SOUTHWEST LABORATORY OF OKLAHOMA

CASE 8501

005753

1012347

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
EPA HOUSTON LABORATORY
6608 HORNWOOD DRIVE
HOUSTON, TX 77074

FEB -3 11:27

QA/QC COMPLIANCE REVIEW OF CONTRACT COMPLIANCE SCREENING (CCS)
RESUBMITTED DATA

DATE: 2/1/88

TO: J.A. MILLER RCM/RED
6H-ES

CASE # 8501

SAS #

FROM: M.C. Rotter
6E7HL

SITE NAME SMITH CALVERT

005754

ACTION: The resubmitted information has no effect on the data, please incorporate into the data package.

Yes ☑ No ☐ (see comment section)

COMMENT: RESUBMITTED / CORRECTED NARRATIVE.

005754

REVM.

CONTRACT LABORATORY PROGRAM
COVER SHEET

ADDITIONAL OR DUPLICATE DATA SUBMISSION
(NOT TO BE USED FOR CCS RESPONSES)

_X_ Organic ____ Inorganic ____ Dioxin ____ Other(SAS)

Lab Name: Southwest Laboratory of Okla Date: 01-12-88

Case: 8501 SAS: ____ SDG: FD667

The attached data are being submitted to (check one):

_X_ All ____ SMO ____ Region ____ EMSL-LV

For EPA Sample Nos. (enter only those to which these data apply):

FD 667

These data supplement the data submitted on : 12-22-87
(State reasons for submission in cover letter)

OR

These data are a duplicate submission, requested by (name, affiliation):

6/87

005755

005755

SWLO

Southwest Laboratory of Oklahoma

10926 E. 55th Pl. / Tulsa, Oklahoma 74146 / (918) 665-0680

January 12, 1988

Sample Management Office
USEPA - Contract Lab Program
209 Madison Street, Suite 200
Alexandria, VA 22314

Attention: Doris Ling

Re: Correction on Case 8501

Dear Ms. Ling:

Please find enclosed a corrected Case Narrative on Case 8501 which was submitted to you on December 22, 1987.

Thank you.

J.D. Shringarpure, Ph.D.
Program Manager

/pc

Enclosure:

005756

Southwest Laboratory of Oklahoma
10926 E. 55th Pl. / Tulsa, Oklahoma 74146 / (918) 665-0680

CASE NARRATIVE

December 22, 1987

CONTRACT NO.: 68-01-7393

CASE NO.: 8501

SAMPLE NO.: FD 667

---

1. The surrogate solution used for spiking the samples was analysed by the GC/MS and the responses generated were used to calculate the surrogate % recoveries for the semi-volatile fraction.

2. The sample was analysed for the semi-volatile fraction only.

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

J. D. Shringarpure, Ph.D.
Program Manager

1-12-88
Date

005757

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
EPA HOUSTON LABORATORY
6608 HORNWOOD DRIVE
HOUSTON, TX 77074

QA/QC COMPLIANCE REVIEW OF CONTRACT COMPLIANCE SCREENING (CCS)
RESUBMITTED DATA

005758

DATE: 2-12-88

TO:

CASE # 8501

SAS #

FROM: Bill Blanton, ASI
Region VI

SITE NAME South Calumet

ACTION: The resubmitted information has no effect on the data, please incorporate into the data package.

Yes [X] No [ ] (see comment section)

COMMENT:

005758

COVER SHEET

LABORATORY RESPONSE TO RESULTS OF

CONTRACT COMPLIANCE SCREENING (CCS)

Response To: (check one) ☑ Organics CCS

☐ Inorganics CCS

Response materials sent to Organics CCS should be sent to the attention of Doris [illegible].

Response materials sent to Inorganics CCS should be sent to the attention of [illegible].

Laboratory Name Southwest Lab of Okla. Response Date 01-29-88

Date Screening Results Received at Laboratory 01-25-88

EPA Contract No. 68-01-7393

Case No. 8501

Sample Nos.* FD1667

*Only list sample numbers that require reconciliation.

This form is used to identify materials sent in response to results of Contract Compliance Screening (CCS). A separate form must accompany the response for each Case.

Please indicate (on the attached continuation form) which fractions and/or which [illegible] correspond with your resubmission. Response materials sent to CCS should also be copied to [illegible] Region and to EMSL/LV, each with this blue Cover Sheet.

005759

005759

ORGANICS

LABORATORY RESPONSE TO RESULTS OF CCS (continued)

Sample	Fraction	Criterion	Comments
FD667-01	BNA	E	Submitting Forms 8
FD667-08	↓	↓	
FD667-09	↓	↓	
FD667-01	BNA	N	Resubmitting Traffic Report with legible SDG #.

005760

10/8/86

8B
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: SOUTHWEST LABORATORY OF OKLA. Contract: 68-01-7393

Lab Code: SWOX Case No.: 8501 SAS No.: _____ SDG No.: FD 667

Lab File ID (Standard): C0100 Date Analyzed: 12/16/87

Instrument ID: 5970-C Time Analyzed: 1110

	IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
12 HOUR STD	67889	8.69	140405	11.46	101991	15.26
UPPER LIMIT	135778		280810		203982	
LOWER LIMIT	33945		70203		50996	
EPA SAMPLE NO.						
01 FD 667	56723	8.68	131195	11.44	91193	15.25
02 FD 667 MS	59045	8.72	128874	11.48	94395	15.28
03 FD 667 MSD	70691	8.70	161101	11.46	109440	15.25
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

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

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

Column used to flag internal standard area values with an asterisk

FORM VIII SV-1 1/87 Rev.

126 A

005761

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: SOUTHWEST LABORATORY OF OKLA. Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD 667

Lab File ID (Standard): C0100 Date Analyzed: 12/16/87

Instrument ID: 5970C Time Analyzed: 1110

	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
12 HOUR STD	201447	18.37	104448	24.01	115393	27.04
UPPER LIMIT	402894		208896		230786	
LOWER LIMIT	100724		52224		57697	
EPA SAMPLE NO.						
01 FD667	178663	18.36	188240	24.00	211298	27.04
02 FD667MS	198158	18:40	193459	24.03	228957	27.06
03 FD667MSD	206161	18:36	187945	24.00	200539	27.04
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

Page 2 of 2

FORM VIII SV-2 1/87 Rev.

126B

005762

005762

8B
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: SOUTHWEST LABORATORY OF OKLA. Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD 667

Lab File ID (Standard): C0137 Date Analyzed: 12/19/87

Instrument ID: 5970-C Time Analyzed: 0901

	IS1(DCB) AREA #	RT	IS2(NPT) AREA #	RT	IS3(ANT) AREA #	RT
12 HOUR STD	67808M	8.43	149332	11.20	111294	14.98
UPPER LIMIT	135616		298664		222588	
LOWER LIMIT	33904		149332		55647	
EPA SAMPLE NO.						
01 SBLK	72912	8.44	179942	11.19	127173	14.97
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

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

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

Column used to flag internal standard area values with an asterisk

Page 1 of 2

FORM VIII SV-1 1/87 Rev.

126C

005763

8C
SEMIVOLATILE INTERNAL STANDARD AREA SUMMARY

Name: SOUTHWEST LABORATORY OF OKLA. Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD 667

Lab File ID (Standard): C0137 Date Analyzed: 12/19/87

Instrument ID: 5970C Time Analyzed: 0901

	IS4(PHN) AREA #	RT	IS5(CRY) AREA #	RT	IS6(PRY) AREA #	RT
12 HOUR STD	265892m	18.07	176278	23.69	153333	26.59
UPPER LIMIT	531784		352556		306666	
LOWER LIMIT	132946		88139		76667	
EPA SAMPLE NO.						
01 3BLK	267389	18.07	247956	23.68	289881	26.60
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk

Page 2 of 2

FORM VIII SV-2 1/87 Rev.

126D

005764

005764

U.S. ENVIRONMENTAL PROTECTION AGENCY Sample Management Office

ORGANICS TRAFFIC REPORT

Sample Number
FD 667

① Case Number: 8501

Sample Site Name/Code:

② SAMPLE CONCENTRATION (Check One)
X Low Concentration
___ Medium Concentration

③ SAMPLE MATRIX (Check One)
X Water
___ Soil/Sediment

④ Ship To: SDG - Final Sample
SWOK
Tulsa, OK

Attn:

Transfer
Ship To:

⑤ Regional Office: VI

Sampling Personnel:
Jens Deichmann (Name)
(512) 345-6651 (Phone)

Sampling Date:
11/17/87 (Begin) 11/17/87 (End)

⑥ For each sample collected specify number of containers used and mark volume level on each bottle.

	Number of Containers	Approximate Total Volume
Water (Extractable)	2	160 oz
Water (VOA)		
Soil/Sediment (Extractable)		
Soil/Sediment (VOA)		
Other		

⑪ Analysis Lab:
Rec'd by: Paula Lee
Date Rec'd: 11/18/87
Sample Condition on Receipt (e.g., broken, no Chain of Custody, etc.)
SDG FD667 P.C. no discrepancy

⑦ Shipping Information
Federal Express
Name of Carrier
11/17/87
Date Shipped:
1599113456
Airbill Number:

⑧ Sample Description
___ Surface Water ___ Mixed Media
X Ground Water ___ Solids
___ Leachate ___ Other (specify) _____

⑨ Sample Location
SCK-MW-08
EPA Tag Nos.: 6-21182
6-21183

⑩ Special Handling Instructions:
(e.g., safety precautions, hazardous nature)

002

LAB COPY FOR RETURN TO SMO

005765

Rec'd 1/15/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
HOUSTON BRANCH
6608 HORNWOOD DRIVE
HOUSTON, TEXAS 77074

Ref. Case No. 8501

Site Name South Calvacade

Date: 1-12-88

Subject: CLP Data Review

From: Michael L. Daggett, Chief, Organic Lab Section, 6E-HL

To: Jo Ann Miller, 6H-ES

A review of the laboratory raw data for the reference site has been completed by members of the Laboratory Section. Samples were:

INORGANIC: _____ _____ _____ _____

ORGANIC: FD667 _____ _____ _____

The data was found:

(√) Acceptable

( ) Provisional; use of data requires caution. Problems are noted in Review Summa

( ) Unacceptable; data should not be used. Problems are noted in Review Summary.

Questions regarding the review can be addressed to me.

Attachments

cc: David Stockton, 6E-HL
Duane Geuder, WH-548A

005766

ORGANIC DA CHECKLIST

Site South Calvacade

Case No. 8501

Reviewed By Bill Blanton

Date 1-8-87

Contract No. 68-01-7393

Contractor Southwest Laboratory of OK

Matrix Water

Acct. # 8TFAJN67 SF TFAU56

Sample No. FD667

OVERALL COMMENTS (To Be Completed By EPA PERSONNEL)

	VOA	B/N	A	Pest	Other
1. Holding Times	NR	A	A	NR	
2. Tuning/Performance		A	A		
3. Calibrations		A	A		
4. Blanks		A	A		
5. Surrogates		A	A		
6. Matrix Spike/Dup		A	A		
7. Compound Identity		A	A		
8. Case Assessment		A	A		

COMMENTS OR CLARIFICATIONS (See Attached)

A - Acceptable - All items delivered; all criteria met.

P - Provisional - Data usable; some non-essential review items missing or criteria were not met.

U - Unacceptable - Data unusable; essential review items missing or criteria not met.

005767

COMMENTS/CLARIFICATIONS
REGION VI CLP QA REVIEW

CASE 8501 SITE South Calvacade LAB Southwest Laboratory of O

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

No.	Acceptable	Provisional	Unacceptable
VOA	NR		
BNA	1		
PEST	NR		
OTHER			

COMMENTS:

Data package is acceptable for Case 8501. The case narrative mistakely identifies the one water sample that constitutes this case as FD 557. The sample identification is FD 667. This case is for BNAs only.

1. Holding times - acceptable

2. Tuning/Performance - acceptable. All DFTPP criteria were met. Pentachlorophenol had split peaks during the initial calibration requiring manual intergration. This had no apparent effect on sample results.

3 Calibrations - acceptable. All SPCC and CCC QC were met.

4. Blanks - acceptable.

5. Surrogates - acceptable. All QC criteria were met. No reanalyses were required.

6. Matrix spike/ duplicate - acceptable. All QC criteria were met.

005768

005768

ORGANIC CLP/QA REVIEW
CONTINUATION PAGE

CASE NO. 8501 SITE South Calvacade

COMMENTS:

7. Compound identity/Results - The only target compound reported above CRDL's was phenanthrene. Othe PAHs were present at estimated concentrations.

8. Case assessment - acceptable.

005769

Southwest Laboratory of Oklahoma
10926 E. 55th Pl. / Tulsa, Oklahoma 74146 / (918) 665-0680

CASE NARRATIVE

December 22, 1987

CONTRACT NO.: 68-01-7393

CASE NO.: 8501

SAMPLE NO.: FD557

---

1. The surrogate solution used for spiking the samples was analysed by the GC/MS and the responses generated were used to calculate the surrogate % recoveries for the semi-volatile fraction.

2. The sample was analysed for the semi-volatile fraction only.

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

J. D. Shringarpure, Ph.D.
Program Manager

12-22-87
Date

001

005770

U.S. ENVIRONMENTAL PROTECTION AGENCY

ORGANICS TRAFFIC REPORT

Sample Number: FD E67

① Case Number: 8501

Sample Site Name/Code:

② SAMPLE CONCENTRATION (Check One)

X Low Concentration
___ Medium Concentration

③ SAMPLE MATRIX (Check One)

X Water
___ Soil/Sediment

④ Ship To: SDC - Final Sample
SWOK
Tulsa, OK

Attn:

[redacted]

Transfer
Ship To:

⑤ Regional Office: SC

Sampling Personnel:
Jens Deichmann
(Name)
(512) 345-6651
(Phone)

Sampling Date:
11/17/87 (Begin) 11/17/87 (End)

⑥ For each sample collected specify number of containers used and mark volume level on each bottle.

	Number of Containers	Approximate Total Volume	
Water (Extractable)	2	160 oz	no discrepancy
Water (VOA)			
Soil/Sediment (Extractable)			
Soil/Sediment (VOA)			
Other			

⑪ Analysis Lab:
Rec'd by: Paula Lieb
Date Rec'd: 11/18/87
Sample Condition on Receipt (e.g., broken, no seal, Chain-of-Custody etc.)

⑦ Shipping Information

Federal Express
Name of Carrier

11/17/87
Date Shipped:

1599113456
Airbill Number:

⑧ Sample Description

___ Surface Water
X Ground Water
___ Leachate
___ Mixed Media
___ Solids
___ Other (specify) _____

⑨ Sample Location

SCK-MW-08

EPA Tag Nos.: 6-21182
6-21183

⑩ Special Handling Instructions:
(e.g., safety precautions, hazardous nature)

002

LAB COPY FOR RETURN TO SMO

005771

005771

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: SWL - TULSA Contract: 68-01-7393

Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

	EPA SAMPLE NO.	S1 (NBZ)#	S2 (FBP)#	S3 (TPH)#	S4 (PHL)#	S5 (2FP)#	S6 (TBP)#	OTHER	TOT OUT
01	FD667	84	88	81	58	70	34		0
02	FD667MS	81	84	87	54	63	40		0
03	FD667MSD	87	87	80	59	72	35		0
04	SBLK	94	93	121	83	79	97		0

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

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

005772

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: SWL - TULSA Contract: 68-01-7393

Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix Spike - EPA Sample No.: FD667

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	222	0	115	52	12- 86
2-Chlorophenol	222	0	115	52	27-123
1,4-Dichlorobenzene	111	0	53.1	48	36 97
N-Nitroso-di-n-prop.(1)	111	0	68.7	62	41 116
1,2,4-Trichlorobenzene	111	0	52.1	47	39 98
4-Chloro-3-methylphenol	222	0	124	56	23 97
Acenaphthene	111	8.96	75.1	60	46-118
4-Nitrophenol	222	0	151	68	10- 80
2,4-Dinitrotoluene	111	0	80.7	73	24- 96
Pentachlorophenol	222	0	183	82	9-103
Pyrene	111	3.49	50.9	43	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	222	134	60	-14	42	12- 86
2-Chlorophenol	222	131	59	-13	40	27-123
1,4-Dichlorobenzene	111	59.6	54	-12	28	36 97
N-Nitroso-di-n-prop.(1)	111	73.0	66	-6	38	41 116
1,2,4-Trichlorobenzene	111	56.3	51	-8	28	39 98
4-Chloro-3-methylphenol	222	114	51	9	42	23 97
Acenaphthene	111	72.9	58	3	31	46-118
4-Nitrophenol	222	140	63	8	50	10- 80
2,4-Dinitrotoluene	111	73.3	66	10	38	24- 96
Pentachlorophenol	222	180	81	1	50	9-103
Pyrene	111	50.9	43	0	31	26-127

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

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

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

COMMENTS: FD667 15580
900ML/1ML/1UL,CASE

005773

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: SWL - TULSA Contract: 68-01-7393

Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Lab File ID: C0139 Lab Sample ID: SBLK

Date Extracted: 11/22/87 Extraction:(SepF/Cont/Sonc) CONT

Date Analyzed: 12/19/87 Time Analyzed: 1036

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

Instrument ID: 5970-C

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	FD667	15980	C0109	12/16/87
02	FD667MS	15980MS	C0110	12/16/87
03	FD667MSD	15980MSD	C0111	12/16/87

COMMENTS: SSBLK 11/22
1000ML/1ML/1UL,CASE

005774

FORM IV SV

5B

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

Lab Name: SWL - TULSA Contract: 68-01-7393

Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Lab File ID: C0096 DFTPP Injection Date: 12/16/87

Instrument ID: 5970-C DFTPP Injection Time: 0821

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.3
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	57.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	40.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	19.7
365	Greater than 1.00% of mass 198	2.51
441	Present, but less than mass 443	~~76.2~~ 6.59
442	Greater than 40.0% of mass 198	44.9
443	17.0 - 23.0% of mass 442	8.7 (19.3)2

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

005775

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD50	SSTD50	C0100	12/16/87	1110
02	SSTD160	SSTD160	C0101	12/16/87	1157
03	SSTD120	SSTD120	C0102	12/16/87	1240
04	SSTD80	SSTD80	C0103	12/16/87	1323
05	SSTD20	SSTD20	C0104	12/16/87	1410
06	FD667	15880	C0109	12/16/87	1831
07	FD667MS	15880MS	C0110	12/16/87	1910
08	FD667MSD	15880MSD	C0111	12/16/87	1951

5B
SEMIVOLATILE ORGANIC GC/MS TUNING AND MASS
CALIBRATION - DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Lab File ID: C0136 DFTPP Injection Date: 12/19/87

Instrument ID: 5970-C DFTPP Injection Time: 0837

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	65.7
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	41.0
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.4
275	10.0 - 30.0% of mass 198	19.5
365	Greater than 1.00% of mass 198	1.51
441	Present, but less than mass 443	~~78.9~~ 6.68 AB
442	Greater than 40.0% of mass 198	47.4
443	17.0 - 23.0% of mass 442	8.4 (17.8)2

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

005776

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD50	SSTD50	C0137	12/19/87	0901
02	SBLK	SBLK	C0139	12/19/87	1036

FORM V SV

1/87 Rev.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD667

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0109

Level: (low/med) LOW Date Received: 11/18/87

Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
100-51-6	Benzyl Alcohol	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	2-Methylphenol	11	U
39638-32-9	bis(2-Chloroisopropyl)Ether	11	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-Di-n-Propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
65-85-0	Benzoic Acid	56	U
111-91-1	bis(2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-Methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	56	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	56	U
131-11-3	Dimethyl Phthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U

005777

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD667

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0109

Level: (low/med) LOW Date Received: 11/18/87

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	56	U
83-32-9	Acenaphthene	9	J
51-28-5	2,4-Dinitrophenol	56	U
100-02-7	4-Nitrophenol	56	U
132-64-9	Dibenzofuran	7	J
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	3	J
100-10-6	4-Nitroaniline	56	U
534-52-1	4,6-Dinitro-2-Methylphenol	56	U
86-30-6	N-Nitrosodiphenylamine (1)	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	56	U
85-01-8	Phenanthrene	15	
120-12-7	Anthracene	2	J
84-74-2	Di-n-Butylphthalate	8	J
206-44-0	Fluoranthene	11	J
129-00-0	Pyrene	3	J
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	22	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-Octyl Phthalate	11	U
205-99-2	Benzo(b)Fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)Anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

(1) - Cannot be separated from Diphenylamine

005778

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD667

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0109

Level: (low/med) LOW Date Received: 11/18/87

Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

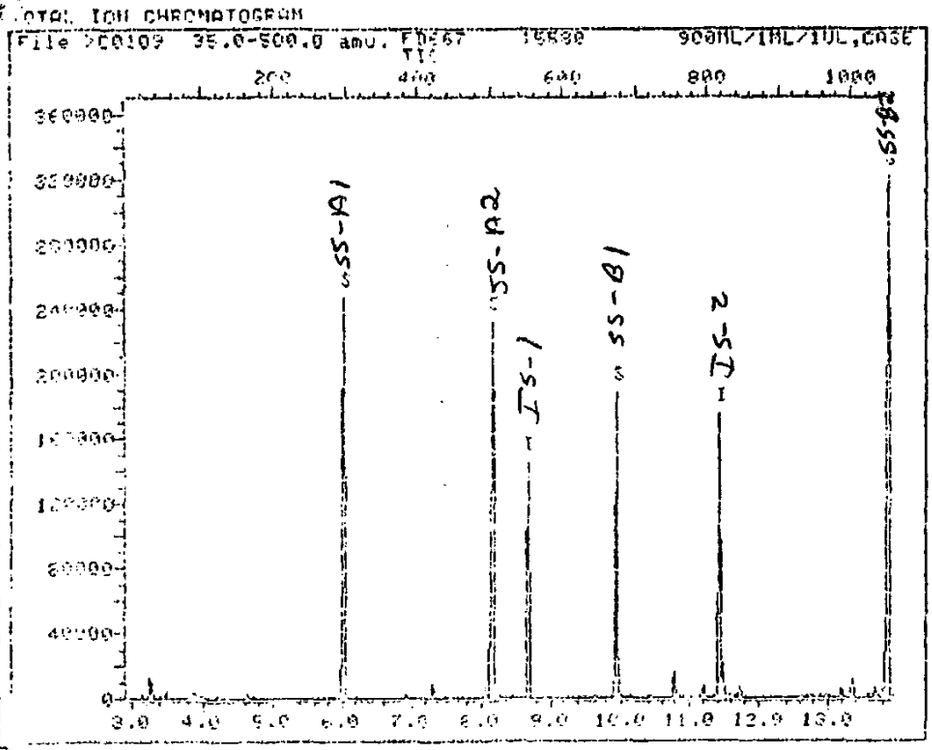
Number TICs found: 8

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	3.82	5.6	J
2.	UKNOWN ACID	15.95	5.6	J
3.	UNKNOWN ACID	17.94	3.3	J
4. 132650	Dibenzothiophene (8CI9CI)	18.14	3.3	J
5. 57103	Hexadecanoic acid (9CI)	19.77	10	BJ
6.	UNKNOWN HYDROCARBON	20.14	2.2	J
7.	UNKNOWN ACID	21.27	4.4	J
8.	UNKNOWN	22.32	13	J

005779

TOTAL ION CHROMATOGRAM



Data File: >C0109::D2 Quant Output File. ^U0109::U0
Name: FD667 15530
Misc: 900ML/1ML/1UL,CASE 8701,INST: C

Id File: ID_B01::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 13:27

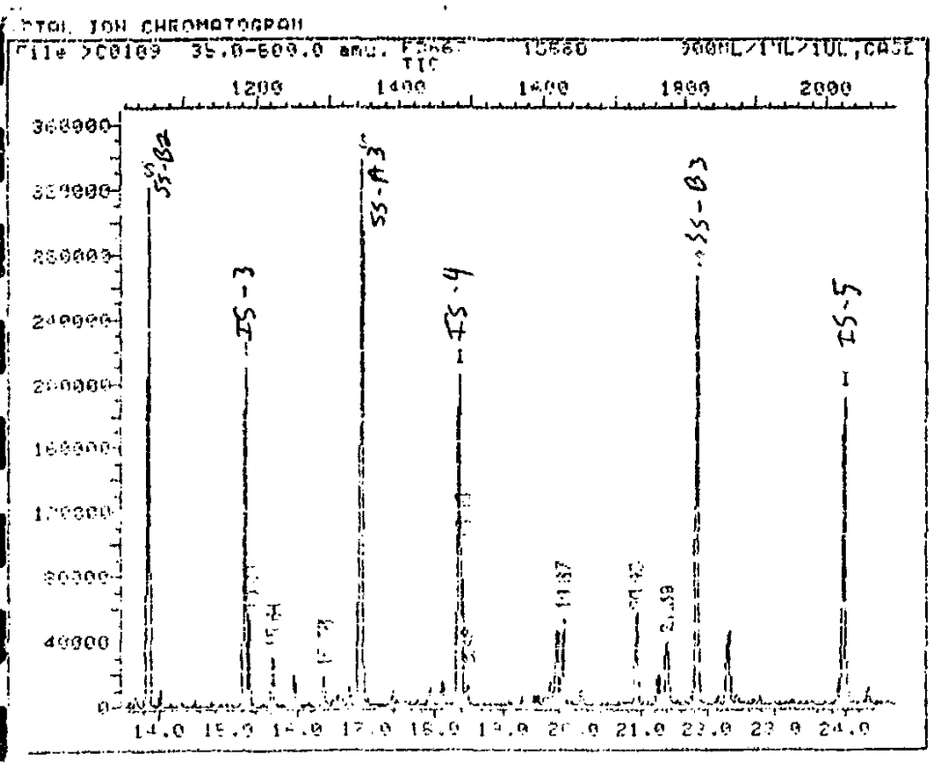
Operator ID: JOHN
Quant Time: 871217 13:37
Injected at: 871216 18:31

TIC page 1 of 3

005780

011

005780



Data File: >C0109::D
Name: FD667 15580
Misc: 900ML 1ML/10UL,CASE 8011,INST: C

Quant Output File: ^C010::D

Id File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 13:27

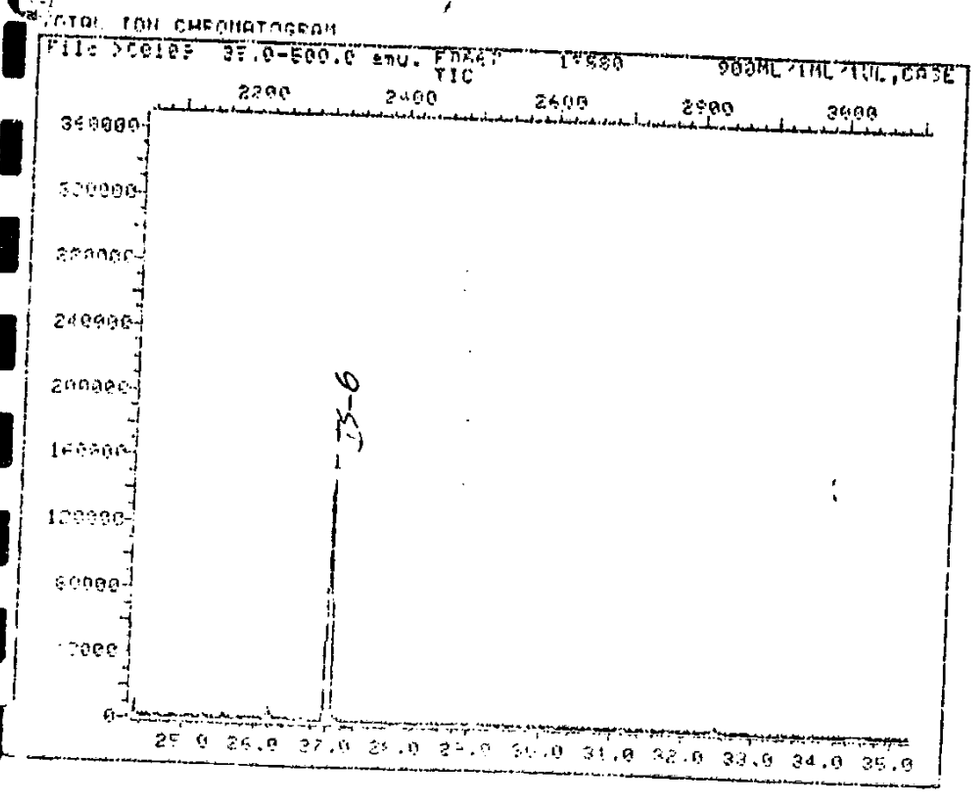
Operator ID: JOHN
Quant Time: 871217 13:37
Injected at: 871216 18:3x

TIC page 2 of 3

005781

012

005781



Data File: >1 0102::D.
Name: FD667 15%.0
Misc: 90UML/1ML/1UL,CASE 8201,/NST: C

Quant Output File: ^C0102::Q

Id File: ID_RN1::EA
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 13:27

Operator ID: 2 341
Quant Time: 871217 13:57
Injected at: 871216 16:31

TIC page 3 of 3

005782

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871217 13:37
Output File: ^C0109::QT Injected at: 871216 16:31
Data File: >C0109::D2 Dilution Factor: 1.00000
Name: F0667 15980
Misc: 900ML/1ML/1UL,CASE 8501,INST: C

File: ID_BYU::FX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 13:2[illegible]

	Compound	R.T.	Q ion	Area	Conc	Units	q
[illegible])	*C120 1,4-DICHLOROBENZENE-D4	8.68	150.0	56723	40.00	NG/UL	96
1[illegible])	C550 2-FLUOROPHENOL	6.0	112.0	110634	138.78	NG/UL	88
[illegible])	C545 PHENOL-D6	8.18	99.0	171876	116.49	NG/UL	90
16)	*C140 NAPHTHALENE-D8	11.44	136.0	131195	40.00	NG/UL	98
[illegible])	C510 NITROBENZENE-D5	9.96	82.0	100497	8[illegible].5[illegible]	NG/UL	83
3[illegible])	*C150 ACENAPHTHENE-D10	15.25	164.0	91193	40.00	NG/UL	99
41)	C560 ACENAPHTHENE	15.31	153.0	23536	8.07	NG/UL	97
4[illegible])	C565 DIBENZOFURAN	15.64	168.0	25320	5.57	NG/UL	91
[illegible])	C590 FLUORENE	16.38	166.0	7980	2.51	NG/UL	97
50)	C525 2-FLUOROBIPHENYL	13.87	172.0	210622	88.42	NG/UL	94
[illegible]	C355 2,4,6-TRIBROMOPHENOL	16.94	329.7	122192	67.34	NG/UL	97
5[illegible]	*C160 PHENANTHRENE-D10	18.36	188.0	178663	40.00	NG/UL	96
5[illegible])	C640 PHENANTHRENE	18.40	178.0	70059	13.80	NG/UL	96
59)	C645 ANTHRACENE	18.48	178.0	10103	1.91	NG/UL	98
4[illegible])	C650 DI-N-BUTYLPHTHALATE	19.87	149.0	50812	7.40	NG/UL	86
6[illegible])	C655 FLUORANTHENE	20.93	202.0	51364	9.94	NG/UL	92
62)	*C170 CHRYSENE-D12	24.00	240.0	188240	40.00	NG/UL	93
6[illegible])	C715 PYRENE	21.39	202.0	33004	3.14	NG/UL	90
6[illegible])	C540 TERPHENYL-D14	21.84	244.0	245780	81.24	NG/UL	91
70)	*C175 PERYLENE-D12	27.04	264.0	211298	40.00	NG/UL	97

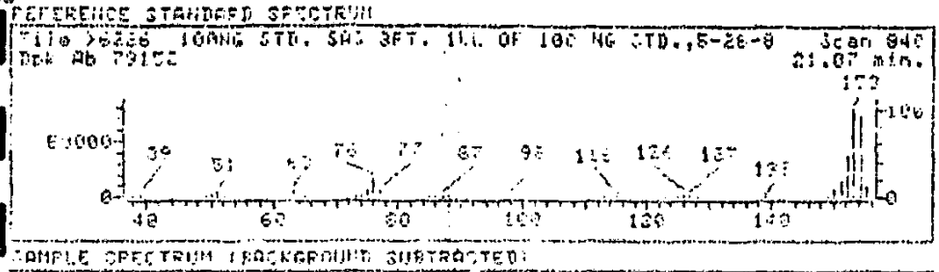
Compound is ISTD

005783

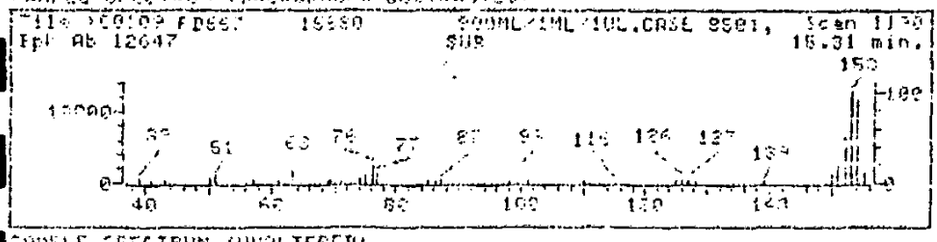
014

005783

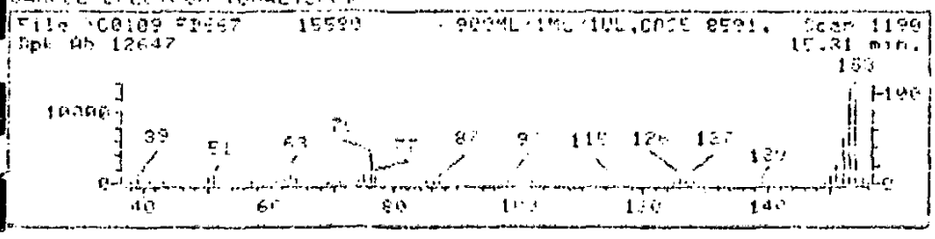
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >C0109::02 Quant Output File: >C0109::Q1
Name: FD667 15580
Misc: 900ML/1ML/10UL,CASE 8501,INST: C
Quant Time: 8/12/17 13:57 Quant IC File: IC_BN1::CX
Injected at: 871.16 18:21 Last Calibration: 871.17 13.27

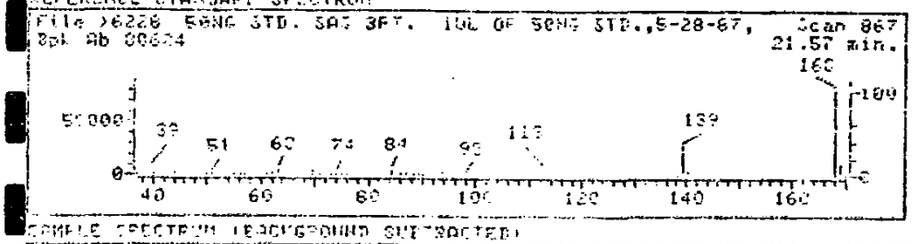
Compound No: 41
Compound Name: C560 ACENAPHTHENE
Scan Number: 1190
Retention Time: 15.31 min.
Quant Ion: 154.0
Area: 23536
Concentration: 8.07 NG/UL
q-value: 97

005784

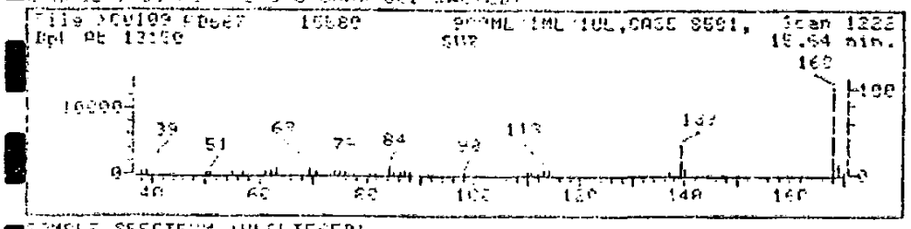
015

005784

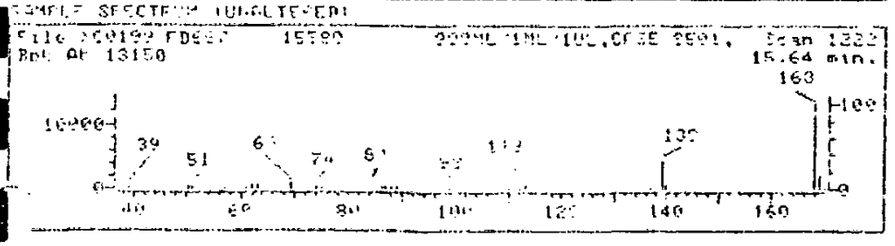
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: >C0109::D2 Quant Output File: ^C0109::Q1
Name: FD667 15580
Misc: 900ML/1ML/10L,CASE 8801,INST: C
Quant Time: 871017 13:37 Quant ID File: ID_BN1::EX
Injected at: 871216 16:31 Last Calibration: 871217 1[illegible]:27

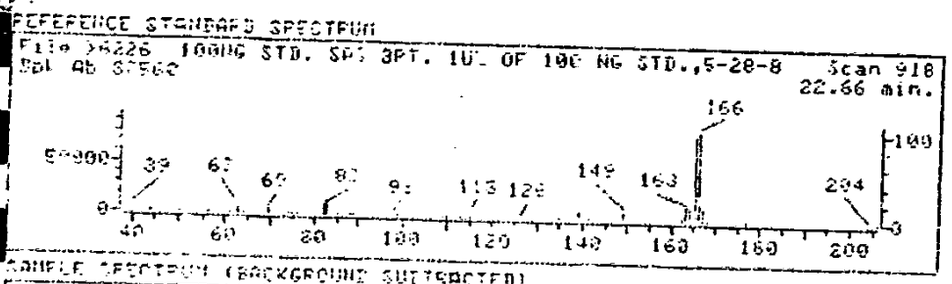
Compound No: 44
Compound Name: C5A5 DIBENZOFURAN
Scan Number: 1222
Retention Time: 15.64 min.
Quant Ion: 168.0
Area: 25320
Concentration: 5.97 NG/UL
q-value: 91

005785

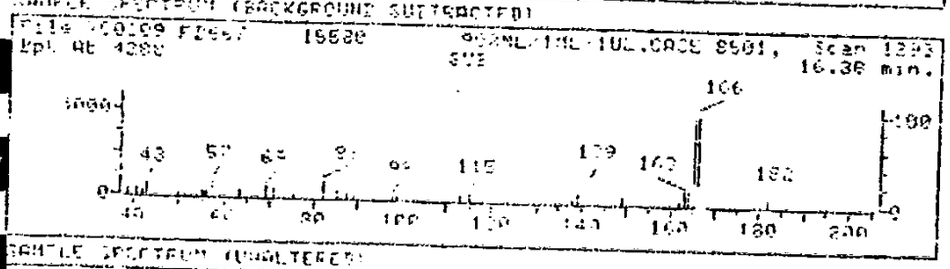
016

005785

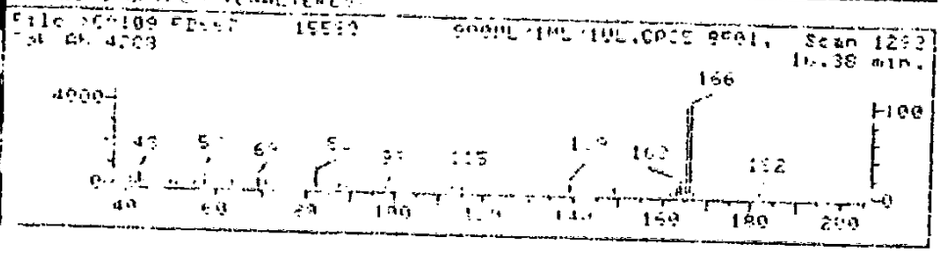
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)



Data File: [illegible]
Name: FE667 [illegible]
Misc: [illegible] 1.INST: C
Quant Time: 8 12 17 13:37
Injected at: 8 12 17 13:3[illegible]

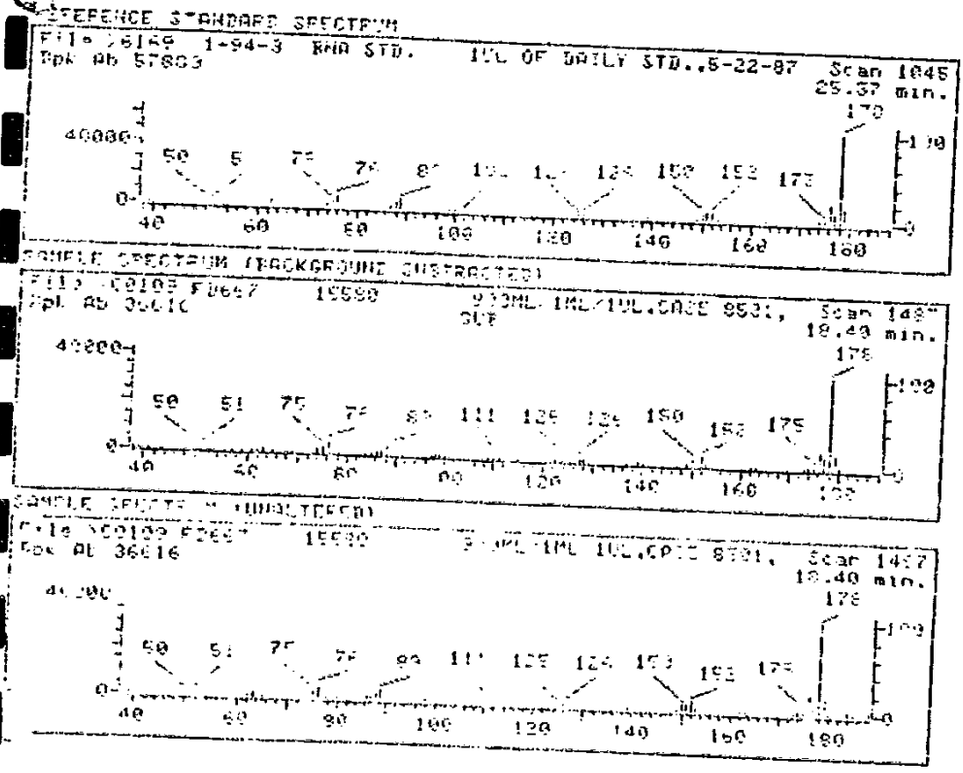
Quant Output File: [illegible]
Quant ID File: ID_ENI::EX
Last Calibration: 8 12 17 1[illegible]:27

Compound No: [illegible]
Compound Name: C590 FLUORENE
Scan Number: 1293
Retention Time: 16.35 min.
Quant Ion: 166.0
Area: [illegible]
Concentration: 2.51 NG/UL
q-value: [illegible]

005786

017

005786



Data File: [illegible]
Name: FD667 15590
Misc: [illegible] 8101.INST: C
Quant Time: 871217 13:[illegible]
Injected at: 871216 1[illegible]

Quant Output File: ^C0109::Q
Quant ID File: ID_B01:.E
Last Calibration: 871217 1[illegible]

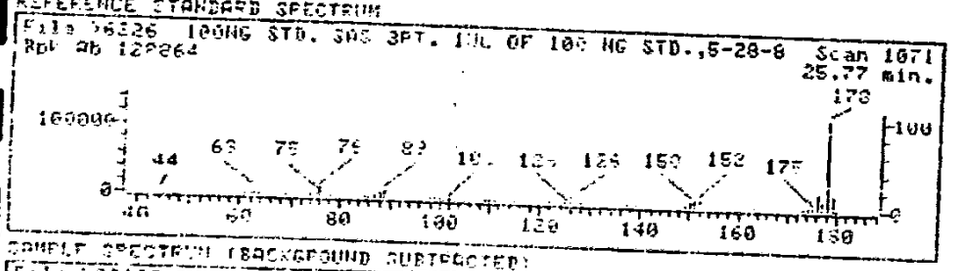
Compound No: 49
Compound Name: C-40 PHENANTHRENE
Scan Number: 1487
Retention Time: 18.40 min.
Quant Ion: 178.0
Area: [illegible]
Concentration: 13.80 NG UL
q-value: 96

005787

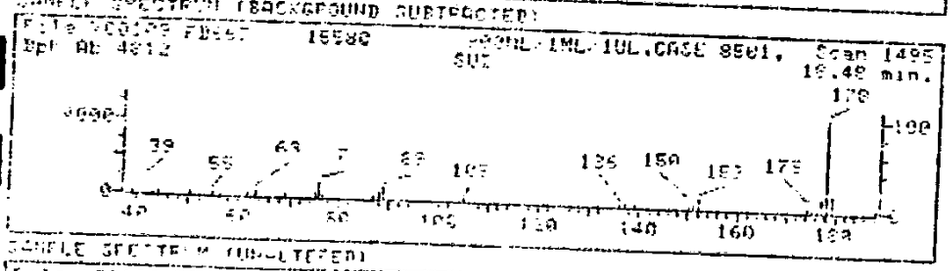
018

005787

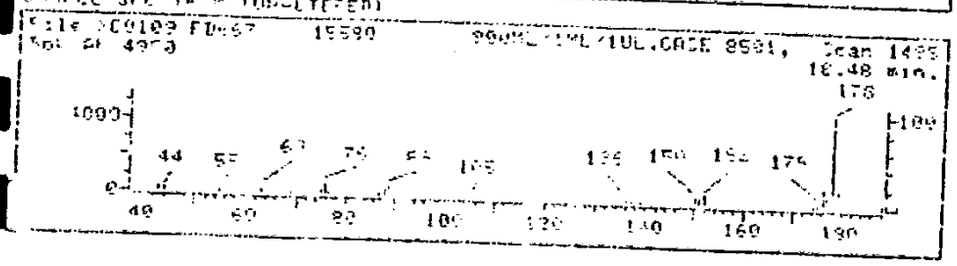
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNFILTERED)



Data File: >C010::0.
Name: FD667 15580
Quant Output File: ^C010::0
Quant Time: 871217 13:
Injected at: 8 12:4 13:3
Quant ID File: ID_E41::E
Last Calibration: 871217 1.:2

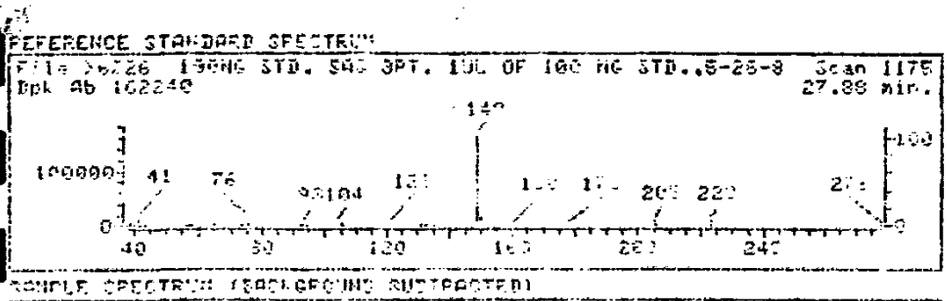
Compound No: 59
Compound Name: C6H4 ANTHRACENE
Scan Number: 1495
Retention Time: 19.48 min.
Quant Ion: 178.0
Area: 10117
Concentration: 1.91 NG UL
q value: 98

005788

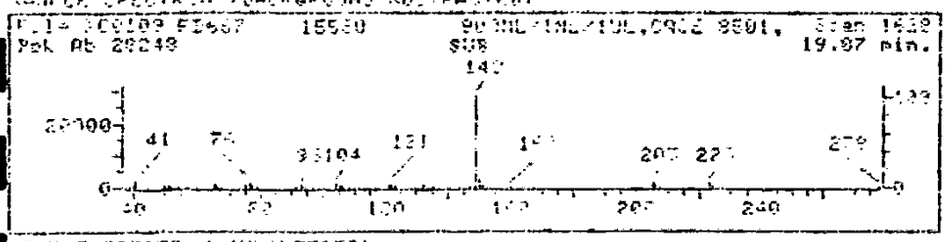
019

005788

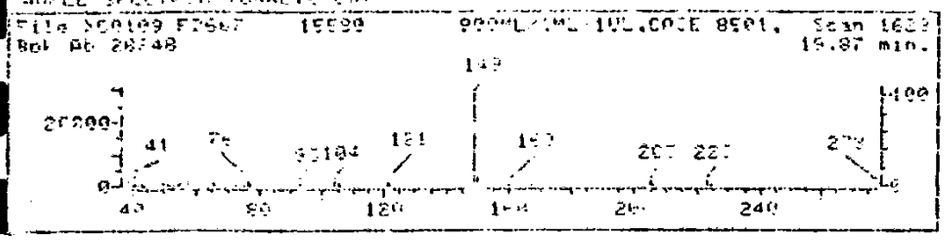
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNSUBTRACTED)



Data File: >C0109::02 Quant Output File: ^C0109::6
Name: FD667 15590
Misc: 900ML/1ML/1UL,CODE 8501,INST: C
Quant Time: 871217 13:37 Quant ID File: ID_BN1::E
Injected at: 8 1215 16:31 Last Calibration: 8/1217 1:2

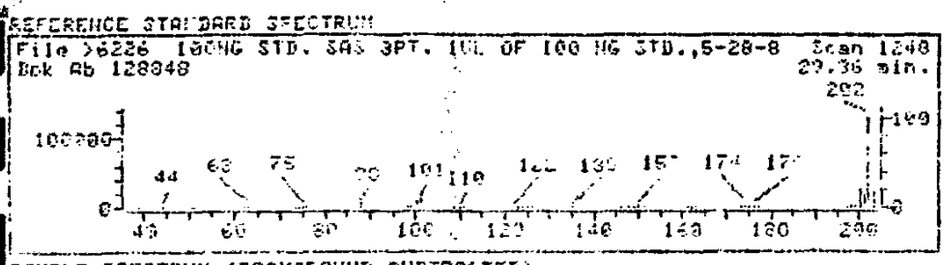
Compound No: 60
Compound Name: C670 DI-N-BUTYLPHTHALATE
Scan Number: 1628
Retention Time: 19.87 min.
Quant Ion: 149.0
Area: 50812
Concentration: 7.40 NG/UL
q-value: 86

005789

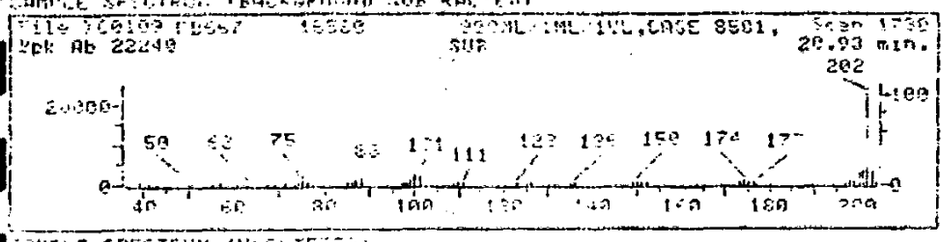
020

005789

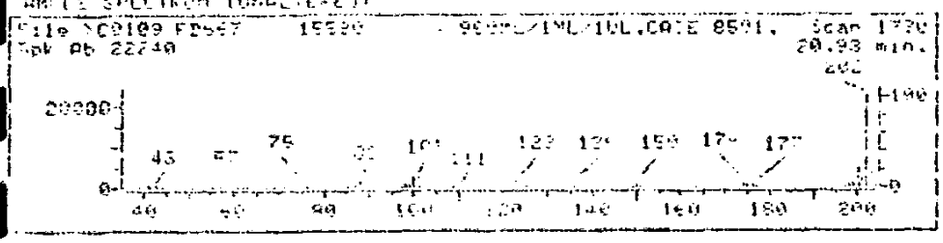
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNAFFECTED)



Data File: >C0109::C Quant Output File: ^C0109::C.
Name: FD567 15560
Misc: 900ML/1ML/1UL,CASE 8501,INST: C
Quant Time: 871217 13:37 Quant .D File: ID_BN1::E
Injected at: 871215 16:31 Last Calibration: 871217 13:27

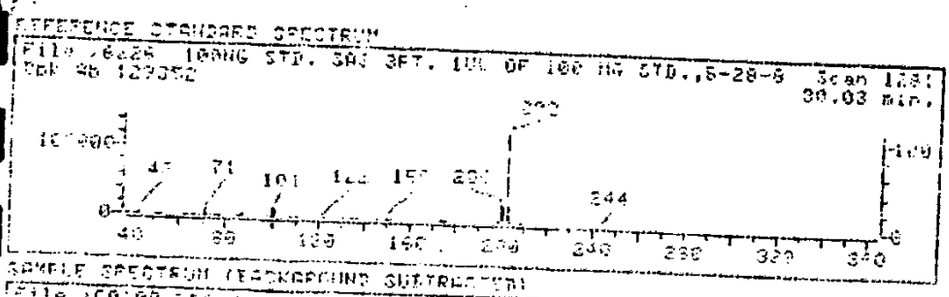
Compound No: 61
Compound Name: C66 FLUORANTHENE
Scan Number: 1730
Retention Time: 20.93 min.
Quant Ion: 202.0
Area: 9136
Concentration: 9.94 NG/UL
q-value: 9%

005790

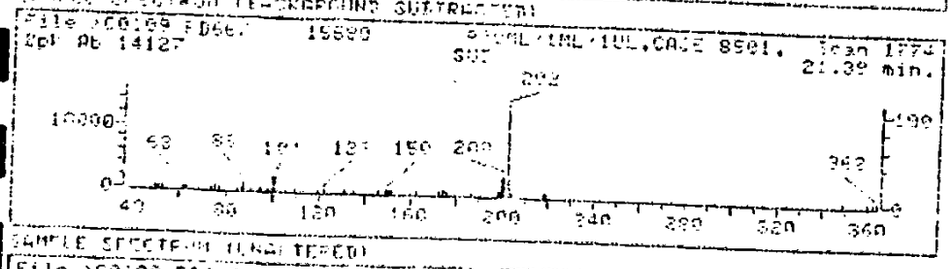
021

005790

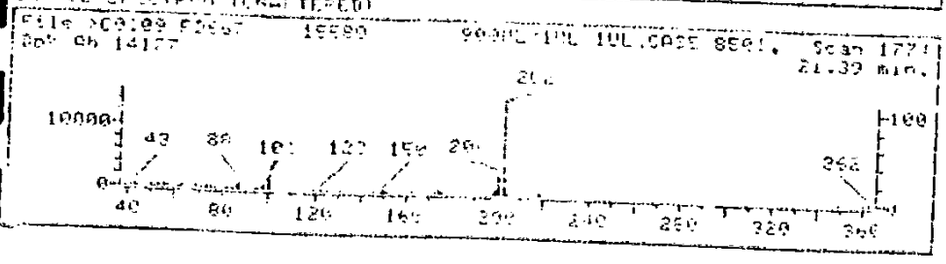
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNSUBTRACTED)



Data File: >C0:09::DC
Name: FD567 15680
Misc: 100NG 1UL/1UL,CASE 8501,INST: C
Quant Time: 871217 13:37
Injected at: 871217 13:31

Quant Output File: ^C0109::6
Quant ID File: ID_EN1::EX
Last Calibration: 871217 1 :2

Compound No: 53
Compound Name: C215 PYRENE
Scan Number: 1774
Retention Time: 21.39 min.
Quant Ion: 202.0
Area: 33604
Concentration: 3.14 NG/UL
q-Value: 90

005791

022

005791

Data File Header from : [illegible]

Sample: F[illegible]67 1558[illegible] Operator: JOHN MS 12/16/8[illegible] 1[illegible]
Mise : 90[illegible]ML/[illegible]ML/JUL,C[illegible]SE 8[illegible]1,INS[illegible]: C
S[illegible] #: 1 MS mode: 70 Sw/MS re[illegible]: 1A ALS # : 0
Method file: [illegible]01 Tuning file: [illegible]1TUNE No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures : [illegible] [illegible] 0. 0. 0.
Chromatographic times, min. : [illegible] 10.0 0.0 0.0 0.0
Chromatographic rate, deg/min: [illegible] 0.0 0.0 0.0 0.0

[illegible] F[illegible]7 1[illegible] [illegible]ML/[illegible]ML/JUL,C[illegible]SE 8[illegible]1,INS[illegible]: C
35.01 500.0 LP DC TIC
[illegible]load: [illegible] [illegible] Reject: [illegible] Max Peaks: 8 Quantitation: [illegible]
[illegible]lope: 0.00 Results File [illegible] Sorted by Time Area [illegible]

[illegible]	R.T. min.	First scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	5.82	82	84	86	[illegible]	29969	29987	[illegible]	6.094
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	13.94	1476	1443	1[illegible]	[illegible]	38[illegible]80	[illegible]5235	[illegible]	6.294
[illegible]	[illegible]	1452	1451	1[illegible]	[illegible]	42[illegible]	[illegible]945	[illegible]	[illegible]
5	19.77	1613	1[illegible]	1[illegible]	[illegible]	[illegible]	11[illegible]070	[illegible]	13.[illegible]
[illegible]	20.17	1646	1[illegible]	1[illegible]	[illegible]	32[illegible]	21486	[illegible]	[illegible]
7	21.27	1756	1[illegible]3	1[illegible]	[illegible]	56[illegible]	46240	[illegible]	9.[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	1[illegible]	[illegible]	[illegible]	1[illegible]929	100.00	[illegible]

Sum of corrected areas: [illegible]20[illegible].

Summary of Library Search and Quantitation

standard	Concentration	Area	Retention Time	Unknown Window
1	[illegible].0	2[illegible]647.	8.63	2.96 - 1[illegible]
2	40.0	31[illegible]06.	11.44	10.06 - 13.24
3	40.0	4[illegible]651.	15.29	13.34 - 1[illegible]
4	40.0	49[illegible]110.	18.16	16.80 - 21.16
5	40.0	[illegible]3[illegible].	24.00	21.16 - 2[illegible]
6	40.0	Sum 58.	27.04	25.52 - [illegible]

Dilution Factor (DF) = [illegible] Fractional Solids (FS) = 1.00
Amount Method (AM) = 1000.00 Amount Used (AU) = 1000.00

Correction Factor = 1.00 * (AM / AU) / (DF * FS)

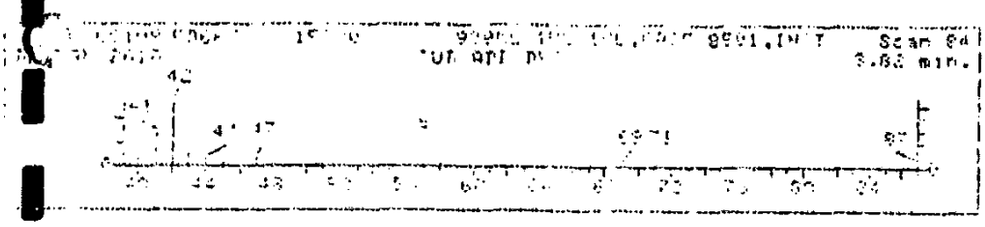
$$\text{Conc Concentration} = \frac{\text{Conc int std}}{\text{Area int std}} * \text{Area Unk} * \text{Correction Factor}$$

11:26 AM Thu., 17 DEC., 198[illegible]

005792

023

005792



005793

Unknown

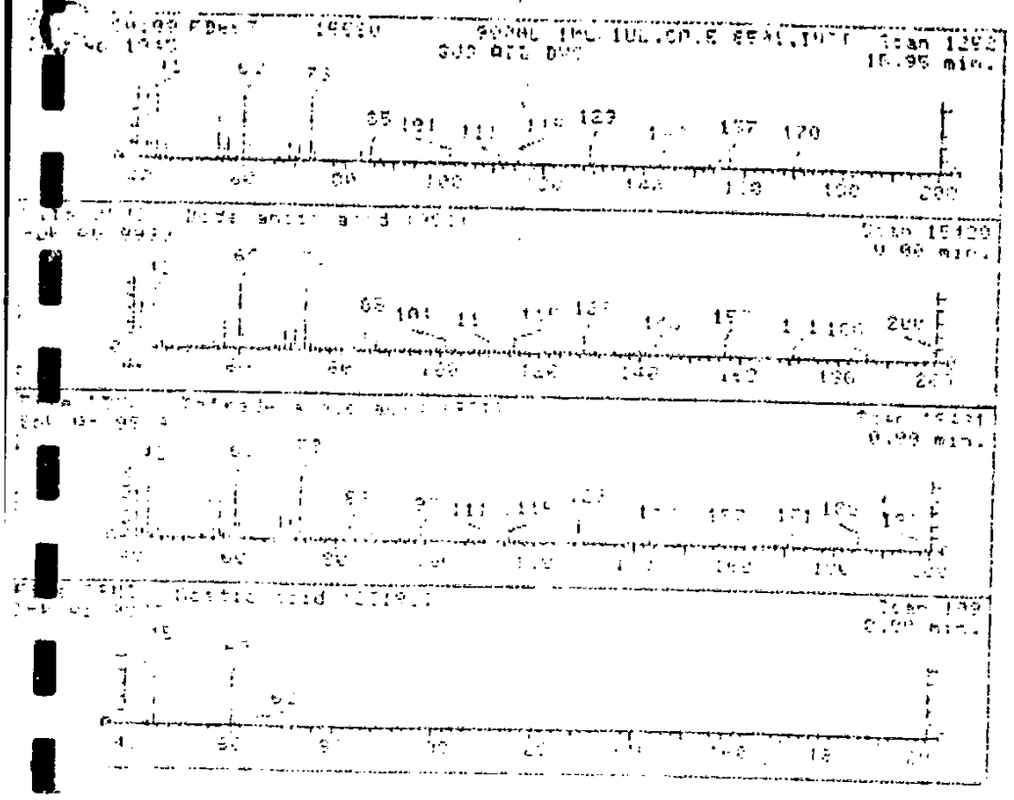
Unknown #.1
Area = 29489.00 Contains Correlation is 0.00

Search Filter Index Number #. 0

No data base entries were retrieved.

024

005793



Unknown acid

Unknown #1
Area = 56102.000 Relative concentration = 5.00

1. Quinaldic acid (1M)
2. Tetradecanoic acid (1M)
3. Maleic acid (1M)
4. Isoxazolidine, 5-methyl-4-methylene-, trans- (1M)

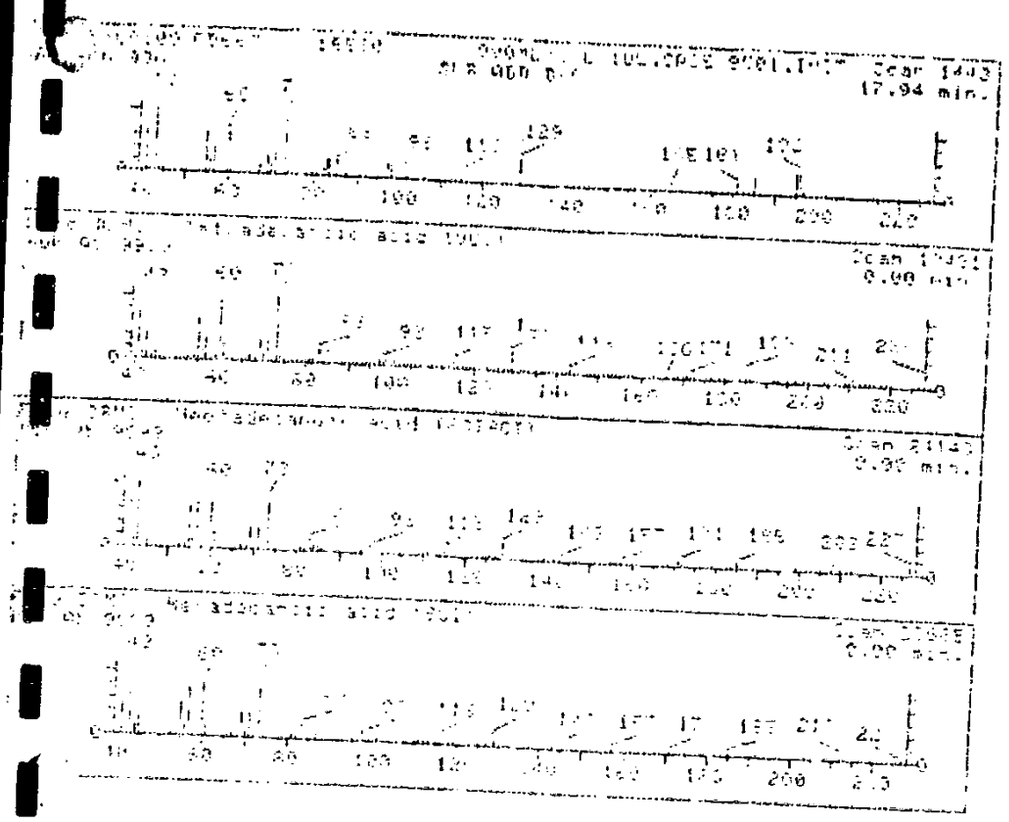
Sample File: [illegible] Spectrum #: [illegible]
Search speed: 1 Filtering option: N No. of ion ranges searched: 43

	Prob.	Lib #	CAS #	Name	R	L	MWG	FILT	%	CUM	L_I	F_IU
1	70	143072	2013	DGMS	79	84	3	0	92	6	42	14
2	75	94467	2066	LMMS	78	76	3	0	90	29	14	12
3	15*	64197	1[illegible]	LEMS	98	94	2	0	98	65	3	14
4	16*	5[illegible]	[illegible]	DGMS	26	76	3	0	147	56	3	12

025

005794

005794



Unknown acid

Unknown #:
Mass = 33/35.00 Tentative Concentration is 3.00

1. Tetradecanoic acid (9CI)
2. Heptadecanoic acid (8CI)
3. Hexadecanoic acid (9CI)
4. 1,3,4-Thiadiazolidine-2-thione, 5-ethyl- (9CI)
5. Isoxazolidine, 5-ethyl-2,4-dimethyl-, cis- (9CI)
6. Isoxazolidine, 5-ethyl-2,4-dimethyl-, trans- (9CI)

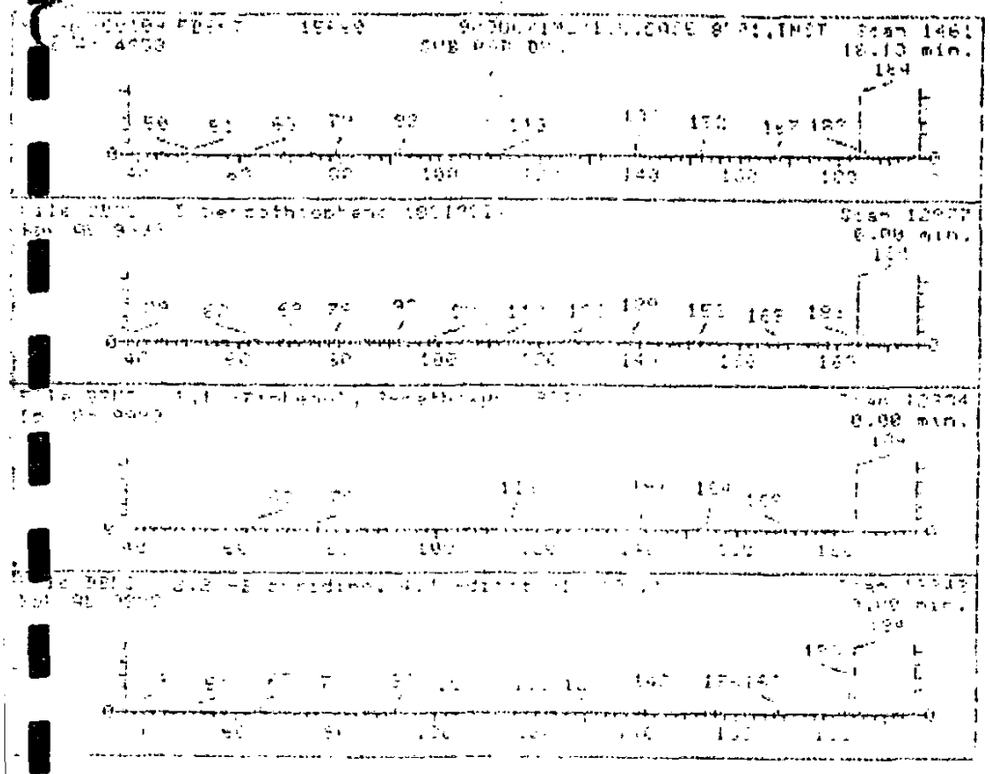
Sample File: Spectrum #: 1443
Search speed: 1 Filter Option: N No. of ion ranges searched: 43

Prob.	LRS #	CCI #	FLOT	R	CI	#FLG	TILT	%	CAS	CI	FLTD
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11*	5670021	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11*	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

005795

026

005795



Area = [illegible] (relative concentration) [illegible]

1. [illegible]
2. 1,1'-Biphenyl, 3-methyl- [illegible]
3. [illegible]
4. [1,1'-Biphenyl]-4,4'-diamine [illegible]
5. [illegible]-Benzimidazole, 2-(2-hydroxy[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

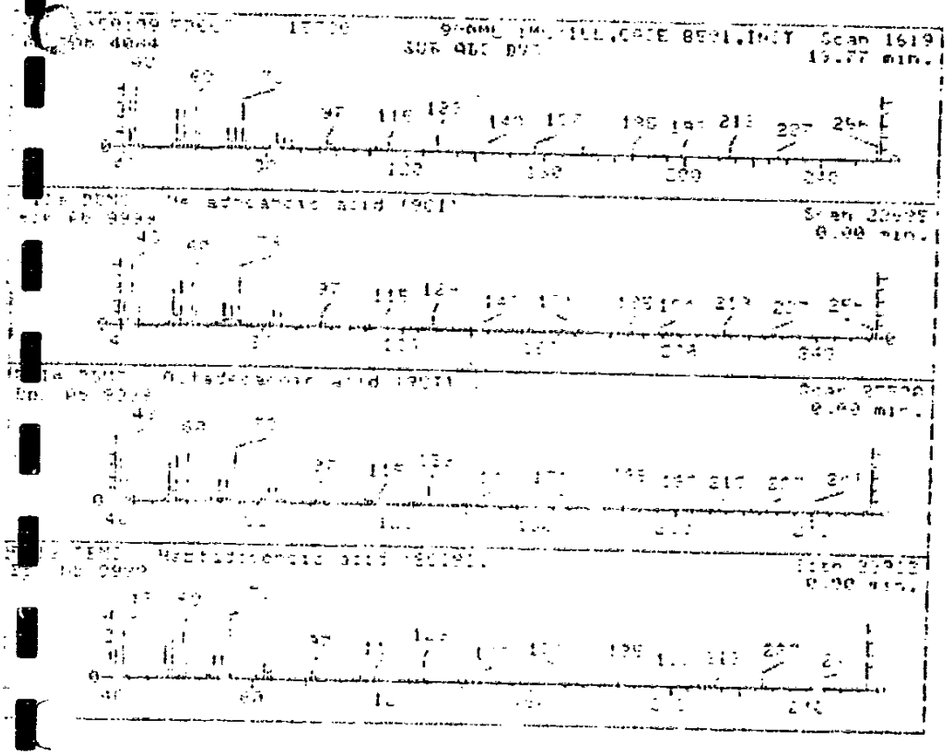
Sample file: [illegible] Spectrum #: [illegible]
Search speed: [illegible] Fitting on ion: N No. of ion ranges searched: 42

Prob.	CAS #	CONC #	SHIFT	R	DK	#FLG	TILT	%	CON	[illegible]	RIV
[illegible]	[illegible]	[illegible]	[illegible]	80	23	2	0	85	5	02	61
[illegible]	211-[illegible]	230-5	[illegible]	2[illegible]	56	3	0	100	18	20	13
[illegible]	[illegible]	[illegible]	[illegible]	2[illegible]	77	2	0	100	2[illegible]	[illegible]	[illegible]
42[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3	0	100	2[illegible]	[illegible]	15
[illegible]	[illegible]	[illegible]	[illegible]	29	81	3	0	100	2[illegible]	14	13

005796

027

005796



Unknown #,F
Area = 1150200.0 Tentative Compounds 9.00

1. Hexadecanoic acid (96%)
2. Octadecanoic acid (C18)
3. Heptadecanoic acid (C17)
4. Pentadecanoic acid (C15)
5. Nonanoic acid (C9)
6. Heptadecanoic acid (C17)
7. Tetradecanoic acid (C14)

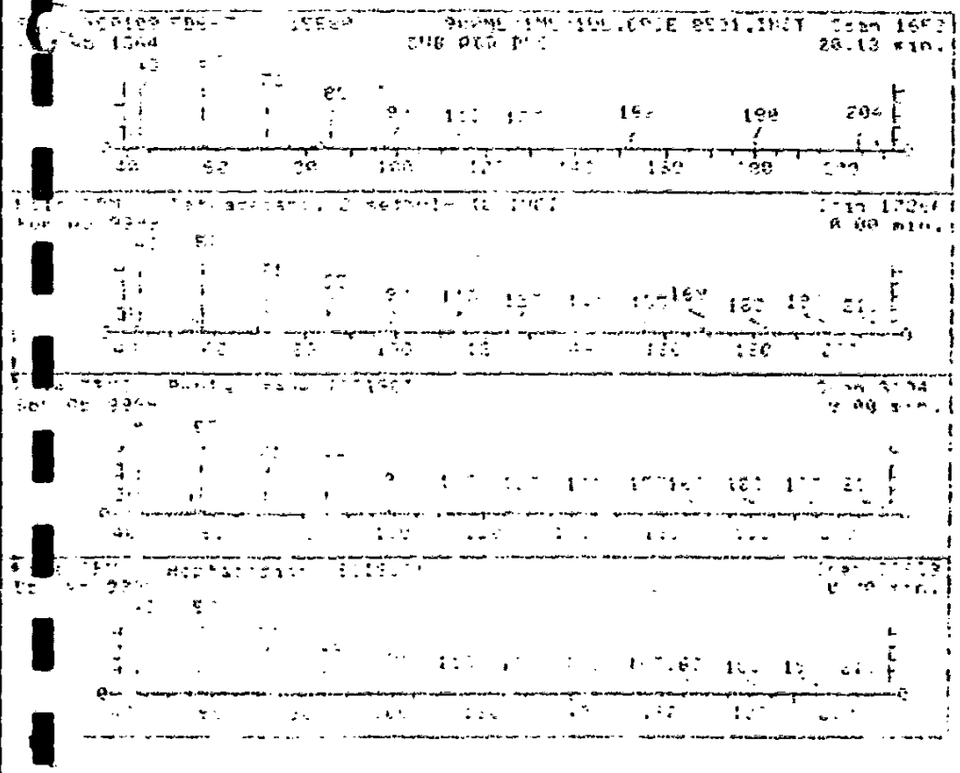
Sample file: 00199 Spectrum #: 1619
Search speed: 1 Tilting option: N No. of ion ranges searched: 43

	Prob.	CAS #	LIB #	SCORE	R	UK	#FIG	TILT	%	CUM	C_I	R_LV
	96*	6217[illegible]	2070	[illegible]	87	94	1	0	63	[illegible]	[illegible]	66
	67	[illegible]	2090	[illegible]	[illegible]	67	1	0	63	30	2[illegible]	56
	62	2026[illegible]	2024	[illegible]	10[illegible]	[illegible]	2	0	69	[illegible]	23	40
4.	59	1002942	2[illegible]	[illegible]	[illegible]	[illegible]	2	0	61	2	19	25
	51*	112050	[illegible]	[illegible]	92	42	1	0	67	46	[illegible]	[illegible]
	40	506122	[illegible]	[illegible]	[illegible]	92	2	0	90	[illegible]	[illegible]	[illegible]
	40	[illegible]	[illegible]	[illegible]	92	94	2	0	76	76	14	27

005797

028

005797



Chk - hydrocarbon

Data = [illegible] Normalization is [illegible] 30

1. Tetradecane, [illegible]
2. Pentacosane [illegible]
3. [illegible]
4. Nonacosane [illegible]
5. Octacosane [illegible]
6. Eicosane, [illegible]
7. Eicosane, [illegible]

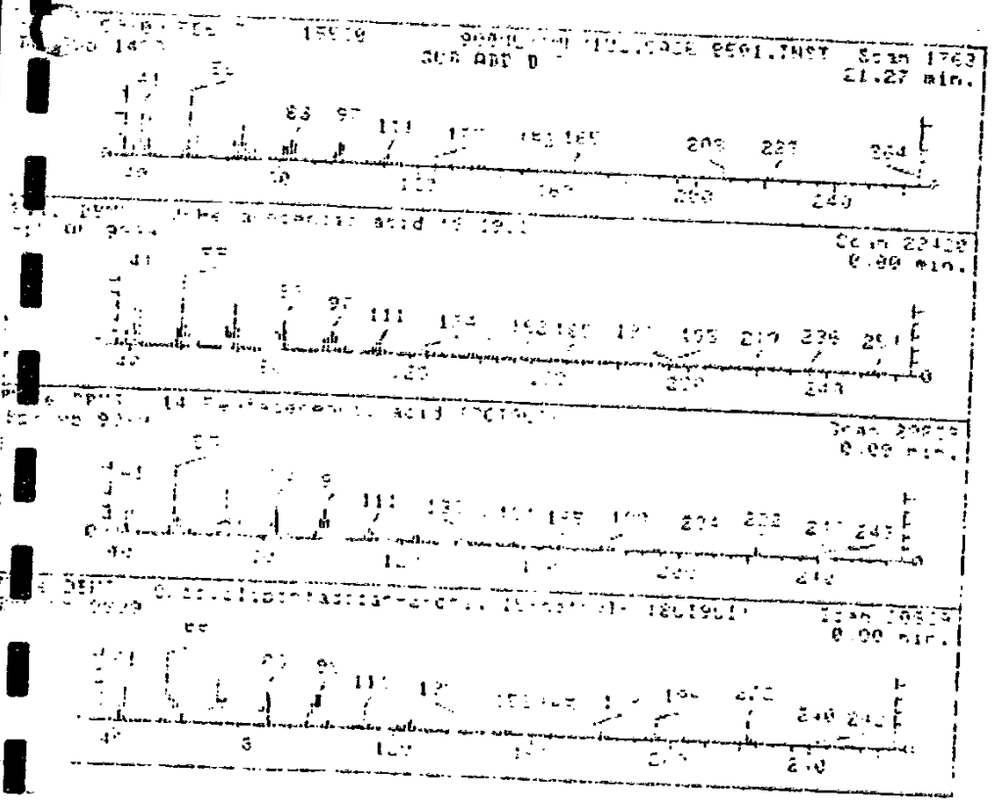
Sample file: [illegible] Spectrum #: 1653
Search speed: [illegible] Fitting options: [illegible] No. of [illegible] ranges searched: 48

	Prob.	CAS #	CON #	NAME	%	OK	SFLG	TILT	%	CHN	[illegible]	REV
	[illegible]	[illegible]	[illegible]	[illegible]	67	54	2	0	95	31	20	[illegible]
	47	[illegible]	[illegible]	[illegible]	93	42	2	0	92	37	20	31
	46	[illegible]	[illegible]	[illegible]	96	48	2	0	91	37	20	30
4.	46	631 35	[illegible]	[illegible]	[illegible]	56	2	0	92	[illegible]	19	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]	85	43	2	0	92	33	16	[illegible]
	40	5833 7	[illegible]	[illegible]	84	47	2	0	100	33	16	23
	40	[illegible]	[illegible]	[illegible]	84	61	2	0	99	[illegible]	16	[illegible]

005798

029

005798



Area = 46240.00 Tentative Concentration is 4.30

1. 9-Octadecenoic acid (Z)-
2. 14-Pentadecenoic acid
3. Octadecanoic acid, 2-methyl- (CAS)
4. 1,2-Ethanediol, 1,2-di-(1-cyclopentene-1-yl)- (9CI)
5. 9-Octadecenoic acid (Z)-, 2-hydroxy, ester (9CI)
6. 1H-Imidazole-2-methanol
7. Octadecanoic acid, 2-oxo, 1-methyl- (9CI)

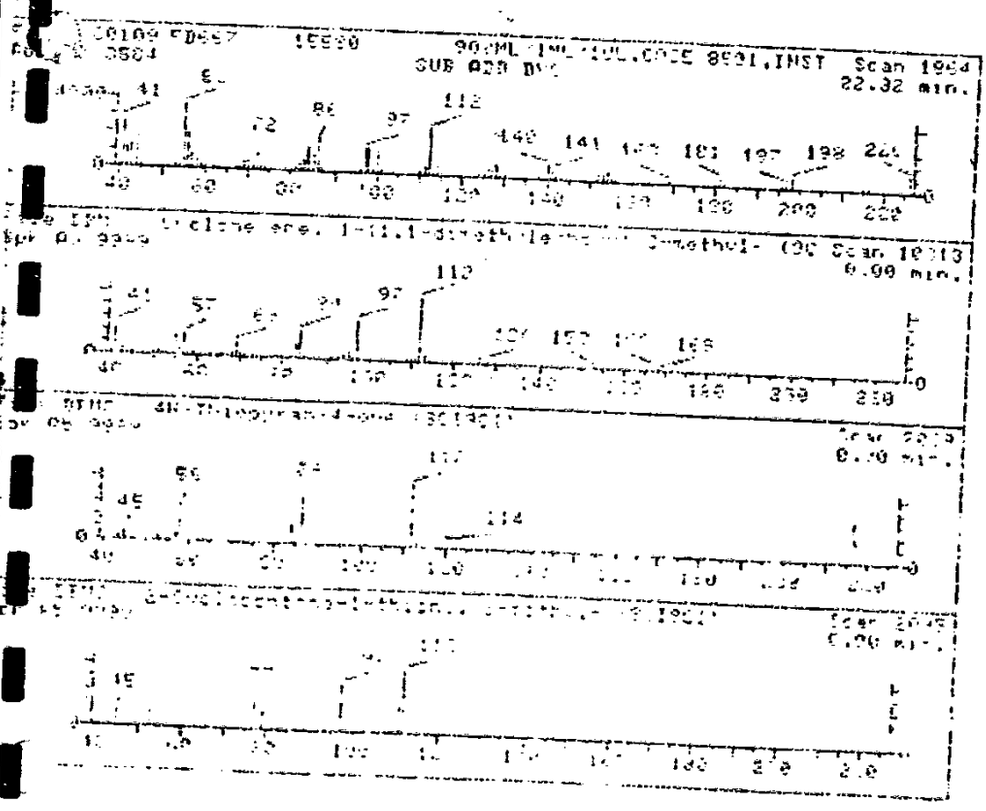
2-4 C10H8Cl2
240 C15H28O2
240 C17H28O2
194 C11H18O3
306 C19H34O3
98 C4H6O3
226 C14H26O3

Sample File: Spectrum #: 1 63
Search speed: Tilting operator: N No. of ion ranges searched: 51

	Prob.	CAS #	CON #	SPCT	K	DK	#FLG	TILT	%	CON	C_I	P_IU
	43	[illegible]	[illegible]	[illegible]	119	36	1	0	72	32	16	23
	40	17351747	91 32	[illegible]	98	40	0	0	56	50	16	21
4.	24*	15811962	[illegible]	[illegible]	5[illegible]	62	1	0	44	[illegible]	[illegible]	40
	24	[illegible]	[illegible]	[illegible]	2	65	0	0	31	[illegible]	[illegible]	16
	24*	3724[illegible]	[illegible]	[illegible]	65	125	2	0	32	50	[illegible]	030
	24	[illegible]	[illegible]	[illegible]	52	60	0	0	29	52	[illegible]	27
					75	29	3	0	112	44	8	12

005799

005799



Unknown

Unknown #5

Area = 1515[illegible].0 Tentative Concentration is [illegible] ug/ml

1. Cyclohexane, 1,1-dimethoxy-2-methyl- (CI) 166 C10H22O2
2. 4H-Thiopyran-4-one (SCIVGI) 112 C6H4OS
3. 2-Cyclohexen-1-thione, 3-methyl- (SCIVGI) 114 [illegible]
4. 1,3-Cyclohexanedione (SCIVGI) 112 C6H6O2
5. Phenetole, m-fluoro- (SCI) 140 C8H9FO
6. 1H-1,2,4-Triazol-3-amine, 1-ethyl- (SCI) 112 C4H7N4
7. 2-Furancarboxylic acid, 1-methylethyl ester (SCI) 154 C8H10O3

Sample file: [illegible] Spectrum #: 1864

Search speed: 1 Tilting option: N No. of ion ranges searched: 43

	Prob.	CAS #	CON #	ROOT	K	DK	#FLS	TILT	%	CON	C_I	R_I
	[illegible]	[illegible]	[illegible]	DBMS	55	51	1	0	66	45	16	42
	25*	1007414	11964	DBMS	24	67	2	0	72	50	7	14
4.	15*	10221524	11996	DBMS	24	46	3	0	54	60	2	17
	15*	504129	11966	DBMS	21	62	2	0	153	57	3	13
	15*	498037	12031	DBMS	23	70	1	0	72	66	3	031
	15*	42786049	11960	DBMS	23	69	2	0	73	58	[illegible]	12
	11*	6270744	12093	DBMS	40	57	2	0	82	63	2	17

005800

005800

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SWL - TULSA Contract: 68-01-7393

Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Instrument ID: 5970-C Calibration Date(s): 12/16/87 12/16/87

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = C0104 RRF50 = C0100

RRF80 = C0103 RRF120= C0102 RRF160= C0101

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol *	0.985	0.928	0.948	0.730	0.712	0.861	15.0*
bis(2-Chloroethyl)Ether	0.888	0.811	0.807	1.011	0.902	0.884	9.4
2-Chlorophenol	0.822	0.791	0.765	0.683	0.667	0.746	9.1
1,3-Dichlorobenzene	0.959	0.888	0.847	0.758	0.741	0.839	10.8
1,4-Dichlorobenzene *	1.017	0.894	0.869	0.748	0.708	0.847	14.6*
Benzyl Alcohol	0.457	0.475	0.477	0.456	0.399	0.453	7.0
1,2-Dichlorobenzene	0.960	0.826	0.816	0.737	0.727	0.813	11.5
2-Methylphenol	0.758	0.702	0.674	0.606	0.580	0.664	10.9
bis(2-Chloroisopropyl)Ether	2.083	1.926	1.749	1.589	1.530	1.775	13.0
4-Methylphenol	0.742	0.637	0.633	0.588	0.562	0.632	10.9
N-Nitroso-Di-n-Propylamine #	0.805	0.721	0.611	0.653	0.401	0.638	23.8#
Hexachloroethane	0.430	0.351	0.352	0.335	0.319	0.357	12.0
Nitrobenzene	0.458	0.478	0.459	0.466	0.456	0.463	1.9
Isophorone	0.872	0.950	0.914	0.694	0.661	0.818	16.1
2-Nitrophenol *	0.243	0.276	0.254	0.267	0.280	0.264	5.8*
2,4-Dimethylphenol	0.381	0.442	0.408	0.330	0.429	0.398	11.2
Benzoic Acid		0.256	0.251	0.281	0.291	0.270	7.2
bis(2-Chloroethoxy)Methane	0.536	0.568	0.385	0.378	0.352	0.444	22.6
2,4-Dichlorophenol *	0.371	0.422	0.372	0.380	0.258	0.361	16.9*
1,2,4-Trichlorobenzene	0.462	0.482	0.429	0.416	0.423	0.442	6.4
Naphthalene	1.166	1.173	1.055	0.997	0.990	1.076	8.3
4-Chloroaniline	0.483	0.492	0.512	0.470	0.490	0.489	3.1
Hexachlorobutadiene *	0.300	0.316	0.279	0.264	0.271	0.286	7.5*
4-Chloro-3-Methylphenol *	0.411	0.451	0.427	0.428	0.298	0.403	15.0*
2-Methylnaphthalene	0.752	0.794	0.701	0.691	0.704	0.728	6.0
Hexachlorocyclopentadiene #	0.389	0.489	0.455	0.460	0.454	0.449	8.2#
2,4,6-Trichlorophenol *	0.456	0.544	0.536	0.577	0.639	0.550	12.1*
2,4,5-Trichlorophenol		0.490	0.448	0.419	0.330	0.422	16.1
2-Chloronaphthalene	1.261	1.278	1.223	1.185	1.123	1.214	5.1
2-Nitroaniline		0.533	0.538	0.544	0.548	0.541	1.2
Dimethyl Phthalate	1.573	1.213	1.610	0.962	0.857	1.243	27.7
Acenaphthylene	1.882	1.940	1.764	1.597	1.460	1.729	11.5
2,6-Dinitrotoluene	0.362	0.315	0.266	0.308	0.292	0.309	11.4
3-Nitroaniline		0.376	0.437	0.398	0.372	0.396	7.5
Acenaphthene *	1.231	1.279	1.199	1.128	1.068	1.181	7.1*
2,4-Dinitrophenol #		0.297	0.330	0.275	0.276	0.295	8.7#
4-Nitrophenol #		0.352	0.382	0.321	0.314	0.342	9.1#

005801

FORM VI SV-1

032 Rev.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Instrument ID: 5970-C Calibration Date(s): 12/16/87 12/16/87

Min RRF for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30.0%

LAB FILE ID: RRF20 = C0104 RRF50 = C0100
RRF80 = C0103 RRF120= C0102 RRF160= C0101

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	RRF	% RSD
Dibenzofuran	1.794	1.862	1.776	1.711	1.667	1.762	4.3
2,4-Dinitrotoluene	0.551	0.632	0.672	0.404	0.392	0.530	24.2
Diethylphthalate	1.611	0.824	0.816	0.774	0.664	0.938	40.7
4-Chlorophenyl-phenylether	0.767	0.804	0.743	0.634	0.572	0.704	13.8
Fluorene	1.356	1.395	1.303	1.170	1.104	1.266	9.8
4-Nitroaniline		0.200	0.248	0.256	0.232	0.234	10.6
4,6-Dinitro-2-Methylphenol		0.067	0.133	0.181	0.183	0.141	38.6
N-Nitrosodiphenylamine (1) *	0.540	0.586	0.528	0.476	0.452	0.516	10.3*
4-Bromophenyl-phenylether	0.259	0.275	0.254	0.249	0.245	0.256	4.6
Hexachlorobenzene	0.337	0.352	0.328	0.317	0.320	0.331	4.3
Pentachlorophenol *		0.205	0.211	0.188	0.203	0.202	4.8*
Phenanthrene	1.089	1.140	1.068	0.996	0.994	1.057	5.9
Anthracene	1.131	1.187	1.103	0.978	0.914	1.063	10.6
Di-n-Butylphthalate	1.538	1.541	1.557	1.295	1.248	1.436	10.5
Fluoranthene *	1.269	1.159	1.198	0.853	0.921	1.080	16.9*
Pyrene	1.377	2.241	2.567	2.891	2.917	2.399	26.4
Butylbenzylphthalate	0.733	1.050	1.269	1.140	1.259	1.090	20.1
3,3'-Dichlorobenzidine	0.353	0.416	0.532	0.307	0.374	0.396	21.6
Benzo(a)Anthracene	1.371	1.885	2.186	1.699	2.075	1.844	17.5
Chrysene	1.088	1.445	1.712	1.445	1.384	1.415	15.7
Bis(2-Ethylhexyl)Phthalate	1.045	1.392	1.796	1.578	1.688	1.500	19.7
Di-n-Octyl Phthalate *	1.493	1.879	1.583	1.880	1.666	1.700	10.3*
Benzo(b)Fluoranthene	1.331	1.797	1.633	1.430	1.672	1.573	12.0
Benzo(k)Fluoranthene	0.802	1.064	0.639	0.849	0.508	0.772	27.4
Benzo(a)Pyrene *	0.969	1.301	0.995	1.026	0.990	1.056	13.1*
Indeno(1,2,3-cd)Pyrene	0.902	1.289	1.155	0.948	1.096	1.078	14.6
Dibenz(a,h)Anthracene	0.812	1.098	0.891	0.840	0.849	0.898	12.8
Benzo(g,h,i)Perylene	0.865	1.161	0.957	0.886	0.882	0.950	13.0
Nitrobenzene-d5	0.460	0.499	0.478	0.488	0.495	0.484	3.2
2-Fluorobiphenyl	1.501	1.539	1.409	1.382	1.313	1.429	6.4
Terphenyl-d14	1.049	1.658	1.898	2.125	2.151	1.776	25.5
Phenol-d5	0.820	0.815	0.794	0.745	0.718	0.778	5.8
2-Fluorophenyl	0.596	0.616	0.608	0.556	0.543	0.584	5.6
2,4,6-Tribromophenol	0.337	0.351	0.372	0.381	0.369	0.362	4.9

(1) Cannot be separated from Diphenylamine

005802

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL - TULSA Contract: 68-01-7393

Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Instrument ID: 5970-C Calibration date: 12/16/87 Time: 1110

Lab File ID: C0100 Init. Calib. Date(s): 12/16/87 12/16/87

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND		RRF	RRF50	%D	
Phenol	*	0.861	0.928	-7.8	*
bis(2-Chloroethyl)Ether		0.884	0.811	8.3	
2-Chlorophenol		0.746	0.791	-6.0	
1,3-Dichlorobenzene		0.839	0.888	-5.8	
1,4-Dichlorobenzene	*	0.847	0.894	-5.5	*
Benzyl Alcohol		0.453	0.475	-4.9	
1,2-Dichlorobenzene		0.813	0.826	-1.6	
2-Methylphenol		0.664	0.702	-5.7	
bis(2-Chloroisopropyl)Ether		1.775	1.926	-8.5	
4-Methylphenol		0.632	0.637	-0.8	
N-Nitroso-Di-n-Propylamine	#	0.638	0.721	-13.0	#
Hexachloroethane		0.357	0.351	1.7	
Nitrobenzene		0.463	0.478	-3.2	
Isophorone		0.818	0.950	-16.1	
2-Nitrophenol	*	0.264	0.276	-4.5	*
2,4-Dimethylphenol		0.398	0.442	-11.1	
Benzoic Acid		0.270	0.256	5.2	
bis(2-Chloroethoxy)Methane		0.444	0.568	-27.9	
2,4-Dichlorophenol	*	0.361	0.422	-16.9	*
1,2,4-Trichlorobenzene		0.442	0.482	-9.1	
Naphthalene		1.076	1.173	-9.0	
4-Chloroaniline		0.489	0.492	-0.6	
Hexachlorobutadiene	*	0.286	0.316	-10.5	*
4-Chloro-3-Methylphenol	*	0.403	0.451	-11.9	*
2-Methylnaphthalene		0.728	0.794	-9.1	
Hexachlorocyclopentadiene	#	0.449	0.489	-8.9	#
2,4,6-Trichlorophenol	*	0.550	0.544	1.1	*
2,4,5-Trichlorophenol		0.422	0.490	-16.1	
2-Chloronaphthalene		1.214	1.278	-5.3	
2-Nitroaniline		0.541	0.533	1.5	
Dimethyl Phthalate		1.243	1.213	2.4	
Acenaphthylene		1.729	1.940	-12.2	
2,6-Dinitrotoluene		0.309	0.315	-1.9	
3-Nitroaniline		0.396	0.376	5.1	
Acenaphthene	*	1.181	1.279	-8.3	*
2,4-Dinitrophenol	#	0.295	0.297	-0.7	#
4-Nitrophenol	#	0.342	0.352	-2.9	#

005803

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Instrument ID: 5970-C Calibration date: 12/16/87 Time: 1110

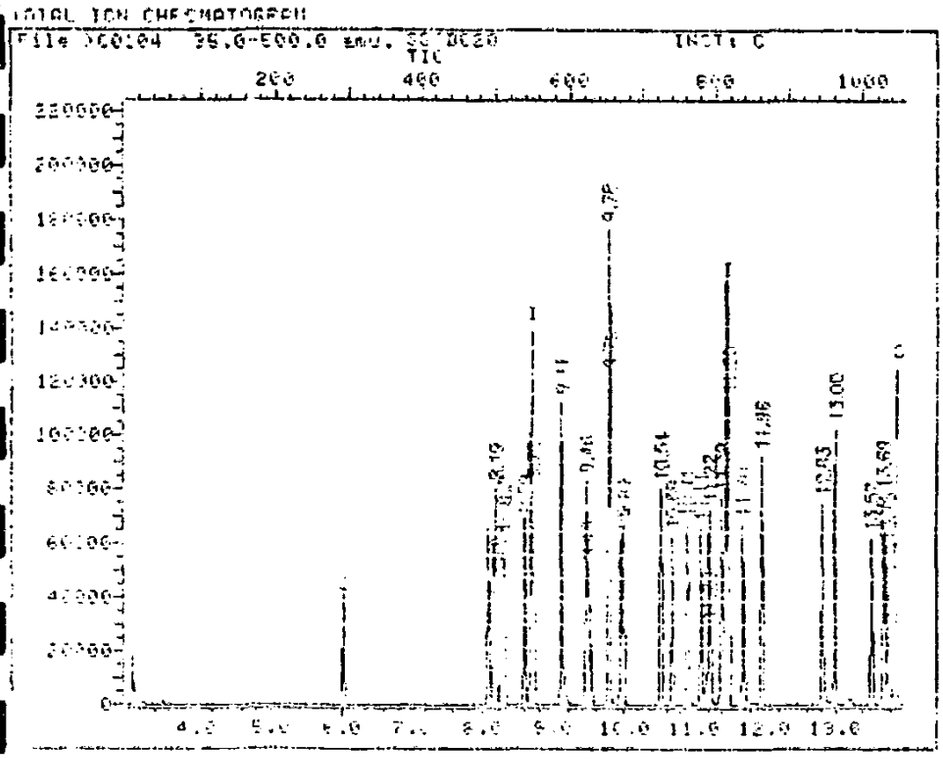
Lab File ID: C0100 Init. Calib. Date(s): 12/16/87 12/16/87

Min RRF50 for SPCC(#) = 0.050 Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Dibenzofuran	1.762	1.862	-5.7
2,4-Dinitrotoluene	0.530	0.632	-19.3
Diethylphthalate	0.938	0.824	12.2
4-Chlorophenyl-phenylether	0.704	0.804	-14.2
Fluorene	1.266	1.395	-10.2
4-Nitroaniline	0.234	0.200	14.5
4,6-Dinitro-2-Methylphenol	0.141	0.067	52.5
N-Nitrosodiphenylamine (1) *	0.516	0.586	-13.6 *
4-Bromophenyl-phenylether	0.256	0.275	-7.4
Hexachlorobenzene	0.331	0.352	-6.3
Pentachlorophenol *	0.202	0.205	-1.5 *
Phenanthrene	1.057	1.140	-7.9
Anthracene	1.063	1.187	-11.7
Di-n-Butylphthalate	1.436	1.541	-7.3
Fluoranthene *	1.080	1.159	-7.3 *
Pyrene	2.399	2.241	6.6
Butylbenzylphthalate	1.090	1.050	3.7
3,3'-Dichlorobenzidine	0.396	0.416	-5.1
Benzo(a)Anthracene	1.844	1.885	-2.2
Chrysene	1.415	1.445	-2.1
bis(2-Ethylhexyl)Phthalate	1.500	1.392	7.2
Di-n-Octyl Phthalate *	1.700	1.879	-10.5 *
Benzo(b)Fluoranthene	1.573	1.797	-14.2
Benzo(k)Fluoranthene	0.772	1.064	-37.8
Benzo(a)Pyrene *	1.056	1.301	-23.2 *
Indeno(1,2,3-cd)Pyrene	1.078	1.289	-19.6
Dibenz(a,h)Anthracene	0.898	1.098	-22.3
Benzo(g,h,i)Perylene	0.950	1.161	-22.2
Nitrobenzene-d5	0.484	0.499	-3.1
2-Fluorobiphenyl	1.429	1.539	-7.7
Terphenyl-d14	1.776	1.658	6.6
Phenol-d5	0.778	0.815	-4.8
2-Fluorophenyl	0.584	0.616	-5.5
2,4,6-Tribromophenol	0.362	0.351	3.0

(1) Cannot be separated from Diphenylamine

005804



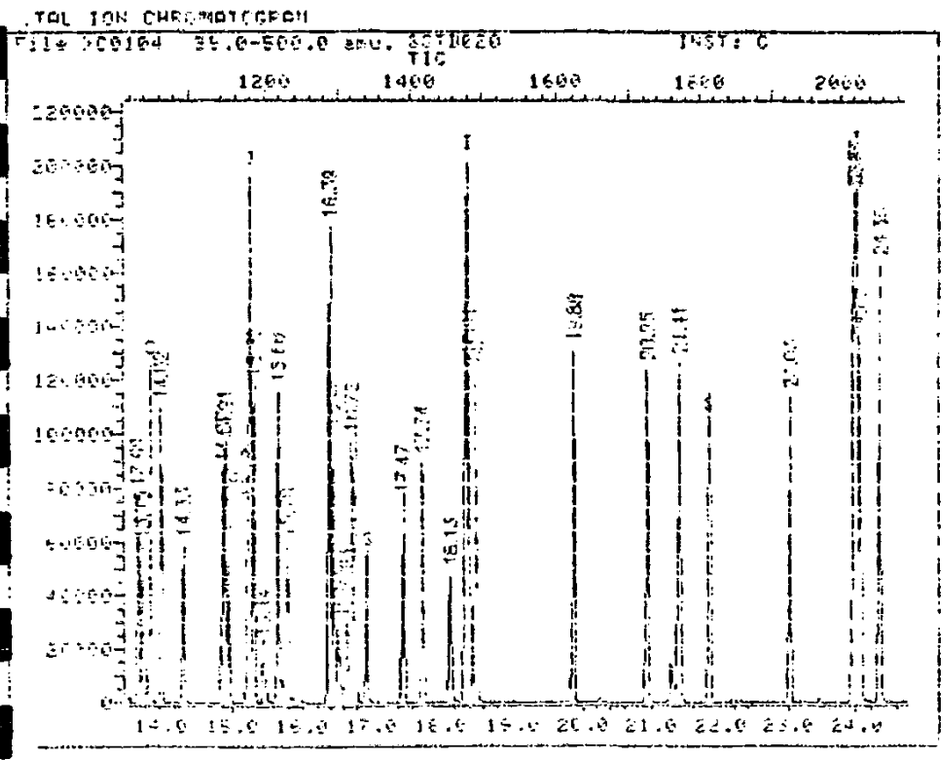
Data File: [illegible] Quant Output File: [illegible]
Name: [illegible]
[illegible]

Id File: ID_[illegible]
Title: [illegible] (EPA [illegible])
Last Calibration: 871215 17:26

Operator ID: [illegible]
Quant Time: 871216 14:46
Injected at: 871216 14:10

TIC page 1 of 3

005805



Data File: >C:10:::03 Quant Output File: ^C:10:::0
Name: SETD020
Date: INST: C

Id File: ID_EM1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

Operator ID: JOHN
Quant Time: 871216 14:46
Injected at: 8712.6 14:10

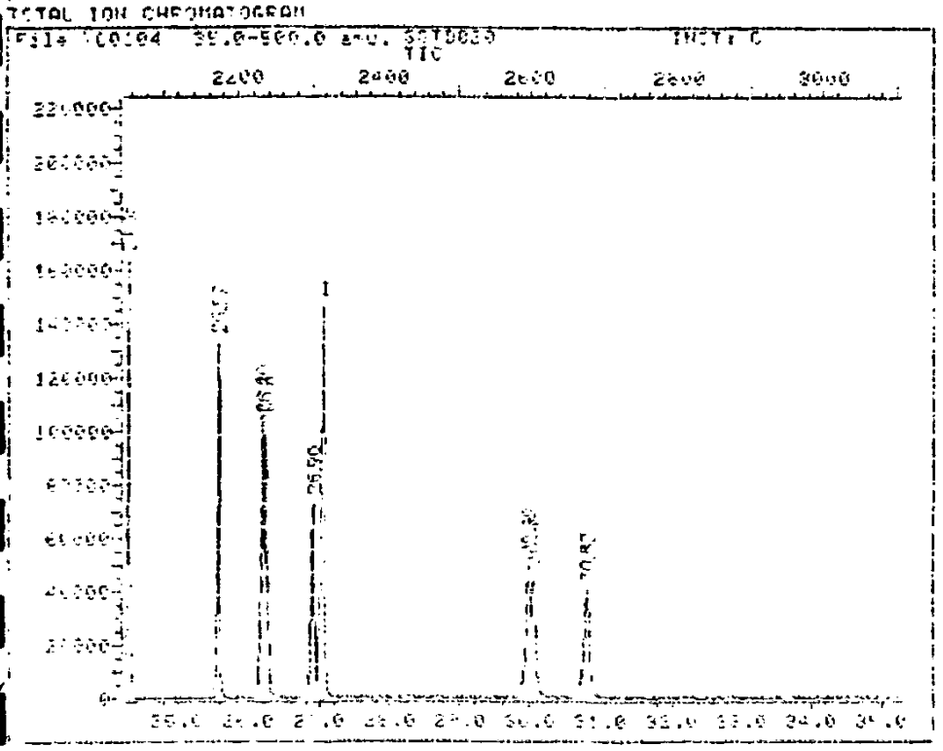
TIC page 2 of 3

005806

037

005806

TOTAL ION CHROMATOGRAM



Data File: [illegible]
Name: SSTD020
Type: INCYT C

Quant Output File: [illegible]

Id File: ID_BNL:EX
Title: SEMI-VOLATILE ORGANICS ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

Operator ID: JOHN
Quant Time: 871216 14:46
Injected at: 871216 14:10

TIC page 3 of 3

005807

038

005807

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871216 14:46
Output File: ^C0104::Q7 Injected at: 871216 14:10
Data File: ^C0104::D3 Dilution Factor: 1.00000
Name: SSTD020
Misc: INST: C

Id File: ID_BNI::E4
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871219 17:26

	Compound	R.T.	Q ion	Area	Conc	Units	q
	*C130 1,4-DICHLOROBENZENE-D4	6.69	150.0	54256	40.00	NG/UL	94
2)	C315 PHENOL	8.19	94.0	27136	19.28	NG/UL	97
	C325 BIS(2-CHLOROETHYL)ETHER	8.28	93.0	24367	20.44	NG/UL	88
	C330 2-CHLOROPHENOL	8.30	128.0	22967	20.17	NG/UL	93
	C335 1,3-DICHLOROBENZENE	8.59	146.0	26334	21.52	NG/UL	97
	C340 1,4-DICHLOROBENZENE	8.72	146.0	27982	22.27	NG/UL	96
	C345 BENZYL ALCOHOL	9.11	108.0	12956	18.71	NG/UL	86
	C350 1,2-DICHLOROBENZENE	9.11	146.0	26357	22.46	NG/UL	96
	C355 2-METHYLPHENOL	9.46	108.0	20816	20.81	NG/UL	93
	C360 BIS(2-CHLOROISOPROPYL)ETH	9.49	45.0	571831	19.62	NG/UL	93
	C365 4-METHYLPHENOL	9.78	108.0	20375	21.91	NG/UL	88
12)	C370 N-NITROSO-DI-N-PROPYLAMIN	9.78	70.0	22134	21.37	NG/UL	86
	C375 HEXACHLOROETHANE	9.79	117.0	11808	22.96	NG/UL	82
	C380 2-FLUOROPHENOL	8.32	112.0	16773	17.79	NG/UL	96
	C385 PHENOL-D5	8.16	99.0	21914	19.07	NG/UL	97
	*C140 NAPHTHALENE-D8	11.45	136.0	126264	40.00	NG/UL	95
	C410 NITROBENZENE	9.96	77.0	26875	20.11	NG/UL	96
	C415 ISOPHORONE	10.54	82.0	849.4	19.68	NG/UL	92
19)	C420 2-NITROPHENOL	10.69	139.0	15321	19.65	NG/UL	97
	C425 2,4-DIMETHYLPHENOL	10.91	107.0	24629	18.97	NG/UL	91
	C430 BENZOIC ACID	11.26	122.0	8691	12.13	NG/UL	89
22)	C435 BIS(2-CHLOROETHOXY)METHAN	11.11	93.0	33752	19.85	NG/UL	98
	C440 2,4-DICHLOROPHENOL	11.22	162.0	23366	21.45	NG/UL	93
	C445 1,2,4-TRICHLOROBENZENE	11.39	180.0	29095	23.91	NG/UL	99
	C450 NAPHTHALENE	11.50	128.0	73437	21.69	NG/UL	99
26)	C455 4-CHLOROANILINE	11.70	127.0	30442	18.88	NG/UL	99
	C460 HEXACHLOROBUTADIENE	11.96	225.0	18877	26.06	NG/UL	97
	C465 4-CHLORO-3-METHYLPHENOL	12.83	107.0	25982	19.76	NG/UL	91
	C470 2-METHYLNAPHTHALENE	13.00	142.0	47371	21.78	NG/UL	96
	C520 NITROBENZENE-D5	9.96	82.0	28970	19.44	NG/UL	81
	*C150 ACENAPHTHENE-D10	15.26	164.0	89111	40.00	NG/UL	96
32)	C510 HEXACHLOROCYCLOPENTADIENE	13.52	237.0	17333	22.85	NG/UL	95
	C515 2,4,6-TRICHLOROPHENOL	13.69	196.0	203391	20.52	NG/UL	96
	C520 2,4,5-TRICHLOROPHENOL	13.75	196.0	22134	22.33	NG/UL	96
	C525 2-CHLORONAPHTHALENE	14.02	162.0	56181	21.50	NG/UL	94
	C530 2-NITROANILINE	14.33	138.0	200781	16.10	NG/UL	
	C535 DIMETHYLPHTHALATE	14.87	163.0	70067	18.99	NG/UL	87
	C540 ACENAPHTHYLENE	14.91	152.0	83833	20.36	NG/UL	97
39)	C543 2,6-DINITROTOLUENE	14.97	165.0	16112	17.15	NG/UL	
40)	C545 3-NITROANILINE	15.22	138.0	15471	14.24	NG/UL	87
	C550 ACENAPHTHENE	15.32	153.0	54893	20.44	NG/UL	99
42)	C555 2,4-DINITROPHENOL	15.44	184.0	8645	14.42	NG/UL	91
	C560 4-NITROPHENOL	15.66	65.0	11489	12.22	NG/UL	83

005808

039

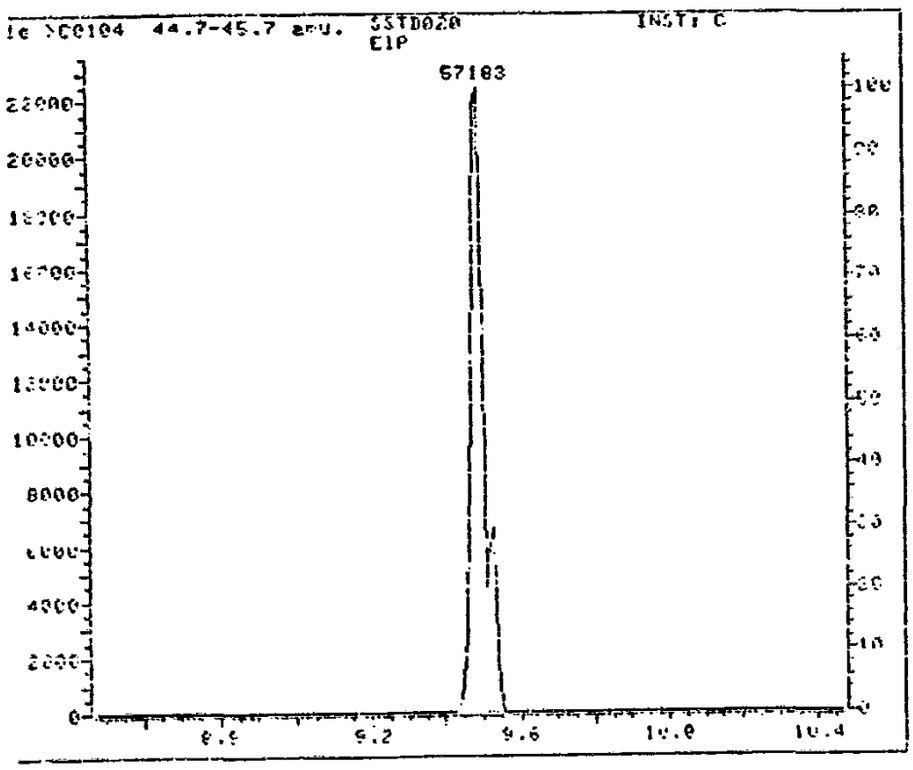
005808

	Compound	R.T.	Q ion	Area	Conc	Units	q
44)	C565 DIBENZOFURAN	15.66	168.0	79915	21.07	NG/UL	73
[illegible])	C570 2,4-DINITROTOLUENE	15.78	165.0	24526	17.00	NG/UL	84
[illegible])	C580 DIETHYLPHTHALATE	16.39	149.0	71775	19.01	NG/UL	97
[illegible])	C585 4-CHLOROPHENYL-PHENYLETHE	16.46	204.0	34153	22.96	NG/UL	85
[illegible])	C590 FLUORENE	16.39	166.0	60790	20.45	NG/UL	96
[illegible])	C595 4-NITROANILINE	16.53	138.0	15181	19.51	NG/UL	87
50)	C625 2-FLUOROBIPHENYL	13.88	172.0	66456	22.42	NG/UL	96
[illegible])	C555 2,4,6-TRIBROMOPHENOL	16.94	329.7	19011	30.15	NG/UL	94
[illegible])	*C160 PHENANTHRENE-D10	18.37	188.0	175815	40.00	NG/UL	95
[illegible])	C610 4,6-DINITRO-2-METHYLPHENO	16.63	198.0	142620	29.76	NG/UL	
54)	C615 N-NITROSODIPHENYLAMINE	16.72	169.0	47479	20.19	NG/UL	96
[illegible])	C625 4-BROMOPHENYLPHENYLETHER	17.47	248.0	22783	26.21	NG/UL	92
[illegible])	C630 HEXACHLOROBENZENE	17.74	284.0	29615	29.76	NG/UL	89
[illegible])	C635 PENTACHLOROPHENOL	18.13	266.0	19515	24.60	NG/UL	[illegible]
[illegible])	C640 PHENANTHRENE	18.41	178.0	956604	20.78	NG/UL	97
[illegible])	C645 ANTHRACENE	18.51	178.0	99589	20.97	NG/UL	95
60)	C650 DI-N-BUTYLPHTHALATE	19.88	149.0	135772	21.14	NG/UL	87
[illegible])	C655 FLUORANTHENE	20.95	202.0	1116591	26.62	NG/UL	96
[illegible])	*C170 CHRYSENE-D12	24.01	240.0	168706	40.00	NG/UL	94
[illegible])	C715 PYRENE	21.41	202.0	1156772	14.26	NG/UL	[illegible]
64)	C720 BUTYLBENZYLPHTHALATE	23.03	149.0	61542	14.28	NG/UL	91
	C725 3,3'-DICHLOROBENZIDINE	23.94	252.0	29654	20.24	NG/UL	[illegible]
	C730 BENZO(A)ANTHRACENE	23.98	228.0	115168	20.66	NG/UL	95
[illegible])	C740 CHRYSENE	24.07	228.0	912278	17.33	NG/UL	94
[illegible])	C745 BIS(2-ETHYLHEXYL)PHTHALAT	24.35	149.0	87797	14.78	NG/UL	[illegible]
[illegible])	C750 TERPHENYL-D14	21.84	244.0	53159	[illegible]	NG/UL	[illegible]
[illegible])	*C175 PERYLENE-D12	27.35	264.0	186[illegible]	[illegible]	NG/UL	96
[illegible])	C760 DI-N-OCTYLPHTHALATE	25.57	149.0	[illegible]	[illegible]	NG/UL	[illegible]
[illegible])	C765 BENZO(B)FLUORANTHENE	26.20	252.0	[illegible]	[illegible]	NG/UL	[illegible]
[illegible])	C770 BENZO(K)FLUORANTHENE	26.29	252.0	74599	16.32	NG/UL	[illegible]
74)	C775 BENZO(A)PYRENE	26.90	252.0	90103	14.70	NG/UL	92
[illegible])	C780 INDENO(1,2,3-CD)PYRENE	29.99	276.0	87683	21.49	NG/UL	[illegible]
[illegible])	C785 DIBENZ(A,H)ANTHRACENE	30.06	278.0	7959	23.99	NG/UL	97
[illegible])	C790 BENZO(G,H,I)PERYLENE	30.82	276.0	8341	23.86	NG/UL	[illegible]

Compound is ISTD

005809

005809



Data File: >C0104::D7 Quant Output File: ^C0104::QT
Name: SSTD020
Inst: INST: C
Quant Time: 8/12/16 14:46 Quant ID File: IC_B[illegible]
Injected at: 871216 14:10 Last Calibration: 871[illegible]5 13:26

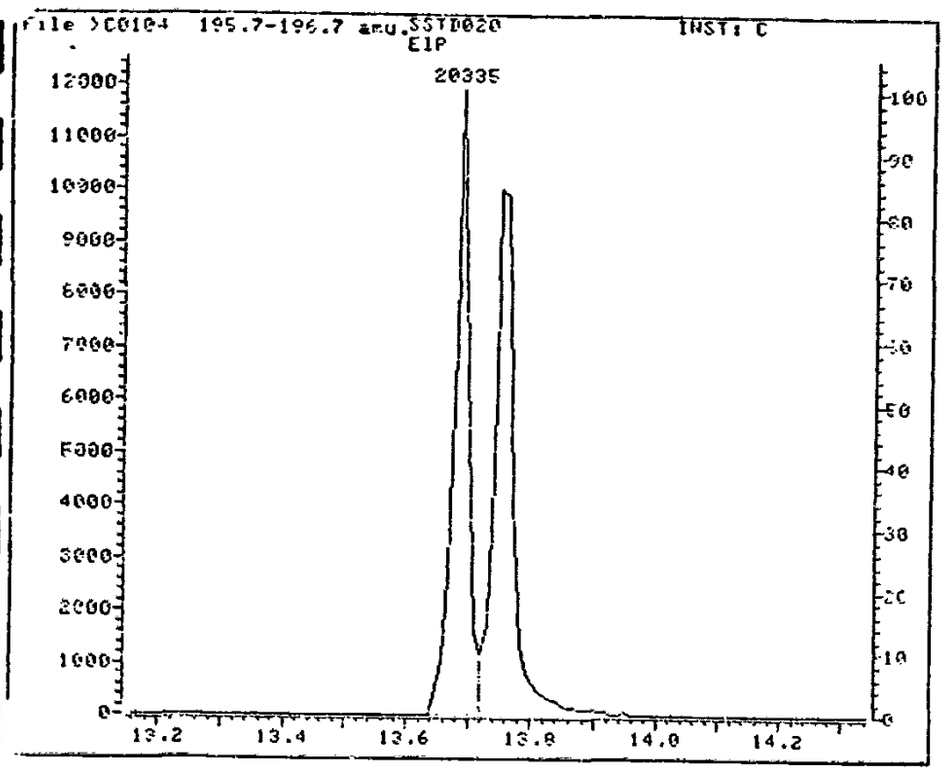
Compound No: [illegible]
Compound Name: C360 BIS(2-CHLOROISOPROPYL)ETH
Scan Number: 625
Retention Time: 9.49 min.
Quant Ion: 45.0
Area: 5718[illegible]M
Concentration: 19.62 NG/UL
q-value: 85

This report was produced by WAREA on: 871218 10:21

005810

041

005810



Data File: >C0104::D3 Quant Output File: ^C0104::QT
Name: SSTD020
Misc: INST: C
Quant Time: 871216 14:46 Quant ID File: ID_BN1::EX
Injected at: 871216 14:10 Last Calibration: 871215 13:26

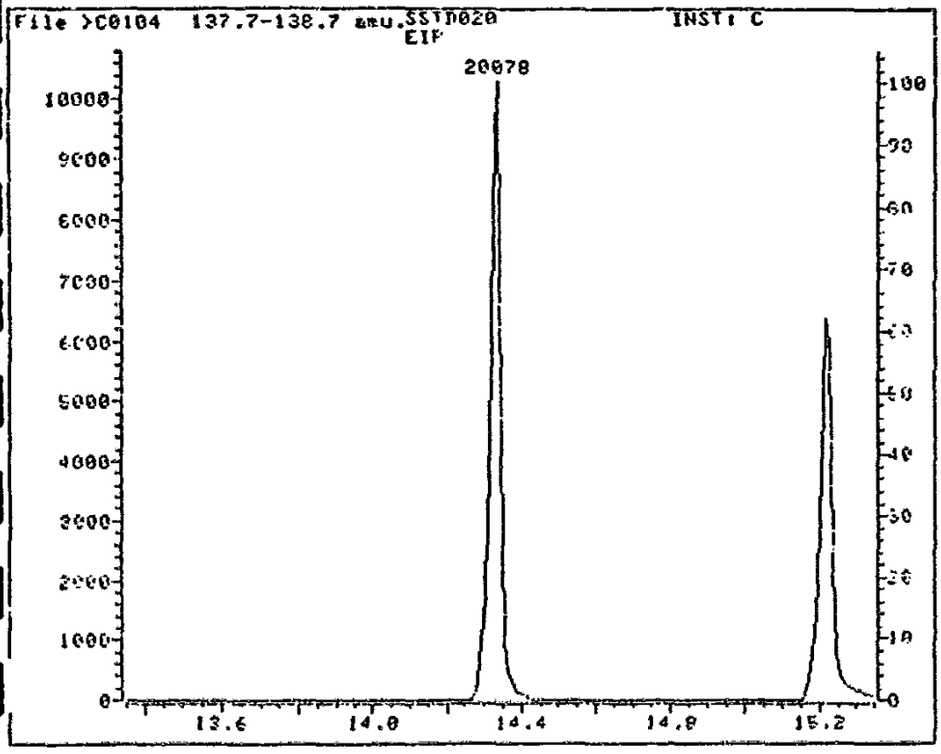
Compound No: 33
Compound Name: C515 2,4,6-TRICHLOROPHENOL
Scan Number: 1029
Retention Time: 13.69 min.
Quant Ion: 196.0
Area: 20335M
Concentration: 20.52 NG/UL
q-value: 96

This report was produced by QAREA on: 871218 10:22

005811

042

005811

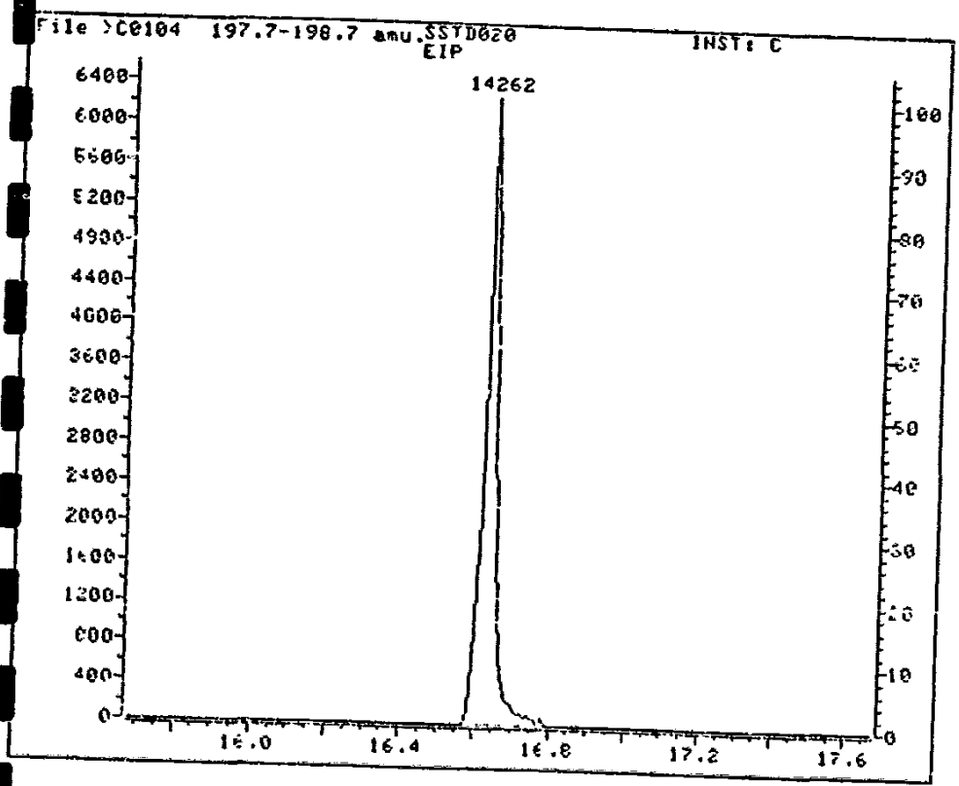


Data File: >C0104::D3 Quant Output File: ^C0104::OT
Name: SSTD020
Misc: INST: C
Quant Time: 871216 14:46 Quant ID File: ID_BNI::EX
Injected at: 871216 14:10 Last Calibration: 871215 13:26

Compound No: 36
Compound Name: C530 2-NITROANILINE
Scan Number: 1091
Retention Time: 14.33 min.
Quant Ion: 138.0
Area: 20078M
Concentration: 16.10 NG/UL

This report was produced by QAREA on: 871218 10:23

005812



Data File: >C0104::D2
Name: SSTD020
Misc: INST: C
Quant Time: 871216 14:46
Injected at: 871216 14:10

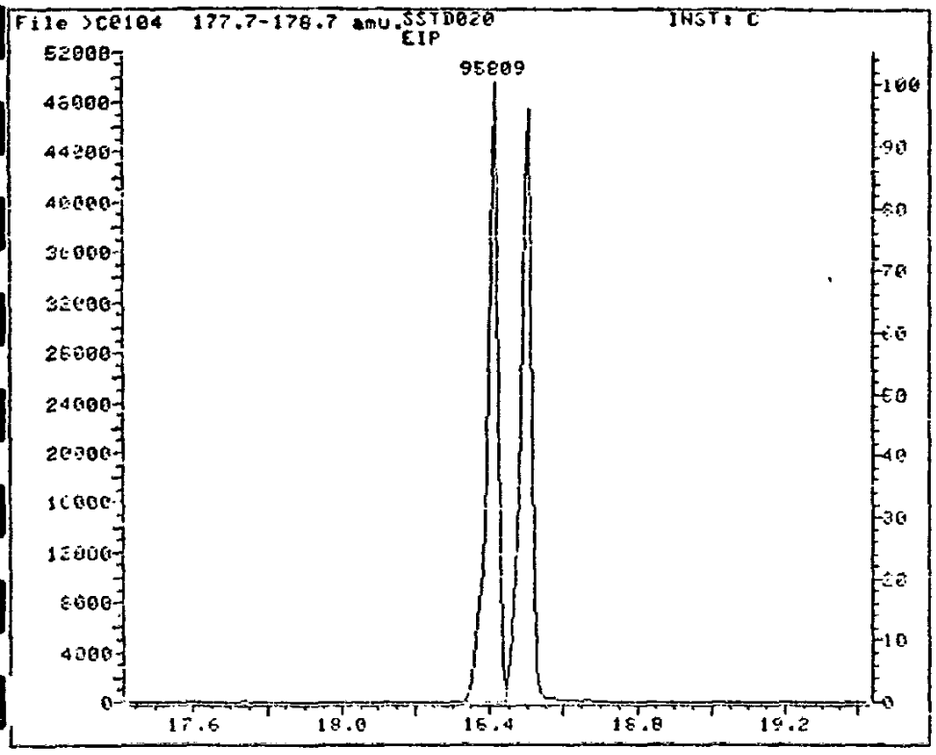
Quant Output File: ^C0104::Q1

Quant ID File: ID_BIL::EX
Last Calibration: 871215 13:26

Compound No: 53
Compound Name: C610 4,6-DINITRO-2-METHYLPHENO
Scan Number: 1312
Retention Time: 16.63 min.
Quant Ion: 198.0
Area: 14262M
Concentration: 20.76 NG/UL

This report was produced by QAREA on: 871218 10:24

005813



Data File: >C0104::D3 Quant Output File: ^C0104::OT
Name: SSTD020
Misc: INST: C
Quant Time: 871216 14:46 Quant ID File: ID_B[illegible]::EX
Injected at: 871216 14:10 Last Calibration: 871215 13:26

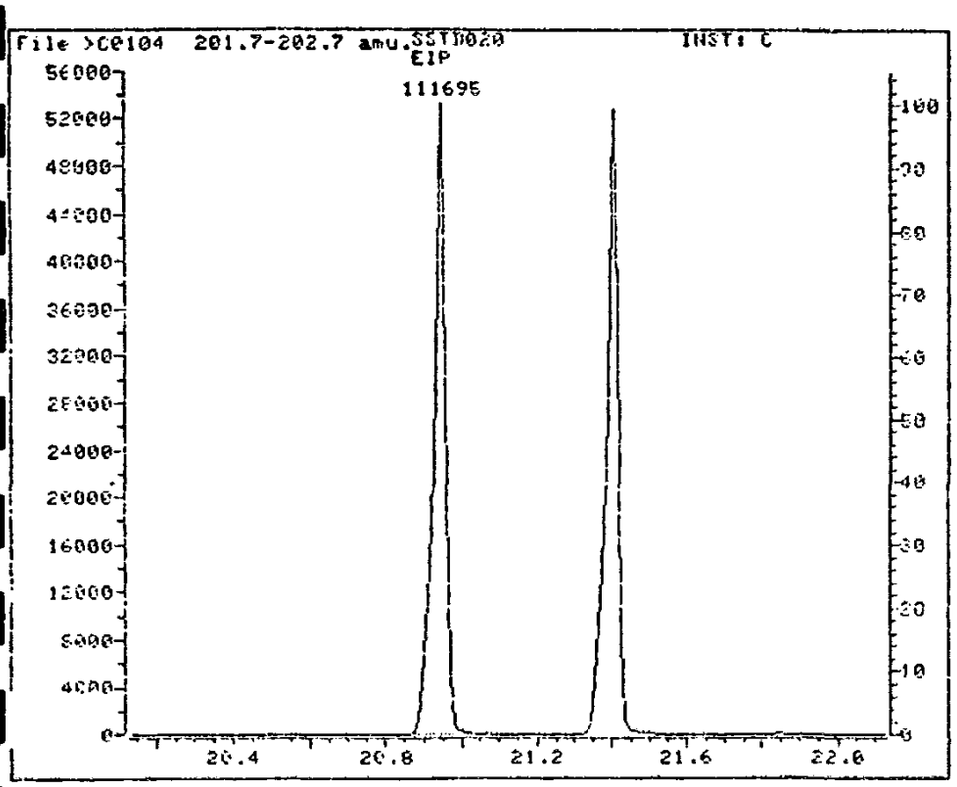
Compound No: 58
Compound Name: C640 PHENANTHRENE
Scan Number: 1483
Retention Time: 18.41 min.
Quant Ion: 178.0
Area: 95809M
Concentration: 20.38 NG/UL
q-value: 97

This report was produced by QAREA on: 871218 10:25

005814

045

005814



Data File: >C0104::D3 Quant Output File: ^C0104::Q1
Name: SSTD020
Inst: INST: C
Quant Time: 871216 14:46 Quant ID File: ID_BN1::EX
Injected at: 871216 14:10 Last Calibration: 871215 13:26

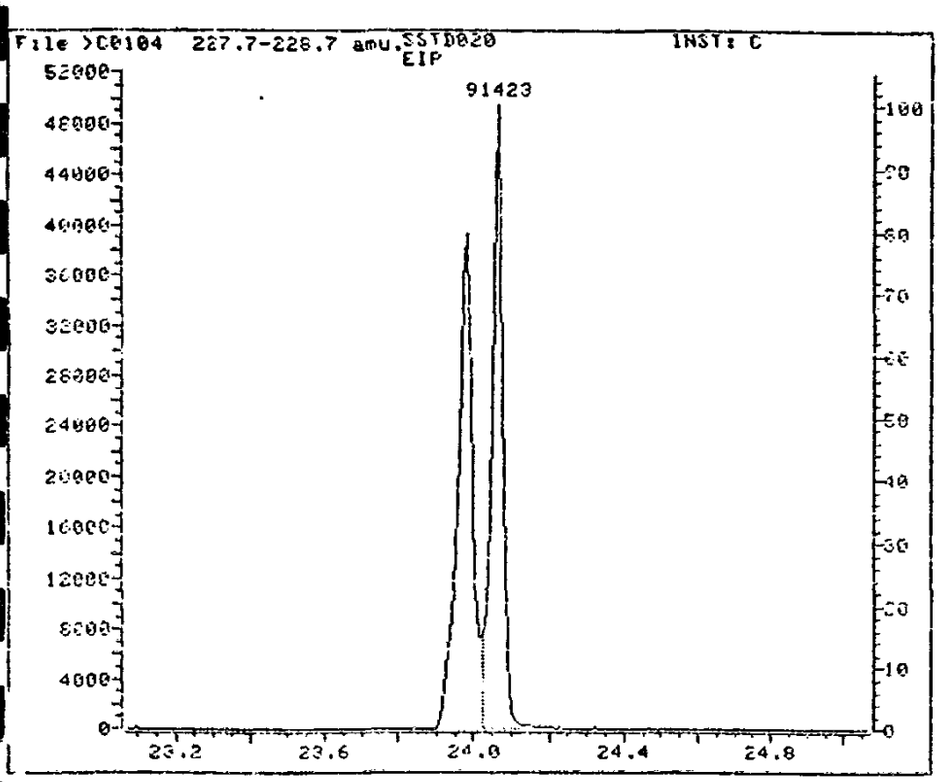
Compound No: 61
Compound Name: C655 FLUORANTHENE
Scan Number: 1727
Retention Time: 20.95 min.
Quant Ion: 202.0
Area: 111695M
Concentration: 26.62 NG/UL
q-value: 98

This report was produced by QHREA on: 871218 10:26

005815

046

005815



Data File: >C0104::D3 Quant Output File: ^L0104::QT
Name: SSTD020
Misc: INST: C
Quant Time: 871216 14:46 Quant ID File: ID_BN1::EX
Injected at: 871216 14:10 Last Calibration: 871215 13:26

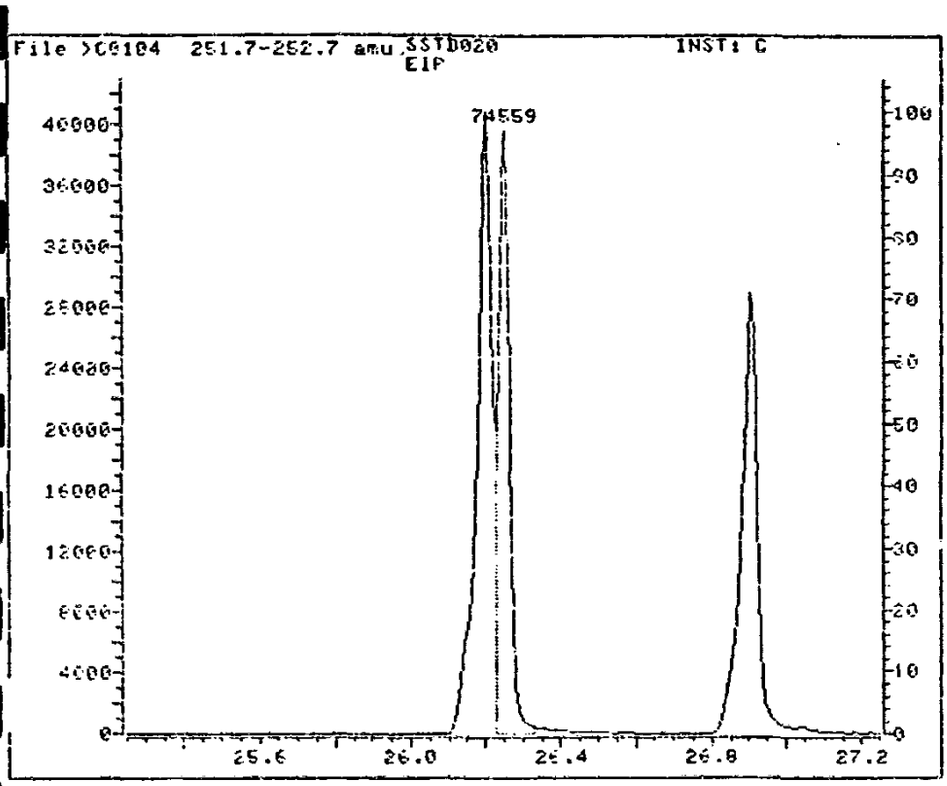
Compound No: 67
Compound Name: C240 CHRYSENE
Scan Number: 2027
Retention Time: 24.07 min.
Quant Ion: 228.0
Area: 91423M
Concentration: 17.33 NG/UL
q-value: 94

This report was produced by QAREA on: 871218 10:27

005816

047

005816



Date File: >C0104::D3 Quant Output File: ^C0104::OT
Name: SSTD020
Misc: INST: C
Quant Time: 871216 14:46 Quant ID File: ID_BN1::EX
Injected at: 871216 14:10 Last Calibration: 871215 13:26

Compound No: 73
Compound Name: C770 BENZO(K)FLUORANTHENE
Scan Number: 2237
Retention Time: 26.25 min.
Quant Ion: 252.0
Area: 74559M
Concentration: 16.32 NG/UL
q-value: 87

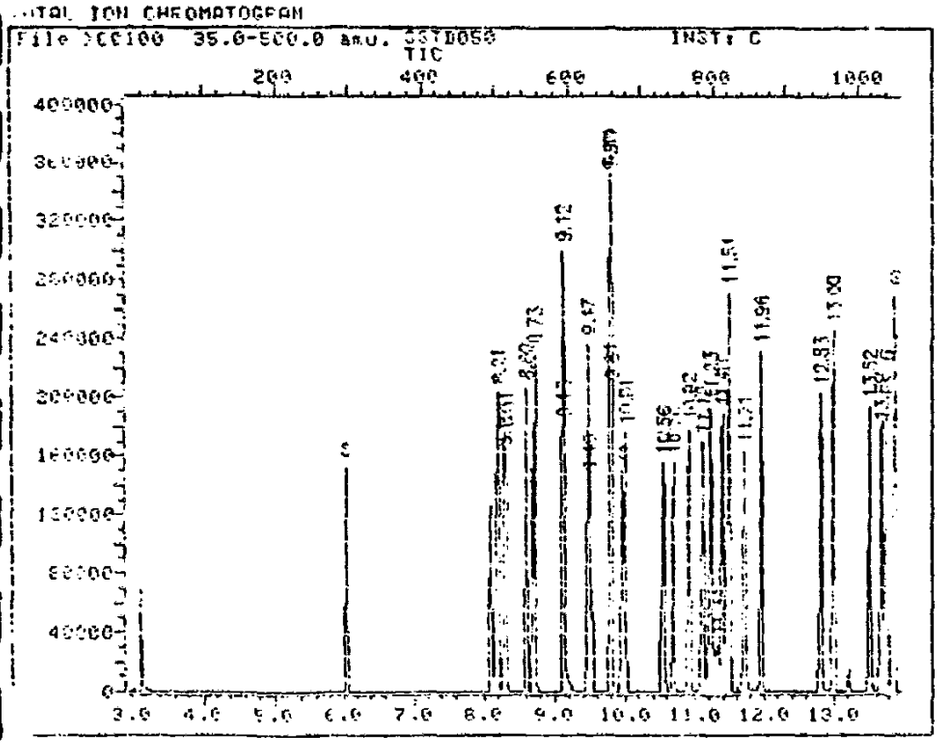
This report was produced by QAREA on: 871218 10:28

005817

048

005817

TOTAL ION CHROMATOGRAM



Data File: >C0100::D3 Quant Output File: ^C0100::QT
Name: CONT. CAL. EPA STD.
Misc: INST: C

Id File: ID_EPA::FX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

Operator ID: JOHN
Quant Time: 871216 11:47
Injected at: 871216 11:10

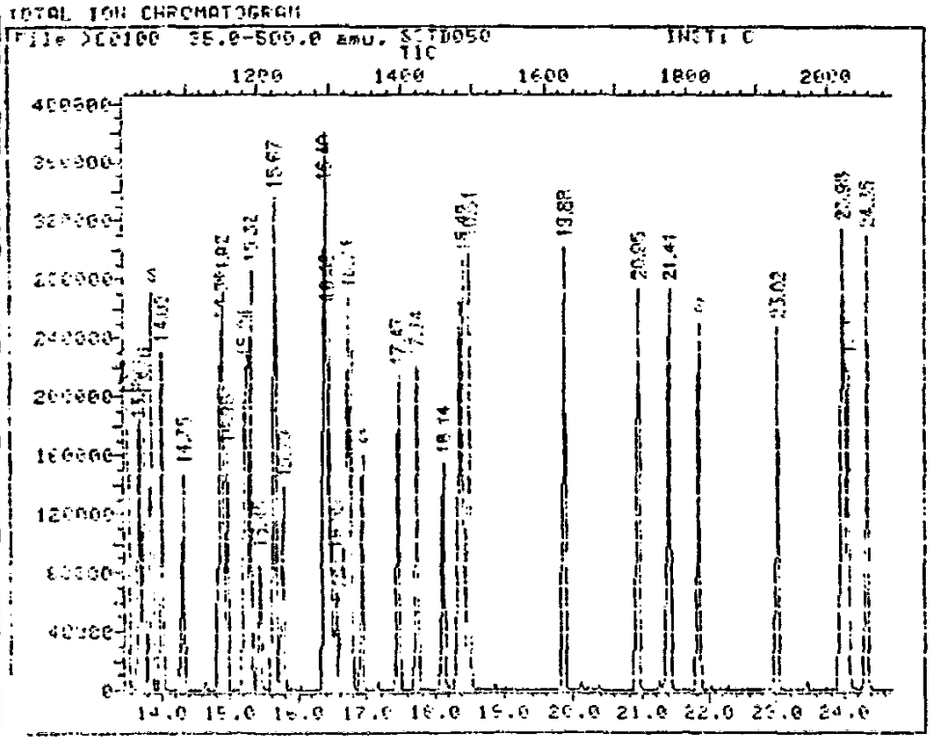
TIC page 1 of 3

005818

049

005818

TOTAL ION CHROMATOGRAM



Data File: >C0100::D3 Quant Output File: >C0100::QT
Comm: COMT. CAL. 8MA STD.
Misc: INST: C

IS File: IS_BA::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871219 13:26

Operator ID: JOHN
Quant Time: 871216 11:47
Injected at: 871216 11:10

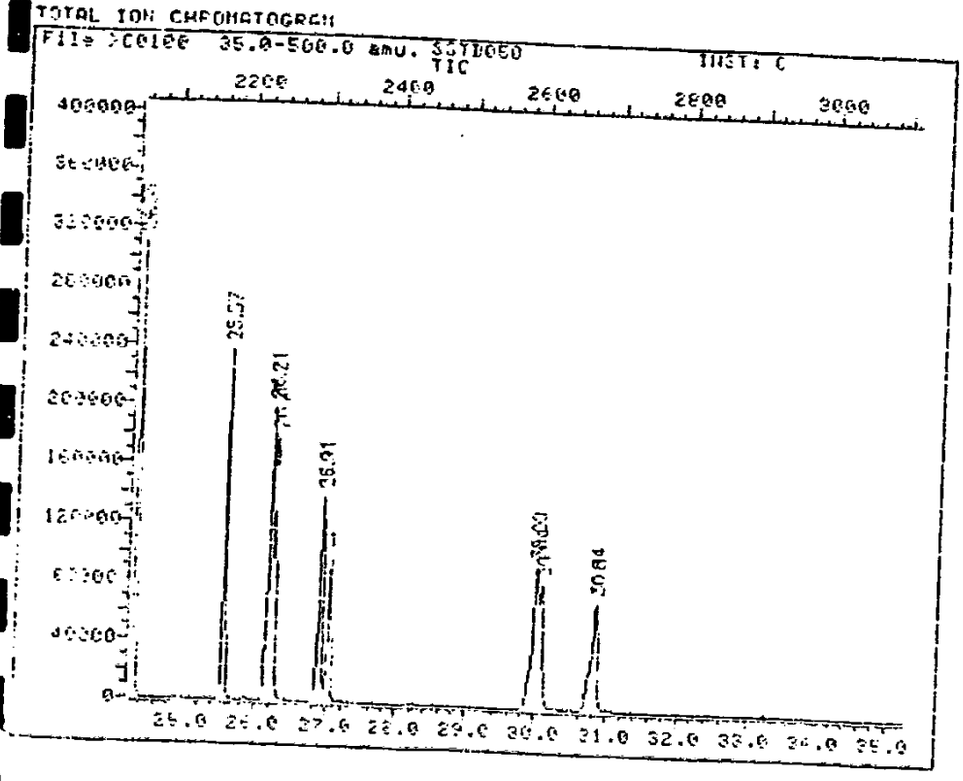
TIC page 2 of 3

005819

050

005819

TOTAL ION CHROMATOGRAM



Data File: >C0100::03
Name: CCMP. SAL. BNA STD.
Misc: INST: C

Quant Output File: >C0100::QT

Ja File: II_B-1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

Operator ID: JOHN
Quant Time: 871216 11:47
Injected at: 871216 11:10

T/C page 3 of 3

005820

051

005820

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871216 11:47
Output File: ^C0100::Q1 Injected at: 871216 11:10
Data File: >C0100::D3 Dilution Factor: 1.00000
Name: CONT. CAL BNA STD.
Misc: INST: C

ID File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*C130 1,4-DICHLOROBENZENE-D4	8.69	552	67889	40.00	NG/UL	95
2)	C315 PHENOL	8.21	506	78731	45.36	NG/UL	94
3)	C325 BIS(2-CHLOROETHYL)ETHER	8.29	514	68839	46.63	NG/UL	86
4)	C330 2-CHLOROPHENOL	8.31	516	67145	48.50	NG/UL	95
5)	C335 1,3-DICHLOROBENZENE	8.60	544	75358	49.88	NG/UL	98
6)	C340 1,4-DICHLOROBENZENE	8.73	556	75857	48.93	NG/UL	97
7)	C345 BENZYL ALCOHOL	9.13	595	40306	48.53	NG/UL	83
8)	C350 1,2-DICHLOROBENZENE	9.12	594	70088	49.21	NG/UL	96
9)	C355 2-METHYLPHENOL	9.47	627	59587	48.12	NG/UL	93
10)	C360 BIS(2-CHLOROISOPROPYL)ETH	9.49	629	163465M	45.33	NG/UL	
11)	C365 4-METHYLPHENOL	9.80	659	54086	47.00	NG/UL	99
12)	C370 N-NITROSO-DI-N-PROPYLAMIN	9.81	660	61198	47.82	NG/UL	88
13)	C375 HEXACHLOROETHANE	9.79	658	29754M	46.74	NG/UL	
14)	C550 2-FLUOROPHENOL	6.84	297	52287	45.81	NG/UL	94
15)	C545 PHENOL-D5	8.18	503	69192	47.34	NG/UL	89
16)	*C140 NAPHTHALENE-D8	11.46	819	140405	40.00	NG/UL	96
17)	C410 NITROBENZENE	10.01	679	83636	52.46	NG/UL	86
18)	C415 ISOPHORONE	10.56	732	166250	53.56	NG/UL	95
19)	C420 2-NITROPHENOL	10.70	746	48337	55.85	NG/UL	80
20)	C425 2,4-DIMETHYLPHENOL	10.92	767	77351	54.94	NG/UL	94
21)	C430 BENZOIC ACID	11.34	807	44881	56.61	NG/UL	90
22)	C435 BIS(2-CHLOROETHOXY)METHAN	11.12	786	99431	52.59	NG/UL	99
23)	C440 2,4-DICHLOROPHENOL	11.23	797	73898	61.09	NG/UL	96
24)	C445 1,2,4-TRICHLOROBENZENE	11.40	813	84391	62.37	NG/UL	97
25)	C450 NAPHTHALENE	11.51	823	205191	54.50	NG/UL	99
26)	C455 4-CHLOROANILINE	11.71	843	86117	48.03	NG/UL	98
27)	C460 HEXACHLOROBUTADIENE	11.96	867	55282	73.90	NG/UL	99
28)	C465 4-CHLORO-3-METHYLPHENOL	12.83	950	78936	54.15	NG/UL	93
29)	C470 2-METHYLNAPHTHALENE	13.00	967	138947	57.45	NG/UL	99
30)	C520 NITROBENZENE-D5	9.97	675	87341	52.71	NG/UL	87
31)	*C150 ACENAPHTHENE-D10	15.26	1184	101991	40.00	NG/UL	98
32)	C510 HEXACHLOROCYCLOPENTADIENE	13.52	1017	62289	71.74	NG/UL	97
33)	C515 2,4,6-TRICHLOROPHENOL	13.69	1033	69362	61.14	NG/UL	99
34)	C520 2,4,5-TRICHLOROPHENOL	13.76	1040	62427M	55.03	NG/UL	98
35)	C525 2-CHLORONAPHTHALENE	14.02	1065	162934	54.48	NG/UL	96
36)	C530 2-NITROANILINE	14.35	1096	67915M	47.59	NG/UL	
37)	C535 DIMETHYLPHTHALATE	14.89	1146	154650	36.61	NG/UL	93
38)	C540 ACENAPHTHYLENE	14.92	1151	247366	52.50	NG/UL	98
39)	C543 2,6-DINITROTOLUENE	14.98	1157	40107	37.30	NG/UL	98
40)	C545 3-NITROANILINE	15.24	1182	47930	38.54	NG/UL	83
41)	C550 ACENAPHTHENE	15.32	1190	163054	53.08	NG/UL	98
42)	C555 2,4-DINITROPHENOL	15.45	1202	37841	55.14	NG/UL	88
43)	C560 4-NITROPHENOL	15.47	1203	44250	40.40	NG/UL	90

C05821

052

005821

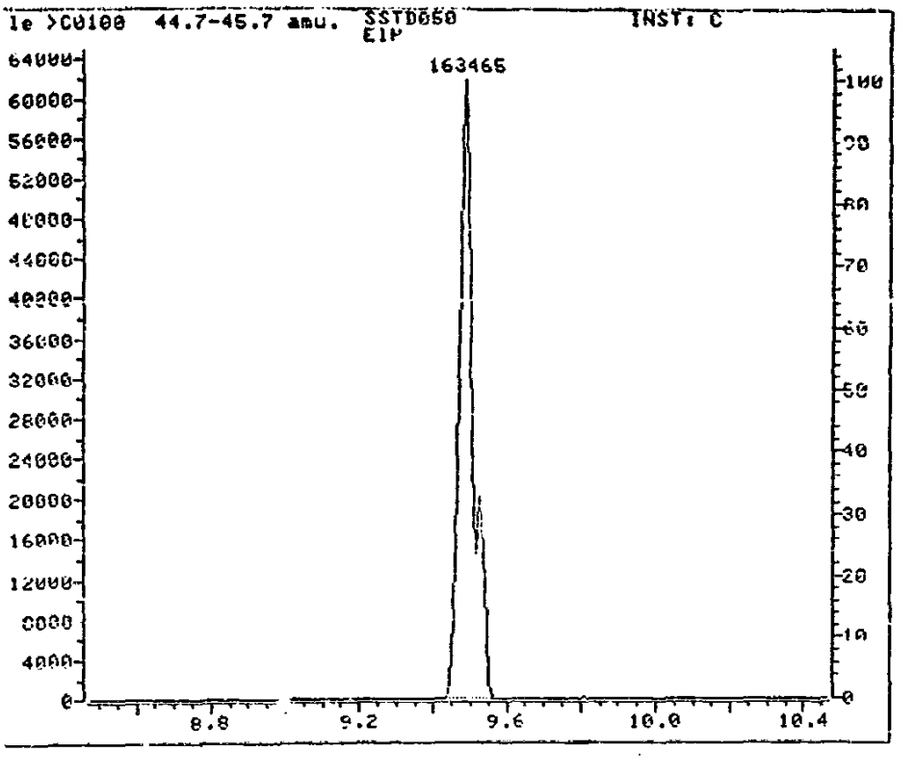
46)	C580	DIETHYLPHTHALATE	16.42	1295	105039	24.31	NG/UL	96
47)	C585	4-CHLOROPHENYL-PHENYLETHE	16.46	1299	102446	60.18	NG/UL	88
48)	C590	FLUORENE	16.40	1293	177842	52.61	NG/UL	99
49)	C595	4-NITROANILINE	16.55	1308	25472	22.85	NG/UL	84
[illegible])	C325	2-FLUOROBIPHENYL	13.88	1051	196180	57.49	NG/UL	96
[illegible])	C555	2,4,6-TRIBROMOPHENOL	16.95	1346	44765	78.55	NG/UL	92
52)	*C160	PHENANTHRENE-D10	18.37	1482	201447	40.00	NG/UL	98
53)	C610	4,6-DINITRO-2-METHYLPHENO	16.62	1314	16905	21.45	NG/UL	79
54)	C615	N-NITROSODIPHENYLAMINE	16.73	1325	147350	54.61	NG/UL	97
55)	C625	4-BROMOPHENYLPHENYLETHER	17.47	1396	69032	69.19	NG/UL	89
56)	C630	HEXACHLOROBENZENE	17.74	1422	88404	77.41	NG/UL	92
57)	C635	PENTACHLOROPHENOL	18.14	1460	51537	72.15	NG/UL	99
58)	C640	PHENANTHRENE	18.42	1487	286301M	53.06	NG/UL	95
59)	C645	ANTHRACENE	18.51	1496	298284	54.78	NG/UL	94
60)	C650	DI-N-BUTYLPHTHALATE	19.88	1628	387169	52.69	NG/UL	86
61)	C655	FLUORANTHENE	20.95	1731	291209M	60.47	NG/UL	98
62)	*C170	CHRYSENE-D12	24.01	2025	104448	40.00	NG/UL	96
63)	C715	PYRENE	21.41	1775	291312	57.88	NG/UL	90
64)	C720	BUTYLBENZYLPHTHALATE	23.02	1930	136510	51.06	NG/UL	92
65)	C725	3,3'-DICHLOROBENZIDINE	23.98	2022	54032	59.56	NG/UL	98
66)	C730	BENZO(A)ANTHRACENE	23.98	2022	245024	70.83	NG/UL	93
67)	C740	CHRYSENE	24.07	2030	187885M	57.37	NG/UL	92
68)	C745	BIS(2-ETHYLHEXYL)PHTHALAT	24.35	2057	180965	49.07	NG/UL	88
69)	C530	TERPHENYL-D14	21.85	1817	215534	68.93	NG/UL	95
70)	*C175	PERYLENE-D12	27.04	2316	115393	40.00	NG/UL	97
71)	C760	DI-N-OCTYLPHTHALATE	25.57	2175	270133	43.59	NG/UL	100
72)	C765	BENZO(B)FLUORANTHENE	26.21	2236	258345	69.79	NG/UL	94
73)	C770	BENZO(K)FLUORANTHENE	26.26	2241	152962M	54.04	NG/UL	87
74)	C775	BENZO(A)PYRENE	26.91	2304	187060	62.69	NG/UL	98
75)	C780	INDENO(1,2,3-CD)PYRENE	30.00	2601	185256	76.31	NG/UL	92
[illegible])	C785	DIBENZ(A,H)ANTHRACENE	30.09	2609	157767	74.13	NG/UL	97
[illegible])	C790	BENZO(G,H,I)PERYLENE	30.84	2682	166836	79.91	NG/UL	99

* Compound is ISTD

005822

053

005822



Data File: >C0100::D3 Quant Output File: ^C0100::Q1
Name: CONT. CAL. BNA STD.
Misc: INST: C
Quant Time: 871216 11:47 Quant ID File: ID_BN1::EX
Injected at: 871216 11:10 Last Calibration: 871215 13:26

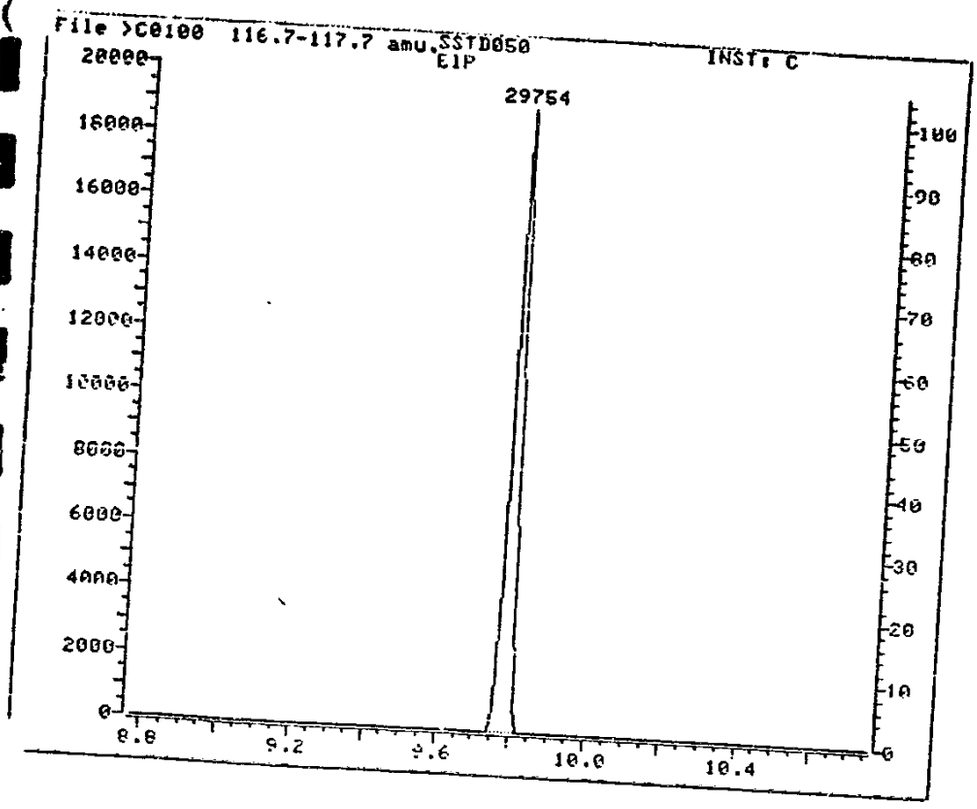
Compound No: 10
Compound Name: C360 BIS(2-CHLOROISOPROPYL)ETH
Scan Number: 629
Retention Time: 9.49 min.
Quant Ion: 45.0
Area: 163465M
Concentration: 45.33 NG/UL

This report was produced by WAREA on: 871218 07:55

005823

054

005823



Data File: >C0100::D3
Name: CONT. CAL. BNA STD.
Misc: INST: C
Quant Time: 871216 11:47
Injected at: 871216 11:10

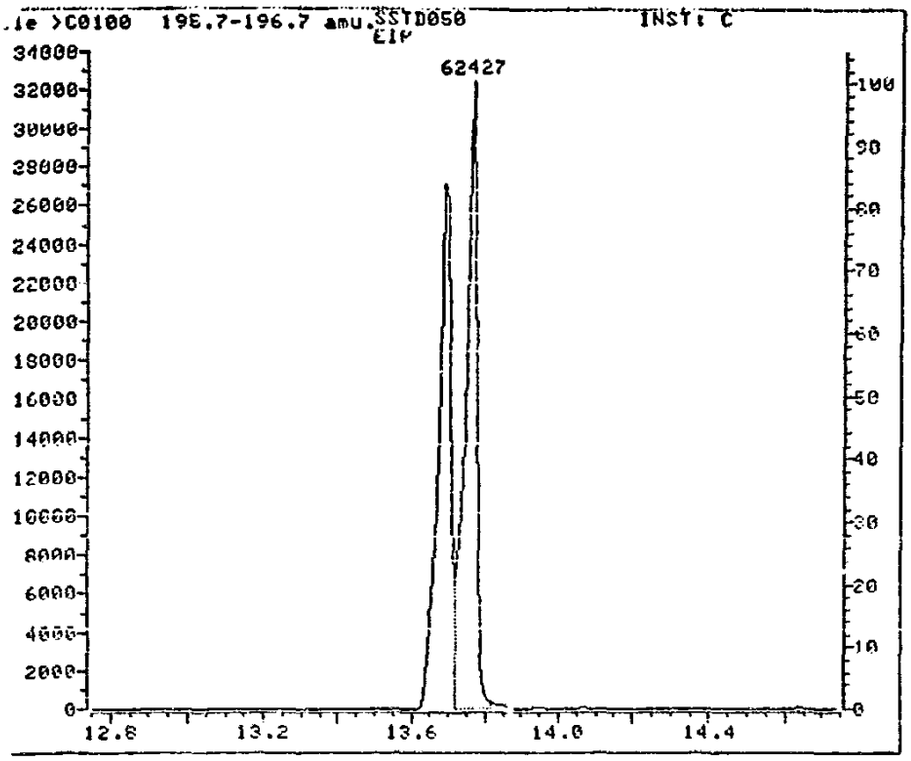
Quant Output File: ^C0100::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

Compound No: 13
Compound Name: C3/5 HEXACHLOROETHANE
Scan Number: 658
Retention Time: 9.79 min.
Quant Ion: 117.0
Area: 29754M
Concentration: 46.74 NG/UL

This report was produced by QAREA on: 871218 07:56

005824



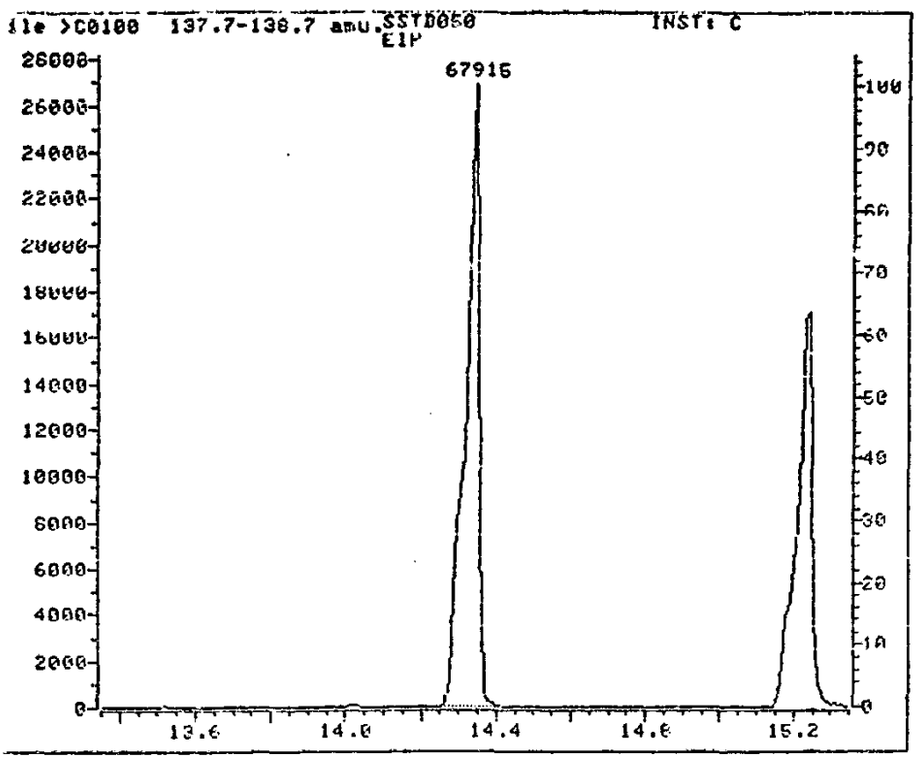
Data File: >C0100::D3 Quant Output File: ^C0100::Q1
Name: CONT. CAL. BNA STD.
Misc: INST: C
Quant Time: 87/12/16 11:47 Quant ID File: ID_BN1::EX
Injected at: 87/12/16 11:10 Last Calibration: 87/12/15 13:26

Compound No: 34
Compound Name: C520 2,4,5-TRICHLOROPHENOL
Scan Number: 1040
Retention Time: 13.76 min.
Quant Ion: 196.0
Area: 62427M
Concentration: 55.03 NG/UL
q-value: 98

This report was produced by QAREA on: 87/12/18 07:57

005825

056



Data File: >C0100::D3 Quant Output File: ^C0100::Q1
Name: CONT. CAL. BNA STD.
Misc: INST: C
Quant Time: 87/12/16 11:47 Quant ID File: ID_BN1::EX
Injected at: 87/12/16 11:10 Last Calibration: 87/12/15 13:26

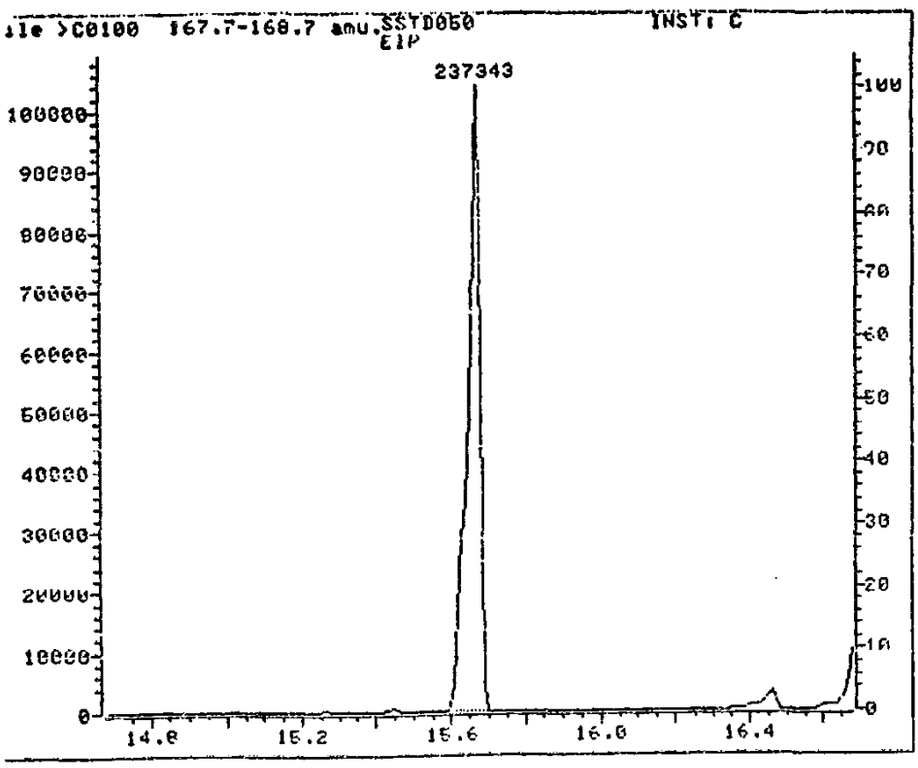
Compound No: 36
Compound Name: C530 2-NITROANILINE
Scan Number: 1096
Retention Time: 14.35 min.
Quant Ion: 138.0
Area: 67915M
Concentration: 47.59 NG/UL

This report was produced by QAREA on: 87/12/18 07:58

005826

057

005826



Data File: >C0100::D3
Name: CONT. CAL. BNA STD.
Misc: INST: C
Quant Time: 8/1216 11:47
Injected at: 8/1216 11:10

Quant Output File: ^C0100::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 8/1215 13:26

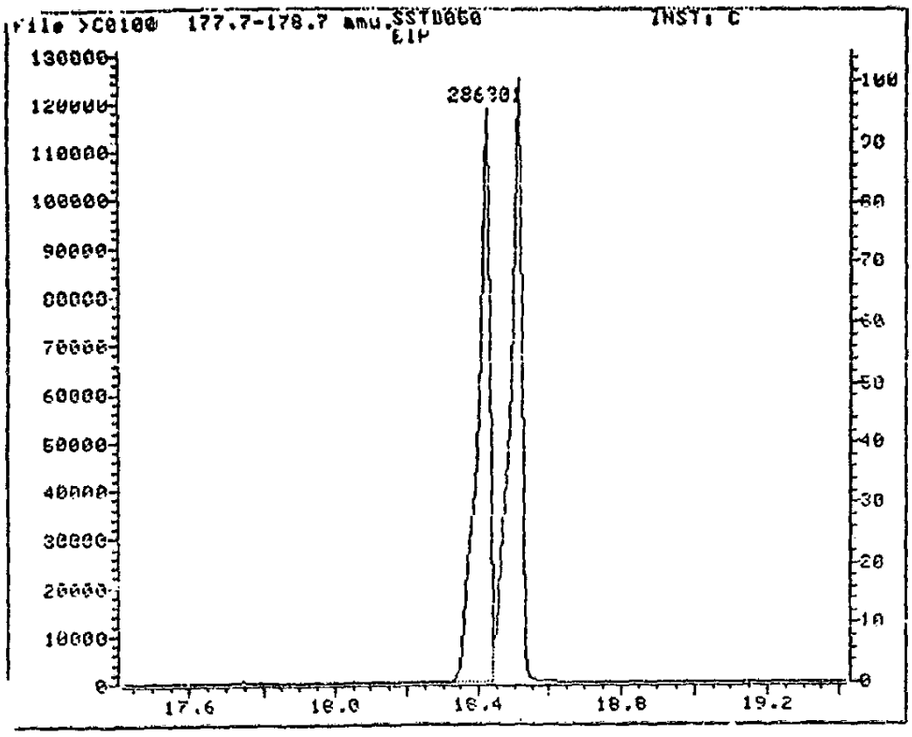
Compound No: 44
Compound Name: C565 DIBENZOFURAN
Scan Number: 1223
Retention Time: 15.67 min.
Quant Ion: 168.0
Area: 237343M
Concentration: 54.68 NG/UL

This report was produced by WARLA on: 8/1218 07:59

005827

058

005827

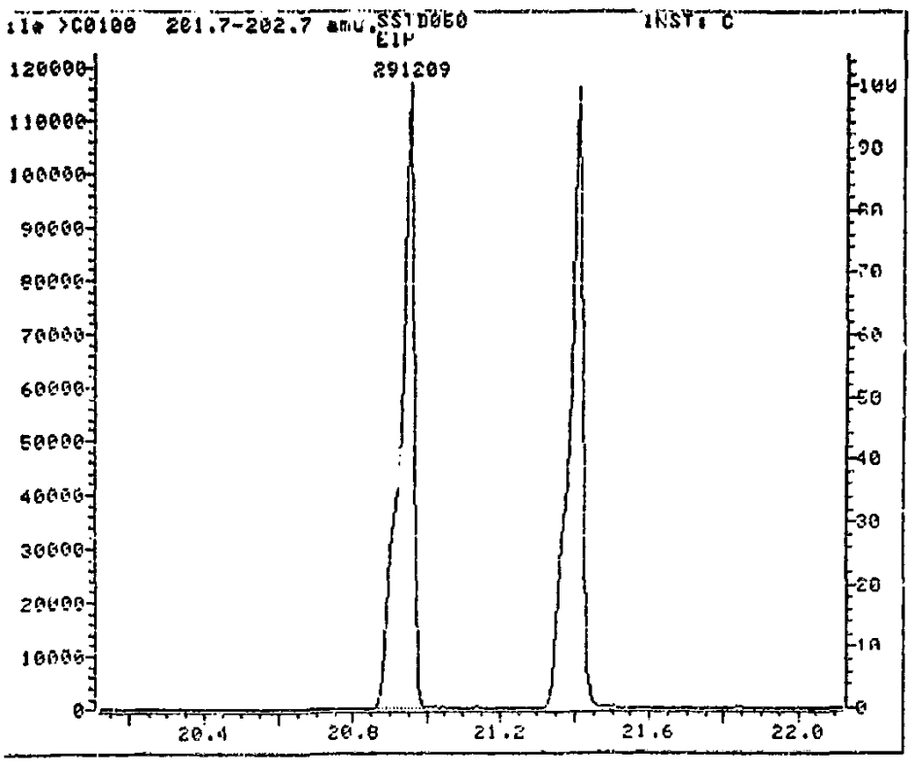


Data File: >C0100::D3 Quant Output File: ^C0100::Q1
Name: CONT. CAL. BNA STD.
Misc: INST: C
Quant Time: 8/1216 11:47 Quant ID File: ID_BN1::EX
Injected at: 8/1216 11:10 Last Calibration: 8/1215 13:26

Compound No: 58
Compound Name: C640 PHENANTHRENE
Scan Number: 1487
Retention Time: 18.42 min.
Quant Ion: 178.0
Area: 286301M
Concentration: 53.06 NG/UL
q-value: 95

This report was produced by QAREA on: 8/1218 08:00

005828



Data File: >C0100::D3
Name: LUNT. CAL. BNA STD.
Misc: INST: C
Quant Time: 87/12/16 11:47
Injected at: 87/12/16 11:10

Quant Output File: ^C0100::Q1

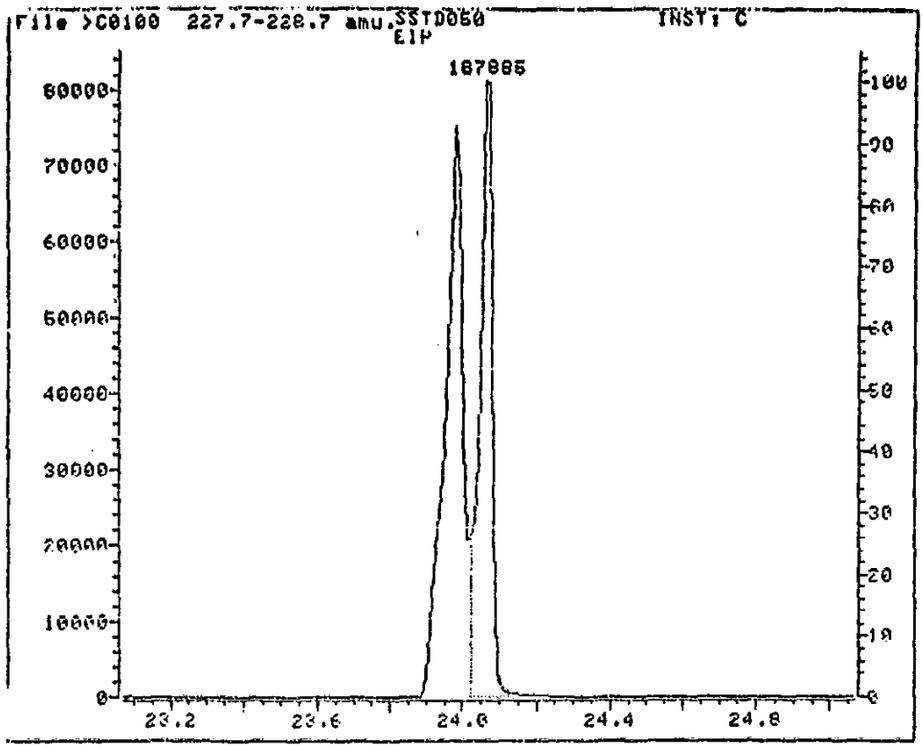
Quant ID File: ID_BN1::EX
Last Calibration: 87/12/15 13:26

Compound No: 61
Compound Name: C655 FLUORANTHENE
Scan Number: 1731
Retention Time: 20.95 min.
Quant Ion: 202.0
Area: 291209M
Concentration: 60.47 NG/UL
q-value: 98

This report was produced by QAREA on: 871218 08:02

005829

C60



Data File: >C0100::D3 Quant Output File: ^C0100::Q1
Name: CONT. CAL. BNA STD.
Misc: INST: C
Quant Time: 8/1216 11:47 Quant ID File: ID_BN1::EX
Injected at: 8/1216 11:10 Last Calibration: 8/1215 13:26

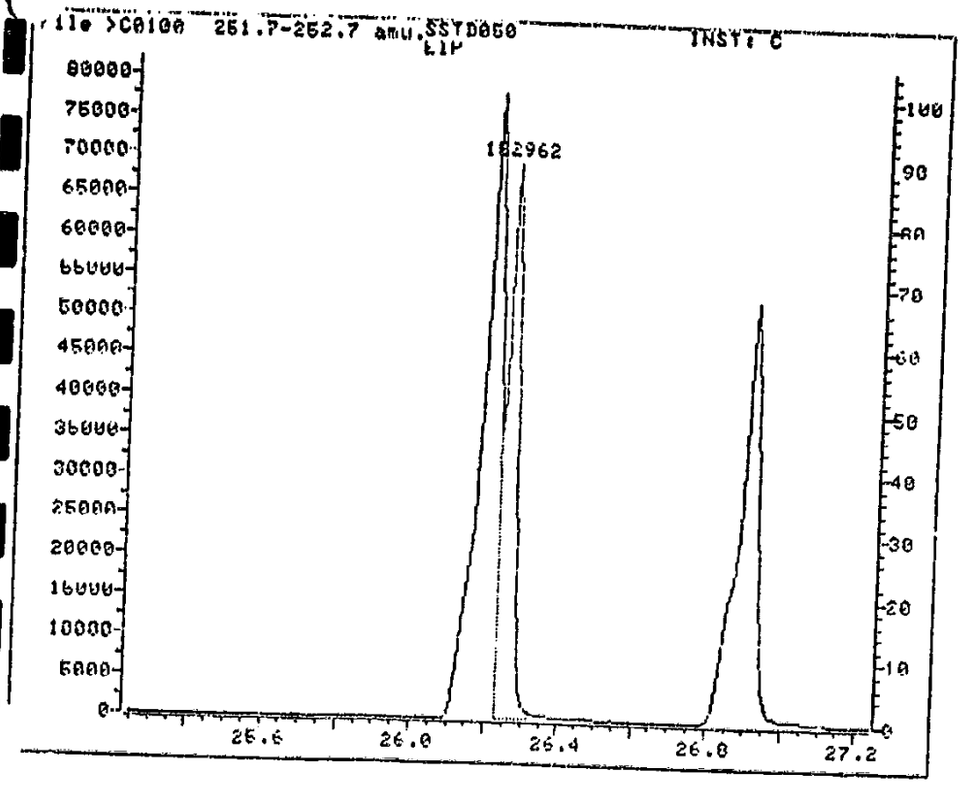
Compound No: 67
Compound Name: C240 CHRYSENE
Scan Number: 2030
Retention Time: 24.07 min.
Quant Ion: 228.0
Area: 187885M
Concentration: 57.37 NG/UL
q-value: 92

This report was produced by QAREA on: 871218 08:03

005830

061

005830



Data File: >C0100::D3
Name: CUN1. CAL. BNA STD.
Misc: INST: C
Quant Time: 87/12/16 11:47
Injected at: 87/12/16 11:10

Quant Output File: ^C0100::Q1

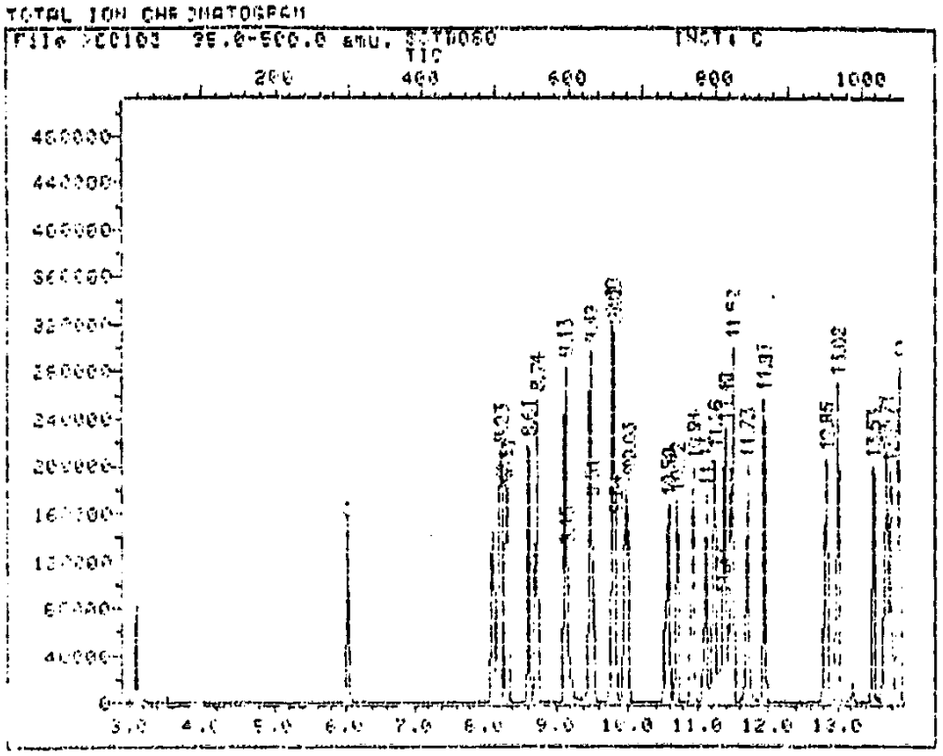
Quant ID File: ID_BN1::EX
Last Calibration: 87/12/15 13:26

Compound No: 73
Compound Name: C27H BENZO(K)FLUORANTHENE
Scan Number: 2241
Retention Time: 26.26 min.
Quant Ion: 252.0
Area: 152962M
Concentration: 54.04 NG/UL
q-value: 87

This report was produced by QAREA on: 87/12/18 08:04

005831

TOTAL ION CHROMATOGRAM



Data File: XC0103::03 Quant Output File: XC0103::03
Name: S:TD060
Misc: INST: C

Id File: ID_B[illegible]::E[illegible]
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

Operator ID: JOHN
Quant Time: 871216 14:08
Injected at: 871216 13:23

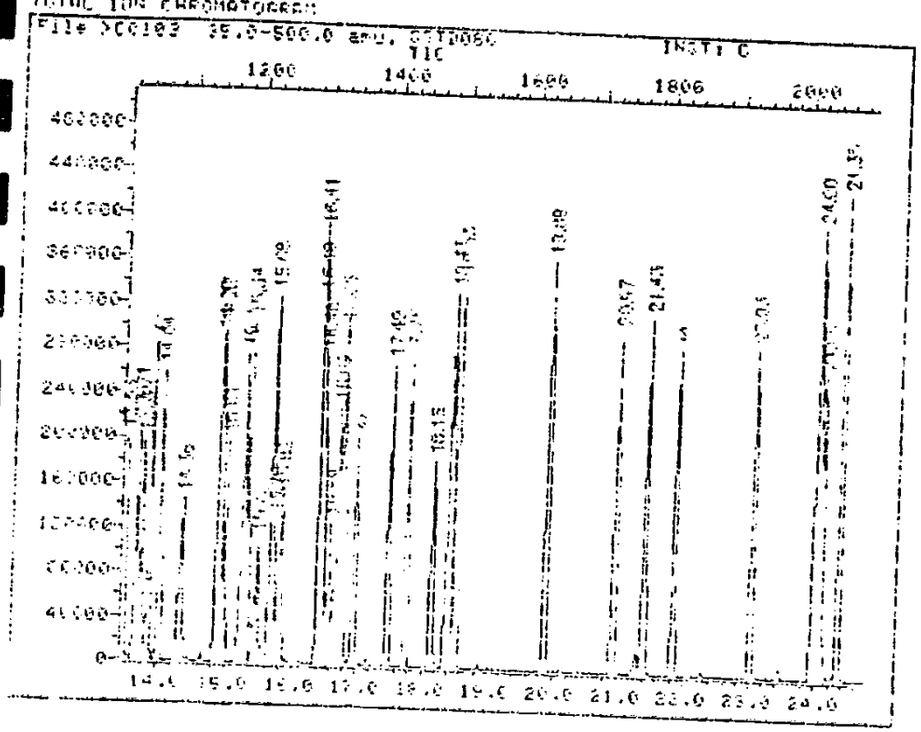
TIC page 1 of 3

005832

063

005832

TOTAL ION CHROMATOGRAM



Data File: >C0103:03
Name: 8270MS
Misc: INST: C

Quant Output File: >C0103:07

Id File: ID_8270:1e
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871219 12:26

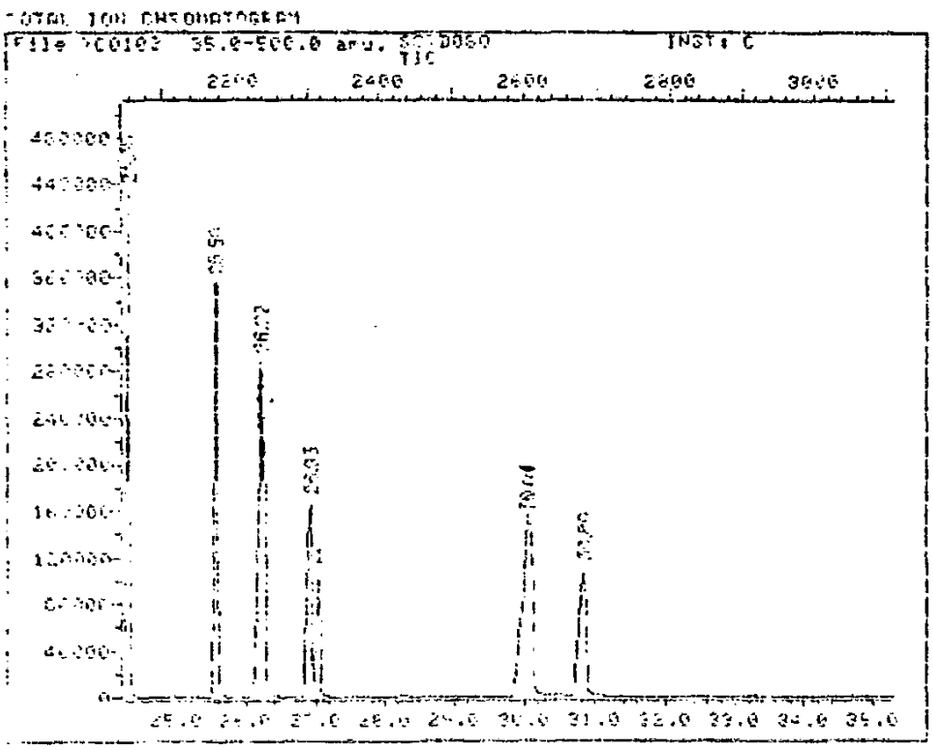
Operator ID: JOHN
Quant Time: 871216 14:06
Injected at: 871216 13:23

TIC page 2 of 3

005833

064

005833



Data File: [illegible] Quant Output File: [illegible]
Name: SS7D060
Misc: [illegible]

Id File: ID_E[illegible]1::EX
Title: S&H-[illegible]TILE ORGANIC [illegible]
Last Calibration: 871219 13:[illegible]

Operator ID: [illegible]
Quant Time: 871216 14:08
Injected at: 871216 13:23

TIC page 3 of 3

005834

065

005834

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871216 14:08
Output File: ^C0103::QT Injected at: 871216 13:23
Data File: >C0103::D3 Dilution Factor: 1.00000
Name: SSTD080
Misc: INST: C

ID File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*C130 1,4-DICHLOROBENZENE-D4	8.70	150.0	53489	40.00	NG/UL	91
2)	C315 PHENOL	8.23	94.0	101425	74.16	NG/UL	94
3)	C325 BIS(2-CHLOROETHYL)ETHER	8.30	93.0	86390	74.27	NG/UL	91
4)	C330 2-CHLOROPHENOL	8.33	128.0	81847	75.03	NG/UL	90
5)	C335 1,3-DICHLOROBENZENE	8.61	146.0	90608	76.12	NG/UL	99
6)	C340 1,4-DICHLOROBENZENE	8.74	146.0	92981	76.12	NG/UL	93
7)	C345 BENZYL ALCOHOL	9.15	108.0	51069	78.04	NG/UL	85
8)	C350 1,2-DICHLOROBENZENE	9.13	146.0	87331	77.83	NG/UL	96
9)	C355 2-METHYLPHENOL	9.49	108.0	72133	73.94	NG/UL	92
10)	C360 BIS(2-CHLOROISOPROPYL)ETH	9.51	45.0	187191	65.88	NG/UL	82
11)	C365 4-METHYLPHENOL	9.82	108.0	67718	74.70	NG/UL	97
12)	C370 N-NITROSO-DI-N-PROPYLAMIN	9.84	70.0	65414	64.87	NG/UL	85
13)	C375 HEXACHLOROETHANE	9.80	117.0	37656	75.08	NG/UL	81
14)	CS50 2-FLUOROPHENOL	6.04	112.0	65084	72.37	NG/UL	93
15)	CS45 PHENOL-D6	8.21	99.0	84917	73.74	NG/UL	90
16)	*C140 NAPHTHALENE-D8	11.48	136.0	118313	40.00	NG/UL	92
17)	C410 NITROBENZENE	10.03	77.0	108288	80.61	NG/UL	80
18)	C415 ISOPHORONE	10.59	82.0	215818	82.52	NG/UL	92
19)	C420 2-NITROPHENOL	10.72	139.0	59987	82.25	NG/UL	77
20)	C425 2,4-DIMETHYLPHENOL	10.94	107.0	96249	81.12	NG/UL	91
21)	C430 BENZOIC ACID	11.37	122.0	59301M	88.76	NG/UL	
22)	C435 BIS(2-CHLOROETHOXY)METHAN	11.13	93.0	90912	57.06	NG/UL	98
23)	C440 2,4-DICHLOROPHENOL	11.26	162.0	87725	86.07	NG/UL	95
24)	C445 1,2,4-TRICHLOROBENZENE	11.40	180.0	101127	88.69	NG/UL	97
25)	C450 NAPHTHALENE	11.52	128.0	249007	78.49	NG/UL	98
26)	C455 4-CHLOROANILINE	11.73	127.0	120815	79.97	NG/UL	98
27)	C460 HEXACHLOROBUTADIENE	11.97	225.0	65903	104.55	NG/UL	98
28)	C465 4-CHLORO-3-METHYLPHENOL	12.85	107.0	100661	81.95	NG/UL	89
29)	C470 2-METHYLNAPHTHALENE	13.02	142.0	165362	81.14	NG/UL	97
30)	CS20 NITROBENZENE-D5	9.99	82.0	112749	80.75	NG/UL	84
31)	*C150 ACENAPHTHENE-D10	15.27	164.0	83700	40.00	NG/UL	99
32)	C510 HEXACHLOROCYCLOPENTADIENE	13.53	237.0	76111	106.81	NG/UL	98
33)	C515 2,4,6-TRICHLOROPHENOL	13.71	196.0	89710	96.36	NG/UL	98
34)	C520 2,4,5-TRICHLOROPHENOL	13.78	196.0	75077M	80.65	NG/UL	98
35)	C525 2-CHLORONAPHTHALENE	14.04	162.0	204653	83.39	NG/UL	95
36)	C530 2-NITROANILINE	14.36	138.0	90017	76.86	NG/UL	80
37)	C535 DIMETHYLPHTHALATE	14.90	163.0	269578	77.77	NG/UL	94
38)	C540 ACENAPHTHYLENE	14.93	152.0	295351	76.38	NG/UL	99
39)	C543 2,6-DINITROTOLUENE	15.01	165.0	44456	50.38	NG/UL	79
40)	C545 3-NITROANILINE	15.27	138.0	73234	71.76	NG/UL	83
41)	C550 ACENAPHTHENE	15.34	153.0	200621	79.58	NG/UL	98
42)	C555 2,4-DINITROPHENOL	15.48	184.0	55219	98.04	NG/UL	97
43)	C560 4-NITROPHENOL	15.70	65.0	63988	72.45	NG/UL	94
44)	C565 DIBENZOFURAN	15.68	168.0	297294	83.47	NG/UL	73

005835

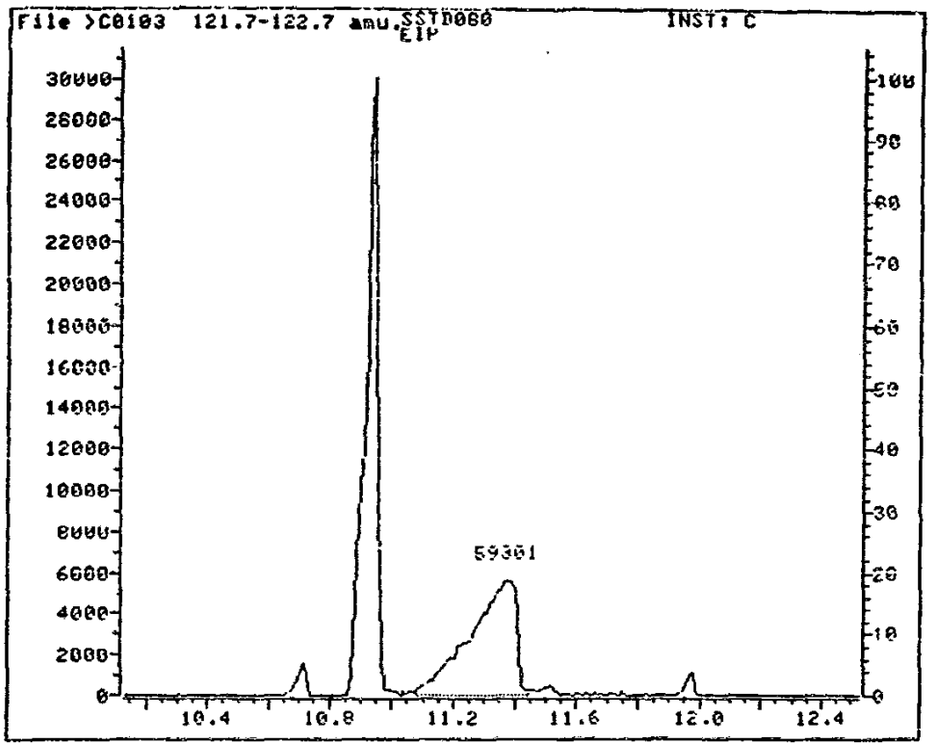
066

005835

47)	C585	4-CHLOROPHENYL-PHENYLETHE	16.48	204.0	124323	89.00	NG/UL	83
48)	C590	FLUORENE	16.41	166.0	218053	78.61	NG/UL	98
49)	C595	4-NITROANILINE	16.59	138.0	41471	45.34	NG/UL	86
50)	C525	2-FLUOROBIPHENYL	13.89	172.0	235820	84.21	NG/UL	95
51)	C555	2,4,6-TRIBROMOPHENOL	16.97	329.7	62267	133.14	NG/UL	93
)	*C160	PHENANTHRENE-D10	18.38	188.0	184633	40.00	NG/UL	96
53)	C610	4,6-DINITRO-2-METHYLPHENO	16.69	198.0	49214	68.12	NG/UL	89
54)	C615	N-NITROSODIPHENYLAMINE	16.75	169.0	195500	79.06	NG/UL	97
55)	C625	4-BROMOPHENYLPHENYLETHER	17.49	248.0	93853	102.63	NG/UL	92
56)	C630	HEXACHLOROBENZENE	17.76	284.0	121225	115.82	NG/UL	91
57)	C635	PENTACHLOROPHENOL	18.15	266.0	77942M	119.06	NG/UL	98
58)	C640	PHENANTHRENE	18.43	178.0	395110M	79.90	NG/UL	96
59)	C645	ANTHRACENE	18.53	178.0	407918	81.74	NG/UL	94
60)	C650	DI-N-BUTYLPHTHALATE	19.89	149.0	576047	85.54	NG/UL	86
61)	C655	FLUORANTHENE	20.97	202.0	443250	100.43	NG/UL	94
62)	*C170	CHRYSENE-D12	24.03	240.0	86114	40.00	NG/UL	94
63)	C715	PYRENE	21.43	202.0	441978	106.51	NG/UL	91
64)	C720	BUTYLBENZYLPHTHALATE	23.03	149.0	218507	99.12	NG/UL	95
65)	C725	3,3'-DICHLOROBENZIDINE	24.00	252.0	91630	122.50	NG/UL	97
66)	C730	BENZO(A)ANTHRACENE	24.00	228.0	376716	132.08	NG/UL	93
67)	C740	CHRYSENE	24.08	228.0	294751M	109.17	NG/UL	92
68)	C745	BIS(2-ETHYLHEXYL)PHTHALAT	24.35	149.0	309345	101.75	NG/UL	89
69)	C530	TERPHENYL-D14	21.86	244.0	326772	126.76	NG/UL	94
70)	*C175	PERYLENE-D12	27.05	264.0	155526	40.00	NG/UL	96
71)	C760	DI-N-OCTYLPHTHALATE	25.58	149.0	493861	59.13	NG/UL	100
72)	C765	BENZO(B)FLUORANTHENE	26.22	252.0	509613	102.14	NG/UL	96
73)	C770	BENZO(K)FLUORANTHENE	26.28	252.0	199274M	52.24	NG/UL	89
74)	C775	BENZO(A)PYRENE	26.93	252.0	310559	77.23	NG/UL	98
75)	C780	INDENO(1,2,3-CD)PYRENE	30.04	276.0	360247	110.10	NG/UL	98
76)	C785	DIBENZ(A,H)ANTHRACENE	30.09	278.0	278048	96.93	NG/UL	98
)	C790	BENZO(G,H,I)PERYLENE	30.86	276.0	298618	106.13	NG/UL	98

* Compound is ISTD

005836



Data File: >C0103::D3 Quant Output File: ^C0103::Q1
Name: SSTD080
Misc: INST: C
Quant Time: 871216 14:08 Quant ID File: ID_BN1::EX
Injected at: 871216 13:23 Last Calibration: 871215 13:26

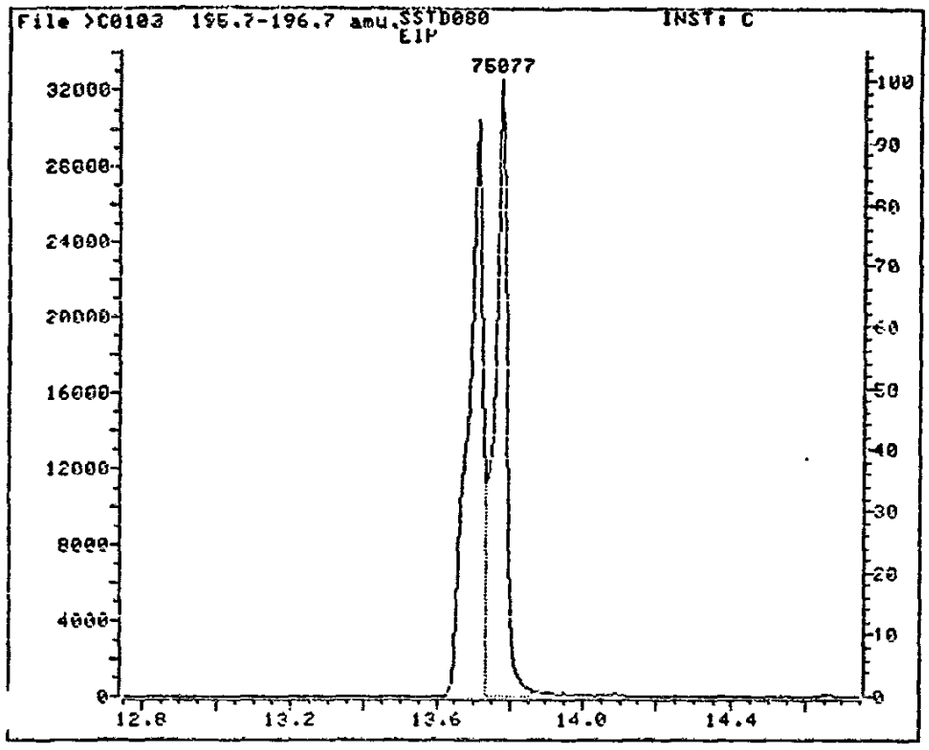
Compound No: 21
Compound Name: C430 BENZOIC ACID
Scan Number: 810
Retention Time: 11.37 min.
Quant Ion: 122.0
Area: 59301M
Concentration: 88.76 NG/UL

This report was produced by QARLA on: 871218 09:43

005837

068

005837



Data File: >C0103::D3 Quant Output File: ^C0103::Q1
Name: SSTD080
Misc: INST: C
Quant Time: 871216 14:08 Quant ID File: ID_BN1::EX
Injected at: 871216 13:23 Last Calibration: 871215 13:26

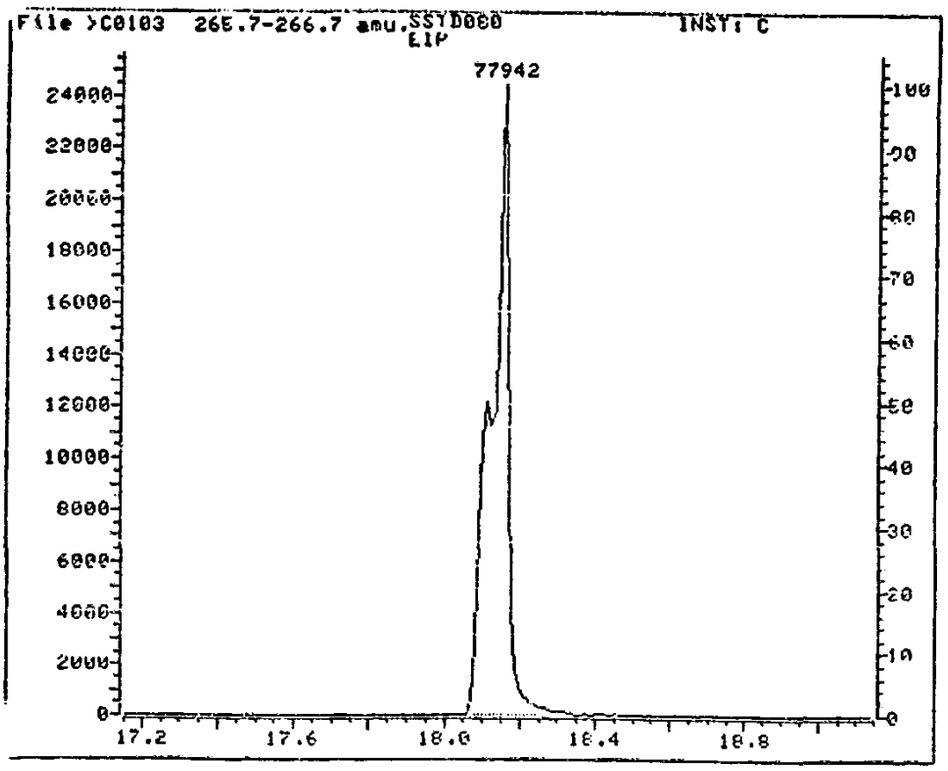
Compound No: 34
Compound Name: C520 2,4,5-TRICHLOROPHENOL
Scan Number: 1041
Retention Time: 13.78 min.
Quant Ion: 196.0
Area: 75077M
Concentration: 80.65 NG/UL
q-value: 98

This report was produced by QAREA on: 871218 09:44

005838

069

005838



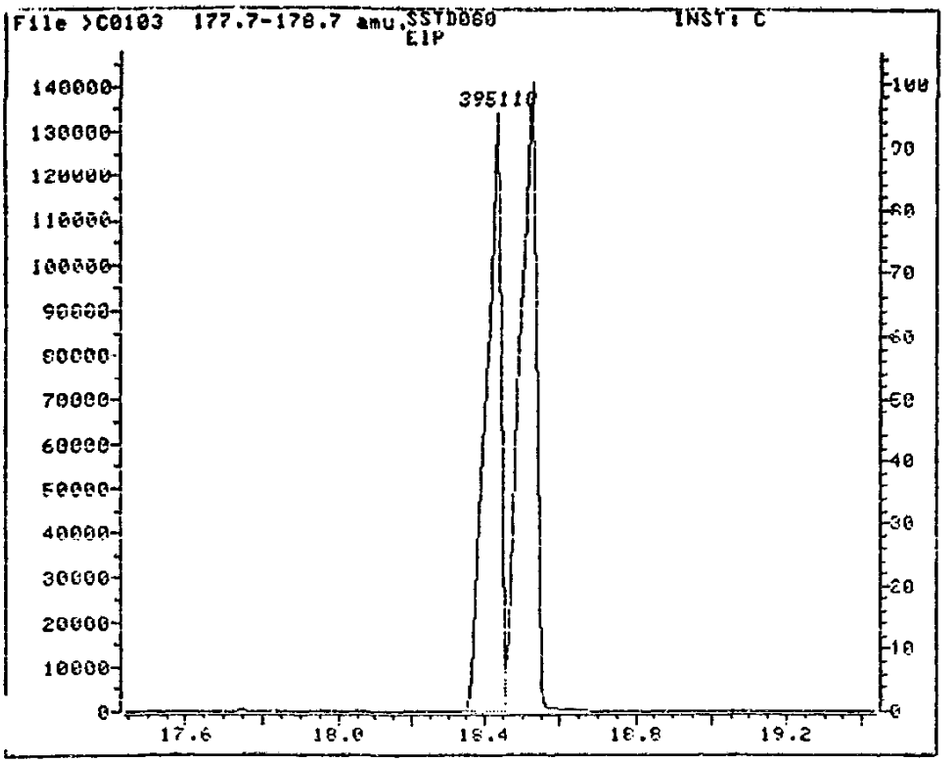
Data File: >C0103::D3 Quant Output File: ^C0103::Q1
Name: SSTD080
Misc: INST: C
Quant Time: 871216 14:08 Quant ID File: ID_BN1::EX
Injected at: 871216 13:23 Last Calibration: 871215 13:26

Compound No: 57
Compound Name: C635 PENTACHLOROPHENOL
Scan Number: 1461
Retention Time: 18.15 min.
Quant Ion: 266.0
Area: 77942M
Concentration: 119.06 NG/UL
q-value: 98

This report was produced by QAREA on: 871218 09:45

005839

070



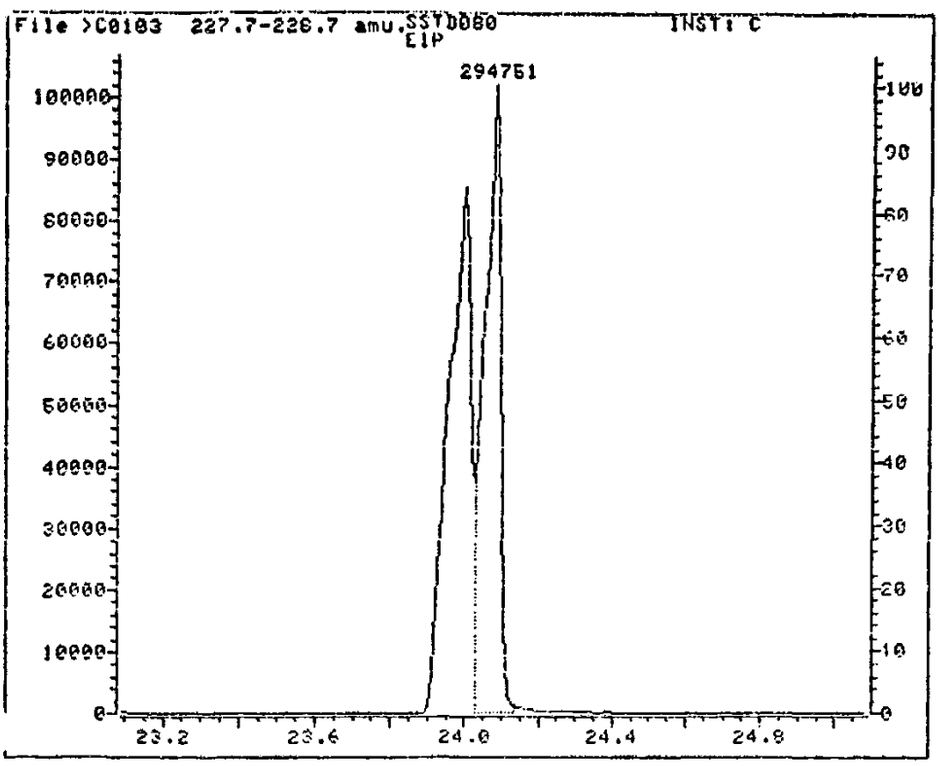
Data File: >C0103::D3 Quant Output File: ^C0103::W1
Name: SSTD060
Misc: INST: C
Quant Time: 871216 14:08 Quant ID File: ID_BN1::EX
Injected at: 871216 13:23 Last Calibration: 871215 13:26

Compound No: 58
Compound Name: C640 PHENANTHRENE
Scan Number: 1488
Retention Time: 18.43 min.
Quant Ion: 178.0
Area: 395110M
Concentration: 79.90 NG/UL
q-value: 96

This report was produced by QAREA on: 871218 09:46

005840

071



Data File: >C0103::D3 Quant Output File: ^C0103::Q1
Name: SSTD080
Misc: INST: C
Quant Time: 87/12/16 14:08 Quant ID File: ID_BN1::EX
Injected at: 87/12/16 13:23 Last Calibration: 871215 13:26

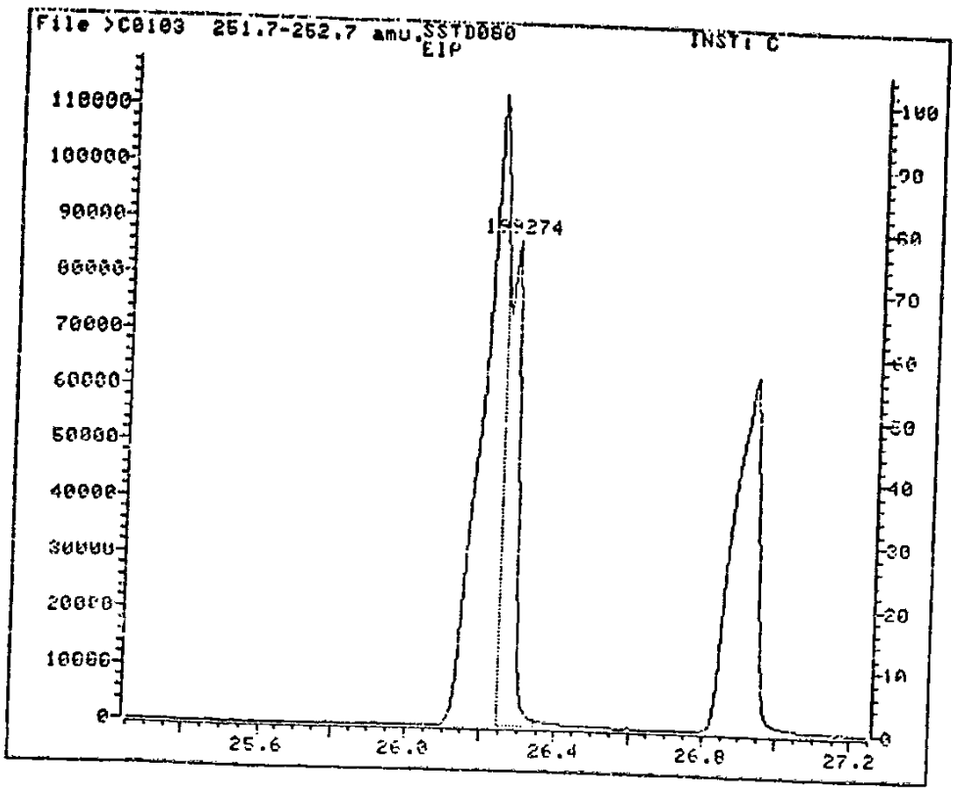
Compound No: 67
Compound Name: C740 CHRYSENE
Scan Number: 2031
Retention Time: 24.08 min.
Quant Ion: 228.0
Area: 294751M
Concentration: 109.17 NG/UL
q-value: 92

This report was produced by QAREA on: 871218 09:47

005841

072

005841



Data File: >C0103::D3
Name: SSTD080
Misc: INST: C
Quant Time: 8/1216 14:08
Injected at: 8/1216 13:23

Quant Output File: ^C0103::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 8/1215 13:26

Compound No: 73
Compound Name: C270 BENZO(K)FLUORANTHENE
Scan Number: 2242
Retent.on Time: 26.28 min.
Quant Ion: 252.0
Area: 199274M
Concentration: 52.24 NG/UL
q-value: 89

This report was produced by QAREA on: 8/1218 09:48

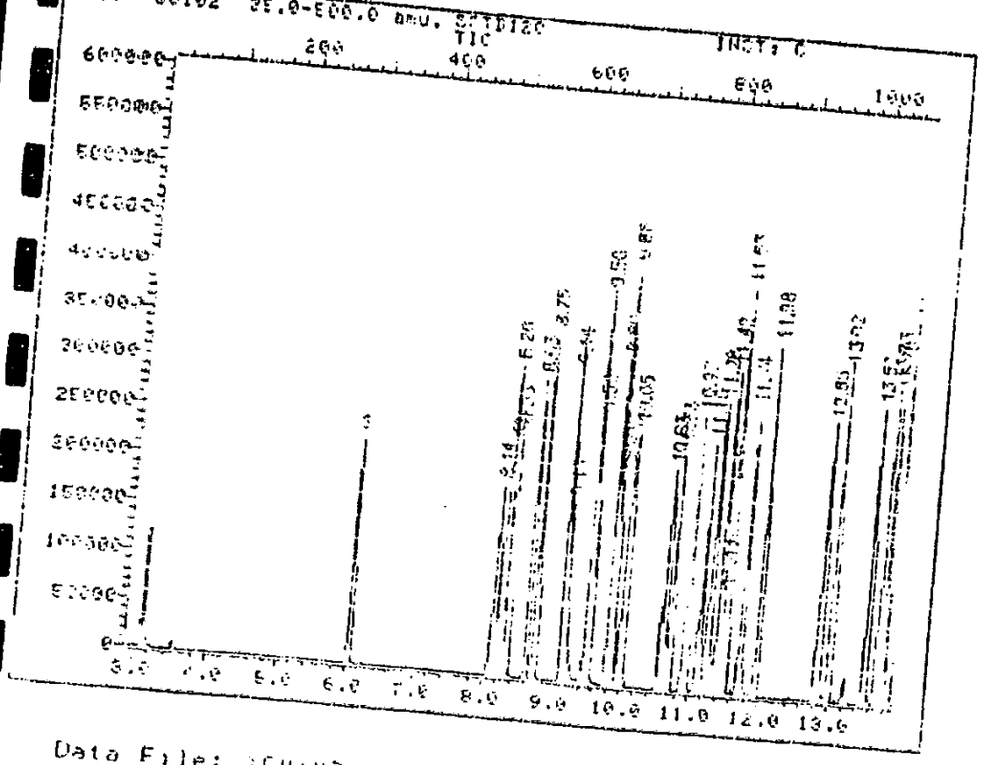
005842

073

005842

TOTAL ION CHROMATOGRAM

File CC102 35.0-600.0 amu. SCIDIR



Data File: CC102::03
Form: SCIDIR
Misc: INST: C

Quant Output File: CC102::QT

Ic File: IC_BR.::rx
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 12:26

Operator ID: JOHN
Quant Time: 871216 13:18
Injected at: 871216 12:40

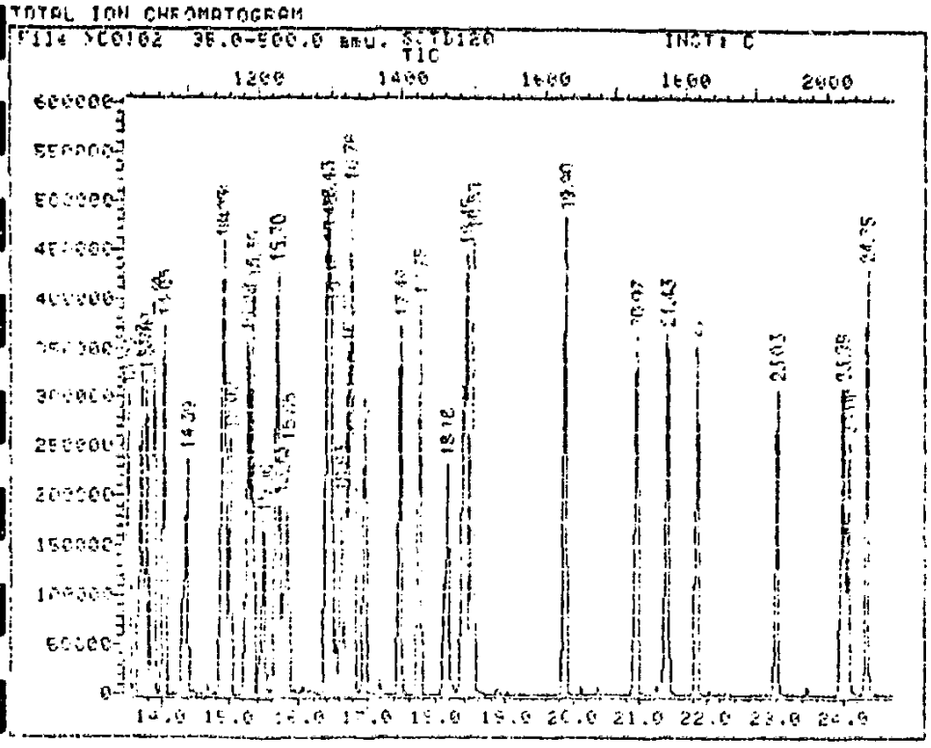
TIC page 1 of 3

005843

074

005843

TOTAL ION CHROMATOGRAM



Data File: >C0102:03 Quant Output File: >C0102:07
Name: S:TD120
Misc: INST: C

Id File: IC_B1:1:5X
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

Operator ID: JOHN
Quant Time: 871216 13:16
Injected at: 871216 12:40

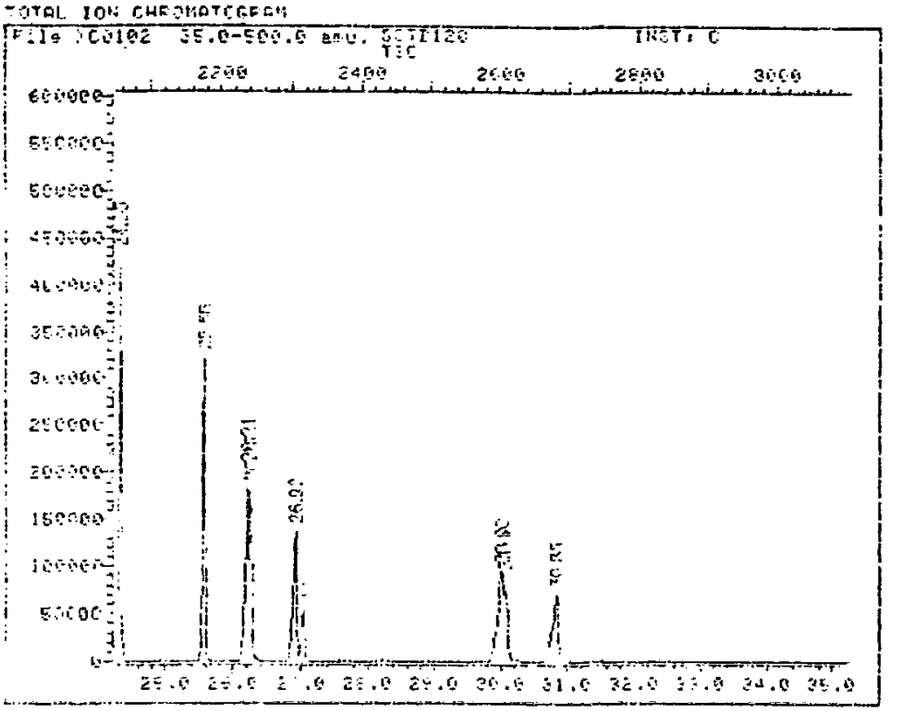
TIC page 2 of 3

005844

075

005844

TOTAL ION CHROMATOGRAM



Data File: ?C0102::C3 Quant Output File: ^C0102::Q3
Name: SSTD??
Misc: INST: C

Id File: ID_SN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

Operator ID: JOHN
Quant Time: 871216 13:18
Injected at: 871216 12:47

TIC page 3 of 3

005845

Option ignored:

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871216 13:18
Output File: ^C0102::Q1 Injected at: 871216 12:40
Data File: >C0102::D3 Dilution Factor: 1.00000
Name: SSID120
Misc: INST: C

ID File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*C130 1,4-DICHLOROBENZENE-D4	8.71	150.0	62230	40.00	NG/UL	88
2)	C315 PHENOL	8.26	94.0	136159	85.57	NG/UL	98
3)	C325 BIS(2-CHLOROETHYL)ETHER	8.14	93.0	188707M	139.44	NG/UL	
4)	C330 2-CHLOROPHENOL	8.35	128.0	127376	100.36	NG/UL	94
5)	C335 1,3-DICHLOROBENZENE	8.63	146.0	141531	102.20	NG/UL	99
6)	C340 1,4-DICHLOROBENZENE	8.75	146.0	139641	98.26	NG/UL	94
7)	C345 BENZYL ALCOHOL	9.19	108.0	85101	111.78	NG/UL	81
8)	C350 1,2-DICHLOROBENZENE	9.14	146.0	137447	105.28	NG/UL	96
9)	C355 2-METHYLPHENOL	9.50	108.0	113087	99.64	NG/UL	92
10)	C360 BIS(2-CHLOROISOPROPYL)ETH	9.52	45.0	296471	89.69	NG/UL	87
11)	C365 4-METHYLPHENOL	9.86	108.0	109647	103.96	NG/UL	98
12)	C370 N-NITROSO-DI-N-PROPYLAMIN	9.87	70.0	121906	103.91	NG/UL	86
13)	C375 HEXACHLOROETHANE	9.80	117.0	62511M	107.13	NG/UL	
14)	C550 2-FLUOROPHENOL	6.05	112.0	103788	99.19	NG/UL	87
15)	C545 PHENOL-D5	8.23	99.0	138959	103.72	NG/UL	90
16)	*C140 NAPHTHALENE-D8	11.48	136.0	125805	40.00	NG/UL	97
17)	C410 NITROBENZENE	10.05	77.0	175989	123.21	NG/UL	79
18)	C415 ISOPHORONE	10.63	82.0	262340	94.33	NG/UL	94
19)	C420 2-NITROPHENOL	10.73	139.0	100948	130.17	NG/UL	79
20)	C425 2,4-DIMETHYLPHENOL	10.97	107.0	124859	98.97	NG/UL	89
21)	C430 BENZOIC ACID	11.46	122.0	106218M	149.52	NG/UL	89
22)	C435 BIS(2-CHLOROETHOXY)METHAN	11.16	93.0	142786	84.28	NG/UL	98
23)	C440 2,4-DICHLOROPHENOL	11.28	162.0	143642	132.53	NG/UL	94
24)	C445 1,2,4-TRICHLOROBENZENE	11.42	180.0	157358	129.79	NG/UL	98
25)	C450 NAPHTHALENE	11.53	128.0	376852	111.71	NG/UL	99
26)	C455 4-CHLOROANILINE	11.74	127.0	177585	110.54	NG/UL	99
27)	C460 HEXACHLOROBUTADIENE	11.98	225.0	99878	149.01	NG/UL	99
28)	C465 4-CHLORO-3-METHYLPHENOL	12.85	107.0	161681	123.79	NG/UL	92
29)	C470 2-METHYLNAPHTHALENE	13.02	142.0	261158	120.52	NG/UL	97
30)	C520 NITROBENZENE-D5	10.01	82.0	184324	124.15	NG/UL	84
31)	*C150 ACENAPHTHENE-D10	15.27	164.0	88504	40.00	NG/UL	99
32)	C510 HEXACHLOROCYCLOPENTADIENE	13.53	237.0	122246	162.25	NG/UL	98
33)	C515 2,4,6-TRICHLOROPHENOL	13.73	196.0	153194	155.63	NG/UL	97
34)	C520 2,4,5-TRICHLOROPHENOL	13.79	196.0	111340M	113.11	NG/UL	96
[illegible])	C525 2-CHLORONAPHTHALENE	14.05	162.0	314715	121.27	NG/UL	93
[illegible])	C530 2-NITROANILINE	14.39	138.0	144486M	116.68	NG/UL	
37)	C535 DIMETHYLPHTHALATE	14.93	163.0	255485	69.71	NG/UL	89
38)	C540 ACENAPHTHYLENE	14.94	152.0	423924	103.68	NG/UL	97
39)	C543 2,6-DINITROTOLUENE	15.02	165.0	81705	87.57	NG/UL	86
40)	C545 3-NITROANILINE	15.28	138.0	105634	97.89	NG/UL	80
41)	C550 ACENAPHTHENE	15.36	153.0	299484	112.35	NG/UL	96
42)	C555 2,4-DINITROPHENOL	15.50	184.0	72894	122.40	NG/UL	95

005846

077

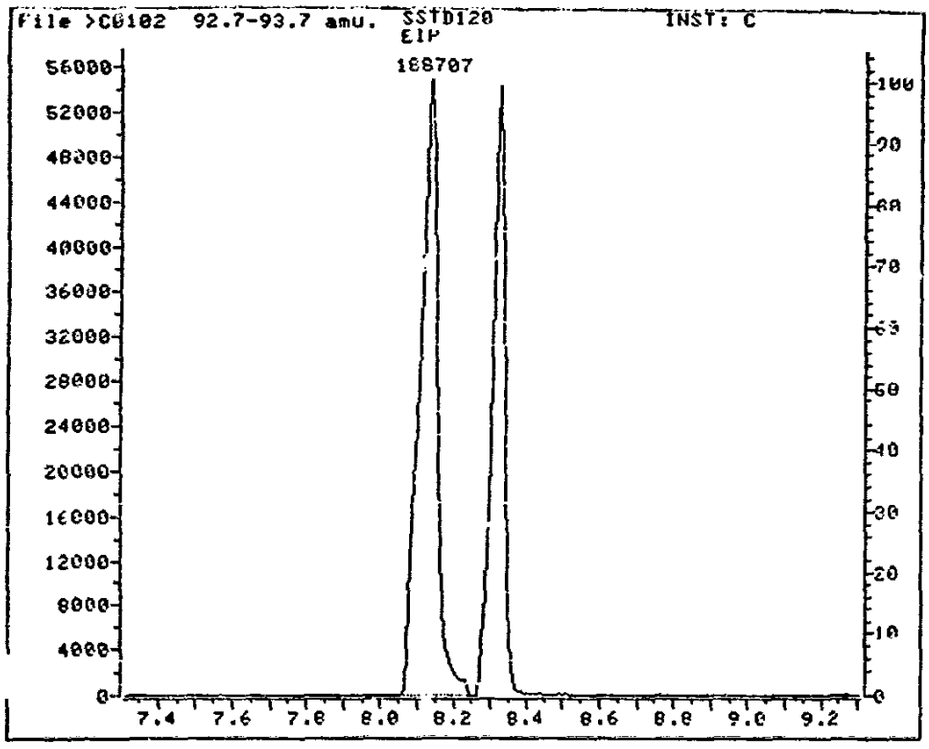
005846

45)	C570	2,4-DINITROTOLUENE	15.85	165.0	107286	74.89	NG/UL	85
46)	C580	DIETHYLPHTHALATE	16.45	149.0	205382	54.77	NG/UL	98
47)	C585	4-CHLOROPHENYL-PHENYLETHE	16.48	204.0	168395	114.00	NG/UL	87
48)	C590	FLUORENE	16.43	166.0	310598	105.89	NG/UL	97
49)	C595	4-NITROANILINE	16.63	138.0	68008	70.31	NG/UL	85
50)	CS25	2-FLUOROBIPHENYL	13.91	172.0	366964	123.92	NG/UL	95
51)	CS55	2,4,6-TRIBROMOPHENOL	16.97	329.7	101069	204.38	NG/UL	91
52)	*C160	PHENANTHRENE-D10	18.39	188.0	194753	40.00	NG/UL	97
53)	C610	4,6-DINITRO-2-METHYLPHENO	16.72	198.0	105873M	138.93	NG/UL	93
54)	C615	N-NITROSODIPHENYLAMINE	16.78	169.0	278389M	106.73	NG/UL	98
55)	C625	4-BROMOPHENYLPHENYLETHER	17.49	248.0	145823	151.18	NG/UL	93
56)	C630	HEXACHLOROBENZENE	17.78	284.0	185281	167.82	NG/UL	87
57)	C635	PENTACHLOROPHENOL	18.16	266.0	109770M	158.97	NG/UL	97
58)	C640	PHENANTHRENE	18.45	178.0	582823	111.73	NG/UL	96
59)	C645	ANTHRACENE	18.55	178.0	572153M	108.69	NG/UL	94
60)	C650	DI-N-BUTYLPHTHALATE	19.90	149.0	757451	106.63	NG/UL	88
61)	C655	FLUORANTHENE	20.97	202.0	499269	107.25	NG/UL	91
62)	*C170	CHRYSENE-D12	24.02	240.0	54386	40.00	NG/UL	94
63)	C715	PYRENE	21.43	202.0	471821	180.04	NG/UL	89
64)	C720	BUTYLBENZYLPHTHALATE	23.03	149.0	186099	133.67	NG/UL	96
65)	C725	3,3'-DICHLOROBENZIDINE	23.99	252.0	50177	106.22	NG/UL	99
66)	C730	BENZO(A)ANTHRACENE	23.99	228.0	277317	153.95	NG/UL	95
67)	C740	CHRYSENE	24.08	228.0	235843M	138.31	NG/UL	93
68)	C745	BIS(2-ETHYLHEXYL)PHTHALAT	24.35	149.0	257563	134.14	NG/UL	88
69)	CS30	TERPHENYL-D14	21.87	244.0	346729	212.97	NG/UL	93
70)	*C175	PERYLENE-D12	27.03	264.0	61945	40.00	NG/UL	97
71)	C760	DI-N-OCTYLPHTHALATE	25.58	149.0	349077	104.93	NG/UL	100
72)	C765	BENZO(B)FLUORANTHENE	26.21	252.0	265546	133.62	NG/UL	95
73)	C770	BENZO(K)FLUORANTHENE	26.26	252.0	157580M	103.71	NG/UL	87
74)	C775	BENZO(A)PYRENE	26.92	252.0	190546	118.96	NG/UL	98
75)	C780	INDENO(1,2,3-CD)PYRENE	30.02	276.0	176121	135.15	NG/UL	94
76)	C785	DIBENZ(A,H)ANTHRACENE	30.03	278.0	155916	136.47	NG/UL	98
77)	C790	BENZO(G,H,I)PERYLENE	30.85	276.0	164531	146.81	NG/UL	99

* Compound is ISTD

005847

005847

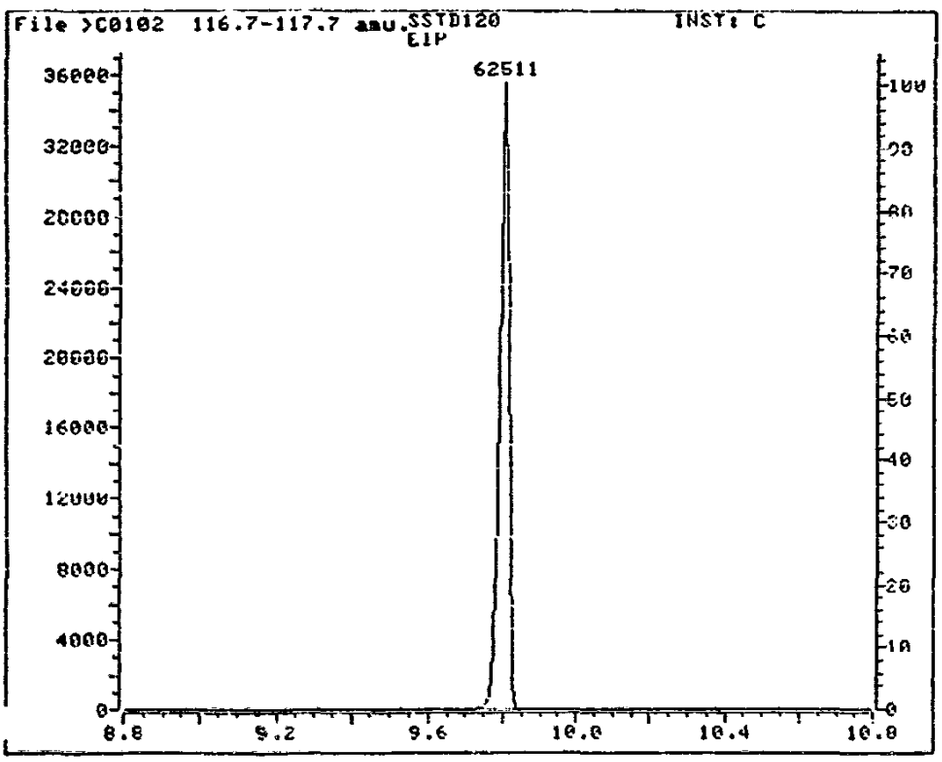


Data File: >C0102::D3 Quant Output File: ^C0102::Q1
Name: SSTD120
Misc: INST: C
Quant Time: 87/12/16 13:18 Quant ID File: ID_BN1::EX
Injected at: 87/12/16 12:40 Last Calibration: 87/12/15 13:26

Compound No: 3
Compound Name: C325 BIS(2-CHLOROETHYL)ETHER
Scan Number: 500
Retention Time: 8.14 min.
Quant Ion: 93.0
Area: 188707M
Concentration: 139.44 NG/UL

This report was produced by WAREA on: 87/12/18 09:28

005848



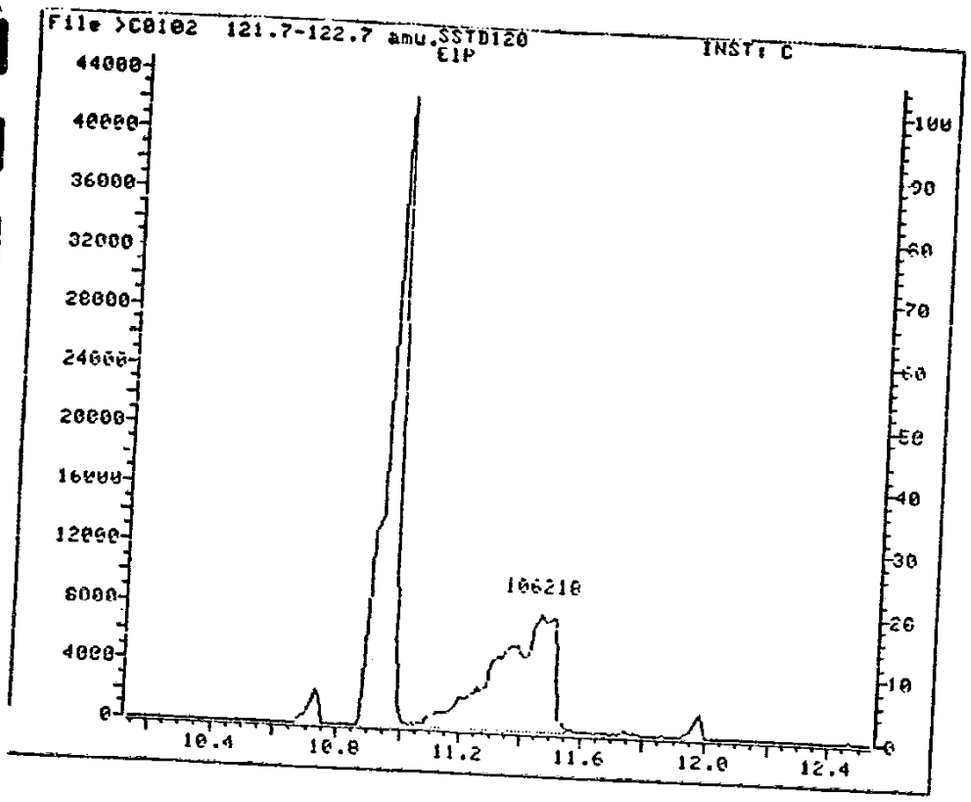
Data File: >C0102::D3 Quant Output File: ^C0102::Q1
Name: SSTD120
Misc: INST: C
Quant Time: 8/1216 13:18 Quant ID File: ID_BN1::EX
Injected at: 8/1216 12:40 Last Calibration: 8/1215 13:26

Compound No: 13
Compound Name: C375 HEXACHLOROETHANE
Scan Number: 660
Retention Time: 9.80 min.
Quant Ion: 117.0
Area: 62511M
Concentration: 107.13 NG/UL

This report was produced by WAREA on: 8/1218 09:29

005849

080



Data File: >C0102::D3
Name: SSTD120
Misc: INST: C
Quant Time: 87/12/16 13:18
Injected at: 871216 12:40

Quant Output File: ^C0102::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 87/12/15 13:26

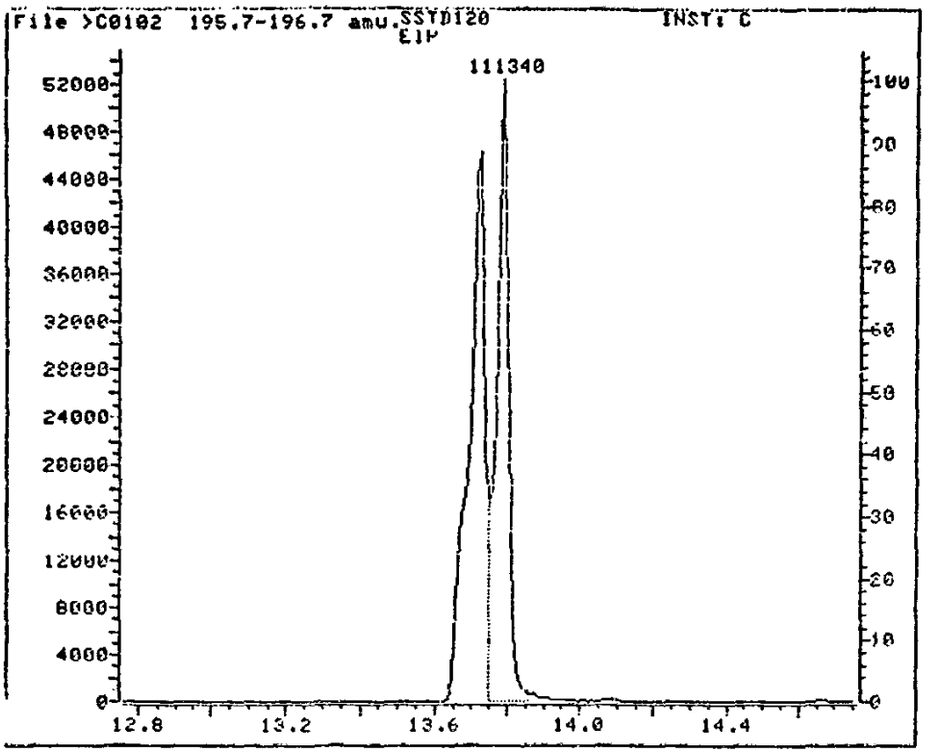
Compound No: 21
Compound Name: C430 BENZOIC ACID
Scan Number: 819
Retention Time: 11.46 min.
Quant Ion: 122.0
Area: 106218M
Concentration: 149.52 NG/UL
q-value: 89

This report was produced by QAREA on: 871218 09:30

005850

081

005850



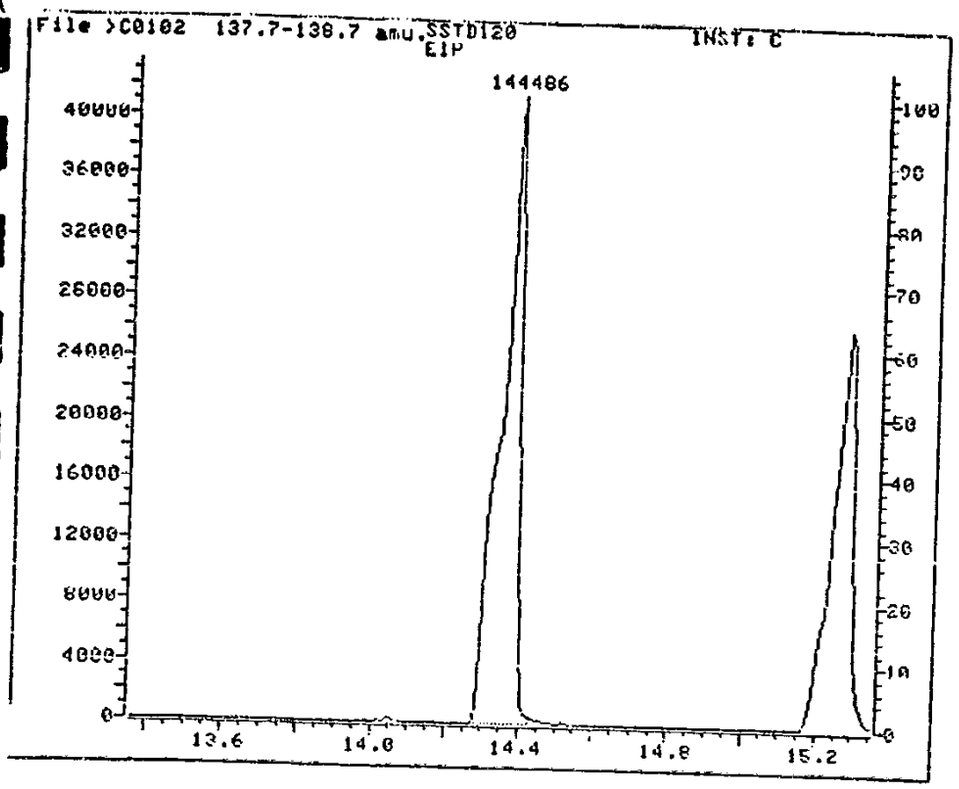
Data File: >C0102::D3 Quant Output File: ^C0102::Q1
Name: SSTD120
Misc: INST: C
Quant Time: 8/1216 13:18 Quant ID File: ID_BN1::EX
Injected at: 8/1216 12:40 Last Calibration: 8/1215 13:26

Compound No: 34
Compound Name: C520 2,4,5-TRICHLOROPHENOL
Scan Number: 1043
Retention Time: 13.79 min.
Quant Ion: 196.0
Area: 111340M
Concentration: 113.11 NG/UL
q-value: 96

This report was produced by QAREA on: 8/1218 09:31

005851

082



Data File: >C0102::D3
Name: SSTD120
Misc: INST: C
Quant Time: 8/1216 13:18
Injected at: 8/1216 12:40

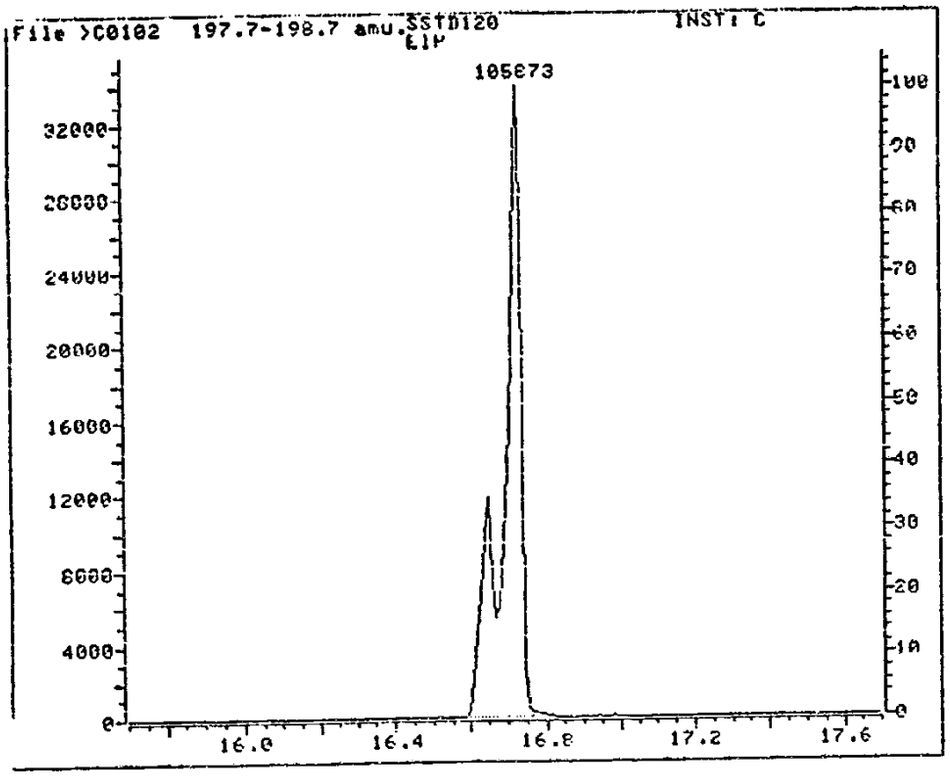
Quant Output File: ^C0102::Q1

Quant ID File: ID_BNI::EX
Last Calibration: 8/1215 13:26

Compound No: 36
Compound Name: C530 2-NITROANILINE
Scan Number: 1100
Retention Time: 14.39 min.
Quant Ion: 138.0
Area: 144486M
Concentration: 116.68 NG/UL

This report was produced by WAREA on: 871218 09:32

005852



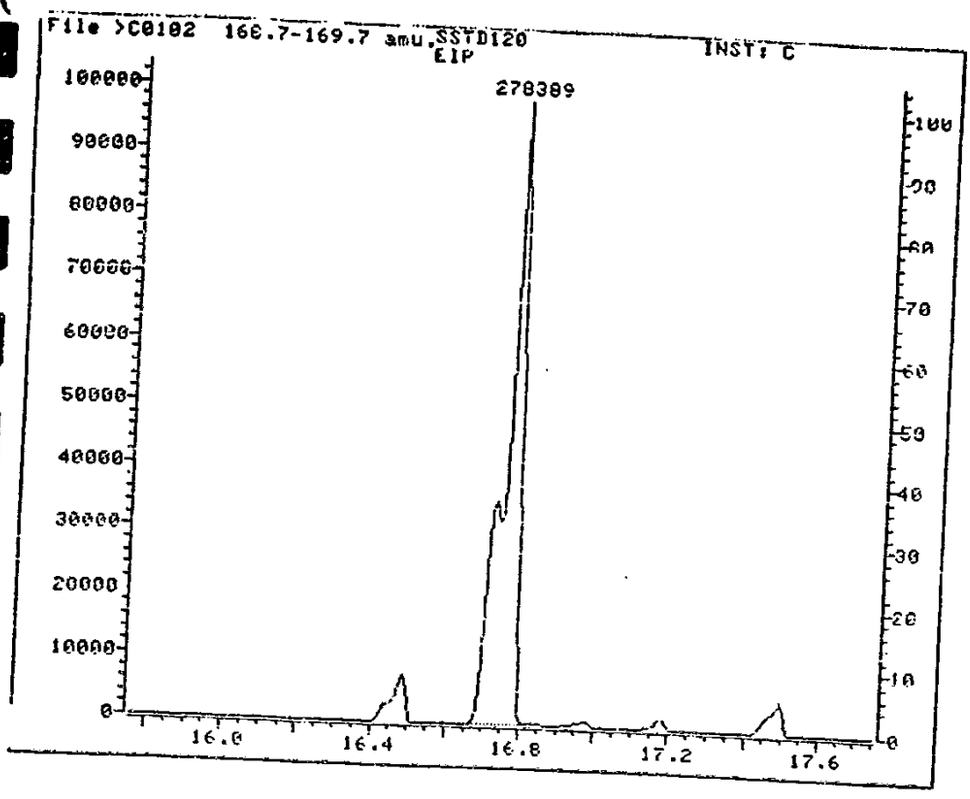
Data File: >C0102::D3 Quant Output File: ^C0102::QI
Name: SSTD120
Misc: INST: C
Quant Time: 87/12/16 13:18 Quant ID File: ID_BN1::EX
Injected at: 87/12/16 12:40 Last Calibration: 87/12/15 13:26

Compound No: 53
Compound Name: C610 4,6-DINITRO-2-METHYLPHENO
Scan Number: 1324
Retention Time: 16.72 min.
Quant Ion: 198.0
Area: 105873M
Concentration: 138.93 NG/UL
q-value: 93

This report was produced by QAREA on: 87/12/18 09:33

005853

084



Data File: >C0102::D3
Name: SSTD120
Misc: INST: C
Quant Time: 8/1216 13:18
Injected at: 8/1216 12:40

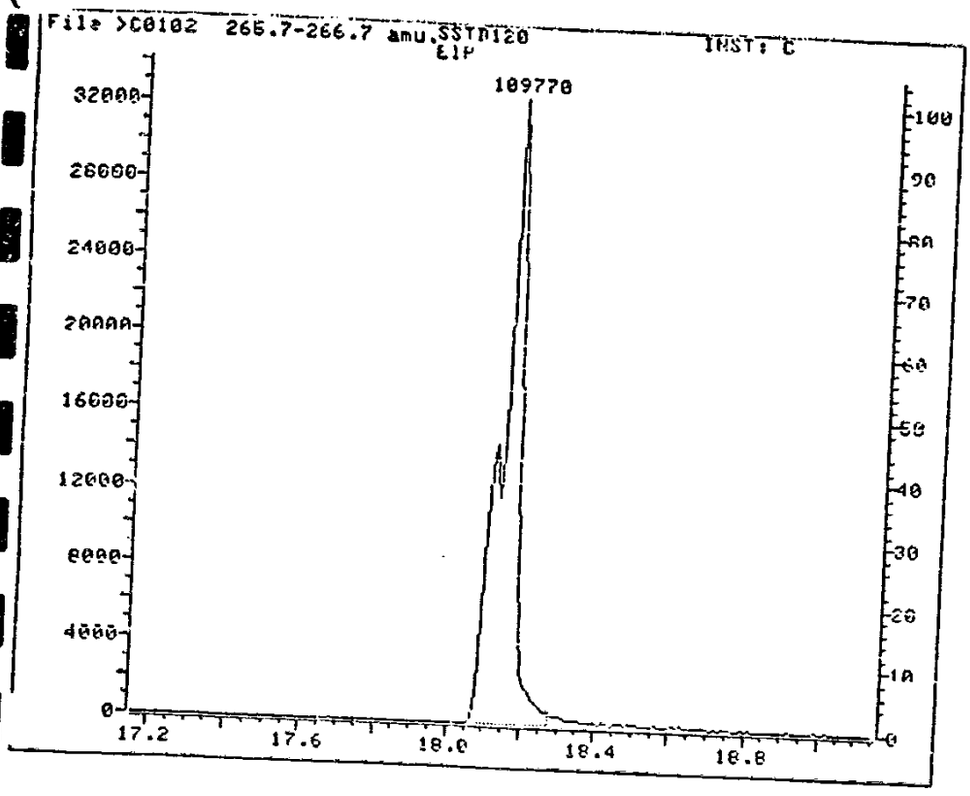
Quant Output File: ^C0102::Q1

Quant ID File: ID_BNI::EX
Last Calibration: 8/1215 13:26

Compound No: 54
Compound Name: C615 N-NITROSODIPHENYLAMINE
Scan Number: 1329
Retention Time: 16.78 min.
Quant Ion: 169.0
Area: 278389M
Concentration: 106.73 NG/UL
q-value: 98

This report was produced by QAREA on: 8/1218 09:34

005854



Data File: >C0102::D3
Name: SSTD120
Misc: INST: C
Quant Time: 87/12/16 13:18
Injected at: 87/12/16 12:40

Quant Output File: ^C0102::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 87/12/15 13:26

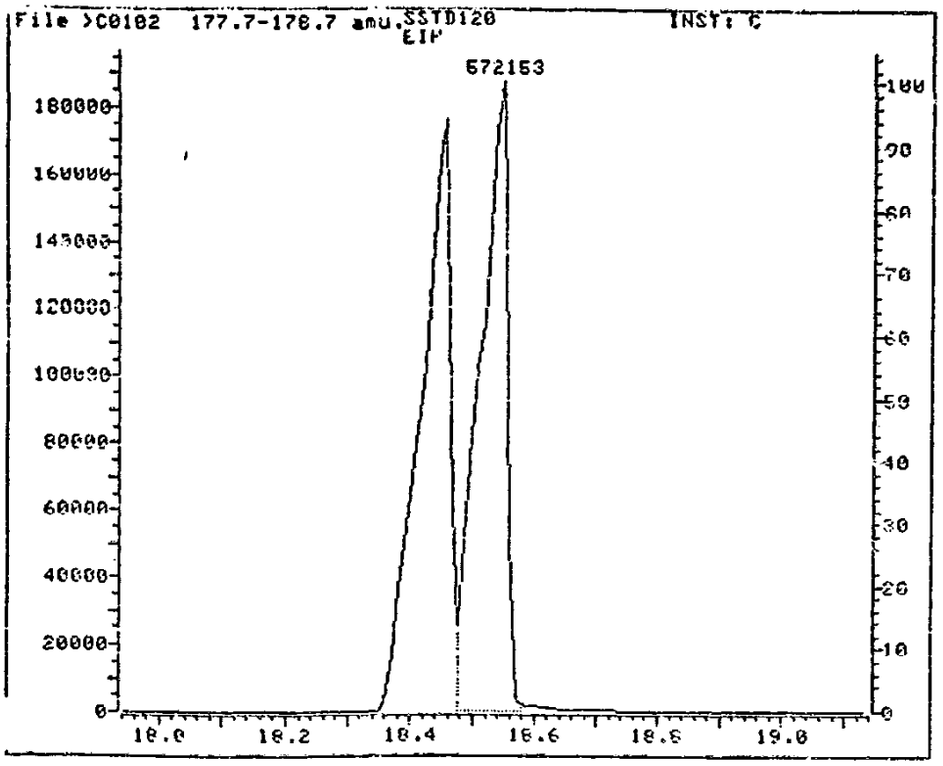
Compound No: 57
Compound Name: C635 PENTACHLOROPHENOL
Scan Number: 1462
Retention Time: 18.16 min.
Quant Ion: 266.0
Area: 109770M
Concentration: 158.97 NG/UL
q-value: 97

This report was produced by QAREA on: 871218 09:35

005855

036

005855

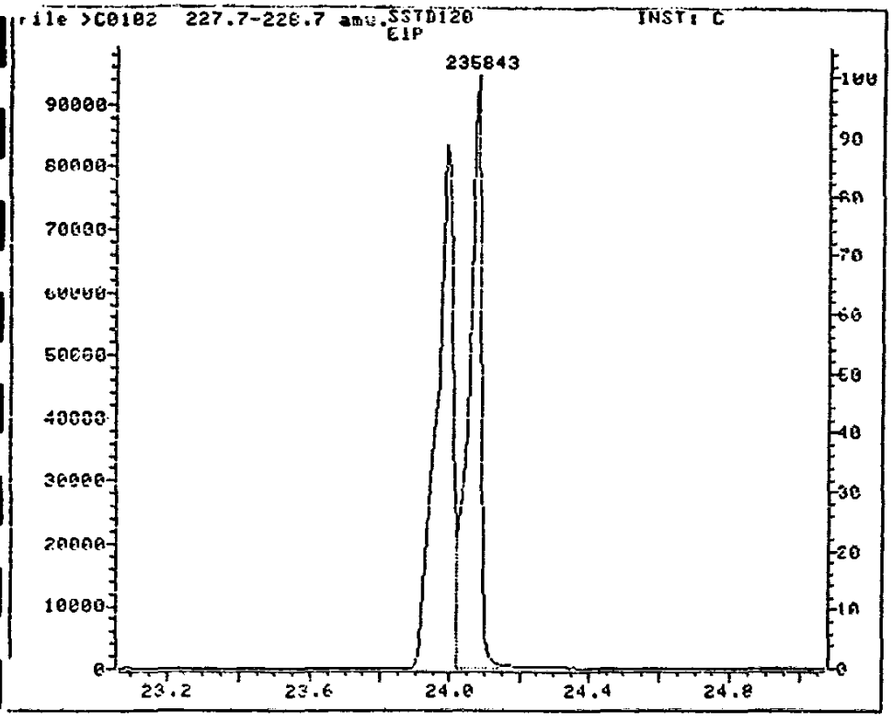


Data File: >C0102::D3 Quant Output File: ^C0102::Q1
Name: SSTD120
Misc: INST: C
Quant Time: 8/1216 13:18 Quant ID File: ID_BN1::EX
Injected at: 8/1216 12:40 Last Calibration: 8/1215 13:26

Compound No: 59
Compound Name: C645 ANTHRACENE
Scan Number: 1499
Retention Time: 18.55 min.
Quant Ion: 178.0
Area: 572153M
Concentration: 108.69 NG/UL
q-value: 94

This report was produced by QAREA on: 8/1218 09:36

005856



Data File: >C0102::D3 Quant Output File: ^C0102::W1
Name: SSTD120
Misc: INST: C
Quant Time: 8/1216 13:18 Quant ID File: ID_BN1::EX
Injected at: 8/1216 12:40 Last Calibration: 8/1215 13:26

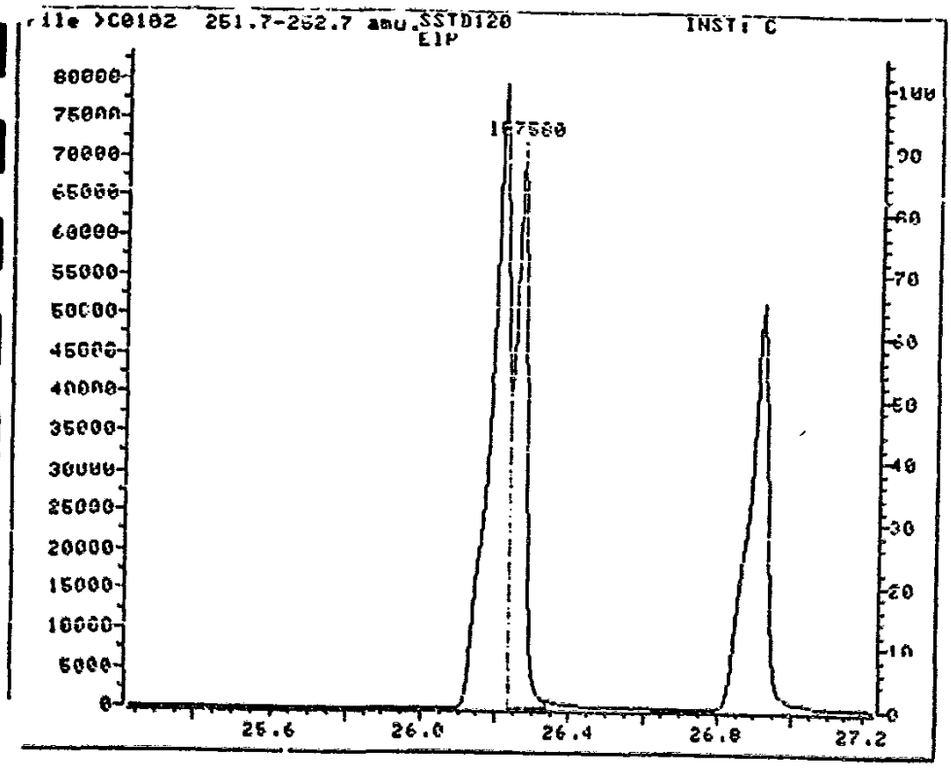
Compound No: 67
Compound Name: C740 CHRYSENE
Scan Number: 2031
Retention Time: 24.08 min.
Quant Ion: 228.0
Area: 235843M
Concentration: 138.31 NG/UL
q-value: 93

This report was produced by QAREA on: 871218 09:37

005857

038

005857



Data File: >C0102::D3
Name: SSTD120
Misc: INST: C
Quant Time: 871216 13:18
Injected at: 871216 12:40

Quant Output File: ^C0102::Q1
Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

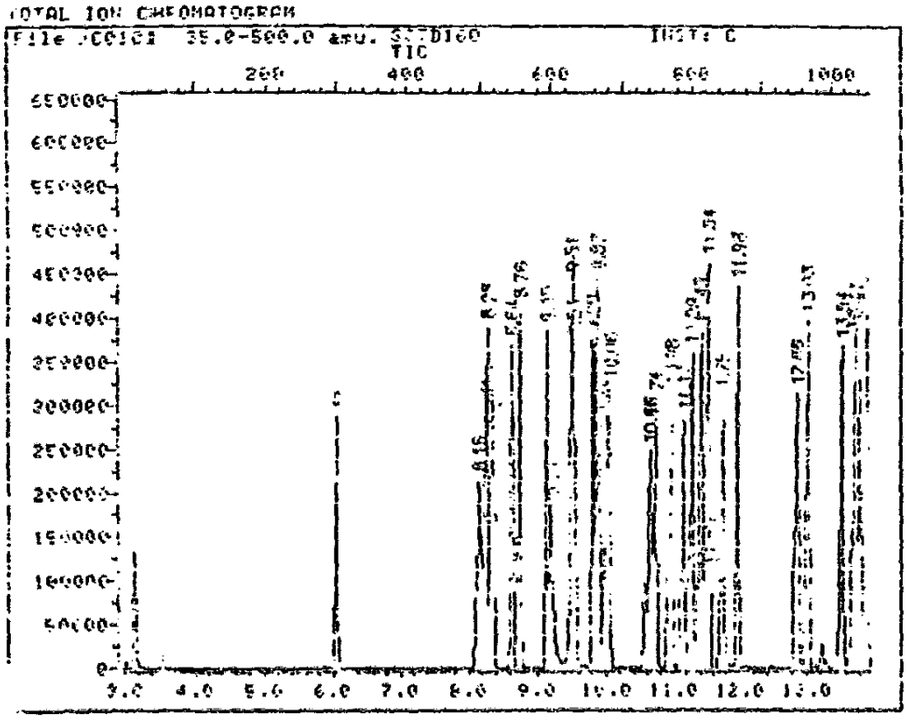
Compound No: 73
Compound Name: C270 BENZO(K)FLUORANTHENE
Scan Number: 2241
Retention Time: 26.26 min.
Quant Ion: 252.0
Area: 157580M
Concentration: 103.71 NG/UL
q-value: 87

This report was produced by QAREA on: 871218 09:38

005858

089

TOTAL ION CHROMATOGRAM



Data File: >C0101:03 Quant Output File: C0101:QT
Name: 5?7D160
Misc: INST: C

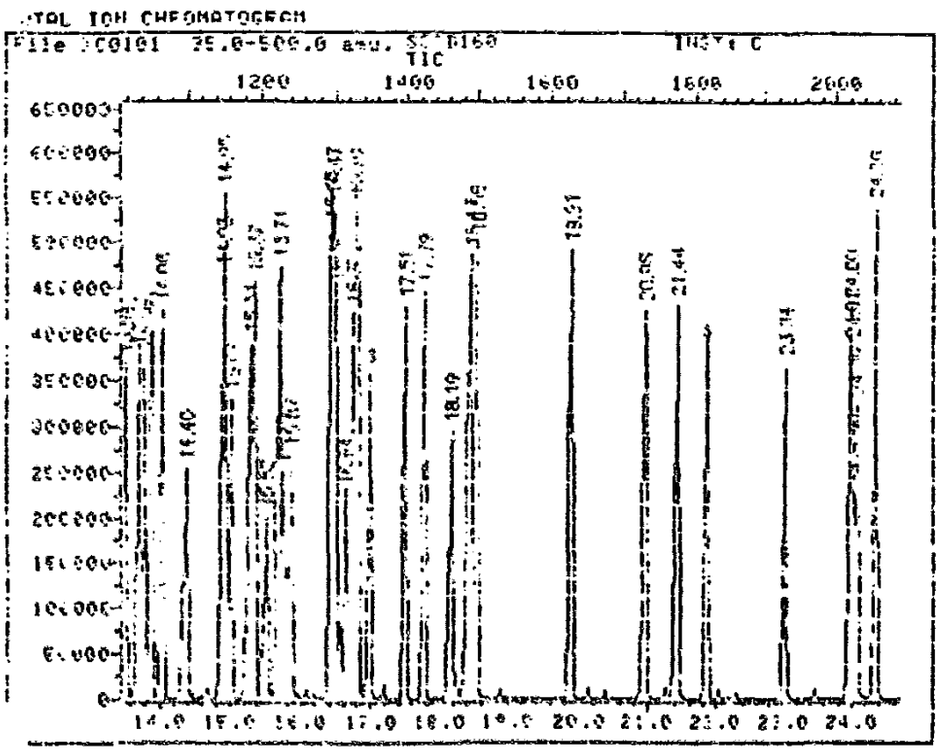
Id File: I_E...:EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 8 12 15 13:26

Operator ID: JOHN
Quant Time: 871216 12:35
Injected at: 871216 11:57

TIC page 1 of 3

005859

005859



Data File: :C0101::D3 Quant Output File: C0101::01
Name: S:TD160
Misc: INST: C

Id File: ID_B:::FX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

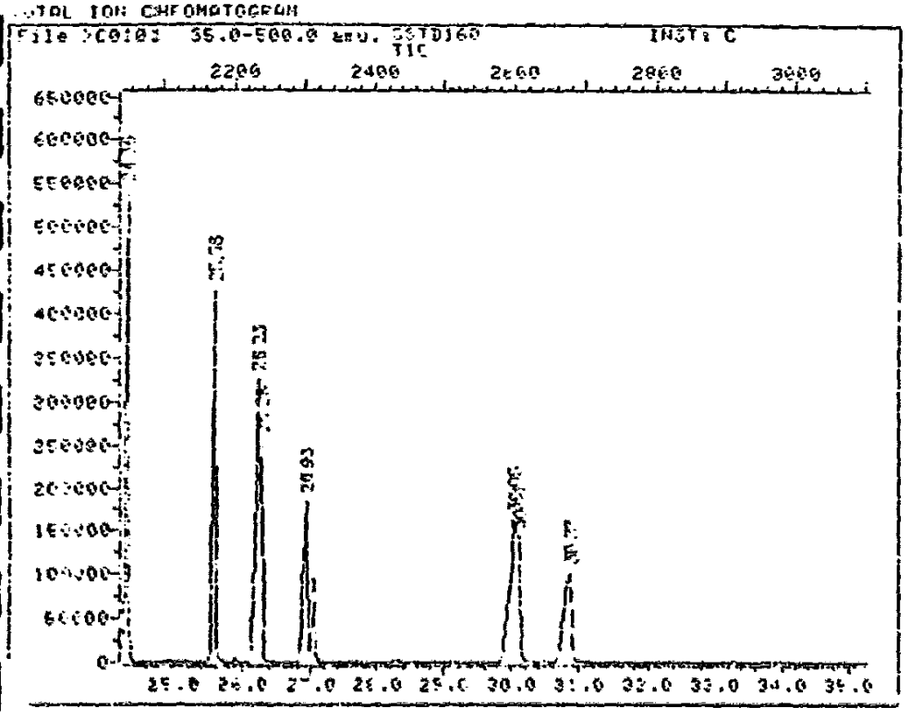
Operator ID: JOHN
Quant Time: 871216 12:35
Injected at: 871216 11:57

TIC page 2 of 3

005860

091

TOTAL ION CHROMATOGRAM



Data File: 3C0101::D7 Quant Output File: ^C0101::D7
Name: SSTD160
Inst: INST: C

Id File: ID_SV1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

Operator ID: JOHN
Quant Time: 871216 12:35
Injected at: 871216 11:57

TIC page 3 of 3

005861

092

005861

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871216 12:35
Output File: ^C0101::Q1 Injected at: 871216 11:57
Data File: >C0101::D3 Dilution Factor: 1.00000
Name: SSTD160
Misc: INST: C

ID File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871215 13:26

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*C130 1,4-DICHLOROBENZENE-D4	8.71	592	61939	40.00	NG/UL	88
2)	C315 PHENOL	8.28	511	176224	111.27	NG/UL	98
3)	C325 BIS(2-CHLOROETHYL)ETHER	8.16	499	223338M	165.80	NG/UL	
4)	C330 2-CHLOROPHENOL	8.36	519	165263	130.83	NG/UL	92
5)	C335 1,3-DICHLOROBENZENE	8.64	545	183491	133.12	NG/UL	99
6)	C340 1,4-DICHLOROBENZENE	8.76	557	175349	123.97	NG/UL	96
7)	C345 BENZYL ALCOHOL	9.21	600	98884	130.50	NG/UL	82
8)	C350 1,2-DICHLOROBENZENE	9.15	594	180016	138.54	NG/UL	96
9)	C355 2-METHYLPHENOL	9.51	629	143501	127.03	NG/UL	88
10)	C360 BIS(2-CHLOROISOPROPYL)ETH	9.53	631	378742	115.11	NG/UL	92
11)	C365 4-METHYLPHENOL	9.87	664	139134	132.53	NG/UL	96
)	C370 N-NITROSO-DI-N-PROPYLAMIN	9.92	668	99327	85.06	NG/UL	86
)	C375 HEXACHLOROETHANE	9.80	657	79001M	136.03	NG/UL	
14)	C550 2-FLUOROPHENOL	6.07	300	134366	129.02	NG/UL	89
15)	C545 PHENOL-D5	8.25	508	177698	133.26	NG/UL	90
16)	*C140 NAPHTHALENE-D8	11.49	819	119499	40.00	NG/UL	95
17)	C410 NITROBENZENE	10.06	682	217054	159.98	NG/UL	81
18)	C415 ISOPHORONE	10.66	739	314544	119.07	NG/UL	92
19)	C420 2-NITROPHENOL	10.74	747	133295	180.95	NG/UL	78
20)	C425 2,4-DIMETHYLPHENOL	10.98	770	204248	170.44	NG/UL	92
21)	C430 BENZOIC ACID	11.55	825	138711M	205.56	NG/UL	93
22)	C435 BIS(2-CHLOROETHOXY)METHAN	11.17	788	167469	104.06	NG/UL	99
23)	C440 2,4-DICHLOROPHENOL	11.29	800	122568	119.06	NG/UL	95
24)	C445 1,2,4-TRICHLOROBENZENE	11.43	813	201298	124.79	NG/UL	98
25)	C450 NAPHTHALENE	11.54	824	471277	147.08	NG/UL	98
26)	C455 4-CHLOROANILINE	11.75	844	233082	152.69	NG/UL	98
27)	C460 HEXACHLOROBUTADIENE	11.98	866	129174	202.89	NG/UL	99
28)	C465 4-CHLORO-3-METHYLPHENOL	12.86	951	141856	114.34	NG/UL	92
29)	C470 2-METHYLNAPHTHALENE	13.03	967	334865	162.68	NG/UL	98
30)	C520 NITROBENZENE-D5	10.02	678	235776	167.18	NG/UL	85
31)	*C150 ACENAPHTHENE-D10	15.28	1183	90005	40.00	NG/UL	98
32)	C510 HEXACHLOROCYCLOPENTADIENE	13.54	1016	163594	213.50	NG/UL	97
33)	C515 2,4,6-TRICHLOROPHENOL	13.73	1034	229977	229.73	NG/UL	99
34)	C520 2,4,5-TRICHLOROPHENOL	13.80	1041	118627M	118.50	NG/UL	99
35)	C525 2-CHLORONAPHTHALENE	14.06	1066	404429	153.25	NG/UL	94
36)	C530 2-NITROANILINE	14.40	1098	197378M	156.73	NG/UL	
37)	C535 DIMETHYLPHTHALATE	14.93	1149	308612	82.80	NG/UL	91
)	C540 ACENAPHTHYLENE	14.95	1151	525444	126.36	NG/UL	98
39)	C543 2,6-DINITROTOLUENE	15.04	1160	105230	110.90	NG/UL	86
40)	C545 3-NITROANILINE	15.31	1185	133935	122.04	NG/UL	84
41)	C550 ACENAPHTHENE	15.37	1191	384399	141.81	NG/UL	97
42)	C555 2,4-DINITROPHENOL	15.52	1206	99308	163.98	NG/UL	92
43)	C560 4-NITROPHENOL	15.75	1228	113076	119.06	NG/UL	89
44)	C565 DIBENZOFURAN	15.71	1224	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

005862

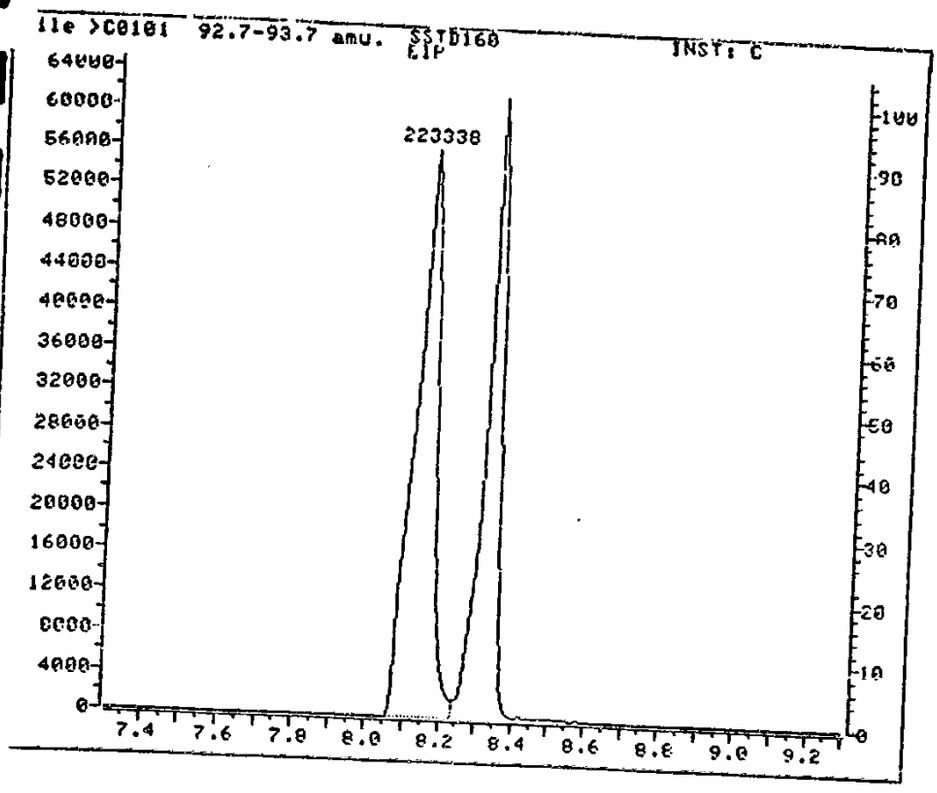
003

005862

47)	C585	4-CHLOROPHENYL-PHENYLETHE	16.50	1299	205944	137.10	NG/UL	85
48)	C590	FLUORENE	16.43	1293	397590	133.29	NG/UL	98
49)	C595	4-NITROANILINE	16.64	1313	83359	84.75	NG/UL	85
50)	CS25	2-FLUOROBIPHENYL	13.91	1051	472742	156.98	NG/UL	96
51)	CS55	2,4,6-TRIBROMOPHENOL	17.00	1347	132684	263.84	NG/UL	94
)	*C160	PHENANTHRENE-D10	18.41	1482	190015	40.00	NG/UL	96
)	C610	4,6-DINITRO-2-METHYLPHENO	16.75	1323	139014M	186.97	NG/UL	97
54)	C615	N-NITROSODIPHENYLAMINE	16.79	1327	343666M	135.04	NG/UL	98
55)	C625	4-BROMOPHENYLPHENYLETHER	17.51	1396	185951	197.59	NG/UL	92
56)	C630	HEXACHLOROBENZENE	17.79	1423	243286	225.85	NG/UL	89
57)	C635	PENTACHLOROPHENOL	18.19	1461	154452M	229.25	NG/UL	98
58)	C640	PHENANTHRENE	18.47	1488	755297	148.41	NG/UL	96
59)	C645	ANTHRACENE	18.56	1497	694810M	135.29	NG/UL	94
60)	C650	DI-N-BUTYLPHTHALATE	19.91	1627	948159	136.81	NG/UL	88
61)	C655	FLUORANTHENE	20.98	1730	699761	154.06	NG/UL	91
62)	*C170	CHRYSENE-D12	24.03	2023	57251	40.00	NG/UL	97
63)	C715	PYRENE	21.44	1774	668525	242.33	NG/UL	89
64)	C720	BUTYLBENZYLPHTHALATE	23.04	1928	288499	196.85	NG/UL	93
65)	C725	3,3'-DICHLOROBENZIDINE	24.00	2020	85658	172.25	NG/UL	99
66)	C730	BENZO(A)ANTHRACENE	24.01	2021	475531	250.78	NG/UL	93
67)	C740	CHRYSENE	24.09	2028	317125M	176.67	NG/UL	91
68)	C745	BIS(2-ETHYLHEXYL)PHTHALAT	24.36	2054	386851	191.39	NG/UL	90
69)	CS30	TERPHENYL-D14	21.87	1815	493046	287.68	NG/UL	91
70)	*C175	PERYLENE-D12	27.04	2312	86639	40.00	NG/UL	98
71)	C760	DI-N-OCTYLPHTHALATE	25.58	2172	577137	124.04	NG/UL	100
72)	C765	BENZO(B)FLUORANTHENE	26.23	2234	579222	208.39	NG/UL	94
73)	C770	BENZO(K)FLUORANTHENE	26.28	2239	175942M	82.79	NG/UL	87
74)	C775	BENZO(A)PYRENE	26.93	2301	342952	153.09	NG/UL	99
75)	C780	INDENO(1,2,3-CD)PYRENE	30.05	2601	379493	208.20	NG/UL	98
76)	C785	DIBENZ(A,H)ANTHRACENE	30.11	2607	294210	184.12	NG/UL	98
)	C790	BENZO(G,H,I)PERYLENE	30.88	2681	305504	194.90	NG/UL	98

* Compound is ISTD

005863



Data File: >C0101::D3
Name: SSTD160
Misc: INST: C
Quant Time: 871216 12:35
Injected at: 871216 11:57

Quant Output File: ^C0101::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

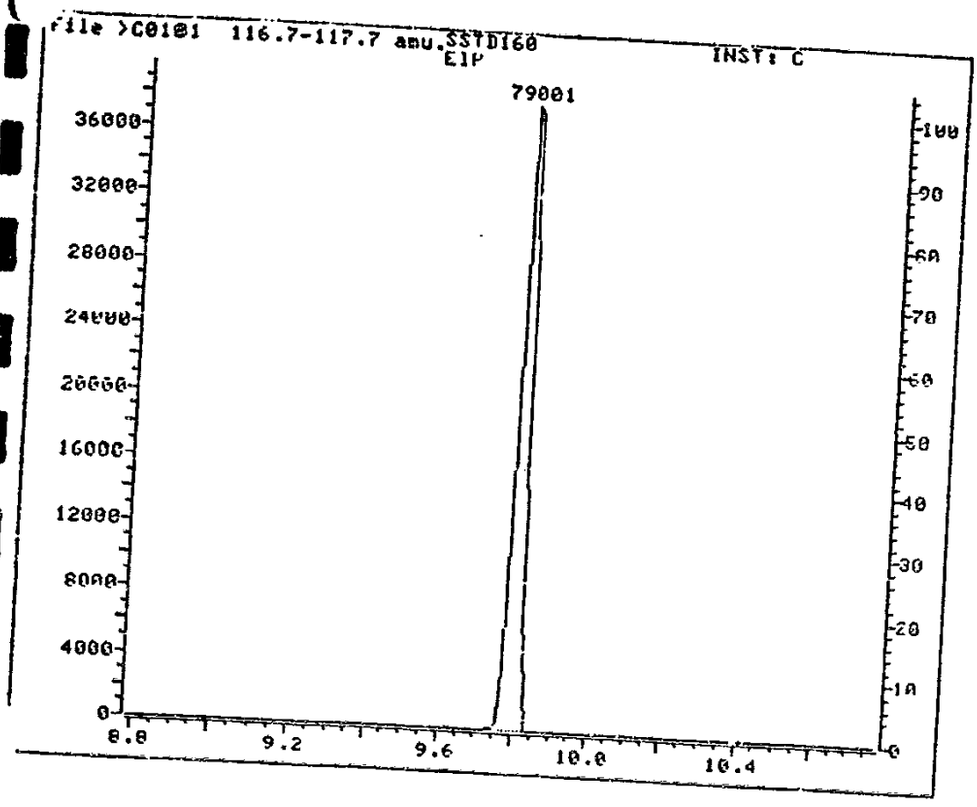
Compound No: 3
Compound Name: C325 BIS(2-CHLOROETHYL)ETHER
Scan Number: 499
Retention Time: 8.16 min.
Quant Ion: 93.0
Area: 223338M
Concentration: 165.80 NG/UL

This report was produced by QAREA on: 871218 08:24

005864

635

005864



Data File: >C0101::D3
Name: SSTD160
Misc: INST: C
Quant Time: 87/12/16 12:35
Injected at: 87/12/16 11:57

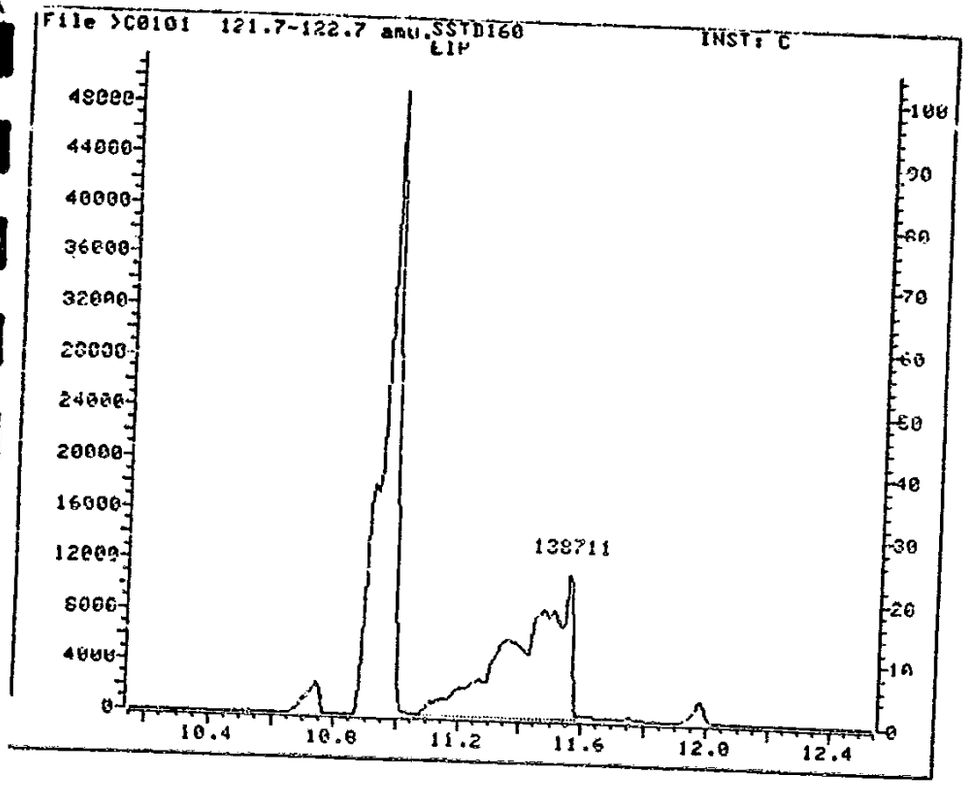
Quant Output File: ^C0101::Q1

Quant ID File: ID_EN1::EX
Last Calibration: 87/12/15 13:26

Compound No: 13
Compound Name: C3/5 HEXACHLOROETHANE
Scan Number: 657
Retention Time: 9.80 min.
Quant Ion: 117.0
Area: 79001M
Concentration: 136.03 NG/UL

This report was produced by QAREA on: 871218 08:25

005865



Data File: >C0101::D3
Name: SSTD160
Misc: INST: C
Quant Time: 871216 12:35
Injected at: 871216 11:57

Quant Output File: ^C0101::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

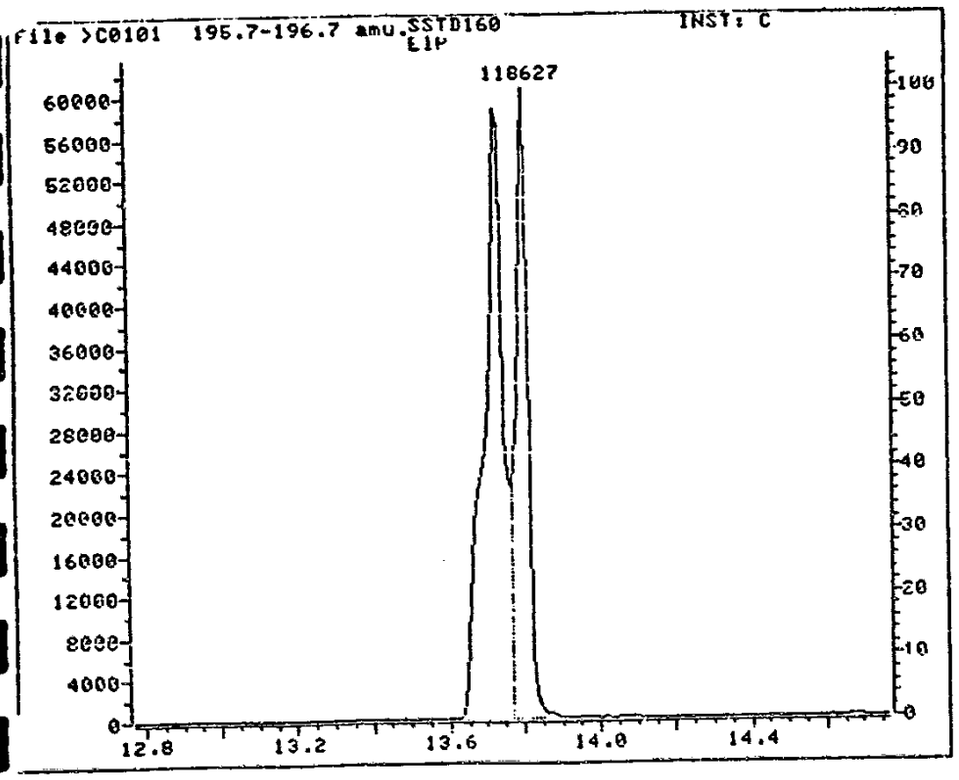
Compound No: 21
Compound Name: C430 BENZOIC ACID
Scan Number: 825
Retention Time: 11.55 min.
Quant Ion: 122.0
Area: 138711M
Concentration: 205.56 NG/UL
q-value: 93

This report was produced by QAREA on: 871218 08:26

005866

097

005866



Data File: >C0101::D3
Name: SSTD160
Misc: INST: C
Quant Time: 87/12/16 12:35
Injected at: 87/12/16 11:57

Quant Output File: ^C0101::QT
Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

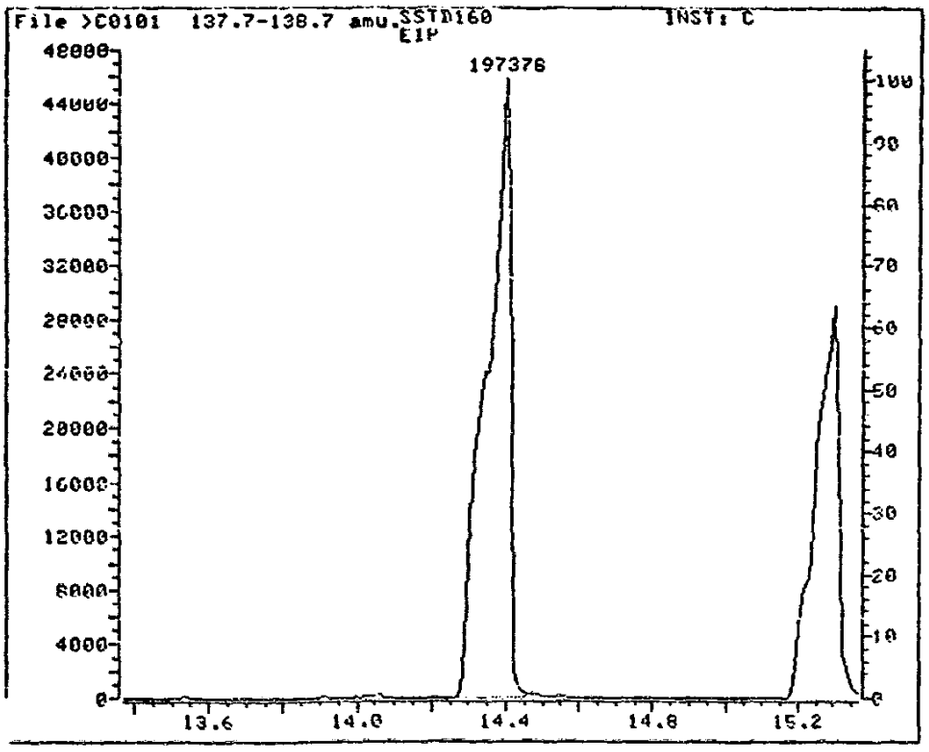
Compound No: 34
Compound Name: C520 2,4,5-TRICHLOROPHENOL
Scan Number: 1041
Retention Time: 13.80 min.
Quant Ion: 196.0
Area: 118627M
Concentration: 118.50 NG/UL
q-value: 99

This report was produced by QAREA on: 871218 08:27

005867

098

005867

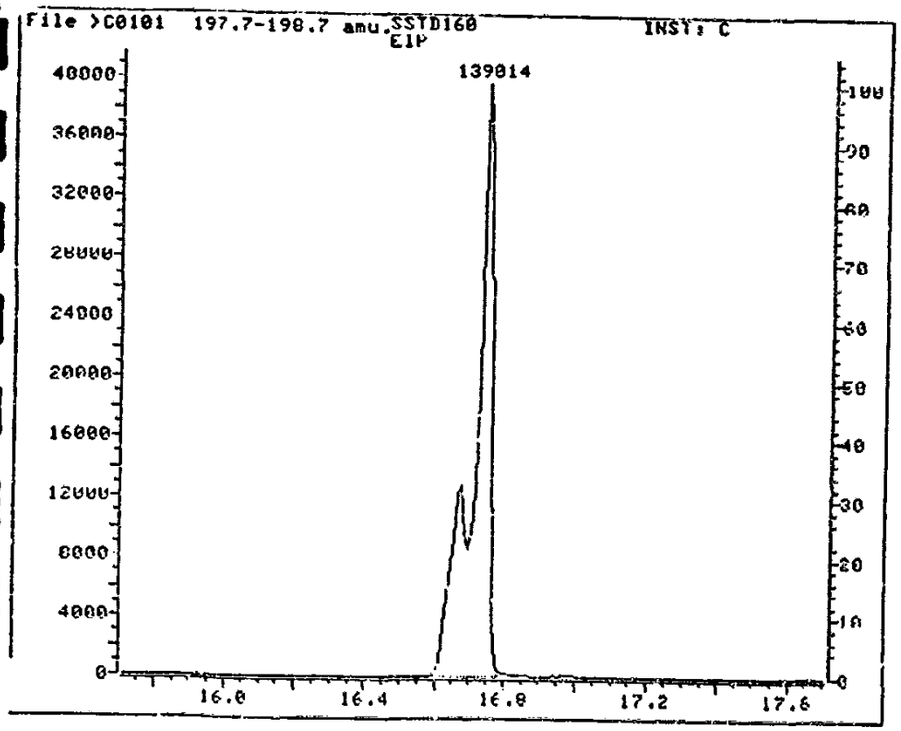


Data File: >C0101::D3 Quant Output File: ^C0101::QT
Name: SSTD160
Misc: INST: C
Quant Time: 871216 12:35 Quant ID File: ID_BN1::EX
Injected at: 871216 11:57 Last Calibration: 871215 13:26

Compound No: 36
Compound Name: C530 2-NITROANILINE
Scan Number: 1098
Retention Time: 14.40 min.
Quant Ion: 138.0
Area: 197378M
Concentration: 156.73 NG/UL

This report was produced by QAREA on: 871218 08:29

005868



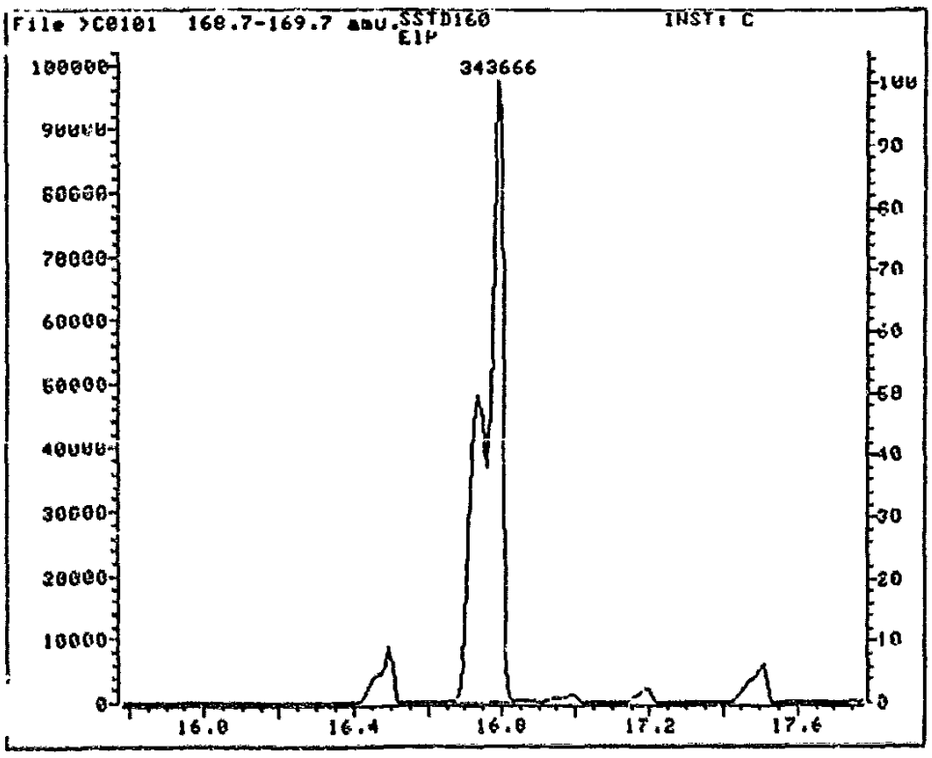
Data File: >C0101::D3
Name: SSID160
Misc: INST: C
Quant Time: 871216 12:35
Injected at: 871216 11:57

Quant Output File: ^C0101::Q1
Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

Compound No: 53
Compound Name: C610 4,6-DINITRO-2-METHYLPHENO
Scan Number: 1323
Retention Time: 16.75 min.
Quant Ion: 198.0
Area: 139014M
Concentration: 186.97 NG/UL
q-value: 97

This report was produced by QAREA on: 871218 08:30

005869

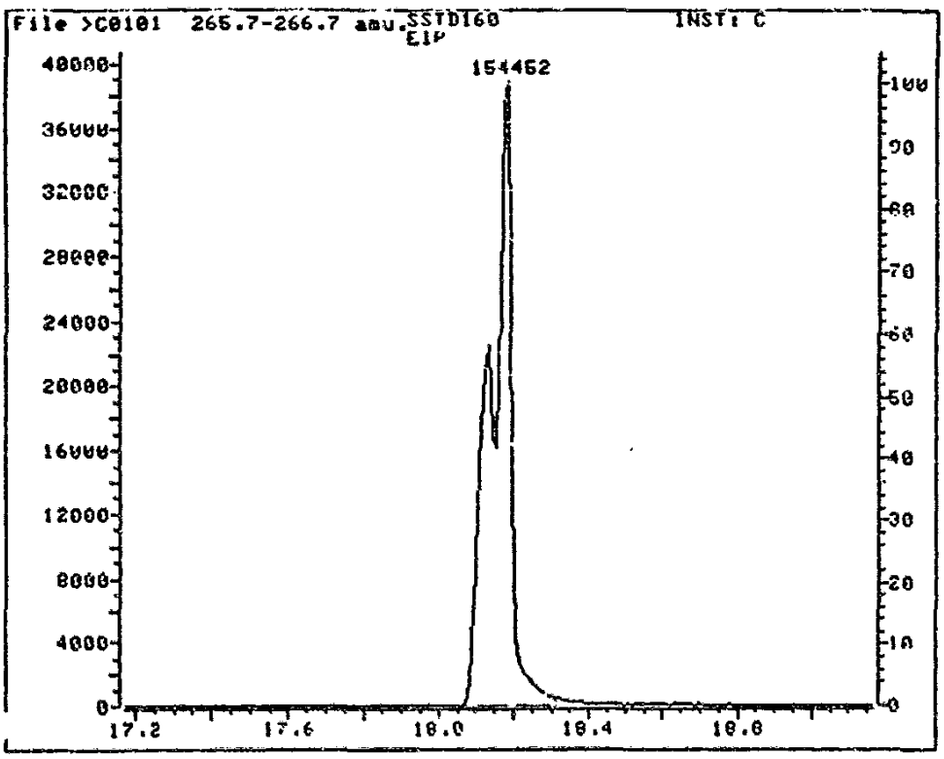


Data File: >C0101::D3 Quant Output File: ^C0101::Q1
Name: SSTD160
Misc: INST: C
Quant Time: 871216 12:35 Quant ID File: ID_BN1::EX
Injected at: 871216 11:57 Last Calibration: 871215 13:26

Compound No: 54
Compound Name: C615 N-NITROSODIPHENYLAMINE
Scan Number: 1327
Retention Time: 16.79 min.
Quant Ion: 169.0
Area: 343666M
Concentration: 135.04 NG/UL
q-value: 98

This report was produced by QAREA on: 871218 08:31

005870

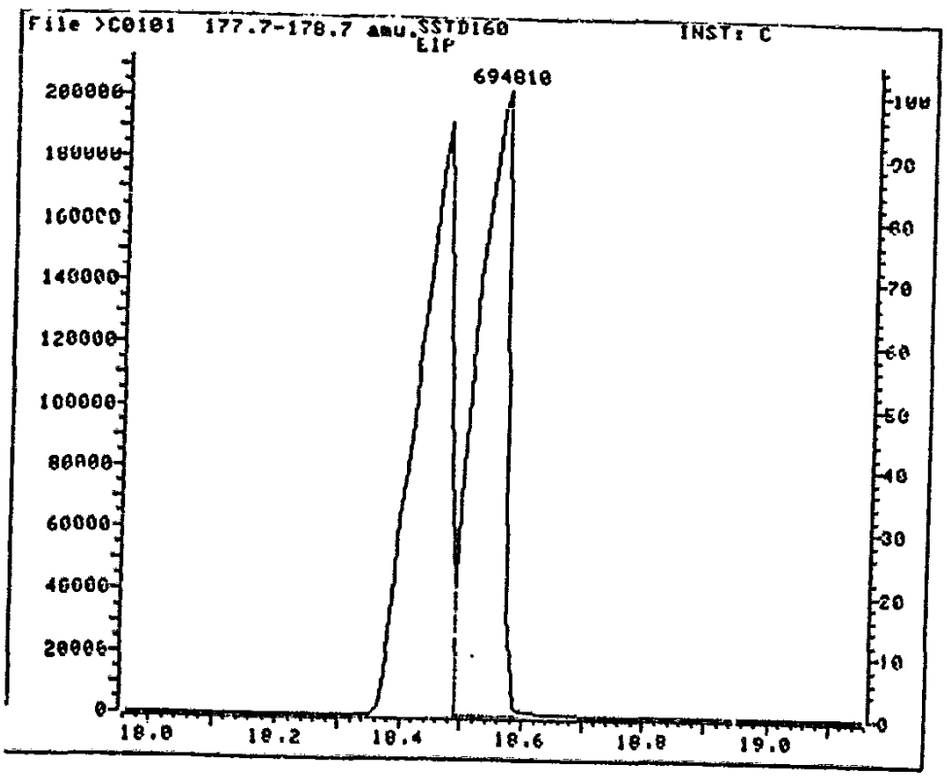


Data File: >C0101::D3 Quant Output File: ^C0101::WI
Name: SSTD160
Misc: INST: C
Quant Time: 871216 12:35 Quant ID File: ID_BN1::EX
Injected at: 871216 11:57 Last Calibration: 871215 13:26

Compound No: 57
Compound Name: C635 PENTACHLOROPHENOL
Scan Number: 1461
Retention Time: 18.19 min.
Quant Ion: 266.0
Area: 154452M
Concentration: 229.25 NG/UL
q-value: 98

This report was produced by QAREA on: 871218 08:32

005871



Data File: >C0101::D3
Name: SSTD160
Misc: INST: C
Quant Time: 871216 12:35
Injected at: 871216 11:57

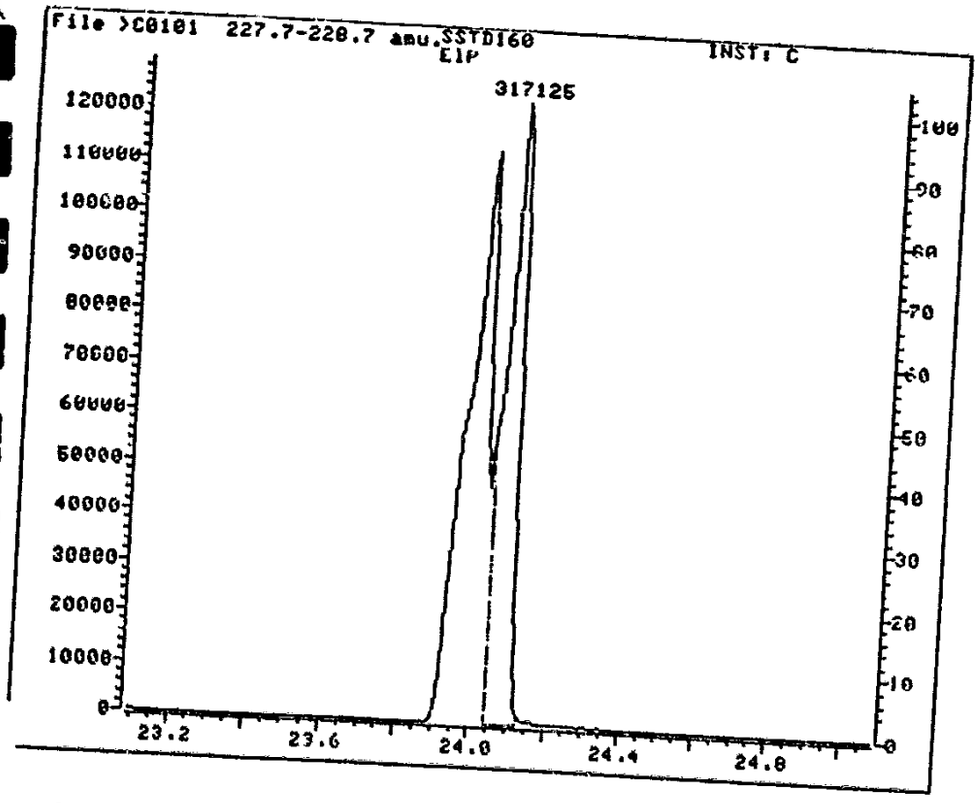
Quant Output File: ^C0101::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

Compound No: 59
Compound Name: C645 ANTHRACENE
Scan Number: 1497
Retention Time: 18.56 min.
Quant Ion: 178.0
Area: 694810M
Concentration: 135.29 NG/UL
q-value: 94

This report was produced by QAREA on: 871218 08:33

005872



Data File: >C0101::D3
Name: SSTD160
Misc: INST: C
Quant Time: 871216 12:35
Injected at: 871216 11:57

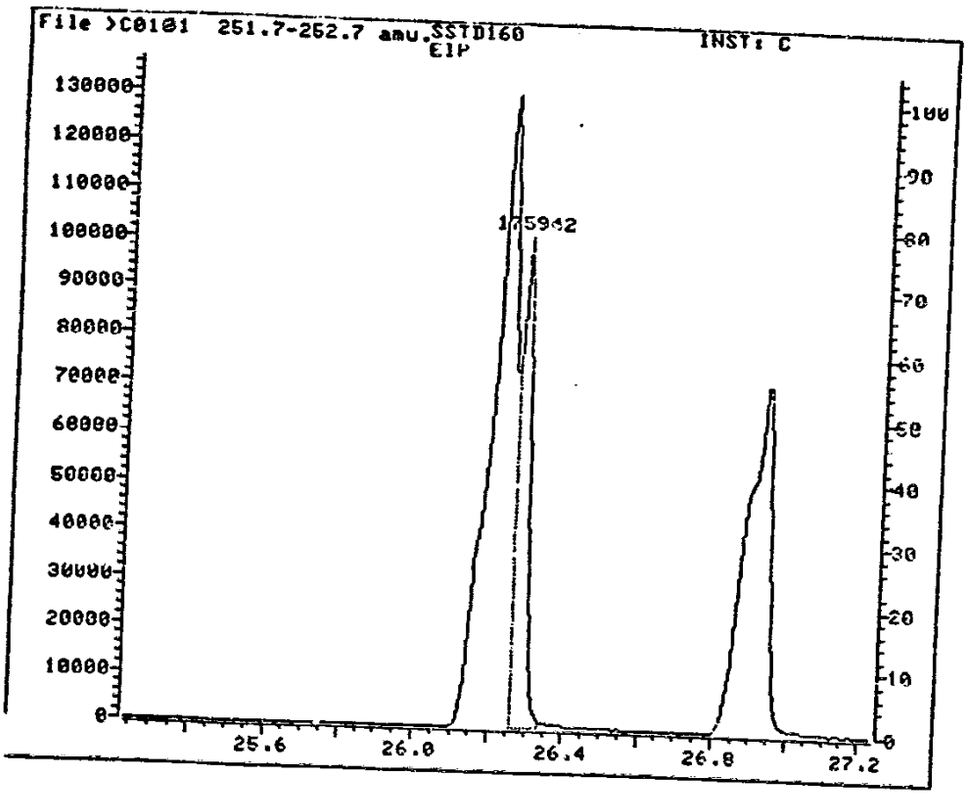
Quant Output File: ^C0101::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

Compound No: 67
Compound Name: C240 CHRYSENE
Scan Number: 2028
Retention Time: 24.09 min.
Quant Ion: 228.0
Area: 317125M
Concentration: 176.67 NG/UL
q-value: 91

This report was produced by QAREA on: 871218 08:34

005873



Data File: >C0101::D3
Name: SSTD160
Misc: INST: C
Quant Time: 871216 12:35
Injected at: 871216 11:57

Quant Output File: ^C0101::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871215 13:26

Compound No: 73
Compound Name: C770 BENZO(K)FLUORANTHENE
Scan Number: 2239
Retention Time: 26.28 min.
Quant Ion: 252.0
Area: 175942M
Concentration: 82.79 NG/UL
q-value: 87

This report was produced by QAREA on: 871218 08:35

005874

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Instrument ID: 5970-C Calibration date: 12/19/87 Time: 0901

Lab File ID: C0137 Init. Calib. Date(s): 12/16/87 12/16/87

Min RRF50 for SPCC(#) = 0.050

Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D
Phenol *	0.861	1.003	-16.5 *
bis(2-Chloroethyl)Ether	0.884	0.829	6.2
2-Chlorophenol	0.746	0.794	-6.4
1,3-Dichlorobenzene	0.839	0.901	-7.4
1,4-Dichlorobenzene *	0.847	0.926	-9.3 *
Benzyl Alcohol	0.453	0.482	-6.4
1,2-Dichlorobenzene	0.813	0.862	-6.0
2-Methylphenol	0.664	0.735	-10.7
bis(2-Chloroisopropyl)Ether	1.775	1.938	-9.2
4-Methylphenol	0.632	0.735	-16.3
N-Nitroso-Di-n-Propylamine #	0.638	0.810	-27.0 #
Hexachloroethane	0.357	0.400	-12.0
Nitrobenzene	0.463	0.511	-10.4
Isophorone	0.818	0.989	-20.9
2-Nitrophenol *	0.264	0.272	-3.0 *
2,4-Dimethylphenol	0.398	0.421	-5.8
Benzoic Acid	0.270	0.253	6.3
bis(2-Chloroethoxy)Methane	0.444	0.566	-27.5
2,4-Dichlorophenol *	0.361	0.401	-11.1 *
1,2,4-Trichlorobenzene	0.442	0.457	-3.4
Naphthalene	1.076	1.185	-10.1
4-Chloroaniline	0.489	0.494	-1.0
Hexachlorobutadiene *	0.286	0.294	-2.8 *
4-Chloro-3-Methylphenol *	0.403	0.466	-15.6 *
2-Methylnaphthalene	0.726	0.789	-8.4
Hexachlorocyclopentadiene #	0.449	0.362	19.4 #
2,4,6-Trichlorophenol *	0.550	0.479	12.9 *
2,4,5-Trichlorophenol	0.422	0.493	-16.8
2-Chloronaphthalene	1.214	1.264	-4.1
2-Nitroaniline	0.541	0.544	-0.6
Dimethyl Phthalate	1.243	1.651	-32.8
Acenaphthylene	1.729	1.885	-9.0
2,6-Dinitrotoluene	0.309	0.447	-44.7
3-Nitroaniline	0.396	0.419	-5.8
Acenaphthene *	1.181	1.278	-8.2 *
2,4-Dinitrophenol #	0.295	0.360	-22.0 #
4-Nitrophenol #	0.342	0.446	-30.4 #

005875

FORM VII SV-1

1/87 Rev.

005875

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Instrument ID: 5970-C Calibration date: 12/19/87 Time: 0901

Lab File ID: C0137 Init. Calib. Date(s): 12/16/87 12/16/87

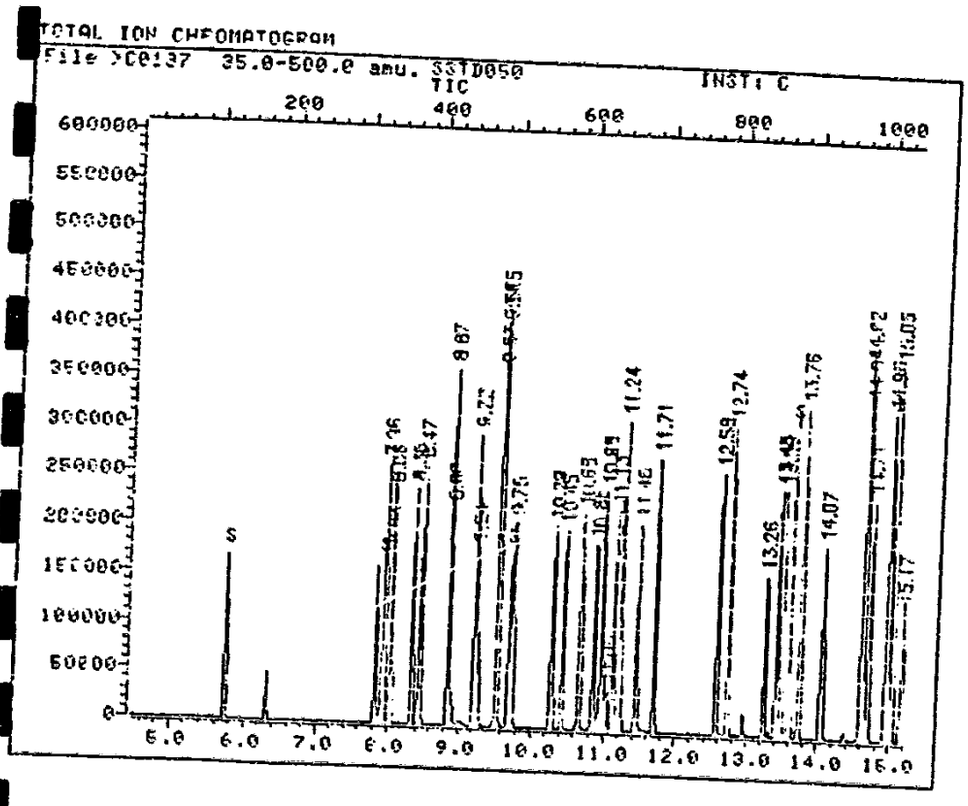
Min RRF50 for SPCC(#) = 0.050

Max %D for CCC(*) = 25.0%

COMPOUND	RRF	RRF50	%D	
Dibenzofuran	1.762	1.897	-7.7	
2,4-Dinitrotoluene	0.530	0.708	-33.6	
Diethylphthalate	0.938	1.871	-99.5	
4-Chlorophenyl-phenylether	0.704	0.835	-18.6	
Fluorene	1.266	1.493	-17.9	
4-Nitroaniline	0.234	0.312	-33.3	
4,6-Dinitro-2-Methylphenol	0.141	0.208	-47.5	
N-Nitrosodiphenylamine (1)	0.516	0.529	-2.5	*
4-Bromophenyl-phenylether	0.256	0.250	2.3	
Hexachlorobenzene	0.331	0.329	0.6	
Pentachlorophenol	0.202	0.246	-21.8	*
Phenanthrene	1.057	1.107	-4.7	
Anthracene	1.063	1.140	-7.2	
Di-n-Butylphthalate	1.436	1.576	-9.7	
Fluoranthene	1.080	1.269	-17.5	*
Pyrene	2.399	1.914	20.2	
Butylbenzylphthalate	1.090	0.872	20.0	
3,3'-Dichlorobenzidine	0.396	0.344	13.1	
Benzo(a)Anthracene	1.844	1.447	21.5	
Chrysene	1.415	1.307	7.6	
bis(2-Ethylhexyl)Phthalate	1.500	1.171	21.9	
Di-n-Octyl Phthalate	1.700	2.038	-19.9	*
Benzo(b)Fluoranthene	1.573	1.771	-12.6	
Benzo(k)Fluoranthene	0.772	1.130	-46.4	
Benzo(a)Pyrene	1.056	1.315	-24.5	*
Indeno(1,2,3-cd)Pyrene	1.078	1.338	-24.1	
Dibenz(a,h)Anthracene	0.898	1.202	-33.9	
Benzo(g,h,i)Perylene	0.950	1.220	-28.4	
Nitrobenzene-d5	0.484	0.526	-8.7	
2-Fluorobiphenyl	1.429	1.490	-4.3	
Terphenyl-d14	1.776	1.402	21.1	
Phenol-d5	0.778	0.863	-10.9	
2-Fluorophenyl	0.584	0.627	-7.4	
2,4,6-Tribromophenol	0.362	0.417	-15.2	

(1) Cannot be separated from Diphenylamine

005876



Data File: >C0137::LJ
Name: SSTD050
Misc: INST: C

Quant Output File: ^Cd137::QT

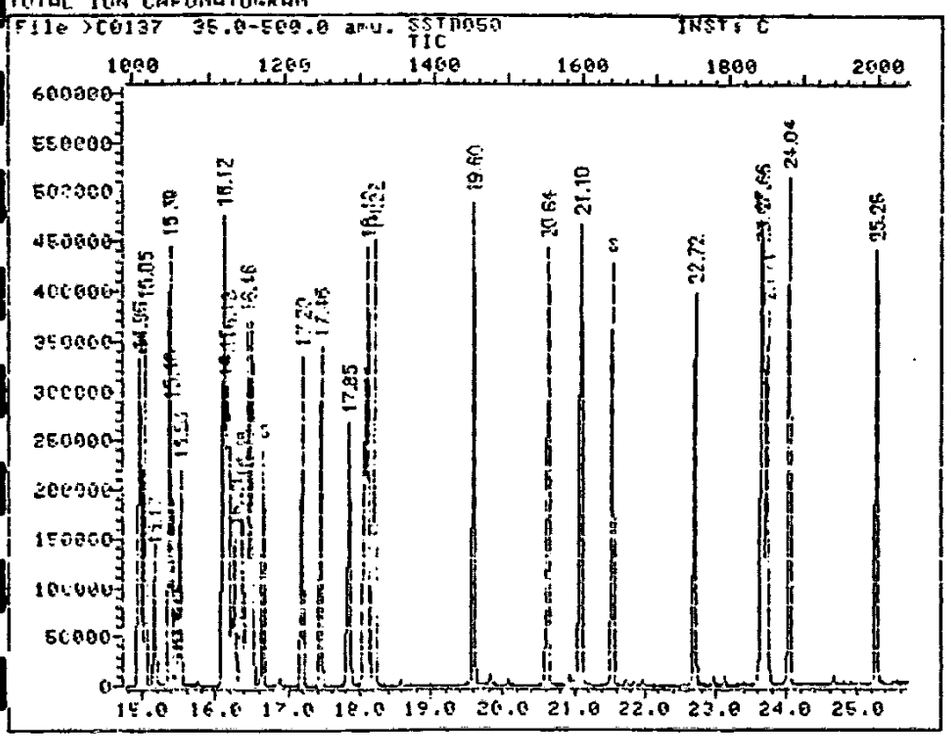
Id File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 14:01

Operator ID: JOHN
Quant Time: 871219 09:38
Injected at: 871219 09:01

TIC page 1 of 3

005877

TOTAL ION CHROMATOGRAM



Data File: >C0137::L1 Quant Output File: ^C0137::Q1
Name: SSTD050
Misc: INST: C

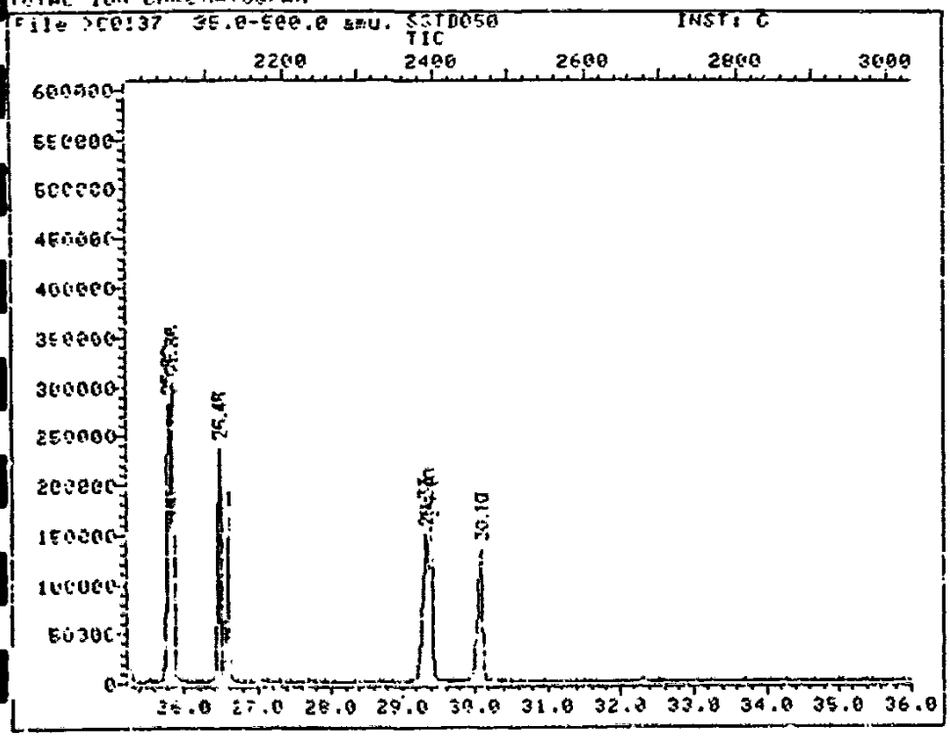
Id File: ID_EM1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 14:01

Operator ID: JOHN
Quant Time: 871219 09:38
Injected at: 871219 09:01

TIC page 2 of 3

005878

TOTAL ION CHROMATOGRAM



Data File: >C0137::L1 Quant Output File: ^C0137::QT
Name: SSTD050
Misc: INST: C

Id File: ID_EN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 14:01

Operator ID: JOHN
Quant Time: 871219 09:38
Injected at: 871219 09:01

TIC page 3 of 3

005879

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871219 09:38
Output File: ^C0137::QT Injected at: 871219 09:01
Data File: >C0137::L1 Dilution Factor: 1.00000
Name: SSTD050
Misc: INST: C

ID File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 14:01

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*C130 1,4-DICHLOROBENZENE-D4	8.43	150.0	67808M	40.00	NG/UL	92
2)	C315 PHENOL	7.96	94.0	84958	54.51	NG/UL	96
3)	C325 BIS(2-CHLOROETHYL)ETHER	8.03	93.0	70271	53.30	NG/UL	84
4)	C330 2-CHLOROPHENOL	8.06	128.0	67288	50.98	NG/UL	88
5)	C335 1,3-DICHLOROBENZENE	8.35	146.0	76347	50.34	NG/UL	98
6)	C340 1,4-DICHLOROBENZENE	8.47	146.0	78517	50.05	NG/UL	95
7)	C345 BENZYL ALCOHOL	8.88	108.0	40839	51.98	NG/UL	81
8)	C350 1,2-DICHLOROBENZENE	8.87	146.0	73079	51.79	NG/UL	96
9)	C355 2-METHYLPHENOL	9.22	108.0	62320	53.67	NG/UL	93
10)	C360 BIS(2-CHLOROISOPROPYL)ETH	9.24	45.0	164235	50.25	NG/UL	83
11)	C365 4-METHYLPHENOL	9.55	108.0	62324	57.91	NG/UL	98
12)	C370 N-NITROSO-DI-N-PROPYLAMIN	9.54	70.0	68605	57.19	NG/UL	83
13)	C375 HEXACHLOROETHANE	9.53	117.0	33935	57.50	NG/UL	82
14)	CS50 2-FLUOROPHENOL	5.75	112.0	53150	48.81	NG/UL	89
15)	CS45 PHENOL-D5	7.93	99.0	73129	57.86	NG/UL	92
16)	*C140 NAPHTHALENE-D8	11.20	136.0	149332	40.00	NG/UL	96
17)	C410 NITROBENZENE	9.75	77.0	95140	54.95	NG/UL	78
18)	C415 ISOPHORONE	10.29	82.0	184116	53.68	NG/UL	92
19)	C420 2-NITROPHENOL	10.45	139.0	50742M	49.82	NG/UL	
20)	C425 2,4-DIMETHYLPHENOL	10.68	107.0	78373	51.91	NG/UL	91
21)	C430 BENZOIC ACID	11.06	122.0	47120	47.84	NG/UL	85
22)	C435 BIS(2-CHLOROETHOXY)METHAN	10.86	93.0	105468	52.73	NG/UL	98
23)	C440 2,4-DICHLOROPHENOL	10.98	162.0	74607	50.23	NG/UL	95
24)	C445 1,2,4-TRICHLOROBENZENE	11.13	180.0	85078	47.42	NG/UL	95
25)	C450 NAPHTHALENE	11.24	128.0	220774	50.74	NG/UL	99
26)	C455 4-CHLOROANILINE	11.46	127.0	92060	53.13	NG/UL	98
27)	C460 HEXACHLOROBUTADIENE	11.71	225.0	54715	46.55	NG/UL	99
28)	C465 4-CHLORO-3-METHYLPHENOL	12.58	107.0	86763	52.91	NG/UL	88
29)	C470 2-METHYLNAPHTHALENE	12.74	142.0	147026	50.59	NG/UL	98
30)	CS20 NITROBENZENE-D5	9.71	82.0	98049	74.14	NG/UL	81
31)	*C150 ACENAPHTHENE-D10	14.98	164.0	111294	40.00	NG/UL	98
32)	C510 HEXACHLOROCYCLOPENTADIENE	13.26	237.0	50215	41.87	NG/UL	99
33)	C515 2,4,6-TRICHLOROPHENOL	13.43	196.0	66514M	48.25	NG/UL	99
34)	C520 2,4,5-TRICHLOROPHENOL	13.50	196.0	68421	48.02	NG/UL	98
35)	C525 2-CHLORONAPHTHALENE	13.76	162.0	175418	49.79	NG/UL	94
36)	C530 2-NITROANILINE	14.07	138.0	75512M	49.83	NG/UL	
37)	C535 DIMETHYLPHTHALATE	14.62	163.0	229094	47.02	NG/UL	86
38)	C540 ACENAPHTHYLENE	14.64	152.0	261587	49.10	NG/UL	98
39)	C543 2,6-DINITROTOLUENE	14.71	165.0	61968	56.74	NG/UL	79
40)	C545 3-NITROANILINE	14.96	138.0	58151	50.61	NG/UL	80
41)	C550 ACENAPHTHENE	15.05	153.0	177366	50.21	NG/UL	99
42)	C555 2,4-DINITROPHENOL	15.17	184.0	49888	51.59	NG/UL	93
43)	C560 4-NITROPHENOL	15.40	65.0	61826	56.26	NG/UL	85

111

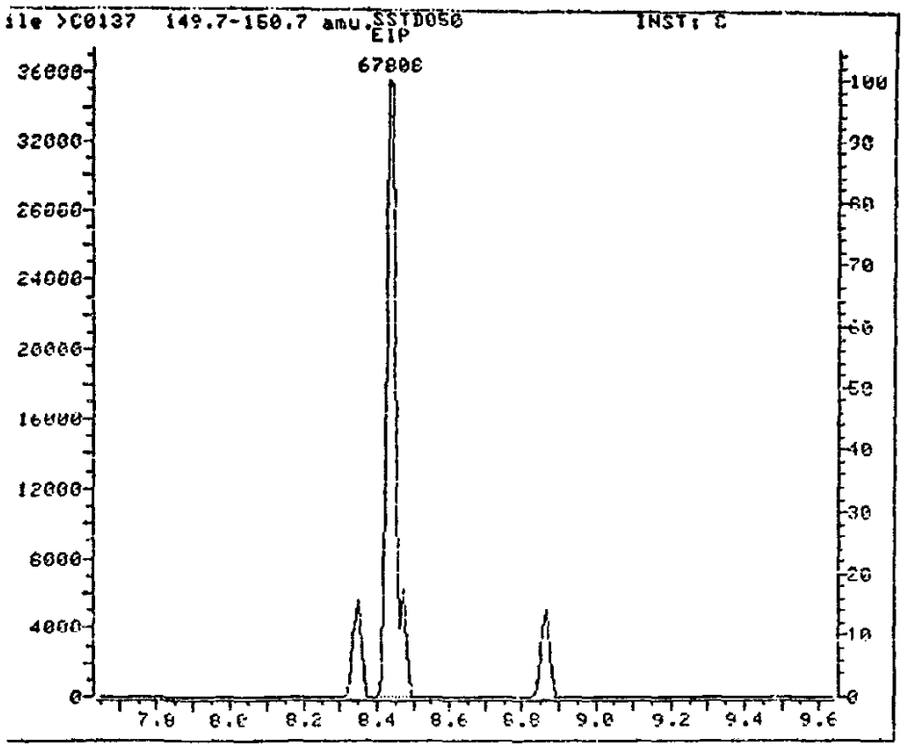
005880

	Compound	R.T.	Q ion	Area	Conc	Units	q
[illegible])	C565 DIBENZOFURAN	15.39	168.0	263148M	49.92	NG/UL	73
[illegible])	C570 2,4-DINITROTOLUENE	15.53	165.0	98233	48.30	NG/UL	88
46)	C580 DIETHYLPHTHALATE	16.15	149.0	259561	50.20	NG/UL	96
[illegible])	C585 4-CHLOROPHENYL-PHENYLETHE	16.18	204.0	115900	47.55	NG/UL	87
[illegible])	C590 FLUORENE	16.12	166.0	207100	50.77	NG/UL	99
49)	C595 4-NITROANILINE	16.28	138.0	43236	46.20	NG/UL	85
50)	C525 2-FLUOROBIPHENYL	13.61	172.0	206737	68.73	NG/UL	98
[illegible])	C555 2,4,6-TRIBROMOPHENOL	16.66	329.7	57869	76.61	NG/UL	92
[illegible])	*C160 PHENANTHRENE-D10	18.07	188.0	265892M	40.00	NG/UL	97
53)	C610 4,6-DINITRO-2-METHYLPHEND	16.38	198.0	69099	66.76	NG/UL	98
[illegible])	C615 N-NITROSODIPHENYLAMINE	16.46	169.0	175988	49.24	NG/UL	96
[illegible])	C625 4-BROMOPHENYLPHENYLETHER	17.20	248.0	83088	46.78	NG/UL	90
56)	C630 HEXACHLOROBENZENE	17.46	284.0	109409	46.85	NG/UL	90
[illegible])	C635 PENTACHLOROPHENOL	17.85	266.0	81712M	50.56	NG/UL	98
[illegible])	C640 PHENANTHRENE	18.12	178.0	368066M	50.80	NG/UL	95
[illegible])	C645 ANTHRACENE	18.22	178.0	379179	50.58	NG/UL	93
60)	C650 DI-N-BUTYLPHTHALATE	19.60	149.0	524005	52.18	NG/UL	89
[illegible])	C655 FLUORANTHENE	20.64	202.0	421989	59.04	NG/UL	92
[illegible])	*C170 CHRYSENE-D12	23.69	240.0	176278	40.00	NG/UL	97
63)	C715 PYRENE	21.10	202.0	421043	45.46	NG/UL	92
[illegible]	C720 BUTYLBENZYLPHTHALATE	22.72	149.0	191892	50.52	NG/UL	92
[illegible]	C725 3,3'-DICHLOROBENZIDINE	23.67	252.0	75680	59.16	NG/UL	99
66)	C730 BENZO(A)ANTHRACENE	23.66	228.0	318320	52.32	NG/UL	93
[illegible])	C740 CHRYSENE	23.74	228.0	287460M	52.75	NG/UL	91
[illegible])	C745 BIS(2-ETHYLHEXYL)PHTHALAT	24.04	149.0	257541	49.81	NG/UL	90
[illegible])	C550 TERPHENYL-D14	21.54	244.0	308413	56.94	NG/UL	94
70)	*C175 PERYLENE-D12	26.59	264.0	153333	40.00	NG/UL	97
[illegible])	C760 DI-N-OCTYLPHTHALATE	25.26	149.0	389698	47.86	NG/UL	100
[illegible])	C765 BENZO(B)FLUORANTHENE	25.82	252.0	338659	48.68	NG/UL	94
73)	C770 BENZO(K)FLUORANTHENE	25.86	252.0	216043M	48.84	NG/UL	87
[illegible])	C775 BENZO(A)PYRENE	26.48	252.0	251564	50.10	NG/UL	96
[illegible])	C780 INDENO(1,2,3-CD)PYRENE	29.33	276.0	255867	53.67	NG/UL	92
76)	C785 DIBENZ(A,H)ANTHRACENE	29.40	278.0	229824	54.03	NG/UL	96
77)	C790 BENZO(G,H,I)PERYLENE	30.10	276.0	233389	51.61	NG/UL	99

* Compound is ISTD

005881

005881

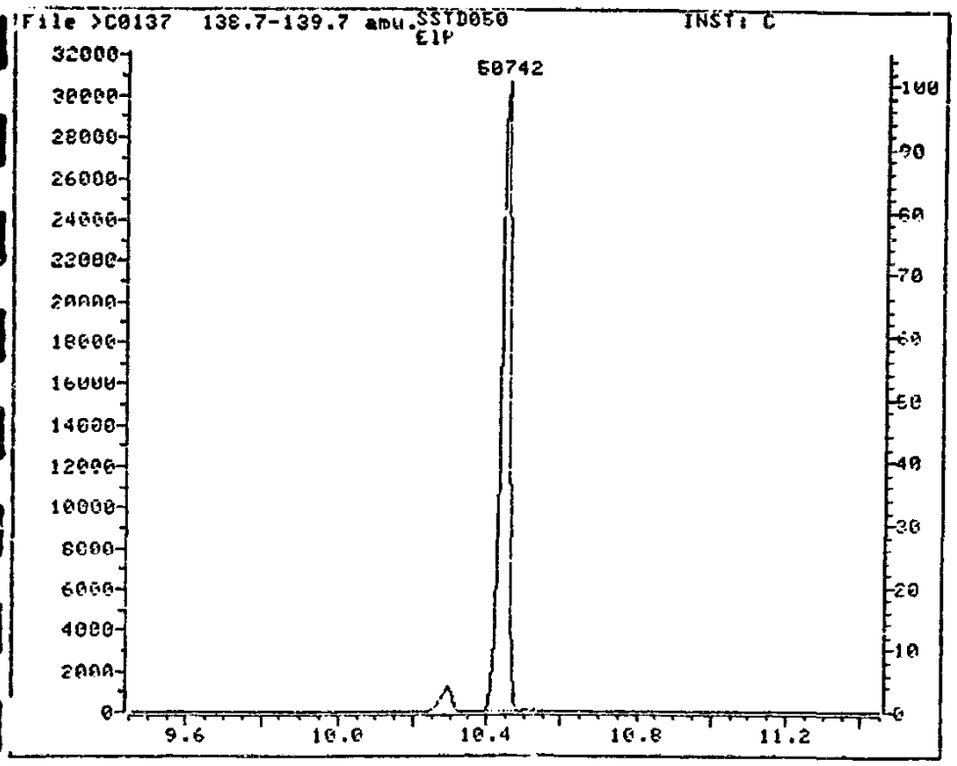


Data File: >C0137::L1 Quant Output File: ^C0137::Q1
Name: SSTD050
Misc: INST: C
Quant Time: 87/12/19 09:38 Quant ID File: ID_BN1::EX
Injected at: 87/12/19 09:01 Last Calibration: 87/12/17 14:01

Compound No: 1 (ISTD)
Compound Name: C130 1,4-DICHLOROBENZENE-D4
Scan Number: 381
Retention Time: 8.43 min.
Quant Ion: 150.0
Area: 67808M
Concentration: 40.00 NG/UL
q-value: 92

This report was produced by QAREA on: 87/12/19 09:59

005882

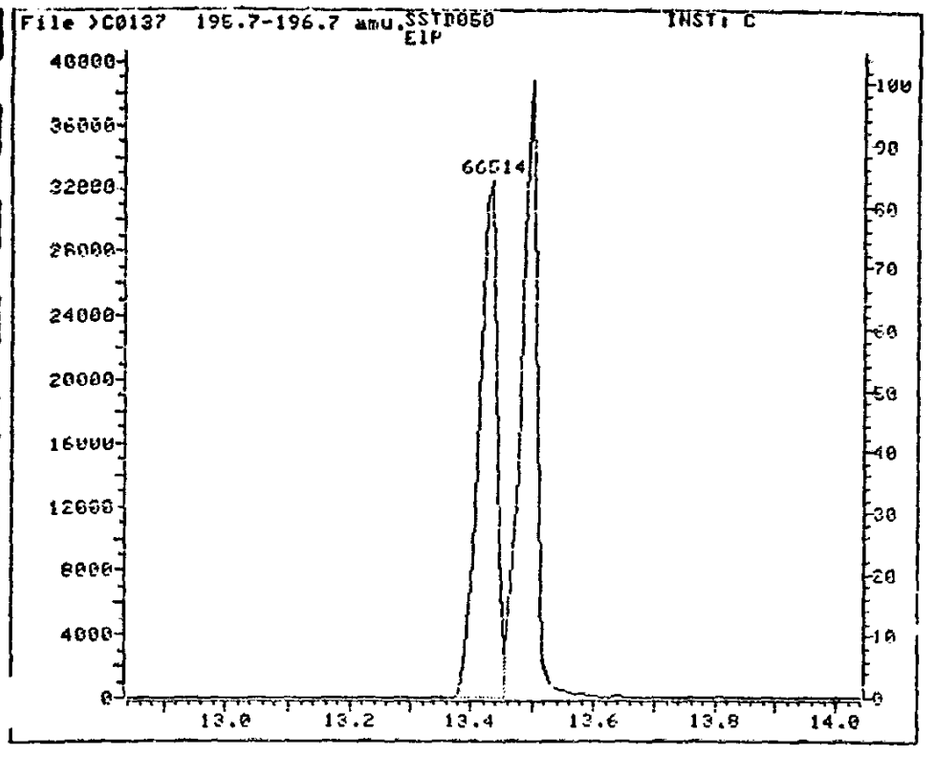


Data File: >C0137::L1 Quant Output File: ^C0137::QT
Name: SSTD050
Misc: INST: C
Quant Time: 871219 09:38 Quant ID File: ID_BN1::EX
Injected at: 871219 09:01 Last Calibration: 871217 14:01

Compound No: 19
Compound Name: C420 2-NITROPHENOL
Scan Number: 575
Retention Time: 10.45 min.
Quant Ion: 139.0
Area: 50742M
Concentration: 49.82 NG/UL

This report was produced by QAREA on: 871219 10:00

005883

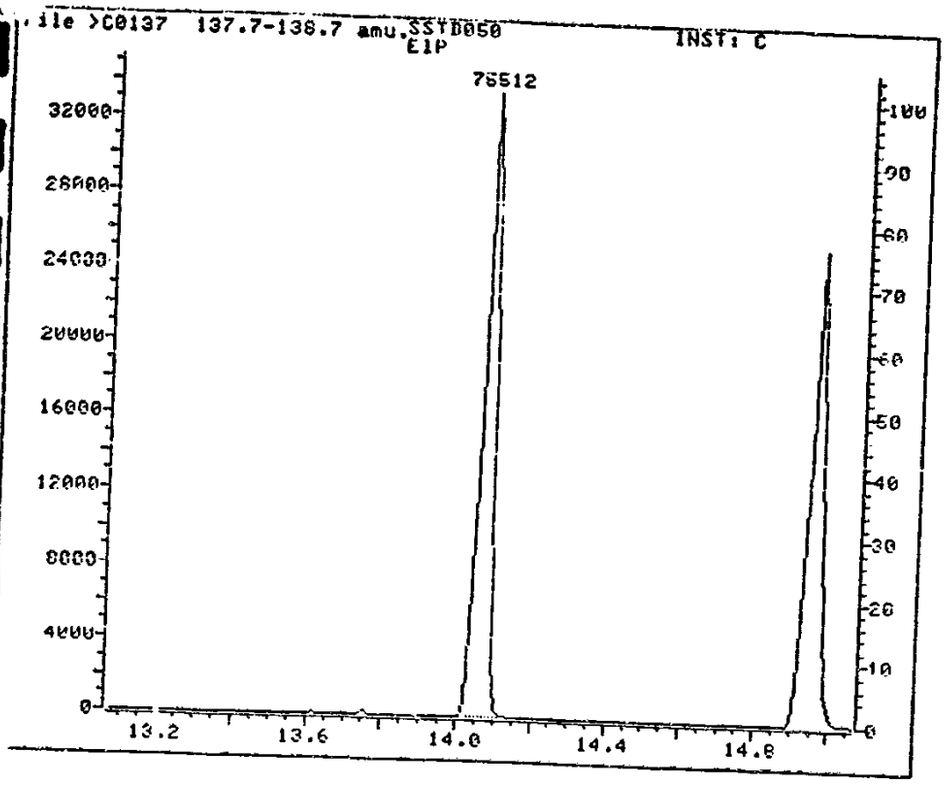


Data File: >C0137::L1 Quant Output File: ^C0137::Q1
Name: SSTD050
Misc: INST: C
Quant Time: 871219 09:38 Quant ID File: ID_BNI::EX
Injected at: 871219 09:01 Last Calibration: 871217 14:01

Compound No: 33
Compound Name: C515 2,4,6-TRICHLOROPHENOL
Scan Number: 862
Retention Time: 13.43 min.
Quant Ion: 196.0
Area: 66514M
Concentration: 48.25 NG/UL
q-value: 99

This report was produced by QAREA on: 871219 10:01

005884



Data File: >C0137::L1
Name: SS1D050
Misc: INST: C
Quant Time: 871219 09:38
Injected at: 871219 09:01

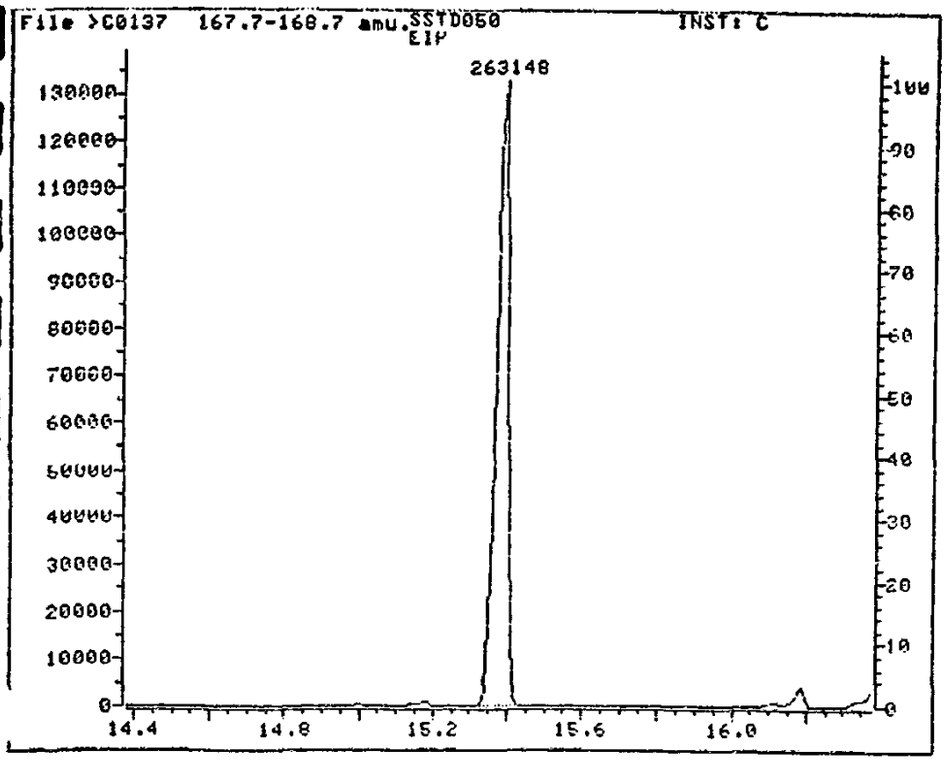
Quant Output File: ^C0137::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871217 14:01

Compound No: 36
Compound Name: C530 2-NITROANILINE
Scan Number: 923
Retention Time: 14.07 min.
Quant Ion: 138.0
Area: 75512M
Concentration: 49.83 NG/UL

This report was produced by QAREA on: 871219 10:02

005835

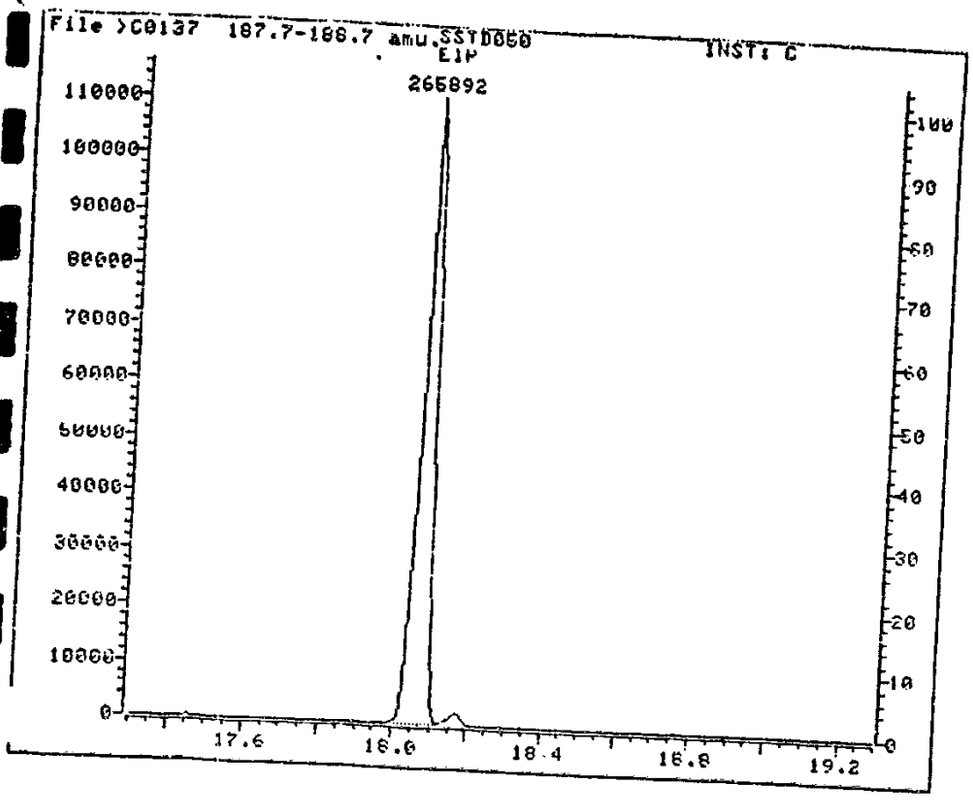


Data File: >C0137::L1 Quant Output File: ^C0137::Q1
Name: SSTD050
Misc: INST: C
Quant Time: 871219 09:38 Quant ID File: ID_BN1::EX
Injected at: 871219 09:01 Last Calibration: 871217 14:01

Compound No: 44
Compound Name: C565 DIBENZOFURAN
Scan Number: 1050
Retention Time: 15.39 min.
Quant Ion: 168.0
Area: 263148M
Concentration: 49.92 NG/UL
q-value: 73

This report was produced by QAREA on: 871219 10:04

005886



Data File: >C0137::L1
Name: SSTD050
Misc: INST: C
Quant Time: 871219 09:38
Injected at: 871219 09:01

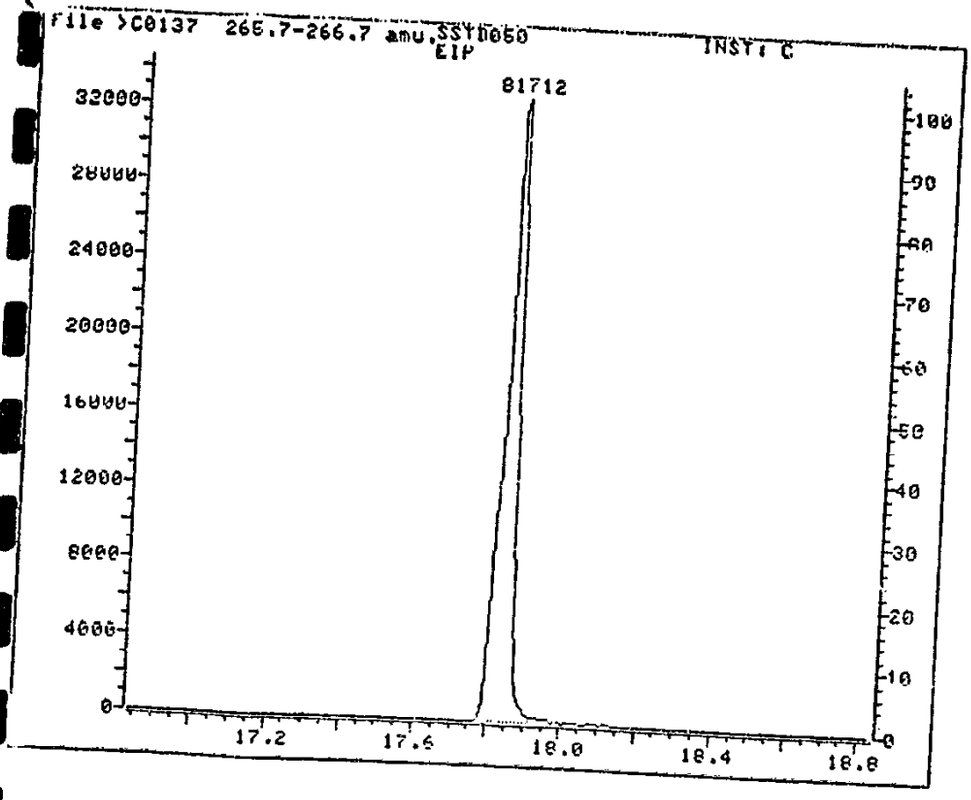
Quant Output File: ^C0137::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871217 14:01

Compound No: 52 (ISTD)
Compound Name: C160 PHENANTHRENE-D10
Scan Number: 1307
Retention Time: 18.07 min.
Quant Ion: 188.0
Area: 265892M
Concentration: 40.00 NG/UL
q-value: 97

This report was produced by QAREA on: 871219 10:05

005887



Data File: >C0137::L1
Name: SS1D050
Misc: INST: C
Quant Time: 871219 09:38
Injected at: 871219 09:01

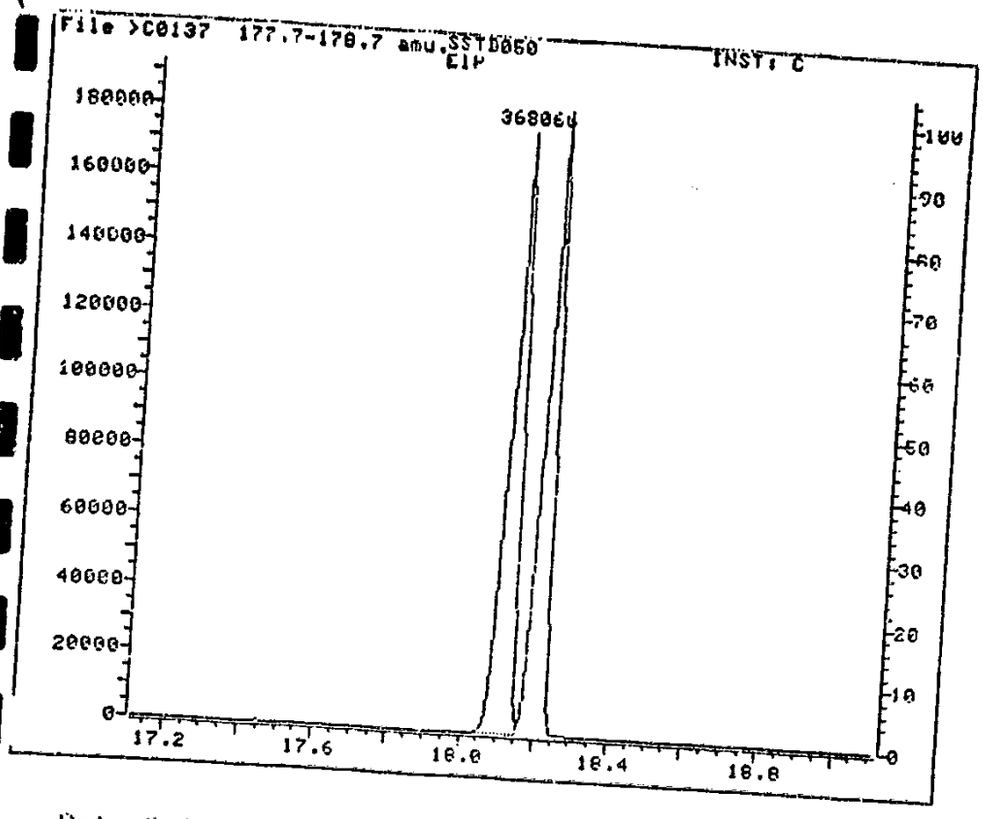
Quant Output File: ^C0137::Q1

Quant ID File: ID_BN1::EX
Last Calibration: 871217 14:01

Compound No: 57
Compound Name: C635 PENTACHLOROPHENOL
Scan Number: 1286
Retention Time: 17.85 min.
Quant Ion: 266.0
Area: 81712M
Concentration: 50.56 NG/UL
q-value: 98

This report was produced by QAREA on: 871219 10:06

005888



Data File: >C0137::L1
Name: SST0050
Misc: INST: C
Quant Time: 871219 09:38
Injected at: 871219 09:01

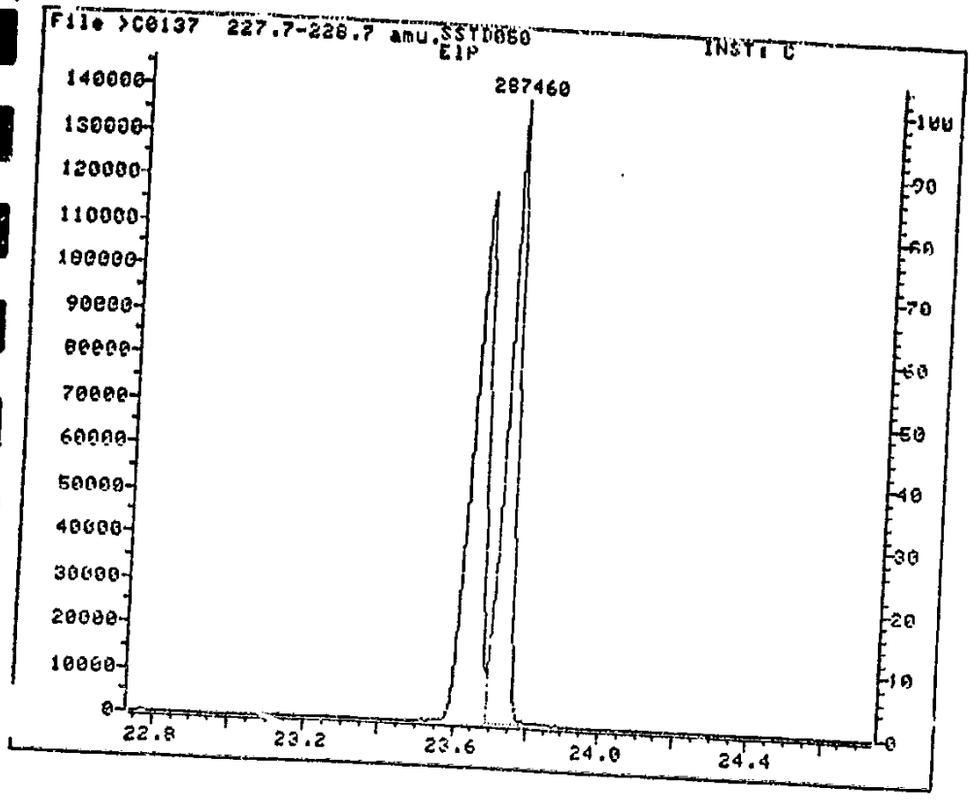
Quant Output File: ^C0137::QT

Quant ID File: ID_BN1::EX
Last Calibration: 871217 14:01

Compound No: 58
Compound Name: C640 PHENANTHRENE
Scan Number: 1312
Retention Time: 18.12 min.
Quant Ion: 178.0
Area: 368066M
Concentration: 50.80 NG/UL
q-value: 95

This report was produced by QAREA on: 871219 10:08

005889



Data File: >C0137::L1
Name: SSTD050
Misc: INST: C
Quant Time: 871219 09:38
Injected at: 871219 09:01

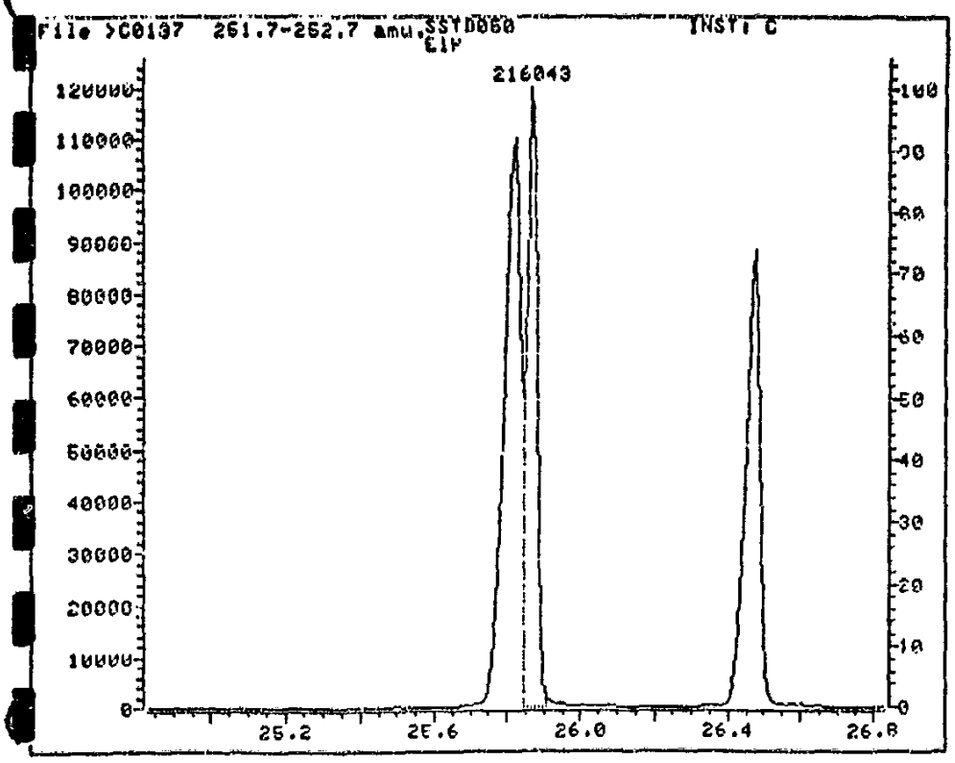
Quant Output File: ^C0137::QT

Quant ID File: ID_BN1::EX
Last Calibration: 871217 14:01

Compound No: 67
Compound Name: C740 CHRYSENE
Scan Number: 1852
Retention Time: 23.74 min.
Quant Ion: 228.0
Area: 287460M
Concentration: 52.75 NG/UL
q-value: 91

This report was produced by QAREA on: 871219 10:09

005890



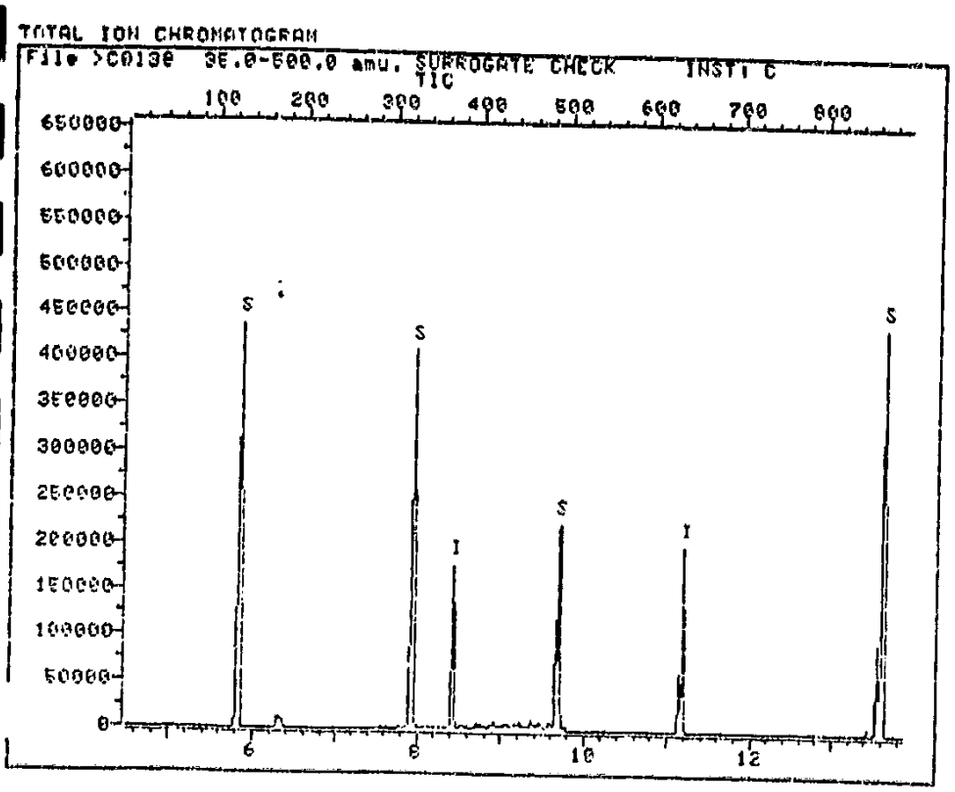
Data File: >C0137::L1 Quant Output File: ^C0137::Q1
Name: SSTD050
Misc: INST: C
Quant Time: 871219 09:38 Quant ID File: ID_BN1::EX
Injected at: 871219 09:01 Last Calibration: 871217 14:01

Compound No: 73
Compound Name: C270 BENZO(K)FLUORANTHENE
Scan Number: 2056
Retention Time: 25.86 min.
Quant Ion: 252.0
Area: 216043M
Concentration: 48.84 NG/UL
q-value: 87

This report was produced by QAREA on: 871219 10:11

005891

TOTAL ION CHROMATOGRAM



Data File: >C0138::L1
Name: SURROGATE CHECK
Misc: INST: C

Quant Output File: ^C0138::QT

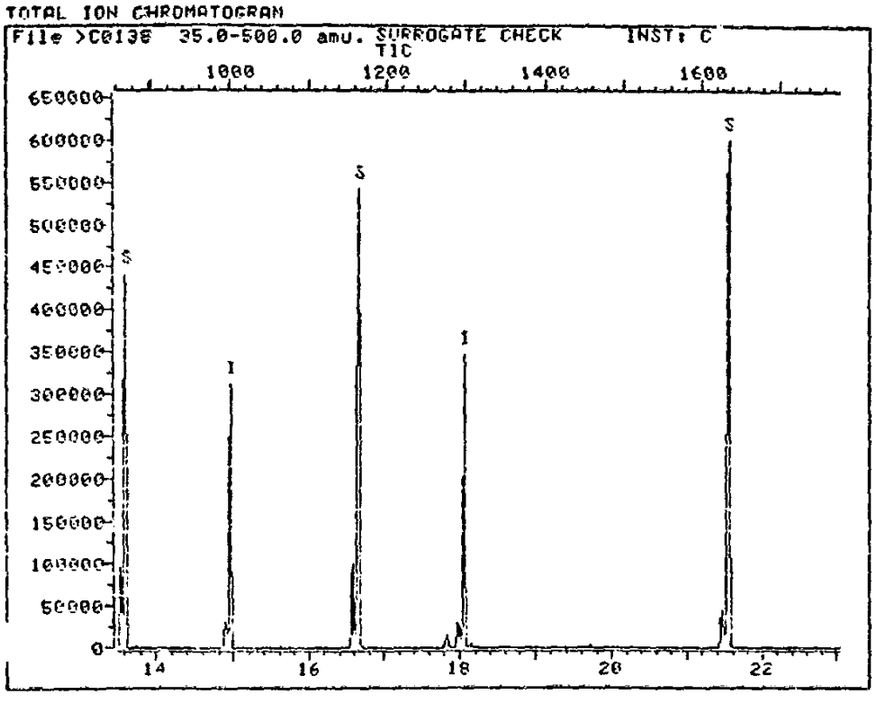
Id File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871219 10:12

Operator ID: JOHN
Quant Time: 871219 10:30
Injected at: 871219 09:56

TIC page 1 of 3

005892

TOTAL ION CHROMATOGRAM



Data File: >C0138::L1 Quant Output File: ^C0138::QT
Name: SURROGATE CHECK
Misc: INST: C

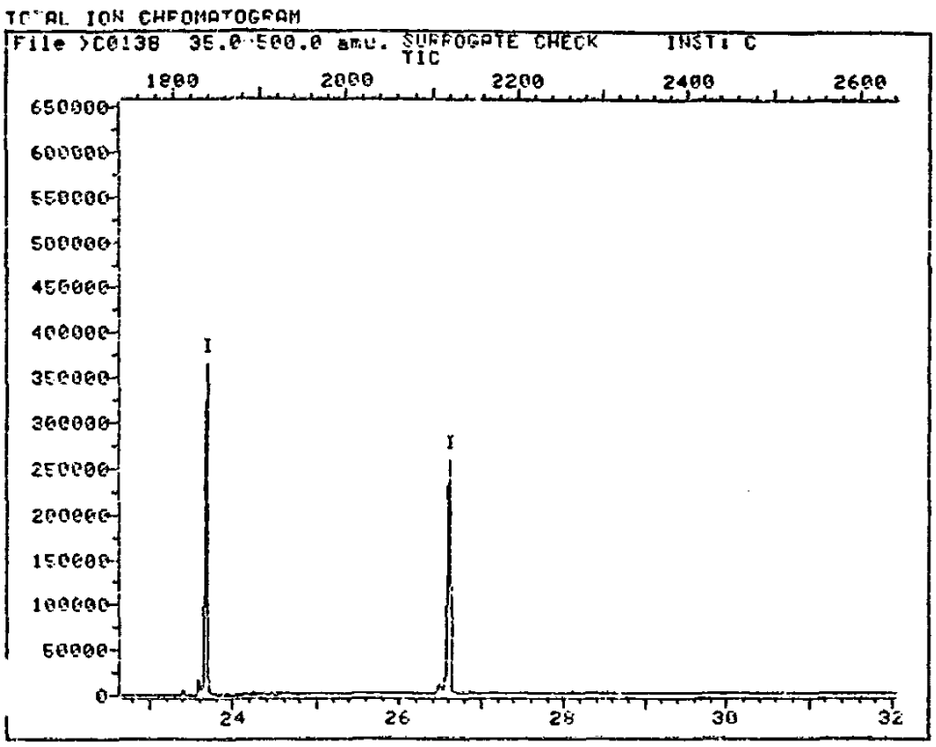
Id File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871219 10:12

Operator ID: JOHN
Quant Time: 871219 10:30
Injected at: 871219 09:56

TIC page 2 of 3

005893

TOTAL ION CHROMATOGRAM



Data File: >C0138::L1 Quant Output File: ^C0138::QT
Name: SURROGATE CHECK
Misc: INST: C

Id File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871219 10:12

Operator ID: JOHN
Quant Time: 871219 10:30
Injected at: 871219 09:56

TIC page 3 of 3

005894

QUANT REPORT

Operator ID: JOHN
Output File: ^C0138::Q1
Data File: >C0138::L1
Name: SURROGATE CHECK
Misc: INST: C

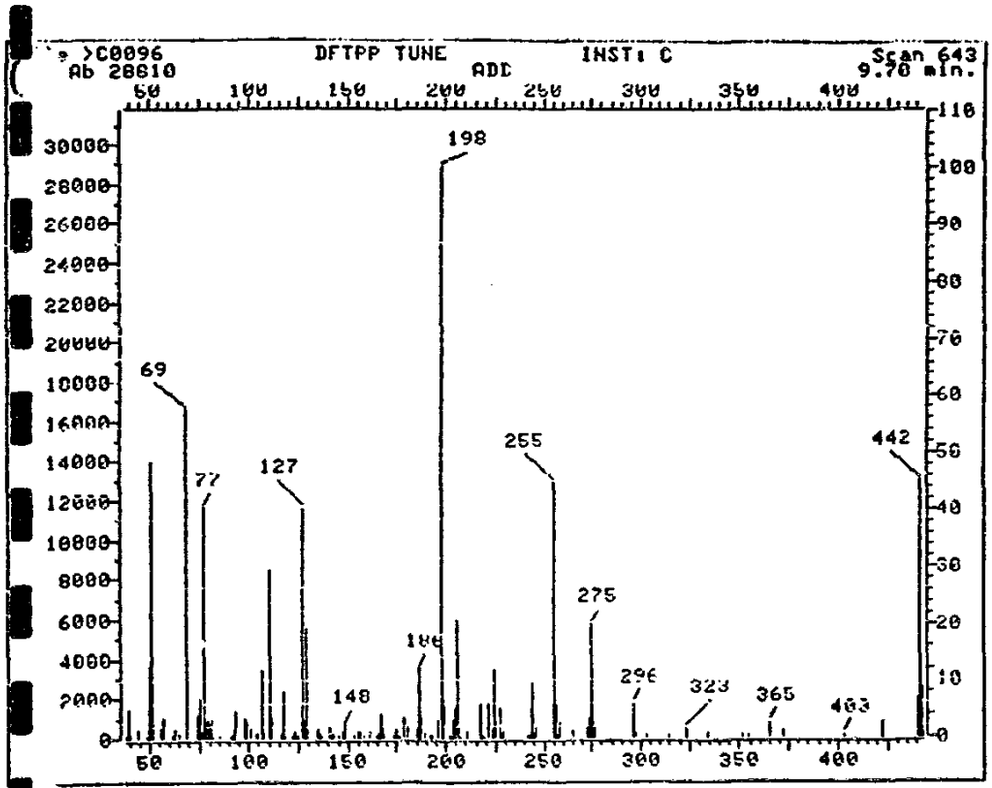
Quant Rev: 6
Quant Time: 871219 10:30
Injected at: 871219 09:56
Dilution Factor: 1.00000

ID File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871219 10:12

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*CI30 1,4-DICHLOROBENZENE-D4	8.43	371	59932	40.00	NG/UL	96
14)	CS50 2-FLUOROPHENOL	5.85	130	195576	208.16	NG/UL	87
15)	CS45 PHENOL-D5	7.95	325	225868	174.73	NG/UL	87
16)	*CI40 NAPHTHALENE-D8	11.19	637	165197M	40.00	NG/UL	94
30)	CS20 NITROBENZENE-D5	9.71	494	158194M	72.92	NG/UL	76
31)	*CI50 ACENAPHTHENE-D10	14.97	1001	121643M	40.00	NG/UL	99
50)	CS25 2-FLUOROBIPHENYL	13.62	871	310687M	68.75	NG/UL	96
51)	CS55 2,4,6-TRIBROMOPHENOL	16.67	1164	16108/M	127.34	NG/UL	96
52)	*CI60 PHENANTHRENE-D10	18.07	1299	226442	40.00	NG/UL	95
62)	*CI70 CHRYSENE-D12	23.68	1839	271123M	40.00	NG/UL	95
49)	CS30 TERPHENYL-D14	21.56	1635	467150M	49.24	NG/UL	95
)	*CI75 PERYLENE-D12	26.60	2120	218829	40.00	NG/UL	97

* Compound is ISTD

005895



Data file header from : >C0096

Sample: DFTPP TUNE Operator: JOHN MS 12/16/87 8:21
Misc : INST: C
Sys. #: 1 MS model: /B SW/HW rev.: 1A ALS # : 0
Method file: #DFT01 Tuning file: #11UNE No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures :	125.	265.	0.	0.	0.
Chromatographic times, min. :	1.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	12.0	0.0	0.0	0.0	0.0

005896

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	Appropriate Peak	Status
51	30-60% of mass 198	48.33	48.33	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	57.31	57.31	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	40.13	40.13	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.40	6.40	Ok
275	10-30% of mass 198	19.69	19.69	Ok
365	Greater than 1% of mass 198	2.51	2.51	Ok
441	0-100% of mass 443	6.59	76.23	Ok
442	Greater than 40% of mass 198	44.88	44.88	Ok
443	17-23% of mass 442	8.65	19.27	Ok

Injection Date: 12/16/87
Injection Time: 08:21
Data File: >C0096
Scan: 643

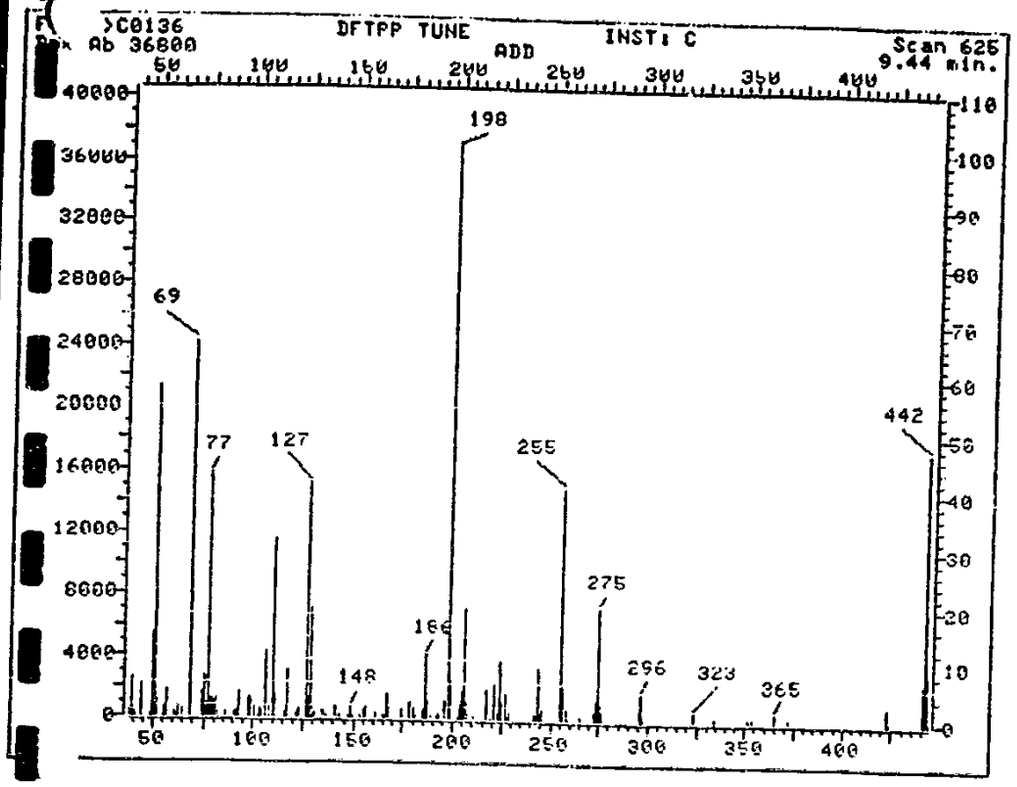
005897

>[illegible] DFTPP TUNE INST: C
[illegible]643 ADD NHM

File: >C0096 Scan #: 643 Retn. time: 9.70

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
[illegible].00	.299	98.05	3.263	145.85	.253	195.95	3.016	254.95	44.582
[illegible].00	4.988	98.95	2.794	146.95	.975	197.95	100.000	255.95	6.050
48.00	.979	100.95	1.673	147.95	2.267	198.85	6.401	256.95	.246
[illegible].90	1.461	103.95	.843	152.95	.451	201.45	.326	257.95	2.846
[illegible].00	.274	104.95	.781	154.95	1.163	202.95	.271	264.95	1.104
50.00	12.919	106.95	11.784	155.95	1.198	203.95	3.190	272.95	1.565
51.00	48.327	107.95	.982	157.85	.222	204.95	5.030	273.95	3.457
[illegible].00	2.513	109.95	29.153	160.95	.975	206.05	20.569	274.95	19.691
[illegible].00	1.555	110.95	3.884	164.95	.482	207.05	2.204	275.95	2.555
57.00	3.339	111.85	.274	165.95	.649	207.85	.670	276.95	1.635
[illegible].00	.344	115.85	.656	166.95	4.002	210.85	.896	295.90	5.849
[illegible].00	1.479	116.95	8.251	167.95	1.815	216.95	6.036	296.90	.562
65.00	.677	117.95	.295	168.95	.271	217.85	.358	302.90	.347
[illegible].00	57.310	121.95	.375	173.85	.472	218.95	.174	314.90	.496
[illegible].00	3.940	122.95	1.031	174.95	1.326	220.95	5.988	323.00	1.479
75.00	6.834	123.95	.312	175.95	.246	222.95	1.222	333.90	.555
76.10	1.104	125.05	.253	176.95	.246	223.95	11.763	351.90	.347
[illegible]	40.167	126.95	40.132	178.95	3.443	224.95	2.877	354.00	.295
[illegible].0	2.770	127.85	3.016	179.95	2.208	226.95	5.217	364.90	2.515
79.00	2.964	128.95	19.320	180.85	.479	227.85	.663	371.90	.920
[illegible].00	2.548	129.85	1.326	184.85	1.329	228.85	.878	402.80	.476
[illegible].00	3.041	134.85	1.225	185.95	12.117	242.05	.312	422.90	2.735
81.90	.368	135.95	.653	186.95	3.360	242.95	.274	440.90	6.591
[illegible].00	.413	136.95	.392	188.85	.635	243.95	9.347	441.90	44.877
[illegible].90	.219	140.95	1.892	191.95	.482	245.05	.566	442.90	8.646
92.00	.722	141.75	.566	192.95	.430	245.95	1.746	444.00	.580
93.00	4.870	142.95	.573						

005898



MS data file header from : >C0136

Sample: DFTPP TUNE Operator: JOHN MS 12/19/87 8:37
Misc : INST: C
Sys. #: 1 MS model: 70 SW/HW rev.: 1A ALS # : 0
Method file: #DF101 Tuning file: #1TUNE No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures :	125.	265.	0.	0.	0.
Chromatographic times, min. :	1.0	0.0	0.0	0.0	0.0
Chromatographic rate, deg/min:	12.0	0.0	0.0	0.0	0.0

005899

GC/MS PERFORMANCE STANDARD

Decafluorotriphenylphospine (DFTPP)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
51	30-60% of mass 198	57.92	57.92	Ok
68	Less than 2% of mass 69	0.00	0.00	Ok
69	(reference only)	65.67	65.67	Ok
70	Less than 2% of mass 69	0.00	0.00	Ok
127	40-60% of mass 198	40.99	40.99	Ok
197	Less than 1% of mass 198	0.00	0.00	Ok
198	Base peak, 100% relative abundance	100.00	100.00	Ok
199	5-9% of mass 198	6.39	6.39	Ok
275	10-30% of mass 198	19.52	19.52	Ok
365	Greater than 1% of mass 198	1.51	1.51	Ok
441	0-100% of mass 443	6.68	78.93	Ok
442	Greater than 40% of mass 198	47.43	47.43	Ok
443	17-23% of mass 442	8.46	17.84	Ok

Injection Date: 12/19/87
Injection Time: 08:37
Data File: >C0136
Scan: 625

005900

C0136 DFTPP TUNE INST: C
625 ADD NRM

File: >C0136 Scan #: 625 Retn. time: 9.44

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
38.00	1.109	81.00	3.405	135.05	1.082	192.95	.587	246.05	1.649
39.00	6.848	81.90	.603	136.95	.397	196.05	3.079	255.05	40.380
40.00	.690	85.90	.745	140.95	2.008	197.95	100.000	256.05	5.728
41.00	.614	91.10	.658	142.05	.313	198.95	6.389	258.05	2.198
44.00	5.636	92.00	.927	142.95	.185	202.95	.201	258.95	.141
48.90	.495	93.00	4.462	146.95	.367	204.05	2.448	264.95	.348
49.10	.495	98.00	3.416	147.95	2.033	205.05	4.584	273.05	1.302
50.00	14.807	99.00	2.916	148.85	.326	206.05	19.285	274.05	3.405
51.00	57.918	101.00	1.728	152.95	.435	207.05	2.761	275.05	19.522
52.00	2.992	103.00	.171	155.05	1.340	208.05	.723	276.05	2.552
55.00	.174	104.00	1.332	156.05	1.899	210.45	.182	277.05	1.372
56.00	2.193	105.00	1.049	161.05	.859	210.95	.842	296.05	4.620
57.00	4.571	107.00	11.576	164.85	.247	216.95	5.196	297.05	.299
61.00	.652	108.00	1.997	166.05	.538	219.05	.193	323.05	1.527
62.00	.522	110.00	31.315	167.05	3.905	221.05	6.171	334.00	.465
63.00	1.848	111.05	3.970	168.05	1.565	223.05	1.054	352.00	.280
73.00	1.250	115.95	.837	175.05	1.432	224.05	10.258	354.00	.212
74.00	65.666	116.95	8.106	178.95	2.851	225.05	2.791	365.00	1.514
74.10	4.329	121.95	.774	180.05	2.160	227.05	4.476	371.90	.340
75.00	7.030	122.95	1.440	180.95	.538	227.95	.451	423.00	2.818
76.10	2.543	126.95	40.986	185.05	1.503	228.95	.910	424.00	.315
77.10	42.660	128.05	3.424	186.05	10.995	241.95	.541	441.00	6.677
78.10	3.076	128.95	19.082	187.05	3.149	243.05	.590	442.00	47.427
79.10	3.264	129.95	1.832	188.95	.747	244.05	8.598	443.10	8.459
80.00	2.774	131.05	.565	192.05	.326	245.05	1.071	444.10	.489

005901

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

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

Sample wt/vol: 1000 (g/mL) ML Lab File ID: C0139

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/19/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
100-51-6	Benzyl Alcohol	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
39638-32-9	bis(2-Chloroisopropyl)Ether	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
65-85-0	Benzoic Acid	50	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	50	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethyl Phthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U

005902

005902

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOL Case No.: 8501 SAS No.: _____ SDG No.: FD667

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

Sample wt/vol: 1000 (g/mL) ML Lab File ID: C0139

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/19/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	50	U
100-02-7	4-Nitrophenol	50	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
100-10-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-Methylphenol	50	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	4	J
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

005903

005903

IE

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLK

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

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

Sample wt/vol: 1000 (g/mL) ML Lab File ID: C0139

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

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/19/87

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.00

Number TICs found: 3

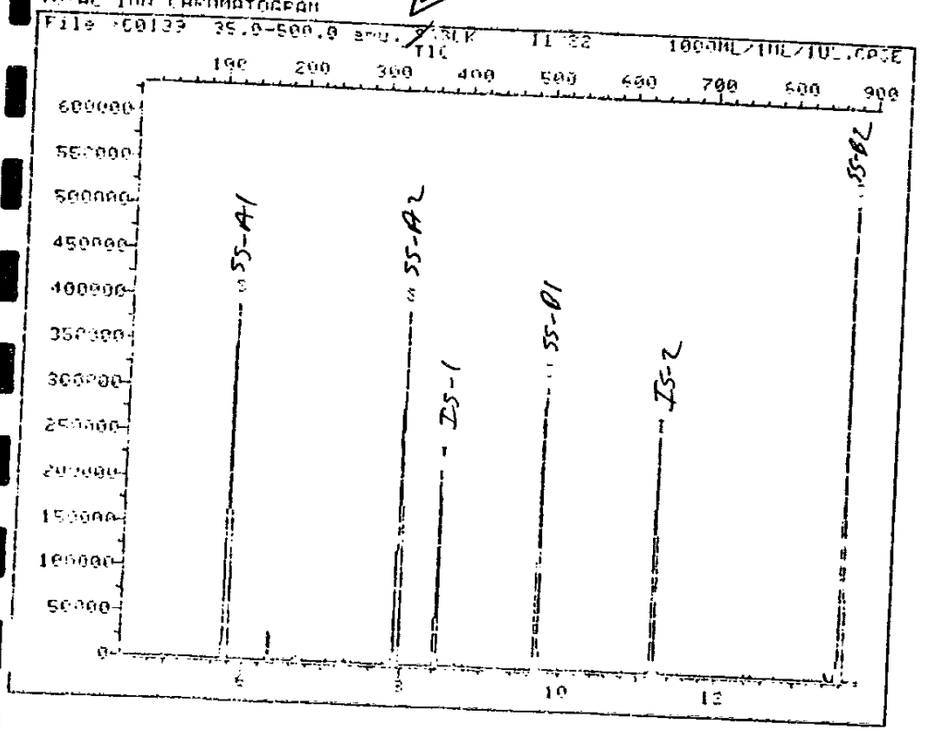
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Heptane -dimethyl-	6.32	6.0	J
2. 57103	Hexadecanoic acid (9CI)	19.52	3.0	J
3. 54833486	Heptadecane, 2,6,10,15-tetra	20.69	2.0	J

005904

005904

TOTAL ION CHROMATOGRAM



Data File: :C0139::L1
Name: BLK 11:2.
Misc: 1000ML/1ML/1UL,CASE 5001,INST: C

Quant Output File: C0139:.QT

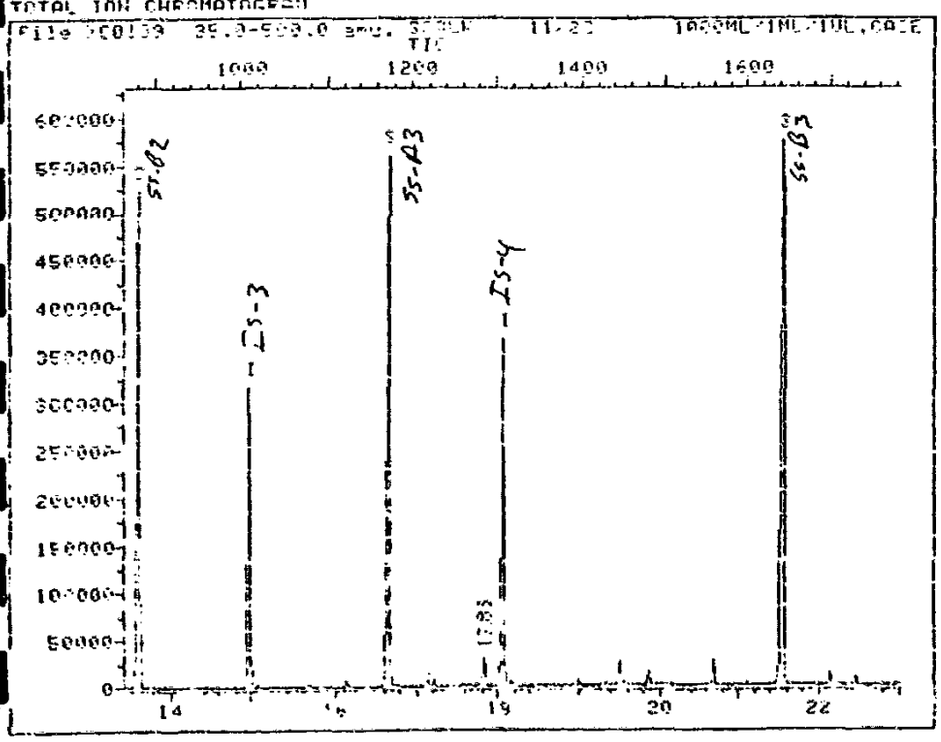
Id File: ID_B::::C
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 6.5)
Last Calibration: 8 1219 10:12

Operator ID: JOHN
Quant Time: 871219 11:37
Injected at: 871219 10:36

TIC page 1 of 3

005905

TOTAL ION CHROMATOGRAM



Data File: [illegible]:L1 Quant Output File: C0[illegible]9:.QT
Name: [illegible] 11 [illegible]
Misc: 100[illegible]ML/1ML/1UL,CASE 8[illegible]01,INST: C

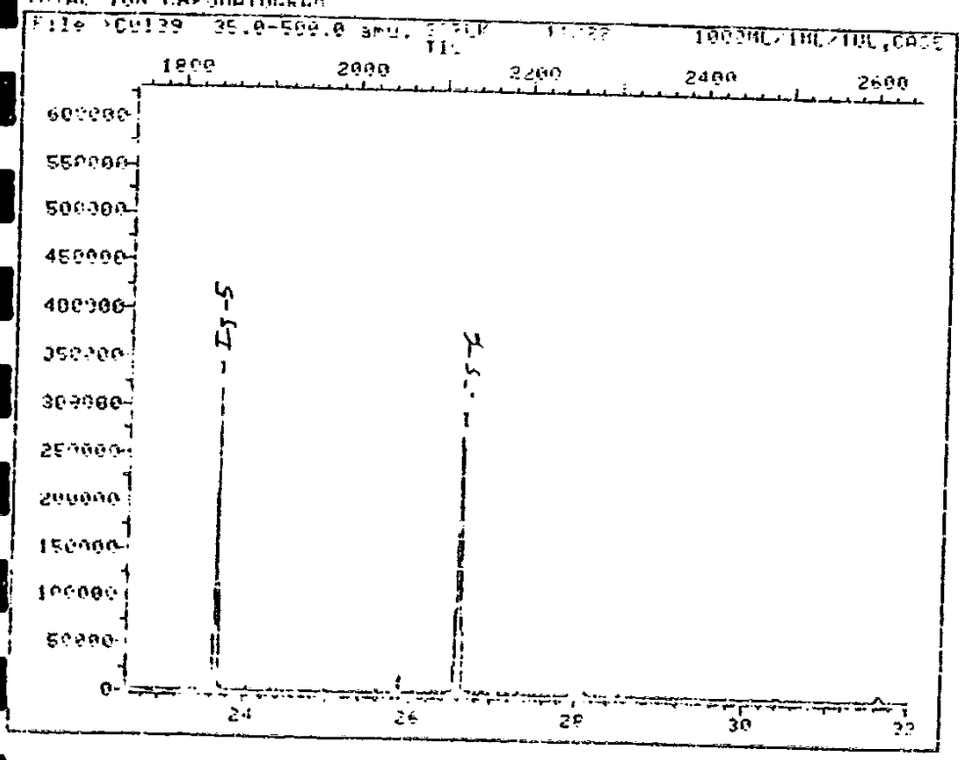
Id File: ID_B[illegible]1::E[illegible]
Title: SEMI-[illegible]OLATILE ORGANIC ANALYSIS (EPA 6.5)
Last Calibration: 8 12 [illegible] 1[illegible]:1[illegible]

Operator ID: JOHN
Quant Time: 8 12[illegible] 1[illegible]:3[illegible]
Injected at: 871219 10:36

TIC page 2 of 3

005906

TOTAL ION CHROMATOGRAM



Data File: >C0139::L1 Quant Output File: "C01 9:.QT
Name: S:9L1 11 2:
Misc: 100:ML/1ML/1UL,CASE 8501,INST: C

Id File: IS_B11::B
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 6.5)
Last Calibration: 8 12 9 1:.1

Operator ID: JOHN
Quant Time: 8 1219 11:3
Injected at: 871219 10:36

TIC page 3 of 3

005907

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871219 11:37
Output File: ^C0139::QT Injected at: 871219 10:36
Data File: >C0139::L1 Dilution Factor: 1.00000
Name: SSBLK 11/22
Misc: 1000ML/1ML/1UL,CASE 8591,INST: C

ID File: ID_BNI::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871219 10:12

	Compound	P.T.	Ion	Area	Conc	Units	q
13)	*C130 1,4-DICHLOROBENZENE-D4	8.44	150.0	72912	40.00	NG/UL	97
14)	C550 2-FLUOROPHENOL	5.78	112.0	187675	157.66	NG/UL	89
15)	C545 PHENOL-D6	7.95	99.0	277911	165.66	NG/UL	89
16)	*C140 NAPHTHALENE-D8	11.19	136.0	179942	40.00	NG/UL	95
17)	C570 NITROBENZENE-D5	9.72	82.0	162254	94.11	NG/UL	79
31)	*C150 ACENAPHTHENE-D10	14.97	164.0	127173	40.00	NG/UL	98
32)	C525 2-FLUOROBIPHENYL	13.62	172.0	301243	92.75	NG/UL	96
33)	C555 2,4,6-TRIBROMOPHENOL	16.67	329.7	163460	194.11	NG/UL	96
56)	*C160 PHENANTHRENE-D10	18.07	188.0	267389	40.00	NG/UL	95
57)	C635 PENTACHLOROPHENOL	17.83	266.0	6480	3.94	NG/UL	98
[illegible]	*C170 CHRYSENE-D12	23.63	240.0	247958	40.00	NG/UL	95
[illegible]	C930 TERPHENYL-D14	21.56	244.0	515850	120.72	NG/UL	94
70)	*C175 PERYLENE-D12	26.60	264.0	244881	40.00	NG/UL	97

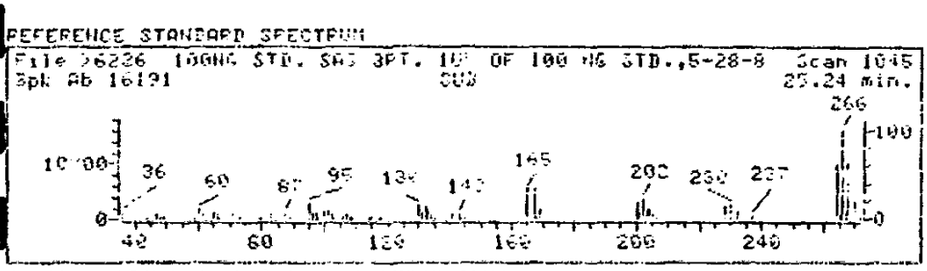
* Compound is ISTD

006500

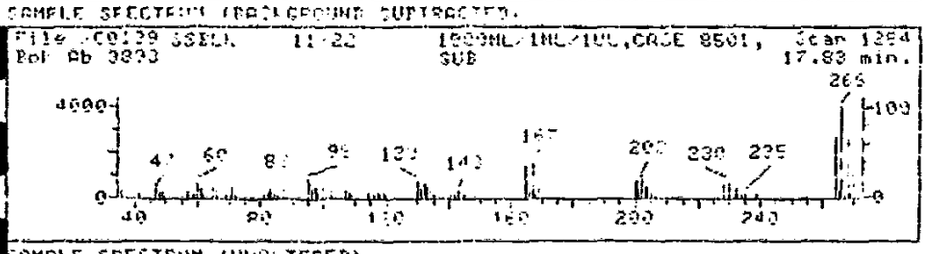
139

005908

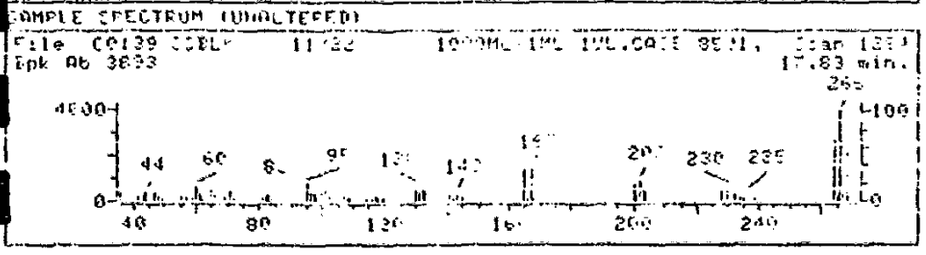
REFERENCE STANDARD SPECTRUM



SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



Data File: C0139::L1 Quant Output File: C0139::QT
Name: SSBLK 11:22
Misc: 1000ML/1ML/1UL,CASE 8501,INST: C
Quant Time: 871219 11:37 Quant ID File: ID_BNI::EX
Injected at: 871219 10:36 Last Calibration: 871219 10:12

Compound No: 67
Compound Name: C635 PENTACHLOROPHENOL
Scan Number: 1284
Retention Time: 17.83 min.
Quant Ion: 266.0
Area: 6488
Concentration: 3.94 NG/UL
q-value: 98

005909

005909

data file header from : >C0139

Sample: SSBLK 11/22 Operator: JOHN MS 12/19/87 10:36
Misc : 1000ML/1ML/1UL,CASE 8501,INST: C
Sys. #: 1 MS model: 70 SW/HW rev.: IA ALS # : 0
Method file: #STD1 Tuning file: #1TUNE No. of extra records: 2
Source temp.: 0 Analyzer temp.: 280 Transfer line temp. : 0

Chromatographic temperatures : 45. 300. 0. 0. 0.
Chromatographic times, min. : 4.0 6.8 0.0 0.0 0.0
Chromatographic rate, deg/min: 12.0 0.0 0.0 0.0 0.0

>C0139 SSBLK 11/22 1000ML/1ML/1UL,CASE 8501,INST: C
35.01 500.0 CLP ADC TIC
Upslope: .20 Area Reject: 31176. Max Peaks: 4 Bunching: 1
Dnslope: 0.00 Results File IC0139 Sorted by Time/Area INT

Peak #	R.T. min.	first scan	max scan	last scan	peak height	raw area	corr. area	corr. % max.	% of total
1	6.32	173	176	181	30101	49632	48375	88.61	25.299
~~2~~	~~17.83~~	~~1279~~	~~1284~~	~~1288~~	~~29368~~	~~55410~~	~~49292~~	~~90.29~~	~~25.758~~
3	19.51	1439	1445	1451	26671	65387	54593	100.00	28.551
	20.69	1555	1559	1562	26716	44607	38954	71.35	20.372

Sum of corrected areas: 191214.

Summary of Unknowns PSI Library Search and Quantitation

Standard	Concentration	Area	Retention Time	Unknown Window
1	40.0	311759.	8.44	4.50 - 9.81
2	40.0	435942.	11.19	9.81 - 13.08
3	40.0	576563.	14.97	13.08 - 16.52
4	40.0	708474.	18.07	16.52 - 20.88
5	40.0	705474.	23.68	20.88 - 25.14
6	40.0	792782.	26.60	25.14 - 32.02

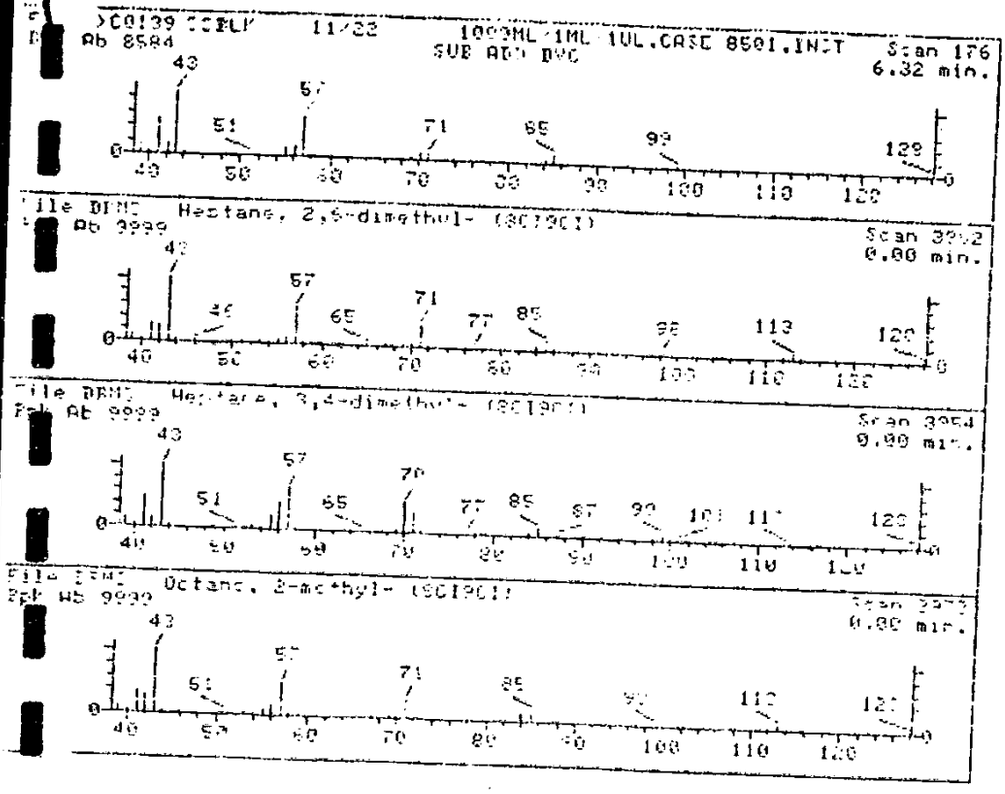
Dilution Factor (DF) = 1.00 Fractional Solids (FS) = 1.00
Amount Method (AM) = 1000.00 Amount Used (AU) = 1000.00

Correction Factor = 1.00 = (AM / AU) / (DF * FS)

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

12:18 PM SAT., 19 DEC., 1987

005910



Unknown #.1
Area = 48375.00 Tentative Concentration is 0.00

1. Heptane, 2,5-dimethyl- (SCI9CI) 128 C_9H_{20}
2. Heptane, 3,4-dimethyl- (SCI9CI) 128 C_9H_{20}
3. Octane, 2-methyl- (SCI9CI) 128 C_9H_{20}
4. Hexane, 2,3,5-trimethyl- (SCI9CI) 128 C_9H_{20}
5. Hexane, 4-ethyl-2-methyl- (SCI9CI) 128 C_9H_{20}
6. Hydroxylamine, O-hexyl- (SCI9CI) 117 $C_6H_{15}NO$
7. Pentane, 2,2,3,4-tetramethyl- (SCI9CI) 128 C_9H_{20}

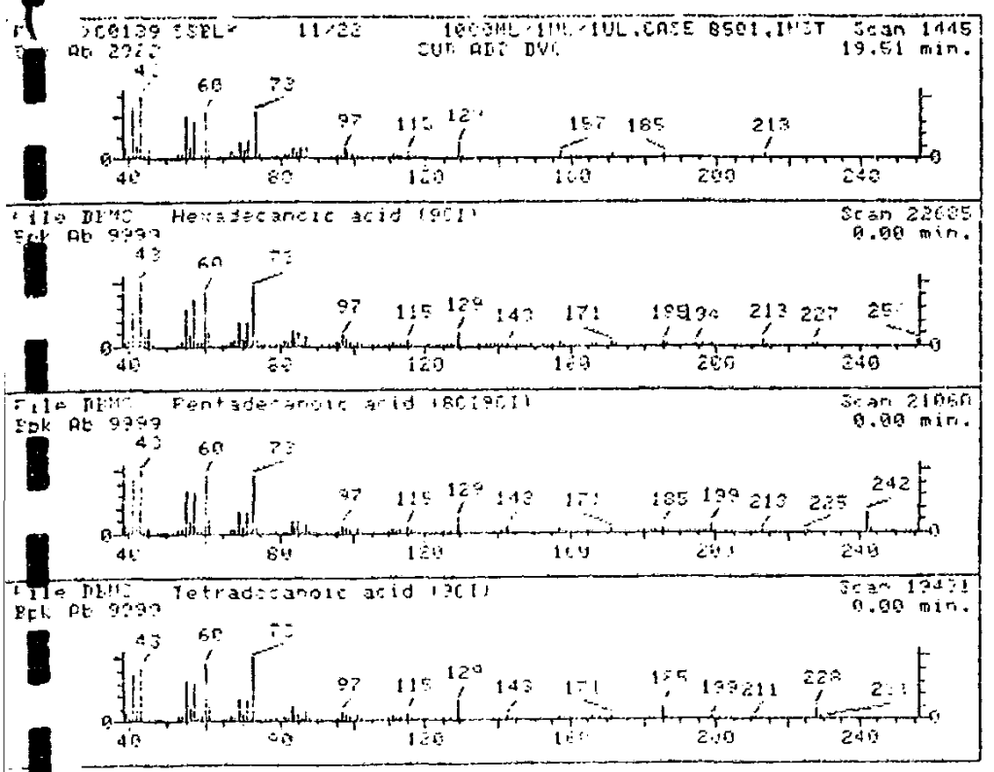
Sample file: SC0139 Spectrum #: 176
Search speed: 1 Tilting option: N No. of ion ranges searched: 48

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
	60*	1072055	6074	DBMS	42	50	3	0	100	13	30	15
2.	60*	922281	3557	DBMS	41	56	3	0	95	14	30	13
3.	60*	3221612	6079	DBMS	28	67	3	0	100	11	30	13
4.	41*	1069[illegible]30	6073	DBMS	24	67	3	0	100	24	12	12
5.	30*	3074777	9546	DBMS	23	66	2	0	63	33	12	13
6.	29	4665683	6042	DBMS	37	46	2	0	90	31	12	12
7.	29	1186534	1935	DBMS	38	48	2	0	63	[illegible]	[illegible]	[illegible]

142

005911

005911



Unknown #.4
Area = 54593.00 Tentative Concentration is 3.00

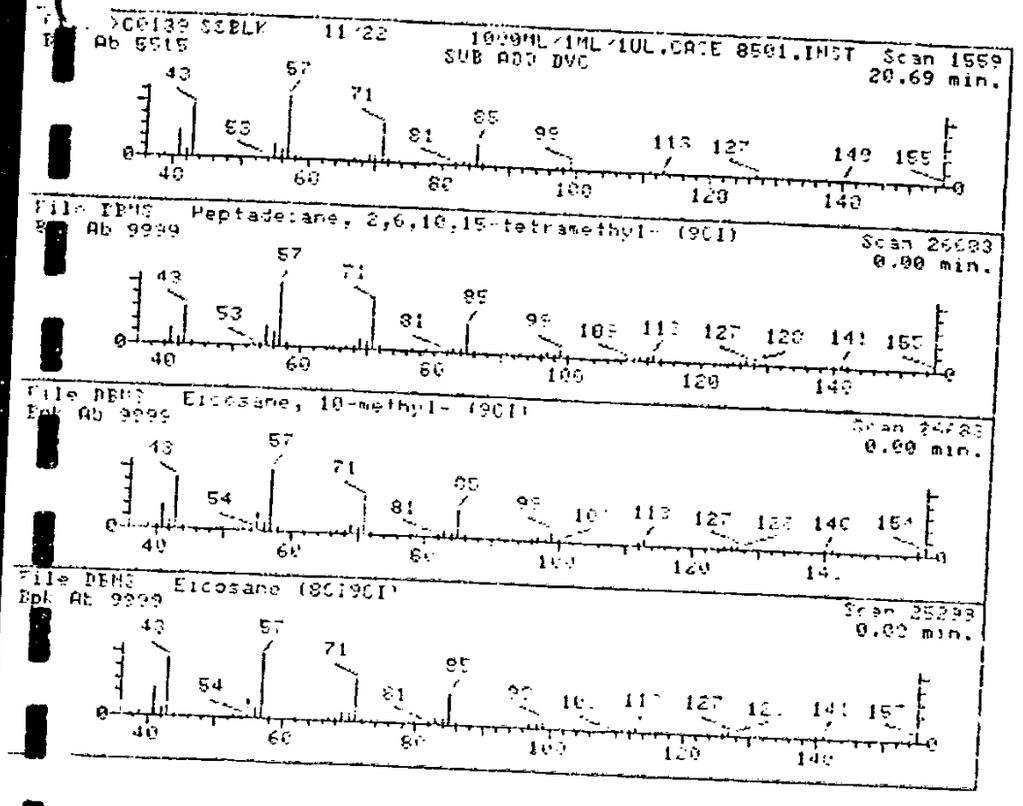
1. Hexadecanoic acid (9CI) 256 C16H32O2
2. Pentadecanoic acid (8CI9CI) 242 C15H30O2
3. Tetradecanoic acid (9CI) 228 C14H28O2
4. Heptadecenoic acid (9CI9CI) 268 C17H32O2
5. Octadecanoic acid (9CI) 284 C18H36O2
6. Heptadecanoic acid (8CI9CI) 270 C17H34O2
7. Dodecanoic acid, silver(1+) salt (9CI) 307 C12H23O2.Ag

Sample file: >C0139 Spectrum #: 1445
Search speed: 1 Tilting option: N No. of ion ranges searched: 42

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
	96*	57103	2072	DBMS	108	43	1	0	79	5	72	96
	76	1002842	2067	DBMS	95	55	1	0	81	14	40	55
	70	544638	2066	DBMS	94	52	1	0	79	-17	32	54
4.	70	26265996	2074	DBMS	92	61	1	0	58	17	32	57
	66	57114	2080	DBMS	111	54	2	0	67	17	31	49
	66	506127	2076	DBMS	85	64	1	0	83	17	31	40
7.	60	18268456	2083	DBMS	72	103	3	0	75	14	30	12

143

005912



005913

Unknown #.4
Area = 38954.00 Tentative Concentration is 2.00

1. Heptadecane, 2,6,10,15-tetramethyl- (9CI) — 296 C21H44
2. Eicosane, 10-methyl- (9CI) — 296 C21H44
3. Eicosane (8CI9CI) — 282 C20H42
4. Nonadecane (8CI9CI) — 268 C19H40
5. Tritetracontane (8CI9CI) — 604 C43H88
6. Hexatriacontane (8CI9CI) — 506 C36H74
7. Tetradecane (8CI9CI) — 198 C14H30

Sample file: >C0139 Spectrum #: 1559
Search speed: 1 Tilting option: N No. of ion ranges searched: 42

	Prob.	CAS #	CON #	ROOT	K	DK	#FLG	TILT	%	CON	C_I	R_IV
	83	5483348	6446	DBMS	94	39	2	0	69	1	57	28
2.	83	54833237	6445	DBMS	83	50	2	0	82	5	57	23
3.	83	112958	6428	DBMS	82	57	2	0	74	-2	144	22
4.	78	629925	6415	DBMS	62	69	2	0	79	4		13
5.	78	7098217	6521	DBMS	69	99	2	0	72	4	59	15
6.	78	630068	6518	DBMS	64	98	2	0	78	2	57	14
7.	78	629804	6319	DBMS	75	43	2	0	80	[illegible]	[illegible]	[illegible]

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD667MS

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880MS

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0110

Level: (low/med) LOW Date Received: 11/18/87

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
100-51-6	Benzyl Alcohol	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	2-Methylphenol	11	U
39638-32-9	bis(2-Chloroisopropyl)Ether	11	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-Di-n-Propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
65-85-0	Benzoic Acid	3	J
111-91-1	bis(2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-Methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	56	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	56	U
131-11-3	Dimethyl Phthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U

005914

005914

1L

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD667MS

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880MS

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0110

Level: (low/med) LOW Date Received: 11/18/87

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

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

CAS NO.	COMPOUND	0	
99-09-2	3-Nitroaniline	56	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	56	U
100-02-7	4-Nitrophenol	56	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	3	J
100-10-6	4-Nitroaniline	56	U
534-52-1	4,6-Dinitro-2-Methylphenol	56	U
86-30-6	N-Nitrosodiphenylamine (1)	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	56	U
85-01-8	Phenanthrene	15	
120-12-7	Anthracene	2	J
84-74-2	Di-n-Butylphthalate	9	J
206-44-0	Fluoranthene	12	
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	22	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-Octyl Phthalate	11	U
205-99-2	Benzo(b)Fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)Anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

(1) - Cannot be separated from Diphenylamine

005915

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD667MS

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880MS

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0110

Level: (low/med) LOW Date Received: 11/18/87

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

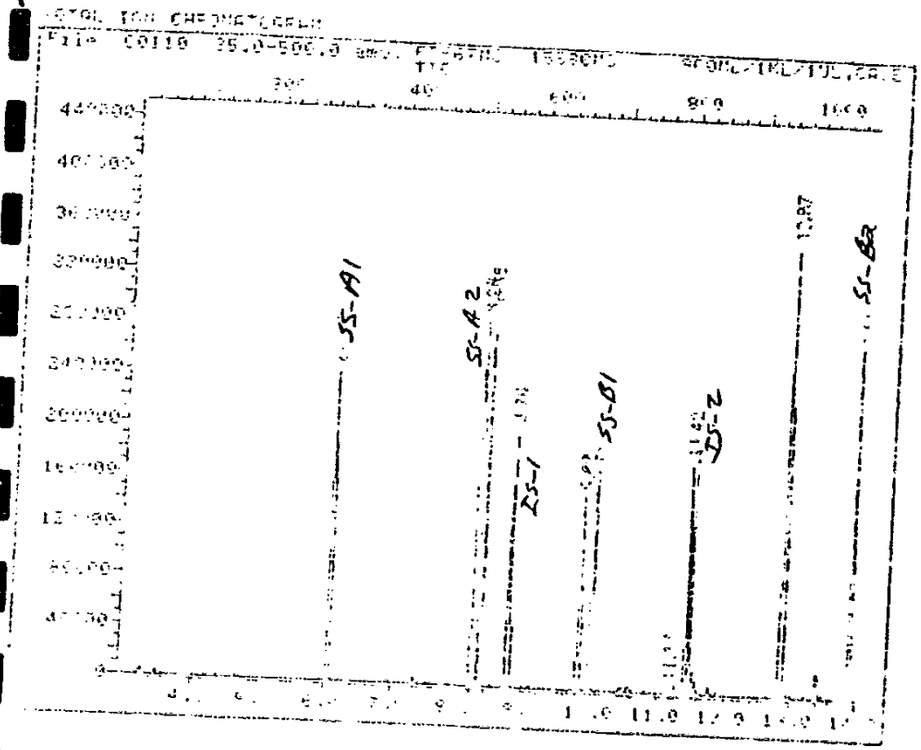
Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

005916

FORM I SV-TIC



Data File: [illegible]
Name: [illegible]
Misc: [illegible] Cutoff File: [illegible]

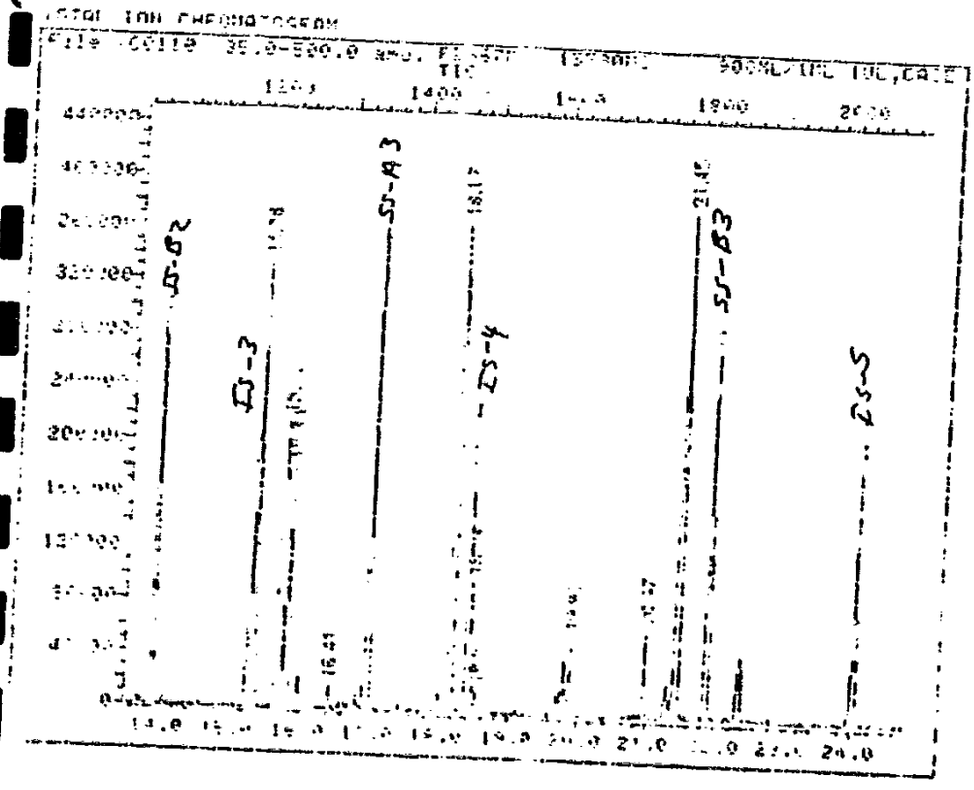
Id File: ID_[illegible]:EX
Title: [illegible]
Last Calibration: [illegible]

Operator ID: [illegible]
Quant Time: 8[illegible]17 13:41
Injection a : 8[illegible] 2 [illegible]

TIC page 1 of 3

005917

005917



Data File: [illegible]
Name: [illegible]
Date: [illegible]

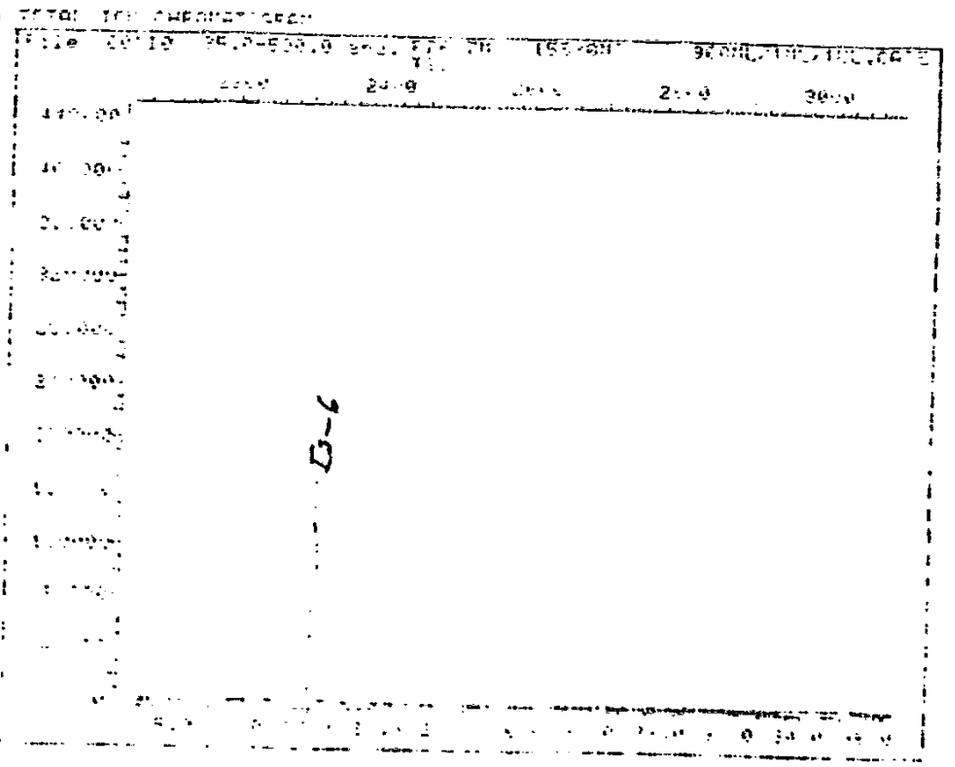
Id File: [illegible]
Title: [illegible]
Last Calibration: [illegible]

Quant Time: 971217 17:41
[illegible]

TIC page 2 of 3

005918

005918



Id File: IC_

Quant Time:

TIC page 1 of 3

005919

005919

QUANT REPORT

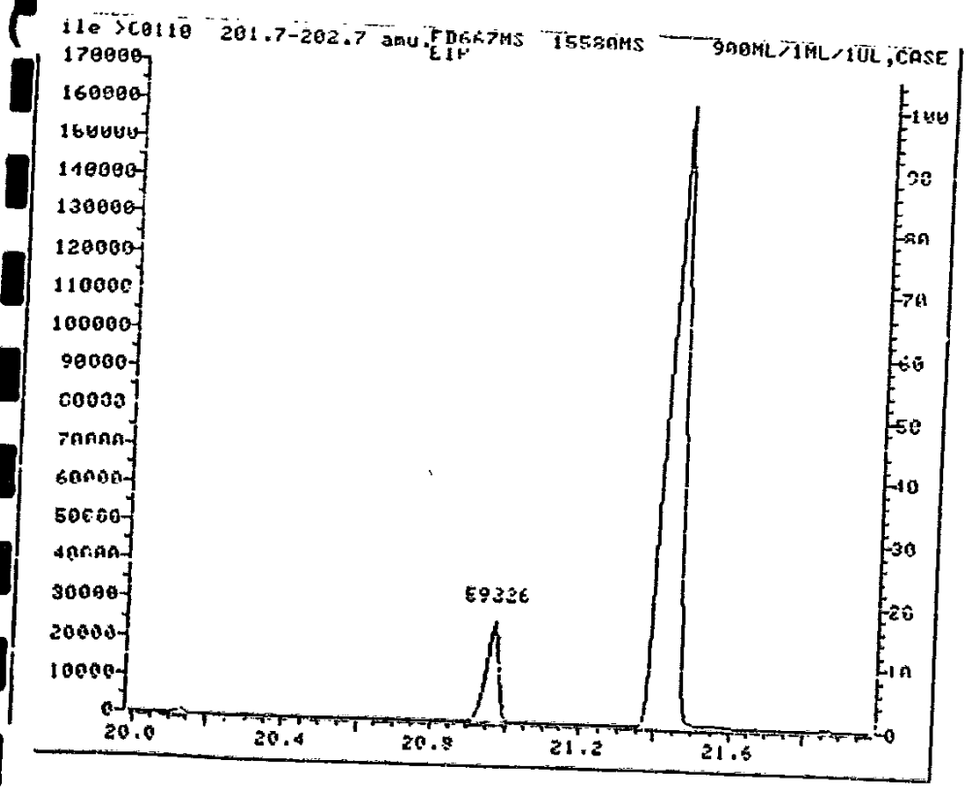
Operator ID: JOHN Quant Rev: 6 Quant Time: [illegible]
Output File: [illegible] Injected at: [illegible]
Data File: [illegible] Dilution Factor: [illegible]
Time: [illegible]
Misc: [illegible] ML, CASE [illegible] ST: C

[illegible] File: [illegible]
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
[illegible] Calibration: [illegible]

	Compound	R.T.	Quan	Area	Conc	Units	Q
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

* Compound is ISTD

005920



Data File: >C0110::L2
Name: FD667MS 15580MS
Misc: 900ML/1ML/1UL,CASE 8501,INST: L
Quant Time: 8/12/7 13:41
Injected at: 8/1216 19:10

Quant Output File: ^C0110::Q1
Quant ID File: ID_BN1::EX
Last Calibration: 8/12/7 13:27

Compound No: 61
Compound Name: C655 FLUORANTHENE
Scan Number: 1/28
Retention Time: 20.97 min.
Quant Ion: 202.0
Area: 69326M
Concentration: 10.36 NG/UL
q-value: 95

This report was produced by QAREA on: 8/12/7 13:58

005921

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD667MSD

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880MSD

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0111

Level: (low/med) LOW Date Received: 11/18/87

Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

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

CAS NO.	COMPOUND		Q
108-95-2	Phenol	11	U
111-44-4	bis(2-Chloroethyl)Ether	11	U
95-57-8	2-Chlorophenol	11	U
541-73-1	1,3-Dichlorobenzene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
100-51-6	Benzyl Alcohol	11	U
95-50-1	1,2-Dichlorobenzene	11	U
95-48-7	2-Methylphenol	11	U
39638-32-9	bis(2-Chloroisopropyl)Ether	11	U
106-44-5	4-Methylphenol	11	U
621-64-7	N-Nitroso-Di-n-Propylamine	11	U
67-72-1	Hexachloroethane	11	U
98-95-3	Nitrobenzene	11	U
78-59-1	Isophorone	11	U
88-75-5	2-Nitrophenol	11	U
105-67-9	2,4-Dimethylphenol	11	U
65-85-0	Benzoic Acid	3	J
111-91-1	bis(2-Chloroethoxy)Methane	11	U
120-83-2	2,4-Dichlorophenol	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
91-20-3	Naphthalene	11	U
106-47-8	4-Chloroaniline	11	U
87-68-3	Hexachlorobutadiene	11	U
59-50-7	4-Chloro-3-Methylphenol	11	U
91-57-6	2-Methylnaphthalene	11	U
77-47-4	Hexachlorocyclopentadiene	11	U
88-06-2	2,4,6-Trichlorophenol	11	U
95-95-4	2,4,5-Trichlorophenol	56	U
91-58-7	2-Chloronaphthalene	11	U
88-74-4	2-Nitroaniline	56	U
131-11-3	Dimethyl Phthalate	11	U
208-96-8	Acenaphthylene	11	U
606-20-2	2,6-Dinitrotoluene	11	U

005922

005922

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FD667MSD

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880MSD

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0111

Level: (low/med) LOW Date Received: 11/18/87

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

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

CAS NO.	COMPOUND		Q
99-09-2	3-Nitroaniline	56	U
83-32-9	Acenaphthene	11	U
51-28-5	2,4-Dinitrophenol	56	U
100-02-7	4-Nitrophenol	56	U
132-64-9	Dibenzofuran	11	U
121-14-2	2,4-Dinitrotoluene	11	U
84-66-2	Diethylphthalate	11	U
7005-72-3	4-Chlorophenyl-phenylether	11	U
86-73-7	Fluorene	3	J
100-10-6	4-Nitroaniline	56	U
534-52-1	4,6-Dinitro-2-Methylphenol	56	U
86-30-6	N-Nitrosodiphenylamine (1)	11	U
101-55-3	4-Bromophenyl-phenylether	11	U
118-74-1	Hexachlorobenzene	11	U
87-86-5	Pentachlorophenol	56	U
85-01-8	Phenanthrene	15	
120-12-7	Anthracene	2	J
84-74-2	Di-n-Butylphthalate	7	J
206-44-0	Fluoranthene	10	J
129-00-0	Pyrene	11	U
85-68-7	Butylbenzylphthalate	11	U
91-94-1	3,3'-Dichlorobenzidine	22	U
56-55-3	Benzo(a)Anthracene	11	U
218-01-9	Chrysene	11	U
117-81-7	bis(2-Ethylhexyl)Phthalate	11	U
117-84-0	Di-n-Octyl Phthalate	11	U
205-99-2	Benzo(b)Fluoranthene	11	U
207-08-9	Benzo(k)Fluoranthene	11	U
50-32-8	Benzo(a)Pyrene	11	U
193-39-5	Indeno(1,2,3-cd)Pyrene	11	U
53-70-3	Dibenz(a,h)Anthracene	11	U
191-24-2	Benzo(g,h,i)Perylene	11	U

(1) - Cannot be separated from Diphenylamine

005923

005923

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FD667MSD

Lab Name: SWL - TULSA Contract: 68-01-7393

Lab Code: SWOK Case No.: 8501 SAS No.: _____ SDG No.: FD667

Matrix: (soil/water) WATER Lab Sample ID: 15880MSD

Sample wt/vol: 900 (g/mL) ML Lab File ID: C0111

Level: (low/med) LOW Date Received: 11/18/87

% Moisture: not dec. ____ dec. ____ Date Extracted: 11/22/87

Extraction: (SepF/Cont/Sonc) CONT Date Analyzed: 12/16/87

GPC Cleanup: (Y/N) N pH: 8.1 Dilution Factor: 0.999

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

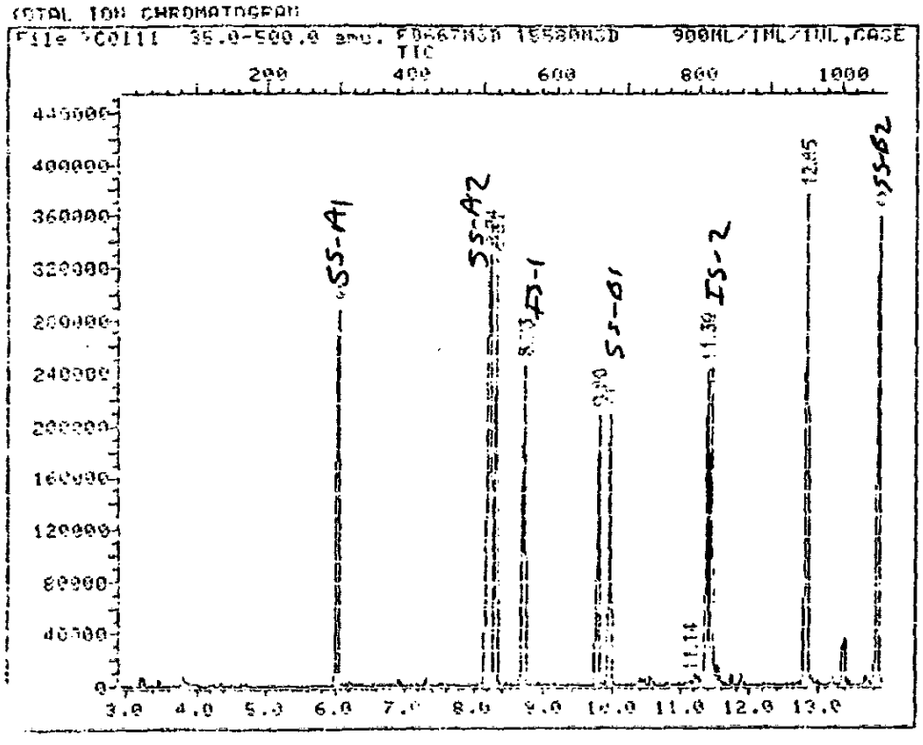
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

005924

FORM I SV-TIC

155 Rev.

TOTAL ION CHROMATOGRAM



Data File: >C0111::L2 Quant Output File: ^C0111::QT
Name: FD667MSD 15580MSD
Misc: 900ML/1ML/10UL,CASE 6.01,INST: C

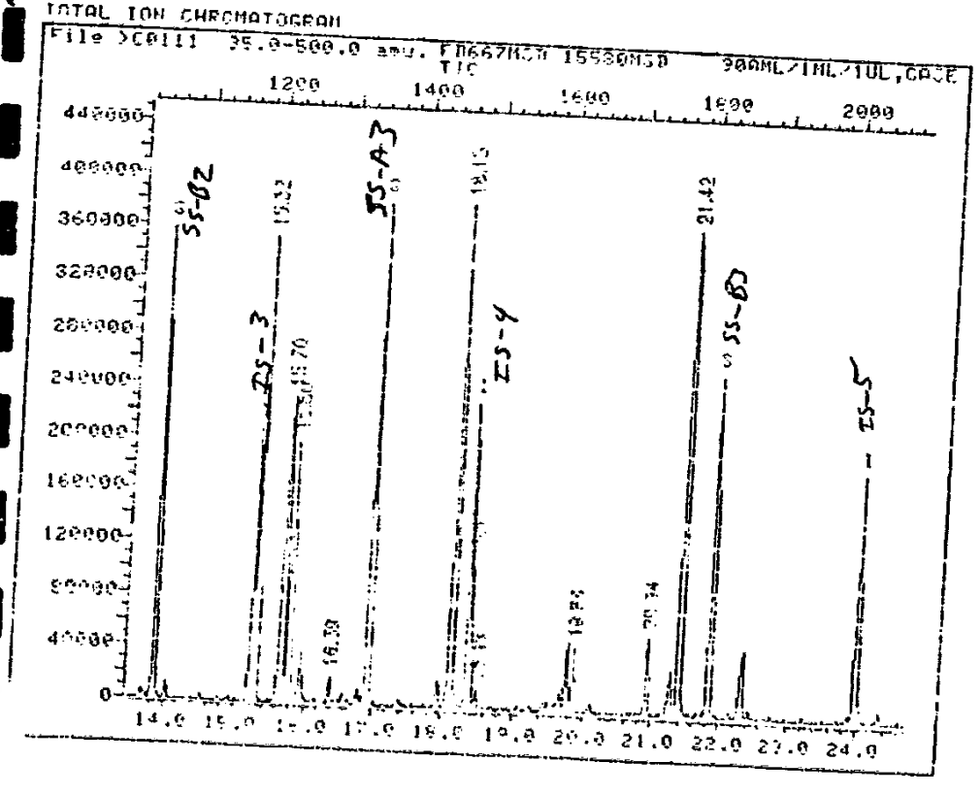
Id File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 13:27

Operator ID: JOHN
Quant Time: 871217 13:46
Injected at: 871216 19:51

TIC page 1 of 3

005925

TOTAL ION CHROMATOGRAM



Data File: >C0111::L2
Name: FD667MSD 15580MSD
Disc: 900ML/1ML/1UL,CASE 85.1,INST: C

Quant Output File: ^C0111::QF

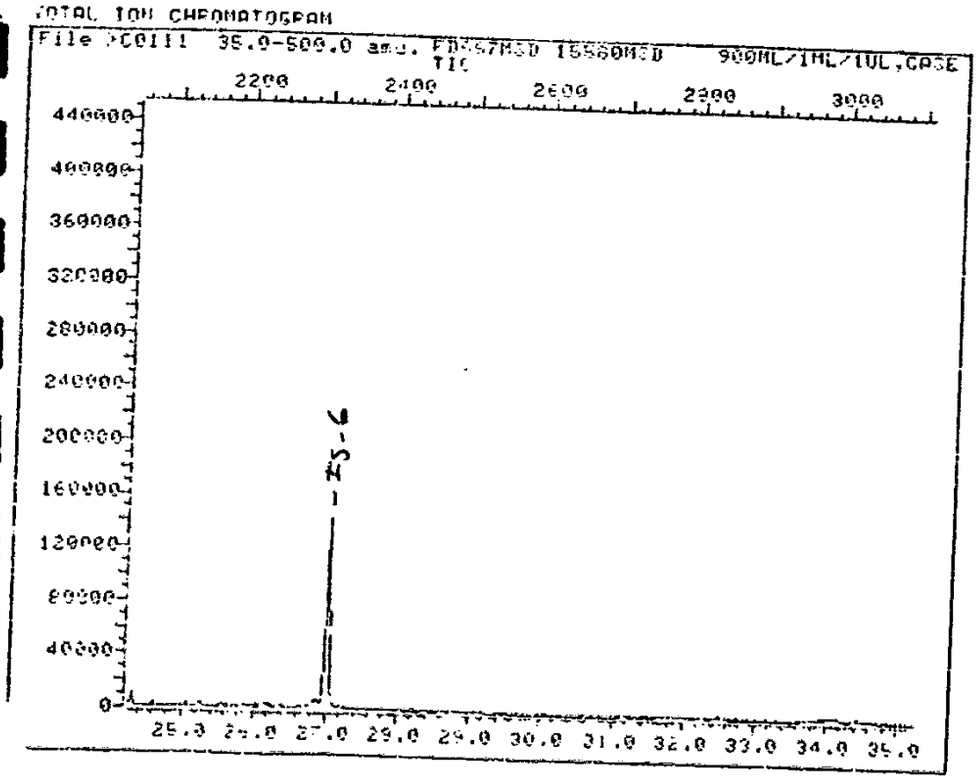
Id File: ID_PH1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 13:27

Operator ID: JOHN
Quant Time: 871217 13:46
Injected at: 871216 19:59

TIC page 2 of 3

005926

TOTAL ION CHROMATOGRAM



Data File: >C0111::L2 Quant Output File: ^C011::QT
Name: FD667MSD 15580MSD
Misc: 900ML/1ML/1UL,CASE 8[illegible],INST: C

Id File: ID_BN1::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 13:2[illegible]

Operator ID: JOHN
Quant Time: 871217 13:46
Injected at: 871216 19:51

TIC page 3 of 3

005927

QUANT REPORT

Operator ID: JOHN Quant Rev: 6 Quant Time: 871217 13:46
Output File: ^C0111::QT Injected at: 871216 19:51
Data File: >C0111::L2 Dilution Factor: 1.00000
Name: FD667MSD 15580MSD
Misc: 900ML/1ML/1UL,CASE 8531,INST: C

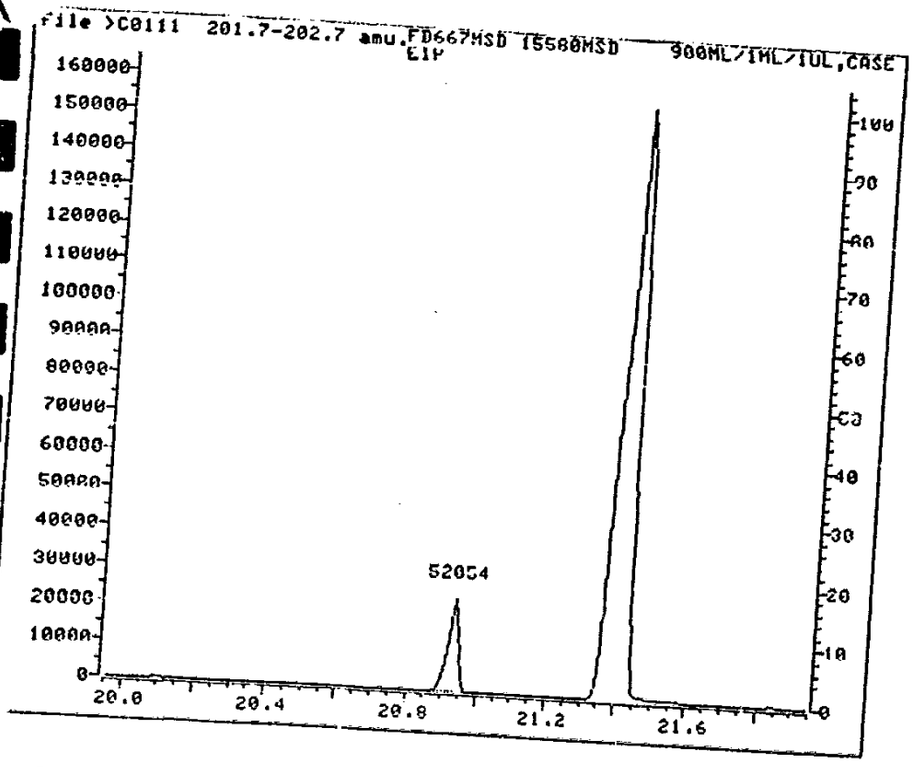
ID File: ID_BNA::EX
Title: SEMI-VOLATILE ORGANIC ANALYSIS (EPA 625)
Last Calibration: 871217 13:27

	Compound	R.T.	Q ion	Area	Conc	Units	q
1)	*C130 1,4-DICHLOROBENZENE-D4	6.70	150.0	70691	40.00	NG/UL	90
2)	C315 PHENOL	8.24	94.0	198858	121.28	NG/UL	96
3)	C330 2-CHLOROPHENOL	8.33	128.0	165273	118.19	NG/UL	91
5)	C340 1,4-DICHLOROBENZENE	8.73	146.0	84818	53.69	NG/UL	95
12)	C370 N-NITROSO-DI-N-PROPYLAMINE	9.80	70.0	83833	63.76	NG/UL	87
14)	C550 2-FLUOROPHENOL	6.05	112.0	141975	142.91	NG/UL	87
19)	C545 PHENOL-D5	8.21	99.0	166000	117.65	NG/UL	86
20)	*C140 NAPHTHALENE-D8	11.46	136.0	161101	40.00	NG/UL	96
21)	C430 BENZOIC ACID	11.14	122.0	2417	2.35	NG/UL	87
22)	C445 1,2,4-TRICHLOROBENZENE	11.39	180.0	98223	50.72	NG/UL	96
	C455 4-CHLORO-3-METHYLPHENOL	12.85	107.0	137063	103.28	NG/UL	89
30)	C520 NITROBENZENE-D5	9.97	82.0	128585	87.08	NG/UL	83
31)	*C150 ACENAPHTHENE-D10	15.25	164.0	149446	40.00	NG/UL	96
33)	C550 ACENAPHTHENE	15.32	153.0	229824	65.68	NG/UL	98
42)	C360 4-NITROPHENOL	15.70	65.0	121032	125.74	NG/UL	92
45)	C570 2,4-DINITROTOLUENE	15.80	165.0	114135	61.03	NG/UL	97
46)	C590 FLUORENE	16.39	166.0	8963	2.39	NG/UL	98
49)	C525 2-FLUOROBIPHENYL	13.88	172.0	248379	86.89	NG/UL	93
51)	C555 2,4,6-TRIBROMOPHENOL	16.95	329.7	152852	70.61	NG/UL	95
52)	*C160 PHENANTHRENE-D10	18.36	188.0	206161	40.00	NG/UL	96
53)	C635 PENTACHLOROPHENOL	18.15	266.0	171254	162.35	NG/UL	99
58)	C640 PHENANTHRENE	18.41	178.0	79148	13.51	NG/UL	97
59)	C645 ANTHRACENE	18.49	178.0	10634	1.74	NG/UL	97
60)	C650 DI-N-BUTYLPHTHALATE	19.86	149.0	50571	6.38	NG/UL	88
61)	C655 FLUORANTHENE	20.94	202.0	920540	8.72	NG/UL	96
62)	*C170 CHRYSENE-D12	24.00	240.0	187945	40.00	NG/UL	93
69)	C715 PYRENE	21.42	202.0	481482	45.93	NG/UL	88
70)	C530 TERPHENYL-D14	21.84	244.0	242838	80.39	NG/UL	90
70)	*C175 PERYLENE-D12	27.04	264.0	200539	40.00	NG/UL	96

Compound is ISTD

005928

005928



Data File: >C0111::L2
Name: FD667MSD 15580MSD
Misc: 900ML/1ML 1UL,CASE 8501,INST: C
Quant Time: 871217 13:46
Injected at: 871216 19:51

Quant Output File: ^C0111::Q1
Quant ID File: ID_BN1::EX
Last Calibration: 871217 13:27

Compound No: 61
Compound Name: C655 FLUORANTHENE
Scan Number: 1730
Retention Time: 20.94 min.
Quant Ion: 202.0
Area: 52054M
Concentration: 8.73 NG/UL
q-value: 96

This report was produced by QAREA on: 871217 13:59

005929