Sylvia File

Elly
Constantellos
Sanders
Sylvia
Jerke
Morin
Ross

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 2/10/86

SUBJECT: Priority and/or Special Sample(s)/Data Set(s) Missing Due Dates

FROM: [redacted] ✓ YOUNG ___

TO: Curtis Ross, Director
Central Regional Laboratory

DATA SET NAME Gary Lagoons

DATA SET NUMBER SF 2936

LABORATORY SECTION: Inorganic ✓; Organic ___;

TEAM: M/N ___; Metals ✓; Toxics ___; General Organic ___; Bioassay ___; Ames ___; Asbestos ___.

The above subject sample(s)/data set(s) will not be completed by the requested due date 18 Feb 86, due to the following reasons....

ICP is down due to lack of useable torch for normal detection limits

I project that the subject sample analyses will be completed by the following date of 27 Feb 86.

ASSUMPTIONS:

Torch arrives by Friday, 21 Feb and ICP is in working condition after arrival of torch

cc: ~~Maggie Phillips~~ Sylvia Griffin
Affected Team Leader(s):

EPA FORM 1320-6 (REV. 3-76)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED
MAR 2 1986
TAT REG V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF 2936 CERCLIS No. _____

SMO Case No. — Site Name and Location: GARY LAGOONS

Name of Contractor or EPA Laboratory: CRL Data User: TAT

No. of Samples: 1 Date Samples or Data Received: 3-19-86

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

Are basic data forms in? YES ✓ NO ___

Number of samples claimed: 1-CN Number of samples received: 1

Checked by: Sylvia Griffin Date: 3-19-86

Received by Contract Project Management Section: _____ Date: _____

Review Started: _____ Reviewer Signature: _____

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

Copied (xeroxed) by: _____ Date: _____

Mailed to Data User by: Sylvia Griffin Date: 3-19-86

DATA USERS:

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

Data received by: Sally Matz Date: 3/24/86

Q.A. review received by: Sally Matz Date: 3/24/86

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

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

Received by Data Management Coordinator, CRL for File: Date: 3/25/86

Signature: Sylvia Griffin

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF 2936 CERCLIS No. _____

SMO Case No. — Site Name and Location: Gary Lagoons

Name of Contractor or EPA Laboratory: CRL Data User: SF

No. of Samples: 1 Date Samples or Data Received: 3-19-86

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

Are basic data forms in? YES ✓ NO ___

Number of samples claimed: 1- Metals Number of samples received: 1

Checked by: Sylvia Griffin Date: 3-20-86

Received by Contract Project Management Section: _____ Date: _____

Review Started: _____ Reviewer Signature: _____

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

Copied (xeroxed) by: _____ Date: _____

Mailed to Data User by: Sylvia Griffin Date: 3-20-86

DATA USERS:

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

Data received by: Anthony Kuth Date: 3-24-86

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

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

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

Received by Data Management Coordinator, CRL for File: Date: 3/25/86

Signature: Melissa Feliciano

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF 2936 CERCLIS No. _____

SMO Case No. — Site Name and Location: GARY LAGOONS

Name of Contractor or EPA Laboratory: CRL Data User: SF

No. of Samples: 1 Date Samples or Data Received: 3-19-86

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

Are basic data forms in? YES ✓ NO ___

Number of samples claimed: 1-CN Number of samples received: 1

Checked by: Sylvia Griffin Date: 3-19-86

Received by Contract Project Management Section: _____ Date: _____

Review Started: _____ Reviewer Signature: _____

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

Copied (xeroxed) by: _____ Date: _____

Mailed to Data User by: Sylvia Griffin Date: 3-19-86

DATA USERS:

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

Data received by: Anthony Walters Date: 3-20-86

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

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

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

Received by Data Management Coordinator, CRL for File: Date: 3/24/86

Signature: Sylvia Felicano

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

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MAR 14 1986
TAT REG V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF 2936 CERCLIS No. —

SMO Case No. — Site Name and Location: Gary Lagoon SM

Name of Contractor or EPA Laboratory: CRL Data User: TAT

No. of Samples: 2 Date Samples or Data Received: 3-13-86

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

Are basic data forms in? YES ✓ NO___

Number of samples claimed: 2 Number of samples received: 2

Checked by: Sylvia Griffin Date: 3-13-86

Received by Contract Project Management Section: _____ Date: _____

Review Started: _____ Reviewer Signature: _____

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

Copied (xeroxed) by: _____ Date: _____

Mailed to Data User by: Sylvia Griffin Date: 3-13-86

DATA USERS:

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

Data received by: Sally Matz Date: 3/14/86

Q.A. review received by: Sally Matz Date: 3/14/86

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

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

Received by Data Management Coordinator, CRL for File: Date: 3/20/86
Signature: S. Griffin

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED
MAR 12 1986
TAT REG V
SM

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF2936 CERCLIS No. 1

SMO Case No. — Site Name and Location: Gary Lagoons

Name of Contractor or EPA Laboratory: CRL Data User: TAT

No. of Samples: 1 Date Samples or Data Received: 3-6-86

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

Are basic data forms in? YES___ NO___

Number of samples claimed: 1 Number of samples received: 1

Checked by: Sylvia Griffin Date: 3-6-86

Received by Contract Project Management Section: _____ Date: _____

Review Started: _____ Reviewer Signature: _____

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

Copied (xeroxed) by: _____ Date: _____

Mailed to Data User by: Sylvia Griffin Date: 3-6-86

DATA USERS:

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

Data received by: Sally Matz Date: 3/14/86

Q.A. review received by: Sally Matz Date: 3/14/86

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

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

Received by Data Management Coordinator, CRL for File: Date: 3/20/86

Signature: S Griffin

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF 2936 CERCLIS No. —

SMO Case No. — Site Name and Location: Gary Lagoon

Name of Contractor or EPA Laboratory: CRL Data User: SF

No. of Samples: 2/1 Date Samples or Data Received: 3-13-86

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

Are basic data forms in? YES ✓ NO___

Number of samples claimed: 2 Number of samples received: 2

Checked by: Sylvia Griffin Date: 3-13-86

Received by Contract Project Management Section: _____ Date: _____

Review Started: _____ Reviewer Signature: _____

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

Copied (xeroxed) by: _____ Date: _____

Mailed to Data User by: Sylvia Griffin Date: 3-13-86

DATA USERS:

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

Data received by: [signature] Date: 3-17-86

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

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

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

Received by Data Management Coordinator, CRL for File: Date: 3/18/86

Signature: Sylvia Griffin

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

ESD/Central Regional Laboratory
DATA TRACKING FORM FOR CONTRACT SAMPLES

CRL Data Set No. SF 2936 CERCLIS No. _____

SMO Case No. — Site Name and Location: Gary Lagoons

Name of Contractor or EPA Laboratory: CRL Data User: SF

No. of Samples: 1 Date Samples or Data Received: 3-6-86

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

Are basic data forms in? YES ✓ NO ___

Number of samples claimed: 1 Number of samples received: 1

Checked by: Sylvia Griffin Date: 3-6-86

Received by Contract Project Management Section: _____ Date: _____

Review Started: _____ Reviewer Signature: _____

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

Copied (xeroxed) by: _____ Date: _____

Mailed to Data User by: Sylvia Griffin Date: 3-6-86

DATA USERS:

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

Data received by: [signature] Date: 3-11-86

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

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

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

Received by Data Management Coordinator, CRL for File: Date: 3/12/86
Signature: Sylvia Griffin

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Priority and/or Special Sample(s)/Data Set(s) Missing Due Dates

FROM: [redacted] J Tika ✓ YOUNG ___

TO: Curtis Ross, Director
Central Regional Laboratory

DATA SET NAME Gary Lagrous

DATA SET NUMBER SF2936

LABORATORY SECTION: Inorganic ___; Organic ___;

TEAM: M/N ___; Metals ✓; Toxics ___; General Organic ___; Bioassay ___; Ames ___; Asbestos ___.

The above subject sample(s)/data set(s) will not be completed by the requested due date 18 Feb 86, due to the following reasons....

Reanalysis was required after first run after ICP became operational

I project that the subject sample analyses will be completed by the following date of 7 March 86.

ASSUMPTIONS: present digestion is satisfactory

cc: ~~Marsha Phillips~~ Sylvia Griffin
Affected Team Leader(s):

EPA FORM 1320-6 (REV. 3-76)

KN

C46A00
OSC-Simes

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: PESTICIDES & PCB'S

DIVISION/BRANCH SUPERFUND SPILL RESP. SECTION/IAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/26/86 DUE DATE 2/13/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS GARYIN PRIORITY N CONTRACTOR CRL.

CRL LOG NUMBER 86CY03	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS POLYCHLORINATED BIPHENYLS MG/KG (DRY) PES211422	SEDIMENTS SOLIDS CHLORINATED PESTICIDES MG/KG (DRY) PES211322	SEDIMENTS SOLIDS OIL AND GREASE MG/KG (DRY) PES214322
576	5-88412	X		
577	5-88413	X	X	

CRL V.2; 3/85

SUPERFUND
SPILL RESP. SECTION/TAT

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH _____ SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/16/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY 2 CONTRACTOR CRL

C46A00
OSC-Simes

CRL LOG NUMBER 86CY03	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX17564	WATER ANN ORGANICS SCAN UG/L TOX17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX215622	SEDIMENTS SOLIDS ANN ORGANICS SCAN MG/KG (DRY) TOX215722
577	5-98413			X	X

CRL V.2; 3/85

(9)

CALACO
OSC-Simes

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH SUPERFUND SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/9/86 DUE DATE 2/18/86

PO NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS CHEMICAL OXYGEN DEMAND MG COD/KG (DRY) MIN83327	SEDIMENTS SOLIDS MERCURY MG HG/KG (DRY) MIN84728	SEDIMENTS SOLIDS PHENOLICS MG PHENOL/KG (DRY) MIN88829	SEDIMENTS SOLIDS CYANIDE MG CN/KG (DRY) MIN88930
86C403					
578	5-84450				X

(5)

C46A00
OSC-SIMES

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM METALS

DIVISION/BRANCH SUPERFUND SPILL RESPONSE SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

96CY03

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL ICAP MG/KG (DRY WT.) MET413	SEDIMENTS SOLIDS AS MG/KG (DRY WT.) MET403	SEDIMENTS SOLIDS SB MG/KG (DRY WT.) MET420B	SEDIMENTS SOLIDS SE MG/KG (DRY WT.) MET421B	SEDIMENTS SOLIDS TL MG/KG (DRY WT.) MET422B
578	5-88450	X	X	X	X	X

CRL V.2; 3/85

SUPERFUND

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

(6)

CALACO
OSC-SIMES

DIVISION/BRANCH SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S PR MG/KG (DRY WT.) MET4193
86C903		
578	5-88450	X

C46A00

(8)

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH SUPERFUND (TAT) SPILL RESPONSE SECTION SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL SOLIDS % MIN45423	SEDIMENTS SOLIDS TOTAL VOLATILE SOLIDS % OF DRY WT. MIN45524	SEDIMENTS SOLIDS AMMONIA MG N/KG (DRY) MIN42925	SEDIMENTS SOLIDS TOTAL KJELDAHL NITROGEN MG N/KG (DRY) MIN43025	SEDIMENTS SOLIDS TOTAL PHOSPHORUS MG P/KG (DRY) MIN43126
86CY03						
S76	5-88412	X				
S77	5-88413	X				
S78	5-88450	X				

CRL V.2: 3/85

Office of Enforcement

CHAIN OF CUSTODY RECORD

Chicago, Illinois 60604

PROJ. NO.	PROJECT NAME
86CY03	GARY LAGOONS

SAMPLERS: (Signature) [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	METALS/CYANIDE	PCB ONLY	PCB/PESTICIDE/NOT ACIDS/BASE/NEUTRALS				REMARKS EPA TAG #
576	12/4	1410	X		BANK SOUTHERN LAGOON	1-9oz.		X					5-88412
577	12/4	1420	X		BOTTOM OF NW CORNER LARGE LAGOON	1-8oz.			X				5-88413
578	12/4	1440	X		W + S LAGOONS	1-8oz.	X						5-88450

Superfund 2936

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
[signature]	1/16/86 1400	[signature]			
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature) [signature]	Date / Time 1/16/86 1554	Received for Laboratory by: (Signature) [signature]	Date / Time 1/16/86 3:55pm	Remarks CRL	

Distribution: White — Accompanies Shipment; Pink — Coordinator Field Files; Yellow — Laboratory File

5- 9947

(2)

C46A00
OSC-Simes

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: PESTICIDES & PCB'S

DIVISION/BRANCH SUPERFUND SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/13/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS GARY, IN PRIORITY N CONTRACTOR CRL.

CRL LOG NUMBER 86CY03	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS POLYCHLORINATED BIPHENYLS MG/KG (DRY) PES211422	SEDIMENTS SOLIDS CHLORINATED PESTICIDES MG/KG (DRY) PES211322	SEDIMENTS SOLIDS OIL AND GREASE MG/KG (DRY) PES214322
576	5-88412	X		
577	5-88413	X	X	

CRL V.2; 3/85

(1)

C46A00
OSC-Simes

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER Y995 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX17564	WATER ARN ORGANICS SCAN UG/L TOX17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX215622	SEDIMENTS SOLIDS ARN ORGANICS SCAN MG/KG (DRY) TOX215722
86CY03					
577	5-98413			X	X

CRL V.2; 3/85

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CALAMO
OSC-Simes

SUPERFUND
SPILL RESP. SECTION/TAT

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/6/86 DUE DATE 2/18/86

CU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS CHEMICAL OXYGEN DEMAND MG COD/KG (DRY)	SEDIMENTS SOLIDS MERCURY MG HG/KG (DRY)	SEDIMENTS SOLIDS PHENOLICS MG PHENOL/KG (DRY)	SEDIMENTS SOLIDS CYANIDE MG CN/KG (DRY)
86C403		MIN43327	MIN44728	MIN44829	MIN44930
578	5-88450				X

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

(5)

C4L6A00
OSC-SIMES

DIVISION/BRANCH SUPERFUND SPILL RESPONSE SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL ICAP MG/KG (DRY WT.) MET413	SEDIMENTS SOLIDS AS MG/KG (DRY WT.) MET463	SEDIMENTS SOLIDS SB MG/KG (DRY WT.) MET4203	SEDIMENTS SOLIDS SE MG/KG (DRY WT.) MET4213	SEDIMENTS SOLIDS TL MG/KG (DRY WT.) MET4223
86C403						
578	5-88450	X	X	X	X	X

CRL V.2; 3/85

(6)

CALACO
OSC-SIMES

SUPERFUND

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

DIVISION/BRANCH SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLID S PB MG/KG (DRY WT.) MET4193
86CY03		
578	5-88450	X

C46AUU

(8)

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH SUPERFUND (TAT) SPILL RESPONSE SECTION SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER 1905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL SOLIDS % MIN45423	SEDIMENTS SOLIDS TOTAL VOLATILE SOLIDS % OF DRY WT. MIN45524	SEDIMENTS SOLIDS AMMONIA MG N/KG (DRY) MIN42925	SEDIMENTS SOLIDS TOTAL KJELDAHL NITROGEN MG N/KG (DRY) MIN43025	SEDIMENTS SOLIDS TOTAL PHOSPHORUS MG P/KG (DRY) MIN43126
86CYU3						
S76	5-88412	X				
S77	5-88413	X				
S78	5-88450	X				

CRL V.2; 3/85

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

RECEIVED
FEB 20 1986
TAT REG V

DATA TRACKING - FORM I

CRL Data Set No. SF 2936 ERRIS No. _____

SMO Case No. — Site Name: Gary Lagoon

Name of Laboratory: CRL Data User: TAT

No. of Samples: 1 Date Samples Received: 2-18-86

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

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 1 Number of samples received: 1
7. Checked by: Sylvia Griffin Date: 2-18-86
8. Received by Contract Project Management Section: _____ Date: _____
9. Review Started: _____ Reviewer Signature: _____
10. Total time spent on review: _____ Date review completed: _____
11. Copied (xeroxed) by: _____ Date: _____
12. Mailed to Data User by: Sylvia Griffin Date: 2-18-86

TO DATA USERS:

Please fill in the blanks and return this form to:

VOA

Charles Elly, DPO, Region V, SSCRL

13. Data received by: Sally Matz Date: 2/21/86
14. Q.A. review received by: Sally Matz Date: 2/21/86
15. Received by CRL - CPM Section for file by: Nidia Fuliano
Date: 2/24/86

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I

CRL Data Set No. SF2936 ERRIS No. _____

SMO Case No. — Site Name: Gary Lagoon

Name of Laboratory: CRL Data User: SF

No. of Samples: 1 Date Samples Received: 2-18-86

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

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 1 Number of samples received: 1
7. Checked by: Sylvia Griffin Date: 2-18-86
8. Received by Contract Project Management Section: _____ Date: _____
9. Review Started: _____ Reviewer Signature: _____
10. Total time spent on review: _____ Date review completed: _____
11. Copied (xeroxed) by: _____ Date: _____
12. Mailed to Data User by: Sylvia Griffin Date: 2-18-86

TO DATA USERS:

VOA

Please fill in the blanks and return this form to:

Charles Elly, DPO, Region V, SSCRL

13. Data received by: Anthony Hunter Date: 2-20-86
14. Q.A. review received by: CRL Date: _____
15. Received by CRL - CPM Section for file by: Sylvia Griffin Date: 2/27/86

REGION V, U.S. ENVIRONMENTAL PROTECTION AGENCY
ESD/Central Regional Laboratory

DATA TRACKING - FORM I

CRL Data Set No. SF 2936 ERRIS No. _____

SMO Case No. — Site Name: GARY LAGOONS

Name of Laboratory: CRL Data User: SF

No. of Samples: 3 Date Samples Received: 2-6-86

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

5. Are basic data forms in? YES ✓ NO ___
6. Number of samples claimed: 3 Number of samples received: 3
7. Checked by: Sylvia Griffin Date: 2-10-86
8. Received by Contract Project Management Section: _____ Date: _____
9. Review Started: _____ Reviewer Signature: _____
10. Total time spent on review: _____ Date review completed: _____
11. Copied (xeroxed) by: _____ Date: _____
12. Mailed to Data User by: Sylvia Griffin Date: 2-10-86

TO DATA USERS:

% Solids

Please fill in the blanks and return this form to:

Charles Elly, DPO, Region V, SSCRL

13. Data received by: [illegible] Date: 2-12-86
14. Q.A. review received by: CRL Date: _____
15. Received by CRL - CPM Section for file by: _____

Date: _____

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 2-6-86

SUBJECT: Precision and Accuracy of Analyses for Data Set SF 2936
Site: GARY LAGOONS.

FROM: Steve Parker,
CRL QC Coordinator

TO: Data User: _____

The Region V Central Regional Laboratory has completed its analyses of 3 (number) SEDIMENTS (matrix type) samples for the parameters listed on the attached sheet. The discrete values reported on the result forms should be considered to be of the precision and accuracy levels listed.

PRECISION is a measure of reproducibility or the closeness with which individual measurements of the same property, under similar conditions agree with each other. It is expressed as the relative percent difference (RPD) or the absolute concentration difference (R') between duplicate analyses. The limit acceptable at the time of analysis is stated. QC data within these limits indicate that the analysis was in control for that set of data.

ACCURACY is a measure of the closeness of an individual measurement to the expected value. It can be expressed as percent recovery of a known spike or standard concentration, or as percent bias which is the deviation from the true value. The limits applicable at the time of analysis are stated. A 95% confidence interval means that 95% of the time, percent recovery will fall between those limts.

Attachment

TRANSMITTED BY

FEB 10 1986

U S EPA CENTRAL REGIONAL LAB
536 S CLARK STREET
CHICAGO ILLINOIS 60605

PRECISION AND ACCURACY STATEMENT

Data Set: SF 2936

Matrix: SEDIMENT SLUDGE

Site Name: GARY LAGOONS

	PRECISION			ACCURACY		
Parameter	RPD R'	Limit	Method of Quality Control	% Recovery % Bias	Limit	Method of Quality Control
% SOLIDS	1%	<10%	DUPLICATE SAMPLE			

COMMENT: ACCURACY WAS CHECK WITH 10, 20, 50 g WEIGHTS = 100.0% REC. BLANK CHECKED TO EQUIVALENT OF 0.02% SOLIDS.

QC FLAGS:

1/30/86 8

C46A00
SK-88

8
2-6-80

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH SUPERFUND (TAT) SPILL RESPONSE SECTION SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER V905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL SOLIDS % MIN45423	SEDIMENTS SOLIDS TOTAL VOLATILE SOLIDS % OF DRY WT. MIN45524	SEDIMENTS SOLIDS AMMONIA MG N/KG (DRY) MIN42925	SEDIMENTS SOLIDS TOTAL KJELDAHL NITROGEN MG N/KG (DRY) MIN43025	SEDIMENTS SOLIDS TOTAL PHOSPHORUS MG P/KG (DRY) MIN43126
86CY03						
S76	5-88412	X 71.0				
S77	5-88413	X 71.0				
S78	5-88450	X 58.5				
		1/23/86 JFP				

CRL V.2; 3/85

COMPUTATION SHEET

C46A00 10TFA05WUZZ

OFFICE	CRL	SF2936	Gary Lagoon	FILE NO.
SUBJECT	% Solids			
COMPUTATION				
COMPUTED BY	JFP 1/22/86	CHECKED BY 1/22/86	1/23/86	DATE
PAGE	OF	PAGES		

(1) Dish/ Sample #	(2) dish wt.	(3) wet dish + sample	(4) dry dish + sample	(5) wet sample wt.	(6) dry sample wt.	(7) % solids	(8)	(9)	(10)
10g Balance	Check	10.0003	50gWT/50.0005						~~RPD~~ Actual
20g Balance	ck-	20.0003					Limits		
8-578	65.0865	~~75~~ 74.9705	70.8722	9.8840	5.7857	58.54	Dup ±	10%	1.37RPD
85-578Dup	69.8141	76.0754	73.5303	6.2613	3.7162	59.35			
3-BLK	73.5100	—	73.5092				Blank Δ	≤0.5mg	-0.8mg*
96-576	73.4951	79.5795	77.8134	6.0844	4.3183	70.97			
5-577	80.5232	85.8099	84.2745	5.2867	3.7513	70.96			

* This difference is less than 0.5mg and should not affect the data since is a negative difference.

GPO 825129

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 2-17-86

SUBJECT: Precision and Accuracy of Analyses for Data Set SF 2936
Site: GARY LAGOON

FROM: Steve Parker,
CRL QC Coordinator

TO: Data User: _____

2/24/86
Kevin,
Correct this for % solids
yr
2/25/86
Corrected
KBB

The Region V Central Regional Laboratory has com
_____ (number) SEDIMENT (ma
the parameters listed on the attached sheet. The
on the result forms should be considered to be
accuracy levels listed.

PRECISION is a measure of reproducibility or th
individual measurements of the same property, u
agree with each other. It is expressed as the rel
(RPD) or the absolute concentration difference
analyses. The limit acceptable at the time of
data within these limits indicate that the analysis was in control for
that set of data.

ACCURACY is a measure of the closeness of an individual measurement to the expected value. It can be expressed as percent recovery of a known spike or standard concentration, or as percent bias which is the deviation from the true value. The limits applicable at the time of analysis are stated. A 95% confidence interval means that 95% of the time, percent recovery will fall between those limts.

Attachment

TRANSMITTED BY
FEB 18 1986
U S EPA CENTRAL REGIONAL LAB
536 S CLARK STREET
CHICAGO ILLINOIS 60605

DATA RETRANSMITTED
TO CORRECT FOR
% SOLIDS
2-25-86

PRECISION AND ACCURACY STATEMENT

Data Set: SF 2936

Matrix: SEDIMENTS

Site Name: GARY LAGOON

	PRECISION			ACCURACY		
Parameter	RPD R'	Limit	Method of Quality Control	% Recovery % Bias	Limit	Method of Quality Control
VOA	NOT AVAILABLE			98-106%	82-115	SURROGATE RECOVERIES

COMMENT:

QC FLAGS: INTERFERENCES MADE IT IMPOSSIBLE TO DETERMINE SURROGATE RECOVERIES FOR THE SAMPLE. PRECISION AND ACCURACY IS NOT AVAILABLE FOR SEDIMENTS AT THIS TIME AND THE QUANTITATION SHOULD BE CONSIDERED AS APPROXIMATE.

VOLATILE ORGANIC ANALYSIS DATA SHEET
U.S. EPA - Region V, Central Regional Laboratory

Study Name: GARY LAGOON
Sample # : 86CY03$77

Data Set #: SF-2936
Matrix : SEDIMENT

	CAS #	Compounds	Concentration (UG/KG)	
1.	74-87-3	Chloromethane	120	U
2.	74-83-9	Bromomethane	120	U
3.	75-01-4	Vinyl Chloride	120	U
4.	75-00-3	Chloroethane	17	U
5.	75-09-2	Methylene Chloride	12	U
6.	107-02-8	Acrolein	1200	U
7.	67-64-1	Acetone	860	U
8.	107-37-1	Acrylonitrile	580	U
9.	75-15-0	Carbon Disulfide	35	U
10.	75-35-4	1,1-Dichloroethene	17	U
11.	75-35-3	1,1-Dichloroethane	17	U
12.	156-60-5	trans-1,2-Dichloroethene	17	U
13.	67-66-3	Chloroform	17	U
14.	78-93-3	2-Butanone	580	U
15.	107-06-2	1,2-Dichloroethane	17	U
16.	71-55-6	1,1,1-Trichloroethane	17	U
17.	56-23-5	Carbon Tetrachloride	17	U
18.	108-05-4	Vinyl Acetate	170	U
19.	75-27-4	Bromodichloromethane	17	U
20.	78-87-5	1,2-Dichloropropane	17	U
21.	10061-02-6	trans-1,3-Dichloropropene	12	U
22.	79-01-6	Trichloroethene	17	U
23.	71-43-2	Benzene	17	U
24.	124-48-1	Dibromochloromethane	17	U
25.	79-00-5	1,1,2-Trichloroethane	17	U
26.	10061-01-5	cis-1,3-Dichloropropene	23	U
27.	110-75-8	2-Chloroethyl Vinyl Ether	17	U
28.	75-25-2	Bromoform	17	U
29.	108-10-1	4-Methyl-2-pentanone	35	U
30.	519-78-6	2-Hexanone	580	U
31.	127-18-4	Tetrachloroethene	17	U
32.	79-34-5	1,1,2,2-Tetrachloroethane	17	U
33.	108-88-3	Toluene	17	U
34.	108-90-7	Chlorobenzene	17	U
35.	100-41-4	Ethylbenzene	17	U
36.	100-42-5	Styrene	12	U
37.	108-38-3	m-Xylene	1800	
38.		o/p-Xylene (total)	2500	

Data Qualifiers:

U -Compound was analyzed for but not detected. The value reported is the method detection limit for reagent water.

SLC -Suspected Laboratory Contaminant.

SFC -Suspected Field Contaminant.

Note: Results are on dry weight basis. 2/28/86 [illegible]

VOLATILE ORGANIC ANALYSIS DATA SHEET
U.S. EPA - Region V, Central Regional Laboratory

Study Name: GARY LAGOON
Sample # : 86CY03#77

Data Set #: SF-2936
Matrix : SEDIMENT

TENTATIVELY IDENTIFIED COMPOUNDS	ESTIMATED CONC.(UG/KG)
METHYL CYCLOHEXANE	4100
MIXED ALKANES	62000

Note: Results are on dry weight basis. 2/20/86 [illegible]

(1)

CA6A00
OSC-Simes

SUPERFUND
SPILL RESP. SECTION/TAT

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH: SPILL RESP. SECTION/TAT SAMPLING DATE: 12/4/85 LAB ARRIVAL DATE: 1/16/86 DUE DATE: 2/18/86

DU NUMBER: Y905 DATASET NUMBER: 2936 STUDY: GARY LAGOONS PRIORITY: N CONTRACTOR: CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX17564	WATER ANA ORGANICS SCAN UG/L TOX17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX215622	SEDIMENTS SOLIDS ANA ORGANICS SCAN MG/KG (DRY) TOX215722
96CY03					
577	5-34413	X Reviewed by 2/12/86		X K Bolyn 2/5/86 Reviewed by 2/12/86 2/13/86 2-17-86	X

Note: No field blank was sent with this data set.
Y Flyn
2/13/86

CRL V.2; 3/85

QUALITY CONTROL SHEET
TOXIC ORGANICS SECTION: VOLATILES

STUDY NAME GARY LAGOON
STUDY NUMBER SF-2936

DATE 2/5/86

ACTIVITY NUMBER C46A00
ANALYST K BOLGER

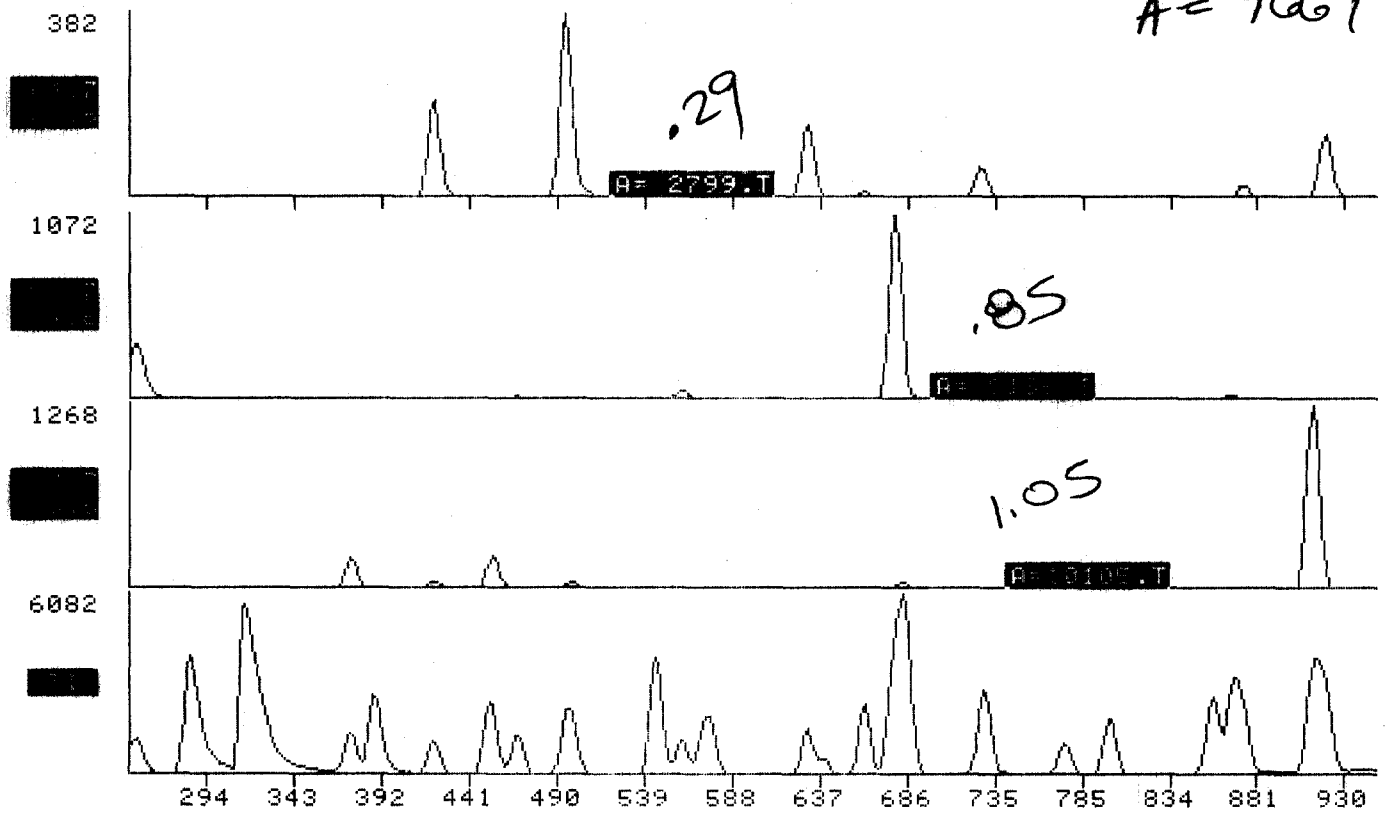
FRN	SAMPLE NUMBER	MATRIX	AMOUNT PURGED	DILUTIONS	FINAL VOL. (AFT. DILU)	INTERNAL STD CONC. (13.4 ng/l) BCM BP AREA	BCP BP AREA	DCB BP AREA	SURROGATES RECOVERY % D4-1,2-DCE	D6-Benzene	D8-Toluene
9903	LABBLANK	WATER	15ML	NONE	15ML	4892	9762	6744	98	104	106
9908	VOLSTD	↓	15ML	NONE	15ML	4946	9669	6960	—	—	—
9909	86CY03$77	SEDIMENT	1.3g	1.3g/15ML	~15ML	5008	9774	*	*	*	*

NO DUPLICATE MATRIX SPIKES RUN
DUE to high LEVEL OF CONTAMINANTS
to GC/MS SYSTEM

* UNABLE TO DETERMINE DUE TO INTERFERENCE
FROM SAMPLE CONSTITUENTS

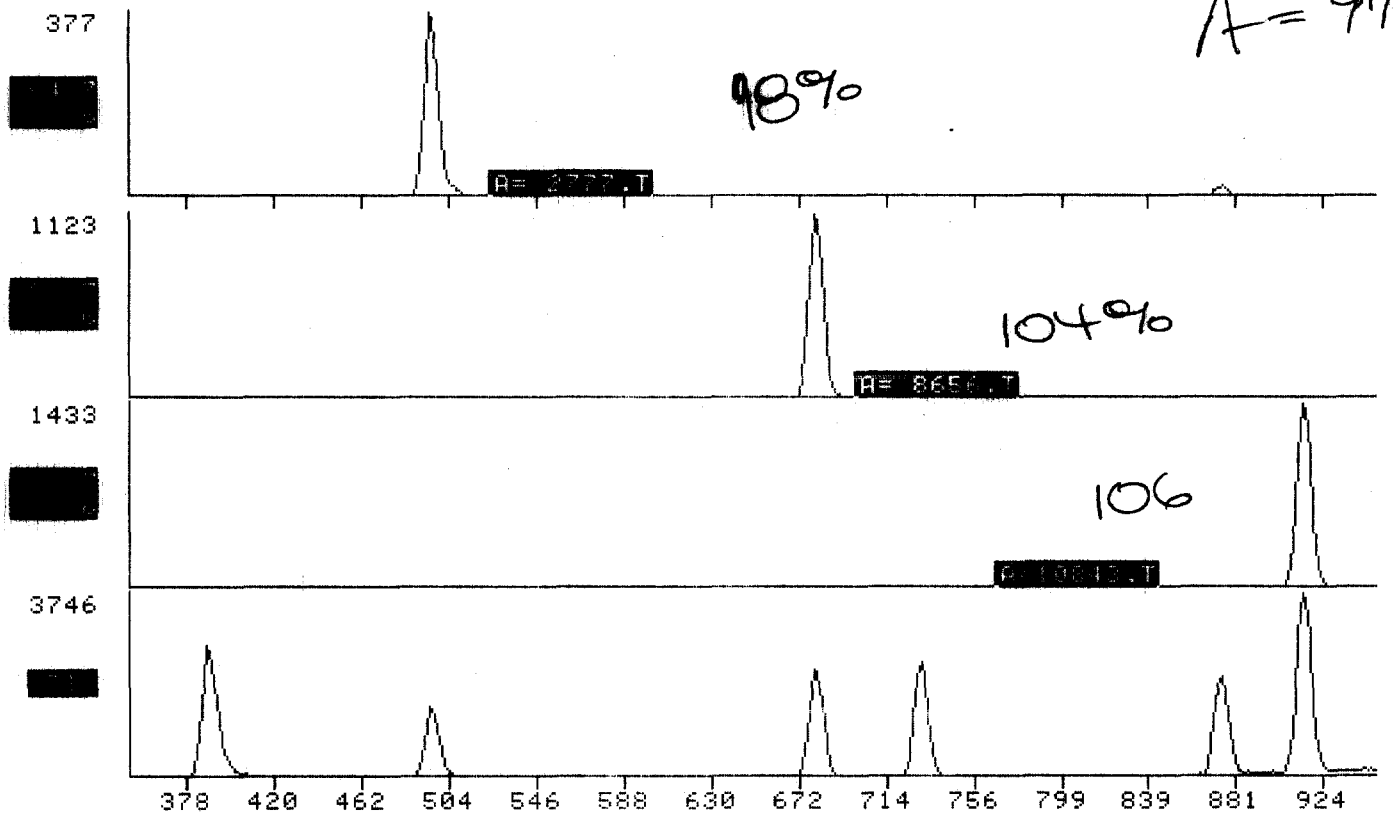
NAME VOLSTD W/D 2/5/86 FRN 9908

A= 9669



NAME LABBLANK 2/5/86 FRN 9903

A = 9762



QUALITY CONTROL SHEET
TOXIC ORGANIC SECTION: VOLATILES

STUDY NAME Gary Lagoon ACTIVITY NUMBER C46A00 ANALYST K Bolger

STUDY NUMBER SF-2936

SUMMARY: BLANKS DATA

#	FRN	DATE	BLANK TYPE	COMPOUNDS DETECTED	ESTIMATED CONCENTRATION (ppb)	STD USED
1.	9903	2/5/86	LABBLANK	No compounds detected	0	BCP
2.						
3.						
4.				No Field BLANK Enclosed since set consists solely of single sediment/sludge sample		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 3/7/86

SUBJECT: SF - 2936, 2963

FROM: T. C. Joseph

TO: G. Frye

SF - 2936 CONSISTS OF 2 SEDIMENT SAMPLES.

SF - 2963 CONSISTS OF 5 WATER + 4 SEDIMENT SAMPLES.

SAMPLE PREPARATION IS DONE ~~TOGETH~~ AT THE SAME TIME FOR ALL SEDIMENT SAMPLES.

SAMPLE PREP: KEN GUNTER, PAT CHURILLA

G C. : T C. Joseph

RESULTS: SF - 2936 SAMPLES SHOWED THE presence of AROCLOR 1242. SF - 2963 SAMPLES DID NOT SHOW ANY PCB ABOVE DETECTION LIMIT.

QC: spk RECOVERY IS OK FOR SEDIMENT spk.
WATER Spk, Duplicate ANALYSIS IS LOW (51.6%)
OTHER spk, PCB spk is ok (89.7%)

NOTE: QC TRACE ~~Spk DATA for~~ SEDIMENT spk IS WITH SF - 2963 FOLDER.

EPA FORM 1320-6 (REV. 3-76)

ATTACHMENT 7

Form # 4

ENVIRONMENTAL PROTECTION AGENCY, REGION V BASIC DATA FORM:

Group #: _____ Data Set: SF 2936 to SF 2963 Sample Type: Sediment

ISTD-Conc.:

Sample #	Sample Amount	Final Volume	Solvent Extract. 1:1 Hexane/Acetone	Dilution with Hexane 1 st.	2 nd.	3 rd.	Vol. Conc. Extr.	Volume to Pest.	Toxic	F.V
86CY03 $76	10g		200ml	1ML→5	.5→10ML		10ml	10ml	—	1000 ML
* 86CY03 $77	10g			.5→10	.5→5				—	2000
86SB42 $04	10g			1ML→5					—	50
$05	10g			"					—	50
$06	10g			"					—	50
$07	10g			.5→10ML					—	200
PCB SPK	~~10g~~ 5g KG			1ML→5					—	50
PCB SPK DUP	~~10g~~ 5g KG			1→5					—	50
METHOD Blank 2936	—								—	10

Date Extracted: 2/4/86 DATE EVAPORATED: 2/5/86 Chemist: K Gunter Toxic Ext. Received by Gen. Org. Ext. " "

Analytical Condition:

GC Conditions:

Column 1) 3%-2100 on Supercoport 10 x 1/8" /1.95%
2) 1.5% SP-2250/ SP-2401 "

T1 _____ Hold _____ Min.

T2 _____ _____ Min.

Rate: _____ C

Carrier Gas: _____; Flow rate: _____

GC Operator & Date: _____

MS Conditions:

Mass Range: _____ to _____

Scan Cycle: _____

High Voltage: _____

Confirmation: _____

Operator & Date: _____

Sample Clean-up and Remarks:

PCB SPK Aroclor 1254 2.34 mg/kg group 2: 3/15/85

All samples were conc. and eluted through florisil column with 1% Ethyl Ether / hexane

Note*: Sample 86CY03 $77 after florisil clean up was concentrated to 5ml, which appeared viscous and oil like

3/7/86

DATA SETS: SF-2936, SF-2963.

AQC P. 1

	CONC. of AROCLOR (PPM)				CONC. of PEST.
	1242	1248	1254	1260	
SF - 2936 MB	<.05	<.05	<.05	<.05	<.05

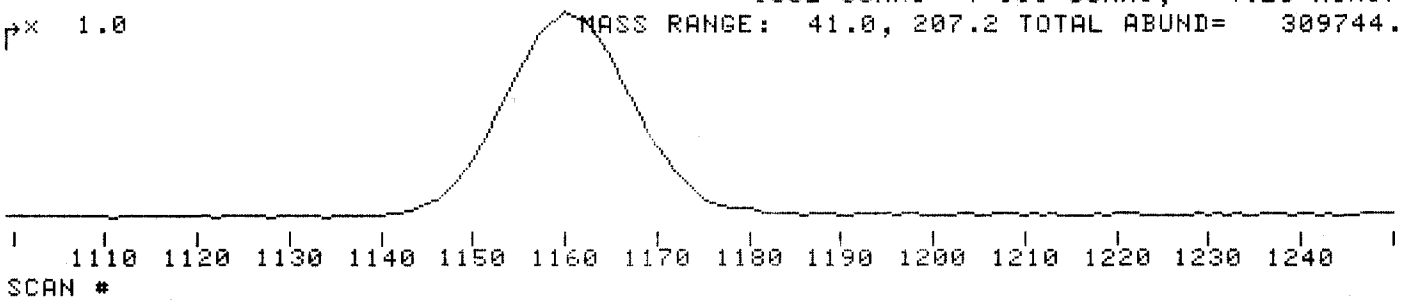
SPIKE DATA

	CONC. of spk (SEDIMENT) PPM		% of RECOVERY	% of Agreement For Duplicate ANALYSIS
	ADDED	FOUND		
SF - 2963 spk (Sed)	2.34	1.475	63.03	95.6
SF - 2963 Spk (Sed)	"	1.41	60.3	

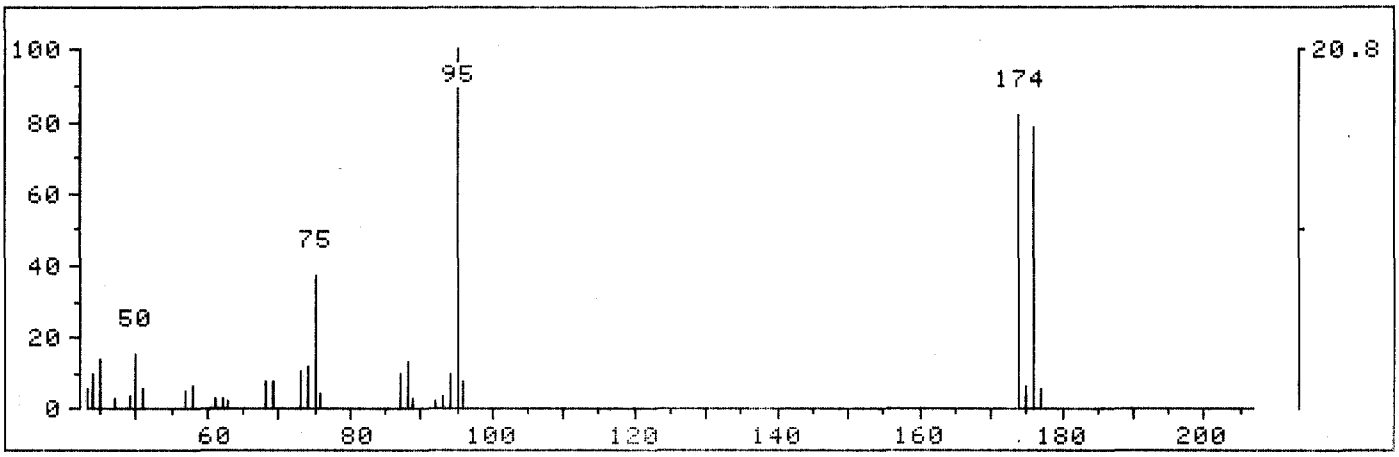
LABBLANK 2/5/86 FRN 9903, SCAN 6

1382 SCANS (151 SCANS, 4.25 MINS)

X 1.0 MASS RANGE: 41.0, 207.2 TOTAL ABUND= 309744.



#1155 RET. TIME: 33.60 TOT ABUND= 2227. BASE PK/ABUND: 95.2/ 463.

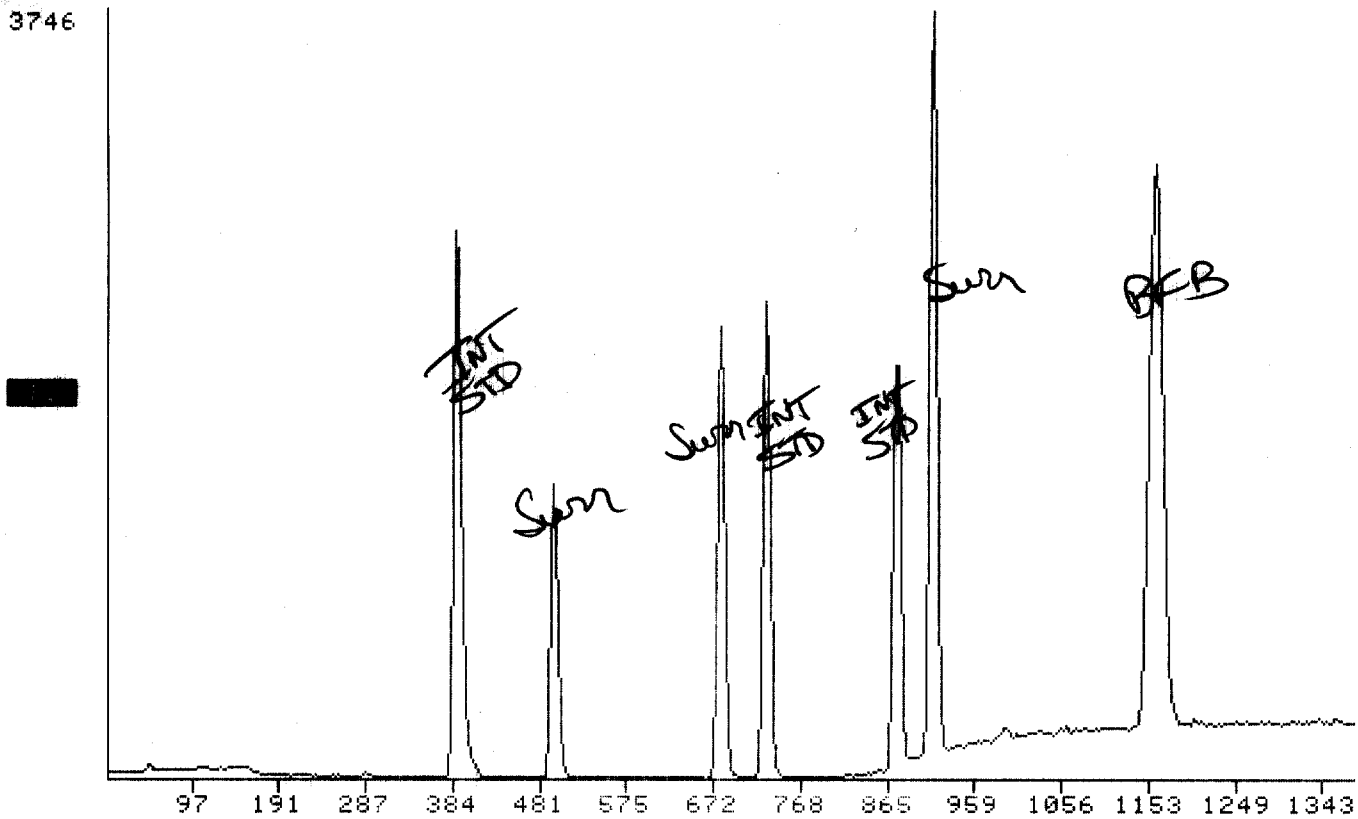


FRN 9903, SPECTRUM # 1155 RET.TIME: 33.60, 30 PEAKS

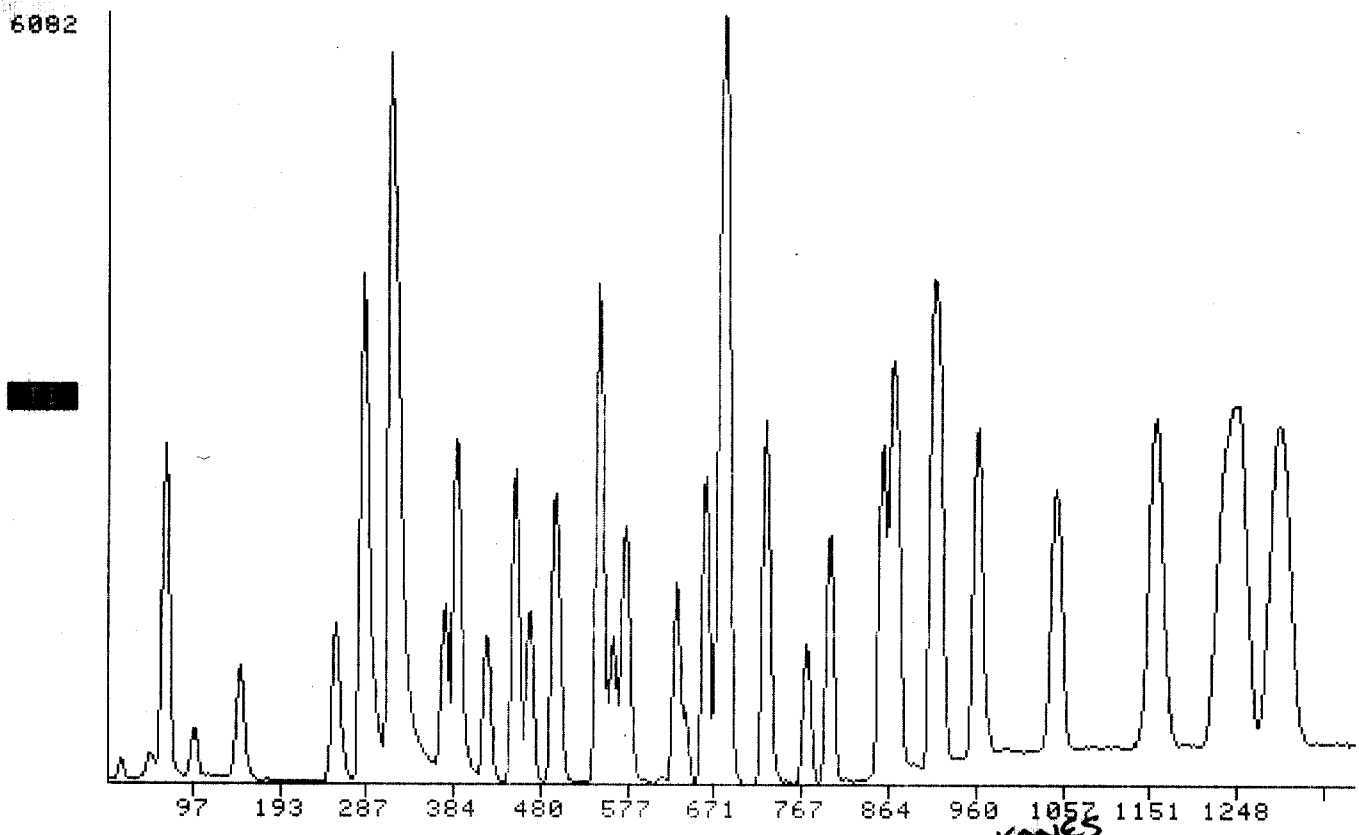
M/Z	REL ABUND	M/Z	REL ABUND	M/Z	REL ABUND	M/Z	REL ABUND
43	5.6	58	6.7	75	37.4	95	100.0
44	10.2	61	3.2	76	4.3	96	7.8
45	14.3	62	3.2	87	10.2	174	82.1
47	3.0	63	2.6	88	13.6	175	6.3
49	3.5	68	8.0	89	3.0	176	78.2
50	15.1	69	8.2	92	2.6	177	5.8
51	5.6	73	10.6	93	3.9		
57	5.4	74	11.9	94	10.2		

>PAUSE

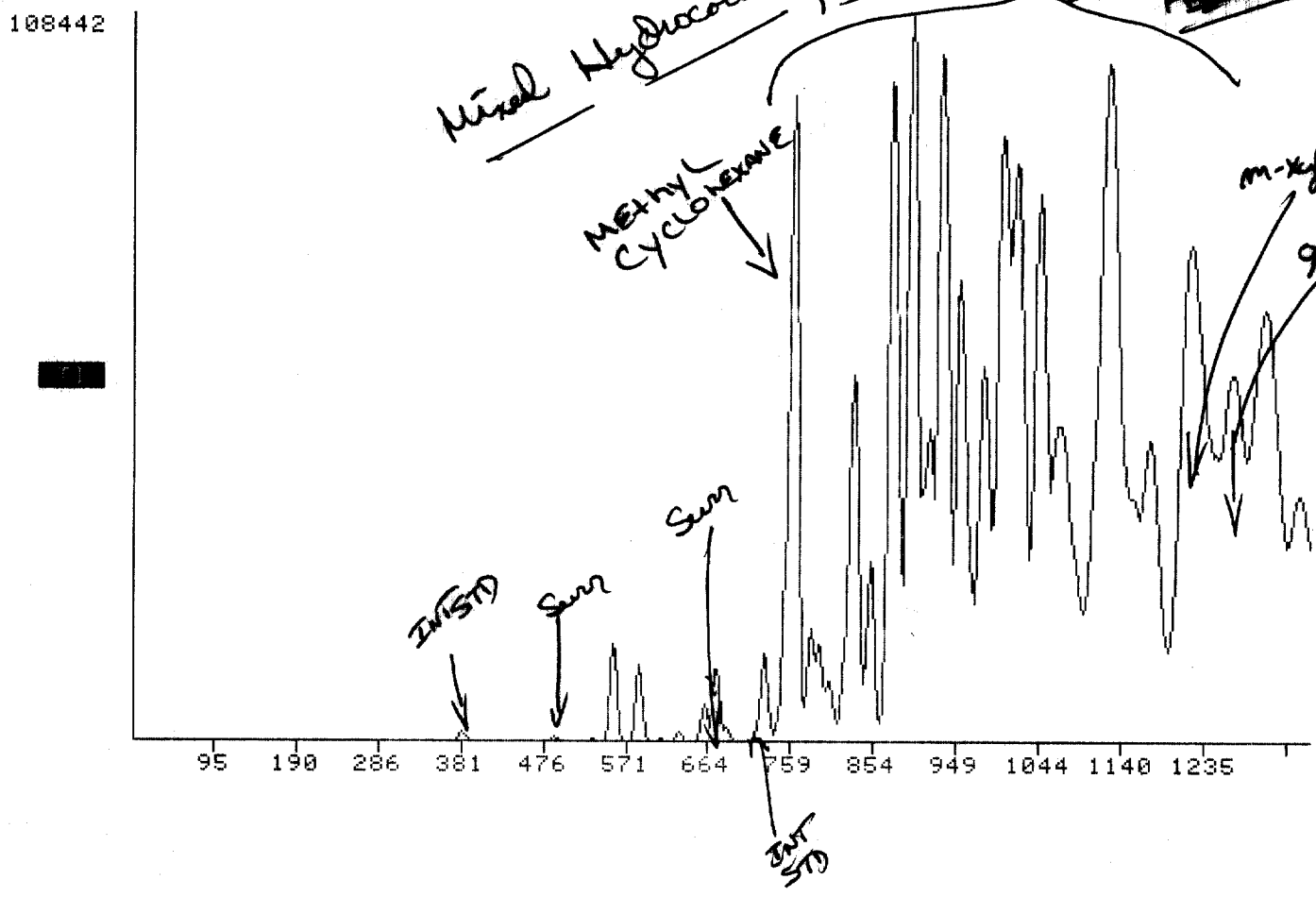
[redacted] LABBLANK 2/5/86 [redacted] 9903



[redacted] VOLSTD W/D 2/5/86 [redacted] 9908



[redacted] SF-2936 GARY LAGOON 86CY03#77

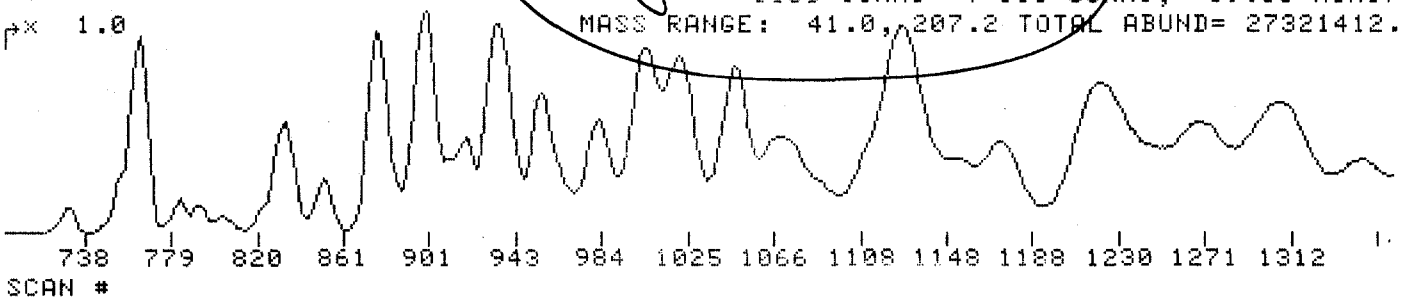


Mass Spectra of HSL VOA'S

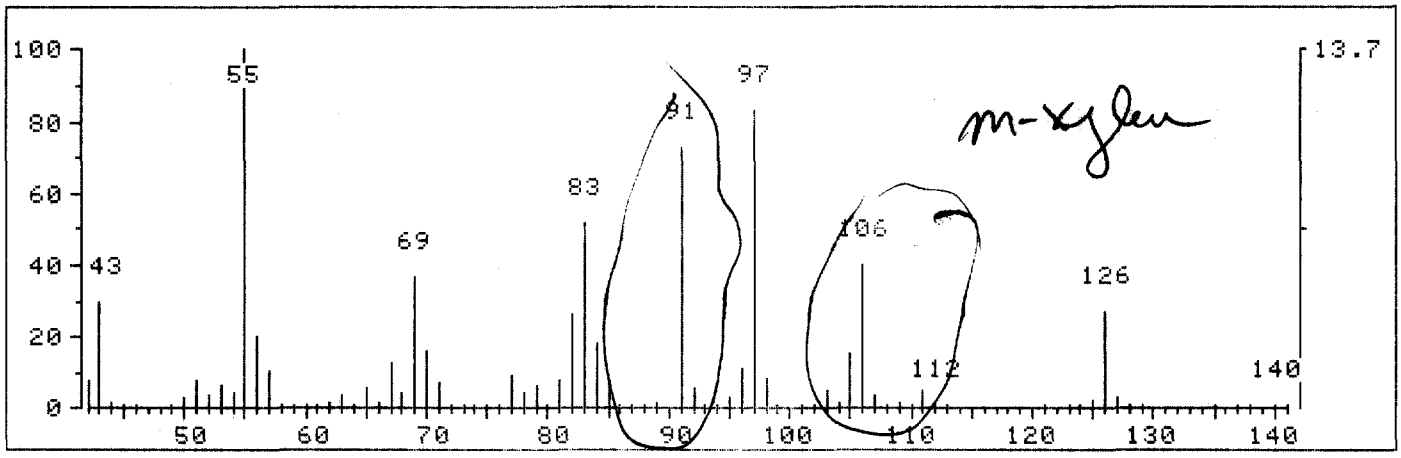
SF-2936 GARY LAGOON 86CY03#77 FRN 9909, CRN 6

1360 SCANS (661 SCANS, 19.00 MINS)

MASS RANGE: 41.0, 207.2 TOTAL ABUND= 27321412.



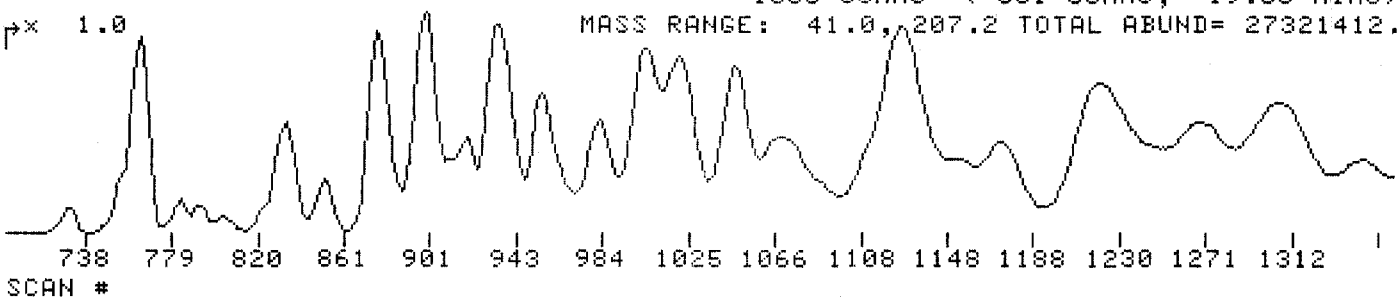
#1225 RET. TIME: 36.12 TOT ABUND= 71468. BASE PK/ABUND: 55.1/ 9794.



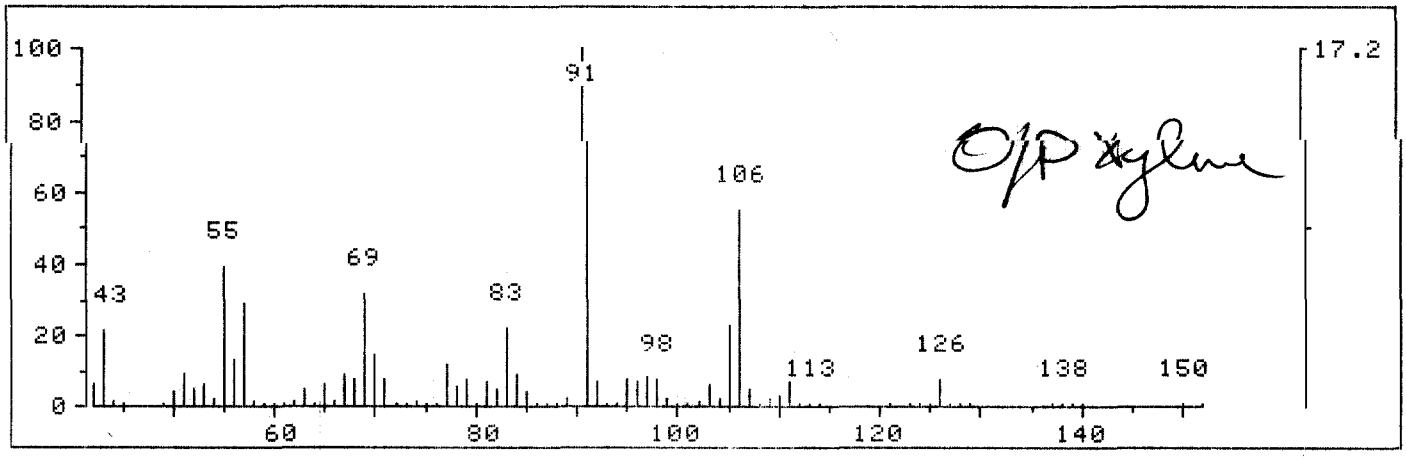
SF-2936 GARY LAGOON 86CY03#77 FRN 9909, CRN 6

1360 SCANS (661 SCANS, 19.00 MINS)

MASS RANGE: 41.0, 207.2 TOTAL ABUND= 27321412.



#1271 RET. TIME: 37.45 TOT ABUND= 54074. BASE PK/ABUND: 91.2/ 9303.

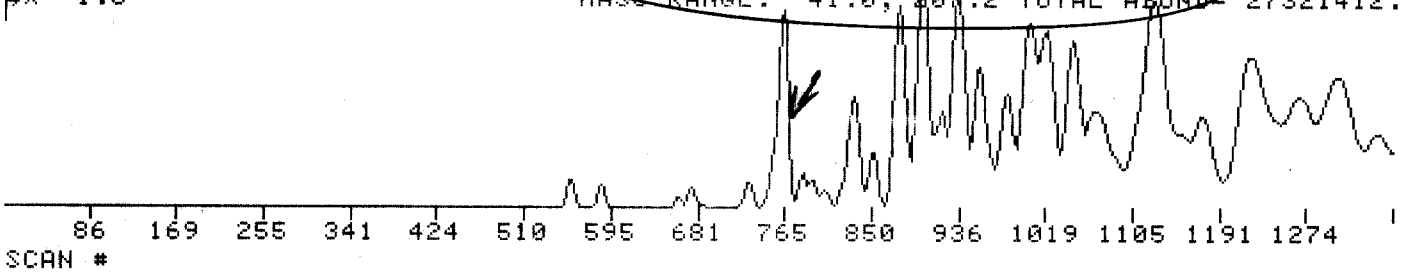


Typical mass spectra of tentatively I.D VOA'S

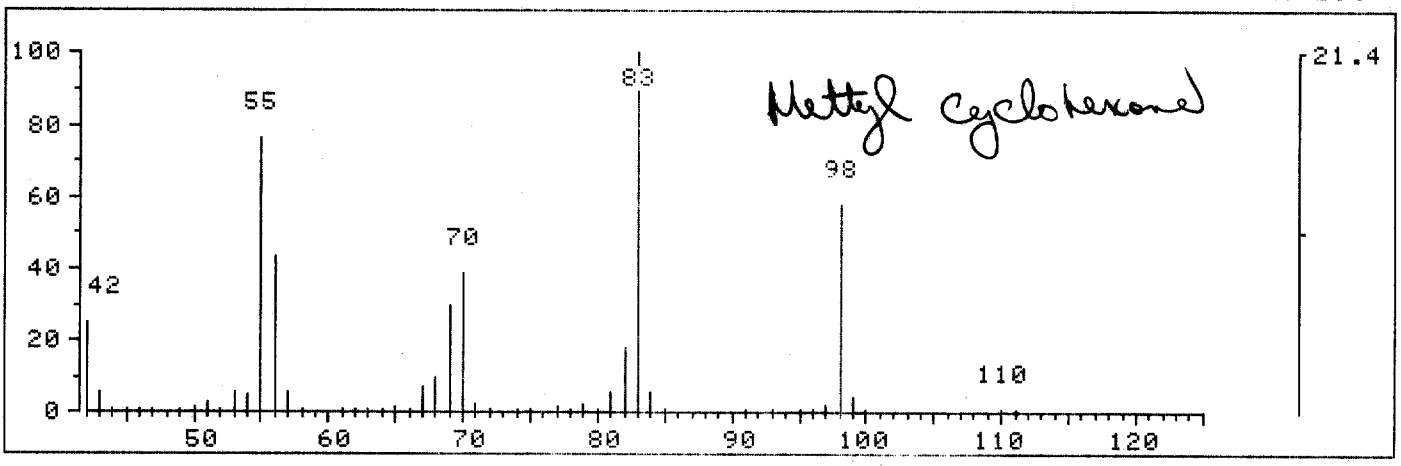
SF-2936 GARY LAGOON 86CY03$77 FRN 9909, FCN 6

1360 SCANS (1360 SCANS, 38.80 MINS)

MASS RANGE: 41.0, 207.2 TOTAL ABUND= 27321412.



765 RET. TIME: 22.93 TOT ABUND= 94455. BASE PK/ABUND: 83.2/ 20181.



FROM Eight Peak Index of Mass Spectra V. 3 PART 2 P. 3559

Methyl Cyclohexane

M/Z	83	55	98	41	56	42	69	70
Intensity	100	71	59	31	25	22	20	20

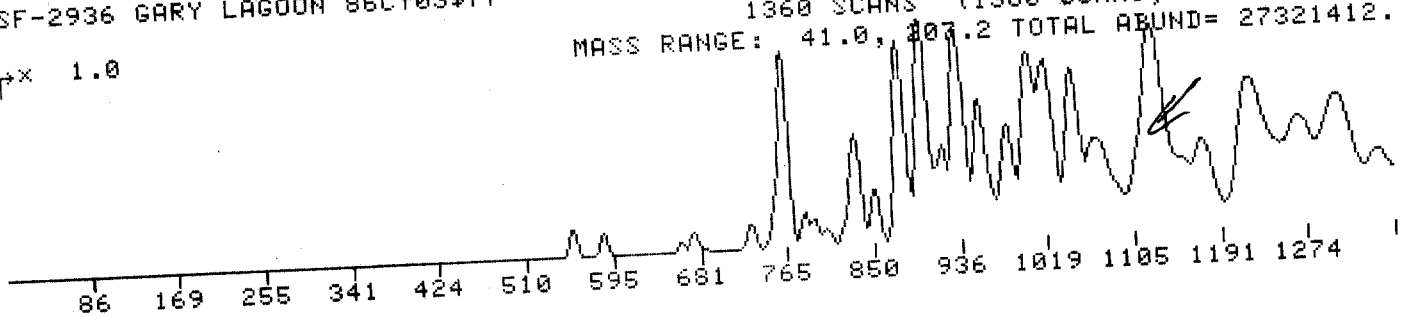
SF-2936 GARY LAGOON 86CY03$77

[redacted] 9909, [redacted] 6

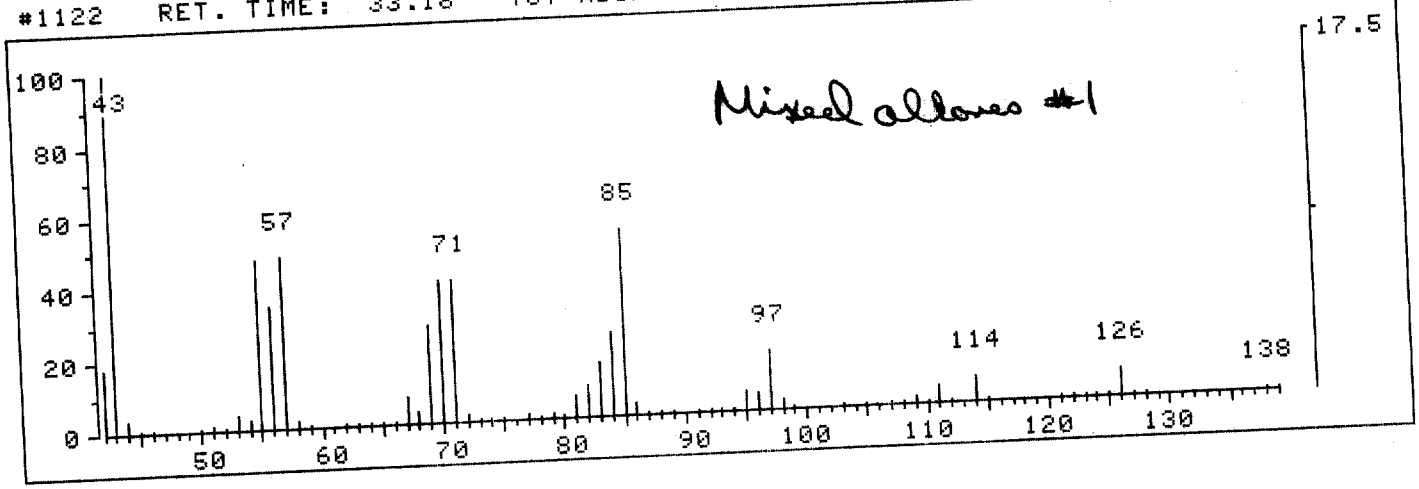
1360 SCANS (1360 SCANS, 38.80 MINS)

MASS RANGE: 41.0, 307.2 TOTAL ABUND= 27321412.

↱x 1.0



#1122 RET. TIME: 33.18 TOT ABUND= 92933. BASE PK/ABUND: 43.2/ 16295.



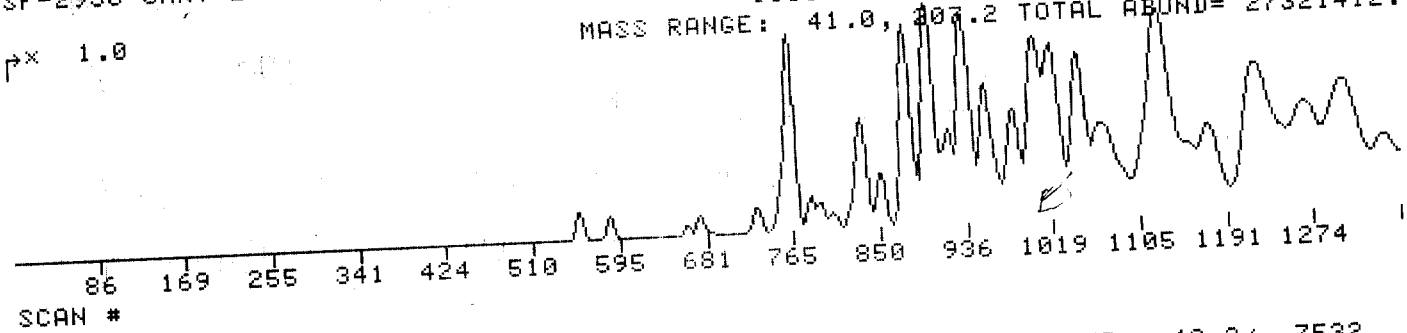
SF-2936 GARY LAGOON 86CY03$77

[redacted] 9909, [redacted] 6

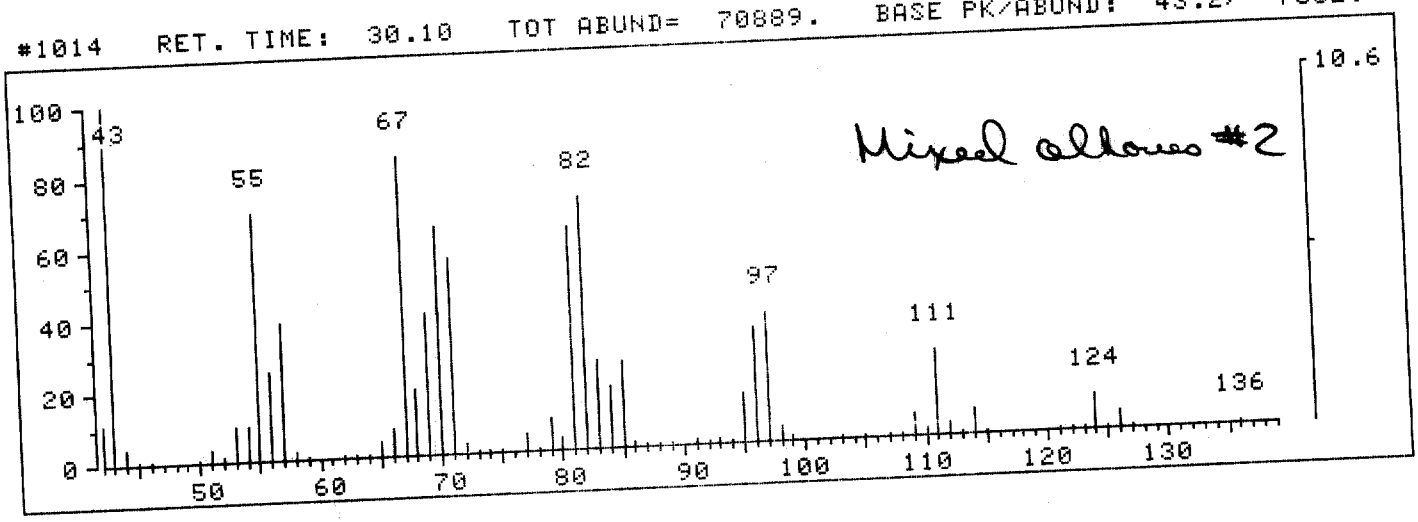
1360 SCANS (1360 SCANS, 38.80 MINS)

MASS RANGE: 41.0, 307.2 TOTAL ABUND= 27321412.

↱x 1.0



#1014 RET. TIME: 30.10 TOT ABUND= 70889. BASE PK/ABUND: 43.2/ 7532.



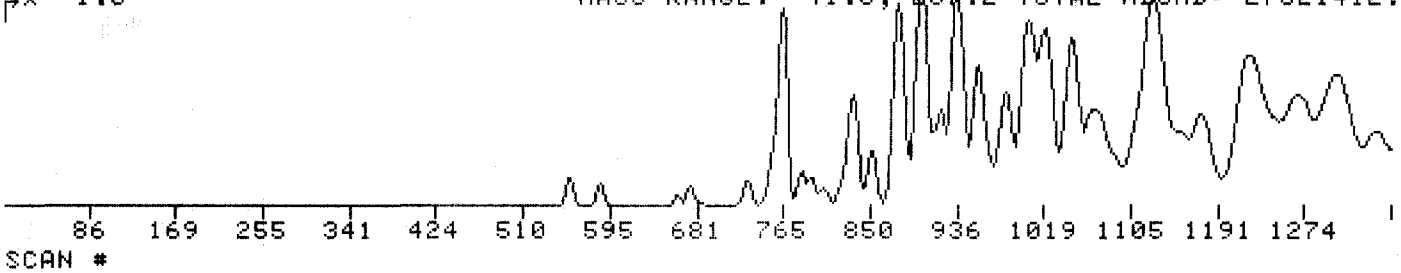
SF-2936 GARY LAGOON 86CY03#77

FRN 9909, CRN 6

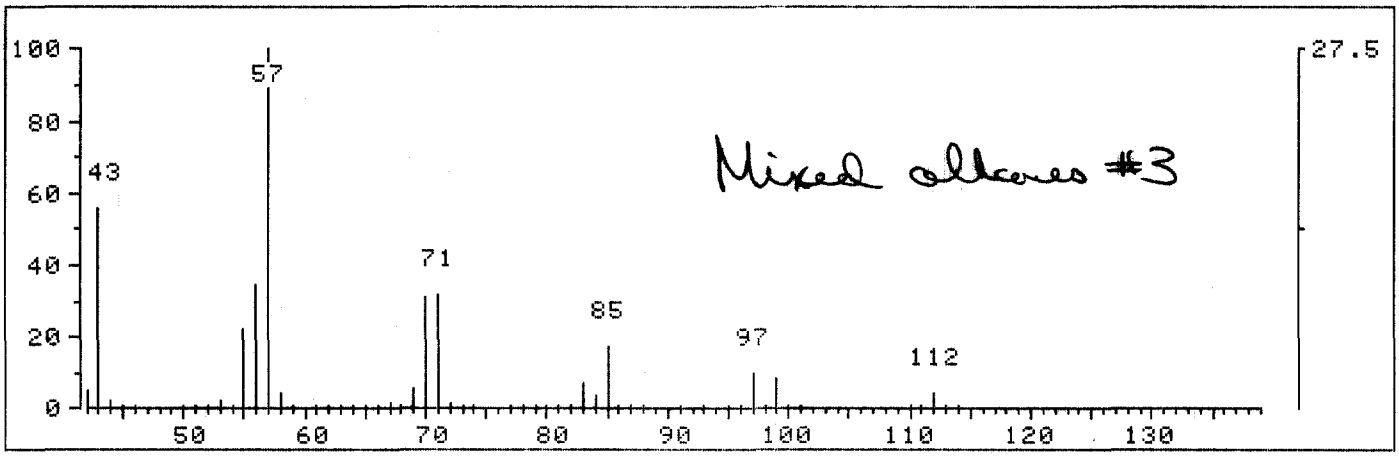
1360 SCANS (1360 SCANS, 38.80 MINS)

x 1.0

MASS RANGE: 41.0, 307.2 TOTAL ABUND= 27321412.



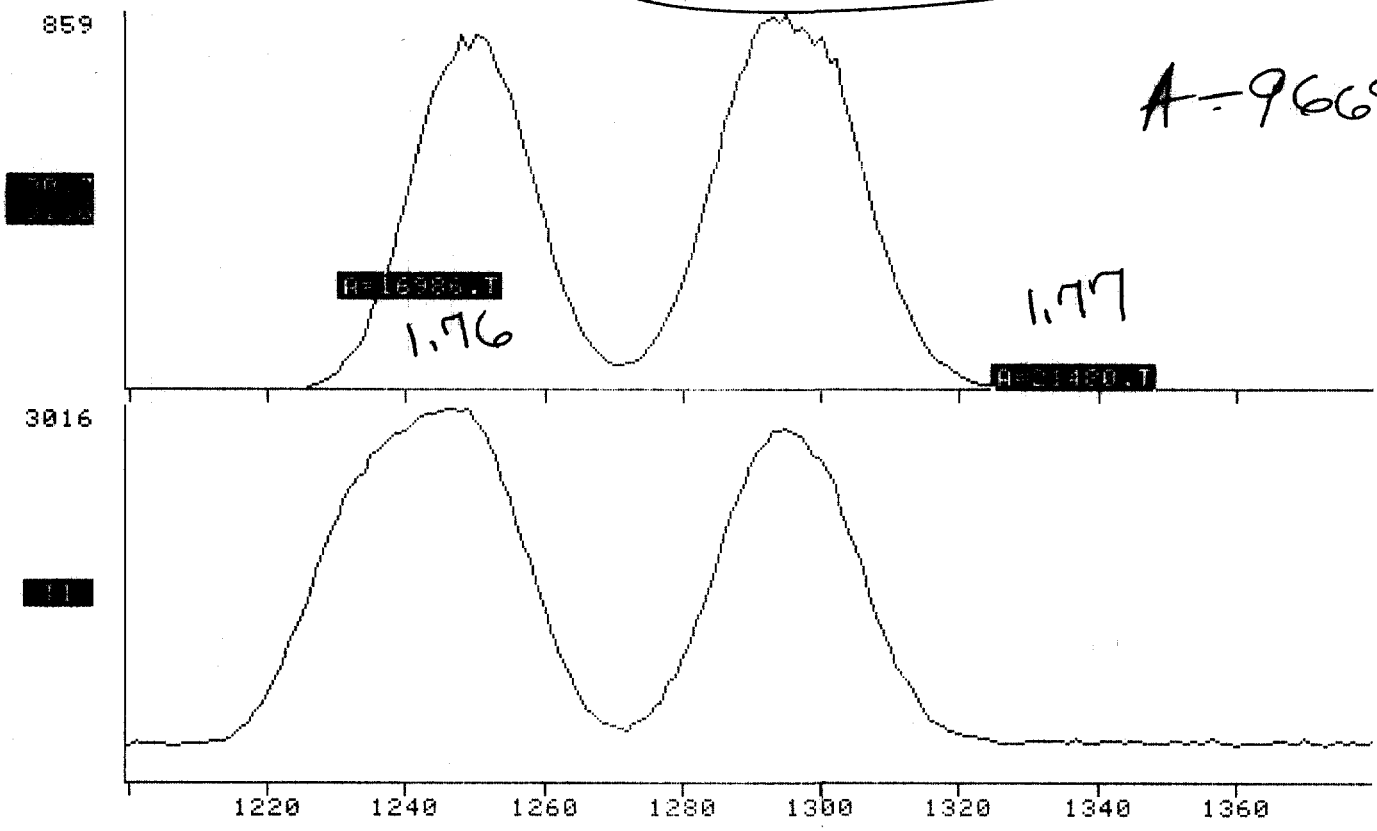
877 RET. TIME: 26.22 TOT ABUND= 98905. BASE PK/ABUND: 57.2/ 27210.



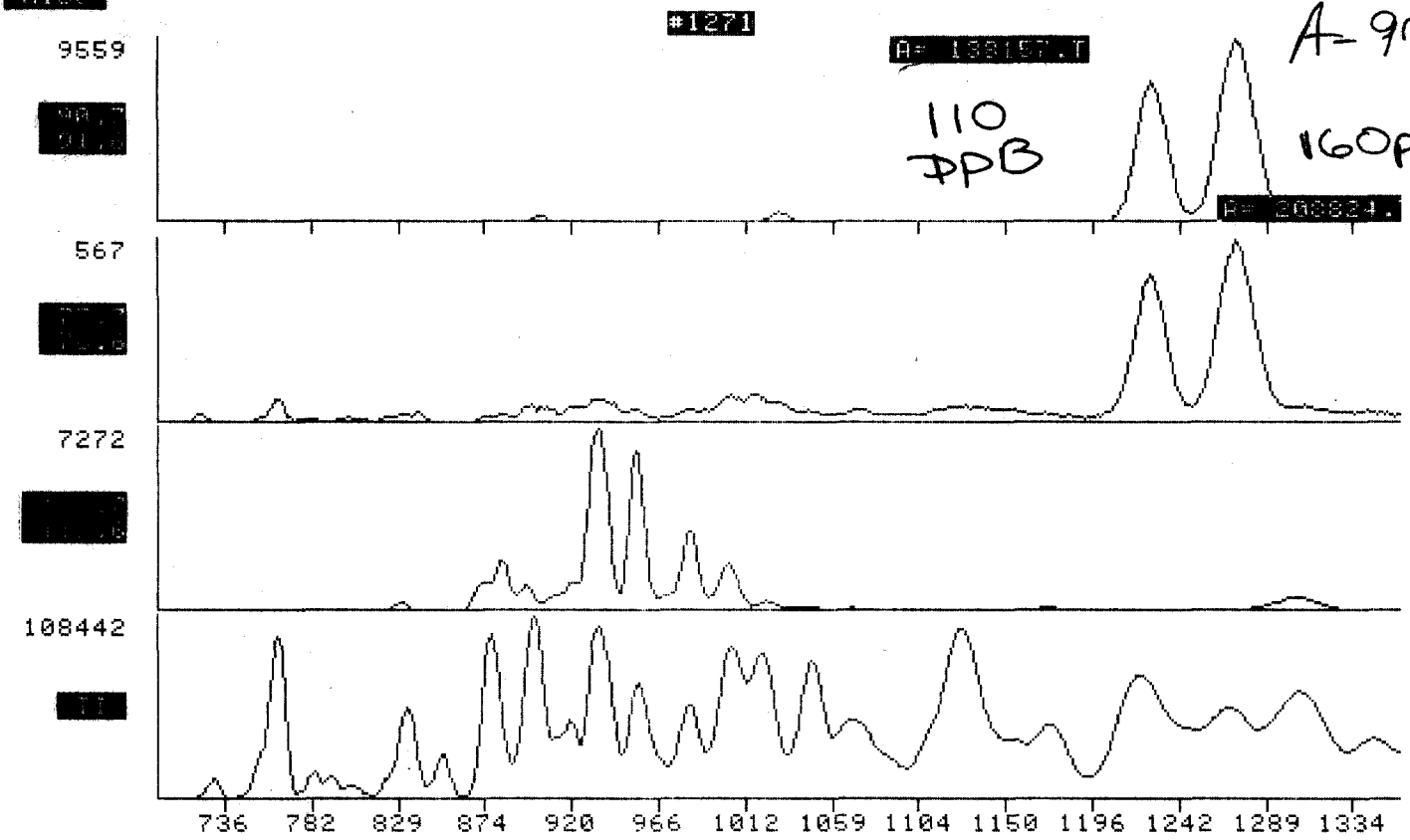
Monsanto Quantitation

VOLSTD W/D 2/5/86 FRN 9908

A-9669



[redacted] SF-2936 GARY LAGOON 86CY03#77 [redacted] 9909



A-9774

110 PPB

160ppB

110 ug/L = 110ppB m-xylene
160 ug/L 160 ppB o/p xylene } in 15 mL water from 1.3g

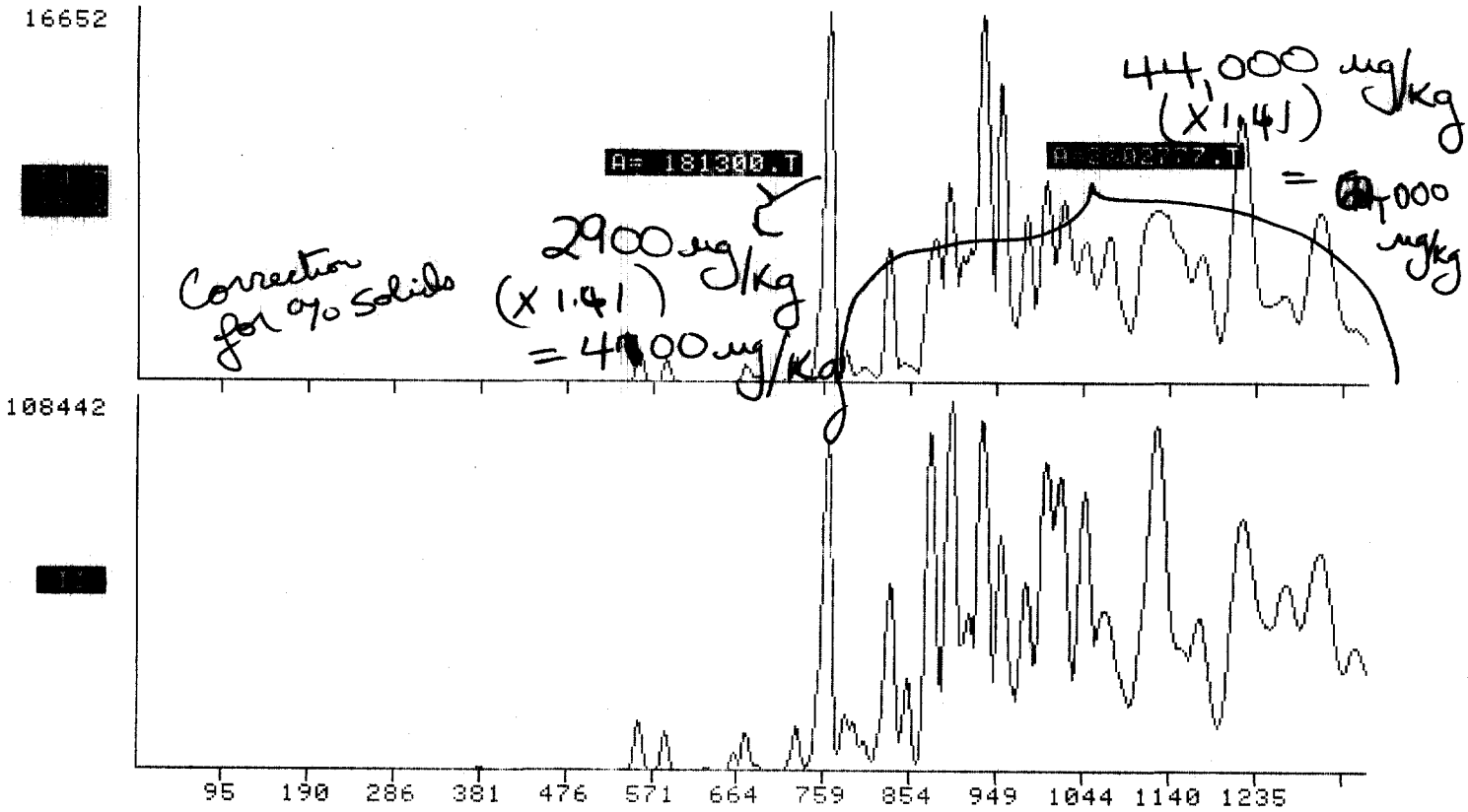
∴ 1.3g in 15mL is equivalent to 11.5:1 dilution

∴ multiply by 11.5

Correction for % solids

∴ 1300 ug/Kg m-xylene (X 1.41) = ~~2900~~ 1800 ug/Kg
+ 1800 ug/Kg o/p-xylene (X 1.41) = ~~2900~~ 2500 ug/Kg

[redacted] SF-2936 GARY LAGOON 86CY03#77 [redacted] 9909



U.S. Environmental Protection Agency Region V

Superfund Document Management System (SDMS)

Lab Data Reference Sheet

Please contact the Superfund Records Manager for further information.

I. Unscannable item due to format

___ Graph

___ Mail receipts

_✓_ Sample tags

II. Image Quality (Pages follow / No. of pages ____)

___ Resolution / Contrast

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 3-6-82

SUBJECT: Precision and Accuracy of Analyses for Data Set SF 2936
Site: GARY LAGOONS

FROM: Steve Parker,
CRL QC Coordinator

TO: Data User: _____

The Region V Central Regional Laboratory has completed its analyses of 1 (number) SEDIMENT (matrix type) samples for the parameters listed on the attached sheet. The discrete values reported on the result forms should be considered to be of the precision and accuracy levels listed.

PRECISION is a measure of reproducibility or the closeness with which individual measurements of the same property, under similar conditions agree with each other. It is expressed as the relative percent difference (RPD) or the absolute concentration difference (R') between duplicate analyses. The limit acceptable at the time of analysis is stated. QC data within these limits indicate that the analysis was in control for that set of data.

ACCURACY is a measure of the closeness of an individual measurement to the expected value. It can be expressed as percent recovery of a known spike or standard concentration, or as percent bias which is the deviation from the true value. The limits applicable at the time of analysis are stated. A 95% confidence interval means that 95% of the time, percent recovery will fall between those limts.

Attachment

Sylvia Griffin

PRECISION AND ACCURACY STATEMENT

Data Set: SF 2936

Matrix: SEDIMENTS

Site Name: GARY LAGOONS

	PRECISION			ACCURACY		
Parameter	~~RPD~~ R'	Limit	Method of Quality Control	~~% Recovery~~ % Bias	Limit	Method of Quality Control
As	10%	≤10%	CONTROL STD	94-104%	90-110%	CONTROL STD
Sb	1%	"		91-93%	"	"
Se	2%	"		92-93%	"	"
Tl	1%	"		103-105%	"	"

COMMENT:

QC FLAGS:

2/27/86 AJ
6TFA05WHZZ (5)

C46A00
OSC-SIMES

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

DIVISION/BRANCH SUPERFUND SPILL RESPONSE SECTION/TAT SAMPLING DATE 12/4/~~86~~85 LAB ARRIVAL DATE 1/~~28~~16/86 DUE DATE 2/18/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL ICAP MG/KG (DRY WT.) MET413	SEDIMENTS SOLIDS AS MG/KG (DRY WT.) MET403	SEDIMENTS SOLIDS SB MG/KG (DRY WT.) MET4203	SEDIMENTS SOLIDS SE MG/KG (DRY WT.) MET4213	SEDIMENTS SOLIDS TL MG/KG (DRY WT.) MET4223
86C403						
578	5-88450	X	X 2.9	X <2.0	X <0.4	X ~~[illegible]~~ 1.6
			J.Thurston		J.Thurston	J.Thurston
			2-24-86	2.18.86	2-24-86	2-24-86
				I.L		

Jun 26 Feb 86

CRL V.2; 3/85

2/27/86
6TFA05WUZZ
(5)

C46A00
OSC-SIMES

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: METALS

DIVISION/BRANCH SUPERFUND SPILL RESPONSE SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 3/18/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS TOTAL ICAP MG/KG (DRY WT.) MET413	SEDIMENTS SOLIDS AS MG/KG (DRY WT.) MET463	SEDIMENTS SOLIDS BA MG/KG (DRY WT.) MET4203	SEDIMENTS SOLIDS SE MG/KG (DRY WT.) MET4213	SEDIMENTS SOLIDS TL MG/KG (DRY WT.) MET4223
96CY03						
578	5-88450	X	X 2.9	X <2.0	X <0.4	X ~~<1.5~~ 1.6
			J.Thupper		J.Thupper	J.Thupper
			2.24.86	2.18.86	2.24.86	2.24.86
				I.L		

Jan
26 Folder
3/6/86

CRL V.2; 3/85

JRT 2-18-86
AS

SAMPLE NO.	CONC.	R VALUE	SLOPE	
RBK1	-.683763	.999154	.0117	<2
AQC	24.303 (TV=23.5)	.996572	.01241	3.4%
S04X12.5	26.7716x12.5	.99667	.01112	334.6 ~ 335
S05X12.5	17.4827x12.5	.998446	.01156	
S04DUPX12.5	26.0824	.998157	.01141	218.53
AQC	22.90830 (TV=23.5)	.999172	.01286	<2. or 0.69 2.6%
S78X3	8.89669x3	.999957	.00997	26.7
S56X12.5	25.381	.997564	.01063	317.3
PREP.BLKX2	4.44444E-02	.998711	.01125	<4
AQC	22.5092	.998237	.01351	4.2%
RBK2	1.19617	.997414	.01045	<2
S06X12.5	24.596	.997543	.01151	307.45
S07X12.5	19.6236	.996877	.01169	245.3
S78SPKX12.5	17.2677	.999811	.01087	215.85 — 94.6% recovery
S06DUPX12.5	22.5325	.997525	.01153	281.66
S78DUPX3	10.2137	.999986	.00936	30.6, <2 13.6% RPD 20% allowed
NBSX6.25	25.4864	.999347	.01172	159.3
AQC	24.5522	.998408	.01206	4.4% 63.7 mg/kg vs (66) nonconf true val
AQC	22.0649	.999948	.01264	6.1% -3.5% deviation

RBK1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.009	-8.00003E-03	9.99969E-04	-12.4996 %
10	.106	.109	2.99997E-03	2.75227 %
20	.235	.226	-.009	-3.9823 %
30	.338	.343	.005	1.45772 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.289	.3016	1.25999E-02	4.17768 %
10	.443	.4257	-1.73001E-02	-4.06392 %
20	.553	.5498	-3.20005E-03	-.58204 %
30	.666	.6739	.0079	1.17228 %

S04X12.5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.294	.2977	3.69996E-03	1.24285 %
10	.406	.4089	2.89997E-03	.709214 %
20	.537	.5201	-1.69001E-02	-3.24939 %
30	.621	.6313	.0103	1.63155 %

S05X12.5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.197	.2021	5.10004E-03	2.52352 %
10	.329	.3177	-.0113	-3.55681 %
20	.426	.4333	7.30002E-03	1.68475 %

30	.55	.5489	-.0011	-.200401 %

S04DUPX12.

Jvn 26 Feb

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.29	.2976	7.60001E-03	2.55377 %
10	.419	.4117	-7.29999E-03	-1.77313 %
20	.534	.5258	-8.20005E-03	-1.55954 %
30	.632	.6399	7.89988E-03	1.23455 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.301	.2946	-6.3999E-03	-2.1724 %
10	.415	.4232	8.20005E-03	1.93763 %
20	.549	.5518	2.80005E-03	.507439 %
30	.685	.6804	-4.59999E-03	-.676071 %

S78X3

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.088	.0887	7.00012E-04	.78919 %
10	.19	.1884	-1.59997E-03	-.84924 %
20	.287	.2881	1.10003E-03	.381823 %
30	.388	.3878	-1.99914E-04	-5.15508E-02 %

S56X12.5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.262	.2698	7.80007E-03	2.89106 %
10	.383	.3761	-6.89986E-03	-1.83458 %
20	.492	.4824	-9.59989E-03	-1.99003 %
30	.58	.5887	8.70013E-03	1.47785 %

PREP.BLKX2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	.0005	-.0045	-900 %
10	.111	.113	.002	1.76992 %
20	.216	.2255	.0095	4.21286 %
30	.345	.338	-.007	-2.07101 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.3	.3041	4.09997E-03	1.34823 %
10	.438	.4392	1.19999E-03	.273222 %
20	.589	.5743	-.0147	-2.55964 %
30	.7	.7094	9.40007E-03	1.32507 %

RBK2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	.0125	.0075	60 %
10	.131	.117	-.014	-11.9658 %
20	.216	.2215	5.50002E-03	2.48308 %
30	.325	.326	1.00002E-03	.306754 %

JVM 26Feb81

S06X12.5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.282	.2831	1.10003E-03	.388567 %
10	.407	.3982	-8.79994E-03	-2.20993 %
20	.499	.5133	1.43001E-02	2.78592 %
30	.635	.6284	-6.59984E-03	-1.05026 %

S07X12.5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.239	.2294	-9.60003E-03	-4.18484 %
10	.338	.3463	8.29995E-03	2.39675 %
20	.451	.4632	.0122	2.63385 %
30	.591	.5801	-.0109	-1.87899 %

S78SPKX12.

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.189	.1877	-1.30005E-03	-.692622 %
10	.293	.2964	.0034	1.1471 %
20	.408	.4051	-2.89997E-03	-.715866 %
30	.513	.5138	8.00014E-04	.155705 %

S06DUPX12.

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.255	.2598	4.80005E-03	1.84759 %
10	.375	.3751	1.00076E-04	2.66799E-02 %
20	.505	.4904	-1.45999E-02	-2.97714 %
30	.596	.6057	9.70012E-03	1.60147 %

S78DUPX3

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.095	.0956	5.9998E-04	.627595 %
10	.19	.1892	-8.00014E-04	-.42284 %
20	.283	.2828	-2.00003E-04	-7.07226E-02 %
30	.376	.3764	4.00007E-04	.106272 %

NBSX6.25

SPIKE	MEASURED	CALC.	ERROR	PER CENT

0	.298	.2987	7.00057E-04	.234368 %
10	.413	.4159	2.90006E-03	.697298 %
20	.541	.5331	-7.89994E-03	-1.48189 %
30	.646	.6503	4.30006E-03	.661242 %

JLM
26 Feb 84

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.299	.2961	-2.89989E-03	-.97936 %
10	.407	.4167	9.70012E-03	2.32784 %
20	.548	.5373	-1.06998E-02	-1.9914 %
30	.654	.6579	3.90017E-03	.592821 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.279	.2789	-1.00076E-04	-3.58825E-02 %
10	.404	.4053	1.29998E-03	.320745 %
20	.534	.5317	-2.30002E-03	-.432579 %
30	.657	.6581	1.10006E-03	.167157 %

Wheel #2

BEGIN DATA FILE: AS3.DF

Begin Element - AS

-0.007	
0.000	AZ
0.005	
0.131	RBK
0.216	
0.325	
0.282	
0.407	S06 x 12.5
0.499	
0.635	
0.239	
0.338	
0.451	S07 x 12.5
0.591	
0.107	
0.216	
0.312	S78 DUP
0.368	
0.189	
0.293	S78 PK
0.408	
0.513	x 12.5
0.600	
0.703	NBS
0.764	
0.894	
0.255	
0.375	DUP S06
0.505	
0.596	x 12.5
0.340	
0.407	
0.554	APC
0.643	
0.095	
0.190	S78 DUP
0.283	
0.376	X 3
0.298	
0.413	NBS
0.541	
0.646	6.25 X
0.299	
0.380	
0.548	
0.654	
0.279	
0.404	
0.534	APC
0.835	
0.657	

Wheel #1

BEGIN DATA FILE: AS2.DF 2-18-86

Begin Element - AS

-0.008	
0.000	AZ
-0.009	
0.106	RBK
0.235	
0.338	
0.289	
0.443	APC
0.553	
0.666	
0.001	
0.091	Rup.BK
0.196	
0.354	
0.354	
0.456	S78
0.411	
0.675	
0.303	
0.353	S58
0.474	
0.631	
0.294	
0.406	
0.537	S04 x 12.5
0.621	
0.197	
0.329	
0.426	S05 x 11.5
0.550	
0.290	
0.419	S04 DUP x 12.5
0.534	
0.632	
0.301	
0.415	APC
0.549	
0.685	
0.088	
0.190	S78 x 3
0.287	
0.388	
0.262	
0.383	S58 x 12.5
0.492	
0.580	
0.005	
0.111	Rup.BK
0.216	
0.345	x 2
0.300	
0.438	APC
0.589	
0.700	

VM 26 Feb 86

	As ug/L	As mg/kg	Se ug/L	Se mg/kg	Tl ug/L		wt
S04	335	33.5	<4	<0.4	<12.5	<1.25	1.0
S05	219	21.9	<4	<0.4	<12.5	<1.25	
S08	26.7, 30.6 } 2 recs	2.9	<4	<0.4	15.8	1.58	
S06	317	31.7	<4	<0.4	<6.	<0.6	
S06	307	30.7	~~<4~~ 13.7	1.37	11.1	1.11	
S07	245	24.5	<4	<0.4	10.0	1.0	
NBS	159	$\frac{15.9}{0.25}=63.6$	6.7	$\frac{0.7}{.25}=2.68$	2.45	$\frac{0.24}{0.25}=7.0$	0.25
SPK 08	216.	21.6	167.4 165.0	16.7 16.5	182.4	18.24	

Jun 2 (Fed 4)

$$ug/g = \frac{ug/L \times .100}{1.0}$$

GARY LALOUNI
4905 CLLGA00 JVM 2/28/87

JRT 2-21-86
TL

SAMPLE NO.	CONC.	R VALUE	SLOPE	
RBK1	4.31726E-02	.999929	.01853	<2
S06X6	1.84615	.990343	.00325	11.1
S78DUPX6	4.25036	.995699	.00687	25.5
S78SPKX12.5	14.5902	.999267	.00915	182.4
NBSX2	1.22516	.999365	.00302	2.45
S07X6	1.66667	.996024	.0015	10.0
S06DUPX6	.993783	.997425	.00161	0.55 or <2
~~AQC~~	~~31.5589~~ VOID	~~.982719~~	~~.013753~~	
AQC	25.822 (25.0)	.999249	.01618	3.3%
RBK2	-.612366	.998287	.01682	<2
PBK	-.489511	.999609	.00286	<2
S78X6	2.63889	.998076	.0036	15.8
S56X6	.604028	.998786	.00149	3.6
S56DUPX6	-.632187	.994692	.00174	<2 or 0.03
S04X12.5	-1.34869	.996962	.00304	<12.5
S05X12.5	-.132891	.996847	.00301	<12.5
AQC	26.1641	.999822	.01426	4.6%

diff |2.64-4.25| <2

Expected 83.3% recovery

182.4-15.8 / 200

RBK1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.001	7.99988E-04	1.79999E-03	225.002 %
10	.19	.1861	-3.90004E-03	-2.09567 %
20	.369	.3714	2.39992E-03	.646183 %
30	.557	.5567	-3.00109E-04	-5.39086E-02 %

S06X6

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.009	.006	-.003	-50 %
10	.031	.0385	.0075	19.4805 %
20	.077	.071	-.006	-8.4507 %
30	.102	.1035	.0015	1.44928 %

S78DUPX6

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.037	.0292	-7.80002E-03	-26.7124 %
10	.087	.0979	.0109	11.1338 %
20	.165	.1666	.0016	.960383 %
30	.24	.2353	-4.70003E-03	-1.99747 %

S78SPKX12.

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.132	.1335	.0015	1.12359 %
10	.224	.225	.001	.444445 %
20	.323	.3165	-6.49998E-03	-2.0537 %
30	.404	.408	4.00007E-03	.980409 %

NBSX2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	.0037	-.0013	-35.1352 %
10	.032	.0339	.0019	5.60472 %
20	.064	.0641	1.00002E-04	.156009 %
30	.095	.0943	-7.00004E-04	-.742317 %

S07X6

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.004	.0025	-.0015	-60 %
10	.016	.0175	.0015	8.57144 %
20	.031	.0325	.0015	4.61539 %
30	.049	.0475	-.0015	-3.15789 %

S06DUPX6

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	1.59999E-03	-1.40001E-03	-87.5011 %
10	.016	.0177	.0017	9.60451 %
20	.033	.0338	7.99999E-04	2.36686 %
30	.051	.0499	-.0011	-2.2044 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.411	.43403	2.30301E-02	5.3061 %
10	.586	.57156	-1.44399E-02	-2.52641 %
20	.7493	.70909	-.04021	-5.67065 %
30	.815	.84662	3.16201E-02	3.73486 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.411	.4178	6.79997E-03	1.62757 %
10	.586	.5796	-6.40005E-03	-1.10422 %
20	.749	.7414	-7.60007E-03	-1.0251 %
30	.896	.9032	7.19994E-03	.797159 %

RBK2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-.0103	-7.29999E-03	70.8738 %
10	.141	.1579	.0169	10.703 %
20	.338	.3261	-.0119	-3.64918 %
30	.492	.4943	2.29999E-03	.465303 %

PBK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.001	-.0014	-4.00002E-04	28.5715 %
10	.026	.0272	.0012	4.41175 %
20	.057	.0558	-1.20001E-03	-2.15055 %
30	.084	.0844	3.99992E-04	.473924 %

Jun 21 Fd Pt

S78X6

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	.0095	-.0025	-26.3158 %
10	.043	.0455	.0025	5.4945 %
20	.079	.0815	2.49999E-03	3.06747 %
30	.12	.1175	-2.50001E-03	-2.12767 %

S56X6

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	9.00002E-04	-9.99984E-05	-11.1109 %
10	.015	.0158	7.99999E-04	5.06328 %
20	.032	.0307	-.0013	-4.23453 %
30	.045	.0456	5.99995E-04	1.31578 %

S56DUPX6

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-1.10001E-03	-2.10001E-03	190.909 %
10	.014	.0163	.0023	14.1104 %
20	.032	.0337	.0017	5.04451 %
30	.053	.0511	-.0019	-3.7182 %

S04X12.5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.007	-4.10001E-03	2.89999E-03	-70.7315 %
10	.03	.0263	-3.70001E-03	-14.0685 %
20	.058	.0567	-1.30001E-03	-2.2928 %
30	.085	.0871	2.09999E-03	2.41101 %

S05X12.5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-4.00002E-04	-4.00002E-04	100 %
10	.027	.0297	.0027	9.0909 %
20	.064	.0598	-.0042	-7.02342 %
30	.088	.0899	1.89999E-03	2.11345 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.37	.3731	3.09986E-03	.830839 %

10	.519	.5157	-3.30007E-03	-.639921 %
20	.661	.6583	-2.70003E-03	-.410152 %
30	.798	.8009	2.89989E-03	.362078 %

JVM
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BEGIN DATA FILE: TL3.DF

```
Begin Element - TL
   0.005
   0.000 AZ
  -0.003
   0.141    RBK
   0.338
   0.492
  -0.001
   0.026
   0.057    PBK
   0.084
   0.012
   0.034
   0.079    S78 X6
   0.120
   0.006
   0.015
   0.032    S52 X6
   0.045
   0.011    1:3
   0.007    4
   0.019
   0.024
   0.009    1:3
   0.005    5
   0.014
   0.026
   0.001
   0.014
   0.032    S58 DUP
   0.053
   0.379
   0.532
   0.669    AQC
   0.773
   0.001
   0.043
  -0.007    2:25
   0.030    S04
   0.058
   0.085
   0.000    2:25
   0.027    S05
   0.064
   0.088
   0.370
   0.519    AQC
   0.661
   0.798
```

2-21-86 JR

BEGIN DATA FILE: TL2.DF

```
Begin Element - TL
   0.001
   0.000 AZ
  -0.001
   0.190    RBK
   0.369
   0.557
   0.460
   0.621    AQC
   0.789
   0.935
   0.009
   0.031    S06
   0.077    X6
   0.102
   0.007
   0.024

                S07
   0.058        X6
   0.075
   0.037
   0.087    DUP 78
   0.165       X6
   0.240
   0.132    SPK 78
   0.224    X12.5
   0.323
   0.404
   0.005    NBS
   0.032       X2
   0.064
   0.095
   0.009    DUP S06
   0.021       X6
   0.050
   0.077
   0.450
   0.586
   0.749    AQC
   0.896
   0.005
   0.013    S07 X6
   0.033
   0.045
   0.411
   0.535
   0.701    AQC
   0.815
   0.004
   0.016    S07X6
   0.031
   0.049
   0.006
   0.016    DUP S06
   0.033       X6
   0.051
   0.003
```

JRT 2-20-86
SE

JM GARY LAWDAY
Y90T C46ADO

JVM 2/24/86

SAMPLE NO.	CONC.	R VALUE	SLOPE
~~RBK1~~	~~-.146358~~ VOID	~~.998441~~ JRC	~~1.08328E-02~~ <2
RBK1	.358522	.998971	.01032 <2
AQC	9.34396 (10.04)	.999173	.01067 6.9%
S78X2	-.285719	.995621	.00175 <4
S04X2	-1.07205	.998992	.00569 <4
S05X2	3.24119E-02	.99931	.00617 <4
S05DUPX2	.384614	.997055	.00624 0.34 or <4
PREP.BLK	-.531915	.996891	.0047 <2
S78X2	.919548	.999393	.00435 <4
S56X2	-1.80982	.998479	.00326 <4
AQC	9.18347 (TV=10.04)	.999809	.01041 8.5%
RBK2	-1.32931	.997673	.00993 <2
~~S06X2~~ VOID	~~1.66666~~ JRC	~~.987763~~	~~.00456~~ <4
S07X2	-1.69202	.999993	.00526 <4
S78DUPX2	-2.00565	.999346	.00354 <2 drift <2 in meas
S78SPKX5	33.0066	.99808	.00602 165.. — 82.5% recovery
NBSX3	-2.2449 X3	.999599	.00637 6.7
S07W.DUPX2	-1.46209	.999473	.00554 <4
S78SPKX12.5	13.3887	.99988	.00723 167.4 — 83.7% recov
S06X2	6.86274	.99793	.00255 13.7
AQC	9.37681 (TV=10.04)	.99919	.01043 6.6%

RBK1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	-1.58547E-03	4.14533E-04	-26.1458 %
10	.115	.106742	-8.25757E-03	-7.73598 %
20	.211	.21507	4.07031E-03	1.89255 %
.31	-.002	1.7727E-03	3.7727E-03	212.822 %

RBK1

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.002	3.69995E-03	5.69995E-03	154.055 %
10	.115	.1069	-8.10003E-03	-7.57721 %
20	.211	.2101	-9.0003E-04	-.428382 %
30	.31	.3133	3.29998E-03	1.0533 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.105	.0997	-5.29999E-03	-5.31593 %
10	.199	.2064	7.40004E-03	3.58529 %
20	.312	.3131	1.10003E-03	.351336 %
30	.423	.4198	-3.19997E-03	-.762259 %

S78X2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.001	-5.00008E-04	-1.50001E-03	299.997 %

10	.016	.017	9.99997E-04	5.88233 %
20	.032	.0345	.0025	7.24638 %
30	.054	.052	-.002	-3.84615 %

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S04X2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-6.09999E-03	-3.09999E-03	50.8196 %
10	.047	.0508	.0038	7.48032 %
20	.106	.1077	1.69999E-03	1.57845 %
30	.167	.1646	-2.40001E-03	-1.45809 %

S05X2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.003	1.99982E-04	-2.80002E-03	-1400.14 %
10	.058	.0619	3.89998E-03	6.30045 %
20	.123	.1236	5.9998E-04	.485421 %
30	.187	.1853	-1.70001E-03	-.917439 %

S05DUPX2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	2.39999E-03	2.39999E-03	100 %
10	.064	.0648	7.99991E-04	1.23455 %
20	.136	.1272	-8.80003E-03	-6.91826 %
30	.184	.1896	5.59999E-03	2.95358 %

PREP.BLK

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	-.0025	-.0045	180 %
10	.038	.0445	.0065	14.6067 %
20	.091	.0915	4.99994E-04	.546441 %
30	.141	.1385	-.0025	-1.80505 %

S78X2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.005	4.00003E-03	-9.99969E-04	-24.999 %
10	.045	.0475	2.50002E-03	5.2632 %
20	.093	.091	-.002	-2.1978 %
30	.134	.1345	5.00008E-04	.371754 %

S56X2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.005	-.0059	-9.00002E-04	15.2543 %
10	.027	.0267	-3.00005E-04	-1.12361 %
20	.056	.0593	3.29999E-03	5.56491 %
30	.094	.0919	-2.10001E-03	-2.2851 %

JWM
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AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.098	9.55999E-02	-2.40009E-03	-2.51056 %
10	.197	.1997	2.69996E-03	1.35201 %
20	.302	.3038	.0018	.592495 %
30	.41	.4079	-2.09996E-03	-.514822 %

RBK2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.008	-.0132	-5.20004E-03	39.3941 %
10	.084	.0861	2.09998E-03	2.43901 %
20	.174	.1854	.0114	6.14887 %
30	.293	.2847	-8.29995E-03	-2.91533 %

S06X2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.016	7.59998E-03	-8.40002E-03	-110.527 %
10	.044	.0532	9.19998E-03	17.2932 %
20	.092	.0988	6.79999E-03	6.88258 %
30	.152	.1444	-7.60001E-03	-5.26316 %

S07X2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.009	-8.90001E-03	9.99905E-05	-1.12349 %
10	.044	.0437	-2.99994E-04	-.686485 %
20	.096	.0963	3.0002E-04	.311547 %
30	.149	.1489	-9.9957E-05	-6.71303E-02 %

S78DUPX2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.007	-7.09999E-03	-9.99905E-05	1.40832 %
10	.027	.0283	1.30001E-03	4.59367 %
20	.066	.0637	-2.29999E-03	-3.61067 %
30	.098	.0991	.0011	1.10999 %

S78SPKX5

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.197	.1987	1.70001E-03	.855568 %
10	.258	.2589	9.0003E-04	.347636 %
20	.326	.3191	-6.89995E-03	-2.16232 %
30	.375	.3793	4.30003E-03	1.13367 %

NBSX3

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.013	-.0143	-1.30003E-03	9.09113 %
10	.049	.0494	3.99977E-04	.80967 %
20	.11	.1131	3.09999E-03	2.74093 %
30	.179	.1768	-2.19999E-03	-1.24434 %

S07W.DUPX2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.006	-8.09999E-03	-2.09999E-03	25.9258 %
10	.045	.0473	2.30001E-03	4.8626 %
20	.101	.1027	1.70001E-03	1.65532 %
30	.16	.1581	-1.89999E-03	-1.20176 %

S78SPKX12.

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.098	.0968	-1.19998E-03	-1.23965 %
10	.167	.1691	2.09999E-03	1.24186 %
20	.242	.2414	-6.00025E-04	-.248561 %
30	.314	.3137	-3.0002E-04	-9.56392E-02 %

S06X2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.016	.0175	.0015	8.57144 %
10	.044	.043	-9.99998E-04	-2.32558 %
20	.071	.0685	-2.49999E-03	-3.64962 %
30	.092	.094	2.00001E-03	2.12767 %

AQC

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.098	9.78001E-02	-1.99892E-04	-.204388 %
10	.198	.2021	4.1001E-03	2.02875 %
20	.314	.3064	-7.59995E-03	-2.4804 %
30	.407	.4107	3.69999E-03	.900898 %

BEGIN DATA FILE: SE4.DF

Begin Element - SE
0.005
0.000 AZ
-0.008
0.084 RBK
0.174
0.293
0.016 SF2963
0.044 S06
~~0.076~~
~~0.152~~ 1:1
-0.009
0.044 S07
0.096
0.149 1:1
-0.007
~~0.015~~
~~0.061~~ DUP
0.098 SF2936
0.066 S78
0.027 1:1
0.197
0.258 SPK
0.326 S78
0.375 1:4
-0.013
0.049 1:3
0.110
0.179
-0.003
0.045 S07 DUP
0.101
0.160
0.098
0.167 SPK78
0.242 2:25
0.314
0.069
0.163
0.237
0.365
0.074
0.160
0.288
0.344
0.185 SPK78
0.292
0.248
0.355
~~0.087~~
0.198 ADC
0.314
0.407
0.071
0.092
0.076
0.078
0.092
0.085
0.098

SE Wheel #1 2.20.96

BEGIN DATA FILE: SE3.DF

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Begin Element - SE
-0.007
0.000 AZ
-0.002
0.115 RBK
0.211
0.310
0.105
0.199
~~0.269~~ ADC
0.423
-0.001
0.005 PBK
0.009
0.023
0.312
0.001
0.016 S78 SF2936
0.032 1:1
~~0.055~~
-0.002
0.020
0.053
0.094
-0.003 SF2963
0.047 S04
0.106
0.167 1:1
0.003
0.058
0.123 S05
0.187 1:1
0.000
0.064
0.136 S05 DUP
0.184 x2
0.091
0.236 ADL
0.314
0.397
0.002
0.038 PBK
0.091
0.141 1:1
~~0.054~~
0.005 SF2936
0.045 S78
~~0.066~~
0.134 1:1
0.093
0.058 SF2974
-0.005 S56
0.027
0.056 1:1
0.102
0.098
0.197 ADL
0.302
0.410

I.L 02/18/88
SB 2936 2963 2974

JVM 2/18/88

SAMPLE NO.	CONC.	R VALUE	SLOPE	
P.BL	.498303	.999542	.00983	
AQC 10.15	9.36955	.999223	.01031	% Dev - 7.7
BLANK DIG.	.821238	.99957	.00818	
SB42904 2963	.517243	.999264	.00812	
SB42905 2963	.450944	.997213	.00781	
~~SB42906 2963~~	~~-.257582~~	~~.99498~~	~~.00811~~	rerun
SB42907 2963	-.311751	.99901	.00834	
SB42904 DUP	.955802	.99963	.00973	Δ ≤ 2
AQC 10.15	10.4595	.99942	.01038	% Dev = 3.1
R.BL2	8.11536E-02	.999423	.01109	
CY0378 2936	.209357	.999064	.00912	
CY03956 2974	3.34227	.999356	.01119	
CY03978 DDUP	-.11976	.999548	.00835	
CY03978 SP 20	10.6264	.999666	.00873	% Rec - 52.1
SB42906 2963	-.818713	.998615	.00855	
AQC 10.15	9.23664	.998559	.01179	% Dev - 9.0

R.BL

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.007	4.80002E-03	-2.19998E-03	-45.8328 %
10	.093	.1031	5.10002E-03	4.94567 %
20	.205	.2014	-3.59997E-03	-1.78747 %
30	.299	.2997	7.00027E-04	.233576 %

AQC 10.15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.094	.0966	2.60004E-03	2.69155 %
10	.2	.1997	-2.9996E-04	-.150205 %
20	.31	.3028	-7.19997E-03	-2.3778 %
30	.401	.4059	4.90007E-03	1.20721 %

BLANK DIG.

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.008	6.80002E-03	-1.19998E-03	-17.6467 %
10	.085	.0886	3.60001E-03	4.06322 %
20	.174	.1704	-3.59999E-03	-2.11267 %
30	.251	.2522	1.19999E-03	.475809 %

SB42904 29

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.01	4.20001E-03	-5.79999E-03	-138.095 %
10	.077	.0854	8.40001E-03	9.83607 %
20	.166	.1666	5.99995E-04	.360141 %
30	.251	.2478	-3.19999E-03	-1.29136 %

SB42905 29

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.009	3.59998E-03	-5.40002E-03	-150.002 %
10	.078	.0817	3.69998E-03	4.52874 %
20	.151	.1598	8.79999E-03	5.50688 %
30	.245	.2379	-7.10002E-03	-2.98445 %

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SB42906 29

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.007	-2.89999E-03	-9.89999E-03	341.38 %
10	.064	.0782	.0142	18.1586 %
20	.158	.1593	1.30001E-03	.816075 %
30	.246	.2404	-5.60001E-03	-2.32945 %

SB42907 29

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.006	-2.60001E-03	-8.60001E-03	330.769 %
10	.067	.0808	.0138	17.0792 %
20	.166	.1642	-.0018	-1.09622 %
30	.251	.2476	-3.39998E-03	-1.37318 %

SB42904 DU

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.012	9.29996E-03	-2.70004E-03	-29.0329 %
10	.104	.1066	2.59998E-03	2.43901 %
20	.201	.2039	.0029	1.42227 %
30	.304	.3012	-2.79996E-03	-.929601 %

AQC 10.15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.111	.1138	2.80005E-03	2.4605 %
10	.229	.2226	-6.39997E-03	-2.8751 %
20	.327	.3314	4.40002E-03	1.32771 %
30	.441	.4402	-8.00014E-04	-.181739 %

R.BL2

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.002	8.99994E-04	-1.10001E-03	-122.224 %
10	.107	.1118	.0048	4.29338 %
20	.229	.2227	-.0063	-2.82892 %
30	.331	.3336	2.60001E-03	.779381 %

CY0378 293

SPIKE	MEASURED	CALC.	ERROR	PER CENT

I. L

0	-.001	1.69998E-03	2.69998E-03	158.824 %
10	.084	.0829	-1.09999E-03	-1.32689 %
20	.17	.1641	-5.89997E-03	-3.59535 %
30	.241	.2453	4.30004E-03	1.75297 %

Jm 2/24/91

CY03956 29

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.041	.0374	-3.59998E-03	-9.6256 %
10	.147	.1493	2.30002E-03	1.54054 %
20	.255	.2612	6.20002E-03	2.37367 %
30	.378	.3731	-4.89998E-03	-1.31332 %

CY03978 DD

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	0	-.001	-.001	100 %
10	.079	.0825	.0035	4.24242 %
20	.17	.166	-3.99999E-03	-2.40963 %
30	.248	.2495	1.50003E-03	.601213 %

CY03978 SP

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.096	.0933	-2.70002E-03	-2.89391 %
10	.177	.1811	4.09998E-03	2.26393 %
20	.269	.2689	-9.99868E-05	-3.71836E-02 %
30	.358	.3567	-1.29998E-03	-.364446 %

SB42906 29

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	-.003	-.007	-.004	57.1429 %
10	.076	.0785	2.50002E-03	3.18474 %
20	.157	.164	7.00004E-03	4.26832 %
30	.255	.2495	-5.49996E-03	-2.20439 %

AQC 10.15

SPIKE	MEASURED	CALC.	ERROR	PER CENT
0	.105	.1089	3.89997E-03	3.58124 %
10	.237	.2268	-.0102	-4.49737 %
20	.336	.3447	8.69998E-03	2.52393 %
30	.465	.4626	-2.40001E-03	-.518809 %

I. L.

Jun 26 Feb 84

Wheel #1

		0.021	
		0.000	AZ
R	1	0.007	
	2	0.098	
	3	0.205	
	4	0.299	
AQC	5	0.094	
	6	0.200	
	7	0.310	
	8	0.401	
BL dipout	9	0.008	
	10	0.085	
	11	0.174	
	12	0.251	
DS3963 SB425 Off	13	0.010	
	14	0.077	
	15	0.156	
	16	0.251	
SOS	17	0.009	
	18	0.073	
	19	0.151	
	20	0.245	
SOG	21	0.007	rerun.
	22	0.064	
	23	0.158	
	24	0.246	
SOT	25	0.006	
	26	0.067	
	27	0.165	
	28	0.251	
SOT Dipout	29	0.012	
	30	0.104	
	31	0.201	
	32	0.304	
AQC	33	0.111	
	34	0.229	
	35	0.327	
	36	0.441	

Wheel #2

		0.009	
		0.000	AZ
R.BL	1	0.002	
	2	0.107	
	3	0.229	
	4	0.331	
CY03578	5	-0.001	
	6	0.084	
	7	0.170	
	8	0.241	
CY02554	9	0.041	
	10	0.147	
	11	0.255	
	12	0.378	
578 Out Dip	13	-0.000	
	14	0.079	
	15	0.170	
	16	0.248	
578 Sp.	17	0.096	
	18	0.177	
	19	0.269	
	20	0.358	
SB425OS	21	-0.003	
	22	0.076	
	23	0.157	
	24	0.255	
AQC	25	0.105	
	26	0.237	
	27	0.336	
	28	0.465	

I.2

Run No. 512

Prep. by MS Date 2/12/88 Anal. by Date

Beaker No.	Data Set	Sample	Notes	Beaker No	Data Set	Sample	Notes
1	Blank			26			
2	SF2936	CY03578	1.0g	27			
3	SF2974	CY03556		28			
4	SF2463	~~SB~~ S04	1.0g Sieved 10 mesh	29			
5		SB 505	1.0g	30			
6		42 S06	Sieved 10 mesh	31			
7	SF2963	S07	Sieved 10 mesh	32			
8	SF2963	CY03578	Dup	33			
9	SF2963	CY03578	Spk + Furnace metals spike	34			
10	SF2975	CY03 589		35			
11		590		36			
12		591		37			
13		592		38			
14		593		39			
15		594		40			
16		595		41			
17		596		42			
18	SF2975	CY03589	DUP	43			
19	SF2975	CY03589	SPK	44			
20	Blank			45			
21	NBS River	1645 Sediment	1.0g	46			
22	NBS	1645	.25g	47			
23				48			
24				49			
25				50			

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 3-13-86

SUBJECT: Precision and Accuracy of Analyses for Data Set SF 2936
Site: GARY LAGOON

FROM: Steve Parker,
CRL QC Coordinator

TO: Data User: _____

The Region V Central Regional Laboratory has completed its analyses of 2 (number) SEDIMENT (matrix type) samples for the parameters listed on the attached sheet. The discrete values reported on the result forms should be considered to be of the precision and accuracy levels listed.

PRECISION is a measure of reproducibility or the closeness with which individual measurements of the same property, under similar conditions agree with each other. It is expressed as the relative percent difference (RPD) or the absolute concentration difference (R') between duplicate analyses. The limit acceptable at the time of analysis is stated. QC data within these limits indicate that the analysis was in control for that set of data.

ACCURACY is a measure of the closeness of an individual measurement to the expected value. It can be expressed as percent recovery of a known spike or standard concentration, or as percent bias which is the deviation from the true value. The limits applicable at the time of analysis are stated. A 95% confidence interval means that 95% of the time, percent recovery will fall between those limts.

Attachment

Griffin
MAR 1 - 1986

PRECISION AND ACCURACY STATEMENT

Data Set: SF 2936

Matrix: SEDIMENT

Site Name: GARY LAGOON

	PRECISION			ACCURACY		
Parameter	RPD R'	Limit	Method of Quality Control	% Recovery % Bias	Limit	Method of Quality Control
PCB	5%	≤40%	CONTROL STANDARD	60-63%	60-120%	CONTROL STANDARD
PEST.	BDL		SAMPLE	BDL		SAMPLE

COMMENT:

QC FLAGS:

Form # 1:

ENVIRONMENTAL PROTECTION AGENCY, REGION V BASIC DATA FORM:

DIVISION/BRANCH: SF-2936 Sampling Date: 12/4/85 (Month Day Year) Arrival Date: 1/16/86 (Month Day Year) Analysis Due Date: 2/18/86 (Month Day Year)

D.U. Number: Y-905 Group #: Activity #: C 46A00 Study: GARY LAGOON

All units are ~~micrograms per liter or~~ milligram per kilograms Sample Type: Water, Sediment, Oil, Sludge

#	Sample #	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor	Aroclor	Aroclor	Dibuthyl phthalate	Diethyl Hexyl phthalate	
1	86CY03 S76	31.2	<6	<3	<3						
2	-S77	86.3	<20	<10	<10						
3						TCJ 3-7-86					
4						G.F. 3/10/86					
5						YF 3/10/86					
6						SP 3-13-86					
7											
8											
9											
0											
1											
2											
3											
4											
5											
6											
7											
8											
9											
0											
1											
2											

ENVIRONMENTAL PROTECTION AGENCY, REGION V BASIC DATA FORM:

DIVISION/BRANCH: SF-2936 Sampling Date: 12/ 4 / 85 (Month Day Year) Arrival Date: 1 / 16 / 86 (Month Day Year) Analysis Due Date: 2 / 18 / 86 (Month Day Year)

D.U. Number: Y-905 Group # : _____ Activity # ; C46A00 Study: GARY LAGOON

ALL UNITS ARE ~~MICROGRAMS PER LITER OR~~ MILLIGRAMS PER KILOGRAM.

Pesticide / Sample #	Y-BHC Lindane	Heptachlor	Aldrin	Heptachlor epoxide	Endosulfan I	Dieldrin	Endrin	Endosulfan II	pp-DDE	Beta-BHC	Delta-BHC	α-BHC	pp-DDD	pp-DDT	Methoxy Chlor	Endosulfan sulfate	Endrin aldehyde	Endrin ketone	TECH. CHLORDANE	TOXAPHENE
1 86CY03S76	<2	<2	<2	<2	<2	<2	<2	<2	<1	<2	<2	<2	<1	<1	<1	<1	<1	<1	<2	<5
2 -S77	<5	<5	<5	<5	<5	<5	<5	<5	<2	<5	<5	<5	<2	<2	<2	<2	<2	<2	<5	<10
3																				TCJ/3-7-86
4																				GF 3/10/86
5																				GF 3/10/86
6																				3-13-86
7																				
8																				
9																				
10																				
11																				
12																				

C46A00
OSC-Simes

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: PESTICIDES & PCB'S

DIVISION/BRANCH SUPERFUND SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/26/86 DUE DATE 2/13/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS GARY, IN PRIORITY N CONTRACTOR CRL.

CRL LOG NUMBER 86CY03	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS POLYCHLORINATED BIPHENYLS MG/KG (DRY) PES211422	SEDIMENTS SOLIDS CHLORINATED PESTICIDES MG/KG (DRY) PES211322	SEDIMENTS SOLIDS OIL AND GREASE MG/KG (DRY) PES214322
576	5-88412	X		
577	5-88413	X	X	

CRL V.2; 3/85

COMPUTATION SHEET

C46A00 10TFA05WUZZ

OFFICE CRL SF2936 Gary Lagoon FILE NO.

SUBJECT % Solids

COMPUTATION

COMPUTED BY JFP 1/22/86 CHECKED BY 1/22/86 DATE 1/23/86 PAGE OF PAGES

(1) Dish/ Sample #	(2) dish wt.	(3) wet dish + sample	(4) dry dish + sample	(5) wet sample wt.	(6) dry sample wt.	(7) % Solids	(8)	(9)	(10)
10g Balance	Check	10.0003	50gWT/50.0005						~~RPD~~
20g Balance	ck-	20.0003							Actual
8-578	65.0865	75.9705	70.8722	9.8840	5.7857	58.54	Limits Dup ± 10%		1.37RPD
85-578Dup	69.8141	76.0754	73.5303	6.2613	3.7162	59.35			
3-BLK	73.5100	—	73.5092				Blank Δ	≤0.5mg	-0.8mg*
96-576	73.4951	79.5795	77.8134	6.0844	4.3183	70.97			
5-577	80.5232	85.8099	84.2745	5.2867	3.7513	70.96			

* This difference is less than 0.5mg and should not affect the data since is a negative difference.

GPO 825129

SF-2936, 2963.

AQC P.2

DIBUTYL CHLORENDATE (DIB) RECOVERY

MIREX - ISTD
7.26 µg/ML
10 µL per VIAL (1.6 ML)

								ISTD AREA CH.0	ISTD AREA CH.14	DIB ADDED (µg)	DIB CONC FOUND (µg/L)	TOTAL* DIB (µg)	% RECOVERY
29	X77 SPK	29,	C0N29	*RAW00	500.00,	1.0000,	1.0000						
30	A 1242-500	30,	C0N30	*RAW00	100.00,	1.0000,	1.0000						
31	DIB 65	31,	C0N31	*RAW00	100.00,	1.0000,	1.0000	410435	157546				
32	A1248-500	32,	C0N32	*RAW00	100.00,	1.0000,	1.0000	-	-				
33	A1260-500	33,	C0N33	*RAW00	100.00,	1.0000,	1.0000	-	-				
34	A1254-500	34,	C0N34	*RAW00	100.00,	1.0000,	1.0000	423516	174957				
35	SF 2936MB	35,	C0N35	*RAW00	1000.0,	1.0000,	.0100	377223	163822				
36	SF 2963SPK	36,	C0N36	*RAW00	5000.0,	1.0000,	.0050	379695	172696				
37	SF 2963SPKD	37,	C0N37	*RAW00	5000.0,	1.0000,	.0050	356424	175212				
38	SB42 S04	38,	C0N38	*RAW00	5000.0,	1.0000,	.0100	390601	159753				
39	SB42 S05	39,	C0N39	*RAW00	5000.0,	1.0000,	.0100	415581	167880				
40	SB42 S06	40,	C0N40	*RAW00	5000.0,	1.0000,	.0100	387653	187456				
41	SB42 S07	41,	C0N41	*RAW00	1000.0,	1.0000,	.0100	-	-				
42	SF 2963MB	42,	C0N42	*RAW00	500.00,	1.0000,	1.0000	446962	157772	.65	.83	.83	127.7
43	A1242-500	43,	C0N43	*RAW00	100.00,	1.0000,	1.0000	404658	182719	~~.65~~	~~.78~~	~~.78~~	-
44	SF 2963SPK	44,	C0N44	*RAW00	500.00,	1.0000,	1.0000	441126	180772	.65	.78	.78	120
45	SF 2963SPKD	45,	C0N45	*RAW00	500.00,	1.0000,	1.0000	432936	170397	.65	.63	.63	96.9
46	SB42 R01	46,	C0N46	*RAW00	500.00,	1.0000,	1.0000	391036	176052	.65	.68	.68	104.6
47	SB42 R02	47,	C0N47	*RAW00	500.00,	1.0000,	.9700	411526	184850	.65	.725	.703	108.2
48	SB42 S01	48,	C0N48	*RAW00	5000.0,	1.0000,	1.0200	389618	177486	.65	.66	.673	103.6
49	SB42 S02	49,	C0N49	*RAW00	5000.0,	1.0000,	.9800	420682	176476	.65	.495	.485	74.6
50	SB42 S03	50,	C0N50	*RAW00	5000.0,	1.0000,	.9800	434603	181577	.65	.61	.60	92
51	SB42 S07	51,	C0N51	*RAW00	20000.,	1.0000,	.0100	384410	166856				-
52	A1242-500	52,	C0N52	*RAW00	100.00,	1.0000,	1.0000	348917	208518				
53	A1248-500	53,	C0N53	*RAW00	100.00,	1.0000,	1.0000	-	-				
54	A1254-500	54,	C0N54	*RAW00	100.00,	1.0000,	1.0000	407416	200075				
55	A1260-500	55,	C0N55	*RAW00	100.00,	1.0000,	1.0000	—	-				
56	PEST A	56,	C0N56	*RAW00	100.00,	1.0000,	1.0000	423826	177928				
57	PEST B	57,	C0N57	*RAW00	100.00,	1.0000,	1.0000	357511	209230				
58	CHLOR 500	58,	C0N58	*RAW00	100.00,	1.0000,	1.0000	417241	216293				
59	TOXA 1660	59,	C0N59	*RAW00	100.00,	1.0000,	1.0000	-	-				
60	SF 2936MB	60,	C0N60	*RAW00	1000.0,	1.0000,	.0100	377660	193195				
61	CY03 S76	61,	C0N61	*RAW00	100000,	1.0000,	.0100	343173	172075				
62	CY03 S77	62,	C0N62	*RAW00	200000,	1.0000,	.0100	351508	185159				
63	85-EM03 R13	63,	C0N63	*RAW00	500.00,	1.0000,	1.0000						
64	85-EM03 S04	64,	C0N64	*RAW00	2000.0,	1.0000,	1.0000						
65	SPK-PCB-S02	65,	C0N65	*RAW00	500.00,	1.0000,	1.0000						

LISTING ABORTED

* CONC. of DIB x Vol. IN LITERS.

U.S. Environmental Protection Agency Region V

Superfund Document Management System (SDMS)

Lab Data Reference Sheet

Please contact the Superfund Records Manager for further information.

I. Unscannable item due to format

X Graph

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___ Resolution / Contrast

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 3-13-86

SUBJECT: Precision and Accuracy of Analyses for Data Set SF 2936
Site: GARY LAGOON

FROM: Steve Parker,
CRL QC Coordinator

TO: Data User: _____

The Region V Central Regional Laboratory has completed its analyses of 1 (number) SEDIMENT (matrix type) samples for the parameters listed on the attached sheet. The discrete values reported on the result forms should be considered to be of the precision and accuracy levels listed.

PRECISION is a measure of reproducibility or the closeness with which individual measurements of the same property, under similar conditions agree with each other. It is expressed as the relative percent difference (RPD) or the absolute concentration difference (R') between duplicate analyses. The limit acceptable at the time of analysis is stated. QC data within these limits indicate that the analysis was in control for that set of data.

ACCURACY is a measure of the closeness of an individual measurement to the expected value. It can be expressed as percent recovery of a known spike or standard concentration, or as percent bias which is the deviation from the true value. The limits applicable at the time of analysis are stated. A 95% confidence interval means that 95% of the time, percent recovery will fall between those limts.

Attachment

Griffin

PRECISION AND ACCURACY STATEMENT

Data Set: SF 2936

Matrix: SEDIMENTS

Site Name: GARY LAGOON

	PRECISION			ACCURACY		
Parameter	RPD R'	Limit	Method of Quality Control	% Recovery % Bias	Limit	Method of Quality Control
ABN	NOT	AVA	ILABLE			

COMMENT: DUE TO THE HIGH FINAL DILUTION OF THE EXTRACTS, THE SURROGATES WERE DILUTED TO TOO LOW A LEVEL TO WORK WITH.

QC FLAGS: DATA SHOULD BE USED FOR INFORMATION PURPOSES ONLY AND THE LAB MUST BE WARNED OF THE LARGE AMOUNT OF MATERIAL PRESENT IN THE SAMPLES THE NEXT TIME SO THAT APPROPRIATE SURROGATES AND SAMPLE PREPARATION PROCEDURES CAN BE USED.

SEMIVOLATILE ORGANIC ANALYSIS DATA SHEET
U.S. EPA - Region V, Central Regional Laboratory

Study Name: GARY LAGOON
Sample # : 86CY03S77

Data Set #: SF-2936
Matrix : SEDIMENT

	CAS #	Compounds	Concentration (MG/KG)
1.	62-53-3	Aniline	15 U
2.	111-44-4	Bis(2-chloroethyl)ether	15 U
3.	108-95-2	Phenol	20 U
4.	95-57-8	2-Chlorophenol	20 U
5.	541-73-1	1,3-Dichlorobenzene	20 U
6.	106-46-7	1,4-Dichlorobenzene	20 U
7.	95-50-1	1,2-Dichlorobenzene	25 U
8.	100-51-6	Benzyl Alcohol	20 U
9.	39638-32-9	Bis(2-chloroisopropyl)ether	25 U
10.	95-48-7	2-Methylphenol	10 U
11.	67-72-1	Hexachloroethane	20 U
12.	621-64-7	N-nitrosodipropylamine	15 U
13.	98-95-3	Nitrobenzene	25 U
14.	106-44-5	4-Methylphenol	10 U
15.	78-59-1	Isophorone	25 U
16.	88-75-5	2-Nitrophenol	20 U
17.	105-67-9	2,4-Dimethylphenol	20 U
18.	111-91-1	Bis(2-chloroethoxy)methane	25 U
19.	120-83-2	2,4-Dichlorophenol	20 U
20.	120-82-1	1,2,4-Trichlorobenzene	20 U
21.	91-20-3	Naphthalene	180
22.	106-47-8	4-Chloroaniline	20 U
23.	87-68-3	Hexachlorobutadiene	25 U
24.	65-85-0	Benzoic acid	(300) U
25.	91-57-6	2-Methylnaphthalene	850
26.	59-50-7	4-Chloro-3-methylphenol	15 U
27.	77-47-4	Hexachlorocyclopentadiene	20 U
28.	88-06-2	2,4,6-Trichlorophenol	15 U
29.	95-95-4	2,4,5-Trichlorophenol	15 U
30.	91-58-7	2-Chloronaphthalene	15 U
31.	208-96-8	Acenaphthylene	15 U
32.	131-11-3	Dimethylphthalate	15 U
33.	606-20-2	2,6-Dinitrotoluene	10 U

(continued on the next page)

Data Qualifiers:

U -Compound was analyzed for but not detected. The value reported is the method detection limit for reagent water.
SLC -Suspected Laboratory Contaminant.
SFC -Suspected Field Contaminant.

Detection limits in parentheses are estimates. Actual limits are currrently being determined.

SEMIVOLATILE ORGANIC ANALYSIS DATA SHEET
U.S. EPA - Region V, Central Regional Laboratory

Study Name: GARY LAGOON
Sample # : 86CY03S77

Data Set #: SF-2936
Matrix : SEDIMENT

	CAS #	Compounds	Concentration (MG/KG)
34.	83-32-9	Acenaphthene	15 U
35.	99-09-2	3-Nitroaniline	25 U
36.	132-64-2	Dibenzofuran	10 U
37.	51-28-5	2,4-Dinitrophenol	(150) U
38.	121-14-2	2,4-Dinitrotoluene	10 U
39.	86-73-7	Fluorene	230
40.	100-02-7	4-Nitrophenol	15 U
41.	7005-72-3	4-Chlorophenyl phenyl ether	10 U
42.	84-66-2	Diethylphthalate	10 U
43.	534-52-1	4,6-Dinitro-2-methylphenol	150 U
44.	122-66-7	1,2-Diphenylhydrazine (azobenzene)	10 U
45.	86-30-6	N-nitrosodiphenylamine (diphenylamine)	15 U
46.	100-01-6	4-Nitroaniline	30 U
47.	101-55-3	4-Bromophenyl phenyl ether	15 U
48.	118-74-1	Hexachlorobenzene	15 U
49.	87-86-5	Pentachlorophenol	20 U
50.	85-01-8	Phenanthrene	390
51.	120-12-7	Anthracene	25 U
52.	84-74-2	Di-n-butylphthalate	20 U
53.	206-44-0	Fluoranthene	15 U
54.	129-00-0	Pyrene	15 U
55.	85-68-7	Butylbenzylphthalate	35 U
56.	218-01-9	Chrysene	15 U
57.	56-55-3	Benzo(a)anthracene	15 U
58.	117-81-7	Bis(2-ethylhexyl)phthalate	10 U
59.	117-84-0	Di-n-octylphthalate	15 U
60.	205-99-2	Benzo(b)fluoranthene	15 U
61.	207-08-9	Benzo(k)fluoranthene	15 U
62.	50-32-8	Benzo(a)pyrene	20 U
63.	193-39-5	Indeno(1,2,3-cd)pyrene	35 U
64.	53-70-3	Dibenzo(a,h)anthracene	25 U
65.	191-24-2	Benzo(ghi)perylene	40 U
66.	88-74-4	2-Nitroaniline	10 U

Data Qualifiers:

U -Compound was analyzed for but not detected. The value reported is the method detection limit for reagent water.

SLC -Suspected Laboratory Contaminant.

SFC -Suspected Field Contaminant.

Detection limits in parentheses are estimates. Actual limits are currrently being determined.

SEMIVOLATILE ORGANIC ANALYSIS DATA SHEET
U.S. EPA - REGION V, CENTRAL REGIONAL LABORATORY

STUDY NAME: GARY LAGOON
SAMPLE #: 86-CY03S77

DATA SET #: SF-2936
MATRIX: SEDIMENT

TENTATIVELY IDENTIFIED COMPOUNDS	ESTIMATED CONC. ~~(PPM)~~ mg/kg
HYDROCARBON	3100
NAPHTHALENE, DECAHYDRO-2-METHYL-	53
NAPHTHALENE, 2,3-DIMETHYL-	180
NAPHTHALENE, 1,8-DIMETHYL-	400
NAPHTHALENE, 1,4-DIMETHYL-	120
NAPHTHALENE, 2-(1-METHYLETHYL)-	170
NAPHTHALENE, 1,6,7-TRIMETHYL-	78
NAPHTHALENE, 2,3,6-TRIMETHYL-	170
NAPHTHALENE, 1,2,6-TRIMETHYL-	140
ANTHRACENE, 1-METHYL-	44
SULFUR, MOL.(S8)	60
UNKNOWN	920

①

CA6A00
OSC-Simes

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: TOXIC SUBSTANCES

DIVISION/BRANCH SUPERFUND SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/16/86 DUE DATE 2/18/86

DU NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

CRL LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX17564	WATER ANA ORGANICS SCAN UG/L TOX17574	SEDIMENTS SOLIDS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX215622	SEDIMENTS SOLIDS ANA ORGANICS SCAN MG/KG (DRY) TOX215722
86CY03					
577	5-98413			X	X
					3/5/86
					3/10/86
					3/12/86
					3-13-86

CRL V.2; 3/85

CENTRAL REGIONAL LABORATORY
U.S. ENVIRONMENTAL PROTECTION AGENCY
536 SOUTH CLARK ST.
CHICAGO, ILLINOIS 60605

312/353-8370

B/N/A ORGANIC ANALYSIS SHEET

Study Name: Gary Lagoon Study Number: SF-2936

Lab Sample I.D. No.: HCY03577 Activity Number: A46A00

TENTATIVELY IDENTIFIED COMPOUNDS (STD: 152105)		ESTIMATED CONCENTRATION (PPM)
1. Hydrocarbon	~~1142646~~	3100
2. ~~Naphthalene, decahydro-2-methyl-~~	~~20717~~	53
3. Naphthalene, 2,3-dimethyl-	~~[illegible]~~	180
4. Naphthalene, 1,8-dimethyl-	~~[illegible]~~	400
5. Naphthalene, 1,4-dimethyl-	~~49422~~	120
6. Naphthalene, 2-(1-methylethyl)-	~~68819~~	170
7. Naphthalene, 1,6,7-trimethyl-	~~30876~~	78
8. Naphthalene, 2,3,6-trimethyl-	~~[illegible]~~	170
9. Naphthalene, 1,2,6-trimethyl-	~~52021~~	140
10. Anthracene, 1-methyl-	~~[illegible]~~	44
11. Sulfur, Mol. (S8)	~~23600~~	60
12. Unknown	~~367848~~	920
13.		
14.		
15.		

CODES:
- U - Compound was analyzed for, but not detected. The value is the minimum detection limit for the sample analyzed.
- SC - Suspected contaminant
- J - Estimated Value
- N.A. - This compound was not analyzed for using an external standard automatic quantification program. However, manual peak identification indicates that the compound is not present above the minimum detection limit of the method.

********** EPA CRITERION VERIFIER FOR DFTPP **********

DRN: 8039
SPECTRUM: 1148

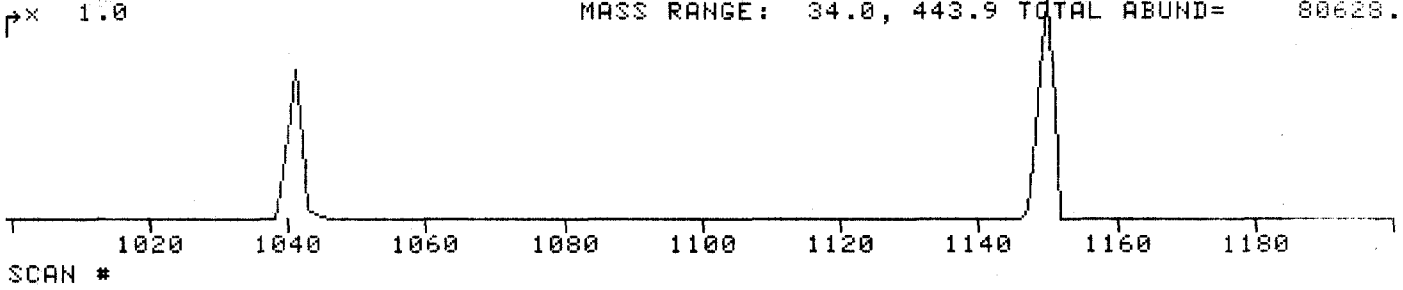
Mass	Rel. Abund.	Criterion
51	40.5	30-60% MASS 198
68	0	< 2% MASS 69
69	60.1	
70	0	< 2% MASS 69
127	51.4	40-60% MASS 198
197	0	< 1% MASS 198
198	100	BASE PEAK
199	7.5	5-9% MASS 198
275	15.1	10-30% MASS 198
365	1.7	> 1% MASS 198
441	7.3	< MASS 443
442	42.7	> 40% MASS 198
443	9.5	17-23% MASS 442

NOTE: '**' indicates out of range!

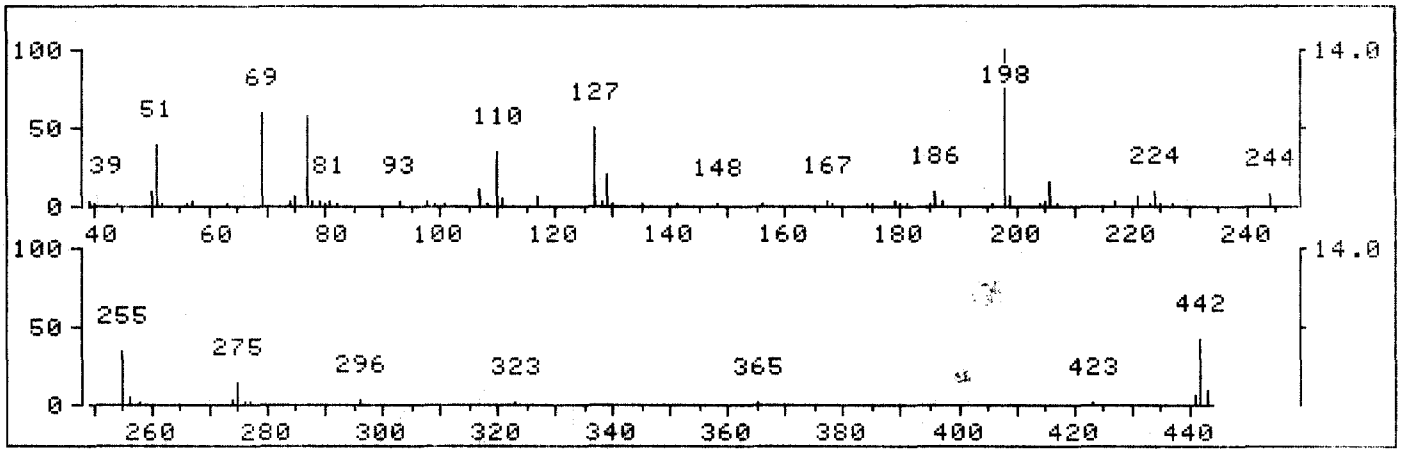
Press <RETURN> to verify the next scan.
Press ^ to restart program. Any other key to exit...

DFTPP
3-3-86

FRN 8039, CRN 2
1204 SCANS (201 SCANS, 3.90 MINS)
MASS RANGE: 34.0, 443.9 TOTAL ABUND= 80628.



#1148 RET. TIME: 24.68 TOT ABUND= 2557. BASE PK/ABUND: 197.9/ 358.



Form # 4

ENVIRONMENTAL PROTECTION AGENCY, REGION V BASIC DATA FORM:

Group #: _____ **Data Set:** SF 2936, SF 2963, SF 2974 **Sample Type:** Sediment

ISTD-Conc.:

Sample #	Sample Amount	Final Volume	Solvent Extract. CH_2Cl_2	Dilution with Hexane 1 st.	2 nd.	3 rd.	Vol. Conc. Extr.	Volume to Pest.	Toxic
86CY03 #73	10g		200ml				100ml	—	1ml
86 SB42 #04	10g		↓				1ml	—	↓
86 SB42 #05	10g						↓	—	
86 SB42 #06	10g							—	
86 SB42 #07	10g						↓	—	
86CY03 #56	10g						10ml	—	
86CY03 #56 MS	10g						↓	—	
86CY03 #56 MSD	10g						↓	—	
METHOD Blank 2974	—		↓				1ml	—	↓

Date Extracted: 2/25/86 **Chemist:** K Gunter **Toxic Ext. Received by**
DATE Evaporated 2/26/86 **Gen. Org. Ext.** " "

Analytical Condition:

GC Conditions:

Column 1) 3%-2100 on Supercoport 10 x 1/8" /1.95%
2) 1.5% SP-2250/ SP-2401 "

T1 _____ Hold _____ Min.

T2 _____ _____ Min.

Rate: _____ C

Carrier Gas: _____; Flow rate: _____

GC Operator & Date: _____

MS Conditions:

Mass Range: _____ to _____

Scan Cycle: _____

High Voltage: _____

Confirmation: _____

Operator & Date: _____

Sample Clean-up and Remarks:

Acid Working Matrix Spike 7/22/85 .5ml added ~~to each~~ (MS + MSD)

B/N Matrix Spiking Solution 10/1/85 .5ml added to each (MS + MSD)

L7 Surrogates ABN 10/8/85 50ml added to each

COMPUTATION SHEET

C46A00 10TFA05WUZZ

OFFICE	CRL	SF2936	Gary Lagoon	FILE NO.
SUBJECT	% Solids			
COMPUTATION				
COMPUTED BY	JFP 1/22/86	CHECKED BY 1/22/86 1/23/86	DATE	PAGE OF PAGES

(1) Dish/ Sample #	(2) dish wt.	(3) wet dish + sample	(4) dry dish + sample	(5) wet sample wt.	(6) dry sample wt.	(7) % Solids	(8)	(9)	(10)
10g Balance	check	10.0003	50gWT/50.0005						~~RPD~~
20g Balance	ck-	20.0003					Limits		Actual
8-578	65.0865	75.9705	70.8722	9.8840	5.7857	58.54	Dup ±	10%	1.37RPD
85-578Dup	69.8141	76.0754	73.5303	6.2613	3.7162	59.35			
3-BLK	73.5100	–	73.5092				Blank Δ	≤0.5mg	-0.8mg*
96-576	73.4951	79.5795	77.8134	6.0844	4.3183	70.97			
5-577	80.5232	85.8099	84.2745	5.2867	3.7513	70.96			

* This difference is less than 0.5mg and should not affect the data since is a negative difference.

GPO 825129

Note: Surrogate % Recovery results are not reported since the final volume was 100 ml (due to the nature of the sample) detection of the surrogate compounds were impaired.

Matrix Spike Percent Recovery
BNA Organic Analysis

Study Number SF-2936

Compounds	Sample # 86CY03 $56 MS	Sample # 86CY03$56MSD	RPD %
Phenol	97	96	1.0
2-Chlorophenol	101	103	2.0
Benzyl Alcohol	104	106	1.9
p-chloro-m-cresol	86	88	2.2
4-Nitrophenol	78	81	3.8
Pentachlorophenol	87	71	20
1,4-Dichlorobenzene	100	99	1.0
1,2,4-Trichlorobenzene	95	100	5.1
Acenaphthene	89	99	11
Dibenzofuran	98	96	2.1
2,4-Dinitrotoluene	92	89	3.3
Pyrene	11*	10*	9.1
4-Chloroaniline	52	64	21
Di-n-butylphthalate	15*	13*	14
N-Nitrosodipropylamine	101	102	1.0

*Low results, confirmed manually. May be matrix interference or effect as baseline is high in this part of the chromatograms.

QUALITY CONTROL SHEET
TOXIC ORGANICS SECTION: BASE/NEUTRAL/ACIDIC

STUDY NAME GARY LAGOONS

STUDY NUMBER SF-2936

DATE

ACTIVITY NUMBER C46A00

ANALYST

FRN	SAMPLE NUMBER	MATRIX	AMOUNT	DILUTIONS	FINAL VOL (AFT.DILU)	INTERNAL STDS. (b.p. areas) Conc.: ug/ml		
						D4-1,4-Cl_2	D10-Phen	D_{12}-Peryl
8040	LAB BLANK					10370	21830	2940
8042	TOXS7D					19460	40730	4730
8044	MATS7D					17390	26410	4380
8047	SF-2974 86CY03 $56MS					~~15790~~ 14610	21710	4740
8048	" $56MSD					14250	21040	4330
8049	SF-2936 86CY03 $77					10471	18184	4947

MS Conditions

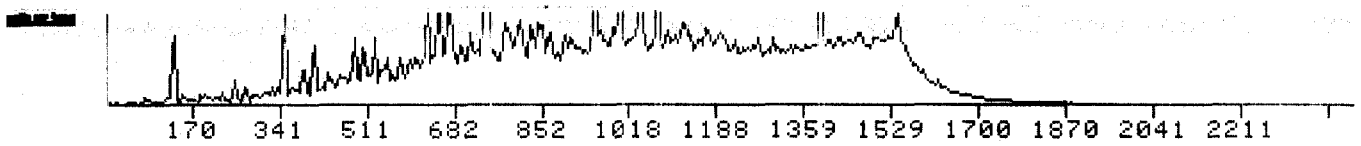
Mass Range: 45 to 445

Scan cycle:

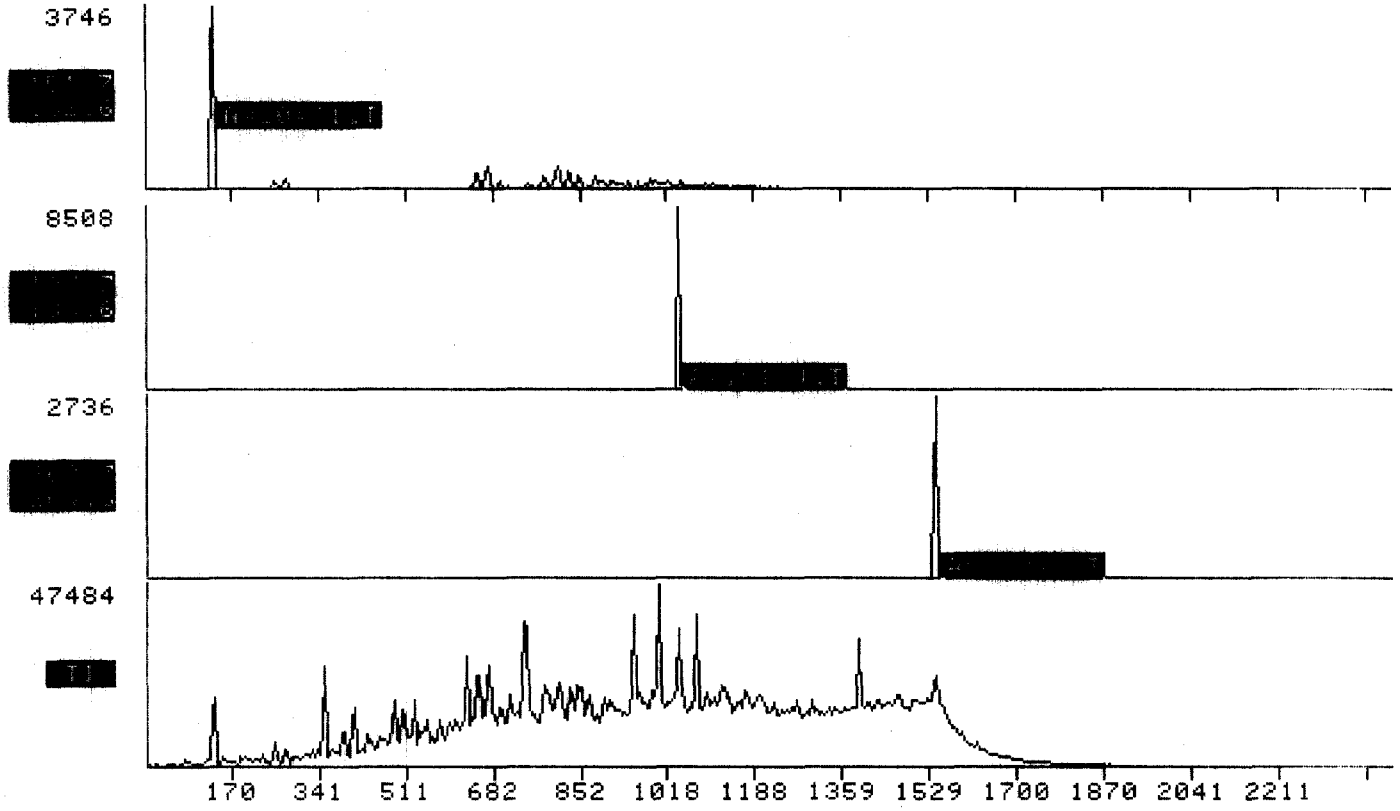
High Voltage:

Operator: L.J. SCHMIDT

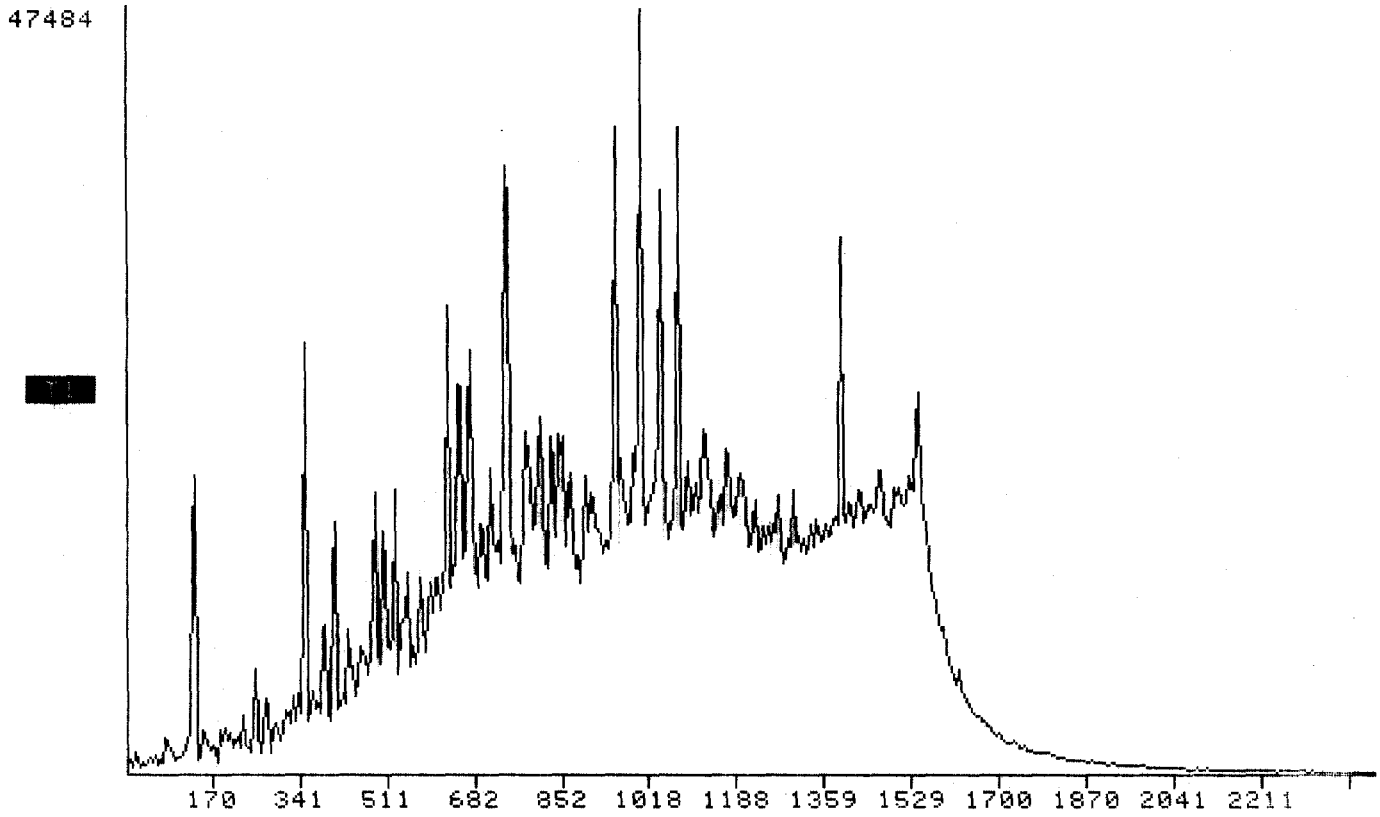
COMMENTS:



SF-2936 86CY03S77:10GR,100 FPN 8049
3-3-86 BTL#10 D8049



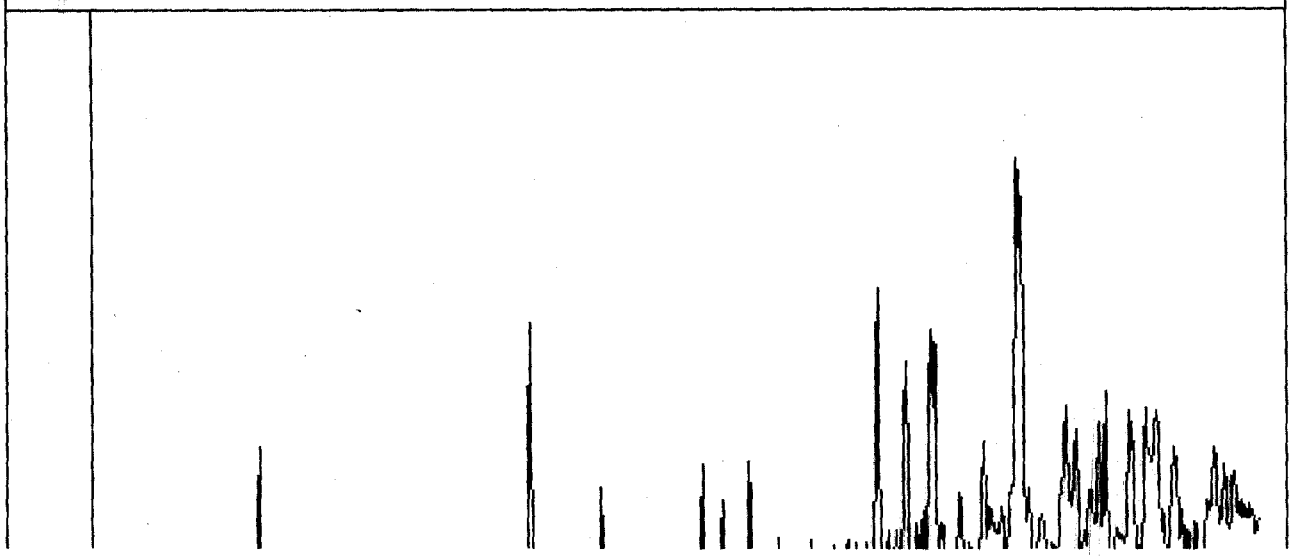
NAME SF-2936 86CY03S77:10GR,100 FRN 8049
DATE 3-3-86 BTL#10 D8049

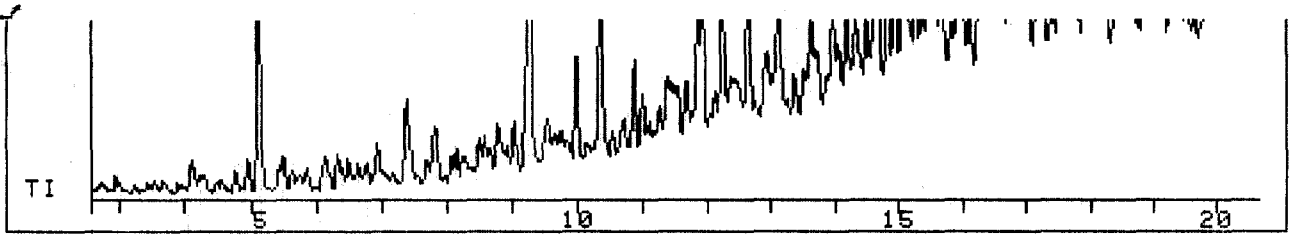


** BATCH PROCESSOR RECONSTRUCT ** FRN 8049

SF-2936 86CY03S77:10GR,100 1ST SC/PG: 1

3-3-86 BTL#10 D8049 X= .25 Y= 1.00

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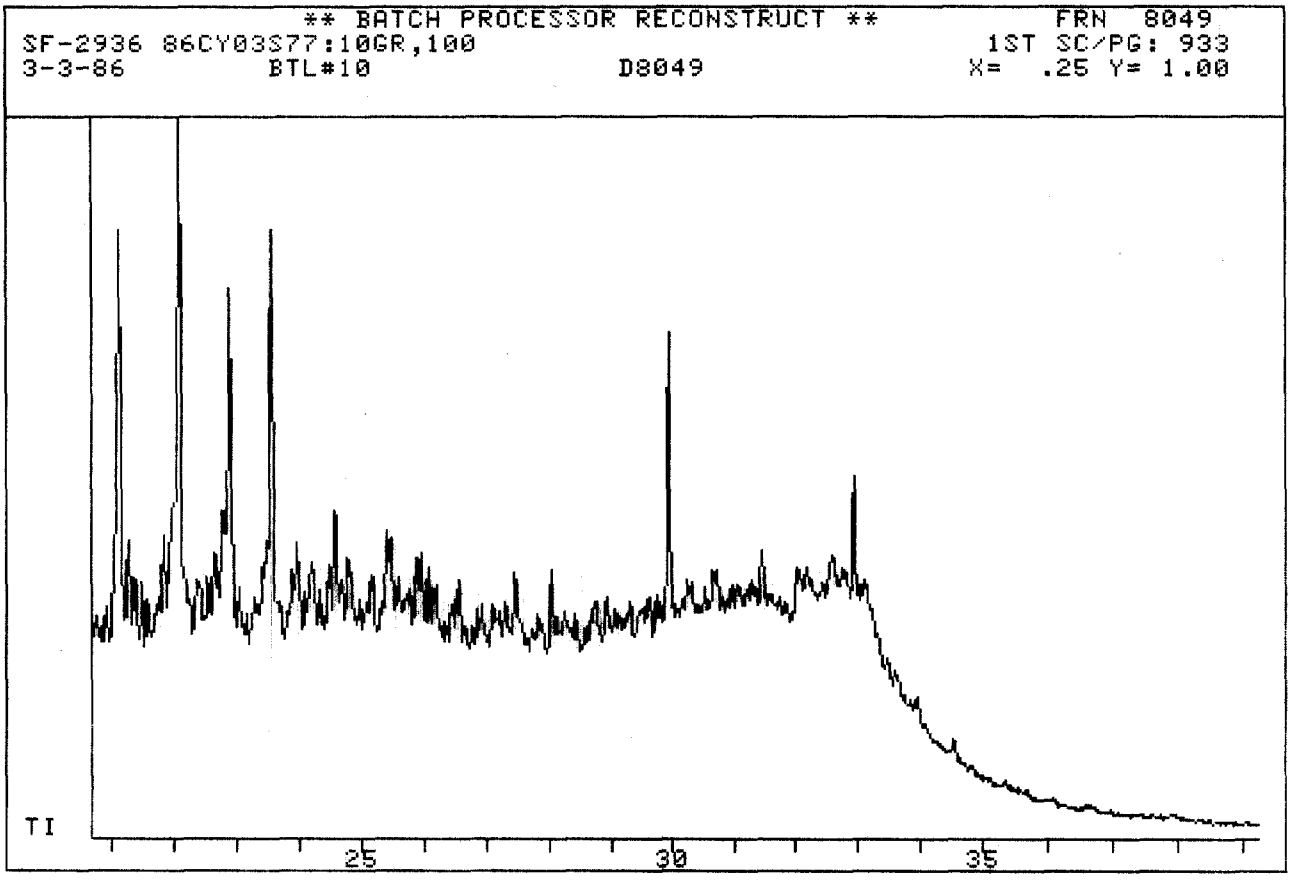
10
15
20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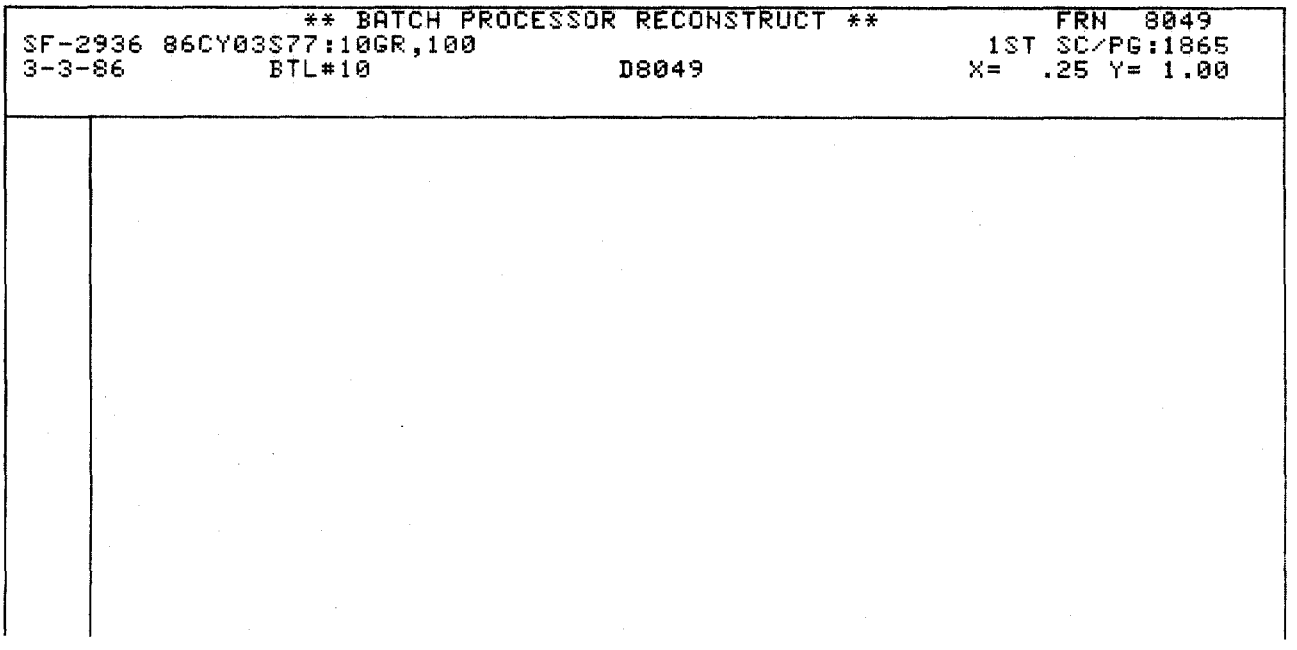
FRN 8049
SF-2936 86CY03S77:10GR,100
1ST SC/PG: 933
3-3-86
BTL#10
D8049
X= .25 Y= 1.00
TI
25
30
35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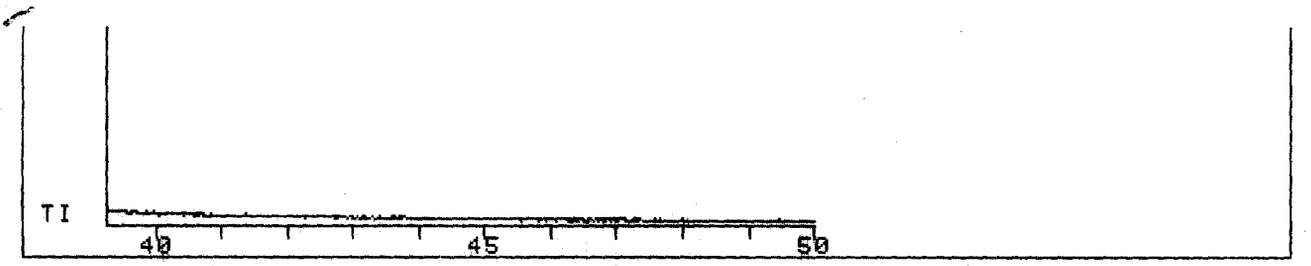
FRN 8049
SF-2936 86CY03S77:10GR,100
1ST SC/PG:1865
3-3-86
BTL#10
D8049
X= .25 Y= 1.00


TI
40
45
50

FINAL REPORT

MS DATA FILE FRN: 8040

NAME: SF-2974,2936 LAB BLANK
MISC DATA: 3-3-86 BTL#1 D8040

IDFILE FRN: 4521

IDFILE NAME: SURR. % RECOVERY-ABN:DB-5
MISC DATA: FT 5/17/85

		NAME	CONCENTRATION (%)
STANDARD		D10-PHENANTHRENE	100.0
	1	D-5 PHENOL	89.9
	2	2-FLUOROPHENOL	85.8
	3	2,4,6-TRIBROMOPHENOL	95.4
	4	D-5 NITROBENZENE	1851.9
	5	2-FLUOROBIPHENYL	93.0
	6	D-14 TERPHENYL	83.3

FINAL REPORT

MS DATA FILE FRN: 8042

NAME: TOXSTD 50PPB
MISC DATA: 3-3-86 BTL#3 D8042

IDFILE FRN: 4521

IDFILE NAME: SURR. % RECOVERY-ABN:DB-5
MISC DATA: FT 5/17/85

		NAME	CONCENTRATION (%)
STANDARD		D10-PHENANTHRENE	100.0
	1	D-5 PHENOL	100.0
	2	2-FLUOROPHENOL	100.0
	3	2,4,6-TRIBROMOPHENOL	100.0
	4	D-5 NITROBENZENE	100.2
	5	2-FLUOROBIPHENYL	100.0
	6	D-14 TERPHENYL	100.2

FINAL REPORT

MS DATA FILE FRN: 8046

NAME: SF-2974 86CY03S56:10GR,10
MISC DATA: 3-3-86 BTL#7 D8046

IDFILE FRN: 4521

IDFILE NAME: SURR. % RECOVERY-ABN:DB-5
MISC DATA: FT 5/17/85

		NAME	CONCENTRATION (%)
STANDARD		D10-PHENANTHRENE	100.0
	1	D-5 PHENOL	10.6
	2	2-FLUOROPHENOL	10.4
	3	2,4,6-TRIBROMOPHENOL	9.2
	4	D-5 NITROBENZENE	204.9
	5	2-FLUOROBIPHENYL	10.1
	6	D-14 TERPHENYL	6.6

FINAL REPORT

MS DATA FILE FRN: 8047

NAME: SF-2974 86CY03S56MS:10GR,10
MISC DATA: 3-3-86 BTL#8 D8047

IDFILE FRN: 4521

IDFILE NAME: SURR. % RECOVERY-ABN:DB-5
MISC DATA: FT 5/17/85

		NAME	CONCENTRATION (%)
STANDARD		D10-PHENANTHRENE	100.0
	1	D-5 PHENOL	12.0
	2	2-FLUOROPHENOL	11.4
	3	2,4,6-TRIBROMOPHENOL	9.2
	4	D-5 NITROBENZENE	224.5
	5	2-FLUOROBIPHENYL	10.5
	6	D-14 TERPHENYL	7.9

FINAL REPORT

MS DATA FILE FRN: 8048

NAME: SF-2974 86CY03S56MSD:10GR,10
MISC DATA: 3-3-86 BTL#9 D8048

IDFILE FRN: 4521

IDFILE NAME: SURR. % RECOVERY-ABN:DB-5
MISC DATA: FT 5/17/85

		NAME	CONCENTRATION (%)
STANDARD		D10-PHENANTHRENE	100.0
	1	D-5 PHENOL	12.0
	2	2-FLUOROPHENOL	10.5
	3	2,4,6-TRIBROMOPHENOL	9.0
	4	D-5 NITROBENZENE	215.8
	5	2-FLUOROBIPHENYL	10.2
	6	D-14 TERPHENYL	LESS THAN 1.6

FINAL REPORT

MS DATA FILE FRN: 8040

NAME: SF-2974,2936 LAB BLANK
MISC DATA: 3-3-86 BTL#1 D8040

IDFILE FRN: 4521

IDFILE NAME: SURR. % RECOVERY-ABN:DB-5
MISC DATA: FT 5/17/85

		NAME	CONCENTRATION (%)
STANDARD		D10-PHENANTHRENE	100.0
	1	D-5 PHENOL	89.9
	2	2-FLUOROPHENOL	85.8
	3	2,4,6-TRIBROMOPHENOL	95.4
	4	D-5 NITROBENZENE	1851.9
	5	2-FLUOROBIPHENYL	93.0
	6	D-14 TERPHENYL	83.3

FINAL REPORT

MS DATA FILE FRN: 8042

NAME: TOXSTD 50PPB
MISC DATA: 3-3-86 BTL#3 D8042

IDFILE FRN: 4521

IDFILE NAME: SURR. % RECOVERY-ABN:DB-5
MISC DATA: FT 5/17/85

		NAME	CONCENTRATION (%)
STANDARD		D10-PHENANTHRENE	100.0
	1	D-5 PHENOL	100.0
	2	2-FLUOROPHENOL	100.0
	3	2,4,6-TRIBROMOPHENOL	100.0
	4	D-5 NITROBENZENE	100.2
	5	2-FLUOROBIPHENYL	100.0
	6	D-14 TERPHENYL	100.2

FINAL REPORT

MS DATA FILE FRN: 8049

NAME: SF-2936 86CY03S77:10GR,100
MISC DATA: 3-3-86 BTL#10 D8049

IDFILE FRN: 4521

IDFILE NAME: SURR. % RECOVERY-ABN:DB-5
MISC DATA: FT 5/17/85

	NAME	CONCENTRATION (%)
STANDARD	D10-PHENANTHRENE	100.0
1	D-5 PHENOL	LESS THAN 1.4
2	2-FLUOROPHENOL	LESS THAN 1.3
3	2,4,6-TRIBROMOPHENOL	LESS THAN 3.2
4	D-5 NITROBENZENE	LESS THAN 44.3
5	2-FLUOROBIPHENYL	LESS THAN 2.1
6	D-14 TERPHENYL	LESS THAN 6.7

FINAL REPORT

MS DATA FILE FRN: 8040

NAME: SF-2974,2936 LAB BLANK
MISC DATA: 3-3-86 BTL#1 D8040

IDFILE FRN: 4500

IDFILE NAME: ACID STD. [CINCIN];D-10(30PPM)
MISC DATA: AA 12/18/84

	NAME	CONCENTRATION (PPB)
STANDARD	D-10 PHENANTHRENE	50.0

1	PHENOL	LESS THAN	.3
2	2-CHLOROPHENOL	LESS THAN	.3
3	2-METHYLPHENOL	LESS THAN	.4
4	4-METHYLPHENOL	LESS THAN	.3
5	2-NITROPHENOL	LESS THAN	.6
6	2,4-DIMETHYLPHENOL	LESS THAN	.4
7	2,4-DICHLOROPHENOL	LESS THAN	.4
8	BENZOIC ACID	LESS THAN	12.7
9	4-CHLORO-3-METHYLPHENOL	LESS THAN	.5
10	2,4,6-TRICHLOROPHENOL	LESS THAN	.7
11	2,4,5-TRICHLOROPHENOL	LESS THAN	.7
12	2,4-DINITROPHENOL	LESS THAN	1.6
13	4-NITROPHENOL	LESS THAN	1.1
14	2-METHYL-4,6-DINITROPHENOL	LESS THAN	1.3
15	PENTACHLOROPHENOL	LESS THAN	1.4

FINAL REPORT

MS DATA FILE FRN: 8042

NAME: TOXSTD 50PPB
MISC DATA: 3-3-86 BTL#3 D8042

IDFILE FRN: 4500

IDFILE NAME: ACID STD. [CINCIN];D-10(30PPM)
MISC DATA: AA 12/18/84

		NAME	CONCENTRATION (PPB)
STANDARD		D-10 PHENANTHRENE	50.0
	1	PHENOL	50.0
	2	2-CHLOROPHENOL	50.0
	3	2-METHYLPHENOL	50.0
	4	4-METHYLPHENOL	50.0
	5	2-NITROPHENOL	50.0
	6	2,4-DIMETHYLPHENOL	50.0
	7	2,4-DICHLOROPHENOL	50.0
	8	BENZOIC ACID	51.6
	9	4-CHLORO-3-METHYLPHENOL	50.0
	10	2,4,6-TRICHLOROPHENOL	50.0
	11	2,4,5-TRICHLOROPHENOL	50.0
	12	2,4-DINITROPHENOL	50.1
	13	4-NITROPHENOL	50.1
	14	2-METHYL-4,6-DINITROPHENOL	50.1
	15	PENTACHLOROPHENOL	50.1

FINAL REPORT

MS DATA FILE FRN: 8049

NAME: SF-2936 86CY03S77:10GR,100
MISC DATA: 3-3-86 BTL#10 D8049

IDFILE FRN: 4500

IDFILE NAME: ACID STD. [CINCIN];D-10(30PPM)
MISC DATA: AA 12/18/84

	NAME	CONCENTRATION (PPB)
STANDARD	D-10 PHENANTHRENE	50.0
1	PHENOL	LESS THAN 1.1
2	2-CHLOROPHENOL	LESS THAN 1.3
3	2-METHYLPHENOL	LESS THAN 1.5
4	4-METHYLPHENOL	LESS THAN 1.3
5	2-NITROPHENOL	LESS THAN 2.5
6	2,4-DIMETHYLPHENOL	LESS THAN 1.8
7	2,4-DICHLOROPHENOL	LESS THAN 1.7
8	BENZOIC ACID	LESS THAN 54.1
9	4-CHLORO-3-METHYLPHENOL	LESS THAN 2.1
10	2,4,6-TRICHLOROPHENOL	LESS THAN 3.0
11	2,4,5-TRICHLOROPHENOL	LESS THAN 3.0
12	2,4-DINITROPHENOL	LESS THAN 6.7
13	4-NITROPHENOL	LESS THAN 4.8
14	2-METHYL-4,6-DINITROPHENOL	LESS THAN 5.7
15	PENTACHLOROPHENOL	LESS THAN 6.1

FINAL REPORT

MS DATA FILE FRN: 8040

NAME: SF-2974,2936 LAB BLANK
MISC DATA: 3-3-86 BTL#1 D8040

IDFILE FRN: 4503

IDFILE NAME: B/N STD D10(43 PPM)
MISC DATA: FT&DJW 8/22/85

		NAME	CONCENTRATION (PPB)
STANDARD		D-10 PHENANTHRENE	50.0
	1	ANILINE	LESS THAN .3
	2	BIS(2-CHLOROETHYL)ETHER	LESS THAN .3
	3	1,3-DICHLOROBENZENE	LESS THAN .3
	4	1,4-DICHLOROBENZENE	LESS THAN .3
	5	1,2-DICHLOROBENZENE	LESS THAN .9
	6	BENZYL ALCOHOL	LESS THAN .6
	7	BIS(2-CHLOROISOPROPYL)ETHER	LESS THAN 1.0
	8	HEXACHLOROETHANE	LESS THAN 1.0
	9	N-NITROSODIPROPYL AMINE	LESS THAN 25.4
	10	NITROBENZENE	LESS THAN -.7
	11	ISOPHORONE	LESS THAN 3.7
	12	BIS(2-CHLOROETHOXY)METHANE	LESS THAN 8.8
	13	1,2,4-TRICHLOROBENZENE	LESS THAN .4
	14	NAPHTHALENE	LESS THAN .1
	15	4-CHLOROANILINE	LESS THAN .3
	16	HEXACHLOROBUTADIENE	LESS THAN .9
	17	2-METHYLNAPTHALENE	LESS THAN .2
	18	HEXACHLOROCYCLOPENTADIENE	LESS THAN .9
	19	2-CHLORONAPHTHALENE	LESS THAN .2
	20	ACENAPHTHYLENE	LESS THAN .2
	21	DIMETHYLPHTHALATE	LESS THAN .2
	22	2,6-DINITROTOLUENE	LESS THAN .7
	23	ACENAPHTHENE	LESS THAN .2
	24	3-NITROANILINE	LESS THAN .8
	25	DIBENZOFURAN	LESS THAN .2
	26	2,4-DINITROTOLUENE	LESS THAN .7
	27	FLUORENE	LESS THAN .2
	28	4-CHLOROPHENYL PHENYL ETHER	LESS THAN .5
	29	DIETHYLPHTHALATE	LESS THAN 20.8
	30	4-NITROANILINE	LESS THAN 1.0
	31	DIPHENYLAMINE (N-NITROSO-)	LESS THAN .4
	32	1,2-DIPHENYLHYDRAZINE	LESS THAN .4
	33	4-BROMOPHENYLPHENYL ETHER	LESS THAN .9
	34	HEXACHLOROBENZENE	LESS THAN .8
	35	PHENANTHRENE	LESS THAN .2
	36	ANTHRACENE	LESS THAN .2
	37	DI-N-BUTYLPHTHALATE	LESS THAN .2
	38	FLUORANTHENE	LESS THAN .2

39	PYRENE	LESS THAN	.3
40	BENZYLBUTYL PHTHALATE	LESS THAN	.6
41	BENZO(A)ANTHRACENE & CHRYSENE	LESS THAN	1.1
42	BIS(2-ETHYLHEXYL)PHTHALATE	LESS THAN	.5
43	DI-N-OCTYLPHTHALATE	LESS THAN	.5
44	BENZO(B &/ K)FLUORANTHENE	LESS THAN	1.8
45	BENZO(A)PYRENE	LESS THAN	.9
46	INDENO[1,2,3-CD]PYRENE	LESS THAN	2.8
47	DIBENZO(A,H)ANTHRACENE	LESS THAN	2.1
48	BENZO(GHI)PERYLENE	LESS THAN	2.1

8040

FINAL REPORT

MS DATA FILE FRN: 8042

NAME: TOXSTD 50PPB
MISC DATA: 3-3-86 BTL#3 D8042

IDFILE FRN: 4503

IDFILE NAME: B/N STD D10(43 PPM)
MISC DATA: FT&DJW 8/22/85

	NAME	CONCENTRATION (PPB)
STANDARD	D-10 PHENANTHRENE	50.0
1	ANILINE	50.0
2	BIS(2-CHLOROETHYL)ETHER	50.0
3	1,3-DICHLOROBENZENE	50.0
4	1,4-DICHLOROBENZENE	50.0
5	1,2-DICHLOROBENZENE	50.0
6	BENZYL ALCOHOL	50.1
7	BIS(2-CHLOROISOPROPYL)ETHER	50.1
8	HEXACHLOROETHANE	50.2
9	N-NITROSODIPROPYL AMINE	55.3
10	NITROBENZENE	-19.9
11	ISOPHORONE	50.2
12	BIS(2-CHLOROETHOXY)METHANE	50.8
13	1,2,4-TRICHLOROBENZENE	50.0
14	NAPHTHALENE	50.0
15	4-CHLOROANILINE	50.0
16	HEXACHLOROBUTADIENE	50.1
17	2-METHYLNAPTHALENE	50.0
18	HEXACHLOROCYCLOPENTADIENE	50.0
19	2-CHLORONAPHTHALENE	50.0
20	ACENAPHTHYLENE	50.0
21	DIMETHYLPHTHALATE	50.0
22	2,6-DINITROTOLUENE	50.1
23	ACENAPHTHENE	50.0
24	3-NITROANILINE	50.0
25	DIBENZOFURAN	50.0
26	2,4-DINITROTOLUENE	50.1
27	FLUORENE	50.0
28	4-CHLOROPHENYL PHENYL ETHER	50.0
29	DIETHYLPHTHALATE	51.1
30	4-NITROANILINE	50.1
31	DIPHENYLAMINE (N-NITROSO-)	LESS THAN .2
32	1,2-DIPHENYLHYDRAZINE	50.0
33	4-BROMOPHENYLPHENYL ETHER	50.1
34	HEXACHLOROBENZENE	50.0
35	PHENANTHRENE	50.0
36	ANTHRACENE	50.0
37	DI-N-BUTYLPHTHALATE	50.0

38	FLUORANTHENE	36.3
39	PYRENE	50.0
40	BENZYLBUTYL PHTHALATE	50.0
41	BENZO(A)ANTHRACENE & CHRYSENE	100.1
42	BIS(2-ETHYLHEXYL)PHTHALATE	50.0
43	DI-N-OCTYLPHTHALATE	50.0
44	BENZO(B &/ K)FLUORANTHENE	63.7
45	BENZO(A)PYRENE	32.5
46	INDENO[1,2,3-CD]PYRENE	50.0
47	DIBENZO(A,H)ANTHRACENE	50.4
48	BENZO(GHI)PERYLENE	50.1

FINAL REPORT

MS DATA FILE FRN: 8049

NAME: SF-2936 86CY03S77:10GR,100
MISC DATA: 3-3-86 BTL#10 D8049

IDFILE FRN: 4503

IDFILE NAME: B/N STD D10(43 PPM)
MISC DATA: FT&DJW 8/22/85

		NAME	CONCENTRATION (PPB)
STANDARD		D-10 PHENANTHRENE	50.0
	1	ANILINE	LESS THAN 1.1
	2	BIS(2-CHLOROETHYL)ETHER	LESS THAN 1.3
	3	1,3-DICHLOROBENZENE	LESS THAN 1.4
	4	1,4-DICHLOROBENZENE	LESS THAN 1.4
	5	1,2-DICHLOROBENZENE	LESS THAN 4.0
	6	BENZYL ALCOHOL	LESS THAN 2.7
	7	BIS(2-CHLOROISOPROPYL)ETHER	LESS THAN 4.4
	8	HEXACHLOROETHANE	LESS THAN 4.0
	9	N-NITROSODIPROPYL AMINE	LESS THAN 108.2
	10	NITROBENZENE	~~CDL~~ *
	11	ISOPHORONE	LESS THAN 15.7
	12	BIS(2-CHLOROETHOXY)METHANE	LESS THAN 37.5
	13	1,2,4-TRICHLOROBENZENE	LESS THAN 1.8
	14	NAPHTHALENE	9.7 =97
	15	4-CHLOROANILINE	~~CDL~~ *
	16	HEXACHLOROBUTADIENE	LESS THAN 3.7
	17	2-METHYLNAPTHALENE	45.9 =460 x
	18	HEXACHLOROCYCLOPENTADIENE	LESS THAN 3.8
	19	2-CHLORONAPHTHALENE	LESS THAN 1.0
	20	ACENAPHTHYLENE	LESS THAN .6
	21	DIMETHYLPHTHALATE	LESS THAN 1.0
	22	2,6-DINITROTOLUENE	~~10.0~~ CDL
	23	ACENAPHTHENE	* CDL
	24	3-NITROANILINE	~~24.0~~ CDL
	25	DIBENZOFURAN	CDL *
	26	2,4-DINITROTOLUENE	CDL *
	27	FLUORENE	12.3 =123 x
	28	4-CHLOROPHENYL PHENYL ETHER	LESS THAN 2.1
	29	DIETHYLPHTHALATE	LESS THAN 88.6
	30	4-NITROANILINE	~~1.3~~ CDL
	31	DIPHENYLAMINE (N-NITROSO-)	~~CDL~~ *
	32	1,2-DIPHENYLHYDRAZINE	LESS THAN 1.8

[redacted] x

[redacted] = ~~160~~ 100

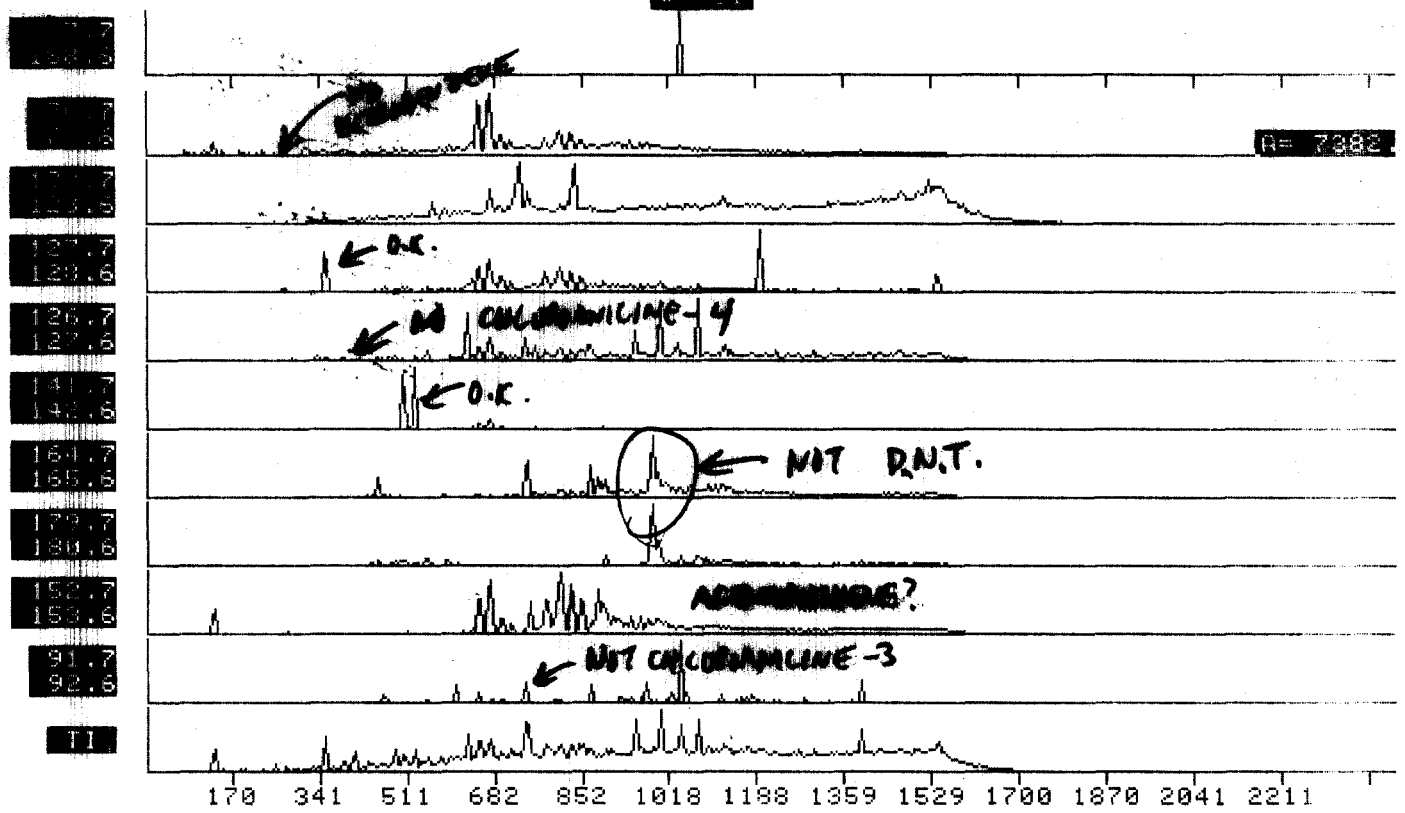
[redacted] = ~~740~~ 850

[redacted] ~~200~~ 230

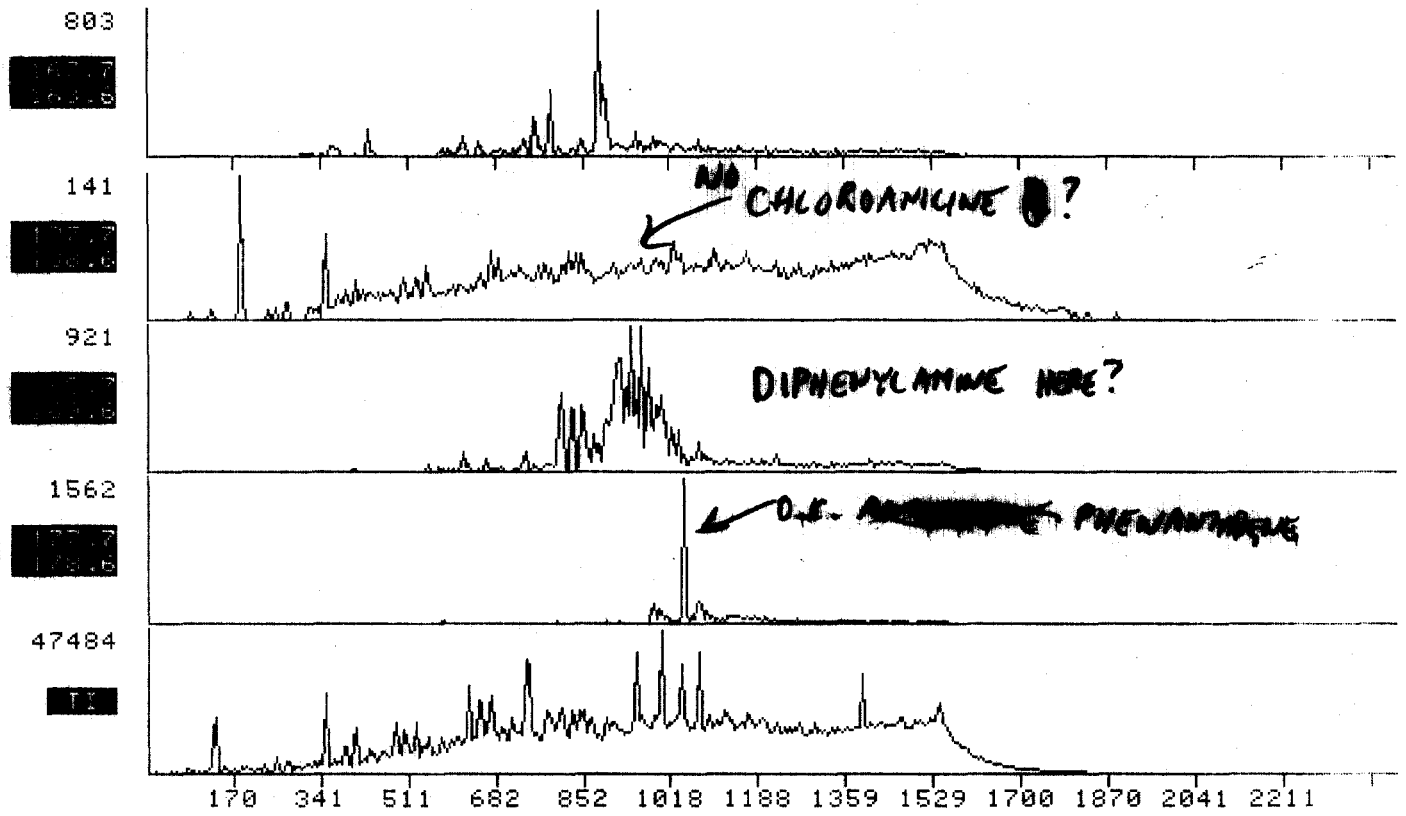
33	4-BROMOPHENYLPHENYL ETHER		*
34	HEXACHLOROBENZENE	LESS THAN	3.6
35	PHENANTHRENE	21.2	212 ~~340~~ 390
36	ANTHRACENE	~~[illegible]~~	
37	DI-N-BUTYLPHTHALATE	LESS THAN	.7
38	FLUORANTHENE	LESS THAN	.8
39	PYRENE	LESS THAN	1.1
40	BENZYLBUTYL PHTHALATE	LESS THAN	2.7
41	BENZO(A)ANTHRACENE & CHRYSENE	LESS THAN	4.7
42	BIS(2-ETHYLHEXYL)PHTHALATE	LESS THAN	2.2
43	DI-N-OCTYLPHTHALATE	LESS THAN	1.9
44	BENZO(B &/ K)FLUORANTHENE	LESS THAN	7.9
45	BENZO(A)PYRENE	LESS THAN	4.0
46	INDENO[1,2,3-CD]PYRENE	LESS THAN	12.0
47	DIBENZO(A,H)ANTHRACENE	LESS THAN	8.9
48	BENZO(GHI)PERYLENE	LESS THAN	8.9

* CALCULATE CONCENTRATION MANUALLY

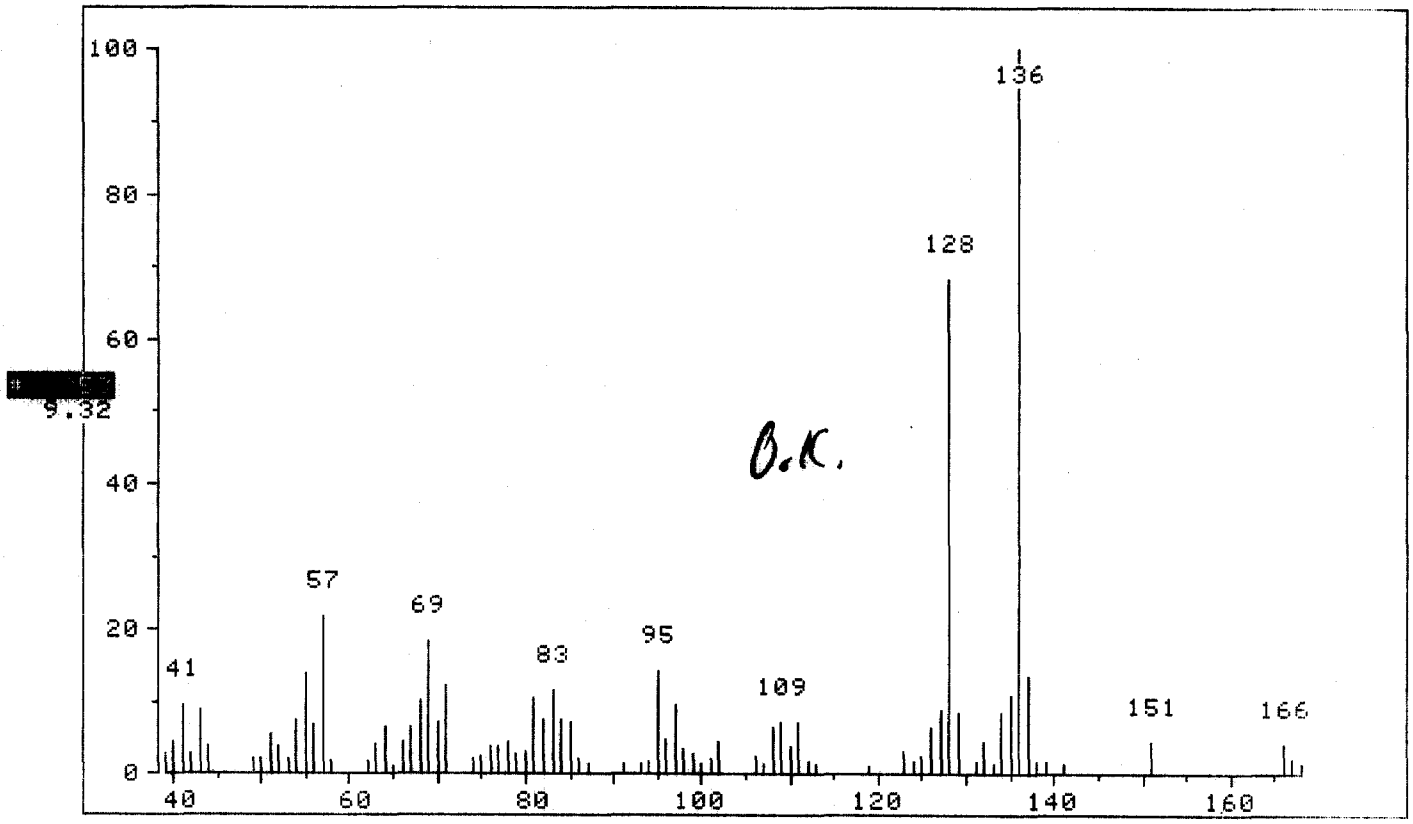
NAME SF-2936 86CY03S77:10GR,100 FRN 8049
3-3-86 BTL#10 D8049



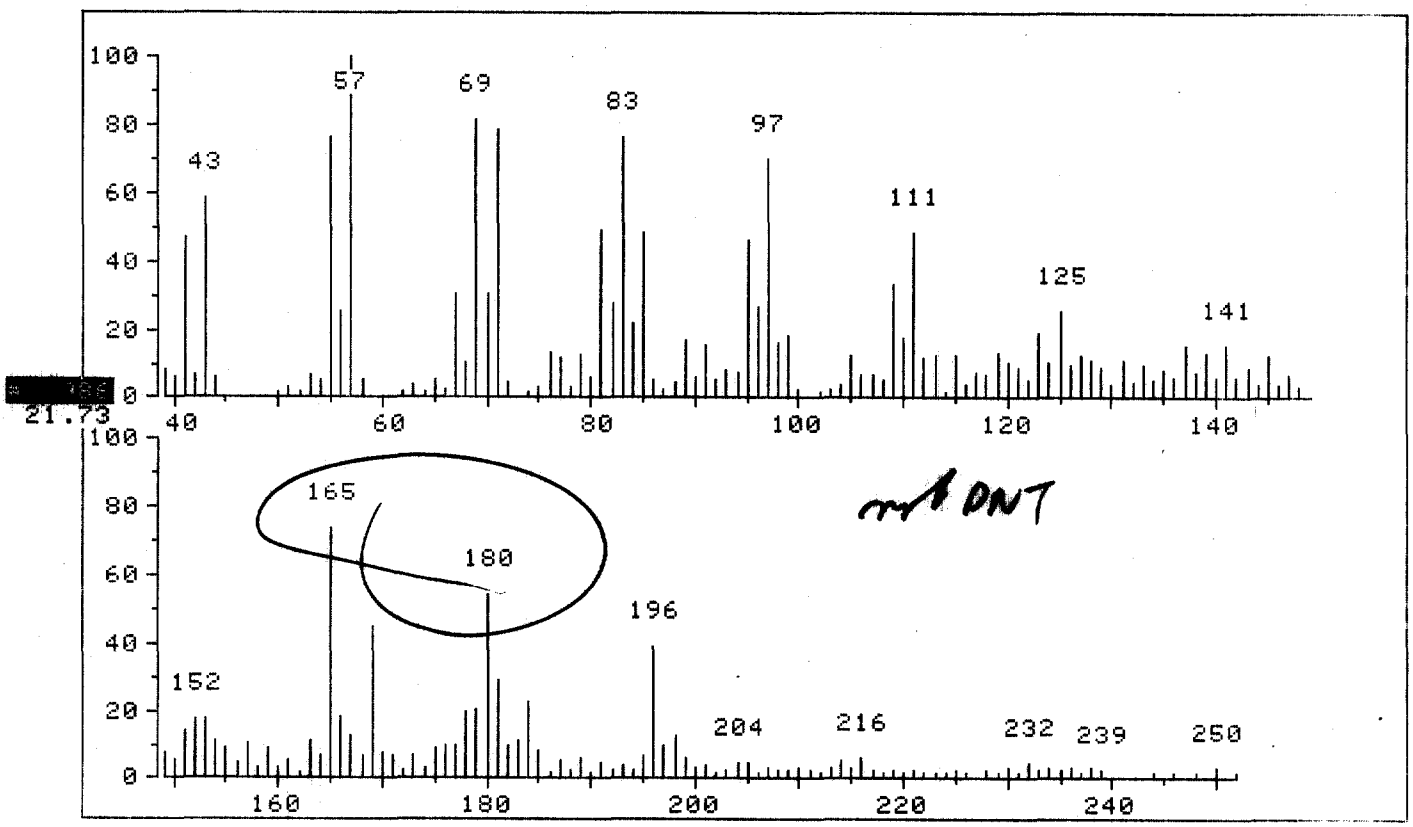
NAME SF-2936 86CY03S77:10GR,100 FRN 8049
3-3-86 BTL#10 D8049



SF-2936 86CY03S77:10GR,100 FPN 8049
3-3-86 BTL#10 D8049



SF-2936 86CY03S77:10GR,100 FPN 8049
3-3-86 BTL#10 D8049



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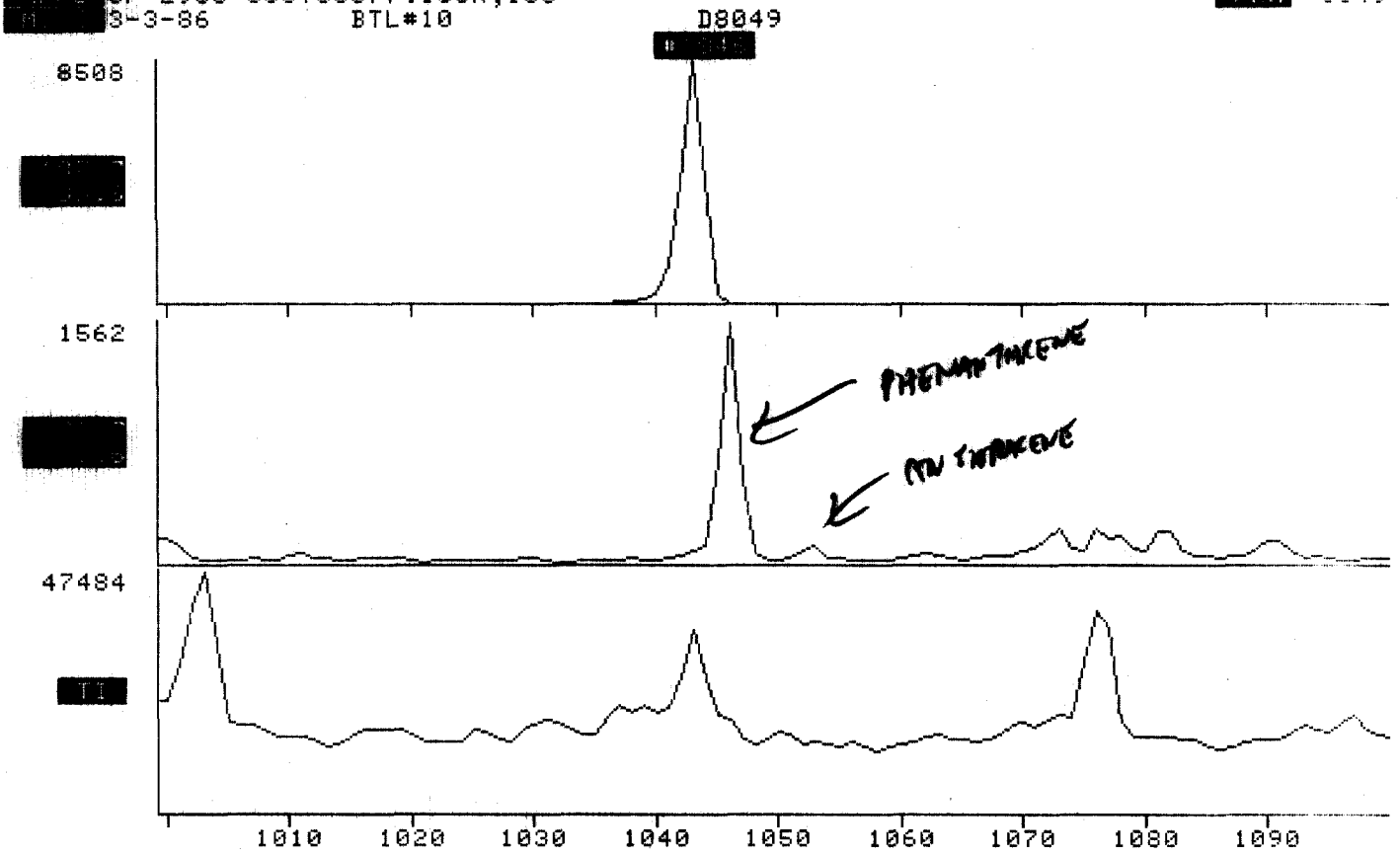
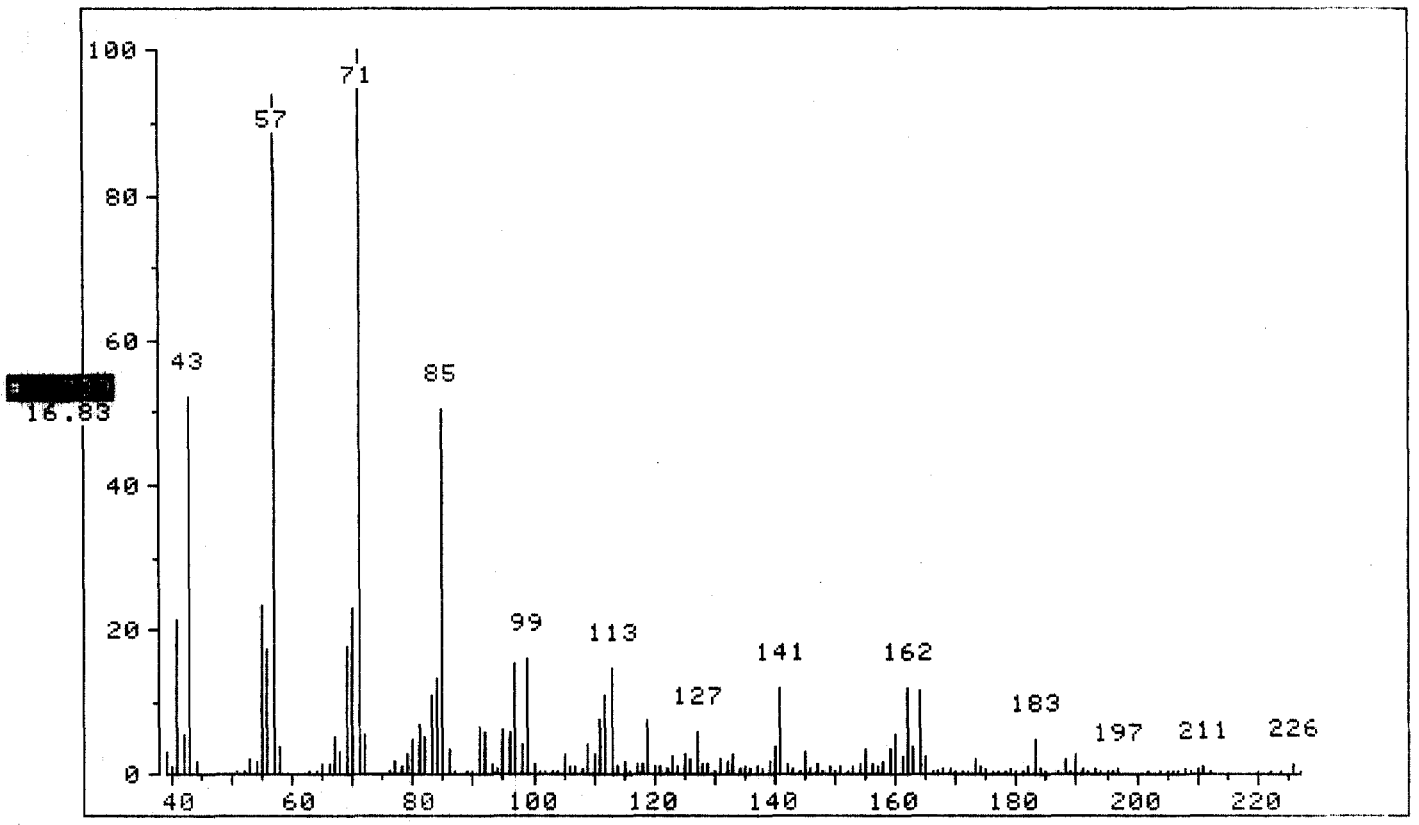
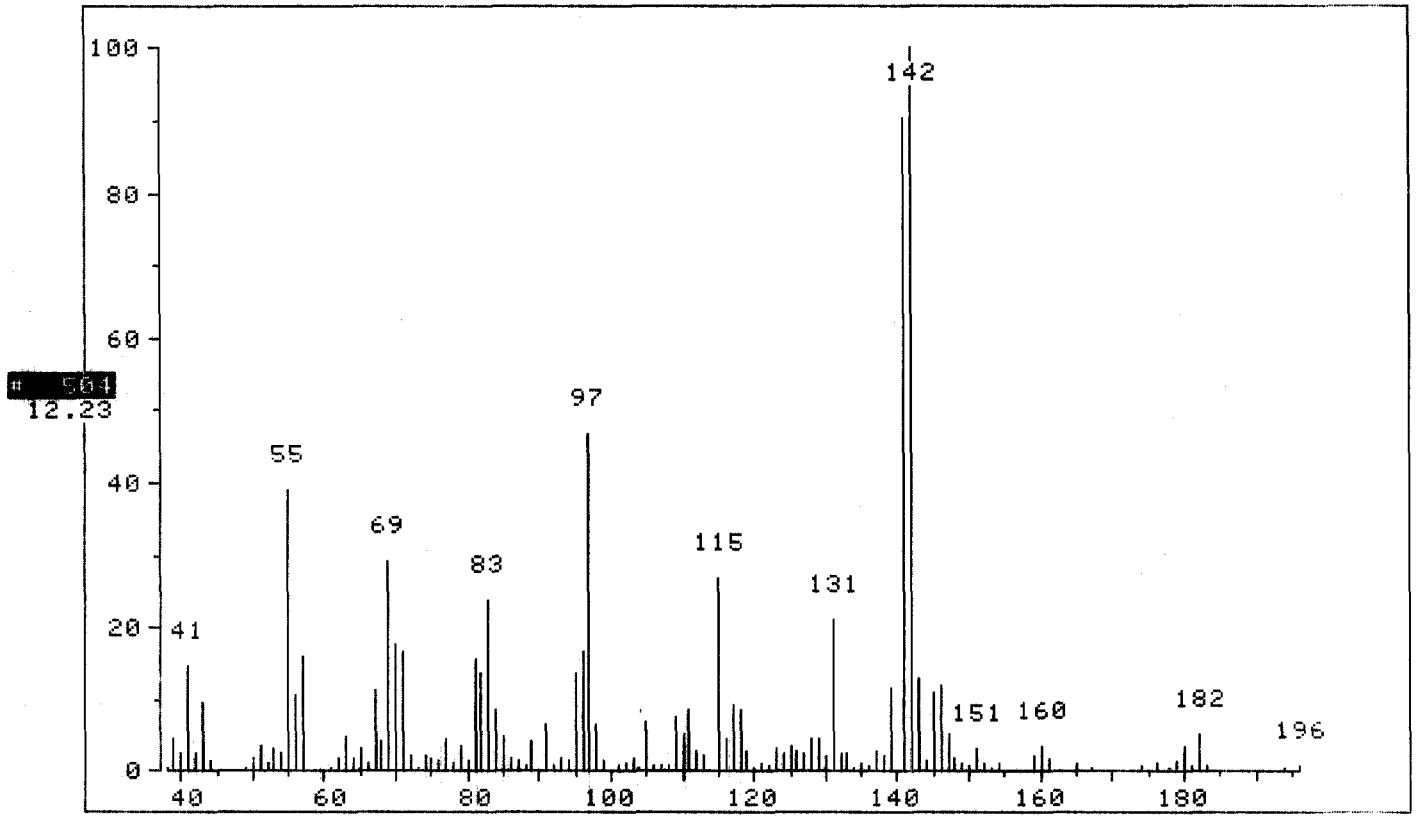
[redacted] 3-3-86 BTL#10



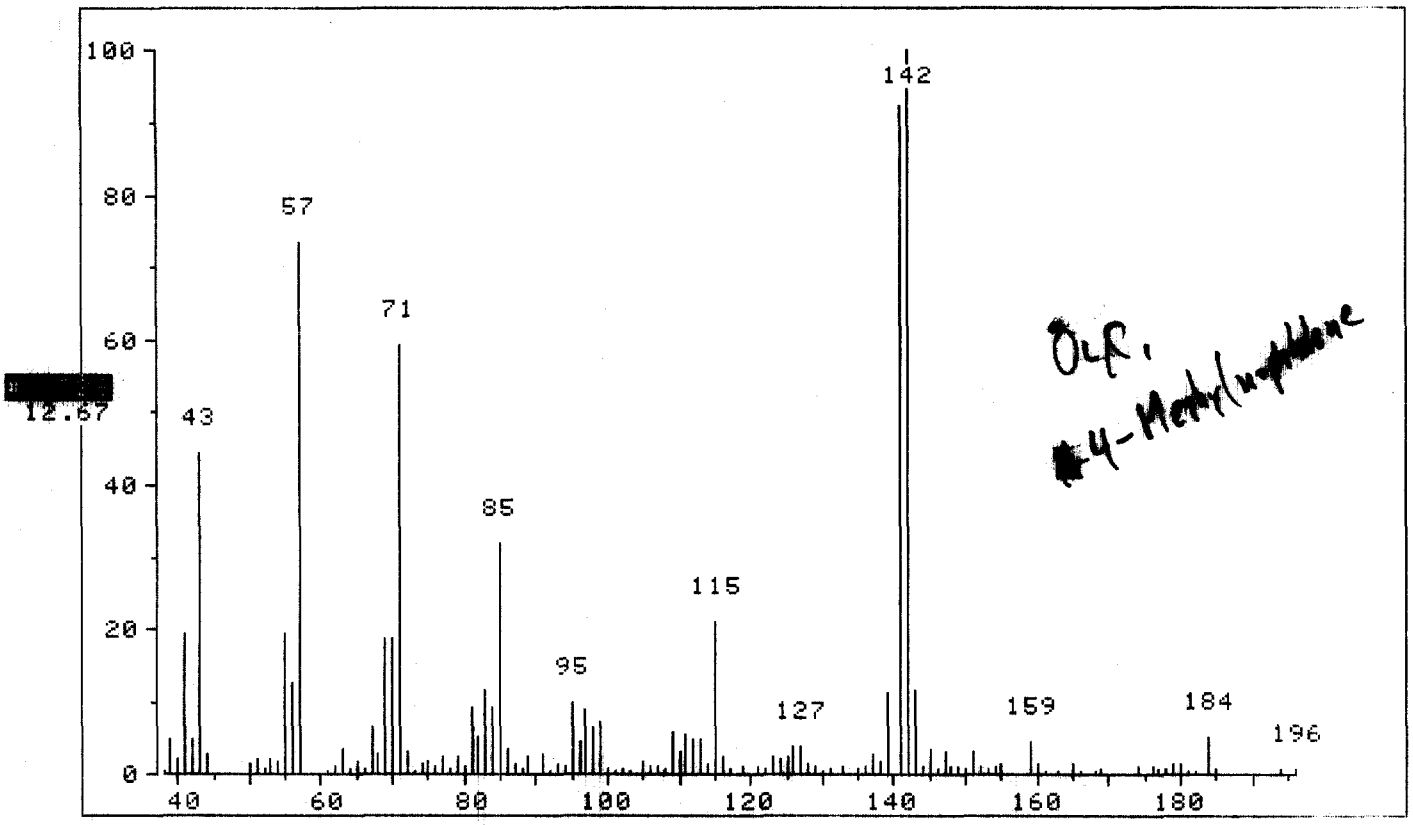
SF-2936 86CY03S77:10GR,100 FRN 8049
3-3-86 BTL#10 D8049



SF-2936 86CY03S77:10GR,100 FRN 8049
3-3-86 BTL#10 D8049



SF-2936 86CY03S77:10GR,100 [redacted] 8049
3-3-86 BTL#10 D8049



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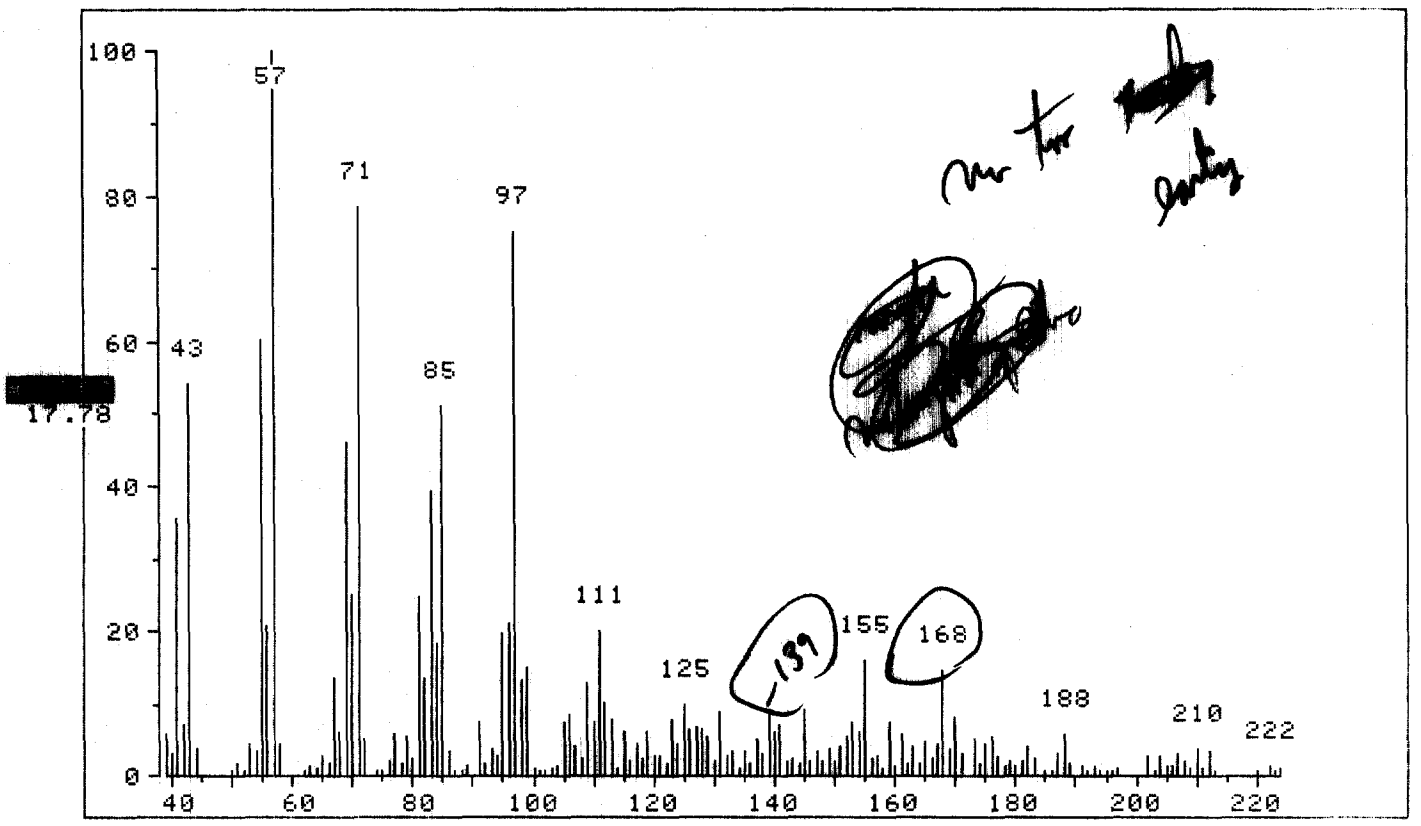
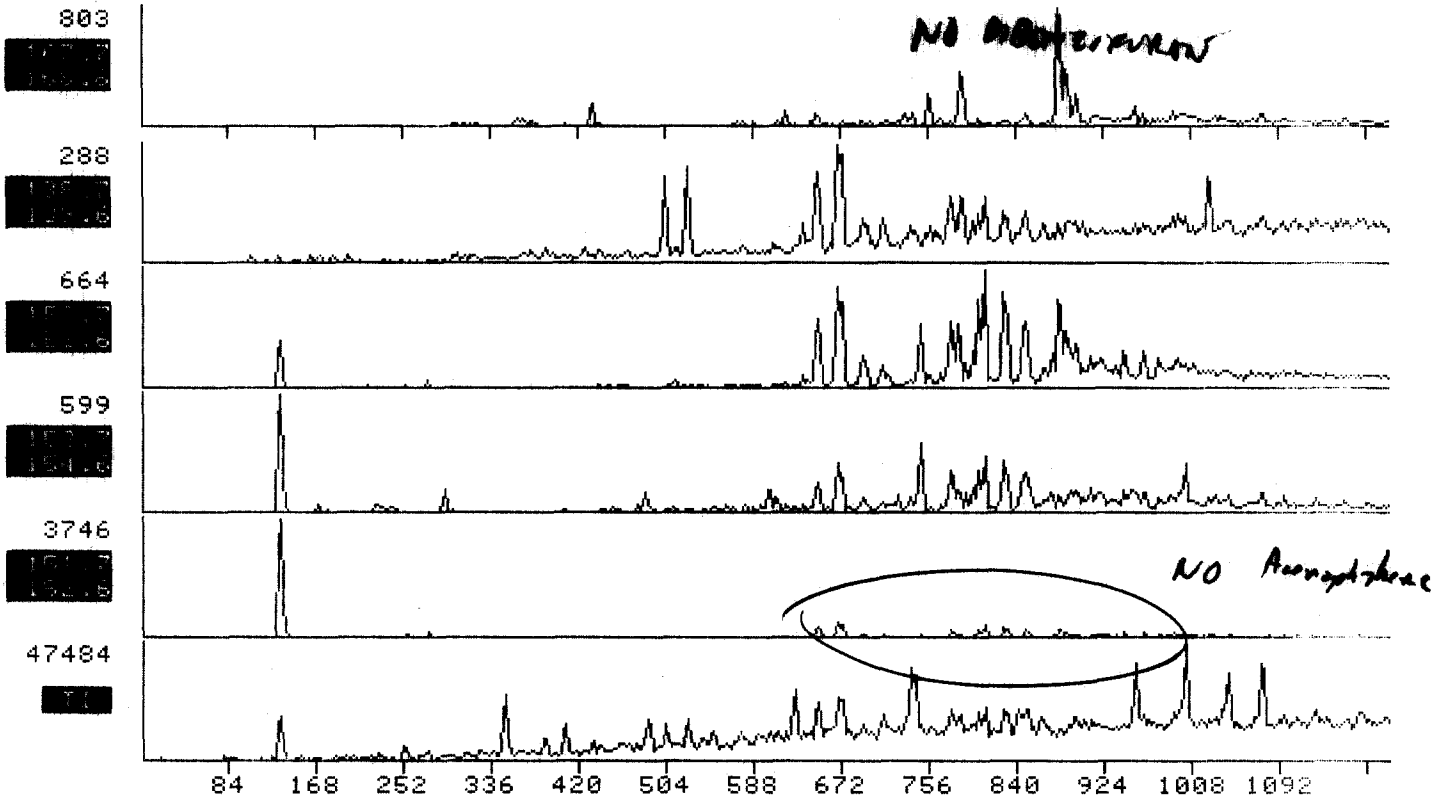
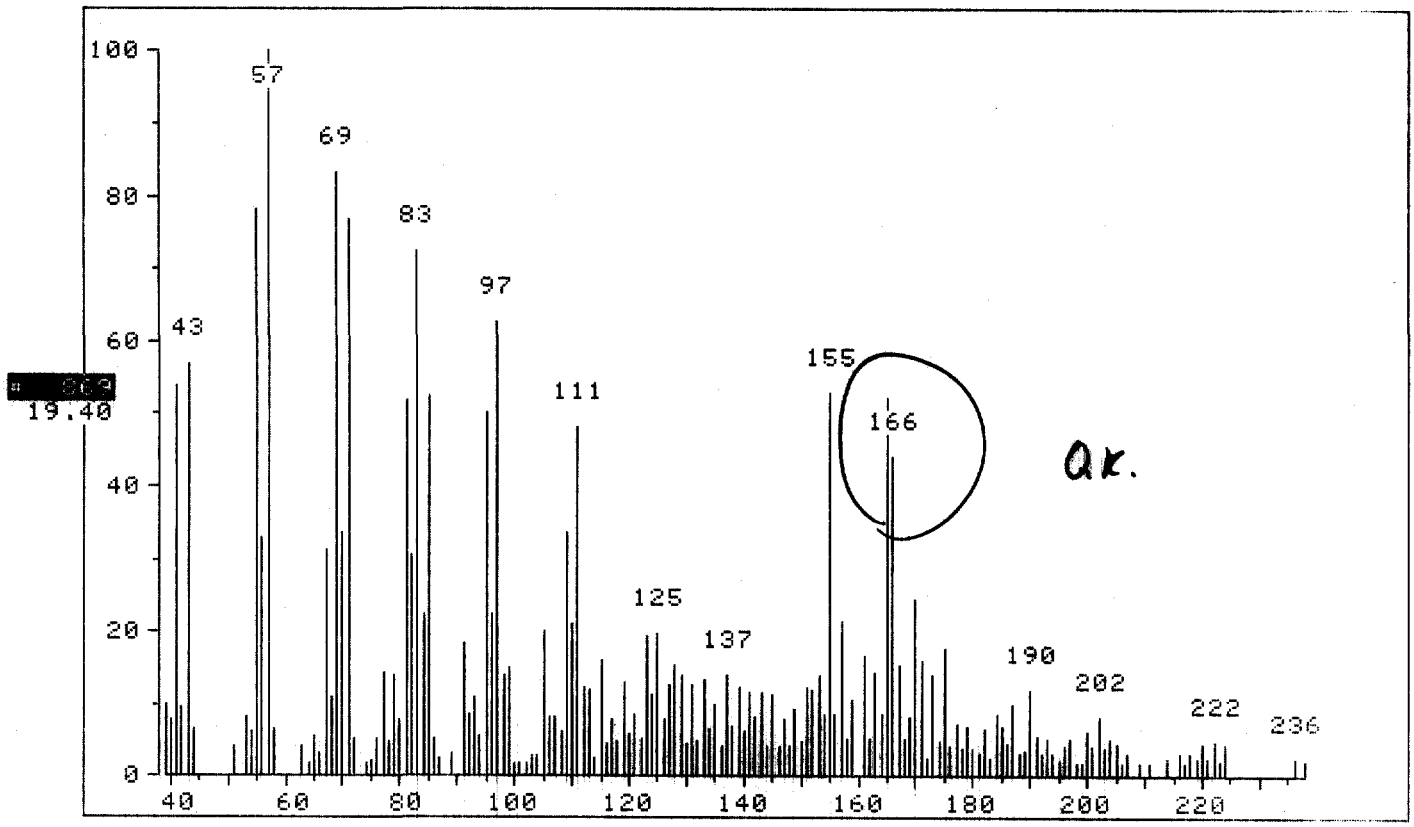
3-3-86 BTL#10 D8049



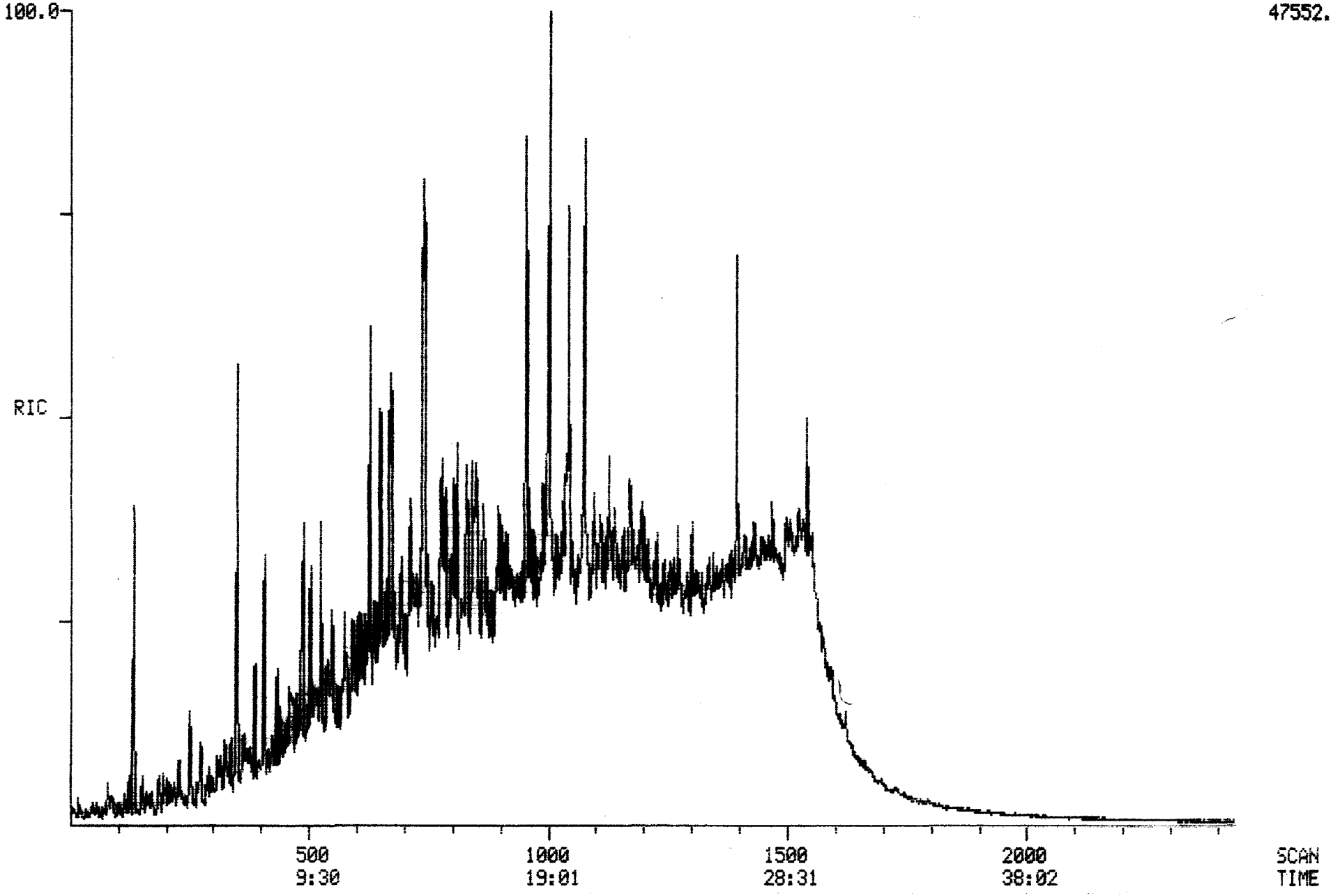
SF-2936 86CY03S77:10GR,100 FRN 8049
3-3-86 BTL#10 D8049



SF-2936 86CY03S77:10GR,100 [redacted] 8049
3-3-86 BTL#10 D8049



RIC DATA: LS8049 #1 SCANS 1 TO 2435
01/05/86 0:00:00
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
RANGE: G 1,2435 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



Reference retention time (min:s) 14:03

No.	Low Mass	High	Scan	Time	Meth	Area	Height	Name	Num
1	0.00	0.00	134	2:33	A BB	54417.	17848.	--	0
2	0.00	0.00	252	4:48	A BB	23334.	5310.	--	0
3	0.00	0.00	275	5:14	A BB	20717.	3476.	--	0
4	0.00	0.00	350	6:39	A BB	86751.	24447.	--	0
5	0.00	0.00	407	7:44	A BB	43188.	12616.	--	0
6	0.00	0.00	460	8:45	A BB	34445.	3513.	--	0
7	0.00	0.00	488	9:17	A BB	57553.	12396.	--	0
8	0.00	0.00	504	9:35	A BV	33283.	9666.	--	0
9	0.00	0.00	511	9:43	A VV	22506.	2528.	--	0
10	0.00	0.00	525	9:59	A VB	36829.	12060.	--	0
11	0.00	0.00	540	10:16	A BV	20559.	3812.	--	0
12	0.00	0.00	549	10:26	A VB	33612.	6591.	--	0
13	0.00	0.00	575	10:56	A BB	44506.	6163.	--	0
14	0.00	0.00	592	11:15	A BB	31360.	4973.	--	0
15	0.00	0.00	611	11:37	A BB	32324.	4630.	--	0
16	0.00	0.00	628	11:57	A BB	80555.	20668.	--	0
17	0.00	0.00	642	12:13	A BV	32021.	4500.	--	0
18	0.00	0.00	650	12:22	A VV	69420.	15547.	--	0
19	0.00	0.00	670	12:44	A VB	157997.	17252.	--	0
20	0.00	0.00	693	13:11	A BB	49472.	6352.	--	0
21	0.00	0.00	712	13:32	A BB	74211.	9139.	--	0
22	0.00	0.00	739	14:03	A BB	205344.	26571.	--	0
23	0.00	0.00	758	14:25	A BB	23132.	3711.	--	0
24	0.00	0.00	778	14:48	A BV	68619.	10564.	--	0
25	0.00	0.00	786	14:57	A VB	35487.	8828.	--	0
26	0.00	0.00	797	15:09	A BV	66100.	9489.	--	0
27	0.00	0.00	810	15:24	A VB	30876.	11702.	--	0
28	0.00	0.00	829	15:46	A BB	68237.	9903.	--	0
29	0.00	0.00	842	16:01	A BV	56648.	9913.	--	0
30	0.00	0.00	850	16:10	A VB	57021.	9860.	--	0
31	0.00	0.00	865	16:27	A BB	56494.	7573.	--	0
32	0.00	0.00	897	17:03	A BV	50962.	6970.	--	0
33	0.00	0.00	905	17:13	A VV	22710.	5501.	--	0
34	0.00	0.00	912	17:21	A VB	38689.	4719.	--	0
35	0.00	0.00	955	18:10	A BB	138466.	26950.	--	0
36	0.00	0.00	1003	19:04	A BB	194672.	33840.	--	0
37	0.00	0.00	1017	19:20	A BV	19143.	3305.	--	0
38	0.00	0.00	1043	19:50	A VB	152105.	22764.	--	0
39	0.00	0.00	1076	20:28	A BB	130264.	26734.	--	0
40	0.00	0.00	1097	20:52	A BB	35216.	5758.	--	0
41	0.00	0.00	1108	21:04	A BB	25765.	4244.	--	0
42	0.00	0.00	1127	21:26	A BB	44624.	7216.	--	0
43	0.00	0.00	1137	21:37	A BB	17421.	4140.	--	0
44	0.00	0.00	1169	22:14	A BB	61176.	6224.	--	0
45	0.00	0.00	1196	22:45	A BB	23600.	4496.	--	0
46	0.00	0.00	1226	23:19	A BB	22855.	4198.	--	0
47	0.00	0.00	1271	24:10	A BB	29406.	4531.	--	0
48	0.00	0.00	1394	26:31	A BB	49744.	19145.	--	0
49	0.00	0.00	1409	26:48	A BB	13610.	2212.	--	0
50	0.00	0.00	1429	27:10	A BB	12468.	2485.	--	0
51	0.00	0.00	1497	28:28	A BV	19967.	3515.	--	0
52	0.00	0.00	1505	28:37	A VV	30226.	3767.	--	0
53	0.00	0.00	1525	29:00	A VV	57932.	5255.	--	0
54	0.00	0.00	1533	29:09	A VV	45416.	4852.	--	0
55	0.00	0.00	1542	29:19	A VV	41191.	11170.	--	0

Reference retention time (min:s) 14:03

No.	Low Mass	High	Scan	Time	Meth	Area	Height	Name	Num
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LIBRARY SEARCH
01/05/86 0:00:00 + 2:33
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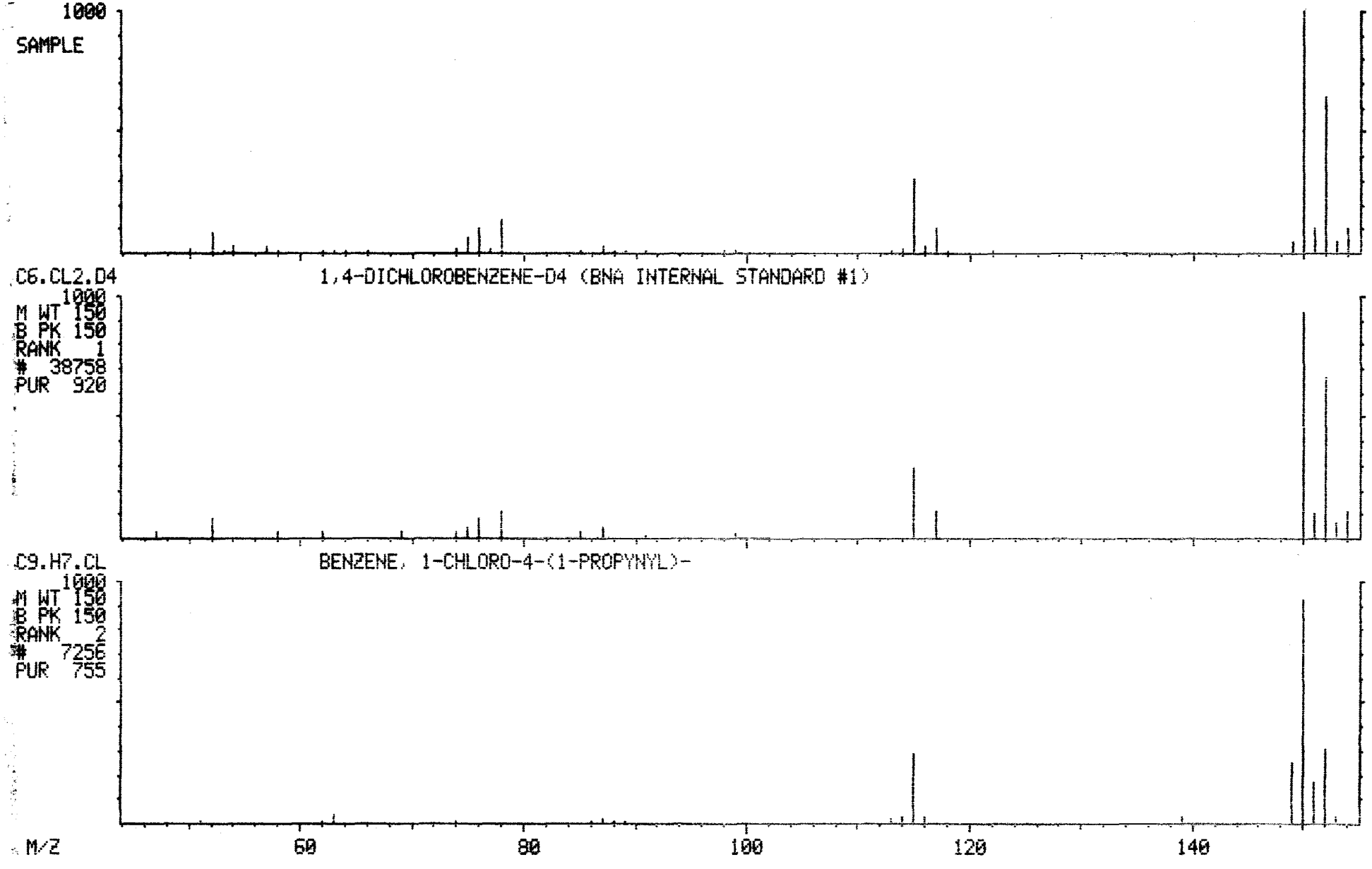
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 134

BASE M/Z: 150
RIC: 16271.



LIBRARY SEARCH
01/05/86 0:00:00 + 4:48
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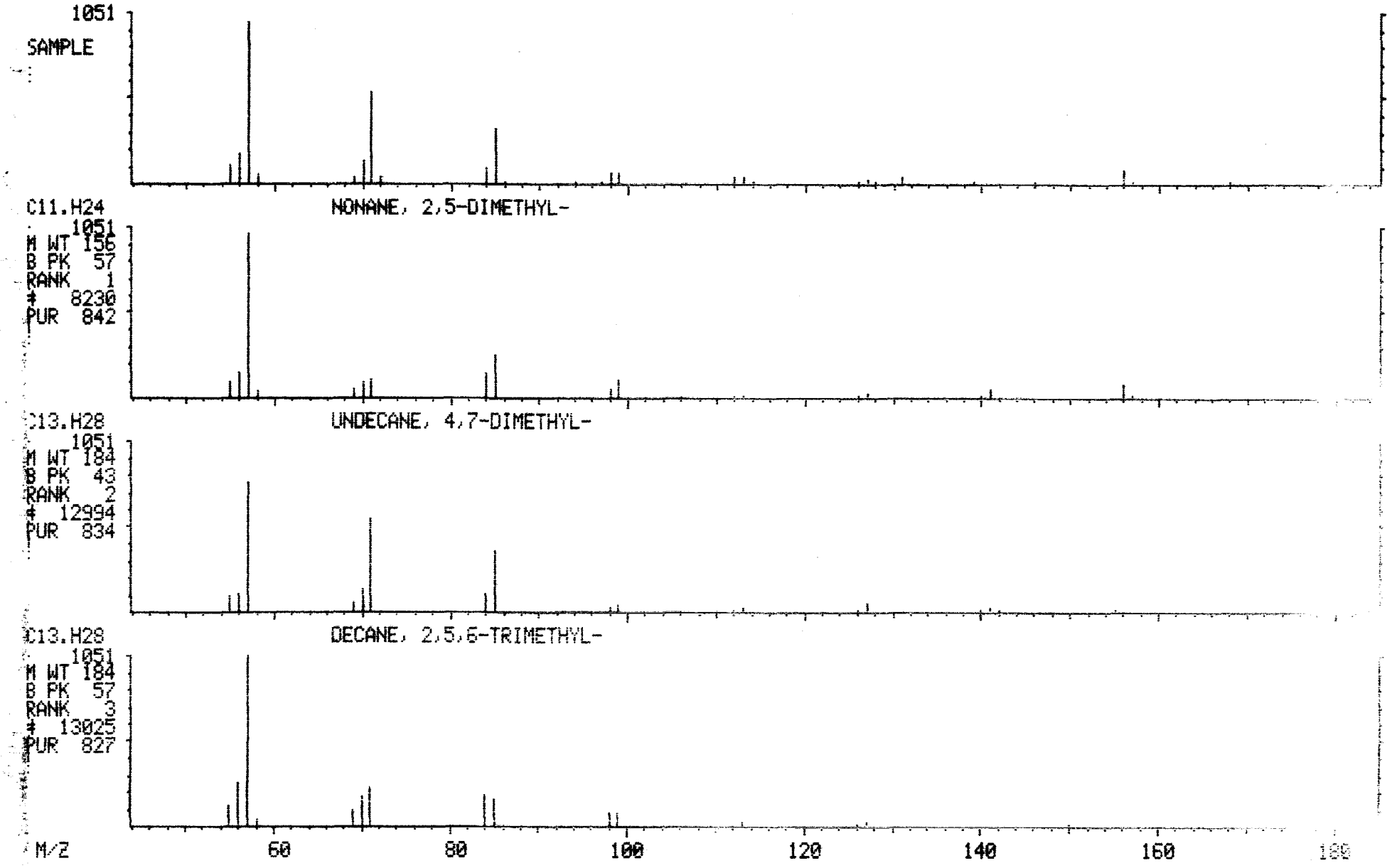
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 252

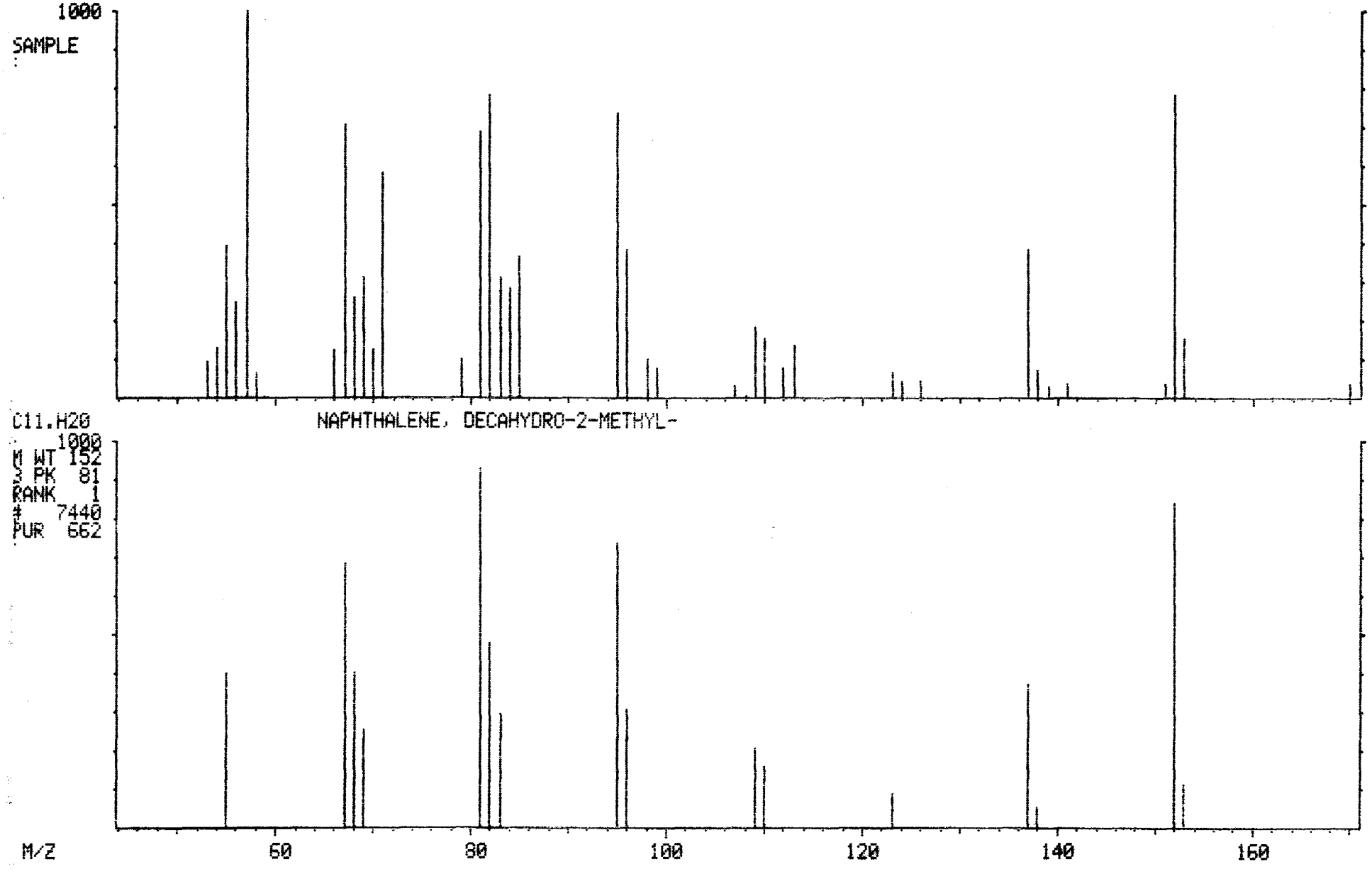
BASE M/Z: 57
RIC: 4815.



LIBRARY SEARCH
01/05/86 0:00:00 + 5:14
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 275

BASE M/Z: 57
RIC: 2771.



LIBRARY SEARCH
01/05/86 0:00:00 + 6:39
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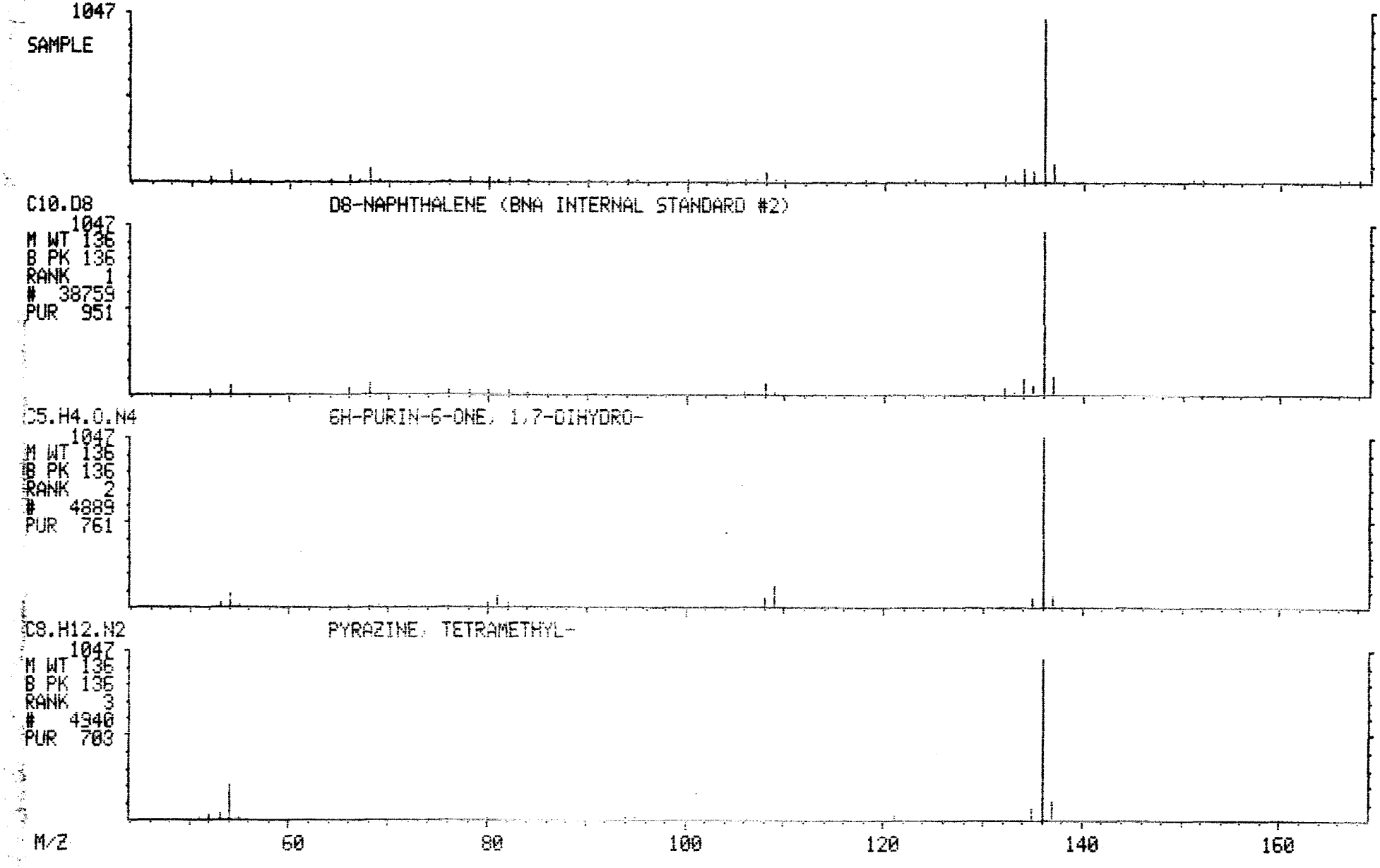
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 350

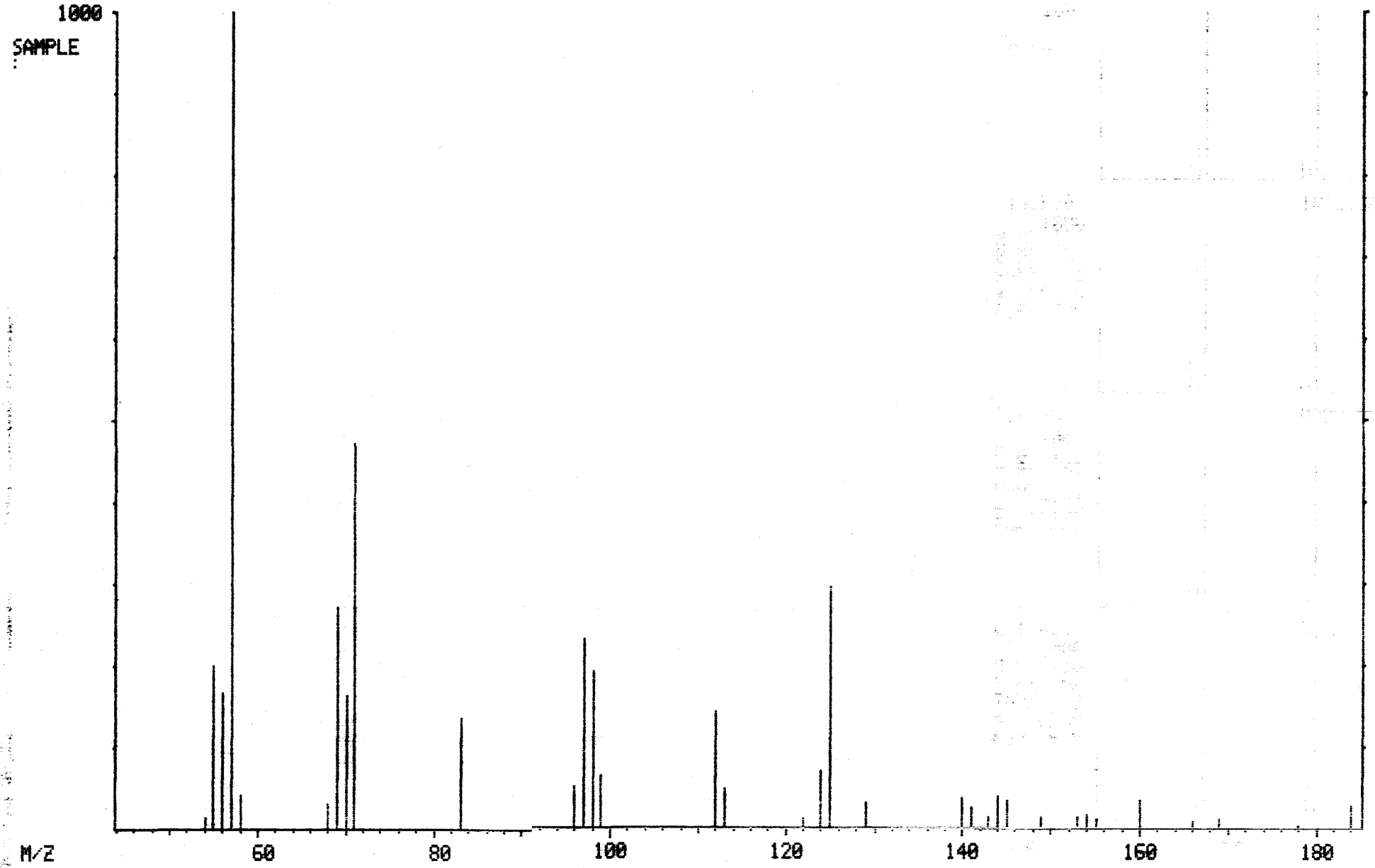
BASE M/Z: 136
RIC: 23327.



LIBRARY SEARCH
01/05/86 0:00:00 + 8:45
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 460

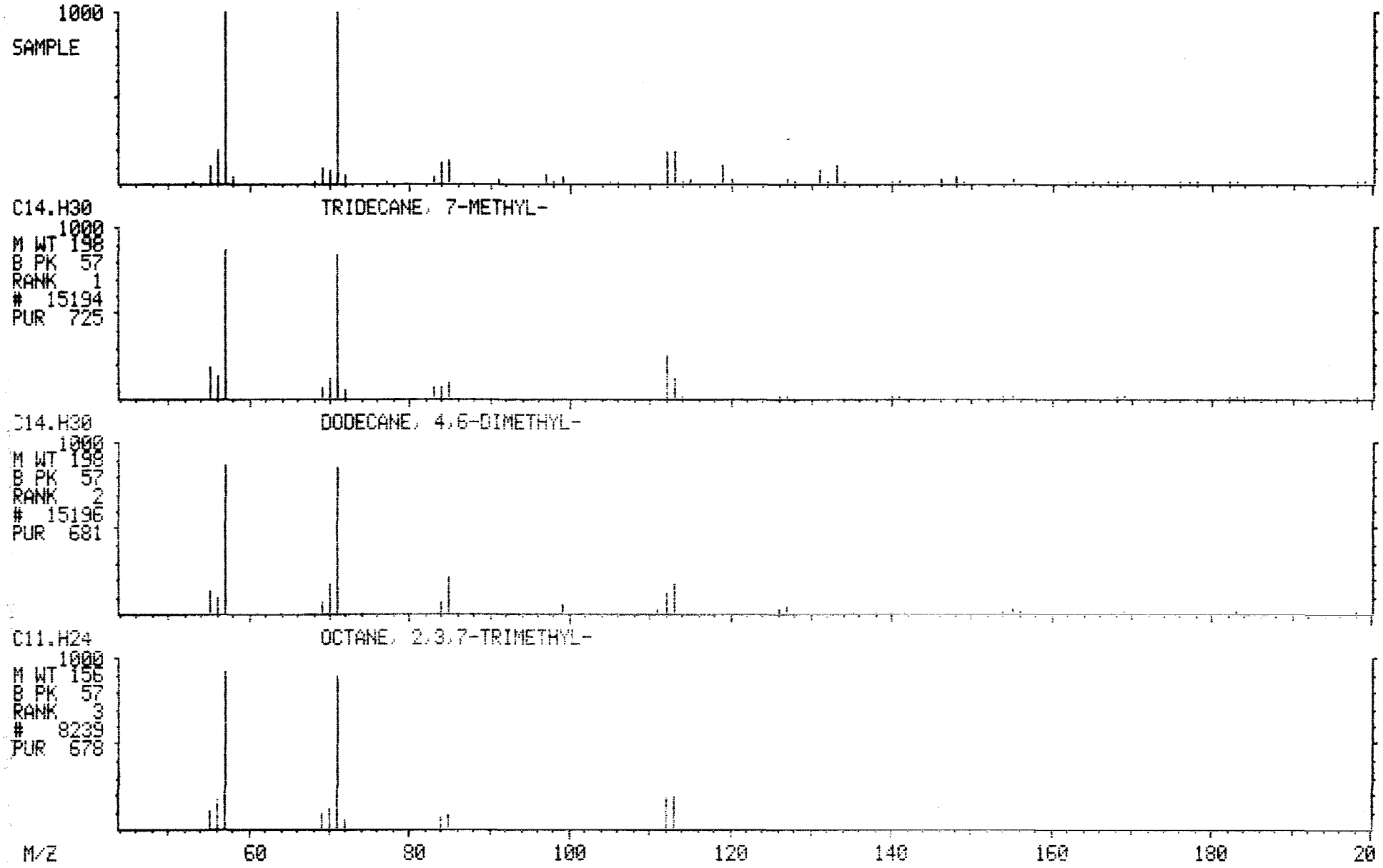
BASE M/Z: 57
RIC: 3167.



LIBRARY SEARCH
01/05/86 0:00:00 + 9:17
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 488

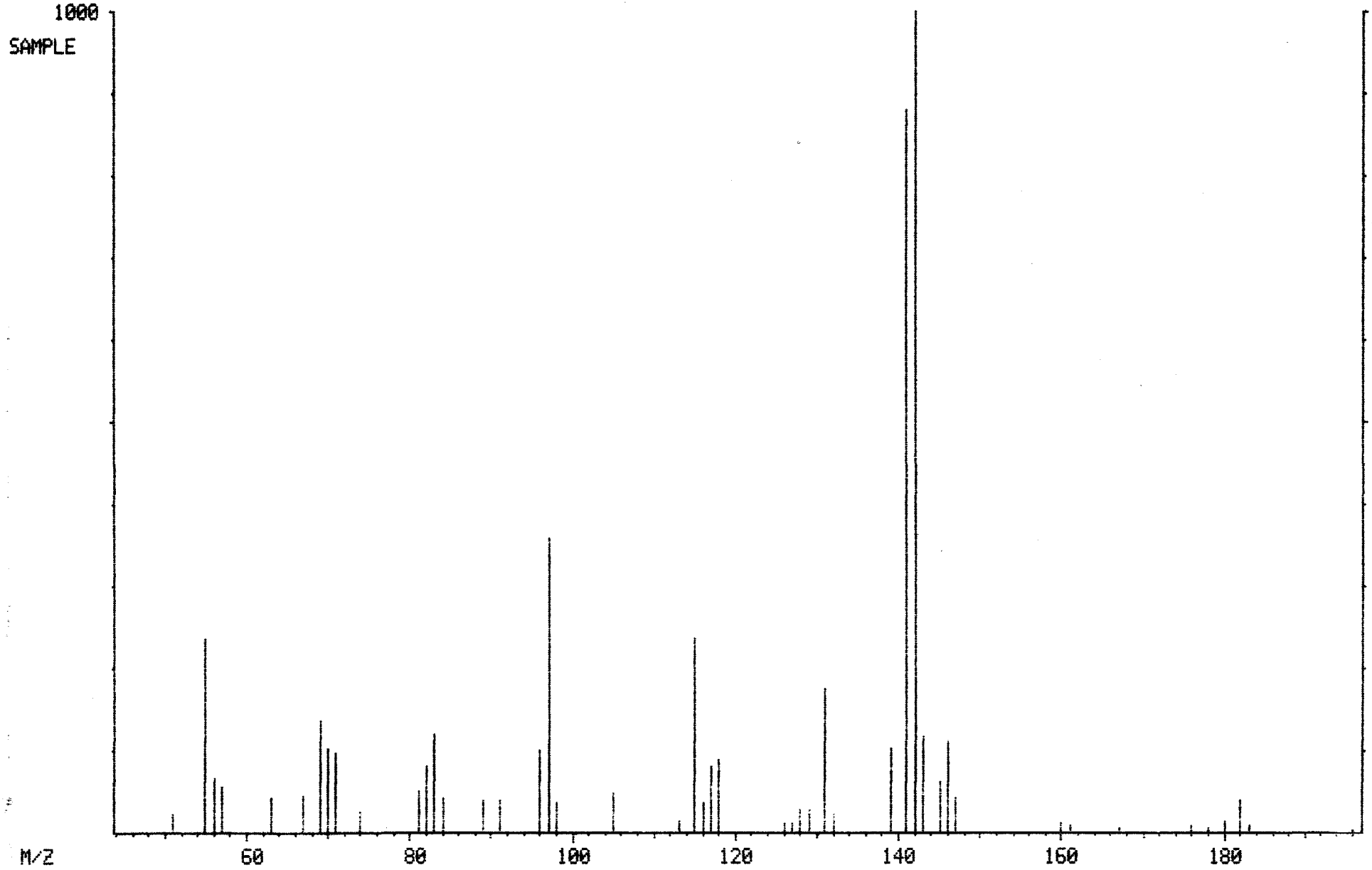
BASE M/Z: 71
RIC: 11599.



LIBRARY SEARCH
01/05/86 0:00:00 + 9:35
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 504

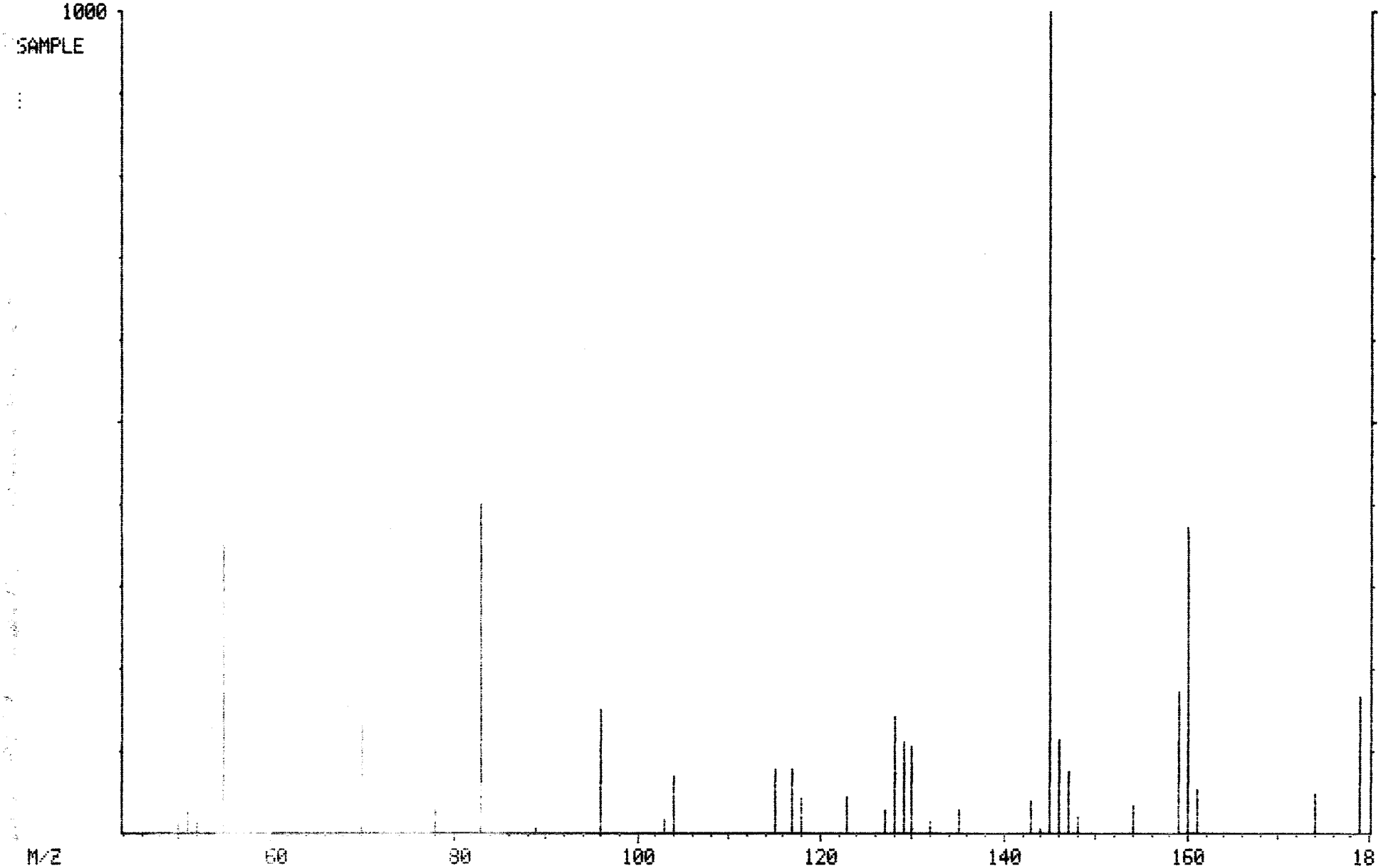
BASE M/Z: 142
RIC: 8367.



LIBRARY SEARCH
01/05/86 0:08:00 + 9:43
SAMPLE: SF-2530 86CY03S77:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 511

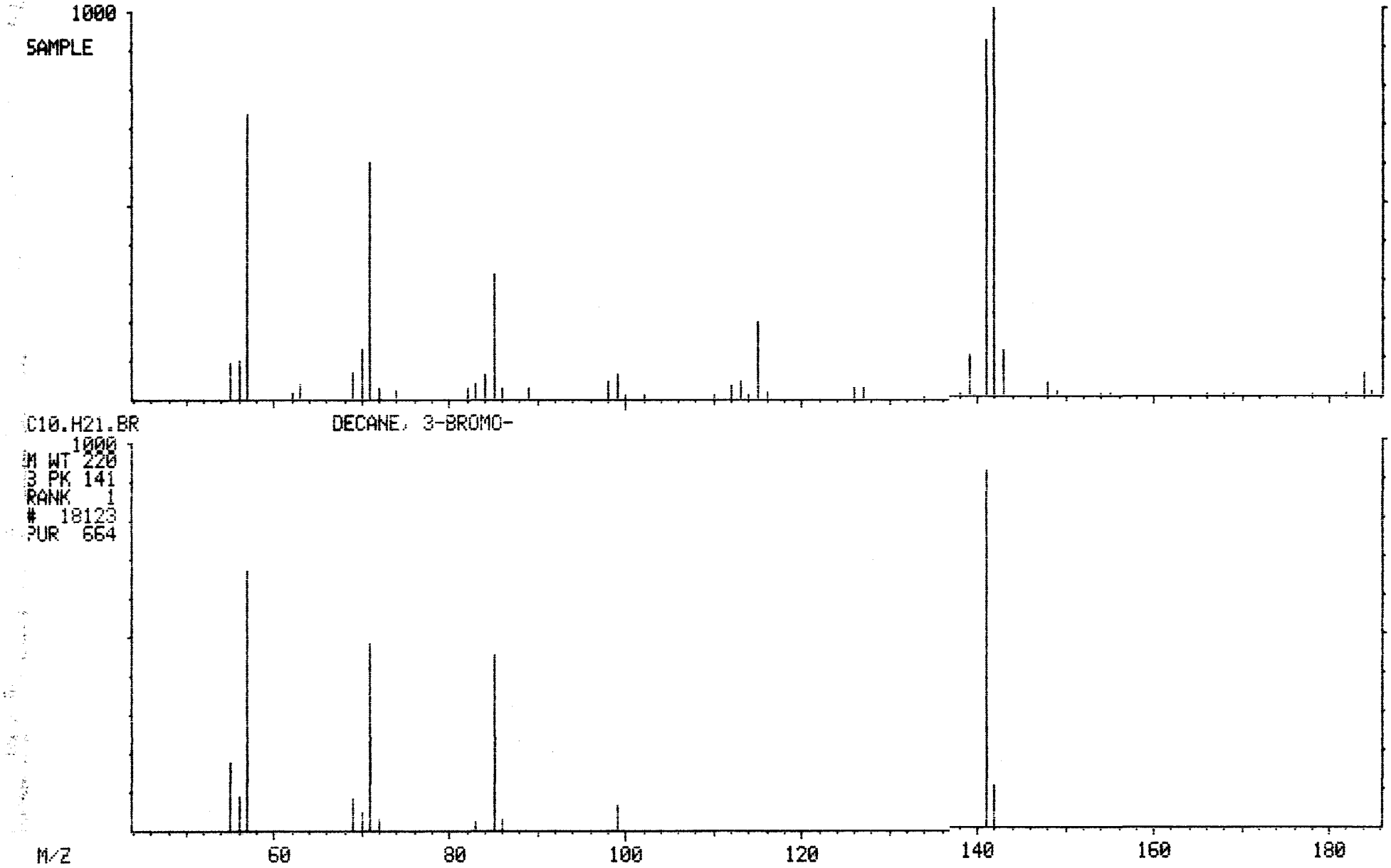
BASE M/Z: 145
RIC: 1527.



LIBRARY SEARCH
01/05/86 0:00:00 + 9:59
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 525

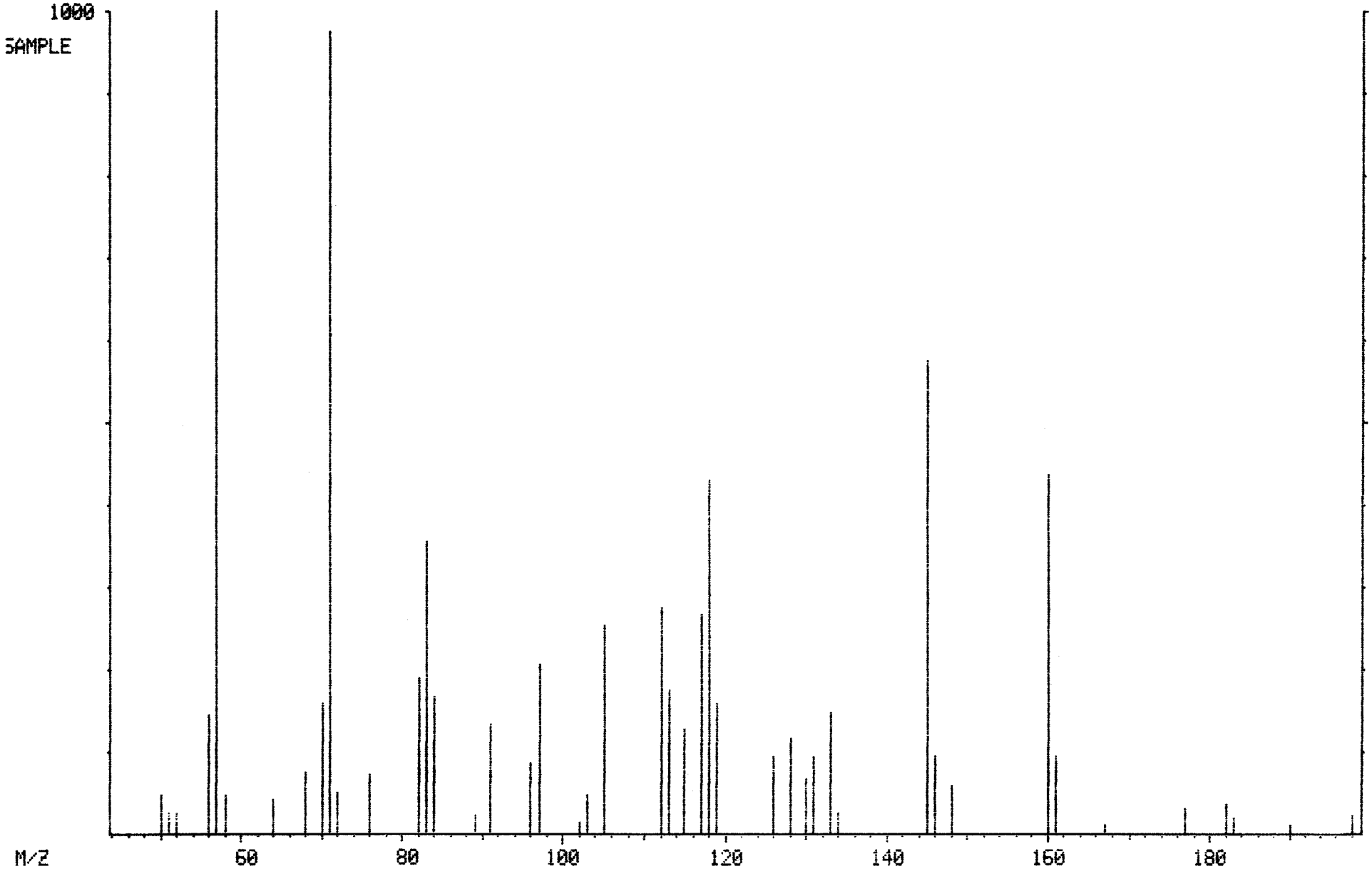
BASE M/Z: 142
RIC: 11199.



LIBRARY SEARCH
01/05/86 0:00:00 + 10:16
SAMPLE: SF-2936 86CY03S77:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 540

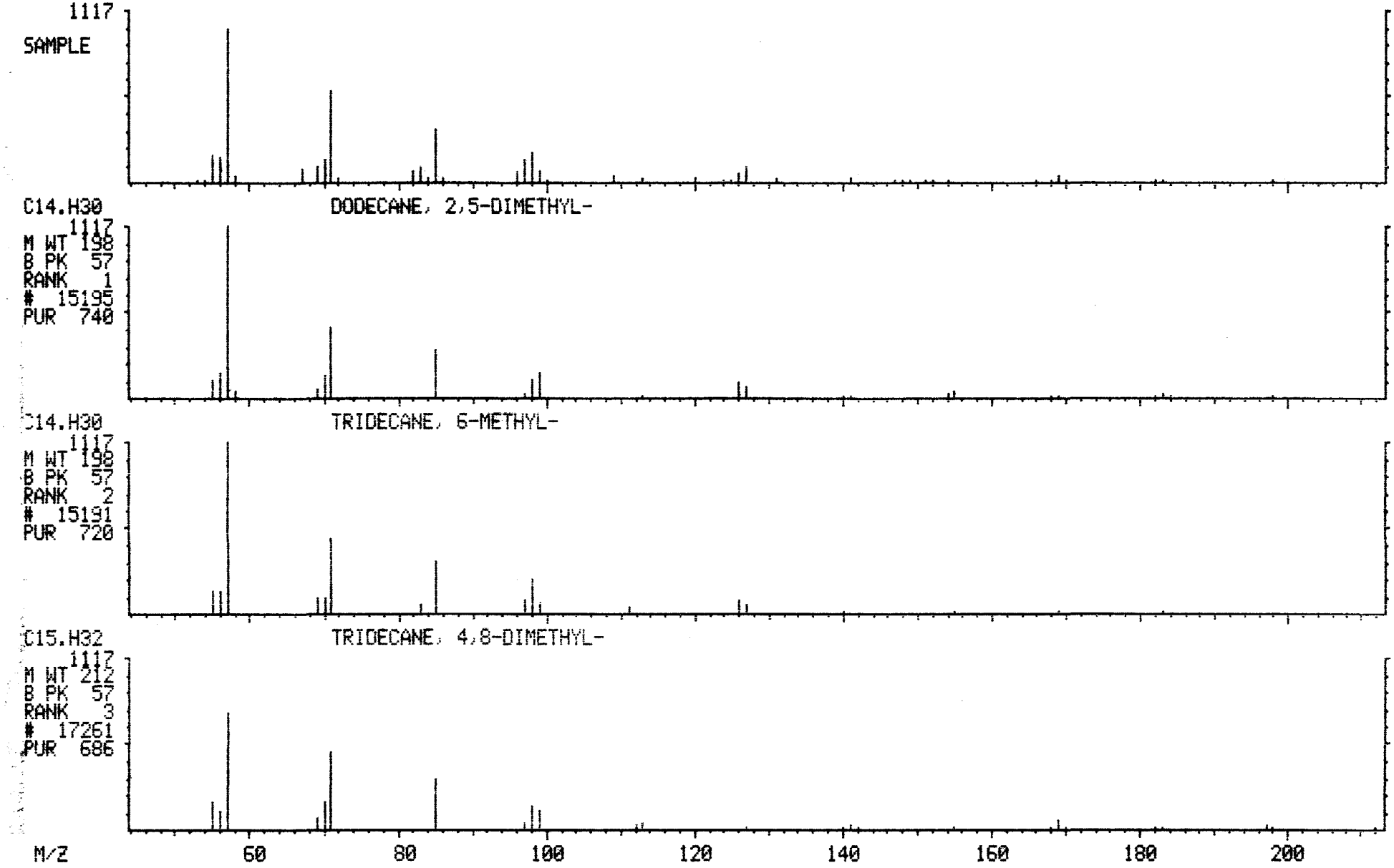
BASE M/Z: 57
RIC: 2871.



LIBRARY SEARCH
01/05/86 0:00:00 + 10:26
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 549

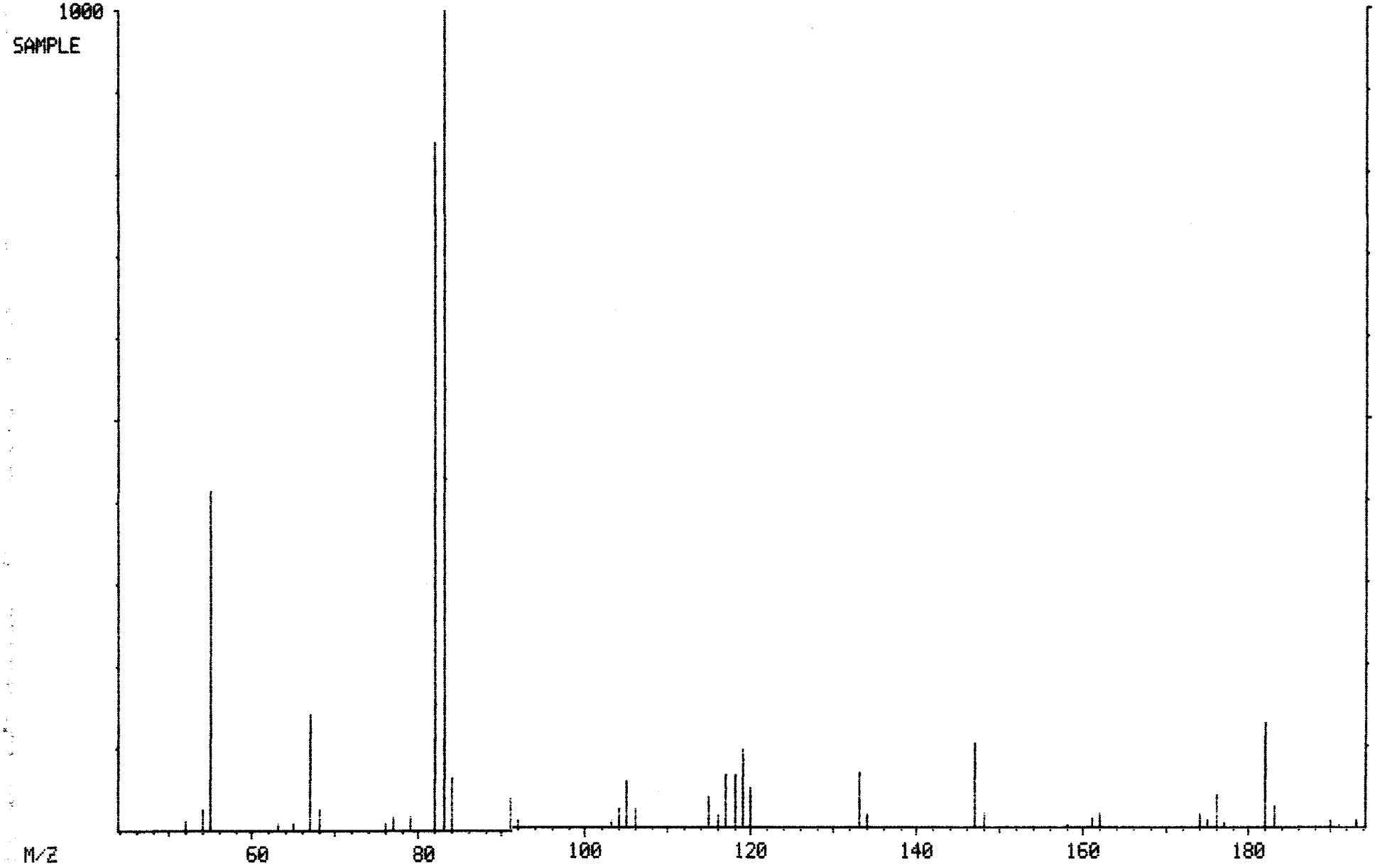
BASE M/Z: 57
RIC: 4975.



LIBRARY SEARCH
01/05/86 0:00:00 + 10:56
SAMPLE: SF-2936 86CY03577:10GR.100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 575

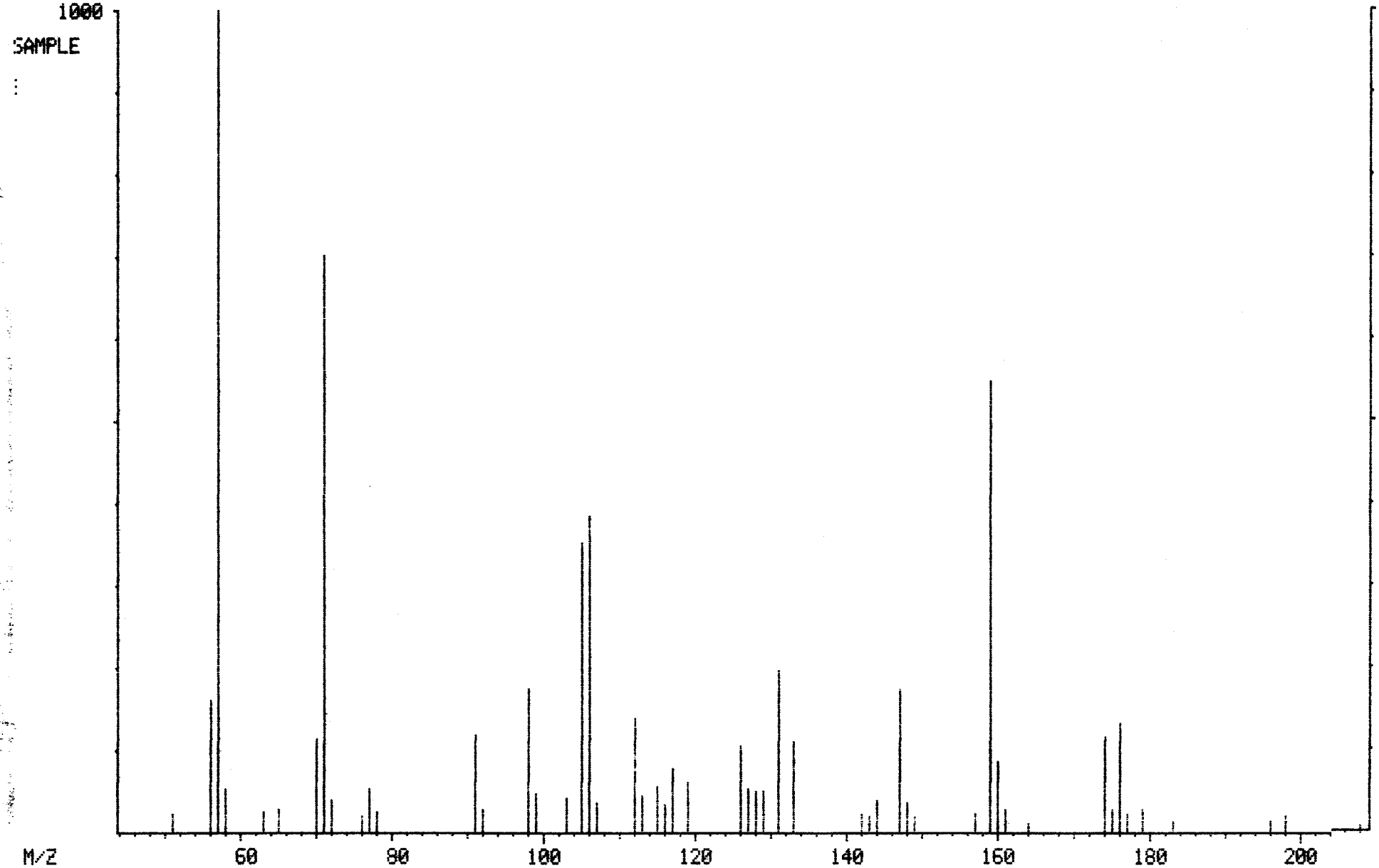
BASE M/Z: 83
RIC: 4463.



LIBRARY SEARCH
01/05/86 0:00:00 + 11:15
SAMPLE: SF-2936 86CY03S77:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 592

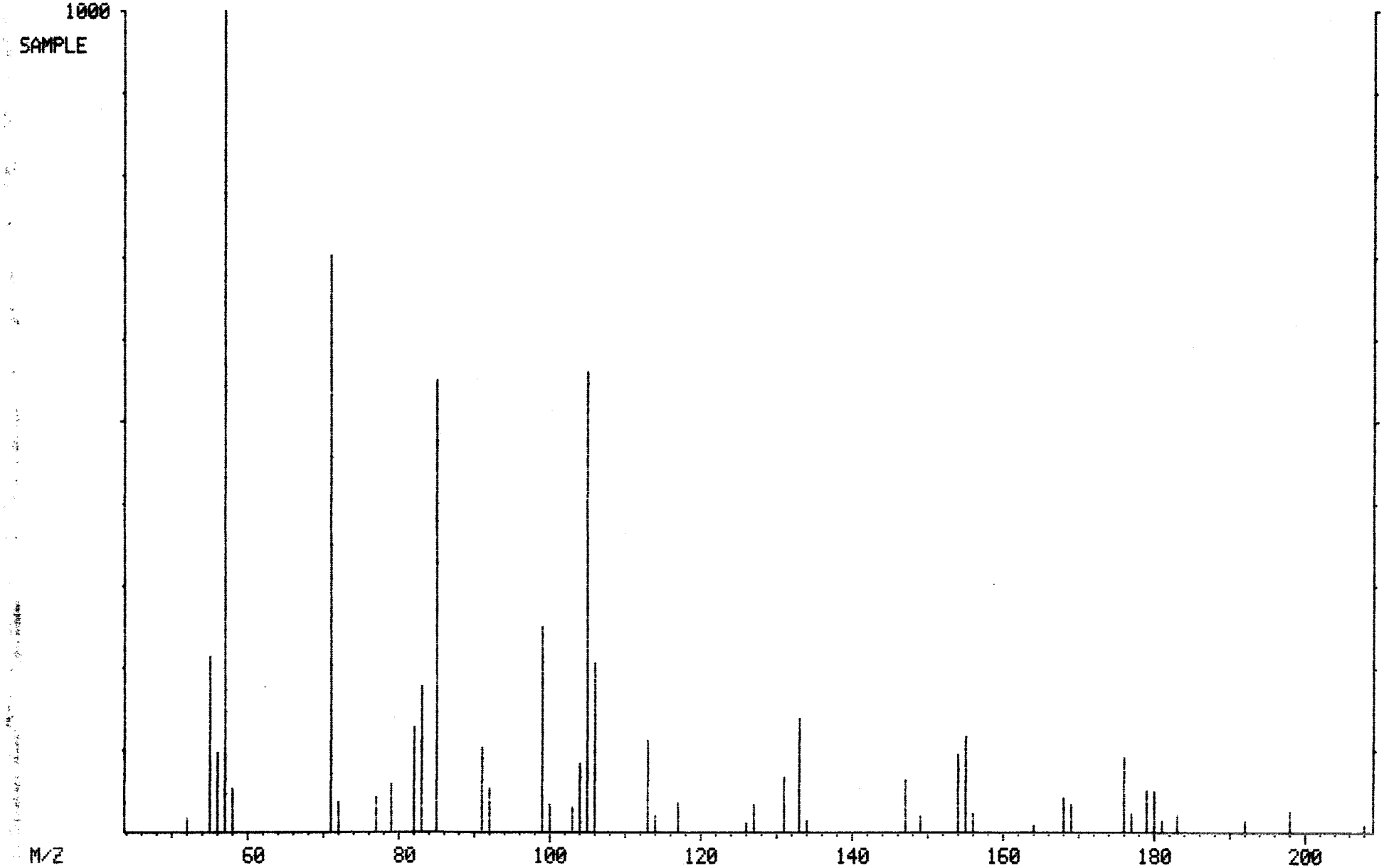
BASE M/Z: 57
RIC: 4191.



LIBRARY SEARCH
01/05/86 0:00:00 + 11:37
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 611

BASE M/Z: 57
RIC: 3803.

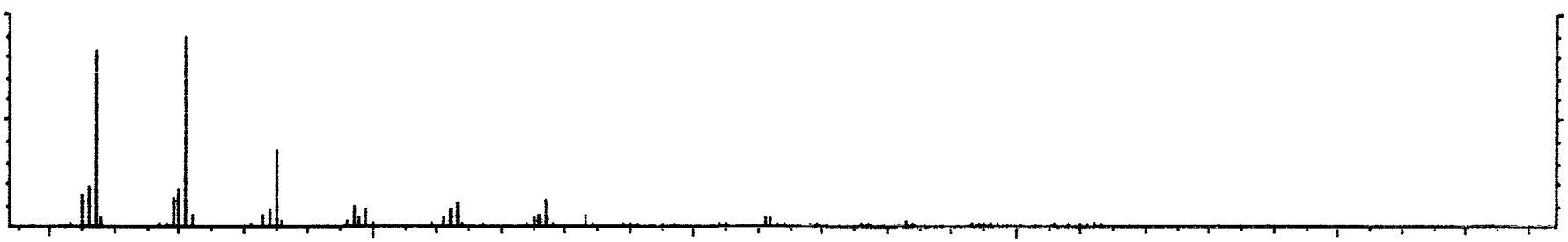


LIBRARY SEARCH
01/05/86 0:00:00 + 11:57
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 628

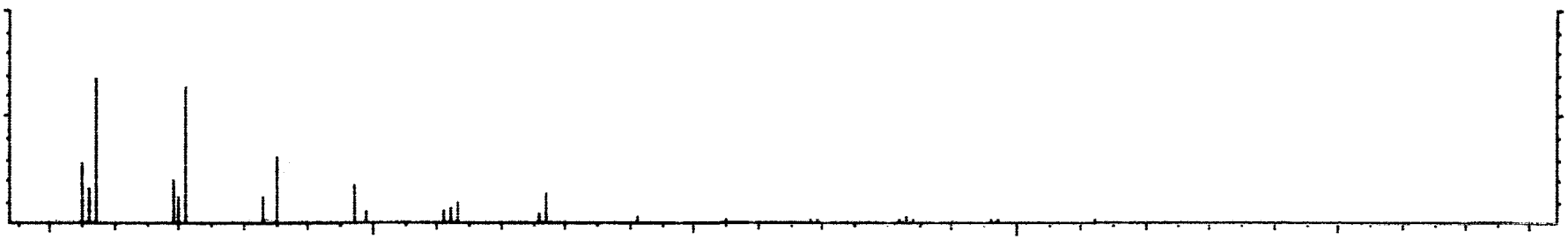
BASE M/Z: 71
RIC: 18303.

1115
SAMPLE



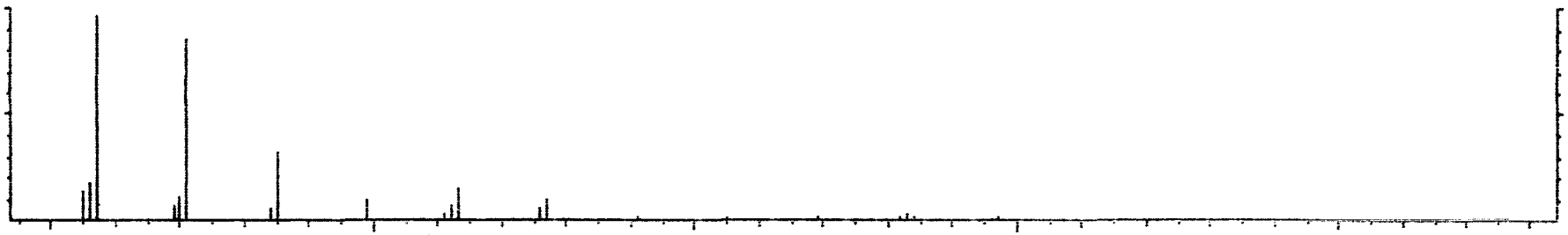
C15.H32 DODECANE, 2,6,10-TRIMETHYL-

1115
M WT 212
B PK 57
RANK 1
17257
PUR 757



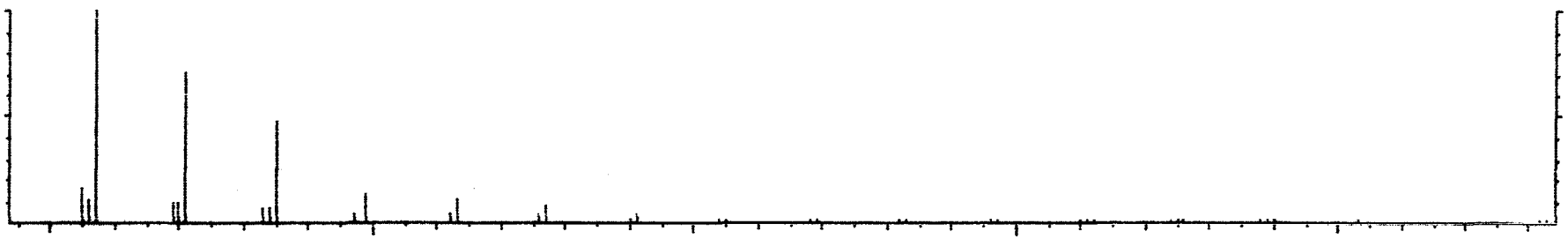
C15.H32 DODECANE, 2,7,10-TRIMETHYL-

1115
M WT 212
B PK 57
RANK 2
17263
PUR 738



C21.H14.O3.N2.FE IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BENZENAMINE-N,N']-

1115
M WT 398
B PK 57
RANK 3
33414
PUR 732

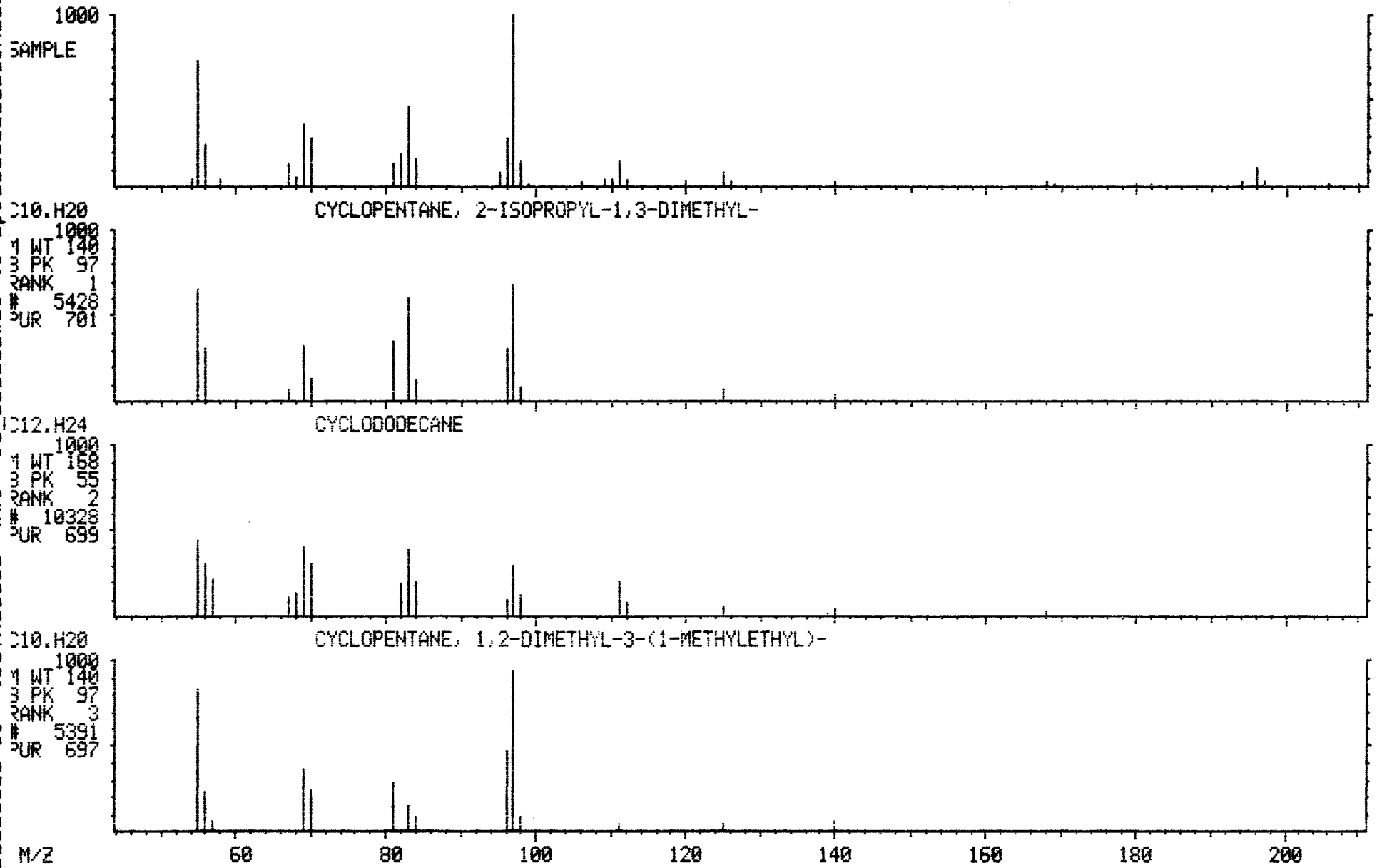


M/Z 50 100 150 200 250

LIBRARY SEARCH
01/05/86 0:00:00 + 12:13
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 642

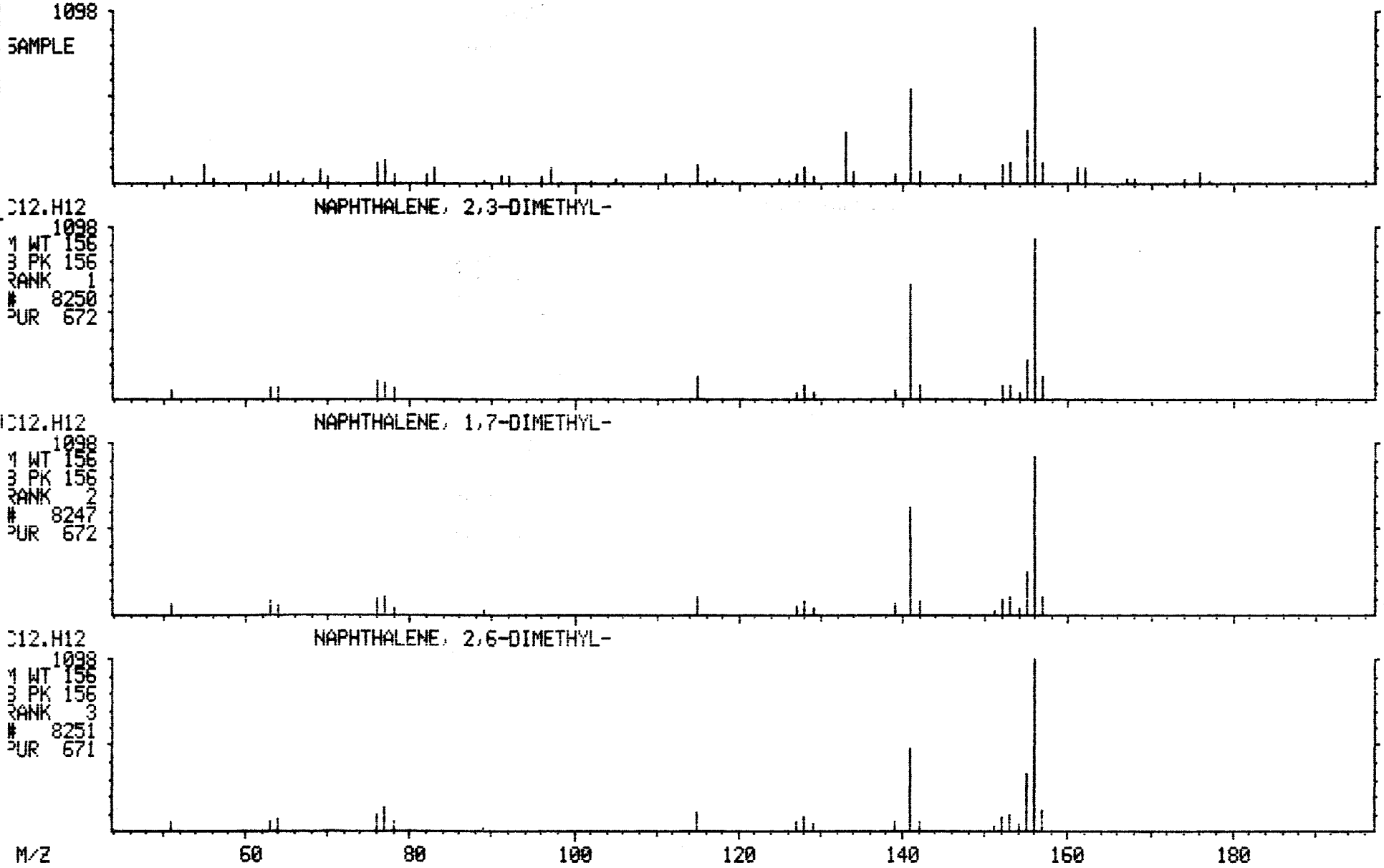
BASE M/Z: 97
RIC: 3739.



LIBRARY SEARCH
01/05/86 0:00:00 + 12:22
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 650

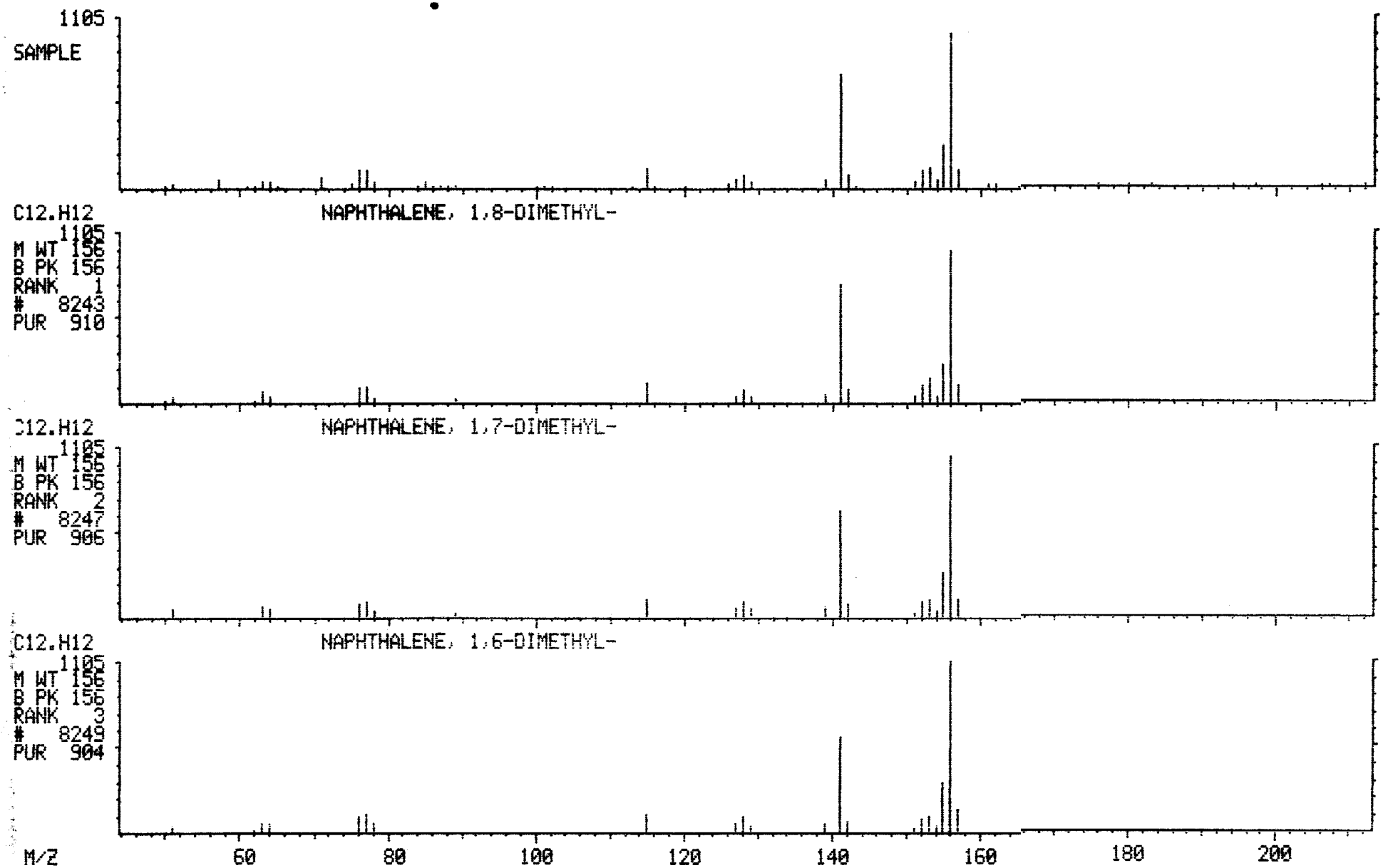
BASE M/Z: 156
RIC: 13391.



LIBRARY SEARCH
01/05/86 0:00:00 + 12:44
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 670

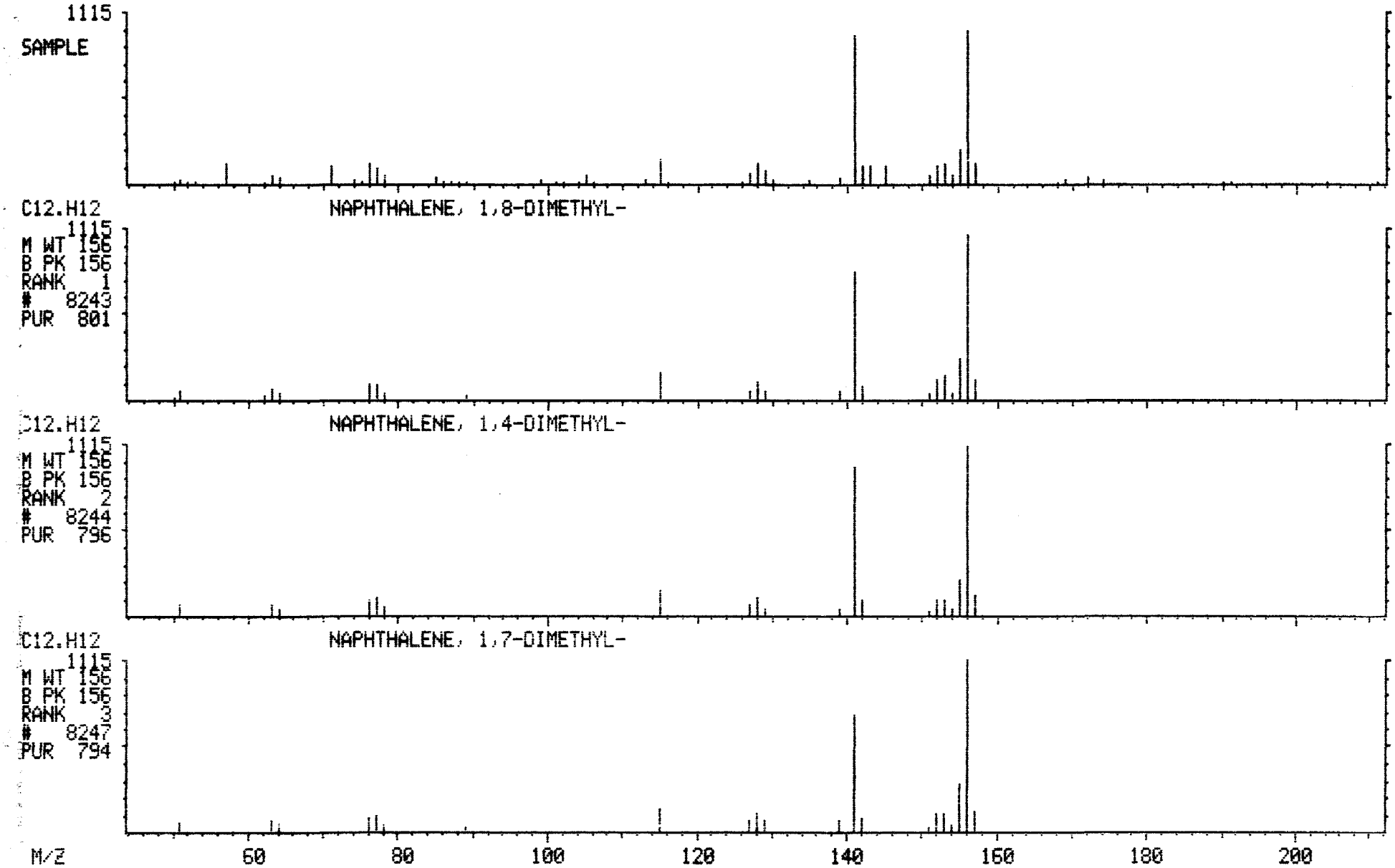
BASE M/Z: 156
RIC: 14143.



LIBRARY SEARCH
01/05/86 0:00:00 + 13:11
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 693

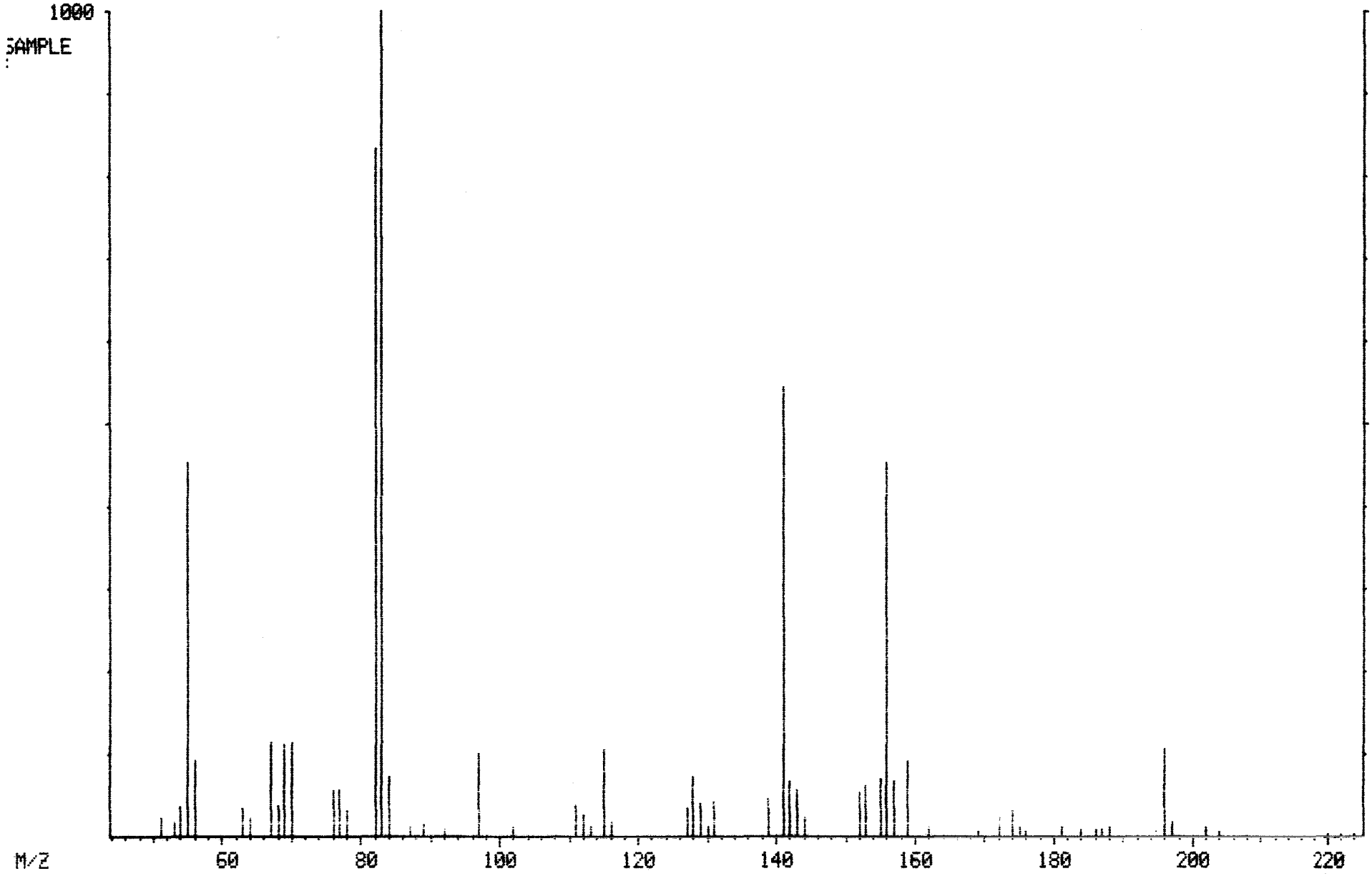
BASE M/Z: 156
RIC: 5575.



LIBRARY SEARCH
01/05/86 0:00:00 + 13:32
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 712

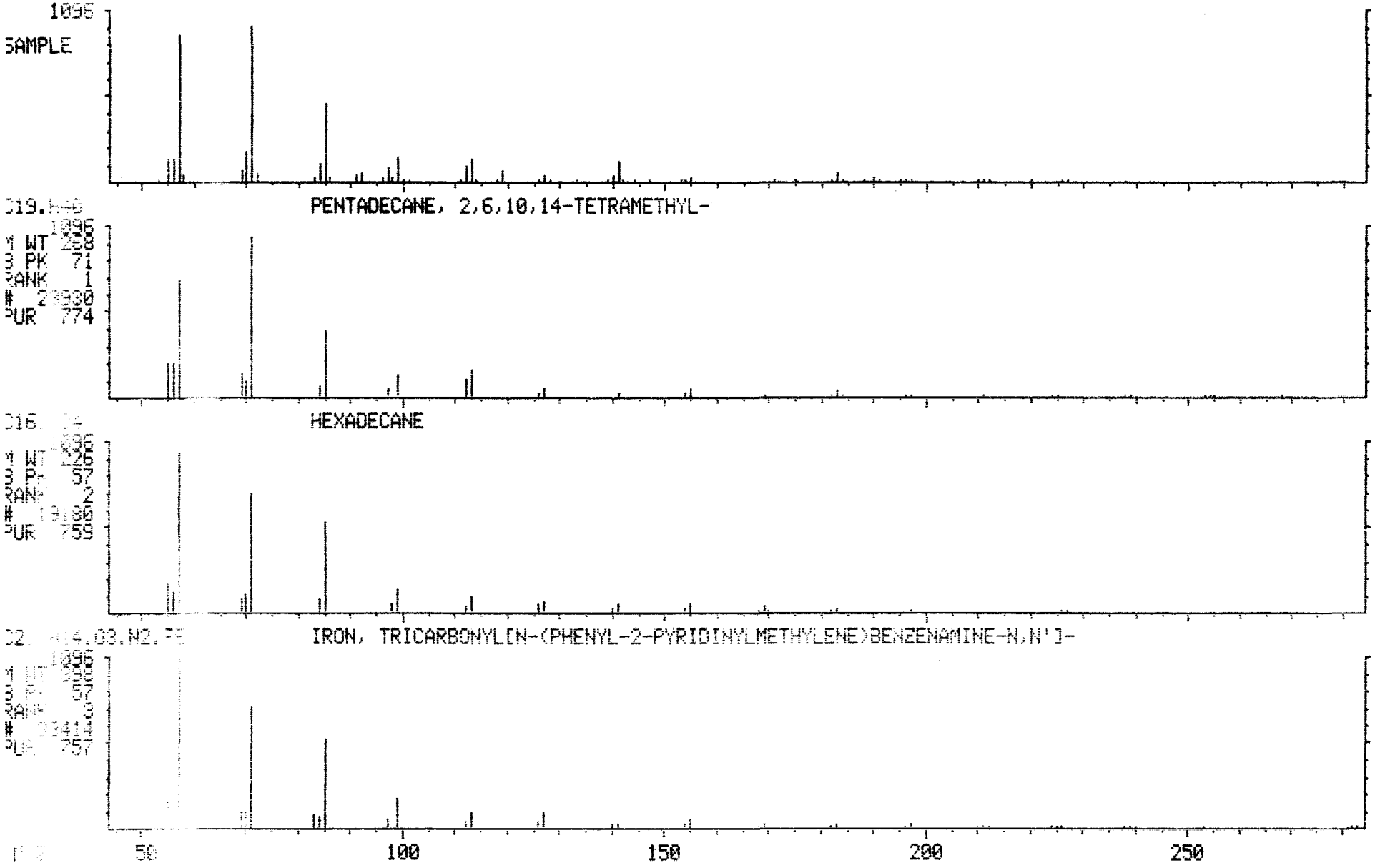
BASE M/Z: 83
RIC: 7863.



LIBRARY SEARCH
01/05/86 0:00:00 + 14:03
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 739

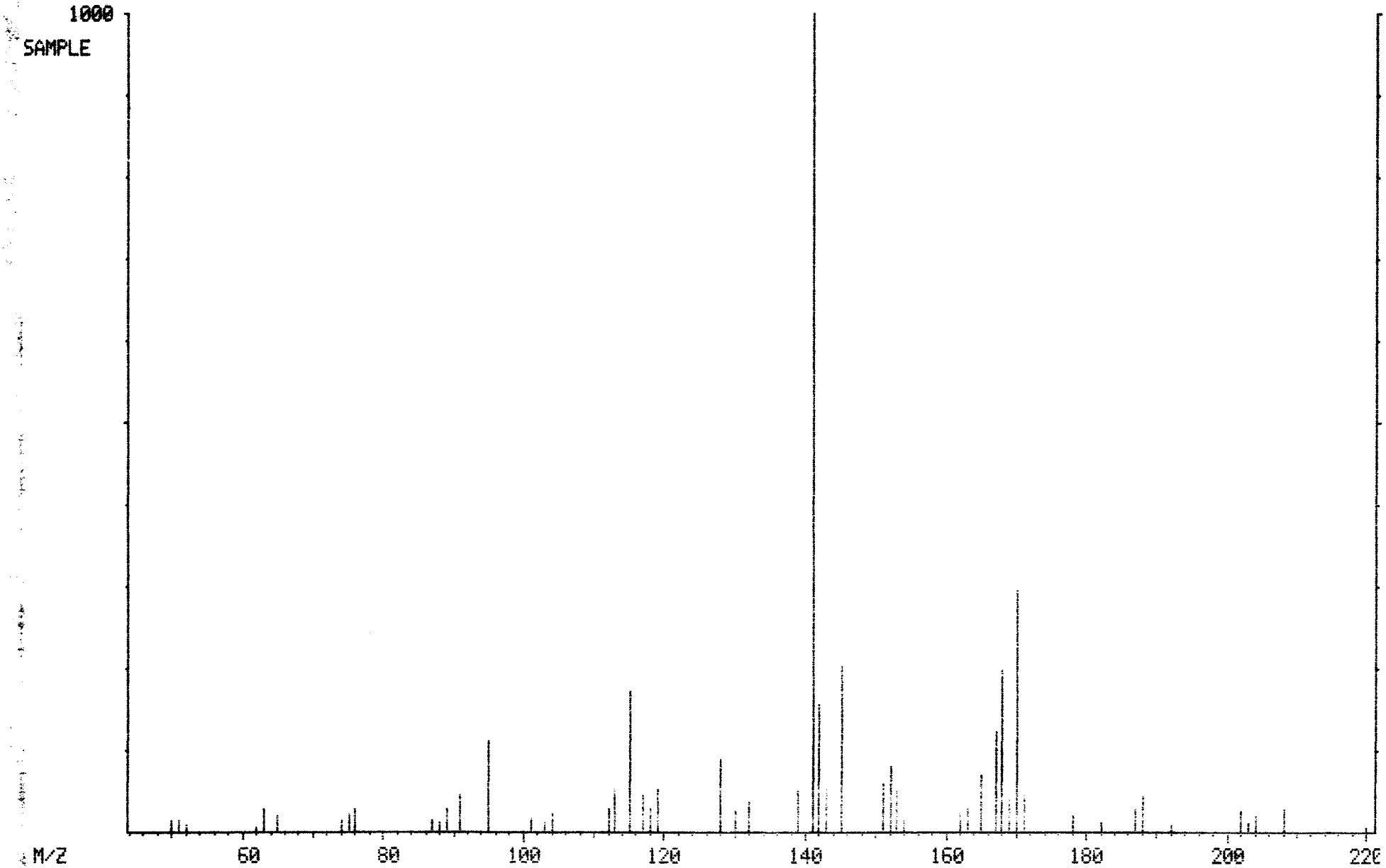
BASE M/Z: 71
RIC: 20415.



LIBRARY SEARCH
01/05/86 0:00:00 + 14:25
SAMPLE: SF-2936 86CY03S77:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 758

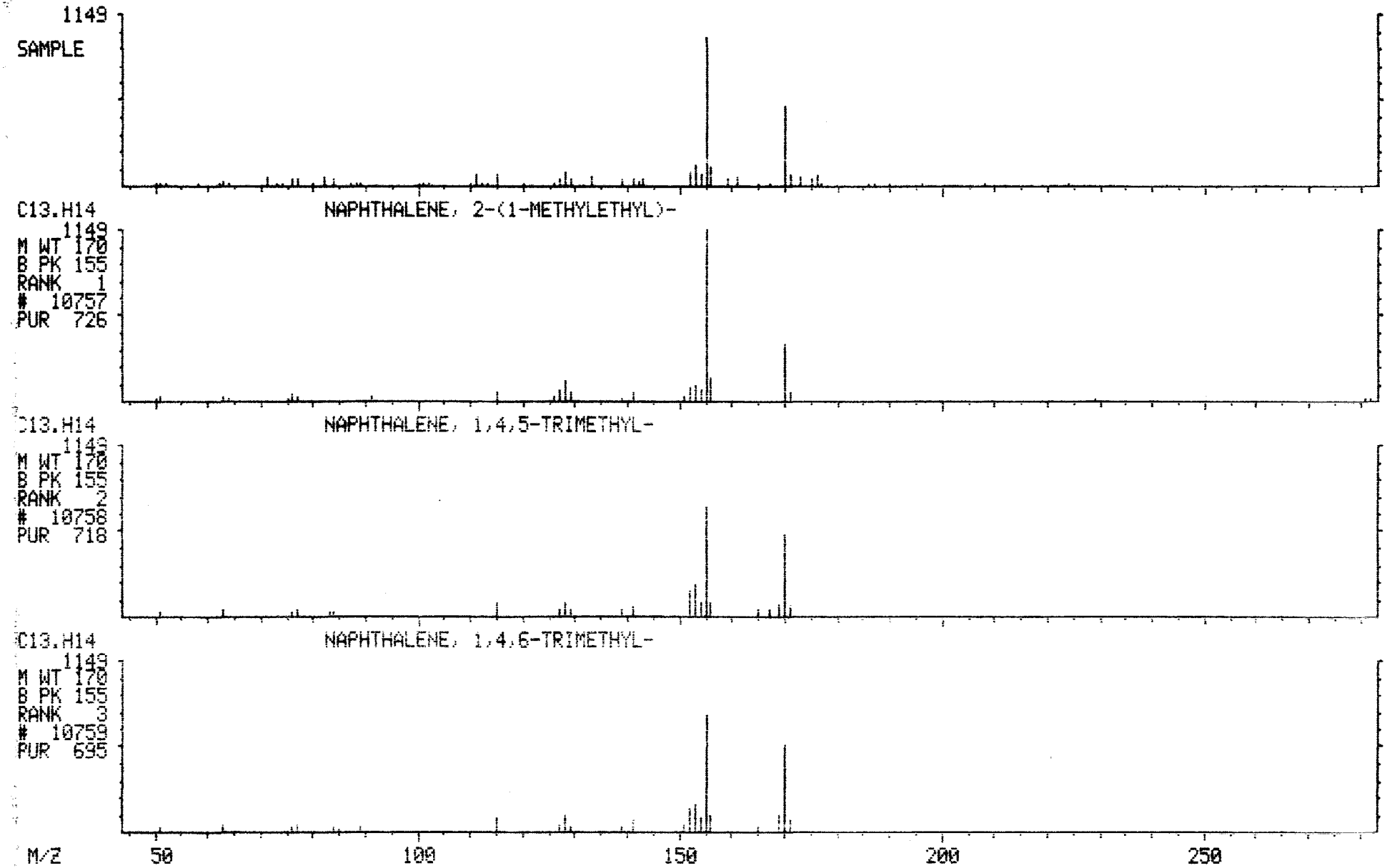
BASE M/Z: 141
RIC: 2843.



LIBRARY SEARCH
01/05/86 0:00:00 + 14:48
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 778

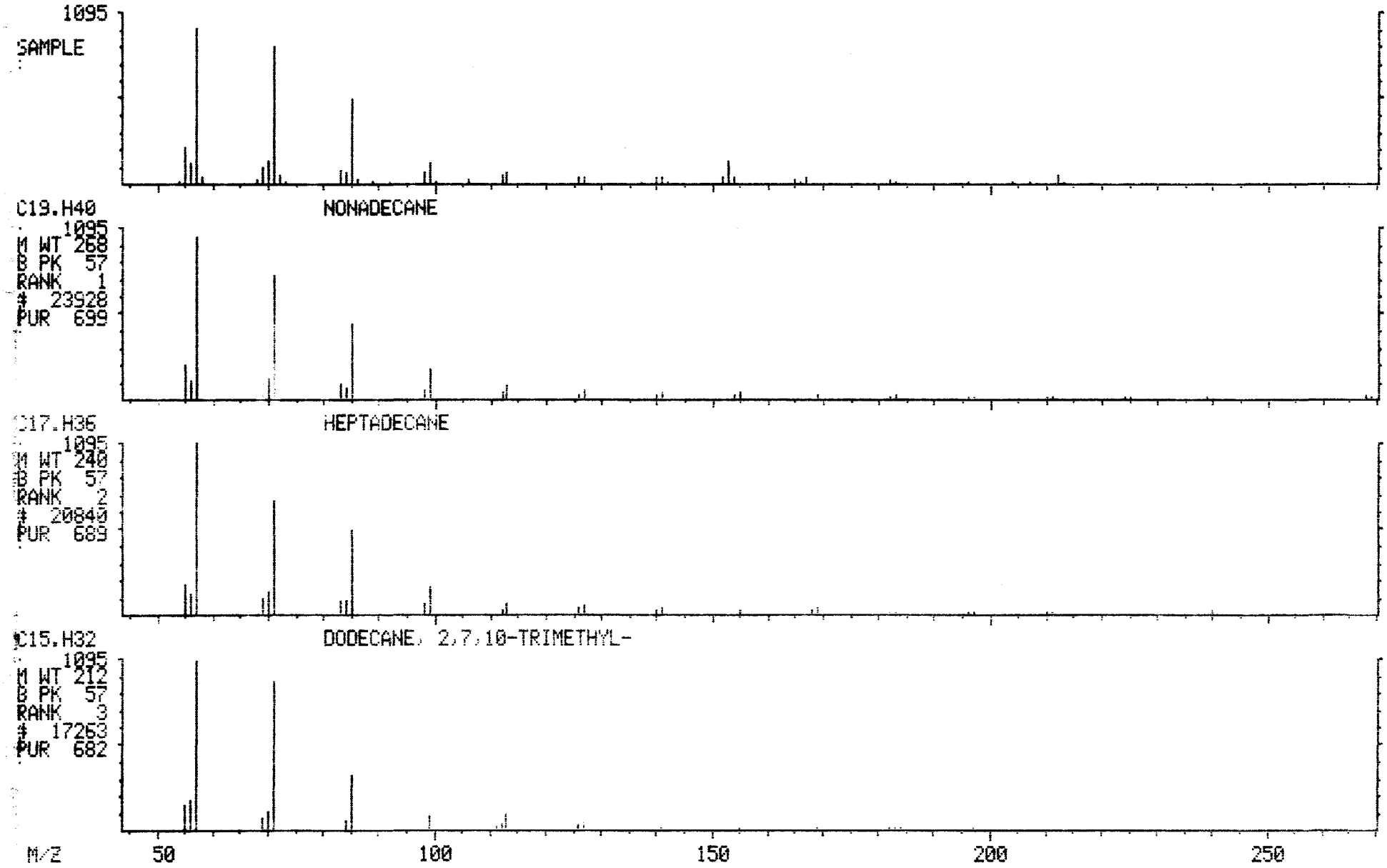
BASE M/Z: 155
RIC: 6215.



LIBRARY SEARCH
01/05/86 0:00:00 + 14:57
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 786

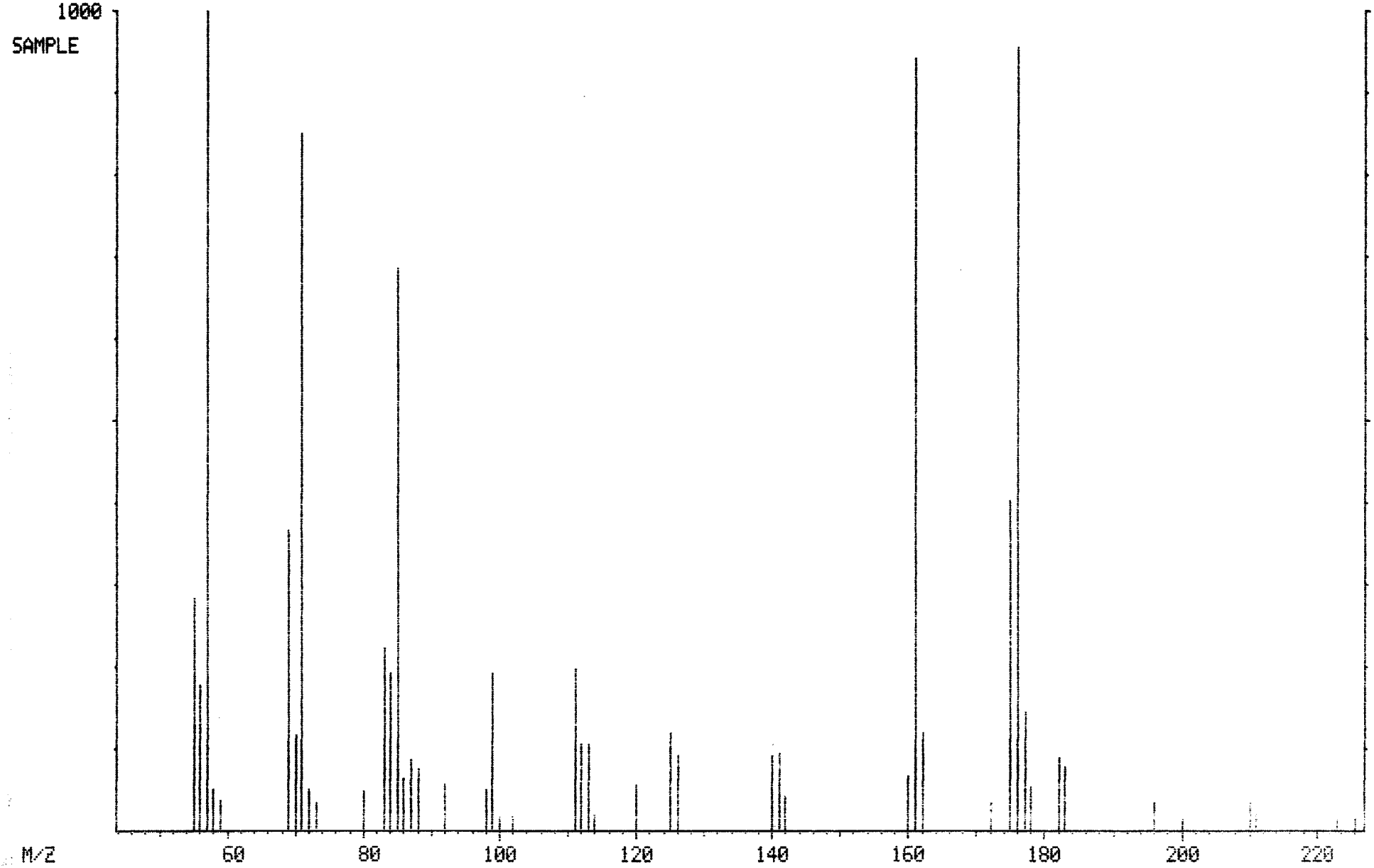
BASE M/Z: 57
RIC: 5935.



LIBRARY SEARCH
01/05/86 0:00:00 + 15:09
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 797

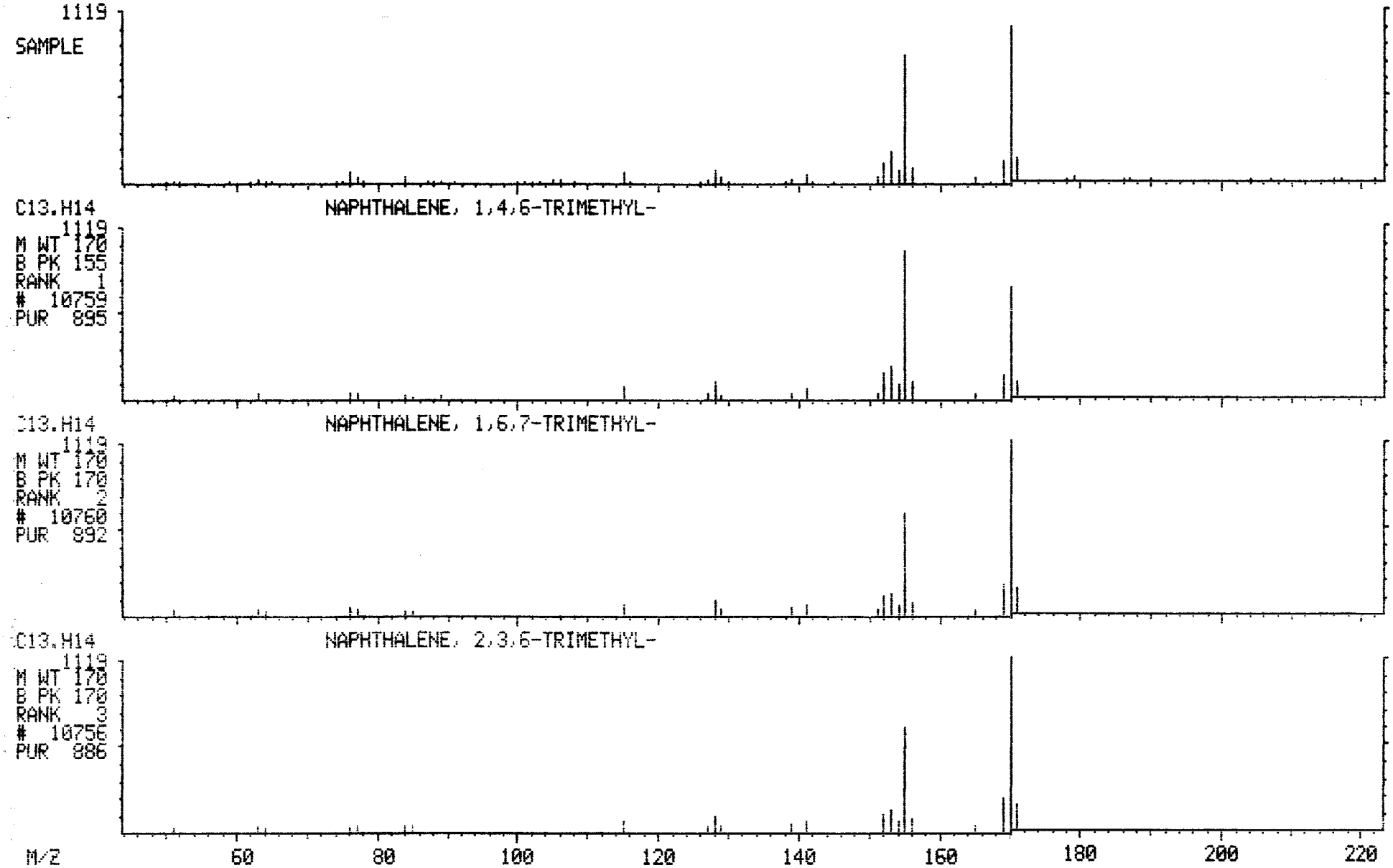
BASE M/Z: 57
RIC: 4223.



LIBRARY SEARCH
01/05/86 0:00:00 + 15:24
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 810

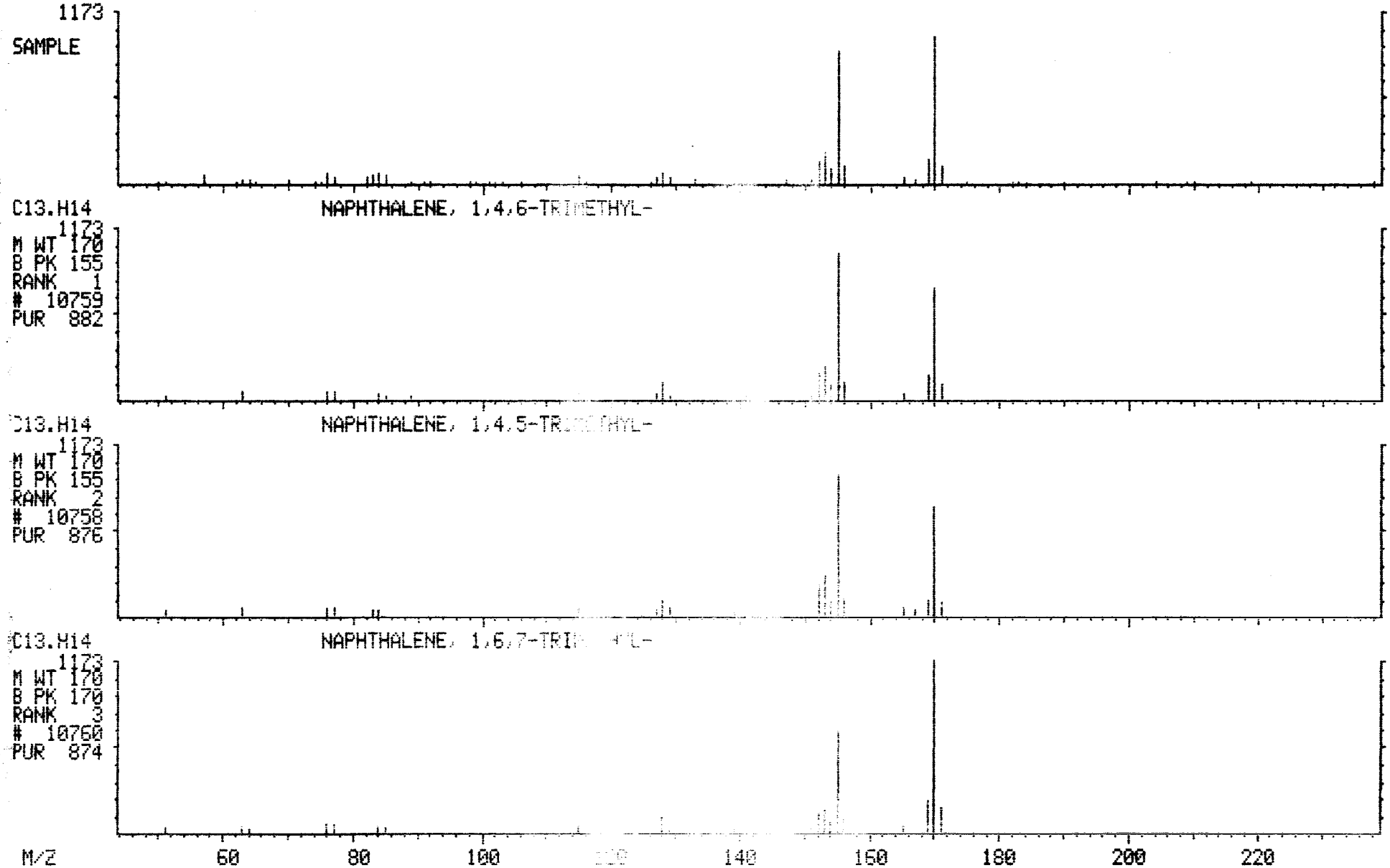
BASE M/Z: 170
RIC: 8463.



LIBRARY SEARCH
01/05/86 0:00:00 + 15:46
SAMPLE: SF-2936 86CY03S77:10GR 130
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 829

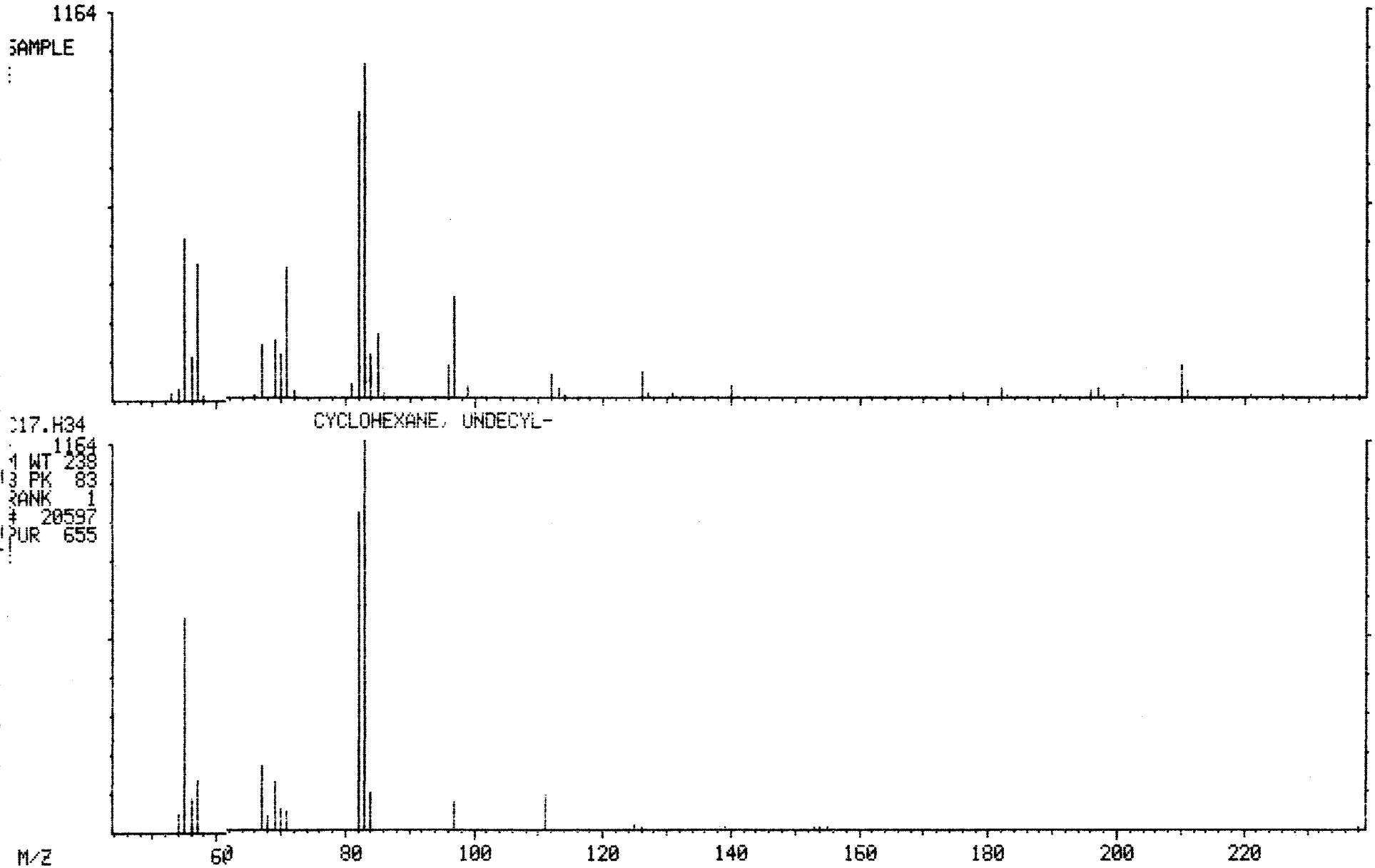
BASE M/Z: 170
RIC: 8911.



LIBRARY SEARCH
01/05/86 0:00:00 + 16:01
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 842

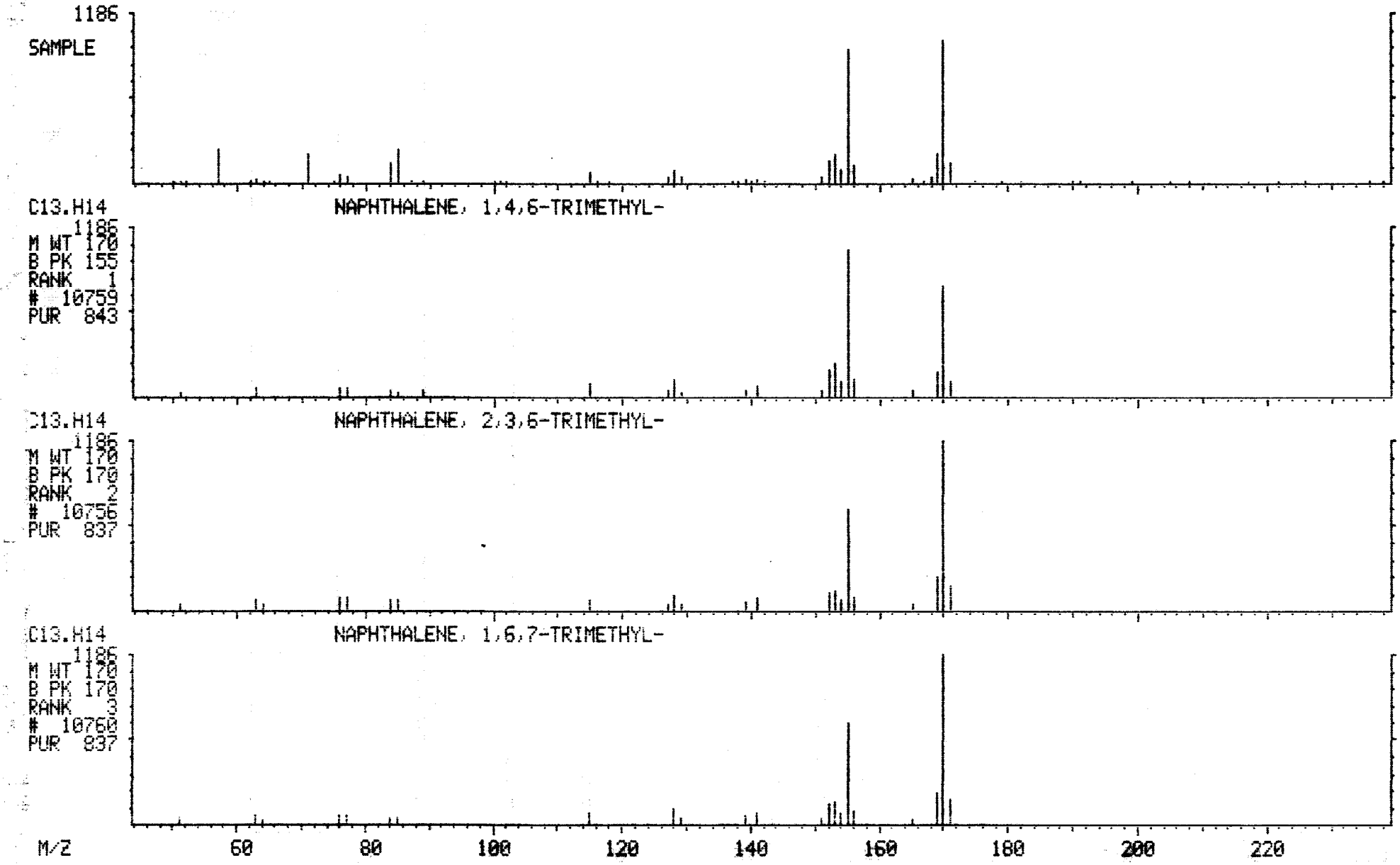
BASE M/Z: 83
RIC: 8591.



LIBRARY SEARCH
01/05/86 0:00:00 + 16:10
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 850

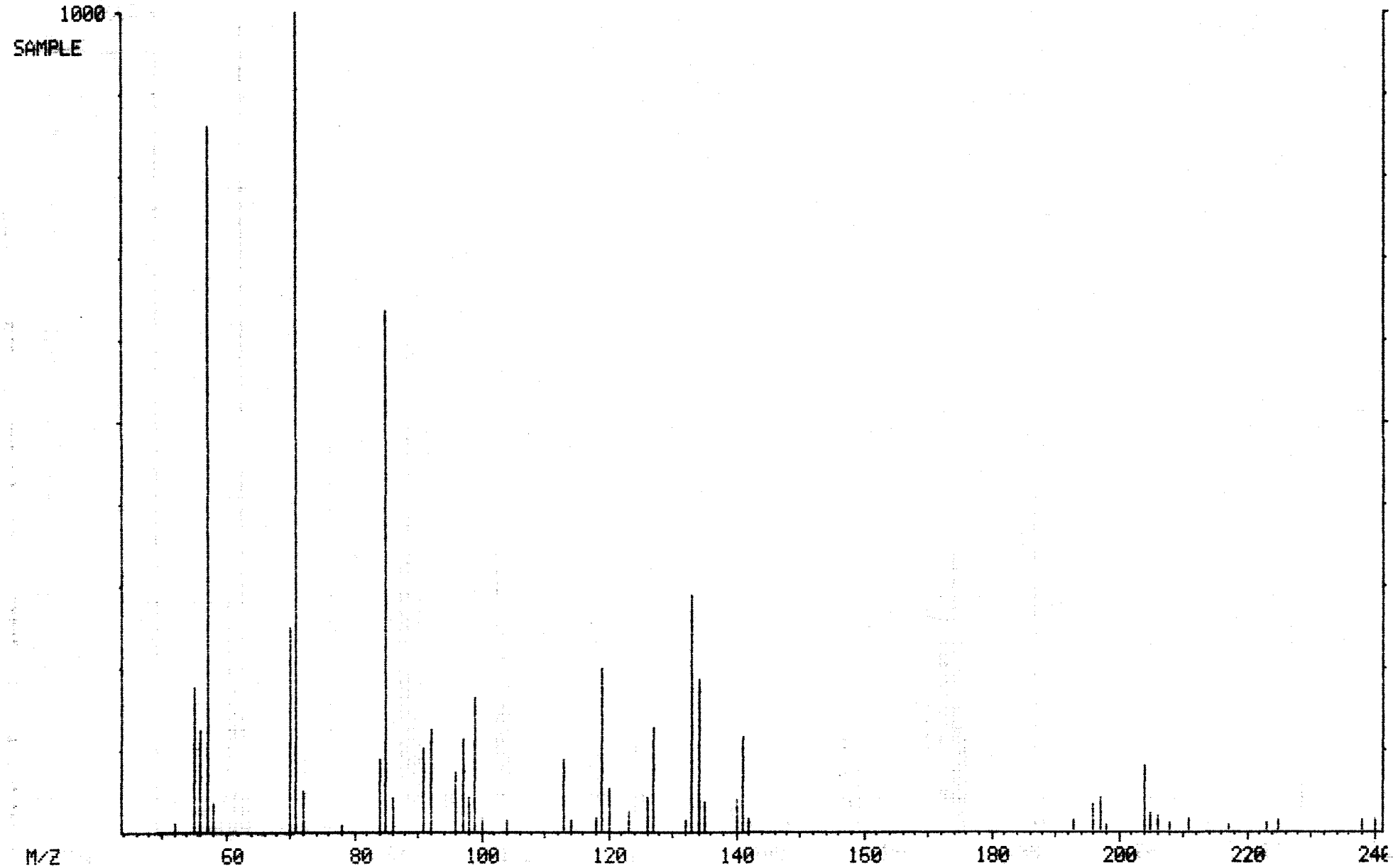
BASE M/Z: 170
RIC: 7183.



LIBRARY SEARCH
01/05/06 0:00:00 + 16:27
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 865

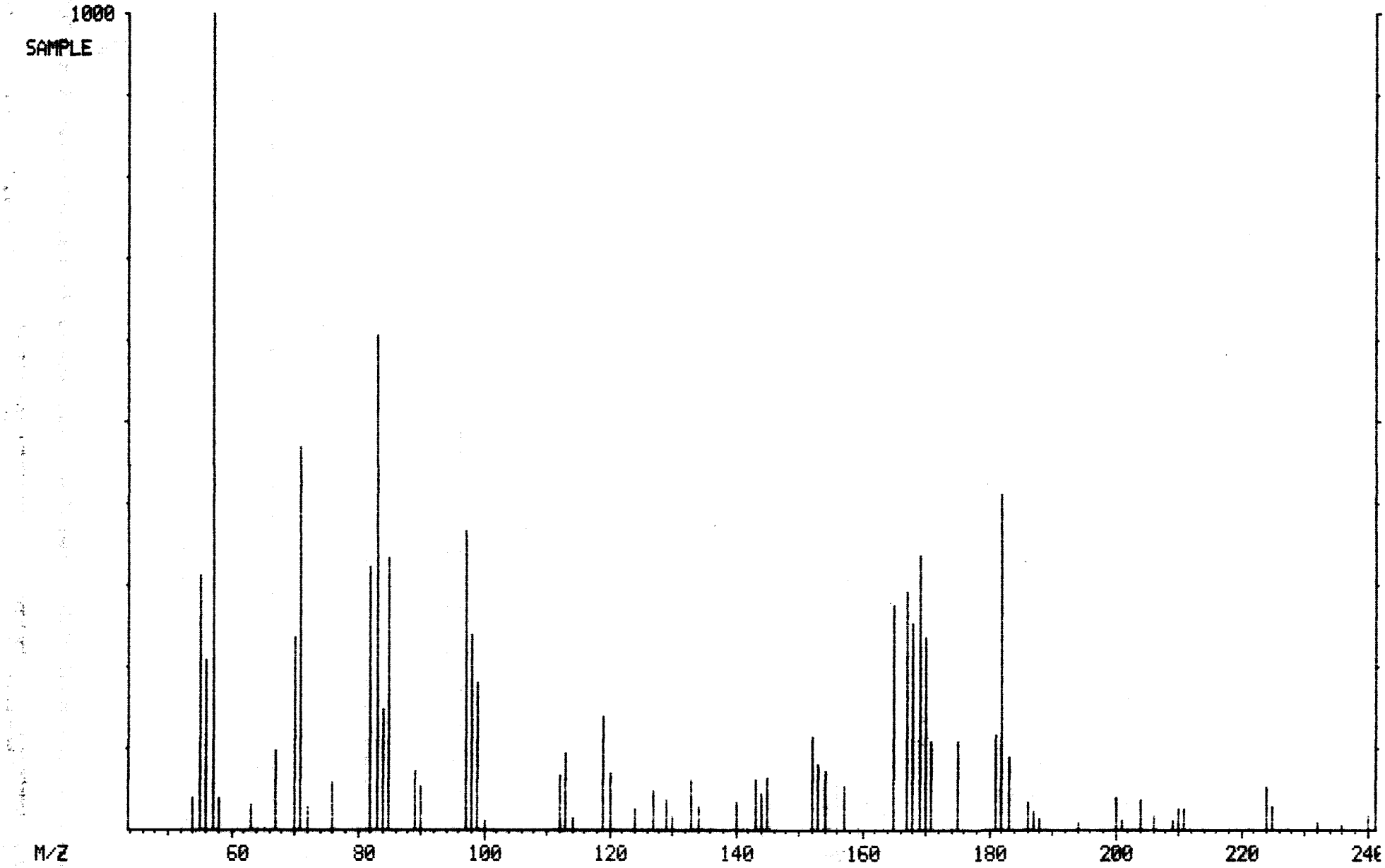
BASE M/Z: 71
RIC: 6735.



LIBRARY SEARCH
01/05/86 0:00:00 + 17:03
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS0049 # 897

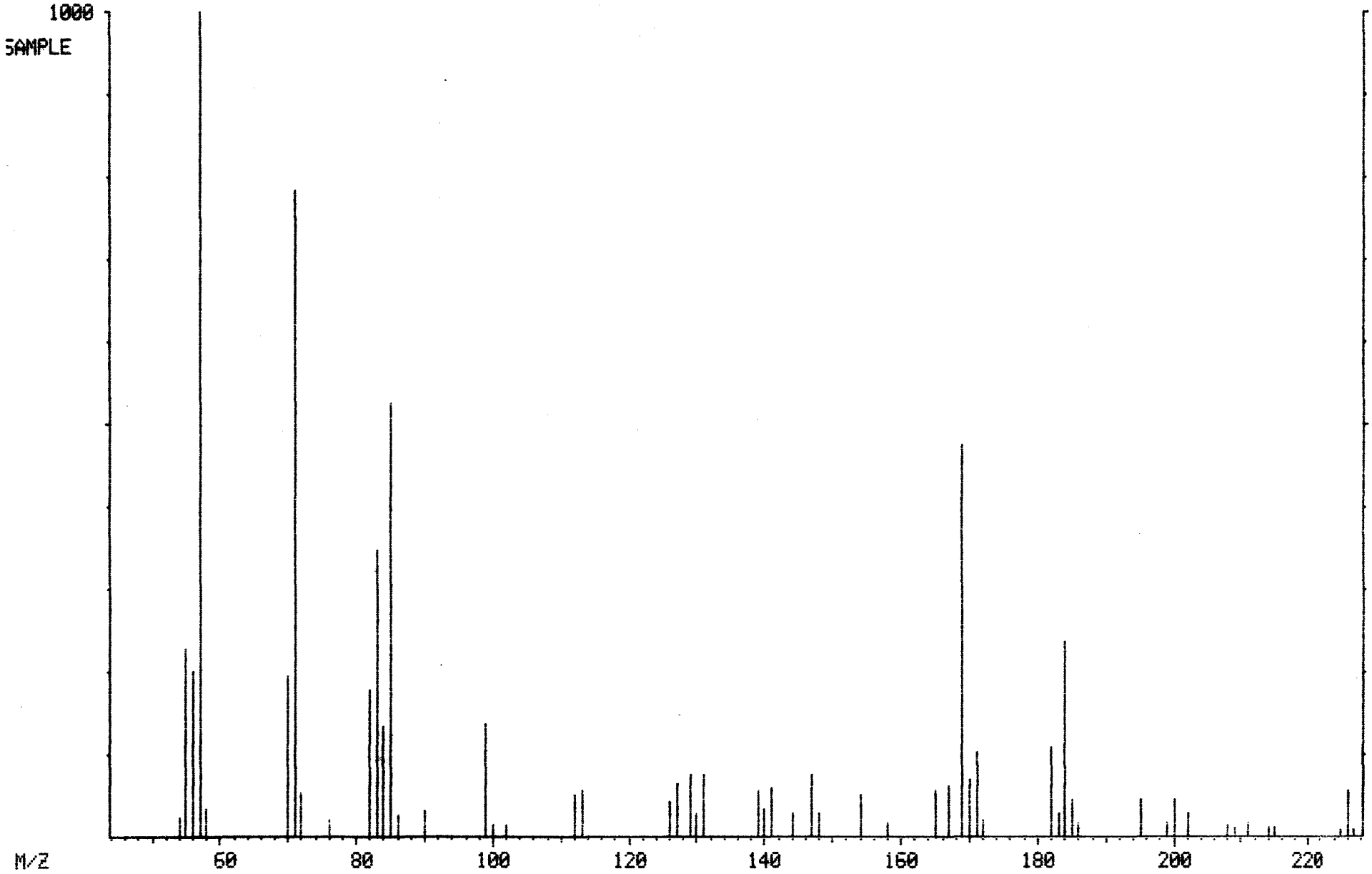
BASE M/Z: 57
RIC: 5519.



LIBRARY SEARCH
01/05/86 0:00:00 + 17:13
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 905

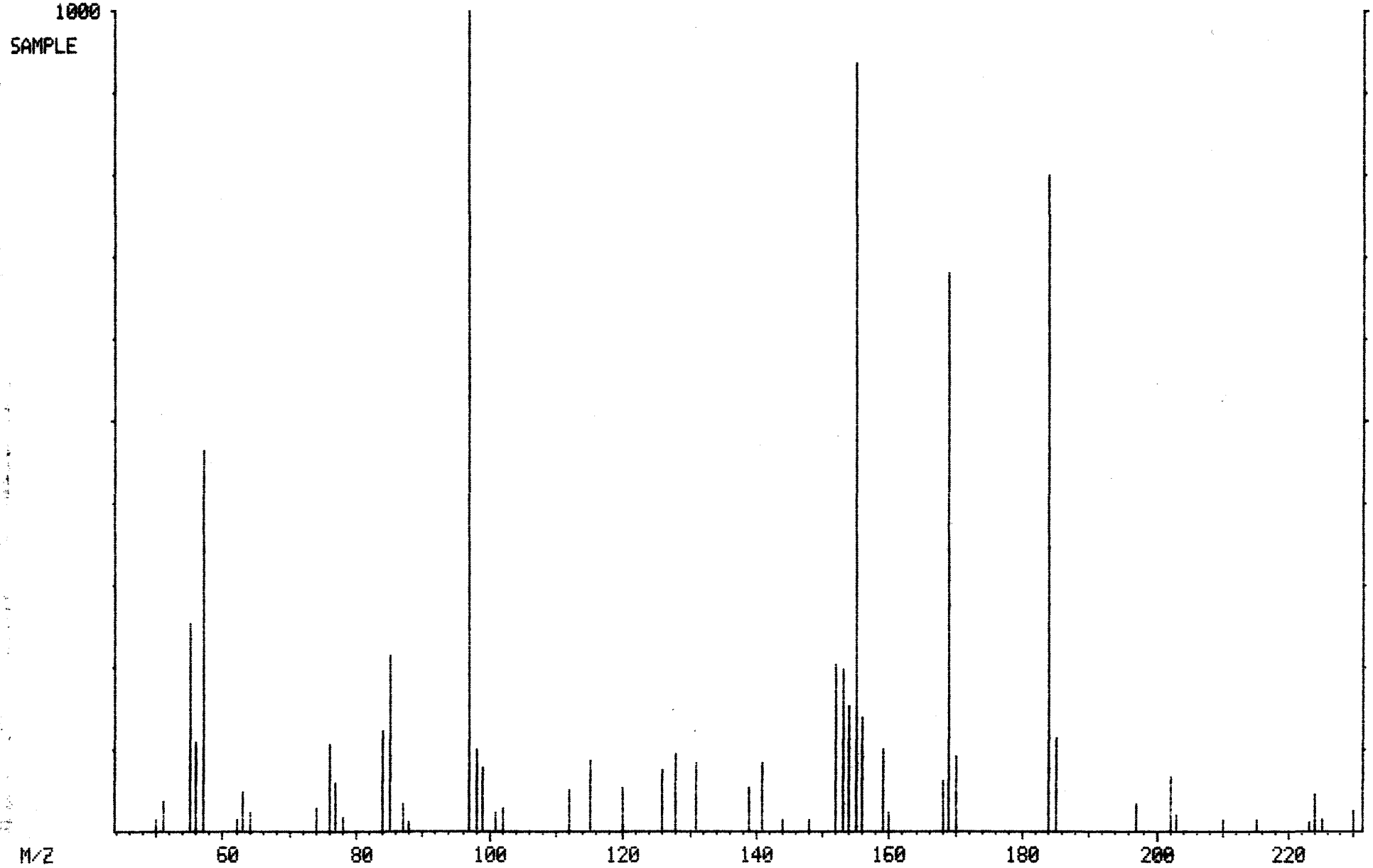
BASE M/Z: 57
RIC: 3923.



LIBRARY SEARCH
01/05/86 0:00:00 + 17:21
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 912

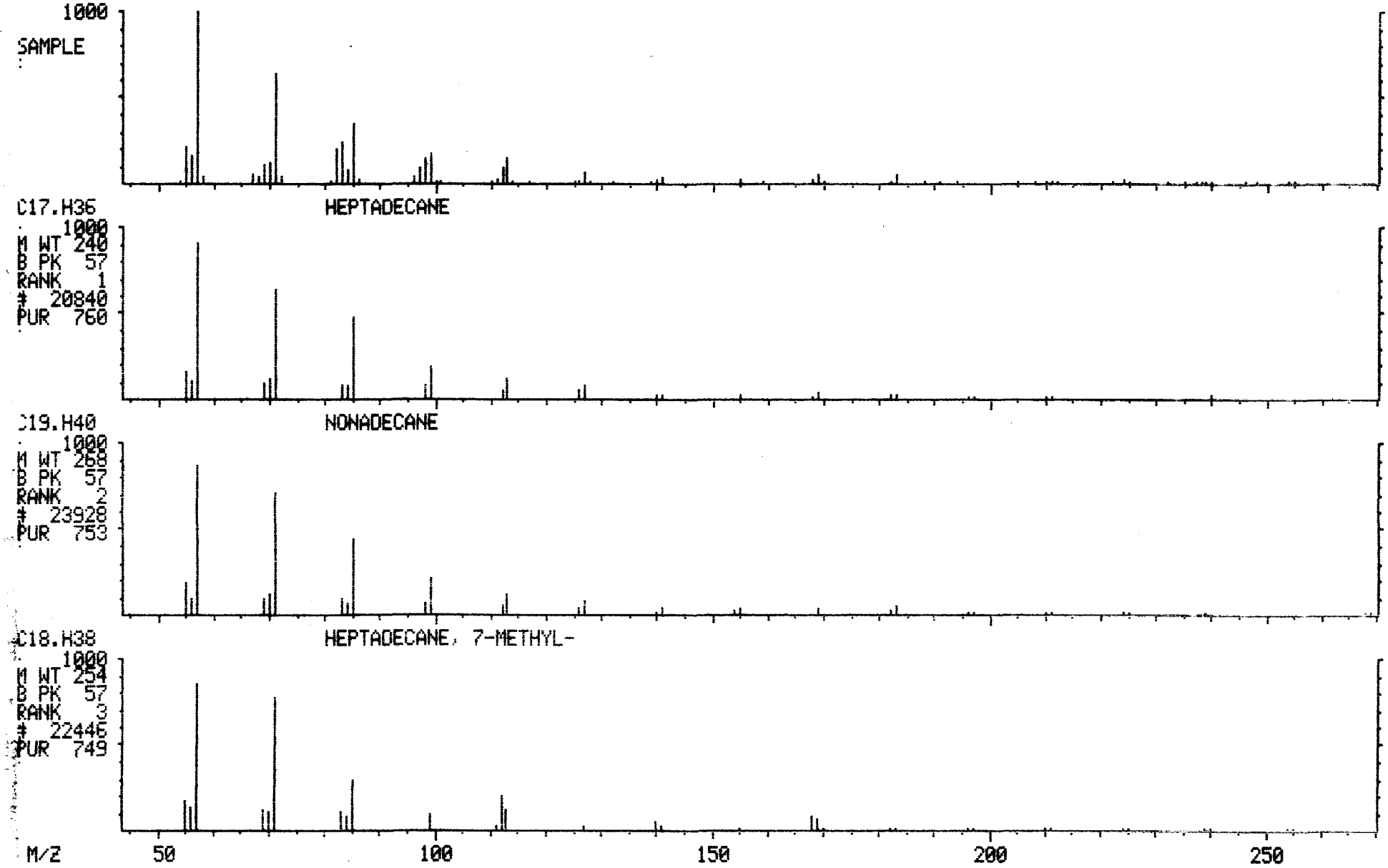
BASE M/Z: 97
RIC: 3371.



LIBRARY SEARCH
01/05/86 0:00:00 + 18:10
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 # 955

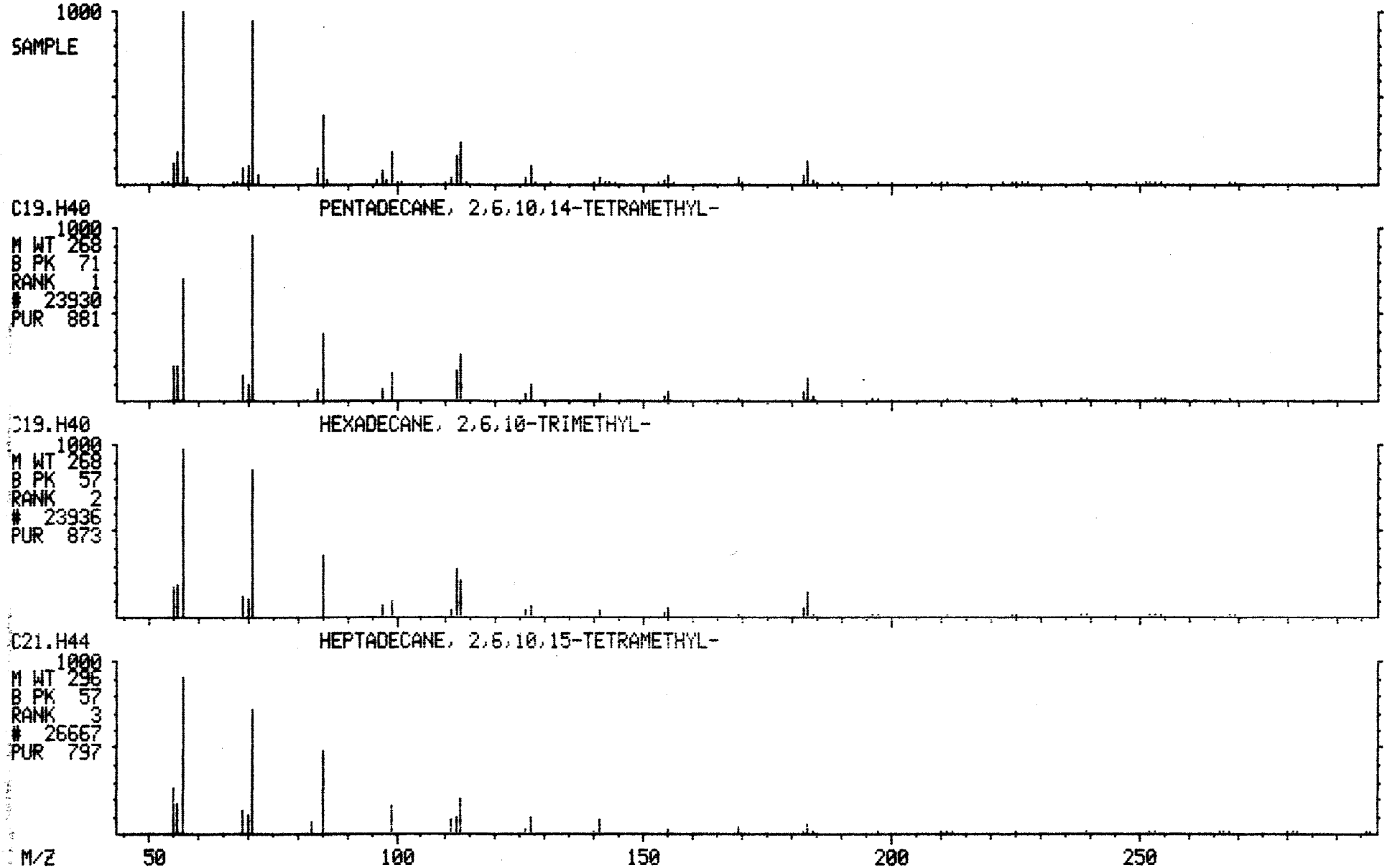
BASE M/Z: 57
RIC: 23615.



LIBRARY SEARCH
01/05/86 0:00:00 + 19:04
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1003

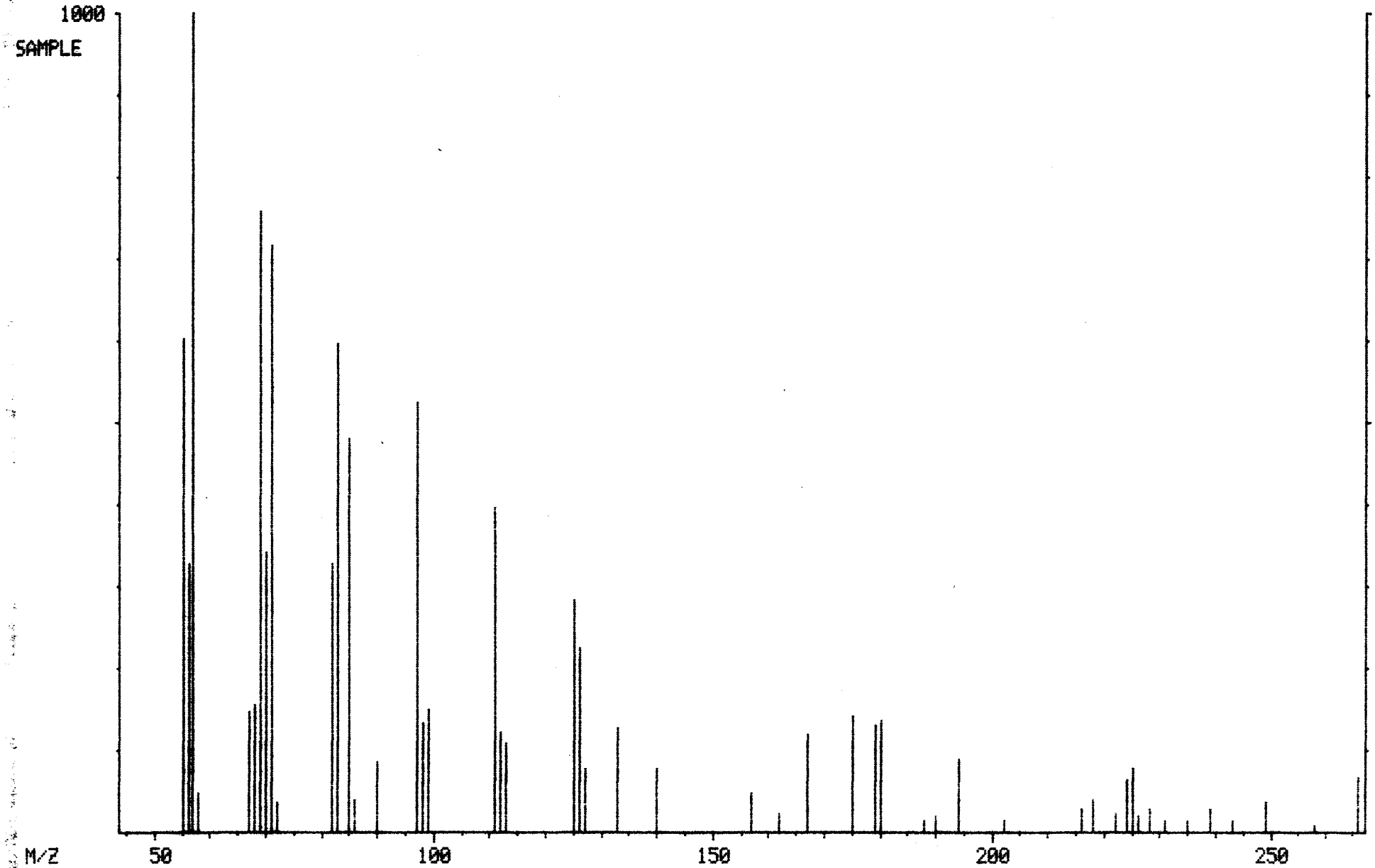
BASE M/Z: 57
RIC: 27839.



LIBRARY SEARCH
01/05/86 0:00:00 + 19:20
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1017

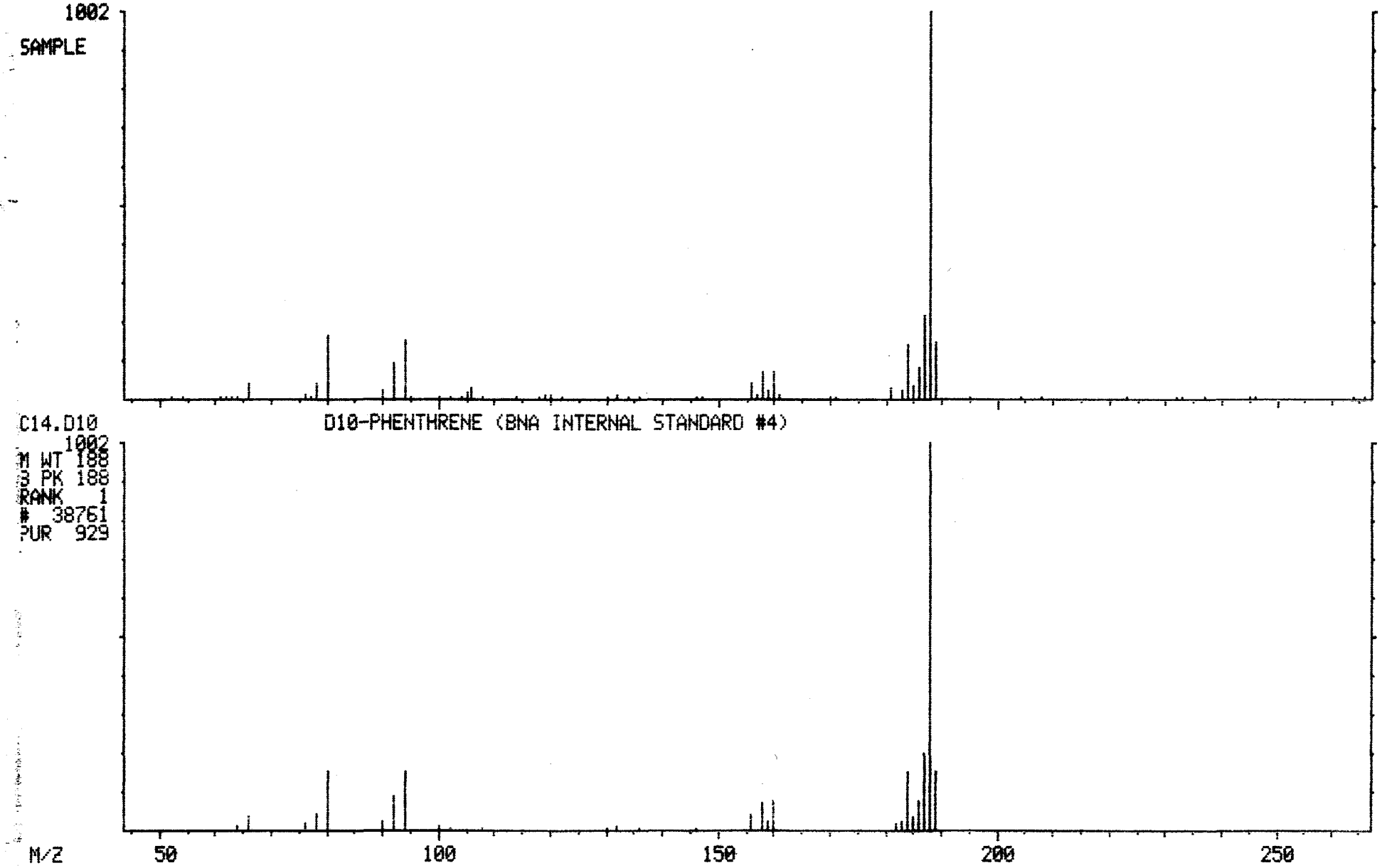
BASE M/Z: 57
RIC: 3171.



LIBRARY SEARCH
01/05/86 0:00:00 + 19:50
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1043

BASE M/Z: 188
RIC: 18047.

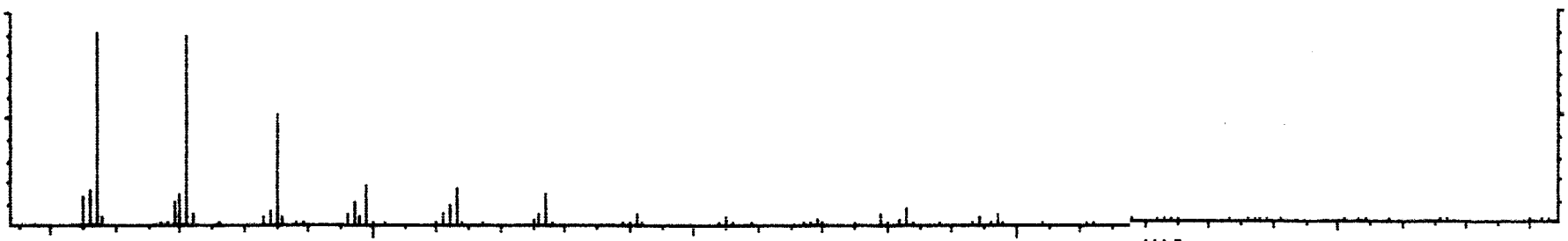


LIBRARY SEARCH
01/05/86 0:00:00 + 20:28
SAMPLE: SF-2936 86CY03S77:10GR.100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1076

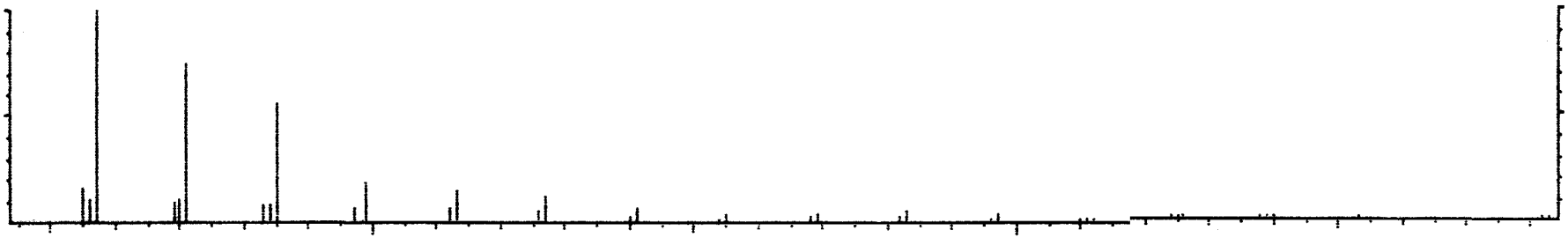
BASE M/Z: 57
RIC: 23071.

1098
SAMPLE



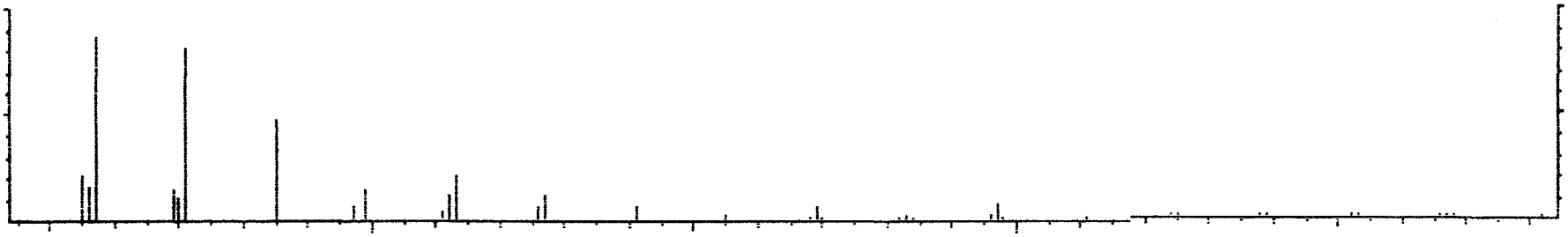
C21.H14.O3.N2.FE IRON, TRICARBONYL[N-(PHENYL-2-PYRIDINYLMETHYLENE)BENZENAMINE-N,N']-

1098
M WT 358
B PK 57
RANK 1
33414
PUR 802



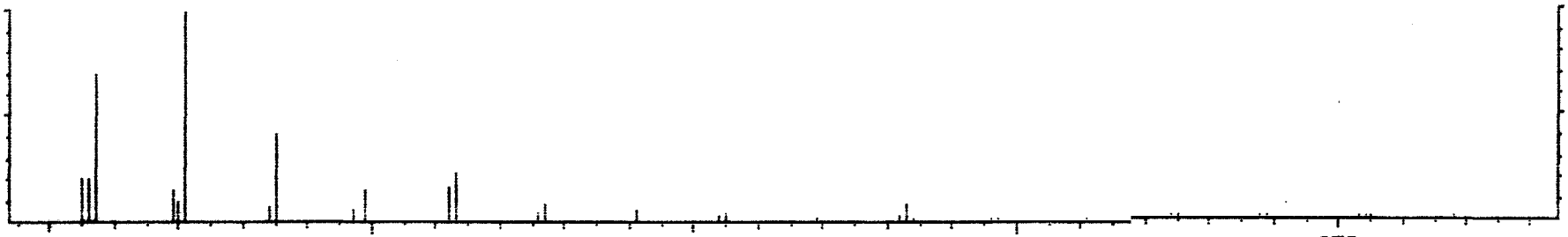
C20.H42 HEXADECANE, 2,6,10,14-TETRAMETHYL-

1098
M WT 282
B PK 57
RANK 2
25284
PUR 796



C19.H40 PENTADECANE, 2,6,10,14-TETRAMETHYL-

1098
M WT 268
B PK 71
RANK 3
23930
PUR 767

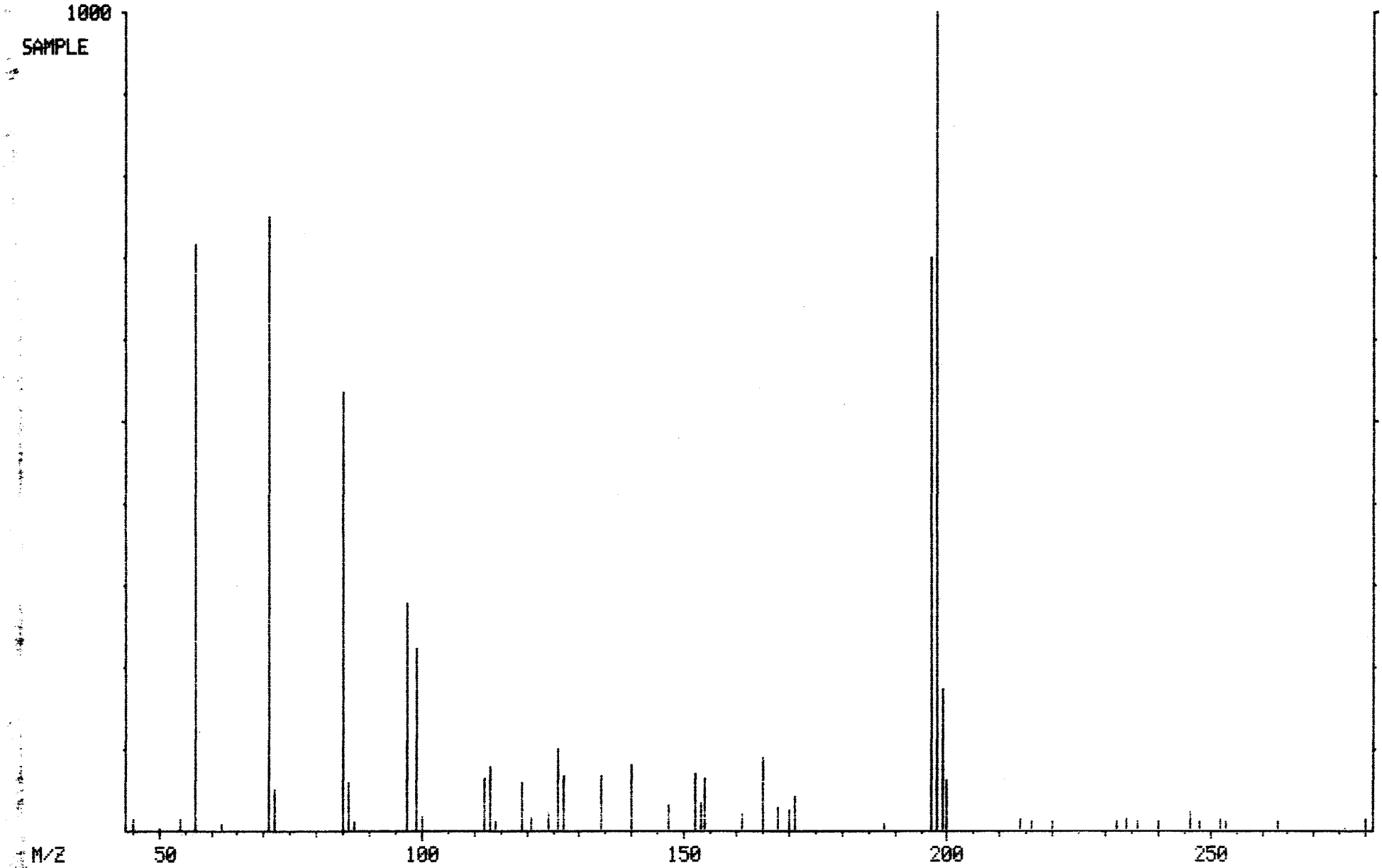


M/Z 50 100 150 200 250

LIBRARY SEARCH
01/05/86 0:00:00 + 20:52
SAMPLE: SF-2936 86CY03577:10GR.100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1097

BASE M/Z: 198
RIC: 4295.



LIBRARY SEARCH
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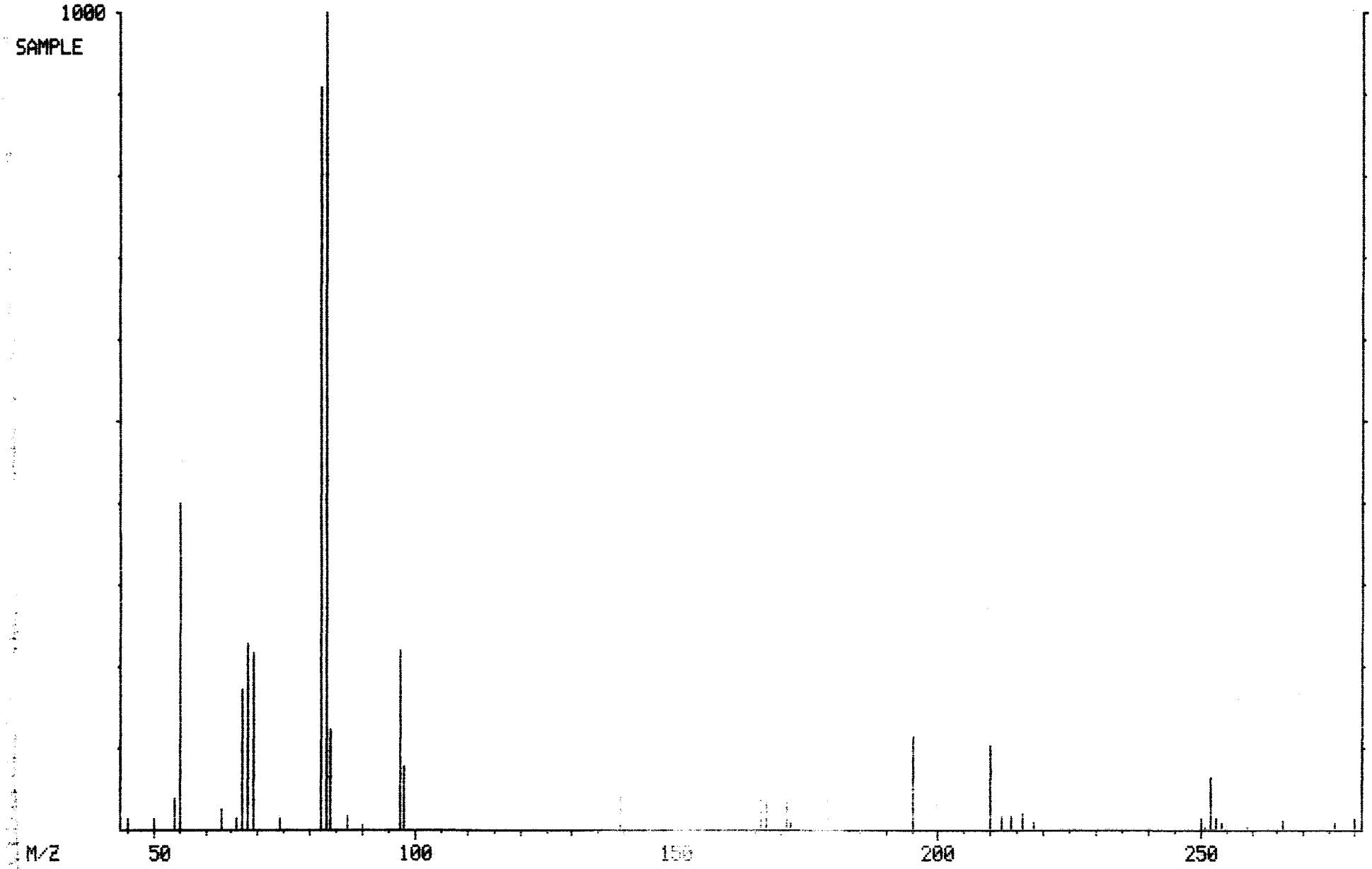
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LSP049 #1108

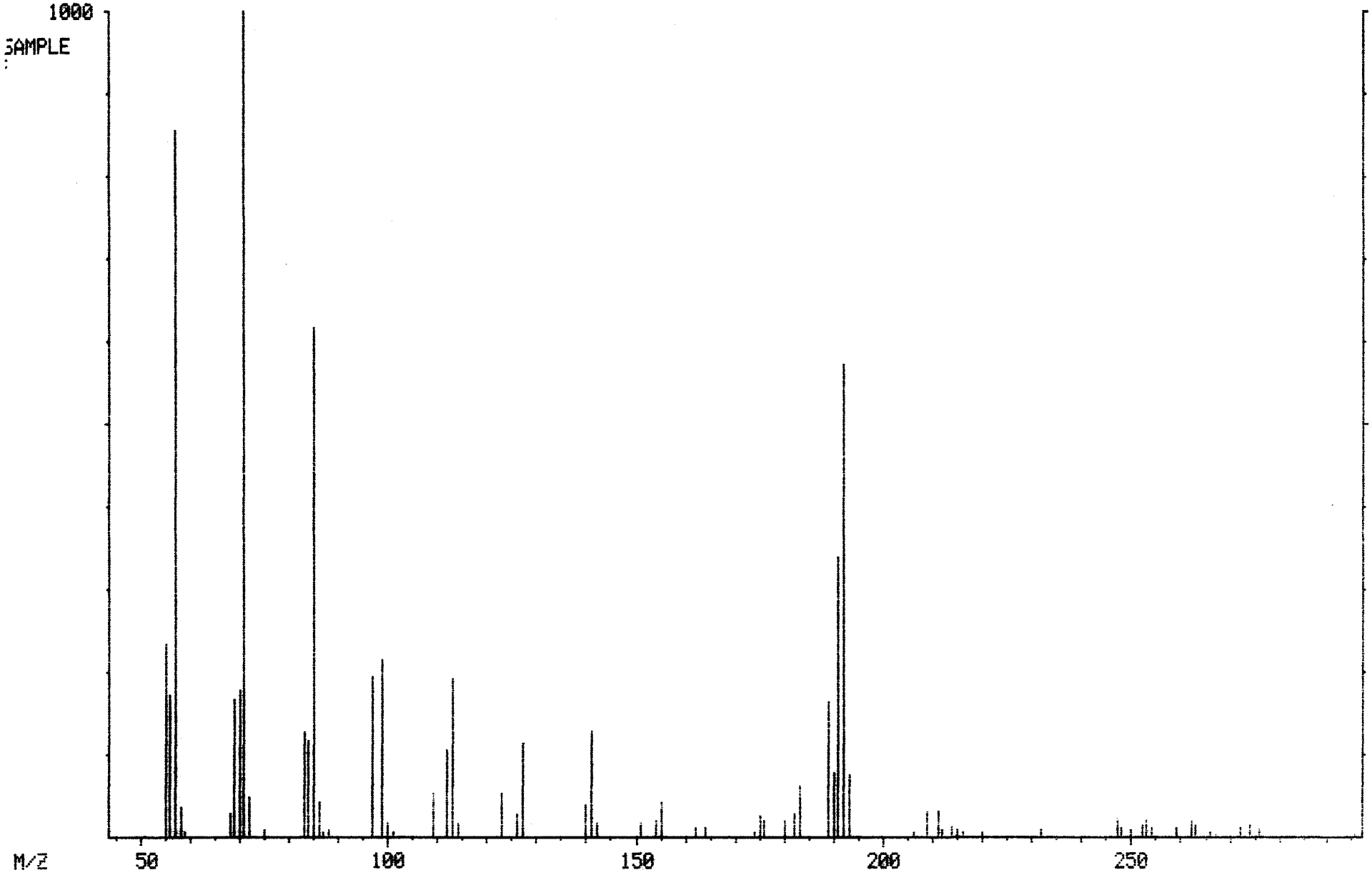
BASE M/Z: 83
RIC: 2511.



LIBRARY SEARCH
01/05/86 0:00:00 + 21:26
SAMPLE: SF-2936 86CY03577:10GR.100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1127

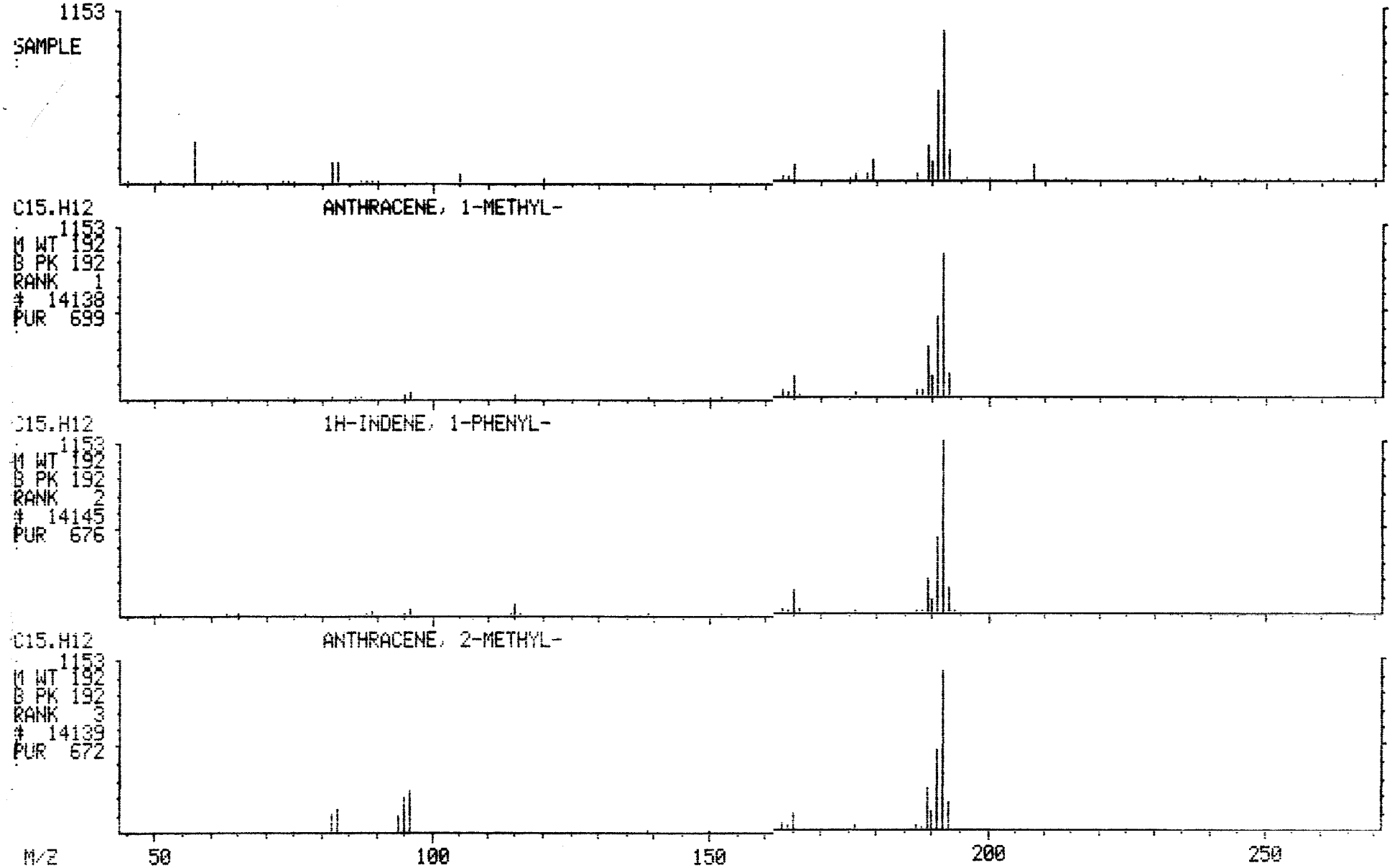
BASE M/Z: 71
RIC: 6863.



LIBRARY SEARCH
01/05/86 0:00:00 + 21:37
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1137

BASE M/Z: 192
RIC: 2395.



LIBRARY SEARCH
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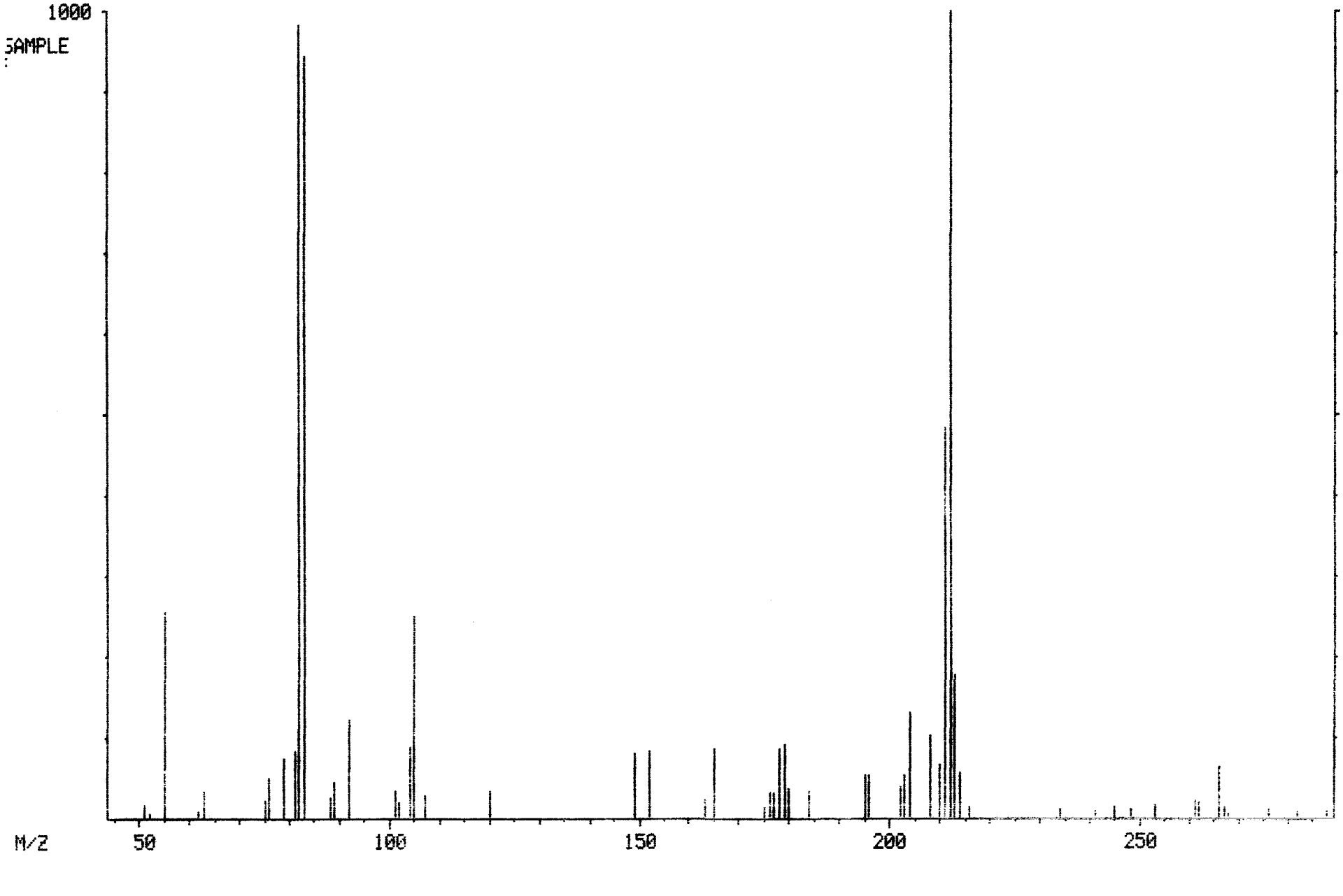
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1169

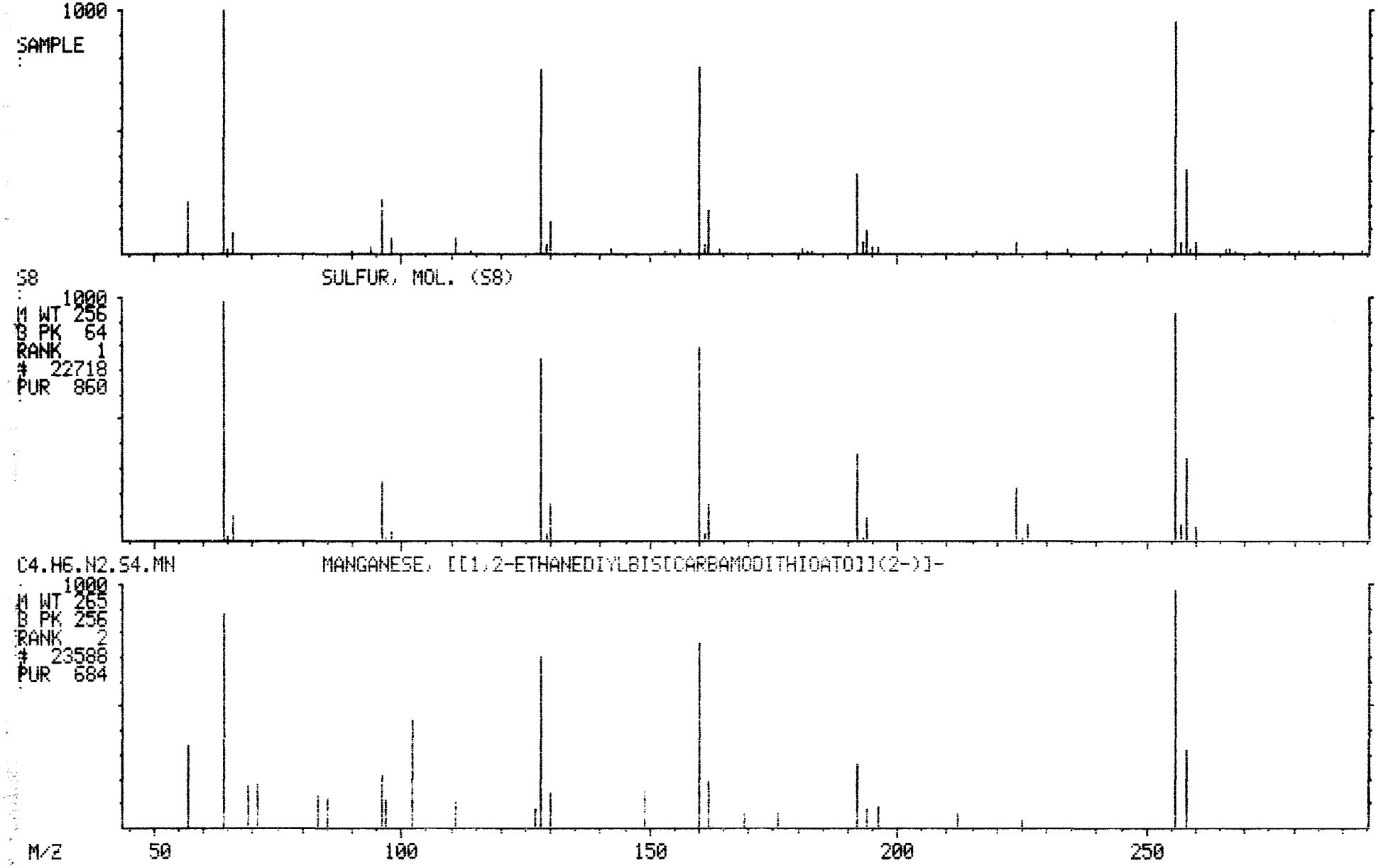
BASE M/Z: 212
RIC: 3555.



LIBRARY SEARCH
01/05/86 0:00:00 + 22:45
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1196

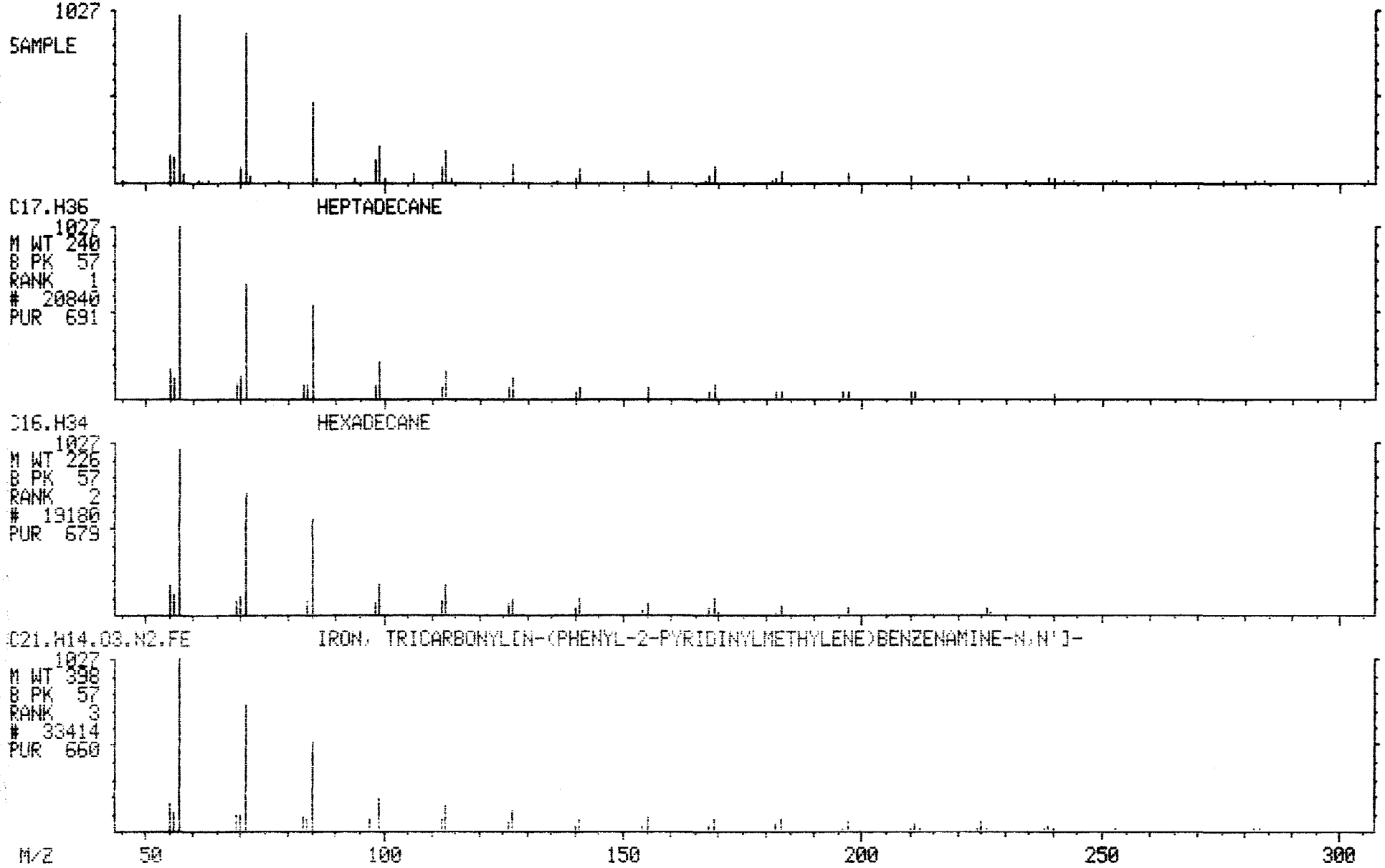
BASE M/Z: 64
RIC: 4631.



LIBRARY SEARCH
01/05/86 0:00:00 + 23:19
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1226

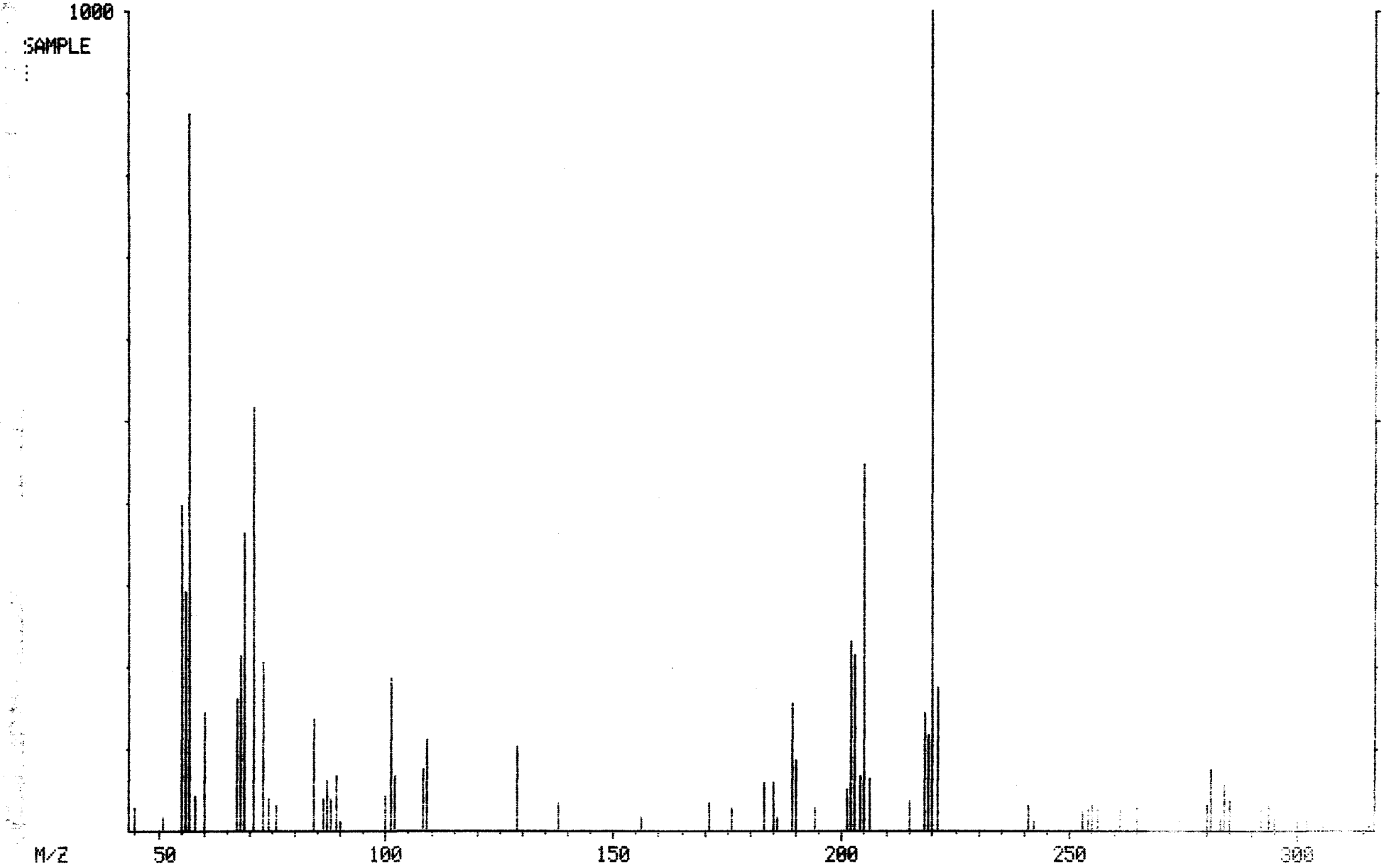
BASE M/Z: 57
RIC: 3147.



LIBRARY SEARCH
01/05/86 0:00:00 + 24:10
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1271

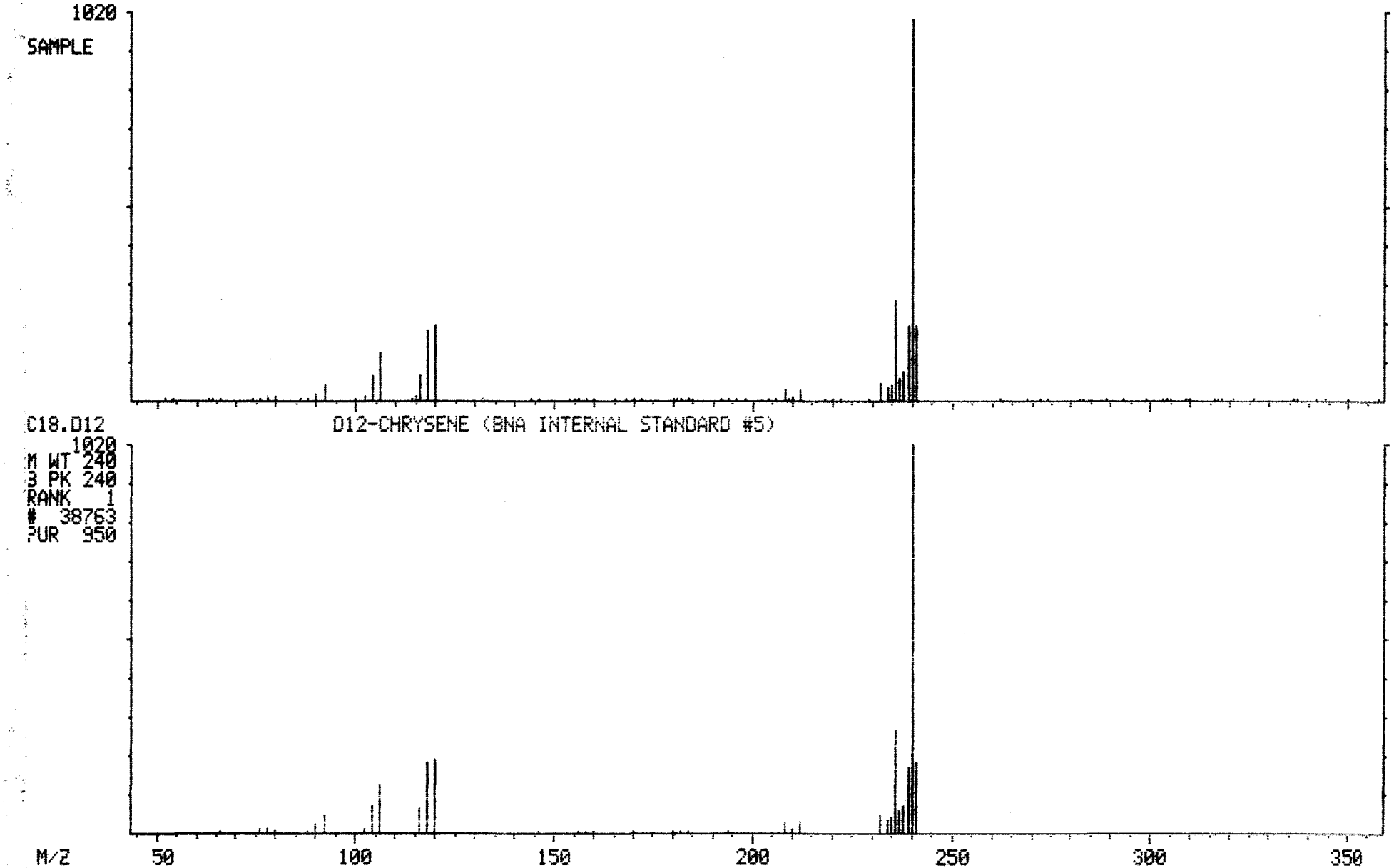
BASE M/Z: 220
RIC: 2855.



LIBRARY SEARCH
01/05/86 0:00:00 + 26:31
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1394

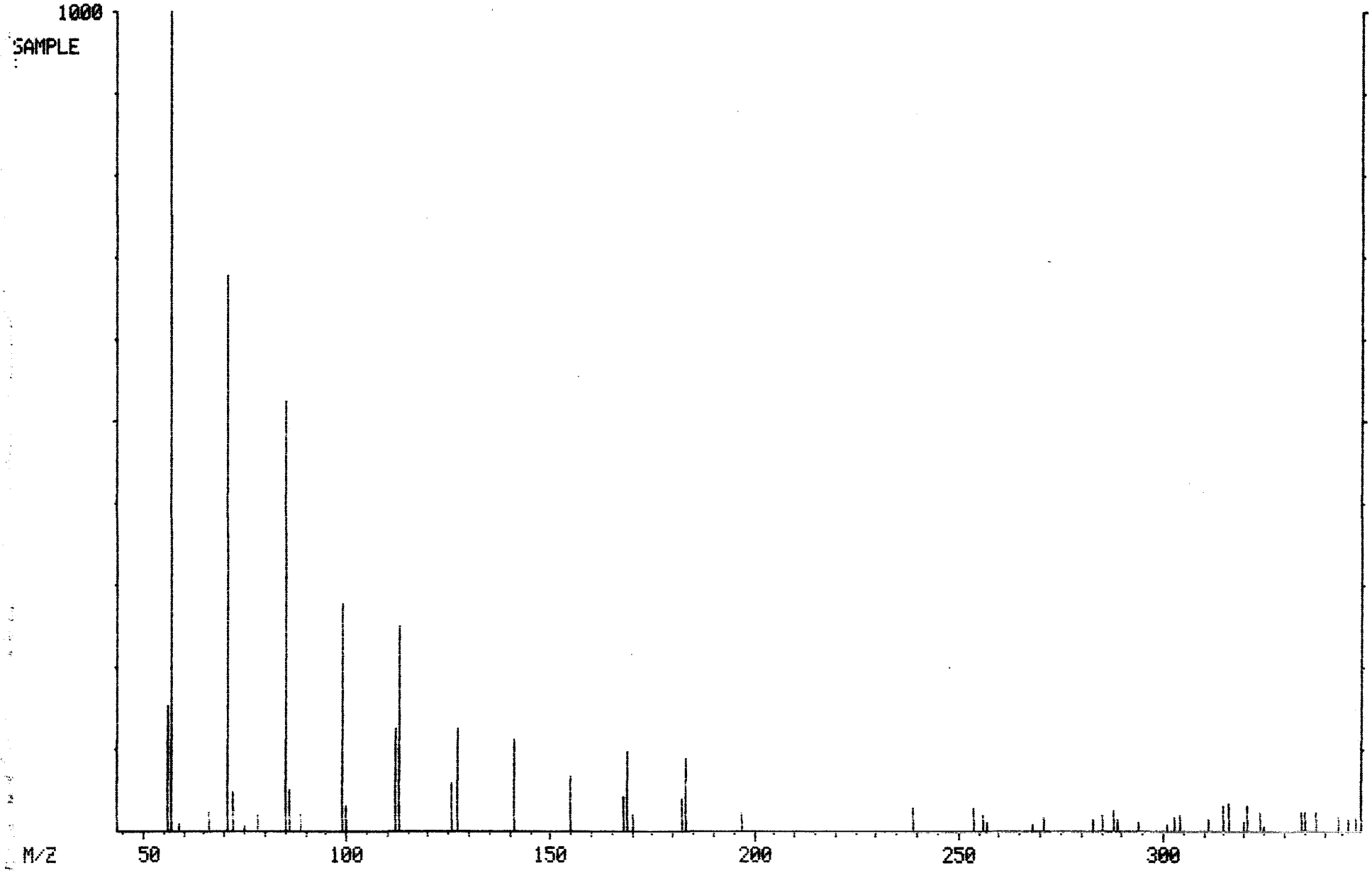
BASE M/Z: 240
RIC: 14399.



LIBRARY SEARCH
01/05/86 0:00:00 + 26:48
SAMPLE: SF-2936 86CY03577:10GR.100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1409

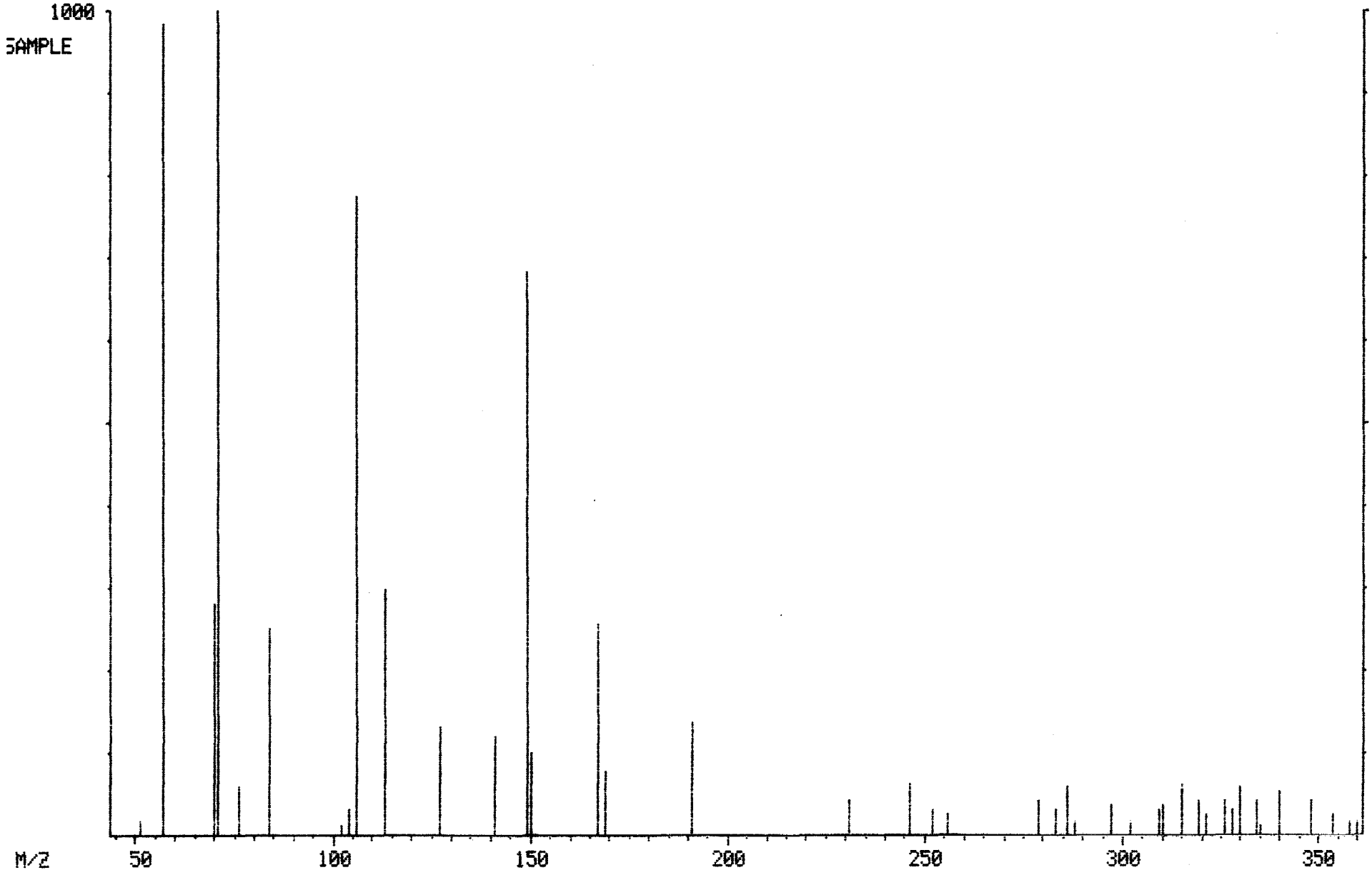
BASE M/Z: 57
RIC: 1785.



LIBRARY SEARCH
01/05/86 0:00:00 + 27:10
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1429

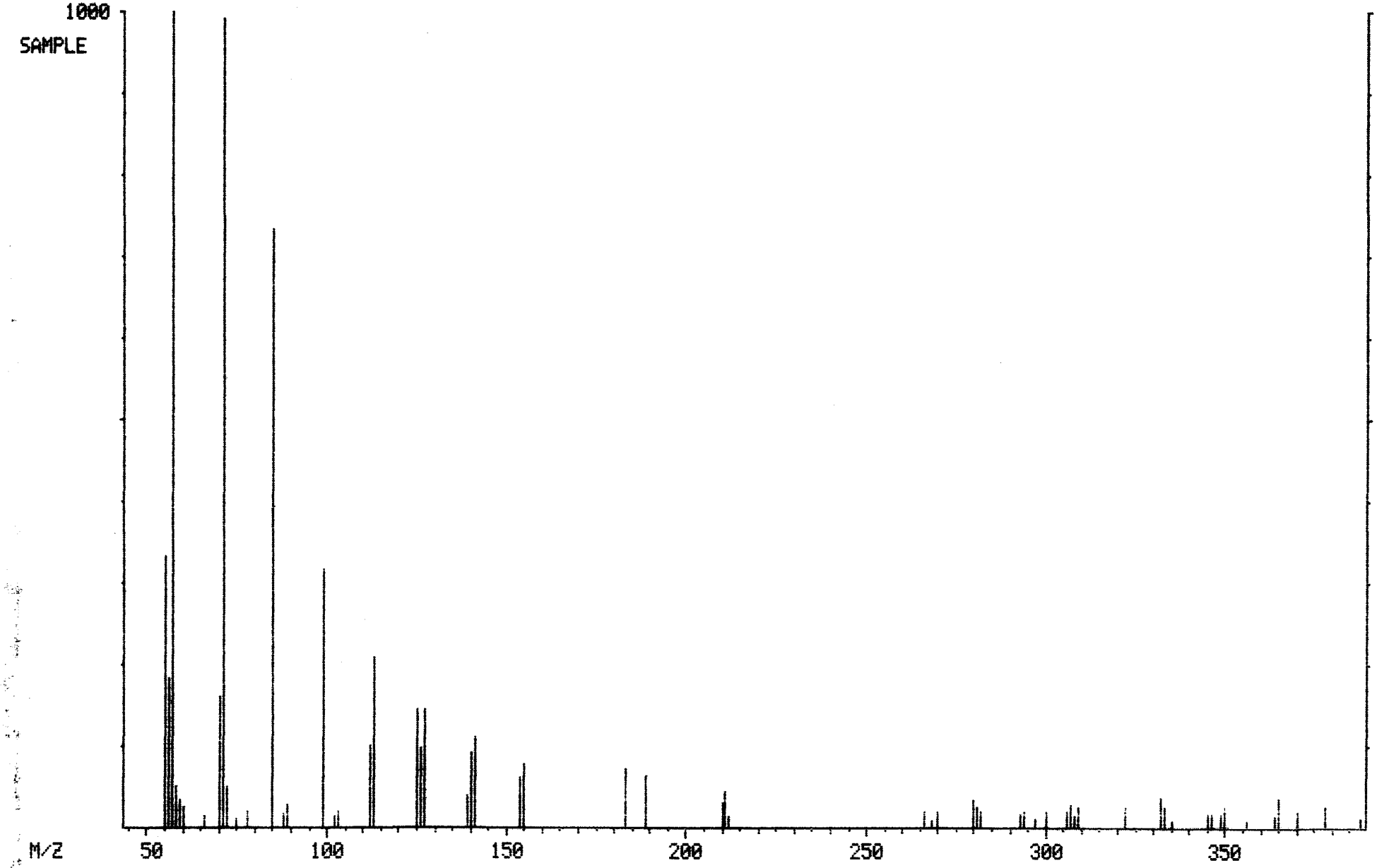
BASE M/Z: 71
RIC: 1193.



LIBRARY SEARCH
01/05/86 0:00:00 + 28:28
SAMPLE: SF-2936 86CY03577:10GR/100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1497

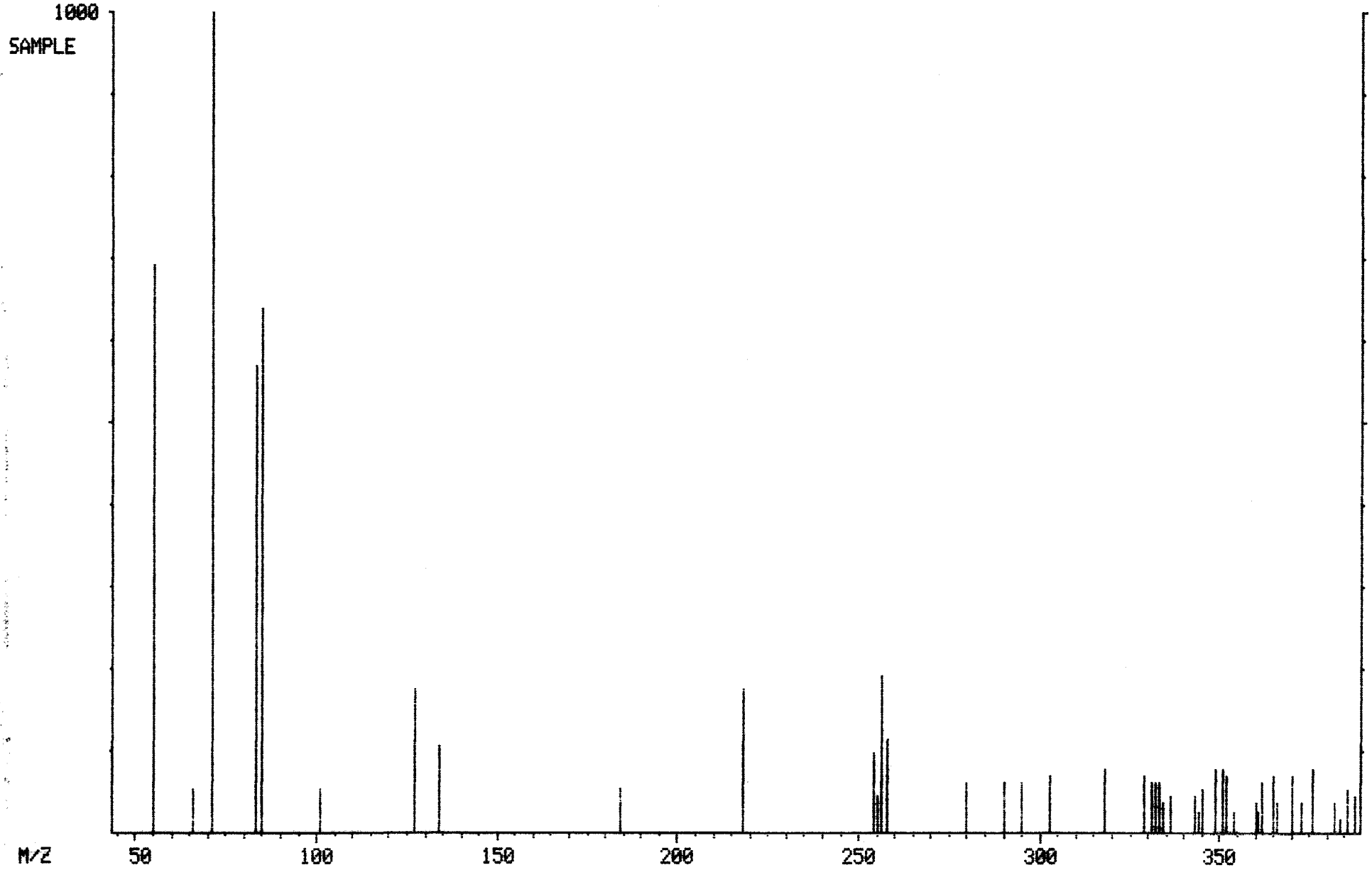
BASE M/Z: 57
RIC: 1929.



LIBRARY SEARCH
01/05/86 0:00:00 + 28:37
SAMPLE: SF-2936 86CY03577:10GR.100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1505

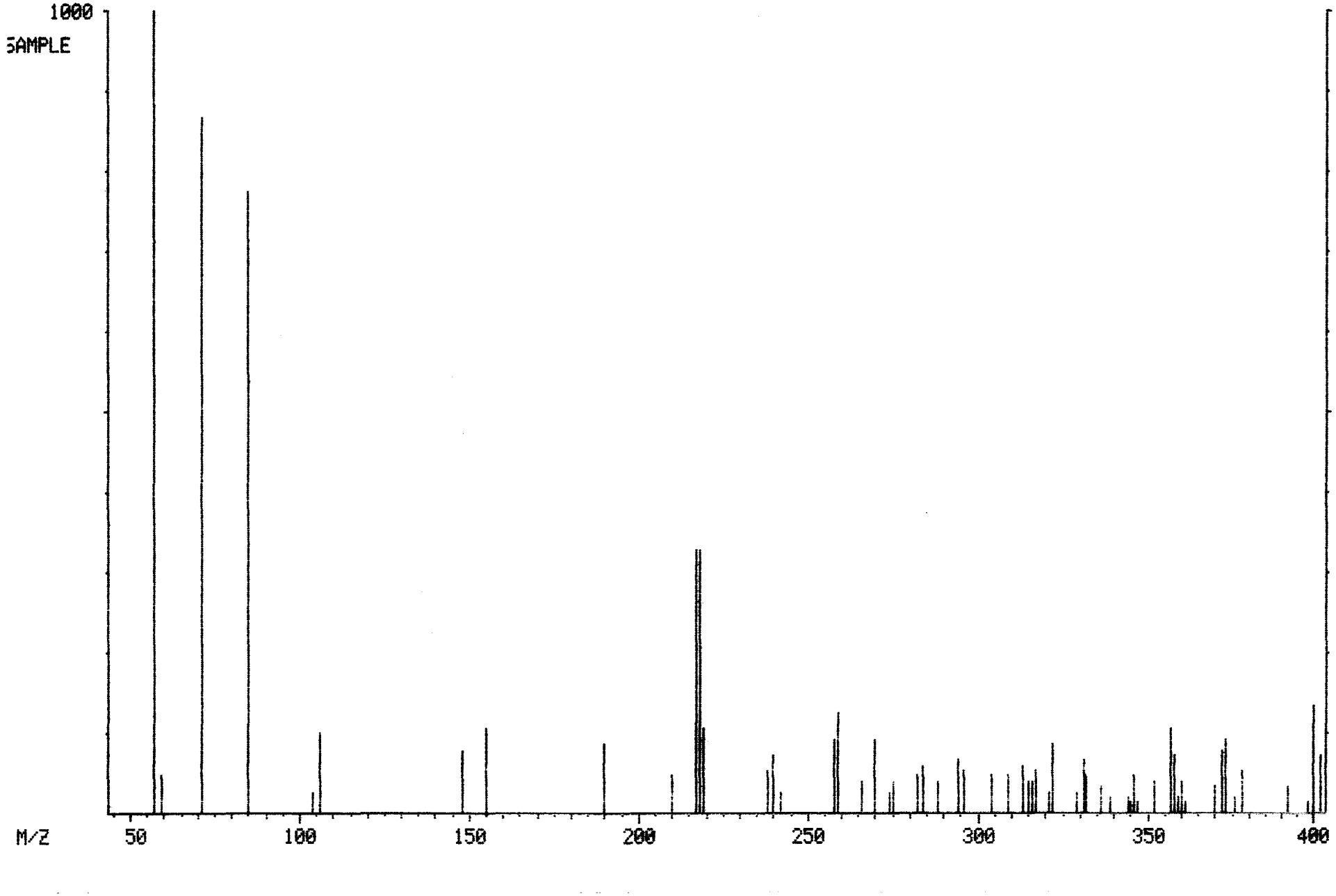
BASE M/Z: 71
RIC: 634.



LIBRARY SEARCH
01/05/86 0:00:00 + 29:00
SAMPLE: SF-2936 86CY03577:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1525

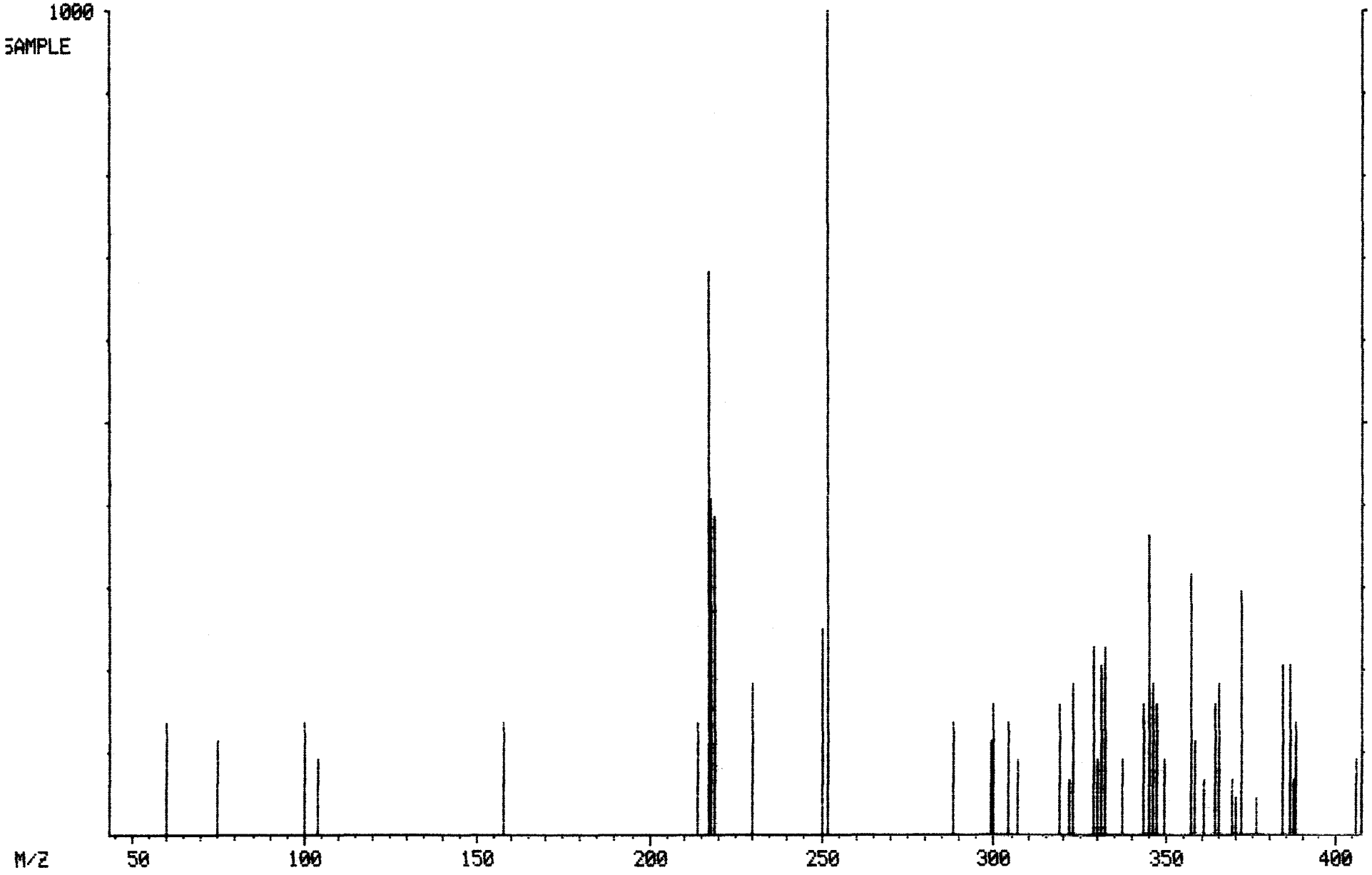
BASE M/Z: 57
RIC: 944.



LIBRARY SEARCH
01/05/86 0:00:00 + 29:09
SAMPLE: SF-2936 86CY03577:10GR.100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1533

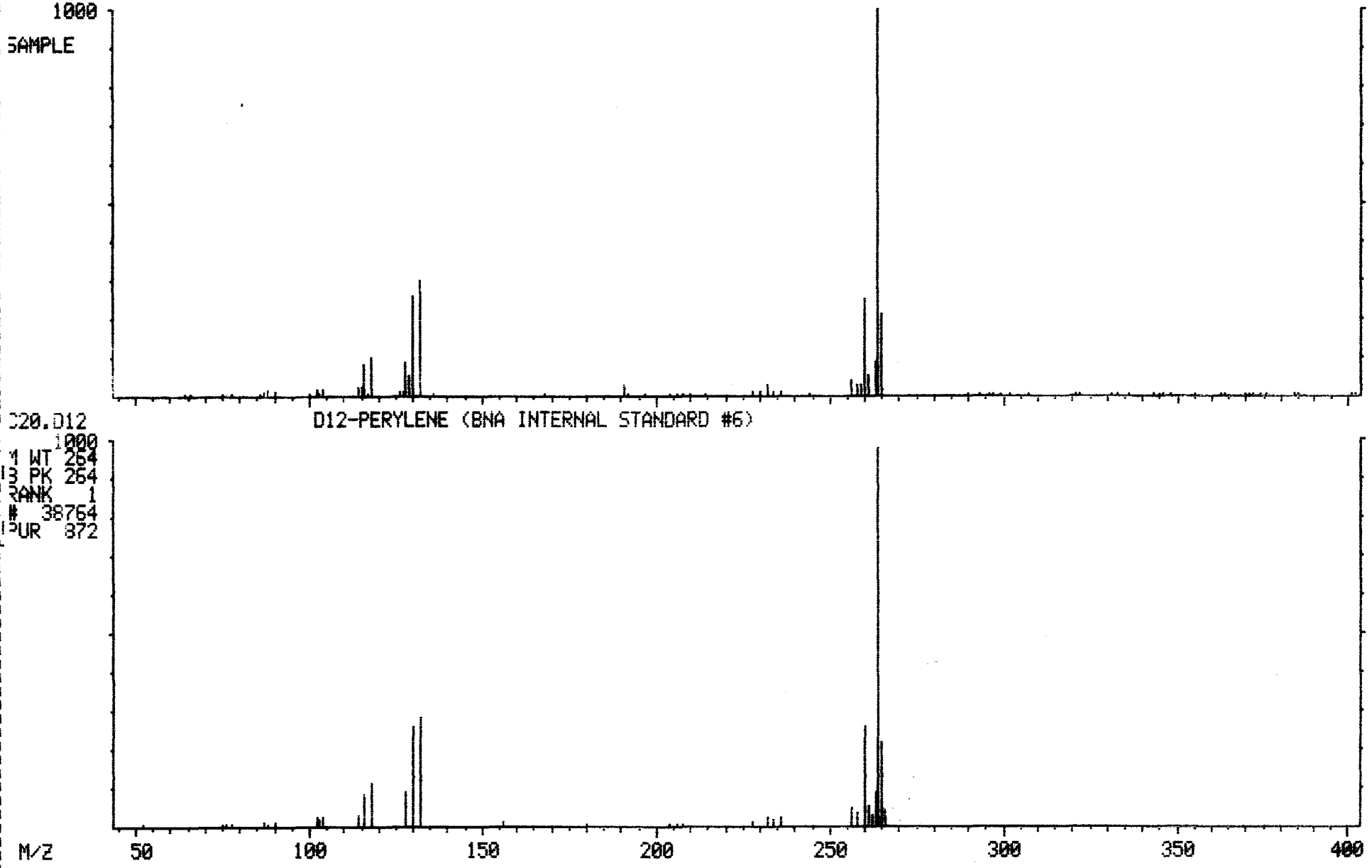
BASE M/Z: 252
RIC: 373.



LIBRARY SEARCH
01/05/86 0:00:00 + 29:19
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1542

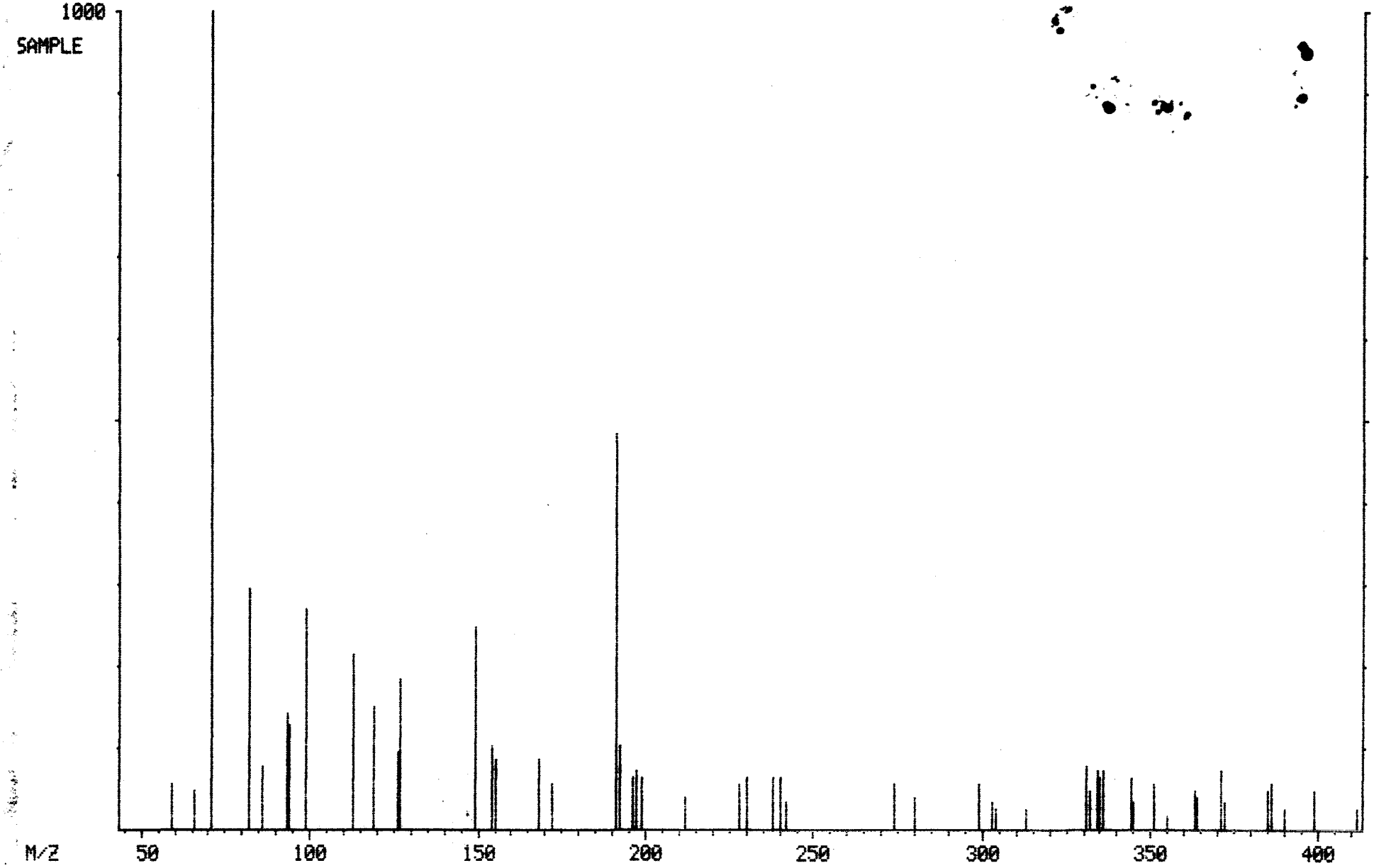
BASE M/Z: 264
RIC: 6159.



LIBRARY SEARCH
01/05/86 0:00:00 + 29:30
SAMPLE: SF-2936 86CY03S77:10GR,100
CONDS.:
ENHANCED (S 15B 2N 0T)

DATA: LS8049 #1551

BASE M/Z: 71
RIC: 731.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 3-19-86

SUBJECT: Precision and Accuracy of Analyses for Data Set SF 2936
Site: GARY LAGOONS

FROM: Steve Parker,
CRL QC Coordinator

TO: Data User: _____

The Region V Central Regional Laboratory has completed its analyses of 1 (number) SEDIMENT (matrix type) samples for the parameters listed on the attached sheet. The discrete values reported on the result forms should be considered to be of the precision and accuracy levels listed.

PRECISION is a measure of reproducibility or the closeness with which individual measurements of the same property, under similar conditions agree with each other. It is expressed as the relative percent difference (RPD) or the absolute concentration difference (R') between duplicate analyses. The limit acceptable at the time of analysis is stated. QC data within these limits indicate that the analysis was in control for that set of data.

ACCURACY is a measure of the closeness of an individual measurement to the expected value. It can be expressed as percent recovery of a known spike or standard concentration, or as percent bias which is the deviation from the true value. The limits applicable at the time of analysis are stated. A 95% confidence interval means that 95% of the time, percent recovery will fall between those limts.

Attachment

Griffin

PRECISION AND ACCURACY STATEMENT

Data Set: SF 2936

Matrix: SEDIMENTS

Site Name: GARY LAGOONS

	PRECISION			ACCURACY		
Parameter	RPD R'	Limit	Method of Quality Control	% Recovery % Bias	Limit	Method of Quality Control
CN	6%	≤20%	CONTROL STANDARD	97-102%	86-104%	CONTROL STANDARD

COMMENT:

QC FLAGS:

3/5/86 (9)

CALGAON
OSC-Simes

ENVIRONMENTAL PROTECTION AGENCY
FOR THE TEAM: MINERALS-NUTRIENTS

DIVISION/BRANCH SUPERFUND SPILL RESP. SECTION/TAT SAMPLING DATE 12/4/85 LAB ARRIVAL DATE 1/29/86 DUE DATE 2/18/86

PO NUMBER Y905 DATASET NUMBER 2936 STUDY GARY LAGOONS PRIORITY N CONTRACTOR CRL

all see Bunce - 98
3-17-86

CRL LOG NUMBER	SAMPLE DESCRIPTION	SEDIMENTS SOLIDS CHEMICAL OXYGEN DEMAND MG COD/KG (DRY) MIN43327	SEDIMENTS SOLIDS MERCURY MG HG/KG (DRY) MIN44728	SEDIMENTS SOLIDS PHENOLICS MG PHENOL/KG (DRY) MIN44829	SEDIMENTS SOLIDS CYANIDE MG CN/KG (DRY) MIN44930
86C403					
578	5-88450				X ~~14.7~~ 15
					A-Outlier 19-2-86

* REGRESSION ANALYSIS * CSC VERSION 2.00 *

NAME OF ANALYST —: aq
PARAMETER NAME —: CN
DATE OF ANALYSIS —: 02-27-1986

DATA SET NUMBER —: CDO 2980, CDO 2980(S), SF 2936, SF 297Y
DU NUMBER ————:

Manual Distillation

DEGREE OF FIT : 1

EQUATION : CONCENTRATION = +7.28394E-01
+2.33991E+00 * SIGNAL

COEFFICIENT OF DETERMINATION : .9985255

T-A-B-L-E O-F S-T-A-N-D-A-R-D-S

STANDARD	SIGNAL	CONCENTRATION	CALCULATED
1	+0.000	+0.000	+0.728
2	+9.500	+25.000	+22.957
3	+20.500	+50.000	+48.696
4	+43.500	+100.000	+102.514
5	+65.500	+150.000	+153.992
6	+83.500	+200.000	+196.110

T-A-B-L-E O-F S-A-M-P-L-E-S

SAMPLE I.D.	SIGNAL	CONCENTRATION		limit
R	+0.000	+0.728		≤ 5 µg/L
CS	+41.000	+96.664	TV = 100	95 ± 9
S01	+33.500	+79.115		
S02 (1:2)	+34.000	+80.285		
S02SPK (1:2)-(100)	+80.500	+189.091	Recd 109 %	96 ± 15 %
S02FULL	+80.500	+189.091		
sf2936 578	+43.500	+102.514		
Ditd Blk	+1.500	+4.238		≤ 8
Distd STD (100)	+43.500	+102.514		96 ± 15 %
SF2974 556	+9.000	+21.787		
CDO2980 504	+11.500	+27.637		
R01 (CDO 2980)	+0.000	+0.728		
SF2936 Dup 578	+49.500	+116.553	Δ = 4 %	Δ ≤ .2 mg/kg* or 20 %
CS	+43.500	+102.514	TV = 100	95 ± 9

* Look for sediment calculation on SF 2936

MS 2/19/86

DATA SET	SAMPLE NUMBER	DISH NUMBER	TARE WEIGHT	TOTAL WEIGHT	SAMPLE WEIGHT	TOTAL WEIGHT DRIED	SAMPLE WEIGHT DRIED	PERCENT SOLIDS
	BLANK	10	68.787	68.787	0	68.7866	-0.0004	ERR
SF2936	CY03S78	6	74.6	84.6331	10.0331	80.8046	6.2046	61.84130
SF2963	SB42S04	3	63.3984	84.6725	21.2741	78.519	15.1206	71.07515
	SB42S05	29	72.1393	103.1766	31.0373	88.465	16.3257	52.60025
	SB42S06	27	74.0934	91.549	17.4556	86.123	12.0296	68.91541
SF2963	SB42S07	16	74.5995	173.533	98.9335	114.6168	40.0173	40.44868
SF2974	CY03S56	10	68.7878	79.0502	10.2624	77.6581	8.8703	86.43494
SF2936	CY03S78DP	33	73.697	83.4065	9.7095	79.7397	6.0427	62.23492

---

* SEDCAL * CSC VERSION 1.00 *

NAME OF ANALYST -----: AQ
DATE OF ANALYSIS ----: 02-19-1986

SEDIMENT CALCULATION FOR CYANIDE

SAMPLE NO.	% SOLIDS	WET WT(GMS)	DRY WT(GM/L)	SED CONC(UG/L)	SED CONC(MG/KG)
SF2974	86.43	2.70	9.34	21.70	2.323

S56 Add

SEDIMENT CALCULATION FOR CYANIDE

SAMPLE NO.	% SOLIDS	WET WT(GMS)	DRY WT(GM/L)	SED CONC(UG/L)	SED CONC(MG/KG)
CD02980 (S)	7.50	4.89	1.47	27.60	18.814

S04

SEDIMENT CALCULATION FOR CYANIDE

SAMPLE NO.	% SOLIDS	WET WT(GMS)	DRY WT(GM/L)	SED CONC(UG/L)	SED CONC(MG/KG)
sf2936 S78	61.84	2.81	6.95	102.50	14.757
SF2936dup S78	61.84	3.07	7.58	116.60	15.379

limit
Δ ≤ 20%

Δ = 4 %

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 3-19-86

SUBJECT: Precision and Accuracy of Analyses for Data Set SF 2936
Site: GARY LAGOON

FROM: Steve Parker,
CRL QC Coordinator

TO: Data User: _____

The Region V Central Regional Laboratory has completed its analyses of 1 (number) SEDIMENT (matrix type) samples for the parameters listed on the attached sheet. The discrete values reported on the result forms should be considered to be of the precision and accuracy levels listed.

PRECISION is a measure of reproducibility or the closeness with which individual measurements of the same property, under similar conditions agree with each other. It is expressed as the relative percent difference (RPD) or the absolute concentration difference (R') between duplicate analyses. The limit acceptable at the time of analysis is stated. QC data within these limits indicate that the analysis was in control for that set of data.

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Attachment

Griffin

NO STATEMENT
PAGE - TRANSMIT
NBS DATA -

6TFA05WUZZ
C46A00 Y905 3/12/86

DATA SET : SF2936 Gary Lagoon

ELEMENT		CY03S78
AG	mg/kg <	0.30
AL		3100.
B		26.
BA		57.
BE	<	0.10
CD	<	0.20
CO		1.5
CR		25.
CU		240.
FE		6700.
LI		6.9
MN		350.
MO		1.9
NI		8.6
PB		47.
SN	<	4.0
SR		230.
V		17.
Y		2.7
ZN		410.
	g/kg	
CA		110.
K	<	0.20
MG		6.0
NA		0.54
	<	

MS March 7, 1986

6TFA05WUZZ
C46A00 Y905 3/12/86

DATA SET : SF2936 Gary Lagoon

JVM 7 Mar

3-19-86

ELEMENT		CY03S78
AG	mg/kg <	0.30
AL		3100.
B		26.
BA		57.
BE	<	0.10
CD	<	0.20
CO		1.5
CR		25.
CU		240.
FE		6700.
LI		6.9
MN		350.
MO		1.9
NI		8.6
PB		47.
SN	<	4.0
SR		230.
V		17.
Y		2.7
ZN		410.
	g/kg	
CA		110.
K	<	0.20
MG		6.0
NA		0.54
	<	

MS March 7, 1986

JM
7 pages

DATA SET : METALS1

ELEMENT		NBS1645	True Value	% recovery
AG		1.77		
AL		4930.	22,600	21.8% –
B		31.5		
BA		52.7		
BE	<	0.100		
CD		7.74	10.2	75.9% –
CO		19.4	10.1	192% –
CR		25300.	29,600	85%
CU		97.6	109	89.5%
FE		79200.	113,000	70%
LI		3.58		
MN		650.	785	82%
MO		18.1		
NI		35.2	45.8	76.8%
PB		368.	714	51.5% –
SN		275.		
SR		774.		
V		21.0	23.5	89.4%
Y		3.51		
ZN		1310.	1720	76%
CA		32.3	29	111%
CA		24.1	29	83%
K	<	0.200	12.6	1% –
MG		6.22	7.4	84%
NA		1.21	5.4	22%
AL		4.80	22.6	21.2% –
FE		83.7	113	74%
ZN		1.04	1.72	60.4%

These recoveries are in the normal expected range, considering that the NBS certified values are based upon different methods than those normally used by EPA. JT

DATA SET : METALS3 SAMPLE ID : SRM1645 digest from run512

ELEMENT	TRUE	MEASURED	% DEV
AL	22600.0	5270.0	-76.7 □
CD	10.2	8.2	-19.4 △
CO	10.	22.	119. ○
CR	29600.0	26100.0	-11.7
CU	109.00	102.00	-6.06
FE	113000.0	83600.0	-26.0 △
MN	785.0	680.0	-13.4
NI	45.8	41.2	-10.1
PB	714.0	533.0	-25.3 △
V	23.5	13.0	-44.9 X
ZN	1720.0	1470.0	-14.3
CA	29.0	36.5	25.9
CA	29.0	25.6	-11.8
K	13.	-0.	-101. □
MG	7.4	6.6	-11.4
NA	5.4	1.3	-76.5 □
AL	22.6	5.0	-77.7 □
FE	113.0	85.5	-24.3 △
ZN	1.7	1.2	-27.3

□ normal low bias because majority refractory
△ normal recovery ~80%
○ Co normally high - unknown interference
X low bias because of Cr interference

all other elements within ± 20%

DO YOU WANT TO EXIT [N:Y] : Y

>

See note - 1ST page

DATA SET : METALS2 SAMPLE ID : SRM1645

ELEMENT		TRUE	MEASURED	% DEV
AL	mg/kg	22600.0	5050.0	-77.7 □
CD		10.2	7.6	-25.4 △
CO		10.1	18.1	79.6 o
CR		29600.00	27200.00	-8.14
CU		109.0	132.0	21.1 *
FE		113000.0	84900.0	-24.9 ▲
MN		785.0	681.0	-13.3
NI		45.80	42.20	-7.76
PB		714.0	551.0	-22.8 ●
V		23.5	12.3	-47.7 ×
ZN		1720.0	1510.0	-12.4
CA	g/kg	29.0	37.0	27.7
CA		29.0	26.0	-10.3
K		13.	-0.	-102. □
MG		7.4	6.4	-13.3
NA		5.4	1.2	-76.8 □
AL		22.6	4.8	-78.6 □
FE		113.0	86.3	-23.7 △
ZN		1.7	1.3	-27.0

□ normal low bias because majority refractory

△ normal recovery ~80%

× low bias because of Cr interference

* Cu out high

o Co normally high — unknown interference

all other elements within ±20%

JVM
7/MAR/86

See note
1st page

Jim
7 pm

Run No. 512

Prep. by _____ Date _____ Anal. by _____ Date _____

Beaker No.	Data Set	Sample	Notes	Beaker No	Data Set	Sample	Notes
1	Blank			26			
2	SF2936	CY03578	1.0g	27			
3	SF2974	CY03556		28			
4	SF2963	~~SB~~ S04	Sieved 10 mesh	29			
5		SB S05		30			
6		42 S06	Sieved 10 mesh	31			
7	SF2962	S07	Sieved 10 mesh	32			
8	SF2988	CY03578	Dup	33			
9	SF2988	CY03578	Spk + Furnace metals spike	34			
10	SF2975	CY03 S89		35			
11		S90		36			
12		S91		37			
13		S92		38			
14		S93		39			
15		S94		40			
16		S95		41			
17		S96		42			
18	SF2975	CY03S89	DUP	43			
19	SF2975	CY03S89	SPK	44			
20	Blank			45			
21	NBS River	1645 Sediment	1.0g	46			
22	NBS	1645	.25g	47			
23				48			
24				49			
25				50			

~~ICP printout~~
~~S91 "first" = S90~~

1.0
~~.001~~ .1

NUMBER OF BLANK(s) TO BE REPORTED : 2

JM
Fmth

DL1:[001,054]RN512C.BRN 05-MAR-86 08:59:40 PAGE 1

DATA SET : METALS1

ELEMENT		DET LIM	BLANK01
AG	ug/l	3.00	-1.77
AL		80.0	57.3
B		80.0	26.3
BA		5.00	-4.25
BE		1.000	-0.357
CD		2.000	1.380
CO		6.00	-2.29
CR		8.0	5.4
CU		6.00	1.07
FE		80.	89. *
LI		10.00	-7.85
MN		5.00	1.20
MO		10.00	-1.47
NI		15.0	-7.9
PB		70.00	-9.62
SN		40.0	17.0
SR		10.000	-0.690
V		5.00	0.17
Y		5.000	-1.310
ZN		40.0	5.3
CA	mg/l	0.500	0.128
CA		0.500	0.060
K		2.00	-2.36
MG		0.100	0.017
NA		1.000	0.269
AL		20.000	-0.052
FE		20.000	-0.246
ZN		20.000	-0.939

MS March 5, 1986

All values ± detection limit except Fe

These samples run following Run 514 so there is no 2σ AQC.

JVM
7pm pk

DL1:[001,054]RN512C.BRN 05-MAR-86 09:02:46 PAGE 2

DATA SET : METALS1 SAMPLE ID : AQC.005

ELEMENT	TRUE	MEASURED	% DEV
AG 4pk	120.000	120.000	-0.143
AL	4100.00	4370.00	6.39
B	306.00	318.00	3.92
BA	186.00	189.00	1.79
BE	216.00	226.00	4.46
CD	220.00	228.00	3.98
CO	176.00	184.00	4.26
CR	705.00	734.00	4.19
CU	690.00	721.00	4.46
FE	13700.00	14100.00	3.14
LI	132.00	142.00	6.95
MN	363.0	400.0	10.2 *
MO	232.000	233.000	0.121
NI	1180.00	1240.00	5.57
PB	425.00	433.00	1.80
SN	211.000	209.000	-0.960
SR	157.00	162.00	3.59
V	265.00	284.00	7.27
Y	1180.00	1250.00	5.72
ZN	2630.00	2450.00	-6.80
CA 7pk	85.00	79.40	-6.64
CA	71.700	71.800	0.111
K	6.84	7.42	8.41
MG	5.4	6.1	13.5 *
NA	17.70	19.00	6.94
AL	4.06	4.38	7.78
FE	14.00	14.70	5.00
ZN	2.65	2.70	1.84

MS March 5, 1986 all values except Mn & Mg ±10%

JVM
7 March

DL1:[001,054]RN512C.BRN 05-MAR-86 09:04:04 PAGE 3

DATA SET : METALS1 SAMPLE ID : AQC.005

ELEMENT	TRUE	MEASURED	% DEV
AG ug/l	120.00	118.00	-1.76
AL	4100.00	4350.00	5.96
B	306.00	313.00	2.34
BA	186.000	187.000	0.231
BE	216.00	224.00	3.76
CD	220.00	229.00	4.19
CO	176.00	182.00	3.59
CR	705.00	738.00	4.69
CU	690.00	721.00	4.40
FE	13700.00	14000.00	2.33
LI	132.00	140.00	5.80
MN	363.00	395.00	8.83
MO	232.000	232.000	-0.135
NI	1180.00	1230.00	4.26
PB	425.00	409.00	-3.94
SN	211.00	223.00	5.77
SR	157.00	161.00	2.58
V	265.00	280.00	5.67
Y	1180.00	1250.00	5.39
ZN	2630.00	2440.00	-7.35
CA mg/l	85.00	79.10	-7.00
CA	71.70	70.90	-1.07
K	6.84	7.46	9.04
MG	5.37	5.83	8.52
NA	17.70	19.00	7.40
AL	4.06	4.35	7.08
FE	14.00	15.00	6.61
ZN	2.65	2.52	-5.07

MS March 5, 1986 all values ± 10%

SET PAPER TO TOP OF FORM AND
PRESS "RETURN TO CONTINUE!

Jim
7 Mar 86

DL1:[001,054]RN512C.BRN 04-FEB-86 13:12:21 PAGE 1

DATA SET : SF2936 SAMPLE ID : CY03S78

ELEMENT	Detection limit	SAMPLE	DUPLICATE	AVERAGE	R P D
AG	3.0	-0.1	-0.0	-0.1	-68.3
AL		3050.00	3320.00	3190.00	8.40
B	80.0	26.3	29.1	27.7	10.1
BA		56.70	60.20	58.50	5.98
BE	1.0	-0.	-0.	-0.	-141.
CD	2.0	0.2	0.1	0.2	39.8
CO	6.0	1.5	1.7	1.6	11.6
CR		25.00	27.00	26.00	7.55
CU	6.0	241.0	133.0	187.0	57.4
FE		6730.00	7310.00	7020.00	8.30
LI		6.89	7.21	7.05	4.48
MN	5.0	349.0	397.0	373.0	12.7
MO	10.0	1.9	2.1	2.0	12.6
NI		8.59	9.07	8.83	5.39
PB	7.0	47.1	55.6	51.4	16.6
SN		3.89	4.06	3.98	4.31
SR		229.00	244.00	236.00	6.07
V		16.60	18.00	17.30	7.94
Y		2.72	2.96	2.84	8.41
ZN		408.00	421.00	415.00	3.01
CA		10.300	10.300	10.300	0.000
CA		105.0	178.0	142.0	51.3
K	2.0	-0.	0.	0.	370.
MG		5.99	6.13	6.06	2.34
NA		0.54	0.58	0.56	7.35
AL		2.98	3.25	3.12	8.62
FE		7.41	7.85	7.63	5.69
ZN		0.40	0.42	0.41	4.76

MS March 4, 1986

All values ± 20% or ± detection limit except Ca and ~~Mg~~

JVM
7 Mar 86

DL1:[001,054]RN512C.BRN 05-MAR-86 08:48:57 PAGE 1

DATA SET : SF2936 SAMPLE ID : CY03S78

ELEMENT	SAMPLE	SPIKE	SPIKE ADDED	% RECOVERY
B	26.3	113.0	100.0	86.9
BA	56.7	104.0	50.0	95.3
BE	-0.0	4.7	5.0	95.1
CD	0.2	9.3	10.0	91.6
CO	1.5	44.6	50.0	86.2
CR	25.0	69.2	50.0	88.3
CU	241.	181.	50.	-120
LI	7.	60.	50.	105.
MN	349.	567.	200.	109.
NI	8.6	50.6	50.0	84.0
PB	47.1	140.0	100.0	92.8
SR	229.	335.	100.	106.
V	16.6	61.7	50.0	90.1
Y	2.7	50.4	50.0	95.3
ZN	408.0	508.0	100.0	99.5

MS March 5, 1986

All values ± ~~15~~ 20% except ~~Ni and~~ Cu which is exceeded by sample by >2