LOCKHEED MARTIN ENVIRONMENTAL AND SYSTEMS TECHNOLOGY, INC.
1200 SMITH STREET, SUITE 800
HOUSTON, TX 77002

MEMORANDUM

DATE: May 8, 1996

TO: Dr. Melvin Ritter, ESAT RPO, Region VI

FROM: Dr. Tom C. H. Chiang, ESAT ETM, Region VI

SUBJECT: CLP Data Review

REF: TDF # 6-6233A
ESAT # O-1684

Attached is the data review summary for Case # 24501
SDG # FEM97
Site OLD BRAZOS FORGE

COMMENTS:

I. CONTRACTUAL ASSESSMENT OF THE DATA PACKAGE

The data package was contractually compliant as determined by the hard copy data and CCS reviews.

II. TECHNICAL/USABILITY ASSESSMENT OF THE DATA PACKAGE

The total number of results reviewed was 250 for this data package. Greater than 5 percent of results were qualified because of technical problems. The data package is technically provisional because of the following significant technical problems:

VOA sample FE-M98(DL) had outlying surrogate recoveries.

III. OTHER AREAS OF CONCERN

1. The rinsate, sample FE-M98, contained high concentrations of acetone and bis(2-ethylhexyl) phthalate.

2. Sample FE-M97, the field blank, contained α-chlordane above the CRQL.

964955

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099

ORGANIC REGIONAL DATA ASSESSMENT

CASE NO. 24501
LABORATORY AATS
CONTRACT# 68-D5-0022
SDG# FEM97
SOW# RAS SOW OLM03.2
ACCT# 6TFAJN39 SF# TFAUZZ

SITE OLD BRAZOS FORGE
NO. OF SAMPLES 2
MATRIX WATER
REVIEWER (IF NOT ESD) ESAT
REVIEWER'S NAME CHRIS COVINGTON
COMPLETION DATE MAY 8, 1996

SAMPLE NO. FE-M97
FE-M98

DATA ASSESSMENT SUMMARY

	VOA	BNA	PEST
1. HOLDING TIMES	O	O	O
2. GC/MS TUNE/INSTR. PERFORM.	O	O	O
3. CALIBRATIONS	O	O	O
4. BLANKS	O	O	O
5. SMC/SURROGATES	M	O	O
6. MATRIX SPIKE/DUPLICATE	N/A	N/A	N/A
7. OTHER QC	N/A	N/A	N/A
8. INTERNAL STANDARDS	O	O	N/A
9. COMPOUND ID/QUANTITATION	O	O	O
10. PERFORMANCE/COMPLETENESS	O	O	O
11. OVERALL ASSESSMENT	M	O	O

O = Data had no problems.
M = Data qualified because of major or minor problems.
Z = Data unacceptable.
NA = Not applicable.

ACTION ITEMS: None.

AREA OF CONCERN: VOA sample FE-M98(DL) had outlying surrogate recoveries. The rinsate, sample FE-M98, contained high concentrations of acetone and bis(2-ethylhexyl)phthalate. Sample FE-M97, the field blank, contained α-chlordane above the CRQL.

NOTABLE PERFORMANCE: The laboratory delivered the data package one day early.

COMMENTS/CLARIFICATIONS
REGION 6 CLP QA REVIEW

CASE 24501 **SDG** FEM97 **SITE** OLD BRAZOS FORGE **LAB** AATS

The following is a summary of sample qualifiers used by Region 6 in reporting this CLP data:

No.	Acceptable	Provisional	Unacceptable
VOA	1	1	
BNA	2		
PEST	2		

COMMENTS: The case consisted of two field QC samples for complete RAS organics analysis. The OTR/COC Record designated sample FE-M97 as the field blank and sample FE-M98 as the equipment rinsate. The data package arrived at the Region 1 day before the contractual 35-day turnaround time.

Rinsate sample FE-M98 contained high concentrations of acetone (510 ug/L) and bis(2-ethylhexyl)phthalate (150 ug/L). The laboratory diluted and reanalyzed the VOA and BNA fractions of sample FE-M98 because of these high concentrations. The field blank, sample FE-M97, had α-chlordane above the CRQL. All data for one VOA sample are provisional because of outlying surrogate recoveries.

The technical usability of all reported sample results is appropriately indicated by ESAT's final data qualifiers in the attached Data Summary Tables. An Evidence Audit was conducted for the Complete Sample Delivery Group File (CSF), and the Evidence Inventory Checklist is attached to this report.

1. **Holding Times:** Acceptable. All samples met the contractual and technical (40 CFR Part 136) holding time criteria.

2. **Tuning/Performance:** Acceptable. The BFB and DFTPP analyses met GC/MS ion abundance criteria. The sample analyses were within 12 hours of the respective BFB/DFTPP analyses. The Pest/PCB samples and calibrations were analyzed according to the method guidelines.

3. **Calibrations:** Acceptable. Target compounds generally met contractual and technical criteria for all fractions. Although 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol failed technical minimum RRF criteria for one BNA daily calibration, the peaks had sufficient absolute instrument responses. The calibration data proved the laboratory's ability to detect these analytes at the CRQL's, so the reviewer did not qualify sample results.

ORGANIC QA REVIEW
CONTINUATION PAGE

CASE 24501 **SDG** FEM97 **SITE** OLD BRAZOS FORGE **LAB** AATS

4. Blanks: Acceptable. The method, storage, and instrument blanks met contractual requirements. The method blanks contained phthalate esters below the CRQL's. The reviewer "U" flagged (undetected) the laboratory "B" flagged sample results because the concentrations were less than 10X the associated method blank concentrations, except for the bis(2-ethylhexyl)phthalate result in sample FE-M98(DL).

The field blank, sample FE-M97, contained α-chlordane above the CRQL and acetone and di-n-butylphthalate below the CRQL. The laboratory reported high concentrations of acetone (510 ug/L) and bis(2-ethylhexyl)phthalate (150 ug/L) in the rinsate, sample FE-M98. Other TCL analytes reported below the CRQL's in sample FE-M98 included 2-butanone, diethylphthalate, and butylbenzylphthalate. The associated soil sample results will be evaluated for field contamination in case 24517 SDG FER94.

5. System Monitoring Compounds (SMC)/Surrogates: Provisional. SMC and surrogate recoveries generally met QC criteria, and exceptions are noted below.

VOA Sample FE-M98 and its dilution had outlying SMC recoveries. The reviewer recommends using the diluted sample results because of better overall QC performance. The reviewer qualified all results for sample FE-M98DL as estimated (J) because of outlying SMC recoveries. The reviewer can not determine the bias because two SMC outliers exceed the upper QC limit and the other is below the QC limit.

Pest/PCB Sample FE-M98 had a DCB surrogate recovery marginally (2%) below the advisory QC limit on one column. Since the other DCB surrogate recovery was within the QC limit, result qualification was unnecessary.

6. Matrix Spike/Matrix Spike Duplicate: Not applicable.

7. Other QC: Not applicable.

8. Internal Standards: Acceptable. The internal standard areas and retention times were within the QC limits for VOA and BNA samples, except for VOA sample FE-M98. The reviewer recommends using results from VOA sample FE-M98DL with acceptable IS performance to minimize data qualification.

ORGANIC QA REVIEW
CONTINUATION PAGE

CASE 24501 **SDG** FEM97 **SITE** OLD BRAZOS FORGE **LAB** AATS

9. Compound Identity/Quantitation: Acceptable. Sample FE-M98 contained high concentrations of acetone (510 ug/L) and bis(2-ethylhexyl) phthalate (150 ug/L). Sample FE-M97 had α-chlordane above the CRQL. Both samples contained phthalate esters, common laboratory contaminants, below the CRQL's. Compound identification and quantitation met contractual guidelines for all samples. GC/MS confirmation was not required for the positive pesticide results. VOA sample FE-M98(DL) also had a high TIC concentration (31,000 ug/L) that was identified as an unknown alcohol.

10. Performance/Completeness: Acceptable. The data package was complete with minor deficiencies. The laboratory was contacted for correction and resubmission (see attached FAX Record Log).

11. Overall Assessment: Data for one VOA, two BNA, and two Pest/PCB samples are acceptable.

VOA: All results for sample FE-M98DL are provisional because of problematic surrogate recoveries.

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

U Not detected at reported quantitation limit.

N Identification is tentative.

J Estimated value.

R Unusable.

^ High biased. Actual concentration may be lower than the concentration reported.

v Low biased. Actual concentration may be higher than the concentration reported.

F+ A false positive exists.

F- A false negative exists.

B This result may be high biased because of laboratory/field contamination. The reported concentration is above 5X or 10X the concentration reported in the method/field blank.

UJ Estimated quantitation limit.

T Identification is questionable because of absence of other commonly coexisting pesticides.

***** Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

ORGANIC DATA SUMMARY

Case No.: 24501 SDG: FEM97 Reviewer: C.COVINGTON

Laboratory: AATS Matrix: WATER Units: ug/L

VOLATILES		FLAG		FLAG		FLAG
EPA SAMPLE NUMBER:	FEM97		FEM98		FEM98DL	
Chloromethane	10	U	10	U*	50	UJ
Bromomethane	10	U	10	U*	50	UJ
Vinyl chloride	10	U	10	U*	50	UJ
Chloroethane	10	U	10	U*	50	UJ
Methylene chloride	10	U	10	U*	50	UJ
Acetone	5	J	640	*	510	J
Carbon disulfide	10	U	10	U*	50	UJ
1,1-Dichloroethene	10	U	10	U*	50	UJ
1,1-Dichloroethane	10	U	10	U*	50	UJ
1,2-Dichloroethene (total)	10	U	10	U*	50	UJ
Chloroform	10	U	10	U*	50	UJ
1,2-Dichloroethane	10	U	10	U*	50	UJ
2-Butanone	10	U	2	*	50	UJ
1,1,1-Trichloroethane	10	U	10	U*	50	UJ
Carbon tetrachloride	10	U	10	U*	50	UJ
Bromodichloromethane	10	U	10	U*	50	UJ
1,2-Dichloropropane	10	U	10	U*	50	UJ
cis-1,3-Dichloropropene	10	U	10	U*	50	UJ
Trichloroethene	10	U	10	U*	50	UJ
Dibromochloromethane	10	U	10	U*	50	UJ
1,1,2-Trichloroethane	10	U	10	U*	50	UJ
Benzene	10	U	10	U*	50	UJ
trans-1,3-Dichloropropene	10	U	10	U*	50	UJ
Bromoform	10	U	10	U*	50	UJ
4-Methyl-2-pentanone	10	U	10	U*	50	UJ
2-Hexanone	10	U	10	U*	50	UJ
Tetrachloroethene	10	U	10	U*	50	UJ
1,1,2,2-Tetrachloroethane	10	U	10	U*	50	UJ
Toluene	10	U	10	U*	50	UJ
Chlorobenzene	10	U	10	U*	50	UJ
Ethylbenzene	10	U	10	U*	50	UJ
Styrene	10	U	10	U*	50	UJ
Xylenes (total)	10	U	10	U*	50	UJ
Sample Volume (mL):	5		5		5	
Dilution Factor:	1		1		5	
Number of TIC's:	0		5		3	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 24501 SDG: FEM97 Reviewer: C.COVINGTON

Laboratory: AATS Matrix: WATER Units: ug/L

SEMIVOLATILES	FLAG	FLAG	FLAG
EPA SAMPLE NUMBER:	FEM97	FEM98	FEM98DL
Phenol	10 U	10 U	20 U*
bis(2-Chloroethyl)ether	10 U	10 U	20 U*
2-Chlorophenol	10 U	10 U	20 U*
1,3-Dichlorobenzene	10 U	10 U	20 U*
1,4-Dichlorobenzene	10 U	10 U	20 U*
1,2-Dichlorobenzene	10 U	10 U	20 U*
2-Methylphenol	10 U	10 U	20 U*
2,2'-Oxybis(1-chloropropane)	10 U	10 U	20 U*
4-Methylphenol	10 U	10 U	20 U*
N-Nitroso-di-n-propylamine	10 U	10 U	20 U*
Hexachloroethane	10 U	10 U	20 U*
Nitrobenzene	10 U	10 U	20 U*
Isophorone	10 U	10 U	20 U*
2-Nitrophenol	10 U	10 U	20 U*
2,4-Dimethylphenol	10 U	10 U	20 U*
bis(2-Chloroethoxy)methane	10 U	10 U	20 U*
2,4-Dichlorophenol	10 U	10 U	20 U*
1,2,4-Trichlorobenzene	10 U	10 U	20 U*
Naphthalene	10 U	10 U	20 U*
4-Chloroaniline	10 U	10 U	20 U*
Hexachlorobutadiene	10 U	10 U	20 U*
4-Chloro-3-methylphenol	10 U	10 U	20 U*
2-Methylnaphthalene	10 U	10 U	20 U*
Hexachlorocyclopentadiene	10 U	10 U	20 U*
2,4,6-Trichlorophenol	10 U	10 U	20 U*
2,4,5-Trichlorophenol	25 U	25 U	50 U*
2-Chloronaphthalene	10 U	10 U	20 U*
2-Nitroaniline	25 U	25 U	50 U*
Dimethylphthalate	10 U	10 U	20 U*
Acenaphthylene	10 U	10 U	20 U*
2,6-Dinitrotoluene	10 U	10 U	20 U*
3-Nitroaniline	25 U	25 U	50 U*
Acenaphthene	10 U	10 U	20 U*
2,4-Dinitrophenol	25 U	25 U	50 U*
4-Nitrophenol	25 U	25 U	50 U*
Dibenzofuran	10 U	10 U	20 U*
2,4-Dinitrotoluene	10 U	10 U	20 U*
Diethylphthalate	10 U	1 J	20 U*
4-Chlorophenyl-phenylether	10 U	10 U	20 U*
Fluorene	10 U	10 U	20 U*
4-Nitroaniline	25 U	25 U	50 U*
4,6-Dinitro-2-methylphenol	25 U	25 U	50 U*
N-Nitrosodiphenylamine	10 U	10 U	20 U*
4-Bromophenyl-phenylether	10 U	10 U	20 U*
Hexachlorobenzene	10 U	10 U	20 U*
Pentachlorophenol	25 U	25 U	50 U*
Phenanthrene	10 U	10 U	20 U*
Anthracene	10 U	10 U	20 U*

ORGANIC DATA SUMMARY

Case No.: 24501 SDG: FEM97 Reviewer: C.COVINGTON

Laboratory: AATS Matrix: WATER Units: ug/L

SEMIVOLATILES		FLAG		FLAG		FLAG
EPA SAMPLE NUMBER:	FEM97		FEM98		FEM98DL	
Carbazole	10	U	10	U	20	U*
Di-n-butylphthalate	10	U	10	U	2	*
Fluoranthene	10	U	10	U	20	U*
Pyrene	10	U	10	U	20	U*
Butylbenzylphthalate	10	U	1	J	20	U*
3,3'-Dichlorobenzidine	10	U	10	U	20	U*
Benzo(a)anthracene	10	U	10	U	20	U*
Chrysene	10	U	10	U	20	U*
bis(2-Ethylhexyl)phthalate	10	U	100	*	150	
Di-n-octylphthalate	10	U	10	U	20	U*
Benzo(b)fluoranthene	10	U	10	U	20	U*
Benzo(k)fluoranthene	10	U	10	U	20	U*
Benzo(a)pyrene	10	U	10	U	20	U*
Indeno(1,2,3-cd)pyrene	10	U	10	U	20	U*
Dibenz(a,h)anthracene	10	U	10	U	20	U*
Benzo(g,h,i)perylene	10	U	10	U	20	U*
Sample Volume (mL):	1000		1000		1000	
Dilution Factor:	1		1		2	
Number of TIC's:	2		35		26	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

ORGANIC DATA SUMMARY

Case No.: 24501 SDG: FEM97 Reviewer: C.COVINGTON

Laboratory: AATS Matrix: WATER Units: ug/L

PESTICIDES/PCBs		FLAG		FLAG
EPA SAMPLE NUMBER:	FEM97		FEM98	
alpha-BHC	0.050	U	0.050	U
beta-BHC	0.050	U	0.050	U
delta-BHC	0.050	U	0.050	U
gamma-BHC (lindane)	0.050	U	0.050	U
Heptachlor	0.050	U	0.050	U
Aldrin	0.050	U	0.050	U
Heptachlor epoxide	0.050	U	0.050	U
Endosulfan I	0.050	U	0.050	U
Dieldrin	0.10	U	0.10	U
4,4'-DDE	0.10	U	0.10	U
Endrin	0.10	U	0.10	U
Endosulfan II	0.10	U	0.10	U
4,4'-DDD	0.10	U	0.10	U
Endosulfan sulfate	0.10	U	0.10	U
4,4'-DDT	0.10	U	0.10	U
Methoxychlor	0.50	U	0.50	U
Endrin ketone	0.10	U	0.10	U
Endrin aldehyde	0.10	U	0.10	U
alpha-Chlordane	0.059		0.05	U
gamma-Chlordane	0.050	U	0.050	U
Toxaphene	5.0	U	5.0	U
Aroclor-1016	1.0	U	1.0	U
Aroclor-1221	2.0	U	2.0	U
Aroclor-1232	1.0	U	1.0	U
Aroclor-1242	1.0	U	1.0	U
Aroclor-1248	1.0	U	1.0	U
Aroclor-1254	1.0	U	1.0	U
Aroclor-1260	1.0	U	1.0	U
Sample Volume (mL):	1000		1000	
Dilution Factor:	1		1	

Note: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 24501 SDG No. FEM97 SDG Nos. To Follow SAS No. Date Rec 04/24/96

EPA Lab ID: AATS
Lab Location: Broken Arrow, NC
Region: 6 Audit No.: 24501/FEM97
Re_Submitted CSF? Yes _____ No X
Box No(s): 1
COMMENTS:

Item No.	Comment
8.	The time reported in the "Time Received" section of the Form DC-1 differs from the time on the COC. The reviewer contacted the laboratory for resubmission.

Over for additional comments.

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

Audited by:	C. A. Covington/Data Reviewer	Date	05/01/96
Audited by:		Date	
Audited by:		Date	
Signiture	Printed Name/Title		

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: _____ Date Entered: _____ Date Reviewed: _____

Entered by: _____ _____

Reviewed by: _____ _____

Signature Printed Name/Title

Lockheed Martin Environmental Systems and Technology
ESAT Region 6

1200 Smith Street, Suite 800, Houston, TX 77002 Tel:(713) 654-4843

FACSIMILE COVER SHEET

Please deliver the following pages to:

Name Harry Borg

Firm AATS

City Broken Arrow **State** OK

Telephone (918) 251-2858 **Ext.** _____

Fax Telephone No. (918) 251-1889 **Ext.** _____

Sender:

Name Chris Covington

Date 5-8-96

Total Number of pages including this Cover Sheet 3

If you do not receive all the pages or if any pages are unclear, please call: (713) 654-4843

MESSAGES: Resubmission request for Case 24501 SDG: FEM97 (O-1684)

Fax Model No. Xerox Telecopier 7033, Fax No. 713-654-4852

In Reference to Case No(s):
24501 SDG:FEM97 (O-1684)

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
FAX Record Log

Date of FAX: May 8, 1996
Laboratory Name: AATS
Lab Contact: Harry Borg

Region: 6
Regional Contact: Chris Covington - ESAT

FAX initiated by: _____Laboratory ___X___Region

In reference to data for the following fractions:

PEST/PCB

Summary of Questions/Issues:

A. PEST/PCB

1. Forms 6I: Please submit Forms 6I for INDAM3K and INDBM3K that were omitted from the data package.

2. RESC3D, HP03A, 3/25/96, 23:51 (pg. 326): Please submit a rescaled chromatogram to better demonstrate the reported resolution between endosulfan I and γ-chlordane.

3. Aroclor 1221, HP03A, 3/26/96, 1:23 (pgs 305, 375 and 376): Please comply with the SOW requirement (OLM03.2, D-25/PEST, 9.2.4.7) to report three <u>different</u> quantitation peaks for multi-component analytes. Please submit the necessary corrected forms and supporting data.

FAX COMMUNICATION LOG

Continuation Page 2
Laboratory/Contact AATS/Harry Borg
In Reference To Case No. 24501 SDG: FEM97

NOTE: Any laboratory resubmission should be submitted either as an addendum to the original CSF with a revised Form DC-2 or submitted as a new CSF with a new Form DC-2 (OLM03.0, p. B-29), except those containing only replacement pages. Custody seals are required for all CSF resubmission shipments.

Please respond to the above items. Region 6 resubmissions may be included with CCS response or sent separately **within 7 days** to:

Ms. Christy Macdowell
U.S. EPA Region 6 Laboratory
10625 Fallstone Road
Houston, TX 77099

If you have any questions, please contact me at (713) 654-4843.

CA Macy — 5-8-96
Signature — Date

Distribution: (1) Lab Copy (2) Region Copy

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM97

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19689.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: not dec. _____ Date Analyzed: 03/27/96 ✓

GC Column:DB-624 ID: 0.53 (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	10	U
67-64-1	Acetone	5	J
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

✓

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM98

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19690.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: not dec. _____ Date Analyzed: 03/27/96

GC Column:DB-624 ID: 0.53 (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	10	U
67-64-1	Acetone	640	E
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	2	J
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

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM98DL

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19712.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: not dec. _____ Date Analyzed: 03/28/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

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	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	50	U
67-64-1	Acetone	510	D
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	50	U
540-59-0	1,2-Dichloroethene (total)	50	U
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	50	U
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (Total)	50	U

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM97

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2256.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.5

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	Dimethylphthalate	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.

FEM97

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2256.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.5

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	0.7	JB
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-octylphthalate	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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM98

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2257.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 3.1

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	Dimethylphthalate	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.

FEM98

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2257.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 3.1

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	1	J
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	2	JB
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	1	J
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	100	EB
117-84-0	Di-n-octylphthalate	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

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM98DL

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02DL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2403.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 3.1

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

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM98DL

b Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02DL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2403.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted:03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 3.1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	U
132-64-9	Dibenzofuran	20	U
121-14-2	2,4-Dinitrotoluene	20	U
84-66-2	Diethylphthalate	20	U
7005-72-3	4-Chlorophenyl-phenylether	20	U
86-73-7	Fluorene	20	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	20	U
101-55-3	4-Bromophenyl-phenylether	20	U
118-74-1	Hexachlorobenzene	20	U
87-86-5	Pentachlorophenol	50	U
85-01-8	Phenanthrene	20	U
120-12-7	Anthracene	20	U
86-74-8	Carbazole	20	U
84-74-2	Di-n-butylphthalate	2	JBD
206-44-0	Fluoranthene	20	U
129-00-0	Pyrene	20	U
85-68-7	Butylbenzylphthalate	20	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)anthracene	20	U
218-01-9	Chrysene	20	U
117-81-7	bis(2-Ethylhexyl)phthalate	150	BD
117-84-0	Di-n-octylphthalate	20	U
205-99-2	Benzo(b)fluoranthene	20	U
207-08-9	Benzo(k)fluoranthene	20	U
50-32-8	Benzo(a)pyrene	20	U
193-39-5	Indeno(1,2,3-cd)pyrene	20	U
53-70-3	Dibenz(a,h)anthracene	20	U
191-24-2	Benzo(g,h,i)perylene	20	U

(1) - Cannot be separated from Diphenylamine

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM97

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.01

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

% Moisture: _____ decanted: (Y/N) __ Date Received: 03/21/96 ✓

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/96 ✓

Concentrated Extract Volume: 10000(uL) Date Analyzed: 03/26/96 ✓

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.5 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
7421-93-4	Endrin aldehyde	0.10	U
5103-71-9	alpha-Chlordane	0.059	
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

✓

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FEM98

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02

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

% Moisture: _____ decanted: (Y/N) __ Date Received: 03/21/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 03/22/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 03/26/96

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 3.1 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
7421-93-4	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

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

MAY 3 0 1995
Superfund Cleanup Division

	EPA SAMPLE NO.	SMC1 (TOL)#	SMC2 (BFB)#	SMC3 (DCE)#	OTHER	TOT OUT
01	VBLK1	102	101	95		0
02	FEM97	102	105	98		0
03	FEM98	207*	34*	80		2
04	VIBLK1	100	104	98		0
05	VBLK2	94	90	86		0
06	FEM98DL	135*	62*	119*		3
07	VHBLK1	104	104	97		0
08						
09						
10						
11						
12						
13						
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30						

		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

10A
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

EPA SAMPLE NO.

FEM97

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab Sample ID: 25005.01 Date(s) Analyzed: 03/26/96 03/26/96

Instrument ID (1): HP_03A Instrument ID (2): HP_03B

GC Column (1): DB-1701 ID: 0.32(mm) GC Column (2): DB-17 ID: 0.32(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	%D
alpha-Chlordane	1	12.39	12.29	12.43	0.066	
	2	12.78	12.78	12.92	0.059	11.9
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

page 1 of 1

BOOKMARK

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

LABORATORY NAME American Analytical Technical Service
CITY/STATE Broken Arrow OK

CASE NO. 24501 SDG NO. FEM97 SDG NOS. TO FOLLOW _____
SAS NO. _____

CONTRACT NO. 68-D5-0022
SOW NO. OLM03.2

All documents delivered in the Complete SDG File must be original documents where possible.

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK EPA
1. Inventory Sheet (Form DC-2) (Do not number)			DK	
2. SDG Case Narrative	1	12		✓
3. SDG Cover Sheet/Traffic Report	13	14		✓
4. Volatiles Data				
a. QC Summary				
System Monitoring Compound Summary (Form II VOA)	15	15		✓
Matrix Spike/Matrix Spike Duplicate Summary (Form III VOA)	NA	NA		
Method Blank Summary (Form IV VOA)	16	17		✓
GC/MS Instrument Performance Check (Form V VOA)	18	20		✓
Internal Standard Area and RT Summary (Form VIII VOA)	21	22		✓
b. Sample Data	23	48		✓
TCL Results - (Form I VOA)				✓
Tentatively Identified Compounds (Form I VOA-TIC)				✓
Reconstructed total ion chromatograms (RIC) for each sample				✓
For each sample:				
Raw spectra and background-subtracted mass spectra of target compounds identified				✓
Quantitation reports				✓
Mass spectra of all reported TICs with three best library matches				✓
c. Standards Data (All Instruments)	49	86		
Initial Calibration Data (Form VI VOA)				✓
RICs and Quan Reports for all Standards				✓
Continuing Calibration Data (Form VII VOA)				✓
RICs and Quantitation Reports for all Standards				✓
d. Raw QC Data				
BFB	87	95		✓
Blank Data	96	114		✓
Matrix Spike/Matrix Spike Duplicate Data	NA	NA		

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

CASE NO. 24501 SDG NO. FEM97 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)	115	115	N	✓
MS/MSD Summary (Form III SV)	NA	NA		
Method Blank Summary (Form IV SV)	116	116		✓
GC/MS Instrument Performance Check (Form V SV)	117	119		✓
Internal Standard Area and RT Summary (Form VIII SV)	120	123		✓
b. Sample Data	124	221		
TCL Results (Form I SV-1, SV-2)				
Tentatively Identified Compounds (Form I SV-TIC)				✓
Reconstructed total ion chromatograms (RIC) for each sample				✓
For each sample:				
Raw spectra and background-subtracted mass spectra of target compounds				✓
Quantitation reports				✓
Mass spectra of TICs with three best library matches				✓
GPC chromatograms (if GPC performed)				✓
c. Standards Data (All Instruments)	222	263		
Initial Calibration Data (Form VI SV-1, SV-2)				✓
RICs and Quan Reports for all Standards				✓
Continuing Calibration Data (Form VII SV-1, SV-2)				✓
RICs and Quantitation Reports for all Standards				✓
d. Raw QC Data				
DFTPP	264	278		✓
Blank Data	279	288		✓
Matrix Spike/Matrix Spike Duplicate Data	NA	NA		
e. Raw GPC Data	NA	NA		
6. Pesticides				
a. QC Summary				
Surrogate Percent Recovery Summary (Form II PEST)	289	289		✓
MS/MSD Duplicate Summary (Form III PEST)	NA	NA		
Method Blank Summary (Form IV PEST)	290	290		✓

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

CASE NO. 24501 SDG NO. FEM97 SDG NOS. TO FOLLOW _____
_____ _____ SAS NO. _____

	PAGE NOs FROM	TO	CHECK LAB	EPA
6. Pesticides (Cont.)				
b. Sample Data	281	300		
TCL Results - Organic Analysis Data Sheet (Form I PEST)			N/A	✓
Chromatograms (Primary Column)				✓
Chromatograms from second GC column confirmation				✓
GC Integration report or data system printout				✓
Manual work sheets				✓
For pesticides/Aroclors confirmed by GC/MS, copies of raw spectra and copies of background-subtracted mass spectra of target compounds (samples & standards)				✓
c. Standards Data	301	374		
Initial Calibration of Single Component Analytes (Form VI PEST-1 and PEST-2)				✓
Initial Calibration of Multicomponent Analytes (Form VI PEST-3)				✓
Analyte Resolution Summary (Form VI PEST-4)				✓
Performance Evaluation Mixture (Form VI PEST-5)				✓
Individual Standard Mixture A (Form VI PEST-6)				✓
Individual Standard Mixture B (Form VI PEST-7)				✓
Calibration Verification Summary (Form VII PEST-1)				✓
Calibration Verification Summary (Form VII PEST-2)				✓
Analytical Sequence (Form VIII PEST)				✓
Florisil Cartridge Check (Form IX PEST-1)				✓
Pesticide GPC Calibration (Form IX PEST-2)				
Pesticide Identification Summary for Single Component Analytes (Form X PEST-1)				✓
Pesticide Identification Summary for Multicomponent Analytes (Form X PEST-2)				
Chromatograms and data system printouts				
A printout of retention times and corresponding peak areas or peak heights				✓
d. Raw QC Data				
Blank Data	375	389		✓
Matrix Spike/Matrix Spike Duplicate Data	NA	NA		

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

CASE NO. 24501 SDG NO. FFM97 SDG NOS. TO FOLLOW _____
_____ _____ SAS NO. _____

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK EPA
6. Pesticides (Cont.)				
e. Raw GPC Data	NA	NA		
f. Raw Florisil Data	390	397		✓
7. Miscellaneous Data				
Original preparation and analysis forms or copies of preparation and analysis logbook pages	398	413		✓
Internal sample and sample extract transfer chain-of-custody records	414	415		✓
Screening records	NA	NA		
All instrument output, including strip charts from screening activities (describe or list)				
8. EPA Shipping/Receiving Documents				
Airbills (No. of shipments 1)	416	416		✓
Chain-of-Custody Records	417	417		✓
Sample Tags	418	423		✓
Sample Log-In Sheet (Lab & DCI)	424	425		✓
Miscellaneous Shipping/Receiving Records (describe or list)				
	NA	NA		
9. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
10. Other Records (describe or list)				
Telephone Communication Log				
Record of Communication	426	429		✓
	NA	NA		

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

CASE NO. 24501	SDG NO. FEM97	SDG NOS. TO FOLLOW
	SAS NO.	

11. Comments:

Completed by: (CLP Lab)	Lisa Kindley (Signature)	Lisa Kindley / Data Clerk (Printed Name/Title)	4-23-96 (Date)
Verified by: (CLP Lab)	Sandra Jackett (Signature)	Sandra Jackett / Data Clerk (Printed Name/Title)	4/23/96 (Date)
Audited by: (EPA)	CA Covington (Signature)	CA Covington / Data Reviewer (Printed Name/Title)	5/1/96 (Date)

[redacted]

Name: Jonathan Rude	Old Brazos Fnge	Contact Recv'd Via:	_ Phone _ Fax X Vmail _ Memo _ Other
Date/Time of Contact 3/21/96 10:33 AM		Initiated By:	_ Lab _ CLASS _ Region X Other

Contact/Org./Phone#: Deanna Eperson/ Texas Natural Resources and Conservation Com./ (512) 239-2565

Lab: BOTH	Contract#: SEE BELOW	Case#: ~~24501~~ 24502	SDG:	Region: 6
SOW:	Affected Samples: Org.: AATS (68-D5-0022 A); Inorg.: INCHVT (68-D5-0063 B) All Samples		Invoice#:	

"IN Organic QC Required"

Discussion/Issue:

3/21/96 @ 1033 - Deanna Eperson / TNRCC - Region VI Sampler / (512)239-2526 - When the Region VI sample provided shipping information to CLASS it was indicated that all of the samples were Equipment Rinsates and that no extra volume had been provided for laboratory - QC procedures. The case was complete with two samples to each of the laboratories.

3/21/96 @ 1313 - Chuck Hoover / AATS / (918)251-2858 -
3/21/96 @ 1309 - Kirk Young / INCHVT / (802)655-1203 -
CLASS provided the shipping information to each of the laboratories, but will update the laboratories with information on the performance of laboratory spikes and (spike) duplicates.

3/22/96 @ 0925 - Chuck Hoover / AATS / (918)251-2858 - AATS requested the update from CLASS on the performance of laboratory matrix spike and matrix spike duplicate for this case.

3/22/96 @ 0930 & 0955 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS informed Region VI of the situation at BOTH of the laboratories for this case. CLASS will provide the detail for each of the laboratories.

3/22/96 @ 1000 - Chuck Hoover / AATS / (918)251-2858 - CLASS asked the laboratory for some clarifications:

Sample #: FEM97 - (SDG#)
FEM98

Volume: 2 liters for each sample (1 for BNA and 1 for Pest/PCB and 2 - 40 ml VOA vials).

3/22/96 @ 1006 - Kirk Young / INCHVT / (802)655-1203 - CLASS asked the laboratory for some clarifications:

Sample #: MFGB95 - (SDG#)
MFGB96

Volume: 2 liters for each sample (1 for TM and 1 for CN).

3/22/96 @ 1015 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS informed Region VI of the situation at each of the laboratories for this case. A response can be expected later today.

RAS OPS	0	Completed Date/Time:		
Routed:	0	Referred To	Date/Time	W.A.#: ST&R

Distribution: ○ Lab ○ Region ○ CLASS ○ AOB ○ Work Assign. Man.

Contract Laboratory Analytical Services Support (CLASS)

Record of Communication

Name: Jonathan Rude

Contact Recv'd Via: _ Phone _ Fax X Vmail _ Memo _ Other

Date/Time of Contact: 3/21/96 10:33 AM

Initiated By: _ Lab _ CLASS _ Region X Other

Contact/Org./Phone#: Deanna Eperson/ Texas Natural Resources and Conservation Com./ (512) 239-2565

Lab: BOTH **Contract#:** SEE BELOW **Case#:** 24501 **SDG:** **Region:** 6

SOW: **Affected Samples:** Org.: AATS (68-D5-0022 A); Inorg.: INCHVT **Invoice#:** (68-D5-0063 B) All Samples

Discussion/Issue:

3/21/96 @ 1033 - Deanna Eperson / TNRCC - Region VI Sampler / (512)239-2526 - When the Region VI sampler provided shipping information to CLASS it was indicated that all of the samples were Equipment Rinsates and that no extra volume had been provided for the laboratories to perform QC. The case was complete with two samples to each of the laboratories.

3/21/96 @ 1313 - Chuck Hoover / AATS / (918)251-2858 -
3/21/96 @ 1309 - Kirk Young / INCHVT / (802)655-1203 -
CLASS provided the shipping information to each of the laboratories, but will update the laboratories with information on the performance of laboratory spikes and (spike) duplicates.

3/22/96 @ 0925 - Chuck Hoover / AATS / (918)251-2858 - AATS requested the update from CLASS on the performance of laboratory matrix spike and matrix spike duplicate for this case.

3/22/96 @ 0930 & 0955 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS informed Region VI of the situation at BOTH of the laboratories for this case. CLASS will provide the detail for each of the laboratories.

3/22/96 @ 1000 - Chuck Hoover / AATS / (918)251-2858 - CLASS asked the laboratory for some clarifications:

Sample #: FEM97 - (SDG#)
FEM98

Volume: 2 liters for each sample (1 for BNA and 1 for Pest/PCB and 2 - 40 ml VOA vials).

3/22/96 @ 1006 - Kirk Young / INCHVT / (802)655-1203 - CLASS asked the laboratory for some clarifications:

Sample #: MFGB95 - (SDG#)
MFGB96

Volume: 2 liters for each sample (1 for TM and 1 for CN).

3/22/96 @ 1015 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS informed Region VI of the situation at each of the laboratories for this case. A response can be expected later today.

3/22/96 @ 1115 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS provided a copy of this discussion sheet to Region VI for response.

Resolution:

3/22/96 @ 1430 - Ray Flores / Region VI, TPO / (713)983-2139 - Region VI informed CLASS that a resolution was still being determined for this incident.

3/22/96 @ 1548 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - Region VI informed CLASS that no resolution would be provided until Monday.

3/25/96 @ 0900 - Kirk Young / INCHVT / (802)655-1203 - INCHVT contacted CLASS to determine if any resolution had been reached for this case. CLASS will update the laboratory as soon as possible.

3/25/96 @ 0915 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS contacted Region VI to find out any update that might expedite a resolution for this case.

3/25/96 @ 0930 - Ray Flores / Region VI, TPO / (713)983-2139 - CLASS contacted Region VI to find out any update on a resolution for this case. Region VI informed CLASS that a response from the inorganic laboratory's Regional TPO was being awaited before a resolution could be provided.

3/25/96 @ 0950 - Christy MacDowell / Region VI. RSCC / (713)983-2137 - Region VI informed CLASS that no laboratory matrix spike or (matrix) duplicate analysis would be required on any of the samples received for this case. All of the samples are equipment rinsates and laboratory QC (MS/MSD or MS/MD) would given irrelevant data. The incident should be noted in the case narratives of each of the laboratories. CLASS will route an internal notification form to correct all CLASS data entry.

3/25/96 @ 1010 - Kirk Young / INCHVT / (802)655-1203 - CLASS provided Region VI's response to the laboratory. The incident should be noted in the case narrative. and CLASS will provide a copy of the discussion to the laboratory.

3/25/96 @ 1013 - Chuck Hoover / AATS / (918)215-2858 - CLASS provided Region VI's response to the laboratory. The incident should be noted in the case narrative. and CLASS will provide a copy of the discussion to the laboratory.

3/25/96 @ 1236 & 1300 - Ray Flores / Region VI, TPO / (713)983-2139 - Region VI informed CLASS that the Region's understanding of the statement of work was that the inorganic laboratories would be required to perform MS/MD at reduced volume if necessary to submit compliant data. This would not affect the organic laboratories in a similar situation. because there is implicit language in the organic statement of work which would prohibit MS/MSD-QC performed on RINSATES (FIELD QC). The inorganic laboratory should be instructed to proceed with MS/MD-QC.

3/25/96 @ 1315 - Kirk Young / INCHVT / (802)655-1203 - INCHVT was informed of Region VI's updated response. The laboratory should note the entire incident in the case narrative.

3/25/96 @ 1330 - Mike Johnson / CLASS. CCS / (703)519-1261 - The CLASS coordinator for Region VI mentioned the events transpiring from this case to CCS. and asked if there was any implicit language in the inorganic SOW ILMO4.0 regarding performance of MS/MD-QC on RINSATE samples.

3/25/96 @ 1409 - Nazy Abousaeedi / CLASS. CCS / (703)519-1254 - CCS informed the CLASS Region VI coordinator that there is indeed implicit language in the inorganic SOW ILMO4.0 that regards NOT performing MS/MD-QC on RINSATE

samples.

E-22 (spike) - first paragraph

E-25 (duplicate) - first paragraph

H-14 (field QC is synonymous for RINSATE) - last item

3/25/96 @ 1430 - Claudia Walters / EPA, AOC / (703)603-8847 - CLASS contacted the APO for the inorganic laboratory involved in this matter for a direction on how to proceed given Region VI's updated response to this issue. Message Left.

3/26/96 @ 1030 - Myra Perez / Region VI, RSCC / (713)983-2130

3/26/96 @ 1030 - Nazy Abousaeedi / CLASS, CCS / (703)519-1254 - Region VI, CLASS CCS, and CLASS ST&R - conducted a conference call regarding implicit language in the inorganic SOW ILMO4.0 for NOT performing MS/MD-QC on RINSATE samples.

E-22 (spike) - first paragraph

E-25 (duplicate) - first paragraph

H-14 (field QC is synonymous for RINSATE) - last item

CLASS should contact the Region VI, TPO for a final resolution/clarification given this implicit language in ILMO4.0.

3/26/96 @ 1050 - Claudia Walters / EPA, AOC / (703)603-8847 - CLASS contacted the APO for the inorganic laboratory involved in this matter for a direction on how to proceed with this issue. AOC informed CLASS that Region VI should make a decision on whether or not QC is needed for this case. If the laboratory involved does perform the MS/MD-QC they are entitled to payment at the Region's expense. however the laboratory can be penalized for not performing QC on RINSATE sample, because of the implicit language in ILMO4.0. CLASS will provide a final copy of the Record of Communication to AOC.

3/26/96 @ 1055 - Ray Flores / Region VI, TPO / (713)983-2139 - CLASS informed Region VI of the situation, and that the laboratory would be contacted to place any further action regarding MS/MD-QC on hold until a final resolution can be provided from Region VI.

3/26/96 @ 1102 - Kirk Young / INCHVT / (802)655-1203 - CLASS informed INCHVT to place any further action regarding MS/MD-QC on hold until a final resolution can be provided from Region VI.

3/26/96 @ 1115; 1207; 1210; 1245 - Ray Flores / Region VI, TPO / (713)983-2139 - Region VI researched and consulted the laboratory's Regional, TPO and determined that ILMO4.0 should direct the laboratory not to perform MS/MD-QC on the RINSATE samples received for this case. Region VI informed CLASS that the laboratory should not perform MS/MD-QC for this case. The

incident should be noted in the case
narrative, and CLASS will route an internal notification form to correct all CLASS data entry.

3/26/96 @ 1338 - Kirk Young / INCHVT / (802)655-1203 - CLASS informed INCHVT that no MS/MD-QC would be required on the RINSATE samples
received for this case. The incident should be noted in the case narrative, and CLASS will route an internal notification form to
correct all CLASS data entry.

RAS OPS: Yes **Completed Date/Time:** 3/29/96 6:46 PM

Routed: Yes **Referred To:** **Date/Time:**
W.A.#: ST&R
Distribution: **Lab** **Region** **CLASS** **AOB** **Work Assign. Man.**

CLASS is operated by DynCorp under Contract #68-D4-0104 to the U.S. Environmental Protection
REC #: 2342

RAS OPS: Yes **Completed Date/Time:** 3/29/96 6:46 PM

Routed: Yes **Referred To:** **Date/Time:**
W.A.#: ST&R
Distribution: **Lab** **Region** **CLASS** **AOB** **Work Assign. Man.**

CLASS is operated by DynCorp under Contract #68-D4-0104 to the U.S. Environmental Protection
REC #: 2342

RAS OPS: Yes **Completed Date/Time:** 3/29/96 6:46 PM

Routed: Yes **Referred To:** **Date/Time:**
W.A.#: ST&R
Distribution: **Lab** **Region** **CLASS** **AOB** **Work Assign. Man.**

CLASS is operated by DynCorp under Contract #68-D4-0104 to the U.S. Environmental Protection
REC #: 2342

USEPA REGION: VI

ORGANIC REGIONAL ACCEPTANCE/REJECTION/REDUCED VALUE RECOMMENDATION FORM

LAB CODE: AATS	CASE NO.: 24501	SDG NO.: FEM97
SITE NAME: OLD BRAZOS FORGE		NUMBER OF SAMPLES: 3

FORM DUE DATE: 05/27/96

SDG MAILDATE: 04/26/96

PART I. DATA ACCEPTANCE OR REJECTION

INSTRUCTIONS: EPA REGIONS MUST ACCEPT OR REJECT DATA WITHIN 30 DAYS. IF DATA ARE BEING REJECTED, THIS FORM MUST BE ACCOMPANIED BY 1.) A SIGNED MEMO FROM THE REGIONAL OFFICIAL DESCRIBING THE CONTRACTUAL REASONS FOR REJECTION. ATTACH ALL RELATED DOCUMENTS (DATA REVIEWS,TELEPHONE LOGS, ETC.), 2.) ALL REJECTED DATA.

A. FULL DATA ACCEPTANCE OR REJECTION
CHECK ONE OF THE FOLLOWING IF YOU FULLY ACCEPT OR FULLY REJECT ALL SAMPLES IN THIS SDG.

✓ ACCEPT ALL ____ REJECT ALL

B. REJECTION OF ALL SAMPLES FOR A PARTICULAR FRACTION
CHECK ONE OF THE FOLLOWING IF YOU FULLY REJECT ALL SAMPLES IN A PARTICULAR FRACTION IN THIS SDG. ALL FRACTIONS NOT MARKED AS REJECTED ARE ACCEPTED.

REJECT ALL: ____ VOA ____ BNA ____ PEST

C. REJECTION AT THE SAMPLE AND FRACTIONAL LEVEL
CHECK THE FOLLOWING TO REJECT SAMPLES AT THE SAMPLE/FRACTIONAL LEVEL AND COMPLETE THE REVERSE SIDE OF THIS FORM.

____ PARTIAL ACCEPTANCE AND REJECTION BY SAMPLE/FRACTION

PART II. REDUCED VALUE

INSTRUCTIONS: REGION RECOMMENDS REDUCED VALUE AND RETAINS THE DATA. FOR A REDUCED VALUE TO BE PROCESSED, THIS FORM MUST BE ACCOMPANIED BY A SIGNED MEMO FROM THE REGIONAL OFFICIAL CITING THE CONTRACTUAL NON-COMPLIANCE; THE DOLLAR AMOUNT FOR REDUCED VALUE; AND A WRITTEN JUSTIFICATION (NARRATIVE) OF HOW SAMPLE WORTH WAS DETERMINED FOR EACH AFFECTED SAMPLE. ATTACH ALL RELATED DOCUMENTS (DATA REVIEWS, TELEPHONE LOGS, ETC.)

CHECK ONE OF THE FOLLOWING:

✓ NO REDUCED VALUE ____ REDUCED VALUE (COMPLETE REVERSE SIDE)

IDENTIFY THE SAMPLES/FRACTIONS THAT ARE RECOMMENDED FOR REDUCED VALUE ON THE REVERSE SIDE OF THIS FORM.

THIS FORM CANNOT BE PROCESSED WITHOUT A SIGNATURE

NAME OF REGIONAL OFFICIAL: MAHMOUD ELFEKY

SIGNATURE: M. Elfeky DATE: 5-17-96

SEND THIS FORM TO: CLASS C/O DYNCORP
INVOICE PROCESSING & CALCULATION GROUP
300 NORTH LEE STREET, ALEXANDRIA, VA 22314

SEE LIST OF SAMPLES ON REVERSE SIDE

LAB CODE: AATS	CASE NO.: 24501	SDG NO.: FEM97

"Y" INDICATES THE SAMPLE WAS ANALYZED FOR THAT FRACTION AND IS BILLABLE
"NP" INDICATES THE SAMPLE WAS ANALYZED FOR THAT FRACTION AND IS NOT BILLABLE
A BLANK CELL INDICATES THE SAMPLE WAS NOT ANALYZED

PART III. PARTIAL ACCEPTANCE AND REJECTION BY SAMPLE

ENTER AN "X" IN THE BLOCK TO THE RIGHT OF THE "Y" FOR THE FRACTION RECOMMENDED FOR REJECTION
ENTER A "D" IN THE BLOCK TO THE RIGHT OF THE "Y" FOR THE FRACTION RECOMMENDED FOR REDUCED VALUE.
ALL SAMPLES THAT ARE NOT MARKED WITH AN "X" OR A "D" ARE ACCEPTED.

	FRACTIONS ANALYZED		
SAMPLE	VOA	BNA	PES
FEM97	Y	Y	Y
FEM98	Y	Y	Y
FEM98DL	Y	Y	

BOOKMARK

Date: May 10, 1996

To: Melvin Ritter, ESAT RPO/Contracts Team Leader

From: Marvelyn Humphrey, EPA Reviewer

Subject: EPA Oversight - SDG# FEM97, Case 24501, Old Brazos Forge

Technical Oversight

Issue 1: Field blank, FE-M97 contained alpha-chlordane above the CRQL.

EPA Response: The raw data for field blank, FE-M97 was examined. The retention time of the peak identified as alpha-chlordane lies on the border of the retention time window of one column and mid point of the confirmation column. The percent difference in concentrations from the two columns is approximately 12 percent. Though the criteria for positive confirmation is satisfied, it is irregular for alpha-chlordane to be present without the presence of isomer gamma-chlordane. Without mass spectral confirmation, some doubt exist that this identification is accurate.

4A
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID: L19709.D Lab Sample ID: L960328A

Date Analyzed: 03/28/96 Time Analyzed: 1052

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

Instrument ID: L

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	FEM98DL	25005.02DL	L19712.D	1233
02	VHBLK1	VHBLK1	L19717.D	1522
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
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COMMENTS:

page 01 of 01

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID: L19537.D BFB Injection Date: 03/19/96

Instrument ID: L BFB Injection Time: 1539

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	17.7
75	30.0 - 66.0% of mass 95	39.9
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	61.8
175	4.0 - 9.0% of mass 174	4.3 (7.0)1
176	93.0 - 101.0% of mass 174	57.6 (93.3)1
177	5.0 - 9.0% of mass 176	3.7 (6.5)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	VSTD010L8	VSTD010L8	L19538.D	03/19/96	1609
02	VSTD020L8	VSTD020L8	L19539.D	03/19/96	1635
03	VSTD050L8	VSTD050L8	L19540.D	03/19/96	1702
04	VSTD100L8	VSTD100L8	L19541.D	03/19/96	1728
05	VSTD200L8	VSTD200L8	L19542.D	03/19/96	1754
06					
07					
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID: L19684.D BFB Injection Date: 03/27/96

Instrument ID: L BFB Injection Time: 1435

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.7
75	30.0 - 66.0% of mass 95	40.7
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.3
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	62.4
175	4.0 - 9.0% of mass 174	4.2 (6.7)1
176	93.0 - 101.0% of mass 174	59.4 (95.2)1
177	5.0 - 9.0% of mass 176	3.9 (6.5)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	VSTD050LW	VSTD050LW	L19686.D	03/27/96	1715
02	VBLK1	L960327B	L19687.D	03/27/96	1748
03	FEM97	25005.01	L19689.D	03/27/96	1851
04	FEM98	25005.02	L19690.D	03/27/96	1918
05	VIBLK1	VIBLK1	L19692.D	03/27/96	2011
06					
07					
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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID: L19707.D BFB Injection Date: 03/28/96

Instrument ID: L BFB Injection Time: 0940

GC Column:DB624 ID: 0.53 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.0
75	30.0 - 66.0% of mass 95	40.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 120.0% of mass 95	61.3
175	4.0 - 9.0% of mass 174	4.6 (7.5)1
176	93.0 - 101.0% of mass 174	58.3 (95.2)1
177	5.0 - 9.0% of mass 176	4.0 (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	VSTD050LX	VSTD050LX	L19708.D	03/28/96	1007
02	VBLK2	L960328A	L19709.D	03/28/96	1052
03	FEM98DL	25005.02DL	L19712.D	03/28/96	1233
04	VHBLK1	VHBLK1	L19717.D	03/28/96	1522
05					
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22					

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID (Standard): L19686.D Date Analyzed: 03/27/96

Instrument ID: L Time Analyzed: 1715

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	333045	7.01	1810670	8.25	1244446	11.71
	UPPER LIMIT	666090	7.51	3621340	8.75	2488892	12.21
	LOWER LIMIT	166522	6.51	905335	7.75	622223	11.21
	EPA SAMPLE No.						
01	VBLK1	329890	7.01	1748738	8.26	1233074	11.71
02	FEM97	329209	7.04	1689042	8.30	1198199	11.74
03	FEM98	139451*	7.05	1110730	8.30	304921*	11.75
04	VIBLK1	342016	7.01	1744059	8.26	1220856	11.72
05							
06							
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20							
21							
22							

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: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID (Standard): L19708.D Date Analyzed: 03/28/96

Instrument ID: L Time Analyzed: 1007

GC Column:DB-624 ID: 0.53 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	311565	7.44	1716648	8.68	1219396	12.06
	UPPER LIMIT	623130	7.94	3433296	9.18	2438792	12.56
	LOWER LIMIT	155782	6.94	858324	8.18	609698	11.56
	EPA SAMPLE No.						
01	VBLK2	368747	6.99	1973951	8.24	1388817	11.69
02	FEM98DL	187367	7.08	1566020	8.33	797905	11.77
03	VHBLK1	322082	7.01	1649175	8.26	1158334	11.70
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22							

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.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEM97

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19689.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: not dec. _____ Date Analyzed: 03/27/96

GC Column:DB-624 ID: 0.53 (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
1.				
2.				
3.				
4.				
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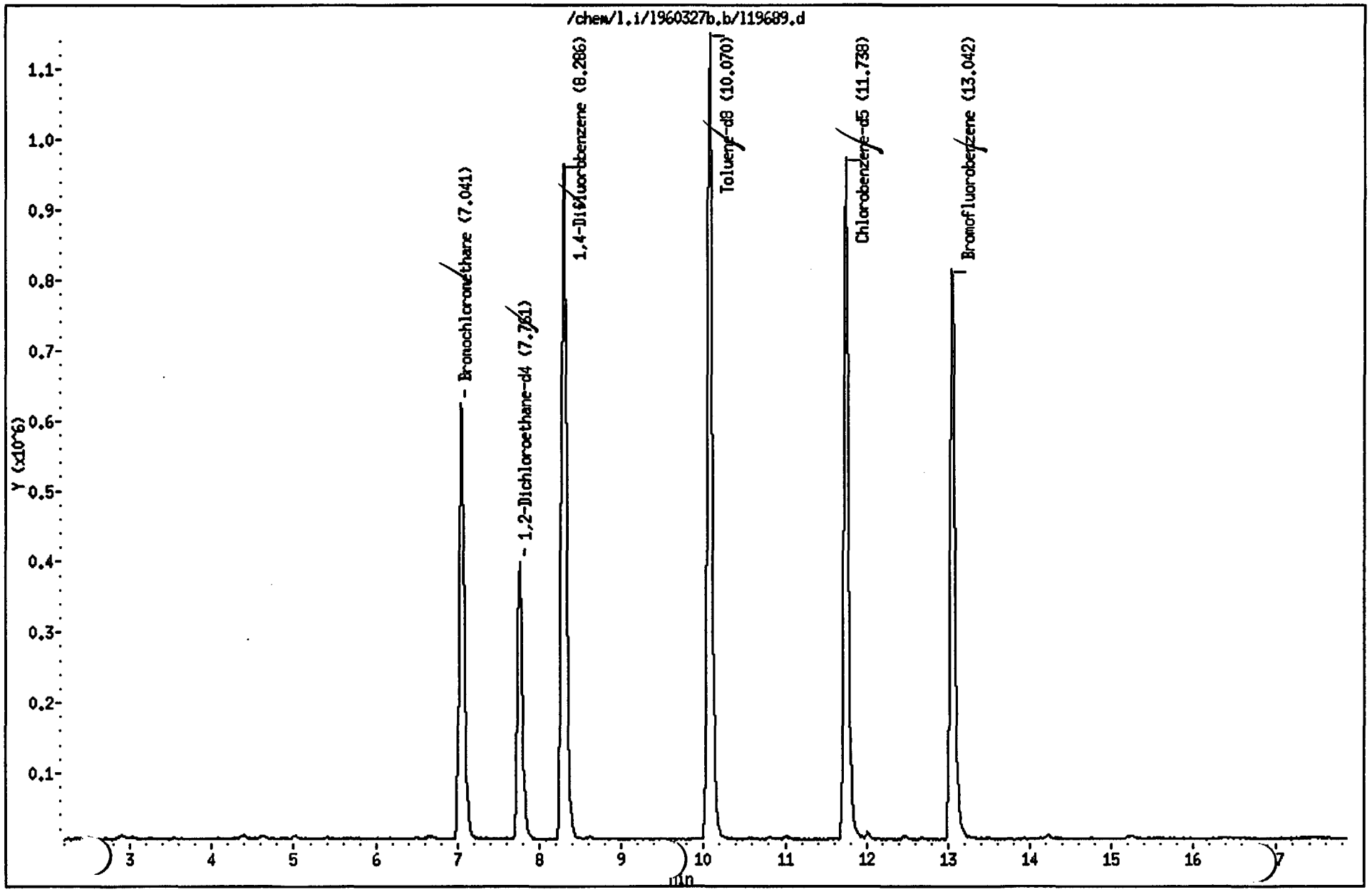
OPERATOR: Linda

Data File: /chem/1.i/1960327b.b/119689.d
Date : 27-MAR-96 18:51
Instrument : 1.i
Sample ID : FEM97
Column phase : DB-624
Volume Injected (uL) : 0.0

Column diameter : 0.53



Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960327b.b/l19689.d
Lab. Id. : 25005.01 Quant Type: ISTD
Inj Date : 27-MAR-96 18:51
Operator : LINDA Inst ID: l.i
Smp Info : FEM97
Misc Info : MS317**INST:L*24501*25005.01*5ML
Comment :
Method : /chem/l.i/1960327b.b/OLM3WAT.m
Meth Date : 27-Mar-1996 17:42
Cal Date : 27-MAR-96 17:15 Cal File: l19686.d
Als bottle: 6
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
6 Acetone	43.00	4.387	(0.627)	16608	5.05	5.05(a)
* 14 Bromochloromethane	128.00	7.041	(1.000)	329209	50.00	(Q)
$ 18 1,2-Dichloroethane-d4	65.00	7.761	(1.102)	509914	48.88	48.88
* 1,4-Difluorobenzene	114.00	8.296	(1.000)	1689042	50.00	
$ Toluene-d8	98.00	10.070	(0.858)	1724644	50.88	50.88
* 34 Chlorobenzene-d5	117.00	11.738	(1.000)	1198199	50.00	
$ 42 Bromofluorobenzene	95.00	13.042	(1.111)	789648	52.49	52.49

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/1.i/1960327b.b/119689.d

Date : 27-MAR-96 18:51

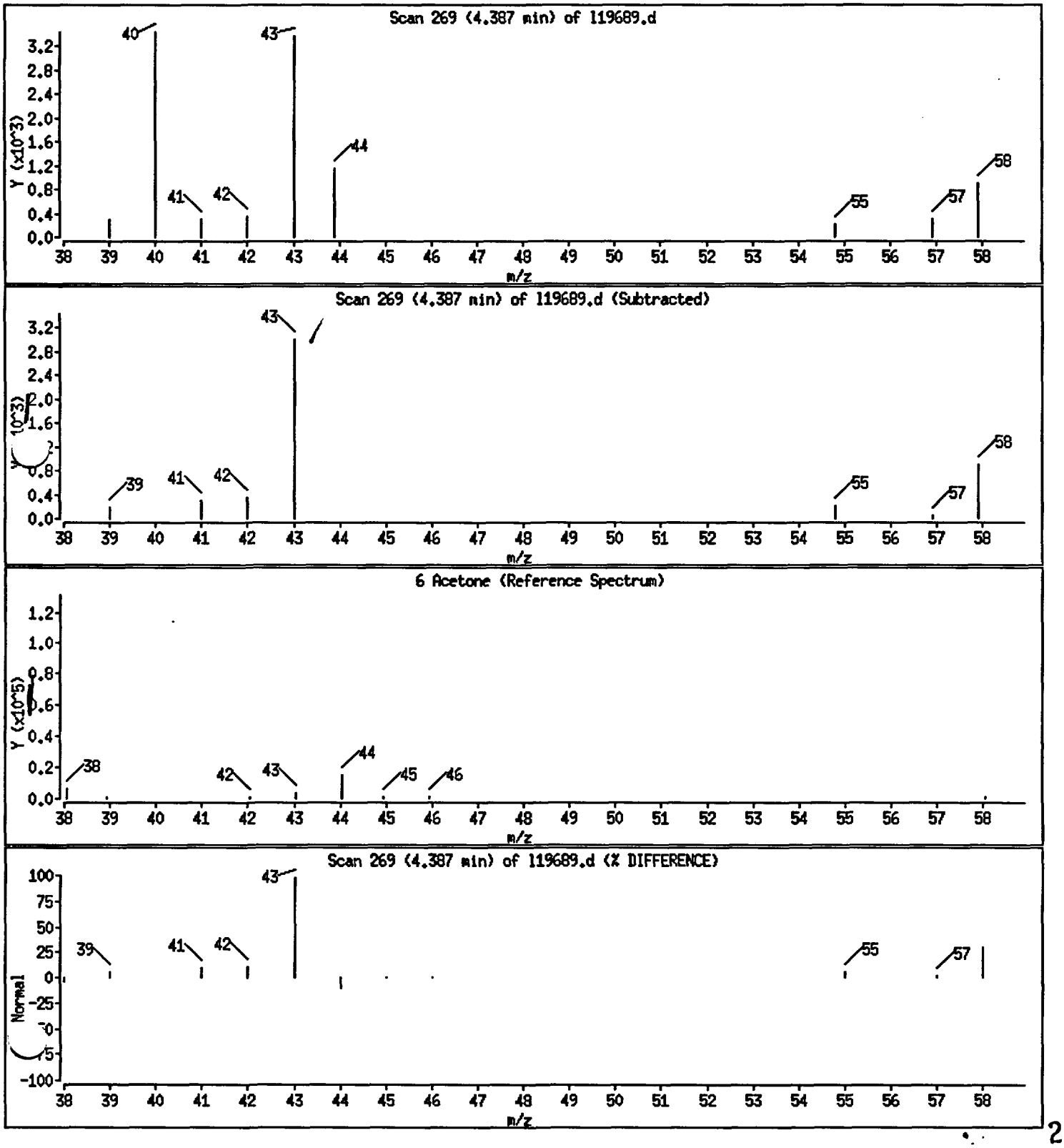
Instrument : 1.i

Sample ID : FEM97

Column phase : DB-624 Column diameter : 0.53

Volume Injected (uL) : 0.0

6 Acetone



1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEM98

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19690.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: not dec. _____ Date Analyzed: 03/27/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

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

Number TICs found: 5

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	2.116	44	J
2.		UNKNOWN ALCOHOL	4.763	7100	J
3.	108-20-3	Diisopropyl ether	6.076	120	NJ
4.		Pentanone, methyl-	9.261	6	J
5.		UNKNOWN	12.110	6	J
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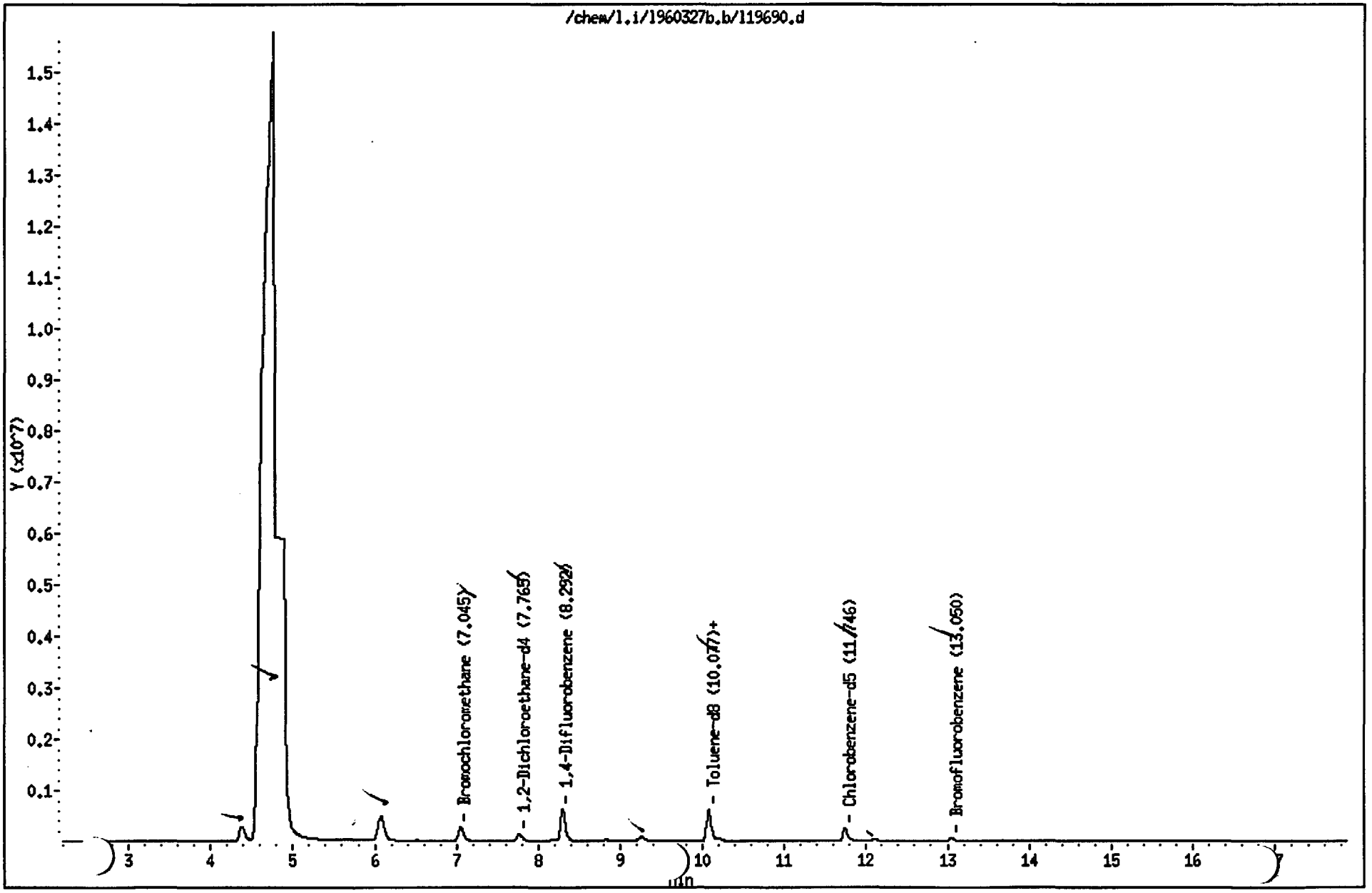
29.					
30.					

bag 4/5/96

Data File: /chem/1.i/1960327b.b/119690.d
Date : 27-MAR-96 19:18
Instrument : 1.i
Sample ID : FEM98
Column phase : DB-624
Volume Injected (uL) : 0.0

Column diameter : 0.53

OPERATOR: Linda



Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960327b.b/119690.d
Lab. Id. : 25005.02 Quant Type: ISTD
Inj Date : 27-MAR-96 19:18
Operator : LINDA Inst ID: l.i
Smp Info : FEM98
Misc Info : MS317**INST:L*24501*25005.02*5ML
Comment :
Method : /chem/l.i/1960327b.b/OLM3WAT.m
Meth Date : 27-Mar-1996 17:42
Cal Date : 27-MAR-96 17:15 Cal File: 119686.d
Als bottle: 7
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
6 Acetone	43.00	4.379	(0.621)	884814	636.05	636.05(A)
13 2-Butanone	43.00	6.508	(0.924)	4916	2.31	2.31(aQ)
* 14 Bromochloromethane	128.00	7.045	(1.000)	139451	50.00	(Q)
$ 1,2-Dichloroethane-d4	65.00	7.765	(1.102)	177579	40.18	40.18
* 1,4-Difluorobenzene	114.00	8.302	(1.000)	1110730	50.00	
~~26 4-Methyl-2-Pentanone~~	~~43.00~~	~~10.077~~	~~(0.858)~~	~~12681~~	~~5.89~~	~~5.89(aQ)~~ FP
$ 27 Toluene-d8	98.00	10.077	(0.858)	893491	103.59	103.59(R)
* 34 Chlorobenzene-d5	117.00	11.746	(1.000)	304921	50.00	
$ 42 Bromofluorobenzene	95.00	13.050	(1.111)	64742	16.91	16.91(R)

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

FP = FALSE POSITIVE DBJ 4/5/96

Data File: /chem/1.i/1960327b.b/119690.d

Date : 27-MAR-96 19:18

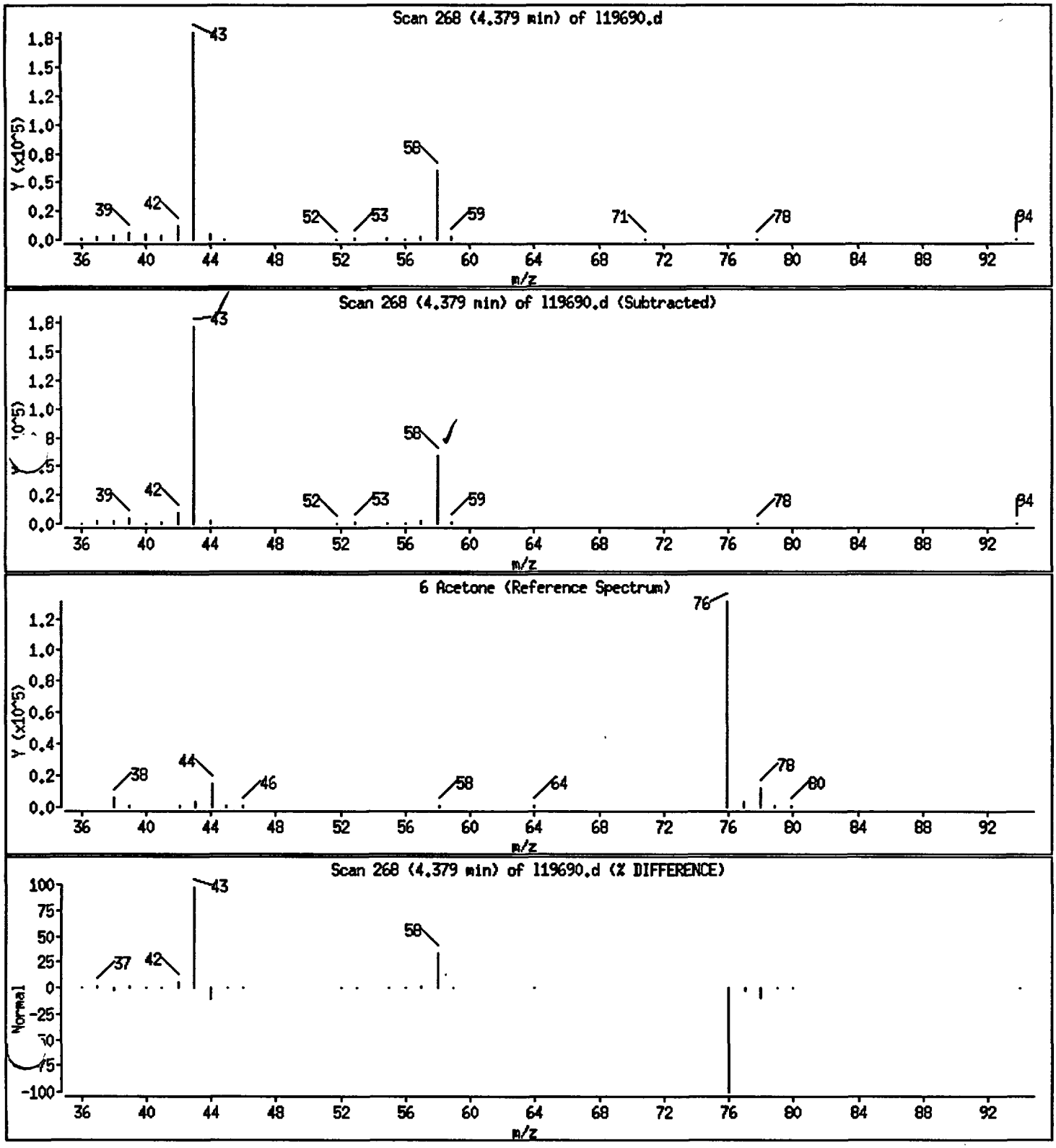
Instrument : 1.i

Sample ID : FEM98

Column phase : DB-624 Column diameter : 0.53

Volume Injected (uL) : 0.0

6 Acetone



Southwest Laboratory of Oklahoma

Unknown Compounds Quantitation Report

Data file : /chem/1.i/1960327b.b/119690.d
Lab. Id. : 25005.02
Inj Date : 27-MAR-96 19:18
Operator : LINDA Inst ID: 1.i
Smp Info : FEM98
Misc Info : MS317**INST:L*24501*25005.02*5ML
Comment :
Method : /chem/1.i/1960327b.b/OLM3WAT.m
Meth Date : 27-Mar-1996 17:42
Cal Date : 27-MAR-96 17:15 Cal File: 119686.d
Als bottle: 7
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD	RT	AREA	AMOUNT
* 14 Bromochloromethane	7.045	1154389	50.000
* 21 1,4-Difluorobenzene	8.302	2704007	50.000
* 34 Chlorobenzene-d5	11.746	968812	50.000

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
Unknown					CAS #:		
~~1.934~~	~~1348743~~	~~58.41~~	~~0~~	air	~~0~~		~~14~~
Propene					CAS #: 115-07-1		
2.116	1023454	44.32	90	NBS75K.l	62258		14
meso-2,3-Butanediol					CAS #: 5341-95-7		
4.763	163424984	7078.41	38	NBS75K.l	914		14
Diisopropyl ether					CAS #: 108-20-3		
6.076	2759231	119.51	83	NBS75K.l	1783		14
3-Pentanone, 2-methyl-					CAS #: 565-69-5		
9.261	353647	6.53	80	NBS75K.l	63398		21
2-Ethoxycarbonyl-2-methyl-4,7-dihydro-1,					CAS #: 0-00-0		
12.110	114873	5.92	30	NBS75K.l	19333		34

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

DBJ
4/5/94

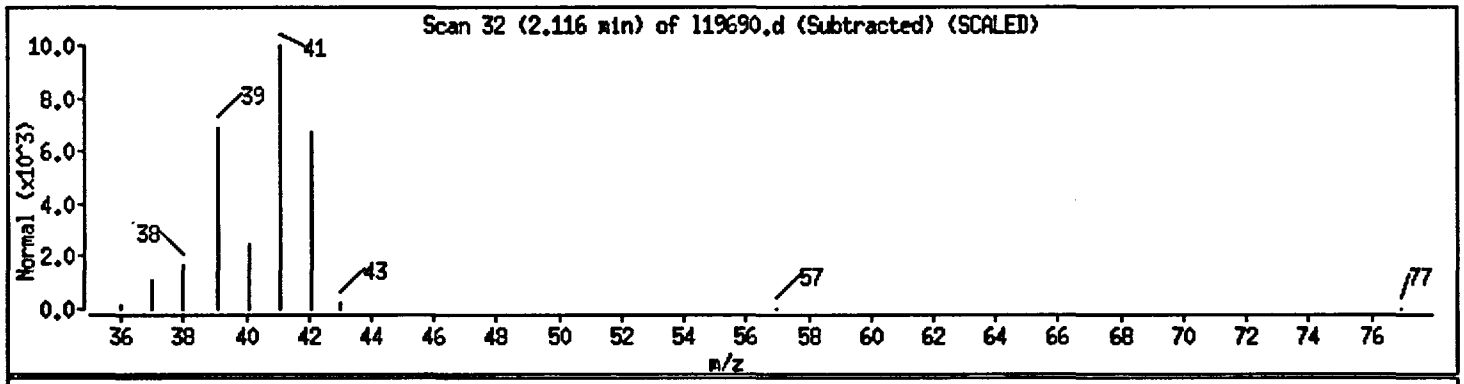
Data File: /chem/1.i/1960327b.b/119690.d
Date : 27-MAR-96 19:18
Instrument : 1.i
Sample ID : FEM98
Column phase : DB-624
Volume Injected (uL) : 0.0

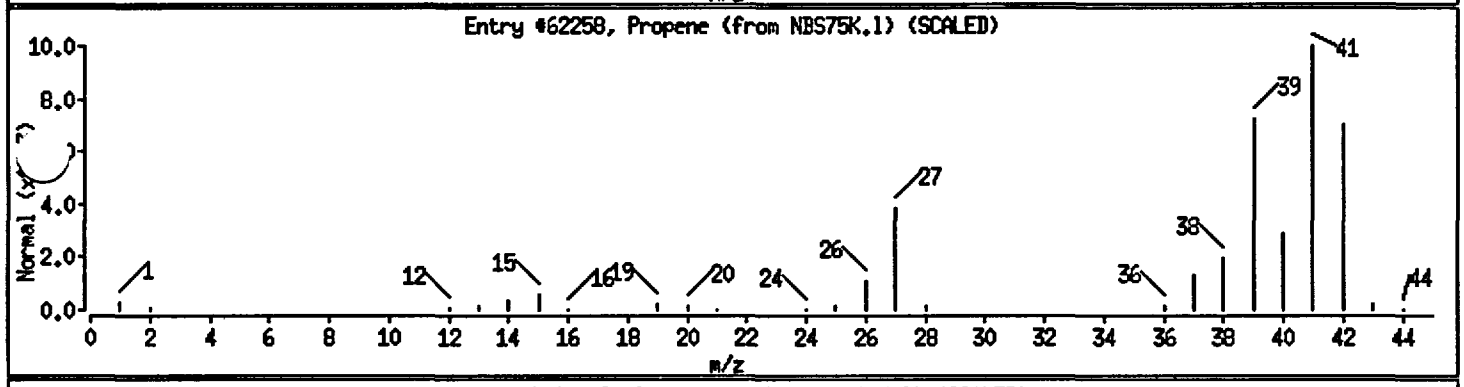
Column diameter : 0.53

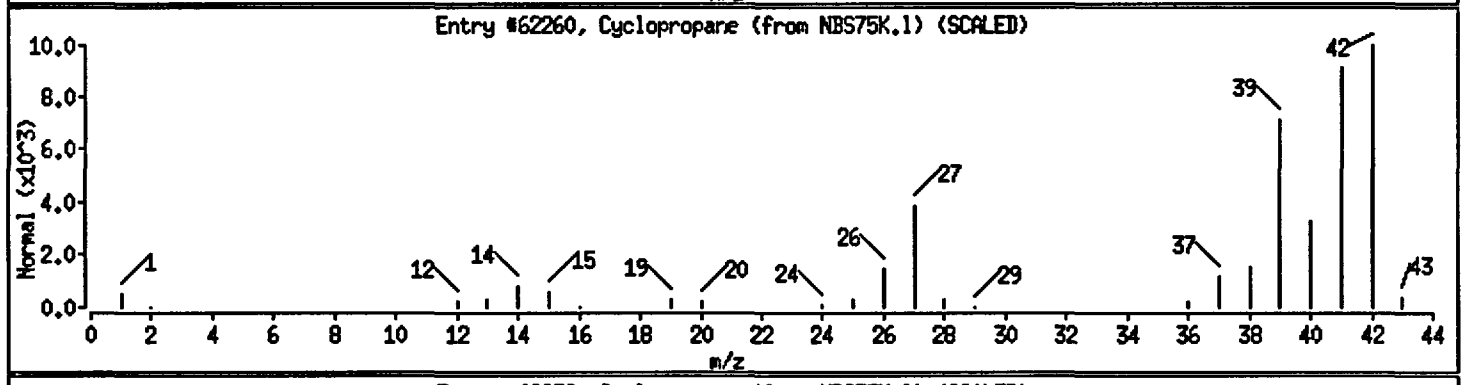
UNKNOWN

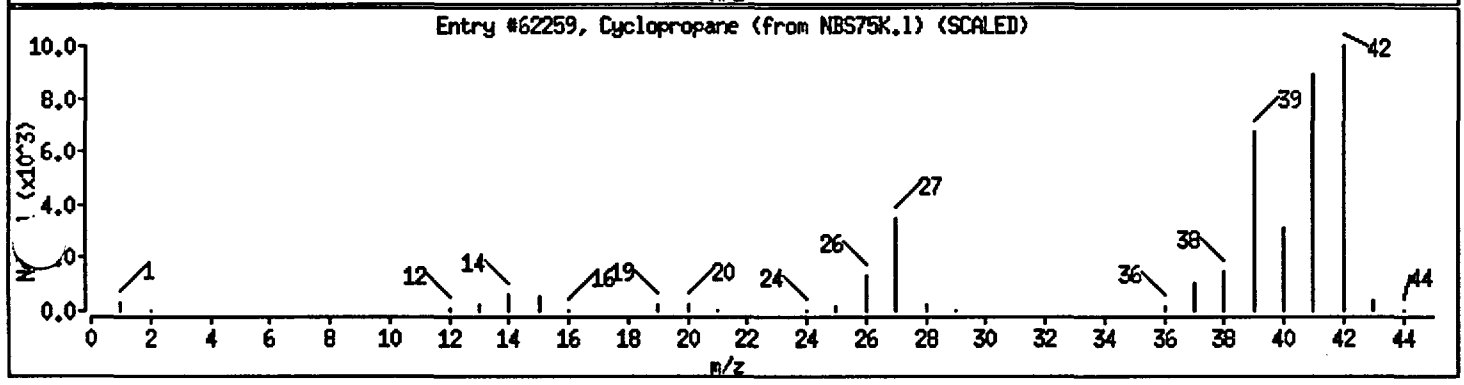
SBJ
4/5/96

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Propene	115-07-1	NBS75K.1	62258	90
Cyclopropane	75-19-4	NBS75K.1	62260	78
Cyclopropane	75-19-4	NBS75K.1	62259	78







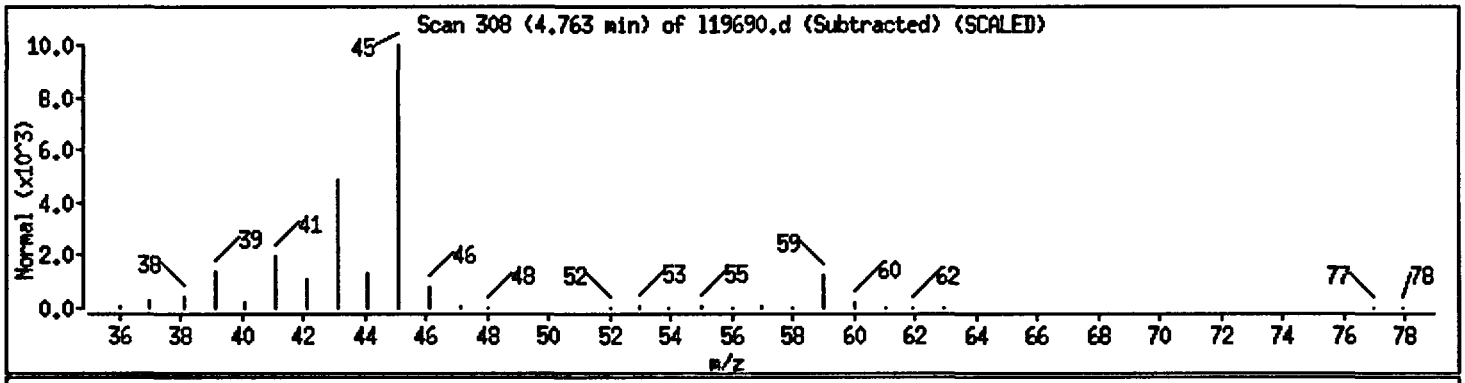


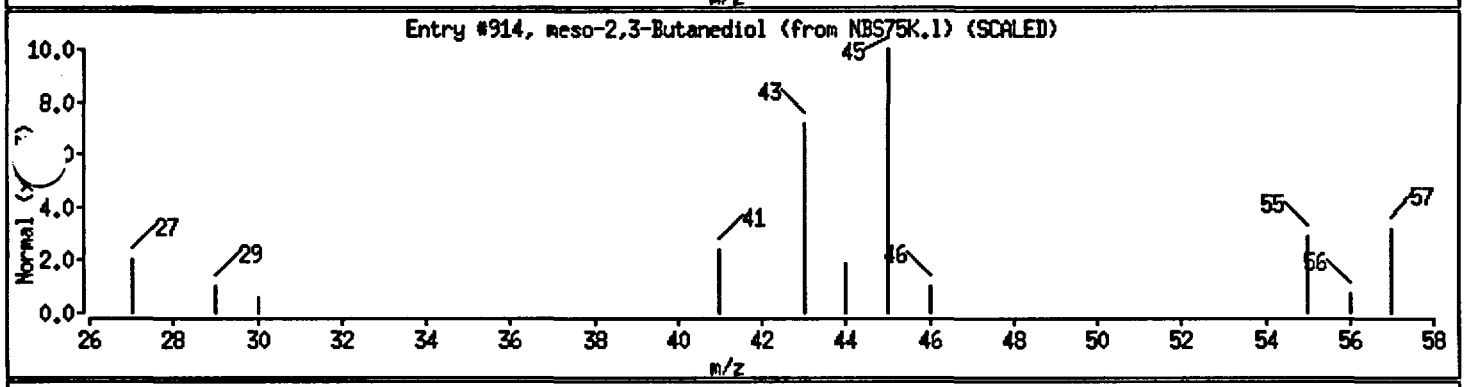
Data File: /chem/1.i/1960327b.b/119690.d
Date : 27-MAR-96 19:18
Instrument : 1.i
Sample ID : FEM98
Column phase : DB-624
Volume Injected (uL) : 0.0

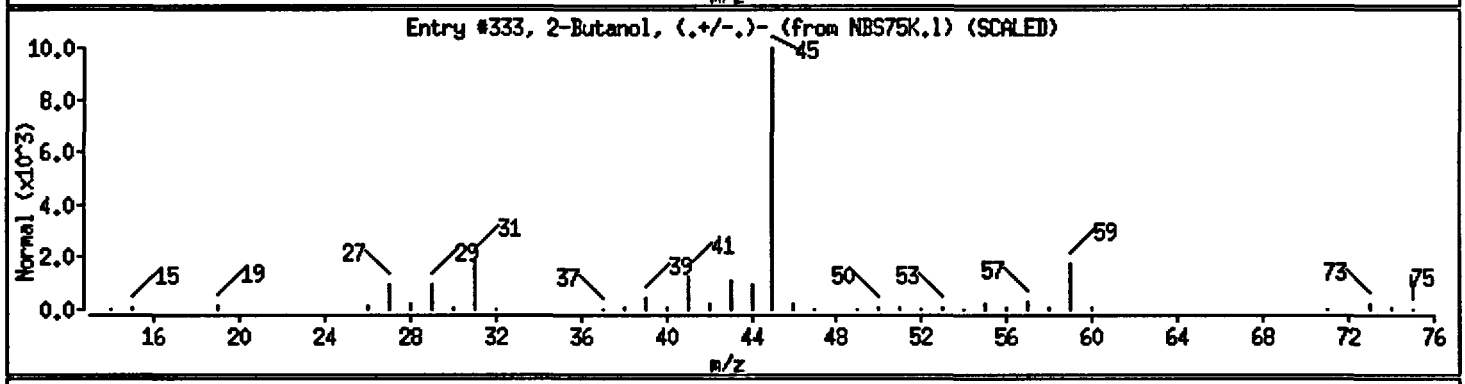
Column diameter : 0.53

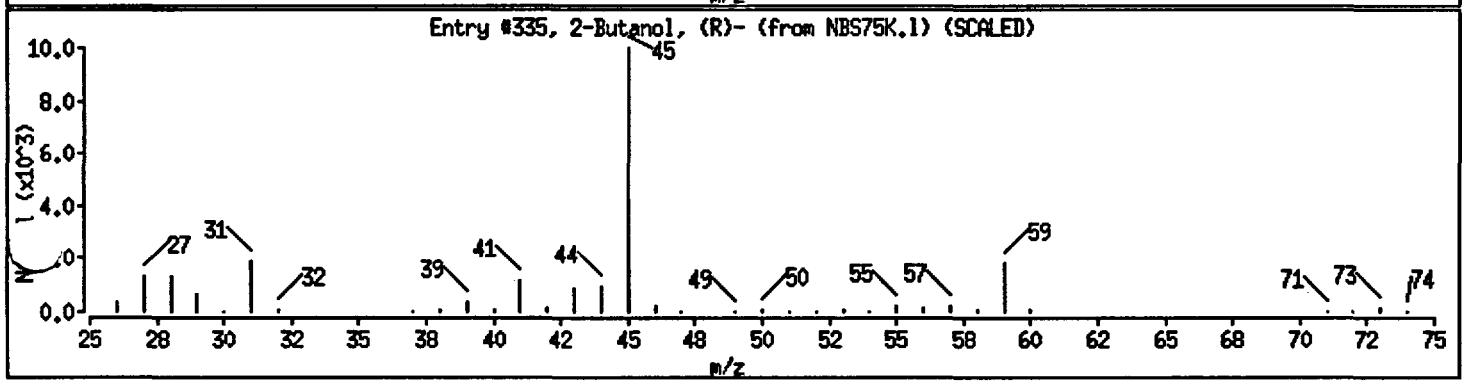
UNKNOWN alcohol
SBJ
4/5/96

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
meso-2,3-Butanediol	5341-95-7	NBS75K.1	914	38
2-Butanol, (.+/-.)-	15892-23-6	NBS75K.1	333	36
2-Butanol, (R)-	14898-79-4	NBS75K.1	335	36





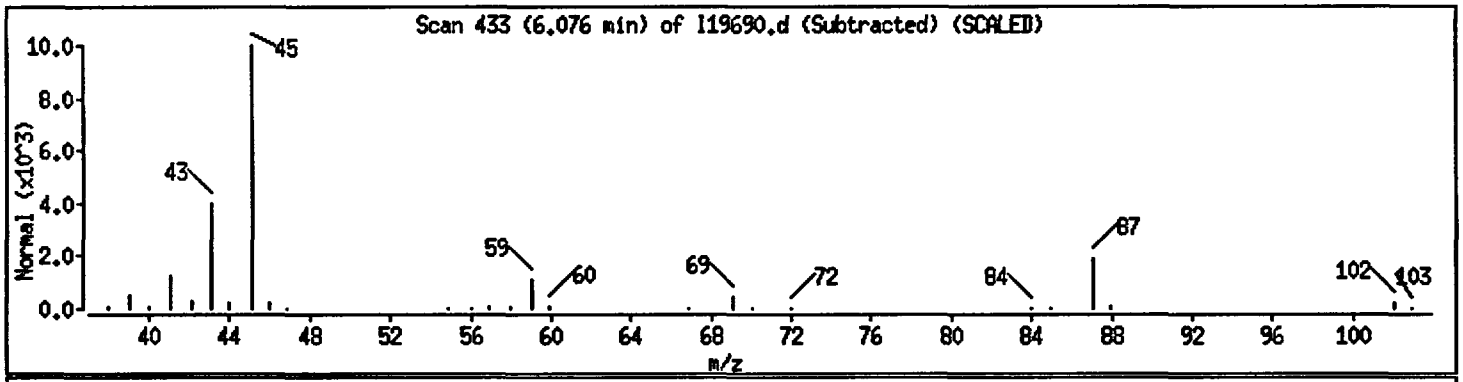


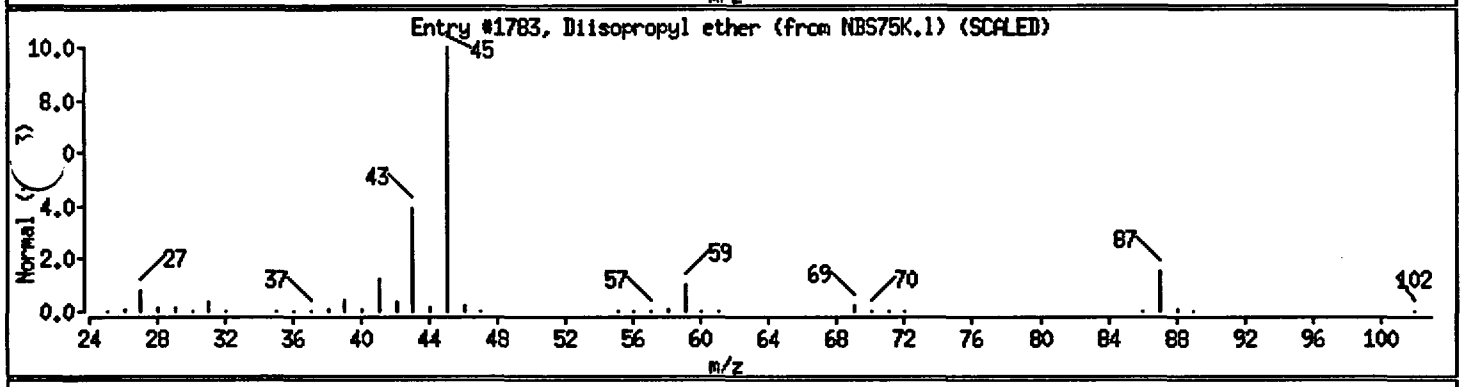


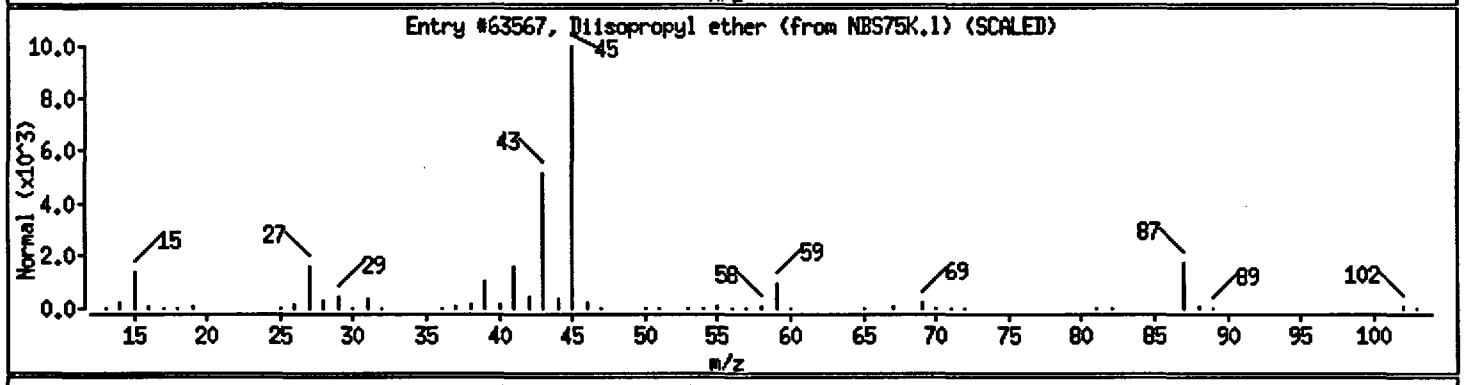
Data File: /chem/1.i/1960327b.b/119690.d
Date : 27-MAR-96 19:18
Instrument : 1.i
Sample ID : FEM98
Column phase : DB-624 Column diameter : 0.53
Volume Injected (uL) : 0.0

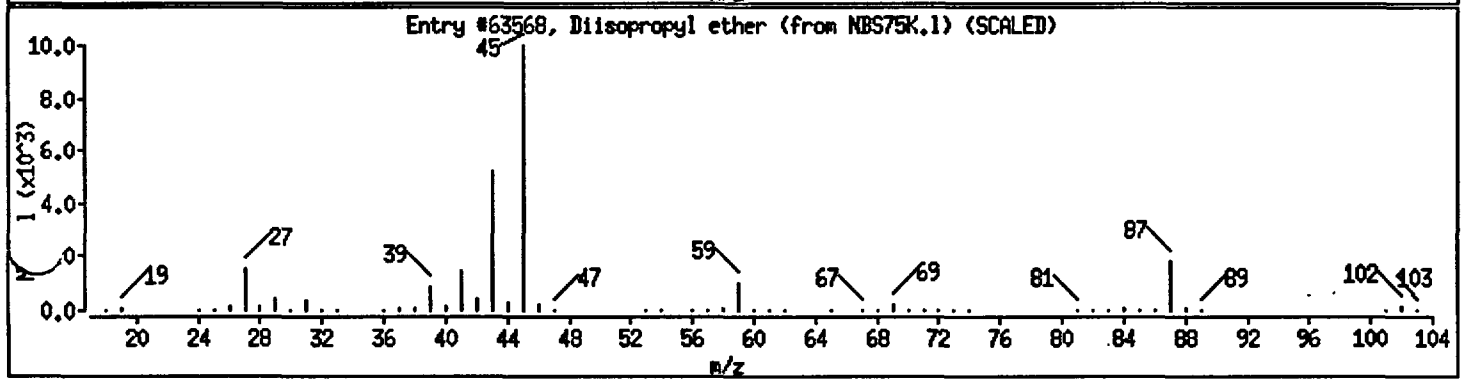
Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
✓ Diisopropyl ether	108-20-3	NBS75K.1	1783	83
Diisopropyl ether	108-20-3	NBS75K.1	63567	78
Diisopropyl ether	108-20-3	NBS75K.1	63568	74

DBJ 4/5/94



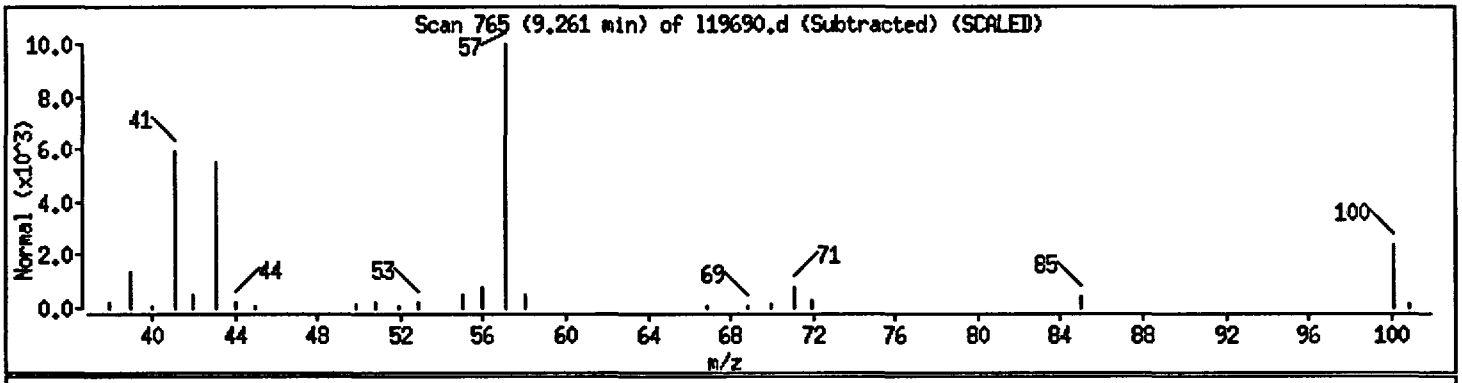


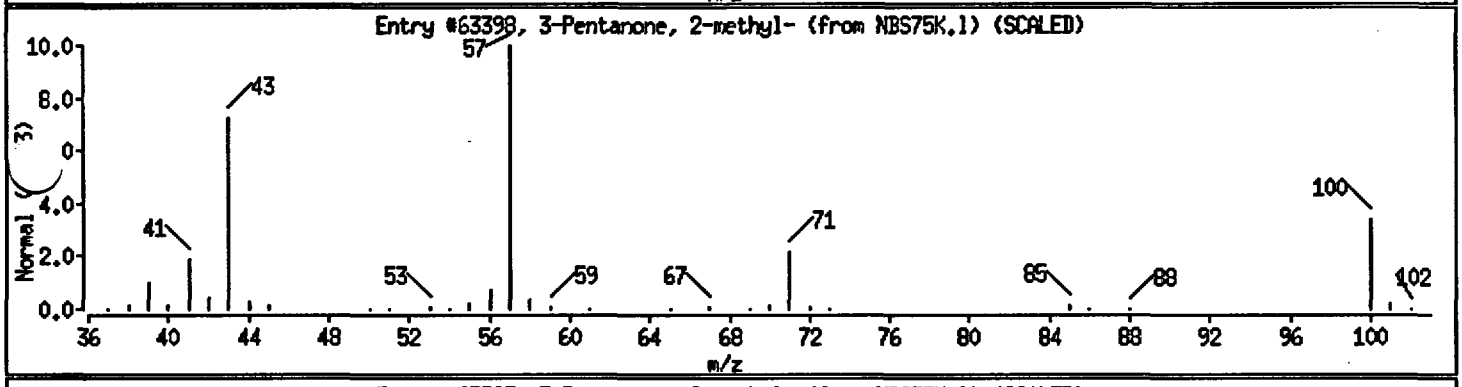


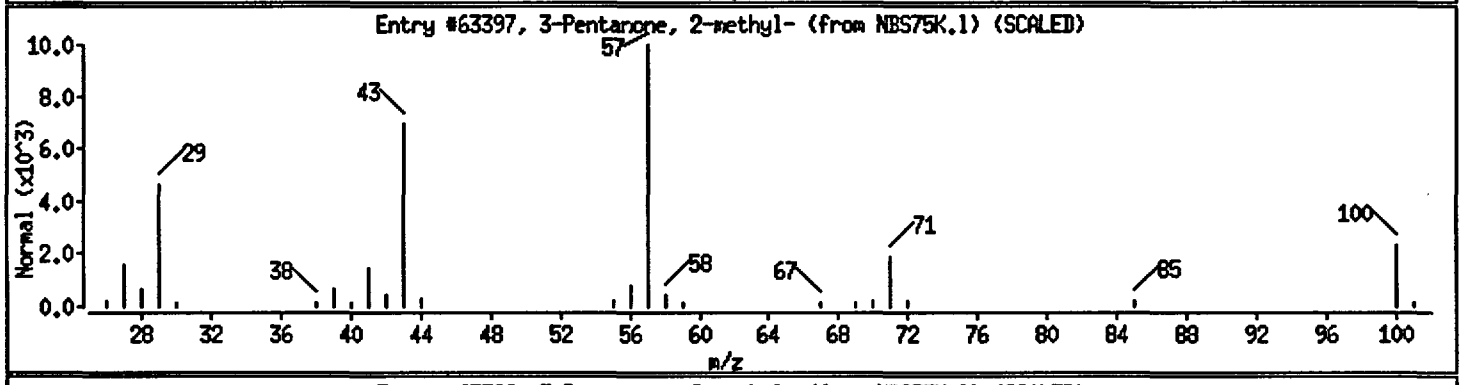


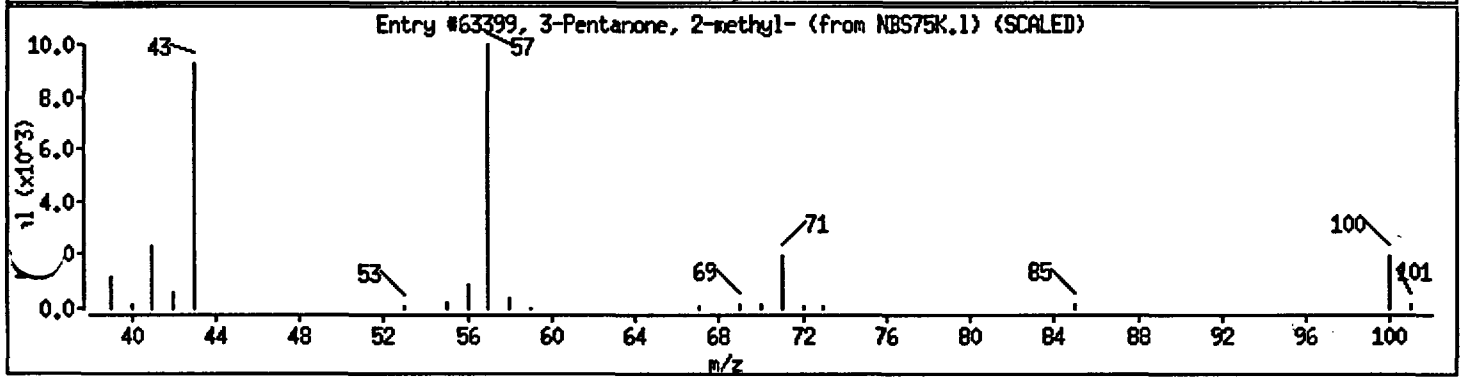
Data File: /chem/1.i/1960327b.b/119690.d
Date : 27-MAR-96 19:18
Instrument : 1.i
Sample ID : FEM98
Column phase : DB-624 Column diameter : 0.53
Volume Injected (uL) : 0.0

Library Search Compound Match		CAS Number	Library	Lib Entry	Quality
~~3~~-Pentanone, ~~2~~-methyl-	DBJ	~~565-69-5~~	NBS75K.1	63398	80
3-Pentanone, 2-methyl-	4/5/94	565-69-5	NBS75K.1	63397	80
3-Pentanone, 2-methyl-		565-69-5	NBS75K.1	63399	72







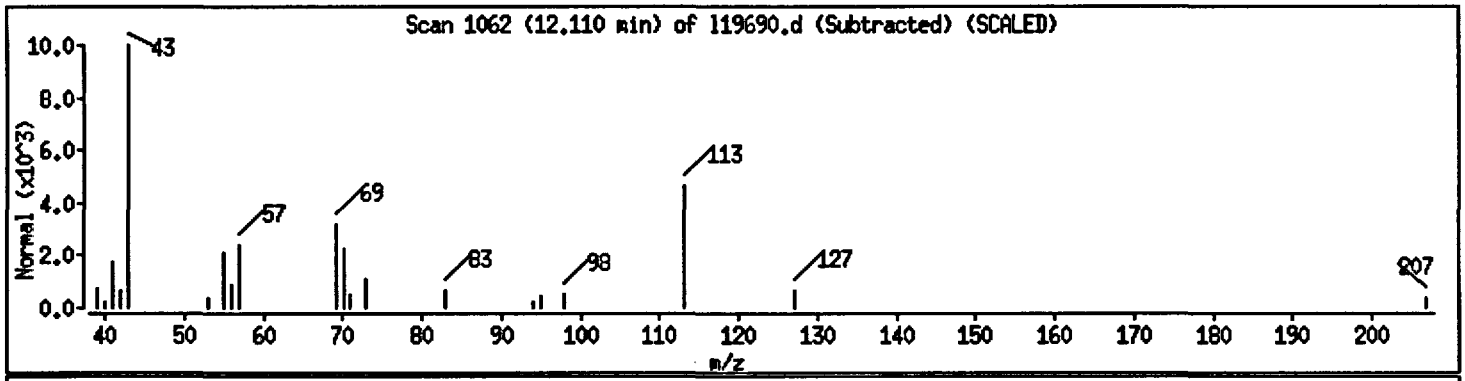


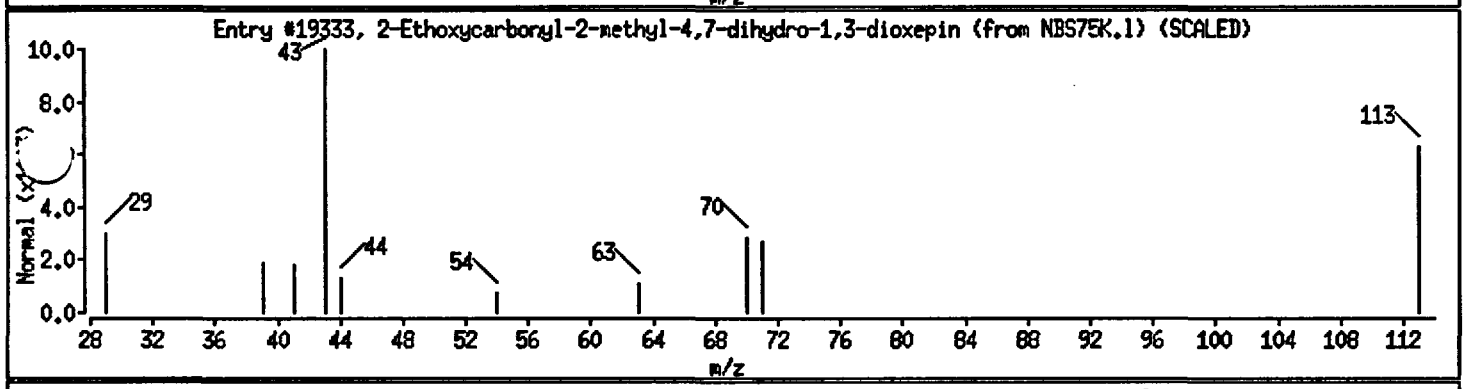
Data File: /chem/1.i/1960327b.b/119690.d
Date : 27-MAR-96 19:18
Instrument : 1.i
Sample ID : FEM98
Column phase : DB-624 Column diameter : 0.53
Volume Injected (uL) : 0.0

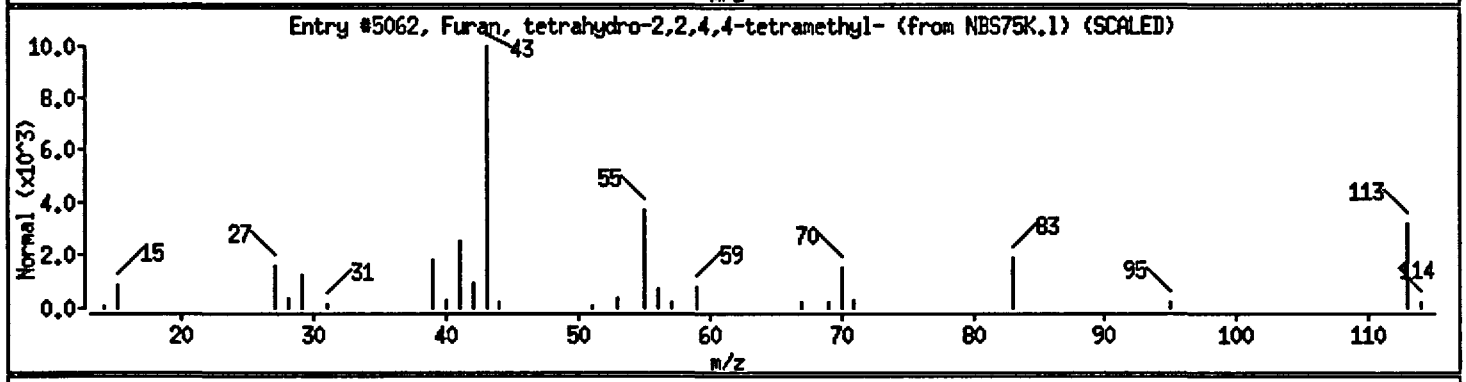
UNKNOWN

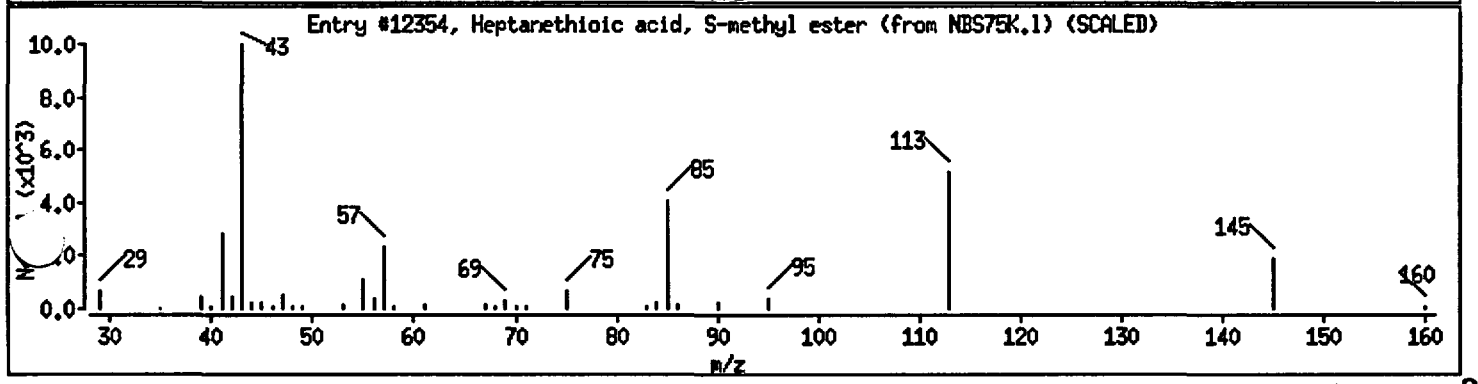
839
4/5/96

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Ethoxycarbonyl-2-methyl-4,7-dihydro-1,	0-00-0	NBS75K.1	19333	30
Furan, tetrahydro-2,2,4,4-tetramethyl-	3358-28-9	NBS75K.1	5062	25
Heptanethioic acid, S-methyl ester	2432-82-8	NBS75K.1	12354	23









1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEM98DL

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02DL

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19712.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: not dec. _____ Date Analyzed: 03/28/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 5.0

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

Number TICs found: 3

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	2.135	110	JD
2. 67-63-0	Isopropyl Alcohol	4.800	31000	NJD
3. 108-20-3	Diisopropyl ether	6.105	130	NJD
4.				
5.				
6.				
7.				
8.				
9.				
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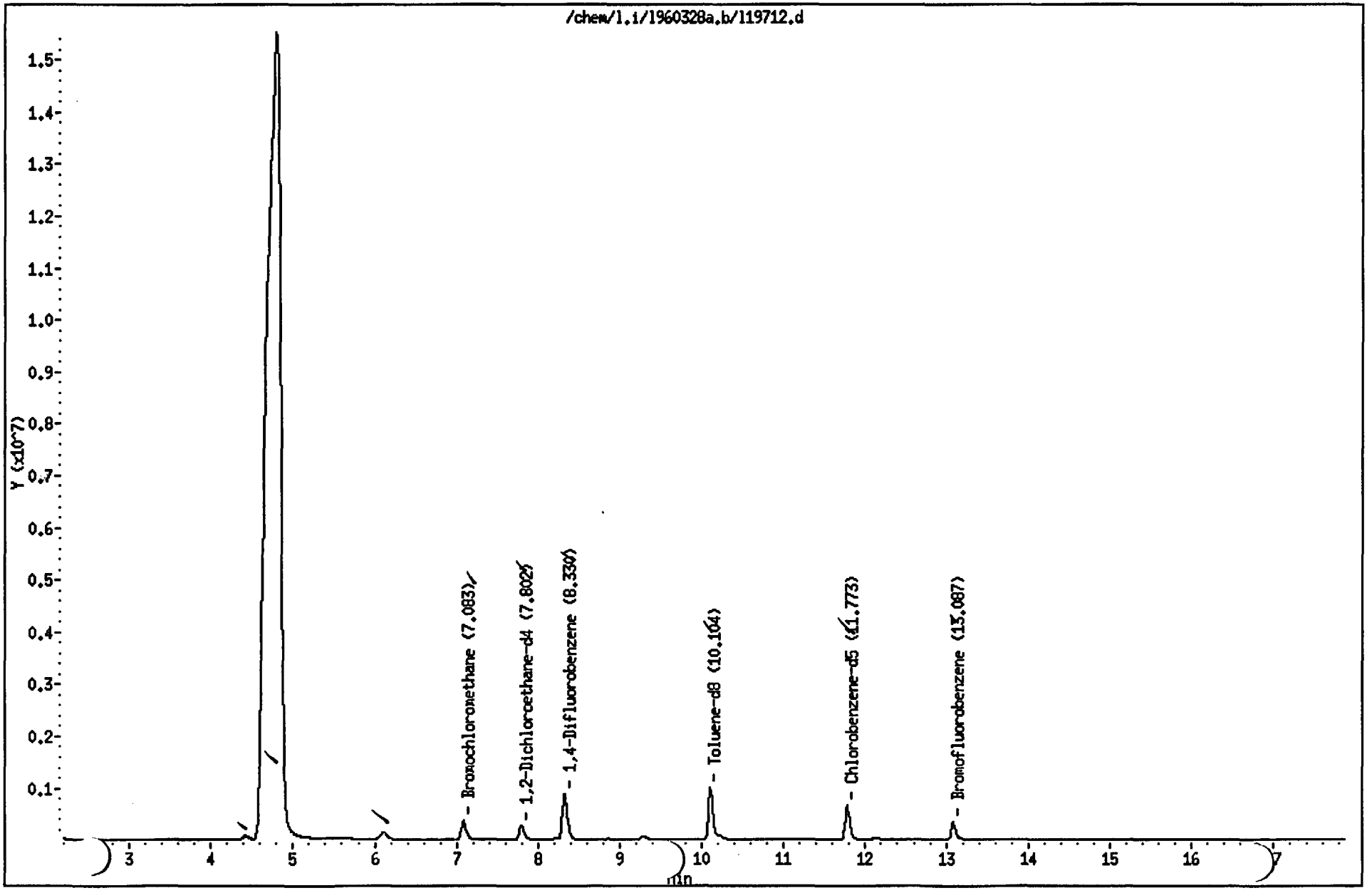
28.				
29.				
30.				

Data File: /chem/1.i/1960328a.b/119712.d
Date : 28-MAR-1996 12:33
Instrument : 1.i
Sample ID : FEM98DL
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



42

Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960328a.b/l19712.d
Lab. Id. : 25005.02DL Quant Type: ISTD
Inj Date : 28-MAR-1996 12:33
Operator : LINDA Inst ID: l.i
Smp Info : FEM98DL
Misc Info : MS317**INST:L*24501*25005.02DL*1ML
Comment :
Method : /chem/l.i/1960328a.b/OLM3WAT.m
Meth Date : 28-Mar-1996 10:43
Cal Date : 28-MAR-96 10:07 Cal File: l19708.d
Als bottle: 7
Dil Factor: 5.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
6 Acetone	43.00	4.416	(0.624)	222130	102.31	511.57
* 14 Bromochloromethane	128.00	7.083	(1.000)	187367	50.00	
$ 18 1,2-Dichloroethane-d4	65.00	7.802	(1.102)	358033	59.55	59.55(R)
* 1,4-Difluorobenzene	114.00	8.330	(1.000)	1566020	50.00	
$ Toluene-d8	98.00	10.104	(0.858)	1492451	67.46	67.46(R)
* 34 Chlorobenzene-d5	117.00	11.773	(1.000)	797905	50.00	
$ 42 Bromofluorobenzene	95.00	13.087	(1.112)	321293	31.07	31.07(aR)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Data File: /chem/1.i/1960327b.b/119690.d

Date : 27-MAR-96 19:18

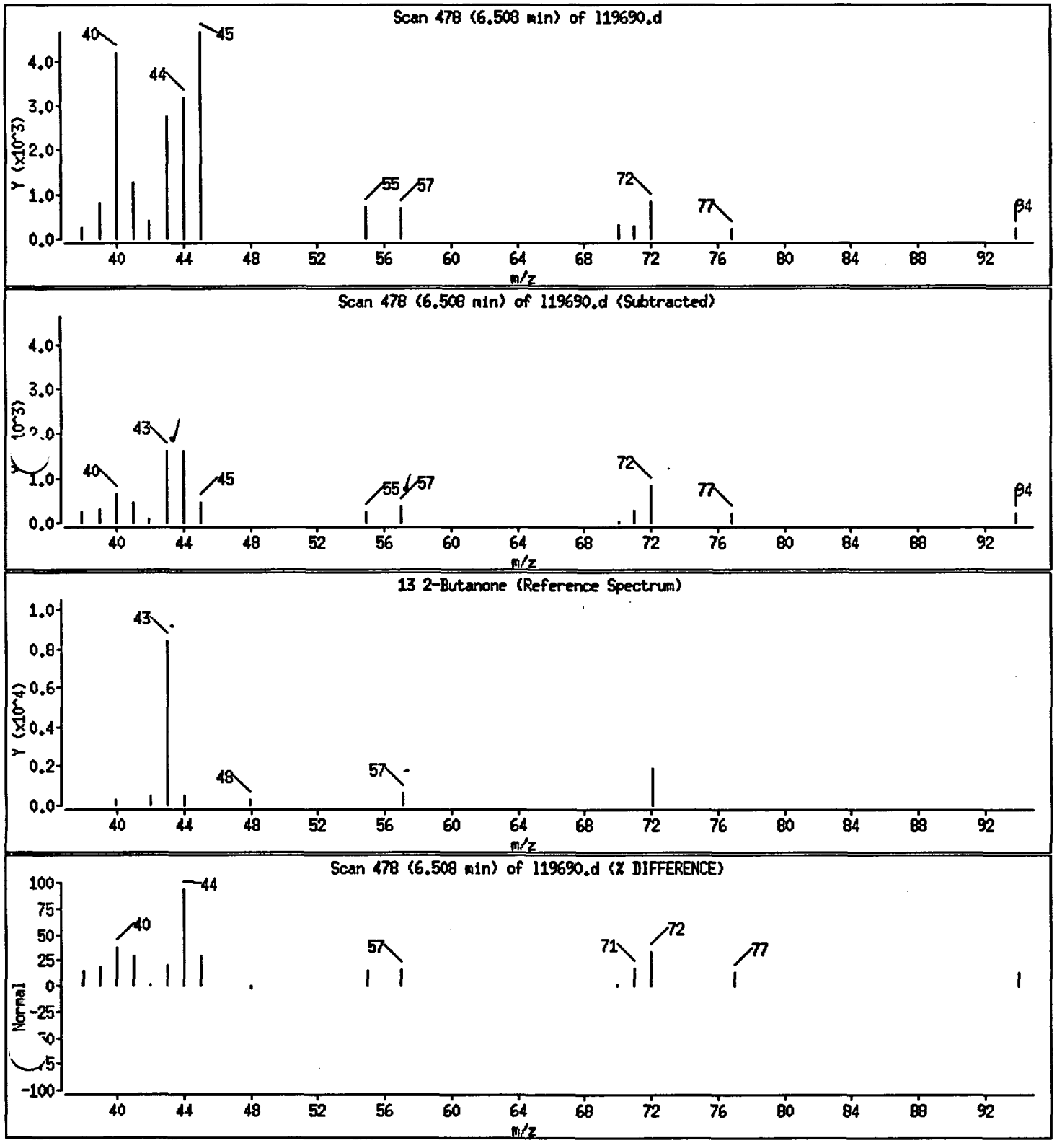
Instrument : 1.i

Sample ID : FEM98

Column phase : DB-624 Column diameter : 0.53

Volume Injected (uL) : 0.0

13 2-Butanone



Data File: /chem/l.i/1960328a.b/119712.d

Date : 28-MAR-1996 12:33

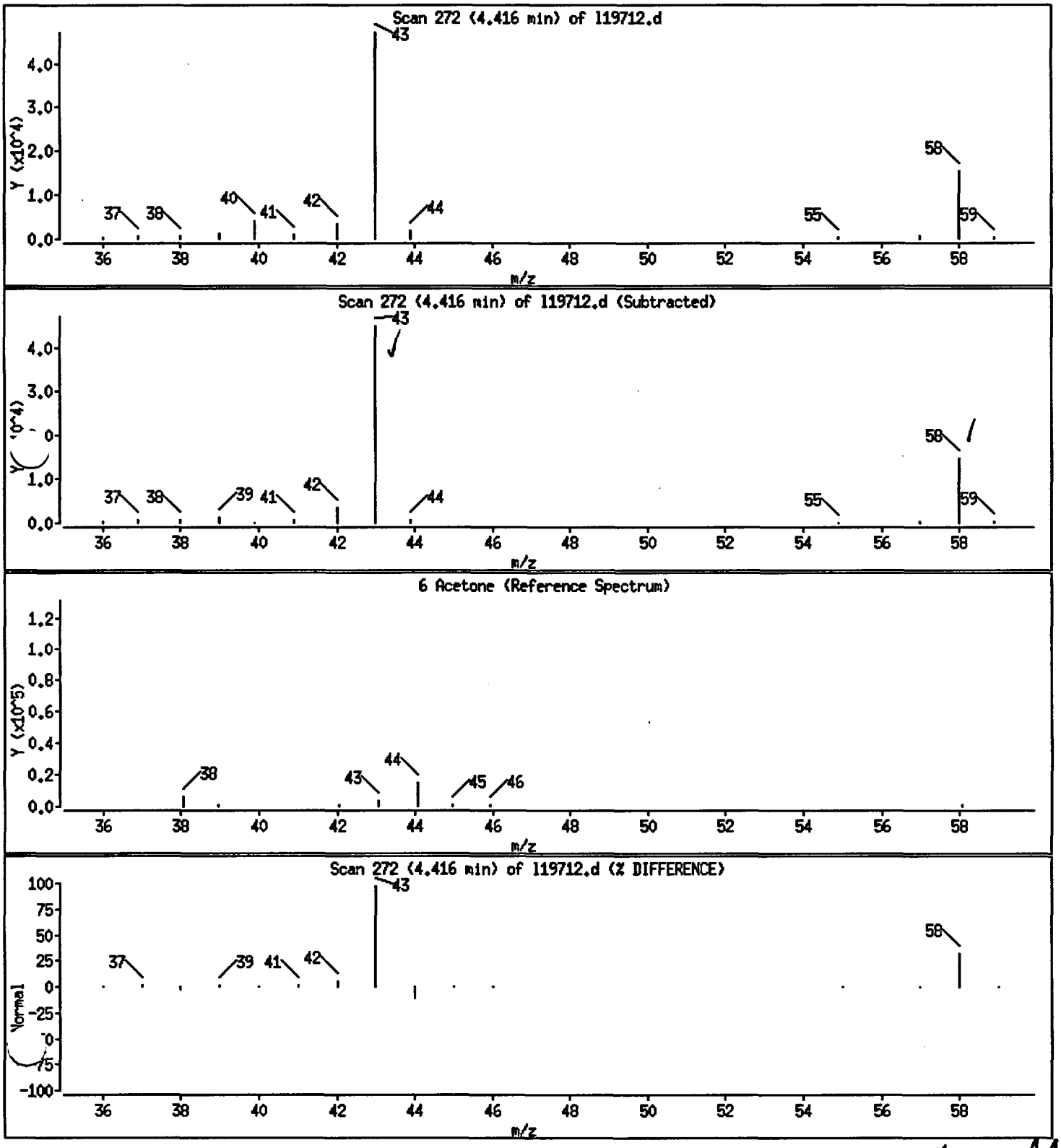
Instrument : l.i

Sample ID : FEM98DL

Column phase : DB-624 Column diameter : 0.53

Volume Injected (uL) : 0.0

6 Acetone



Southwest Laboratory of Oklahoma

Unknown Compounds Quantitation Report

Data file : /chem/l.i/1960328a.b/119712.d
Lab. Id. : 25005.02DL
Inj Date : 28-MAR-1996 12:33
Operator : LINDA Inst ID: l.i
Smp Info : FEM98DL
Misc Info : MS317**INST:L*24501*25005.02DL*1ML
Comment :
Method : /chem/l.i/1960328a.b/OLM3WAT.m
Meth Date : 28-Mar-1996 10:43
Cal Date : 28-MAR-96 10:07 Cal File: 119708.d
Als bottle: 7
Dil Factor: 5.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD	RT	AREA	AMOUNT
* 14 Bromochloromethane	7.083	1480565	50.000

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
Pinene					CAS #: 115-07-1		
2.135	675313	114.03	90	NBS75K.l	62258		14
2-Butanol, (.+/-.)-					CAS #: 15892-23-6		
4.800	184467286	31148.12	36	NBS75K.l	333		14
Diisopropyl ether					CAS #: 108-20-3		
6.105	756802	127.78	83	NBS75K.l	1783		14

QC Flag Legend

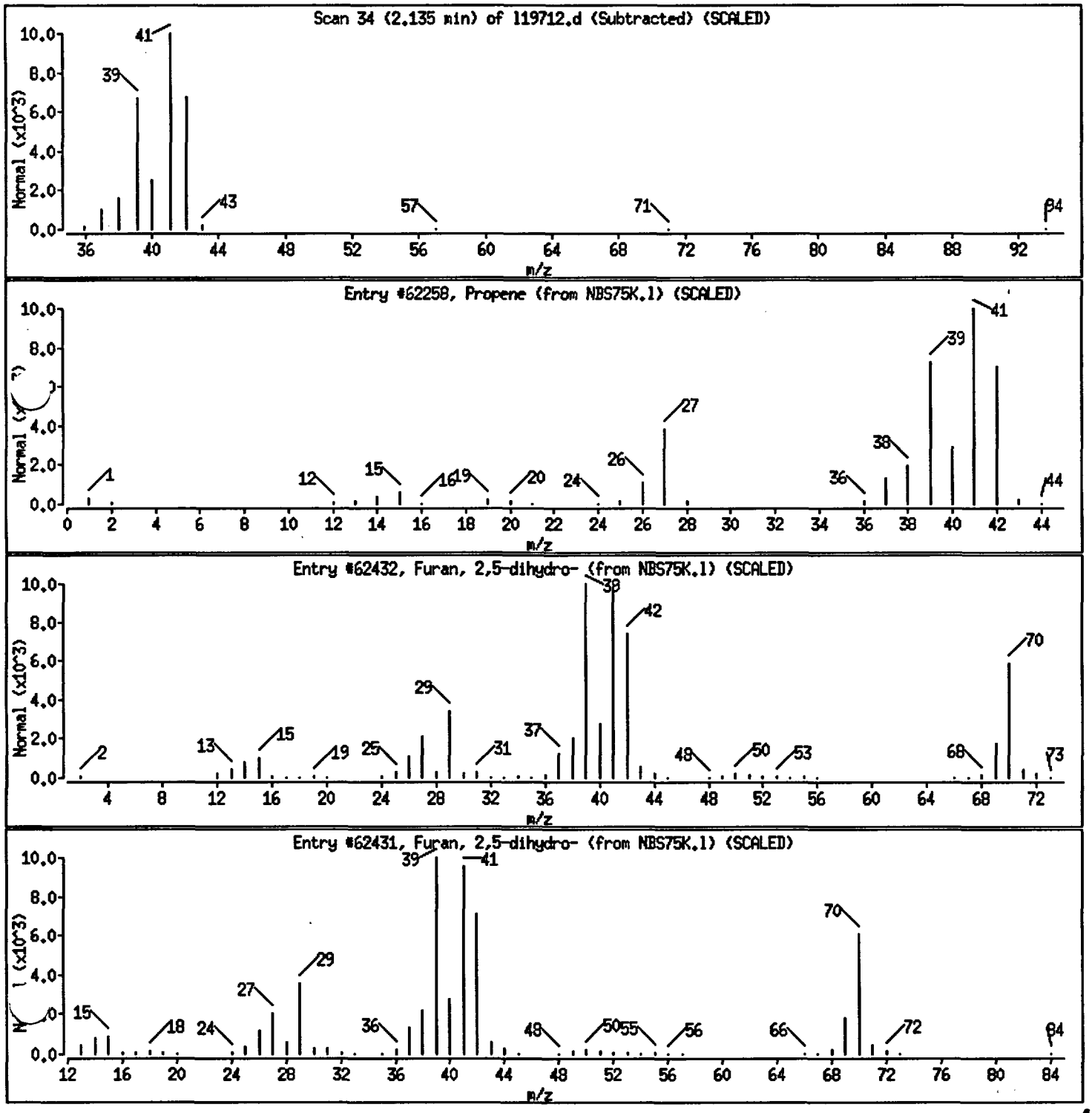
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.

Data File: /chem/1.i/1960328a.b/119712.d
Date : 28-MAR-1996 12:33
Instrument : 1.i
Sample ID : FEM98DL
Column phase : DB-624 Column diameter : 0.53
Volume Injected (uL) : 0.0

UNKNOWN

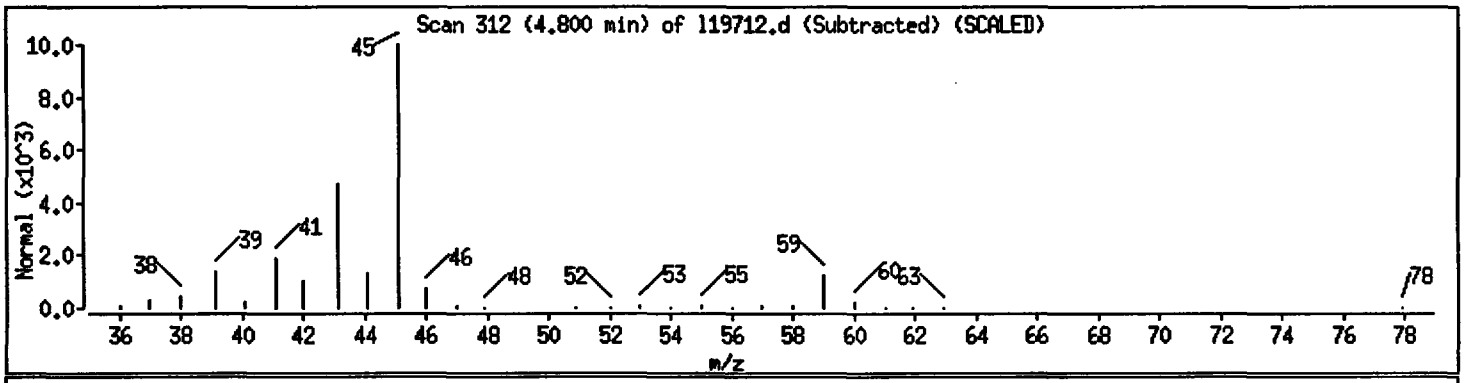
SBG 4/5/96

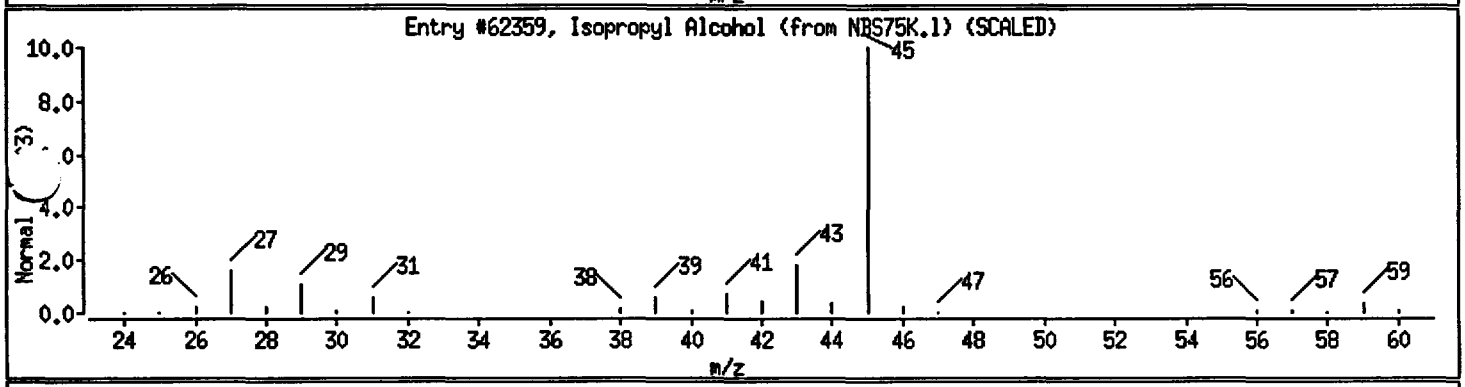
Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Propene	115-07-1	NBS75K.1	62258	90
Furan, 2,5-dihydro-	1708-29-8	NBS75K.1	62432	78
Furan, 2,5-dihydro-	1708-29-8	NBS75K.1	62431	78

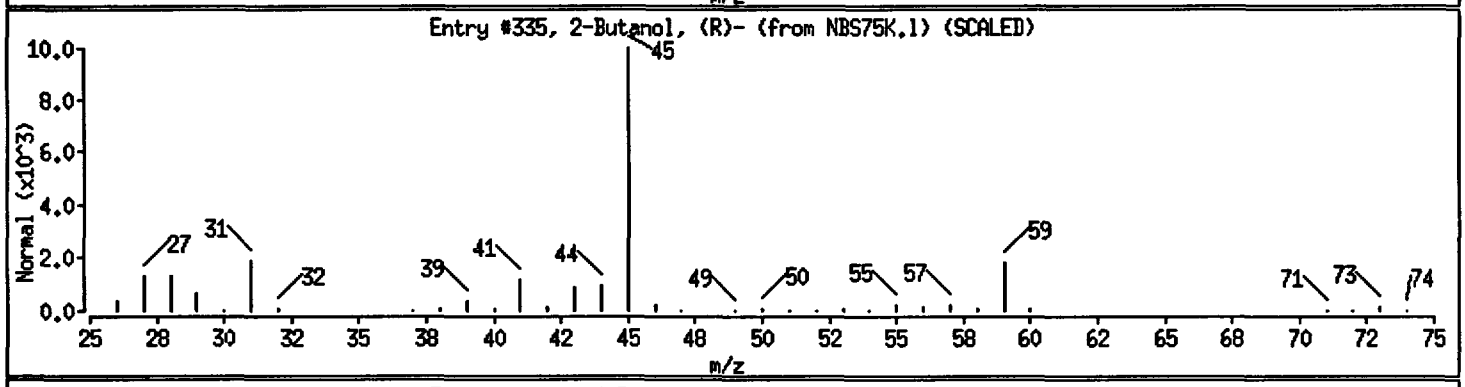


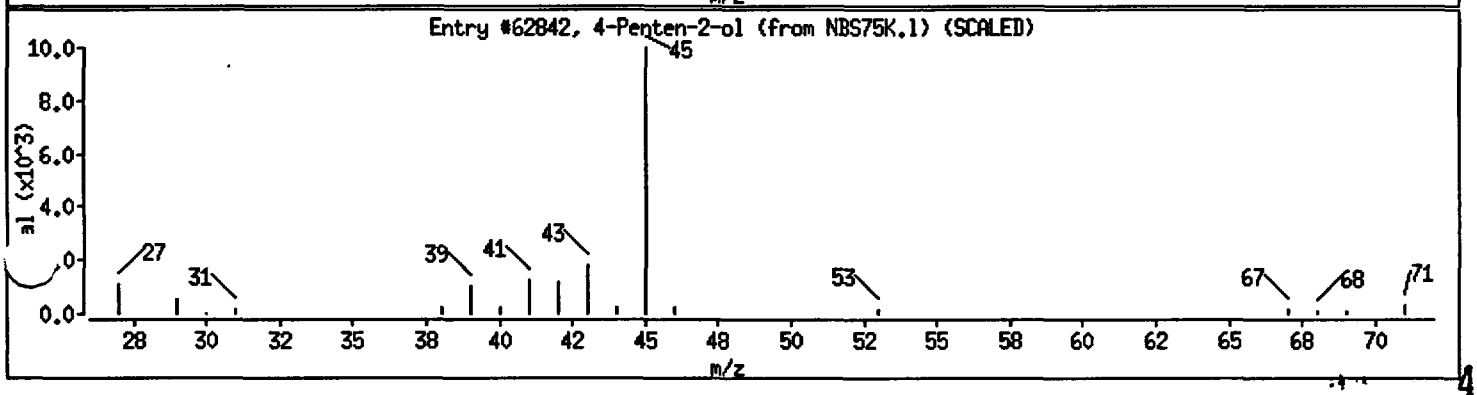
Data File: /chem/1.i/1960328a.b/119712.d
Date : 28-MAR-1996 12:33
Instrument : 1.i
Sample ID : FEM98DL
Column phase : DB-624 Column diameter : 0.53
Volume Injected (uL) : 0.0

Library Search Compound Match		CAS Number	Library	Lib Entry	Quality
Isopropyl Alcohol	DBJ 4/5/96	67-63-0	NBS75K.1	62359	22
2-Butanol, (R)-		14898-79-4	NBS75K.1	335	36
4-Penten-2-ol		625-31-0	NBS75K.1	62842	34



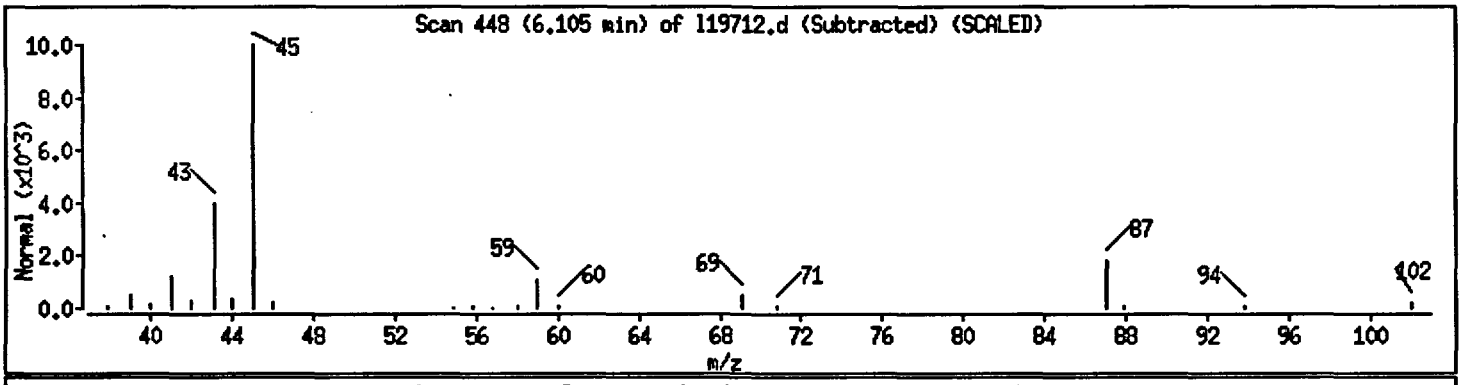


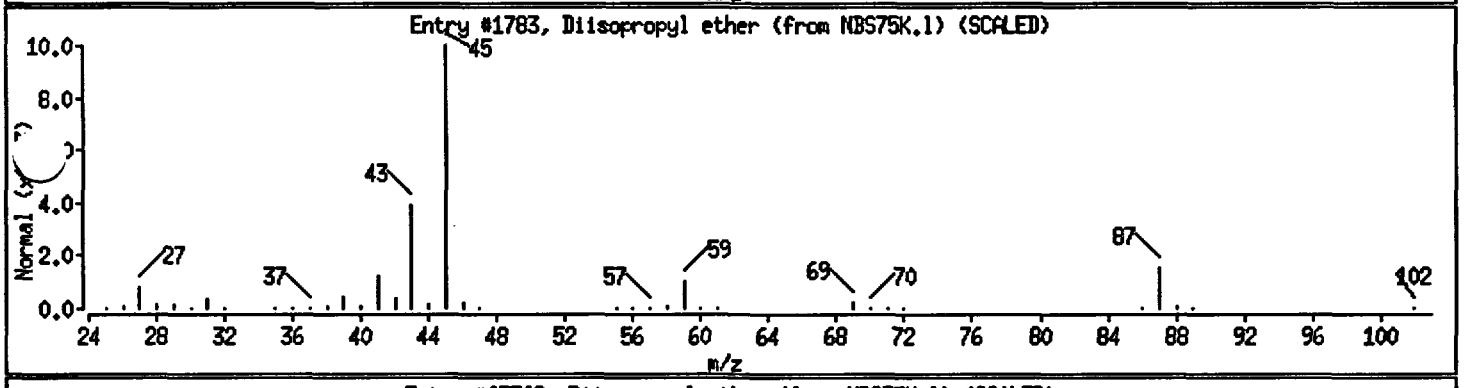


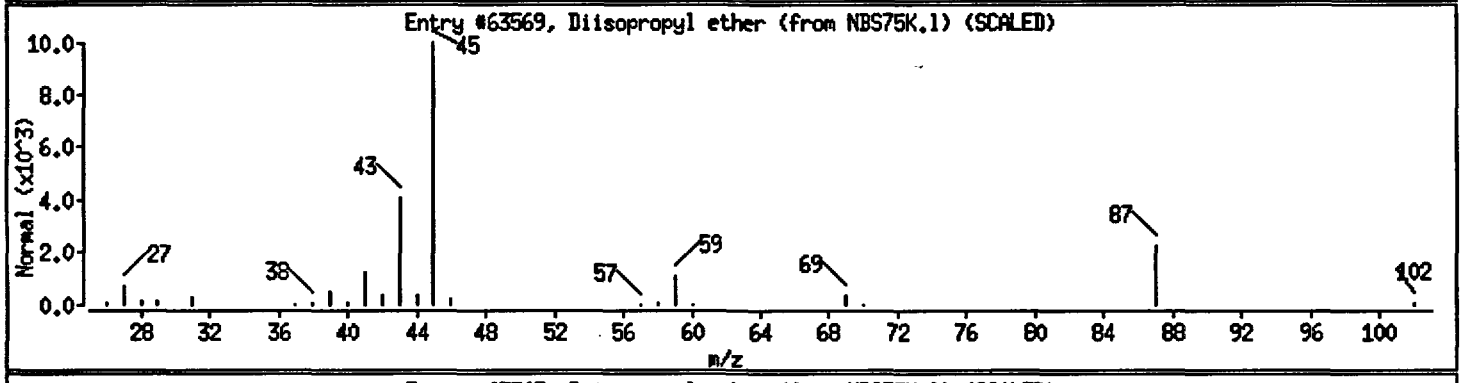


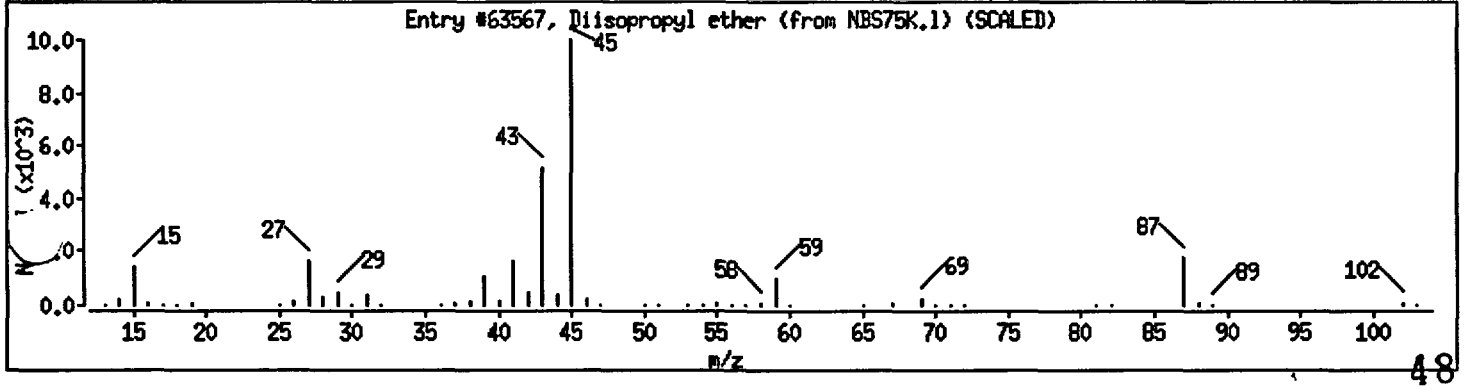
Data File: /chem/1.i/1960328a.b/119712.d
Date : 28-MAR-1996 12:33
Instrument : 1.i
Sample ID : FEM98DL
Column phase : DB-624 Column diameter : 0.53
Volume Injected (uL) : 0.0

Library Search Compound Match		CAS Number	Library	Lib Entry	Quality
✓Diisopropyl ether	DBJ 4/5/96	108-20-3	NBS75K.1	1783	83
Diisopropyl ether		108-20-3	NBS75K.1	63569	83
Diisopropyl ether		108-20-3	NBS75K.1	63567	78









6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: L Calibration Date(s): 03/19/96

Heated Purge: (Y/N) N Calibration Times: 1609 1754

GC Column:DB-624 ID: 0.53 (mm)

LAB FILE ID: RRF10 =L19538.D RRF20 =L19539.D
RRF50 =L19540.D RRF100=L19541.D RRF200=L19542.D

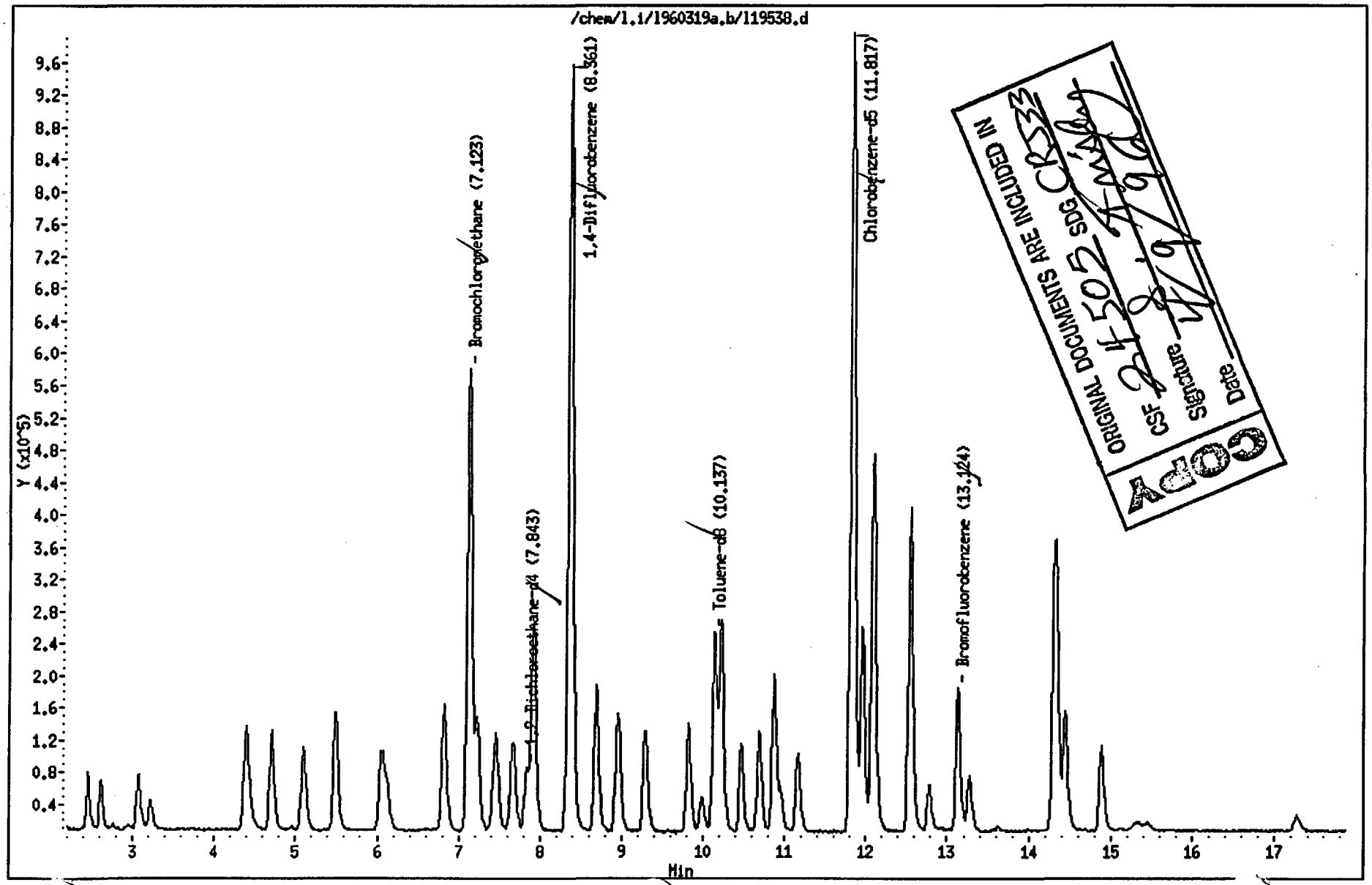
COMPOUND		RRF10	RRF20	RRF50	RRF100	RRF200	$\overline{RRF}$	% RSD
Chloromethane		2.137	1.967	1.911	2.069	1.983	2.013	4.4
Bromomethane	*	1.681	1.598	1.440	1.536	1.051	1.461	16.8*
Vinyl Chloride	*	2.026	1.927	1.835	1.989	1.663	1.888	7.7*
Chloroethane		1.292	1.178	1.116	1.216	0.964	1.153	10.7
Methylene Chloride		1.775	1.634	1.640	1.679	1.591	1.664	4.1
Acetone		0.681	0.523	0.575	0.491	0.580	0.570	12.6
Carbon Disulfide		6.472	6.197	6.231	6.381	6.017	6.259	2.8
1,1-Dichloroethene	*	2.214	2.075	2.106	2.172	2.161	2.146	2.5*
1,1-Dichloroethane	*	4.067	3.857	3.920	4.032	4.014	3.978	2.1*
1,2-Dichloroethene (total)		2.296	2.195	2.223	2.274	2.273	2.252	1.8
Chloroform	*	3.783	3.641	3.790	3.850	3.859	3.785	2.3*
1,2-Dichloroethane	*	1.869	1.823	1.858	1.807	1.896	1.850	1.9*
-Butanone		0.775	0.815	0.933	0.766	0.900	0.838	8.9
1,1,1-Trichloroethane	*	0.580	0.579	0.587	0.590	0.606	0.588	1.8*
Carbon Tetrachloride	*	0.505	0.502	0.515	0.516	0.535	0.514	2.5*
Bromodichloromethane	*	0.570	0.583	0.609	0.588	0.617	0.593	3.2*
1,2-Dichloropropane		0.428	0.433	0.445	0.429	0.442	0.436	1.8
cis-1,3-Dichloropropene	*	0.539	0.552	0.566	0.547	0.571	0.555	2.4*
Trichloroethene	*	0.388	0.387	0.397	0.392	0.398	0.392	1.3*
Dibromochloromethane	*	0.352	0.375	0.391	0.368	0.408	0.379	5.7*
1,1,2-Trichloroethane	*	0.269	0.290	0.297	0.273	0.302	0.286	5.1*
Benzene	*	1.078	1.055	1.056	1.020	1.030	1.048	2.1*
trans-1,3-Dichloropropene	*	0.401	0.421	0.433	0.407	0.453	0.423	4.9*
Bromoform	*	0.172	0.208	0.226	0.208	0.248	0.212	13.0*
4-Methyl-2-Pentanone		0.345	0.364	0.405	0.340	0.415	0.374	9.1
2-Hexanone		0.289	0.300	0.340	0.290	0.331	0.310	7.7
Tetrachloroethene	*	0.469	0.461	0.455	0.464	0.464	0.463	1.0*
1,1,2,2-Tetrachloroethane	*	0.393	0.442	0.469	0.418	0.483	0.441	8.2*
Toluene	*	1.720	1.586	1.601	1.560	1.565	1.606	4.1*
Chlorobenzene	*	1.010	1.014	1.047	1.038	1.067	1.035	2.3*
Ethylbenzene	*	0.494	0.506	0.514	0.528	0.542	0.517	3.6*
Styrene	*	0.997	1.007	1.030	1.019	1.040	1.019	1.7*
Xylene (Total)	*	0.583	0.588	0.603	0.609	0.623	0.601	2.7*
Toluene-d8		1.606	1.764	1.642	1.548	1.486	1.609	6.5
Bromofluorobenzene	*	0.722	0.828	0.781	0.741	0.750	0.764	5.4*
1,2-Dichloroethane-d4		1.728	1.997	1.876	1.791	1.819	1.842	5.5

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/1.i/1960319a.b/119538.d
Date : 19-MAR-96 16:09
Instrument : 1.i
Sample ID : VSTD010L8
Column phase : DB-624
Volume Injected (uL) : 0.0

Column diameter : 0.53

OPERATOR: Linda



COPY
ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF SDG
Signature
Date

Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960319a.b/119538.d
Lab. Id. : VSTD010L8 Quant Type: ISTD
Inj Date : 19-MAR-1996 16:09
Operator : LINDA Inst ID: l.i
Smp Info : VSTD010L8
Misc Info : MS317**INST:L*AATS*2-015-10*5ML
Comment :
Method : /chem/l.i/1960319a.b/OLM3WAT.m
Meth Date : 20-Mar-1996 11:11 linda
Cal Date : 19-MAR-96 17:02 Cal File: 119540.d
Als bottle: 17 Calibration Sample, Level: 1
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	1 Chloromethane	50.00	2.452	(0.344)	127184	10.61	10.61
	2 Vinyl Chloride	62.00	2.606	(0.366)	120616	10.73	10.73
	3 Bromomethane	94.00	3.076	(0.432)	100066	11.50	11.50
	4 Chloroethane	64.00	3.220	(0.452)	76931	11.20	11.20
	5 1,1-Dichloroethene	96.00	4.389	(0.616)	131794	10.31	10.31
	6 Acetone	43.00	4.466	(0.627)	40528	11.94	11.94
	7 Carbon Disulfide	76.00	4.706	(0.661)	385233	10.34	10.34
	8 Methylene Chloride	84.00	5.099	(0.716)	105651	10.66	10.66
M	9 1,2-Dichloroethene (total)	96.00			273376	20.39	20.39
	10 trans-1,2-Dichloroethene	96.00	5.492	(0.771)	135753	10.26	10.26
	11 1,1-Dichloroethane	63.00	6.049	(0.849)	242055	10.22	10.22
	12 cis-1,2-Dichloroethene	96.00	6.816	(0.957)	137623	10.12	10.12
	13 2-Butanone	43.00	6.835	(0.960)	46158	9.25	9.25(a)
*	14 Bromochloromethane	128.00	7.123	(1.000)	297612	50.00	
	15 Chloroform	83.00	7.229	(1.015)	225169	9.99	9.99(a)
	16 1,1,1-Trichloroethane	97.00	7.459	(0.892)	196248	9.86	9.86(a)
	17 Carbon Tetrachloride	117.00	7.670	(0.917)	170744	9.81	9.81(a)
$	18 1,2-Dichloroethane-d4	65.00	7.843	(1.101)	102887	9.38	9.38(a)
	19 Benzene	78.00	7.910	(0.946)	364464	10.28	10.28
	20 1,2-Dichloroethane	62.00	7.930	(1.113)	111249	10.10	10.10
*	21 1,4-Difluorobenzene	114.00	8.361	(1.000)	1690151	50.00	
	22 Trichloroethene	130.00	8.688	(1.039)	131126	9.88	9.88(a)
	23 1,2-Dichloropropane	63.00	8.947	(1.070)	144558	9.81	9.81(a)
	24 Bromodichloromethane	83.00	9.293	(1.111)	192585	9.60	9.60(a)
	25 cis-1,3-Dichloropropene	75.00	9.820	(1.174)	182085	9.70	9.70(a)
	26 4-Methyl-2-Pentanone	43.00	9.983	(0.845)	80710	9.23	9.23(a)
$	27 Toluene-d8	98.00	10.137	(0.858)	375200	9.79	9.79(a)
	28 Toluene	91.00	10.214	(0.864)	402040	10.71	10.71
	29 trans-1,3-Dichloropropene	75.00	10.464	(1.251)	135457	9.47	9.47(a)
	30 1,1,2-Trichloroethane	97.00	10.685	(1.278)	90901	9.40	9.40(a)
	31 Tetrachloroethene	164.00	10.867	(0.920)	109518	10.13	10.13

Data File: /chem/l.i/1960319a.b/119538.d
Report Date: 20-Mar-1996 11:11

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	32 2-Hexanone	43.00	10.954	(0.927)	67482	9.31	9.31(a)
	33 Dibromochloromethane	129.00	11.155	(1.334)	118818	9.28	9.28(a)
*	34 Chlorobenzene-d5	117.00	11.817	(1.000)	1168389	50.00	
	35 Chlorobenzene	112.00	11.846	(1.002)	235985	9.75	9.75(a)
	36 Ethylbenzene	106.00	11.952	(1.011)	115575	9.56	9.56(a)
	37 m,p-Xylene	106.00	12.087	(1.023)	310700	20.27	20.27
	38 o-Xylene	106.00	12.538	(1.061)	136178	9.69	9.69(a)
M	39 Xylene (Total)	106.00			446878	31.79	31.79
	40 Styrene	104.00	12.548	(1.062)	232982	9.78	9.78(a)
	41 Bromoform	173.00	12.788	(1.529)	58167	8.10	8.10(a)
$	42 Bromofluorobenzene	95.00	13.124	(1.111)	168728	9.44	9.44(a)
	43 1,1,2,2-Tetrachloroethane	83.00	13.268	(1.123)	91875	9.12	9.12(a)

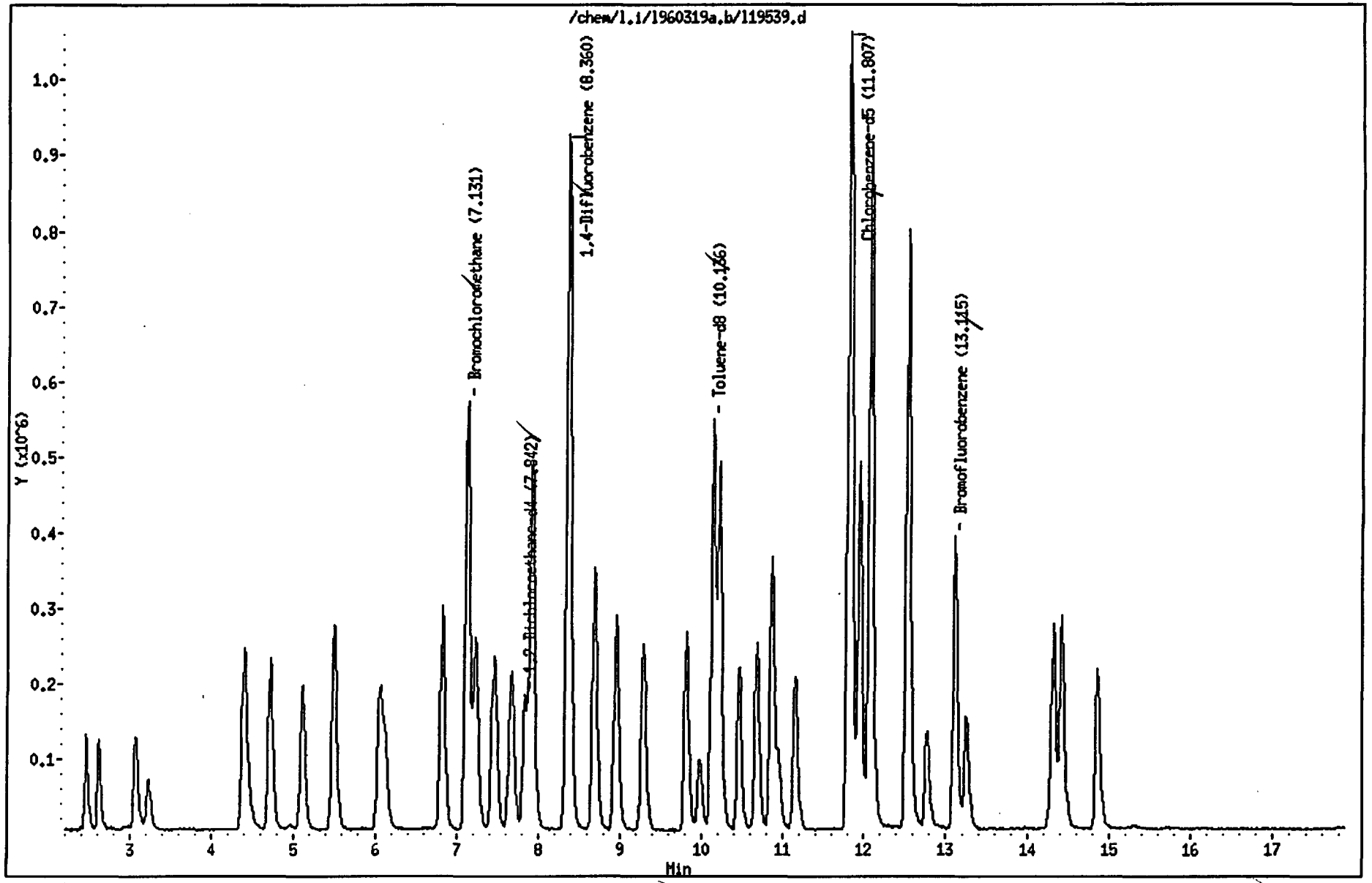
QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/1.i/1960319a.b/119539.d
Date : 19-MAR-96 16:35
Instrument : 1.i
Sample ID : VSTD020LB
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



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Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960319a.b/119539.d
Lab. Id. : VSTD020L8 Quant Type: ISTD
Inj Date : 19-MAR-1996 16:35
Operator : LINDA Inst ID: l.i
Smp Info : VSTD020L8
Misc Info : MS317**INST:L*AATS*2-015-10*5ML
Comment :
Method : /chem/l.i/1960319a.b/OLM3WAT.m
Meth Date : 20-Mar-1996 11:11 linda
Cal Date : 19-MAR-96 17:02 Cal File: 119540.d
Als bottle: 18 Calibration Sample, Level: 2
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	1 Chloromethane	50.00	2.451	(0.344)	232427	19.54	19.54
	2 Vinyl Chloride	62.00	2.618	(0.367)	227736	20.41	20.41
	3 Bromomethane	94.00	3.075	(0.431)	188777	21.86	21.86
	4 Chloroethane	64.00	3.226	(0.453)	139132	20.42	20.42
	5 1,1-Dichloroethene	96.00	4.398	(0.617)	245202	19.34	19.34
	6 Acetone	43.00	4.465	(0.626)	61837	18.36	18.36
	7 Carbon Disulfide	76.00	4.714	(0.661)	732181	19.80	19.80
	8 Methylene Chloride	84.00	5.098	(0.715)	193098	19.64	19.64
M	9 1,2-Dichloroethene (total)	96.00			518699	38.98	38.98
	10 trans-1,2-Dichloroethene	96.00	5.491	(0.770)	256308	19.53	19.53
	11 1,1-Dichloroethane	63.00	6.057	(0.849)	455769	19.39	19.39
	12 cis-1,2-Dichloroethene	96.00	6.824	(0.957)	262391	19.45	19.45
	13 2-Butanone	43.00	6.824	(0.957)	96328	19.45	19.45
*	14 Bromochloromethane	128.00	7.131	(1.000)	295380	50.00	
	15 Chloroform	83.00	7.227	(1.013)	430219	19.24	19.24
	16 1,1,1-Trichloroethane	97.00	7.456	(0.892)	376326	19.66	19.66
	17 Carbon Tetrachloride	117.00	7.669	(0.917)	326139	19.49	19.49
$	18 1,2-Dichloroethane-d4	65.00	7.842	(1.100)	235977	21.68	21.68
	19 Benzene	78.00	7.909	(0.946)	685845	20.13	20.13
	20 1,2-Dichloroethane	62.00	7.928	(1.112)	215377	19.70	19.70
*	21 1,4-Difluorobenzene	114.00	8.360	(1.000)	1625311	50.00	
	22 Trichloroethene	130.00	8.687	(1.039)	251559	19.71	19.71
	23 1,2-Dichloropropane	63.00	8.956	(1.071)	281766	19.89	19.89
	24 Bromodichloromethane	83.00	9.292	(1.111)	378825	19.64	19.64
	25 cis-1,3-Dichloropropene	75.00	9.810	(1.173)	358701	19.88	19.88
	26 4-Methyl-2-Pentanone	43.00	9.983	(0.845)	167962	19.48	19.48
$	27 Toluene-d8	98.00	10.136	(0.858)	813248	21.51	21.51
	28 Toluene	91.00	10.213	(0.865)	731151	19.74	19.74
	29 trans-1,3-Dichloropropene	75.00	10.463	(1.252)	273596	19.89	19.89
	30 1,1,2-Trichloroethane	97.00	10.684	(1.278)	188276	20.24	20.24
	31 Tetrachloroethene	164.00	10.857	(0.920)	212588	19.93	19.93

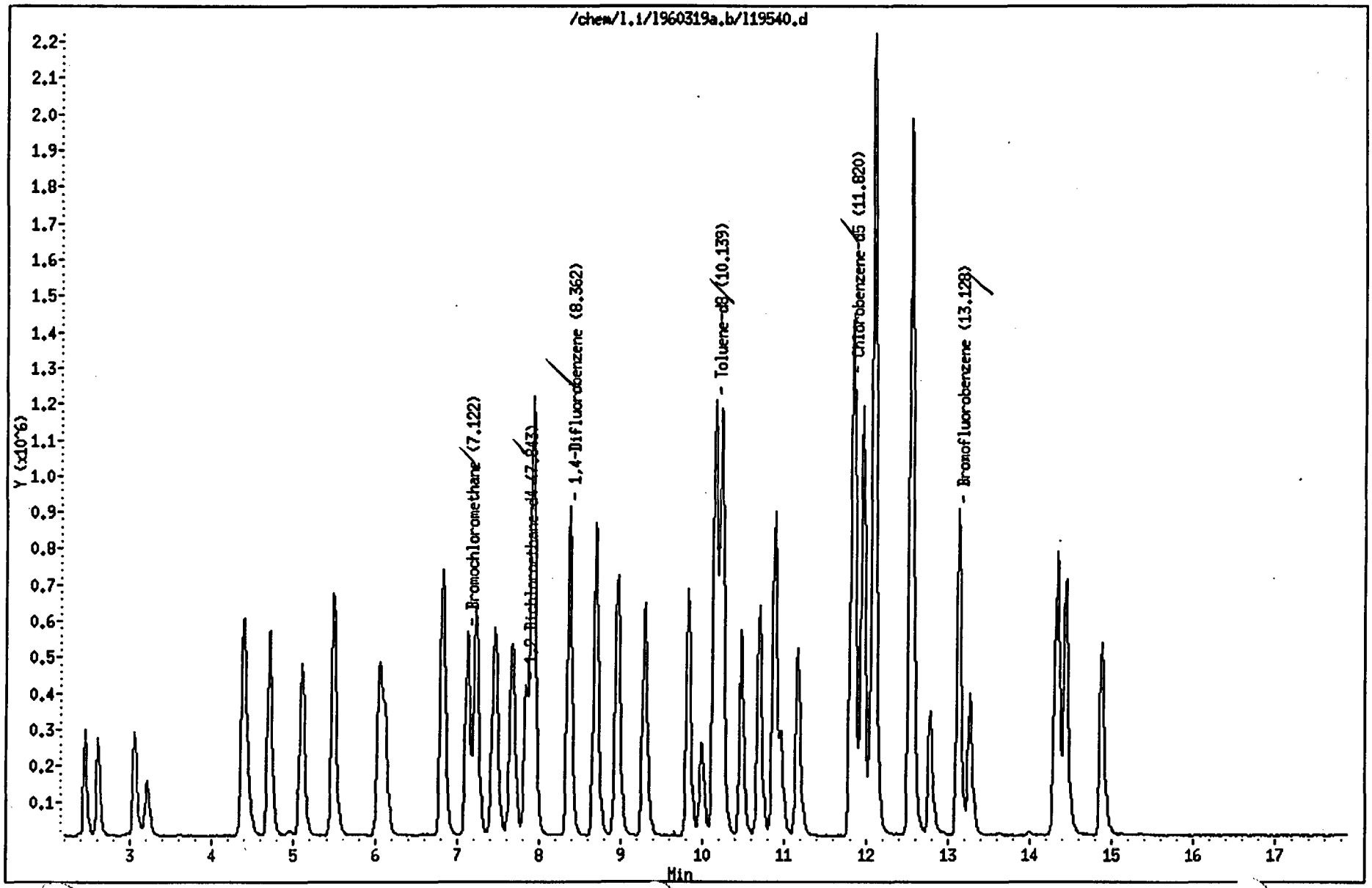
Data File: /chem/l.i/1960319a.b/119539.d
Report Date: 20-Mar-1996 11:11

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	32 2-Hexanone	43.00	10.944	(0.927)	138116	19.33	19.33
	33 Dibromochloromethane	129.00	11.145	(1.333)	243882	19.81	19.81
*	34 Chlorobenzene-d5	117.00	11.807	(1.000)	1152701	50.00	
	35 Chlorobenzene	112.00	11.836	(1.002)	467428	19.58	19.58
	36 Ethylbenzene	106.00	11.942	(1.011)	233199	19.56	19.56
	37 m,p-Xylene	106.00	12.077	(1.023)	591904	39.14	39.14
	38 o-Xylene	106.00	12.518	(1.060)	271338	19.57	19.57
M	39 Xylene (Total)	106.00			863242	62.25	62.25
	40 Styrene	104.00	12.538	(1.062)	464298	19.77	19.77
	41 Bromoform	173.00	12.769	(1.527)	135549	19.63	19.63
$	42 Bromofluorobenzene	95.00	13.115	(1.111)	382033	21.67	21.67
	43 1,1,2,2-Tetrachloroethane	83.00	13.259	(1.123)	203974	20.54	20.54

Data File: /chem/1.i/1960319a.b/119540.d
Date : 19-MAR-1996 17:02
Instrument : 1.i
Sample ID : VSTD050L8
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960319a.b/l19540.d
Lab. Id. : VSTD050L8 Quant Type: ISTD
Inj Date : 19-MAR-1996 17:02
Operator : LINDA Inst ID: l.i
Smp Info : VSTD050L8
Misc Info : MS317**INST:L*AATS*2-015-10*5ML
Comment :
Method : /chem/l.i/1960319a.b/OLM3WAT.m
Meth Date : 20-Mar-1996 11:11 linda
Cal Date : 19-MAR-1996 17:02 Cal File: l19540.d
Als bottle: 19 Calibration Sample, Level: 3
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	1 Chloromethane	50.00	2.442	(0.343)	558432	47.46	47.46
	2 Vinyl Chloride	62.00	2.605	(0.366)	536313	48.60	48.60
	3 Bromomethane	94.00	3.056	(0.429)	420903	49.29	49.29
	4 Chloroethane	64.00	3.209	(0.451)	325999	48.37	48.37
	5 1,1-Dichloroethene	96.00	4.381	(0.616)	615374	49.07	49.07
	6 Acetone	43.00	4.456	(0.626)	168039	50.44	50.44
	7 Carbon Disulfide	76.00	4.705	(0.661)	1820570	49.77	49.77
	8 Methylene Chloride	84.00	5.098	(0.716)	479185	49.28	49.28
M	9 1,2-Dichloroethene (total)	96.00			1299267	98.70	98.70
	10 trans-1,2-Dichloroethene	96.00	5.482	(0.770)	635914	48.98	48.98
	11 1,1-Dichloroethane	63.00	6.057	(0.850)	1145379	49.27	49.27
	12 cis-1,2-Dichloroethene	96.00	6.815	(0.957)	663353	49.71	49.71
	13 2-Butanone	43.00	6.825	(0.958)	272568	55.66	55.66
*	14 Bromochloromethane	128.00	7.122	(1.000)	292191	50.00	
	15 Chloroform	83.00	7.228	(1.015)	1107364	50.06	50.06
	16 1,1,1-Trichloroethane	97.00	7.459	(0.892)	942780	49.90	49.90
	17 Carbon Tetrachloride	117.00	7.670	(0.917)	825986	50.00	50.00
$	18 1,2-Dichloroethane-d4	65.00	7.833	(1.100)	548180	50.91	50.91
	19 Benzene	78.00	7.910	(0.946)	1695135	50.39	50.39
	20 1,2-Dichloroethane	62.00	7.930	(1.113)	542988	50.21	50.21
*	21 1,4-Difluorobenzene	114.00	8.362	(1.000)	1604926	50.00	
	22 Trichloroethene	130.00	8.698	(1.040)	637727	50.61	50.61
	23 1,2-Dichloropropane	63.00	8.957	(1.071)	714861	51.11	51.11
	24 Bromodichloromethane	83.00	9.294	(1.111)	977703	51.33	51.33
	25 cis-1,3-Dichloropropene	75.00	9.821	(1.175)	908628	51.00	51.00
	26 4-Methyl-2-Pentanone	43.00	9.985	(0.845)	455307	54.13	54.13
$	27 Toluene-d8	98.00	10.148	(0.859)	1846555	50.05	50.05
	28 Toluene	91.00	10.225	(0.000)	1801129	49.83	49.83 (M)
	29 trans-1,3-Dichloropropene	75.00	10.466	(1.252)	695712	51.23	51.23
	30 1,1,2-Trichloroethane	97.00	10.687	(1.278)	476055	51.84	51.84
	31 Tetrachloroethene	164.00	10.870	(0.920)	511877	49.17	49.17

3/20/96 AM

Data File: /chem/l.i/1960319a.b/119540.d
Report Date: 20-Mar-1996 11:11

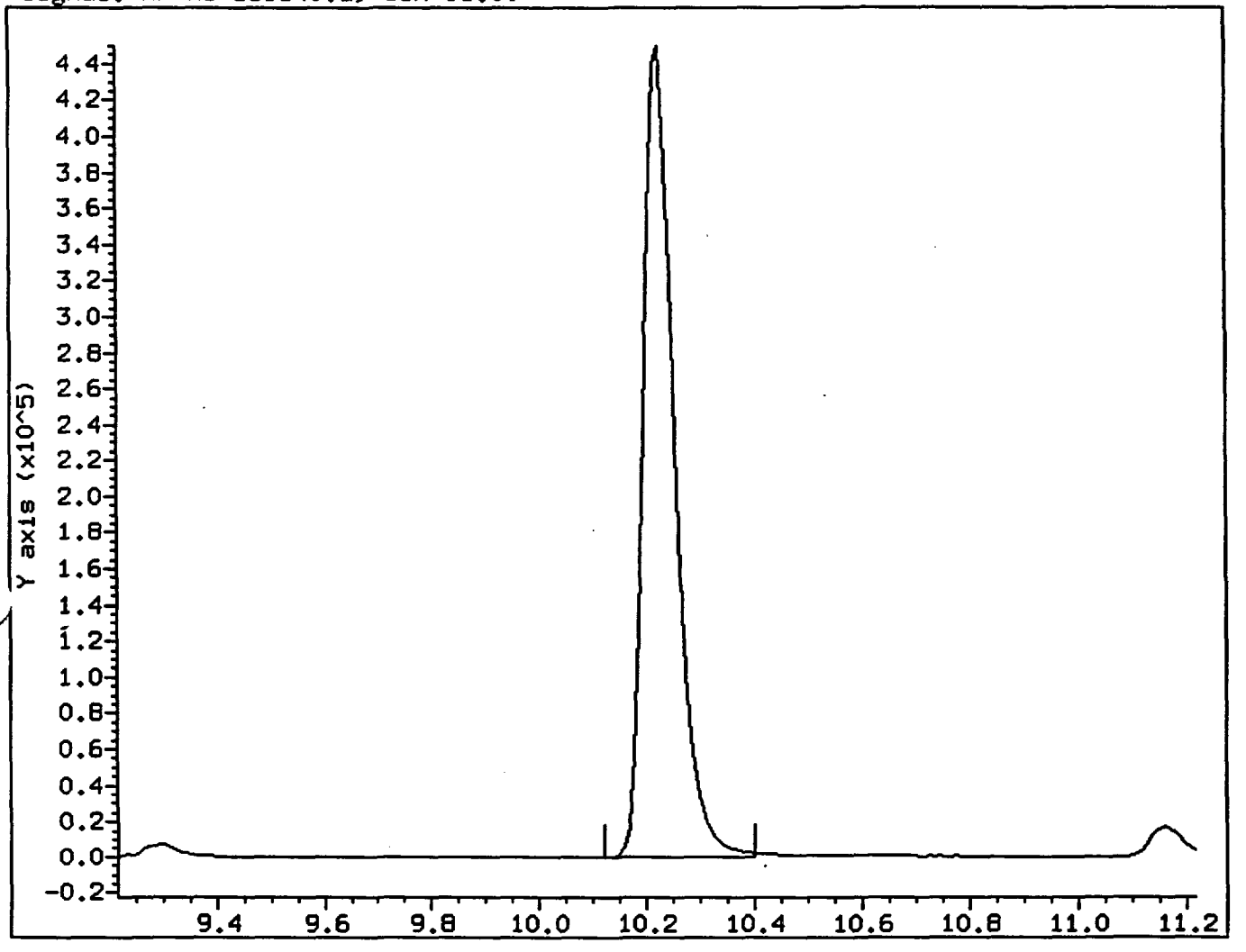
	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	32 2-Hexanone	43.00	10.856	(0.927)	382219	54.82	54.82
	33 Dibromochloromethane	129.00	11.158	(1.334)	627448	51.61	51.61
*	34 Chlorobenzene-d5	117.00	11.820	(1.000)	1124915	50.00	
	35 Chlorobenzene	112.00	11.849	(1.002)	1177968	50.58	50.58
	36 Ethylbenzene	106.00	11.955	(1.011)	578818	49.75	49.75
	37 m,p-Xylene	106.00	12.090	(1.023)	1462030	99.07	99.07
	38 o-Xylene	106.00	12.542	(1.061)	678763	50.16	50.16
M	39 Xylene (Total)	106.00			2140793	158.21	158.21
	40 Styrene	104.00	12.551	(1.062)	1159256	50.58	50.58
	41 Bromoform	173.00	12.782	(1.529)	362317	53.14	53.14
$	42 Bromofluorobenzene	95.00	13.128	(1.111)	878346	51.07	51.07
	43 1,1,2,2-Tetrachloroethane	83.00	13.272	(1.123)	527651	54.44	54.44

QC Flag Legend

M - Compound response manually integrated.

Manual Integration

Client Sample ID: VSTD050L8
Injection Date: 19-MAR-96 17:02
Instrument: l.i
Compound: Toluene
Signal: HP MS 119540.d, Ion 91.00



03/20/96
RY

MANUAL INTEGRATION REPORT

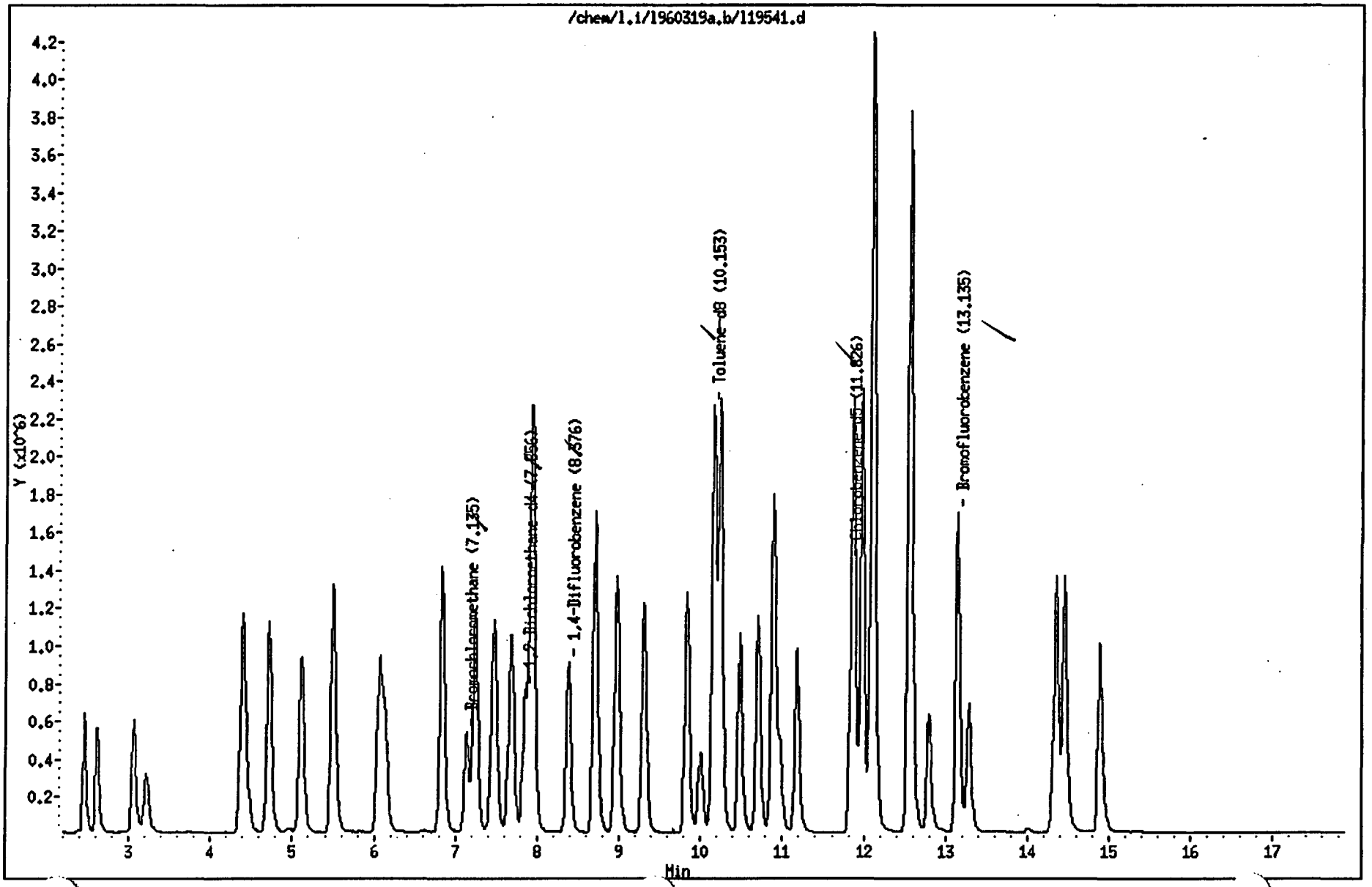
LAB SAMPLE ID: VSTD050L8
SAMPLE ID. : VSTD050L8
FILENAME : /chem/l.i/1960319a.b/l19540.d
INST ID. : l.i
ANALYST : LINDA
DATE INJECTED: 19-MAR-1996 17:02
COMPOUND : Toluene
ION: 91 AREA: 1801129 CONCENTRATION: 49.47
INTEGRATION SCAN RANGE: 865 - 894

Report Generated: 03/20/96 at 11:07 by _____

Data File: /chem/1.i/1960319a.b/119541.d
Date : 19-MAR-96 17:28
Instrument : 1.i
Sample ID : VSTD100LB
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960319a.b/l19541.d
Lab. Id. : VSTD100L8 Quant Type: ISTD
Inj Date : 19-MAR-1996 17:28
Operator : LINDA Inst ID: l.i
Smp Info : VSTD100L8
Misc Info : MS317**INST:L*AATS*2-015-10*5ML
Comment :
Method : /chem/l.i/1960319a.b/OLM3WAT.m
Meth Date : 20-Mar-1996 11:09 linda
Cal Date : 19-MAR-96 17:02 Cal File: l19540.d
Als bottle: 20 Calibration Sample, Level: 4
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	1 Chloromethane	50.00	2.452	(0.344)	1160615	102.76	102.76
	2 Vinyl Chloride	62.00	2.615	(0.366)	1115722	105.34	105.34
	3 Bromomethane	94.00	3.056	(0.428)	861430	105.10	105.10
	4 Chloroethane	64.00	3.226	(0.451)	681824	105.41	105.41
	5 1,1-Dichloroethene	96.00	4.390	(0.615)	1218241	101.21	101.21
	6 Acetone	43.00	4.467	(0.626)	275198	86.06	86.06
	7 Carbon Disulfide	76.00	4.707	(0.000)	3578968	101.93	101.93 (M)
	8 Methylene Chloride	84.00	5.100	(0.715)	942025	100.93	100.93
M	9 1,2-Dichloroethene (total)	96.00			2551360	201.94	201.94
	10 trans-1,2-Dichloroethene	96.00	5.494	(0.770)	1254916	100.71	100.71
	11 1,1-Dichloroethane	63.00	6.070	(0.851)	2261319	101.35	101.35
	12 cis-1,2-Dichloroethene	96.00	6.828	(0.957)	1296444	101.22	101.22
	13 2-Butanone	43.00	6.838	(0.958)	429636	91.40	91.40
*	14 Bromochloromethane	128.00	7.135	(1.000)	280454	50.00	
	15 Chloroform	83.00	7.241	(1.015)	2159644	101.73	101.73
	16 1,1,1-Trichloroethane	97.00	7.462	(0.891)	1886746	100.26	100.26
	17 Carbon Tetrachloride	117.00	7.683	(0.917)	1650265	100.31	100.31
$	18 1,2-Dichloroethane-d4	65.00	7.847	(1.100)	1004617	97.21	97.21
	19 Benzene	78.00	7.924	(0.946)	3263001	97.38	97.38
	20 1,2-Dichloroethane	62.00	7.943	(1.113)	1013612	97.65	97.65
*	21 1,4-Difluorobenzene	114.00	8.376	(1.000)	1598585	50.00	
	22 Trichloroethene	130.00	8.702	(1.039)	1254568	99.97	99.97
	23 1,2-Dichloropropane	63.00	8.912	(1.071)	1372734	98.55	98.55
	24 Bromodichloromethane	83.00	9.298	(1.110)	1880934	99.14	99.14
	25 cis-1,3-Dichloropropene	75.00	9.838	(1.174)	1750257	98.64	98.64
	26 4-Methyl-2-Pentanone	43.00	9.999	(0.846)	753993	90.90	90.90
$	27 Toluene-d8	98.00	10.153	(0.859)	3433548	94.39	94.39
	28 Toluene	91.00	10.230	(0.000)	3460109	97.08	97.08 (M)
	29 trans-1,3-Dichloropropene	75.00	10.481	(1.251)	1302404	96.29	96.29
	30 1,1,2-Trichloroethane	97.00	10.702	(1.278)	871890	95.33	95.33
	31 Tetrachloroethene	164.00	10.885	(0.920)	1030513	100.39	100.39

3/20/96
LM

Data File: /chem/l.i/1960319a.b/119541.d
Report Date: 20-Mar-1996 11:09

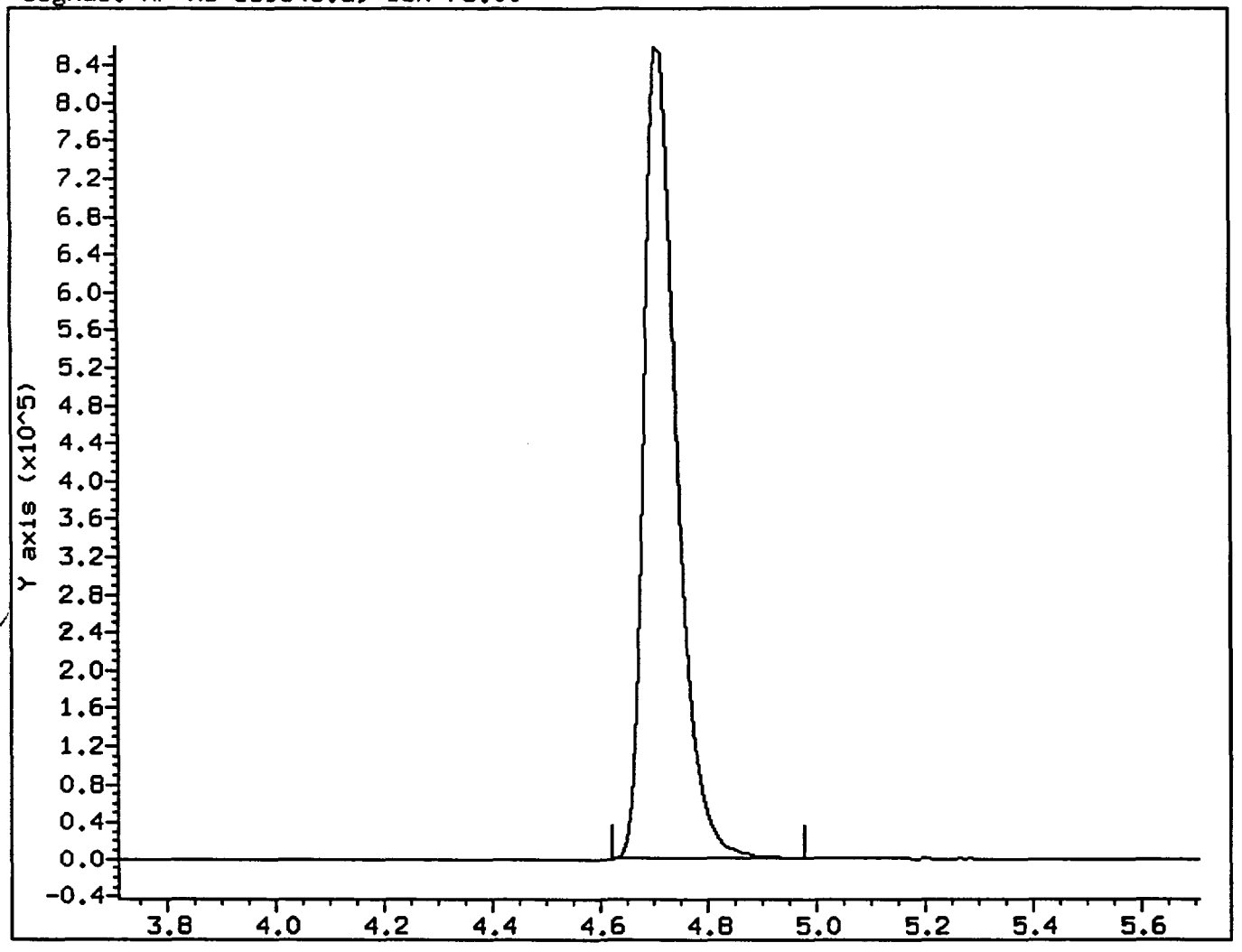
	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	32 2-Hexanone	43.00	10.972	(0.928)	643662	93.63	93.63
	33 Dibromochloromethane	129.00	11.174	(1.334)	1175084	97.04	97.04
*	34 Chlorobenzene-d5	117.00	11.826	(1.000)	1109234	50.00	
	35 Chlorobenzene	112.00	11.865	(0.000)	2302792	100.27	100.27(M)
	36 Ethylbenzene	106.00	11.971	(1.012)	1171734	102.13	102.13
	37 m,p-Xylene	106.00	12.106	(1.024)	2914539	200.29	200.29
	38 o-Xylene	106.00	12.548	(1.061)	1351249	101.27	101.27
M	39 Xylene (Total)	106.00			4265788	319.71	319.71
	40 Styrene	104.00	12.558	(1.062)	2259734	99.99	99.99
	41 Bromoform	173.00	12.799	(1.528)	664930	97.92	97.92
$	42 Bromofluorobenzene	95.00	13.135	(1.111)	1643040	96.88	96.88
	43 1,1,2,2-Tetrachloroethane	83.00	13.280	(1.123)	928254	97.13	97.13

QC Flag Legend

M - Compound response manually integrated.

Manual Integration

Client Sample ID: VSTD100L8
Injection Date: 19-MAR-96 17:28
Instrument: 1.i
Compound: Carbon Disulfide
Signal: HP MS 119541.d, Ion 76.00



AH
3/20/96
AH

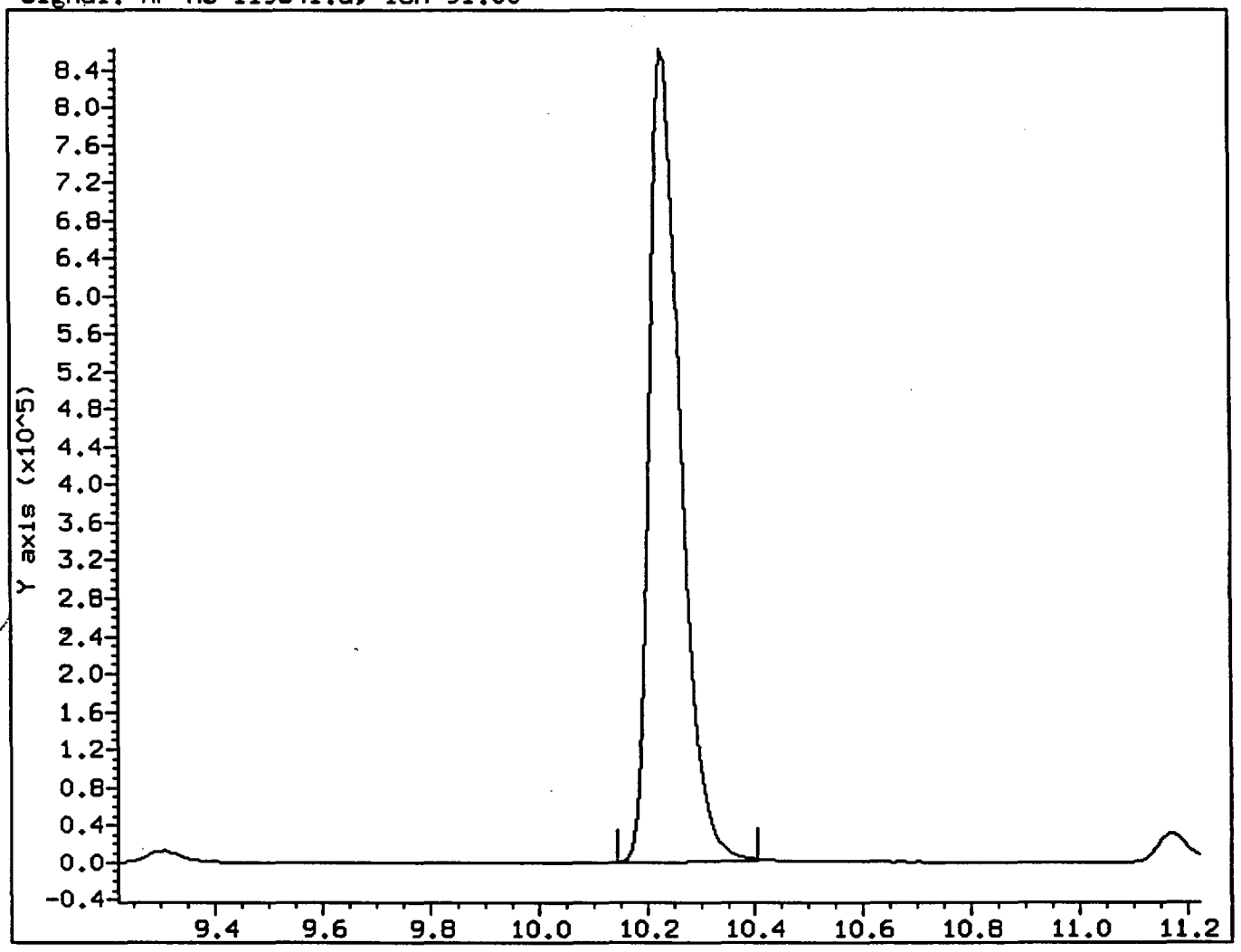
MANUAL INTEGRATION REPORT

LAB SAMPLE ID: VSTD100L8
SAMPLE ID. : VSTD100L8
FILENAME : /chem/l.i/1960319a.b/l19541.d
INST ID. : l.i
ANALYST : LINDA
DATE INJECTED: 19-MAR-1996 17:28
COMPOUND : Carbon Disulfide
ION: 76 AREA: 3578968 CONCENTRATION: 101.93
INTEGRATION SCAN RANGE: 292 - 329

Report Generated: 03/20/96 at 11:08 by LM

Manual Integration

Client Sample ID: VSTD100LB
Injection Date: 19-MAR-96 17:28
Instrument: l.i
Compound: Toluene
Signal: HP MS 119541.d, Ion 91.00



3/20/96
RY

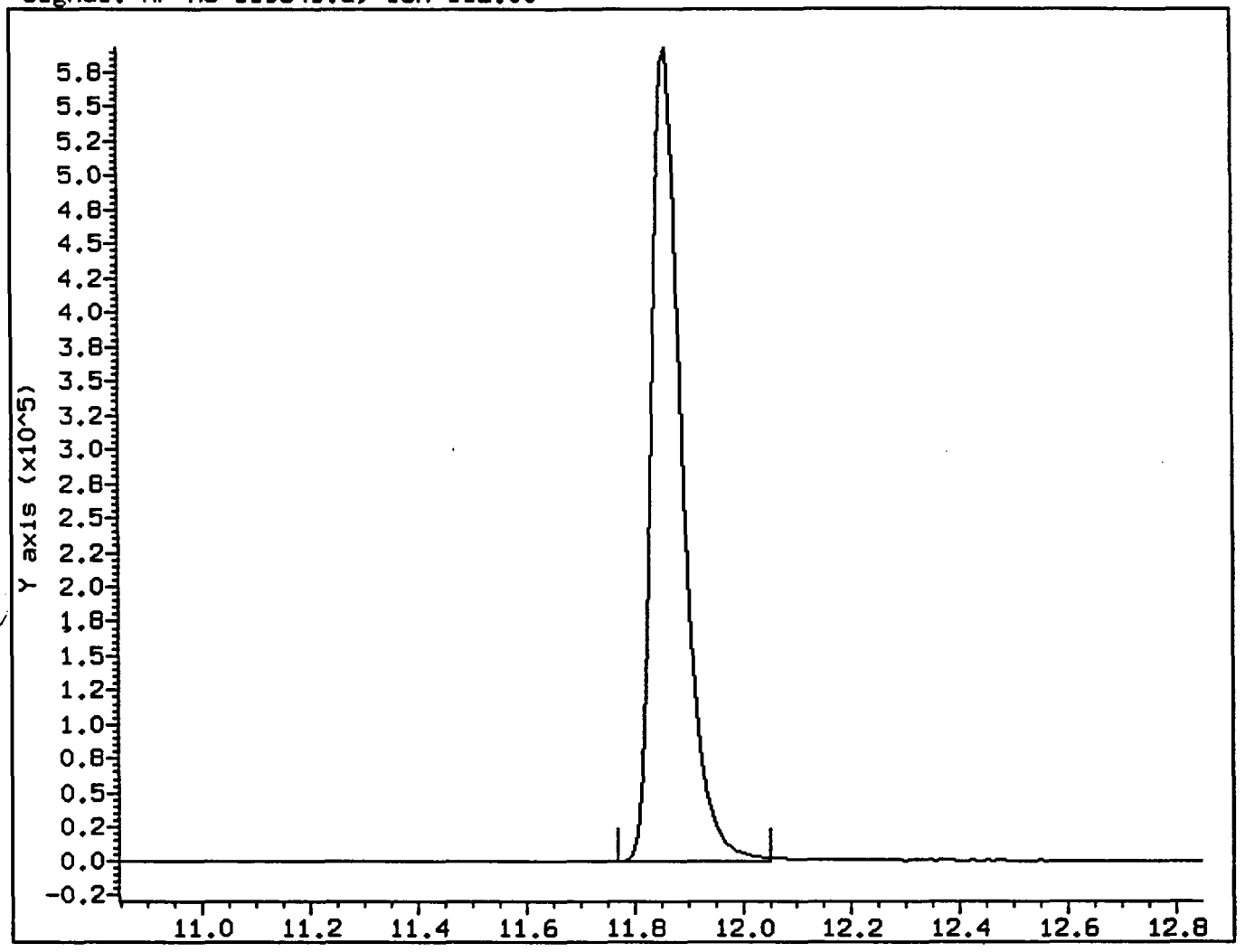
MANUAL INTEGRATION REPORT

LAB SAMPLE ID: VSTD100L8
SAMPLE ID. : VSTD100L8
FILENAME : /chem/l.i/1960319a.b/119541.d
INST ID. : l.i
ANALYST : LINDA
DATE INJECTED: 19-MAR-1996 17:28
COMPOUND : Toluene
ION: 91 AREA: 3460109 CONCENTRATION: 97.08
INTEGRATION SCAN RANGE: 867 - 894

Report Generated: 03/20/96 at 11:09 by LY

Manual Integration

Client Sample ID: VSTD100L8
Injection Date: 19-MAR-96 17:28
Instrument: l.i
Compound: Chlorobenzene
Signal: HP MS 119541.d, Ion 112.00



3/20/96
AB

MANUAL INTEGRATION REPORT

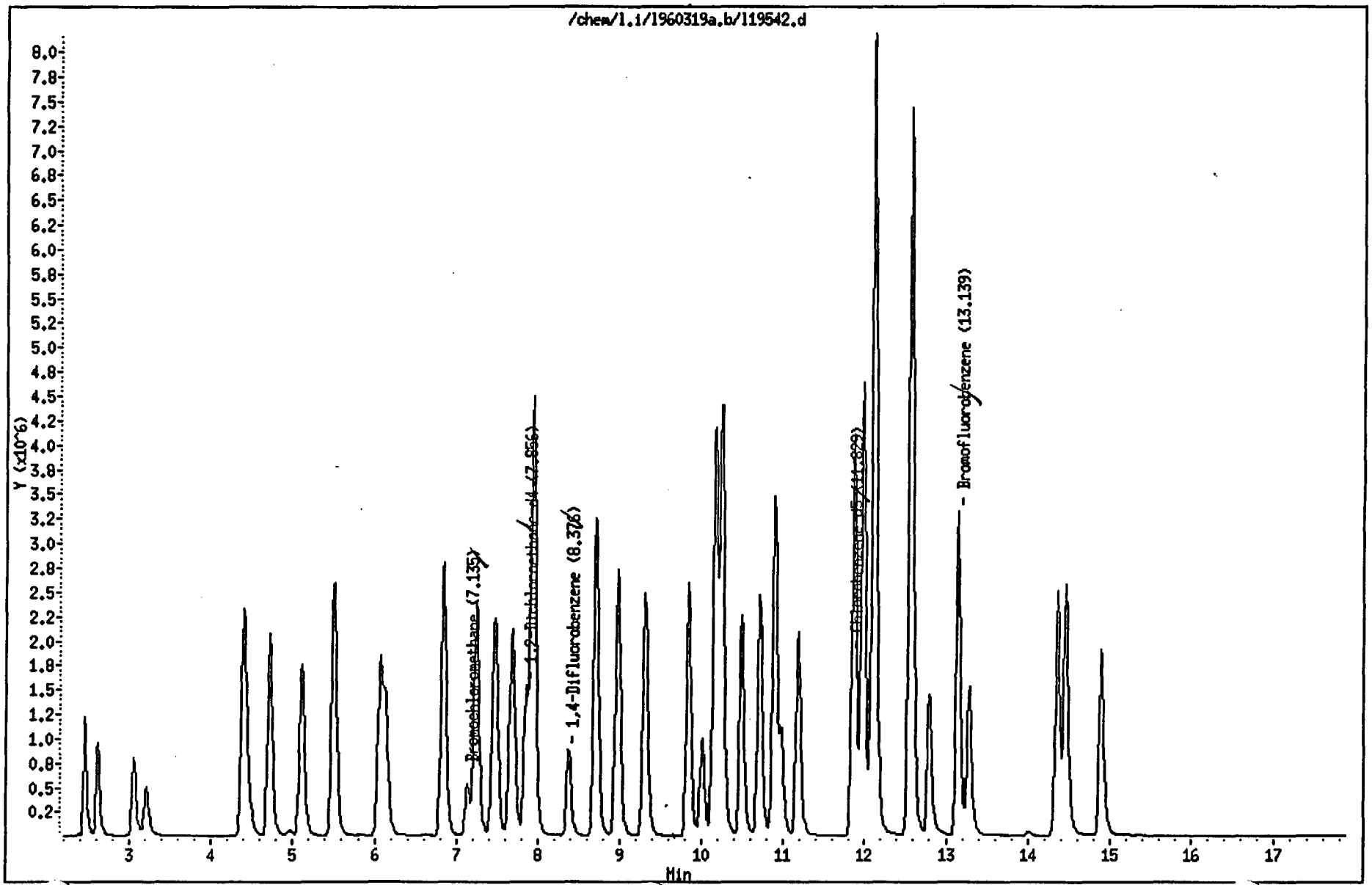
LAB SAMPLE ID: VSTD100L8
SAMPLE ID. : VSTD100L8
FILENAME : /chem/l.i/1960319a.b/l19541.d
INST ID. : l.i
ANALYST : LINDA
DATE INJECTED: 19-MAR-1996 17:28
COMPOUND : Chlorobenzene
ION: 112 AREA: 2302792 CONCENTRATION: 100.27
INTEGRATION SCAN RANGE: 1036 - 1065

Report Generated: 03/20/96 at 11:09 by _____

Data File: /chem/1.i/1960319a.b/119542.d
Date : 19-MAR-96 17:54
Instrument : 1.i
Sample ID : VSTD200L8
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



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Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960319a.b/l19542.d
Lab. Id. : VSTD200L8 Quant Type: ISTD
Inj Date : 19-MAR-1996 17:54
Operator : LINDA Inst ID: l.i
Smp Info : VSTD200L8
Misc Info : MS317**INST:L*AATS*2-015-10*5ML
Comment :
Method : /chem/l.i/1960319a.b/OLM3WAT.m
Meth Date : 20-Mar-1996 11:11 linda
Cal Date : 19-MAR-1996 17:02 Cal File: l19540.d
Als bottle: 21 Calibration Sample, Level: 5
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	1 Chloromethane	50.00	2.451	(0.343)	2229669	196.97	196.97
	2 Vinyl Chloride	62.00	2.615	(0.366)	1869502	176.11	176.11
	3 Bromomethane	94.00	3.056	(0.428)	1181834	143.86	143.86
	4 Chloroethane	64.00	3.212	(0.451)	1084021	167.22	167.22
	5 1,1-Dichloroethene	96.00	4.392	(0.616)	2430068	201.44	201.44
	6 Acetone	43.00	4.476	(0.626)	652428	203.58	203.58
	7 Carbon Disulfide	76.00	4.716	(0.660)	6764963	192.24	192.24
	8 Methylene Chloride	84.00	5.109	(0.715)	1788875	191.23	191.23
M	9 1,2-Dichloroethene (total)	96.00			5111294	403.65	403.65
	10 trans-1,2-Dichloroethene	96.00	5.502	(0.770)	2522824	202.00	202.00
	11 1,1-Dichloroethane	63.00	6.069	(0.849)	4512655	201.79	201.79
	12 cis-1,2-Dichloroethene	96.00	6.837	(0.957)	2588470	201.64	201.64
	13 2-Butanone	43.00	6.847	(0.958)	1012213	214.86	214.86(A)
*	14 Bromochloromethane	128.00	7.145	(1.000)	281091	50.00	
	15 Chloroform	83.00	7.241	(1.013)	4338920	203.92	203.92
	16 1,1,1-Trichloroethane	97.00	7.472	(0.891)	3754161	205.89	205.89(A)
	17 Carbon Tetrachloride	117.00	7.687	(0.916)	3316319	208.04	208.04(A)
$	18 1,2-Dichloroethane-d4	65.00	7.856	(1.100)	2044837	197.43	197.43
	19 Benzene	78.00	7.933	(0.946)	6381348	196.56	196.56
	20 1,2-Dichloroethane	62.00	7.943	(1.112)	2131233	204.85	204.85
*	21 1,4-Difluorobenzene	114.00	8.385	(1.000)	1548919	50.00	
	22 Trichloroethene	130.00	8.703	(1.038)	2465533	202.76	202.76
	23 1,2-Dichloropropane	63.00	8.972	(1.070)	2741551	203.13	203.13
	24 Bromodichloromethane	83.00	9.308	(1.110)	3822344	207.94	207.94(A)
	25 cis-1,3-Dichloropropene	75.00	9.837	(1.173)	3537301	205.74	205.74(A)
	26 4-Methyl-2-Pentanone	43.00	10.016	(0.846)	1799661	222.03	222.03(A)
$	27 Toluene-d8	98.00	10.164	(0.000)	6443451	184.72	184.72(M)
	28 Toluene	91.00	10.241	(0.866)	6787062	194.87	194.87
	29 trans-1,3-Dichloropropene	75.00	10.482	(1.250)	2804789	214.03	214.03(A)
	30 1,1,2-Trichloroethane	97.00	10.703	(1.276)	1873438	211.42	211.42(A)
	31 Tetrachloroethene	164.00	10.887	(0.920)	2012243	200.60	200.60

3/20/96 RY

Data File: /chem/l.i/1960319a.b/119542.d
Report Date: 20-Mar-1996 11:12

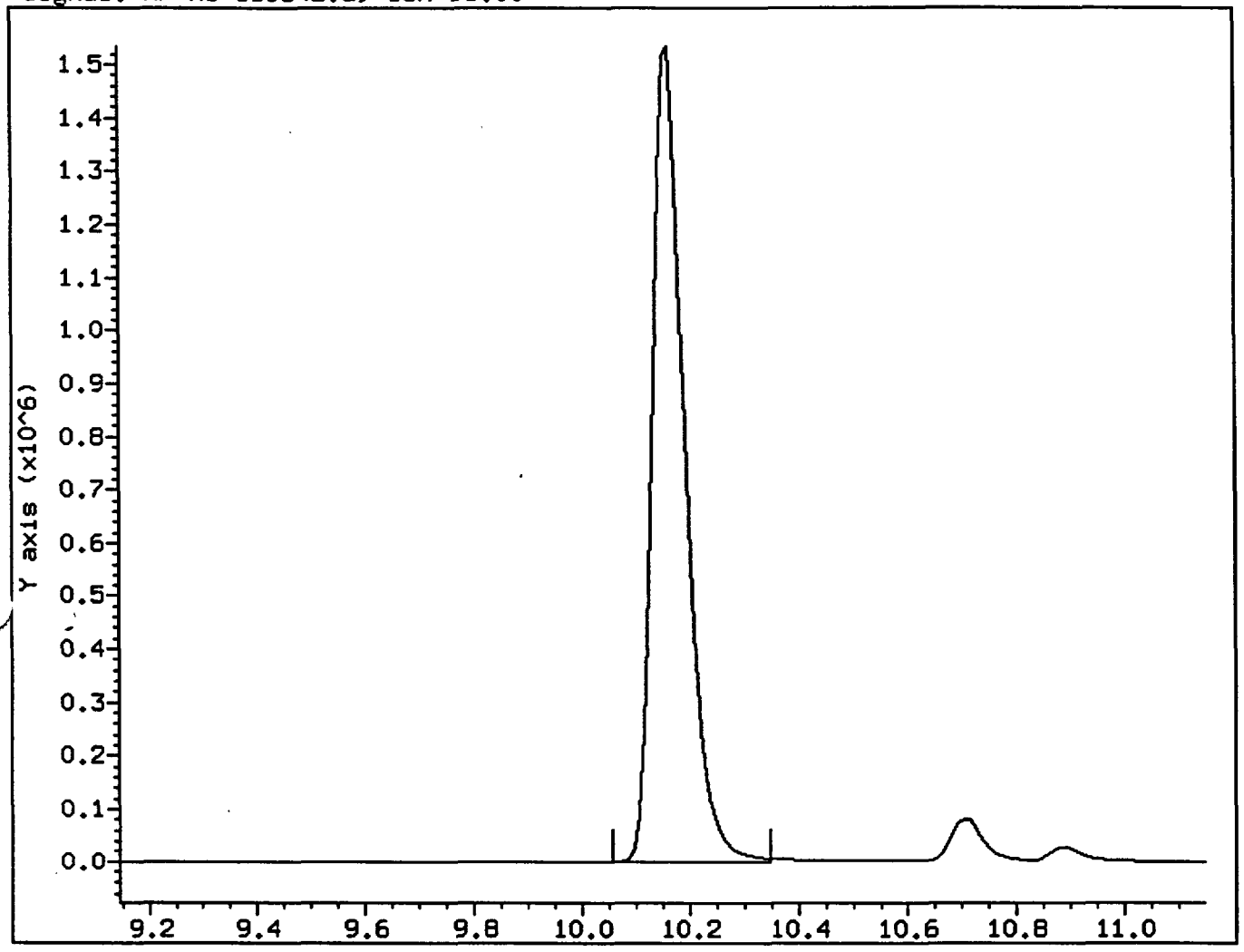
	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	32 2-Hexanone	43.00	10.973	(0.928)	1435675	213.70	213.70(A)
	33 Dibromochloromethane	129.00	11.176	(1.333)	2531039	215.73	215.73(A)
*	34 Chlorobenzene-d5	117.00	11.829	(1.000)	1083999	50.00	
	35 Chlorobenzene	112.00	11.867	(1.003)	4626335	206.14	206.14(A)
	36 Ethylbenzene	106.00	11.974	(1.012)	2352429	209.82	209.82(A)
	37 m,p-Xylene	106.00	12.109	(1.024)	5776909	406.24	406.24(A)
	38 o-Xylene	106.00	12.571	(1.061)	2703129	207.31	207.31(A)
M	39 Xylene (Total)	106.00			8480038	650.36	650.36
	40 Styrene	104.00	12.571	(1.063)	4510310	204.22	204.22
	41 Bromoform	173.00	12.792	(1.526)	1533972	233.15	233.15(A)
$	42 Bromofluorobenzene	95.00	13.139	(1.111)	3252683	196.26	196.26
	43 1,1,2,2-Tetrachloroethane	83.00	13.283	(0.000)	2093363	218.87	218.87(AM)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.

Manual Integration

Client Sample ID: VSTD200L8
Injection Date: 19-MAR-96 17:54
Instrument: l.i
Compound: Toluene-d8
Signal: HP MS 119542.d, Ion 98.00



3/20/96
RY

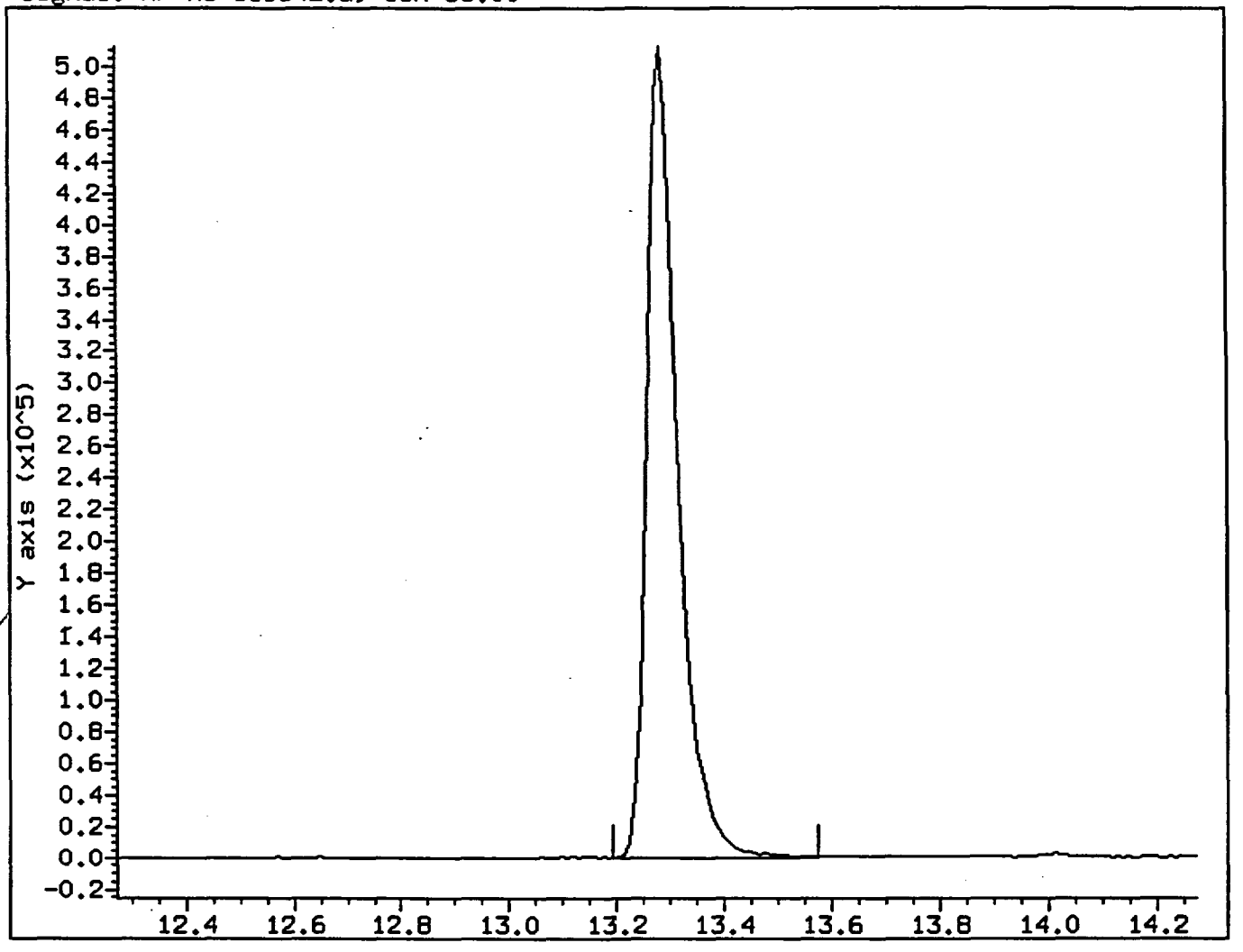
MANUAL INTEGRATION REPORT

LAB SAMPLE ID: VSTD200L8
SAMPLE ID. : VSTD200L8
FILENAME : /chem/l.i/1960319a.b/l19542.d
INST ID. : l.i
ANALYST : LINDA
DATE INJECTED: 19-MAR-1996 17:54
COMPOUND : Toluene-d8
ION: 98 AREA: 6443451 CONCENTRATION: 184.72
INTEGRATION SCAN RANGE: 858 - 888

Report Generated: 03/20/96 at 11:12 by LY

Manual Integration

Client Sample ID: VSTD200L8
Injection Date: 19-MAR-96 17:54
Instrument: l.i
Compound: 1,1,2,2-Tetrachloroethane
Signal: HP MS 119542.d, Ion 83.00



3/20/96
AY

MANUAL INTEGRATION REPORT

LAB SAMPLE ID: VSTD200L8
SAMPLE ID. : VSTD200L8
FILENAME : /chem/l.i/1960319a.b/l19542.d
INST ID. : l.i
ANALYST : LINDA
DATE INJECTED: 19-MAR-1996 17:54
COMPOUND : 1,1,2,2-Tetrachloroethane
ION: 83 AREA: 2093363 CONCENTRATION: 218.87
INTEGRATION SCAN RANGE: 1184 - 1223

Report Generated: 03/20/96 at 11:12 by LY

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: L Calibration Date: 03/27/96 Time: 1715

Lab File ID: L19686.D Init. Calibration Date(s): 03/19/96

Heated Purge: (Y/N) N Init. Calibration Times: 1609 1754

GC Column:DB-624 ID: 0.53 (mm)

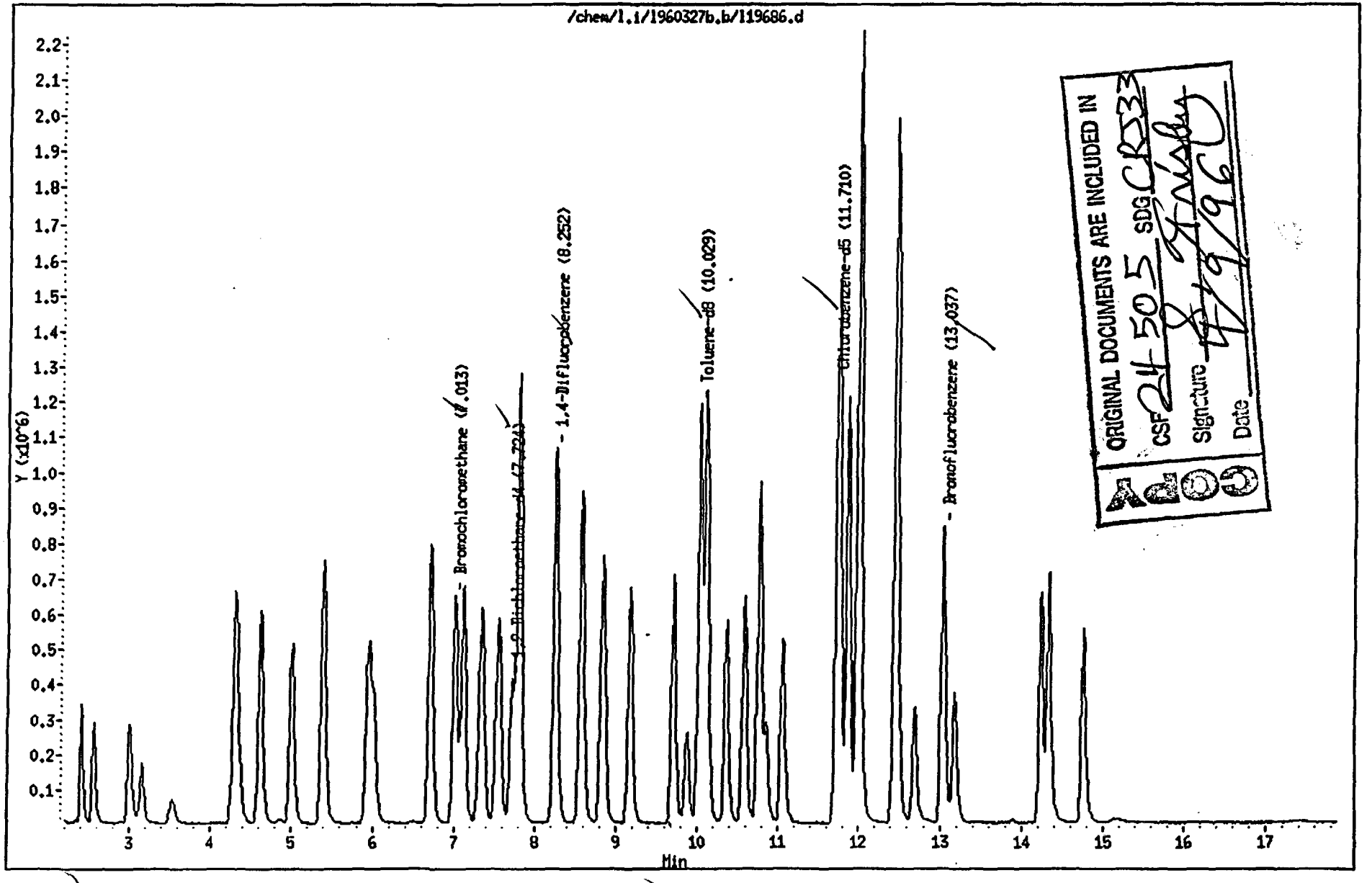
COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	2.013	1.723		-14.4	
Bromomethane	1.461	1.202	0.100	-17.7	25.0
Vinyl Chloride	1.888	1.587	0.100	-15.9	25.0
Chloroethane	1.153	1.000		-13.3	
Methylene Chloride	1.664	1.476		-11.3	
Acetone	0.570	0.499		-12.5	
Carbon Disulfide	6.259	5.520		-11.8	
1,1-Dichloroethene	2.146	1.953	0.100	-9.0	25.0
1,1-Dichloroethane	3.978	3.646	0.200	-8.3	25.0
1,2-Dichloroethene (total)	2.252	2.081		-7.6	
Chloroform	3.785	3.485	0.200	-7.9	25.0
1,2-Dichloroethane	1.850	1.710	0.100	-7.6	25.0
2-Butanone	0.838	0.761		-9.2	
1,1,1-Trichloroethane	0.588	0.558	0.100	-5.1	25.0
Carbon Tetrachloride	0.514	0.489	0.100	-4.9	25.0
Bromodichloromethane	0.593	0.562	0.200	-5.2	25.0
1,2-Dichloropropane	0.436	0.409		-6.2	
cis-1,3-Dichloropropene	0.555	0.506	0.200	-8.8	25.0
Trichloroethene	0.392	0.369	0.300	-5.9	25.0
Dibromochloromethane	0.379	0.344	0.100	-9.2	25.0
1,1,2-Trichloroethane	0.286	0.261	0.100	-8.7	25.0
Benzene	1.048	0.974	0.500	-7.1	25.0
trans-1,3-Dichloropropene	0.423	0.375	0.100	-11.3	25.0
Bromoform	0.212	0.187	0.100	-11.8	25.0
4-Methyl-2-Pentanone	0.374	0.353		-5.6	
2-Hexanone	0.310	0.309		-0.3	
Tetrachloroethene	0.463	0.430	0.200	-7.1	25.0
1,1,2,2-Tetrachloroethane	0.441	0.396	0.300	-10.2	25.0
Toluene	1.606	1.496	0.400	-6.8	25.0
Chlorobenzene	1.035	0.946	0.500	-8.6	25.0
Ethylbenzene	0.517	0.475	0.100	-8.1	25.0
Styrene	1.019	0.909	0.300	-10.8	25.0
Xylene (Total)	0.601	0.548	0.300	-8.8	25.0
Toluene-d8	1.609	1.414		-12.1	
Bromofluorobenzene	0.764	0.628	0.200	-17.8	25.0
1,2-Dichloroethane-d4	1.842	1.584		-14.0	

All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/1.i/1960327b.b/119686.d
Date : 27-MAR-96 17:15
Instrument : 1.i
Sample ID : VSTD050LW
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24 50 5 SDG CR33
Signature
Date 4/9/96

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Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960327b.b/119686.d
Lab. Id. : VSTD050LW
Quant Type: ISTD
Inj Date : 27-MAR-96 17:15
Operator : LINDA
Inst ID: l.i
Smp Info : VSTD050LW
Misc Info : MS317**INST:L*AATS*2-015-10*5ML
Comment :
Method : /chem/l.i/1960327b.b/OLM3WAT.m
Meth Date : 27-Mar-1996 17:42
Cal Date : 27-MAR-96 17:15
Cal File: 119686.d
Als bottle: 3
Continuing Calibration Sample
Dil Factor: 1.000
Target Version: Target 3.00
Integrator: HP RTE
Compound Sublist: all.sub
Sample Type: WATER

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	1 Chloromethane	50.00	2.404	(0.343)	573805	42.78	42.78
	2 Vinyl Chloride	62.00	2.558	(0.365)	528665	42.03	42.03
	3 Bromomethane	94.00	2.999	(0.428)	400434	41.14	41.14
	4 Chloroethane	64.00	3.152	(0.450)	333169	43.37	43.37
	5 1,1-Dichloroethene	96.00	4.302	(0.614)	650322	45.50	45.50
	6 Acetone	43.00	4.370	(0.623)	166114	43.74	43.74
	7 Carbon Disulfide	76.00	4.610	(0.657)	1838435	44.09	44.09
	8 Methylene Chloride	84.00	5.003	(0.713)	491565	44.35	44.35
M	9 1,2-Dichloroethene (total)	96.00			1385953	92.37	92.37
	10 trans-1,2-Dichloroethene	96.00	5.385	(0.768)	688983	46.56	46.56
	11 1,1-Dichloroethane	63.00	5.951	(0.849)	1214433	45.83	45.83
	12 cis-1,2-Dichloroethene	96.00	6.705	(0.956)	696970	45.82	45.82
	13 2-Butanone	43.00	6.715	(0.958)	253599	45.43	45.43
*	14 Bromochloromethane	128.00	7.013	(1.000)	333045	50.00	
	15 Chloroform	83.00	7.119	(1.015)	1160720	46.04	46.04
	16 1,1,1-Trichloroethane	97.00	7.340	(0.889)	1010165	47.39	47.39
	17 Carbon Tetrachloride	117.00	7.551	(0.915)	885980	47.54	47.54
$	18 1,2-Dichloroethane-d4	65.00	7.724	(1.101)	527674	43.00	43.00
	19 Benzene	78.00	7.801	(0.945)	1764365	46.49	46.49
	20 1,2-Dichloroethane	62.00	7.810	(1.114)	569385	46.19	46.19
*	21 1,4-Difluorobenzene	114.00	8.252	(1.000)	1810670	50.00	
	22 Trichloroethene	130.00	8.569	(1.038)	667508	46.96	46.96
	23 1,2-Dichloropropane	63.00	8.838	(1.071)	740210	46.91	46.91
	24 Bromodichloromethane	83.00	9.165	(1.111)	1018252	47.38	47.38
	25 cis-1,3-Dichloropropene	75.00	9.702	(1.176)	916750	45.61	45.61
	26 4-Methyl-2-Pentanone	43.00	9.875	(0.843)	438901	47.16	47.16
$	27 Toluene-d8	98.00	10.029	(0.856)	1760037	43.95	43.95
	28 Toluene	91.00	10.106	(0.863)	1862317	46.57	46.57
	29 trans-1,3-Dichloropropene	75.00	10.366	(1.255)	678394	44.28	44.28
	30 1,1,2-Trichloroethane	97.00	10.577	(1.282)	472423	45.60	45.60
	31 Tetrachloroethene	164.00	10.760	(0.919)	535021	46.46	46.46

Data File: /chem/l.i/1960327b.b/119686.d
Report Date: 27-Mar-1996 17:42

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	32 2-Hexanone	43.00	10.876	(0.926)	384867	49.90	49.90
	33 Dibromochloromethane	129.00	11.048	(1.339)	622619	45.39	45.39
*	34 Chlorobenzene-d5	117.00	11.710	(1.000)	1244446	50.00	
	35 Chlorobenzene	112.00	11.749	(1.003)	1177470	45.70	45.70
	36 Ethylbenzene	106.00	11.856	(1.012)	590837	45.90	45.90
	37 m,p-Xylene	106.00	11.998	(1.024)	1472163	90.17	90.17
	38 o-Xylene	106.00	12.442	(1.062)	682695	45.60	45.60
M	39 Xylene (Total)	106.00			2154858	143.95	143.95
	40 Styrene	104.00	12.460	(1.064)	1131513	44.62	44.62
	41 Bromoform	173.00	12.691	(1.538)	338895	44.06	44.06
$	42 Bromofluorobenzene	95.00	13.027	(1.112)	781195	41.05	41.05
	43 1,1,2,2-Tetrachloroethane	83.00	13.172	(1.125)	493101	44.90	44.90

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: L Calibration Date: 03/28/96 Time: 1007

Lab File ID: L19708.D Init. Calibration Date(s): 03/19/96

Heated Purge: (Y/N) N Init. Calibration Times: 1609 1754

GC Column:DB-624 ID: 0.53 (mm)

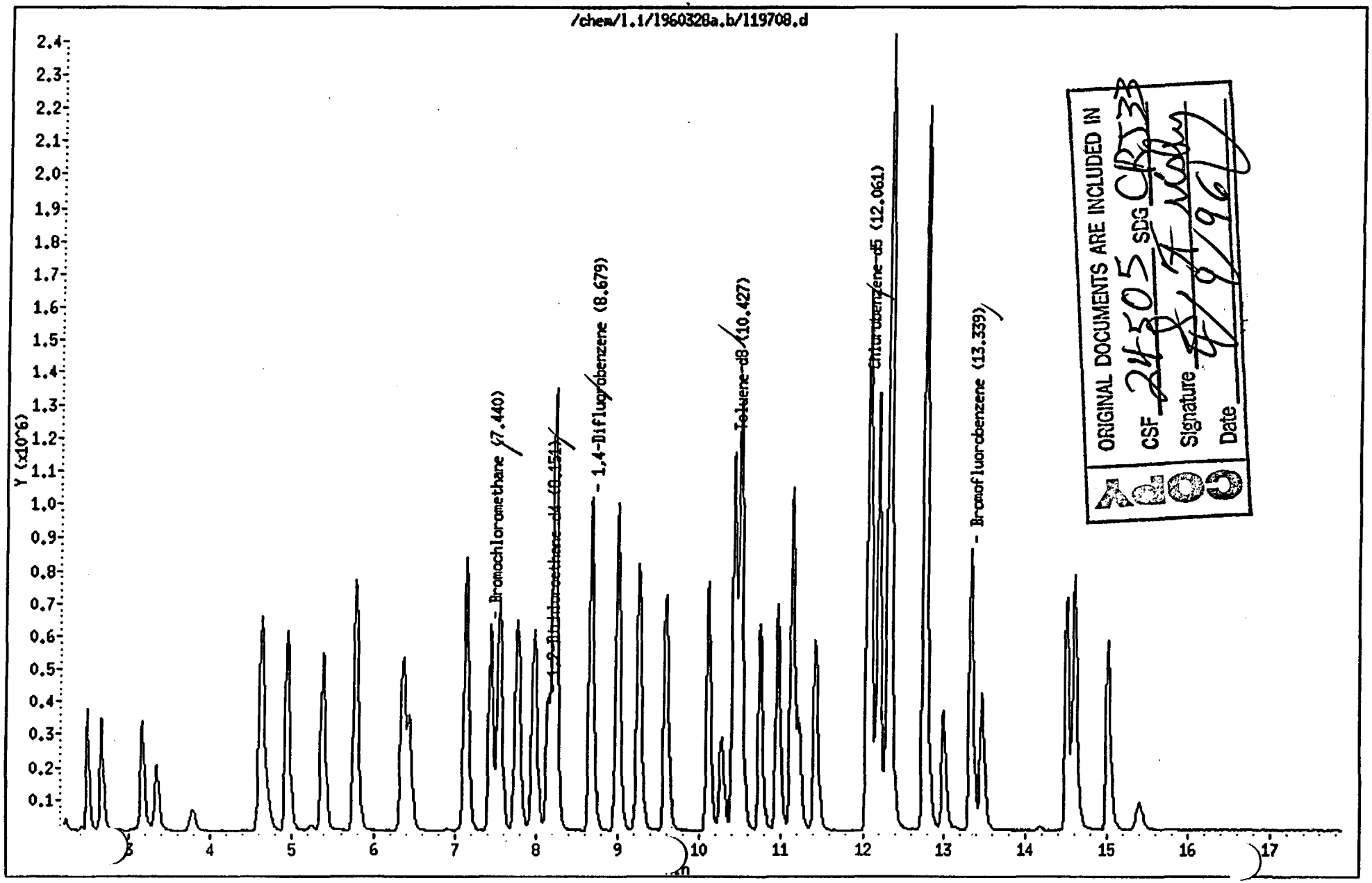
COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Chloromethane	2.013	1.997		-0.8	
Bromomethane	1.461	1.492	0.100	2.1	25.0
Vinyl Chloride	1.888	2.163	0.100	14.6	25.0
Chloroethane	1.153	1.376		19.3	
Methylene Chloride	1.664	1.685		1.3	
Acetone	0.570	0.579		1.6	
Carbon Disulfide	6.259	6.200		-0.9	
1,1-Dichloroethene	2.146	2.157	0.100	0.5	25.0
1,1-Dichloroethane	3.978	4.018	0.200	1.0	25.0
1,2-Dichloroethene (total)	2.252	2.270		0.8	
Chloroform	3.785	3.843	0.200	1.5	25.0
1,2-Dichloroethane	1.850	1.863	0.100	0.7	25.0
2-Butanone	0.838	0.918		9.5	
1,1,1-Trichloroethane	0.588	0.604	0.100	2.7	25.0
Carbon Tetrachloride	0.514	0.531	0.100	3.3	25.0
Bromodichloromethane	0.593	0.615	0.200	3.7	25.0
1,2-Dichloropropane	0.436	0.450		3.2	
cis-1,3-Dichloropropene	0.555	0.568	0.200	2.3	25.0
Trichloroethene	0.392	0.406	0.300	3.6	25.0
Dibromochloromethane	0.379	0.384	0.100	1.3	25.0
1,1,2-Trichloroethane	0.286	0.292	0.100	2.1	25.0
Benzene	1.048	1.065	0.500	1.6	25.0
trans-1,3-Dichloropropene	0.423	0.424	0.100	0.2	25.0
Bromoform	0.212	0.214	0.100	0.9	25.0
4-Methyl-2-Pentanone	0.374	0.399		6.7	
2-Hexanone	0.310	0.352		13.5	
Tetrachloroethene	0.463	0.466	0.200	0.6	25.0
1,1,2,2-Tetrachloroethane	0.441	0.436	0.300	-1.1	25.0
Toluene	1.606	1.595	0.400	-0.7	25.0
Chlorobenzene	1.035	1.034	0.500	-0.1	25.0
Ethylbenzene	0.517	0.506	0.100	-2.1	25.0
Styrene	1.019	1.010	0.300	-0.9	25.0
Xylene (Total)	0.601	0.597	0.300	-0.7	25.0
Toluene-d8	1.609	1.386		-13.9	
Bromofluorobenzene	0.764	0.648	0.200	-15.2	25.0
1,2-Dichloroethane-d4	1.842	1.604		-12.9	

All other compounds must meet a minimum RRF of 0.010.

OPERATOR: Linda

Data File: /chem/1.i/1960328a.b/119708.d
Date : 28-MAR-1996 10:07
Instrument : 1.i
Sample ID : VSTD050LX
Column phase : DB-624
Volume Injected (uL) : 0.0

Column diameter : 0.53



ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24505 SDG CR33
Signature
Date 4/8/96
COPY

Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960328a.b/119708.d
Lab. Id. : VSTD050LX
Quant Type: ISTD
Inj Date : 28-MAR-1996 10:07
Operator : LINDA
Inst ID: l.i
Smp Info : VSTD050LX
Misc Info : MS317**INST:L*AATS*2-015-10*5ML
Comment :
Method : /chem/l.i/1960328a.b/OLM3WAT.m
Meth Date : 28-Mar-1996 10:43
Cal Date : 28-MAR-96 10:07
Cal File: 119708.d
Als bottle: 2
Continuing Calibration Sample
Dil Factor: 1.000
Target Version: Target 3.00
Integrator: HP RTE
Compound Sublist: all.sub
Sample Type: WATER

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	1 Chloromethane	50.00	2.481	(0.333)	622087	49.58	49.58
	2 Vinyl Chloride	62.00	2.653	(0.357)	673876	57.27	57.27
	3 Bromomethane	94.00	3.162	(0.425)	464952	51.06	51.06
	Chloroethane	64.00	3.344	(0.450)	428774	59.67	59.67
	1,1-Dichloroethene	96.00	4.620	(0.622)	671922	50.25	50.25
	6 Acetone	43.00	4.715	(0.634)	180508	50.81	50.81
	7 Carbon Disulfide	76.00	4.936	(0.663)	1931728	49.52	49.52
	8 Methylene Chloride	84.00	5.377	(0.723)	524865	50.62	50.62
M	9 1,2-Dichloroethene (total)	96.00			1414684	100.79	100.79
	10 trans-1,2-Dichloroethene	96.00	5.780	(0.777)	695046	50.21	50.21
	11 1,1-Dichloroethane	63.00	6.365	(0.856)	1251800	50.50	50.50
	12 cis-1,2-Dichloroethene	96.00	7.132	(0.959)	719638	50.57	50.57
	13 2-Butanone	43.00	7.142	(0.960)	285891	54.75	54.75
*	14 Bromochloromethane	128.00	7.440	(1.000)	311565	50.00	
	15 Chloroform	83.00	7.545	(1.014)	1197310	50.76	50.76
	16 1,1,1-Trichloroethane	97.00	7.766	(0.895)	1036788	51.30	51.30
	17 Carbon Tetrachloride	117.00	7.978	(0.919)	910957	51.56	51.56
$	18 1,2-Dichloroethane-d4	65.00	8.151	(1.096)	499882	43.54	43.54
	19 Benzene	78.00	8.218	(0.947)	1828813	50.82	50.82
	20 1,2-Dichloroethane	62.00	8.237	(1.107)	580381	50.33	50.33
*	21 1,4-Difluorobenzene	114.00	8.679	(1.000)	1716648	50.00	
	22 Trichloroethene	130.00	8.996	(1.037)	696191	51.66	51.66
	23 1,2-Dichloropropane	63.00	9.256	(1.066)	773372	51.70	51.70
	24 Bromodichloromethane	83.00	9.592	(1.105)	1055578	51.81	51.81
	25 cis-1,3-Dichloropropene	75.00	10.110	(1.165)	975922	51.21	51.21
	26 4-Methyl-2-Pentanone	43.00	10.271	(0.852)	486593	53.36	53.36
$	27 Toluene-d8	98.00	10.427	(0.865)	1690445	43.08	43.08
	28 Toluene	91.00	10.504	(0.000)	1945493	49.65	49.65 (M)
	29 trans-1,3-Dichloropropene	75.00	10.714	(1.238)	728549	50.16	50.16
	30 1,1,2-Trichloroethane	97.00	10.956	(1.262)	501159	51.03	51.03
	31 Tetrachloroethene	164.00	11.139	(0.924)	568242	50.36	50.36

3/28/96 [illegible]

Data File: /chem/l.i/1960328a.b/119708.d
Report Date: 28-Mar-1996 10:44

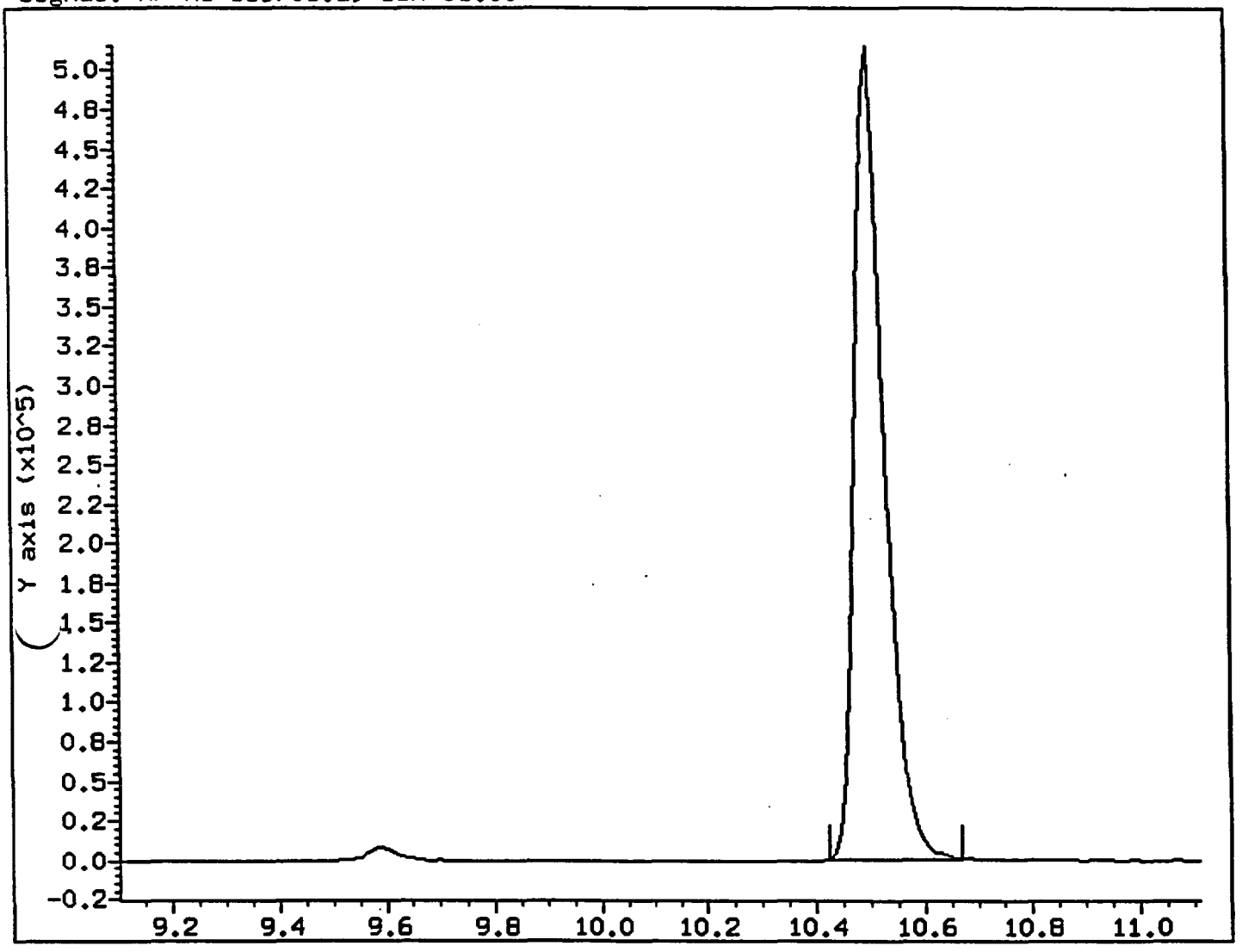
	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
	32 2-Hexanone	43.00	11.216	(0.930)	428842	56.74	56.74
	33 Dibromochloromethane	129.00	11.418	(1.316)	658384	50.63	50.63
*	34 Chlorobenzene-d5	117.00	12.061	(1.000)	1219396	50.00	
	35 Chlorobenzene	112.00	12.089	(1.002)	1260643	49.93	49.93
	36 Ethylbenzene	106.00	12.205	(1.012)	617384	48.95	48.95
	37 m,p-Xylene	106.00	12.339	(1.022)	1589255	99.35	99.35
	38 o-Xylene	106.00	12.763	(1.058)	727594	49.60	49.60
M	39 Xylene (Total)	106.00			2316849	157.95	157.95
	40 Styrene	104.00	12.772	(1.059)	1230983	49.55	49.55
	41 Bromoform	173.00	13.003	(1.498)	368340	50.51	50.51
$	42 Bromofluorobenzene	95.00	13.339	(1.106)	790123	42.38	42.38
	43 1,1,2,2-Tetrachloroethane	83.00	13.474	(1.117)	532189	49.46	49.46

QC Flag Legend

M - Compound response manually integrated.

Manual Integration

Client Sample ID: VSTD050LX
Injection Date: 28-MAR-96 10:07
Instrument: 1.i
Compound: Toluene
Signal: HP MS 119708.d, Ion 91.00



3/28/96
RY

MANUAL INTEGRATION REPORT

LAB SAMPLE ID: VSTD050LX
SAMPLE ID. : VSTD050LX
FILENAME : /chem/l.i/1960328a.b/119708.d
INST ID. : l.i
ANALYST : LINDA
DATE INJECTED: 28-MAR-1996 10:07
COMPOUND : Toluene
ION: 91 AREA: 1945493 CONCENTRATION: 49.65
INTEGRATION SCAN RANGE: 897 - 922

Report Generated: 03/28/96 at 10:44 by _____

Data File: /chem/1.i/1960319a.b/119537.d

Date : 19-MAR-96 15:39

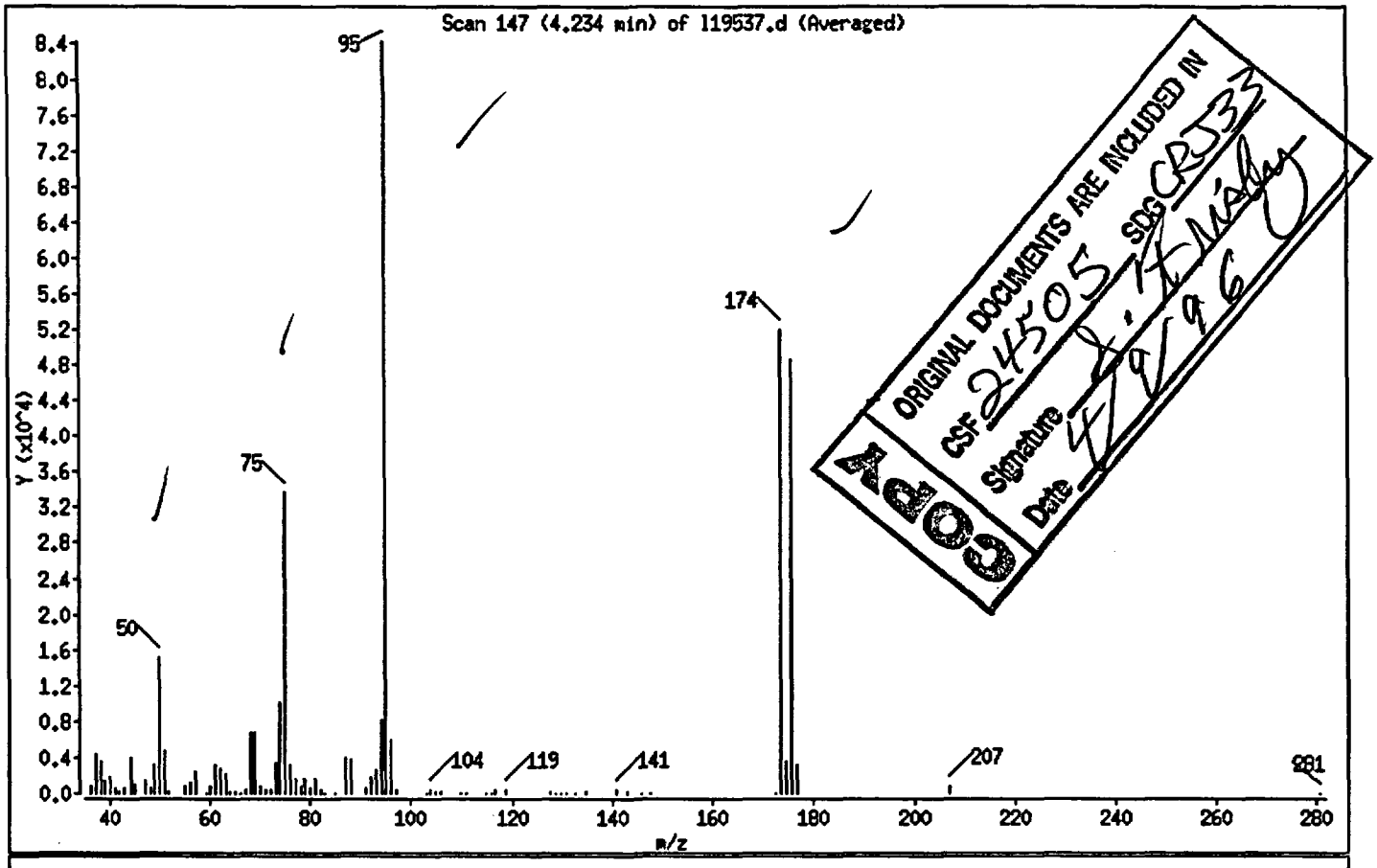
Instrument : 1.i

Sample ID : BFB

Column phase : DB624 Column diameter : 0.53

Volume Injected (uL) : 0.0

1 bfb



ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24505 SDG CR533
Signature
Date 4/9/96
ADOS

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.0
50	8.00 - 40.00% of mass 95	17.7
75	30.00 - 66.00% of mass 95	39.9
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	0.0
174	50.00 - 120.00% of mass 95	61.8
175	4.00 - 9.00% of mass 174	7.0
176	93.00 - 101.00% of mass 174	93.3
177	5.00 - 9.00% of mass 176	6.5

Data File: /chem/1.i/1960319a.b/119537.d

Date : 19-MAR-96 15:39

Instrument : 1.i

Sample ID : BFB

Column phase : DB624 Column diameter : 0.53

Volume Injected (uL) : 0.0

Spectrum: Scans 147-149 (4.234 min), Subtraction Scan 115

Location of Maximum: 95.00

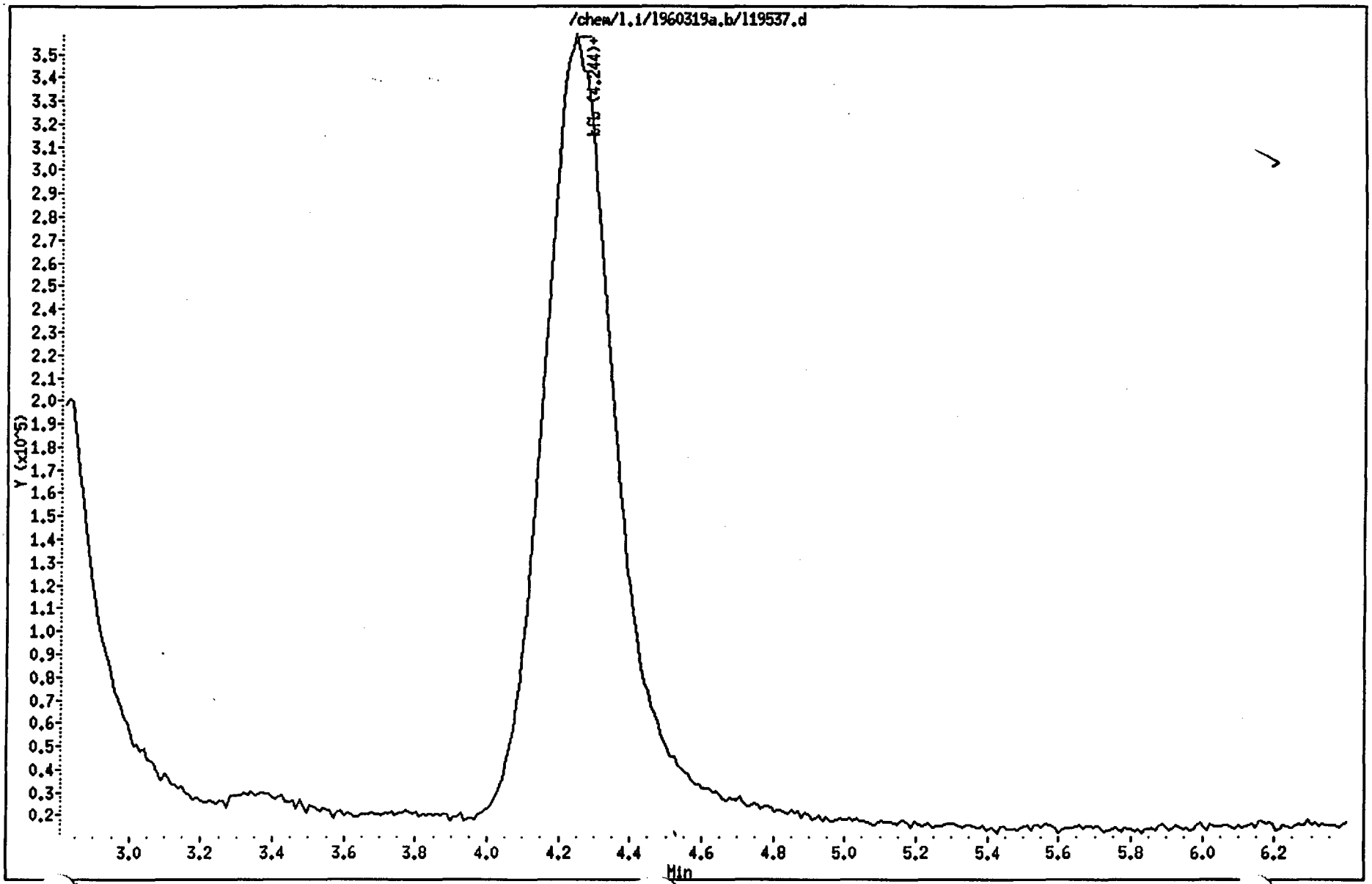
Number of points: 69

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	806	62.00	2705	82.00	377	119.00	360
37.00	4343	63.00	2108	83.00	74	128.00	269
38.00	3685	64.00	163	85.00	68	129.00	78
39.00	748	66.00	91	87.00	3974	130.00	89
42.00	276	67.00	384	88.00	3836	131.00	71
44.00	612	68.00	6701	91.00	150	135.00	244
45.00	468	69.00	6458	92.00	1830	141.00	452
47.00	1361	70.00	546	93.00	2352	143.00	174
48.00	566	72.00	407	94.00	7797	146.00	70
49.00	3244	73.00	2722	95.00	84296	148.00	71
50.00	14902	74.00	10156	96.00	5743	174.00	52098
51.00	4176	75.00	33600	97.00	35	175.00	3654
52.00	215	76.00	3180	104.00	165	176.00	48589
56.00	967	77.00	198	110.00	66	177.00	3160
57.00	1668	78.00	284	111.00	70	207.00	125
59.00	94	79.00	1289	115.00	67		
60.00	788	80.00	499	116.00	90		
61.00	3268	81.00	1239	117.00	382		

Data File: /chem/1.i/1960319a.b/119537.d
Date : 19-MAR-96 15:39
Instrument : 1.i
Sample ID : BFB
Column phase : DB624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



Data File: /chem/1.i/1960327b.b/119684.d

Date : 27-MAR-96 14:35

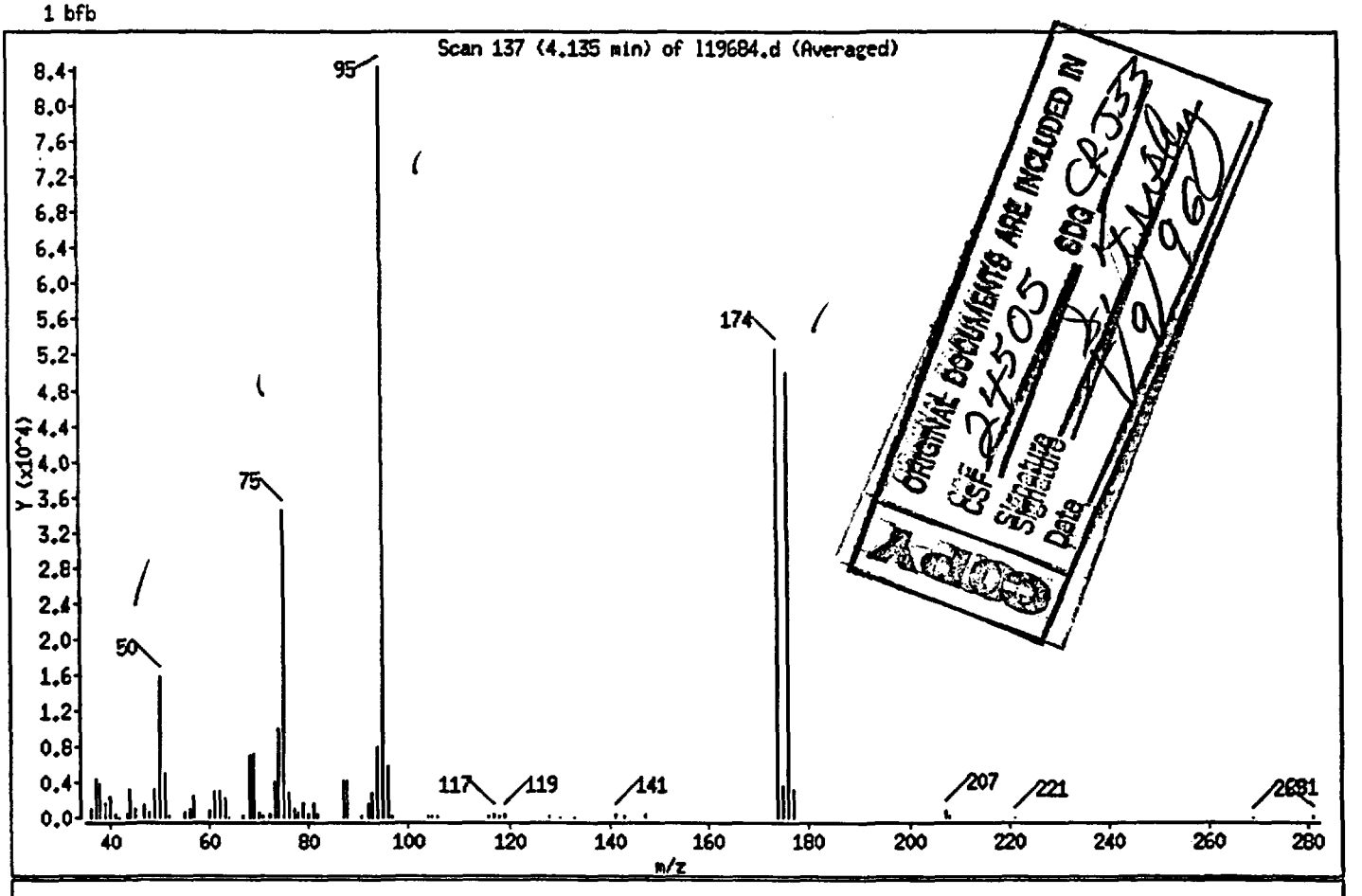
Instrument : 1.i

Sample ID : BFB

Column phase : DB624 Column diameter : 0.53

Volume Injected (uL) : 0.0

1 bfb



ORIGINAL DOCUMENTS ARE INCLUDED IN CSF 24505 SDG CR533
Signature
Date 4/9/96

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.0
50	8.00 - 40.00% of mass 95	18.7
75	30.00 - 66.00% of mass 95	40.7
96	5.00 - 9.00% of mass 95	6.3
173	Less than 2.00% of mass 174	0.0
174	50.00 - 120.00% of mass 95	62.4
175	4.00 - 9.00% of mass 174	6.7
176	93.00 - 101.00% of mass 174	95.2
177	5.00 - 9.00% of mass 176	6.5

Data File: /chem/1.i/1960327b.b/119684.d

Date : 27-MAR-96 14:35

Instrument : 1.i

Sample ID : BFB

Column phase : DB624 Column diameter : 0.53

Volume Injected (uL) : 0.0

Spectrum: Scans 137-139 (4.135 min), Subtraction Scan 102

Location of Maximum: 95.00

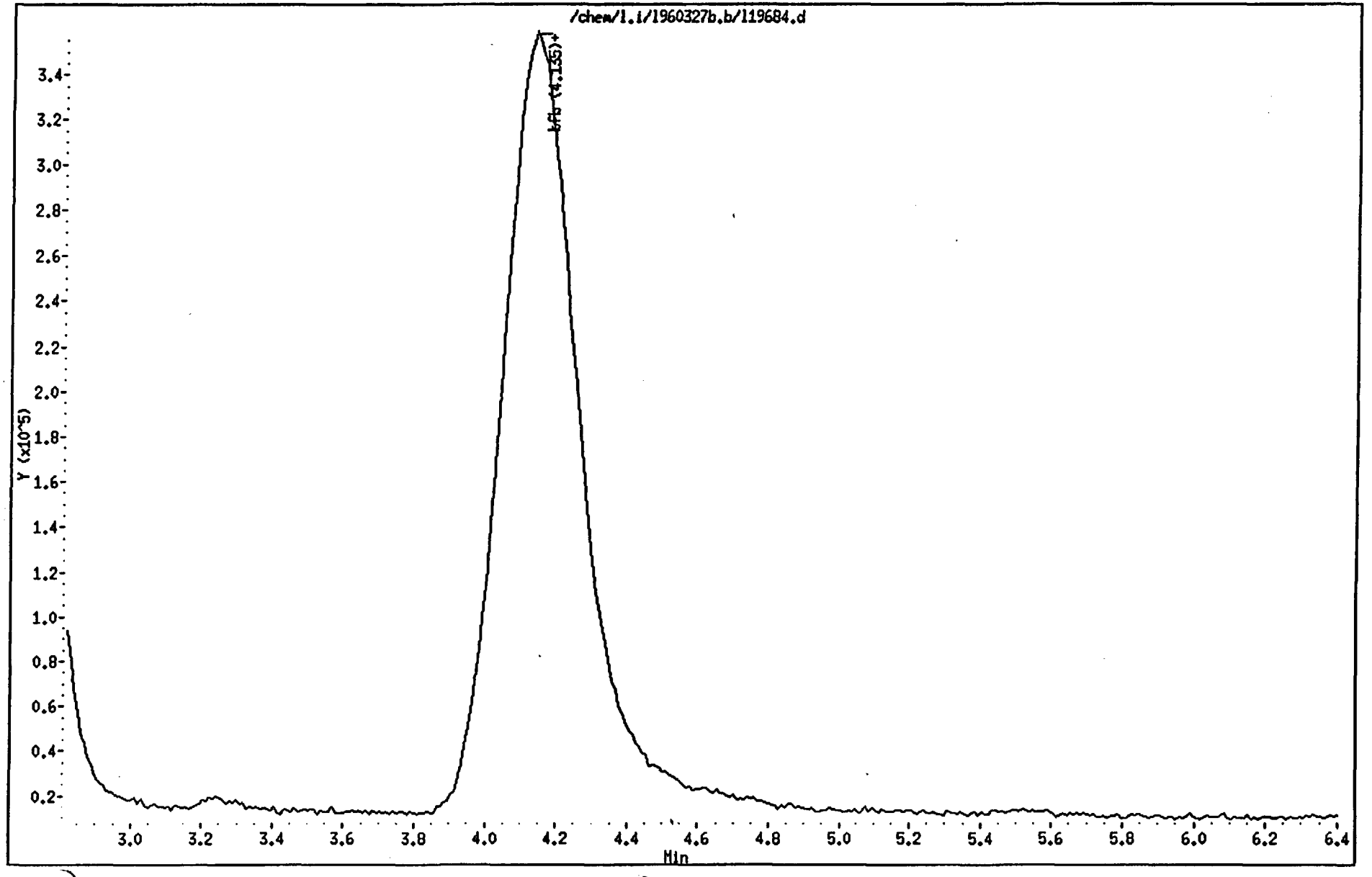
Number of points: 67

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	906	62.00	2982	81.00	1597	119.00	309
37.00	4322	63.00	2172	82.00	385	128.00	272
38.00	3751	64.00	86	87.00	4218	130.00	66
39.00	1407	67.00	145	88.00	4264	133.00	80
41.00	104	68.00	6961	91.00	74	141.00	376
45.00	1036	69.00	6743	92.00	1620	143.00	275
47.00	1403	70.00	596	93.00	2813	147.00	307
48.00	503	71.00	81	94.00	8064	174.00	52722
49.00	3201	72.00	380	95.00	84437	175.00	3518
50.00	15823	73.00	3616	96.00	5314	176.00	50173
51.00	4798	74.00	10019	97.00	289	177.00	3260
52.00	160	75.00	34361	104.00	289	207.00	43
55.00	18	76.00	2864	105.00	289	208.00	144
56.00	1036	77.00	404	106.00	184	221.00	73
57.00	1789	78.00	328	116.00	232	269.00	82
60.00	843	79.00	1562	117.00	387	281.00	160
61.00	2970	80.00	401	118.00	136		

Data File: /chem/1.i/1960327b.b/119684.d
Date : 27-MAR-96 14:35
Instrument : 1.i
Sample ID : BFB
Column phase : DB624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



Data File: /chem/l.i/1960328a.b/119707.d

Date : 28-MAR-96 09:40

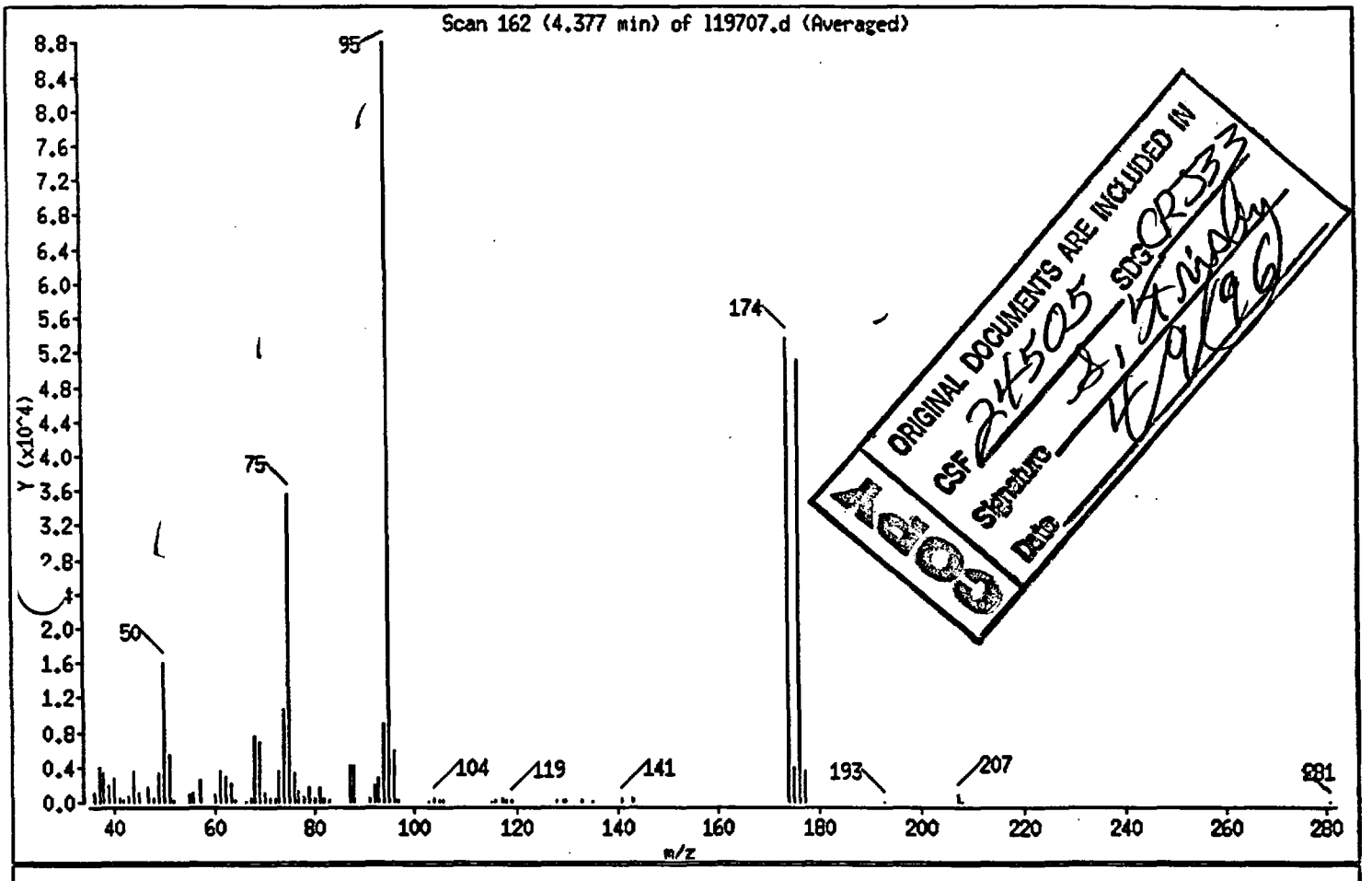
Instrument : l.i

mple ID : BFB

Column phase : DB624 Column diameter : 0.53

Volume Injected (uL) : 0.0

1 bfb



ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24505 SDG CR333
Signature
Date 4/9/96
ACOS

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.0
50	8.00 - 40.00% of mass 95	18.0
75	30.00 - 66.00% of mass 95	40.3
96	5.00 - 9.00% of mass 95	6.8
173	Less than 2.00% of mass 174	0.0
174	50.00 - 120.00% of mass 95	61.3
175	4.00 - 9.00% of mass 174	7.5
176	93.00 - 101.00% of mass 174	95.2
177	5.00 - 9.00% of mass 176	6.9

Data File: /chem/l.i/1960328a.b/119707.d

Date : 28-MAR-96 09:40

Instrument : l.i

mple ID : BFB

Column phase : DB624 Column diameter : 0.53

Volume Injected (uL) : 0.0

Spectrum: Scans 162-164 (4.377 min), Subtraction Scan 127

Location of Maximum: 95.00

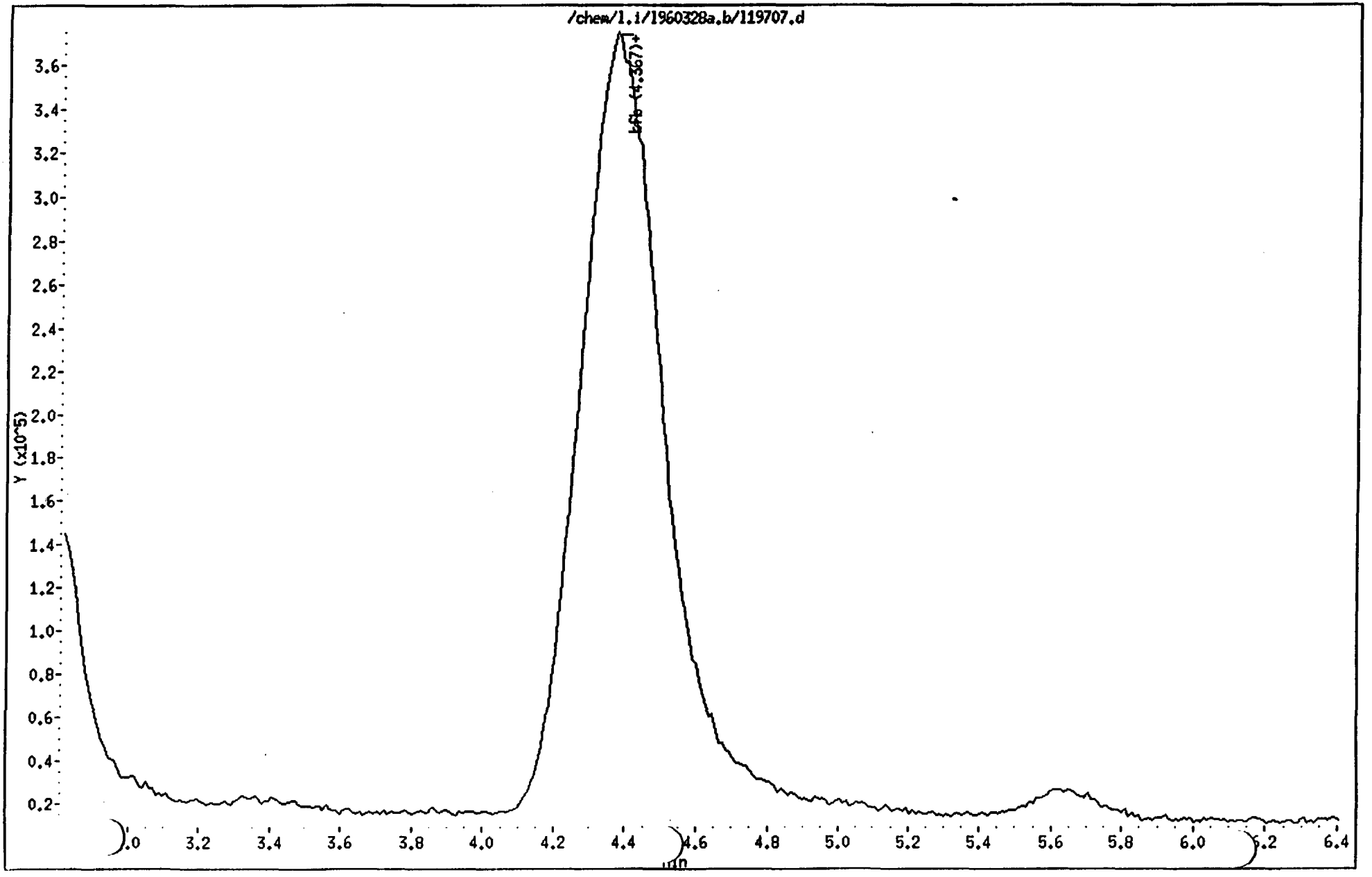
Number of points: 71

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	957	62.00	2991	81.00	1566	117.00	435
37.00	3884	63.00	2167	82.00	372	118.00	170
38.00	3299	64.00	185	83.00	245	119.00	268
39.00	1412	66.00	96	87.00	4247	128.00	181
40.00	16	67.00	451	88.00	4075	129.00	166
44.00	318	68.00	7591	91.00	362	130.00	153
45.00	629	69.00	6555	92.00	1890	133.00	163
47.00	1678	70.00	672	93.00	2791	141.00	452
48.00	457	71.00	43	94.00	8650	143.00	369
49.00	3385	72.00	428	95.00	87692	174.00	53730
50.00	15782	73.00	3073	96.00	5929	175.00	4050
51.00	5107	74.00	10526	97.00	247	176.00	51168
52.00	276	75.00	35358	103.00	77	177.00	3521
55.00	387	76.00	3341	104.00	441	193.00	70
56.00	809	77.00	559	105.00	261	207.00	155
57.00	1923	78.00	357	106.00	261	208.00	73
60.00	777	79.00	1764	115.00	77	281.00	75
61.00	3486	80.00	468	116.00	283		

Data File: /chem/1.i/1960328a.b/119707.d
Date : 28-MAR-96 09:40
Instrument : 1.i
Sample ID : BFB
Column phase : DB624
Volume Injected (uL) : 0.0

Column diameter : 0.53

OPERATOR: Linda



1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: L960327B

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19687.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 03/27/96

GC Column:DB-624 ID: 0.53 (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	10	U
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.

VBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: L960327B

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19687.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 03/27/96

GC Column:DB-624 ID: 0.53 (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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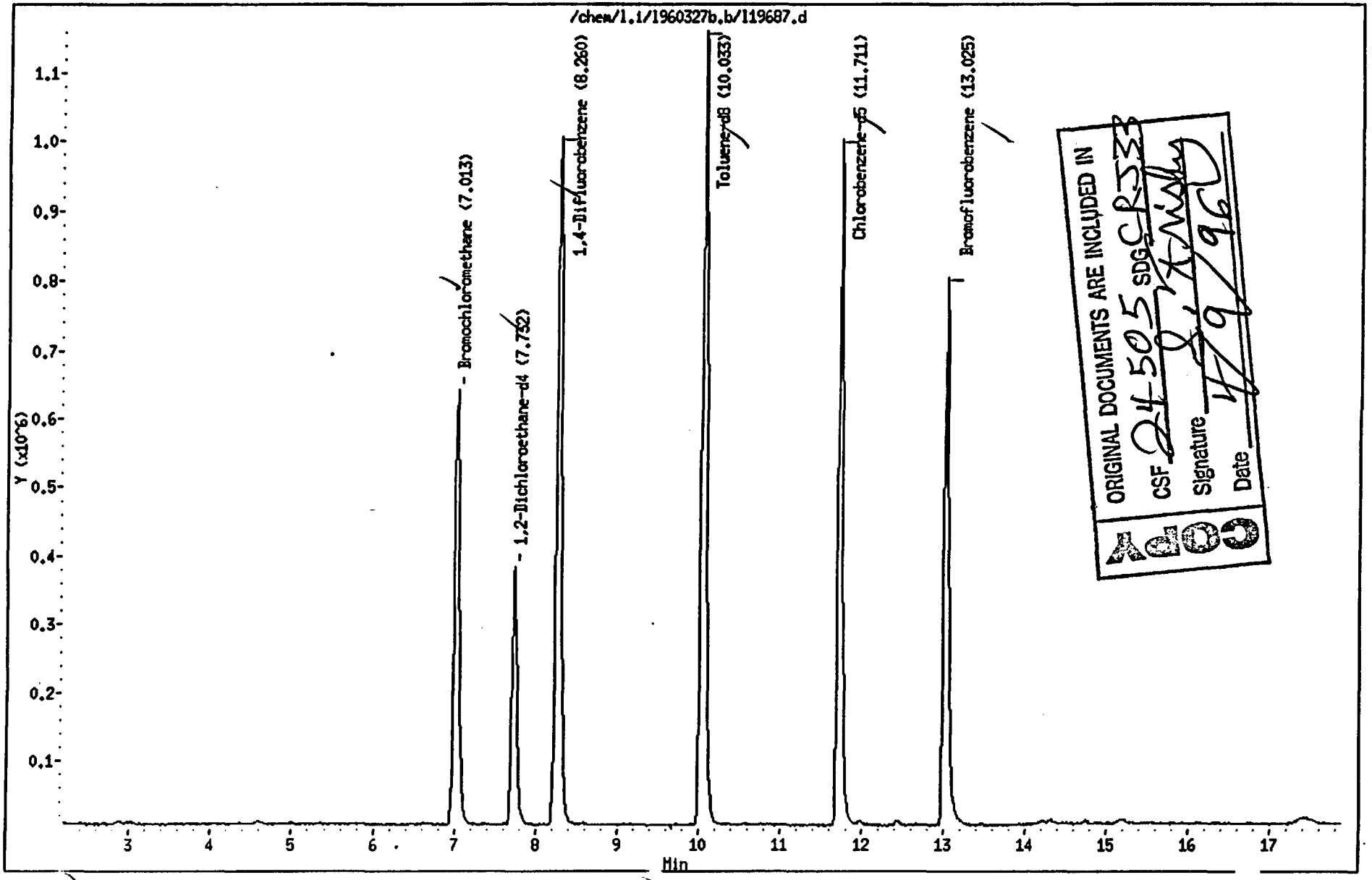
Data File: /chem/1.i/1960327b.b/119687.d
Date : 27-MAR-96 17:48
Instrument : 1.i
Sample ID : VBLK
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24505 SDG CR333
Signature
Date 4/9/96
COPY

Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/1.i/1960327b.b/119687.d
Lab. Id. : L960327B
Quant Type: ISTD
Inj Date : 27-MAR-96 17:48
Operator : LINDA
Inst ID: 1.i
Smp Info : VBLK
Misc Info : MS317**INST:L*AATS*L960327B*5ML
Comment :
Method : /chem/1.i/1960327b.b/OLM3WAT.m
Meth Date : 27-Mar-1996 17:42
Cal Date : 27-MAR-96 17:15
Cal File: 119686.d
Als bottle: 3
QC Sample: BLANK
Dil Factor: 1.000
Target Version: Target 3.00
Integrator: HP RTE
Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
* 14 Bromochloromethane	128.00	7.013	(1.000)	329890	50.00	(Q)
$ 18 1,2-Dichloroethane-d4	65.00	7.732	(1.103)	494583	47.31	47.31
* 21 1,4-Difluorobenzene	114.00	8.260	(1.000)	1748738	50.00	
$ 27 Toluene-d8	98.00	10.033	(0.857)	1777282	50.95	50.95
* 34 Chlorobenzene-d5	117.00	11.711	(1.000)	1233074	50.00	
$ 42 Bromofluorobenzene	95.00	13.025	(1.112)	783732	50.62	50.62

QC Flag Legend

Q - Qualifier signal failed the ratio test.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: L960328A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19709.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 03/28/96

GC Column:DB-624 ID: 0.53 (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	10	U
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.

VBLK2

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: L960328A

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19709.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 03/28/96

GC Column:DB-624 ID: 0.53 (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
1.				
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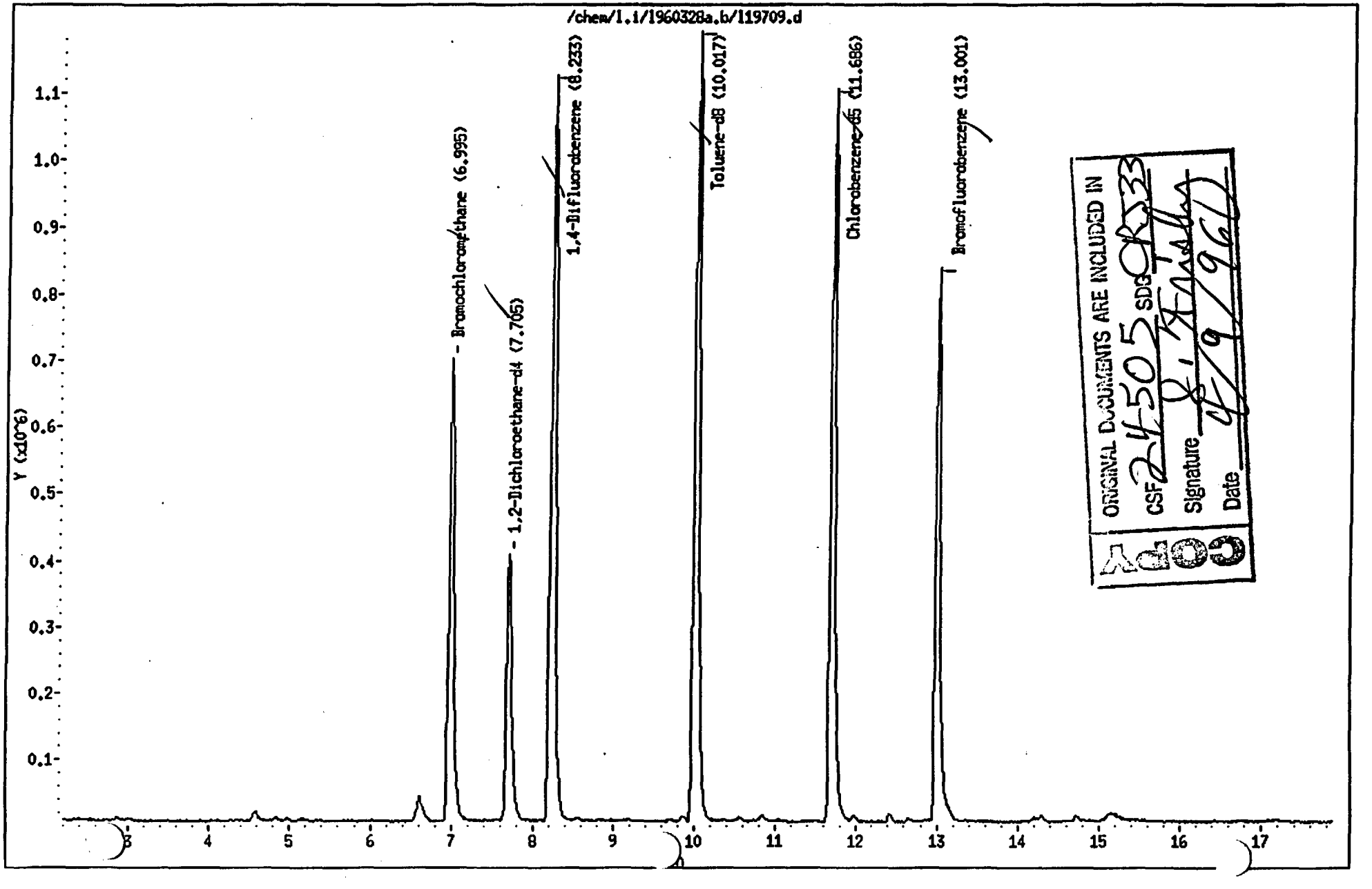
Data File: /chem/1.i/1960328a.b/119709.d
Date : 28-MAR-96 10:52
Instrument : 1.i
Sample ID : VBLK
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24505 SDG OR033
Signature
Date 4/9/96

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Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/l960328a.b/l19709.d
Lab. Id. : L960328A
Quant Type: ISTD
Inj Date : 28-MAR-96 10:52
Operator : LINDA
Inst ID: l.i
Smp Info : VBLK 2
Misc Info : MS317**INST:L*AATS*L960328A*5ML
Comment :
Method : /chem/l.i/l960328a.b/OLM3WAT.m
Meth Date : 28-Mar-1996 10:43
Cal Date : 28-MAR-96 10:07
Cal File: l19708.d
Als bottle: 3
QC Sample: BLANK
Dil Factor: 1.000
Target Version: Target 3.00
Integrator: HP RTE
Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
* 14 Bromochloromethane	128.00	6.995	(1.000)	368747	50.00	
$ 18 1,2-Dichloroethane-d4	65.00	7.705	(1.101)	510341	43.13	43.13
* 21 1,4-Difluorobenzene	114.00	8.242	(1.000)	1973951	50.00	
$ Toluene-d8	98.00	10.017	(0.857)	1817582	47.20	47.20
* Chlorobenzene-d5	117.00	11.686	(1.000)	1388817	50.00	
$ 42 Bromofluorobenzene	95.00	13.001	(1.112)	807436	44.86	44.86
~~43 1,1,2,2-Tetrachloroethane~~	~~83.00~~	~~13.145~~	~~(1.125)~~	~~15516~~	~~1.11~~	~~1.11(a)~~ FP

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

FP = FALSE POSITIVE 4/10/96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VHBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: VHBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19717.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 03/28/96

GC Column:DB-624 ID: 0.53 (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	10	U
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.

VHBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: VHBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19717.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 03/28/96

GC Column:DB-624 ID: 0.53 (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
1.				
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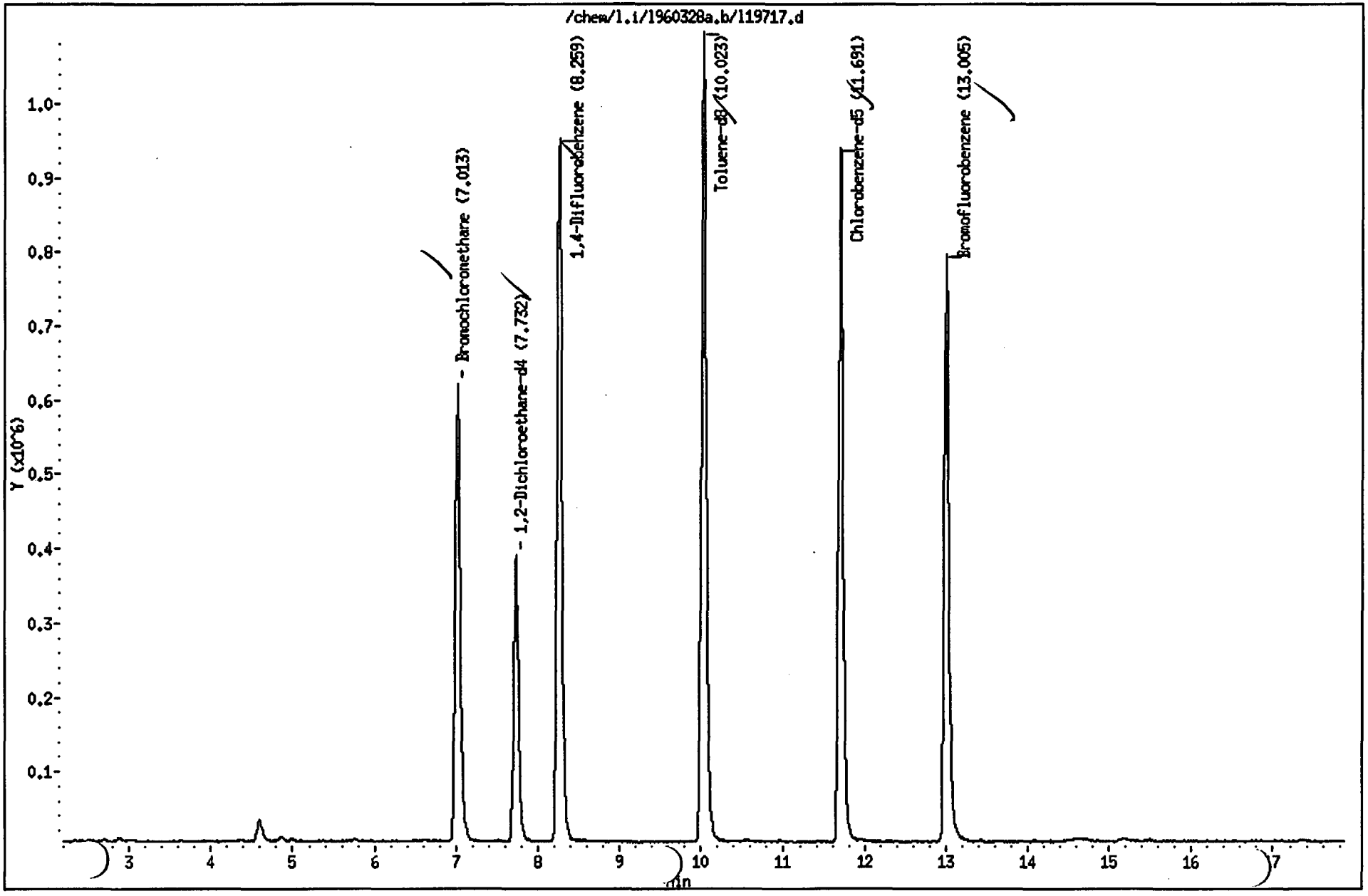
Data File: /chem/1.i/1960328a.b/119717.d
Date : 28-MAR-96 15:22
Instrument : 1.i
Sample ID : VHBLK
Column phase : DB-624
Volume Injected (uL) : 0.0

OPERATOR: Linda

Column diameter : 0.53



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SWOK/AATS

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960328a.b/l19717.d
Lab. Id. : VHBLK
Inj Date : 28-MAR-96 15:22
Operator : LINDA
Smp Info : VHBLK
Misc Info : MS317**INST:L*24505*VHBLK*5ML
Comment :
Method : /chem/l.i/1960328a.b/OLM3WAT.m
Meth Date : 01-Apr-1996 14:51 gina
Cal Date : 28-MAR-96 10:07
Als bottle: 12
Dil Factor: 1.000
Integrator: HP RTE
Sample Type: WATER

Quant Type: ISTD
Inst ID: l.i
Cal File: l19708.d
Target Version: Target 3.00
Compound Sublist: all.sub

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
* 14 Bromochloromethane	128.00	7.013	(1.000)	322082	50.00	
$ 18 1,2-Dichloroethane-d4	65.00	7.732	(1.103)	502017	48.57	48.57
* 21 1,4-Difluorobenzene	114.00	8.259	(1.000)	1649175	50.00	
$ Toluene-d8	98.00	10.033	(0.857)	1662032	51.75	51.75
* Chlorobenzene-d5	117.00	11.701	(1.000)	1158334	50.00	
$ 42 Bromofluorobenzene	95.00	13.005	(1.111)	779653	51.93	51.93

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VIBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: VIBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19692.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 03/27/96

GC Column:DB-624 ID: 0.53 (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	10	U
67-64-1	Acetone	7	J
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.

VIBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: VIBLK1

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: L19692.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. _____ Date Analyzed: 03/27/96

GC Column:DB-624 ID: 0.53 (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/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 67-63-0	Isopropyl Alcohol	4.589	56	NJ
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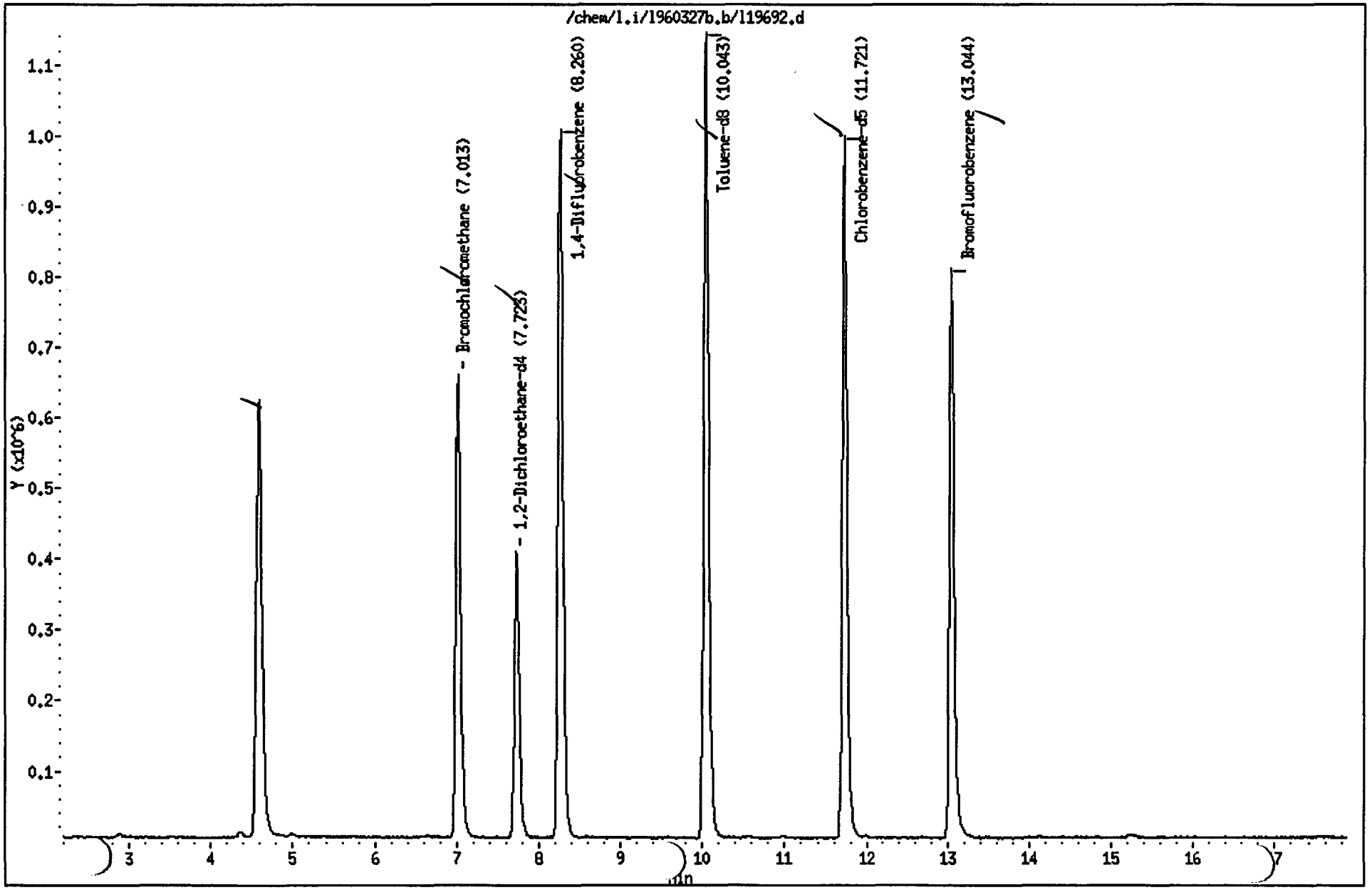
FORM I VOA-TIC OLM03.0

BBG 4/13/96

Data File: /chem/1.i/1960327b.b/119692.d
Date : 27-MAR-1996 20:11
Instrument : 1.i
Sample ID : VIBLK
Column phase : DB-624
Volume Injected (uL) : 0.0

Column diameter : 0.53



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Southwest Laboratory of Oklahoma

VOLATILE QUANT REPORT

Data file : /chem/l.i/1960327b.b/119692.d
Lab. Id. : VIBLK|
Quant Type: ISTD
Inj Date : 27-MAR-1996 20:11
Operator : LINDA
Inst ID: l.i
Smp Info : VIBLK|
Misc Info : MS317**INST:L*24501*VIBLK*5ML
Comment :
Method : /chem/l.i/1960327b.b/OLM3WAT.m
Meth Date : 27-Mar-1996 17:42
Cal Date : 27-MAR-96 17:15
Cal File: 119686.d
Als bottle: 5
Dil Factor: 1.000
Target Version: Target 3.00
Integrator: HP RTE
Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
6 Acetone	43.00	4.378	(0.604)	23228	6.80	6.80(a)
* 14 Bromochloromethane	128.00	7.013	(1.000)	342016	50.00	(Q)
$ 18 1,2-Dichloroethane-d4	65.00	7.723	(1.101)	528373	48.75	48.75
* 1,4-Difluorobenzene	114.00	8.260	(1.000)	1744059	50.00	
$ Toluene-d8	98.00	10.043	(0.857)	1730153	50.10	50.10
* 34 Chlorobenzene-d5	117.00	11.721	(1.000)	1220856	50.00	
$ 42 Bromofluorobenzene	95.00	13.044	(1.113)	794957	51.86	51.86

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: /chem/l.i/1960327b.b/119692.d

Date : 27-MAR-1996 20:11

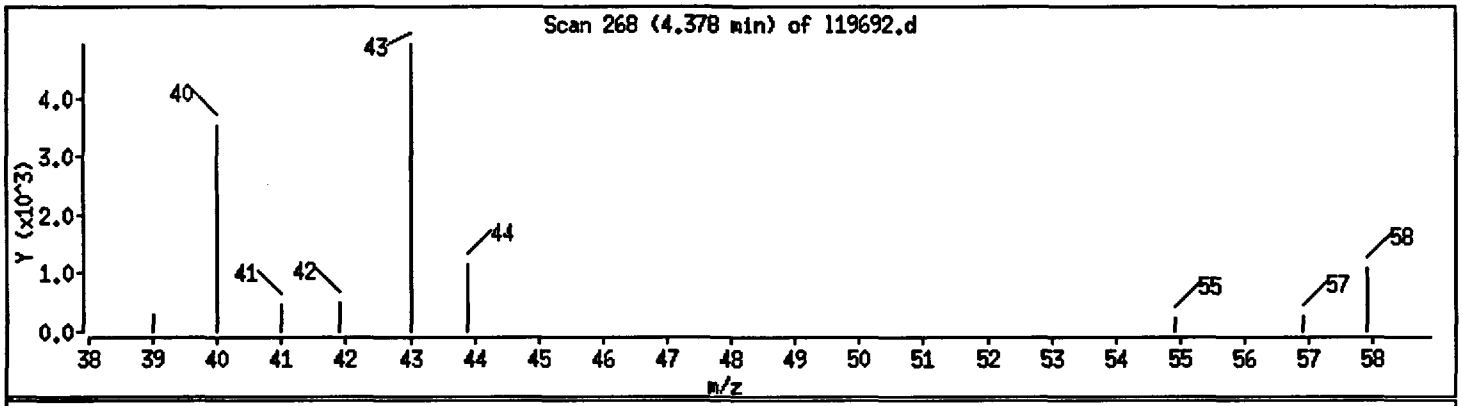
Instrument : l.i

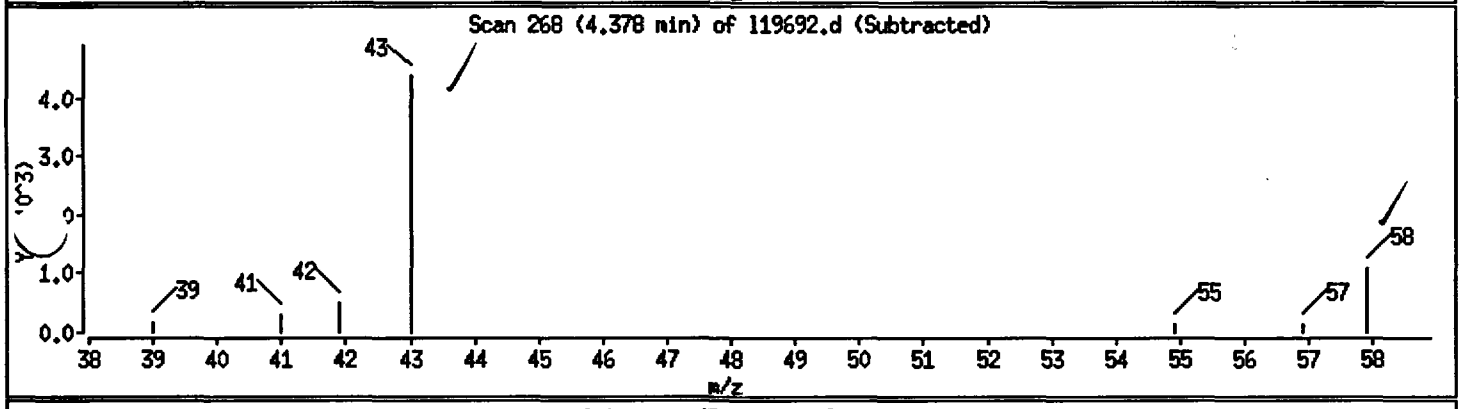
Sample ID : VIBLK

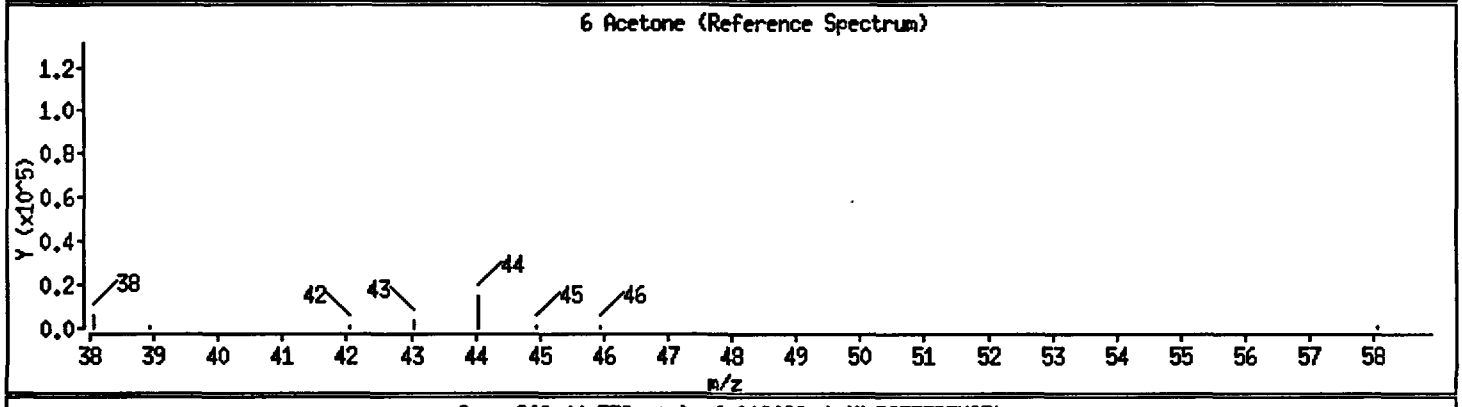
Column phase : DB-624 Column diameter : 0.53

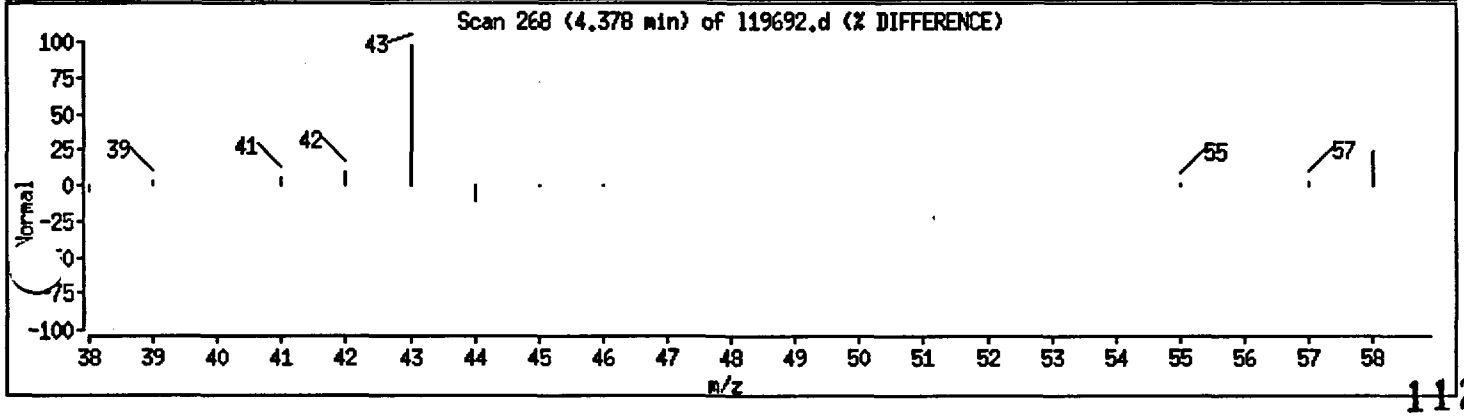
Volume Injected (uL) : 0.0

6 Acetone









Southwest Laboratory of Oklahoma

Unknown Compounds Quantitation Report

Data file : /chem/l.i/1960327b.b/l19692.d
Lab. Id. : VIBLK
Inj Date : 27-MAR-1996 20:11
Operator : LINDA Inst ID: l.i
Smp Info : VIBLK
Misc Info : MS317**INST:L*24501*VIBLK*5ML
Comment :
Method : /chem/l.i/1960327b.b/OLM3WAT.m
Meth Date : 27-Mar-1996 17:42
Cal Date : 27-MAR-96 17:15 Cal File: l19686.d
Als bottle: 5
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD	RT	AREA	AMOUNT
* 14 Bromochloromethane	7.013	2724651	50.000

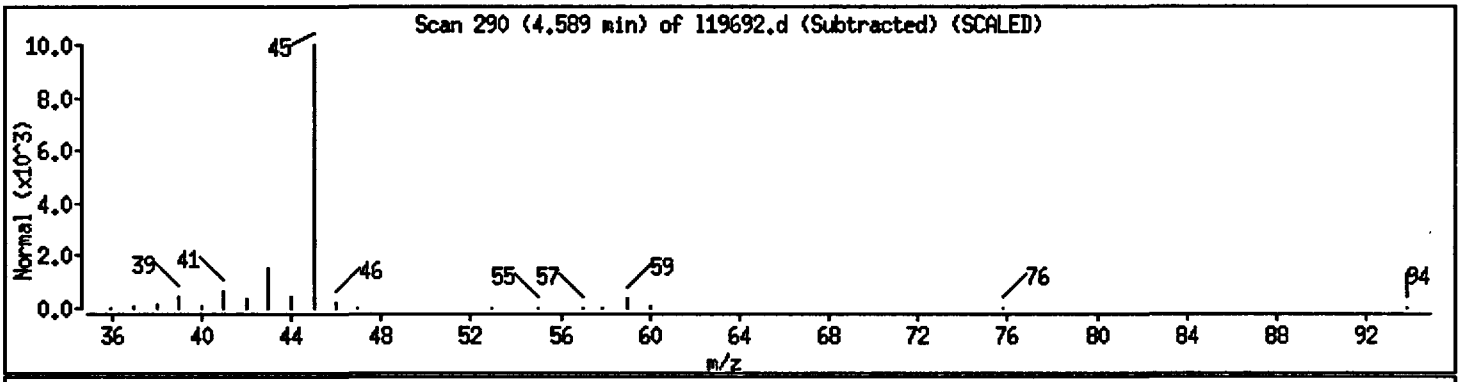
RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
1-propyl Alcohol					CAS #: 67-63-0		
4.589	3068719	56.31	86	NBS75K.l	62358		14

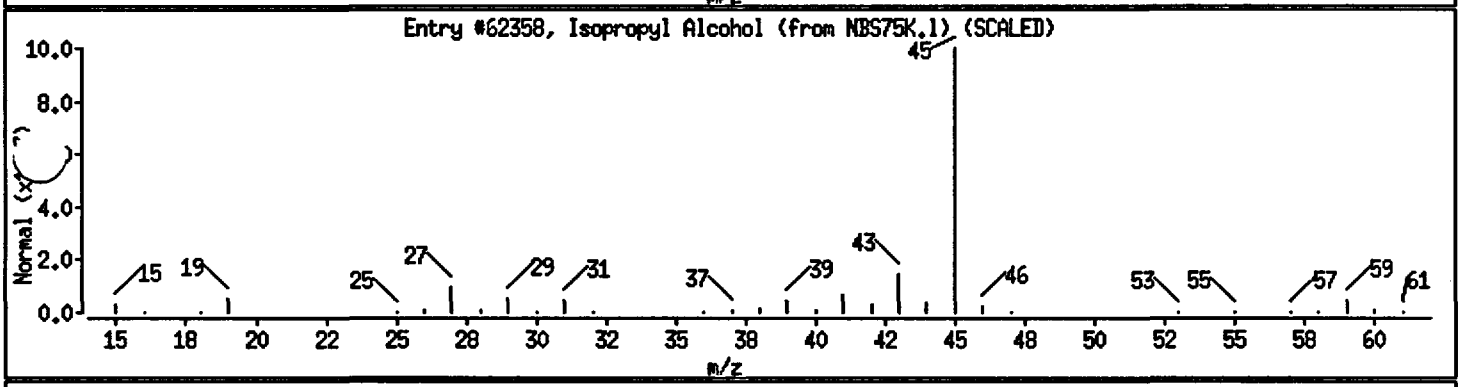
QC Flag Legend

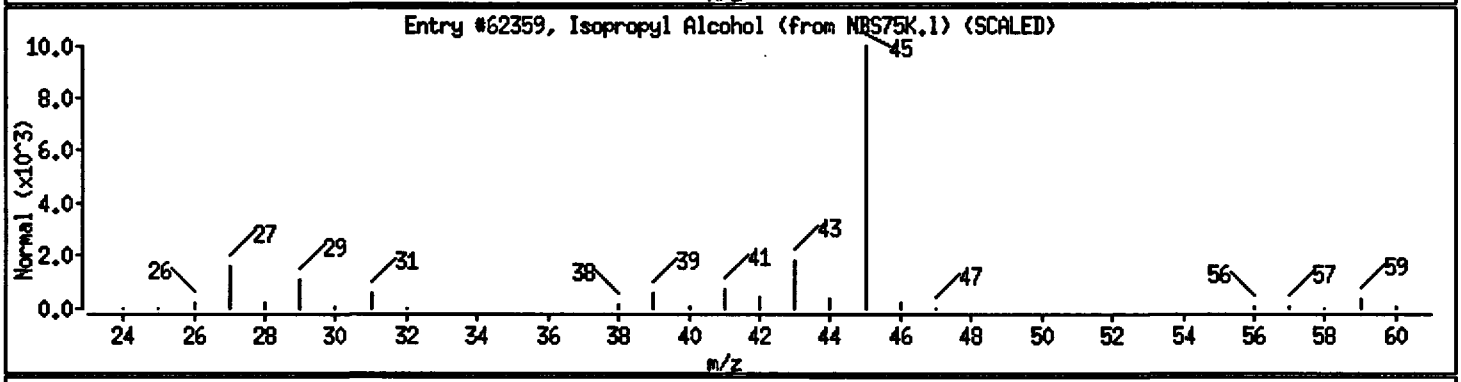
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

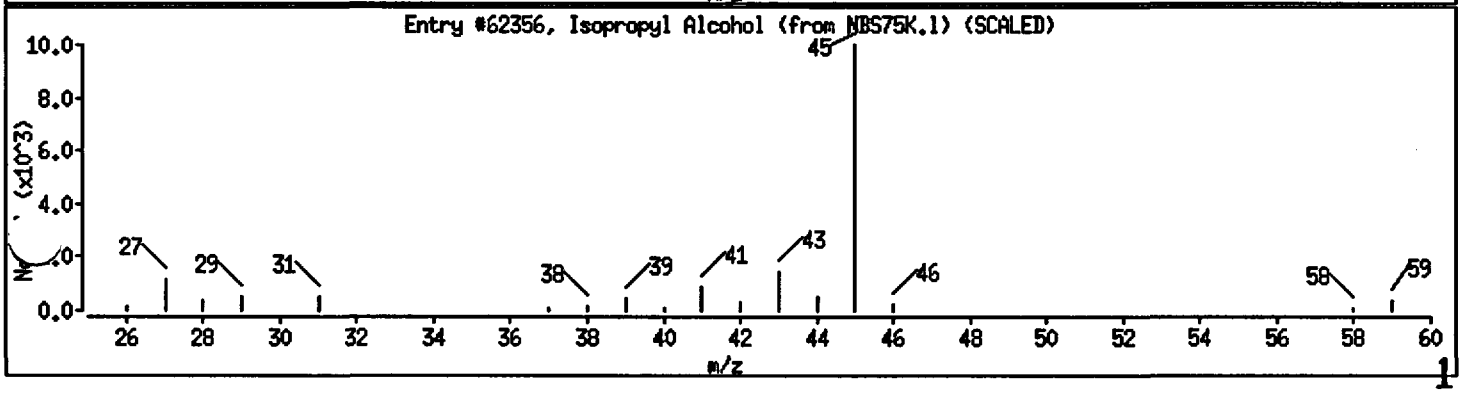
Data File: /chem/1.i/1960327b.b/119692.d
Date : 27-MAR-1996 20:11
Instrument : 1.i
Sample ID : VIBLK 1
Column phase : DB-624 Column diameter : 0.53
Volume Injected (uL) : 0.0

Library Search Compound Match		CAS Number	Library	Lib Entry	Quality
Isopropyl Alcohol	DBJ 4/13/96	67-63-0	NBS75K.1	62358	86
Isopropyl Alcohol		67-63-0	NBS75K.1	62359	78
Isopropyl Alcohol		67-63-0	NBS75K.1	62356	78









2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	S7 (2CP)#	S8 (DCB)#	TOT OUT
01	SBLK1	70	72	76	63	58	58	60	66	0
02	FEM97	75	79	80	70	65	79	68	78	0
03	FEM98	78	85	85	77	73	105	74	74	0
04	FEM98DL	84	98	93	78	66	95	82	78	0
05										
06										
07										
08										
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30										

		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

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID: A2246.D Lab Sample ID: BL0322WA

Instrument ID: A Date Extracted: 03/22/96

Matrix: (soil/water) WATER Date Analyzed: 03/25/96

Level:(low/med) LOW Time Analyzed: 1056

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	FEM97	25005.01	A2256.D	03/25/96
02	FEM98	25005.02	A2257.D	03/25/96
03	FEM98DL	25005.02DL	A2403.D	03/30/96
04				
05				
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COMMENTS:

page 01 of 01

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID: A2200.D DFTPP Injection Date: 03/21/96

Instrument ID: A DFTPP Injection Time: 0859

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	40.6
68	Less than 2.0% of mass 69	0.5 (1.1)1
69	Mass 69 relative abundance	42.5
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	42.7
197	Less than 1.0% of mass 198	0.3
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	22.3
365	Greater than 0.75% of mass 198	1.54
441	Present, but less than mass 443	10.3
442	40.0 - 110.0% of mass 198	68.6
443	15.0 - 24.0% of mass 442	11.7 (17.0)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	SSTD160AL	SSTD160AL	A2201.D	03/21/96	0924
02	SSTD020AL	SSTD020AL	A2202.D	03/21/96	0956
03	SSTD080AL	SSTD080AL	A2203.D	03/21/96	1028
04	SSTD120AL	SSTD120AL	A2204.D	03/21/96	1101
05	SSTD050AL	SSTD050AL	A2205.D	03/21/96	1148
06					
07					
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22					

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

b Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID: A2243.D DFTPP Injection Date: 03/25/96

Instrument ID: A DFTPP Injection Time: 0920

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	42.7
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	48.9
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	41.8
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	7.7
275	10.0 - 30.0% of mass 198	17.2
365	Greater than 0.75% of mass 198	2.02
441	Present, but less than mass 443	9.6
442	40.0 - 110.0% of mass 198	64.5
443	15.0 - 24.0% of mass 442	14.5 (22.5)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	SSTD050AP	SSTD050AP	A2245.D	03/25/96	1017
02	SBLK1	BL0322WA	A2246.D	03/25/96	1056
03	FEM97	25005.01	A2256.D	03/25/96	1627
04	FEM98	25005.02	A2257.D	03/25/96	1701
05					
06					
07					
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22					

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

b Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID: A2390.D DFTPP Injection Date: 03/30/96

Instrument ID: A DFTPP Injection Time: 1251

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	52.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.8
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	54.5
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	7.5
275	10.0 - 30.0% of mass 198	19.2
365	Greater than 0.75% of mass 198	2.54
441	Present, but less than mass 443	10.5
442	40.0 - 110.0% of mass 198	64.0
443	15.0 - 24.0% of mass 442	13.5 (21.1)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	SSTD050AR	SSTD050AR	A2392.D	03/30/96	1339
02	FEM98DL	25005.02DL	A2403.D	03/30/96	1946
03					
04					
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22					

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID (Standard): A2245.D Date Analyzed: 03/25/96

Instrument ID: A Time Analyzed: 1017

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	417689	4.25	1381384	5.97	901722	8.74
	UPPER LIMIT	835378	4.75	2762768	6.47	1803444	9.24
	LOWER LIMIT	208844	3.75	690692	5.47	450861	8.24
	EPA SAMPLE No.						
01	SBLK1	456471	4.25	1411981	5.97	785776	8.75
02	FEM97	540347	4.25	1775367	5.97	1045471	8.75
03	FEM98	469645	4.25	1570810	5.97	1046445	8.75
04							
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

b Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID (Standard): A2245.D Date Analyzed: 03/25/96

Instrument ID: A Time Analyzed: 1017

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1552017	11.16	1291469	15.61	1494470	17.85
	UPPER LIMIT	3104034	11.66	2582938	16.11	2988940	18.35
	LOWER LIMIT	776008	10.66	645734	15.11	747235	17.35
	EPA SAMPLE No.						
01	SBLK1	1333265	11.16	1136973	15.62	1347059	17.84
02	FEM97	1744970	11.16	1400294	15.62	1575516	17.85
03	FEM98	1828103	11.16	1664084	15.62	2096373	17.85
04							
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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 values outside QC limits with an asterisk.
* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID (Standard): A2392.D Date Analyzed: 03/30/96

Instrument ID: A Time Analyzed: 1339

	IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
12 HOUR STD	544427	4.06	1740319	5.74	1096213	8.50
UPPER LIMIT	1088854	4.56	3480638	6.24	2192426	9.00
LOWER LIMIT	272214	3.56	870160	5.24	548106	8.00
EPA SAMPLE No.						
01 FEM98DL	486725	4.05	1706894	5.73	1044425	8.48
02						
03						
04						
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22						

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab File ID (Standard): A2392.D Date Analyzed: 03/30/96

Instrument ID: A Time Analyzed: 1339

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1710922	10.90	1219540	15.32	1308696	17.53
	UPPER LIMIT	3421844	11.40	2439080	15.82	2617392	18.03
	LOWER LIMIT	855461	10.40	609770	14.82	654348	17.03
	EPA SAMPLE No.						
01	FEM98DL	1705335	10.88	1357327	15.31	2001288	17.53
02							
03							
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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 values outside QC limits with an asterisk.
* Values outside of QC limits.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEM97

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2256.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.5

Number TICs found: 2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.293	4	J
2.	UNKNOWN ORGANIC ACID	9.653	2	JB
3.				
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23.				
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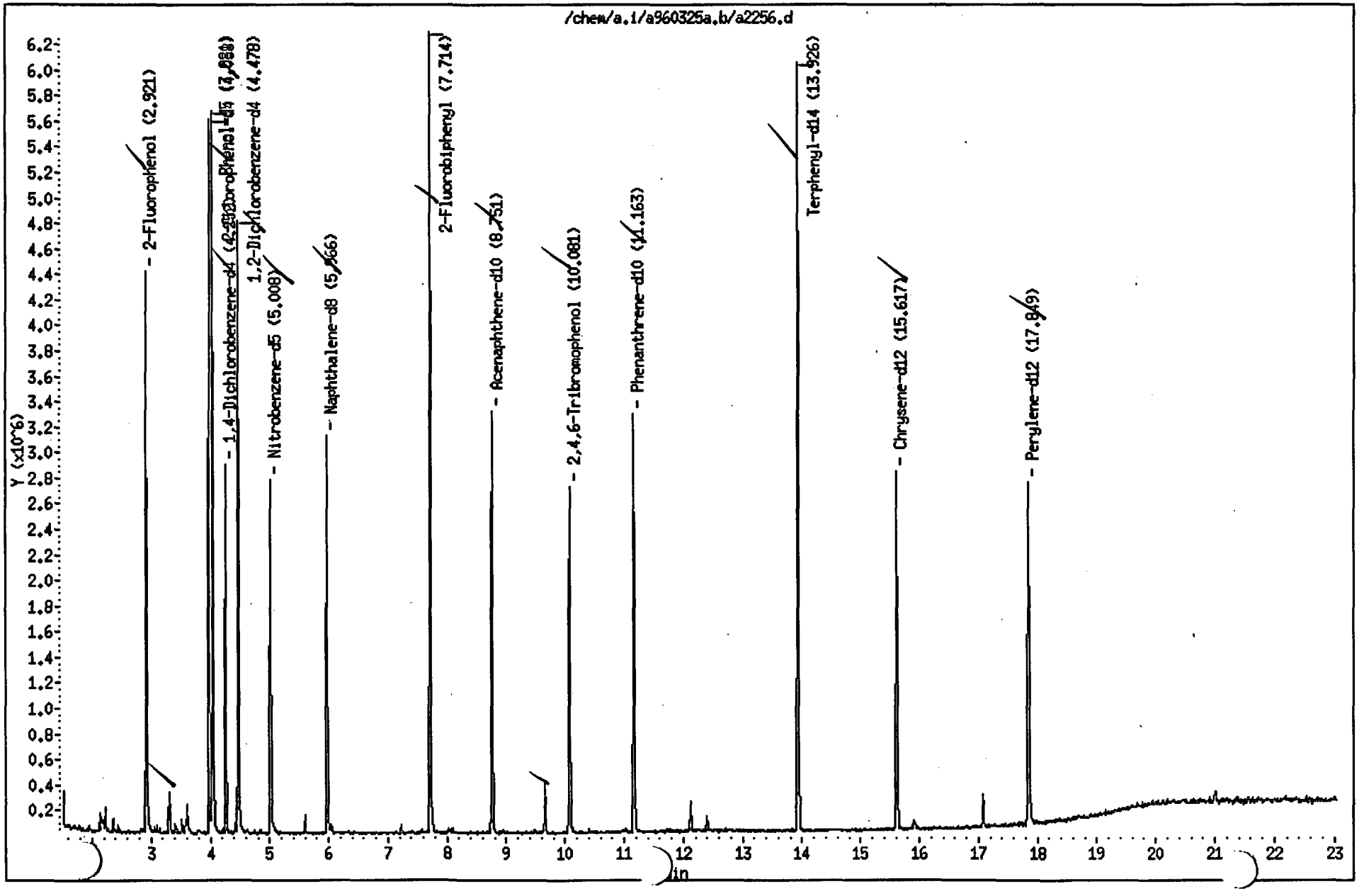
Data File: /chem/a.i/a960325a.b/a2256.d
Date : 25-MAR-1996 16:27
Instrument : a.i
Sample ID : FEM97
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: MIKE

Column diameter : 0.25

127



Data File: /chem/a.i/a960325a.b/a2256.d
Report Date: 26-Mar-1996 08:00

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960325a.b/a2256.d
Lab. Id. : 25005.01 Quant Type: ISTD
Inj Date : 25-MAR-1996 16:27
Operator : ANNIE Inst ID: a.i
Smp Info : FEM97
Misc Info : MS517**INSTA*AATS-E:24501*25005.01*1000ML/1ML/2UL*
Comment :
Method : /chem/a.i/a960325a.b/BNA517EPA.m
Meth Date : 26-Mar-1996 07:57 mike
Cal Date : 25-MAR-96 10:17 Cal File: a2245.d
Als bottle: 11
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
$ 1 2-Fluorophenol	112.00	2.921	(0.687)	1320539	97.31	48.65
$ 2 Phenol-d5	98.80	3.981	(0.936)	1877306	105.22	52.61
* 5 2-Chlorophenol-d4	132.00	4.038	(0.950)	1592523	102.87	51.43
8 1,4-Dichlorobenzene-d4	151.85	4.252	(1.000)	540347	40.00	
$ 10 1,2-Dichlorobenzene-d4	152.00	4.478	(1.053)	850416	78.49	39.24
$ 17 Nitrobenzene-d5	82.00	5.008	(0.839)	1156989	75.49	37.74
* 25 Naphthalene-d8	135.65	5.966	(1.000)	1775367	40.00	
$ 34 2-Fluorobiphenyl	172.00	7.714	(0.881)	2486787	79.36	39.68
* 40 Acenaphthene-d10	164.00	8.751	(1.000)	1045471	40.00	
$ 53 2,4,6-Tribromophenol	329.80	10.081	(0.903)	453796	118.51	59.25
* 57 Phenanthrene-d10	187.65	11.163	(1.000)	1744970	40.00	
61 Di-n-butylphthalate	149.00	12.392	(1.110)	69917	1.37	0.68(aH)
$ 64 Terphenyl-d14	244.00	13.926	(0.892)	2732111	80.40	40.20
* 67 Chrysene-d12	240.00	15.617	(1.000)	1400294	40.00	
* 75 Perylene-d12	264.00	17.849	(1.000)	1575516	40.00	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Data File: /chem/a.i/a960325a.b/a2256.d

Date : 25-MAR-1996 16:27

Instrument : a.i

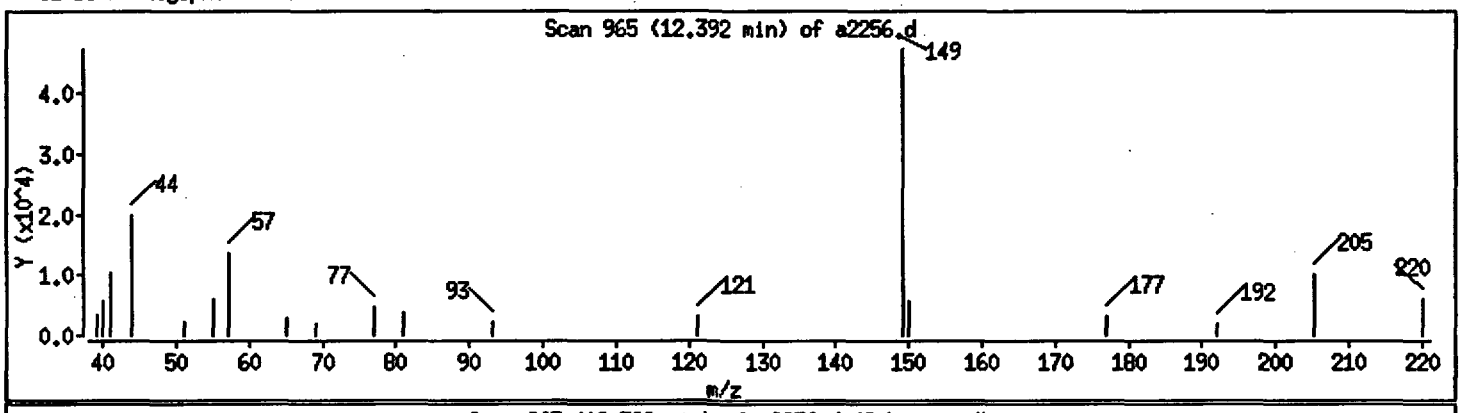
Sample ID : FEM97

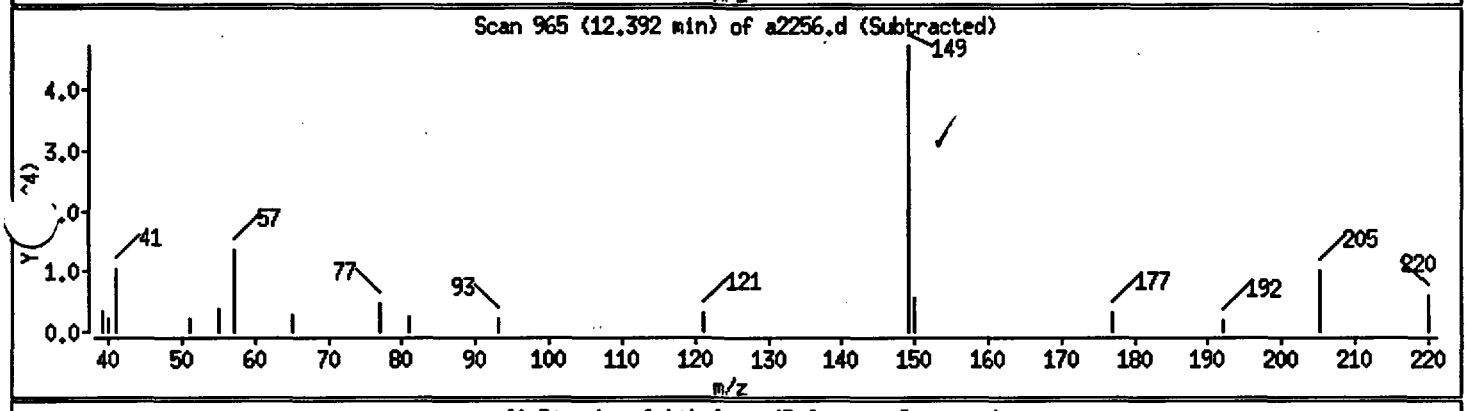
Column phase : XTI-5

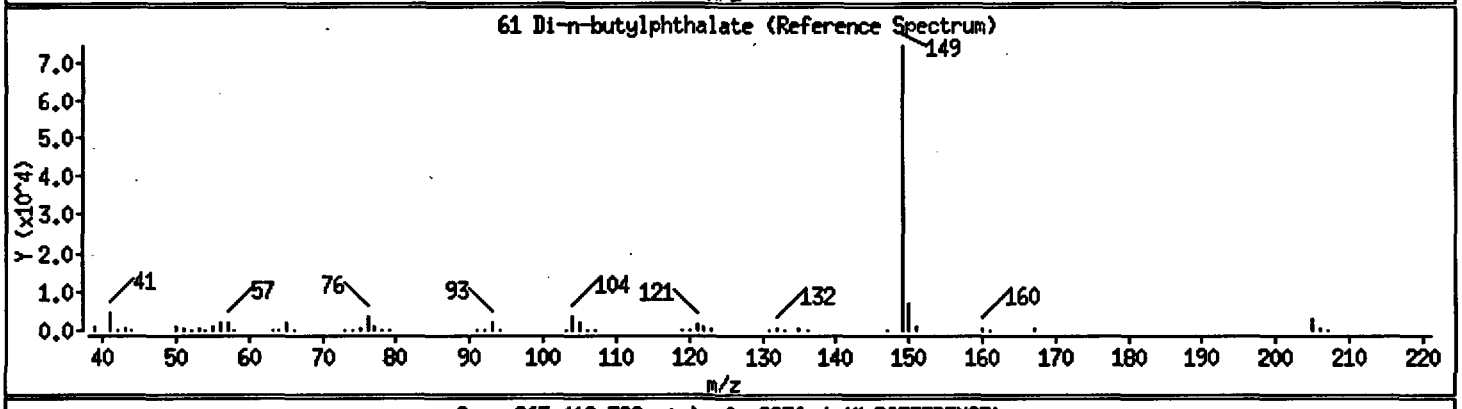
Column diameter : 0.25

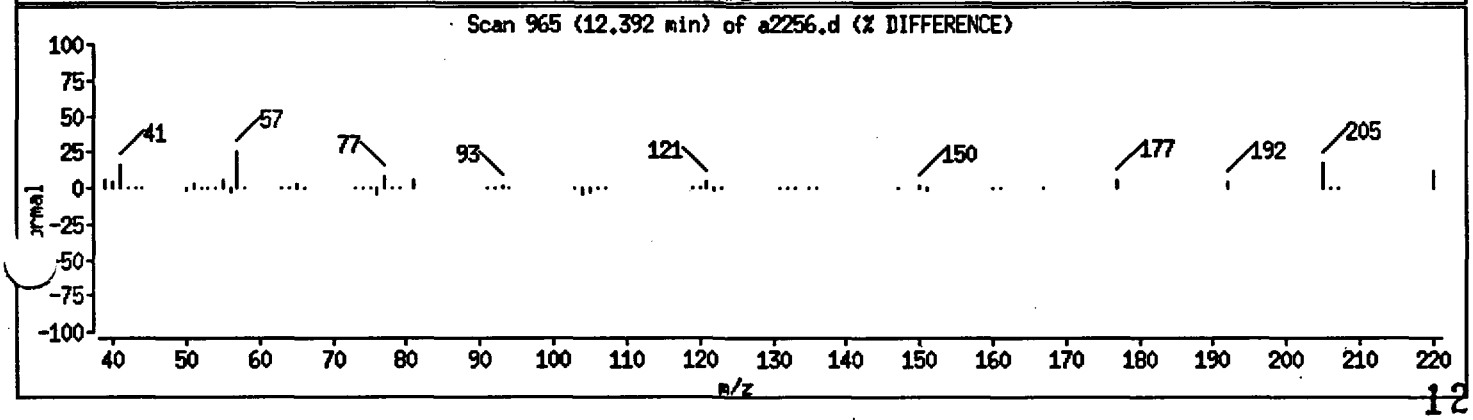
Volume Injected (uL) : 2.0

61 Di-n-butylphthalate









Data File: /chem/a.i/a960325a.b/a2256.d
Report Date: 26-Mar-1996 08:00

Southwest Laboratory of Oklahoma

Unknown Compounds Quantitation Report

Data file : /chem/a.i/a960325a.b/a2256.d
Lab. Id. : 25005.01
Inj Date : 25-MAR-1996 16:27
Operator : ANNIE Inst ID: a.i
Smp Info : FEM97
Misc Info : MS517**INSTA*AATS-E:24501*25005.01*1000ML/1ML/2UL*
Comment :
Method : /chem/a.i/a960325a.b/BNA517EPA.m
Meth Date : 26-Mar-1996 07:57 mike
Cal Date : 25-MAR-96 10:17 Cal File: a2245.d
Als bottle: 11
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD	RT	AREA	AMOUNT
* 8 1,4-Dichlorobenzene-d4	4.252	3054036	40.000
* 40 Acenaphthene-d10	8.751	4375580	40.000

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
2-Butenal, 3-methyl-					CAS #: 107-86-8		
3.293	555311	3.63	59	NBS75K.1	62726		8
Propanoic acid, 2-methyl-, 1-(1,1-dimeth					CAS #: 74381-40-1		
9.653	493216	2.25	83	NBS75K.1	40505		40

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

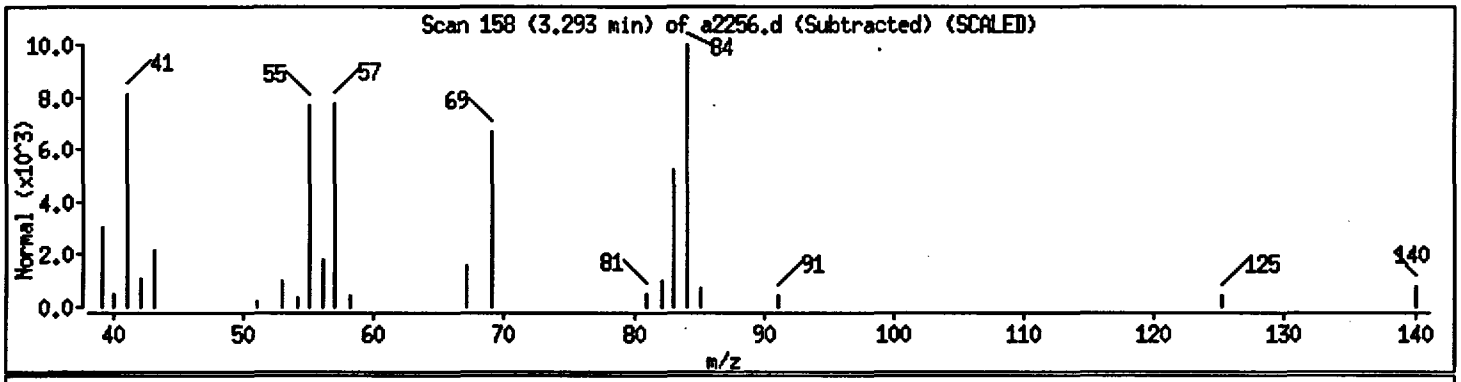
Data File: /chem/a.i/a960325a.b/a2256.d

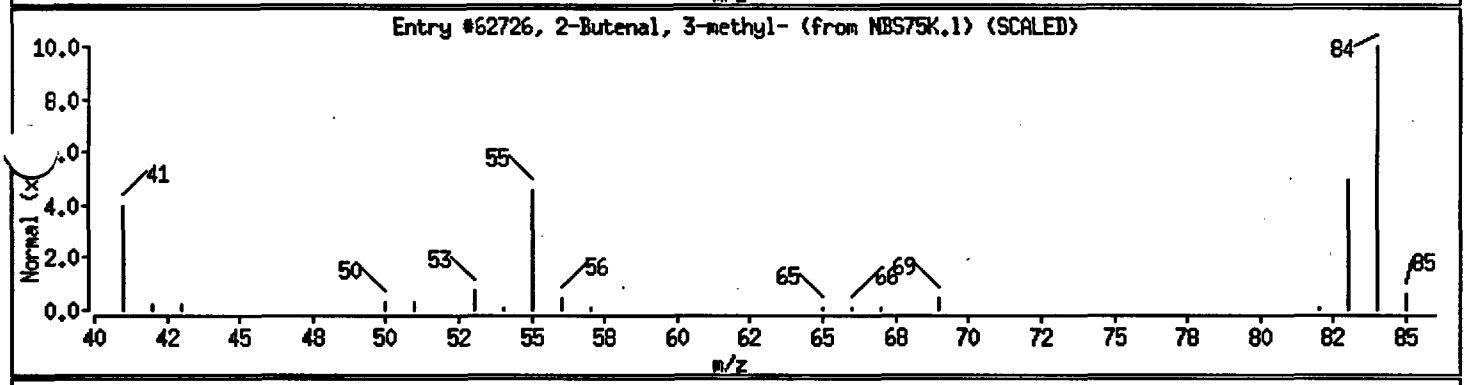
Date : 25-MAR-1996 16:27
Instrument : a.i
Sample ID : FEM97

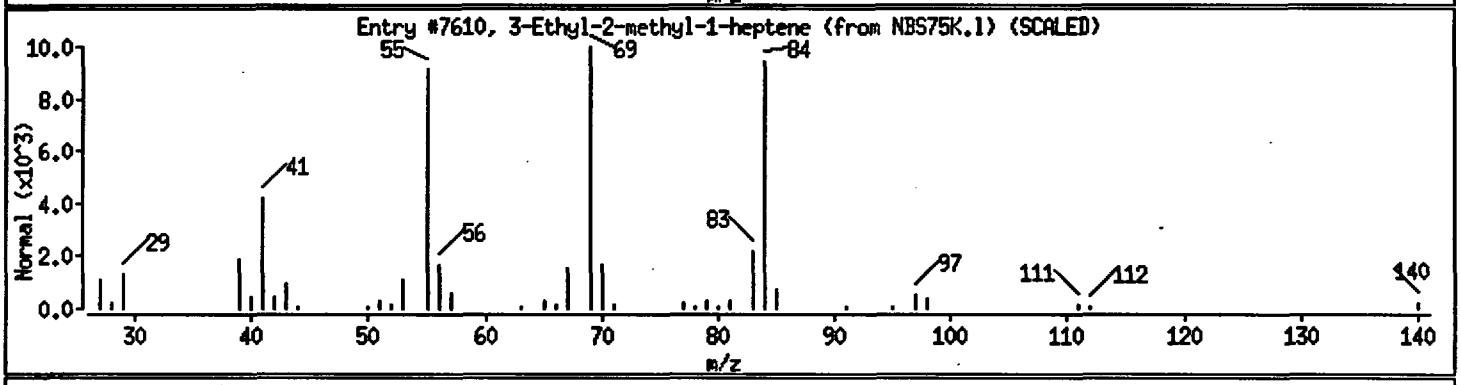
UNKNOWN

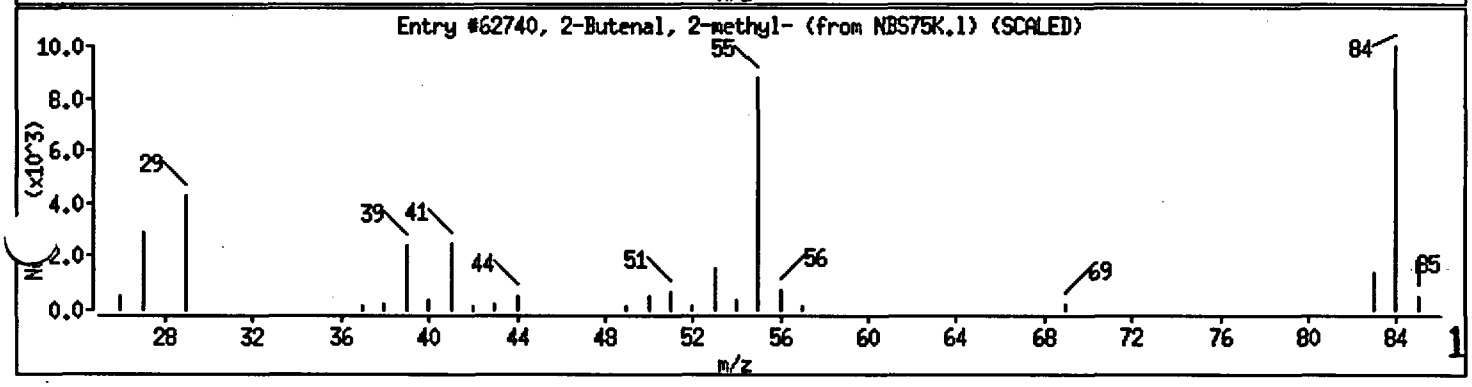
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Butenal, 3-methyl-	107-86-8	NBS75K.l	62726	59
3-Ethyl-2-methyl-1-heptene	19780-60-0	NBS75K.l	7610	53
2-Butenal, 2-methyl-	1115-11-3	NBS75K.l	62740	46







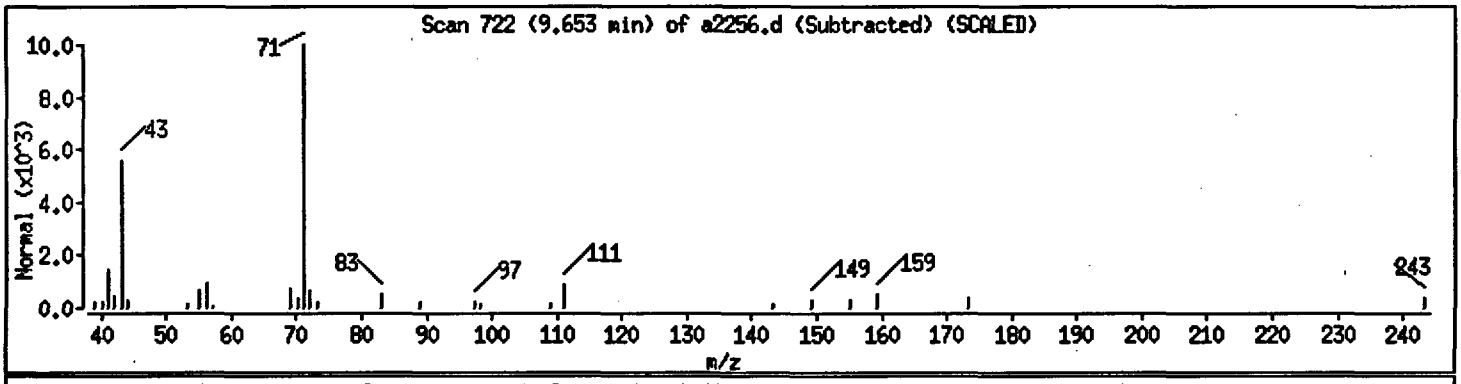


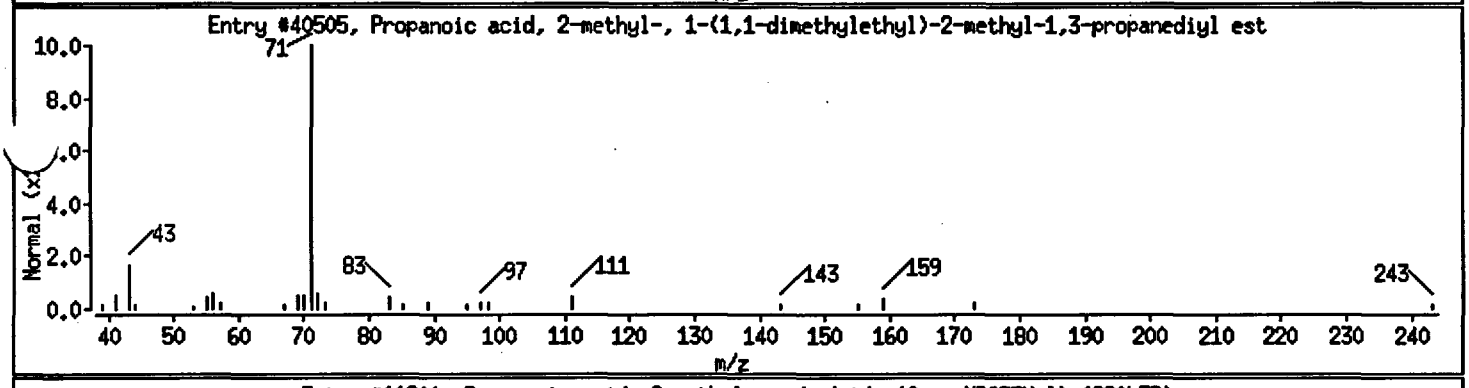
Data File: /chem/a.i/a960325a.b/a2256.d

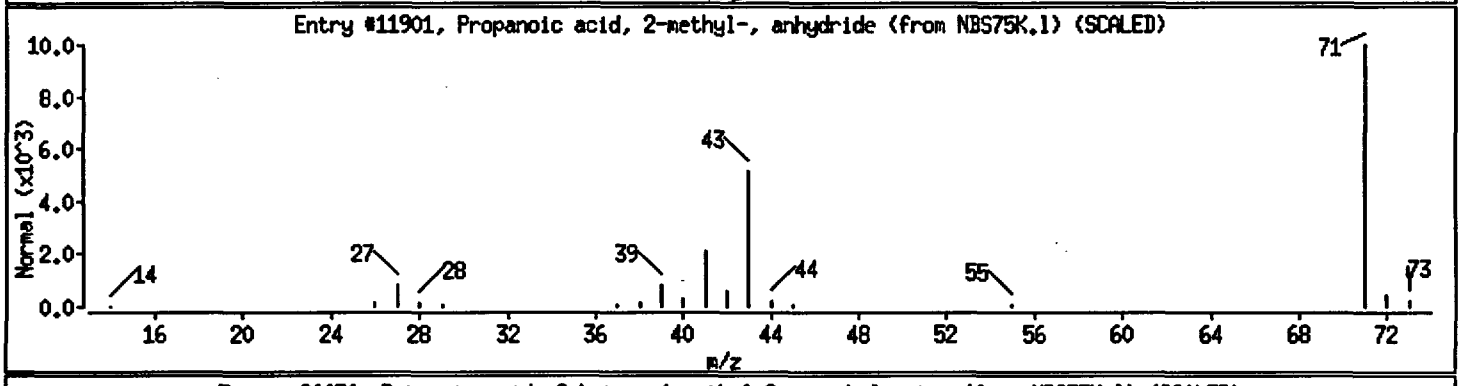
Date : 25-MAR-1996 16:27
Instrument : a.i
Sample ID : FEM97
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

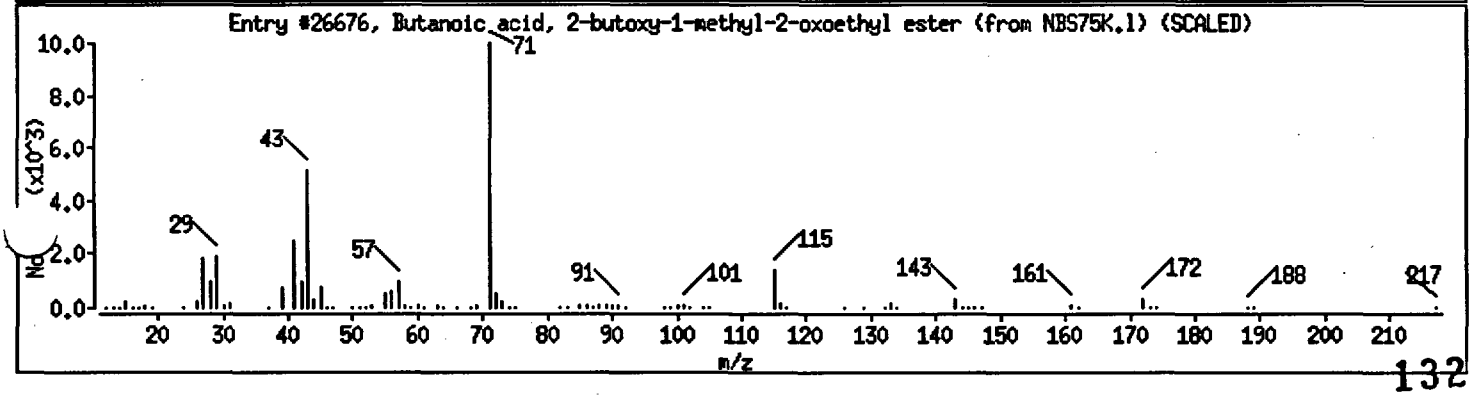
UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Propanoic acid, 2-methyl-, 1-(1,1-dimeth	74381-40-1	NBS75K.l	40505	83
Propanoic acid, 2-methyl-, anhydride	97-72-3	NBS75K.l	11901	53
Butanoic acid, 2-butoxy-1-methyl-2-oxoet	7492-70-8	NBS75K.l	26676	50









1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEM98

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2257.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 3.1

Number TICs found: 35

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 590-36-3	2-Pentanol, 2-methyl-	1.624	21	NJ
2. 565-61-7	2-Pentanone, 3-methyl-	1.771	110	NJ
3. 626-93-7	2-Hexanol	1.839	6	NJ
4. 565-67-3	3-Pentanol, 2-methyl-	1.929	5	NJ
5.	UNKNOWN	2.166	9	J
6.	UNKNOWN	2.223	14	J
7.	UNKNOWN	2.539	4	J
8.	UNKNOWN	3.001	25	J
9.	UNKNOWN	3.295	8	J
10.	UNKNOWN	3.329	4	J
11.	UNKNOWN	4.345	5	J
12. 95-16-9	Benzothiazole	6.410	4	NJ
13. 121-33-5	Vanillin	8.024	8	NJ
14.	UNKNOWN ORGANIC ACID	9.333	3	J
15.	UNKNOWN	10.191	2	J
16.	UNKNOWN ORGANIC ACID	10.892	3	J
17.	UNKNOWN	12.113	3	J
18.	UNKNOWN ORGANIC ACID	12.350	110	J
19.	UNKNOWN	12.475	8	J
20.	UNKNOWN ORGANIC ACID	12.736	2	J
21.	Phenol, -tris(-dimethylethyl	13.019	3	J
22.	UNKNOWN	13.155	3	J
23.	UNKNOWN	13.325	2	J
24.	UNKNOWN ORGANIC ACID	13.506	35	J
25.	UNKNOWN ORGANIC ACID	13.677	210	J
26.	UNKNOWN AMIDE	13.802	12	J
27.	UNKNOWN ORGANIC ACID	13.995	4	J
28.	UNKNOWN	14.619	4	J
29.	UNKNOWN	14.789	7	J
30.	UNKNOWN	14.823	9	J

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEM98

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2257.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 3.1

Number TICs found: 35

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN AMIDE	15.005	5	J
2.	Hexanedioic acid, ester	15.050	5	J
3. 115-86-6	Phosphoric acid, triphenyl e	15.186	2	NJ
4.	UNKNOWN AMIDE	17.102	100	J
5.	UNKNOWN	21.014	8	J
6.				
7.				
8.				
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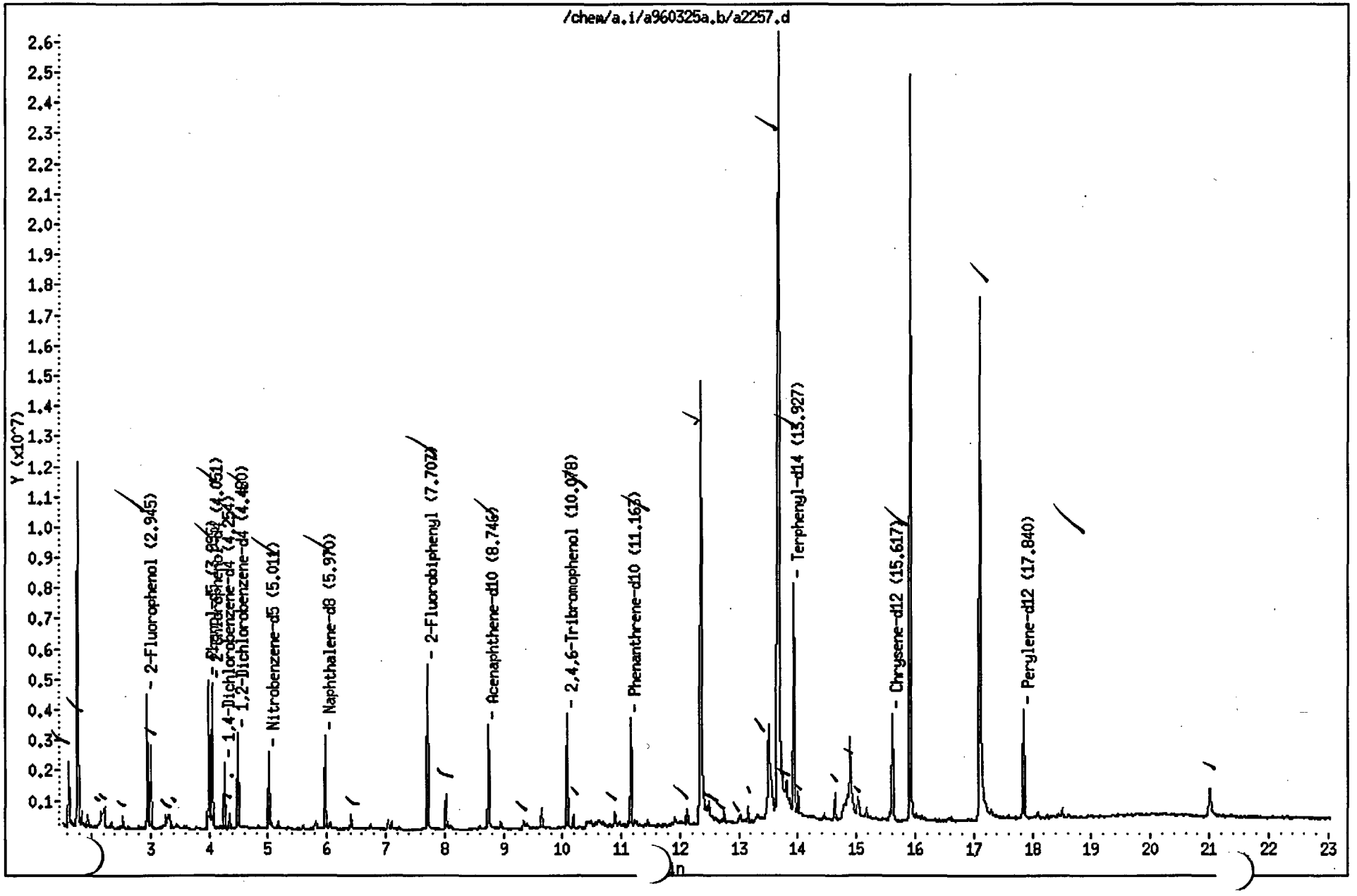
30.				

SK 4-23-96 136

Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: Mike

Column diameter : 0.25



Data File: /chem/a.i/a960325a.b/a2257.d
Report Date: 26-Mar-1996 08:02

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

MAY 8 1996
Pollution Cleanup Division

Data file : /chem/a.i/a960325a.b/a2257.d
Lab. Id. : 25005.02 Quant Type: ISTD
Inj Date : 25-MAR-1996 17:01
Operator : ANNIE Inst ID: a.i
Smp Info : FEM98
Misc Info : MS517**INSTA*AATS-E:24501*25005.02*1000ML/1ML/2UL*
Comment :
Method : /chem/a.i/a960325a.b/BNA517EPA.m
Meth Date : 26-Mar-1996 07:57 mike
Cal Date : 25-MAR-96 10:17 Cal File: a2245.d
Als bottle: 12
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
$ 1 2-Fluorophenol	112.00	2.945	(0.692)	1290923	109.45	54.72
$ 2 Phenol-d5	98.80	3.995	(0.939)	1797268	115.90	57.95
5 2-Chlorophenol-d4	132.00	4.051	(0.952)	1495351	111.13	55.56
8 1,4-Dichlorobenzene-d4	151.85	4.254	(1.000)	469645	40.00	
$ 10 1,2-Dichlorobenzene-d4	152.00	4.492	(1.056)	697366	74.06	37.03
$ 17 Nitrobenzene-d5	82.00	5.011	(0.839)	1063332	78.42	39.21
* 25 Naphthalene-d8	135.65	5.970	(1.000)	1570810	40.00	
$ 34 2-Fluorobiphenyl	172.00	7.719	(0.883)	2678719	85.41	42.70
* 40 Acenaphthene-d10	164.00	8.746	(1.000)	1046445	40.00	
47 Diethylphthalate	149.00	9.660	(1.105)	62416	1.92	0.96(a)
$ 53 2,4,6-Tribromophenol	329.80	10.078	(0.903)	634609	158.20	79.10
* 57 Phenanthrene-d10	187.65	11.163	(1.000)	1828103	40.00	
61 Di-n-butylphthalate	149.00	12.385	(1.109)	227652	4.26	2.13(a)
$ 64 Terphenyl-d14	244.00	13.927	(0.892)	3436967	85.11	42.55
65 Butylbenzylphthalate	149.00	14.868	(0.952)	57661	2.27	1.13(a)
* 67 Chrysene-d12	240.00	15.617	(1.000)	1664084	40.00	
70 bis(2-Ethylhexyl)phthalate	149.00	15.912	(1.019)	7821034	202.60	101.30(A)
* 75 Perylene-d12	264.00	17.851	(1.000)	2096373	40.00	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

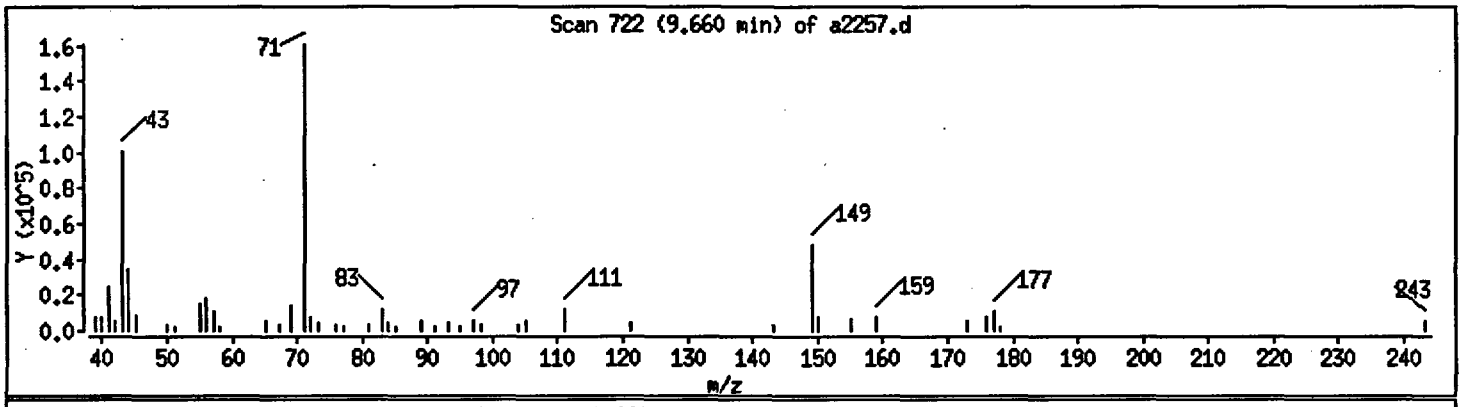
Column phase : XTI-5

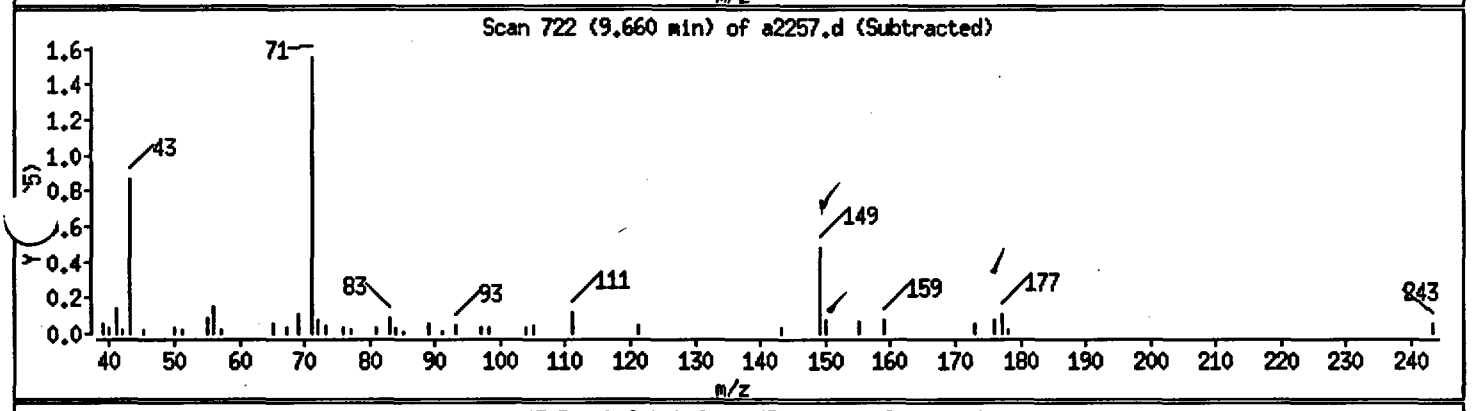
Column diameter : 0.25

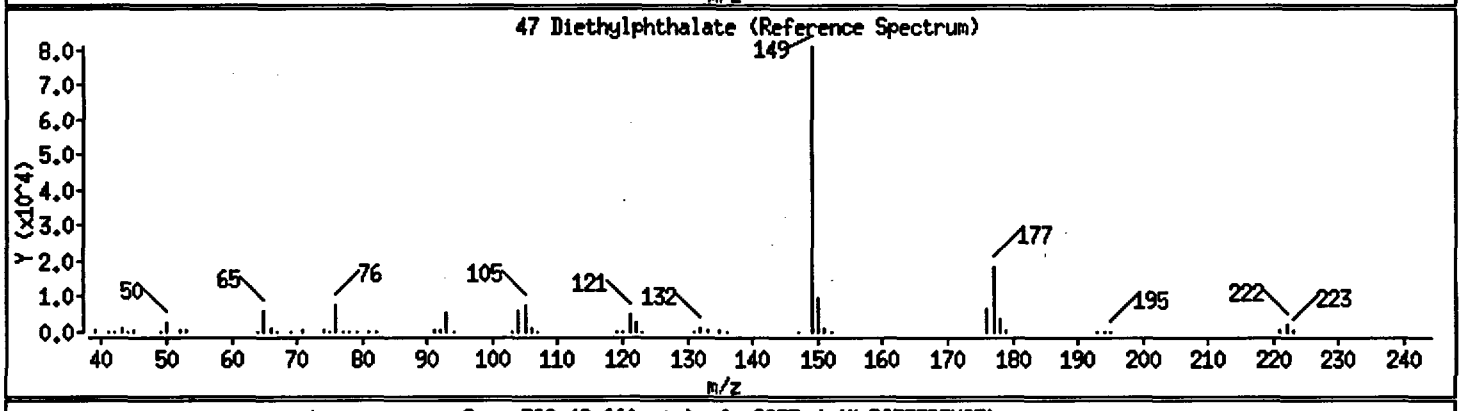
Volume Injected (uL) : 2.0

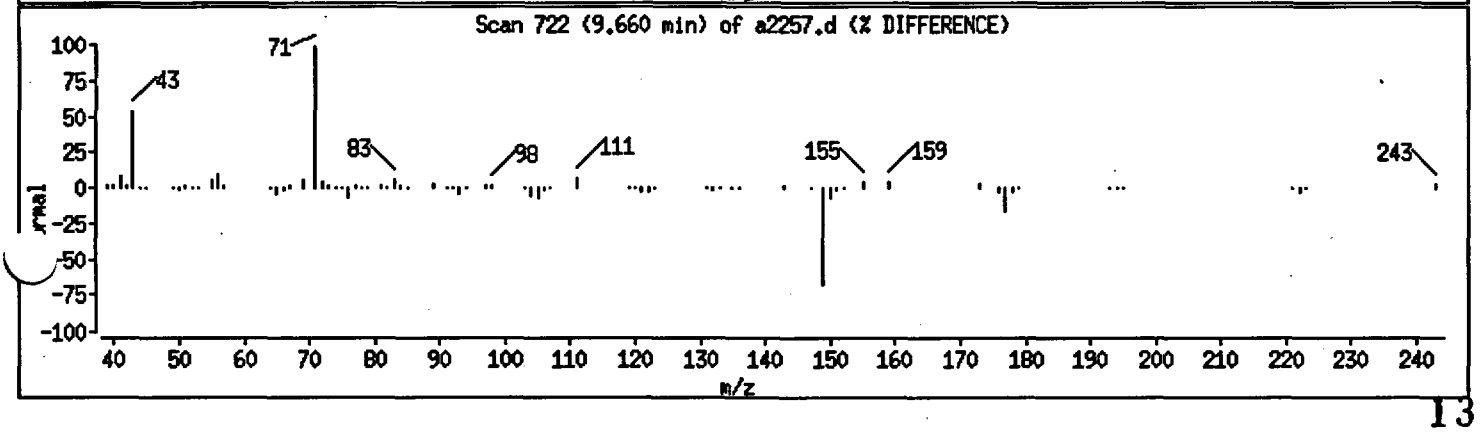
+ co-eluted

47 Diethylphthalate









Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

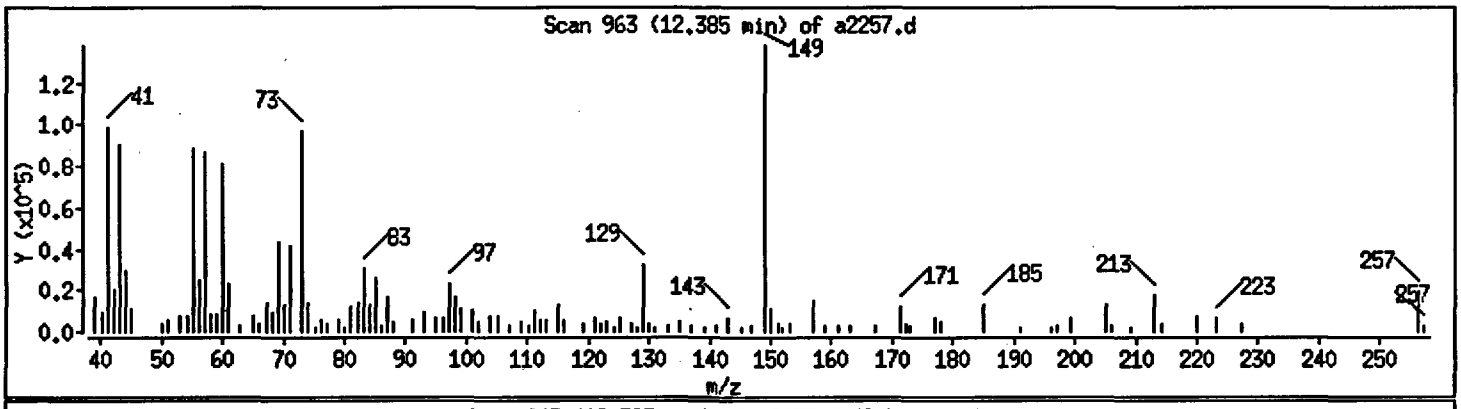
Sample ID : FEM98

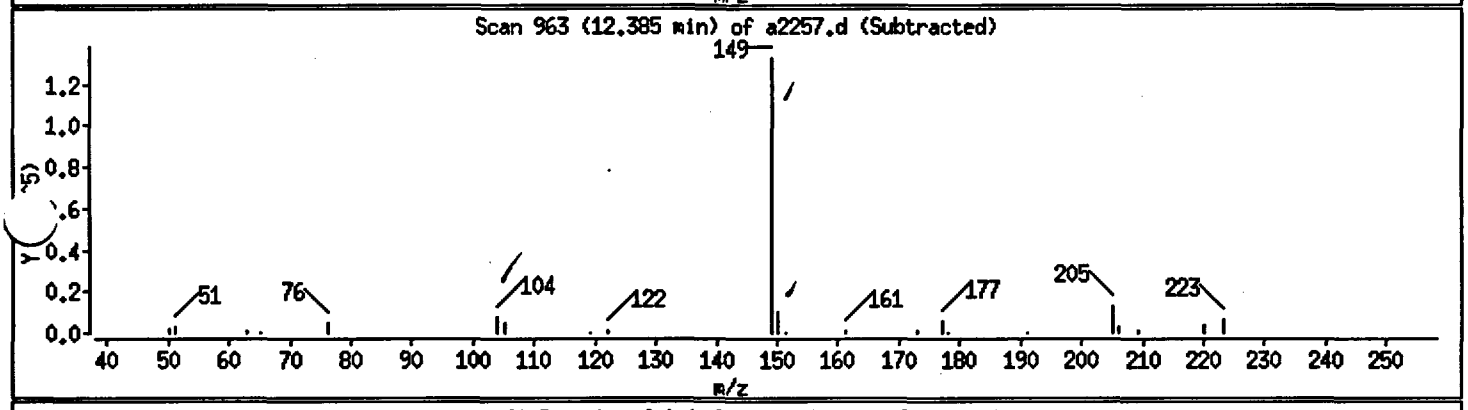
Column phase : XTI-5

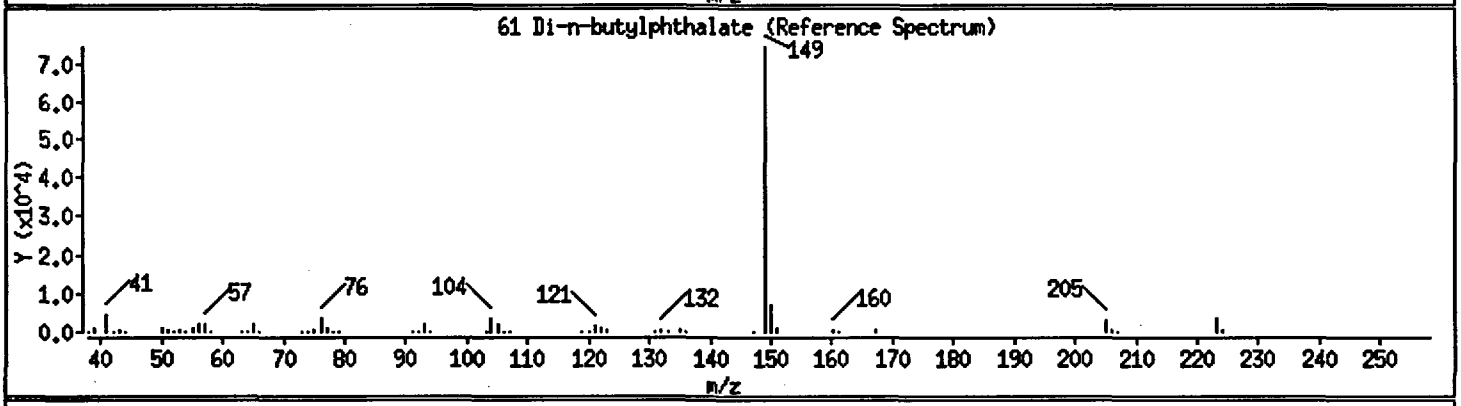
Column diameter : 0.25

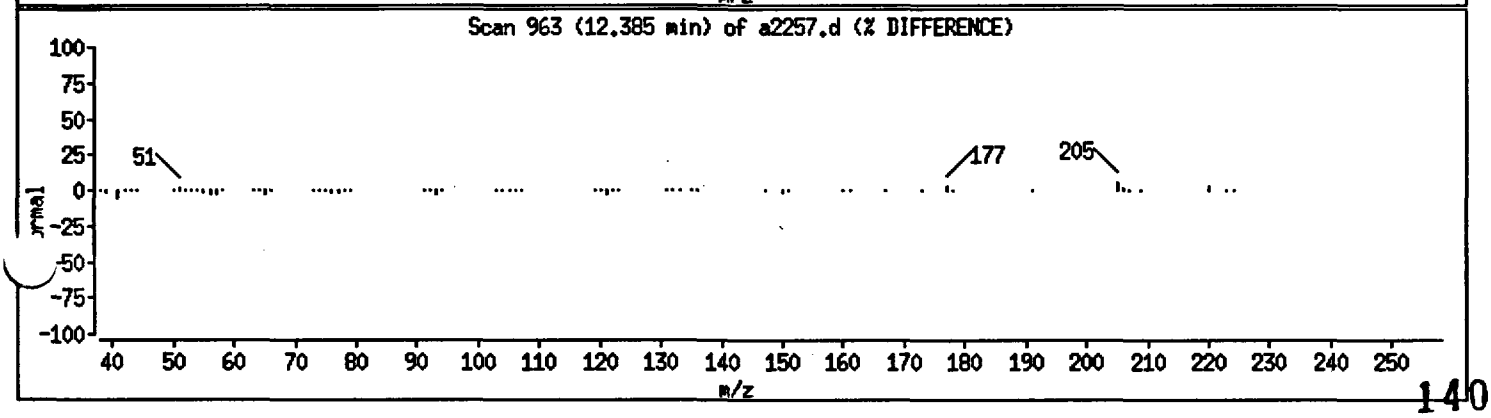
Volume Injected (uL) : 2.0

61 Di-n-butylphthalate









Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

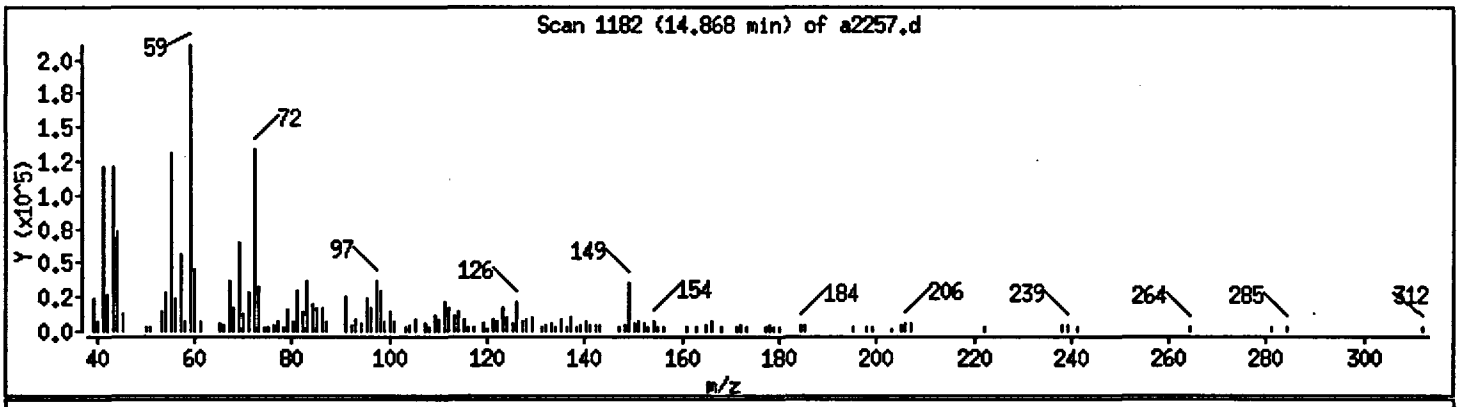
Column phase : XTI-5

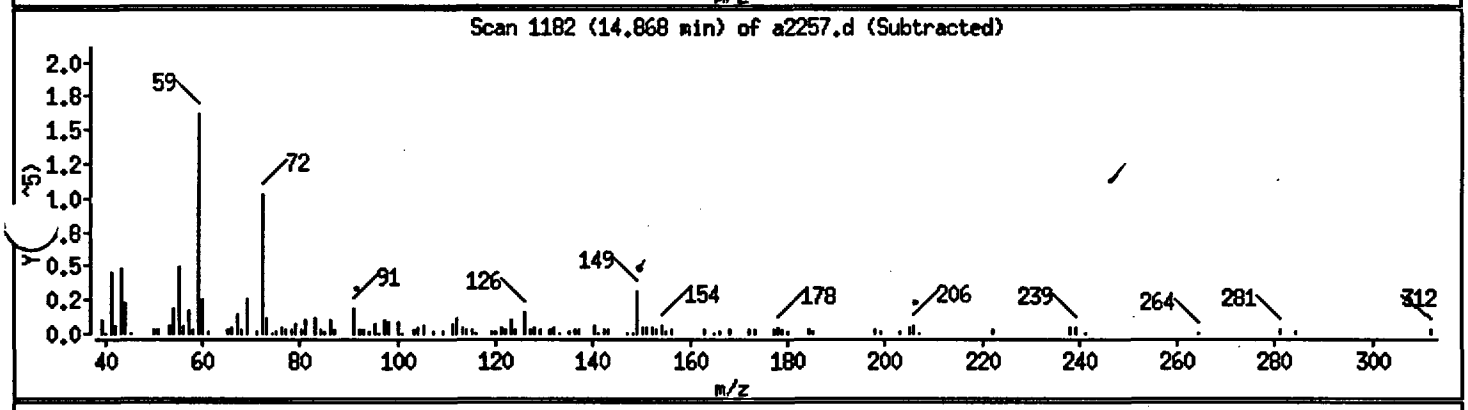
Column diameter : 0.25

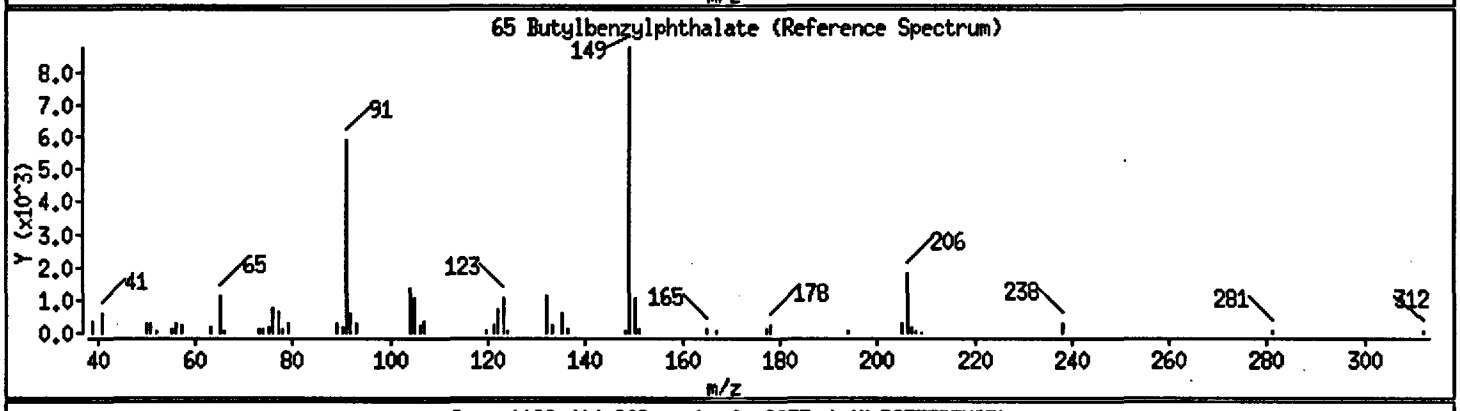
+ co-eluter

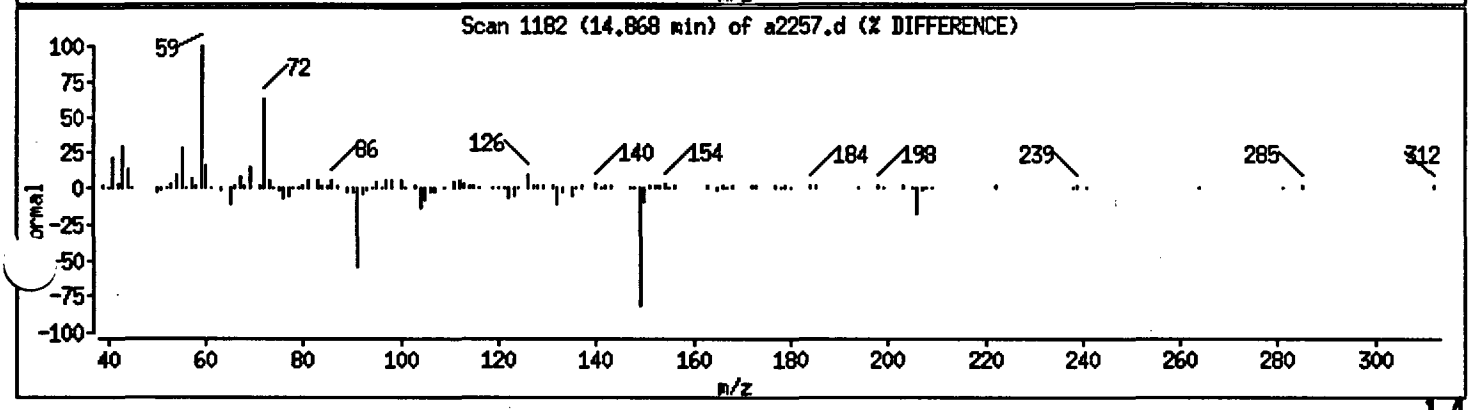
Volume Injected (uL) : 2.0

65 Butylbenzylphthalate









Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

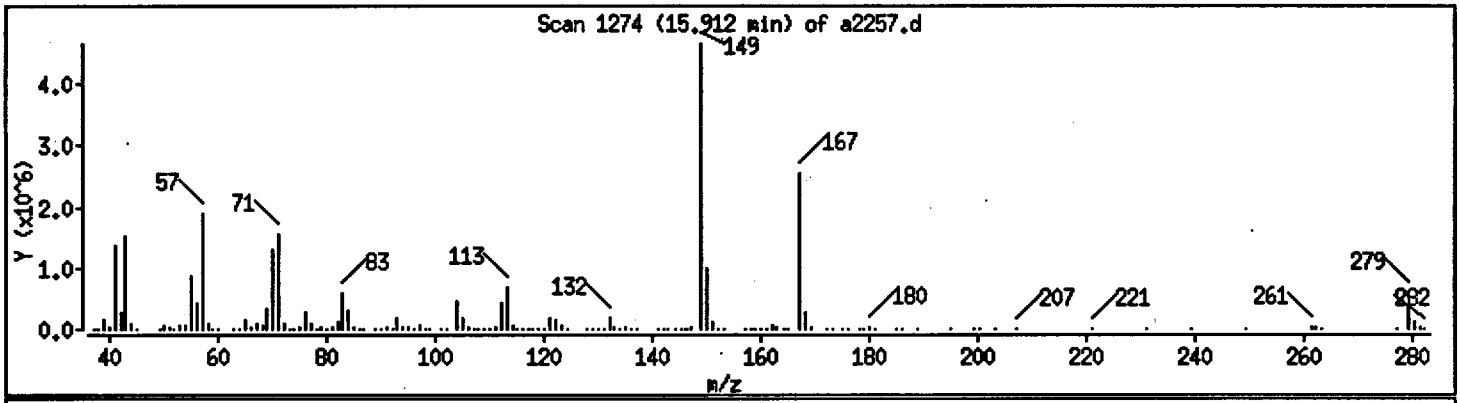
Sample ID : FEM98

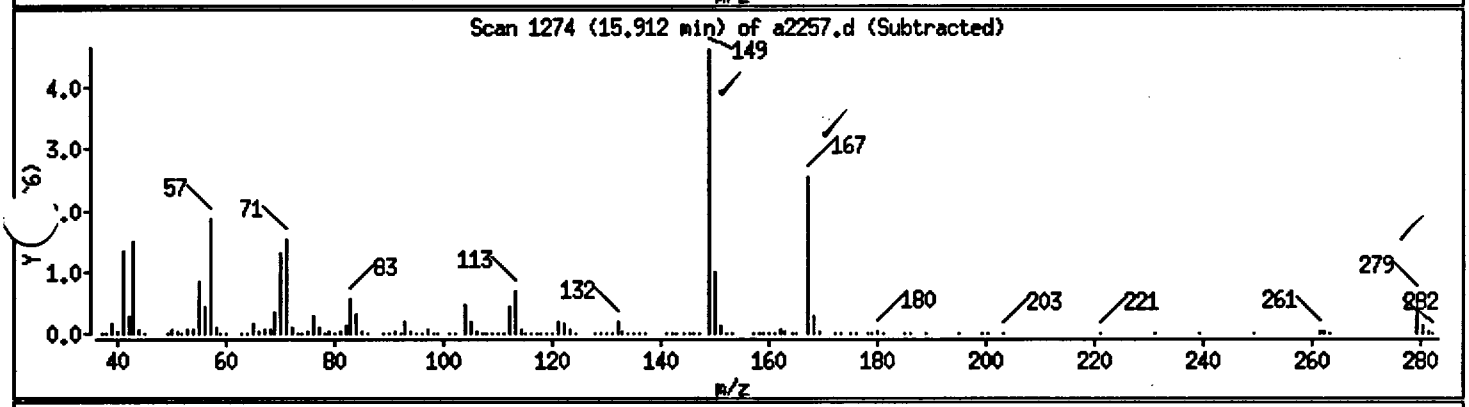
Column phase : XTI-5

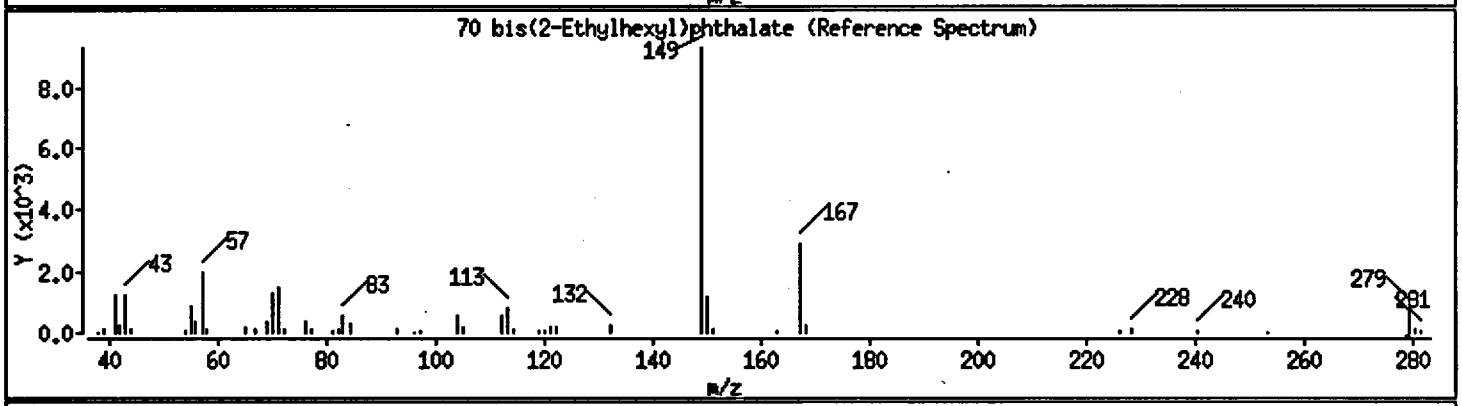
Column diameter : 0.25

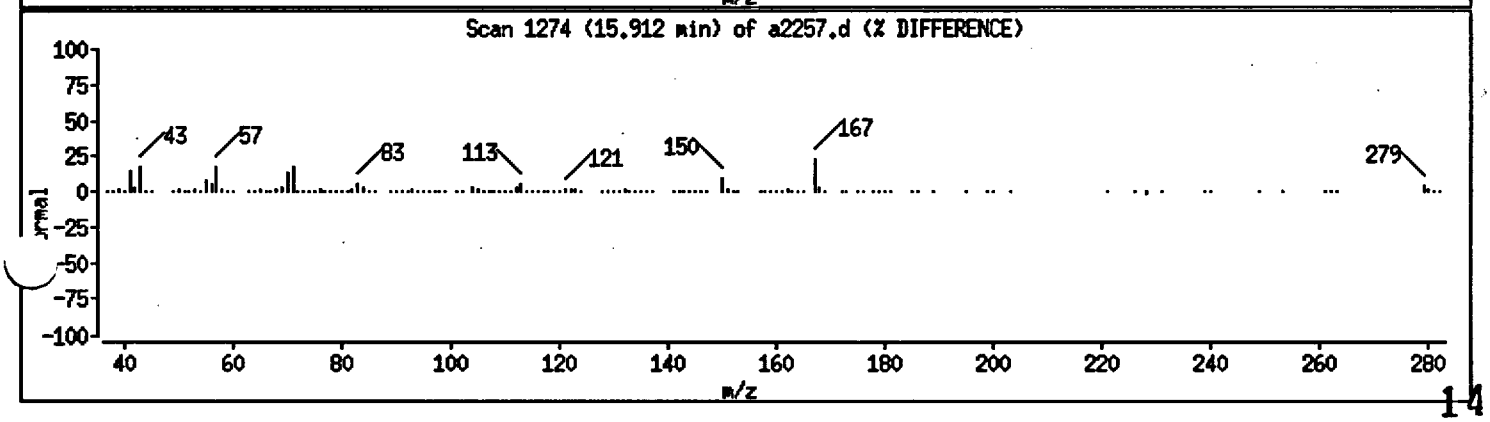
Volume Injected (uL) : 2.0

70 bis(2-Ethylhexyl)phthalate









Data File: /chem/a.i/a960325a.b/a2257.d
Report Date: 26-Mar-1996 08:02

Southwest Laboratory of Oklahoma

Unknown Compounds Quantitation Report

Data file : /chem/a.i/a960325a.b/a2257.d
Lab. Id. : 25005.02
Inj Date : 25-MAR-1996 17:01
Operator : ANNIE Inst ID: a.i
Smp Info : FEM98
Misc Info : MS517**INSTA*AATS-E:24501*25005.02*1000ML/1ML/2UL*
Comment :
Method : /chem/a.i/a960325a.b/BNA517EPA.m
Meth Date : 26-Mar-1996 07:57 mike
Cal Date : 25-MAR-96 10:17 Cal File: a2245.d
Als bottle: 12
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD		RT	AREA	AMOUNT
* 8	1,4-Dichlorobenzene-d4	4.254	2651743	40.000
* 25	Naphthalene-d8	5.970	3581941	40.000
40	Acenaphthene-d10	8.746	4531158	40.000
* 57	Phenanthrene-d10	11.163	5038410	40.000
* 67	Chrysene-d12	15.617	6371393	40.000
* 75	Perylene-d12	17.851	6699318	40.000

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
2-Pentanol, 2-methyl-					CAS #: 590-36-3		
1.624	2844026	21.45	83	NBS75K.l	1763		8
4-Penten-2-ol, 4-methyl-					CAS #: 2004-67-3		
1.658	537594	4.05	38	NBS75K.l	1568		8
2-Pentanone, 3-methyl-					CAS #: 565-61-7		
1.771	14717712	111.00	80	NBS75K.l	63363		8
2-Hexanol					CAS #: 626-93-7		
1.839	841061	6.34	64	NBS75K.l	63584		8
3-Pentanol, 2-methyl-					CAS #: 565-67-3		
1.929	671965	5.06	64	NBS75K.l	63561		8

Data File: /chem/a.i/a960325a.b/a2257.d
Report Date: 26-Mar-1996 08:02

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
Oxirane, 2-ethyl-2-methyl-					CAS #: 30095-63-7		
2.166	1159699	8.74	40	NBS75K.l	689		8
Crotonic acid					CAS #: 3724-65-0		
2.223	1807772	13.63	86	NBS75K.l	62802		8
Ethanone, 1-cyclopropyl-					CAS #: 765-43-5		
2.539	578906	4.36	46	NBS75K.l	62744		8
Furan, tetrahydro-2,2,4,4-tetramethyl-					CAS #: 3358-28-9		
3.001	3348982	25.25	50	NBS75K.l	5062		8
2(3H)-Furanone, dihydro-4,4-dimethyl-					CAS #: 13861-97-7		
3.261	504842	3.80	43	NBS75K.l	2897		8
2-Butenal, 3-methyl-					CAS #: 107-86-8		
3.295	1010676	7.62	22	NBS75K.l	62726		8
3-Buten-2-one, 4-(2,2,6-trimethyl-7-oxab					CAS #: 23267-57-4		
3.329	579698	4.37	35	NBS75K.l	24938		8
Cyclohexene, 4-ethenyl-					CAS #: 100-40-3		
4.345	664361	5.01	58	NBS75K.l	63795		8
o-2-Bromonorbornane					CAS #: 2534-77-2		
5.823	707691	3.95	35	NBS75K.l	68413		25
Benzothiazole					CAS #: 95-16-9		
6.410	725592	4.05	94	NBS75K.l	6263		25
Vanillin					CAS #: 121-33-5		
8.024	1795339	7.92	94	NBS75K.l	10181		40
Phenol, 2,4-bis(1,1-dimethylethyl)-					CAS #: 96-76-4		
8.949	517353	2.28	86	NBS75K.l	70051		40
Decanoic acid					CAS #: 334-48-5		
9.333	740534	3.26	27	NBS75K.l	68358		40
1,4-Cyclohexadiene-1,2-dicarboxylic acid					CAS #: 0-00-0		
10.191	629549	2.49	32	NBS75K.l	34298		57
Tetradecanoic acid					CAS #: 544-63-8		
10.892	793547	3.15	96	NBS75K.l	70843		57
2H-1-Benzopyran, 6,7-dimethoxy-2,2-dimet					CAS #: 644-06-4		
12.113	828372	3.28	30	NBS75K.l	27608		57
Tetradecanoic acid					CAS #: 544-63-8		
12.350	26768717	106.25	94	NBS75K.l	70840		57

Data File: /chem/a.i/a960325a.b/a2257.d
Report Date: 26-Mar-1996 08:02

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
2-Mercaptobenzothiazole					CAS #: 149-30-4		
12.475	1899685	7.54	58	NBS75K.l	68033	57	
Hexadecanoic acid					CAS #: 57-10-3		
12.736	581387	2.30	25	NBS75K.l	71607	57	
Phenol, 2,4,6-tris(1,1-dimethylethyl)-					CAS #: 732-26-3		
13.019	724704	2.87	59	NBS75K.l	71799	57	
2-Pentanone, 4-methyl-1-(triphenylphosph					CAS #: 27653-95-8		
13.155	691645	2.74	50	NBS75K.l	50394	57	
3-Hexanone, 2,5-dimethyl-					CAS #: 1888-57-9		
13.325	604831	2.40	47	NBS75K.l	5056	57	
Oleic Acid					CAS #: 112-80-1		
13.506	11238347	35.27	99	NBS75K.l	72314	67	
Octadecanoic acid					CAS #: 57-11-4		
13.677	66165865	207.69	99	NBS75K.l	72366	67	
Hexadecanamide					CAS #: 629-54-9		
13.802	3847573	12.07	91	NBS75K.l	34960	67	
decane, 5-ethyl-5-propyl-					CAS #: 2755-07-9		
13.848	2373487	7.45	50	NBS75K.l	29252	67	
Octadecanoic acid					CAS #: 57-11-4		
13.995	1448794	4.54	50	NBS75K.l	72365	67	
.gamma. Dodecalactone					CAS #: 2305-05-7		
14.619	1443710	4.53	47	NBS75K.l	69608	67	
(2H)Cyclohepta[b]furan-2,8-dione, octahy					CAS #: 0-00-0		
14.789	2136947	6.70	15	NBS75K.l	14464	67	
1-Piperazineethanol					CAS #: 103-76-4		
14.823	2877167	9.03	36	NBS75K.l	5385	67	
Nonanamide					CAS #: 1120-07-6		
15.005	1638021	5.14	56	NBS75K.l	11725	67	
Hexanedioic acid, dicyclohexyl ester					CAS #: 849-99-0		
15.050	1690454	5.30	42	NBS75K.l	44263	67	
Phosphoric acid, triphenyl ester					CAS #: 115-86-6		
15.186	691595	2.17	99	NBS75K.l	46311	67	
9-Octadecenamide, (Z)-					CAS #: 301-02-0		
17.102	34684182	103.54	72	NBS75K.l	39626	75	

Data File: /chem/a.i/a960325a.b/a2257.d
Report Date: 26-Mar-1996 08:02

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
Butanedioic acid, chloro-, bis(1-methylp					CAS #: 57983-51-4		
21.014	2847849	8.50	7	NBS75K.l	36512	75	

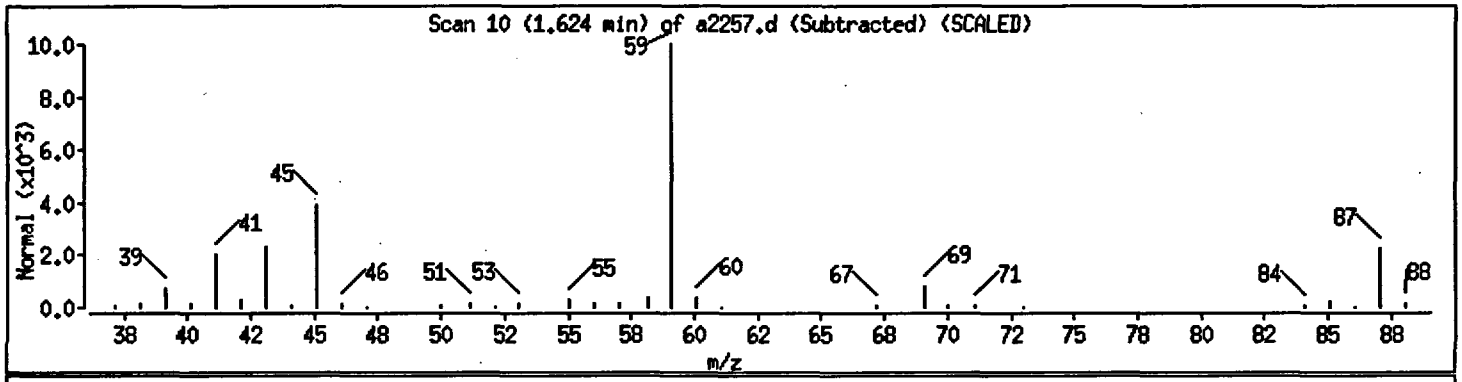
QC Flag Legend

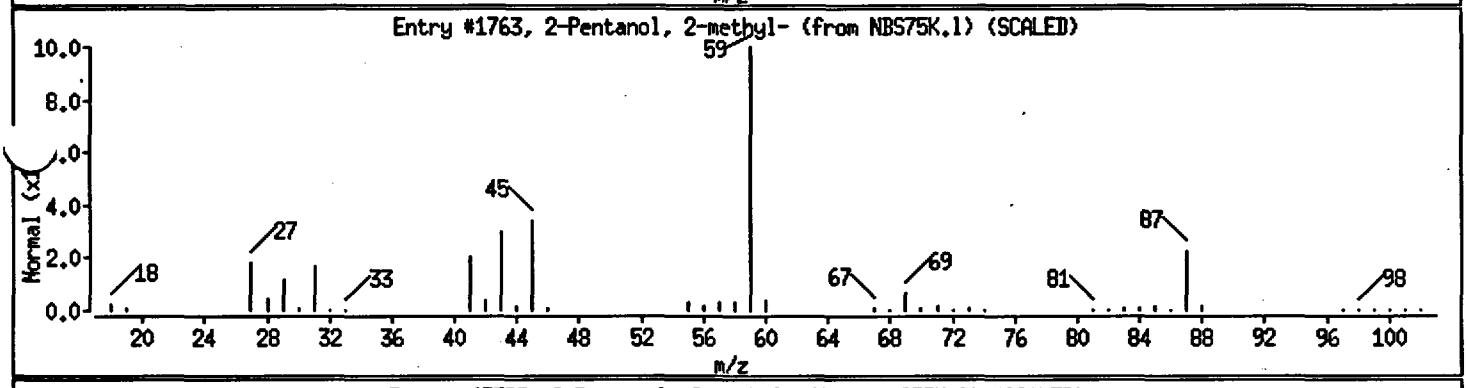
a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.

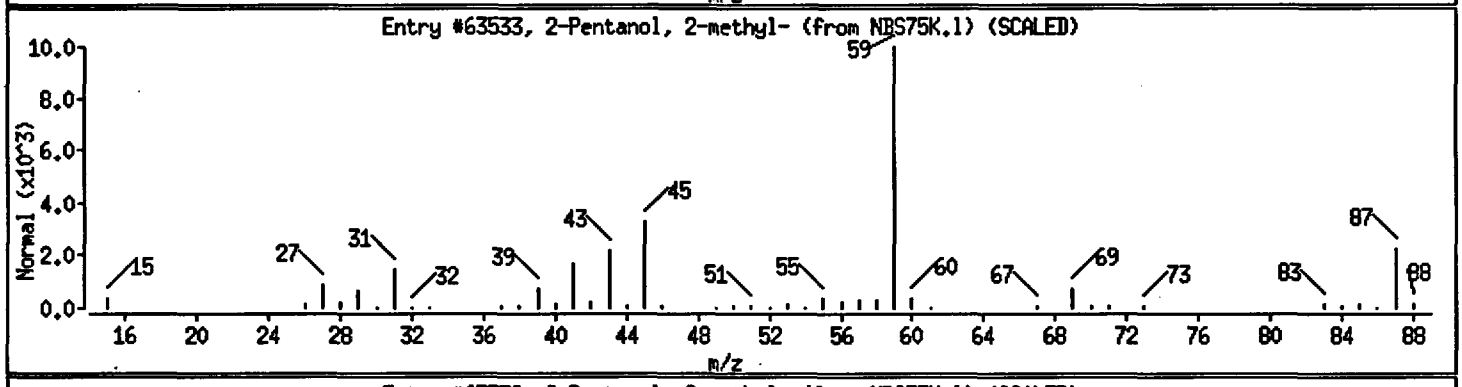
Data File: /chem/a.i/a960325a.b/a2257.d

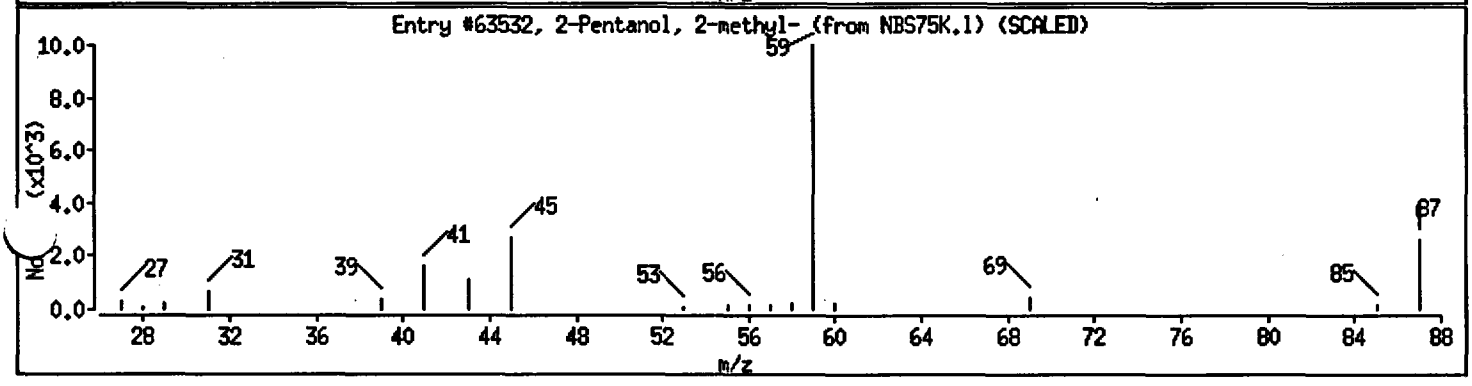
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Pentanol, 2-methyl-	590-36-3	NBS75K.1	1763	83
2-Pentanol, 2-methyl-	590-36-3	NBS75K.1	63533	83
2-Pentanol, 2-methyl-	590-36-3	NBS75K.1	63532	78





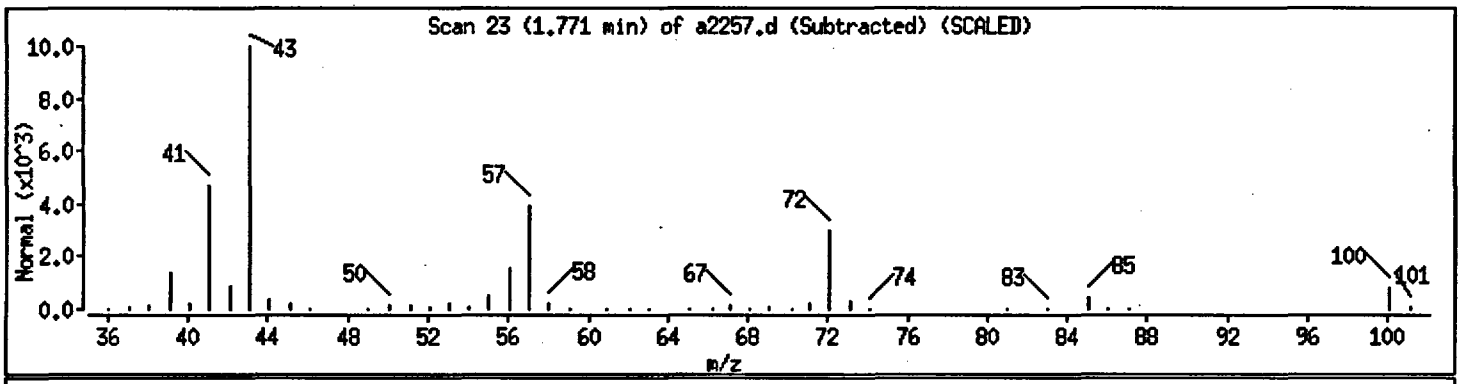


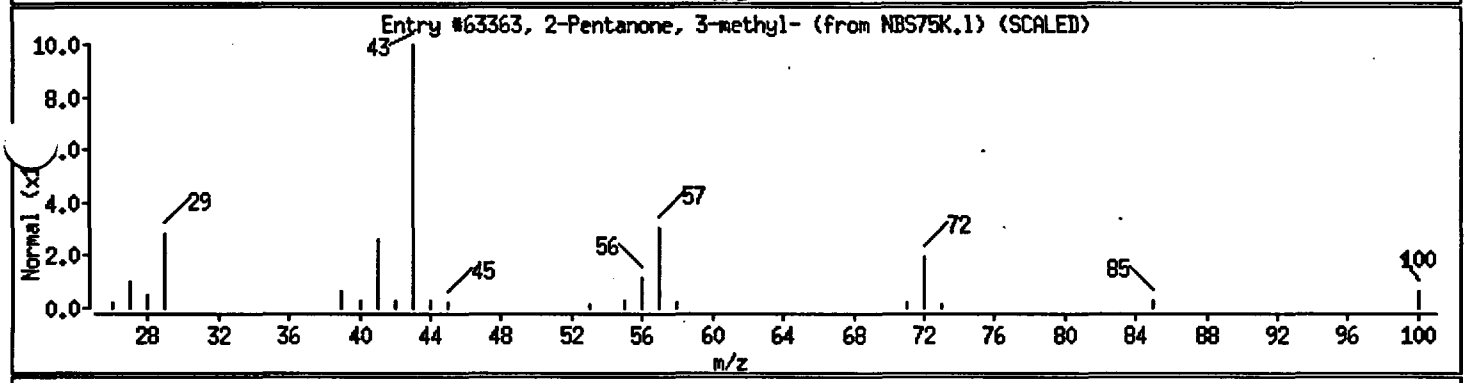


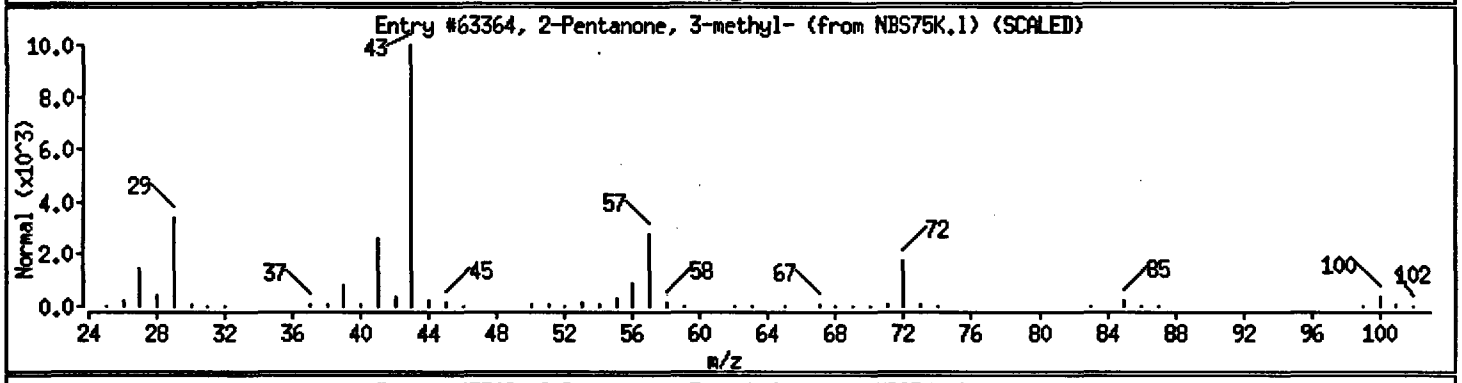
Data File: /chem/a.i/a960325a.b/a2257.d

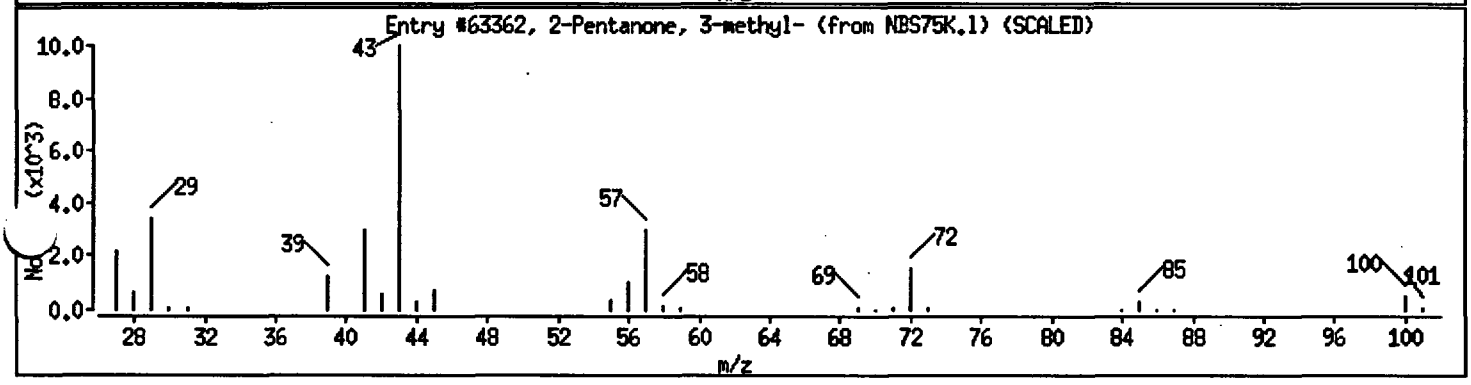
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Pentanone, 3-methyl-	565-61-7	NBS75K.l	63363	80
2-Pentanone, 3-methyl-	565-61-7	NBS75K.l	63364	76
2-Pentanone, 3-methyl-	565-61-7	NBS75K.l	63362	64





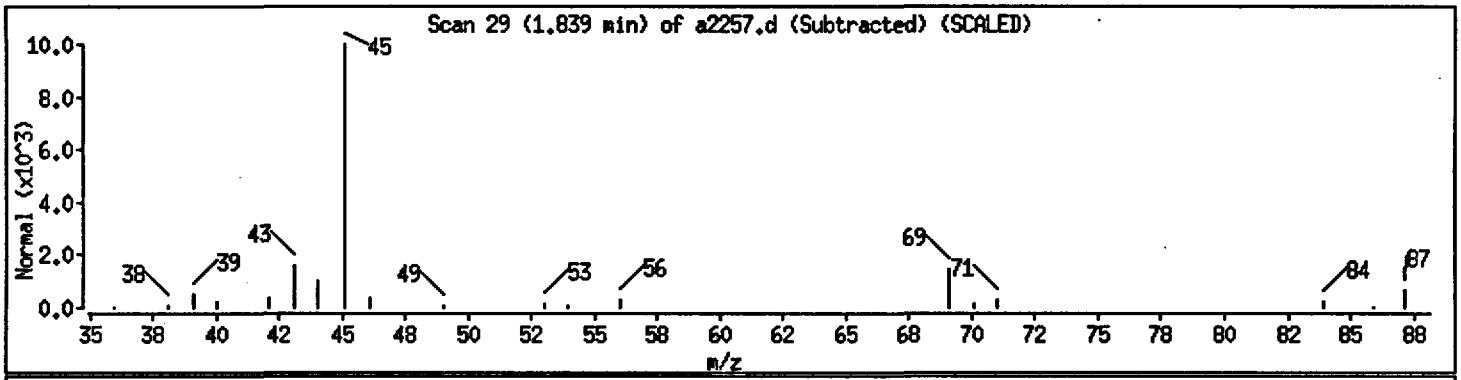


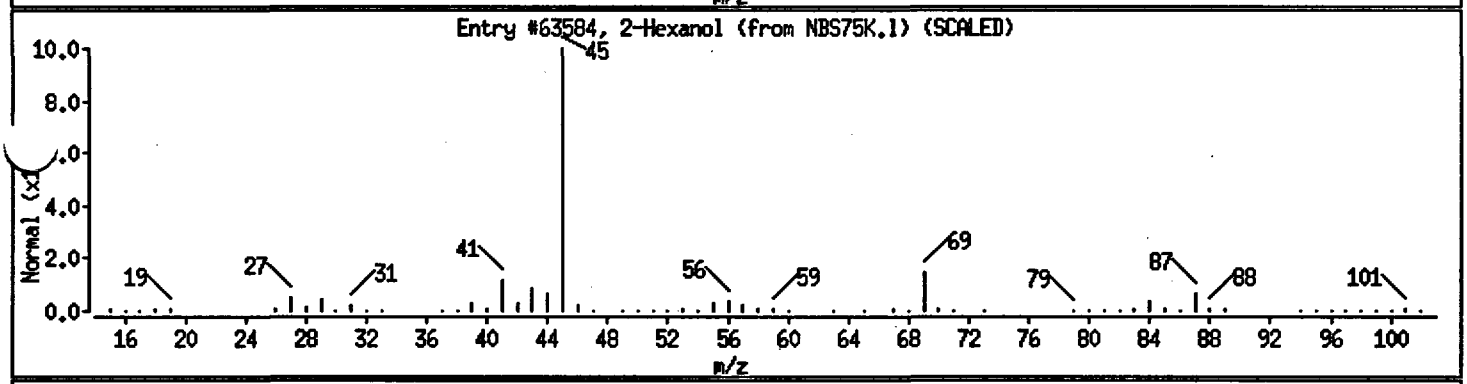


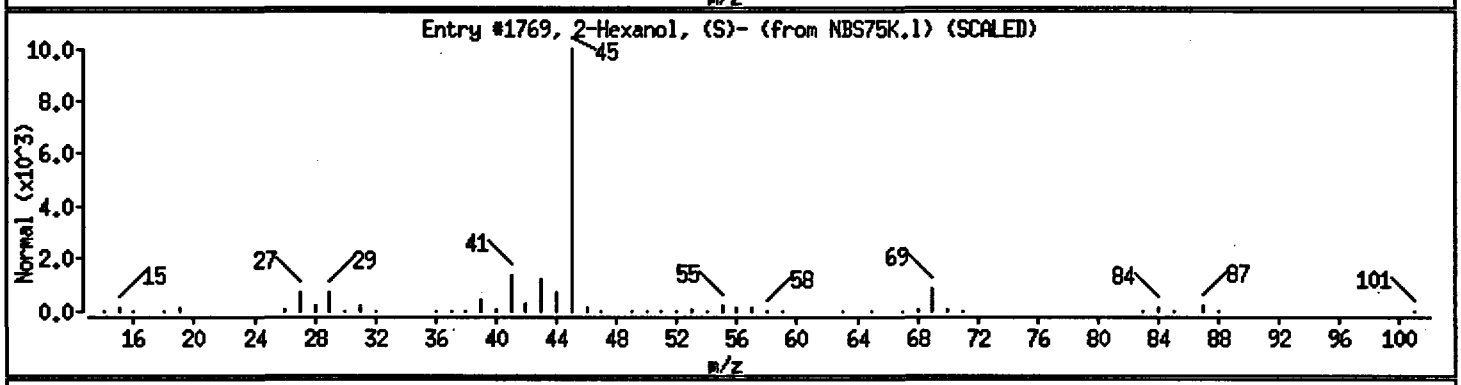
Data File: /chem/a.i/a960325a.b/a2257.d

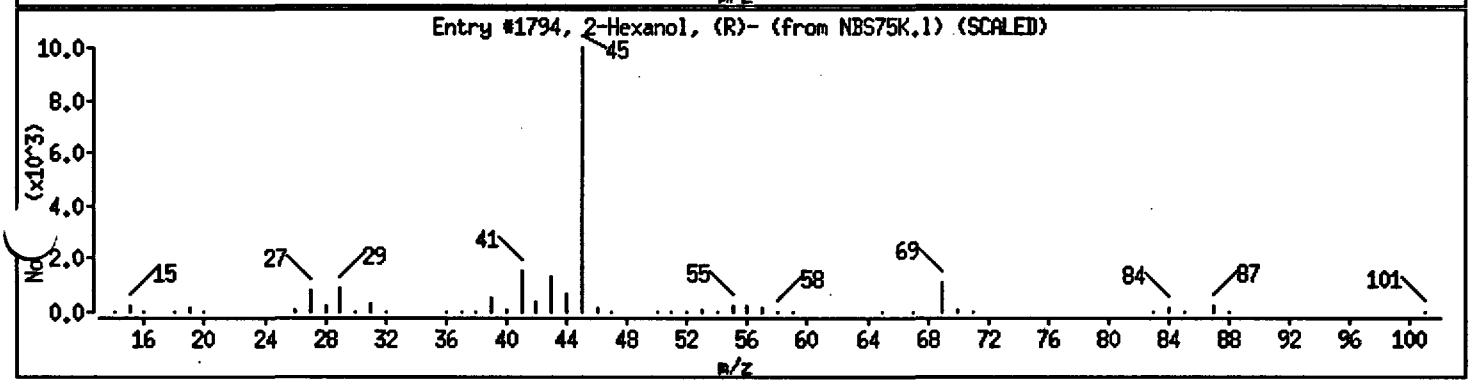
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Hexanol	626-93-7	NBS75K.l	63584	64
2-Hexanol, (S)-	52019-78-0	NBS75K.l	1769	64
2-Hexanol, (R)-	26549-24-6	NBS75K.l	1794	64





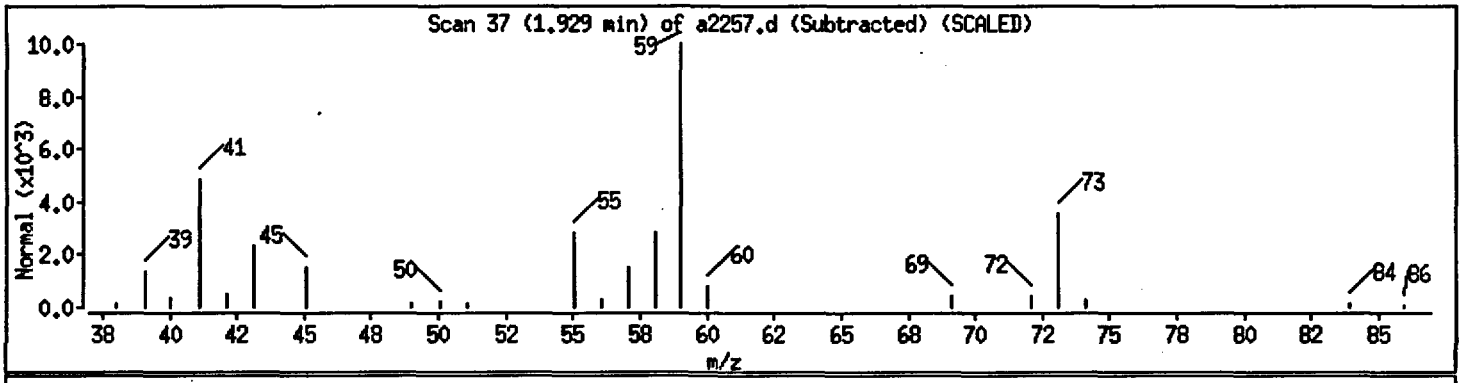


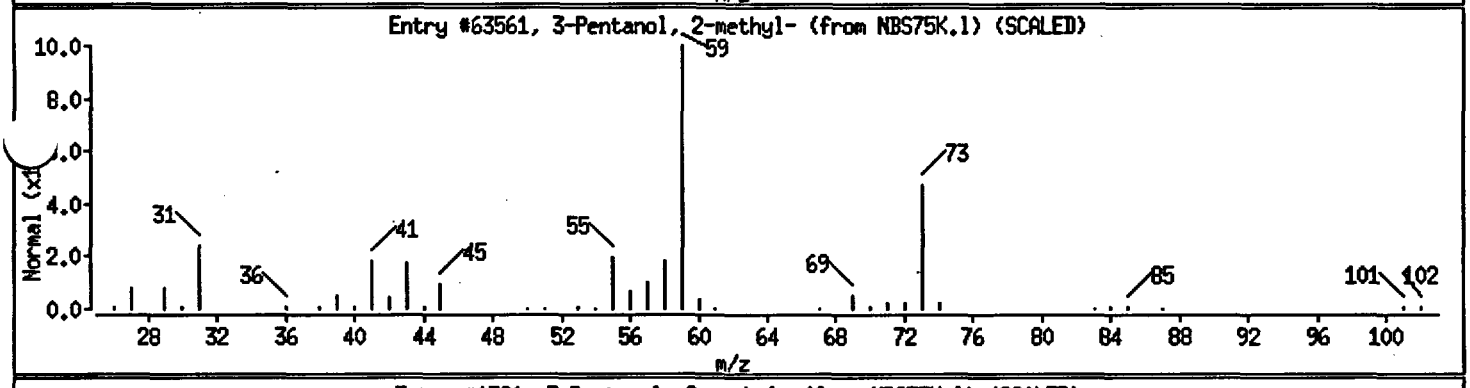


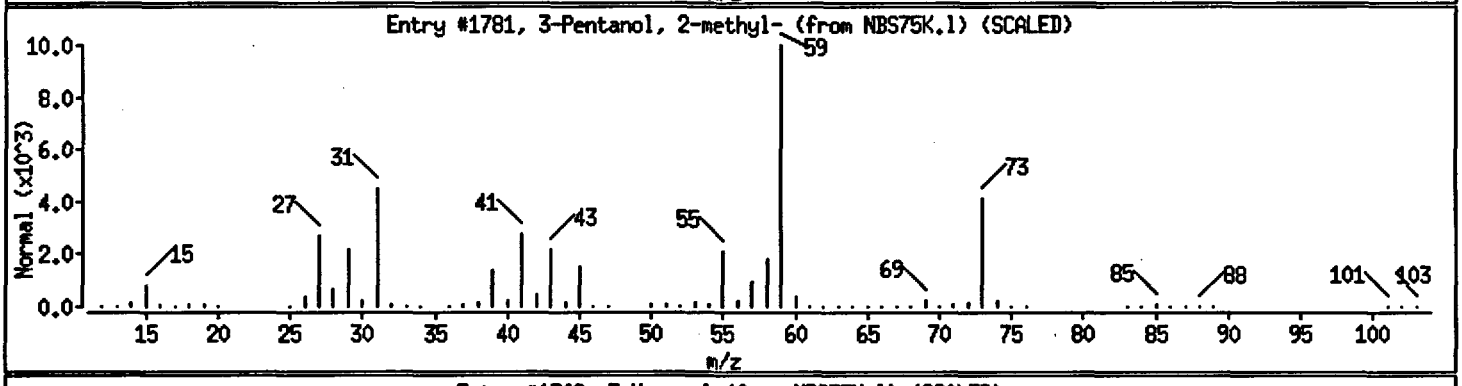
Data File: /chem/a.i/a960325a.b/a2257.d

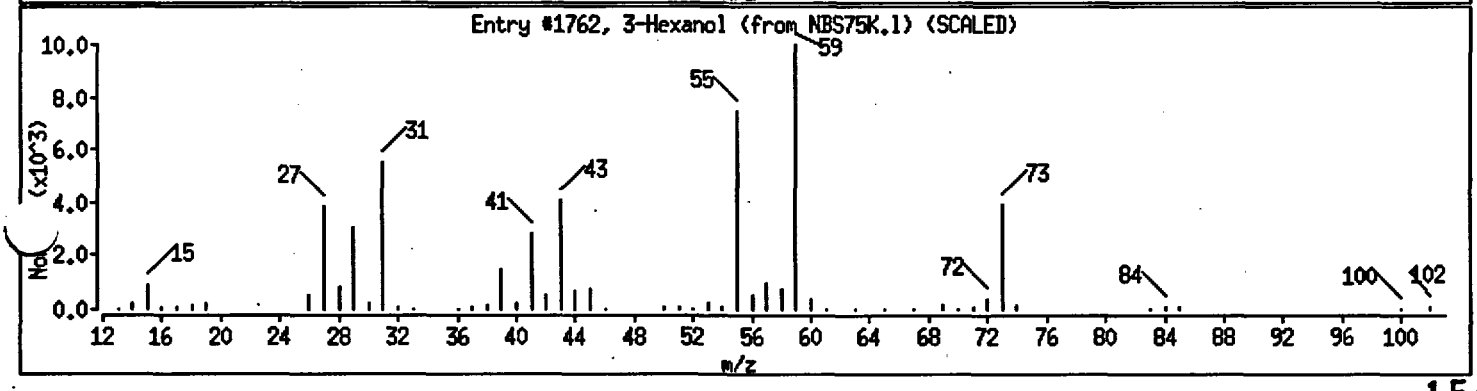
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
3-Pentanol, 2-methyl-	565-67-3	NBS75K.1	63561	64
3-Pentanol, 2-methyl-	565-67-3	NBS75K.1	1781	56
3-Hexanol	623-37-0	NBS75K.1	1762	39







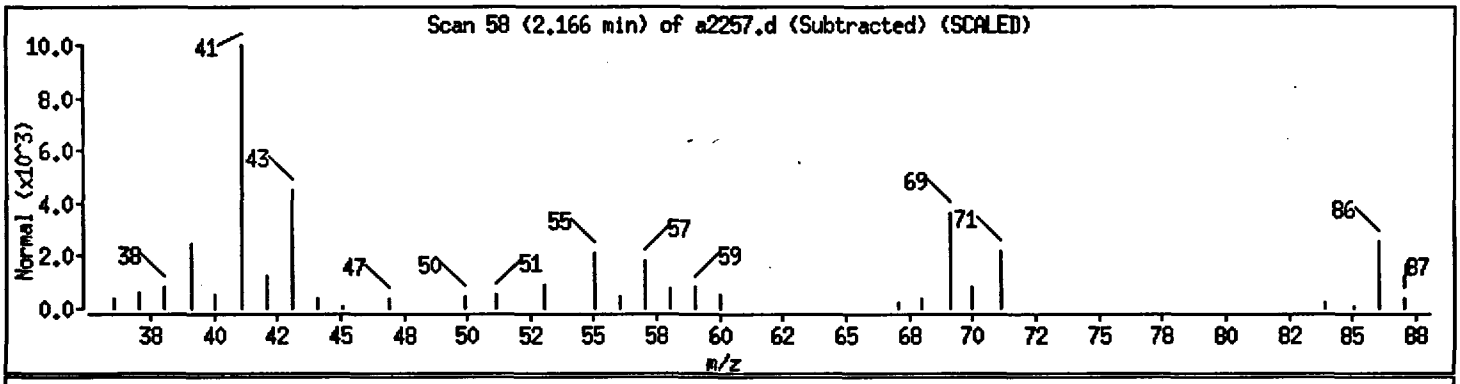


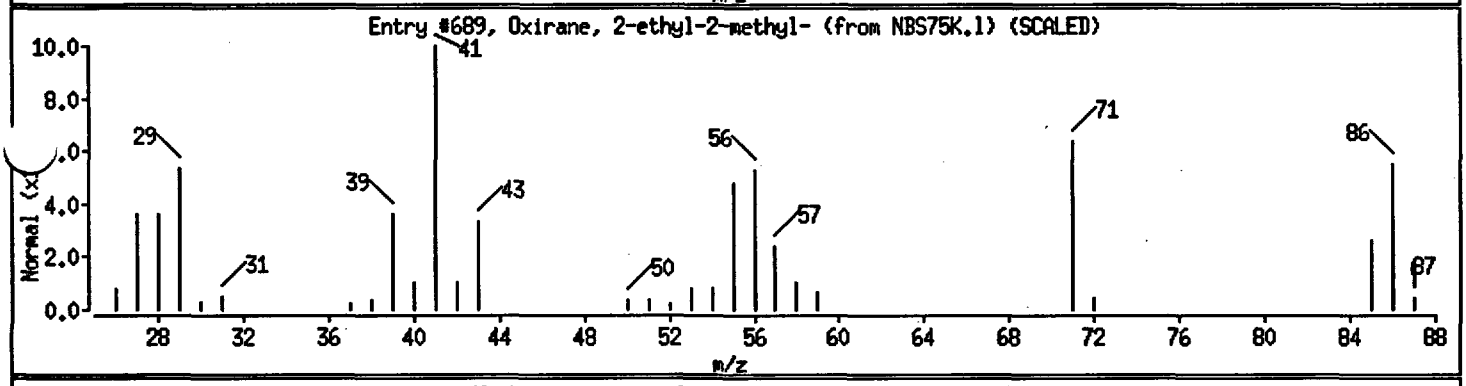
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

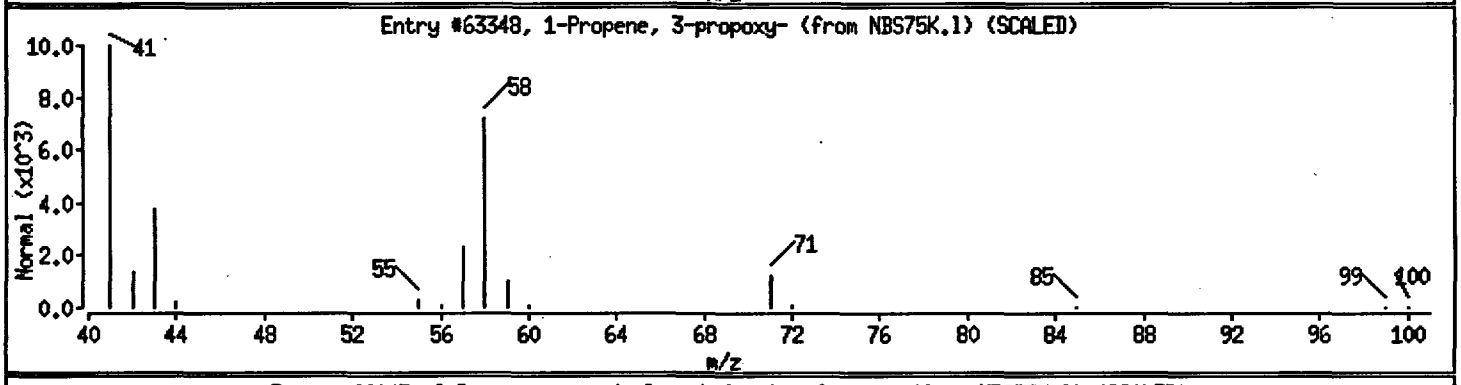
UNKNOWN

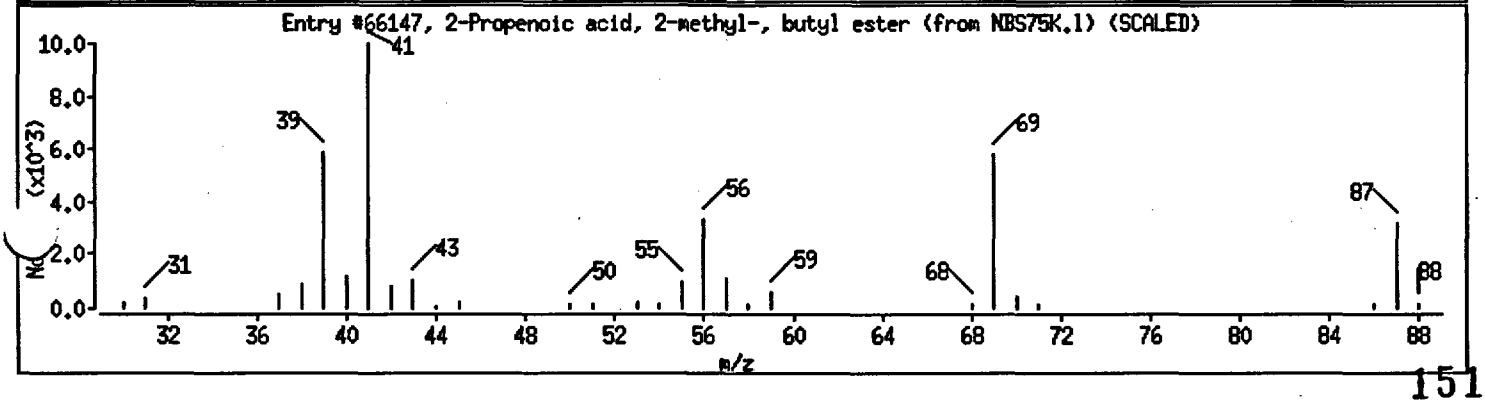
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Oxirane, 2-ethyl-2-methyl-	30095-63-7	NBS75K.1	689	40
1-Propene, 3-propoxy-	1471-03-0	NBS75K.1	63348	23
2-Propenoic acid, 2-methyl-, butyl ester	97-88-1	NBS75K.1	66147	20







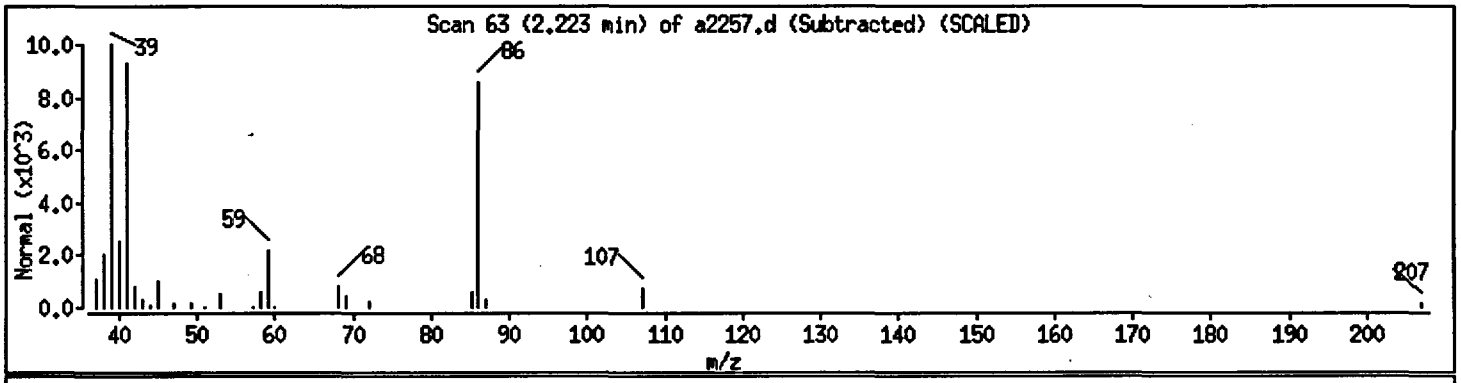


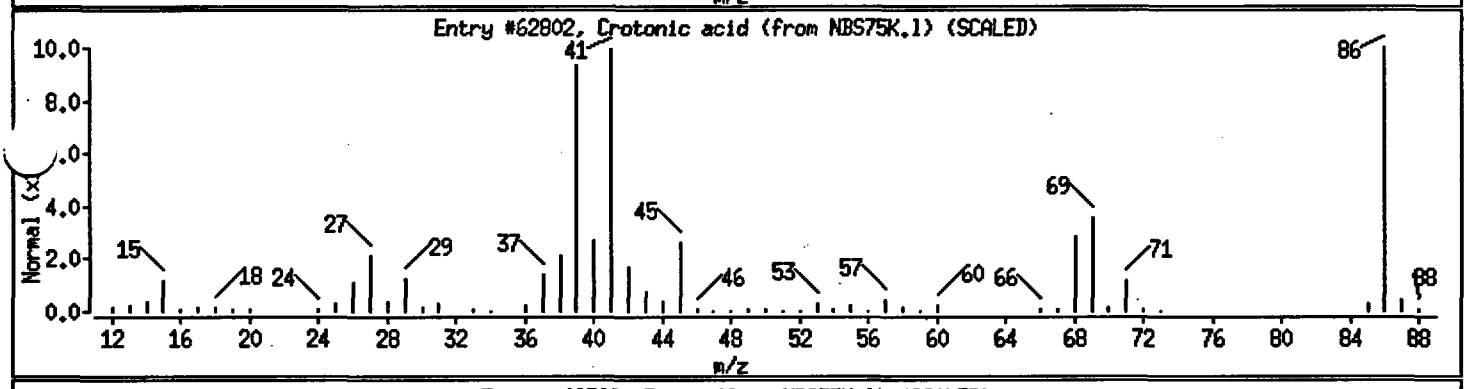
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

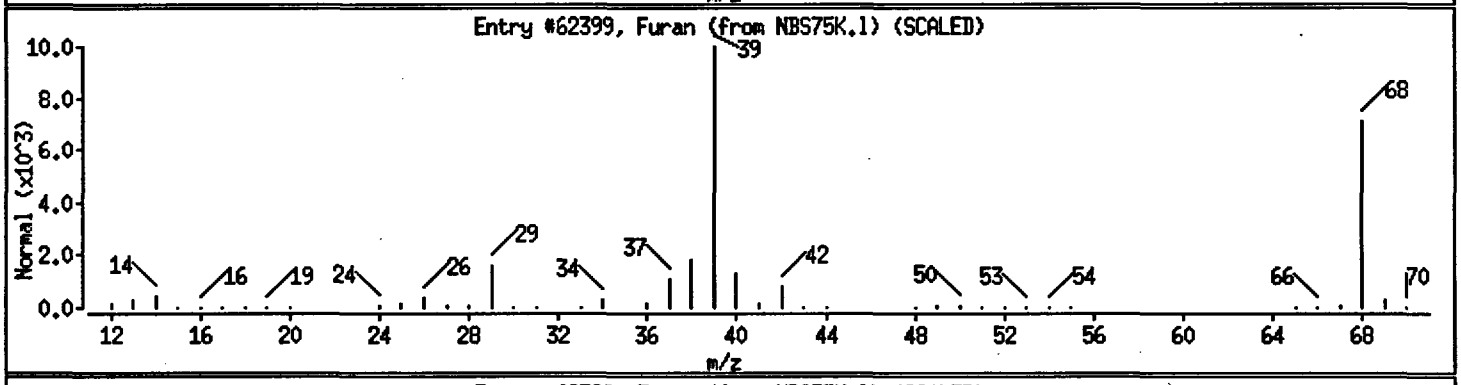
Column diameter : 0.25

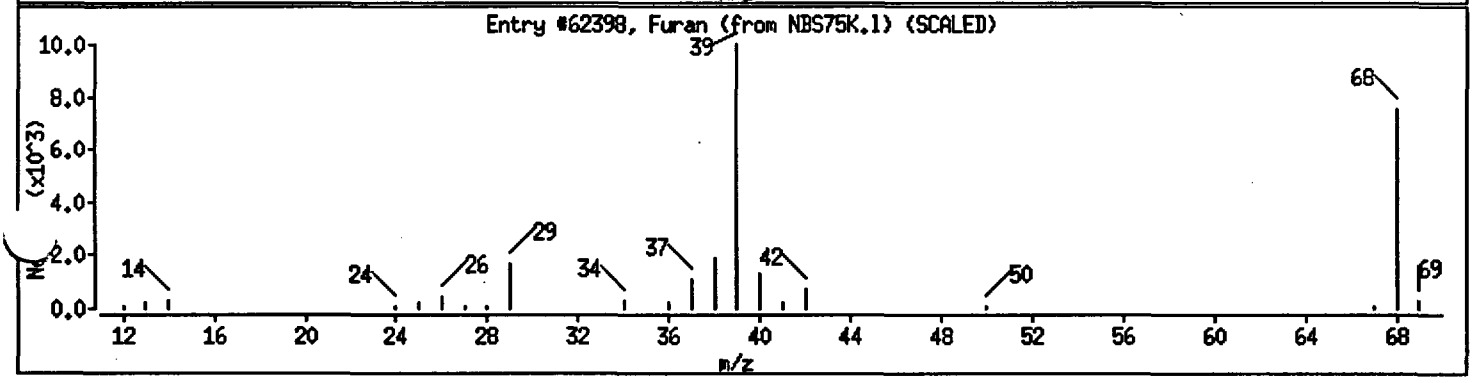
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Crotonic acid	3724-65-0	NBS75K.1	62802	86
Furan	110-00-9	NBS75K.1	62399	64
Furan	110-00-9	NBS75K.1	62398	64









Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

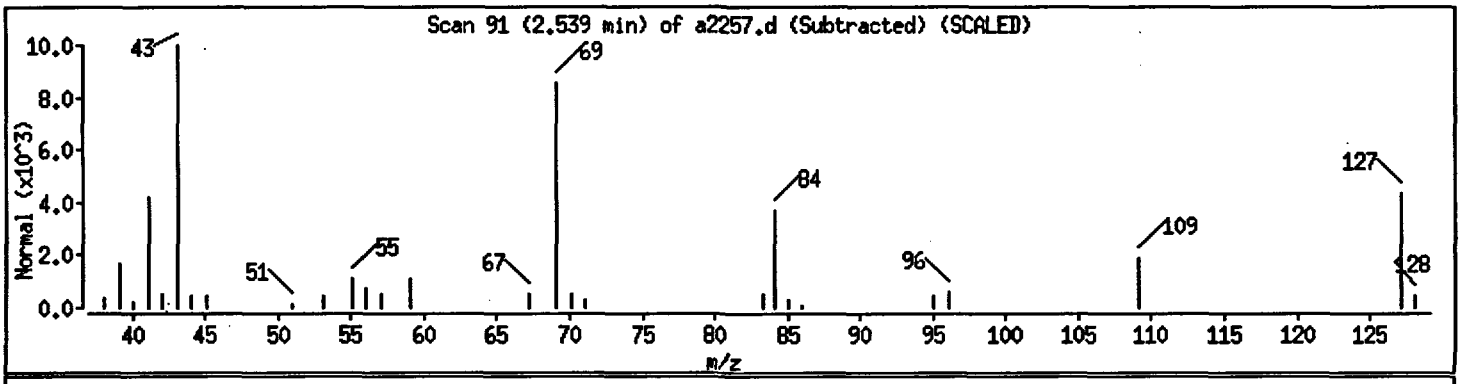
Column phase : XTI-5

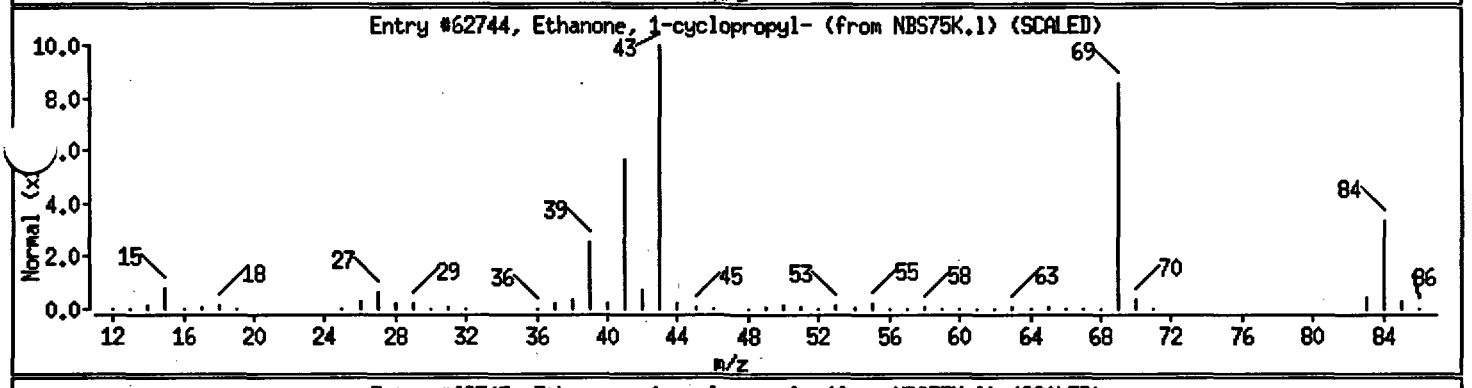
Volume Injected (uL) : 2.0

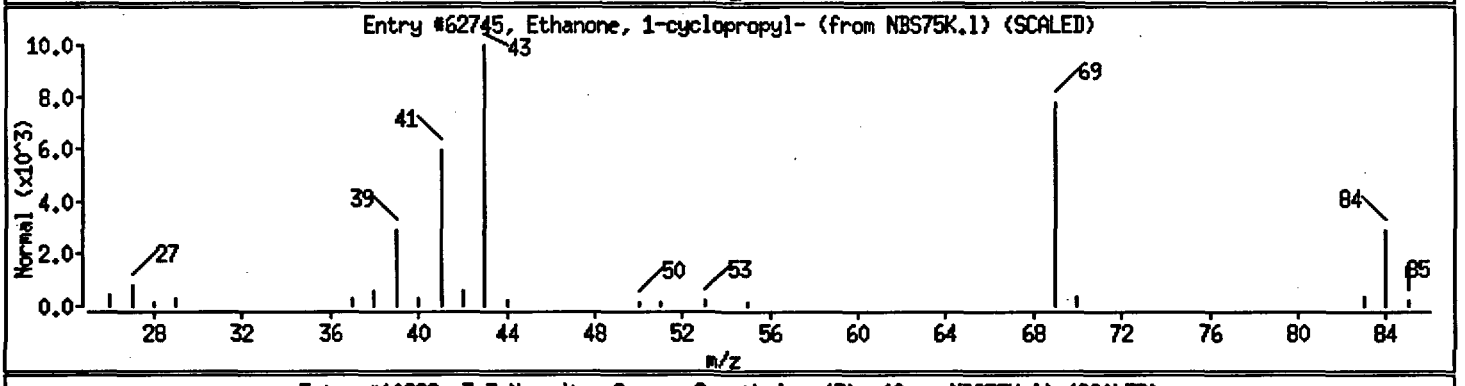
Column diameter : 0.25

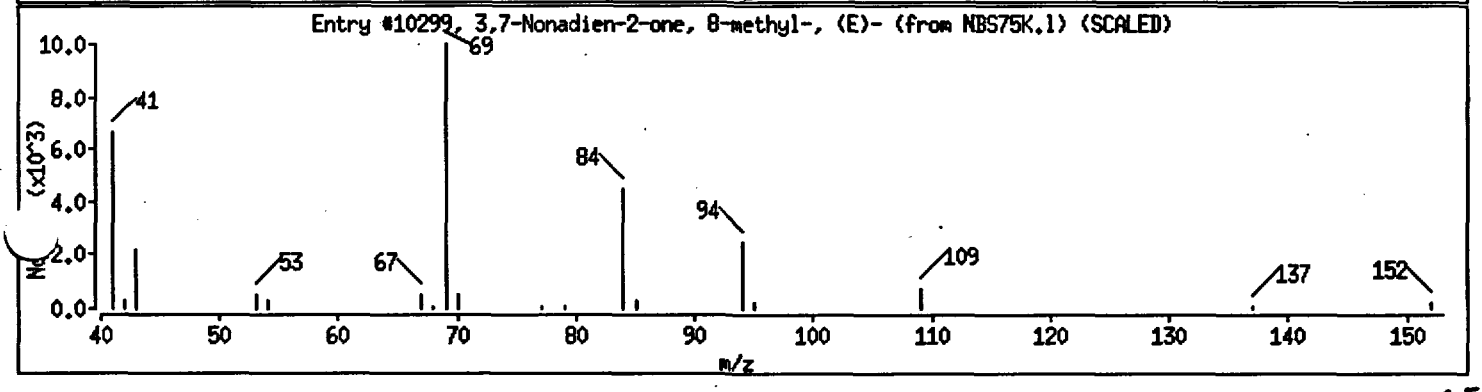
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Ethanone, 1-cyclopropyl-	765-43-5	NBS75K.1	62744	46
Ethanone, 1-cyclopropyl-	765-43-5	NBS75K.1	62745	43
3,7-Nonadien-2-one, 8-methyl-, (E)-	35408-14-1	NBS75K.1	10299	38







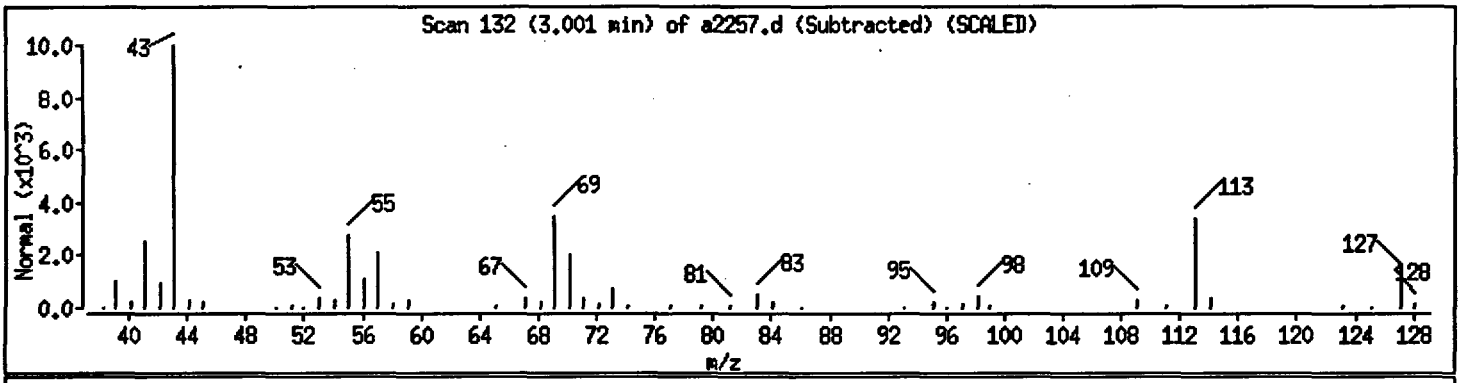


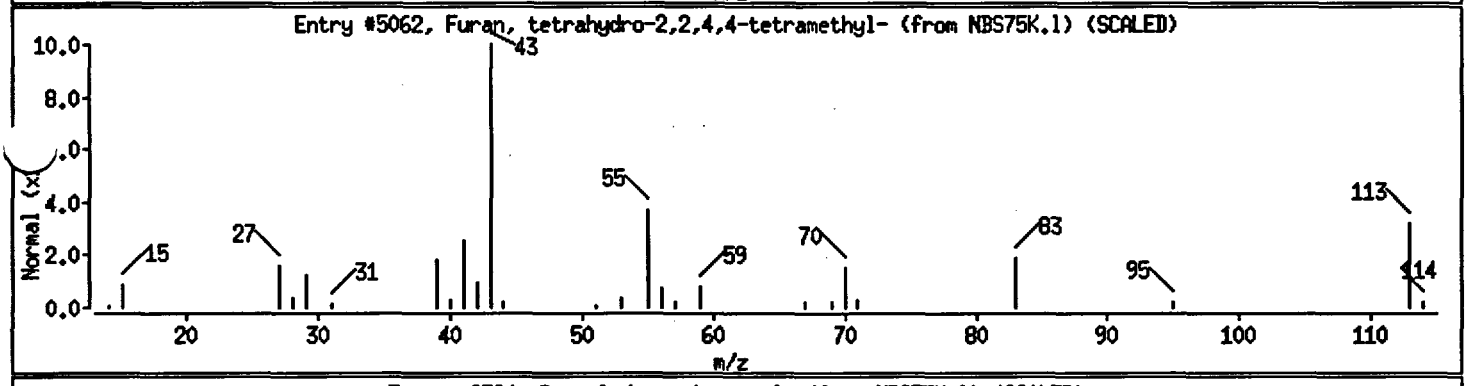
Data File: /chem/a.i/a960325a.b/a2257.d

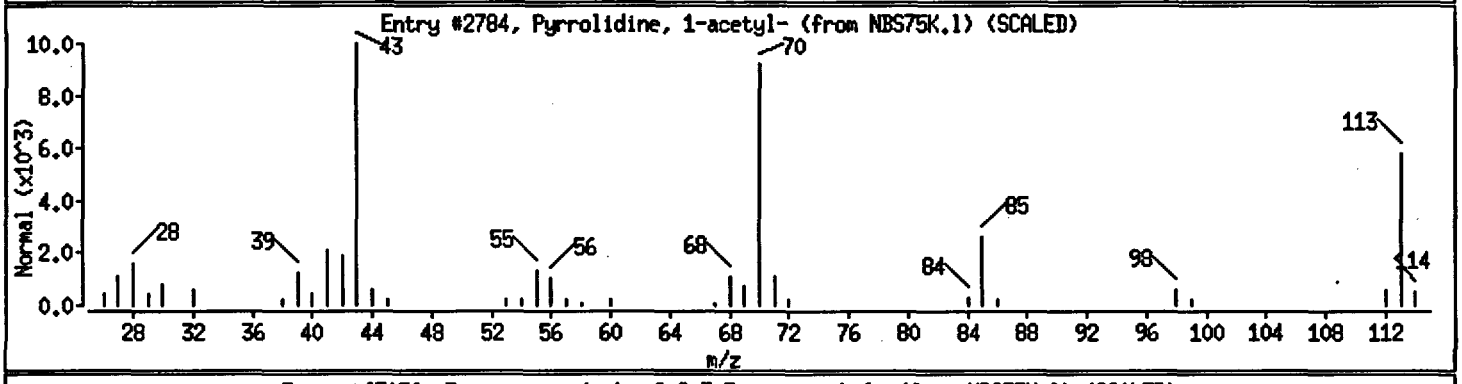
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

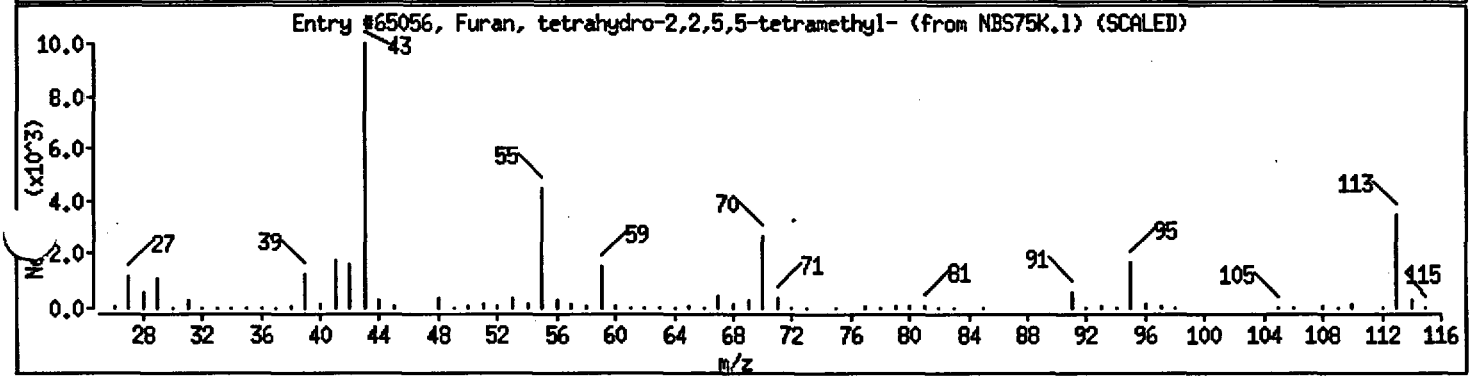
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Furan, tetrahydro-2,2,4,4-tetramethyl-	3358-28-9	NBS75K.l	5062	50
Pyrrolidine, 1-acetyl-	4030-18-6	NBS75K.l	2784	38
Furan, tetrahydro-2,2,5,5-tetramethyl-	15045-43-9	NBS75K.l	65056	38







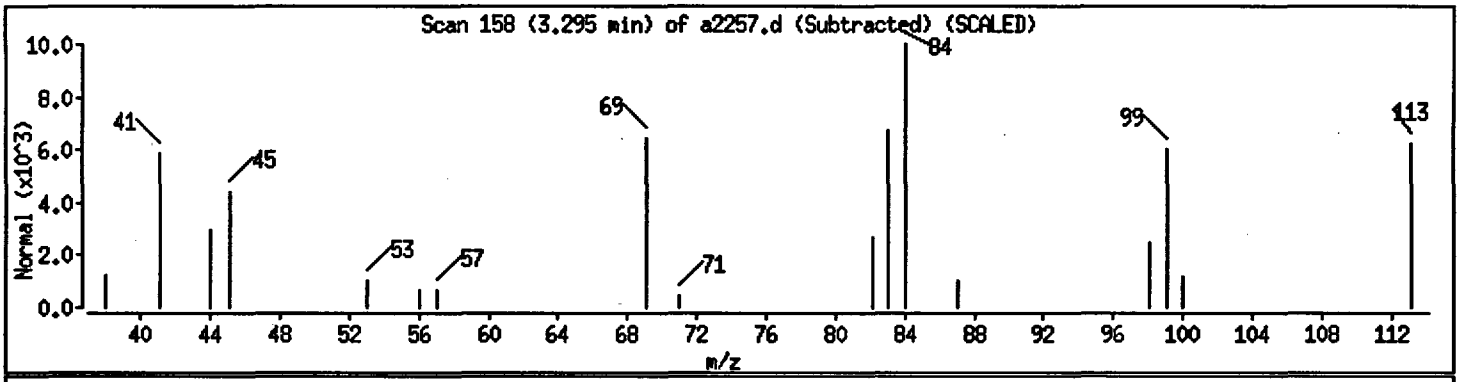


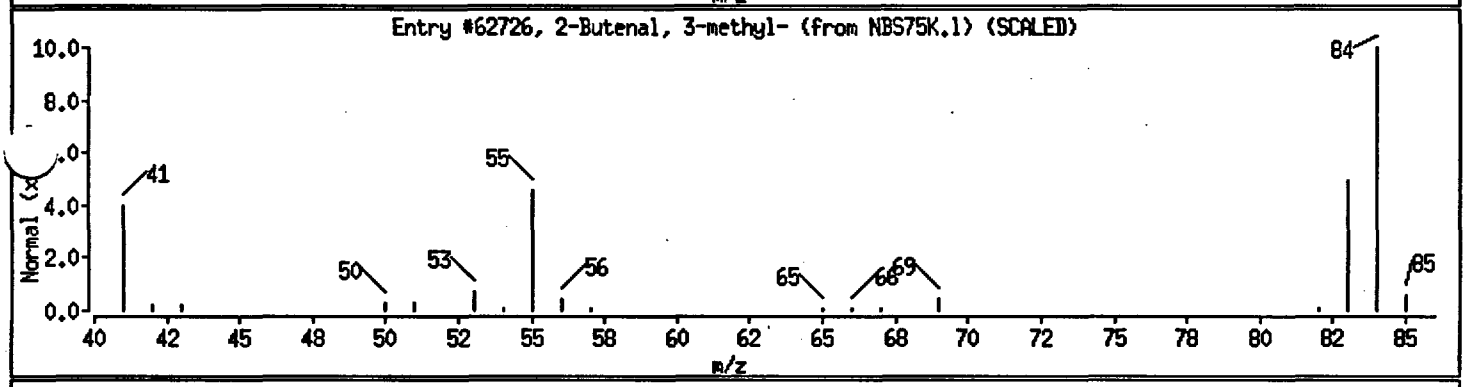
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

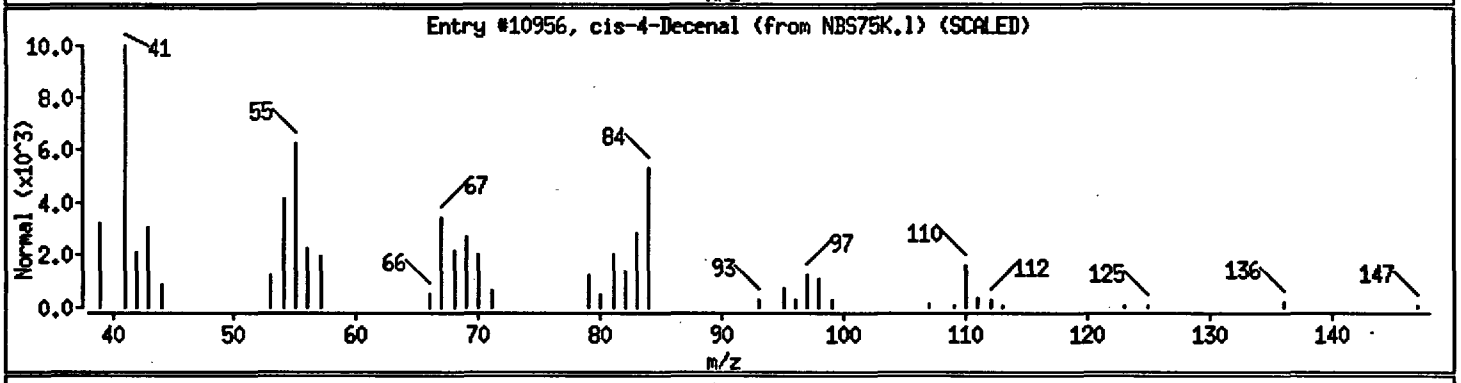
UNKNOWN

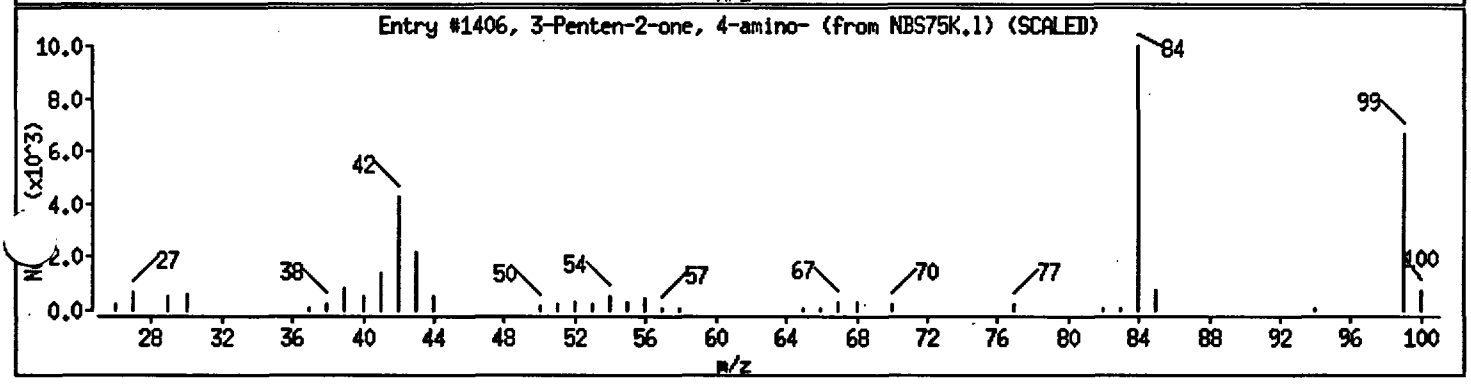
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Butenal, 3-methyl-	107-86-8	NBS75K.1	62726	22
cis-4-Decenal	21662-09-9	NBS75K.1	10956	20
3-Penten-2-one, 4-amino-	1118-66-7	NBS75K.1	1406	16







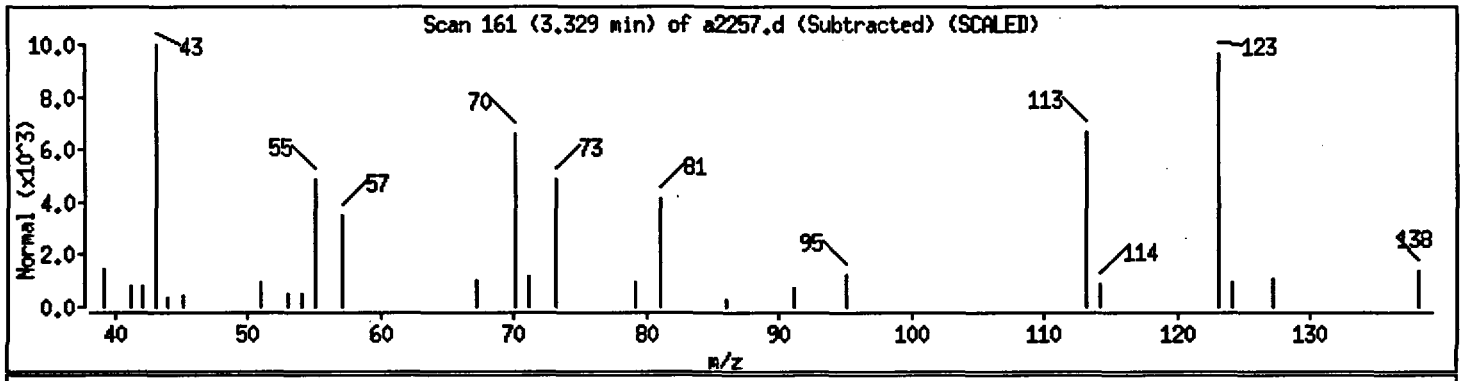


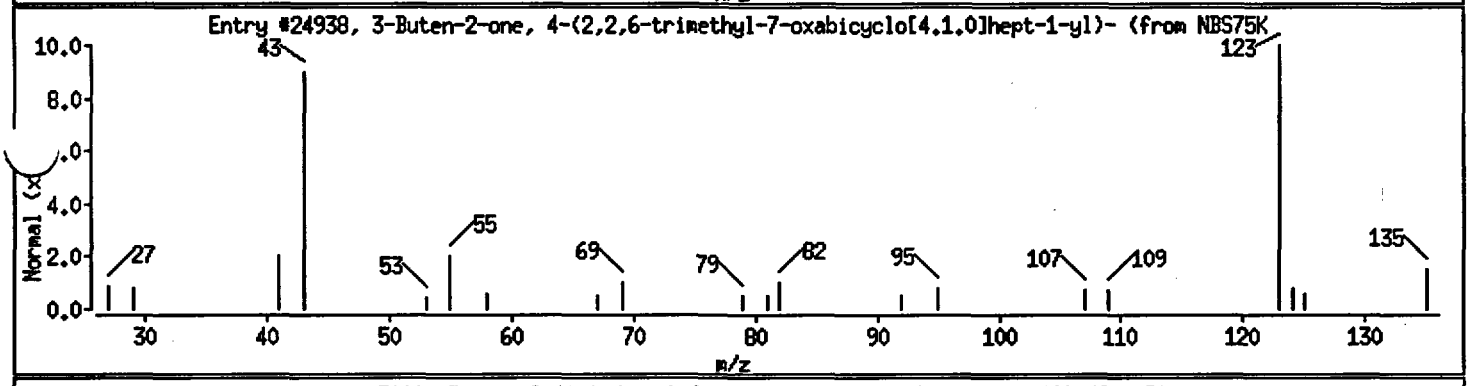
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

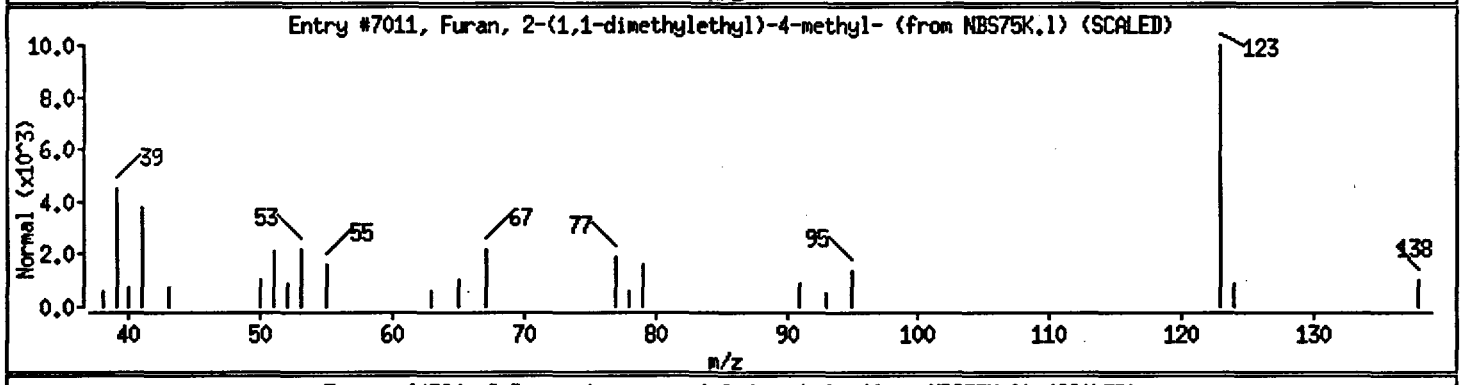
Column diameter : 0.25

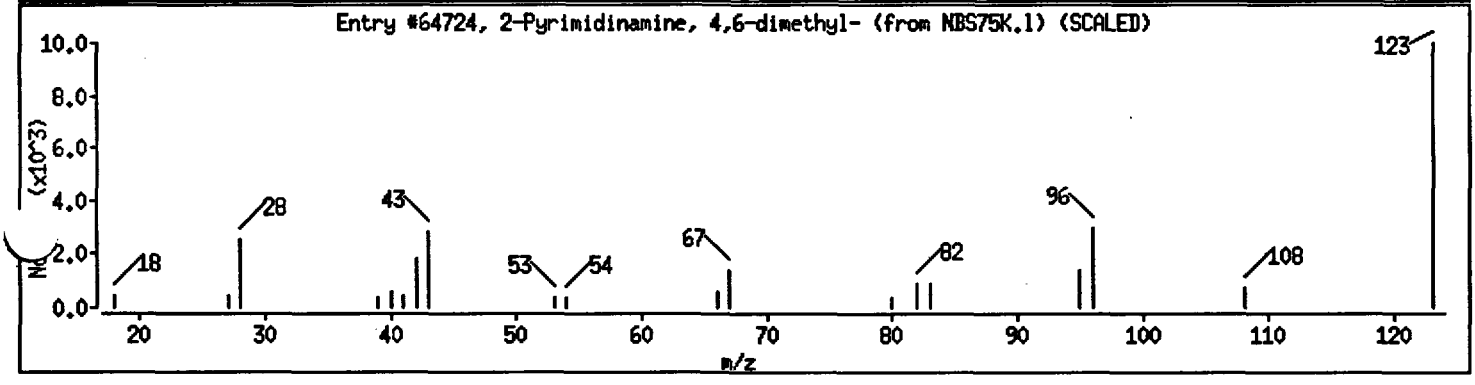
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
3-Buten-2-one, 4-(2,2,6-trimethyl-7-oxab	23267-57-4	NBS75K.l	24938	35
Furan, 2-(1,1-dimethylethyl)-4-methyl-	6141-68-0	NBS75K.l	7011	35
2-Pyrimidinamine, 4,6-dimethyl-	767-15-7	NBS75K.l	64724	27







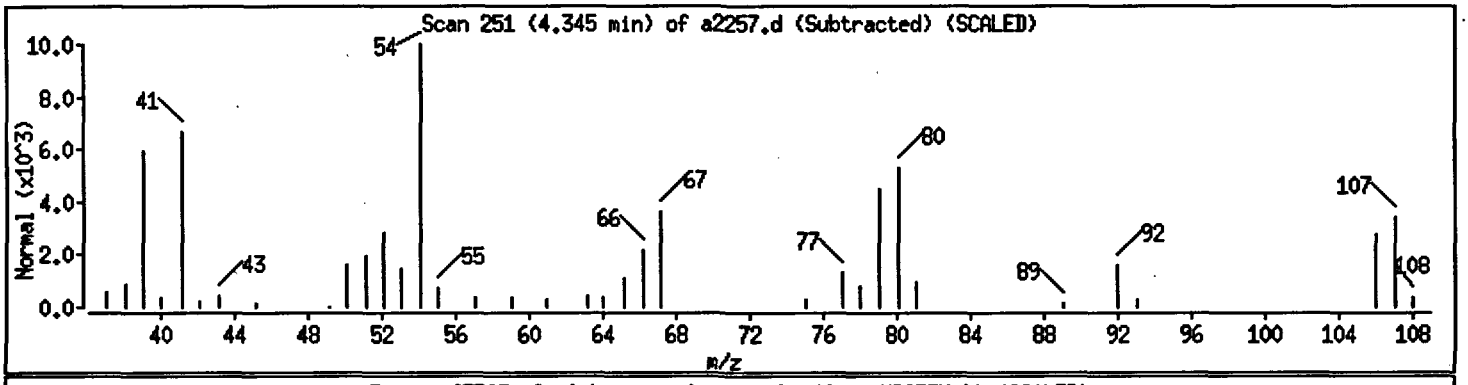


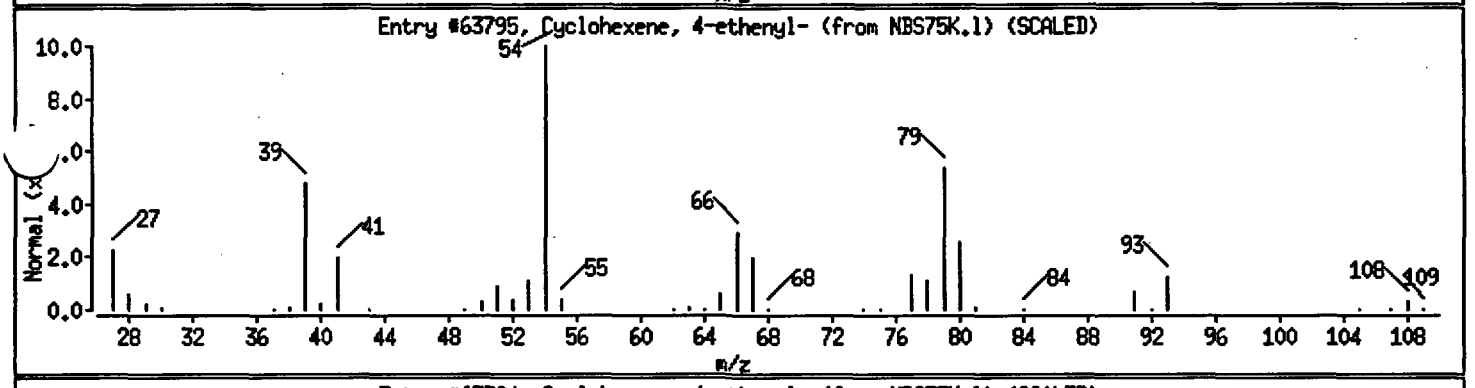
Data File: /chem/a.i/a960325a.b/a2257.d

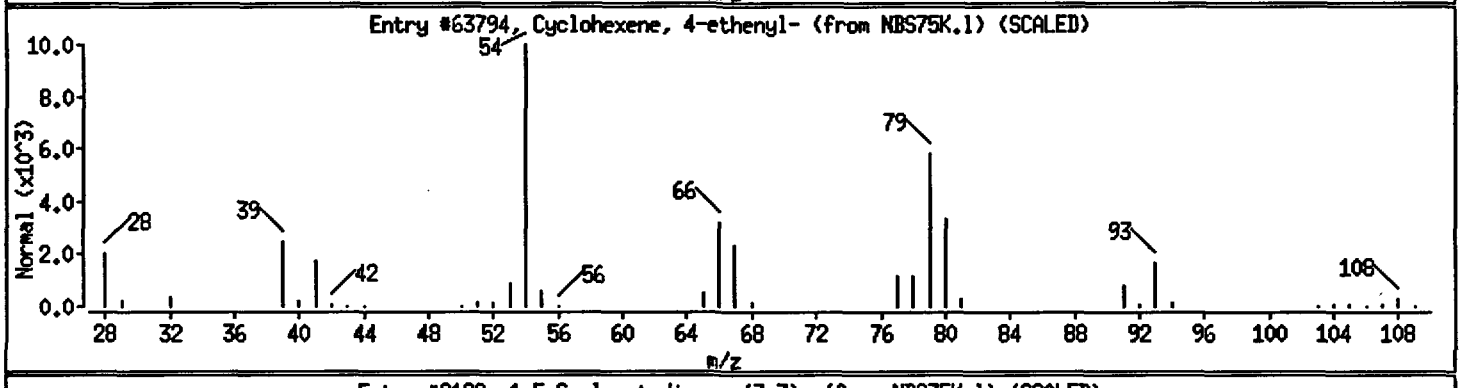
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

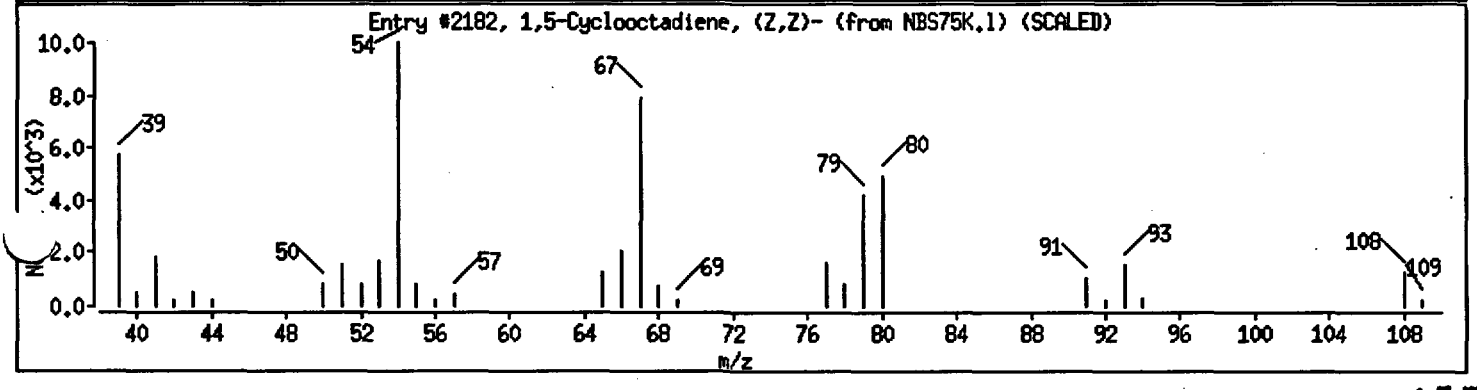
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Cyclohexene, 4-ethenyl-	100-40-3	NBS75K.l	63795	58
Cyclohexene, 4-ethenyl-	100-40-3	NBS75K.l	63794	58
1,5-Cyclooctadiene, (Z,Z)-	1552-12-1	NBS75K.l	2182	53





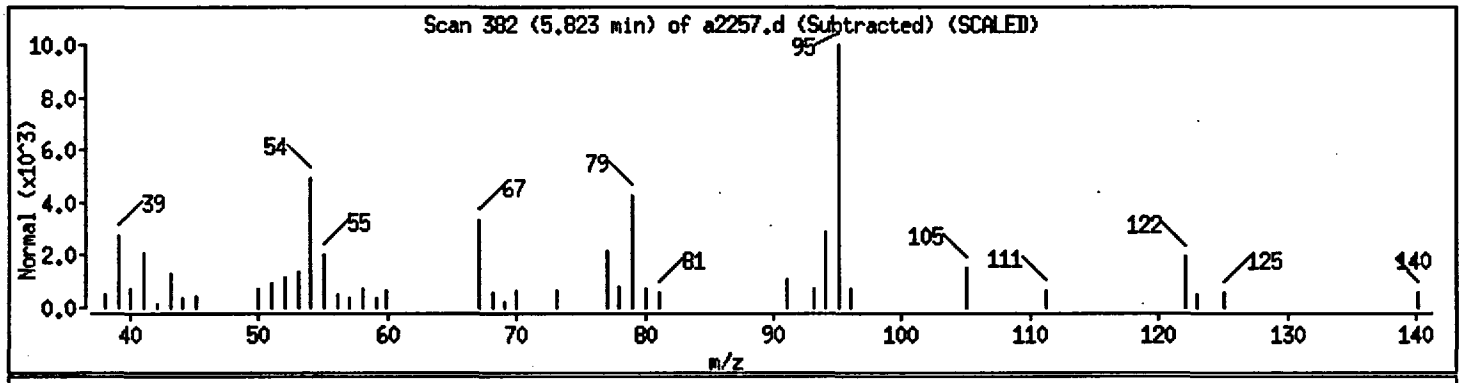


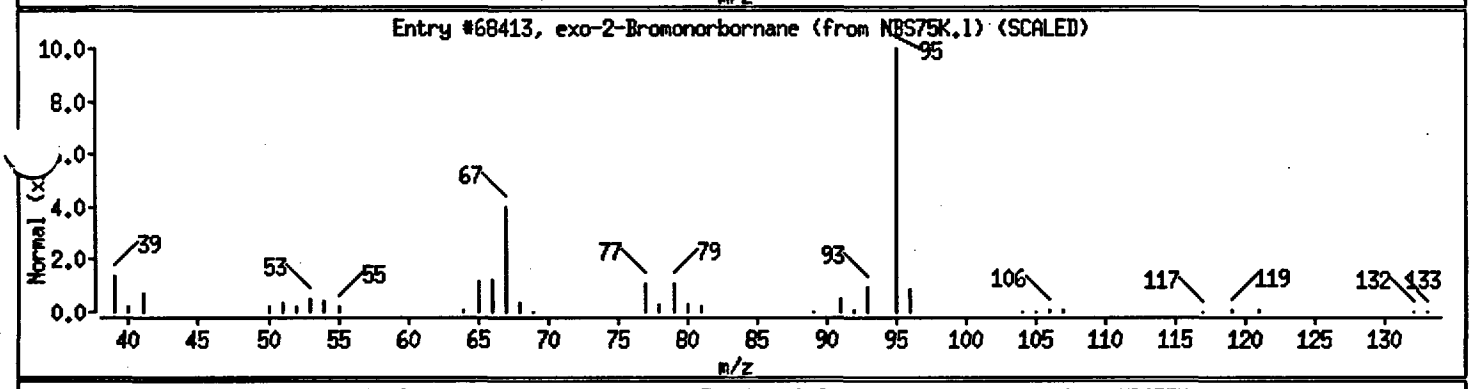


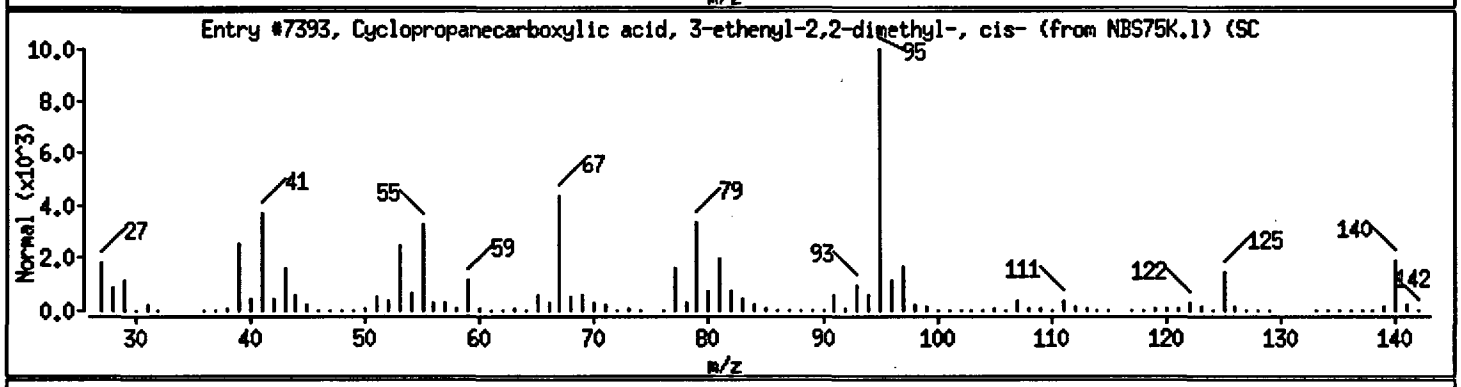
Data File: /chem/a.i/a960325a.b/a2257.d

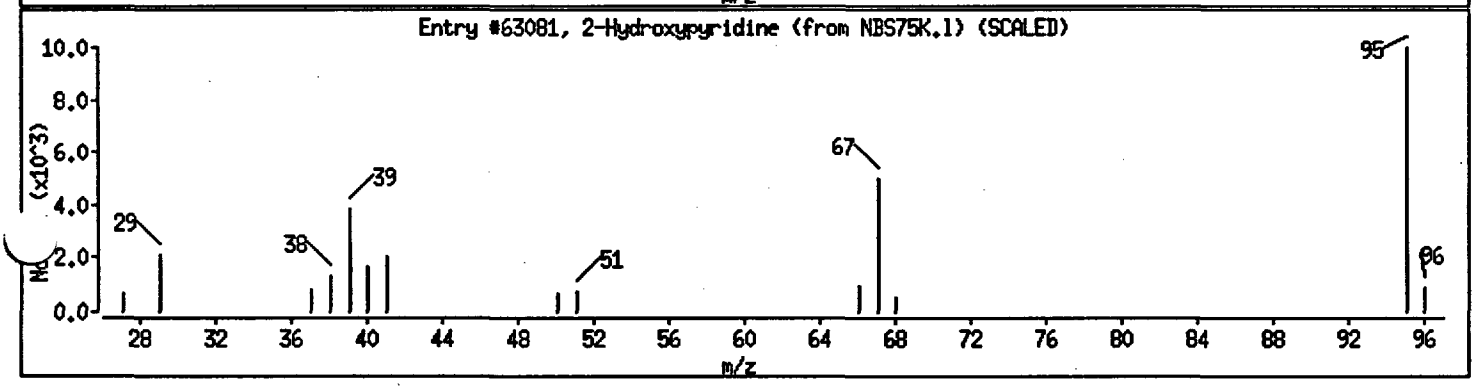
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
exo-2-Bromonorbornane	2534-77-2	NBS75K.l	68413	35
Cyclopropanecarboxylic acid, 3-ethenyl-2	67528-58-9	NBS75K.l	7393	27
2-Hydroxypyridine	142-08-5	NBS75K.l	63081	27





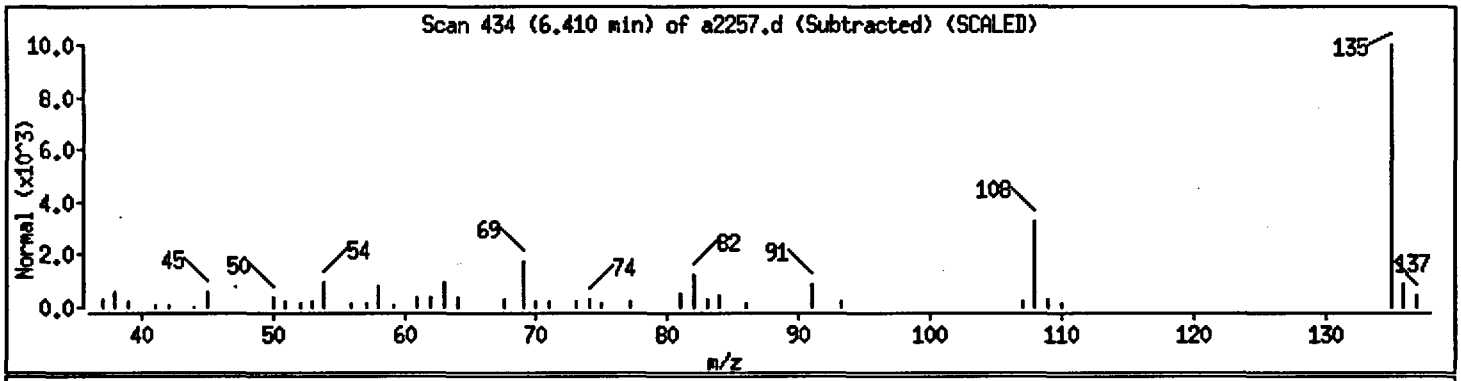


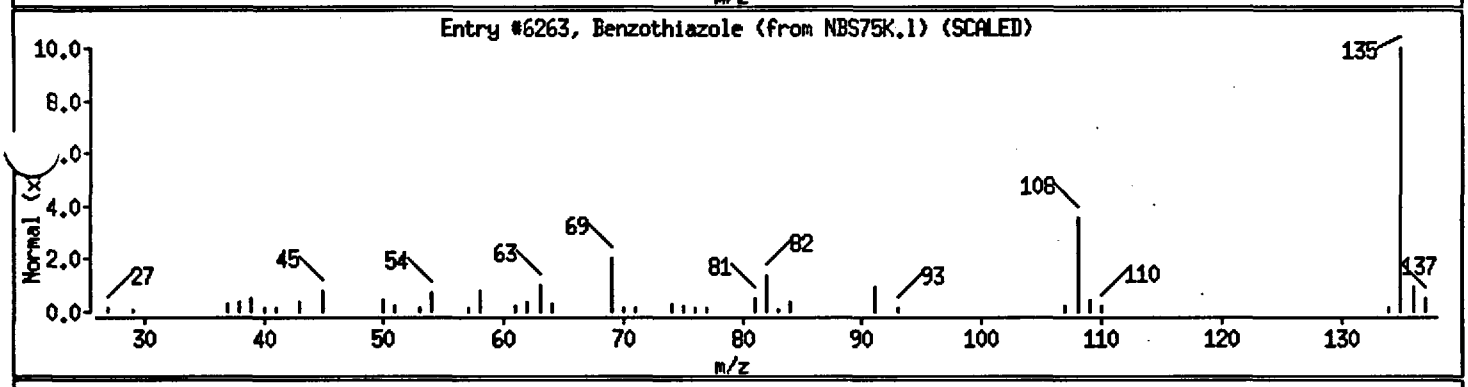


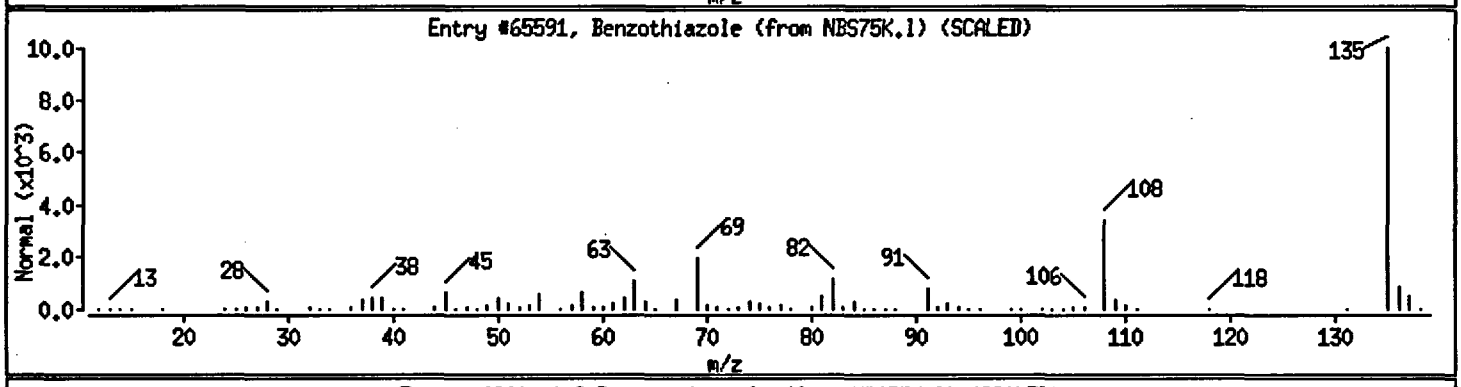
Data File: /chem/a.i/a960325a.b/a2257.d

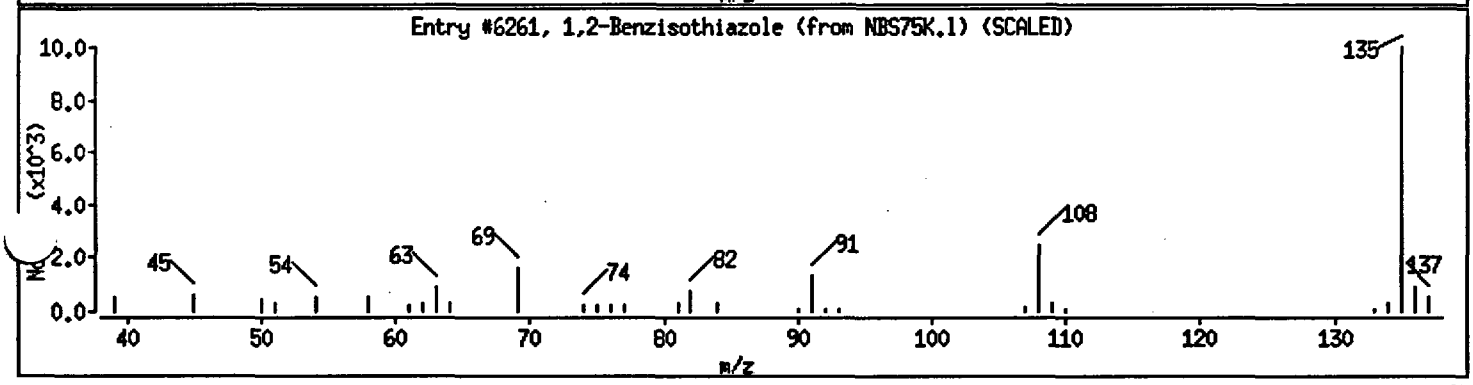
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Benzothiazole	95-16-9	NBS75K.l	6263	94
Benzothiazole	95-16-9	NBS75K.l	65591	94
1,2-Benzisothiazole	272-16-2	NBS75K.l	6261	91





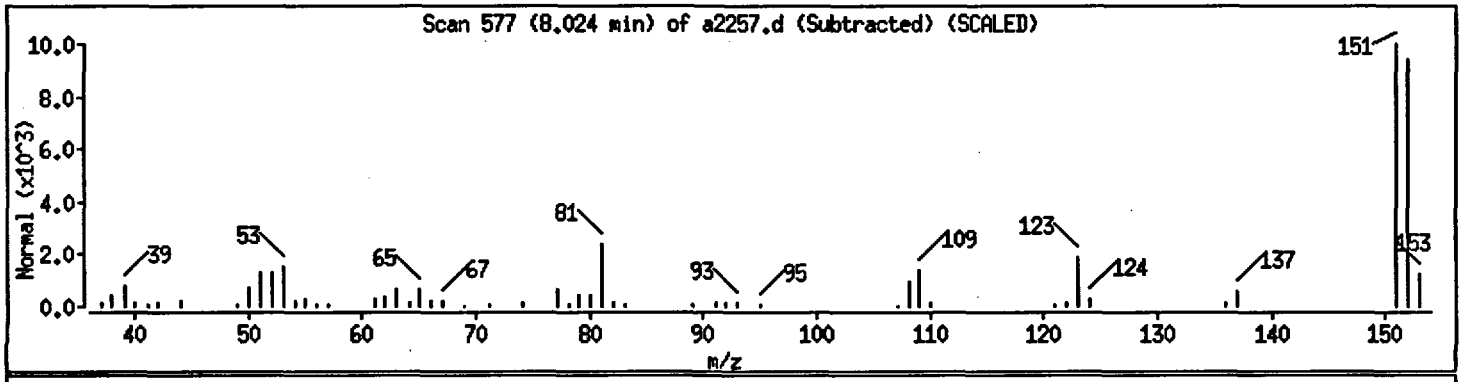


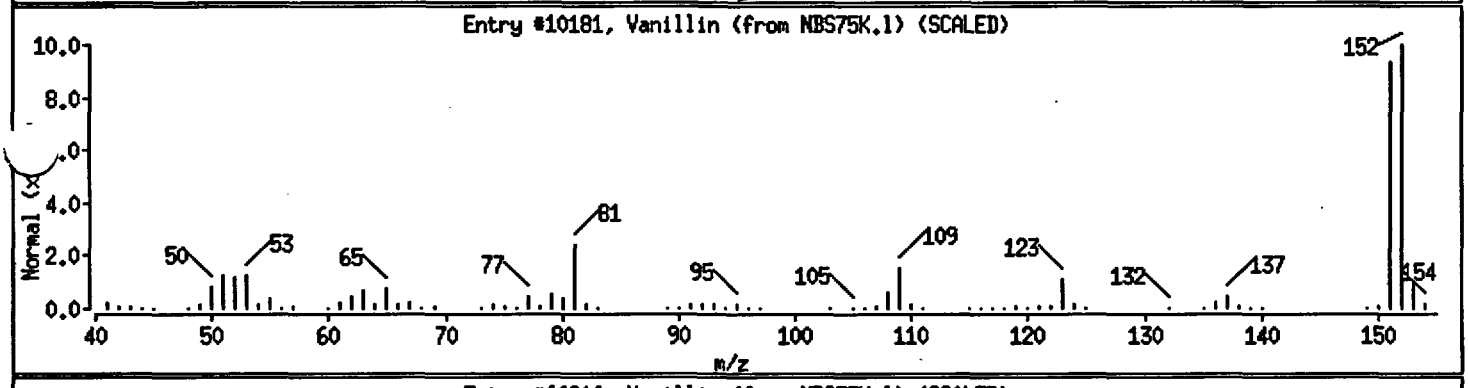


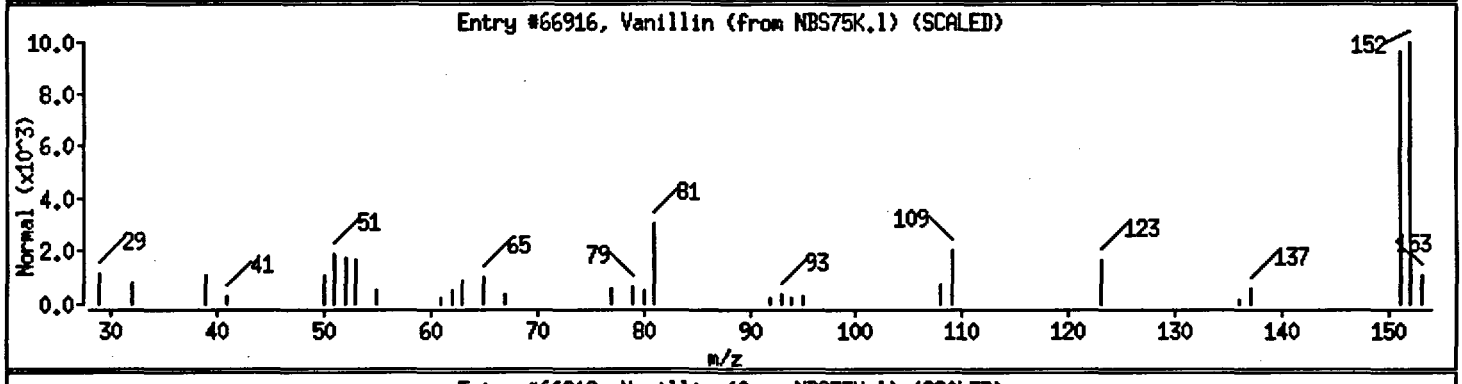
Data File: /chem/a.i/a960325a.b/a2257.d

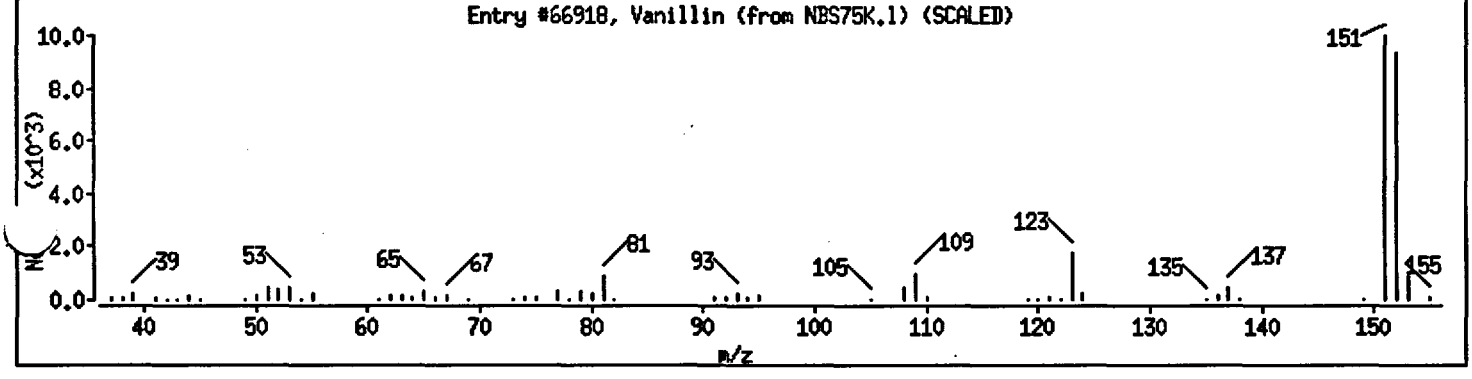
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Vanillin	121-33-5	NBS75K.1	10181	94
Vanillin	121-33-5	NBS75K.1	66916	94
Vanillin	121-33-5	NBS75K.1	66918	94









Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

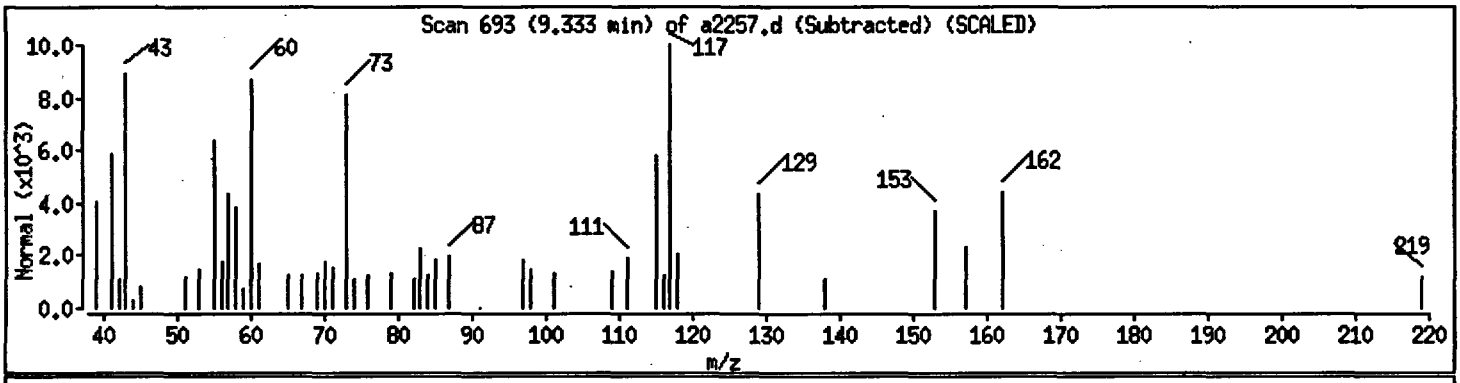
Column phase : XTI-5

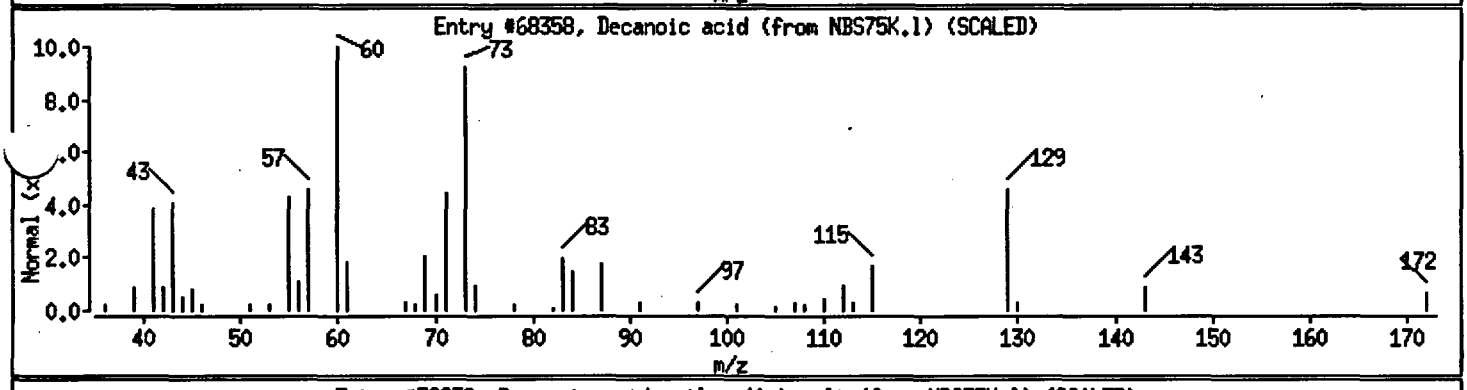
Volume Injected (uL) : 2.0

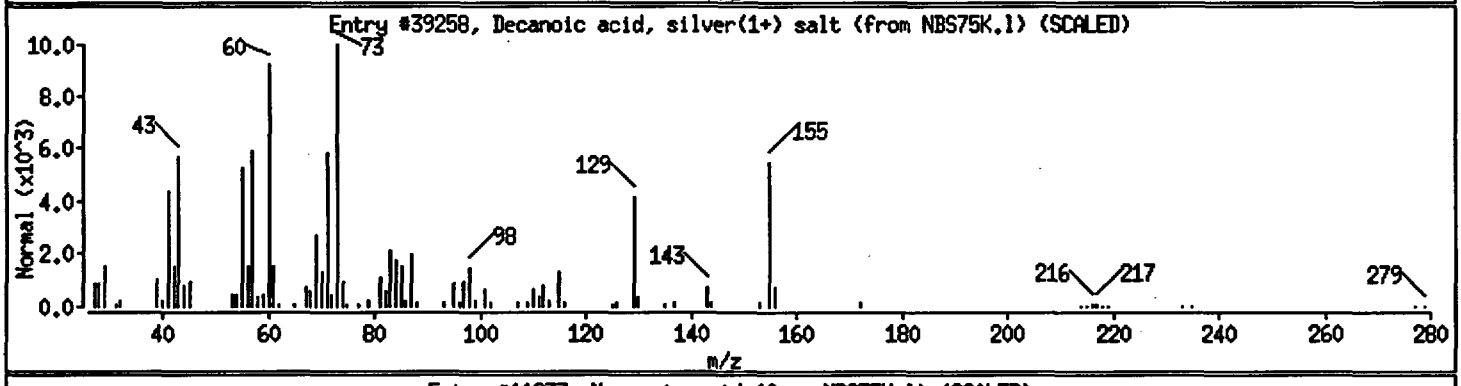
Column diameter : 0.25

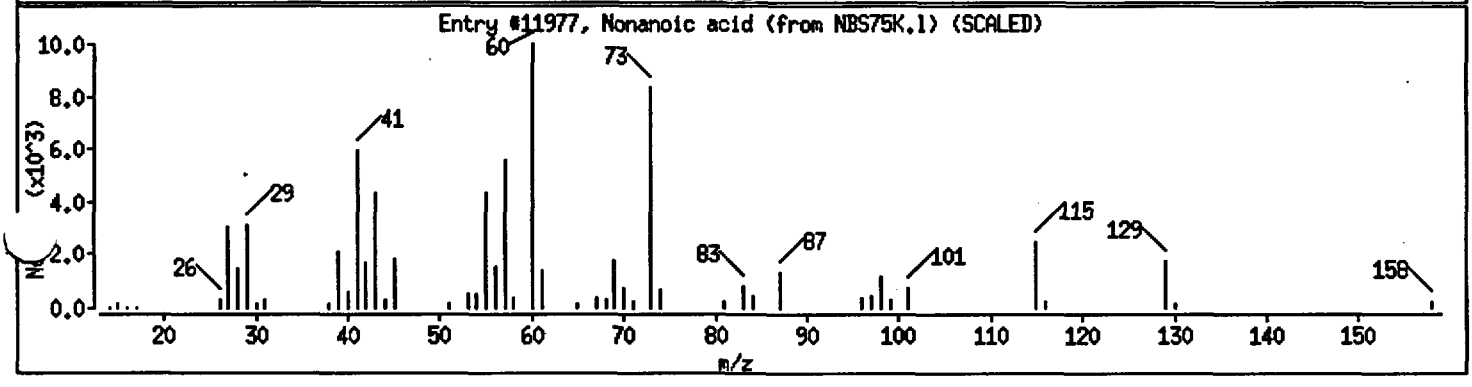
UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Decanoic acid	334-48-5	NBS75K.l	68358	27
Decanoic acid, silver(1+) salt	13126-67-5	NBS75K.l	39258	27
Nonanoic acid	112-05-0	NBS75K.l	11977	27







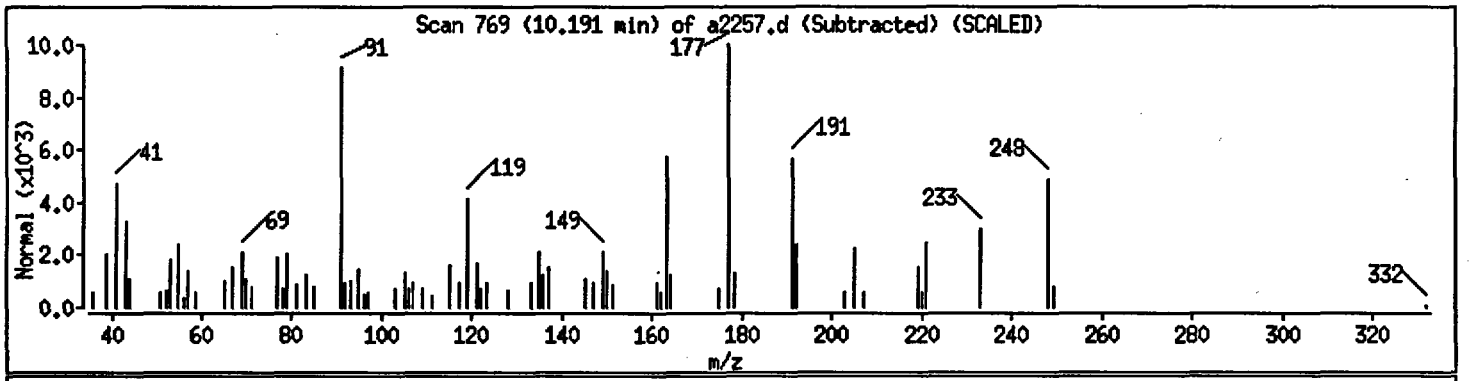


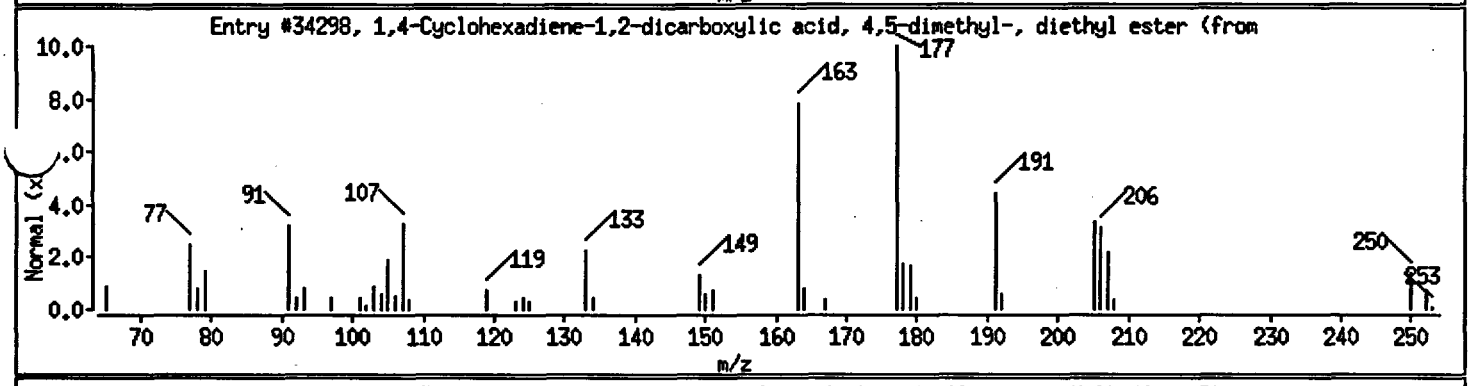
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

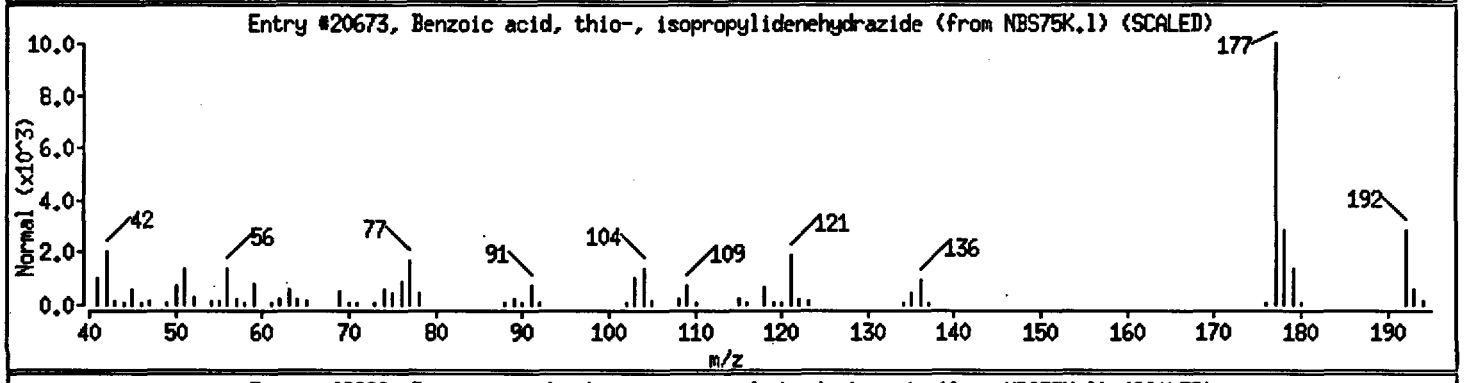
UNKNOWN

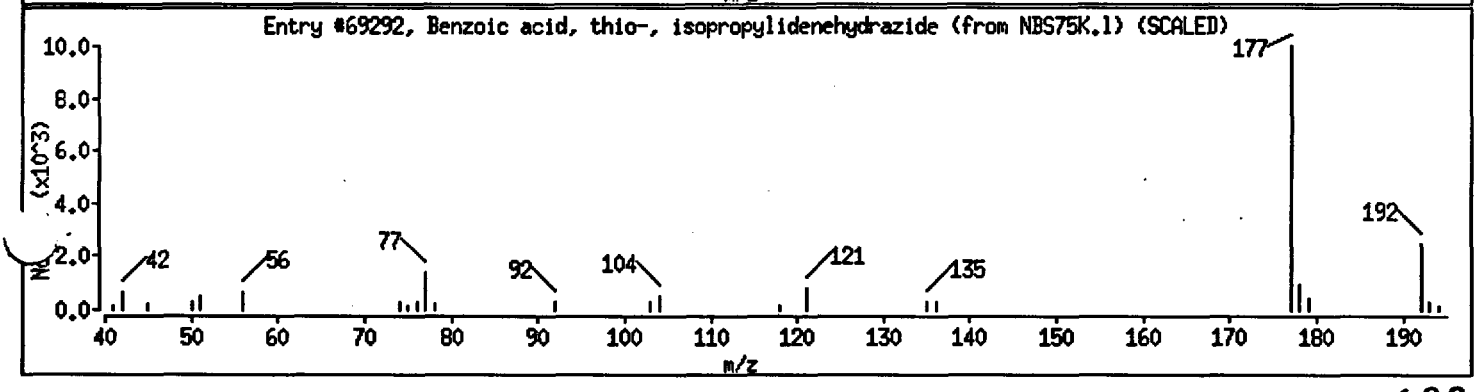
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
1,4-Cyclohexadiene-1,2-dicarboxylic acid	0-00-0	NBS75K.l	34298	32
Benzoic acid, thio-, isopropylidenehydra	20185-02-8	NBS75K.l	20673	18
Benzoic acid, thio-, isopropylidenehydra	20185-02-8	NBS75K.l	69292	18









Data File: /chem/a.i/a960325a.b/a2257.d

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Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

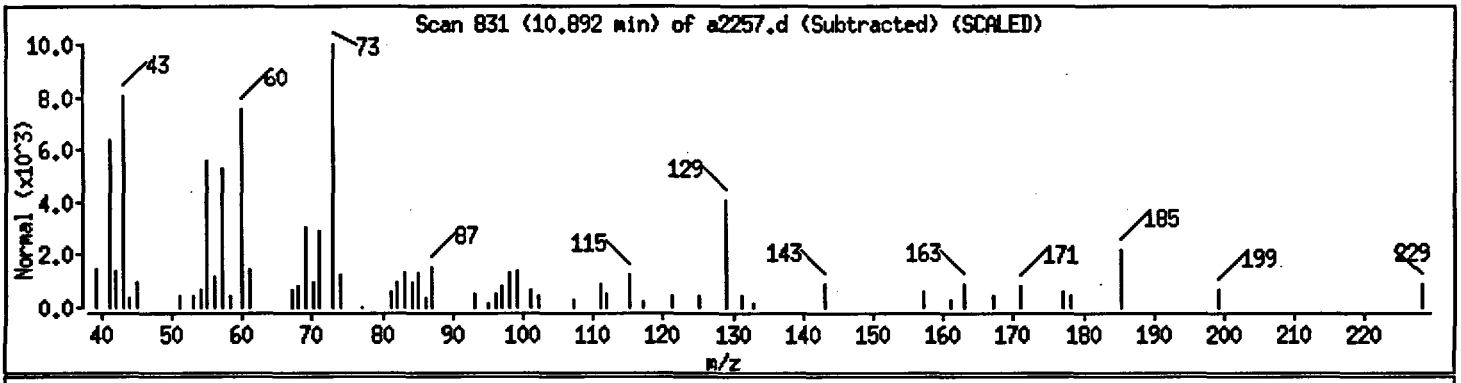
UNKNOWN ORGANIC ACID

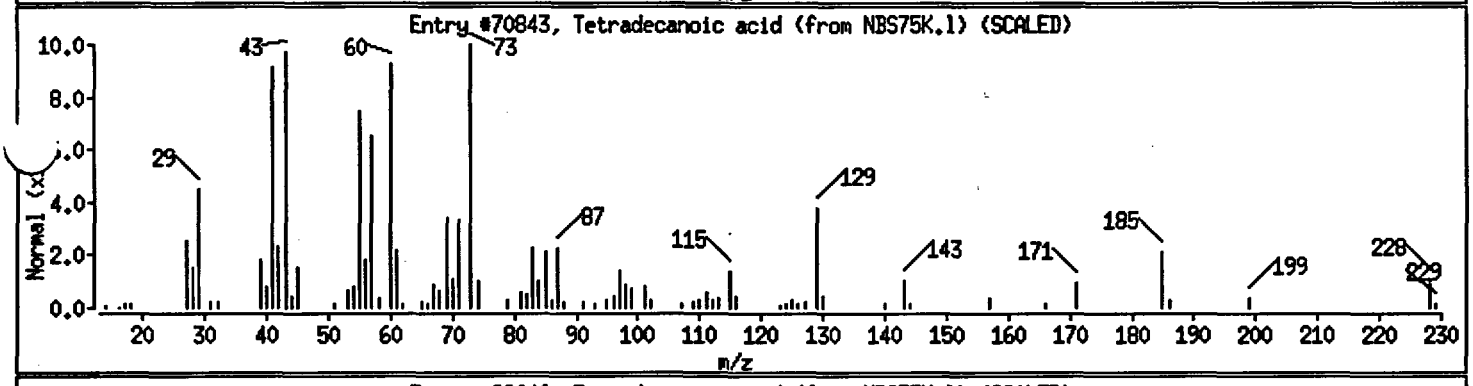
Column phase : XTI-5

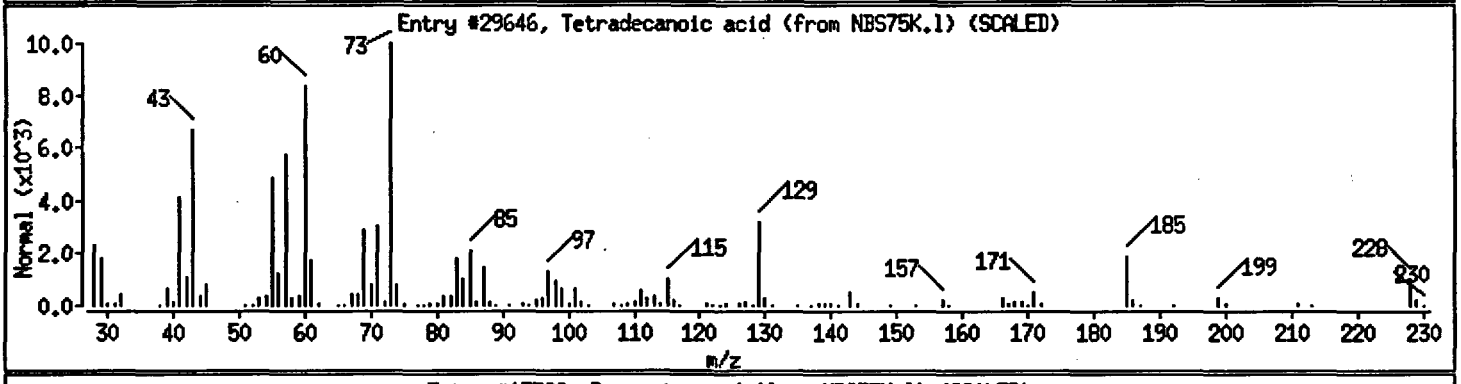
Column diameter : 0.25

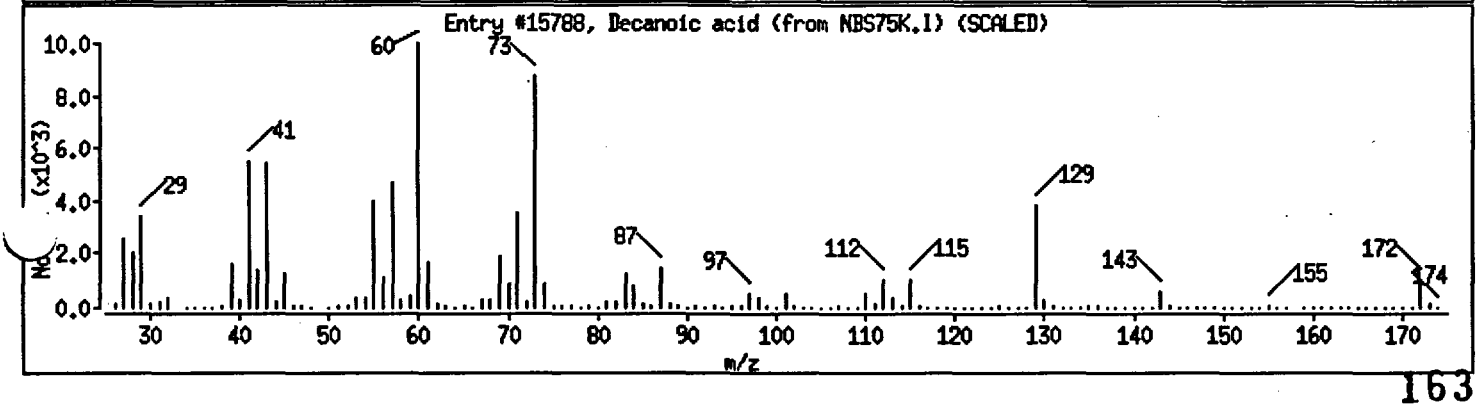
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Tetradecanoic acid	544-63-8	NBS75K.1	70843	96
Tetradecanoic acid	544-63-8	NBS75K.1	29646	93
Decanoic acid	334-48-5	NBS75K.1	15788	59







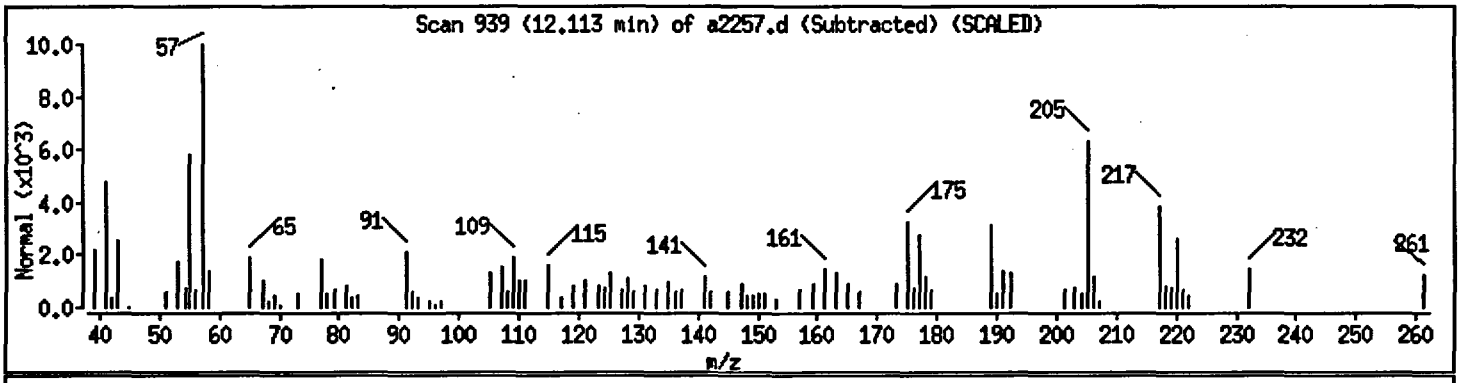


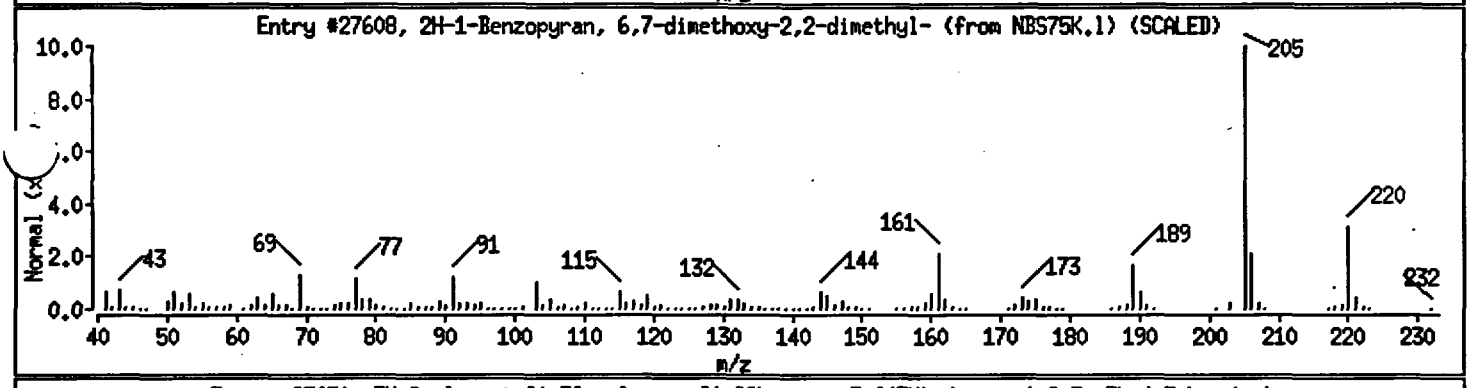
Data File: /chem/a.i/a960325a.b/a2257.d

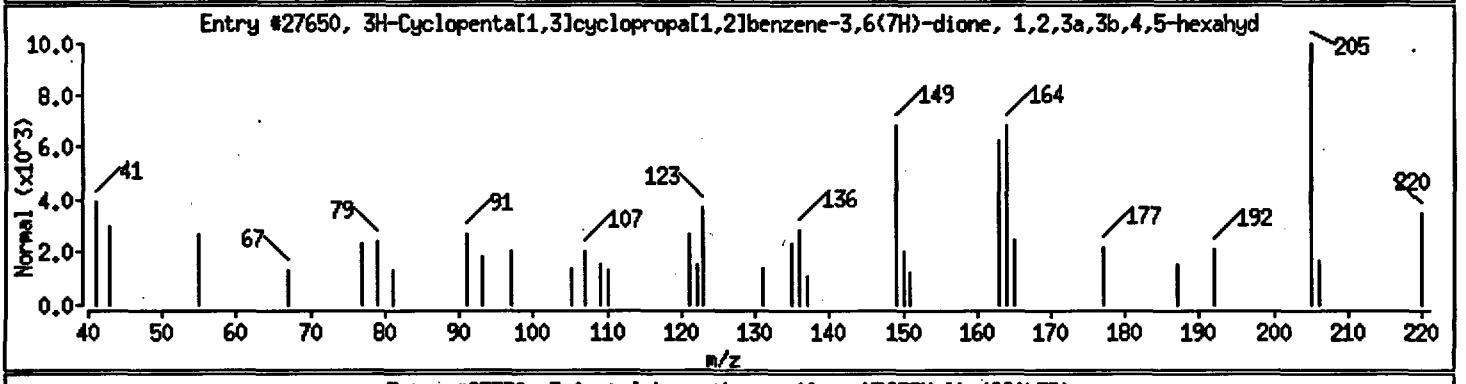
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

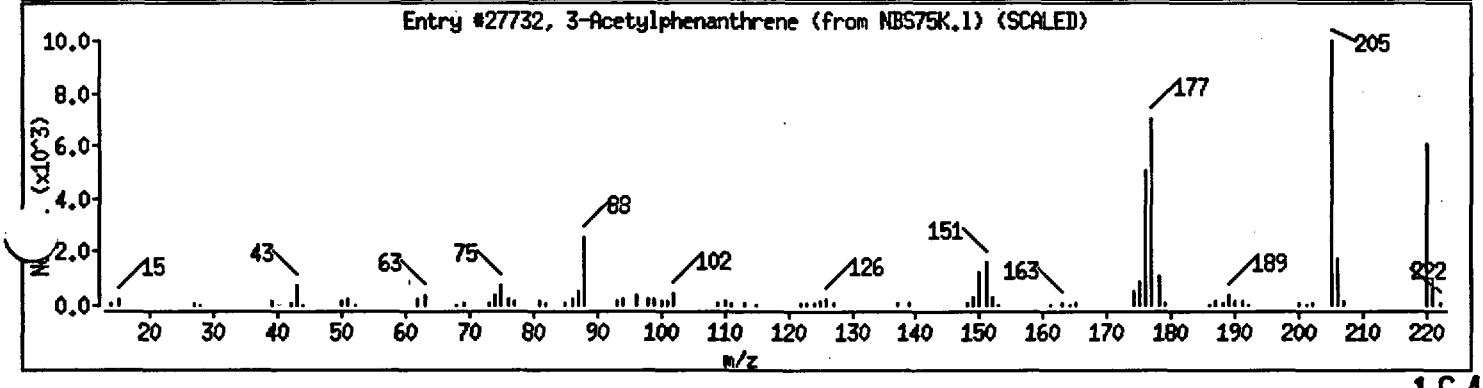
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2H-1-Benzopyran, 6,7-dimethoxy-2,2-dimet	644-06-4	NBS75K.l	27608	30
3H-Cyclopenta[1,3]cyclopropa[1,2]benzene	66708-18-7	NBS75K.l	27650	27
3-Acetylphenanthrene	2039-76-1	NBS75K.l	27732	25





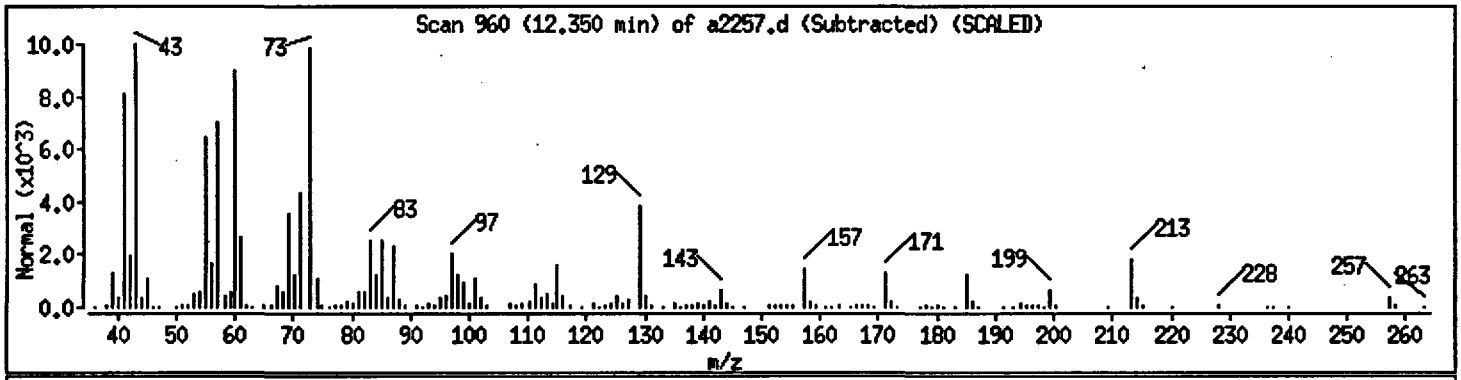


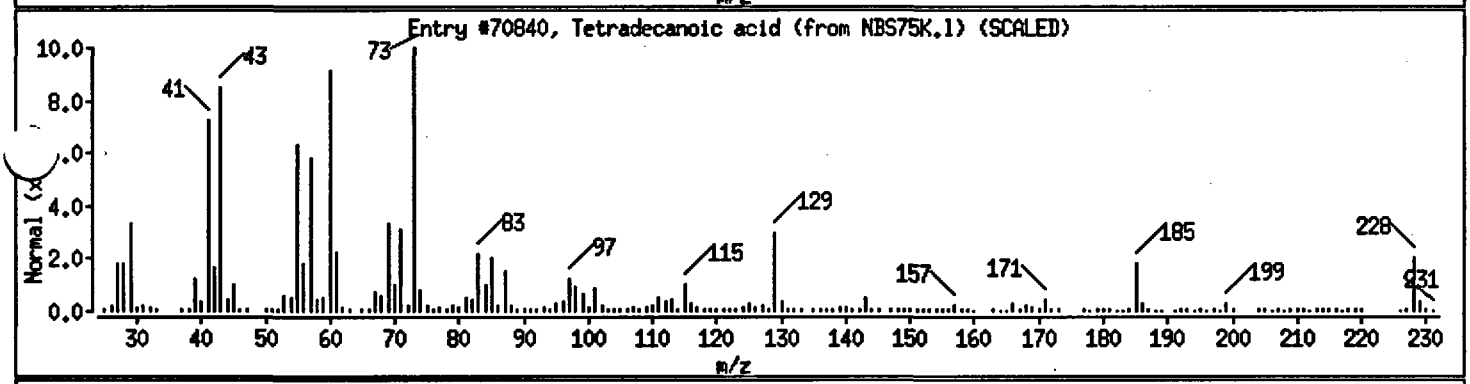


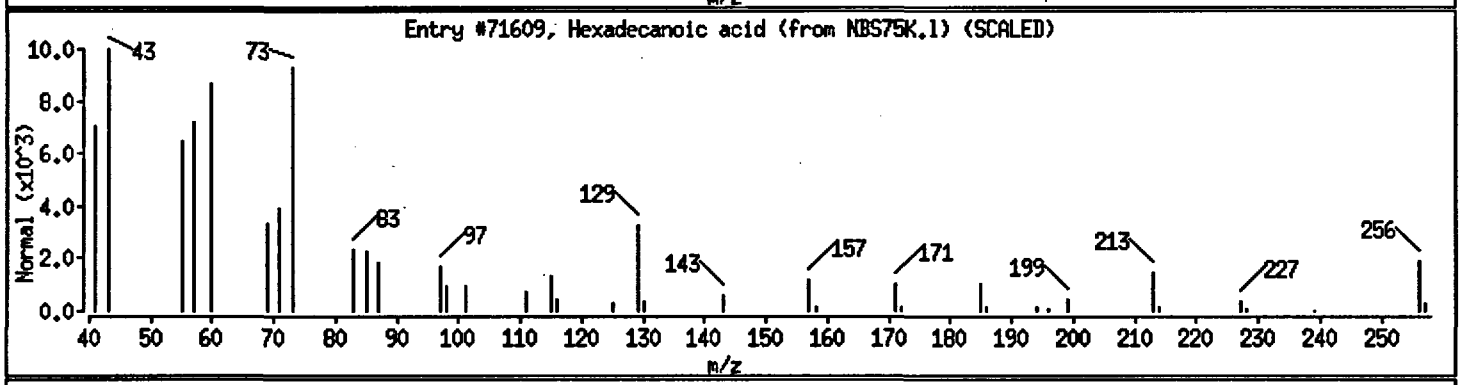
UNKNOWN ORGANIC ACID

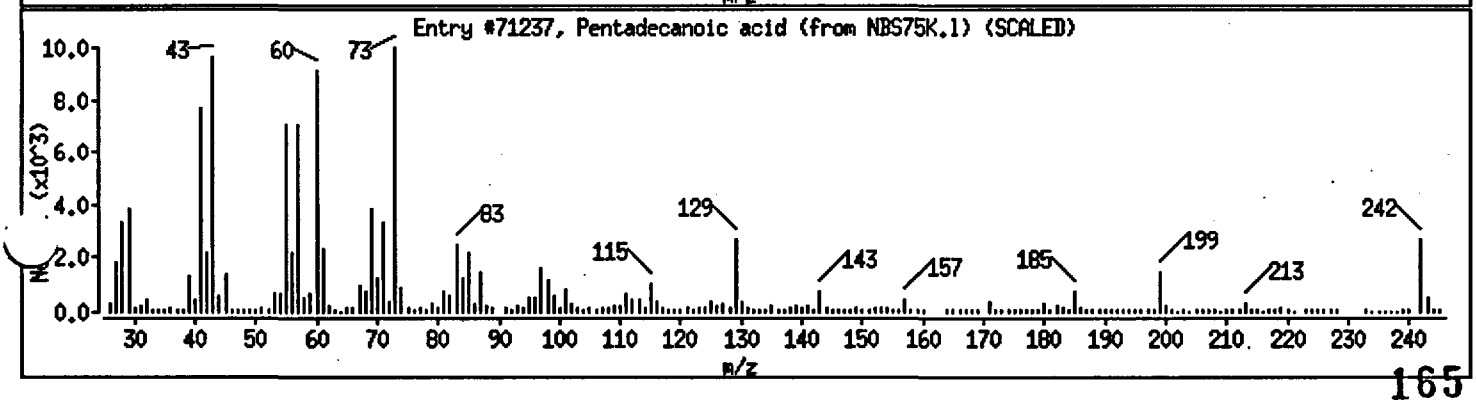
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Tetradecanoic acid	544-63-8	NBS75K.1	70840	94
Hexadecanoic acid	57-10-3	NBS75K.1	71609	93
Pentadecanoic acid	1002-84-2	NBS75K.1	71237	86









Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

UNKNOWN

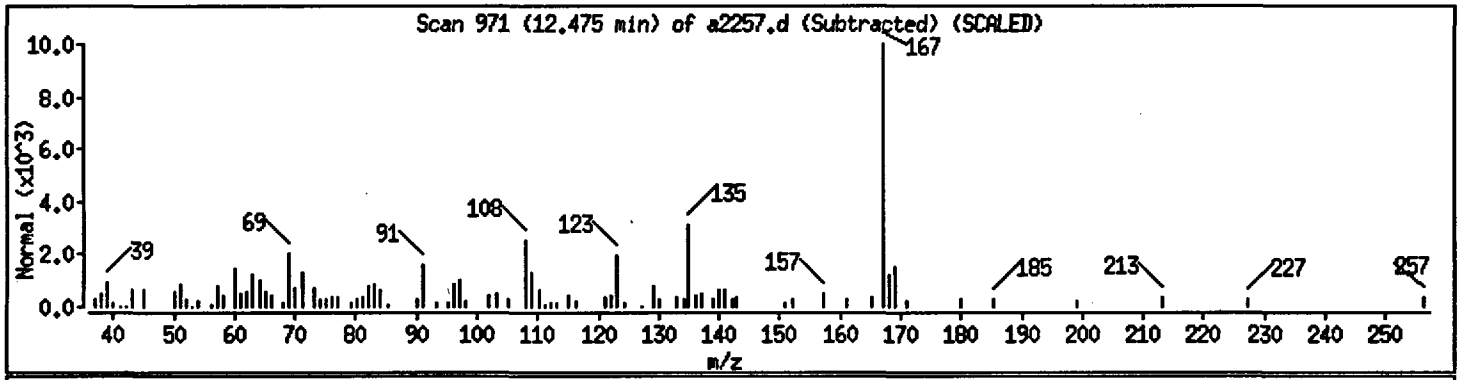
Sample ID : FEM98

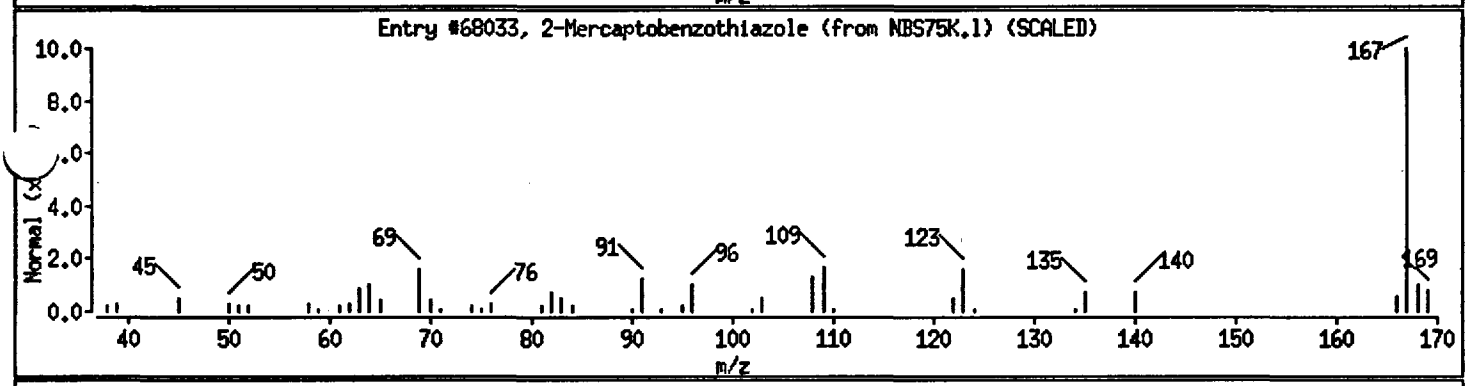
Column phase : XTI-5

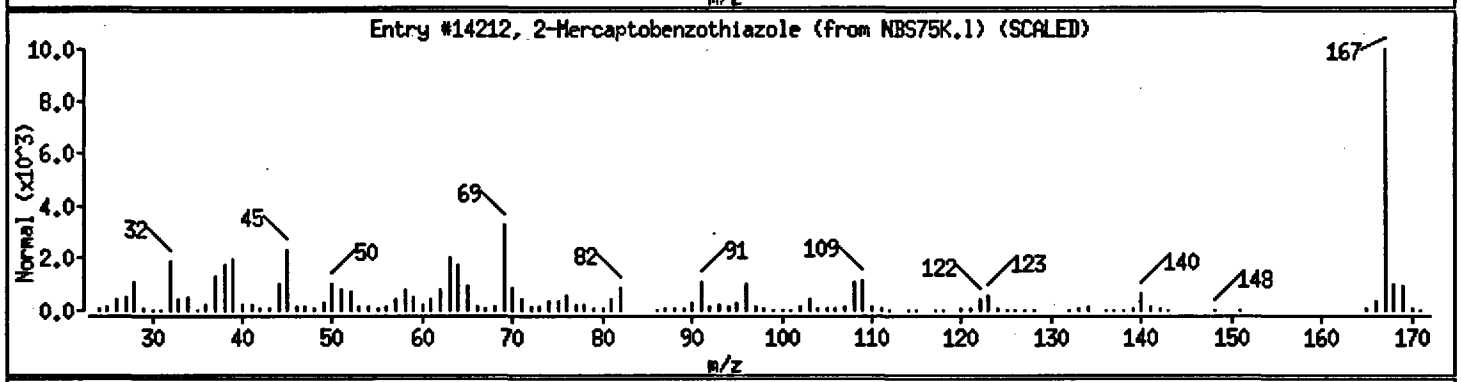
Column diameter : 0.25

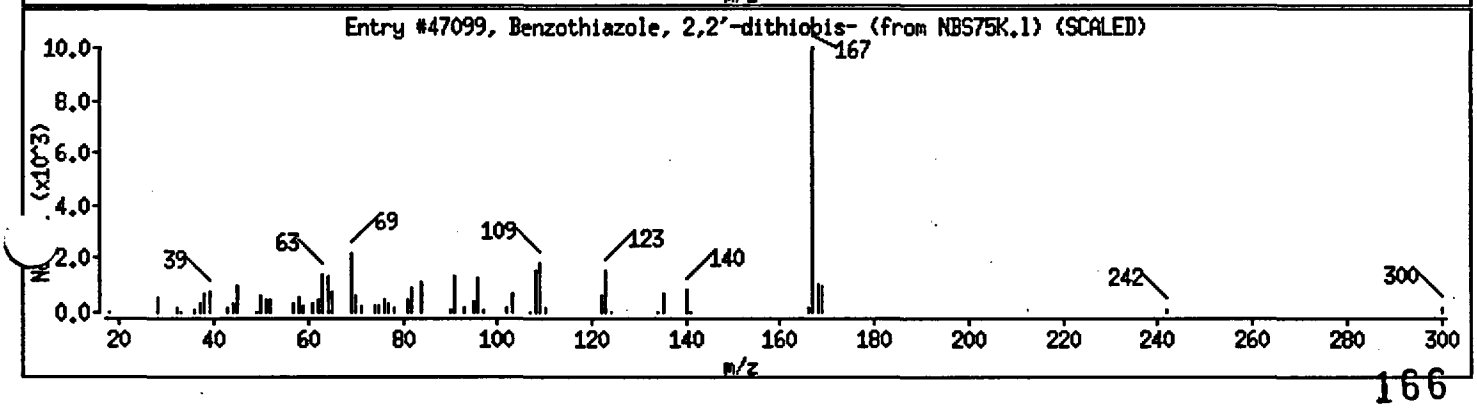
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Mercaptobenzothiazole	149-30-4	NBS75K.l	68033	58
2-Mercaptobenzothiazole	149-30-4	NBS75K.l	14212	47
Benzothiazole, 2,2'-dithiobis-	120-78-5	NBS75K.l	47099	43







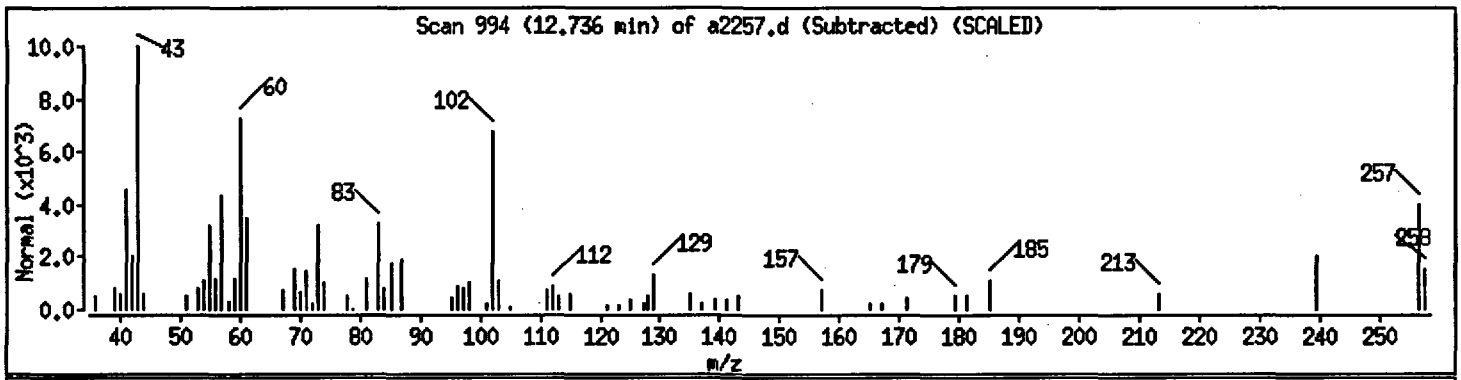


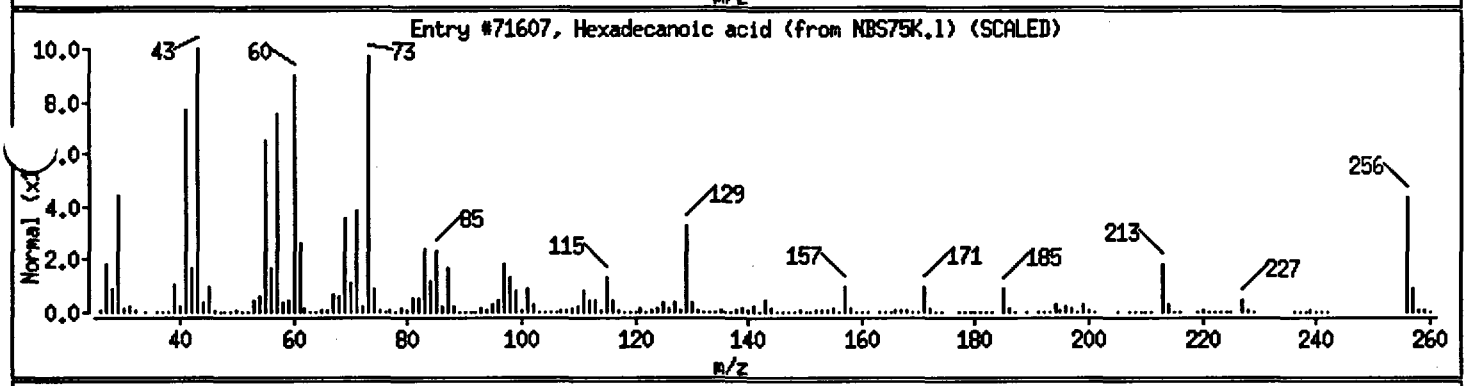
Data File: /chem/a.i/a960325a.b/a2257.d

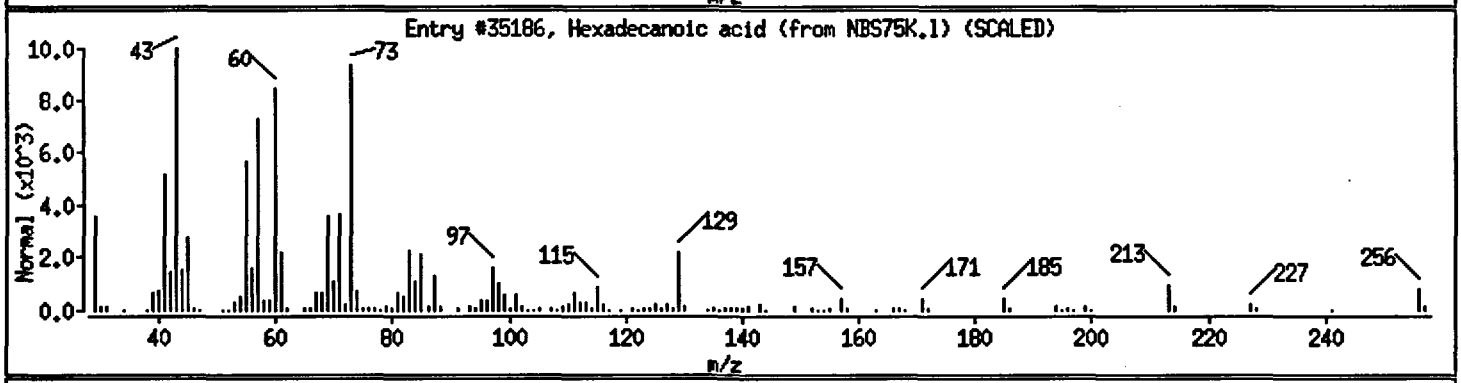
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

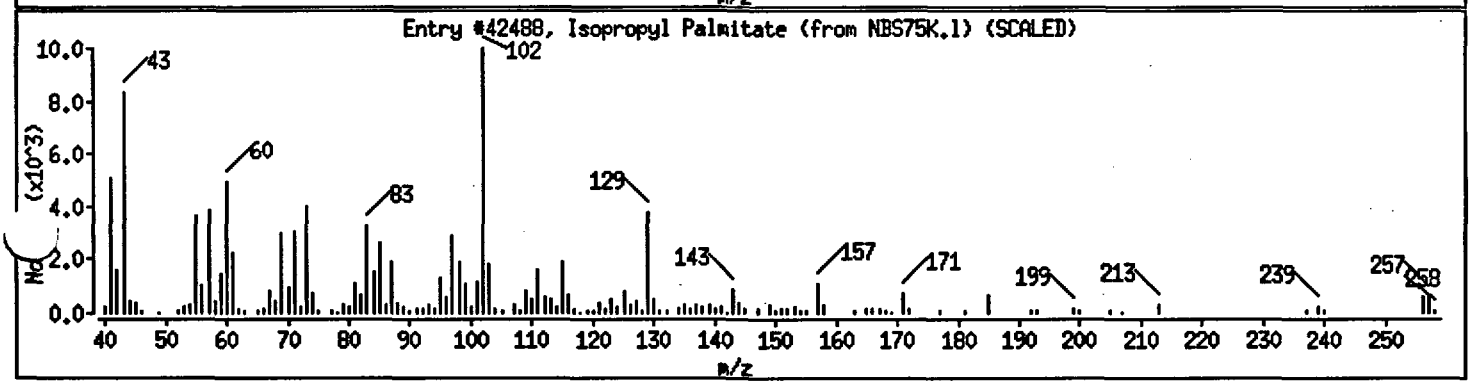
UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Hexadecanoic acid	57-10-3	NBS75K.l	71607	25
Hexadecanoic acid	57-10-3	NBS75K.l	35186	23
Isopropyl Palmitate	142-91-6	NBS75K.l	42488	12









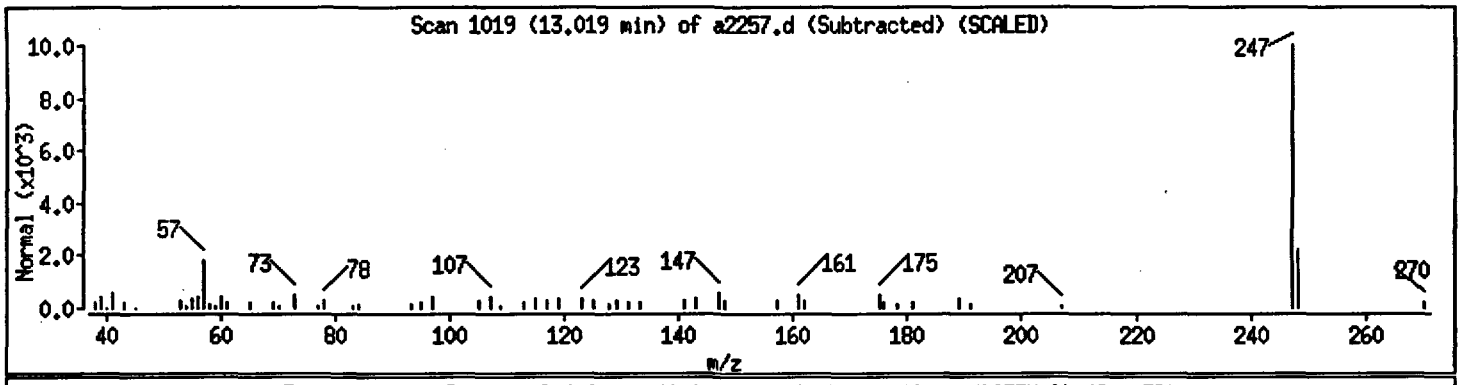
Data File: /chem/a.i/a960325a.b/a2257.d

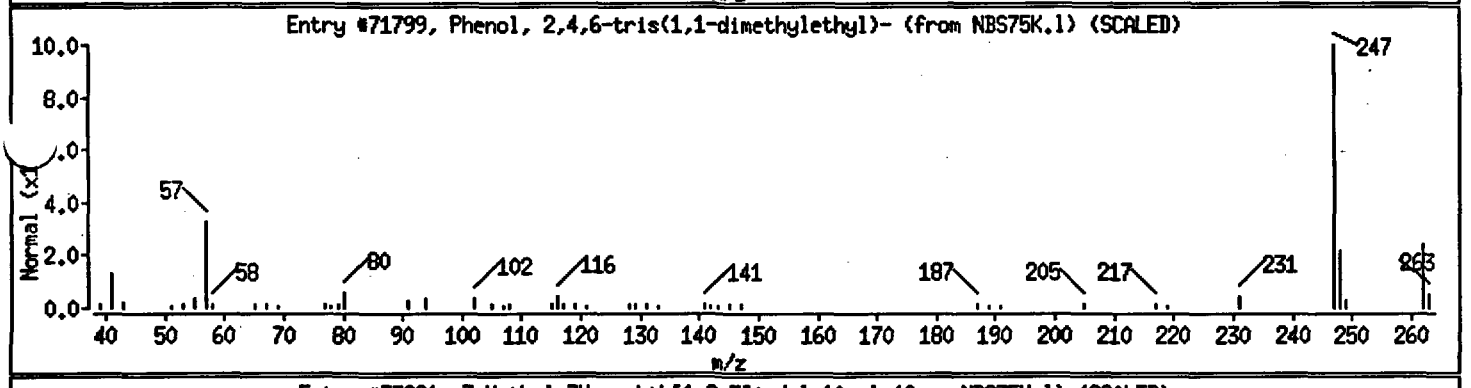
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

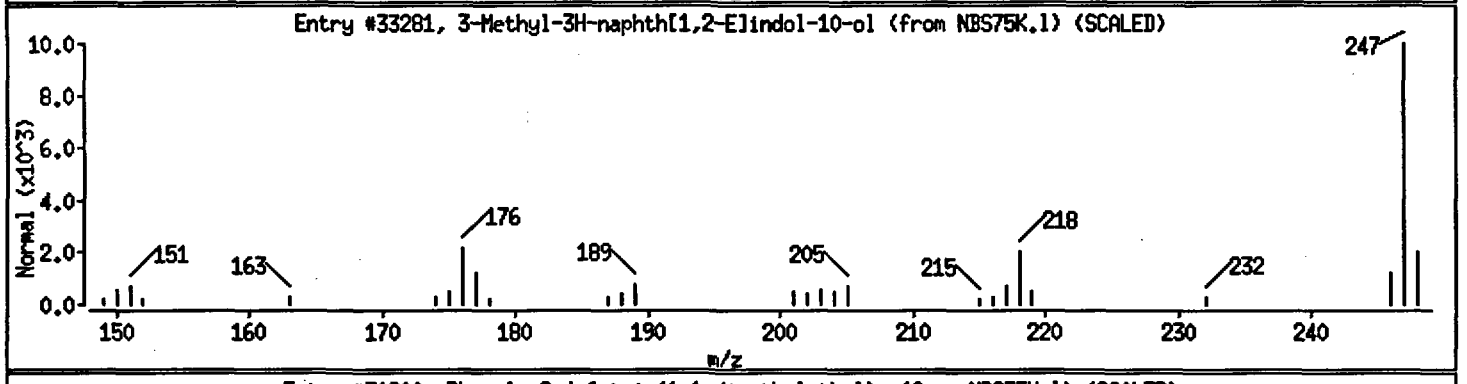
3/29/96

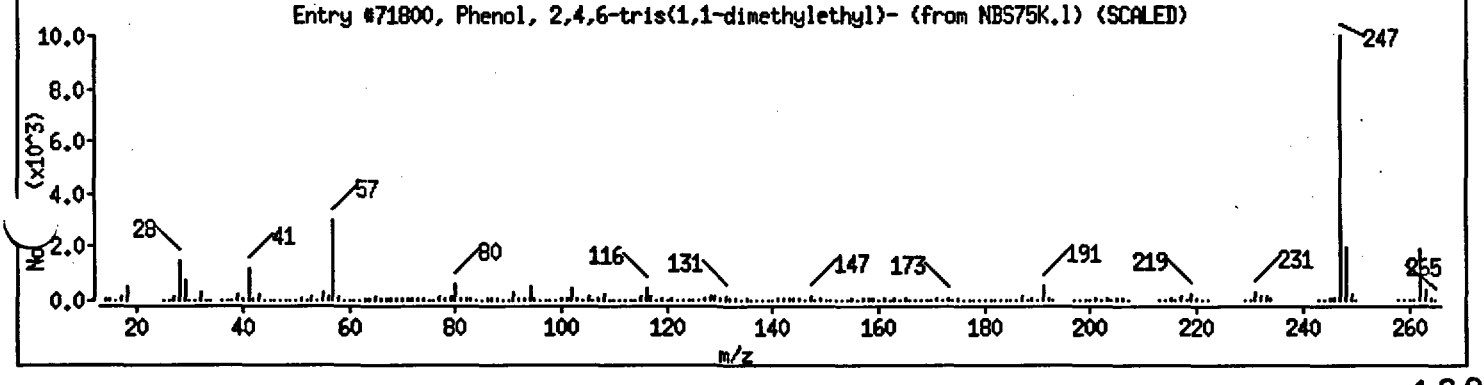
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Phenol, ~~2,4,6-tris(1,1-dimethylethyl)-~~	~~732-26-3~~	NBS75K.1	71799	59
3-Methyl-3H-naphth[1,2-E]indol-10-ol	98033-21-7	NBS75K.1	33281	40
Phenol, 2,4,6-tris(1,1-dimethylethyl)-	732-26-3	NBS75K.1	71800	36









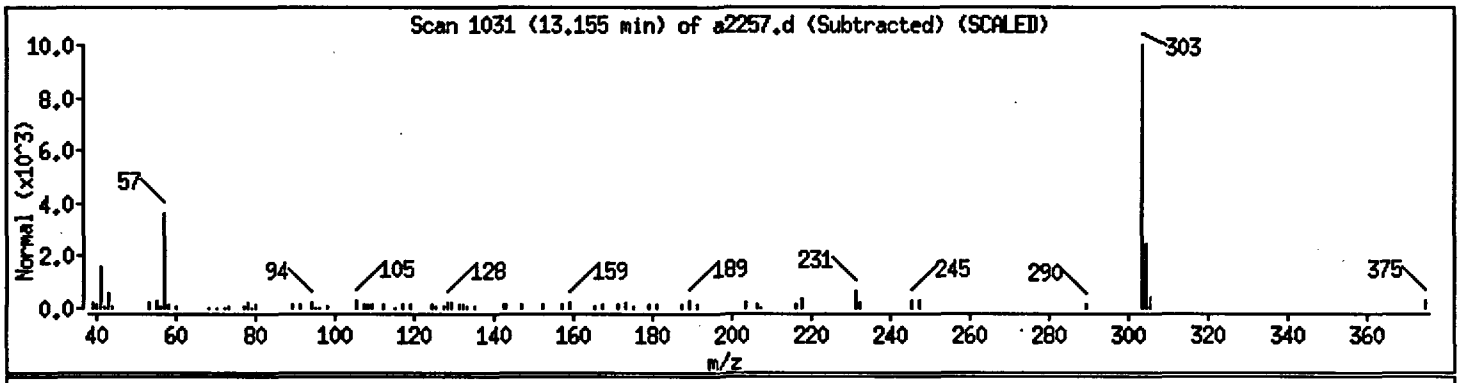
Data File: /chem/a.i/a960325a.b/a2257.d

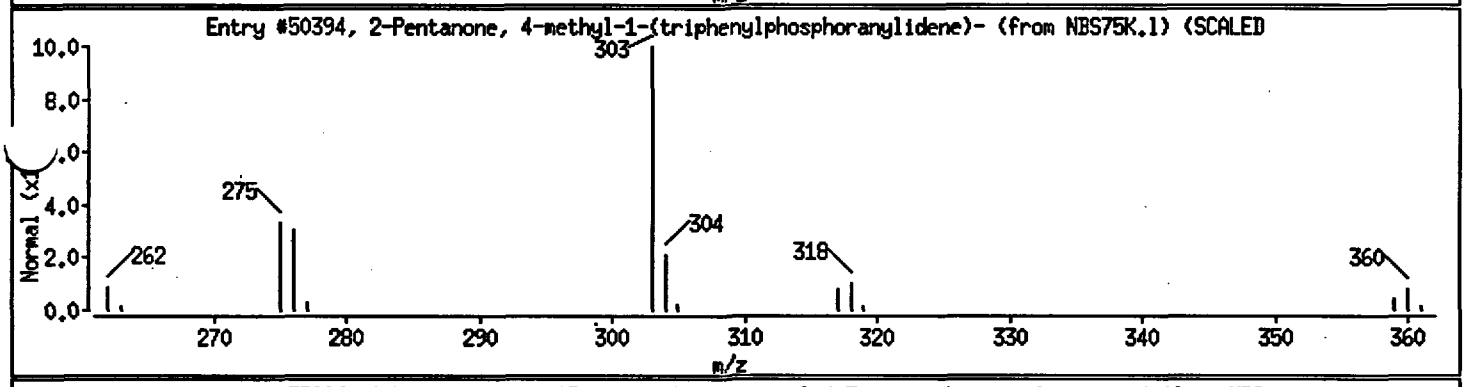
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25

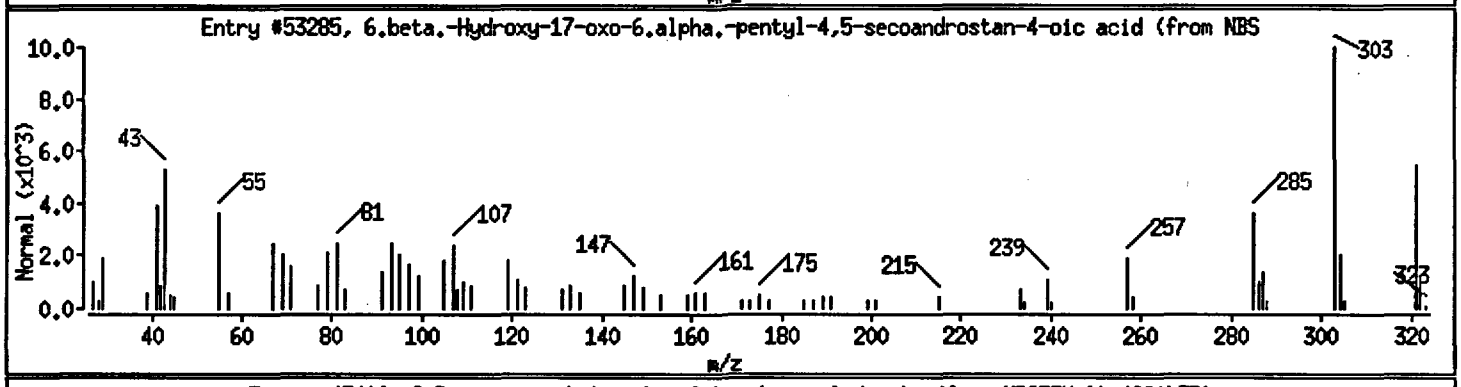
UNKNOWN

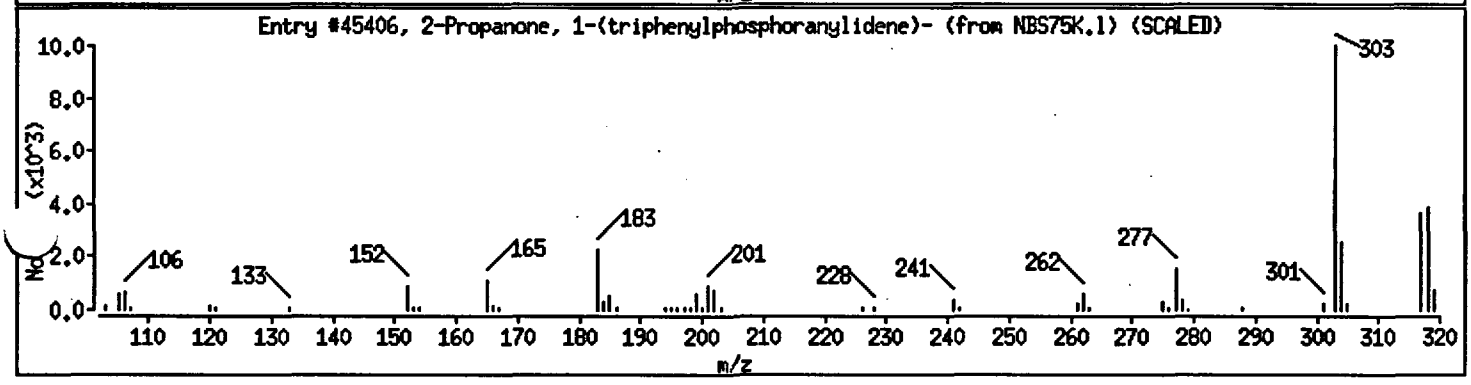
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Pentanone, 4-methyl-1-(triphenylphosph	27653-95-8	NBS75K.l	50394	50
6.beta.-Hydroxy-17-oxo-6.alpha.-pentyl-4	0-00-0	NBS75K.l	53285	38
2-Propanone, 1-(triphenylphosphoranylide	1439-36-7	NBS75K.l	45406	38









Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

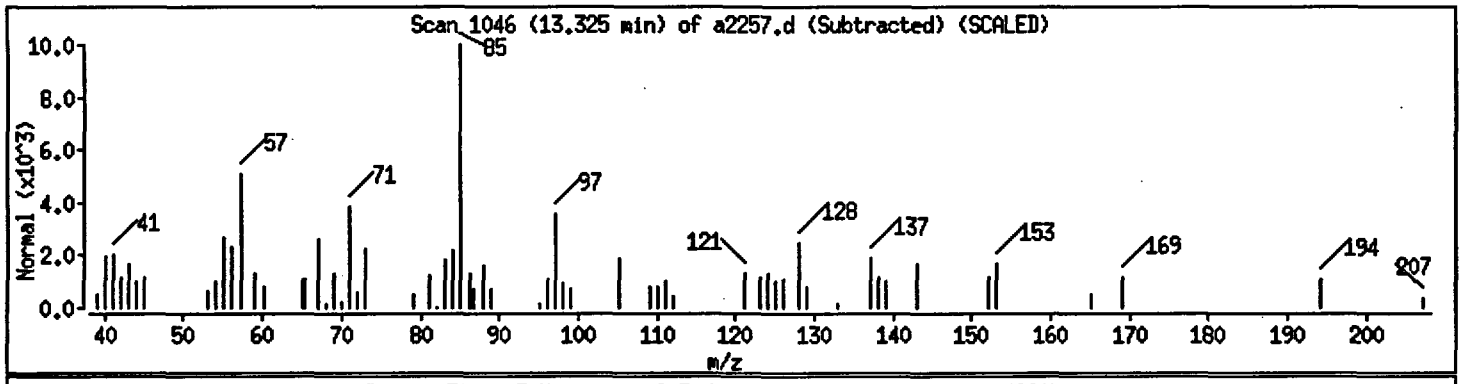
Column phase : XTI-5

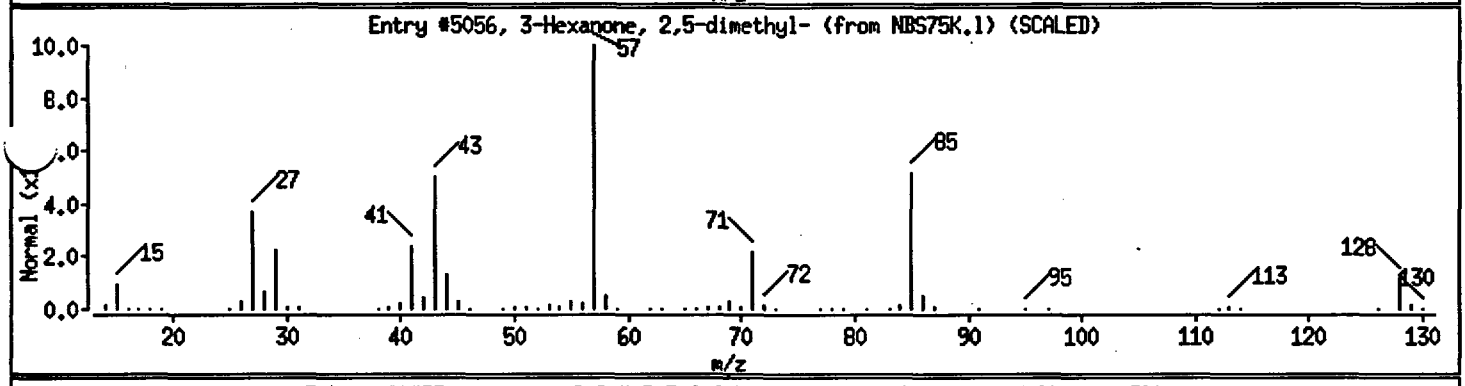
Column diameter : 0.25

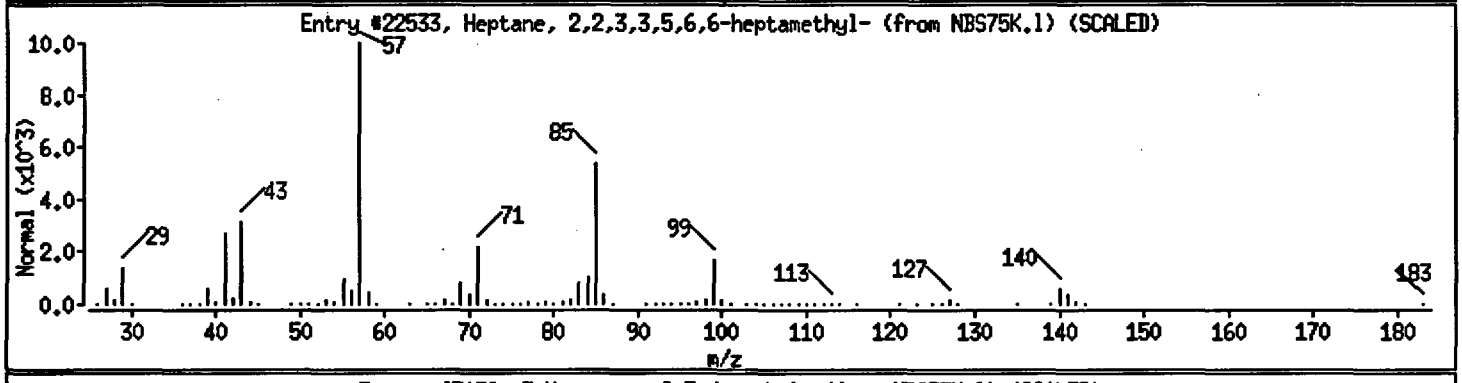
Volume Injected (uL) : 2.0

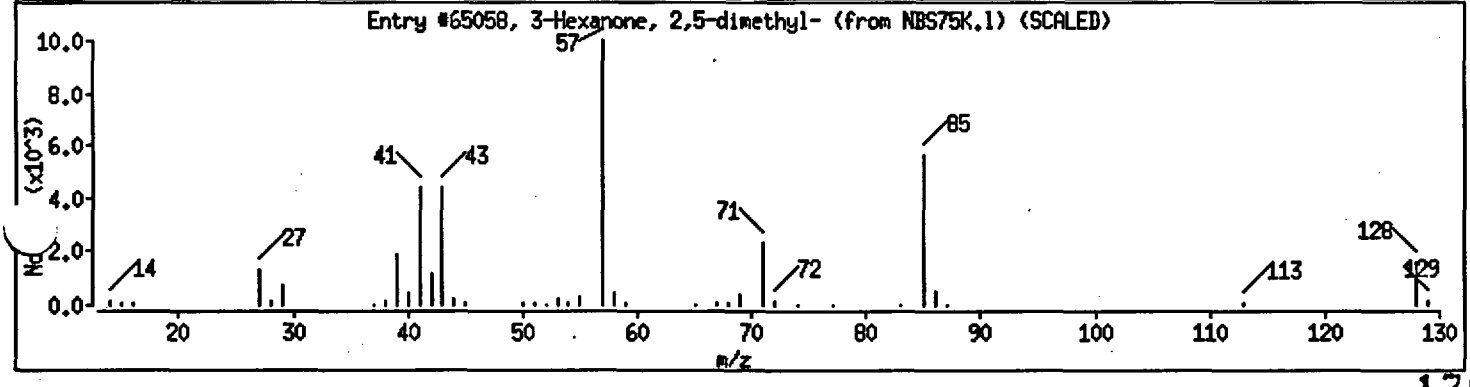
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
3-Hexanone, 2,5-dimethyl-	1888-57-9	NBS75K.1	5056	47
Heptane, 2,2,3,3,5,6,6-heptamethyl-	7225-67-4	NBS75K.1	22533	43
3-Hexanone, 2,5-dimethyl-	1888-57-9	NBS75K.1	65058	43









Data File: /chem/a.i/a960325a.b/a2257.d

Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

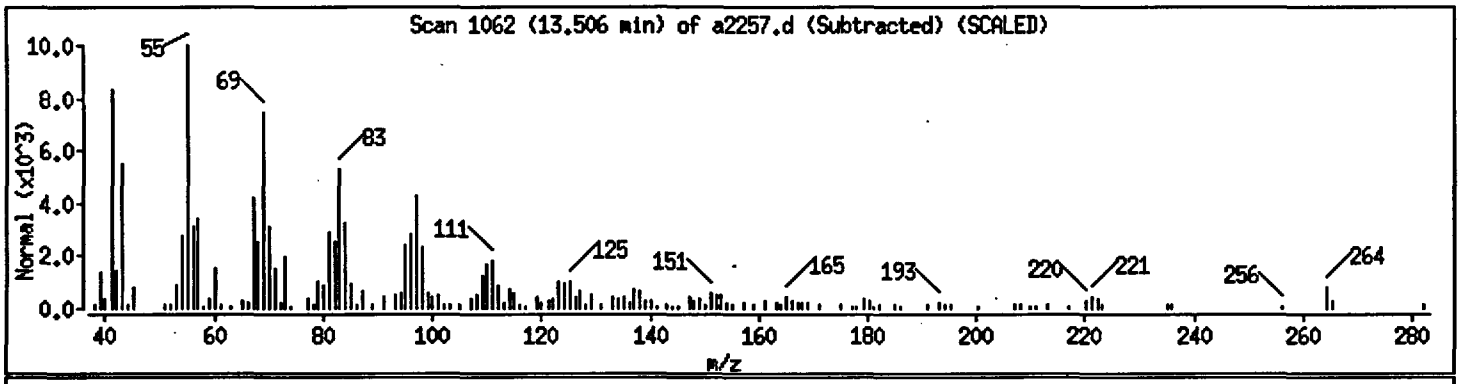
Column phase : XTI-5

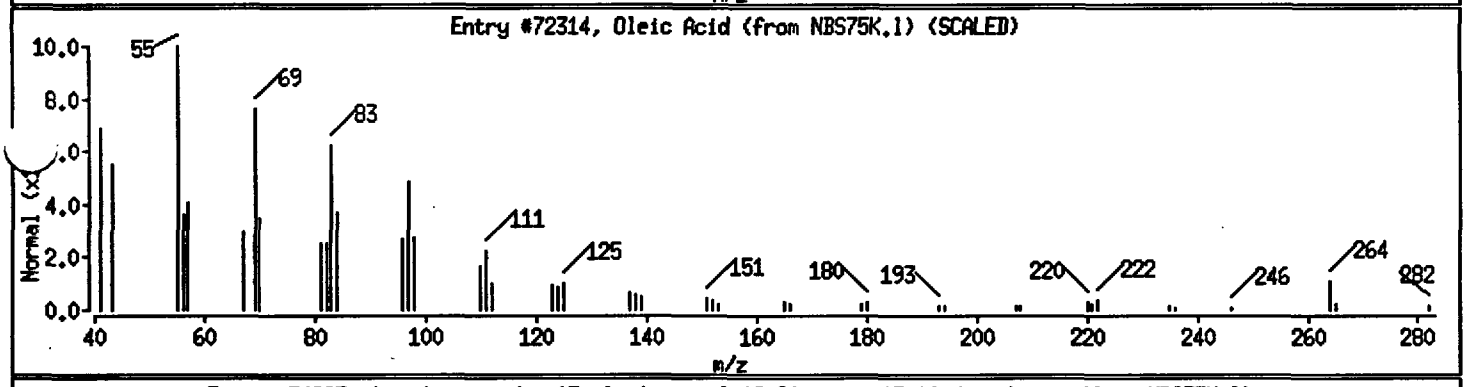
Volume Injected (uL) : 2.0

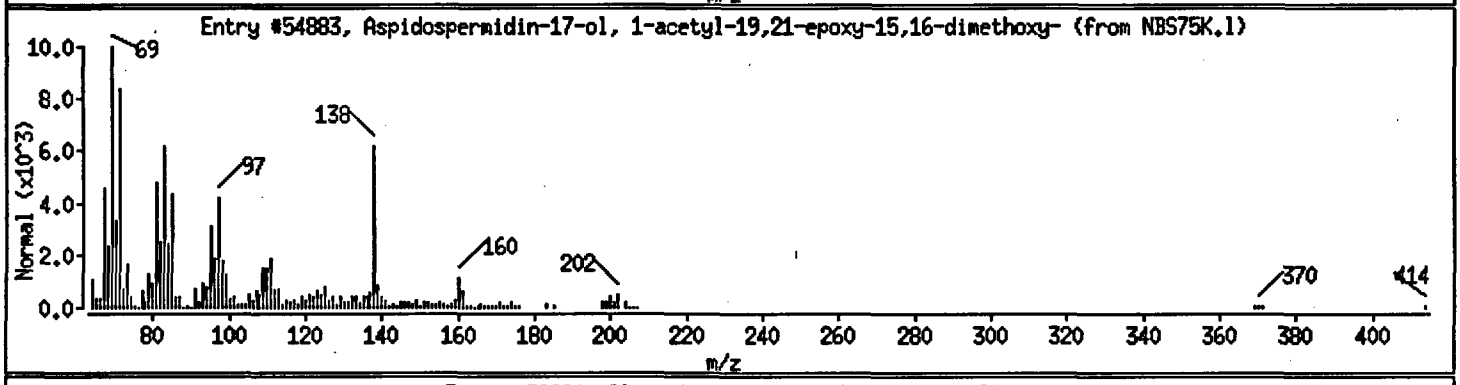
UNKNOWN ORGANIC ACID

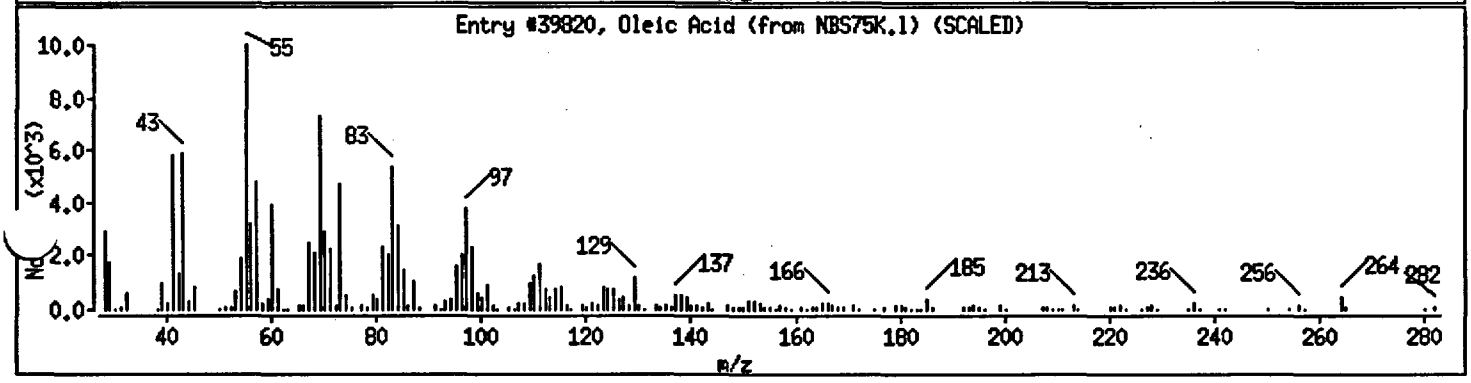
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Oleic Acid	112-80-1	NBS75K.1	72314	99
Aspidospermidin-17-ol, 1-acetyl-19,21-ep	2122-26-1	NBS75K.1	54883	83
Oleic Acid	112-80-1	NBS75K.1	39820	76





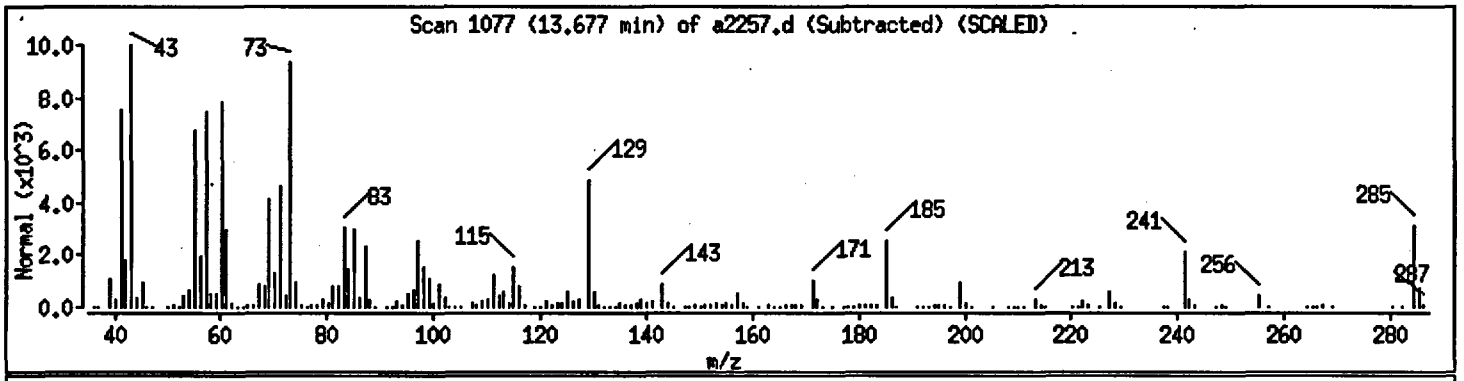


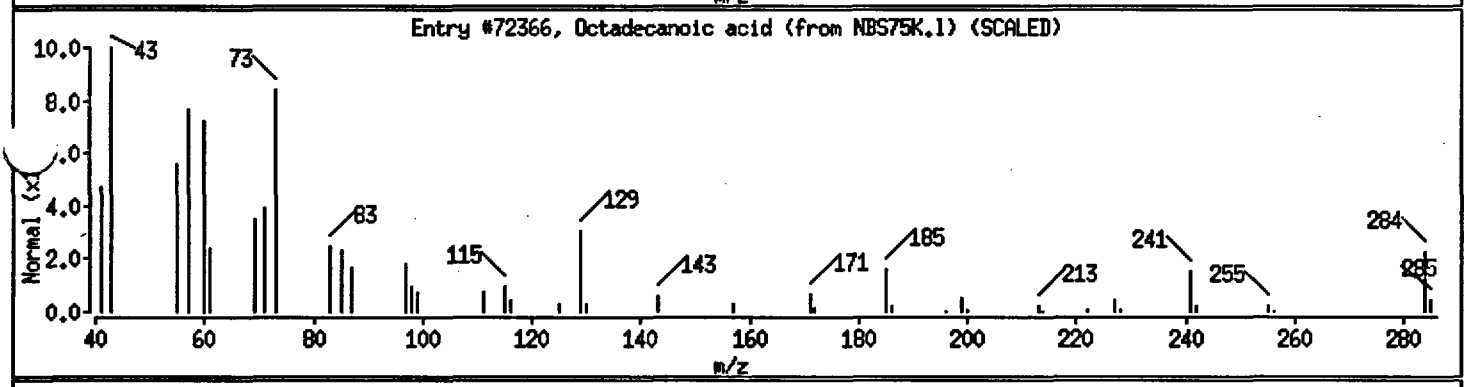


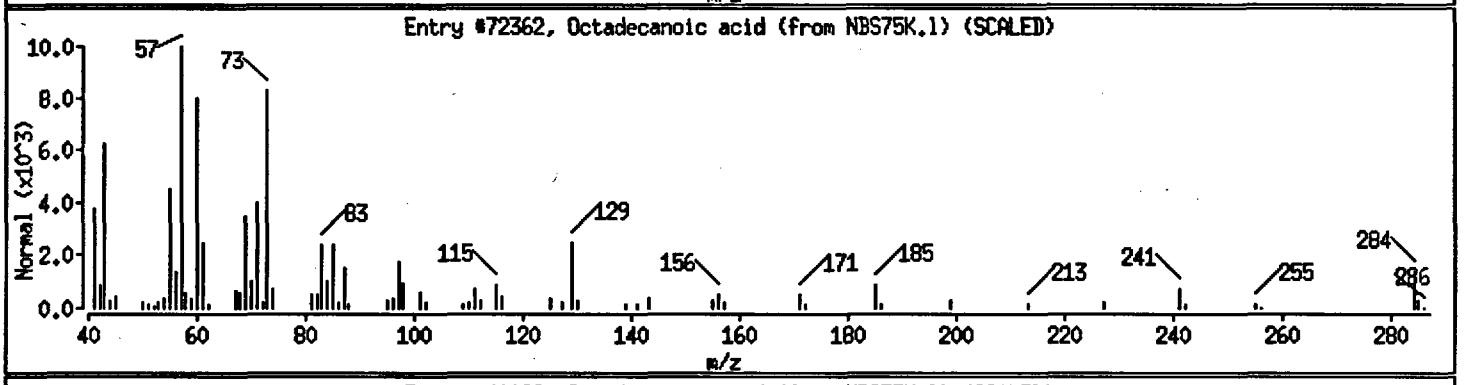
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

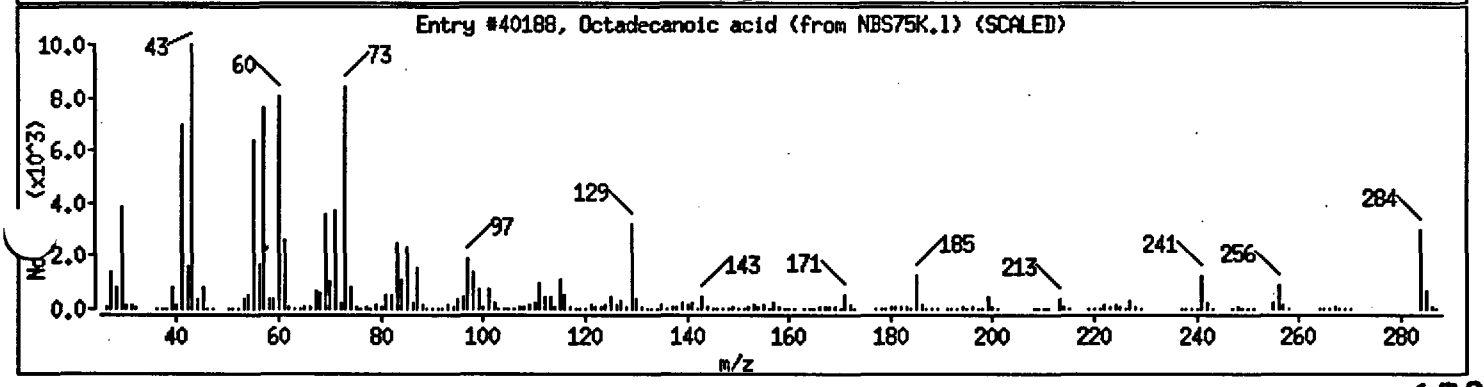
Column diameter : UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Octadecanoic acid	57-11-4	NBS75K.l	72366	99
Octadecanoic acid	57-11-4	NBS75K.l	72362	99
Octadecanoic acid	57-11-4	NBS75K.l	40188	99







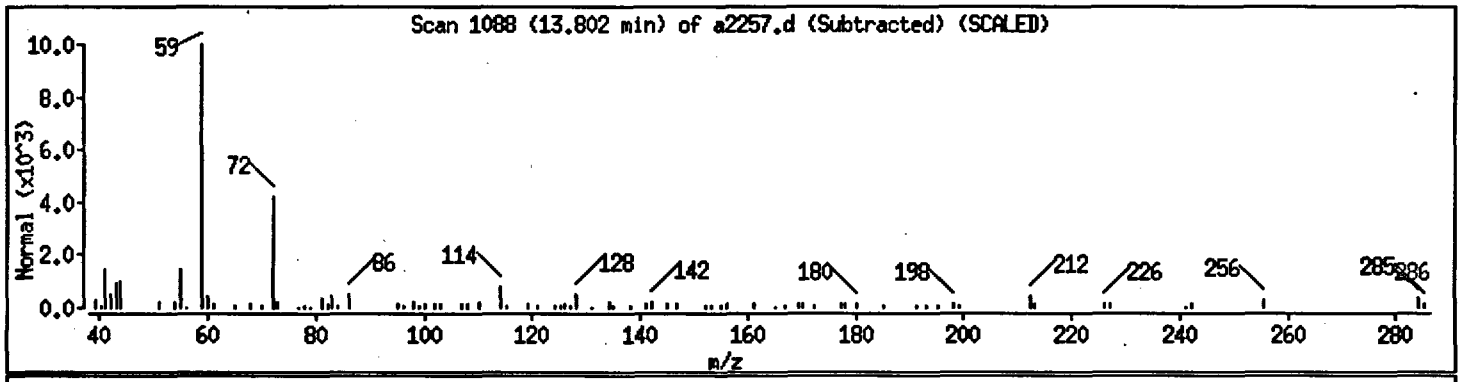


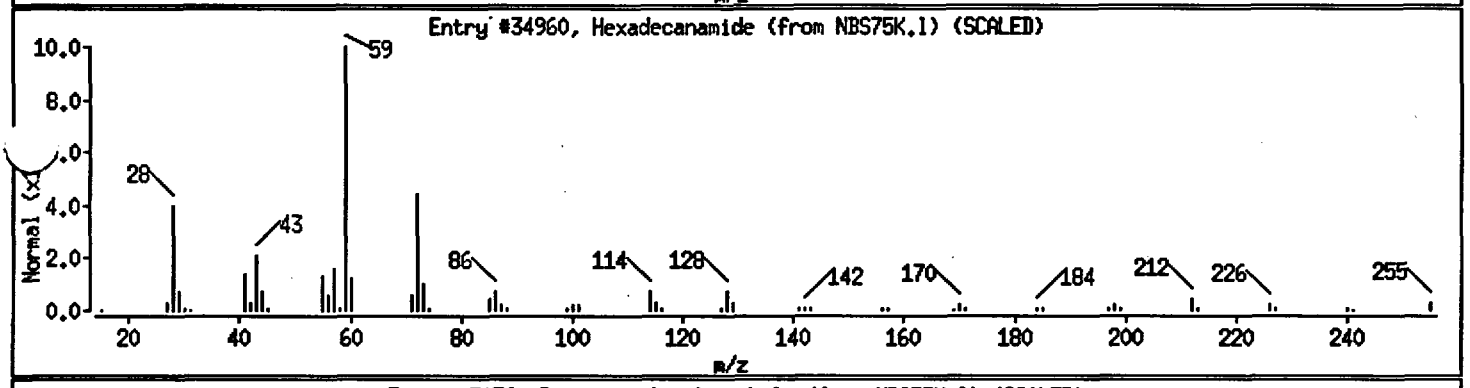
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

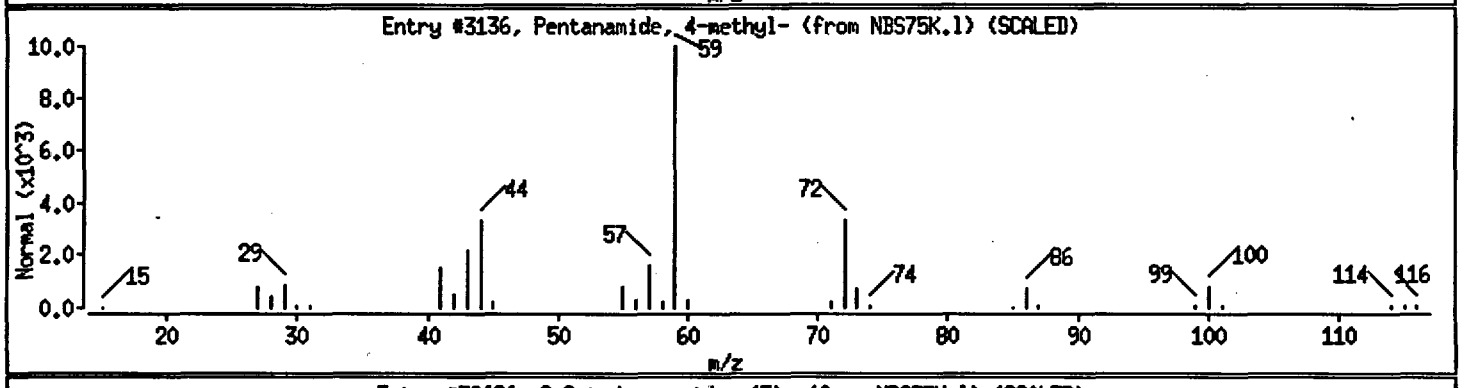
Column diameter : 0.25

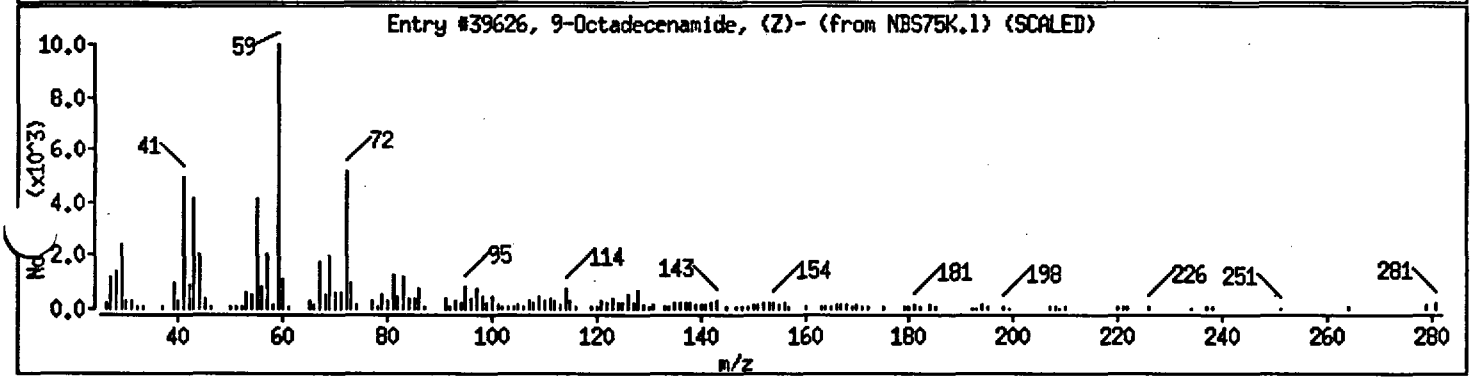
UNKNOWN AMIDE

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Hexadecanamide	629-54-9	NBS75K.l	34960	91
Pentanamide, 4-methyl-	1119-29-5	NBS75K.l	3136	59
9-Octadecenamide, (Z)-	301-02-0	NBS75K.l	39626	56





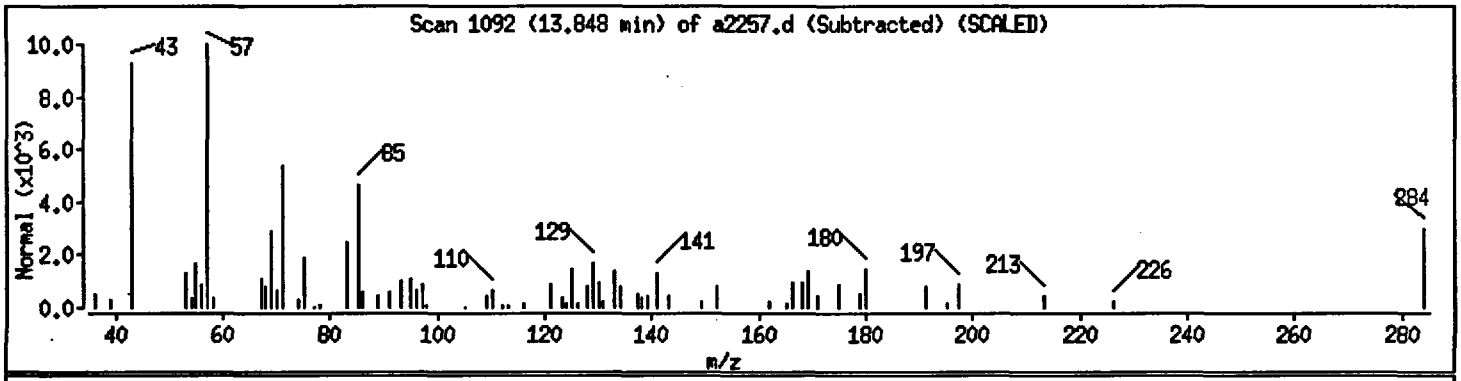


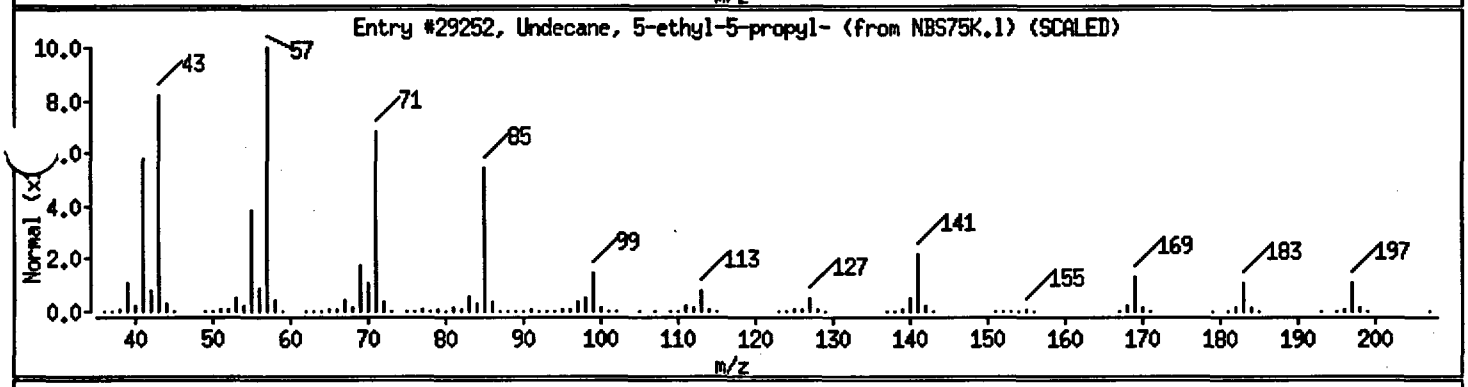


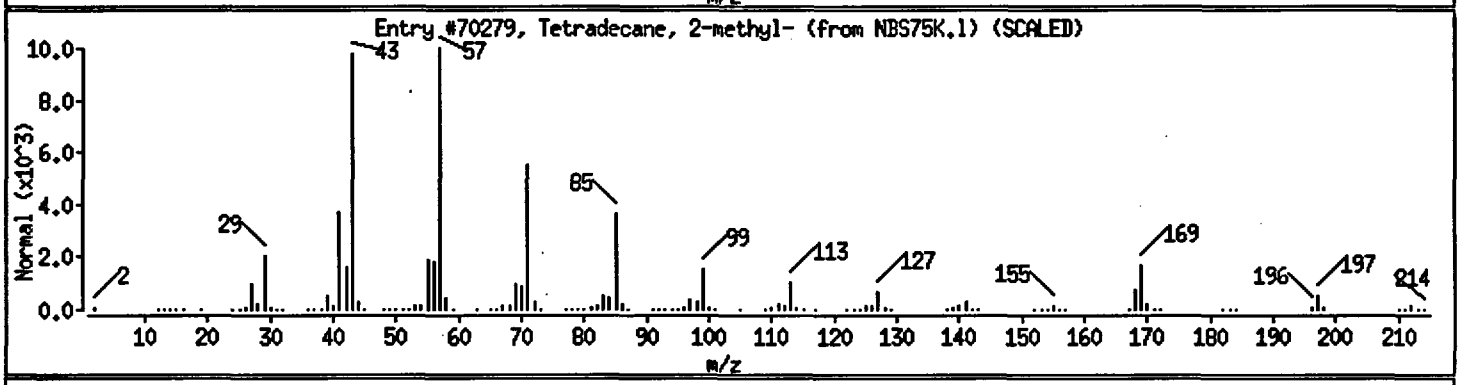
Data File: /chem/a.i/a960325a.b/a2257.d

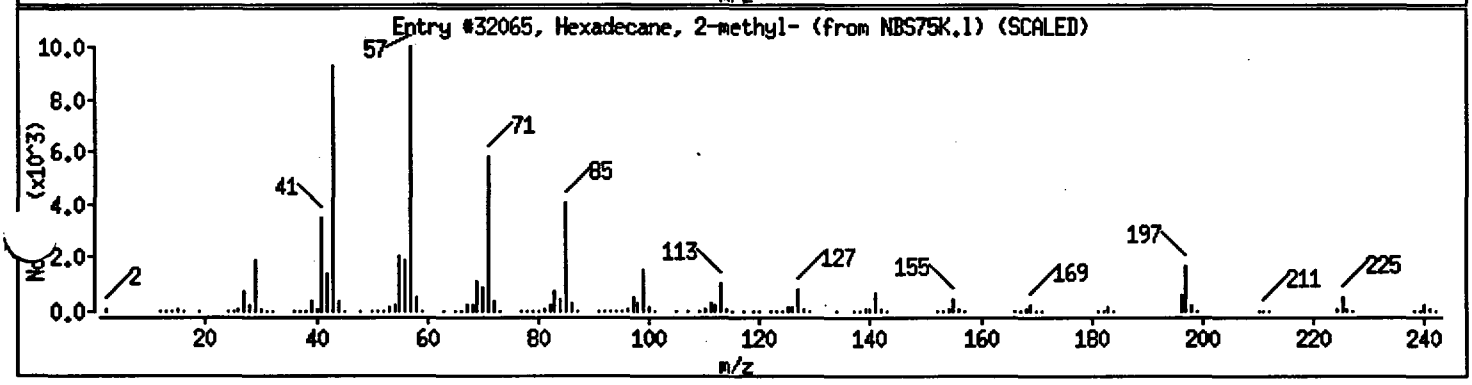
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Undecane, 5-ethyl-5-propyl-	2755-07-9	NBS75K.l	29252	50
Tetradecane, 2-methyl-	1560-95-8	NBS75K.l	70279	47
Hexadecane, 2-methyl-	1560-92-5	NBS75K.l	32065	43









Data File: /chem/a.i/a960325a.b/a2257.d

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Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

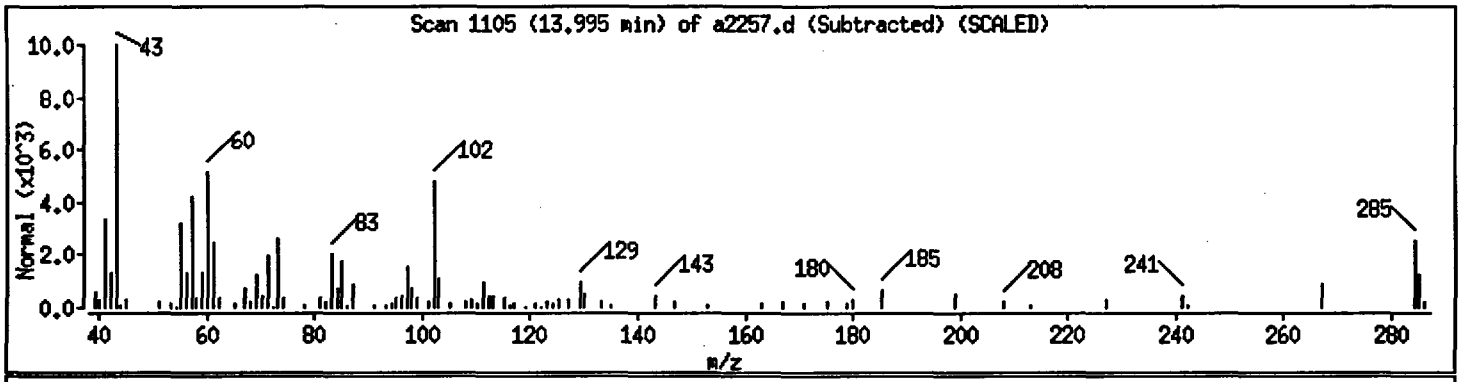
Column phase : XTI-5

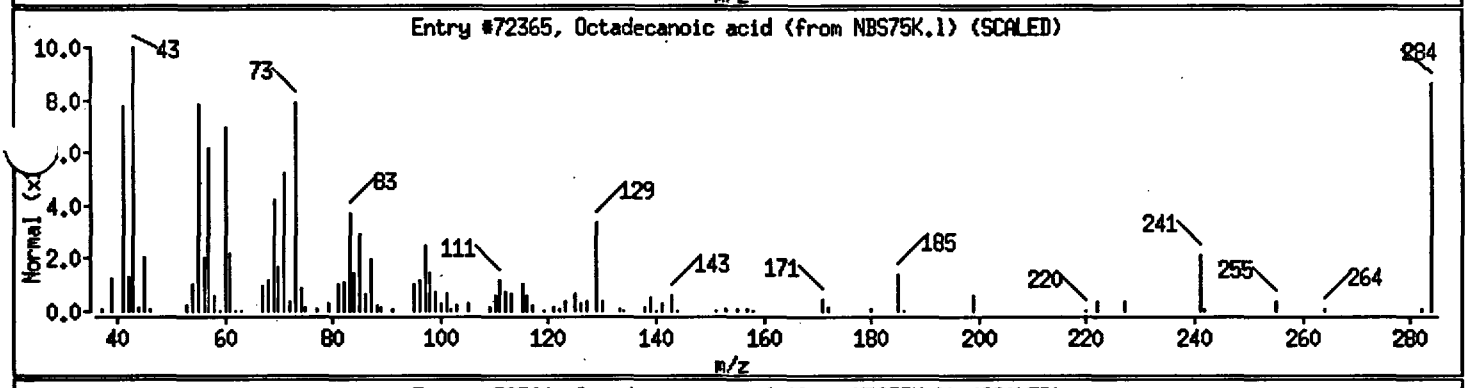
Column diameter : 0.25

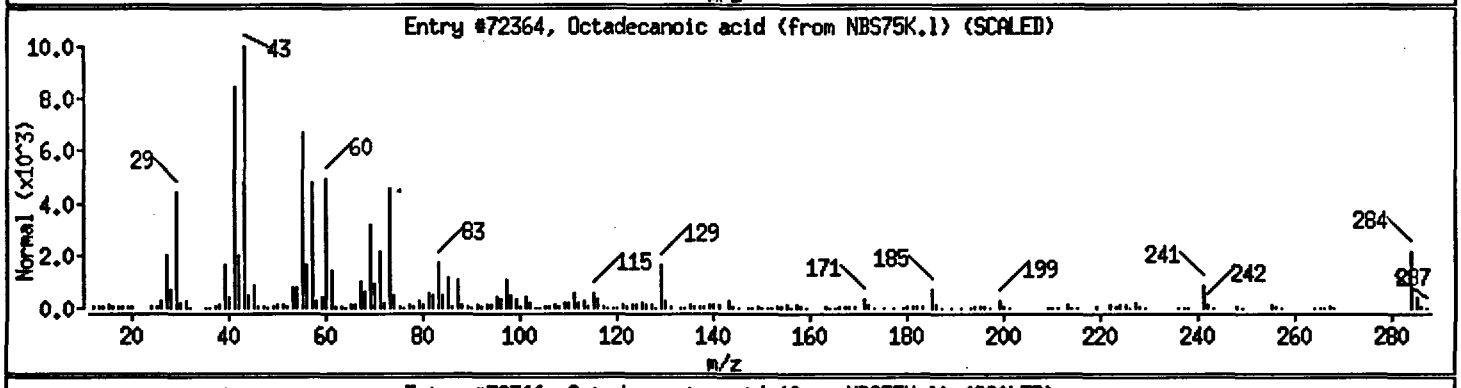
Volume Injected (uL) : 2.0

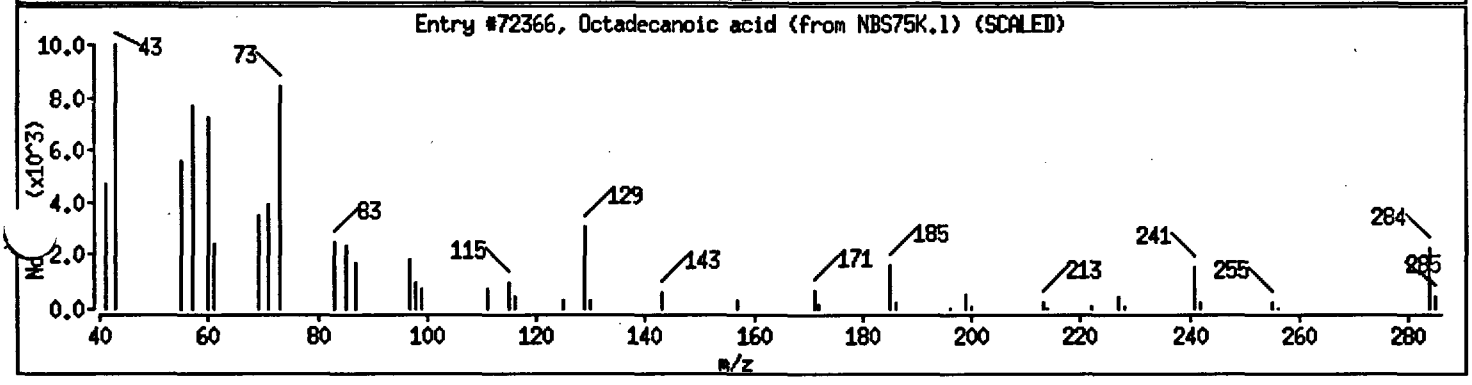
UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Octadecanoic acid	57-11-4	NBS75K.l	72365	50
Octadecanoic acid	57-11-4	NBS75K.l	72364	38
Octadecanoic acid	57-11-4	NBS75K.l	72366	27







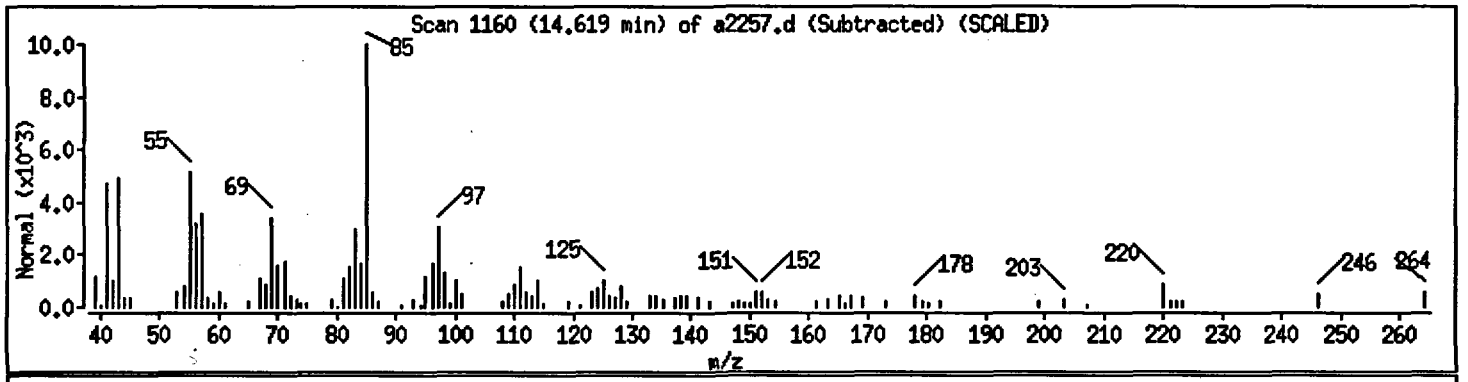


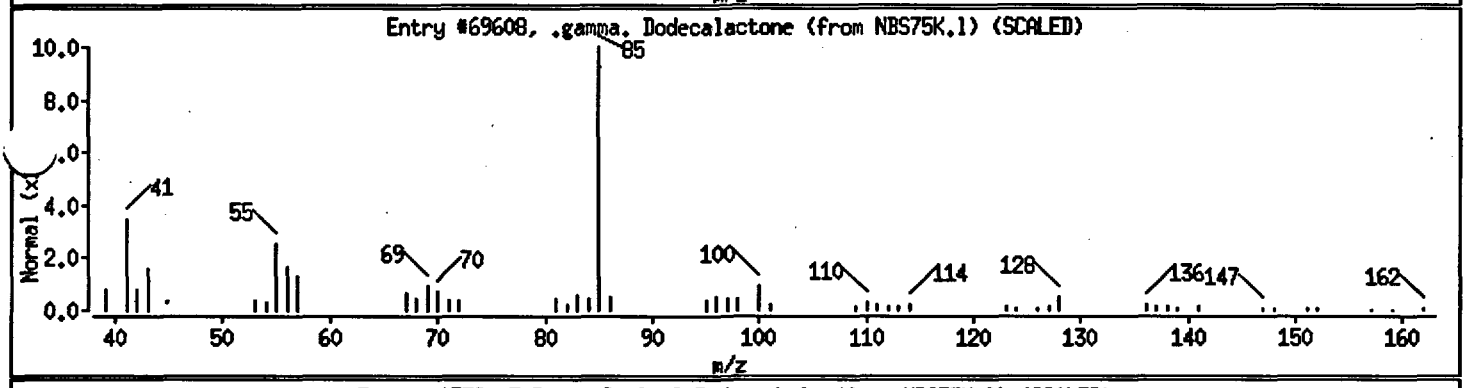
Data File: /chem/a.i/a960325a.b/a2257.d

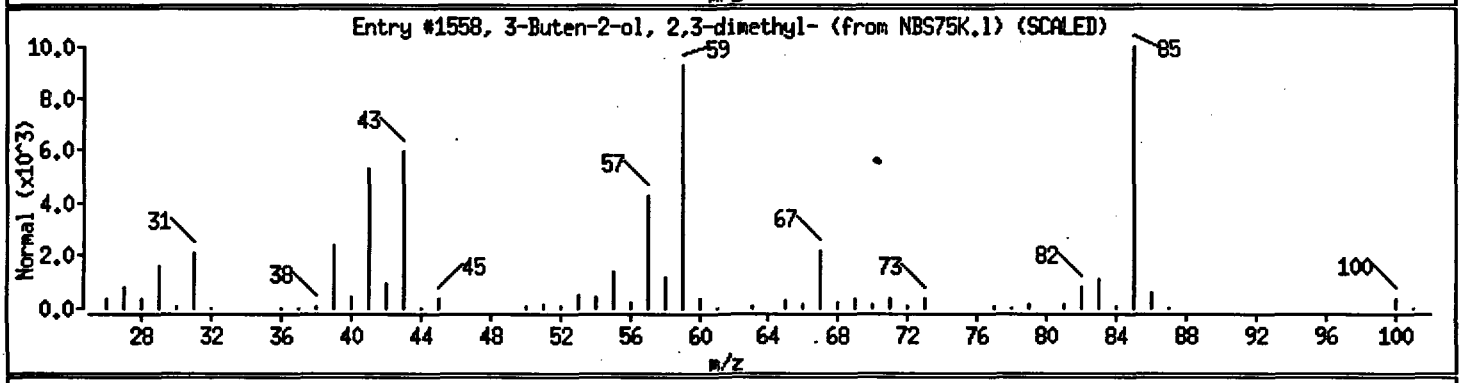
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

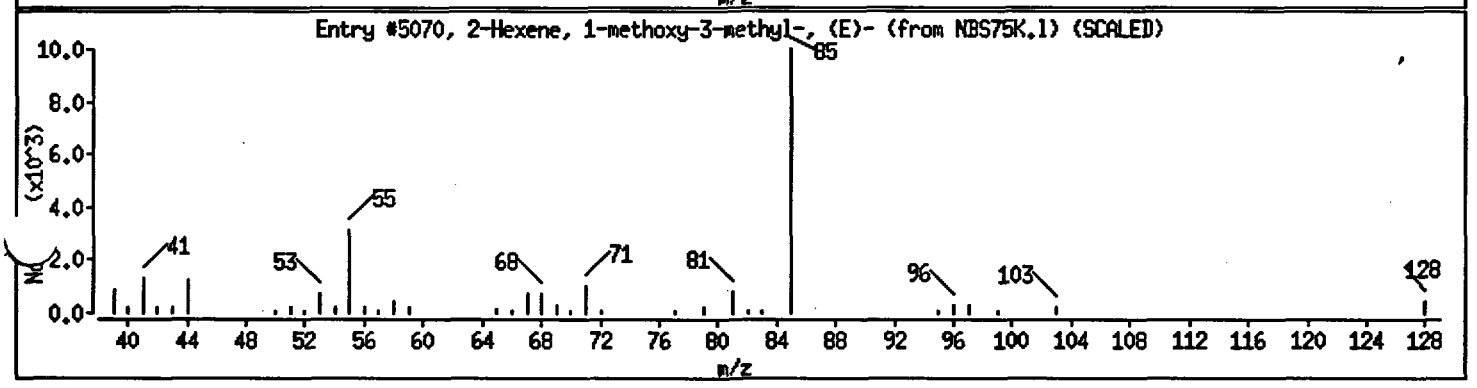
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
.gamma. Dodecalactone	2305-05-7	NBS75K.1	69608	47
3-Buten-2-ol, 2,3-dimethyl-	10473-13-9	NBS75K.1	1558	46
2-Hexene, 1-methoxy-3-methyl-, (E)-	56052-84-7	NBS75K.1	5070	38







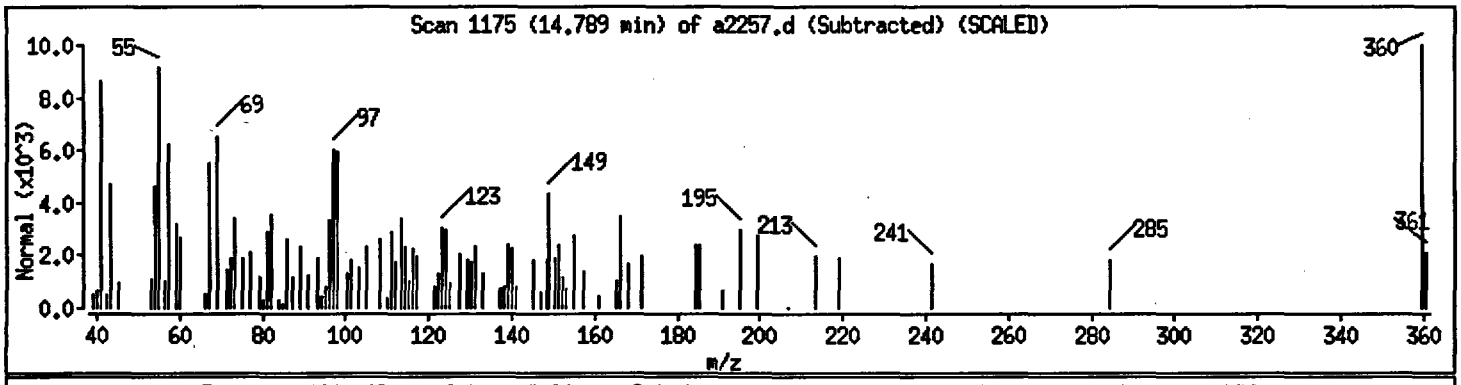


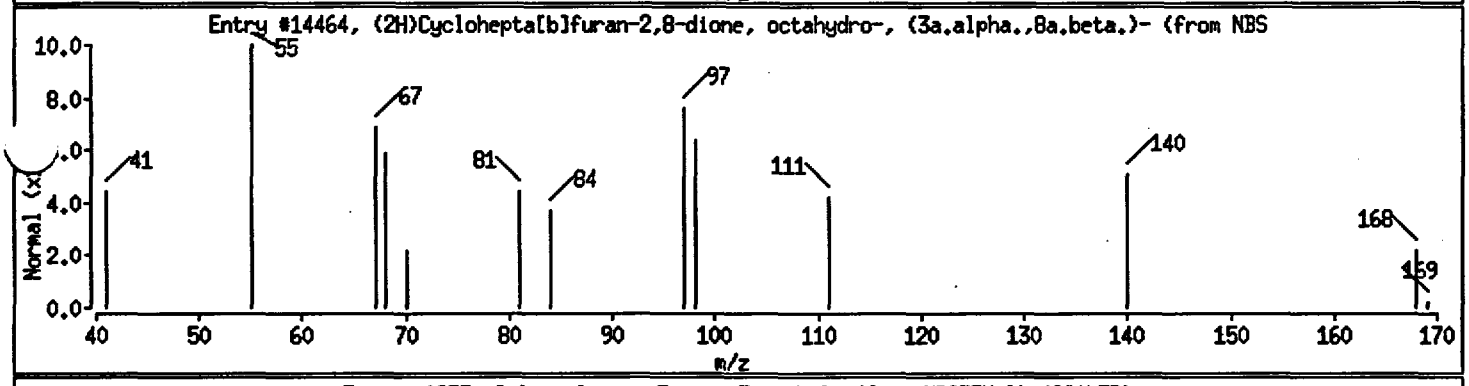
Data File: /chem/a.i/a960325a.b/a2257.d

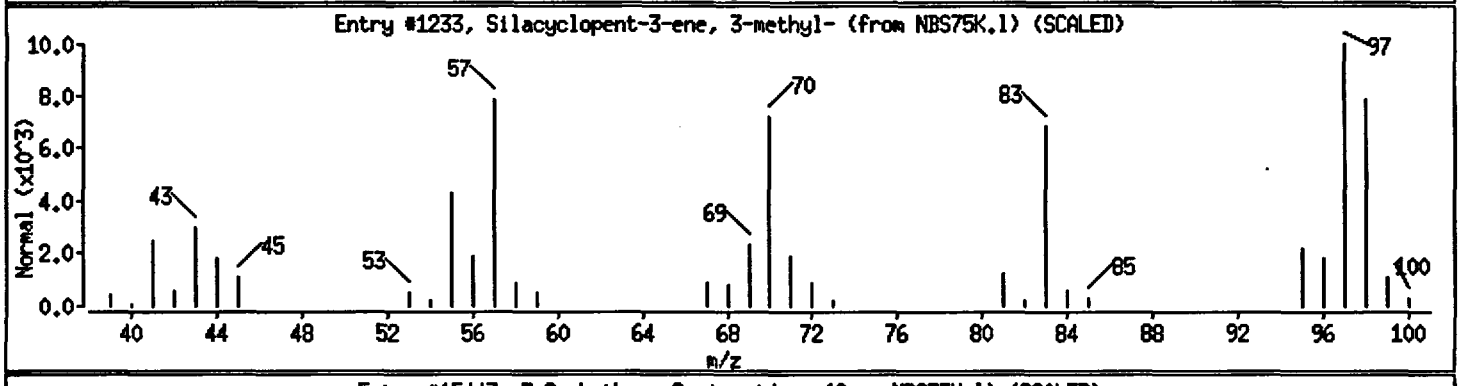
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

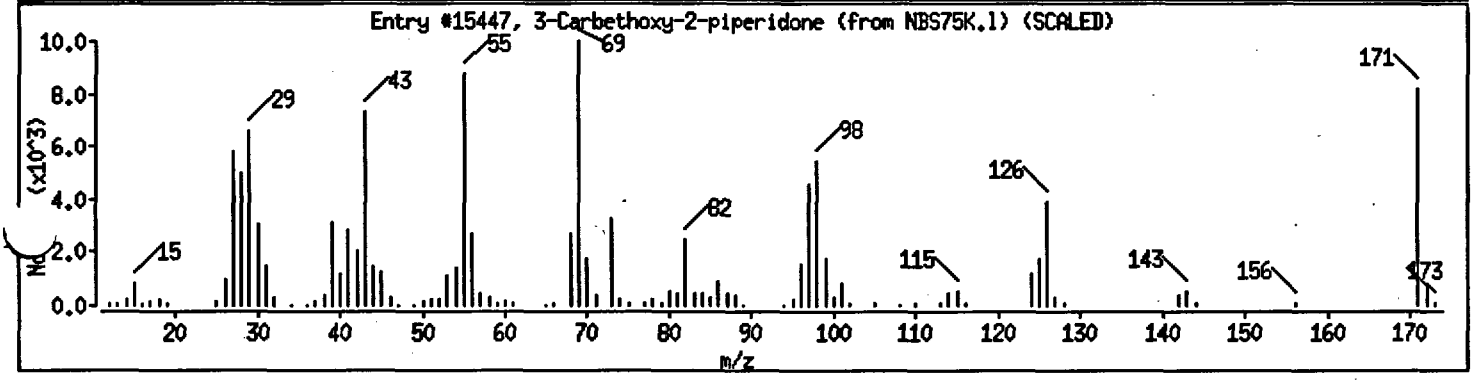
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
(2H)Cycloheptа[b]furan-2,8-dione, octahy	0-00-0	NBS75K.1	14464	15
Silacyclopent-3-ene, 3-methyl-	54077-65-5	NBS75K.1	1233	10
3-Carbethoxy-2-piperidone	3731-16-6	NBS75K.1	15447	9









Data File: /chem/a.i/a960325a.b/a2257.d

Page 40

Date : 25-MAR-1996 17:01

Instrument : a.i

Sample ID : FEM98

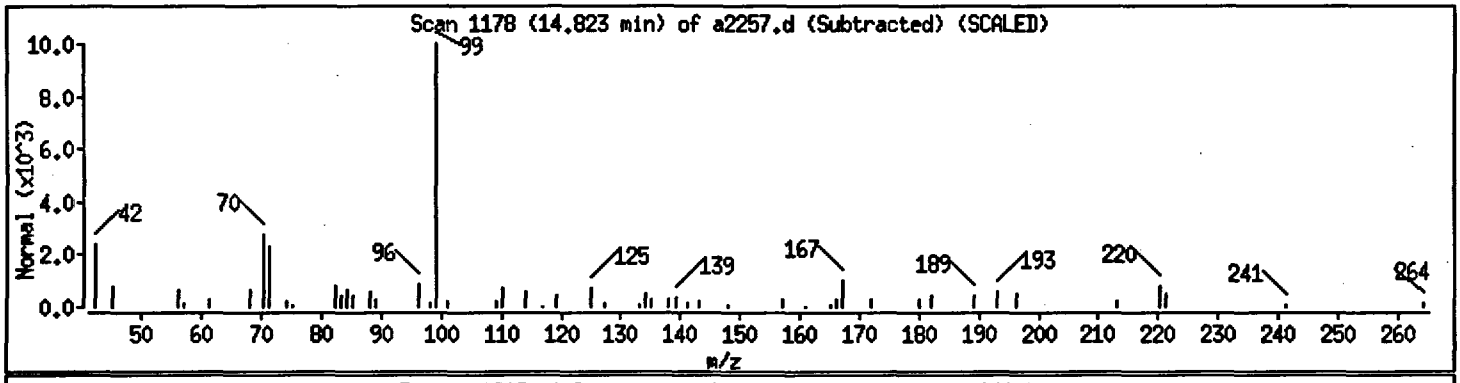
UNKNOWN

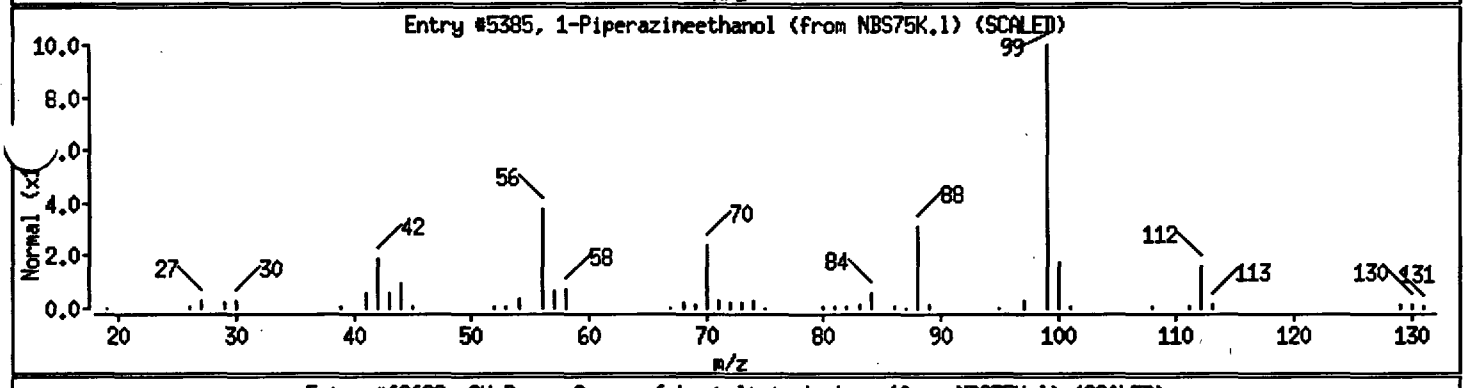
Column phase : XTI-5

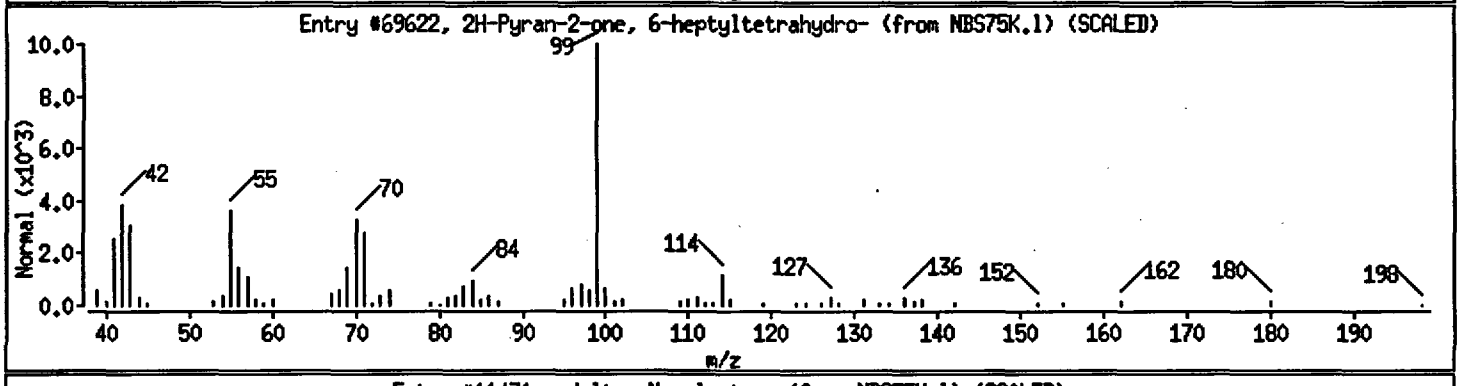
Column diameter : 0.25

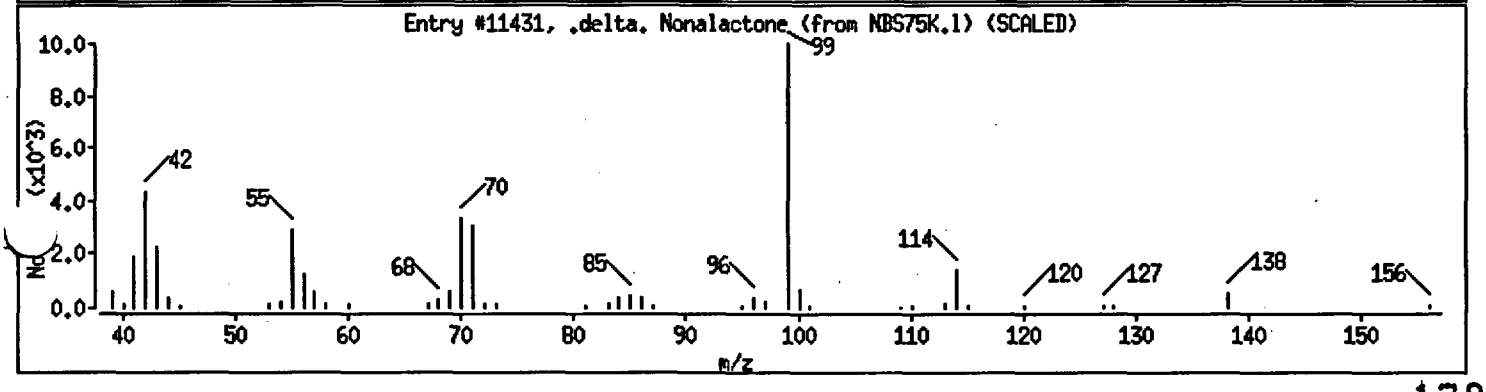
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
1-Piperazineethanol	103-76-4	NBS75K.1	5385	36
2H-Pyran-2-one, 6-heptyltetrahydro-	713-95-1	NBS75K.1	69622	34
.delta. Nonalactone	3301-94-8	NBS75K.1	11431	34







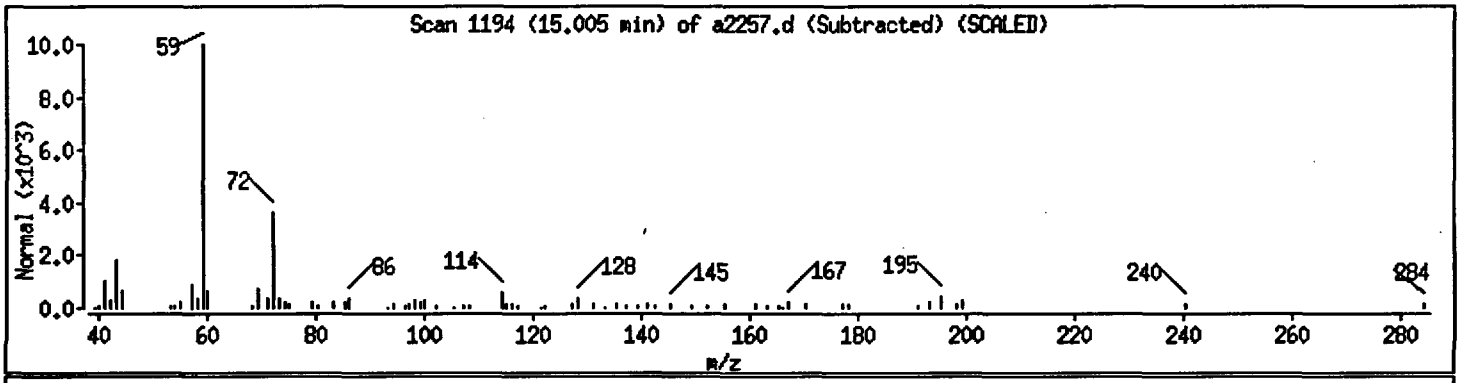


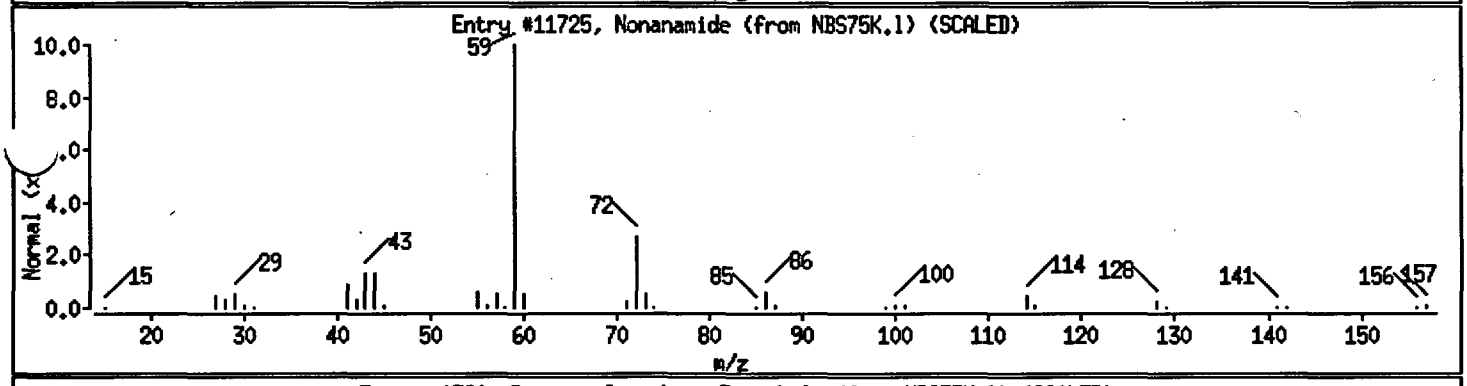
Data File: /chem/a.i/a960325a.b/a2257.d

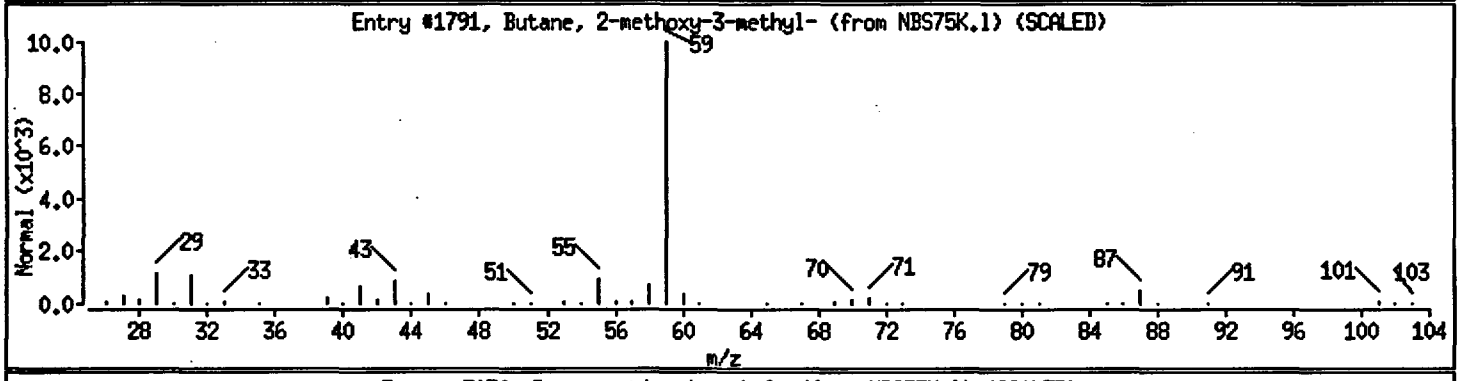
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

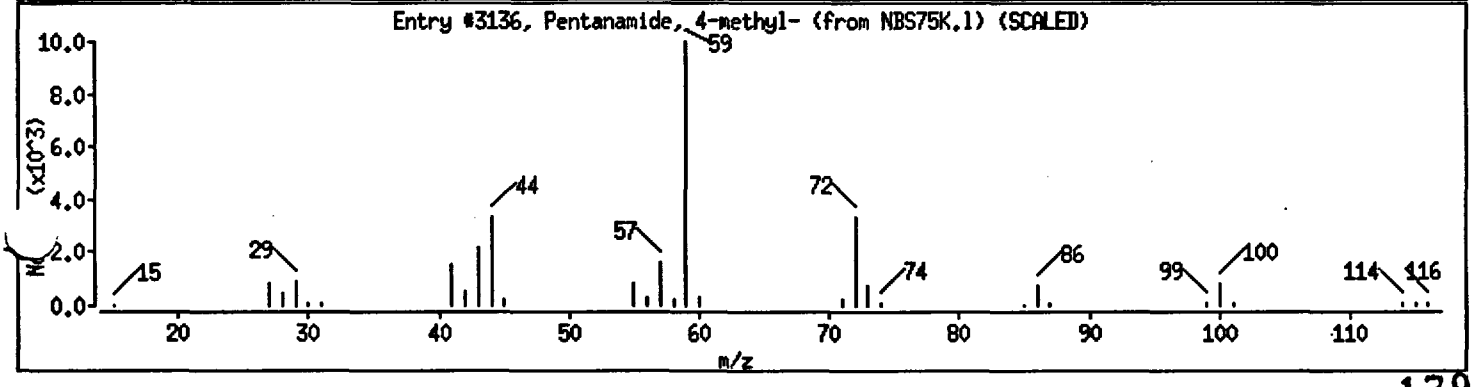
UNKNOWN AMIDE

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Nonanamide	1120-07-6	NBS75K.l	11725	56
Butane, 2-methoxy-3-methyl-	62016-49-3	NBS75K.l	1791	47
Pentanamide, 4-methyl-	1119-29-5	NBS75K.l	3136	45









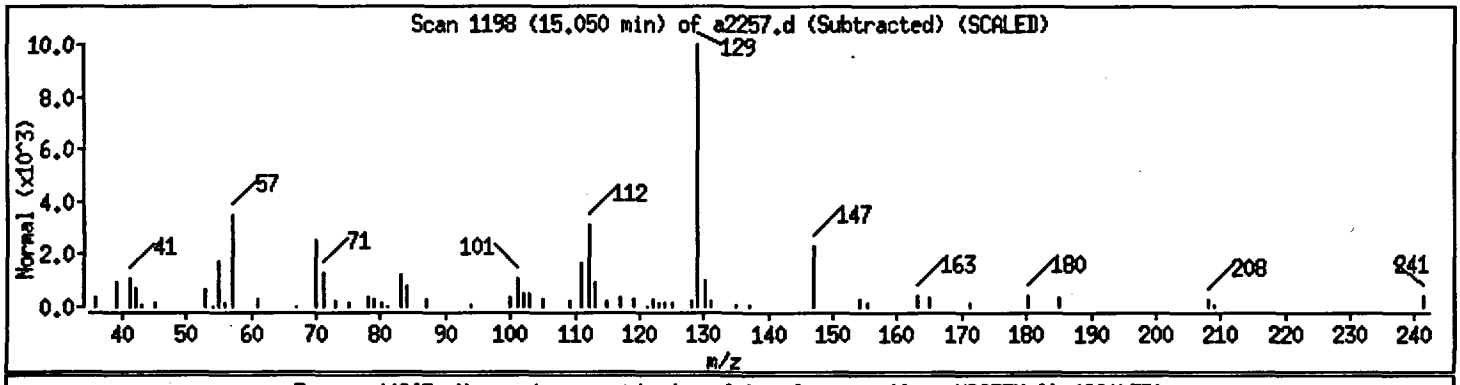
Data File: /chem/a.i/a960325a.b/a2257.d

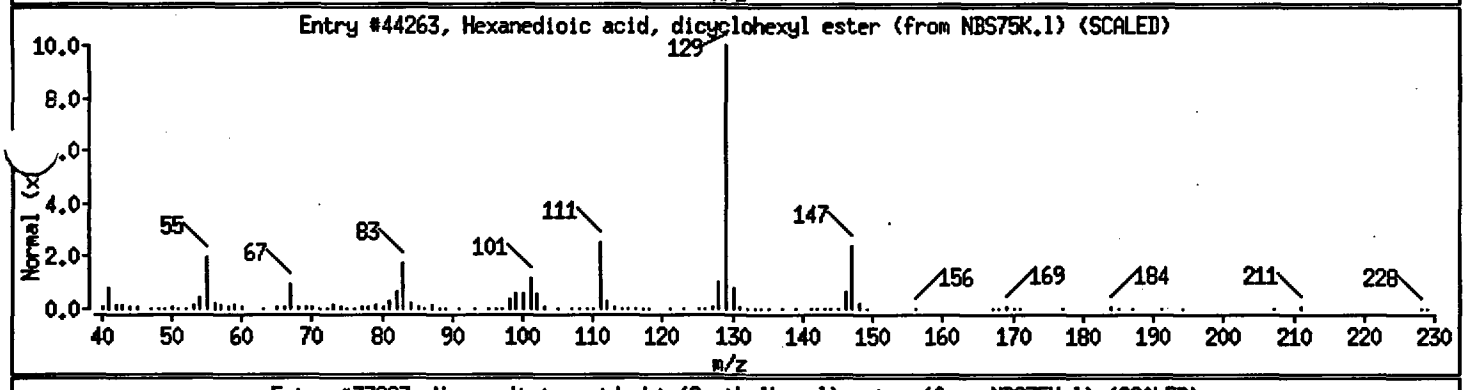
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

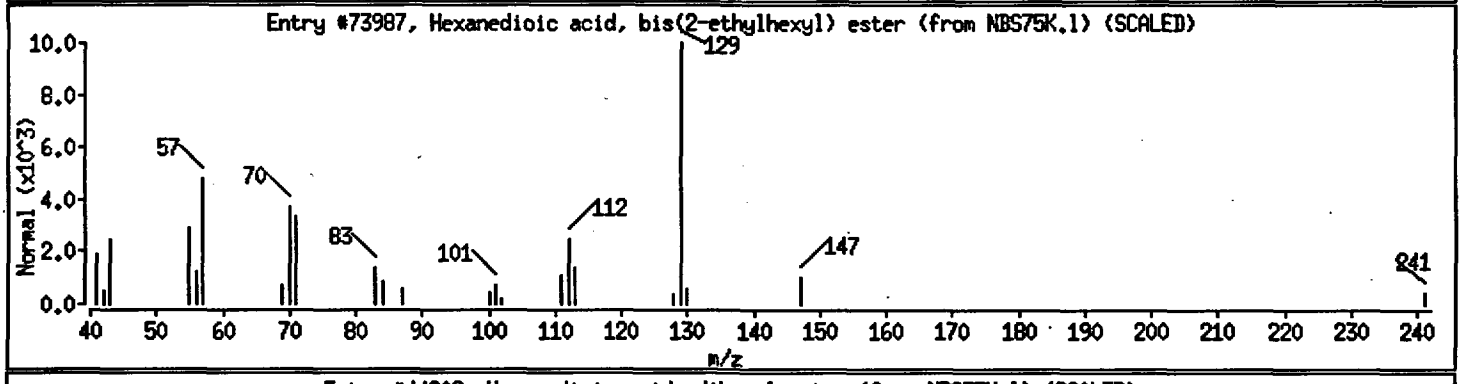
3/29/96
(DH)

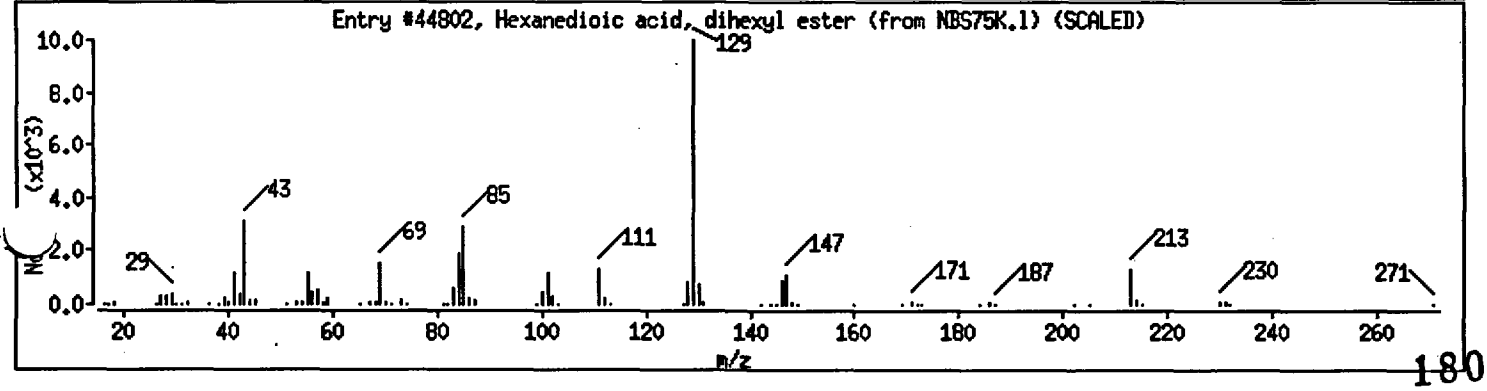
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Hexanedioic acid, ~~dicyclohexyl~~ ester	~~849-99-0~~	NBS75K.1	44263	42
Hexanedioic acid, bis(2-ethylhexyl) este	103-23-1	NBS75K.1	73987	37
Hexanedioic acid, dihexyl ester	110-33-8	NBS75K.1	44802	33





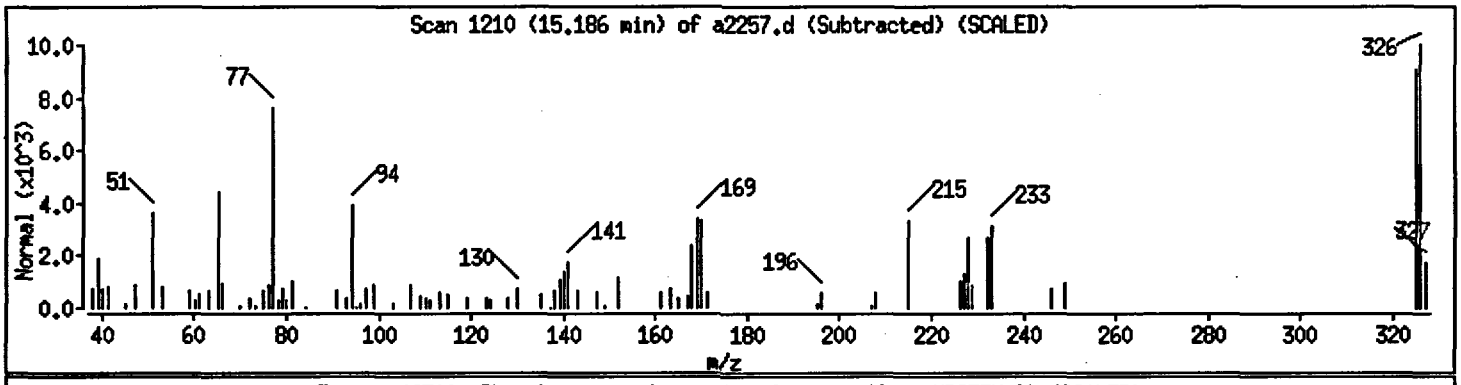


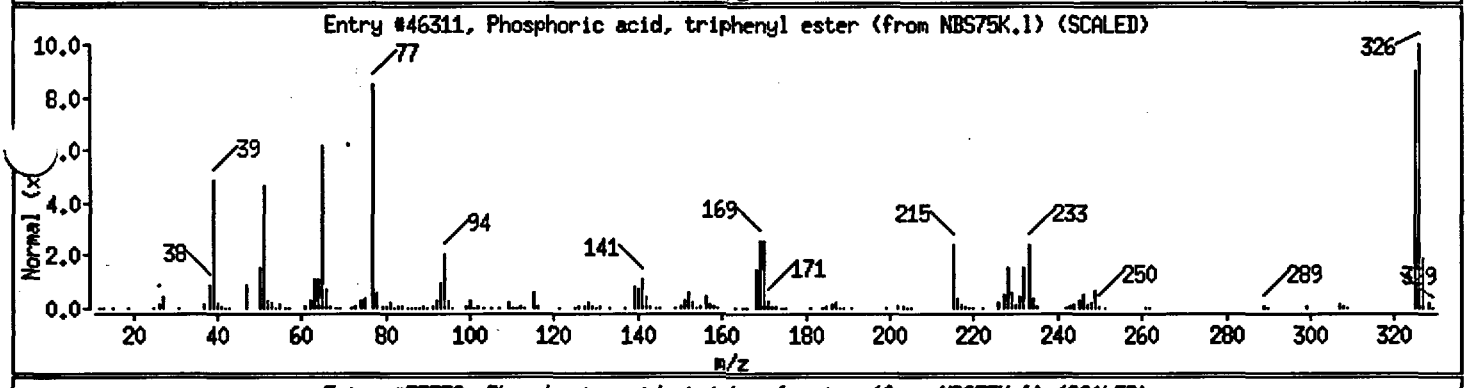


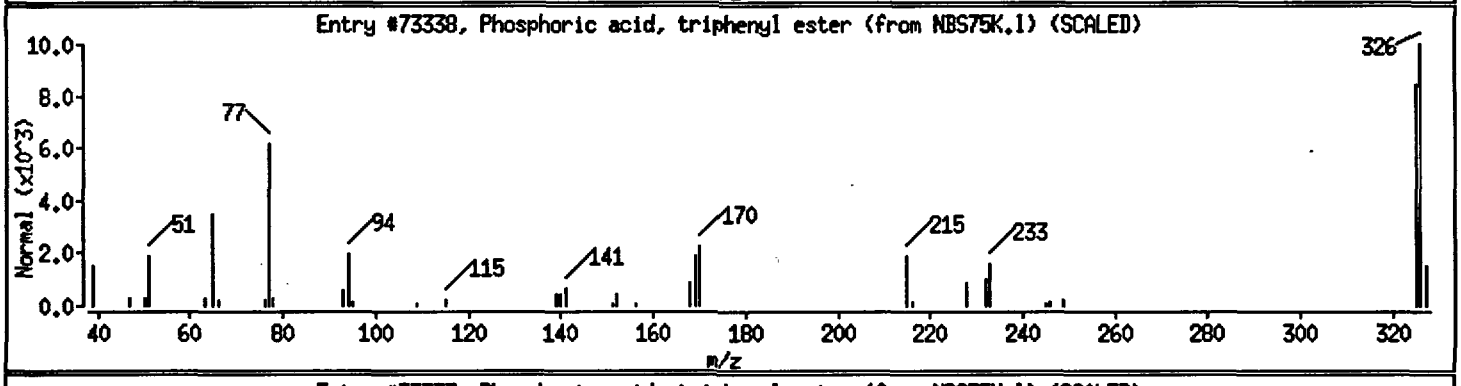
Data File: /chem/a.i/a960325a.b/a2257.d

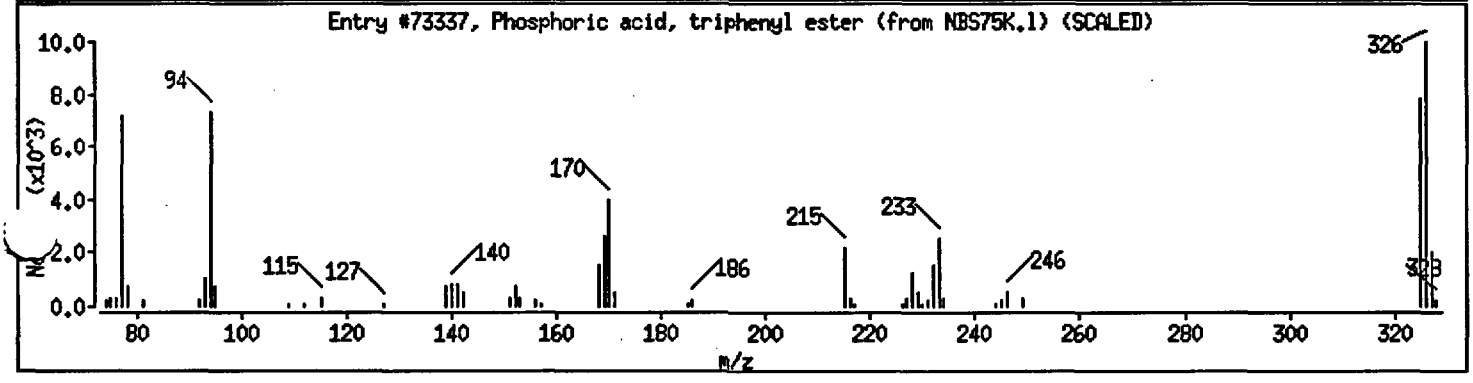
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Phosphoric acid, triphenyl ester	115-86-6	NBS75K.1	46311	99
Phosphoric acid, triphenyl ester	115-86-6	NBS75K.1	73338	95
Phosphoric acid, triphenyl ester	115-86-6	NBS75K.1	73337	91







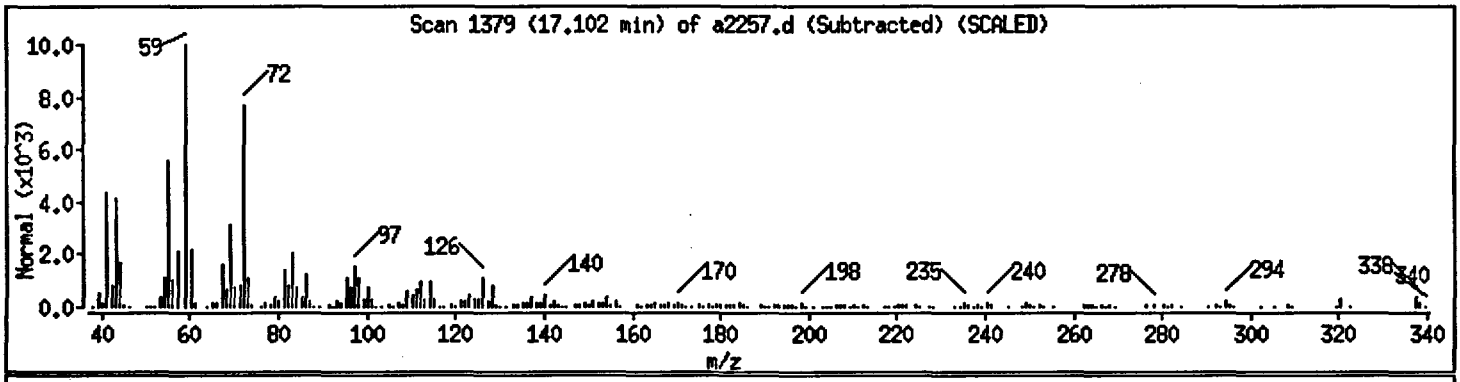


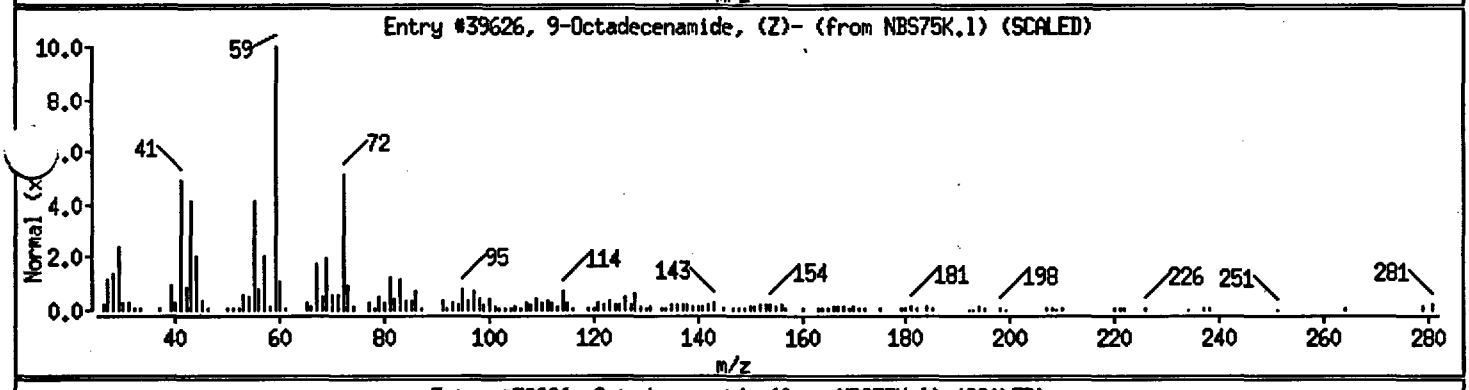
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

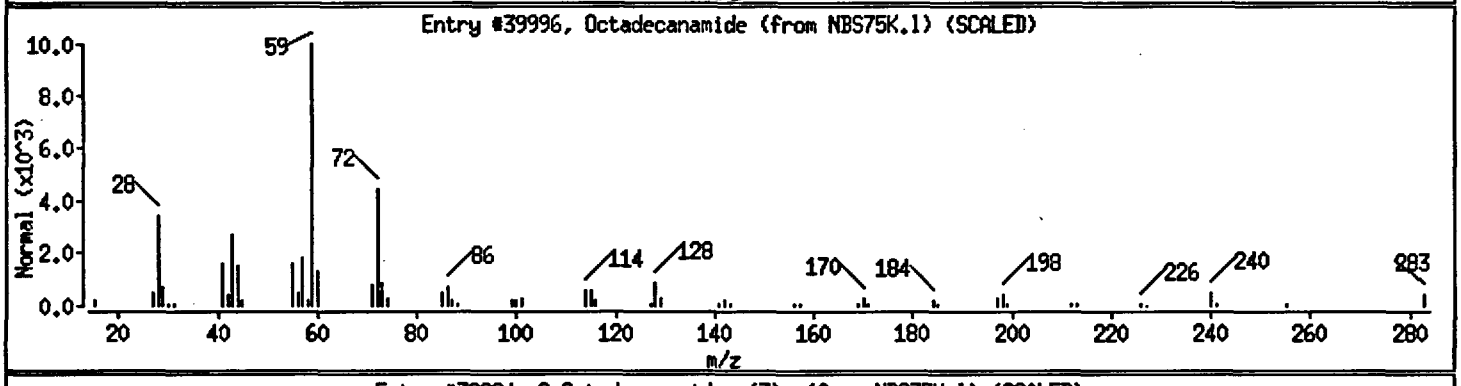
UNKNOWN AMIDE

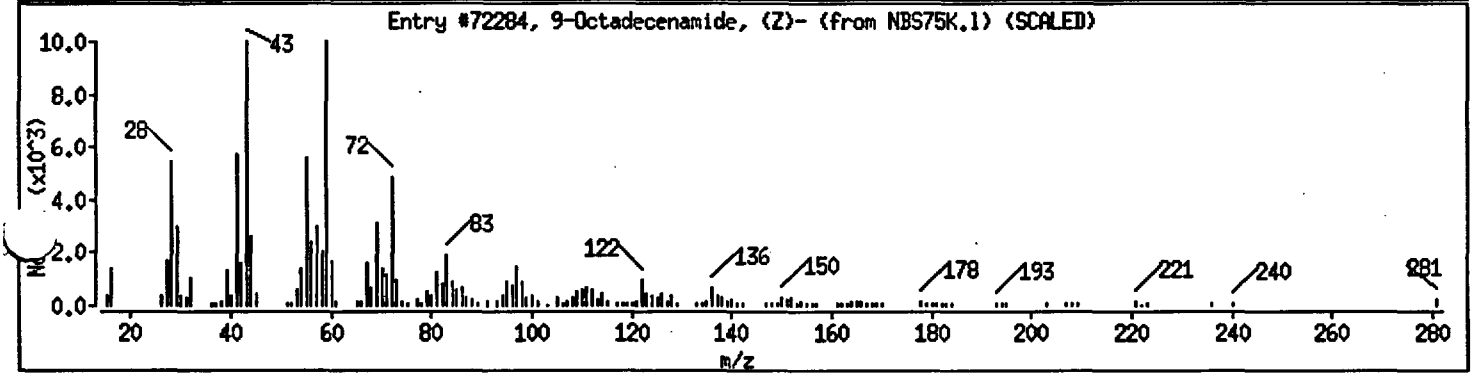
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
9-Octadecenamide, (Z)-	301-02-0	NBS75K.1	39626	72
Octadecanamide	124-26-5	NBS75K.1	39996	42
9-Octadecenamide, (Z)-	301-02-0	NBS75K.1	72284	42







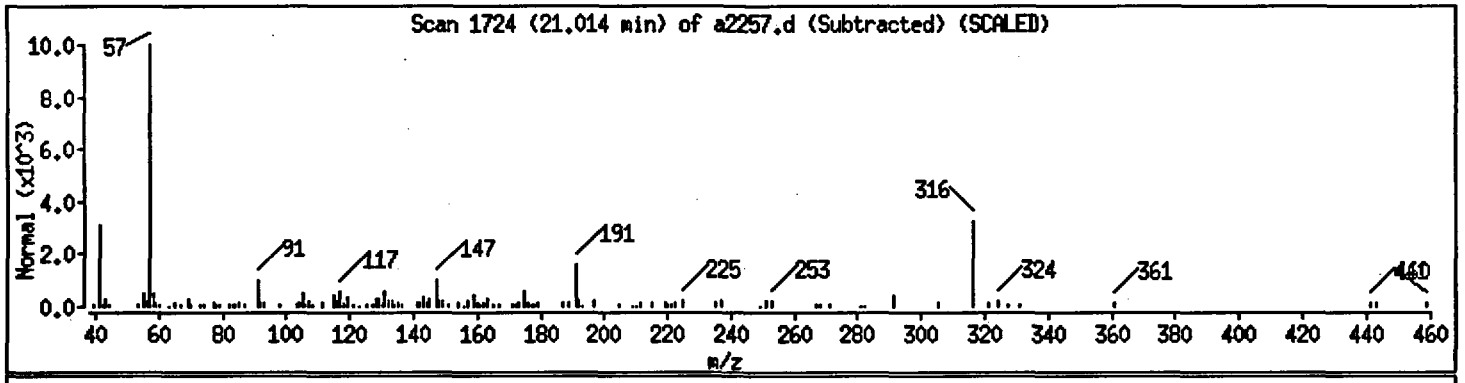


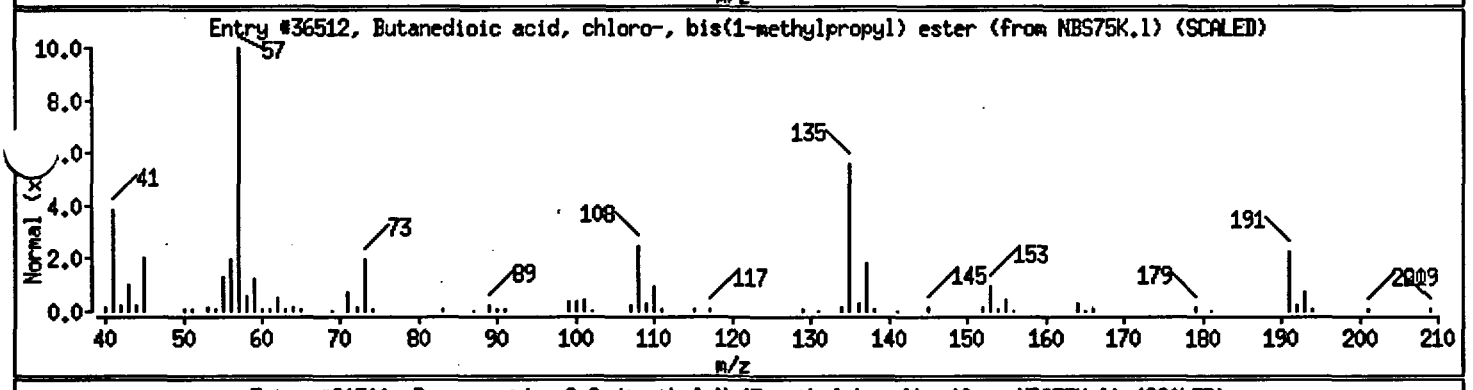
Data File: /chem/a.i/a960325a.b/a2257.d
Date : 25-MAR-1996 17:01
Instrument : a.i
Sample ID : FEM98
Column phase : XTI-5
Volume Injected (uL) : 2.0

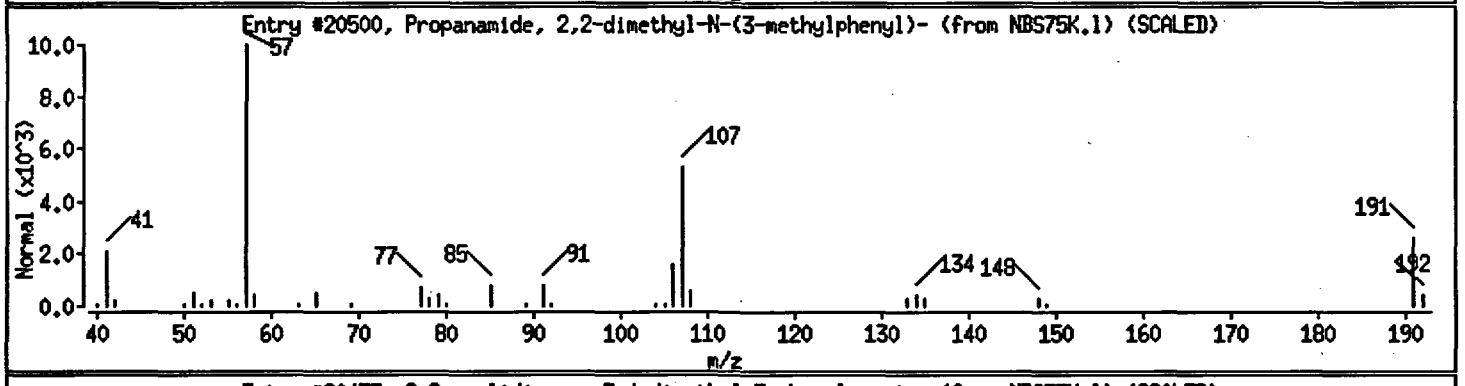
UNKNOWN

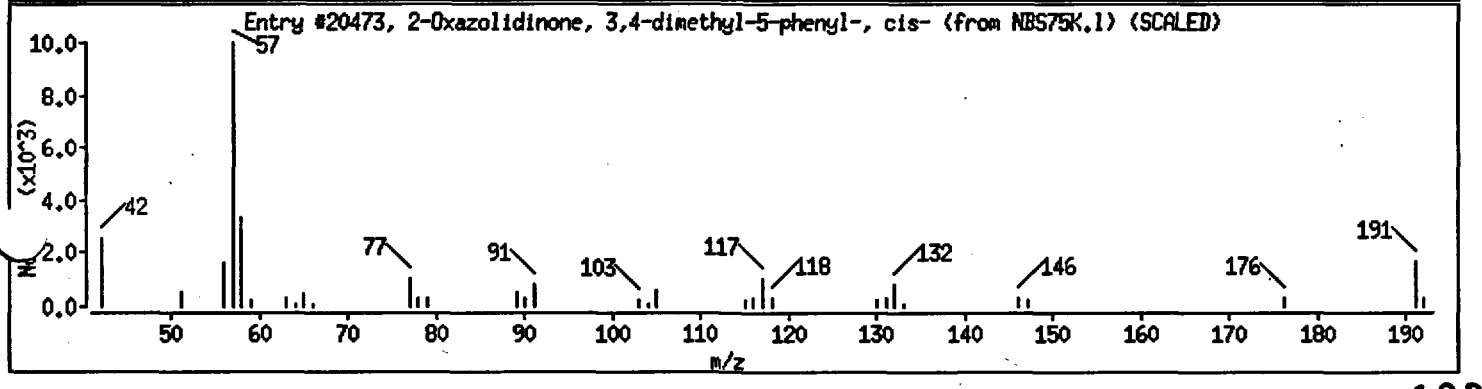
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Butanedioic acid, chloro-, bis(1-methylp	57983-51-4	NBS75K.1	36512	7
Propanamide, 2,2-dimethyl-N-(3-methylphe	32597-29-8	NBS75K.1	20500	7
2-Oxazolidinone, 3,4-dimethyl-5-phenyl-,	32461-37-3	NBS75K.1	20473	7









1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FEM98DL

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 25005.02DL

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2403.D

Level: (low/med) LOW Date Received: 03/21/96

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/30/96

Injection Volume: 2.0(uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 3.1

Number TICs found: 26

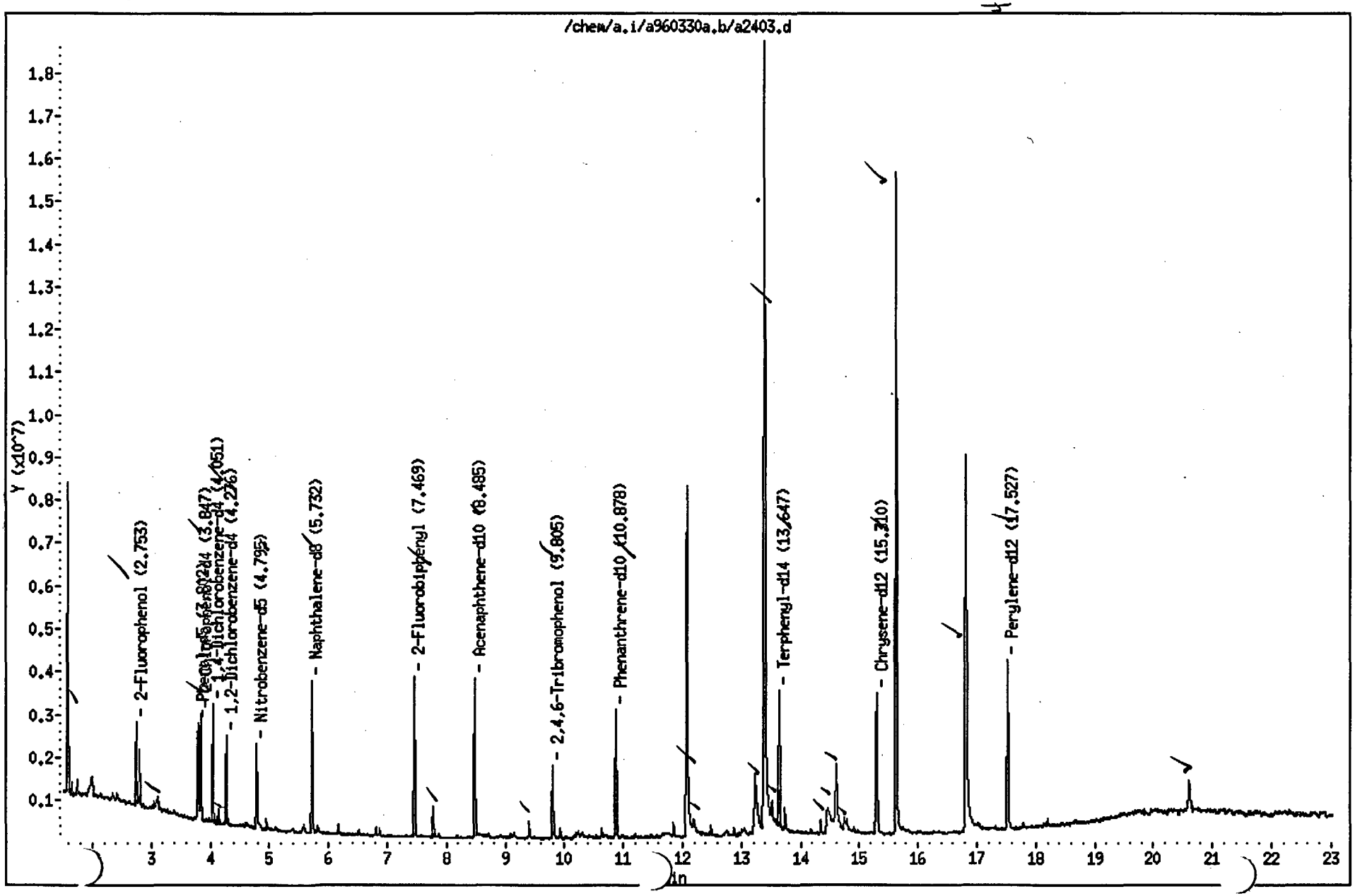
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 565-61-7	2-Pentanone, 3-methyl-	1.590	100	NJD
2.	-Hexanol	1.658	5	JD
3. 565-67-3	3-Pentanol, 2-methyl-	1.748	4	NJD
4.	UNKNOWN	2.008	21	JD
5.	UNKNOWN	2.346	6	JD
6. 123-42-2	2-Pentanone, 4-hydroxy-4-met	2.414	8	NJAD
7.	UNKNOWN	2.809	26	JD
8.	UNKNOWN	3.091	5	JD
9.	UNKNOWN	3.125	4	JD
10.	UNKNOWN	4.141	6	JD
11. 121-33-5	Vanillin	7.774	8	NJD
12.	UNKNOWN ORGANIC ACID	9.410	6	JD
13.	UNKNOWN ORGANIC ACID	12.086	120	JD
14.	-Mercaptobenzothiazole	12.188	10	JD
15.	UNKNOWN ORGANIC ACID	13.239	36	JD
16.	UNKNOWN ORGANIC ACID	13.397	260	JD
17.	UNKNOWN AMIDE	13.522	19	JD
18.	UNKNOWN ORGANIC ACID	13.738	7	JD
19.	UNKNOWN	14.348	4	JD
20.	UNKNOWN ORGANIC ACID	14.461	21	JD
21.	UNKNOWN AMIDE	14.608	35	JD
22.	UNKNOWN AMIDE	14.744	7	JD
23.	Hexanedioic acid, este	14.778	6	JD
24.	UNKNOWN AMIDE	16.814	120	JD
25.	UNKNOWN	20.611	12	JD
26.	UNKNOWN	22.699	4	JD
27.				
28.				
29.				
30.				

Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: Mike

Column diameter : 0.25



Data File: /chem/a.i/a960330a.b/a2403.d
Report Date: 01-Apr-1996 09:52

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960330a.b/a2403.d
Lab. Id. : 25005.02 Quant Type: ISTD
Inj Date : 30-MAR-1996 19:46
Operator : ANNIE Inst ID: a.i
Smp Info : FEM98 DL
Misc Info : MS517**INSTA*AATS-E:24501*25005.02*1000ML/.5ML/2X/2UL*
Comment :
Method : /chem/a.i/a960330a.b/BNA517EPA.m
Meth Date : 01-Apr-1996 08:35 mike
Cal Date : 30-MAR-96 13:39 Cal File: a2392.d
Als bottle: 8
Dil Factor: 2.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
$ 1 2-Fluorophenol	112.00	2.753	(0.680)	658755	49.24	49.24
$ 2 Phenol-d5	98.80	3.802	(0.939)	994929	58.59	58.59
5 2-Chlorophenol-d4	132.00	3.847	(0.950)	845824	61.26	61.26
* 8 1,4-Dichlorobenzene-d4	151.85	4.051	(1.000)	486725	40.00	
$ 10 1,2-Dichlorobenzene-d4	152.00	4.276	(1.056)	385807	39.17	39.17
$ 17 Nitrobenzene-d5	82.00	4.795	(0.837)	682561	42.00	42.00
* 25 Naphthalene-d8	135.65	5.732	(1.000)	1706894	40.00	
$ 34 2-Fluorobiphenyl	172.00	7.469	(0.880)	1476338	48.84	48.84
* 40 Acenaphthene-d10	164.00	8.485	(1.000)	1044425	40.00	
$ 53 2,4,6-Tribromophenol	329.80	9.816	(0.902)	292734	71.33	71.33
* 57 Phenanthrene-d10	187.65	10.878	(1.000)	1705335	40.00	
61 Di-n-butylphthalate	149.00	12.131	(1.115)	92831	1.95	1.95(a)
$ 64 Terphenyl-d14	244.00	13.647	(0.891)	1651012	46.47	46.47
* 67 Chrysene-d12	240.00	15.310	(1.000)	1357327	40.00	
70 bis(2-Ethylhexyl)phthalate	149.00	15.638	(1.021)	4862438	148.56	148.56
* 75 Perylene-d12	264.00	17.527	(1.000)	2001288	40.00	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i

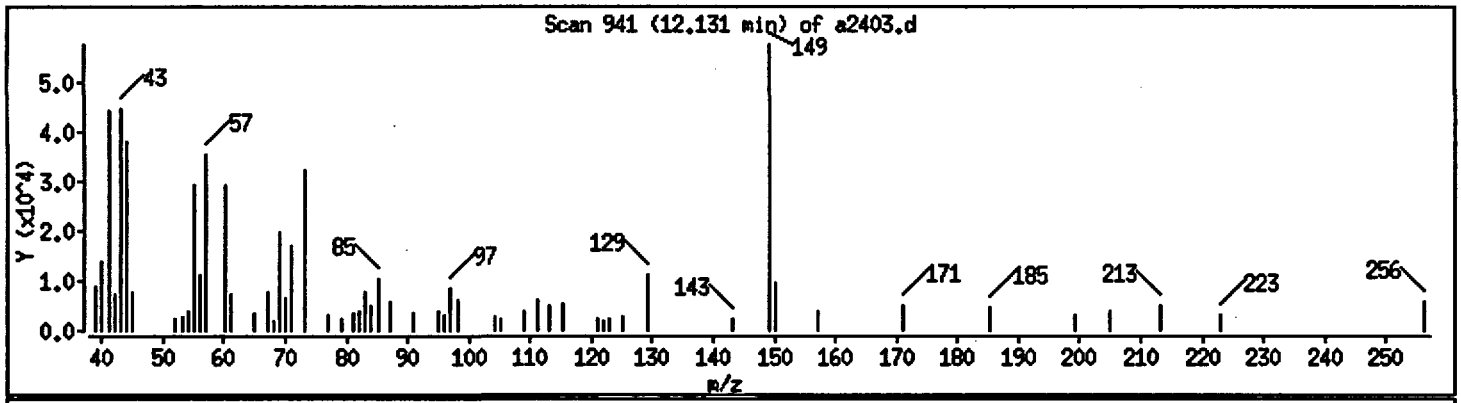
Sample ID : FEM98 DL

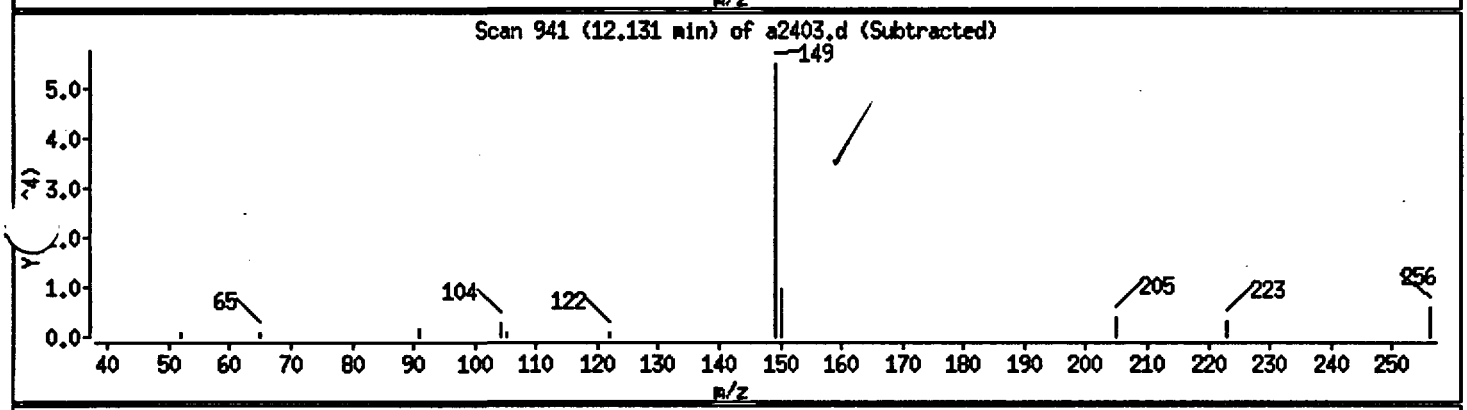
Column phase : XTI-5

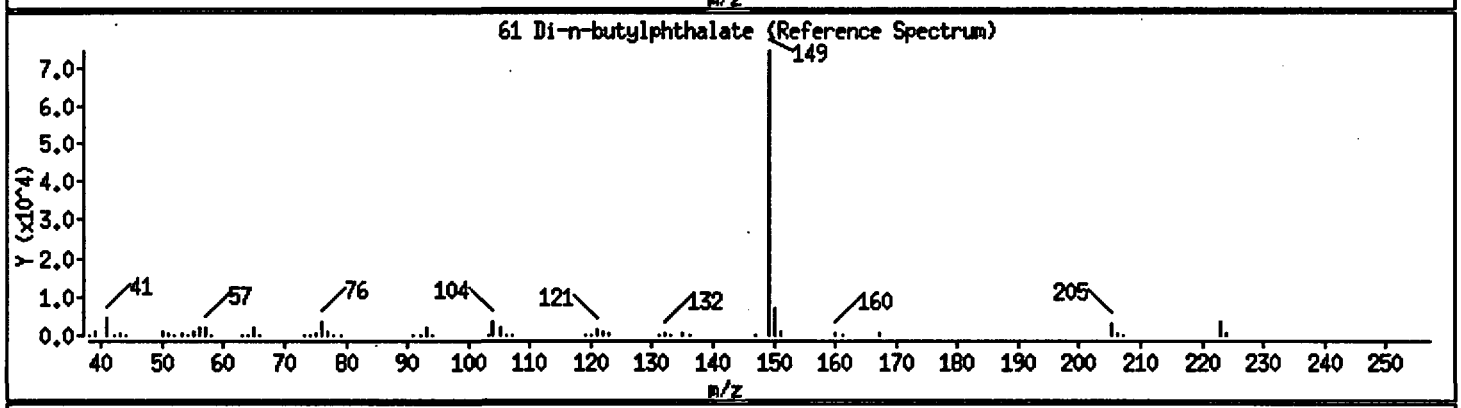
Column diameter : 0.25

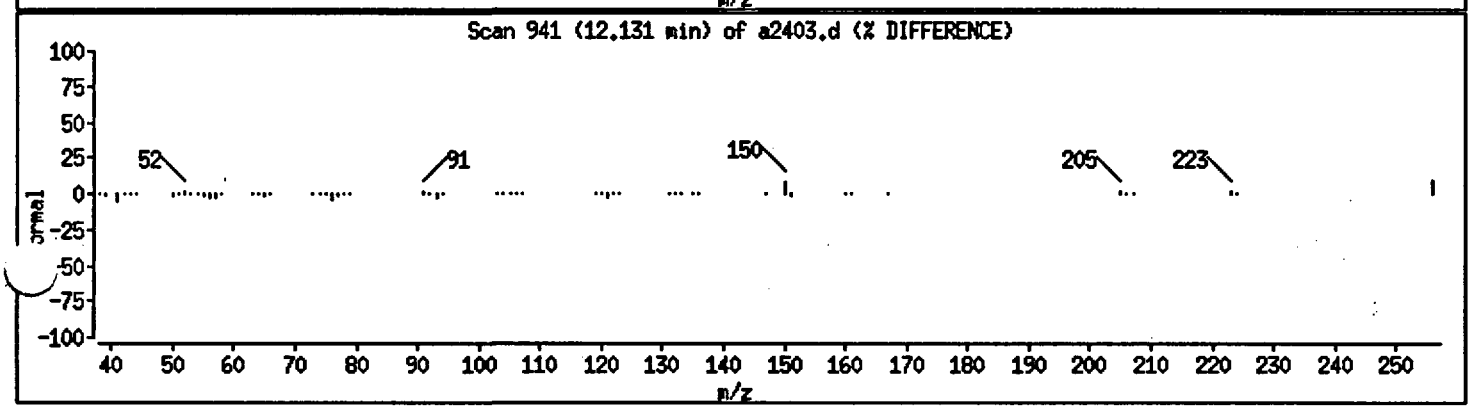
Volume Injected (uL) : 2.0

61 Di-n-butylphthalate









Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i

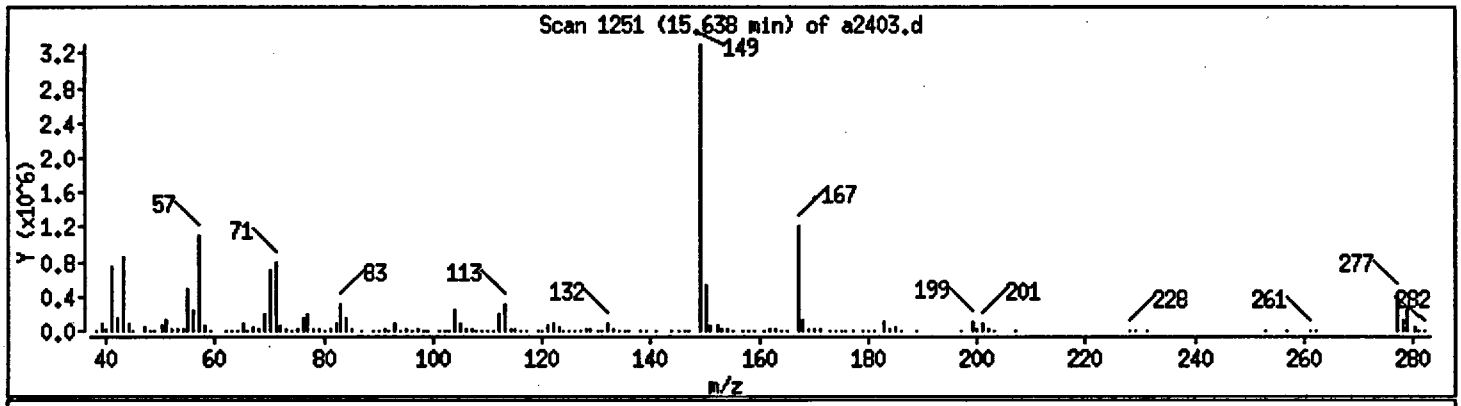
Sample ID : FEM98 DL

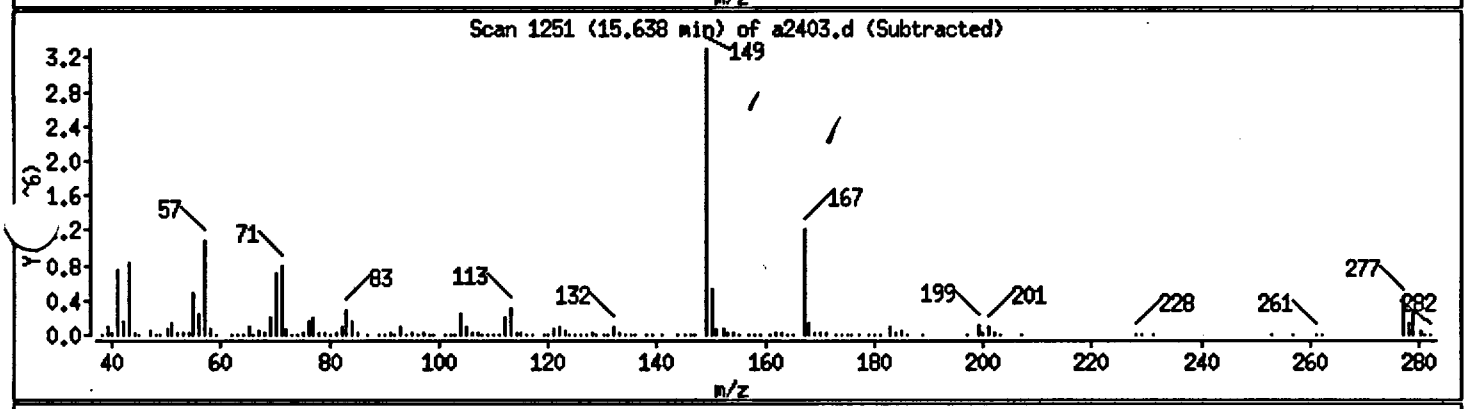
Column phase : XTI-5

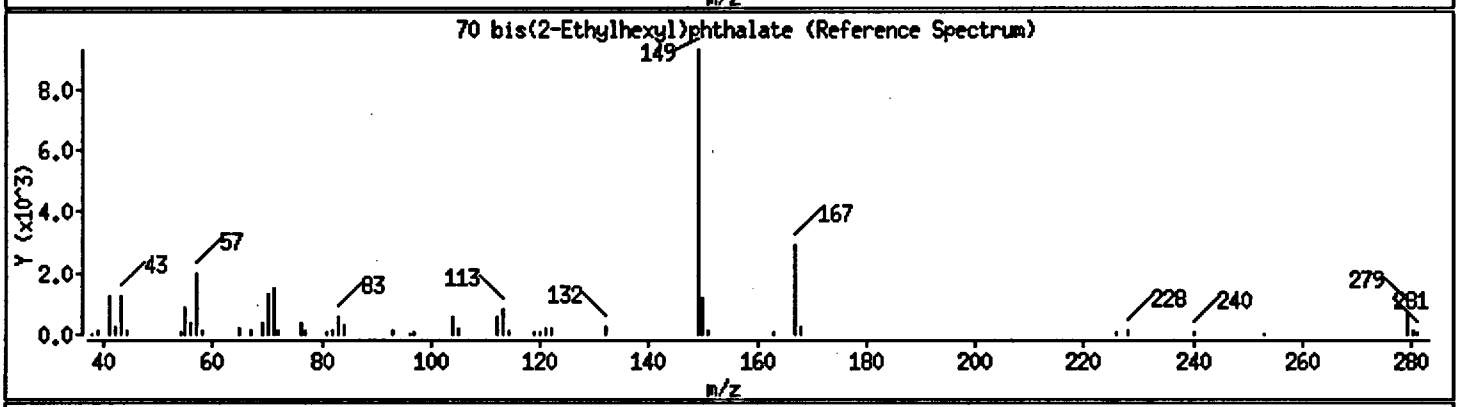
Column diameter : 0.25

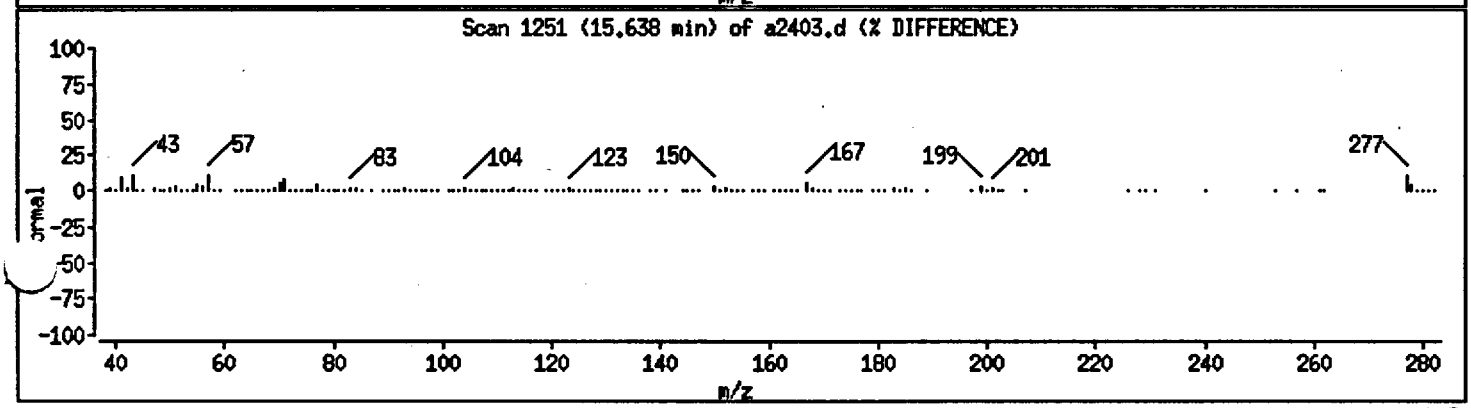
Volume Injected (uL) : 2.0

70 bis(2-Ethylhexyl)phthalate









Data File: /chem/a.i/a960330a.b/a2403.d
Report Date: 01-Apr-1996 09:52

Southwest Laboratory of Oklahoma

Unknown Compounds Quantitation Report

Data file : /chem/a.i/a960330a.b/a2403.d
Lab. Id. : 25005.02
Inj Date : 30-MAR-1996 19:46
Operator : ANNIE DL Inst ID: a.i
Smp Info : FEM98
Misc Info : MS517**INSTA*AATS-E:24501*25005.02*1000ML/.5ML/2X/2UL*
Comment :
Method : /chem/a.i/a960330a.b/BNA517EPA.m
Meth Date : 01-Apr-1996 08:35 mike
Cal Date : 30-MAR-96 13:39 Cal File: a2392.d
Als bottle: 8
Dil Factor: 2.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD	RT	AREA	AMOUNT
* 8 1,4-Dichlorobenzene-d4	4.051	2858571	40.000
* 25 Naphthalene-d8	5.732	4001091	40.000
* 40 Acenaphthene-d10	8.485	4608835	40.000
* 57 Phenanthrene-d10	10.878	4875112	40.000
* 67 Chrysene-d12	15.310	5391055	40.000
* 75 Perylene-d12	17.527	6391937	40.000

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT CPND #
2-Pentanone, 3-methyl-					CAS #: 565-61-7	
1.590	7510455	105.09	87	NBS75K.l	63364	8
2-Hexanol					CAS #: 626-93-7	
1.658	370807	5.18	72	NBS75K.l	63583	8
3-Pentanol, 2-methyl-					CAS #: 565-67-3	
1.748	326034	4.56	72	NBS75K.l	1781	8
Isocrotonic acid					CAS #: 503-64-0	
2.008	1533742	21.46	40	NBS75K.l	660	8
Ethanone, 1-cyclopropyl-					CAS #: 765-43-5	
2.346	435913	6.10	40	NBS75K.l	62744	8

Data File: /chem/a.i/a960330a.b/a2403.d
Report Date: 01-Apr-1996 09:52

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
Oxirane, [(1-methylethoxy)methyl]-					CAS #: 4016-14-2		
2.414	544537	7.62	38	NBS75K.1	3238		8
3-Nonanone					CAS #: 925-78-0		
2.809	1894760	26.51	33	NBS75K.1	66193		8
Hexanoic acid, hexyl ester					CAS #: 6378-65-0		
3.091	373781	5.23	13	NBS75K.1	69724		8
Furan, 2-(1,1-dimethylethyl)-4-methyl-					CAS #: 6141-68-0		
3.125	323435	4.52	27	NBS75K.1	7011		8
cis-1,3-Cyclohexanedicarbonitrile					CAS #: 10340-01-9		
4.141	404930	5.66	50	NBS75K.1	6144		8
Cycloheptane, 1,2-dichloro-, trans-					CAS #: 32616-83-4		
5.597	413404	4.13	50	NBS75K.1	13862		25
Vanillin					CAS #: 121-33-5		
7.774	970783	8.42	97	NBS75K.1	66917		40
Propanoic acid, 2-methyl-, 1-(1,1-dimeth					CAS #: 74381-40-1		
9.410	691598	6.00	59	NBS75K.1	40505		40
Hexadecanoic acid					CAS #: 57-10-3		
12.086	14030534	115.12	99	NBS75K.1	71609		57
2-Mercaptobenzothiazole					CAS #: 149-30-4		
12.188	1187512	9.74	45	NBS75K.1	68034		57
9-Hexadecenoic acid					CAS #: 2091-29-4		
13.239	4838857	35.90	90	NBS75K.1	34770		67
Octadecanoic acid					CAS #: 57-11-4		
13.397	35299994	261.91	99	NBS75K.1	72366		67
Dodecanamide					CAS #: 1120-16-7		
13.522	2512332	18.64	91	NBS75K.1	22660		67
Hexadecane, 2,6,10,14-tetramethyl-					CAS #: 638-36-8		
13.579	887784	6.58	37	NBS75K.1	72329		67
Octadecanoic acid					CAS #: 57-11-4		
13.738	971989	7.21	30	NBS75K.1	72364		67
4-Ethyl-4-methyl-1-hexene					CAS #: 0-00-0		
14.348	559359	4.15	47	NBS75K.1	4619		67
Undecylenic Acid					CAS #: 112-38-9		
14.461	2822874	20.94	35	NBS75K.1	18869		67

Data File: /chem/a.i/a960330a.b/a2403.d
Report Date: 01-Apr-1996 09:52

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
Nonanamide					CAS #: 1120-07-6		
14.608	4729478	35.09	53	NBS75K.l	11725	67	
Acetic acid, bromo-, methyl ester					CAS #: 96-32-2		
14.744	908044	6.73	52	NBS75K.l	10055	67	
Hexanedioic acid, bis(2-ethylhexyl) este					CAS #: 103-23-1		
14.778	749643	5.56	50	NBS75K.l	73987	67	
Dodecanamide					CAS #: 1120-16-7		
16.814	18563229	116.16	59	NBS75K.l	22660	75	
Propanamide, 2,2-dimethyl-N-(4-methylphe					CAS #: 21354-40-5		
20.611	1867364	11.68	25	NBS75K.l	20505	75	
4-Amino-5-(4-acetylphenylazo)benzofuraza					CAS #: 0-00-0		
22.699	681668	4.26	10	NBS75K.l	39574	75	

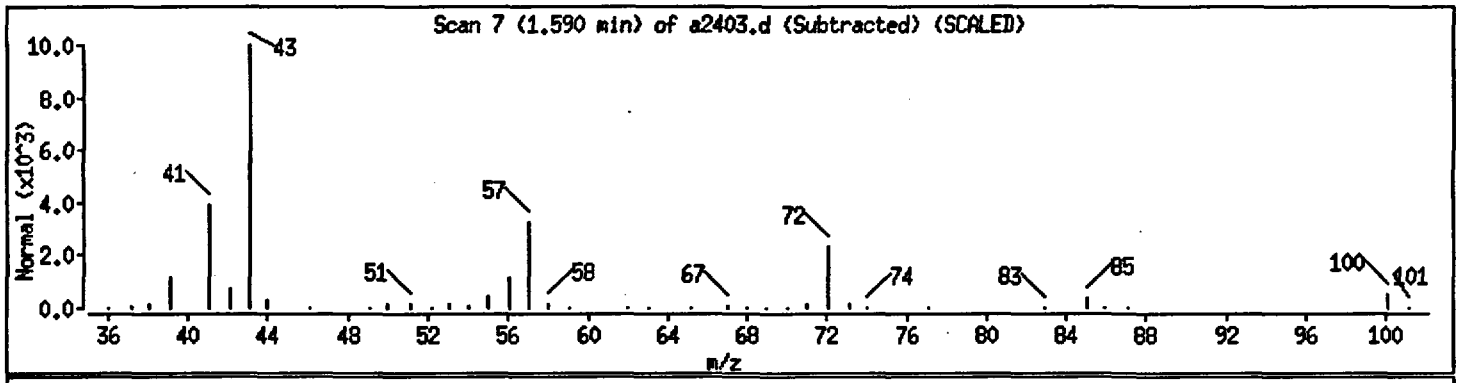
QC Flag Legend

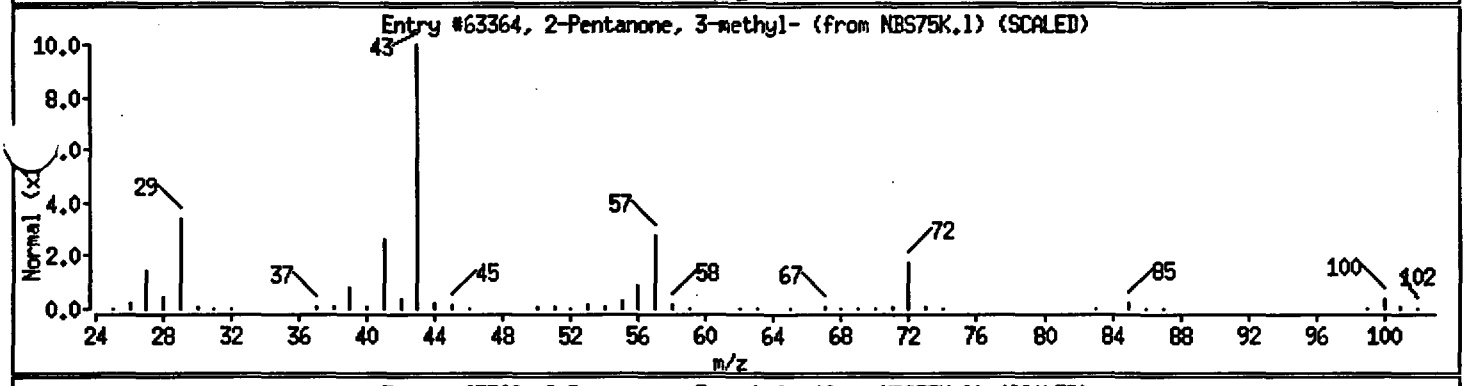
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

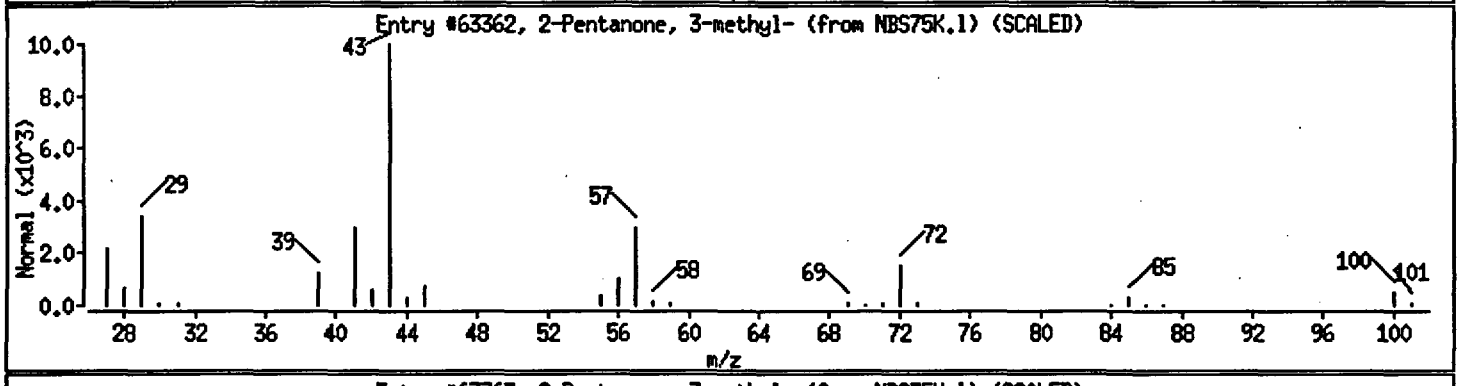
Data File: /chem/a.i/a960330a.b/a2403.d

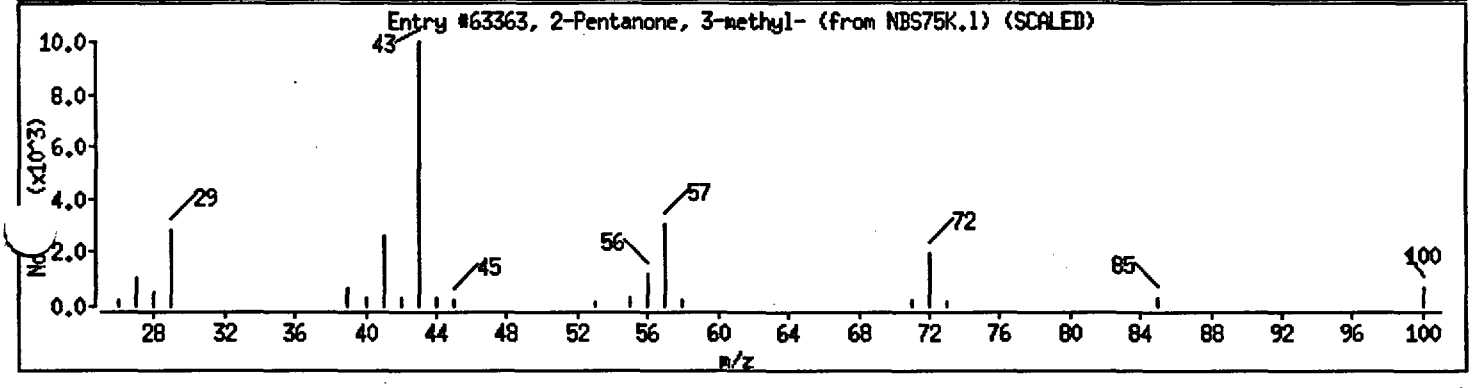
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
2-Pentanone, 3-methyl-	565-61-7	NBS75K.1	63364	87
2-Pentanone, 3-methyl-	565-61-7	NBS75K.1	63362	80
2-Pentanone, 3-methyl-	565-61-7	NBS75K.1	63363	80









Data File: /chem/a.i/a960330a.b/a2403.d

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Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

Column phase : XTI-5

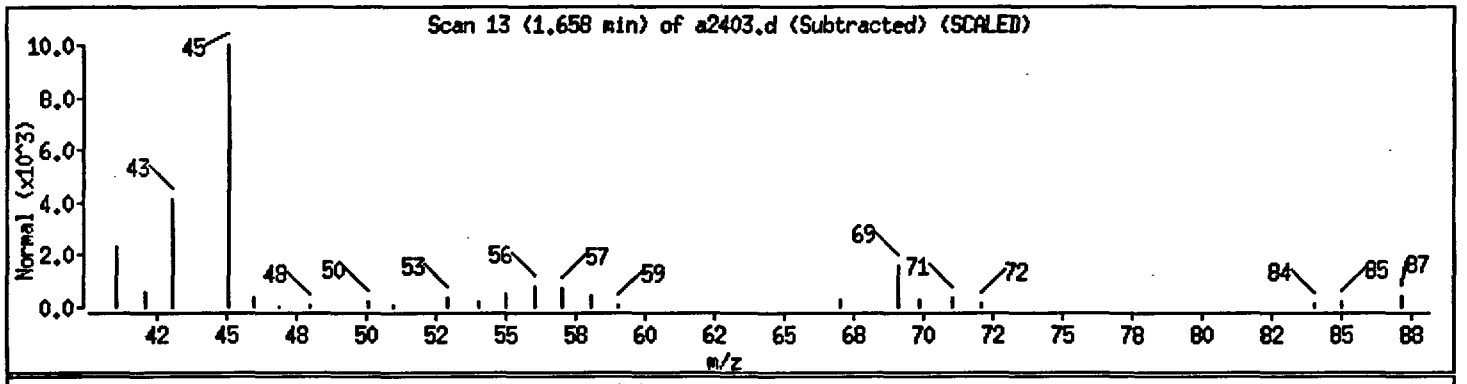
Column diameter : 0.25

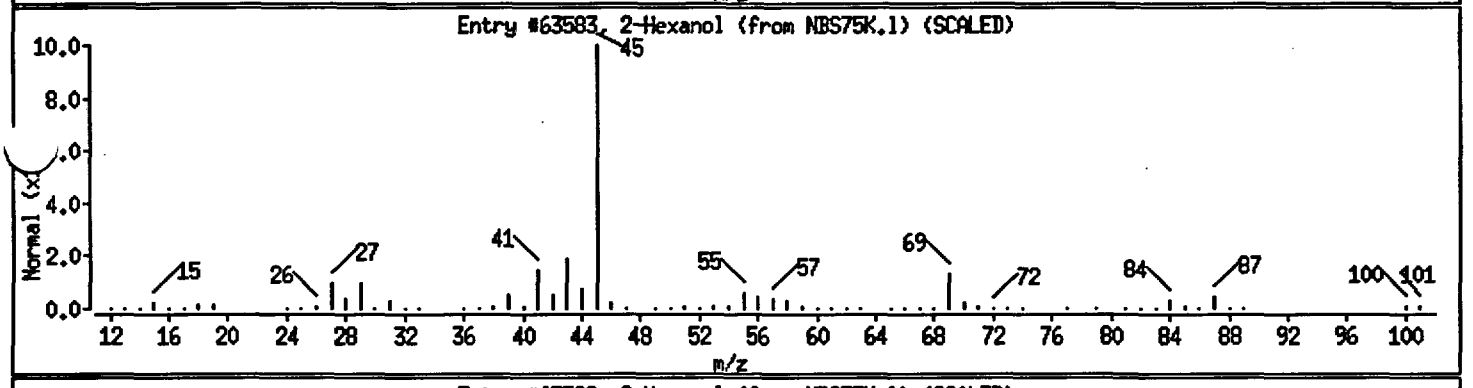
Volume Injected (uL) : 2.0

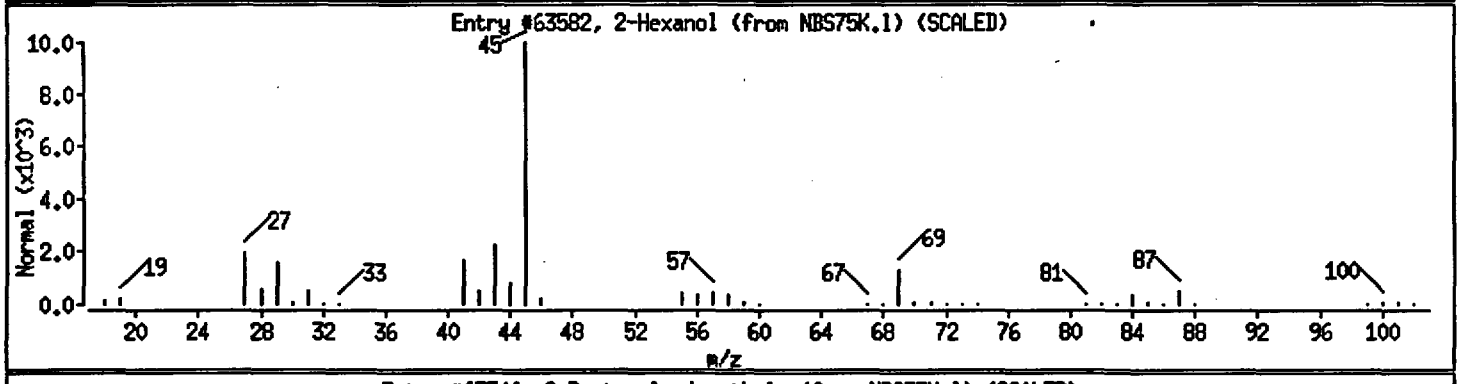
4-5-96

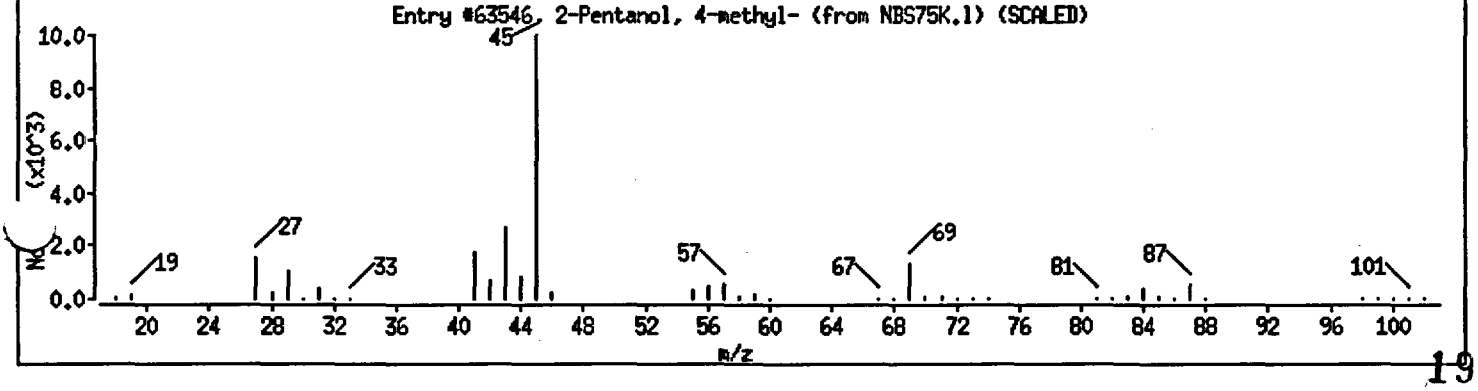
DH

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
~~2-Hexanol~~	~~626-93-7~~	NBS75K.1	63583	72
2-Hexanol	626-93-7	NBS75K.1	63582	72
2-Pentanol, 4-methyl-	108-11-2	NBS75K.1	63546	64





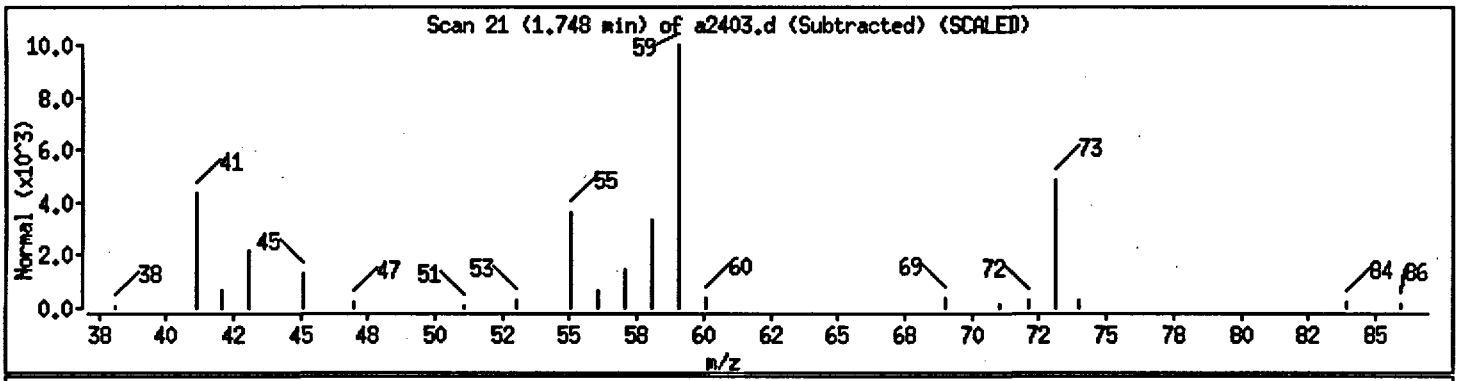


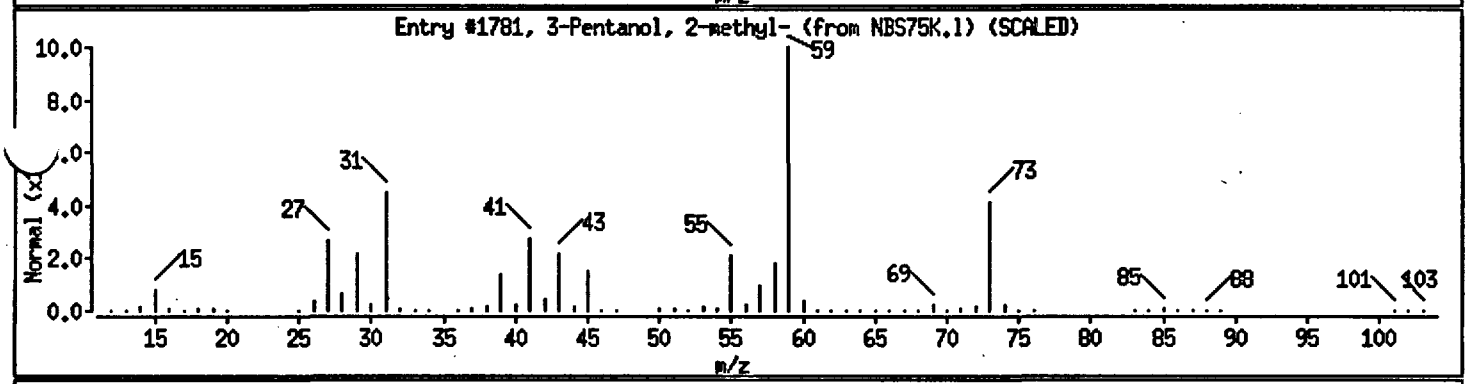


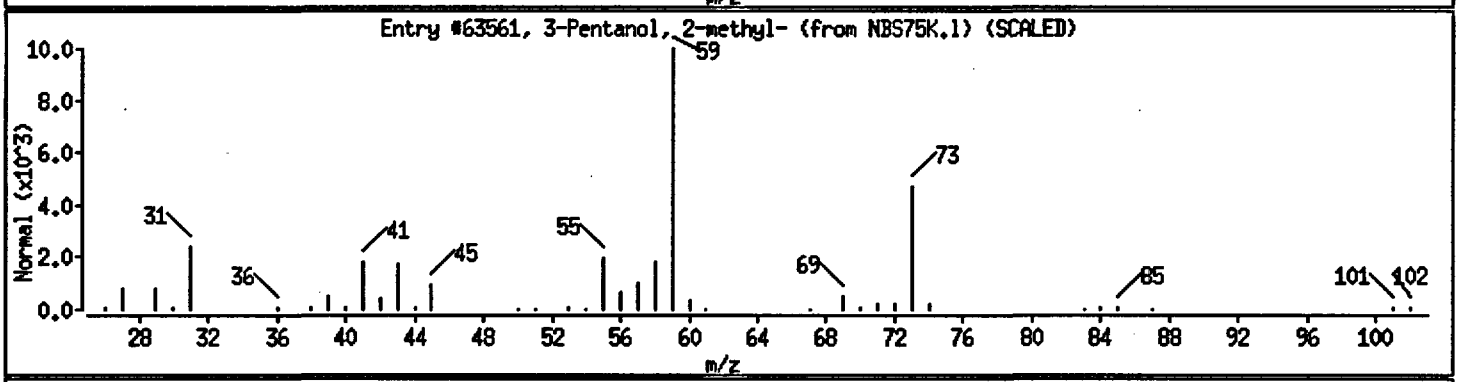
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 **DL**
Column phase : XTI-5
Volume Injected (uL) : 2.0

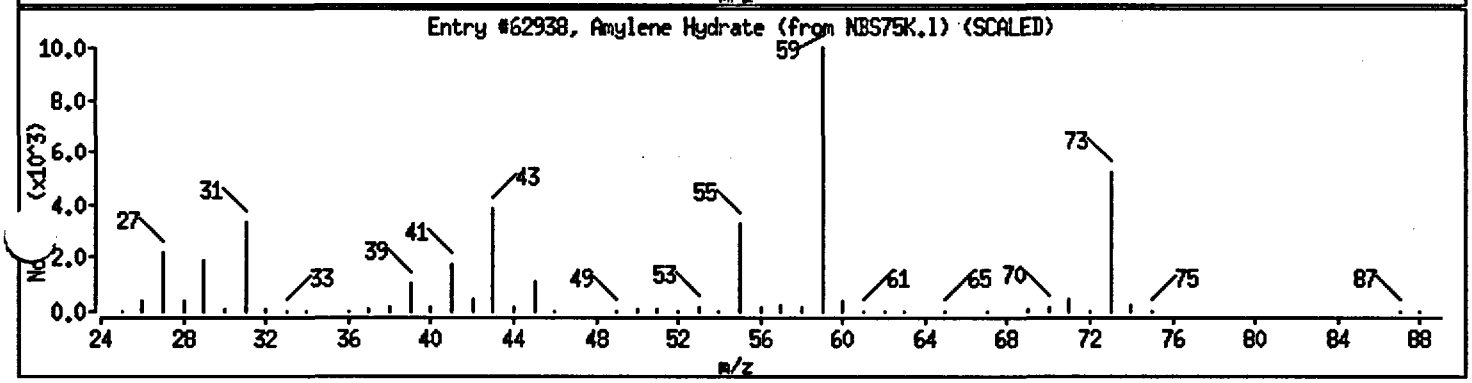
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
3-Pentanol, 2-methyl-	565-67-3	NBS75K.l	1781	72
3-Pentanol, 2-methyl-	565-67-3	NBS75K.l	63561	72
Amylene Hydrate	75-85-4	NBS75K.l	62938	59









Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

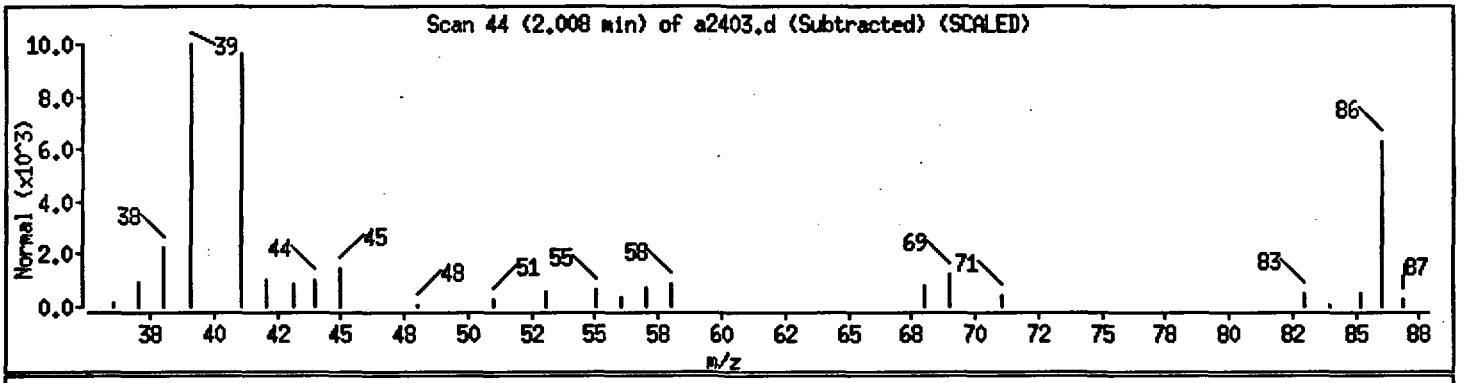
Column phase : XTI-5

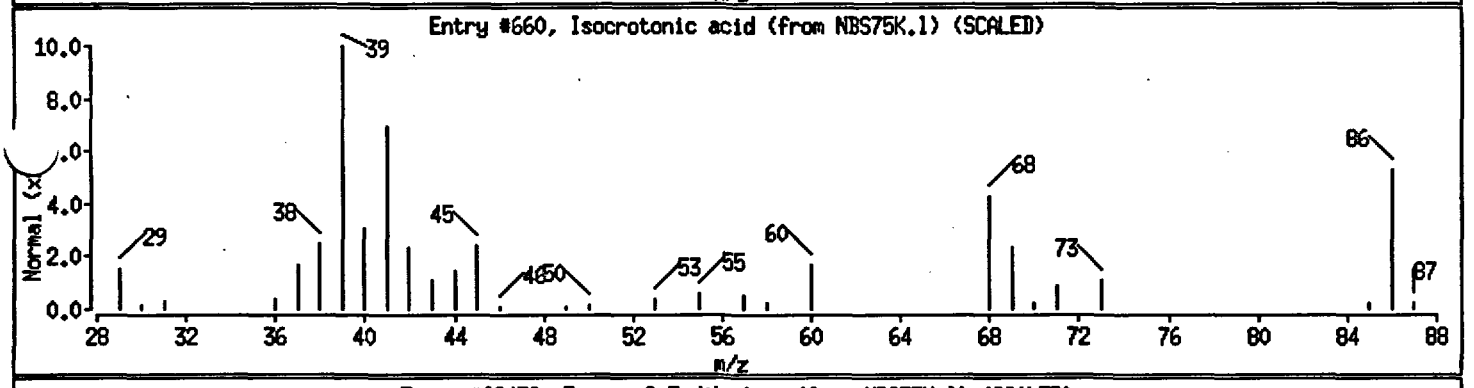
Volume Injected (uL) : 2.0

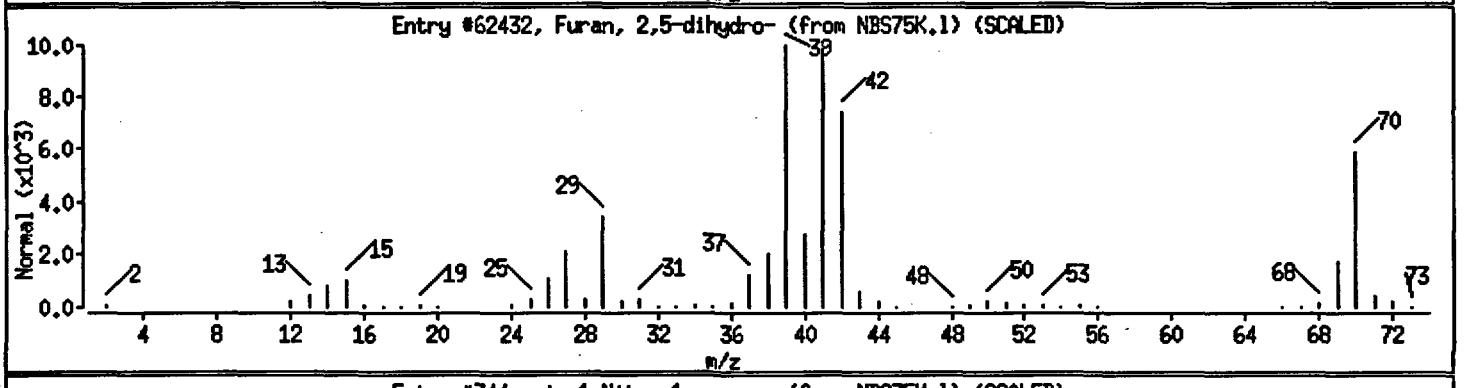
Column diameter : 0.25

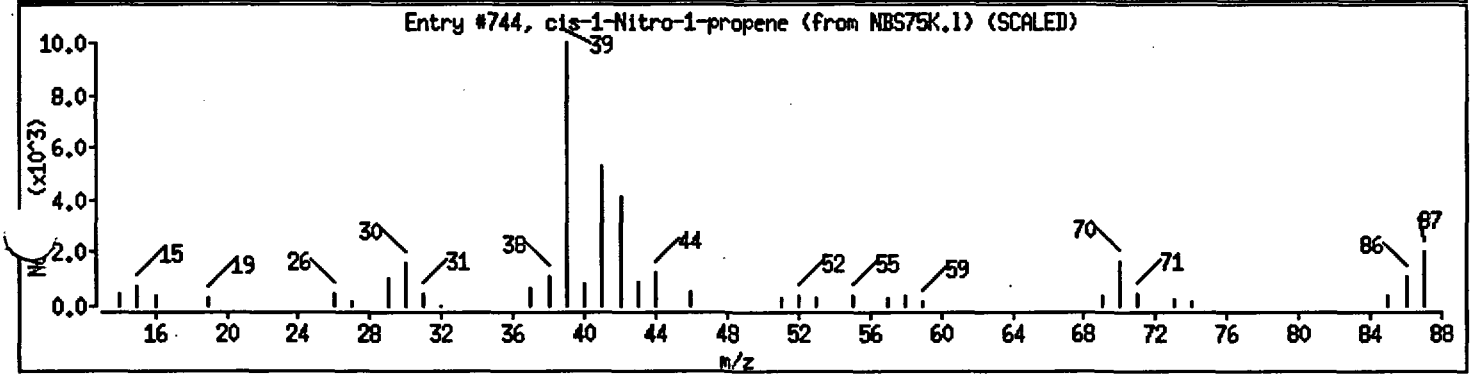
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Isocrotonic acid	503-64-0	NBS75K.1	660	40
Furan, 2,5-dihydro-	1708-29-8	NBS75K.1	62432	39
cis-1-Nitro-1-propene	27675-36-1	NBS75K.1	744	38









Data File: /chem/a.i/a960330a.b/a2403.d

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Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

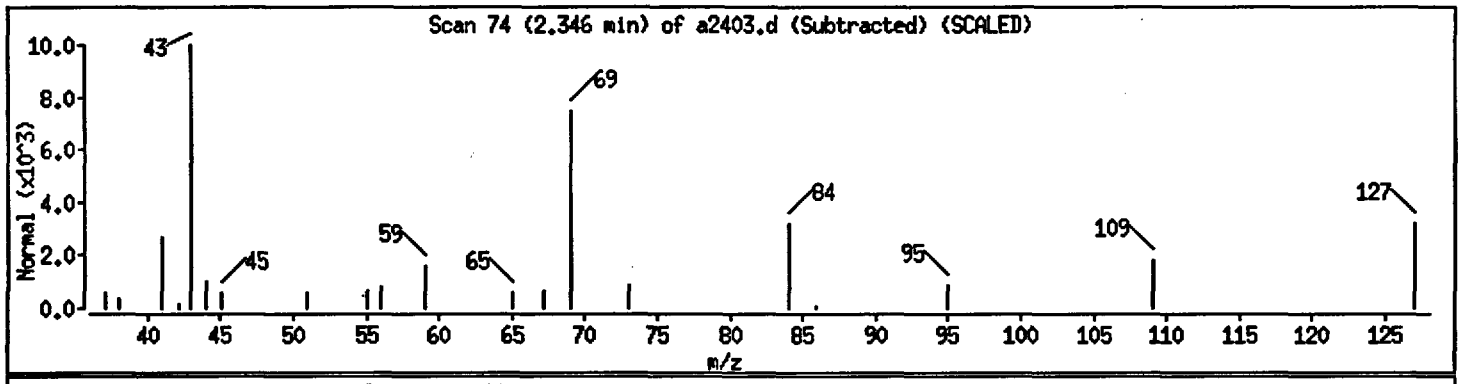
Column phase : XTI-5

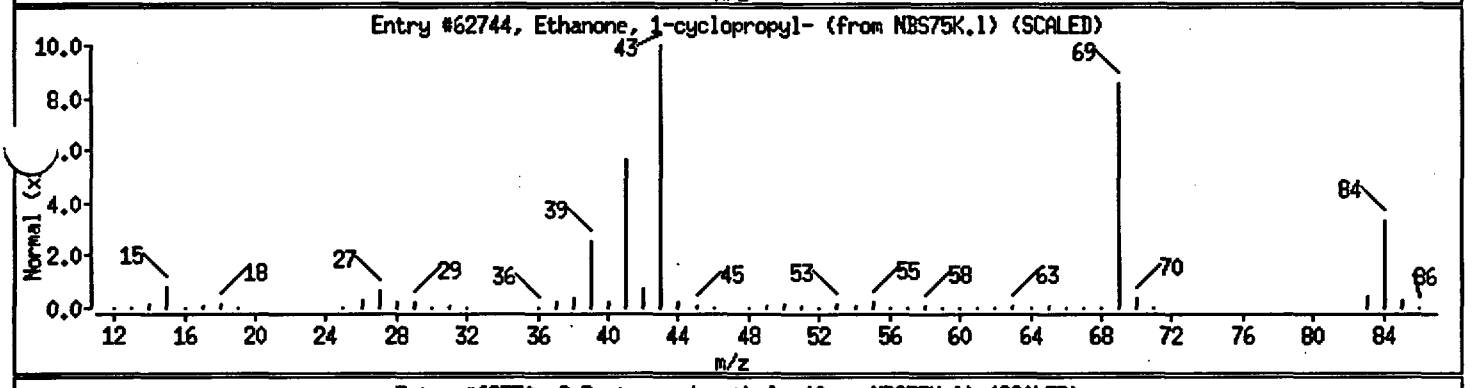
Column diameter : 0.25

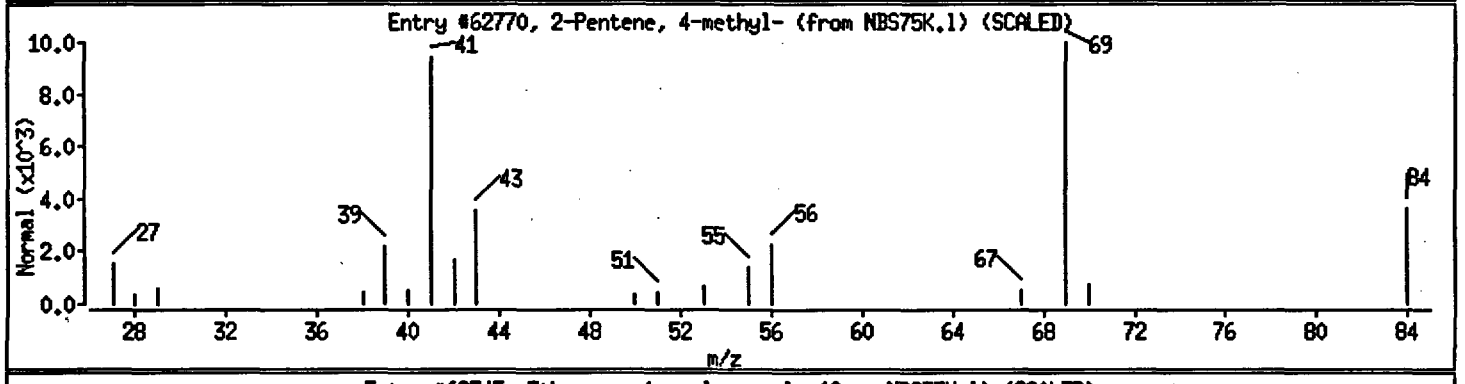
Volume Injected (uL) : 2.0

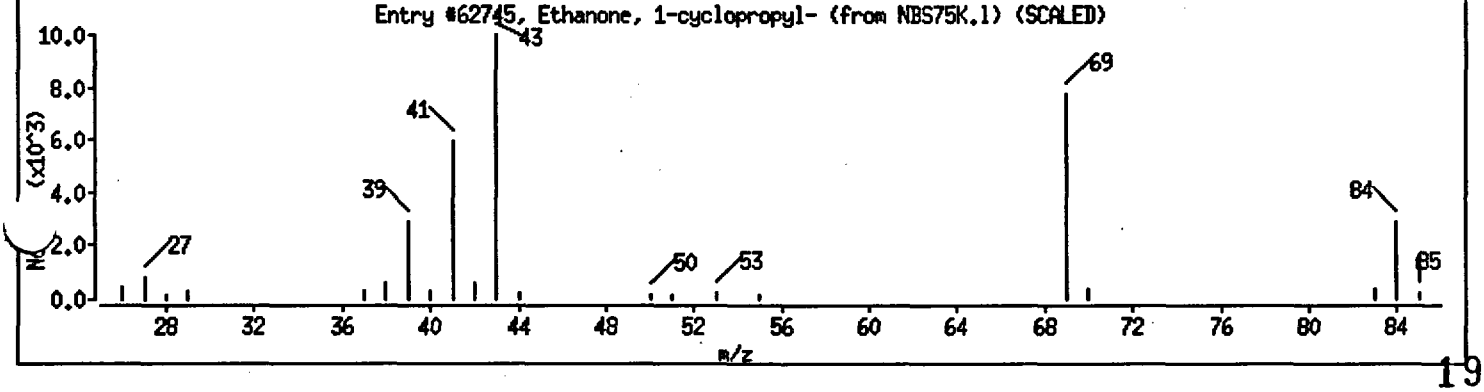
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Ethanone, 1-cyclopropyl-	765-43-5	NBS75K.l	62744	40
2-Pentene, 4-methyl-	4461-48-7	NBS75K.l	62770	37
Ethanone, 1-cyclopropyl-	765-43-5	NBS75K.l	62745	30







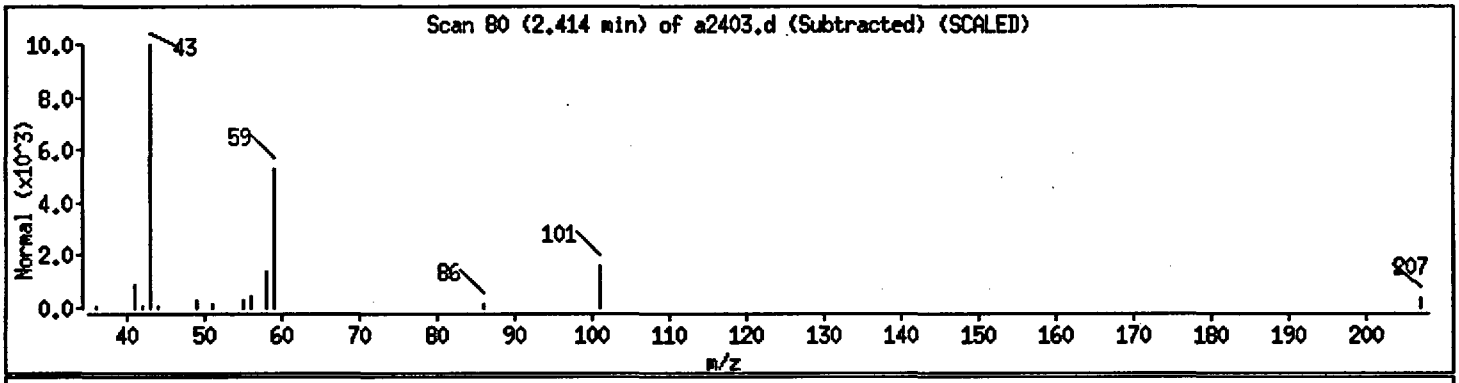


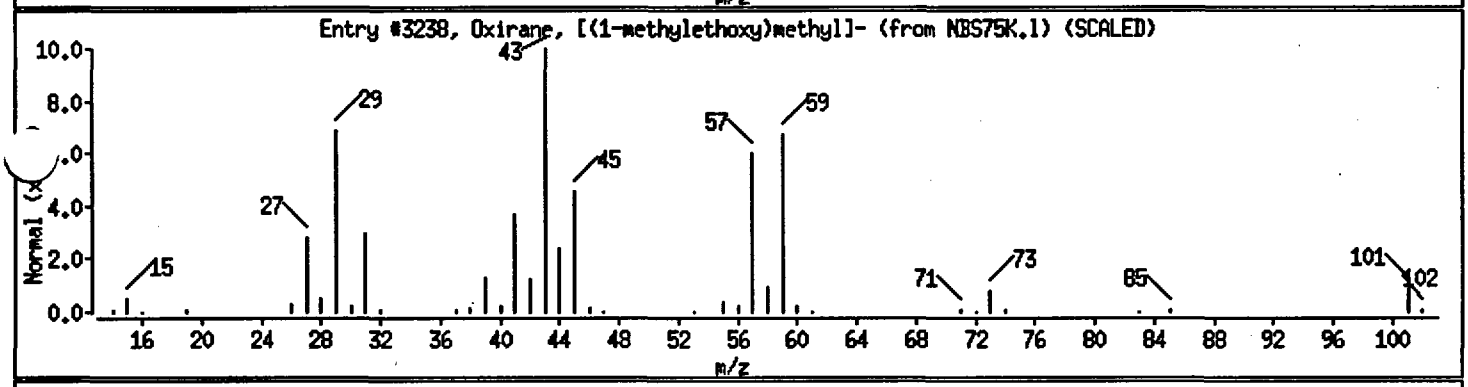
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

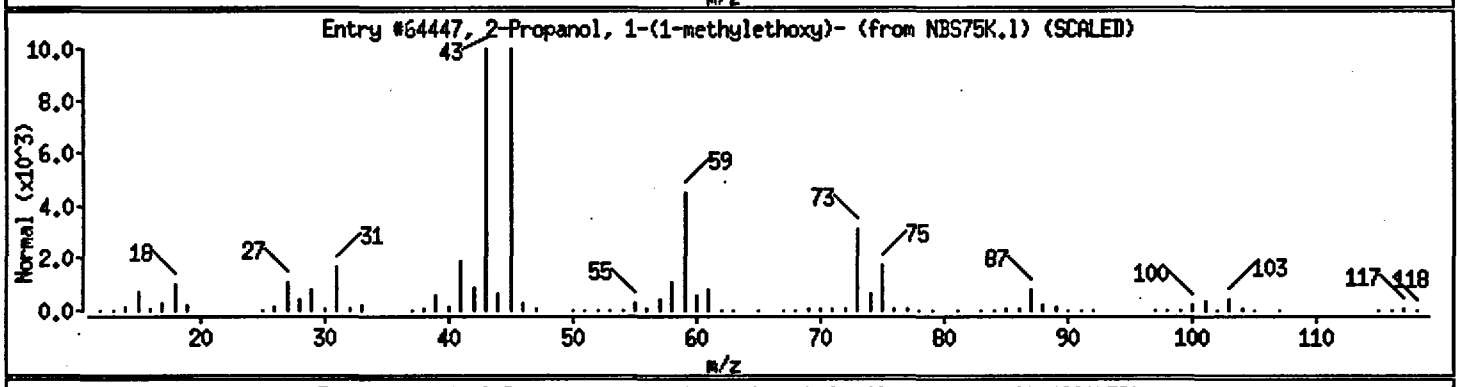
Column diameter : 0.25

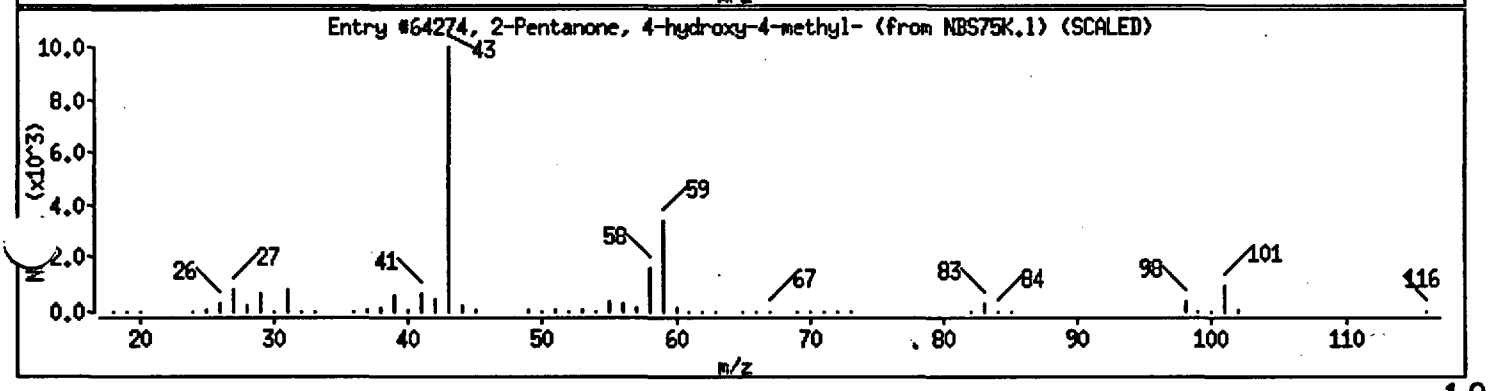
ALDOL CONDENSATE

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Oxirane, [(1-methylethoxy)methyl]-	4016-14-2	NBS75K.l	3238	38
2-Propanol, 1-(1-methylethoxy)-	3944-36-3	NBS75K.l	64447	36
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NBS75K.l	64274	34









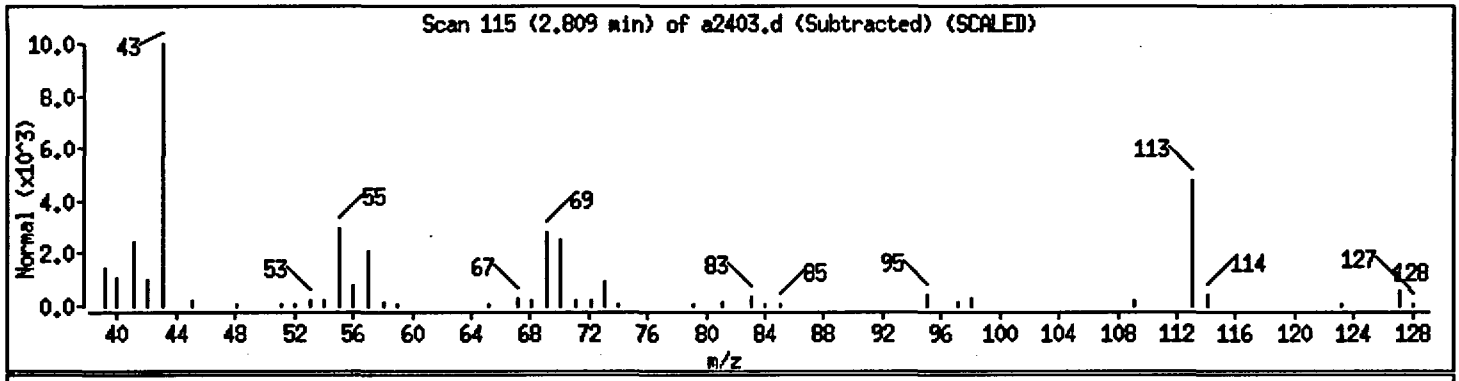
Data File: /chem/a.i/a960330a.b/a2403.d

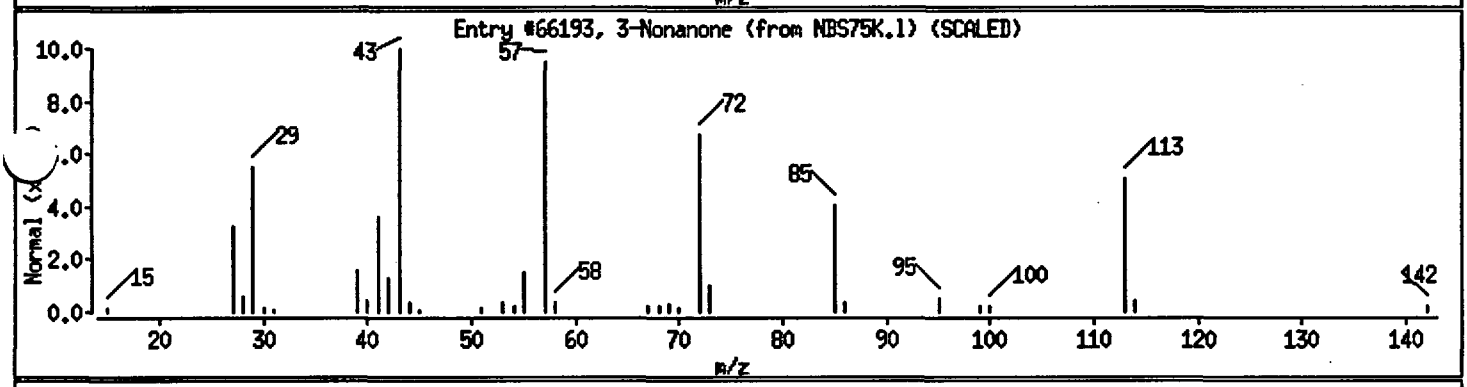
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

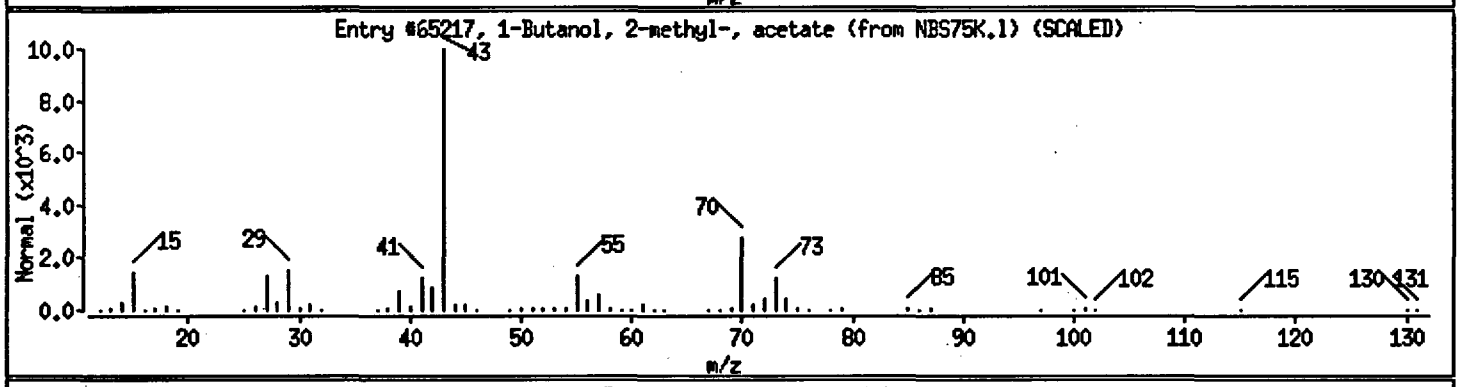
Column diameter : 0.25

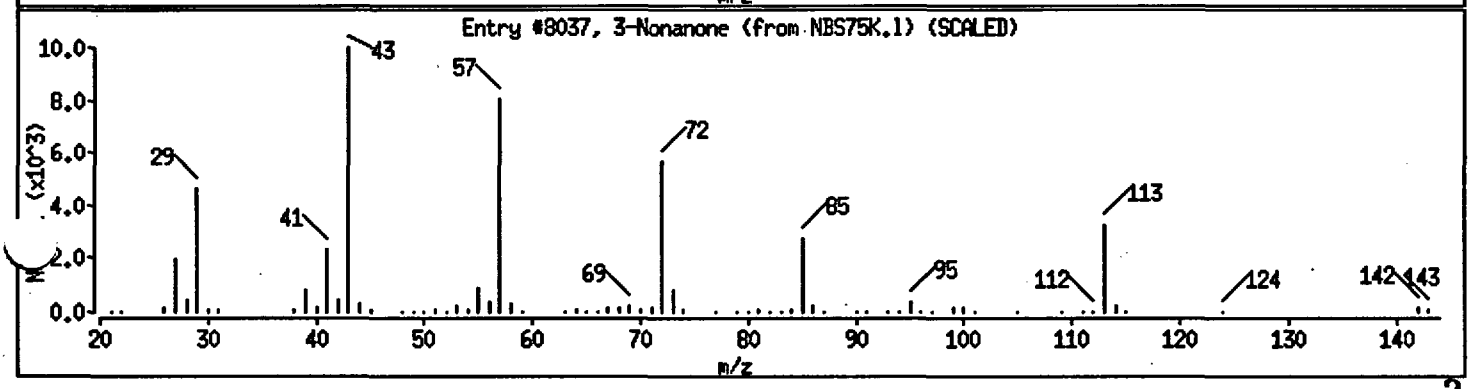
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
3-Nonanone	925-78-0	NBS75K.l	66193	33
1-Butanol, 2-methyl-, acetate	624-41-9	NBS75K.l	65217	32
3-Nonanone	925-78-0	NBS75K.l	8037	30







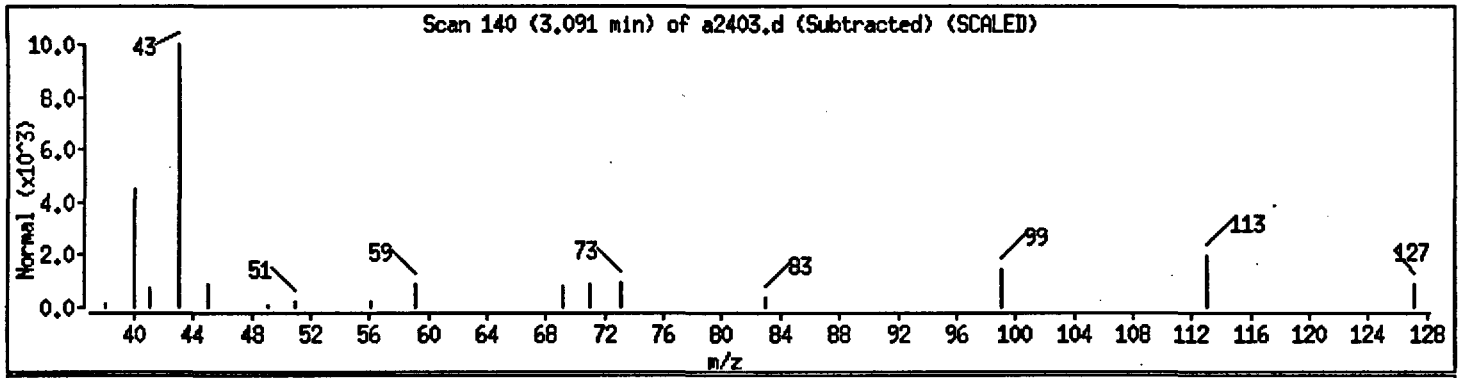


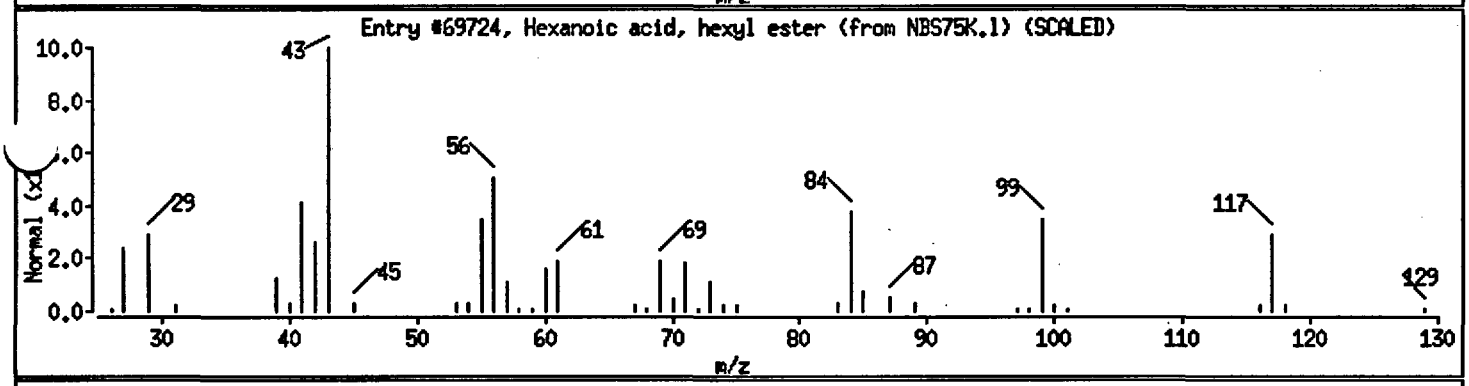
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

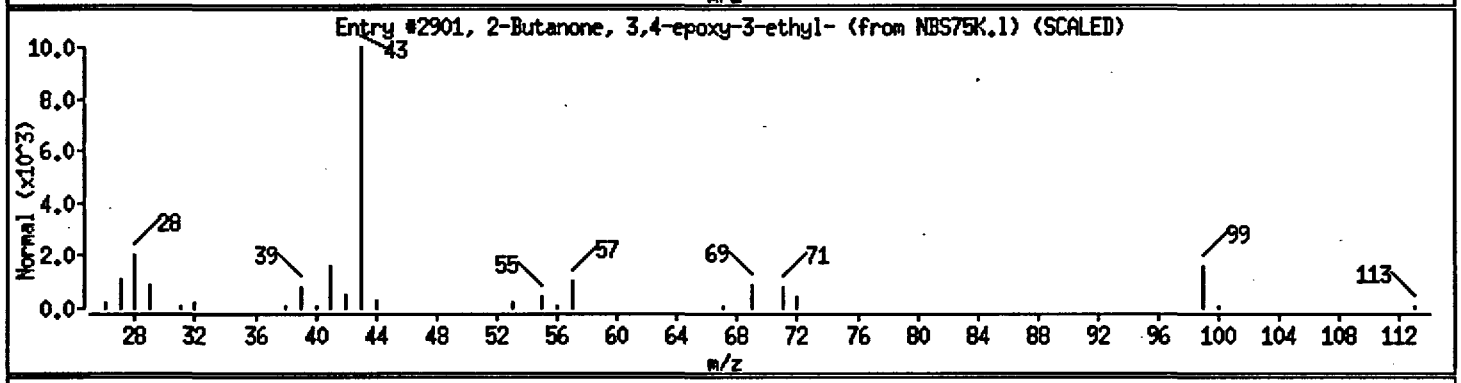
UNKNOWN

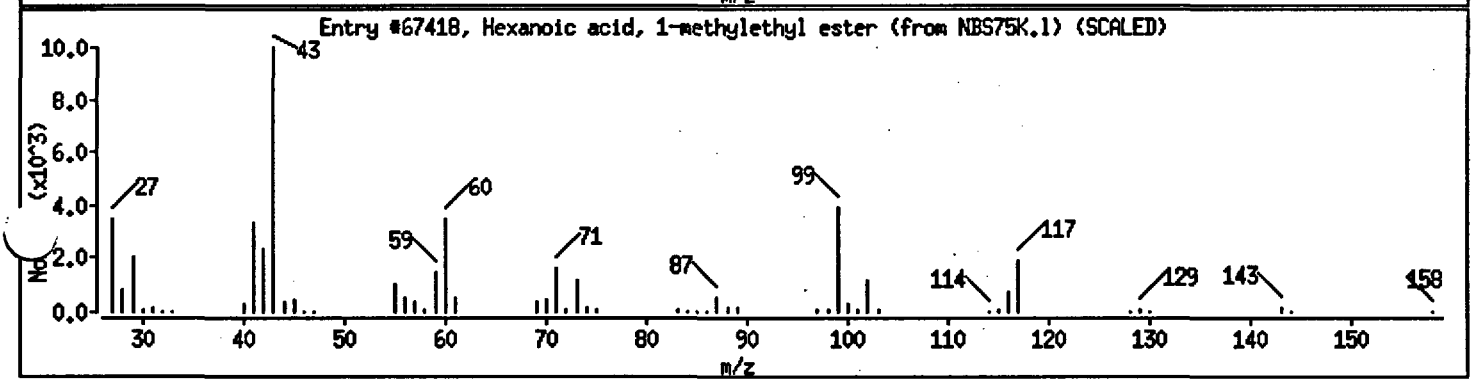
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Hexanoic acid, hexyl ester	6378-65-0	NBS75K.l	69724	13
2-Butanone, 3,4-epoxy-3-ethyl-	17257-82-8	NBS75K.l	2901	13
Hexanoic acid, 1-methylethyl ester	2311-46-8	NBS75K.l	67418	10







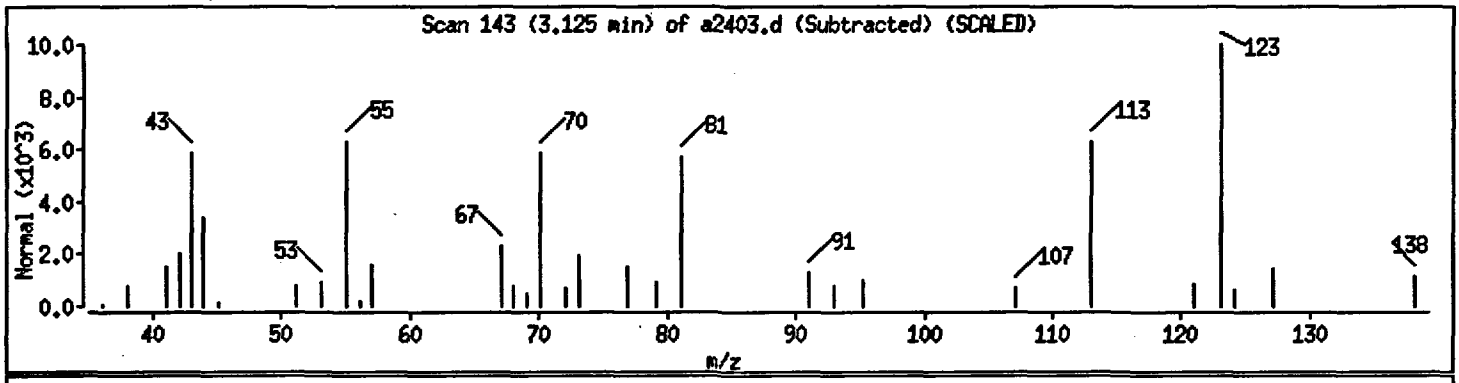


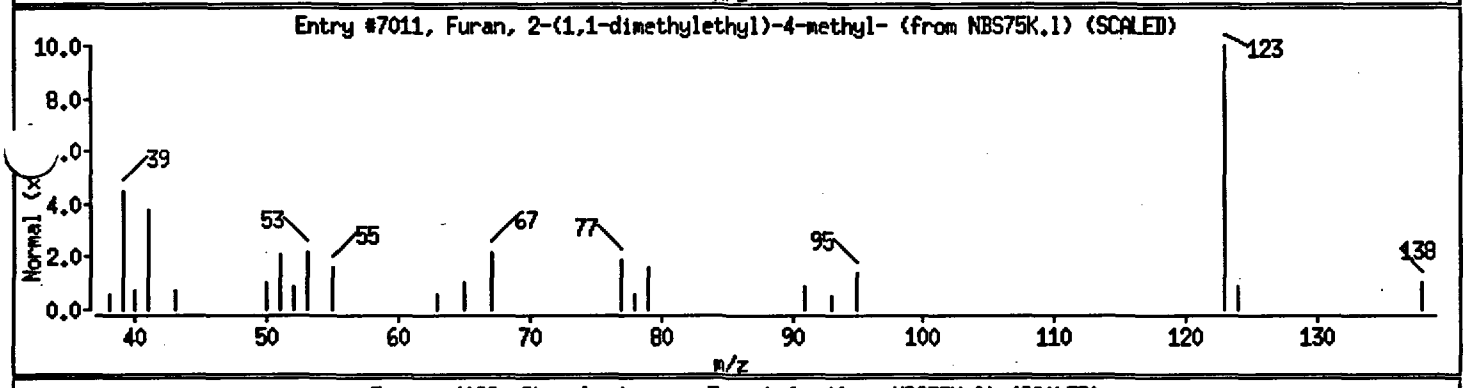
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

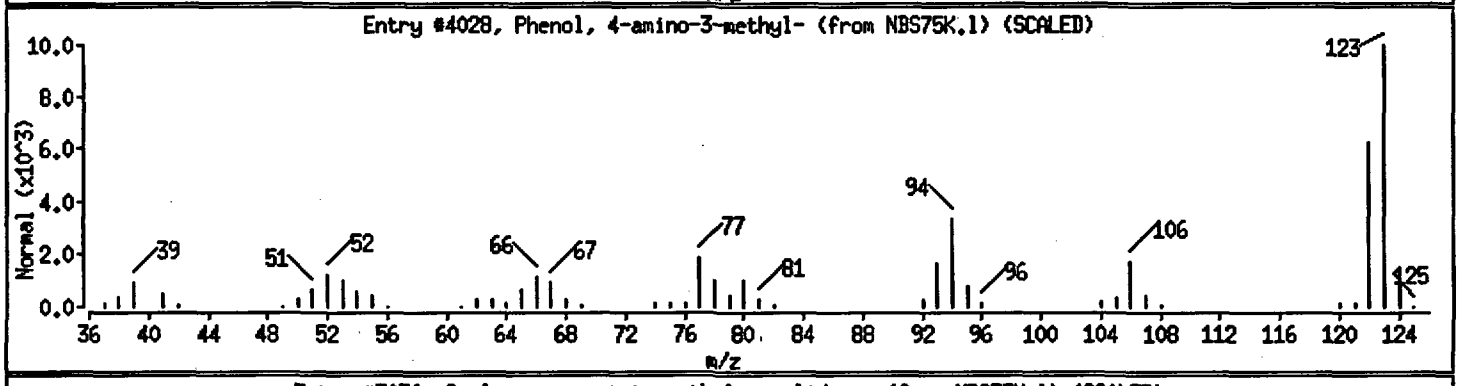
UNKNOWN

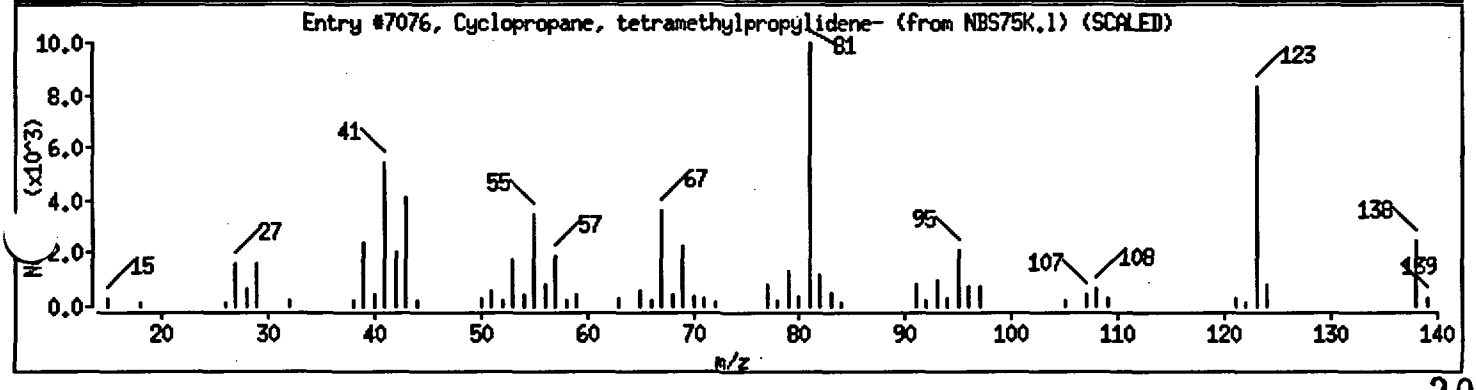
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Furan, 2-(1,1-dimethylethyl)-4-methyl-	6141-68-0	NBS75K.1	7011	27
Phenol, 4-amino-3-methyl-	2835-99-6	NBS75K.1	4028	22
Cyclopropane, tetramethylpropylidene-	24519-04-8	NBS75K.1	7076	18







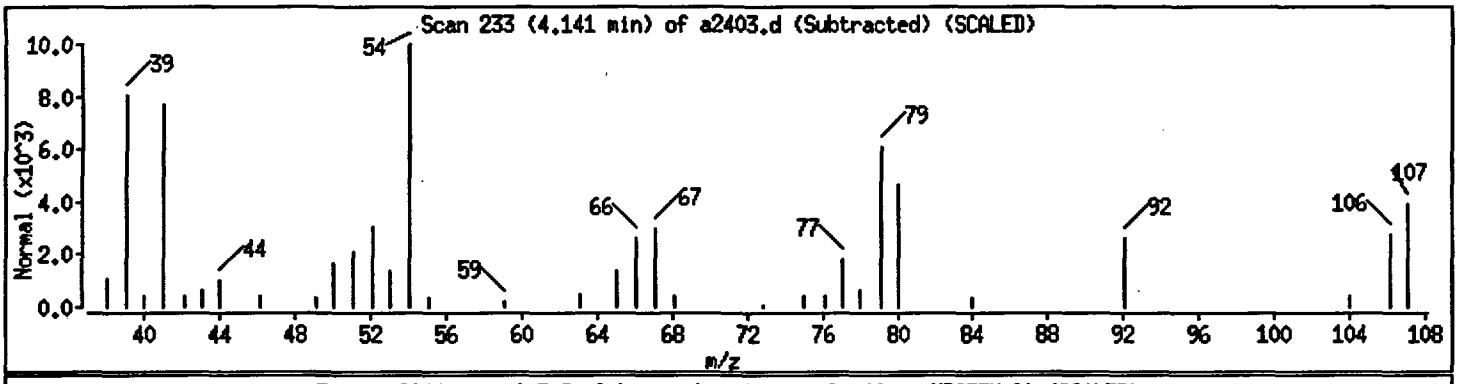


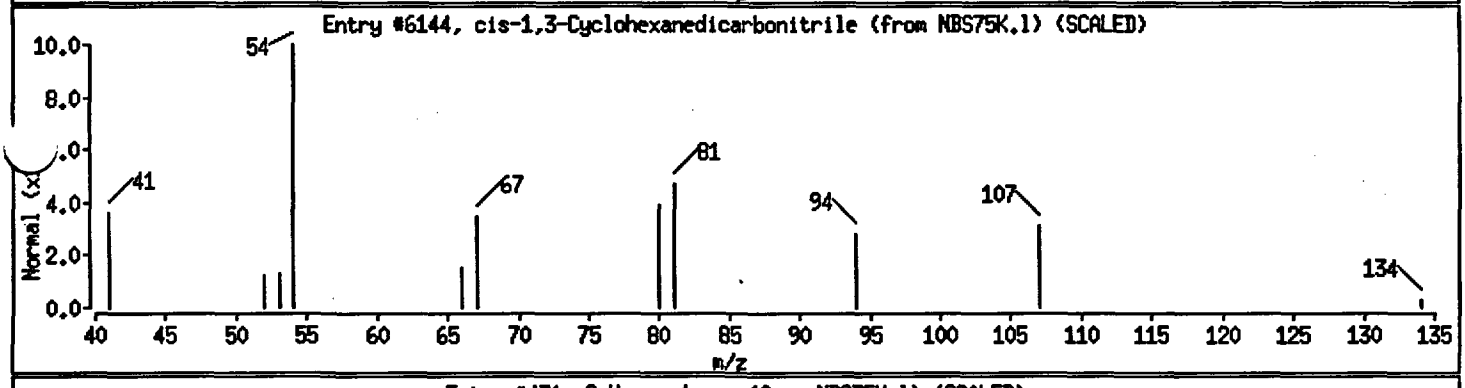
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

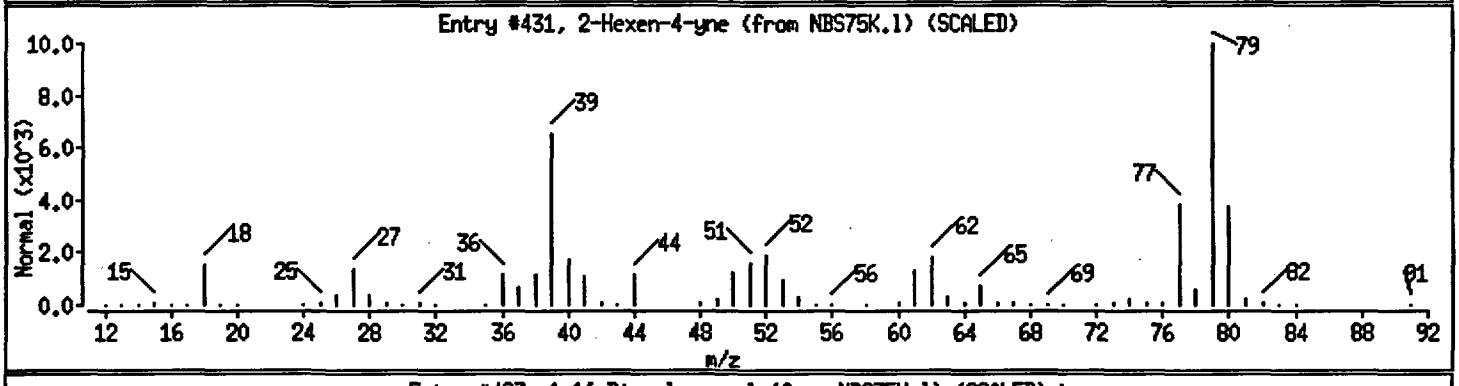
UNKNOWN

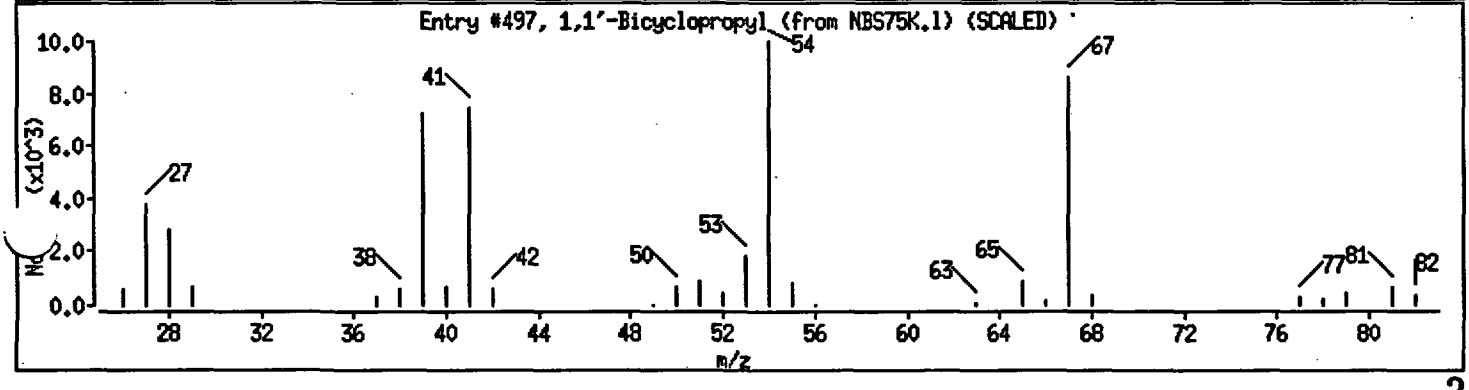
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
cis-1,3-Cyclohexanedicarbonitrile	10340-01-9	NBS75K.l	6144	50
2-Hexen-4-yne	14092-20-7	NBS75K.l	431	41
1,1'-Bicyclopropyl	5685-46-1	NBS75K.l	497	33





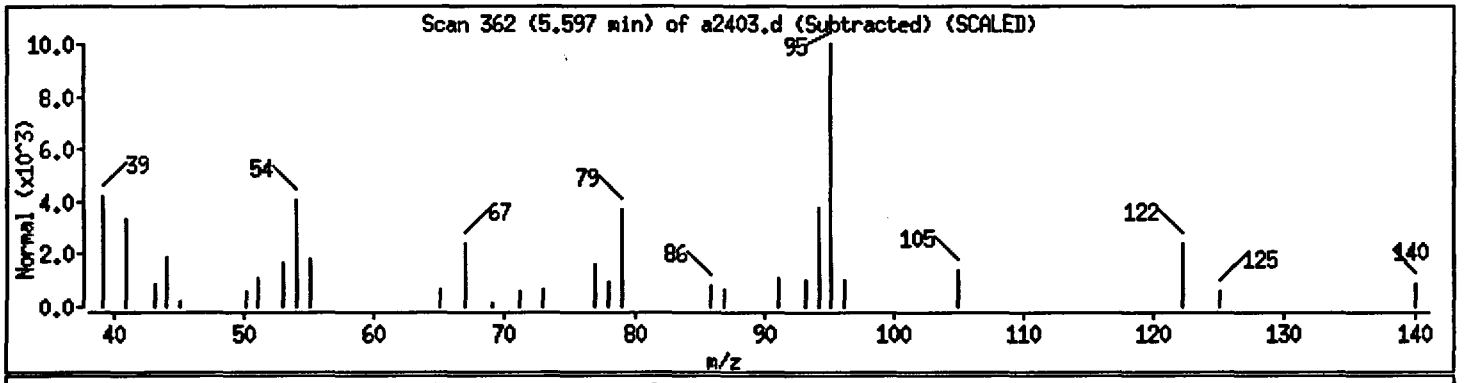


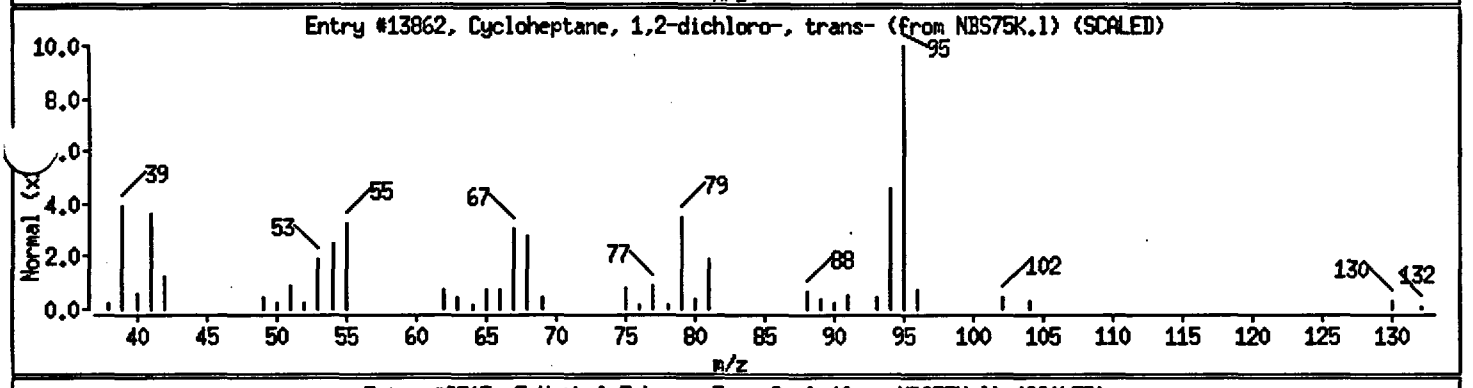


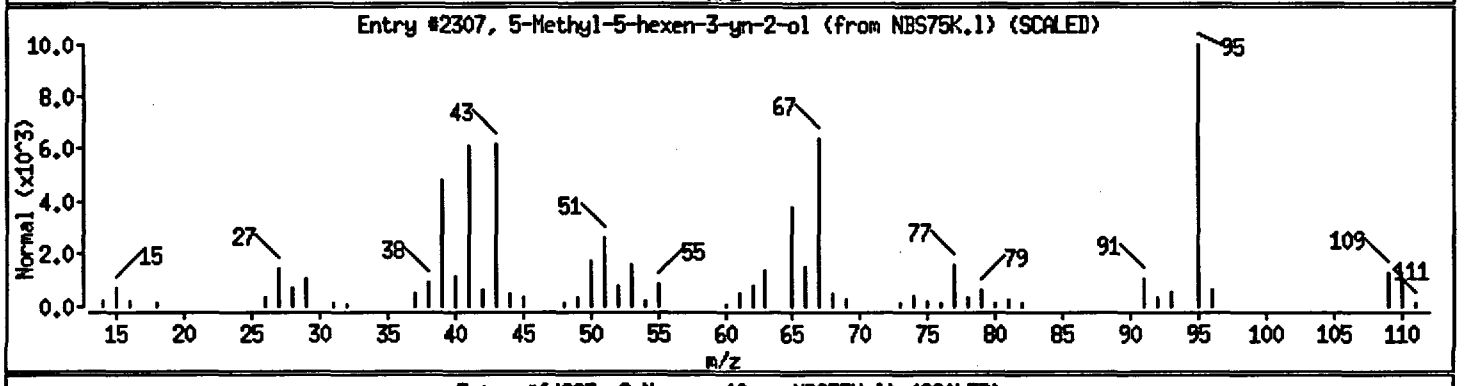
Data File: /chem/a.i/a960330a.b/a2403.d

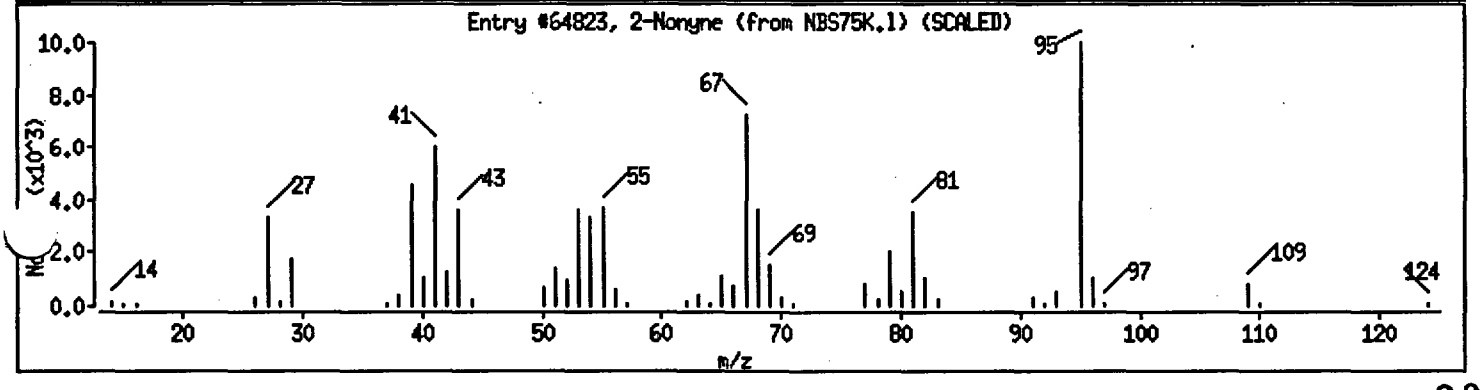
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Cycloheptane, 1,2-dichloro-, trans-	32616-83-4	NBS75K.1	13862	50
5-Methyl-5-hexen-3-yn-2-ol	68017-33-4	NBS75K.1	2307	37
2-Nonyne	19447-29-1	NBS75K.1	64823	34





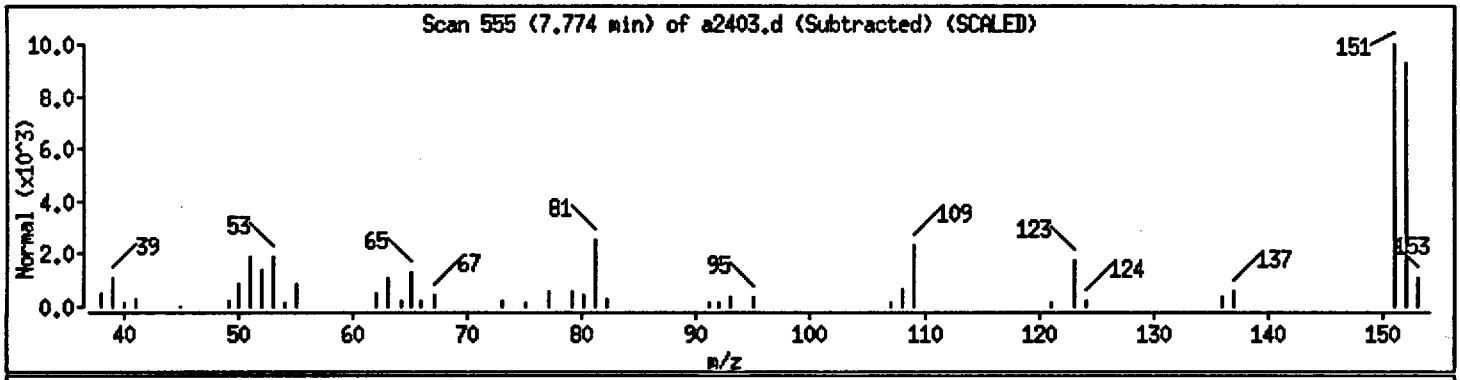


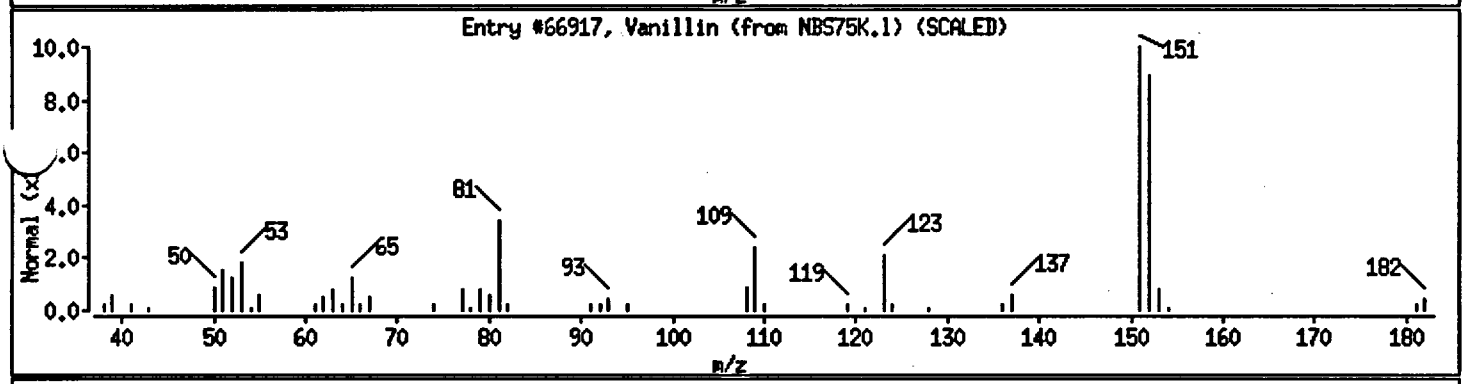


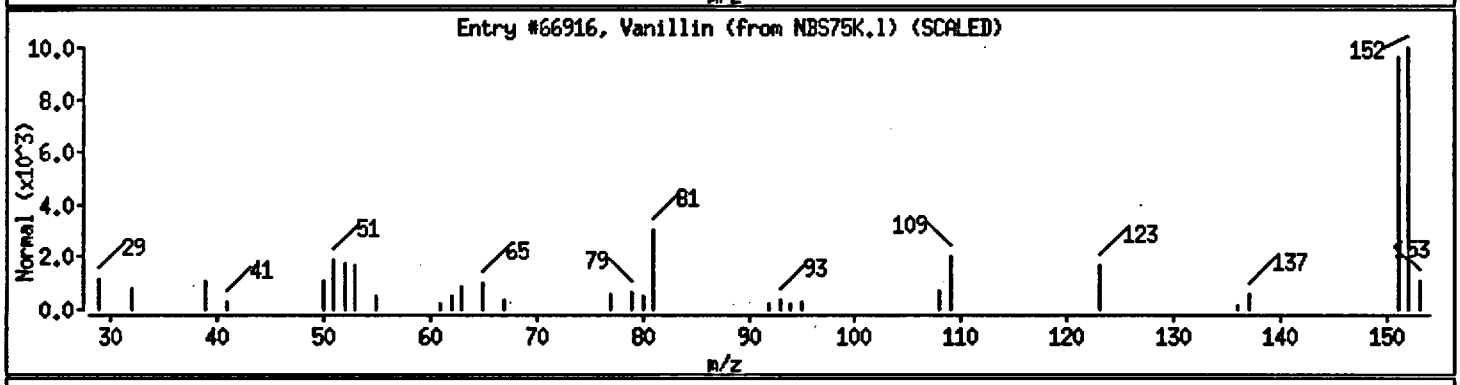
Data File: /chem/a.i/a960330a.b/a2403.d

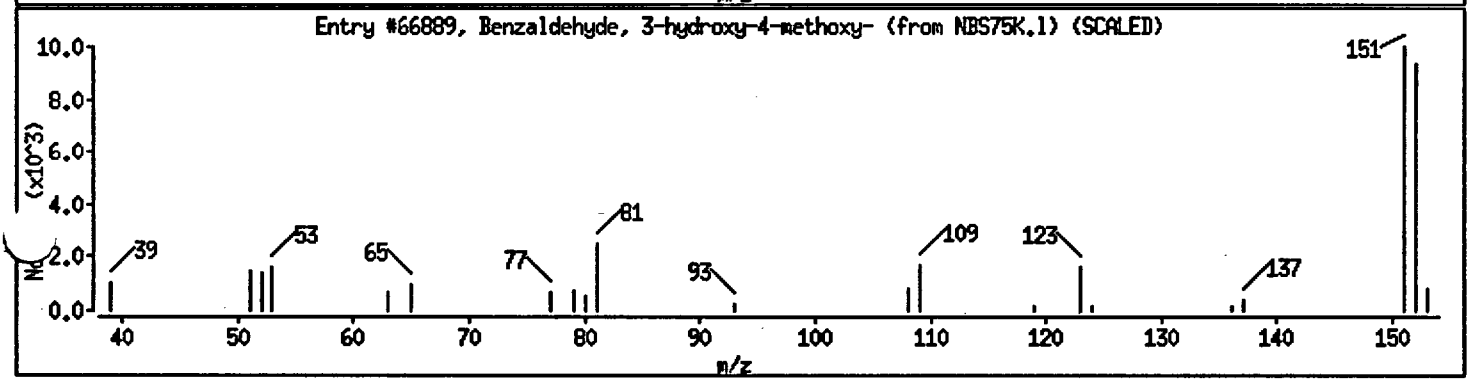
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Vanillin	121-33-5	NBS75K.l	66917	97
Vanillin	121-33-5	NBS75K.l	66916	96
Benzaldehyde, 3-hydroxy-4-methoxy-	621-59-0	NBS75K.l	66889	94







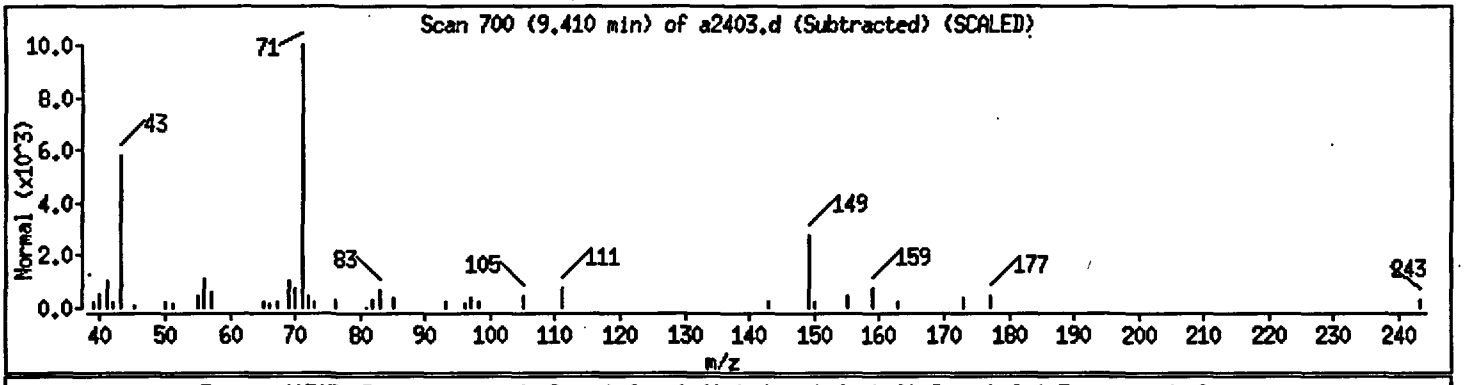


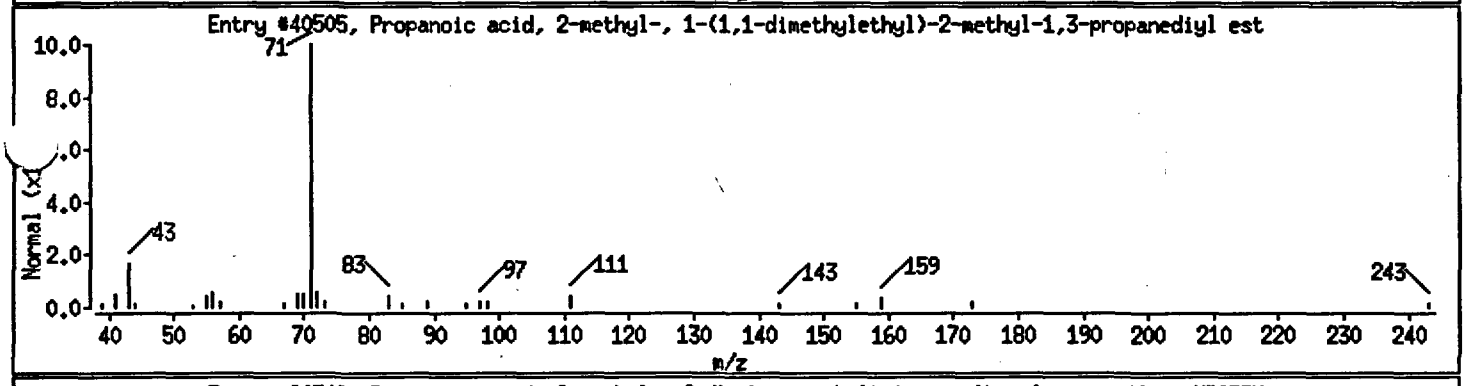
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

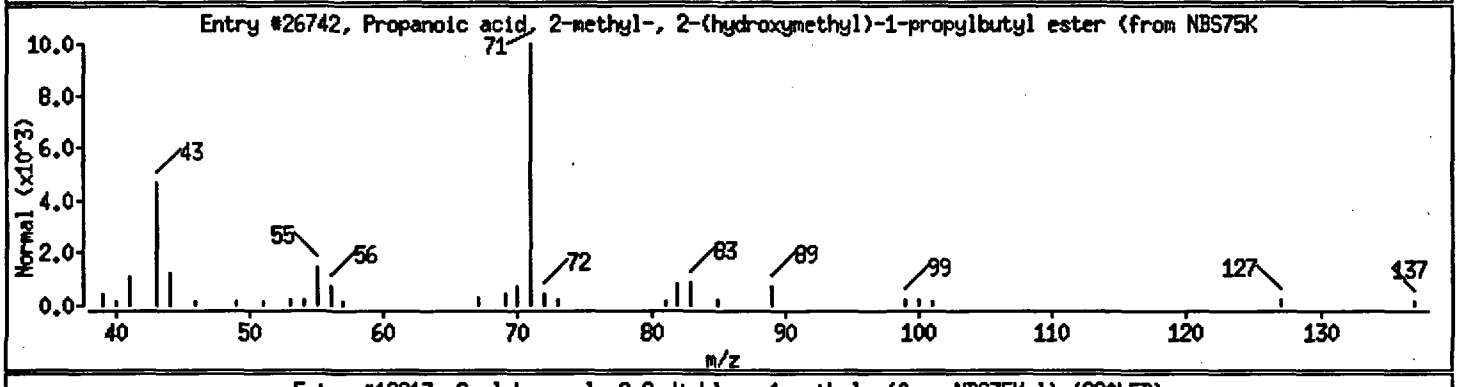
UNKNOWN ORGANIC ACID

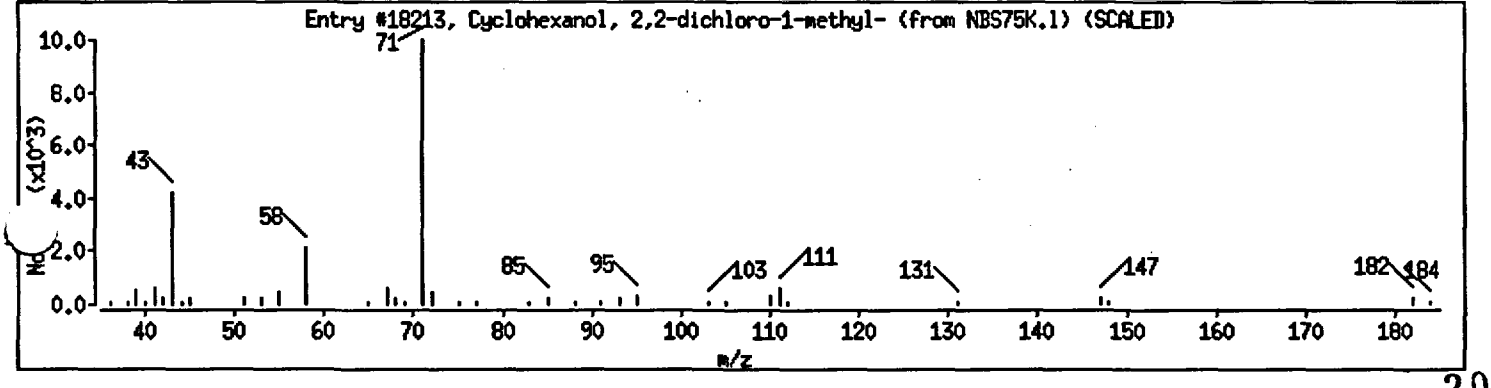
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Propanoic acid, 2-methyl-, 1-(1,1-dimeth	74381-40-1	NBS75K.l	40505	59
Propanoic acid, 2-methyl-, 2-(hydroxymet	74367-32-1	NBS75K.l	26742	38
Cyclohexanol, 2,2-dichloro-1-methyl-	0-00-0	NBS75K.l	18213	38









Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

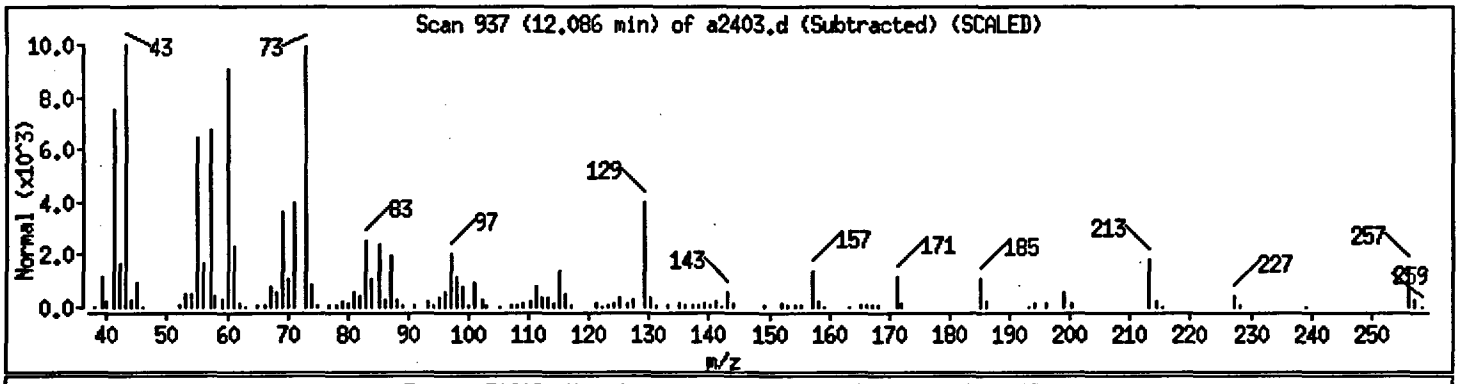
Column phase : XTI-5

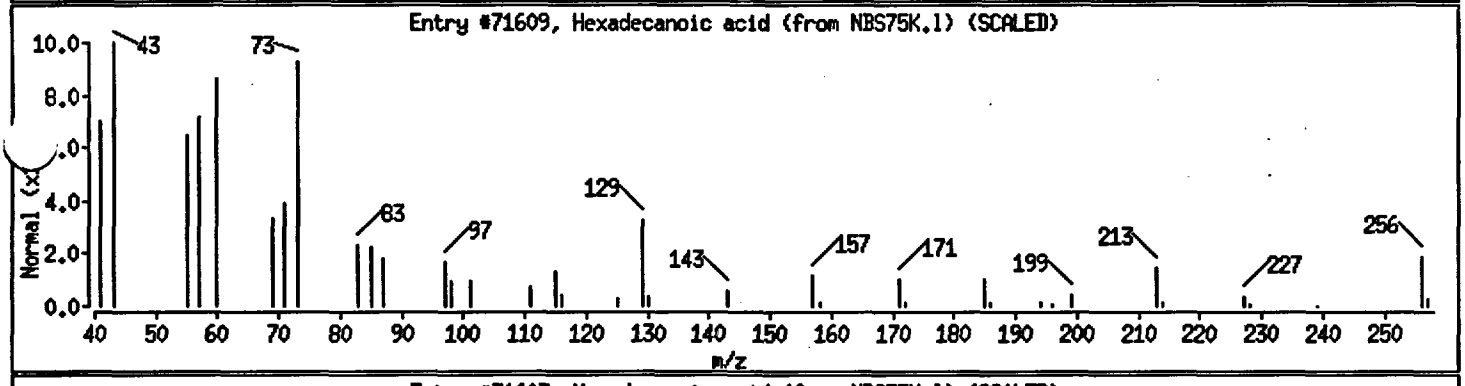
Volume Injected (uL) : 2.0

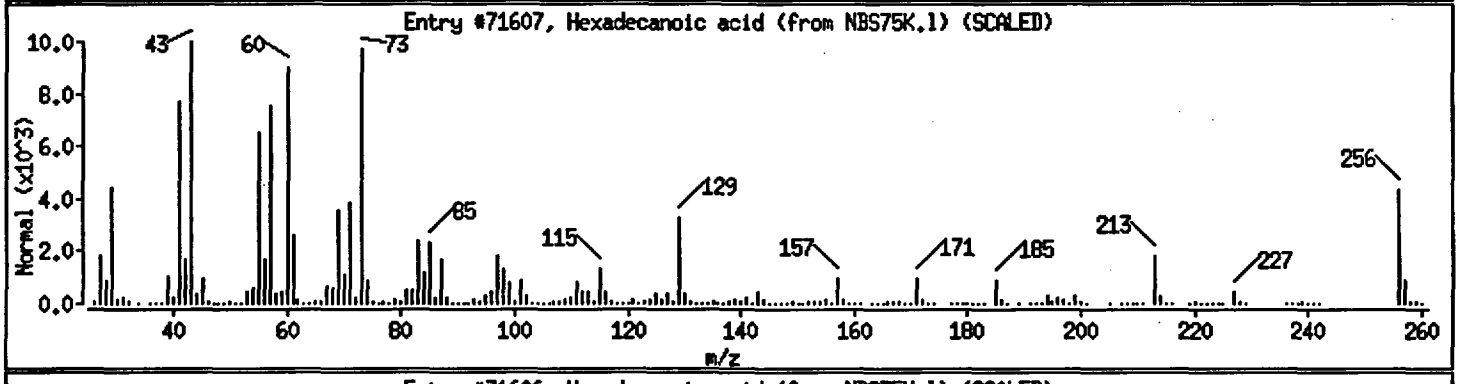
Column diameter : 0.25

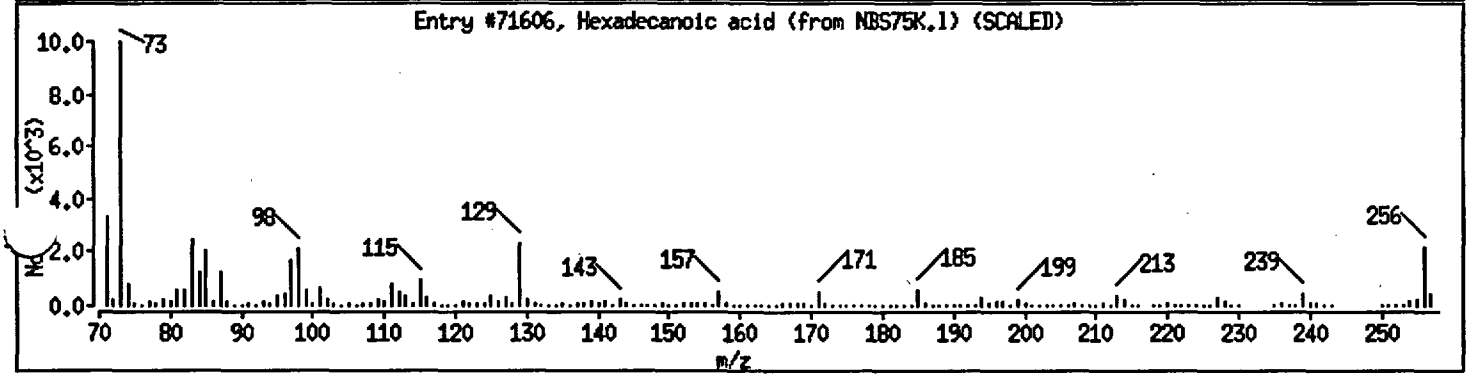
UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Hexadecanoic acid	57-10-3	NBS75K.1	71609	99
Hexadecanoic acid	57-10-3	NBS75K.1	71607	98
Hexadecanoic acid	57-10-3	NBS75K.1	71606	94









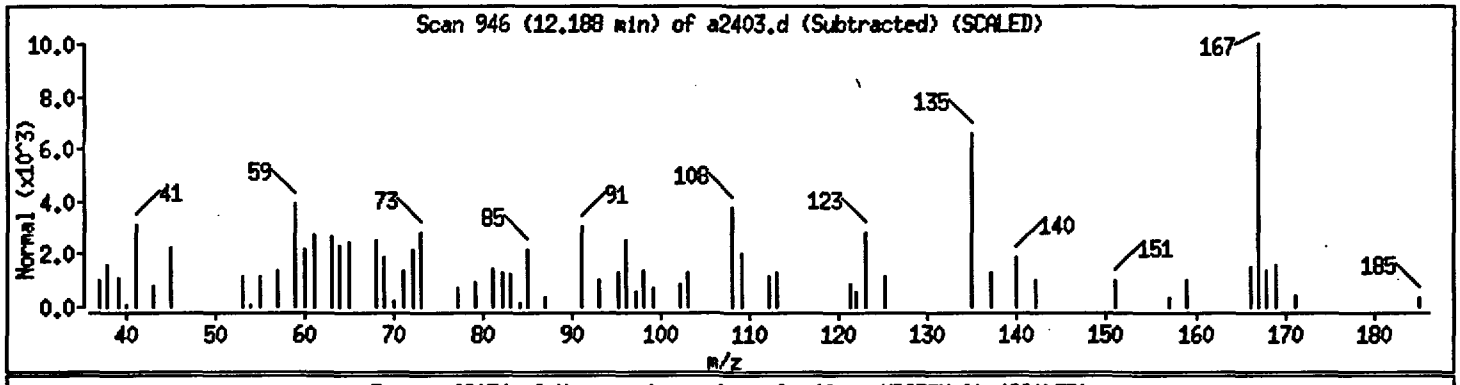
Data File: /chem/a.i/a960330a.b/a2403.d

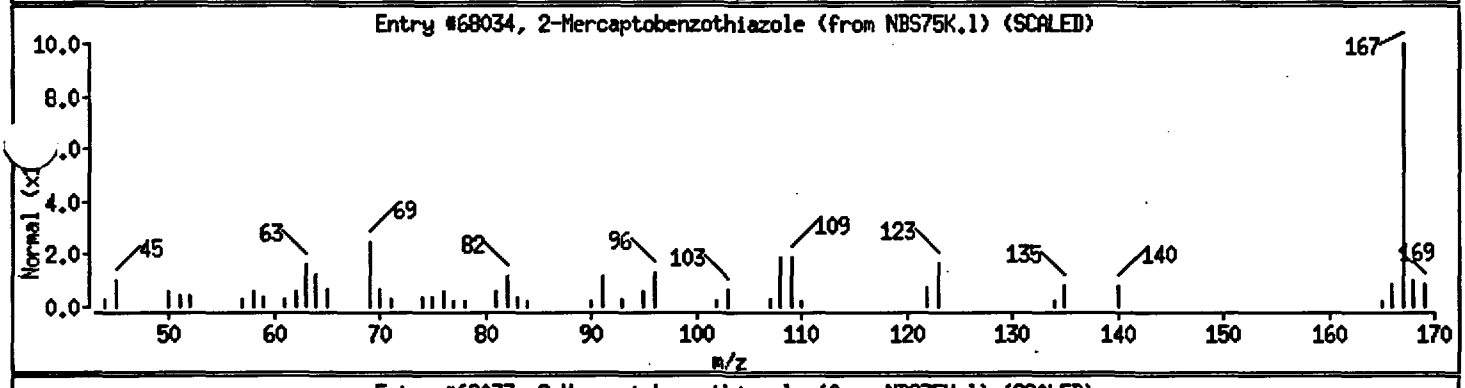
Date : 30-MAR-1996 19:46
Instrument : a.i.
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

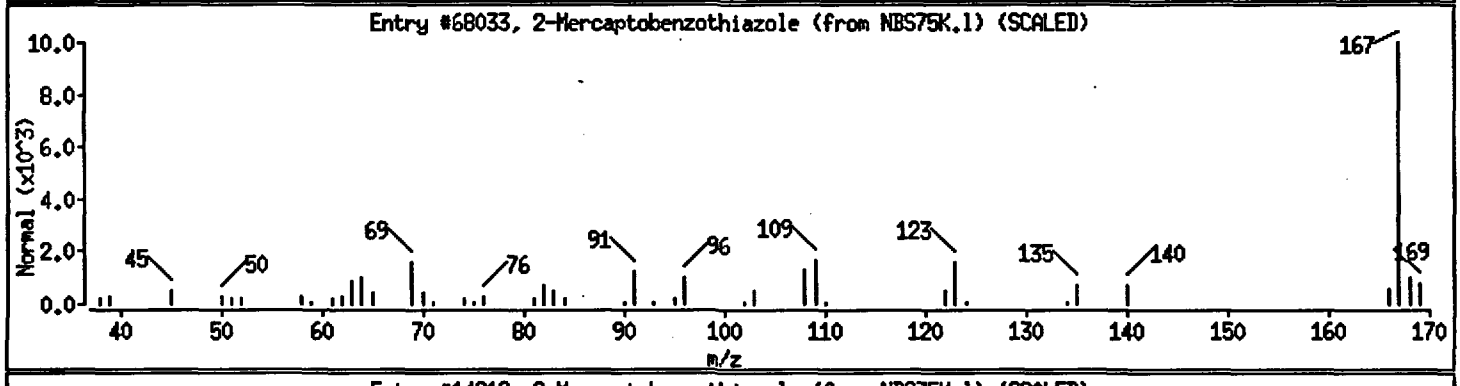
4-5-96
DH

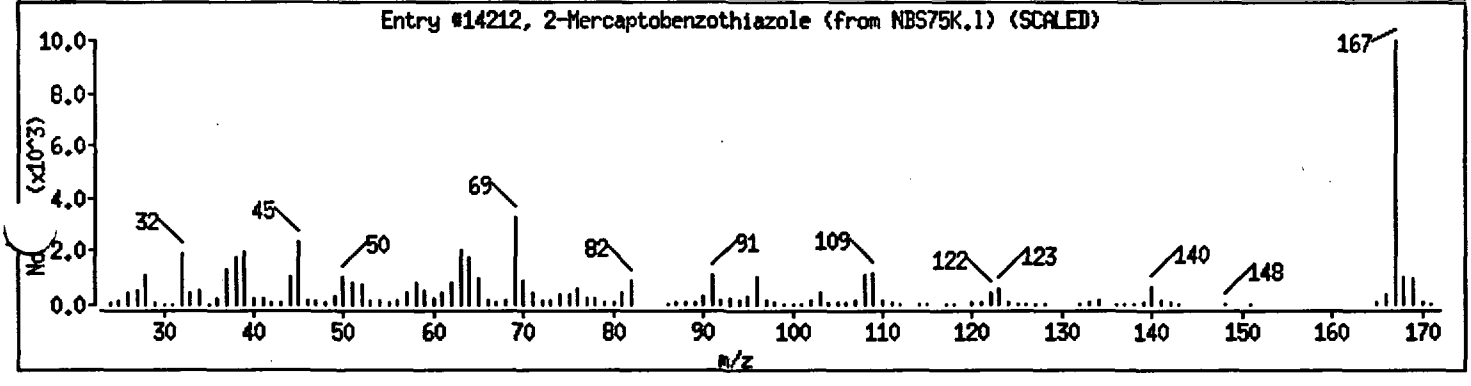
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
~~2-Mercaptobenzothiazole~~	~~149-30-4~~	NBS75K.l	68034	45
2-Mercaptobenzothiazole	149-30-4	NBS75K.l	68033	38
2-Mercaptobenzothiazole	149-30-4	NBS75K.l	14212	35







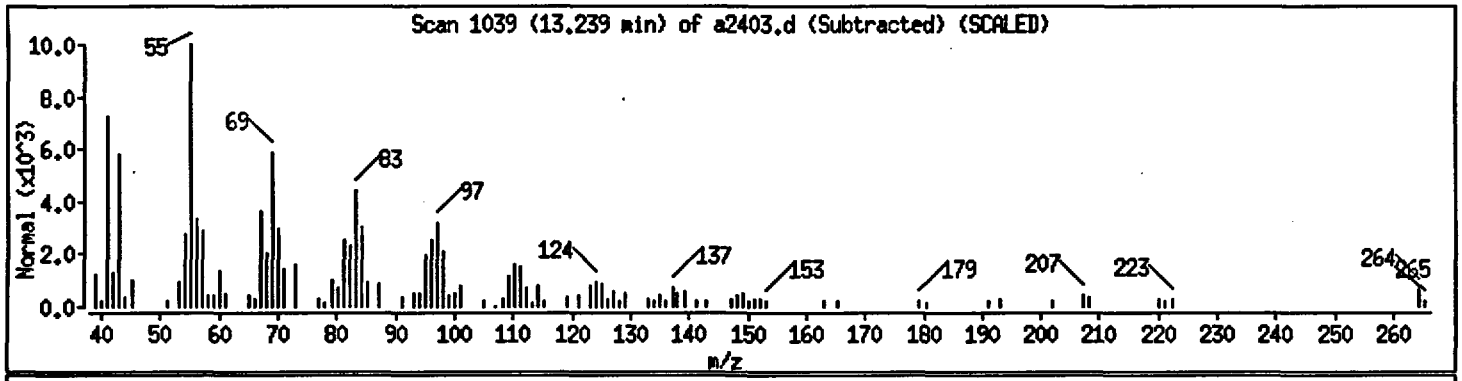


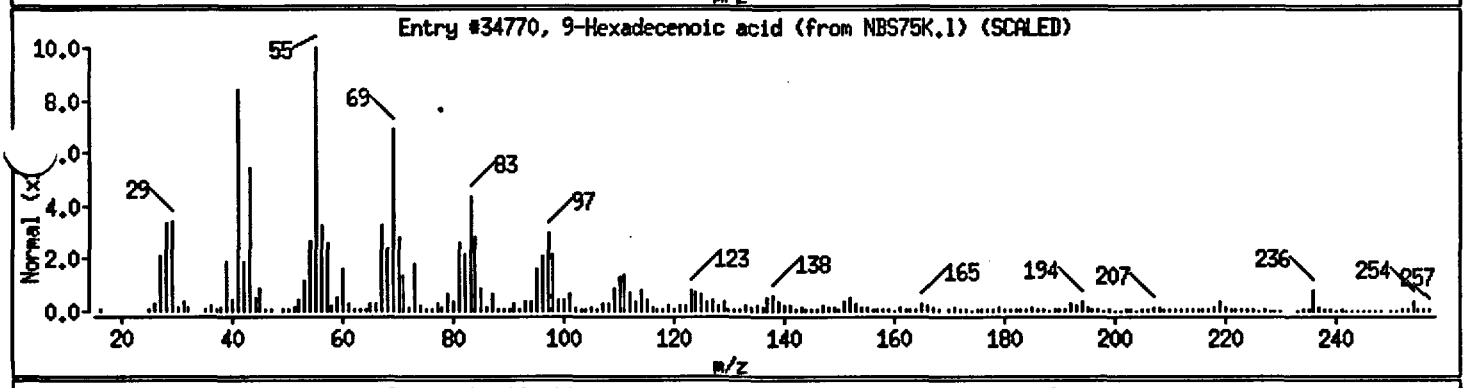
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

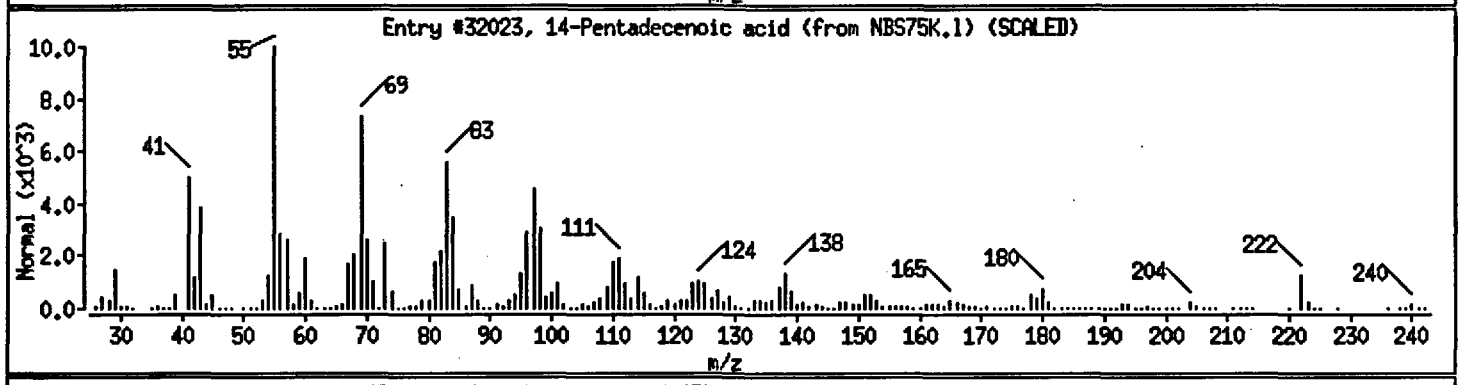
UNKNOWN ORGANIC ACID

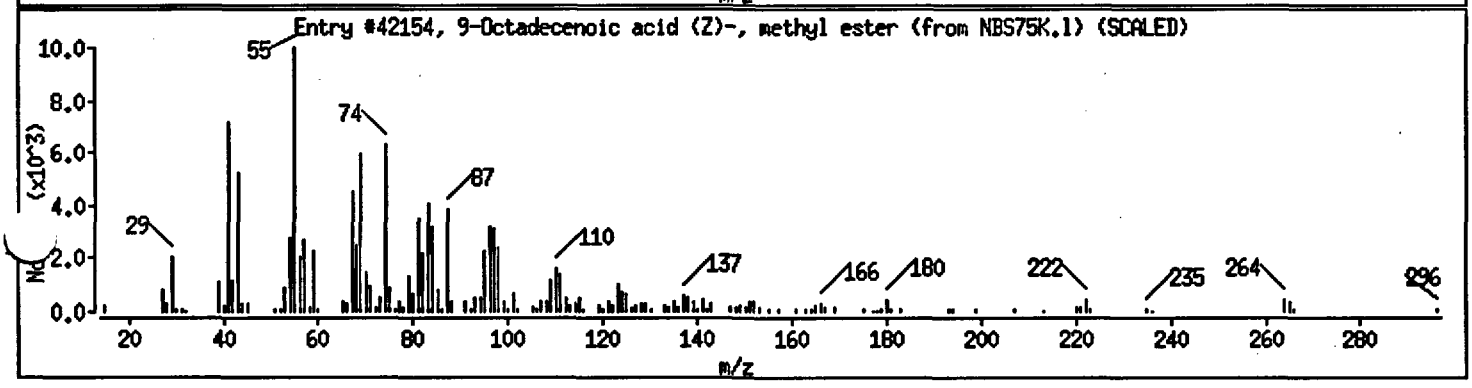
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
9-Hexadecenoic acid	2091-29-4	NBS75K.l	34770	90
14-Pentadecenoic acid	17351-34-7	NBS75K.l	32023	87
9-Octadecenoic acid (Z)-, methyl ester	112-62-9	NBS75K.l	42154	87







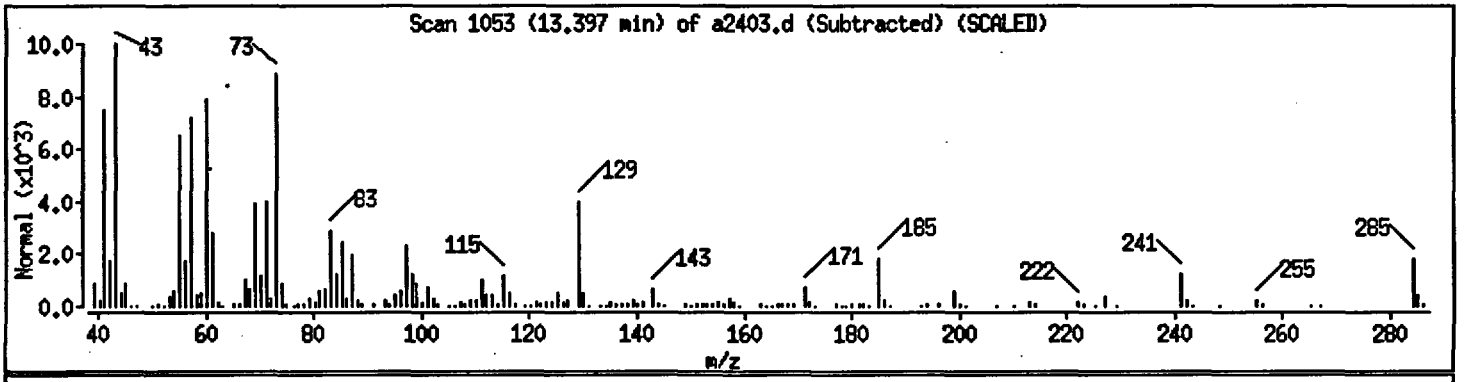


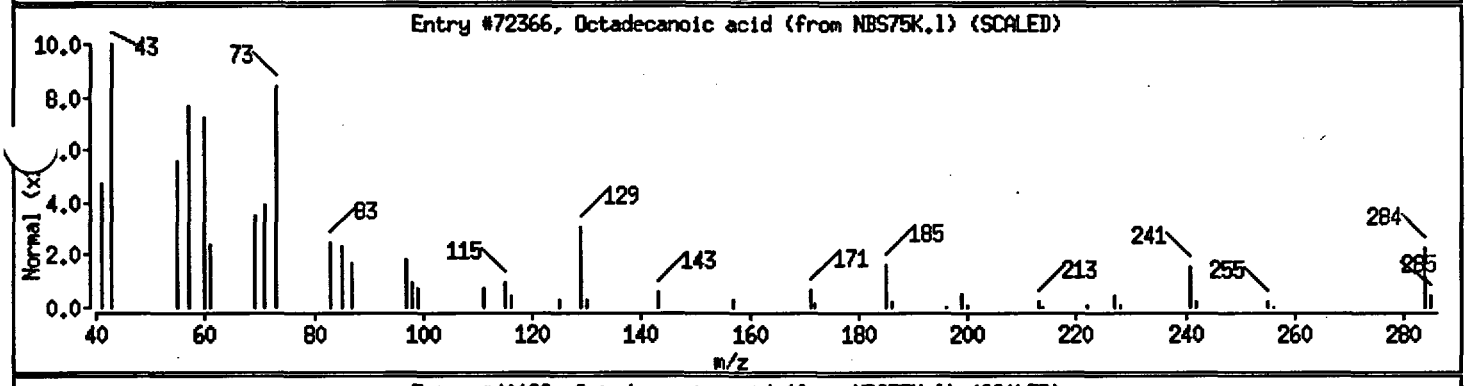
Data File: /chem/a.i/a960330a.b/a2403.d

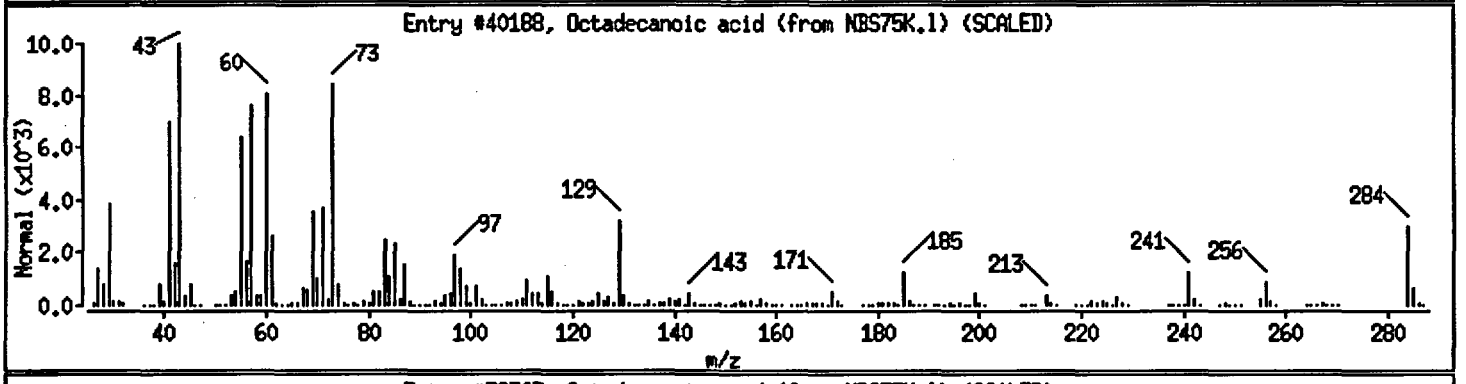
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Column diameter : 0.25
Volume Injected (uL) : 2.0

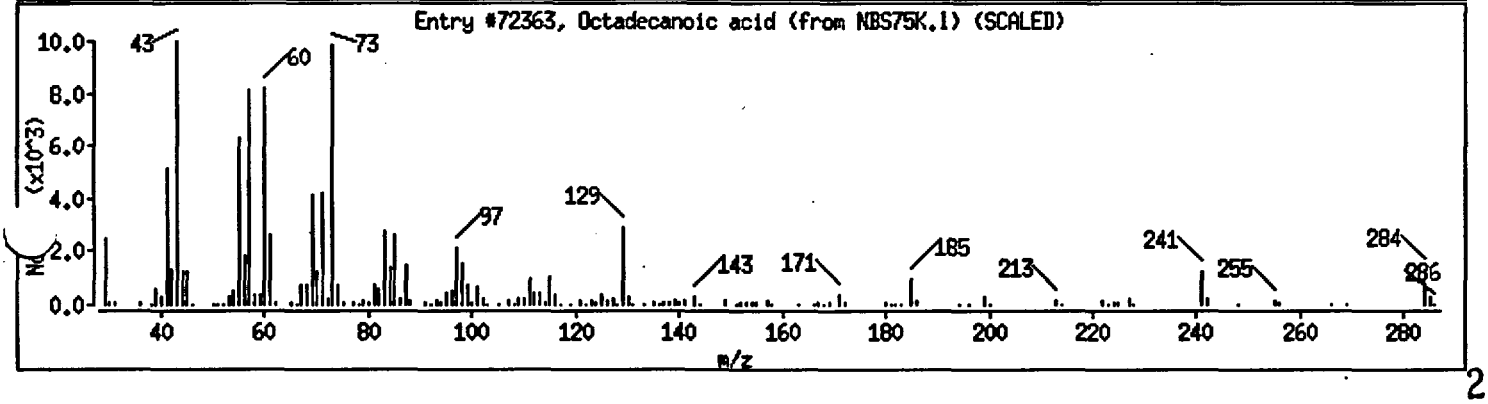
UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Octadecanoic acid	57-11-4	NBS75K.l	72366	99
Octadecanoic acid	57-11-4	NBS75K.l	40188	99
Octadecanoic acid	57-11-4	NBS75K.l	72363	99









Data File: /chem/a.i/a960330a.b/a2403.d

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Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

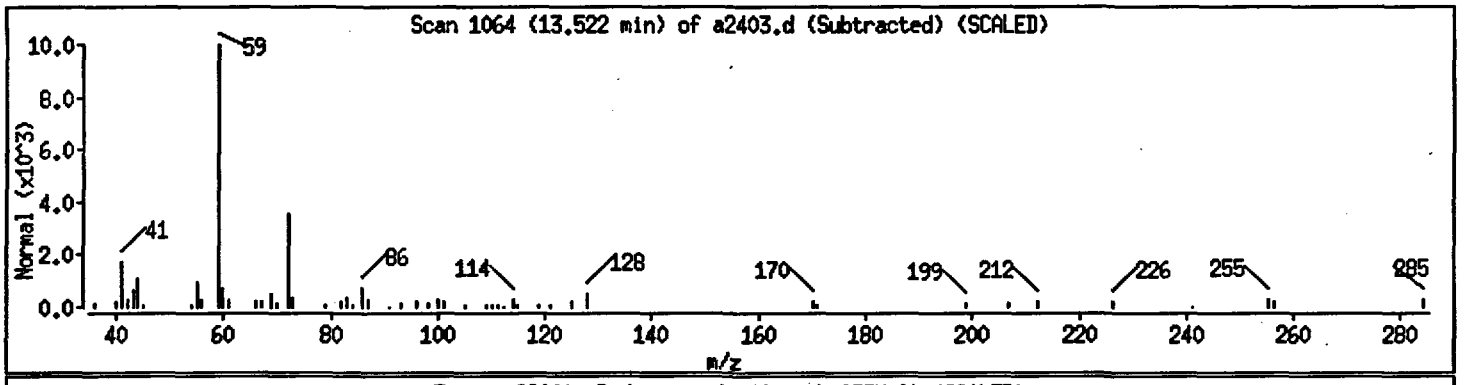
Column phase : XTI-5

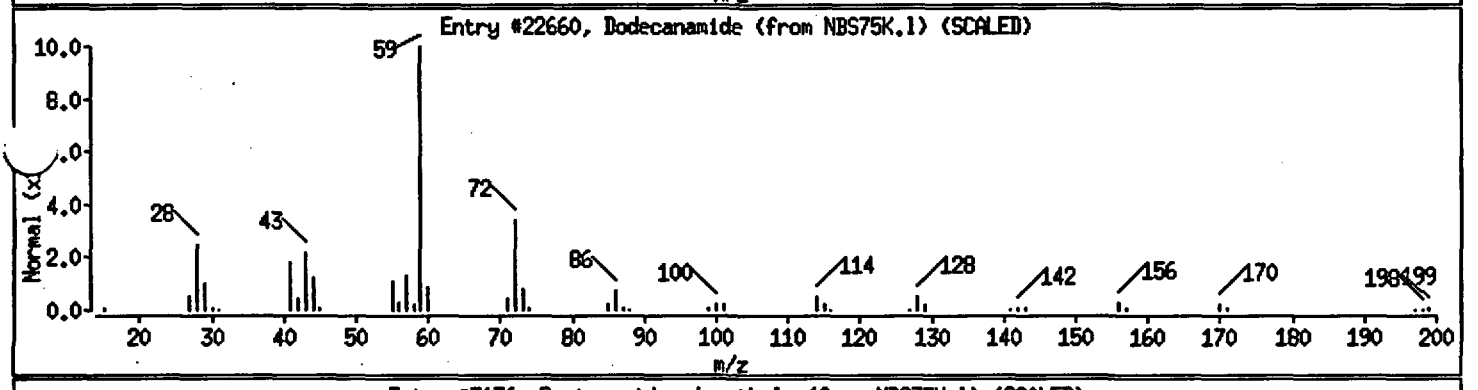
Column diameter : 0.25

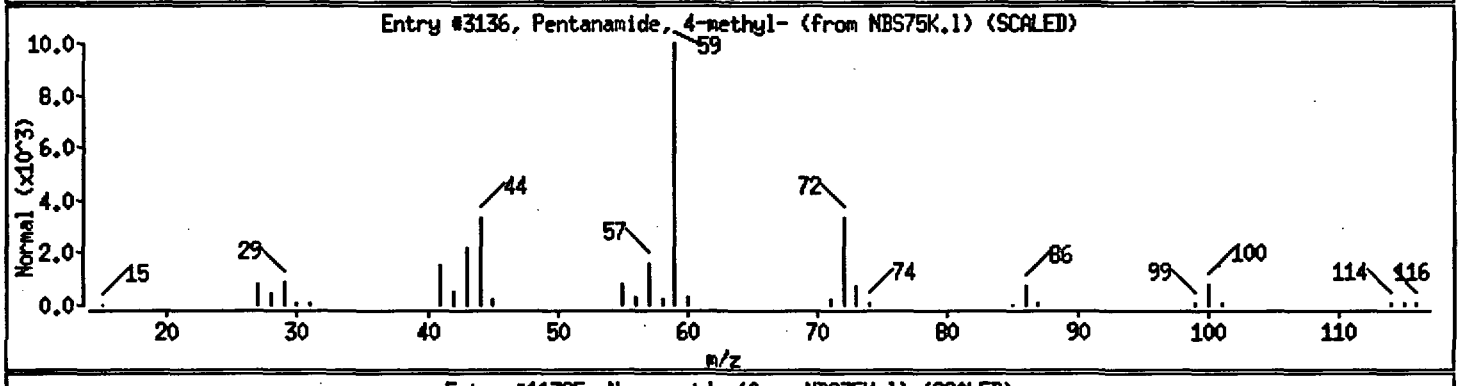
UNKNOWN AMIDE

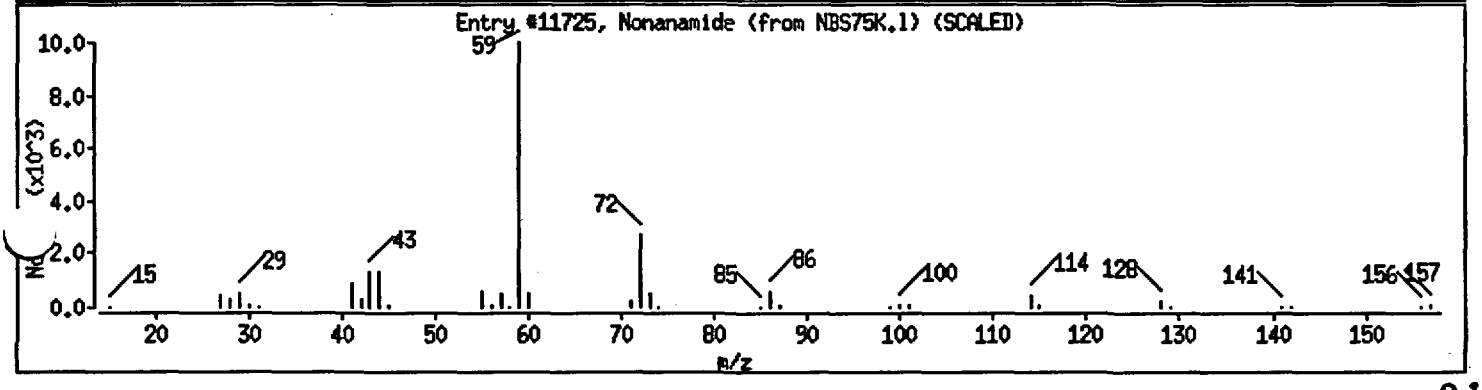
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Dodecanamide	1120-16-7	NBS75K.l	22660	91
Pentanamide, 4-methyl-	1119-29-5	NBS75K.l	3136	72
Nonanamide	1120-07-6	NBS75K.l	11725	64





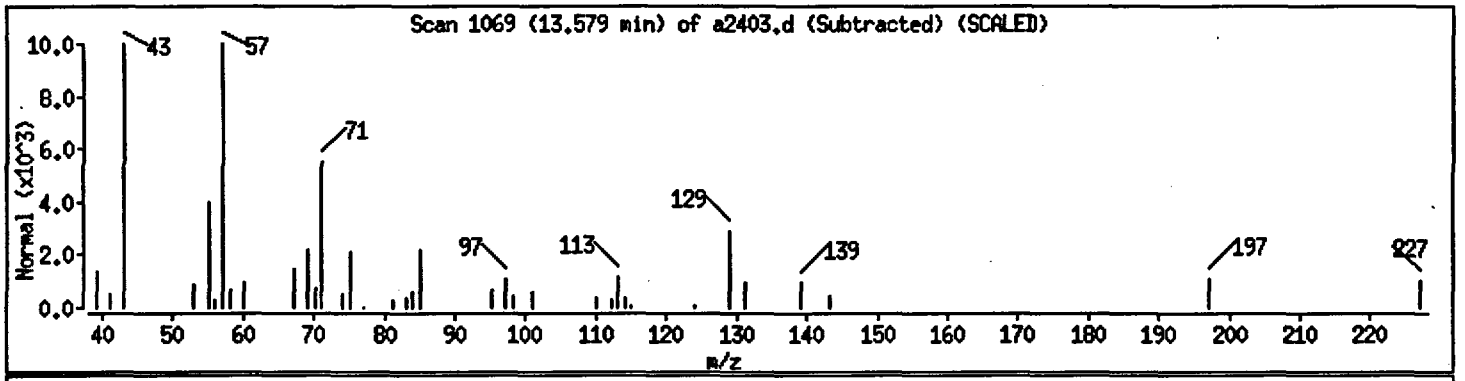


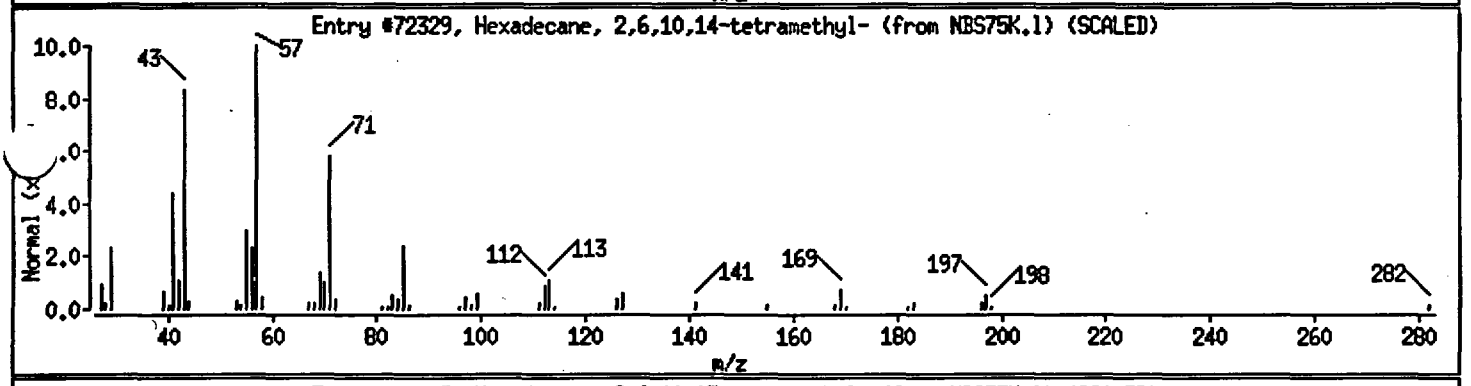


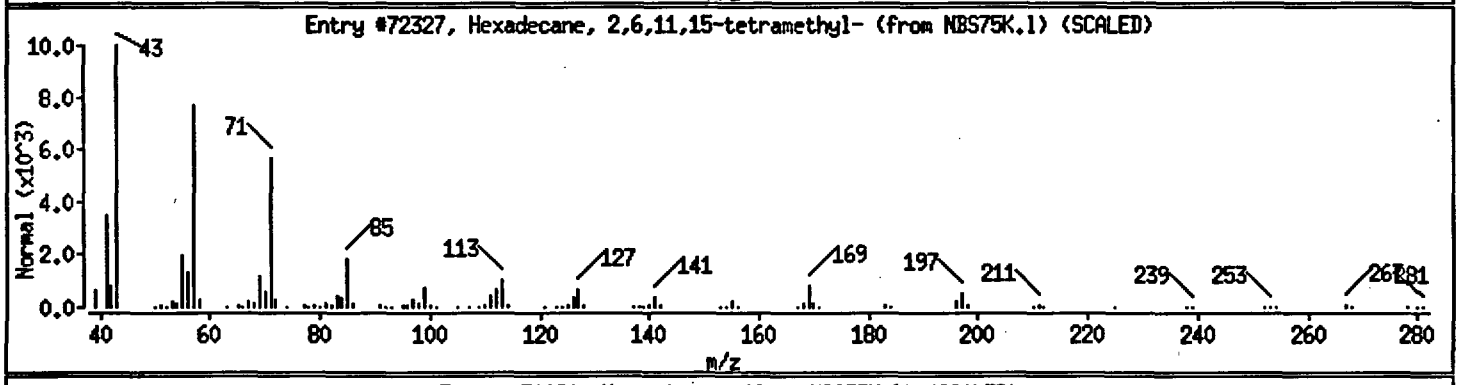
Data File: /chem/a.i/a960330a.b/a2403.d

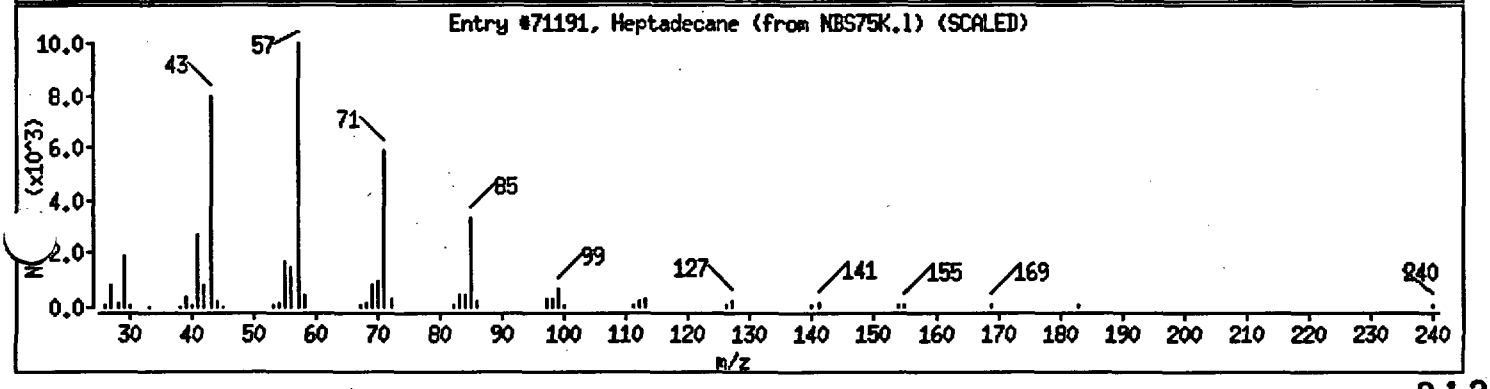
Date : 30-MAR-1996 19:46
Instrument : a.i ,
Sample ID : FEM98 DL
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Hexadecane, 2,6,10,14-tetramethyl-	638-36-8	NBS75K.1	72329	37
Hexadecane, 2,6,11,15-tetramethyl-	504-44-9	NBS75K.1	72327	35
Heptadecane	629-78-7	NBS75K.1	71191	35









Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i .

Sample ID : FEM98 DL

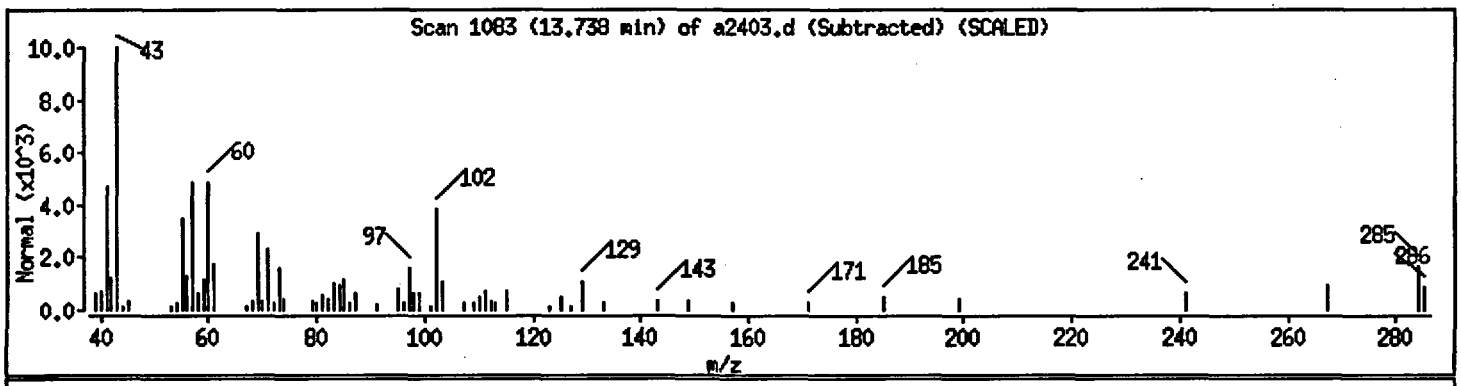
Column phase : XTI-5

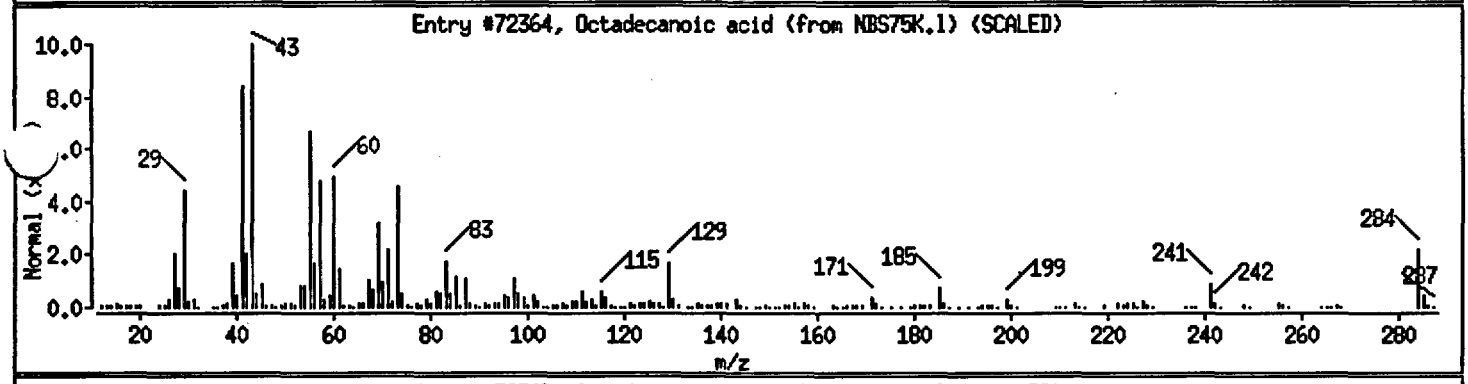
Column diameter : 0.25

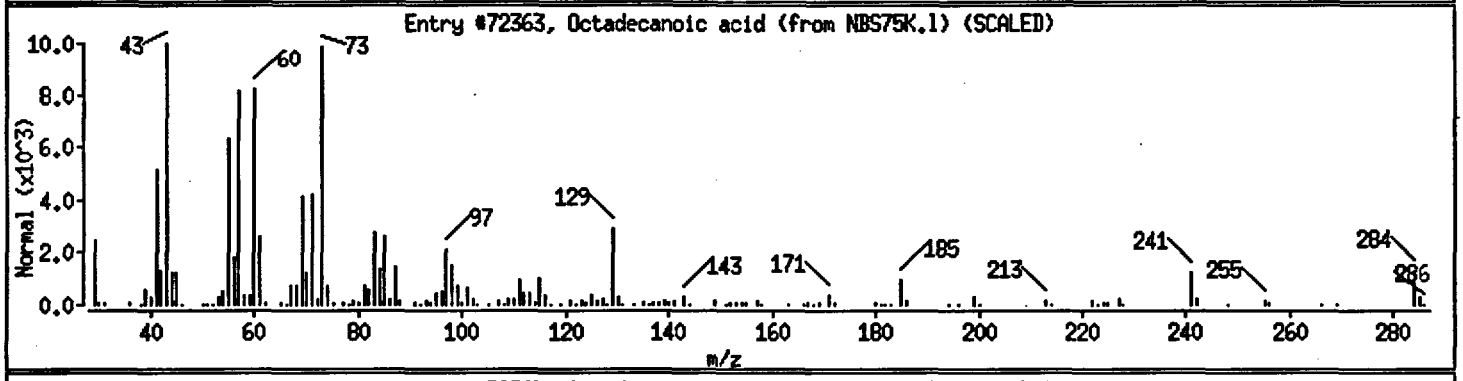
Volume Injected (uL) : 2.0

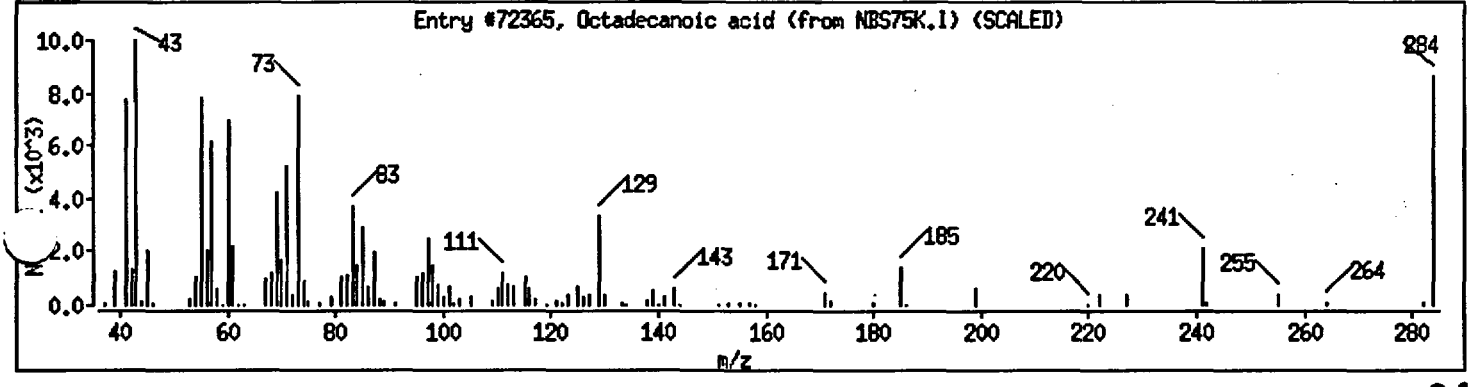
UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Octadecanoic acid	57-11-4	NBS75K.l	72364	30
Octadecanoic acid	57-11-4	NBS75K.l	72363	27
Octadecanoic acid	57-11-4	NBS75K.l	72365	25









Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

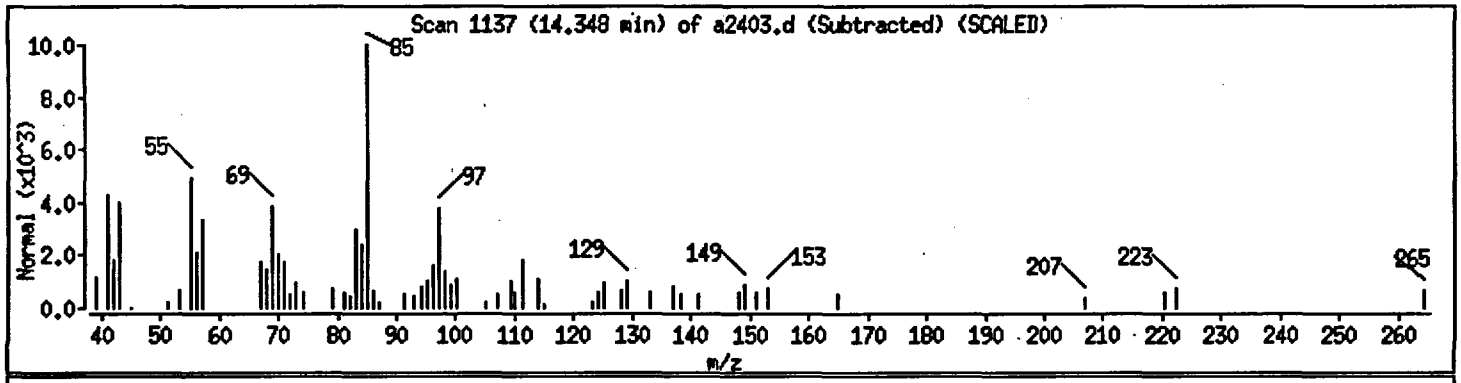
Column phase : XTI-5

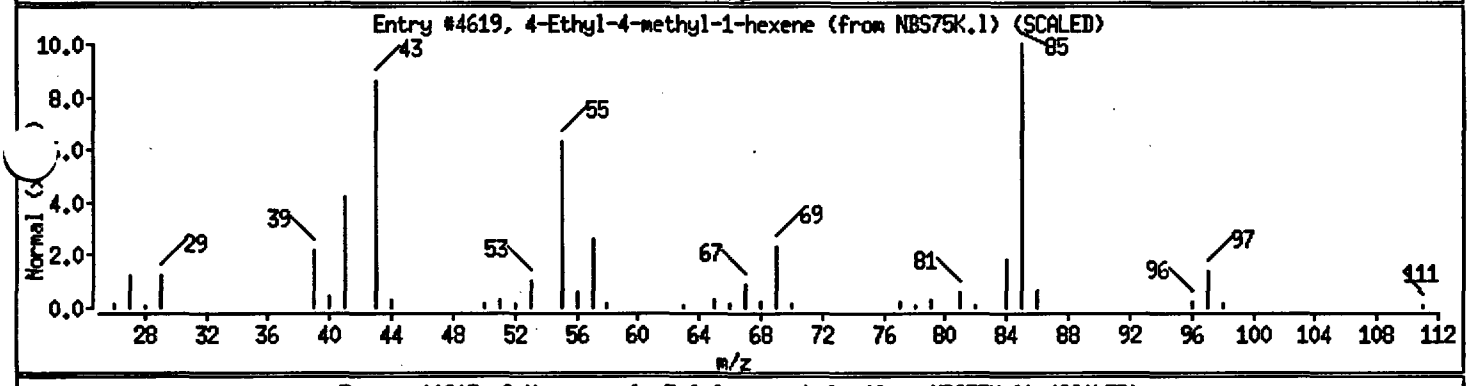
Volume Injected (uL) : 2.0

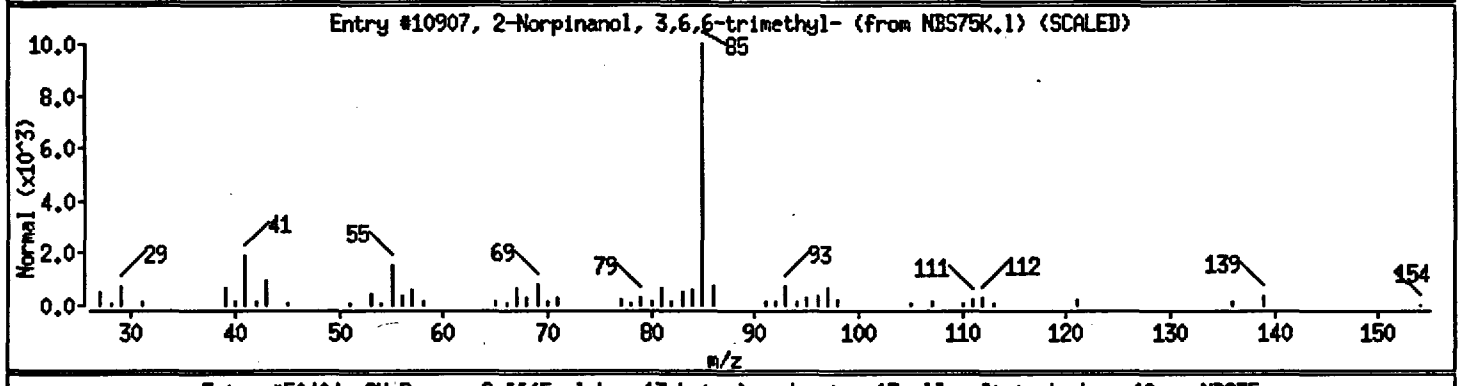
Column diameter : 0.25

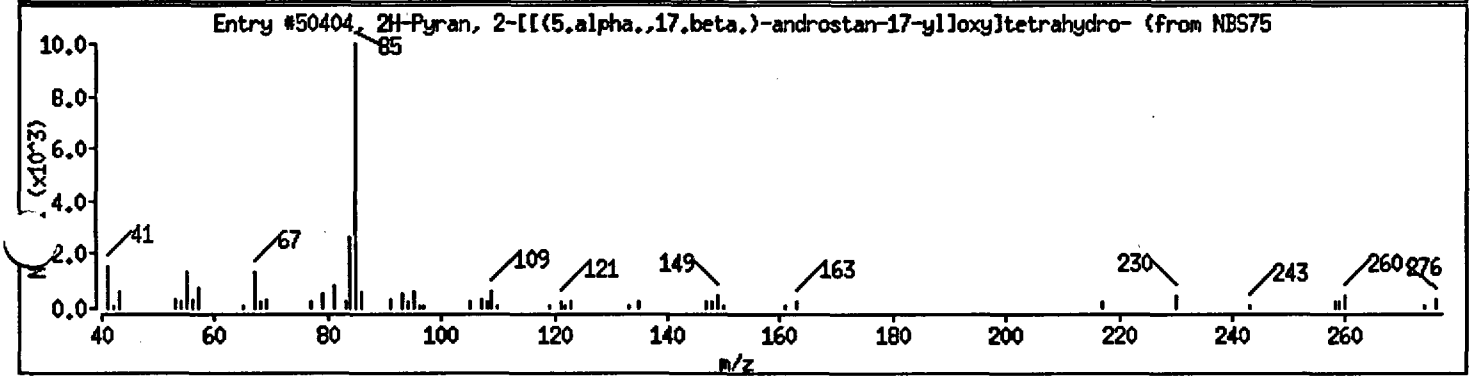
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
4-Ethyl-4-methyl-1-hexene	0-00-0	NBS75K.1	4619	47
2-Norpinanol, 3,6,6-trimethyl-	29548-09-2	NBS75K.1	10907	43
2H-Pyran, 2-[[(5.alpha.,17.beta.)-andros	55162-81-7	NBS75K.1	50404	43







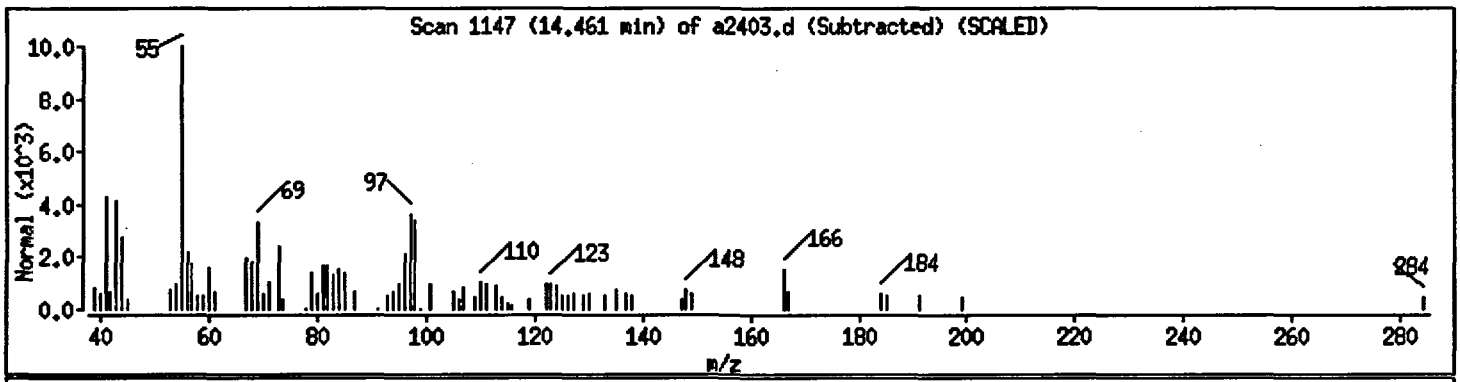


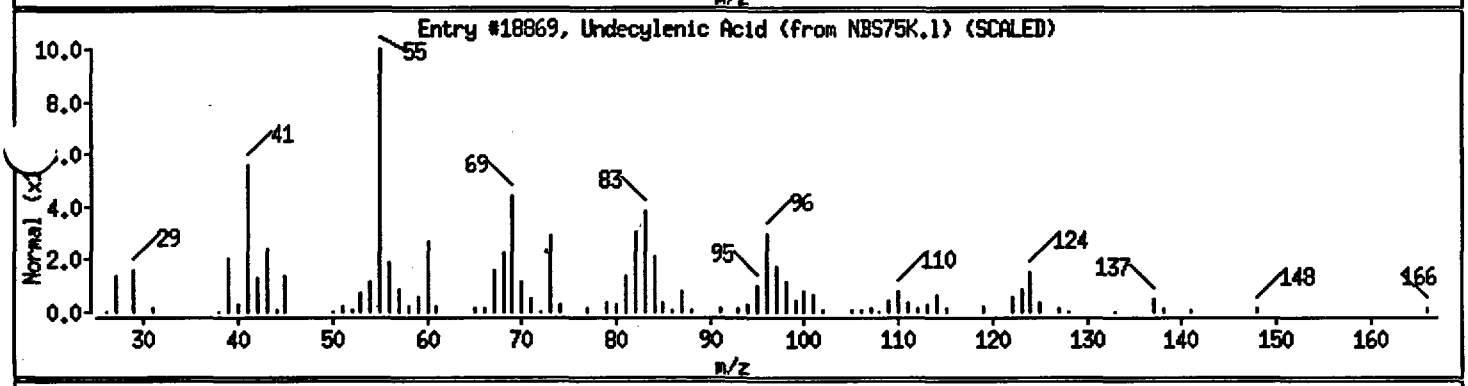
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5
Volume Injected (uL) : 2.0

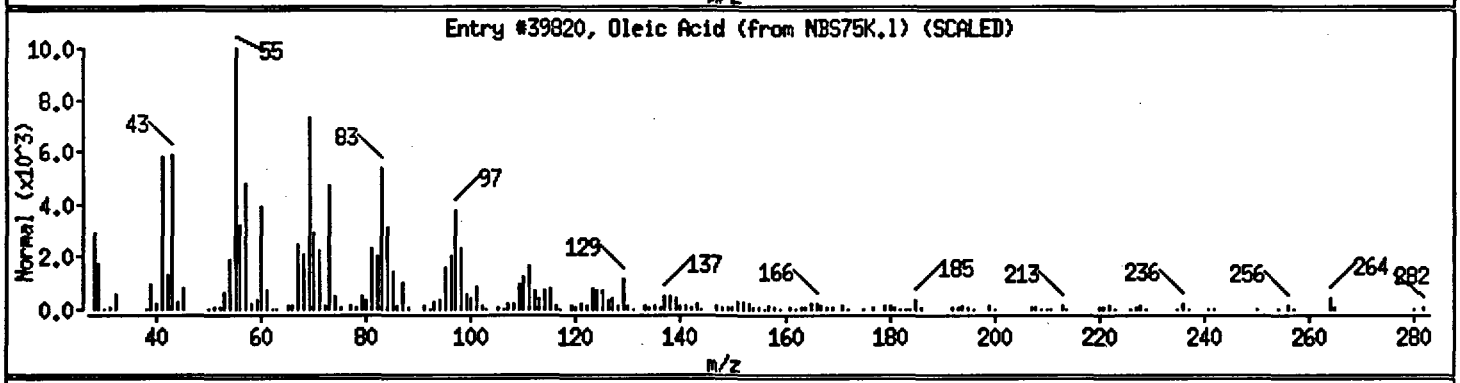
Column diameter

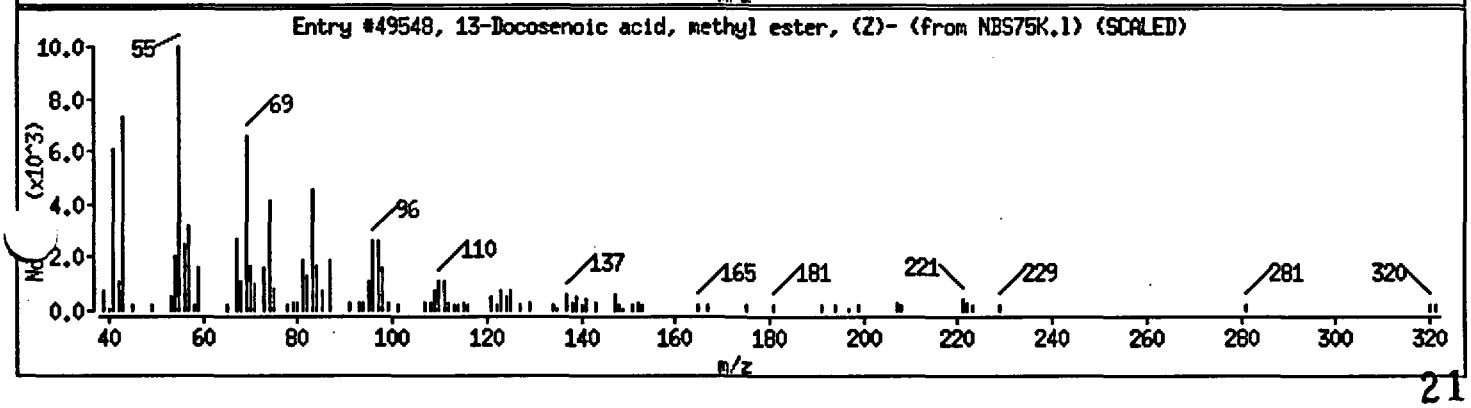
UNKNOWN ORGANIC ACID

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Undecylenic Acid	112-38-9	NBS75K.l	18869	35
Oleic Acid	112-80-1	NBS75K.l	39820	30
13-Docosenoic acid, methyl ester, (Z)-	1120-34-9	NBS75K.l	49548	27









Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

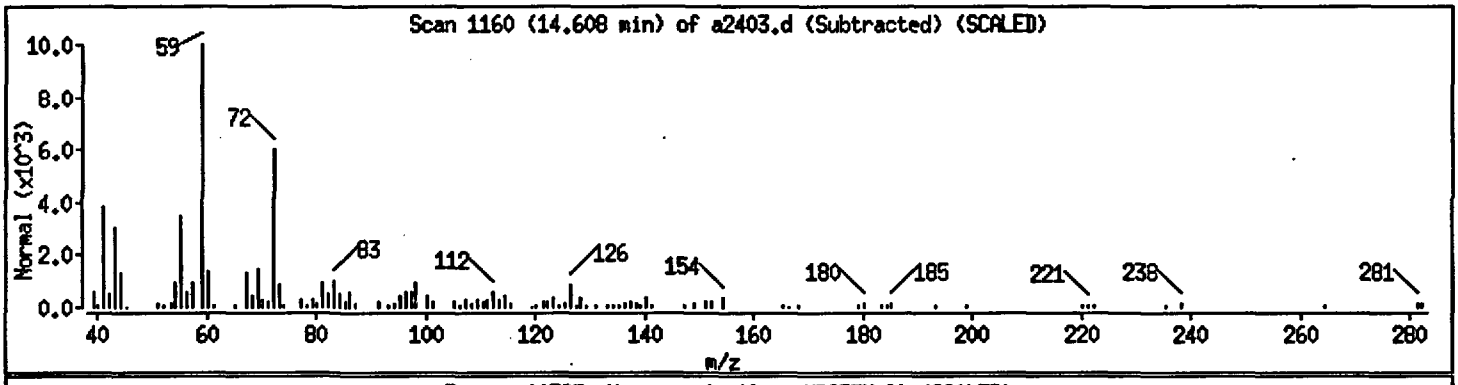
Column phase : XTI-5

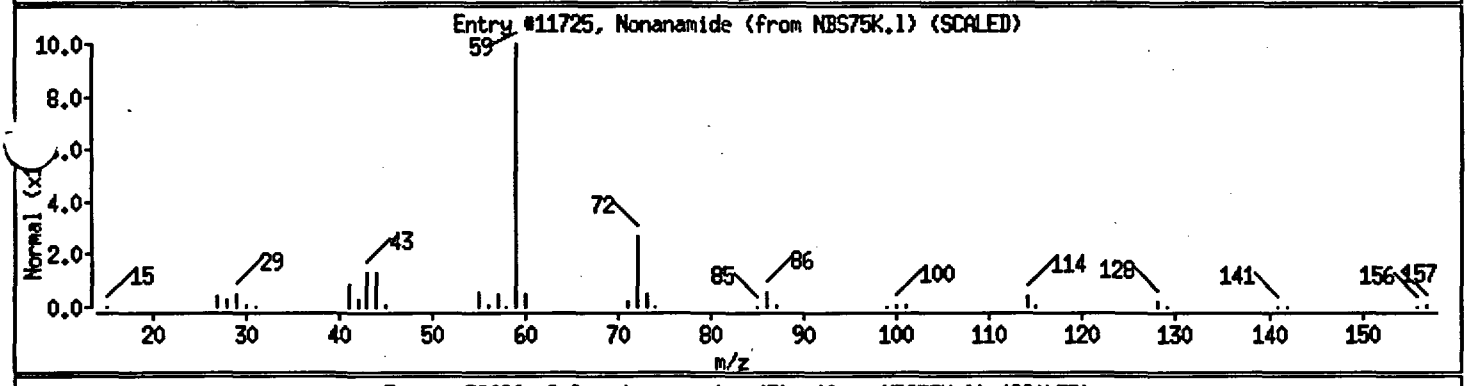
Volume Injected (uL) : 2.0

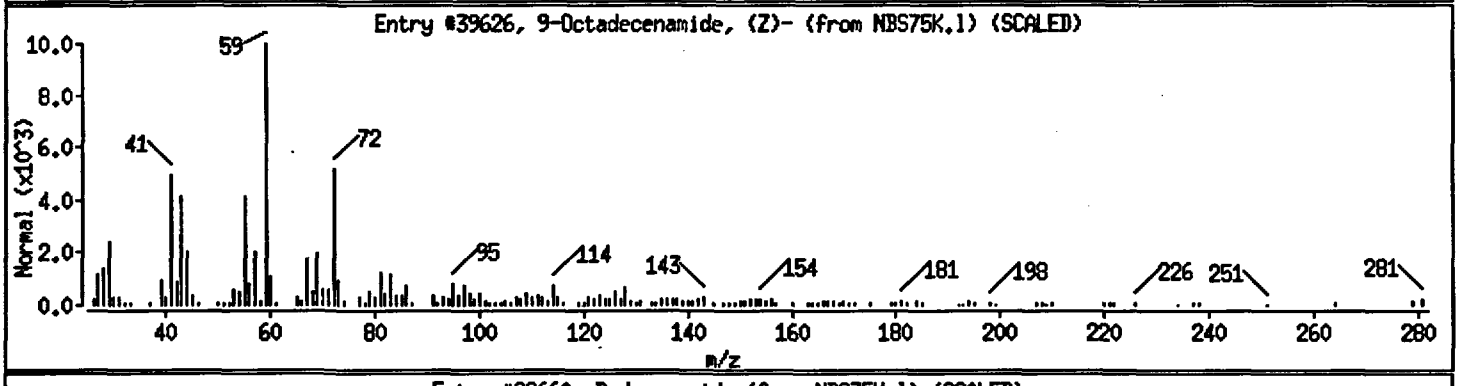
UNKNOWN AMIDE

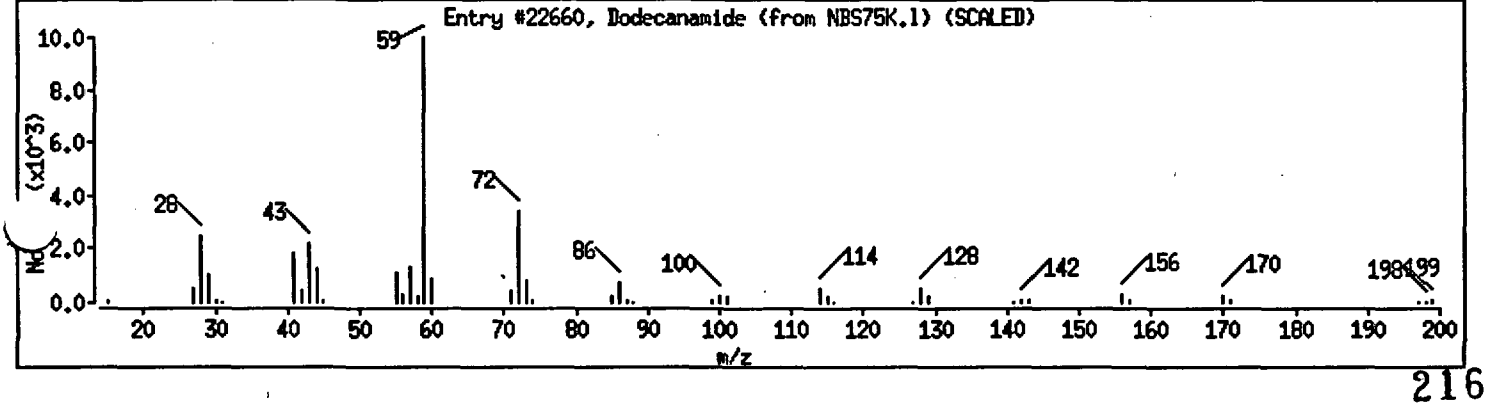
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Nonanamide	1120-07-6	NBS75K.l	11725	53
9-Octadecenamide, (Z)-	301-02-0	NBS75K.l	39626	45
Dodecanamide	1120-16-7	NBS75K.l	22660	38









Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

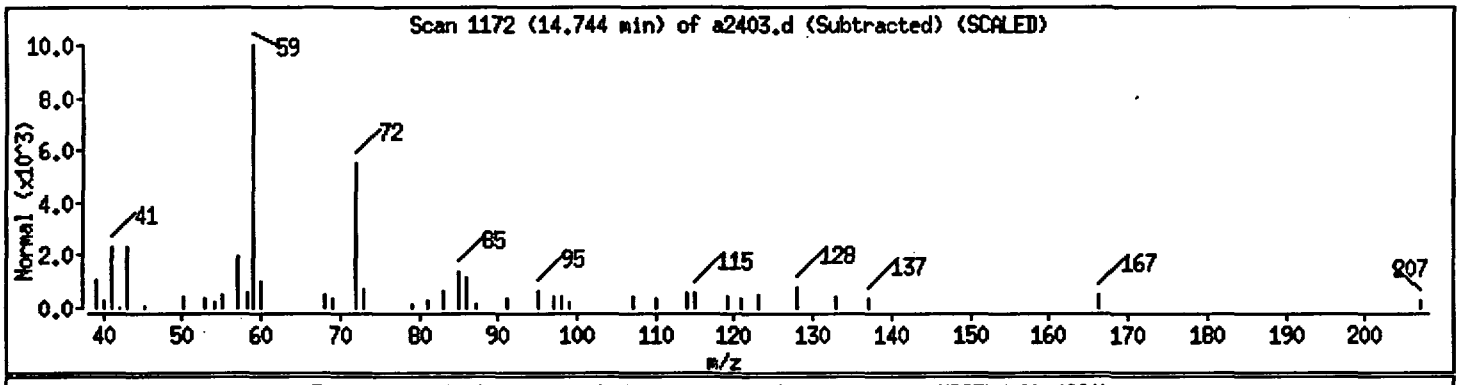
Column phase : XTI-5

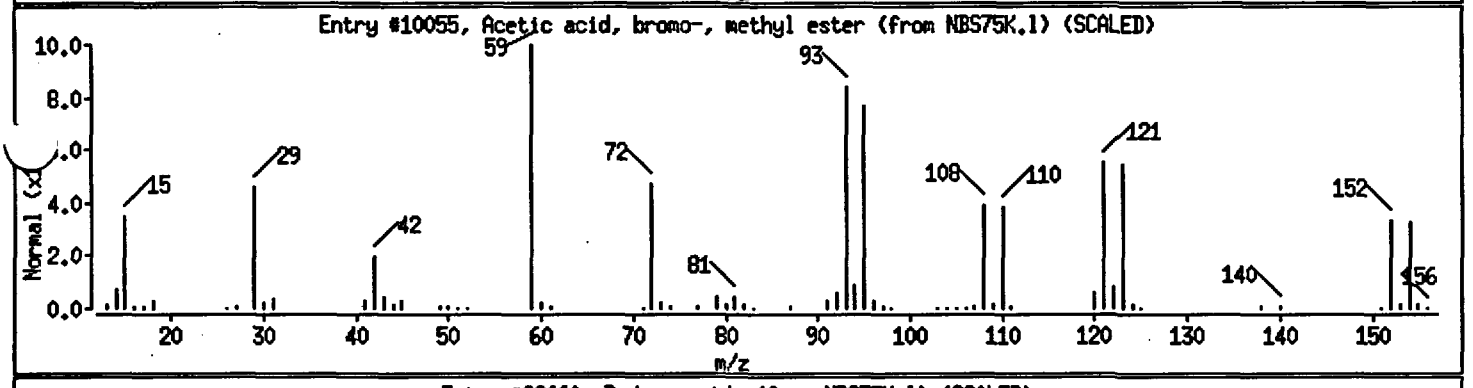
Volume Injected (uL) : 2.0

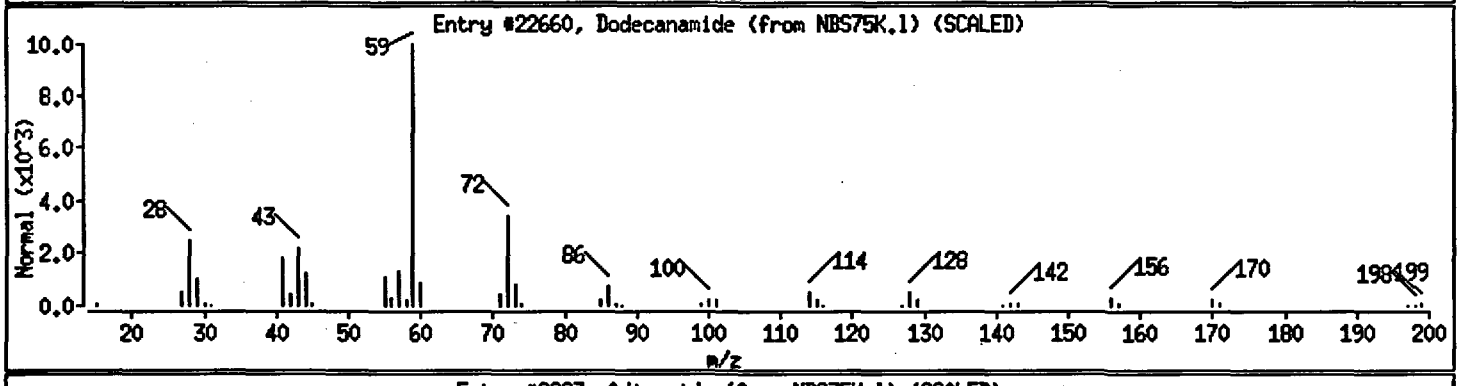
UNKNOWN AMIDE

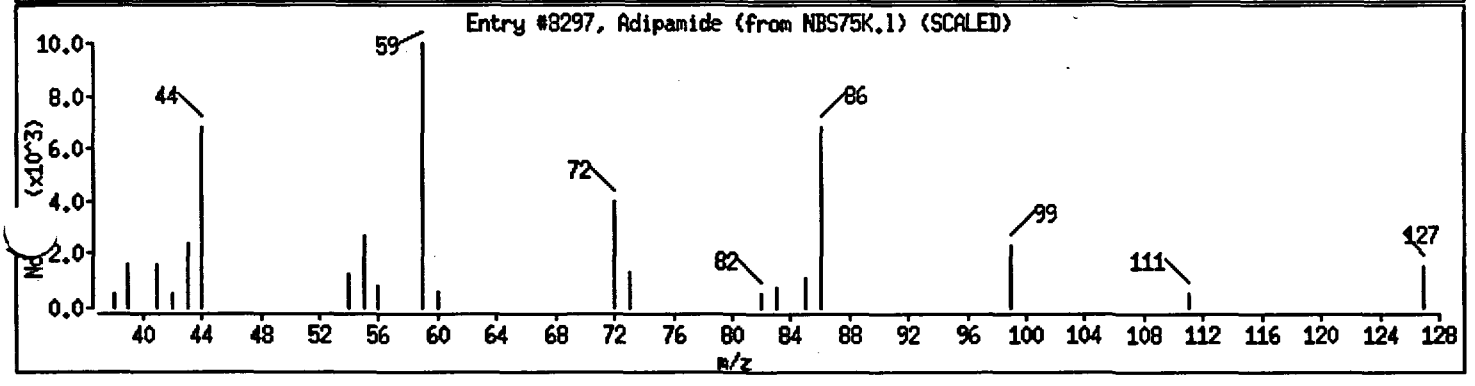
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Acetic acid, bromo-, methyl ester	96-32-2	NBS75K.1	10055	52
Dodecanamide	1120-16-7	NBS75K.1	22660	45
Adipamide	628-94-4	NBS75K.1	8297	39









Data File: /chem/a.i/a960330a.b/a2403.d

Page 28

Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

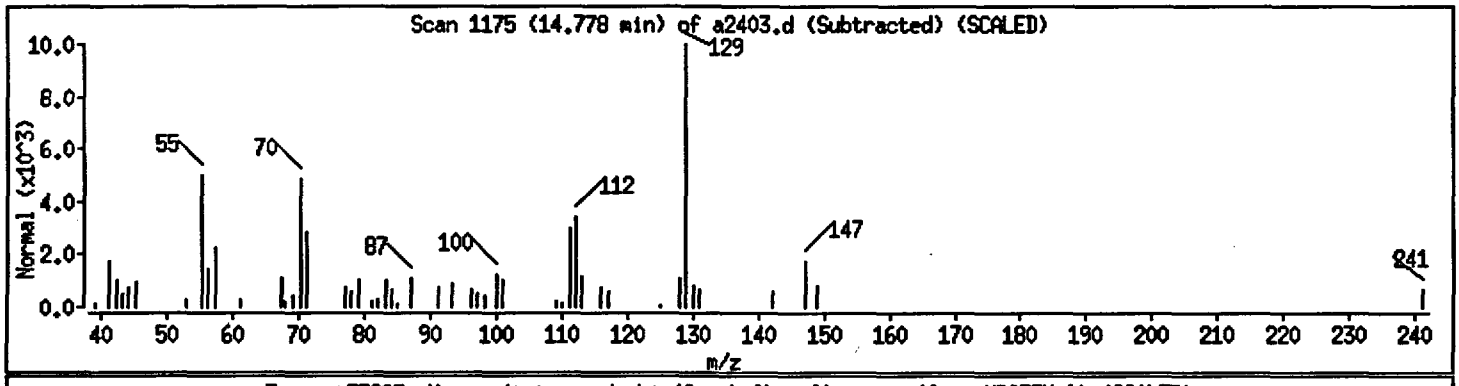
Column phase : XTI-5

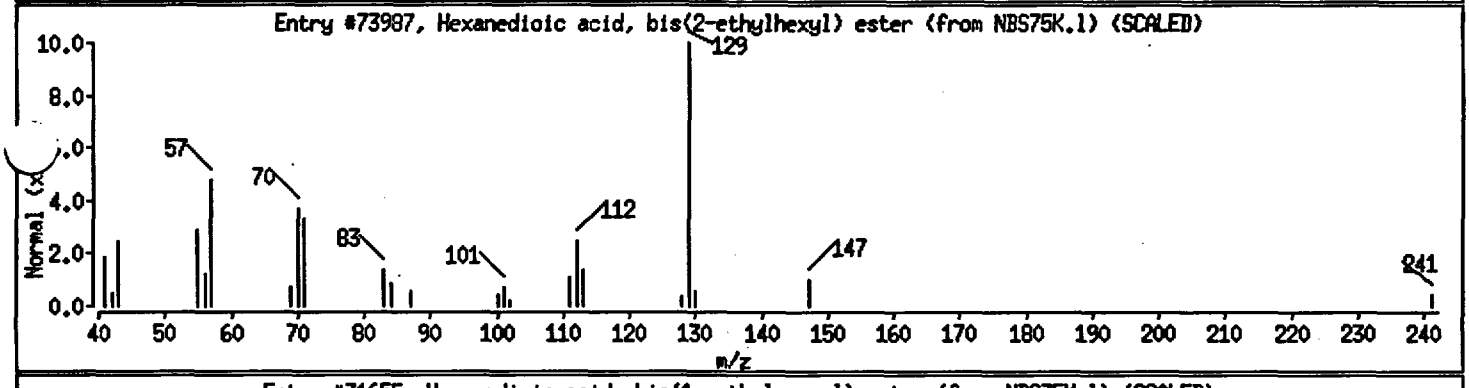
4-5-96

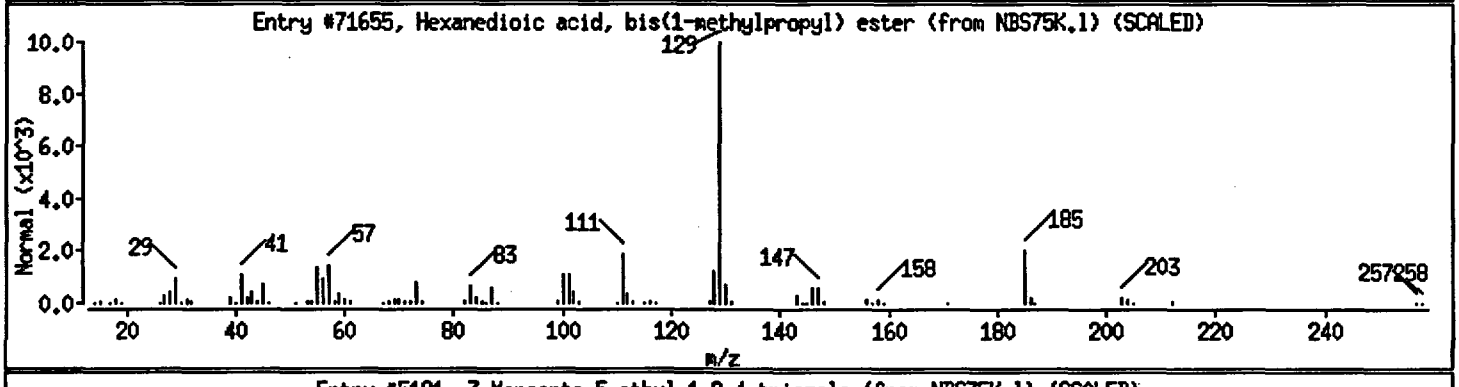
Column diameter : 0.25

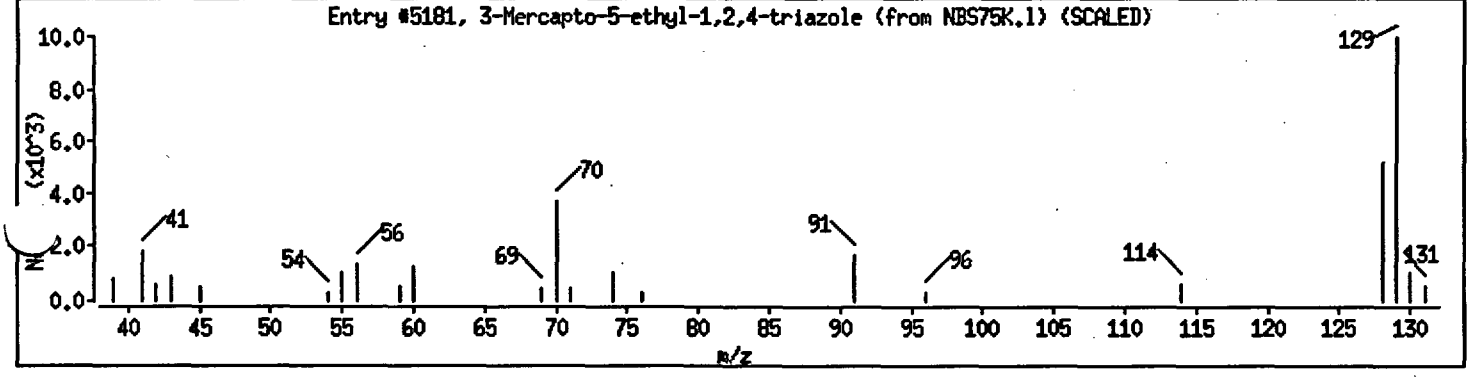
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Hexanedioic acid, ~~bis(2-ethylhexyl)~~ este	~~103-23-1~~	NBS75K.1	73987	50
Hexanedioic acid, ~~bis(1-methylpropyl) es~~	38447-22-2	NBS75K.1	71655	47
3-Mercapto-5-ethyl-1,2,4-triazole	7271-45-6	NBS75K.1	5181	43







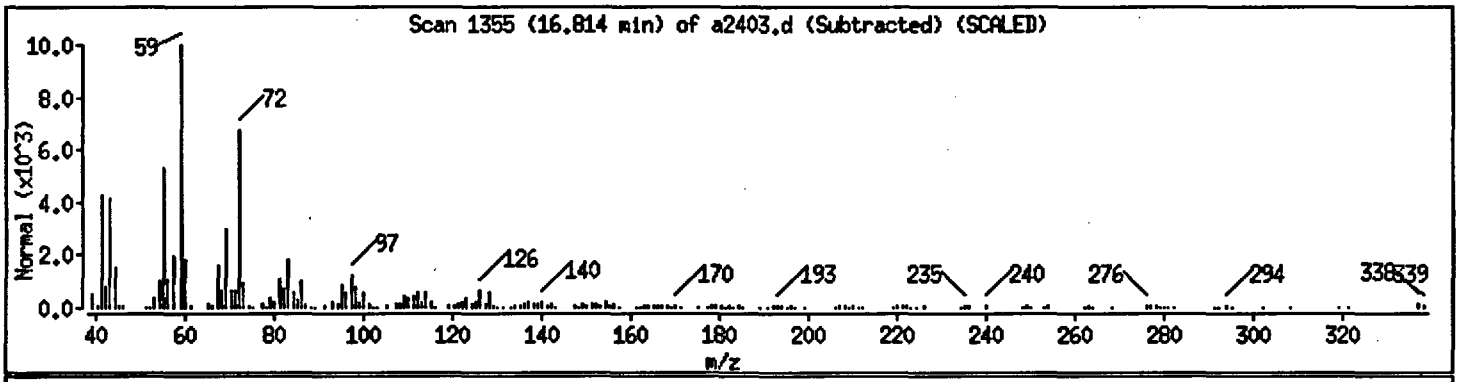


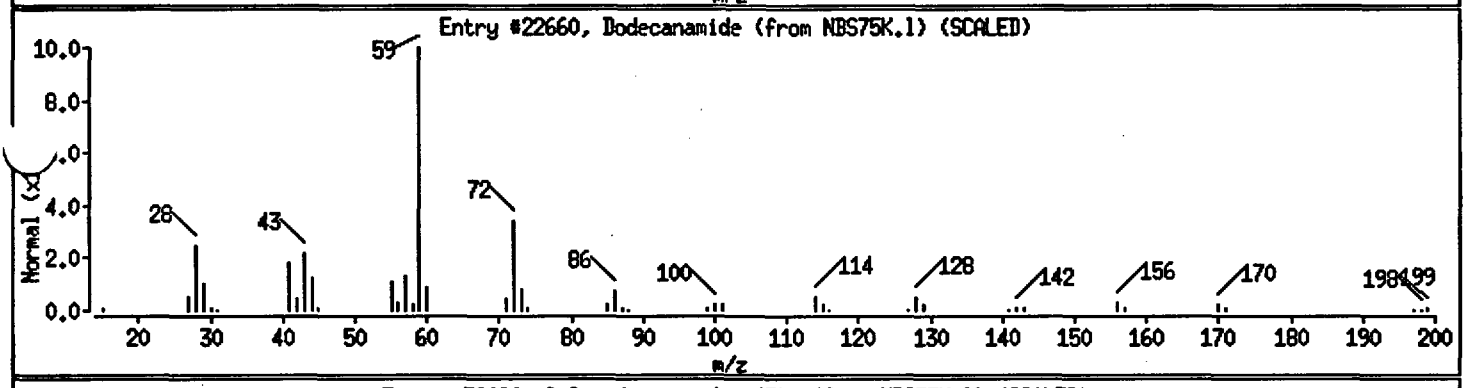
Data File: /chem/a.i/a960330a.b/a2403.d
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DC
Column phase : XTI-5
Volume Injected (uL) : 2.0

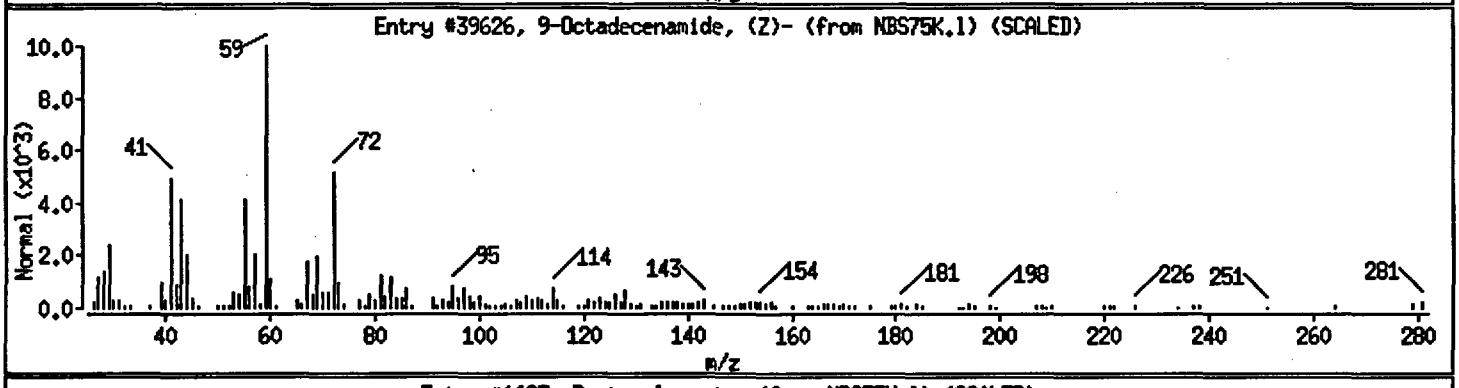
UNKNOWN AMIDE

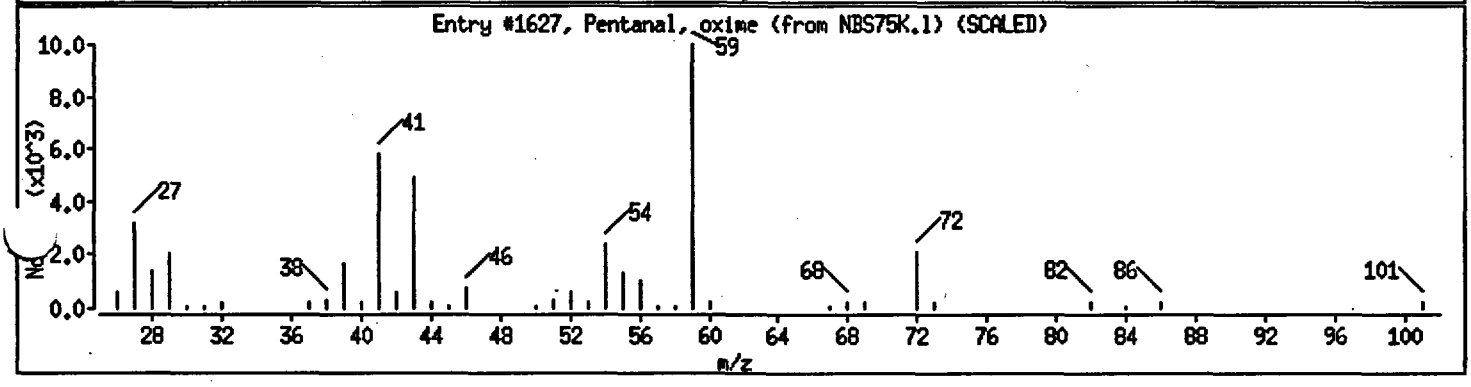
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Dodecanamide	1120-16-7	NBS75K.l	22660	59
9-Octadecenamide, (Z)-	301-02-0	NBS75K.l	39626	56
Pentanal, oxime	628-79-5	NBS75K.l	1627	43





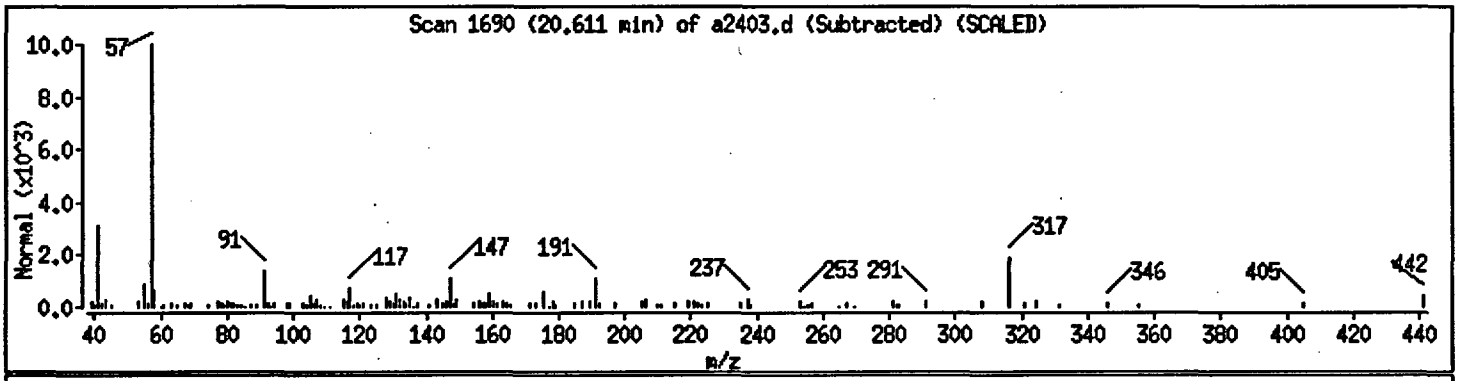


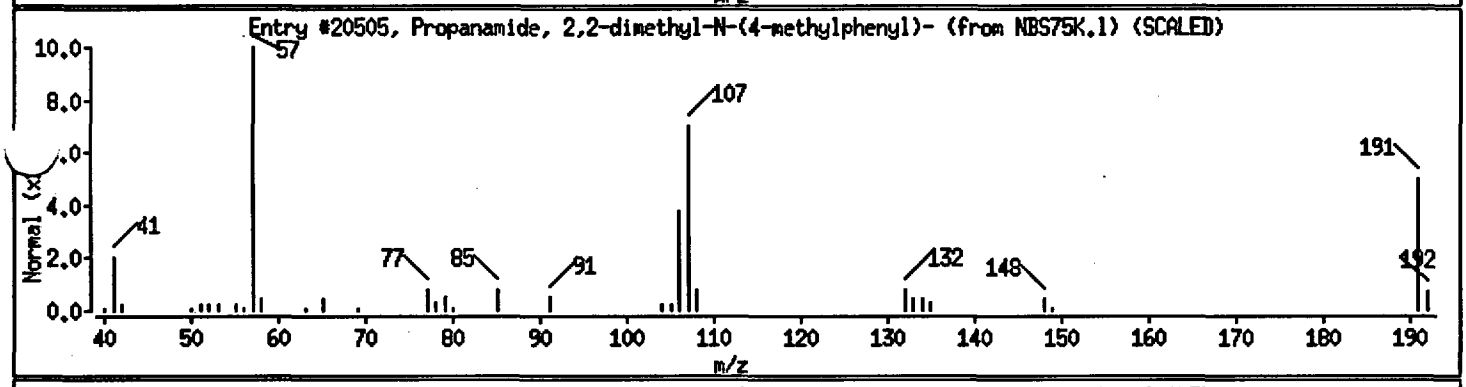


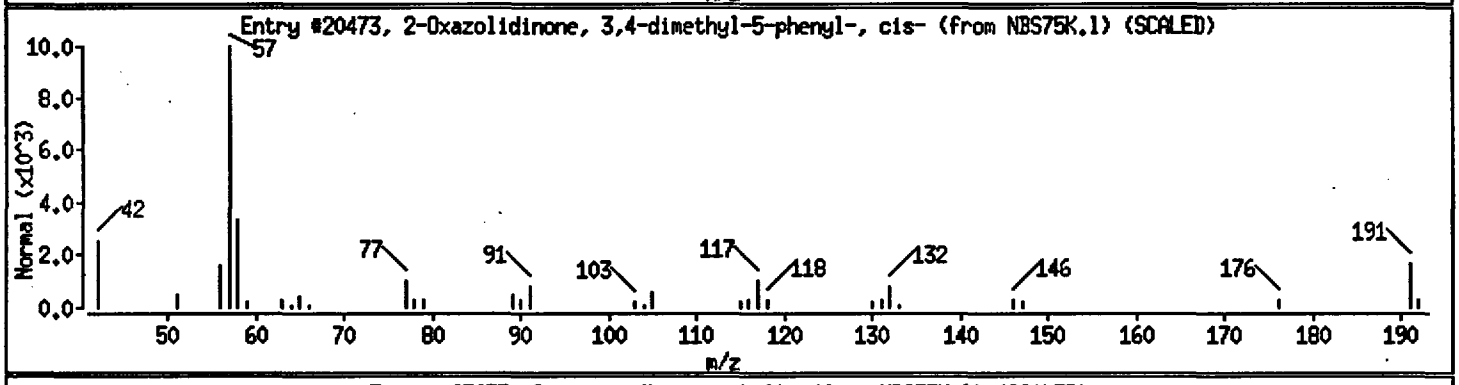
Data File: /chem/a.i/a960330a.b/a2403.d

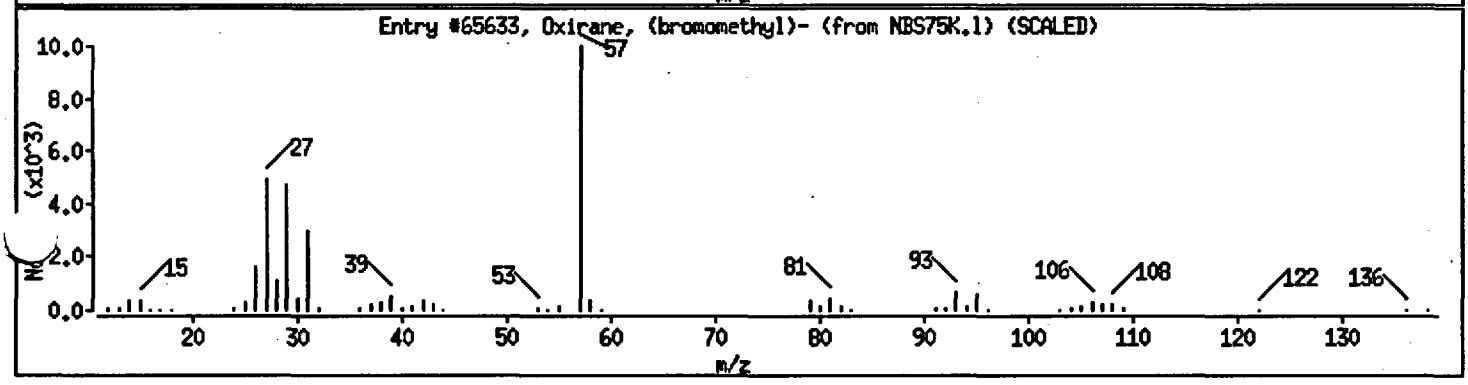
Date : 30-MAR-1996 19:46
Instrument : a.i
Sample ID : FEM98 DL
Column phase : XTI-5 Column diameter : 0.25 **UNKNOWN**
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Propanamide, 2,2-dimethyl-N-(4-methylphe	21354-40-5	NBS75K.l	20505	25
2-Oxazolidinone, 3,4-dimethyl-5-phenyl-,	32461-37-3	NBS75K.l	20473	14
Oxirane, (bromomethyl)-	3132-64-7	NBS75K.l	65633	10









Data File: /chem/a.i/a960330a.b/a2403.d

Date : 30-MAR-1996 19:46

Instrument : a.i

Sample ID : FEM98 DL

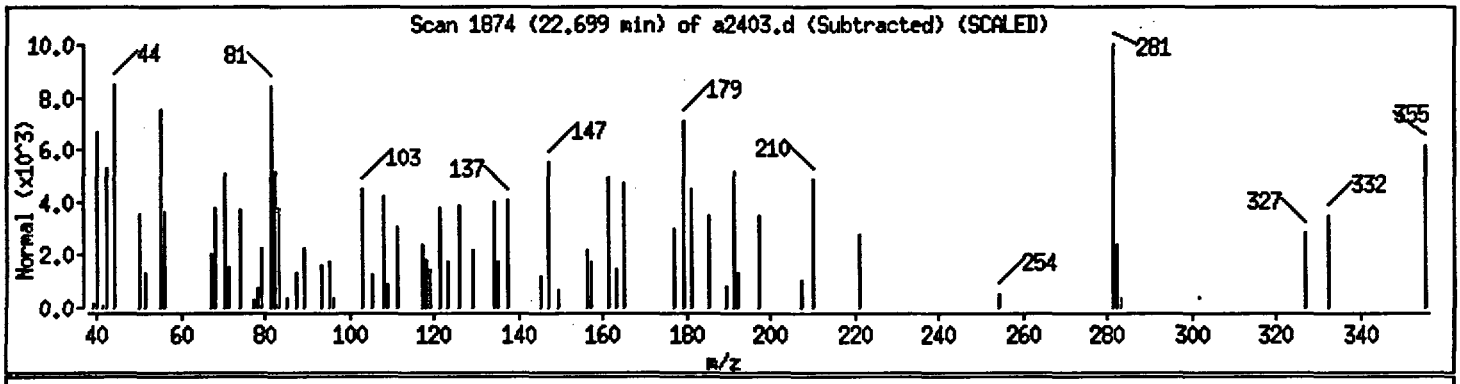
Column phase : XTI-5

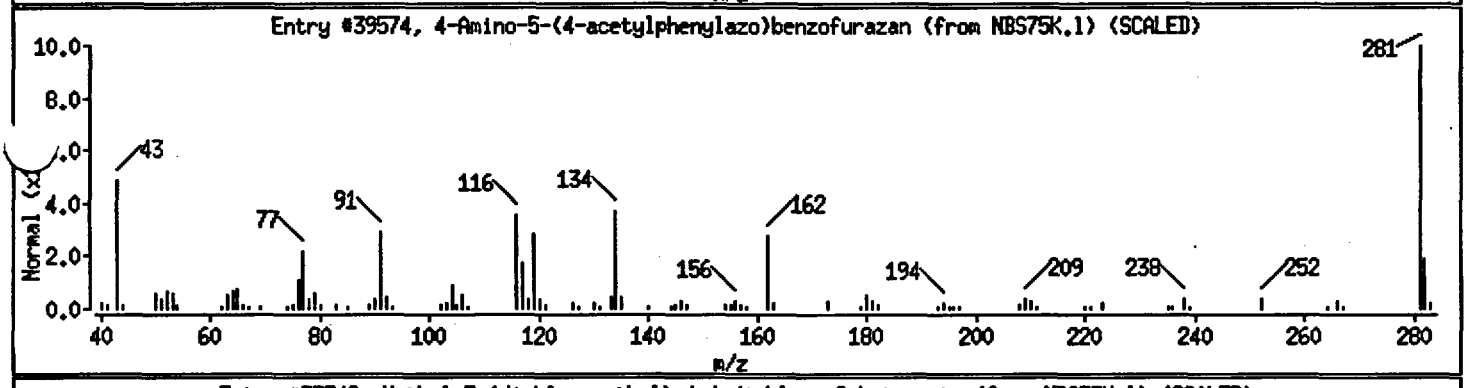
Column diameter : 0.25

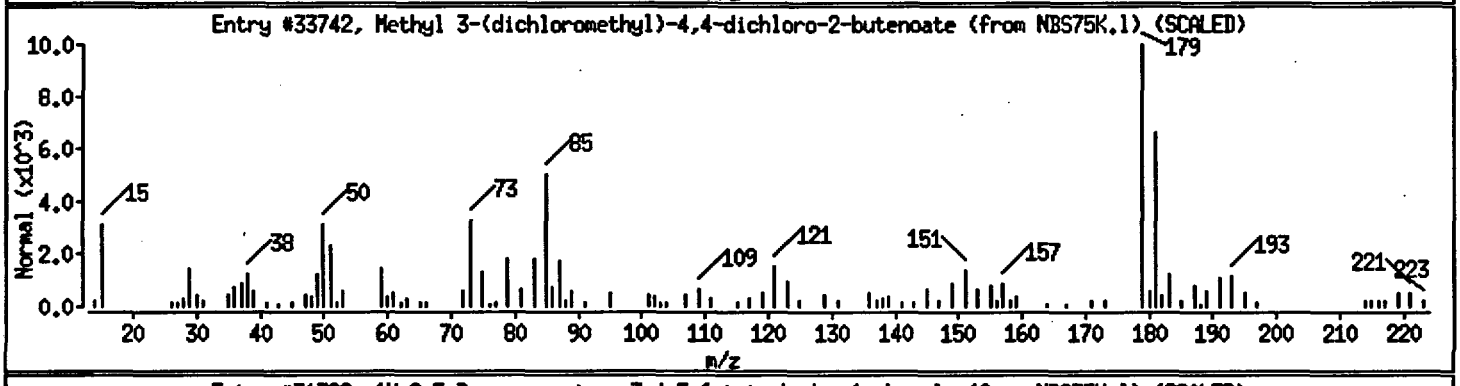
Volume Injected (uL) : 2.0

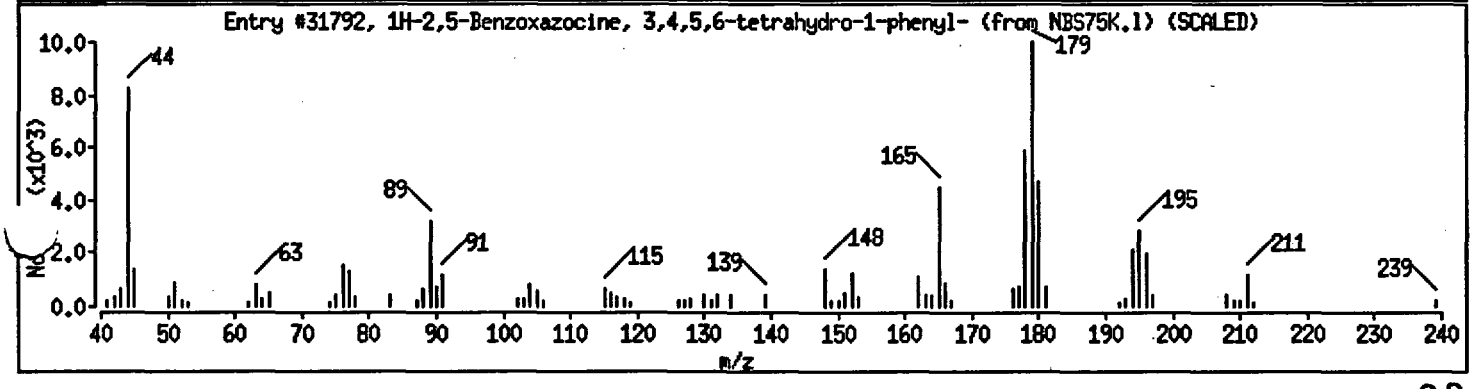
UNKNOWN

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
4-Amino-5-(4-acetylphenylazo)benzofuraza	0-00-0	NBS75K.l	39574	10
Methyl 3-(dichloromethyl)-4,4-dichloro-2	0-00-0	NBS75K.l	33742	7
1H-2,5-Benzoxazocine, 3,4,5,6-tetrahydro	46868-19-3	NBS75K.l	31792	7









6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

L Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: A Calibration Date(s): 03/21/96

Calibration Times: 0924 1148

LAB FILE ID: RRF20 =A2202.D RRF50 =A2205.D
RRF80 =A2203.D RRF120=A2204.D RRF160=A2201.D

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol	*	1.534	1.403	1.338	1.184	1.206	1.333	10.8*
bis(2-Chloroethyl)Ether	*	1.180	1.084	1.060	0.992	0.952	1.053	8.3*
2-Chlorophenol	*	1.230	1.188	1.124	0.995	0.992	1.106	9.8*
1,3-Dichlorobenzene	*	1.438	1.367	1.335	1.211	1.174	1.305	8.4*
1,4-Dichlorobenzene	*	1.463	1.393	1.339	1.189	1.158	1.308	10.0*
1,2-Dichlorobenzene	*	1.415	1.331	1.288	1.118	1.061	1.243	11.9*
2-Methylphenol	*	1.015	0.968	0.927	0.808	0.864	0.916	8.9*
2,2'-oxybis(1-Chloropropane)		2.006	1.874	1.877	1.674	1.776	1.842	6.7
4-Methylphenol	*	1.075	1.037	1.032	0.927	0.947	1.004	6.3*
N-Nitroso-di-n-propylamine	*	0.784	0.732	0.763	0.684	0.717	0.736	5.3*
Hexachloroethane	*	0.570	0.513	0.530	0.470	0.479	0.512	7.8*
Nitrobenzene	*	0.372	0.361	0.371	0.338	0.348	0.358	4.1*
Isophorone	*	0.656	0.637	0.629	0.595	0.600	0.623	4.1*
Nitrophenol	*	0.202	0.197	0.221	0.212	0.215	0.209	4.6*
2,4-Dimethylphenol	*	0.304	0.308	0.310	0.306	0.312	0.308	1.0*
bis(2-Chloroethoxy)methane	*	0.459	0.433	0.426	0.399	0.415	0.427	5.2*
2,4-Dichlorophenol	*	0.331	0.330	0.328	0.305	0.291	0.317	5.7*
1,2,4-Trichlorobenzene	*	0.395	0.387	0.374	0.350	0.331	0.368	7.1*
Naphthalene	*	1.070	1.024	0.952	0.873	0.833	0.951	10.4*
4-Chloroaniline		0.457	0.448	0.435	0.416	0.402	0.432	5.2
Hexachlorobutadiene		0.186	0.181	0.203	0.190	0.169	0.186	6.6
4-Chloro-3-Methylphenol	*	0.276	0.305	0.289	0.292	0.299	0.292	3.7*
2-Methylnaphthalene	*	0.820	0.789	0.716	0.628	0.641	0.718	11.9*
Hexachlorocyclopentadiene		0.286	0.255	0.279	0.302	0.336	0.292	10.2
2,4,6-Trichlorophenol	*	0.360	0.351	0.629	0.346	0.342	0.406	30.8*
2,4,5-Trichlorophenol	*		0.379	0.326	0.386	0.387	0.369	7.9*
2-Chloronaphthalene	*	1.165	1.085	0.938	0.965	0.971	1.025	9.4*
2-Nitroaniline			0.272	0.341	0.297	0.311	0.305	9.5
Dimethylphthalate		1.149	1.131	1.061	1.022	1.016	1.076	5.7
Acenaphthylene	*	1.743	1.566	1.416	1.359	1.367	1.490	11.0*
2,6-Dinitrotoluene	*	0.224	0.224	0.252	0.260	0.268	0.245	8.2*
3-Nitroaniline			0.271	0.267	0.277	0.288	0.276	3.2
Acenaphthene	*	1.159	1.054	0.964	0.948	0.919	1.009	9.7*
2,4-Dinitrophenol			0.065	0.102	0.117	0.140	0.106	29.6
4-Nitrophenol			0.104	0.110	0.106	0.110	0.108	2.6
Dibenzofuran	*	1.559	1.490	1.375	1.366	1.303	1.419	7.2*
2,4-Dinitrotoluene	*	0.312	0.329	0.368	0.349	0.363	0.344	6.8*

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

L Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: A Calibration Date(s): 03/21/96

Calibration Times: 0924 1148

LAB FILE ID: RRF20 =A2202.D RRF50 =A2205.D
RRF80 =A2203.D RRF120=A2204.D RRF160=A2201.D

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Diethylphthalate	1.166	1.158	1.061	1.058	1.009	1.090	6.3
4-Chlorophenyl-phenylether *	0.648	0.631	0.625	0.584	0.585	0.614	4.7*
Fluorene *	1.209	1.184	1.141	1.096	1.067	1.139	5.2*
4-Nitroaniline		0.260	0.287	0.288	0.313	0.287	7.5
4,6-Dinitro-2-methylphenol		0.078	0.124	0.120	0.133	0.114	21.5
N-Nitrosodiphenylamine (1)	0.526	0.497	0.549	0.468	0.464	0.501	7.3
4-Bromophenyl-phenylether *	0.241	0.229	0.240	0.226	0.228	0.233	3.0*
Hexachlorobenzene *	0.300	0.262	0.282	0.261	0.268	0.275	5.9*
Pentachlorophenol *		0.235	0.207	0.200	0.180	0.205	11.0*
Phenanthrene *	1.107	1.009	0.991	0.903	0.901	0.982	8.6*
Anthracene *	0.939	0.879	0.910	0.820	0.791	0.868	7.1*
Carbazole	0.939	0.957	0.924	0.866	0.861	0.909	4.8
Di-n-butylphthalate	1.167	1.168	1.148	1.033	1.033	1.110	6.3
uoranthene *	1.084	1.058	1.015	0.959	0.976	1.019	5.2*
rene *	1.696	1.426	1.473	1.365	1.178	1.428	13.1*
Butylbenzylphthalate	0.671	0.653	0.730	0.717	0.650	0.684	5.3
3,3'-Dichlorobenzidine	0.411	0.432	0.492	0.473	0.495	0.460	8.1
Benzo(a)anthracene *	1.208	1.070	1.140	1.125	1.054	1.119	5.4*
Chrysene *	1.274	1.106	1.144	1.029	0.941	1.099	11.3*
bis(2-Ethylhexyl)phthalate	0.967	0.979	1.017	1.005	0.909	0.975	4.3
Di-n-octylphthalate	1.230	1.362	1.335	1.205	1.145	1.255	7.2
Benzo(b)fluoranthene *	1.029	1.025	1.231	1.061	1.166	1.102	8.3*
Benzo(k)fluoranthene *	1.331	1.123	1.065	1.077	0.978	1.115	11.8*
Benzo(a)pyrene *	0.910	0.992	0.988	0.972	0.932	0.959	3.7*
Indeno(1,2,3-cd)pyrene *	1.347	1.281	1.286	1.218	1.283	1.283	3.5*
Dibenz(a,h)anthracene *	1.110	1.113	1.082	1.048	1.056	1.082	2.7*
Benzo(g,h,i)perylene *	1.134	1.141	1.091	1.011	1.112	1.098	4.7*
Nitrobenzene-d5 *	0.359	0.332	0.359	0.332	0.339	0.344	4.0*
2-Fluorobiphenyl *	1.304	1.190	0.919	1.092	1.066	1.114	12.9*
Terphenyl-d14 *	1.072	0.965	0.981	0.965	0.830	0.963	9.0*
Phenol-d5 *	1.322	1.227	1.234	1.090	1.098	1.194	8.2*
2-Fluorophenol *	1.001	0.966	1.001	0.890	0.957	0.963	4.7*
2,4,6-Tribromophenol	0.093	0.100	0.112	0.102	0.112	0.104	7.8
2-Chlorophenol-d4 *	1.183	1.094	1.078	0.978	0.933	1.053	9.3*
1,2-Dichlorobenzene-d4 *	0.783	0.769	0.783	0.709	0.688	0.746	6.0*

(1) - Cannot be separated from Diphenylamine
* Compounds with required minimum RRF and maximum %RSD values.
ll other compounds must meet a minimum RRF of 0.010.

FORM VI SV-2 OLM03.0

Data File: /chem/a.i/a960321a.b/a2202.d
Date : 21-MAR-1996 09:56
Instrument : a.i
Sample ID : SSTD020AL
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: MIKE

Column diameter : 0.25

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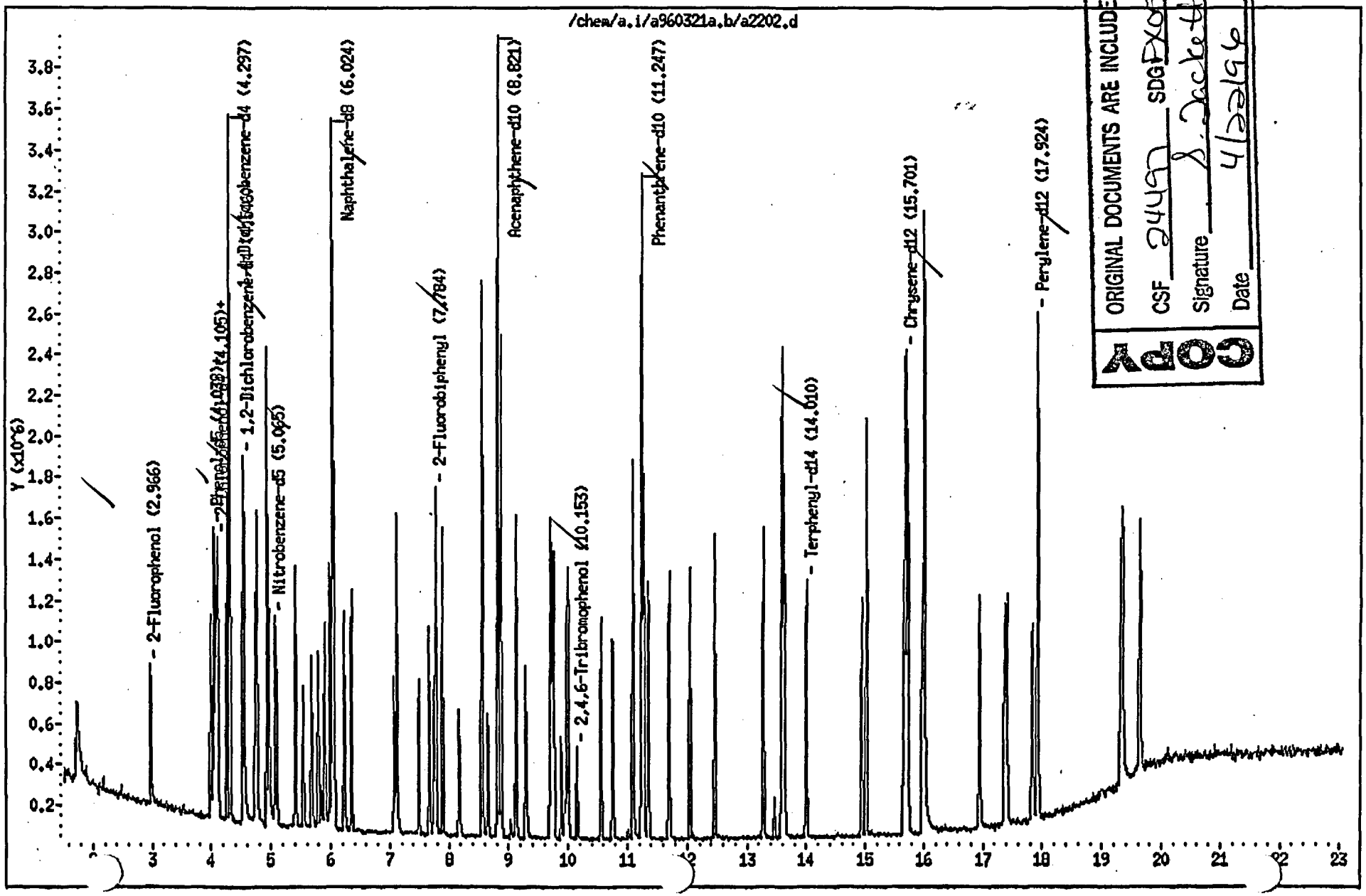


COPY
ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24497 SDG PX063
Signature J. Jackett
Date 4/22/96

Data File: /chem/a.i/a960321a.b/a2202.d
Report Date: 21-Mar-1996 13:16

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960321a.b/a2202.d
Lab. Id. : SSTD020AL Quant Type: ISTD
Inj Date : 21-MAR-1996 09:56
Operator : MIKE Inst ID: a.i
Smp Info : SSTD020AL
Misc Info : MS517**INSTA*SSTD020*1-327-11*
Comment :
Method : /chem/a.i/a960321a.b/BNA517EPA.m
Meth Date : 21-Mar-1996 13:16 mike
Cal Date : 21-MAR-96 11:48 Cal File: a2205.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: SOIL

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
$	1 2-Fluorophenol	112.00	2.978	(0.693)	307659	20.79	346.55
$	2 Phenol-d5	98.80	4.038	(0.940)	406394	22.14	369.11
	3 Phenol	94.00	4.049	(0.942)	471285	23.01	383.54
	4 bis(2-Chloroethyl)Ether	93.00	4.071	(0.947)	362571	22.40	373.39
	5 2-Chlorophenol-d4	132.00	4.094	(0.953)	363398	22.45	374.28
	6 2-Chlorophenol	128.00	4.105	(0.955)	378078	22.24	370.80
	7 1,3-Dichlorobenzene	146.00	4.252	(0.989)	442023	22.04	367.36
*	8 1,4-Dichlorobenzene-d4	151.85	4.297	(1.000)	614624	40.00	
	9 1,4-Dichlorobenzene	146.00	4.320	(1.005)	449665	22.36	372.78
$	10 1,2-Dichlorobenzene-d4	152.00	4.534	(1.055)	240621	20.97	349.62
	11 1,2-Dichlorobenzene	146.00	4.546	(1.058)	434978	22.78	379.69
	12 2-Methylphenol	108.00	4.760	(1.108)	311797	22.14	369.03
	13 2,2'-oxybis(1-Chloropropane)	45.00	4.737	(1.102)	616499	21.78	363.11
	14 4-Methylphenol	108.00	4.963	(1.155)	330373	21.42	357.06
	15 N-Nitroso-di-n-propylamine	70.00	4.929	(1.147)	241065	21.31	355.20
	16 Hexachloroethane	117.00	4.929	(1.147)	175062	22.23	370.63
$	17 Nitrobenzene-d5	82.00	5.065	(0.841)	342973	20.88	348.01
	18 Nitrobenzene	77.00	5.088	(0.845)	355209	20.77	346.28
	19 Isophorone	82.00	5.414	(0.899)	626320	21.05	350.95
	20 2-Nitrophenol	139.00	5.539	(0.919)	192495	19.27	321.20(a)
	21 2,4-Dimethylphenol	107.00	5.685	(0.944)	289835	19.72	328.82(a)
	22 bis(2-Chloroethoxy)methane	93.00	5.787	(0.961)	438450	21.54	358.99
	23 2,4-Dichlorophenol	162.00	5.900	(0.979)	315480	20.86	347.66
	24 1,2,4-Trichlorobenzene	180.00	5.990	(0.994)	376868	21.48	358.08
*	25 Naphthalene-d8	135.65	6.024	(1.000)	1908834	40.00	
	26 Naphthalene	128.00	6.058	(1.006)	1021393	22.51	375.26
	27 4-Chloroaniline	127.00	6.238	(1.036)	436376	21.18	353.15
	28 Hexachlorobutadiene	224.65	6.363	(1.056)	177770	20.03	333.97
	29 4-Chloro-3-Methylphenol	107.00	7.073	(1.174)	263784	18.91	315.23(a)
	30 2-Methylnaphthalene	142.00	7.129	(1.183)	782319	22.81	380.29
	31 Hexachlorocyclopentadiene	236.80	7.501	(0.850)	165853	19.63	327.31(a)

Data File: /chem/a.i/a960321a.b/a2202.d
Report Date: 21-Mar-1996 13:16

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	32 2,4,6-Trichlorophenol	196.00	7.671	(0.870)	208704	17.77	296.16(a)
	33 2,4,5-Trichlorophenol	196.00	7.750	(0.878)	220010	20.56	342.81(a)
$	34 2-Fluorobiphenyl	172.00	7.784	(0.882)	755132	23.40	390.12
	35 2-Chloronaphthalene	162.00	7.885	(0.894)	674812	22.74	379.00
	36 2-Nitroaniline	65.00	8.178	(0.927)	151839	17.18	286.36(a)
	37 Dimethylphthalate	163.00	8.562	(0.971)	665542	21.36	356.02
	38 Acenaphthylene	152.00	8.562	(0.971)	1009167	23.39	389.85
	39 2,6-Dinitrotoluene	165.00	8.663	(0.982)	129816	18.26	304.36(a)
*	40 Acenaphthene-d10	164.00	8.821	(1.000)	1158279	40.00	
	41 3-Nitroaniline	138.00	8.867	(1.005)	156219	19.57	326.17(a)
	42 Acenaphthene	153.00	8.867	(1.005)	671042	22.97	382.93
	43 2,4-Dinitrophenol	183.85	9.047	(1.026)	27770	9.02	150.38(a)
	44 Dibenzofuran	168.00	9.137	(1.036)	902651	21.97	366.22
	45 4-Nitrophenol	109.00	9.295	(1.054)	43483	13.95	232.63(a)
	46 2,4-Dinitrotoluene	165.00	9.295	(1.054)	180656	18.12	302.04(a)
	47 Diethylphthalate	149.00	9.735	(1.104)	675222	21.38	356.46
	48 Fluorene	166.00	9.701	(1.100)	700241	21.22	353.71
	49 4-Chlorophenyl-phenylether	204.00	9.758	(1.106)	375413	21.10	351.66
	50 4-Nitroaniline	138.00	9.882	(1.120)	142617	17.14	285.72(a)
	51 4,6-Dinitro-2-methylphenol	198.00	9.961	(0.886)	61524	12.10	201.73(a)
	52 N-Nitrosodiphenylamine (1)	169.00	9.983	(0.888)	469420	20.99	349.93
$	53 2,4,6-Tribromophenol	329.80	10.164	(0.904)	83123	17.92	298.77(a)
	54 4-Bromophenyl-phenylether	248.00	10.559	(0.939)	214991	20.66	344.48
	55 Hexachlorobenzene	283.80	10.762	(0.957)	267472	21.82	363.67
	56 Pentachlorophenol	265.80	11.100	(0.987)	358964	39.13	652.27(a)
*	57 Phenanthrene-d10	187.65	11.247	(1.000)	1785968	40.00	
	58 Phenanthrene	178.00	11.281	(1.003)	988128	22.53	375.51
	59 Anthracene	178.00	11.349	(1.009)	838845	21.65	360.88
	60 Carbazole	167.00	11.698	(1.040)	838596	20.65	344.27
	61 Di-n-butylphthalate	149.00	12.465	(1.108)	1042259	21.03	350.54
	62 Fluoranthene	202.00	13.276	(1.180)	968065	21.28	354.79
	63 Pyrene	202.00	13.638	(0.869)	1035600	23.75	395.89
$	64 Terphenyl-d14	244.00	14.010	(0.892)	654752	22.27	371.17
	65 Butylbenzylphthalate	149.00	14.945	(0.952)	409989	19.62	327.09(a)
	66 Benzo(a)anthracene	228.00	15.667	(0.998)	738031	21.58	359.79
*	67 Chrysene-d12	240.00	15.701	(1.000)	1221551	40.00	
	68 3,3'-Dichlorobenzidine	252.00	15.735	(1.002)	250880	17.84	297.37(a)
	69 Chrysene	228.00	15.735	(1.002)	778227	23.18	386.49
	70 bis(2-Ethylhexyl)phthalate	149.00	15.984	(1.018)	590600	19.82	330.44
	71 Di-n-octylphthalate	149.00	16.943	(0.945)	848638	19.58	326.47(a)
	72 Benzo(b)fluoranthene	252.00	17.383	(0.970)	710124	18.66	311.13(a)
	73 Benzo(k)fluoranthene	252.00	17.416	(0.972)	918722	23.87	397.88
	74 Benzo(a)pyrene	252.00	17.845	(0.996)	628332	18.98	316.49(a)
*	75 Perylene-d12	264.00	17.924	(1.000)	1380423	40.00	
	76 Indeno(1,2,3-cd)pyrene	276.00	19.336	(1.079)	929986	21.00	350.03
	77 Dibenz(a,h)anthracene	278.00	19.359	(1.080)	766160	20.52	342.10
	78 Benzo(g,h,i)perylene	276.00	19.641	(1.096)	782947	20.66	344.41

Data File: /chem/a.i/a960321a.b/a2202.d
Report Date: 21-Mar-1996 13:16

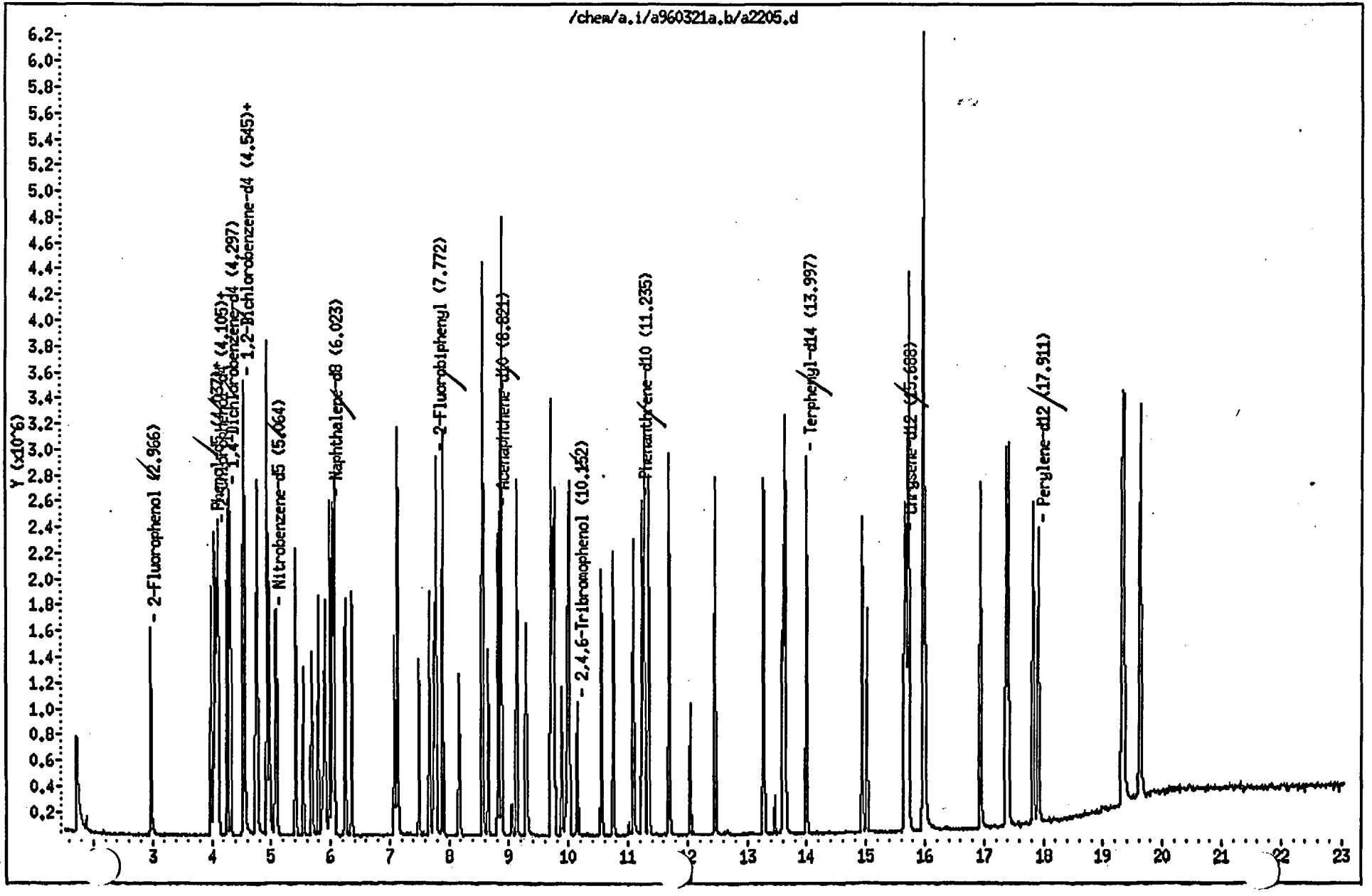
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

OPERATOR: MIKE

Data File: /chem/a.i/a960321a.b/a2205.d
Date : 21-MAR-1996 11:48
Instrument : a.i
Sample ID : SSTD050
Column phase : XTI-5
Volume Injected (uL) : 2.0

Column diameter : 0.25



Data File: /chem/a.i/a960321a.b/a2205.d
Report Date: 21-Mar-1996 13:16

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960321a.b/a2205.d
Lab. Id. : SSTD050 Quant Type: ISTD
Inj Date : 21-MAR-1996 11:48
Operator : MIKE Inst ID: a.i
Smp Info : SSTD050
Misc Info : MS500**INSTA*SSTD050*1-327-11*
Comment :
Method : /chem/a.i/a960321a.b/BNA517EPA.m
Meth Date : 21-Mar-1996 13:16 mike
Cal Date : 21-MAR-1996 11:48 Cal File: a2205.d
Als bottle: 5 Calibration Sample, Level: 2
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: SOIL

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
$ 1 2-Fluorophenol	112.00	2.966	(0.690)	538495	50.16	836.09
$ 2 Phenol-d5	98.80	4.037	(0.940)	683857	51.36	856.14
3 Phenol	94.00	4.048	(0.942)	781806	52.62	877.00
4 bis(2-Chloroethyl)Ether	93.00	4.071	(0.947)	603959	51.44	857.33
5 2-Chlorophenol-d4	132.00	4.093	(0.953)	609927	51.95	865.88
6 2-Chlorophenol	128.00	4.105	(0.955)	662026	53.69	894.97
7 1,3-Dichlorobenzene	146.00	4.251	(0.989)	761663	52.35	872.54
* 8 1,4-Dichlorobenzene-d4	151.85	4.297	(1.000)	445903	40.00	
9 1,4-Dichlorobenzene	146.00	4.319	(1.005)	776235	53.22	887.01
$ 10 1,2-Dichlorobenzene-d4	152.00	4.534	(1.055)	428898	51.54	859.00
11 1,2-Dichlorobenzene	146.00	4.545	(1.058)	741777	53.55	892.49
12 2-Methylphenol	108.00	4.759	(1.108)	539748	52.83	880.56
13 2,2'-oxybis(1-Chloropropane)	45.00	4.737	(1.102)	1044795	50.89	848.23
14 4-Methylphenol	108.00	4.963	(1.155)	577759	51.64	860.70
15 N-Nitroso-di-n-propylamine	70.00	4.929	(1.147)	408028	49.72	828.72
16 Hexachloroethane	117.00	4.929	(1.147)	285741	50.03	833.86
$ 17 Nitrobenzene-d5	82.00	5.064	(0.841)	560747	48.19	803.24
18 Nitrobenzene	77.00	5.087	(0.845)	610941	50.44	840.78
19 Isophorone	82.00	5.414	(0.899)	1076305	51.08	851.40
20 2-Nitrophenol	139.00	5.538	(0.919)	333545	47.14	785.71
21 2,4-Dimethylphenol	107.00	5.685	(0.944)	519759	49.94	832.43
22 bis(2-Chloroethoxy)methane	93.00	5.786	(0.961)	731285	50.71	845.26
23 2,4-Dichlorophenol	162.00	5.899	(0.979)	557753	52.06	867.69
24 1,2,4-Trichlorobenzene	180.00	5.978	(0.992)	654924	52.70	878.45
* 25 Naphthalene-d8	135.65	6.023	(1.000)	1352160	40.00	
26 Naphthalene	128.00	6.057	(1.006)	1731057	53.87	897.84
27 4-Chloroaniline	127.00	6.238	(1.036)	757410	51.91	865.31
28 Hexachlorobutadiene	224.65	6.362	(1.056)	305549	48.62	810.36
29 4-Chloro-3-Methylphenol	107.00	7.072	(1.174)	515334	52.16	869.37
30 2-Methylnaphthalene	142.00	7.117	(1.182)	1332766	54.87	914.59
31 Hexachlorocyclopentadiene	236.80	7.489	(0.849)	283252	43.77	729.60

Data File: /chem/a.i/a960321a.b/a2205.d
Report Date: 21-Mar-1996 13:16

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	32 2,4,6-Trichlorophenol	196.00	7.670	(0.870)	389323	43.26	721.09
	33 2,4,5-Trichlorophenol	196.00	7.738	(0.877)	420092	51.26	854.35
$	34 2-Fluorobiphenyl	172.00	7.772	(0.881)	1319939	53.40	890.03
	35 2-Chloronaphthalene	162.00	7.885	(0.894)	1203671	52.94	882.35
	36 2-Nitroaniline	65.00	8.178	(0.927)	301189	44.48	741.39(a)
	37 Dimethylphthalate	163.00	8.550	(0.969)	1254491	52.55	875.88
	38 Acenaphthylene	152.00	8.561	(0.971)	1737059	52.55	875.85
	39 2,6-Dinitrotoluene	165.00	8.651	(0.981)	248707	45.66	761.06
*	40 Acenaphthene-d10	164.00	8.821	(1.000)	887436	40.00	
	41 3-Nitroaniline	138.00	8.866	(1.005)	301067	49.22	820.44(a)
	42 Acenaphthene	153.00	8.866	(1.005)	1169249	52.25	870.88
	43 2,4-Dinitrophenol	183.85	9.046	(1.026)	72276	30.65	510.86(a)
	44 Dibenzofuran	168.00	9.136	(1.036)	1653094	52.52	875.38
	45 4-Nitrophenol	109.00	9.283	(1.052)	115640	48.45	807.50(a)
	46 2,4-Dinitrotoluene	165.00	9.294	(1.054)	365253	47.82	797.05
	47 Diethylphthalate	149.00	9.734	(1.104)	1284613	53.10	885.15
	48 Fluorene	166.00	9.700	(1.100)	1313566	51.96	866.03
	49 4-Chlorophenyl-phenylether	204.00	9.757	(1.106)	699825	51.33	855.62
	50 4-Nitroaniline	138.00	9.881	(1.120)	288817	45.31	755.21(a)
	51 4,6-Dinitro-2-methylphenol	198.00	9.949	(0.886)	137921	34.23	570.51(a)
	52 N-Nitrosodiphenylamine (1)	169.00	9.983	(0.889)	879505	49.62	827.09
$	53 2,4,6-Tribromophenol	329.80	10.152	(0.904)	177478	48.28	804.74
	54 4-Bromophenyl-phenylether	248.00	10.558	(0.940)	405532	49.18	819.72
	55 Hexachlorobenzene	283.80	10.750	(0.957)	464488	47.80	796.72
	56 Pentachlorophenol	265.80	11.088	(0.987)	415603	57.16	952.68
*	57 Phenanthrene-d10	187.65	11.235	(1.000)	1415724	40.00	
	58 Phenanthrene	178.00	11.269	(1.003)	1785650	51.36	856.06
	59 Anthracene	178.00	11.348	(1.010)	1555326	50.64	844.12
	60 Carbazole	167.00	11.686	(1.040)	1692938	52.60	876.78
	61 Di-n-butylphthalate	149.00	12.452	(1.108)	2066325	52.60	876.71
	62 Fluoranthene	202.00	13.275	(1.182)	1872429	51.94	865.71
	63 Pyrene	202.00	13.625	(0.868)	1961209	49.94	832.32
$	64 Terphenyl-d14	244.00	13.997	(0.892)	1327952	50.14	835.72
	65 Butylbenzylphthalate	149.00	14.933	(0.952)	898046	47.72	795.39
	66 Benzo(a)anthracene	228.00	15.665	(0.999)	1472192	47.80	796.75
*	67 Chrysene-d12	240.00	15.688	(1.000)	1100341	40.00	
	68 3,3'-Dichlorobenzidine	252.00	15.722	(1.002)	593549	46.86	781.04
	69 Chrysene	228.00	15.734	(1.003)	1521164	50.32	838.67
	70 bis(2-Ethylhexyl)phthalate	149.00	15.971	(1.018)	1346269	50.17	836.22
	71 Di-n-octylphthalate	149.00	16.941	(0.946)	2178019	54.26	904.41
	72 Benzo(b)fluoranthene	252.00	17.369	(0.970)	1638062	46.48	774.68
	73 Benzo(k)fluoranthene	252.00	17.403	(0.972)	1795966	50.37	839.55
	74 Benzo(a)pyrene	252.00	17.832	(0.996)	1585065	51.70	861.78
*	75 Perylene-d12	264.00	17.911	(1.000)	1278889	40.00	
	76 Indeno(1,2,3-cd)pyrene	276.00	19.322	(1.079)	2048060	49.92	832.06
	77 Dibenz(a,h)anthracene	278.00	19.345	(1.080)	1778542	51.43	857.19
	78 Benzo(g,h,i)perylene	276.00	19.627	(1.096)	1823404	51.94	865.78

Data File: /chem/a.i/a960321a.b/a2205.d
Report Date: 21-Mar-1996 13:16

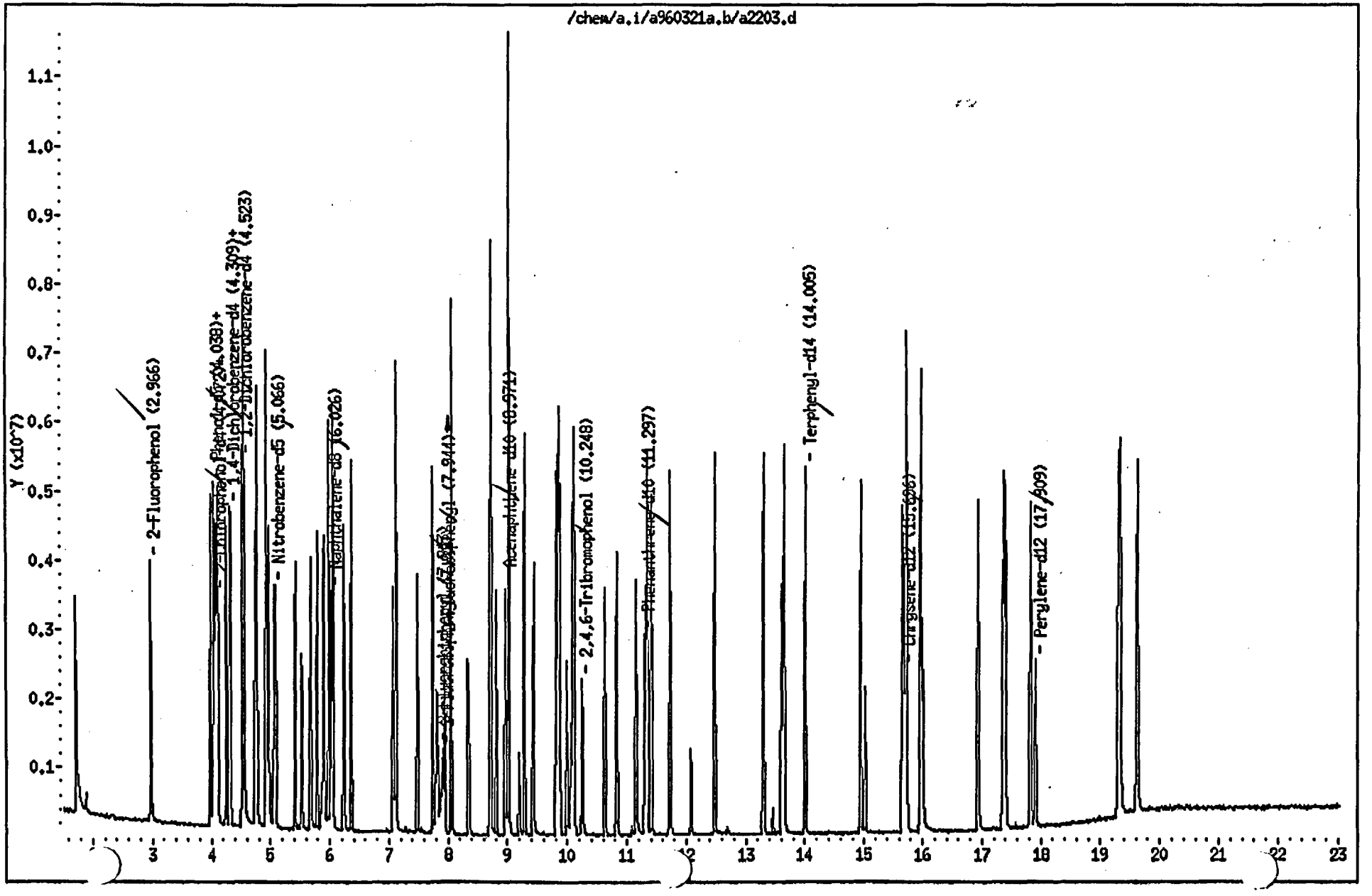
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/a.i/a960321a.b/a2203.d
Date : 21-MAR-1996 10:28
Instrument : a.i
Sample ID : SSTD080AL
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: MIKE

Column diameter : 0.25



Data File: /chem/a.i/a960321a.b/a2203.d
Report Date: 21-Mar-1996 13:16

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960321a.b/a2203.d
Lab. Id. : SSTD080AL
Inj Date : 21-MAR-1996 10:28
Operator : MIKE
Smp Info : SSTD080AL
Misc Info : MS517**INSTA*SSTD080*1-327-11*
Comment :
Method : /chem/a.i/a960321a.b/BNA517EPA.m
Meth Date : 21-Mar-1996 13:16 mike
Cal Date : 21-MAR-96 11:48
Als bottle: 3
Dil Factor: 1.000
Integrator: HP RTE
Sample Type: SOIL

Quant Type: ISTD
Inst ID: a.i
Cal File: a2205.d
Calibration Sample, Level: 3
Target Version: Target 3.00
Compound Sublist: all.sub

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
$ 1 2-Fluorophenol	112.00	2.966	(0.690)	1188520	83.17	1386.17
$ 2 Phenol-d5	98.80	4.038	(0.939)	1464797	82.65	1377.51
3 Phenol	94.00	4.049	(0.942)	1588584	80.31	1338.60
4 bis(2-Chloroethyl)Ether	93.00	4.072	(0.947)	1258021	80.48	1341.42
5 2-Chlorophenol-d4	132.00	4.083	(0.950)	1279374	81.85	1364.32
6 2-Chlorophenol	128.00	4.106	(0.955)	1334207	81.29	1354.86
7 1,3-Dichlorobenzene	146.00	4.252	(0.989)	1584774	81.82	1363.73
* 8 1,4-Dichlorobenzene-d4	151.85	4.298	(1.000)	593614	40.00	
9 1,4-Dichlorobenzene	146.00	4.320	(1.005)	1589352	81.85	1364.25
$ 10 1,2-Dichlorobenzene-d4	152.00	4.523	(1.053)	929736	83.92	1398.73
11 1,2-Dichlorobenzene	146.00	4.546	(1.058)	1529185	82.92	1382.06
12 2-Methylphenol	108.00	4.761	(1.108)	1100500	80.91	1348.64
13 2,2'-oxybis(1-Chloropropane)	45.00	4.738	(1.103)	2228793	81.55	1359.22
14 4-Methylphenol	108.00	4.964	(1.155)	1225566	82.28	1371.45
15 N-Nitroso-di-n-propylamine	70.00	4.930	(1.147)	905737	82.91	1381.84
16 Hexachloroethane	117.00	4.930	(1.147)	629395	82.78	1379.68
$ 17 Nitrobenzene-d5	82.00	5.066	(0.841)	1279985	83.39	1389.94
18 Nitrobenzene	77.00	5.089	(0.844)	1325036	82.94	1382.36
19 Isophorone	82.00	5.416	(0.899)	2243391	80.71	1345.28
20 2-Nitrophenol	139.00	5.540	(0.919)	789109	84.54	1409.14
21 2,4-Dimethylphenol	107.00	5.675	(0.942)	1104961	80.49	1341.55
22 bis(2-Chloroethoxy)methane	93.00	5.788	(0.961)	1519632	79.89	1331.53
23 2,4-Dichlorophenol	162.00	5.901	(0.979)	1170363	82.81	1380.24
24 1,2,4-Trichlorobenzene	180.00	5.980	(0.992)	1334413	81.41	1356.84
* 25 Naphthalene-d8	135.65	6.026	(1.000)	1783686	40.00	
26 Naphthalene	128.00	6.048	(1.004)	3397359	80.14	1335.79
27 4-Chloroaniline	127.00	6.229	(1.034)	1551247	80.60	1343.48
28 Hexachlorobutadiene	224.65	6.353	(1.054)	723305	87.25	1454.22
29 4-Chloro-3-Methylphenol	107.00	7.064	(1.172)	1030700	79.08	1318.13
30 2-Methylnaphthalene	142.00	7.120	(1.182)	2553196	79.69	1328.21
31 Hexachlorocyclopentadiene	236.80	7.492	(0.835)	645152	76.56	1276.15

Data File: /chem/a.i/a960321a.b/a2203.d
Report Date: 21-Mar-1996 13:16

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	32 2,4,6-Trichlorophenol	196.00	7.744	(0.863)	1453161	124.01	2066.92
	33 2,4,5-Trichlorophenol	196.00	7.820	(0.872)	752728	70.53	1175.61(H)
$	34 2-Fluorobiphenyl	172.00	7.944	(0.874)	2124545	66.00	1100.13(MH)
	35 2-Chloronaphthalene	162.00	8.046	(0.897)	2168629	73.24	1220.81(H)
	36 2-Nitroaniline	65.00	8.328	(0.928)	788748	89.46	1490.99
	37 Dimethylphthalate	163.00	8.712	(0.971)	2452318	78.89	1314.87
	38 Acenaphthylene	152.00	8.723	(0.972)	3271729	76.01	1266.85
	39 2,6-Dinitrotoluene	165.00	8.813	(0.982)	581830	82.03	1367.29(H)
*	40 Acenaphthene-d10	164.00	8.971	(1.000)	1155599	40.00	
	41 3-Nitroaniline	138.00	9.017	(1.005)	616084	77.35	1289.30
	42 Acenaphthene	153.00	9.017	(1.005)	2227426	76.44	1274.05(H)
	43 2,4-Dinitrophenol	183.85	9.197	(1.025)	236897	77.15	1285.88
	44 Dibenzofuran	168.00	9.276	(1.034)	3177802	77.53	1292.28
	45 4-Nitrophenol	109.00	9.412	(1.049)	254459	81.87	1364.53(H)
	46 2,4-Dinitrotoluene	165.00	9.434	(1.052)	850215	85.48	1424.79
	47 Diethylphthalate	149.00	9.852	(1.098)	2451257	77.82	1297.07
	48 Fluorene	166.00	9.829	(1.096)	2637991	80.13	1335.63
	49 4-Chlorophenyl-phenylether	204.00	9.875	(1.101)	1444196	81.35	1355.96
	50 4-Nitroaniline	138.00	9.999	(1.115)	664269	80.03	1333.89(H)
	51 4,6-Dinitro-2-methylphenol	198.00	10.067	(0.891)	402656	87.15	1452.55
	52 N-Nitrosodiphenylamine (1)	169.00	10.089	(0.893)	1781748	87.67	1461.24
$	53 2,4,6-Tribromophenol	329.80	10.248	(0.907)	364729	86.53	1442.26
	54 4-Bromophenyl-phenylether	248.00	10.642	(0.942)	780671	82.57	1376.16
	55 Hexachlorobenzene	283.80	10.834	(0.959)	915752	82.19	1369.84
	56 Pentachlorophenol	265.80	11.162	(0.988)	671175	80.50	1341.73
*	57 Phenanthrene-d10	187.65	11.297	(1.000)	1623376	40.00	
	58 Phenanthrene	178.00	11.339	(1.003)	3219059	80.75	1345.85
	59 Anthracene	178.00	11.410	(1.010)	2953242	83.86	1397.79(H)
	60 Carbazole	167.00	11.737	(1.039)	3000849	81.32	1355.36
	61 Di-n-butylphthalate	149.00	12.482	(1.105)	3728248	82.77	1379.51
	62 Fluoranthene	202.00	13.294	(1.177)	3295780	79.73	1328.88
	63 Pyrene	202.00	13.644	(0.869)	3402877	82.57	1376.18
$	64 Terphenyl-d14	244.00	14.005	(0.892)	2266240	81.54	1359.09
	65 Butylbenzylphthalate	149.00	14.940	(0.952)	1684926	85.32	1422.08
	66 Benzo(a)anthracene	228.00	15.662	(0.998)	2632545	81.46	1357.68
*	67 Chrysene-d12	240.00	15.696	(1.000)	1154693	40.00	
	68 3,3'-Dichlorobenzidine	252.00	15.719	(1.001)	1137368	85.57	1426.20
	69 Chrysene	228.00	15.730	(1.002)	2641577	83.27	1387.84
	70 bis(2-Ethylhexyl)phthalate	149.00	15.968	(1.017)	2348949	83.42	1390.35
	71 Di-n-octylphthalate	149.00	16.938	(0.946)	3688854	85.04	1417.45
	72 Benzo(b)fluoranthene	252.00	17.367	(0.970)	3402160	89.33	1488.88
	73 Benzo(k)fluoranthene	252.00	17.401	(0.972)	2944281	76.41	1273.62
	74 Benzo(a)pyrene	252.00	17.830	(0.996)	2729849	82.40	1373.42
*	75 Perylene-d12	264.00	17.909	(1.000)	1382040	40.00	
	76 Indeno(1,2,3-cd)pyrene	276.00	19.320	(1.079)	3554158	80.17	1336.18
	77 Dibenz(a,h)anthracene	278.00	19.343	(1.080)	2989837	80.00	1333.43
	78 Benzo(g,h,i)perylene	276.00	19.626	(1.096)	3015013	79.48	1324.72

3/21/96

Data File: /chem/a.i/a960321a.b/a2203.d
Report Date: 21-Mar-1996 13:16

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

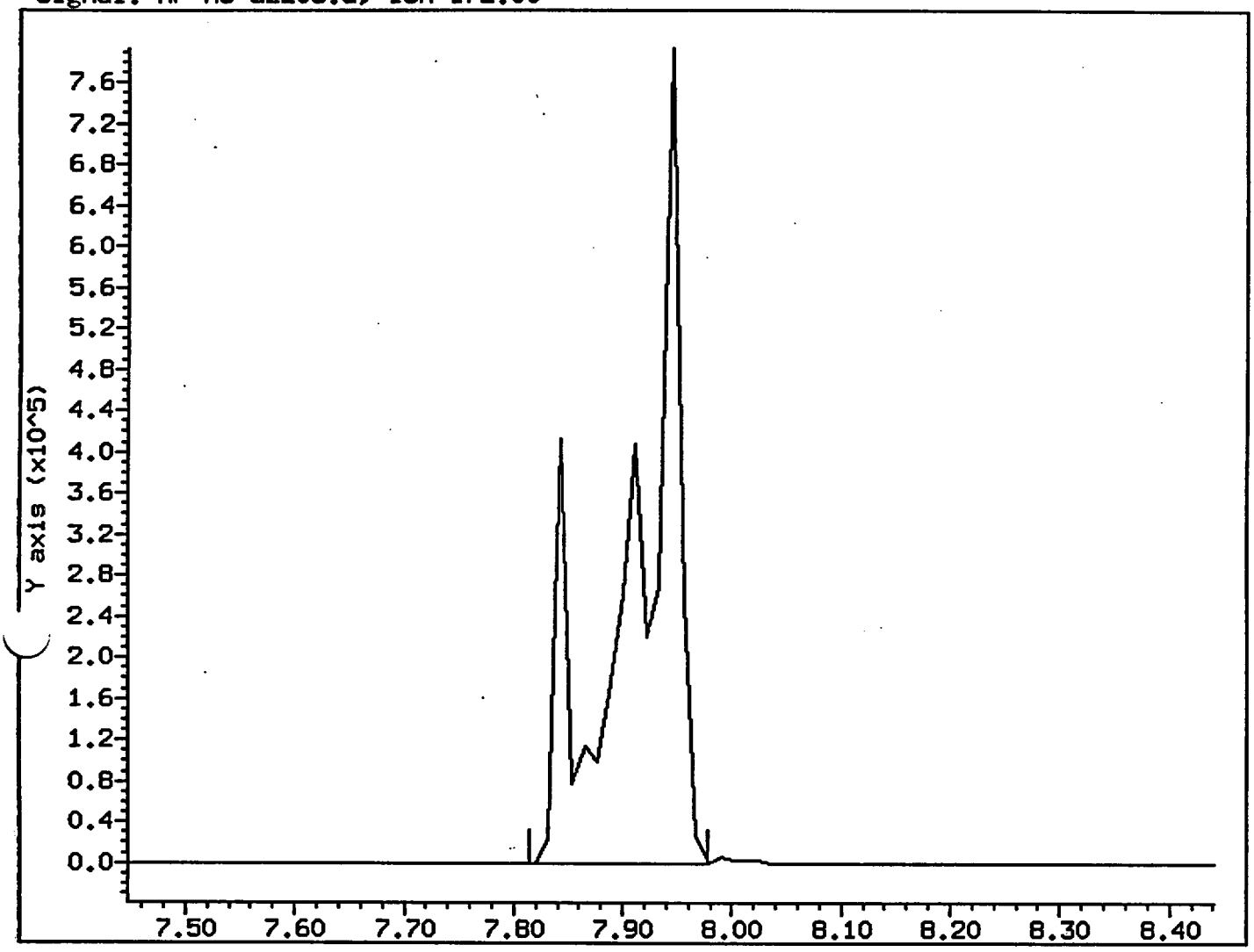
MANUAL INTEGRATION REPORT

LAB SAMPLE ID: SSTD080AL
SAMPLE ID. : SSTD080AL
FILENAME : /chem/a.i/a960321a.b/a2203.d
INST ID. : a.i
ANALYST : MIKE
DATE INJECTED: 21-MAR-1996 10:28
COMPOUND : 2-Fluorobiphenyl
ION: 172 AREA: 2124545 CONCENTRATION: 1100.13
INTEGRATION SCAN RANGE: 558 - 572

Report Generated: 03/26/96 at 07:09 by MK

Manual Integration

Client Sample ID: SSTD080
Injection Date: 21-MAR-96 10:28
Instrument: a.i
Compound: 2-Fluorobiphenyl
Signal: HP MS a2203.d, Ion 172.00



3/21/96

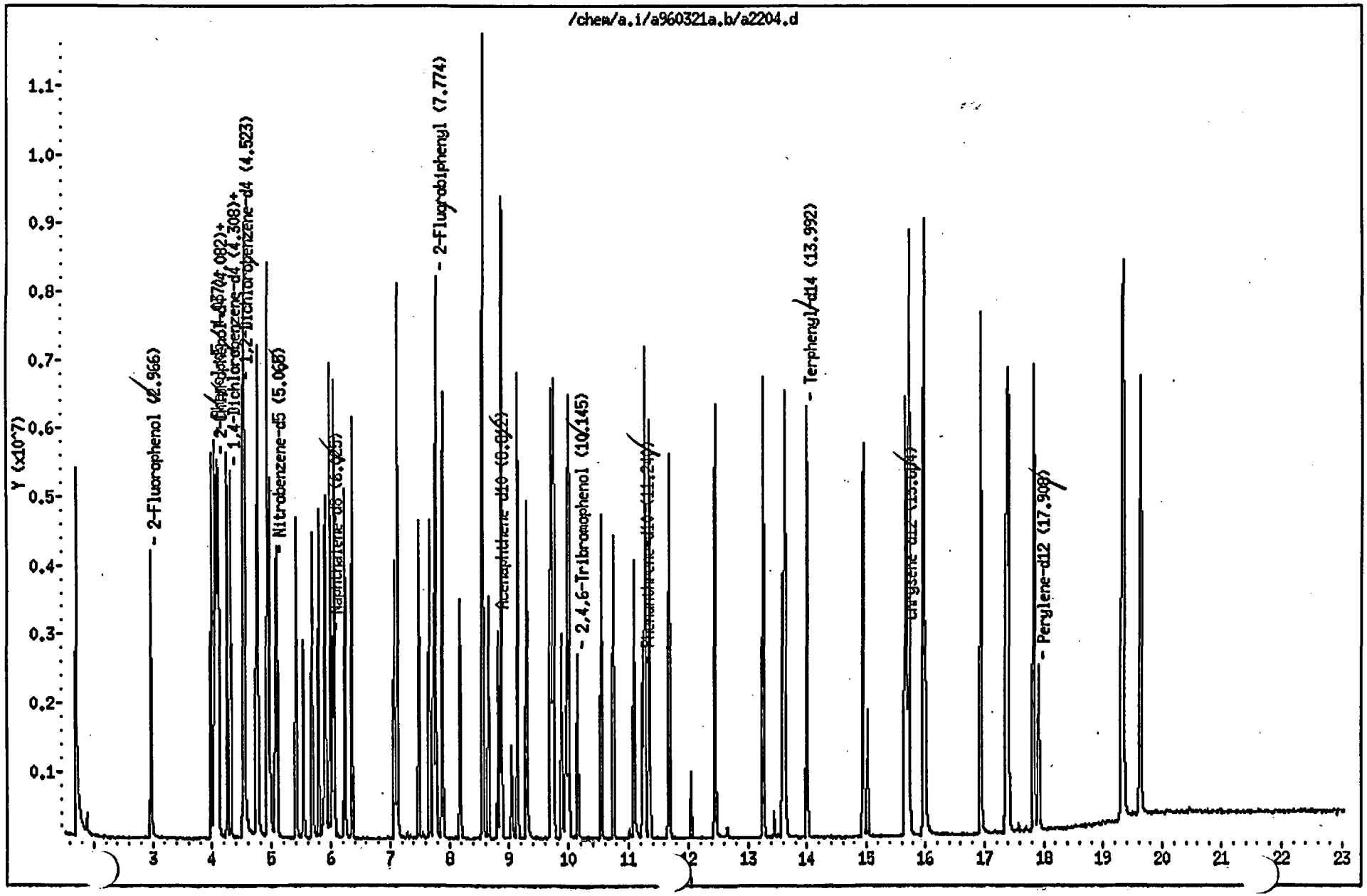
DK
3/25/96
DK

Data File: /chem/a.i/a960321a.b/a2204.d
Date : 21-MAR-1996 11:01
Instrument : a.i
Sample ID : SSTD120AL
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: MIKE

Column diameter : 0.25

238



Data File: /chem/a.i/a960321a.b/a2204.d
Report Date: 21-Mar-1996 13:16

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960321a.b/a2204.d
Lab. Id. : SSTD120AL
Inj Date : 21-MAR-1996 11:01
Operator : MIKE
Smp Info : SSTD120AL
Misc Info : MS517**INSTA*SSTD120*1-327-11*
Comment :
Method : /chem/a.i/a960321a.b/BNA517EPA.m
Meth Date : 21-Mar-1996 13:16 mike
Cal Date : 21-MAR-96 11:48
Als bottle: 4
Dil Factor: 1.000
Integrator: HP RTE
Sample Type: SOIL

Quant Type: ISTD
Inst ID: a.i
Cal File: a2205.d
Calibration Sample, Level: 4
Target Version: Target 3.00
Compound Sublist: all.sub

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
$ 1 2-Fluorophenol	112.00	2.966	(0.690)	1386107	110.85	1847.63
$ 2 Phenol-d5	98.80	4.037	(0.940)	1698069	109.50	1825.07
3 Phenol	94.00	4.048	(0.942)	1844904	106.60	1776.73
4 bis(2-Chloroethyl)Ether	93.00	4.071	(0.947)	1545145	112.98	1883.01
5 2-Chlorophenol-d4	132.00	4.082	(0.950)	1524315	111.46	1857.80
6 2-Chlorophenol	128.00	4.105	(0.955)	1551116	108.01	1800.20
7 1,3-Dichlorobenzene	146.00	4.241	(0.987)	1887371	111.37	1856.20
* 8 1,4-Dichlorobenzene-d4	151.85	4.297	(1.000)	519395	40.00	
9 1,4-Dichlorobenzene	146.00	4.320	(1.005)	1853334	109.09	1818.17
$ 10 1,2-Dichlorobenzene-d4	152.00	4.523	(1.053)	1104156	113.91	1898.51
11 1,2-Dichlorobenzene	146.00	4.545	(1.058)	1741824	107.95	1799.19
12 2-Methylphenol	108.00	4.760	(1.108)	1258971	105.79	1763.30
13 2,2'-oxybis(1-Chloropropane)	45.00	4.738	(1.103)	2608778	109.09	1818.29
14 4-Methylphenol	108.00	4.964	(1.155)	1444181	110.82	1847.03
15 N-Nitroso-di-n-propylamine	70.00	4.930	(1.147)	1066557	111.58	1859.71
16 Hexachloroethane	117.00	4.918	(1.145)	732134	110.05	1834.22
$ 17 Nitrobenzene-d5	82.00	5.065	(0.841)	1462930	115.77	1929.60
18 Nitrobenzene	77.00	5.088	(0.844)	1490700	113.34	1889.02
19 Isophorone	82.00	5.415	(0.899)	2621134	114.55	1909.19
20 2-Nitrophenol	139.00	5.539	(0.919)	931917	121.28	2021.38
21 2,4-Dimethylphenol	107.00	5.675	(0.942)	1348207	119.29	1988.24
22 bis(2-Chloroethoxy)methane	93.00	5.788	(0.961)	1759247	112.34	1872.38
23 2,4-Dichlorophenol	162.00	5.901	(0.979)	1345564	115.65	1927.49
24 1,2,4-Trichlorobenzene	180.00	5.980	(0.992)	1541923	114.26	1904.39
* 25 Naphthalene-d8	135.65	6.025	(1.000)	1468472	40.00	
26 Naphthalene	128.00	6.048	(1.004)	3847928	110.26	1837.71
27 4-Chloroaniline	127.00	6.228	(1.034)	1831565	115.60	1926.75
28 Hexachlorobutadiene	224.65	6.353	(1.054)	838914	122.92	2048.70
29 4-Chloro-3-Methylphenol	107.00	7.063	(1.172)	1285843	119.84	1997.42
30 2-Methylnaphthalene	142.00	7.119	(1.182)	2765937	104.86	1747.75
31 Hexachlorocyclopentadiene	236.80	7.492	(0.850)	835848	124.13	2068.87

Data File: /chem/a.i/a960321a.b/a2204.d
Report Date: 21-Mar-1996 13:16

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
32 2,4,6-Trichlorophenol	196.00	7.661	(0.869)	958482	102.35	1705.92(H)
33 2,4,5-Trichlorophenol	196.00	7.740	(0.878)	1069997	125.46	2091.09
$ 34 2-Fluorobiphenyl	172.00	7.774	(0.882)	3024998	117.60	1960.07
35 2-Chloronaphthalene	162.00	7.887	(0.895)	2672548	112.95	1882.58
36 2-Nitroaniline	65.00	8.169	(0.927)	822941	116.79	1946.57
37 Dimethylphthalate	163.00	8.553	(0.971)	2832195	114.01	1900.18
38 Acenaphthylene	152.00	8.553	(0.971)	3764055	109.42	1823.77(H)
39 2,6-Dinitrotoluene	165.00	8.655	(0.982)	719150	126.88	2114.70
* 40 Acenaphthene-d10	164.00	8.812	(1.000)	923511	40.00	
41 3-Nitroaniline	138.00	8.869	(1.006)	767938	120.65	2010.98(H)
42 Acenaphthene	153.00	8.869	(1.006)	2625294	112.74	1879.00
43 2,4-Dinitrophenol	183.85	9.038	(1.026)	324526	132.25	2204.23
44 Dibenzofuran	168.00	9.129	(1.036)	3785139	115.56	1926.09
45 4-Nitrophenol	109.00	9.276	(1.053)	293864	118.31	1971.86
46 2,4-Dinitrotoluene	165.00	9.287	(1.054)	967724	121.75	2029.27
47 Diethylphthalate	149.00	9.727	(1.104)	2929867	116.39	1939.94
48 Fluorene	166.00	9.704	(1.101)	3035933	115.40	1923.41(H)
49 4-Chlorophenyl-phenylether	204.00	9.750	(1.106)	1616888	113.97	1899.62
50 4-Nitroaniline	138.00	9.885	(1.122)	797793	120.27	2004.62
51 4,6-Dinitro-2-methylphenol	198.00	9.953	(0.885)	515968	126.63	2110.61
52 N-Nitrosodiphenylamine (1)	169.00	9.987	(0.889)	2011997	112.26	1871.06
$ 53 2,4,6-Tribromophenol	329.80	10.145	(0.903)	437071	117.58	1959.80
4 4-Bromophenyl-phenylether	248.00	10.551	(0.939)	971274	116.48	1941.46
5 Hexachlorobenzene	283.80	10.755	(0.957)	1119057	113.88	1898.15
56 Pentachlorophenol	265.80	11.093	(0.987)	860607	117.05	1950.84(H)
* 57 Phenanthrene-d10	187.65	11.240	(1.000)	1431637	40.00	
58 Phenanthrene	178.00	11.271	(1.003)	3879512	110.35	1839.20(H)
59 Anthracene	178.00	11.342	(1.009)	3521107	113.38	1889.77
60 Carbazole	167.00	11.692	(1.040)	3717528	114.23	1903.93
61 Di-n-butylphthalate	149.00	12.458	(1.108)	4436095	111.67	1861.26
62 Fluoranthene	202.00	13.270	(1.181)	4118495	112.98	1883.01
63 Pyrene	202.00	13.631	(0.869)	4228182	114.74	1912.44
$ 64 Terphenyl-d14	244.00	13.992	(0.892)	2989611	120.31	2005.22
65 Butylbenzylphthalate	149.00	14.939	(0.953)	2219346	125.69	2094.95
66 Benzo(a)anthracene	228.00	15.663	(0.999)	3484132	120.58	2009.65
* 67 Chrysene-d12	240.00	15.684	(1.000)	1032434	40.00	
68 3,3'-Dichlorobenzidine	252.00	15.718	(1.002)	1463543	123.15	2052.53
69 Chrysene	228.00	15.729	(1.003)	3188241	112.40	1873.41
70 bis(2-Ethylhexyl)phthalate	149.00	15.967	(1.018)	3113951	123.68	2061.42
71 Di-n-octylphthalate	149.00	16.937	(0.946)	4917510	115.20	1919.99
72 Benzo(b)fluoranthene	252.00	17.366	(0.970)	4330467	115.54	1925.66
73 Benzo(k)fluoranthene	252.00	17.400	(0.972)	4396494	115.94	1932.44
74 Benzo(a)pyrene	252.00	17.829	(0.996)	3967620	121.69	2028.30
* 75 Perylene-d12	264.00	17.908	(1.000)	1360136	40.00	
76 Indeno(1,2,3-cd)pyrene	276.00	19.320	(1.079)	4970250	113.91	1898.65
77 Dibenz(a,h)anthracene	278.00	19.343	(1.080)	4276938	116.29	1938.19
78 Benzo(g,h,i)perylene	276.00	19.637	(1.097)	4126853	110.54	1842.44

Data File: /chem/a.i/a960321a.b/a2204.d
Report Date: 21-Mar-1996 13:16

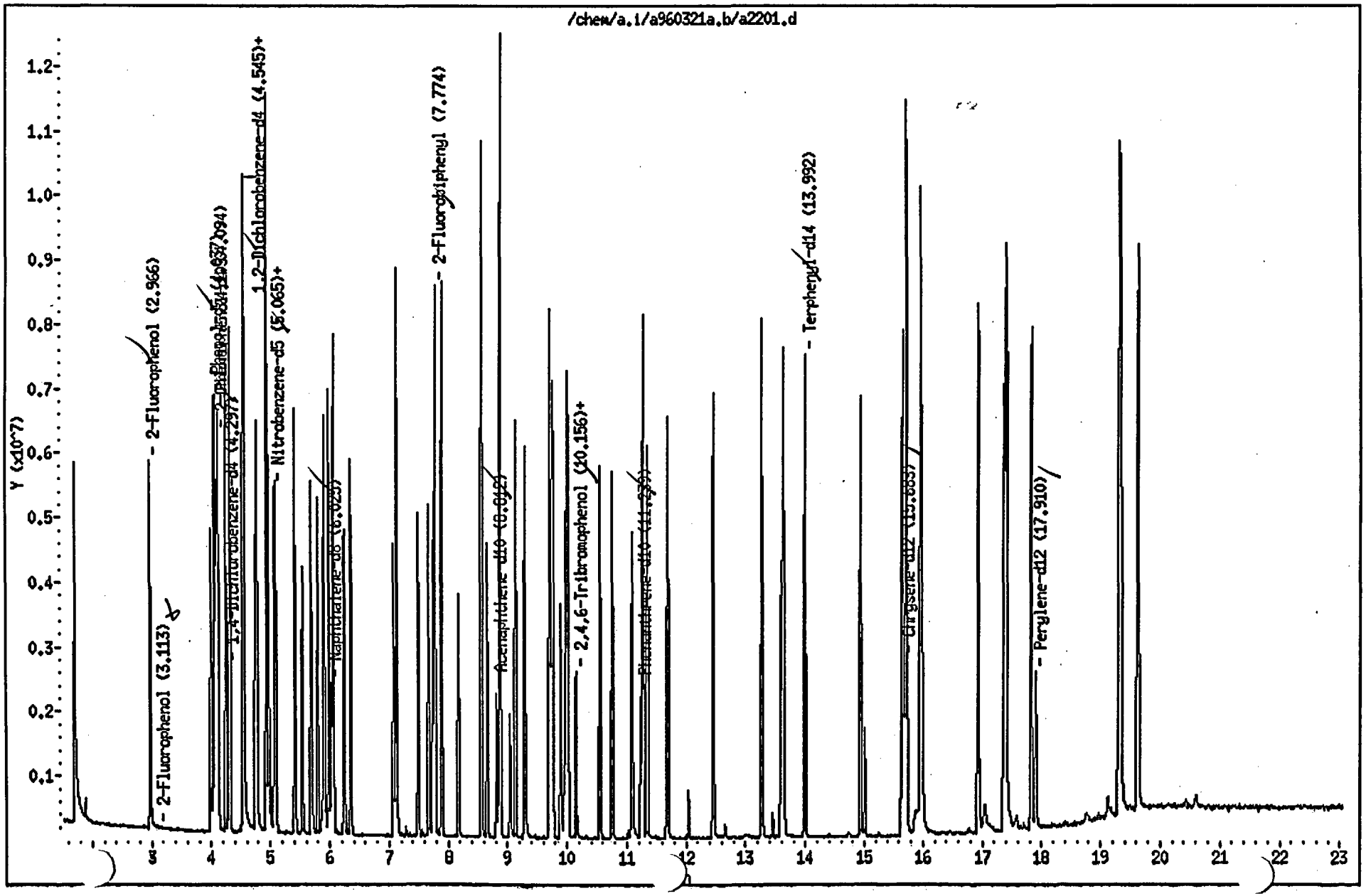
QC Flag Legend

H - Operator selected an alternate compound hit.

OPERATOR: Mike

Data File: /chem/a.i/a960321a.b/a2201.d
Date : 21-MAR-1996 09:24
Instrument : a.i
Sample ID : SSTD160AL
Column phase : XTI-5
Volume Injected (uL) : 2.0

Column diameter : 0.25



Data File: /chem/a.i/a960321a.b/a2201.d
Report Date: 21-Mar-1996 13:16

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960321a.b/a2201.d
Lab. Id. : SSTD160AL Quant Type: ISTD
Inj Date : 21-MAR-1996 09:24
Operator : MIKE Inst ID: a.i
Smp Info : SSTD160AL
Misc Info : MS517**INSTA*SSTD160*1-327-11*
Comment :
Method : /chem/a.i/a960321a.b/BNA517EPA.m
Meth Date : 21-Mar-1996 13:16 mike
Cal Date : 21-MAR-96 11:48 Cal File: a2205.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: SOIL

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
$	1 2-Fluorophenol	112.00	2.966	(0.690)	1649133	158.96	2649.48(H)
$	2 Phenol-d5	98.80	4.037	(0.939)	1893062	147.13	2452.31(H)
	3 Phenol	94.00	4.048	(0.942)	2078280	144.74	2412.34
	4 bis(2-Chloroethyl)Ether	93.00	4.071	(0.947)	1640209	144.55	2409.18(H)
	5 2-Chlorophenol-d4	132.00	4.094	(0.953)	1608300	141.75	2362.54
	6 2-Chlorophenol	128.00	4.105	(0.955)	1710674	143.57	2392.94
	7 1,3-Dichlorobenzene	146.00	4.252	(0.989)	2024521	143.98	2399.81(H)
*	8 1,4-Dichlorobenzene-d4	151.85	4.297	(1.000)	430934	40.00	
	9 1,4-Dichlorobenzene	146.00	4.320	(1.005)	1995810	141.59	2359.86
$	10 1,2-Dichlorobenzene-d4	152.00	4.534	(1.055)	1186401	147.52	2458.67
	11 1,2-Dichlorobenzene	146.00	4.545	(1.058)	1828770	136.60	2276.77
	12 2-Methylphenol	108.00	4.771	(1.110)	1489748	150.89	2514.85(H)
	13 2,2'-oxybis(1-Chloropropane)	45.00	4.738	(1.103)	3060688	154.27	2571.18
	14 4-Methylphenol	108.00	4.964	(1.155)	1632795	151.01	2516.93(H)
	15 N-Nitroso-di-n-propylamine	70.00	4.930	(1.147)	1235467	155.78	2596.45(H)
	16 Hexachloroethane	117.00	4.930	(1.147)	826239	149.69	2494.91
$	17 Nitrobenzene-d5	82.00	5.065	(0.841)	1699361	157.56	2626.11
	18 Nitrobenzene	77.00	5.088	(0.844)	1743908	155.34	2589.13
	19 Isophorone	82.00	5.415	(0.899)	3005736	153.90	2565.04
	20 2-Nitrophenol	139.00	5.539	(0.919)	1076592	164.15	2735.93(A)
	21 2,4-Dimethylphenol	107.00	5.686	(0.944)	1565481	162.29	2704.85(A)
	22 bis(2-Chloroethoxy)methane	93.00	5.788	(0.961)	2082630	155.81	2596.95
	23 2,4-Dichlorophenol	162.00	5.901	(0.979)	1456757	146.69	2444.89
	24 1,2,4-Trichlorobenzene	180.00	5.980	(0.992)	1661854	144.28	2404.74
*	25 Naphthalene-d8	135.65	6.025	(1.000)	1253379	40.00	
	26 Naphthalene	128.00	6.059	(1.006)	4175247	140.17	2336.23(H)
	27 4-Chloroaniline	127.00	6.240	(1.036)	2014724	148.98	2483.14(H)
	28 Hexachlorobutadiene	224.65	6.353	(1.054)	848708	145.69	2428.30
	29 4-Chloro-3-Methylphenol	107.00	7.074	(1.174)	1500010	163.79	2729.97(A)
	30 2-Methylnaphthalene	142.00	7.119	(1.182)	3211463	142.65	2377.51(H)
	31 Hexachlorocyclopentadiene	236.80	7.492	(0.850)	1030597	184.15	3069.31(A)

Data File: /chem/a.i/a960321a.b/a2201.d
Report Date: 21-Mar-1996 13:16

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	32 2,4,6-Trichlorophenol	196.00	7.672	(0.871)	1049777	134.88	2248.11(H)
	33 2,4,5-Trichlorophenol	196.00	7.740	(0.878)	1187937	167.60	2793.37(AH)
$	34 2-Fluorobiphenyl	172.00	7.774	(0.882)	3271477	153.03	2550.56
	35 2-Chloronaphthalene	162.00	7.887	(0.895)	2980388	151.56	2526.07
	36 2-Nitroaniline	65.00	8.180	(0.928)	954573	163.00	2716.79(A)
	37 Dimethylphthalate	163.00	8.553	(0.971)	3120370	151.13	2518.98
	38 Acenaphthylene	152.00	8.564	(0.972)	4196177	146.77	2446.32
	39 2,6-Dinitrotoluene	165.00	8.654	(0.982)	822141	174.53	2908.85(A)
*	40 Acenaphthene-d10	164.00	8.812	(1.000)	767532	40.00	
	41 3-Nitroaniline	138.00	8.869	(1.006)	882716	166.87	2781.30(AH)
	42 Acenaphthene	153.00	8.869	(1.006)	2821195	145.77	2429.56
	43 2,4-Dinitrophenol	183.85	9.038	(1.026)	430851	211.26	3521.12(A)
	44 Dibenzofuran	168.00	9.140	(1.037)	4000977	146.98	2449.66
	45 4-Nitrophenol	109.00	9.287	(1.054)	337443	163.46	2724.43(A)
	46 2,4-Dinitrotoluene	165.00	9.287	(1.054)	1114145	168.66	2811.10(A)
	47 Diethylphthalate	149.00	9.738	(1.105)	3098306	148.10	2468.37
	48 Fluorene	166.00	9.704	(1.101)	3274869	149.78	2496.43(H)
	49 4-Chlorophenyl-phenylether	204.00	9.761	(1.108)	1794899	152.23	2537.30
	50 4-Nitroaniline	138.00	9.885	(1.122)	962290	174.56	2909.34(AH)
	51 4,6-Dinitro-2-methylphenol	198.00	9.953	(0.886)	637314	187.30	3121.74(A)
	52 N-Nitrosodiphenylamine (1)	169.00	9.987	(0.889)	2218010	148.19	2469.93(H)
$	53 2,4,6-Tribromophenol	329.80	10.156	(0.904)	534579	172.22	2870.33(A)
	54 4-Bromophenyl-phenylether	248.00	10.551	(0.939)	1091836	156.80	2613.39(H)
	55 Hexachlorobenzene	283.80	10.754	(0.957)	1281962	156.23	2603.83
	56 Pentachlorophenol	265.80	11.092	(0.987)	859654	140.00	2333.46(H)
*	57 Phenanthrene-d10	187.65	11.239	(1.000)	1195568	40.00	
	58 Phenanthrene	178.00	11.273	(1.003)	4308401	146.75	2445.84(H)
	59 Anthracene	178.00	11.353	(1.010)	3780725	145.78	2429.76
	60 Carbazole	167.00	11.691	(1.040)	4115712	151.44	2524.07
	61 Di-n-butylphthalate	149.00	12.458	(1.108)	4941613	148.96	2482.76
	62 Fluoranthene	202.00	13.269	(1.181)	4669042	153.37	2556.23
	63 Pyrene	202.00	13.631	(0.869)	4763141	132.02	2200.44
$	64 Terphenyl-d14	244.00	13.992	(0.892)	3354178	137.86	2297.81
	65 Butylbenzylphthalate	149.00	14.927	(0.952)	2628188	152.03	2533.88(H)
	66 Benzo(a)anthracene	228.00	15.661	(0.999)	4261291	150.62	2510.44(H)
*	67 Chrysene-d12	240.00	15.683	(1.000)	1010837	40.00	
	68 3,3'-Dichlorobenzidine	252.00	15.718	(1.002)	2000753	171.95	2865.88(AH)
	69 Chrysene	228.00	15.729	(1.003)	3805839	137.04	2284.09
	70 bis(2-Ethylhexyl)phthalate	149.00	15.967	(1.018)	3674626	149.07	2484.56
	71 Di-n-octylphthalate	149.00	16.926	(0.945)	5884671	145.95	2432.54
	72 Benzo(b)fluoranthene	252.00	17.367	(0.970)	5989727	169.19	2819.92(AH)
	73 Benzo(k)fluoranthene	252.00	17.401	(0.972)	5028117	140.39	2339.86
	74 Benzo(a)pyrene	252.00	17.831	(0.996)	4789850	155.54	2592.44
*	75 Perylene-d12	264.00	17.910	(1.000)	1284690	40.00	
	76 Indeno(1,2,3-cd)pyrene	276.00	19.312	(1.078)	6593172	159.99	2666.52(H)
	77 Dibenz(a,h)anthracene	278.00	19.335	(1.080)	5424064	156.14	2602.39(H)
	78 Benzo(g,h,i)perylene	276.00	19.630	(1.096)	5715375	162.09	2701.49(A)

Data File: /chem/a.i/a960321a.b/a2201.d
Report Date: 21-Mar-1996 13:16

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
H - Operator selected an alternate compound hit.

Data File: /chem/a.i/a960321a.b/a2206.d
Report Date: 21-Mar-1996 13:17

Southwest Laboratory of Oklahoma

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a.i Injection Date: 21-MAR-96 12:21
Lab File ID: a2206.d Init. Calibration Date(s): 03/21/96 03/21/96
Analysis Type: SOIL Init. Calibration Times: 09:24 11:48
Lab Sample ID: SSTD050AM 2NDSOURCE Method File: /chem/a.i/a960321a.b/BNA517EPA.m
Quant Type: ISTD

	COMPOUND	$\overline{RRF}$	RF50	MIN RRF	%D	MAX %D
$	1 2-Fluorophenol	0.963	0.998	0.600	3.6	25.0
$	2 Phenol-d5	1.194	1.337	0.800	11.9	25.0
	3 Phenol	1.333	1.393	0.800	4.5	25.0
	4 bis(2-Chloroethyl)Ether	1.053	1.063	0.700	0.9	25.0
$	5 2-Chlorophenol-d4	1.053	1.075	0.800	2.1	25.0
	6 2-Chlorophenol	1.106	1.169	0.800	5.7	25.0
	7 1,3-Dichlorobenzene	1.305	1.353	0.600	3.7	25.0
	9 1,4-Dichlorobenzene	1.308	1.363	0.500	4.2	25.0
$	10 1,2-Dichlorobenzene-d4	0.746	0.841	0.400	12.6	25.0
	11 1,2-Dichlorobenzene	1.243	1.275	0.400	2.6	25.0
	12 2-Methylphenol	0.916	0.979	0.700	6.8	25.0
	13 2,2'-oxybis(1-Chloropropane)	1.842	1.864	0.010	1.2	100.0
	14 4-Methylphenol	1.004	1.070	0.600	6.6	25.0
	15 N-Nitroso-di-n-propylamine	0.736	0.771	0.500	4.8	25.0
	16 Hexachloroethane	0.512	0.524	0.300	2.2	25.0
$	17 Nitrobenzene-d5	0.344	0.345	0.200	0.2	25.0
	18 Nitrobenzene	0.358	0.356	0.200	0.6	25.0
	19 Isophorone	0.623	0.605	0.400	2.9	25.0
	20 2-Nitrophenol	0.209	0.200	0.100	4.6	25.0
	21 2,4-Dimethylphenol	0.308	0.331	0.200	7.5	25.0
	22 bis(2-Chloroethoxy)methane	0.427	0.430	0.300	0.8	25.0
	23 2,4-Dichlorophenol	0.317	0.323	0.200	1.8	25.0
	24 1,2,4-Trichlorobenzene	0.368	0.361	0.200	1.9	25.0
	26 Naphthalene	0.951	0.989	0.700	4.1	25.0
	27 4-Chloroaniline	0.432	0.342	0.010	20.9	100.0
	28 Hexachlorobutadiene	0.186	0.189	0.010	1.9	100.0
	29 4-Chloro-3-Methylphenol	0.292	0.285	0.200	2.4	25.0
	30 2-Methylnaphthalene	0.718	0.675	0.400	6.1	25.0
	31 Hexachlorocyclopentadiene	0.292	0.164	0.010	43.8	100.0
	32 2,4,6-Trichlorophenol	0.406	0.366	0.200	9.8	25.0
	33 2,4,5-Trichlorophenol	0.369	0.379	0.200	2.6	25.0
$	34 2-Fluorobiphenyl	1.114	1.220	0.700	9.5	25.0
	35 2-Chloronaphthalene	1.025	1.065	0.800	3.9	25.0
	36 2-Nitroaniline	0.305	0.268	0.010	12.1	100.0
	37 Dimethylphthalate	1.076	1.106	0.010	2.8	100.0
	38 Acenaphthylene	1.490	1.552	0.900	4.2	25.0
	39 2,6-Dinitrotoluene	0.245	0.236	0.200	3.8	25.0
	41 3-Nitroaniline	0.276	0.264	0.010	4.2	100.0
	42 Acenaphthene	1.009	1.066	0.900	5.6	25.0
	43 2,4-Dinitrophenol	0.106	0.089	0.010	16.0	100.0
	44 Dibenzofuran	1.419	1.445	0.800	1.9	25.0
	45 4-Nitrophenol	0.108	0.100	0.010	7.5	100.0
	46 2,4-Dinitrotoluene	0.344	0.332	0.200	3.5	25.0
	47 Diethylphthalate	1.090	1.095	0.010	0.4	100.0

2nd Source

Data File: /chem/a.i/a960321a.b/a2206.d
Report Date: 21-Mar-1996 13:17

Southwest Laboratory of Oklahoma

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: a.i Injection Date: 21-MAR-96 12:21
Lab File ID: a2206.d Init. Calibration Date(s): 03/21/96 03/21/96
Analysis Type: SOIL Init. Calibration Times: 09:24 11:48
Lab Sample ID: SSTD050AM 2NDSOURCE Method File: /chem/a.i/a960321a.b/BNA517EPA.m
Quant Type: ISTD

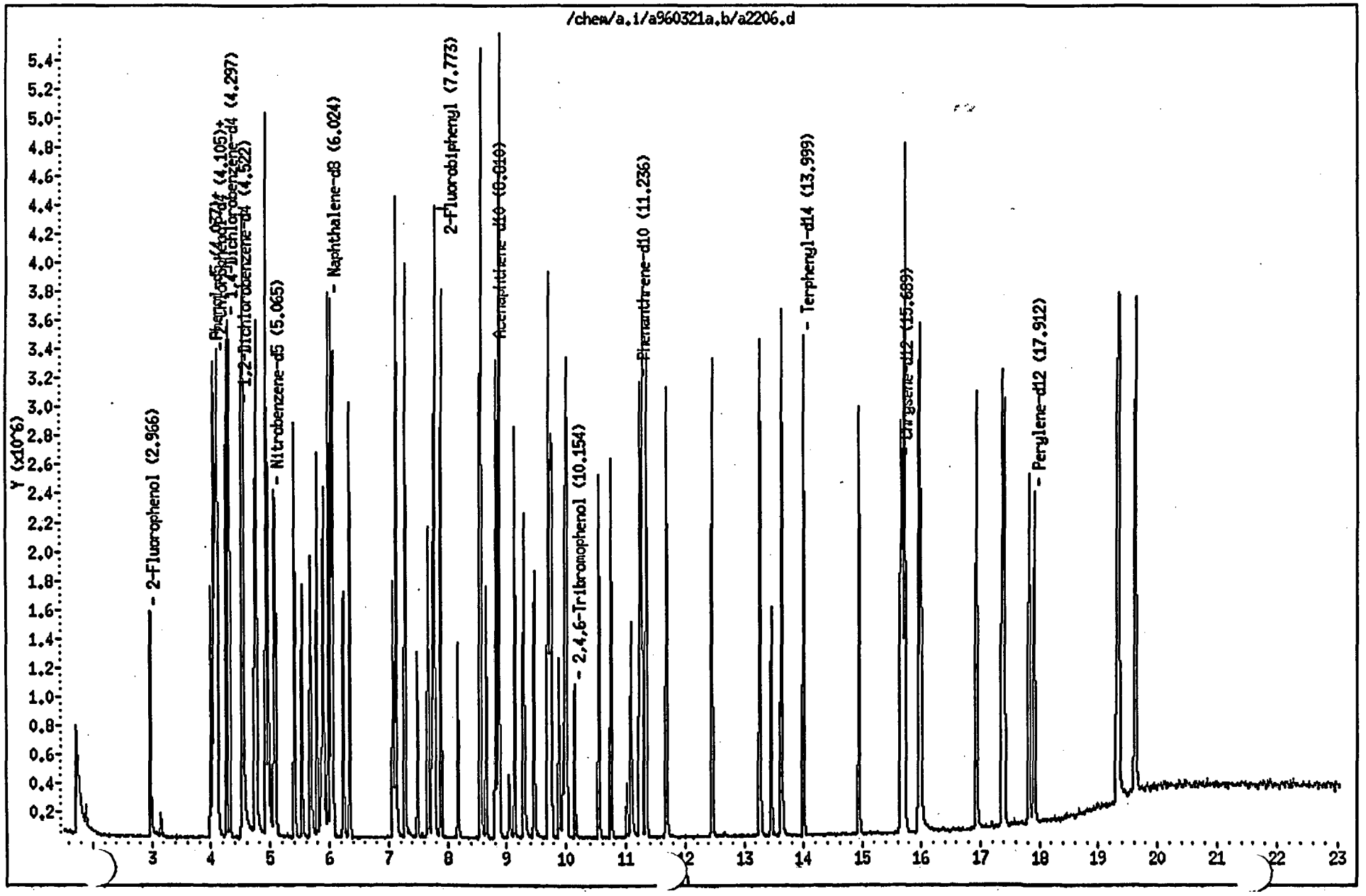
	COMPOUND	$\overline{RRF}$	RF50	MIN RRF	%D	MAX %D	
	48 Fluorene	1.139	1.143	0.900	0.3	25.0	
	49 4-Chlorophenyl-phenylether	0.614	0.608	0.400	1.0	25.0	
	50 4-Nitroaniline	0.287	0.257	0.010	10.6	100.0	
	51 4,6-Dinitro-2-methylphenol	0.114	0.098	0.010	13.5	100.0	
	52 N-Nitrosodiphenylamine (1)	0.501	0.510	0.010	1.8	100.0	
$	53 2,4,6-Tribromophenol	0.104	0.104	0.010	0.2	100.0	
	54 4-Bromophenyl-phenylether	0.233	0.236	0.100	1.2	25.0	
	55 Hexachlorobenzene	0.275	0.268	0.100	2.3	25.0	
	56 Pentachlorophenol	0.205	0.144	0.050	30.1	25.0	<-
	58 Phenanthrene	0.982	1.013	0.700	3.2	25.0	
	59 Anthracene	0.868	0.957	0.700	10.3	25.0	
	60 Carbazole	0.909	0.911	0.010	0.2	100.0	
	61 Di-n-butylphthalate	1.110	1.137	0.010	2.4	100.0	
	62 Fluoranthene	1.019	1.041	0.600	2.2	25.0	
	63 Pyrene	1.428	1.493	0.600	4.6	25.0	
$	64 Terphenyl-d14	0.963	1.115	0.500	15.8	25.0	
	65 Butylbenzylphthalate	0.684	0.664	0.010	2.9	100.0	
	66 Benzo(a)anthracene	1.119	1.154	0.800	3.1	25.0	
	68 3,3'-Dichlorobenzidine	0.460	0.411	0.010	10.7	100.0	
	69 Chrysene	1.099	1.018	0.700	7.4	25.0	
	70 bis(2-Ethylhexyl)phthalate	0.975	0.979	0.010	0.3	100.0	
	71 Di-n-octylphthalate	1.255	1.430	0.010	13.9	100.0	
	72 Benzo(b)fluoranthene	1.102	1.125	0.700	2.1	25.0	✓
	73 Benzo(k)fluoranthene	1.115	1.402	0.700	25.7	25.0	<-
	74 Benzo(a)pyrene	0.959	1.001	0.700	4.4	25.0	
	76 Indeno(1,2,3-cd)pyrene	1.283	1.342	0.500	4.6	25.0	
	77 Dibenz(a,h)anthracene	1.082	1.232	0.400	13.9	25.0	
	78 Benzo(g,h,i)perylene	1.098	1.248	0.500	13.6	25.0	

Data File: /chem/a.i/a960321a.b/a2206.d
Date : 21-MAR-96 12:21
Instrument : a.i
Sample ID : SSTD050AM 2NDSOURCE
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: MIKE

Page 1

Column diameter : 0.25



Data File: /chem/a.i/a960321a.b/a2206.d
Report Date: 21-Mar-1996 13:17

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960321a.b/a2206.d
Lab. Id. : SSTD050AM 2NDSOURCE, Quant Type: ISTD
Inj Date : 21-MAR-96 12:21
Operator : MIKE Inst ID: a.i
Smp Info : SSTD050AM 2NDSOURCE
Misc Info : MS517**INSTA*SSTD050*1-113-11*
Comment :
Method : /chem/a.i/a960321a.b/BNA517EPA.m
Meth Date : 21-Mar-1996 13:17
Cal Date : 21-MAR-96 12:21 Cal File: a2206.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: SOIL

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
$ 1 2-Fluorophenol	112.00	2.977	(0.693)	762603	51.81	863.51
$ 2 Phenol-d5	98.80	4.037	(0.940)	1021634	55.96	932.76
3 Phenol	94.00	4.048	(0.942)	1064747	52.26	871.05
4 bis(2-Chloroethyl)Ether	93.00	4.071	(0.947)	812366	50.45	840.98
5 2-Chlorophenol-d4	132.00	4.094	(0.953)	821520	51.03	850.54
6 2-Chlorophenol	128.00	4.105	(0.955)	893444	52.85	880.84
7 1,3-Dichlorobenzene	146.00	4.252	(0.989)	1033961	51.82	863.82
* 8 1,4-Dichlorobenzene-d4	151.85	4.297	(1.000)	611429	40.00	
9 1,4-Dichlorobenzene	146.00	4.320	(1.005)	1041574	52.08	868.00
$ 10 1,2-Dichlorobenzene-d4	152.00	4.522	(1.052)	642459	56.30	938.38
11 1,2-Dichlorobenzene	146.00	4.545	(1.058)	974840	51.32	855.38
12 2-Methylphenol	108.00	4.760	(1.108)	748122	53.40	890.09
13 2,2'-oxybis(1-Chloropropane)	45.00	4.737	(1.102)	1424714	50.61	843.54
14 4-Methylphenol	108.00	4.963	(1.155)	817858	53.31	888.55
15 N-Nitroso-di-n-propylamine	70.00	4.929	(1.147)	589456	52.38	873.10
16 Hexachloroethane	117.00	4.929	(1.147)	400107	51.09	851.51
$ 17 Nitrobenzene-d5	82.00	5.065	(0.841)	794709	50.09	834.95
18 Nitrobenzene	77.00	5.087	(0.844)	820466	49.69	828.17
19 Isophorone	82.00	5.414	(0.899)	1394999	48.56	809.36
20 2-Nitrophenol	139.00	5.538	(0.919)	460231	47.71	795.16
21 2,4-Dimethylphenol	107.00	5.685	(0.944)	762559	53.74	895.77
22 bis(2-Chloroethoxy)methane	93.00	5.787	(0.961)	990893	50.40	840.05
23 2,4-Dichlorophenol	162.00	5.900	(0.979)	743233	50.88	848.05
24 1,2,4-Trichlorobenzene	180.00	5.979	(0.992)	831352	49.07	817.88
* 25 Naphthalene-d8	135.65	6.024	(1.000)	1843547	40.00	
26 Naphthalene	128.00	6.058	(1.006)	2279776	52.03	867.27
27 4-Chloroaniline	127.00	6.239	(1.036)	787066	39.57	659.51
28 Hexachlorobutadiene	224.65	6.351	(1.054)	436577	50.95	849.24
29 4-Chloro-3-Methylphenol	107.00	7.073	(1.174)	657486	48.81	813.54
30 2-Methylnaphthalene	142.00	7.118	(1.182)	1555157	46.96	782.75
31 Hexachlorocyclopentadiene	236.80	7.490	(0.850)	225438	28.09	468.17

Data File: /chem/a.i/a960321a.b/a2206.d
Report Date: 21-Mar-1996 13:17

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	32 2,4,6-Trichlorophenol	196.00	7.671	(0.871)	503591	45.12	752.01
	33 2,4,5-Trichlorophenol	196.00	7.739	(0.878)	521354	51.29	854.86
$	34 2-Fluorobiphenyl	172.00	7.773	(0.882)	1678641	54.75	912.59
	35 2-Chloronaphthalene	162.00	7.886	(0.895)	1465661	51.97	866.23
	36 2-Nitroaniline	65.00	8.179	(0.928)	369210	43.96	732.74(a)
	37 Dimethylphthalate	163.00	8.551	(0.971)	1521128	51.37	856.27
	38 Acenaphthylene	152.00	8.562	(0.972)	2135652	52.09	868.19
	39 2,6-Dinitrotoluene	165.00	8.652	(0.982)	324829	48.08	801.41
*	40 Acenaphthene-d10	164.00	8.810	(1.000)	1100697	40.00	
	41 3-Nitroaniline	138.00	8.867	(1.006)	363348	47.89	798.32(a)
	42 Acenaphthene	153.00	8.867	(1.006)	1465996	52.82	880.35
	43 2,4-Dinitrophenol	183.85	9.036	(1.026)	122832	42.00	699.99(a)
	44 Dibenzofuran	168.00	9.138	(1.037)	1988040	50.92	848.77
	45 4-Nitrophenol	109.00	9.284	(1.054)	136942	46.25	770.97(a)
	46 2,4-Dinitrotoluene	165.00	9.284	(1.054)	457194	48.26	804.38
	47 Diethylphthalate	149.00	9.724	(1.104)	1506621	50.21	836.98
	48 Fluorene	166.00	9.702	(1.101)	1572943	50.16	836.11
	49 4-Chlorophenyl-phenylether	204.00	9.758	(1.108)	836785	49.49	824.85
	50 4-Nitroaniline	138.00	9.883	(1.122)	353560	44.72	745.38(a)
	51 4,6-Dinitro-2-methylphenol	198.00	9.950	(0.886)	204566	43.26	721.03(a)
	52 N-Nitrosodiphenylamine (1)	169.00	9.984	(0.889)	1059188	50.92	848.73
$	53 2,4,6-Tribromophenol	329.80	10.154	(0.904)	216217	50.12	835.39
	54 4-Bromophenyl-phenylether	248.00	10.548	(0.939)	489851	50.62	843.70
	55 Hexachlorobenzene	283.80	10.751	(0.957)	557000	48.84	814.08
	56 Pentachlorophenol	265.80	11.090	(0.987)	298075	34.93	582.21(a)
*	57 Phenanthrene-d10	187.65	11.236	(1.000)	1661481	40.00	
	58 Phenanthrene	178.00	11.270	(1.003)	2104854	51.59	859.83
	59 Anthracene	178.00	11.349	(1.010)	1987453	55.14	919.10
	60 Carbazole	167.00	11.688	(1.040)	1891923	50.09	834.90
	61 Di-n-butylphthalate	149.00	12.454	(1.108)	2361147	51.21	853.62
	62 Fluoranthene	202.00	13.265	(1.181)	2161560	51.09	851.56
	63 Pyrene	202.00	13.626	(0.869)	2253275	52.27	871.31
$	64 Terphenyl-d14	244.00	13.999	(0.892)	1682436	57.88	964.73
	65 Butylbenzylphthalate	149.00	14.934	(0.952)	1002738	48.55	809.20
	66 Benzo(a)anthracene	228.00	15.655	(0.998)	1741602	51.52	858.81
*	67 Chrysene-d12	240.00	15.689	(1.000)	1207643	40.00	
	68 3,3'-Dichlorobenzidine	252.00	15.724	(1.002)	620485	44.63	743.94
	69 Chrysene	228.00	15.735	(1.003)	1536151	46.30	771.68
	70 bis(2-Ethylhexyl)phthalate	149.00	15.972	(1.018)	1477453	50.17	836.16
	71 Di-n-octylphthalate	149.00	16.930	(0.945)	2341176	56.96	949.36
	72 Benzo(b)fluoranthene	252.00	17.370	(0.970)	1841570	51.03	850.50
	73 Benzo(k)fluoranthene	252.00	17.405	(0.972)	2294560	62.84	1047.47
	74 Benzo(a)pyrene	252.00	17.833	(0.996)	1638099	52.18	869.73
*	75 Perylene-d12	264.00	17.912	(1.000)	1309602	40.00	
	76 Indeno(1,2,3-cd)pyrene	276.00	19.323	(1.079)	2197655	52.31	871.90
	77 Dibenz(a,h)anthracene	278.00	19.346	(1.080)	2016345	56.94	949.01
	78 Benzo(g,h,i)perylene	276.00	19.629	(1.096)	2042467	56.82	947.05

Data File: /chem/a.i/a960321a.b/a2206.d
Report Date: 21-Mar-1996 13:17

Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

b Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: A Calibration Date: 03/25/96 Time: 1017

Lab File ID: A2245.D Init. Calibration Date(s): 03/21/96

Init. Calibration Times: 0924 1148

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Phenol	1.333	1.522	0.800	14.2	25.0
bis(2-Chloroethyl)Ether	1.053	1.200	0.700	13.9	25.0
2-Chlorophenol	1.106	1.158	0.800	4.7	25.0
1,3-Dichlorobenzene	1.305	1.404	0.600	7.6	25.0
1,4-Dichlorobenzene	1.308	1.426	0.500	9.0	25.0
1,2-Dichlorobenzene	1.243	1.372	0.400	10.4	25.0
2-Methylphenol	0.916	1.012	0.700	10.4	25.0
2,2'-oxybis(1-Chloropropane)	1.842	2.060		11.9	
4-Methylphenol	1.004	1.109	0.600	10.5	25.0
N-Nitroso-di-n-propylamine	0.736	0.836	0.500	13.5	25.0
Hexachloroethane	0.512	0.545	0.300	6.4	25.0
Nitrobenzene	0.358	0.371	0.200	3.7	25.0
Isophorone	0.623	0.649	0.400	4.1	25.0
2-Nitrophenol	0.209	0.152	0.100	-27.2	25.0
2,4-Dimethylphenol	0.308	0.276	0.200	-10.2	25.0
bis(2-Chloroethoxy)methane	0.427	0.438	0.300	2.7	25.0
2,4-Dichlorophenol	0.317	0.300	0.200	-5.2	25.0
1,2,4-Trichlorobenzene	0.368	0.352	0.200	-4.2	25.0
Naphthalene	0.951	1.003	0.700	5.5	25.0
4-Chloroaniline	0.432	0.442		2.4	
Hexachlorobutadiene	0.186	0.197		5.8	
4-Chloro-3-Methylphenol	0.292	0.297	0.200	1.6	25.0
2-Methylnaphthalene	0.718	0.757	0.400	5.4	25.0
Hexachlorocyclopentadiene	0.292	0.174		-40.4	
2,4,6-Trichlorophenol	0.406	0.304	0.200	-25.1	25.0
2,4,5-Trichlorophenol	0.369	0.375	0.200	1.5	25.0
2-Chloronaphthalene	1.025	1.056	0.800	3.0	25.0
2-Nitroaniline	0.305	0.276		-9.6	
Dimethylphthalate	1.076	1.208		12.3	
Acenaphthylene	1.490	1.593	0.900	6.9	25.0
2,6-Dinitrotoluene	0.245	0.258	0.200	5.2	25.0
3-Nitroaniline	0.276	0.299		8.4	
Acenaphthene	1.009	1.070	0.900	6.1	25.0
2,4-Dinitrophenol	0.106	0.019		-81.8	
4-Nitrophenol	0.108	0.103		-4.6	
Dibenzofuran	1.419	1.549	0.800	9.2	25.0
2,4-Dinitrotoluene	0.344	0.383	0.200	11.3	25.0

All other compounds must meet a minimum RRF of 0.010.

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: A Calibration Date: 03/25/96 Time: 1017

Lab File ID: A2245.D Init. Calibration Date(s): 03/21/96

Init. Calibration Times: 0924 1148

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.090	1.243		14.0	
4-Chlorophenyl-phenylether	0.614	0.627	0.400	2.1	25.0
Fluorene	1.139	1.216	0.900	6.7	25.0
4-Nitroaniline	0.287	0.298		3.9	
4,6-Dinitro-2-methylphenol	0.114	0.038		-66.5	
N-Nitrosodiphenylamine (1)	0.501	0.500		-0.2	
4-Bromophenyl-phenylether	0.233	0.219	0.100	-6.0	25.0
Hexachlorobenzene	0.275	0.270	0.100	-1.7	25.0
Pentachlorophenol	0.205	0.188	0.050	-8.7	25.0
Phenanthrene	0.982	1.035	0.700	5.4	25.0
Anthracene	0.868	0.911	0.700	5.0	25.0
Carbazole	0.909	0.996		9.6	
Di-n-butylphthalate	1.110	1.169		5.4	
Fluoranthene	1.019	1.142	0.600	12.1	25.0
Pyrene	1.428	1.485	0.600	4.0	25.0
Butylbenzylphthalate	0.684	0.609		-10.9	
3,3'-Dichlorobenzidine	0.460	0.401		-12.8	
Benzo(a)anthracene	1.119	1.137	0.800	1.6	25.0
Chrysene	1.099	1.187	0.700	8.0	25.0
bis(2-Ethylhexyl)phthalate	0.975	0.928		-4.9	
Di-n-octylphthalate	1.255	1.232		-1.8	
Benzo(b)fluoranthene	1.102	1.281	0.700	16.2	25.0
Benzo(k)fluoranthene	1.115	1.240	0.700	11.2	25.0
Benzo(a)pyrene	0.959	0.979	0.700	2.2	25.0
Indeno(1,2,3-cd)pyrene	1.283	1.274	0.500	-0.7	25.0
Dibenz(a,h)anthracene	1.082	1.022	0.400	-5.5	25.0
Benzo(g,h,i)perylene	1.098	1.054	0.500	-4.0	25.0
Nitrobenzene-d5	0.344	0.345	0.200	0.3	25.0
2-Fluorobiphenyl	1.114	1.199	0.700	7.6	25.0
Terphenyl-d14	0.963	0.971	0.500	0.8	25.0
Phenol-d5	1.194	1.321	0.800	10.6	25.0
2-Fluorophenol	0.963	1.005	0.600	4.3	25.0
2,4,6-Tribromophenol	0.104	0.088		-15.5	
2-Chlorophenol-d4	1.053	1.146	0.800	8.8	25.0
1,2-Dichlorobenzene-d4	0.746	0.802	0.400	7.4	25.0

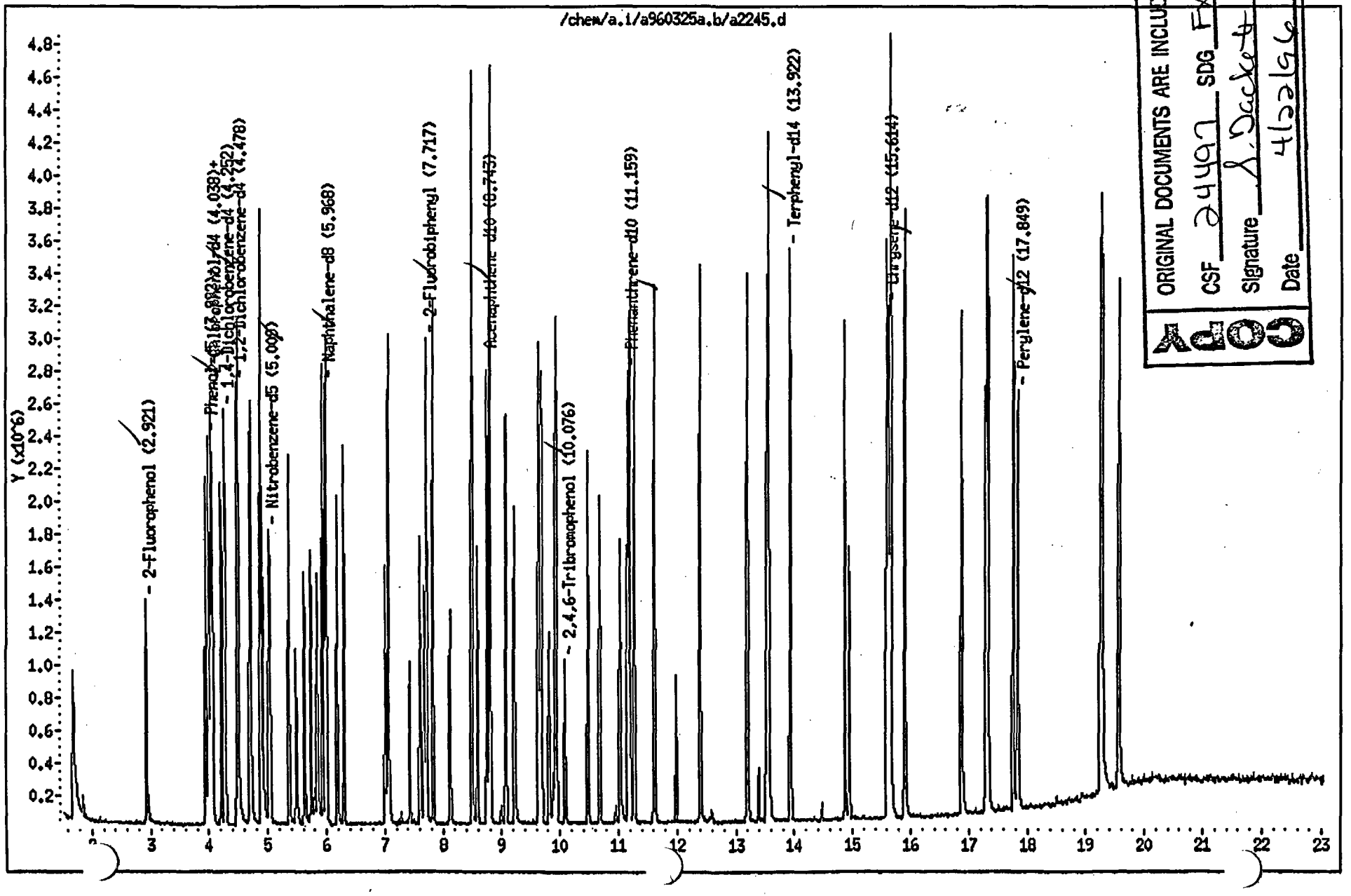
(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

Data File: /chem/a.i/a960325a.b/a2245.d
Date : 25-MAR-96 10:17
Instrument : a.i
Sample ID : SSTD050 AP
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: Mike

Column diameter : 0.25

254



COPY
ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24497 SDG FX053
Signature J. Jackett
Date 4/26/96

Data File: /chem/a.i/a960325a.b/a2245.d
Report Date: 25-Mar-1996 10:51

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960325a.b/a2245.d
Lab. Id. : SSTD050 AP
Inj Date : 25-MAR-96 10:17
Operator : ANNIE
Smp Info : SSTD050 AP
Misc Info : MS517**INSTA*SSTD050AP*1-327-11*2UL*
Comment :
Method : /chem/a.i/a960325a.b/BNA517EPA.m
Meth Date : 25-Mar-1996 10:49
Cal Date : 25-MAR-96 10:17
Als bottle: 99
Dil Factor: 1.000
Integrator: HP RTE
Sample Type: WATER

Quant Type: ISTD
Inst ID: a.i
Cal File: a2245.d
Continuing Calibration Sample
Target Version: Target 3.00
Compound Sublist: all.sub

	Compounds	QUANT SIG MASS	RT.	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
$	1 2-Fluorophenol	112.00	2.921	(0.687)	524466	52.15	26.08
$	2 Phenol-d5	98.80	3.981	(0.936)	689578	55.29	27.64
	3 Phenol	94.00	3.992	(0.939)	794906	57.11	28.55
	4 bis(2-Chloroethyl)Ether	93.00	4.026	(0.947)	626314	56.94	28.47
	5 2-Chlorophenol-d4	132.00	4.038	(0.950)	598320	54.40	27.20
	6 2-Chlorophenol	128.00	4.060	(0.955)	604442	52.33	26.17
	7 1,3-Dichlorobenzene	146.00	4.207	(0.989)	733186	53.80	26.90
*	8 1,4-Dichlorobenzene-d4	151.85	4.252	(1.000)	417689	40.00	
	9 1,4-Dichlorobenzene	146.00	4.275	(1.005)	744414	54.48	27.24
$	10 1,2-Dichlorobenzene-d4	152.00	4.478	(1.053)	418728	53.71	26.85
	11 1,2-Dichlorobenzene	146.00	4.501	(1.058)	716363	55.20	27.60
	12 2-Methylphenol	108.00	4.715	(1.109)	528420	55.21	27.60
	13 2,2'-oxybis(1-Chloropropane)	45.00	4.692	(1.104)	1075439	55.92	27.96
	14 4-Methylphenol	108.00	4.907	(1.154)	579227	55.27	27.63
	15 N-Nitroso-di-n-propylamine	70.00	4.873	(1.146)	436353	56.76	28.38
	16 Hexachloroethane	117.00	4.873	(1.146)	284503	53.18	26.59
$	17 Nitrobenzene-d5	82.00	5.009	(0.839)	596213	50.15	25.07
	18 Nitrobenzene	77.00	5.031	(0.843)	641452	51.84	25.92
	19 Isophorone	82.00	5.358	(0.898)	1120598	52.06	26.03
	20 2-Nitrophenol	139.00	5.483	(0.919)	263055	36.39	18.19
	21 2,4-Dimethylphenol	107.00	5.618	(0.941)	477222	44.88	22.44
	22 bis(2-Chloroethoxy)methane	93.00	5.731	(0.960)	756688	51.36	25.68
	23 2,4-Dichlorophenol	162.00	5.832	(0.977)	518681	47.39	23.69
	24 1,2,4-Trichlorobenzene	180.00	5.923	(0.992)	607779	47.87	23.93
*	25 Naphthalene-d8	135.65	5.968	(1.000)	1381384	40.00	
	26 Naphthalene	128.00	5.991	(1.004)	1731356	52.74	26.37
	27 4-Chloroaniline	127.00	6.171	(1.034)	763321	51.21	25.60
	28 Hexachlorobutadiene	224.65	6.296	(1.055)	339515	52.88	26.44
	29 4-Chloro-3-Methylphenol	107.00	7.006	(1.174)	512840	50.81	25.40
	30 2-Methylnaphthalene	142.00	7.062	(1.183)	1307347	52.69	26.34
	31 Hexachlorocyclopentadiene	236.80	7.435	(0.850)	196055	29.82	14.91

Data File: /chem/a.i/a960325a.b/a2245.d
Report Date: 25-Mar-1996 10:51

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
	32 2,4,6-Trichlorophenol	196.00	7.604	(0.870)	342446	37.45	18.72
	33 2,4,5-Trichlorophenol	196.00	7.672	(0.877)	422481	50.73	25.36
$	34 2-Fluorobiphenyl	172.00	7.717	(0.883)	1351259	53.80	26.90
	35 2-Chloronaphthalene	162.00	7.819	(0.894)	1190301	51.52	25.76
	36 2-Nitroaniline	65.00	8.112	(0.928)	311012	45.20	22.60(a)
	37 Dimethylphthalate	163.00	8.495	(0.972)	1361630	56.13	28.06
	38 Acenaphthylene	152.00	8.495	(0.972)	1795345	53.45	26.72
	39 2,6-Dinitrotoluene	165.00	8.586	(0.982)	291174	52.61	26.30
*	40 Acenaphthene-d10	164.00	8.743	(1.000)	901722	40.00	
	41 3-Nitroaniline	138.00	8.800	(1.006)	336811	54.19	27.09
	42 Acenaphthene	153.00	8.800	(1.006)	1206077	53.04	26.52
	43 2,4-Dinitrophenol	183.85	8.981	(1.027)	21755	9.08	4.54(a)
	44 Dibenzofuran	168.00	9.071	(1.037)	1746012	54.59	27.29
	45 4-Nitrophenol	109.00	9.206	(1.053)	115666	47.69	23.84(a)
	46 2,4-Dinitrotoluene	165.00	9.218	(1.054)	431946	55.66	27.83
	47 Diethylphthalate	149.00	9.669	(1.106)	1400546	56.98	28.49
	48 Fluorene	166.00	9.635	(1.102)	1370249	53.34	26.67
	49 4-Chlorophenyl-phenylether	204.00	9.692	(1.108)	706792	51.02	25.51
	50 4-Nitroaniline	138.00	9.816	(1.123)	336318	51.93	25.96
	51 4,6-Dinitro-2-methylphenol	198.00	9.884	(0.886)	74006	16.75	8.37(a)
	52 N-Nitrosodiphenylamine (1)	169.00	9.917	(0.889)	969722	49.91	24.95
$	53 2,4,6-Tribromophenol	329.80	10.087	(0.904)	170276	42.25	21.12
	54 4-Bromophenyl-phenylether	248.00	10.482	(0.939)	424922	47.00	23.50
	55 Hexachlorobenzene	283.80	10.685	(0.958)	523716	49.16	24.58
	56 Pentachlorophenol	265.80	11.023	(0.988)	364035	45.67	22.83(a)
*	57 Phenanthrene-d10	187.65	11.159	(1.000)	1552017	40.00	
	58 Phenanthrene	178.00	11.204	(1.004)	2008431	52.69	26.34
	59 Anthracene	178.00	11.272	(1.010)	1767399	52.49	26.25
	60 Carbazole	167.00	11.610	(1.040)	1932934	54.79	27.39
	61 Di-n-butylphthalate	149.00	12.388	(1.110)	2268392	52.67	26.33
	62 Fluoranthene	202.00	13.182	(1.182)	2215665	56.06	28.03
	63 Pyrene	202.00	13.550	(0.868)	2397920	52.02	26.01
$	64 Terphenyl-d14	244.00	13.922	(0.892)	1566968	50.41	25.20
	65 Butylbenzylphthalate	149.00	14.869	(0.952)	983624	44.53	22.26
	66 Benzo(a)anthracene	228.00	15.591	(0.999)	1835799	50.79	25.39
*	67 Chrysene-d12	240.00	15.614	(1.000)	1291469	40.00	
	68 3,3'-Dichlorobenzidine	252.00	15.648	(1.002)	648001	43.59	21.79
	69 Chrysene	228.00	15.668	(1.003)	1916366	54.01	27.00
	70 bis(2-Ethylhexyl)phthalate	149.00	15.908	(1.019)	1497921	47.56	23.78
	71 Di-n-octylphthalate	149.00	16.878	(0.946)	2302104	49.08	24.54
	72 Benzo(b)fluoranthene	252.00	17.295	(0.969)	2392729	58.10	29.05
	73 Benzo(k)fluoranthene	252.00	17.329	(0.971)	2317230	55.61	27.80
	74 Benzo(a)pyrene	252.00	17.758	(0.995)	1829647	51.07	25.53
*	75 Perylene-d12	264.00	17.849	(1.000)	1494470	40.00	
	76 Indeno(1,2,3-cd)pyrene	276.00	19.248	(1.078)	2379181	49.63	24.81
	77 Dibenz(a,h)anthracene	278.00	19.282	(1.080)	1908609	47.23	23.61
	78 Benzo(g,h,i)perylene	276.00	19.565	(1.096)	1968785	47.99	23.99

Data File: /chem/a.i/a960325a.b/a2245.d
Report Date: 25-Mar-1996 10:51

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: A Calibration Date: 03/30/96 Time: 1339

Lab File ID: A2392.D Init. Calibration Date(s): 03/21/96

Init. Calibration Times: 0924 1148

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Phenol	1.333	1.578	0.800	18.4	25.0
bis(2-Chloroethyl)Ether	1.053	1.218	0.700	15.6	25.0
2-Chlorophenol	1.106	1.216	0.800	9.9	25.0
1,3-Dichlorobenzene	1.305	1.410	0.600	8.0	25.0
1,4-Dichlorobenzene	1.308	1.446	0.500	10.6	25.0
1,2-Dichlorobenzene	1.243	1.374	0.400	10.6	25.0
2-Methylphenol	0.916	1.048	0.700	14.3	25.0
2,2'-oxybis(1-Chloropropane)	1.842	2.184		18.6	
4-Methylphenol	1.004	1.115	0.600	11.1	25.0
N-Nitroso-di-n-propylamine	0.736	0.917	0.500	24.5	25.0
Hexachloroethane	0.512	0.591	0.300	15.3	25.0
Nitrobenzene	0.358	0.405	0.200	13.1	25.0
Isophorone	0.623	0.697	0.400	11.8	25.0
2-Nitrophenol	0.209	0.216	0.100	3.2	25.0
2,4-Dimethylphenol	0.308	0.283	0.200	-8.0	25.0
bis(2-Chloroethoxy)methane	0.427	0.455	0.300	6.6	25.0
2,4-Dichlorophenol	0.317	0.310	0.200	-2.1	25.0
1,2,4-Trichlorobenzene	0.368	0.361	0.200	-1.8	25.0
Naphthalene	0.951	0.988	0.700	3.9	25.0
4-Chloroaniline	0.432	0.456		5.6	
Hexachlorobutadiene	0.186	0.162		-12.9	
4-Chloro-3-Methylphenol	0.292	0.313	0.200	7.0	25.0
2-Methylnaphthalene	0.718	0.737	0.400	2.5	25.0
Hexachlorocyclopentadiene	0.292	0.278		-4.5	
2,4,6-Trichlorophenol	0.406	0.324	0.200	-20.0	25.0
2,4,5-Trichlorophenol	0.369	0.366	0.200	-0.9	25.0
2-Chloronaphthalene	1.025	1.045	0.800	1.9	25.0
2-Nitroaniline	0.305	0.306		0.1	
Dimethylphthalate	1.076	1.078		0.2	
Acenaphthylene	1.490	1.568	0.900	5.2	25.0
2,6-Dinitrotoluene	0.245	0.243	0.200	-0.9	25.0
3-Nitroaniline	0.276	0.284		2.9	
Acenaphthene	1.009	1.024	0.900	1.5	25.0
2,4-Dinitrophenol	0.106	0.087		-17.8	
4-Nitrophenol	0.108	0.108		0.4	
Dibenzofuran	1.419	1.472	0.800	3.8	25.0
2,4-Dinitrotoluene	0.344	0.336	0.200	-2.3	25.0

All other compounds must meet a minimum RRF of 0.010.

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: A Calibration Date: 03/30/96 Time: 1339

Lab File ID: A2392.D Init. Calibration Date(s): 03/21/96

Init. Calibration Times: 0924 1148

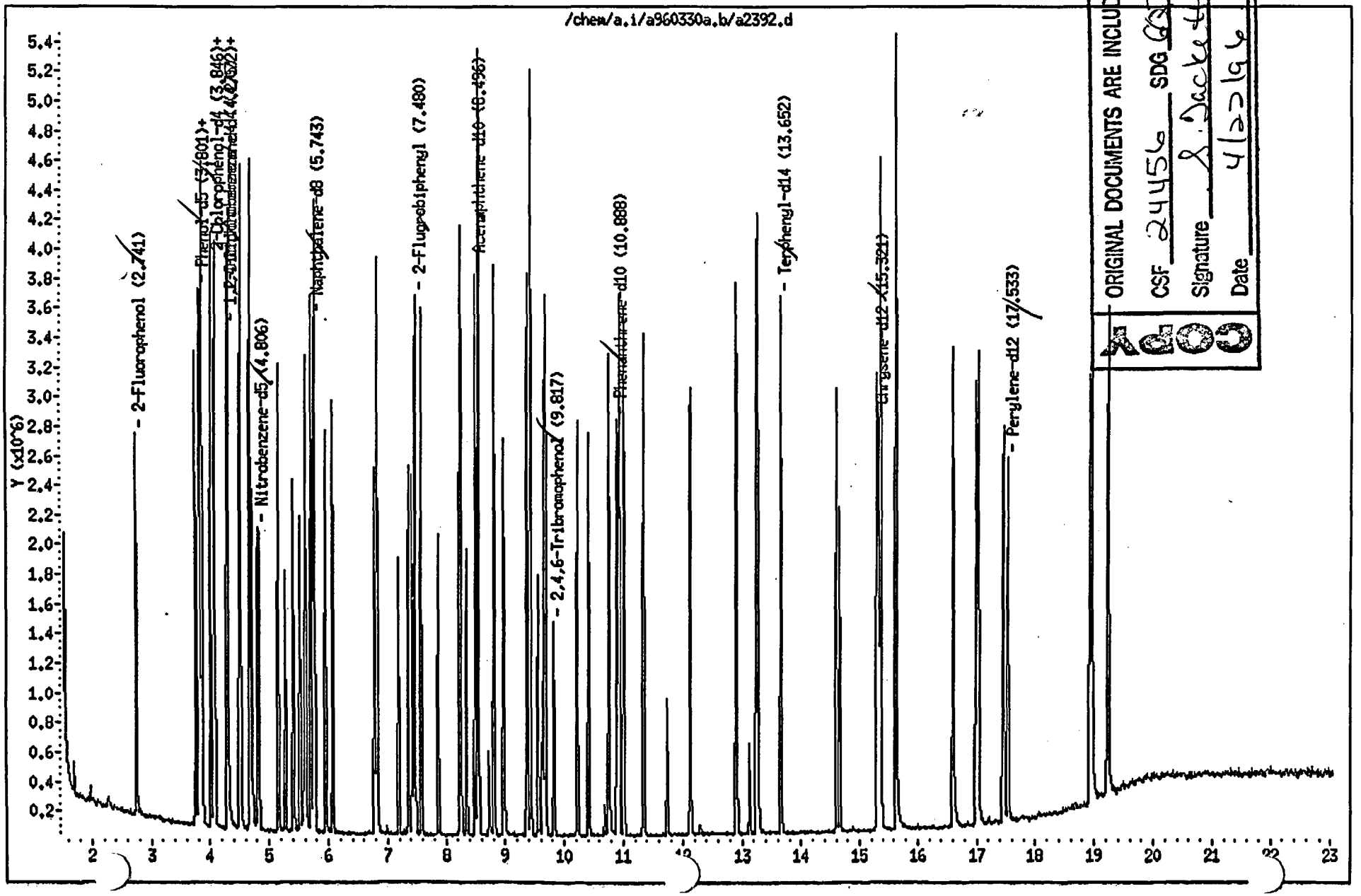
COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.090	1.077		-1.3	
4-Chlorophenyl-phenylether	0.614	0.583	0.400	-5.1	25.0
Fluorene	1.139	1.155	0.900	1.4	25.0
4-Nitroaniline	0.287	0.286		-0.6	
4,6-Dinitro-2-methylphenol	0.114	0.100		-12.4	
N-Nitrosodiphenylamine (1)	0.501	0.481		-4.0	
4-Bromophenyl-phenylether	0.233	0.219	0.100	-6.0	25.0
Hexachlorobenzene	0.275	0.254	0.100	-7.6	25.0
Pentachlorophenol	0.205	0.241	0.050	17.2	25.0
Phenanthrene	0.982	0.992	0.700	1.0	25.0
Anthracene	0.868	0.858	0.700	-1.2	25.0
Carbazole	0.909	0.965		6.1	
Di-n-butylphthalate	1.110	1.117		0.6	
Fluoranthene	1.019	1.042	0.600	2.3	25.0
Pyrene	1.428	1.516	0.600	6.2	25.0
Butylbenzylphthalate	0.684	0.689		0.7	
3,3'-Dichlorobenzidine	0.460	0.403		-12.4	
Benzo(a)anthracene	1.119	1.080	0.800	-3.6	25.0
Chrysene	1.099	1.115	0.700	1.5	25.0
bis(2-Ethylhexyl)phthalate	0.975	0.965		-1.1	
Di-n-octylphthalate	1.255	1.372		9.3	
Benzo(b)fluoranthene	1.102	1.230	0.700	11.6	25.0
Benzo(k)fluoranthene	1.115	1.098	0.700	-1.6	25.0
Benzo(a)pyrene	0.959	0.969	0.700	1.1	25.0
Indeno(1,2,3-cd)pyrene	1.283	1.263	0.500	-1.6	25.0
Dibenz(a,h)anthracene	1.082	1.059	0.400	-2.1	25.0
Benzo(g,h,i)perylene	1.098	1.161	0.500	5.7	25.0
Nitrobenzene-d5	0.344	0.381	0.200	10.6	25.0
2-Fluorobiphenyl	1.114	1.158	0.700	3.9	25.0
Terphenyl-d14	0.963	1.047	0.500	8.7	25.0
Phenol-d5	1.194	1.395	0.800	16.8	25.0
2-Fluorophenol	0.963	1.099	0.600	14.2	25.0
2,4,6-Tribromophenol	0.104	0.096		-7.3	
2-Chlorophenol-d4	1.053	1.135	0.800	7.7	25.0
1,2-Dichlorobenzene-d4	0.746	0.809	0.400	8.4	25.0

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

OPERATOR: Mike

Data File: /chem/a.i/a960330a.b/a2392.d
Date : 30-MAR-96 13:39
Instrument : a.i
Sample ID : SSTD050AR
Column phase : XTI-5
Volume Injected (uL) : 2.0

Column diameter : 0.25



ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24456 SDG GQT35
Signature L. Jackett
Date 4/22/96
COPY

Data File: /chem/a.i/a960330a.b/a2392.d
Report Date: 01-Apr-1996 10:02

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960330a.b/a2392.d
Lab. Id. : SSTD050AR
Inj Date : 30-MAR-96 13:39
Operator : ANNIE
Smp Info : SSTD050AR
Misc Info : MS517**INSTA*SSTD050AR*1-327-11*
Comment :
Method : /chem/a.i/a960330a.b/BNA517EPA.m
Meth Date : 01-Apr-1996 08:35 mike
Cal Date : 30-MAR-96 13:39
Als bottle: 1
Dil Factor: 1.000
Integrator: HP RTE
Sample Type: SOIL

Quant Type: ISTD
Inst ID: a.i
Cal File: a2392.d
Continuing Calibration Sample
Target Version: Target 3.00
Compound Sublist: all.sub

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
$	1 2-Fluorophenol	112.00	2.741	(0.675)	748214	57.08	951.48
$	2 Phenol-d5	98.80	3.801	(0.936)	949648	58.42	973.74
	3 Phenol	94.00	3.812	(0.939)	1073991	59.20	986.74
	4 bis(2-Chloroethyl)Ether	93.00	3.835	(0.944)	828829	57.81	963.62
	5 2-Chlorophenol-d4	132.00	3.846	(0.947)	772145	53.86	897.80
	6 2-Chlorophenol	128.00	3.869	(0.953)	827190	54.95	915.88
	7 1,3-Dichlorobenzene	146.00	4.004	(0.986)	959233	54.00	900.01
*	8 1,4-Dichlorobenzene-d4	151.85	4.061	(1.000)	544427	40.00	
	9 1,4-Dichlorobenzene	146.00	4.072	(1.003)	984364	55.27	921.28
$	10 1,2-Dichlorobenzene-d4	152.00	4.275	(1.053)	550862	54.21	903.61
	11 1,2-Dichlorobenzene	146.00	4.298	(1.058)	934859	55.27	921.25
	12 2-Methylphenol	108.00	4.512	(1.111)	712944	57.15	952.63
	13 2,2'-oxybis(1-Chloropropane)	45.00	4.490	(1.106)	1486103	59.29	988.17
	14 4-Methylphenol	108.00	4.704	(1.159)	758675	55.54	925.69
	15 N-Nitroso-di-n-propylamine	70.00	4.670	(1.150)	623914	62.27	1037.87
	16 Hexachloroethane	117.00	4.659	(1.147)	402141	57.67	961.16
$	17 Nitrobenzene-d5	82.00	4.806	(0.837)	828370	55.31	921.94
	18 Nitrobenzene	77.00	4.829	(0.841)	881160	56.53	942.19
	19 Isophorone	82.00	5.144	(0.896)	1515949	55.90	931.71
	20 2-Nitrophenol	139.00	5.268	(0.917)	469933	51.60	860.08
	21 2,4-Dimethylphenol	107.00	5.415	(0.943)	616068	45.99	766.61
	22 bis(2-Chloroethoxy)methane	93.00	5.528	(0.963)	989461	53.31	888.59
	23 2,4-Dichlorophenol	162.00	5.618	(0.978)	675131	48.96	816.04
	24 1,2,4-Trichlorobenzene	180.00	5.698	(0.992)	784878	49.07	817.96
*	25 Naphthalene-d8	135.65	5.743	(1.000)	1740319	40.00	
	26 Naphthalene	128.00	5.765	(1.004)	2148880	51.95	865.96
	27 4-Chloroaniline	127.00	5.946	(1.035)	991212	52.79	879.84
	28 Hexachlorobutadiene	224.65	6.070	(1.057)	352310	43.55	725.97
	29 4-Chloro-3-Methylphenol	107.00	6.780	(1.181)	680479	53.51	891.93
	30 2-Methylnaphthalene	142.00	6.826	(1.189)	1602595	51.26	854.47(H)
	31 Hexachlorocyclopentadiene	236.80	7.198	(0.847)	381485	47.72	795.48

Data File: /chem/a.i/a960330a.b/a2392.d
Report Date: 01-Apr-1996 10:02

	Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/Kg)
	32 2,4,6-Trichlorophenol	196.00	7.367	(0.867)	444549	39.99	666.56
	33 2,4,5-Trichlorophenol	196.00	7.424	(0.874)	501343	49.52	825.41(a)
$	34 2-Fluorobiphenyl	172.00	7.480	(0.880)	1586294	51.95	865.91
	35 2-Chloronaphthalene	162.00	7.571	(0.891)	1431518	50.97	849.51
	36 2-Nitroaniline	65.00	7.864	(0.926)	418755	50.06	834.46
	37 Dimethylphthalate	163.00	8.259	(0.972)	1477740	50.11	835.25
	38 Acenaphthylene	152.00	8.236	(0.969)	2147943	52.60	876.76
	39 2,6-Dinitrotoluene	165.00	8.349	(0.983)	333492	49.56	826.15
*	40 Acenaphthene-d10	164.00	8.496	(1.000)	1096213	40.00	
	41 3-Nitroaniline	138.00	8.552	(1.007)	388874	51.47	857.90
	42 Acenaphthene	153.00	8.541	(1.005)	1402732	50.74	845.80
	43 2,4-Dinitrophenol	183.85	8.722	(1.027)	119696	41.09	684.91(a)
	44 Dibenzofuran	168.00	8.812	(1.037)	2017198	51.88	864.75
	45 4-Nitrophenol	109.00	8.970	(1.056)	148065	50.22	837.01
	46 2,4-Dinitrotoluene	165.00	8.970	(1.056)	460711	48.83	813.88
	47 Diethylphthalate	149.00	9.421	(1.109)	1475177	49.37	822.87
	48 Fluorene	166.00	9.376	(1.104)	1582883	50.69	844.84
	49 4-Chlorophenyl-phenylether	204.00	9.432	(1.110)	798693	47.43	790.52
	50 4-Nitroaniline	138.00	9.557	(1.125)	391436	49.71	828.61(a)
	51 4,6-Dinitro-2-methylphenol	198.00	9.624	(0.883)	213272	43.80	729.99(a)
	52 N-Nitrosodiphenylamine (1)	169.00	9.670	(0.887)	1027693	47.98	799.70
$	53 2,4,6-Tribromophenol	329.80	9.817	(0.901)	205857	46.34	772.37
	54 4-Bromophenyl-phenylether	248.00	10.222	(0.938)	468257	46.99	783.20
	55 Hexachlorobenzene	283.80	10.414	(0.955)	542750	46.22	770.33
	56 Pentachlorophenol	265.80	10.753	(0.987)	514875	58.59	976.61
*	57 Phenanthrene-d10	187.65	10.900	(1.000)	1710922	40.00	
	58 Phenanthrene	178.00	10.934	(1.003)	2121748	50.50	841.68
	59 Anthracene	178.00	11.001	(1.009)	1833920	49.41	823.59
	60 Carbazole	167.00	11.340	(1.040)	2064011	53.07	884.53
	61 Di-n-butylphthalate	149.00	12.140	(1.114)	2388603	50.31	838.59
	62 Fluoranthene	202.00	12.907	(1.184)	2228211	51.14	852.45
	63 Pyrene	202.00	13.268	(0.866)	2310404	53.08	884.68
$	64 Terphenyl-d14	244.00	13.652	(0.891)	1595774	54.36	906.11
	65 Butylbenzylphthalate	149.00	14.598	(0.953)	1050222	50.35	839.26
	66 Benzo(a)anthracene	228.00	15.298	(0.999)	1645962	48.22	803.73
*	67 Chrysene-d12	240.00	15.321	(1.000)	1219540	40.00	
	68 3,3'-Dichlorobenzidine	252.00	15.366	(1.003)	614858	43.80	730.00
	69 Chrysene	228.00	15.355	(1.002)	1699808	50.73	845.56(H)
	70 bis(2-Ethylhexyl)phthalate	149.00	15.648	(1.021)	1470394	49.44	824.05
	71 Di-n-octylphthalate	149.00	16.607	(0.947)	2244104	54.63	910.62
	72 Benzo(b)fluoranthene	252.00	16.991	(0.969)	2012909	55.81	930.28
	73 Benzo(k)fluoranthene	252.00	17.025	(0.971)	1795843	49.22	820.37(H)
	74 Benzo(a)pyrene	252.00	17.454	(0.995)	1584982	50.52	842.11
*	75 Perylene-d12	264.00	17.533	(1.000)	1308696	40.00	
	76 Indeno(1,2,3-cd)pyrene	276.00	18.932	(1.080)	2066077	49.21	820.27
	77 Dibenz(a,h)anthracene	278.00	18.966	(1.082)	1731648	48.93	815.58
	78 Benzo(g,h,i)perylene	276.00	19.238	(1.097)	1898846	52.86	881.06

Data File: /chem/a.i/a960330a.b/a2392.d
Report Date: 01-Apr-1996 10:02

Qc Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
H - Operator selected an alternate compound hit.

Data File: /chem/a.i/a960321a.b/a2200.d

Date : 21-MAR-96 08:59

Instrument : a.i

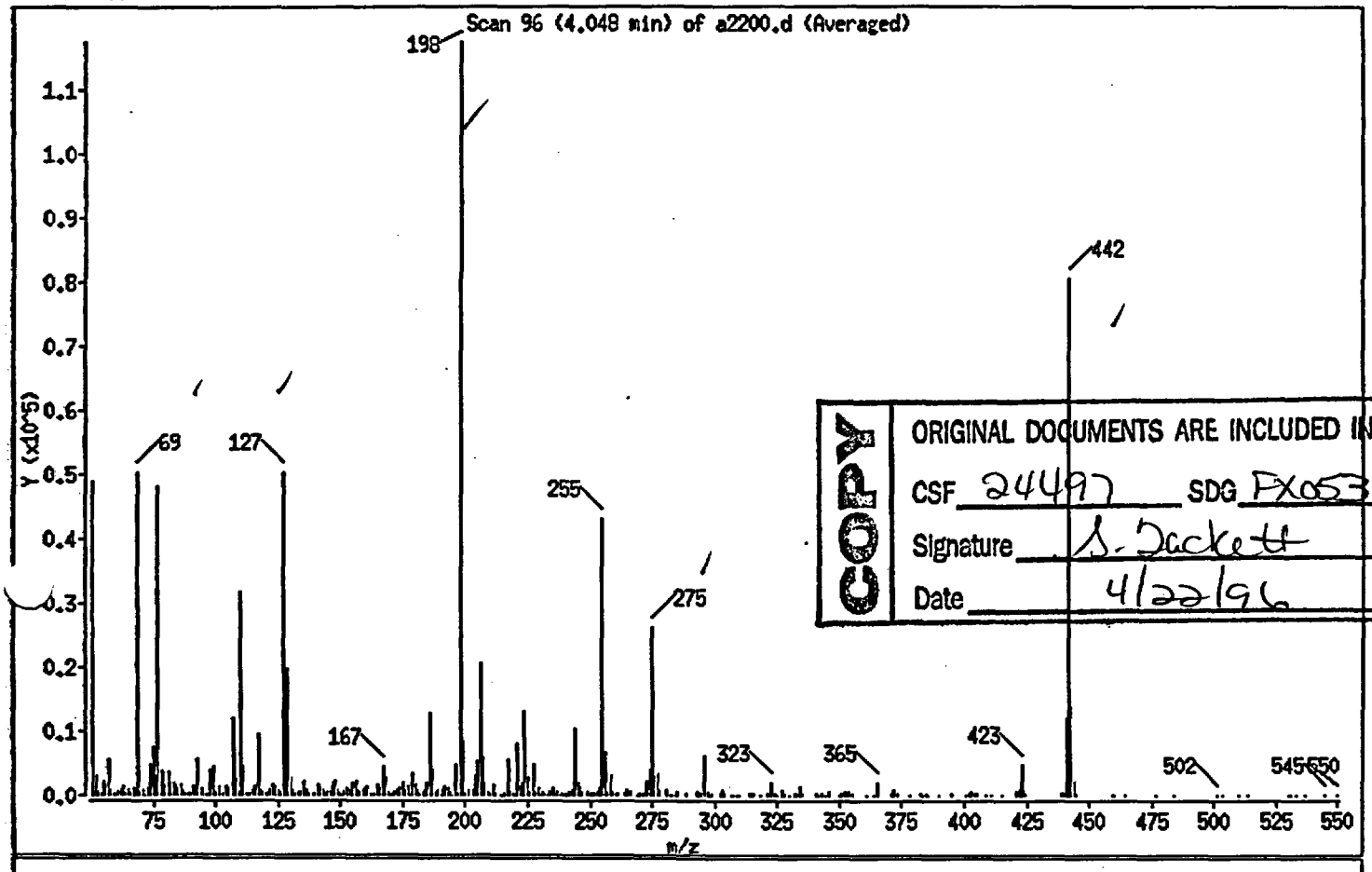
Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

1 dftpp



ORIGINAL DOCUMENTS ARE INCLUDED IN

COPY

CSF 24497 SDG FX053

Signature S. Jackett

Date 4/22/96

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.0
51	30.00 - 80.00% of mass 198	40.6
68	Less than 2.00% of mass 69	1.1
69	Mass 69 relative abundance	42.5
70	Less than 2.00% of mass 69	0.0
127	25.00 - 75.00% of mass 198	42.7
197	Less than 1.00% of mass 198	0.3
199	5.00 - 9.00% of mass 198	7.0
275	10.00 - 30.00% of mass 198	22.3
365	Greater than 0.75% of mass 198	1.5
441	Present, but less than mass 443	88.0
442	40.00 - 110.00% of mass 198	68.6
443	15.00 - 24.00% of mass 442	17.0

OC 3/25/96

Data File: /chem/a.i/a960321a.b/a2200.d

Date : 21-MAR-96 08:59

Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

Spectrum: Scans 96-98 (4.048 min), Subtraction Scan 94
Location of Maximum: 198.00
Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	47701	143.00	609	222.00	1505	323.00	1909
52.00	3009	144.00	214	223.00	2051	324.00	95
53.00	517	145.00	558	224.00	13059	325.00	99
55.00	995	146.00	87	225.00	2858	327.00	551
56.00	463	147.00	774	226.00	535	328.00	198
57.00	4235	148.00	2220	227.00	4634	330.00	89
58.00	725	149.00	742	228.00	516	332.00	148
60.00	90	150.00	140	229.00	823	333.00	163
61.00	477	151.00	77	230.00	123	334.00	1284
62.00	961	152.00	543	231.00	596	335.00	280
63.00	1480	153.00	1147	232.00	175	341.00	223
64.00	140	154.00	899	233.00	97	342.00	70
65.00	391	155.00	2007	234.00	651	343.00	148
68.00	529	156.00	2340	235.00	1198	344.00	67
69.00	49886	157.00	719	236.00	113	345.00	78
73.00	637	158.00	80	237.00	555	346.00	562
74.00	4844	159.00	171	238.00	85	350.00	138
75.00	7022	160.00	708	239.00	220	351.00	147
76.00	3057	161.00	765	240.00	292	352.00	497
77.00	46270	162.00	233	241.00	132	353.00	166
78.00	3551	163.00	185	242.00	654	354.00	506
79.00	3233	164.00	226	243.00	846	355.00	281
80.00	1118	165.00	996	244.00	10412	361.00	94
81.00	1940	166.00	1216	245.00	1652	364.00	66
82.00	810	167.00	4312	246.00	1392	365.00	1809
83.00	1348	168.00	2693	247.00	597	366.00	187
84.00	364	169.00	668	249.00	434	371.00	154
85.00	830	172.00	422	250.00	306	372.00	970
86.00	584	173.00	765	251.00	77	373.00	291
87.00	789	174.00	793	252.00	307	378.00	87
89.00	199	175.00	1852	253.00	430	383.00	308
91.00	574	176.00	844	254.00	726	384.00	101
92.00	1242	177.00	697	255.00	42917	385.00	219
93.00	5619	179.00	3127	256.00	6329	390.00	133
94.00	1017	180.00	1557	257.00	552	395.00	248

Data File: /chem/a.i/a960321a.b/a2200.d

Date : 21-MAR-96 08:59

Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

Spectrum: Scans 96-98 (4.048 min), Subtraction Scan 94
Location of Maximum: 198.00
Number of points: 284

m/z	Y	m/z	Y	m/z	Y	m/z	Y
95.00	2	181.00	967	258.00	2975	401.00	122
96.00	334	182.00	227	259.00	682	402.00	314
98.00	3816	184.00	574	261.00	48	403.00	647
99.00	4331	185.00	1407	264.00	35	404.00	239
100.00	594	186.00	12723	265.00	863	405.00	160
101.00	1508	187.00	3995	266.00	273	409.00	98
104.00	1504	188.00	57	269.00	77	411.00	70
105.00	95	189.00	218	270.00	274	415.00	69
107.00	11330	191.00	297	271.00	218	421.00	476
108.00	2383	192.00	1346	272.00	227	422.00	785
110.00	31215	193.00	1009	273.00	2262	423.00	4756
111.00	3465	194.00	527	274.00	3757	424.00	741
113.00	343	195.00	110	275.00	26141	425.00	188
114.00	191	196.00	4694	276.00	3103	439.00	234
115.00	457	197.00	368	277.00	2820	440.00	23
116.00	992	198.00	117461	282.00	91	441.00	12041
117.00	9026	199.00	8227	284.00	90	442.00	80610
118.00	391	200.00	151	285.00	566	443.00	13690
119.00	514	202.00	744	289.00	382	444.00	2337
120.00	289	203.00	10	293.00	455	445.00	148
122.00	936	204.00	3083	294.00	174	459.00	79
123.00	1554	205.00	5387	295.00	202	465.00	67
124.00	1251	206.00	20474	296.00	6165	477.00	71
125.00	701	207.00	4637	297.00	524	484.00	88
127.00	50138	208.00	1488	298.00	101	502.00	90
128.00	3926	209.00	226	299.00	247	504.00	87
129.00	19345	210.00	259	302.00	172	510.00	86
130.00	2677	211.00	1686	303.00	700	514.00	68
131.00	861	212.00	215	304.00	343	531.00	71
133.00	255	214.00	85	307.00	105	534.00	66
134.00	529	215.00	107	308.00	110	537.00	80
135.00	2269	216.00	405	310.00	78	545.00	124
136.00	957	217.00	5639	314.00	244	550.00	133
137.00	882	218.00	614	315.00	364		
138.00	386	219.00	184	316.00	208		

Data File: /chem/a.i/a960321a.b/a2200.d

Date : 21-MAR-96 08:59

Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

Spectrum: Scans 96-98 (4.048 min), Subtraction Scan 94

Location of Maximum: 198.00

Number of points: 284

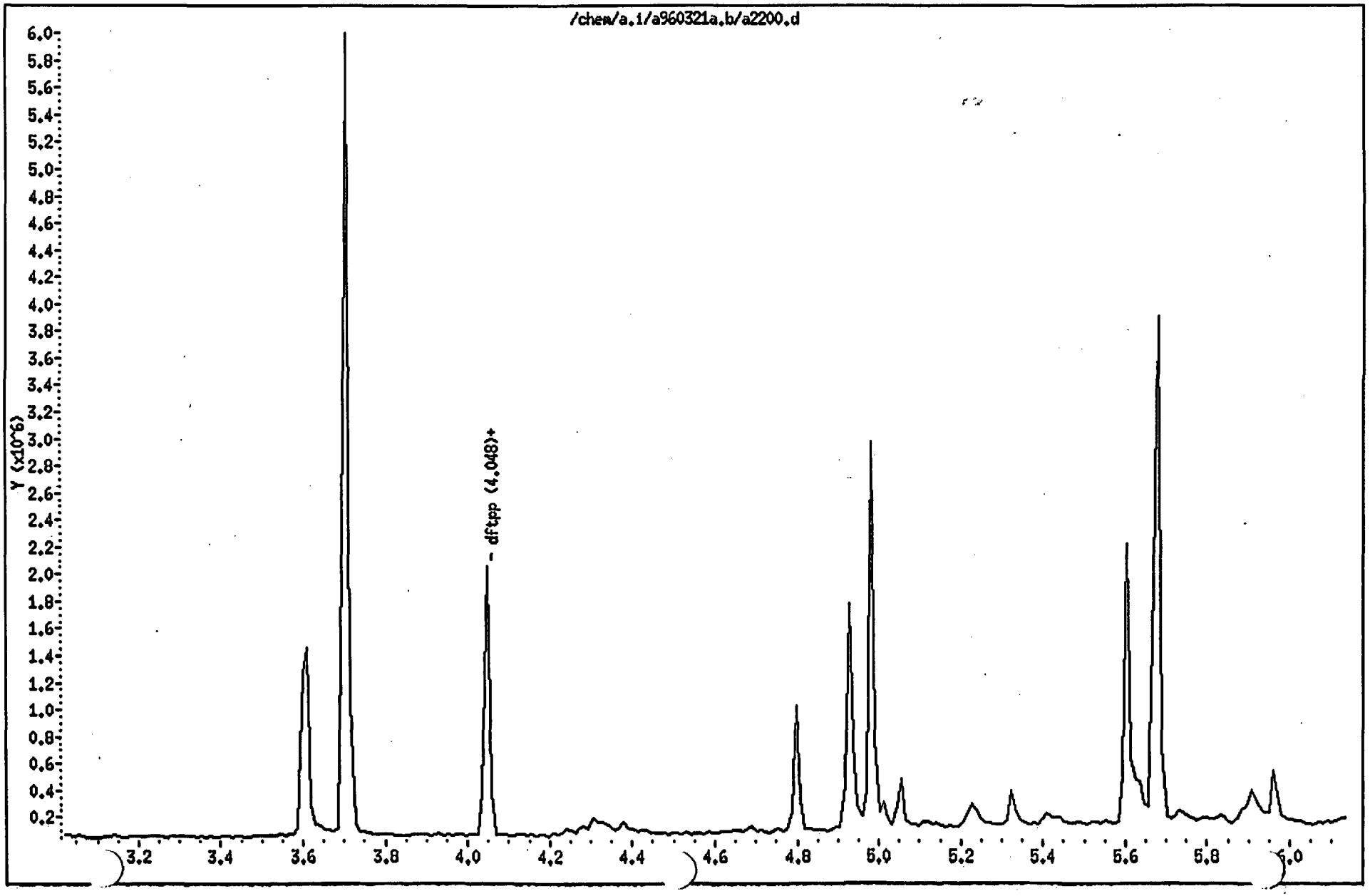
m/z	Y	m/z	Y	m/z	Y	m/z	Y
141.00	1017	220.00	79	318.00	83		
142.00	999	221.00	8005	321.00	326		

Data File: /chem/a.i/a960321a.b/a2200.d
Date : 21-MAR-96 08:59
Instrument : a.i
Sample ID : DFTPP
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: Mike

Column diameter : 0.25

268



Data File: /chem/a.i/a960325a.b/a2243.d

Date : 25-MAR-96 09:20

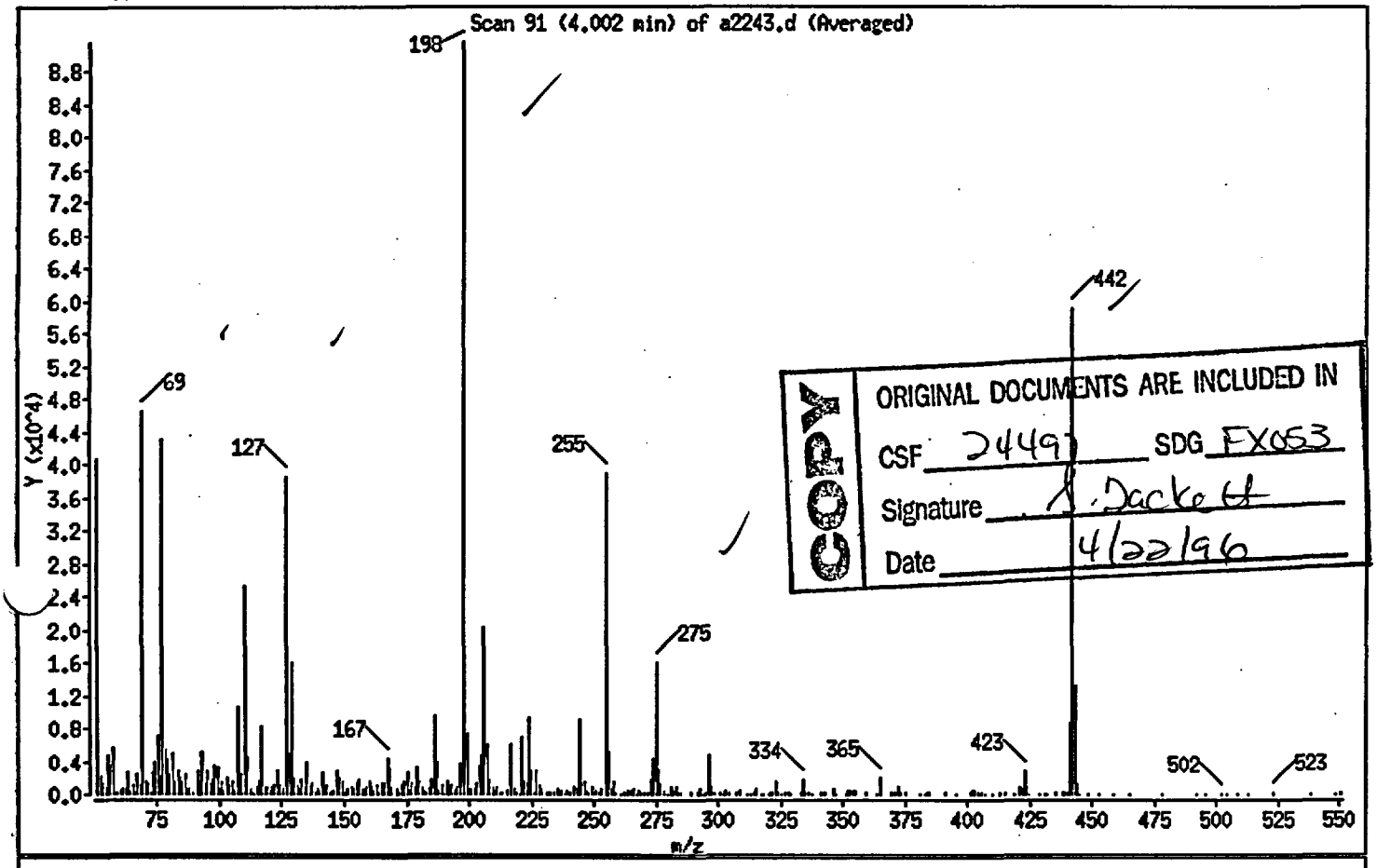
Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5 Column diameter : 0.25

Volume Injected (uL) : 2.0

1 dftpp



ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24497 SDG FX053
Signature S. Dackett
Date 4/22/96

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.0
51	30.00 - 80.00% of mass 198	42.7
68	Less than 2.00% of mass 69	0.0
69	Mass 69 relative abundance	48.9
70	Less than 2.00% of mass 69	0.0
127	25.00 - 75.00% of mass 198	41.8
197	Less than 1.00% of mass 198	0.0
199	5.00 - 9.00% of mass 198	7.7
275	10.00 - 30.00% of mass 198	17.2
365	Greater than 0.75% of mass 198	2.0
441	Present, but less than mass 443	65.8
442	40.00 - 110.00% of mass 198	64.5
443	15.00 - 24.00% of mass 442	22.5

JK 3/27/96 DH

Data File: /chem/a.i/a960325a.b/a2243.d

Date : 25-MAR-96 09:20

Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

Spectrum: Scans 91-93 (4.002 min), Subtraction Scan 89

Location of Maximum: 198.00

Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	39052	138.00	320	222.00	1166	322.00	242
52.00	1059	139.00	607	223.00	1282	323.00	1488
53.00	866	140.00	87	224.00	9395	324.00	181
54.00	404	141.00	2631	225.00	2795	325.00	105
56.00	2646	142.00	382	226.00	255	327.00	126
57.00	2089	143.00	929	227.00	2813	328.00	318
58.00	239	144.00	144	228.00	777	333.00	156
59.00	41	145.00	168	229.00	673	334.00	1426
60.00	405	146.00	501	231.00	267	335.00	153
61.00	281	147.00	1819	233.00	242	336.00	156
62.00	658	148.00	1484	234.00	323	338.00	105
63.00	2519	149.00	528	235.00	198	341.00	285
64.00	428	150.00	295	236.00	52	343.00	280
65.00	36	151.00	697	237.00	442	346.00	704
66.00	244	154.00	456	238.00	70	348.00	86
67.00	923	155.00	1010	239.00	496	351.00	75
69.00	44762	156.00	1442	240.00	226	352.00	393
72.00	289	157.00	245	241.00	158	353.00	411
73.00	783	158.00	630	242.00	851	354.00	523
74.00	3513	159.00	358	243.00	211	355.00	30
75.00	6902	160.00	750	244.00	9035	364.00	72
76.00	2246	161.00	293	245.00	774	365.00	1850
77.00	42447	162.00	28	246.00	1496	369.00	164
78.00	3658	163.00	585	247.00	435	371.00	164
79.00	3122	166.00	1397	248.00	257	372.00	676
80.00	1275	167.00	3797	249.00	950	373.00	145
81.00	2504	168.00	3074	250.00	228	375.00	140
82.00	790	169.00	357	251.00	70	382.00	93
84.00	457	173.00	766	252.00	248	383.00	78
86.00	612	174.00	1311	253.00	26	384.00	116
87.00	438	175.00	2218	255.00	38679	385.00	138
88.00	592	177.00	765	256.00	5221	395.00	78
91.00	897	178.00	807	257.00	588	401.00	162
92.00	430	179.00	2613	258.00	1420	402.00	411
93.00	3979	180.00	934	259.00	164	403.00	154

Data File: /chem/a.i/a960325a.b/a2243.d

Date : 25-MAR-96 09:20

Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5 Column diameter : 0.25

Volume Injected (uL) : 2.0

Spectrum: Scans 91-93 (4.002 min), Subtraction Scan 89

Location of Maximum: 198.00

Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
94.00	1040	181.00	468	261.00	93	404.00	124
95.00	1387	182.00	384	265.00	456	405.00	68
97.00	139	183.00	157	266.00	242	406.00	269
98.00	3505	184.00	327	269.00	240	407.00	90
99.00	2416	185.00	1293	270.00	264	410.00	69
100.00	235	186.00	9280	273.00	1737	413.00	166
101.00	1397	187.00	3851	274.00	4283	415.00	167
103.00	1894	189.00	1153	275.00	15760	419.00	69
104.00	902	191.00	728	276.00	2997	421.00	573
106.00	508	192.00	387	277.00	1243	422.00	291
107.00	10211	193.00	398	278.00	467	423.00	2864
108.00	1759	194.00	540	280.00	72	424.00	773
110.00	24195	195.00	152	282.00	484	425.00	74
111.00	3867	196.00	3593	283.00	881	432.00	84
112.00	596	198.00	91517	285.00	274	436.00	115
115.00	944	199.00	7025	289.00	115	439.00	125
116.00	1407	201.00	757	292.00	123	440.00	316
117.00	7221	202.00	565	293.00	613	441.00	8744
118.00	164	203.00	1231	294.00	100	442.00	59060
120.00	203	204.00	3423	296.00	4537	443.00	13288
121.00	772	205.00	4772	297.00	767	444.00	1205
122.00	1099	206.00	19826	298.00	257	445.00	69
123.00	2238	207.00	2252	299.00	123	449.00	90
124.00	1084	208.00	425	301.00	184	453.00	91
125.00	27	209.00	583	302.00	97	459.00	92
127.00	38212	210.00	534	303.00	432	465.00	93
128.00	4661	211.00	440	304.00	255	492.00	92
129.00	15963	212.00	150	309.00	378	496.00	79
130.00	1555	213.00	164	312.00	95	502.00	107
131.00	617	214.00	285	313.00	80	505.00	83
132.00	535	215.00	325	314.00	112	513.00	72
133.00	628	216.00	267	315.00	583	523.00	129
134.00	887	217.00	6002	317.00	67	539.00	93
135.00	3127	218.00	292	318.00	75	549.00	66
136.00	797	219.00	50	320.00	93		

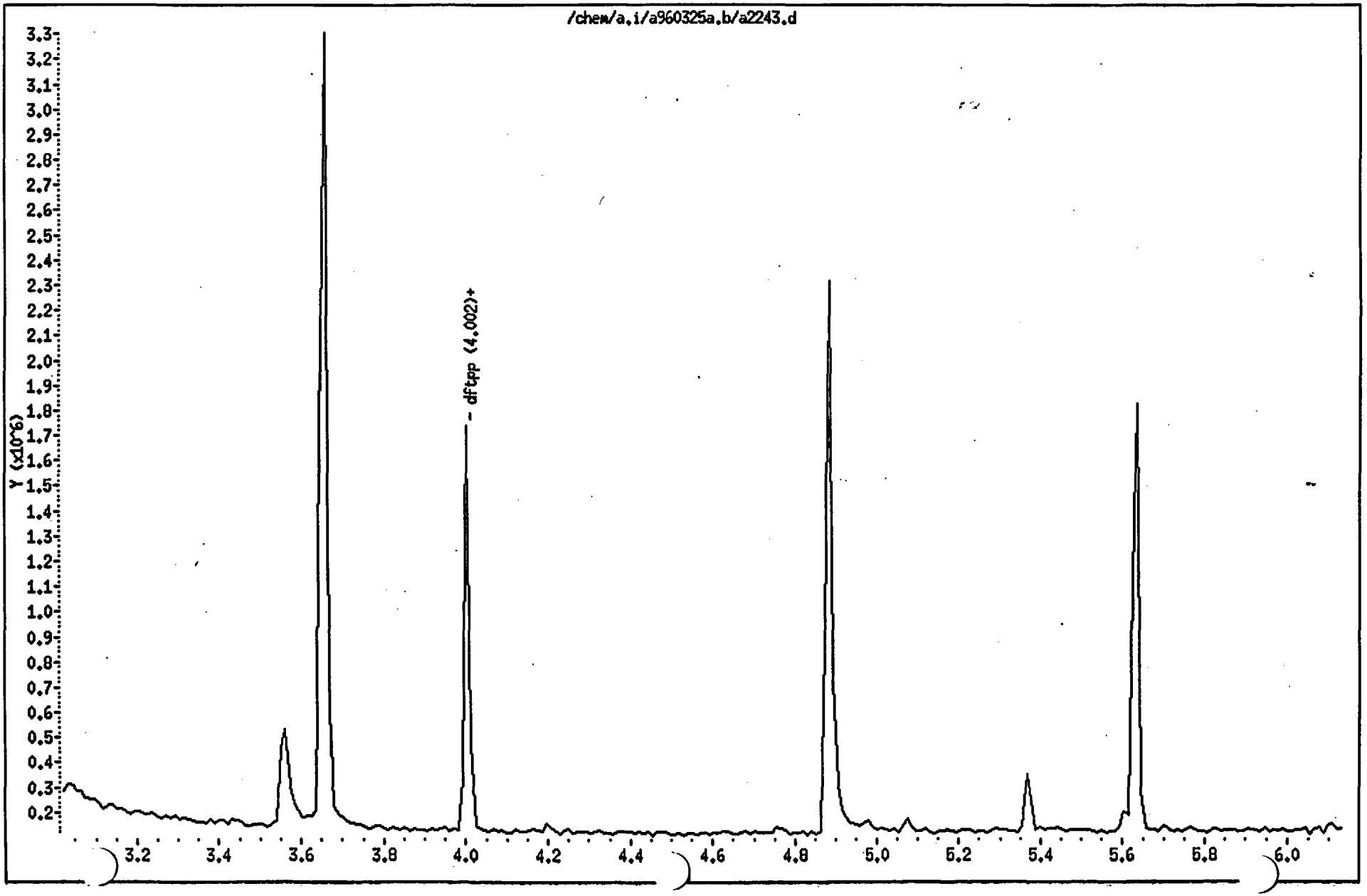
Data File: /chem/a.i/a960325a.b/a2243.d
Date : 25-MAR-96 09:20
Instrument : a.i
Sample ID : DFTPP
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Spectrum: Scans 91-93 (4.002 min), Subtraction Scan 89
Location of Maximum: 198.00
Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
137.00	405	221.00	6262	321.00	147		

Data File: /chem/a.i/a960325a.b/a2243.d
Date : 25-MAR-96 09:20
Instrument : a.i
Sample ID : DFTPP
Column phase : XTI-5
Volume Injected (uL) : 2.0

Column diameter : 0.25



Data File: /chem/a.i/a960330a.b/a2390.d

Page 2

Date : 30-MAR-96 12:51

Instrument : a.i

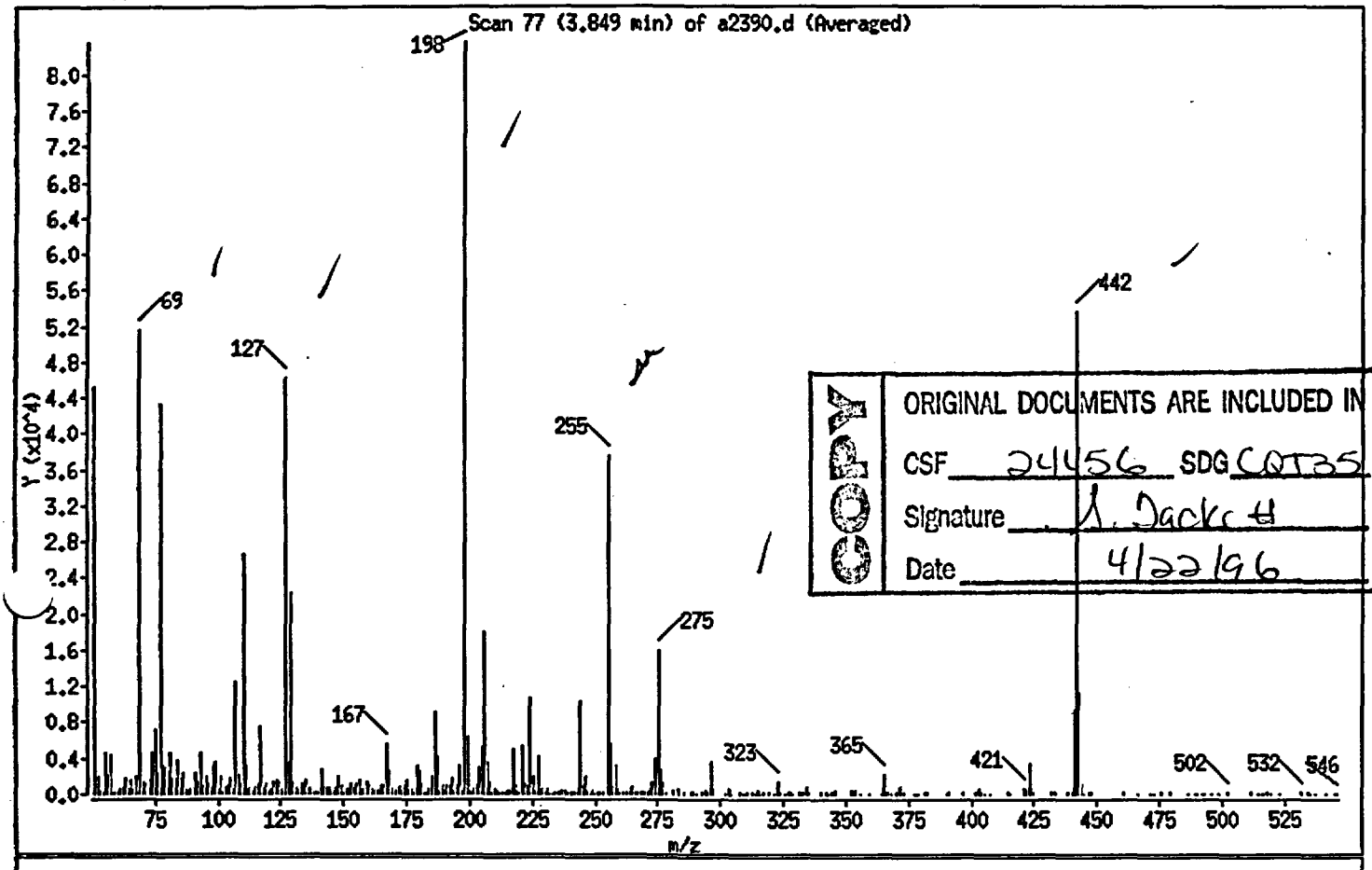
Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

1 dftpp



ORIGINAL DOCUMENTS ARE INCLUDED IN

CSF 24456 SDG CQT35

Signature J. Jacks

Date 4/22/96

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.0
51	30.00 - 80.00% of mass 198	52.4
68	Less than 2.00% of mass 69	0.0
69	Mass 69 relative abundance	57.8
70	Less than 2.00% of mass 69	0.0
127	25.00 - 75.00% of mass 198	54.5
197	Less than 1.00% of mass 198	0.1
199	5.00 - 9.00% of mass 198	7.5
275	10.00 - 30.00% of mass 198	19.2
365	Greater than 0.75% of mass 198	2.5
441	Present, but less than mass 443	78.0
442	40.00 - 110.00% of mass 198	64.0
443	15.00 - 24.00% of mass 442	21.1

OK 4/01/96 DD

Data File: /chem/a.i/a960330a.b/a2390.d

Date : 30-MAR-96 12:51

Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

Spectrum: Scans 77-79 (3.849 min), Subtraction Scan 75
Location of Maximum: 198.00
Number of points: 301

m/z	Y	m/z	Y	m/z	Y	m/z	Y
51.00	43730	145.00	150	229.00	645	343.00	81
52.00	1850	146.00	254	230.00	244	344.00	116
55.00	1013	147.00	856	231.00	556	345.00	138
56.00	456	148.00	1100	232.00	73	346.00	345
57.00	649	149.00	753	233.00	69	352.00	370
58.00	123	150.00	157	234.00	281	353.00	278
59.00	282	151.00	385	236.00	268	354.00	298
61.00	615	153.00	481	237.00	447	359.00	84
62.00	570	154.00	788	239.00	170	364.00	80
63.00	1444	155.00	1204	240.00	250	365.00	2125
64.00	507	156.00	1337	241.00	237	366.00	283
65.00	1066	157.00	683	242.00	294	367.00	118
66.00	49	158.00	376	243.00	249	368.00	76
67.00	1459	159.00	1300	244.00	10184	371.00	177
69.00	48262	160.00	968	245.00	1049	372.00	800
73.00	1079	161.00	679	246.00	1896	373.00	269
74.00	4464	164.00	370	247.00	447	377.00	66
75.00	7108	165.00	297	248.00	89	378.00	87
76.00	2114	166.00	1078	249.00	391	379.00	73
77.00	41750	167.00	5272	255.00	37534	382.00	136
78.00	2365	168.00	2098	256.00	5556	383.00	272
79.00	1964	169.00	568	257.00	482	390.00	79
80.00	2476	171.00	208	258.00	2559	391.00	199
81.00	2895	172.00	771	259.00	632	397.00	151
82.00	817	173.00	374	261.00	119	402.00	134
83.00	461	174.00	980	263.00	28	403.00	555
84.00	1330	175.00	1542	264.00	211	404.00	113
85.00	917	176.00	586	265.00	847	406.00	87
86.00	1440	177.00	245	266.00	109	408.00	96
88.00	257	178.00	193	267.00	112	415.00	260
89.00	526	179.00	2566	268.00	104	416.00	79
91.00	1380	180.00	2040	269.00	150	421.00	397
92.00	1027	181.00	650	270.00	35	422.00	462
93.00	3783	184.00	415	271.00	286	423.00	3301
94.00	684	185.00	1716	272.00	155	424.00	537

Data File: /chem/a.i/a960330a.b/a2390.d

Date : 30-MAR-96 12:51

Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

Spectrum: Scans 77-79 (3.849 min), Subtraction Scan 75
Location of Maximum: 198.00
Number of points: 301

m/z	Y	m/z	Y	m/z	Y	m/z	Y
98.00	2808	186.00	9075	273.00	1332	425.00	125
99.00	3599	187.00	3942	274.00	3460	432.00	137
100.00	435	188.00	383	275.00	16045	433.00	101
101.00	1744	189.00	476	276.00	2713	438.00	92
103.00	861	190.00	91	277.00	1379	439.00	111
104.00	1043	191.00	205	278.00	214	440.00	205
105.00	576	192.00	964	281.00	302	441.00	8791
106.00	527	193.00	1866	283.00	499	442.00	53470
107.00	12226	194.00	426	285.00	222	443.00	11277
108.00	1626	195.00	1037	286.00	149	444.00	1157
110.00	26358	196.00	2889	288.00	155	445.00	73
111.00	2555	197.00	101	289.00	198	447.00	115
112.00	591	198.00	83528	291.00	93	448.00	105
113.00	828	199.00	6244	293.00	198	467.00	97
114.00	333	200.00	361	294.00	455	472.00	83
115.00	316	202.00	257	295.00	159	473.00	76
116.00	887	203.00	823	296.00	3618	476.00	106
117.00	6685	204.00	2920	297.00	558	479.00	103
118.00	828	205.00	4920	302.00	72	486.00	81
119.00	551	206.00	17750	303.00	593	489.00	70
121.00	247	207.00	2658	308.00	254	490.00	92
122.00	887	208.00	1433	309.00	74	492.00	94
123.00	344	210.00	517	310.00	85	493.00	88
124.00	797	211.00	447	311.00	180	496.00	83
126.00	311	212.00	129	314.00	76	499.00	89
127.00	45488	213.00	114	315.00	479	502.00	225
128.00	3369	214.00	175	316.00	70	512.00	182
129.00	22296	215.00	65	317.00	204	515.00	92
130.00	1457	216.00	339	319.00	253	516.00	97
131.00	779	217.00	4900	322.00	73	517.00	95
132.00	614	218.00	924	323.00	1291	519.00	172
133.00	48	219.00	433	324.00	141	520.00	68
134.00	597	220.00	183	326.00	70	523.00	75
135.00	179	221.00	4416	327.00	104	532.00	292
136.00	451	222.00	1172	328.00	102	536.00	78

Data File: /chem/a.i/a960330a.b/a2390.d

Date : 30-MAR-96 12:51

Instrument : a.i

Sample ID : DFTPP

Column phase : XTI-5

Column diameter : 0.25

Volume Injected (uL) : 2.0

Spectrum: Scans 77-79 (3.849 min), Subtraction Scan 75

Location of Maximum: 198.00

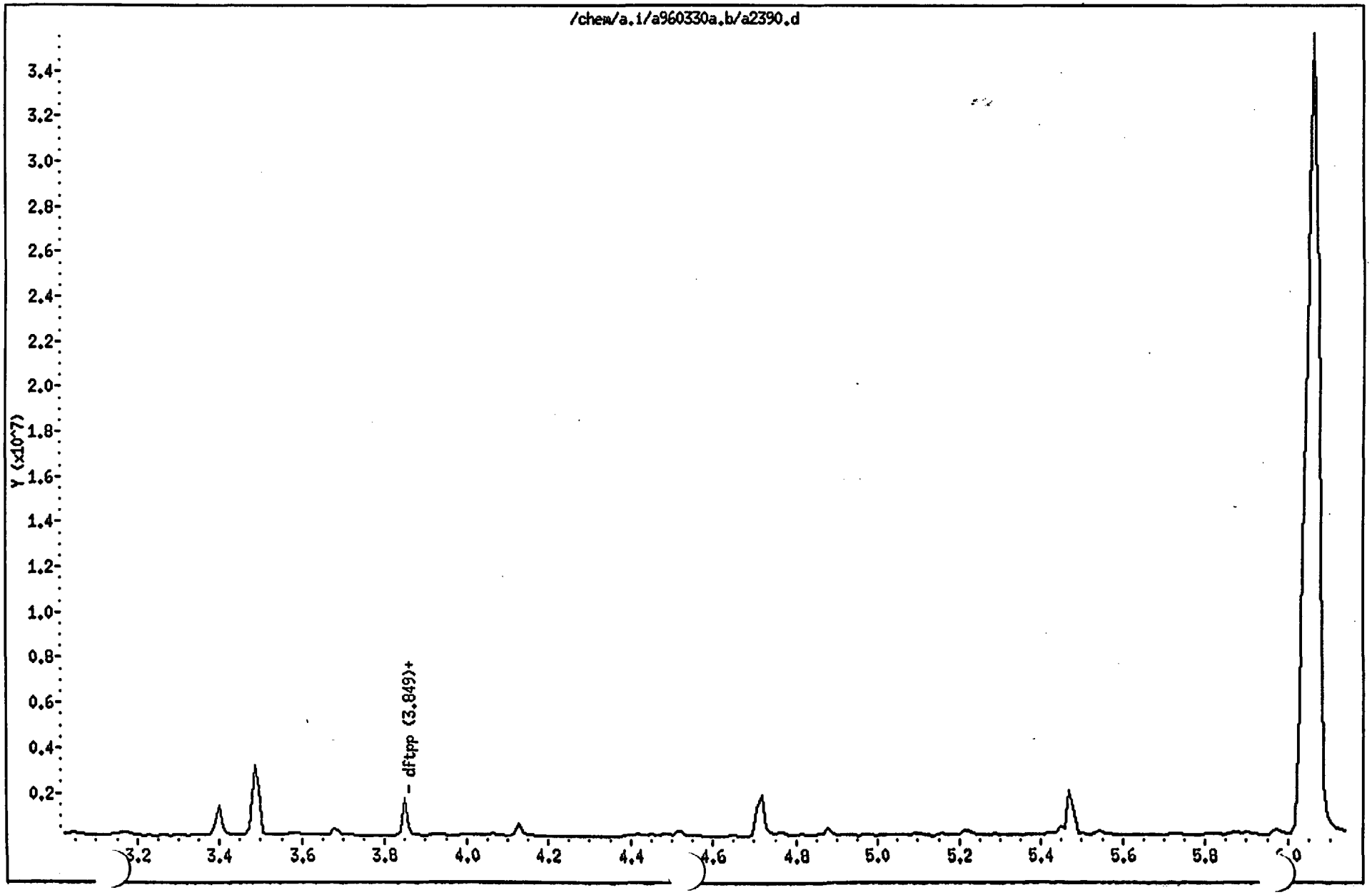
Number of points: 301

m/z	Y	m/z	Y	m/z	Y	m/z	Y
137.00	338	223.00	1069	331.00	140	542.00	78
140.00	203	224.00	10705	332.00	79	545.00	91
141.00	2014	225.00	1945	333.00	213	546.00	67
142.00	770	226.00	89	334.00	709		
143.00	761	227.00	4183	340.00	224		
144.00	716	228.00	509	342.00	288		

Data File: /chem/a.i/a960330a.b/a2390.d
Date : 30-MAR-96 12:51
Instrument : a.i
Sample ID : DFTPP
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: Mike

Column diameter : 0.25



1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: BL0322WA

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2246.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

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	Dimethylphthalate	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.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: BL0322WA

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2246.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted: 03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

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	0.8	J
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	0.9	J
117-84-0	Di-n-octylphthalate	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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK1

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: BL0322WA

Sample wt/vol: 1000 (g/mL) ML Lab File ID: A2246.D

Level: (low/med) LOW Date Received: / /

% Moisture: _____ decanted: (Y/N)___ Date Extracted:03/22/96

Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ORGANIC ACID	9.652	2	J
2.				
3.				
4.				
5.				
6.				
7.				
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27.				
28.				
29.				
30.				

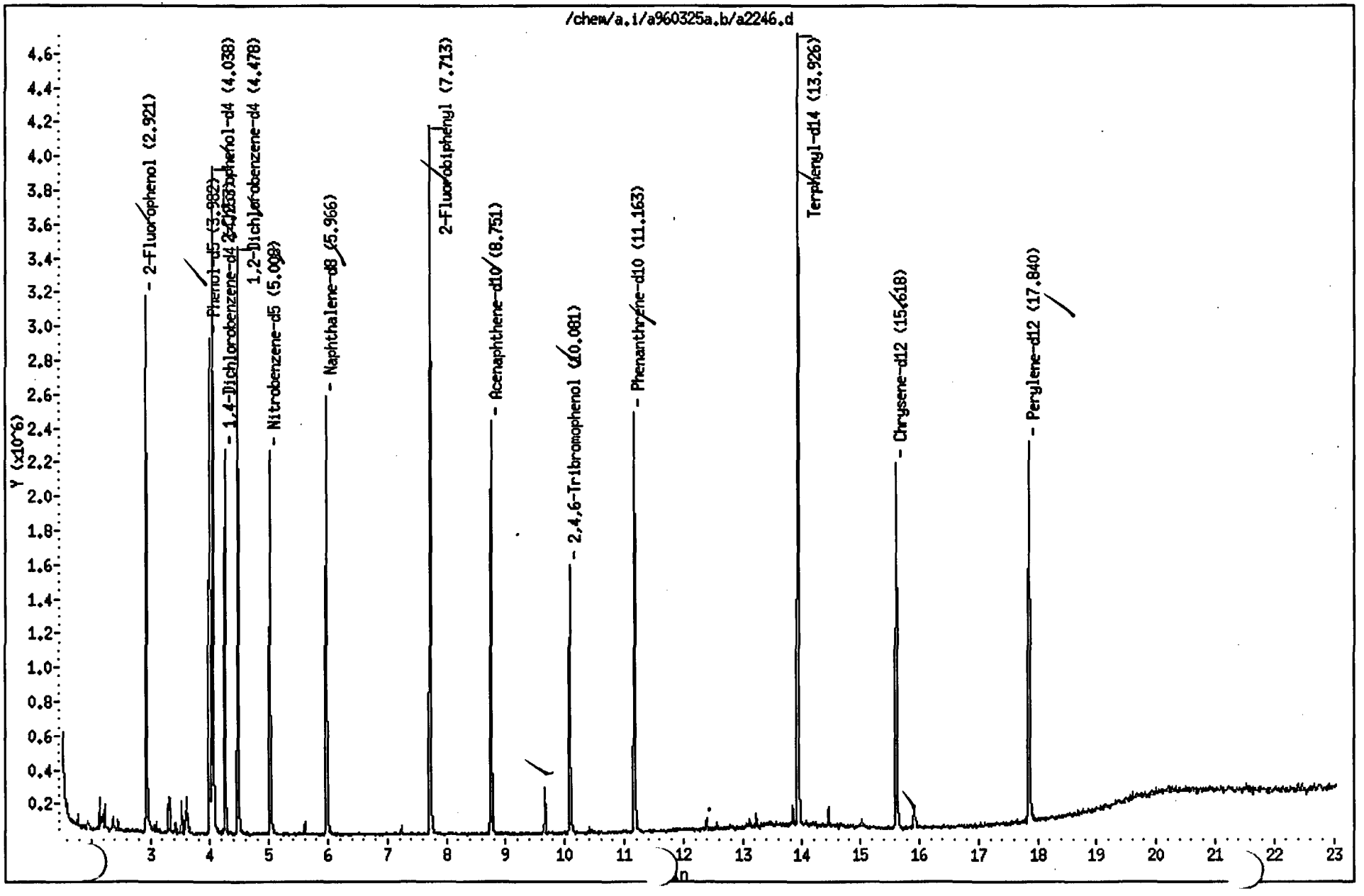
282

Data File: /chem/a.i/a960325a.b/a2246.d
Date : 25-MAR-1996 10:56
Instrument : a.i
Sample ID : SBLK
Column phase : XTI-5
Volume Injected (uL) : 2.0

OPERATOR: Mike

Column diameter : 0.25

OK 3/29/96



Data File: /chem/a.i/a960325a.b/a2246.d
Report Date: 25-Mar-1996 13:02

Southwest Laboratory of Oklahoma

BASE NEUTRAL QUANT AND RATIO REPORT

Data file : /chem/a.i/a960325a.b/a2246.d
Lab. Id. : BL0322WA Quant Type: ISTD
Inj Date : 25-MAR-1996 10:56
Operator : ANNIE Inst ID: a.i
Smp Info : SBLK
Misc Info : MS517**INSTA*AATS-E:24501*BL0322WA*1000ML/1ML/2UL*
Comment :
Method : /chem/a.i/a960325a.b/BNA517EPA.m
Meth Date : 25-Mar-1996 12:58 annie
Cal Date : 25-MAR-96 10:17 Cal File: a2245.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER

Compounds	QUANT SIG MASS	RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng)	FINAL (ug/L)
$ 1 2-Fluorophenol	112.00	2.921	(0.687)	993006	86.62	43.31
$ 2 Phenol-d5	98.80	3.982	(0.936)	1429198	94.82	47.41
* 5 2-Chlorophenol-d4	132.00	4.038	(0.950)	1172632	89.66	44.83
8 1,4-Dichlorobenzene-d4	151.85	4.253	(1.000)	456471	40.00	
$ 10 1,2-Dichlorobenzene-d4	152.00	4.478	(1.053)	607837	66.41	33.20
$ 17 Nitrobenzene-d5	82.00	5.008	(0.839)	852374	69.93	34.96
* 25 Naphthalene-d8	135.65	5.966	(1.000)	1411981	40.00	
$ 34 2-Fluorobiphenyl	172.00	7.713	(0.881)	1689468	71.73	35.86
* 40 Acenaphthene-d10	164.00	8.751	(1.000)	785776	40.00	
$ 53 2,4,6-Tribromophenol	329.80	10.081	(0.903)	254843	87.11	43.55
* 57 Phenanthrene-d10	187.65	11.163	(1.000)	1333265	40.00	
61 Di-n-butylphthalate	149.00	12.392	(1.110)	61401	1.57	0.78(a)
$ 64 Terphenyl-d14	244.00	13.926	(0.892)	2106187	76.33	38.16
* 67 Chrysene-d12	240.00	15.618	(1.000)	1136973	40.00	
70 bis(2-Ethylhexyl)phthalate	149.00	15.900	(1.018)	46892	1.77	0.88(a)
* 75 Perylene-d12	264.00	17.840	(1.000)	1347059	40.00	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).

Data File: /chem/a.i/a960325a.b/a2246.d

Date : 25-MAR-1996 10:56

Instrument : a.i

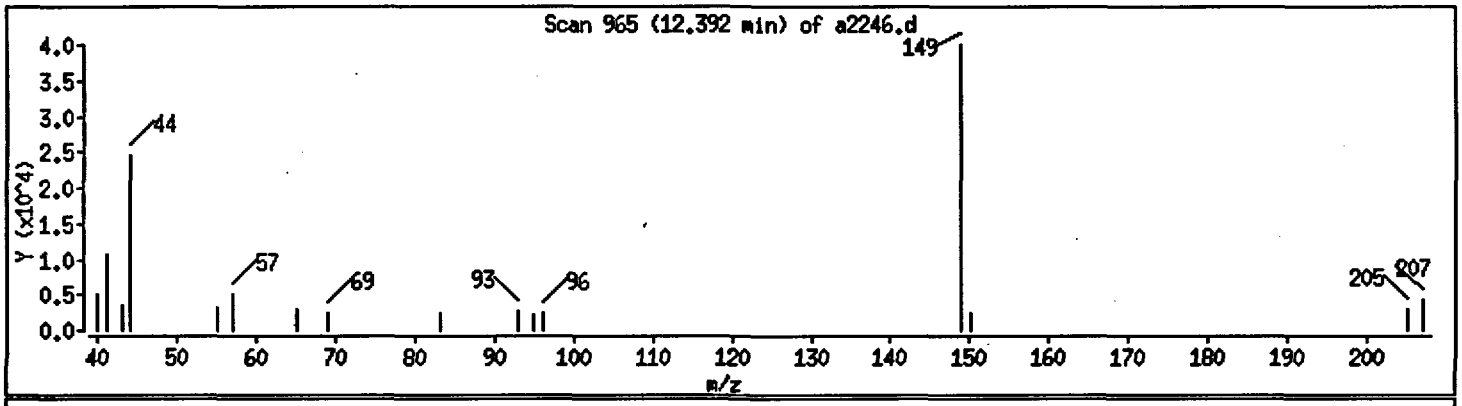
Sample ID : SBLK

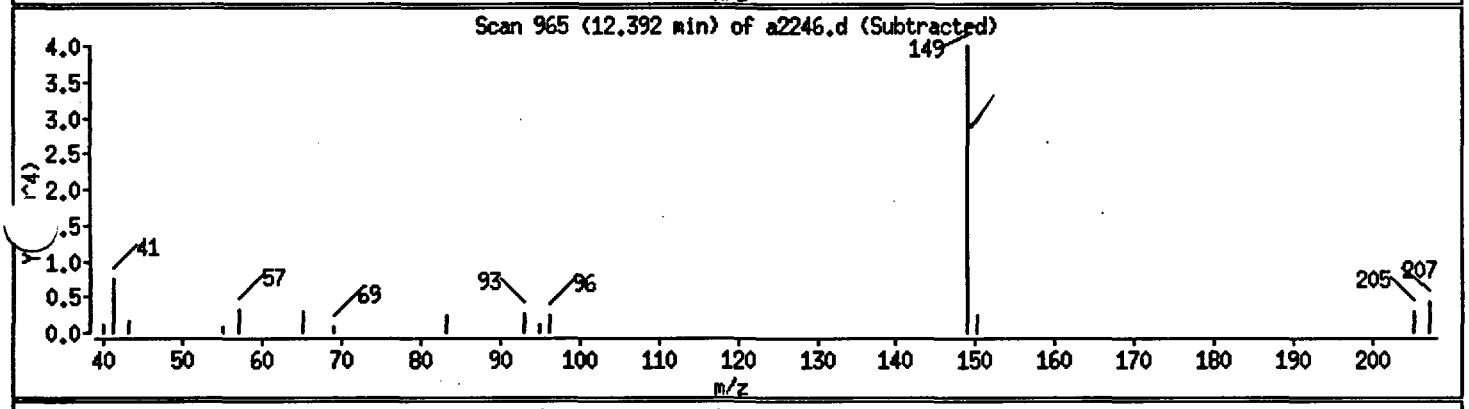
Column phase : XTI-5

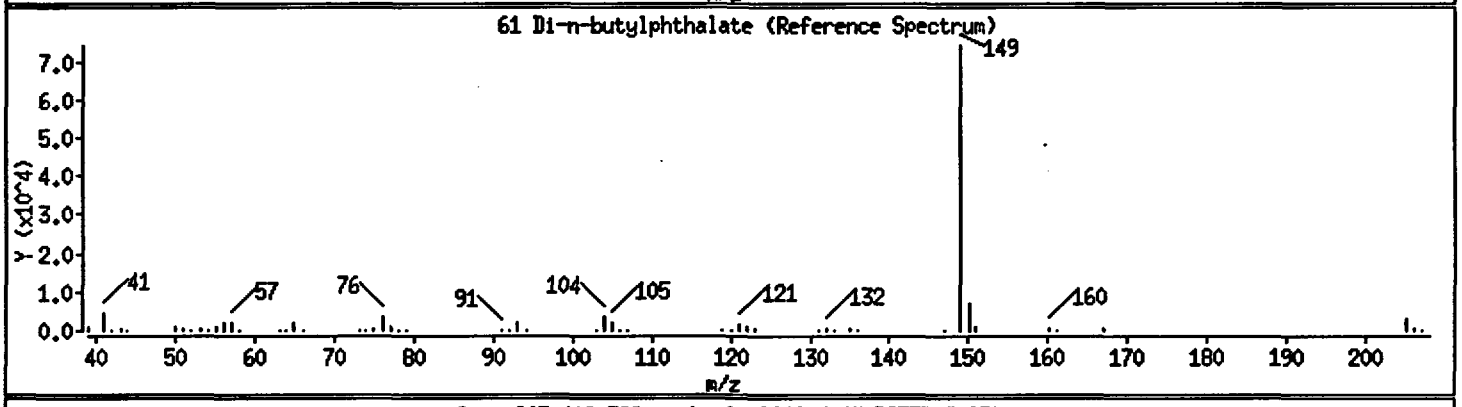
Column diameter : 0.25

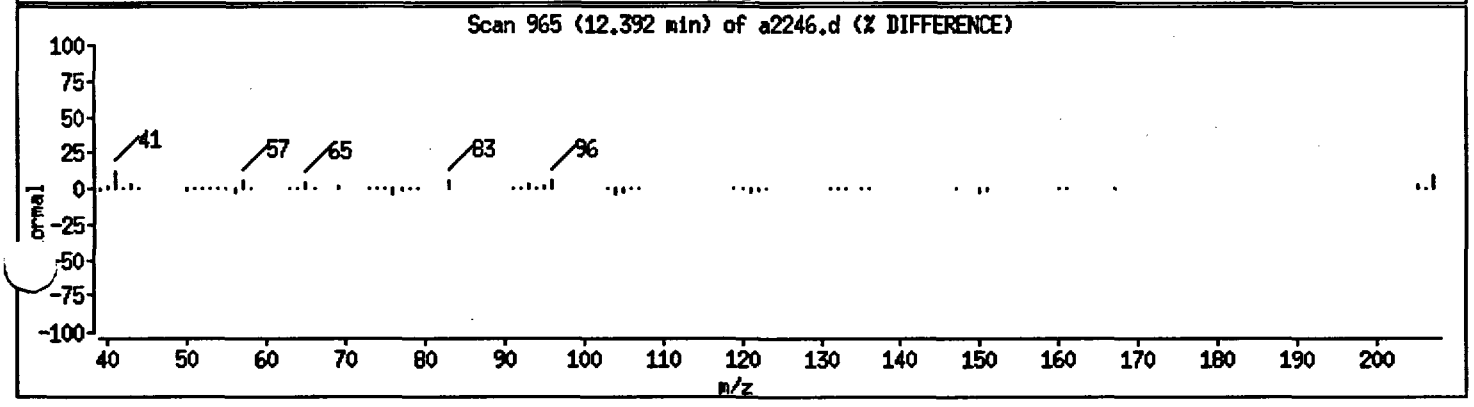
Volume Injected (uL) : 2.0

61 Di-n-butylphthalate









Data File: /chem/a.i/a960325a.b/a2246.d

Date : 25-MAR-1996 10:56

Instrument : a.i

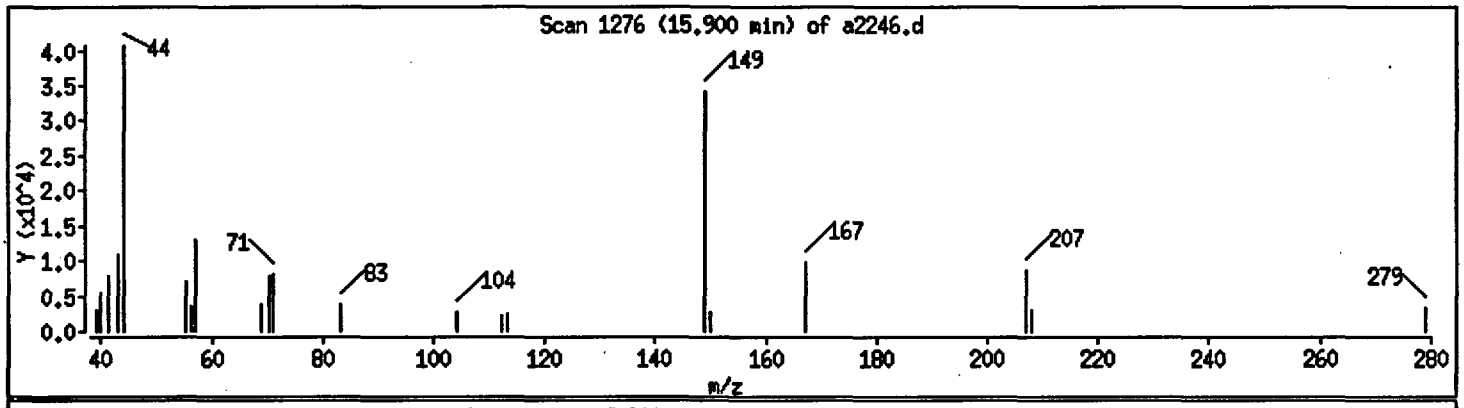
Sample ID : SBLK

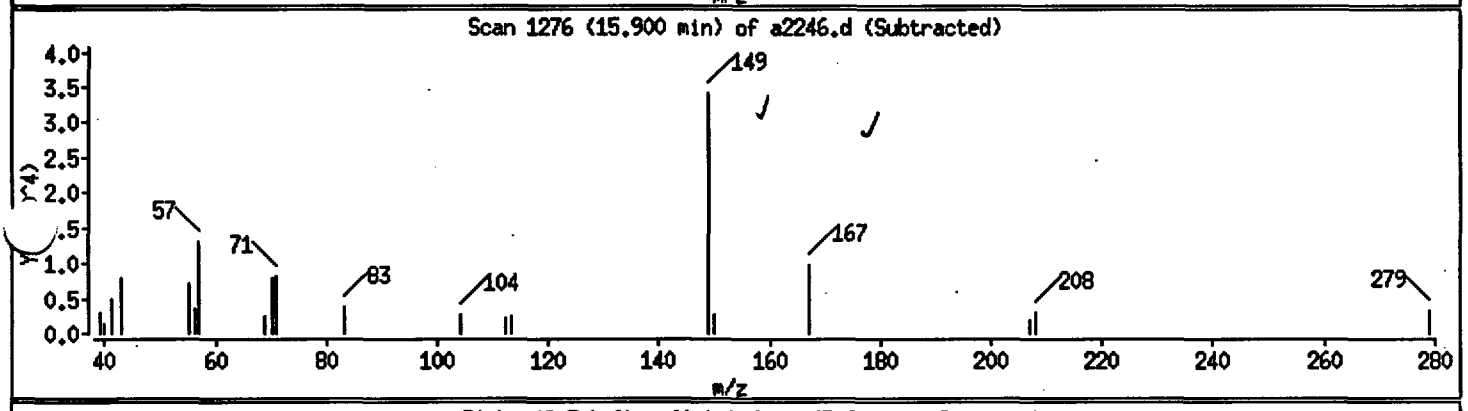
Column phase : XTI-5

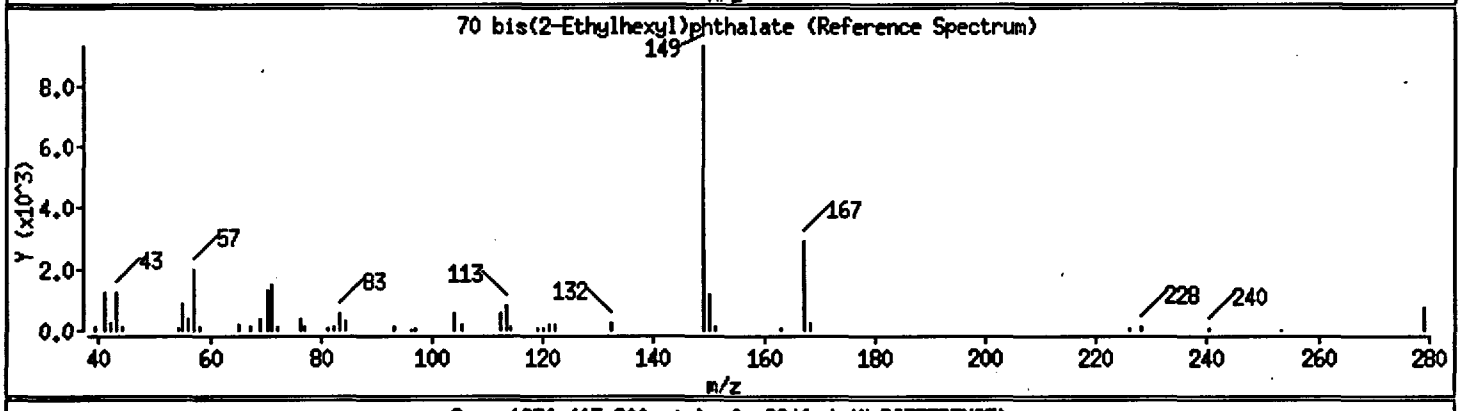
Column diameter : 0.25

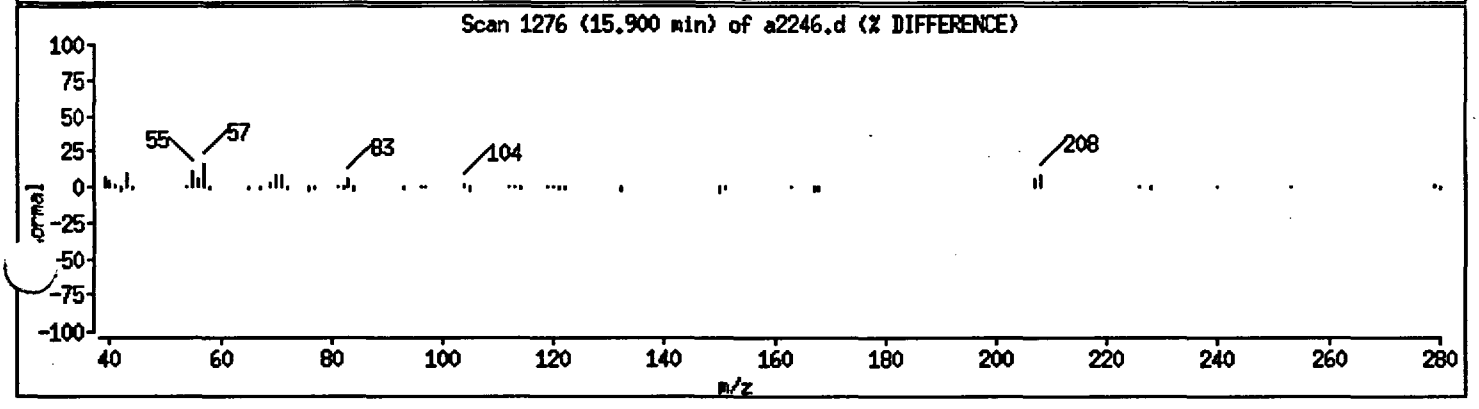
Volume Injected (uL) : 2.0

70 bis(2-Ethylhexyl)phthalate









Data File: /chem/a.i/a960325a.b/a2246.d
Report Date: 25-Mar-1996 13:02

Southwest Laboratory of Oklahoma

Unknown Compounds Quantitation Report

Data file : /chem/a.i/a960325a.b/a2246.d
Lab. Id. : BL0322WA
Inj Date : 25-MAR-1996 10:56
Operator : ANNIE Inst ID: a.i
Smp Info : SBLK\
Misc Info : MS517**INSTA*AATS-E:24501*BL0322WA*1000ML/1ML/2UL*
Comment :
Method : /chem/a.i/a960325a.b/BNA517EPA.m
Meth Date : 25-Mar-1996 12:58 annie
Cal Date : 25-MAR-96 10:17 Cal File: a2245.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.000 Target Version: Target 3.00
Integrator: HP RTE Compound Sublist: all.sub
Sample Type: WATER
Quantitative Mode : Use RF of Nearest Std

ISTD	RT	AREA	AMOUNT
* 8 1,4-Dichlorobenzene-d4	4.253	2640004	40.000
* 40 Acenaphthene-d10	8.751	3384434	40.000

RT	AREA	CONC(ug/L)	QUAL	LIBRARY	LIB ENTRY	QUANT	CPND #
Cyclopentane, 1,1,3,4-tetramethyl-, cis-					CAS #: 53907-60-1		
3.294	476027	3.60	43	NBS75K.l	64945	8	
Propanoic acid, 2-methyl-, 1-(1,1-dimeth					CAS #: 74381-40-1		
9.652	365927	2.16	83	NBS75K.l	40505	40	

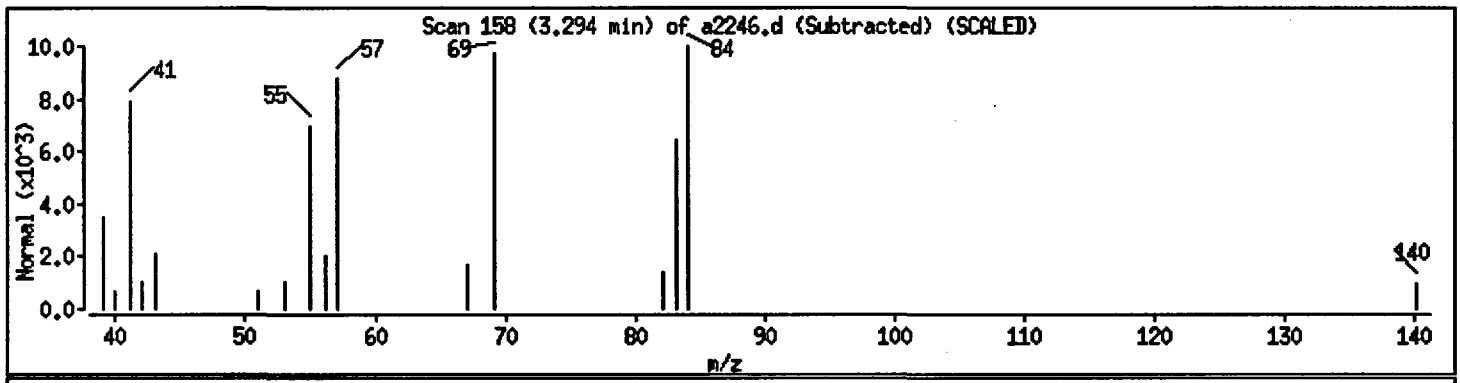
QC Flag Legend

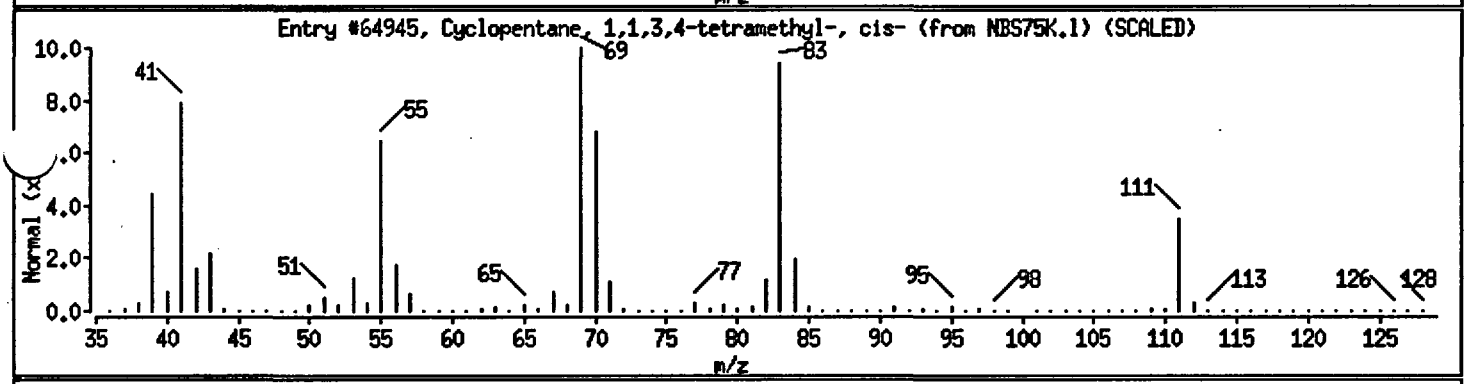
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

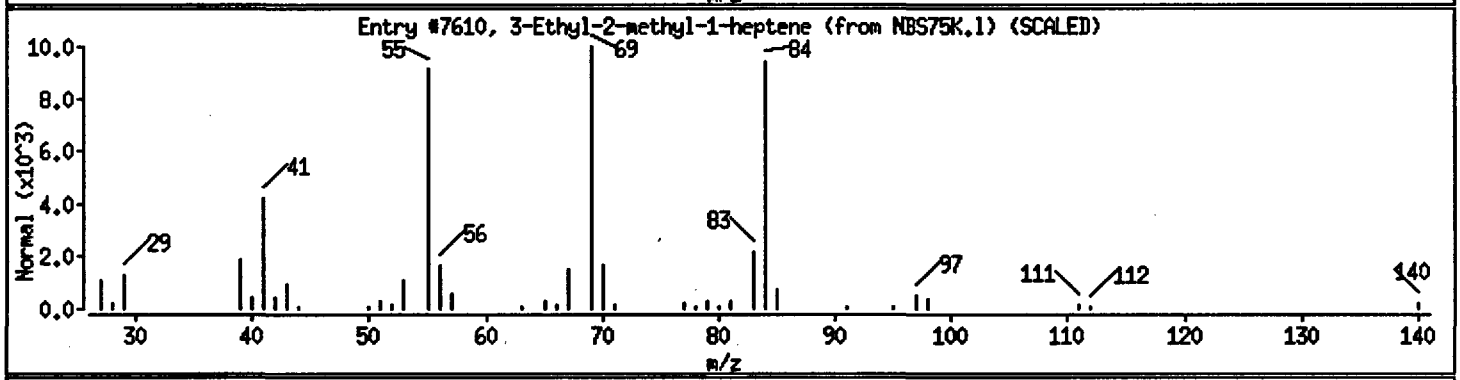
Data File: /chem/a.i/a960325a.b/a2246.d

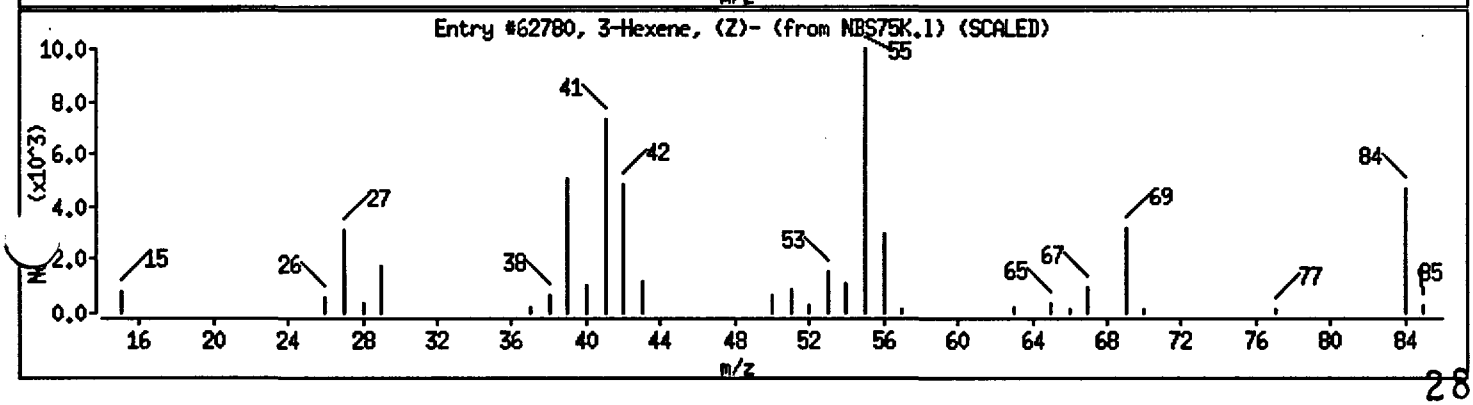
Date : 25-MAR-1996 10:56
Instrument : a.i
Sample ID : SBLK
Column phase : XTI-5 Column diameter : 0.25
Volume Injected (uL) : 2.0

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Cyclopentane, 1,1,3,4-tetramethyl-, cis-	53907-60-1	NBS75K.l	64945	43
3-Ethyl-2-methyl-1-heptene	19780-60-0	NBS75K.l	7610	42
3-Hexene, (Z)-	7642-09-3	NBS75K.l	62780	35







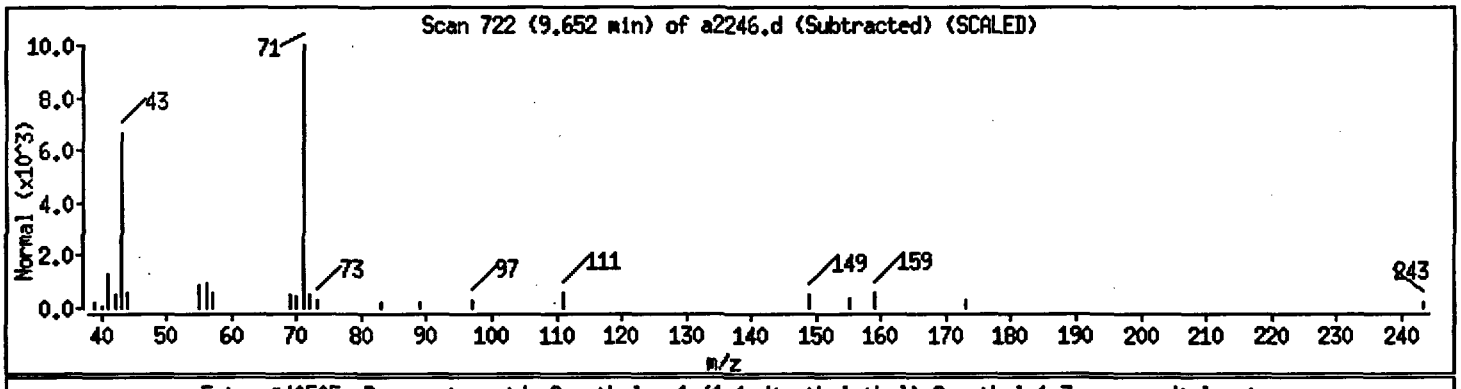


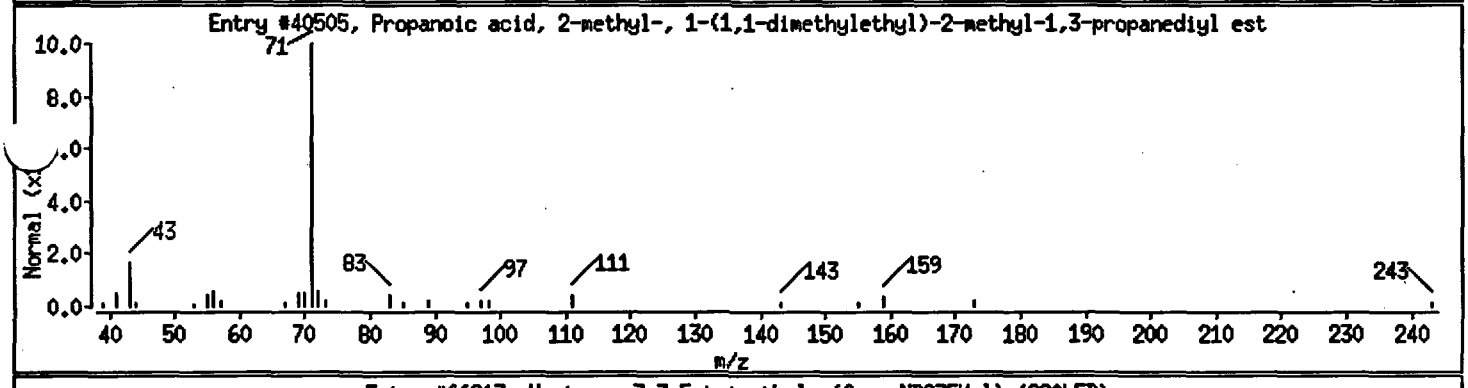
Data File: /chem/a.i/a960325a.b/a2246.d
Date : 25-MAR-1996 10:56
Instrument : a.i
Sample ID : SBLK
Column phase : XTI-5
Volume Injected (µL) : 2.0

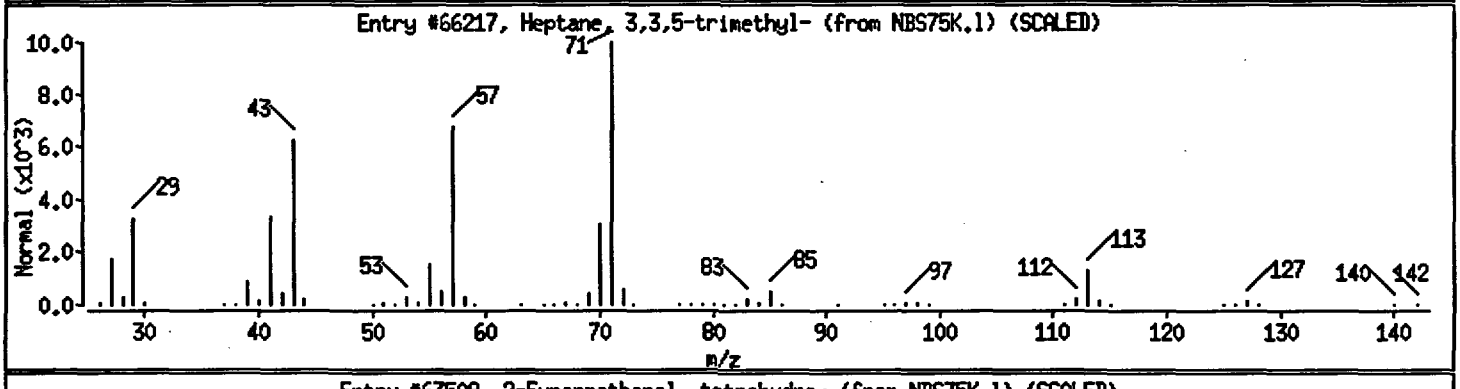
UNKNOWN ORGANIC ACID

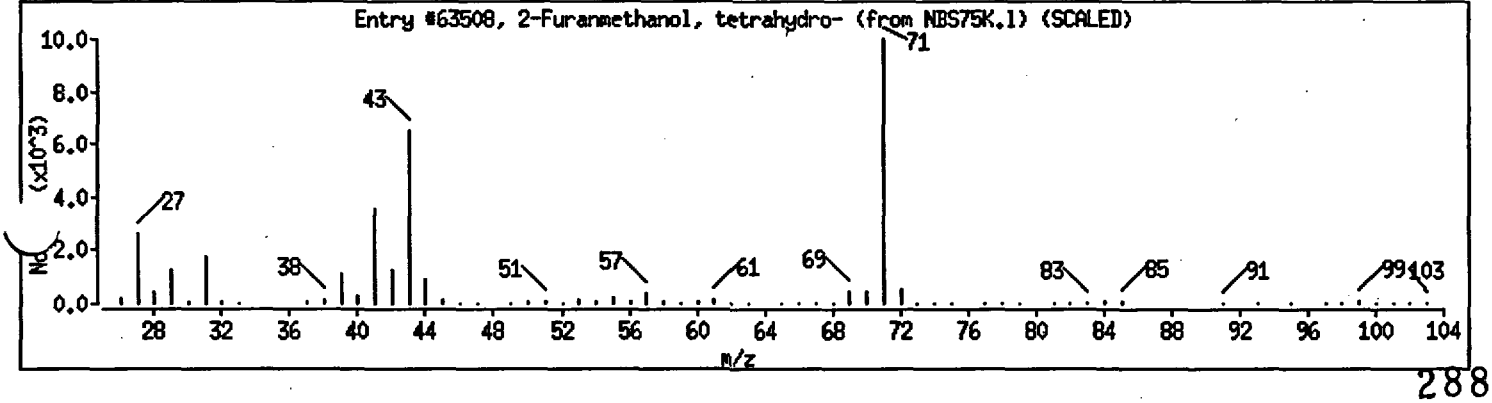
Column diameter : 0.25

Library Search Compound Match	CAS Number	Library	Lib Entry	Quality
Propanoic acid, 2-methyl-, 1-(1,1-dimeth	74381-40-1	NBS75K.l	40505	83
Heptane, 3,3,5-trimethyl-	7154-80-5	NBS75K.l	66217	50
2-Furanmethanol, tetrahydro-	97-99-4	NBS75K.l	63508	42









2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column(1): DB-1701 ID: 0.32(mm) GC Column(2): DB-17 ID: 0.32(mm)

	EPA SAMPLE NO.	TCX 1 %REC #	TCX 2 %REC #	DCB 1 %REC #	DCB 2 %REC #	OTHER (1)	OTHER (2)	TOT OUT
01	PBLKWE	122	91	122	117			0
02	FEM97	141	96	124	124			0
03	FEM98	84	63	28*	39			1
04								
05								
06								
07								
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30								

QC LIMITS

TCX = Tetrachloro-m-xylene (30-150)
DCB = Decachlorobiphenyl (30-150)

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

4C
PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKWE

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Lab Sample ID: PBLKWE Lab File ID: 3_004261

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

Sulfur Cleanup: (Y/N) N Date Extracted: 03/22/96

Date Analyzed (1): 03/26/96 Date Analyzed (2): 03/26/96

Time Analyzed (1): 1836 Time Analyzed (2): 1836

Instrument ID (1): HP_03A Instrument ID (2): HP_03B

GC Column (1): DB-1701 ID: 0.32(mm) GC Column (2): DB-17 ID: 0.32(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	FEM97	25005.01	03/26/96	03/26/96
02	FEM98	25005.02	03/26/96	03/26/96
03				
04				
05				
06				
07				
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Comments:

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004263.D Vial: 44
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004263.D\CONFIRM.D
Acq On : 26 Mar 96 19:37 Operator: HM
Sample : FEM97 Inst : HP_03
Misc : 25005.01 Multiplr: 0.0100
Quant Time: Mar 30 11:35 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Mar 30 11:24:04 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L
		Surrogate Compounds						
1)	S	TCX	7.24	7.84	1002018	512092	0.2814m	0.1924 #
					Recovery	=	140.70%	96.20%
22)	S	DCB	17.71	20.21	1205676	947657	0.2482m	0.2476
					Recovery	=	124.10%	123.80%
		Target Compounds						
2)	AE	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
4)	MA	Heptachlor	0.00	10.66	0	1075758	N.D.	0.3536 #
5)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE	beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
10)	B	gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11)	B	alpha-Chlordane	12.39	12.78f	250341	172560	0.0665	0.0593
12)	B	4,4'-DDE	12.39f	0.00	250341	0	0.0668	N.D. #
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.
15)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA	4,4'-DDT	0.00	0.00	0	0	N.D.	N.D.
18)	B	Endrin Aldehyde	0.00	14.97	0	309175	N.D.	0.1379 #
19)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20)	AE	Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21)	B	Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

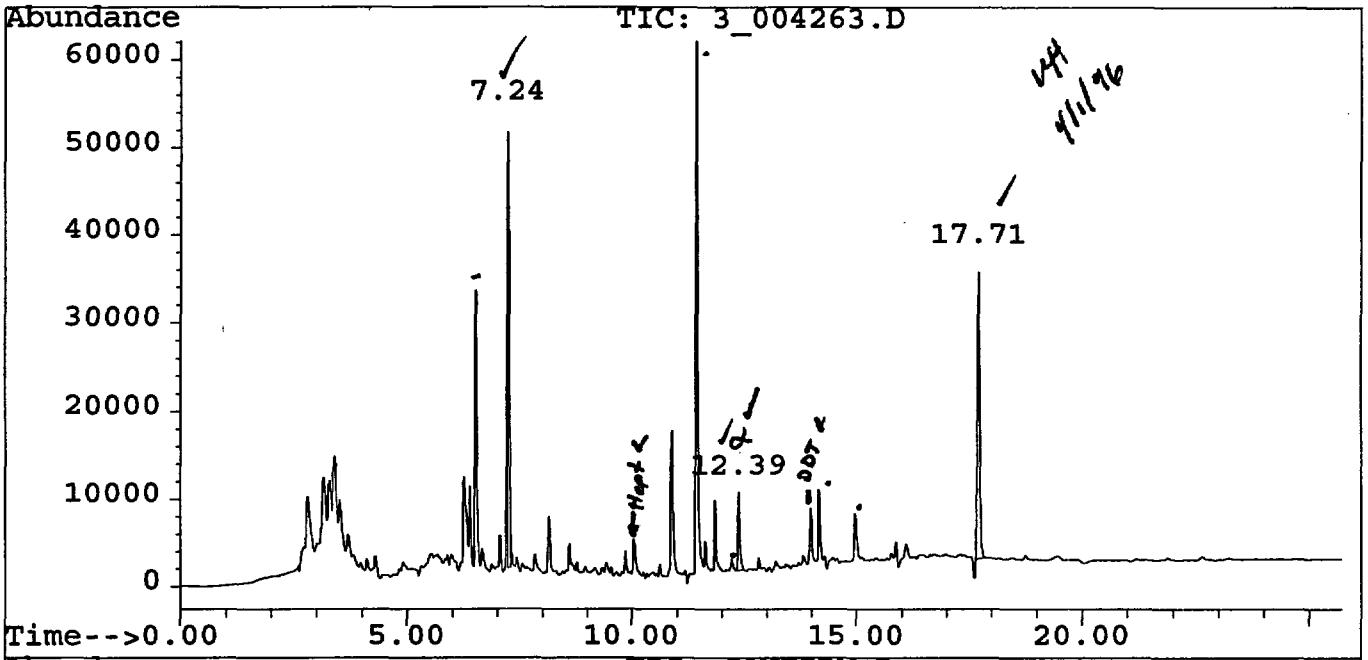
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int. 292
(E)= > Highest calibration standard (d)=compound deleted

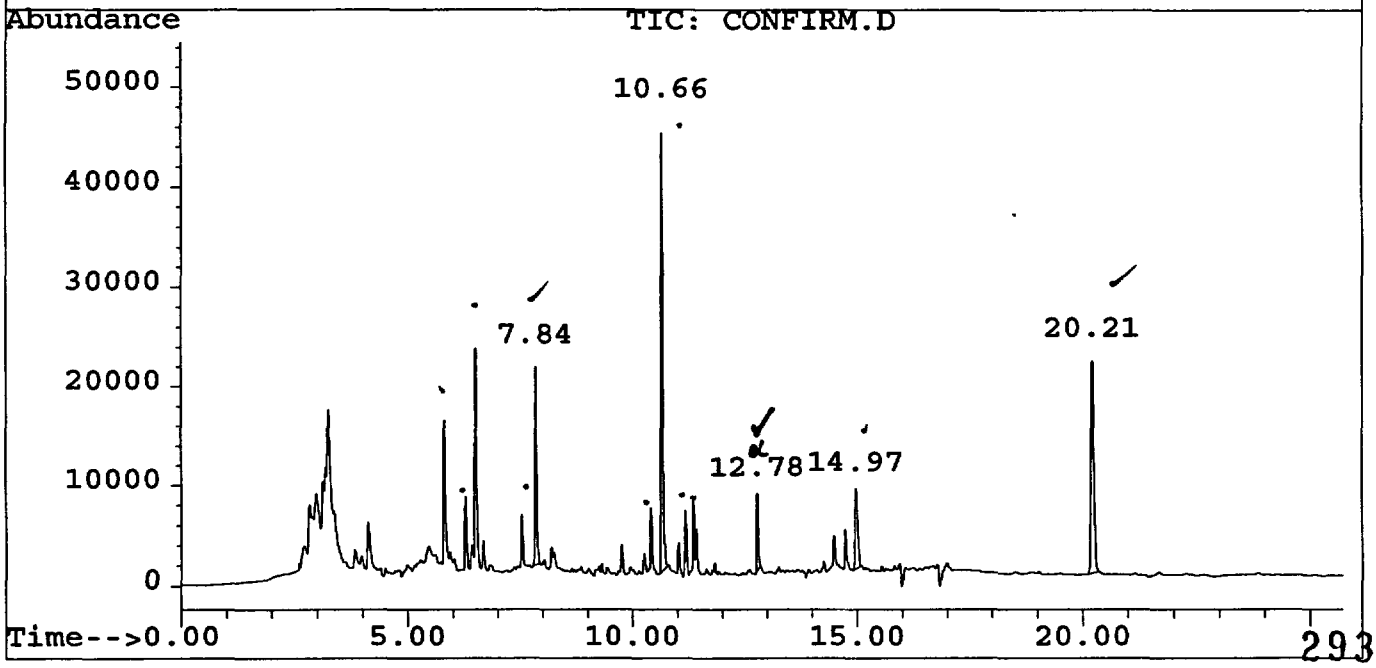
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004263.D Vial: 44
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004263.D\CONFIRM.D
Acq On : 26 Mar 96 19:37 Operator: HM
Sample : FEM97 Inst : HP_03
Misc : 25005.01 Multiplr: 0.0100
Quant Time: Mar 30 11:35 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Mar 30 11:24:04 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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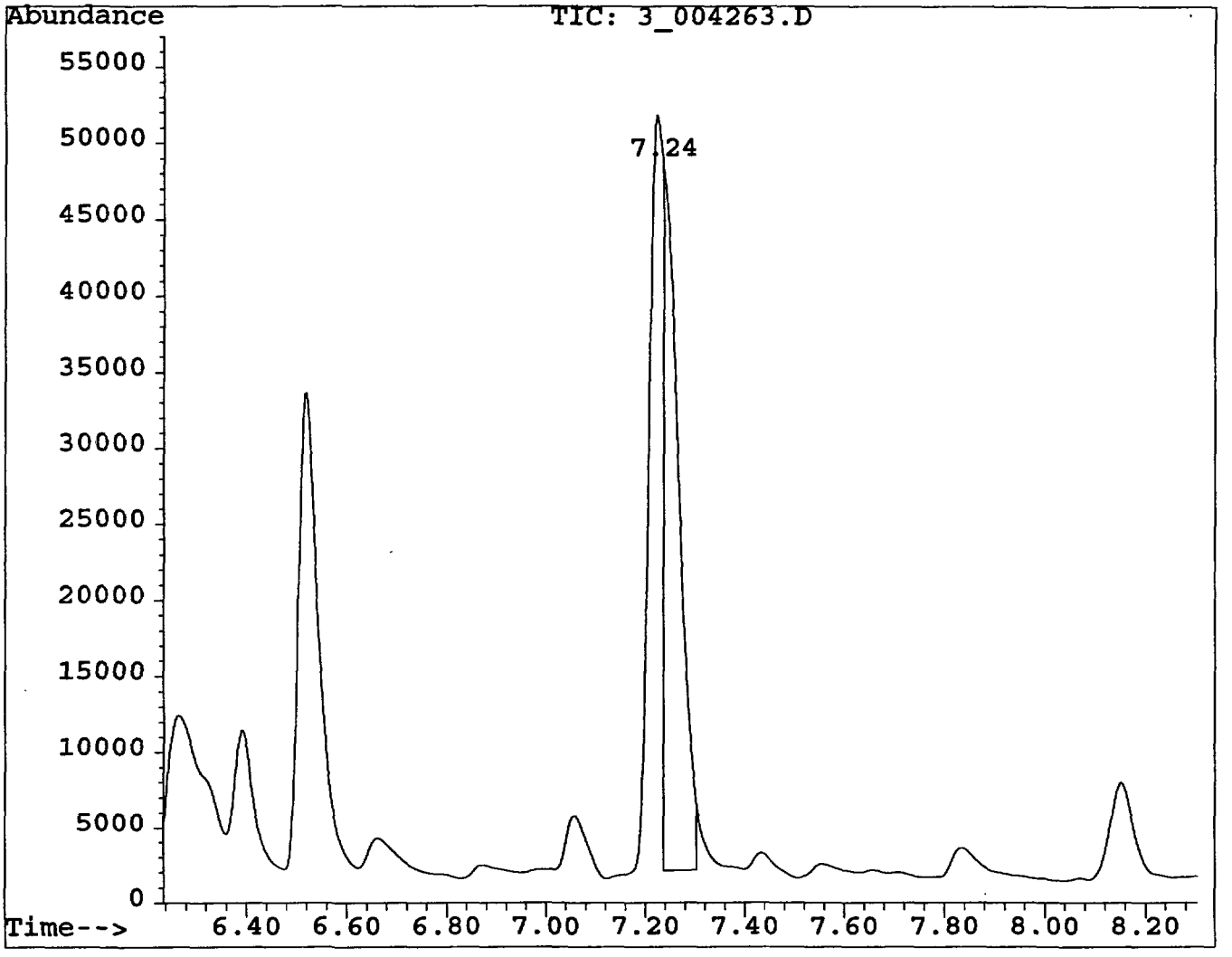
MANUAL INTEGRATION REPORT

Data File: W:\HPCHEM\HP\3\DATA\03_25_96\3_004263.D
Date Acquired: 26 Mar 96 19:37
Inst: HP_03 Operator ID: HM
Name: FEM97
Misc: 25005.01
Method: W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title: OLM3.0 CLP Pesticide/PCB
Quant Time: Mar 30 11:35 1996

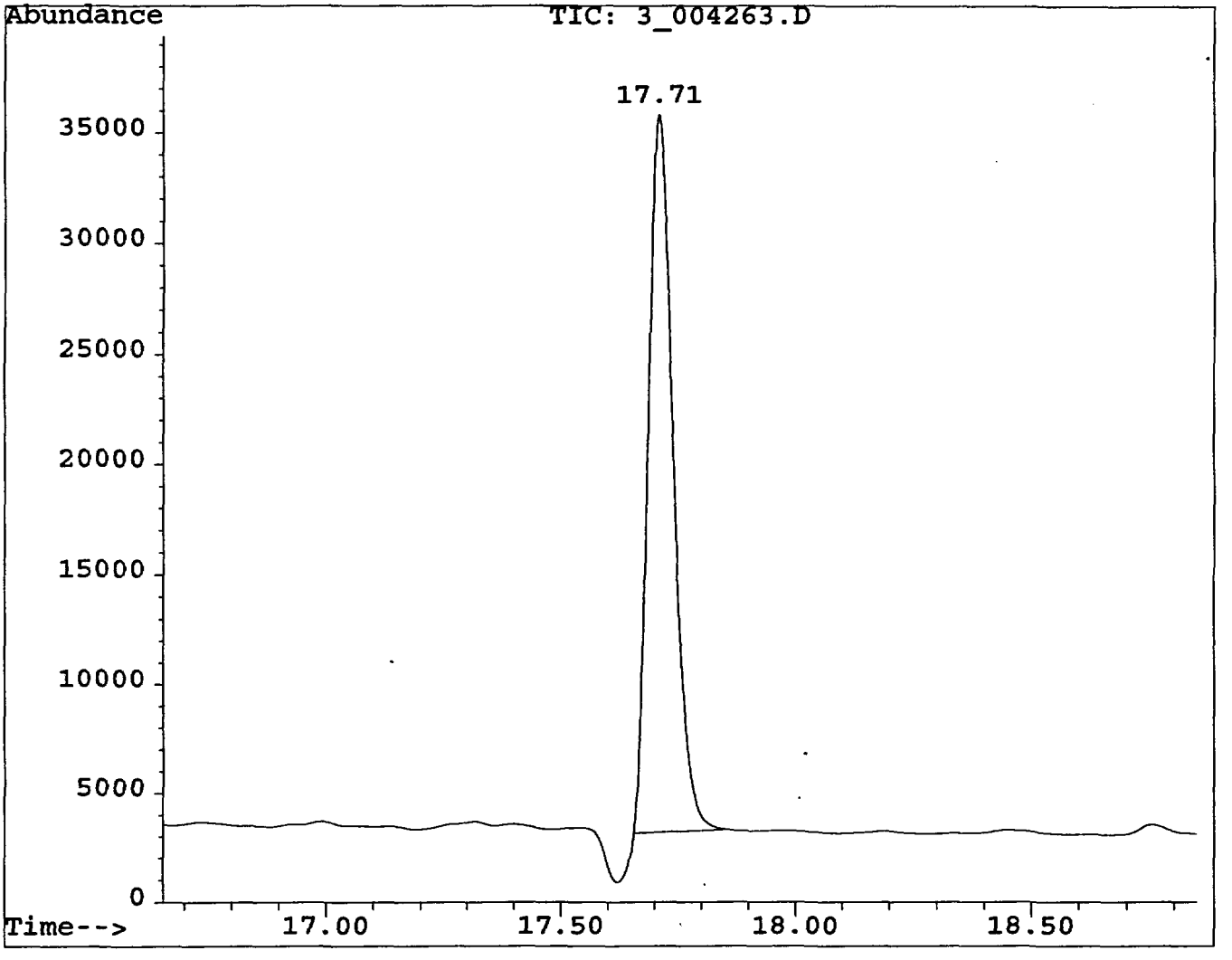


TCX 7.24min area: 1002018 m

Integration Time Range: 7.24 - 7.30

MANUAL INTEGRATION REPORT

Data File: W:\HPCHEM\HP\3\DATA\03_25_96\3_004263.D
Date Acquired: 26 Mar 96 19:37
Inst: HP_03 Operator ID: HM
Name: FEM97
Misc: 25005.01
Method: W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title: OLM3.0 CLP Pesticide/PCB
Quant Time: Mar 30 11:35 1996



DCB 17.71min area: 1205676 m

Integration Time Range: 17.66 - 17.85

W:\HPCHEM\HP\3\DATA\03_25_96\3_004263.D
Report generated: Sat Mar 30 11:38:19 1996

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004264.D Vial: 45
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004264.D\CONFIRM.D
Acq On : 26 Mar 96 20:08 Operator: HM
Sample : FEM98 Inst : HP_03
Misc : 25005.02 Multiplr: 0.0100
Quant Time: Mar 30 11:36 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Mar 30 11:24:04 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Surrogate Compounds							
1)	S	TCX	7.25	7.84	601750	334979	0.1690m	0.1258	#
					Recovery	=	84.50%	62.90%	
22)	S	DCB	17.71	20.21	276272	299024	0.0569m	0.0781	#
					Recovery	=	28.45%	39.05%	
		Target Compounds							
2)	AE	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.	
3)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	Heptachlor	0.00	10.65	0	595698 NO	N.D.	0.1958	#
5)	MB	Aldrin	0.00	11.31f	0	141390 NO	N.D.	0.0495	#
6)	BE	beta-BHC	0.00	0.00	0	0	N.D.	N.D.	
7)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.	
8)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.	
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.	
10)	B	gamma-Chlordane	0.00	12.55	0	808639 NO	N.D.	0.2815	#
11)	B	alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
12)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.	
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.	
14)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.	
15)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.	
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.	
17)	MA	4,4'-DDT	13.98	0.00	536371 NO	0	0.1839	N.D.	#
18)	B	Endrin Aldehyde	0.00	14.99	0	2799710 NO	N.D.	1.2486	#
19)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.	
20)	AE	Methoxychlor	14.97	0.00	3636604 NO	0	2.4264	N.D.	#
21)	B	Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.	

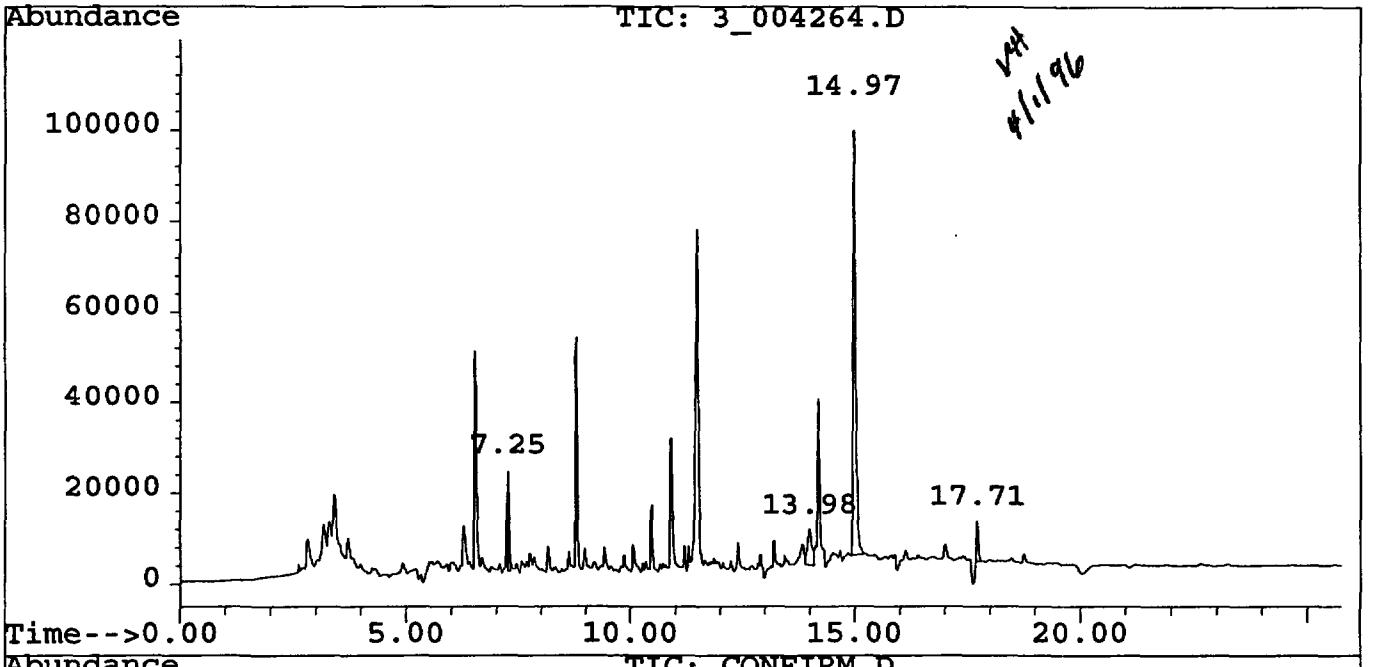
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

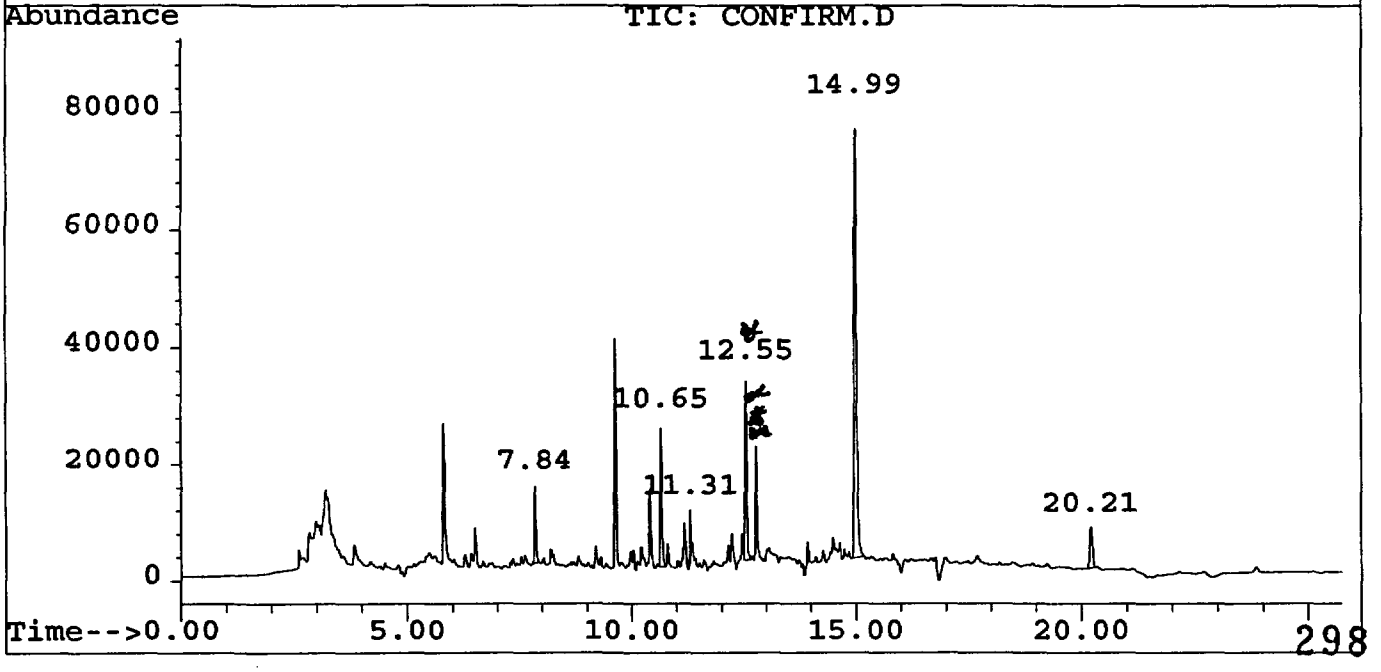
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004264.D Vial: 45
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004264.D\CONFIRM.D
Acq On : 26 Mar 96 20:08 Operator: HM
Sample : FEM98 Inst : HP_03
Misc : 25005.02 Multiplr: 0.0100
Quant Time: Mar 30 11:36 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Mar 30 11:24:04 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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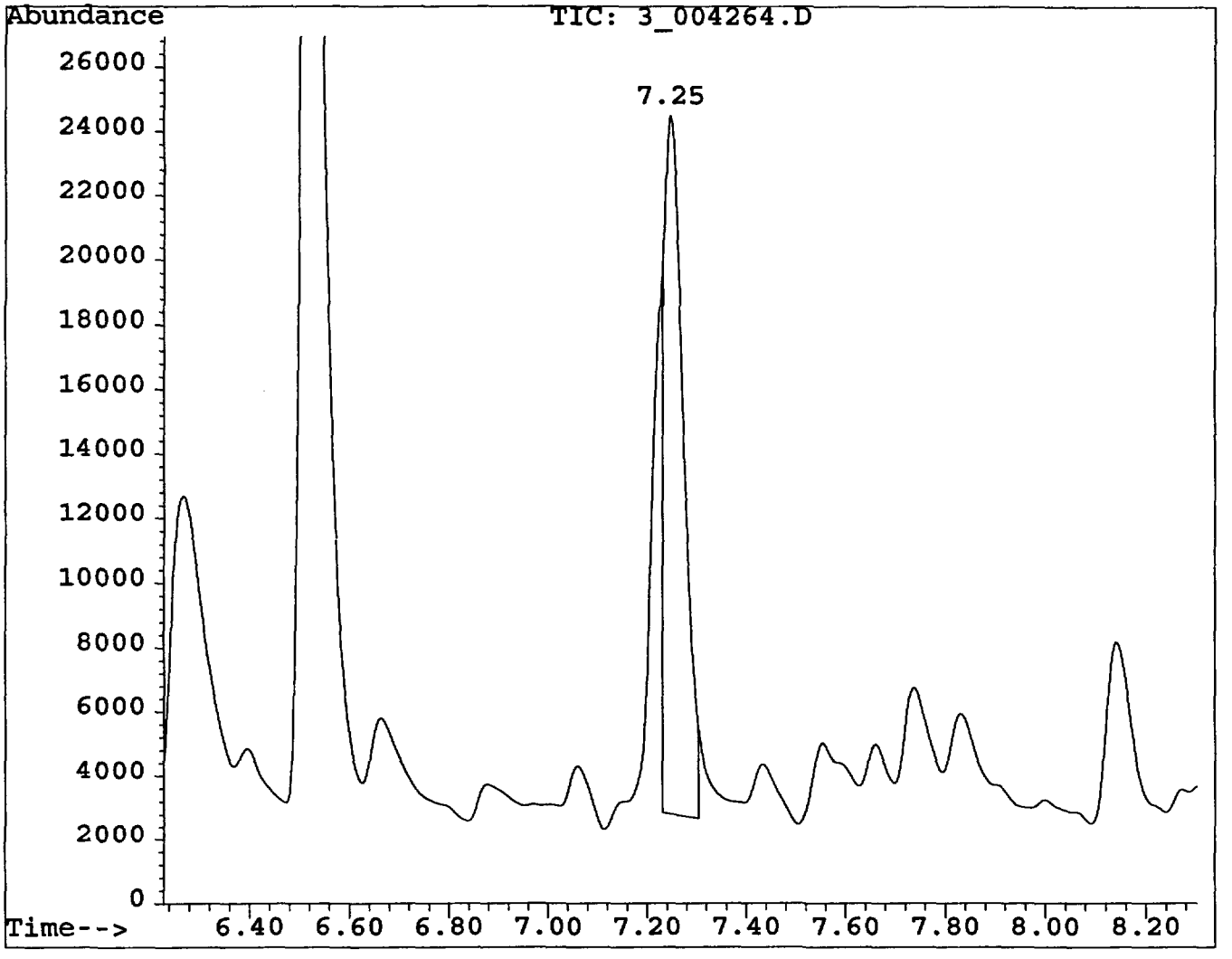
MANUAL INTEGRATION REPORT

Data File: W:\HPCHEM\HP\3\DATA\03_25_96\3_004264.D
Date Acquired: 26 Mar 96 20:08
Inst: HP_03 Operator ID: HM
Name: FEM98
Misc: 25005.02
Method: W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title: OLM3.0 CLP Pesticide/PCB
Quant Time: Mar 30 11:36 1996

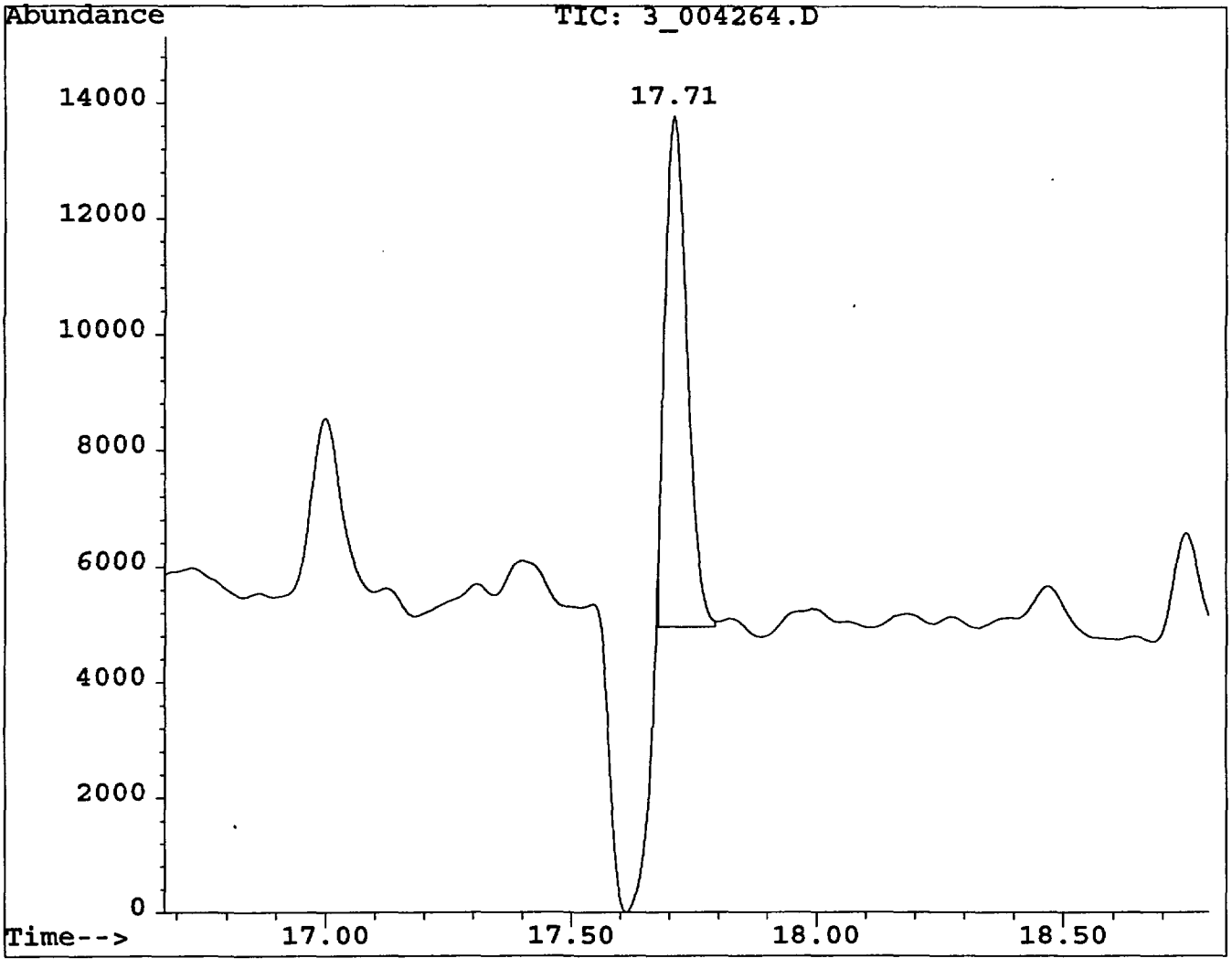


TCX 7.25min area: 601750 m

Integration Time Range: 7.23 - 7.30

MANUAL INTEGRATION REPORT

Data File: W:\HPCHEM\HP\3\DATA\03_25_96\3_004264.D
Date Acquired: 26 Mar 96 20:08
Inst: HP_03 Operator ID: HM
Name: FEM98
Misc: 25005.02
Method: W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title: OLM3.0 CLP Pesticide/PCB
Quant Time: Mar 30 11:36 1996



DCB 17.71min area: 276272 m

Integration Time Range: 17.68 - 17.79

W:\HPCHEM\HP\3\DATA\03_25_96\3_004264.D
Report generated: Sat Mar 30 11:38:25 1996

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: HP_03A Level (x low): low 1.0 mid 4.0 high 16.0

GC Column: DB-1701 ID: 0.32(mm) Date(s) Analyzed: 03/26/96 03/26/96

COMPOUND	RT OF STANDARDS LOW	MID	HIGH	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	8.95	8.95	8.95	8.95	8.90	9.00
beta-BHC	10.95	10.95	10.95	10.95	10.90	11.00
delta-BHC	11.36	11.36	11.36	11.36	11.31	11.41
gamma-BHC (Lindane)	9.68	9.68	9.68	9.68	9.63	9.73
Heptachlor	10.04	10.04	10.04	10.04	9.99	10.09
Aldrin	10.51	10.51	10.51	10.51	10.46	10.56
Heptachlor epoxide	11.71	11.71	11.70	11.71	11.64	11.78
Endosulfan I	12.16	12.16	12.16	12.16	12.09	12.23
Dieldrin	12.77	12.77	12.77	12.77	12.70	12.84
4,4'-DDE	12.45	12.45	12.45	12.45	12.38	12.52
Endrin	13.12	13.12	13.12	13.12	13.05	13.19
Endosulfan II	13.89	13.89	13.88	13.89	13.82	13.96
4,4'-DDD	13.73	13.73	13.73	13.73	13.66	13.80
Endosulfan sulfate	15.07	15.07	15.07	15.07	15.00	15.14
4,4'-DDT	14.00	14.00	14.00	14.00	13.93	14.07
Methoxychlor	14.99	14.99	14.99	14.99	14.92	15.06
Endrin ketone	15.78	15.78	15.78	15.78	15.71	15.85
Endrin aldehyde	14.55	14.55	14.55	14.55	14.48	14.62
alpha-Chlordane	12.36	12.36	12.36	12.36	12.29	12.43
gamma-Chlordane	12.23	12.23	12.23	12.23	12.16	12.30
Tetrachloro-m-xylene	7.26	7.26	7.26	7.26	7.21	7.31
Decachlorobiphenyl	17.72	17.72	17.72	17.72	17.62	17.82

* Surrogate retention times are measured from Standard Mix A analyses.

Retention time windows are +/- 0.05 minutes for all compounds that elute before Heptachlor epoxide, +/-0.07 minutes for all other compounds, except +/-0.10 minutes for Decachlorobiphenyl.

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: HP_03B Level (x low): low 1.0 mid 4.0 high 16.0

GC Column: DB-17 ID: 0.32(mm) Date(s) Analyzed: 03/26/96 03/26/96

COMPOUND	RT OF STANDARDS LOW	MID	HIGH	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	9.25	9.25	9.25	9.25	9.20	9.30
beta-BHC	10.14	10.14	10.14	10.14	10.09	10.19
delta-BHC	10.84	10.84	10.84	10.84	10.79	10.89
gamma-BHC (Lindane)	10.01	10.02	10.02	10.02	9.97	10.07
Heptachlor	10.64	10.64	10.64	10.64	10.59	10.69
Aldrin	11.26	11.26	11.26	11.26	11.21	11.31
Heptachlor epoxide	12.28	12.28	12.27	12.28	12.21	12.35
Endosulfan I	12.91	12.91	12.91	12.91	12.84	12.98
Dieldrin	13.45	13.45	13.45	13.45	13.38	13.52
4,4'-DDE	13.26	13.26	13.26	13.26	13.19	13.33
Endrin	14.10	14.10	14.10	14.10	14.03	14.17
Endosulfan II	14.40	14.40	14.40	14.40	14.33	14.47
4,4'-DDD	14.22	14.22	14.22	14.22	14.15	14.29
Endosulfan sulfate	15.17	15.18	15.17	15.17	15.10	15.24
4,4'-DDT	14.74	14.74	14.74	14.74	14.67	14.81
Methoxychlor	16.42	16.42	16.41	16.42	16.35	16.49
Endrin ketone	16.83	16.83	16.83	16.83	16.76	16.90
Endrin aldehyde	14.96	14.96	14.95	14.96	14.89	15.03
alpha-Chlordane	12.85	12.85	12.85	12.85	12.78	12.92
gamma-Chlordane	12.57	12.57	12.56	12.57	12.50	12.64
Tetrachloro-m-xylene	7.84	7.84	7.84	7.84	7.79	7.89
Decachlorobiphenyl	20.22	20.23	20.22	20.22	20.12	20.32

* Surrogate retention times are measured from Standard Mix A analyses.

Retention time windows are +/- 0.05 minutes for all compounds that elute before Heptachlor epoxide, +/-0.07 minutes for all other compounds, except +/-0.10 minutes for Decachlorobiphenyl.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: HP_03A Level (x low): low 1.0 mid 4.0 high 16.0

GC Column: DB-1701 ID: 0.32(mm) Date(s) Analyzed: 03/26/96 03/26/96

COMPOUND	CALIBRATION FACTORS LOW	MID	HIGH	MEAN	%RSD
alpha-BHC	39362000	42837300	47729150	43309483	9.7
beta-BHC	21943600	23755150	18866875	21521875	11.5
delta-BHC	30498000	33920000	34808275	33075425	6.9
gamma-BHC (Lindane)	39930400	41471950	44795013	42065788	5.9
Heptachlor	47608800	44595050	44127738	45443863	4.2
Aldrin	37010400	40194100	38314525	38506342	4.2
Heptachlor epoxide	41689600	40329000	35847250	39288617	7.8
Endosulfan I	34933600	35490200	36587238	35670346	2.4
Dieldrin	32731800	35106675	36629719	34822731	5.6
4,4'-DDE	37536200	37498950	33683544	36239565	6.1
Endrin	26513600	28224300	29416475	28051458	5.2
Endosulfan II	31398200	30532725	27448969	29793298	7.0
4,4'-DDD	23057300	27279850	28669144	26335431	11.1
Endosulfan sulfate	28465900	28281150	26025419	27590823	4.9
4,4'-DDT	37304200	29166450	28087294	31519315	16.0
Methoxychlor	15291280	14987415	13314840	14531178	7.3
Endrin ketone	29208500	30389975	28336663	29311713	3.5
Endrin aldehyde	22069300	24470050	22882075	23140475	5.3
alpha-Chlordane	38495400	37650550	32948400	36364783	8.2
gamma-Chlordane	40523000	39919350	35543063	38661804	7.0
Tetrachloro-m-xylene	36199800	35608350	35165113	35657754	1.5
Decachlorobiphenyl	53463600	48568025	40345438	47459021	14.0

* Surrogate calibration factors are measured from Standard Mix A analyses.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: HP_03B Level (x low): low 1.0 mid 4.0 high 16.0

GC Column: DB-17 ID: 0.32(mm) Date(s) Analyzed: 03/26/96 03/26/96

COMPOUND	CALIBRATION FACTORS LOW	MID	HIGH	MEAN	%RSD
alpha-BHC	27444800	29616450	32662188	29907813	8.8
beta-BHC	15833200	15599750	13416900	14949950	8.9
delta-BHC	24884200	27616350	26388325	26296292	5.2
gamma-BHC (Lindane)	27545600	28889350	30620000	29018317	5.3
Heptachlor	35075200	30421150	28956288	31484213	10.1
Aldrin	29893800	28557000	25751825	28067542	7.5
Heptachlor epoxide	30245600	28726300	24838350	27936750	10.0
Endosulfan I	28192600	26905500	26460900	27186333	3.3
Dieldrin	26241900	27070250	26362750	26558300	1.7
4,4'-DDE	27230500	26690450	23063663	25661538	8.8
Endrin	20715800	20788125	19861494	20455140	2.5
Endosulfan II	25874200	24986150	20935250	23931867	11.0
4,4'-DDD	20552800	21738000	21126744	21139181	2.8
Endosulfan sulfate	26525400	24810150	20756944	24030831	12.3
4,4'-DDT	22542600	22615200	21094488	22084096	3.9
Methoxychlor	11828600	10630740	8498543	10319294	16.3
Endrin ketone	29327400	28765625	24749494	27614173	9.0
Endrin aldehyde	26376600	22423450	18126025	22308692	18.5
alpha-Chlordane	30983400	29112250	24576275	28223975	11.7
gamma-Chlordane	28288200	28727600	25372738	27462846	6.6
Tetrachloro-m-xylene	30916400	26620350	24816150	27450967	11.4
Decachlorobiphenyl	43382400	38274975	30150213	37269196	17.9

* Surrogate calibration factors are measured from Standard Mix A analyses.

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: HP_03A Date(s) Analyzed: 03/26/96 03/26/96

GC Column: DB-1701 ID: 0.32(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.50	*1	14.40	14.33	14.47	630770
		*2	14.59	14.52	14.66	863020
		*3	15.02	14.95	15.09	1151702
		4	15.13	15.06	15.20	577498
		5				
Aroclor 1016	0.10	*1	8.31	8.24	8.38	1281880
		*2	9.04	8.97	9.11	3117990
		*3	9.83	9.76	9.90	5850870
		4	10.08	10.01	10.15	2511940
		5	10.46	10.39	10.53	3815970
Aroclor 1221	0.20	*1	7.91	7.84	7.98	673665
		*2	8.31	8.24	8.38	1793450
		*3	8.31	8.24	8.38	1793450
		4				
		5				
Aroclor 1232	0.10	*1	8.31	8.24	8.38	1366700
		*2	9.04	8.97	9.11	1383640
		*3	9.83	9.76	9.90	2461280
		4	10.08	10.01	10.15	1151860
		5				
Aroclor 1242	0.10	*1	9.04	8.97	9.11	2146430
		*2	9.83	9.76	9.90	4495260
		*3	10.08	10.01	10.15	2009120
		4	10.47	10.40	10.54	2097170
		5	10.88	10.81	10.95	2292740
Aroclor 1248	0.10	*1	9.83	9.76	9.90	2132410
		*2	10.46	10.39	10.53	2292650
		*3	10.88	10.81	10.95	2362520
		4	11.05	10.98	11.12	1678380
		5	11.57	11.50	11.64	2581500
Aroclor 1254	0.10	*1	11.57	11.50	11.64	4130430
		*2	11.92	11.85	11.99	1614810
		*3	12.72	12.65	12.79	125750
		4	13.01	12.94	13.08	2881120
		5	13.82	13.75	13.89	3393940
Aroclor 1260	0.10	*1	12.90	12.83	12.97	2906340
		*2	13.25	13.18	13.32	3648180
		*3	13.93	13.86	14.00	2241840
		4	14.86	14.79	14.93	5262910
		5	15.46	15.39	15.53	3875480

* Denotes required peaks

6F

PESTICIDE INITIAL CALIBRATION OF MULTICOMPONENT ANALYTES

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Instrument ID: HP_03B Date(s) Analyzed: 03/26/96 03/26/96

GC Column: DB-17 ID: 0.32(mm)

COMPOUND	AMOUNT (ng)	PEAK	RT	RT WINDOW FROM	RT WINDOW TO	CALIBRATION FACTOR
Toxaphene	0.50	*1	14.46	14.39	14.53	1027010
		*2	14.80	14.73	14.87	786972
		*3	15.94	15.87	16.01	1170634
		4	16.07	16.00	16.14	1829784
		5				
Aroclor 1016	0.10	*1	9.17	9.10	9.24	907380
		*2	9.97	9.90	10.04	2262530
		*3	10.66	10.59	10.73	4332550
		4	10.96	10.89	11.03	1830640
		5	11.22	11.15	11.29	2923060
Aroclor 1221	0.20	*1	8.73	8.66	8.80	523650
		*2	9.04	8.97	9.11	355215
		*3	9.16	9.09	9.23	1113520
		4				
		5				
Aroclor 1232	0.10	*1	9.17	9.10	9.24	926290
		*2	9.97	9.90	10.04	1156300
		*3	10.66	10.59	10.73	1928190
		4	11.21	11.14	11.28	1597180
		5				
Aroclor 1242	0.10	*1	9.97	9.90	10.04	1758270
		*2	10.66	10.59	10.73	3354990
		*3	10.96	10.89	11.03	1473900
		4	11.22	11.15	11.29	2572970
		5	11.83	11.76	11.90	1903570
Aroclor 1248	0.10	*1	11.23	11.16	11.30	1939540
		*2	11.83	11.76	11.90	1362510
		*3	12.28	12.21	12.35	1593390
		4	12.40	12.33	12.47	1686420
		5	12.90	12.83	12.97	1275480
Aroclor 1254	0.10	*1	12.54	12.47	12.61	2025770
		*2	12.63	12.56	12.70	2583730
		*3	13.55	13.48	13.62	3142440
		4	13.74	13.67	13.81	2584610
		5	14.74	14.67	14.81	2517470
Aroclor 1260	0.10	*1	13.85	13.78	13.92	2804390
		*2	13.98	13.91	14.05	2940980
		*3	14.74	14.67	14.81	2596890
		4	14.79	14.72	14.86	2067190
		5	15.69	15.62	15.76	4323990

* Denotes required peaks

6G

PESTICIDE ANALYTE RESOLUTION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column (1): DB-1701 ID: 0.32(mm) Instrument ID (1): HP_03A

EPA Sample No. (Standard 1): RESC3D Lab Sample Id (1): 5-311-14

Date Analyzed (1): 03/25/96 Time Analyzed (1): 2351

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.26	100.0
02	Endosulfan I	12.16	78.7
03	gamma-Chlordane	12.23	100.0
04	4,4'-DDE	12.45	100.0
05	Dieldrin	12.77	100.0
06	Methoxychlor	14.99	61.0
07	Endosulfan Sulfate	15.07	100.0
08	Endrin Ketone	15.78	100.0
09	Decachlorobiphenyl	17.72	

GC Column (2): DB-17 ID: 0.32(mm) Instrument ID (2): HP_03B

EPA Sample No. (Standard 2): RESC3D Lab Sample Id (2): 5-311-14

Date Analyzed (2): 03/25/96 Time Analyzed (2): 2351

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.84	100.0
02	gamma-Chlordane	12.56	100.0
03	Endosulfan I	12.91	100.0
04	4,4'-DDE	13.26	100.0
05	Dieldrin	13.45	100.0
06	Endosulfan Sulfate	15.17	100.0
07	Methoxychlor	16.41	100.0
08	Endrin Ketone	16.83	100.0
09	Decachlorobiphenyl	20.22	

6H
PESTICIDE EVALUATION MIXTURE (PEM)

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column (1): DB-1701 ID: 0.32(mm) Instrument ID (1): HP_03A

EPA Sample No. (Standard 1): PEM3M Lab Sample Id (1): 5-387-14

Date Analyzed (1): 03/26/96 Time Analyzed (1): 0022

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.25	100.0
02	alpha-BHC	8.95	100.0
03	gamma-BHC (Lindane)	9.68	100.0
04	beta-BHC	10.95	100.0
05	Endrin	13.12	100.0
06	4,4'-DDT	14.00	100.0
07	Methoxychlor	14.99	100.0
08	Decachlorobiphenyl	17.72	

GC Column (2): DB-17 ID: 0.32(mm) Instrument ID (2): HP_03B

EPA Sample No. (Standard 2): PEM3M Lab Sample Id (2): 5-387-14

Date Analyzed (2): 03/26/96 Time Analyzed (2): 0022

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.84	100.0
02	alpha-BHC	9.25	100.0
03	gamma-BHC (Lindane)	10.01	100.0
04	beta-BHC	10.14	100.0
05	Endrin	14.10	100.0
06	4,4'-DDT	14.74	100.0
07	Methoxychlor	16.41	100.0
08	Decachlorobiphenyl	20.22	

6H
PESTICIDE EVALUATION MIXTURE (PEM)

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column (1): DB-1701 ID: 0.32(mm) Instrument ID (1): HP_03A

EPA Sample No. (Standard 1): PEM3N Lab Sample Id (1): 5-387-14

Date Analyzed (1): 03/26/96 Time Analyzed (1): 0804

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.26	100.0
02	alpha-BHC	8.95	100.0
03	gamma-BHC (Lindane)	9.68	100.0
04	beta-BHC	10.95	100.0
05	Endrin	13.11	100.0
06	4,4'-DDT	14.00	100.0
07	Methoxychlor	14.99	100.0
08	Decachlorobiphenyl	17.72	

GC Column (2): DB-17 ID: 0.32(mm) Instrument ID (2): HP_03B

EPA Sample No. (Standard 2): PEM3N Lab Sample Id (2): 5-387-14

Date Analyzed (2): 03/26/96 Time Analyzed (2): 0804

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.84	100.0
02	alpha-BHC	9.25	100.0
03	gamma-BHC (Lindane)	10.01	100.0
04	beta-BHC	10.14	100.0
05	Endrin	14.10	100.0
06	4,4'-DDT	14.74	100.0
07	Methoxychlor	16.41	100.0
08	Decachlorobiphenyl	20.22	

6H
PESTICIDE EVALUATION MIXTURE (PEM)

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column (1): DB-1701 ID: 0.32(mm) Instrument ID (1): HP_03A

EPA Sample No. (Standard 1): PEM30 Lab Sample Id (1): 5-387-14

Date Analyzed (1): 03/27/96 Time Analyzed (1): 0249

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.26	100.0
02	alpha-BHC	8.96	100.0
03	gamma-BHC (Lindane)	9.69	100.0
04	beta-BHC	10.96	100.0
05	Endrin	13.12	100.0
06	4,4'-DDT	14.01	100.0
07	Methoxychlor	15.00	100.0
08	Decachlorobiphenyl	17.73	

GC Column (2): DB-17 ID: 0.32(mm) Instrument ID (2): HP_03B

EPA Sample No. (Standard 2): PEM30 Lab Sample Id (2): 5-387-14

Date Analyzed (2): 03/27/96 Time Analyzed (2): 0249

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.84	100.0
02	alpha-BHC	9.25	100.0
03	gamma-BHC (Lindane)	10.02	100.0
04	beta-BHC	10.15	100.0
05	Endrin	14.10	100.0
06	4,4'-DDT	14.74	100.0
07	Methoxychlor	16.42	100.0
08	Decachlorobiphenyl	20.23	

6I
INDIVIDUAL STANDARD MIXTURE A

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column (1): DB-1701 ID: 0.32(mm) Instrument ID (1): HP_03A

EPA Sample No. (Standard 1): INDAM3J Lab Sample Id (1): 5-410-14

Date Analyzed (1): 03/26/96 Time Analyzed (1): 0530

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.26	100.0
02	alpha-BHC	8.95	100.0
03	gamma-BHC (Lindane)	9.68	100.0
04	Heptachlor	10.04	100.0
05	Endosulfan I	12.16	100.0
06	Dieldrin	12.77	100.0
07	Endrin	13.12	100.0
08	4,4'-DDD	13.73	100.0
09	4,4'-DDT	14.00	100.0
10	Methoxychlor	14.99	100.0
11	Decachlorobiphenyl	17.72	

GC Column (2): DB-17 ID: 0.32(mm) Instrument ID (2): HP_03B

EPA Sample No. (Standard 2): INDAM3J Lab Sample Id (2): 5-410-14

Date Analyzed (2): 03/26/96 Time Analyzed (2): 0530

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.84	100.0
02	alpha-BHC	9.25	100.0
03	gamma-BHC (Lindane)	10.02	100.0
04	Heptachlor	10.64	100.0
05	Endosulfan I	12.91	100.0
06	Dieldrin	13.45	100.0
07	Endrin	14.10	99.6
08	4,4'-DDD	14.22	100.0
09	4,4'-DDT	14.74	100.0
10	Methoxychlor	16.42	100.0
11	Decachlorobiphenyl	20.23	

6J
INDIVIDUAL STANDARD MIXTURE B

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column (1): DB-1701 ID: 0.32(mm) Instrument ID (1): HP_03A

EPA Sample No. (Standard 1): INDBM3J Lab Sample Id (1): 5-413-14

Date Analyzed (1): 03/26/96 Time Analyzed (1): 0601

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.26	100.0
02	Aldrin	10.51	100.0
03	beta-BHC	10.95	100.0
04	delta-BHC	11.36	100.0
05	Heptachlor Epoxide	11.71	100.0
06	gamma-Chlordane	12.23	98.4
07	alpha-Chlordane	12.36	91.0
08	4,4'-DDE	12.45	100.0
09	Endosulfan II	13.89	100.0
10	Endrin Aldehyde	14.55	100.0
11	Endosulfan Sulfate	15.07	100.0
12	Endrin Ketone	15.78	100.0
13	Decachlorobiphenyl	17.72	

GC Column (2): DB-17 ID: 0.32(mm) Instrument ID (2): HP_03B

EPA Sample No. (Standard 2): INDBM3J Lab Sample Id (2): 5-413-14

Date Analyzed (2): 03/26/96 Time Analyzed (2): 0601

	ANALYTE	RT	RESOLUTION (%)
01	Tetrachloro-m-xylene	7.84	100.0
02	beta-BHC	10.14	100.0
03	delta-BHC	10.84	100.0
04	Aldrin	11.27	100.0
05	Heptachlor Epoxide	12.28	100.0
06	gamma-Chlordane	12.57	100.0
07	alpha-Chlordane	12.85	100.0
08	4,4'-DDE	13.26	100.0
09	Endosulfan II	14.40	100.0
10	Endrin Aldehyde	14.96	100.0
11	Endosulfan Sulfate	15.17	100.0
12	Endrin Ketone	16.83	100.0
13	Decachlorobiphenyl	20.23	

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-1701 ID: 0.32(mm) Init. Calib Date(s): 03/26/96 03/26/96

EPA Sample No.(PIBLK): _____ Date Analyzed : _____

Lab Sample ID (PIBLK): _____ Time Analyzed : _____

EPA Sample No.(PEM): PEM3M Date Analyzed : 03/26/96

Lab Sample ID (PEM): 5-387-14 Time Analyzed : 0022

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	8.95	8.90	9.00	0.0112	0.010	12.0
beta-BHC	10.95	10.90	11.00	0.0103	0.010	3.0
gamma-BHC (Lindane)	9.68	9.63	9.73	0.0109	0.010	9.0
Endrin	13.12	13.05	13.19	0.0569	0.050	13.8
4,4'-DDT	14.00	13.93	14.07	0.0977	0.10	-2.3
Methoxychlor	14.99	14.92	15.06	0.246	0.25	-1.6

4,4'-DDT % breakdown (1): 0.0 Endrin % breakdown (1): 0.0

Combined % breakdown (1): 0.0

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-1701 ID: 0.32(mm) Init. Calib Date(s): 03/26/96 03/26/96

EPA Sample No.(PIBLK): PIBLK3U Date Analyzed : 03/26/96

Lab Sample ID (PIBLK): 5-394-14 Time Analyzed : 0733

EPA Sample No.(PEM): PEM3N Date Analyzed : 03/26/96

Lab Sample ID (PEM): 5-387-14 Time Analyzed : 0804

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	8.95	8.90	9.00	0.0115	0.010	15.0
beta-BHC	10.95	10.90	11.00	0.0120	0.010	20.0
gamma-BHC (Lindane)	9.68	9.63	9.73	0.0116	0.010	16.0
Endrin	13.11	13.05	13.19	0.0621	0.050	24.2
4,4'-DDT	14.00	13.93	14.07	0.104	0.10	4.0
Methoxychlor	14.99	14.92	15.06	0.261	0.25	4.4

4,4'-DDT % breakdown (1): 2.4 Endrin % breakdown (1): 0.0

Combined % breakdown (1): 2.4

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-1701 ID: 0.32(mm) Init. Calib Date(s): 03/26/96 03/26/96

EPA Sample No.(PIBLK): PIBLK3W Date Analyzed : 03/27/96

Lab Sample ID (PIBLK): 5-394-14 Time Analyzed : 0218

EPA Sample No.(PEM): PEM3O Date Analyzed : 03/27/96

Lab Sample ID (PEM): 5-387-14 Time Analyzed : 0249

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	8.96	8.90	9.00	0.0122	0.010	22.0
beta-BHC	10.96	10.90	11.00	0.0112	0.010	12.0
gamma-BHC (Lindane)	9.69	9.63	9.73	0.0117	0.010	17.0
Endrin	13.12	13.05	13.19	0.0412	0.050	-17.6
4,4'-DDT	14.01	13.93	14.07	0.0828	0.10	-17.2
Methoxychlor	14.99	14.92	15.06	0.231	0.25	-7.6

4,4'-DDT % breakdown (1): 3.2 Endrin % breakdown (1): 0.0

Combined % breakdown (1): 3.2

7D
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-17 ID: 0.32(mm) Init. Calib Date(s): 03/26/96 03/26/96

EPA Sample No.(PIBLK): _____ Date Analyzed : _____

Lab Sample ID (PIBLK): _____ Time Analyzed : _____

EPA Sample No.(PEM): PEM3M Date Analyzed : 03/26/96

Lab Sample ID (PEM): 5-387-14 Time Analyzed : 0022

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	9.25	9.20	9.30	0.0112	0.010	12.0
beta-BHC	10.14	10.09	10.19	0.0111	0.010	11.0
gamma-BHC (Lindane)	10.01	9.97	10.07	0.0111	0.010	11.0
Endrin	14.10	14.03	14.17	0.0564	0.050	12.8
4,4'-DDT	14.74	14.67	14.81	0.100	0.10	0.0
Methoxychlor	16.41	16.35	16.49	0.242	0.25	-3.2

4,4'-DDT % breakdown (1): 0.0 Endrin % breakdown (1): 0.0

Combined % breakdown (1): 0.0

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-17 ID: 0.32(mm) Init. Calib Date(s): 03/26/96 03/26/96

EPA Sample No.(PIBLK): PIBLK3U Date Analyzed : 03/26/96

Lab Sample ID (PIBLK): 5-394-14 Time Analyzed : 0733

EPA Sample No.(PEM): PEM3N Date Analyzed : 03/26/96

Lab Sample ID (PEM): 5-387-14 Time Analyzed : 0804

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	9.25	9.20	9.30	0.0115	0.010	15.0
beta-BHC	10.14	10.09	10.19	0.0115	0.010	15.0
gamma-BHC (Lindane)	10.01	9.97	10.07	0.0116	0.010	16.0
Endrin	14.10	14.03	14.17	0.0603	0.050	20.6
4,4'-DDT	14.74	14.67	14.81	0.103	0.10	3.0
Methoxychlor	16.41	16.35	16.49	0.252	0.25	0.8

4,4'-DDT % breakdown (1): 3.2 Endrin % breakdown (1): 0.0

Combined % breakdown (1): 3.2

7D

PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-17 ID: 0.32(mm) Init. Calib Date(s): 03/26/96 03/26/96

EPA Sample No.(PIBLK): PIBLK3W Date Analyzed : 03/27/96

Lab Sample ID (PIBLK): 5-394-14 Time Analyzed : 0218

EPA Sample No.(PEM): PEM30 Date Analyzed : 03/27/96

Lab Sample ID (PEM): 5-387-14 Time Analyzed : 0249

PEM COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	9.25	9.20	9.30	0.0105	0.010	5.0
beta-BHC	10.15	10.09	10.19	0.0110	0.010	10.0
gamma-BHC (Lindane)	10.02	9.97	10.07	0.0107	0.010	7.0
Endrin	14.10	14.03	14.17	0.0419	0.050	-16.2
4,4'-DDT	14.74	14.67	14.81	0.0787	0.10	-21.3
Methoxychlor	16.42	16.35	16.49	0.218	0.25	-12.8

4,4'-DDT % breakdown (1): 0.0 Endrin % breakdown (1): 0.0

Combined % breakdown (1): 0.0

7E
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-1701 ID: 0.32(mm) Init. Calib Date(s): 03/26/96 03/26/96

EPA Sample No.(PIBLK): PIBLK3V Date Analyzed : 03/26/96

Lab Sample ID (PIBLK): 5-394-14 Time Analyzed : 1445

EPA Sample No.(INDA): INDAM3K Date Analyzed : 03/26/96

Lab Sample ID (INDA): 5-410-14 Time Analyzed : 1523

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	8.95	8.90	9.00	0.0200	0.020	-0.1
gamma-BHC (Lindane)	9.68	9.63	9.73	0.0205	0.020	2.5
Heptachlor	10.04	9.99	10.09	0.0208	0.020	4.1
Endosulfan I	12.16	12.09	12.23	0.0225	0.020	12.6
Dieldrin	12.77	12.70	12.84	0.0456	0.040	13.9
Endrin	13.12	13.05	13.19	0.0430	0.040	7.5
4,4'-DDD	13.73	13.66	13.80	0.0480	0.040	20.1
4,4'-DDT	14.00	13.93	14.07	0.0451	0.040	12.8
Methoxychlor	14.99	14.92	15.06	0.207	0.20	3.5
Tetrachloro-m-xylene	7.26	7.21	7.31	0.0210	0.020	5.1
Decachlorobiphenyl	17.72	17.62	17.82	0.0429	0.040	7.2

EPA Sample No.(INDB): INDBM3K Date Analyzed : 03/26/96

Lab Sample ID (INDB): 5-413-14 Time Analyzed : 1554

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
beta-BHC	10.94	10.90	11.00	0.0207	0.020	3.7
delta-BHC	11.35	11.31	11.41	0.0217	0.020	8.6
Aldrin	10.51	10.46	10.56	0.0214	0.020	6.9
Heptachlor epoxide	11.70	11.64	11.78	0.0217	0.020	8.4
4,4'-DDE	12.45	12.38	12.52	0.0436	0.040	9.1
Endosulfan II	13.88	13.82	13.96	0.0446	0.040	11.6
Endosulfan sulfate	15.06	15.00	15.14	0.0443	0.040	10.7
Endrin ketone	15.78	15.71	15.85	0.0438	0.040	9.6
Endrin aldehyde	14.55	14.48	14.62	0.0438	0.040	9.6
alpha-Chlordane	12.35	12.29	12.43	0.0220	0.020	9.8
gamma-Chlordane	12.23	12.16	12.30	0.0219	0.020	9.5
Tetrachloro-m-xylene	7.25	7.21	7.31	0.0231	0.020	15.3
Decachlorobiphenyl	17.71	17.62	17.82	0.0419	0.040	4.7

7E
PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-17 ID: 0.32(mm) Init. Calib Date(s): 03/26/96 03/26/96

EPA Sample No.(PIBLK): PIBLK3V Date Analyzed : 03/26/96

Lab Sample ID (PIBLK): 5-394-14 Time Analyzed : 1445

EPA Sample No.(INDA): INDAM3K Date Analyzed : 03/26/96

Lab Sample ID (INDA): 5-410-14 Time Analyzed : 1523

INDIVIDUAL MIX A COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	9.24	9.20	9.30	0.0198	0.020	-0.9
gamma-BHC (Lindane)	10.01	9.97	10.07	0.0200	0.020	0.1
Heptachlor	10.64	10.59	10.69	0.0202	0.020	1.0
Endosulfan I	12.91	12.84	12.98	0.0213	0.020	6.4
Dieldrin	13.45	13.38	13.52	0.0432	0.040	8.0
Endrin	14.10	14.03	14.17	0.0411	0.040	2.8
4,4'-DDD	14.22	14.15	14.29	0.0455	0.040	13.9
4,4'-DDT	14.74	14.67	14.81	0.0409	0.040	2.2
Methoxychlor	16.41	16.35	16.49	0.199	0.20	-0.7
Tetrachloro-m-xylene	7.84	7.79	7.89	0.0186	0.020	-6.9
Decachlorobiphenyl	20.22	20.12	20.32	0.0418	0.040	4.4

EPA Sample No.(INDB): INDBM3K Date Analyzed : 03/26/96

Lab Sample ID (INDB): 5-413-14 Time Analyzed : 1554

INDIVIDUAL MIX B COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
beta-BHC	10.14	10.09	10.19	0.0207	0.020	3.5
delta-BHC	10.84	10.79	10.89	0.0207	0.020	3.5
Aldrin	11.26	11.21	11.31	0.0210	0.020	5.0
Heptachlor epoxide	12.27	12.21	12.35	0.0211	0.020	5.7
4,4'-DDE	13.25	13.19	13.33	0.0424	0.040	6.1
Endosulfan II	14.40	14.33	14.47	0.0425	0.040	6.2
Endosulfan sulfate	15.17	15.10	15.24	0.0422	0.040	5.5
Endrin ketone	16.82	16.76	16.90	0.0416	0.040	4.0
Endrin aldehyde	14.95	14.89	15.03	0.0419	0.040	4.7
alpha-Chlordane	12.84	12.78	12.92	0.0211	0.020	5.5
gamma-Chlordane	12.56	12.50	12.64	0.0210	0.020	4.9
Tetrachloro-m-xylene	7.84	7.79	7.89	0.0210	0.020	4.9
Decachlorobiphenyl	20.21	20.12	20.32	0.0409	0.040	2.2

8D
PESTICIDE ANALYTICAL SEQUENCE

ab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-1701 ID: 0.32(mm) Init. Calib. Date(s): 03/26/96 03/26/96

Instrument ID: HP_03A

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 7.26 DCB: 17.72

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	RESC3D	5-311-14	03/25/96	2351	7.26	17.72
02	PEM3M	5-387-14	03/26/96	0022	7.25	17.72
03	AR16603D	5-348-14	03/26/96	0053	7.26	17.72
04	AR12213D	5-349-14	03/26/96	0123	7.26	17.72
05	AR12323D	5-350-14	03/26/96	0154	7.26	17.72
06	AR12423D	5-351-14	03/26/96	0225	7.26	17.72
07	AR12483D	5-352-14	03/26/96	0256	7.26	17.72
08	AR12543D	5-353-14	03/26/96	0327	7.26	17.72
09	TOXAPH3D	5-354-14	03/26/96	0358	7.26	17.72
10	INDAL3D	5-411-14	03/26/96	0428	7.26	17.72
11	INDBL3D	5-414-14	03/26/96	0459	7.26	17.72
12	INDAM3J	5-410-14	03/26/96	0530	7.26	17.72
13	INDBM3J	5-413-14	03/26/96	0601	7.26	17.72
14	INDAH3D	5-409-14	03/26/96	0632	7.26	17.72
15	INDBH3D	5-412-14	03/26/96	0703	7.26	17.72
16	PIBLK3U	5-394-14	03/26/96	0733	7.26	17.72
17	PEM3N	5-387-14	03/26/96	0804	7.26	17.72
18	PIBLK3V	5-394-14	03/26/96	1445	7.26	17.71
19	INDAM3K	5-410-14	03/26/96	1523	7.26	17.72
20	INDBM3K	5-413-14	03/26/96	1554	7.25	17.71
21	PBLKWE	PBLKWE	03/26/96	1836	7.25	17.71
22	FEM97	25005.01	03/26/96	1937	7.24	17.71
23	FEM98	25005.02	03/26/96	2008	7.25	17.71
24	PIBLK3W	5-394-14	03/27/96	0218	7.26	17.72
25	PEM3O	5-387-14	03/27/96	0249	7.26	17.73
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
TCX = Tetrachloro-m-xylene (+/- 0.05 MINUTES)
DCB = Decachlorobiphenyl (+/- 0.10 MINUTES)

Column to be used to flag retention time values with an asterisk.
* Values outside of QC limits

FORM VIII PEST OLM03.0

LK 11-23-96 321

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

GC Column: DB-17 ID: 0.32(mm) Init. Calib. Date(s): 03/26/96 03/26/96

Instrument ID: HP_03B

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
TCX: 7.84 DCB: 20.22

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TCX RT #	DCB RT #
01	RESC3D	5-311-14	03/25/96	2351	7.84	20.22
02	PEM3M	5-387-14	03/26/96	0022	7.84	20.22
03	AR16603D	5-348-14	03/26/96	0053	7.84	20.22
04	AR12213D	5-349-14	03/26/96	0123	7.84	20.22
05	AR12323D	5-350-14	03/26/96	0154	7.84	20.22
06	AR12423D	5-351-14	03/26/96	0225	7.84	20.22
07	AR12483D	5-352-14	03/26/96	0256	7.84	20.22
08	AR12543D	5-353-14	03/26/96	0327	7.84	20.22
09	TOXAPH3D	5-354-14	03/26/96	0358	7.84	20.22
10	INDAL3D	5-411-14	03/26/96	0428	7.84	20.22
11	INDBL3D	5-414-14	03/26/96	0459	7.84	20.22
12	INDAM3J	5-410-14	03/26/96	0530	7.84	20.23
13	INDBM3J	5-413-14	03/26/96	0601	7.84	20.23
14	INDAH3D	5-409-14	03/26/96	0632	7.84	20.22
15	INDBH3D	5-412-14	03/26/96	0703	7.84	20.22
16	PIBLK3U	5-394-14	03/26/96	0733	7.84	20.22
17	PEM3N	5-387-14	03/26/96	0804	7.84	20.22
18	PIBLK3V	5-394-14	03/26/96	1445	7.84	20.21
19	INDAM3K	5-410-14	03/26/96	1523	7.84	20.22
20	INDBM3K	5-413-14	03/26/96	1554	7.84	20.21
21	PBLKWE	PBLKWE	03/26/96	1836	7.84	20.22
22	FEM97	25005.01	03/26/96	1937	7.84	20.21
23	FEM98	25005.02	03/26/96	2008	7.84	20.21
24	PIBLK3W	5-394-14	03/27/96	0218	7.84	20.22
25	PEM3O	5-387-14	03/27/96	0249	7.84	20.23
26						
27						
28						
29						
30						
31						
32						

	QC LIMITS
TCX = Tetrachloro-m-xylene	(+/- 0.05 MINUTES)
DCB = Decachlorobiphenyl	(+/- 0.10 MINUTES)

Column to be used to flag retention time values with an asterisk.
* Values outside of QC limits

9A
PESTICIDE FLORISIL CARTRIDGE CHECK

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Florisil Catridge Lot Number: FLO943355 Date of Analysis: 09/29/95

GC Column(1): DB-17 ID: 0.32(mm) GC Column(2): DB-1701 ID: 0.32(mm)

COMPOUND	SPIKE ADDED (ng)	SPIKE RECOVERED (ng)	% REC #	QC LIMITS
alpha-BHC	20.0	21.5	107	80-120
gamma-BHC (Lindane)	20.0	21.4	107	80-120
Heptachlor	20.0	20.8	104	80-120
Endosulfan I	20.0	20.7	104	80-120
Dieldrin	40.0	42.2	105	80-120
Endrin	40.0	41.0	102	80-120
4,4'-DDD	40.0	40.8	102	80-120
4,4'-DDT	40.0	40.8	102	80-120
Methoxychlor	200.0	200	100	80-120
Tetrachloro-m-xylene	20.0	21.4	107	80-120
Decachlorobiphenyl	40.0	41.1	103	80-120

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

THIS CARTRIDGE LOT APPLIES TO THE FOLLOWING SAMPLES, BLANKS, MS, AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PBLKWE	PBLKWE	03/26/96	03/26/96
02	FEM97	25005.01	03/26/96	03/26/96
03	FEM98	25005.02	03/26/96	03/26/96
04				
05				
06				
07				
08				
09				
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20				
21				
22				
23				

page 1 of 1

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004225.D Vial: 6
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004225.D\CONFIRM.D
Acq On : 25 Mar 96 23:51 Operator: HM
Sample : RESC3D Inst : HP_03
Misc : 5-311-14 Multiplr: 0.0010
Quant Time: Mar 27 13:37 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
		Surrogate Compounds						
1)	S	TCX	7.26	7.84	910493	709510	0.0256	0.0267
					Recovery	=	128.00%	133.50%
22)	S	DCB	17.72	20.22	997833	851613	0.0205	0.0222
					Recovery	=	102.50%	111.00%
		Target Compounds						
2)	AE	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
4)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE	beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A	Endosulfan I	12.16	12.91	414125	359421	0.0117	0.0134
10)	B	gamma-Chlordane	12.23	12.56	481728	378080	0.0121	0.0132
11)	B	alpha-Chlordane	0.00	12.91f	0	359421	N.D.	0.0123 #
12)	B	4,4'-DDE	12.45	13.26	870705	684834	0.0232	0.0257
13)	MA	Dieldrin	12.77	13.45	808776	697812	0.0230	0.0258
14)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.
15)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA	4,4'-DDT	13.99	0.00	200412	0	0.0069	N.D. #
18)	B	Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19)	B	Endosulfan Sulfate	15.07	15.17	706882	612366	0.0250	0.0247
20)	AE	Methoxychlor	14.99	16.41	1646106	1297989	0.1098	0.1221
21)	B	Endrin Ketone	15.78	16.83	683212	724746	0.0225	0.0252

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 2/4/56 SDG C0735
Signature [illegible]
Date APR 01 1996

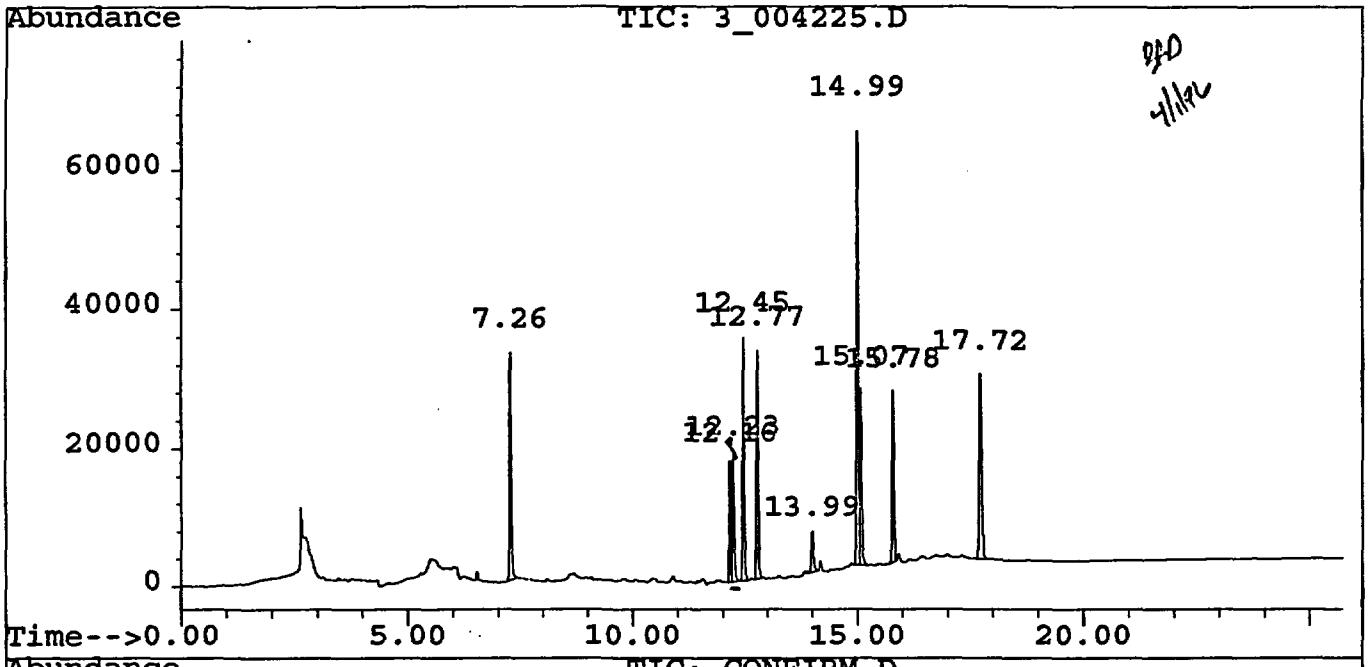
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

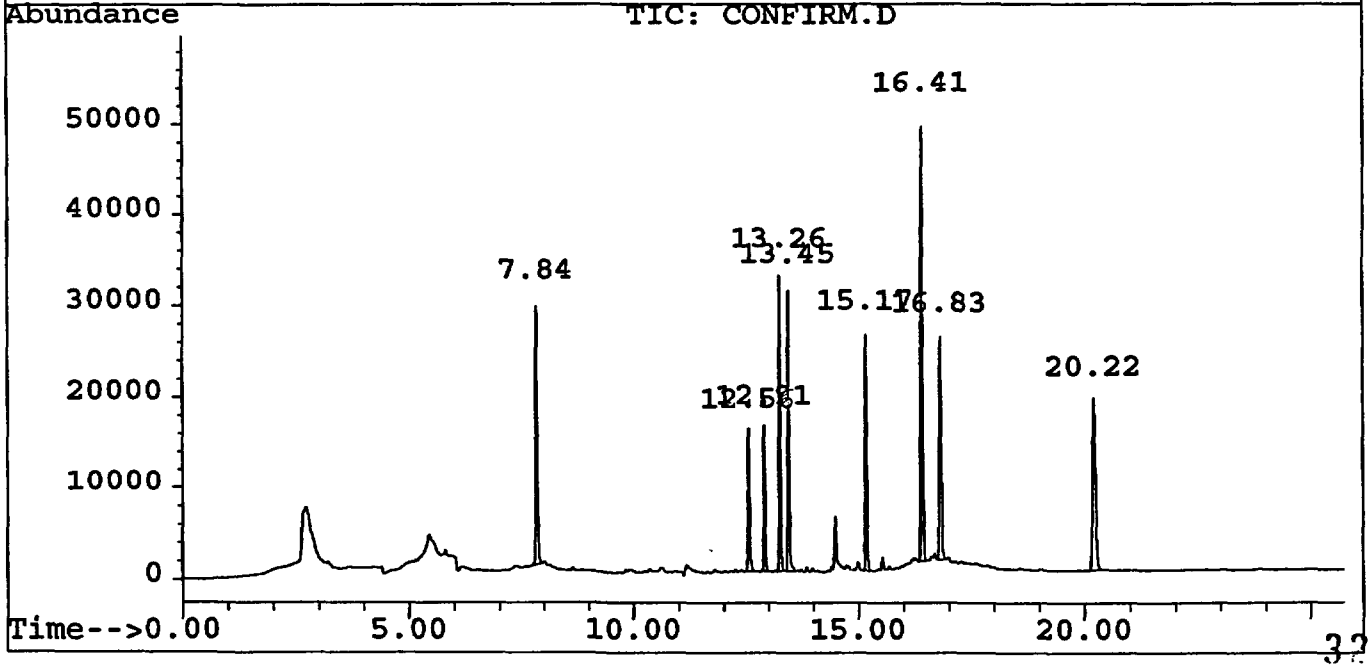
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004225.D Vial: 6
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004225.D\CONFIRM.D
Acq On : 25 Mar 96 23:51 Operator: HM
Sample : RESC3D Inst : HP_03
Misc : 5-311-14 Multiplr: 0.0010
Quant Time: Mar 27 13:37 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





Chromatographic Resolution Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004225.D Vial: 6
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004225.D\CONFIRM.D
Acq On : 25 Mar 96 23:51 Operator: HM
Sample : RESC3D Inst : HP_03
Misc : 5-311-14 Multiplr: 0.0010

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB

RT#1	RT#2	Resolution	Compound for RT#1
7.260	12.160	100.00%	TCX
12.160	12.230	78.68%	Endosulfan I
12.230	12.450	100.00%	gamma-Chlordane
12.450	12.765	100.00%	4,4'-DDE
12.765	14.989	100.00%	Dieldrin
14.989	15.069	61.00%	Methoxychlor
15.069	15.782	100.00%	Endosulfan Sulfate
15.782	17.719	100.00%	Endrin Ketone
Signal #2			
7.841	12.563	100.00%	TCX #2
12.563	12.912	100.00%	gamma-Chlordane #2
12.912	13.256	100.00%	Endosulfan I #2
13.256	13.450	100.00%	4,4'-DDE #2
13.450	15.171	100.00%	Dieldrin #2
15.171	16.414	100.00%	Endosulfan Sulfate #2
16.414	16.825	100.00%	Methoxychlor #2
16.825	20.222	100.00%	Endrin Ketone #2

* = Value less than resolution criteria, 60 for RESC, 90 for PEM, INDA, INDB

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004226.D Vial: 7
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004226.D\CONFIRM.D
Acq On : 26 Mar 96 00:22 Operator: HM
Sample : PEM3M Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010
Quant Time: Mar 27 13:38 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
		Surrogate Compounds						
1)	S	TCX	7.25	7.84	803637	573340	0.0226	0.0215
					Recovery	=	113.00%	107.50%
22)	S	DCB	17.72	20.22	945061	795821	0.0195	0.0208
					Recovery	=	97.50%	104.00%
		Target Compounds						
2)	AE	alpha-BHC	8.95	9.25	478887	330507	0.0112	0.0112
3)	MA	gamma-BHC (Lindane	9.68	10.01	452900	322062	0.0109	0.0111
4)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE	beta-BHC	10.95	10.14	244457 ✓	173325 ✓	0.0103 ✓	0.0111 ✓
7)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
10)	B	gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11)	B	alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
12)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Endrin	13.12	14.10	1605188	1173058	0.0569	0.0564
15)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA	4,4'-DDT	14.00	14.74	2848983	2271553	0.0977	0.1004
18)	B	Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20)	AE	Methoxychlor	14.99	16.41	3691516	2575714	0.2463	0.2423
21)	B	Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

COPY
ORIGINAL DOCUMENTS ARE INCLUDED
CSF 24456 SDG C0735
Signature Lenal T Brader
Date APR 01 1996

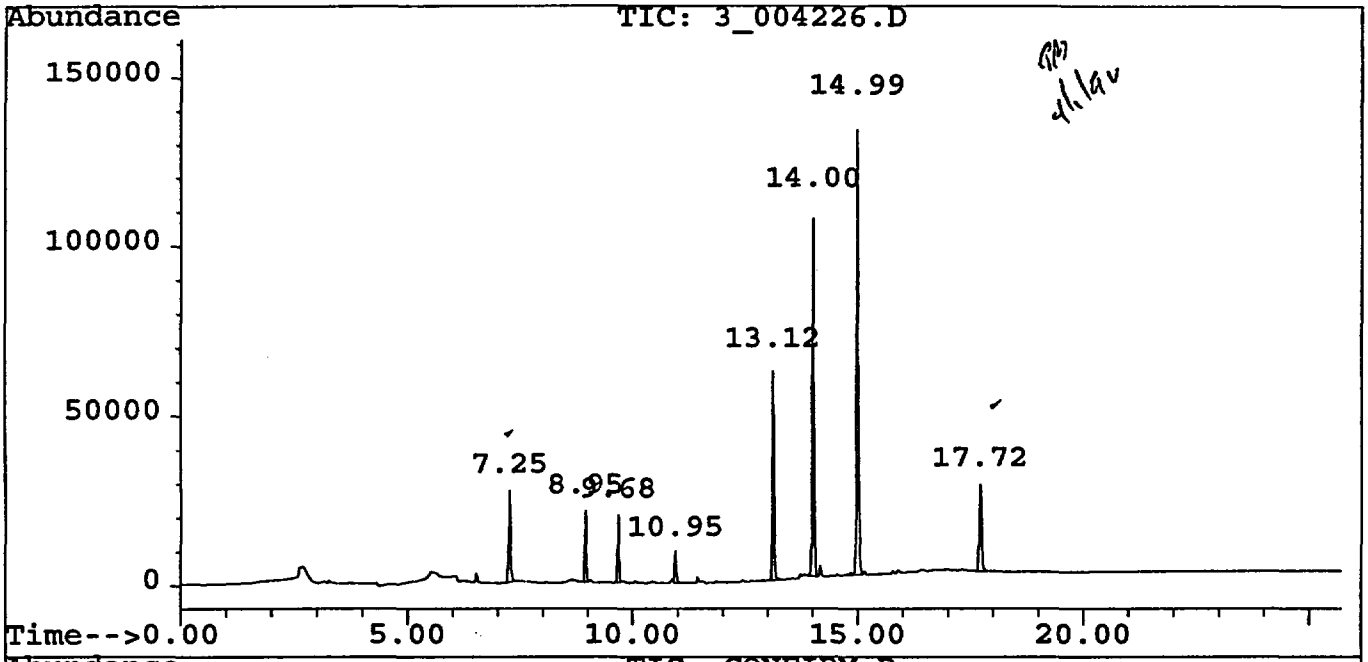
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

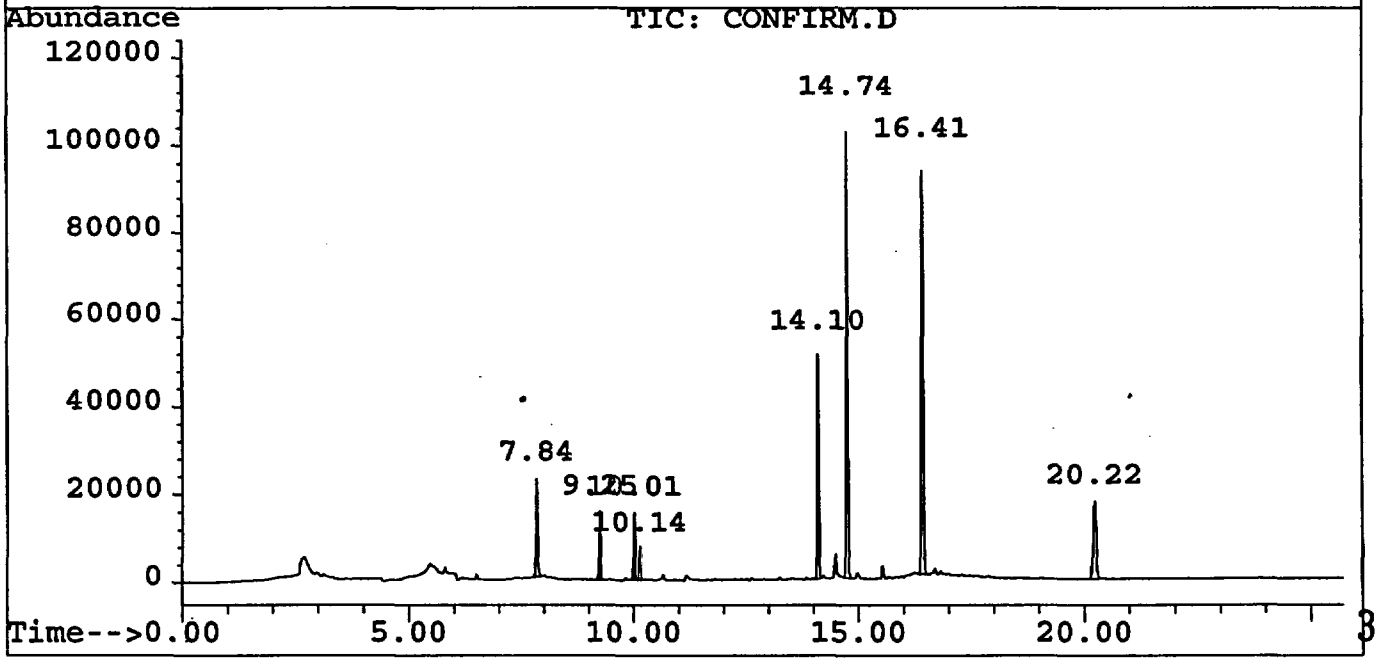
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004226.D Vial: 7
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004226.D\CONFIRM.D
Acq On : 26 Mar 96 00:22 Operator: HM
Sample : PEM3M Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010
Quant Time: Mar 27 13:38 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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PEM REPORT

Data File: W:\HPCHEM\HP\3\DATA\03_25_96\3_004226.D
Date Acquired: 26 Mar 96 00:22
nst: HP_03 Operator ID: HM
Name: PEM3M
Misc: 5-387-14
Method: W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title: OLM3.0 CLP Pesticide/PCB
Quant Time: Mar 27 13:38 1996

% D

Compound	Amount #1 (ng/mL)	Amount #2 (ng/mL)	Cnom	%D #1	%D #2
TCX	22.57	21.54	20	-12.8	-7.7
alpha-BHC	11.18	11.16	10	-11.8	-11.6
gamma-BHC	10.92	11.15	10	-9.2	-11.5
beta-BHC	10.29	11.11	10	-2.9	-11.1
Endrin	56.87	56.43	50	-13.7	-12.9
4,4'-DDT	97.68	100.44	100	2.3	-0.4
Methoxychlor	246.31	242.29	250	1.5	3.1
DCB	19.46	20.79	20	2.7	-4.0

Acceptance range for %D: -25.0 to 25.0 * = Value outside acceptance range

Degradation

Calculated by CLP Method

% DDT deg. #1 = 0.0 % DDT deg. #2 = 0.0

% Endrin deg. #1 = 0.0 % Endrin deg. #2 = 0.0

% Total deg. #1 = 0.0 % Total deg. #2 = 0.0

Degradation acceptance criteria DDT and Endrin < 20.0 Total: < 30.0
* = Value failed acceptance criteria

Chromatographic Resolution Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004226.D Vial: 7
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004226.D\CONFIRM.D
Acq On : 26 Mar 96 00:22 Operator: HM
Sample : PEM3M Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB

RT#1	RT#2	Resolution	Compound for RT#1
7.254	8.949	100.00%	TCX
8.949	9.678	100.00%	alpha-BHC
9.678	10.949	100.00%	gamma-BHC (Lindane)
10.949	13.116	100.00%	beta-BHC
13.116	14.004	100.00%	Endrin
14.004	14.990	100.00%	4,4'-DDT
14.990	17.720	100.00%	Methoxychlor
Signal #2			
7.837	9.246	100.00%	TCX #2
9.246	10.013	100.00%	alpha-BHC #2
10.013	10.138	100.00%	gamma-BHC (Lindane) #2
10.138	14.096	100.00%	beta-BHC #2
14.096	14.738	100.00%	Endrin #2
14.738	16.414	100.00%	4,4'-DDT #2
16.414	20.222	100.00%	Methoxychlor #2

* = Value less than resolution criteria, 60 for RESC, 90 for PEM, INDA, INDB

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004241.D Vial: 22
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004241.D\CONFIRM.D
Acq On : 26 Mar 96 08:04 Operator: HM
Sample : PEM3N Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010
Quant Time: Mar 27 13:40 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
		Surrogate Compounds						
1)	S	TCX	7.26	7.84	854181	589818	0.0240	0.0222
					Recovery	=	120.00%	111.00%
22)	S	DCB	17.72	20.22	1042822	835525	0.0215	0.0218
					Recovery	=	107.50%	109.00%
		Target Compounds						
2)	AE	alpha-BHC	8.95	9.25	494208	341741	0.0115	0.0115
)	MA	gamma-BHC (Lindane	9.68	10.01	482392	334296	0.0116	0.0116
)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE	beta-BHC	10.95	10.14	285389	179876	0.0120	0.0115
7)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
10)	B	gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11)	B	alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
12)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Endrin	13.11	14.10	1753583	1254537	0.0621	0.0603
15)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16)	A	4,4'-DDD	13.73	14.22	64740	68812	0.0024	0.0032 #
17)	MA	4,4'-DDT	14.00	14.74	3023488	2339328	0.1037	0.1034
18)	B	Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20)	AE	Methoxychlor	14.99	16.41	3915207	2682141	0.2612	0.2523
21)	B	Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24456 SDG C0235
Signature Lindsay Bowles
Date APR 01 1996

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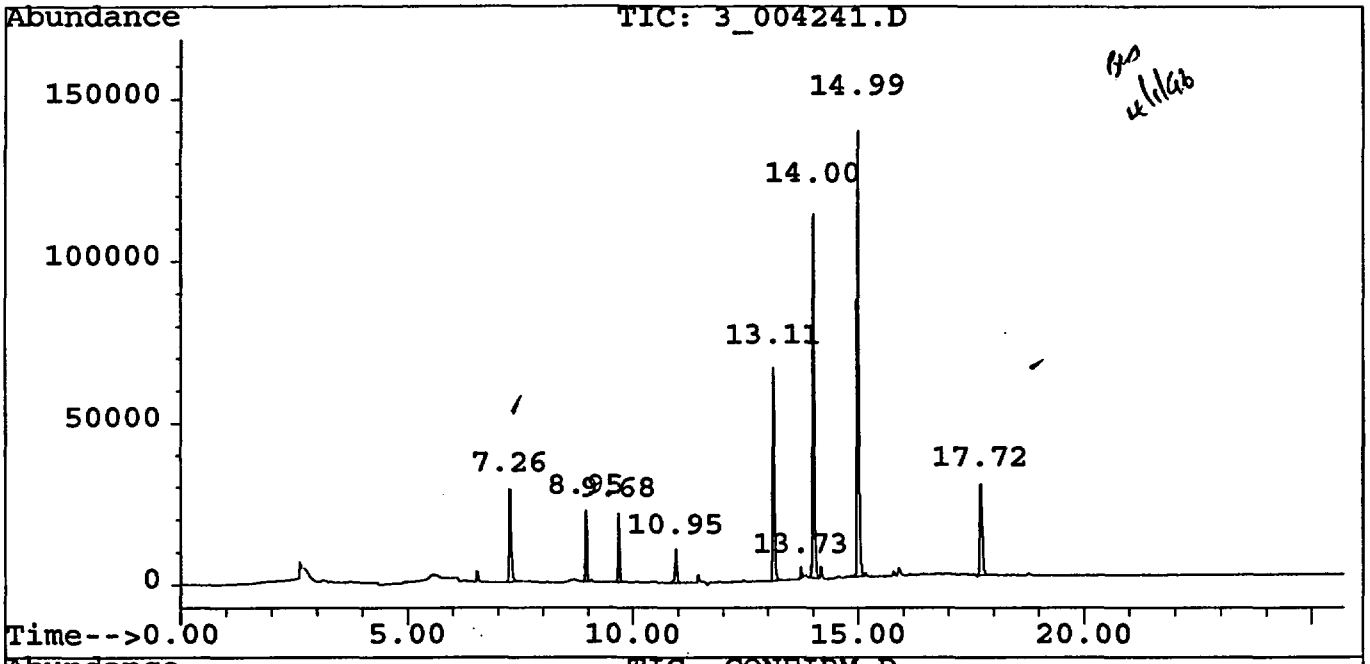
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

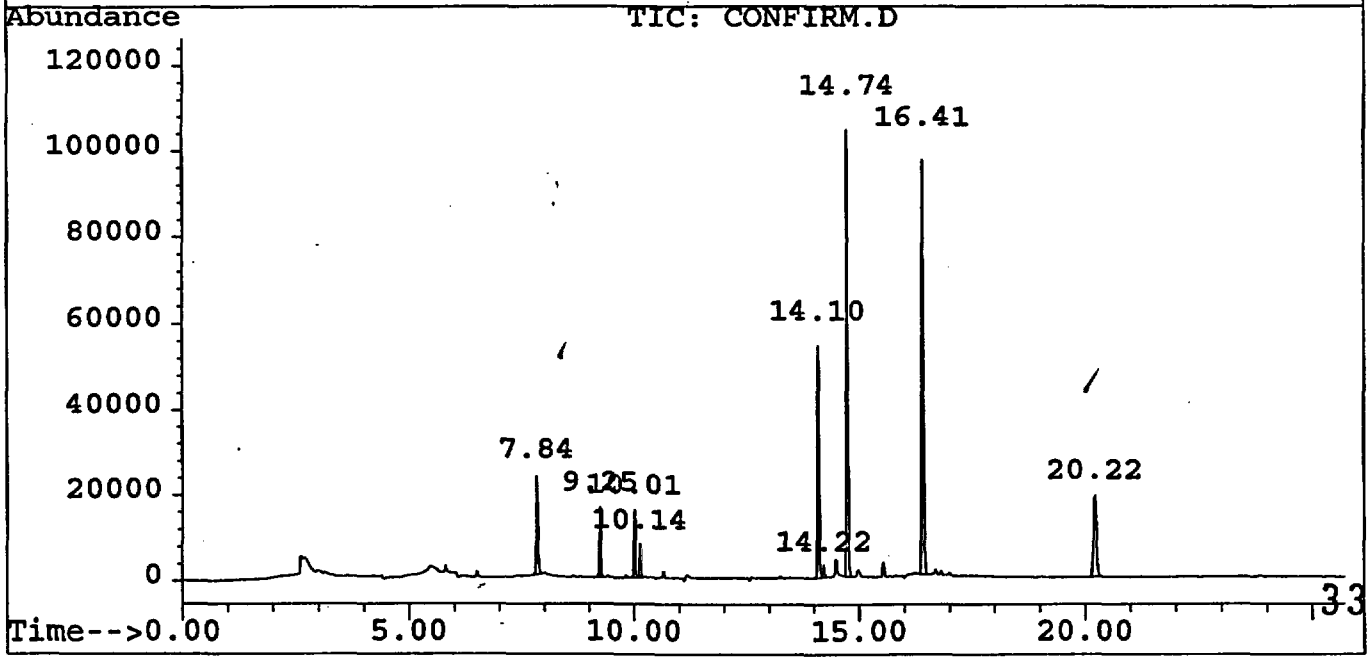
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004241.D Vial: 22
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004241.D\CONFIRM.D
Acq On : 26 Mar 96 08:04 Operator: HM
Sample : PEM3N Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010
Quant Time: Mar 27 13:40 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





PEM REPORT

Data File: W:\HPCHEM\HP\3\DATA\03_25_96\3_004241.D
Date Acquired: 26 Mar 96 08:04
Inst: HP_03 Operator ID: HM
Name: PEM3N
Misc: 5-387-14
Method: W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title: OLM3.0 CLP Pesticide/PCB
Quant Time: Mar 27 13:40 1996

% D

Compound	Amount #1 (ng/mL)	Amount #2 (ng/mL)	Cnom	%D #1	%D #2
TCX	23.99	22.16	20	-19.9	-10.8
alpha-BHC	11.54	11.54	10	-15.4	-15.4
gamma-BHC	11.63	11.57	10	-16.3	-15.7
beta-BHC	12.01	11.53	10	-20.1	-15.3
Endrin	62.13	60.35	50	-24.3	-20.7
4,4'-DDT	103.66	103.44	100	-3.7	-3.4
Methoxychlor	261.23	252.30	250	-4.5	-0.9
DCB	21.47	21.83	20	-7.4	-9.1

Acceptance range for %D: -25.0 to 25.0 * = Value outside acceptance range

Degradation

Calculated by CLP Method

% DDT deg. #1 = 2.4 ✓ % DDT deg. #2 = 3.2 ✓

% Endrin deg. #1 = 0.0 % Endrin deg. #2 = 0.0

% Total deg. #1 = 2.4 % Total deg. #2 = 3.2

Degradation acceptance criteria DDT and Endrin < 20.0 Total: < 30.0
* = Value failed acceptance criteria

Chromatographic Resolution Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004241.D Vial: 22
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004241.D\CONFIRM.D
Acq On : 26 Mar 96 08:04 Operator: HM
Sample : PEM3N Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB

RT#1	RT#2	Resolution	Compound for RT#1
7.256	8.949	100.00%	TCX
8.949	9.677	100.00%	alpha-BHC
9.677	10.947	100.00%	gamma-BHC (Lindane)
10.947	13.114	100.00%	beta-BHC
13.114	14.001	100.00%	Endrin
14.001	14.986	100.00%	4,4'-DDT
14.986	17.715	100.00%	Methoxychlor
Signal #2			
7.840	9.247	100.00%	TCX #2
9.247	10.014	100.00%	alpha-BHC #2
10.014	10.139	100.00%	gamma-BHC (Lindane) #2
10.139	14.096	100.00%	beta-BHC #2
14.096	14.737	100.00%	Endrin #2
14.737	16.413	100.00%	4,4'-DDT #2
16.413	20.218	100.00%	Methoxychlor #2

* = Value less than resolution criteria, 60 for RESC, 90 for PEM, INDA, INDB
3_004241.D OLM03C25.M Wed Mar 27 13:41:52 1996

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D Vial: 58
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D\CONFIRM.D
Acq On : 27 Mar 96 02:49 Operator: HM
Sample : PEM3O Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010
Quant Time: Mar 30 11:21 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

	Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
	Surrogate Compounds						
1)	S TCX	7.26	7.84	874186	538594	0.0246	0.0202
				Recovery	=	123.00%	101.00%
22)	S DCB	17.73	20.23	913940	574385	0.0188	0.0150
				Recovery	=	94.00%	75.00%
	Target Compounds						
2)	AE alpha-BHC	8.96	9.25	521572	310611	0.0122	0.0105
3)	MA gamma-BHC (Lindane	9.69	10.02	485262	309759	0.0117	0.0107
4)	MA Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE beta-BHC	10.96	10.15	266791	171765	0.0112	0.0110
7)	B delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
10)	B gamma-Chlordane	0.00	12.62f	0	28117	N.D.	0.0010 #
11)	B alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
12)	B 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13)	MA Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA Endrin	13.12	14.10	1162245	871804	0.0412	0.0419
15)	B Endosulfan II	13.84f	0.00	73286	0	0.0024	N.D. #
16)	A 4,4'-DDD	13.74	0.00	87283	0	0.0032	N.D. #
17)	MA 4,4'-DDT	14.01	14.74	2414510	1780623	0.0828	0.0787
18)	B Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19)	B Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20)	AE Methoxychlor	14.99	16.42	3459427	2313040	0.2308m	0.2176
21)	B ~~Endrin Ketone~~	0.00	0.00	0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 2d4576 SDG CQT35
Signature Lynchi Bauder
Date APR 01 1995

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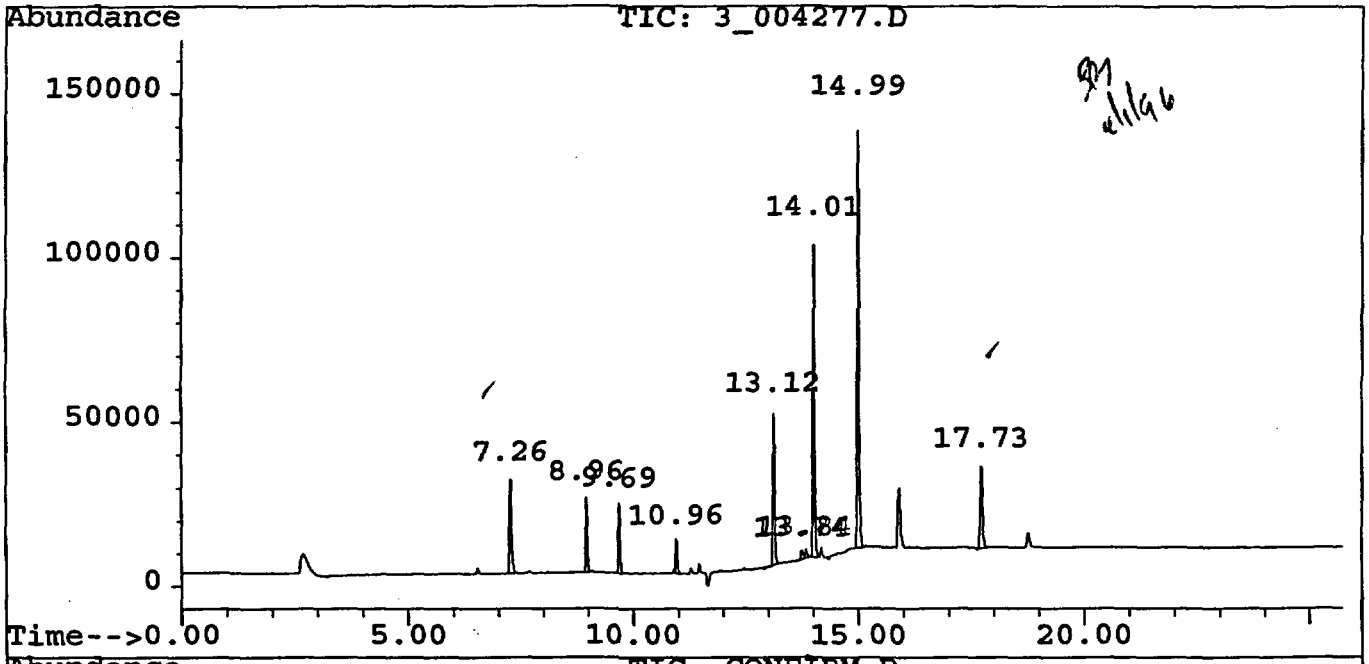
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

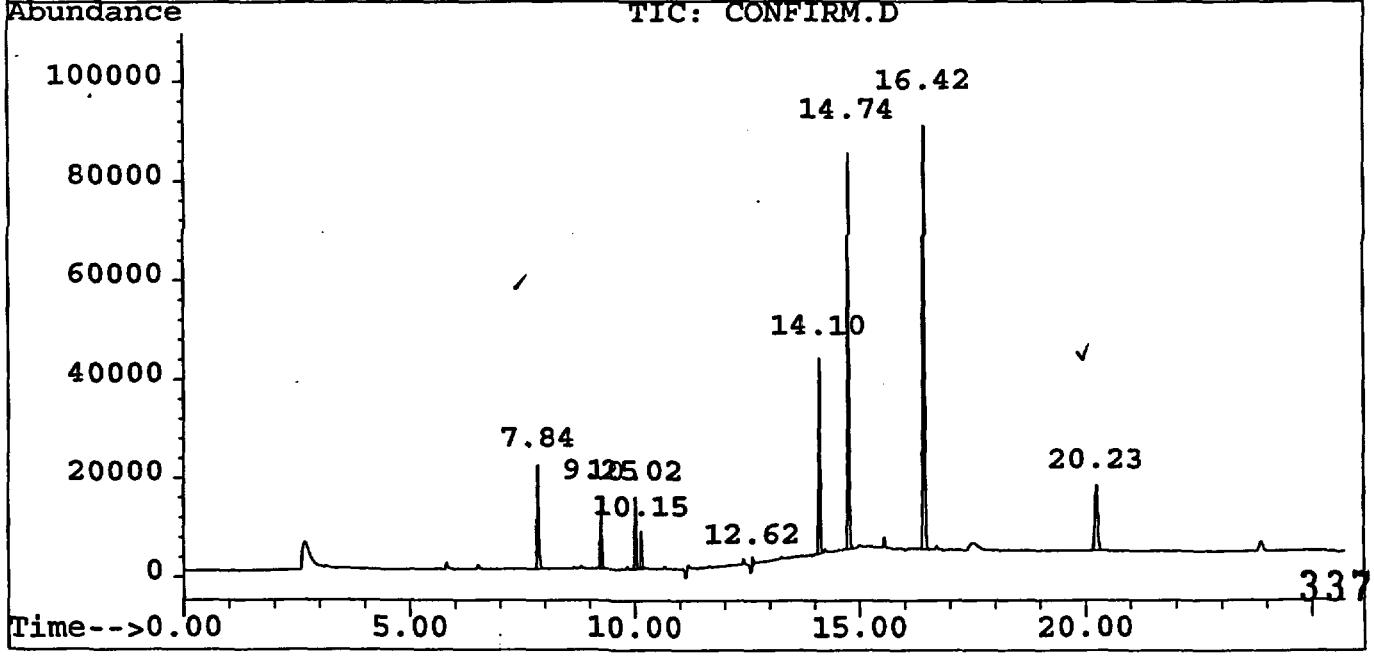
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D Vial: 58
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D\CONFIRM.D
Acq On : 27 Mar 96 02:49 Operator: HM
Sample : PEM3O Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010
Quant Time: Mar 30 11:21 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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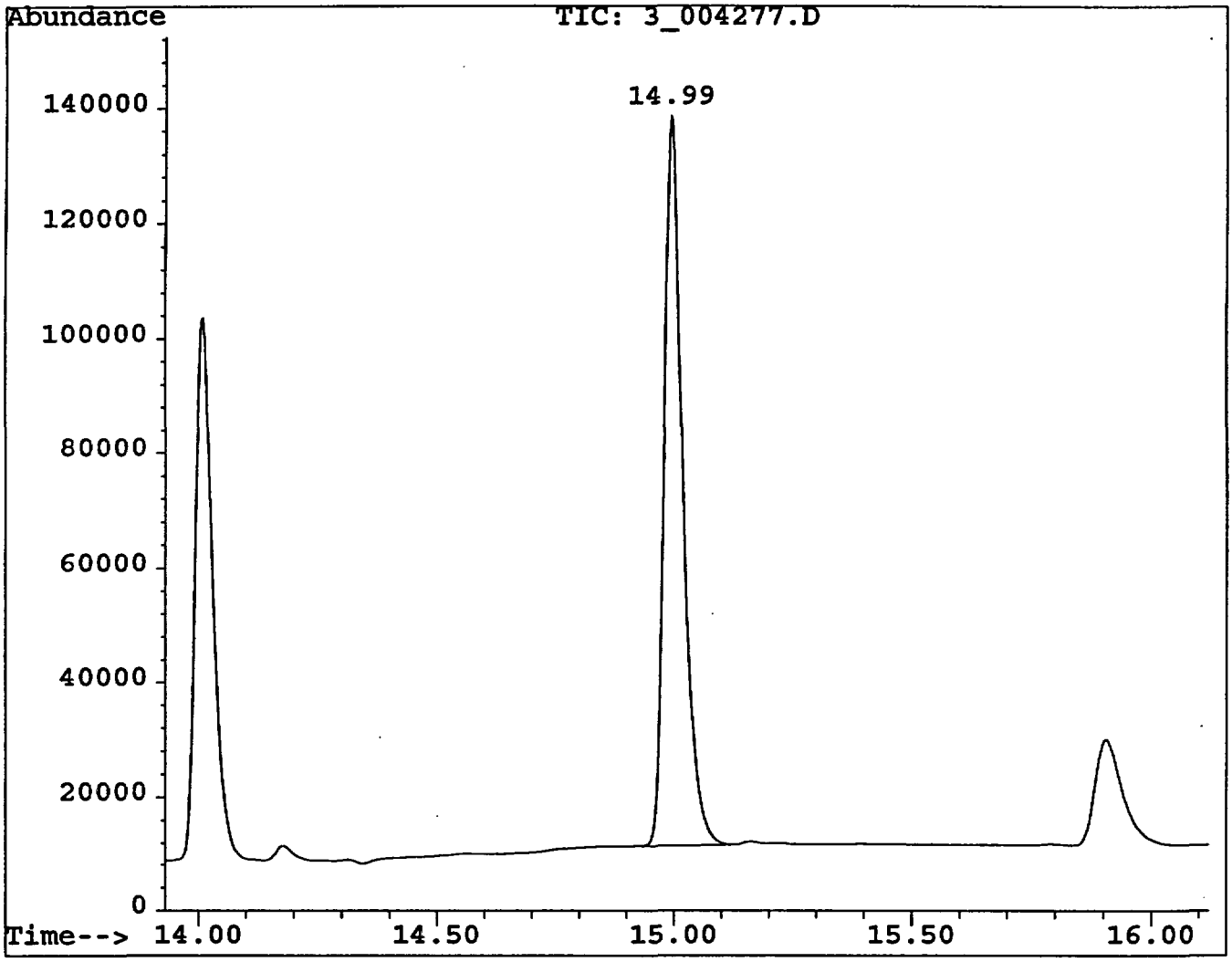
MANUAL INTEGRATION REPORT

Data File: W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D
Date Acquired: 27 Mar 96 02:49
Inst: HP_03 Operator ID: HM
Name: PEM3O
Misc: 5-387-14
Method: W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title: OLM3.0 CLP Pesticide/PCB
Quant Time: Mar 30 11:21 1996



Methoxychlor 14.99min area: 3459427 m

Integration Time Range: 14.93 - 15.12

W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D
Report generated: Sat Mar 30 11:22:09 1996

PEM REPORT

Data File: W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D
Date Acquired: 27 Mar 96 02:49
Inst: HP_03 Operator ID: HM
Name: PEM3O
Misc: 5-387-14
Method: W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title: OLM3.0 CLP Pesticide/PCB
Quant Time: Mar 30 11:21 1996

% D

Compound	Amount #1 (ng/mL)	Amount #2 (ng/mL)	Cnom	%D #1	%D #2
TCX	24.55	20.23	20	-22.8	-1.2
alpha-BHC	12.18	10.49	10	-21.8	-4.9
gamma-BHC	11.70	10.72	10	-17.0	-7.2
beta-BHC	11.23	11.01	10	-12.3	-10.1
Endrin	41.18	41.94	50	17.6	16.1
4,4'-DDT	82.78	78.74	100	17.2	21.3
Methoxychlor	230.82	217.58	250	7.7	13.0
DCB	18.82	15.01	20	5.9	25.0

Acceptance range for %D: -25.0 to 25.0 * = Value outside acceptance range

Degradation

Calculated by CLP Method

% DDT deg. #1 = 3.2 ✓ % DDT deg. #2 = 0.0

% Endrin deg. #1 = 0.0 % Endrin deg. #2 = 0.0

% Total deg. #1 = 3.2 % Total deg. #2 = 0.0

Degradation acceptance criteria DDT and Endrin < 20.0 Total: < 30.0
* = Value failed acceptance criteria

Chromatographic Resolution Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D Vial: 58
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004277.D\CONFIRM.D
Acq On : 27 Mar 96 02:49 Operator: HM
Sample : PEM3O Inst : HP_03
Misc : 5-387-14 Multiplr: 0.0010

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB

RT#1	RT#2	Resolution	Compound for RT#1
7.265	8.957	100.00%	TCX
8.957	9.685	100.00%	alpha-BHC
9.685	10.956	100.00%	gamma-BHC (Lindane)
10.956	13.123	100.00%	beta-BHC
13.123	14.010	100.00%	Endrin
14.010	14.995	100.00%	4,4'-DDT
14.995	17.732	100.00%	Methoxychlor
Signal #2			
7.843	9.252	100.00%	TCX #2
9.252	10.019	100.00%	alpha-BHC #2
10.019	10.147	100.00%	gamma-BHC (Lindane) #2
10.147	14.103	100.00%	beta-BHC #2
14.103	14.744	100.00%	Endrin #2
14.744	16.422	100.00%	4,4'-DDT #2
16.422	20.234	100.00%	Methoxychlor #2

* = Value less than resolution criteria, 60 for RESC, 90 for PEM, INDA, INDB
3_004277.D OLM03C25.M Sat Mar 30 11:20:13 1996

Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004234.D
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004234.D\CONFIRM.D
Acq On : 26 Mar 96 04:28 Vial: 15
Sample : INDAL3D Operator: HM
Misc : 5-411-14 Inst : HP_03
Quant Time: Mar 26 9:59 1996 Multiplr: 0.0010

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 09:59:44 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701
Signal #1 Info : 0.32mm
Signal #1 Inst : HP_03A

Signal #2 Phase: DB-17
Signal #2 Info : 0.32mm
Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	180999	154582	0.0037	0.0041
			Recovery	=	18.50%	20.50%
22) S DCB	17.72	20.22	534636	433824	0.0117	0.0110
			Recovery	=	58.50%	55.00%
Target Compounds						
2) AE alpha-BHC	8.95	9.25	196810	137224	0.0034	0.0030
3) MA gamma-BHC (Lindane	9.68	10.01	199652	137728	0.0036	0.0032
4) MA Heptachlor	10.04	10.64	238044	175376	0.0043	0.0041
5) MB Aldrin	0.00	0.00	0	0	N.D.	N.D.
6) BE beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7) B delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8) B Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9) A Endosulfan I	12.16	12.91	174668	140963	0.0042	0.0040
10) B gamma-Chlordane	0.00	0.00	0	0	N.D.d	N.D.
11) B alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.d
12) B 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13) MA Dieldrin	12.77	13.45	327318	262419	0.0078	0.0074
14) MA Endrin	13.12	14.10	265136	207158	0.0079	0.0077
15) B Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16) A 4,4'-DDD	13.73	14.22	230573	205528	0.0073	0.0073
17) MA 4,4'-DDT	14.00	14.74	373042	225426	0.0137	0.0085 #
18) B Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19) B Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20) AE Methoxychlor	14.99	16.42	764564	591430	0.0513	0.0517
21) B Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

COPY
ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 34456 SDG CQ735
Signature Emeline Baudu
Date APR 01 1996

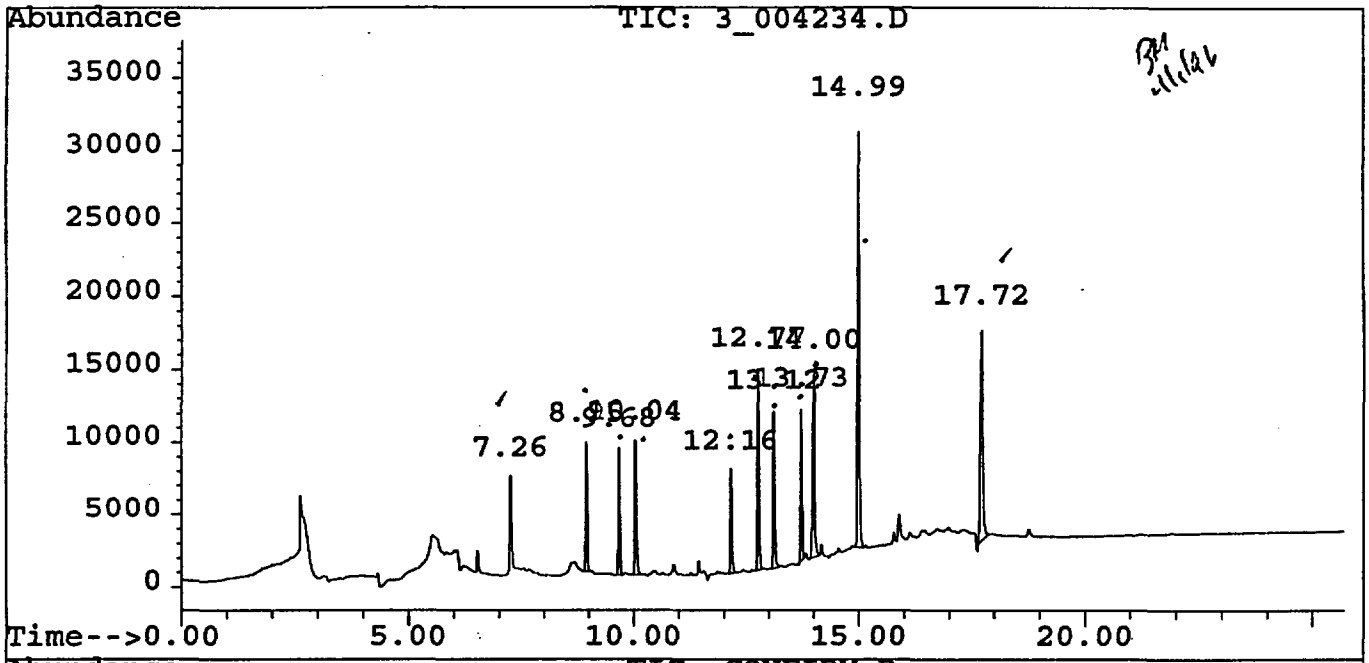
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

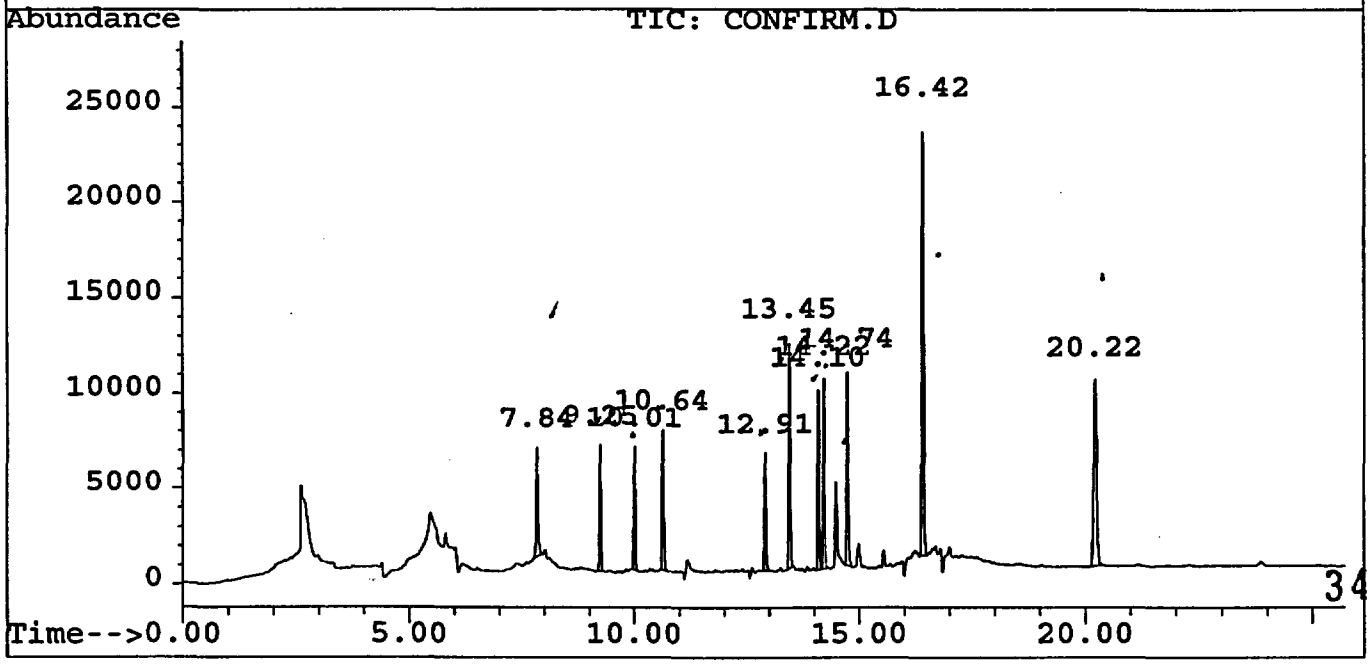
Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004234.D Vial: 15
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004234.D\CONFIRM.D
Acq On : 26 Mar 96 04:28 Operator: HM
Sample : INDAL3D Inst : HP_03
Misc : 5-411-14 Multiplr: 0.0010
Quant Time: Mar 26 9:59 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 09:59:44 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004236.D
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004236.D\CONFIRM.D
Vial: 17
Acq On : 26 Mar 96 05:30
Operator: HM
Sample : INDAM3J
Inst : HP_03
Misc : 5-410-14
Multiplr: 0.0010
Quant Time: Mar 26 10:01 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:01:16 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701
Signal #1 Info : 0.32mm
Signal #1 Inst : HP_03A
Signal #2 Phase: DB-17
Signal #2 Info : 0.32mm
Signal #2 Inst : HP_03B

	Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
	Surrogate Compounds						
1)	S TCX	7.26	7.84	712167	532407	0.0147	0.0141
				Recovery	=	73.50%	70.50%
22)	S DCB	17.72	20.23	1942721	1530999	0.0424	0.0389
				Recovery	=	212.00%	194.50%
	Target Compounds						
2)	AE alpha-BHC	8.95	9.25	856746	592329	0.0150	0.0131
3)	MA gamma-BHC (Lindane	9.68	10.02	829439	577787	0.0149	0.0134
4)	MA Heptachlor	10.04	10.64	891901	608423	0.0160	0.0142
5)	MB Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7)	B delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A Endosulfan I	12.16	12.91	709804	538110	0.0171	0.0154
10)	B gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11)	B alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.d
12)	B 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13)	MA Dieldrin	12.77	13.45	1404267	1082810	0.0335	0.0304
14)	MA Endrin	13.12	14.10	1128972	831525	0.0336	0.0307
15)	B Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16)	A 4,4'-DDD	13.73	14.22	1091194	869520	0.0347	0.0311
17)	MA 4,4'-DDT	14.00	14.74	1166658	904608	0.0430	0.0339
18)	B Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.d
19)	B Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20)	AE Methoxychlor	14.99	16.42	2997483	2126148	0.2010	0.1859
21)	B Endrin Ketone	0.00	0.00	0	0	N.D.d	N.D.d

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CSF 24456 SDG CQ735
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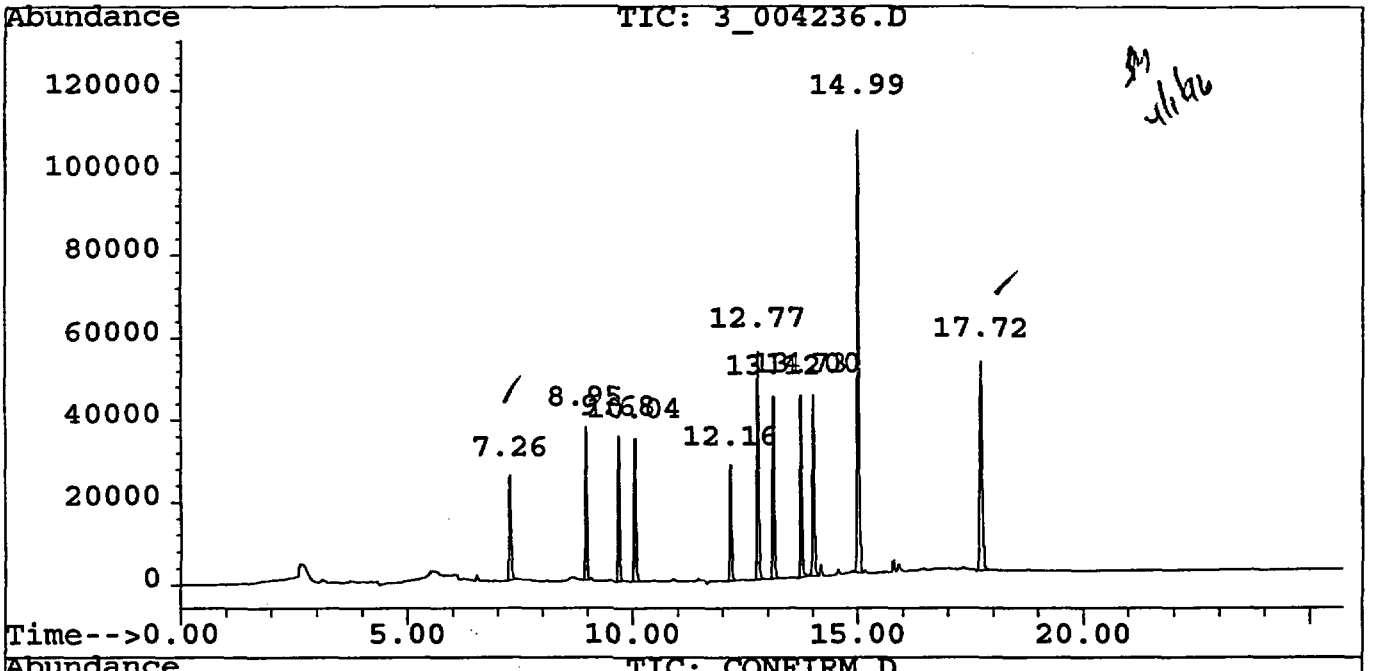
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted
3_004236.D OLM03C25.M Tue Mar 26 10:01:30 1996 LISA Page 1

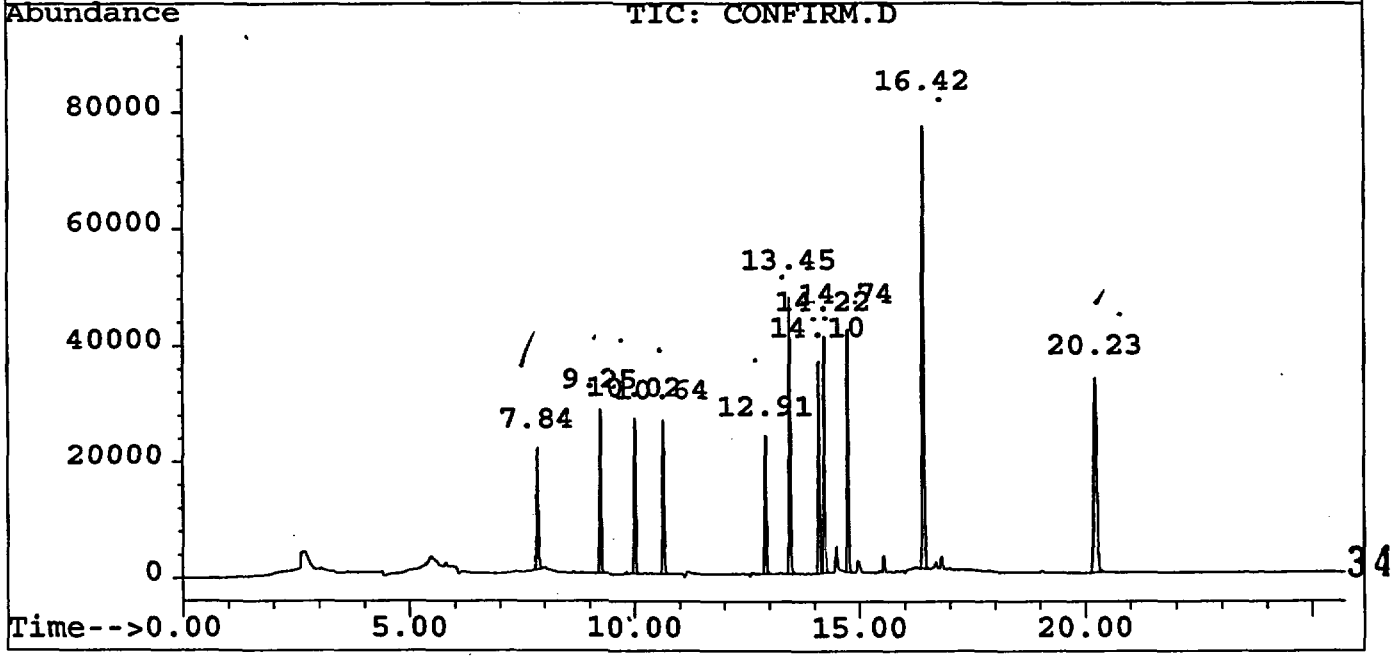
Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004236.D Vial: 17
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004236.D\CONFIRM.D
Acq On : 26 Mar 96 05:30 Operator: HM
Sample : INDAM3J Inst : HP_03
Misc : 5-410-14 Multiplr: 0.0010
Quant Time: Mar 26 10:01 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:01:16 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





344

Chromatographic Resolution Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004236.D Vial: 17
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004236.D\CONFIRM.D
Acq On : 26 Mar 96 05:30 Operator: HM
Sample : INDAM3J Inst : HP_03
Misc : 5-410-14 Multiplr: 0.0010

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB

RT#1	RT#2	Resolution	Compound for RT#1
7.257	8.951	100.00%	TCX
8.951	9.679	100.00%	alpha-BHC
9.679	10.041	100.00%	gamma-BHC (Lindane)
10.041	12.162	100.00%	Heptachlor
12.162	12.767	100.00%	Endosulfan I
12.767	13.117	100.00%	Dieldrin
13.117	13.728	100.00%	Endrin
13.728	14.004	100.00%	4,4'-DDD
14.004	14.991	100.00%	4,4'-DDT
14.991	17.722	100.00%	Methoxychlor
Signal #2			
7.840	9.249	100.00%	TCX #2
9.249	10.016	100.00%	alpha-BHC #2
10.016	10.641	100.00%	gamma-BHC (Lindane) #2
10.641	12.915	100.00%	Heptachlor #2
12.915	13.453	100.00%	Endosulfan I #2
13.453	14.099	100.00%	Dieldrin #2
14.099	14.220	99.64%	Endrin #2
14.220	14.740	100.00%	4,4'-DDD #2
14.740	16.417	100.00%	4,4'-DDT #2
16.417	20.227	100.00%	Methoxychlor #2

* = Value less than resolution criteria, 60 for RESC, 90 for PEM, INDA, INDB
3_004236.D OLM03C25.M Tue Mar 26 10:02:06 1996 LISA

Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004238.D
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004238.D\CONFIRM.D
Acq On : 26 Mar 96 06:32 Vial: 19
Sample : INDAH3D Operator: HM
Misc : 5-409-14 Inst : HP_03
Quant Time: Mar 26 10:03 1996 Multiplr: 0.0010

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:03:32 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701
Signal #1 Info : 0.32mm
Signal #1 Inst : HP_03A

Signal #2 Phase: DB-17
Signal #2 Info : 0.32mm
Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	2813209	1985292	0.0790	0.0746
			Recovery	=	395.00%	373.00%
22) S DCB	17.72	20.22	6455270	4824034	0.1329E	0.1260
			Recovery	=	664.50%	630.00%
Target Compounds						
2) AE alpha-BHC	8.95	9.25	3818332	2612975	0.0891	0.0882
) MA gamma-BHC (Lindane	9.68	10.02	3583601	2449600	0.0864	0.0848
) MA Heptachlor	10.04	10.64	3530219	2316503	0.0792	0.0761
5) MB Aldrin	0.00	0.00	0	0	N.D.	N.D.
6) BE beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7) B delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8) B Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9) A Endosulfan I	12.16	12.91	2926979	2116872	0.0825	0.0787
10) B gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11) B alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.d
12) B 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13) MA Dieldrin	12.77	13.45	5860755	4218040	0.1669	0.1558
14) MA Endrin	13.12	14.10	4706636	3177839	0.1668	0.1529
15) B Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16) A 4,4'-DDD	13.73	14.22	4587063	3380279	0.1681	0.1555
17) MA 4,4'-DDT	14.00	14.74	4493967	3375118	0.1541	0.1492
18) B Endrin Aldehyde	0.00	0.00	0	0	N.D.d	N.D.d
19) B Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20) AE Methoxychlor	14.99	16.41	10651872	6798834	0.7107	0.6395
21) B Endrin Ketone	0.00	0.00	0	0	N.D.d	N.D.d

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Signature [signature]
Date APR 01 1996

346

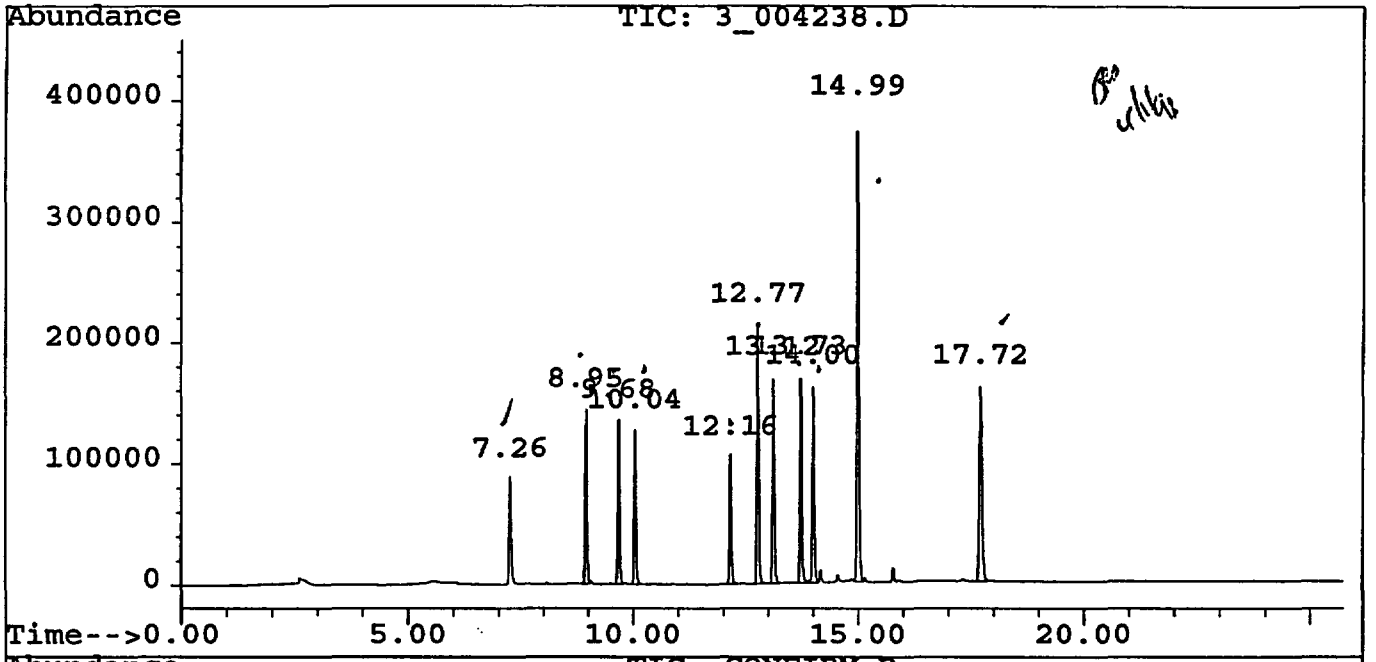
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

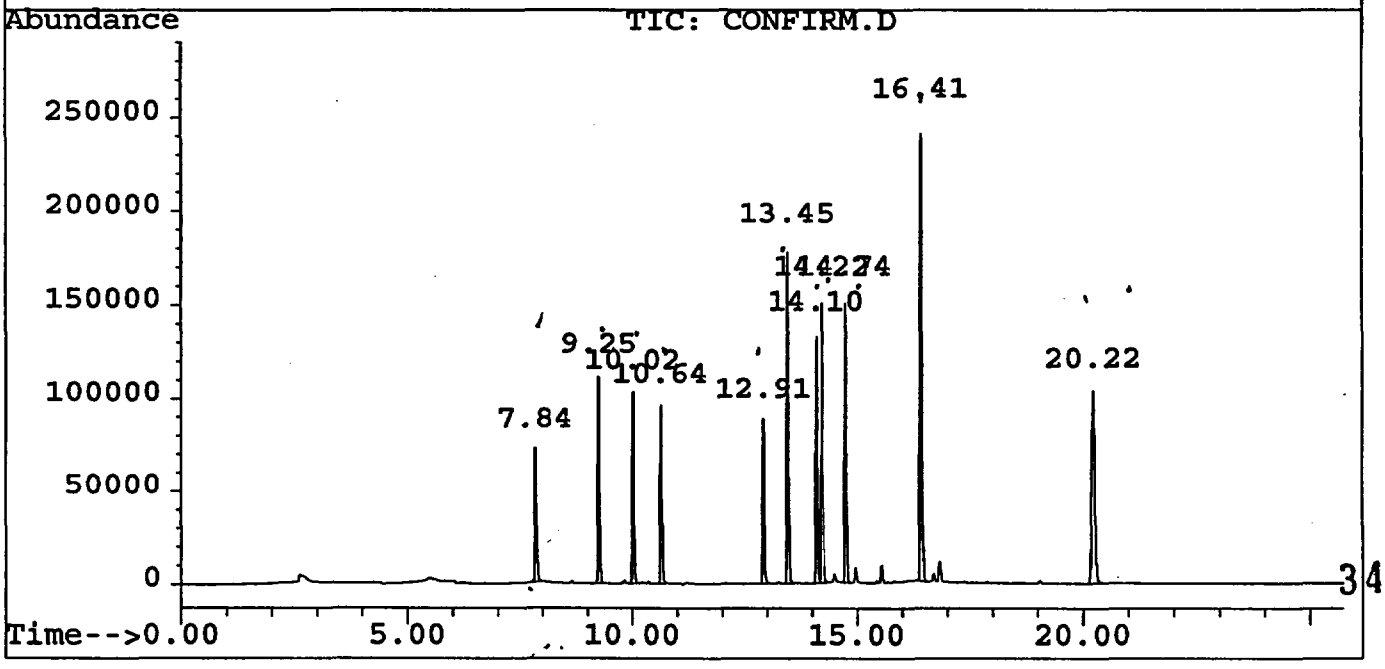
Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004238.D Vial: 19
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004238.D\CONFIRM.D
Acq On : 26 Mar 96 06:32 Operator: HM
Sample : INDAH3D Inst : HP_03
Misc : 5-409-14 Multiplr: 0.0010
Quant Time: Mar 26 10:03 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:03:32 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





347

Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004235.D Vial: 16
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004235.D\CONFIRM.D
Acq On : 26 Mar 96 04:59 Operator: HM
Sample : INDBL3D Inst : HP_03
Misc : 5-414-14 Multiplr: 0.0010
Quant Time: Mar 26 10:00 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:00:29 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
		Surrogate Compounds						
1)	S	TCX	7.26	7.84	178244	153444	0.0037	0.0041
					Recovery	=	18.50%	20.50%
22)	S	DCB	17.72	20.22	522268	444337	0.0114	0.0113
					Recovery	=	57.00%	56.50%
		Target Compounds						
2)	AE	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
4)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB	Aldrin	10.51	11.26	185052	149469	0.0038	0.0039
6)	BE	beta-BHC	10.95	10.14	109718	79166	0.0040	0.0035
7)	B	delta-BHC	11.36	10.84	152490	124421	0.0037	0.0032
8)	B	Heptachlor Epoxide	11.71	12.28	208448	151228	0.0047	0.0042
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.d
10)	B	gamma-Chlordane	12.23	12.57	202615	141441	0.0046	0.0038
11)	B	alpha-Chlordane	12.36	12.85	192477	154917	0.0045	0.0041
12)	B	4,4'-DDE	12.45	13.26	375362	272305	0.0092	0.0083
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.
15)	B	Endosulfan II	13.89	14.40	313982	258742	0.0095	0.0087
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA	4,4'-DDT	0.00	0.00	0	0	N.D.d	N.D.
18)	B	Endrin Aldehyde	14.55	14.96	220693	263766	0.0090	0.0108
19)	B	Endosulfan Sulfate	15.07	15.17	284659	265254	0.0098	0.0097
20)	AE	Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21)	B	Endrin Ketone	15.78	16.83	292085	293274	0.0094	0.0091

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CSF 24456 SDG C0T33
Signature [signature]
Date APR 01 1996

348

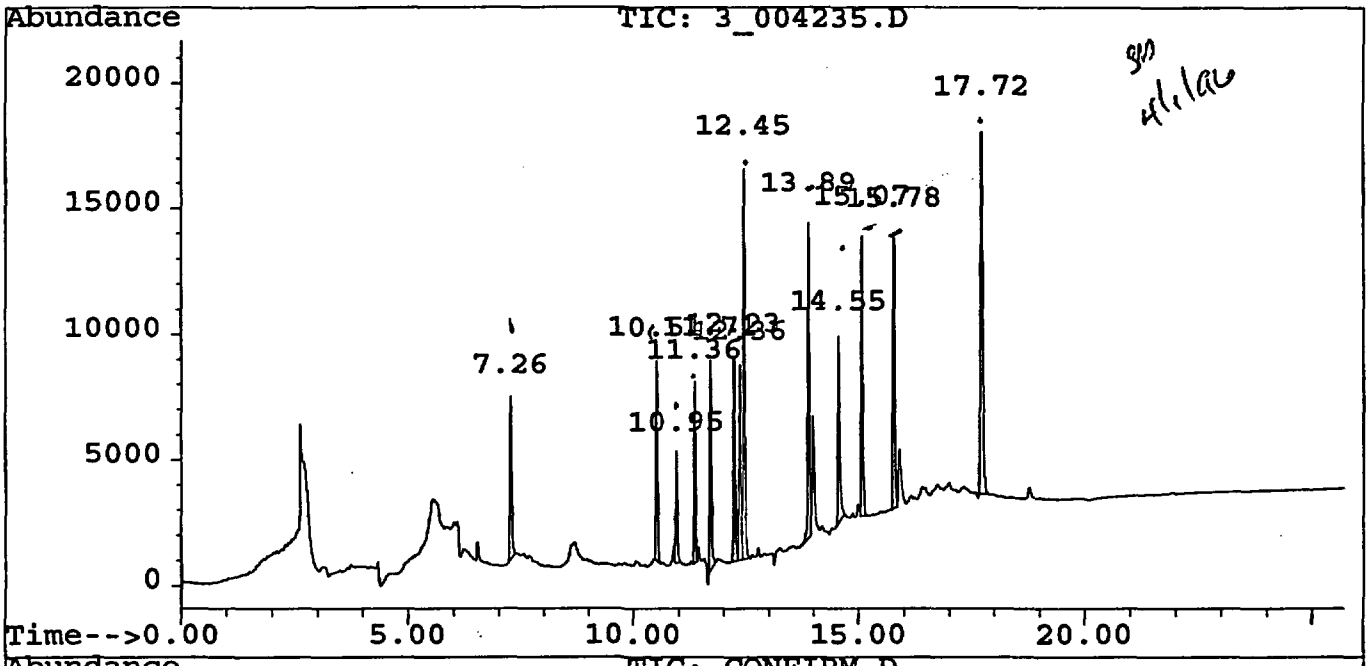
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

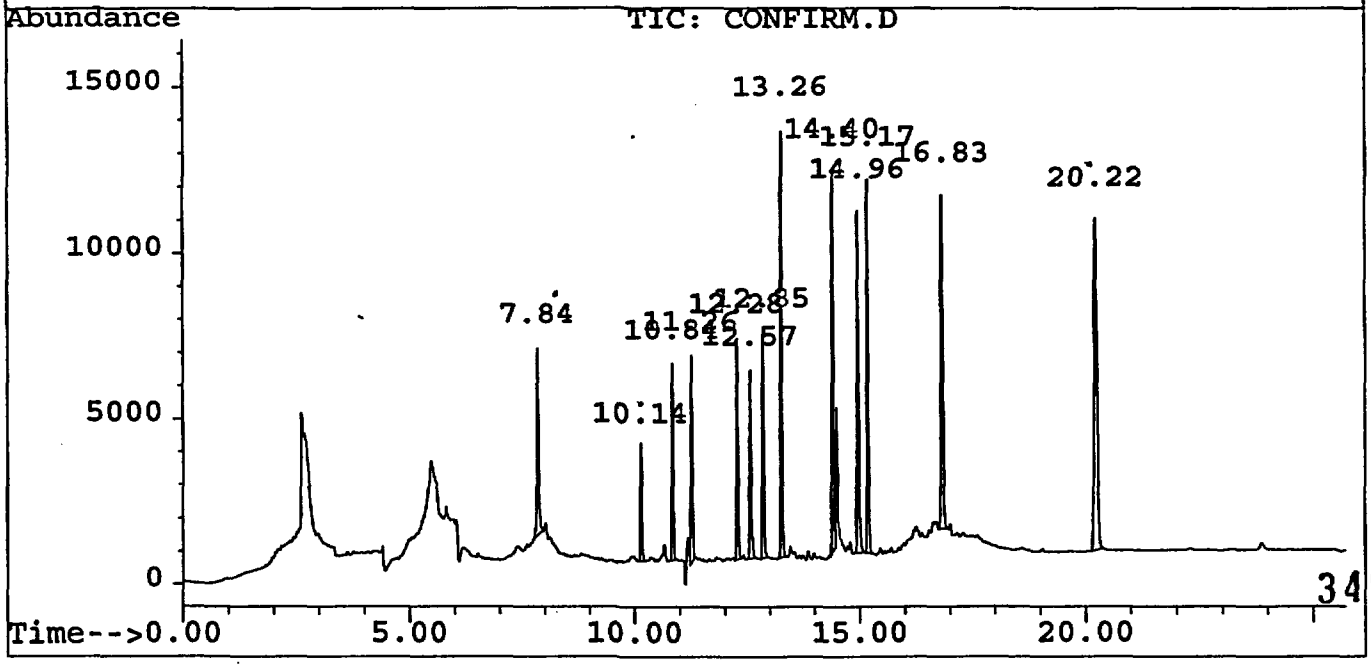
Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004235.D Vial: 16
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004235.D\CONFIRM.D
Acq On : 26 Mar 96 04:59 Operator: HM
Sample : INDBL3D Inst : HP_03
Misc : 5-414-14 Multiplr: 0.0010
Quant Time: Mar 26 10:00 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:00:29 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





349

Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004237.D Vial: 18
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004237.D\CONFIRM.D
Acq On : 26 Mar 96 06:01 Operator: HM
Sample : INDBM3J Inst : HP_03
Misc : 5-413-14 Multiplr: 0.0010
Quant Time: Mar 26 10:02 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:02:26 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
		Surrogate Compounds						
1)	S	TCX	7.26	7.84	779913	550139	0.0219	0.0207
					Recovery	=	109.50%	103.50%
22)	S	DCB	17.72	20.23	1902867	1504228	0.0392	0.0393
					Recovery	=	196.00%	196.50%
		Target Compounds						
2)	AE	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
4)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB	Aldrin	10.51	11.27	803882	571140	0.0166	0.0151
6)	BE	beta-BHC	10.95	10.14	475103	311995	0.0174	0.0140
7)	B	delta-BHC	11.36	10.84	678400	552327	0.0163	0.0142
8)	B	Heptachlor Epoxide	11.71	12.28	806580	574526	0.0182	0.0160
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.d
10)	B	gamma-Chlordane	12.23	12.57	798387	574552	0.0180	0.0156
11)	B	alpha-Chlordane	12.36	12.85	753011	582245	0.0176	0.0155
12)	B	4,4'-DDE	12.45	13.26	1499958	1067618	0.0366	0.0327
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.
15)	B	Endosulfan II	13.89	14.40	1221309	999446	0.0369	0.0337
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA	4,4'-DDT	0.00	0.00	0	0	N.D.d	N.D.
18)	B	Endrin Aldehyde	14.55	14.96	978802	896938	0.0399	0.0367
19)	B	Endosulfan Sulfate	15.07	15.17	1131246	992406	0.0389	0.0361
20)	AE	Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21)	B	Endrin Ketone	15.78	16.83	1215599	1150625	0.0391	0.0357

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ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF CO-24456 SDG CQT35
Signature Linda J Boulu
Date APR 01 1996 APR 01 1996 APR 01 1996

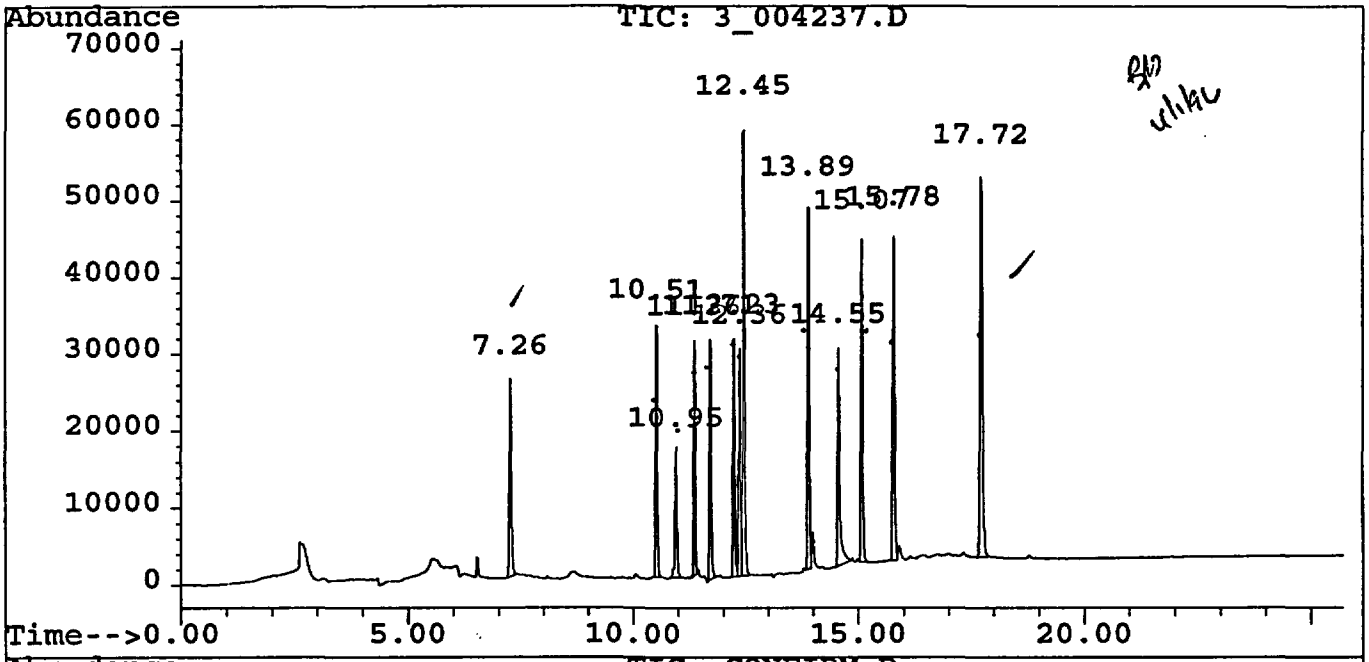
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted
3_004237.D OLM03C25.M Tue Mar 26 10:02:38 1996 LISA Page 1

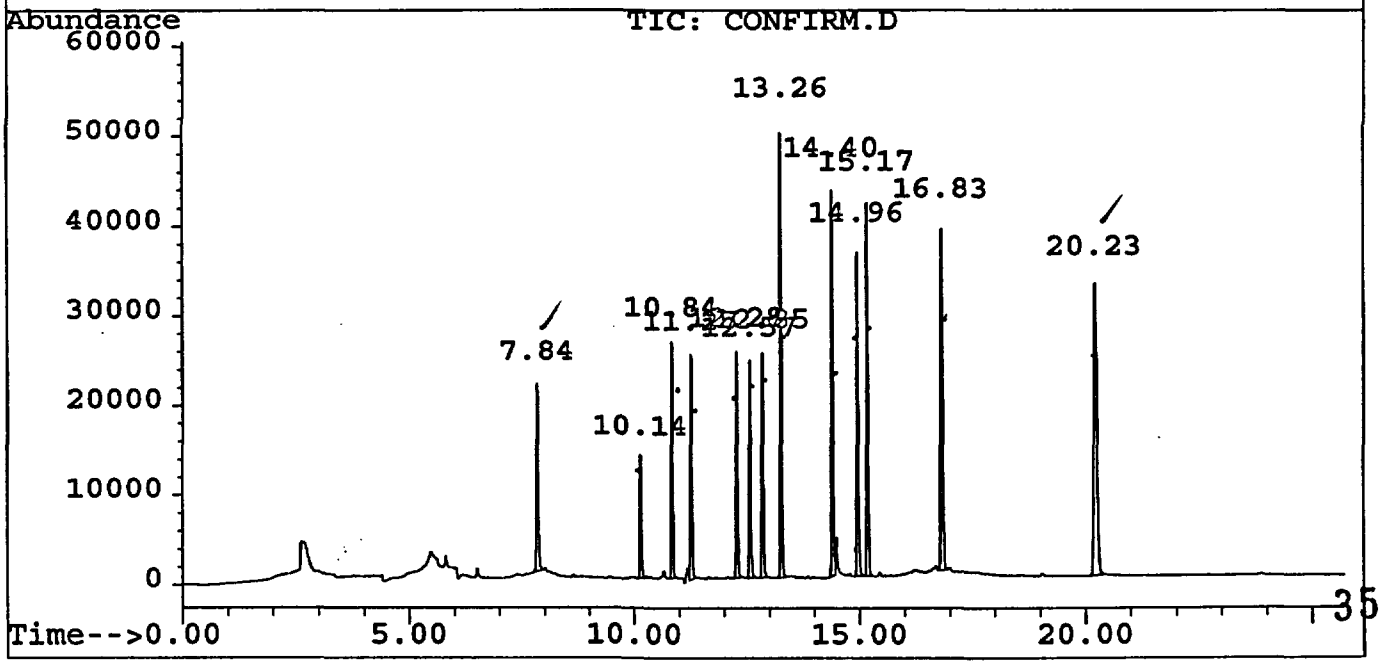
Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004237.D Vial: 18
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004237.D\CONFIRM.D
Acq On : 26 Mar 96 06:01 Operator: HM
Sample : INDBM3J Inst : HP_03
Misc : 5-413-14 Multiplr: 0.0010
Quant Time: Mar 26 10:02 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:02:26 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Chromatographic Resolution Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004237.D Vial: 18
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004237.D\CONFIRM.D
Acq On : 26 Mar 96 06:01 Operator: HM
Sample : INDBM3J Inst : HP_03
Misc : 5-413-14 Multiplr: 0.0010

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB

RT#1	RT#2	Resolution	Compound for RT#1
7.257	10.510	100.00%	TCX
10.510	10.950	100.00%	Aldrin
10.950	11.357	100.00%	beta-BHC
11.357	11.706	100.00%	delta-BHC
11.706	12.232	100.00%	Heptachlor Epoxide
12.232	12.358	98.38%	gamma-Chlordane
12.358	12.452	90.96%	alpha-Chlordane
12.452	13.887	100.00%	4,4'-DDE
13.887	14.554	100.00%	Endosulfan II
14.554	15.071	100.00%	Endrin Aldehyde
15.071	15.784	100.00%	Endosulfan Sulfate
15.784	17.722	100.00%	Endrin Ketone
Signal #2			
7.840	10.141	100.00%	TCX #2
10.141	10.841	100.00%	beta-BHC #2
10.841	11.265	100.00%	delta-BHC #2
11.265	12.277	100.00%	Aldrin #2
12.277	12.567	100.00%	Heptachlor Epoxide #2
12.567	12.849	100.00%	gamma-Chlordane #2
12.849	13.259	100.00%	alpha-Chlordane #2
13.259	14.401	100.00%	4,4'-DDE #2
14.401	14.957	100.00%	Endosulfan II #2
14.957	15.175	100.00%	Endrin Aldehyde #2
15.175	16.830	100.00%	Endosulfan Sulfate #2
16.830	20.226	100.00%	Endrin Ketone #2

* = Value less than resolution criteria, 60 for RESC, 90 for PEM, INDA, INDB
3_004237.D OLM03C25.M Tue Mar 26 10:03:14 1996 LISA

Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004239.D
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004239.D\CONFIRM.D
Acq On : 26 Mar 96 07:03 Vial: 20
Sample : INDBH3D Operator: HM
Misc : 5-412-14 Inst : HP_03
Quant Time: Mar 26 10:04 1996 Multiplr: 0.0010

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701
Signal #1 Info : 0.32mm
Signal #1 Inst : HP_03A

Signal #2 Phase: DB-17
Signal #2 Info : 0.32mm
Signal #2 Inst : HP_03B

	Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
	Surrogate Compounds						
1)	S TCX	7.26	7.84	2568345	1807191	0.0721	0.0679
				Recovery	=	360.50%	339.50%
22)	S DCB	17.72	20.22	6333797	4741255	0.1304	0.1239
				Recovery	=	652.00%	619.50%
	Target Compounds						
2)	AE alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3)	MA gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
4)	MA Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB Aldrin	10.51	11.26	3065162	2060146	0.0763	0.0721
6)	BE beta-BHC	10.95	10.14	1509350	1073352	0.0635	0.0688
7)	B delta-BHC	11.36	10.84	2784662	2111066	0.0821	0.0764
8)	B Heptachlor Epoxide	11.70	12.27	2867780	1987068	0.0711	0.0692
9)	A Endosulfan I	0.00	0.00	0	0	N.D.d	N.D.d
10)	B gamma-Chlordane	12.23	12.56	2843445	2029819	0.0712	0.0707
11)	B alpha-Chlordane	12.36	12.85	2635872	1966102	0.0700	0.0675
12)	B 4,4'-DDE	12.45	13.26	5389367	3690186	0.1437	0.1383
13)	MA Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA Endrin	0.00	0.00	0	0	N.D.	N.D.
15)	B Endosulfan II	13.88	14.40	4391835	3349640	0.1438	0.1341
16)	A 4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA 4,4'-DDT	0.00	0.00	0	0	N.D.d	N.D.
18)	B Endrin Aldehyde	14.55	14.95	3661132	2900164	0.1496	0.1293
19)	B Endosulfan Sulfate	15.07	15.17	4164067✓	3321111✓	0.1472	0.1339
20)	AE Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21)	B Endrin Ketone	15.78	16.83	4533866	3959919	0.1492	0.1377

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 2/4/56 SDG C0735
Signature [signature]
Date APR 01 1996

353

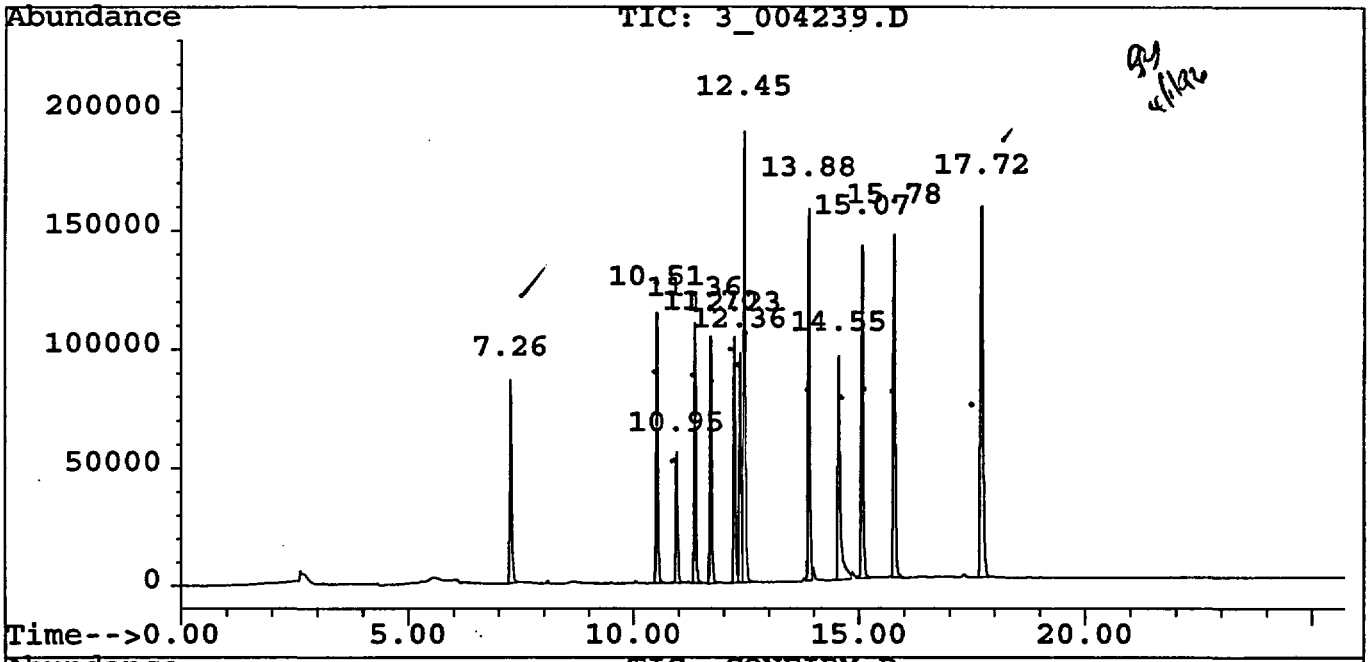
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

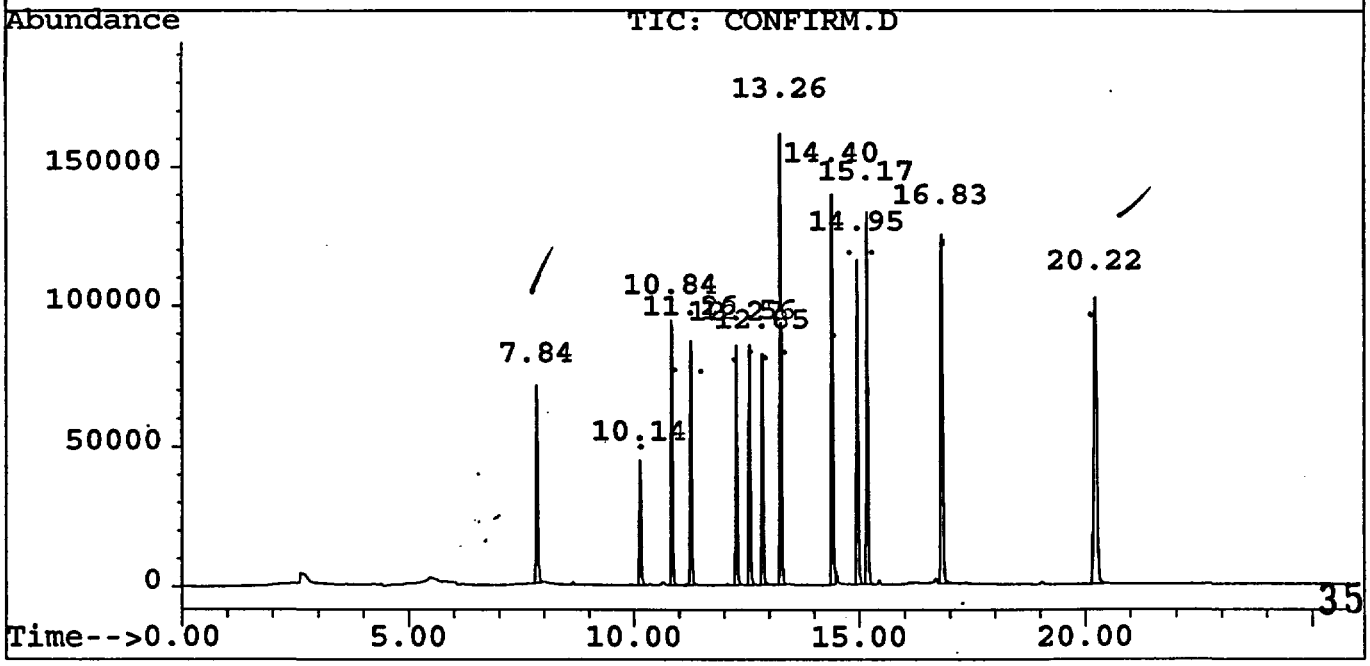
Quantitation Report

Signal #1 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004239.D Vial: 20
Signal #2 : F:\HPCHEM\HP\3\DATA\03_25_96\3_004239.D\CONFIRM.D
Acq On : 26 Mar 96 07:03 Operator: HM
Sample : INDBH3D Inst : HP_03
Misc : 5-412-14 Multiplr: 0.0010
Quant Time: Mar 26 10:04 1996

Method : F:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004227.D Vial: 8
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004227.D\CONFIRM.D
Acq On : 26 Mar 96 00:53 Operator: HM
Sample : AR16603D Inst : HP_03
Misc : 5-348-14 Multiplr: 0.0010
Quant Time: Apr 1 11:00 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Mon Apr 01 10:58:44 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	967804	749377	0.0200	0.0200
			Recovery	=	100.00%	100.00%
38) S DCB	17.72	20.22	1013548	864324	0.0200	0.0200
			Recovery	=	100.00%	100.00%
Target Compounds						
2) L1 Aroclor-1016	8.31	9.17	128188	90738	0.1000	0.1000
3) L1 Aroclor-1016 {2}	9.04	9.97	311799	226253	0.1000	0.1000
4) L1 Aroclor-1016 {3}	9.83	10.66	585087	433255	0.1000	0.1000
5) L1 Aroclor-1016 {4}	10.08	10.96	251194	183064	0.1000	0.1000
6) L1 Aroclor-1016 {5}	10.46	11.22	381597	292306	0.1000	0.1000
Total Aroclor-1016			1657863	1225617	0.5000	0.5000
Total Aroclor-1221			0	0	N.D.	N.D.
Total Aroclor-1232			0	0	N.D.	N.D.
Total Aroclor-1242			0	0	N.D.	N.D.
Total Aroclor-1248			0	0	N.D.	N.D.
Total Aroclor-1254			0	0	N.D.	N.D.
29) L7 Aroclor-1260	12.90	13.85	290634	280439	0.1000	0.1000
30) L7 Aroclor-1260 {2}	13.25	13.98	364818	294098	0.1000	0.1000
31) L7 Aroclor-1260 {3}	13.93	14.74	224184	259689	0.1000	0.1000
32) L7 Aroclor-1260 {4}	14.86	14.79	526291	206719	0.1000	0.1000
33) L7 Aroclor-1260 {5}	15.46	15.69	387548	432399	0.1000	0.1000
Total Aroclor-1260			1793474	1473345	0.5000	0.5000
Total Toxaphene			0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24/56 SDG C0T35
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Date APR 01 1996

355

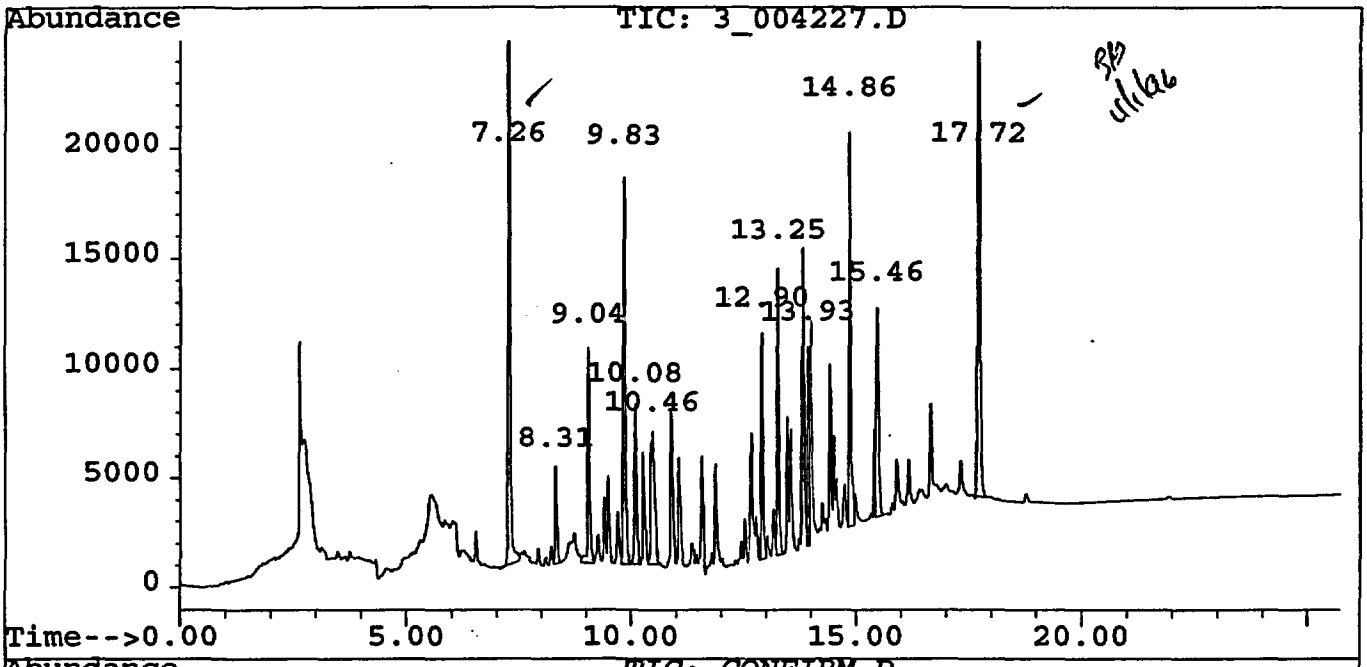
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

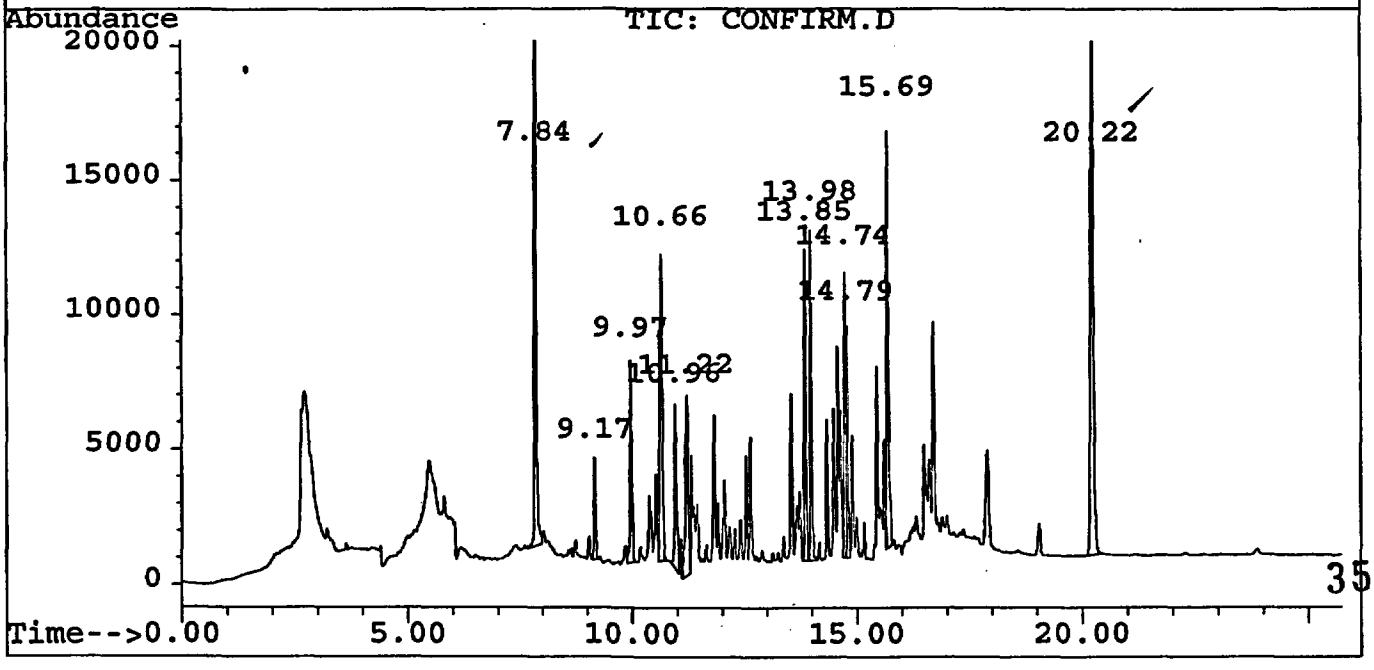
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004227.D Vial: 8
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004227.D\CONFIRM.D
Acq On : 26 Mar 96 00:53 Operator: HM
Sample : AR16603D Inst : HP_03
Misc : 5-348-14 Multiplr: 0.0010
Quant Time: Apr 1 11:00 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Mon Apr 01 10:58:44 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





356

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004228.D Vial: 9
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004228.D\CONFIRM.D
Acq On : 26 Mar 96 01:23 Operator: HM
Sample : AR12213D Inst : HP_03
Misc : 5-349-14 Multiplr: 0.0010
Quant Time: Mar 30 17:27 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:27:19 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	1014085	700459	0.0210	0.0187
			Recovery	=	105.00%	93.50%
38) S DCB	17.72	20.22	952835	819487	0.0188	0.0190
			Recovery	=	94.00%	95.00%
Target Compounds						
Total Aroclor-1016			0	0	N.D.	N.D.
) L2 Aroclor-1221	7.91f	8.73	134733	104730	0.1704	0.1888
8) L2 Aroclor-1221 {2}	8.31f•	9.04	358690	71043	0.8132	0.1852 #
9) L2 Aroclor-1221 {3}	8.31f•	9.16	358690	222704	0.2232	0.1913
Total Aroclor-1221			852114	398477	1.2068	0.5654
Total Aroclor-1232			0	0	N.D.	N.D.
Total Aroclor-1242			0	0	N.D.	N.D.
Total Aroclor-1248			0	0	N.D.	N.D.
Total Aroclor-1254			0	0	N.D.	N.D.
Total Aroclor-1260			0	0	N.D.	N.D.
Total Toxaphene			0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 2/4/96 SDG CPT35
Signature
APR 01 1996
Date

357

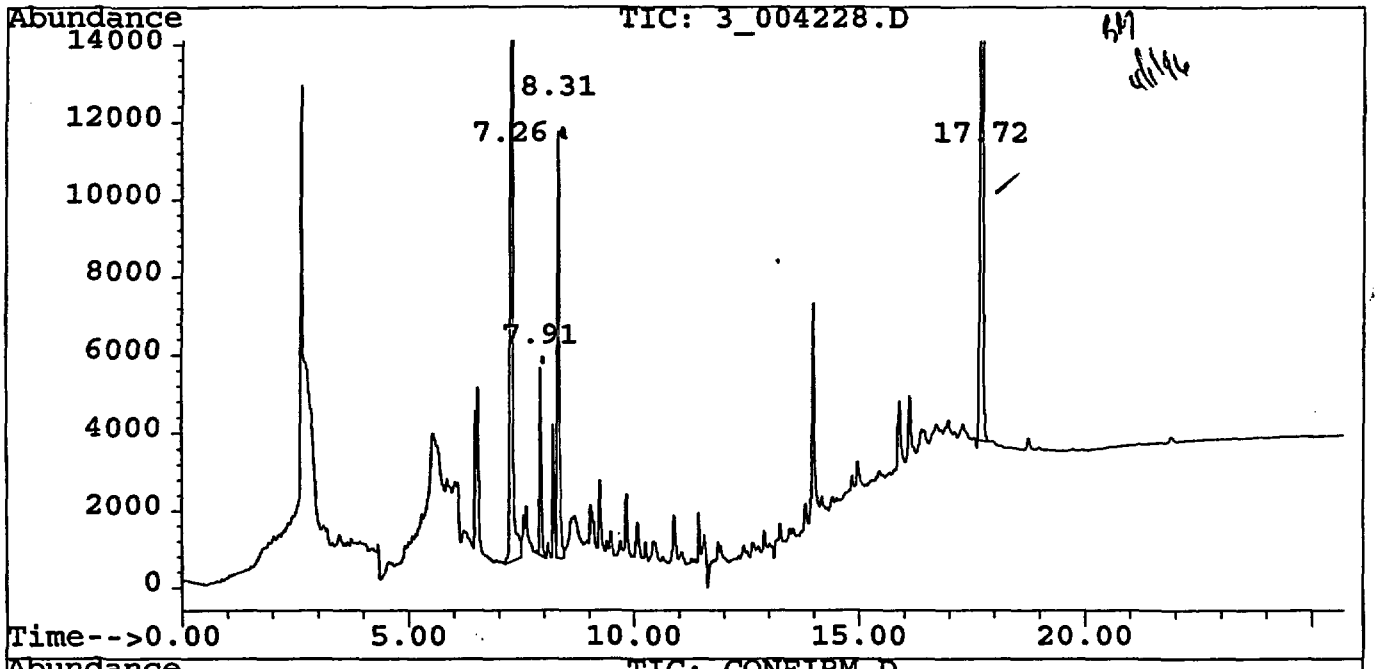
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

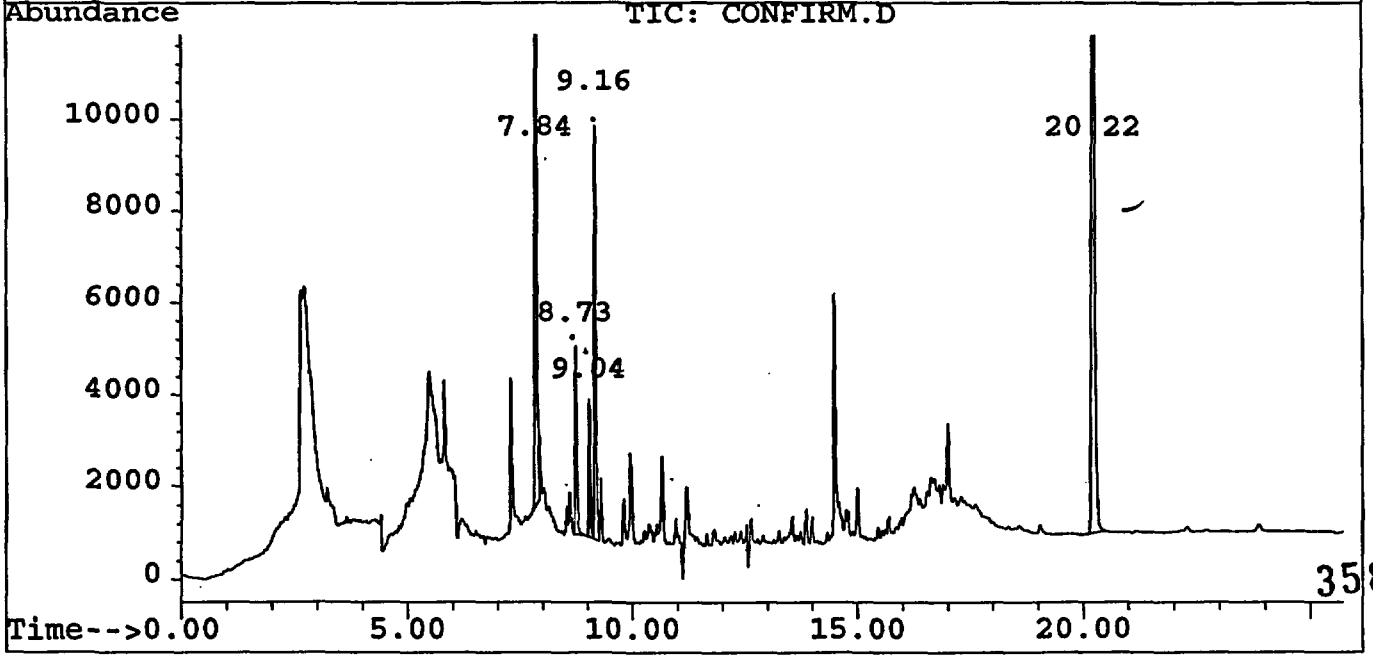
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004228.D Vial: 9
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004228.D\CONFIRM.D
Acq On : 26 Mar 96 01:23 Operator: HM
Sample : AR12213D Inst : HP_03
Misc : 5-349-14 Multiplr: 0.0010
Quant Time: Mar 30 17:27 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:27:19 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





358

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004229.D Vial: 10
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004229.D\CONFIRM.D
Acq On : 26 Mar 96 01:54 Operator: HM
Sample : AR12323D Inst : HP_03
Misc : 5-350-14 Multiplr: 0.0010
Quant Time: Mar 30 17:28 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:28:25 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	935795	731654	0.0193	0.0195
			Recovery	=	96.50%	97.50%
38) S DCB	17.72	20.22	955119	801220	0.0188	0.0185
			Recovery	=	94.00%	92.50%
Target Compounds						
Total Aroclor-1016			0	0	N.D.	N.D.
Total Aroclor-1221			0	0	N.D.	N.D.
10) L3 Aroclor-1232	8.31f	9.17	136670	92629	0.0997	0.0881
11) L3 Aroclor-1232 {2}	9.04f	9.97	138364	115630	0.1161	0.1002
12) L3 Aroclor-1232 {3}	9.83f	10.66	246128	192819	0.1052	0.0886
13) L3 Aroclor-1232 {4}	10.08f	11.21	115186	159718	0.0961	0.0997
Total Aroclor-1232			636348	560795	0.4172	0.3767
Total Aroclor-1242			0	0	N.D.	N.D.
Total Aroclor-1248			0	0	N.D.	N.D.
Total Aroclor-1254			0	0	N.D.	N.D.
Total Aroclor-1260			0	0	N.D.	N.D.
Total Toxaphene			0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24456 SDG CQT85
Signature Gerald Bauler
Date APR 01 1996

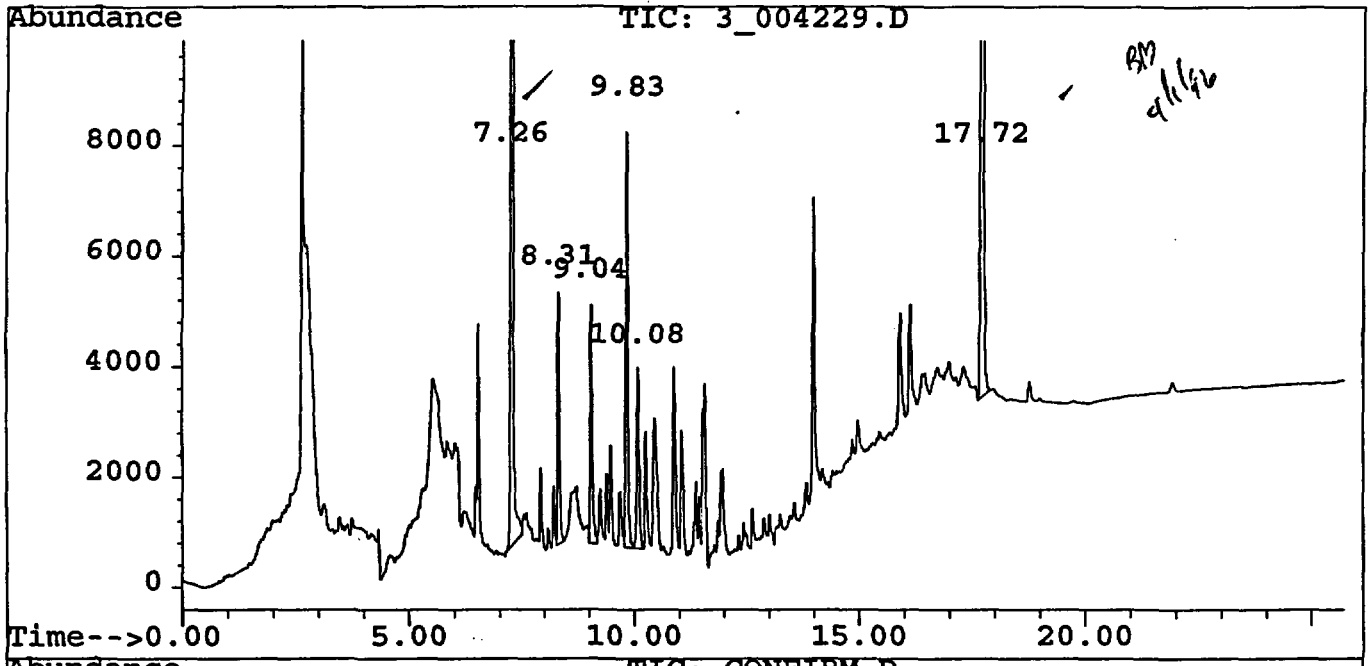
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted
3_004229.D CLPPCC25.M Sat Mar 30 17:28:43 1996 Page 1

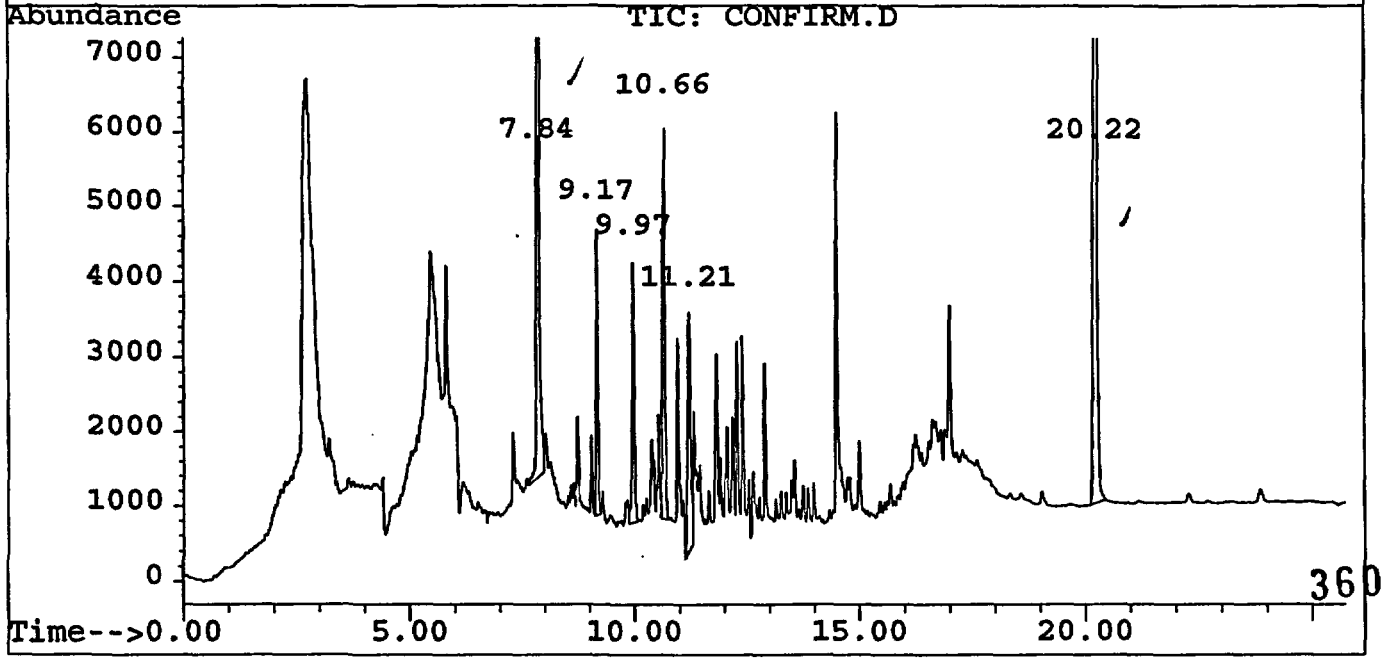
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004229.D Vial: 10
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004229.D\CONFIRM.D
Acq On : 26 Mar 96 01:54 Operator: HM
Sample : AR12323D Inst : HP_03
Misc : 5-350-14 Multiplr: 0.0010
Quant Time: Mar 30 17:28 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:28:25 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004230.D Vial: 11
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004230.D\CONFIRM.D
Acq On : 26 Mar 96 02:25 Operator: HM
Sample : AR12423D Inst : HP_03
Misc : 5-351-14 Multiplr: 0.0010
Quant Time: Mar 30 17:29 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:29:32 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	963780	772210	0.0199	0.0206
			Recovery	=	99.50%	103.00%
38) S DCB	17.72	20.22	1013090	851050	0.0200	0.0197
			Recovery	=	100.00%	98.50%
Target Compounds						
Total Aroclor-1016			0	0	N.D.	N.D.
Total Aroclor-1221			0	0	N.D.	N.D.
Total Aroclor-1232			0	0	N.D.	N.D.
14) L4 Aroclor-1242	9.04f	9.97	214643	175827	0.1063	0.0959
15) L4 Aroclor-1242 {2}	9.83f	10.66	449526	335499	0.1086	0.0921
16) L4 Aroclor-1242 {3}	10.08f	10.96	200912	147390	0.1037	0.1158
17) L4 Aroclor-1242 {4}	10.47f	11.22	209717	257297	0.0789	0.1190 #
18) L4 Aroclor-1242 {5}	10.88f	11.83	229274	190357	0.1041	0.1337 #
Total Aroclor-1242			1304072	1106369	0.5014	0.5565
Total Aroclor-1248			0	0	N.D.	N.D.
Total Aroclor-1254			0	0	N.D.	N.D.
Total Aroclor-1260			0	0	N.D.	N.D.
Total Toxaphene			0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24/56 SDG CQT35
Signature Eileen Bauder
Date APR 01 1996

361

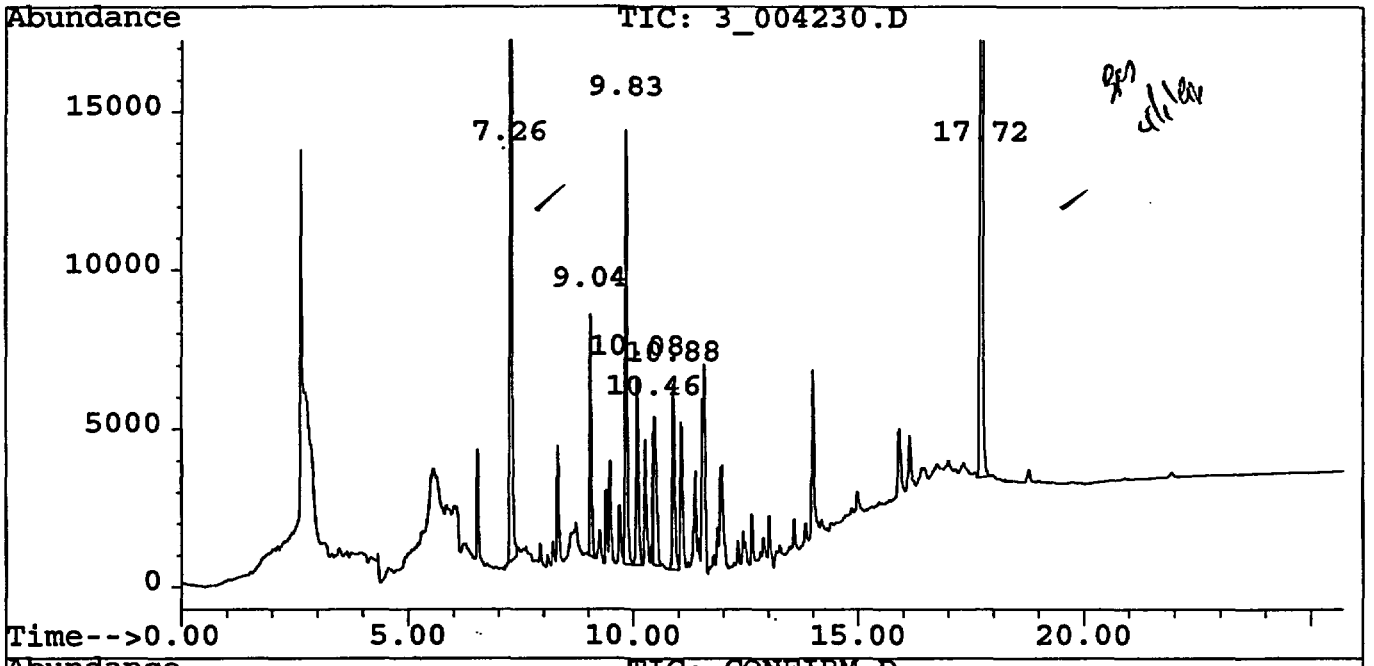
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

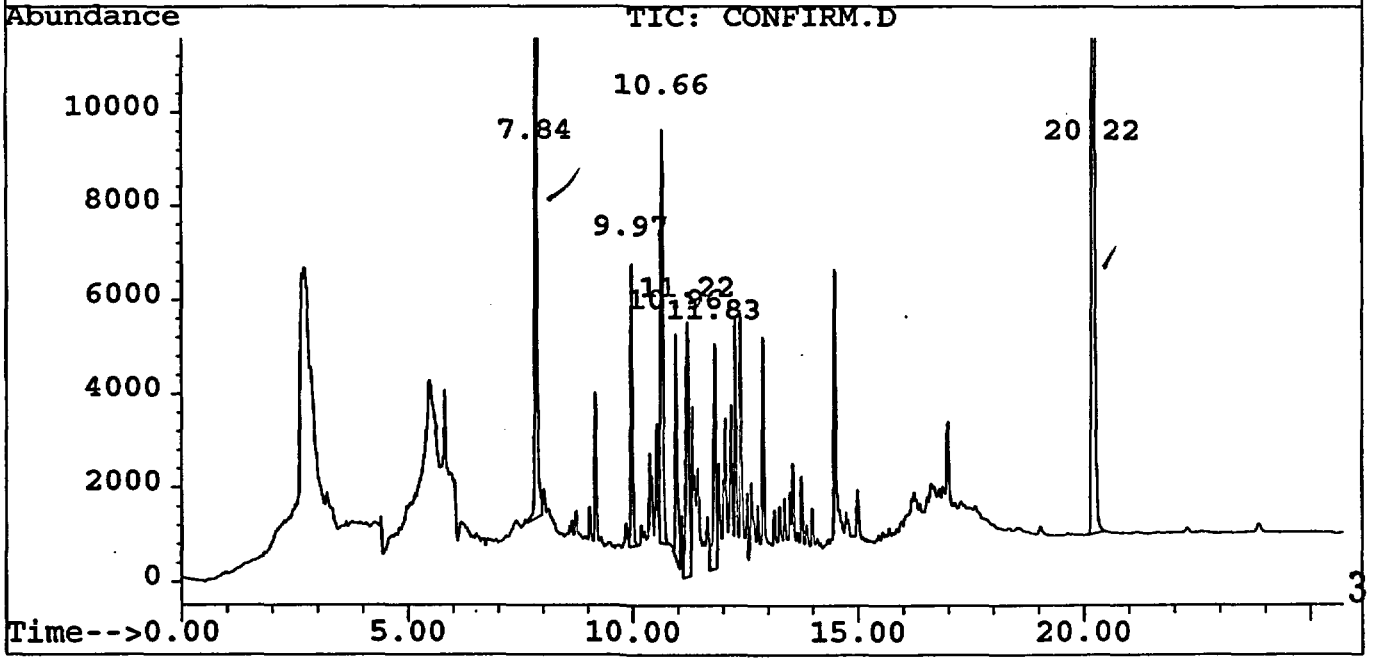
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004230.D Vial: 11
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004230.D\CONFIRM.D
Acq On : 26 Mar 96 02:25 Operator: HM
Sample : AR12423D Inst : HP_03
Misc : 5-351-14 Multiplr: 0.0010
Quant Time: Mar 30 17:29 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:29:32 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





362

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004231.D Vial: 12
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004231.D\CONFIRM.D
Acq On : 26 Mar 96 02:56 Operator: HM
Sample : AR12483D Inst : HP_03
Misc : 5-352-14 Multiplr: 0.0010
Quant Time: Mar 30 17:30 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:30:41 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	699987	546237	0.0145	0.0146
Recovery				=	72.50%	73.00%
38) S DCB	17.72	20.22	928881	814759	0.0183	0.0189
Recovery				=	91.50%	94.50%
Target Compounds						
Total Aroclor-1016			0	0	N.D.	N.D.
Total Aroclor-1221			0	0	N.D.	N.D.
Total Aroclor-1232			0	0	N.D.	N.D.
Total Aroclor-1242			0	0	N.D.	N.D.
19) L5 Aroclor-1248	9.83f	11.23	213241	193954	0.0824	0.0842
20) L5 Aroclor-1248 {2}	10.46f	11.83	229265	136251	0.0805	0.0757
21) L5 Aroclor-1248 {3}	10.88f	12.28	236252	159339	0.0817	0.0771
22) L5 Aroclor-1248 {4}	11.05f	12.40	167838	168642	0.0801	0.0774
23) L5 Aroclor-1248 {5}	11.57f	12.90	258150	127548	0.0764	0.0771
Total Aroclor-1248			1104746	785735	0.4012	0.3917
Total Aroclor-1254			0	0	N.D.	N.D.
Total Aroclor-1260			0	0	N.D.	N.D.
Total Toxaphene			0	0	N.D.	N.D.

COPY
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CSF 24456 SDG C0135
Signature [illegible]
Date APR 01 1996

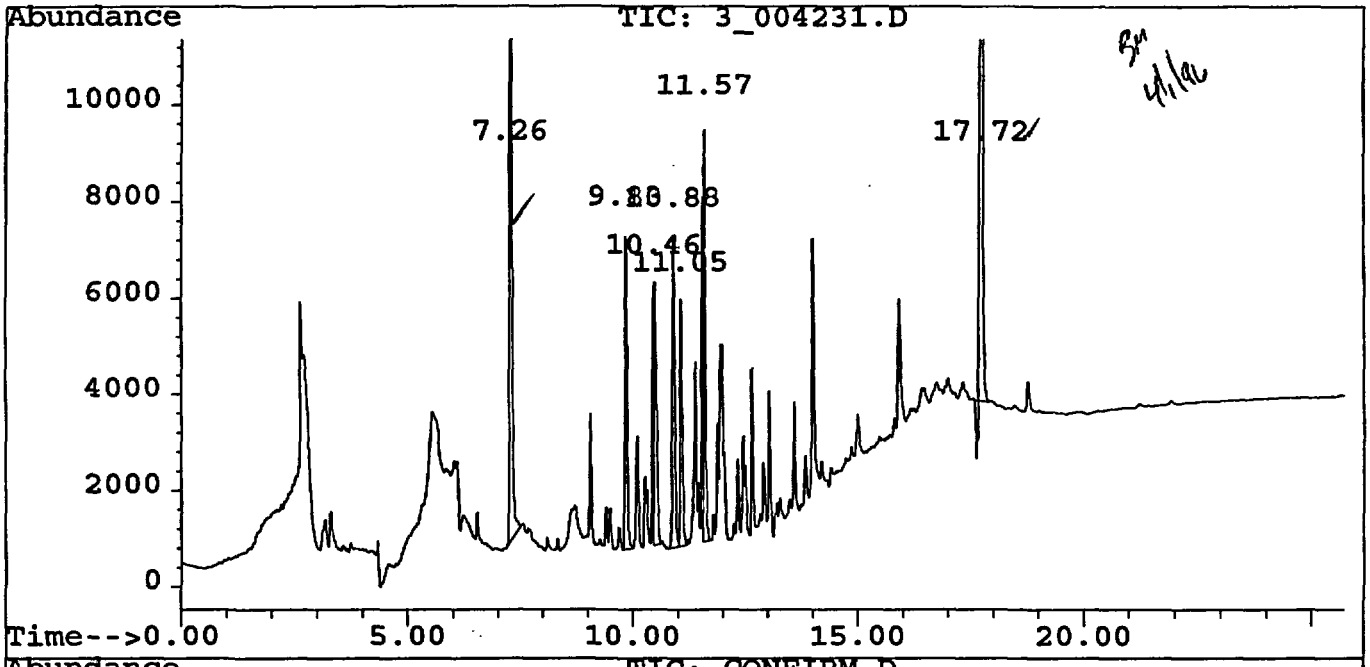
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

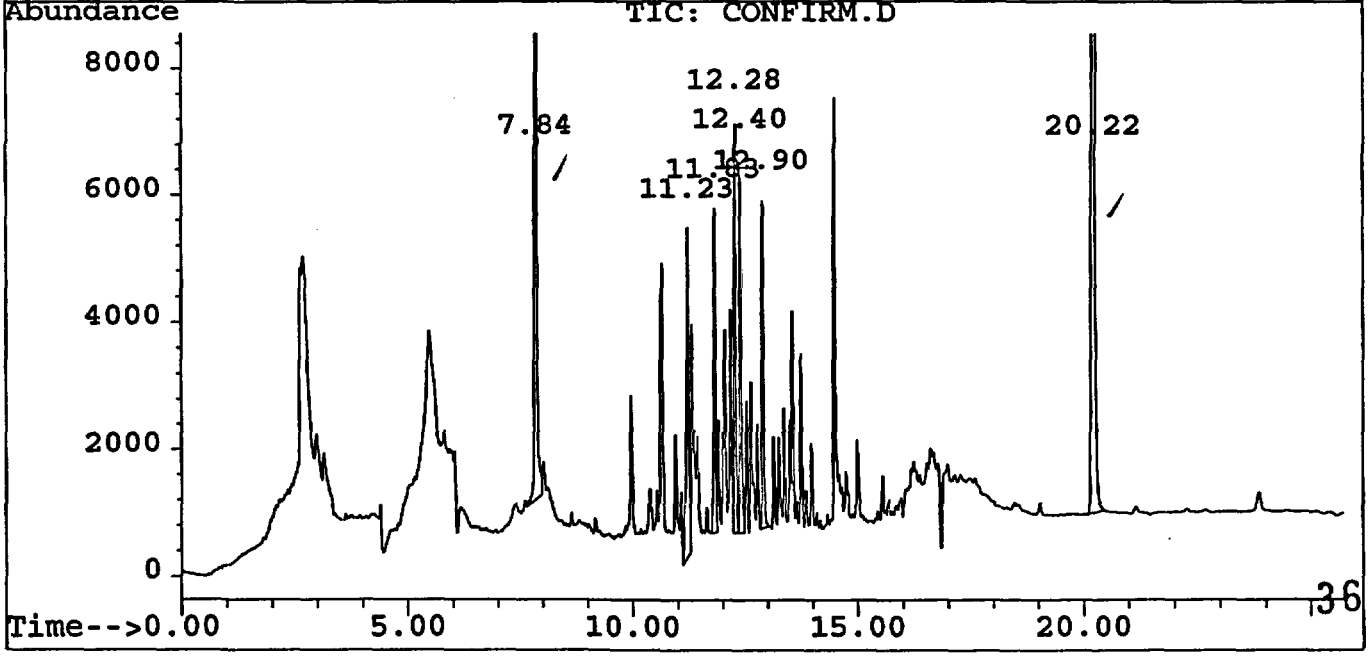
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004231.D Vial: 12
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004231.D\CONFIRM.D
Acq On : 26 Mar 96 02:56 Operator: HM
Sample : AR12483D Inst : HP_03
Misc : 5-352-14 Multiplr: 0.0010
Quant Time: Mar 30 17:30 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:30:41 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004232.D Vial: 13
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004232.D\CONFIRM.D
Acq On : 26 Mar 96 03:27 Operator: HM
Sample : AR12543D Inst : HP_03
Misc : 5-353-14 Multiplr: 0.0010
Quant Time: Mar 30 17:31 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:31:49 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	1018710	761882	0.0211	0.0203
			Recovery	=	105.50%	101.50%
38) S DCB	17.72	20.22	1022286	862929	0.0202	0.0200
			Recovery	=	101.00%	100.00%
Target Compounds						
Total Aroclor-1016			0	0	N.D.	N.D.
Total Aroclor-1221			0	0	N.D.	N.D.
Total Aroclor-1232			0	0	N.D.	N.D.
Total Aroclor-1242			0	0	N.D.	N.D.
Total Aroclor-1248			0	0	N.D.	N.D.
24) L6 Aroclor-1254	11.57f	12.54	413043	202577	0.1087	0.0948
25) L6 Aroclor-1254 {2}	11.92	12.63	161481	258373	0.0693	0.0985 #
26) L6 Aroclor-1254 {3}	12.72	13.55	12575	314244	0.0037	0.1000 #
27) L6 Aroclor-1254 {4}	13.01f	13.74	288112	258461	0.1103	0.0995
28) L6 Aroclor-1254 {5}	13.82f	14.74	339394	251747	0.1103	0.1036
Total Aroclor-1254			1214605	1285402	0.4023	0.4964
Total Aroclor-1260			0	0	N.D.	N.D.
Total Toxaphene			0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 2457 SDG C0735
Signature [signature]
Date APR 01 1996

365

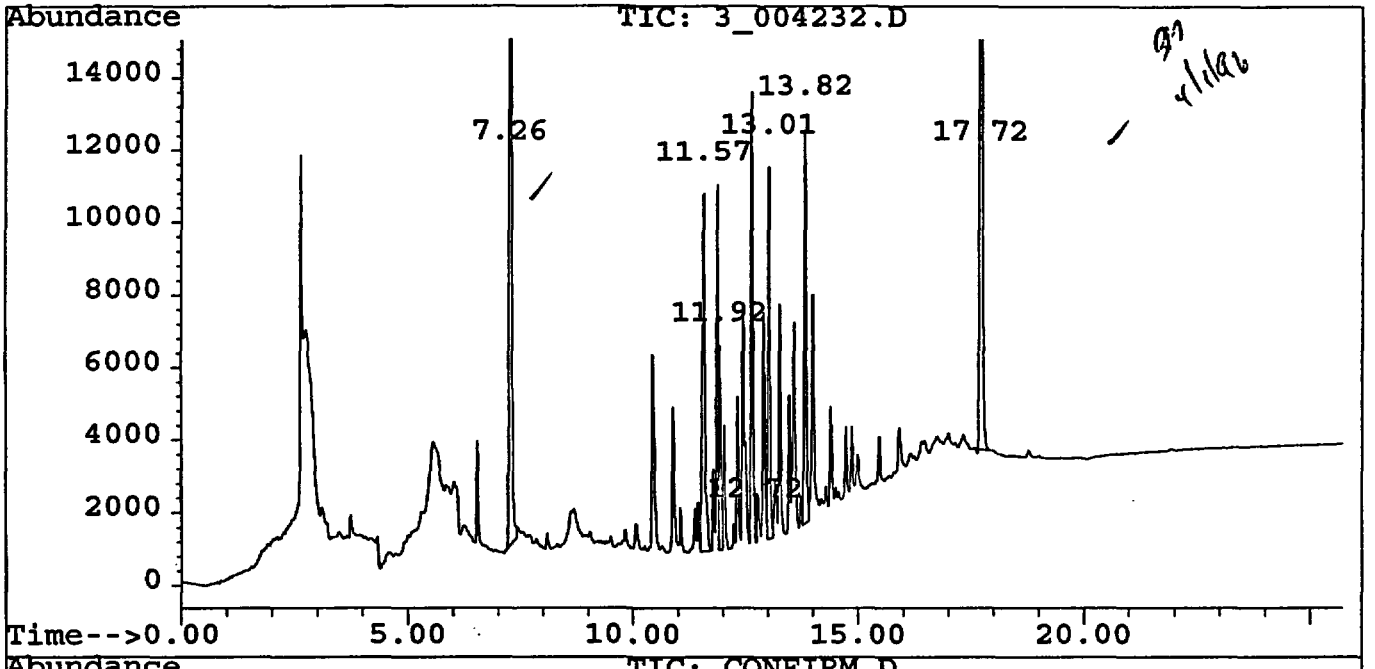
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

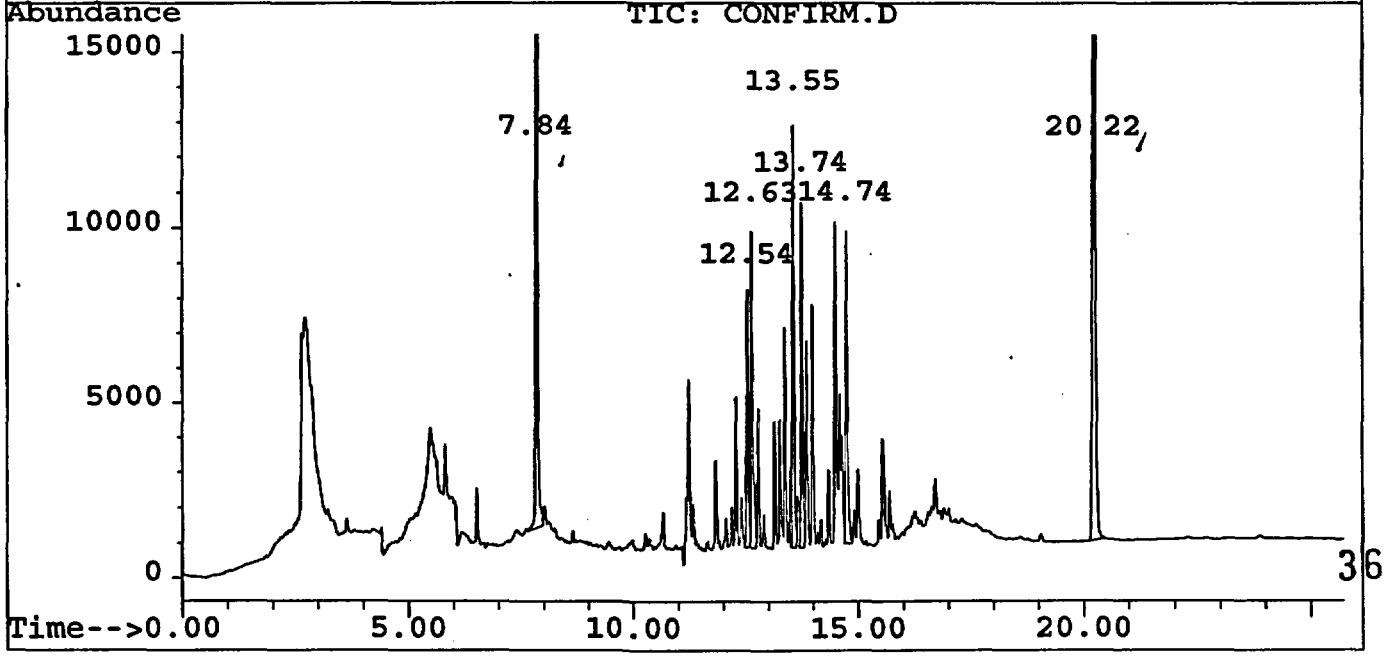
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004232.D Vial: 13
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004232.D\CONFIRM.D
Acq On : 26 Mar 96 03:27 Operator: HM
Sample : AR12543D Inst : HP_03
Misc : 5-353-14 Multiplr: 0.0010
Quant Time: Mar 30 17:31 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:31:49 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





366

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004233.D Vial: 14
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004233.D\CONFIRM.D
Acq On : 26 Mar 96 03:58 Operator: HM
Sample : TOXAPH3D Inst : HP_03
Misc : 5-354-14 Multiplr: 0.0010
Quant Time: Mar 30 17:32 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:33:01 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701
Signal #1 Info : 0.32mm
Signal #1 Inst : HP_03A

Signal #2 Phase: DB-17
Signal #2 Info : 0.32mm
Signal #2 Inst : HP_03B

Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
Surrogate Compounds						
1) S TCX	7.26	7.84	976646	751996	0.0202	0.0201
			Recovery		= 101.00%	100.50%
38) S DCB	17.72	20.22	1003007	846098	0.0198	0.0196
			Recovery		= 99.00%	98.00%
Target Compounds						
Total Aroclor-1016			0	0	N.D.	N.D.
Total Aroclor-1221			0	0	N.D.	N.D.
Total Aroclor-1232			0	0	N.D.	N.D.
Total Aroclor-1242			0	0	N.D.	N.D.
Total Aroclor-1248			0	0	N.D.	N.D.
Total Aroclor-1254			0	0	N.D.	N.D.
Total Aroclor-1260			0	0	N.D.	N.D.
34) L8 Toxaphene	14.40f	14.46	315385	513505	0.2083	0.6786 #
35) L8 Toxaphene {2}	14.59	14.80	431510	393486	0.3830	0.5192 #
36) L8 Toxaphene {3}	15.02	15.94	575851	585317	0.7357	0.5082 #
37) L8 Toxaphene {4}	15.13f	16.07	288749	914892	0.2451	0.5224 #
Total Toxaphene			1611496	2407200	1.5721	2.2285

COPY

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24456 SDG CDT85
Signature [signature]
Date APR 01 1996

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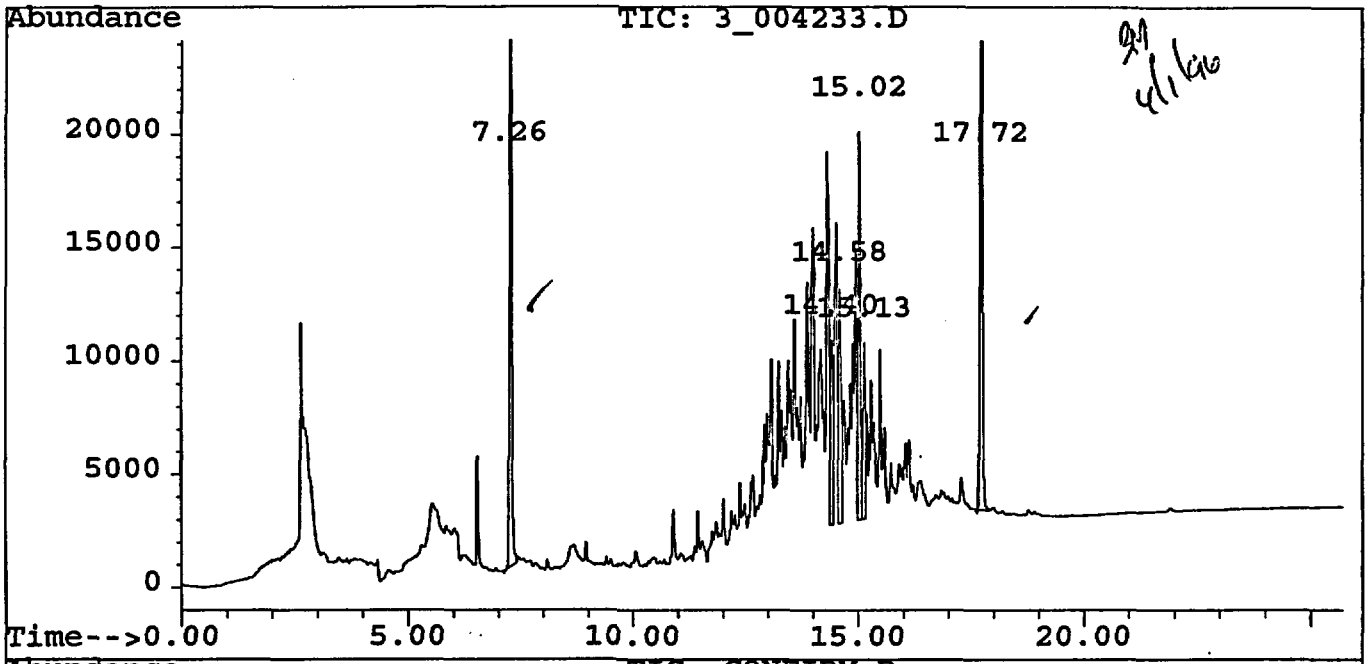
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

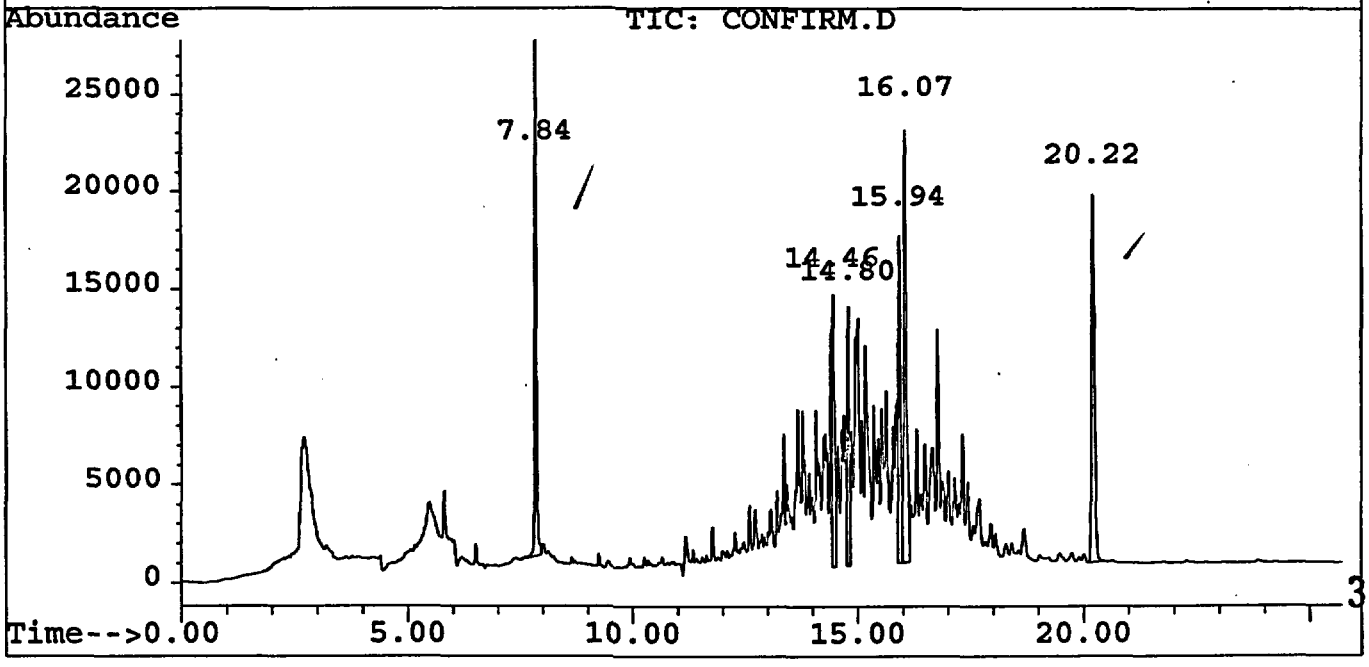
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004233.D Vial: 14
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004233.D\CONFIRM.D
Acq On : 26 Mar 96 03:58 Operator: HM
Sample : TOXAPH3D Inst : HP_03
Misc : 5-354-14 Multiplr: 0.0010
Quant Time: Mar 30 17:32 1996

Method : W:\HPCHEM\HP\3\METHODS\CLPPCC25.M
Title : PCB/TOXAPHENE
Last Update : Sat Mar 30 17:33:01 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004255.D Vial: 36
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004255.D\CONFIRM.D
Acq On : 26 Mar 96 15:23 Operator: HM
Sample : INDAM3K Inst : HP_03
Misc : 5-410-14 Multiplr: 0.0010
Quant Time: Mar 27 13:44 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
		Surrogate Compounds						
1)	S	TCX	7.26	7.84	748283	495910	0.0210	0.0186
					Recovery	=	105.00%	93.00%
22)	S	DCB	17.72	20.22	2082773	1598745	0.0429	0.0418
					Recovery	=	214.50%	209.00%
		Target Compounds						
2)	AE	alpha-BHC	8.95	9.24	855916	587259	0.0200	0.0198
)	MA	gamma-BHC (Lindane	9.68	10.01	850050	578122	0.0205	0.0200
)	MA	Heptachlor	10.04	10.64	928656	614317	0.0208	0.0202
5)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE	beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A	Endosulfan I	12.16	12.91	799503	572791	0.0225	0.0213
10)	B	gamma-Chlordane	0.00	0.00	0	0	N.D.d	N.D.
11)	B	alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.d
12)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13)	MA	Dieldrin	12.77	13.45	1599649	1169927	0.0456	0.0432
14)	MA	Endrin	13.12	14.10	1214082	854842	0.0430	0.0411
15)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16)	A	4,4'-DDD	13.73	14.22	1310879	990061	0.0481	0.0455
17)	MA	4,4'-DDT	14.00	14.74	1315714	924543	0.0451	0.0409
18)	B	Endrin Aldehyde	0.00	0.00	0	0	N.D.d	N.D.d
19)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20)	AE	Methoxychlor	14.99	16.41	3101414	2111825	0.2069	0.1987
21)	B	Endrin Ketone	0.00	0.00	0	0	N.D.d	N.D.d

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24456 SDG CQT35
Signature
Date APR 01 1996

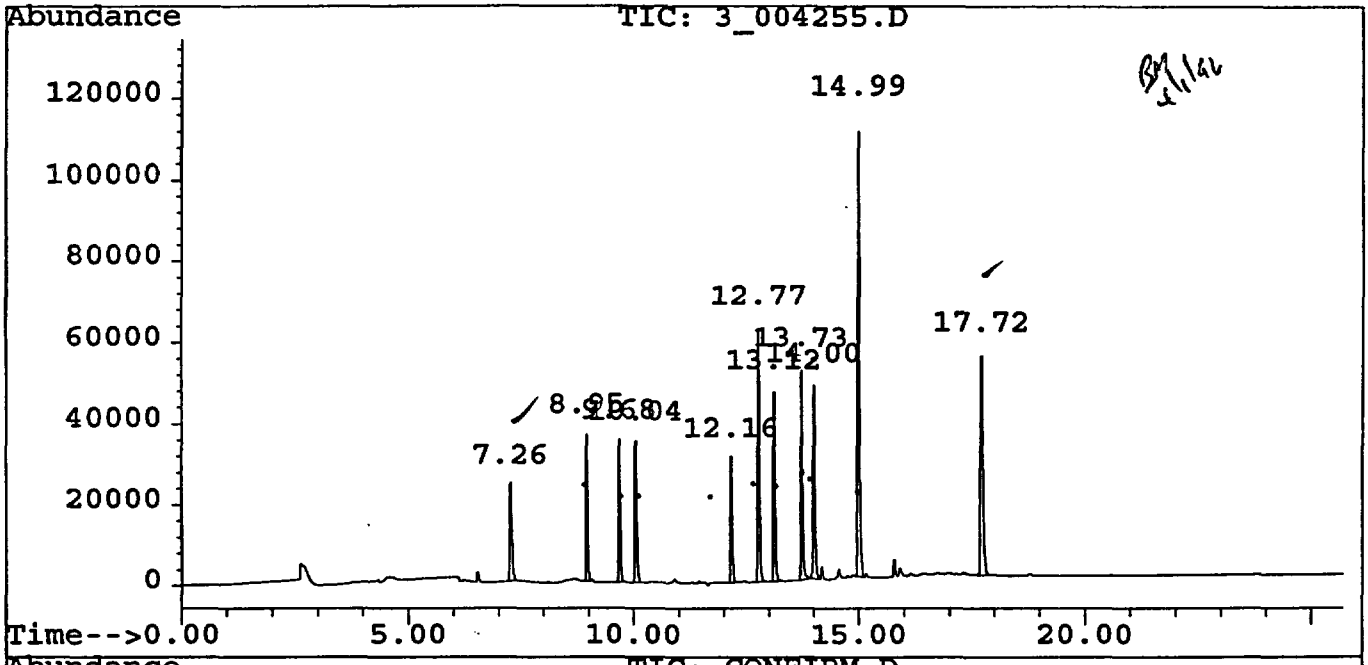
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted
3_004255.D OLM03C25.M Wed Mar 27 13:44:24 1996 Page 1

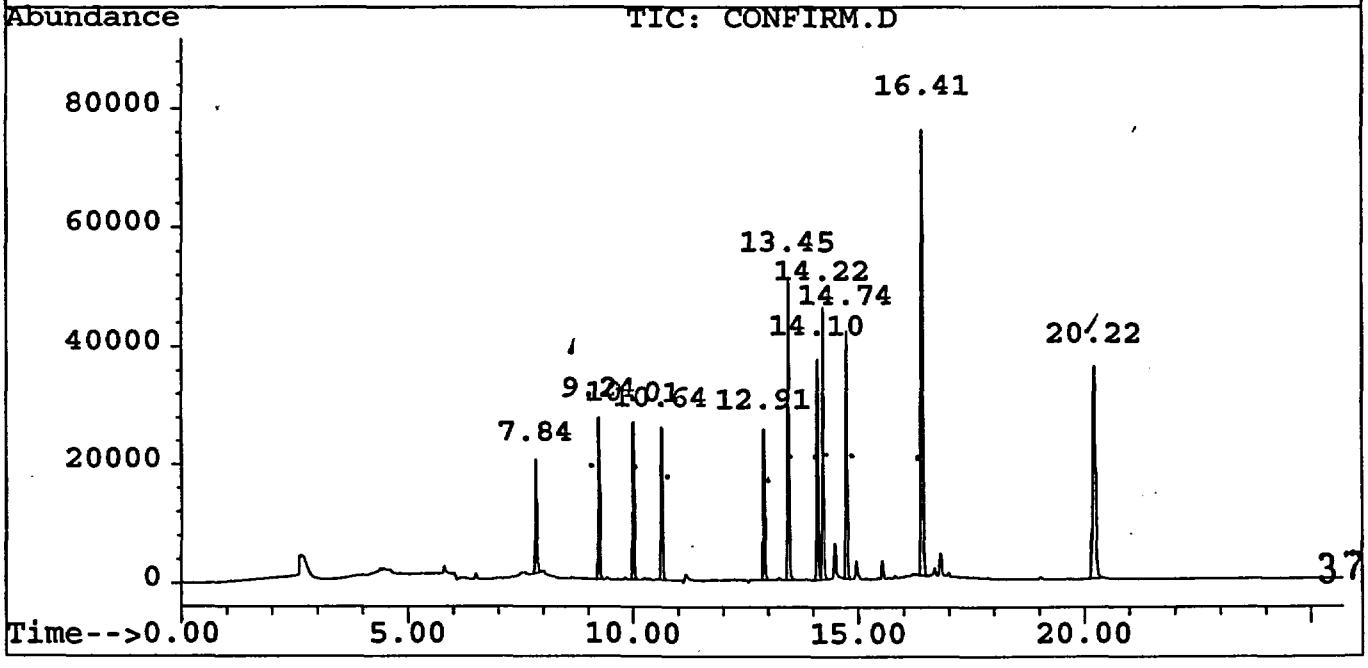
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004255.D Vial: 36
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004255.D\CONFIRM.D
Acq On : 26 Mar 96 15:23 Operator: HM
Sample : INDAM3K Inst : HP_03
Misc : 5-410-14 Multiplr: 0.0010
Quant Time: Mar 27 13:44 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Evaluate INDA Continuing Calibration Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004255.D Vial: 36
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004255.D\CONFIRM.D
Acq On : 26 Mar 96 15:23 Operator: HM
Sample : INDAM3K Inst : HP_03
Misc : 5-410-14 Multiplr: 0.0010

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Max. %D : 25% Max. R.T. Dev 0.20min

		Compound	MedRF	CCRF		%D	Dev(Min)
1	S	TCX	35.608	37.414	E3	5.1	0.00
2	AE	alpha-BHC	42.837	42.796	E3	-0.1	0.00
3	MAE	gamma-BHC (Lindane)	41.472	42.503	E3	2.5	0.00
4	MA	Heptachlor	44.595	46.433	E3	4.1	0.00
9	A	Endosulfan I	35.490	39.975	E3	12.6	0.00
13	MA	Dieldrin	35.107	39.991	E3	13.9	0.00
14	MAE	Endrin	28.224	30.352	E3	7.5	0.00
16	A	4,4'-DDD	27.280	32.772	E3	20.1	0.00
17	MAE	4,4'-DDT	29.166	32.893	E3	12.8	0.00
20	AE	Methoxychlor	14.987	15.507	E3	3.5	0.00
22	S	DCB	48.568	52.069	E3	7.2	0.00

Signal #2

		Compound	MedRF	CCRF		%D	Dev(Min)
1	S	TCX	26.620	24.795	E3	-6.9	0.00
2	AE	alpha-BHC	29.616	29.363	E3	-0.9	0.00
3	MAE	gamma-BHC (Lindane)	28.889	28.906	E3	0.1	0.00
4	MA	Heptachlor	30.421	30.716	E3	1.0	0.00
9	A	Endosulfan I	26.906	28.640	E3	6.4	0.00
13	MA	Dieldrin	27.070	29.248	E3	8.0	0.00
14	MAE	Endrin	20.788	21.371	E3	2.8	0.00
16	A	4,4'-DDD	21.738	24.752	E3	13.9	0.00
17	MAE	4,4'-DDT	22.615	23.114	E3	2.2	0.00
20	AE	Methoxychlor	10.631	10.559	E3	-0.7	0.00
22	S	DCB	38.275	39.969	E3	4.4	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
CONFIRM.D OLM03C25.M Wed Mar 27 13:44:55 1996 Page 1

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004256.D Vial: 37
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004256.D\CONFIRM.D
Acq On : 26 Mar 96 15:54 Operator: HM
Sample : INDBM3K Inst : HP_03
Misc : 5-413-14 Multiplr: 0.0010
Quant Time: Mar 27 13:45 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
		Surrogate Compounds						
1)	S	TCX	7.25	7.84	821349	558443	0.0231	0.0210
					Recovery	=	115.50%	105.00%
22)	S	DCB	17.71	20.21	2034055	1564080	0.0419	0.0409
					Recovery	=	209.50%	204.50%
		Target Compounds						
2)	AE	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
3)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
4)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB	Aldrin	10.51	11.26	859472	599846	0.0214	0.0210
6)	BE	beta-BHC	10.94	10.14	492578	322813	0.0207	0.0207
7)	B	delta-BHC	11.35	10.84	736935	571873	0.0217	0.0207
8)	B	Heptachlor Epoxide	11.70	12.27	874628	607220	0.0217	0.0211
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.d	N.D.d
10)	B	gamma-Chlordane	12.23	12.56	873938	602850	0.0219	0.0210
11)	B	alpha-Chlordane	12.35	12.84	827080	614029	0.0220	0.0211
12)	B	4,4'-DDE	12.45	13.25	1635934	1133003	0.0436	0.0424
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.
15)	B	Endosulfan II	13.88	14.40	1363070	1061673	0.0446	0.0425
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA	4,4'-DDT	0.00	0.00	0	0	N.D.d	N.D.
18)	B	Endrin Aldehyde	14.55	14.95	1072817	939443	0.0438	0.0419
19)	B	Endosulfan Sulfate	15.06	15.17	1252009	1047277	0.0443	0.0422
20)	AE	Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21)	B	Endrin Ketone	15.78	16.82	1332663	1196654	0.0439	0.0416

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 2/4/96 SDG CQT35
Signature [signature]
Date APR 01 1996

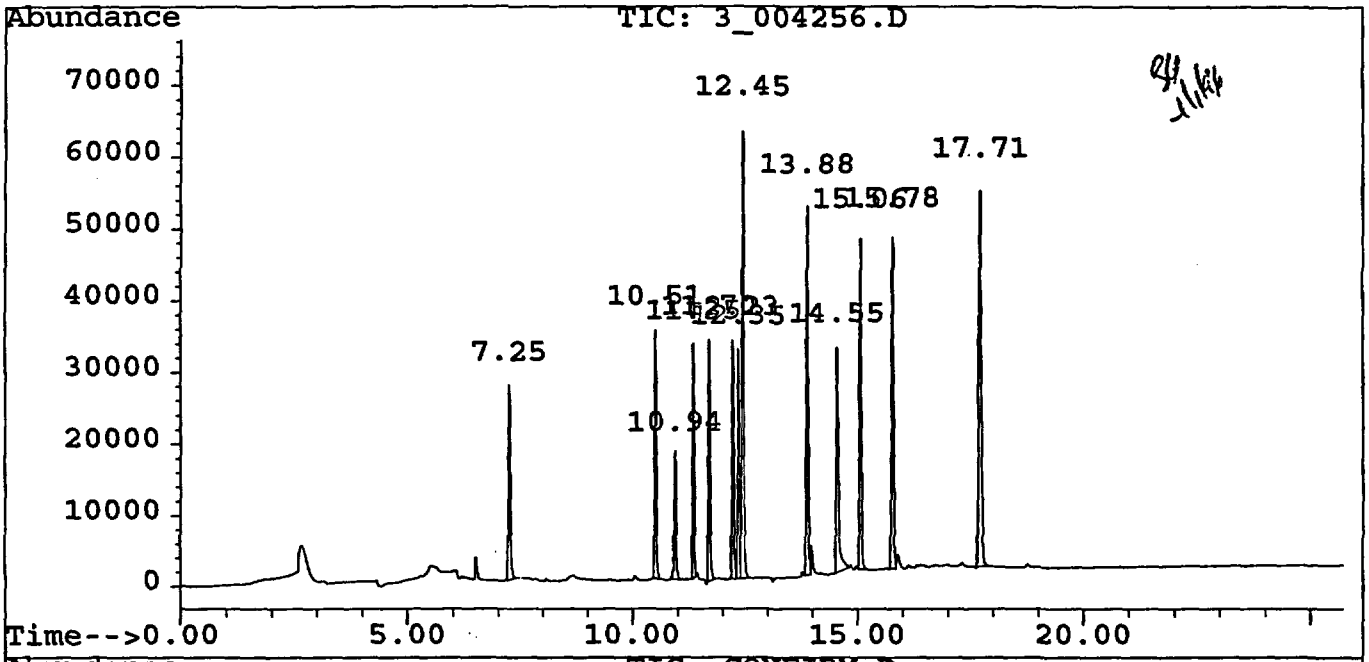
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted
3_004256.D OLM03C25.M Wed Mar 27 13:45:28 1996 Page 1

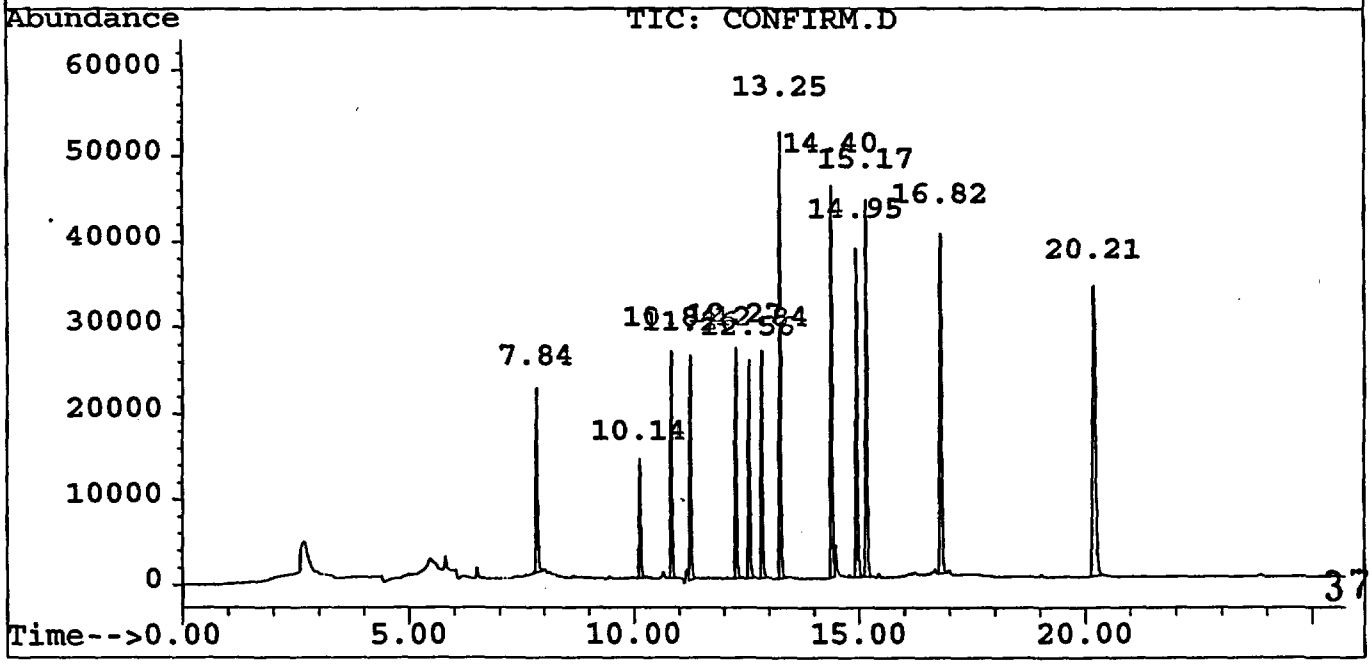
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004256.D Vial: 37
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004256.D\CONFIRM.D
Acq On : 26 Mar 96 15:54 Operator: HM
Sample : INDBM3K Inst : HP_03
Misc : 5-413-14 Multiplr: 0.0010
Quant Time: Mar 27 13:45 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Evaluate INDB Continuing Calibration Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004256.D Vial: 37
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004256.D\CONFIRM.D
Acq On : 26 Mar 96 15:54 Operator: HM
Sample : INDBM3K Inst : HP_03
Misc : 5-413-14 Multiplr: 0.0010

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Max. %D : 25% Max. R.T. Dev 0.20min

		Compound	MedRF	CCRF		%D	Dev(Min)
1	S	TCX	35.608	41.067	E3	15.3	0.00
5	MB	Aldrin	40.194	42.974	E3	6.9	0.00
6	BE	beta-BHC	23.755	24.629	E3	3.7	0.00
7	B	delta-BHC	33.920	36.847	E3	8.6	0.00
8	B	Heptachlor Epoxide	40.329	43.731	E3	8.4	0.00
10	B	gamma-Chlordane	39.919	43.697	E3	9.5	0.00
11	B	alpha-Chlordane	37.651	41.354	E3	9.8	0.00
12	B	4,4'-DDE	37.499	40.898	E3	9.1	0.00
15	B	Endosulfan II	30.533	34.077	E3	11.6	0.00
18	B	Endrin Aldehyde	24.470	26.820	E3	9.6	0.00
19	B	Endosulfan Sulfate	28.281	31.300	E3	10.7	0.00
[illegible]	B	Endrin Ketone	30.390	33.317	E3	9.6	0.00
[illegible]	S	DCB	48.568	50.851	E3	4.7	0.00

Signal #2

		Compound	MedRF	CCRF		%D	Dev(Min)
1	S	TCX	26.620	27.922	E3	4.9	0.00
5	MB	Aldrin	28.557	29.992	E3	5.0	0.00
6	BE	beta-BHC	15.600	16.141	E3	3.5	0.00
7	B	delta-BHC	27.616	28.594	E3	3.5	0.00
8	B	Heptachlor Epoxide	28.726	30.361	E3	5.7	0.00
10	B	gamma-Chlordane	28.728	30.142	E3	4.9	0.00
11	B	alpha-Chlordane	29.112	30.701	E3	5.5	0.00
12	B	4,4'-DDE	26.690	28.325	E3	6.1	0.00
15	B	Endosulfan II	24.986	26.542	E3	6.2	0.00
18	B	Endrin Aldehyde	22.423	23.486	E3	4.7	0.00
19	B	Endosulfan Sulfate	24.810	26.182	E3	5.5	0.00
21	B	Endrin Ketone	28.766	29.916	E3	4.0	0.00
22	S	DCB	38.275	39.102	E3	2.2	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
CONFIRM.D OLM03C25.M Wed Mar 27 13:45:59 1996 Page 1

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKWE

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

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

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

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

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/22/96

Concentrated Extract Volume: 10000(uL) Date Analyzed: 03/26/96

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 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
7421-93-4	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

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004261.D Vial: 42
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004261.D\CONFIRM.D
Acq On : 26 Mar 96 18:36 Operator: HM
Sample : PBLKW6 Inst : HP_03
Misc : BL0322WE Multiplr: 0.0100
Quant Time: Mar 30 11:24 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Mar 30 11:24:04 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ug/L	ug/L	
		Surrogate Compounds							
1)	S	TCX	7.25	7.84	868586	484018	0.2439	0.1818	#
					Recovery	=	121.95%	90.90%	
22)	S	DCB	17.71	20.22	1190268	893934	0.2451	0.2336	
					Recovery	=	122.55%	116.80%	
		Target Compounds							
2)	AE	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.	
3)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.	
5)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.	
6)	BE	beta-BHC	0.00	0.00	0	0	N.D.	N.D.	
7)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.	
8)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.	
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.	
10)	B	gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
11)	B	alpha-Chlordane	0.00	12.78f	0	188943	N.D.	0.0649	#
12)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.	
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.	
14)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.	
15)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.	
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.	
17)	MA	4,4'-DDT	0.00	0.00	0	0	N.D.	N.D.	
18)	B	Endrin Aldehyde	0.00	14.98	0	393658	N.D.	0.1756	#
19)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.	
20)	AE	Methoxychlor	14.98	0.00	292756	0	0.1953	N.D.	#
21)	B	Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.	

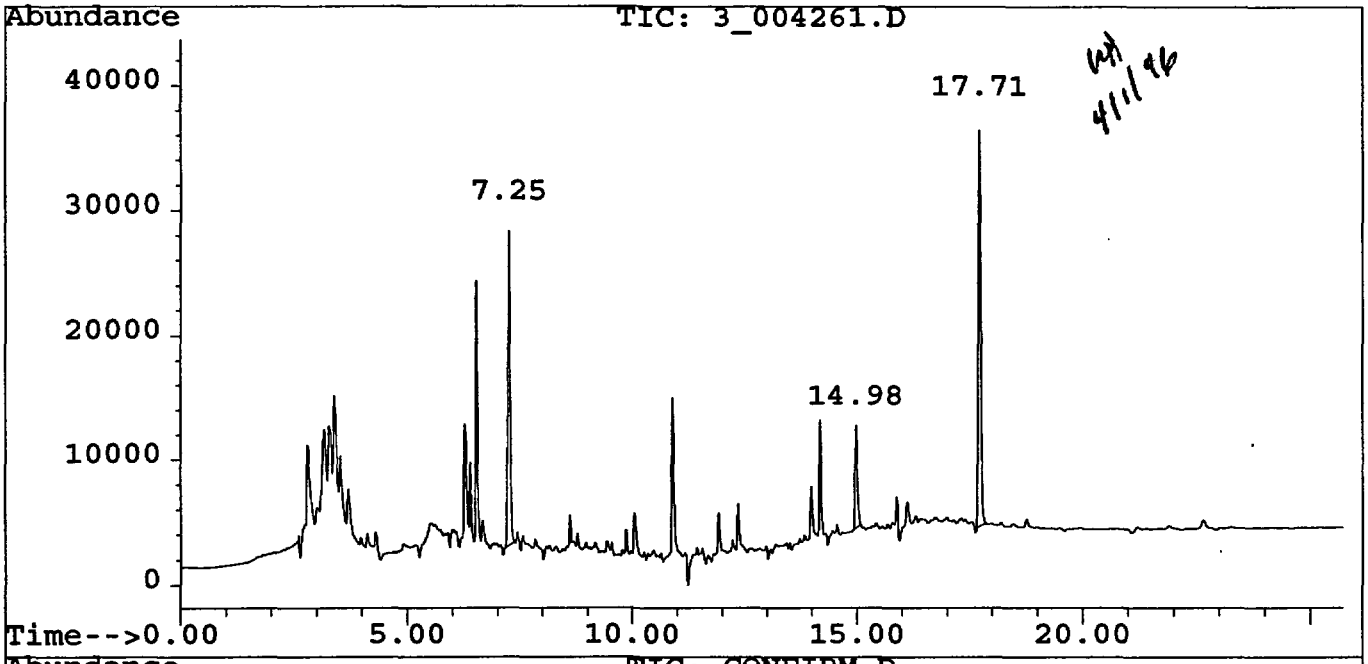
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

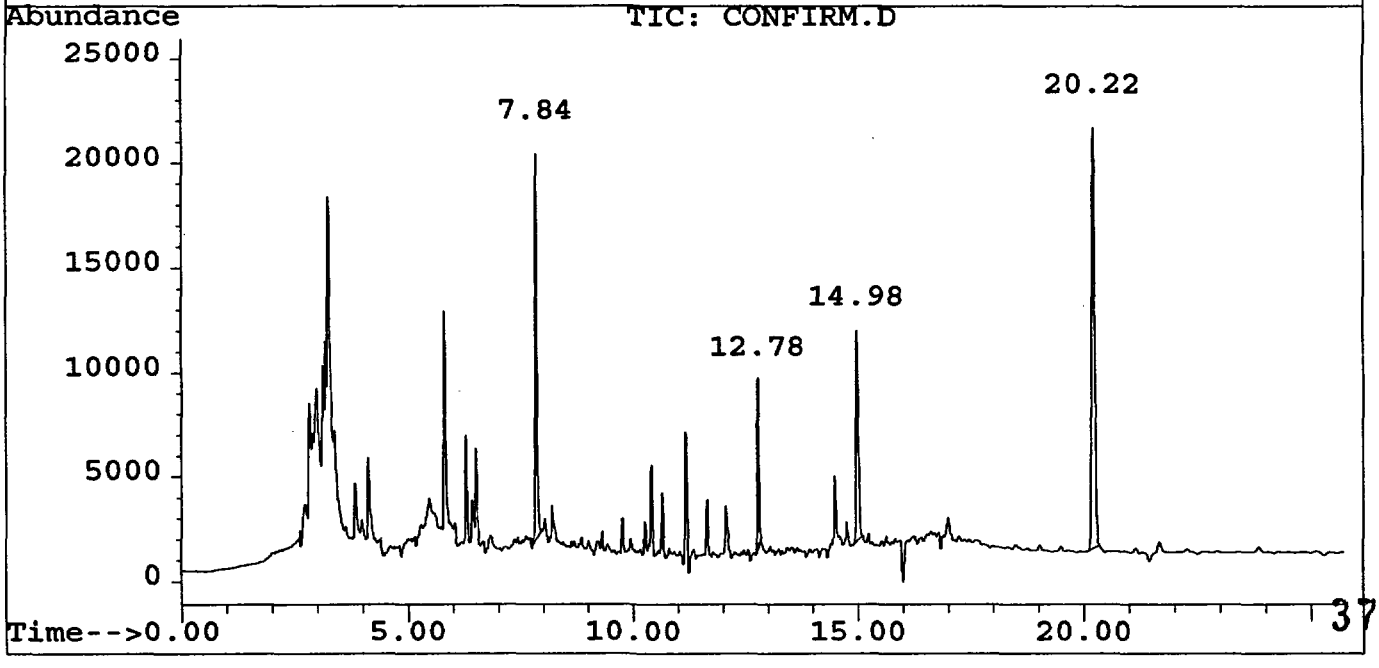
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004261.D Vial: 42
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004261.D\CONFIRM.D
Acq On : 26 Mar 96 18:36 Operator: HM
Sample : PBLKW Inst : HP_03
Misc : BL0322WE Multiplr: 0.0100
Quant Time: Mar 30 11:24 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Mar 30 11:24:04 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK3U

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 5-394-14

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

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

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:_____

Concentrated Extract Volume: _____ (uL) Date Analyzed: 03/26/96

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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
7421-93-4	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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK3U

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 5-394-14

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

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

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:_____

Concentrated Extract Volume: _____ (uL) Date Analyzed: 03/26/96

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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
7421-93-4	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

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004240.D Vial: 21
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004240.D\CONFIRM.D
Acq On : 26 Mar 96 07:33 Operator: HM
Sample : PIBLK3U Inst : HP_03
Misc : 5-394-14 Multiplr: 0.0010
Quant Time: Mar 27 13:40 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

		Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
		Surrogate Compounds						
1)	S	TCX	7.26	7.84	947355	713246	0.0266	0.0268
					Recovery	=	133.00%	134.00%
22)	S	DCB	17.72	20.22	1087309	879600	0.0224	0.0230
					Recovery	=	112.00%	115.00%
		Target Compounds						
2)	AE	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE	beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
10)	B	gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11)	B	alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
12)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.
15)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA	4,4'-DDT	13.99	0.00	153548	0	0.0053	N.D. #
18)	B	Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20)	AE	Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21)	B	Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24156 SDG CQT35
Signature Caroline Bauder
Date APR 01 1996

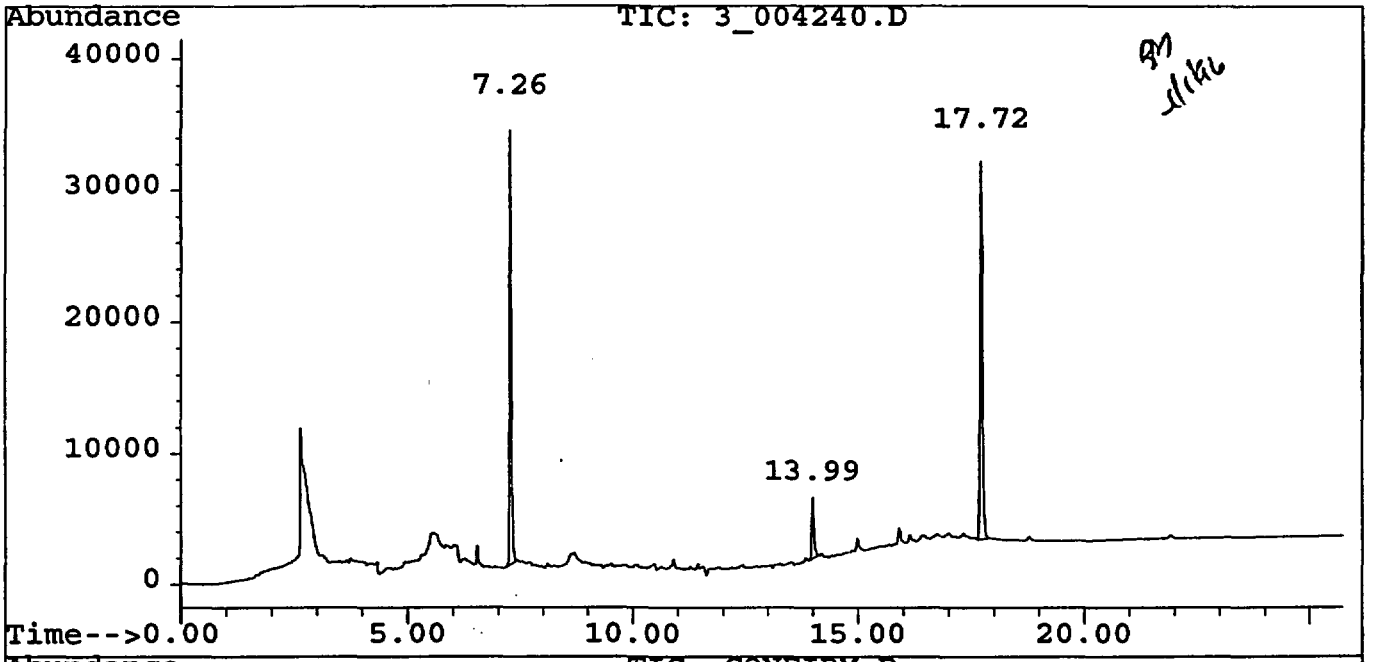
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

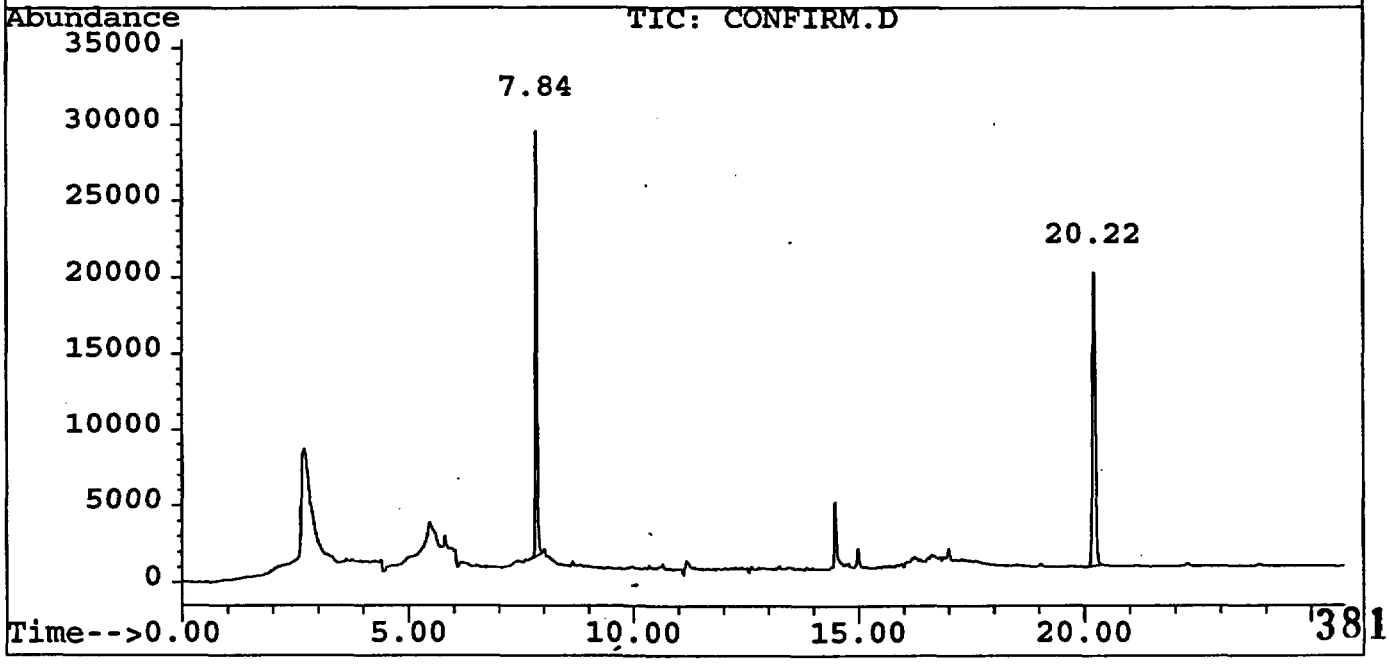
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004240.D Vial: 21
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004240.D\CONFIRM.D
Acq On : 26 Mar 96 07:33 Operator: HM
Sample : PIBLK3U Inst : HP_03
Misc : 5-394-14 Multiplr: 0.0010
Quant Time: Mar 27 13:40 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK3V

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 5-394-14

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

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

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:_____

Concentrated Extract Volume: _____ (uL) Date Analyzed: 03/26/96

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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
7421-93-4	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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK3V

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 5-394-14

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

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

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:_____

Concentrated Extract Volume: _____ (uL) Date Analyzed: 03/26/96

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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
7421-93-4	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

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004254.D Vial: 35
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004254.D\CONFIRM.D
Acq On : 26 Mar 96 14:45 Operator: HM
Sample : PIBLK3V Inst : HP_03
Misc : 5-394-14 Multiplr: 0.0010
Quant Time: Mar 27 13:43 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

	Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol
	Surrogate Compounds						
1)	S TCX	7.26	7.84	1057234	741558	0.0297	0.0279
				Recovery	=	148.50%	139.50%
22)	S DCB	17.71	20.21	1138432	910759	0.0234	0.0238
				Recovery	=	117.00%	119.00%
	Target Compounds						
2)	AE alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
)	MA gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
)	MA Heptachlor	0.00	0.00	0	0	N.D.	N.D.
5)	MB Aldrin	0.00	0.00	0	0	N.D.	N.D.
6)	BE beta-BHC	0.00	0.00	0	0	N.D.	N.D.
7)	B delta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
9)	A Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
10)	B gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
11)	B alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
12)	B 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
13)	MA Dieldrin	0.00	0.00	0	0	N.D.	N.D.
14)	MA Endrin	0.00	0.00	0	0	N.D.	N.D.
15)	B Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
16)	A 4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
17)	MA 4,4'-DDT	13.98	0.00	146888	0	0.0050	N.D. #
18)	B Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
19)	B Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
20)	AE Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
21)	B Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24/56 SDG C0T35
Signature [signature]
Date APR 01 1996

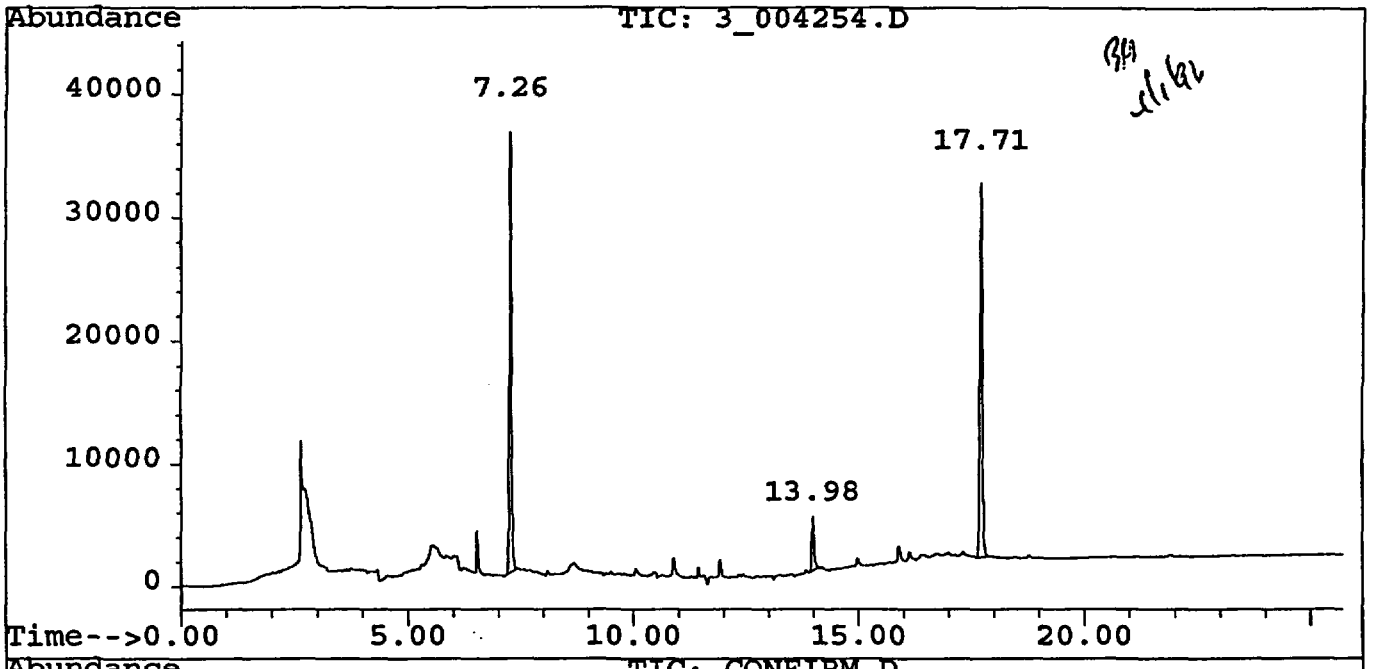
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted

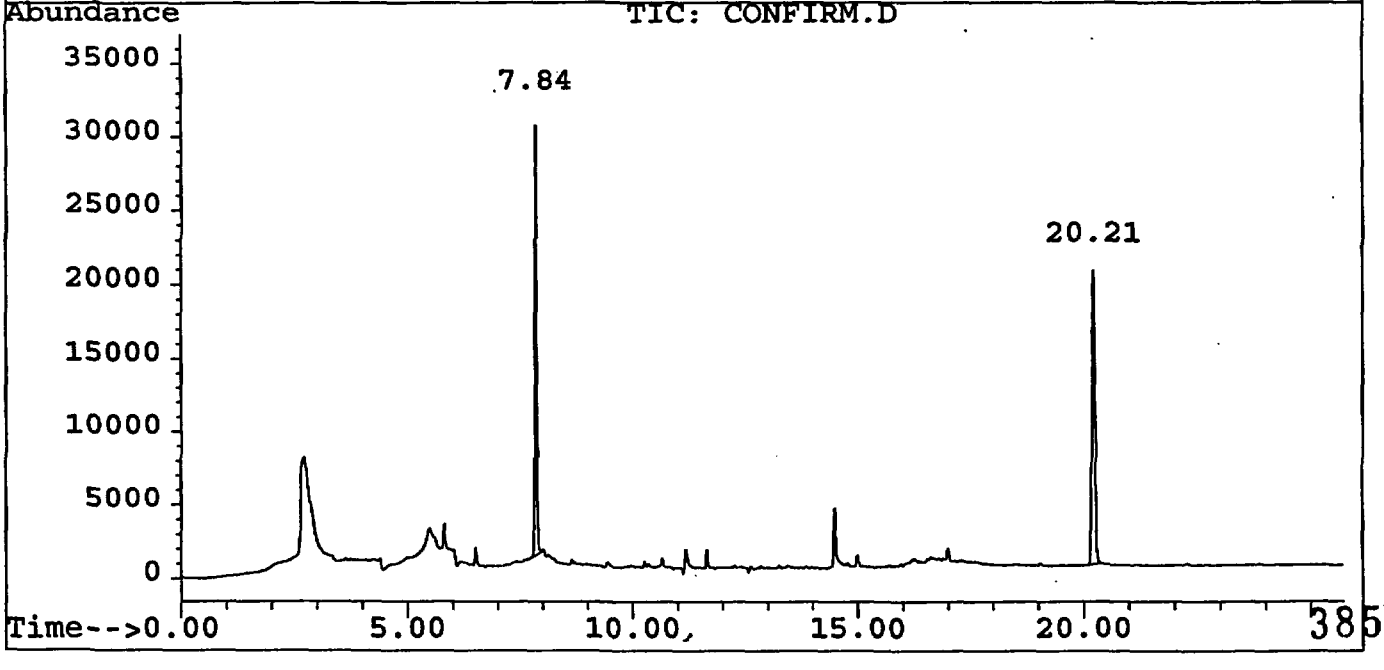
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004254.D Vial: 35
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004254.D\CONFIRM.D
Acq On : 26 Mar 96 14:45 Operator: HM
Sample : PIBLK3V Inst : HP_03
Misc : 5-394-14 Multiplr: 0.0010
Quant Time: Mar 27 13:43 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





385

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK3W

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 5-394-14

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

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

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:_____

Concentrated Extract Volume: _____ (uL) Date Analyzed: 03/27/96

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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
7421-93-4	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

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLK3W

Lab Name: SWL-TULSA Contract: 68-D5-0022

Lab Code: AATS Case No.: 24501 SAS No.: SDG No.: FEM97

Matrix: (soil/water) WATER Lab Sample ID: 5-394-14

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

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

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:_____

Concentrated Extract Volume: _____ (uL) Date Analyzed: 03/27/96

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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
7421-93-4	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

Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004276.D Vial: 57
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004276.D\CONFIRM.D
Acq On : 27 Mar 96 02:18 Operator: HM
Sample : PIBLK3W Inst : HP_03
Misc : 5-394-14 Multiplr: 0.0010
Quant Time: Mar 27 13:46 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B

	Compound	RT#1	RT#2	Resp#1	Resp#2	ngonCol	ngonCol	
	Surrogate Compounds							
1)	S TCX	7.26	7.84	1060007	635319	0.0298	0.0239	
				Recovery	=	149.00%	119.50%	
22)	S DCB	17.72	20.22	858319	487762	0.0177	0.0127	#
				Recovery	=	88.50%	63.50%	
	Target Compounds							
2)	AE alpha-BHC	0.00	0.00	0	0	N.D.	N.D.	
3)	MA gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.	
4)	MA Heptachlor	0.00	0.00	0	0	N.D.	N.D.	
5)	MB Aldrin	0.00	0.00	0	0	N.D.	N.D.	
6)	BE beta-BHC	0.00	0.00	0	0	N.D.	N.D.	
7)	B delta-BHC	0.00	0.00	0	0	N.D.	N.D.	
8)	B Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.	
9)	A Endosulfan I	0.00	0.00	0	0	N.D.	N.D.	
10)	B gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
11)	B alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.	
12)	B 4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.	
13)	MA Dieldrin	0.00	0.00	0	0	N.D.	N.D.	
14)	MA Endrin	0.00	0.00	0	0	N.D.	N.D.	
15)	B Endosulfan II	0.00	0.00	0	0	N.D.	N.D.	
16)	A 4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.	
17)	MA 4,4'-DDT	13.98	0.00	34992	0	0.0012	N.D.	#
18)	B Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.	
19)	B Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.	
20)	AE Methoxychlor	0.00	0.00	0	0	N.D.	N.D.	
21)	B Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.	

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24456 SDG CQT35
Signature Lamelene Bauder
Date APR 01 1996

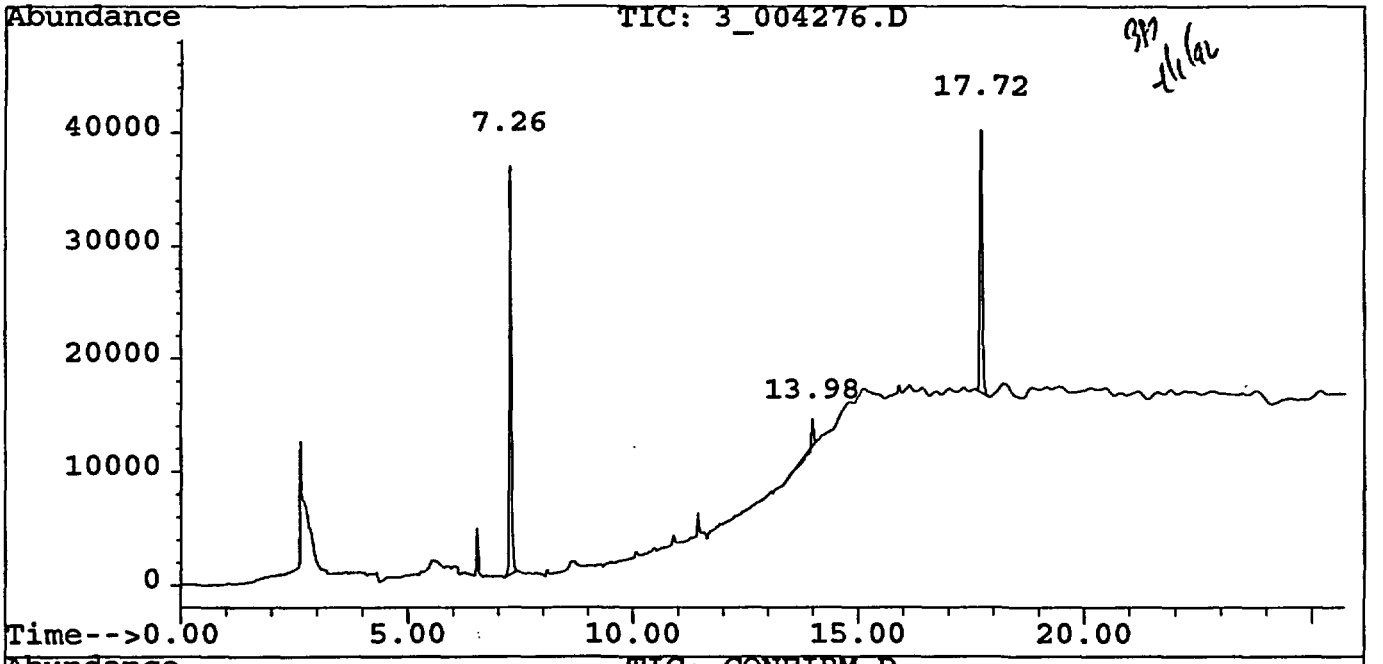
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
(E)= > Highest calibration standard (d)=compound deleted
3_004276.D OLM03C25.M Wed Mar 27 13:47:00 1996 Page 1

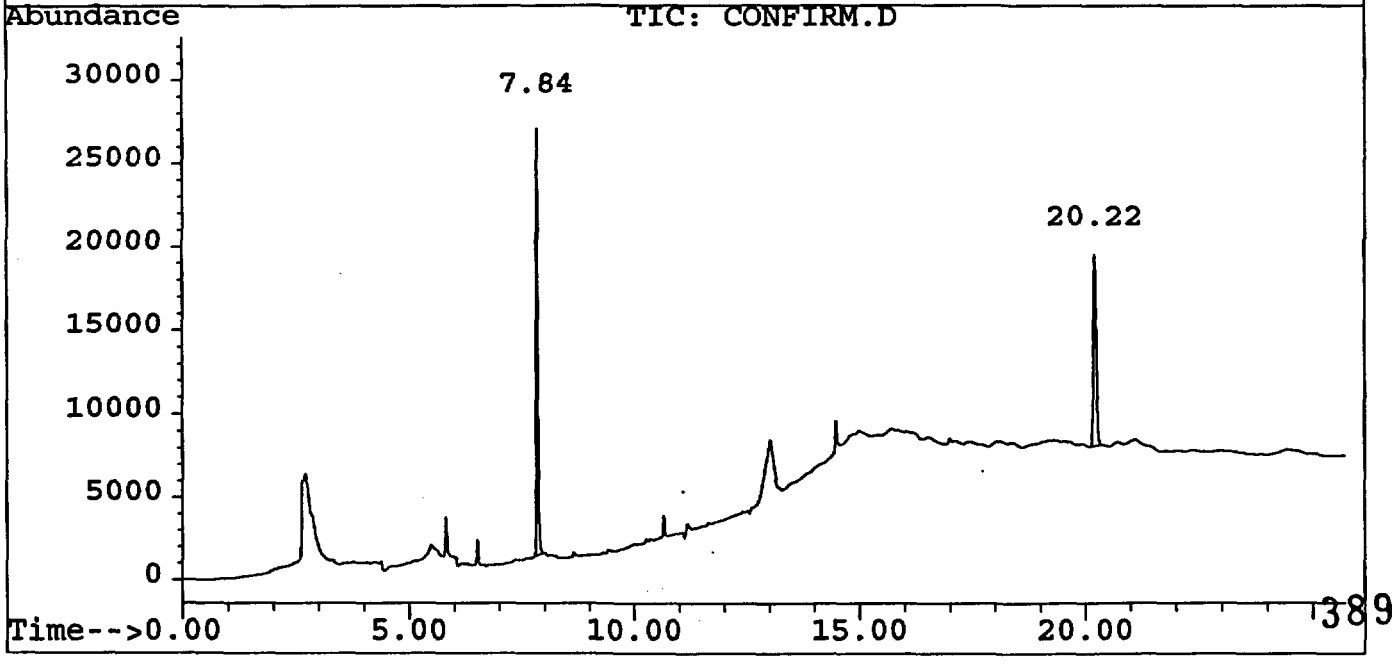
Quantitation Report

Signal #1 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004276.D Vial: 57
Signal #2 : W:\HPCHEM\HP\3\DATA\03_25_96\3_004276.D\CONFIRM.D
Acq On : 27 Mar 96 02:18 Operator: HM
Sample : PIBLK3W Inst : HP_03
Misc : 5-394-14 Multiplr: 0.0010
Quant Time: Mar 27 13:46 1996

Method : W:\HPCHEM\HP\3\METHODS\OLM03C25.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Tue Mar 26 10:04:18 1996
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-1701 Signal #2 Phase: DB-17
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_03A Signal #2 Inst : HP_03B





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Quantitation Report

Signal #1 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005790.D Vial: 8
Signal #2 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005790.D\CONFIRM.D
Acq On : 29 Sep 95 22:58 Operator: JM
Sample : FLO 943355 Inst : HP_02
Misc : 943355 LOT Multiplr: 0.0010
Quant Time: Sep 30 11:32 1995

Method : G:\HPCHEM\HP\2\METHODS\OLM0328F.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Sep 30 11:30:23 1995
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-17 Signal #2 Phase: DB-1701
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_02A Signal #2 Inst : HP_02B

		Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
		Surrogate Compounds						
2)	S	TCX	7.57	7.70	410037	745238	0.0214	0.0211
					Recovery	=	107.00%	105.50%
23)	S	DCB	21.65	20.36	834434	1192759	0.0411	0.0409
					Recovery	=	205.50%	204.50%
		Target Compounds						
1)		TCP	5.28	0.00	65887	0	0.0020	N.D.E#
3)	AP	alpha-BHC	9.10	9.65	443590	712469	0.0215	0.0213
4)	MA	gamma-BHC (Lindane	9.94	10.47	447653	711072	0.0214	0.0209
5)	MA	Heptachlor	10.62	10.89	464923	677648	0.0208	0.0208
6)	MB	Aldrin	11.24f	0.00	28805	0	0.0005	N.D. #
7)	BP	beta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
9)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
10)	A	Endosulfan I	13.12	13.29	366603	589473	0.0207	0.0204
11)	B	gamma-Chlordane	0.00	13.29	0	589473	N.D.	0.0204 #
12)	B	alpha-Chlordane	12.99f	13.46	16144	4396	0.0003	0.0001 #
13)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Dieldrin	13.71	13.97	757542	1241434	0.0422	0.0412
15)	MA	Endrin	14.42	14.36	534872	920477	0.0410	0.0423
16)	B	Endosulfan II	14.78f	0.00	17113	0	0.0005	N.D. #
17)	A	4,4'-DDD	14.55	15.06	614784	1489337	0.0408	0.0636 #
18)	MA	4,4'-DDT	15.14	15.39	491821	697637	0.0408	0.0449
19)	B	Endrin Aldehyde	15.43	0.00	468755	0	0.0194	N.D. #
20)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
21)	AP	Methoxychlor	17.12	16.65	1420291	1695903	0.1998	0.1953
22)	B	Endrin Ketone	17.62	17.94	49811	69982	0.0013	0.0319 #

DOC
ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24155 SDG DCM14
Signature [illegible]
Date 2/28/96

390

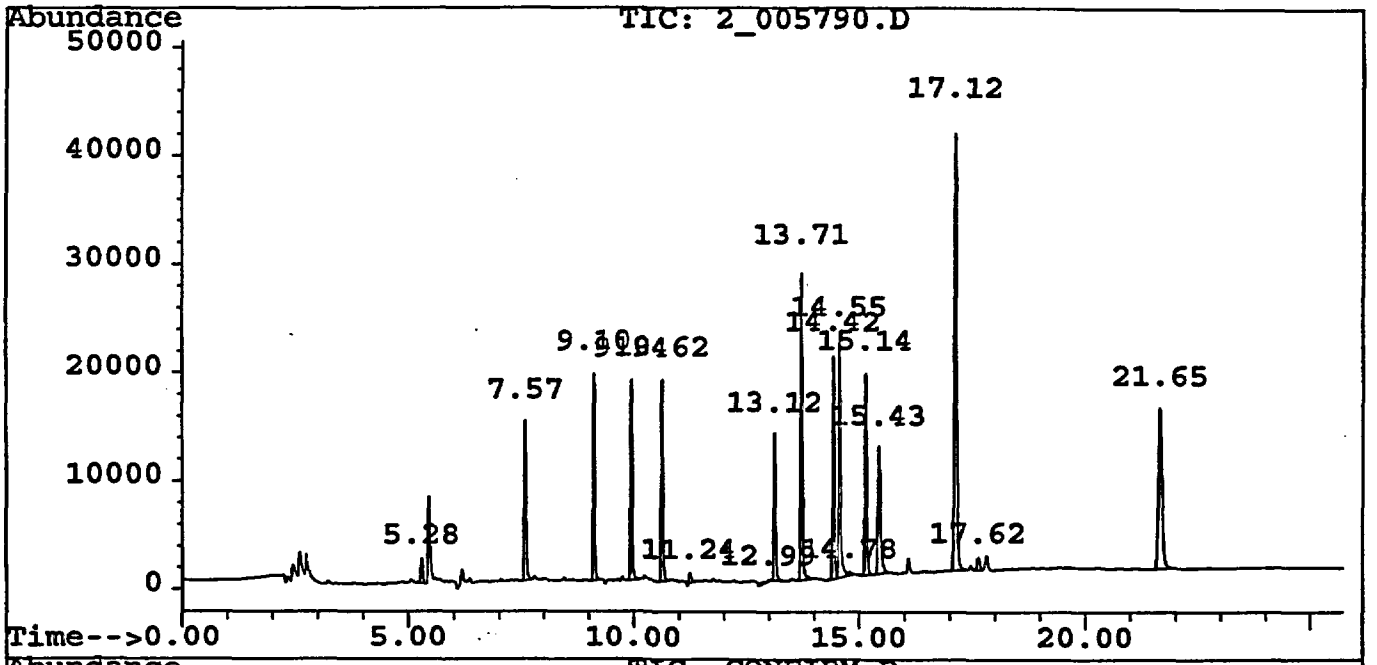
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

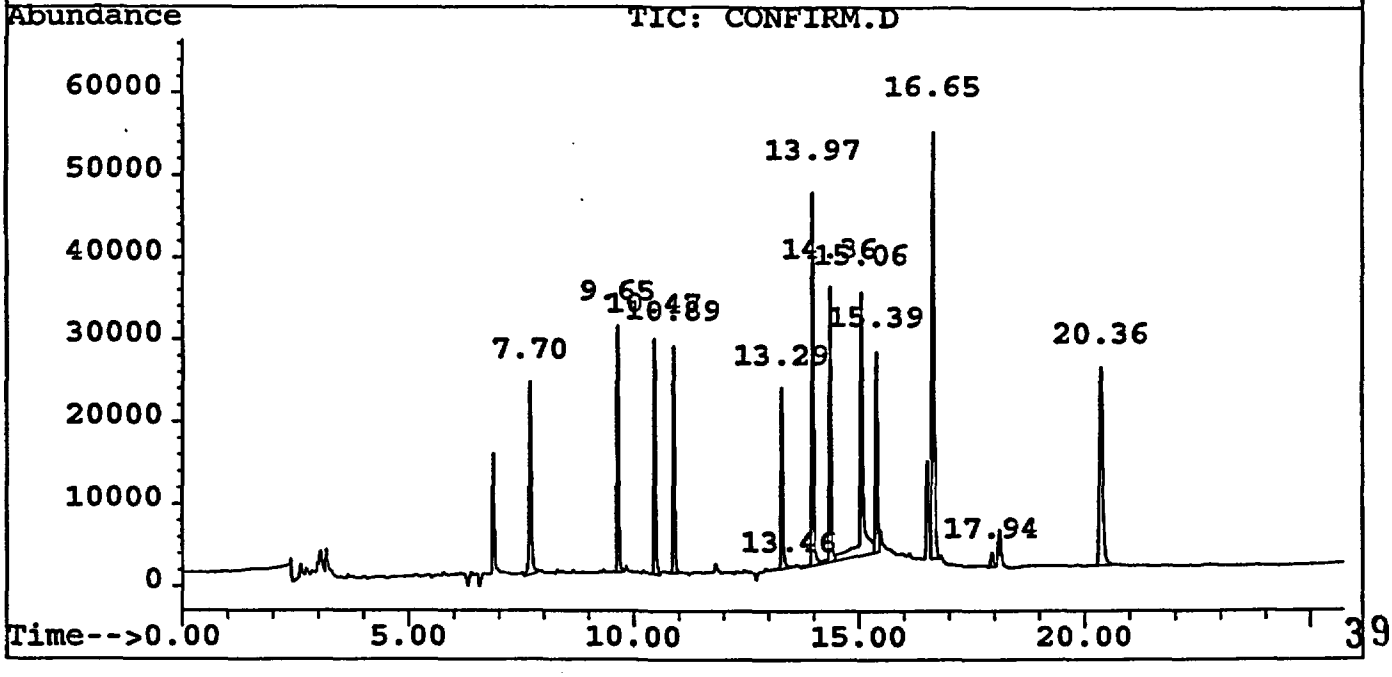
Quantitation Report

Signal #1 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005790.D Vial: 8
Signal #2 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005790.D\CONFIRM.D
Acq On : 29 Sep 95 22:58 Operator: JM
Sample : FLO 943355 Inst : HP_02
Misc : 943355 LOT Multiplr: 0.0010
Quant Time: Sep 30 11:32 1995

Method : G:\HPCHEM\HP\2\METHODS\OLM0328F.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Sep 30 11:30:23 1995
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-17 Signal #2 Phase: DB-1701
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_02A Signal #2 Inst : HP_02B





Quantitation Report

Signal #1 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005791.D Vial: 9
Signal #2 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005791.D\CONFIRM.D
Acq On : 29 Sep 95 23:29 Operator: JM
Sample : TCP Inst : HP_02
Misc : 943355 LOT Multiplr: 0.0010
Quant Time: Sep 30 11:27 1995

Method : G:\HPCHEM\HP\2\METHODS\OLM0328F.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Sep 30 11:27:42 1995
Response via : Single Level Calibration

GL
FLORISIL
LOT 943355

use 2-005790

Volume Inj. : 1uL
Signal #1 Phase : DB-17 Signal #2 Phase: DB-1701
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_02A Signal #2 Inst : HP_02B

		Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
		Surrogate Compounds						
2)	S	TCX	0.00	7.67f	0	27565	N.D.	0.0008 #
					Recovery	=	0.00%	4.00%
23)	S	DCB	0.00	0.00	0	0	N.D.	N.D.
					Recovery	=	0.00%	0.00%
		Target Compounds						
1)		TCP	5.29	0.00	3244021	0	0.1000	N.D.E#
3)	AP	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.
4)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.
5)	MA	Heptachlor	0.00	0.00	0	0	N.D.	N.D.
6)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.
7)	BP	beta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
9)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
10)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.
11)	B	gamma-Chlordane	0.00	0.00	0	0	N.D.	N.D.
12)	B	alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
13)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.
15)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.
16)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
17)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.
18)	MA	4,4'-DDT	15.20f	0.00	12993	0	0.0011	N.D. #
19)	B	Endrin Aldehyde	0.00	0.00	0	0	N.D.	N.D.
20)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
21)	AP	Methoxychlor	0.00	0.00	0	0	N.D.	N.D.
22)	B	Endrin Ketone	0.00	0.00	0	0	N.D.	N.D.

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24155 SDG DKM14
Signature [signature]
Date 2/28/96

392

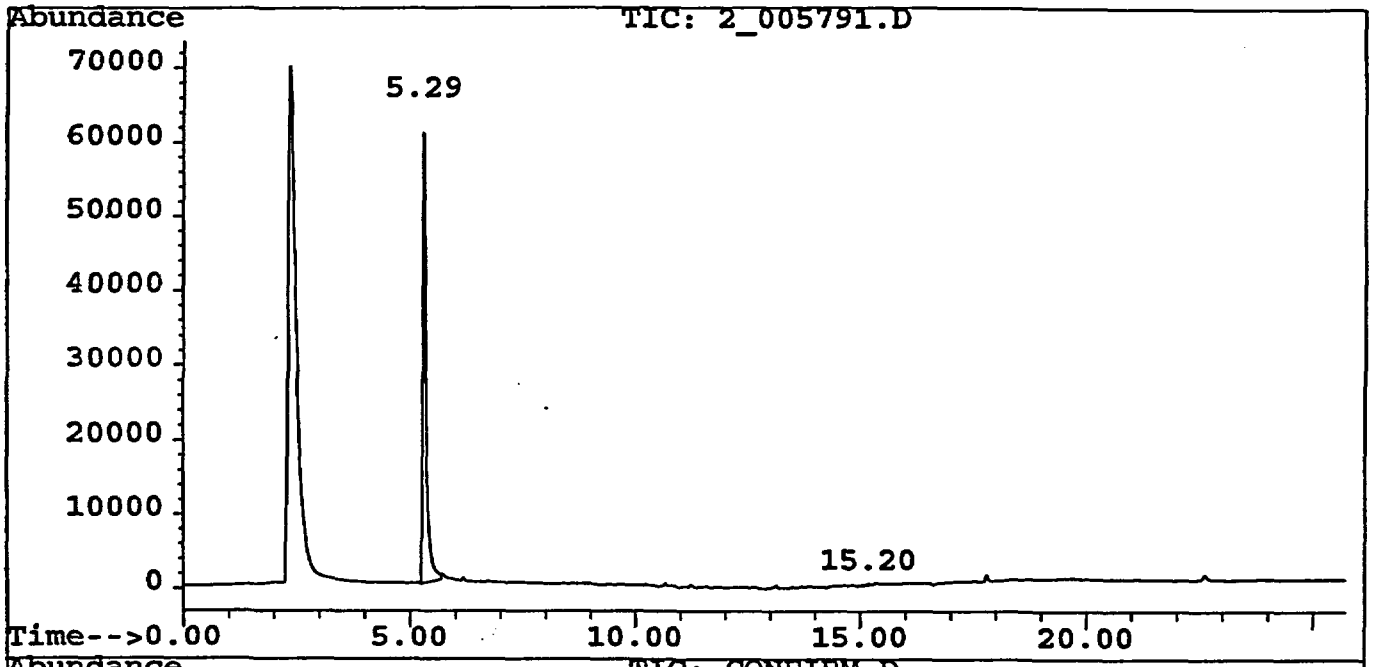
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

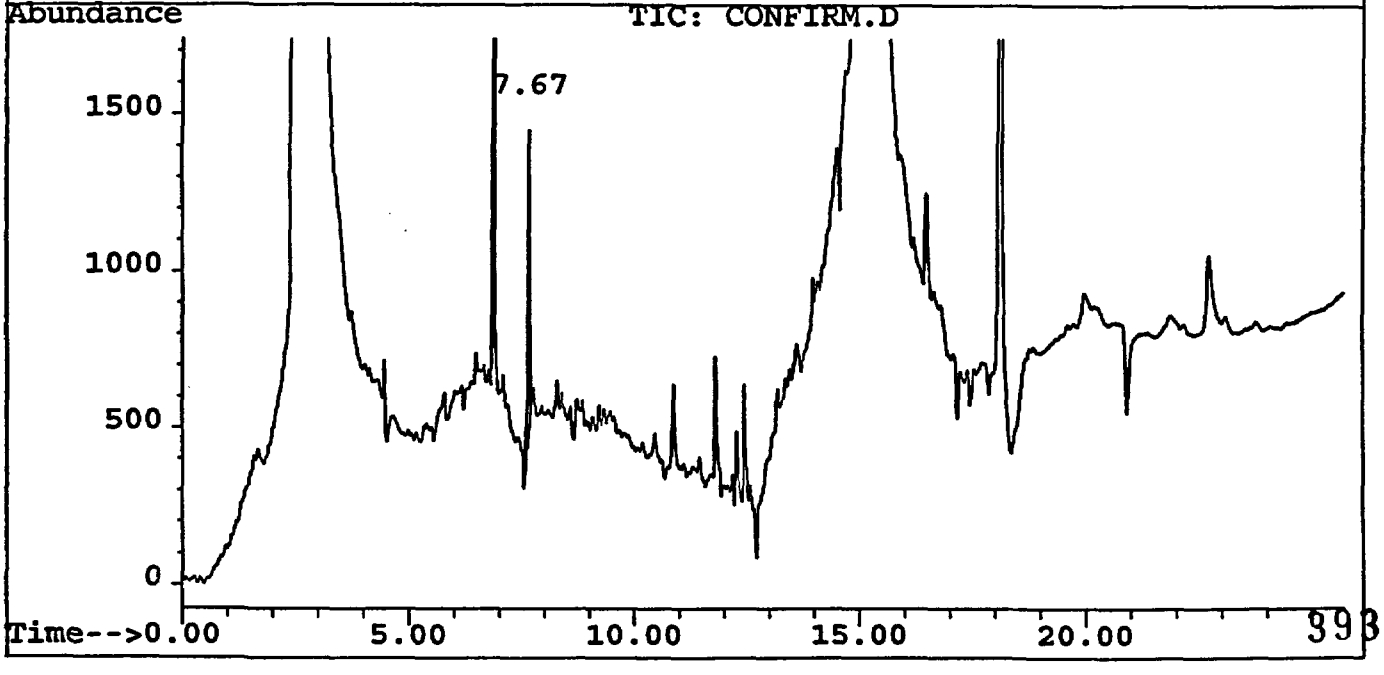
Quantitation Report

Signal #1 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005791.D Vial: 9
Signal #2 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005791.D\CONFIRM.D
Acq On : 29 Sep 95 23:29 Operator: JM
Sample : TCP Inst : HP_02
Misc : 943355 LOT Multiplr: 0.0010
Quant Time: Sep 30 11:27 1995

Method : G:\HPCHEM\HP\2\METHODS\OLM0328F.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Sep 30 11:27:42 1995
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-17 Signal #2 Phase: DB-1701
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_02A Signal #2 Inst : HP_02B





Quantitation Report

Signal #1 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005786.D Vial: 4
Signal #2 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005786.D\CONFIRM.D
Acq On : 29 Sep 95 20:52 Operator: JM
Sample : FLORISIL INDA Inst : HP_02
Misc : 943355 LOT Multiplr: 0.0010
Quant Time: Sep 29 22:20 1995

Method : G:\HPCHEM\HP\2\METHODS\OLM0328F.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Fri Sep 29 22:20:06 1995
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-17 Signal #2 Phase: DB-1701
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_02A Signal #2 Inst : HP_02B

		Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2
		Surrogate Compounds						
2)	S	TCX	7.57	7.70	383292	706308	0.0200	0.0200
					Recovery		= 100.00%	100.00%
23)	S	DCB	21.66	20.37	812689	1166357	0.0400	0.0400
					Recovery		= 200.00%	200.00%
		Target Compounds						
1)		TCP	0.00	0.00	0	0	N.D.	N.D.E
3)	AP	alpha-BHC	9.10	9.65	412688	667420	0.0200	0.0200
4)	MA	gamma-BHC (Lindane	9.94	10.47	417806	680563	0.0200	0.0200
5)	MA	Heptachlor	10.62	10.89	446265	652055	0.0200	0.0200
6)	MB	Aldrin	0.00	0.00	0	0	N.D.	N.D.
7)	BP	beta-BHC	0.00	0.00	0	0	N.D.	N.D.
8)	B	delta-BHC	0.00	0.00	0	0	N.D.	N.D.
9)	B	Heptachlor Epoxide	0.00	0.00	0	0	N.D.	N.D.
10)	A	Endosulfan I	13.12	13.29	354123	576941	0.0200	0.0200
11)	B	gamma-Chlordane	0.00	13.29	0	576941	N.D.	0.0200 #
12)	B	alpha-Chlordane	0.00	0.00	0	0	N.D.	N.D.
13)	B	4,4'-DDE	0.00	0.00	0	0	N.D.	N.D.
14)	MA	Dieldrin	13.71	13.97	718279	1206256	0.0400	0.0400
15)	MA	Endrin	14.42	14.36	522166	869554	0.0400	0.0400
16)	B	Endosulfan II	0.00	0.00	0	0	N.D.	N.D.
17)	A	4,4'-DDD	14.56	15.06	602417	936928	0.0400	0.0400
18)	MA	4,4'-DDT	15.14	15.39	482437	620877	0.0400	0.0400
19)	B	Endrin Aldehyde	15.43	0.00	965685	0	0.0400	N.D. #
20)	B	Endosulfan Sulfate	0.00	0.00	0	0	N.D.	N.D.
21)	AP	Methoxychlor	17.12	16.65	1421684	1736862	0.2000	0.2000
22)	B	Endrin Ketone	0.00	17.95	0	87807	N.D.	0.0400 #

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 2155 SDG DCM14
Signature Ernest Baude
Date 2/28/96

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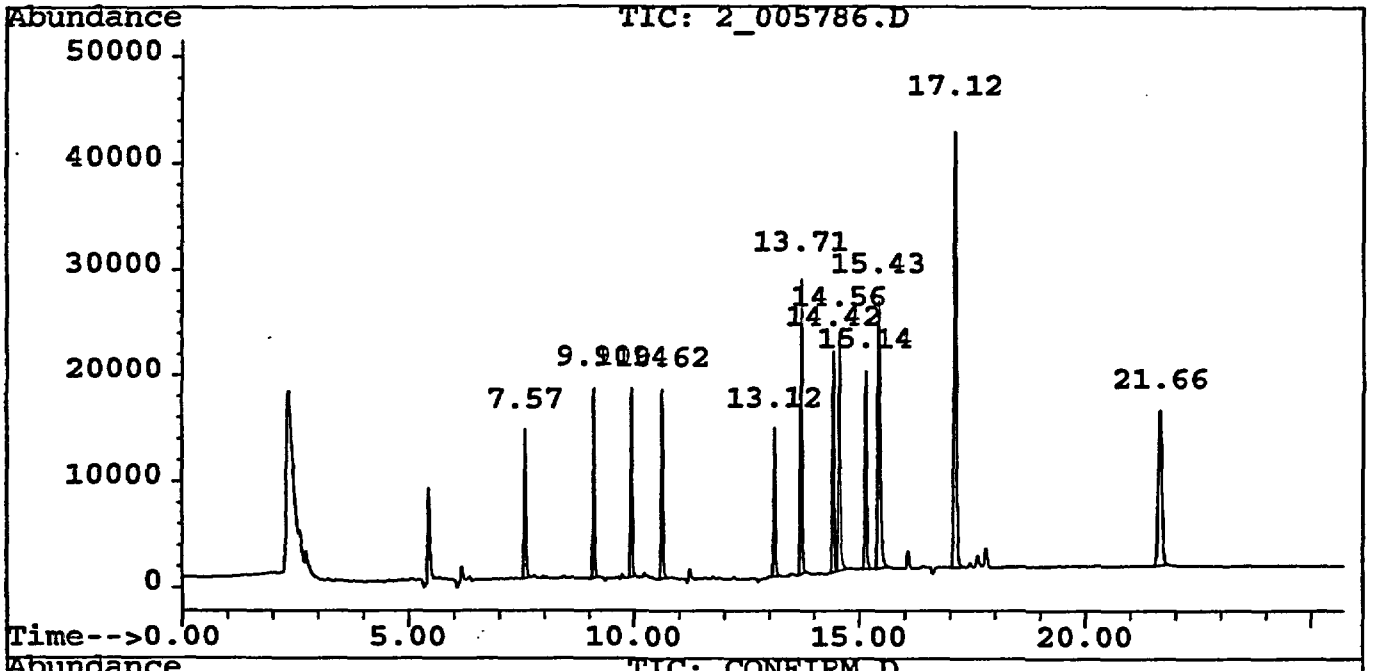
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.

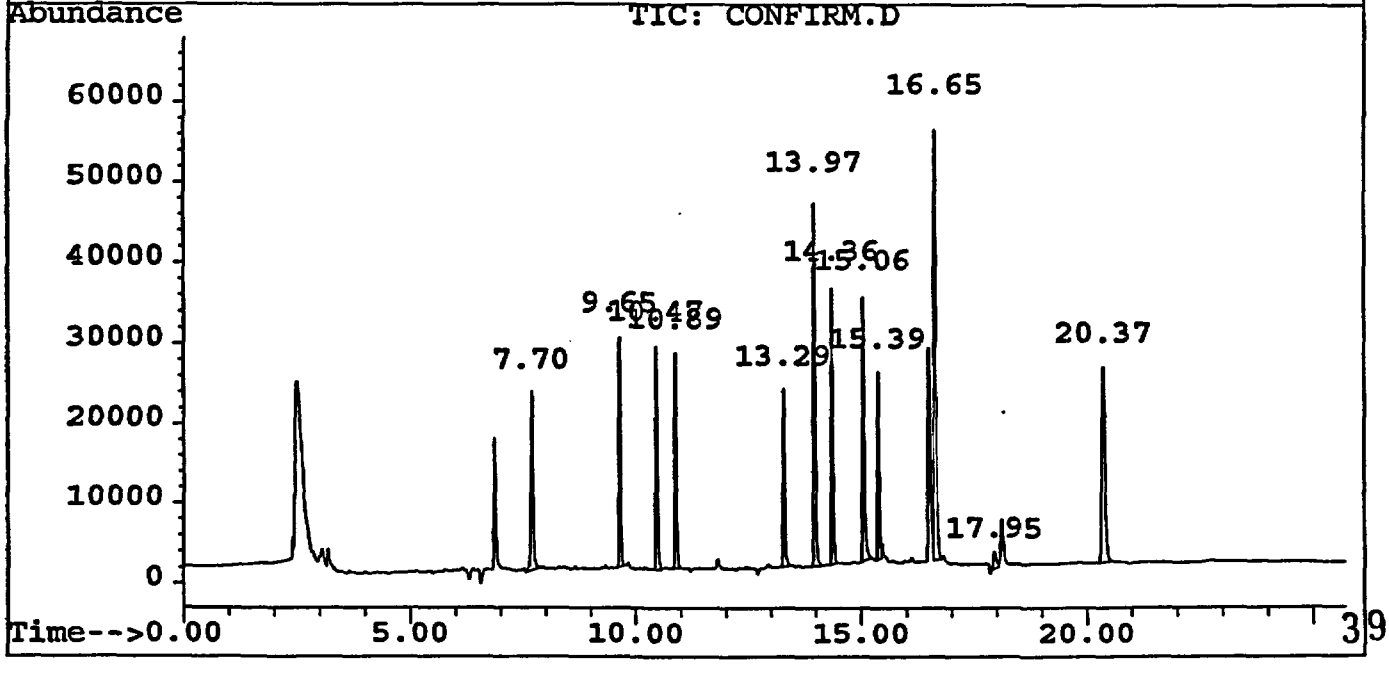
Quantitation Report

Signal #1 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005786.D Vial: 4
Signal #2 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005786.D\CONFIRM.D
Acq On : 29 Sep 95 20:52 Operator: JM
Sample : FLORISIL INDA Inst : HP_02
Misc : 943355 LOT Multiplr: 0.0010
Quant Time: Sep 29 22:20 1995

Method : G:\HPCHEM\HP\2\METHODS\OLM0328F.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Fri Sep 29 22:20:06 1995
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-17 Signal #2 Phase: DB-1701
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_02A Signal #2 Inst : HP_02B





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Quantitation Report

Signal #1 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005801.D Vial: 19
Signal #2 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005801.D\CONFIRM.D
Acq On : 30 Sep 95 04:43 Operator: JM
Sample : INDBM2T Inst : HP_02
Misc : 8-64-5 Multiplr: 0.0010
Quant Time: Sep 30 11:48 1995

Method : G:\HPCHEM\HP\2\METHODS\OLM0328F.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Sep 30 11:30:23 1995
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-17 Signal #2 Phase: DB-1701
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_02A Signal #2 Inst : HP_02B

		Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	
		Surrogate Compounds							
2)	S	TCX	7.57	7.70	1061933	1834216	0.0554	0.0519	
					Recovery		= 277.00%	259.50%	
23)	S	DCB	21.65	20.36	1647455	2394502	0.0811	0.0821	
					Recovery		= 405.50%	410.50%	
		Target Compounds							
1)		TCP	0.00	0.00	0	0	N.D.	N.D.E	
3)	AP	alpha-BHC	0.00	0.00	0	0	N.D.	N.D.	
4)	MA	gamma-BHC (Lindane	0.00	0.00	0	0	N.D.	N.D.	
5)	MA	Heptachlor	10.62	10.89	1369	30206	0.0001	0.0009	#
6)	MB	Aldrin	11.30	11.45	1095541	1935977	0.0207	0.0214	
7)	BP	beta-BHC	10.08	11.89	645414	1007790	0.0211	0.0213	
8)	B	delta-BHC	10.84	12.39	1054363	1452984	0.0208	0.0208	
9)	B	Heptachlor Epoxide	12.41	12.75	997288	1619436	0.0205	0.0215	
10)	A	Endosulfan I	0.00	0.00	0	0	N.D.	N.D.	
11)	B	gamma-Chlordane	12.73	0.00	973741	0	0.0202	N.D.	#
12)	B	alpha-Chlordane	13.04	13.46	1112096	1709857	0.0219	0.0215	
13)	B	4,4'-DDE	13.50	13.60	1761440	3100316	0.0409	0.0433	
14)	MA	Dieldrin	0.00	0.00	0	0	N.D.	N.D.	
15)	MA	Endrin	0.00	0.00	0	0	N.D.	N.D.	
16)	B	Endosulfan II	14.75	15.25	1499399	2143821	0.0402	0.0426	
17)	A	4,4'-DDD	0.00	0.00	0	0	N.D.	N.D.	
18)	MA	4,4'-DDT	0.00	0.00	0	0	N.D.	N.D.	
19)	B	Endrin Aldehyde	15.40	16.11	1171762	1527009	0.0485	0.0452	
20)	B	Endosulfan Sulfate	15.66	16.82	1341872	1711824	0.0414	0.0450	
21)	AP	Methoxychlor	0.00	16.61f	0	82458	N.D.	0.0095	#
22)	B	Endrin Ketone	17.62	17.93	1523844	2081642	0.0413	0.9483	#

COPY

ORIGINAL DOCUMENTS ARE INCLUDED IN
CSF 24153 SDG DKM14
Signature [illegible]
Date 9/28/96

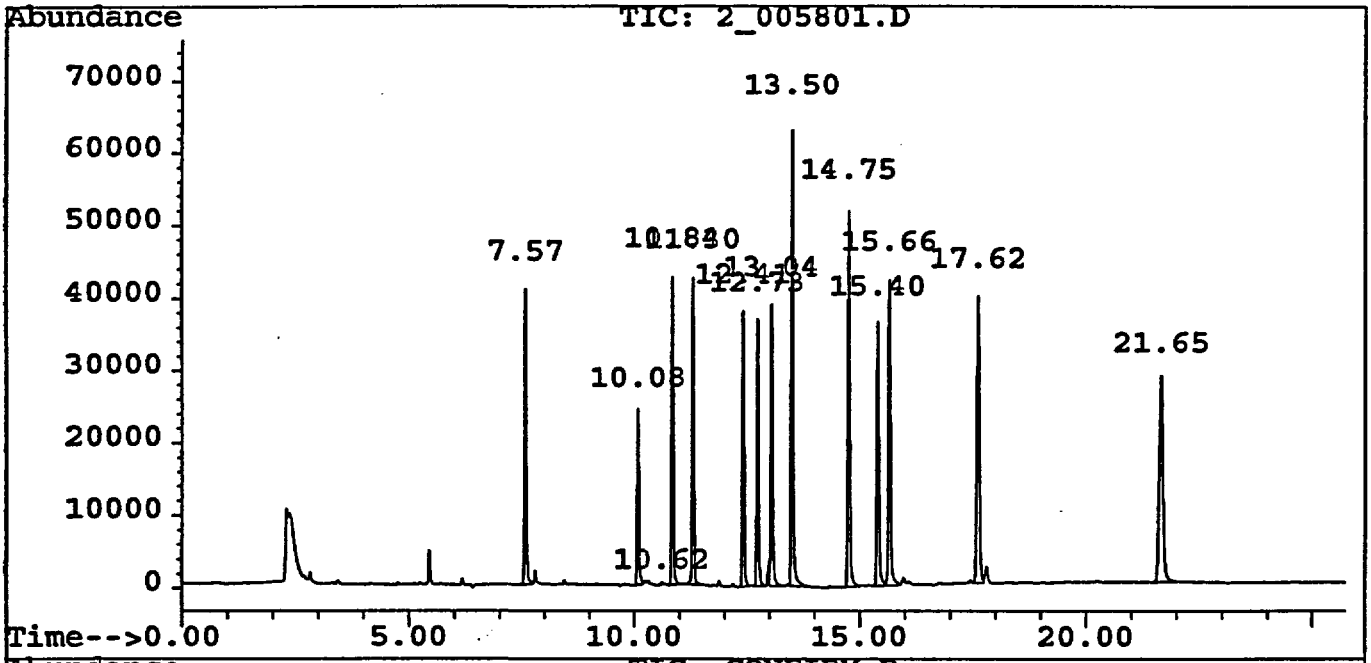
(f)=RT Delta > 1/2 Window (#)=Amounts differ by > 25% (m)=manual int.
2_005801.D OLM0328F.M Sat Sep 30 11:48:16 1995 Page 1

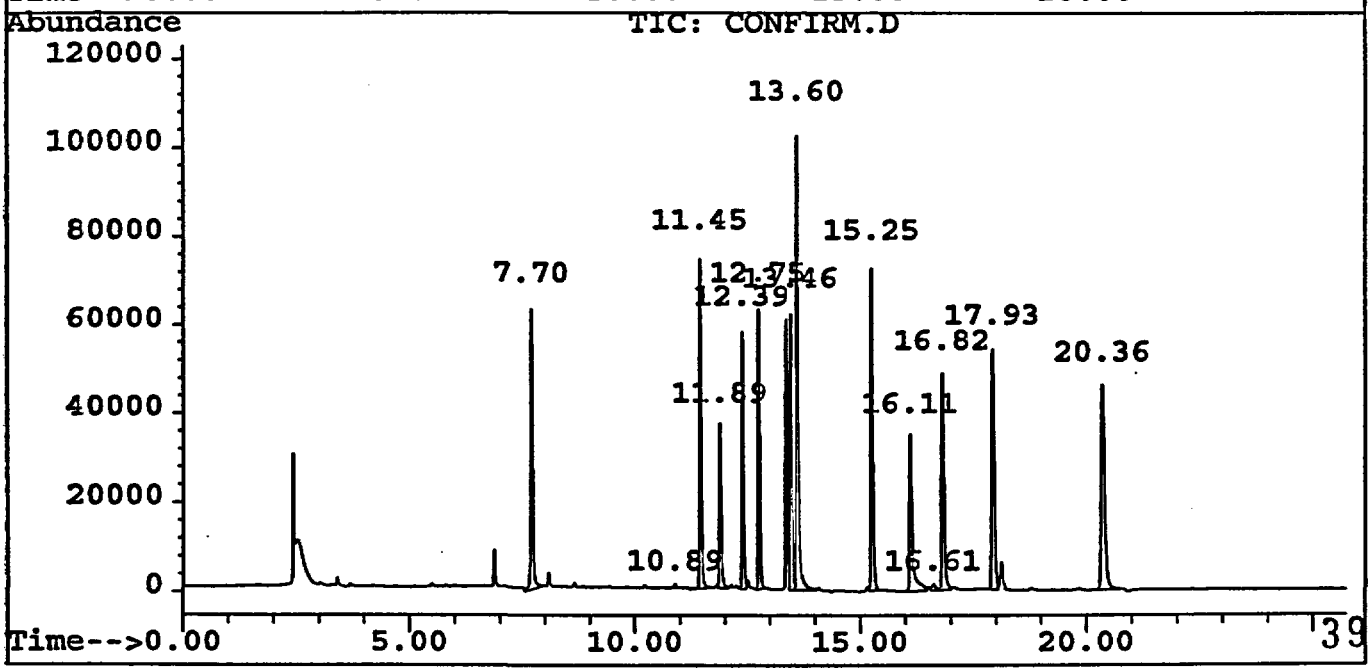
Quantitation Report

Signal #1 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005801.D Vial: 19
Signal #2 : G:\HPCHEM\HP\2\DATA\09_29_95\2_005801.D\CONFIRM.D
Acq On : 30 Sep 95 04:43 Operator: JM
Sample : INDBM2T Inst : HP_02
Misc : 8-64-5 Multiplr: 0.0010
Quant Time: Sep 30 11:48 1995

Method : G:\HPCHEM\HP\2\METHODS\OLM0328F.M
Title : OLM3.0 CLP Pesticide/PCB
Last Update : Sat Sep 30 11:30:23 1995
Response via : Single Level Calibration

Volume Inj. : 1uL
Signal #1 Phase : DB-17 Signal #2 Phase: DB-1701
Signal #1 Info : 0.32mm Signal #2 Info : 0.32mm
Signal #1 Inst : HP_02A Signal #2 Inst : HP_02B





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VOLATILES GC/MS RUN LOG

VOLATILES GC/MS DEPARTMENT

SWOK (AATS)

MS Std. # 2-052-9

IS Std.# 2-109-9

Surr Std. # 2-098-9

TUNE FILE ID: BFB.U

INSTRUMENT: L

CB/ID FILE ID: BFB_NEW, OLM3WAT OLM3SOIL

METHOD FILES BFBL, TESTL

DATE 3/19/96

ARCHIVE TAPE #: L#23

Time	File	SWOK/AATS Sample ID	Client ID	Vol.	IS Area	Surr. Rec.	Lin. Chk.	Comments	OK/RR
15:39	L19537	2-026-10	BFB	5ml				18	OK
16:09	L19533	2015-10	VSTD010L8	5ml				9 water I-cal	OK
16:35	L19539	2015-10	VSTD020L8	5ml				10 for MS317 +	OK
17:02	L19540	2015-10	VSTD050L8	5ml				11 MS315	OK
17:28	L19541	2-015-10	VSTD100L8	5ml				12	OK
17:54	L19542	2015-10	VSTD200L8	5ml				13	OK
18:20	L19543	2015-10	VSTD200L8	5ml				15 not needed	
18:47	L19544	2015-10	VSTD100L8	5ml				16	
19:13	L19545	2-015-10	VSTD050L8	5ml				1	
19:39	L19546	2-015-10	VSTD020L8	5ml				2	
20:05	L19547	2-015-10	VSTD010L8	5ml				3	
20:31	L19548	2-015-10	VSTD010L8	5ml				23 see i-cal	
20:57	L19549	2-015-10	VSTD050L9	5ml				24	
21:23	L19550	2-015-10	VSTD050L9	5ml				25	
21:50	L19551	2-015-10	VSTD100L9	5ml				26	
22:16	L19552	2-015-10	VSTD200L9	5ml				27	
22:42	L19553	2-015-10	VSTD200L9	5ml				28	OK
23:08	L19554	2-015-10	VSTD100L9	5ml				29	OK
23:33	L19555	2-015-10	VSTD050L9	5ml				30	OK
23:59	L19556	2-015-10	VSTD020L9	5ml				31	OK
00:25	L19557	2-015-10	VSTD010L9	5ml				32	OK

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Linda Gaibold

Analyst Signature

VOLATILES GC/MS RUN LOG

VOLATILES GC/MS DEPARTMENT

SWOK / AATS

MS Std. # 2-052-9

IS Std.# 2-017-10,

Surr Std. # 2-098-9

TUNE FILE ID: BFB.U

METHOD FILES BFBL, TESTL

INSTRUMENT: L

DATE 3/27/96

CB/ID FILE ID: BFB-NEW, OLM3SOIL OLM3WAT

ARCHIVE TAPE #: L#23

Time	File	SWOK/AATS Sample ID	Client ID	Vol.	IS Area	Surr. Rec.	Lin. Chk.	Comments	OK/RR
09:19	L19675	2-006-10	BFB	5ml				18	OK
09:49	L19676	2-015-10	VSTD050LW	5ml				17	OK
10:25	L19677	L960327A	VBLK	5ml	✓	✓	✓	18	OK
11:07	L19678	25019.15	CQT46	5g	✓	✓	✓	1	OK
11:33	L19679	25019.16	CQT47	5g	✓	✓	✓	2	OK
11:59	L19680	25019.17	CQT48	5g	#3 low	✓	✓	3 See L19655	OK
12:26	L19681	250A.08MSD	CQT30MSD	5g	✓	✓	✓	4	OK
13:25	L19682	VHBLK CQT35	VHBLK	5ml	✓	✓	✓	5	OK
13:51	L19683	VHBLK CQT30	VHBLK	5ml	✓	✓	✓	6	OK
NEW RUN 14:35	L19684	2-006-10	BFB	5ml				18	OK
15:43	L19685	2-015-10	VSTD050LW	5ml				17	
17:15	L19686	2-015-10	VSTD050LW	5ml				17	OK
17:48	L19687	L960327B	VBLK	5ml	✓	✓	✓	18	OK
18:25	L19688	25003.02	CRJ40	5ml	✓	✓	✓	1	OK
18:51	L19689	25005.01	FEM97	5ml	✓	✓	✓	2	OK
19:18	L19690	25005.02	FEM98	5ml	#1,3 low	#2hi #1 low		3 See L19712 5X-10X Acetone 600	RR
19:44	L19691	25014.01	CRJ45	5ml	✓	✓		4 Acetone 50	RR
20:11	L19692	VIBLK	VIBLK	5ml	✓	✓	✓	3	OK
20:38	L19693	25014.04	CRJ48	5ml	✓	✓	✓	5	
21:05	L19694	25014.01	CRJ45	5ml	✓	✓	✓	6	
21:32	L19695	B3003.03	CRJ42	5ml	✓	✓	✓	8	OK

Linda Godwold
Analyst Signature

VOLATILES GC/MS RUN LOG

VOLATILES GC/MS DEPARTMENT

SWOK / AATS

MS Std. # 2-052-9

IS Std.# 2-017-10

Surr Std. # 2-098-9

TUNE FILE ID: BFB.U

METHOD FILES BFBL, TESTL

INSTRUMENT: L

DATE 3/27/96

CB/ID FILE ID: BFB-NEW, OLM3WAT

ARCHIVE TAPE #: L#23

2:35 Time	File	SWOK/AATS Sample ID	Client ID	Vol.	IS Area	Surr. Rec.	Lin. Chk.	Comments	OK/RR
21:58	L19696	25014.03	CRJ47	500 ul	✓	✓	✓ 9	Dichloroethene 86 smelled strong Run 5X	RR
22:25	L19697	25003.01	CRJ39	10ul	✓	✓	10	smell Run 25ul 200X	RR
22:57	L19698	24986.02	CRJ34	25ul	✓	✓	✓	smell	OK
23:17	L19699	25003.04	CRJ43	10ul	✓	✓		Trichloroethene 73 smell Run 25ul	RR
00:04	L19700	25014.02	CRJ46	5ml	✓	✓	✓		OK
00:30	L19701	25014.03	CRJ47	1ml				bad purge	RR
00:57	L19702	25003.01	CRJ39	25ul	✓	✓	✓		OK
01:23	L19703	25003.04	CRJ43	25ul	✓	✓	✓		OK
01:50	L19704	25014.03MS	CRJ47MS	1ml	✓	✓	✓		OK
02:17	L19705	25014.03MSD	CRJ47MSD	1ml	✓	✓	✓		OK

Linda Goldwold

Analyst Signature

400 88

3/26

VOLATILES GC/MS RUN LOG

VOLATILES GC/MS DEPARTMENT

SWOK / AATS

MS Std. # 2-052-9

IS Std.# 2-017-10

Surr Std. # 2-098-9

TUNE FILE ID: BFB.U

METHOD FILES BFBL, TESTL

INSTRUMENT: L

DATE 3/28/96

CB/ID FILE ID: BFB-NEW, OLM3WAT

ARCHIVE TAPE #: L#23

Time	File	SWOK/AATS Sample ID	Client ID	Vol.	IS Area	Surr. Rec.	Lin. Chk.	Comments	OK/RR
09:46	L19707	2-006-10	BFB	5ml				18	OK
10:07	L19708	VSTD050LX	2-015-10	5ml				17	OK
10:52	L19709	VBLK	L960328A	5ml	✓	✓	✓	18	OK
11:41	L19710	25014.04	CRJ48	5ml	✓	✓	✓	1	OK
12:07	L19711	25014.01	CRJ45	5ml	✓	✓	✓	2	OK
12:33	L19712	25005.02	EEM98	1ml	✓	#1,7 H1 #3/OW	✓	3 see L19690	OK
13:00	L19713	VHBLK	VHBLK	5ml	✓	✓		4 Acetone carryover?	RR
13:41	L19714	25014.03	CRJ47	1ml	✓	✓	✓	5	OK
14:30	L19715	VHBLK	VHBLK					6	
14:56	L19716	VHBLK	VHBLK	5ml	✓	✓	✓	1	OK
15:22	L19717	VHBLK	VHBLK	5ml	✓	✓	✓	2	OK
15:49	L19718	VHBLK	VHBLK	5ml				3 not needed	/
16:16	L19719	VHBLK	VHBLK	5ml				4 "	/
16:43	L19720	VHBLK	VHBLK	5ml				5 "	/

Linda K Godbold
Analyst Signature

401 89

SEMIVOLATILE GC/MS RUN LOG

SEMIVOLATILES GC/MS DEPARTMENT

SWOK / AATS

BOOK 17 PAGE 58

CLIENT: AATS-E (PE: 24479) | EPA: 24479

DATE (MO/DAY/YR): 032196

CASE: 24930 | 24928

INSTRUMENT ID (A,B,C, etc.): A

SAS: ws 517 | ws 517

METHOD NO: Diffpack, BNA 390

COLUMN NO: XT-5

EMV: 2200

TUNE FILE ID: tune A

OTHER: Processing Methods: Dfpp390.m, BNASTDFA.m

Batch: chem1: 1960321.b

Int Std: 1-265-11

Time: 2059

TIME	INIT	CLIENT SAMPLE ID	LAB ID	FILE ID	SAMPLE AMOUNT wt	SAMPLE AMOUNT vol	SAMPLE AMOUNT inj	DIL. FACT.	AUTO INJ POS	ARCH TAPE NO	RUN NO
0859	MT	Dfpp · 2ul	1-264-11	A2200							1
0924		SSTD 160 AL	1-327-11	A2201							2
0956		SSTD 020 AL		A2202							3
1028		SSTD 080 AL		A2203							4
1101		SSTD 120 AL		A2204							5
1148		SSTD 050 AL	1-322-11	A2205							6
1221		SSTD 050 (2nd source) AM	1-113-11	A2206							7
1357		SBLK	BL0315WB	A2207	1000ml	1ml	2ul				8
1451		X5964 ~~LCS~~	~~LC0315WB~~	A2208							9
1505		X5965 ~~LCSD~~	~~LC0315WB~~	A2209							10
1540		SBLK ~~X5964~~	BL0315WA ~~24930-01~~	A2210							11
1614		X5989 ~~X5965~~	24928-01 ~~24930-02~~	A2211							12
1649		X5990	24928-02	A2212							13
1722		QC	QC	A2213	1000ml	1ml					14
1755	AM	SSTD 050 (2nd source) AM	1-113-11	A2214			2ul				15

4 corrections @ 3/21/96

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Analyst Signature

PART I

SWL/AATS, Broken Arrow, Ok

[SGM002A-0492-01]

SEMIVOLATILE GC/MS RUN LOG

SEMIVOLATILES GC/MS DEPARTMENT

SWOK / AATS

BOOK 17 PAGE 58

(Check appropriate box. All major maintenance should be recorded in maintenance logbook.)

ROUTINE MAINTENANCE: ☐ MAJOR MAINTENANCE: ☐ In Book____Page____.

DATE: _____ TIME: _____

COMMENTS: _____

INTERNAL STANDARD AREAS

Cpd.	IS #1	IS #2	IS #3	IS #4	IS #5	IS #6	
Std. RT							Run # =
NO.	m/z=	m/z=	m/z=	m/z=	m/z=	m/z=	Comment
1							Passed
2	430934	1253371	767532	1195568	1010837	1284690	
3	614624	1908834	1158279	1785968	1221556	1380423	N.P. Initial Cal. Good
4	593614	1783686	1155599	1623376	1154693	1382040	
5	519395	1468472	923511	1431637	1032434	1360136	
6	445903	1352160	887436	1415724	1100341	1278889	
7	611429	1843547	1100697	1661481	1207643	1305602	2nd Source Std. Good
8							Int. Stds. OK ✓ Surrs. OK
9							✓
10							✓
11							✓
12							✓
13							✓
14							Int. Stds. OK ✓ Surrs. OK
15	748993	2219271	1328530	2021054	1402325	1599340	3rd Source Ending Std. Good

Last Std / Since Reruns with Cases - Air 057298

403

Analyst Signature

PART II

SWL/AATS, Broken Arrow, Ok

[SGM002B-0492-01]

SEMIVOLATILE GC/MS RUN LOG

SEMIVOLATILES GC/MS DEPARTMENT

SWOK / AATS

BOOK 17 PAGE 61

CLIENT: AATS RE 224501 / EPA 114: 24997 (New)

DATE (MO/DAY/YR): 032596

CASE: 25605 / 24976

INSTRUMENT ID (A,B,C, etc.): A

SAS: 517 / MS 517 (Hw / Hw)

METHOD NO: DETPRAND, BNA350

COLUMN NO: XTI-5

EMV: 2200

TUNE FILE ID: TUNEA

OTHER: PROCESSING METHODS: DETPRB50.M, BNA517ERA.M

BATCH: clea/a.i/a960325a.b

Int. Std.: 1-265-11 / 1-329-11

TIME LIMIT: 2120

TIME	INIT	CLIENT SAMPLE ID	LAB ID	FILE ID	SAMPLE AMOUNT wt	SAMPLE AMOUNT vol	SAMPLE AMOUNT inj	DIL. FACT.	AUTO INJ POS	ARCH TAPE NO	RUN NO
0804	AW/MT	DETPP	1-264-11	a2241			2uL				1
—		BLANKS (BAKEOUT)	BNA390	a2242							2
0920		DETPP	1-264-11	a2243							3
0944		SSTD 050 AP	1-327-11	a2244							4
1017		SSTD 050 AP	1-327-11	a2245							5
1056		CBLK	BLB322WA	A2246	1000	1ml	2ul				6
1129		FX053 ~~FEM97~~	24976.01 ~~EF005.01~~	A2247				10X			7
1202		FX054 ~~FEM98~~	24976.02 ~~EF005.02~~	A2248				10X			8
1235		FX055	24976.03	A2249				2X			9
1308		FX056	24976.04	A2250				2X			10
1341		FX058	24976.06	A2251				5X			11
1414		FX054	24976.02	A2252				20X			12
1447		FX055	24976.03	A2253				4X			13
1521		FX056	24976.04	A2254				4X			14
1555		FX058	24976.06	A2255				10X			15

404

Analyst Signature

SEMIVOLATILE GC/MS RUN LOG

SEMIVOLATILES GC/MS DEPARTMENT

SWOK / AATS

BOOK_____PAGE_____

(Check appropriate box. All major maintenance should be recorded in maintenance logbook.)

ROUTINE MAINTENANCE: ☐ MAJOR MAINTENANCE: ☐ In Book____Page____.

DATE: _____ TIME: _____

COMMENTS: _____

INTERNAL STANDARD AREAS

Cpd.	IS #1	IS #2	IS #3	IS #4	IS #5	IS #6	
Std. RT							Run # =
NO.	m/z=	m/z=	m/z=	m/z=	m/z=	m/z=	Comment
1							FAIL - TO HIGH
2							—
3							Passed
4							
5	417689	1381384	901722	1952017	1291469	1454470	Passed CCAL NF
6							IS OK ✓ Sr o.k.
7							✓
8							Need 20X
9							Need 4X
10							Need 4X
11							Need 10X
12							✓
13							✓
14							✓
15							✓ IS OK Sr o.k.

Analyst Signature

405

SEMIVOLATILE GC/MS RUN LOG

SEMIVOLATILES GC/MS DEPARTMENT

SWOK / AATS

BOOK 17 PAGE 62

CLIENT: ~~AATS-25001~~ MX / EPAM: 24456 DATE (MO/DAY/YR): 022556

CASE: 25005 / 25001 INSTRUMENT ID (A,B,C, etc.): A

SAS: 517 / MS 517

H.O / S/C

METHOD NO: Bue 350 COLUMN NO: XTI-5

EMV: 2200 TUNE FILE ID: tune A

OTHER: Processing Method No. BNA517EPA.m

Reagents: Chem/Lot: 156325 ac/b

Int Std: 1-265-11

Tune: 2120

TIME	INIT	CLIENT SAMPLE ID	LAB ID	FILE ID	SAMPLE AMOUNT wt	vol	inj	DIL. FACT.	AUTO INJ POS	ARCH TAPE NO	RUN NO
1627	MT/ABW	FEM 97 ✓ Abx	2500501	A2256	1000ml	1ml	2ml				1
1701		FEM 98 ✓ Abx	2500502	A2257							2
1733		SBLK ✓	BL032156	A2258	30g	5ml	2ml				3
1806		GPC BLK ✓	G032256B	A2259							4
1838		CQT 35 ✓	25001.01	A2260							5
1911		CQT 36 ✓	25001.02	A2261							6
1943		CQT 36 MS ✓	2509.02	A2262							7
2016		CQT 36 MSD	25001.02	A2263							8
2049		CQT 37 ✓	25001.03	A2264							9
2121		CQT 38 ✓	25001.04	A2265							10
2154		CQT 39	25001.05	A2266							11
2227		CQT 40	25001.06	A2267							12
2259		CQT 41	25001.07	A2268							13
2332		CQT 42	25001.08	A2269							14
0065		CQT 43	25001.09	A2270							15

Analyst Signature

406

SEMIVOLATILE GC/MS RUN LOG

SEMIVOLATILES GC/MS DEPARTMENT

SWOK & AATS

BOOK 17 PAGE 62

(Check appropriate box. All major maintenance should be recorded in maintenance logbook.)

ROUTINE MAINTENANCE: ☐ MAJOR MAINTENANCE: ☐ In Book____Page____.

DATE: _____ TIME: _____

COMMENTS: _____

INTERNAL STANDARD AREAS

Cpd.	IS #1	IS #2	IS #3	IS #4	IS #5	IS #6	
Std. RT							Run # =
NO.	m/z=	m/z=	m/z=	m/z=	m/z=	m/z=	Comment
1							IS ok ✓ Sr on
2							IS ok ✓ Sr on
3							IS ok ✓ Sr on
4							✓
5							✓
6							✓
7							✓
8							✓
9							✓
10							OUT OF CONTROL
11							
12							
13							
14							
15							

1st STD ✓ Case

03 26 95

03 26 95

Analyst Signature

407

SEMIVOLATILE GC/MS RUN LOG

SEMIVOLATILES GC/MS DEPARTMENT

SWOK / AATS

BOOK 17 PAGE 69

CLIENT: EPA14:24456 / AATS-E

DATE (MO/DAY/YR): 033096

CASE: 25019 / 25005

INSTRUMENT ID (A,B,C, etc.): A

SAS: MS 517 / 517

S/L / H_2O

METHOD NO: DFtpp, Bnx 390

COLUMN NO: XT-5

EMV: 2200

TUNE FILE ID: tune A

OTHER: Processing Methods: DFtpp 390.m, Bnx EPA 517.m

Batch: chemlab 1560330cb

Int std: 1265-11

Time: 0051

TIME	INIT	CLIENT SAMPLE ID	LAB ID	FILE ID	SAMPLE AMOUNT wt	SAMPLE AMOUNT vol	SAMPLE AMOUNT inj	DIL. FACT.	AUTO INJ POS	ARCH TAPE NO	RUN NO
1251	MT	DFtpp	1-264-1	A2390							1
1306		SSTD 050 AR	1-327-11	A2391							2
1335		SSTD 050 AR	1-327-11	A2392							3
1413		SBLK	BL0323SA	A2393	30g	.5ml	2ml				4
1447		CAT 28	25019.06	A2394				10X			
1521		CAT 32	25019.10	A2395							5
1554		CAT 33	25019.11	A2396				2X			6
1627		CAT 34	25019.12	A2397				10X			7
1701		CAT 44	25019.13	A2398							8
1733		CAT 39	25019.10	A2399							9
1807		CAT 44	25019.13	A2400							10
1840		SBLK	BL0323SA	A2401							11
—		SBLK	BL0323SB	A2402							12
1946		FEM 98	25005.02	A2403	100ml	1ml	2ml	2X			13
2019		FEM 98	25005.02	A2404				4X			14
—		BLANK	BM 390	A2405-08							15

Analyst Signature

408

PART 1

SWL/AATS, BROKEN ARROW, OK

[SGM002A-0492-01]

SEMIVOLATILE GC/MS RUN LOG

SEMIVOLATILES GC/MS DEPARTMENT

SWOK / AATS

BOOK 17 PAGE 69

(Check appropriate box. All major maintenance should be recorded in maintenance logbook.)

ROUTINE MAINTENANCE: ☐ MAJOR MAINTENANCE: ☐ In Book____Page____.

DATE: _____ TIME: _____

COMMENTS: _____

INTERNAL STANDARD AREAS

Cpd.	IS #1	IS #2	IS #3	IS #4	IS #5	IS #6	
Std. RT							Run # =
NO.	m/z=	m/z=	m/z=	m/z=	m/z=	m/z=	Comment
1							Passed
2	79389	282301	187824	321501	221438	252220	DO NOT USE
3	544427	174019	109623	1710922	1210622	1308696	Passed CCAL NP
4							IS ok ✓ Surr ok
5							IS ok ✓ Surr ok
6							✓
7							✓
8							✓
9							IS ok ✓ Surr ok
10							DO NOT NEED
11							DO NOT NEED
12							DO NOT NEED
13							IS ok ✓ Surr ok
14							DO NOT NEED
15							—

Int Stds Checks (1) (2) 04/01/95

Analyst Signature

PESTICIDE/PCB GC RUN LOG

SWOK/AATS

INSTRUMENT : HP_03

CASE NO.: 24456; 24501

INJ. VOL : 1 uL

SDG NO. : CQT35; FEM97

METHOD FILE : OLM03C25

DATE/TIME	COL. 1 / COL. 2 CLIENT ID	SAMPLE ID	FILE	COMMENT
03/25/96 21:16	HEXANE	HEXANE	3_004220	OK
03/25/96 21:47	HEXANE	HEXANE	3_004221	
03/25/96 22:18	HEXANE	HEXANE	3_004222	
03/25/96 22:49	HEXANE	HEXANE	3_004223	
03/25/96 23:20	PIBLK3T	5-394-14	3_004224	
03/25/96 23:51	RESC3D	5-311-14	3_004225	
03/26/96 00:22	PEM3M	5-387-14	3_004226	
03/26/96 00:53	AR16603D	5-348-14	3_004227	
03/26/96 01:23	AR12213D	5-349-14	3_004228	
03/26/96 01:54	AR12323D	5-350-14	3_004229	
03/26/96 02:25	AR12423D	5-351-14	3_004230	
03/26/96 02:56	AR12483D	5-352-14	3_004231	
03/26/96 03:27	AR12543D	5-353-14	3_004232	
03/26/96 03:58	TOXAPH3D	5-354-14	3_004233	
03/26/96 04:28	INDAL3D	5-411-14	3_004234	
03/26/96 04:59	INDBL3D	5-414-14	3_004235	
03/26/96 05:30	INDAM3J	5-410-14	3_004236	
03/26/96 06:01	INDBM3J	5-413-14	3_004237	
03/26/96 06:32	INDAH3D	5-409-14	3_004238	

Unless noted, Client id is the same for both columns

Verification Signature

Analyst Signature

4/1/96

Date

4/1/96

Date

Book: HP_03 Page: ~~12~~ 11 4/1/96 410

PESTICIDE/PCB GC RUN LOG

SWOK/AATS

INSTRUMENT : HP_03

CASE NO.: 24450 ; 24501

INJ. VOL : 1 uL

SDG NO. : CQT35 ; FEN97

METHOD FILE : OLM03C25

DATE/TIME	COL. 1 / COL. 2 CLIENT ID	SAMPLE ID	FILE	COMMENT
03/26/96 07:03	INDBH3D	5-412-14	3_004239	04
03/26/96 07:33	PIBLK3U	5-394-14	3_004240	
03/26/96 08:04	PEM3N	5-387-14	3_004241	
03/26/96 08:35	PBLKWA	BL0315WD	3_004242	
03/26/96 09:06	PBLKWB	BB0315WD	3_004243	
03/26/96 09:37	X5964	24930.01	3_004244	
03/26/96 10:08	X5965	24930.02	3_004245	
03/26/96 10:38	PBLKWC	BL0315WC	3_004246	
03/26/96 11:09	PBLKWD	BB0315WC	3_004247	
03/26/96 11:40	X5989	24928.01	3_004248	
03/26/96 12:11	X5990	24928.02	3_004249	
03/26/96 12:42	24928QC	24928.QC	3_004250	
03/26/96 13:13	HEXANE	HEXANE	3_004251	
03/26/96 13:44	HEXANE	HEXANE	3_004252	
03/26/96 14:15	HEXANE	HEXANE	3_004253	
03/26/96 14:45	PIBLK3V	5-394-14	3_004254	
03/26/96 15:23	INDAM3K	5-410-14	3_004255	
03/26/96 15:54	INDBM3K	5-413-14	3_004256	
03/26/96 16:31	INDAM-SECOND SOUNCE	5-410-14	3_004257	

Unless noted, Client id is the same for both columns

Verification Signature

Analyst Signature

4/1/96

Date

4/1/96

Date

Book: HP_03 Page: ~~13~~ 12 H 4/1/96

PESTICIDE/PCB GC RUN LOG

SWOK/AATS

CASE NO.: 24456 (24501)

SDG NO. : C QT 35 (FEM97)

INSTRUMENT : HP_03

INJ. VOL : 1 uL

METHOD FILE : OLM03C25

DATE/TIME	COL. 1 / COL. 2 CLIENT ID	SAMPLE ID	FILE	COMMENT
03/26/96 17:03	INDBM-SECOND SOURCE	5-413-14	3_004258	04
03/26/96 17:34	INDAM-SECOND SOURCE	5-410-14	3_004259	
03/26/96 18:05	INDBM-SECOND SOURCE	5-413-14	3_004260	
03/26/96 18:36	PBLKW E ✓	BL0322WE	3_004261	
03/26/96 19:07	PBLKW	BB0322WE	3_004262	
03/26/96 19:37	FEM97 ✓	25005.01	3_004263	
03/26/96 20:08	FEM98 ✓	25005.02	3_004264	
03/26/96 20:39	PBLKS	BB0321SB-S	3_004265	
03/26/96 21:10	PBLKS	BL0321SB-S	3_004266	
03/26/96 21:41	CQT35	25001.01S	3_004267	
03/26/96 22:12	CQT36	25001.02S	3_004268	
03/26/96 22:42	CQT36MS	25001.02SMS	3_004269	
03/26/96 23:13	CQT36MSD	25001.02SMS	3_004270	
03/26/96 23:44	CQT37	25001.03S	3_004271	
03/27/96 00:15	CQT38	25001.04S	3_004272	
03/27/96 00:46	CQT39DL	25001.05SE1	3_004273	
03/27/96 01:17	HEXANE	HEXANE	3_004274	
03/27/96 01:48	G032196A	GPC BLANK-G	3_004275	
03/27/96 02:18	PIBLK3W ✓	5-394-14	3_004276	

Unless noted, Client id is the same for both columns

Verification Signature

Analyst Signature

4/1/96

Date

4/1/96

Date

Book: HP_03 Page: ~~14~~ 13 Ha 4/1/96

PESTICIDE/PCB GC RUN LOG

SWOK/AATS

CASE NO.: 24456 ; 24501

SDG NO. : CQT35 / FEM97

INSTRUMENT : HP_03

INJ. VOL : 1 uL

METHOD FILE : OLM03C25

DATE/TIME	COL. 1 / COL. 2 CLIENT ID	SAMPLE ID	FILE	COMMENT
03/27/96 02:49	PEM30 ✓	5-387-14	3_004277	OK
03/27/96 03:20	CQT39	25001.05	3_004278	not used
03/27/96 03:51	CQT40	25001.06	3_004279	
03/27/96 04:22	CQT41	25001.07	3_004280	
03/27/96 04:53	CQT42	25001.08	3_004281	
03/27/96 05:24	CQT43	25001.09	3_004282	
03/27/96 05:55	CQT49	25001.10	3_004283	
03/27/96 06:26	CQT50	25001.11	3_004284	
03/27/96 06:57	CQT51	25001.12	3_004285	
03/27/96 07:28	CQT52	25001.13	3_004286	
03/27/96 07:59	HEXANE	HEXANE	3_004287	
03/27/96 08:30	HEXANE	HEXANE	3_004288	
03/27/96 09:01	HEXANE	HEXANE	3_004289	
03/27/96 09:31	HEXANE	HEXANE	3_004290	
03/27/96 10:02	PIBLK3X	5-394-14	3_004291	
03/27/96 10:33	INDAM3L	5-410-14	3_004292	out
03/27/96 11:04	INDBM3L	5-413-14	3_004293	out

Unless noted, Client id is the same for both columns

Verification Signature

Date 4/1/96

Analyst Signature Howard

Date 4/1/96

Book: HP_03 Page: ~~15~~ 14 H 4/1/96

4/2

SAMPLE EXTRACTION LOG

SWOK • AATS

Southwest Laboratory of Oklahoma, Inc.
American Analytical & Technical Services, Inc.

METHOD	SV	PEST • PCB	OTHER
CONT. EX.	M5517		
SEP-F	6/1/92 M5517		
SONC.			

☐ RUSH ☐ REEXTRACT ☐ TCLP ☐ DIOXIN

CLIENT: AATS-E DATE RECEIVED: 3-21-96

CASE: 24501 EXTRACT DATE: 3-22-96

SAMPLE ID (EPISODE #)	CLIENT ID	MATRIX • LEVEL	SAMPLE pH	% MOISTURE	DRY WEIGHT	AMOUNT EXTRACTED	EXTRACTED VOLUME	GPC VOLUME	GPC ELUTE VOL	FLORISIL VOL CONC	FLORISIL FIN VOL CONC	VOL SV • P	FIN PROCESS VOLUME	SCREEN Y/N	MS SV • P	SURR SV • P	BASE pH CONFIRMATION	ACID pH CONFIRMATION	COMMENTS
				%	g	g ~~mL~~	mL	mL	mL	mL	mL	mL	mL		µL	µL			TPS
RL0322WA		W	–			1000	450					10.0	1.0			500			–
BB0322WA			–				250												–
25005.01	FEM97		8.49																<10,000
25005.02	FEM98	W	3.12			1000	250					10.0	1.0			500			<10,000

INITIALS		ID NUMBERS	COMMENTS
WEIGHING: b	EXTRACTION: b	FLORISIL CARTRIDGE #:	Prep Batch # 960322WA
CLEANUP:	KD: DM	GPC COLUMN #:	
BLOWDOWN: DM		SURROGATES ID CONC #: 1-323-11	–
SURROG. SPIKER: b	VERIFIER: TR	MATRIX SPIKE SOL ID/CONC #(S):	
MATRIX SPIKER:	VERIFIER:		
SUBMITTED BY: DM 3/24/96	REVIEWED BY:	MISC:	

CH2Cl2 # 3203-5
Na2SO4 # 001

[EX013-0393-01]

48634

04/03

METHOD	SV	PEST • PCB	OTHER
CONT. EX.			6
SEP-F		GC817	1
SONC.			

☐ RUSH ☐ REEXTRACT ☐ TCLP ☐ DIOXIN

SAMPLE EXTRACTION LOG

SWOK • AATS

Southwest Laboratory of Oklahoma, Inc.
American Analytical & Technical Services, Inc.

CLIENT: AATS-E DATE RECEIVED: 03/21/96

CASE: 24501 EXTRACT DATE: 03/22/96

SAMPLE ID (EPISODE #)	CLIENT ID	MATRIX • LEVEL	SAMPLE pH	% MOISTURE	DRY WEIGHT	AMOUNT EXTRACTED	EXTRACTED VOLUME	GPC VOLUME	GPC ELUTE VOL	FLORISIL VOL CONC	FLORISIL FIN VOL CONC	VOL SV • P	FIN PROCESS VOLUME	SCREEN Y/N	MS SV (P)	SURR SV • (8)	BASE pH CONFIRMATION	ACID pH CONFIRMATION	COMMENTS
				%	g	g • (ml)	mL	mL	mL	mL	mL	mL	mL		µL	µL			TDS
BL0322WE	~~3-004261~~ —	W	—			1000	400			10.0	10.0	10.0	1.0		—	1000			—
BB0322WE	—		—												—				—
25005.01	FEM 97		8.49												—				
25005.02	FEM 98	W	3.12			1000	400			10.0	10.0	10.0	1.0		—	1000			

INITIALS		ID NUMBERS	COMMENTS
WEIGHING: PBL	EXTRACTION: PBL	FLORISIL CARTRIDGE #: 943355/ 29888	PREP BATCH # 960322WE
CLEANUP:	KD: PBL	GPC COLUMN #:	
BLOWDOWN: PBS		SURROGATES ID CONC #: 5-30-16	
SURROG. SPIKER: PBL	VERIFIER: 6	MATRIX SPIKE SOL ID/CONC #(S): ~~5-264-14~~ PBL 3/22/96	
MATRIX SPIKER: -	VERIFIER:		
SUBMITTED BY: PBS	REVIEWED BY:	MISC:	

CH_2Cl_2 # 390315
Na_2SO_4 # 601

[EX013-0393-01]

48642

445

PLEASE PRINT OR TYPE

FOR SHIPMENTS WITHIN U.S. ONLY

PACKAGE LABEL

001 (1/89) M-01

FROM

T N R C C
POLLUTION CLEANUP
12216 PARK 35 CIRCLE

AUSTIN TX 78753

Deanna Epperson 512/229-2565

TO

AATS
1700 West Albany, Suite C
Broken Arrow, OK 74012
Attn: Rick (918)251-2858

3038108441

Preprint Format No. 6656789

Origin STN

Airbill Number 3038108441

Method of Payment *Assumed sender unless otherwise noted*

- [x] Bill Sender
- [ ] Bill Receiver
- [ ] Bill 3rd Party
- [ ] Paid in Advance

AIRBORNE EXPRESS.

EXP

Billing Reference *will appear on Invoice*

No. of Pkgs	Weight LBS	Check if
11	50 SUBJECT TO CORRECTION	[ ] LETTER EXPRESS [ ] EXP. PACK

SDS

Special Instructions

- [ ] SAT
- [ ] HAA
- [ ] LAB
- [ ] _____

TUL-82

Rec'd by:
M. Milton
3/21/96 11:00

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):
Case No.: 24501

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

2. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

2. Region No.: 6
Sampling Co.: TNRCC
4. Date Shipped: 2/20/96
Carrier: Airborne Express
6. Date Received – Received by: M. Mcomber 3/21/96
Sampler (Name): Deanna Epperson
Airbill Number: 30381C 8441
Laboratory Contract Number:
Unit Price:
Sampler Signature: Deanna Epperson
5. Ship To: AATS 170 West Albany Suite C Broken Arrow, OK 74012 ATTN: Hue Pers
7. Transfer to:
Date Received:
Received by:
Contract Number:
Price:

3. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 2) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K High Phases Solids	Water-Miscible Liq.	Water-Immis. Liq.
FEM97	4	L	G	5	X	X	X		6-024041-41	R-11	02/20/96	MFGD96	DSE			
~~FEM98~~	~~4~~	~~L~~	~~G~~	~~5~~	~~X~~	~~X~~	~~X~~		~~6-024040-41~~		~~DSE 03/20/96~~					
FEM98	4	L	G	5		X	X		6-046141	R-11	02/20/96	MFGD96	DSE			
FEM98	4	L	G	5	X				6-024040-41	R-11	02/20/96	MFGD96	DSE			

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Deanna Epperson	02/20/96 15:30				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks Is custody seal intact? Y/N/none	
		M. Mcomber	3/21/96 11:00	intact	

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-4 REV. 3/93

FEM97

360369

AMERICAN ANALYTICAL & TECHNICAL SERVICES, INC.
1700 W. ALBANY SUITE C
BROKEN ARROW, OK 74012-1421

Date: 03/21/96
Episode: **25005**
Client: **AATS-E**
Project: 24501

SAMPLE LOG-IN RECORD

SAMPLE #	DATE IN	DESCRIPTION	SDG	MA	NC	TEST	PRI	DUE	CONTAINER	DESCRIPTION	RESULTS	ANALYST	DATE/TIME
25005.01	03/21/96	FEM97 (CASE#24501)		W	3	GC817	4	04/10/96	C	PEST CLP OLM03			
										EXTRACTION			
						MS317	4	04/10/96	AB	VOA-CLP OLM03.			
						MS517	4	04/10/96	C	BNA CLP OLM03.			
										EXTRACTION			
25005.02	03/21/96	FEM98 (CASE#24501)		W	3	GC817	4	04/10/96	C	PEST CLP OLM03			
										EXTRACTION			
						MS317	4	04/10/96	AB	VOA-CLP OLM03.			
						MS517	4	04/10/96	C	BNA CLP OLM03.			
										EXTRACTION			

Total samples = 2

SAMPLE LOG-IN SHEET

Name: American Analytical + Technical Services	Page 1 of 1
Received by (Print Name): Kim Willison	Log-in Date: 3-21-96
Received by (Signature): K Willison	
Case Number: 24501	Sample Delivery Group No.: FEM97
	SAS Number:

Remarks:

			EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1.	Custody Seal(s)	Present/Absent* Intact/Broken	FEM97	6-024037-39	25005.01	intact 3 c
2.	Custody Seal Nos.	NA	FEM98	6-024040-41	25005.02	↓
3.	Chain-of Custody Records	Present/Absent*				
4.	Traffic Reports or Packing Lists	Present/Absent*				
5.	Airbill	Airbill/Sticker Present/Absent*				
6.	Airbill No.	3038108441				
7.	Sample Tags	Present/Absent*				
	Sample Tag Numbers	Listed/Not Listed on Chain-of-Custody				
8.	Sample Condition	Intact/Broken*/Leaking				
9.	Does information on custody records, traffic reports, and sample tags agree?	Yes/No*				
10.	Date Received at Lab	3-21-96				
11.	Time Received	1000				

Sample Transfer

Fraction:	Fraction:
Area #	Area #
By: KW	By: KW
On:	On:

* Contact SMO and attach record of resolution.

Reviewed By	Logbook No.
Date	Logbook Page No.

425

Contract Laboratory Analytical Services Support (CLASS)

Record of Communication

Name: Courtney Lapham	Contact Recv'd Via:	X Phone _ Fax _ Vmail _ Memo _ Other	
Date/Time of Contact 4/1/96 10:00 AM	Initiated By:	_ Lab _ CLASS _ Region _ Other	
Contact/Org./Phone#: Claudia Walters/ AOC/ (703) 603-8847			

Lab: SEVERAL	Contract#: SEVERAL	Case#: 0	SDG:	Region: 6
SOW:	Affected Samples:		Invoice#:	

Discussion/Issue:

Claudia Walters telephoned in reference to the following ROCs:

ROC 2338 for Skinner's Inorganic Contract No. 68-D5-0062; Case 24500;SDG MFCA**

ROC 2342 for AATS' Inorganic Contract No. 68-D5-0022, and INCHVT's Organic Contract No. 68-D5-0063; Case 24501

THIS ROC IS TO ACT AS AN AMENDMENT TO THE TWO ABOVE LISTED ROCS. THE FIFTH TO THE LAST PARAGRAPH ENTITLED - 3/26/96 @ 1050 - Claudia Walters/EPA, AOC/(703)603-8847 - SHOULD READ:

CLASS contacted the APO for the inorganic laboratory involved in this matter for a direction on how to proceed with this issue. AOC informed CLASS that Region VI should make a decision on whether or not QC is needed for this case. If the laboratory involved does perform the MS/MD-QC they are entitled to payment at the Region's expense, however the laboratory CANNOT be penalized for not performing QC on RINSATE sample, because of the implicit language in ILMO4.0. CLASS will provide a final copy of the Record of Communication to AOC.

Resolution

A copy of this resolution was distributed on 4/2/96, via facsimile to the laboratories involved, and CLASS courier to AOC.

RAS OPS	0	Completed Date/Time: 4/2/96 10:00 AM		
Routed:	0	Referred To	Date/Time	W.A.#: ST&R

Distribution: ◉ Lab ◉ Region ◉ CLASS ◉ AOB ◉ Work Assign. Man.

CLASS is operated by DynCorp under Contract #68-D4-0104 to the U.S. Environmental Protection Agency

REC #: 2463

Contract Laboratory Analytical Services Support (CLASS)
Record of Communication

Name: Jonathan Rude

Contact Recv'd Via: _ Phone _ Fax X Vmail _ Memo _ Other

Date/Time of Contact 3/21/96 10:33 AM

Initiated By: _ Lab _ CLASS _ Region X Other

Contact/Org./Phone#: Deanna Eperson/ Texas Natural Resources and Conservation Com./ (512) 239-2565

Lab: BOTH **Contract#:** SEE BELOW **Case#:** 24501 **SDG:** **Region:** 6

SOW: **Affected Samples:** Org.: AATS (68-D5-0022 A); Inorg.: INCHVT (68-D5-0063 B) All Samples **Invoice#:**

Discussion/Issue:

3/21/96 @ 1033 - Deanna Eperson / TNRCC - Region VI Sampler / (512)239-2526 - When the Region VI sampler provided shipping information to CLASS it was indicated that all of the samples were Equipment Rinsates and that no extra volume had been provided for the laboratories to perform QC. The case was complete with two samples to each of the laboratories.

3/21/96 @ 1313 - Chuck Hoover / AATS / (918)251-2858 -
3/21/96 @ 1309 - Kirk Young / INCHVT / (802)655-1203 -
CLASS provided the shipping information to each of the laboratories, but will update the laboratories with information on the rformance of laboratory spikes and (spike) duplicates.

3/22/96 @ 0925 - Chuck Hoover / AATS / (918)251-2858 - AATS requested the update from CLASS on the performance of laboratory matrix spike and matrix spike duplicate for this case.

3/22/96 @ 0930 & 0955 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS informed Region VI of the situation at BOTH of the laboratories for this case. CLASS will provide the detail for each of the laboratories.

3/22/96 @ 1000 - Chuck Hoover / AATS / (918)251-2858 - CLASS asked the laboratory for some clarifications:
Sample #: FEM97 - (SDG#)
FEM98
Volume: 2 liters for each sample (1 for BNA and 1 for Pest/PCB and 2 - 40 ml VOA vials).

3/22/96 @ 1006 - Kirk Young / INCHVT / (802)655-1203 - CLASS asked the laboratory for some clarifications:
Sample #: MFGB95 - (SDG#)
MFGB96
Volume: 2 liters for each sample (1 for TM and 1 for CN).

3/22/96 @ 1015 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS informed Region VI of the situation at each of the laboratories for this case. A response can be expected later today.

3/22/96 @ 1115 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS provided a copy of this discussion sheet to Region VI for response.

RAS OPS Yes **Completed Date/Time:** 3/29/96 6:46 PM

Routed: Yes **Referred To** **Date/Time** **W.A.#:** ST&R

Distribution: ◉ Lab ◉ Region ◉ CLASS ◉ AOB ◉ Work Assign. Man.

Resolution

3/22/96 @ 1430 - Ray Flores / Region VI, TPO / (713)983-2139 - Region VI informed CLASS that a resolution was still being determined for this incident.

3/22/96 @ 1548 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - Region VI informed CLASS that no resolution would be provided until Monday.

3/25/96 @ 0900 - Kirk Young / INCHVT / (802)655-1203 - INCHVT contacted CLASS to determine if any resolution had been reached for this case. CLASS will update the laboratory as soon as possible.

3/25/96 @ 0915 - Sylvia Gorostiza / Region VI, RSCC / (713)983-2150 - CLASS contacted Region VI to find out any update that might expedite a resolution for this case.

3/25/96 @ 0930 - Ray Flores / Region VI, TPO / (713)983-2139 - CLASS contacted Region VI to find out any update on a resolution for this case. Region VI informed CLASS that a response from the inorganic laboratory's Regional TPO was being awaited before a resolution could be provided.

3/25/96 @ 0950 - Christy MacDowell / Region VI, RSCC / (713)983-2137 - Region VI informed CLASS that no laboratory matrix spike or (matrix) duplicate analysis would be required on any of the samples received for this case. All of the samples are equipment rinsates and laboratory QC (MS/MSD or MS/MD) would given irrelevant data. The incident should be noted in the case narratives of each of the laboratories. CLASS will route an internal notification form to correct all CLASS data entry.

3/25/96 @ 1010 - Kirk Young / INCHVT / (802)655-1203 - CLASS provided Region VI's response to the laboratory. The incident should be noted in the case narrative, and CLASS will provide a copy of the discussion to the laboratory.

3/25/96 @ 1013 - Chuck Hoover / AATS / (918)215-2858 - CLASS provided Region VI's response to the laboratory. The incident should be noted in the case narrative, and CLASS will provide a copy of the discussion to the laboratory.

3/25/96 @ 1236 & 1300 - Ray Flores / Region VI, TPO / (713)983-2139 - Region VI informed CLASS that the Region's understanding of the statement of work was that the inorganic laboratories would be required to perform MS/MD at reduced volume if necessary to submit compliant data. This would not affect the organic laboratories in a similar situation, because there is implicit language in the organic statement of work which would prohibit MS/MSD-QC performed on RINSATES (FIELD QC). The inorganic laboratory should be instructed to proceed with MS/MD-QC.

3/25/96 @ 1315 - Kirk Young / INCHVT / (802)655-1203 - INCHVT was informed of Region VI's updated response. The laboratory should note the entire incident in the case narrative.

3/25/96 @ 1330 - Mike Johnson / CLASS, CCS / (703)519-1261 - The CLASS coordinator for Region VI mentioned the events transpiring from this case to CCS, and asked if there was any implicit language in the inorganic SOW ILMO4.0 regarding performance of MS/MD-QC on RINSATE samples.

3/25/96 @ 1409 - Nazy Abousaeedi / CLASS, CCS / (703)519-1254 - CCS informed the CLASS Region VI coordinator that there is indeed implicit language in the inorganic SOW ILMO4.0 that regards NOT performing MS/MD-QC on RINSATE samples.
E-22 (spike) - first paragraph
E-25 (duplicate) - first paragraph
H-14 (field QC is synonymous for RINSATE) - last item

3/25/96 @ 1430 - Claudia Walters / EPA, AOC / (703)603-8847 - CLASS contacted the APO for the inorganic laboratory involved in this matter for a direction on how to proceed given Region VI's updated response to this issue. Message Left.

3/26/96 @ 1030 - Myra Perez / Region VI, RSCC / (713)983-2130
3/26/96 @ 1030 - Nazy Abousaeedi / CLASS, CCS / (703)519-1254 - Region VI, CLASS CCS, and CLASS ST&R - conducted a conference call regarding implicit language in the inorganic SOW ILMO4.0 for NOT performing MS/MD-QC on RINSATE samples.

RAS OPS	Yes	**Completed Date/Time:** 3/29/96 6:46 PM		
Routed:	Yes	**Referred To**	**Date/Time**	**W.A.#:** ST&R
	Distribution: ◉ **Lab** ◉ **Region** ◉ **CLASS** ◉ **AOB** ◉ **Work Assign. Man.**			

E-22 (spike) - first paragraph
E-25 (duplicate) - first paragraph
H-14 (field QC is synonymous for RINSATE) - last item

ASS should contact the Region VI, TPO for a final resolution/clarification given this implicit language in ILMO4.0.

3/26/96 @ 1050 - Claudia Walters / EPA, AOC / (703)603-8847 - CLASS contacted the APO for the inorganic laboratory involved in this matter for a direction on how to proceed with this issue. AOC informed CLASS that Region VI should make a decision on whether or not QC is needed for this case. If the laboratory involved does perform the MS/MD-QC they are entitled to payment at the Region's expense, however the laboratory can be penalized for not performing QC on RINSATE sample, because of the implicit language in ILMO4.0. CLASS will provide a final copy of the Record of Communication to AOC.

3/26/96 @ 1055 - Ray Flores / Region VI, TPO / (713)983-2139 - CLASS informed Region VI of the situation, and that the laboratory would be contacted to place any further action regarding MS/MD-QC on hold until a final resolution can be provided from Region VI.

3/26/96 @ 1102 - Kirk Young / INCHVT / (802)655-1203 - CLASS informed INCHVT to place any further action regarding MS/MD-QC on hold until a final resolution can be provided from Region VI.

3/26/96 @ 1115; 1207; 1210; 1245 - Ray Flores / Region VI, TPO / (713)983-2139 - Region VI researched and consulted the laboratory's Regional, TPO and determined that ILMO4.0 should direct the laboratory not to perform MS/MD-QC on the RINSATE samples received for this case. Region VI informed CLASS that the laboratory should not perform MS/MD-QC for this case. The incident should be noted in the case narrative, and CLASS will route an internal notification form to correct all CLASS data entry.

3/26/96 @ 1338 - Kirk Young / INCHVT / (802)655-1203 - CLASS informed INCHVT that no MS/MD-QC would be required on the RINSATE samples received for this case. The incident should be noted in the case narrative, and CLASS will route an internal notification form to correct all CLASS data entry.

RAS OPS	Yes	**Completed Date/Time:** 3/29/96 6:46 PM		
outed:	Yes	**Referred To**	**Date/Time**	**W.A.#:** ST&R
	Distribution: ◉ **Lab** ◉ **Region** ◉ **CLASS** ◉ **AOB** ◉ **Work Assign. Man.**			

Designate: Grab / Comp.

Time: 1135

Month/Day/Year: 03/20/96

Station No.: R-11

Station Location: R-11

Samplers (Signatures): Deanna Epperson

Preservative: ICE

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	X
Pesticides/PCB	X
_____ Metals	
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: 22 FEM98

Concentration: ☒ L ☐ M ☐ H

Project Code CLP Case No.: 24501

Tag Number: 6- 046141

Lab Sample No.:

Designate: Grab / Comp.

Time: 1135

Month/Day/Year: 03/20/96

Station No.: R-11

Station Location: R-11

Samplers (Signatures): Deanna Epperson

Preservative: ICE

Yes ☒ No ☐

Volatile Organics (VOA)	X
Semi Volatiles (ABN)	
Pesticides/PCB	
_____ Metals	
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	
22	

Remarks: FEM98

Concentration: ☒ L ☐ M ☐ H

Project Code CLP Case No.: 24501

Tag Number: 6- 024040

Lab Sample No.:

Designate: Grab / Comp.

Time: 1135

Month/Day/Year: 03/20/96

Station No.: R-11

Station Location: R-11

Samplers (Signatures): Deanna Epperson

Preservative: ICE

Yes ☒ No ☐

Volatile Organics (VOA)	X
Semi Volatiles (ABN)	
Pesticides/PCB	
_____ Metals	
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	
23	

Remarks: FEM98

Concentration: ☒ L ☐ M ☐ H

Project Code CLP Case No.: 24501

Tag Number: 6- 024041

Lab Sample No.:

Designate: Grab / Comp.

Time

Month/Day/Year: 03/20/96

Station No.

Project Code CLP Case No.: 24501

Samplers (Signatures): Deanna Epperson

Station Location: R-11

Preservative: ICE

Yes ☒ No ☐

Volatile Organics (VOA)	X
Semi Volatiles (ABN)	
Pesticides/PCB	
_____ Metals	
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: FEM97

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6- 024037

Lab Sample No.

Designate: Grab / Comp.

Time

Month/Day/Year: 03/20/96

Station No.

Project Code CLP Case No.: 24501

Samplers (Signatures): Deanna Epperson

Station Location: R-11

Preservative: Ice

Yes ☒ No ☐

Volatile Organics (VOA)	X
Semi Volatiles (ABN)	
Pesticides/PCB	
_____ Metals	
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: FEM97

Concentration: ☒ L ☐ M ☐

Tag Number: 6- 024038

Lab Sample No.

Designate: Grab / Comp.

Time

Month/Day/Year: 03/20/96

Station No.

Project Code CLP Case No.: 24501

Samplers (Signatures): Deanna Epperson

Station Location: R-11

Preservative: ICE

Yes ☒ No ☐

Volatile Organics (VOA)	
Semi Volatiles (ABN)	X
Pesticides/PCB	X
_____ Metals	
Cyanide	
Alkalinity/Hardness	
TCLP	
☐ VOA	
☐ ABN	
☐ METALS	
Asbestos	
Dioxin	
Oil and Grease	

Remarks: FEM97

Concentration: ☒ L ☐ M ☐ H

Tag Number: 6- 024039

Lab Sample No.

CASE PACKET FORM

CASE NO. 24501 SDG FEm97

RECEIVED 3/21

DUE DATE 4/10/96 @ VBP

ENCLOSED ITEMS
(check if enclosed, add pg. numbers)

ORIGINAL AIR BILL _____pg_____to pg_____

ORIGINAL SAMPLE TAGS _____pg_____to pg_____

ORIGINAL GPC CHROMATOGRAMS _____pg_____to pg_____

MISCELLANEOUS

_____ _____pg_____to pg_____

_____ _____pg_____to pg_____

_____ _____pg_____to pg_____

_____ _____pg_____to pg_____

_____ _____pg_____to pg_____

_____ _____pg_____to pg_____

EPA United States Environmental Protection Agency
Contract Laboratory Program

Organic Traffic Report & Chain of Custody Record
(For Organic CLP Analysis)

SAS No. (if applicable):

Case No.: 24501

1. Project Code:
Account Code:
2. Region No.: 6
Sampling Co.: TNRCC
4. Date Shipped: 3/20/96
Carrier: Airborne Express

Regional Information:
Sampler (Name): Deanna Epperson
Airbill Number: 3038108441

Non-Superfund Program:
Sampler Signature: Deanna Epperson
5. Ship To: AATS 1700 West Albany Suite C Broken Arrow, OK 74012
ATTN: Harry Borg

Site Name: Brazos Forge
3. Purpose*
Lead: [X] SF [ ] PRP [ ] ST [ ] FED
Early Action: [ ] CLEM [ ] PA [ ] REM [ ] RI [X] SI [ ] ESI
Long-Term Action: [ ] FS [ ] RD [ ] RA [ ] O&M [ ] NPLD

City, State: Bonham TX
Site Spill ID:

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

7. Preservative (Enter in Column D)
1. HCl
2. HNO3
3. NaHSO4
4. H2SO4
5. Ice only
6. Other (Specify in Column D)
N. Not preserved

CLP Sample Numbers (from labels)	A Matrix (from Box 6) Other:	B Conc. Low Med High	C Sample Type: Comp./Grab	D Preservative (from Box 7) Other:	E RAS Analysis VOA	BNA	Pest/PCB	High only / ARO/TOX	F Regional Specific Tracking Number or Tag Numbers	G Station Location Identifier	H Mo/Day/Year/Time Sample Collection	I Corresponding CLP Inorganic Sample No.	J Sampler Initials	K Field QC Qualifier (B = Blank, S = Spike, D = Duplicate, R = Rinsate, PE = Perform. Eval., — = Not a QC Sample)
FEM97	4	L	G	5	X	X	X		6-024037-39	R-11	03/20/96 9:45	MFGD95 9:45	D&E	B
~~FEM98~~	~~4~~	~~L~~	~~G~~	~~5~~	~~X~~	~~X~~	~~X~~		~~6-024040-41~~		D&E 03/20/96			
FEM98	4	L	G	5		X	X		6-046141	R-11	03/20/96 11:35	MFGD96	D&E	R
FEM98	4	L	G	5	X				6-024040-41	R-11	03/20/96 11:35	MFGD96	D&E	R

Shipment for Case Complete? (Y/N): Y
Page 1 of 1
Sample(s) to be Used for Laboratory QC:
Additional Sampler Signatures:
Chain of Custody Seal Number(s):

CHAIN OF CUSTODY RECORD

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Deanna Epperson	03/20/96 15:30				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks: Is custody seal intact? Y/N/none	

DISTRIBUTION: Blue - Region Copy; White - Lab Copy for Return to Region; Pink - SMO Copy; Yellow - Lab Copy for Return to SMO

EPA Form 9110-2

SEE REVERSE FOR ADDITIONAL STANDARD INSTRUCTIONS
*SEE REVERSE FOR PURPOSE CODE DEFINITIONS

A21-012-3 REV. 3/93

360369