[redacted] EC[redacted] RE[redacted] k [redacted]e[redacted]86 [redacted]05[redacted]

eceived: 12/11/86 01/22/87 12:16:40

REPORT TO
Keystone Env. Resources, Inc.
Water Quality Engineering
440 College Park Drive
Monroeville, PA 15146-1536
ATTEN Shannon Craig

PREPARED BY
Spectrix Corporation
3911 Fondren
Suite 100
Houston, Texas 77063-5821
ATTEN Sample Control
PHONE (713) 266-6800

CERTIFIED BY

CONTACT CRUZ

CLIENT KEYSTONE SAMPLES 19
COMPANY Keystone Company, Inc.
FACILITY

Please call the above number if you have any questions.
NOTE: ALL SAMPLES WILL BE RETAINED FOR 90 DAYS AND THEN DISCARDED. IF YOU WISH YOUR SAMPLES RETURNED TO YOUR FACILITY CALL SAMPLE CONTROL AT THE ABOVE NUMBER.

WORK ID Water
TAKEN Client
TRANS Client
TYPE Project 1573-73
P.O. # 14-5-50106
INVOICE under separate cover

SAMPLE IDENTIFICATION

01 [illegible] BLANK (LLW)
02 SCK-MW09-001 (LLW) MS
03 SCK-MW09-001 (LLW) MSD
04 SCK-MW09-001 (LLW) DUP.
05 SCK-MW09-001 (LLW) SPIKE
06 CAV-OW01-001 (LLW)
07 CAV-OW13-001 (LLW)
08 SCK-MW02-001 (LLW)
09 SCK-MW06-001 (LLW)
10 SCK-MW07-001 (LLW)
11 SCK-MW09-001 (LLW)
12 SCK-MW12-001 (LLW)
13 SCK-MW14-001 (LLW)
14 SCK-MW16-001 (LLW)
15 SCK-MW20-001 (LLW) dup.
16 SCK-MW21-001 (LLW) [illegible]
17 SCK-P05-001 (LLW)
18 TRIP BLANK (LLW)
19 TRIP BLANK (LLW)

TEST CODES and NAMES used on this report

AG	Silver
AS	Arsenic
BE	Berylium
CD	Cadmium
CN SU	Cyanide in Water
CR	Chromium
CU	Copper
FE	Iron
HG	Mercury
NI	Nickel
PB	Lead
PEST W	EPA Pesticides/PCB's-Water
SB	Antimony
SE	Selenium
TL	Thallium
ZN	Zinc

1012285

003701

LABORATORY: SPECTRIX-HOUSTON

LABORATORY NO: 86-12-050

CLIENT: SPECTRIX-MONROEVILLE

SITE: SOUTH CAVALCADE

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Inorganic Matrix Duplicate and Matrix Spike

003702

CHECKLIST

SECTION I - Support Information and QC Summaries

✓ Narrative

✓ Introduction to the Spectrix Organic Data Package

✓ Introduction to the Spectrix Inorganic Data Package

✓ Shipping Document, Chain-of-Custody

✓ Organic MS/MSD Data Summary Form

003703

SPECTRIX

NARRATIVE - ORGANIC ANALYSES

CLIENT: SPECTRIX - MONROEVILLE
LAB NO: 8612050

SITE: SOUTH CAVALCADE

I. RECEIPT

A. DATE: 12/11/86
B. NO. OF SAMPLES: 12 + QC
C. SAMPLE TYPE: WATER
D. ANALYSIS REQUESTED: Full organics following EPA CLP protocol
E. SHIPPING PROBLEMS: NONE
F. DOCUMENTATION PROBLEMS: NONE
G. QC DISTRIBUTION:

LEVEL	MATRIX	VOA	SV	PEST
LOW	WATER	SCK-MW09-001	SCK-MW09-001	

II. PREPARATION

A. ANALYTICAL LEVELS: Low level

B. EXTRACTION PROBLEMS: None

III. ANALYSIS

A. ANALYSIS PROBLEMS: Some samples were diluted due to the high concentration of organics.

B. SURROGATE RECOVERIES: The acid surrogate recoveries of sample CAV-OW13-001 and SCK-MW07-001 are outside the range of method requirement. These two samples will be re-extracted and data will be sent out later.

IV. OTHER PROBLEMS None

Thomas F. Altern
Project Manager

003704

SPECTRIX-HOUSTON

NARRATIVE - INORGANIC ANALYSES

CLIENT: Spectrix-Monroeville
LAB NO: 86-12-050

SITE: South Cavalcade

I. RECEIPT

A. DATE: 12/11/86
B. NO. OF SAMPLES: 12
C. SAMPLE TYPE: Water
D. ANALYSIS REQUESTED: Metals: Ag, As, Be, Cd, Cr, Cu, Fe, Hg, Ni, Pb, Sb, Se, Tl, Zn and CN

II. PREPARATION

A. REFERENCE METHOD: EPA CLP Protocol (SOW784)

B. ANALYTICAL LEVELS: Low level

C. DIGESTION PROBLEMS: None

III. ANALYSIS

A. REFERENCE METHOD: EPA CLP Protocol (SOW784)

B. ANALYSIS PROBLEMS: None

C. SPIKE RECOVERIES: Recoveries for Ag, Cd, Sb and Se are usually very erratic. Fe concentration in sample was so high that spike recovery was meaningless.

IV. OTHER PROBLEMS None

Ken U. Ewel
Department Supervisor

003705

INTRODUCTION TO THE SPECTRIX ORGANIC DATA PACKAGE

The purpose of this introduction is to clarify several technical report sheets contained in this report. Data sheets showing analytes and concentration are called Organic Analysis Data Sheets (OADS). OADS pages 1 and 2 contain Hazardous Substance List (HSL) compounds associated with Volatile Organics and Semi-Volatile Organics (Base/Neutral/Acids). OADS pages 4 and 5 contain Tentatively Identified Compounds (TIC) found in the Volatiles and Semi-Volatiles analyses. All concentrations listed on pages 1 and 2 are stated in UG/L or UG/KG. Header information listed on pages 1 and 2 includes client number, Spectrix internal sample number, dilution factor used, instrument used in the analysis, date received/date analyzed and other pertinent information. Soil OADS also contain listings for percent moisture and soil pH determined during the extraction process. The reporting section for pages 1 and 2 of the OADS lists individual HSL compounds and four possible listings of the concentrations found. These four possibilities are the actual concentration found, nothing detected at the detection limit as noted with a "U", a value detected but just below the detection limit noted with a "J" and a value also found in the blank noted with a "B". It is possible that a sample may contain a value just below the detection limit and also found in the blank. In this instance a "JB" would be seen after a listed detection limit. A "J" value reported indicates a trace level was found below a concentration where the quantitated value may be in question.

OADS pages 4 and 5 in general list compounds not on the HSL but also found in the GC/MS analysis. These compounds or "non-targeted compounds" are identified by comparing the peak spectra in question to a list of several thousands library spectra stored on the GC/MS magnetic disc. A measure to which the library spectra and the sample spectra are similar is the "purity". Purity is listed on the OADS as a number between 1 and 1000 where 1000 would be an extremely confident identification. OADS pages 4 and 5 list two sections: a header and data reporting section. The header contains client sample name, instrument ID, analyst and data file name. The data section shows cas #, compound name, scan #, purity of each compound and UG/L or UG/KG found. The cas #, or chemical abstract service number, is an identifying number related to the organic compound name and can help clarify differences between common names and IUPAC terminology. The scan # relates to the location of the compound in the run (i.e., retention time). The concentration listed is estimated based on the Internal Standard concentrated which is added to the sample prior to analysis. These estimated values are listed as a "J" and are not to be confused with "J" listed on OADS pages 1 and 2. Only purity values greater than 750 will show the name and cas #. Purity values less than 750 are considered unknowns and only a scan # and concentration are listed. Unknown compounds on the OADS pages 4 and 5 will also be listed on individual library search spectra sheets included in the data package. These raw data sheets show the top 4 matches to the unknown compounds so that best estimation of the compound's identity can be ascertained by you the data user. Additional manual identifications may be achieved at additional costs.

Quantitation report sheets are also found in this package. These data sheets depict raw header and analysis data important for record keeping purposes. The quantitation report also lists surrogate recoveries showing the % recovery of similar HSL compounds for Quality Control determinations. EPA % recovery acceptance levels are available upon request.

INTRODUCTION TO THE SPECTRIX INORGANIC DATA PACKAGE

The inorganic portion of the data package is designed to serve two purposes, namely, explain the reporting format and describe the methods used in analysis of samples.

Inorganic Analytical Report

Metals are reported in micrograms per liter (ug/L) for aqueous samples and milligrams per kilogram dry weight (mg/Kg dry wt.) for non-aqueous samples. Non-aqueous samples have been calculated to their dry weight basis. Default units for each parameter are shown just below the individual test code. In situations where the reported units differs from the default unit, the reported units will be shown next to the reported value.

Example: The default units for BE_S is mg/Kg dry wt., which indicates that report will be in dry weight basis. Report that shows mg/Kg below a numerical value means that sample was not calculated to dry weight basis.

Percent solid of non-aqueous samples, if performed, will be reported as PSOLID in %.

Reporting for non-metallic elements follow same pattern as metals; ug/L or mg/L for aqueous samples and mg/Kg for non-aqueous samples. Here too, mg/Kg dry weight indicates that samples have been corrected for dry weight.

Methodology for Analysis of Inorganic Parameters

The analysis of metals in aqueous samples is performed according to EPA Contract Laboratory Program (CLP) Protocol Statement of Work (SOW) No. 785, "Inorganic Analysis of Multi-Media, Multi-Concentration Samples", July, 1985. Silver, beryllium, cadmium, chromium, copper, iron, nickel, and zinc are analyzed by ICP emission spectrometry. Antimony, arsenic, lead, selenium and thallium are determined by furnace - AA, and mercury is determined by manual cold vapor. All furnace - AA and ICP analyses are background corrected. L'vov platformed graphite tubes are used for all furnace - AA analyses and matrix modified where applicable.

The analysis of non-aqueous samples is done according to EPA CLP Protocol SOW No. 785. This is a modified version of methods in EPA manual "Test methods for Evaluating Solid Waste", EPA SW-846, July, 1982.

The EP Toxicity leaching procedure is performed according to methods published by EPA in "Test Methods for Evaluating Solid Wastes", EPA SW-846, July, 1982. Analysis of the leachates for metals is performed by the method for aqueous samples cited above.

003707

003708

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
Koppers Co Inc	South Cavalcade, Houston
Project No.	**Field Logbook No.**
1573-73	Scott Barnes KER #2
Sampler: (Signature)	**Chain of Custody Tape No.**
Scott Barnes Dock Labs	NA

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN(1 amber) AW	CN(1 plastic)	Priority Pollutant Metals Fe (1 plastic)	Pest./PCB	VOA		REMARKS
SCK-MW20-001	86/12/11	1850			2	1	1	1	2		
SCK-MW12-001	86/12/11	1745			2	1	1	1	2		
Trip Blank	86/12/12	0850							2		
SCK-P05-001	86/12/12	0800			2	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/12	0927			
Relinquished by: (Signature)	**Date**	**Time**	**Received by: (Signature)**	**Date**	**Time**
Relinquished by: (Signature)	**Date**	**Time**	**Received for Laboratory: (Signature)**	**Date**	**Time**
			Deborah Cipolati	12/12/86	7:30
Sample Disposal Method:			**Disposed of by: (Signature)**	**Date**	**Time**

SAMPLE COLLECTOR

KER

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

440 College Pk Dr
Monroeville, PA 15146

ANALYTICAL LABORATORY

Spectrix
3911 Fondren Rd. Suite 100
Houston, TX 77063

ERT

№ 7359

3-8

601600

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
Koppers Co Inc	South Cavalcade Houston
Project No.	**Field Logbook No.**
1573-73	Scott Barnes/KER #2
Sampler: (Signature)	**Chain of Custody Tape No.**
Scott Barnes	NA

ANALYSES: BN (1) amber; CN (1) plastic; Priority Pollutant Metals (1) plastic; Fe; Test. FCB (1) plastic; AW

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN	CN	Priority Pollutant Metals	Fe	Test. FCB	AW			REMARKS
SCK-MW21-001	86/12/11	1415		Ground water	2	1	1		1				Samples preserved in the field
CAV-QW01-001	86/12/11	1332		" "	2	1	1		1				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/11	1837			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
			MF Chang	86/12/11	18:37
Sample Disposal Method:			Disposed of by: (Signature)	Date	Time

SAMPLE COLLECTOR: KER

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

440 College Pk
Monroeville PA 15146

ANALYTICAL LABORATORY: Spectrix Corp.
3911 Fondren Ave.
Suite 100
Houston, TX 77063

ERT

№ 7457

1 [illegible]-84

003709

CHAIN OF CUSTODY RECORD

Client/Project Name: Koppers Co Inc	Project Location: South Cavalcade Houston TX
Project No.: 573-73	Field Logbook No.: Scott Barnes / KER #2
Sampler: (Signature) Scott Barnes	Chain of Custody Tape No.: NA

ANALYSES

Sample No./ identification	Date	Time	Lab Sample Number	Type of Sample	BN (1L amber)	CN (1L plastic)	Priority Pollutants + Fe (1L plastic)	Pest./PCB (1L plastic)			REMARKS
SCK-MW07-001	86/12/11	0830		Ground water	7	3	3	4			Samples preserved in field.
											MS/MSD done on MW-09.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/11	1838			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
			M/H Chng	86/12/11	18:38
Sample Disposal Method:			Disposed of by: (Signature)	Date	Time

SAMPLE COLLECTOR

~~Environmental Research and Technology, Inc.~~
~~696 Virginia Road~~
~~Concord, MA 01742~~
~~617-369-8910~~

KER
440 College Pk
Monroeville, PA 15146

ANALYTICAL LABORATORY

Spectrix Corp
3711 Fondren, Suite 102
Houston, TX 77063

ERT

№ 7453

3-84

003710

003711

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
Koppers Co Inc	South Cavalcade, Houston, TX
Project No.	**Field Logbook No.**
1573-73	Scott Barnes/KER #2
Sampler: (Signature)	**Chain of Custody Tape No.**
Scott Barnes	NA

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN (1 L amber)	CN (1 L plastic)	Priority Metals & Fe (1 L plastic)	Pest./PCB (1 L plastic)			Samples preserved in field. REMARKS
SCK-MW06-001	86/12/11	1100		Ground Water	2	1	1	1			
SCK-MW14-001	86/12/11	1255		" "	2	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/11	1837			
Relinquished by: (Signature)	**Date**	**Time**	**Received by: (Signature)**	**Date**	**Time**
Relinquished by: (Signature)	**Date**	**Time**	**Received for Laboratory: (Signature)**	**Date**	**Time**
			LMF Crung	86/12/11	19:37
Sample Disposal Method:			**Disposed of by: (Signature)**	**Date**	**Time**

SAMPLE COLLECTOR

KER

~~Environmental Research and Technology, Inc.~~
~~696 Virginia Road~~
~~Concord, MA 01742~~
~~617-369-8910~~

440 College PK
Monroeville, PA 15146

ANALYTICAL LABORATORY

Spectrix Corp.
3911 Fondren, Suite 100
Houston, TX 77063

ERT

No 7454

8-84

003712

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
Koppers Co Inc	South Cavalcade. Houston, TX AW
Project No.	**Field Logbook No.**
1573-73	Scott Barnes/KER #2
Sampler: (Signature)	**Chain of Custody Tape No.**
Scott Barnes	NA

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN (1 amber)	CN (1 plastic)	Phenol, Fe, Mn (1 plastic)	Pest./PCB (1 amber)			REMARKS
CAV-OW13-001	86/12/11	1600		Ground Water	2	1	1	1			Samples preserved in the field.
JCK-MW02-001	86/12/11	1610		" "	2	1	1	1			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/11	1835			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
			M.F. Cruz	86/12/11	14:35
Sample Disposal Method:			Disposed of by: (Signature)	Date	Time

SAMPLE COLLECTOR

KER

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~~617-369-8910~~

440 College Pk
Monroeville PA 15146

ANALYTICAL LABORATORY

Spectrix Corp.
3911 Fondren Suite 100
Houston, TX 77063

ERT

№ 7456

19[redacted]84

003712

003713

CHAIN OF CUSTODY RECORD

Client/Project Name: Koppers Co Inc	Project Location: South Cavalcade Houston, TX
Project No.: 1573-73	Field Logbook No.: Scott Barnes / KER #2
Sampler: (Signature) Scott Barnes	Chain of Custody Tape No.: NA

ANALYSES

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	BN (1L amber)	CN (1L plastic)	Priority Metals (1L plastic)	Pest.	2B (1L plastic)	VOA		REMARKS
SCK-MW07-001	86/12/11	0751		Ground water	2	1	1	1		2		
SCK-MW16-001	86/12/11	0720		" "	2	1	1	1		2		
SCK-MW09-001	86/12/11	0824		" "						2		
SCK-MW09-MS/MSD	86/12/11	0824		" "						6		
SCK-MW14-001	86/12/11	1255		" "						2		
SCK-MW06-001	86/12/11	1100		" "						2		
SCK-MW02-001	86/12/11	1610		" "						2		
Trip Blank	86/12/11			" "						2		

Samples preserved in field.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/11	1827			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received for Laboratory: (Signature)	Date	Time
			[illegible]	86/12/11	15:27

Sample Disposal Method:	Disposed of by: (Signature)

SAMPLE COLLECTOR: KER

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

440 Colloye Pk
Monroeville, PA 15146

ANALYTICAL LABORATORY: Spectrix Corp.
3911 Fondren Suite 100
Houston, TX 77063

ERT

№ 7455

003713

CHAIN OF CUSTODY RECORD

Client/Project Name	Project Location
Koppers Co Inc	South Cavalcade, Houston
Project No.	**Field Logbook No.**
1573-73	Scott Barnes KER #2
Samplem (Signature)	**Chain of Custody Tape No.**
Scott Barnes	NA

ANALYSES: VOA

Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample	VOA						REMARKS
CAV-OW13-001	86/12/11	1600		Ground Water	2						
CAV-OW01-001	86/12/11	1332			2						
SCR-MW21-001	86/12/11	1415			2						
SCR-P05-001	86/12/11	1635			2						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Scott Barnes	86/12/11	1827			
Relinquished by: (Signature)	**Date**	**Time**	**Received by: (Signature)**	**Date**	**Time**
Relinquished by: (Signature)	**Date**	**Time**	**Received for Laboratory: (Signature)**	**Date**	**Time**
			MF Cruz	86/12/11	18:27
Sample Disposal Method:			**Disposed of by: (Signature)**	**Date**	**Time**

SAMPLE COLLECTOR

Environmental Research and Technology, Inc.
696 Virginia Road
Concord, MA 01742
617-369-8910

ANALYTICAL LABORATORY

ERT

№ 7452

1974-2-64

003714

5 1 7 5 0 0 ROPPERS COMPANY, INC.
WATER MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

Work Order #: 8612050 Contractor: SPECTRIX CORPORATION Site: South Cavalcade

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC.	CONC. MSD	% REC.	RPD	QC RPD	LIMITS* REC-REC
VOA	1,1-Dichloroethene	50	0	34	68	35	70	3	14	61-145
	Trichloroethene	50	0	37	74	40	80	8	14	71-120
SAMPLE NO.	Chlorobenzene	50	0	48	96	51	102	6	13	75-130
SCK-MW09-001	Toluene	50	0	44	88	46	92	4	13	76-125
	Benzene	50	0	44	88	46	92	4	11	76-127
B/N	1,2,4-Trichlorobenzene	50	0	24	48	23	46	4	28	39- 98
	Acenaphthene	50	0	22	44*	21	42*	5	31	46-118
SAMPLE NO.	2,4-Dinitrotoluene	50	0	33	66	30	60	10	38	24- 96
SCK-MW09-001	Pyrene	50	0	12	24*	11	22*	9	31	26-127
	N-Nitroso-Di-n-Propylamine	50	0	27	54	25	50	8	38	41-116
	1,4-Dichlorobenzene	50	0	22	44	22	44	0	28	36- 97
ACID	Pentachlorophenol	100	0	28	28	26	26	7	50	9-103
	Phenol	100	0	46	46	46	46	0	42	12- 89
SAMPLE NO.	2-Chlorophenol	100	0	44	44	44	44	0	40	27-123
SCK-MW09-001	4-Chloro-3-Methylphenol	100	0	43	43	44	44	2	42	23- 97
	4-Nitrophenol	100	0	48	48	43	43	11	50	10- 80
PEST.	Lindane								15	56-123
	Heptachlor								20	40-131
SAMPLE NO.	Aldrin								22	40-120
	Dieldrin								18	52-126
	Endrin								21	56-121
	4,4'-DDT								27	38-127

* ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs 0 out of 5 ; outside QC limits
B/N 0 out of 6 ; outside QC limits
ACID 0 out of 5 ; outside QC limits
PEST ___ out of 6 ; outside QC limits

RECOVERY: VOAs 0 out of 10 ; outside QC limits
B/N 4 out of 12 ; outside QC limits
ACID 0 out of 10 ; outside QC limits
PEST ___ out of 12 ; outside QC limits

Comments:

CHECKLIST

SECTION II - Sample Data Packets

Sample No: CAV-OW01-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003716

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: CAV-OW01-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205006
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: gm

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
DATE ANALYZED: 12/16/86

DATAFILE: 4U12050V06A

DILUTION FACTOR: 1:1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	130
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	18
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 J
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003717

INST ID 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: CAV-OW01-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

BORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205006
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/10/87

DATAFILE: 4U12050C06
DILUTION FACTOR: 4.0

CAS #	COMPOUND	UG/L
C315	PHENOL	35 J
C325	BIS(2-CHLOROETHYL)ETHER	40 U
C330	2-CHLOROPHENOL	40 U
C335	1,3-DICHLOROBENZENE	40 U
C340	1,4-DICHLOROBENZENE	40 U
C345	BENZYL ALCOHOL	40 U
C350	1,2-DICHLOROBENZENE	40 U
C355	2-METHYLPHENOL	40 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	40 U
C365	4-METHYLPHENOL	40 U
C370	N-NITROSODIPROPYLAMINE	40 U
C375	HEXACHLOROETHANE	40 U
C410	NITROBENZENE	40 U
C415	ISOPHORONE	40 U
C420	2-NITROPHENOL	40 U
C425	2,4-DIMETHYLPHENOL	40 U
C430	BENZOIC ACID	200 U
C435	BIS(2-CHLOROETHOXY)METHANE	40 U
C440	2,4-DICHLOROPHENOL	40 U
C445	1,2,4-TRICHLOROBENZENE	40 U
C450	NAPHTHALENE	11 J
C455	4-CHLOROANILINE	40 U
C460	HEXACHLOROBUTADIENE	40 U
C465	P-CHLORO-M-CRESOL	40 U
C470	2-METHYLNAPHTHALENE	4 J
C510	HEXACHLOROCYCLOPENTADIENE	40 U
C515	2,4,6-TRICHLOROPHENOL	40 U
C520	2,4,5-TRICHLOROPHENOL	200 U
C525	2-CHLORONAPHTHALENE	40 U
C530	2-NITROANILINE	200 U
C535	DIMETHYL PHTHALATE	40 U
C540	ACENAPHTHYLENE	6 J
C545	3-NITROANILINE	200 U
C550	ACENAPHTHENE	8 J
C555	2,4-DINITROPHENOL	200 U
C560	4-NITROPHENOL	200 U
C565	DIBENZOFURAN	40 U
C570	2,4-DINITROTOLUENE	40 U
C575	2,6-DINITROTOLUENE	40 U

003718B

SPECTRIX DC # ---- 8

SAMPLE NUMBER: CAV-OW01-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

ATAFILE: 4U12050C06

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	40 U
C585	4-CHLOROPHENYL PHENYL ETHER	40 U
C590	FLUORENE	12 J
C595	4-NITROANILINE	200 U
C610	4,6-DINITRO-2-METHYLPHENOL	200 U
C615	N-NITROSODIPHENYLAMINE	40 U
C625	4-BROMOPHENYL PHENYL ETHER	40 U
C630	HEXACHLOROBENZENE	40 U
C635	PENTACHLOROPHENOL	200 U
C640	PHENANTHRENE	63
C645	ANTHRACENE	35 J
C650	DI-N-BUTYL PHTHALATE	40 U
C655	FLUORANTHENE	52
C715	PYRENE	40
C720	BUTYL BENZYL PHTHALATE	40 U
C725	3,3'-DICHLOROBENZIDINE	80 U
C730	BENZO(A)ANTHRACENE	42
C735	BIS(2-ETHYLHEXYL)PHTHALATE	40 U
C740	CHRYSENE	42
C760	DI-N-OCTYL PHTHALATE	40 U
C765	BENZO(B)FLUORANTHENE	35 J
C770	BENZO(K)FLUORANTHENE	46
C775	BENZO(A)PYRENE	38 J
C780	INDENO(1,2,3-CD)PYRENE	35 J
C785	DIBENZO(A,H)ANTHRACENE	40 U
C790	BENZO(GHI)PERYLENE	32 J

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003719

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-06A

DC No: KEYSTONE
SMO No: CAV-OW01-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/15/87
Dilution Factor: 10
Percent Moisture(decanted):

GPC Cleanup _Yes _No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. _Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.50 U
319-85-7	BETA-BHC	110
319-86-8	DELTA-BHC	0.50 U
58-89-9	GAMMA-BHC (LINDANE)	0.50 U
76-44-8	HEPTACHLOR	0.50 U
309-00-2	ALDRIN	0.50 U
1024-57-3	HEPTACHLOR EPOXIDE	0.50 U
959-98-8	ENDOSULFAN I	0.50 U
60-57-1	DIELDRIN	1.00 U
72-55-9	4,4'-DDE	1.00 U
72-20-8	ENDRIN	1.00 U
33213-65-9	ENDOSULFAN II	1.00 U
72-54-8	4,4'-DDD	1.00 U
7421-93-4	ENDRIN ALDEHYDE	1.00 U
1031-07-8	ENDOSULFAN SULFATE	1.00 U
50-29-3	4,4'-DDT	1.00 U
72-43-5	METHOXYCHLOR	5.00 U
53494-70-5	ENDRIN KETONE	1.00 U
57-74-9	CHLORDANE	5.00 U
8001-35-2	TOXAPHENE	10.0 U
12674-11-2	AROCLOR-1016	5.00 U
11104-28-2	AROCLOR-1221	5.00 U
11141-16-5	AROCLOR-1232	5.00 U
53469-21-9	AROCLOR-1242	5.00 U
12672-29-6	AROCLOR-1248	5.00 U
11097-69-1	AROCLOR-1254	10.0 U
11096-82-5	AROCLOR-1260	10.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA.
QUANTITATION BASED ON 1:40 DILUTION
U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003720

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: CAV-OW01-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO. : ----

QC REPORT NO. : ---- ANALYST: MB DATAFILE: 4U12050V06A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	26		180 J
74-93-1	METHANETHIOL	48	988	5 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

INST ID: 4530

SPECTRIX DC # ---- 8

SAMPLE: CAV-OW01-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ---

SDG REPORT NO.: ---

ANALYST: GU

DATAFILE: 4U12050C06

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
110-12-3	2-HEXANONE, 5-METHYL- *	292	935	23 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	536		20 J
96-50-4	2-THIAZOLAMINE	579	866	89 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	617		670 J
289-16-7	1,2,4-TRITHIOLANE	635	870	1800 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	723		290 J
2372-99-8	1,3,5,7,9-PENTATHIECANE	868	830	570 J
2372-99-8	1,3,5,7,9-PENTATHIECANE	895	836	2000 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	908		31 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	983		26 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1023		230 J
292-45-5	1,2,4,6-TETRATHIEPANE	1062	816	510 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1089		32 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1099		74 J
292-46-6	LENTHIONINE	1158	765	160 J
73-00-4	1,3,5,7-TETRATHIOCANE	1225	827	740 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1279		110 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1405		29 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1532		150 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1584		62 J

* ALSO FOUND IN BLANK

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

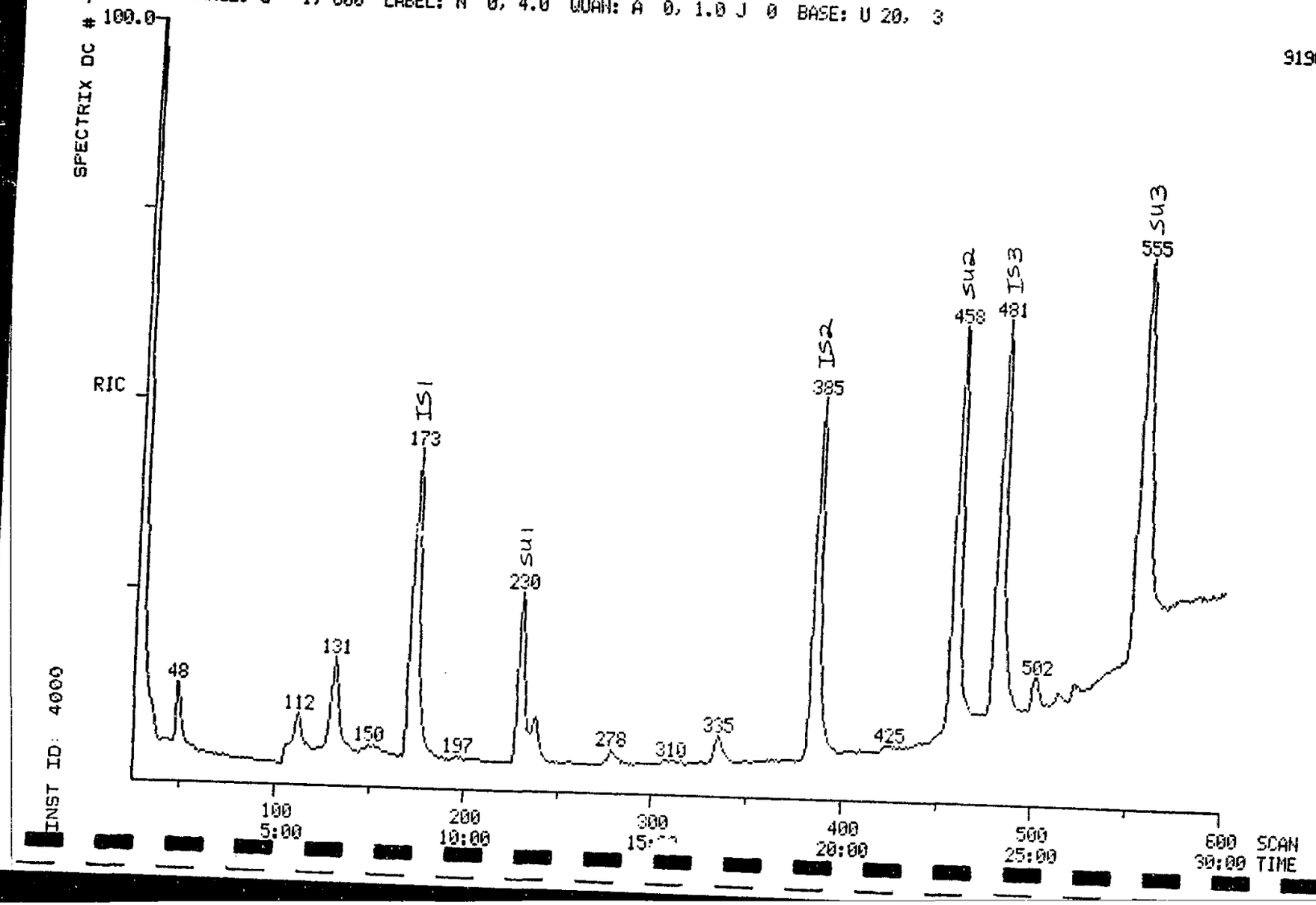
003723

003724

RIC
12/16/86 15:48:00
SAMPLE: CAV-OW01-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050U06A #1 SCANS 25 TO 600
CALI: 4U12050U06A #3

91904.



003724

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID	CAV-OW01-001		
FILENAME	4U12050V06A	INST	4000
CLIENT	KEYSTONE	ANALYST	MB
DATE INJECTED	12/16/86 15:48:00	VERIFIED BY	DEW
CALIB STD DATE	12-14-86	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
173	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	17069
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	74949
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	62310
230	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	90 %	1.329	22063
458	CS05	D8-TOLUENE	**SU2**	98	98 %	0.952	66487
554	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	96 %	1.152	43638
112	C030	METHYLENE CHLORIDE	*	84	4 UG/L	0.647	2249
131	C035	ACETONE		43	130 UG/L	0.757	29231
238	C110	2-BUTANONE		72	18 UG/L	0.618	1871

* BLANK CORRECTED ON DATA SHEET

LIBRARY SEARCH
12/16/86 15:48:00 + 1:21
SAMPLE: CAV-OW01-001
CONDS.: ----
ENHANCED (S 15B 2N 0T)

DATA: 4U12050U06A # 27
CALI: 4U12050U06A # 3

BASE M/Z: 36
RIC: 74879.

SPECTRIX DC # -----19
ANALYST: MB

SAMPLE

H.CL
M WT 36
B PK 36
RANK 1
19
PUR 723

HYDROCHLORIC ACID (DOT)

C2.H9.N2.CL
M WT 132
B PK 36
RANK 2
4551
PUR 449

HYDRAZINE, 1,2-DIMETHYL-, DIHYDROCHLORIDE

C2.H8.N.S.CL
M WT 113
B PK 30
RANK 3
2283
PUR 373

ETHANETHIOL, 2-AMINO-, HYDROCHLORIDE

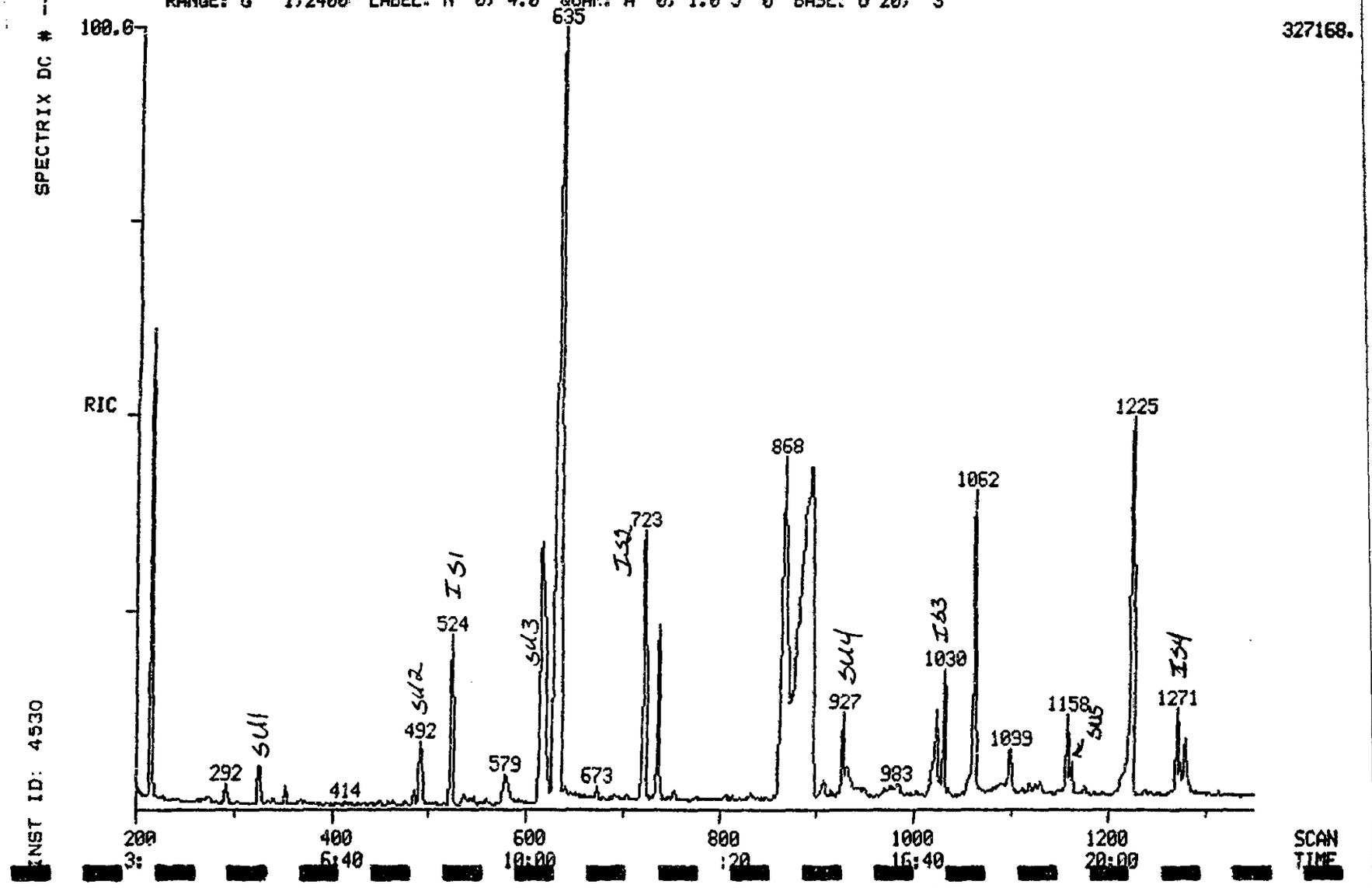
INST ID: 4000

M/Z 20 40 60 80 100 120 140

003727

RIC
01/10/87 15:14:00
SAMPLE: CAV-OW01-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASL: U 20, 3

DATA: 4U12050C06 #1 SCANS 200 TO 1350
CALI: 4U12050C06 #3



003727

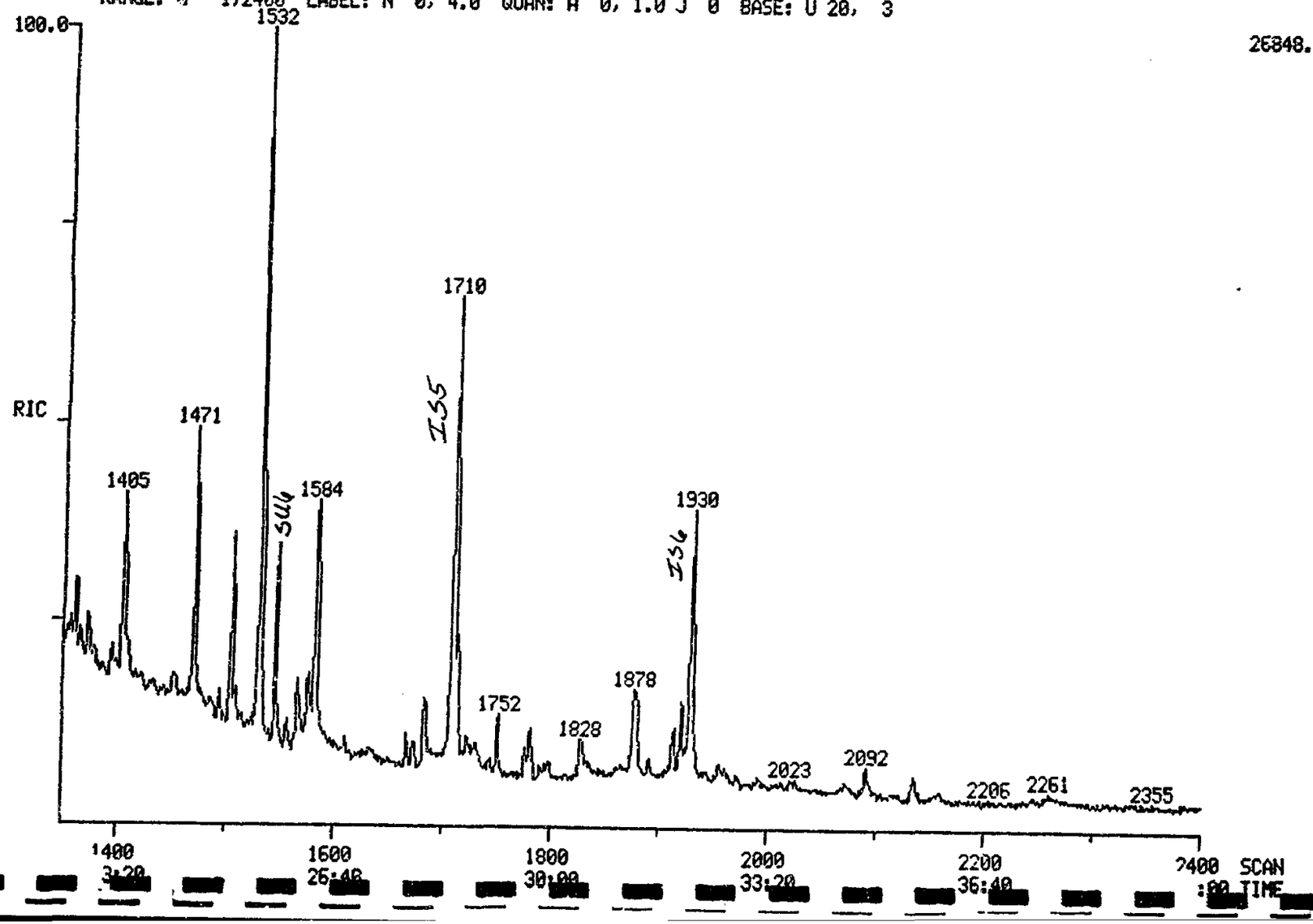
003728

RIC
01/10/87 15:14:00
SAMPLE: CAV-GW01-001
CONDS.: ---
RANGE: C 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C06 #1
CALI: 4U12050C06 #3

SCANS 1350 TO 2400

26848.



003728

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

AMPLE ID. CAV-OW01-001

.ENAME 4U12050C06 INST ID. 4530

LIENT KEYSTONE ANALYST GU

DATE INJECTED 01/10/87 15:14:00 VERIFIED BY GU

ALIB STD DATE 01/08/87 CORR. FACTOR 4.00

CAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
524	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	160 UG/L	1.000	21783
737	CI40	NAPHTHALENE-D8 ** IS2 **	136	160 UG/L	1.000	79102
1030	CI50	ACENAPHTHENE-D10 ** IS3 **	164	160 UG/L	1.000	38179
1271	CI60	PHENANTHRENE-D10 ** IS4 **	188	160 UG/L	1.000	42639
710	CI70	CHRYSENE-D12 ** IS5 **	240	160 UG/L	1.000	22199
930	CI75	PERYLENE-D12 ** IS6 **	264	160 UG/L	1.000	15405
325	CS50	2-FLUOROPHENOL ** SU1 **	112	67 %	0.620	12103
491	CS45	PHENOL-D5 ** SU2 **	99	81 %	0.937	20587
162	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	102 %	1.128	2658
623	CS20	NITROBENZENE-D5 ** SU3 **	82	97 %	0.845	10672
927	CS25	2-FLUOROBIPHENYL ** SU4 **	172	110 %	0.900	26193
547	CS30	TERPHENYL-D14 ** SU6 **	244	93 %	0.905	7228
493	C315	PHENOL	94	35 UG/L	0.941	11507
739	C450	NAPHTHALENE	128	11 UG/L	1.003	5318
57	C470	2-METHYLNAPHTHALENE	142	4 UG/L	1.163	1319
03	C540	ACENAPHTHYLENE	152	6 UG/L	0.974	2357
1035	C550	ACENAPHTHENE	153	8 UG/L	1.005	1730
118	C590	FLUORENE	166	12 UG/L	1.085	3072
274	C640	PHENANTHRENE	178	63 UG/L	1.002	15974
1281	C645	ANTHRACENE	178	35 UG/L	1.008	8897
1471	C655	FLUORANTHENE	202	52 UG/L	1.157	11574
506	C715	PYRENE	202	40 UG/L	0.881	8899
708	C730	BENZO(A)ANTHRACENE	228	42 UG/L	0.999	5161
1751	C735	BIS(2-ETHYLHEXYL)PHTHALATE *	149	9 UG/L	1.024	1455
714	C740	CHRYSENE	228	42 UG/L	1.002	5248
877	C765	BENZO(B)FLUORANTHENE	252	35 UG/L	0.973	4359
1879	C770	BENZO(K)FLUORANTHENE	252	46 UG/L	0.974	4935
921	C775	BENZO(A)PYRENE	252	38 UG/L	0.995	3883
092	C780	INDENO(1,2,3-CD)PYRENE	276	35 UG/L	1.084	2266
2136	C790	BENZO(GHI)PERYLENE	276	32 UG/L	1.107	2131

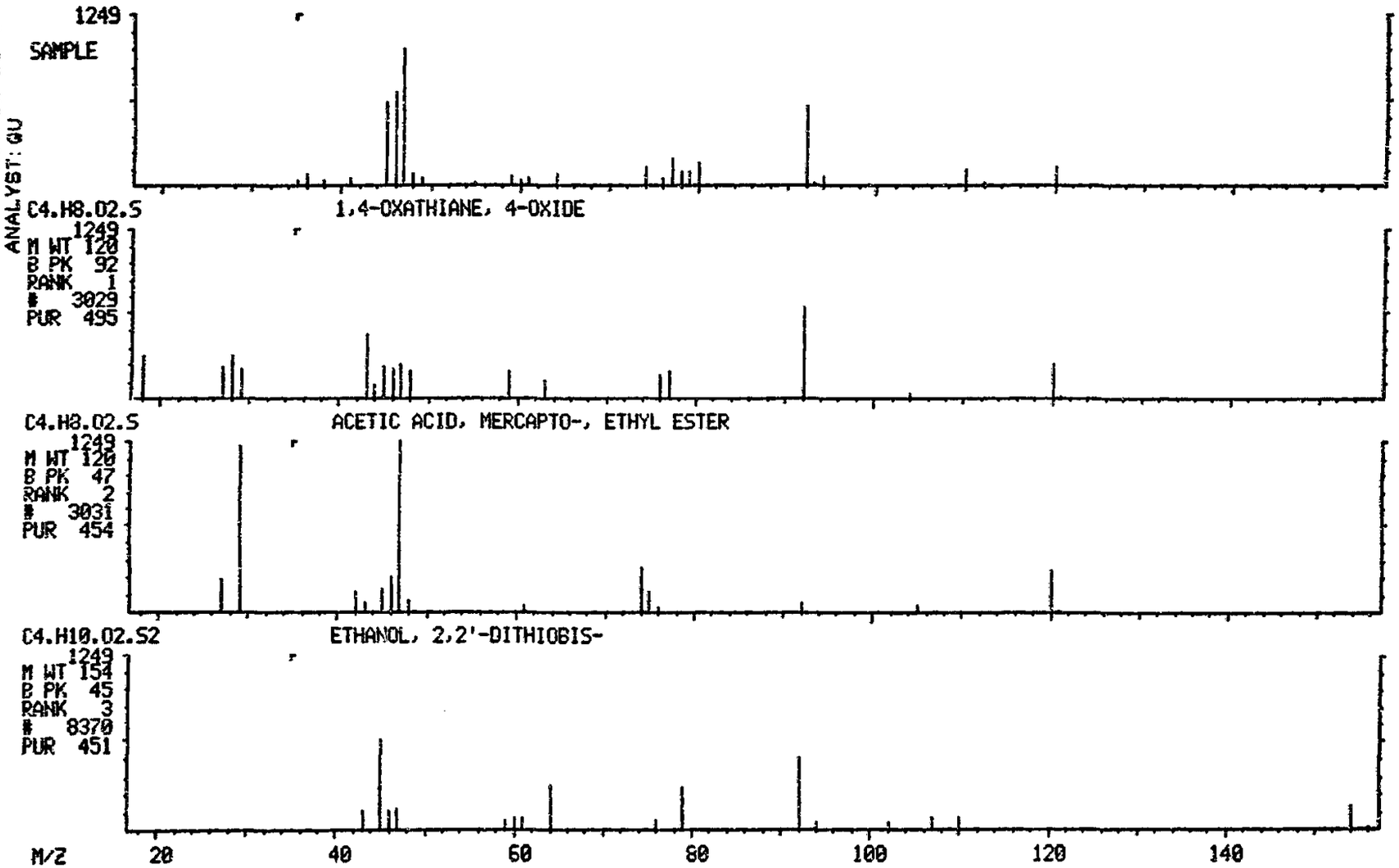
* BLANK CORRECTED ON DATA SHEET

LIBRARY SEARCH
01/10/87 15:14:00 + 8:56
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 # 536
CALI: 4U12050C06 # 3

BASE M/Z: 47
RIC: 3695.

SPECTRIX DC # -----19
ANALYST: GU



NBT ID: 4530

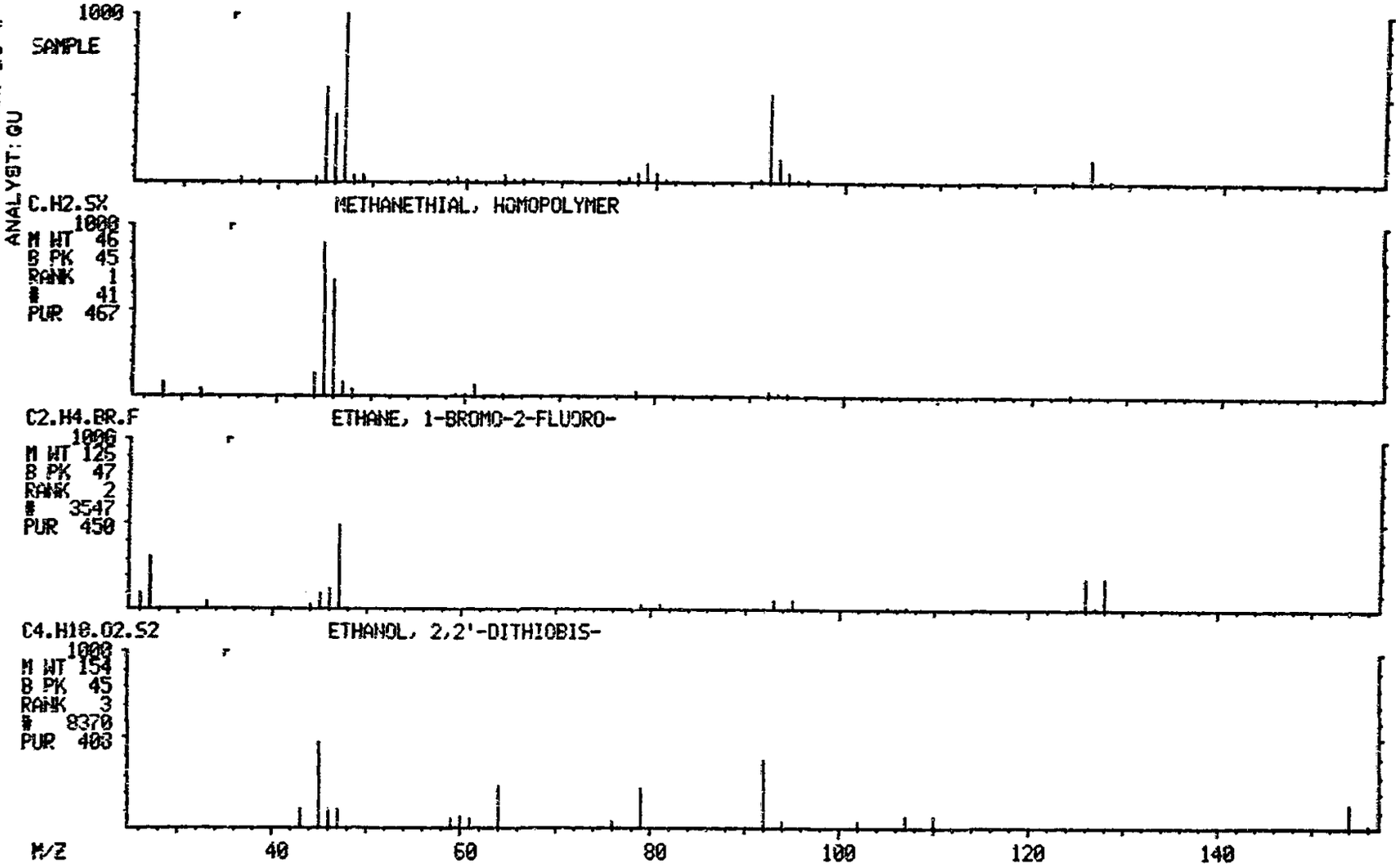
003731

LIBRARY SEARCH
01/10/87 15:14:00 + 10:17
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 # 617
CALI: 4U12050C06 # 3

BASE M/Z: 47
RIC: 105599.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

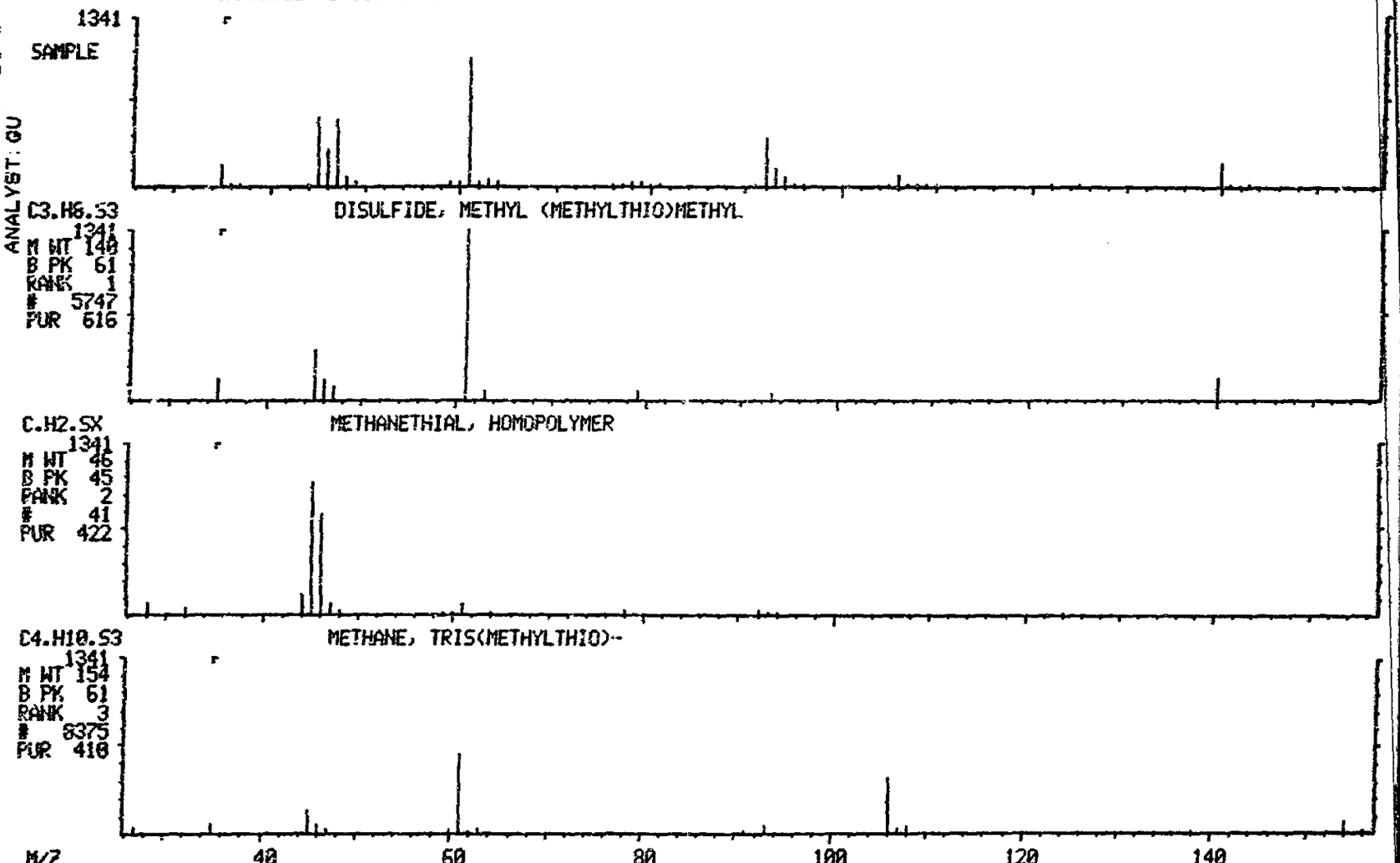
003731

LIBRARY SEARCH
01/10/87 15:14:00 + 12:03
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 # 723
CALI: 4U12050C06 # 3

BASE M/Z: 61
RIC: 89343.

SPECTRIX DC # ----19
ANALYST: GU



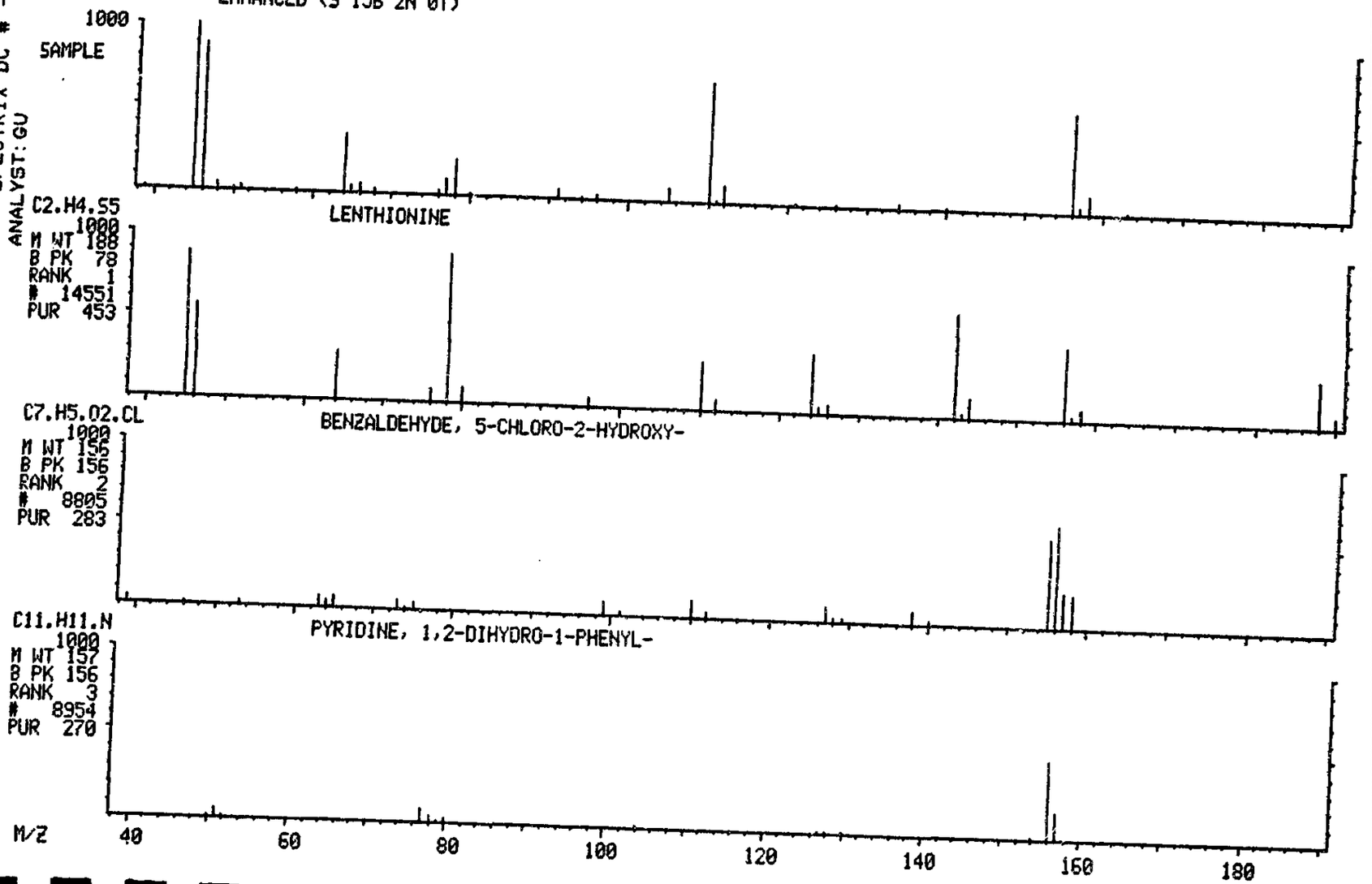
INST ID: 4530

LIBRARY SEARCH
01/10/87 15:14:00 + 15:08
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 # 908
CALI: 4U12050C06 # 3

BASE M/Z: 45
R.C: 5567.

SPECTRIX DC # ----19
ANALYST: GU



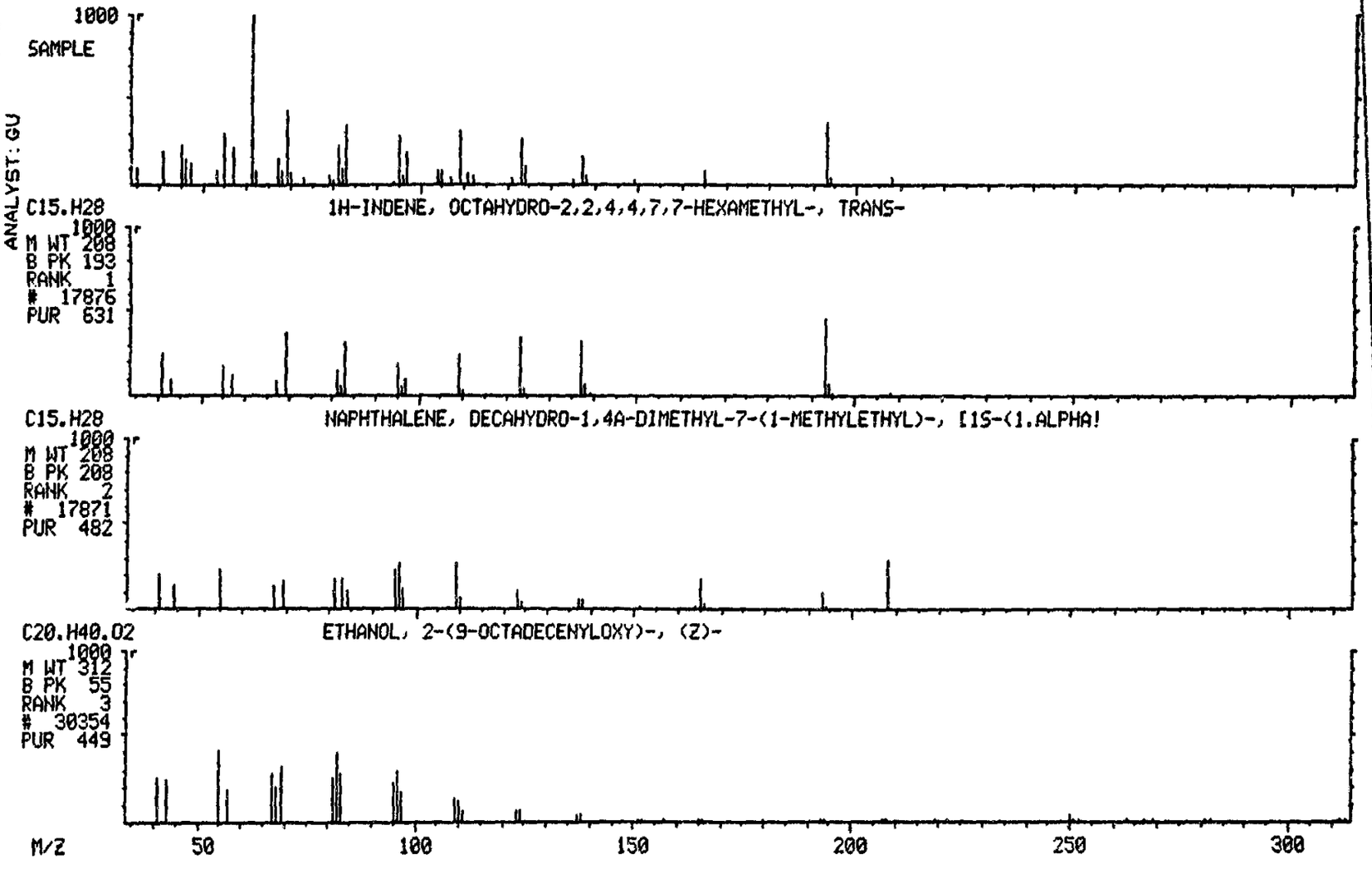
INST ID: 4530

LIBRARY SEARCH
01/10/87 15:14:00 + 16:23
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 # 983
CALI: 4U12050C06 # 3

BASE M/Z: 61
RIC: 3015.

SPECTRIX DC # -----19
ANALYST: GU



INST ID: 4530

LIBRARY SEARCH
01/10/87 15:14:00 + 17:03
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 #1023
CALI: 4U12050C06 # 3

BASE M/Z: 47
RIC: 26079.

SPECTRIX DC # ----19
ANALYST: GU

1230
SAMPLE

C.H2.SX
1230
M WT 46
B PK 45
RANK 1
41
PUR 500
METHANETHIAL, HOMOPOLYMER

C2.H4.O2.S
1230
M WT 92
B PK 47
RANK 2
837
PUR 420
ACETIC ACID, MERCAPTO-

C4.H8.S4
1230
M WT 184
B PK 45
RANK 3
13965
PUR 393
1,3,5,7-TETRATHIOCANE

INST ID: 4530

M/Z
40 60 80 100 120 140 160 180 200

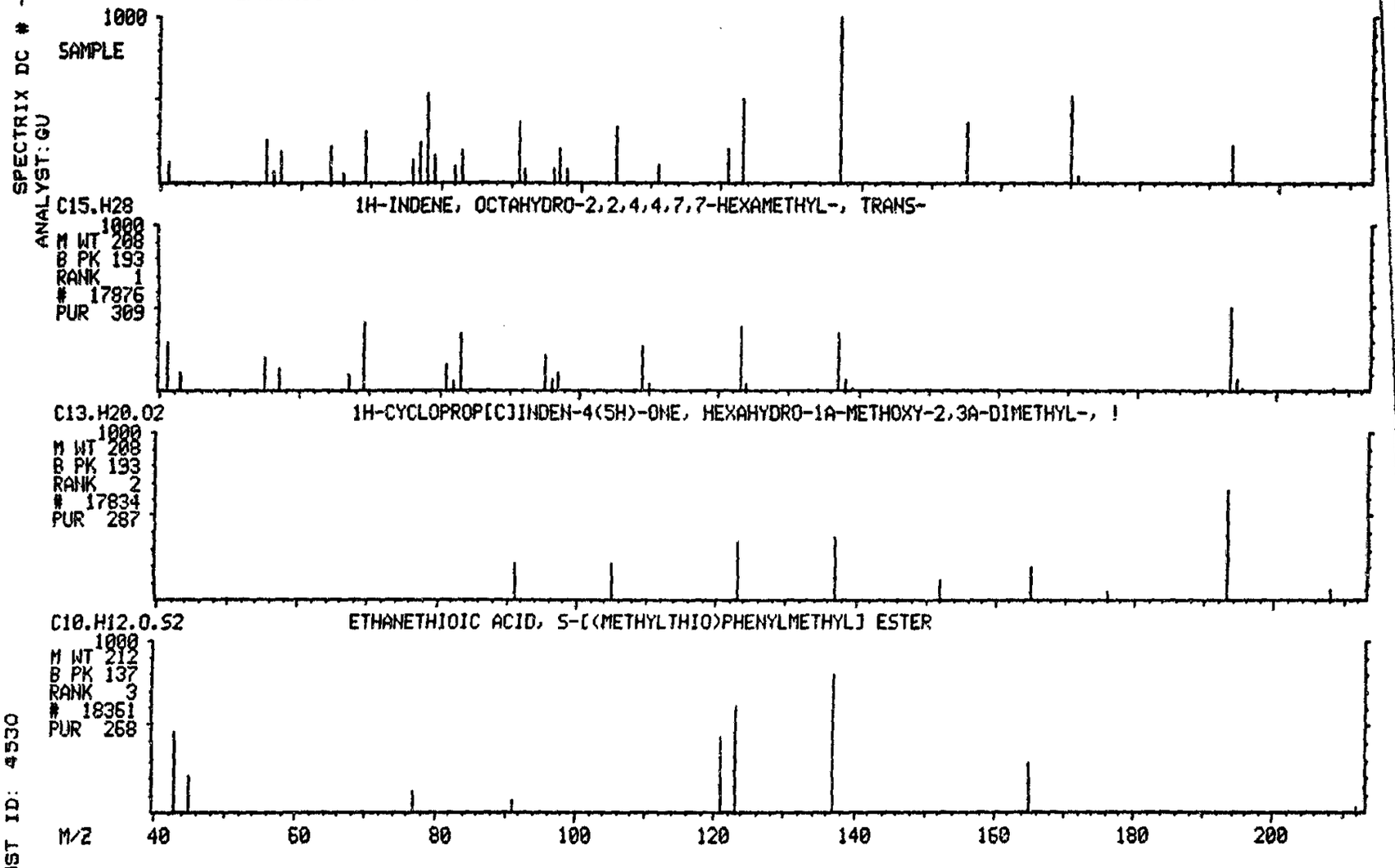
003736

LIBRARY SEARCH
01/10/87 15:14:00 + 18:09
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 #1089
CALI: 4U12050C06 # 3

BASE M/Z: 137
RIC: 1101.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

003736

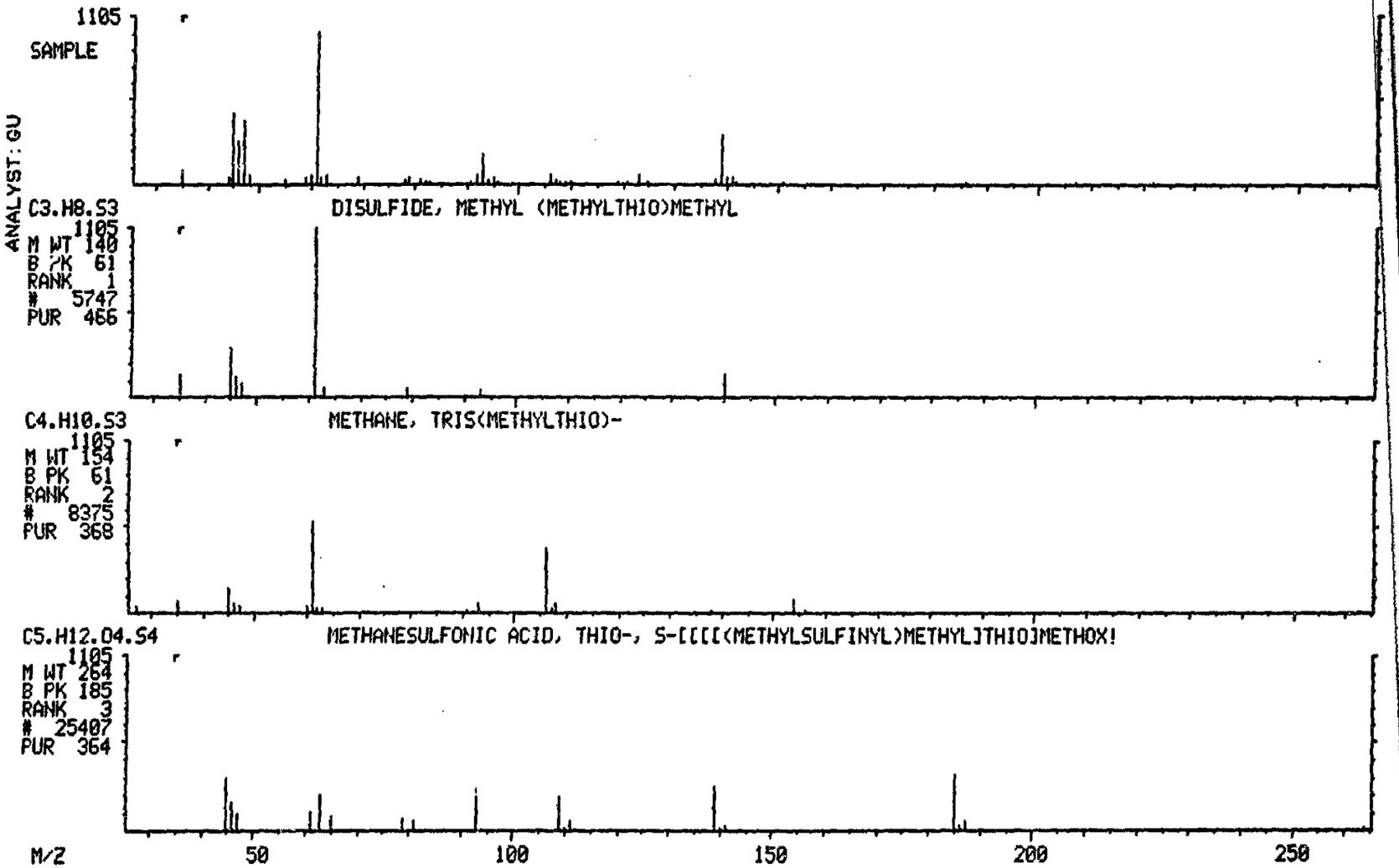
003737

LIBRARY SEARCH
01/10/87 15:14:00 + 18:19
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

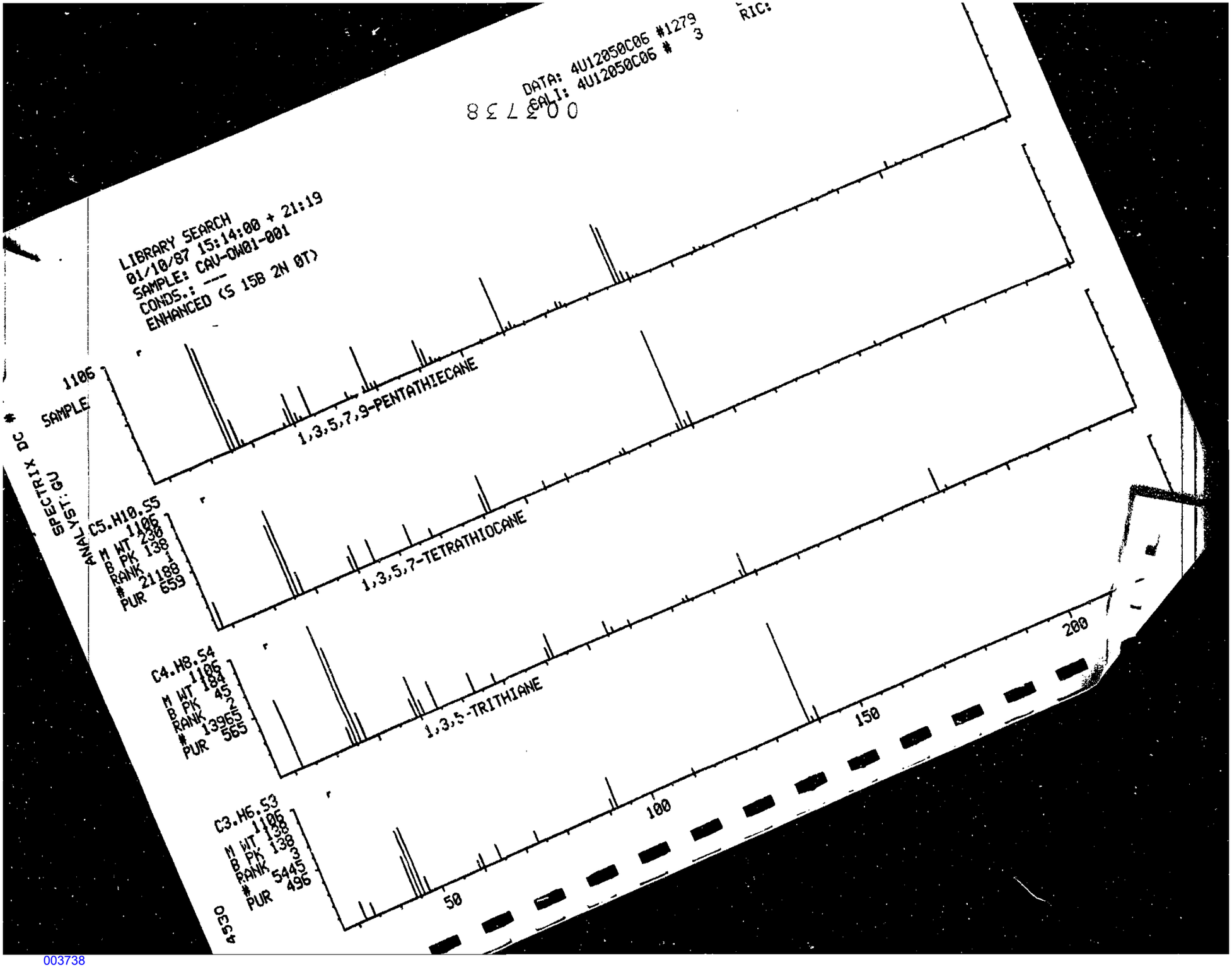
DATA: 4U12050C06 #1099
CALI: 4U12050C06 # 3

BASE M/Z: 61
RIC: 13071.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530


DATA: 4U12050C06 #1279
CAL1: 4U12050C06 # 3
RIC:
003738
LIBRARY SEARCH
01/10/87 15:14:00 + 21:19
SAMPLE: CAV-DW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)
SPECTRIX DC #
ANALYST: GU
SAMPLE 1106
1,3,5,7,9-PENTATHIECANE
C5.H10.S5
1106
M WT 230
B PK 138
RANK 1
21188
PUR 659
1,3,5,7-TETRATHIOCANE
C4.H8.S4
1106
M WT 184
B PK 45
RANK 2
13965
PUR 565
1,3,5-TRITHIANE
C3.H6.S3
1106
M WT 138
B PK 138
RANK 3
5445
PUR 496
4530
50
100
150
200

003738

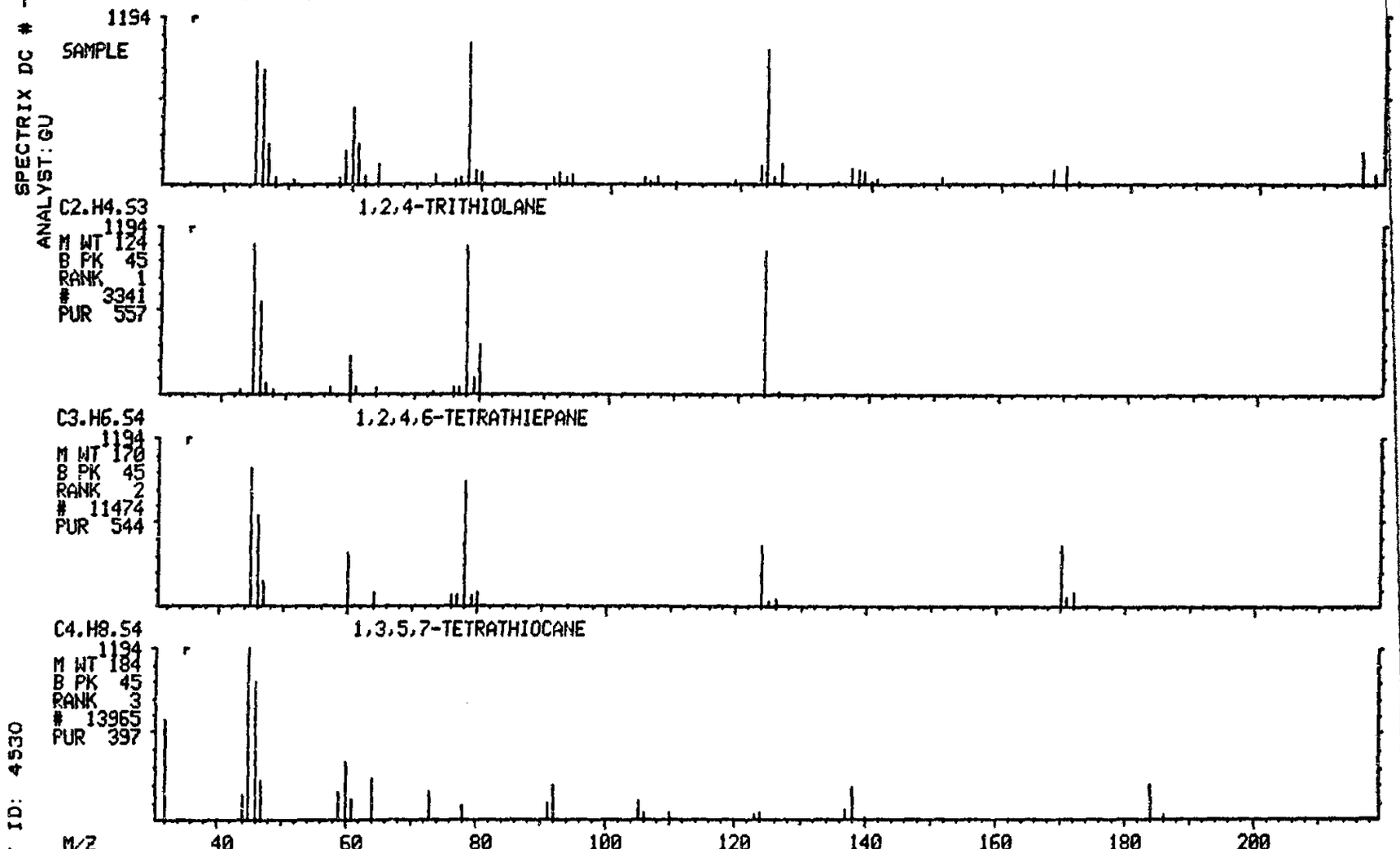
003739

LIBRARY SEARCH
01/10/87 15:14:00 + 23:25
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 #1405
CALI: 4U12050C06 # 3

BASE M/Z: 78
RIC: 5431.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

003739

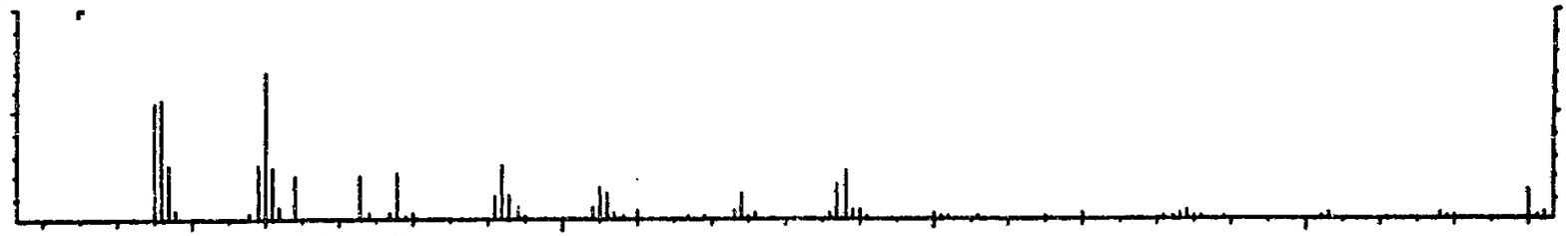
LIBRARY SEARCH
01/10/87 15:14:00 + 25:32
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C06 #1532
CALI: 4U12050C06 # 3

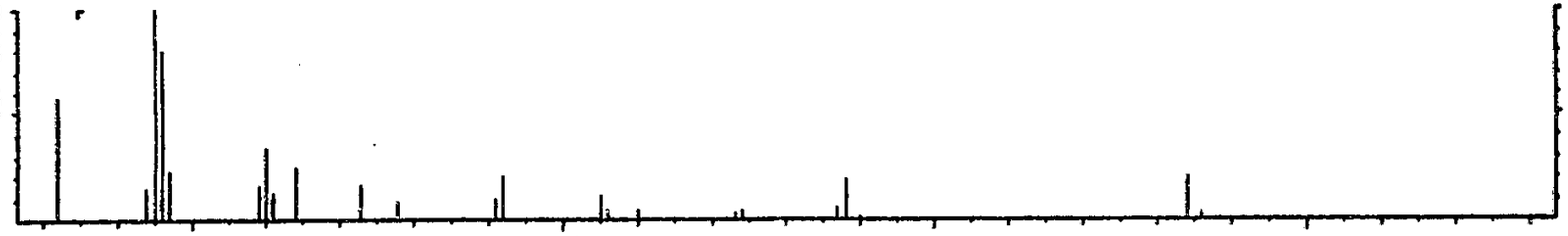
BASE M/Z: 60
RIC: 20479.

SPECTRIX DC # ----19
ANALYST: GU

1439
SAMPLE



C4.H8.S4 1,3,5,7-TETRATHIOCANE
1439
M WT 184
B PK 45
RANK 1
13965
PUR 617



C5.H10.S5 1,3,5,7,9-PENTATHIECANE
1439
M WT 230
B PK 138
RANK 2
21188
PUR 605

C4.H10.S2.CL.B.P PHOSPHORUS(1+), CHLORO(1,2,3-DITHIABOROLAN-B3)DIMETHYL-, (T-4)-
1439
M WT 199
B PK 46
RANK 3
16417
PUR 381

INST ID: 4530

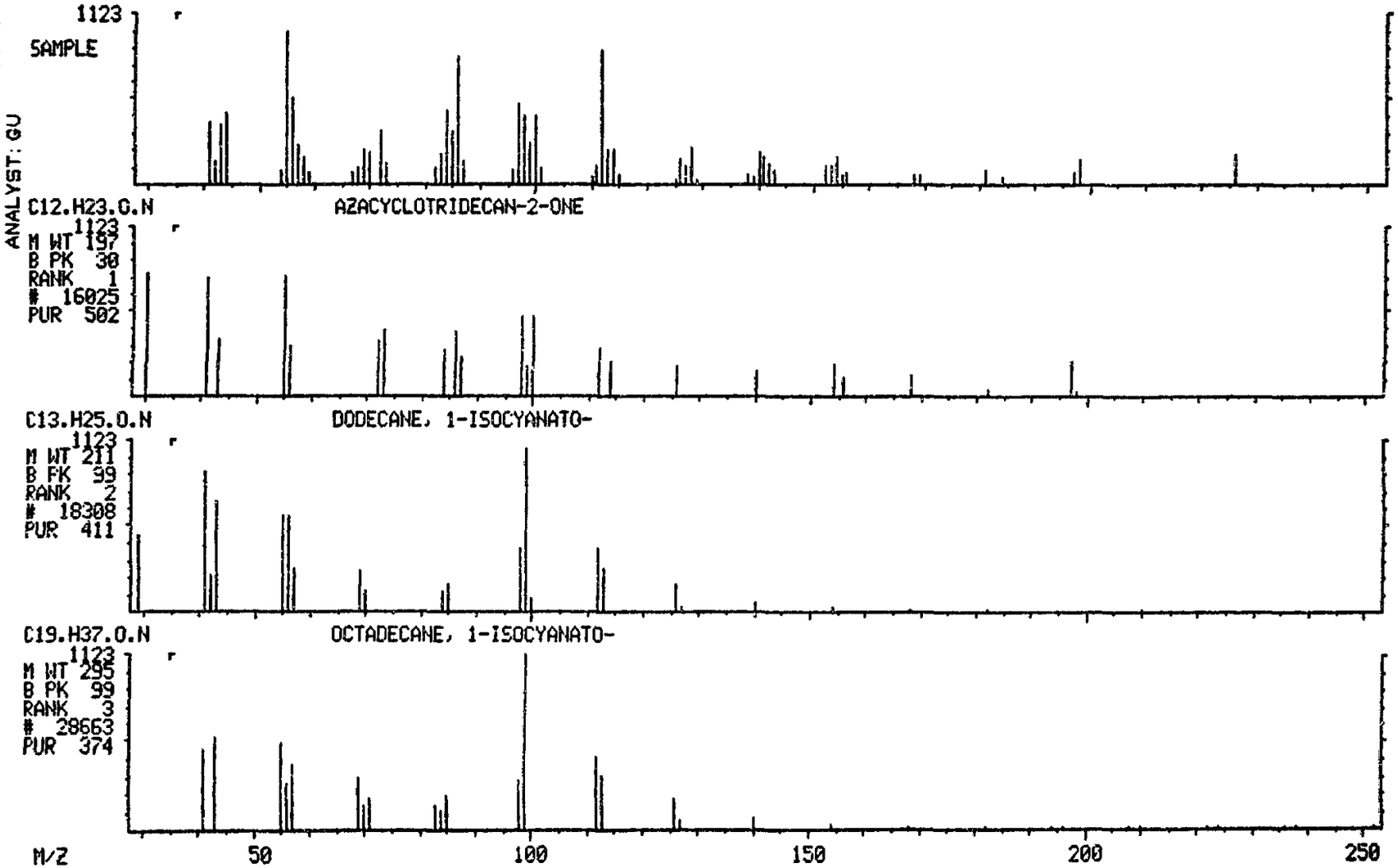
M/Z 50 100 150 200

LIBRARY SEARCH
01/10/87 15:14:00 + 26:24
SAMPLE: CAV-OW01-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

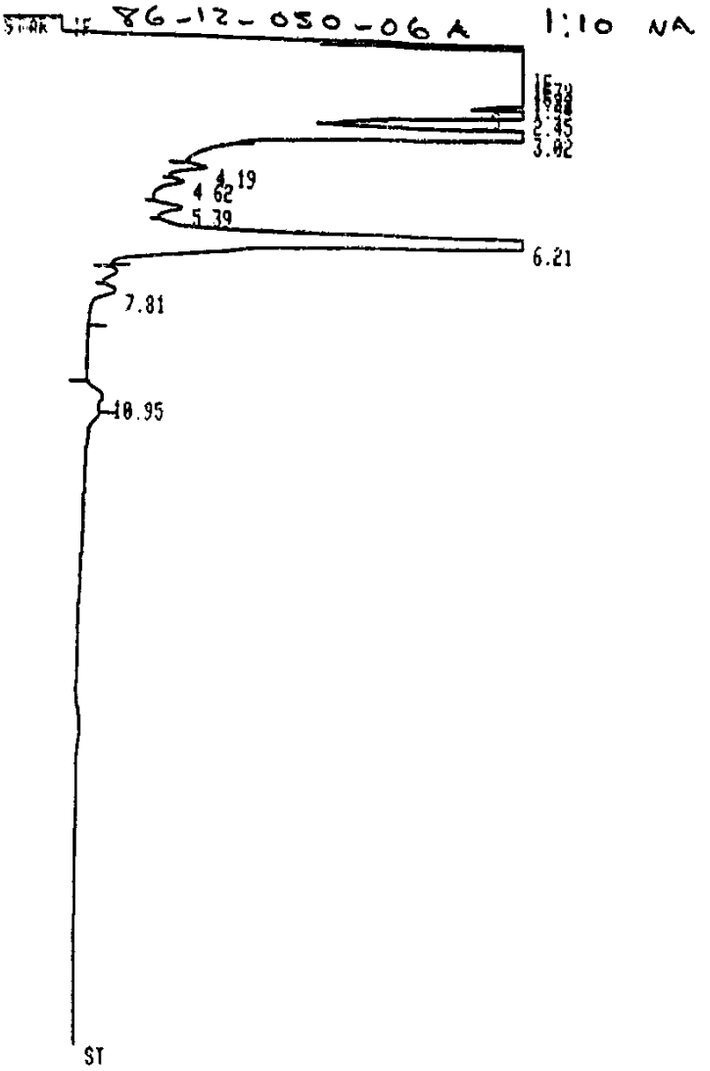
DATA: 4U12050C06 #1584
CALI: 4U12050C06 # 3

BASE M/Z: 55
RIC: 6647

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530



DC#_____-____-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. CAV-OW01-0
PESTICIDE FRACTION
1ST COLUMN QUANT.

1ST COLUMN ID
1.8m x 4mm ID x6mm (
1.5% SP 2250
1.95% SP 2401
100/120 SUPELCOPORT

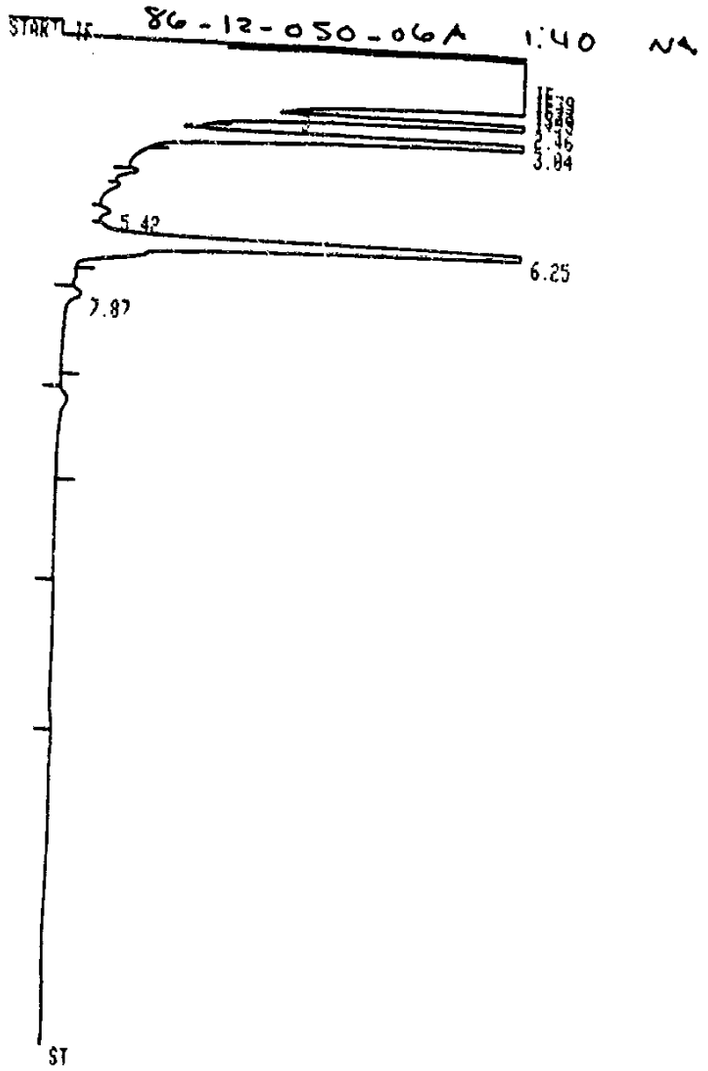
COLUMN TEMP. 203°C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6000

003

RUN # 165 JAN/15/87 05:19:49
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.39	2045801	DSBB	0.090	23.850
1.72	3180562	SPH	0.120	37.080
1.94	2334353	SHB	0.100	27.214
2.45	380223	BB	0.109	4.433
3.02	468547	BB	0.139	5.462
4.19	3458	BP	0.166	0.040
4.62	2355	PP	0.170	0.028
5.39	4681	PV	0.298	0.055
6.21	154382	VB	0.298	1.800
7.81	2090	PB	0.175	0.024
10.95	1206	PB	0.341	0.014



DC# _____ - _____ - _____
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. CAV-0W01-0C
PESTICIDE FRACTION
1ST COLUMN QUANT.

1ST COLUMN ID
1.8m x 4mm ID x6mm O
1.5% SP 2250
1.95% SP 2401
100/120 SUPELCOPORT

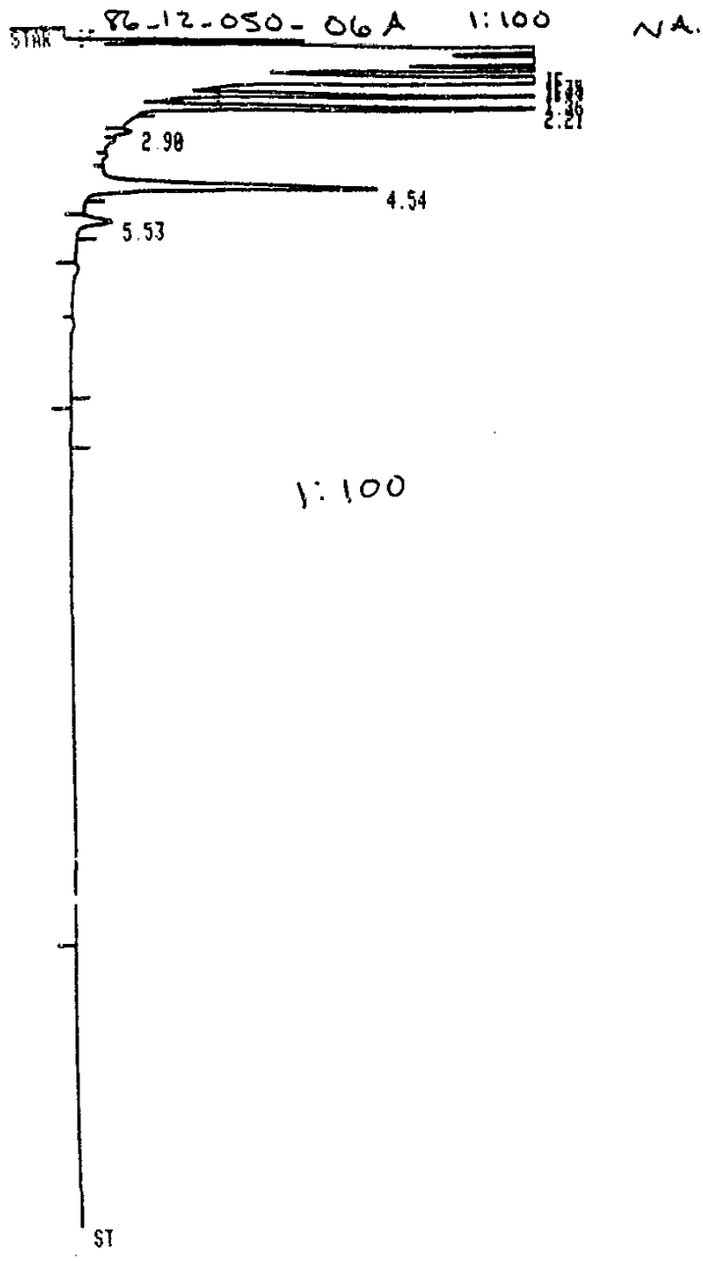
COLUMN TEMP. 203 °C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6000

RUN # 145
WORKFILE ID: C
WORKFILE NAME:

JAN/14/87 18:54:19

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.39	1365261	SBB	0.081	21.506
1.73	2777967	SPB	0.105	43.759
1.95	1818279	SPB	0.094	28.642
2.46	144943	BB	0.115	2.283
3.04	162046	BB	0.154	2.553
5.42	1712	PV	0.272	0.027
6.25	3160	VB	0.305	1.231



DC#_____-___-___
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. CAV-0W01-001
PESTICIDE FRACTION
2ND COLUMN CONFIRMAT:

2ND COLUMN II C
1.8m x2mm ID x6mm OD
3% SP-2100
100/120 SUPELCOPORT
COLUMN TEMP. 187 °C
VOLUME INJ. 1 µl
INSTRUMENT ID. Godo

RUN # 189 JAN/16/87 14:55:56
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.35	1482738	SPH	0.083	48.885
1.44	1255590	DSHB	0.082	41.396
1.86	99179	D BB	0.090	3.270
2.21	110584	D BB	0.104	3.646
2.90	3004	D BP	0.116	0.099
4.54	74306	PB	0.209	2.450
5.53	7732	BB	0.210	0.255

SPECTRIX REPORT

Work Order # 86-12-030

Received: 12/11/86

Results by Sample

SAMPLE ID CAV-OW01-001 (LLW) SAMPLE # 06 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	166 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	<10 ug/L	FE	6230 ug/L	HG	<0.2 ug/L	NI	40 ug/L	PB	28.3 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	73 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: CAV-OW13-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003746

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: CAV-OW13-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205007
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yppn

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
DATE ANALYZED: 12/16/86

DATAFILE: 4U12050V07

DILUTION FACTOR: 1:1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003747

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: CAV-OW13-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205007
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/10/87

DATAFILE: 4U12050C07
DILUTION FACTOR: 2.0

CAS #	COMPOUND	UG/L
C315	PHENOL	20 U
C325	BIS(2-CHLOROETHYL)ETHER	20 U
C330	2-CHLOROPHENOL	20 U
C335	1,3-DICHLOROBENZENE	20 U
C340	1,4-DICHLOROBENZENE	20 U
C345	BENZYL ALCOHOL	20 U
C350	1,2-DICHLOROBENZENE	20 U
C355	2-METHYLPHENOL	20 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	20 U
C365	4-METHYLPHENOL	20 U
C370	N-NITROSODIPROPYLAMINE	20 U
C375	HEXACHLOROETHANE	20 U
C410	NITROBENZENE	20 U
C415	ISOPHORONE	20 U
C420	2-NITROPHENOL	20 U
C425	2,4-DIMETHYLPHENOL	20 U
C430	BENZOIC ACID	100 U
C435	BIS(2-CHLOROETHOXY)METHANE	20 U
C440	2,4-DICHLOROPHENOL	20 U
C445	1,2,4-TRICHLOROBENZENE	20 U
C450	NAPHTHALENE	2 J
C455	4-CHLOROANILINE	20 U
C460	HEXACHLOROBUTADIENE	20 U
C465	P-CHLORO-M-CRESOL	20 U
C470	2-METHYLNAPHTHALENE	20 U
C510	HEXACHLOROCYCLOPENTADIENE	20 U
C515	2,4,6-TRICHLOROPHENOL	20 U
C520	2,4,5-TRICHLOROPHENOL	100 U
C525	2-CHLORONAPHTHALENE	20 U
C530	2-NITROANILINE	100 U
C535	DIMETHYL PHTHALATE	20 U
C540	ACENAPHTHYLENE	20 U
C545	3-NITROANILINE	100 U
C550	ACENAPHTHENE	20 U
C555	2,4-DINITROPHENOL	100 U
C560	4-NITROPHENOL	100 U
C565	DIBENZOFURAN	20 U
C570	2,4-DINITROTOLUENE	20 U
C575	2,6-DINITROTOLUENE	20 U

003748

SPECTRIX DC # ---- 8

SAMPLE NUMBER: CAV-OW13-001

:MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C07

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	20 U
C585	4-CHLOROPHENYL PHENYL ETHER	20 U
C590	FLUORENE	20 U
C595	4-NITROANILINE	100 U
C610	4,6-DINITRO-2-METHYLPHENOL	100 U
C615	N-NITROSODIPHENYLAMINE	20 U
C625	4-BROMOPHENYL PHENYL ETHER	20 U
C630	HEXACHLOROBENZENE	20 U
C635	PENTACHLOROPHENOL	100 U
C640	PHENANTHRENE	20 U
C645	ANTHRACENE	20 U
C650	DI-N-BUTYL PHTHALATE	20 U
C655	FLUORANTHENE	20 U
C715	PYRENE	20 U
C720	BUTYL BENZYL PHTHALATE	20 U
C725	3,3'-DICHLOROBENZIDINE	40 U
C730	BENZO(A)ANTHRACENE	20 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	20 U
C740	CHRYSENE	20 U
C760	DI-N-OCTYL PHTHALATE	20 U
C765	BENZO(B)FLUORANTHENE	20 U
C770	BENZO(K)FLUORANTHENE	20 U
C775	BENZO(A)PYRENE	20 U
C780	INDENO(1,2,3-CD)PYRENE	20 U
C785	DIBENZO(A,H)ANTHRACENE	20 U
C790	BENZO(GHI)PERYLENE	20 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
U = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003749

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-07A

DC No: KEYSTONE
SMO No: CAV-OW13-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/14/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No/
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003750

INST ID: 4000 SPECTRIX DC # ----- B

SAMPLE NUMBER: CAV-OW13-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: MB DATAFILE: 4U12050V07

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003751

INST ID: 4530

SPECTRIX DC # ---- 8

SAMPLE: CAV-OW13-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ---

QC REPORT NO.: ---

ANALYST: GU

DATAFILE: 4U12050C07

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	760		17 UG/L

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003752

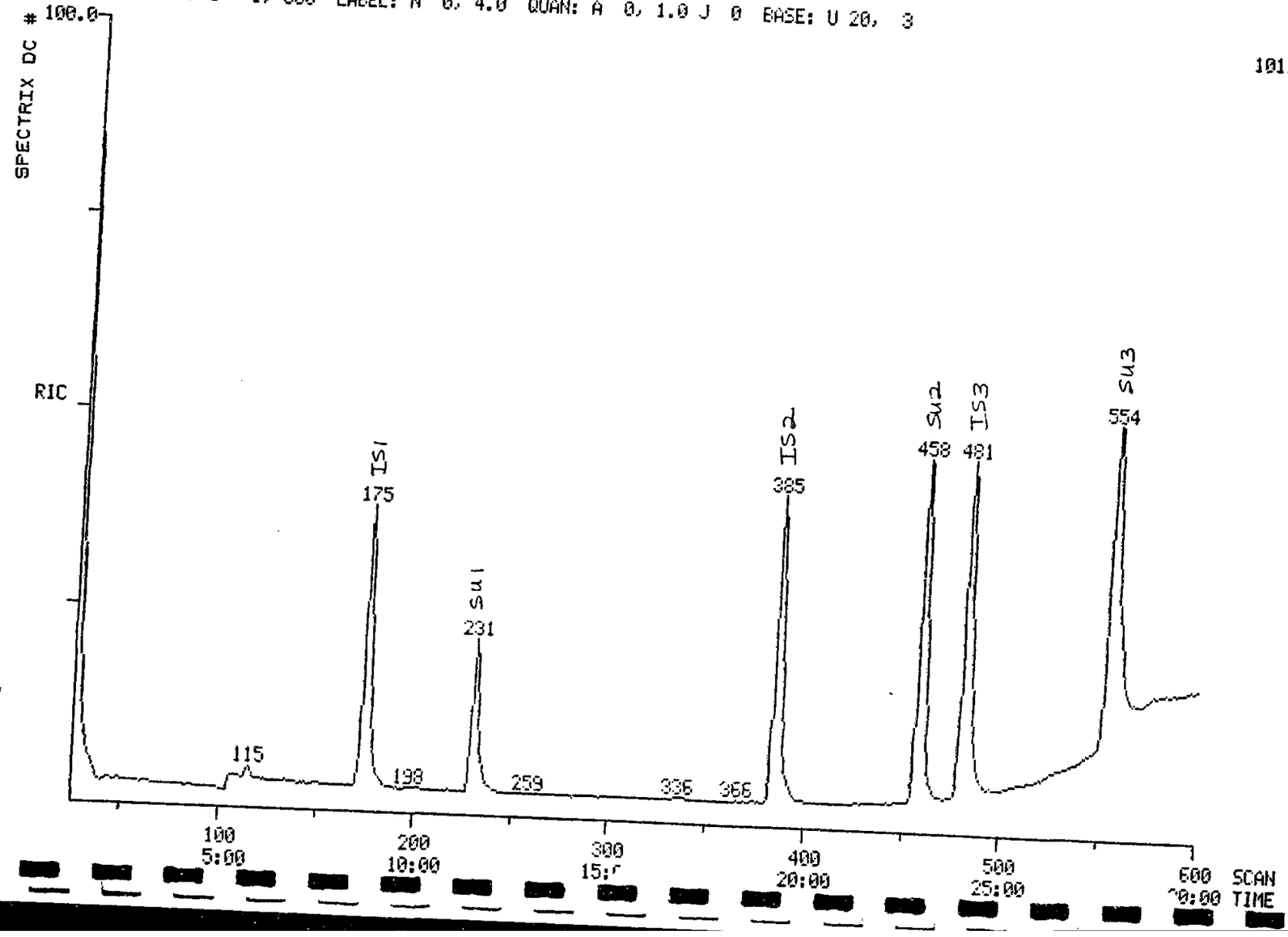
003753

RIC
12/16/86 14:28:00
SAMPLE: CAV-OW13-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V07 #1
CALI: 4U12050V07 #3

SCANS 25 TO 600

101120.



003753

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

AMPLE ID. CAV-OW13-001

FILENAME 4U12050V07

CLIENT KEYSTONE

DATE INJECTED 12/16/86 14:29:00

CALIB STD DATE 12-14-86

INST 4000

ANALYST MB

VERIFIED BY NOT

CORR. FACTOR 1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
175	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	15917
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	69631
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	57056
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	90 %	1.320	20722
458	CS05	D8-TOLUENE	**SU2**	98	98 %	0.952	61164
554	CS10	F-BROMOFLUOROBENZENE	**SU3**	95	104 %	1.152	43229

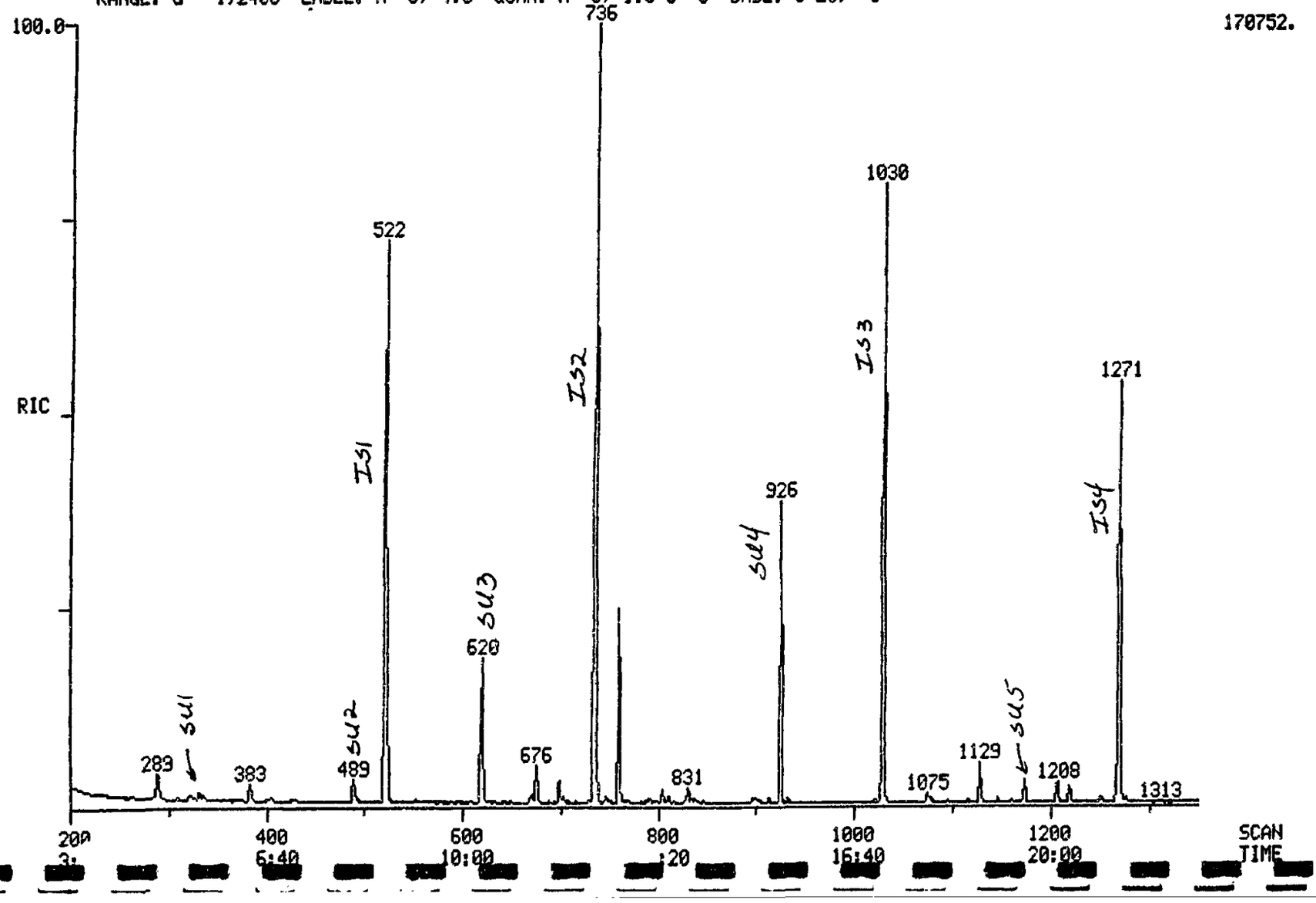
RIC
01/10/87 16:06:00
SAMPLE: CAV-OW13-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C07 #1
CALI: 4U12050C07 #3

SCANS 200 TO 1350

SPECTRIX DC # ----14

INST ID: 4530



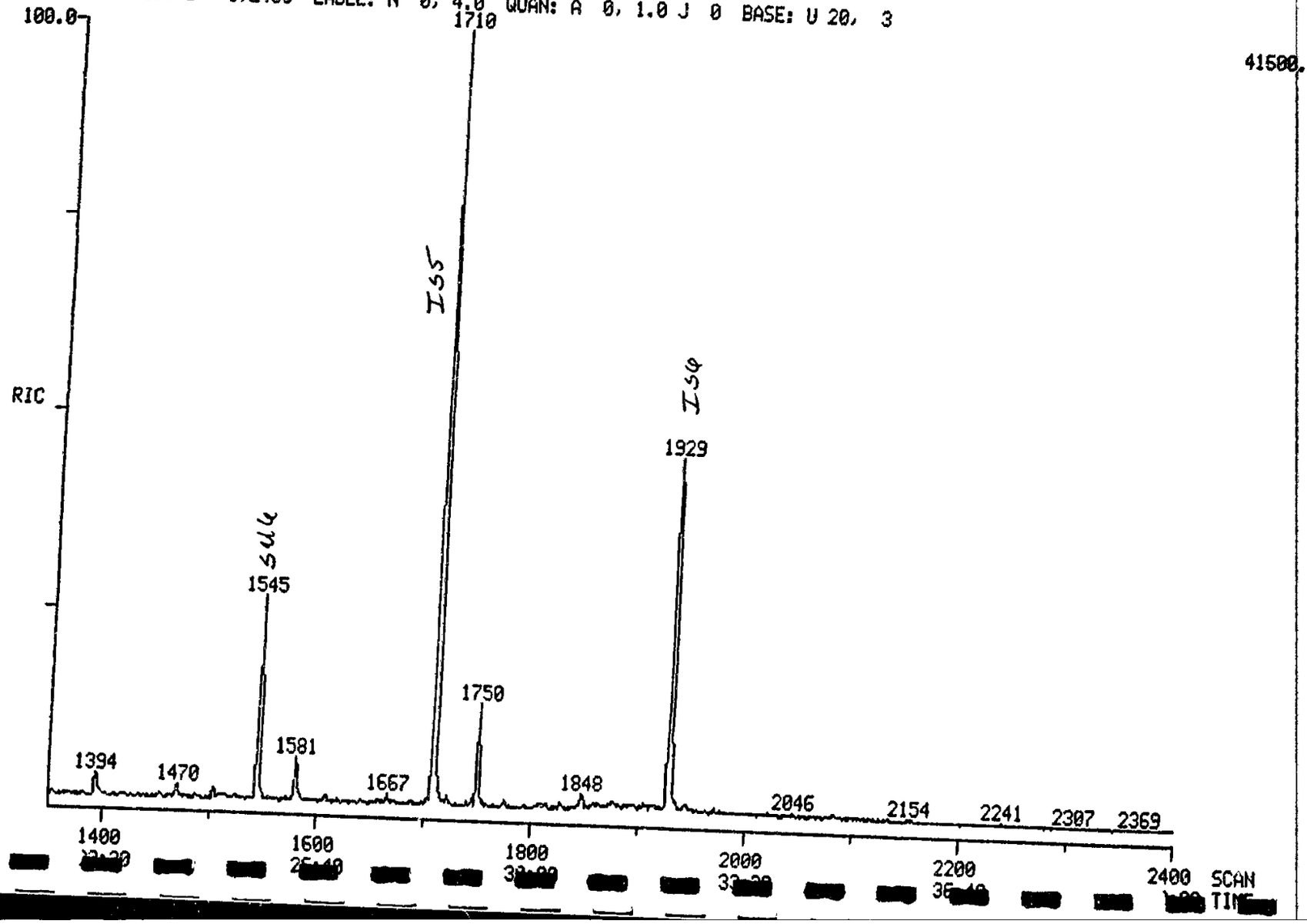
003756

RIC
01/10/87 16:06:00
SAMPLE: CAV-OW13-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C07 #1
CALI: 4U12050C07 #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14



NST ID: 4530

003756

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID.	CAV-GW13-001		
.LENAME	4U12050C07	INST ID.	4530
CLIENT	KEYSTONE	ANALYST	GU
DATE INJECTED	01/10/87 16:06:00	VERIFIED BY	GU
CALIB STD DATE	01/08/87	CORR. FACTOR	2.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
522	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	80 UG/L	1.000	48700
736	CI40	NAPHTHALENE-D8 ** IS2 **	136	80 UG/L	1.000	18500
1030	CI50	ACENAPHTHENE-D10 ** IS3 **	164	80 UG/L	1.000	90845
1271	CI60	PHENANTHRENE-D10 ** IS4 **	188	80 UG/L	1.000	112455
1710	CI70	CHRYSENE-D12 ** IS5 **	240	80 UG/L	1.000	59307
1929	CI75	PERYLENE-D12 ** IS6 **	264	80 UG/L	1.000	31495
322	CS50	2-FLUOROPHENOL ** SU1 **	112	2 %	0.617	174
489	CS45	PHENOL-D5 ** SU2 **	99	5 %	0.937	594
1160	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	1 %	1.126	12
620	CS20	NITROBENZENE-D5 ** SU3 **	82	49 %	0.842	2592
926	CS25	2-FLUUOROBIPHENYL ** SU4 **	172	47 %	0.899	5268
1545	CS30	TERPHENYL-D14 ** SU6 **	244	32 %	0.904	13410
738	C450	NAPHTHALENE	128	2 UG/L	1.003	374
1750	C735	BIS(2-ETHYLHEXYL)PHTHALATE *	149	4 UG/L	1.023	313
148	C760	DI-N-OCTYL PHTHALATE *	149	1 UG/L	0.958	101

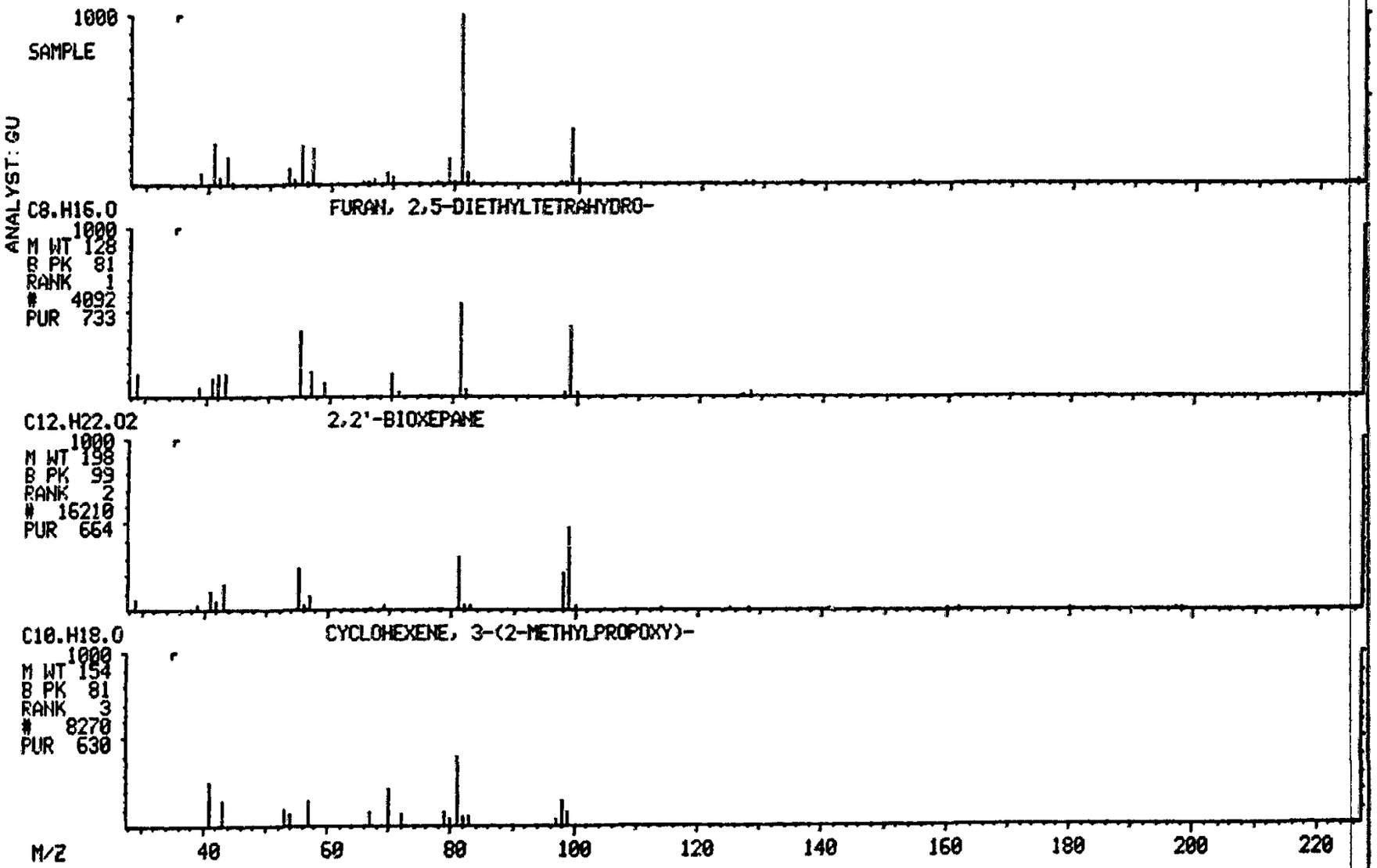
* BLANK CORRECTED ON DATA SHEET

LIBRARY SEARCH
01/10/87 16:06:00 + 12:40
SAMPLE: CAV-OW13-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

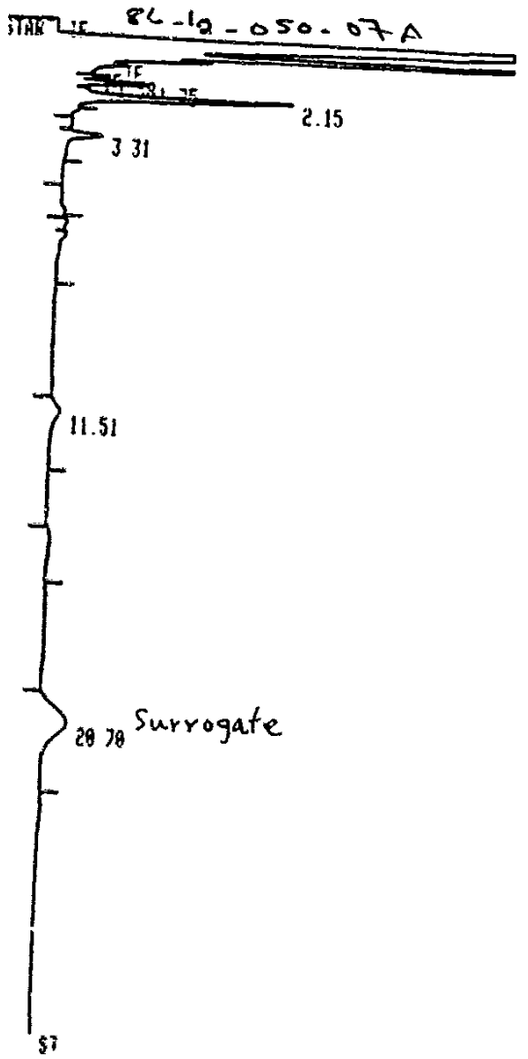
DATA: 4U12050C07 # 760
CALI: 4U12050C07 # 3

BASE M/Z: 81
RIC: 31967.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530



NA.

DC#_____-____-____
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. CAV-OW13-0
PESTICIDE FRACTION
1ST COLUMN QUANT.

1ST COLUMN ID
1.8m x 4mm ID x6mm
1.5% SP 2250
1.95% SP 2401
100/120 SUPELCOPORT

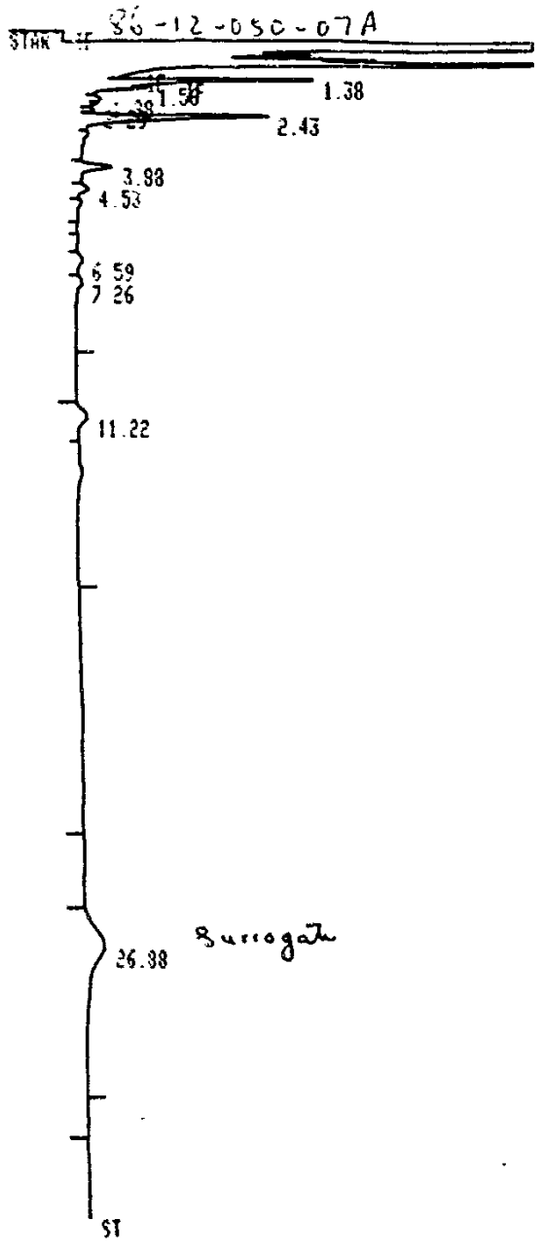
COLUMN TEMP. 203°C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6000

RUN # 146
WORKFILE ID: C
WORKFILE NAME:

JAN/14/87 19:25:36

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.58	2835	D BV	0.077	5.797
1.75	8409	D VP	0.101	17.194
2.15	28340	PB	0.129	57.947
3.31	4673	PB	0.169	9.555
11.51	1231	BB	0.568	2.517
20.70	3419	BB	0.979	6.991



N.A.

DC#_____-___-___
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. CAV-0013-001
PESTICIDE FRACTION
2ND COLUMN CONFIRMATI

2ND COLUMN II C
1.8m x2mm ID x6mm OD
3% SP-2100
100/120 SUPELCOPORT
COLUMN TEMP. 187 °C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6098

RUN # 192 JAN/16/87 16:44:46
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.38	51552	D BV	0.102	38.463
1.56	10593	D VP	0.082	7.904
1.88	2077	PV	0.112	1.550
2.20	1170	D PV	0.090	0.873
2.43	46614	VV	0.137	34.779
3.88	8042	PV	0.193	6.000
4.53	2629	VP	0.222	1.962
6.59	1537	PV	0.328	1.147
7.26	1536	VB	0.378	1.146
11.22	2962	BV	0.483	2.210
26.88	5318	BB	1.411	3.968

SPECTREX LOC REPORT

Work Order # 86-12-050

Received: 12/11/86

Results by Sample

SAMPLE ID CAV-DW13-001 (LLW) SAMPLE # 07 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	30 ug/L
CU	13 ug/L	FE	10000 ug/L	HG	<0.2 ug/L	NI	54 ug/L	PB	46.2 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	76 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW02-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003762

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW02-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205008
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yyn

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/17/86
DATE ANALYZED: 12/17/86

DATAFILE: 4U12050V08

DILUTION FACTOR: 1:20

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	200 U
C015	BROMOMETHANE	200 U
C020	VINYL CHLORIDE	200 U
C025	CHLOROETHANE	200 U
C030	METHYLENE CHLORIDE	400
C035	ACETONE	200 U
C040	CARBON DISULFIDE	100 U
C045	1,1-DICHLOROETHENE	100 U
C050	1,1-DICHLOROETHANE	100 U
C055	TRANS-1,2-DICHLOROETHENE	100 U
C060	CHLOROFORM	100 U
C065	1,2-DICHLOROETHANE	100 U
C110	2-BUTANONE	200 U
C115	1,1,1-TRICHLOROETHANE	100 U
C120	CARBON TETRACHLORIDE	100 U
C125	VINYL ACETATE	200 U
C130	BROMODICHLOROMETHANE	100 U
C140	1,2-DICHLOROPROPANE	100 U
C145	TRANS-1,3-DICHLOROPROPENE	100 U
C150	TRICHLOROETHENE	100 U
C155	DIBROMOCHLOROMETHANE	100 U
C160	1,1,2-TRICHLOROETHANE	100 U
C165	BENZENE	90
C170	CIS-1,3-DICHLOROPROPENE	100 U
C175	2-CHLOROETHYLVINYLETHER	200 U
C180	BROMOFORM	100 U
C210	2-HEXANONE	200 U
C205	4-METHYL-2-PENTANONE	200 U
C220	TETRACHLOROETHENE	100 U
C225	1,1,2,2-TETRACHLOROETHANE	100 U
C230	TOLUENE	120
C235	CHLOROBENZENE	100 U
C240	ETHYLBENZENE	160
C245	STYRENE	100 U
C250	TOTAL XYLENES	400

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003763

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW02-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205008
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/11/87

DATAFILE: 4U12050C08A
DILUTION FACTOR: 20

CAS #	COMPOUND	UG/L
C315	PHENOL	200 U
C325	BIS(2-CHLOROETHYL)ETHER	200 U
C330	2-CHLOROPHENOL	200 U
C335	1,3-DICHLOROBENZENE	200 U
C340	1,4-DICHLOROBENZENE	200 U
C345	BENZYL ALCOHOL	200 U
C350	1,2-DICHLOROBENZENE	200 U
C355	2-METHYLPHENOL	31 J
C360	BIS(2-CHLOROISOPROPYL)ETHER	200 U
C365	4-METHYLPHENOL	200 U
C370	N-NITROSODIPROPYLAMINE	200 U
C375	HEXACHLOROETHANE	200 U
C410	NITROBENZENE	200 U
C415	ISOPHORONE	200 U
C420	2-NITROPHENOL	200 U
C425	2,4-DIMETHYLPHENOL	34 J
C430	BENZOIC ACID	1000 U
C435	BIS(2-CHLOROETHOXY)METHANE	200 U
C440	2,4-DICHLOROPHENOL	200 U
C445	1,2,4-TRICHLOROBENZENE	200 U
C450	NAPHTHALENE	11000
C455	4-CHLOROANILINE	200 U
C460	HEXACHLOROBUTADIENE	200 U
C465	P-CHLORO-M-CRESOL	200 U
C470	2-METHYLNAPHTHALENE	530
C510	HEXACHLOROCYCLOPENTADIENE	200 U
C515	2,4,6-TRICHLOROPHENOL	200 U
C520	2,4,5-TRICHLOROPHENOL	1000 U
C525	2-CHLORONAPHTHALENE	200 U
C530	2-NITROANILINE	1000 U
C535	DIMETHYL PHTHALATE	200 U
C540	ACENAPHTHYLENE	200 U
C545	3-NITROANILINE	1000 U
C550	ACENAPHTHENE	540
C555	2,4-DINITROPHENOL	1000 U
C560	4-NITROPHENOL	1000 U
C565	DIBENZOFURAN	370
C570	2,4-DINITROTOLUENE	200 U
C575	2,6-DINITROTOLUENE	200 U

003764

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW02-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C08A

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	200 U
C585	4-CHLOROPHENYL PHENYL ETHER	200 U
C590	FLUORENE	220
C595	4-NITROANILINE	1000 U
C610	4,6-DINITRO-2-METHYLPHENOL	1000 U
C615	N-NITROSODIPHENYLAMINE	200 U
C625	4-BROMOPHENYL PHENYL ETHER	200 U
C630	HEXACHLOROBENZENE	200 U
C635	PENTACHLOROPHENOL	1000 U
C640	PHENANTHRENE	320
C645	ANTHRACENE	41 J
C650	DI-N-BUTYL PHTHALATE	200 U
C655	FLUORANTHENE	45 J
C715	PYRENE	34 J
C720	BUTYL BENZYL PHTHALATE	200 U
C725	3,3'-DICHLOROBENZIDINE	400 U
C730	BENZO(A)ANTHRACENE	200 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	200 U
C740	CHRYSENE	200 U
C760	DI-N-OCTYL PHTHALATE	200 U
C765	BENZO(B)FLUORANTHENE	200 U
C770	BENZO(K)FLUORANTHENE	200 U
C775	BENZO(A)PYRENE	200 U
C780	INDENO(1,2,3-CD)PYRENE	200 U
C785	DIBENZO(A,H)ANTHRACENE	200 U
C790	BENZO(GHI)PERYLENE	200 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003765

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-08A

DC No: KEYSTONE
SMO No: SCK-MW02-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/14/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003766

INST ID: 4000

SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW02-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ----

QC REPORT NO.: ----

ANALYST: NOT

DATAFILE: 4U12050V08

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003767

INST ID 4530 SPECTRIX DC # ---- B

SAMPLE: SCK-MW02-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

GC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12050C08A

B. TENTATIVELY IDENTIFIED COMPOUNDS

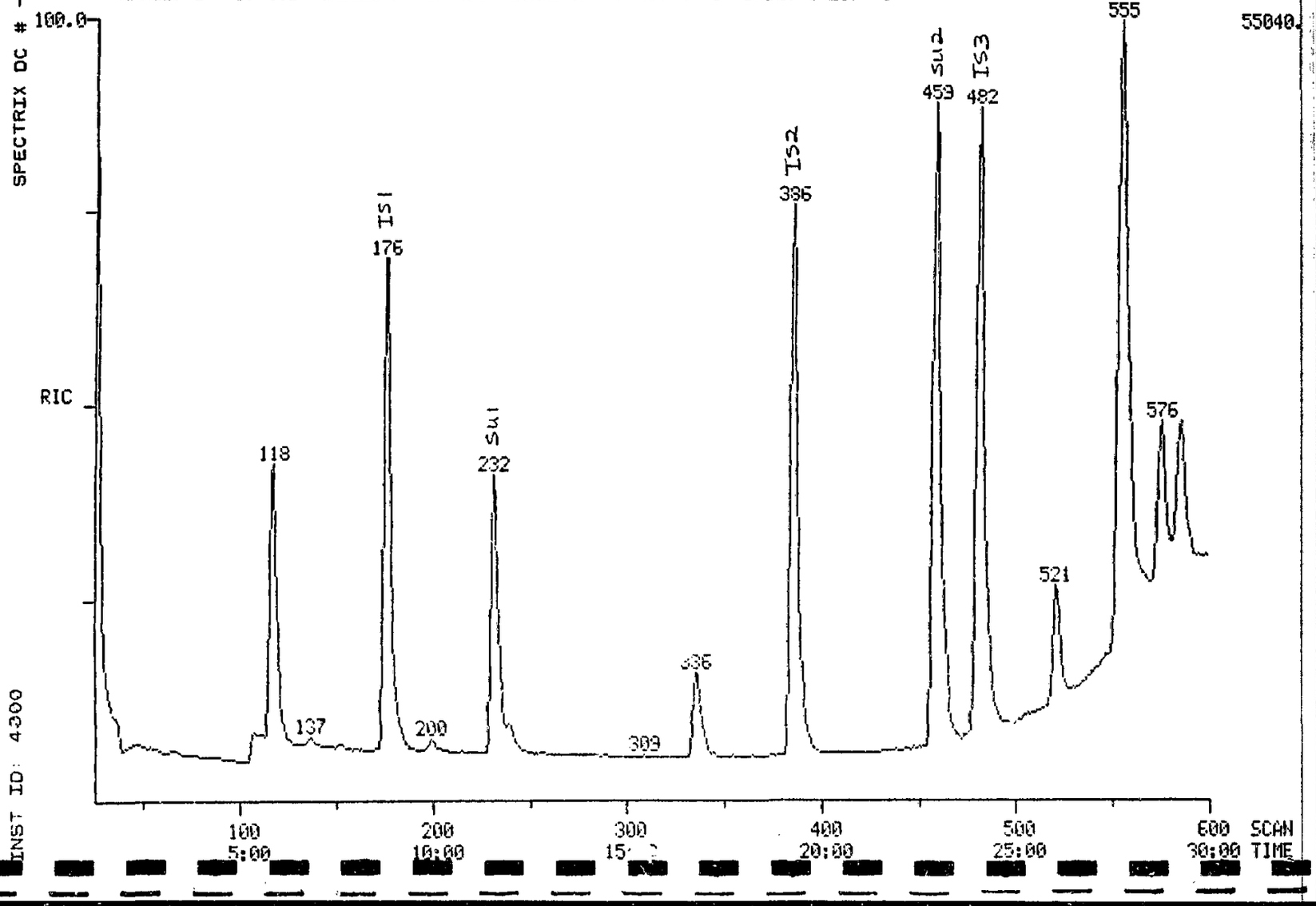
CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
				UG/L
108-38-3	BENZENE, 1,3-DIMETHYL-	306	960	130 J
89-51-0	BENZENEACETIC ACID, 2-CARBOXY-	502	872	420 J
611-15-4	BENZENE, 1-ETHENYL-2-METHYL-	557	959	730 J
95-13-6	1H-INDENE	568	943	540 J
529-19-1	BENZONITRILE, 2-METHYL-	600	928	140 J
59-52-8	BENZOFURAN, 7-METHYL-	644	888	99 J
95-15-8	BENZO[B]THIOPHENE	749	924	650 J
2471-83-2	1H-INDENE, 1-ETHYLIDENE-	871	879	470 J
97-34-8	PHENOL, 3,5-DIETHYL-	905	813	200 J
92-52-4	1,1'-BIPHENYL	936	849	190 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1040		220 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1147		160 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1210		240 J
580-51-8	[1,1'-BIPHENYL]-3-OL	1217	843	140 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1251		290 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1259		140 J
2788-23-0	9H-CARBAZOLE, 9-NITROSO-	1312	892	740 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003769

RIC
12/17/86 16:59:00
SAMPLE: SCK-MW02-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V08 #1 SCANS 25 TO 600
CALI: 4U12050V08 #3



003769

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

AMPLE ID.	SCK-MW02-001		
FILENAME	4U12050V08	INST	4000
CLIENT	KEYSTONE	ANALYST	NOT
DATE INJECTED	12/17/86 16:59:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	20.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
176	CI01	BROMOCHLOROMETHANE	**IS1**	128	1000 UG/L	1.000	15872
386	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	1000 UG/L	1.000	69310
482	CI20	D5-CHLOROBENZENE	**IS3**	117	1000 UG/L	1.000	57438
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	94 %	1.318	21481
459	CS05	D8-TOLUENE	**SU2**	98	99 %	0.952	60702
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	98 %	1.151	40919
117	C030	METHYLENE CHLORIDE *		84	440 UG/L	0.665	11955
336	C165	BENZENE *		78	127 UG/L	0.870	11178
463	C230	TOLUENE		92	124 UG/L	0.961	6441
521	C240	ETHYLBENZENE		106	158 UG/L	1.081	4409
585	C250	TOTAL XYLENES		106	395 UG/L	1.214	14160

* BLANK CORRECTED ON DATA SHEET

003771

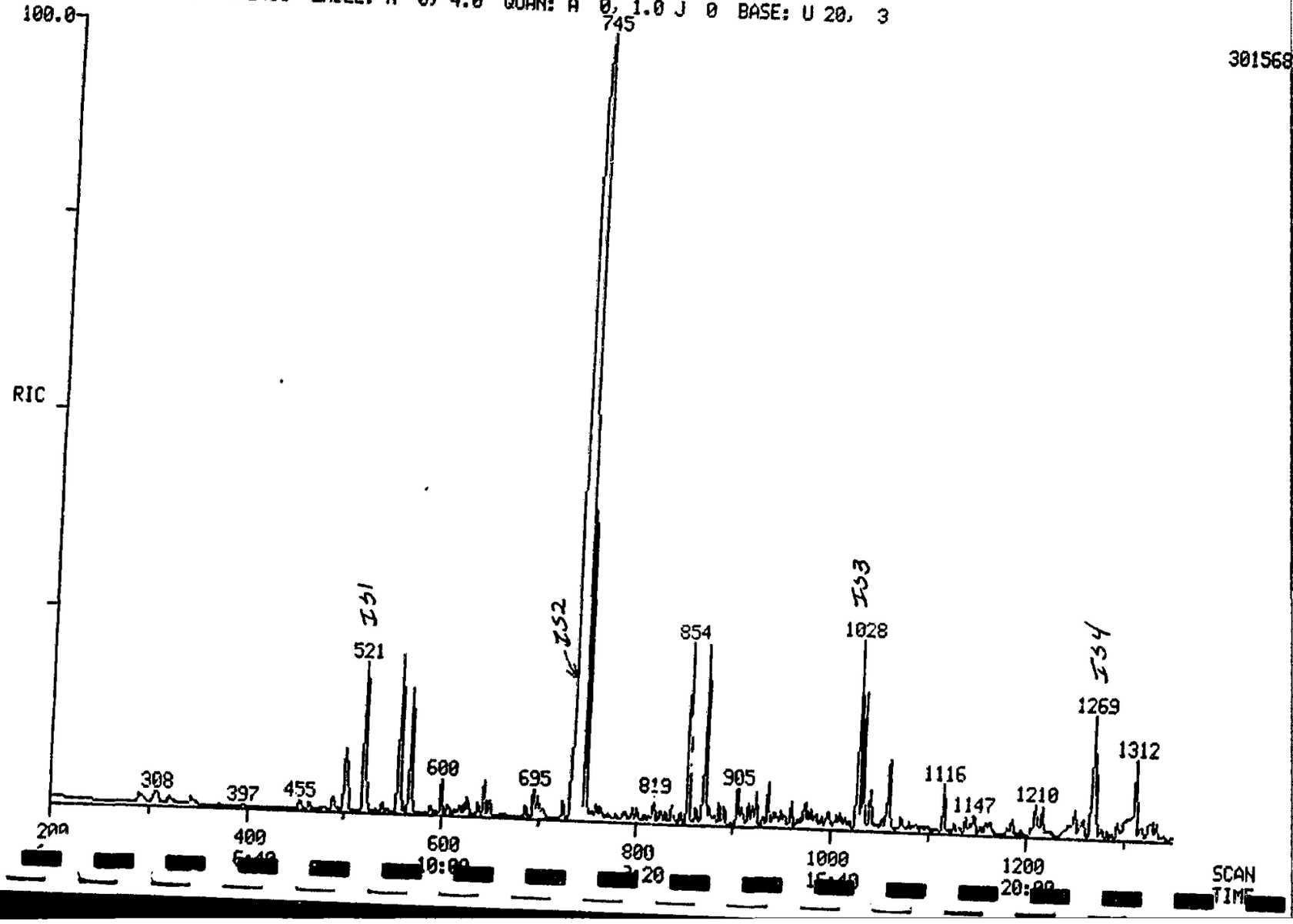
RIC
01/11/87 18:50:00
SAMPLE: SCK-MW02-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C08A #1
CALI: 4U12050C08A #3

SCANS 200 TO 1350

SPECTRIX DC # ----14

INST ID: 4530



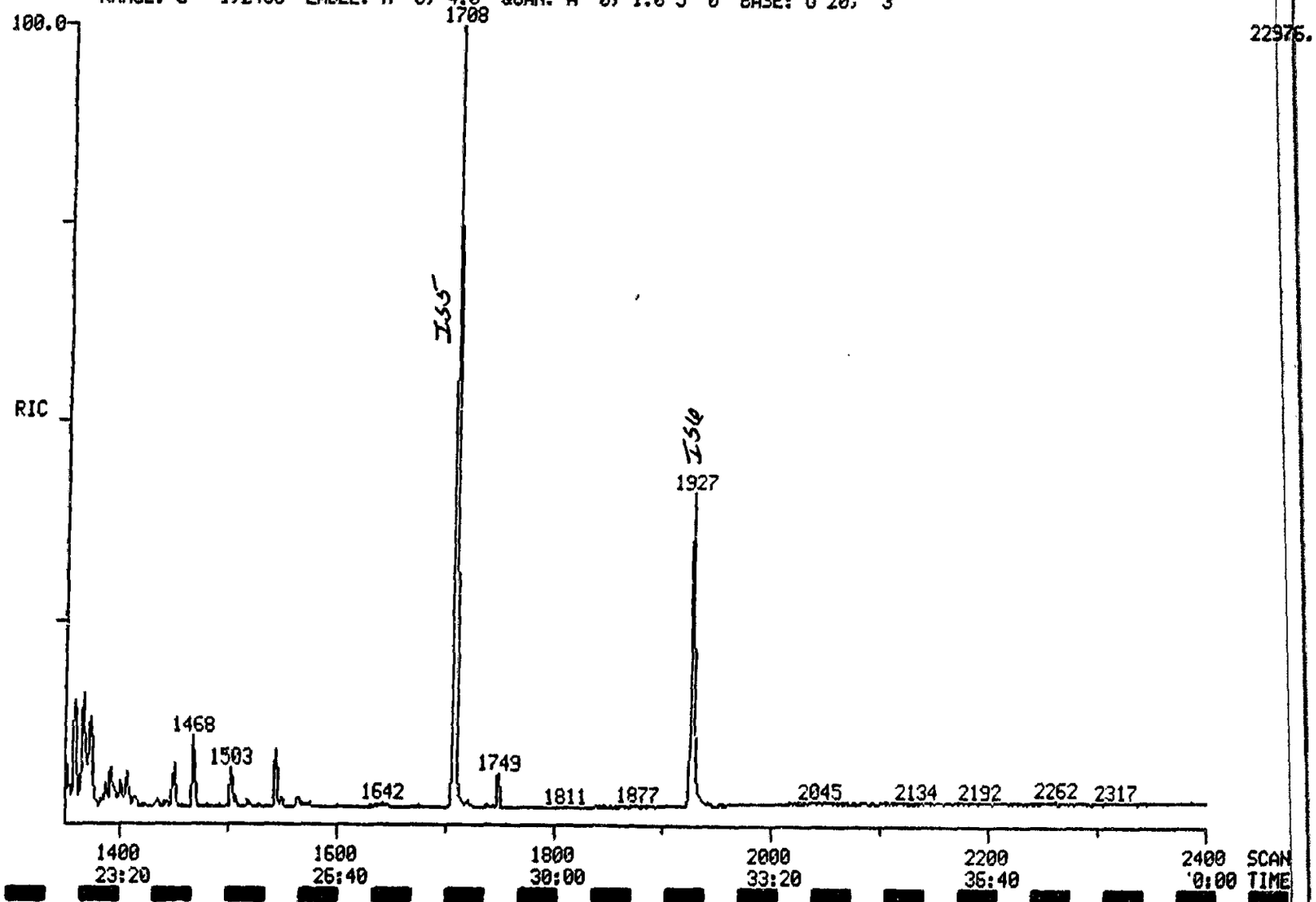
003772

RIC
01/11/87 18:50:00
SAMPLE: SCK-MW02-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C08A #1 SCANS 1350 TO 2400
CALI: 4U12050C08A #3

SPECTRIX DC # ----14

INST ID: 4530



003772

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

AMPLE ID. SCK-MW02-001

ILENAME 4U12050C08A

LIENT KEYSTONE

ATE INJECTED 01/11/87 18:50:00

CALIB STD DATE 01/08/87

INST ID. 4530

ANALYST GU

VERIFIED BY GU

CORR. FACTOR 20.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
521	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	800 UG/L	1.000	25921
738	CI40	NAPHTHALENE-D8 ** IS2 **	136	800 UG/L	1.000	82673
1028	CI50	ACENAPHTHENE-D10 ** IS3 **	164	800 UG/L	1.000	45570
269	CI60	PHENANTHRENE-D10 ** IS4 **	188	800 UG/L	1.000	54332
708	CI70	CHRYSENE-D12 ** IS5 **	240	800 UG/L	1.000	31371
1927	CI75	PERYLENE-D12 ** IS6 **	264	800 UG/L	1.000	16480
388	C355	2-METHYLPHENOL	108	31 UG/L	1.129	15[illegible]
704	C425	2,4-DIMETHYLPHENOL	122	34 UG/L	0.954	12[illegible]
745	C450	NAPHTHALENE	128	10756 UG/L	1.009	10637[illegible]
854	C470	2-METHYLNAPHTHALENE	142	531 UG/L	1.157	4920
033	C550	ACENAPHTHENE	153	543 UG/L	1.005	28459
060	C565	DIBENZOFURAN	168	373 UG/L	1.031	26696
1116	C590	FLUORENE	166	219 UG/L	1.086	13022
272	C640	PHENANTHRENE	178	316 UG/L	1.002	20631
279	C645	ANTHRACENE	178	41 UG/L	1.008	2631
1468	C655	FLUORANTHENE	202	45 UG/L	1.157	2767
1503	C715	PYRENE	202	34 UG/L	0.880	1751

* SURROGATES WERE DILUTED OUT

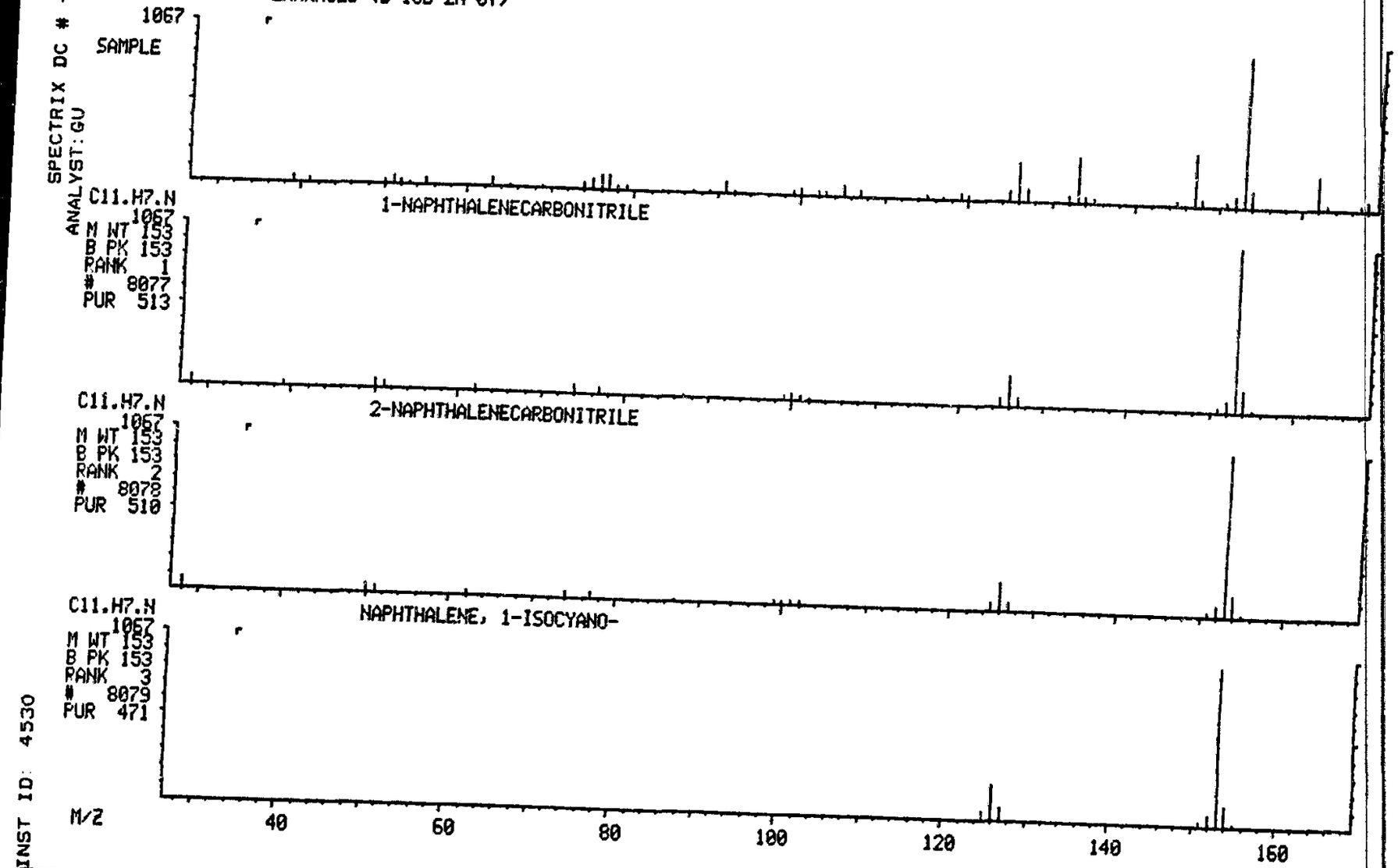
003774

LIBRARY SEARCH
01/11/87 18:50:00 + 17:20
SAMPLE: SCK-MW02-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C08A #1040
CALI: 4U12050C08A # 3

BASE M/Z: 153
RIC: 11327.

SPECTRIX DC # -----19
ANALYST: GU



INST ID: 4530

003774

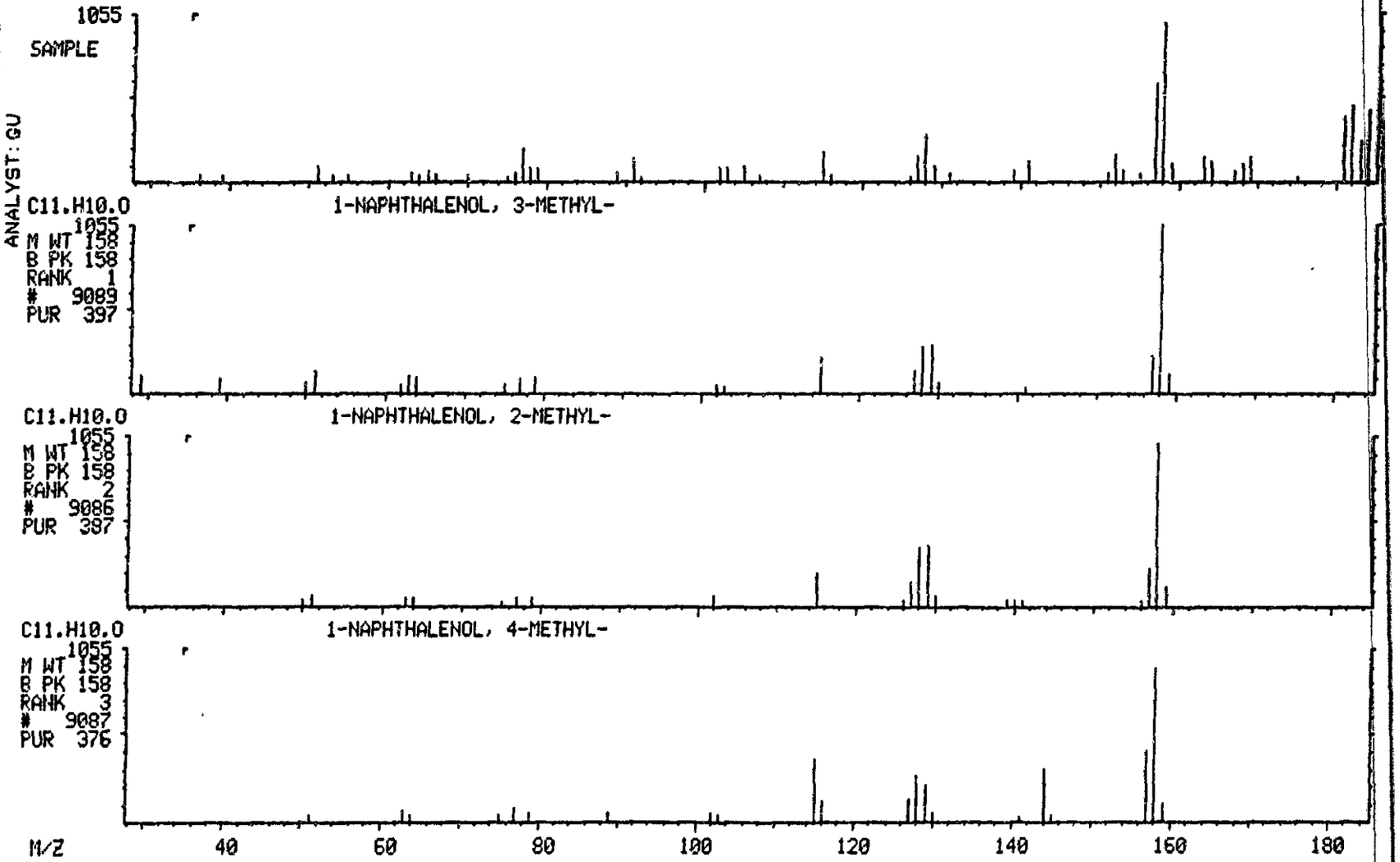
003775

LIBRARY SEARCH
01/11/87 18:50:00 + 19:07
SAMPLE: SCK-MW02-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C08A #1147
CALI: 4U12050C08A # 3

BASE M/Z: 158
RIC: 4919.

SPECTRIX DC # -----19
ANALYST: GU



NST ID: 4530

003775

003776

LIBRARY SEARCH
01/11/87 18:50:00 + 20:10
SAMPLE: SCK-MW02-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C08A #1210
CALI: 4U12050C08A # 3

BASE M/Z: 170
RIC: 8847.

SPECTRIX DC # ----19
ANALYST: GU

1243
SAMPLE

C12.H10.O
1243
M WT 170
B PK 170
RANK 1
11441
PUR 622
[1,1'-BIPHENYL]-3-OL

C14.H14.O
1243
M WT 198
B PK 170
RANK 2
16268
PUR 593
1,1'-BIPHENYL, 3-ETHOXY-

C12.H10.O
1243
M WT 170
B PK 170
RANK 3
11437
PUR 580
[1,1'-BIPHENYL]-4-OL

NST ID: 4530

M/Z 40 60 80 100 120 140 160 180 200 220

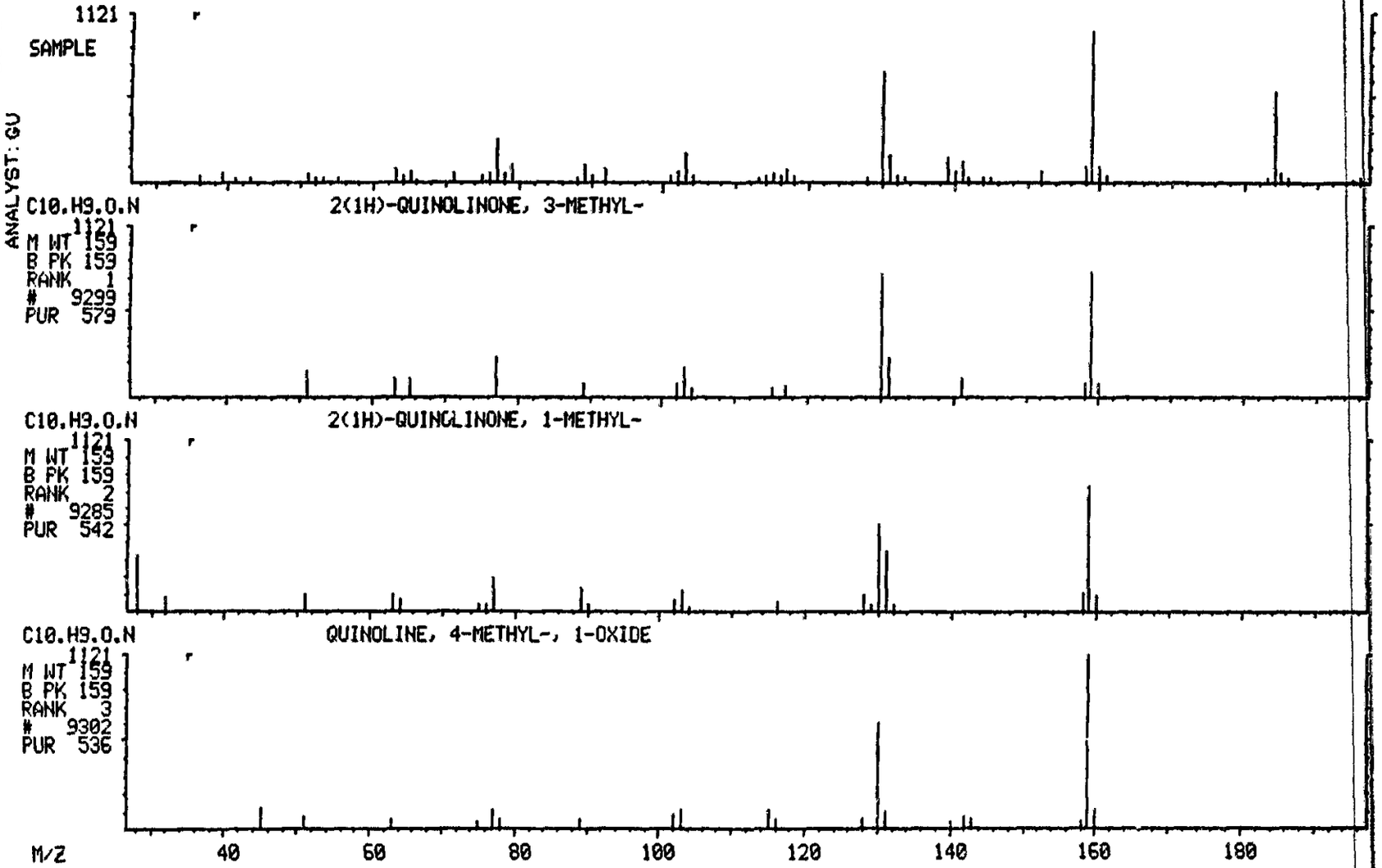
003777

LIBRARY SEARCH
01/11/87 18:50:00 + 20:51
SAMPLE: SCK-MW02-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C08A #1251
CALI: 4U12050C08A # 3

BASE M/Z: 159
RIC: 6159.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

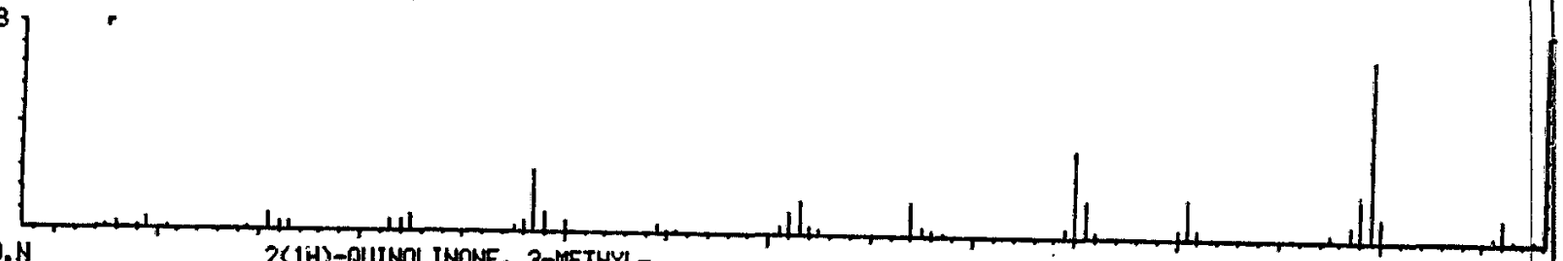
LIBRARY SEARCH
01/11/87 18:50:00 + 20:59
SAMPLE: SCK-MW02-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C08A #1259
CALI: 4U12050C08A # 3

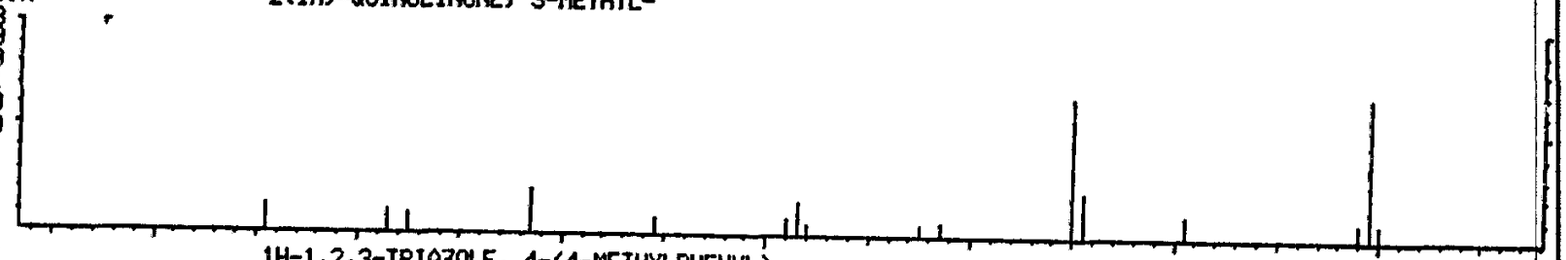
BASE M/Z: 159
RIC: 4959.

SPECTRIX DC # -----19
ANALYST: GU

1158
SAMPLE

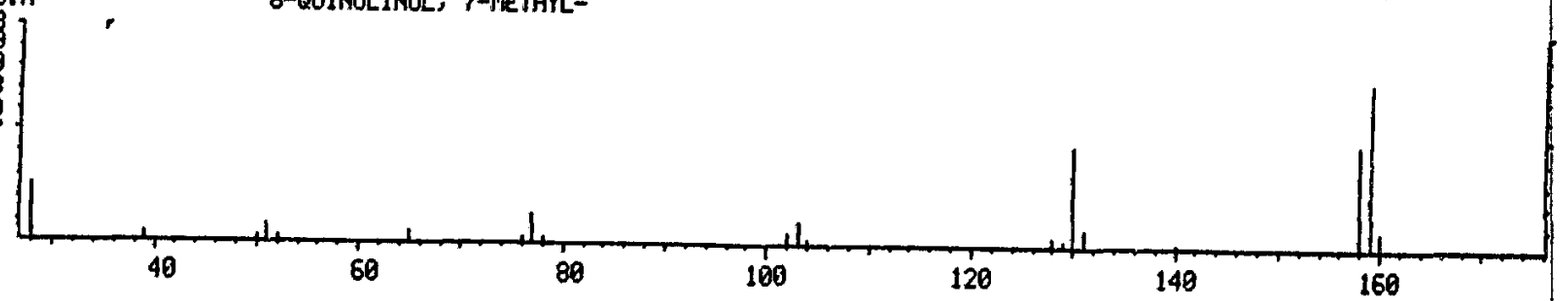


C10.H9.O.N
2(1H)-QUINOLINONE, 3-METHYL-
1158
M WT 159
B PK 159
RANK 1
9299
PUR 719



C9.H9.N3
1H-1,2,3-TRIAZOLE, 4-(4-METHYLPHENYL)-
1158
M WT 159
B PK 159
RANK 2
9364
PUR 675

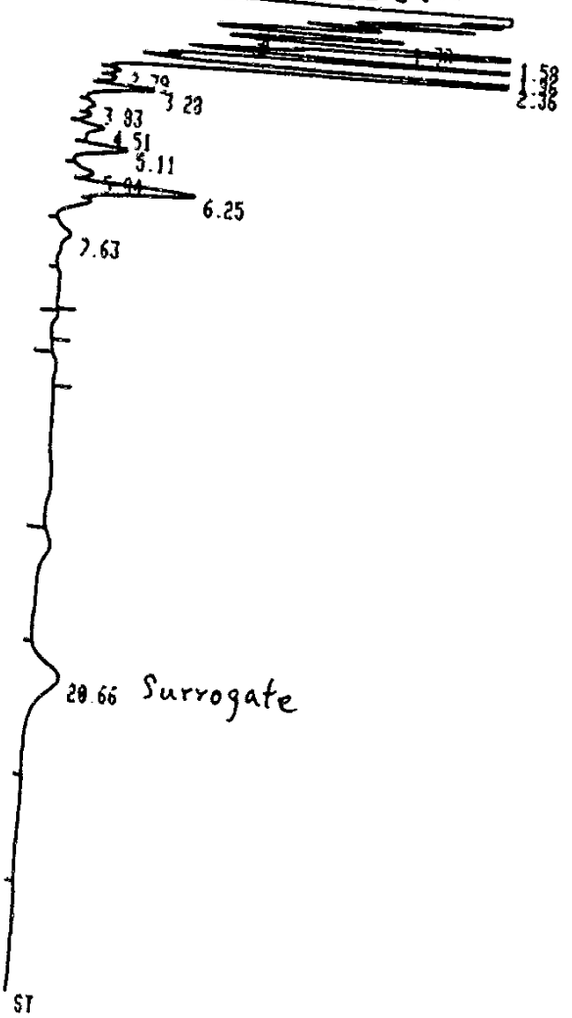
C10.H9.O.N
8-QUINOLINOL, 7-METHYL-
1158
M WT 159
B PK 159
RANK 3
9310
PUR 667



INST ID: 4530

TAK 86-12-050-08A

NA.



DC#_____

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW02-C

PESTICIDE FRACTION

1ST COLUMN QUANT.

1ST COLUMN ID

1.8m x 4mm ID x6mm

1.5% SP 2250

1.95% SP 2401

100/120 SUPELCOPORT

COLUMN TEMP. 203 C

VOLUME INJ. 1 uL

INSTRUMENT ID. 6900

RUN # 149

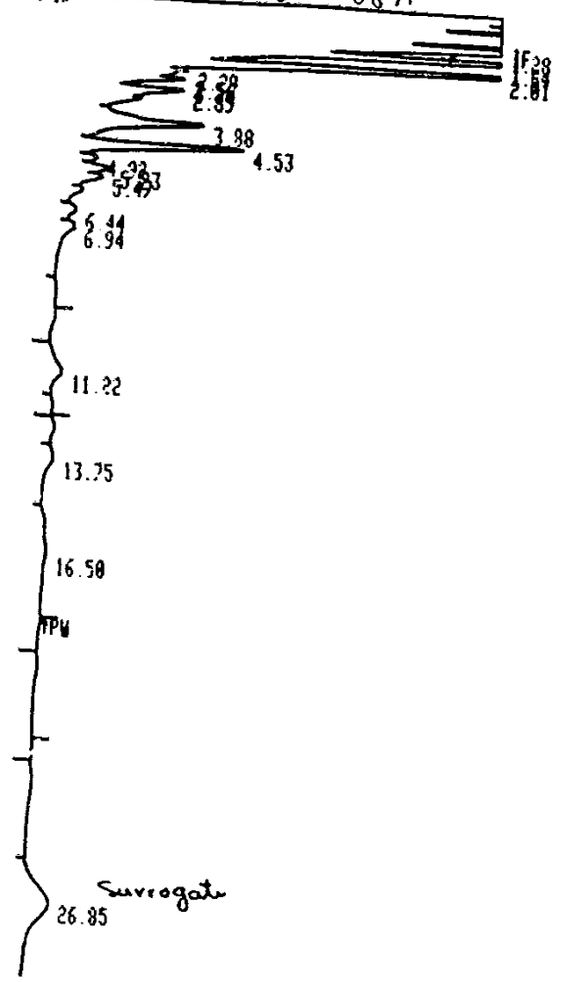
WORKFILE ID: C JAN/14/87 20:59:25

WORKFILE NAME:

HEIGHT% RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.30	21194	D BV	0.115	7.538
1.58	70409	D VV	0.109	25.042
1.96	53597	D VV	0.101	19.063
2.36	87048	PP	0.120	30.960
2.79	1759	PV	0.131	0.626
3.28	8006	VP	0.172	2.848
3.83	1332	PV	0.220	0.474
4.51	3325	PV	0.312	1.183
5.11	7159	VV	0.246	2.546
5.84	3520	VV	0.297	1.252
6.25	17766	VV	0.285	6.319
7.63	1905	PP	0.506	0.678
20.66	4141	PP	1.140	1.473

86-12-050-08A

N.A



DC#_____

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW02-00

PESTICIDE FRACTION

2ND COLUMN CONFIRMATI

2ND COLUMN II C

1.8m x2mm ID x6mm OD

3% SP-2100

100/120 SUPELCOPORT

COLUMN TEMP. 187 °C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6000

RUN # 193 JAN/16/87 17:21:03

WORKFILE ID: C

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.28	130331	D BP	0.132	14.056
1.64	382427	D PP	0.085	41.243
2.01	277178	D PP	0.103	29.892
2.29	4328	D PV	0.200	0.467
2.56	10478	D VP	0.125	1.130
2.89	15789	PV	0.186	1.703
3.88	27497	PP	0.256	2.965
4.53	41054	PV	0.175	4.428
4.92	3708	VV	0.201	0.400
5.23	8224	VV	0.225	0.887
5.47	6784	VV	0.248	0.732
6.44	2561	PV	0.295	0.276
6.94	3191	VP	0.353	0.344
11.22	3216	BP	0.623	0.347
13.75	1905	VP	0.592	0.206
16.50	1560	PB	1.548	0.168
26.85	7024	PB	1.383	0.758

Received: 12/11/86

SPECTRIX CO REPORT
Results by Sample

Work Order # 86-12-050

SAMPLE ID SCK-MW02-001 (LLW) SAMPLE # 08 FRACTIONS: A
Date & Time Collected 12/11/86 Category

AG	<10	ug/L	AS	20.2	ug/L	BE	<3	ug/L	CD	<5	ug/L	CN_SU	<100	ug/L	CR	<9	ug/L
CU	<10	ug/L	FE	4840	ug/L	HG	<0.2	ug/L	NI	42	ug/L	PB	18.8	ug/L	SB	<44	ug/L
SE	<5	ug/L	TL	<10	ug/L	ZN	37	ug/L									

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW06-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003782

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW06-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205009
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/17/86
DATE ANALYZED: 12/17/86

DATAFILE: 4U12050V09
DILUTION FACTOR: 1:20

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	200 U
C015	BROMOMETHANE	200 U
C020	VINYL CHLORIDE	200 U
C025	CHLOROETHANE	200 U
C030	METHYLENE CHLORIDE	470
C035	ACETONE	200 U
C040	CARBON DISULFIDE	100 U
C045	1,1-DICHLOROETHENE	100 U
C050	1,1-DICHLOROETHANE	100 U
C055	TRANS-1,2-DICHLOROETHENE	100 U
C060	CHLOROFORM	100 U
C065	1,2-DICHLOROETHANE	100 U
C110	2-BUTANONE	200 U
C115	1,1,1-TRICHLOROETHANE	100 U
C120	CARBON TETRACHLORIDE	100 U
C125	VINYL ACETATE	200 U
C130	BROMODICHLOROMETHANE	100 U
C140	1,2-DICHLOROPROPANE	100 U
C145	TRANS-1,3-DICHLOROPROPENE	100 U
C150	TRICHLOROETHENE	100 U
C155	DIBROMOCHLOROMETHANE	100 U
C160	1,1,2-TRICHLOROETHANE	100 U
C165	BENZENE	930
C170	CIS-1,3-DICHLOROPROPENE	100 U
C175	2-CHLOROETHYLVINYLETHER	200 U
C180	BROMOFORM	100 U
C210	2-HEXANONE	200 U
C205	4-METHYL-2-PENTANONE	200 U
C220	TETRACHLOROETHENE	100 U
C225	1,1,2,2-TETRACHLOROETHANE	100 U
C230	TOLUENE	900
C235	CHLOROBENZENE	100 U
C240	ETHYLBENZENE	170
C245	STYRENE	100 U
C250	TOTAL XYLENES	680

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003783

INST ID: 4330

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW06-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205009
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/11/87

DATAFILE: 4U12050C09A
DILUTION FACTOR: 400

CAS #	COMPOUND	UG/L
C315	PHENOL	40000 U
C325	BIS(2-CHLOROETHYL)ETHER	40000 U
C330	2-CHLOROPHENOL	40000 U
C335	1,3-DICHLOROBENZENE	40000 U
C340	1,4-DICHLOROBENZENE	40000 U
C345	BENZYL ALCOHOL	40000 U
C350	1,2-DICHLOROBENZENE	40000 U
C355	2-METHYLPHENOL	40000 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	40000 U
C365	4-METHYLPHENOL	40000 U
C370	N-NITROSODIPROPYLAMINE	40000 U
C375	HEXACHLOROETHANE	40000 U
C410	NITROBENZENE	40000 U
C415	ISOPHORONE	40000 U
C420	2-NITROPHENOL	40000 U
C425	2,4-DIMETHYLPHENOL	7100 J
C430	BENZOIC ACID	200000 U
C435	BIS(2-CHLOROETHOXY)METHANE	40000 U
C440	2,4-DICHLOROPHENOL	40000 U
C445	1,2,4-TRICHLOROBENZENE	40000 U
C450	NAPHTHALENE	820000
C455	4-CHLOROANILINE	40000 U
C460	HEXACHLOROBUTADIENE	40000 U
C465	P-CHLORO-M-CRESOL	40000 U
C470	2-METHYLNAPHTHALENE	130000
C510	HEXACHLOROCYCLOPENTADIENE	40000 U
C515	2,4,6-TRICHLOROPHENOL	40000 U
C520	2,4,5-TRICHLOROPHENOL	200000 U
C525	2-CHLORONAPHTHALENE	40000 U
C530	2-NITROANILINE	200000 U
C535	DIMETHYL PHTHALATE	40000 U
C540	ACENAPHTHYLENE	7300 J
C545	3-NITROANILINE	200000 U
C550	ACENAPHTHENE	210000
C555	2,4-DINITROPHENOL	200000 U
C560	4-NITROPHENOL	200000 U
C565	DIBENZOFURAN	140000
C570	2,4-DINITROTOLUENE	40000 U
C575	2,6-DINITROTOLUENE	40000 U

003784

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW06-001

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

ATAFILE: 4U12050C09A

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	40000 U
C585	4-CHLOROPHENYL PHENYL ETHER	40000 U
C590	FLUORENE	170000
C595	4-NITROANILINE	200000 U
C610	4,6-DINITRO-2-METHYLPHENOL	200000 U
C615	N-NITROSODIPHENYLAMINE	40000 U
C625	4-BROMOPHENYL PHENYL ETHER	40000 U
C630	HEXACHLOROBENZENE	40000 U
C635	PENTACHLOROPHENOL	200000 U
C640	PHENANTHRENE	480000
C645	ANTHRACENE	70000
C650	DI-N-BUTYL PHTHALATE	40000 U
C655	FLUORANTHENE	200000
C715	PYRENE	160000
C720	BUTYL BENZYL PHTHALATE	40000 U
C725	3,3'-DICHLOROBENZIDINE	80000 U
C730	BENZO(A)ANTHRACENE	31000 J
C735	BIS(2-ETHYLHEXYL)PHTHALATE	40000 U
C740	CHRYSENE	31000 J
C760	DI-N-OCTYL PHTHALATE	40000 U
C765	BENZO(B)FLUORANTHENE	9000 J
C770	BENZO(K)FLUORANTHENE	12000 J
C775	BENZO(A)PYRENE	40000 U
C780	INDENO(1,2,3-CD)PYRENE	40000 U
C785	DIBENZO(A,H)ANTHRACENE	40000 U
C790	BENZO(GHI)PERYLENE	40000 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003785

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-09A

DC No: KEYSTONE
SMO No: SCK-MW06-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/14/87
Dilution Factor: 50
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	2.50 U
319-85-7	BETA-BHC	2.50 U
319-86-8	DELTA-BHC	2.50 U
58-89-9	GAMMA-BHC (LINDANE)	2.50 J
76-44-8	HEPTACHLOR	2.50 U
309-00-2	ALDRIN	2.50 U
1024-57-3	HEPTACHLOR EPOXIDE	2.50 U
959-98-8	ENDOSULFAN I	2.50 U
60-57-1	DIELDRIN	5.00 U
72-55-9	4,4'-DDE	5.00 U
72-20-8	ENDRIN	5.00 U
33213-65-9	ENDOSULFAN II	5.00 U
72-54-8	4,4'-DDD	5.00 U
7421-93-4	ENDRIN ALDEHYDE	5.00 U
1031-07-8	ENDOSULFAN SULFATE	5.00 U
50-29-3	4,4'-DDT	5.00 U
72-43-5	METHOXYCHLOR	25.00 U
53494-70-5	ENDRIN KETONE	5.00 U
57-74-9	CHLORDANE	25.00 U
8001-35-2	TOXAPHENE	50.0 U
12674-11-2	AROCLOR-1016	25.00 U
11104-28-2	AROCLOR-1221	25.00 U
11141-16-5	AROCLOR-1232	25.00 U
53469-21-9	AROCLOR-1242	25.00 U
12672-29-6	AROCLOR-1248	25.00 U
11097-69-1	AROCLOR-1254	50.0 U
11096-82-5	AROCLOR-1260	50.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003786

INST ID: 4000

SPECTRIX DC # ----- B

SAMPLE NUMBER: SCK-MW06-00

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION

QC REPORT NO. : ----

CASE NO. : ----

ANALYST: NOT

DATAFILE: 4U12050V09

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003787

INST ID: 4530 SPECTRIX DC # ----8

SAMPLE: SCK-MW06-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

QC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12050C09A

B. TENTATIVELY IDENTIFIED COMPOUNDS

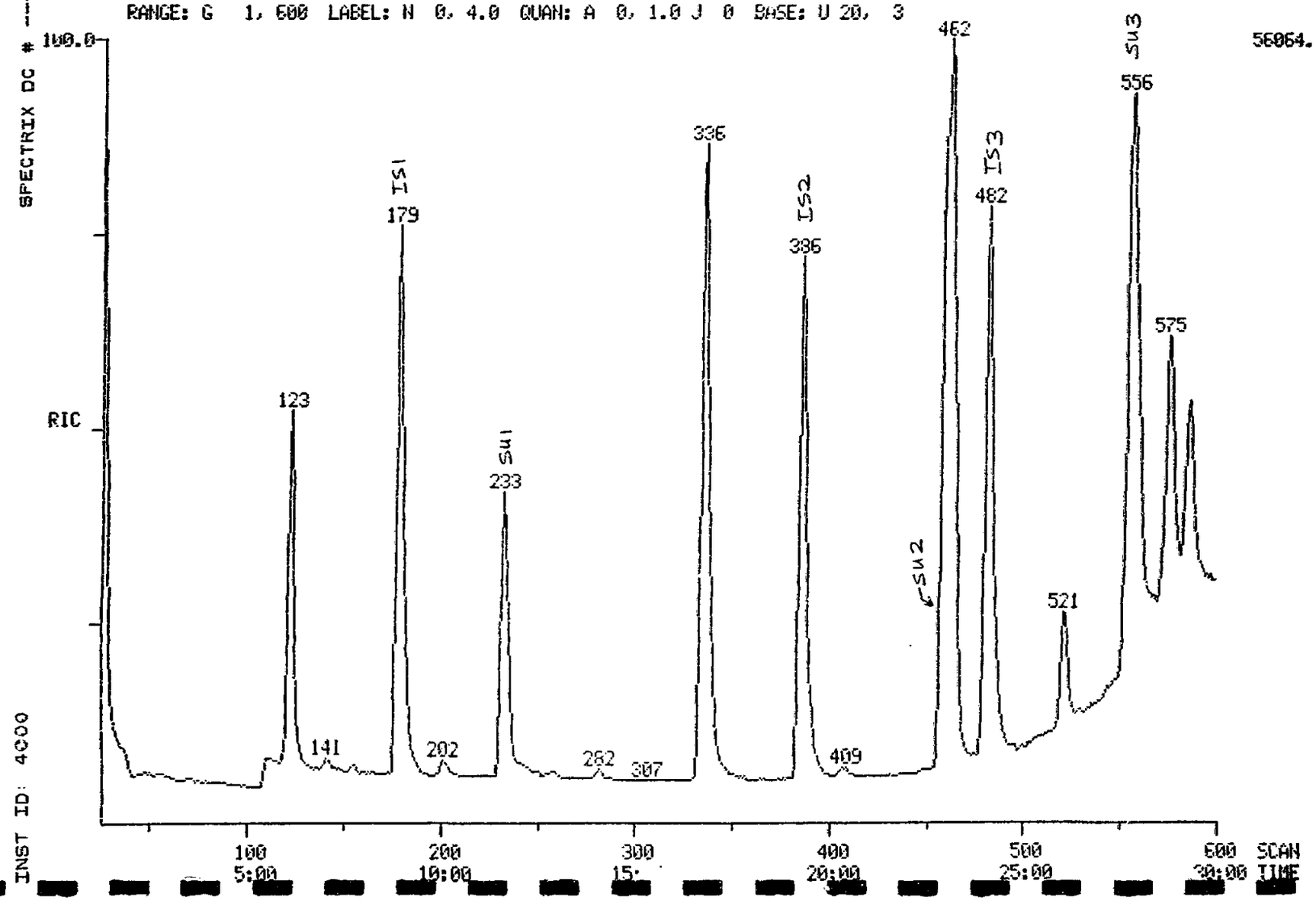
CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L	
611-15-4	BENZENE, 1-ETHENYL-2-METHYL-	557	967	24000	8
95-13-6	1H-INDENE	568	934	38000	37
95-15-8	BENZO[B]THIOPHENE	747	904	62000	50
2471-83-2	1H-INDENE, 1-ETHYLIDENE-	871	917	150000	J
92-52-4	1,1'-BIPHENYL	936	926	42000	J
9-27-5	NAPHTHALENE, 2-ETHYL-	950	870	21000	J
581-40-8	NAPHTHALENE, 2,3-DIMETHYL-	961	904	40000	J
5-37-1	NAPHTHALENE, 1,7-DIMETHYL-	974	936	67000	J
644-08-6	1,1'-BIPHENYL, 4-METHYL-	1132	914	30000	J
20-53-8	DIBENZOFURAN, 4-METHYL-	1148	826	24000	J
20-53-8	DIBENZOFURAN, 4-METHYL-	1159	874	31000	J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1210		77000	J
32-65-0	DIBENZOTHIOPHENE	1251	773	48000	J
2788-23-0	9H-CARBAZOLE, 9-NITROSO-	1312	880	29000	J
61-96-2	1H-INDENE, 1-PHENYL-	1355	937	29000	J
61-96-2	1H-INDENE, 1-PHENYL-	1359	913	29000	J
203-64-5	4H-CYCLOPENTA[DEF]PHENANTHRENE	1372	802	57000	J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003789

RIC
12/17/86 18:10:00
SAMPLE: SCK-MW06-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050U09 #1 SCANS 25 TO 600
CALI: 4U12050U09 #3



003789

SPECTRIX DC # ------14

VOA QUANTITATION REPORT

SAMPLE ID SCK-MW06-001

FILENAME 4U12050V09 INST 4000

CLIENT KEYSTONE ANALYST NOT

DATE INJECTED 12/17/86 18:10:00 VERIFIED BY NOT

CALIB STD DATE 12-14-86 CORR. FACTOR 20.00

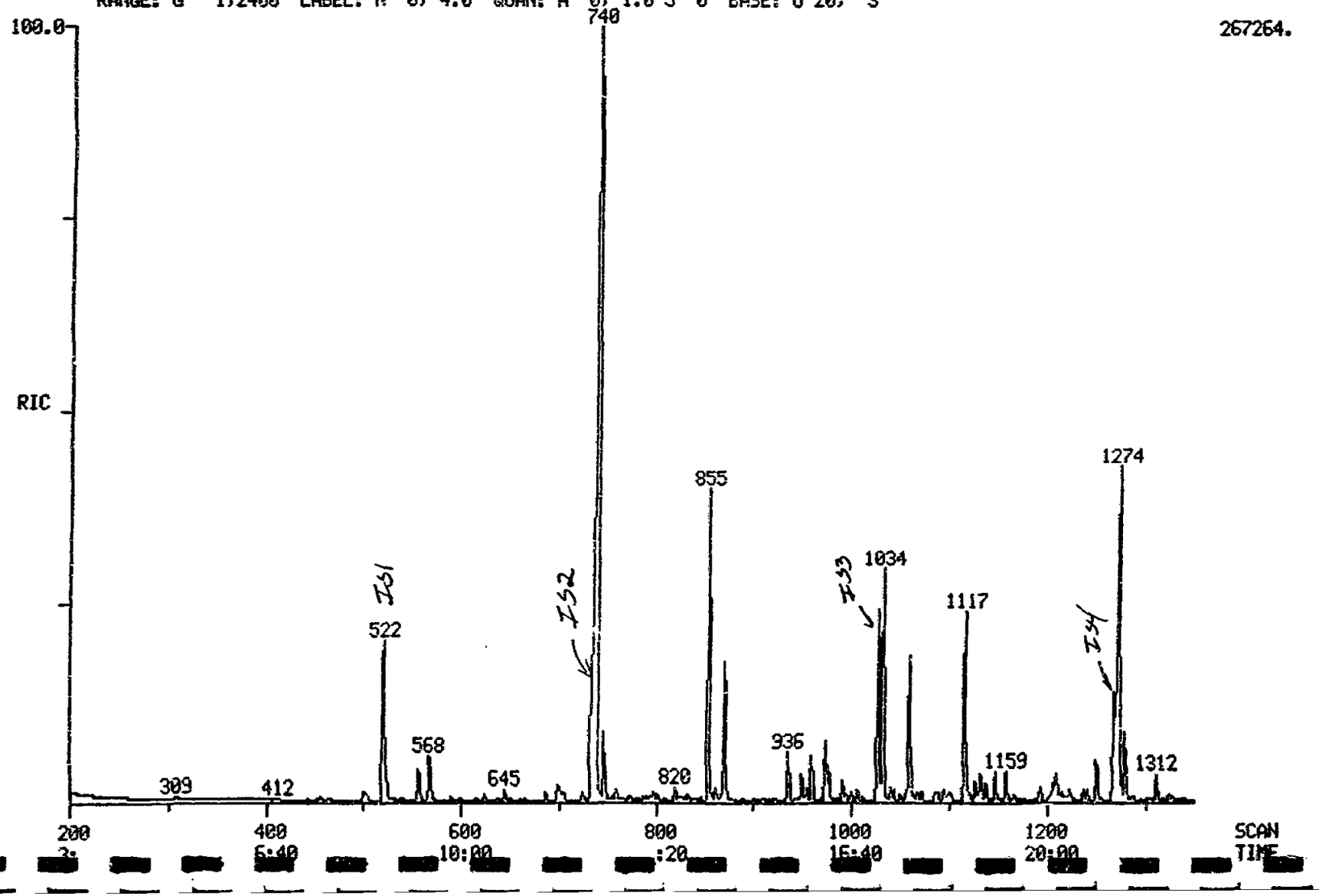
SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
179	CI01	BROMOCHLOROMETHANE	**IS1**	128	1000 UG/L	1.000	16398
386	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	1000 UG/L	1.000	66598
482	CI20	D5-CHLOROBENZENE	**IS3**	117	1000 UG/L	1.000	51481
233	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.302	21575
459	CS05	D8-TOLUENE	**SU2**	98	100 %	0.952	55175
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	102 %	1.151	38343
123	C030	METHYLENE CHLORIDE *		84	514 UG/L	0.687	14425
336	C165	BENZENE *		78	968 UG/L	0.870	81580
463	C230	TOLUENE		92	902 UG/L	0.961	41752
521	C240	ETHYLBENZENE		106	175 UG/L	1.081	4359
576	C250	TOTAL XYLENES		106	678 UG/L	1.195	21767

* BLANK CORRECTED ON DATA SHEET

003791

RIC
01/11/87 19:42:00
SAMPLE: SCK-MW06-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C09A #1 SCANS 200 TO 1350
CALI: 4U12050C09A #3



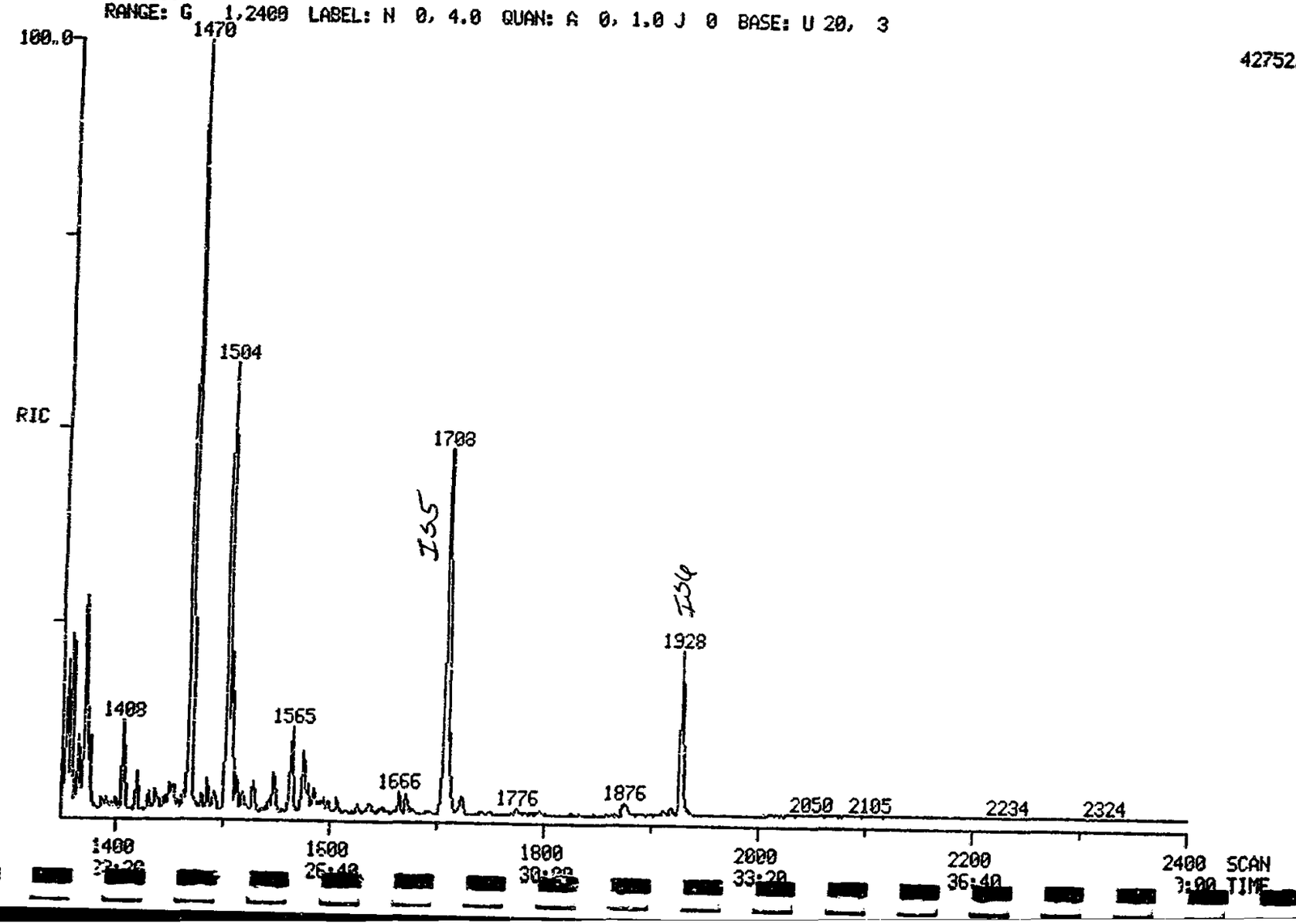
003792

RIC
01/11/87 19:42:00
SAMPLE: SCK-MW06-001
CONDS.: ——
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C09A #1
CALI: 4U12050C09A #3

SCANS 1350 TO 2400

42752.



SPECTRIX DC # ----14

INST ID: 4530

003792

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID SCK-MW06-001

LENAME 4U12050C09A

CLIENT KEYSTONE

DATE INJECTED 01/11/87 19:42:00

CALIB STD DATE 01/08/87

INST ID. 4530

ANALYST GU

VERIFIED BY GU

CORR. FACTOR 4000.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
522	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	160000 UG/L	1.000	25705
735	CI40	NAPHTHALENE-D8 ** IS2 **	136	160000 UG/L	1.000	99415
1028	CI50	ACENAPHTHENE-D10 ** IS3 **	164	160000 UG/L	1.000	45517
1269	CI60	PHENANTHRENE-D10 ** IS4 **	188	160000 UG/L	1.000	55282
1708	CI70	CHRYSENE-D12 ** IS5 **	240	160000 UG/L	1.000	28865
1928	CI75	PERYLENE-D12 ** IS6 **	264	160000 UG/L	1.000	15861
701	C425	2,4-DIMETHYLPHENOL	122	7145 UG/L	0.954	160
740	C450	NAPHTHALENE	128	821153 UG/L	1.007	488306
855	C470	2-METHYLNAPHTHALENE	142	132653 UG/L	1.163	7387
1001	C540	ACENAPHTHYLENE	152	7345 UG/L	0.974	342
1034	C550	ACENAPHTHENE	153	207424 UG/L	1.006	5428
1060	C565	DIBENZOFURAN	168	135582 UG/L	1.031	4847
1117	C590	FLUORENE	166	173563 UG/L	1.087	5143
1274	C640	PHENANTHRENE	178	484662 UG/L	1.004	161189
280	C645	ANTHRACENE	178	69634 UG/L	1.009	2294
470	C655	FLUORANTHENE	202	196112 UG/L	1.158	6184
1504	C715	PYRENE	202	157076 UG/L	0.881	3715
1706	C730	BENZO(A)ANTHRACENE	228	30954 UG/L	0.999	579
1712	C740	CHRYSENE	228	30758 UG/L	1.002	528
1875	C765	BENZO(B)FLUORANTHENE	252	9157 UG/L	0.973	111
1877	C770	BENZO(K)FLUORANTHENE	252	12285 UG/L	0.974	153

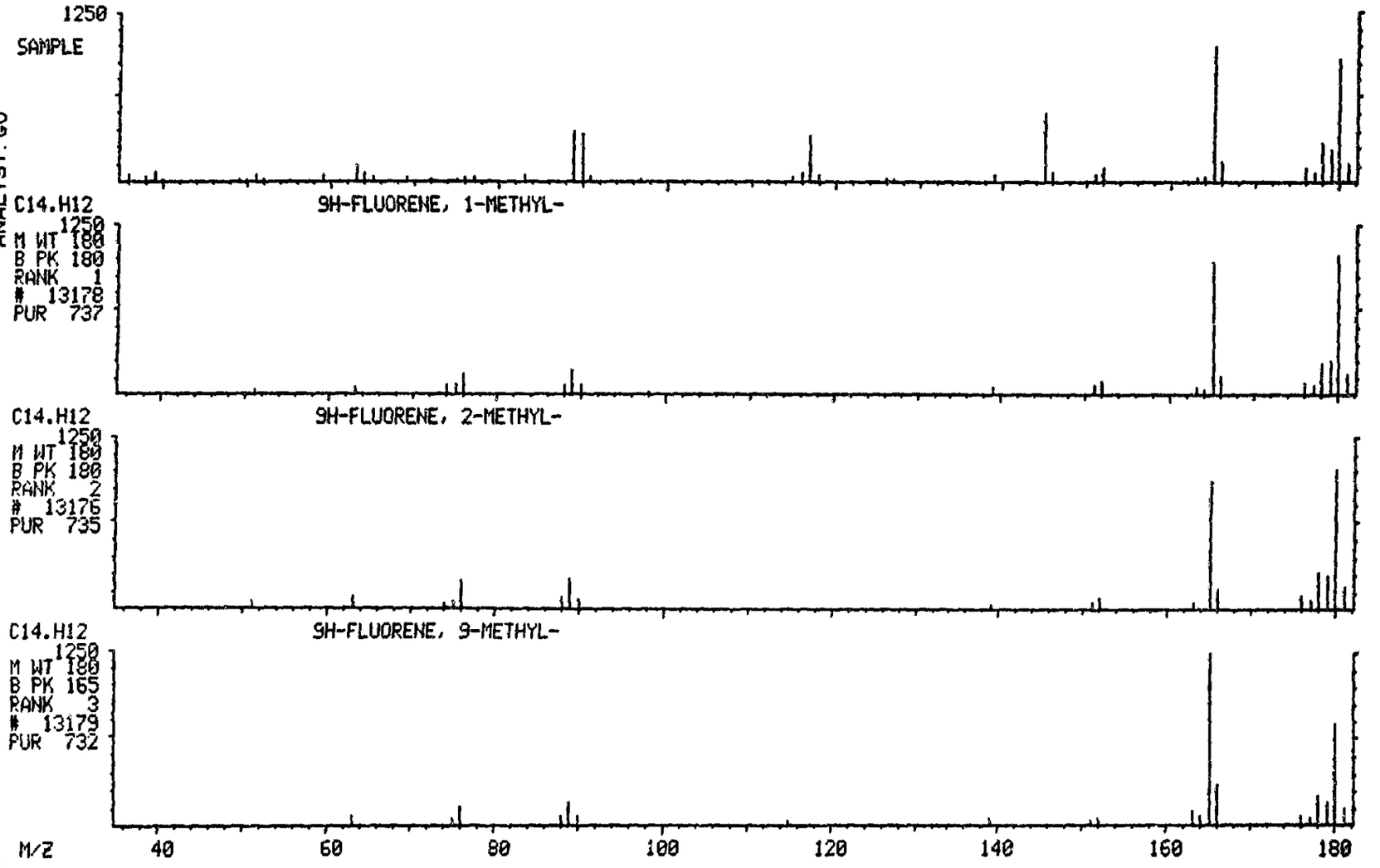
* SURROGATES WERE DILUTED OUT

003794

LIBRARY SEARCH
01/11/87 19:42:00 + 20:10
SAMPLE: SCK-MW06-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C09A #1210
CALI: 4U12050C09A # 3

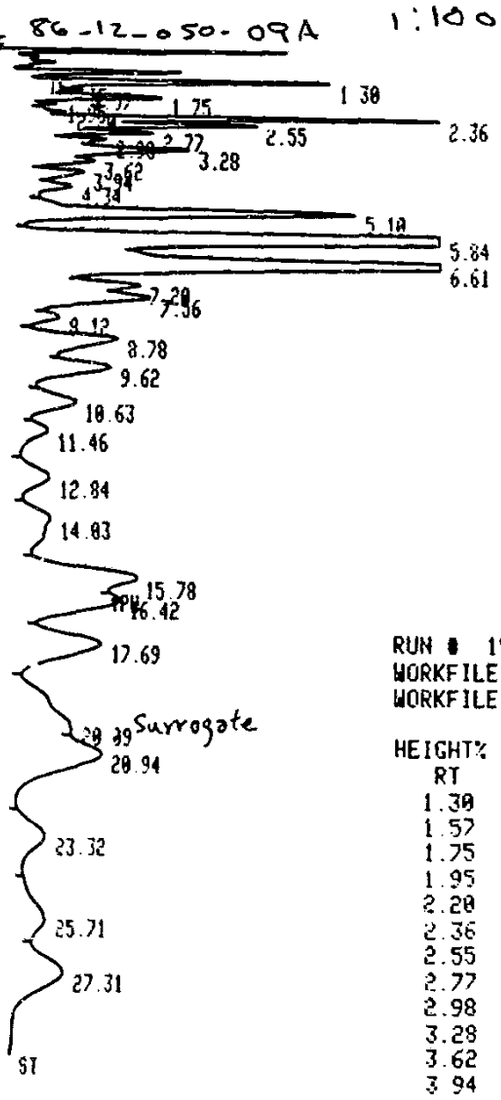
BASE M/Z: 165
RIC: 6303.



SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530

003794

TRK 86-12-050-09A 1:100 NA.



DC#_____-____-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW06-0c

PESTICIDE FRACTION

1ST COLUMN QUANT.

1ST COLUMN ID

1.8m x 4mm ID x6mm (

1.5% SP 2250

1.95% SP 2401

100/120 SUPELCOPORT

COLUMN TEMP. 203°C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6090

003

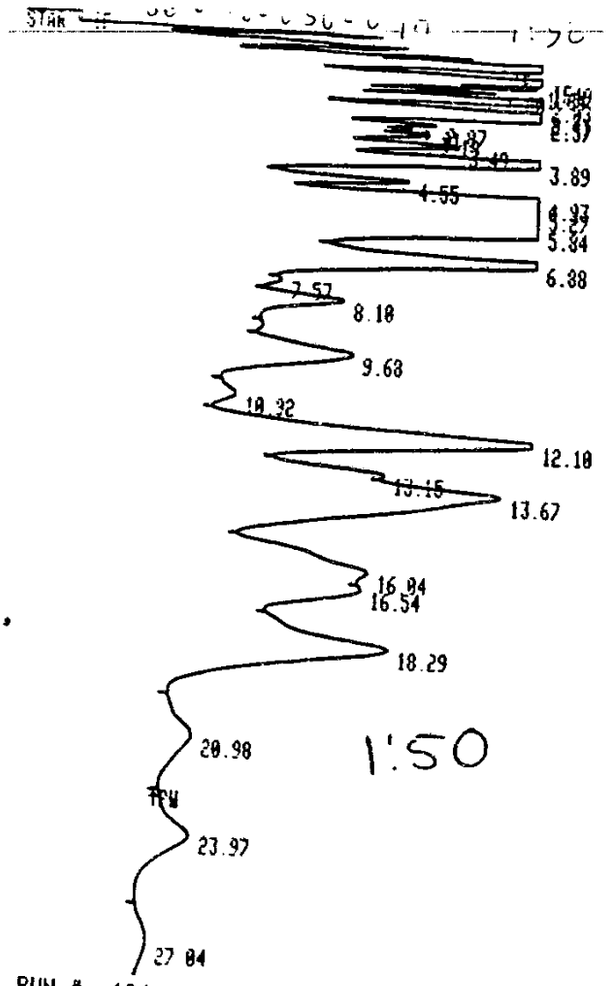
RUN # 153 JAN/14/87 23:04:31

WORKFILE ID: C

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.30	36599	D BV	0.106	5.621
1.57	4566	D VV	0.103	0.701
1.75	15565	VP	0.128	2.391
1.95	1969	D PP	0.070	0.302
2.20	3568	PV	0.097	0.548
2.36	54219	VV	0.114	8.328
2.55	29133	D VV	0.135	4.475
2.77	15657	D VV	0.141	2.405
2.98	9287	VV	0.187	1.426
3.28	20622	VV	0.240	3.167
3.62	8028	D VV	0.173	1.233
3.94	6761	VV	0.245	1.038
4.34	5414	VV	0.261	0.832
5.10	43712	VP	0.248	6.714
5.84	155763	PV	0.255	23.924
6.61	79143	VV	0.359	12.156
7.20	15592	VV	0.311	2.395
7.56	17114	VV	0.357	2.629
8.12	4908	VV	0.333	0.754
8.78	12739	VV	0.505	1.957
9.62	11829	VV	0.500	1.817
10.63	7390	VV	0.595	1.135
11.46	3765	VV	0.546	0.578
12.84	4135	VV	0.644	0.635
14.03	4397	VV	1.099	0.675
15.78	16292	VV	0.693	2.502
16.42	13992	D VV	0.652	2.149
17.69	11490	VV	0.845	1.765
20.09	7933	VV	1.098	1.219
20.94	11947	VV	1.079	1.835
23.32	4769	VV	1.152	0.733
25.71	5115	VV	1.518	0.786
27.31	7660	I VP	1.458	1.177



DC#_____

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. Sck-MW06-0

PESTICIDE FRACTION

2ND COLUMN CONFIRMAT

2ND COLUMN II C

1.8m x2mm ID x6mm OD

3% SP-2100

100/120 SUPELCOPORT

COLUMN TEMP. 187 °C

VOLUME INJ. 1 µlm

INSTRUMENT ID. 6000

RUN # 194

WORKFILE ID: C JAN/16/87 17:57:19

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.49	124184	PV	0.188	3.379
1.64	54765	D VV	0.094	1.490
1.80	44664	D VV	0.099	1.215
2.03	538312	VV	0.114	14.647
2.41	156730	VV	0.135	4.265
2.57	106946	D VV	0.156	2.910
2.87	34374	VV	0.152	0.935
3.01	28572	D VV	0.120	0.777
3.18	34347	VV	0.190	0.935
3.49	44019	VV	0.240	1.198
3.89	345874	VP	0.187	9.411
4.55	35988	PV	0.204	0.979
4.93	115278	VV	0.181	3.137
5.27	1203491	VV	0.364	32.746
5.84	232896	VV	0.343	6.337
6.88	105833	VV	0.439	2.880
7.57	9531	VV	0.283	0.259
8.10	27160	VV	0.470	0.739
9.68	33391	VV	0.678	0.909
10.92	5280	VP	0.433	0.144
12.10	90812	PV	0.657	2.471
13.15	48007	VV	0.416	1.306
13.67	79898	VV	1.068	2.174
16.04	47626	VV	0.953	1.296
16.54	46521	VV	0.701	1.266
18.29	56183	VV	1.182	1.529
20.98	8256	VV	1.426	0.225
23.97	11622	VP	1.308	0.316

Received: 12/11/86

SPECTRIX L500 REPORT

Results by Sample

Work Order # 86-12-050

SAMPLE ID SCK-MW06-001 (LLW) SAMPLE # 09 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<50 ug/L	AS	33.4 ug/L	BE	<15 ug/L	CD	<25 ug/L	CN_SU	<100 ug/L	CR	450 ug/L
CU	75 ug/L	FE	35600 ug/L	HG	<0.2 ug/L	NI	360 ug/L	PB	119 ug/L	SB	<220 ug/L
SE	<25 ug/L	TL	<10 ug/L	ZN	685 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW07-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003798

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW07-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205010
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V10A
DILUTION FACTOR: 1:1000

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10000 U
C015	BROMOMETHANE	10000 U
C020	VINYL CHLORIDE	10000 U
C025	CHLOROETHANE	10000 U
C030	METHYLENE CHLORIDE	5000 U
C035	ACETONE	5600 J
C040	CARBON DISULFIDE	5000 U
C045	1,1-DICHLOROETHENE	5000 U
C050	1,1-DICHLOROETHANE	5000 U
C055	TRANS-1,2-DICHLOROETHENE	5000 U
C060	CHLOROFORM	5000 U
C065	1,2-DICHLOROETHANE	5000 U
C110	2-BUTANONE	10000 U
C115	1,1,1-TRICHLOROETHANE	5000 U
C120	CARBON TETRACHLORIDE	5000 U
C125	VINYL ACETATE	10000 U
C130	BROMODICHLOROMETHANE	5000 U
C140	1,2-DICHLOROPROPANE	5000 U
C145	TRANS-1,3-DICHLOROPROPENE	5000 U
C150	TRICHLOROETHENE	5000 U
C155	DIBROMOCHLOROMETHANE	5000 U
C160	1,1,2-TRICHLOROETHANE	5000 U
C165	BENZENE	5000 U
C170	CIS-1,3-DICHLOROPROPENE	5000 U
C175	2-CHLOROETHYLVINYLETHER	10000 U
C180	BROMOFORM	5000 U
C210	2-HEXANONE	10000 U
C205	4-METHYL-2-PENTANONE	10000 U
C220	TETRACHLOROETHENE	5000 U
C225	1,1,2,2-TETRACHLOROETHANE	5000 U
C230	TOLUENE	5000 U
C235	CHLOROBENZENE	5000 U
C240	ETHYLBENZENE	5000 U
C245	STYRENE	5000 U
C250	TOTAL XYLENES	5000 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003799

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW07-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205010
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: YMH

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/10/87

DATAFILE: 4U12050C10
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	1 J
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003800

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW07-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C10

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10 U
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003801

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-10A

DC No: KEYSTONE
SMO No: SCK-MW07-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/16/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. _Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003802

INST ID: 4000

SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW07-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION

QC REPORT NO. : ----

CASE NO. : ----

ANALYST: TTO

DATAFILE: 4U12050V10A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
	NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.			

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-MW07-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

QC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12050C10

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
110-12-3	2-HEXANONE, 5-METHYL- *	288	919	14 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	383		8 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	761		45 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1582		10 J

* ALSO FOUND IN BLANK

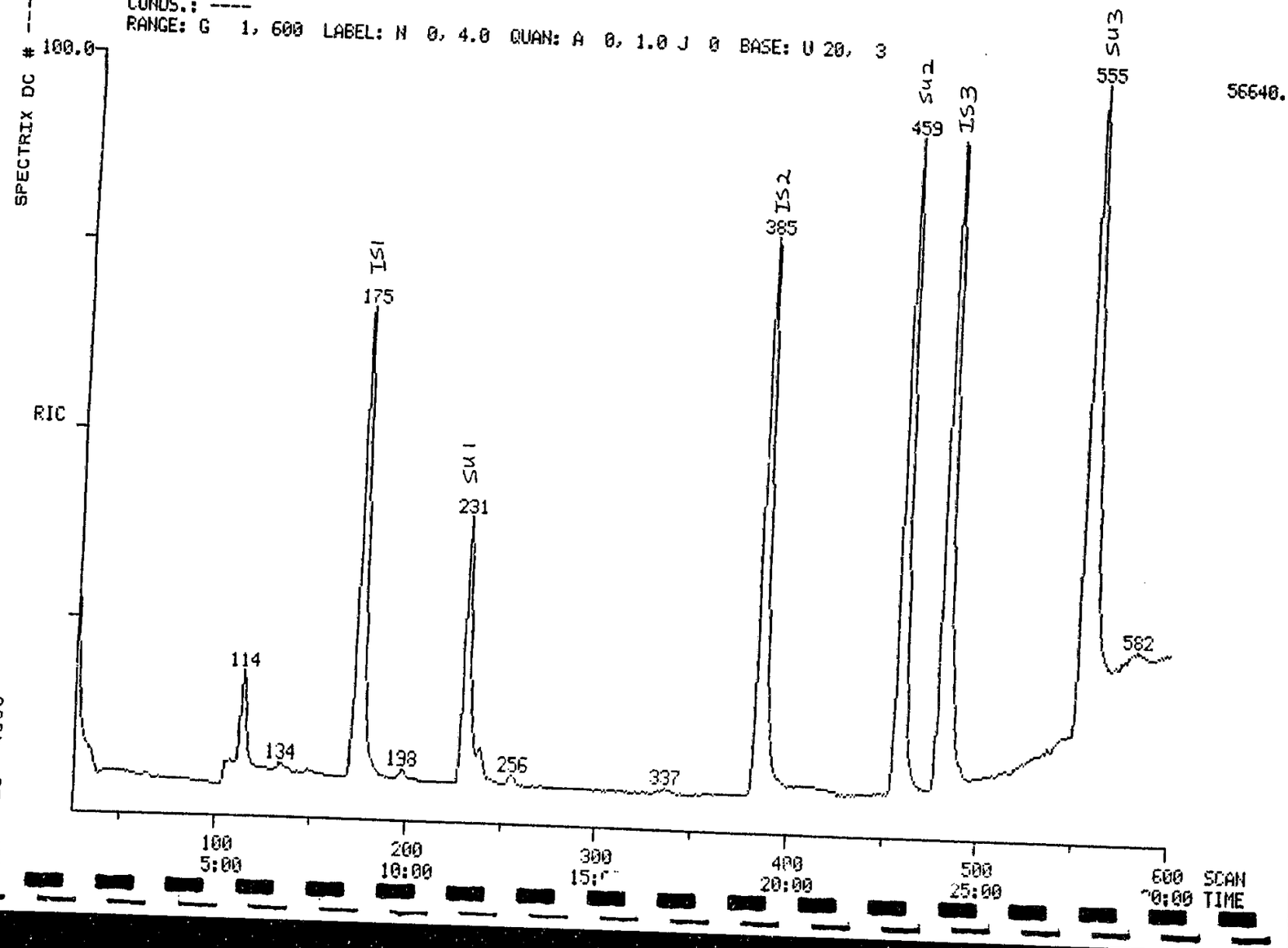
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003805

RIC
12/18/96 18:12:00
SAMPLE: SCK-MW07-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V10A #1
CALI: 4U12050V10A #3

SCANS 25 TO 600



003805

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

AMPLE ID.	SCK-MW07-001		
FILENAME	4U12050V10A	INST	4000
CLIENT	KEYSTONE	ANALYST	TTO
DATE INJECTED	12/18/86 18:12:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	1000.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
174	CI01	BROMOCHLOROMETHANE	**IS1**	128	50000 UG/L	1.000	16276
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50000 UG/L	1.000	74086
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50000 UG/L	1.000	65620
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.328	21523
459	CS05	D8-TOLUENE	**SU2**	98	95 %	0.954	65560
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	101 %	1.154	48555
114	C030	METHYLENE CHLORIDE *		84	6602 UG/L	0.655	3986
134	C035	ACETONE		43	5616 UG/L	0.770	1382

* BLANK CORRECTED ON DATA SHEET

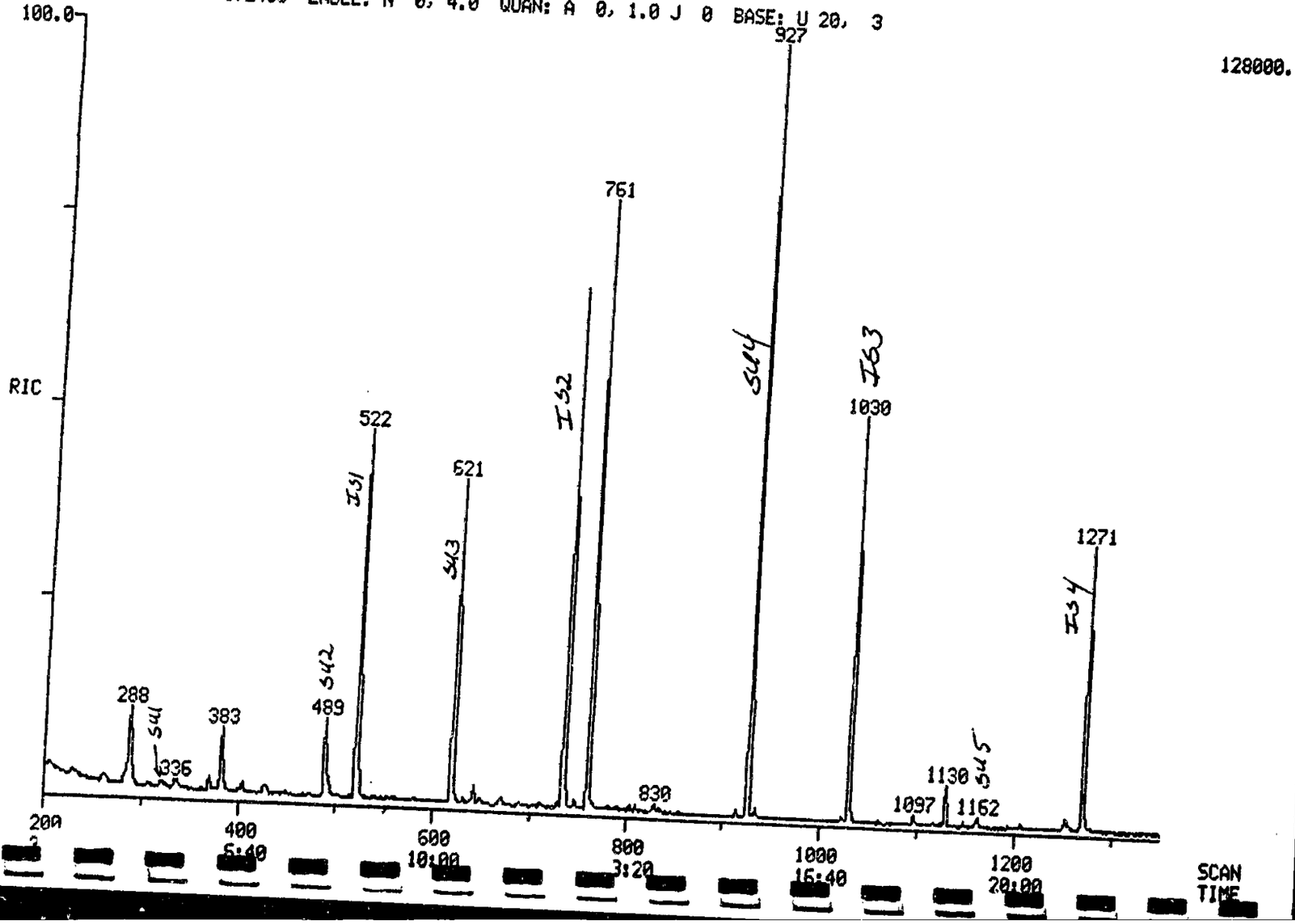
003807

RIC
01/10/87 18:40:00
SAMPLE: SCK-MW07-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C10 #1
CALI: 4U12050C10 #3

SCANS 200 TO 1350

SPECTRIX DC # ----14



NST ID: 4530

003807

003808

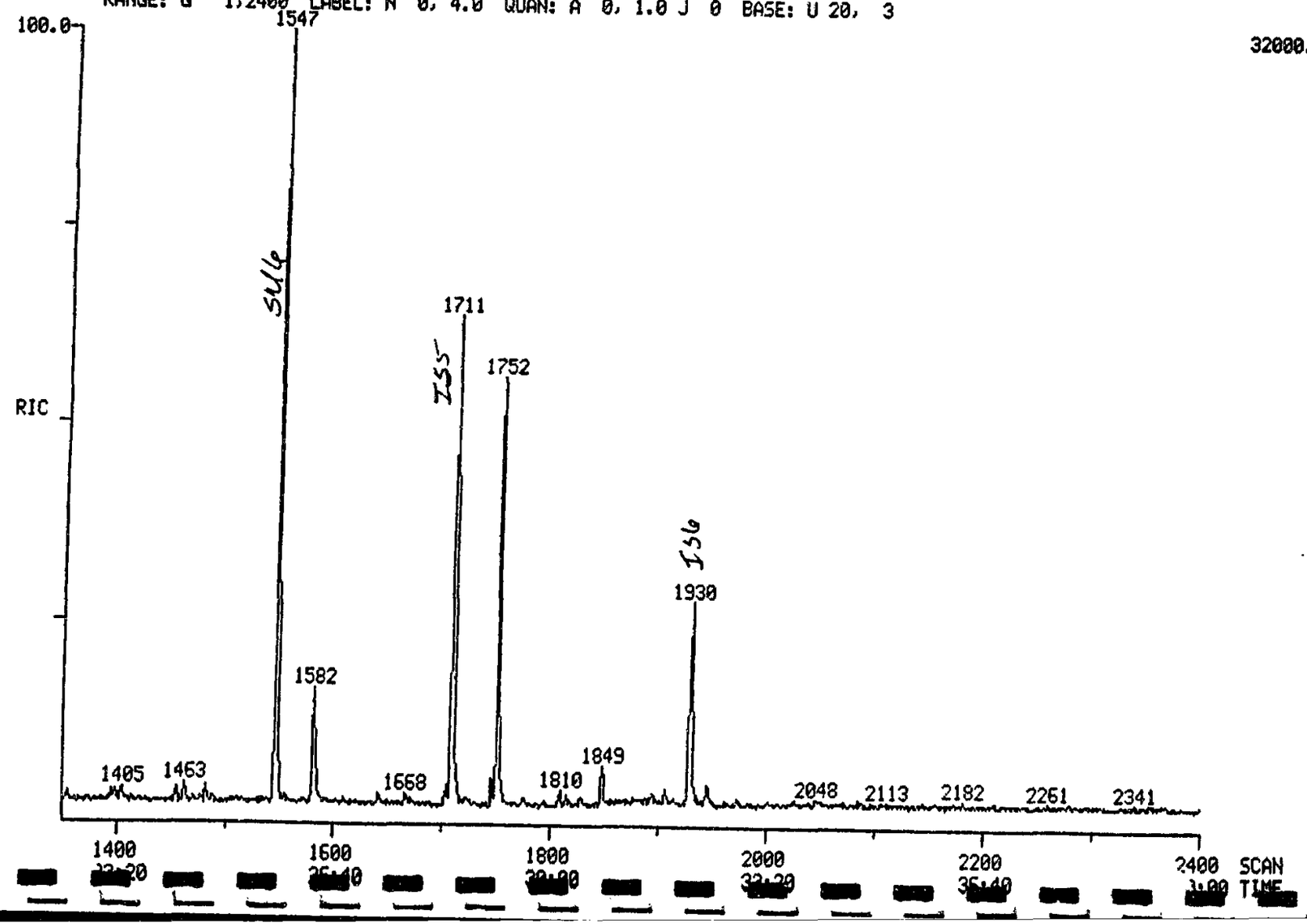
RIC
01/10/87 18:40:00
SAMPLE: SCK-MW07-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C10 #1
CALI: 4U12050C10 #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14

NST ID: 4530



003808

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW07-001

FILENAME 4U12050C10 INST ID. 4530

CLIENT KEYSTONE ANALYST GU

DATE INJECTED 01/10/87 18:40:00 VERIFIED BY GU

CALIB STD DATE 01/08/87 CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
522	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	23506
736	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	90325
1030	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	41621
1271	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	51588
1710	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	27655
1930	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	13129
321	CS50	2-FLUOROPHENOL ** SU1 **	112	2 %	0.615	1956
489	CS45	PHENOL-D5 ** SU2 **	99	13 %	0.937	14172
1161	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	4 %	1.127	457
621	CS20	NITROBENZENE-D5 ** SU3 **	82	99 %	0.844	49694
927	CS25	2-FLUUOROBIPHENYL ** SU4 **	172	96 %	0.900	98989
1547	CS30	TERPHENYL-D14 ** SU6 **	244	85 %	0.905	32864
738	C450	NAPHTHALENE	128	1 UG/L	1.003	1721
1752	C735	BIS(2-ETHYLHEXYL)PHTHALATE *	149	12 UG/L	1.025	9595
149	C760	DI-N-OCTYL PHTHALATE *	149	2 UG/L	0.958	1695

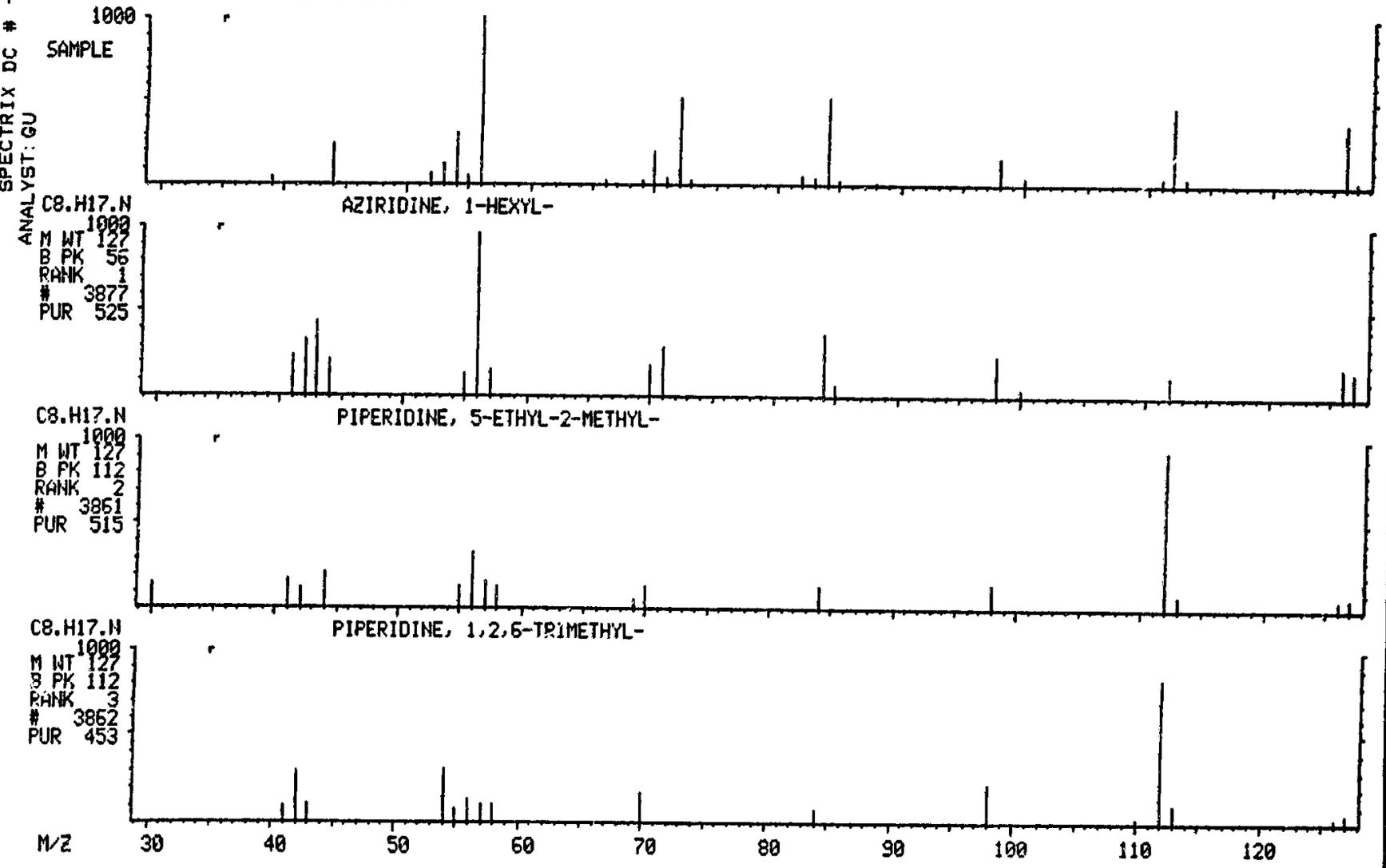
* BLANK CORRECTED ON DATA SHEET

LIBRARY SEARCH
01/10/87 18:40:00 + 6:23
SAMPLE: SCK-MW07-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C10 # 383
CALI: 4U12050C10 # 3

BASE M/Z: 56
RIC: 8559.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

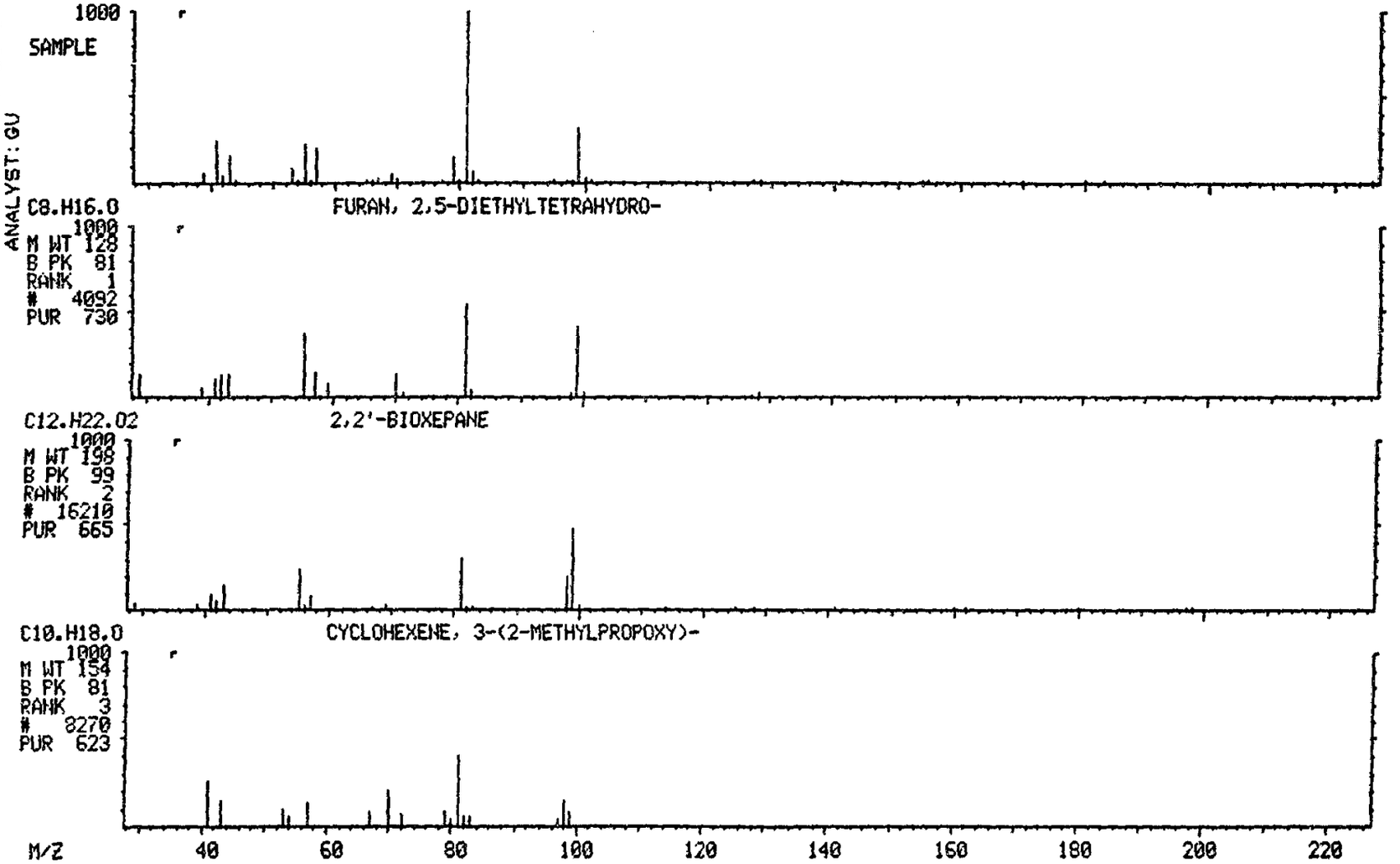
003811

LIBRARY SEARCH
01/10/87 18:40:00 + 12:41
SAMPLE: SCK-MW07-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C10 # 761
CALI: 4U12050C10 # 3

BASE M/Z: 81
RIC: 80383.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



003811

003812

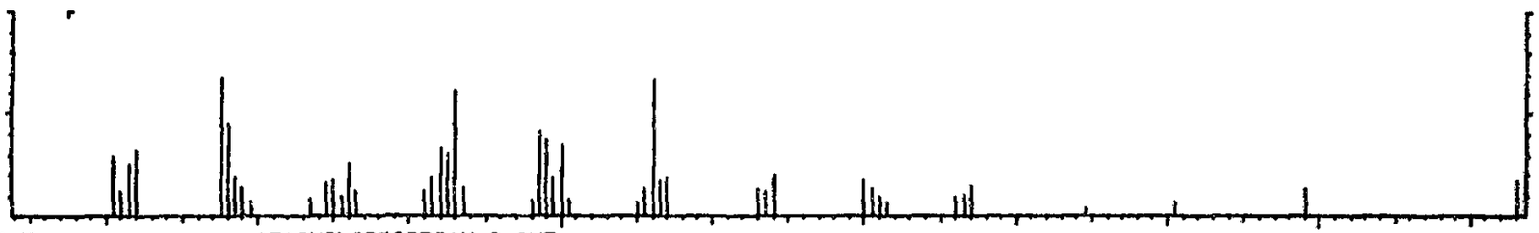
LIBRARY SEARCH
01/10/87 18:40:00 + 26:22
SAMPLE: SCK-MW07-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C10 #1582
CALI: 4U12050C10 # 3

BASE M/Z: 55
RIC: 3943.

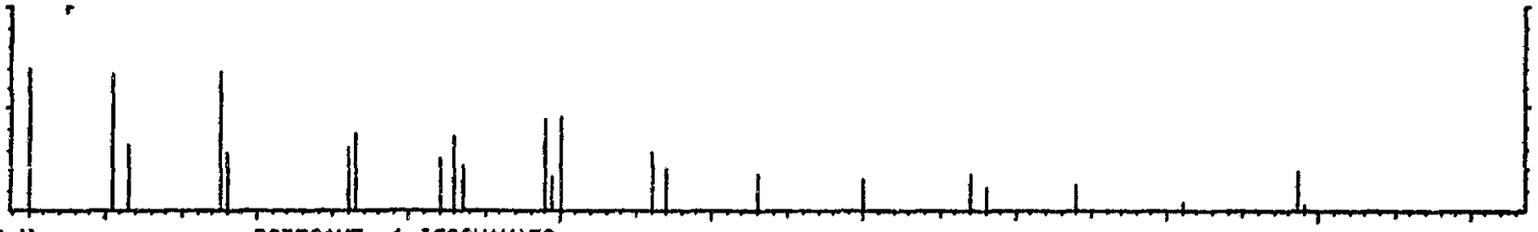
SPECTRIX DC # ----19
ANALYST: GU

1469
SAMPLE



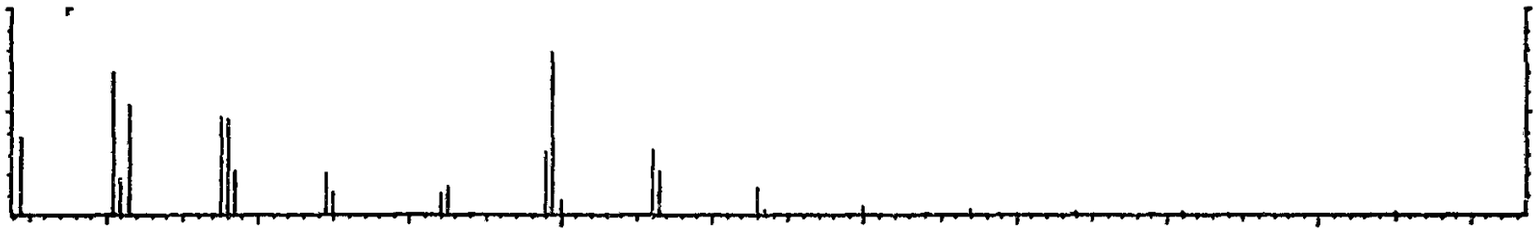
C12.H23.O.N AZACYCLOTRIDECAN-2-ONE

1469
M WT 197
B PK 30
RANK 1
16025
PUR 430



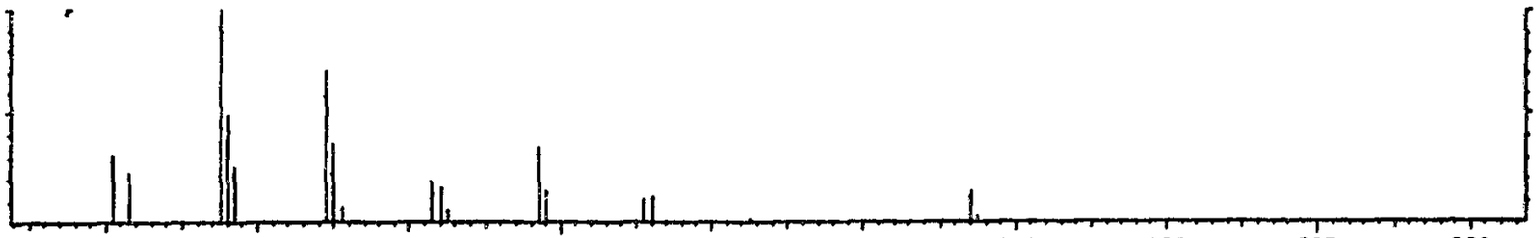
C13.H25.O.N DODECANE, 1-ISOCYANATO-

1469
M WT 211
B PK 99
RANK 2
18308
PUR 412



C11.H22 CYCLOPROPANE, 1-BUTYL-1-METHYL-2-PROPYL-

1469
M WT 154
B PK 55
RANK 3
8331
PUR 364



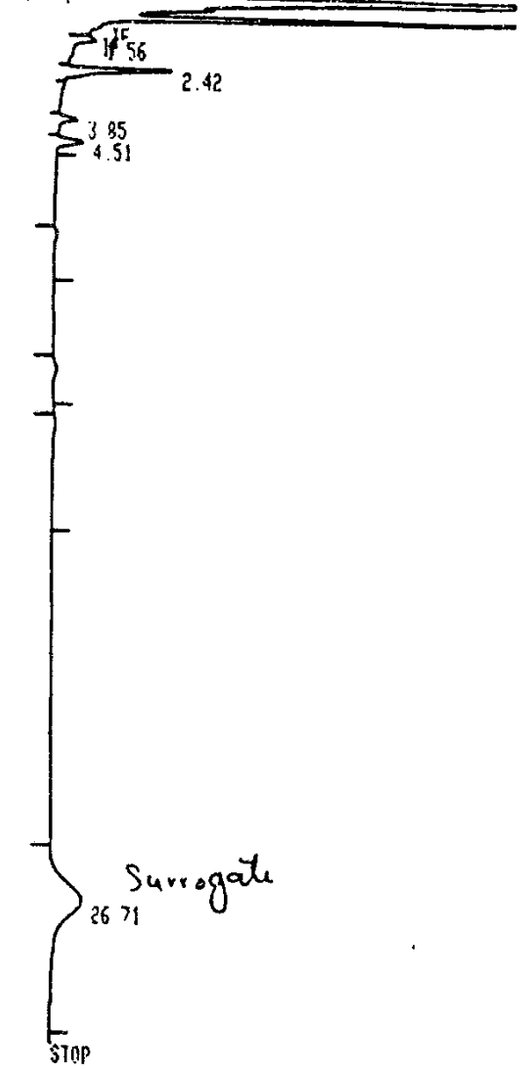
M/Z 40 60 80 100 120 140 160 180 200 220

INST ID: 4530

003812

86-12-050-10A

N1.



DC#_____-___-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW07-0

PESTICIDE FRACTION

2ND COLUMN CONFIRMATI

2ND COLUMN II C

1.8m x2mm ID x6mm OD

3% SP-2100

100/120 SUPELCOPORT

COLUMN TEMP. 187 °C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6000

003813

RUN # 200 JAN/16/87 21:31:24

WORKFILE ID: C

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.42	27559	PP	0.137	58.338
3.85	4692	PP	0.186	9.932
4.51	6596	PB	0.176	13.963
26.71	8393	PB	1.315	17.767

SPECTRIX 8 ≤ 0 0 REPORT

Work Order # 86-12-050

Received: 12/11/86

Results by Sample

SAMPLE ID SCK-MW07-001 (LLW) SAMPLE # 10 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	23.8 ug/L	BE	<3 ug/L	CD	6 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	17 ug/L	FE	5260 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	33.7 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	49 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW09-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003815

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW09-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205011
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
DATE ANALYZED: 12/16/86

DATAFILE: 4U12050V011
DILUTION FACTOR: 1:1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	9 J
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003816

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW09-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205011
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/11/87

DATAFILE: 4U12050C11A
DILUTION FACTOR: 4.0

CAS #	COMPOUND	UG/L
C315	PHENOL	40 U
C325	BIS(2-CHLOROETHYL)ETHER	40 U
C330	2-CHLOROPHENOL	40 U
C335	1,3-DICHLOROBENZENE	40 U
C340	1,4-DICHLOROBENZENE	40 U
C345	BENZYL ALCOHOL	40 U
C350	1,2-DICHLOROBENZENE	40 U
C355	2-METHYLPHENOL	40 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	40 U
C365	4-METHYLPHENOL	40 U
C370	N-NITROSODIPROPYLAMINE	40 U
C375	HEXACHLOROETHANE	40 U
C410	NITROBENZENE	40 U
C415	ISOPHORONE	40 U
C420	2-NITROPHENOL	40 U
C425	2,4-DIMETHYLPHENOL	40 U
C430	BENZOIC ACID	200 U
C435	BIS(2-CHLOROETHOXY)METHANE	40 U
C440	2,4-DICHLOROPHENOL	40 U
C445	1,2,4-TRICHLOROBENZENE	40 U
C450	NAPHTHALENE	40 U
C455	4-CHLOROANILINE	40 U
C460	HEXACHLOROBUTADIENE	40 U
C465	P-CHLORO-M-CRESOL	40 U
C470	2-METHYLNAPHTHALENE	40 U
C510	HEXACHLOROCYCLOPENTADIENE	40 U
C515	2,4,6-TRICHLOROPHENOL	40 U
C520	2,4,5-TRICHLOROPHENOL	200 U
C525	2-CHLORONAPHTHALENE	40 U
C530	2-NITROANILINE	200 U
C535	DIMETHYL PHTHALATE	40 U
C540	ACENAPHTHYLENE	40 U
C545	3-NITROANILINE	200 U
C550	ACENAPHTHENE	40 U
C555	2,4-DINITROPHENOL	200 U
C560	4-NITROPHENOL	200 U
C565	DIBENZOFURAN	40 U
C570	2,4-DINITROTOLUENE	40 U
C575	2,6-DINITROTOLUENE	40 U

SPECTRIX-DC # ---- 8

SAMPLE NUMBER: SCK-MW09-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

ATAFILE: 4U12050C11A

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	40 U
C585	4-CHLOROPHENYL PHENYL ETHER	40 U
C590	FLUORENE	40 U
C595	4-NITROANILINE	200 U
C610	4,6-DINITRO-2-METHYLPHENOL	200 U
C615	N-NITROSODIPHENYLAMINE	40 U
C625	4-BROMOPHENYL PHENYL ETHER	40 U
C630	HEXACHLOROBENZENE	40 U
C635	PENTACHLOROPHENOL	200 U
C640	PHENANTHRENE	40 U
C645	ANTHRACENE	40 U
C650	DI-N-BUTYL PHTHALATE	40 U
C655	FLUORANTHENE	40 U
C715	PYRENE	40 U
C720	BUTYL BENZYL PHTHALATE	40 U
C725	3,3'-DICHLOROBENZIDINE	80 U
C730	BENZO(A)ANTHRACENE	40 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	40 U
C740	CHRYSENE	40 U
C760	DI-N-OCTYL PHTHALATE	40 U
C765	BENZO(B)FLUORANTHENE	40 U
C770	BENZO(K)FLUORANTHENE	40 U
C775	BENZO(A)PYRENE	40 U
C780	INDENO(1,2,3-CD)PYRENE	40 U
C785	DIBENZO(A,H)ANTHRACENE	40 U
C790	BENZO(GHI)PERYLENE	40 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003818

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-11A

DC No: KEYSTONE
SMO No: SCK-MW09-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/15/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : ~~6000~~ NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003819

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW09-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: MB DATAFILE: 4U12050V011

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003820

INST ID: 4330

SPECTRIX DC # ---- 8
SPECTRIX DC # ---- 8

SAMPLE: SCK-MW09-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ---

QC REPORT NO.: ---

ANALYST: GU

DATAFILE: 4U12050C11A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1210		450 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1582		76 J
4337-65-9	HEXANEDIOIC ACID, MONO(2-ETHYLHEXYL)ESTER	1667	803	23 J

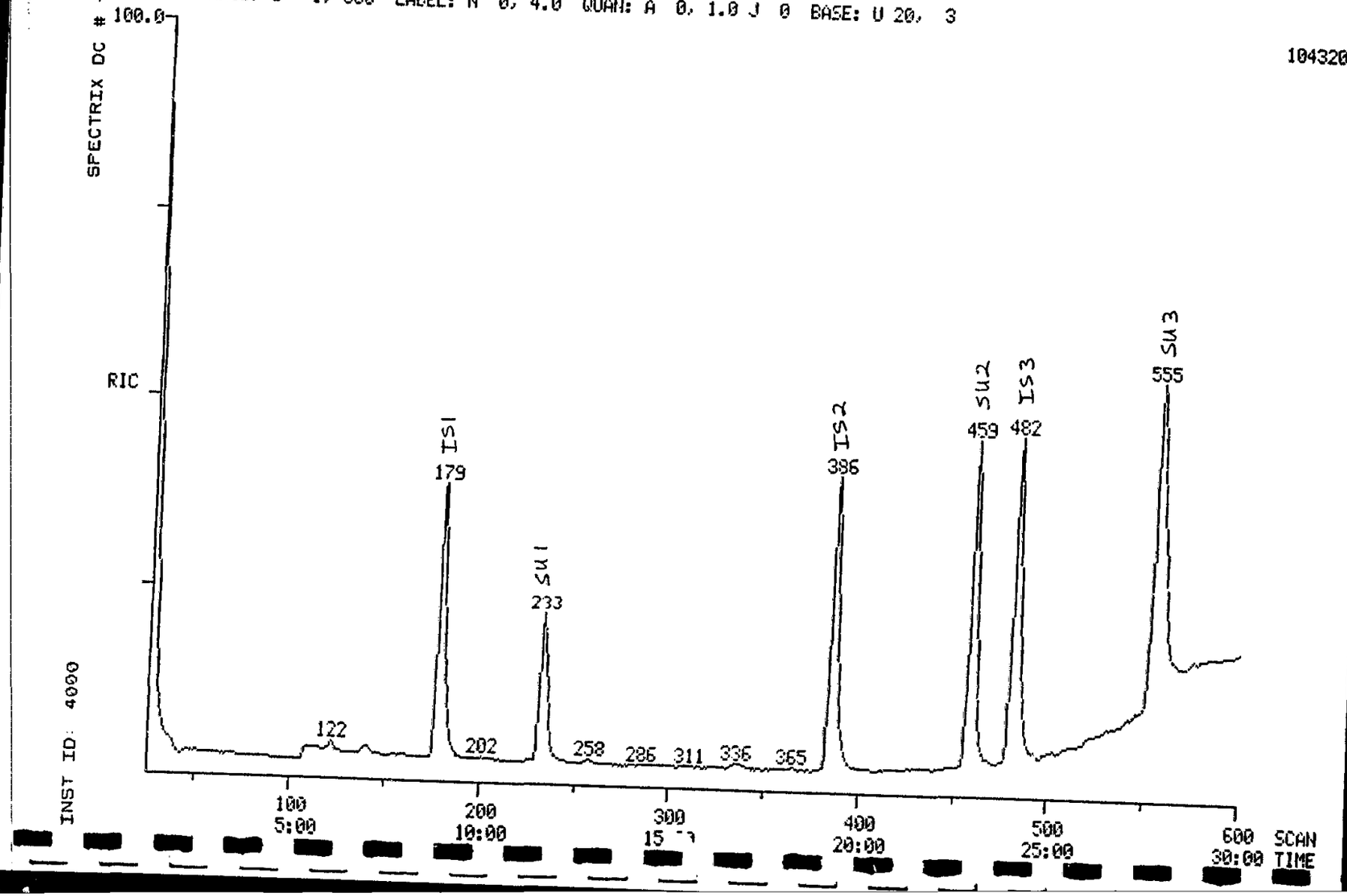
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003822

RIC
12/16/86 12:26:00
SAMPLE: SCK-MW09-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V011 #1
CALI: 4U12050V011 #3

SCANS 25 TO 600



003822

SPECTRIX DC # -----14

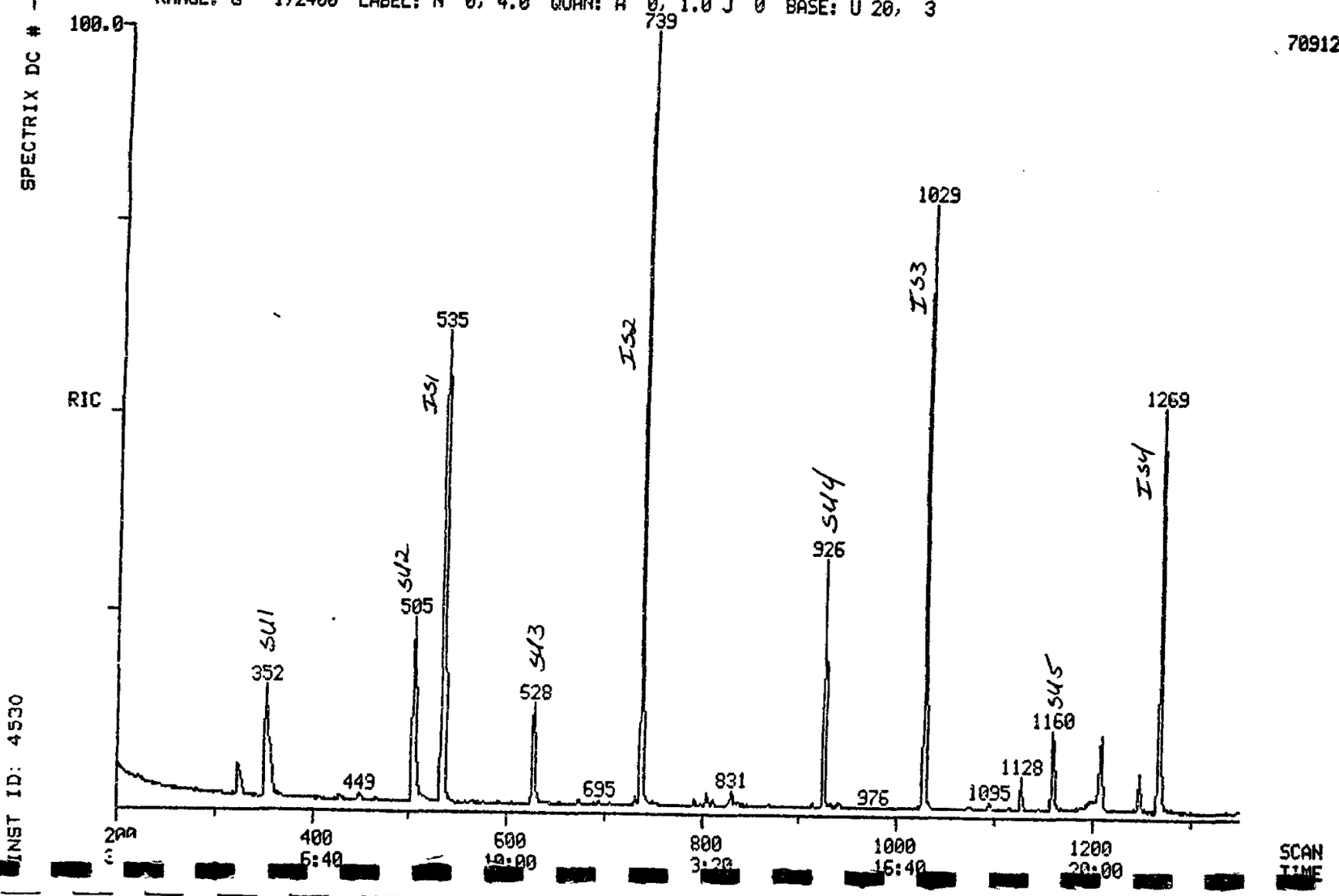
VOA QUANTITATION REPORT

SAMPLE ID.	SCK-MW09-001		
FILENAME	4U12050V011	INST	4000
CLIENT	KEYSTONE	ANALYST	MB
DATE INJECTED	12/16/86 12:26:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
178	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	16787
386	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	72576
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	57474
233	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	90 %	1.309	21839
459	CS05	D8-TOLUENE	**SU2**	98	97 %	0.954	61101
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	99 %	1.154	41406
140	C035	ACETONE		43	9 UG/L	0.787	2029

RIC
01/11/87 15:25:00
SAMPLE: SCK-MW09-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C11A #1 SCANS 200 TO 1350
CALI: 4U12050C11A #3

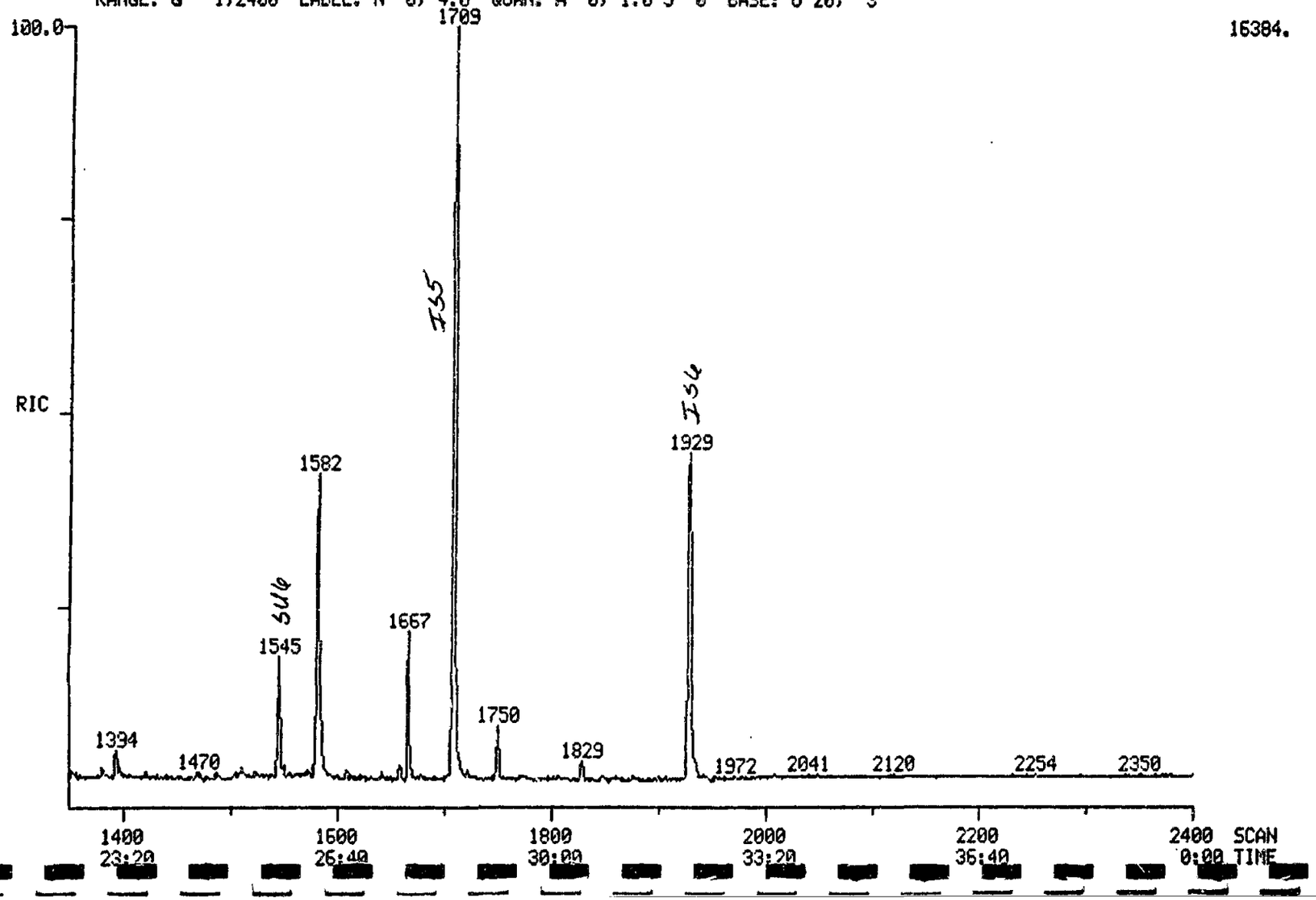


70912.

003825

RIC
01/11/87 15:25:00
SAMPLE: SCK-MW09-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C11A #1 SCANS 1350 TO 2400
CALI: 4U12050C11A #3



SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW09-001

FILENAME 4U12050C11A

CLIENT KEYSTONE

DATE INJECTED 01/11/87 15:25:00

CALIB STD DATE 01/08/87

INST ID. 4530

ANALYST GU

VERIFIED BY GU

CORR. FACTOR 4.00

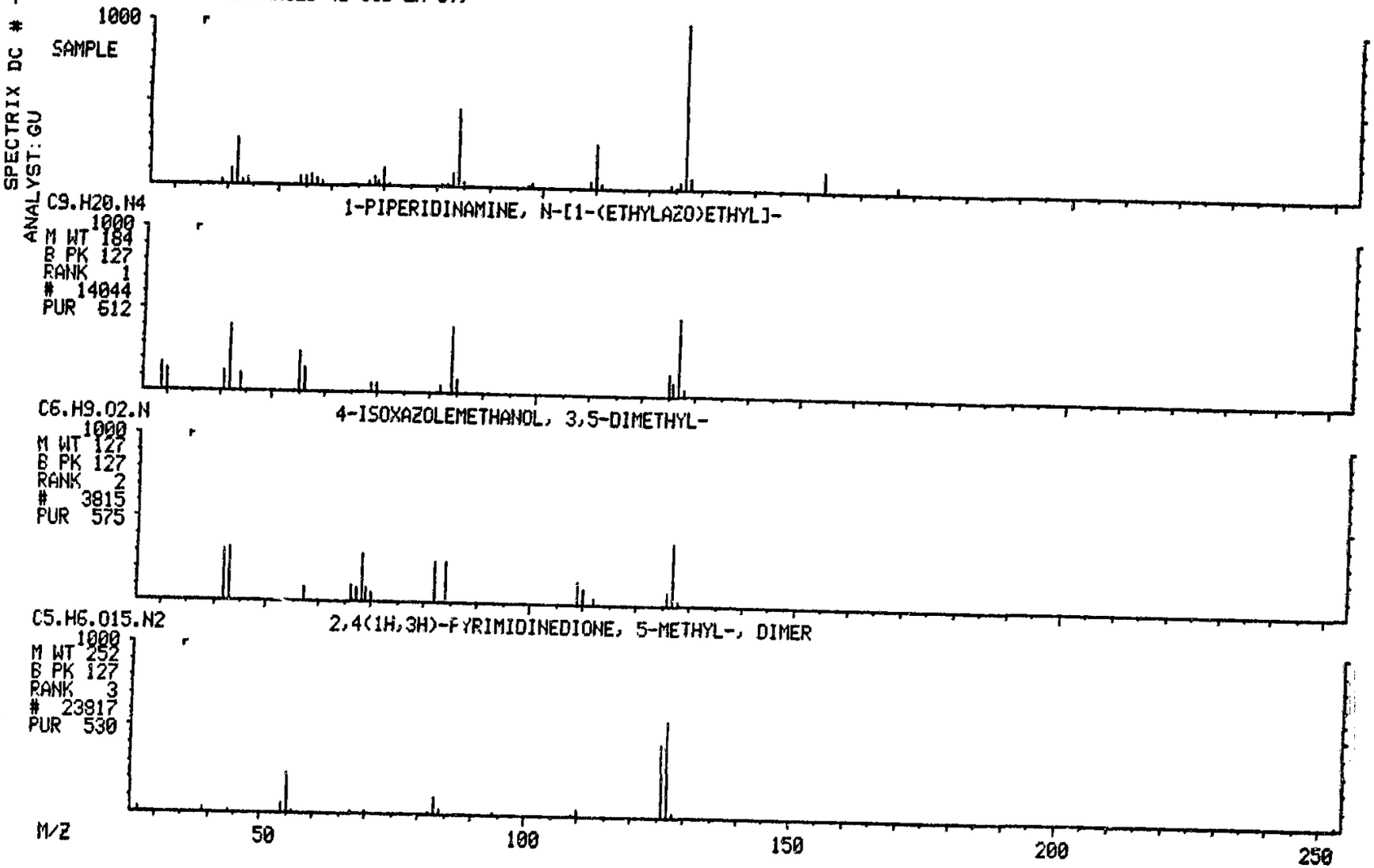
SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
535	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	160 UG/L	1.000	20800
739	CI40	NAPHTHALENE-D8 ** IS2 **	136	160 UG/L	1.000	77456
1029	CI50	ACENAPHTHENE-D10 ** IS3 **	164	160 UG/L	1.000	38015
1269	CI60	PHENANTHRENE-D10 ** IS4 **	188	160 UG/L	1.000	43906
1709	CI70	CHRYSENE-D12 ** IS5 **	240	160 UG/L	1.000	2165[illegible]
1929	CI75	PERYLENE-D12 ** IS6 **	264	160 UG/L	1.000	12770
352	CS50	2-FLUOROPHENOL ** SU1 **	112	86 %	0.658	14992
505	CS45	PHENOL-D5 ** SU2 **	99	90 %	0.944	21728
1160	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	70 %	1.127	1902
628	CS20	NITROBENZENE-D5 ** SU3 **	82	88 %	0.850	9287
926	CS25	2-FLUOROBIPHENYL ** SU4 **	172	93 %	0.900	20392
1543	CS30	TERPHENYL-D14 ** SU6 **	244	54 %	0.904	337[illegible]

LIBRARY SEARCH
01/11/87 15:25:00 + 20:10
SAMPLE: SCK-MW09-601
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C11A #1210
CALI: 4U12050C11A # 3

BASE M/Z: 127
RIC: 5655.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



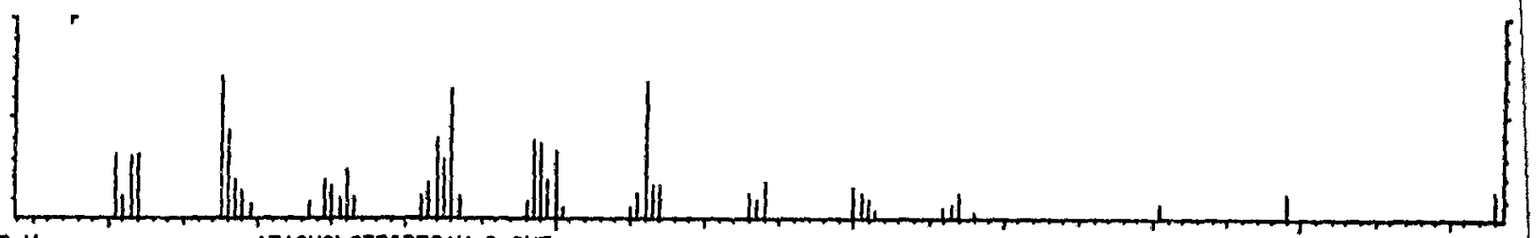
003828

LIBRARY SEARCH
01/11/87 15:25:00 + 26:22
SAMPLE: SCK-MW09-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C11A #1582 BASE M/Z: 55
CALI: 4U12050C11A # 3 RIC: 5471.

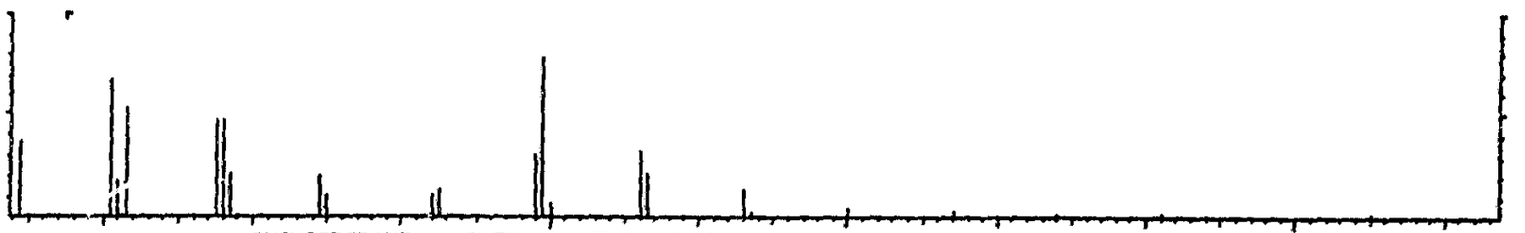
SPECTRIX DC # ----19
ANALYST: GU

1419
SAMPLE

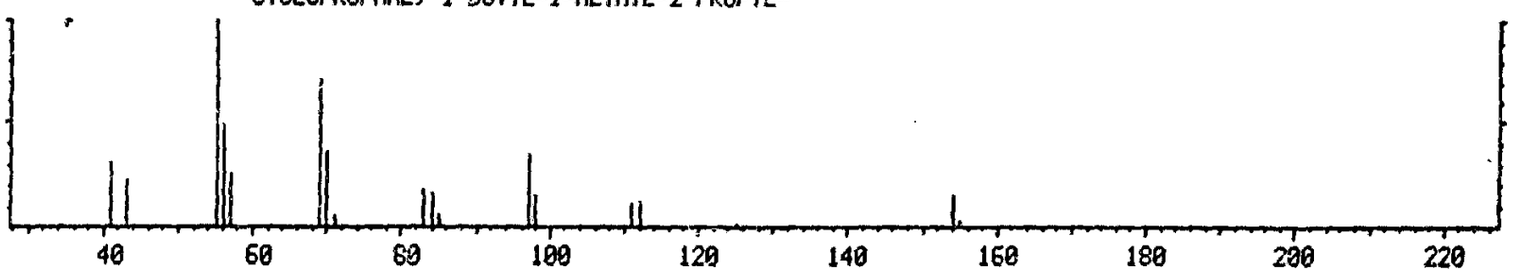


C12.H23.O.N AZACYCLOTRIDECAN-2-ONE
1419
M WT 197
B PK 30
RANK 1
16025
PUR 468

C13.H25.O.N DODECANE, 1-ISOCYANATO-
1419
M WT 211
B PK 99
RANK 2
18308
PUR 441



C11.H22 CYCLOPROPANE, 1-BUTYL-1-METHYL-2-PROPYL-
1419
M WT 154
B PK 55
RANK 3
8331
PUR 392



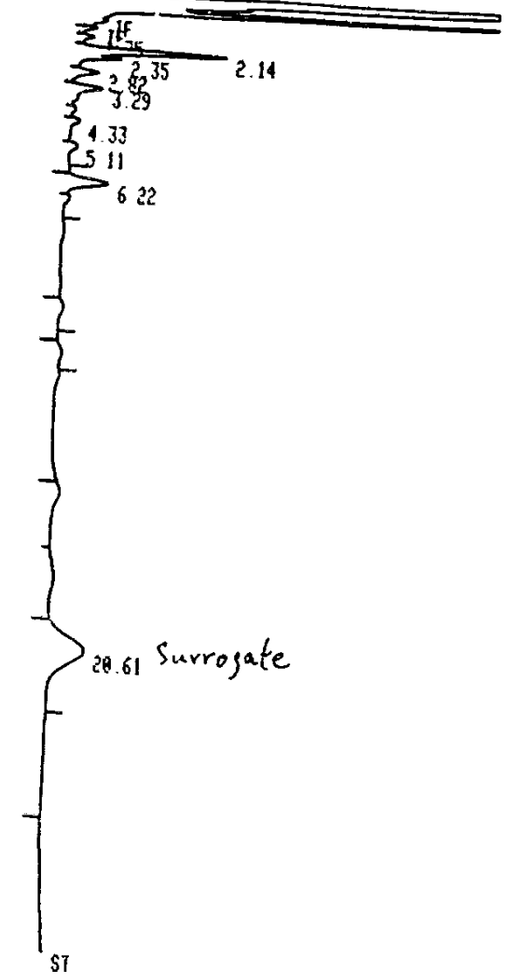
M/Z 40 60 80 100 120 140 160 180 200 220

INST ID: 4530

003828

TRX LF 86-12-030-11A

N.A.



DC#_____

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW09-C

PESTICIDE FRACTION

1ST COLUMN QUANT.

1ST COLUMN ID

1.8m x 4mm ID x6mm C

1.5% SP 2250

1.95% SP 2401

100/120 SUPELCOPORT

COLUMN TEMP. 203°C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6000

RUN # 156

WORKFILE ID: C

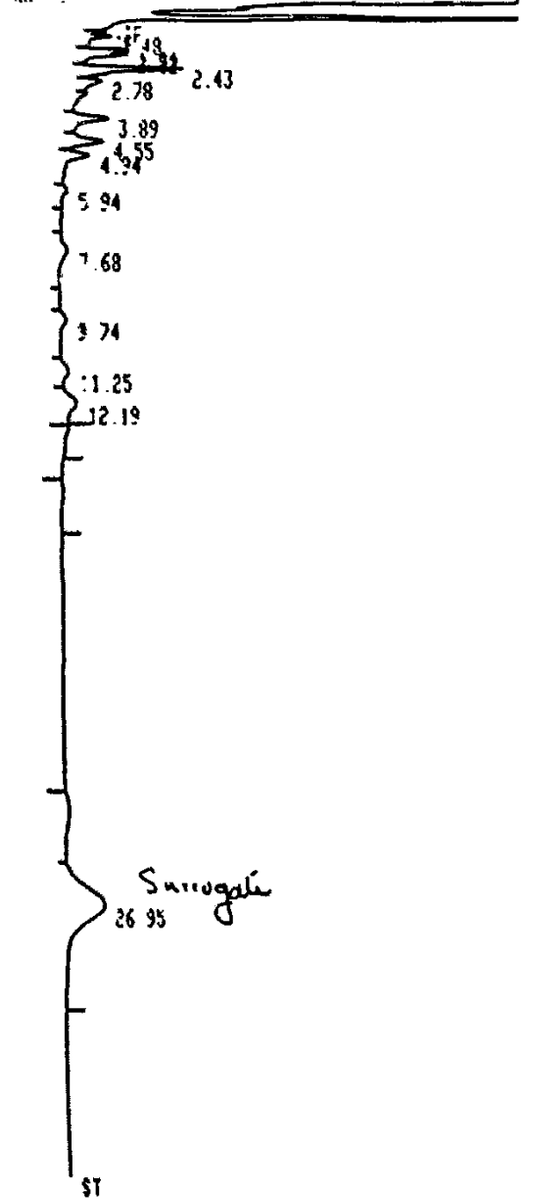
WORKFILE NAME:

JAN/15/87 00:38:21

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.75	1632	D PV	0.128	3.339
2.14	20435	VV	0.143	41.806
2.35	5906	D VV	0.144	12.082
2.82	3258	VP	0.181	6.665
3.29	4171	PV	0.247	8.533
4.33	1405	VP	0.222	2.874
5.11	1286	PB	0.228	2.631
6.22	5678	BV	0.277	11.616
20.61	5110	BB	0.991	10.454

86-12-050-11A NA.



DC#_____-___-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW09-00

PESTICIDE FRACTION

2ND COLUMN CONFIRMAT.

2ND COLUMN II C

1.8m x2mm ID x6mm OD

3% SP-2100

100/120 SUPELCOPORT

COLUMN TEMP. 187 °C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6000

003830

RUN # 188 JAN/16/87 14:19:40

WORKFILE ID: C

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.48	3482	D PP	0.049	3.511
1.91	11183	PV	0.096	11.275
2.02	10811	D VP	0.117	10.900
2.43	25995	PV	0.147	26.208
2.78	5512	VV	0.242	5.557
3.89	8792	PV	0.224	8.864
4.55	8315	VV	0.218	8.383
4.94	5559	VP	0.216	5.605
5.94	1364	PP	0.229	1.375
7.68	2066	VP	0.523	2.083
9.74	1630	VP	0.423	1.643
11.25	1687	PP	0.387	1.701
12.19	2778	PB	0.435	2.801
26.95	10014	VB	1.250	10.096

SPECTRIX REPORT

Work Order # 86-12-030

Received: 12/11/86

Results by Sample

SAMPLE ID SCK-MW09-001 (LLW) SAMPLE # 11 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	11 ug/L	FE	3300 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	22.8 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	67 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW12-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003832

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW12-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 801205012
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V12

DILUTION FACTOR: 1:100

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	1000 U
C015	BROMOMETHANE	1000 U
C020	VINYL CHLORIDE	1000 U
C025	CHLOROETHANE	1000 U
C030	METHYLENE CHLORIDE	500 U
C035	ACETONE	1000 U
C040	CARBON DISULFIDE	500 U
C045	1,1-DICHLOROETHENE	500 U
C050	1,1-DICHLOROETHANE	500 U
C055	TRANS-1,2-DICHLOROETHENE	500 U
C060	CHLOROFORM	500 U
C065	1,2-DICHLOROETHANE	500 U
C110	2-BUTANONE	1000 U
C115	1,1,1-TRICHLOROETHANE	500 U
C120	CARBON TETRACHLORIDE	500 U
C125	VINYL ACETATE	1000 U
C130	BROMODICHLOROMETHANE	500 U
C140	1,2-DICHLOROPROPANE	500 U
C145	TRANS-1,3-DICHLOROPROPENE	500 U
C150	TRICHLOROETHENE	500 U
C155	DIBROMOCHLOROMETHANE	500 U
C160	1,1,2-TRICHLOROETHANE	500 U
C165	BENZENE	500 U
C170	CIS-1,3-DICHLOROPROPENE	500 U
C175	2-CHLOROETHYLVINYLETHER	1000 U
C180	BROMOFORM	500 U
C210	2-HEXANONE	1000 U
C205	4-METHYL-2-PENTANONE	1000 U
C220	TETRACHLOROETHENE	500 U
C225	1,1,2,2-TETRACHLOROETHANE	500 U
C230	TOLUENE	500 U
C235	CHLOROBENZENE	500 U
C240	ETHYLBENZENE	500 U
C245	STYRENE	500 U
C250	TOTAL XYLENES	500 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003833

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW12-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

BORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205012
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: MPM

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/11/87

DATAFILE: 4U12050C12A

DILUTION FACTOR: 20

CAS #	COMPOUND	UG/L
C315	PHENOL	140 J
C325	BIS(2-CHLOROETHYL)ETHER	200 U
C330	2-CHLOROPHENOL	200 U
C335	1,3-DICHLOROBENZENE	200 U
C340	1,4-DICHLOROBENZENE	200 U
C345	BENZYL ALCOHOL	200 U
C350	1,2-DICHLOROBENZENE	200 U
C355	2-METHYLPHENOL	450
C360	BIS(2-CHLOROISOPROPYL)ETHER	200 U
C365	4-METHYLPHENOL	720
C370	N-NITROSODIPROPYLAMINE	200 U
C375	HEXACHLOROETHANE	200 U
C410	NITROBENZENE	200 U
C415	ISOPHORONE	200 U
C420	2-NITROPHENOL	200 U
C425	2,4-DIMETHYLPHENOL	1400
C430	BENZOIC ACID	1000 U
C435	BIS(2-CHLOROETHOXY)METHANE	200 U
C440	2,4-DICHLOROPHENOL	200 U
C445	1,2,4-TRICHLOROBENZENE	200 U
C450	NAPHTHALENE	7400
C455	4-CHLOROANILINE	200 U
C460	HEXACHLOROBUTADIENE	200 U
C465	P-CHLORO-M-CRESOL	200 U
C470	2-METHYLNAPHTHALENE	570
C510	HEXACHLOROCYCLOPENTADIENE	200 U
C515	2,4,6-TRICHLOROPHENOL	200 U
C520	2,4,5-TRICHLOROPHENOL	1000 U
C525	2-CHLORONAPHTHALENE	200 U
C530	2-NITROANILINE	1000 U
C535	DIMETHYL PHTHALATE	200 U
C540	ACENAPHTHYLENE	11 J
C545	3-NITROANILINE	1000 U
C550	ACENAPHTHENE	650
C555	2,4-DINITROPHENOL	1000 U
C560	4-NITROPHENOL	1000 U
C565	DIBENZOFURAN	410
C570	2,4-DINITROTOLUENE	200 U
C575	2,6-DINITROTOLUENE	200 U

003834

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW12-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C12A

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	200 U
C585	4-CHLOROPHENYL PHENYL ETHER	200 U
C590	FLUORENE	310
C595	4-NITROANILINE	1000 U
C610	4,6-DINITRO-2-METHYLPHENOL	1000 U
C615	N-NITROSODIPHENYLAMINE	200 U
C625	4-BROMOPHENYL PHENYL ETHER	200 U
C630	HEXACHLOROBENZENE	200 U
C635	PENTACHLOROPHENOL	1000 U
C640	PHENANTHRENE	680
C645	ANTHRACENE	96 J
C650	DI-N-BUTYL PHTHALATE	200 U
C655	FLUORANTHENE	200
C715	PYRENE	166 J
C720	BUTYL BENZYL PHTHALATE	200 U
C725	3,3'-DICHLOROBENZIDINE	400 U
C730	BENZO(A)ANTHRACENE	28 J
C735	BIS(2-ETHYLHEXYL)PHTHALATE	200 U
C740	CHRYSENE	26 J
C760	DI-N-OCTYL PHTHALATE	200 U
C765	BENZO(B)FLUORANTHENE	200 U
C770	BENZO(K)FLUORANTHENE	200 U
C775	BENZO(A)PYRENE	200 U
C780	INDENO(1,2,3-CD)PYRENE	200 U
C785	DIBENZO(A,H)ANTHRACENE	200 U
C790	BENZO(GHI)PERYLENE	200 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003835

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-12A

DC No: KEYSTONE
SMO No: SCK-MW12-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/15/87
Dilution Factor: 5
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.05 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.10 U
53494-70-5	ENDRIN KETONE	0.50 U
57-74-9	CHLORDANE	0.10 U
8001-35-2	TOXAPHENE	0.50 U
12674-11-2	AROCLOR-1016	1.0 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	0.50 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003836

INST ID 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW12-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: NOT DATAFILE: 4U12050V12

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003837

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-MW12-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

QC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12050C12A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
				46/l
89-51-0	BENZENEACETIC ACID, 2-CARBOXY-	504	906	370 J
611-15-4	BENZENE, 1-ETHENYL-2-METHYL-	558	959	540 J
95-13-6	1H-INDENE	569	931	280 J
526-75-0	PHENOL, 2,3-DIMETHYL-	727	913	16000 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	750		16000 J
7-89-8	PHENOL, 4-(1-METHYLETHYL)-	787	884	4800 J
1515-95-3	BENZENE, 1-ETHYL-4-METHOXY-	798	892	4000 J
98-71-5	PHENOL, 3-ETHYL-5-METHYL-	803	876	3300 J
98-71-5	PHENOL, 3-ETHYL-5-METHYL-	821	863	12000 J
527-60-6	PHENOL, 2,4,6-TRIMETHYL-	833	908	2300 J
71-83-2	1H-INDENE, 1-ETHYLIDENE-	872	859	8800 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	878		4800 J
1197-34-8	PHENOL, 3,5-DIETHYL-	906	837	530 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	924		350 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	944		270 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1041		260 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1212		490 J
580-51-8	[1,1'-BIPHENYL]-3-OL	1218	831	400 J
188-23-0	9H-CARBAZOLE, 9-NITROSO-	1314	872	430 J

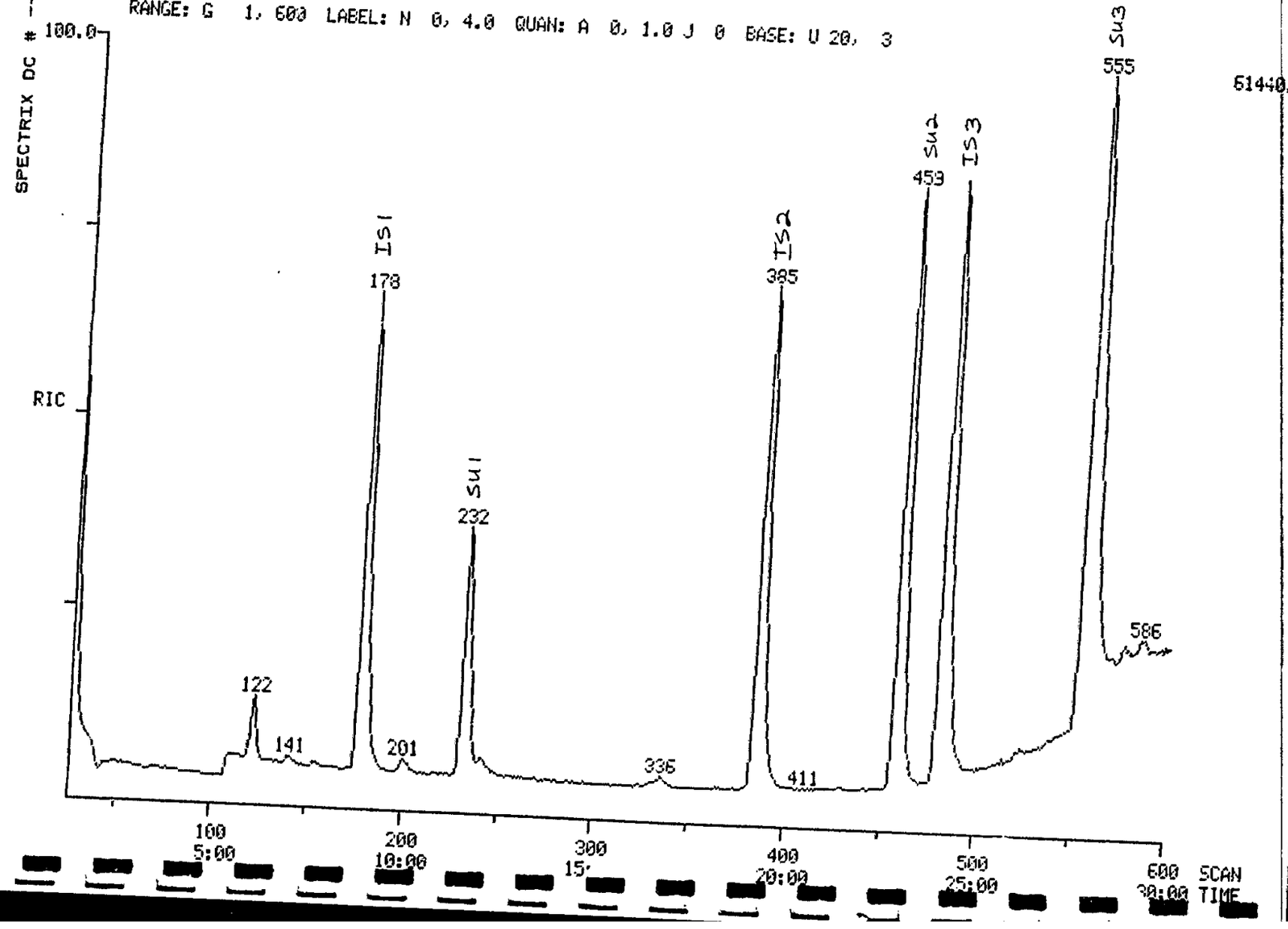
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003839

RIC
12/18/86 10:43:00
SAMPLE: SCK-MW2-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050U12 #1
CALI: 4U12050U12 #3

SCANS 25 TO 600



SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID	SCK-MWla-001		
FILENAME	4U12050V12	INST	4000
CLIENT	KEYSTONE	ANALYST	NOT
DATE INJECTED	12/19/86 10:43:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	100.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
178	CI01	BROMOCHLOROMETHANE	**IS1**	128	5000 UG/L	1.000	16444
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	5000 UG/L	1.000	74326
481	CI20	D5-CHLOROBENZENE	**IS3**	117	5000 UG/L	1.000	64375
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	93 %	1.303	21967
459	CS05	D8-TOLUENE	**SU2**	98	98 %	0.954	66480
554	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	97 %	1.152	45902
122	C030	METHYLENE CHLORIDE *		84	442 UG/L	0.685	2606

* BLANK CORRECTED ON DATA SHEET

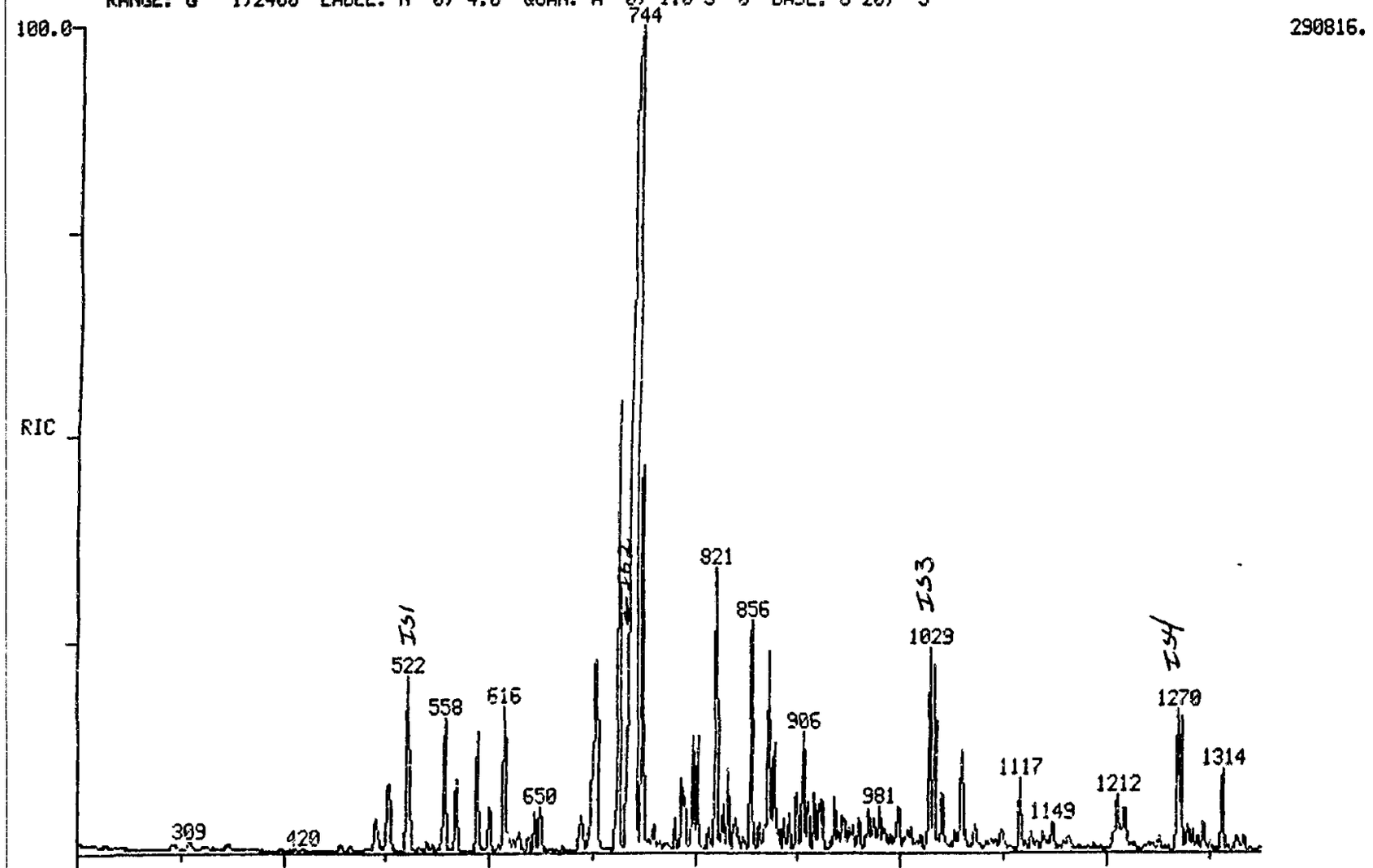
003842

RIC
01/11/87 20:33:00
SAMPLE: SCK-MW12-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C12A #1 SCANS 200 TO 1350
CALI: 4U12050C12A #3

SPECTRIX DC # ----14

INST ID: 4530

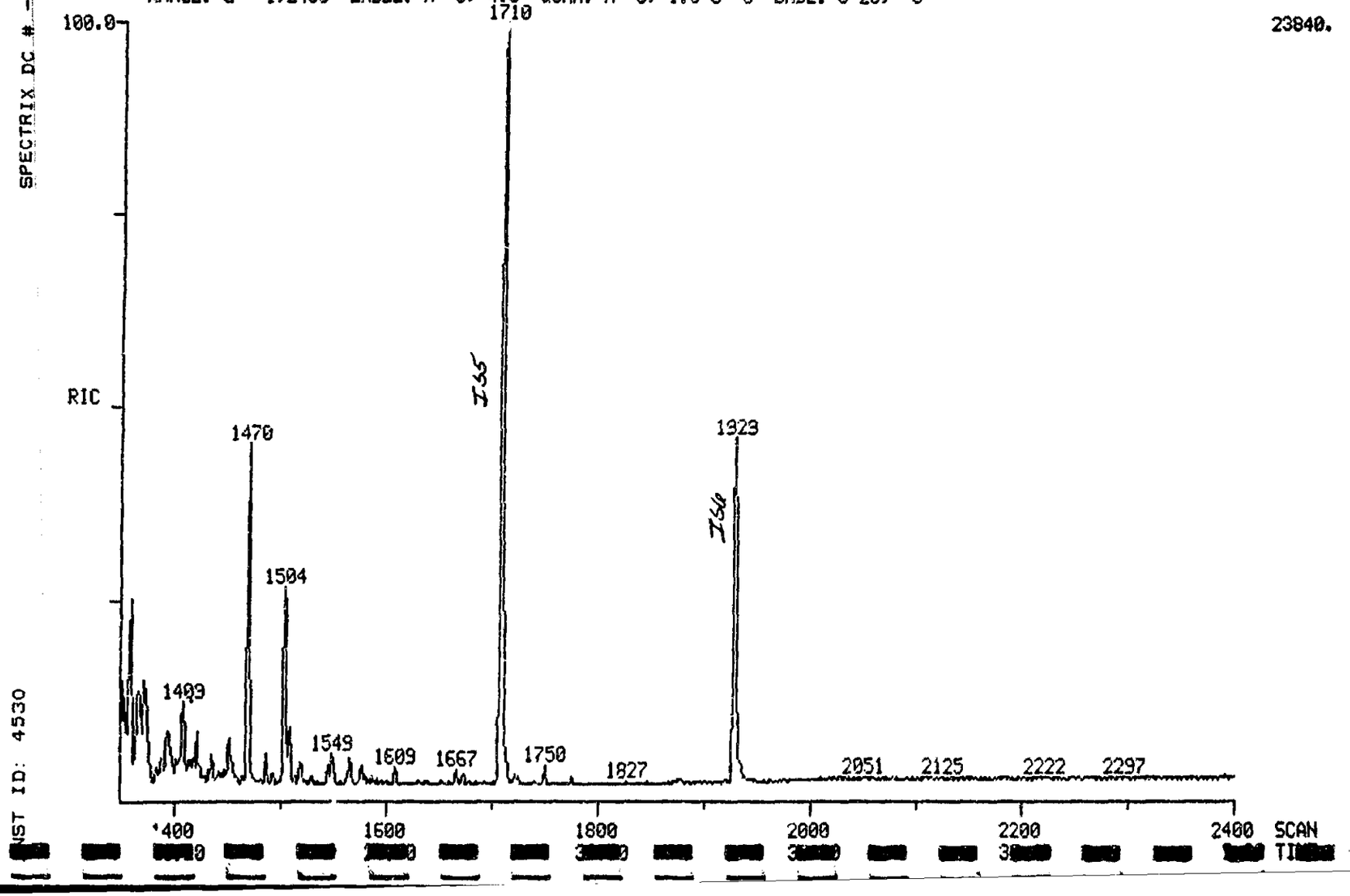


003842

003843

RIC
01/11/87 20:33:00
SAMPLE: SCK-MW12-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C12A #1 SCANS 1350 TO 2400
CALI: 4U12050C12A #3



003843

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID.	SCK-MW12-001		
LENAME	4U12050C12A	INST ID.	4530
CLIENT	KEYSTONE	ANALYST	GU
DATE INJECTED	01/11/87 20:33:00	VERIFIED BY	GU
CALIB STD DATE	01/08/87	CORR. FACTOR	20.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
522	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	800 UG/L	1.000	27519
738	CI40	NAPHTHALENE-D8 ** IS2 **	136	800 UG/L	1.000	91144
1029	CI50	ACENAPHTHENE-D10 ** IS3 **	164	800 UG/L	1.000	45946
1270	CI60	PHENANTHRENE-D10 ** IS4 **	188	800 UG/L	1.000	58276
1710	CI70	CHRYSENE-D12 ** IS5 **	240	800 UG/L	1.000	33846
1929	CI75	PERYLENE-D12 ** IS6 **	264	800 UG/L	1.000	18519
491	C315	PHENOL	94	138 UG/L	0.941	11170
589	C355	2-METHYLPHENOL	108	446 UG/L	1.128	22865
616	C365	4-METHYLPHENOL	108	718 UG/L	1.180	37816
704	C425	2,4-DIMETHYLPHENOL	122	1445 UG/L	0.954	59389
744	C450	NAPHTHALENE	128	7354 UG/L	1.008	801847
855	C470	2-METHYLNAPHTHALENE	142	574 UG/L	1.159	58669
1001	C540	ACENAPHTHYLENE	152	11 UG/L	0.973	1070
1034	C550	ACENAPHTHENE	153	647 UG/L	1.005	34208
161	C565	DIBENZOFURAN	168	413 UG/L	1.031	29814
1117	C590	FLUORENE	166	309 UG/L	1.086	18515
1274	C640	PHENANTHRENE	178	683 UG/L	1.003	47905
1280	C645	ANTHRACENE	178	96 UG/L	1.008	6703
1470	C655	FLUORANTHENE	202	205 UG/L	1.157	13608
1504	C715	PYRENE	202	166 UG/L	0.880	9047
1707	C730	BENZO(A)ANTHRACENE	228	28 UG/L	0.998	1223
1713	C740	CHRYSENE	228	26 UG/L	1.002	1046

* SURROGATES WERE DILUTED OUT

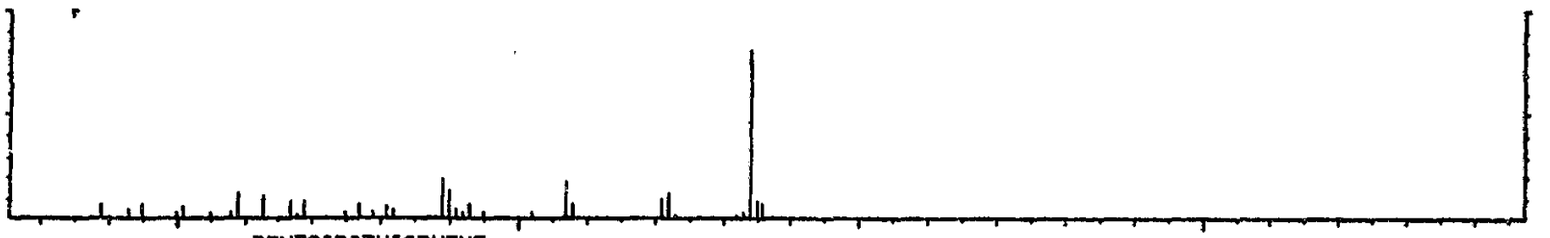
003845

LIBRARY SEARCH
01/11/87 20:33:00 + 12:30
SAMPLE: SCK-MW12-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

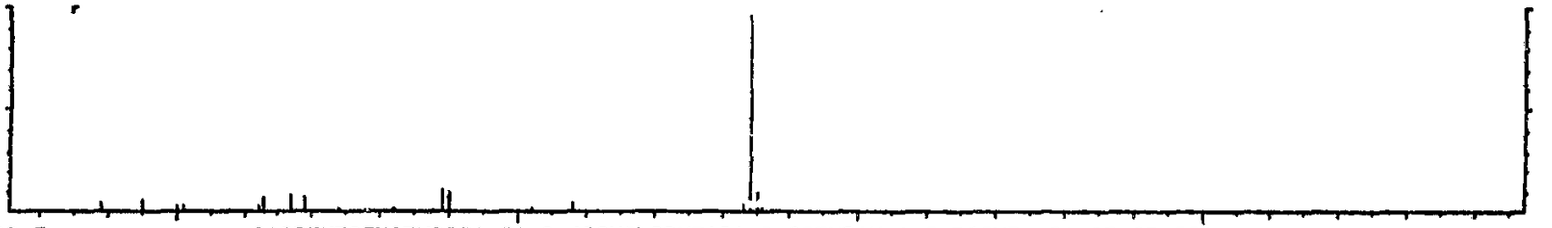
DATA: 4U12050C12A # 750 BASE M/Z: 134
CALI: 4U12050C12A # 3 RIC: 103551.

SPECTRIX DC # ----19
ANALYST:GU

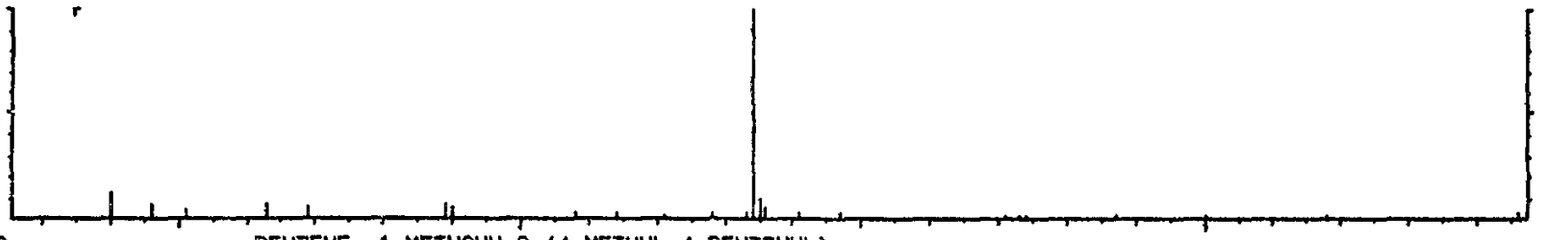
1221
SAMPLE



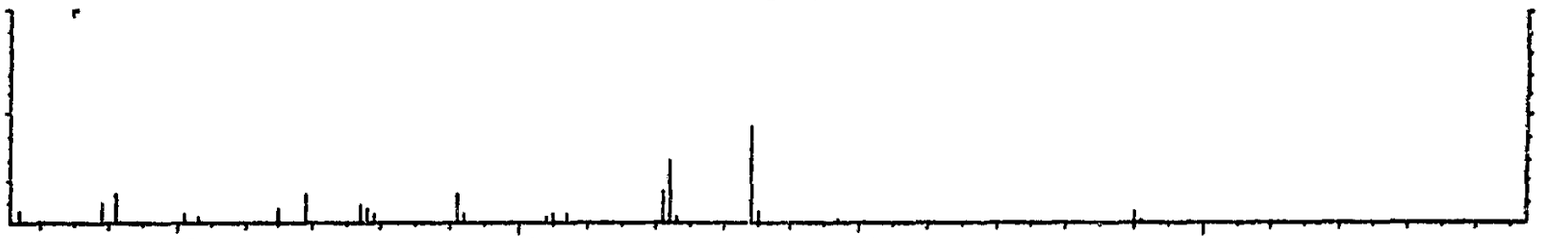
C8.H6.S BENZO[B]THIOPHENE
1221
M WT 134
B PK 134
RANK 1
4885
PUR 663



C13.H10.O3.S [1]BENZOTHIENO[2',3':3,4]CYCLOBUTA[1,2-C]FURAN-1,3-DIONE, 3A,3B,8B,8C]
1221
M WT 246
B PK 134
RANK 2
23068
PUR 516



C13.H18.O BENZENE, 1-METHOXY-3-(4-METHYL-4-PENTENYL)-
1221
M WT 190
B PK 134
RANK 3
14811
PUR 487



M/Z 50 100 150 200

INST ID: 4530

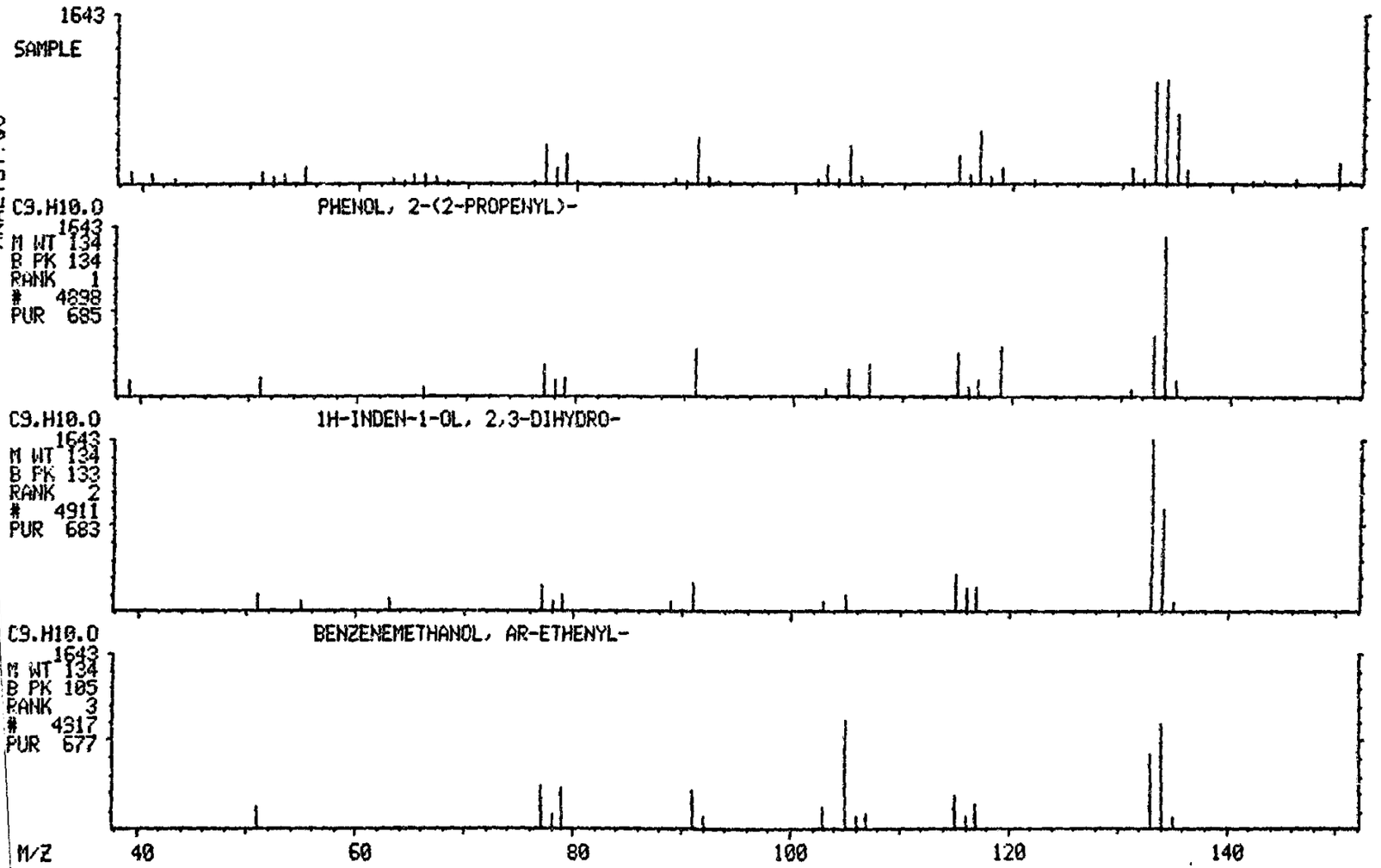
003845

003846

LIBRARY SEARCH
01/11/87 20:33:00 + 14:38
SAMPLE: SCK-MW12-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C12A # 878 BASE M/Z: 134
CALI: 4U12050C12A # 3 RIC: 27455.

SPECTRIX-DC # ----19
ANALYST: GU
INST ID: 4530



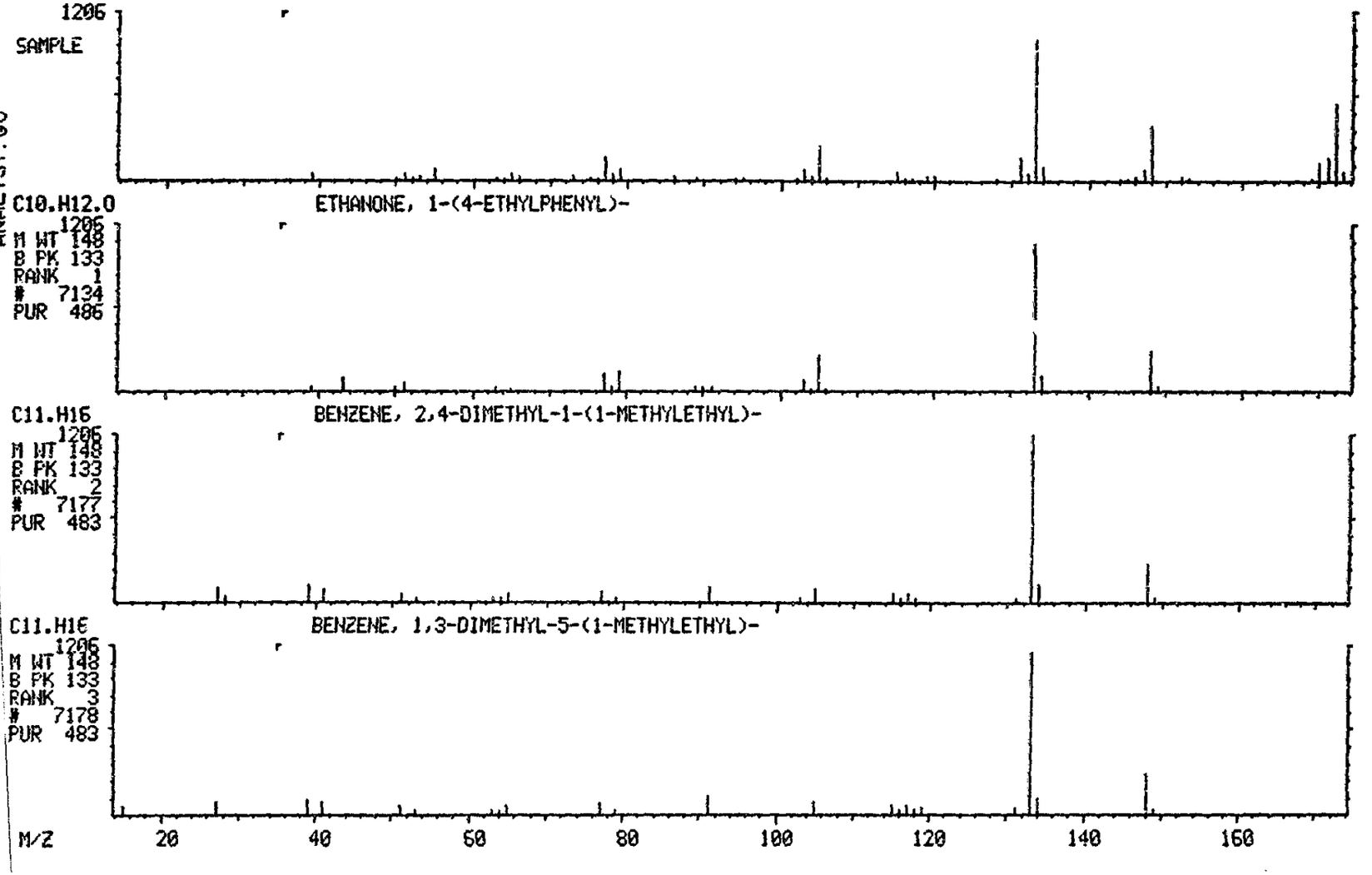
003846

003847

LIBRARY SEARCH
01/11/87 20:33:00 + 15:24
SAMPLE: SCK-MW12-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C12A # 924 BASE M/Z: 133
CALI: 4U12050C12A # 3 RIC: 11855.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530



003847

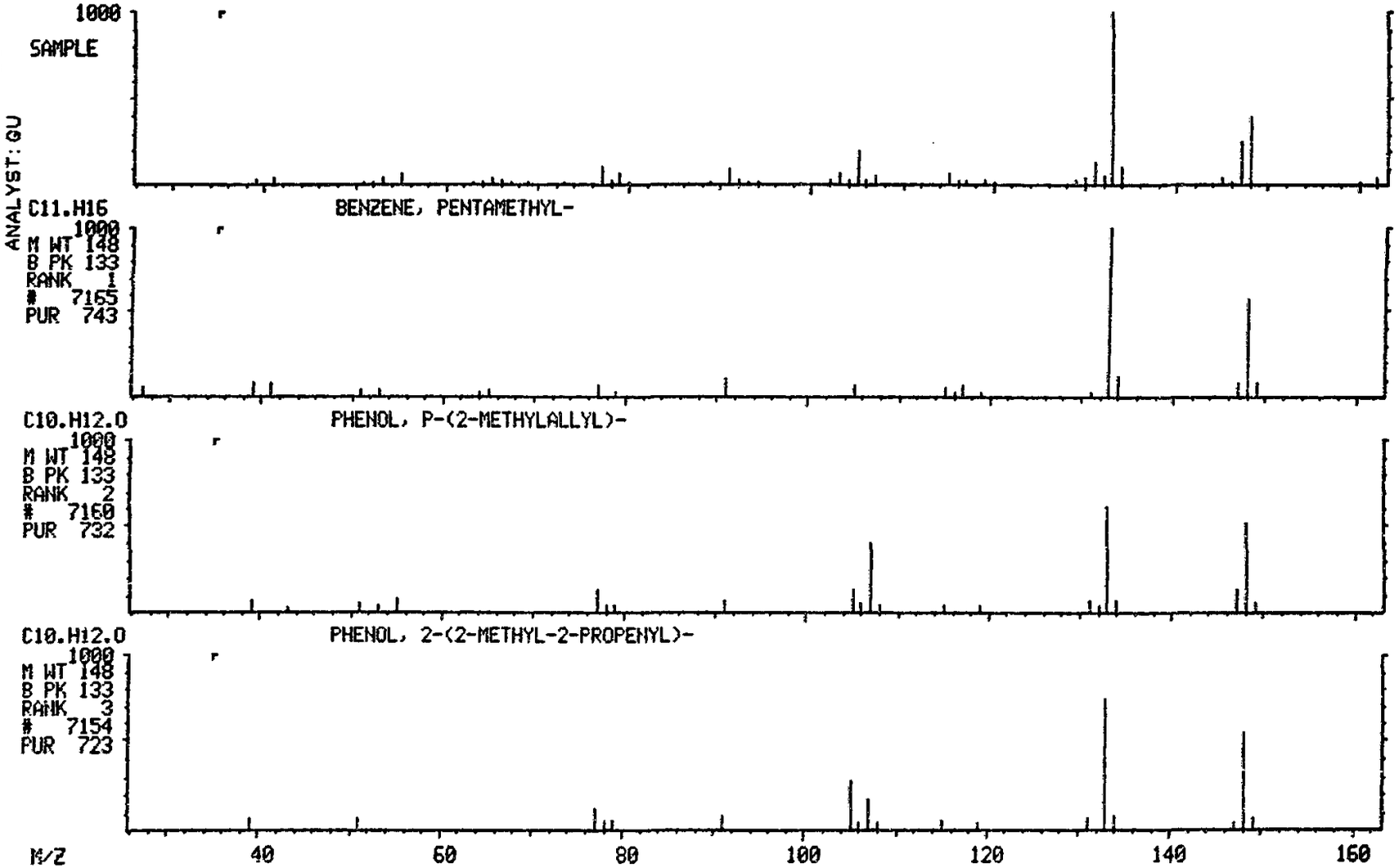
003848

LIBRARY SEARCH
01/11/87 20:33:00 + 15:44
SAMPLE: SCK-MW12-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C12A # 944
CALI: 4U12050C12A # 3

BASE M/Z: 133
RIC: 8383.

SPECTRIX DC # ----19
ANALYST: GU



NST ID: 4530

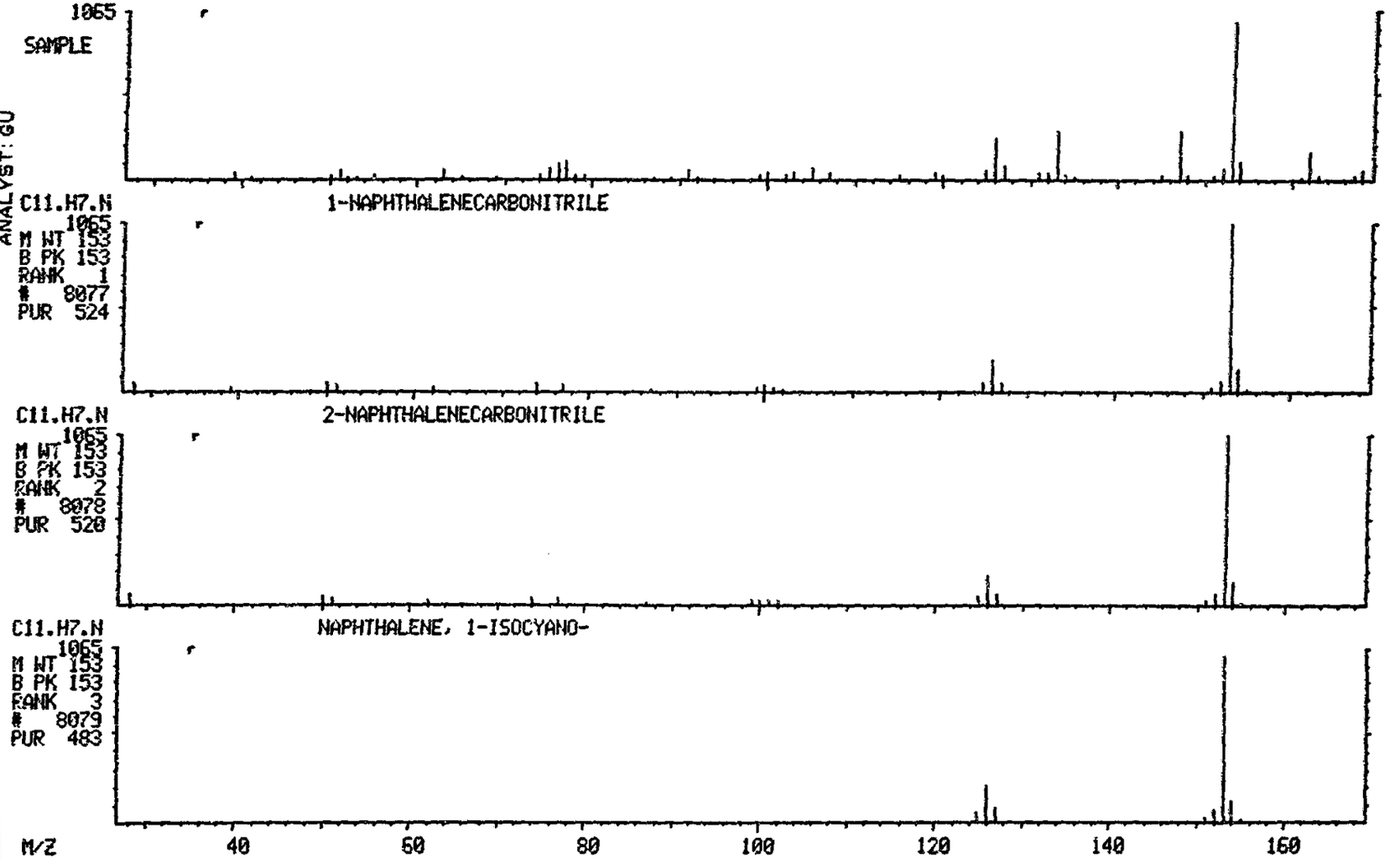
003848

003849

LIBRARY SEARCH
01/11/87 20:33:00 + 17:21
SAMPLE: SCK-MW12-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C12A #1041 BASE M/Z: 153
CALI: 4U12050C12A # 3 RIC: 15455.

SPECTRIX DC # -----19
ANALYST: GU
INST ID: 4530



003849

003850

LIBRARY SEARCH
01/11/87 20:33:00 + 20:12
SAMPLE: SCK-MW12-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C12A #1212 BASE M/Z: 170
CALI: 4U12050C12A # 3 RIC: 13167.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530

1206
SAMPLE

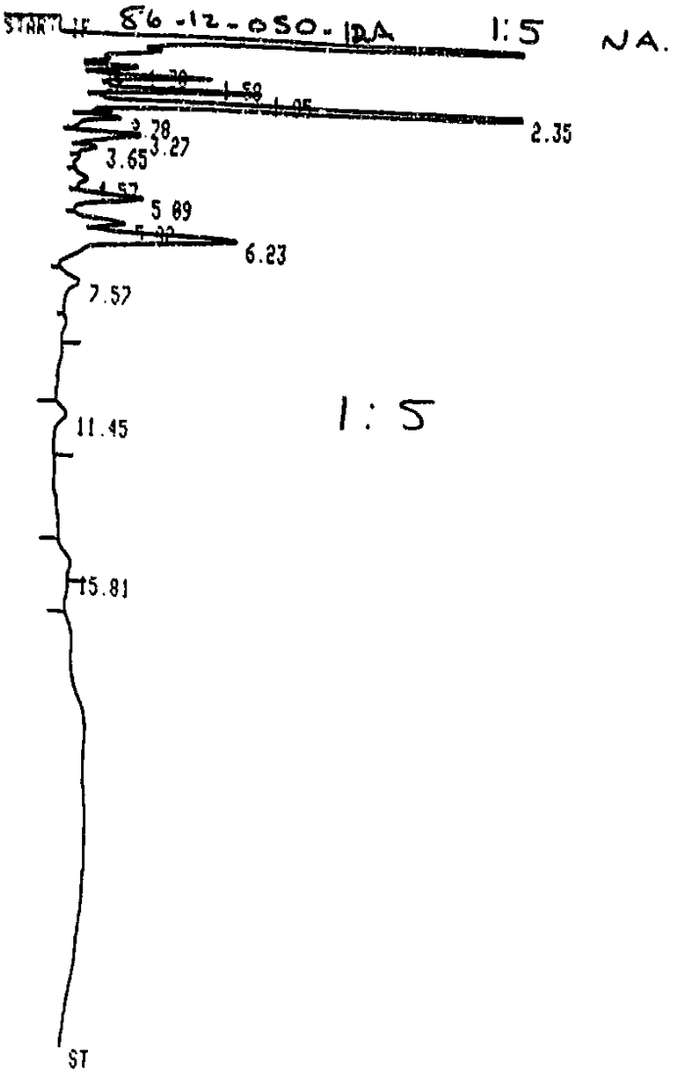
C12.H10.O [1,1'-BIPHENYL]-3-OL
1206
M WT 170
B PK 170
RANK 1
11441
PUR 716

C14.H14.O 1,1'-BIPHENYL, 3-ETHOXY-
1206
M WT 198
B PK 170
RANK 2
16268
PUR 677

C12.H10.O [1,1'-BIPHENYL]-4-OL
1206
M WT 170
B PK 170
RANK 3
11437
PUR 676

M/Z 40 60 80 100 120 140 160 180 200 220

003850



DC#_____-____-____
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW12-0
PESTICIDE FRACTION
1ST COLUMN QUANT.

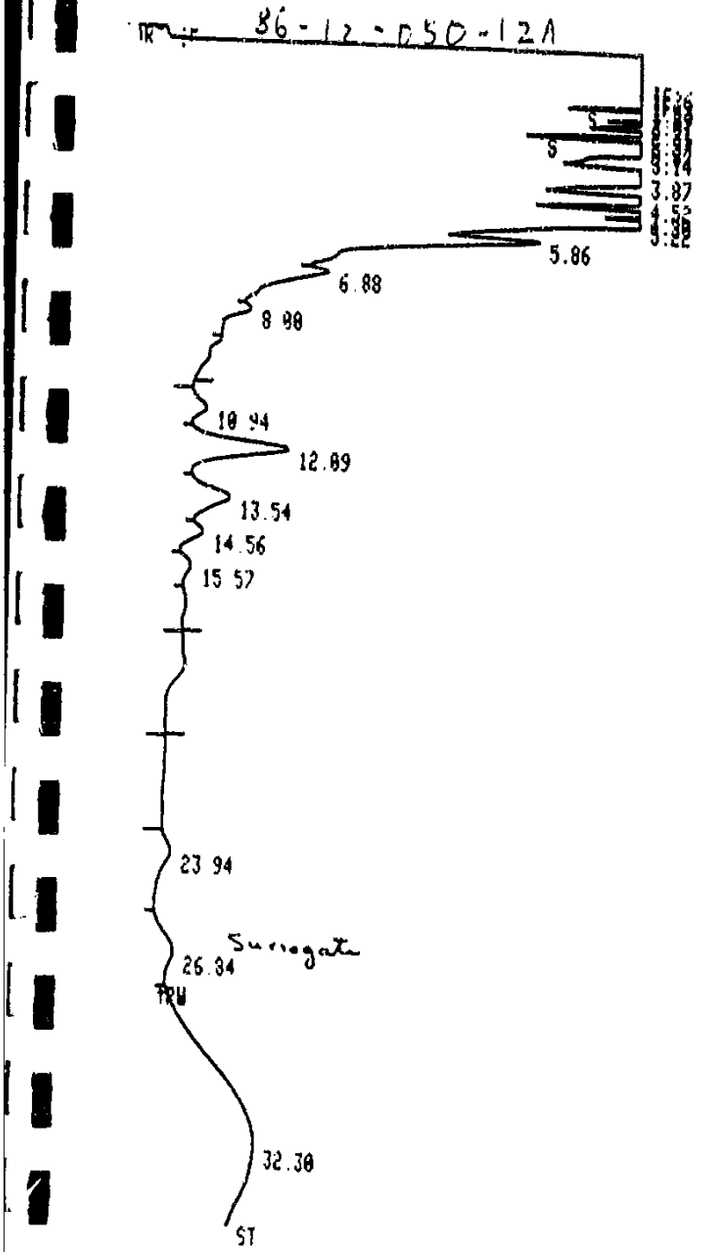
1ST COLUMN ID
1.8m x 4mm ID x6mm C
1.5% SP 2250
1.95% SP 2401
100/120 SUPELCOPORT

COLUMN TEMP. 203°C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6000

RUN # 160 JAN/15/87 02:43:27
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.30	5797	BV	0.135	2.141
1.58	15742	VV	0.112	5.813
1.95	22334	D VV	0.116	8.247
2.35	162492	VB	0.113	59.998
2.78	4283	BP	0.129	1.581
3.27	8773	PV	0.210	3.239
3.65	3272	VV	0.176	1.208
4.57	2622	VV	0.404	0.968
5.09	9817	VV	0.269	3.625
5.82	7852	VV	0.287	2.899
6.23	22882	VP	0.330	8.449
7.57	2608	PV	0.524	0.963
11.45	1515	BB	0.448	0.559
15.81	839	PB	0.431	0.310



DC#_____-____-____
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. Sck.Mud.Oc
PESTICIDE FRACTION
2ND COLUMN CONFIRMAT

2ND COLUMN II C
1.8m x2mm ID x6mm OD
3% SP-2100
100/120 SUPELCOPORT
COLUMN TEMP. 187 °C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6000

003

HEIGHT% RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.26	160392	D BP	0.085	3.674
1.63	961472	SPB	0.088	22.026
1.79	28134	DTBB	0.064	0.645
2.01	1937078	SPB	0.118	44.375
2.31	11999	DTBV	0.129	0.275
2.57	77207	TVB	0.121	1.769
2.87	86915	BV	0.136	1.991
3.14	90794	VV	0.273	2.030
3.87	258410	VV	0.258	5.920
4.52	364961	VV	0.185	8.361
4.90	97709	VV	0.219	2.238
5.22	149265	VV	0.290	3.419
5.86	47567	VV	0.335	1.090
6.88	8306	VP	0.231	0.190
8.00	2972	PP	0.070	0.068
10.94	4042	BV	0.514	0.093
12.09	25709	VV	0.551	0.589
13.54	11599	VV	0.751	0.266
14.56	5534	VP	0.524	0.127
15.57	2686	PV	0.536	0.062
23.94	2969	BP	0.869	0.068
26.84	4828	PV	1.198	0.111
32.30	24705 I	VH	4.921	0.566

RUN # 197
WORKFILE ID: C
WORKFILE NAME:

JAN/16/87 19:46:09

Received: 12/11/86

SPECTRIX 2580 REPORT
Results by Sample

Work Order # 86-12-050

SAMPLE ID SCK-MW12-001 (LLW)

SAMPLE # 12 FRACTIONS: A
Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	29.0 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	11 ug/L						
CU	11 ug/L	FE	9620 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	102 ug/L	SB	<44 ug/L						
SE	<5 ug/L	TL	<10 ug/L	ZN	60 ug/L												

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW14-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003854

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW14-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205013
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: YPH

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V13A

DILUTION FACTOR: 1:100

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	1000 U
C015	BROMOMETHANE	1000 U
C020	VINYL CHLORIDE	1000 U
C025	CHLOROETHANE	1000 U
C030	METHYLENE CHLORIDE	500 U
C035	ACETONE	490 J
C040	CARBON DISULFIDE	500 U
C045	1,1-DICHLOROETHENE	500 U
C050	1,1-DICHLOROETHANE	500 U
C055	TRANS-1,2-DICHLOROETHENE	500 U
C060	CHLOROFORM	500 U
C065	1,2-DICHLOROETHANE	500 U
C110	2-BUTANONE	1000 U
C115	1,1,1-TRICHLOROETHANE	500 U
C120	CARBON TETRACHLORIDE	500 U
C125	VINYL ACETATE	1000 U
C130	BROMODICHLOROMETHANE	500 U
C140	1,2-DICHLOROPROPANE	500 U
C145	TRANS-1,3-DICHLOROPROPENE	500 U
C150	TRICHLOROETHENE	500 U
C155	DIBROMOCHLOROMETHANE	500 U
C160	1,1,2-TRICHLOROETHANE	500 U
C165	BENZENE	830
C170	CIS-1,3-DICHLOROPROPENE	500 U
C175	2-CHLOROETHYLVINYLETHER	1000 U
C180	BROMOFORM	500 U
C210	2-HEXANONE	1000 U
C205	4-METHYL-2-PENTANONE	1000 U
C220	TETRACHLOROETHENE	500 U
C225	1,1,2,2-TETRACHLOROETHANE	500 U
C230	TOLUENE	640
C235	CHLOROBENZENE	500 U
C240	ETHYLBENZENE	500 U
C245	STYRENE	500 U
C250	TOTAL XYLENES	500 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003855

INST ID: 4530

SPECTRIX DC # ---- B

SAMPLE NUMBER: SCK-MW14-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205013
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ---
GC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/11/87

DATAFILE: 4U12050C13A
DILUTION FACTOR: 2000

CAS #	COMPOUND	UG/L
C315	PHENOL	20000 U
C325	BIS(2-CHLOROETHYL)ETHER	20000 U
C330	2-CHLOROPHENOL	20000 U
C335	1,3-DICHLOROBENZENE	20000 U
C340	1,4-DICHLOROBENZENE	20000 U
C345	BENZYL ALCOHOL	20000 U
C350	1,2-DICHLOROBENZENE	20000 U
C355	2-METHYLPHENOL	3800 J
C360	BIS(2-CHLOROISOPROPYL)ETHER	20000 U
C365	4-METHYLPHENOL	8500 J
C370	N-NITROSODIPROPYLAMINE	20000 U
C375	HEXACHLOROETHANE	20000 U
C410	NITROBENZENE	20000 U
C415	ISOPHORONE	20000 U
C420	2-NITROPHENOL	20000 U
C425	2,4-DIMETHYLPHENOL	5500 J
C430	BENZOIC ACID	100000 U
C435	BIS(2-CHLOROETHOXY)METHANE	20000 U
C440	2,4-DICHLOROPHENOL	20000 U
C445	1,2,4-TRICHLOROBENZENE	20000 U
C450	NAPHTHALENE	340000
C455	4-CHLOROANILINE	20000 U
C460	HEXACHLOROBUTADIENE	20000 U
C465	P-CHLORO-M-CRESOL	20000 U
C470	2-METHYLNAPHTHALENE	55000
C510	HEXACHLOROCYCLOPENTADIENE	20000 U
C515	2,4,6-TRICHLOROPHENOL	20000 U
C520	2,4,5-TRICHLOROPHENOL	100000 U
C525	2-CHLORONAPHTHALENE	20000 U
C530	2-NITROANILINE	100000 U
C535	DIMETHYL PHTHALATE	20000 U
C540	ACENAPHTHYLENE	2200 J
C545	3-NITROANILINE	100000 U
C550	ACENAPHTHENE	82000
C555	2,4-DINITROPHENOL	100000 U
C560	4-NITROPHENOL	100000 U
C565	DIBENZOFURAN	56000
C570	2,4-DINITROTOLUENE	20000 U
C575	2,6-DINITROTOLUENE	20000 U

003856

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW14-00

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C13A

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	20000 U
C585	4-CHLOROPHENYL PHENYL ETHER	20000 U
C590	FLUORENE	67000
C595	4-NITROANILINE	100000 U
C610	4,6-DINITRO-2-METHYLPHENOL	100000 U
C615	N-NITROSODIPHENYLAMINE	20000 U
C625	4-BROMOPHENYL PHENYL ETHER	20000 U
C630	HEXACHLOROBENZENE	20000 U
C635	PENTACHLOROPHENOL	100000 U
C640	PHENANTHRENE	200000
C645	ANTHRACENE	29000
C650	DI-N-BUTYL PHTHALATE	20000 U
C655	FLUORANTHENE	83000
C715	PYRENE	66000
C720	BUTYL BENZYL PHTHALATE	20000 U
C725	3,3'-DICHLOROBENZIDINE	40000 U
C730	BENZO(A)ANTHRACENE	13000 J
C735	BIS(2-ETHYLHEXYL)PHTHALATE	20000 U
C740	CHRYSENE	13000 J
C760	DI-N-OCTYL PHTHALATE	20000 U
C765	BENZO(B)FLUORANTHENE	8300 J
C770	BENZO(K)FLUORANTHENE	20000 U
C775	BENZO(A)PYRENE	20000 U
C780	INDENO(1,2,3-CD)PYRENE	20000 U
C785	DIBENZO(A,H)ANTHRACENE	20000 U
C790	BENZO(GHI)PERYLENE	20000 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003857

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-13A

DC No: KEYSTONE
SMO No: SCK-MW14-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/15/87
Dilution Factor: 50
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	2.50 U
319-85-7	BETA-BHC	2.50 U
319-86-8	DELTA-BHC	2.50 U
58-89-9	GAMMA-BHC (LINDANE)	2.50 U
76-44-8	HEPTACHLOR	2.50 U
309-00-2	ALDRIN	2.50 U
1024-57-3	HEPTACHLOR EPOXIDE	2.50 U
959-98-8	ENDOSULFAN I	2.50 U
60-57-1	DIELDRIN	2.50 U
72-55-9	4,4'-DDE	5.00 U
72-20-8	ENDRIN	5.00 U
33213-65-9	ENDOSULFAN II	5.00 U
72-54-8	4,4'-DDD	5.00 U
7421-93-4	ENDRIN ALDEHYDE	5.00 U
1031-07-8	ENDOSULFAN SULFATE	5.00 U
50-29-3	4,4'-DDT	5.00 U
72-43-5	METHOXYCHLOR	5.00 U
53494-70-5	ENDRIN KETONE	25.00 U
57-74-9	CHLORDANE	5.00 U
8001-35-2	TOXAPHENE	25.00 U
12674-11-2	AROCLOR-1016	50.0 U
11104-28-2	AROCLOR-1221	25.00 U
11141-16-5	AROCLOR-1232	25.00 U
53469-21-9	AROCLOR-1242	25.00 U
12672-29-6	AROCLOR-1248	25.00 U
11097-69-1	AROCLOR-1254	25.00 U
11096-82-5	AROCLOR-1260	50.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : ~~6000~~ NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003858

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW14-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: NOT DATAFILE: 4U12050V13A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003859

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-MW14-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

QC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12050C13A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
				UG/L
611-15-4	BENZENE, 1-ETHENYL-2-METHYL-	557	969	9800 J
95-13-6	1H-INDENE	568	953	12000 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	700		15000 J
526-75-0	PHENOL, 2,3-DIMETHYL-	724	911	15000 J
95-15-8	BENZO[B]THIOPHENE	747	902	24000 J
11-83-2	1H-INDENE, 1-ETHYLIDENE-	871	918	51000 J
92-52-4	1,1'-BIPHENYL	937	935	16000 J
581-40-8	NAPHTHALENE, 2,3-DIMETHYL-	961	912	16000 J
581-40-8	NAPHTHALENE, 2,3-DIMETHYL-	974	943	26000 J
644-08-6	1,1'-BIPHENYL, 4-METHYL-	1133	913	11000 J
7320-53-8	DIBENZOFURAN, 4-METHYL-	1148	828	8700 J
7320-53-8	DIBENZOFURAN, 4-METHYL-	1159	872	12000 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1252		16000 J
86-74-8	9H-CARBAZOLE	1313	880	9700 J
613-12-7	ANTHRACENE, 2-METHYL-	1356	931	9900 J
1961-96-2	1H-INDENE, 1-PHENYL-	1360	927	9900 J
203-64-5	4H-CYCLOPENTA[DEF]PHENANTHRENE	1372	891	21000 J

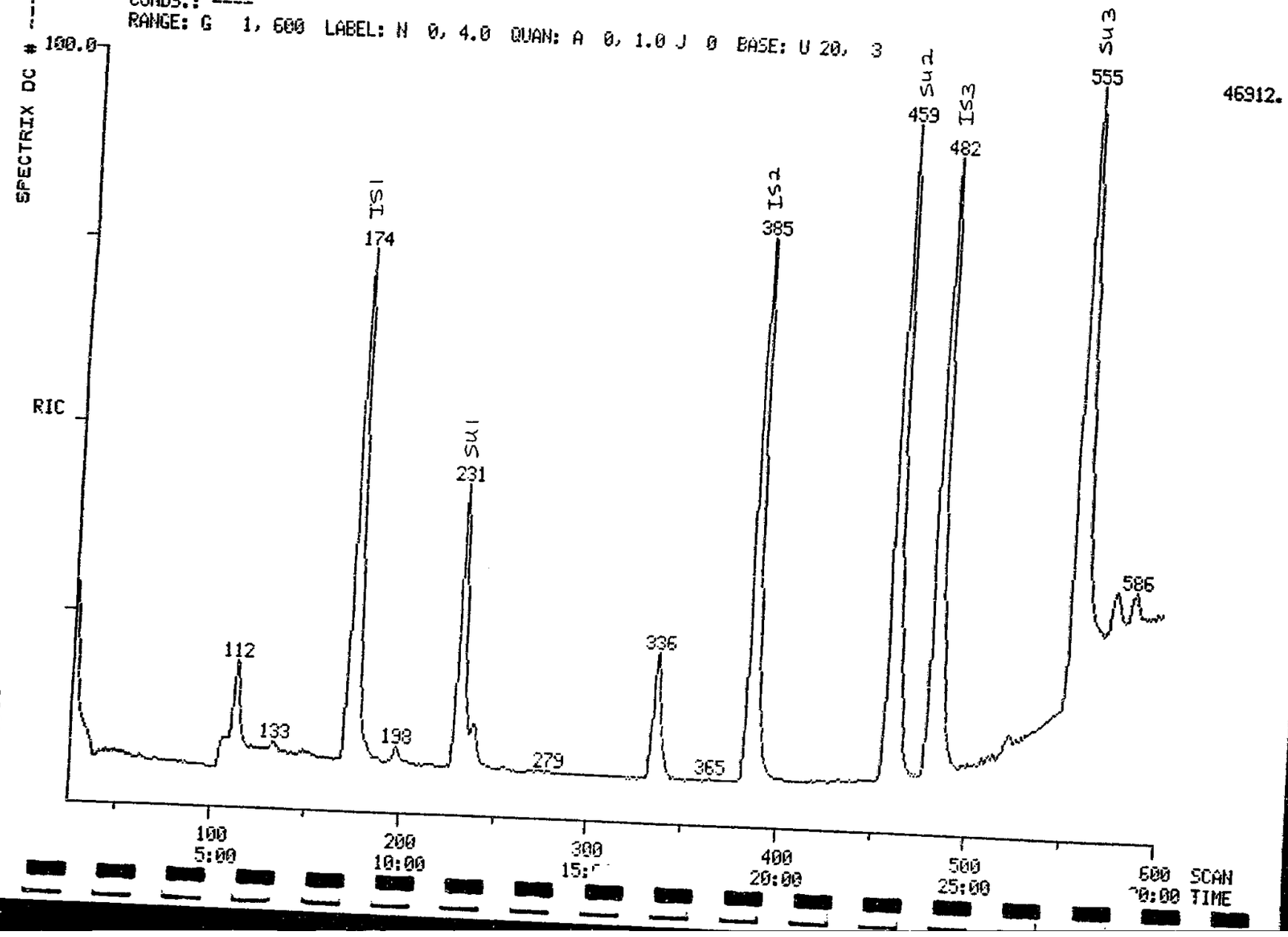
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003861

RIC
12/18/86 16:53:00
SAMPLE: SCK-MW14-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050U13A #1
CALI: 4U12050U13A #3

SCANS 25 TO 600



46912.

003861

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

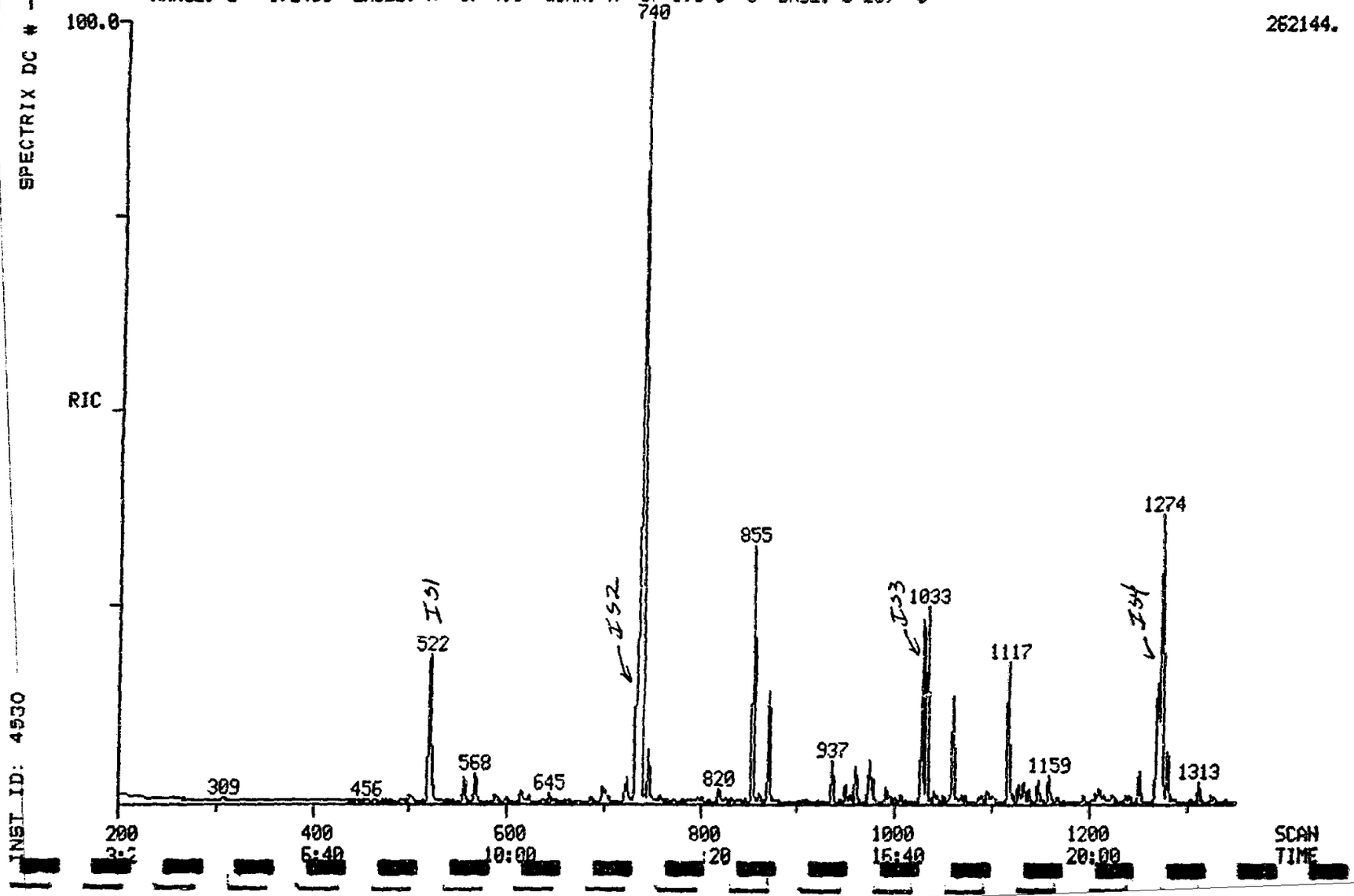
SAMPLE ID.	SCK-MW14-001		
FILENAME	4U12050V13A	INST	4000
CLIENT	KEYSTONE	ANALYST	NOT
DATE INJECTED	12/18/86 16:53:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	100.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
174	CI01	BROMOCHLOROMETHANE	**IS1**	128	5000 UG/L	1.000	14702
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	5000 UG/L	1.000	63346
481	CI20	D5-CHLOROBENZENE	**IS3**	117	5000 UG/L	1.000	50898
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	94 %	1.328	19859
459	CS05	D8-TOLUENE	**SU2**	98	100 %	0.954	53704
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	103 %	1.154	38622
112	C030	METHYLENE CHLORIDE *		84	587 UG/L	0.644	3200
133	C035	ACETONE		43	489 UG/L	0.764	1088
335	C165	BENZENE		78	835 UG/L	0.870	14584
463	C230	TOLUENE		92	641 UG/L	0.963	6263

* BLANK CORRECTED ON DATA SHEET

RIC
01/11/87 21:24:00
SAMPLE: SCK-MW14-001
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C13A #1 SCANS 200 TO 1350
CALI: 4U12050C13A #3



003863

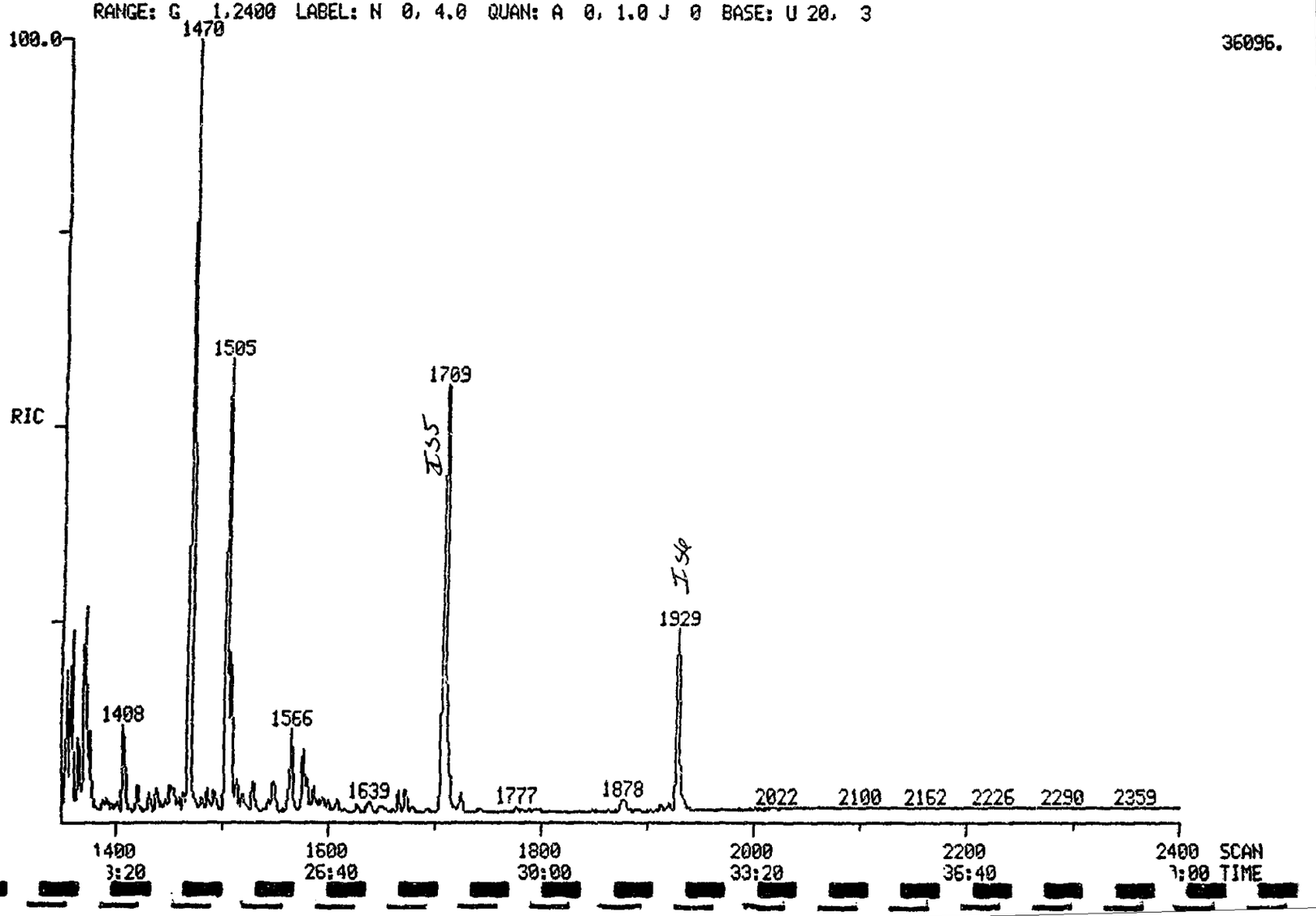
003864

RIC
01/11/87 21:24:00
SAMPLE: SCK-MW14-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C13A #1 SCANS 1350 TO 2400
CALI: 4U12050C13A #3

SPECTRIX DC # ----14

INST ID: 4530



003864

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW14-001

LENAME 4U12050C13A

CLIENT KEYSTONE

DATE INJECTED 01/11/87 21:24:00

CALIB STD DATE 01/08/87

INST ID. 4530

ANALYST GU

VERIFIED BY GU

CORR. FACTOR 2000.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
521	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	80000 UG/L	1.000	25016
735	CI40	NAPHTHALENE-D8 ** IS2 **	136	80000 UG/L	1.000	97283
1028	CI50	ACENAPHTHENE-D10 ** IS3 **	164	80000 UG/L	1.000	44573
1270	CI60	PHENANTHRENE-D10 ** IS4 **	188	80000 UG/L	1.000	54566
1709	CI70	CHRYSENE-D12 ** IS5 **	240	80000 UG/L	1.000	29288
1929	CI75	PERYLENE-D12 ** IS6 **	264	80000 UG/L	1.000	15258
589	C355	2-METHYLPHENOL	108	3793 UG/L	1.131	176
616	C365	4-METHYLPHENOL	108	8525 UG/L	1.182	468
702	C425	2,4-DIMETHYLPHENOL	122	5470 UG/L	0.955	299
740	C450	NAPHTHALENE	128	340449 UG/L	1.007	39622
855	C470	2-METHYLNAPHTHALENE	142	54550 UG/L	1.163	5947
1001	C540	ACENAPHTHYLENE	152	2245 UG/L	0.974	2048
1034	C550	ACENAPHTHENE	153	82394 UG/L	1.006	42232
1060	C565	DIBENZOFURAN	168	55768 UG/L	1.031	39050
17	C590	FLUORENE	166	66504 UG/L	1.087	38601
1274	C640	PHENANTHRENE	178	197901 UG/L	1.003	129904
1280	C645	ANTHRACENE	178	28522 UG/L	1.008	18553
1470	C655	FLUORANTHENE	202	83229 UG/L	1.157	51802
1505	C715	PYRENE	202	66424 UG/L	0.881	31995
1707	C730	BENZO(A)ANTHRACENE	228	13428 UG/L	0.999	5119
1713	C740	CHRYSENE	228	13180 UG/L	1.002	4611
1876	C765	BENZO(B)FLUORANTHENE	252	8274 UG/L	0.973	1932

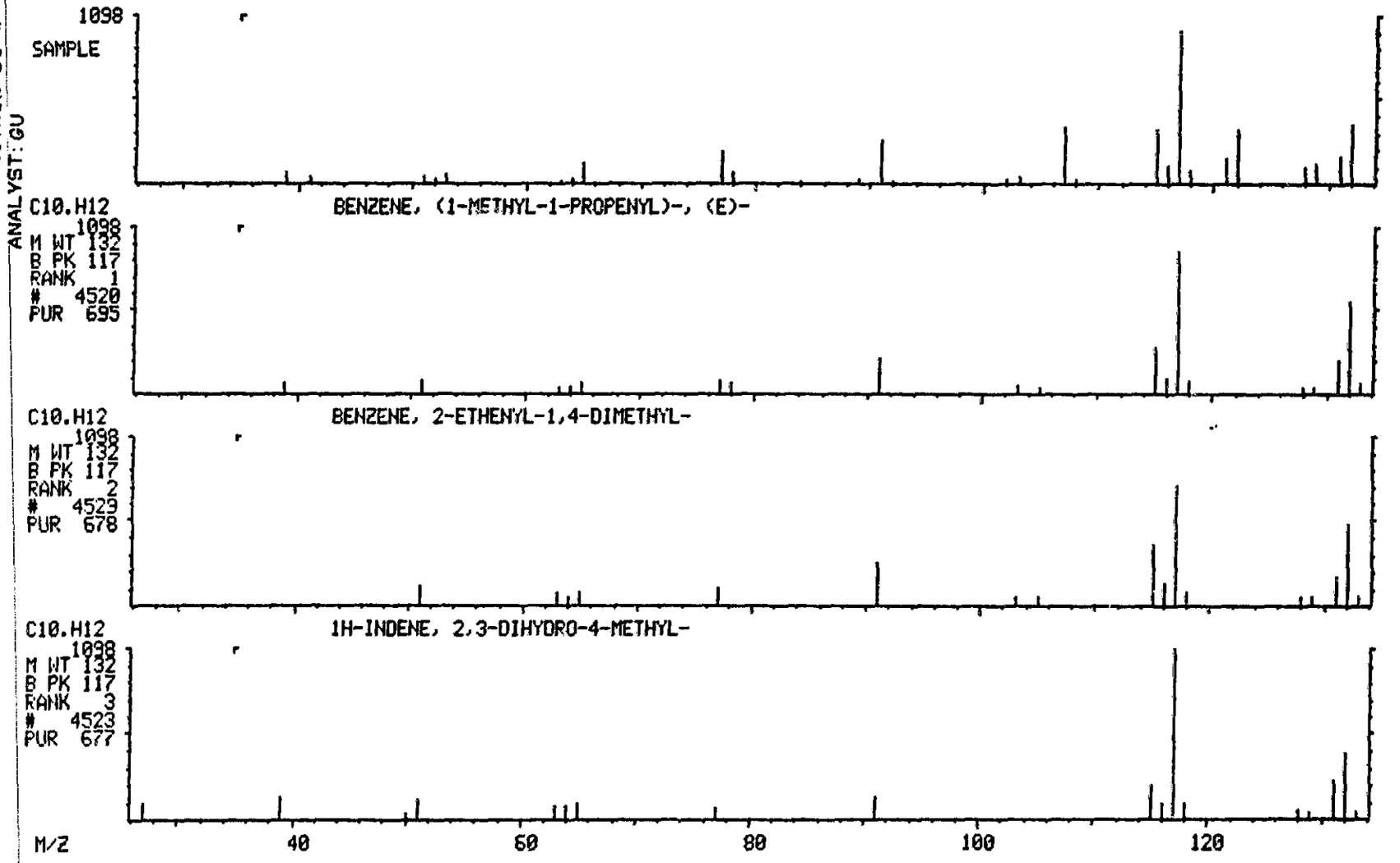
* SURROGATES WERE DILUTED OUT

998200

LIBRARY SEARCH
01/11/87 21:24:00 + 11:40
SAMPLE: SCK-MW14-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C13A # 700 BASE M/Z: 117
CALI: 4U12050C13A # 3 RIC: 3703.

SPECTRIX DC # ----19
ANALYST:GU



INST ID: 4530

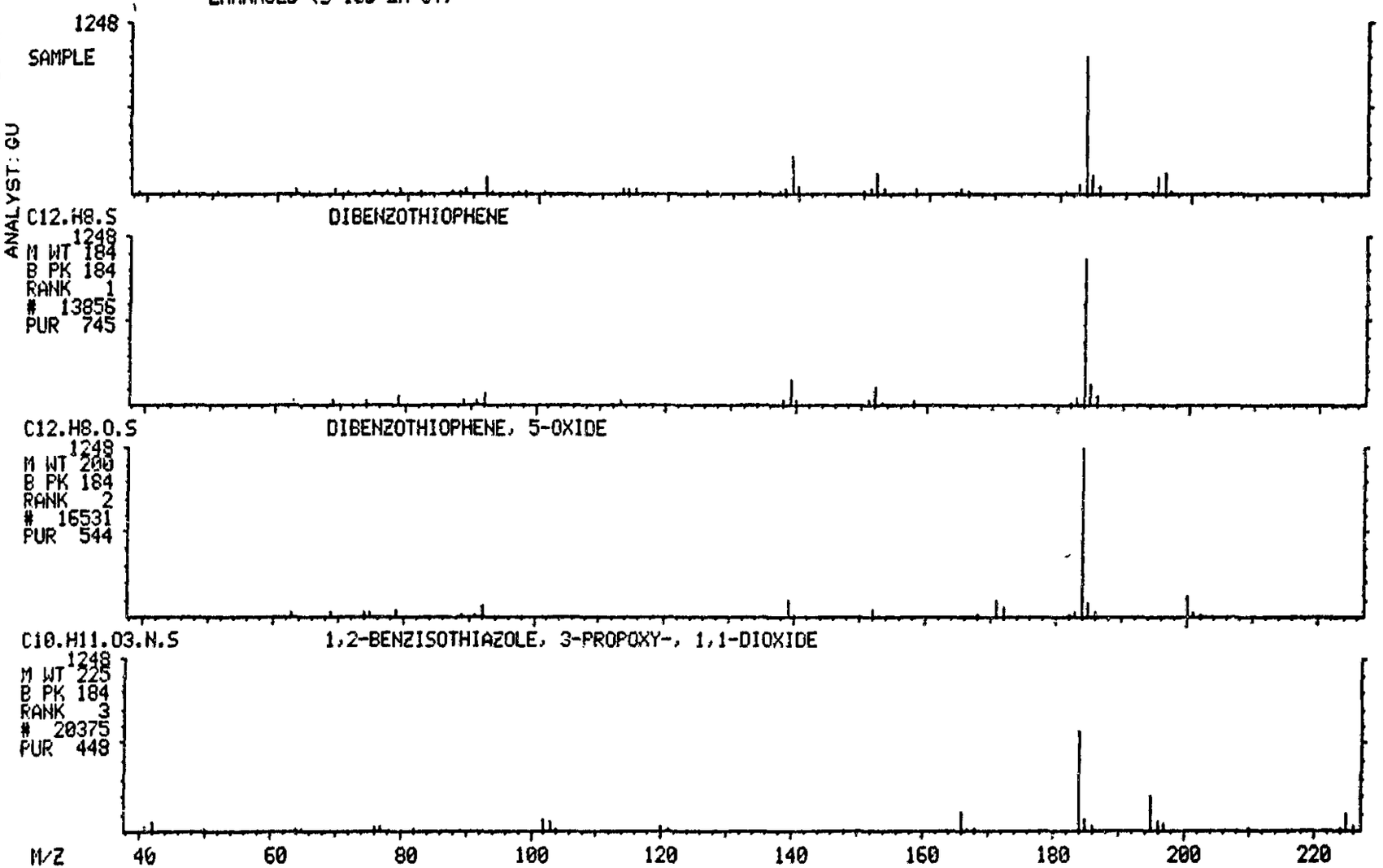
003866

003867

LIBRARY SEARCH
01/11/87 21:24:00 + 20:52
SAMPLE: SCK-MW14-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C13A #1252 BASE M/Z: 184
CALI: 4U12050C13A # 3 RIC: 8735.

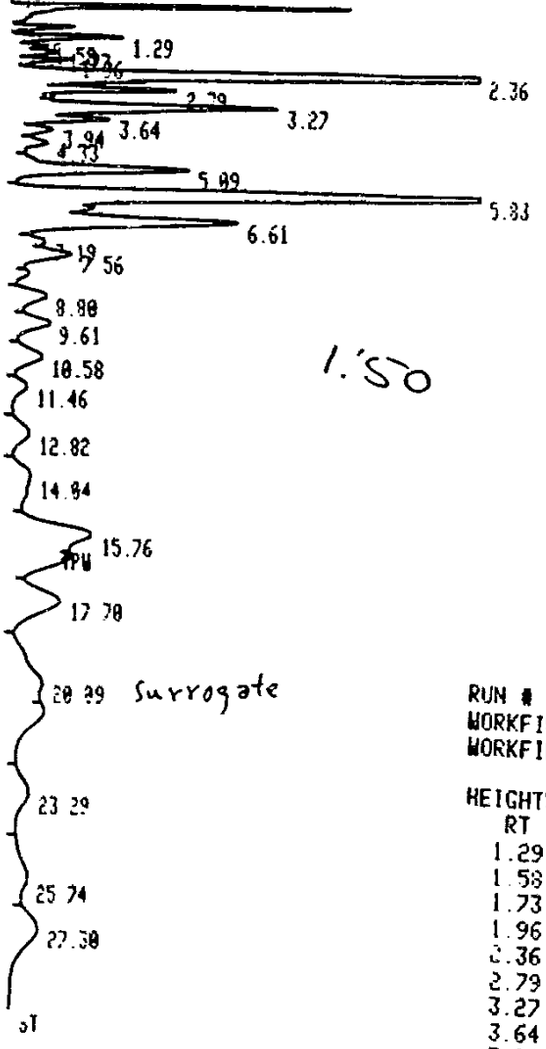
SPECTRIX DC # ----19
ANALYST: GU



INST ID: 4530

003867

INR 86-12-050-13A 1.50 NA.



DC#_____-____-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW14-

PESTICIDE FRACTION

1ST COLUMN QUANT.

1ST COLUMN ID

1.8m x 4mm ID x6mm

1.5% SP 2250

1.95% SP 2401

100/120 SUPELCOPORT

COLUMN TEMP. 203°C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6000

RUN # 161

WORKFILE ID: C

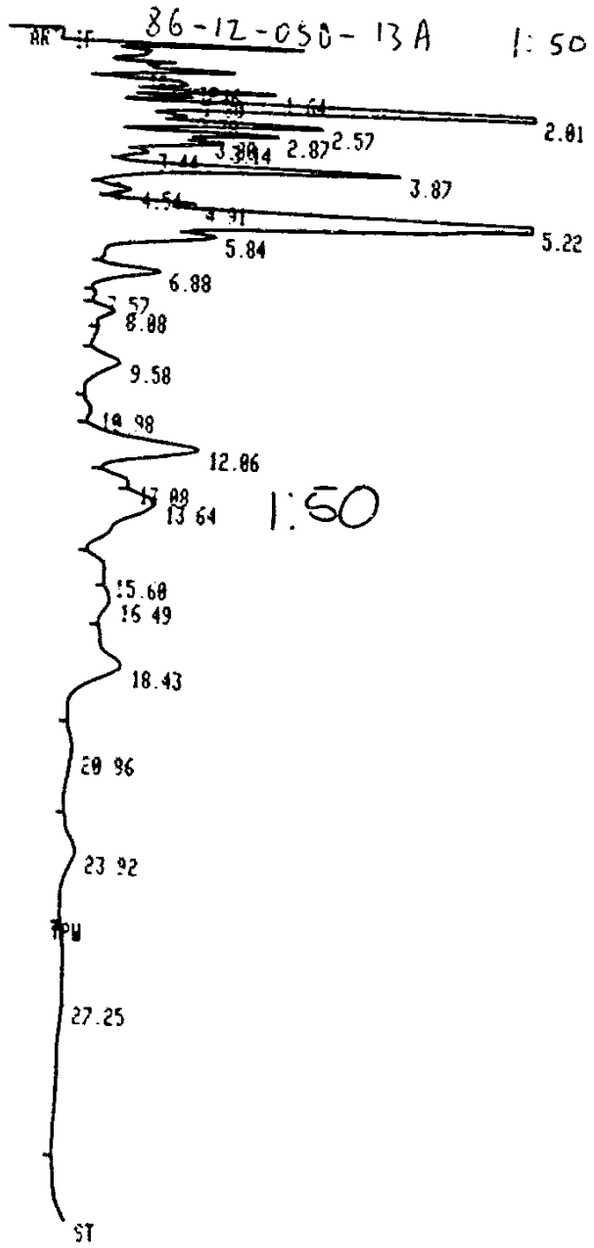
WORKFILE NAME:

JUN/15/87 03:14:44

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.29	12344	D BV	0.115	1.634
1.58	2289	VV	0.091	0.303
1.73	4082	VV	0.137	0.540
1.96	5761	D VP	0.090	0.763
2.36	478742	PB	0.104	63.376
2.79	15334	PP	0.113	2.030
3.27	30401	VV	0.211	4.025
3.64	9446	VP	0.149	1.251
3.94	2871	PV	0.171	0.380
4.33	2661	VP	0.189	0.352
5.09	21997	PP	0.242	2.912
5.83	81091	PV	0.256	10.735
6.61	28927	VV	0.317	3.829
7.19	3897	VV	0.265	0.516
7.56	7346	VV	0.372	0.973
8.80	4218	VV	0.452	0.558
9.61	4795	VV	0.446	0.635
10.58	3773	VV	0.531	0.500
11.46	1873	VP	0.458	0.248
12.82	2254	PV	0.626	0.298
14.84	2431	VV	1.066	0.322
15.76	10[illegible]99	VV	0.729	1.381
17.70	6318	VV	0.863	0.836
20.09	4044	VV	1.083	0.535
23.29	2335	VV	1.163	0.309
25.74	2208	VV	1.362	0.292
27.30	3530	I VP	1.126	0.467

86-12-050-13A 1:50 N+



DC#_____
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW14-00
PESTICIDE FRACTION
2ND COLUMN CONFIRMAT

2ND COLUMN II C
1.8m x2mm ID x6mm OD
3% SP-2100
100/120 SUPELCOPORT
COLUMN TEMP. 187 °C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6000

003

UN # 199
WORKFILE ID: C
WORKFILE NAME:

JAN/16/87 20:

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.46	19841	PV	0.220	1.134
1.64	42594	D VV	0.097	2.434
1.80	21023	D VH	0.098	1.202
2.01	1065711	SHB	0.113	60.907
2.38	8468	TBV	0.129	0.484
2.57	46964	TVP	0.130	2.684
2.87	38695	TPV	0.131	2.212
3.00	20012	DTVV	0.089	1.144
3.14	24854	DTVV	0.166	1.421
3.44	7326	TVV	0.201	0.419
3.87	75209	TVB	0.192	4.298
4.54	7411	BV	0.208	0.424
4 91	24684	VV	0.180	1.411
5.22	182519	VV	0.329	10.431
5.84	30485	VV	0.338	1.742
6.88	16912	VP	0.325	0.967
7.57	1241	PV	0.208	0.071
8.08	6203	VV	0.366	0.355
9.58	8450	VP	0.584	0.483
10.98	2044	PV	0.482	0.117
12.06	30077	VV	0 630	1.719
13.08	12384	VV	0.426	0.708
13.64	19596	VV	1.111	1.120
15.60	7843	VV	0.710	0.448
16.49	9308	VV	1.099	0.532
18.43	13090	VP	1.326	0.748
20.86	1659	PP	1.221	0.095
23.92	3537	PP	1.147	0.202
27.25	1586	PP	3.564	0.091

HEIGHT%

SPECTRIX 0 1 8 2 0 0 REPORT

Work Order # 86-12-030

Received: 12/11/86

Results by Sample

SAMPLE ID SCK-MW14-001 (LLW) SAMPLE # 13 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	50.2 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SV	<100 ug/L	CR	26 ug/L
CU	33 ug/L	FE	22100 ug/L	HG	<0.2 ug/L	NI	47 ug/L	PB	66.6 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	75 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW16-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003871

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW16-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205014
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V14
DILUTION FACTOR: 1:1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	170
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003872

INST ID: 4530

SPECTRIX DC # ---- B
SAMPLE NUMBER: SCK-MW16-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205014
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/10/87

DATAFILE: 4U12050C14
DILUTION FACTOR: 2.0

CAS #	COMPOUND	UG/L
C315	PHENOL	20 U
C325	BIS(2-CHLOROETHYL)ETHER	20 U
C330	2-CHLOROPHENOL	20 U
C335	1,3-DICHLOROBENZENE	20 U
C340	1,4-DICHLOROBENZENE	20 U
C345	BENZYL ALCOHOL	20 U
C350	1,2-DICHLOROBENZENE	20 U
C355	2-METHYLPHENOL	20 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	20 U
C365	4-METHYLPHENOL	20 U
C370	N-NITROSODIPROPYLAMINE	20 U
C375	HEXACHLOROETHANE	20 U
C410	NITROBENZENE	20 U
C415	ISOPHORONE	20 U
C420	2-NITROPHENOL	20 U
C425	2,4-DIMETHYLPHENOL	20 U
C430	BENZOIC ACID	100 U
C435	BIS(2-CHLOROETHOXY)METHANE	20 U
C440	2,4-DICHLOROPHENOL	20 U
C445	1,2,4-TRICHLOROBENZENE	20 U
C450	NAPHTHALENE	20 U
C455	4-CHLOROANILINE	20 U
C460	HEXACHLOROBUTADIENE	20 U
C465	P-CHLORO-M-CRESOL	20 U
C470	2-METHYLNAPHTHALENE	20 U
C510	HEXACHLOROCYCLOPENTADIENE	20 U
C515	2,4,6-TRICHLOROPHENOL	20 U
C520	2,4,5-TRICHLOROPHENOL	100 U
C525	2-CHLORONAPHTHALENE	20 U
C530	2-NITROANILINE	100 U
C535	DIMETHYL PHTHALATE	20 U
C540	ACENAPHTHYLENE	20 U
C545	3-NITROANILINE	100 U
C550	ACENAPHTHENE	20 U
C555	2,4-DINITROPHENOL	100 U
C560	4-NITROPHENOL	100 U
C565	DIBENZOFURAN	20 U
C570	2,4-DINITROTOLUENE	20 U
C575	2,6-DINITROTOLUENE	20 U

003873

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW16-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C14

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	20 U
C585	4-CHLOROPHENYL PHENYL ETHER	20 U
C590	FLUORENE	20 U
C595	4-NITROANILINE	100 U
C610	4,6-DINITRO-2-METHYLPHENOL	100 U
C615	N-NITROSODIPHENYLAMINE	20 U
C625	4-BROMOPHENYL PHENYL ETHER	20 U
C630	HEXACHLOROBENZENE	20 U
C635	PENTACHLOROPHENOL	100 U
C640	PHENANTHRENE	20 U
C645	ANTHRACENE	20 U
C650	DI-N-BUTYL PHTHALATE	20 U
C655	FLUORANTHENE	20 U
C715	PYRENE	20 U
C720	BUTYL BENZYL PHTHALATE	20 U
C725	3,3'-DICHLOROBENZIDINE	40 U
C730	BENZO(A)ANTHRACENE	20 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	20 U
C740	CHRYSENE	20 U
C760	DI-N-OCTYL PHTHALATE	20 U
C765	BENZO(B)FLUORANTHENE	20 U
C770	BENZO(K)FLUORANTHENE	20 U
C775	BENZO(A)PYRENE	20 U
C780	INDENO(1,2,3-CD)PYRENE	20 U
C785	DIBENZO(A,H)ANTHRACENE	20 U
C790	BENZO(GHI)PERYLENE	20 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
U = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003874

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-14A

DC No: KEYSTONE
SMO No: SCK-MW16-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/15/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000 N.A.
2nd Column Inst. : 6000

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003875

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW16-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: NOT DATAFILE: 4U12050V14

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003876

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-MW16 -001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

GC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12050C14

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
110-12-3	2-HEXANONE, 5-METHYL- *	293	929	1400 J
1630-52-7	3-UNDECENE, 6-METHYL-, (E)-	555	840	48 J
144-19-4	1,3-PENTANEDIOL, 2,2,4-TRIMETHYL-	701	907	9 J
112-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-	745	827	9 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1043		10 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

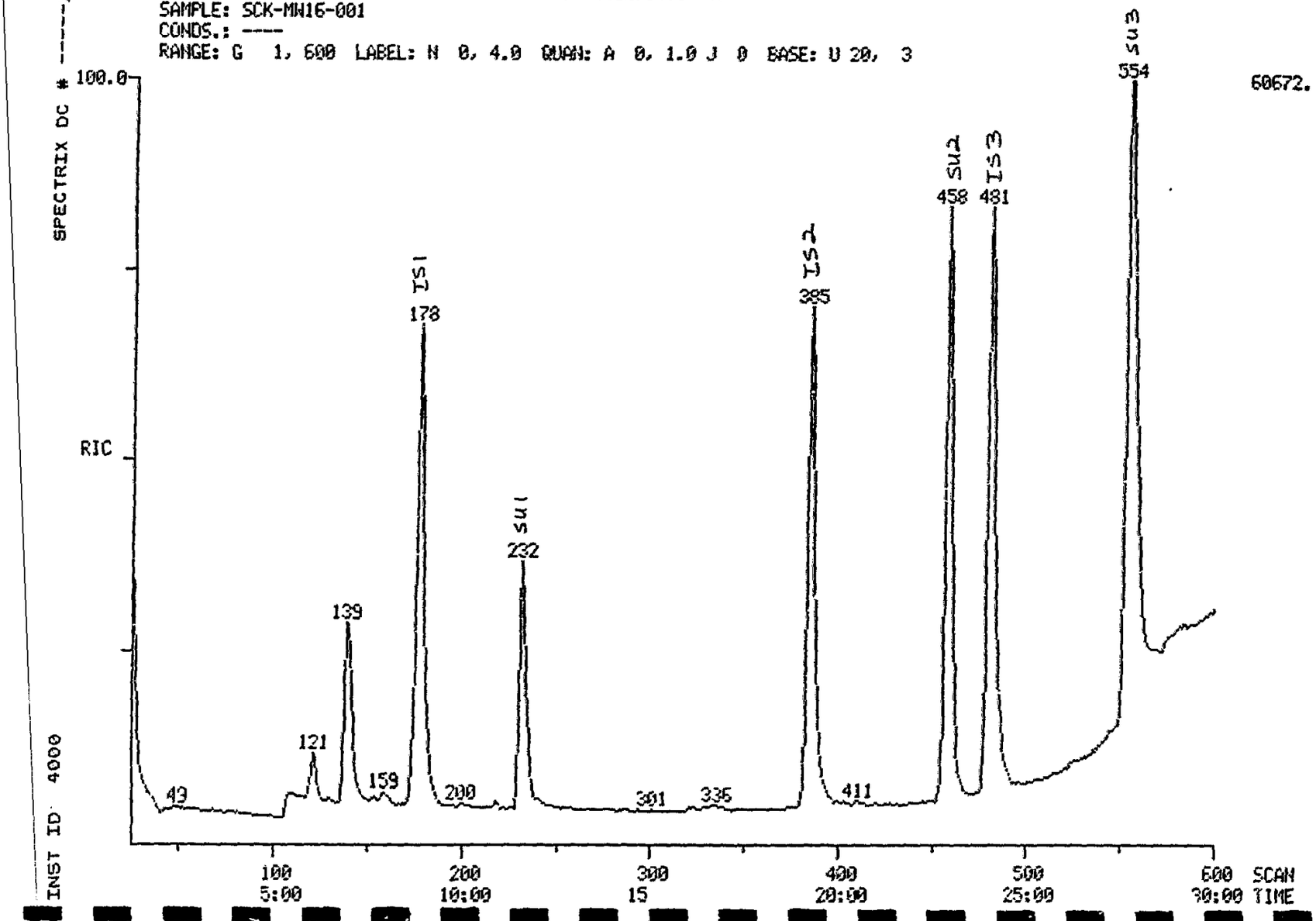
* ALSO FOUND IN BLANK

003878

RIC
12/18/86 12:41:00
SAMPLE: SCK-MW16-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V14 #1
CALI: 4U12050V14 #3

SCANS 25 TO 600



003878

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID. SCK-MW16-001

FILENAME 4U12050V14

CLIENT KEYSTONE

DATE INJECTED 12/18/86 12:41:00

CALIB STD DATE 12-14-86

INST 4000

ANALYST NOT

VERIFIED BY Not

CORR. FACTOR 1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	15862
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	71295
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	61730
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	91 %	1.311	20659
458	CS05	D8-TOLUENE	**SU2**	98	97 %	0.952	63118
554	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	95 %	1.152	43148
121	C030	METHYLENE CHLORIDE *		84	3 UG/L	0.684	1961
139	C035	ACETONE		43	169 UG/L	0.785	40471

* BLANK CORRECTED ON DATA SHEET

003880

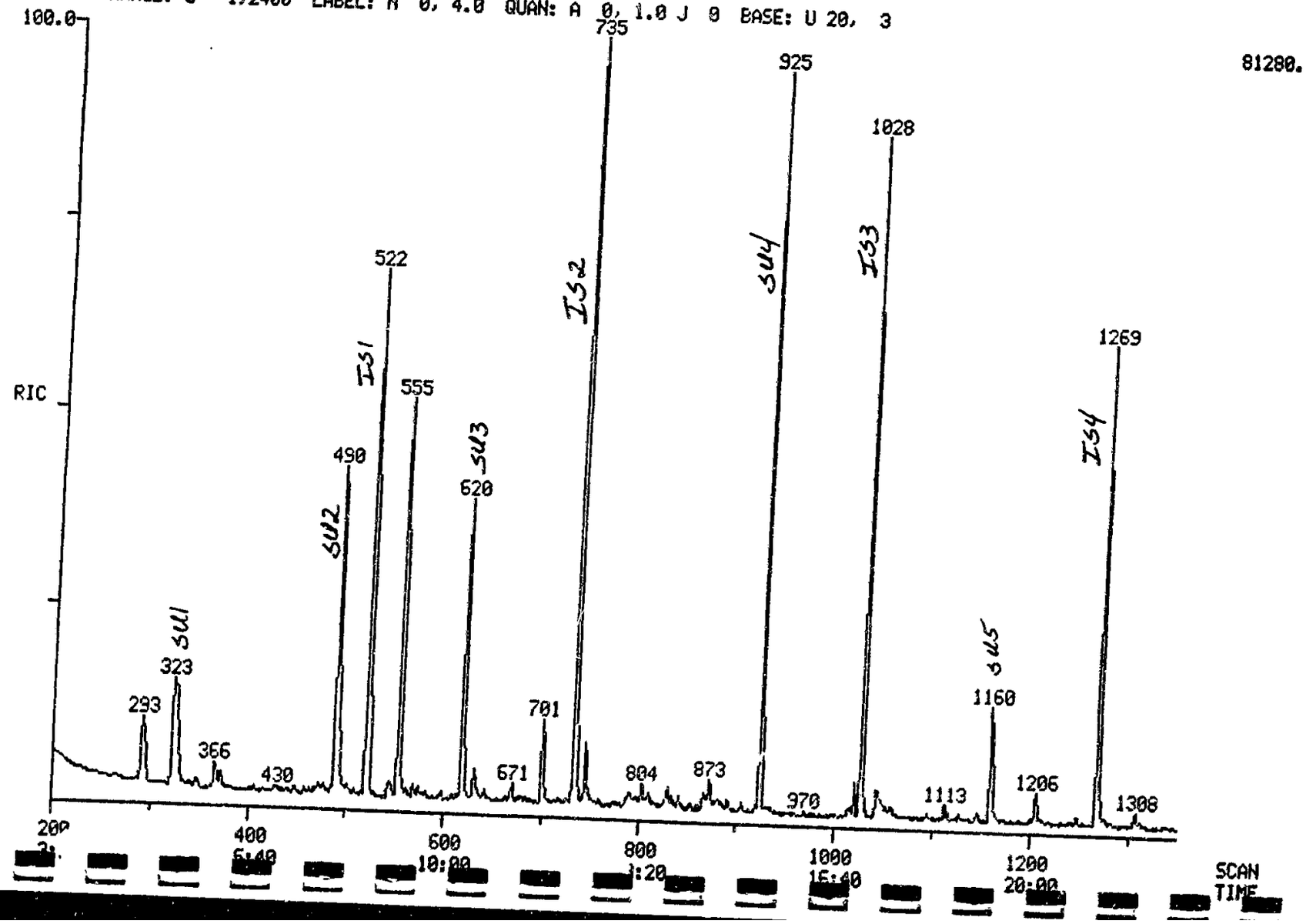
RIC
01/10/87 22:07:00
SAMPLE: SCK-MW16-001
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C14 #1
CALI: 4U12050C14 #3

SCANS 200 TO 1350

SPECTRIX DC # ----14

INST ID: 4530



003881

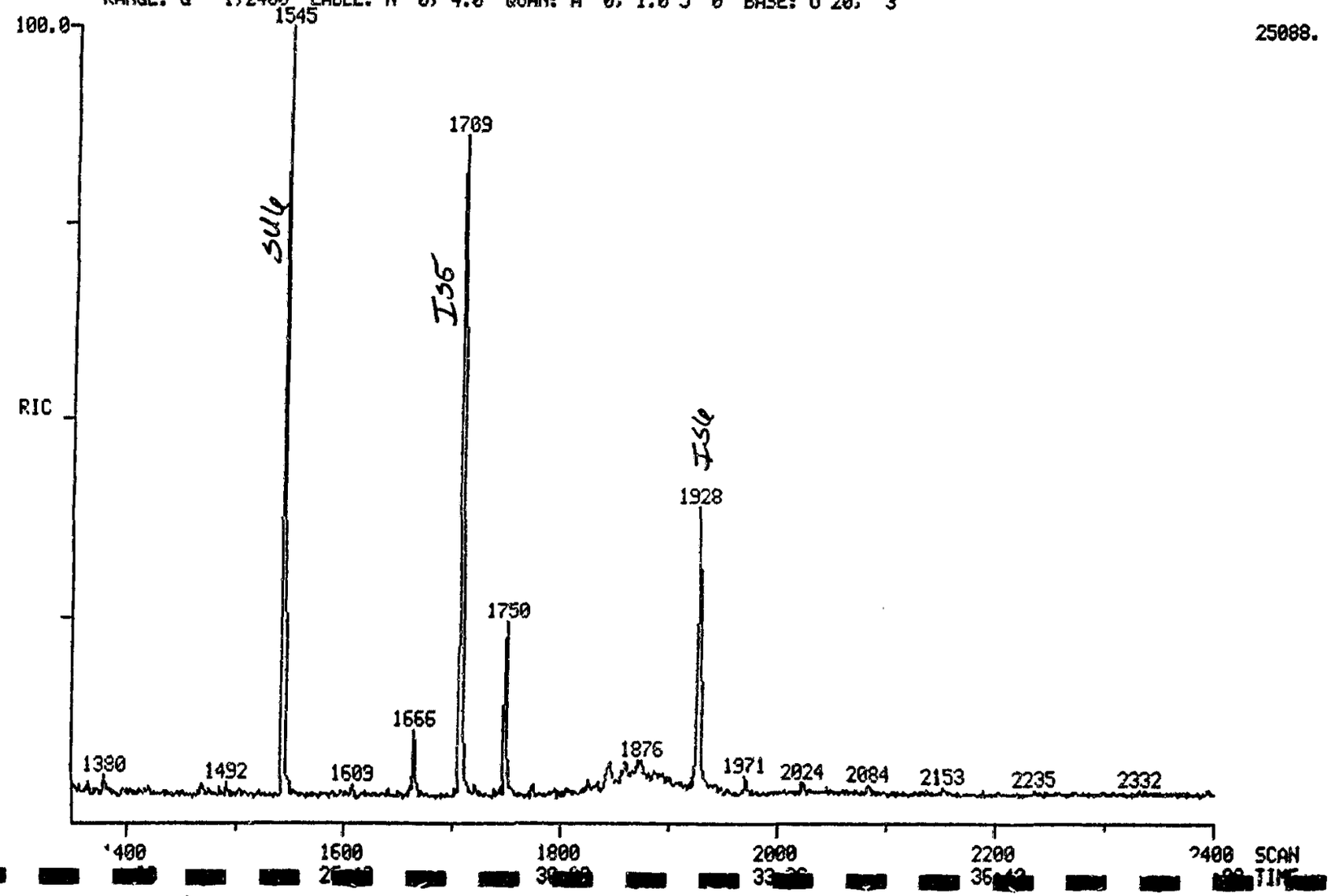
RIC
01/10/87 22:07:00
SAMPLE: SCK-MW16-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C14 #1
CALI: 4U12050C14 #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14

INST ID: 4530



SPECTRIX DC # -----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW16-001

LENAME 4U12050C14 INST ID. 4530

CLIENT KEYSTONE ANALYST GU

DATE INJECTED 01/10/87 22:07:00 VERIFIED BY GU

CALIB STD DATE 01/08/87 CORR. FACTOR 2.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
522	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	80 UG/L	1.000	2403
735	CI40	NAPHTHALENE-D8 ** IS2 **	136	80 UG/L	1.000	9267
1028	CI50	ACENAPHTHENE-D10 ** IS3 **	164	80 UG/L	1.000	4292
1269	CI60	PHENANTHRENE-D10 ** IS4 **	188	80 UG/L	1.000	5379
1709	CI70	CHRYSENE-D12 ** IS5 **	240	80 UG/L	1.000	2956
1928	CI75	PERYLENE-D12 ** IS6 **	264	80 UG/L	1.000	1481
323	CS50	2-FLUOROPHENOL ** SU1 **	112	46 %	0.619	1829
490	CS45	PHENOL-D5 ** SU2 **	99	70 %	0.939	3909
1160	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	50 %	1.128	283
620	CS20	NITROBENZENE-D5 ** SU3 **	82	104 %	0.844	2672
925	CS25	2-FLUOROBIPHENYL ** SU4 **	172	108 %	0.900	5750
1545	CS30	TERPHENYL-D14 ** SU6 **	244	119 %	0.904	2478
1750	C735	BIS(2-ETHYLHEXYL)PHTHALATE *	149	8 UG/L	1.024	342

* BLANK CORRECTED ON DATA SHEET

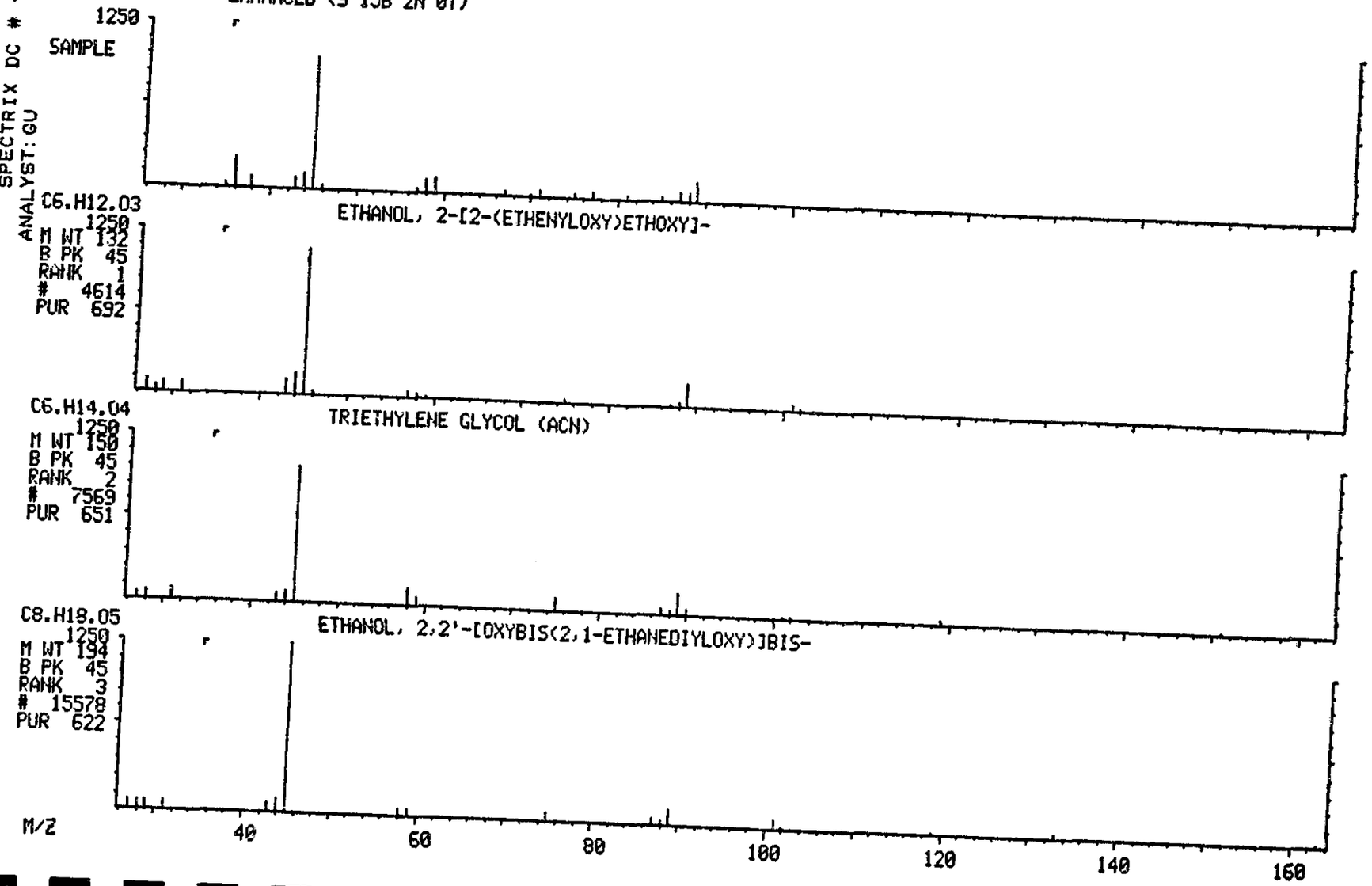
003883

LIBRARY SEARCH
01/10/87 22:07:00 + 17:23
SAMPLE: SCK-MW16-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C14 #1043
CALI: 4U12050C14 # 3

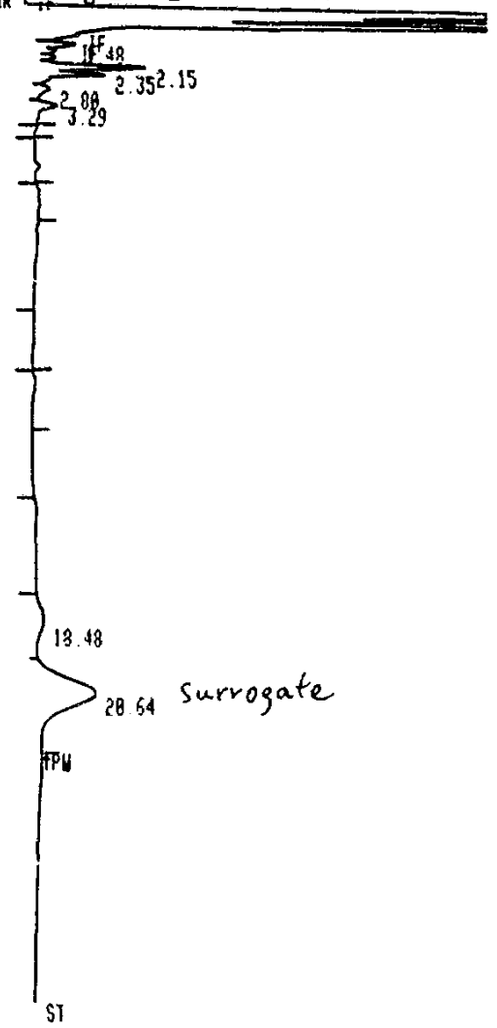
BASE M/Z: 45
RIC: 1959.

SPECTRIX DC # ----19
ANALYST: GU



INST ID: 453Q

TAR # 86-12-030-14A NA



DC#_____-____-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-HW16-0

PESTICIDE FRACTION

1ST COLUMN QUANT.

1ST COLUMN ID

1.8m x 4mm ID x6mm

1.5% SP 2250

1.95% SP 2401

100/120 SUPELCOPORT

COLUMN TEMP. 203°C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6089

RUN # 163 JAN/15/87 04:17:17

WORKFILE ID: C

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.48	2959	BV	0.121	8.011
2.15	13381	VV	0.120	36.226
2.35	8111	D VP	0.136	21.958
2.80	1212	PP	0.182	3.281
3.29	2646	PB	0.194	7.163
18.48	994	BP	0.820	2.691
20.64	7635	PB	0.956	20.670

SPECTRIX REPORT

Work Order # 86-12-050

Received: 12/11/86

Results by Sample

SAMPLE ID SCK-MW16-001 (LLW) SAMPLE # 14 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SV	<100 ug/L	CR	20 ug/L
CU	<10 ug/L	FE	428 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	7.4 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	24 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW20-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003886

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW20 -001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205015
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: JPH

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V15A
DILUTION FACTOR: 1:20

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	200 U
C015	BROMOMETHANE	200 U
C020	VINYL CHLORIDE	200 U
C025	CHLOROETHANE	200 U
C030	METHYLENE CHLORIDE	100 U
C035	ACETONE	240
C040	CARBON DISULFIDE	100 U
C045	1,1-DICHLOROETHENE	100 U
C050	1,1-DICHLOROETHANE	100 U
C055	TRANS-1,2-DICHLOROETHENE	100 U
C060	CHLOROFORM	100 U
C065	1,2-DICHLOROETHANE	100 U
C110	2-BUTANONE	200 U
C115	1,1,1-TRICHLOROETHANE	100 U
C120	CARBON TETRACHLORIDE	100 U
C125	VINYL ACETATE	200 U
C130	BROMODICHLOROMETHANE	100 U
C140	1,2-DICHLOROPROPANE	100 U
C145	TRANS-1,3-DICHLOROPROPENE	100 U
C150	TRICHLOROETHENE	100 U
C155	DIBROMOCHLOROMETHANE	100 U
C160	1,1,2-TRICHLOROETHANE	100 U
C165	BENZENE	100 U
C170	CIS-1,3-DICHLOROPROPENE	100 U
C175	2-CHLOROETHYLVINYLETHER	200 U
C180	BROMOFORM	100 U
C210	2-HEXANONE	200 U
C205	4-METHYL-2-PENTANONE	200 U
C220	TETRACHLOROETHENE	100 U
C225	1,1,2,2-TETRACHLOROETHANE	100 U
C230	TOLUENE	100 U
C235	CHLOROBENZENE	100 U
C240	ETHYLBENZENE	100 U
C245	STYRENE	100 U
C250	TOTAL XYLENES	46 J

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003887

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW20-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

BORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205015
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86.

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/12/87

DATAFILE: 4U12050C15B
DILUTION FACTOR: 100

CAS #	COMPOUND	UG/L
C315	PHENOL	1000 U
C325	BIS(2-CHLOROETHYL)ETHER	1000 U
C330	2-CHLOROPHENOL	1000 U
C335	1,3-DICHLOROBENZENE	1000 U
C340	1,4-DICHLOROBENZENE	1000 U
C345	BENZYL ALCOHOL	1000 U
C350	1,2-DICHLOROBENZENE	1000 U
C355	2-METHYLPHENOL	330 J
C360	BIS(2-CHLOROISOPROPYL)ETHER	1000 U
C365	4-METHYLPHENOL	610 J
C370	N-NITROSODIPROPYLAMINE	1000 U
C375	HEXACHLOROETHANE	1000 U
C410	NITROBENZENE	1000 U
C415	ISOPHORONE	1000 U
C420	2-NITROPHENOL	1000 U
C425	2,4-DIMETHYLPHENOL	1000
C430	BENZOIC ACID	5000 U
C435	BIS(2-CHLOROETHOXY)METHANE	1000 U
C440	2,4-DICHLOROPHENOL	1000 U
C445	1,2,4-TRICHLOROBENZENE	1000 U
C450	NAPHTHALENE	14000
C455	4-CHLOROANILINE	1000 U
C460	HEXACHLOROBUTADIENE	1000 U
C465	P-CHLORO-M-CRESOL	1000 U
C470	2-METHYLNAPHTHALENE	960 J
C510	HEXACHLOROCYCLOPENTADIENE	1000 U
C515	2,4,6-TRICHLOROPHENOL	1000 U
C520	2,4,5-TRICHLOROPHENOL	5000 U
C525	2-CHLORONAPHTHALENE	1000 U
C530	2-NITROANILINE	5000 U
C535	DIMETHYL PHTHALATE	1000 U
C540	ACENAPHTHYLENE	1000 U
C545	3-NITROANILINE	5000 U
C550	ACENAPHTHENE	880 J
C555	2,4-DINITROPHENOL	5000 U
C560	4-NITROPHENOL	5000 U
C565	DIBENZOFURAN	600 J
C570	2,4-DINITROTOLUENE	1000 U
C575	2,6-DINITROTOLUENE	1000 U

003888

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW20-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C15B

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	1000 U
C585	4-CHLOROPHENYL PHENYL ETHER	1000 U
C590	FLUORENE	440 J
C595	4-NITROANILINE	5000 U
C610	4,6-DINITRO-2-METHYLPHENOL	5000 U
C615	N-NITROSODIPHENYLAMINE	1000 U
C625	4-BROMOPHENYL PHENYL ETHER	1000 U
C630	HEXACHLOROBENZENE	1000 U
C635	PENTACHLOROPHENOL	5000 U
C640	PHENANTHRENE	1100
C645	ANTHRACENE	180 J
C650	DI-N-BUTYL PHTHALATE	1000 U
C655	FLUORANTHENE	380 J
C715	PYRENE	250 J
C720	BUTYL BENZYL PHTHALATE	1000 U
C725	3,3'-DICHLOROBENZIDINE	1000 U
C730	BENZO(A)ANTHRACENE	1000 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	1000 U
C740	CHRYSENE	1000 U
C760	DI-N-OCTYL PHTHALATE	1000 U
C765	BENZO(B)FLUORANTHENE	1000 U
C770	BENZO(K)FLUORANTHENE	1000 U
C775	BENZO(A)PYRENE	1000 U
C780	INDENO(1,2,3-CD)PYRENE	1000 U
C785	DIBENZO(A,H)ANTHRACENE	1000 U
C790	BENZO(GHI)PERYLENE	1000 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003889

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-15A

DC No: KEYSTONE
SMO No: SCK-MW20-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/15/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003890

INST ID: 4000

SPECTRIX DC # ----- 8

SAMPLE NUMBER: SCK-MW20-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO. : ----

QC REPORT NO. : ----

ANALYST: NOT

DATAFILE: 4U12050V15A

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003891

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: SCK-MW20 - 001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

GC REPORT NO.: --- ANALYST: GU DATAFILE: 4U12050C15B

B. TENTATIVELY IDENTIFIED COMPOUNDS

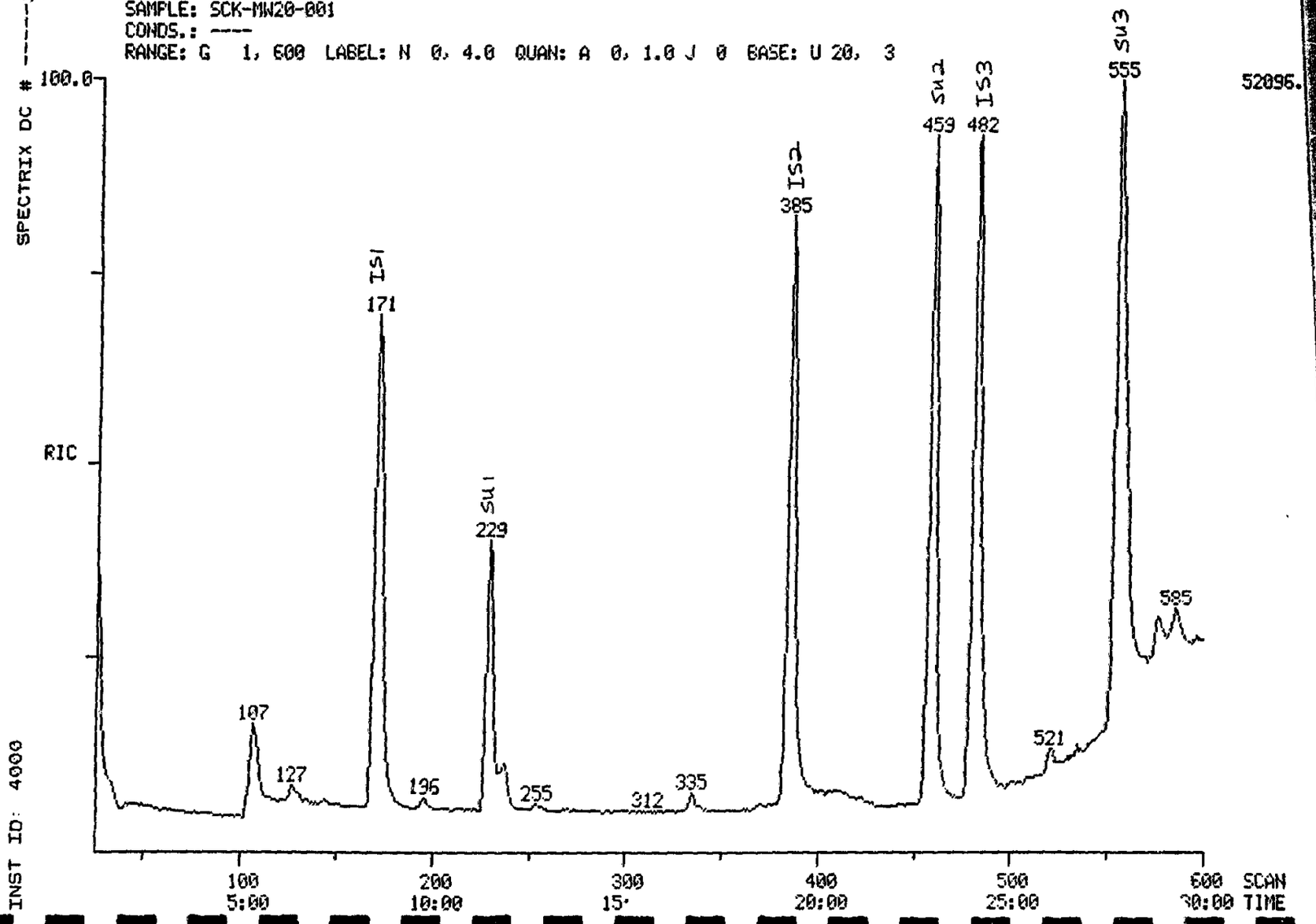
CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
				UG/L
89-51-0	BENZENEACETIC ACID, 2-CARBOXY-	505	900	430 J
611-15-4	BENZENE, 1-ETHENYL-2-METHYL-	559	963	610 J
526-75-0	PHENOL, 2,3-DIMETHYL-	726	907	1100 J
95-15-8	BENZO[B]THIOPHENE	749	880	1600 J
98-71-5	PHENOL, 3-ETHYL-5-METHYL-	822	849	760 J
2411-83-2	1H-INDENE, 1-ETHYLIDENE-	873	903	780 J
86-74-8	9H-CARBAZOLE	1315	894	400 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003893

RIC
12/18/86 17:32:00
SAMPLE: SCK-MW20-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V15A #1 SCANS 25 TO 600
CALI: 4U12050V15A #3



SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID. SCK-MW20-001

FILENAME 4U12050V15A

CLIENT KEYSTONE

DATE INJECTED 12/18/86 17:32:00

CALIB STD DATE 12-14-86

INST 4000

ANALYST NOT

VERIFIED BY NOT

CORR. FACTOR 20.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
171	CI01	BROMOCHLOROMETHANE	**IS1**	128	1000 UG/L	1.000	15815
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	1000 UG/L	1.000	69791
481	CI20	D5-CHLOROBENZENE	**IS3**	117	1000 UG/L	1.000	59551
229	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	93 %	1.339	21158
459	CS05	D8-TOLUENE	**SU2**	98	97 %	0.954	61050
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	95 %	1.154	41489
107	C030	METHYLENE CHLORIDE *		84	102 UG/L	0.626	2978
128	C035	ACETONE		43	244 UG/L	0.749	2919
585	C250	TOTAL XYLENES		106	46 UG/L	1.216	1754

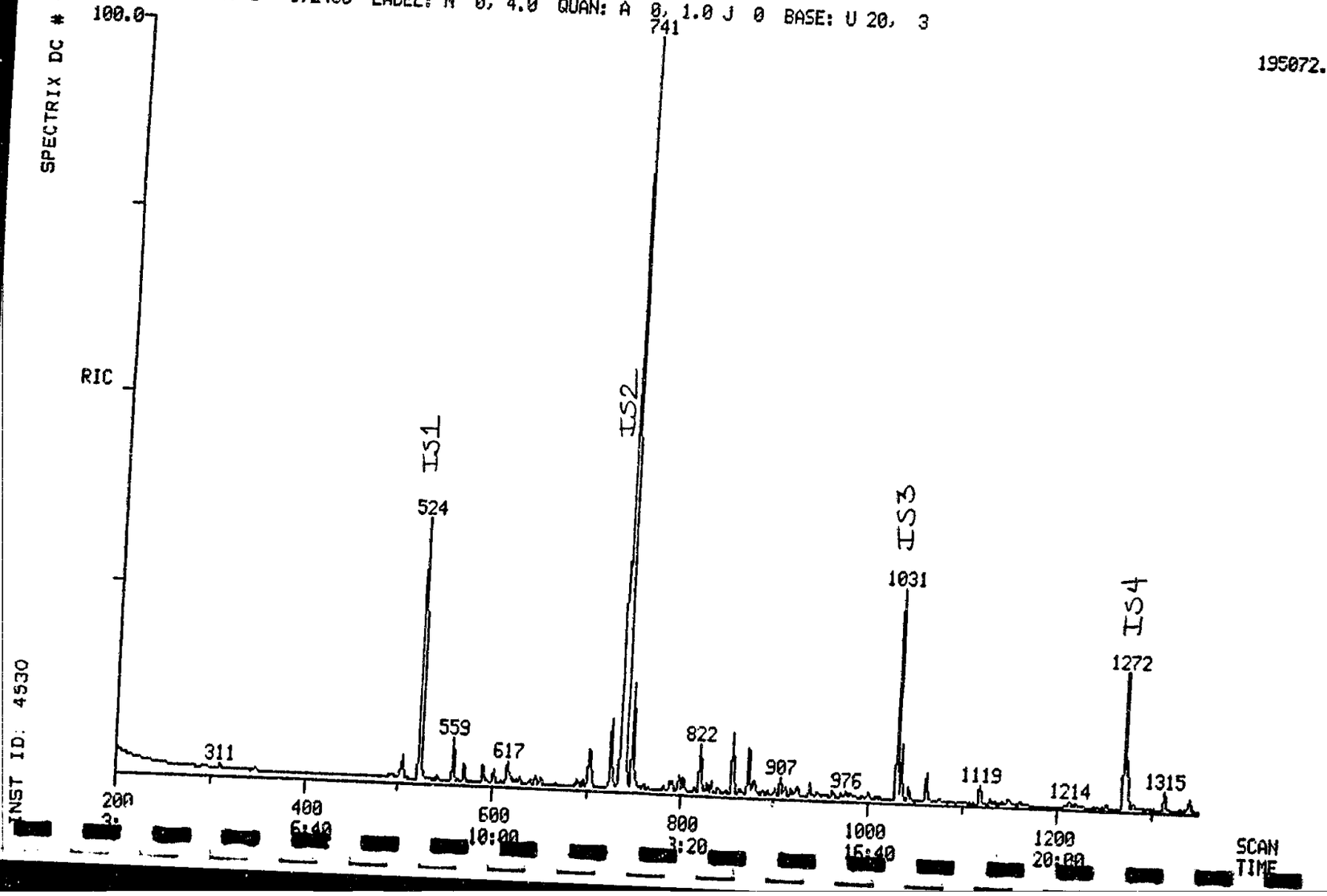
* BLANK CORRECTED ON DATA SHEET

003895

RIC
01/12/87 13:10:00
SAMPLE: SCK-MW20-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C15B #1
CALI: 4U12050C15B #3

SCANS 200 TO 1350



003896

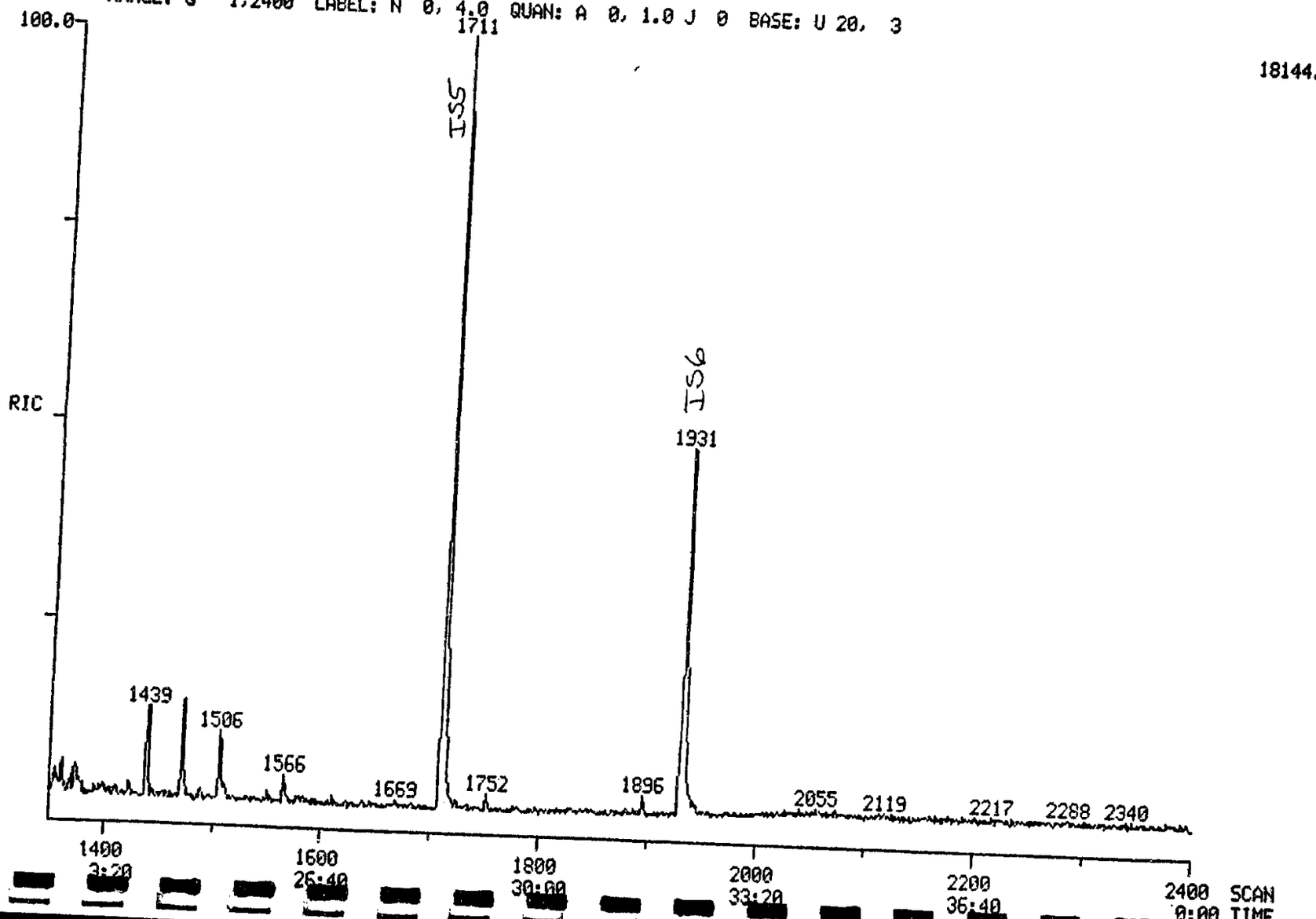
RIC
01/12/87 13:10:00
SAMPLE: SCK-MW20-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C15B #1
CALI: 4U12050C15B #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14

INST ID: 4530



18144.

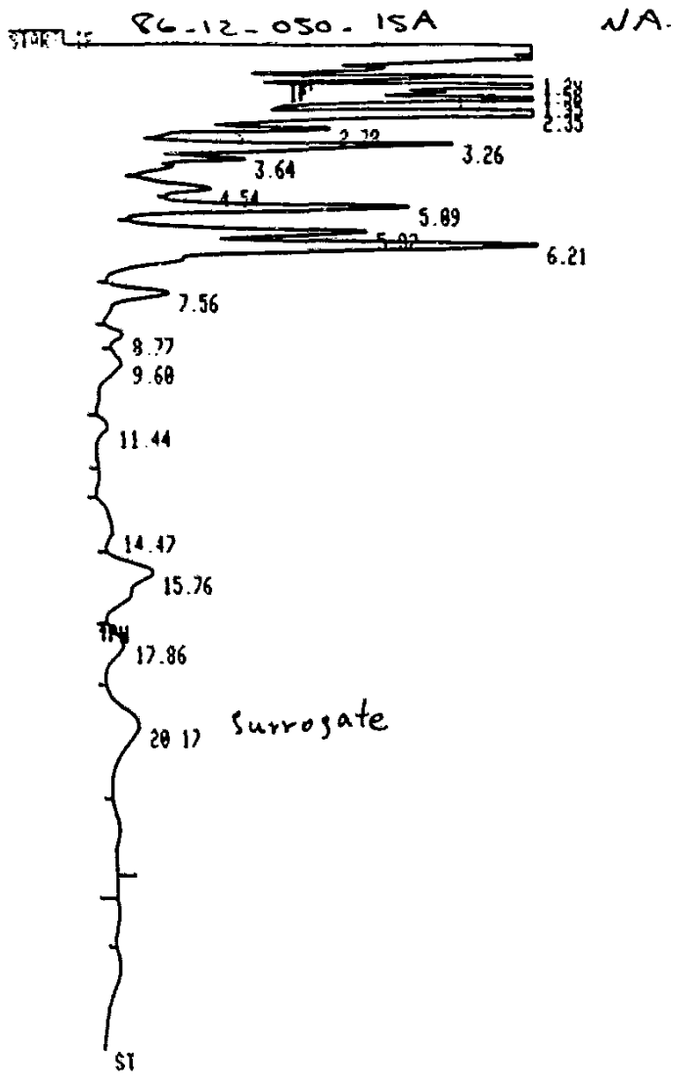
SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID.	SCK-MW20-001		
LENAME	4U12050C15B	INST ID.	4530
CLIENT	KEYSTONE	ANALYST	GU
DATE INJECTED	01/12/87 13:10:00	VERIFIED BY	
CALIB STD DATE	01/08/87	CORR. FACTOR	100.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
524	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	4000 UG/L	1.000	20423
737	CI40	NAPHTHALENE-D8 ** IS2 **	136	4000 UG/L	1.000	75469
1031	CI50	ACENAPHTHENE-D10 ** IS3 **	164	4000 UG/L	1.000	37472
1271	CI60	PHENANTHRENE-D10 ** IS4 **	188	4000 UG/L	1.000	46640
1711	CI70	CHRYSENE-D12 ** IS5 **	240	4000 UG/L	1.000	26093
1931	CI75	PERYLENE-D12 ** IS6 **	264	4000 UG/L	1.000	18542
590	C355	2-METHYLPHENOL	108	334 UG/L	1.126	269
617	C365	4-METHYLPHENOL	108	609 UG/L	1.177	487
703	C425	2,4-DIMETHYLPHENOL	122	1003 UG/L	0.954	652
741	C450	NAPHTHALENE	128	14225 UG/L	1.005	262907
857	C470	2-METHYLNAPHTHALENE	142	967 UG/L	1.163	1211
1035	C550	ACENAPHTHENE	153	880 UG/L	1.004	7768
1062	C565	DIBENZOFURAN	168	597 UG/L	1.030	6993
1119	C590	FLUORENE	166	441 UG/L	1.085	436
1175	C640	PHENANTHRENE	178	1094 UG/L	1.003	12392
1282	C645	ANTHRACENE	178	181 UG/L	1.009	207
1472	C655	FLUORANTHENE	202	379 UG/L	1.158	375
1506	C715	PYRENE	202	248 UG/L	0.880	253

* SURROGATES WERE DILUTED OUT



DC#_____-____-____
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW20-0
PESTICIDE FRACTION
1ST COLUMN QUANT.

1ST COLUMN ID
1.8m x 4mm ID x6mm C
1.5% SP 2250
1.95% SP 2401
100/120 SUPELCOPORT

COLUMN TEMP. 203°C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6090

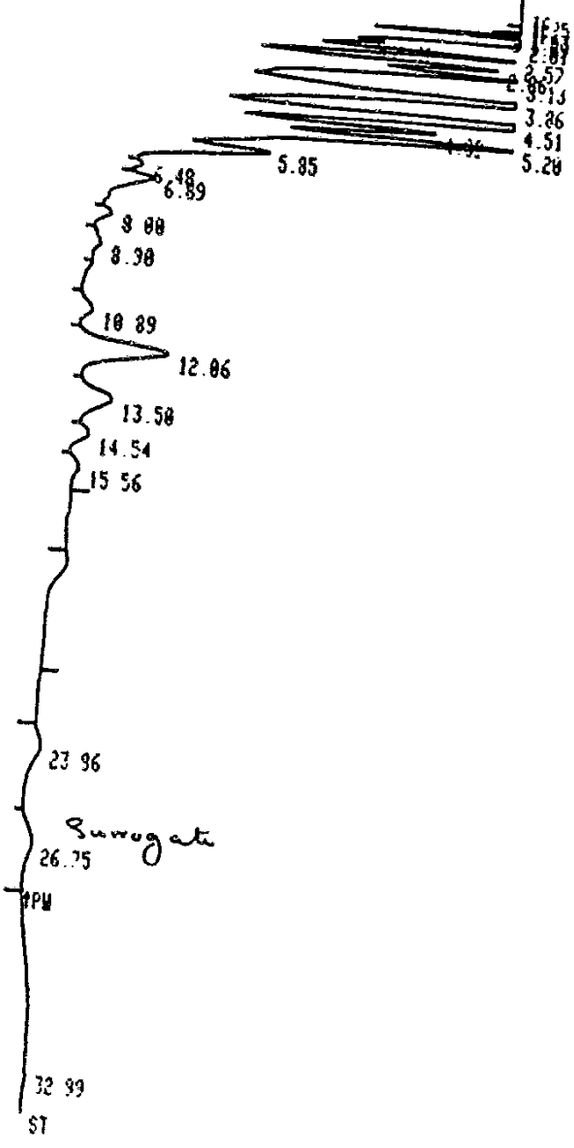
RUN # 168 JAN/15/87 06:53:38
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.28	32108	D BP	0.104	1.781
1.56	192240	D PV	0.101	10.666
1.75	22403	D VV	0.134	1.243
1.95	107417	D VB	0.103	5.960
2.35	1208542	SBB	0.105	67.052
2.78	17055	BP	0.111	0.946
3.26	40242	PV	0.200	2.233
3.64	13614	VV	0.163	0.755
4.54	10357	PV	0.309	0.575
5.09	37491	VV	0.247	2.080
5.82	32921	VV	0.256	1.827
6.21	58289	VP	0.328	3.234
7.56	8015	PV	0.375	0.445
8.77	2607	VV	0.421	0.145
9.60	2709	VP	0.787	0.150
11.44	1497	PV	0.480	0.083
14.47	1869	PV	1.071	0.104
15.76	6692	VV	1.036	0.371
17.86	2452	VP	0.886	0.136
20.17	3868	PP	1.303	0.215

86-12-050-15A

N.A.



DC#_____

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. Sck. MW20-0

PESTICIDE FRACTION

2ND COLUMN CONFIRMAT:

2ND COLUMN II C

1.8m x2mm ID x6mm OD

3% SP-2100

100/120 SUPELCOPORT

COLUMN TEMP. 187 °C

VOLUME INJ. 1 µL00

INSTRUMENT ID. 6990

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.25	223107	D BB	0.031	5.745
1.63	862559	SPB	0.084	22.210
1.79	26010	D BP	0.070	0.670
2.01	1780414	SPB	0.111	45.844
2.31	8616	D BV	0.113	0.222
2.57	57826	VP	0.117	1.489
2.86	63148	PV	0.134	1.626
3.13	70925	VV	0.232	1.826
3.86	170318	VV	0.225	4.386
4.51	365642	VV	0.169	9.415
4.89	65704	VV	0.205	1.692
5.20	90356	VV	0.278	2.327
5.85	29978	VP	0.276	0.772
6.48	2620	PV	0.237	0.068
6.89	7861	VP	0.309	0.202
8.00	3118	PP	0.296	0.080
8.90	2718	PV	0.478	0.070
10.89	3502	PV	0.488	0.090
12.06	23268	VV	0.560	0.599
13.50	10091	VV	0.755	0.260
14.54	4936	VP	0.523	0.127
15.56	2360	PB	0.514	0.061
23.86	2501	BP	0.841	0.064
26.75	2450	PB	0.991	0.063
32.99	3645	I BH	4.850	0.094

RUN # 202

WORKFILE ID: C

WORKFILE NAME:

JAN/16/87 22:47:32

SPECTRIX REPORT

Work Order # 86-12-050

Received: 12/11/86

Results by Sample

SAMPLE ID SCK-MW20-001 (LLW) SAMPLE # 15 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	43.6 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	14 ug/L
CU	<10 ug/L	FE	4240 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	128 ug/L	SB	65 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	30 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-MW21-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003901

SPECTRIX DC # ----- 8

INST ID 4300

SAMPLE NUMBER: SCK-MW21 -001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205016
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V16
DILUTION FACTOR: 1:1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003902

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW21-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205016
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-11-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/11/87

DATAFILE: 4U12050C16
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	2 J
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003903

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW21-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C16

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	2 J
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	10 U
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	10 U
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	10 U
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003904

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-16A

DC No: KEYSTONE
SMO No: SCK-MW21-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/15/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003905

INST ID: 4000

SPECTRIX DC # -

SAMPLE NUMBER:

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION

CASE N

QC REPORT NO.: ----

ANALYST: NOT

DATAFILE: 4

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003906

INST ID: 4530

SPECTRIX DC # ---- B

SAMPLE: SCK-MW21 -001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION

GC REPORT NO.: ---

CASE NO.: ---

ANALYST: GU

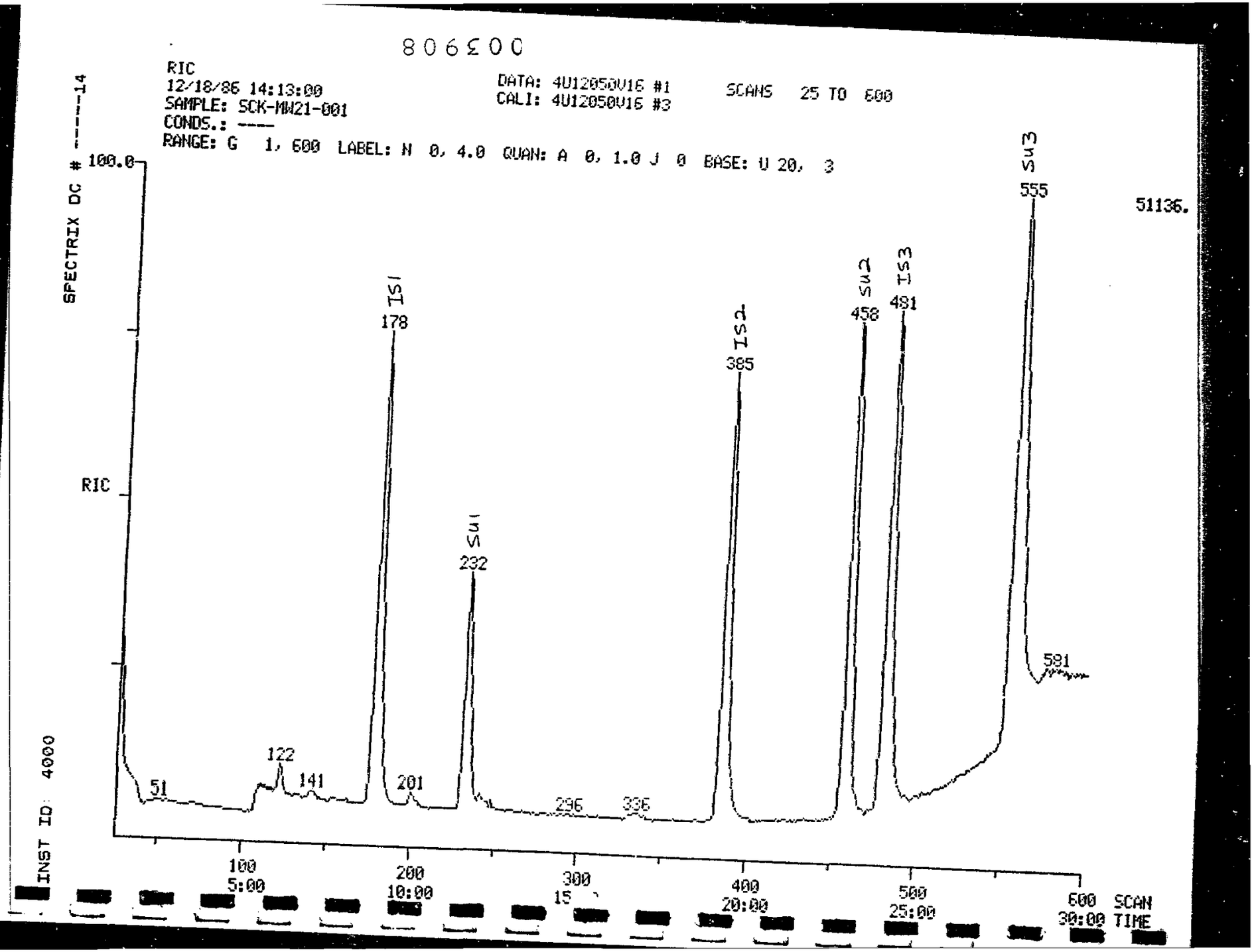
DATAFILE: 4U12050C16

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT UG/L
110-12-3	2-HEXANONE, 5-METHYL-	* 291	938	8 J
629-74-3	1-HEXADECYNE	1461	817	150 J
56554-96-2	2-OCTADECENAL	1475	782	5 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1489		6 J
629-74-3	1-HEXADECYNE	1498	735	11 J
	UNKNOWN-DOESN'T MATCH ANY LIBRARY SPECTRA	1514		6 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

* ALSO FOUND IN BLANK


RIC
12/18/86 14:13:00
SAMPLE: SCK-MW21-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 4U12050V16 #1
CALI: 4U12050V16 #3
SCANS 25 TO 600
SPECTRIX DC # -----14
INST ID: 4000
RIC
100.0
51136.
IS1
178
SU1
232
IS2
385
SU2
458
IS3
481
SU3
555
51
122
141
201
296
336
581
100
5:00
200
10:00
300
15
400
20:00
500
25:00
600
30:00
SCAN
TIME

003908

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

\MPLE ID.	SCK-MW21-001		
FILENAME	4U12050V16	INST	4000
CLIENT	KEYSTONE	ANALYST	NOT
DATE INJECTED	12/18/86 14:13:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
178	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	15089
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	61938
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	50646
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.303	19846
458	CS05	D8-TOLUENE	**SU2**	98	99 %	0.952	52582
554	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	102 %	1.152	37992
122	C030	METHYLENE CHLORIDE *		84	2 UG/L	0.685	1024

* BLANK CORRECTED ON DATA SHEET

003910

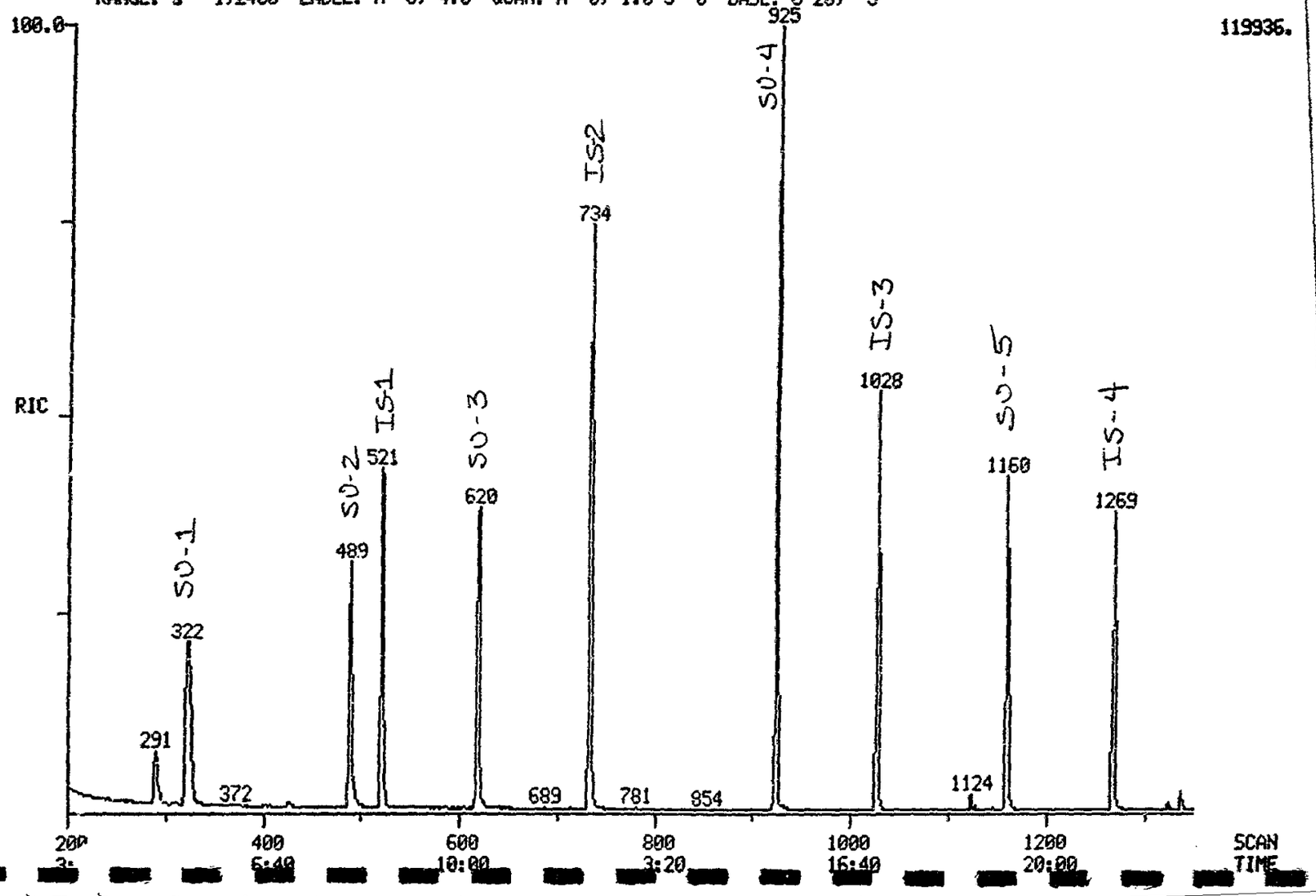
RIC
01/11/87 17:08:00
SAMPLE: SCK-MW21-001
CONDS.: ---
RANGE: G 1.2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C16 #1
CALI: 4U12050C16 #3

SCANS 200 TO 1350

SPECTRIX DC # ----14

INST ID: 4530



003910

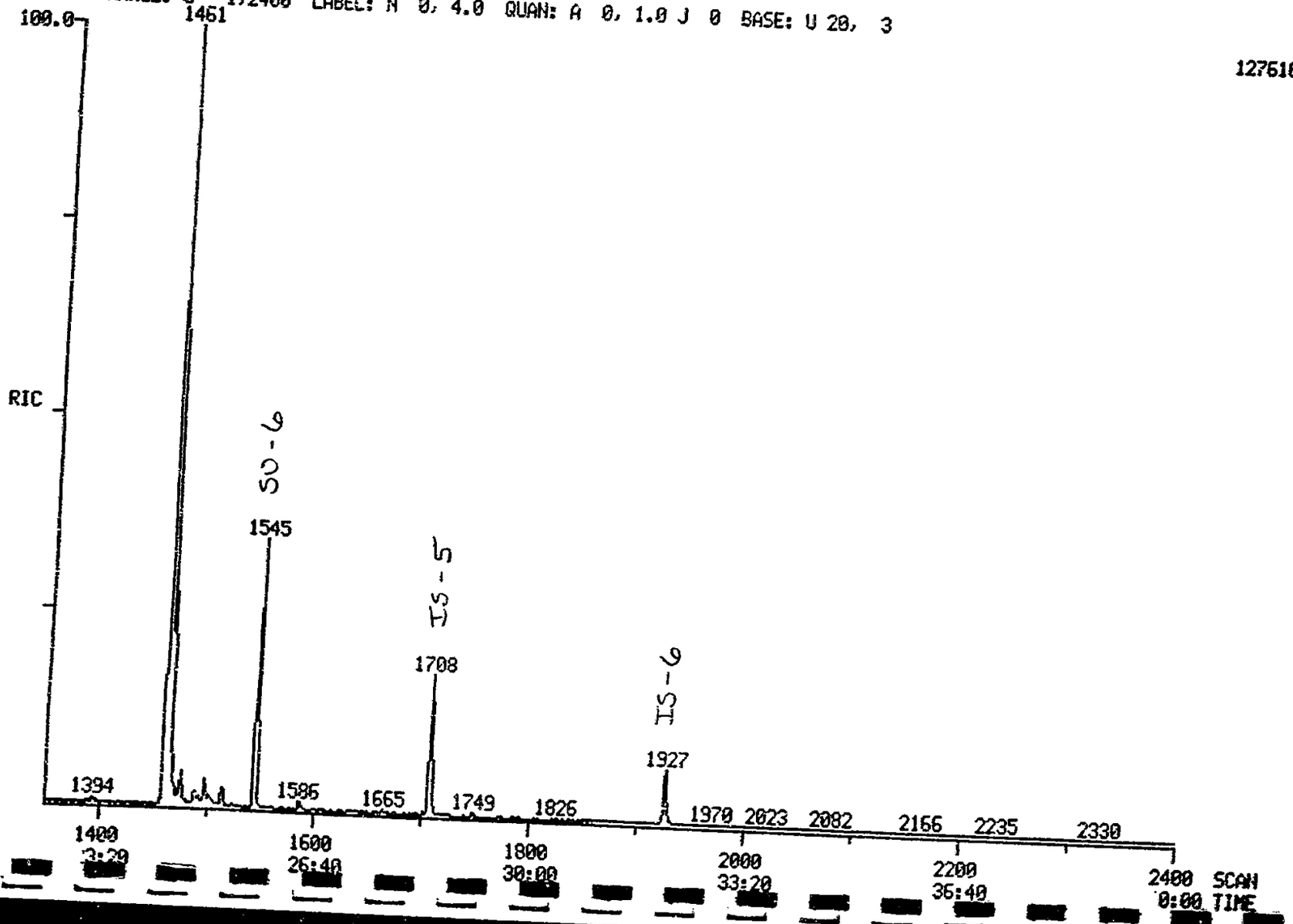
003911

RIC
01/11/87 17:08:00
SAMPLE: SCK-MW21-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C16 #1
CALI: 4U12050C16 #3

SCANS 1350 TO 2400

127616.



003911

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW21-001

LENAME 4U12050C16

CLIENT KEYSTONE

DATE INJECTED 01/11/87 17:08:00

CALIB STD DATE 01/08/87

INST ID. 4530

ANALYST GU

VERIFIED BY

CORR. FACTOR 1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
521	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	2380
734	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	9279
1028	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	4375
1269	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	5588
1708	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	2915
1927	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	1493
322	CS50	2-FLUOROPHENOL ** SU1 **	112	54 %	0.618	4293
489	CS45	PHENOL-D5 ** SU2 **	99	38 %	0.939	4197
1160	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	97 %	1.128	1267
617	CS20	NITROBENZENE-D5 ** SU3 **	82	93 %	0.843	4689
925	CS25	2-FLUOROBIPHENYL ** SU4 **	172	91 %	0.900	9625
1545	CS30	TERPHENYL-D14 ** SU6 **	244	139 %	0.905	4666
737	C450	NAPHTHALENE	128	2 UG/L	1.004	349
1124	C580	DIETHYL PHTHALATE	149	2 UG/L	1.093	244

LIBRARY SEARCH
01/11/87 17:08:00 + 24:49
SAMPLE: SCK-MW21-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C16 #1489
CALI: 4U12050C16 # 3

BASE M/Z: 67
RIC: 1577.

SPECTRIX DC # ----19
ANALYST: GU
INST ID: 4530

1002
SAMPLE

C18.H31.O.CL
9,12-OCTADECADIENOYL CHLORIDE, (Z,Z)-
1002
M WT 298
B PK 55
RANK 1
28996
PUR 675

C21.H38.O2
11,14-EICOSADIENOIC ACID, METHYL ESTER
1002
M WT 322
B PK 67
RANK 2
31258
PUR 643

C18.H32.O
9,17-OCTADECADIENAL, (Z)-
1002
M WT 264
B PK 67
RANK 3
25393
PUR 627

M/Z
50 100 150 200 250 300

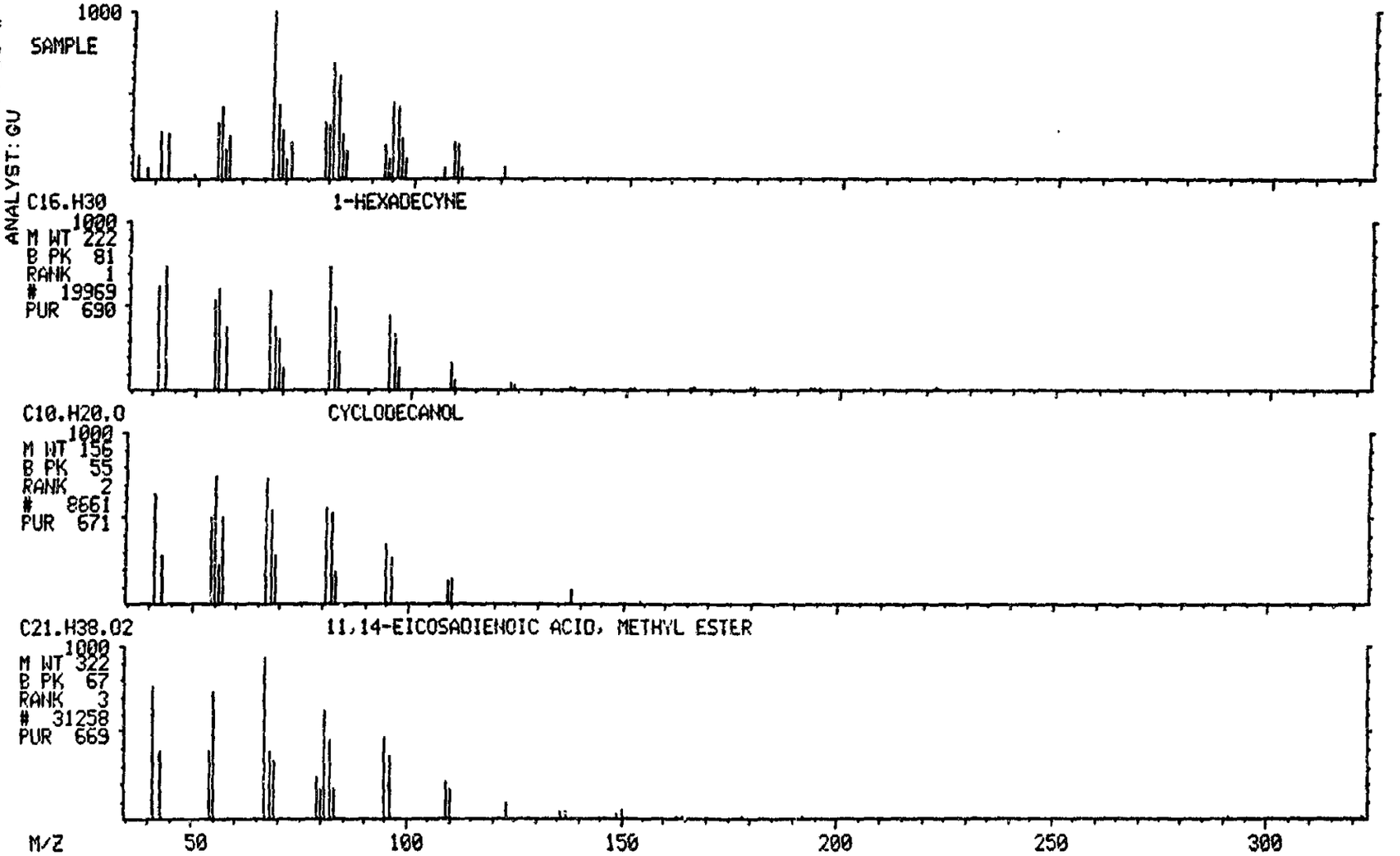
003914

LIBRARY SEARCH
01/11/87 17:08:00 + 25:14
SAMPLE: SCK-MW21-001
CONDS.: ---
ENHANCED (S 15B 2N 0T)

DATA: 4U12050C16 #1514
CALI: 4U12050C16 # 3

BASE M/Z: 67
RIC: 2367.

SPECTRIX DC # -----19
ANALYST: GU

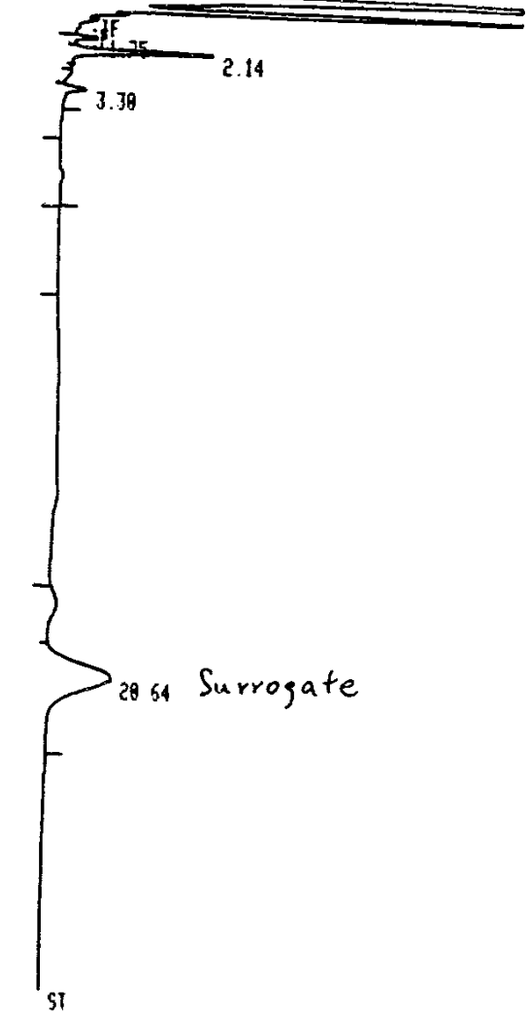


INST ID: 4530

003914

STAR FILE 86-12-050-16A

NA



DC#

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW21-

PESTICIDE FRACTION
1ST COLUMN QUANT.

1ST COLUMN ID
1.8m x 4mm ID x6mm
1.5% SP 2250
1.95% SP 2401
100/120 SUPELCOPORT

COLUMN TEMP. 203°C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6000

RUN # 170 JAN/15/87 07:56:11
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.75	3124	D BV	0.105	9.239
2.14	18949	VV	0.137	56.039
3.30	3043	PB	0.181	8.999
20.64	8698	PB	0.957	25.723

Received: 12/11/86

SPECTRIX REPORT
Results by Sample

Work Order # 86-12-030

SAMPLE ID SCK-MW21-001 (LLW) SAMPLE # 16 FRACTIONS: A
Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	<10 ug/L	FE	<30 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	<5 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	22 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: SCK-P05-001

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ✓ SV
- ✓ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ✓ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Analysis Data Sheets (IADS)

003917

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-P05-001

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 881205017
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V17

DILUTION FACTOR: 1:10

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	100 U
C015	BROMOMETHANE	100 U
C020	VINYL CHLORIDE	100 U
C025	CHLOROETHANE	100 U
C030	METHYLENE CHLORIDE	50 U
C035	ACETONE	78 J
C040	CARBON DISULFIDE	50 U
C045	1,1-DICHLOROETHENE	50 U
C050	1,1-DICHLOROETHANE	50 U
C055	TRANS-1,2-DICHLOROETHENE	50 U
C060	CHLOROFORM	50 U
C065	1,2-DICHLOROETHANE	50 U
C110	2-BUTANONE	100 U
C115	1,1,1-TRICHLOROETHANE	50 U
C120	CARBON TETRACHLORIDE	50 U
C125	VINYL ACETATE	100 U
C130	BROMODICHLOROMETHANE	50 U
C140	1,2-DICHLOROPROPANE	50 U
C145	TRANS-1,3-DICHLOROPROPENE	50 U
C150	TRICHLOROETHENE	50 U
C155	DIBROMOCHLOROMETHANE	50 U
C160	1,1,2-TRICHLOROETHANE	50 U
C165	BENZENE	50 U
C170	CIS-1,3-DICHLOROPROPENE	50 U
C175	2-CHLOROETHYLVINYLETHER	100 U
C180	BROMOFORM	50 U
C210	2-HEXANONE	100 U
C205	4-METHYL-2-PENTANONE	100 U
C220	TETRACHLOROETHENE	50 U
C225	1,1,2,2-TETRACHLOROETHANE	50 U
C230	TOLUENE	50 U
C235	CHLOROBENZENE	50 U
C240	ETHYLBENZENE	50 U
C245	STYRENE	50 U
C250	TOTAL XYLENES	50 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003918

SPECTRIX DC # ---- 8

--17
INST ID: 4530

SAMPLE NUMBER: SCK-P05-001

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205017
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12-11-86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12-16-86
DATE ANALYZED: 01/12/87

DATAFILE: 4U12050C17B
DILUTION FACTOR: 40.0

CAS #	COMPOUND	UG/L
C315	PHENOL	400 U
C325	BIS(2-CHLOROETHYL)ETHER	400 U
C330	2-CHLOROPHENOL	400 U
C335	1,3-DICHLOROBENZENE	400 U
C340	1,4-DICHLOROBENZENE	400 U
C345	BENZYL ALCOHOL	400 U
C350	1,2-DICHLOROBENZENE	400 U
C355	2-METHYLPHENOL	400 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	400 U
C365	4-METHYLPHENOL	400 U
C370	N-NITROSODIPROPYLAMINE	400 U
C375	HEXACHLOROETHANE	400 U
C410	NITROBENZENE	400 U
C415	ISOPHORONE	400 U
C420	2-NITROPHENOL	400 U
C425	2,4-DIMETHYLPHENOL	400 U
C430	BENZOIC ACID	2000 U
C435	BIS(2-CHLOROETHOXY)METHANE	400 U
C440	2,4-DICHLOROPHENOL	400 U
C445	1,2,4-TRICHLOROBENZENE	400 U
C450	NAPHTHALENE	2400
C455	4-CHLOROANILINE	400 U
C460	HEXACHLOROBUTADIENE	400 U
C465	P-CHLORO-M-CRESOL	400 U
C470	2-METHYLNAPHTHALENE	220 J
C510	HEXACHLOROCYCLOPENTADIENE	400 U
C515	2,4,6-TRICHLOROPHENOL	400 U
C520	2,4,5-TRICHLOROPHENOL	2000 U
C525	2-CHLORONAPHTHALENE	400 U
C530	2-NITROANILINE	2000 U
C535	DIMETHYL PHTHALATE	400 U
C540	ACENAPHTHYLENE	400 U
C545	3-NITROANILINE	2000 U
C550	ACENAPHTHENE	400
C555	2,4-DINITROPHENOL	2000 U
C560	4-NITROPHENOL	2000 U
C565	DIBENZOFURAN	230 J
C570	2,4-DINITROTOLUENE	400 U
C575	2,6-DINITROTOLUENE	400 U

003919

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-P05-001

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C17B

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	70 J
C585	4-CHLOROPHENYL PHENYL ETHER	400 U
C590	FLUORENE	150 J
C595	4-NITROANILINE	2000 U
C610	4,6-DINITRO-2-METHYLPHENOL	2000 U
C615	N-NITROSODIPHENYLAMINE	400 U
C625	4-BROMOPHENYL PHENYL ETHER	400 U
C630	HEXACHLOROBENZENE	400 U
C635	PENTACHLOROPHENOL	2000 U
C640	PHENANTHRENE	370 J
C645	ANTHRACENE	34 J
C650	DI-N-BUTYL PHTHALATE	400 U
C655	FLUORANTHENE	64 J
C715	PYRENE	41 J
C720	BUTYL BENZYL PHTHALATE	400 U
C725	3,3'-DICHLOROBENZIDINE	800 U
C730	BENZO(A)ANTHRACENE	400 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	400 U
C740	CHRYSENE	400 U
C760	DI-N-OCTYL PHTHALATE	400 U
C765	BENZO(B)FLUORANTHENE	400 U
C770	BENZO(K)FLUORANTHENE	400 U
C775	BENZO(A)PYRENE	400 U
C780	INDENO(1,2,3-CD)PYRENE	400 U
C785	DIBENZO(A,H)ANTHRACENE	400 U
C790	BENZO(GHI)PERYLENE	400 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003920

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-17A

DC No: KEYSTONE
SMO No: SCK-P05-001

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/15/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.05 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.10 U
53494-70-5	ENDRIN KETONE	0.50 U
57-74-9	CHLORDANE	0.10 U
8001-35-2	TOXAPHENE	0.50 U
12674-11-2	AROCLOR-1016	1.0 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	0.50 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 A

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003921

INST ID: 4000 SPECTRIX DC # ------ 8

SAMPLE NUMBER: SCK-F05-001

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: NOT DATAFILE: 4U12050V17

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT	CN
	NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.				

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

INST ID: 4530

SPECTRIX DC # ---- B

SAMPLE: SCK-P05-001

ORGANICS ANALYSIS DATA SHEET - PAGE 5

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ---

SDC REPORT NO.: ---

ANALYST: GU

DATAFILE: 4U12050C17B

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
14630-52-7	3-UNDECENE, 6-METHYL-, (E)-	567	829	UG/L 210 J

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

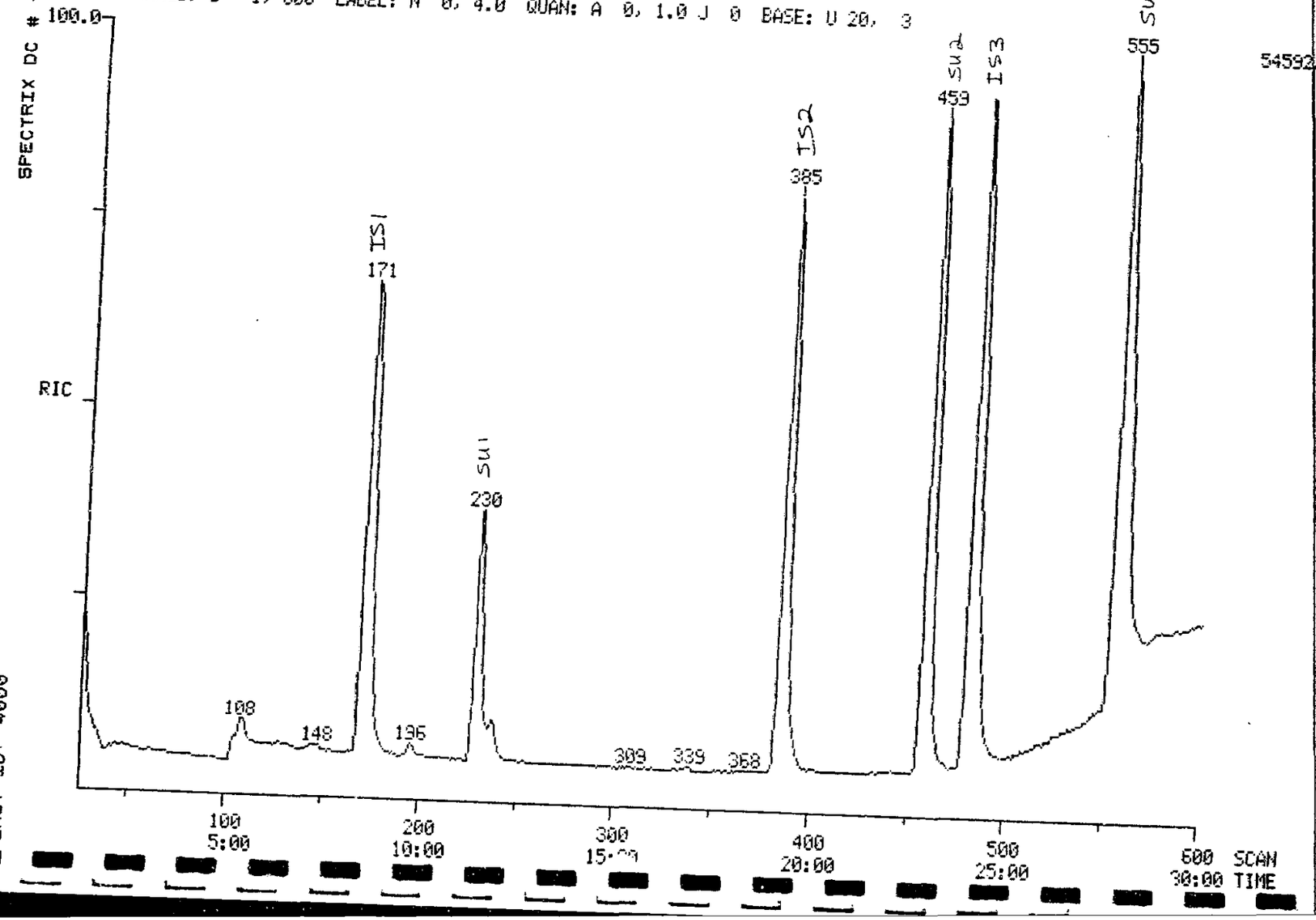
003923

003924

RIC
12/18/86 16:14:00
SAMPLE: TRIP BLANK 12/12
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050U19 #1
CALI: 4U12050U19 #3

SCANS 25 TO 600



003924

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID. SCK-P05-001

FILENAME 4U12050V17

CLIENT KEYSTONE

DATE INJECTED 12/18/86 14:53:00

CALIB STD DATE 12-14-86

INST 4000

ANALYST NOT

VERIFIED BY NOT

CORR. FACTOR 10.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
173	CI01	BROMOCHLOROMETHANE	**IS1**	128	500 UG/L	1.000	17018
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	500 UG/L	1.000	74824
481	CI20	D5-CHLOROBENZENE	**IS3**	117	500 UG/L	1.000	64178
230	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.329	22374
458	CS05	D8-TOLUENE	**SU2**	98	97 %	0.952	65656
554	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	104 %	1.152	49072
112	C030	METHYLENE CHLORIDE *		84	33 UG/L	0.647	2099
132	C035	ACETONE		43	78 UG/L	0.763	2009

* BLANK CORRECTED ON DATA SHEET

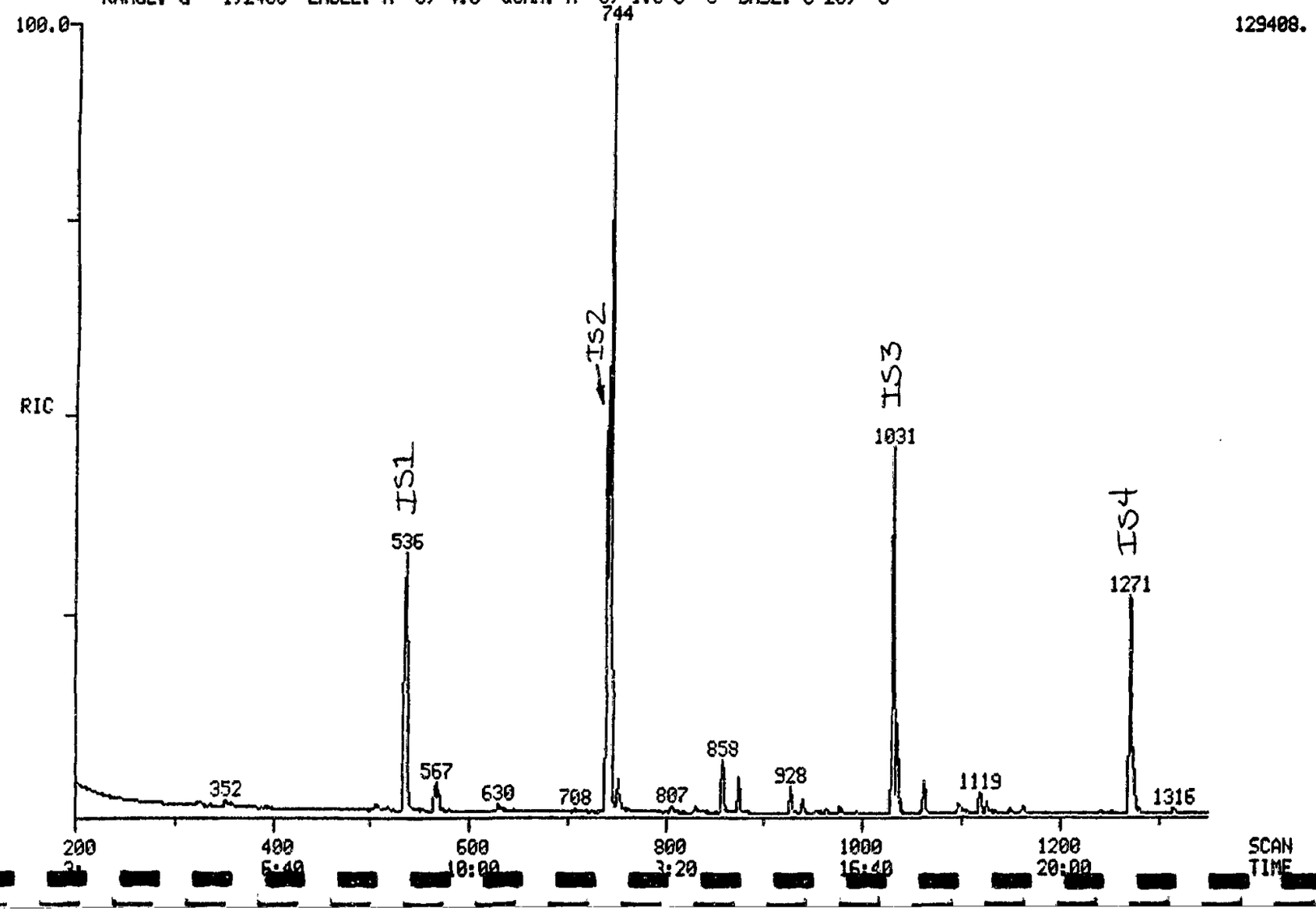
003926

RIC
01/12/87 14:20:00
SAMPLE: SCK-P05-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C17B #1 SCANS 200 TO 1350
CALI: 4U12050C17B #3

SPECTRIX DC # ----14

INST ID: 4:30



003926

003927

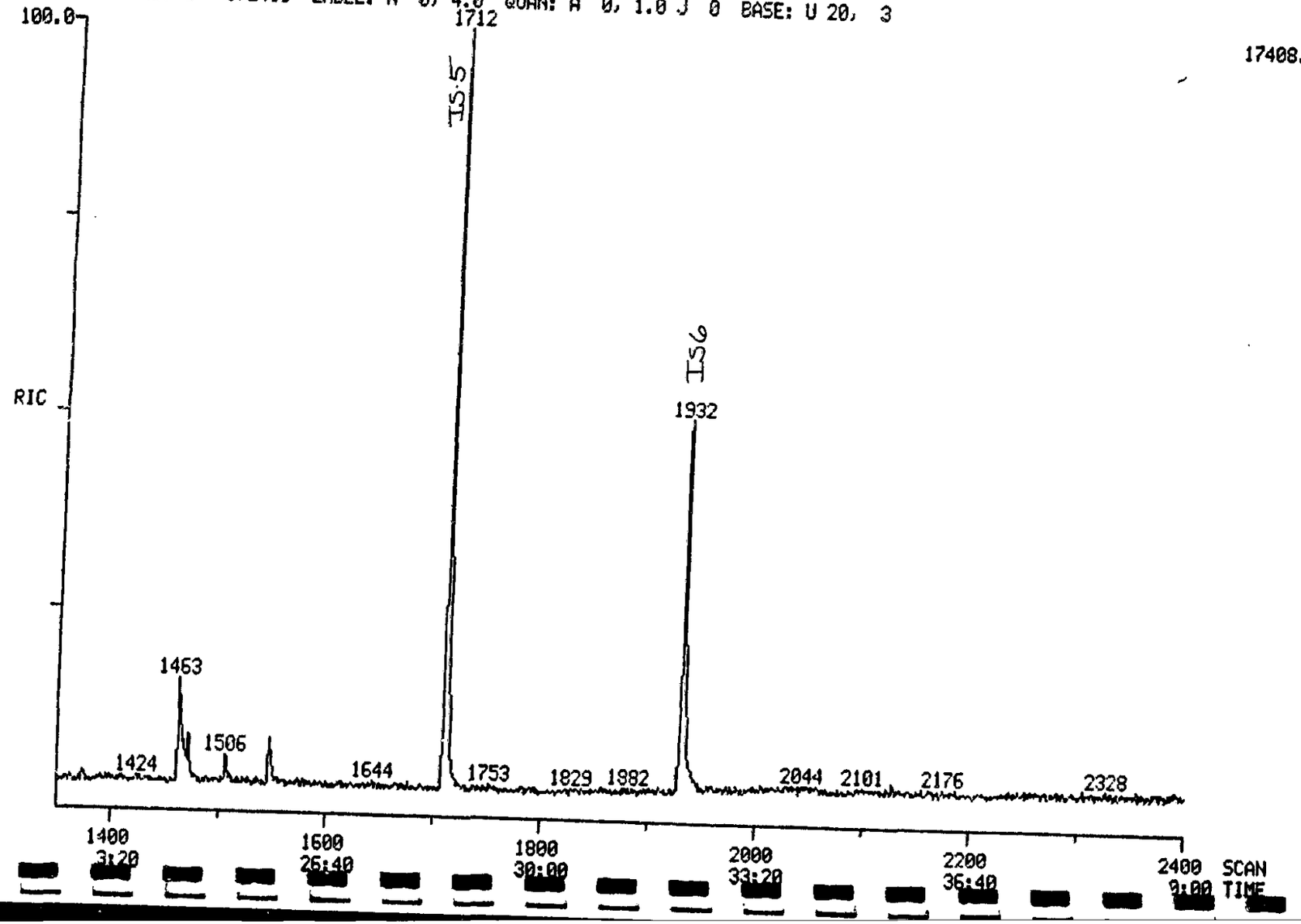
RIC
01/12/87 14:20:00
SAMPLE: SCK-P05-001
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C17B #1
CALI: 4U12050C17B #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14

INST ID: 4530



SPECTRIX DC * ----

4530

SEMIVOLATILE WATER REPORT

LE ID. SCK-P05-001

ENAME 4U12050C17B

LIENT KEYSTONE

DATE INJECTED 01/12/87 14:20:00

CALIB STD DATE 01/08/87

INST ID. GU

ANALYST

VERIFIED BY

CORR. FACTOR 40.00

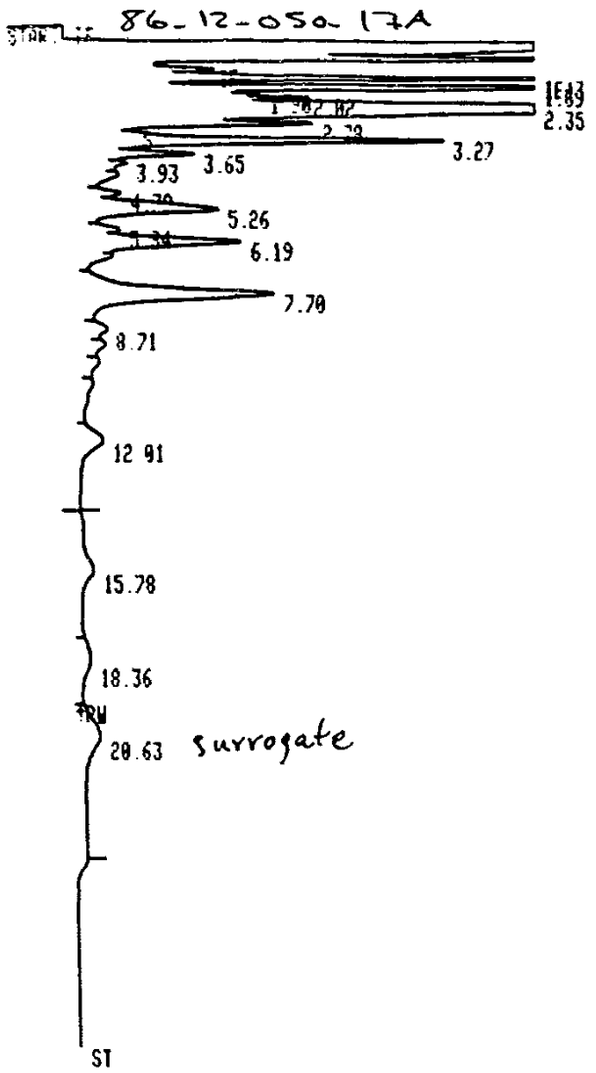
SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	1600 UG/L	1.000	2117[illegible]
536	CI40	NAPHTHALENE-D8 ** IS2 **	136	1600 UG/L	1.000	8162[illegible]
741	CI50	ACENAPHTHENE-D10 ** IS3 **	164	1600 UG/L	1.000	3906[illegible]
1031	CI60	PHENANTHRENE-D10 ** IS4 **	188	1600 UG/L	1.000	4791[illegible]
1271	CI70	CHRYSENE-D12 ** IS5 **	240	1600 UG/L	1.000	2585[illegible]
1712	CI75	PERYLENE-D12 ** IS6 **	264	1600 UG/L	1.000	1669[illegible]
1932	C430	NAPHTHALENE	128	2410 UG/L	1.000	12044[illegible]
744	C470	2-METHYLNAPHTHALENE	142	216 UG/L	1.004	733[illegible]
858	C550	ACENAPHTHENE	153	401 UG/L	1.158	922[illegible]
1036	C565	DIBENZOFURAN	168	232 UG/L	1.005	706[illegible]
1063	C580	DIETHYL PHTHALATE	149	73 UG/L	1.031	175[illegible]
1126	C590	FLUORENE	166	146 UG/L	1.092	376[illegible]
1119	C640	PHENANTHRENE	178	373 UG/L	1.085	1084[illegible]
1275	C645	ANTHRACENE	178	34 UG/L	1.003	101[illegible]
1282	C655	FLUORANTHENE	202	64 UG/L	1.009	163[illegible]
72	C715	PYRENE	202	41 UG/L	1.158	102[illegible]
1506					0.880	

* SURROGATES WERE DILUTED OUT

003928

86-12-050-17A

NA.



DC#_____-____-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-P05-0

PESTICIDE FRACTION

1ST COLUMN QUANT.

1ST COLUMN ID

1.8m x 4mm ID x6mm

1.5% SP 2250

1.95% SP 2401

100/120 SUPELCOPORT

COLUMN TEMP. 203°C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6000

RUN # 171 JAN/15/87 08:27:27

WORKFILE ID: C

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.43	60429	D PP	0.094	2.888
1.69	311131	D PV	0.089	14.872
1.90	9113	VV	0.098	0.436
2.02	14255	D VH	0.115	0.681
2.35	1552577	SHB	0.119	74.211
2.78	15122	TBB	0.123	0.723
3.27	41398	BV	0.180	1.979
3.65	9880	VV	0.154	0.472
3.93	1995	VV	0.175	0.095
4.79	3176	PV	0.191	0.152
5.26	16023	VV	0.323	0.766
5.84	3535	VV	0.206	0.169
6.19	19395	VV	0.294	0.927
7.70	24128	PV	0.400	1.153
8.71	2735	VV	0.396	0.131
12.01	2535	VB	0.591	0.121
15.78	1626	BP	1.086	0.078
18.36	1086	PP	0.977	0.052
20.63	1980	PB	1.193	0.095

DC#_____

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. Sck-pos-0

PESTICIDE FRACTION

2ND COLUMN CONFIRMAT

2ND COLUMN II C

1.8m x2mm ID x6mm OD

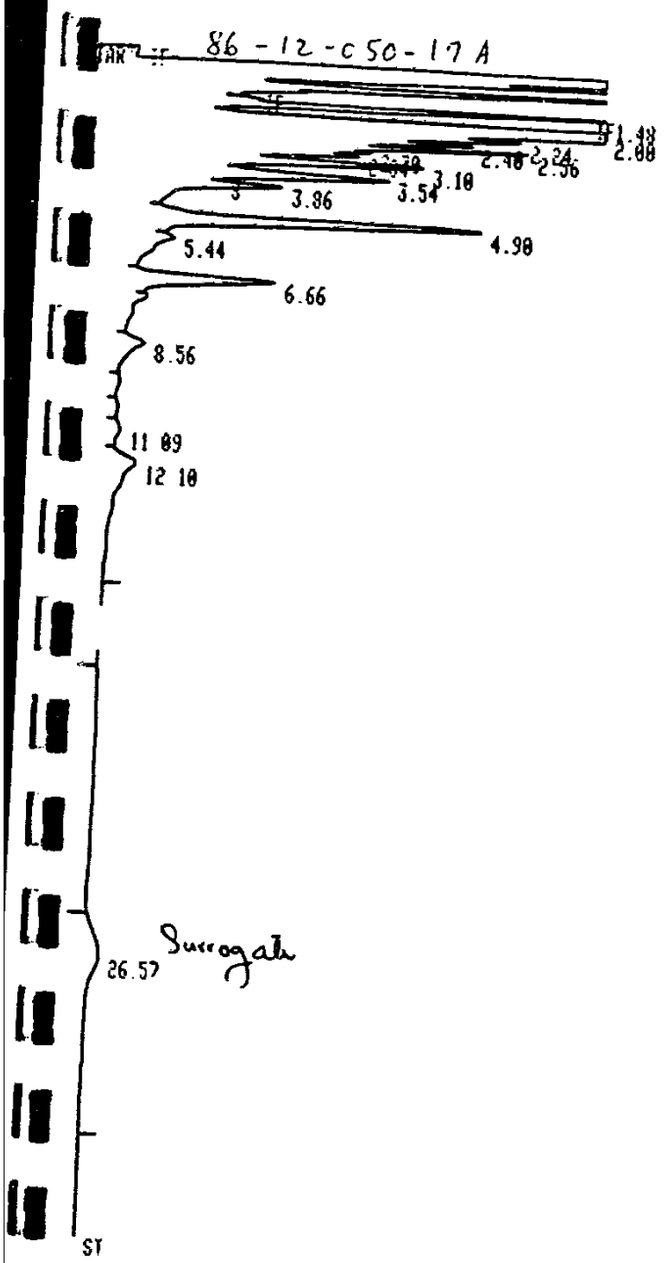
3% SP-2100

100/120 SUPELCOPORT

COLUMN TEMP. 187 °C

VOLUME INJ. 1 µL

INSTRUMENT ID. 6500



HEIGHT% RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.48	139638	D BP	0.090	5.926
2.00	1854177	SPB	0.163	78.682
2.24	18806	DTBP	0.089	0.798
2.40	19798	DTPP	0.072	0.840
2.56	44879	DTPV	0.093	1.904
2.70	11469	DTVV	0.098	0.487
2.84	16570	DTVP	0.106	0.703
3.10	44535	TPP	0.139	1.890
3.54	42353	TPB	0.176	1.797
3.86	18575	BP	0.075	0.788
4.90	85726	PV	0.226	3.638
5.44	6655	VP	0.409	0.282
6.66	35798	PV	0.282	1.519
8.56	5596	VP	0.442	0.238
11.09	1637	VV	0.463	0.070
12.10	6464	VB	0.943	0.274
26.57	3871	BB	1.565	0.164

JN # 203

WORKFILE ID: C

WORKFILE NAME:

JAN/16/87 23:23:41

SPECTRIX 6 2 0 0 REPORT

Work Order # 86-12-030

Received: 12/11/86

Results by Sample

SAMPLE ID SCK-P05-001 (LLW)

SAMPLE # 17 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SV	<100 ug/L	CR	25 ug/L
CU	17 ug/L	FE	14400 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	21.3 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	87 ug/L						

CHECKLIST

SECTION II - Sample Data Packets

Sample No: TRIP BLANK 12/11

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ___ SV
- ___ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ___ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ___ SV chromatogram
- ___ SV quantitation report (surrogates)
- ___ Pest. chromatogram and integrator print out

___ Inorganic Analysis Data Sheets (IADS)

003932

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: TRIP BLANK 12/1

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: S61205018
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V18

DILUTION FACTOR: 1:1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003933

SPECTRIX DC # ----

SAMPLE NUMBER: TRIP BLANK 12/11

CASE NO.: ----

DATAFILE: 4U12050V18

ID: 4000

ORGANICS ANALYSIS DATA SHEET - PAGE 4

SPECTRIX CORPORATION

ANALYST: NOT

LABORATORY NAME:

QC REPORT NO.: ----

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

UG/

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

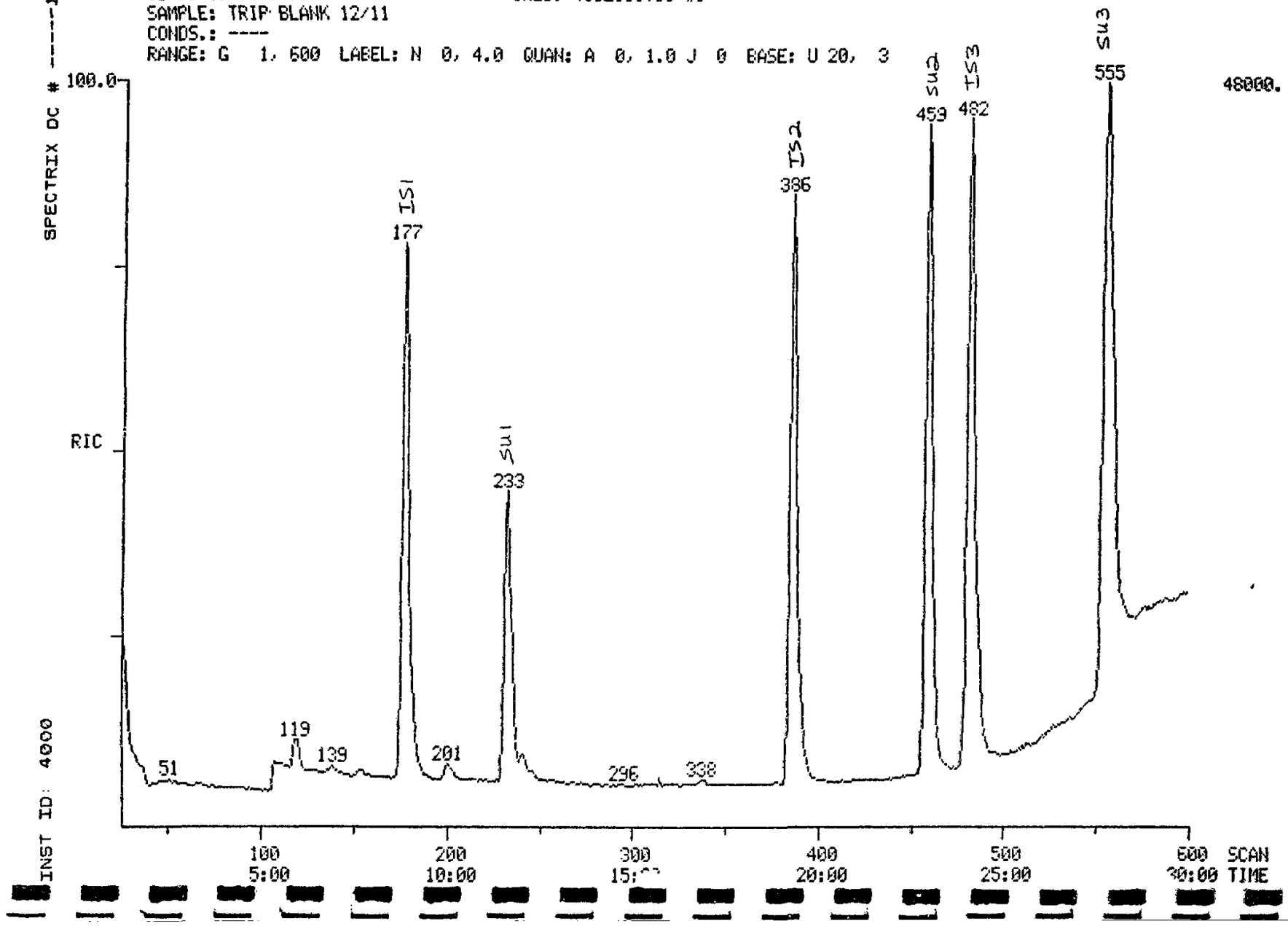
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003934

003935

RIC
12/18/86 15:34:00
SAMPLE: TRIP BLANK 12/11
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V18 #1 SCANS 25 TO 600
CALI: 4U12050V18 #3



003935

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID. TRIP BLANK 12/11

FILENAME 4U12050V18

CLIENT KEYSTONE

DATE INJECTED 12/18/86 15:34:00

CALIB STD DATE 12-14-86

INST 4000

ANALYST NOT

VERIFIED BY NOT

CORR. FACTOR 1.00

SCAN#	VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177 CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	15607
386 CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	67609
482 CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	54851
233 CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.316	20650
459 CS05	D8-TOLUENE	**SU2**	98	99 %	0.952	57027
555 CS10	P-BROMOFLUOROBENZENE	**SU3**	95	101 %	1.151	40861

CHECKLIST

SECTION II - Sample Data Packets

Sample No: TRIP BLANK 12/12

✓ Organic Analysis Data Sheets (OADS)

- ✓ VOA
- ___ SV
- ___ Pest.

✓ Tentatively Identified Compounds

- ✓ VOA
- ___ SV

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ___ SV chromatogram
- ___ SV quantitation report (surrogates)
- ___ Pest. chromatogram and integrator print out

___ Inorganic Analysis Data Sheets (IADS)

003937

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: TRIP BLANK 12/12

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205019
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: YPH

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4U12050V19

DILUTION FACTOR: 1:1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003938

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: TRIP BLANK
12/12/86

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: NOT DATAFILE: 4U12050V19

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

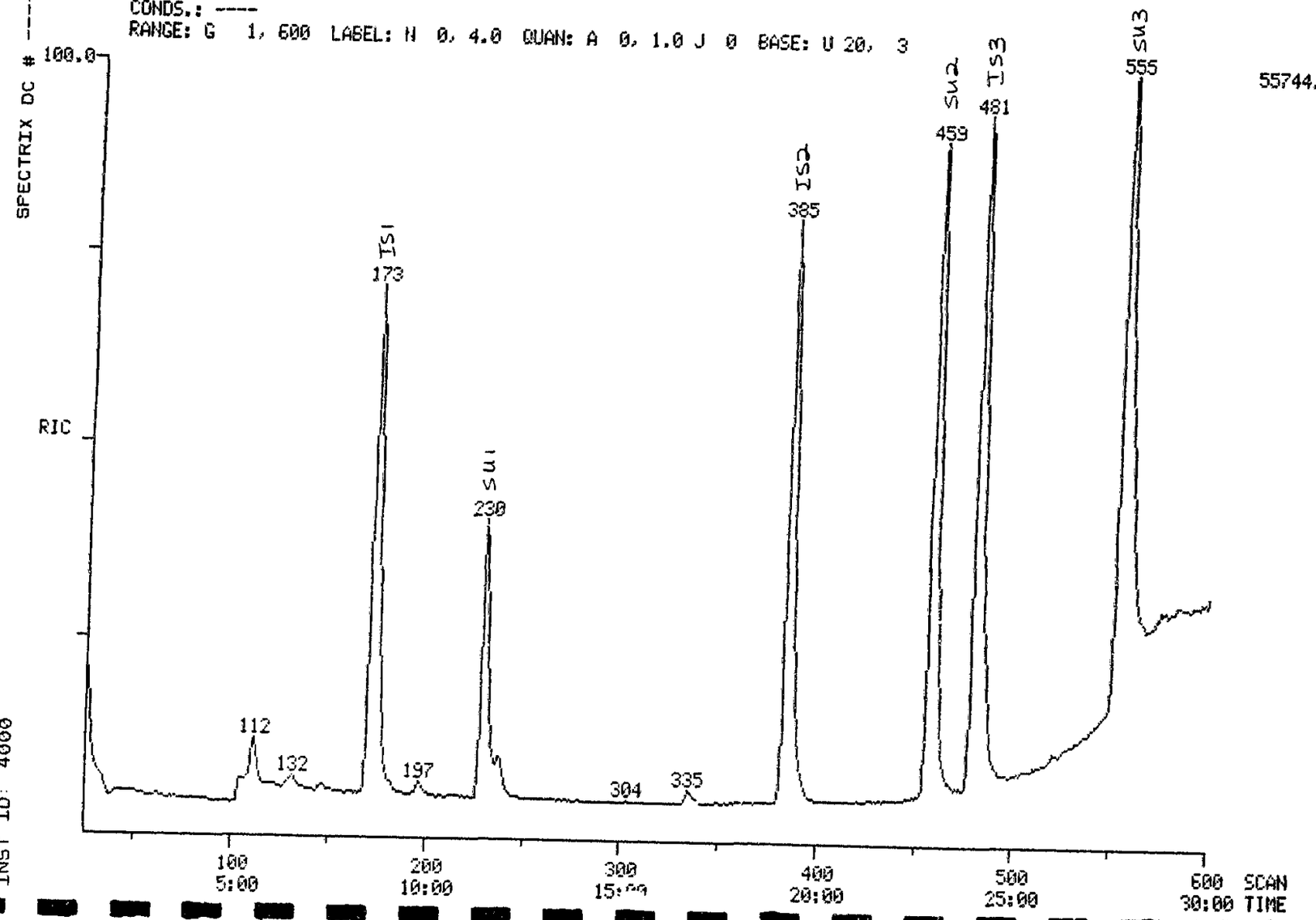
J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003940

RIC
12/18/86 14:53:00
SAMPLE: SCK-P05-001
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V17 #1
CALI: 4U12050V17 #3

SCANS 25 TO 600



003940

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	TRIP BLANK 12/12		
FILENAME	4U12050V19	INST	4000
CLIENT	KEYSTONE	ANALYST	NOT
DATE INJECTED	12/18/86 16:14:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
171	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	16328
385	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	73435
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	63817
229	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	92 %	1.339	21473
459	CS05	D8-TOLUENE	**SU2**	98	97 %	0.954	65180
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	95 %	1.154	44724

CHECKLIST

SECTION III - Blanks

- ✓ OADS
  - ✓ VOA
  - ✓ SV
  - ✓ Pest.
- ✓ Tentatively Identified Compounds
  - ✓ VOA
  - ✓ SV
- ✓ Raw Data
  - ✓ VOA chromatogram
  - ✓ VOA quantitation report (surrogates)
  - ✓ SV chromatogram
  - ✓ SV quantitation report (surrogates)
  - ✓ Pest. chromatogram with integrator print out
- ✓ IADS

003942

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: LLW BLK

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 86----
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: gpm

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
DATE ANALYZED: 12/16/86

DATAFILE: EB1216V01

DILUTION FACTOR: 1.1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	3 J
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003943

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: LLW BLK

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 8612050
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/87
DATE ANALYZED: 01/10/87

DATAFILE: 4B12050C01
DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C315	PHENOL	10 U
C325	BIS(2-CHLOROETHYL)ETHER	10 U
C330	2-CHLOROPHENOL	10 U
C335	1,3-DICHLOROBENZENE	10 U
C340	1,4-DICHLOROBENZENE	10 U
C345	BENZYL ALCOHOL	10 U
C350	1,2-DICHLOROBENZENE	10 U
C355	2-METHYLPHENOL	10 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	10 U
C365	4-METHYLPHENOL	10 U
C370	N-NITROSODIPROPYLAMINE	10 U
C375	HEXACHLOROETHANE	10 U
C410	NITROBENZENE	10 U
C415	ISOPHORONE	10 U
C420	2-NITROPHENOL	10 U
C425	2,4-DIMETHYLPHENOL	10 U
C430	BENZOIC ACID	50 U
C435	BIS(2-CHLOROETHOXY)METHANE	10 U
C440	2,4-DICHLOROPHENOL	10 U
C445	1,2,4-TRICHLOROBENZENE	10 U
C450	NAPHTHALENE	10 U
C455	4-CHLOROANILINE	10 U
C460	HEXACHLOROBUTADIENE	10 U
C465	P-CHLORO-M-CRESOL	10 U
C470	2-METHYLNAPHTHALENE	10 U
C510	HEXACHLOROCYCLOPENTADIENE	10 U
C515	2,4,6-TRICHLOROPHENOL	10 U
C520	2,4,5-TRICHLOROPHENOL	50 U
C525	2-CHLORONAPHTHALENE	10 U
C530	2-NITROANILINE	50 U
C535	DIMETHYL PHTHALATE	10 U
C540	ACENAPHTHYLENE	10 U
C545	3-NITROANILINE	50 U
C550	ACENAPHTHENE	10 U
C555	2,4-DINITROPHENOL	50 U
C560	4-NITROPHENOL	50 U
C565	DIBENZOFURAN	10 U
C570	2,4-DINITROTOLUENE	10 U
C575	2,6-DINITROTOLUENE	10 U

003944

SPECTRIX DC # ---- 8

SAMPLE NUMBER: LLW BLK

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

ATAFILE: 4B12050C01

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	10 U
C585	4-CHLOROPHENYL PHENYL ETHER	10 U
C590	FLUORENE	10 U
C595	4-NITROANILINE	50 U
C610	4,6-DINITRO-2-METHYLPHENOL	50 U
C615	N-NITROSODIPHENYLAMINE	1 J
C625	4-BROMOPHENYL PHENYL ETHER	10 U
C630	HEXACHLOROBENZENE	10 U
C635	PENTACHLOROPHENOL	50 U
C640	PHENANTHRENE	10 U
C645	ANTHRACENE	10 U
C650	DI-N-BUTYL PHTHALATE	10 U
C655	FLUORANTHENE	10 U
C715	PYRENE	10 U
C720	BUTYL BENZYL PHTHALATE	10 U
C725	3,3'-DICHLOROBENZIDINE	20 U
C730	BENZO(A)ANTHRACENE	10 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	3 J
C740	CHRYSENE	10 U
C760	DI-N-OCTYL PHTHALATE	2 J
C765	BENZO(B)FLUORANTHENE	10 U
C770	BENZO(K)FLUORANTHENE	10 U
C775	BENZO(A)PYRENE	10 U
C780	INDENO(1,2,3-CD)PYRENE	10 U
C785	DIBENZO(A,H)ANTHRACENE	10 U
C790	BENZO(GHI)PERYLENE	10 U

= UNDETECTED AT THE LISTED DETECTION LIMIT
= COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003945

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-01A

DC No: KEYSTONE
SMO No: L.BLANK LLW

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/14/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.05 U
76-44-8	HEPTACHLOR	0.05 U
309-00-2	ALDRIN	0.05 U
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.05 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.10 U
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	METHOXYCHLOR	0.10 U
53494-70-5	ENDRIN KETONE	0.50 U
57-74-9	CHLORDANE	0.10 U
8001-35-2	TOXAPHENE	0.50 U
12674-11-2	AROCLOR-1016	1.0 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	0.50 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 1000 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

003946

INST ID: 4000

SPECTRIX DC # ----- 8

SAMPLE NUMBER: LLW BLK

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION

CASE NO.: ----

QC REPORT NO.: ----

ANALYST: MB

DATAFILE: EB1216V01

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003947

INST ID: 4530 SPECTRIX DC # ---- 8

SAMPLE: LLW BLK

ORGANICS ANALYSIS DATA SHEET - PAGE 5

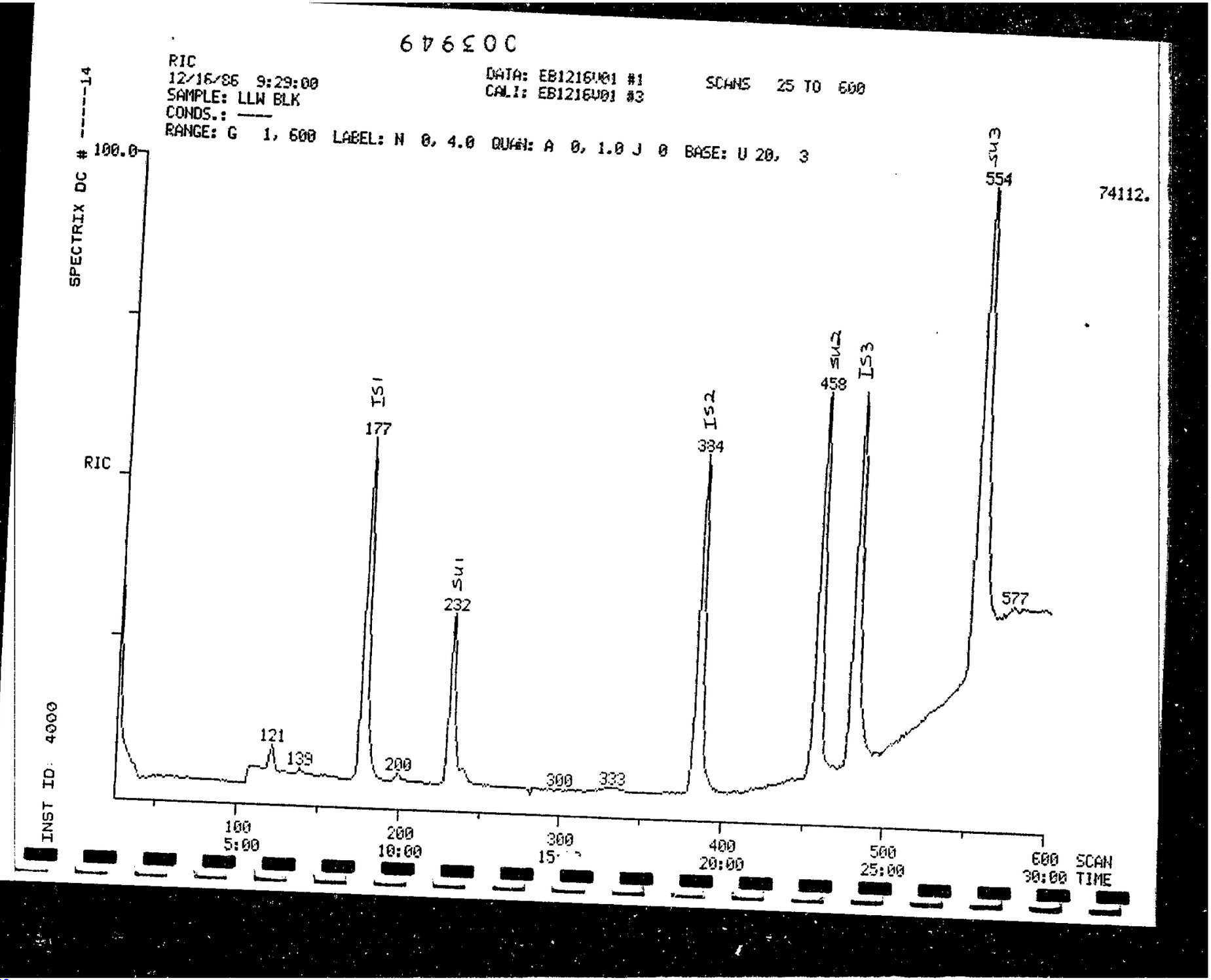
LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ---

GC REPORT NO.: --- ANALYST: GU DATAFILE: 4B12050C01

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	SEMIVOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
110-12-3	2-HEXANONE, 5-METHYL-	295	931	0.0398 UG/L

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED


RIC
12/16/86 9:29:00
SAMPLE: LLW BLK
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUANT: A 0, 1.0 J 0 BASE: U 20, 3
DATA: EB1216U01 #1
CALI: EB1216U01 #3
SCANS 25 TO 600
SPECTRIX DC # -----14
100.0
RIC
INST ID: 4000
IS1
177
SU1
232
IS2
334
SU2
458
IS3
SU3
554
577
121
139
200
300
333
100
5:00
200
10:00
300
400
20:00
500
25:00
600
30:00
SCAN TIME
74112.

003949

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

AMPLE ID.	LLW BLK		
FILENAME	EB1216V01	INST	4000
CLIENT	KEYSTONE	ANALYST	MB
DATE INJECTED	12/16/86 9:29:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	16081
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	69361
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	55899
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	89 %	1.311	20737
458	CS05	D8-TOLUENE	**SU2**	98	100 %	0.954	61365
553	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	96 %	1.152	39313
121	C030	METHYLENE CHLORIDE		84	3 UG/L	0.684	1492

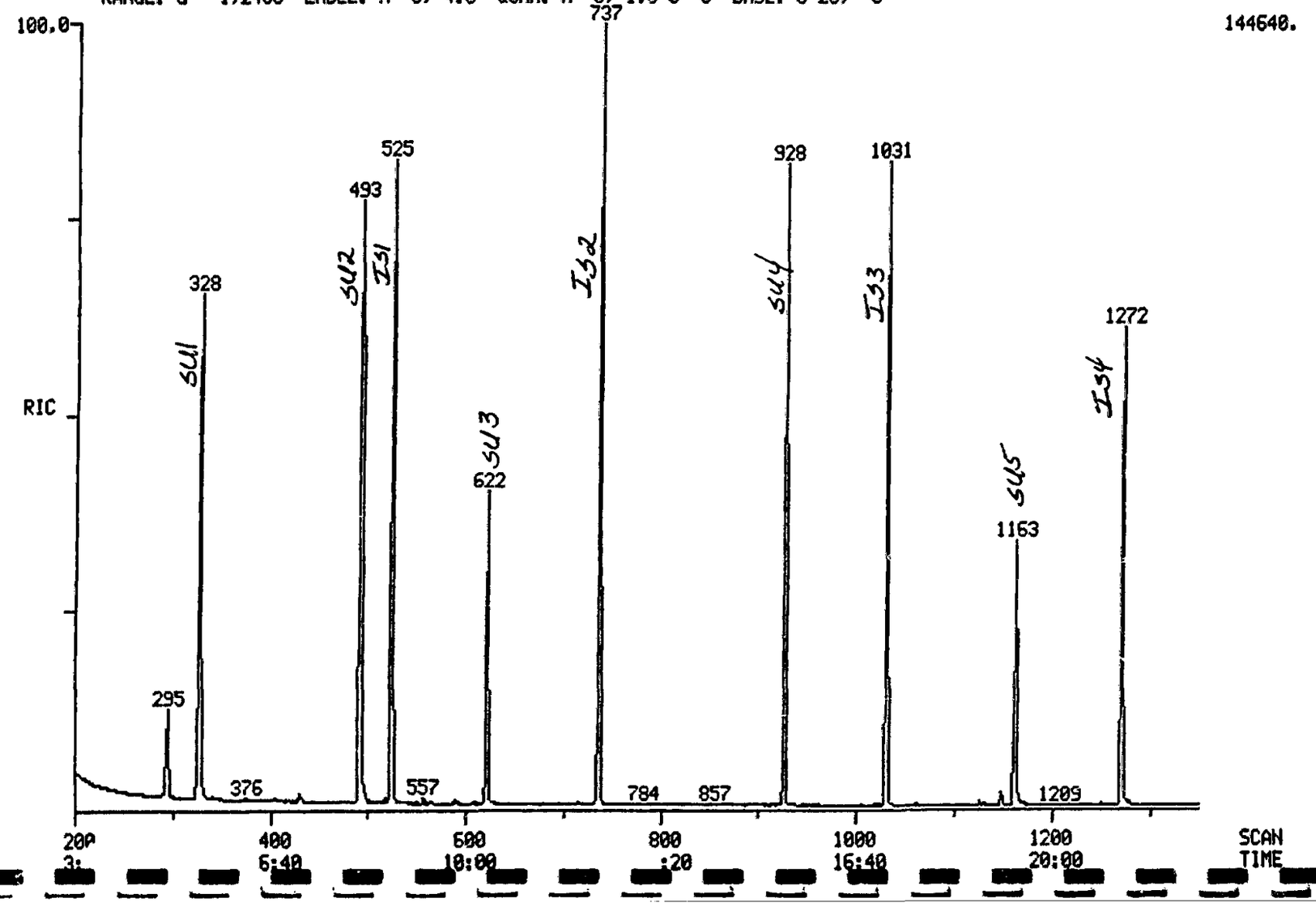
003951

RIC
01/10/87 12:40:00
SAMPLE: LLW BLK
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4B12050C01 #1 SCANS 200 TO 1350
CALI: 4B12050C01 #3

SPECTRIX DC # ----14

INST ID: 4530



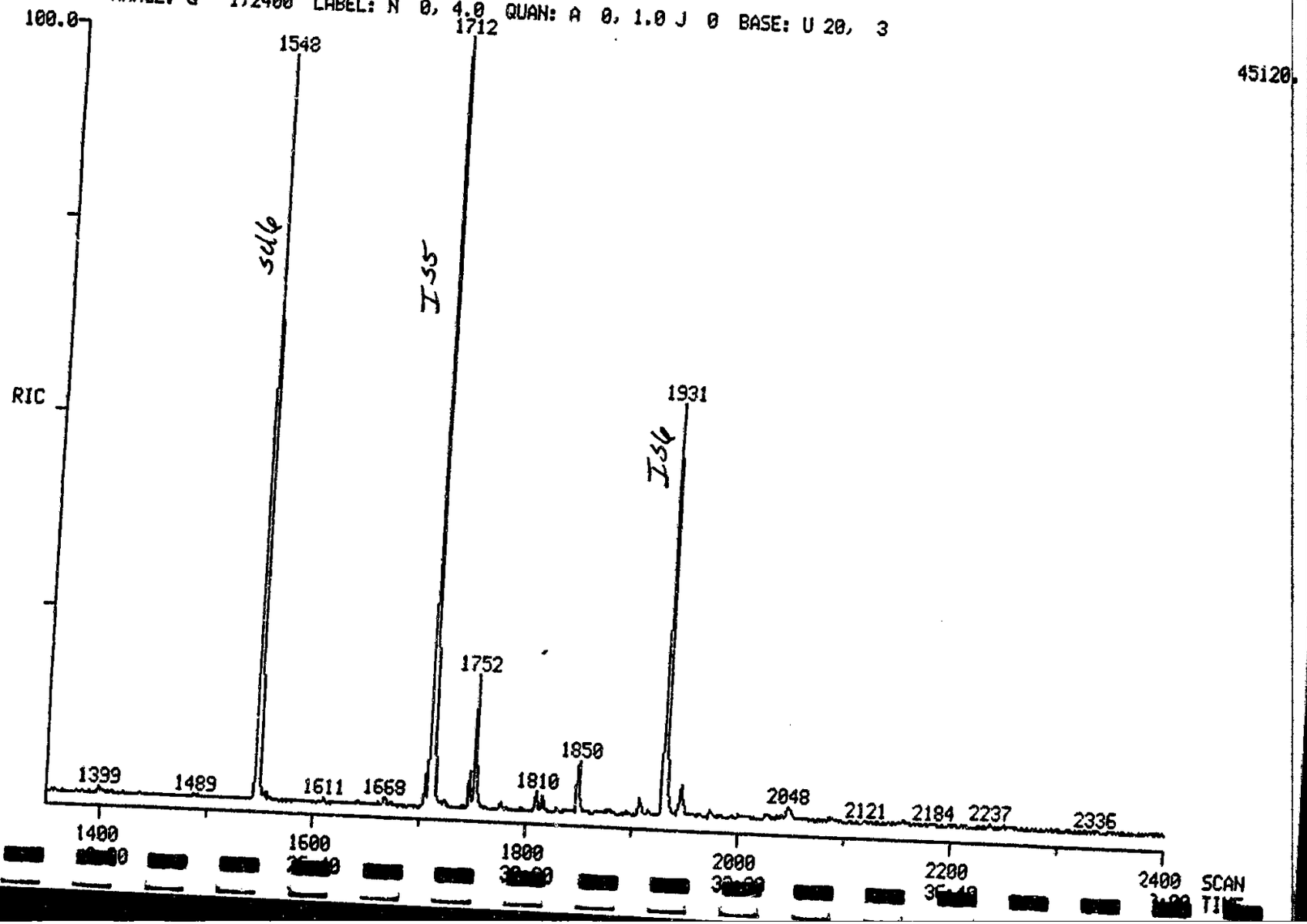
003952

RIC
01/10/87 12:40:00
SAMPLE: LLW BLK
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4B12050C01 #1
CALI: 4B12050C01 #3

SCANS 1350 TO 2400

SPECTRIX DC # ----14



INST ID: 4530

003952

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

AMPLE ID.	LLW BLK		
_ENAME	4B12050C01		
LIENT	KEYSTONE	INST ID.	4530
DATE INJECTED	01/10/87 12:40:00	ANALYST	GU
ALIB STD DATE	01/08/87	VERIFIED BY	GU
		CORR. FACTOR	1.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
525	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	40 UG/L	1.000	37503
737	CI40	NAPHTHALENE-D8 ** IS2 **	136	40 UG/L	1.000	151848
1031	CI50	ACENAPHTHENE-D10 ** IS3 **	164	40 UG/L	1.000	77127
1272	CI60	PHENANTHRENE-D10 ** IS4 **	188	40 UG/L	1.000	98903
712	CI70	CHRYSENE-D12 ** IS5 **	240	40 UG/L	1.000	59922
931	CI75	PERYLENE-D12 ** IS6 **	264	40 UG/L	1.000	38848
328	CS50	2-FLUOROPHENOL ** SU1 **	112	55 %	0.625	68416
493	CS45	PHENOL-D5 ** SU2 **	99	59 %	0.939	104014
162	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	58 %	1.127	12241
622	CS20	NITROBENZENE-D5 ** SU3 **	82	57 %	0.844	47909
928	CS25	2-FLUUOROBIPHENYL ** SU4 **	172	54 %	0.900	104195
548	CS30	TERPHENYL-D14 ** SU6 **	244	60 %	0.904	50344
149	C615	N-NITROSODIPHENYLAMINE	169	1 UG/L	0.903	1549
1752	C735	BIS(2-ETHYLHEXYL)PHTHALATE	149	3 UG/L	1.023	4358
49	C760	DI-N-OCTYL PHTHALATE	149	2 UG/L	0.958	4310

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: LLW BLANK

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 86------
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yph

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/17/86
DATE ANALYZED: 12/17/86

DATAFILE: 4B1217V01

DILUTION FACTOR: 1.0

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	2 J
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	2 J
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003954

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: LLW BLANK

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

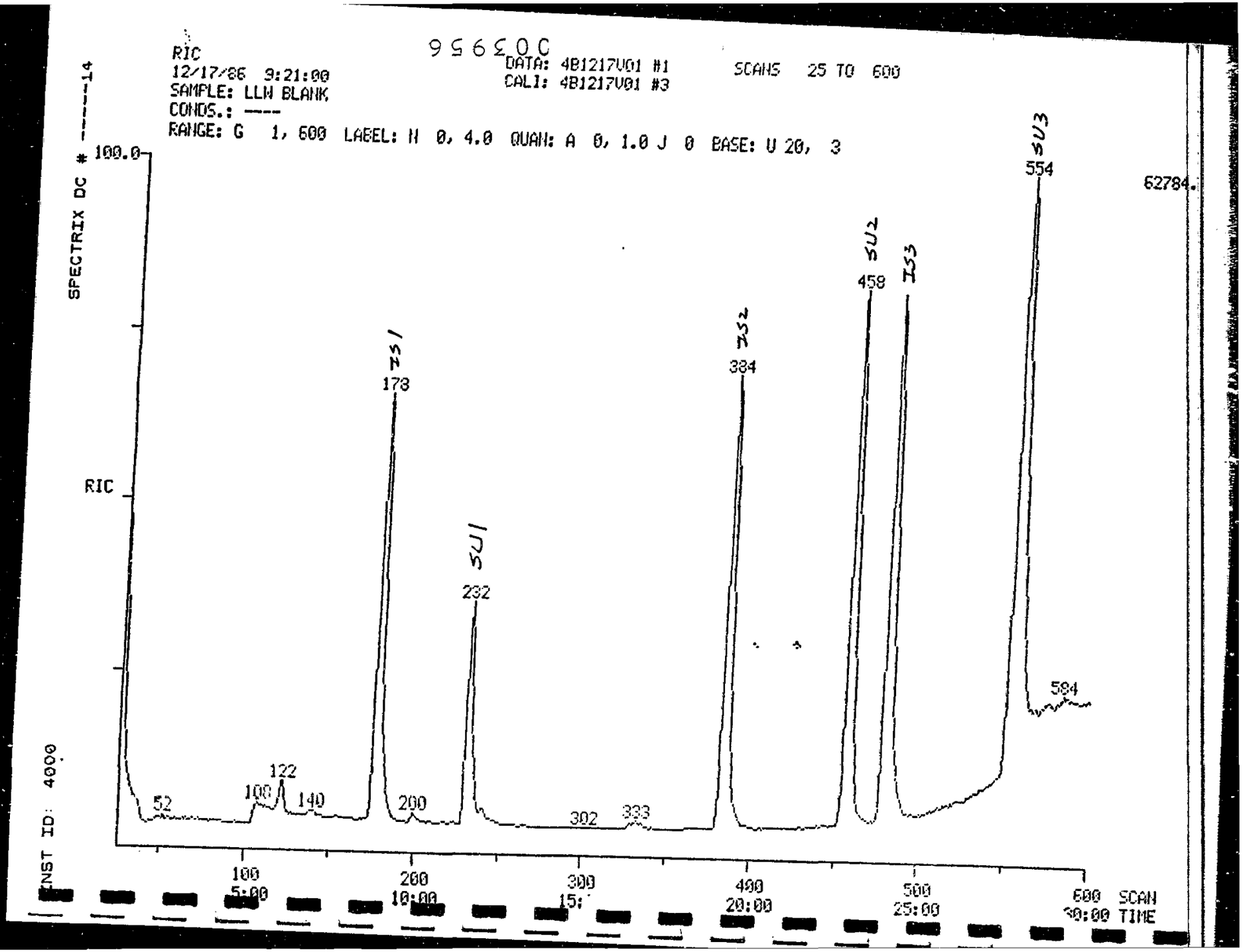
QC REPORT NO.: ---- ANALYST: NOT DATAFILE: 4B1217V01

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT
	NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.			

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

003955


RIC
12/17/86 9:21:00
SAMPLE: LLW BLANK
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3
DATA: 4B1217V01 #1
CALI: 4B1217V01 #3
SCANS 25 TO 600
956200
SPECTRIX DC # ------14
INST ID: 4000
100.0
RIC
62784.
52
100
122
140
178
200
232
302
333
384
458
554
584
100
5:00
200
10:00
300
15:
400
20:00
500
25:00
600 SCAN
30:00 TIME

003956

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

MPLE ID. LLW BLANK

FILENAME 4B1217V01 INST 4000

CLIENT KEYSTONE ANALYST NOT

DATE INJECTED 12/17/86 9:21:00 VERIFIED BY JPH

CALIB STD DATE 12-14-86 CORR. FACTOR 1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	ARE
177	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	1672.
384	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	7445
480	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	6349
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	91 %	1.311	2168
458	CS05	D8-TOLUENE	**SU2**	98	99 %	0.954	6738
553	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	98 %	1.152	4513
121	C030	METHYLENE CHLORIDE		84	2 UG/L	0.684	140
333	C165	BENZENE		78	2 UG/L	0.867	921

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: LLW BLANK

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 86----
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: [illegible]

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/18/86
DATE ANALYZED: 12/18/86

DATAFILE: 4B1218V01

DILUTION FACTOR: 1.1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5
C035	ACETONE	10 U
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	5 U
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	5 U
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	5 U
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	5 U
C235	CHLOROBENZENE	5 U
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003958

INST ID: 4000 SPECTRIX DC # ----- 8

SAMPLE NUMBER: LLW BLANK

ORGANICS ANALYSIS DATA SHEET - PAGE 4

LABORATORY NAME: SPECTRIX CORPORATION CASE NO.: ----

QC REPORT NO.: ---- ANALYST: NOT DATAFILE: 4B1218V01

B. TENTATIVELY IDENTIFIED COMPOUNDS

CAS #	VOLATILE COMPOUND NAMES	SCAN#	PURITY	AMOUNT

NO NON-HSL COMPOUNDS FOUND > 10% OF NEAREST INT. STD.

J = ESTIMATED VALUE - A 1:1 RESPONSE FACTOR IS ASSUMED

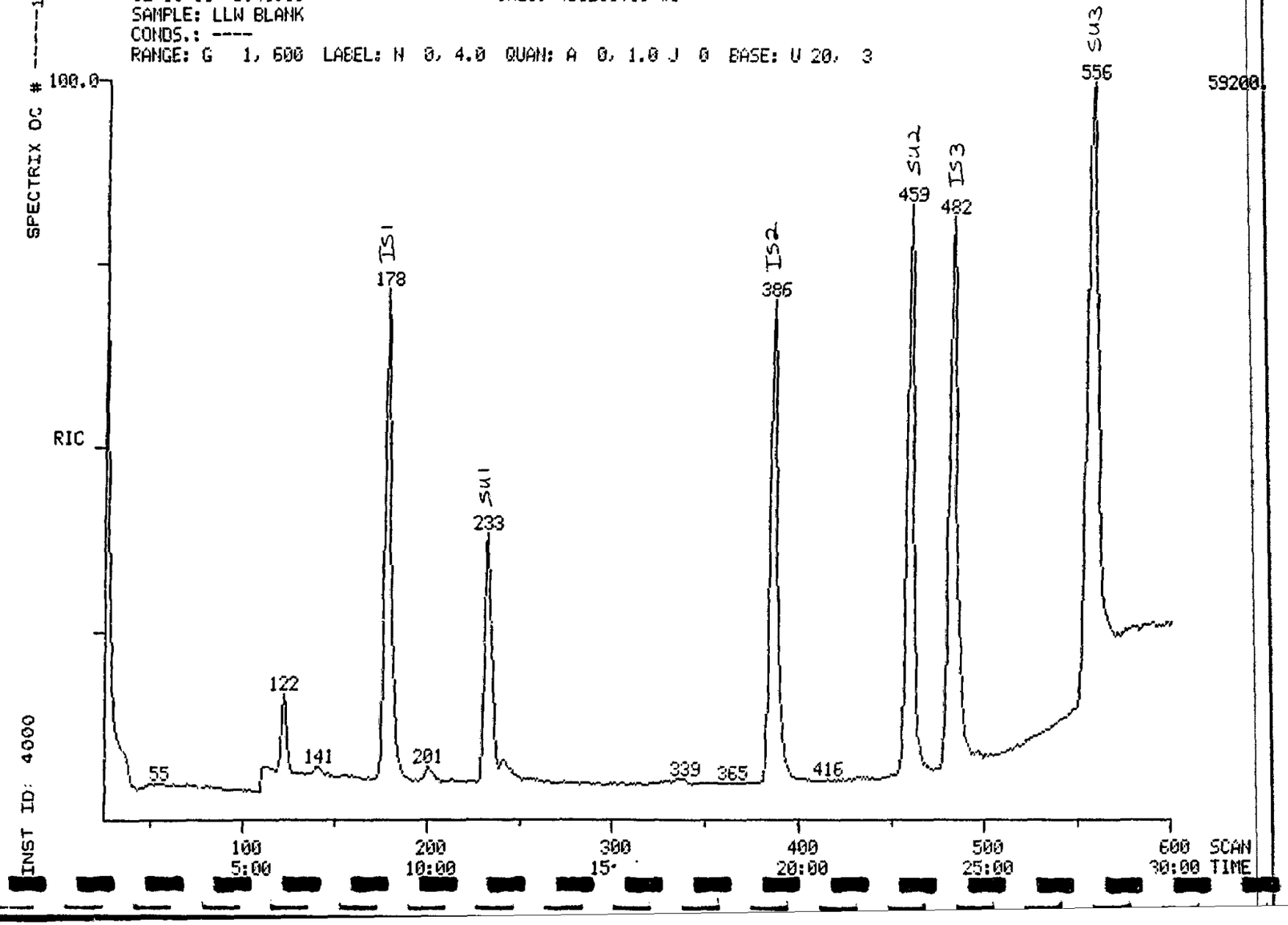
003959

003960

RIC
12/18/86 9:45:00
SAMPLE: LLW BLANK
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4B1218V01 #1
CALI: 4B1218V01 #3

SCANS 25 TO 600



SPECTRIX DC # ------14

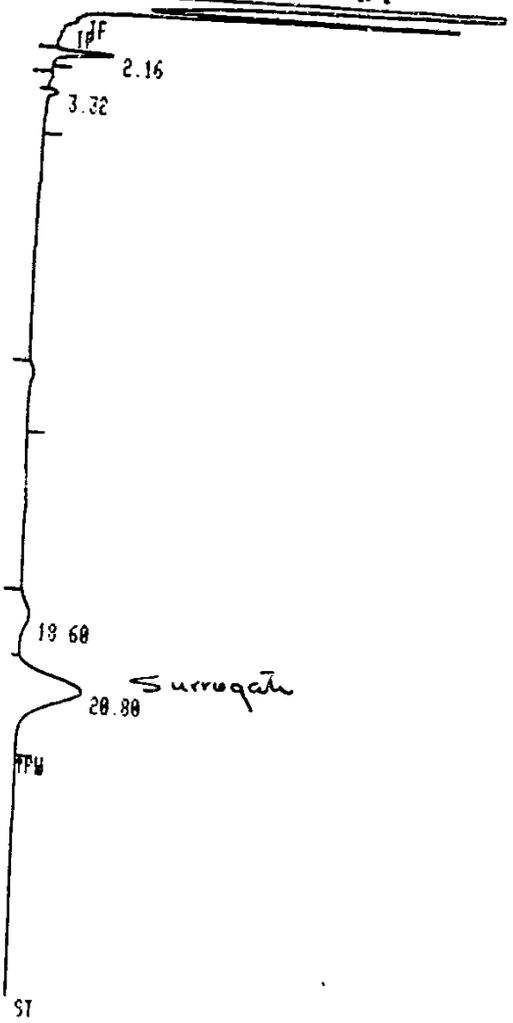
VOA QUANTITATION REPORT

SAMPLE ID.	LLW BLANK		
FILENAME	4B1218V01	INST	4000
CLIENT	KEYSTONE	ANALYST	NOT
DATE INJECTED	12/18/86 9:45:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AR
178	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	160
386	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	708
482	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	593
233	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	93 %	1.309	214
459	CS05	D8-TOLUENE	**SU2**	98	99 %	0.952	618
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	95 %	1.151	414
122	C030	METHYLENE CHLORIDE		84	5 UG/L	0.685	31

START # 86-12-050- 01A

N.A.



DC# _____-____-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. L. Blank

PESTICIDE FRACTION

1ST COLUMN QUANT.

1ST COLUMN ID

1.8m x 4mm ID x6mm C

1.5% SP 2250

1.95% SP 2401

100/120 SUPELCOPORT

COLUMN TEMP. 203°C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6000

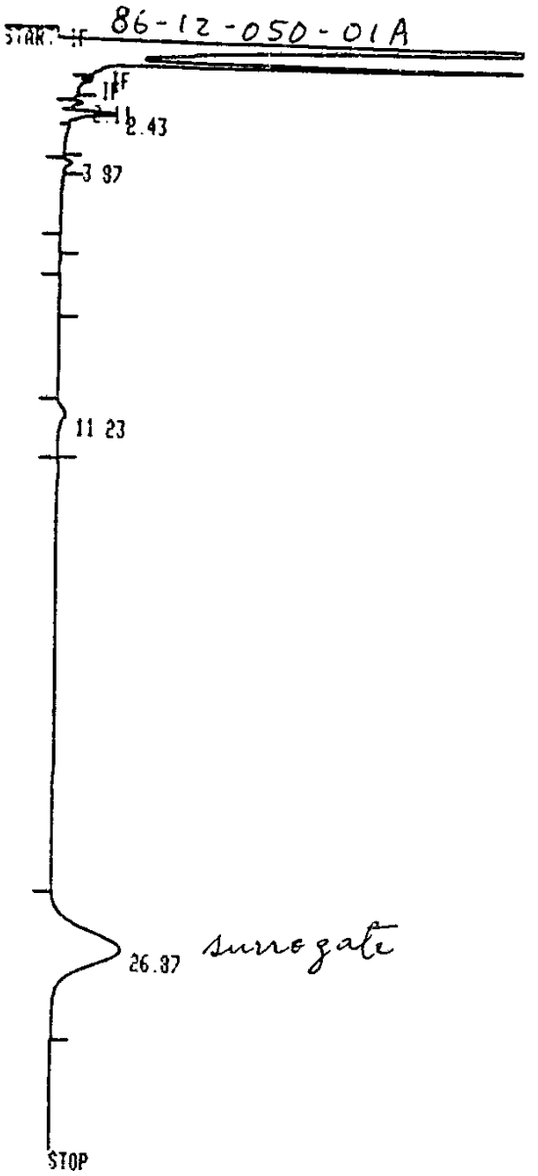
RUN # 142

WORKFILE ID: C JAN/14/87 17:20:30

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.16	7571	BB	0.133	41.044
3.32	1274	PB	0.177	6.907
18.60	1245	BV	0.855	6.749
20.80	8356	VB	0.962	45.300



DC# _____-___-___
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. L. Blank.
PESTICIDE FRACTION
2ND COLUMN CONFIRMAT

2ND COLUMN II C
1.8m x2mm ID x6mm OD
3% SP-2100
100/120 SUPELCOPORT
COLUMN TEMP. 187 °C
VOLUME INJ. 1 µl
INSTRUMENT ID. 6080

003963

RUN # 185 JAN/16/87 12:32:39
WORKFILE ID: C
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
2.11	2350	D BP	0.108	6.319
2.43	12279	PP	0.137	33.019
3.87	2049	PB	0.157	5.510
11.23	2061	PB	0.474	5.542
26.87	18449	PB	1.227	49.610

SAMPLE ID LAB BLANK (LLW) SAMPLE # 01 FRACTIONS: A
Date & Time Collected not specified Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CR	<9 ug/L	CU	<10 ug/L
FE	<30 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	<5 ug/L	SB	<44 ug/L	SE	<5 ug/L
TL	<10 ug/L	ZN	<8 ug/L								

CHECKLIST

SECTION IV - Organic Matrix Spikes - Matrix Spike Duplicates
Inorganic Matrix Duplicate and Matrix Spike

✓ OADS

- ✓ VOA
- ✓ SV
- ✓ Pest.

N/A Tentatively Identified Compounds

✓ Raw Data

- ✓ VOA chromatogram
- ✓ VOA quantitation report (surrogates)
- ✓ SV chromatogram
- ✓ SV quantitation report (surrogates)
- ✓ Pest. chromatogram and integrator print out

✓ Inorganic Matrix Duplicate and Matrix Spike

003965

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW09-001 MS

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205002
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: YPH

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
DATE ANALYZED: 12/16/86

DATAFILE: 4U12050V02

DILUTION FACTOR: 1:1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	7 J
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	34
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	37
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	44
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	44
C235	CHLOROBENZENE	48
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003966

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW09-001H5

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205002
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: yyn..

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86...

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: ...12/16/86....
DATE ANALYZED: 01/10/87

DATAFILE: 4U12050C02
DILUTION FACTOR: ....2.0...

CAS #	COMPOUND	UG/L
C315	PHENOL	46
C325	BIS(2-CHLOROETHYL)ETHER	20 U
C330	2-CHLOROPHENOL	44
C335	1,3-DICHLOROBENZENE	20 U
C340	1,4-DICHLOROBENZENE	22
C345	BENZYL ALCOHOL	20 U
C350	1,2-DICHLOROBENZENE	20 U
C355	2-METHYLPHENOL	20 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	20 U
C365	4-METHYLPHENOL	20 U
C370	N-NITROSODIPROPYLAMINE	27
C375	HEXACHLOROETHANE	20 U
C410	NITROBENZENE	20 U
C415	ISOPHORONE	20 U
C420	2-NITROPHENOL	20 U
C425	2,4-DIMETHYLPHENOL	20 U
C430	BENZOIC ACID	100 U
C435	BIS(2-CHLOROETHOXY)METHANE	20 U
C440	2,4-DICHLOROPHENOL	20 U
C445	1,2,4-TRICHLOROBENZENE	24
C450	NAPHTHALENE	20 U
C455	4-CHLOROANILINE	20 U
C460	HEXACHLOROBUTADIENE	20 U
C465	P-CHLORO-M-CRESOL	43
C470	2-METHYLNAPHTHALENE	20 U
C510	HEXACHLOROCYCLOPENTADIENE	20 U
C515	2,4,6-TRICHLOROPHENOL	20 U
C520	2,4,5-TRICHLOROPHENOL	100 U
C525	2-CHLORONAPHTHALENE	20 U
C530	2-NITROANILINE	100 U
C535	DIMETHYL PHTHALATE	20 U
C540	ACENAPHTHYLENE	20 U
C545	3-NITROANILINE	100 U
C550	ACENAPHTHENE	22
C555	2,4-DINITROPHENOL	100 U
C560	4-NITROPHENOL	48 J
C565	DIBENZOFURAN	20 U
C570	2,4-DINITROTOLUENE	33
C575	2,6-DINITROTOLUENE	20 U

003967

SPECTRIX DC # ---- 8

SAMPLE NUMBER: SCK-MW09-001MS

MIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C02

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	20 U
C585	4-CHLOROPHENYL PHENYL ETHER	20 U
C590	FLUORENE	20 U
C595	4-NITROANILINE	100 U
C610	4,6-DINITRO-2-METHYLPHENOL	100 U
C615	N-NITROSODIPHENYLAMINE	20 U
C625	4-BROMOPHENYL PHENYL ETHER	20 U
C630	HEXACHLOROBENZENE	20 U
C635	PENTACHLOROPHENOL	28 J
C640	PHENANTHRENE	20 U
C645	ANTHRACENE	20 U
C650	DI-N-BUTYL PHTHALATE	20 U
C655	FLUORANTHENE	20 U
C715	PYRENE	12 J
C720	BUTYL BENZYL PHTHALATE	20 U
C725	3,3'-DICHLOROBENZIDINE	40 U
C730	BENZO(A)ANTHRACENE	20 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	20 U
C740	CHRYSENE	20 U
C760	DI-N-OCTYL PHTHALATE	20 U
C765	BENZO(B)FLUORANTHENE	20 U
C770	BENZO(K)FLUORANTHENE	20 U
C775	BENZO(A)PYRENE	20 U
C780	INDENO(1,2,3-CD)PYRENE	20 U
C785	DIBENZO(A,H)ANTHRACENE	20 U
C790	BENZO(GHI)PERYLENE	20 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003968

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-02A

DC No: KEYSTONE
SMO No: SCK-MW09-001 MS

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/14/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes ✓No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. ✓Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.2
76-44-8	HEPTACHLOR	0.05
309-00-2	ALDRIN	0.09
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.04
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.12
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.18
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. ε 6000
2nd Column Inst. ε 6000 NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

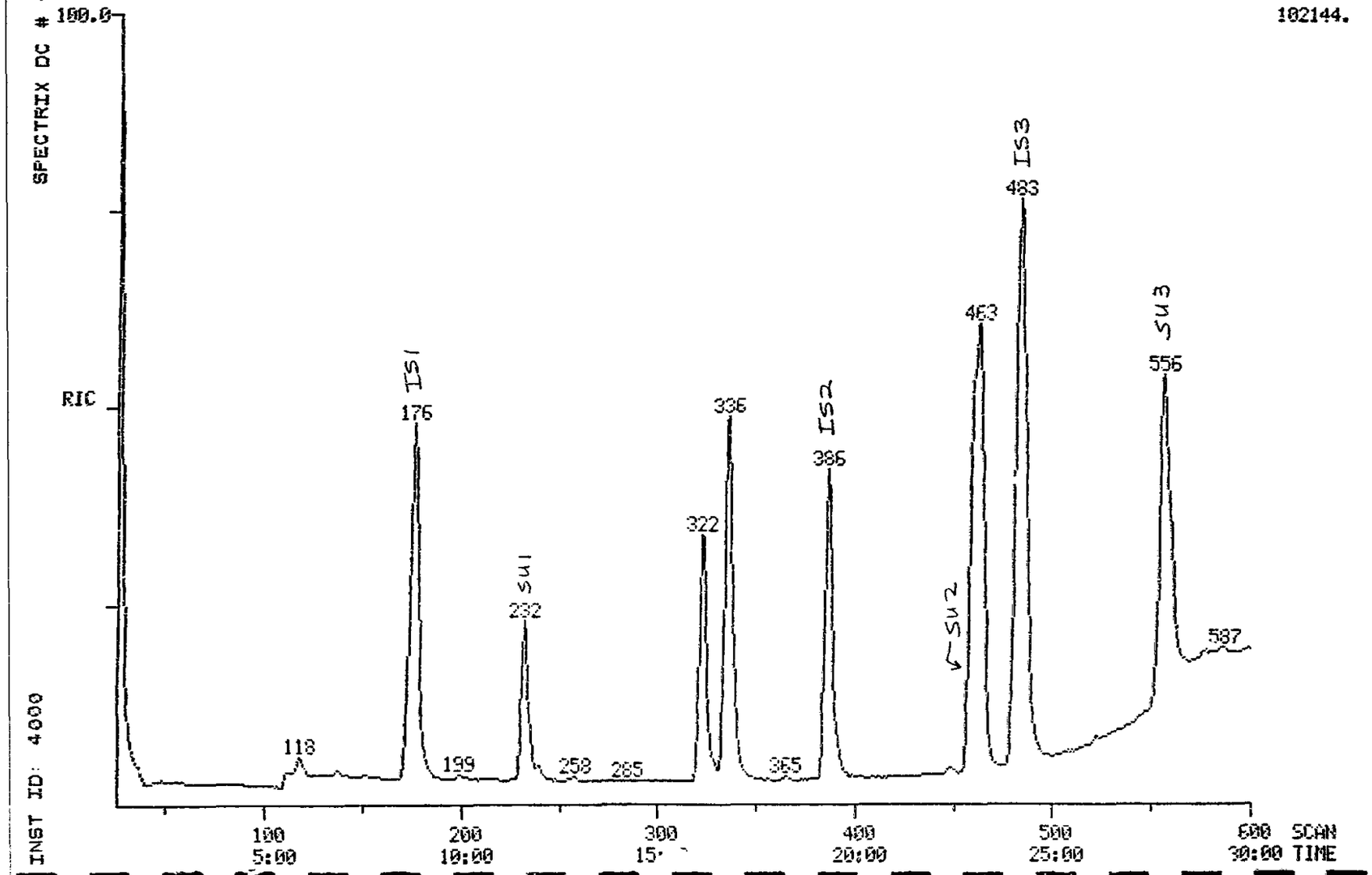
003969

003970

RIC
12/16/86 13:08:00
SAMPLE: SCK-MW09-001 MS
CONDS.: ——
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050U02 #1 SCANS 25 TO 600
CALI: 4U12050U02 #3

102144.



003970

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

AMPLE ID SCK-MW09-001 MS

FILENAME 4U12050V02 INST 4000

CLIENT KEYSTONE ANALYST MB

DATE INJECTED 12/16/86 13:08:00 VERIFIED BY NOT

CALIB STD DATE 12-14-86 CORR. FACTOR 1.00

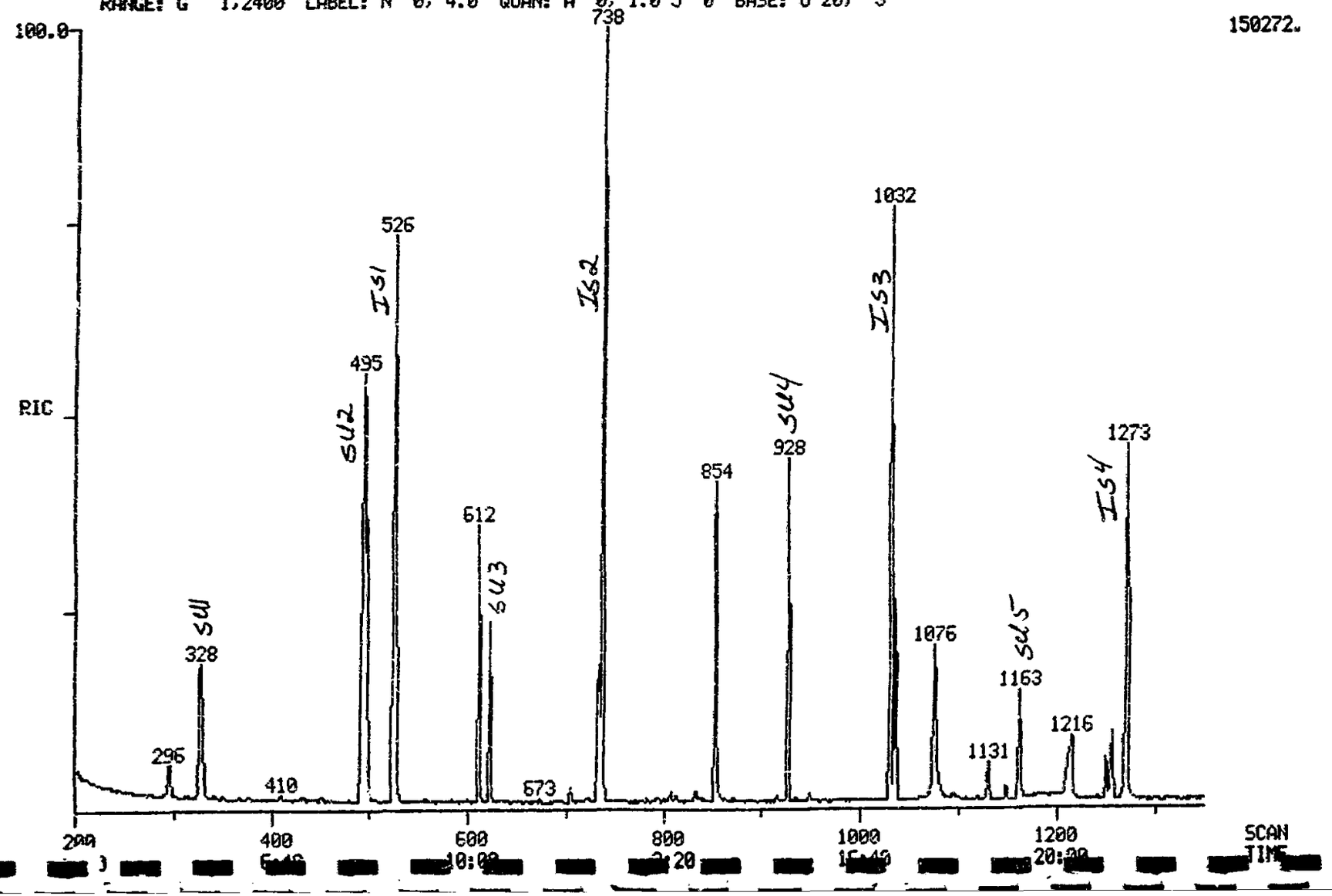
SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
176	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	16403
386	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	72572
482	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	57640
232	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	91 %	1.318	21526
459	CS05	D8-TOLUENE	**SU2**	98	98 %	0.952	61708
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	96 %	1.151	40570
137	C035	ACETONE		43	7 UG/L	0.778	1580
174	C045	1,1-DICHLOROETHENE		96	34 UG/L	0.989	15504
322	C150	TRICHLOROETHENE		130	37 UG/L	0.834	26265
336	C165	BENZENE		78	44 UG/L	0.870	83583
463	C230	TOLUENE		92	44 UG/L	0.961	46645
484	C235	CHLOROBENZENE		112	48 UG/L	1.004	61204

003972

RIC
01/10/87 13:32:00
SAMPLE: SCK-MW09-001MS
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C02 #1 SCANS 200 TO 1350
CALI: 4U12050C02 #3

150272.



003972

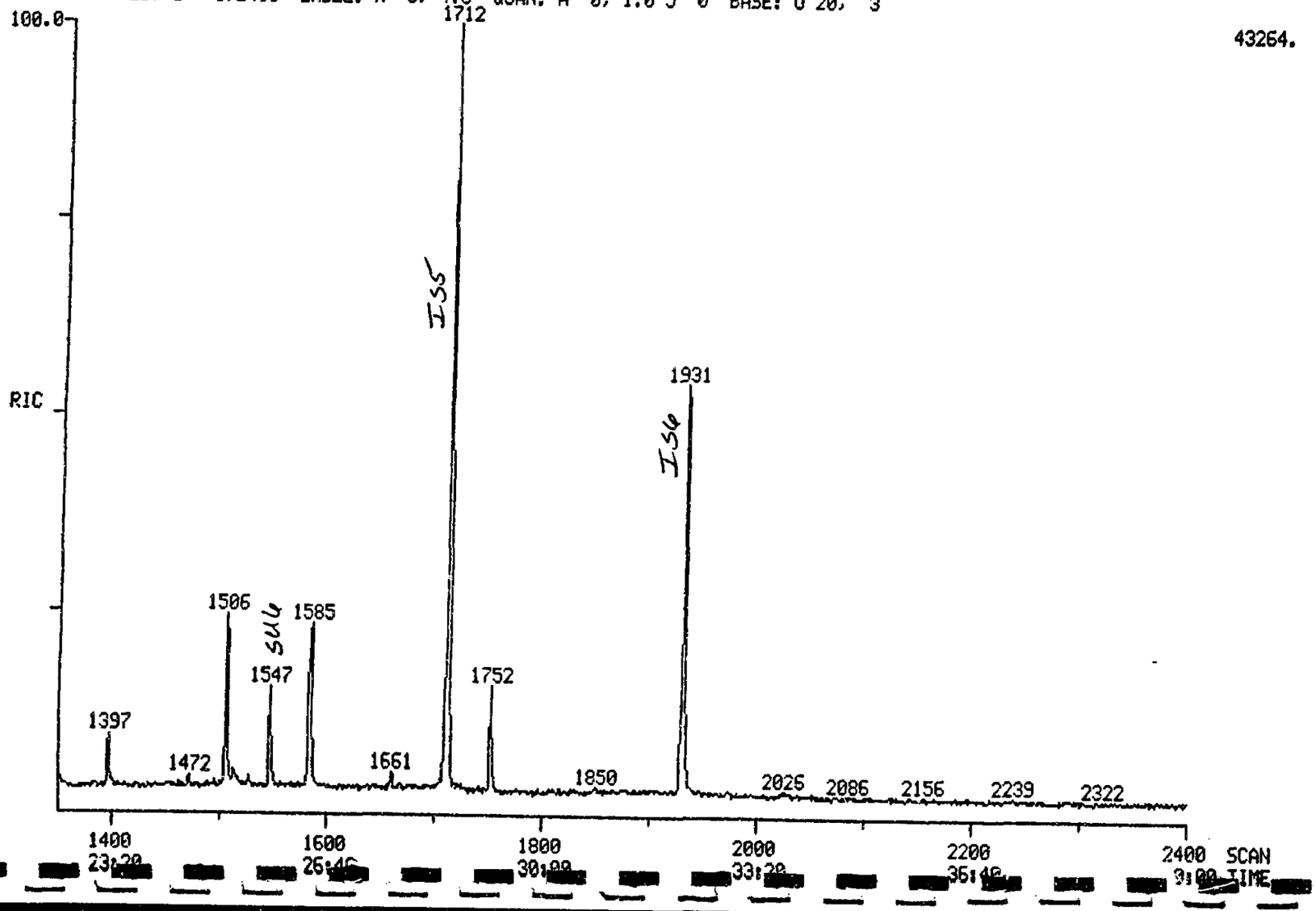
003973

RIC
01/10/87 13:32:00
SAMPLE: SCK-MW09-001MS
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C02 #1
CALI: 4U12050C02 #3

SCANS 1350 TO 2400

43264.



SPECTRIX DC # ----14

INST ID: 4530

003973

SPECTRIX DC # ----14

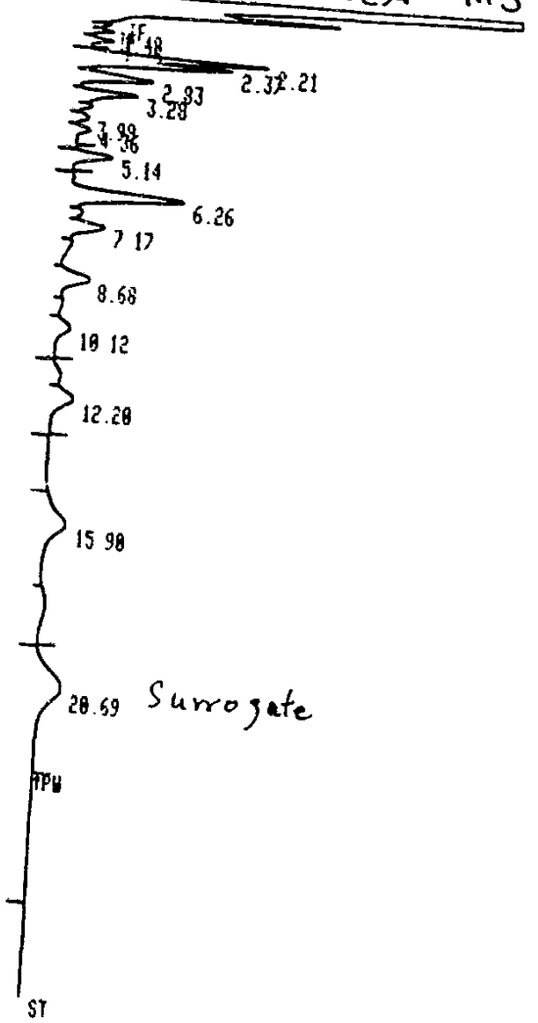
SEMIVOLATILE WATER REPORT

AMPLE ID.	SCK-MW09-001MS		
.LENAME	4U12050C02	INST ID.	4530
LIENT	KEYSTONE	ANALYST	GU
DATE INJECTED	01/10/87 13:32:00	VERIFIED BY	GU
CALIB STD DATE	01/08/87	CORR. FACTOR	2.00

CAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
526	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	80 UG/L	1.000	40583
738	CI40	NAPHTHALENE-D8 ** IS2 **	136	80 UG/L	1.000	160995
1032	CI50	ACENAPHTHENE-D10 ** IS3 **	164	80 UG/L	1.000	80063
1272	CI60	PHENANTHRENE-D10 ** IS4 **	188	80 UG/L	1.000	98160
712	CI70	CHRYSENE-D12 ** IS5 **	240	80 UG/L	1.000	54862
931	CI75	PERYLENE-D12 ** IS6 **	264	80 UG/L	1.000	37858
327	CS50	2-FLUOROPHENOL ** SU1 **	112	46 %	0.622	31209
494	CS45	PHENOL-D5 ** SU2 **	99	54 %	0.939	51143
163	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	41 %	1.127	4581
623	CS20	NITROBENZENE-D5 ** SU3 **	82	56 %	0.844	24944
928	CS25	2-FLUUOROBIPHENYL ** SU4 **	172	51 %	0.899	50566
547	CS30	TERPHENYL-D14 ** SU6 **	244	16 %	0.904	6304
495	C315	PHENOL	94	46 UG/L	0.941	56887
498	C330	2-CHLOROPHENOL	128	44 UG/L	0.947	30510
8	C340	1,4-DICHLOROBENZENE	146	22 UG/L	1.004	15639
612	C370	N-NITROSODIPROPYLAMINE	70	27 UG/L	1.163	24464
734	C445	1,2,4-TRICHLOROBENZENE	180	24 UG/L	0.995	12307
854	C465	P-CHLORO-M-CRESOL	107	43 UG/L	1.157	33386
036	C550	ACENAPHTHENE	153	22 UG/L	1.004	21334
1076	C560	4-NITROPHENOL	139	48 UG/L	1.043	7087
1076	C570	2,4-DINITROTOLUENE	165	33 UG/L	1.043	7285
149	C615	N-NITROSODIPHENYLAMINE *	169	2 UG/L	0.903	1520
257	C635	PENTACHLOROPHENOL	266	28 UG/L	0.988	3864
1506	C715	PYRENE	202	12 UG/L	0.880	13700
752	C735	BIS(2-ETHYLHEXYL)PHTHALATE *	149	4 UG/L	1.023	3318

* BLANK CORRECTED ON DATA SHEET

STAR File 86-12-050-02A MS NA.



DC#_____
SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW09-0 MS
PESTICIDE FRACTION
1ST COLUMN QUANT.

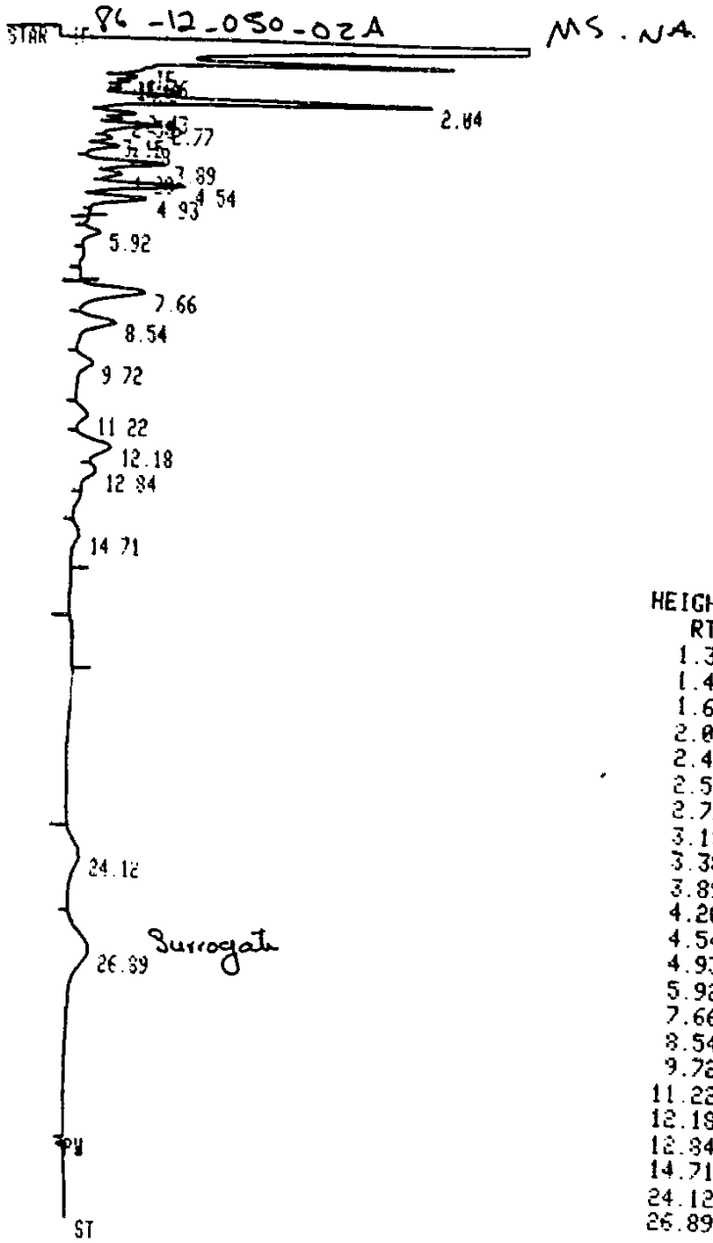
1ST COLUMN ID
1.8m x 4mm ID x6mm C
1.5% SP 2250
1.95% SP 2401
100/120 SUPELCOPORT

COLUMN TEMP. 203 C
VOLUME INJ. 1 uL
INSTRUMENT ID. 6000

RUN # 143
WORKFILE ID: C JAN/14/87 17:51:46
WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.48	2242	D PP	0.082	2.061
1.76	2946	PB	0.108	2.708
2.21	23775	BV	0.154	21.857
2.37	19278	D VV	0.126	17.723
2.83	9432	VP	0.198	8.671
3.28	7673	PV	0.205	7.054
3.99	1431	VP	0.215	1.316
4.36	1760	PB	0.182	1.618
5.14	4975	BB	0.225	4.574
6.26	15204	BV	0.288	13.978
7.17	5077	VV	0.329	4.668
8.68	3968	PV	0.392	3.648
10.12	1842	VB	0.408	1.693
12.20	2852	VB	0.533	2.622
15.90	2909	BP	0.888	2.674
20.69	3409	BB	1.168	3.134



DC#_____-___-___
SPECTRIX HOUSTON

CASE NO. Keystone MS

SAMPLE NO. SCK-MW09-00
PESTICIDE FRACTION
2ND COLUMN CONFIRMAT:

2ND COLUMN II C
1.8m x2mm ID x6mm OD
3% SP-2100
100/120 SUPELCOPORT
COLUMN TEMP. 187 °C
VOLUME INJ. 1 µL
INSTRUMENT ID. 6000

003

HEIGHT% RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.36	4135	D PV	0.076	1.512
1.49	3095	D VP	0.077	1.131
1.63	1363	D PV	0.079	0.498
2.04	84450	VP	0.141	30.872
2.43	9319	PV	0.117	3.407
2.58	6185	D VV	0.111	2.261
2.77	16849	VV	0.176	6.159
3.15	5296	D VV	0.169	1.936
3.38	7706	VP	0.153	2.817
3.89	19978	PV	0.195	7.303
4.20	9022	VV	0.221	3.298
4.54	25032	VV	0.190	9.151
4.93	15232	VV	0.199	5.568
5.92	4284	PP	0.229	1.566
7.66	16997	BV	0.337	6.214
8.54	9758	VP	0.357	3.567
9.72	4406	PV	0.427	1.611
11.22	3337	VV	0.442	1.220
12.18	9625	VV	0.522	3.519
12.84	5920	VV	0.534	2.164
14.71	1993	VB	0.531	0.729
24.12	3392	BV	1.058	1.240
26.89	6174	VP	1.416	2.257

RUN # 186
WORKFILE ID: C
WORKFILE NAME:

JAN/16/87 13:07:07

SPECTRIX DC # ----- 8

INST ID 4000

SAMPLE NUMBER: SCK-MW09-001 MSD

ORGANICS ANALYSIS DATA SHEET (PAGE 1)

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205003
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY:

CASE NO.: ----
QC REPORT NO.: ----
CONTRACT NO.: ----
DATE SAMPLE RECEIVED: 12/11/86

VOLATILES

CONCENTRATION: LOW
DATE EXTRACTED/PREPARED: 12/16/86
DATE ANALYZED: 12/16/86

DATAFILE: 4U12050V03
DILUTION FACTOR: 1.1

CAS #	COMPOUND	UG/L
C010	CHLOROMETHANE	10 U
C015	BROMOMETHANE	10 U
C020	VINYL CHLORIDE	10 U
C025	CHLOROETHANE	10 U
C030	METHYLENE CHLORIDE	5 U
C035	ACETONE	10 J
C040	CARBON DISULFIDE	5 U
C045	1,1-DICHLOROETHENE	35
C050	1,1-DICHLOROETHANE	5 U
C055	TRANS-1,2-DICHLOROETHENE	5 U
C060	CHLOROFORM	5 U
C065	1,2-DICHLOROETHANE	5 U
C110	2-BUTANONE	10 U
C115	1,1,1-TRICHLOROETHANE	5 U
C120	CARBON TETRACHLORIDE	5 U
C125	VINYL ACETATE	10 U
C130	BROMODICHLOROMETHANE	5 U
C140	1,2-DICHLOROPROPANE	5 U
C145	TRANS-1,3-DICHLOROPROPENE	5 U
C150	TRICHLOROETHENE	40
C155	DIBROMOCHLOROMETHANE	5 U
C160	1,1,2-TRICHLOROETHANE	5 U
C165	BENZENE	46
C170	CIS-1,3-DICHLOROPROPENE	5 U
C175	2-CHLOROETHYLVINYLETHER	10 U
C180	BROMOFORM	5 U
C210	2-HEXANONE	10 U
C205	4-METHYL-2-PENTANONE	10 U
C220	TETRACHLOROETHENE	5 U
C225	1,1,2,2-TETRACHLOROETHANE	5 U
C230	TOLUENE	46
C235	CHLOROBENZENE	51
C240	ETHYLBENZENE	5 U
C245	STYRENE	5 U
C250	TOTAL XYLENES	5 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003977

INST ID: 4530

SPECTRIX DC # ---- 8
SAMPLE NUMBER: SCK-MW09-001-MSD

ORGANICS ANALYSIS DATA SHEET - PAGE 2

LABORATORY NAME: SPECTRIX
LAB SAMPLE ID NO.: 861205003
SAMPLE MATRIX: WATER
DATA RELEASE AUTHORIZED BY: ...

CASE NO.: ---
QC REPORT NO.: ---
CONTRACT NO.: ---
DATE SAMPLE RECEIVED: 12/11/86

SEMIVOLATILES

CONCENTRATION: LOW
DATE EXTRACTED: 12/16/86
DATE ANALYZED: 01/10/87

DATAFILE: 4U12050C03
DILUTION FACTOR: 2.0

CAS #	COMPOUND	UG/L
C315	PHENOL	46
C325	BIS(2-CHLOROETHYL)ETHER	20 U
C330	2-CHLOROPHENOL	44
C335	1,3-DICHLOROBENZENE	20 U
C340	1,4-DICHLOROBENZENE	22
C345	BENZYL ALCOHOL	20 U
C350	1,2-DICHLOROBENZENE	20 U
C355	2-METHYLPHENOL	20 U
C360	BIS(2-CHLOROISOPROPYL)ETHER	20 U
C365	4-METHYLPHENOL	20 U
C370	N-NITROSODIPROPYLAMINE	25
C375	HEXACHLOROETHANE	20 U
C410	NITROBENZENE	20 U
C415	ISOPHORONE	20 U
C420	2-NITROPHENOL	20 U
C425	2,4-DIMETHYLPHENOL	20 U
C430	BENZOIC ACID	100 U
C435	BIS(2-CHLOROETHOXY)METHANE	20 U
C440	2,4-DICHLOROPHENOL	20 U
C445	1,2,4-TRICHLOROBENZENE	23
C450	NAPHTHALENE	20 U
C455	4-CHLOROANILINE	20 U
C460	HEXACHLOROBUTADIENE	20 U
C465	P-CHLORO-M-CRESOL	44
C470	2-METHYLNAPHTHALENE	20 U
C510	HEXACHLOROCYCLOPENTADIENE	20 U
C515	2,4,6-TRICHLOROPHENOL	20 U
C520	2,4,5-TRICHLOROPHENOL	100 U
C525	2-CHLORONAPHTHALENE	20 U
C530	2-NITROANILINE	100 U
C535	DIMETHYL PHTHALATE	20 U
C540	ACENAPHTHYLENE	20 U
C545	3-NITROANILINE	100 U
C550	ACENAPHTHENE	21
C555	2,4-DINITROPHENOL	100 U
C560	4-NITROPHENOL	43 J
C565	DIBENZOFURAN	20 U
C570	2,4-DINITROTOLUENE	30
C575	2,6-DINITROTOLUENE	20 U

003978

SPECTRIX DC # ---- B

SAMPLE NUMBER: SCK-MW09-00HS

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET, CONTINUED

DATAFILE: 4U12050C03

CAS #	COMPOUND	UG/L
C580	DIETHYL PHTHALATE	20 U
C585	4-CHLOROPHENYL PHENYL ETHER	20 U
C590	FLUORENE	20 U
C595	4-NITROANILINE	100 U
C610	4,6-DINITRO-2-METHYLPHENOL	100 U
C615	N-NITROSODIPHENYLAMINE	20 U
C625	4-BROMOPHENYL PHENYL ETHER	20 U
C630	HEXACHLOROBENZENE	20 U
C635	PENTACHLOROPHENOL	26 J
C640	PHENANTHRENE	20 U
C645	ANTHRACENE	20 U
C650	DI-N-BUTYL PHTHALATE	20 U
C655	FLUORANTHENE	20 U
C715	PYRENE	11 J
C720	BUTYL BENZYL PHTHALATE	20 U
C725	3,3'-DICHLOROBENZIDINE	40 U
C730	BENZO(A)ANTHRACENE	20 U
C735	BIS(2-ETHYLHEXYL)PHTHALATE	20 U
C740	CHRYSENE	20 U
C760	DI-N-OCTYL PHTHALATE	20 U
C765	BENZO(B)FLUORANTHENE	20 U
C770	BENZO(K)FLUORANTHENE	20 U
C775	BENZO(A)PYRENE	20 U
C780	INDENO(1,2,3-CD)PYRENE	20 U
C785	DIBENZO(A,H)ANTHRACENE	20 U
C790	BENZO(GHI)PERYLENE	20 U

U = UNDETECTED AT THE LISTED DETECTION LIMIT
J = COMPOUND IS PRESENT, BUT BELOW THE LISTED DETECTION LIMIT

003979

Lab Name: Spectrix
Case No: KEYSTONE
Lab No.: 86-12-050-03A

DC No: KEYSTONE
SMO No: SCK-MW09-001 MSD

ORGANICS ANALYSIS DATA SHEET
(page 3)

Pesticide/PCBs

Conc: Low
Date Extracted: 12/17/86
Date Analyzed: 1/14/87
Dilution Factor: 1
Percent Moisture(decanted):

GPC Cleanup _Yes _No
Sep. Funnel Ext. _Yes
Cont. Liquid Ext. _Yes

CAS #	Compound	ug/L
319-84-6	ALPHA-BHC	0.05 U
319-85-7	BETA-BHC	0.05 U
319-86-8	DELTA-BHC	0.05 U
58-89-9	GAMMA-BHC (LINDANE)	0.18
76-44-8	HEPTACHLOR	0.04
309-00-2	ALDRIN	0.1
1024-57-3	HEPTACHLOR EPOXIDE	0.05 U
959-98-8	ENDOSULFAN I	0.05 U
60-57-1	DIELDRIN	0.04
72-55-9	4,4'-DDE	0.10 U
72-20-8	ENDRIN	0.1
33213-65-9	ENDOSULFAN II	0.10 U
72-54-8	4,4'-DDD	0.10 U
7421-93-4	ENDRIN ALDEHYDE	0.10 U
1031-07-8	ENDOSULFAN SULFATE	0.10 U
50-29-3	4,4'-DDT	0.17
72-43-5	METHOXYCHLOR	0.50 U
53494-70-5	ENDRIN KETONE	0.10 U
57-74-9	CHLORDANE	0.50 U
8001-35-2	TOXAPHENE	1.0 U
12674-11-2	AROCLOR-1016	0.50 U
11104-28-2	AROCLOR-1221	0.50 U
11141-16-5	AROCLOR-1232	0.50 U
53469-21-9	AROCLOR-1242	0.50 U
12672-29-6	AROCLOR-1248	0.50 U
11097-69-1	AROCLOR-1254	1.0 U
11096-82-5	AROCLOR-1260	1.0 U

Vs = 500 = Volume of water extracted (ml)
Vt = 5000 = Volume of total extract (ul)
Vi = 1 = Volume of extract injected(ul)
1st Column Inst. : 6000
2nd Column Inst. : 6000 NA.

U=UNDETECTED AT THE LISTED DETECTION LIMIT.
J=COMPOUND IS PRESENT,BUT BELOW THE LISTED DETECTION LIMIT.
B=COMPOUND ALSO FOUND IN BLANK.

Form 1

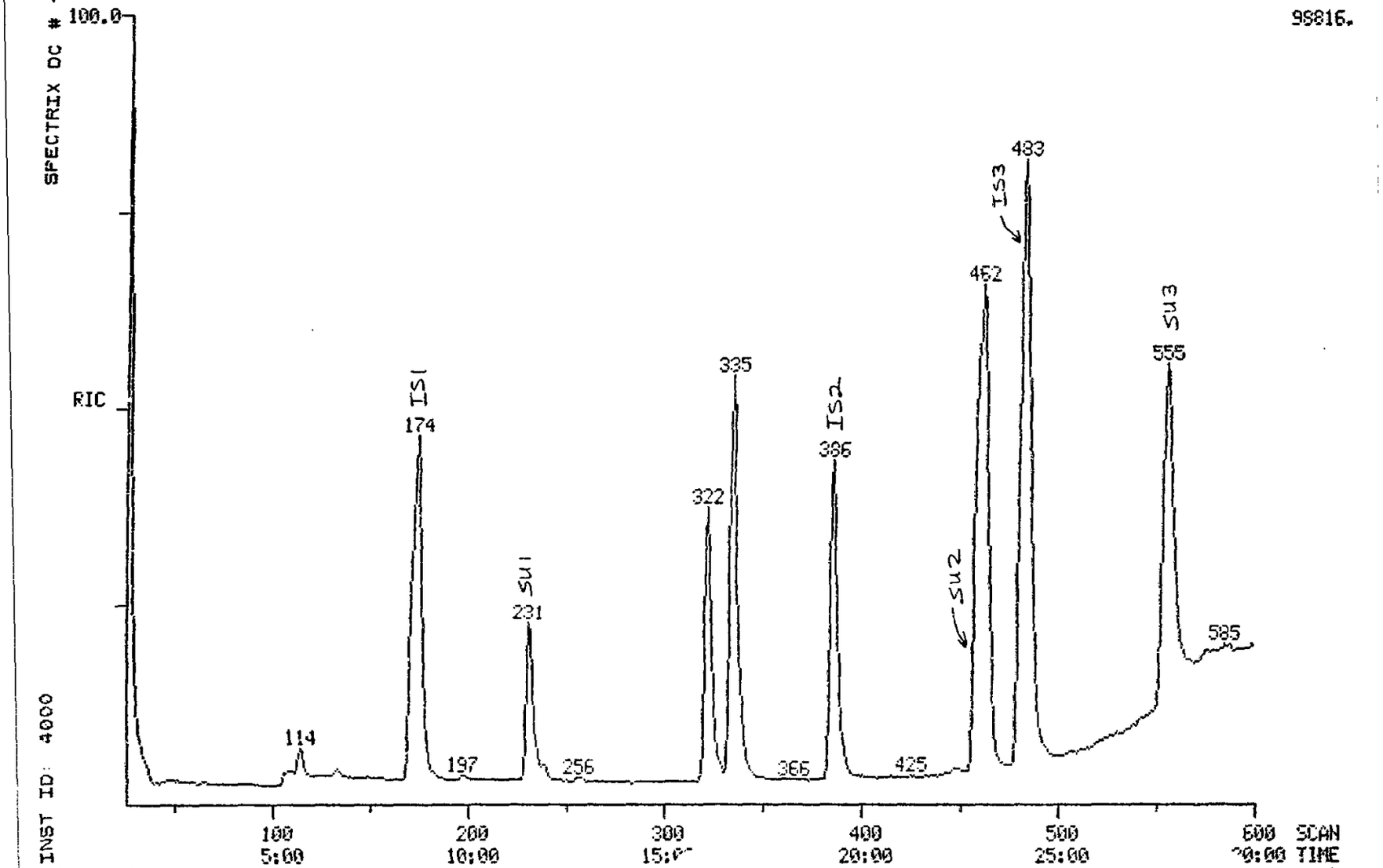
003980

003981

RIC
12/16/86 13:48:00
SAMPLE: SCK-MW09-001-MSD
CONDS.: ----
RANGE: G 1, 600 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050V03 #1 SCANS 25 TO 600
CALI: 4U12050V03 #3

98816.



003981

SPECTRIX DC # -----14

VOA QUANTITATION REPORT

SAMPLE ID.	SCK-MW09-001-MSD		
FILENAME	4U12050V03	INST	4000
CLIENT	KEYSTONE	ANALYST	MB
DATE INJECTED	12/16/86 13:48:00	VERIFIED BY	NOT
CALIB STD DATE	12-14-86	CORR. FACTOR	1.00

SCAN#		VOA COMPOUNDS		M/E	AMOUNT	RRT	AREA
174	CI01	BROMOCHLOROMETHANE	**IS1**	128	50 UG/L	1.000	15940
386	CI10	1,4-DIFLUOROBENZENE	**IS2**	114	50 UG/L	1.000	71831
481	CI20	D5-CHLOROBENZENE	**IS3**	117	50 UG/L	1.000	56854
231	CS15	D4-1,2-DICHLOROETHANE	**SU1**	65	93 %	1.328	21408
459	CS05	D8-TOLUENE	**SU2**	98	100 %	0.954	62087
555	CS10	P-BROMOFLUOROBENZENE	**SU3**	95	97 %	1.154	40280
114	C030	METHYLENE CHLORIDE *		84	3 UG/L	0.655	1849
133	C035	ACETONE		43	9 UG/L	0.764	1818
172	C045	1,1-DICHLOROETHENE		96	35 UG/L	0.989	15697
322	C150	TRICHLOROETHENE		130	40 UG/L	0.834	27598
335	C165	BENZENE		78	46 UG/L	0.868	86122
463	C230	TOLUENE		92	46 UG/L	0.963	48962
484	C235	CHLOROBENZENE		112	51 UG/L	1.006	64199

* BLANK CORRECTED ON DATA SHEET

003983

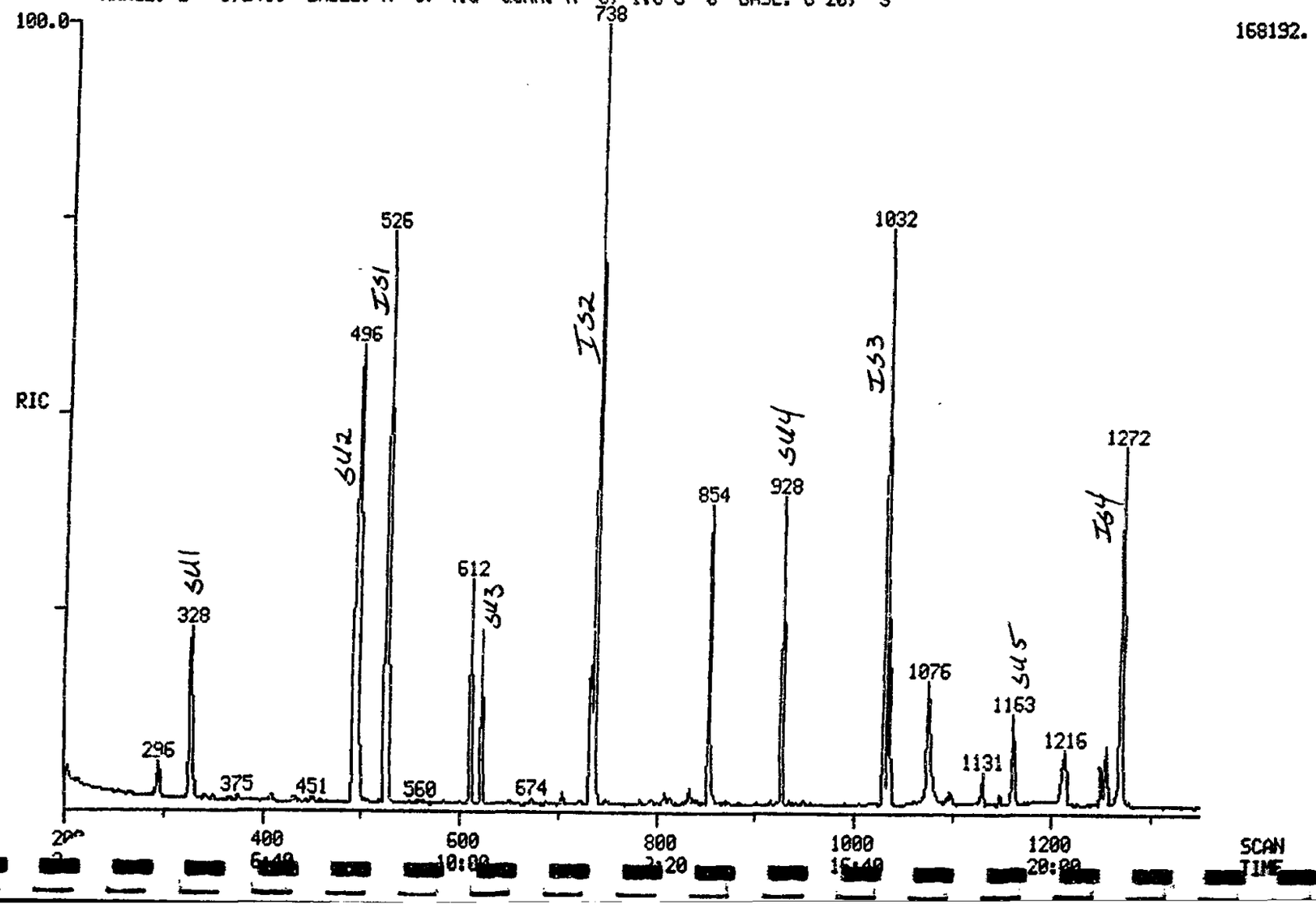
RIC
01/10/87 14:23:00
SAMPLE: SCK-MW09-001MSD
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 GUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C03 #1 SCANS 200 TO 1350
CALI: 4U12050C03 #3

SPECTRIX DC # ----14

INST ID: 4530

168192.



003983

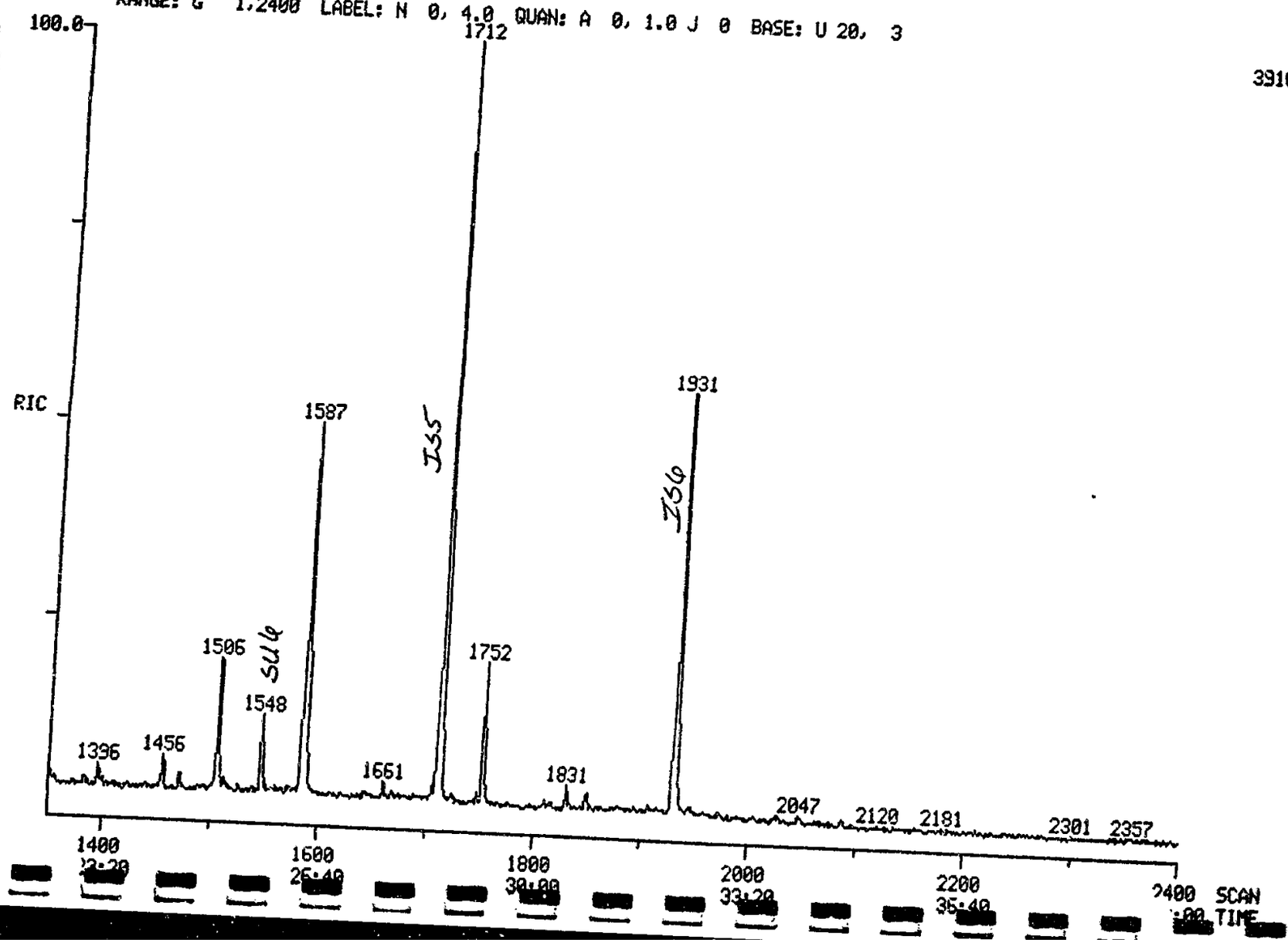
003984

RIC
01/10/87 14:23:00
SAMPLE: SCK-MW09-001MSD
CONDS.: ---
RANGE: G 1,2400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 4U12050C03 #1
CALI: 4U12050C03 #3

SCANS 1350 TO 2400

39168.



INST ID: 4530

SPECTRIX DC # ----14

SEMIVOLATILE WATER REPORT

SAMPLE ID. SCK-MW09-001MSD

FILENAME 4U12050C03

CLIENT KEYSTONE

INST ID. 4530

DATE INJECTED 01/10/87 14:23:00

ANALYST GU

CALIB STD DATE 01/08/87

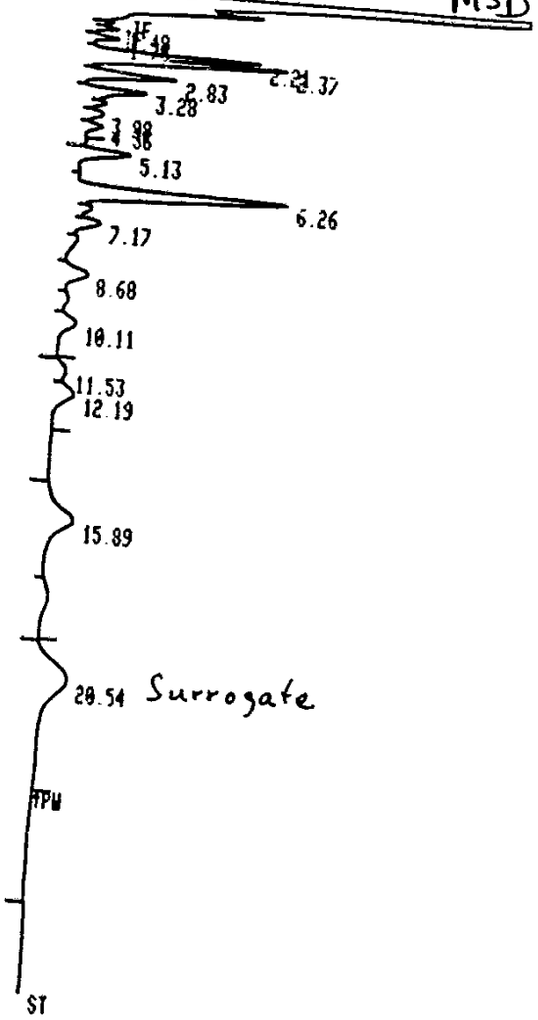
VERIFIED BY GU

CORR. FACTOR 2.00

SCAN#		SEMIVOLATILE COMPOUNDS	M/E	AMOUNT	RRT	AREA
526	CI30	1,4-DICHLOROBENZEND-D4 ** IS1 **	152	80 UG/L	1.000	45781
738	CI40	NAPHTHALENE-D6 ** IS2 **	136	80 UG/L	1.000	17549
1032	CI50	ACENAPHTHENE-D10 ** IS3 **	164	80 UG/L	1.000	8765
1272	CI60	PHENANTHRENE-D10 ** IS4 **	188	80 UG/L	1.000	10423
712	CI70	CHRYSENE-D12 ** IS5 **	240	80 UG/L	1.000	5077
931	CI75	PERYLENE-D12 ** IS6 **	264	80 UG/L	1.000	3595
328	CS50	2-FLUOROPHENOL ** SU1 **	112	46 %	0.624	3509
494	CS45	PHENOL-D5 ** SU2 **	99	54 %	0.939	574
162	CS55	2,4,6-TRIBROMOPHENOL ** SU5 **	330	36 %	1.126	430
623	CS20	NITROBENZENE-D5 ** SU3 **	82	57 %	0.844	2804
928	CS25	2-FLUOROBIPHENYL ** SU4 **	172	48 %	0.899	5262
547	CS30	TERPHENYL-D14 ** SU6 **	244	13 %	0.904	477
496	C315	PHENOL	94	46 UG/L	0.943	6459
498	C330	2-CHLOROPHENOL	128	44 UG/L	0.947	3449
28	C340	1,4-DICHLOROBENZENE	146	22 UG/L	1.004	1751
612	C370	N-NITROSODIPROPYLAMINE	70	25 UG/L	1.163	2587
734	C445	1,2,4-TRICHLOROBENZENE	180	23 UG/L	0.995	1285
854	C465	P-CHLORO-M-CRESOL	107	44 UG/L	1.157	3672
1036	C550	ACENAPHTHENE	153	21 UG/L	1.004	2134
1077	C560	4-NITROPHENOL	139	43 UG/L	1.044	692
1076	C570	2,4-DINITROTOLUENE	165	30 UG/L	1.043	718
1149	C615	N-NITROSODIPHENYLAMINE *	169	2 UG/L	0.903	133
1257	C635	PENTACHLOROPHENOL	266	26 UG/L	0.988	374
1506	C715	PYRENE	202	11 UG/L	0.880	1105
1752	C735	BIS(2-ETHYLHEXYL)PHTHALATE *	149	5 UG/L	1.023	399

* BLANK CORRECTED ON DATA SHEET

STARTING 86-12-050-03A MSD NA.



DC#_____

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCK-MW09-C

PESTICIDE FRACTION

1ST COLUMN QUANT.

1ST COLUMN ID

1.8m x 4mm ID x6mm

1.5% SP 2250

1.95% SP 2401

100/120 SUPELCOPORT

COLUMN TEMP. 205°C

VOLUME INJ. 1 µl

INSTRUMENT ID. 6000

RUN # 144

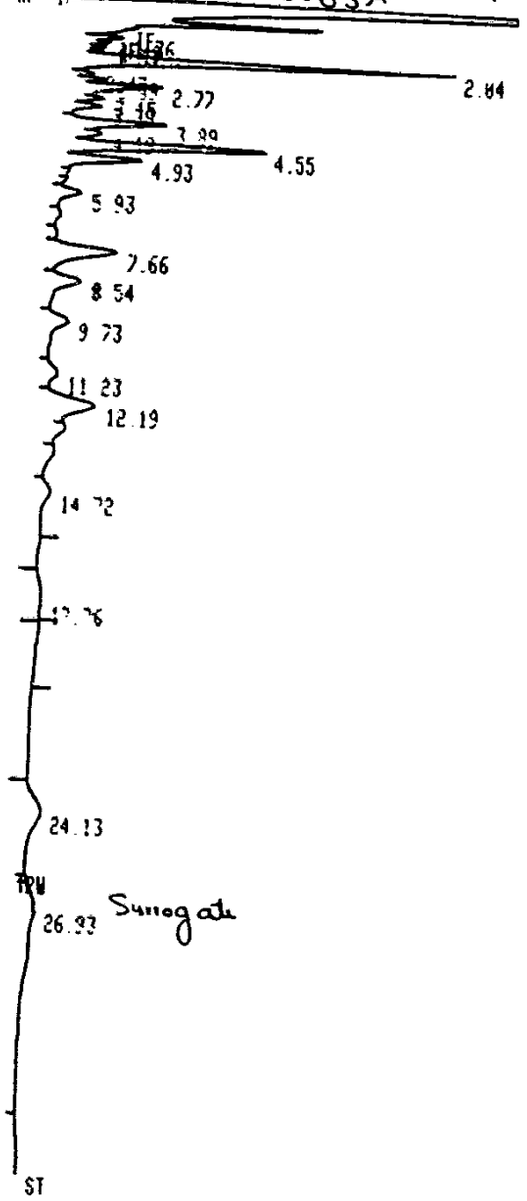
WORKFILE ID: C JAN/14/87 18:23:03

WORKFILE NAME:

HEIGHT%

RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.48	2643	D PP	0.083	1.978
1.76	3389	PV	0.114	2.537
2.21	22150	VV	0.140	16.579
2.37	25752	D VV	0.127	19.275
2.83	11634	VP	0.182	8.708
3.28	7965	PV	0.216	5.962
3.98	2419	VV	0.255	1.811
4.36	2137	VB	0.195	1.600
5.13	6401	BP	0.225	4.791
6.26	27723	PV	0.280	20.750
7.17	3982	VV	0.320	2.980
8.68	3221	PV	0.395	2.411
10.11	2203	VB	0.390	1.649
11.53	1425	BV	0.447	1.067
12.19	2687	VB	0.525	2.011
15.89	3805	BV	0.852	2.848
20.54	4068	BB	1.290	3.045

86-12-050-03A MSD. NA



DC#_____-___-___

SPECTRIX HOUSTON

CASE NO. Keystone

SAMPLE NO. SCL-MW09-001 A

PESTICIDE FRACTION

2ND COLUMN CONFIRMAT:

2ND COLUMN II C

1.8m x2mm ID x6mm OD

3% SP-2100

100/120 SUPELCOPORT

COLUMN TEMP. 187 °C

VOLUME INJ. 1 µl 00

INSTRUMENT ID. 6008

003

HEIGHT% RT	HEIGHT	TYPE	AR/HT	HEIGHT%
1.36	4812	D PV	0.076	1.565
1.49	2719	D VP	0.074	0.885
1.63	1986	D PV	0.081	0.646
2.04	95106	VP	0.136	30.937
2.43	2882	PV	0.106	0.938
2.59	6201	D VV	0.112	2.017
2.77	20997	VV	0.181	6.830
3.15	6751	D VV	0.175	2.196
3.38	6634	VP	0.153	2.158
3.89	23721	PV	0.197	7.716
4.19	7918	VV	0.212	2.576
4.55	50136	VV	0.184	16.309
4.93	18790	VV	0.206	6.112
5.93	5240	VP	0.236	1.705
7.66	15433	VV	0.344	5.020
8.54	7398	VP	0.359	2.407
9.73	5148	PV	0.437	1.675
11.23	2845	VV	0.454	0.926
12.19	12378	VV	0.529	4.02.
14.72	2306	VB	0.491	0.750
17.76	857	PB	0.815	0.279
24.13	3897	BV	1.024	1.268
26.93	3259	VP	2.116	1.060

RUN # 197

WORKFILE ID: C

WORKFILE NAME:

JAN/16/87 13:43:23

SPECTRIX CORPORATION REPORT

Work Order # 86-12-050

Received: 12/11/86

Results by Sample

SAMPLE ID SCK-MW09-001 (LLW) DUP. SAMPLE # 04 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG	<10 ug/L	AS	<10 ug/L	BE	<3 ug/L	CD	<5 ug/L	CN_SU	<100 ug/L	CR	<9 ug/L
CU	<10 ug/L	FE	3290 ug/L	HG	<0.2 ug/L	NI	<29 ug/L	PB	22.2 ug/L	SB	<44 ug/L
SE	<5 ug/L	TL	<10 ug/L	ZN	60 ug/L						

Received: 12/11/86

SPECTRIX QC REPORT

Results by Sample

Work Order # 86-12-030

SAMPLE ID SCK-MW09-001 (LLW) SPIKE SAMPLE # 05 FRACTIONS: A

Date & Time Collected 12/11/86 Category

AG 36\72.0 ug/L\%Recovery	AS 15.8\79.0 ug/L\%Recovery	BE 41\82.0 ug/L\%Recovery	CD 35\70.0 ug/L\%Recovery	CN_SU <100 ug/L	CR 158\79.0 ug/L\%Recovery
CU 218\82.8 ug/L\%Recovery	FE NA ug/L	HG 1.03\103 ug/L\%Recovery	NI 345\86.2 ug/L\%Recovery	PB 38.9\83.5 ug/L\%Recovery	SB <44\0 ug/L\%Recovery
SE 6.4\64.0 ug/L\%Recovery	TL 42.4\84.8 ug/L\%Recovery	ZN 262\97.5 ug/L\%Recovery			

GC/MS Tuning and Mass Calibration

BROMOFLUOROBENZENE

Case Number:
Inst ID: 4000
Lab ID: ES1216V01

Laboratory:
Sens Date: 12/16/86
Cali Date:

Contract:
Sens Time: 7:43:00
Analyst: NOT

Data release authorized by:

m/z	Ion Abundance Criteria	Spec # 208	
50	15 to 40% of mass 95	33.22	
75	30 to 60% of mass 95	43.45	
95	base peak, 100% relative abundance	100.00	
96	5 to 9% of mass 95	7.99	
173	less than 1% of mass 95	0.00	
174	greater than 50% of mass 95	83.06	
175	5 to 9% of mass 174	7.12	(8.58) 1
176	between 95% and 101% of mass 174	79.21	(95.36) 1
177	5 to 9% of mass 176	5.73	(7.24) 2

1 - value in parenthesis is % of mass 174
2 - value in parenthesis is % of mass 176

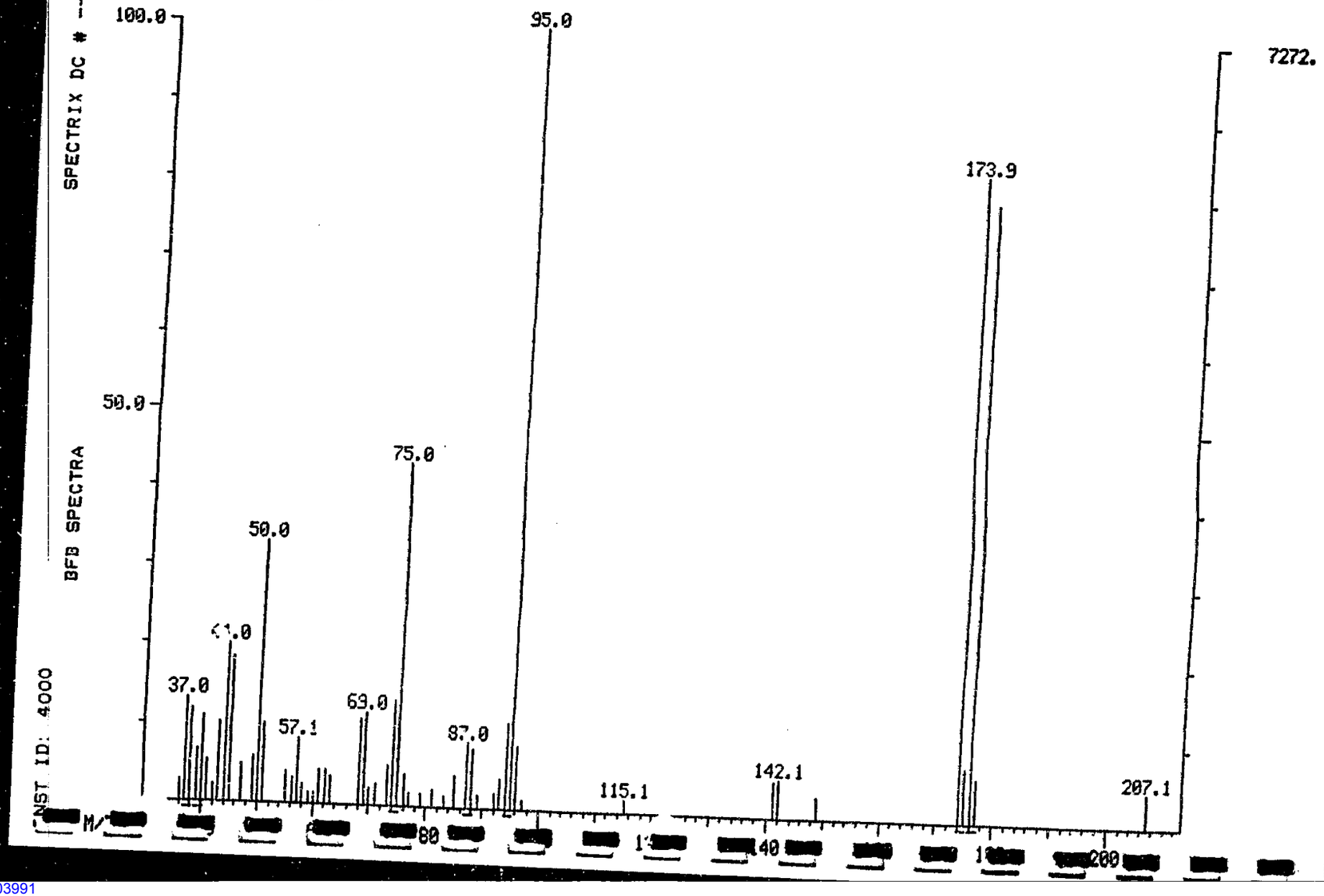
003990

003991

MASS SPECTRUM
12/16/86 7:43:00 + 10:24
SAMPLE: BFB
CONDS.: ----

DATA: ES1216V01 #208
CALI: ES1216V01 #3

BASE M/Z: 95
RIC: 46144.



003991

INST ID: 4000

BFB MASS LISTING

SPECTRIX DC # ------15

Mass List
12/16/86 7:43:00 + 10:24
Sample: BFB
Cmds.: ----

Data: ES1216V01 # 208
Cali: ES1216V01 # 3

Base m/z: 95
RIC: 46144.

36 0.00 0.00 0. Minima Min Inten: 0.
207 # 0 Maxima

Mass	% RA	% RIC	Inten.
35.96?	2.97	0.47	216.
36.97?F	13.17	2.08	958.
37.97?F	11.72	1.85	852.
39.00?F	6.83	1.08	497.
39.93?F	10.92	1.72	794.
41.02?	5.43	0.86	395.
42.02?	2.46	0.39	179.
43.03?	10.09	1.59	734.
43.98	19.86	3.13	1444.
45.02	18.26	2.88	1328.
47.05	4.98	0.78	362.
49.01	6.15	0.97	447.
50.02	33.22	5.24	2416.
51.04	10.20	1.61	742.
55.05	4.15	0.65	302.
56.05	3.48	0.55	253.
57.08	8.35	1.32	607.
58.04	2.64	0.42	192.
59.06	1.61	0.25	117.
60.00	1.55	0.24	113.
1.04	4.52	0.71	329.
62.05	4.43	0.70	322.
63.05	3.80	0.60	276.
68.02	11.11	1.75	808.
69.02	11.89	1.87	865.
70.04	2.31	0.36	168.
71.08	2.94	0.46	214.
73.02	5.21	0.82	379.
74.02 F	13.28	2.09	966.
75.01 F	43.45	6.85	3160.
76.02	4.32	0.68	314.
76.99	1.79	0.28	130.
78.91	1.71	0.27	124.
81.04	2.43	0.38	177.
83.09	1.46	0.23	106.
85.00	4.29	0.68	312.
87.00 F	8.39	1.32	610.
87.97 F	7.51	1.18	546.
88.98	1.73	0.27	126.
92.05	1.97	0.31	143.
93.02	3.86	0.61	281.
94.04 F	10.95	1.73	796.
95.01 F	100.00	15.76	7272.
96.00	7.99	1.26	581.
97.06	1.43	0.23	104.
3.09	1.76	0.28	128.
41.06	4.74	0.75	345.
142.08	4.96	0.78	361.
149.05	2.92	0.46	212.
173.94 F	83.06	13.09	6040.
174.98 F	7.12	1.12	518.

Mass	% RA	% RIC	Inten.
175.95 F	79.21	12.48	5760.
177.00 F	5.73	0.90	417.
207.08	4.51	0.71	328.

003992

GC/MS Tuning and Mass Calibration

BROMOFLUOROBENZENE

Case Number:
Inst ID: 4000
Lab ID: ES1217V01

Laboratory:
Sens Date: 12/17/86
Cali Date:

Contract:
Sens Time: 7:42:00
Analyst: NOT

Data release authorized by: JPH

m/z	Ion Abundance Criteria	Spec # 210	
50	15 to 40% of mass 95	33.10	
75	30 to 60% of mass 95	43.12	
95	base peak, 100% relative abundance	100.00	
96	5 to 9% of mass 95	7.12	
173	less than 1% of mass 95	0.00	
174	greater than 50% of mass 95	85.23	
175	5 to 9% of mass 174	7.18	(8.43) 1
176	between 95% and 101% of mass 174	81.73	(95.88) 1
177	5 to 9% of mass 176	5.48	(6.70) 2

1 - value in parenthesis is % of mass 174
2 - value in parenthesis is % of mass 176

003993

INST ID: 4000

SPECTRIX DC # -----15

BFB MASS LISTING

Mass List
12/17/86 7:42:00 + 10:30

Data: ES1217V01 # 210
Cali: ES1217V01 # 3

Base m/z: 95
RIC: 37248.

ample: BFB
Conds. : ----

36 0.00 0.00 0. Minima Min Inten: 0.
207 # 0 Maxima

Mass	% RA	% RIC	Inten.
35.95?	2.80	0.48	179.
36.97?	13.20	2.27	844.
37.96?	11.62	1.99	743.
38.99?	5.77	0.99	369.
39.93?	9.37	1.61	599.
41.02?	4.55	0.78	291.
42.02?	1.71	0.29	109.
43.03?	8.23	1.41	526.
43.99	14.42	2.48	922.
45.02	13.00	2.23	831.
47.02	4.30	0.74	275.
49.01	5.76	0.99	368.
50.01	33.10	5.68	2116.
51.03	9.62	1.65	615.
55.06	3.69	0.63	236.
56.04	2.83	0.49	181.
57.07	7 56	1.30	483.
58.08	1.72	0.30	110.
61.04	4.35	0.75	278.
62.05	4.02	0.69	257.
63.06	3.18	0.54	203.
68.03	11.01	1.89	704.
69.03	11.50	1.97	735.
71.10	1.99	0.34	127.
73.03	4.38	0.75	280.
74.02	12.67	2.17	810.
75.02	43.12	7.40	2756.
76.05	4.11	0.71	263.
77.04	1.64	0.28	105.
81.02	2.13	0.37	136.
85.00	4.01	0.69	256.
86.99	7.62	1.31	487.
87.96	6.79	1.17	434.
92.02	1.60	0.27	102.
93.02	3.46	0.59	221.
94.04 F	10.58	1.81	676.
95.03 F	100.00	17.16	6392.
96.05	7.12	1.22	455.
149.03	2.77	0.48	177.
173.95 F	85.23	14.63	5448.
174.98 F	7.18	1.23	459.
175.97 F	81.73	14.02	5224.
176.98 F	5.48	0.94	350.
207.12	1.66	0.28	106.

003994

GC/MS Tuning and Mass Calibration

BROMOFLUOROBENZENE

Case Number:		Laboratory:		Contract:	
Inst ID:	4000	Sens Date:	12/18/86	Sens Time:	8:01:00
Lab ID:	ES1218V01	Cali Date:		Analyst:	NOT

Data release authorized by:

m/z	Ion Abundance Criteria	Spec # 207	
50	15 to 40% of mass 95	32.75	
75	30 to 60% of mass 95	43.08	
95	base peak, 100% relative abundance	100.00	
96	5 to 9% of mass 95	7.25	
173	less than 1% of mass 95	0.00	
174	greater than 50% of mass 95	84.40	
175	5 to 9% of mass 174	6.91	(8.19) 1
176	between 95% and 101% of mass 174	80.99	(95.96) 1
177	5 to 9% of mass 176	5.59	(6.90) 2

1 - value in parenthesis is % of mass 174
2 - value in parenthesis is % of mass 176

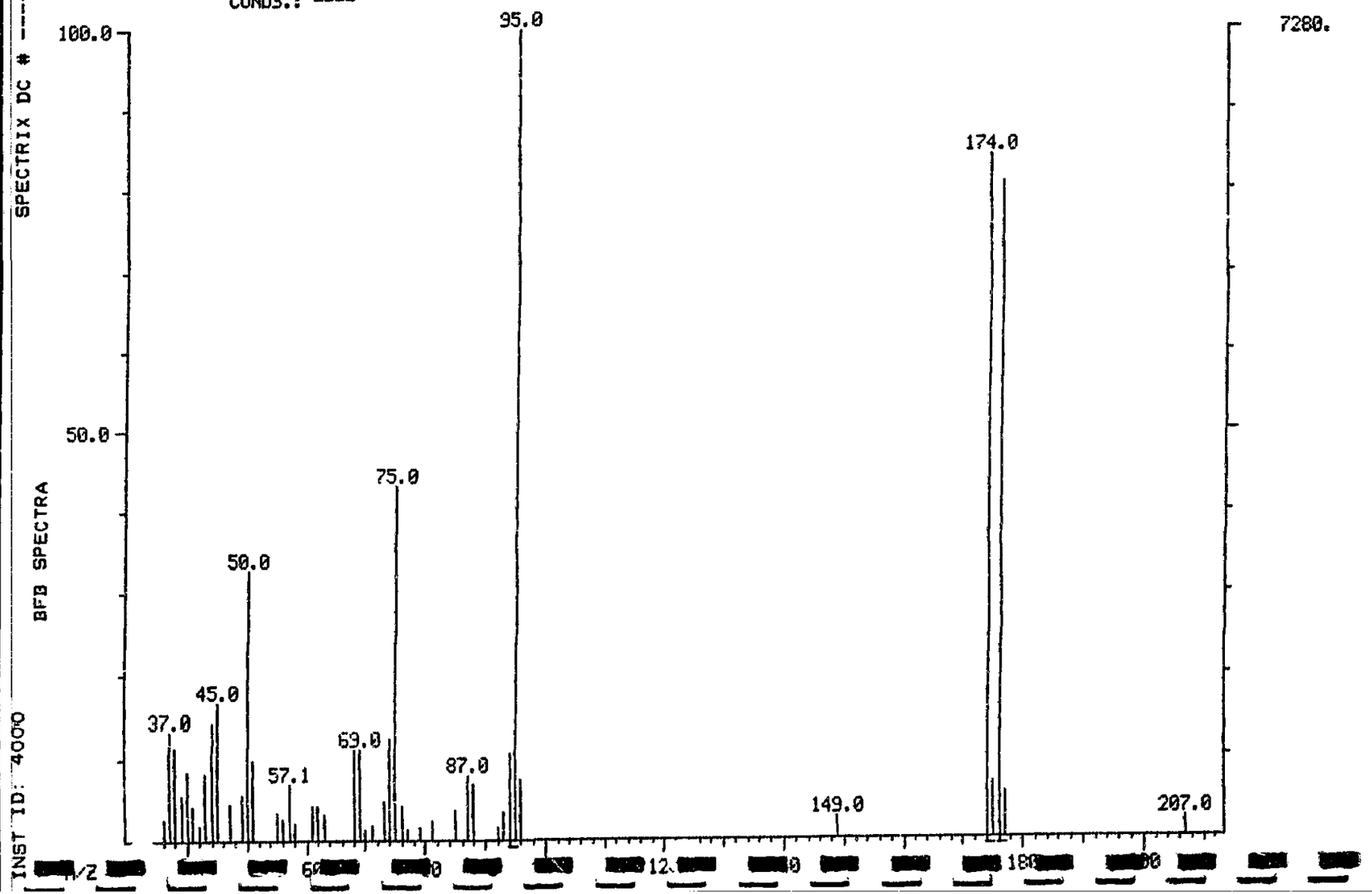
003995

966200

MASS SPECTRUM
12/18/86 8:01:00 + 10:21
SAMPLE: BFB
CONDS.: ----

DATA: ES1218V01 #207
CALI: ES1218V01 #3

BASE M/Z: 95
RIC: 42496.



003996

INST ID: 4000

Mass List

BFB MASS LISTING

SPECTRIX DC # -----15

12/18/86 8:01:00 + 10:21

Data: ES1218V01 # 207

Cali: ES1218V01 # 3

Base m/z: 95

RIC: 42496.

ample: BFB

ds.: ----

36 0.00 0.00 0. Minima

207 # 0 Maxima

Min Inten: 0.

Mass	% RA	% RIC	Inten.
35.97?	2.69	0.46	196.
36.99?	12.97	2.22	944.
37.98?	11.30	1.94	823.
39.01?	5.55	0.95	404.
39.95?	8.35	1.43	608.
41.02?	4.24	0.73	309.
42.02?	1.83	0.31	133.
43.04?	8.15	1.40	593.
43.99?	14.20	2.43	1034.
45.02?	16.51	2.83	1202.
47.02?	4.34	0.74	316.
49.01?	5.62	0.96	409.
50.01	32.75	5.61	2384.
51.02	9.57	1.64	697.
55.04	3.30	0.56	240.
56.04	2.71	0.46	197.
57.06	6.92	1.19	504.
58.07	2.17	0.37	158.
61.02	4.23	0.72	308.
62.05	4.07	0.70	296.
3.05	3.17	0.54	231.
68.02	10.88	1.86	792.
69.02	11.07	1.90	806.
70.05	1.40	0.24	102.
71.09	1.85	0.32	135.
73.02	4.60	0.79	335.
74.01	12.34	2.11	898.
75.02	43.08	7.38	3136.
76.03	4.08	0.70	297.
77.03	1.43	0.24	104.
78.91	1.52	0.26	111.
81.02	2.25	0.39	164.
84.99	3.72	0.64	271.
86.99	7.84	1.34	571.
87.97	6.84	1.17	498.
92.04	1.68	0.29	122.
93.02	3.39	0.58	247.
94.03 F	10.37	1.78	755.
95.02 F	100.00	17.13	7280.
96.02	7.25	1.24	528.
49.05	2.54	0.44	185.
173.95 F	84.40	14.46	6144.
174.95 F	6.91	1.18	503.
175.95 F	80.99	13.87	5896.
176.95 F	5.59	0.96	407.
7.03	2.49	0.43	181.

003997

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory:		Contract:	
Inst ID:	4530	Sens Date:	01/10/87	Sens Time:	11:34:00
Lab ID:	ES0110C01	Cali Date:		Analyst:	GU

Data release authorized by: GU

M/E	Ion Abundance Criteria	Spec # 394	
51	30 to 60% of mass 198	48.05	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	22.44	
70	less than 2% of mass 69	0.12	(0.57) 1
127	40 TO 60% of mass 198	53.85	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	6.32	
275	10 TO 30% of mass 198	21.38	
365	greater than 1% of mass 198	1.32	
441	less than mass 443	10.20	
442	greater than 40% of mass 198	84.62	
443	17 TO 23% of mass 442	16.14	(19.07) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

003998

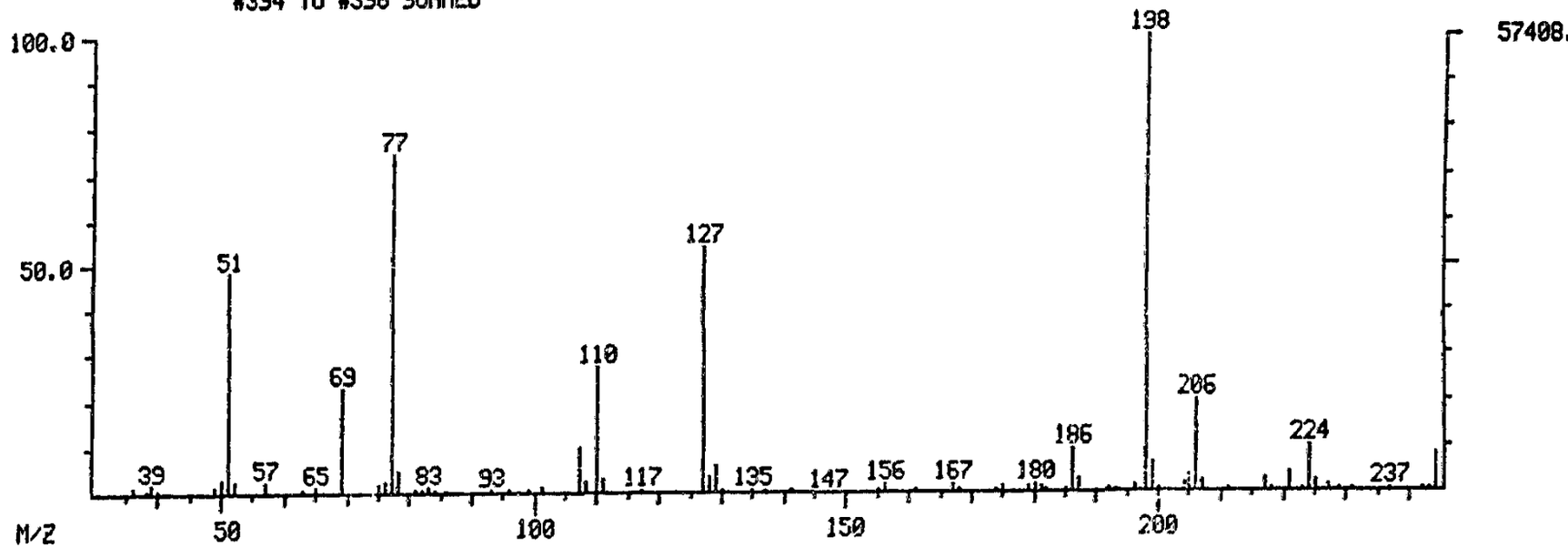
666200

MASS SPECTRUM
01/10/87 11:34:00 + 6:35
SAMPLE: DFTPP
CONDS.: ---
#394 TO #396 SUMMED

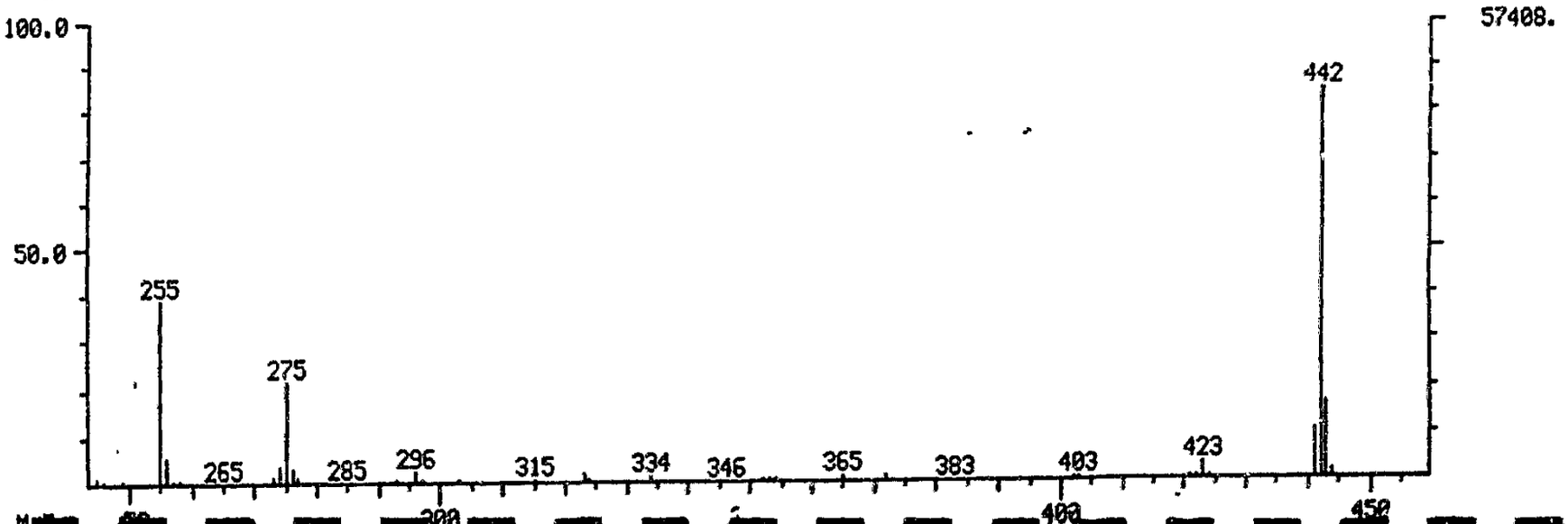
DATA: ES0110C01 #395
CALI: ES0110C01 #3

BASE M/Z: 198
RIC: 393728.

SPECTRIX DC # ----15



DFTPP SPECTRA



NST ID: 4530

003999

INST ID: 4530 SPECTRIX DC # ----15

DFTPP MASS LISTING

ass List Data: ES0110C01 # 395 Base m/z: 198

01/10/87 11:34:00 + 6:35 Cali: ES0110C01 # 3 RIC: 393728.

ample: DFTPP

nds.: ---

94 to #396 summed

36 0.00 0. Minima Min Inten: 201.

444 Maxima # 0

Mass	% RA	Inten.	Mass	% RA	Inten.
36?	1.06	608.	199	6.32	3628.
38?	0.40	229.	200	0.41	234.
39?	1.96	1124.	204	1.68	962.
40	0.65	371.	205	3.71	2128.
49	1.09	627.	206	19.68	11296.
50	2.75	1580.	207	2.46	1410.
51	48.05	27584.	211	0.77	440.
52	2.27	1306.	217	2.80	1608.
57	2.25	1294.	218	0.43	244.
63	0.41	233.	221	4.35	2500.
65	1.32	755.	223	0.86	494.
69	22.44	12880.	224	9.77	5608.
75	1.69	969.	225	2.32	1332.
76	2.33	1340.	227	1.35	774.
77	74.47	42752.	229	0.67	384.
78	4.70	2696.	231	0.41	236.
81	0.71	408.	242	0.42	240.
83	1.13	649.	243	0.50	289.
84	0.64	366.	244	7.90	4536.
86	0.43	246.	245	1.02	586.
101	1.06	608.	246	0.49	282.
107	9.96	5720.	255	39.02	22400.
108	2.04	1170.	256	5.31	3048.
110	27.34	15696.	257	0.39	222.
111	2.72	1564.	258	0.79	454.
117	0.41	237.	273	1.20	690.
127	53.85	30912.	274	3.77	2164.
128	3.60	2064.	275	21.38	12272.
129	5.94	3412.	276	2.69	1544.
130	0.50	285.	277	0.90	519.
135	0.59	338.	296	2.61	1500.
137	0.37	211.	297	0.37	211.
155	0.48	274.	303	0.46	264.
156	1.56	898.	323	1.69	970.
161	0.59	338.	334	0.98	560.
167	1.95	1118.	352	0.45	261.
168	0.68	393.	353	0.37	212.
174	0.43	247.	354	0.64	366.
175	1.21	694.	365	1.32	759.
179	1.05	600.	372	0.92	526.
180	1.51	869.	402	0.40	229.
181	0.97	555.	403	0.53	305.
182	0.41	233.	421	0.47	268.
185	0.56	324.	422	0.46	263.
186	9.43	5416.	423	3.69	2120.
187	2.86	1644.	424	0.67	383.
192	0.40	230.	441	10.20	5856.
193	0.59	339.	442	84.62	48576.
196	1.40	803.	443	16.14	9264.
198	100.00	57408.	444	1.49	855.

004000

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:
Inst ID: 4530
Lab ID: ES0111C01

Laboratory:
Sens Date: 01/11/87
Cali Date:

Contract:
Sens Time: 10:47:00
Analyst: GU

Data release authorized by: GU

M/E	Ion Abundance Criteria	Spec # 395	
51	30 to 60% of mass 198	47.42	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	22.54	
70	less than 2% of mass 69	0.18	(0.79) 1
127	40 TO 60% of mass 198	55.75	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	6.12	
275	10 TO 30% of mass 198	22.05	
365	greater than 1% of mass 198	1.58	
441	less than mass 443	11.58	
442	greater than 40% of mass 198	93.15	
443	17 TO 23% of mass 442	17.46	(18.74) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

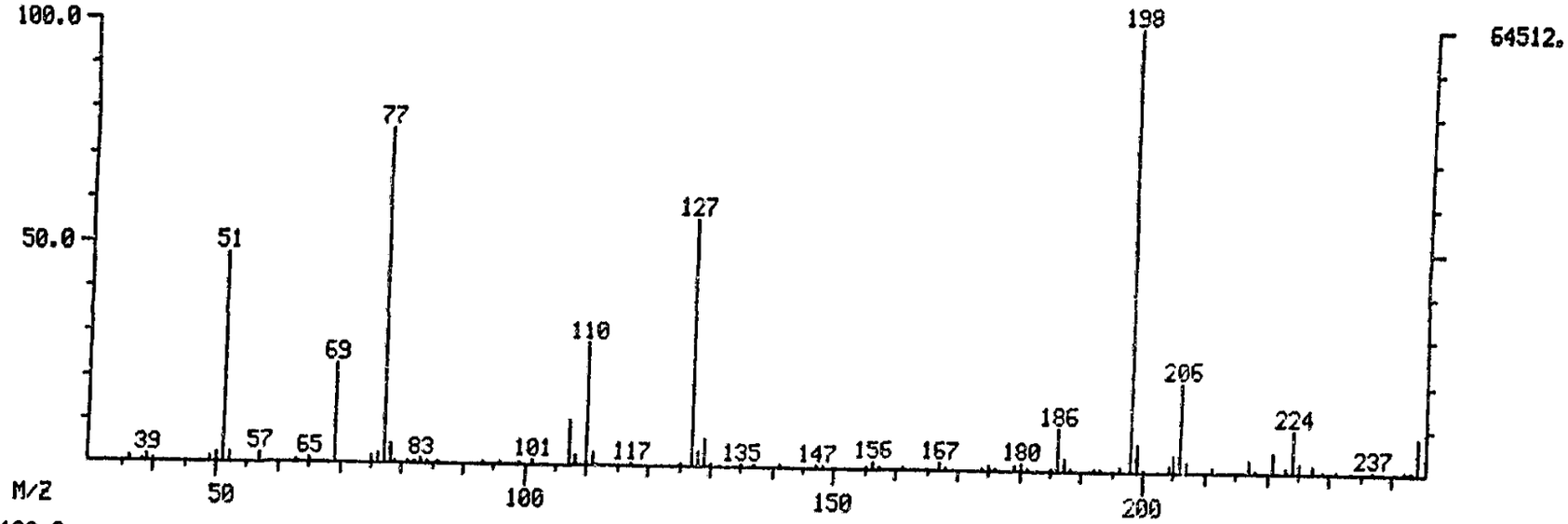
004001

MASS SPECTRUM
01/11/87 10:47:00 + 6:36
SAMPLE: DFTPP
CONDS.: ---
#395 TO #397 SUMMED

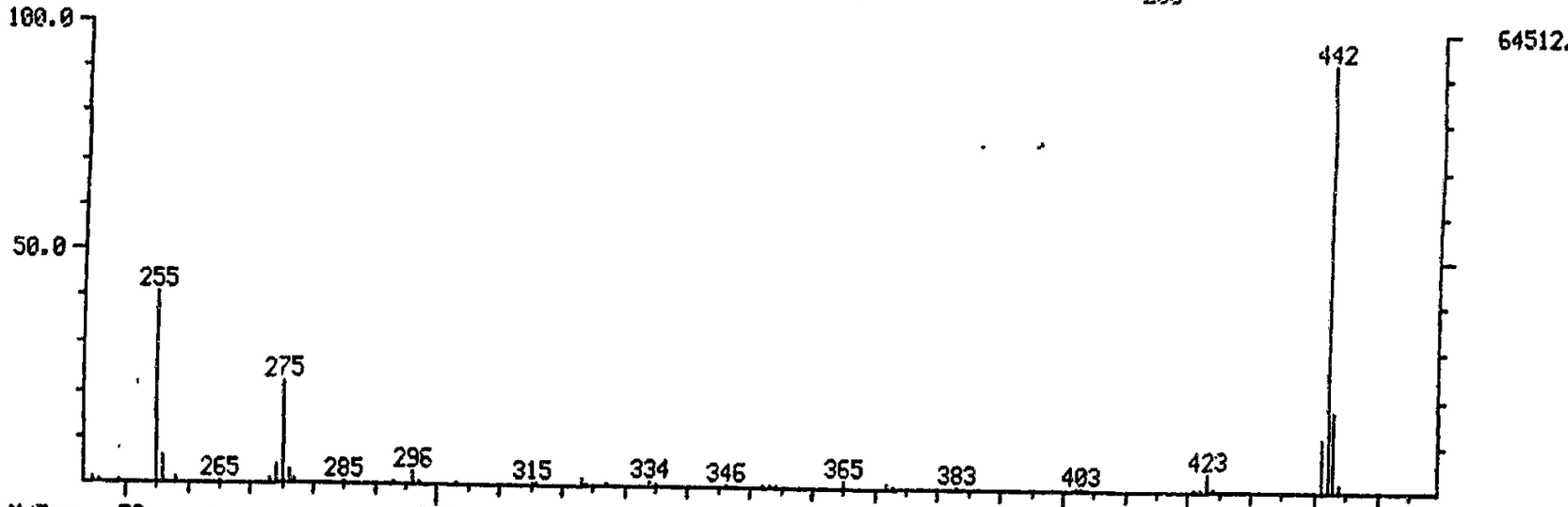
DATA: ES0111C01 #396
CALI: ES0111C01 #3

BASE M/Z: 198
RIC: 462336.

SPECTRIX DC # ----19



DFTPP SPECTRA



NST ID: 4530

INST ID: 4530

SPECTRIX DC # ----15

DFTPP MASS LISTING

Mass List

Data: ES0111C01 # 396

Base m/z: 198

01/11/87 10:47:00 + 6:36

Cali: ES0111C01 # 3

RIC: 462336.

Sample: DFTPP

Mds.: ---

#395 to #397 summed

36	0.00	0.	Minima	Min Inten:		243.
445			Maxima	#	0	
Mass	% RA	Inten.	Mass		% RA	Inten.
36?	0.91	586.	200		0.43	279.
39?	1.93	1244.	204		1.79	1152.
40	0.68	436.	205		3.79	2448.
49	0.94	605.	206		20.26	13072.
50	2.59	1674.	207		2.46	1584.
51	47.42	30592.	211		0.90	579.
52	2.25	1452.	217		2.86	1846.
57	2.25	1454.	218		0.46	295.
63	0.42	269.	221		4.44	2864.
65	1.39	896.	223		0.91	585.
69	22.54	14544.	224		9.91	6392.
75	1.75	1130.	225		2.45	1578.
76	2.25	1454.	227		1.48	955.
77	75.30	48576.	229		0.74	475.
78	4.88	3148.	231		0.51	329.
81	0.71	461.	242		0.48	310.
83	1.16	751.	243		0.52	333.
84	0.56	360.	244		8.20	5288.
86	0.38	246.	245		1.03	665.
101	1.20	776.	246		0.54	346.
107	10.40	6712.	249		0.38	248.
108	2.10	1354.	255		40.43	26080.
110	27.68	17856.	256		5.54	3572.
111	2.86	1846.	258		0.95	611.
117	0.47	303.	273		1.31	847.
127	55.75	35968.	274		3.91	2520.
128	3.58	2308.	275		22.05	14224.
129	6.14	3964.	276		2.76	1778.
130	0.48	311.	277		0.93	603.
135	0.62	400.	293		0.49	317.
137	0.42	271.	296		2.78	1792.
141	0.40	258.	297		0.39	254.
155	0.53	339.	303		0.52	336.
156	1.65	1066.	323		1.89	1220.
161	0.64	416.	334		1.10	712.
167	2.00	1290.	352		0.56	361.
168	0.71	459.	353		0.41	262.
174	0.45	290.	354		0.74	477.
175	1.26	815.	365		1.58	1022.
179	1.10	707.	372		1.04	668.
180	1.62	1048.	402		0.46	295.
181	0.78	502.	403		0.65	422.
185	0.60	387.	421		0.62	397.
186	9.80	6320.	422		0.51	327.
187	2.77	1784.	423		4.14	2668.
192	0.47	300.	424		0.75	482.
193	0.65	420.	441		11.58	7472.
196	1.45	936.	442		93.15	60096.
198	100.00	64512.	443		17.46	11264.
199	6.12	3948.	444		1.52	978.

004003

GC/MS Tuning and Mass Calibration

DECAFLUOROTRIPHENYLPHOSPHINE

Case Number:		Laboratory:		Contract:	
Inst ID:	4530	Sens Date:	01/12/87	Sens Time:	9:32:00
Lab ID:	ES0112C01	Cali Date:		Analyst:	GU

Data release authorized by: _____

M/E	Ion Abundance Criteria	Spec # 390	
51	30 to 60% of mass 198	46.34	
68	less than 2% of mass 69	0.00	(0.00) 1
69	mass 69 relative abundance	22.42	
70	less than 2% of mass 69	0.12	(0.56) 1
127	40 TO 60% of mass 198	55.38	
197	less than 1% of mass 198	0.00	
198	base peak, 100% relative abundance	100.00	
199	5 TO 9% of mass 198	6.34	
275	10 TO 30% of mass 198	21.52	
365	greater than 1% of mass 198	1.29	
441	less than mass 443	9.09	
442	greater than 40% of mass 198	75.61	
443	17 TO 23% of mass 442	14.47	(19.14) 2

1 - value in parenthesis is % of mass 69
2 - value in parenthesis is % of mass 442

004004

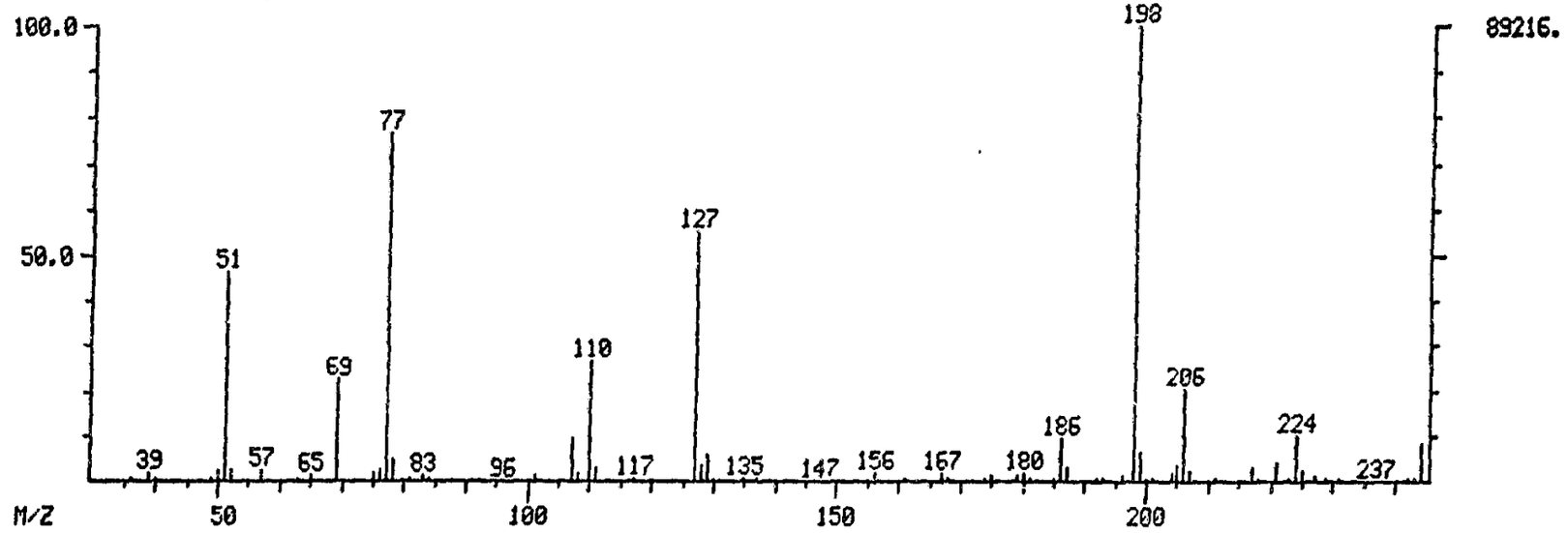
004005

MASS SPECTRUM
01/12/87 9:32:00 + 6:31
SAMPLE: DFTPP
CONDS.: ---
#390 TO #392 SUMMED

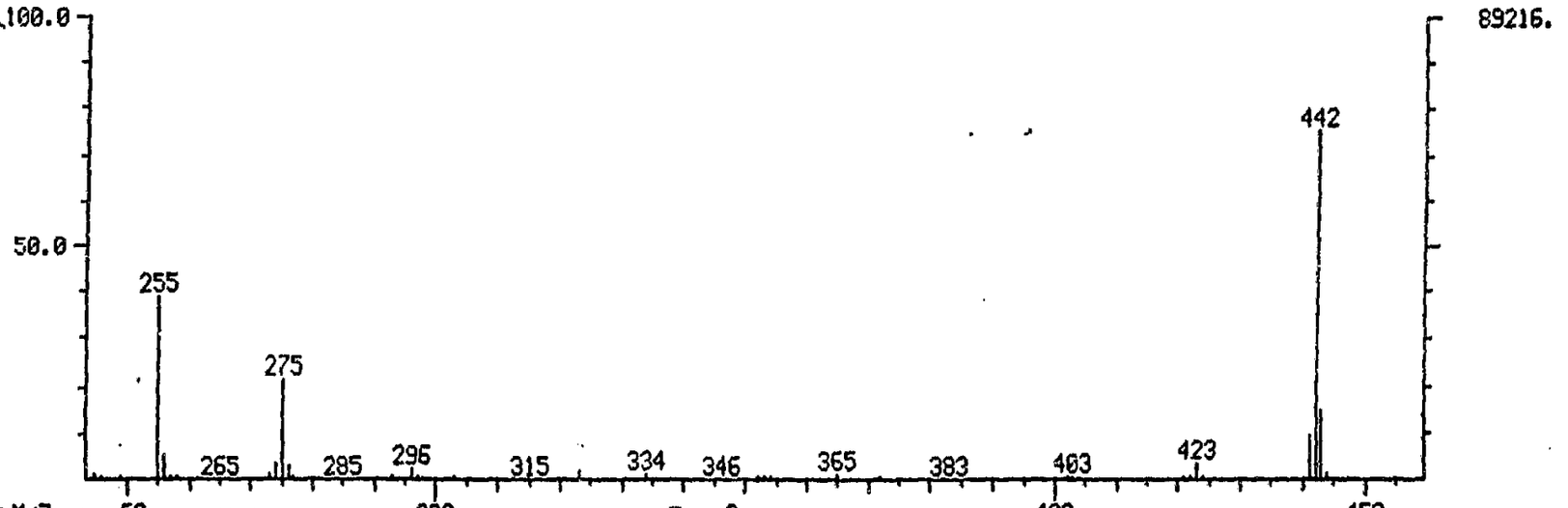
DATA: ES0112C01 #391
CALI: ES0112C01 #3

BASE M/Z: 198
RIC: 598016.

SPECTRIX DC # ----15



DFTPP SPECTRA



INST ID: 4530

004005

INST ID: 4530

Mass List — DFTPP MASS L[illegible]ING — SPECTRIX DC # ----15

01/12/87 9:32:00 + 6:31 — Data: ES0112C01 # 391 — Base m/z: 198

Sample: DFTPP — Cali: ES0112C01 # 3 — RIC: 598016.

Comds.: ---

#390 to #392 summed

36 0.00 0.

444

Mass	% RA	Inten.
36?	0.66	586.
39?	1.72	1536.
40	0.56	500.
49	0.68	611.
50	2.37	2116.
51	46.34	41344.
52	2.20	1962.
57	2.11	1880.
63	0.33	298.
65	1.31	1170.
69	22.42	20000.
75	1.56	1390.
76	2.18	1946.
77	76.61	68352.
78	4.77	4256.
81	0.59	528.
83	1.10	983.
84	0.39	349.
101	0.98	878.
107	9.42	8400.
108	1.97	1762.
110	27.01	24096.
111	2.63	2344.
117	0.32	288.
127	55.38	49408.
128	3.66	3264.
129	5.94	5296.
130	0.42	374.
135	0.52	460.
137	0.32	284.
155	0.40	355.
156	1.50	1338.
161	0.54	483.
167	1.84	1638.
168	0.62	555.
174	0.36	324.
175	1.18	1052.
179	0.94	843.
180	1.49	1330.
181	0.75	671.
185	0.52	468.
186	9.11	8128.
187	2.71	2416.
192	0.34	305.
193	0.55	494.
196	1.35	1204.
198	100.00	89216.
199	6.34	5656.
200	0.39	346.
201	0.29	261.

Minima Maxima — Min Inten: 250.

#	Mass	% RA	Inten.
0	204	1.59	1422.
	205	3.73	3328.
	206	20.09	17920.
	207	2.47	2204.
	211	0.72	639.
	217	2.75	2452.
	218	0.43	382.
	221	4.28	3820.
	223	0.85	761.
	224	9.77	8720.
	225	2.37	2112.
	227	1.23	1096.
	229	0.60	539.
	231	0.39	346.
	242	0.42	374.
	243	0.45	400.
	244	8.13	7256.
	245	0.99	887.
	246	0.48	427.
	249	0.29	263.
	255	38.74	34560.
	256	5.51	4912.
	257	0.35	312.
	258	0.73	649.
	273	1.24	1106.
	274	3.70	3300.
	275	21.52	19200.
	276	2.68	2388.
	277	0.84	746.
	293	0.30	268.
	296	2.56	2288.
	297	0.32	285.
	303	0.40	361.
	323	1.58	1410.
	334	0.88	787.
	352	0.42	375.
	353	0.32	283.
	354	0.58	516.
	365	1.29	1152.
	372	0.84	753.
	402	0.31	279.
	403	0.49	440.
	421	0.42	373.
	422	0.39	351.
	423	3.30	2940.
	424	0.59	522.
	441	9.09	8112.
	442	75.61	67456.
	443	14.47	12912.
	444	1.29	1148.

004006