

ANALYTICAL REPORT
U. S. ENVIRONMENTAL PROTECTION AGENCY
ORDER NO. 11783NBSX



ANALYTICAL REPORT
U. S. ENVIRONMENTAL PROTECTION AGENCY
ORDER NO. 11783NBSX

REPORT DATE: APRIL 30, 1980

PREPARED BY: ENVIRONMENTAL RESEARCH GROUP
ANN ARBOR, MICHIGAN
BRIDGEVIEW, ILLINOIS

NOTE TO THE READER: You will find included in the analytical results, levels of phthalates below the reliable detection limits as discussed in Mr. Epstein's letter to Dr. Sturino, found in the correspondence section of this report. These values are given to indicate analytical detection, but do not represent accuracy levels beyond those discussed in that correspondence.

U. S. ENVIRONMENTAL PROTECTION AGENCY

ANALYTICAL REPORT

April 30, 1980

THE FOLLOWING IS A REPORT ON THE ANALYSIS OF WATER, FISH, FISH FOOD, AND SEDIMENT SAMPLES, COLLECTED UNDER THE DIRECTION OF THE U.S.E.P.A., REGION V, AND DELIVERED TO ENVIRONMENTAL RESEARCH GROUP'S LABORATORY IN ANN ARBOR, MICHIGAN, FOR ANALYSIS. AUTHORIZATION FOR THIS WORK IS IN ACCORDANCE WITH THE PROVISIONS OF THE GENERAL SERVICES ADMINISTRATION, CONTRACT NO. GS-04S-22913 AND WAS REQUISITIONED BY THE GREAT LAKES NATIONAL PROGRAMS OFFICE UNDER ORDER NO. I1783NBSX.

INCLUDED IN THIS REPORT ARE A TABULAR SUMMARY OF ANALYTICAL DATA AND QUALITY CONTROL STATISTICS, COPIES OF RECONSTRUCTED ION CHROMATOGRAMS FOR ALL GC/MS SCANS, A DESCRIPTION OF THE ANALYTICAL METHODOLOGY, AND A COMMENTARY ON ANALYTICAL QUALITY CONTROL AND GENERAL OBSERVATIONS.

ALL SAMPLE PREPARATION, ANALYSIS, CALCULATIONS, AND REPORTING WAS DONE BY ENVIRONMENTAL RESEARCH GROUP PERSONNEL.

ANALYTICAL RESULTSU.S.E.P.A. - I1783NBSXE.P.A. SAMPLE # LB35C22
ERG SAMPLE # 40335MATRIX FISH
SAMPLE RECEIVED 10/29/79INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.ORGANIC RESULTSBASE NEUTRAL GC/MS SCANPRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIETHYL PHTHALATE	260
DIBUTYL PHTHALATE	1900
BUTYL BENZYL PHTHALATE	240
ETHYL HEXYL PHTHALATE	3200

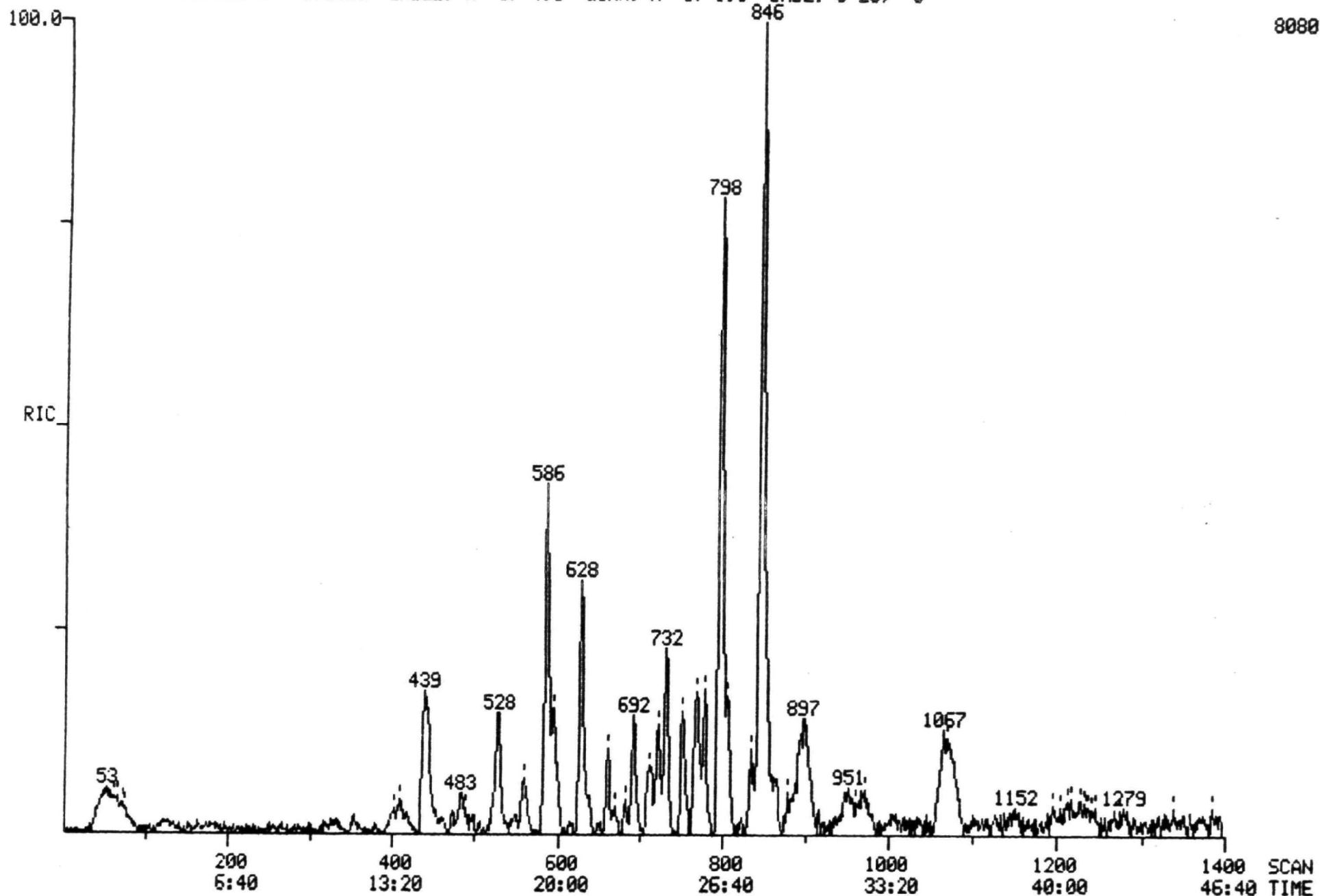
OTHER COMPOUNDS

NONE

RIC
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SAMPLE: B40335
RANGE: G 1,1400

DATA: B40335 #1
CALI: CAL2FEB #3
LABEL: N 1, 4.0
QUAN: A 0, 1.0
BASE: U 20, 3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 35C23

MATRIX FISH

ERG SAMPLE # 40336

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

640
1400

OTHER COMPOUNDS

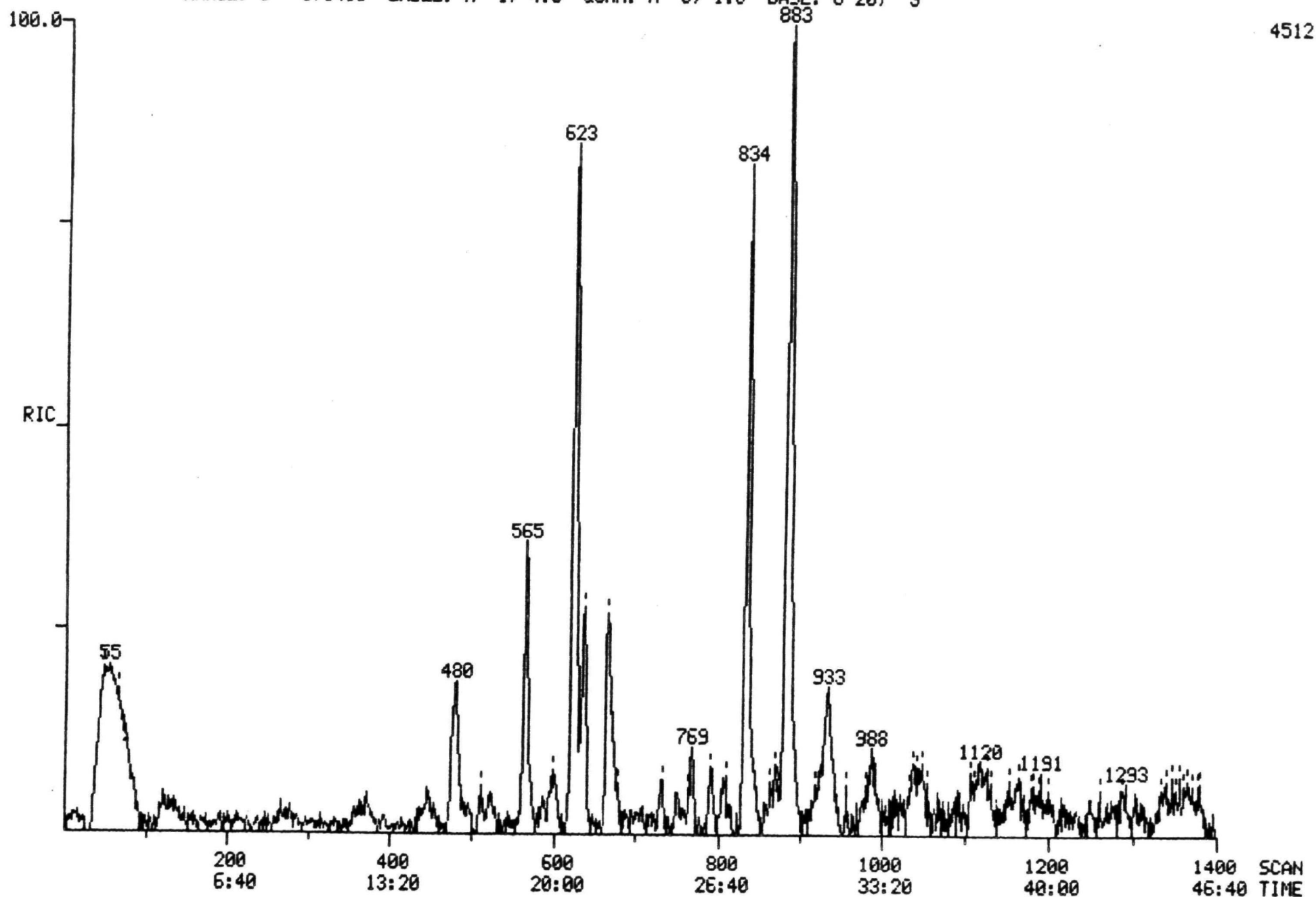
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02/07/80 20:05:00
SAMPLE: B40336
RANGE: G 1.1400

DATA: B40336 #1
CALI: CAL130 #1

SCANS 1 TO 1400

LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 35C24

MATRIX FISH

ERG SAMPLE # 40337

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	11000
ETHYL HEXYL PHTHALATE	13000

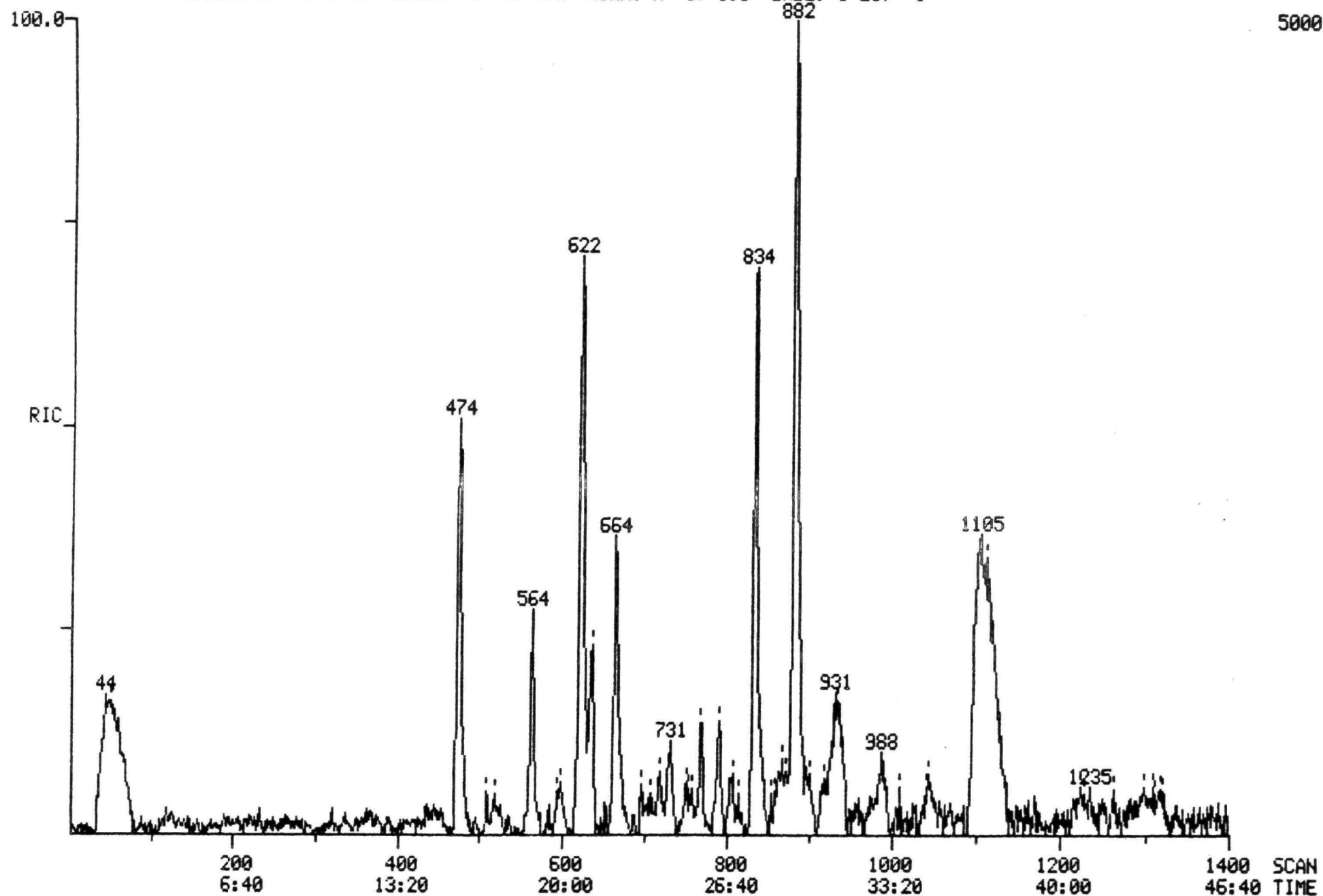
OTHER COMPOUNDS

NONE

RIC
02/07/80 21:06:00
SAMPLE: B40337
RANGE: G 1.1400

DATA: B40337 #1
CALI: CAL130 #1
BASE: U 20, 3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 35C25

MATRIX FISH

ERG SAMPLE # 40338

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

--
--
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--
--
--

Results reported in unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIETHYL PHTHALATE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

280
2000
3400

OTHER COMPOUNDS

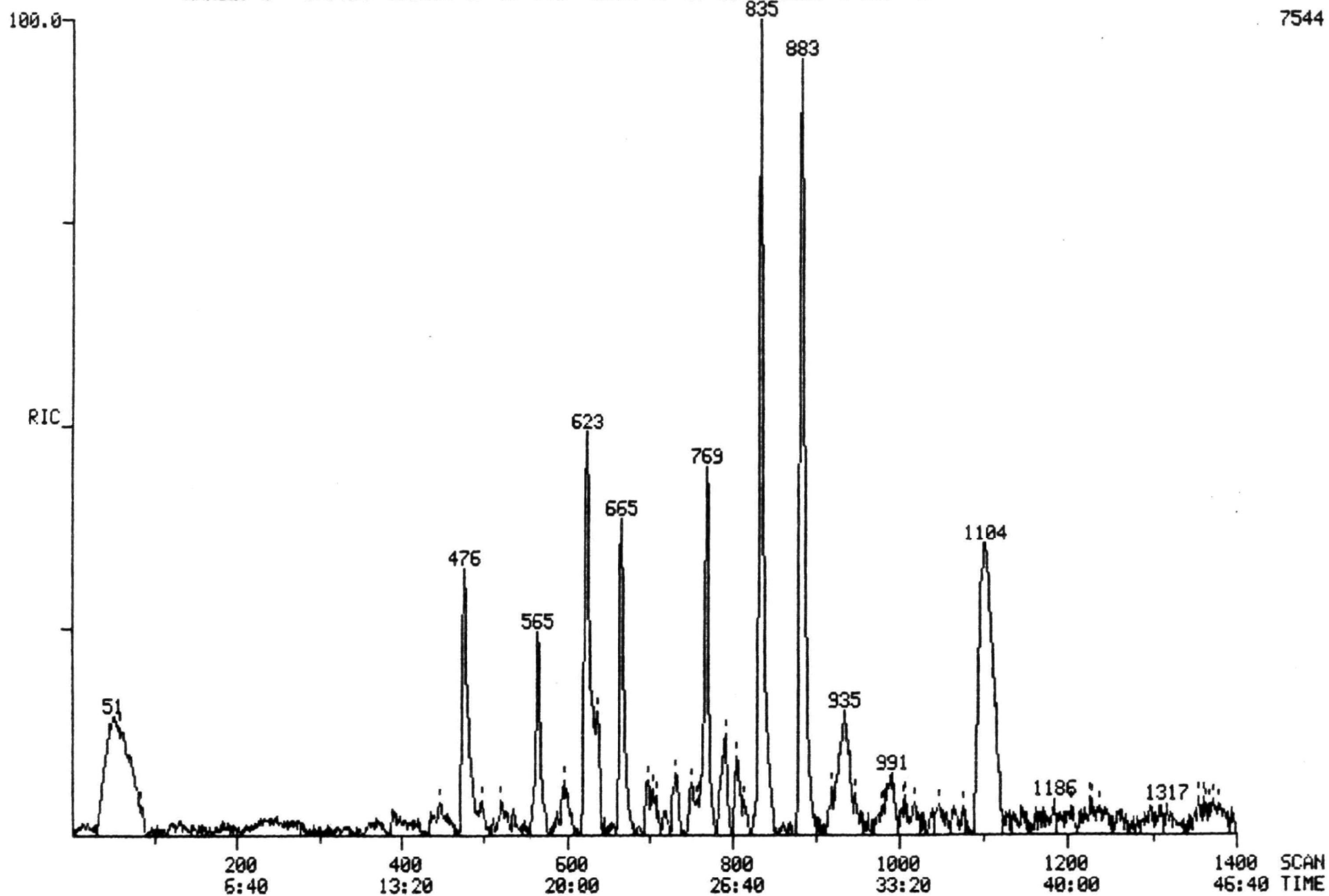
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RIC
02/07/80 22:07:00
SAMPLE: B40338
RANGE: G 1.1400

DATA: B40338 #1
CALI: CAL31JAN2 #1

SCANS 1 TO 1400

LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 35C26

MATRIX FISH

ERG SAMPLE # 40339

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	360
ETHYL HEXYL PHTHALATE	850

OTHER COMPOUNDS

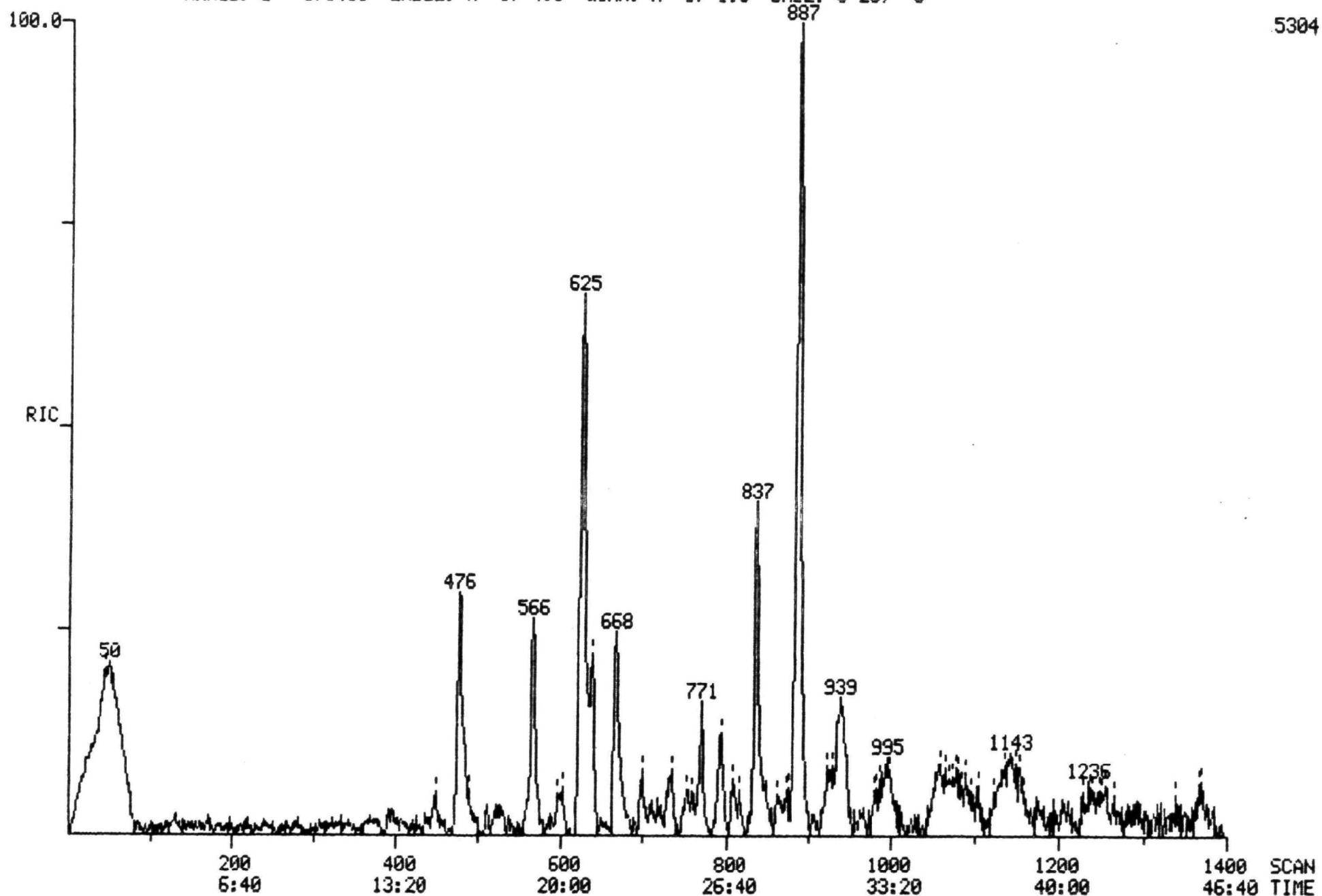
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RIC
02/07/80 23:10:00
SAMPLE: B40339
RANGE: G 1.1400

DATA: B40339 #1
CALI: CAL31JAN2 #1

SCANS 1 TO 1400

LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 36C01

MATRIX FISH

ERG SAMPLE # 40340

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

--
--
--
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--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

3100
13000
16000

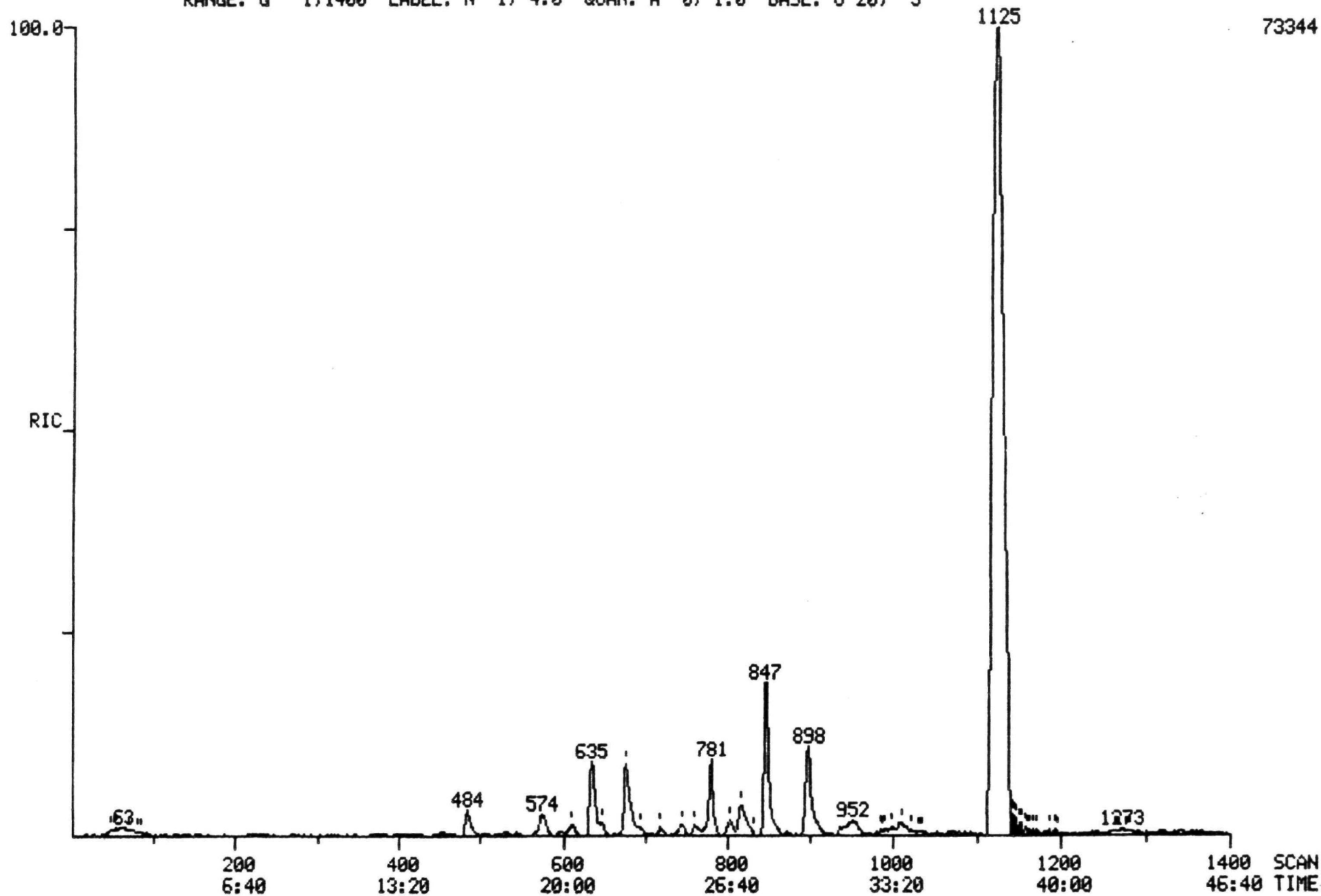
OTHER COMPOUNDS

NONE

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02/08/80 9:27:00
SAMPLE: B40340 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40340 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB36C02

MATRIX FISH

ERG SAMPLE # 40341

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE

540

DIBUTYL PHTHALATE

1200

ETHYL HEXYL PHTHALATE

2400

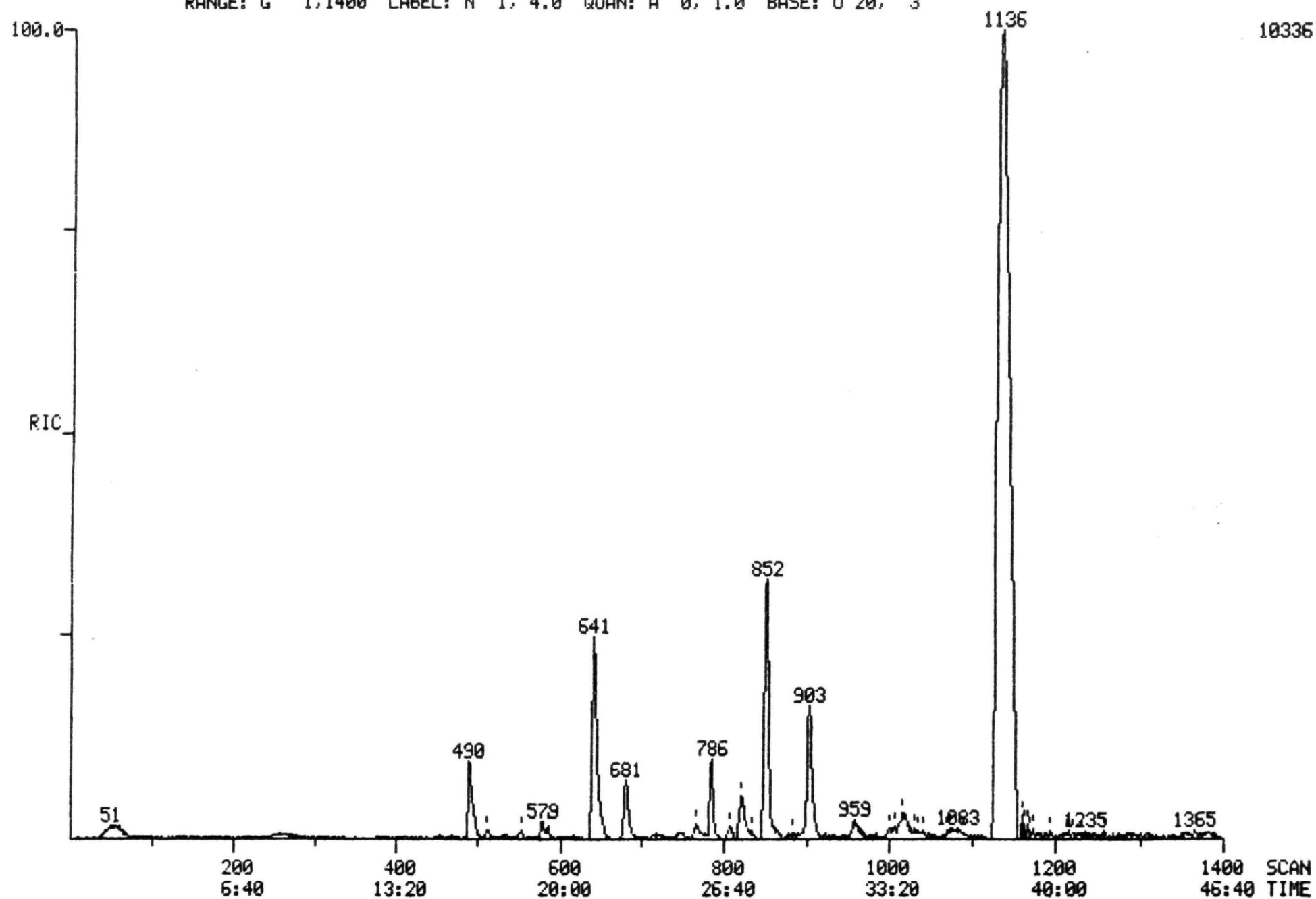
OTHER COMPOUNDS

NONE

RIC
02/09/80 12:15:00
SAMPLE: B40341 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40341 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C03

MATRIX FISH

ERG SAMPLE # 40342

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

—
—
—
—
—
—
—
—
—
—
—

Results reported in — unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

320
810
3600

OTHER COMPOUNDS

NONE

RIC

02/09/80 13:17:00

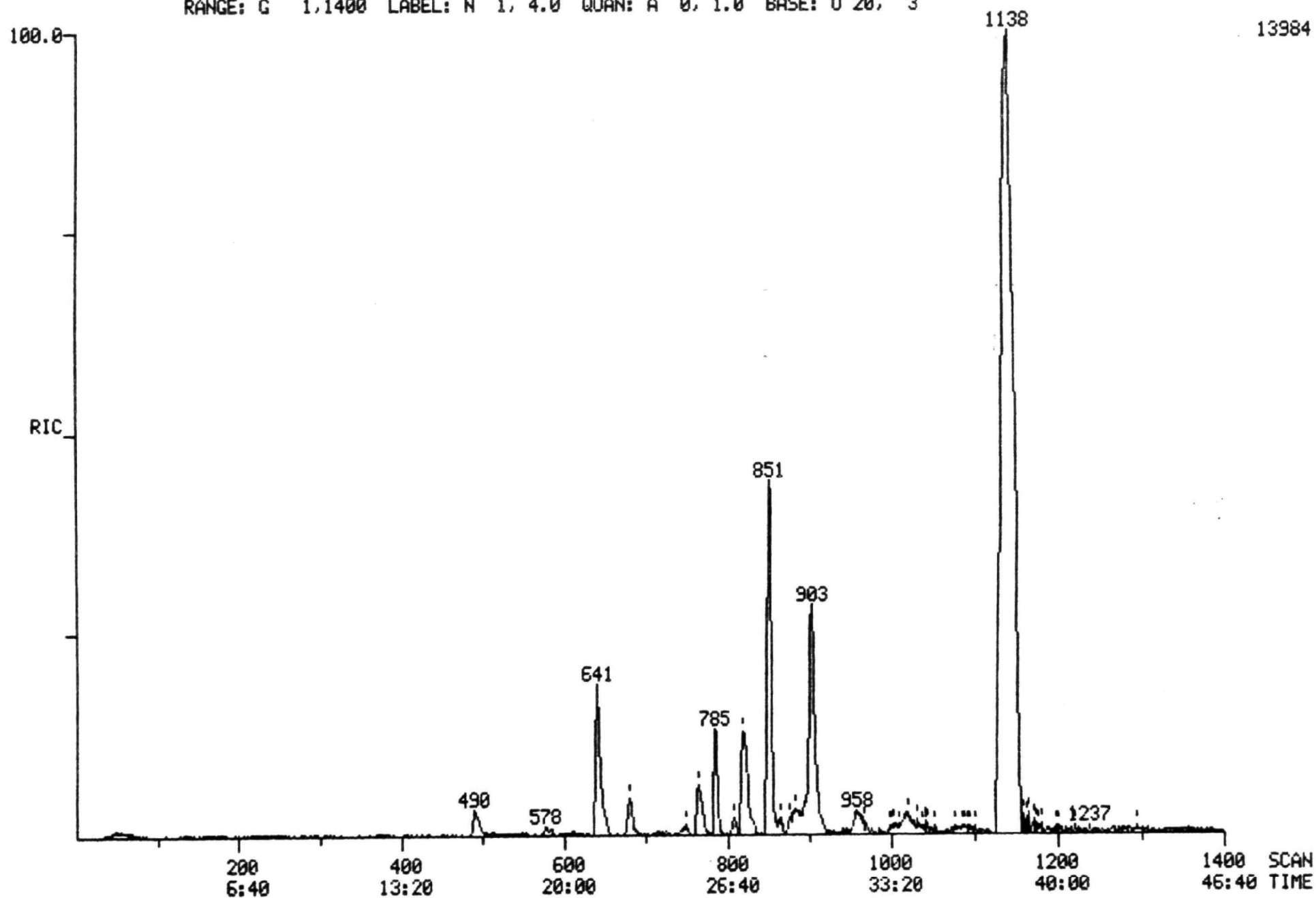
SAMPLE: B40342 EPA FISH

RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40342 #1

CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C04

MATRIX FISH

ERG SAMPLE # 40343

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

1,2,4 TRICHLOROBENZENE
HEXACHLOROBENZENE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

70
2200
360
2200

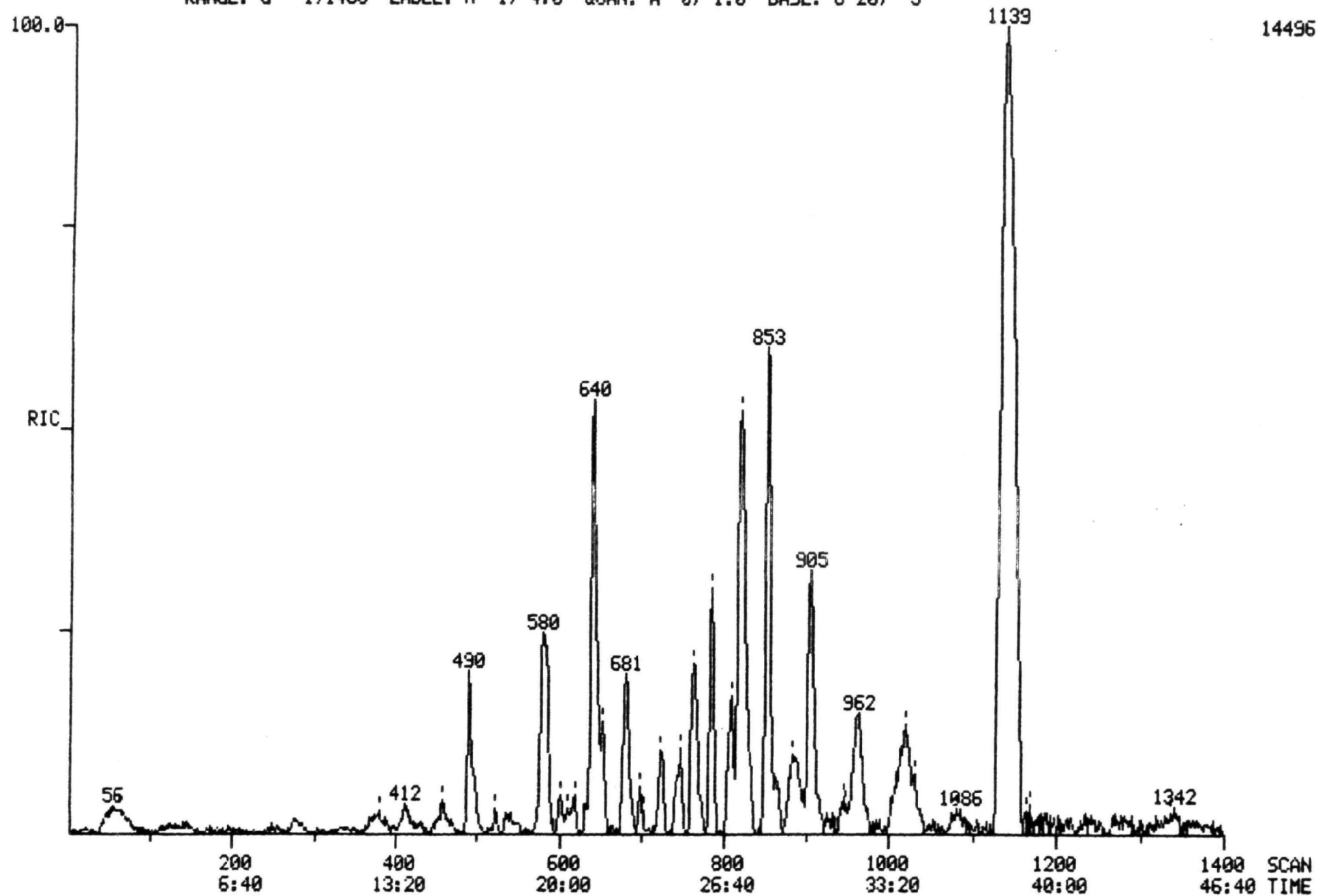
OTHER COMPOUNDS

NONE

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02/08/80 10:36:00
SAMPLE: B40343 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40343 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C05

MATRIX FISH

ERG SAMPLE # 40344

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE
ETHYL HEXYL PHTHALATE

1100
1100

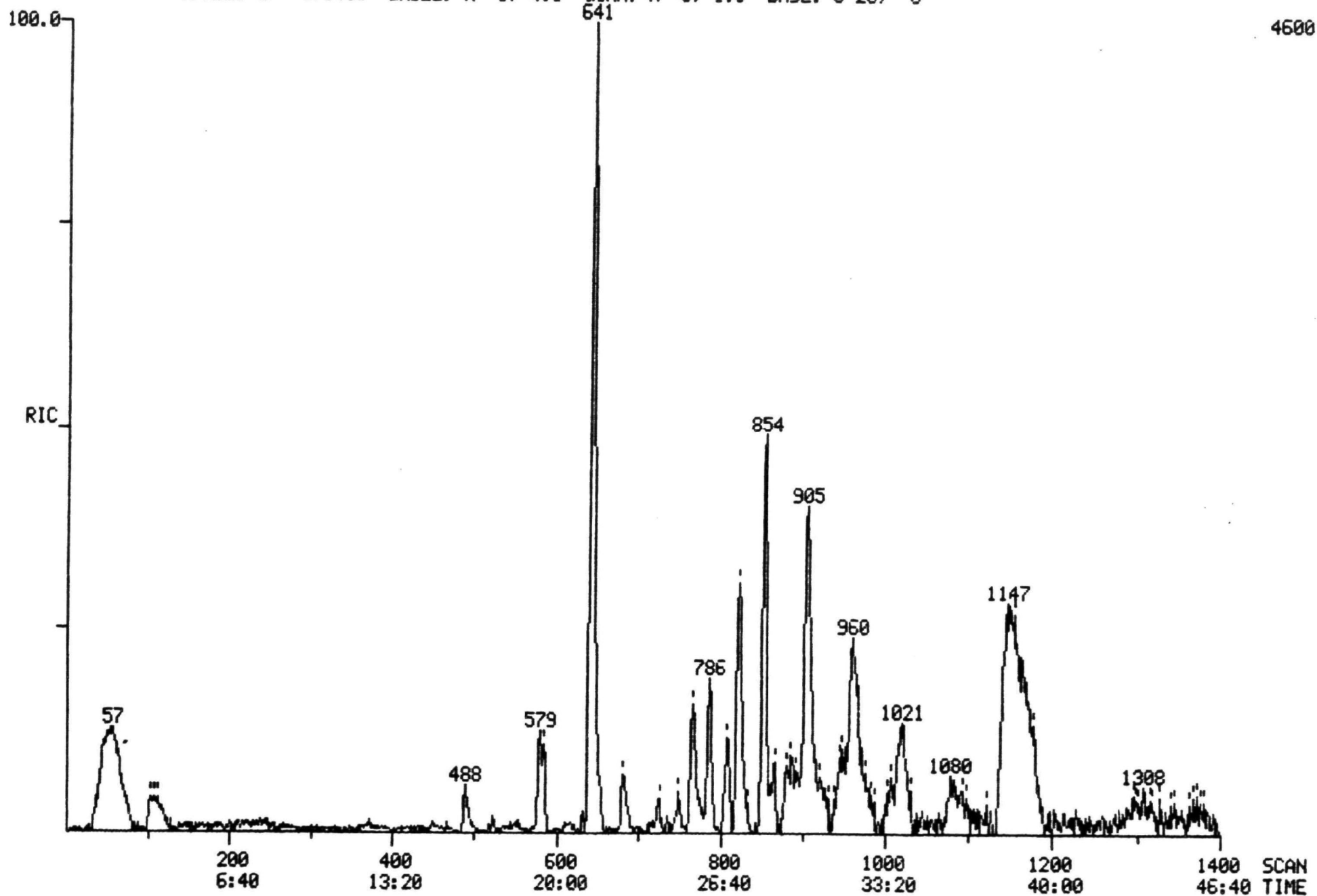
OTHER COMPOUNDS

NONE

RIC
02/08/80 17:47:00
SAMPLE: B40344 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40344 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB36C06

MATRIX FISH

ERG SAMPLE # 40345A

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	220
ETHYL HEXYL PHTHALATE	2300

OTHER COMPOUNDS

NONE

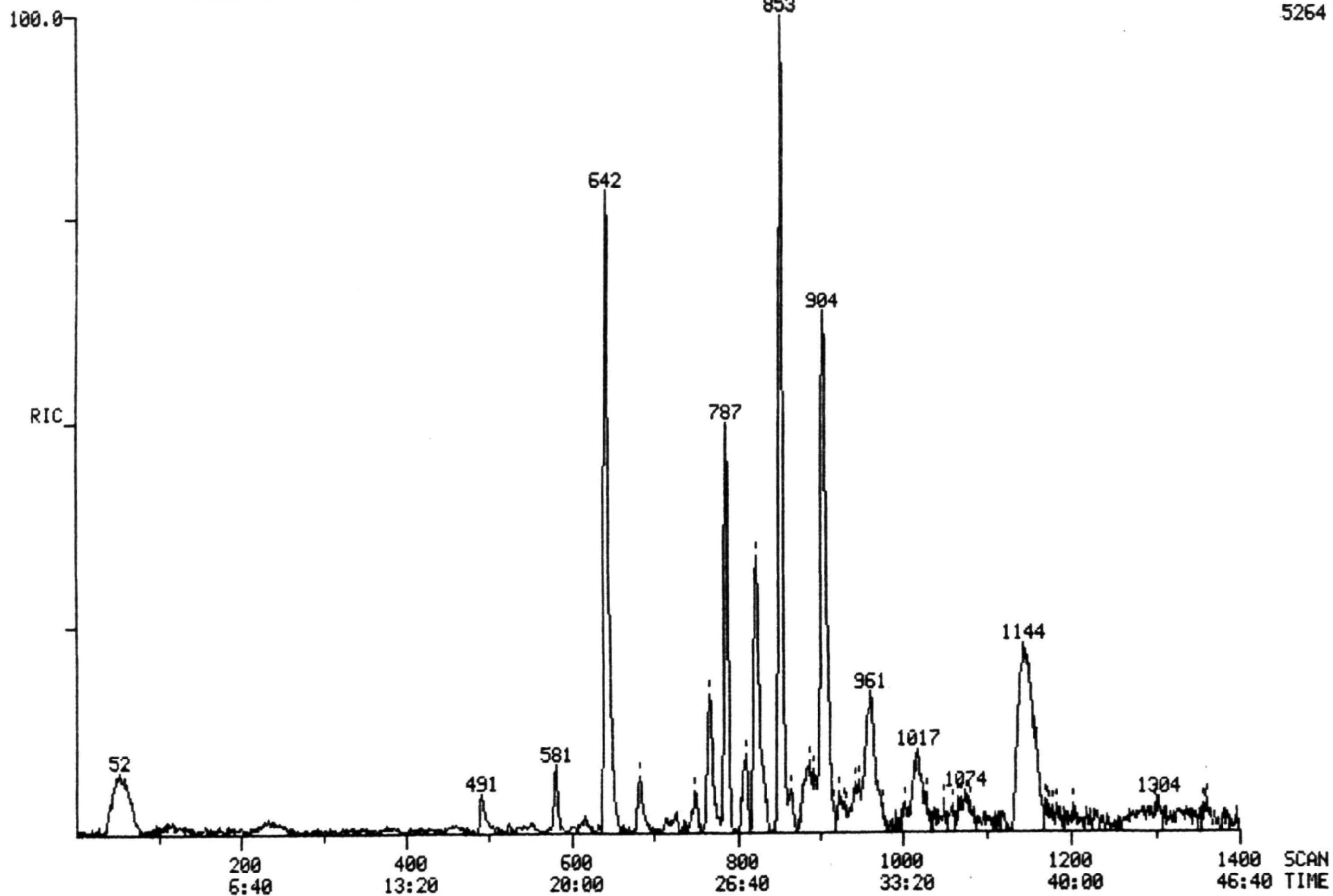
SEE DUPLICATE ON NEXT PAGE

RIC
02/08/80 16:41:00
SAMPLE: B40345A EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40345A #1
CALI: CAL28 #1

SCANS 1 TO 1400

5264



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB36C06

MATRIX FISH

ERG SAMPLE # 40345B

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
NAPHTHALENE	410
HEXACHLOROBENZENE	110
ETHYL HEXYL PHTHALATE	3100

OTHER COMPOUNDS

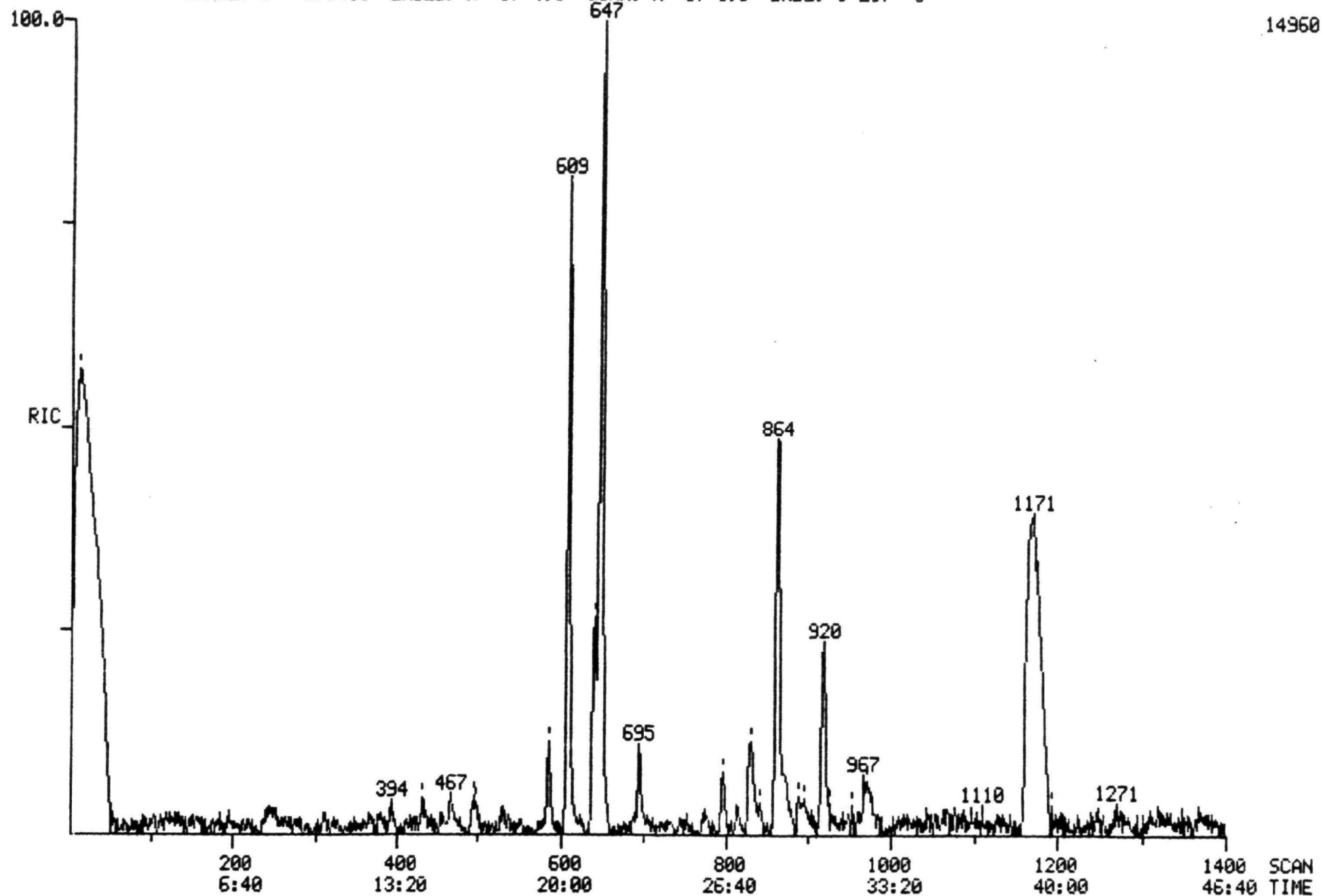
NONE

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SAMPLE: B40345B EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0

DATA: B40345B #1
CALI: CAL32008FEB #2

SCANS 1 TO 1400

QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C07
ERG SAMPLE # 40346

MATRIX FISH
SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

NAPHTHALENE
ETHYL HEXYL PHTHALATE

470
3300

OTHER COMPOUNDS

PCB's (PENTA)

<.01 (TRACE)

RIC

02/08/80 13:17:00

SAMPLE: B40346 EPA FISH

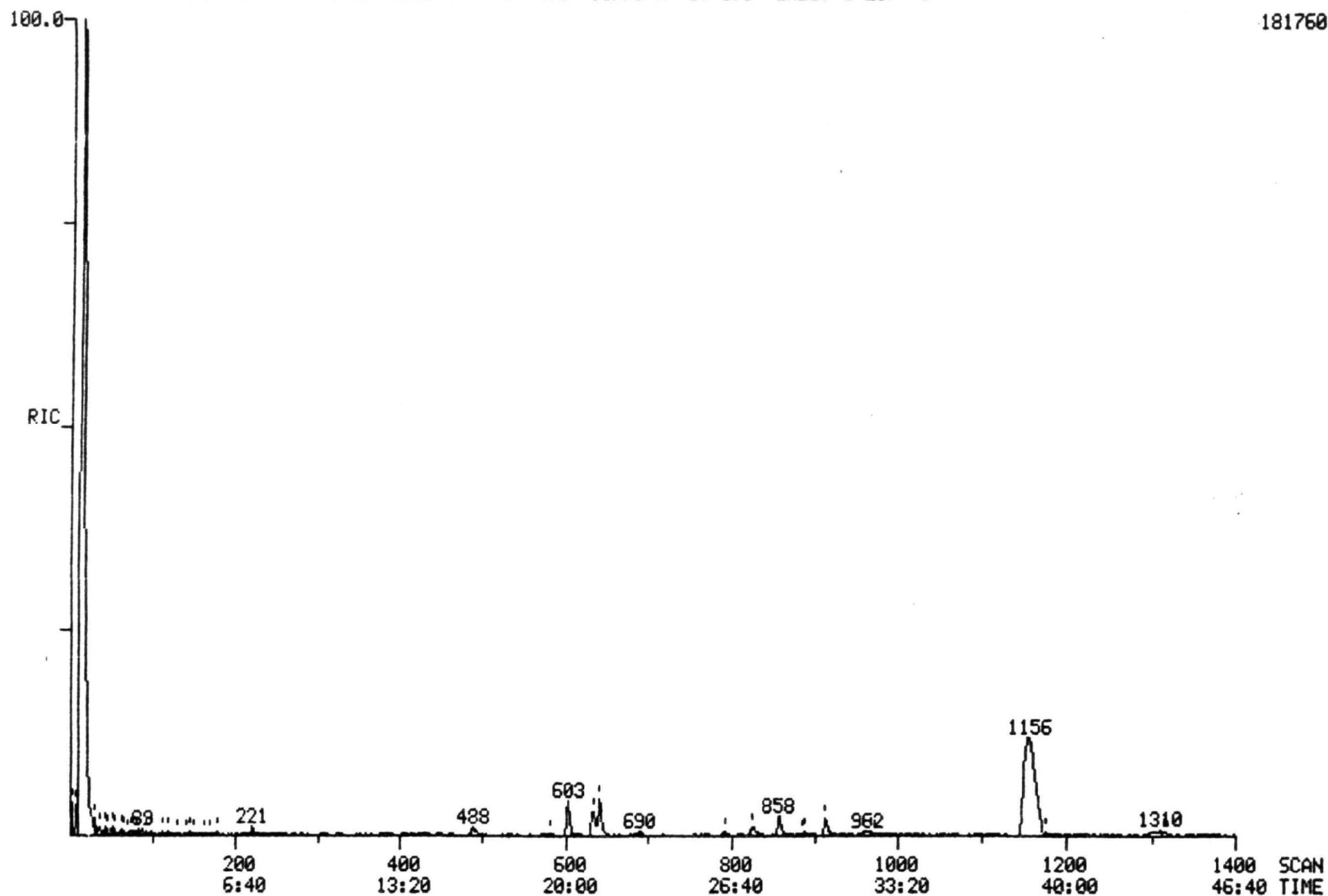
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40346 #1

CALI: CAL32008FEB #2

SCANS 1 TO 1400

181760



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB36C08

MATRIX FISH

ERG SAMPLE # 40347

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

CADMIUM

COBALT

COPPER

CHROMIUM

LEAD

MERCURY

SELENIUM

TIN

ZINC

% MOISTURE

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

200

ETHYL HEXYL PHTHALATE

2800

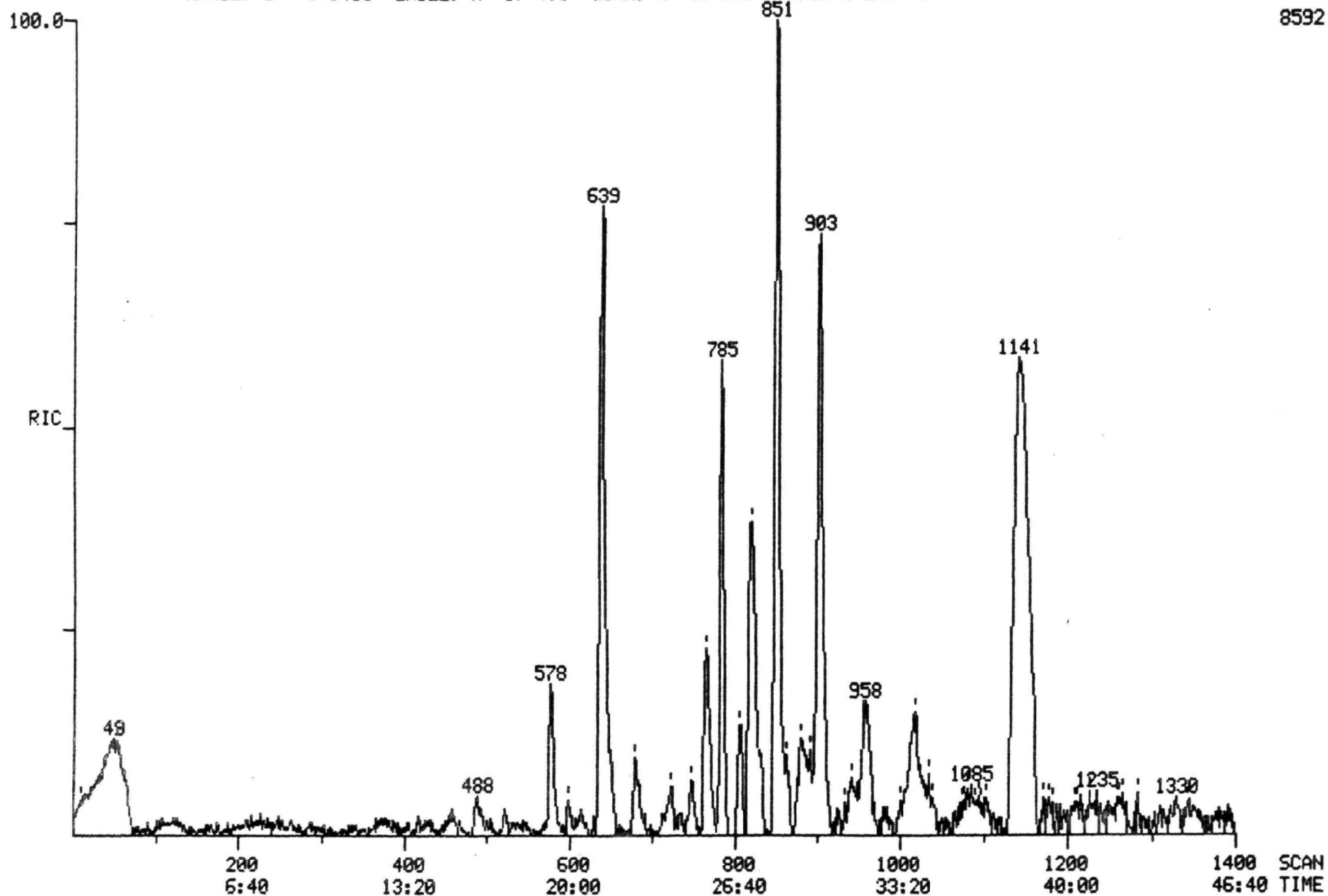
OTHER COMPOUNDS

NONE

RIC
02/08/80 13:44:00
SAMPLE: B40347 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40347 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB36C09

MATRIX FISH

ERG SAMPLE # 40348

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

9700

OTHER COMPOUNDS

NONE

RIC

02/08/80 12:03:00

SAMPLE: B40348 EPA FISH

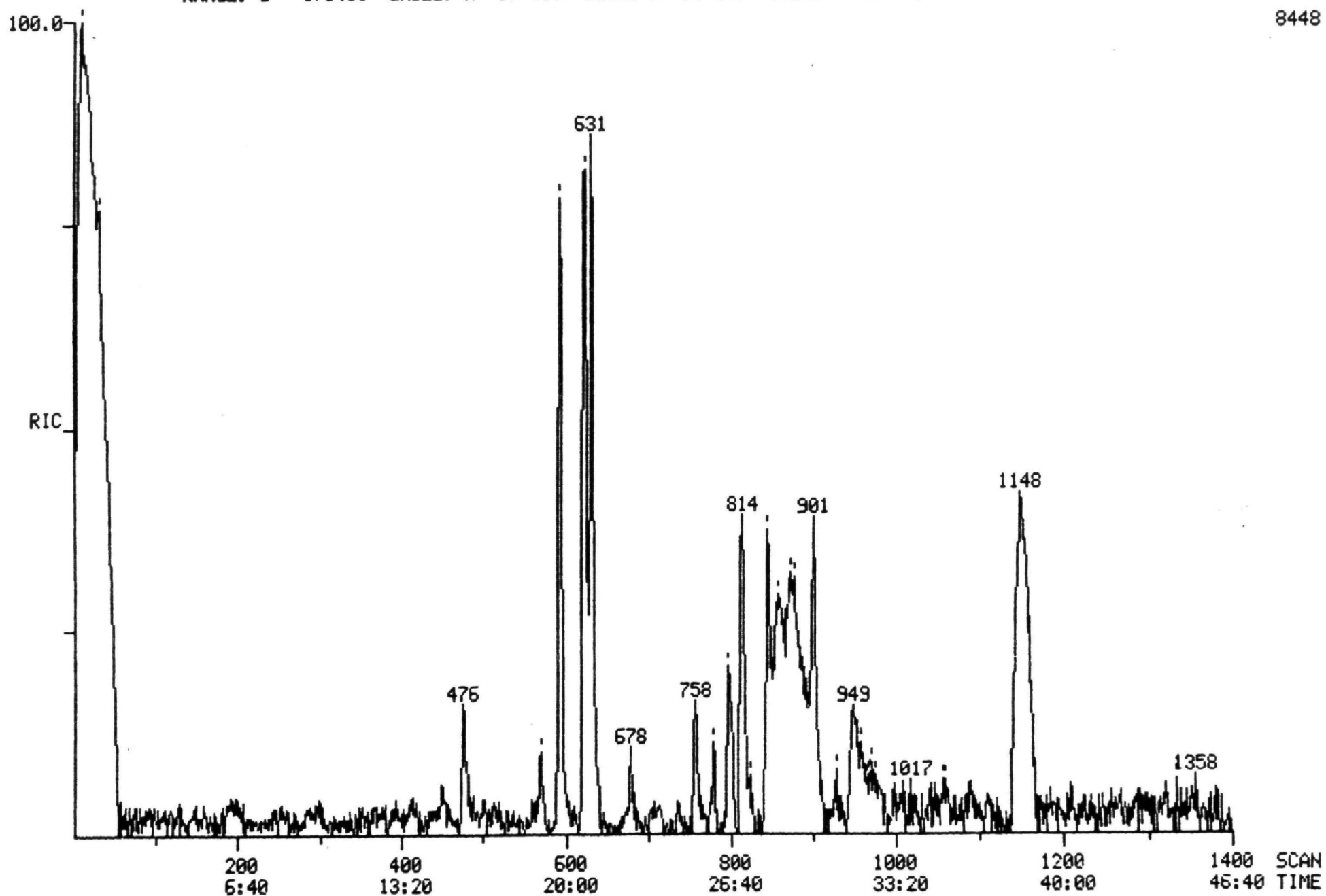
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40348 #1

CALI: CAL32008FEB #2

SCANS 1 TO 1400

8448



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C10

MATRIX FISH

ERG SAMPLE # 40349

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE

70

ETHYL HEXYL PHTHALATE

1700

OTHER COMPOUNDS

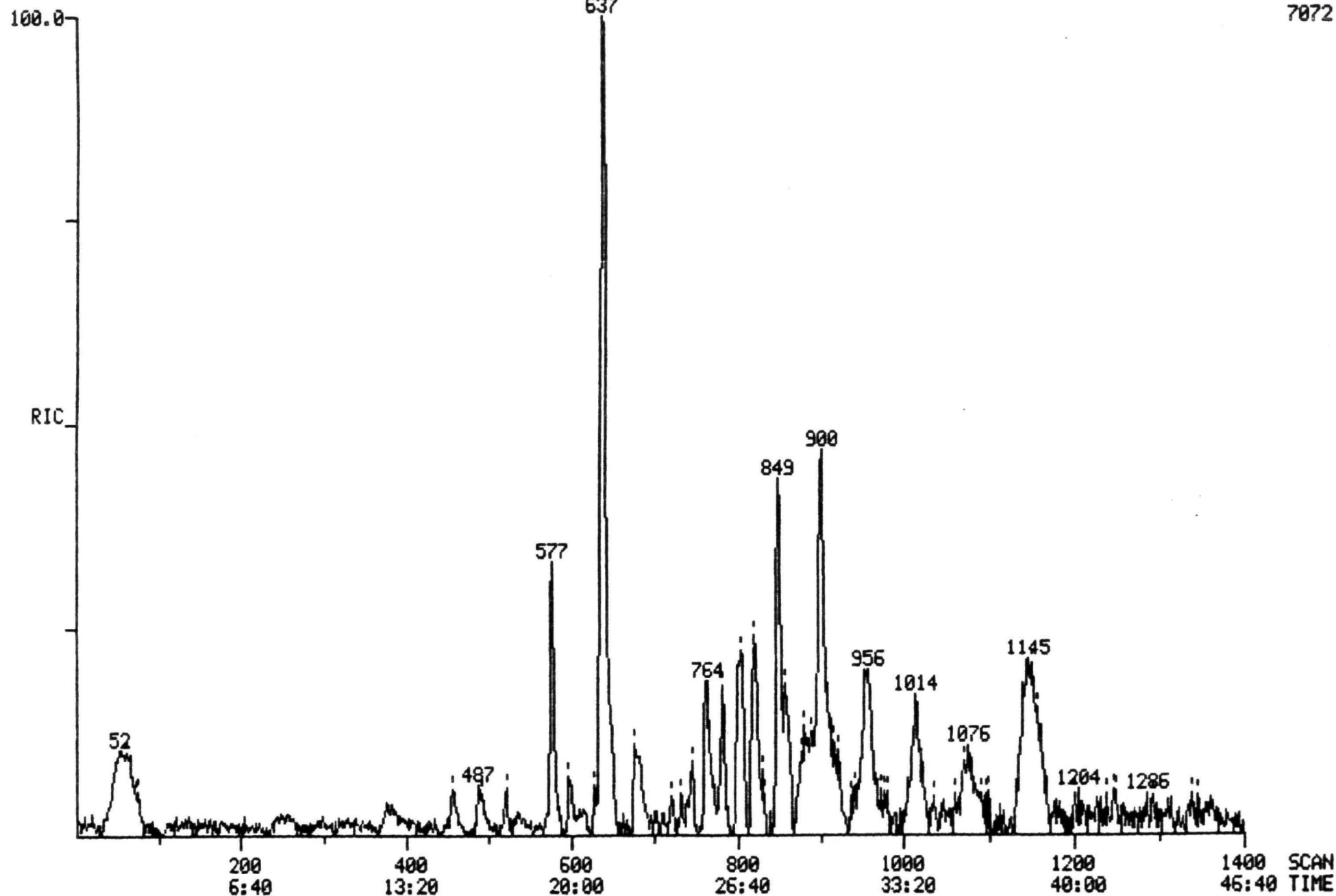
NONE

RIC
02/08/80 11:44:00
SAMPLE: B40349 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40349 #1
CALI: CAL28 #1

SCANS 1 TO 1400

7072



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C11

MATRIX FISH

ERG SAMPLE # 40350

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

CADMIUM

COBALT

COPPER

CHROMIUM

LEAD

MERCURY

SELENIUM

TIN

ZINC

% MOISTURE

Results reported in _____ unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

260

ETHYL HEXYL PHTHALATE

1900

OTHER COMPOUNDS

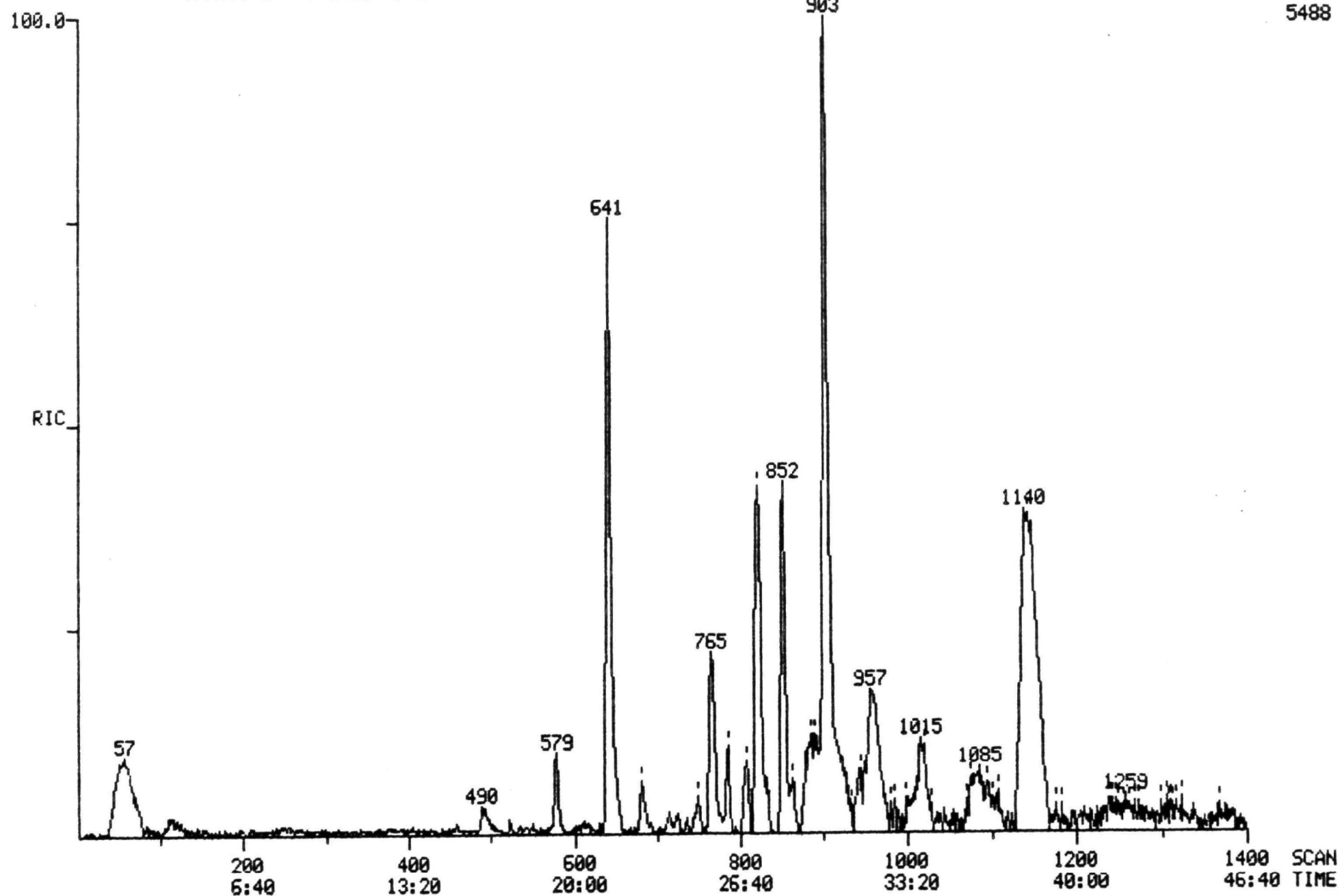
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02/08/80 18:50:00
SAMPLE: B40350 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40350 #1
CALI: CAL28 #1

SCANS 1 TO 1400

5488



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB36C12

MATRIX FISH

ERG SAMPLE # 40351A

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

CADMIUM

COBALT

COPPER

CHROMIUM

LEAD

MERCURY

SELENIUM

TIN

ZINC

% MOISTURE

Results reported in — unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

580

ETHYL HEXYL PHTHALATE

18000

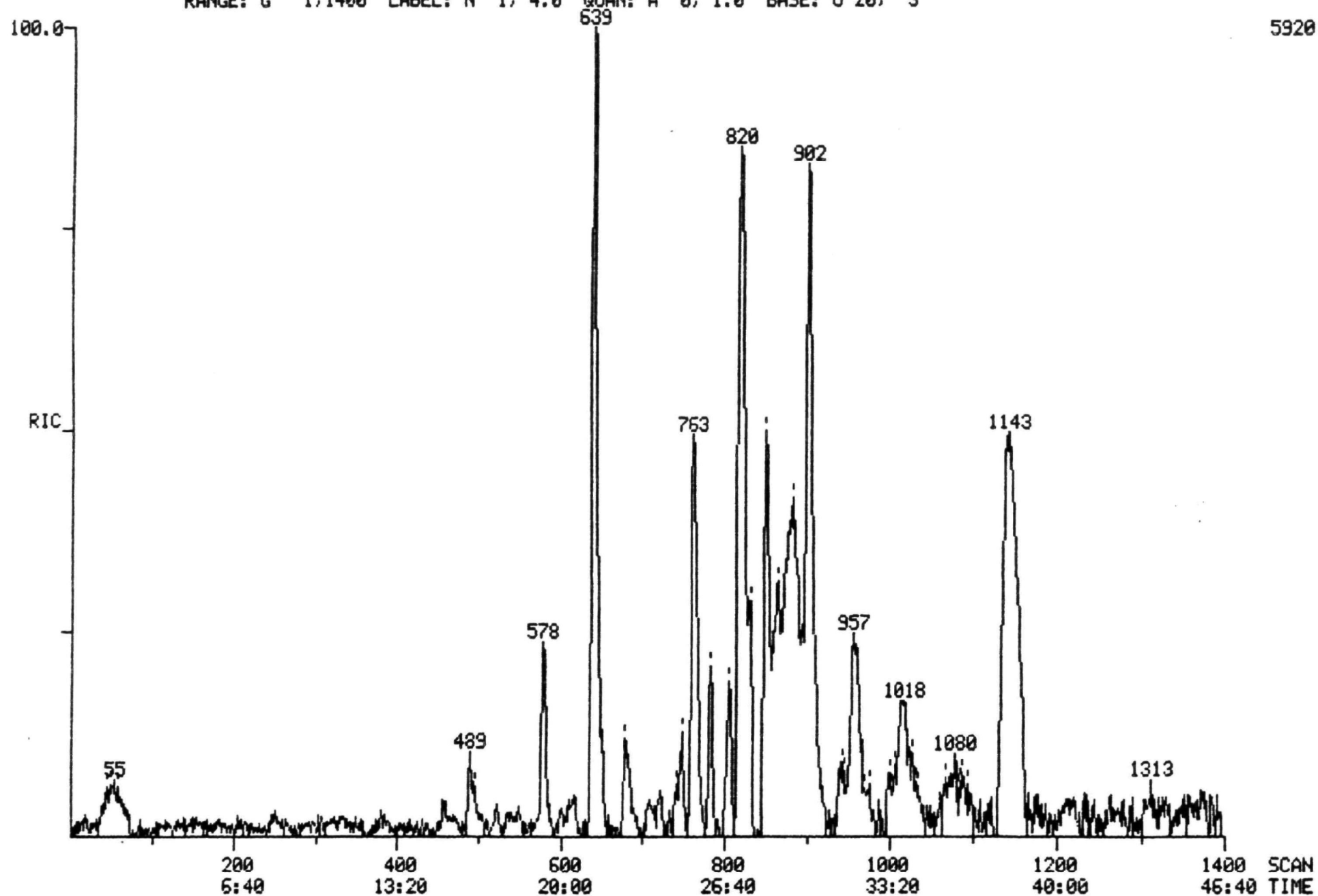
OTHER COMPOUNDS

NONE

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02/08/80 12:43:00
SAMPLE: B40351 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40351 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C12

MATRIX FISH

ERG SAMPLE # 40351B

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

CADMIUM

COBALT

COPPER

CHROMIUM

LEAD

MERCURY

SELENIUM

TIN

ZINC

% MOISTURE

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

1900

BUTYL BENZYL PHTHALATE

12000

ETHYL HEXYL PHTHALATE

1100

OTHER COMPOUNDS

NONE

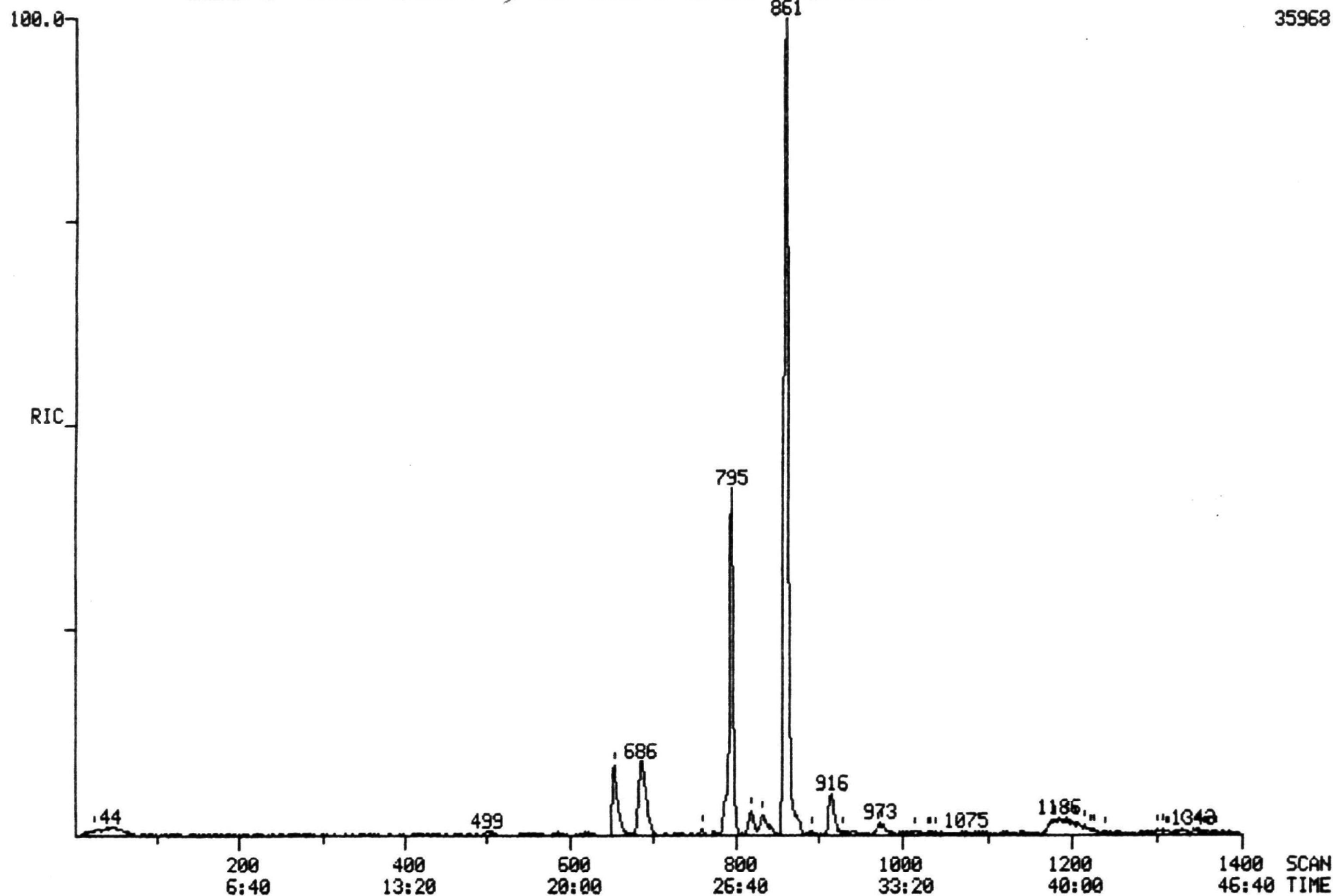
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02/13/80 9:23:00

DATA: B40351 #1
CALI: CAL213 #3

SCANS 1 TO 1400

SAMPLE: B40351 EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C13

MATRIX FISH

ERG SAMPLE # 40352

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

NAPHTHALENE

140

ETHYL HEXYL PHTHALATE

790

OTHER COMPOUNDS

PENTACHLOROBENZENE

<.01 (TRACE)

RIC

02/08/80 14:17:00

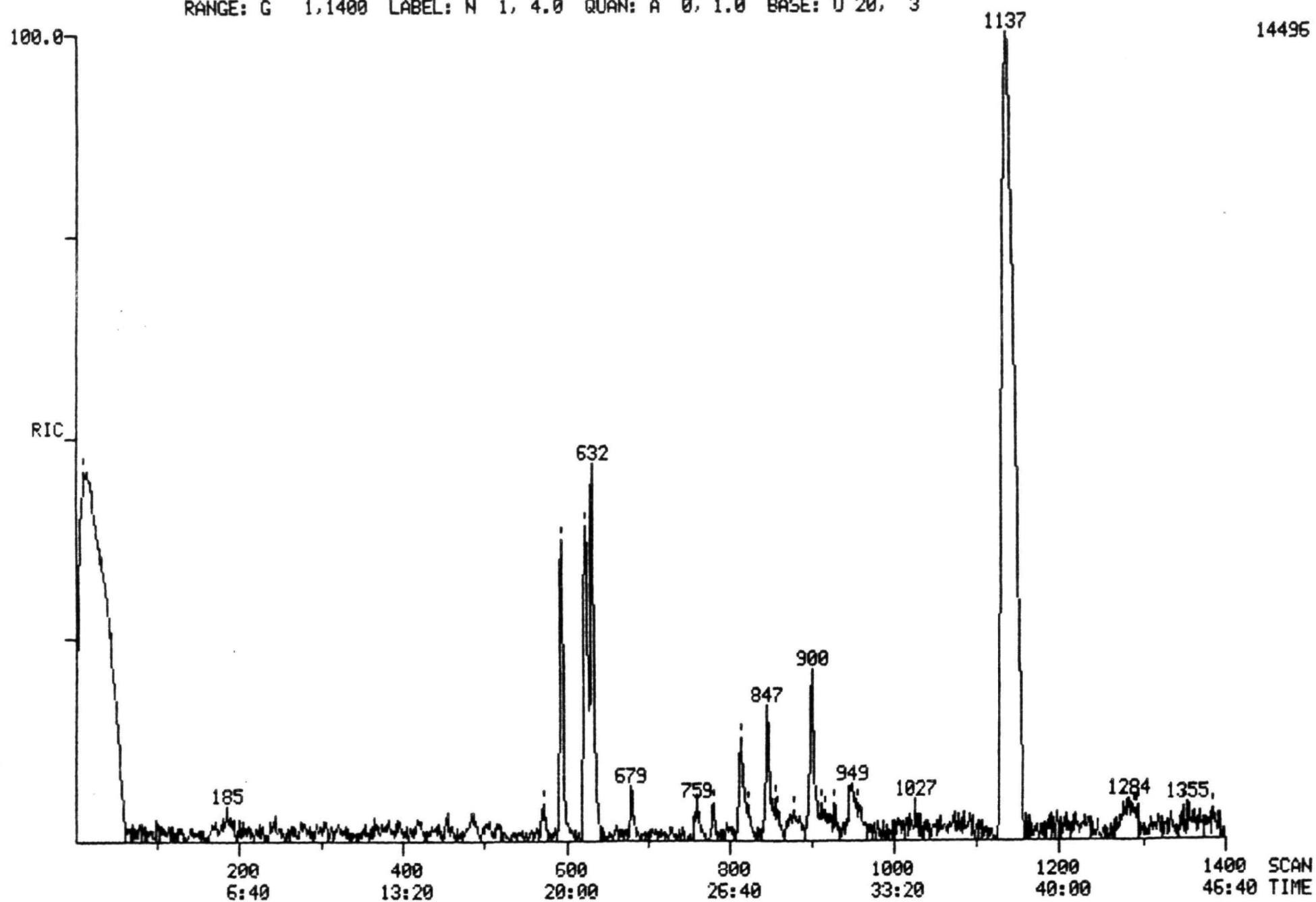
SAMPLE: B40352 EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40352 #1

CALI: CAL32008FEB #2

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 36C14

MATRIX FISH

ERG SAMPLE # 40353

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

NAPHTHALENE

1400

ETHYL HEXYL PHTHALATE

19300

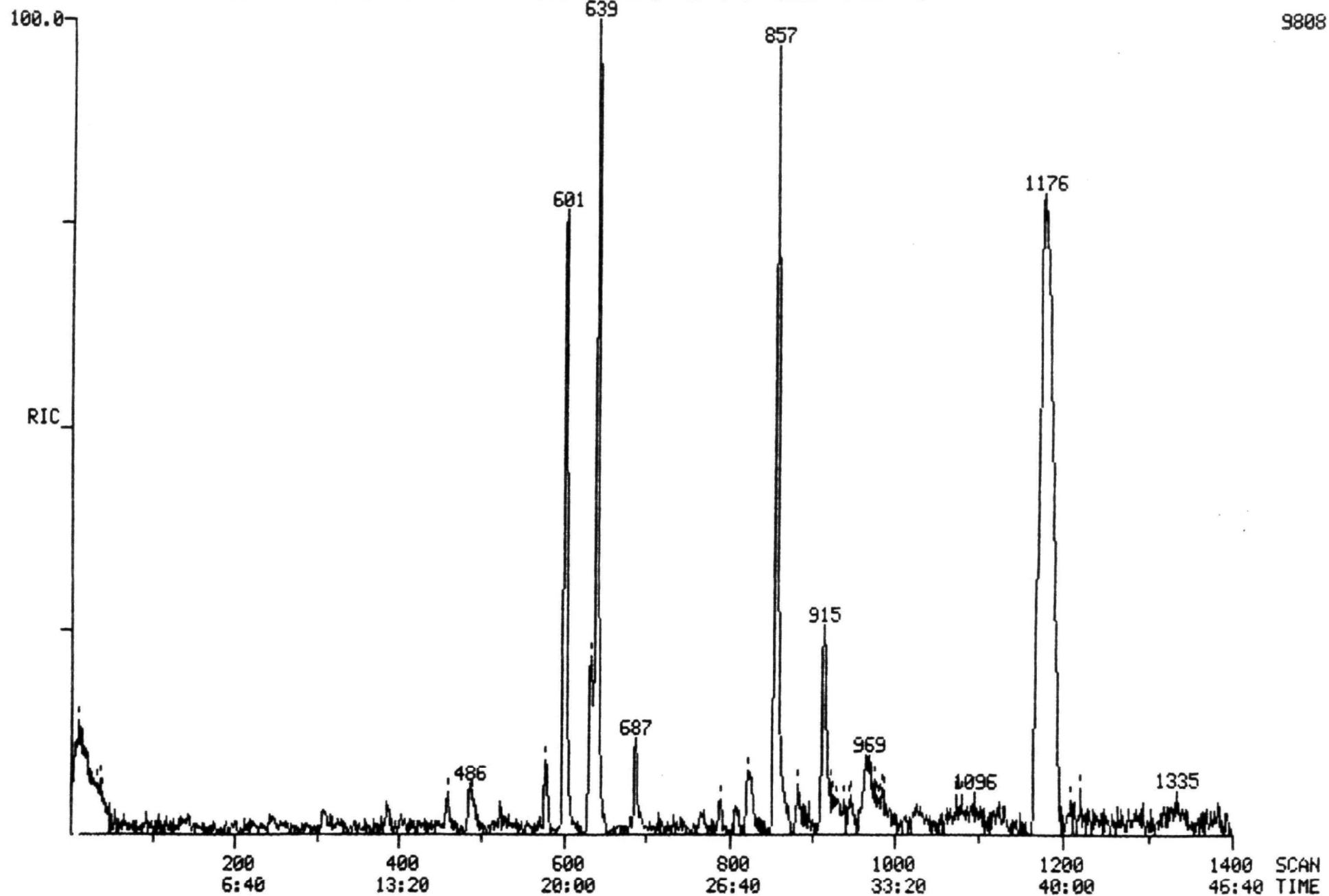
OTHER COMPOUNDS

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SAMPLE: B40353 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40353 #1
CALI: CAL32008FEB #2

SCANS 1 to 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C15

MATRIX FISH

ERG SAMPLE # 40354

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

CADMIUM

COBALT

COPPER

CHROMIUM

LEAD

MERCURY

SELENIUM

TIN

ZINC

% MOISTURE

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

200

ETHYL HEXYL PHTHALATE

2700

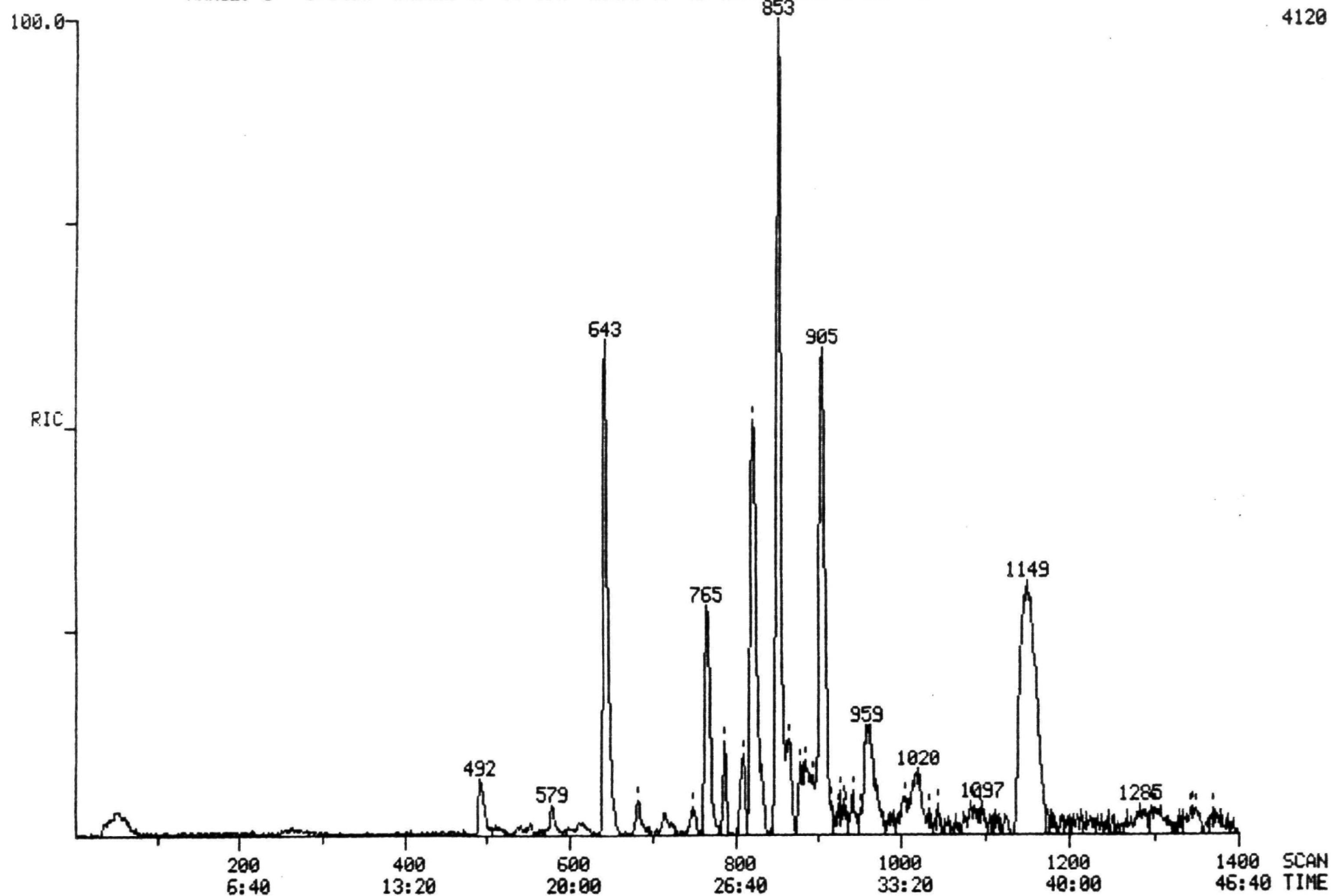
OTHER COMPOUNDS

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02/09/80 14:19:00
SAMPLE: B40354 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40354 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C16

MATRIX FISH

ERG SAMPLE # 40355A

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

160

ETHYL HEXYL PHTHALATE

2700

OTHER COMPOUNDS

NONE

SEE DUPLICATE ON NEXT PAGE

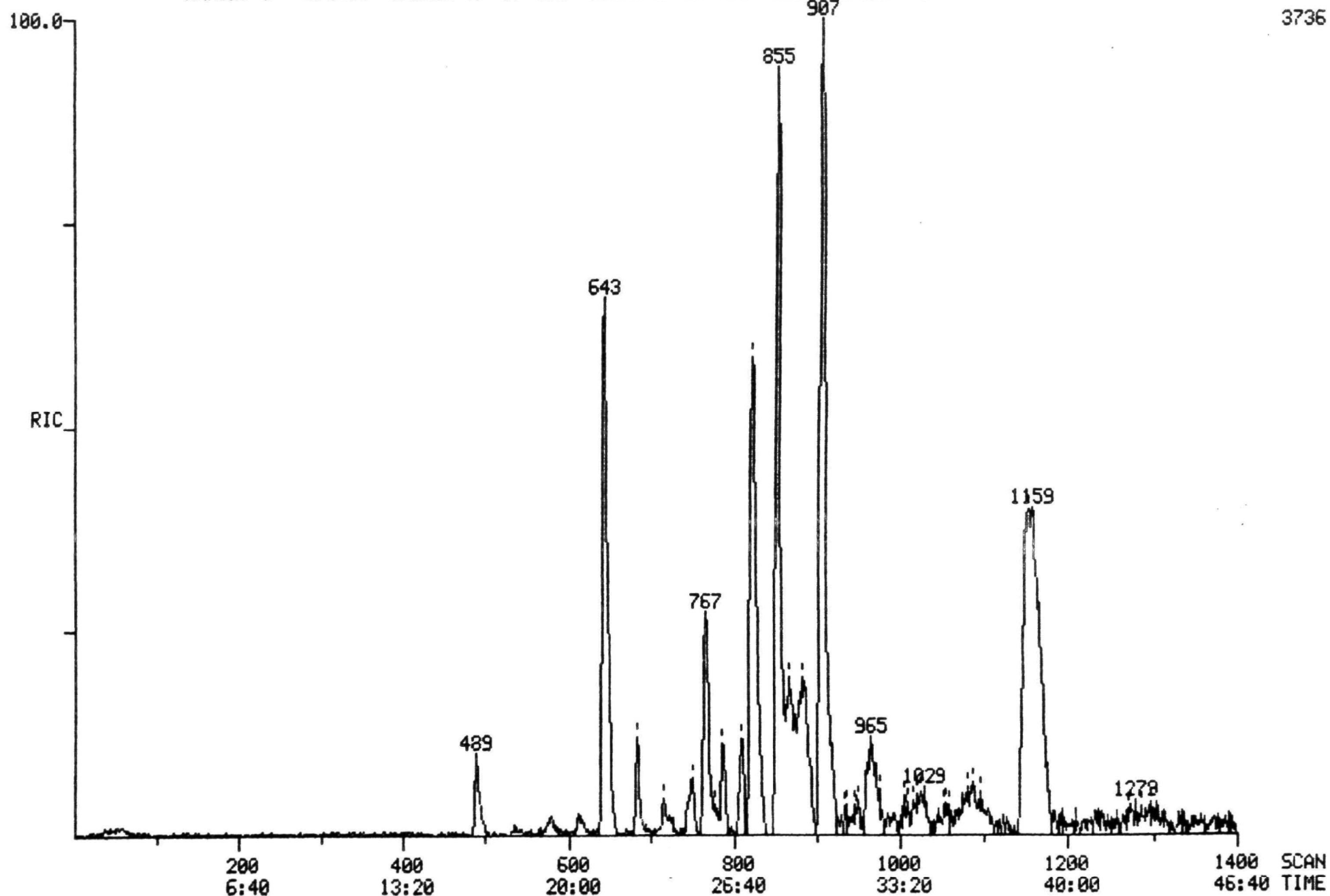
ENVIRONMENTAL RESEARCH GROUP, INC.

RIC
02/09/80 15:20:00
SAMPLE: B40355A EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40355A #1
CALI: CAL2FEB #3

SCANS 1 TO 1400

3736



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C16

MATRIX FISH

ERG SAMPLE # 40355B

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

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Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

280
1300

OTHER COMPOUNDS

NONE

RIC

02/08/80 19:51:00

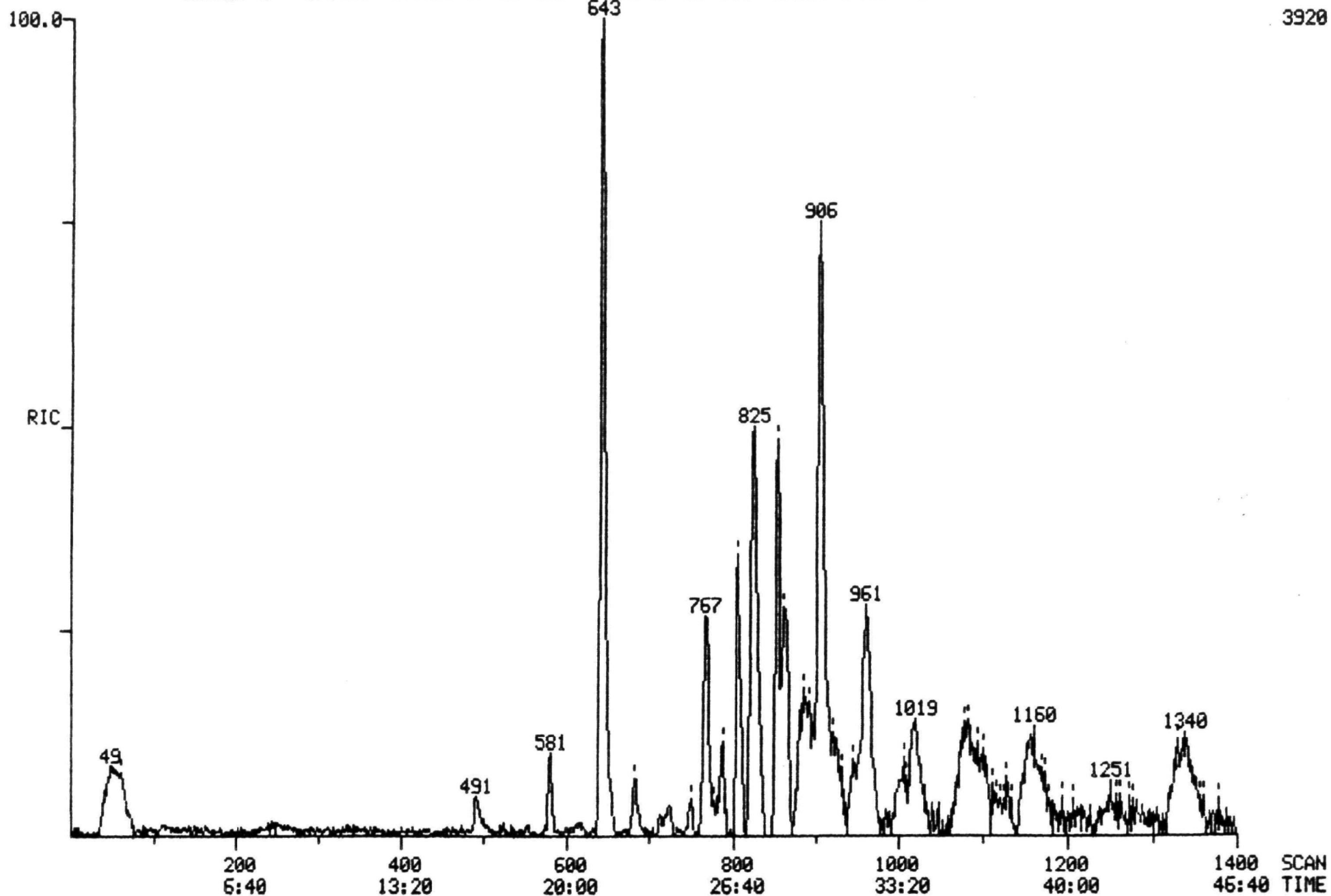
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RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40355B #1

CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB36C17
ERG SAMPLE # 40356

MATRIX FISH
SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
EHTYL HEXYL PHTHALATE

90
420

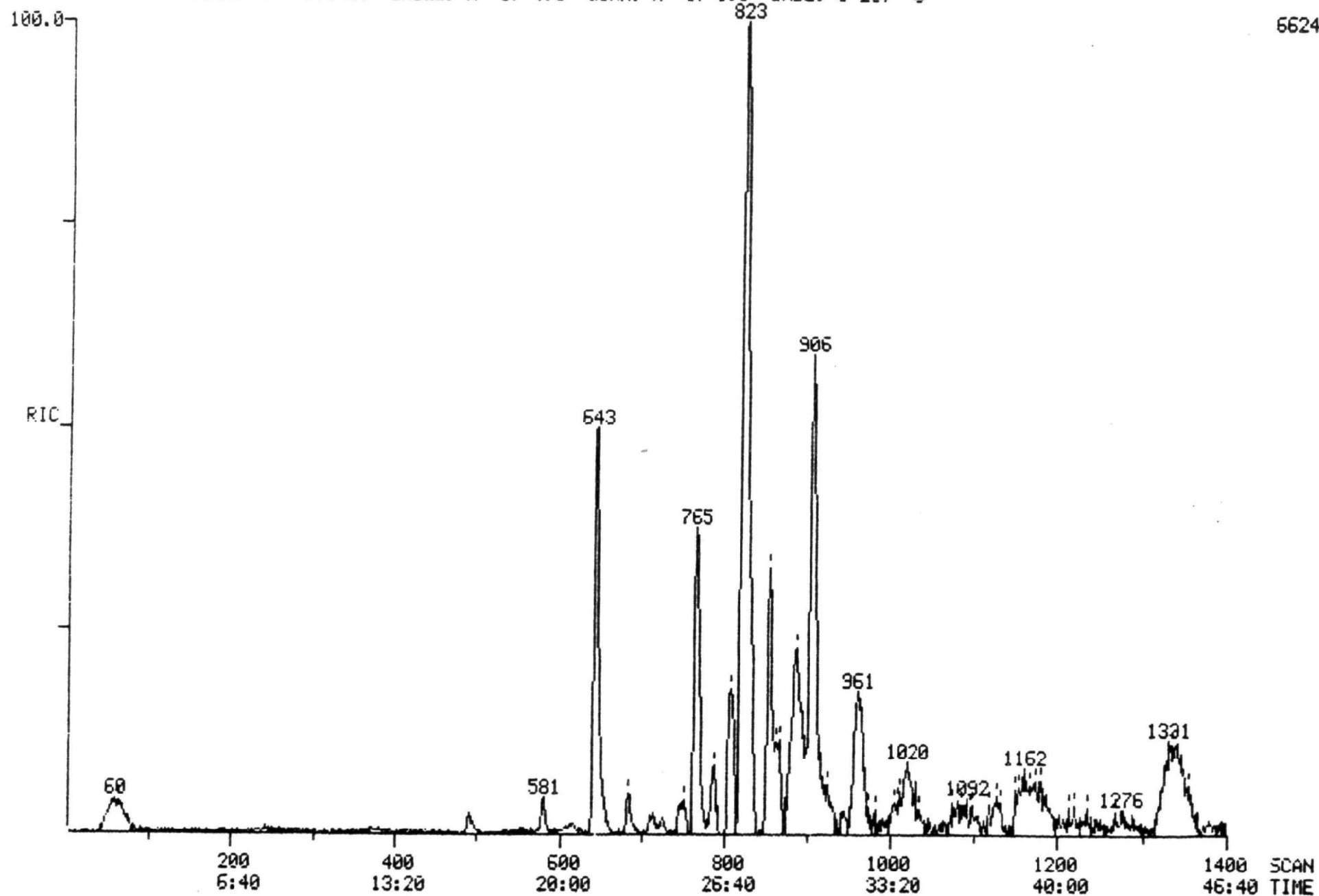
OTHER COMPOUNDS

NONE

RIC
02/08/80 20:52:00
SAMPLE: B40356 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40356 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB36C18

MATRIX FISH

ERG SAMPLE # 40357

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

460

ETHYL HEXYL PHTHALATE

1500

OTHER COMPOUNDS

NONE

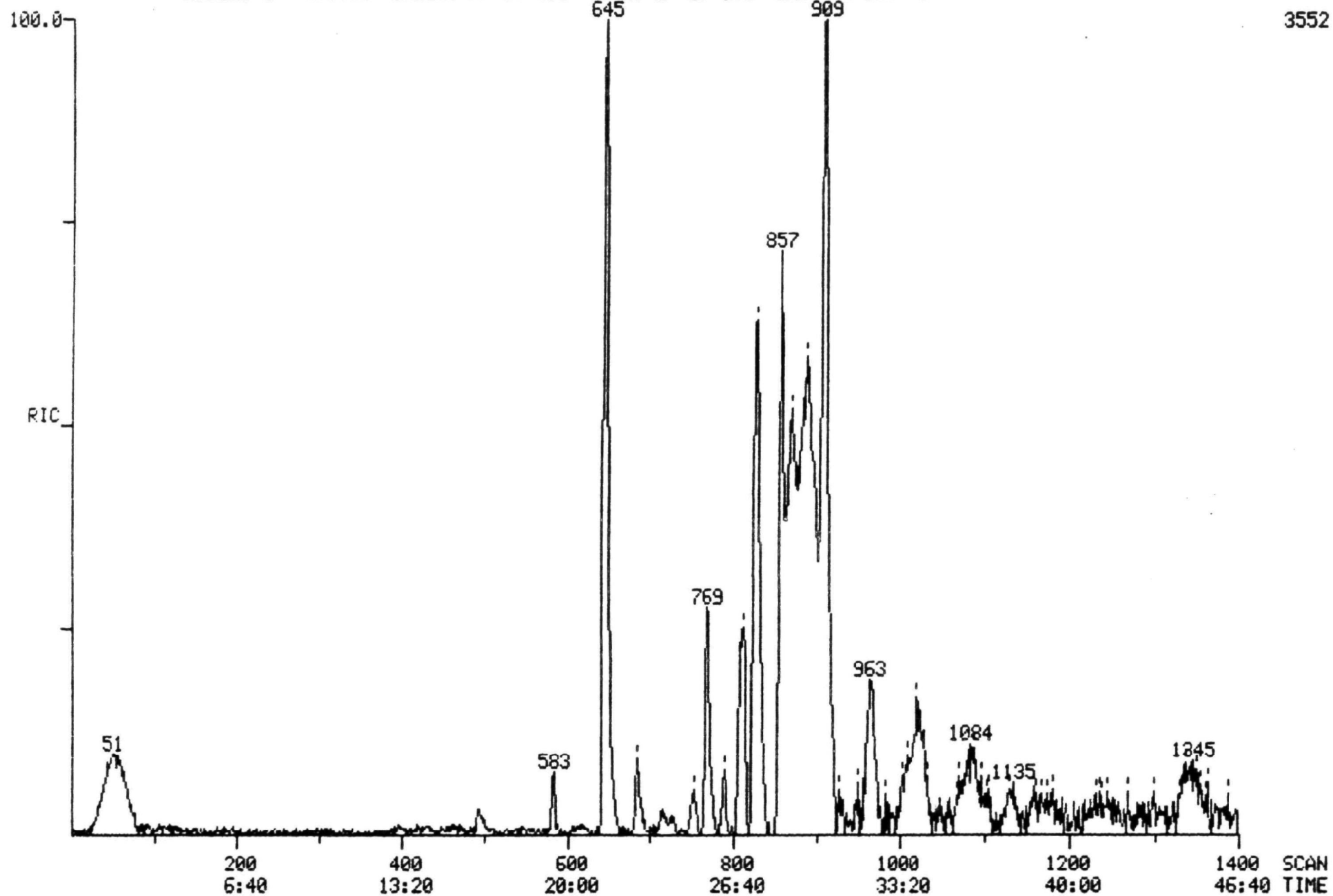
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02/08/80 21:54:00

DATA: B40357 #1
CALI: CAL28 #1

SCANS 1 TO 1400

SAMPLE: B40357 EPA FISH

RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C19
ERG SAMPLE # 40358

MATRIX FISH
SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	300
BUTYL BENZYL PHTHALATE	430
ETHYL HEXYL PHTHALATE	1200

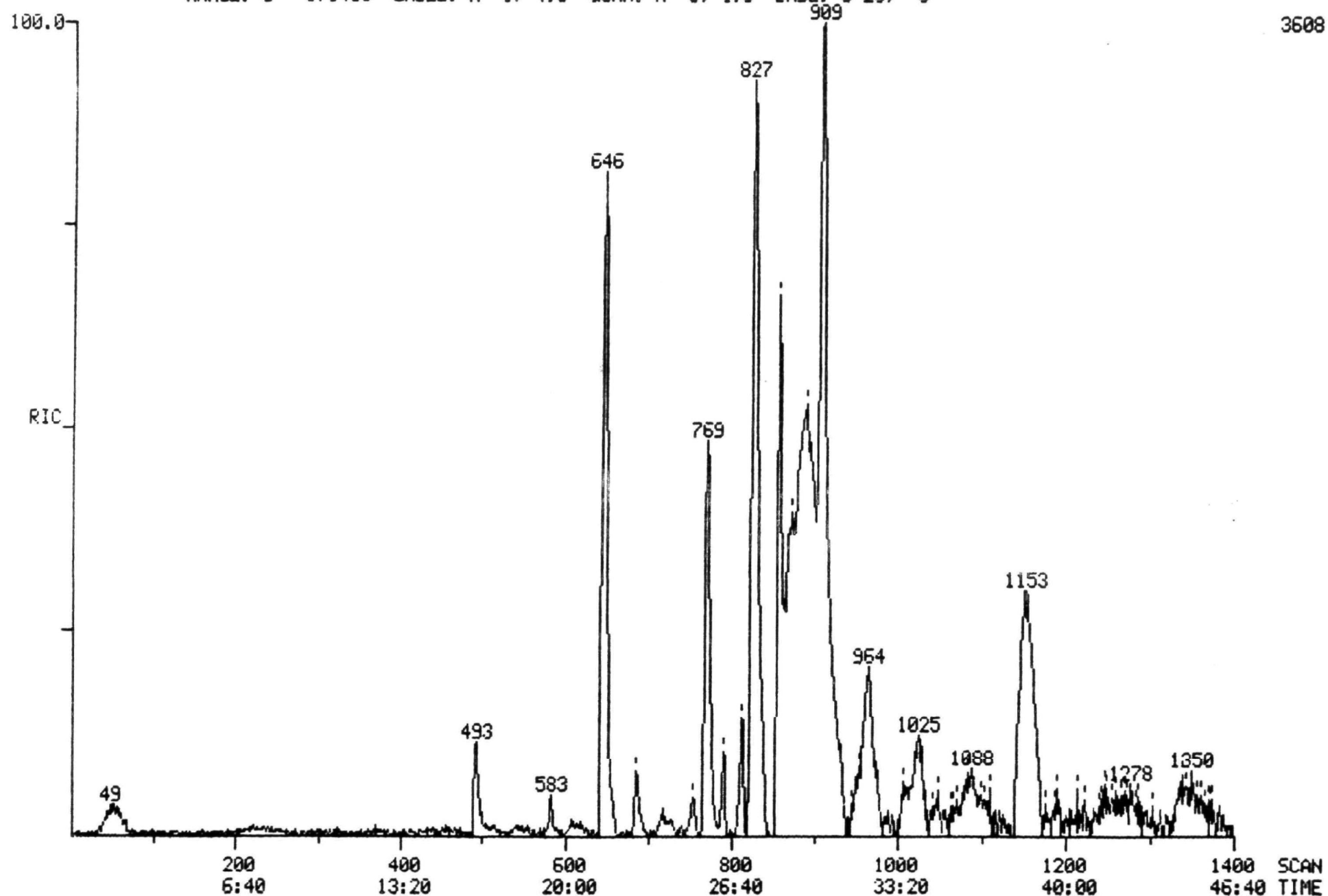
OTHER COMPOUNDS

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RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40358 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 36C20

MATRIX FISH

ERG SAMPLE # 40359

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

1700

ETHYL HEXYL PHTHALATE

4400

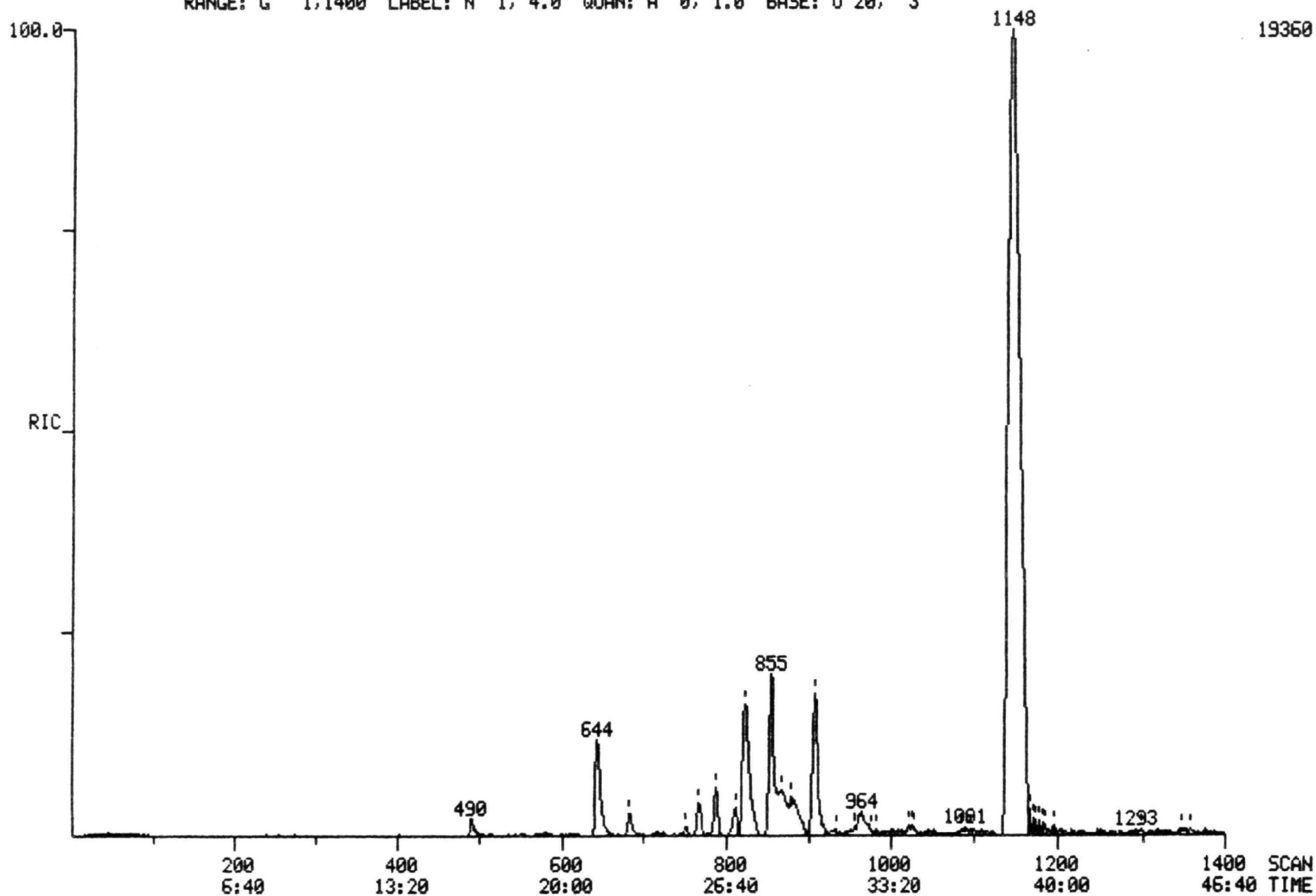
OTHER COMPOUNDS

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02/09/80 16:26:00
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RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40359 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C02

MATRIX WATER

ERG SAMPLE # 40360

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	1.9 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.006
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.007
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	<5

OTHER COMPOUNDS

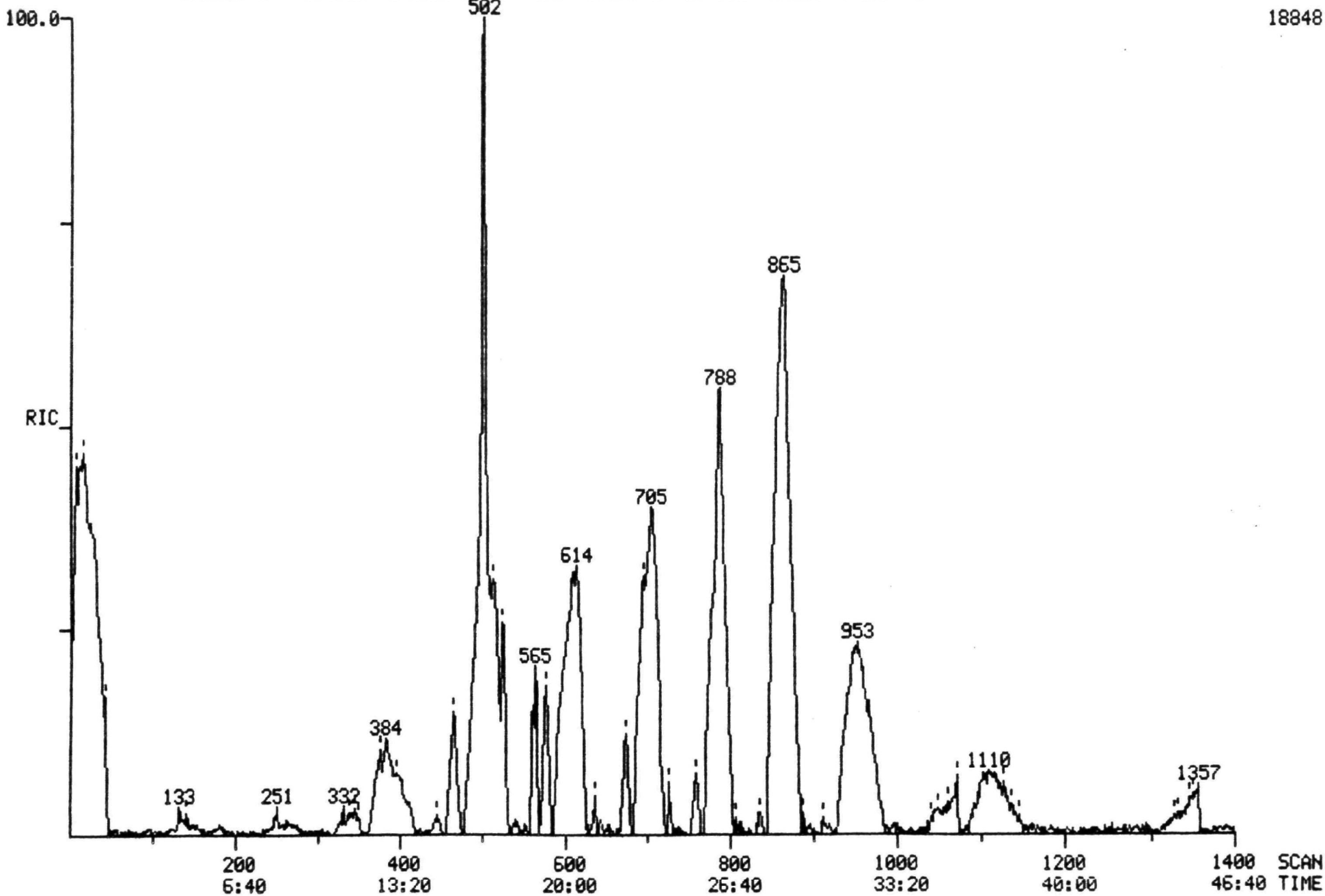
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01/21/80 18:27:00
SAMPLE: B40360, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40360 #1
CALI: CAL121B #1

SCANS 1 TO 1400

18848



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB37C03

MATRIX WATER

ERG SAMPLE # 40361

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	<.005
% MOISTURE	—

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

<5

OTHER COMPOUNDS

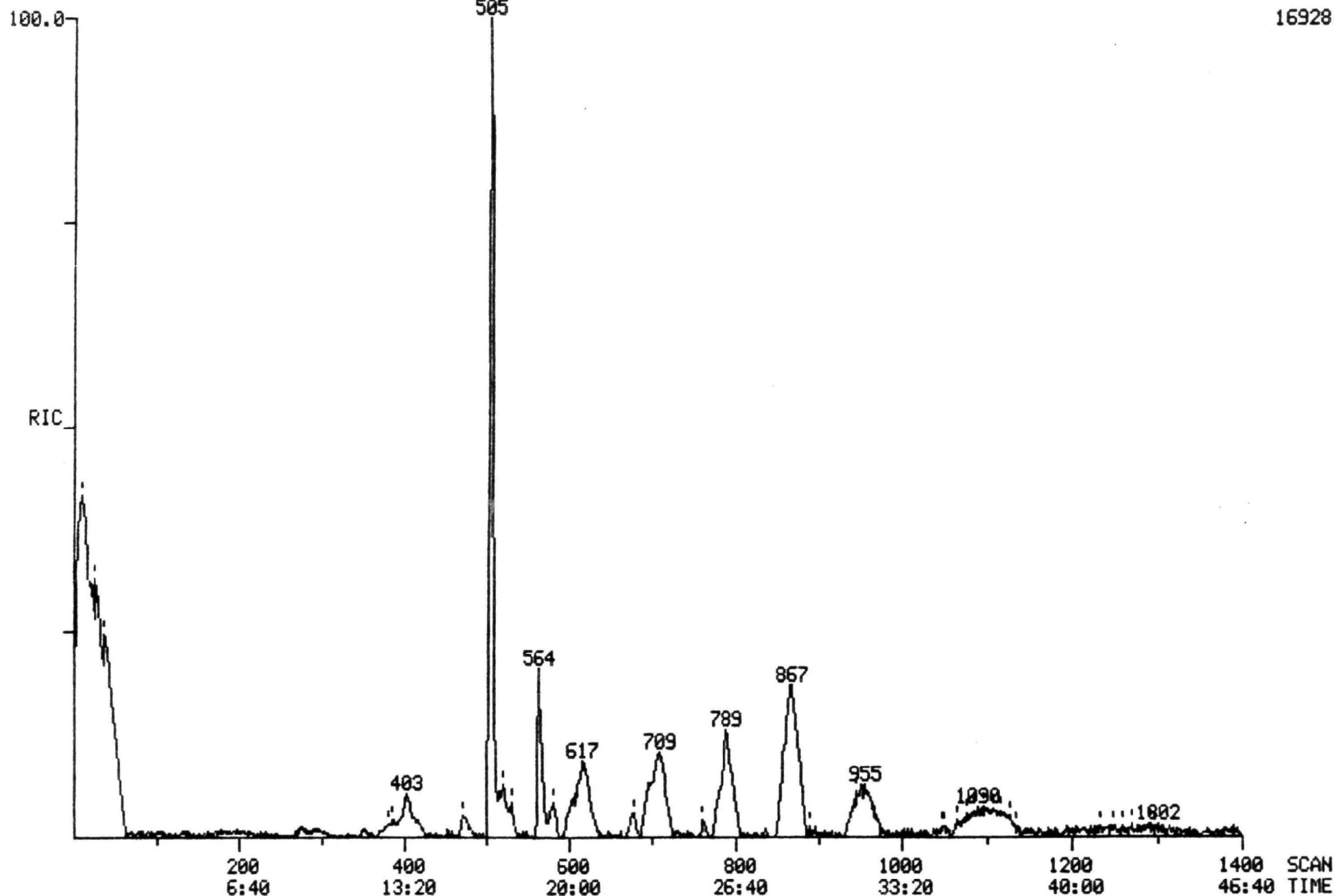
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RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40361 #1
CALI: CAL121B #1

SCANS 1 TO 1400

16928



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 37C04

MATRIX WATER

ERG SAMPLE # 40362

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	1.3 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	1.7 µg/l
TIN	<.08
ZINC	.005
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

22

OTHER COMPOUNDS

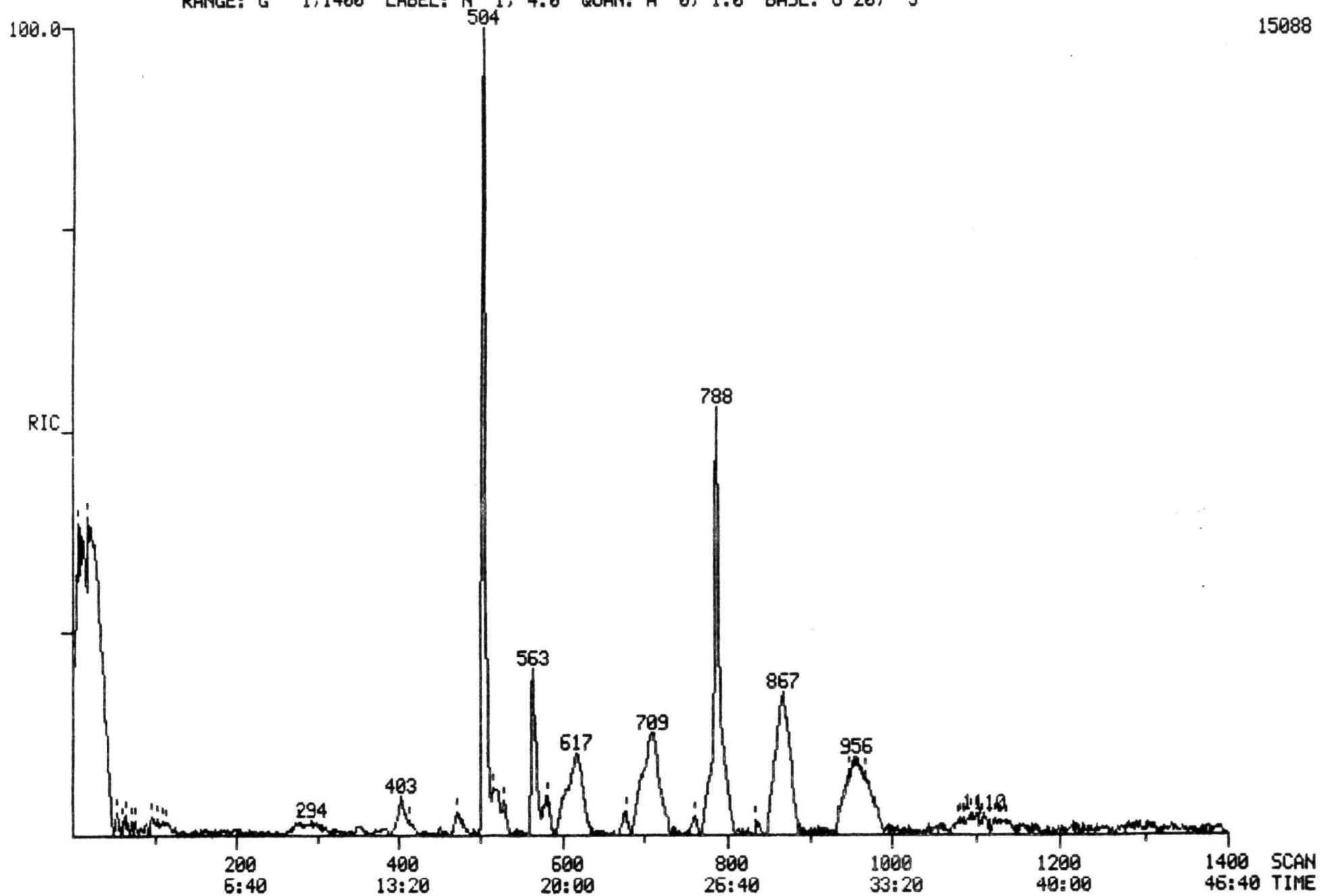
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SAMPLE: B40362, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40362 #1
CALI: CAL121B #1

SCANS 1 10 1400

15088



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C05

MATRIX WATER

ERG SAMPLE # 40363

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	1.3 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	.0005
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.005
% MOISTURE	—

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

<5

OTHER COMPOUNDS

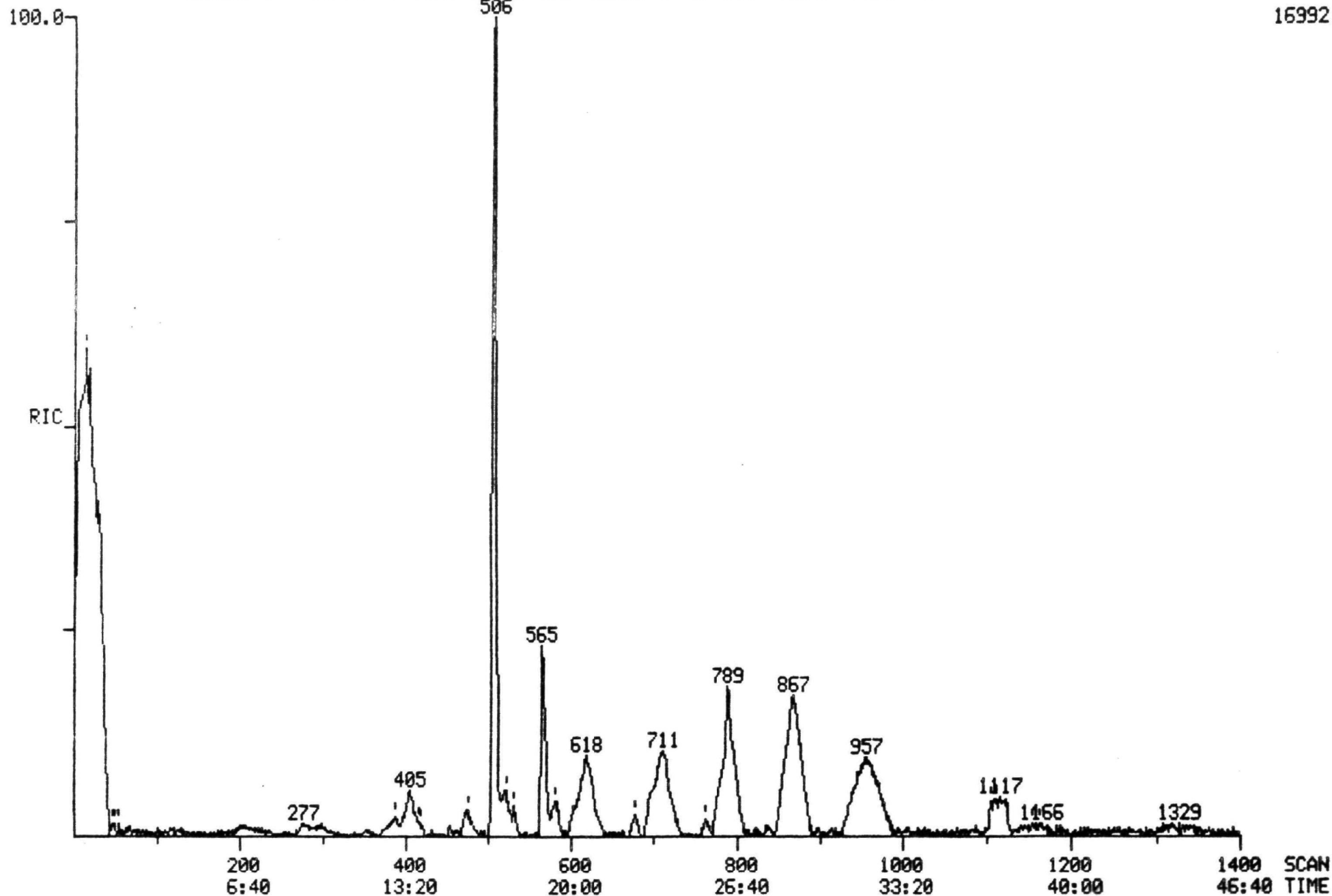
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RIC
01/21/80 21:45:00
SAMPLE: B40363, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40363 #1
CALI: CAL121B #1

SCANS 1 TO 1400

16992



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C06

MATRIX WATER

ERG SAMPLE # 40364

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	1.1 µg/l
TIN	<.08
ZINC	.006
% MOISTURE	—

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	<5

OTHER COMPOUNDS

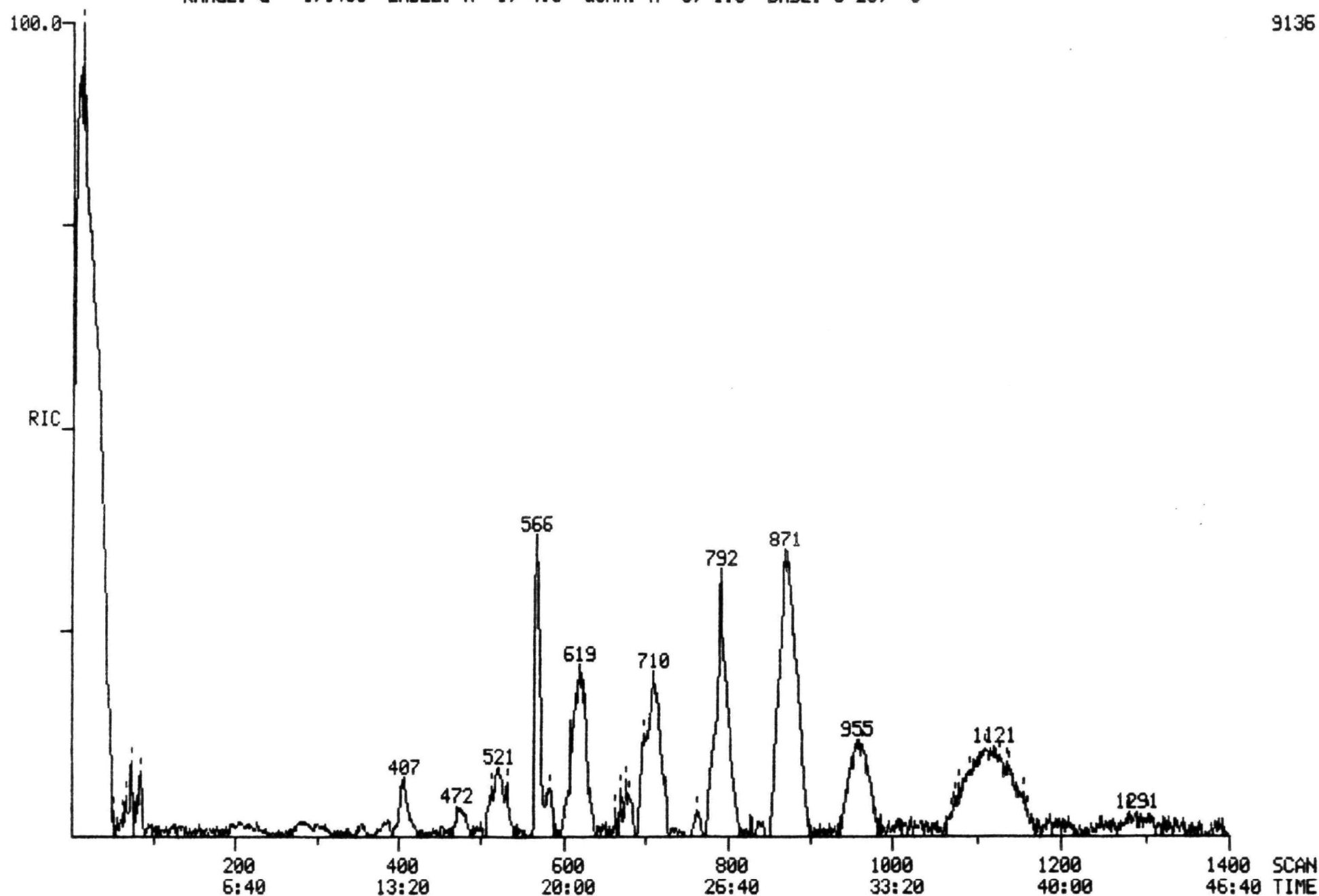
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RIC
01/21/80 22:48:00
SAMPLE: B40364, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40364 #1
CALI: CAL121B #1

SCANS 1 TO 1400

9136



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C07

MATRIX WATER

ERG SAMPLE # 40365

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.005
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N

ETHYL HEXYL PHTHALATE

11

OTHER COMPOUNDS

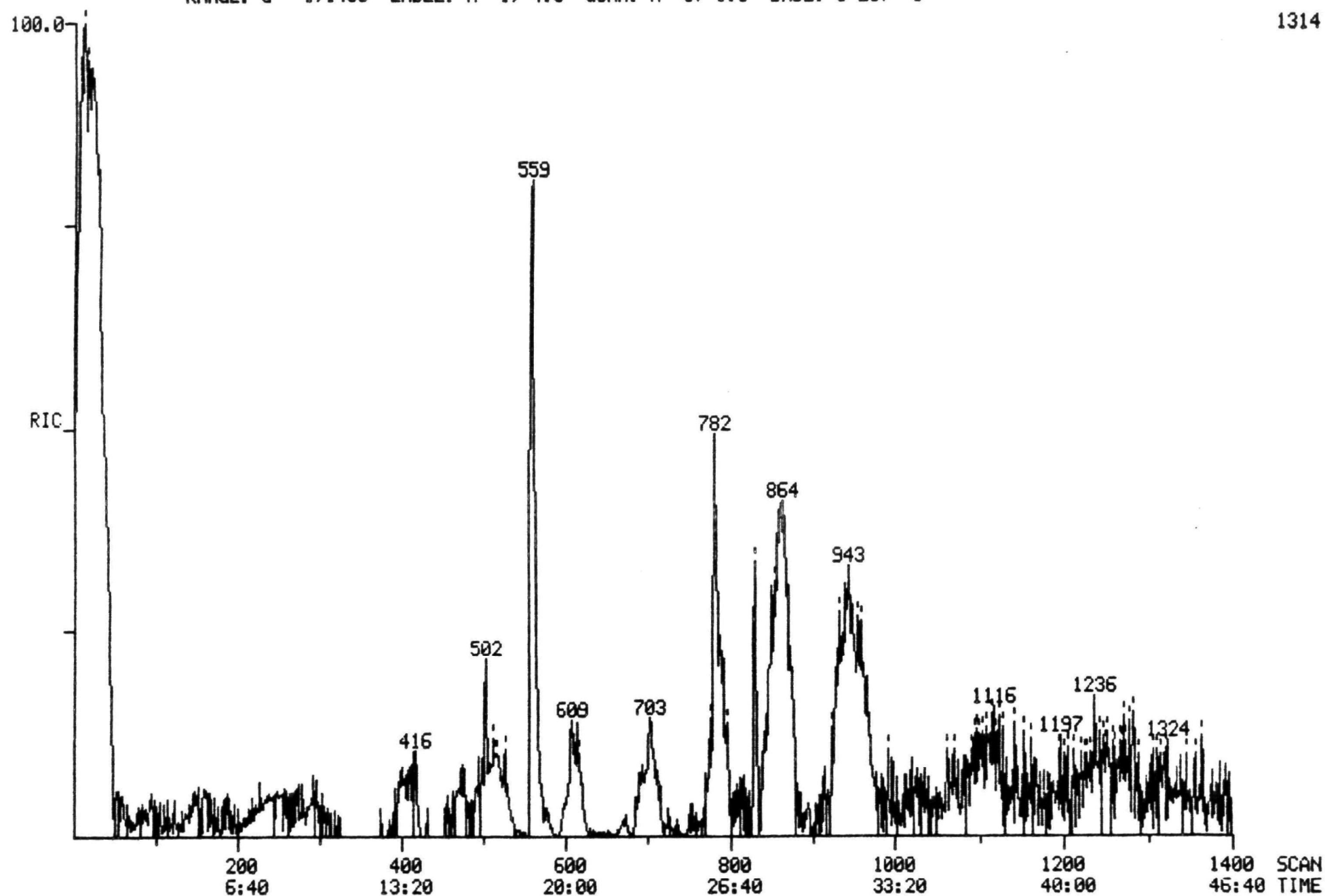
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RIC
01/22/80 8:45:00
SAMPLE: B40365: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40365 #1
CALI: CAL122 #1

SCANS 1 10 1400

1314



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 37C08

MATRIX WATER

ERG SAMPLE # 40366

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	.75 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	.0005
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	<.005
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	10

OTHER COMPOUNDS

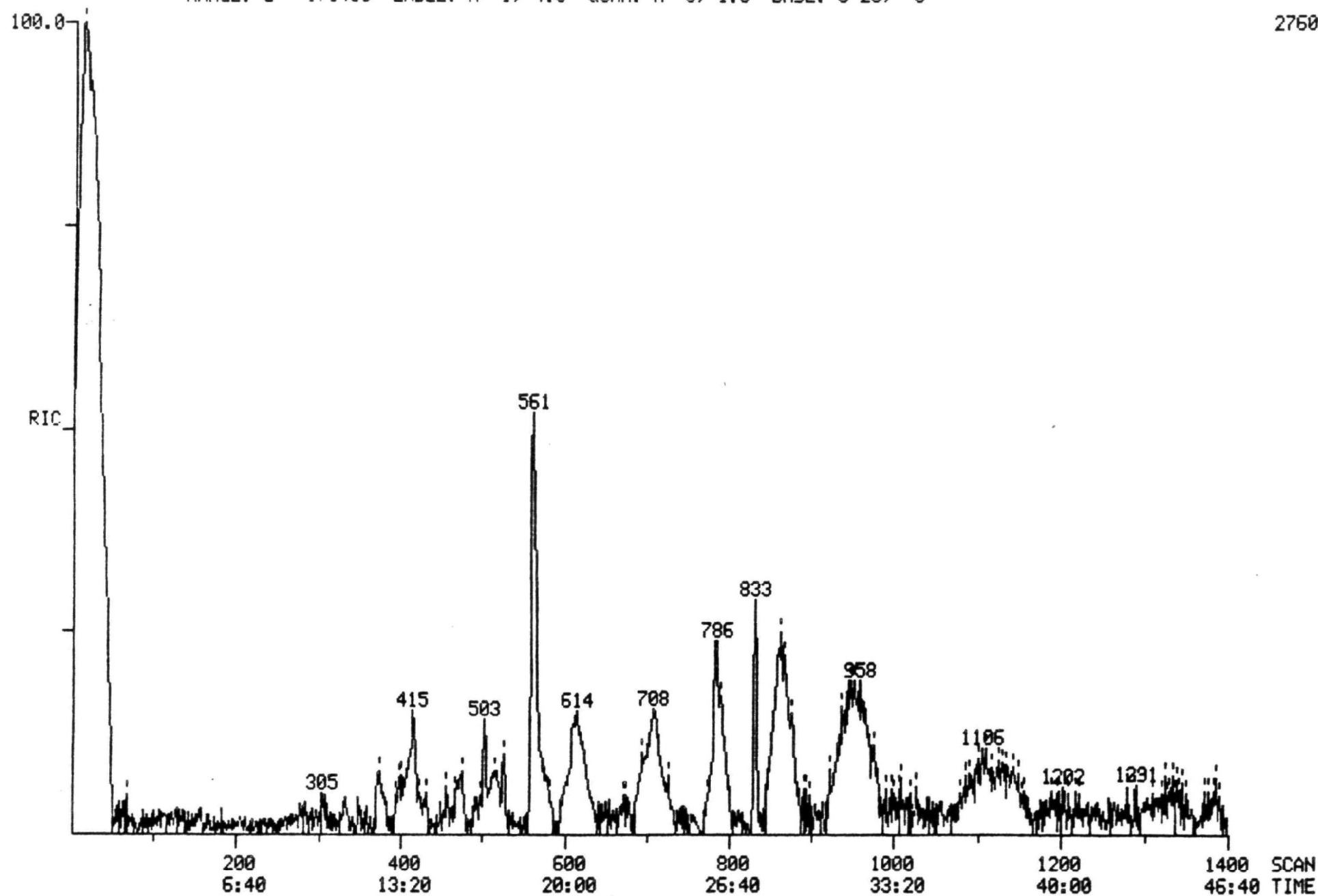
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01/22/80 9:48:00
SAMPLE: B40366: 3 UL SAMPLE, 50 NG
RANGE: G 1/1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40366 #1
CALI: CAL122 #1

SCANS 1 TO 1400

2750



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C09

MATRIX WATER

ERG SAMPLE # 40367

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	.56 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.010
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

<5
<5

OTHER COMPOUNDS

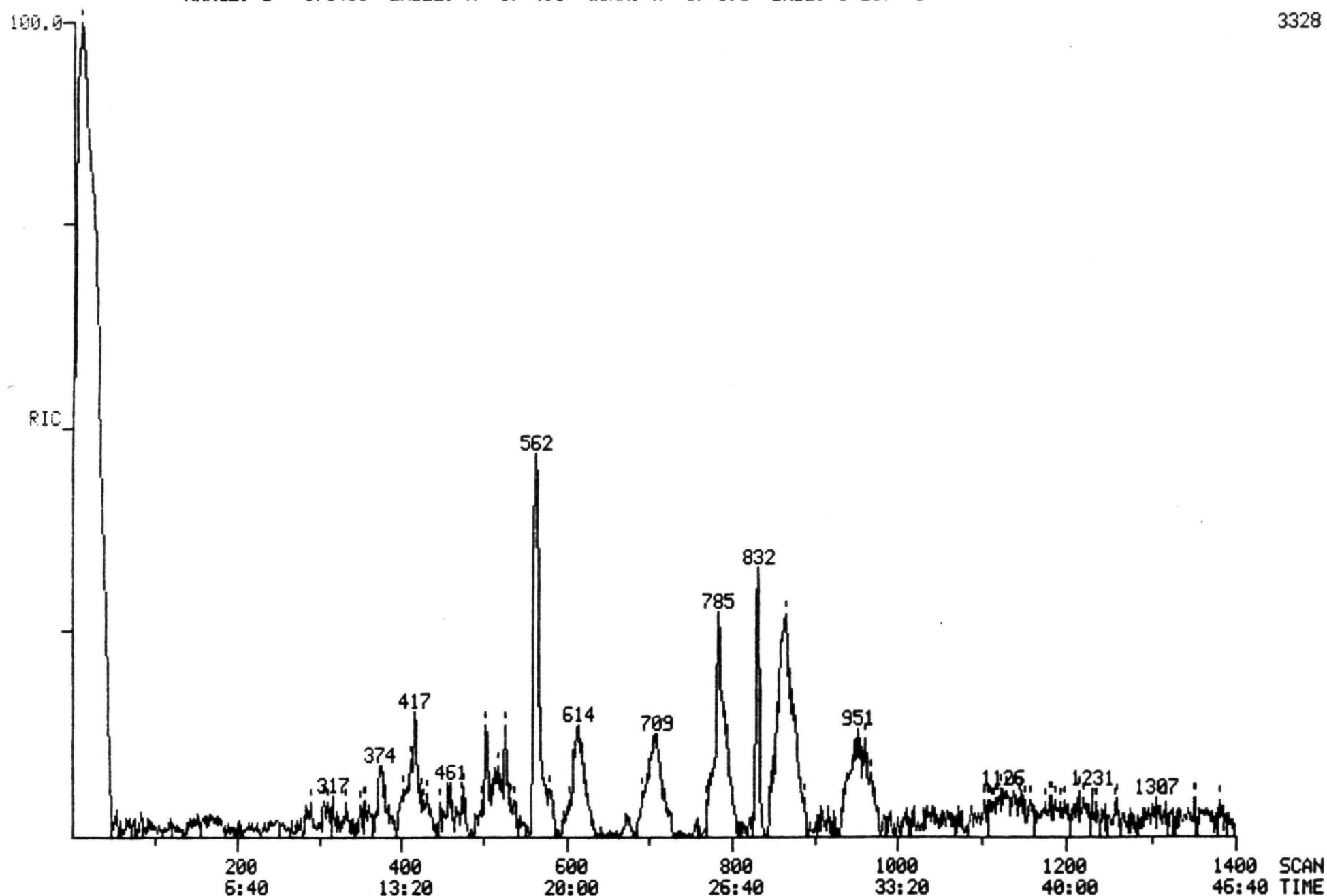
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01/22/80 10:50:00
SAMPLE: B40367: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40367 #1
CALI: CAL122 #1

SCANS 1 TO 1400

3328



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C10

MATRIX WATER

ERG SAMPLE # 40368

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	.56 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	1.7 µg/l
TIN	<.08
ZINC	.008
% MOISTURE	—

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	<5

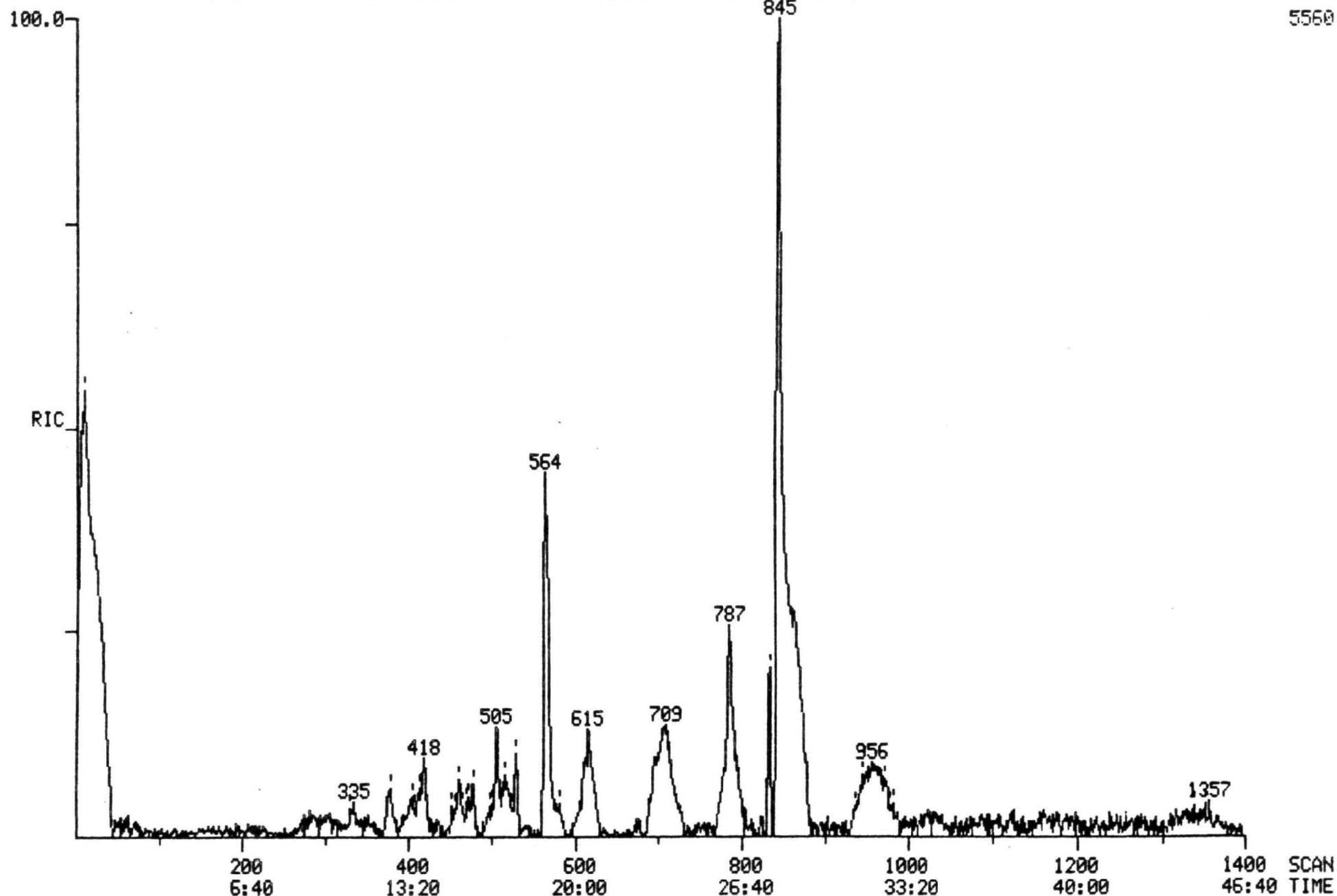
OTHER COMPOUNDS

NONE

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01/22/80 16:33:00
SAMPLE: B40368, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40368 #1
CALI: CAL122 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C11

MATRIX WATER

ERG SAMPLE # 40369

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	1.1 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	<.005
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

31

OTHER COMPOUNDS

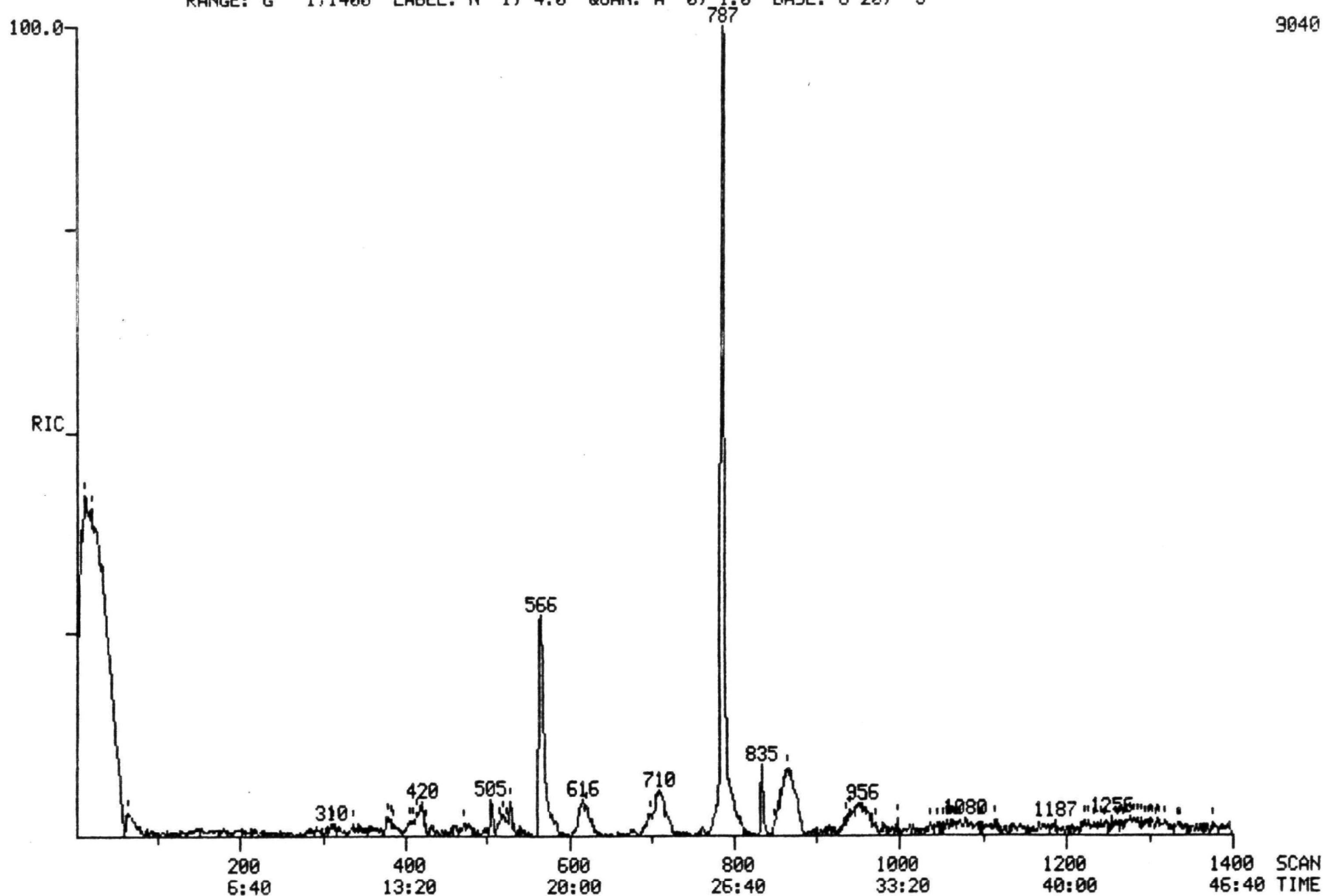
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01/22/80 18:45:00
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RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40369 #1
CALI: CAL122 #1

SCANS 1 TO 1400

9040



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C12

MATRIX WATER

ERG SAMPLE # 40370A

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	.56 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	<.005
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

<5
10

OTHER COMPOUNDS

NONE

SEE DUPLICATE ON FOLLOWING PAGE

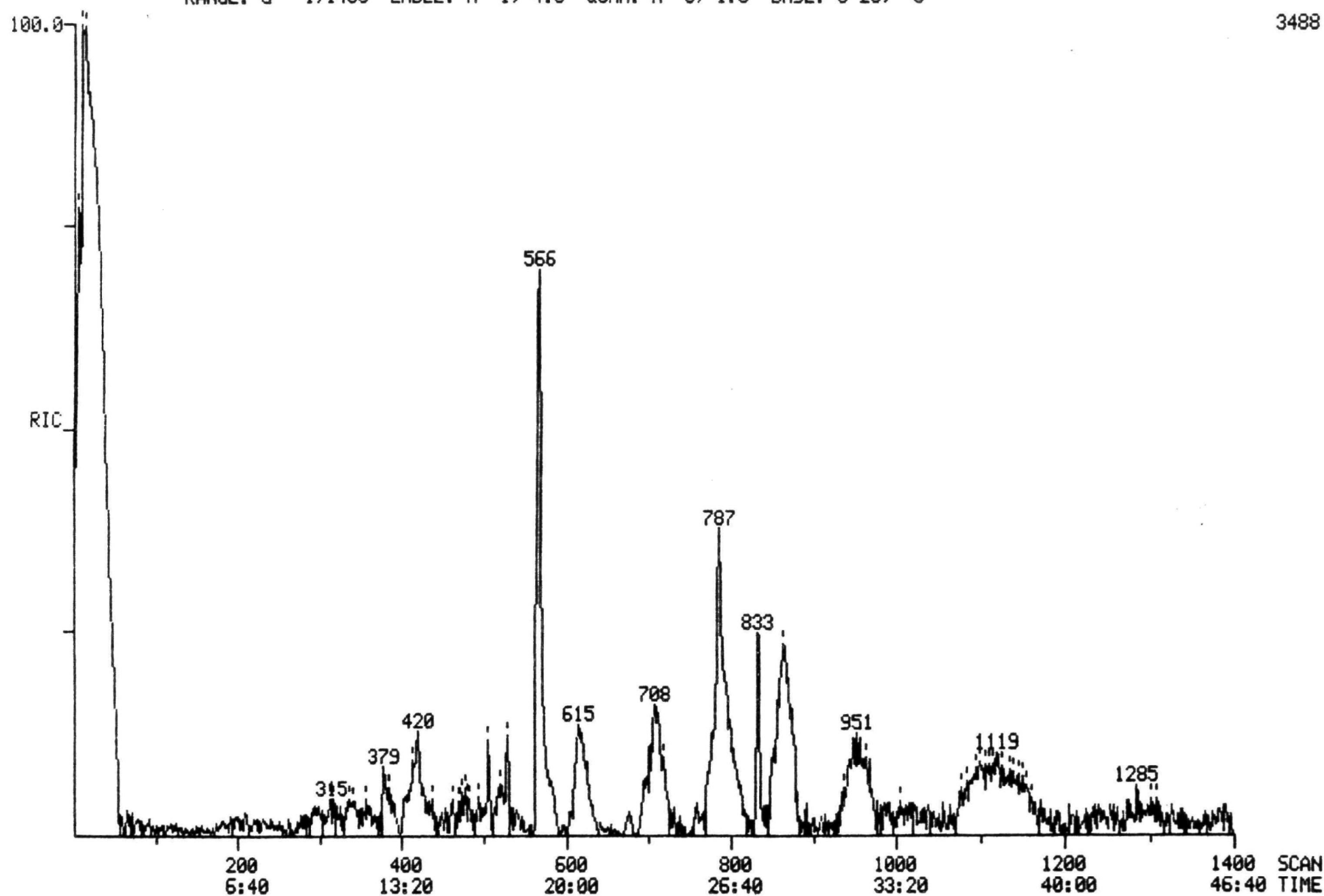
ENVIRONMENTAL RESEARCH GROUP, INC.

RIC
01/22/80 19:48:00
SAMPLE: B40370A, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40370A #1
CALI: CAL122 #1

SCANS 1 TO 1400

3488



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C12

MATRIX WATER

ERG SAMPLE # 40370 B

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	.56 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	<.005
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N</u>
DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	10

OTHER COMPOUNDS

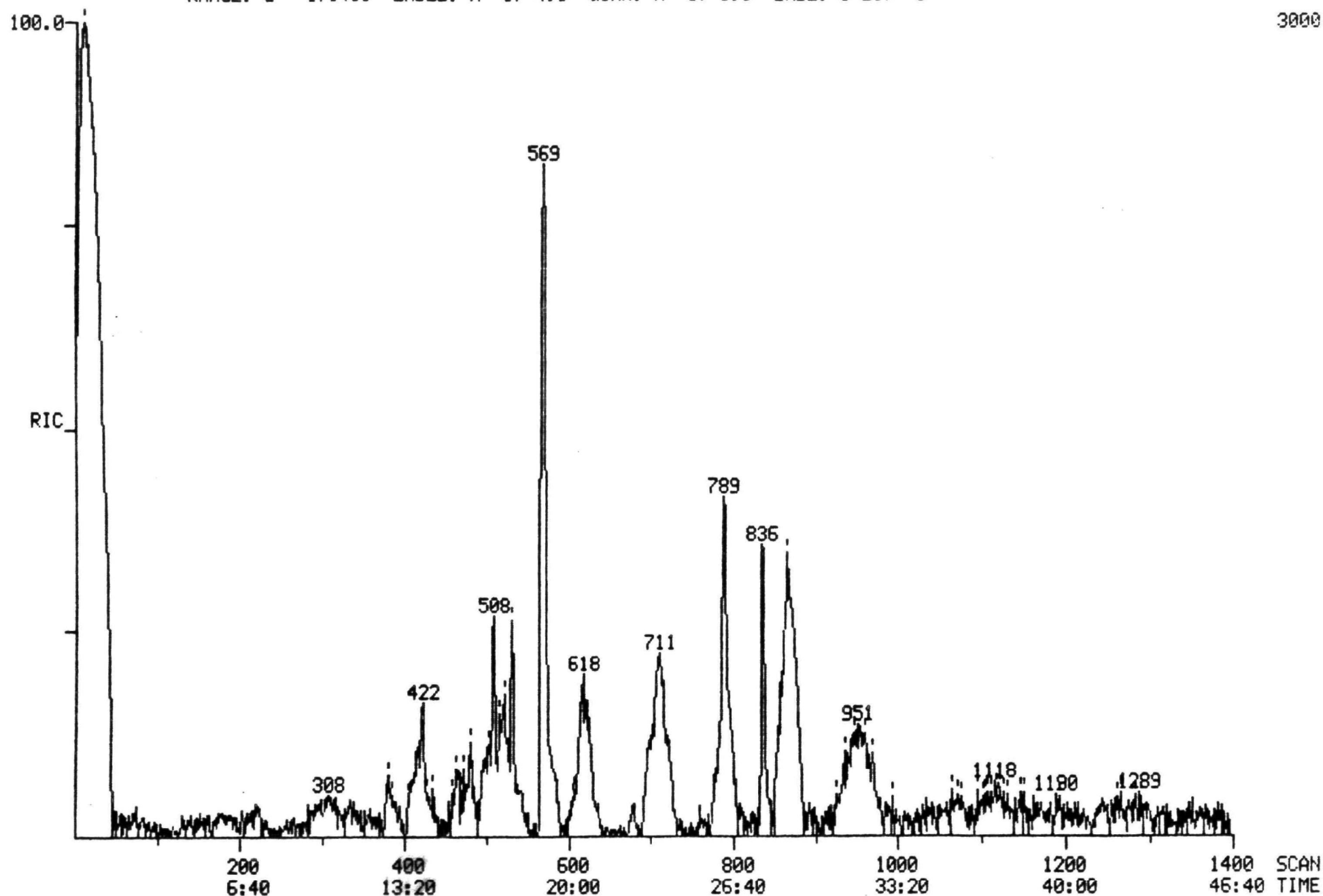
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01/22/80 20:59:00
SAMPLE: B40370B, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40370B #1
CALI: CAL122 #1

SCANS 1 TO 1400

3000



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB37C13

MATRIX WATER

ERG SAMPLE # 40371

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.50 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.006
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	16

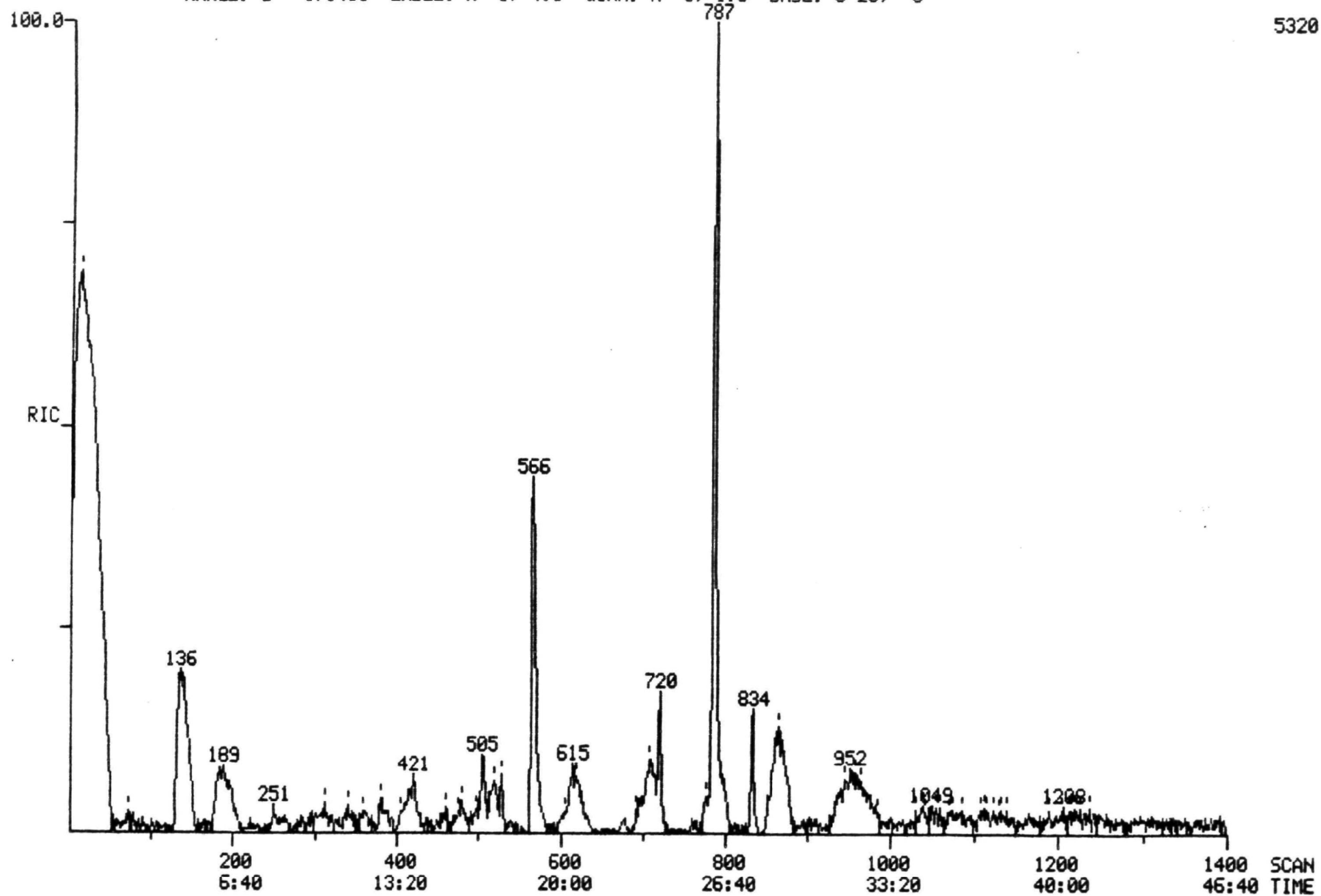
OTHER COMPOUNDS

NONE

RIC
01/22/80 22:02:00
SAMPLE: B40371, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40371 #1
CALI: CAL122 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C14

MATRIX WATER

ERG SAMPLE # 40372

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.006
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

<5
15

OTHER COMPOUNDS

NONE

RIC
01/22/80 23:04:00

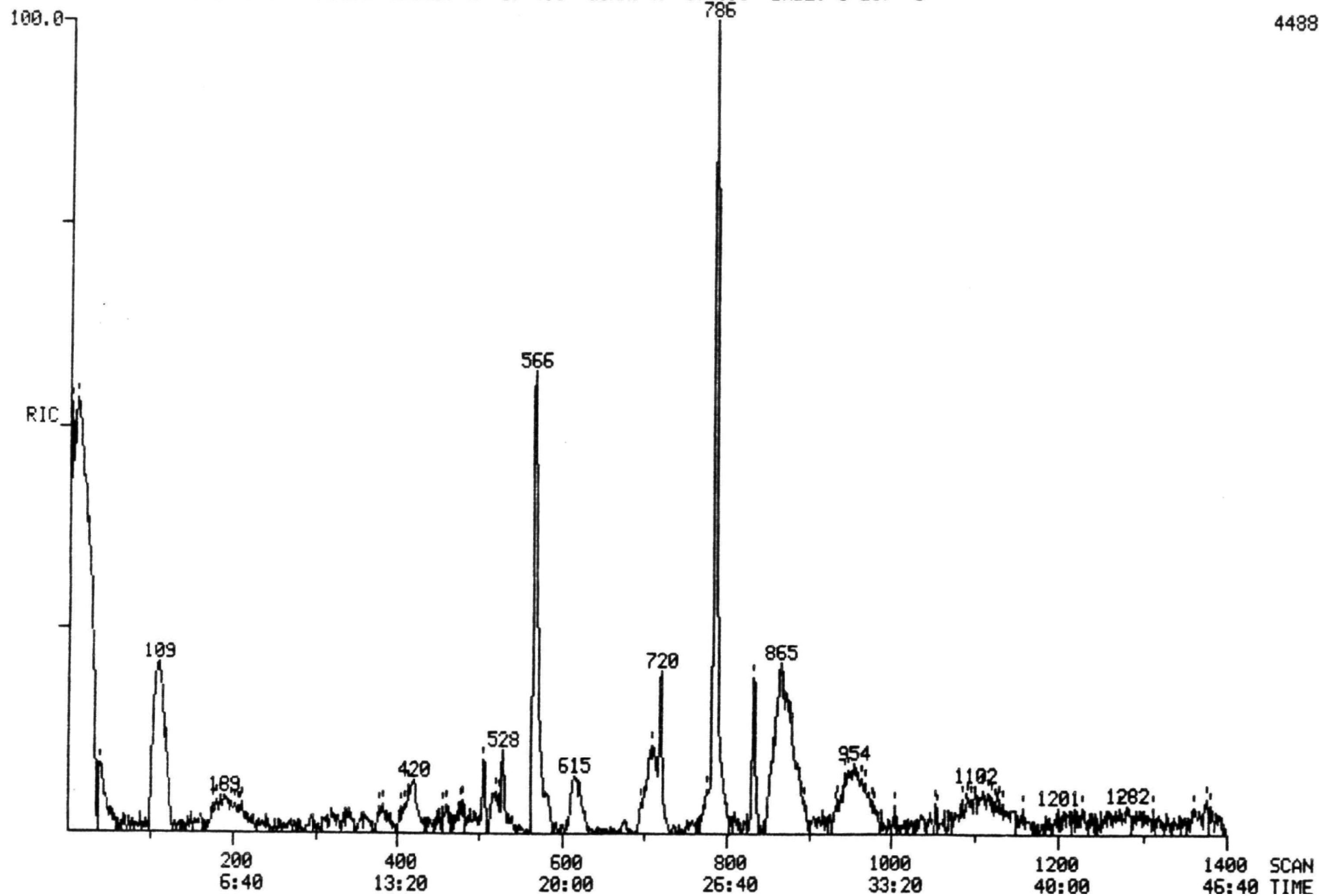
DATA: B40372 #111

SCANS 1 TO 1400

CALI: CAL122 #1

SAMPLE: B40372, 3 UL + 1 UL IS

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C15

MATRIX WATER

ERG SAMPLE # 40373

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	.75 µg/1
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/1
TIN	<.08
ZINC	.007
% MOISTURE	--

Results reported in mg/1 unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

<5
11

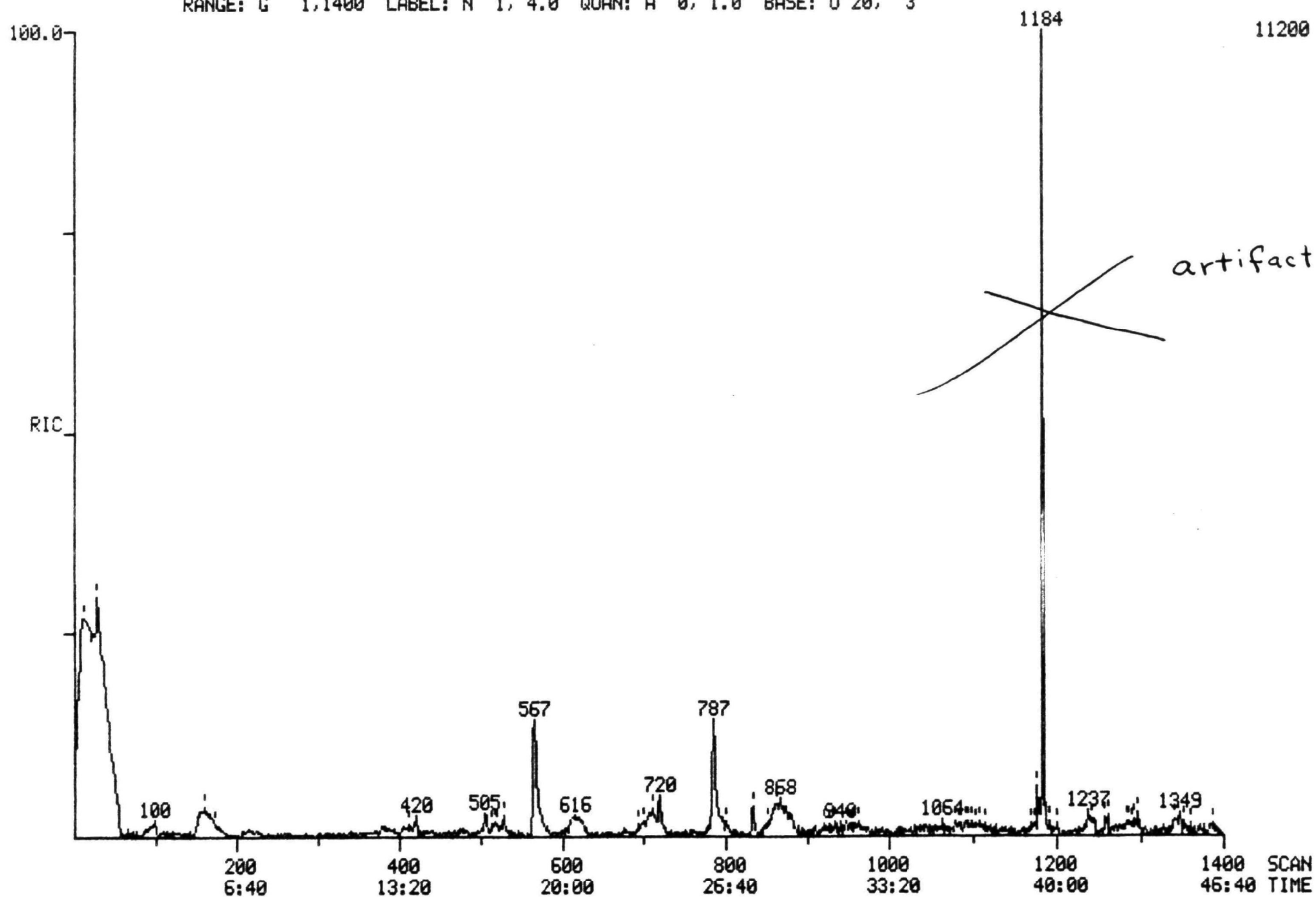
OTHER COMPOUNDS

NONE

RIC
01/23/80 9:05:00
SAMPLE: B40373: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40373 #787
CALI: CAL123 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C16

MATRIX WATER

ERG SAMPLE # 40374

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	1.7 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.009
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

4-BROMOPHENYL PHENYLETHER	<5
ANTHRACENE	<5
DIBUTYL PHTHALATE	10
ETHYL HEXYL PHTHALATE	24

OTHER COMPOUNDS

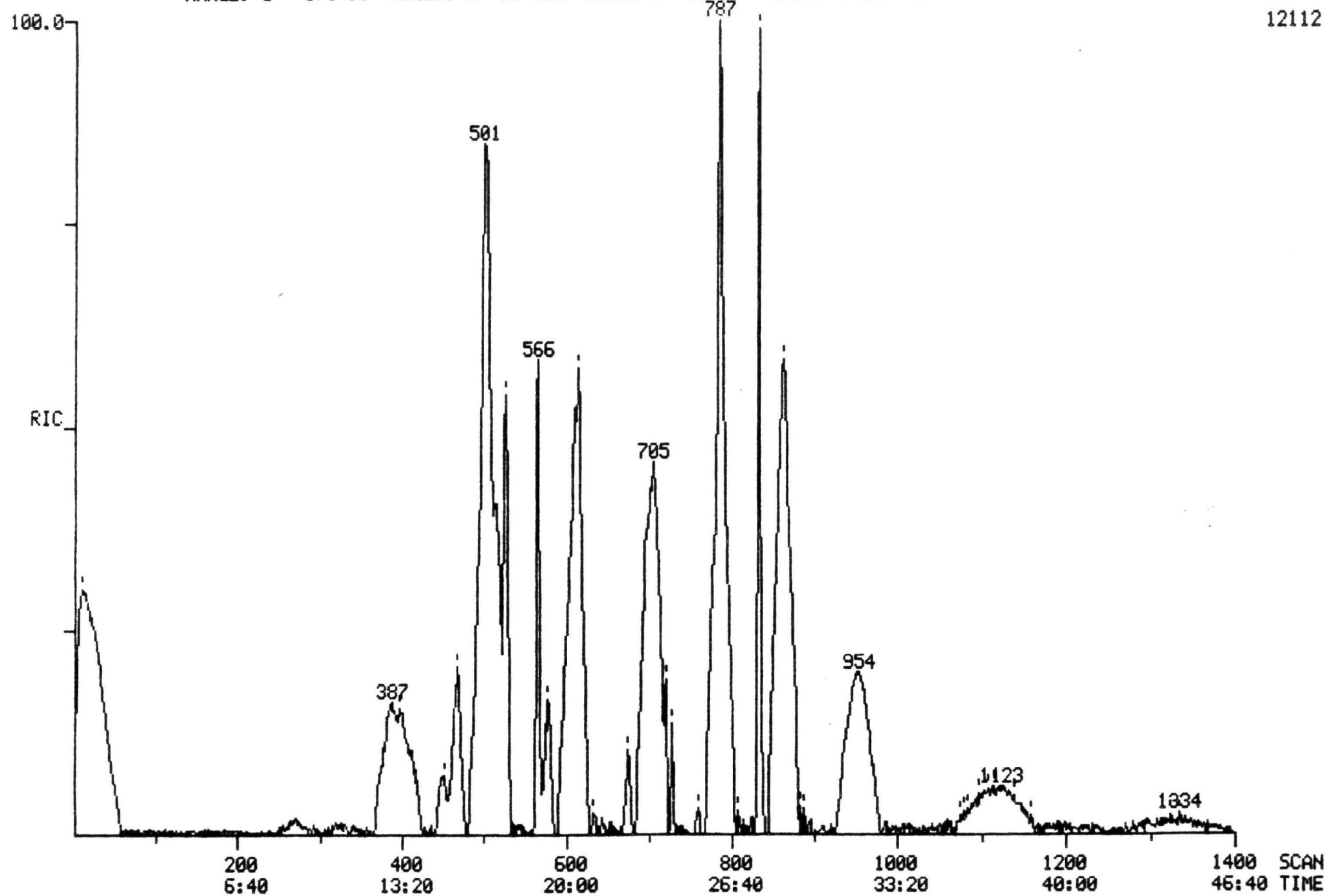
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01/23/80 11:49:00
SAMPLE: B40374: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40374 #1
CALI: CAL123 #1

SCANS 1 10 1400

12112



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB37C17

MATRIX WATER

ERG SAMPLE # 40375

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/1
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/1
TIN	<.08
ZINC	.008
% MOISTURE	--

Results reported in mg/1 unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

<5
16

OTHER COMPOUNDS

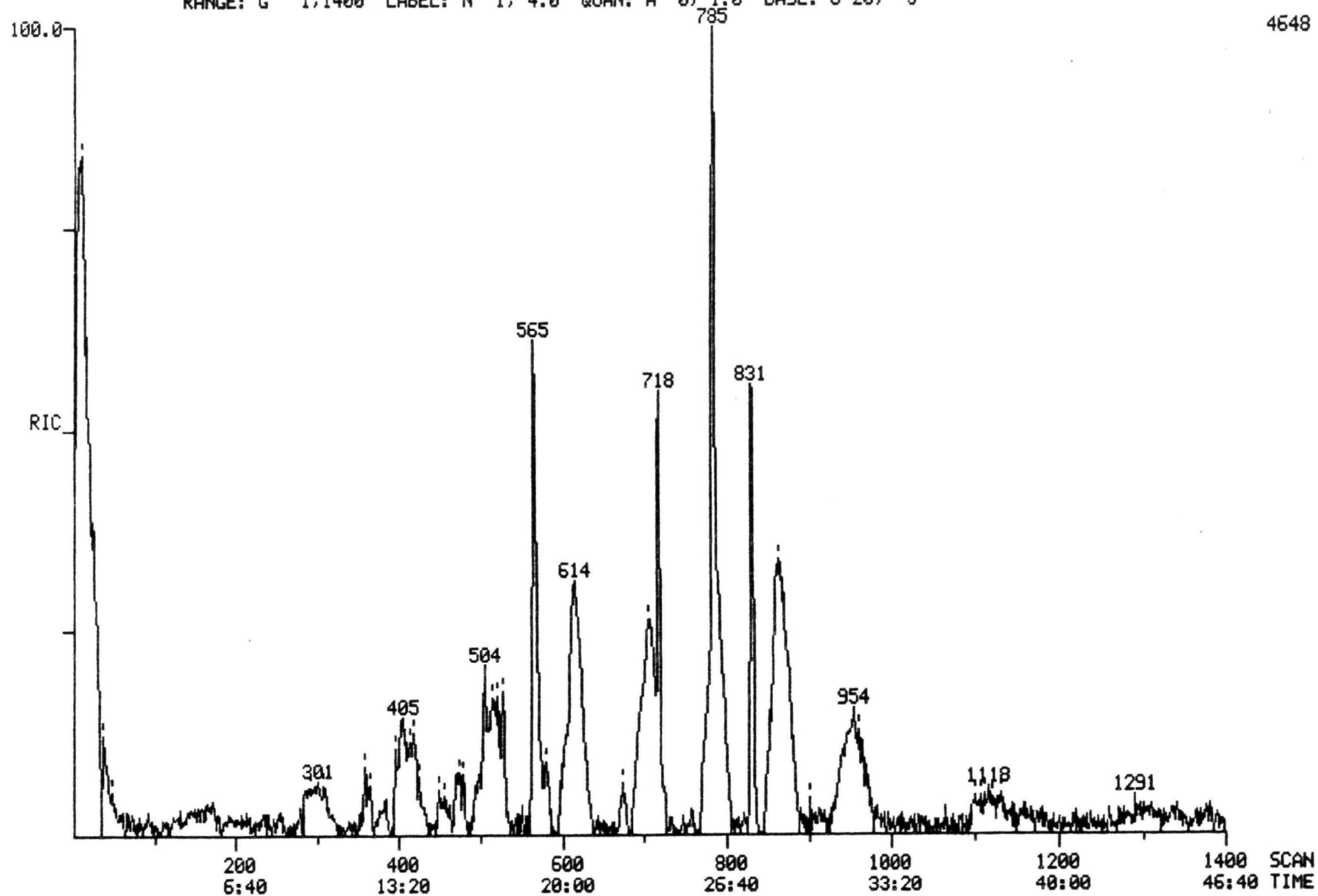
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RIC
01/23/80 12:51:00
SAMPLE: B40375: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: 040310 #1
CALI: CAL123 #1

SCN 14

4648



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB37C18

MATRIX WATER

ERG SAMPLE # 40376

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.50 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.007
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	10

OTHER COMPOUNDS

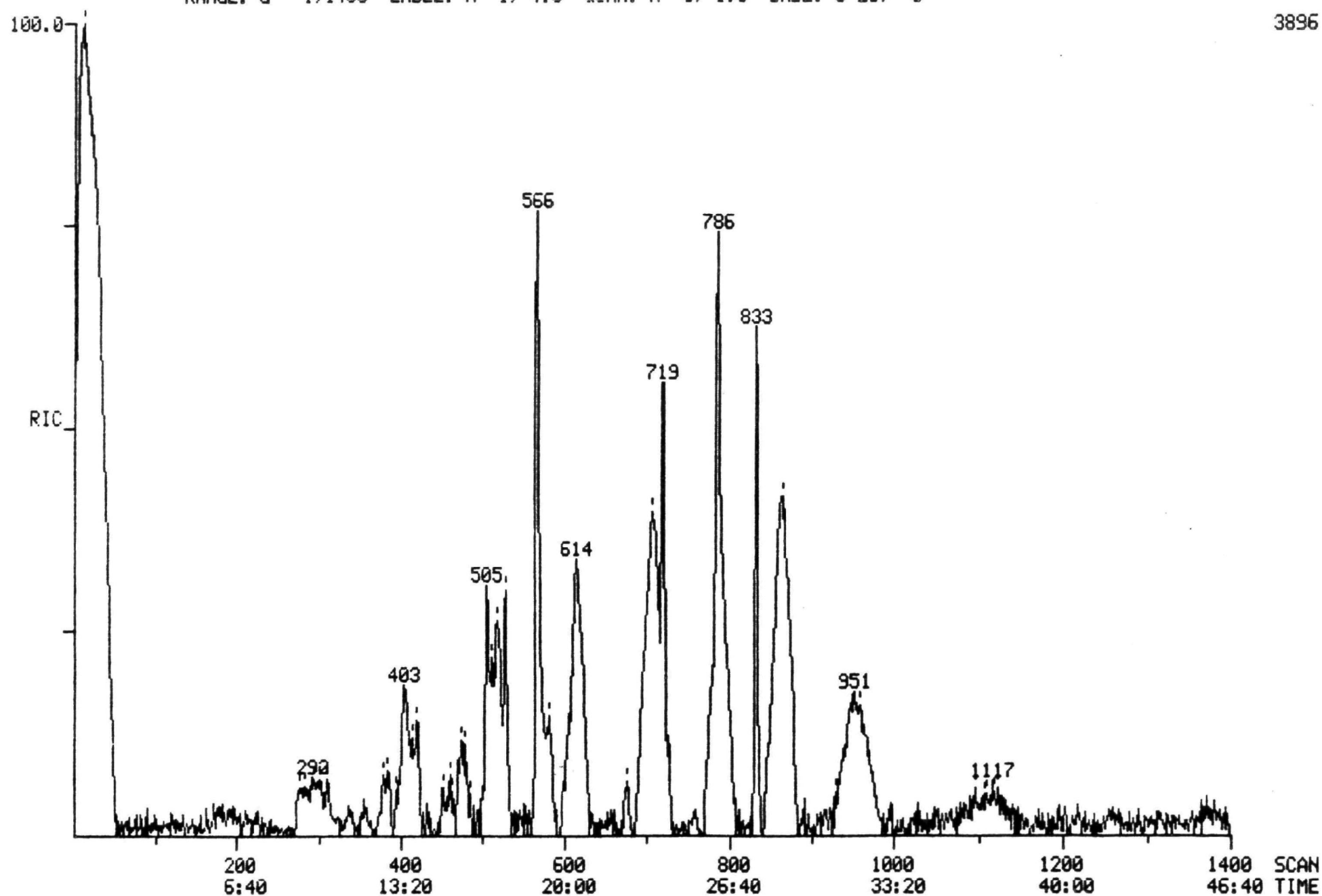
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RIC
01/23/80 13:57:00
SAMPLE: B40376: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40376 #1
CALI: CAL123 #1

SCANS 1 10 1700

3896



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C19

MATRIX WATER

ERG SAMPLE # 40377

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.5 µg/1
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/1
TIN	<.08
ZINC	.008
% MOISTURE	--

Results reported in mg/1 unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIETHYL PHTHALATE	<5
DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	17

OTHER COMPOUNDS

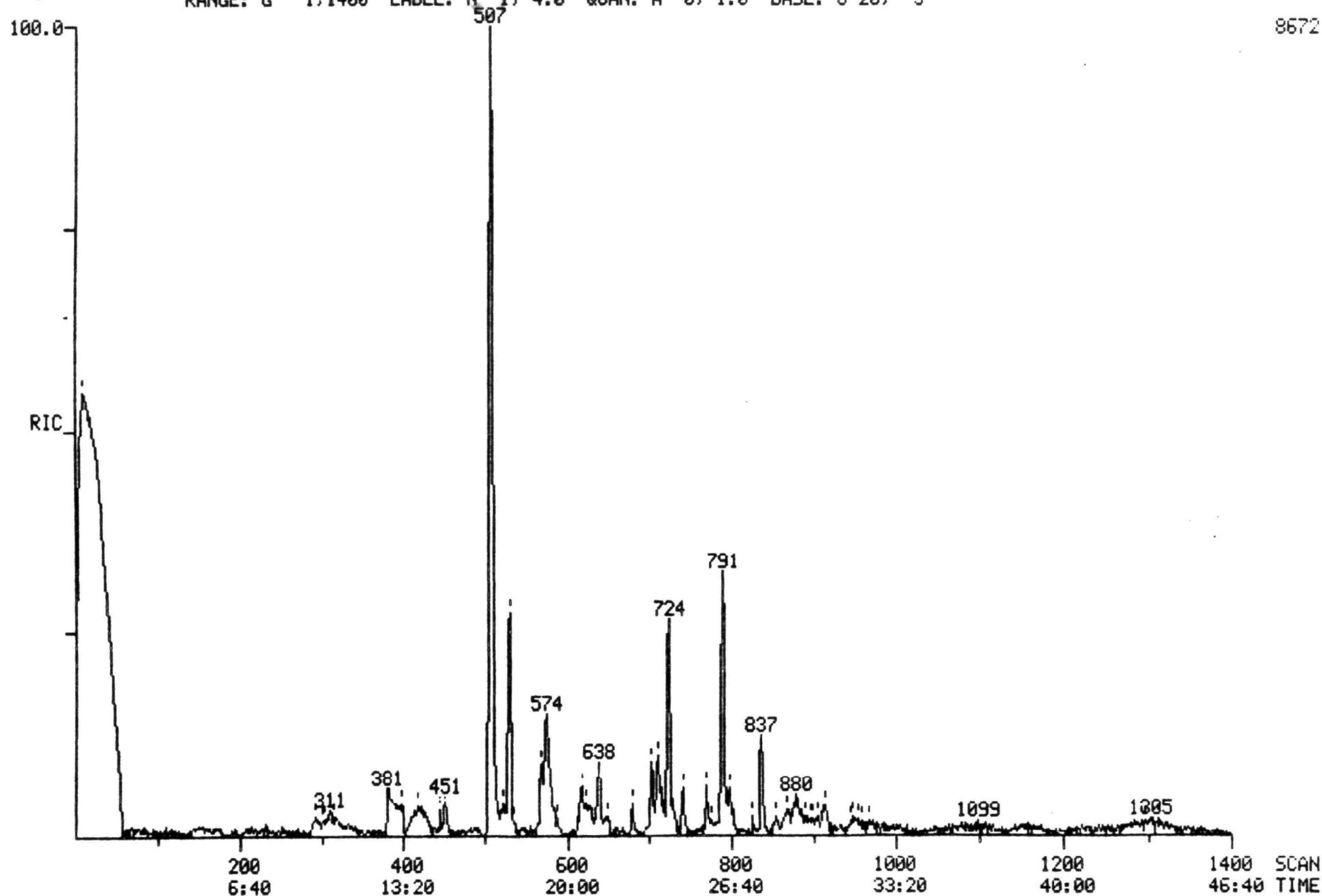
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RIC
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SAMPLE: B40377, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: J0311 .1
CALI: CAL124 #1

SCAN 1400

8672



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C20

MATRIX WATER

ERG SAMPLE # 40378

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

29 µg/l

CADMIUM

<.003

COBALT

<.005

COPPER

<.005

CHROMIUM

<.005

LEAD

<.010

MERCURY

<.0002

SELENIUM

<1.0 µg/l

TIN

<.08

ZINC

.007

% MOISTURE

--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

14

OTHER COMPOUNDS

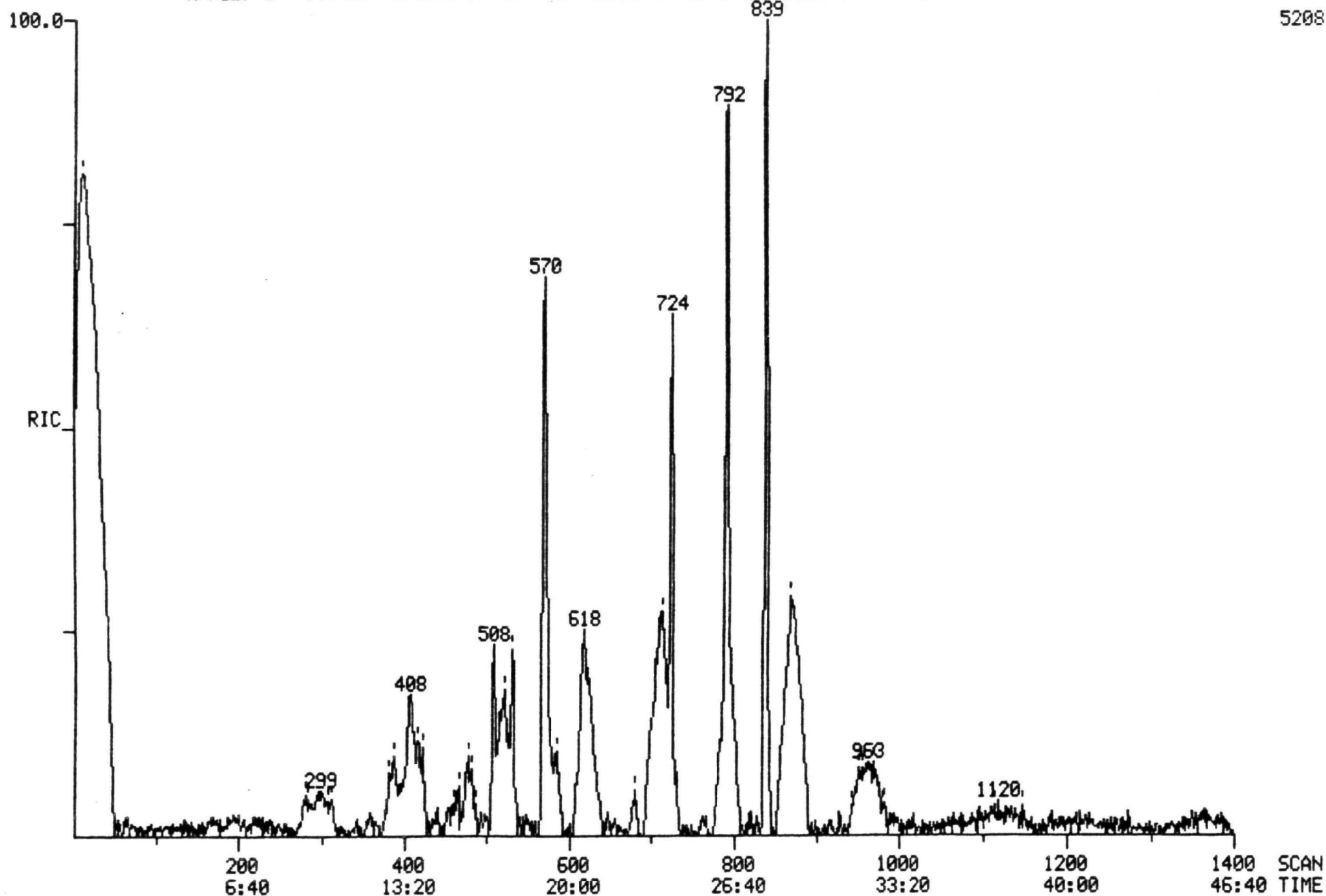
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RIC
01/23/80 17:13:00
SAMPLE: B40378, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40378 #1
CALI: CAL123 #1

SCANS 1 TO 1400

5208



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 37C21

MATRIX WATER

ERG SAMPLE # 40379

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.007
% MOISTURE	—

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

<5
12

OTHER COMPOUNDS

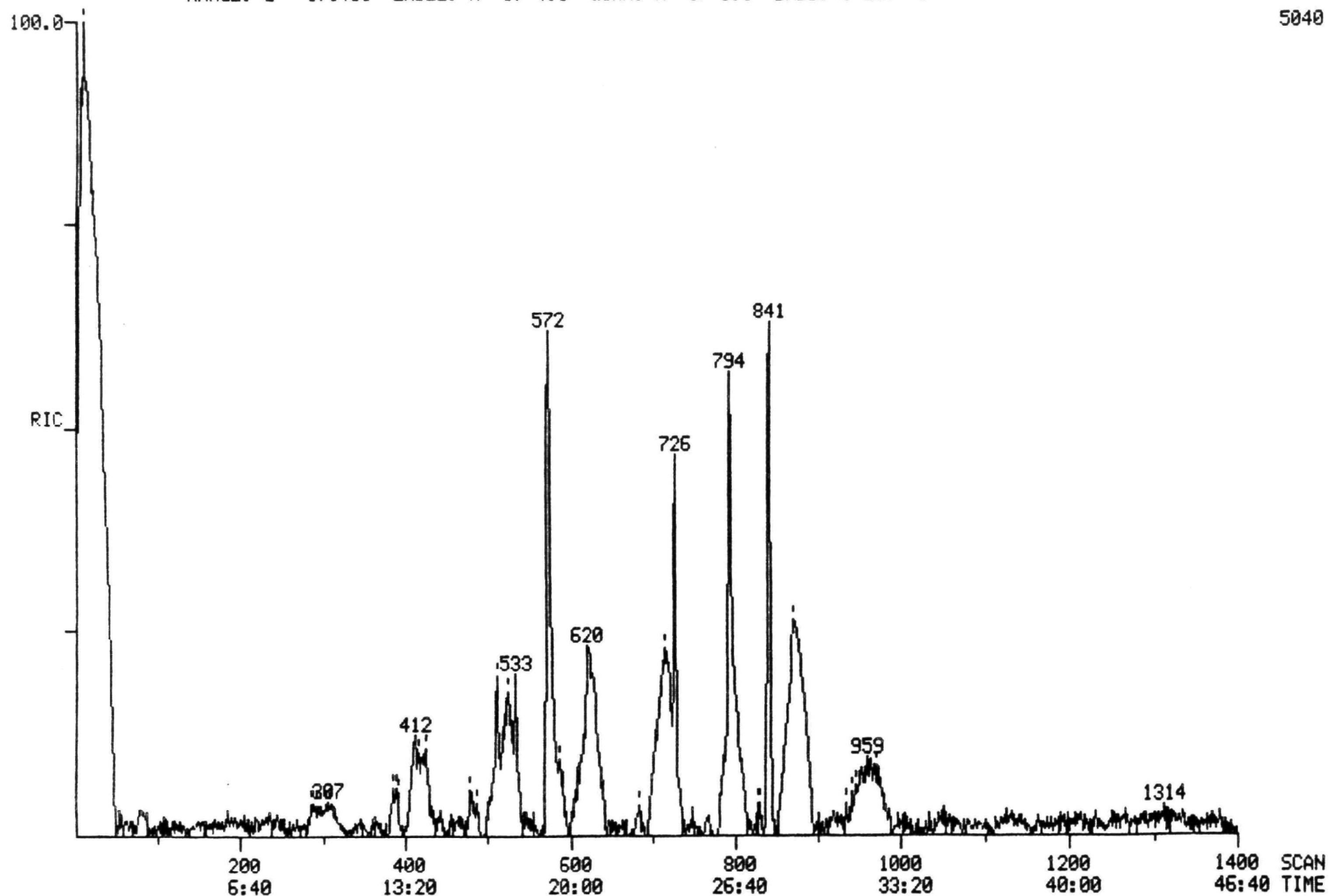
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RIC
01/23/80 18:29:00
SAMPLE: B40379A, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40379A #1
CALI: CAL123 #1

SCANS 1 TO 1400

5040



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C01

MATRIX SEDIMENT

ERG SAMPLE # 40380

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	8.7
CADMIUM	27
COBALT	13
COPPER	130
CHROMIUM	25
LEAD	98
MERCURY	<1
SELENIUM	11
TIN	71
ZINC	167.2
% MOISTURE	63

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBUTADIENE	150
1,2,4 TRICHLOROBENZENE	830
HEXACHLOROBENZENE	12900
PHENANTHRENE	680
ANTHRACENE	680
DIBUTYL PHTHALATE	360
FLUORANTHENE	1380
PYRENE	1200
ETHYL HEXYL PHTHALATE	10900
BENZO (a) ANTHRACENE	1900
BENZO (k) FLUORANTHENE	3800
BENZO (a) PYRENE	1900

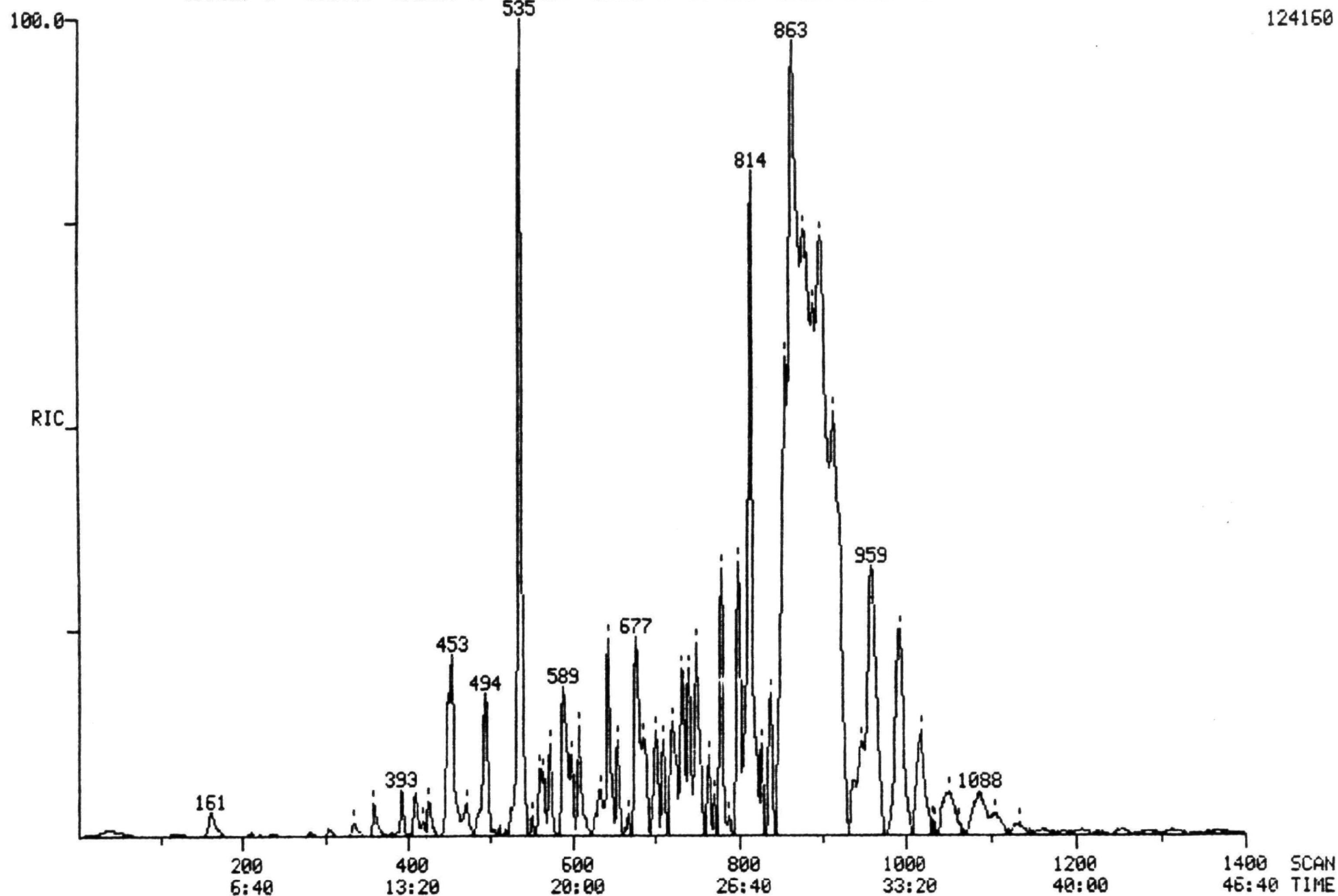
OTHER COMPOUNDS

PCB'S	3568
PENTACHLOROBENZENE	<10

RIC
01/30/80 21:50:00
SAMPLE: B40380, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40380 #1
CALI: CAL130 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C03

MATRIX SEDIMENT

ERG SAMPLE # 40381

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	14
CADMIUM	25
COBALT	14
COPPER	130
CHROMIUM	26
LEAD	98
MERCURY	<1
SELENIUM	14
TIN	87
ZINC	175.2
% MOISTURE	48

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBUTADIENE	170
1,2,4 TRICHLOROBENZENE	1400
HEXACHLOROBENZENE	20000
PHENANTHRENE	600
ANTHRACENE	600
DIBUTYL PHTHALATE	520
FLUORANTHENE	1200
PYRENE	1300
ETHYL HEXYL PHTHALATE	11600
CRYSENE	1400
BENZO (a) ANTHRACENE	1400
BENZO (k) FLUORANTHENE	2600
BENZO (a) PYRENE	1200

OTHER COMPOUNDS

PCB's	3660
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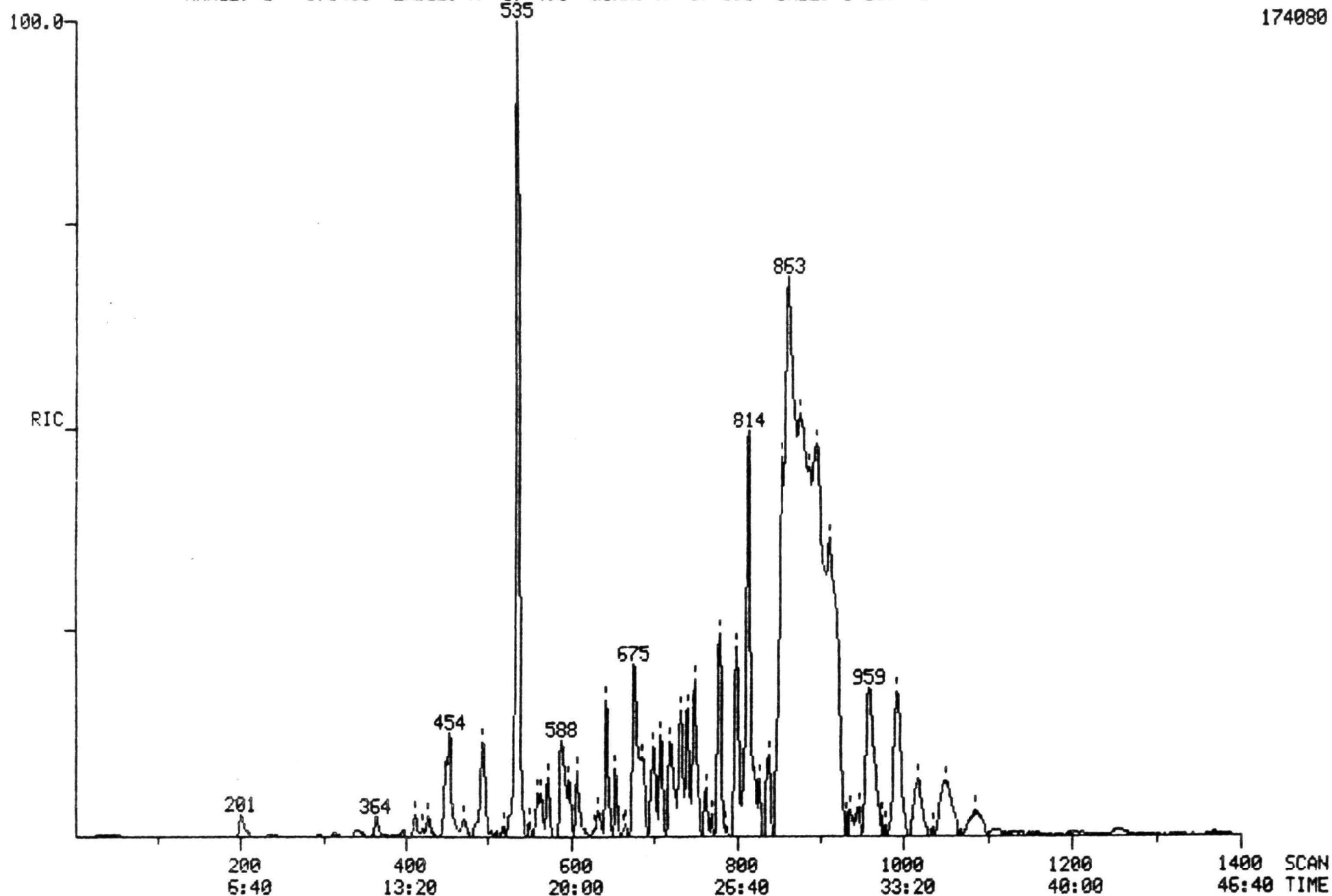
RIC
01/30/80 22:59:00
SAMPLE: B40381, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40381 #1

CALI: CAL130 #1

SCANS 1 TO 1400

174080



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB34C04

MATRIX SEDIMENT

ERG SAMPLE # 40382

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	8.6
CADMIUM	25
COBALT	13
COPPER	130
CHROMIUM	24
LEAD	92
MERCURY	<1
SELENIUM	12
TIN	95
ZINC	170.0
% MOISTURE	64

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
HEXACHLOROBUTADIENE	110
1,2,4 TRICHLOROBENZENE	790
HEXACHLOROBENZENE	11800
PHENANTHRENE	670
ANTHRACENE	670
DIBUTYL PHTHALATE	420
FLUORANTHENE	1400
PYRENE	1200
ETHYL HEXYL PHTHALATE	11,100
CHRYSENE	1600
BENZO (a) ANTHRACENE	1600
BENZO (k) FLUORANTHENE	300
BENZO (a) PYRENE	1400

OTHER COMPOUNDS

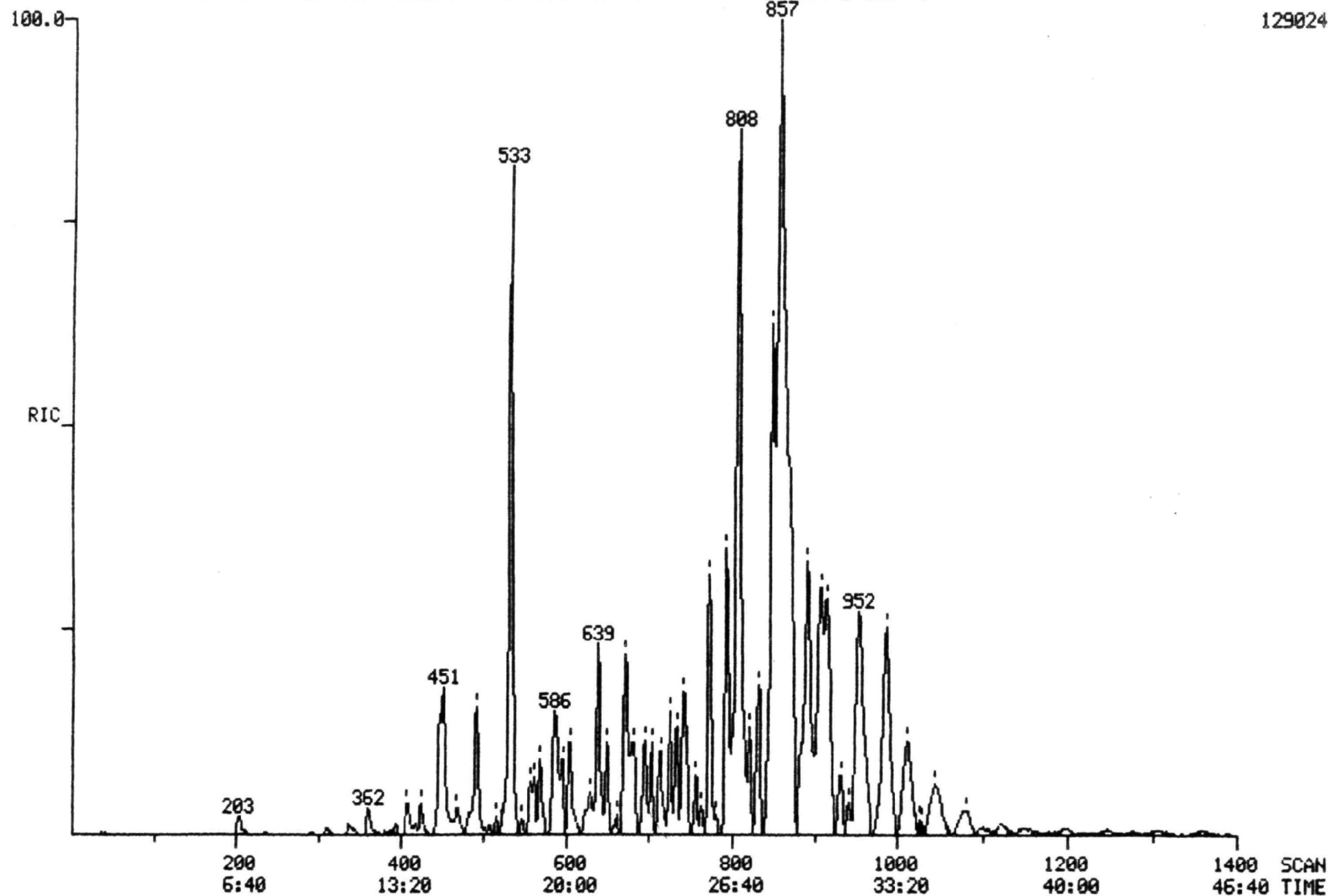
PCB's	2420
TETRACHLOROBENZENE	200
PENTACHLOROBENZENE	310

RIC
01/31/80 9:57:00
SAMPLE: B40382: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40382 #1
CALI: CAL130 #1

SCANS 1 TO 1400

129024



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C05

MATRIX SEDIMENT

ERG SAMPLE # 40383

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	13
CADMIUM	26
COBALT	14
COPPER	130
CHROMIUM	24
LEAD	96
MERCURY	<1
SELENIUM	17
TIN	82
ZINC	179.4
% MOISTURE	60

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
1,2,4 TRICHLOROBENZENE	1200
HEXACHLOROBENZENE	13400
PHENANTHRENE	380
ANTHRACENE	380
DIBUTYL PHTHALATE	210
FLUORANTHENE	800
PYRENE	770
ETHYL HEXYL PHTHALATE	6600
CHRYSENE	760
BENZO (a) ANTHRACENE	760
BENZO (k) FLUORANTHENE	1300
BENZO (a) PYRENE	470

OTHER COMPOUNDS

PCB's	1890
PENTACHLOROBENZENE	193

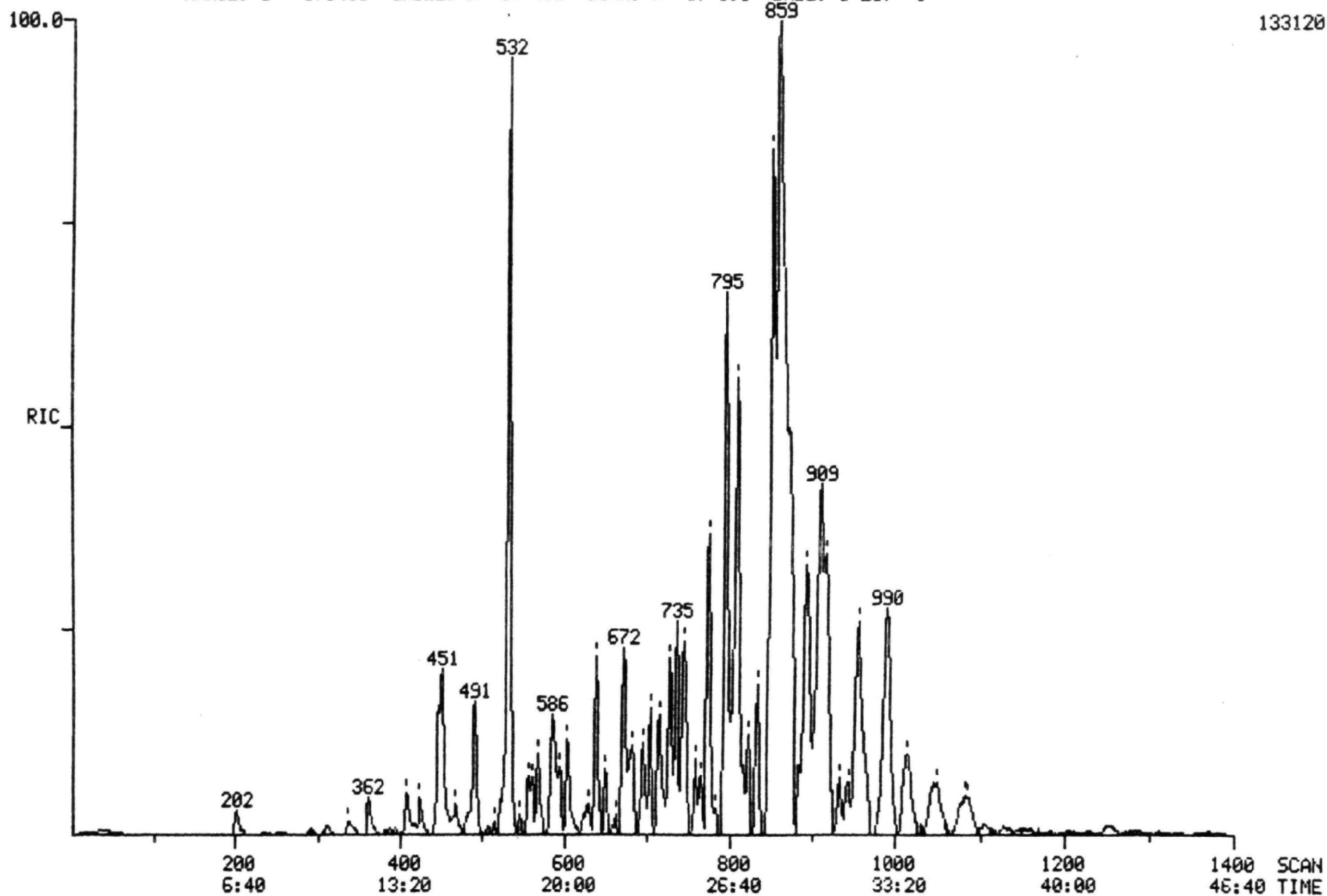
RIC
01/31/80 11:03:00

JAT... 40... J1
CALI: CAL130 #1

SL... J 1...

SAMPLE: B40383: 3 UL SAMPLE, 50 NG D10A

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C06

MATRIX SEDIMENT

ERG SAMPLE # 40384

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	13
CADMIUM	1.6
COBALT	10
COPPER	27
CHROMIUM	33
LEAD	37
MERCURY	<1
SELENIUM	<4
TIN	50
ZINC	96.3
% MOISTURE	33

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

PHENANTHRENE	50
ANTHRACENE	50
DIBUTYL PHTHALATE	380
FLUORANTHENE	100
PYRENE	100
ETHYL HEXYL PHTHALATE	3200

OTHER COMPOUNDS

HYDROCARBONS

UNRESOLVABLE

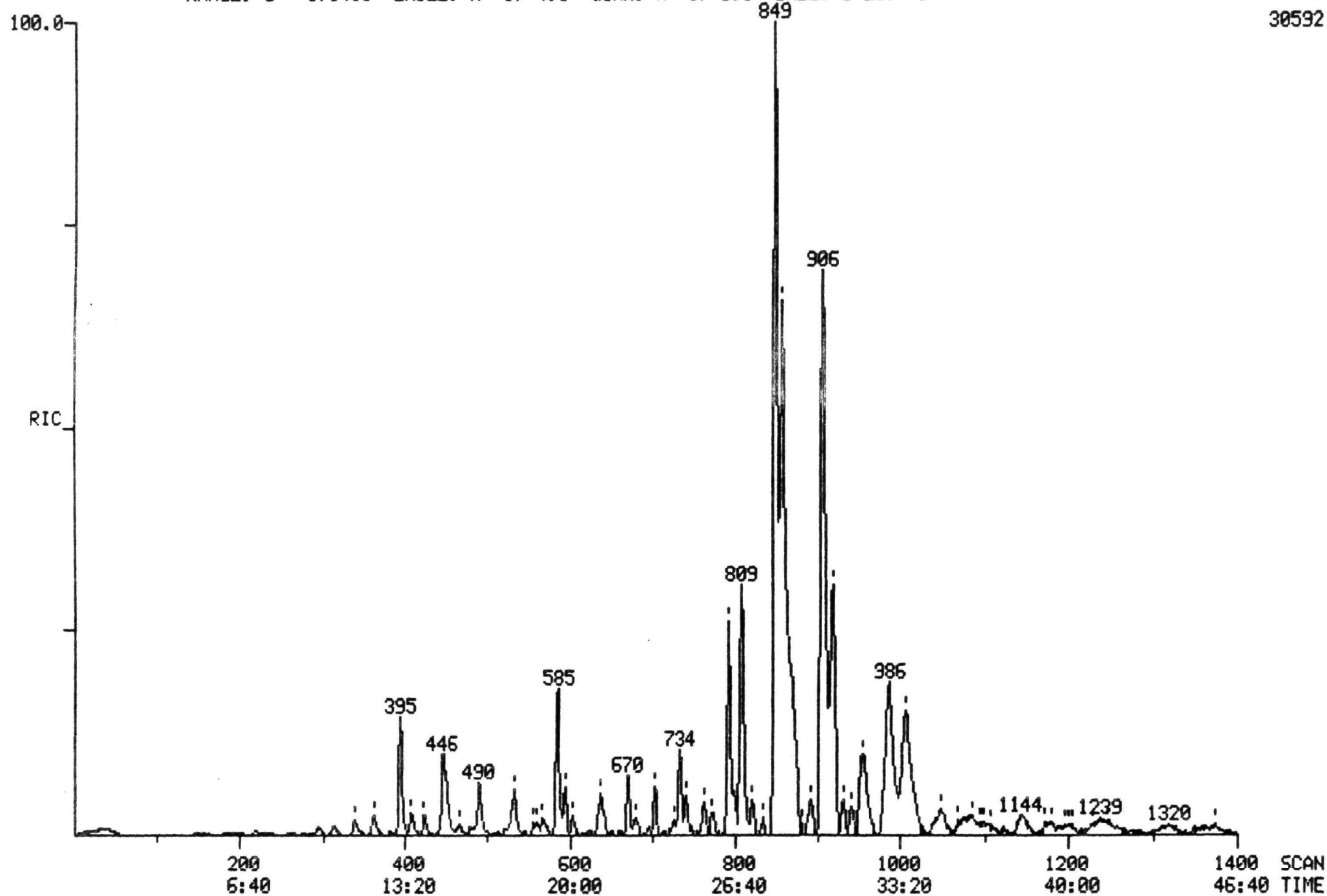
RIC
01/31/80 12:05:00

DATA: B40384 #1
CALI: CAL130 #1

SCANS 1 TO 1400

SAMPLE: B40384: 3 UL SAMPLE, 50 NG D10A

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB34C08

MATRIX SEDIMENT

ERG SAMPLE # 40385A

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	12
CADMIUM	1.6
COBALT	11
COPPER	28
CHROMIUM	31
LEAD	53
MERCURY	<1
SELENIUM	3.6
TIN	58
ZINC	114.2
% MOISTURE	40

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE	130
PHENANTHRENE	130
ANTHRACENE	130
DIBUTYL PHTHALATE	50
FLUORANTHENE	160
PYRENE	170
ETHYL HEXYL PHTHALATE	1400
CHRYSENE	30
BENZO (a) ANTHRACENE	30

OTHER COMPOUNDS

HYDROCARBONS

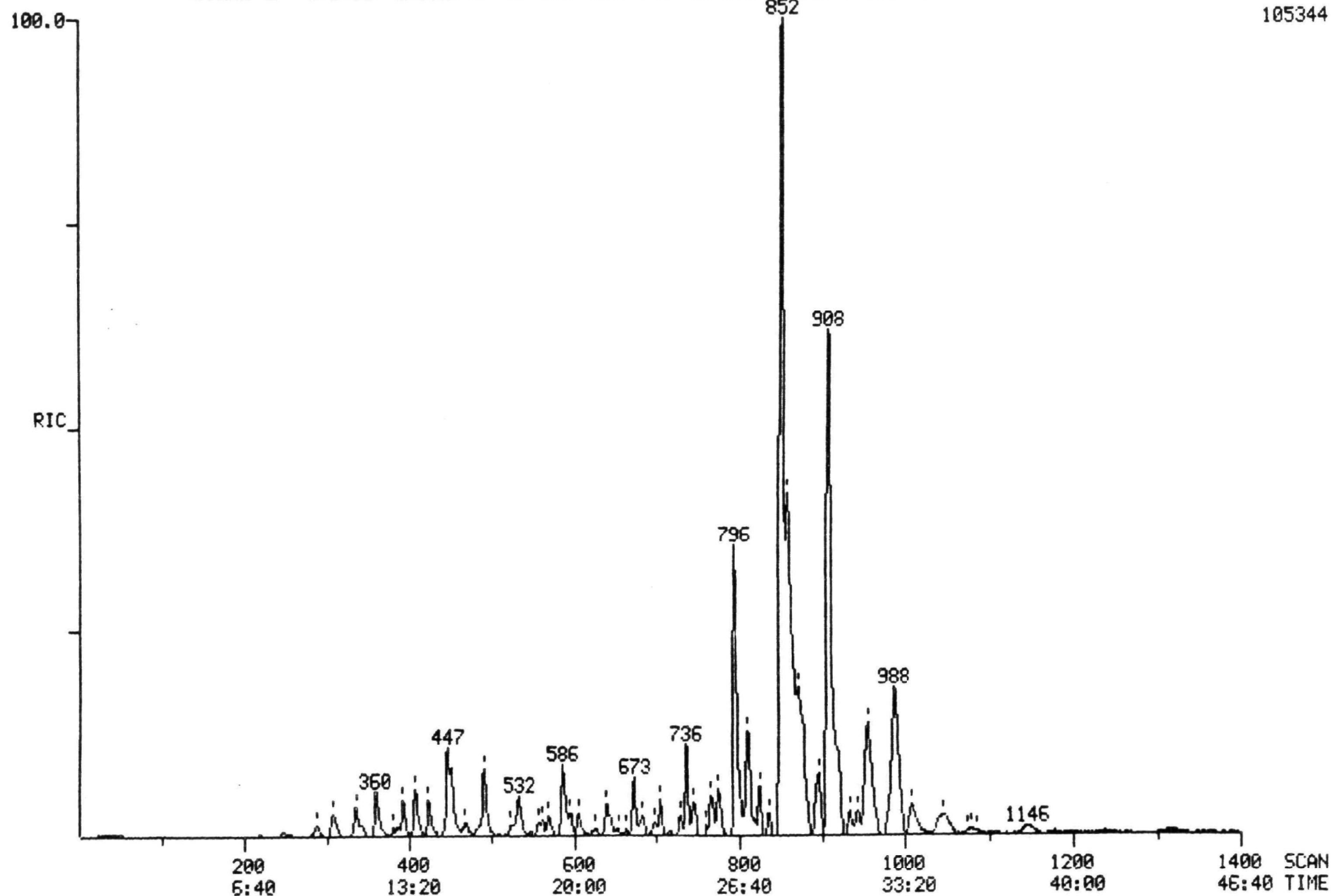
UNRESOLVABLE

RIC
01/31/80 1:59:00
SAMPLE: B40385A: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40385A #1
CALI: CAL130 #1

SCANS 1 TO 1400

105344



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C08

MATRIX SEDIMENT

ERG SAMPLE # 40385B

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	12
CADMIUM	1.6
COBALT	11
COPPER	28
CHROMIUM	31
LEAD	53
MERCURY	<1
SELENIUM	3.6
TIN	58
ZINC	114.2
% MOISTURE	40

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
PHENANTHRENE	20
ANTHRACENE	20
DIBUTYL PHTHALATE	70
PYRENE	20
ETHYL HEXYL PHTHALATE	740

OTHER COMPOUNDS

HYDROCARBONS UNRESOLVABLE

RIC
01/31/80 3:10:00

DATA: B40385B #1
CALI: CAL130 #1

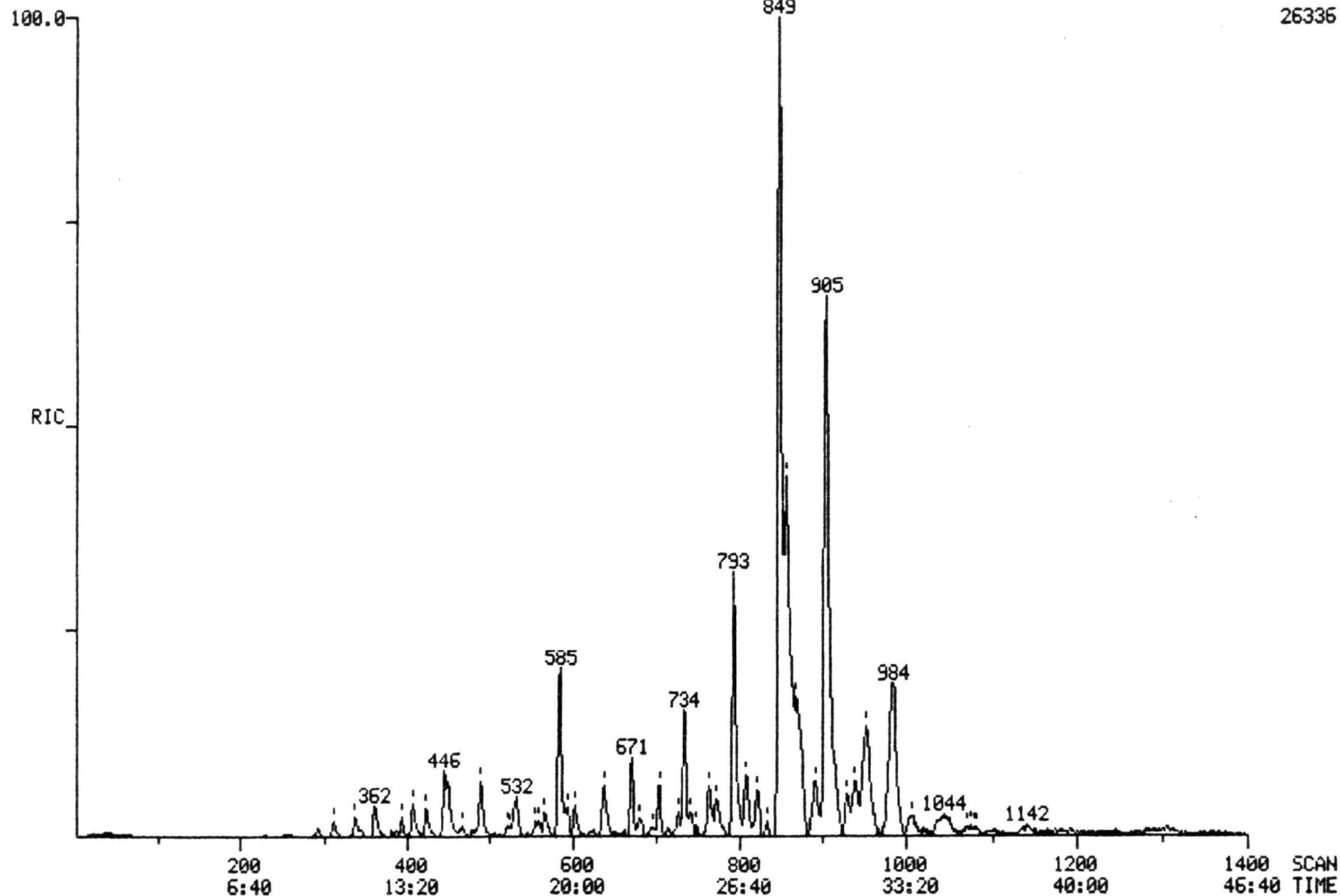
SCANS 1 TO 1400

SAMPLE: B40385B: 3 UL SAMPLE, 50 NG D10A

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

849

26336



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C10

MATRIX SEDIMENT

ERG SAMPLE # 40386

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	9.4
CADMIUM	1.6
COBALT	9.9
COPPER	29
CHROMIUM	33
LEAD	45
MERCURY	.48
SELENIUM	4.6
TIN	36
ZINC	96.8
% MOISTURE	41

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
HEXACHLOROBENZENE	60
PHENANTHRENE	550
ANTHRACENE	550
DIBUTYL PHTHALATE	130
FLUORANTHENE	680
PYRENE	620
ETHYL HEXYL PHTHALATE	3200
CHRYSENE	450
BENZO (a) ANTHRACENE	450

OTHER COMPOUNDS

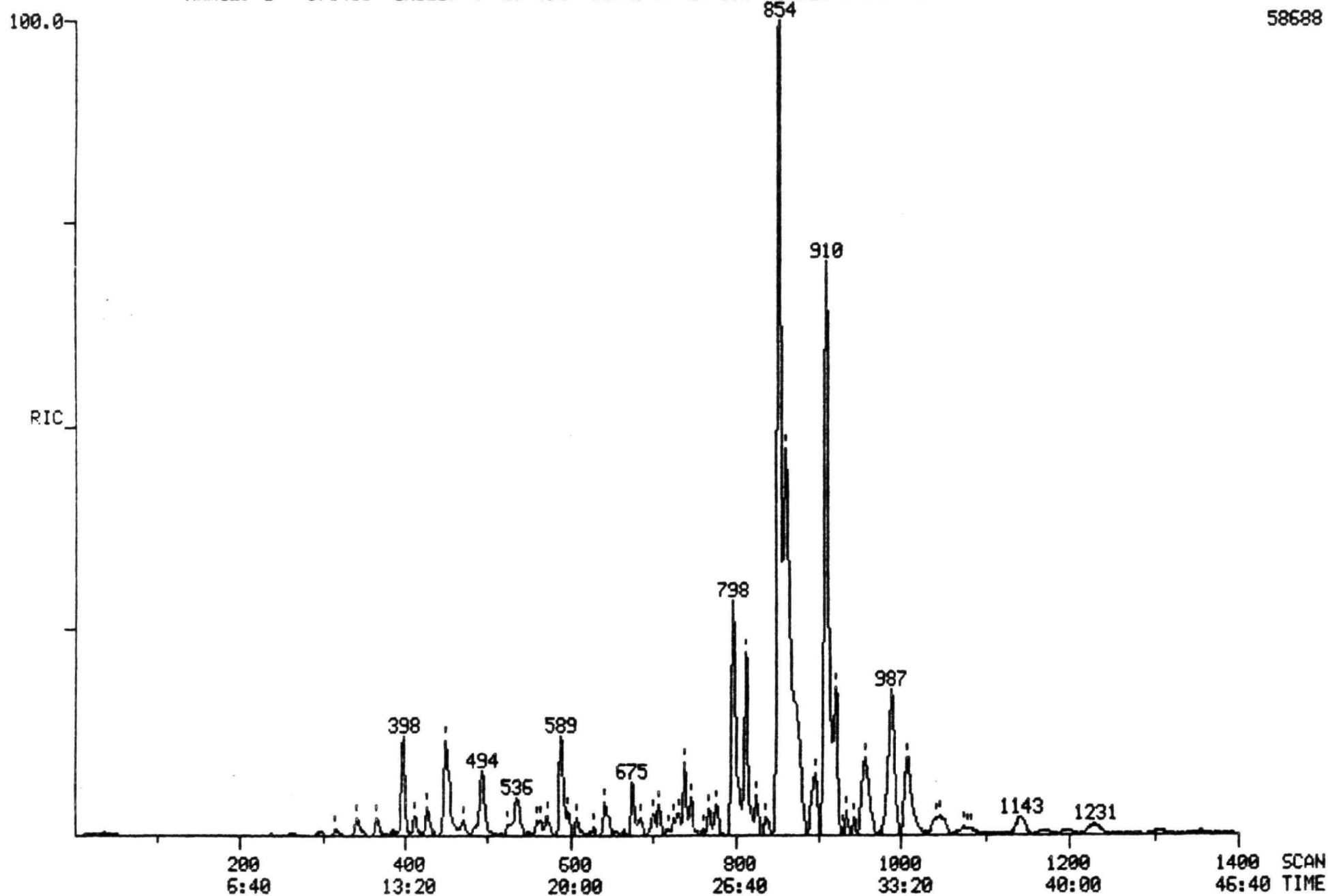
HYDROCARBONS	UNRESOLVABLE
LONG CHAIN ACIDS	UNRESOLVABLE

RIC
01/31/80 17:23:00
SAMPLE: B40386, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40386 #1
CALI: CAL131 #1

SCANS 1 TO 1400

58688



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C11

MATRIX SEDIMENT

ERG SAMPLE # 40387

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	8
CADMIUM	7.0
COBALT	12
COPPER	34
CHROMIUM	49
LEAD	37
MERCURY	<.7
SELENIUM	1.5
TIN	51
ZINC	126.8
% MOISTURE	49

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N</u> (PPB)
1,4 DICHLOROBENZENE	2200
PHENANTHRENE	500
ANTHRACENE	500
DIBUTYL PHTHALATE	260
FLUORANTHENE	1200
PYRENE	960
ETHYL HEXYL PHTHALATE	2700
CHRYSENE	700
BENZO (a) ANTHRACENE	700
BENZO (k) FLUORANTHENE	420

OTHER COMPOUNDS

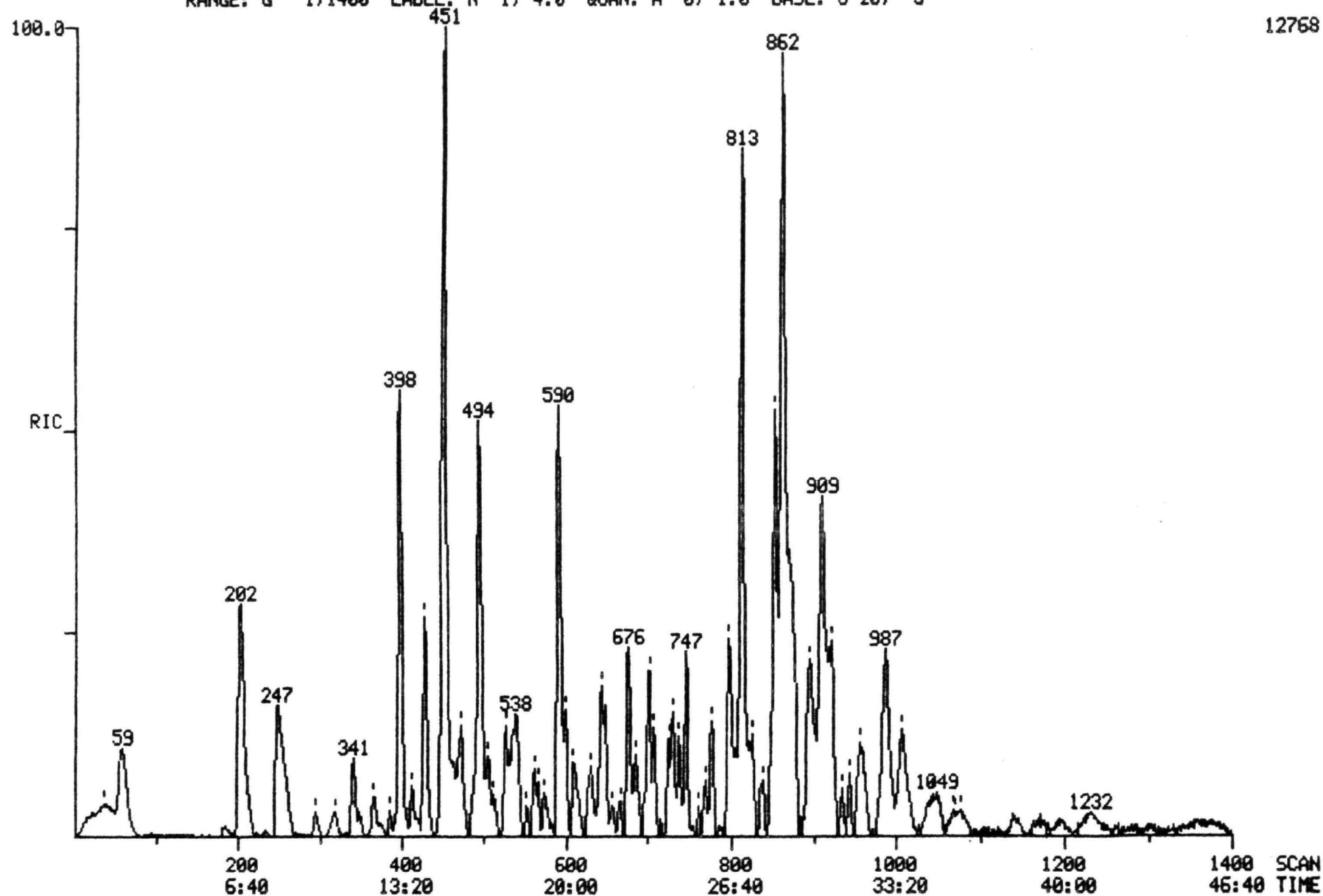
NONE

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01/31/80 18:21:00
SAMPLE: B40387, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40387 #1
CALI: CAL131 #1

SCANS 1 TO 1400

12768



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C12

MATRIX SEDIMENT

ERG SAMPLE # 40388A

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	11
CADMIUM	7.1
COBALT	11
COPPER	33
CHROMIUM	47
LEAD	38
MERCURY	<1
SELENIUM	<3
TIN	64
ZINC	122.2
% MOISTURE	39

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
1,4 DICHLOROBENZENE	2900
HEXACHLOROBENZENE	20 *
PHENANTHRENE	530
ANTHRACENE	530
DIBUTYL PHTHALATE	220
FLUORANTHENE	780
PYRENE	780
ETHYL HEXYL PHTHALATE	1700
CHRYSENE	380
BENZO (a) ANTHRACENE	380
BENZO (k) FLUORANTHENE	220 *

OTHER COMPOUNDS

METHYL PHENANTHRENE }	113.8 (TOTAL BOTH
METHYL ANTHRACENE }	COMPOUNDS)

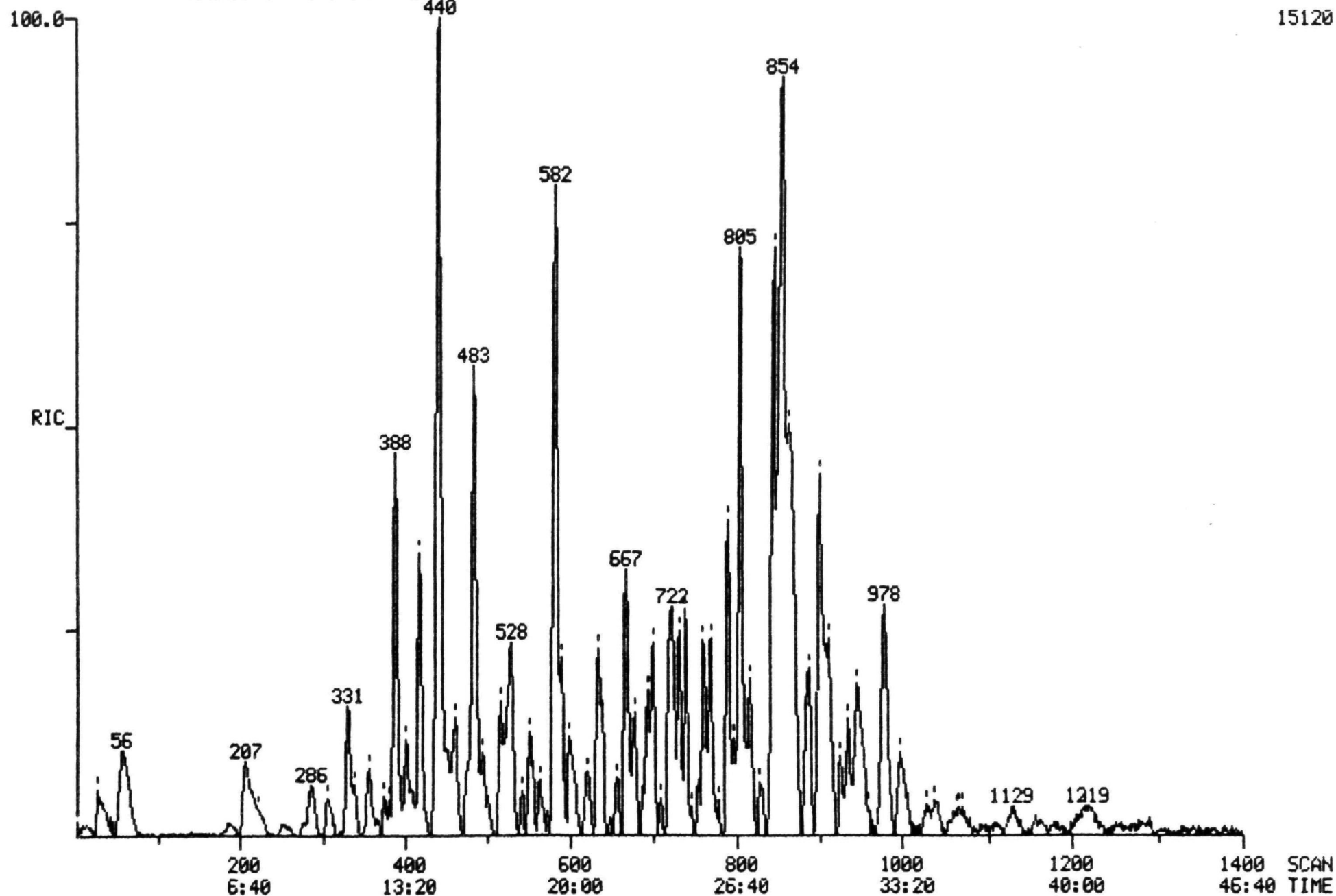
*Please refer to correspondence PE/ES, 4/8/80

RIC
02/01/68 4:43:00
SAMPLE: B40388A: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40388A #1
CALI: CAL31JAN2 #1

SCANS 1 TO 1420

15120



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C12

MATRIX SEDIMENT

ERG SAMPLE # 40388B

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	11
CADMIUM	7.1
COBALT	11
COPPER	33
CHROMIUM	47
LEAD	38
MERCURY	<1
SELENIUM	<3
TIN	64
ZINC	122.2
% MOISTURE	39

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

1,4 DICHLOROBENZENE	2700
PHENANTHRENE	230
ANTHRACENE	230
DIBUTYL PHTHALATE	60
FLUORANTHENE	440
PYRENE	490
ETHYL HEXYL PHTHALATE	1100
CHRYSENE	150
BENZO (a) ANTHRACENE	150

OTHER COMPOUNDS

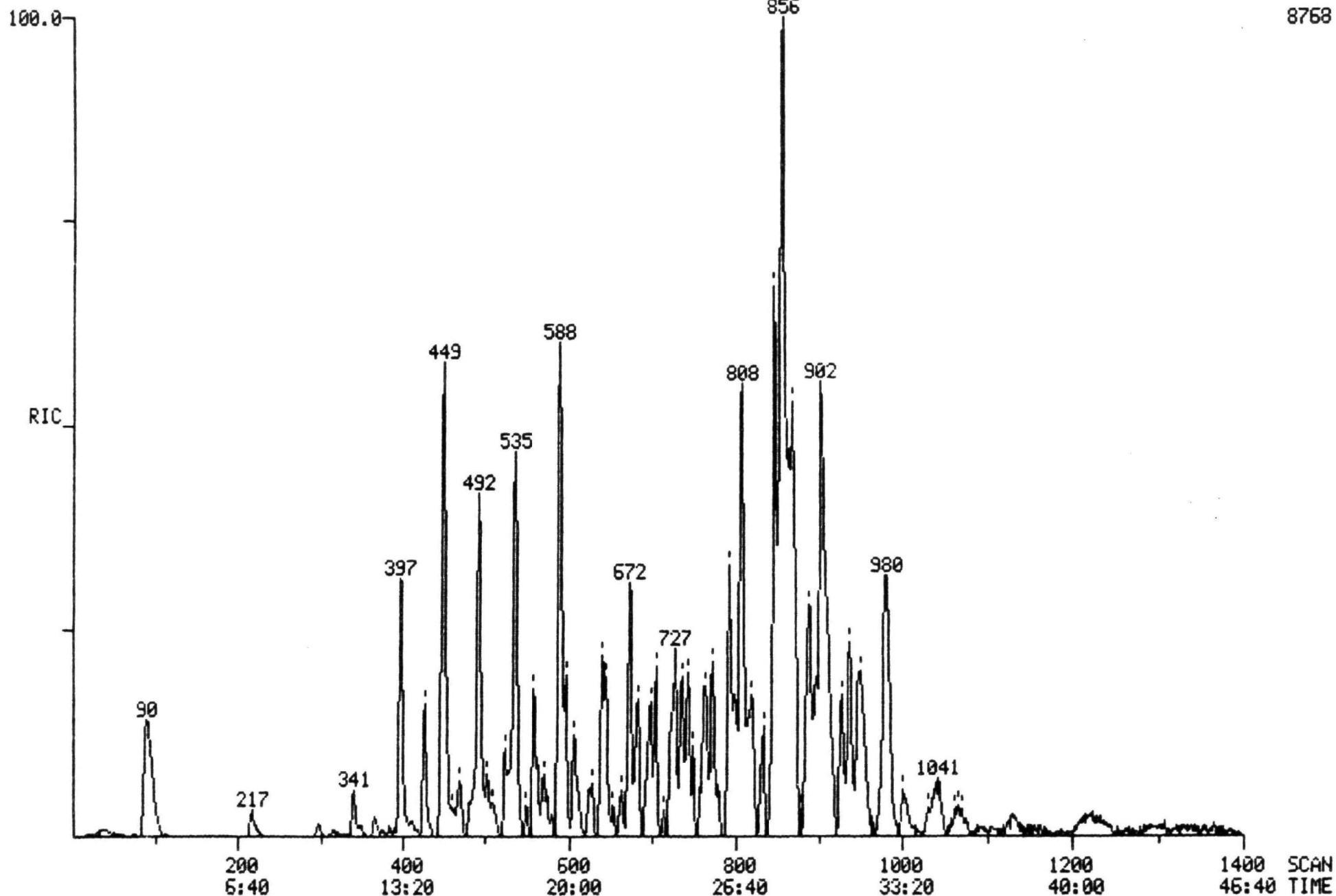
METHYL PHENANTHRENE)
METHYL ANTHRACENE)

113.8 (TOTAL BOTH
COMPOUNDS)

RIC
01/31/80 21:13:00
SAMPLE: B40388B, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40388B #1
CALI: CAL131 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C13

MATRIX SEDIMENT

ERG SAMPLE # 40389

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	70
CADMIUM	7.3
COBALT	11
COPPER	33
CHROMIUM	49
LEAD	37
MERCURY	<5
SELENIUM	<15
TIN	63
ZINC	125.6
% MOISTURE	37

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
PHENANTHRENE	520
ANTHRACENE	520
DIBUTYL PHTHALATE	190
FLUORANTHENE	920
PYRENE	1100
ETHYL HEXYL PHTHALATE	1700
CHRYSENE	730
BENZO (a) ANTHRACENE	730
BENZO (k) FLUORANTHENE	350

OTHER COMPOUNDS

METHYL PHENANTHRENE }	
METHYL ANTHRACENE }	14 (TOTAL BOTH COMPOUNDS)

RIC

01/31/80 23:19:00

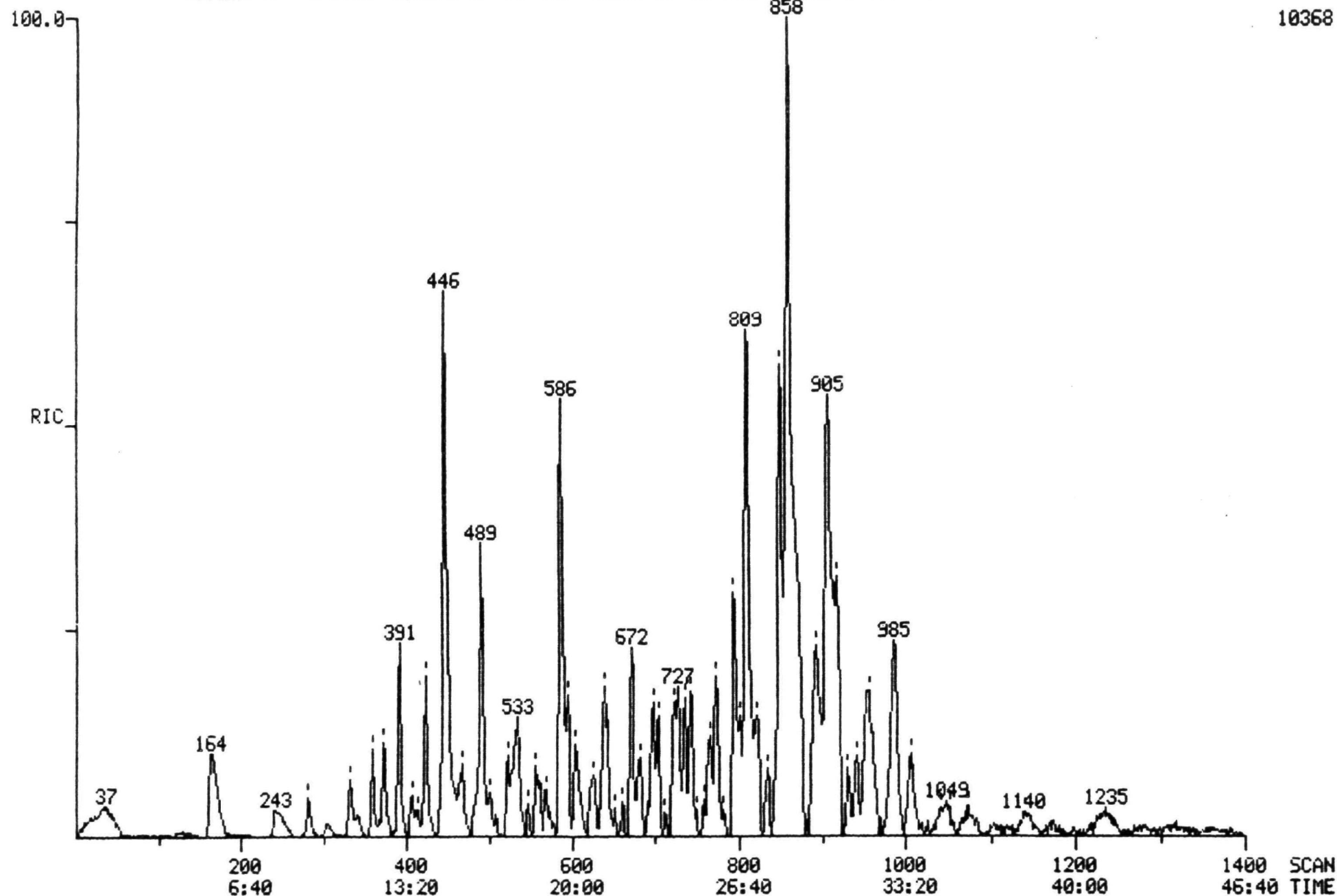
SAMPLE: B40389, 3 UL + 1 UL IS

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40389 #583

CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB34C14

MATRIX SEDIMENT

ERG SAMPLE # 40390

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	11
CADMIUM	8.3
COBALT	11
COPPER	35
CHROMIUM	50
LEAD	38
MERCURY	<.4
SELENIUM	1.6
TIN	61
ZINC	128.3
% MOISTURE	43

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
1,4 DICHLOROBENZENE	7000
NAPHTHALENE	10
1,2,4 TRICHLOROBENZENE	100
PHENANTHRENE	740
ANTHRACENE	740
DIBUTYL PHTHALATE	280
FLUORANTHENE	930
PYRENE	970
ETHYL HEXYL PHTHALATE	2600
CHRYSENE	590
BENZO (a) ANTHRACENE	590
BENZO (k) FLUORANTHENE	370
BENZO (a) PYRENE	70

OTHER COMPOUNDS

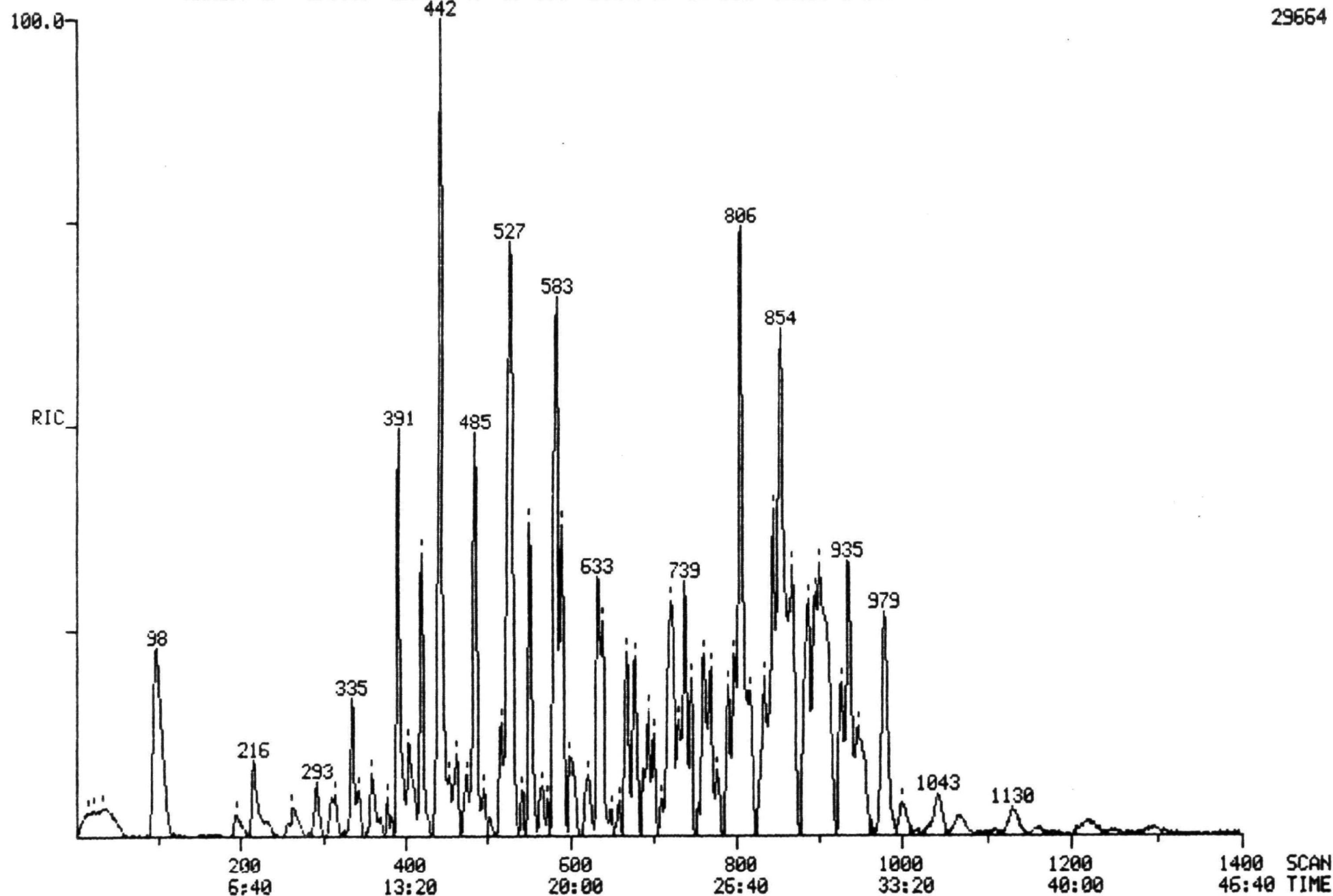
CHLORINATED STYRENE	139
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RIC
02/01/80 3:35:00
SAMPLE: B40390: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40390 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400

29664



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB34C17

ERG SAMPLE # 40391

MATRIX SEDIMENT

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	52
CADMIUM	<.74
COBALT	<1.2
COPPER	<1.2
CHROMIUM	<.74
LEAD	<2.5
MERCURY	<2
SELENIUM	<5
TIN	29
ZINC	<2.5
% MOISTURE	21

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	100
ETHYL HEXYL PHTHALATE	790

OTHER COMPOUNDS

NONE

RIC

02/01/80 5:44:00

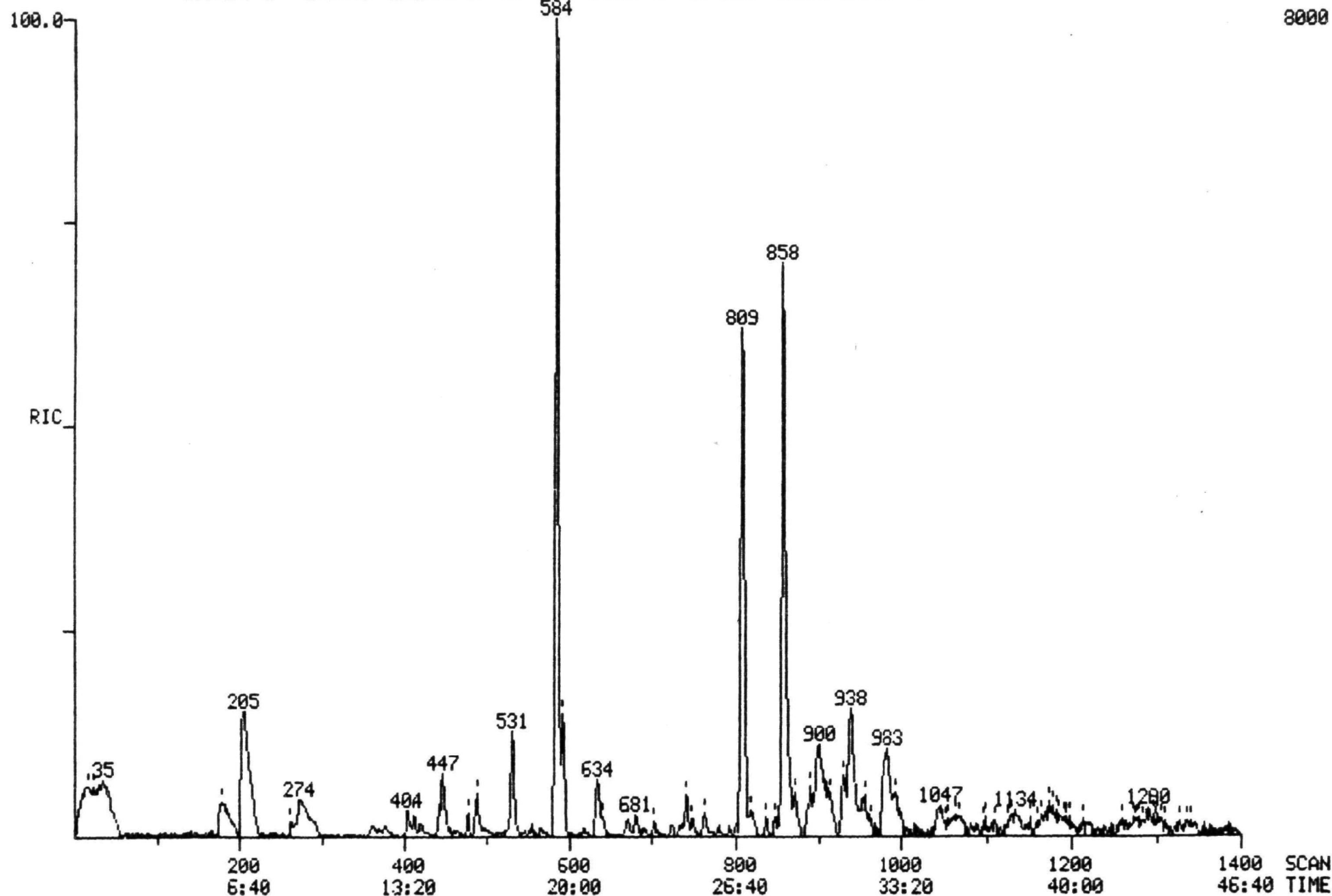
SAMPLE: B40391, 3 UL + I UL IS

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40391 #1

CALI: CAL31JAN2 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C18

MATRIX SEDIMENT

ERG SAMPLE # 40392

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	2
CADMIUM	<.70
COBALT	<1.2
COPPER	<1.2
CHROMIUM	<.70
LEAD	<2.3
MERCURY	<1
SELENIUM	<4
TIN	<19
ZINC	<2.5
% MOISTURE	15

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

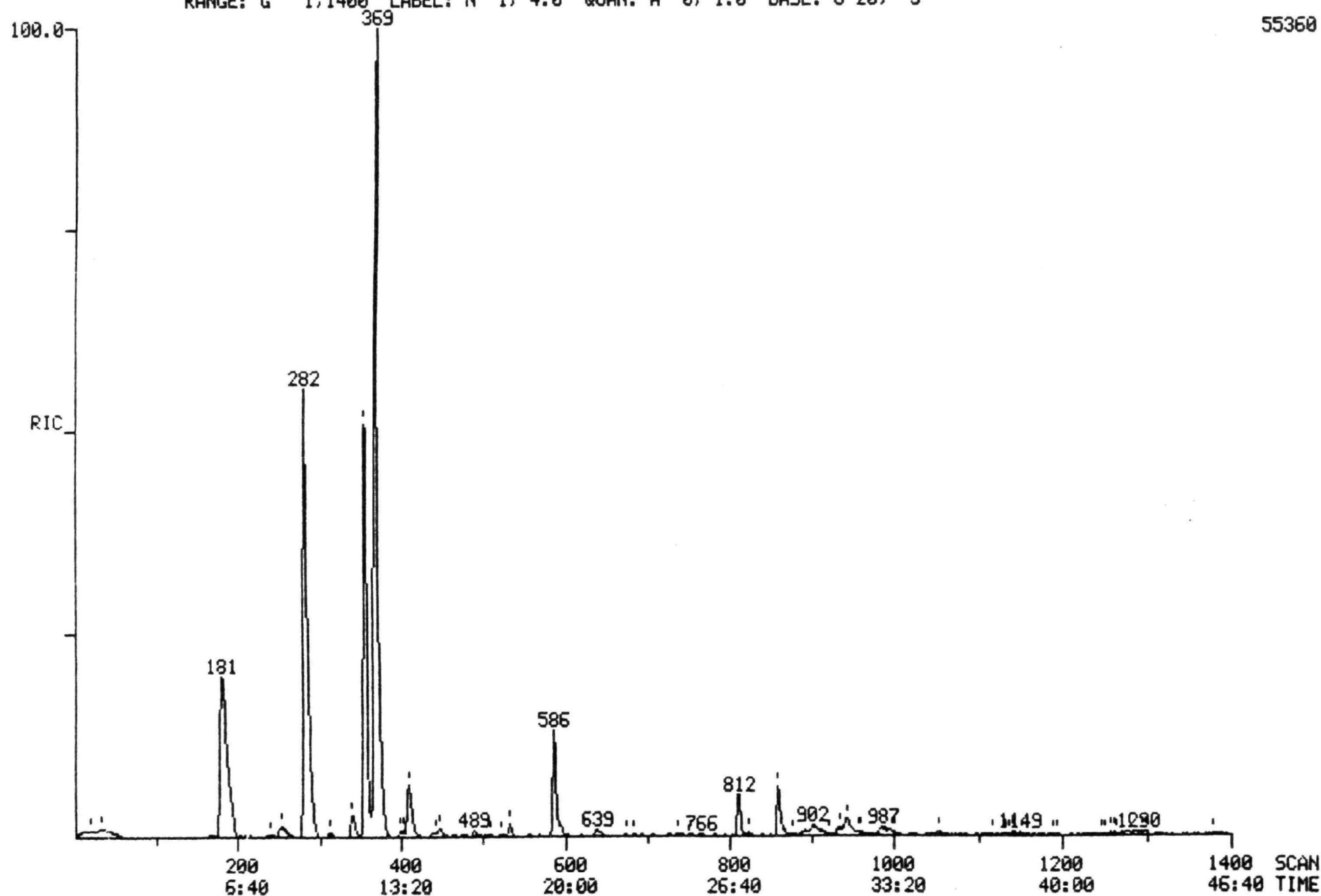
DIBUTYL PHTHALATE	30
ETHYL HEXYL PHTHALATE	520

RIC
02/01/80 6:44:00
SAMPLE: B40392, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40392 #1
CALI: CAL31JAN2 #1

SCANS 1 TO 1400

55360



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C19

MATRIX SEDIMENT

ERG SAMPLE # 40393

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	<.74
COBALT	<1.2
COPPER	<1.2
CHROMIUM	<.74
LEAD	<2.5
MERCURY	--
SELENIUM	--
TIN	53
ZINC	<2.5
% MOISTURE	--

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N</u> (PPB)
DIBUTYL PHTHALATE	20
ETHYL HEXYL PHTHALATE	110

OTHER COMPOUNDS

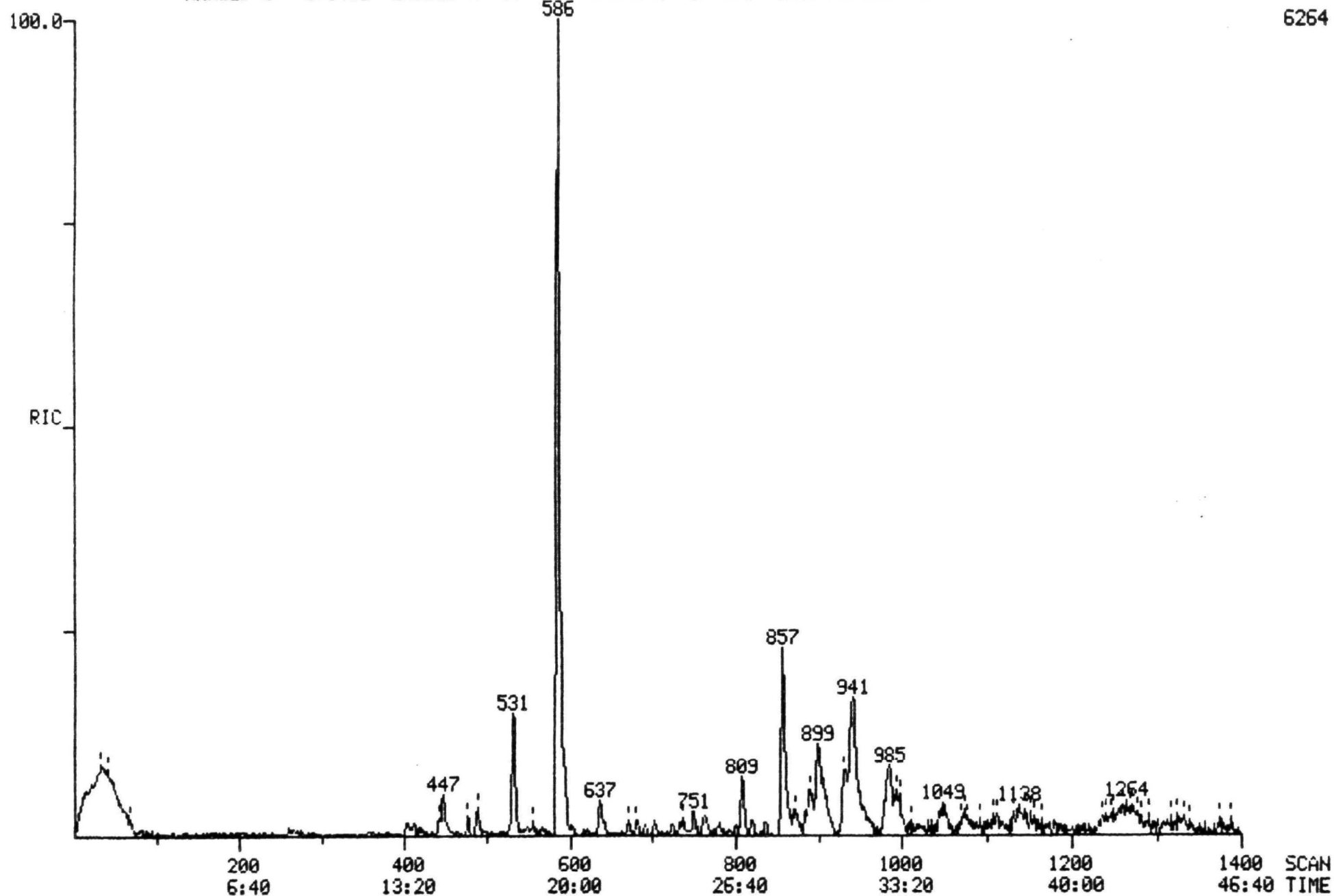
NONE

RIC
02/01/80 7:45:00
SAMPLE: B40393A, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40393A #1
CALI: CAL31JAN2 #1

SCANS 1 TO 1400

6264



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 34C21
ERG SAMPLE # 40394

MATRIX SEDIMENT
SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

120
380

OTHER COMPOUNDS

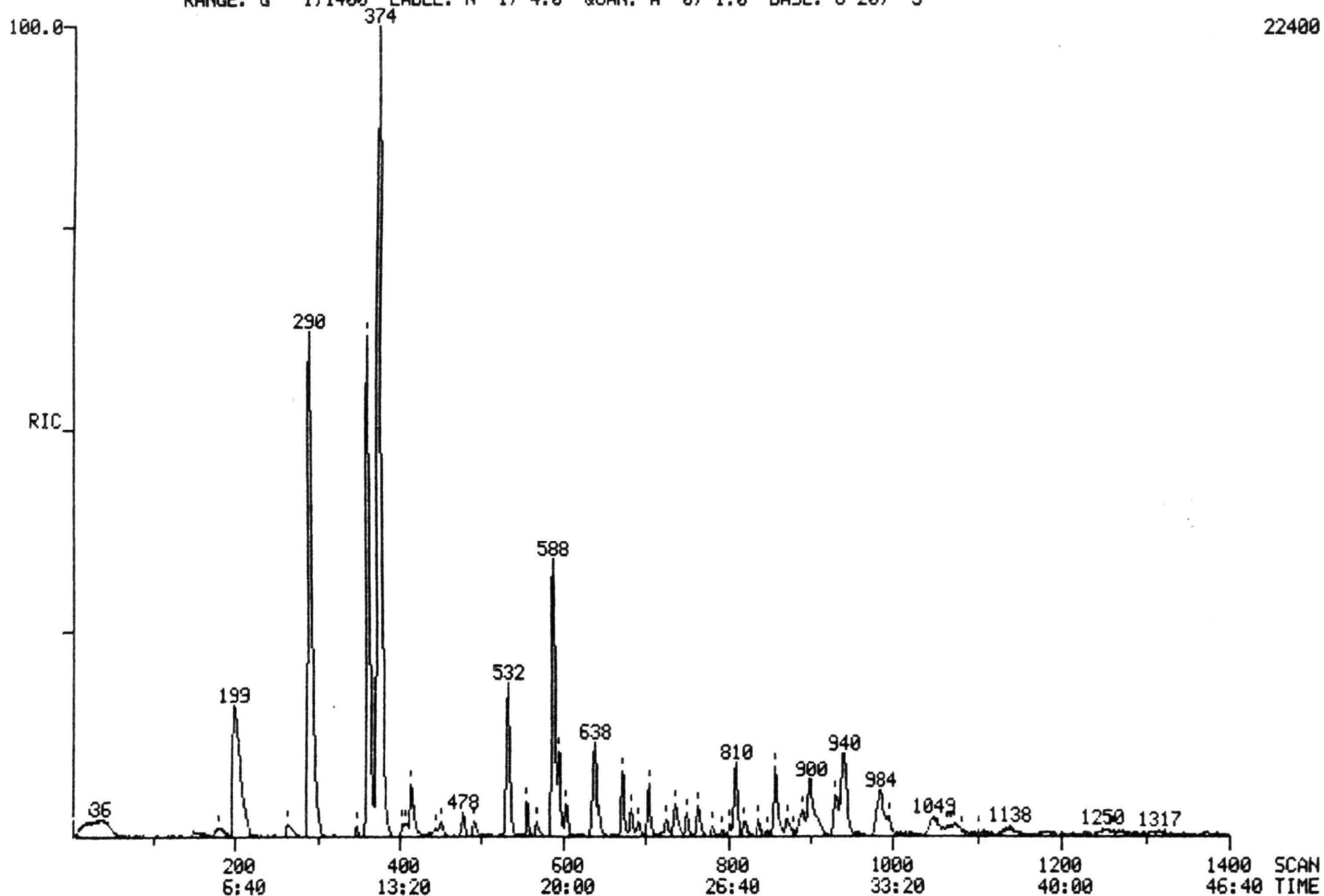
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RIC
02/01/80 9:29:00
SAMPLE: B40394, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40394 #1
CALI: CAL31JAN2 #1

SCANS 1 TO 1400

22400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 39C501

MATRIX FISH FOOD

ERG SAMPLE # 40395

SAMPLE RECEIVED 10/29/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	.24
CADMIUM	<.72
COBALT	<1.2
COPPER	67
CHROMIUM	<7.2
LEAD	2.8
MERCURY	<1
SELENIUM	<3
TIN	38
ZINC	44.76
% MOISTURE	--

Results reported in mg/kg unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

880
13000

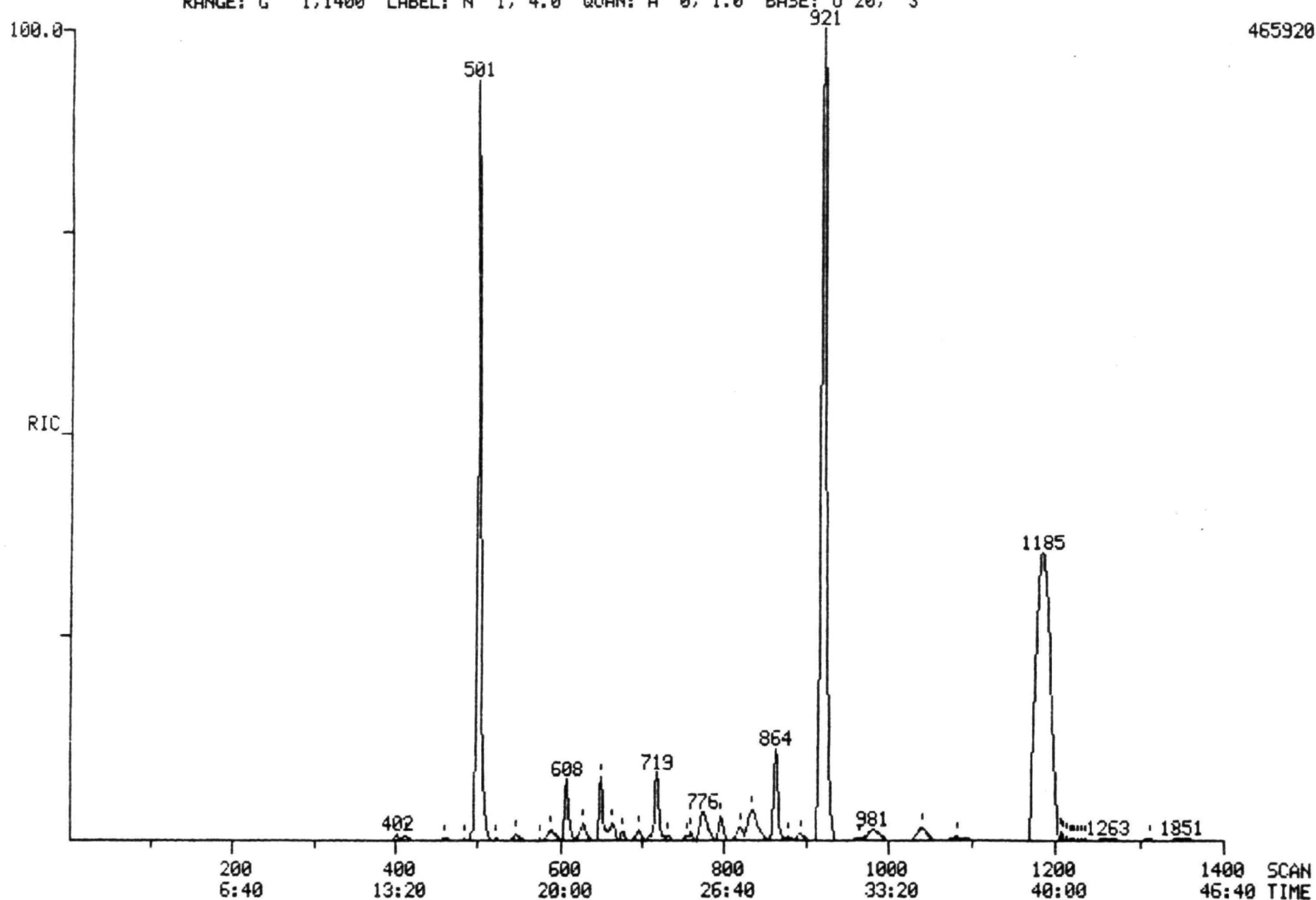
OTHER COMPOUNDS

NONE

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02/13/80 21:43:00
SAMPLE: B40395
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B40395 #1
CALI: CAL213 #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C01

MATRIX WATER

ERG SAMPLE # 41278

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	.78 µg/l
CADMIUM	<.003
COBALT	.007
COPPER	.012
CHROMIUM	<.005
LEAD	.013
MERCURY	<.0002
SELENIUM	2.4 µg/l
TIN	.088
ZINC	.019
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	86

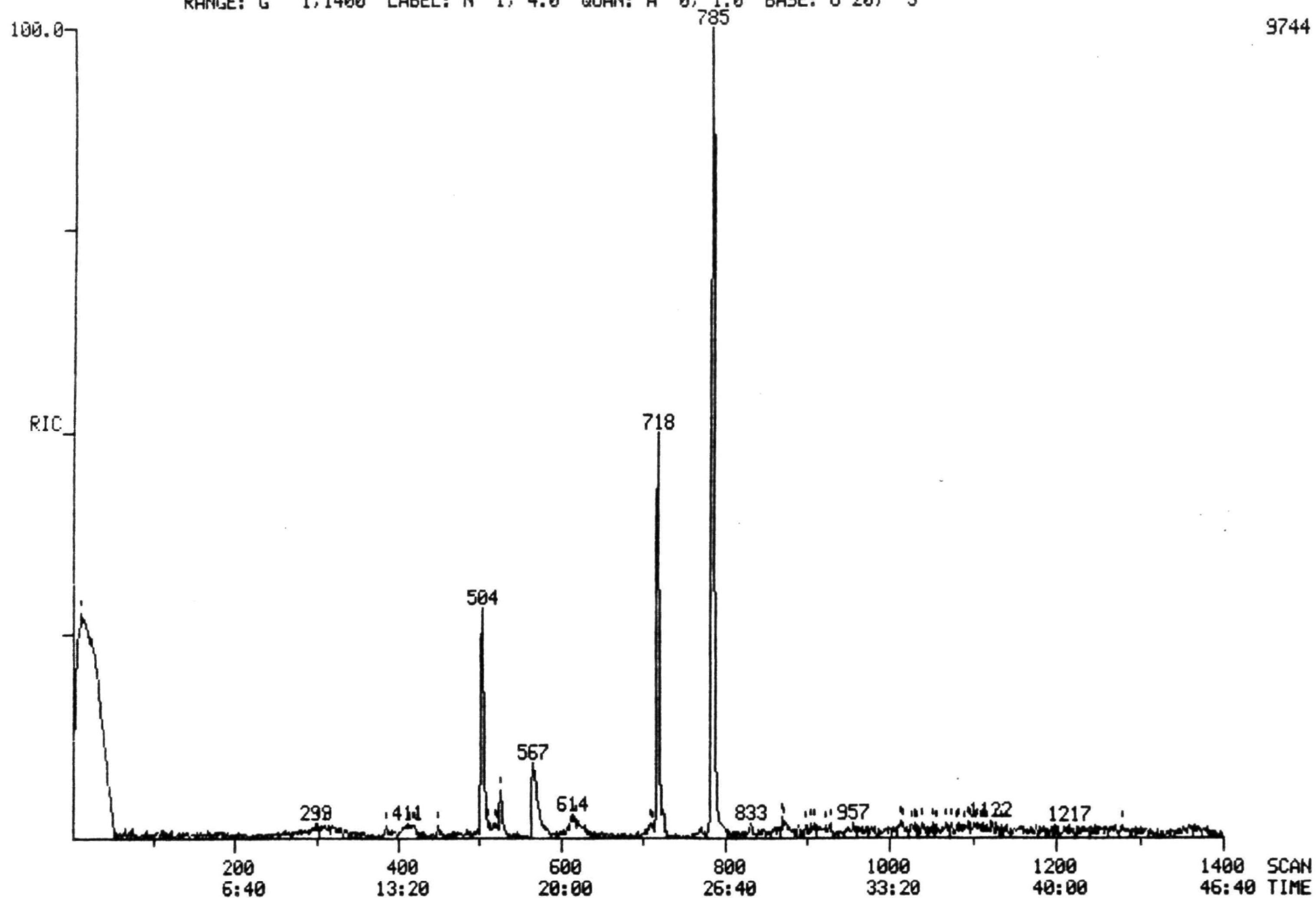
OTHER COMPOUNDS

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01/24/80 9:09:00
SAMPLE: B41278:3 UL SAMPLE, 50 NG D10A
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41278 #1
CALI: CAL124 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C02

MATRIX WATER

ERG SAMPLE # 41279

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	.59 µg/l
CADMIUM	.004
COBALT	.007
COPPER	.007
CHROMIUM	<.005
LEAD	.015
MERCURY	<.0002
SELENIUM	1.3 µg/l
TIN	<.08
ZINC	.018
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	<5
ETHYL HEXYL PHTHALATE	31

OTHER COMPOUNDS

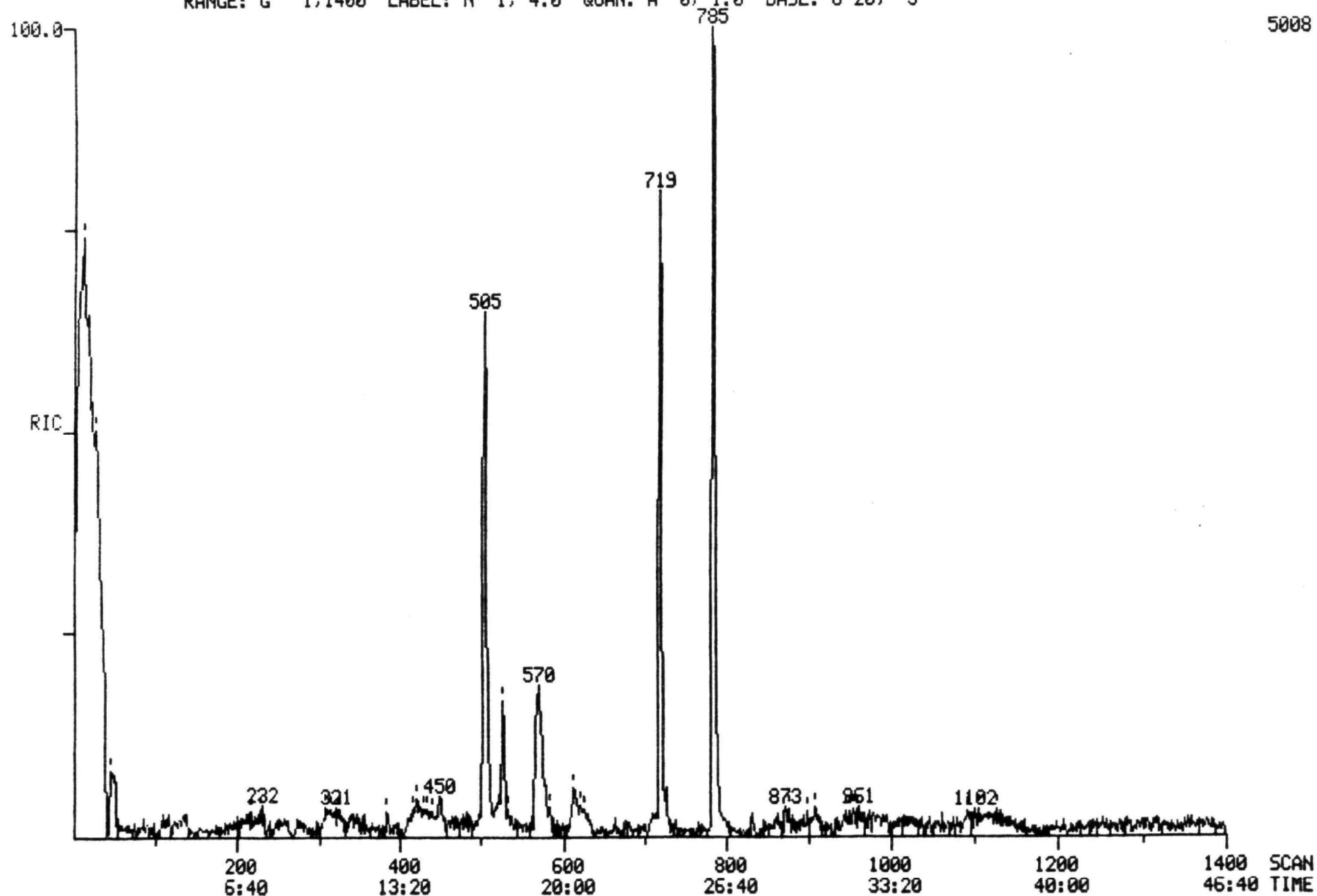
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01/24/80 10:10:00
SAMPLE: B41279: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41279 #1
CALI: CAL124 #1

SCANS 1 TO 1400

5008



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C03

MATRIX WATER

ERG SAMPLE # 41280

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	1.6 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.009
CHROMIUM	.006
LEAD	.010
MERCURY	<.0002
SELENIUM	1.3 µg/l
TIN	<.08
ZINC	.011
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

6

OTHER COMPOUNDS

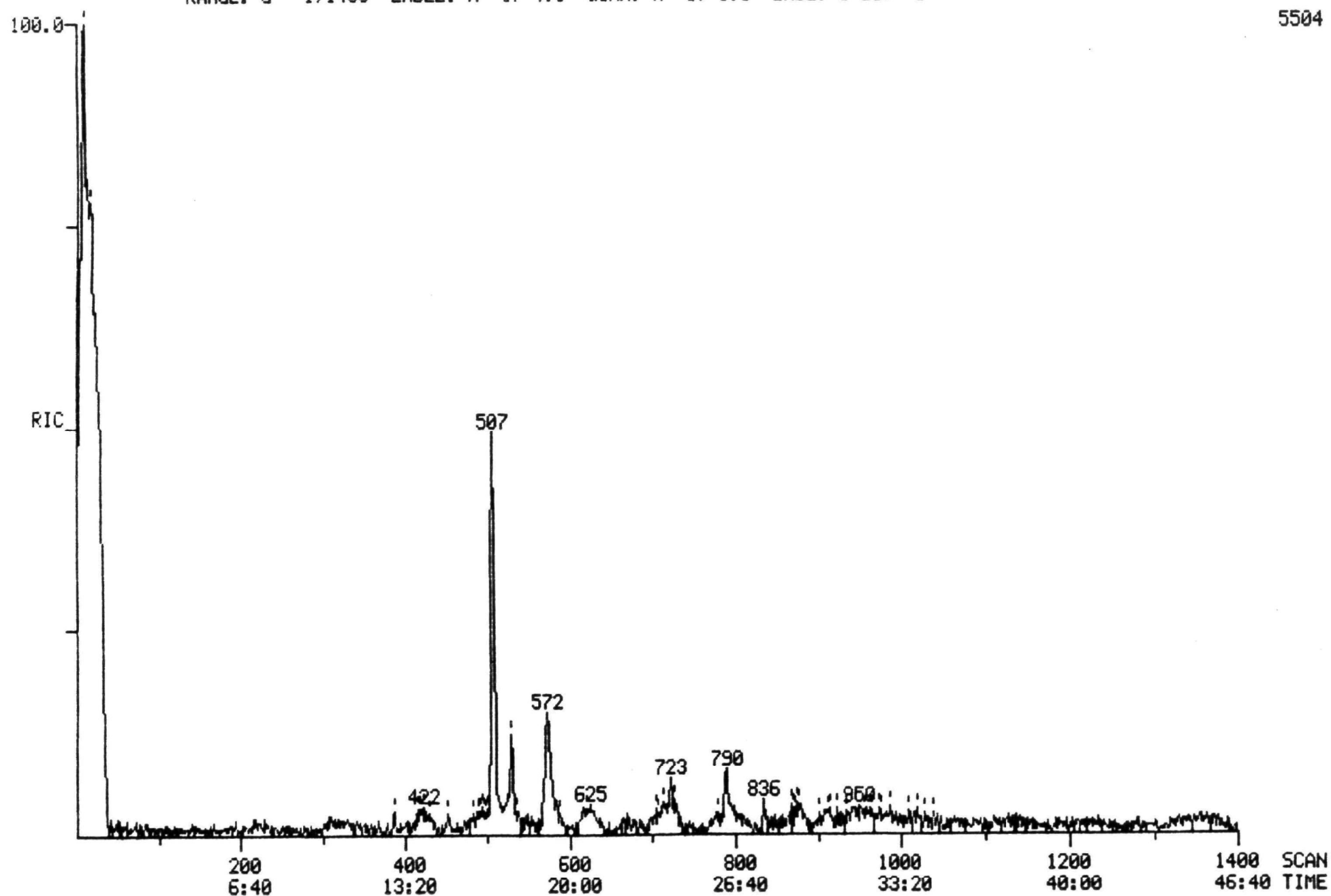
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RIC
01/24/80 11:12:00
SAMPLE: B41280: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41280 #1
CALI: CAL123 #1

SCANS 1 10 1400

5504



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C04

MATRIX WATER

ERG SAMPLE # 41281

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.012
CHROMIUM	.006
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.046
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

18

OTHER COMPOUNDS

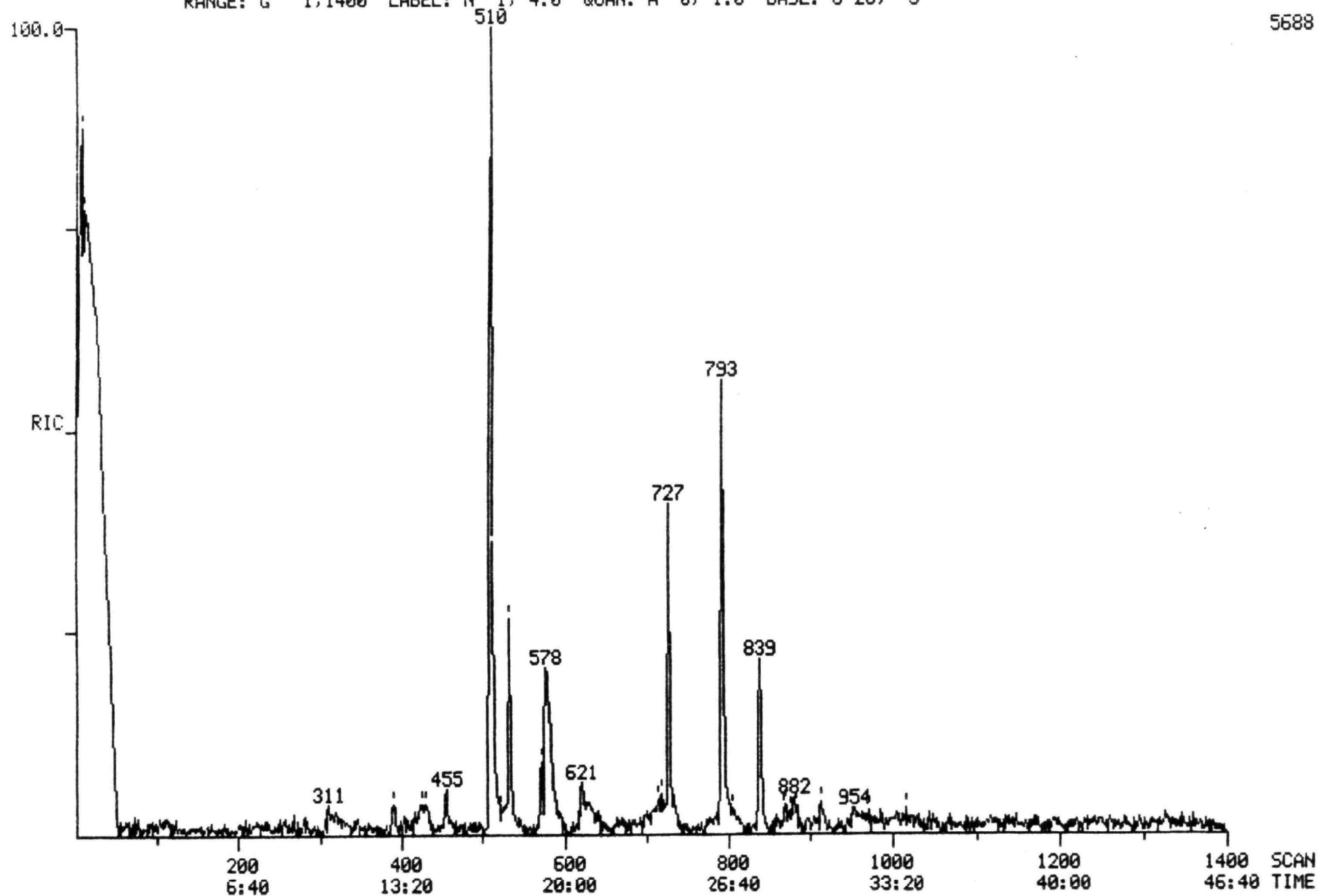
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RIC
01/24/80 18:34:00
SAMPLE: B41281, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41281 #1
CALI: CAL124 #1

SCANS 1 TO 1400

5688



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C05

MATRIX WATER

ERG SAMPLE # 41282

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.009
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	1.< µg/l
TIN	<.08
ZINC	.024
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

50

OTHER COMPOUNDS

NONE

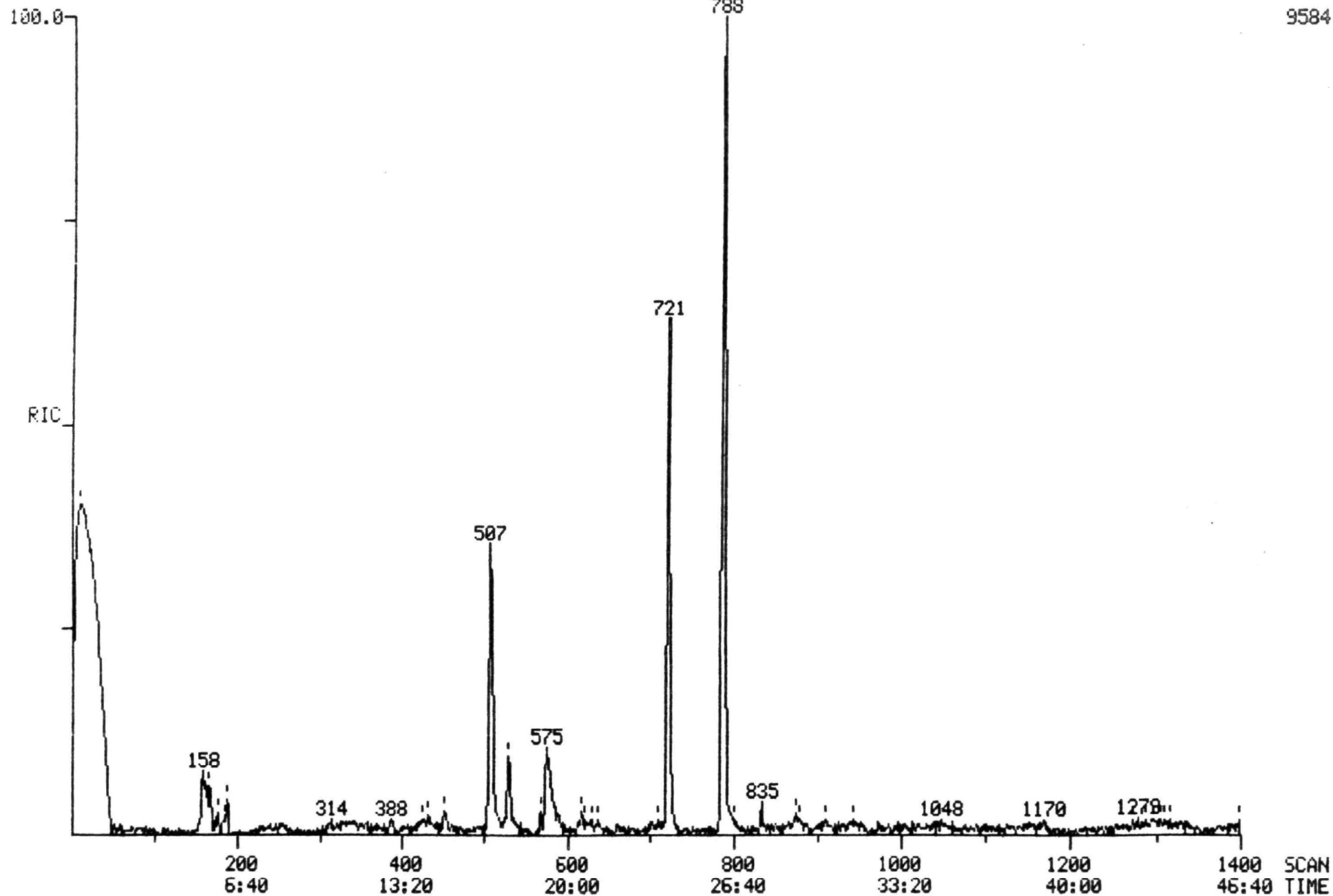
RIC
01/24/80 19:37:00

DATA: B41282 #1
CALI: CAL124 #1

SCANS 1 TO 1400

SAMPLE: B41282, 3 UL + 1 UL IS

RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C06

MATRIX WATER

ERG SAMPLE # 41283

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.5 µg/1
CADMIUM	<.003
COBALT	<.005
COPPER	.007
CHROMIUM	.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	1.3 µg/1
TIN	<.08
ZINC	.021
% MOISTURE	--

Results reported in mg/1 unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

31

OTHER COMPOUNDS

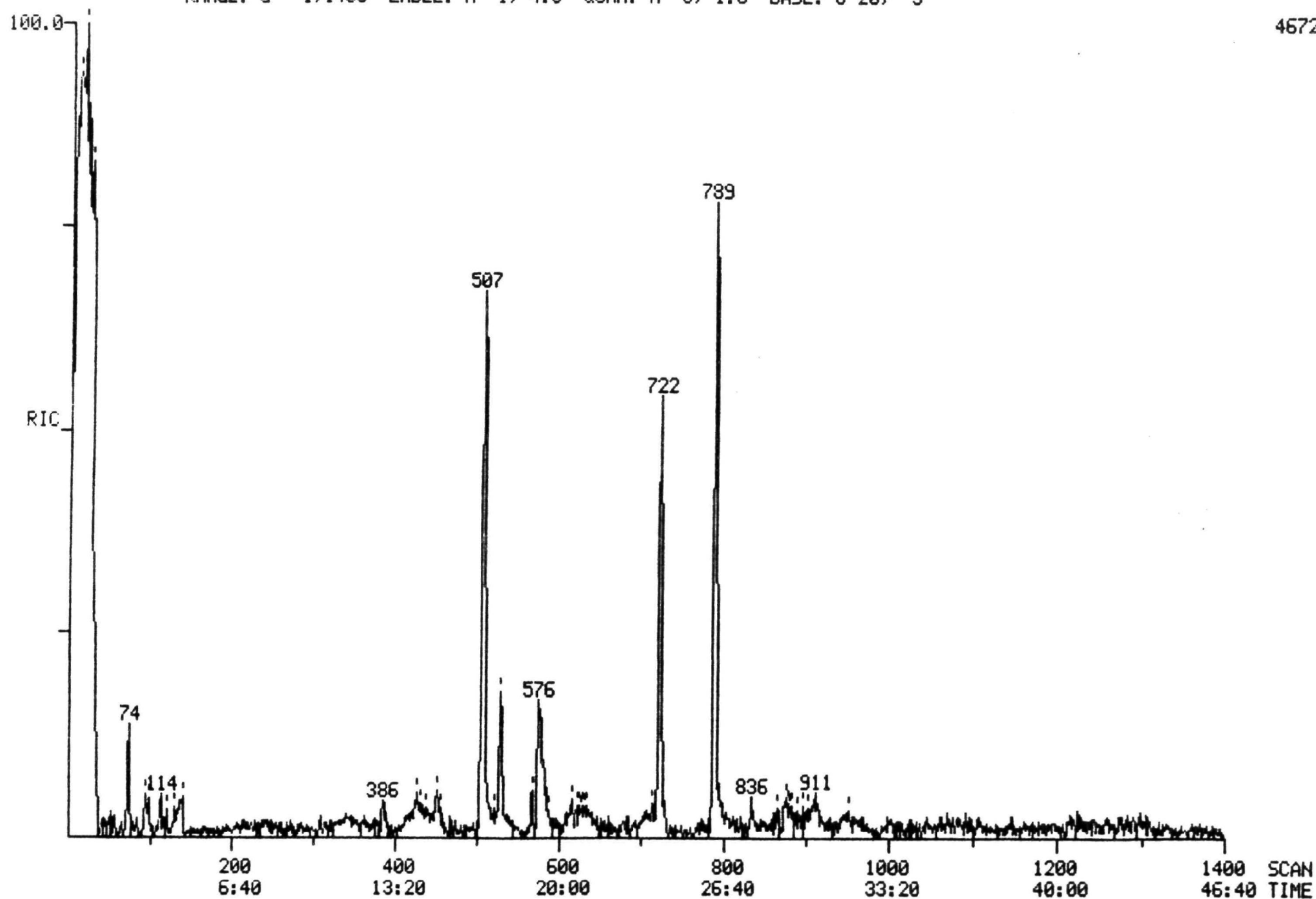
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01/24/80 20:39:00
SAMPLE: B41283, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41283 #1
CALI: CAL124 #1

SCANS 1 TO 1400

4672



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB40C07

MATRIX WATER

ERG SAMPLE # 41284

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.013
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

92

OTHER COMPOUNDS

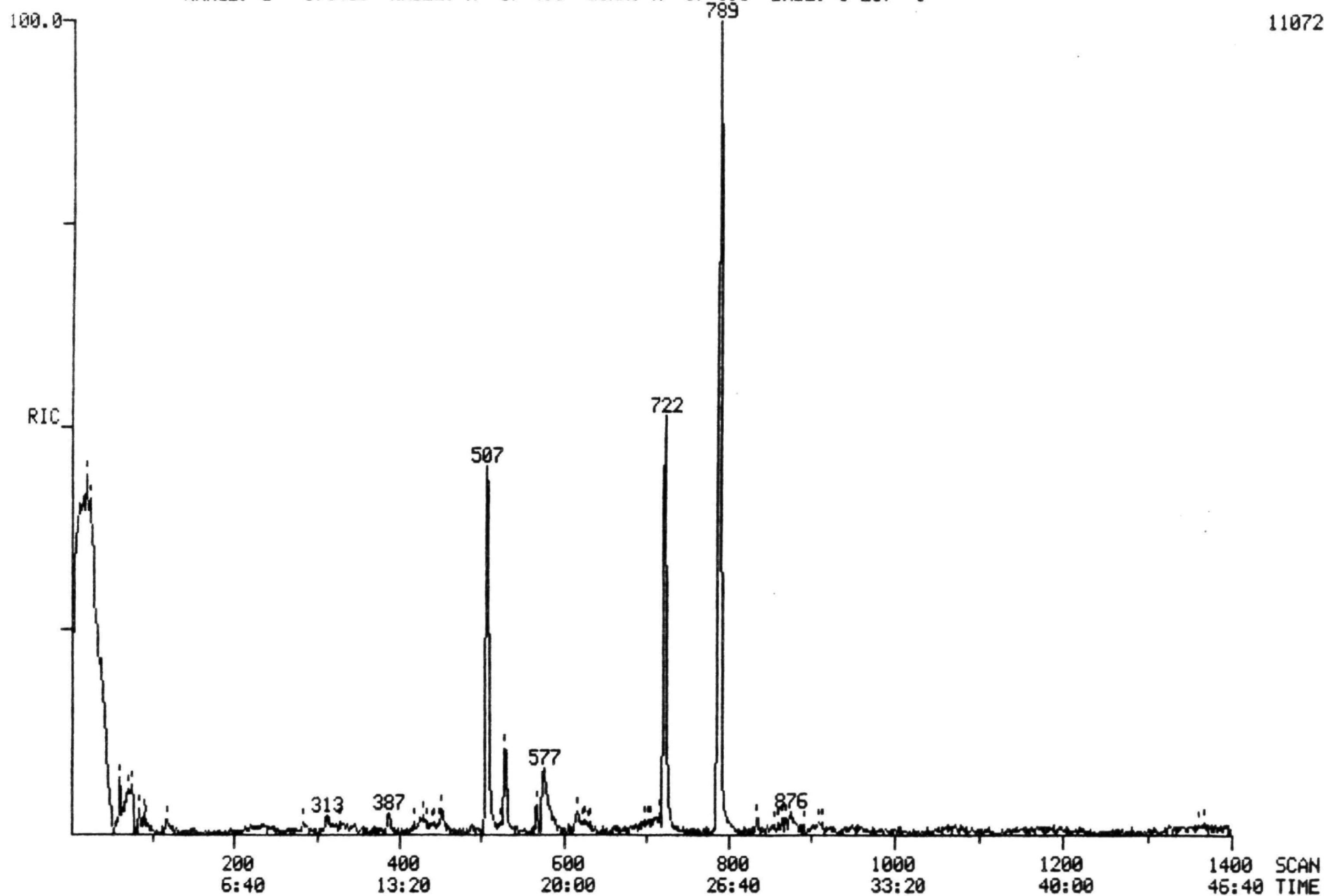
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RIC
01/24/80 21:50:00
SAMPLE: B41284, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41204 #1
CALI: CAL124 #1

SCANS 110 1400

11072



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C08

MATRIX WATER

ERG SAMPLE # 41285A

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.05 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.006
CHROMIUM	.007
LEAD	.011
MERCURY	<.0002
SELENIUM	1.2 µg/l
TIN	<.08
ZINC	.007
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

100

OTHER COMPOUNDS

NONE

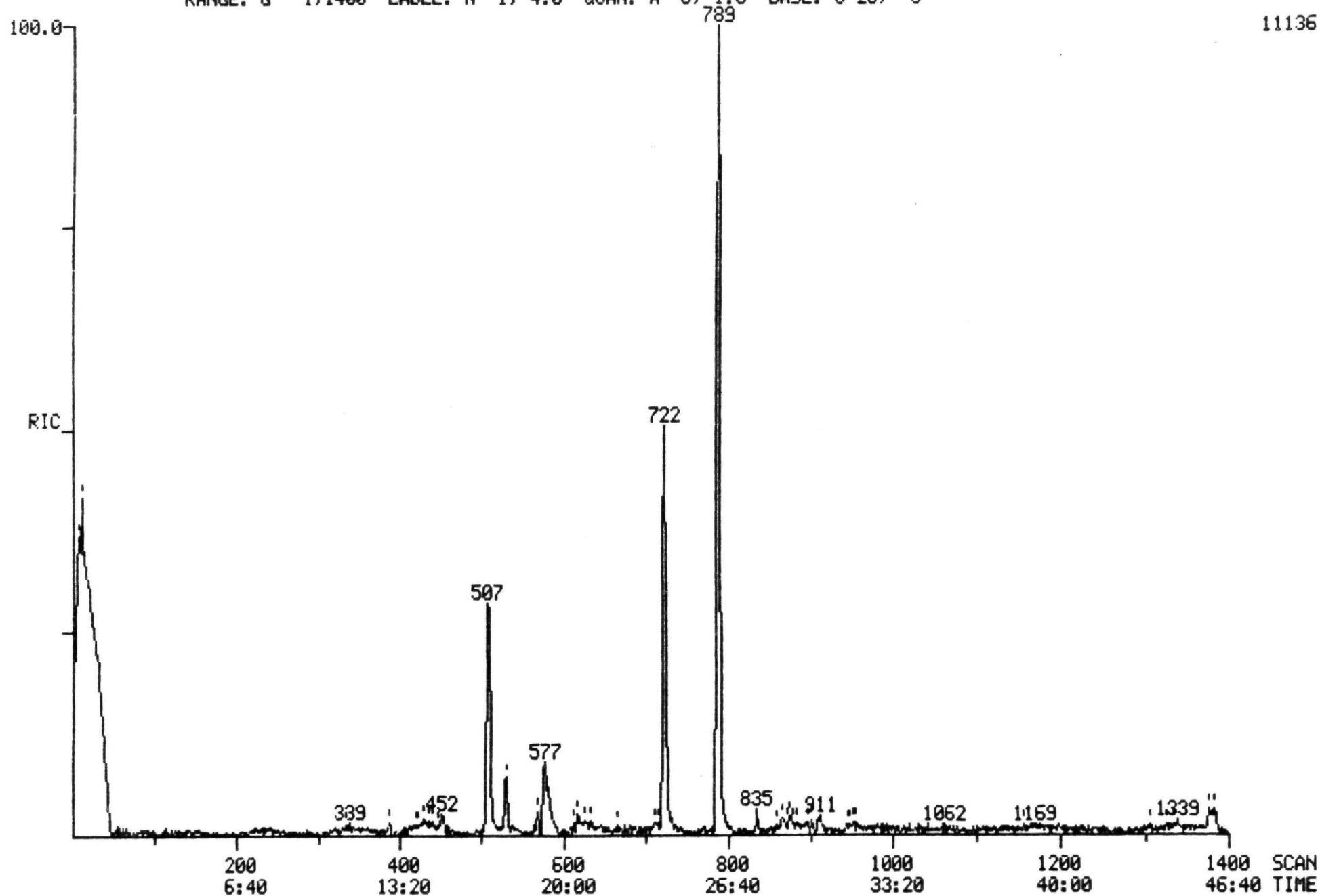
RIC
01/24/80 22:55:00

DATA: B41285A #1
CALI: CAL124 #1

SCANS 1 TO 1400

SAMPLE: B41285A, 3 UL + 1 UL IS

RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB40C08

MATRIX WATER

ERG SAMPLE # 41285B

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.006
CHROMIUM	.007
LEAD	.011
MERCURY	<.0002
SELENIUM	1.2 µg/l
TIN	<.08
ZINC	.007
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

79

OTHER COMPOUNDS

NONE

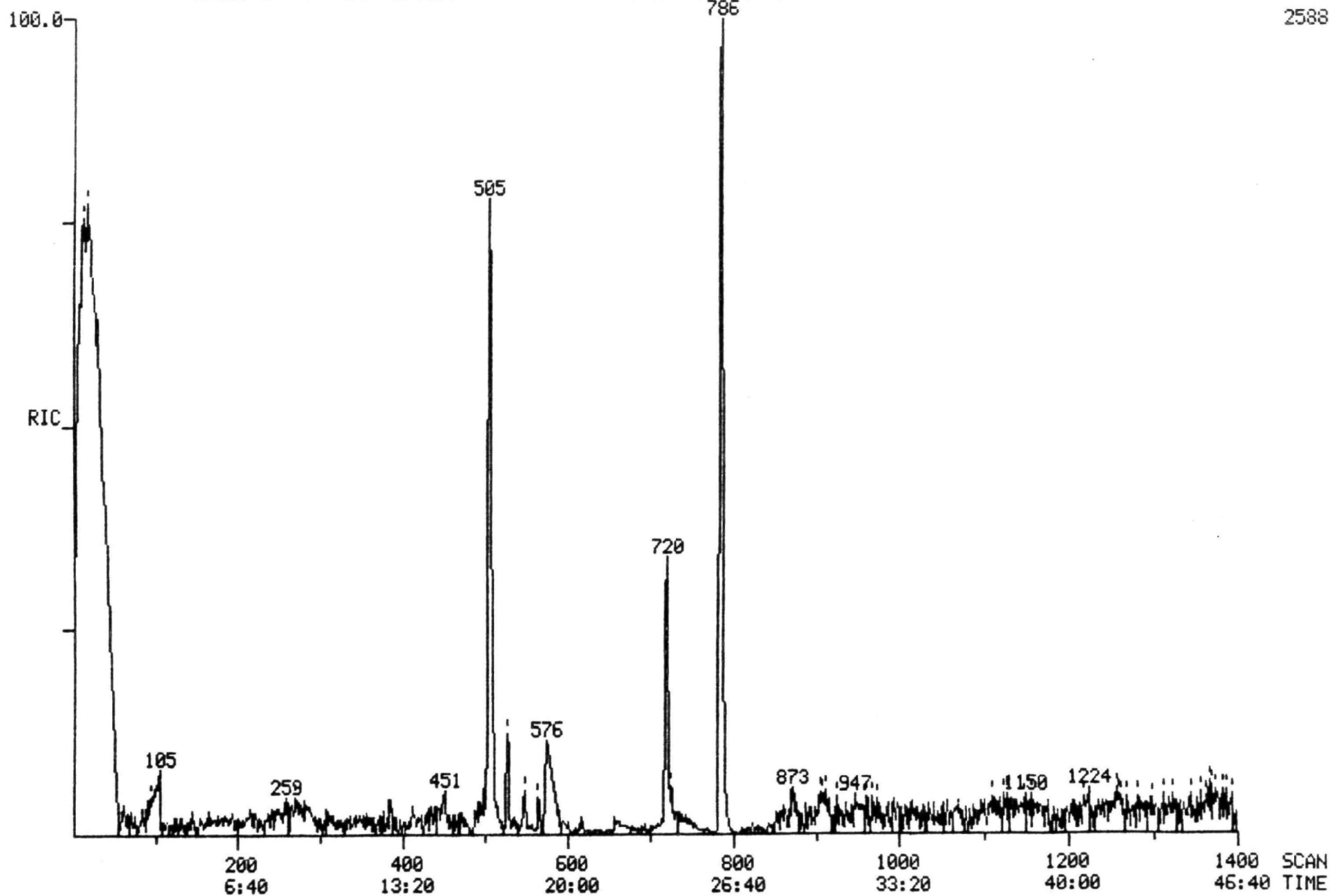
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01/25/80 9:03:00
SAMPLE: B41285B: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

JATI.. J+12... #1
CALI: CAL125 #1

SCI

14

2588



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB40C09

MATRIX WATER

ERG SAMPLE # 41286

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.009
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

43.

OTHER COMPOUNDS

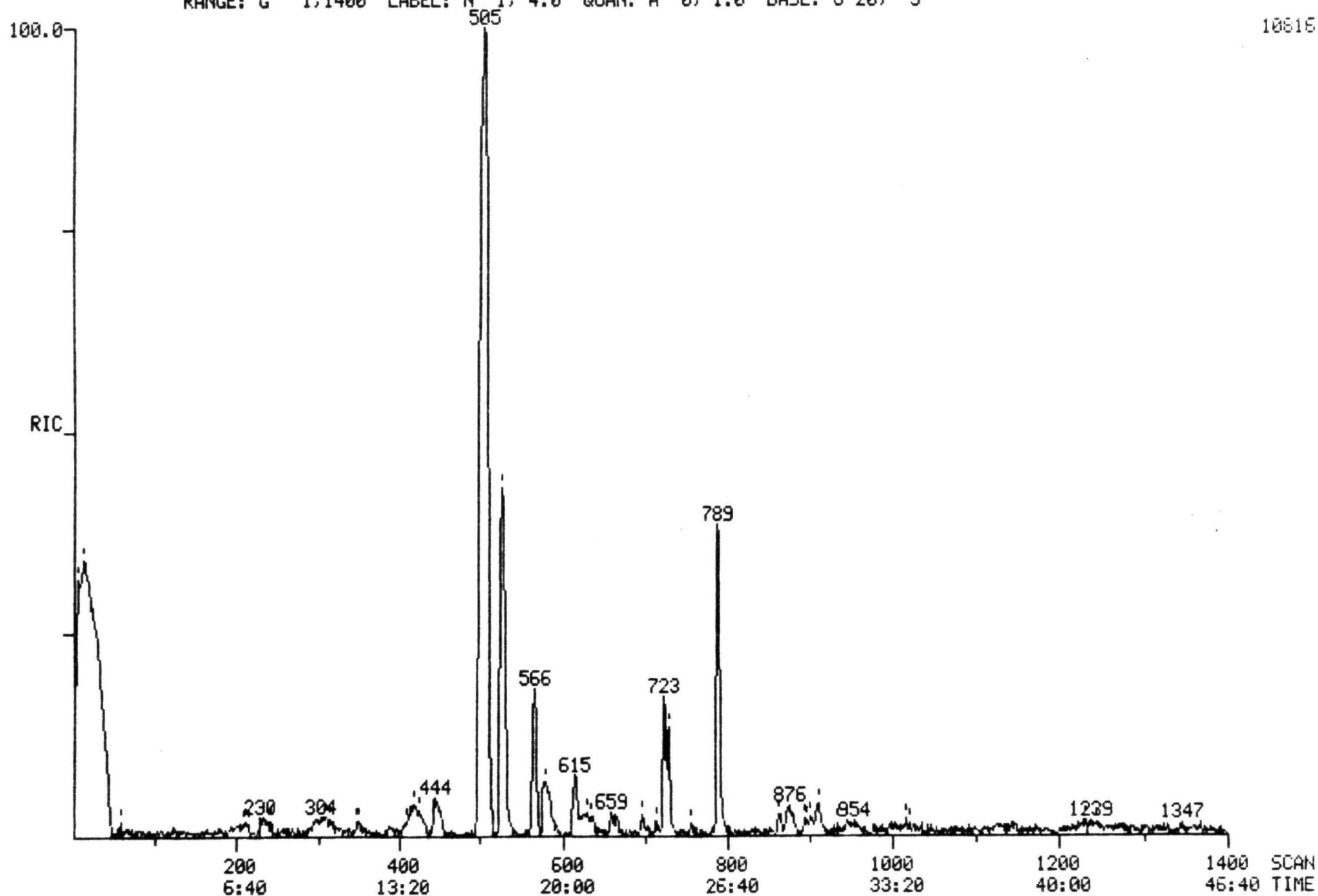
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RIC
01/25/80 12:10:00
SAMPLE: B41286: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41286 #1
CALI: CAL125 #1

SCANS 1 TO 1400

10815



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C10

MATRIX WATER

ERG SAMPLE # 41287

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.010
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

51

OTHER COMPOUNDS

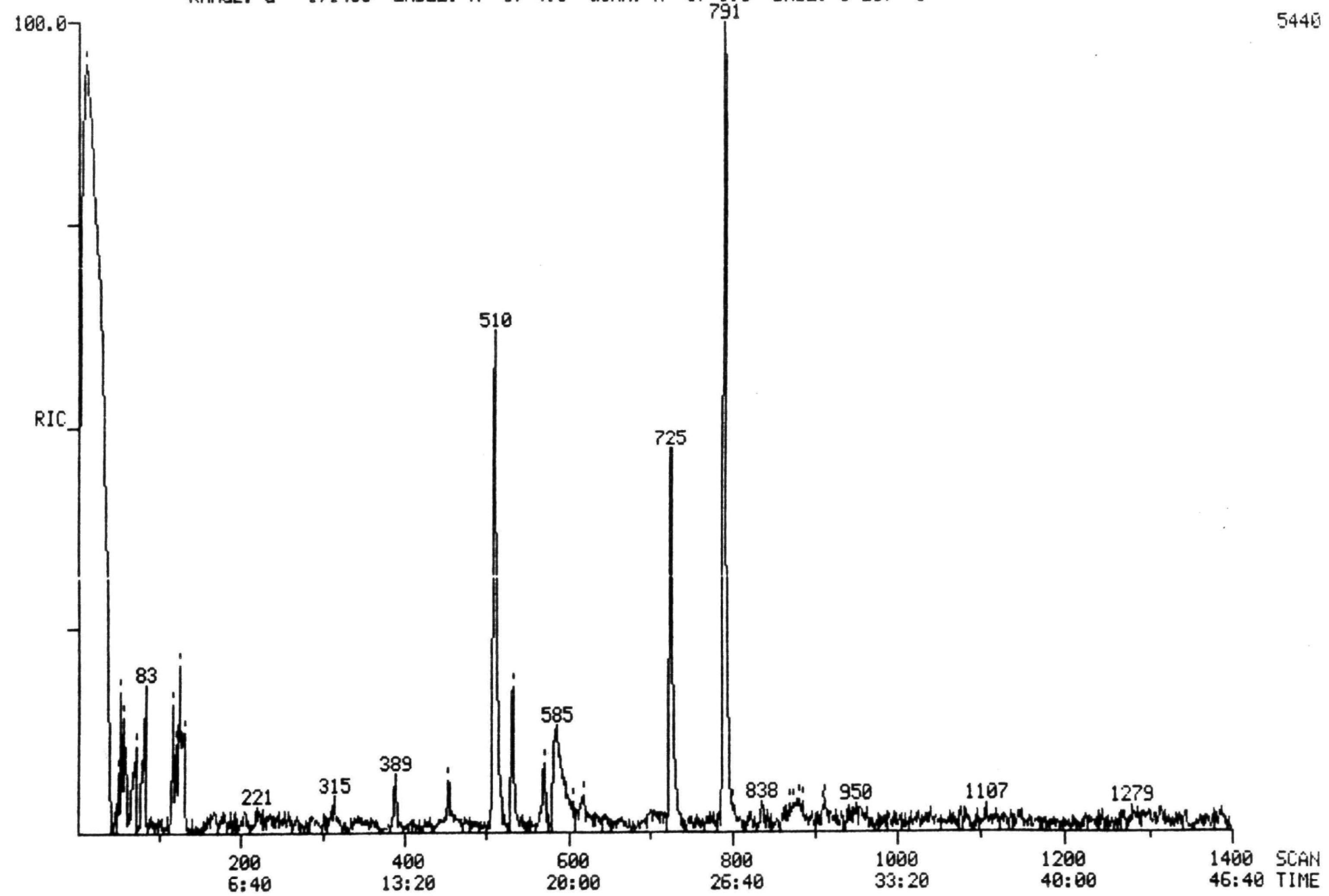
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RIC
01/25/80 14:10:00
SAMPLE: B41287: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41287 #1
CALI: CAL125 #1

SCANS 1 TO 1400

5440



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C11

MATRIX WATER

ERG SAMPLE # 41288A

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.007
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.024
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

53

OTHER COMPOUNDS

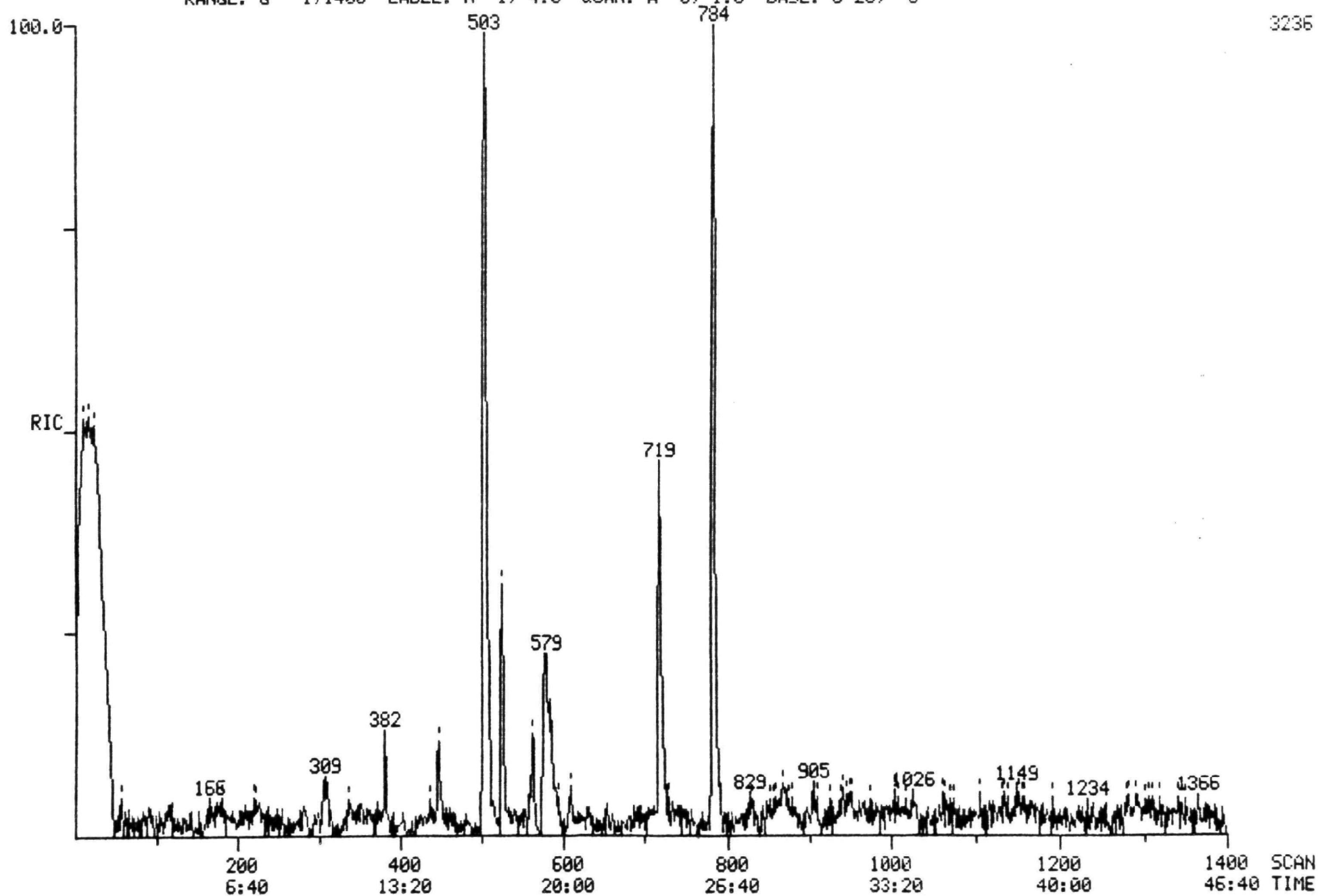
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R...
01/25/80 15:16:00
SAMPLE: B41288A: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DA1... 412... #1
CALI: CAL125 #1

SC...) 1...

3235



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB40C11

MATRIX WATER

ERG SAMPLE # 41288B

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/1
CADMIUM	<.003
COBALT	<.005
COPPER	.007
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/1
TIN	<.08
ZINC	.024
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

67

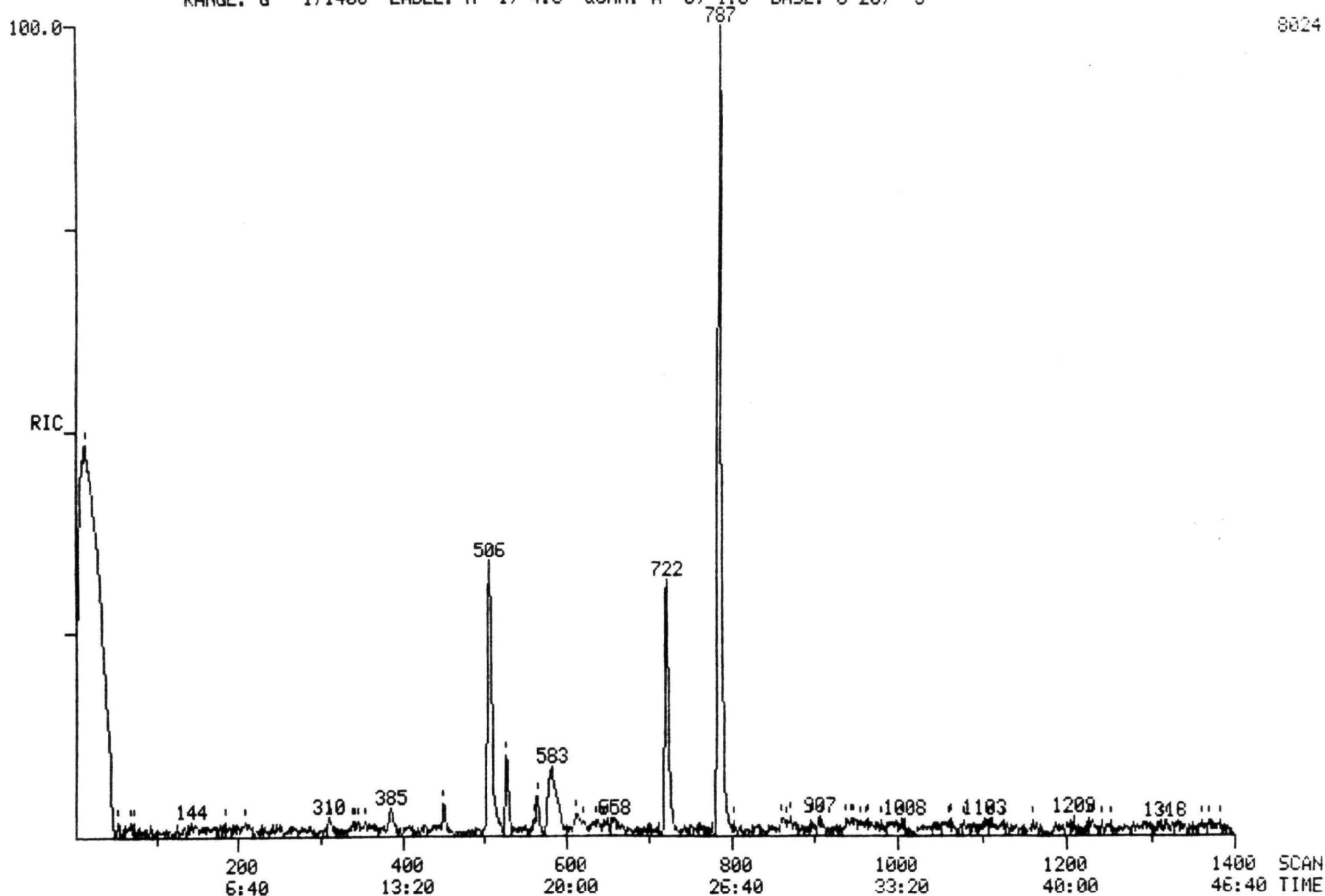
OTHER COMPOUNDS

NONE

RIC
01/25/80 16:20:00
SAMPLE: B41288B: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41288B #1
CALI: CAL125 #1

SCAN: 1 10 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB40C12

MATRIX WATER

ERG SAMPLE # 41289

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.007
CHROMIUM	.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.018
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

84

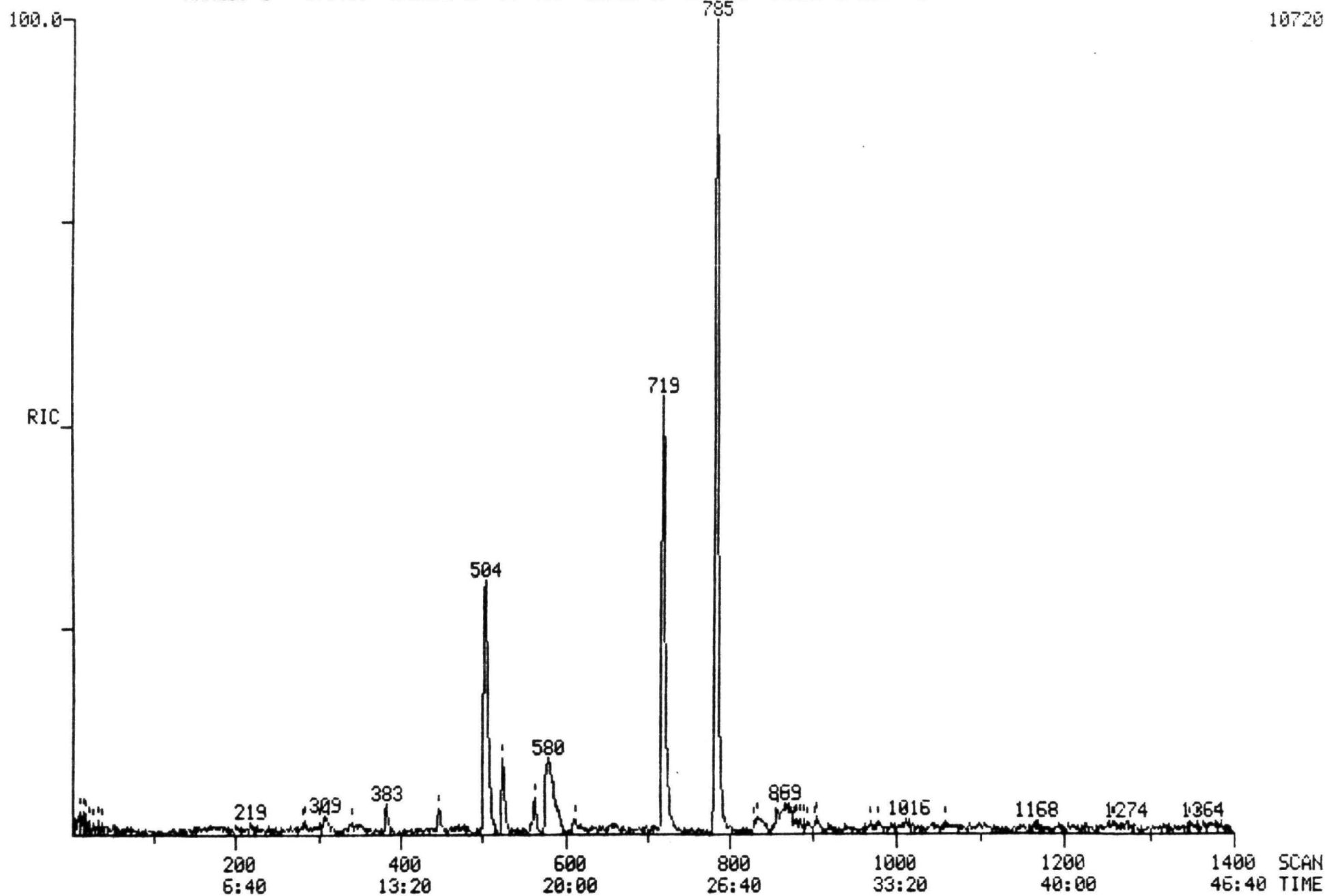
OTHER COMPOUNDS

NONE

RIC
01/25/80 19:40:00
SAMPLE: B41289, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41289 #19
CALI: CAL125 #1

SCANS 1 to 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C13

MATRIX WATER

ERG SAMPLE # 41290

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.008
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.018
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

53

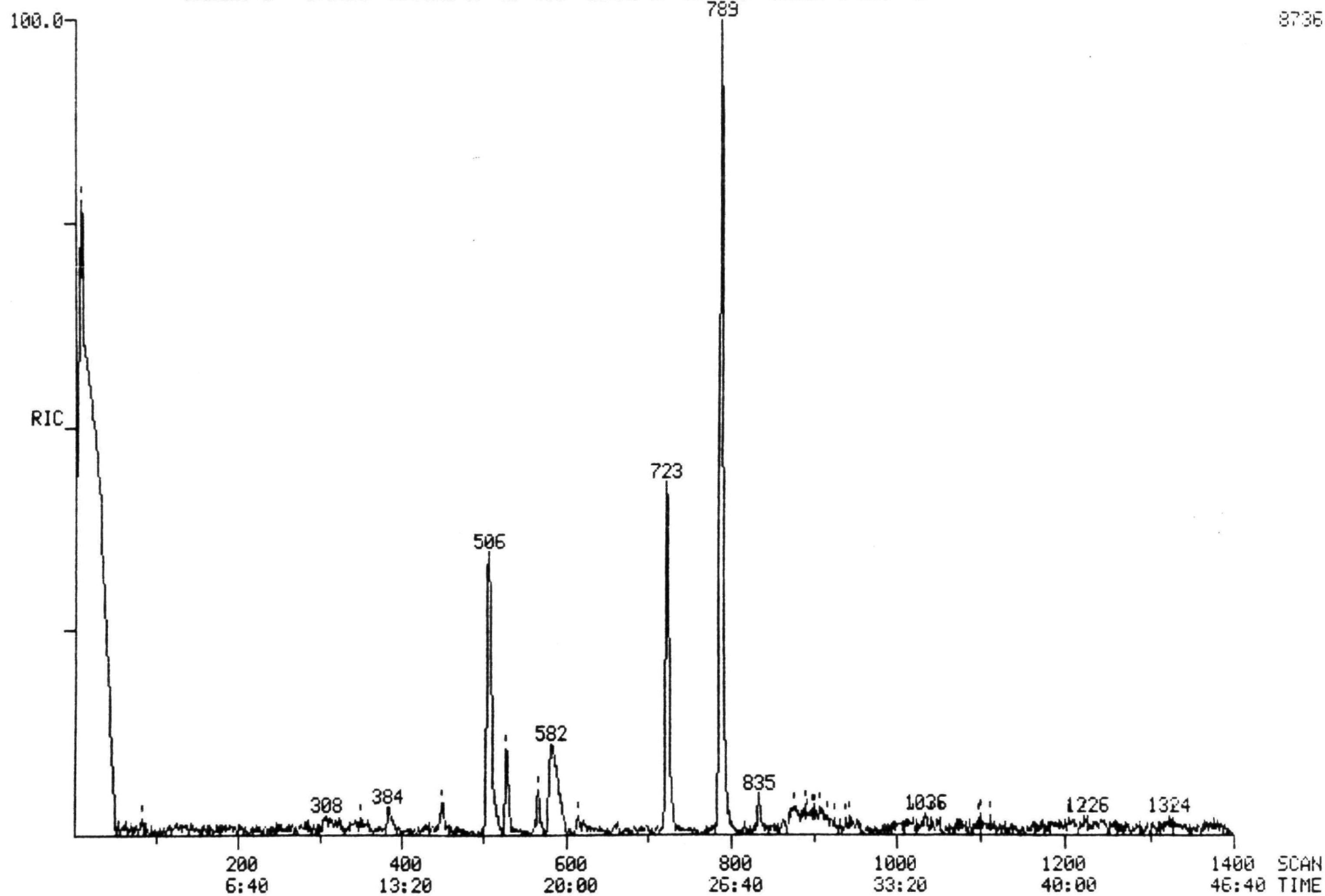
OTHER COMPOUNDS

NONE

RIC
01/25/80 20:44:00
SAMPLE: B41290, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: 0.1250 ...
CALI: CAL125 #1

SCAN: 1 10 140



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C14

MATRIX WATER

ERG SAMPLE # 41291

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.008
CHROMIUM	.008
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.024
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

73

OTHER COMPOUNDS

NONE

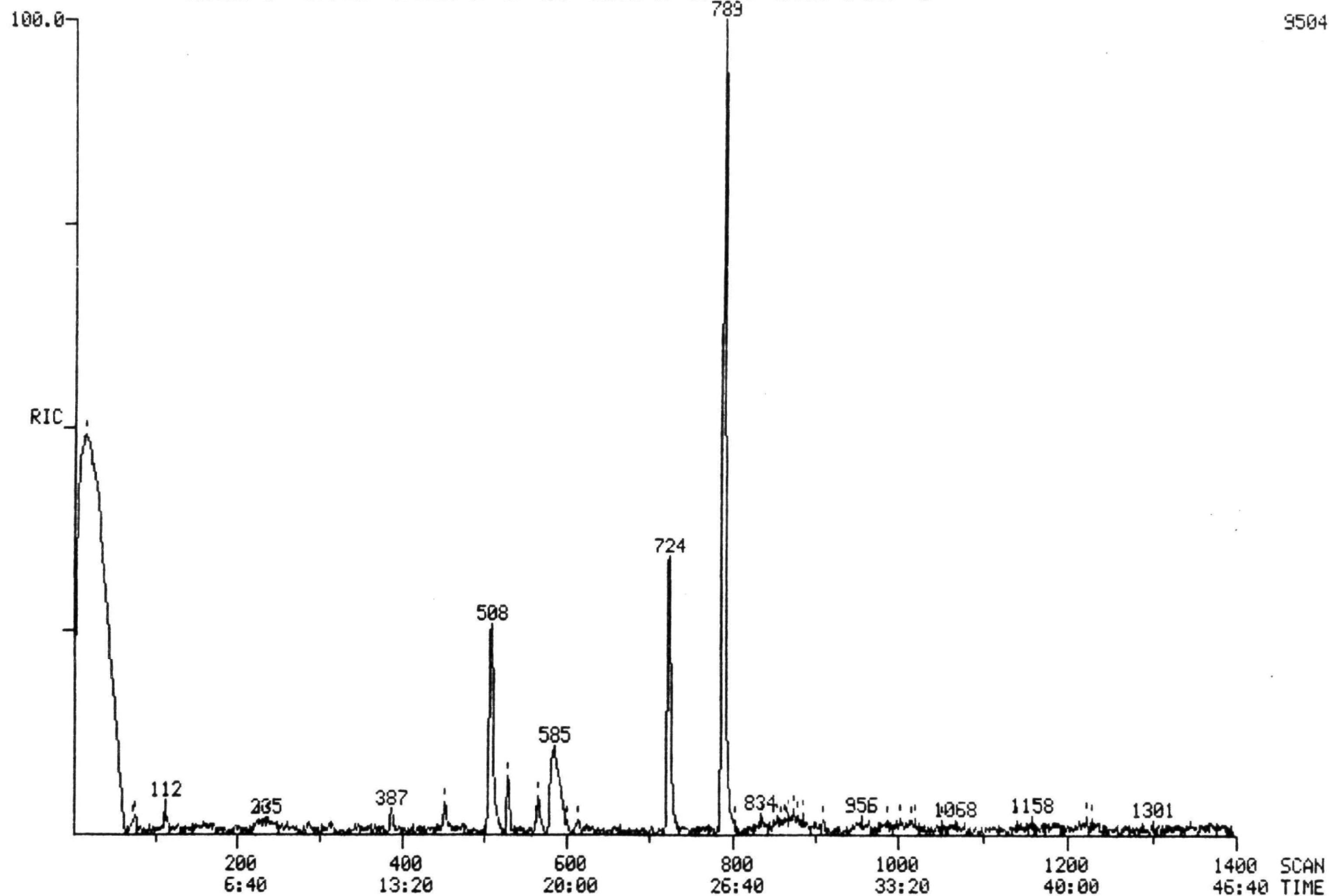
RIC
01/25/80 22:35:00

DATA: B41291 #1
CALI: CAL125 #1

SCANS 1 to 1400

SAMPLE: B41291, 3 UL + 1 UL IS

RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB40C15

MATRIX WATER

ERG SAMPLE # 41292

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.009
CHROMIUM	.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.034
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

60

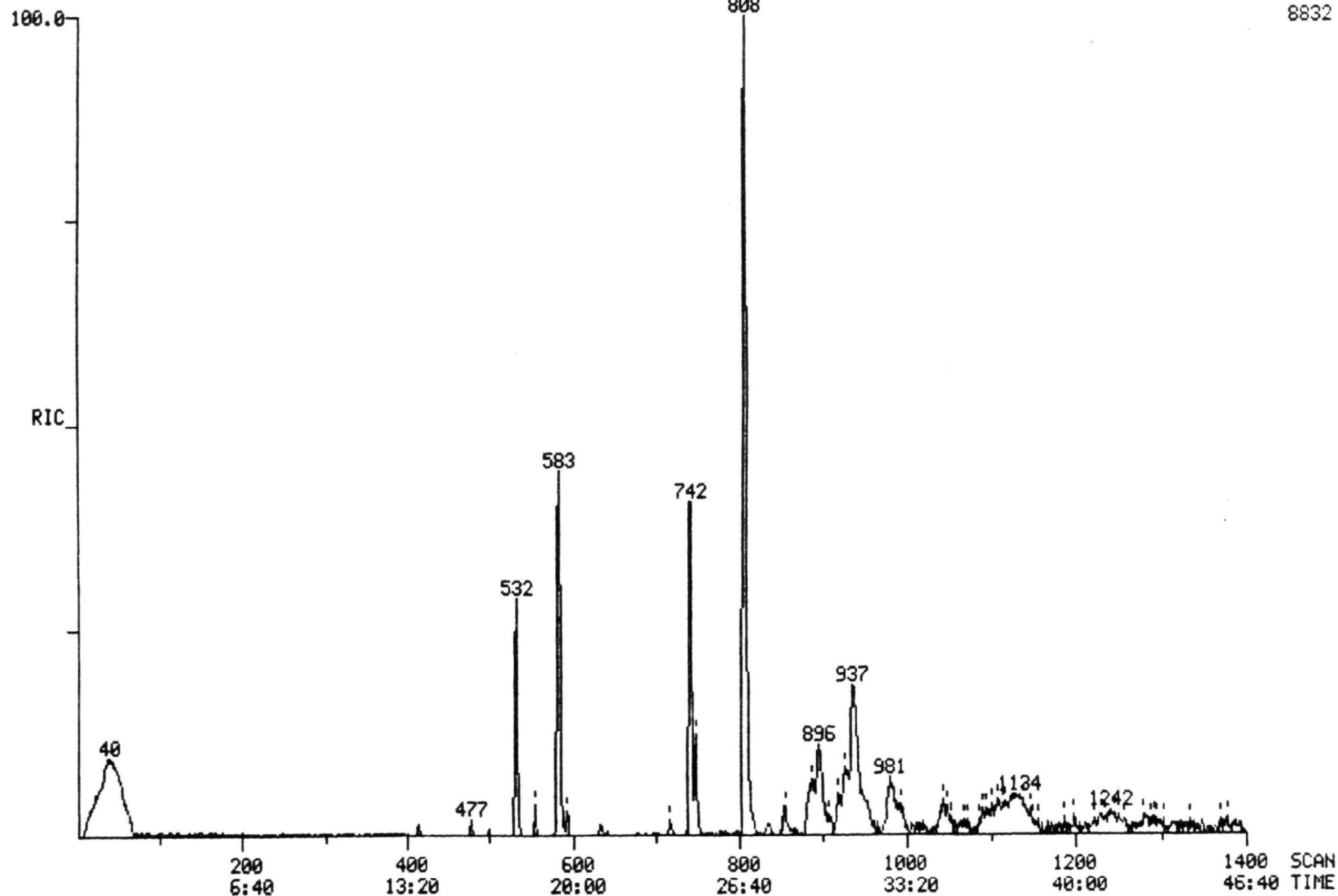
OTHER COMPOUNDS

NONE

RIC
01/30/80 12:40:00
SAMPLE: B41292: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41292 #1
CALI: CAL130 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 40C16

MATRIX WATER

ERG SAMPLE # 41293

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	.76 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.005
LEAD	.012
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.009
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS. SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

50

OTHER COMPOUNDS

NONE

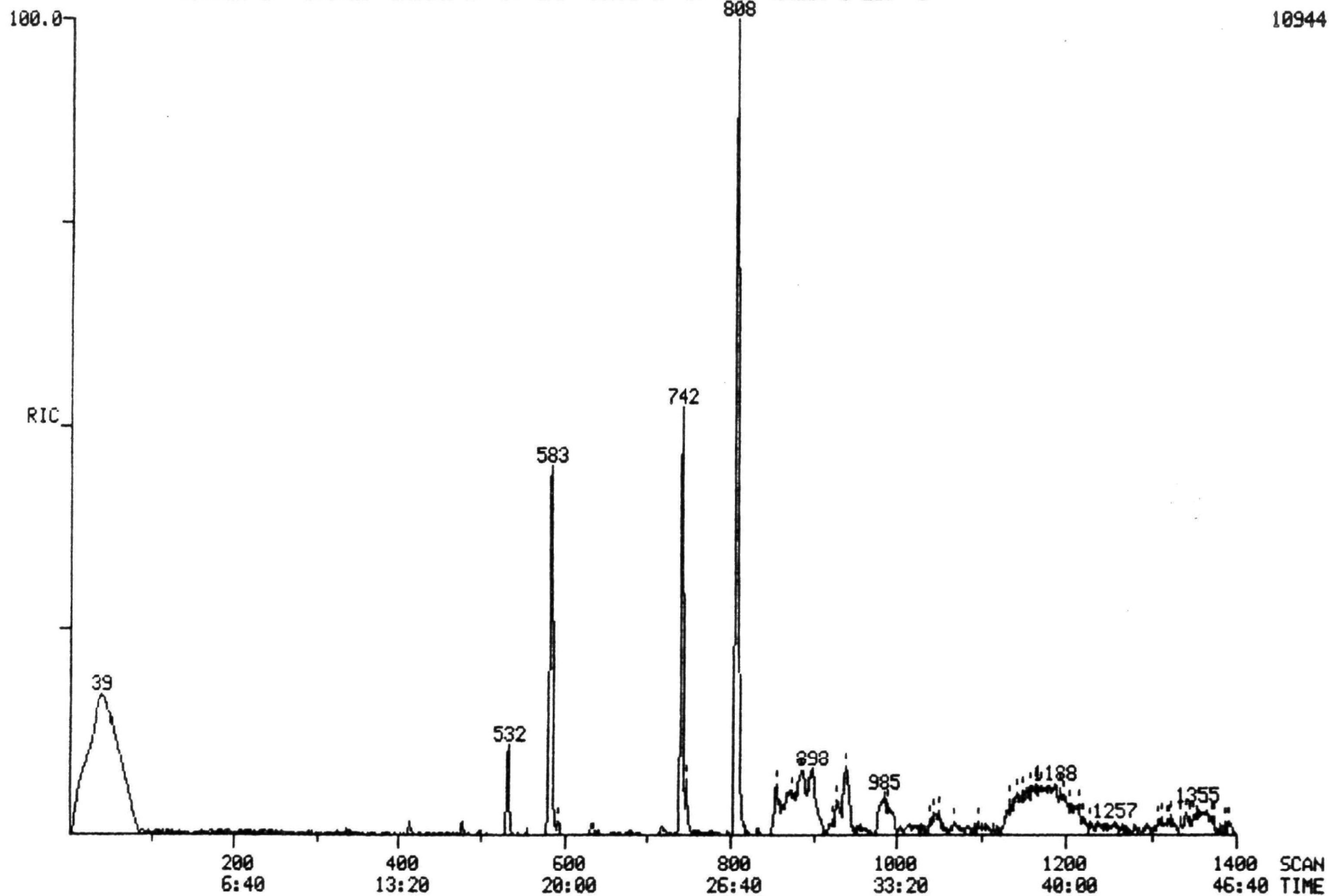
RIC
01/30/80 13:39:00

DATA: B41293 #1
CALI: CAL130 #1

SCANS 1 TO 1400

SAMPLE: B41293: 3 UL SAMPLE, 50 NG D10A

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB40C17

MATRIX WATER

ERG SAMPLE # 41294

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	1.3 µg/l
TIN	<.08
ZINC	.012
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

50

OTHER COMPOUNDS

NONE

RIC
01/30/80 14:37:00

DATA: B41294 #1
CALI: CAL130 #1

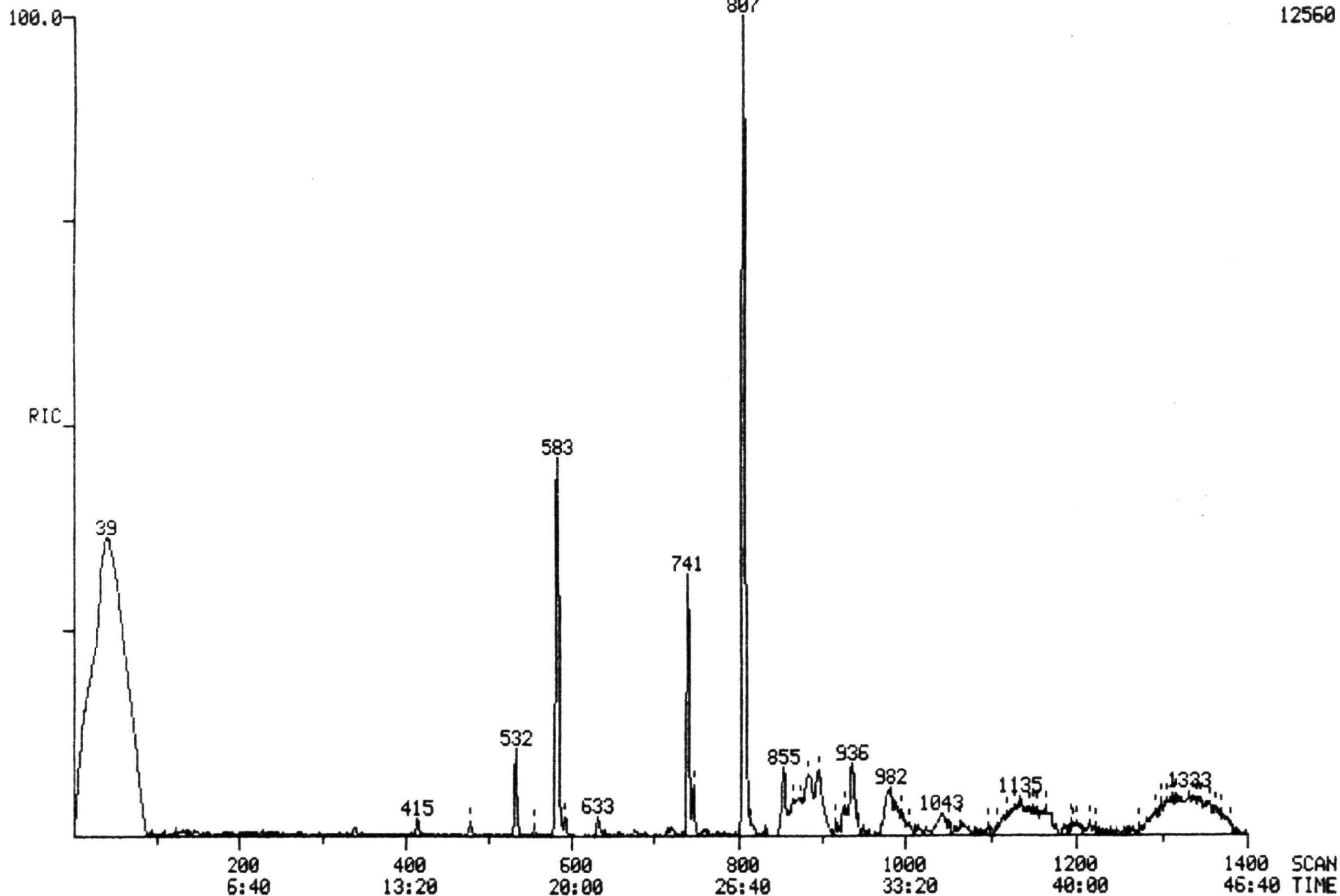
SCANS 1 TO 1400

SAMPLE: B41294: 3 UL SAMPLE, 50 NG D10A

RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

807

12560



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 40C18

MATRIX WATER

ERG SAMPLE # 41295

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	<.5 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.008
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.008
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

50

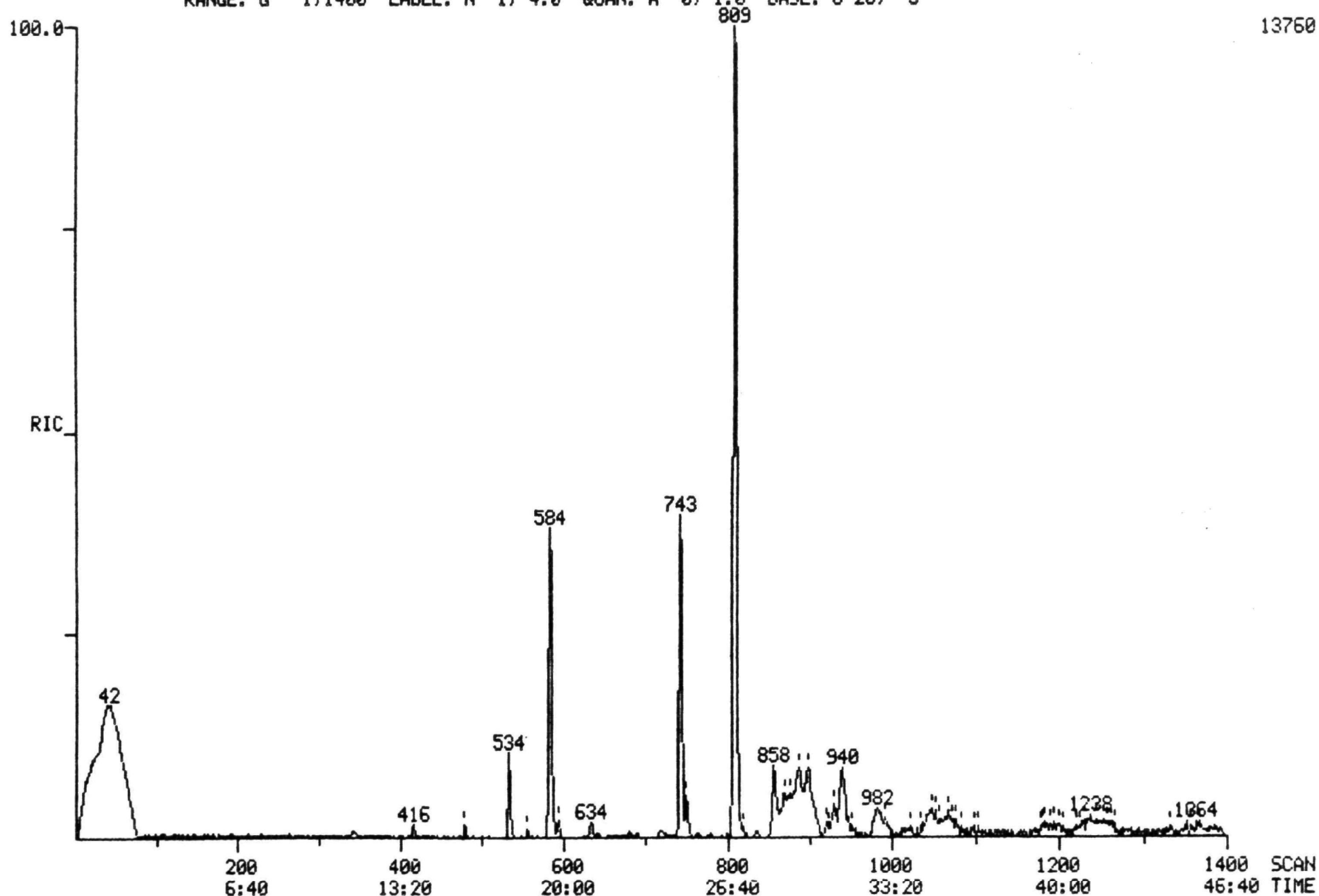
OTHER COMPOUNDS

NONE

RIC
01/30/80 15:45:00
SAMPLE: B41295: 3 UL SAMPLE, 50 NG D10A
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41295 #1
CALI: CAL130 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 40C19

MATRIX WATER

ERG SAMPLE # 41296

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	3.3 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.010
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

ETHYL HEXYL PHTHALATE

40

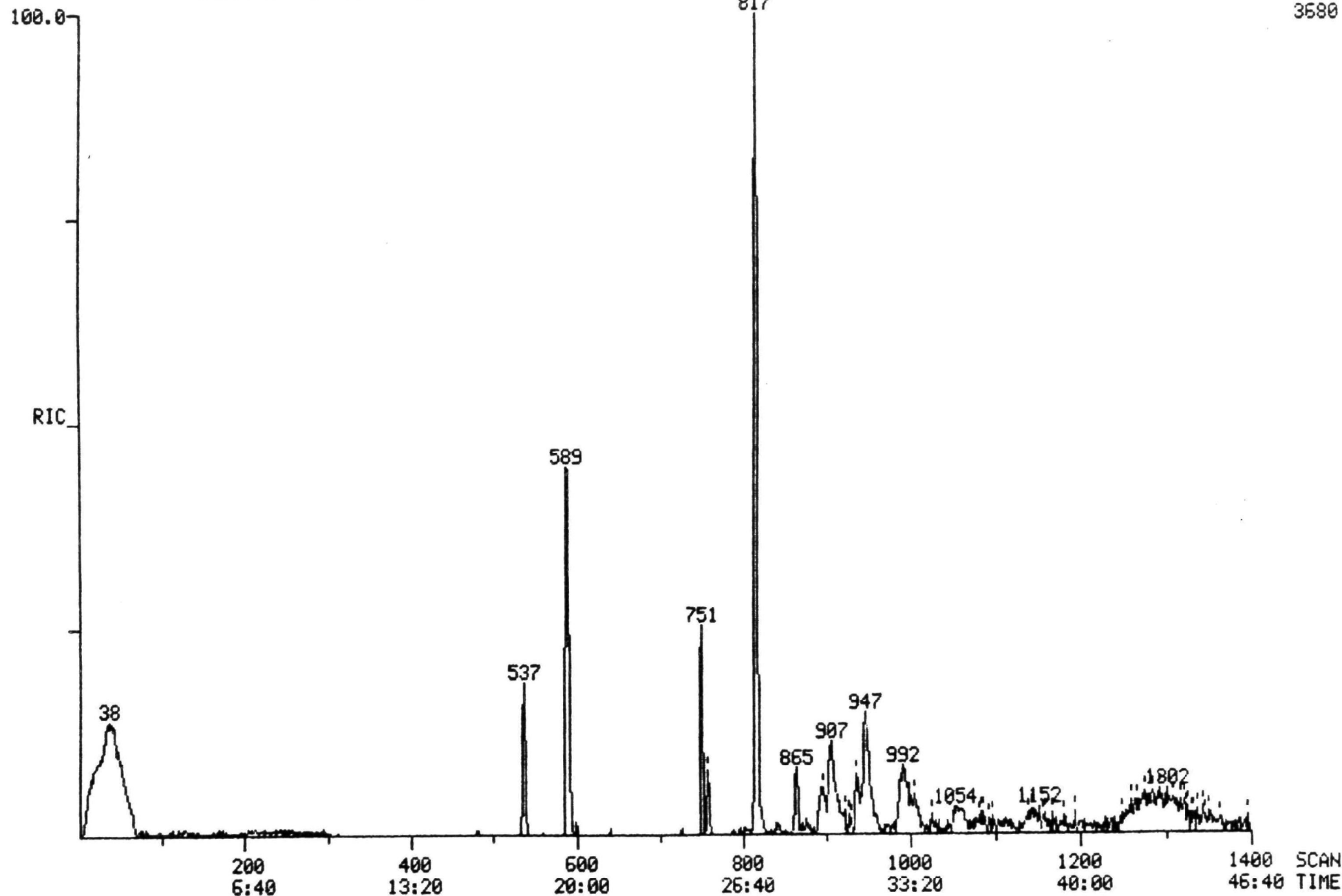
OTHER COMPOUNDS

NONE

RIC
01/30/80 16:54:00
SAMPLE: B41296, 3 UL + 1 UL IS
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41296 #1
CALI: CAL130 #1

SCANS 1 IU 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB40C20

MATRIX WATER

ERG SAMPLE # 41297

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	30 µg/l
CADMIUM	<.003
COBALT	<.005
COPPER	<.005
CHROMIUM	<.005
LEAD	<.010
MERCURY	<.0002
SELENIUM	<1.0 µg/l
TIN	<.08
ZINC	.018
% MOISTURE	--

Results reported in mg/l unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIETHYL PHTHALATE	10
ANTHRACENE	<5
ETHYL HEXYL PHTHALATE	130

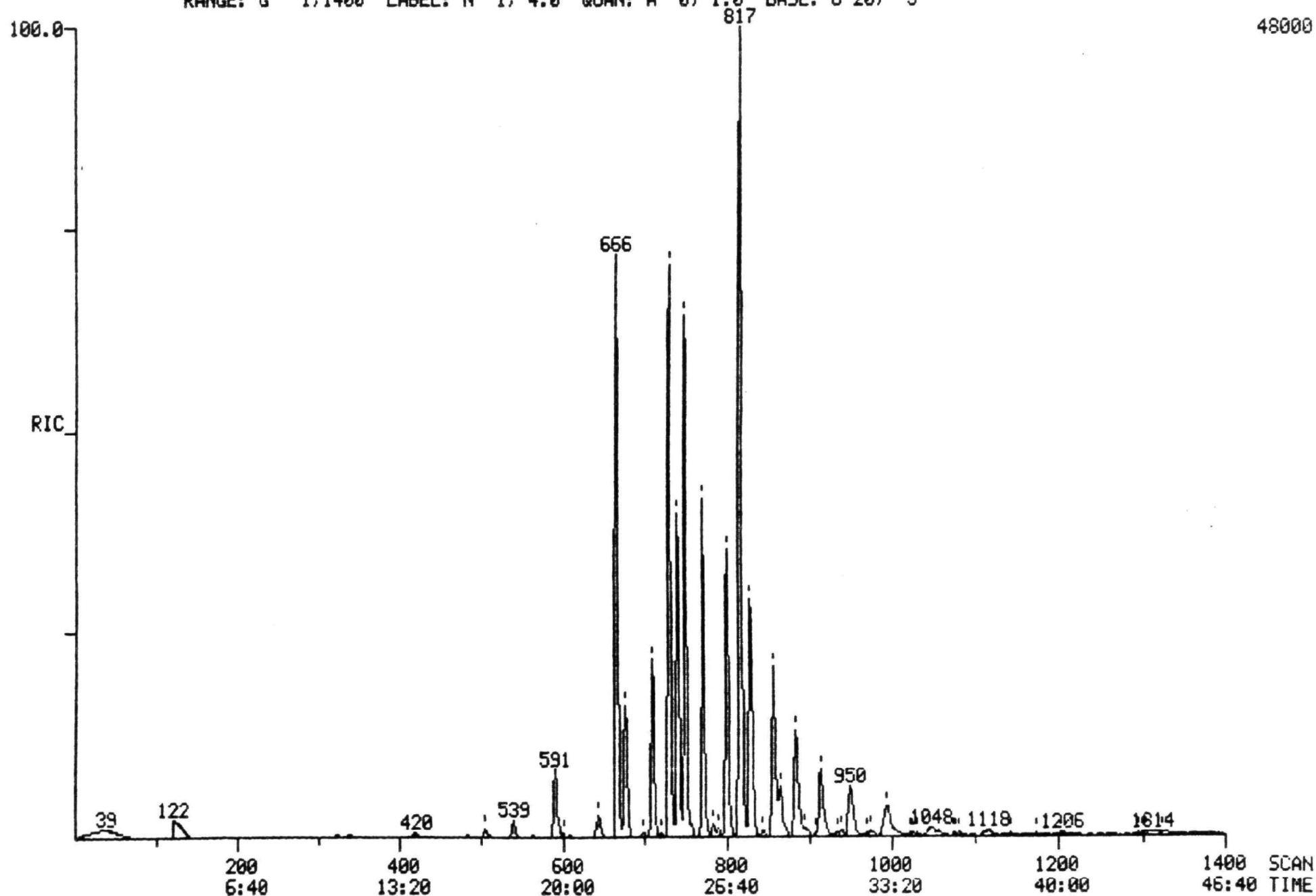
OTHER COMPOUNDS

NONE

RIC
01/30/80 17:54:00
SAMPLE: B41297, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41297 #1
CALI: CAL130 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C01
ERG SAMPLE # 41299A

MATRIX FISH
SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

380
2700
6200

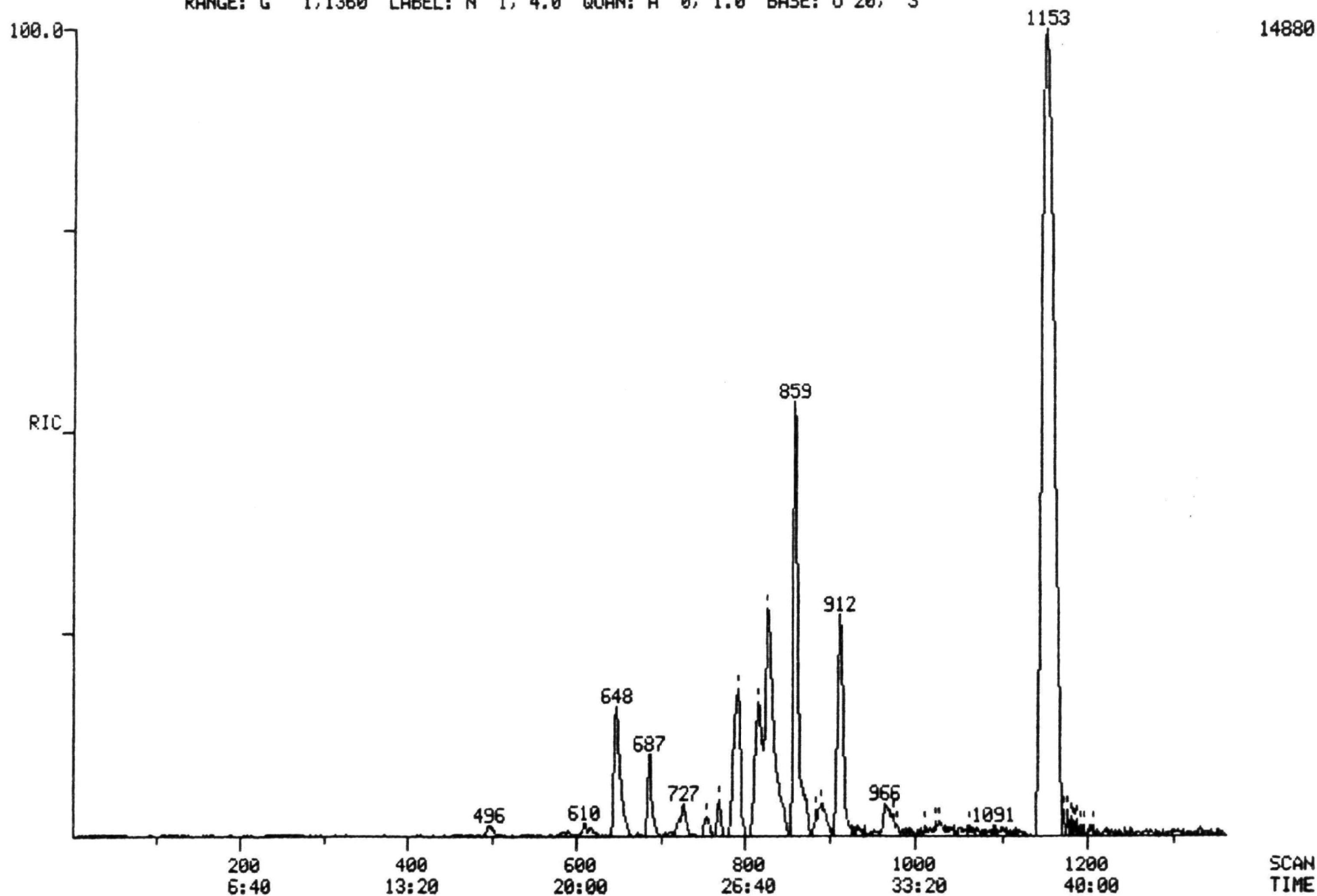
OTHER COMPOUNDS

NONE

RIC
02/09/80 18:19:00
SAMPLE: B41299A EPA FISH
RANGE: G 1,1360 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41299A #1
CALI: CAL2FEB #3

SCANS 1 TO 1360



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C01

MATRIX FISH

ERG SAMPLE # 41299B

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLORO BENZENE

1900

DIBUTYL PHTHALATE

8000

BUTYL BENZYL PHTHALATE

2600

ETHYL HEXYL PHTHALATE

6300

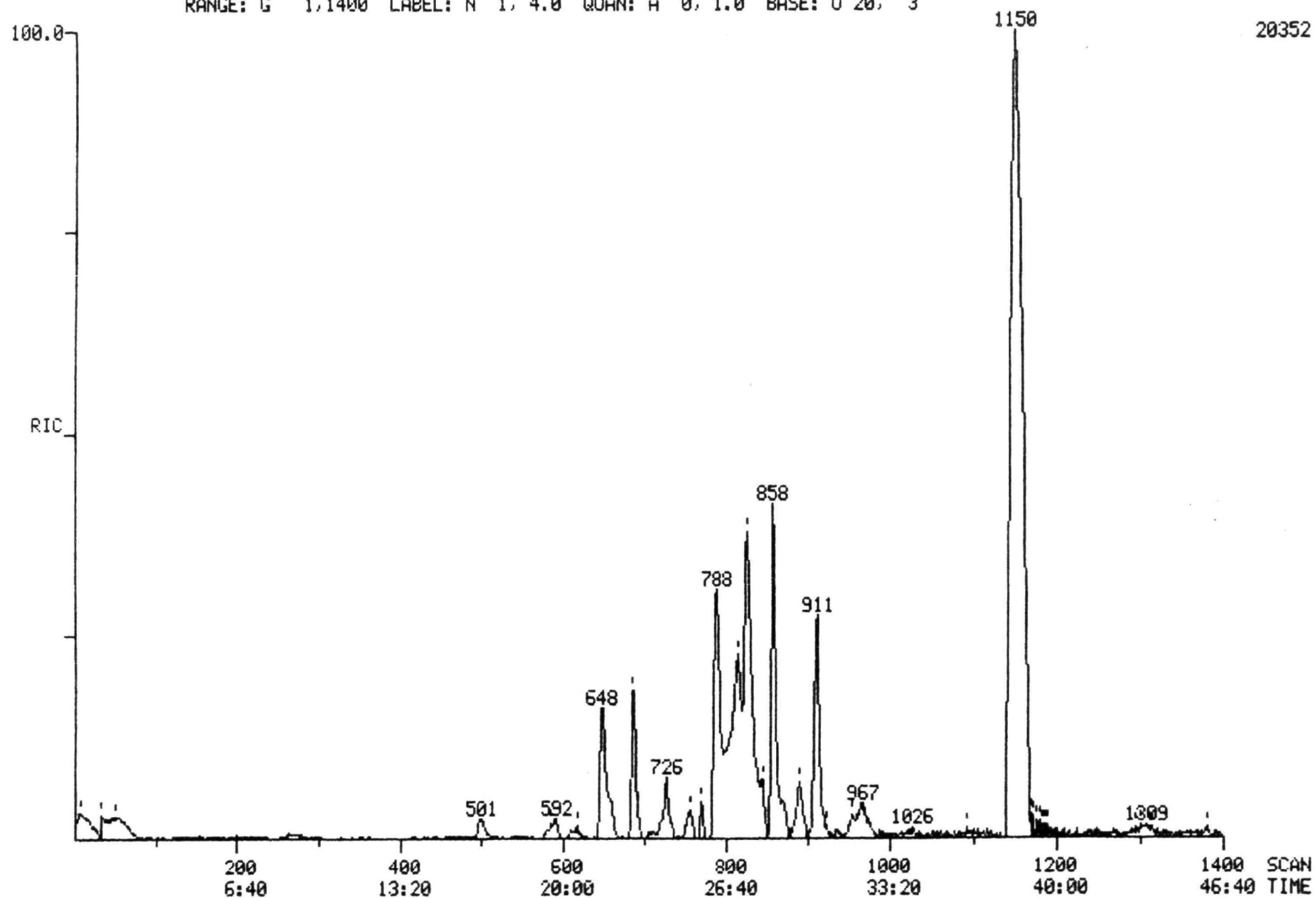
OTHER COMPOUNDS

NONE

RIC
02/10/80 11:23:00
SAMPLE: B412998 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B412998 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

ECP.A. SAMPLE # LB41C02

MATRIX FISH

ERG SAMPLE # 41300

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE

1500

DIBUTYL PHTHALATE

2900

ETHYL HEXYL PHTHALATE

4000

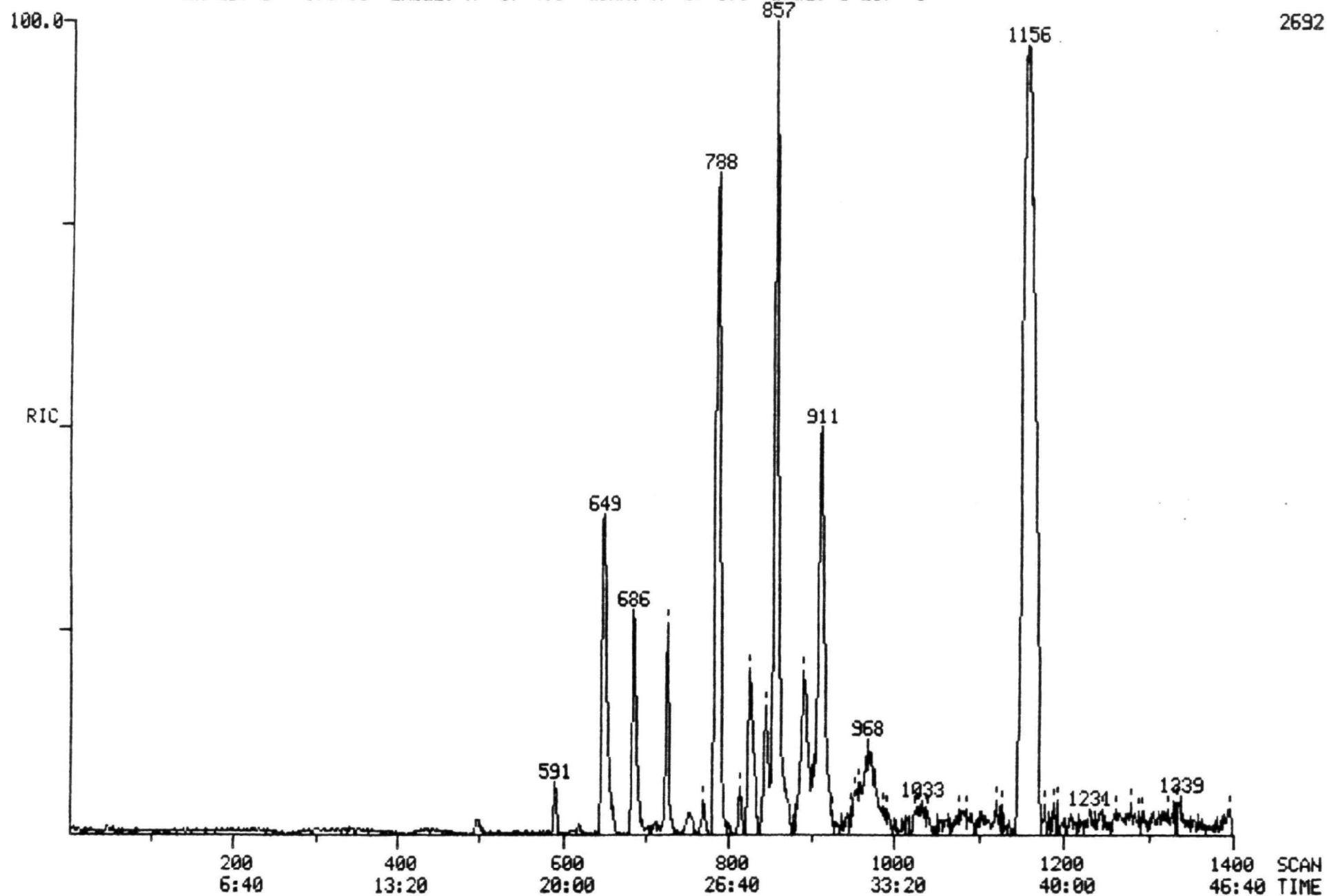
OTHER COMPOUNDS

NONE

RIC
02/11/80 13:19:00
SAMPLE: B41300 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0

DATA: B41300 #1
CALI: CAL2FEB #3
QUAN: A 0, 1.0
BASE: U 20, 3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41C03

MATRIX FISH

ERG SAMPLE # 41301

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

2000
2700

OTHER COMPOUNDS

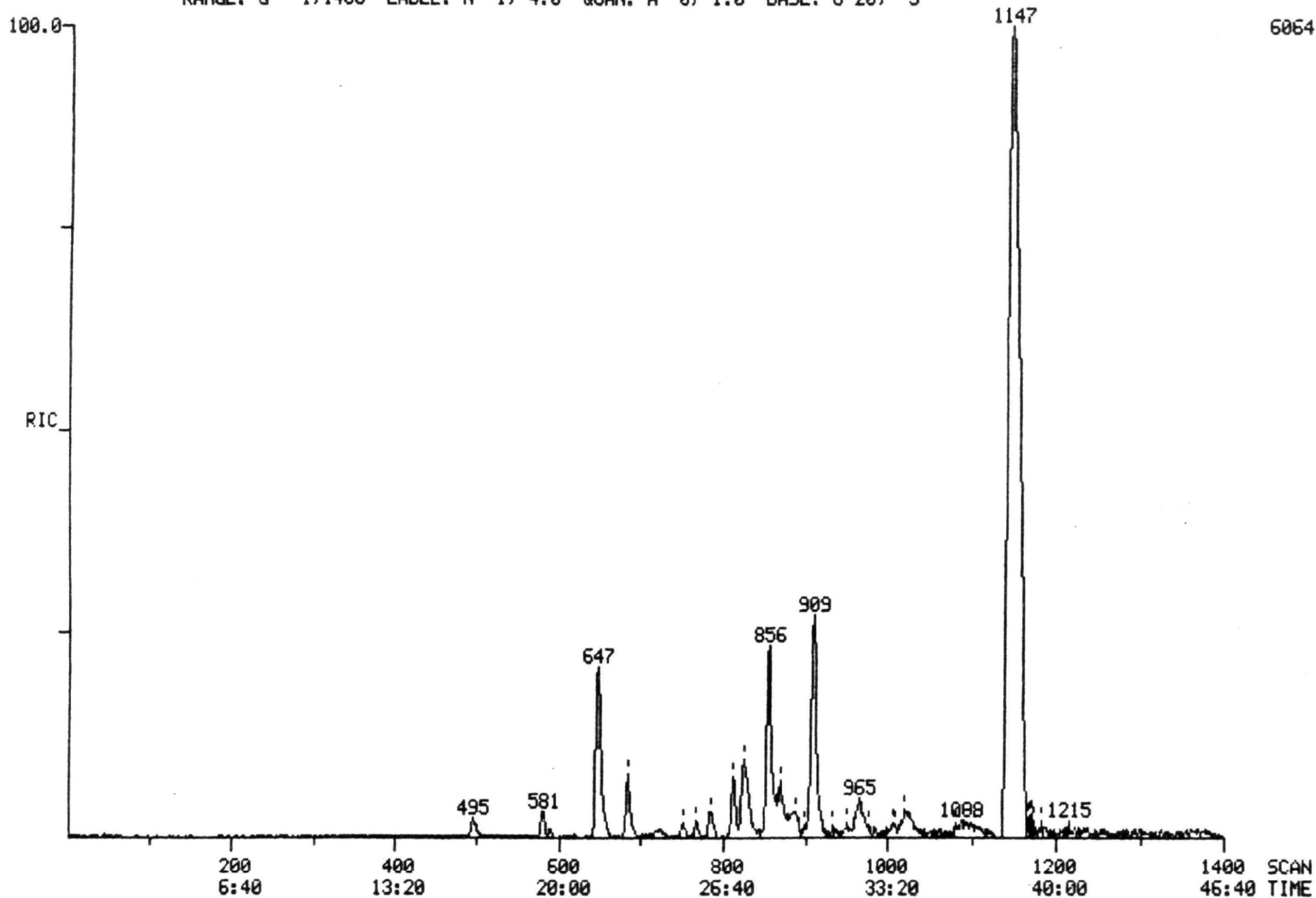
NONE

RIC
02/11/80 11:21:00
SAMPLE: B41301 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0

DATA: B41301 #856
CALI: CAL2FEB #3

SCANS 1 TO 1400

QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C04

MATRIX FISH

ERG SAMPLE # 41302

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
HEXACHLOROBENZENE	2700
DIBUTYL PHTHALATE	550
ETHYL HEXYL PHTHALATE	1400

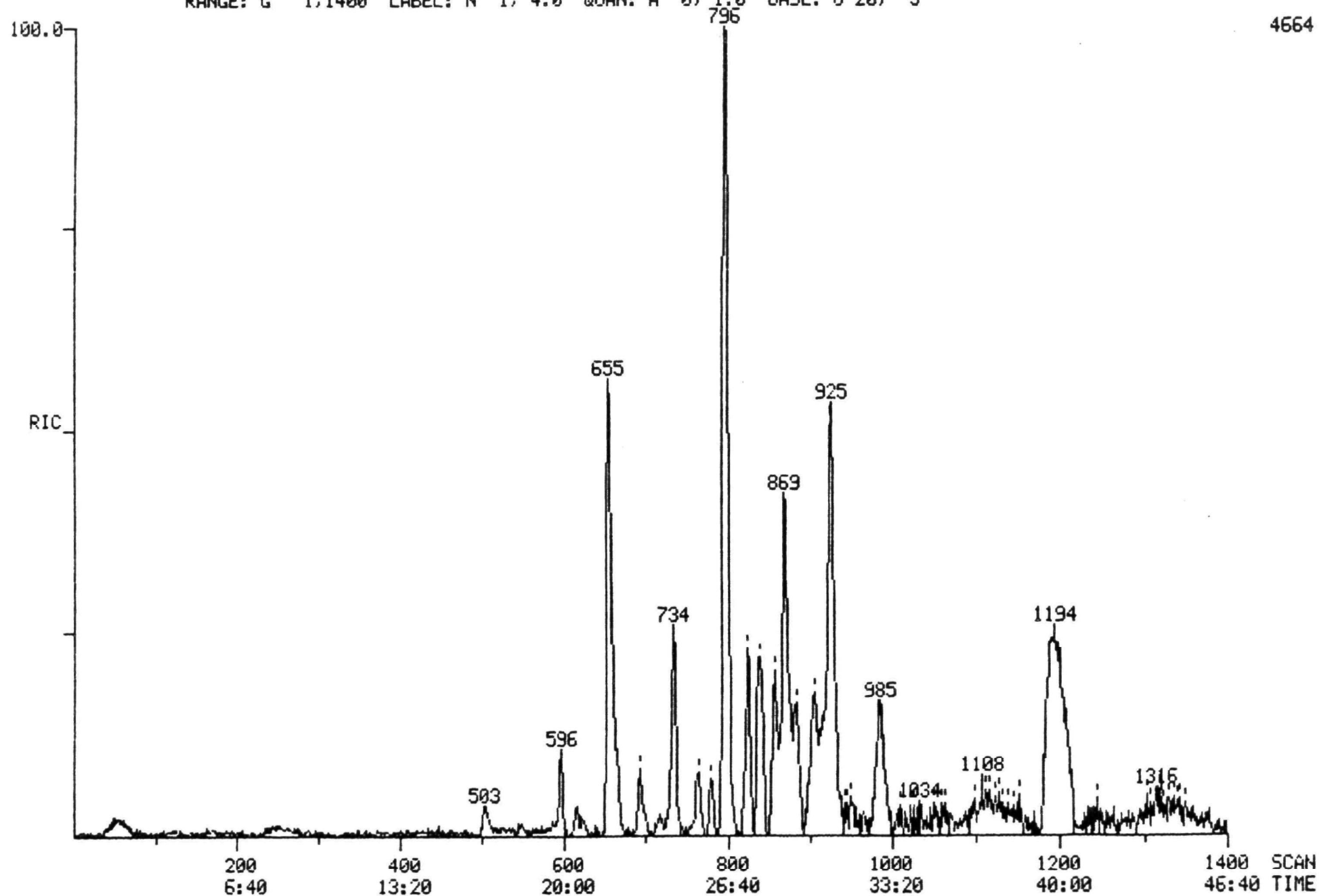
OTHER COMPOUNDS

NONE

RIC
02/10/80 6:00:00
SAMPLE: B41302 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41302 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C05

MATRIX FISH

ERG SAMPLE # 41303

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE

4000

DIBUTYL PHTHALATE

1300

ETHYL HEXYL PHTHALATE

810

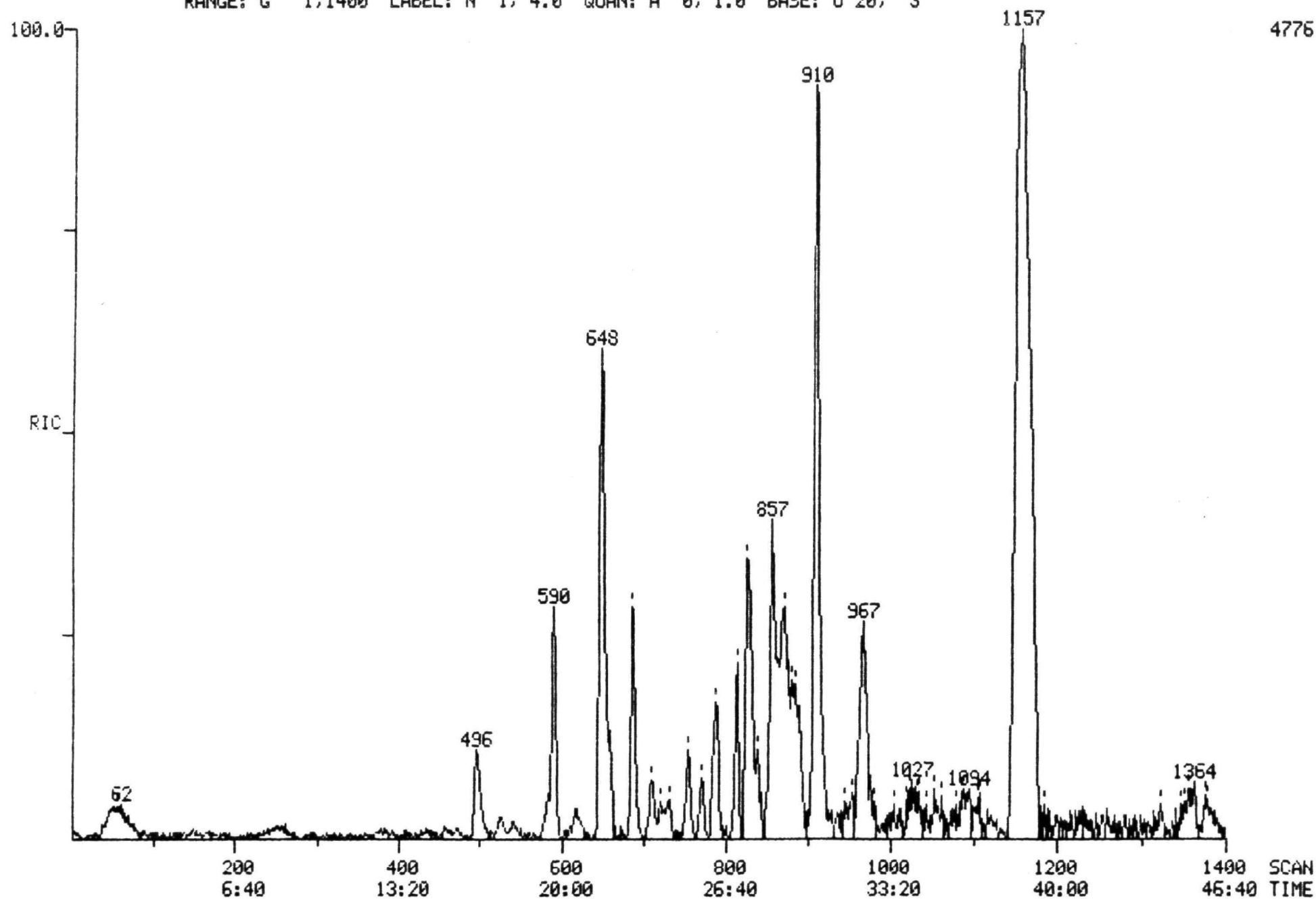
OTHER COMPOUNDS

NONE

RIC
02/10/80 14:20:00
SAMPLE: B41303 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41303 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C06

MATRIX FISH

ERG SAMPLE # 41304

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

660

ETHYL HEXYL PHTHALATE

680

OTHER COMPOUNDS

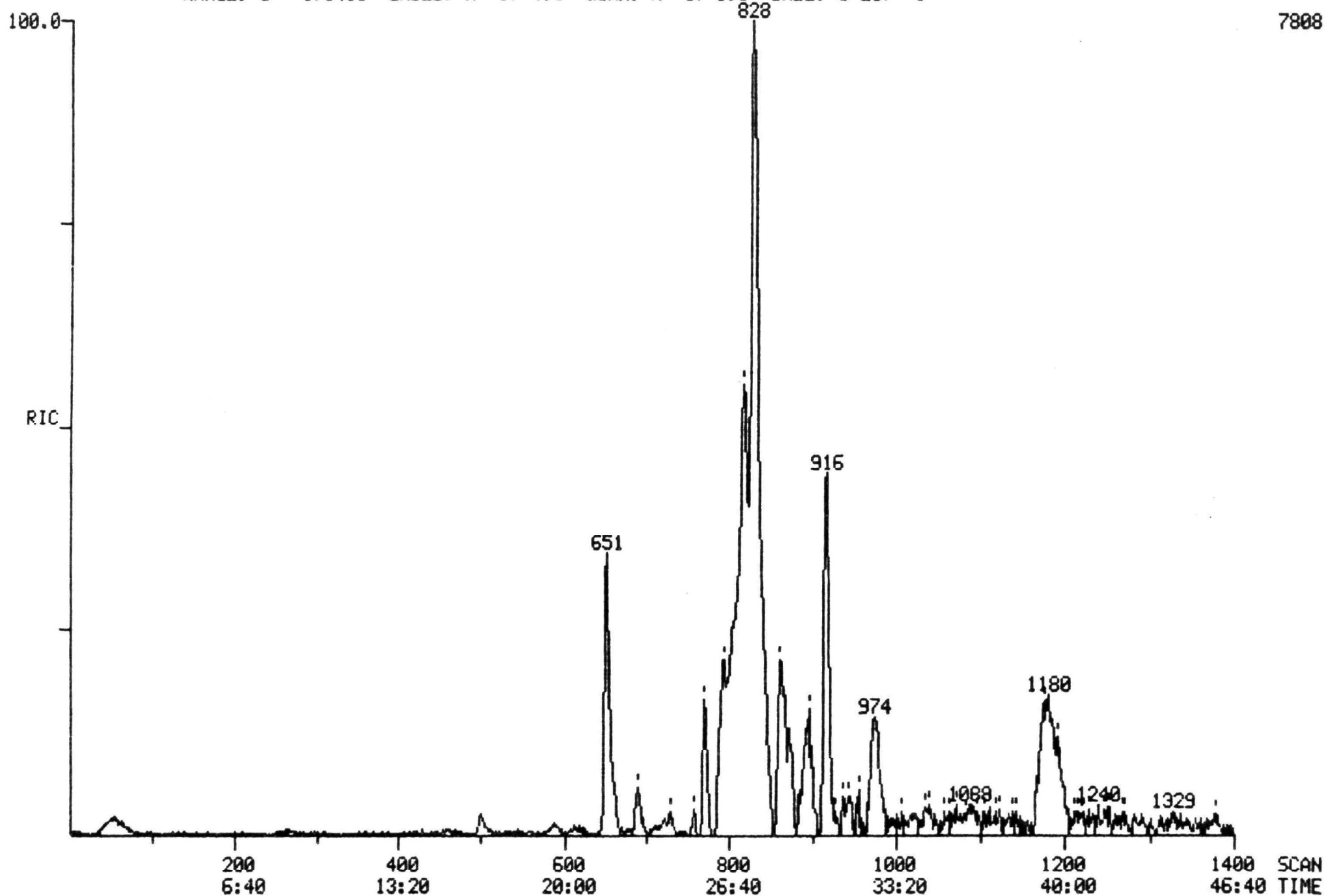
NONE

RIC
02/10/80 17:01:00
SAMPLE: B41304 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41304 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400

7808



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB41C07

MATRIX FISH

ERG SAMPLE # 41305

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

810

EHTYL HEXYL PHTHALATE

360

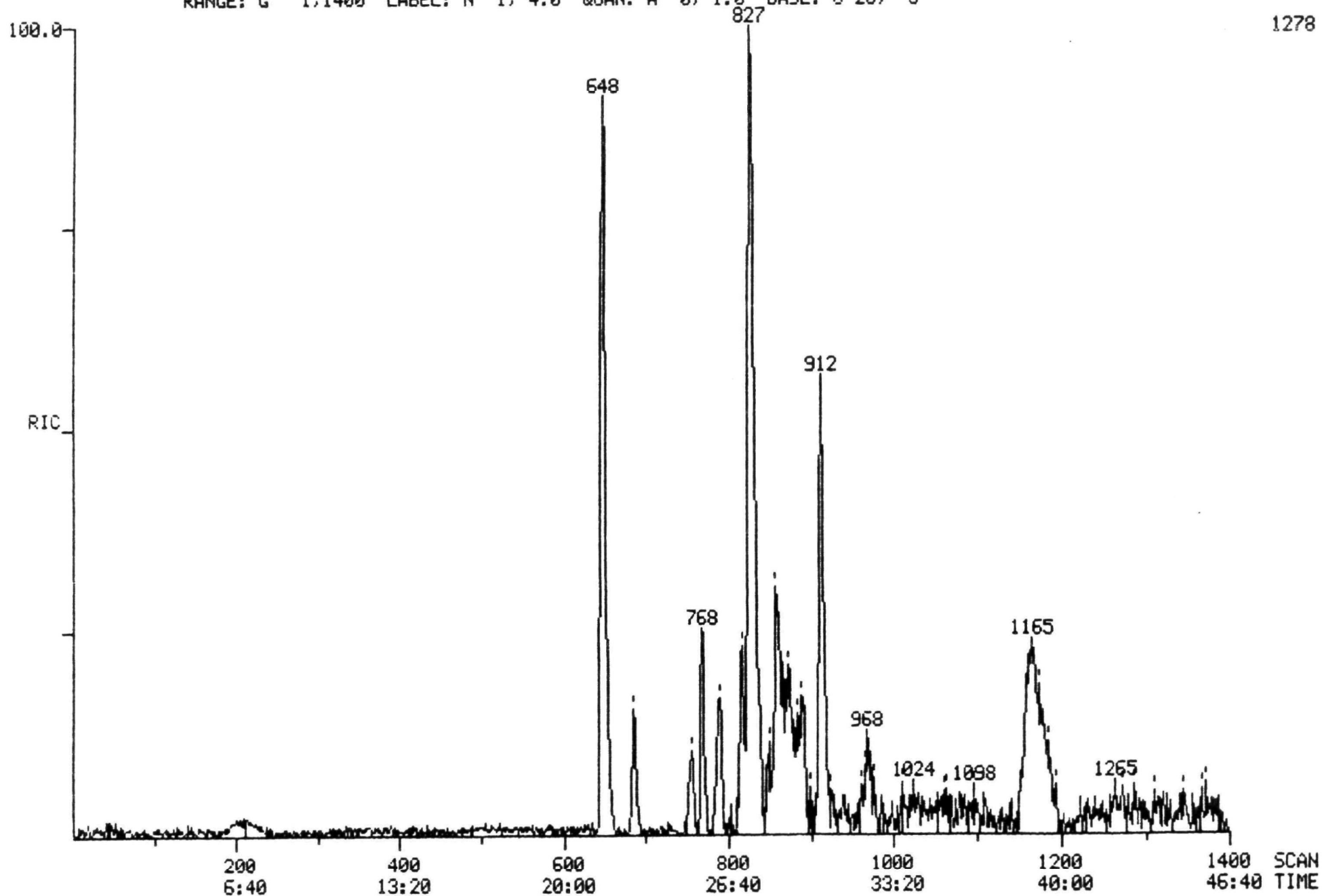
OTHER COMPOUNDS

NONE

RIC
02/11/80 9:11:00
SAMPLE: B41305 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41305 #1
CALI: CAL211 #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C08

MATRIX FISH

ERG SAMPLE # 41306

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

460

ETHYL HEXYL PHTHALATE

570

OTHER COMPOUNDS

NONE

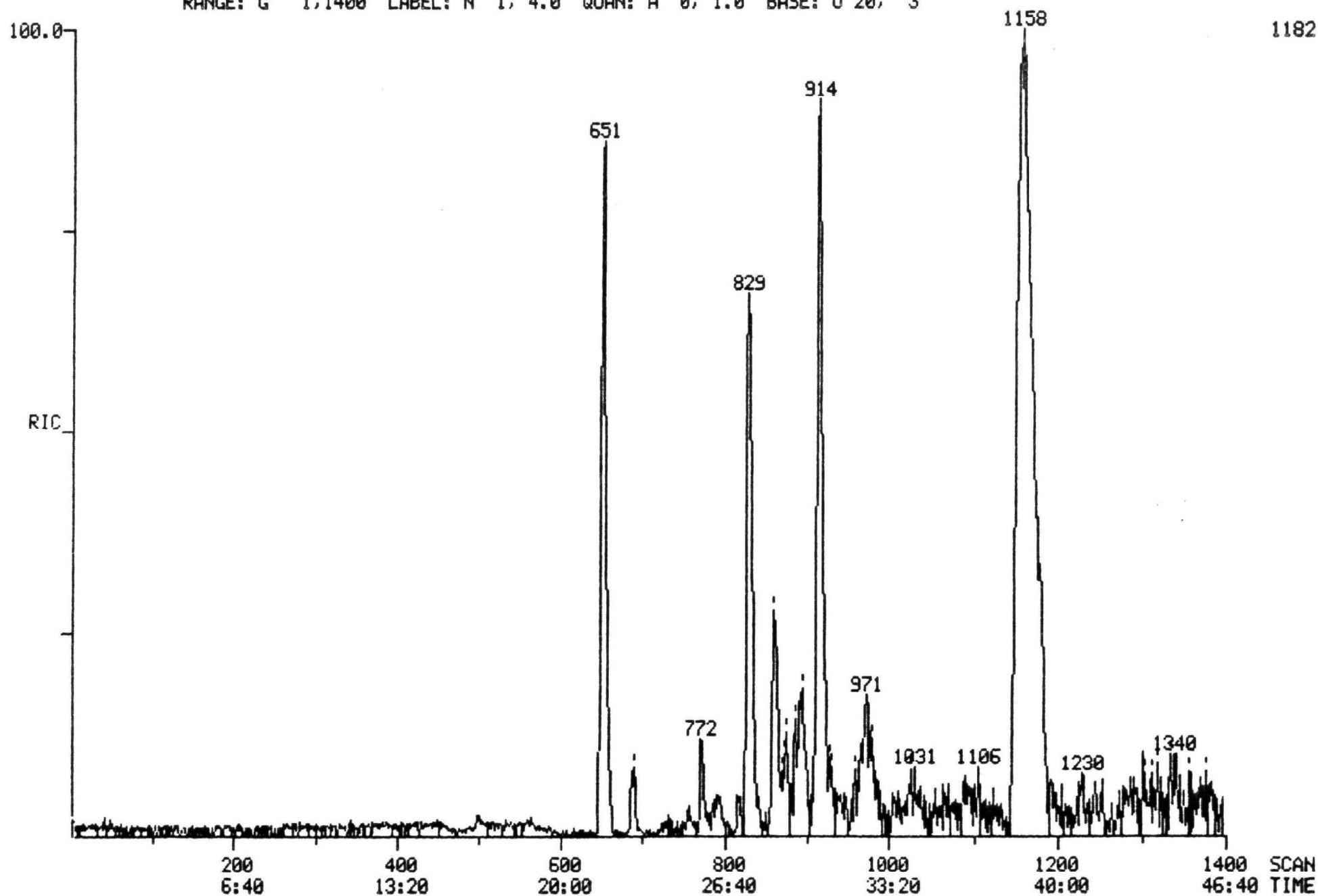
RIC
02/11/80 12:20:00

SAMPLE: B41306 EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41306 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C09

MATRIX FISH

ERG SAMPLE # 41307

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

920
860

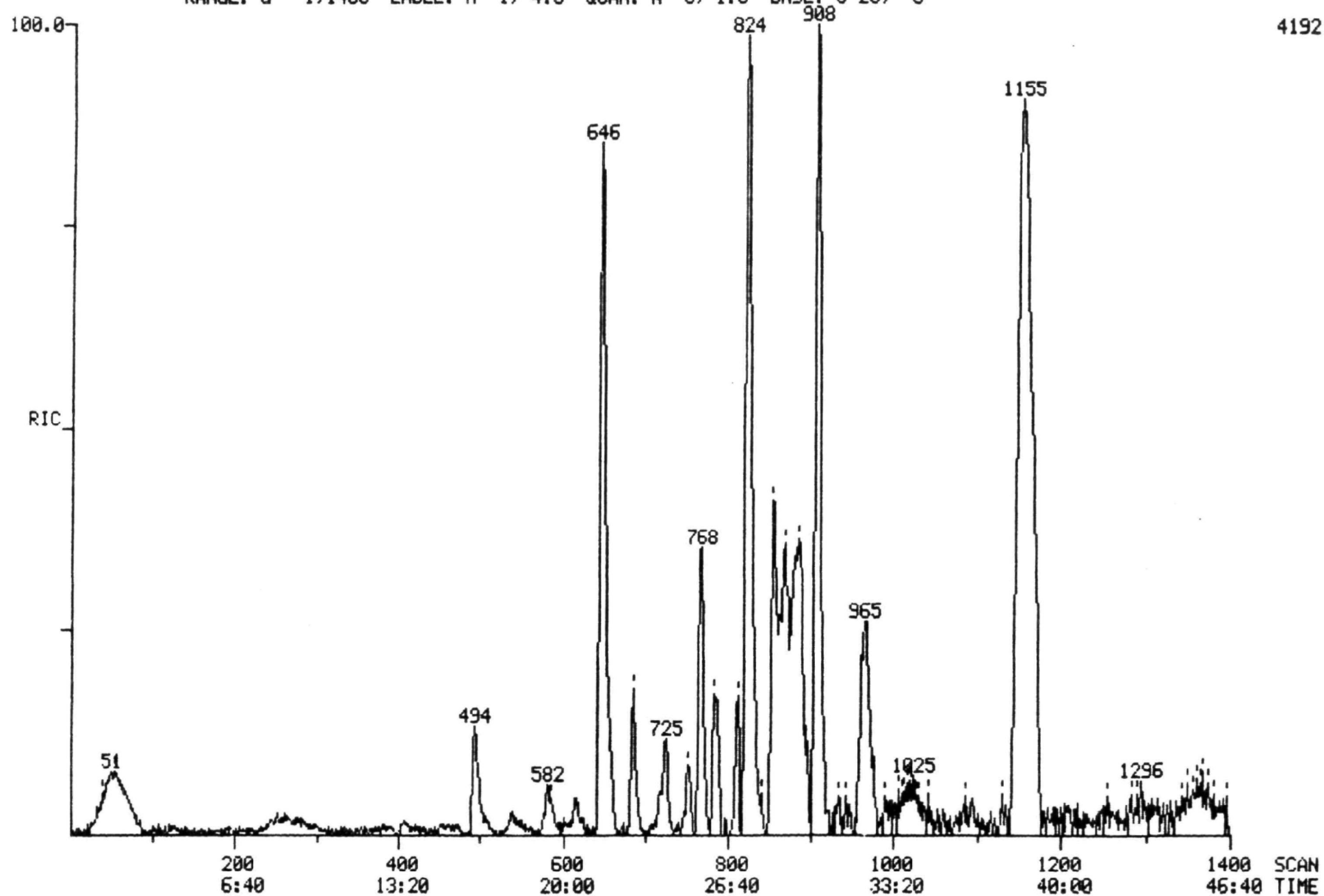
OTHER COMPOUNDS

NONE

RIC
02/10/80 12:21:00
SAMPLE: B41307 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0

DATA: B41307 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C10

MATRIX FISH

ERG SAMPLE # 41308

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

400
350

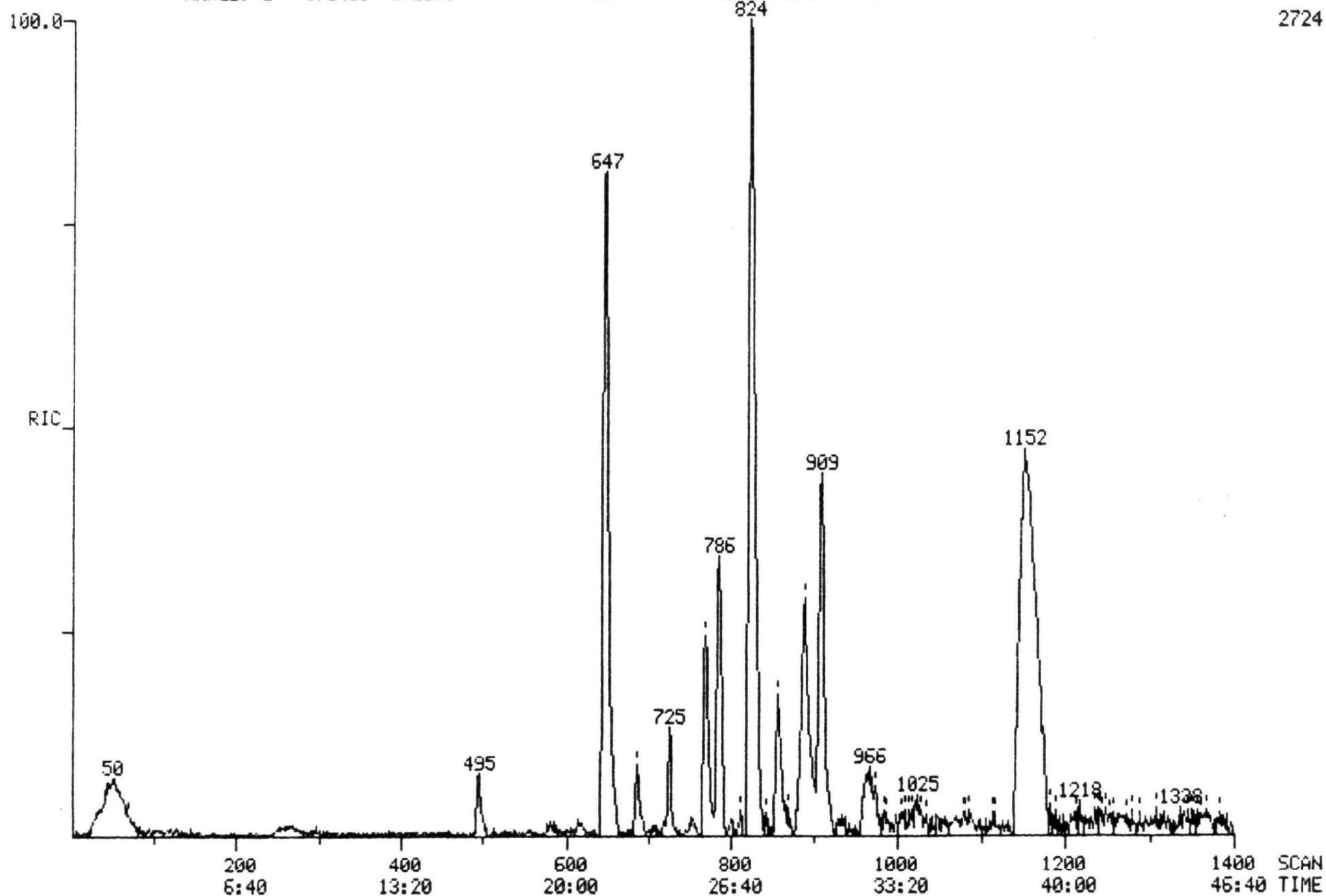
OTHER COMPOUNDS

NONE

RIC
02/10/80 10:15:00
SAMPLE: B41308 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41308 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C11

MATRIX FISH

ERG SAMPLE # 41309A

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

2100
1700

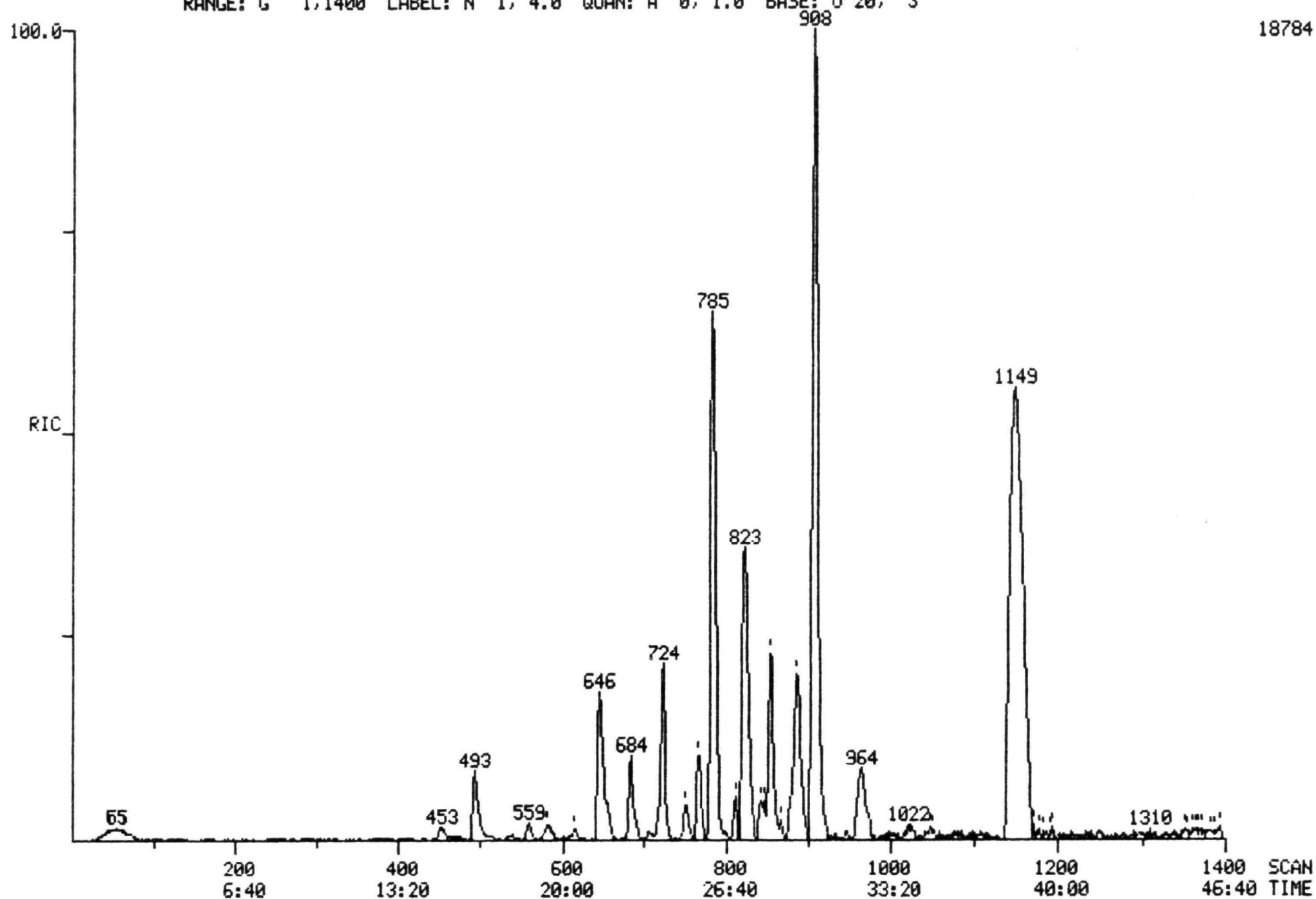
OTHER COMPOUNDS

NONE

RIC
02/10/80 13:22:00
SAMPLE: B41309A EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41309A #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB41C11

MATRIX FISH

ERG SAMPLE # 41309B

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	5000
ETHYL HEXYL PHTHALATE	1200

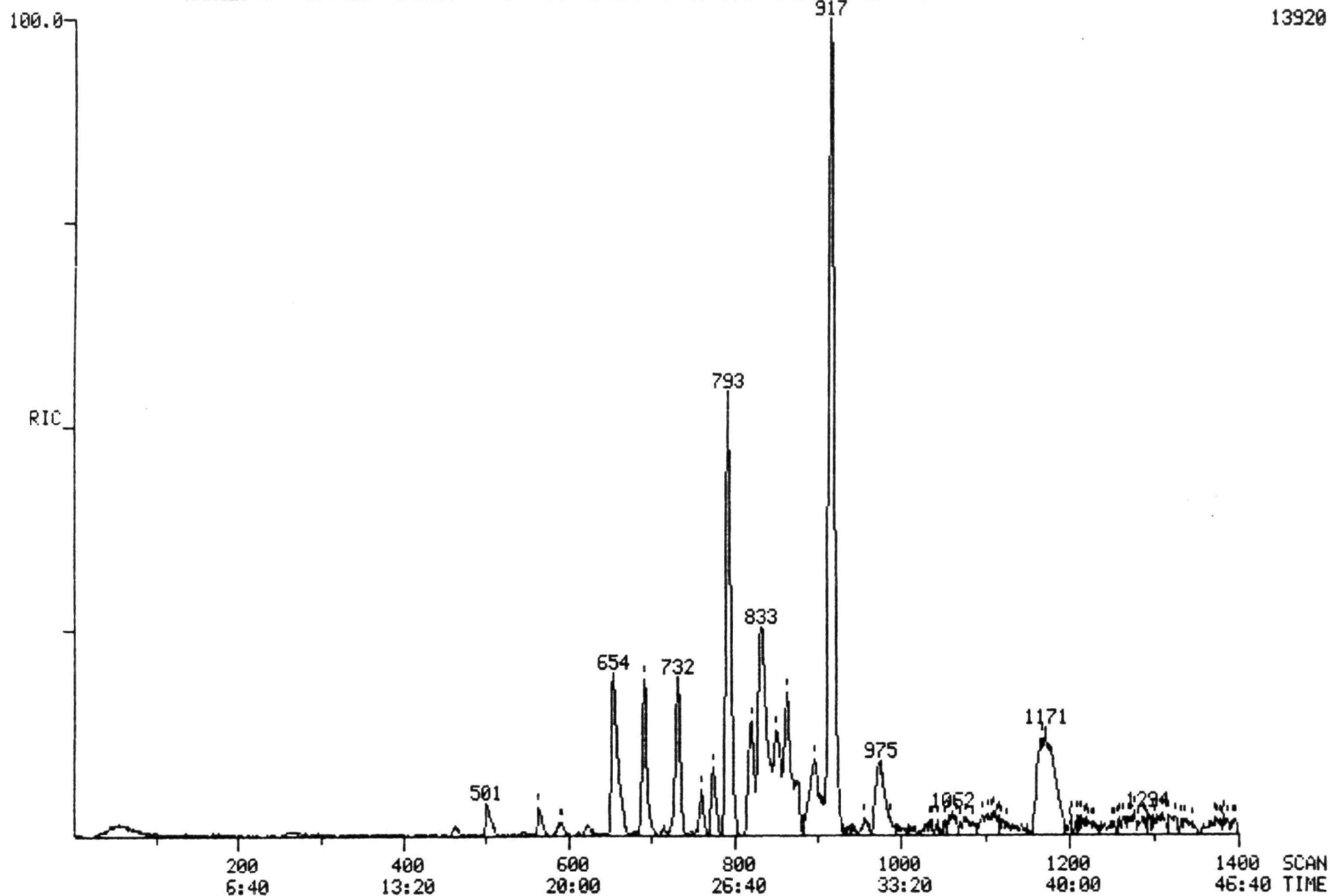
OTHER COMPOUNDS

NONE

RIC
02/10/80 16:03:00
SAMPLE: B41309B EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41309B #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX.

E.P.A. SAMPLE # LB 41C12

ERG SAMPLE # 41310

MATRIX FISH

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

2600

ETHYL HEXYL PHTHALATE

740

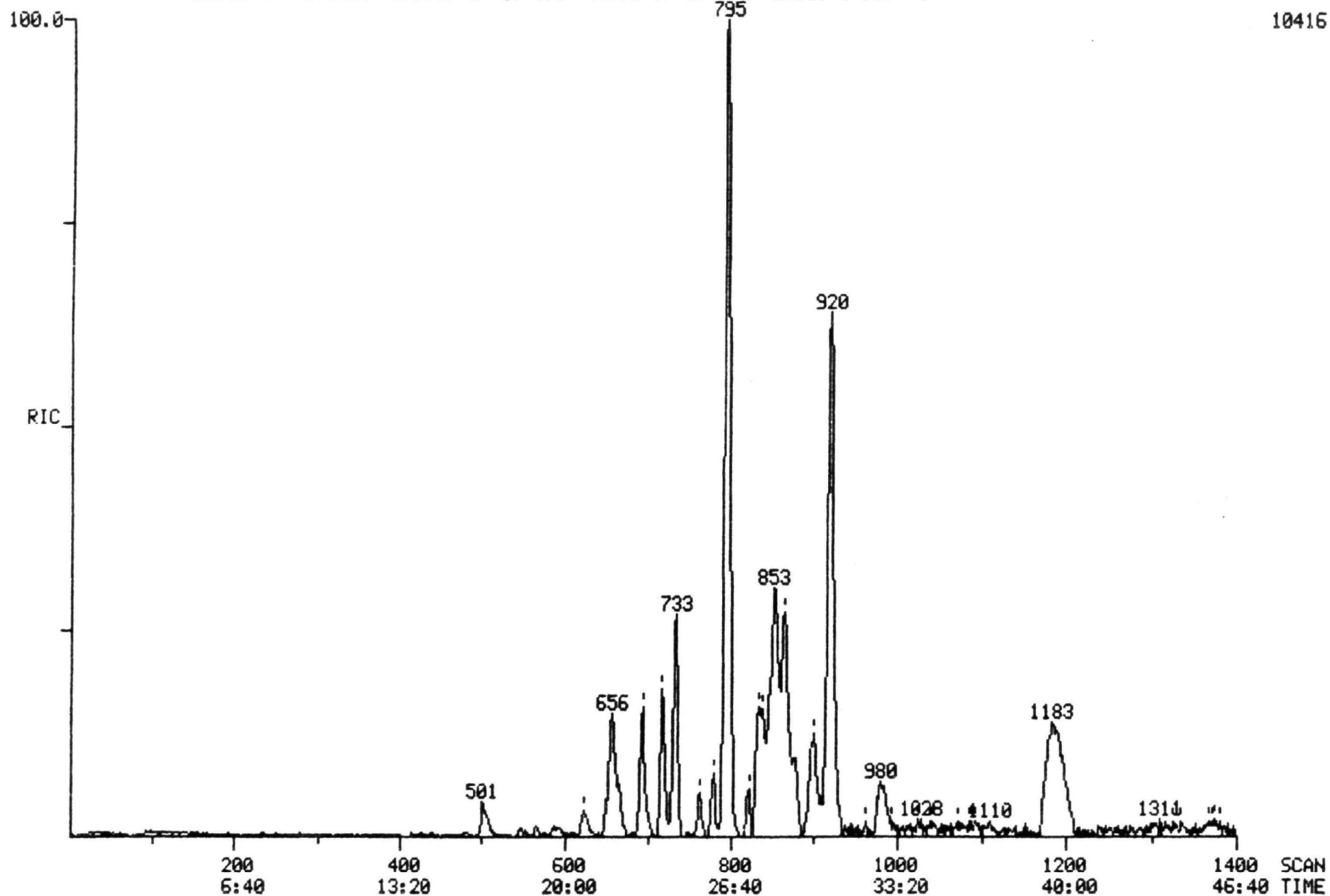
OTHER COMPOUNDS

NONE

RIC
02/11/80 15:23:00
SAMPLE: B41310 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41310 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41C13

MATRIX FISH

ERG SAMPLE # 41311

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

1500
1400

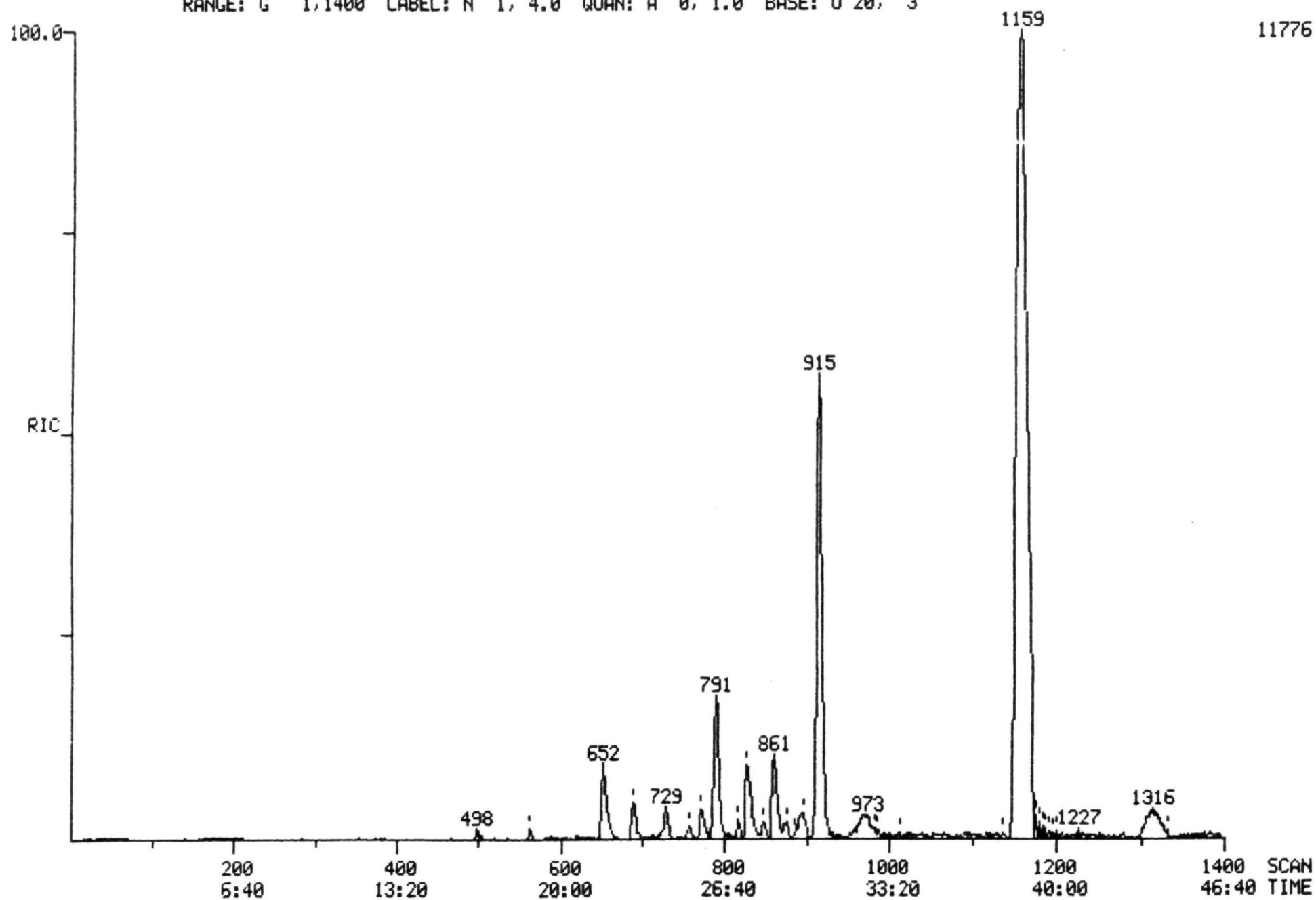
OTHER COMPOUNDS

NONE

RIC
02/11/80 14:25:00
SAMPLE: B41311 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41311 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB41C14

MATRIX FISH

ERG SAMPLE # 41312

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

5600

ETHYL HEXYL PHTHALATE

760

OTHER COMPOUNDS

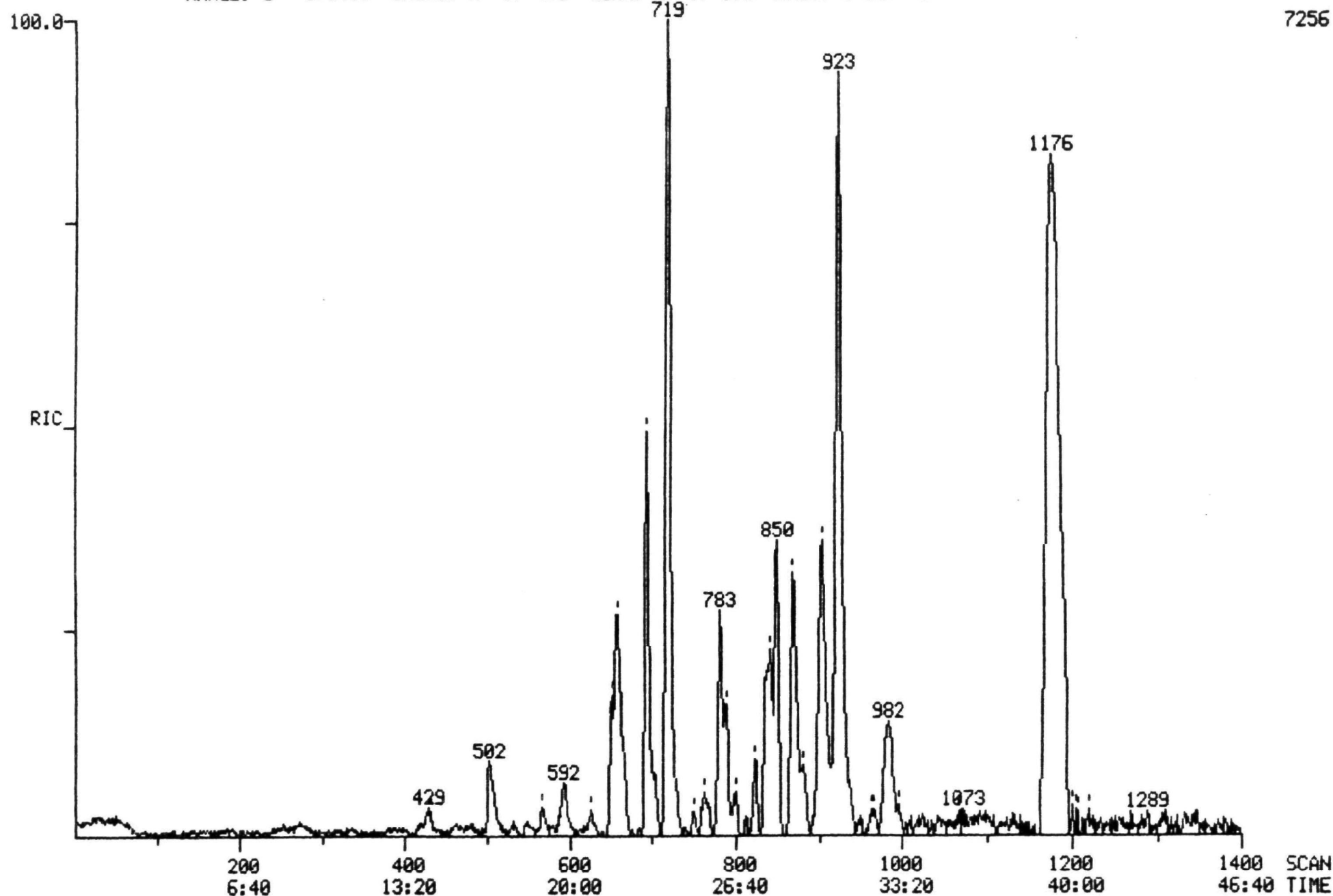
NONE.

RIC
02/11/80 18:41:00
SAMPLE: B41312 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41312 #1
CALI: CAL211 #3

SCANS 1 TO 1400

7256



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41C15

MATRIX FISH

ERG SAMPLE # 41313

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

--
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Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

3300
27500

OTHER COMPOUNDS

NONANEDIOIC ACID, bis (2-ETHYL HEXYL) ESTER

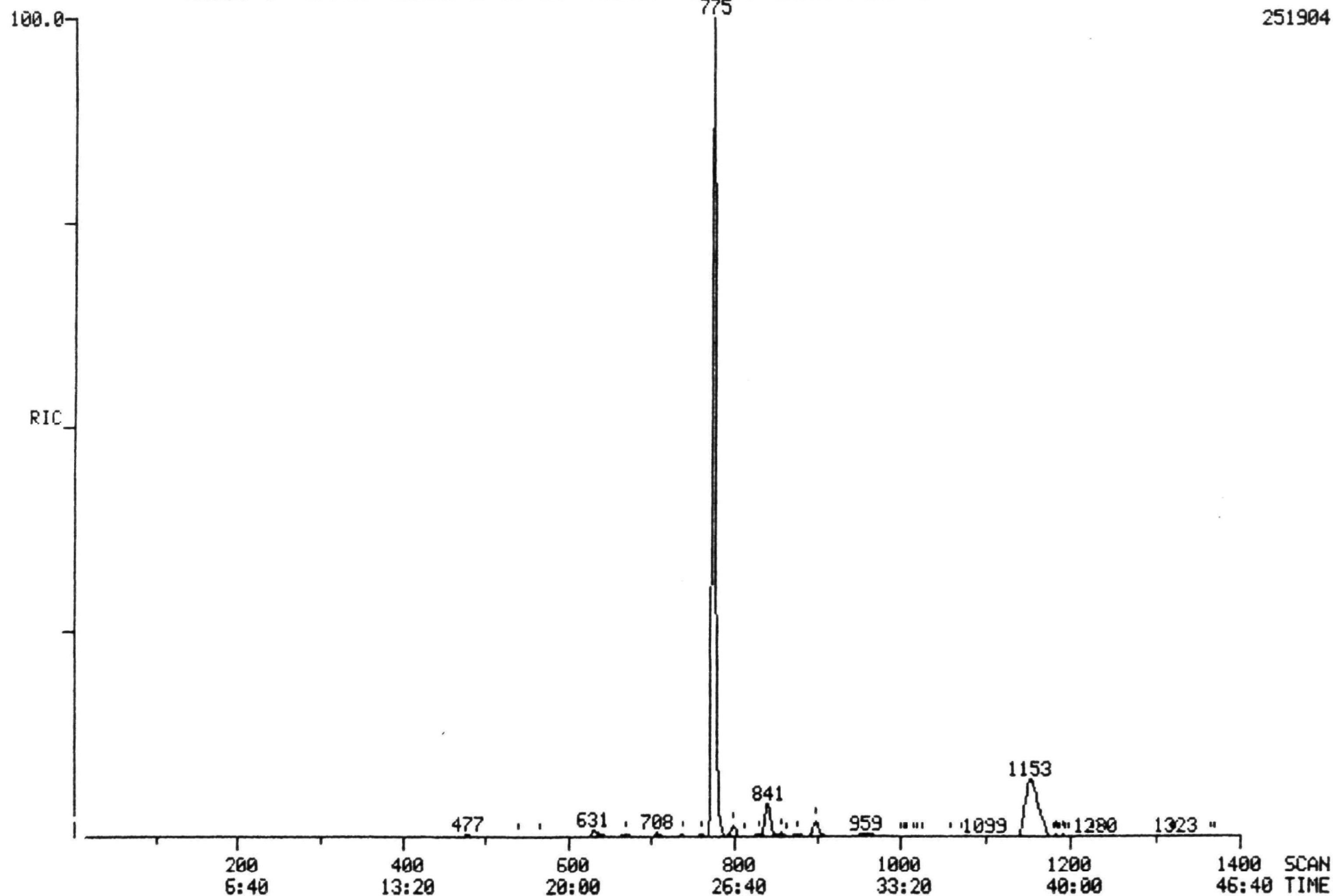
245000

*also Azelaic acid
molecular weight is 188.2*

RIC
02/11/80 19:39:00
SAMPLE: B41313 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41313 #1
CALI: CAL211 #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41C16

MATRIX FISH

ERG SAMPLE # 41314A

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

670

ETHYL HEXYL PHTHALATE

600

OTHER COMPOUNDS

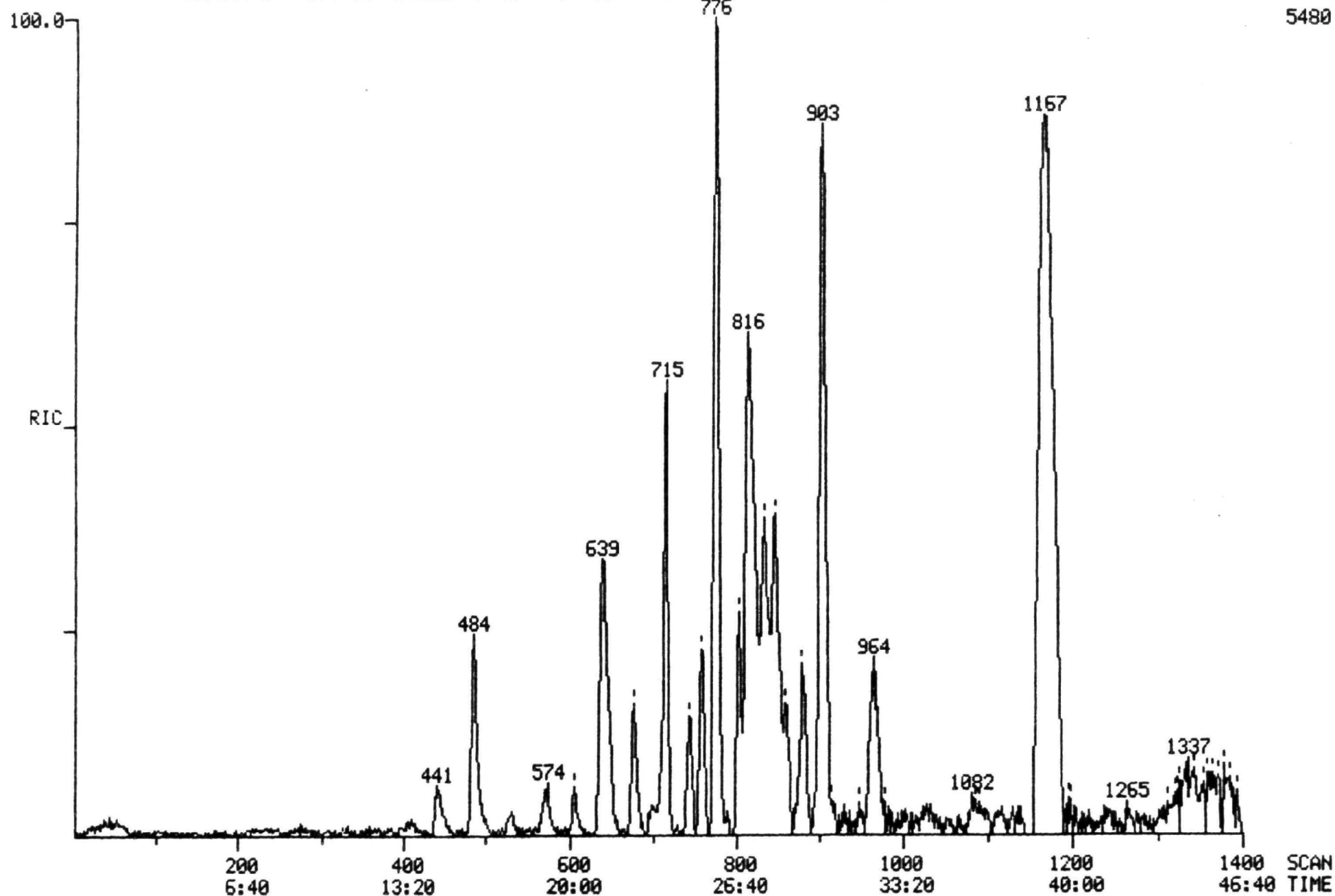
NONE

RIC
02/11/80 21:45:00
SAMPLE: B41314A EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41314A #1
CALI: CAL211 #3

SCANS 1 TO 1400

5480



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41C16

MATRIX FISH

ERG SAMPLE # 41314B

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

610
270

OTHER COMPOUNDS

NONE

RIC
02/11/80 23:00:00

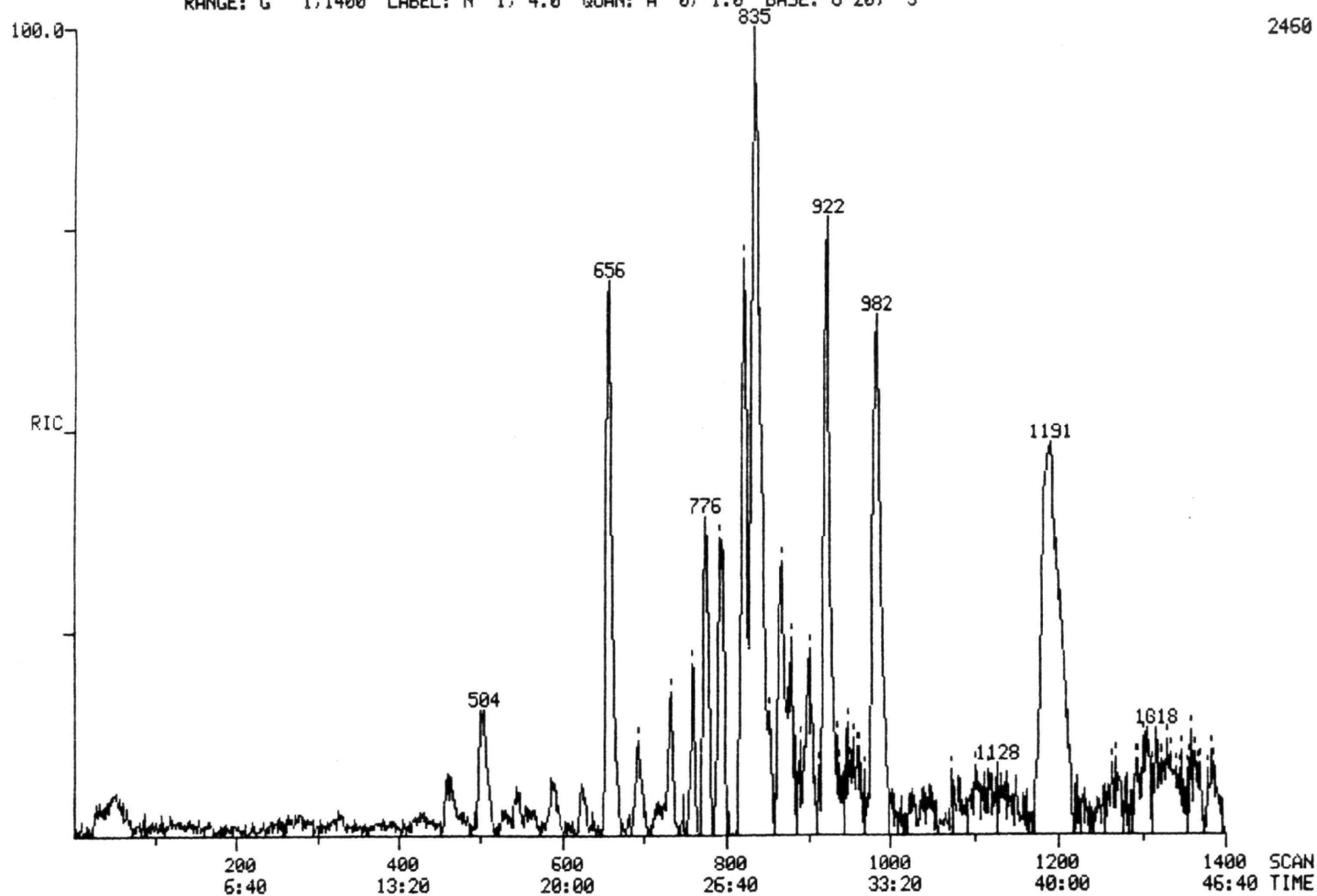
SAMPLE: B41314B EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41314B #1

CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41C17

MATRIX FISH

ERG SAMPLE # 41315

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIMETHYL PHTHALATE	750
DIETHYL PHTHALATE	9900
PHENANTHRENE	840
ANTHRACENE	840
DIBUTYL PHTHALATE	1100
FLUORANTHENE	520
PYRENE	520
BUTYL BENZYL PHTHALATE	1800
ETHYL HEXYL PHTHALATE	11000
CHRYSENE	250

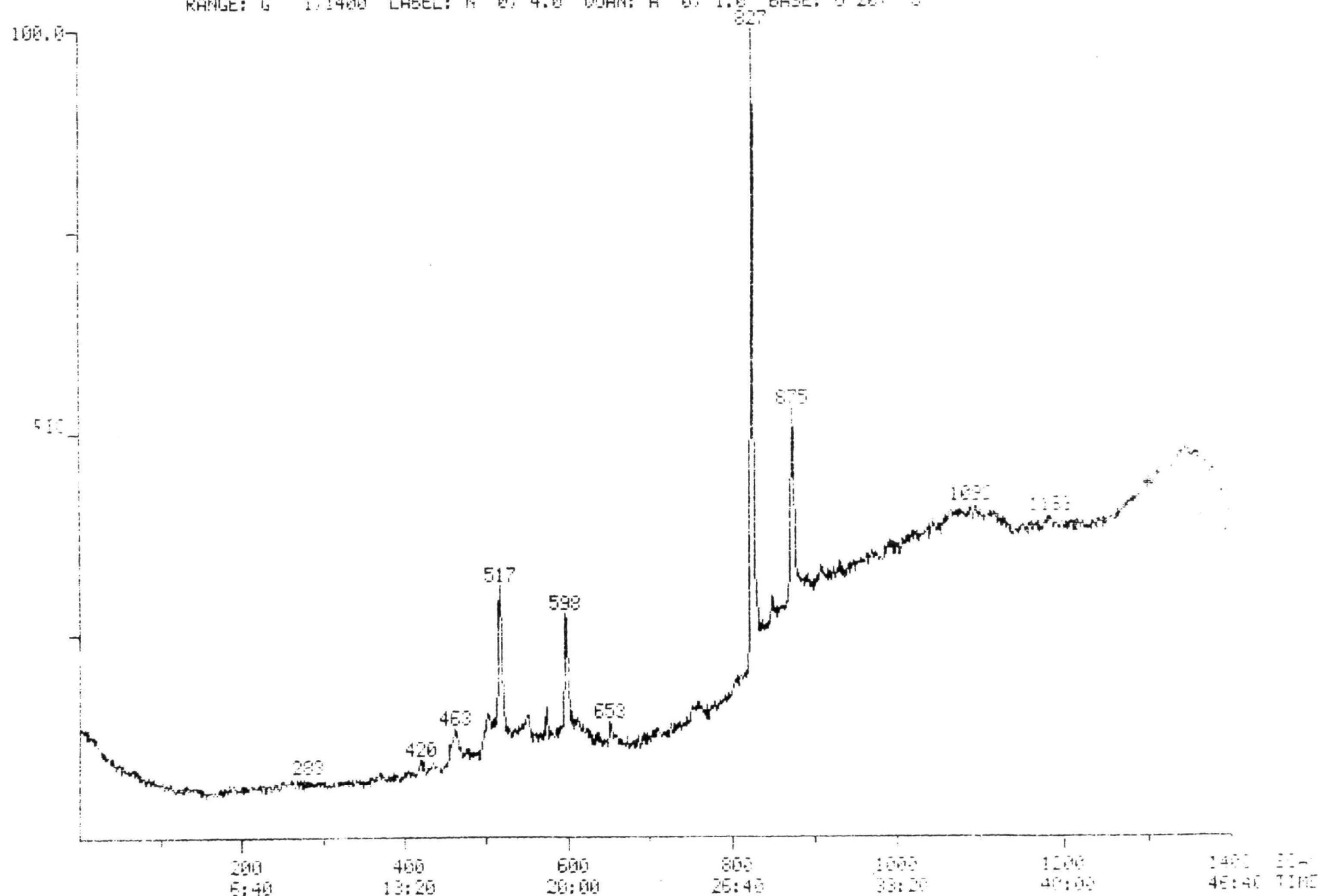
OTHER COMPOUNDS

NONE

RIC
02/05/80 21:52:00
SAMPLE: B41315 FISH
RANGE: G 1.1400 LABEL: N 0. 4.0 QUAN: A 0. 1.0 BASE: U 20. 3

DATA: B41315 #1
CALI: CAL3200 #1

SCANS 1 10 1480



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41C18

MATRIX FISH

ERG SAMPLE # 41316

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

--
--
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--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIMETHYL PHTHALATE
DIETHYL PHTHALATE
DIBUTYL PHTHALATE
FLUORANTHENE
PYRENE
ETHYL HEXYL PHTHALATE
CHRYSENE
BENZO (a) ANTHRACENE

570
7300
480
100
110
27000
290
290

OTHER COMPOUNDS

PCB's

40

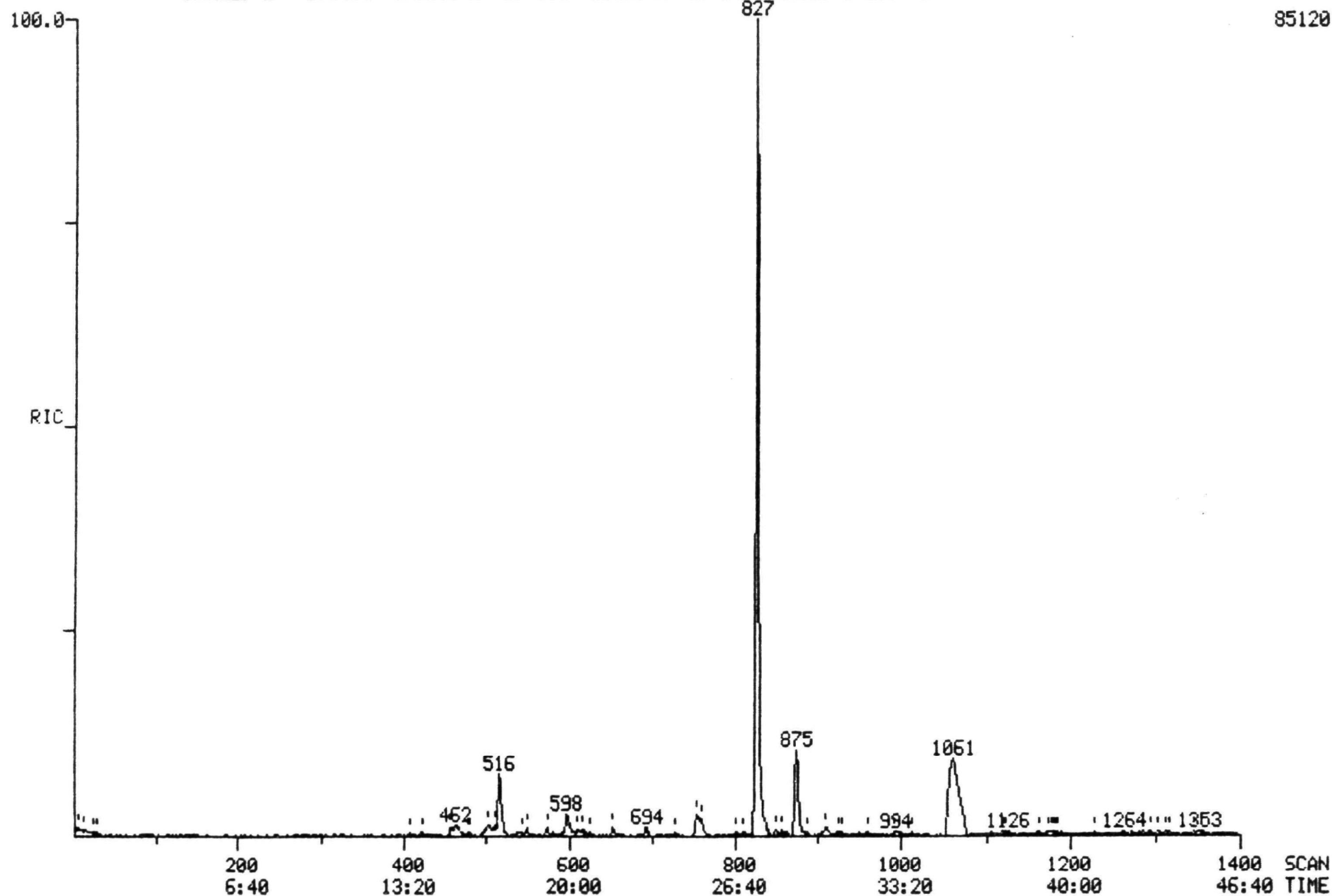
RIC
02/05/80 23:11:00
SAMPLE: B41316 FISH
RANGE: G 1,1400

DATA: B41316 #1
CALI: CAL3200 #1

SCANS 1 TO 1400

827
QUAN: A 0, 1.0
BASE: U 20, 3

85120



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41C19

MATRIX FISH

ERG SAMPLE # 41317

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIMETHYL PHTHALATE	800
DIETHYL PHTHALATE	14000
DIBUTYL PHTHALATE	710
ETHYL HEXYL PHTHALATE	1800

OTHER COMPOUNDS

NONE

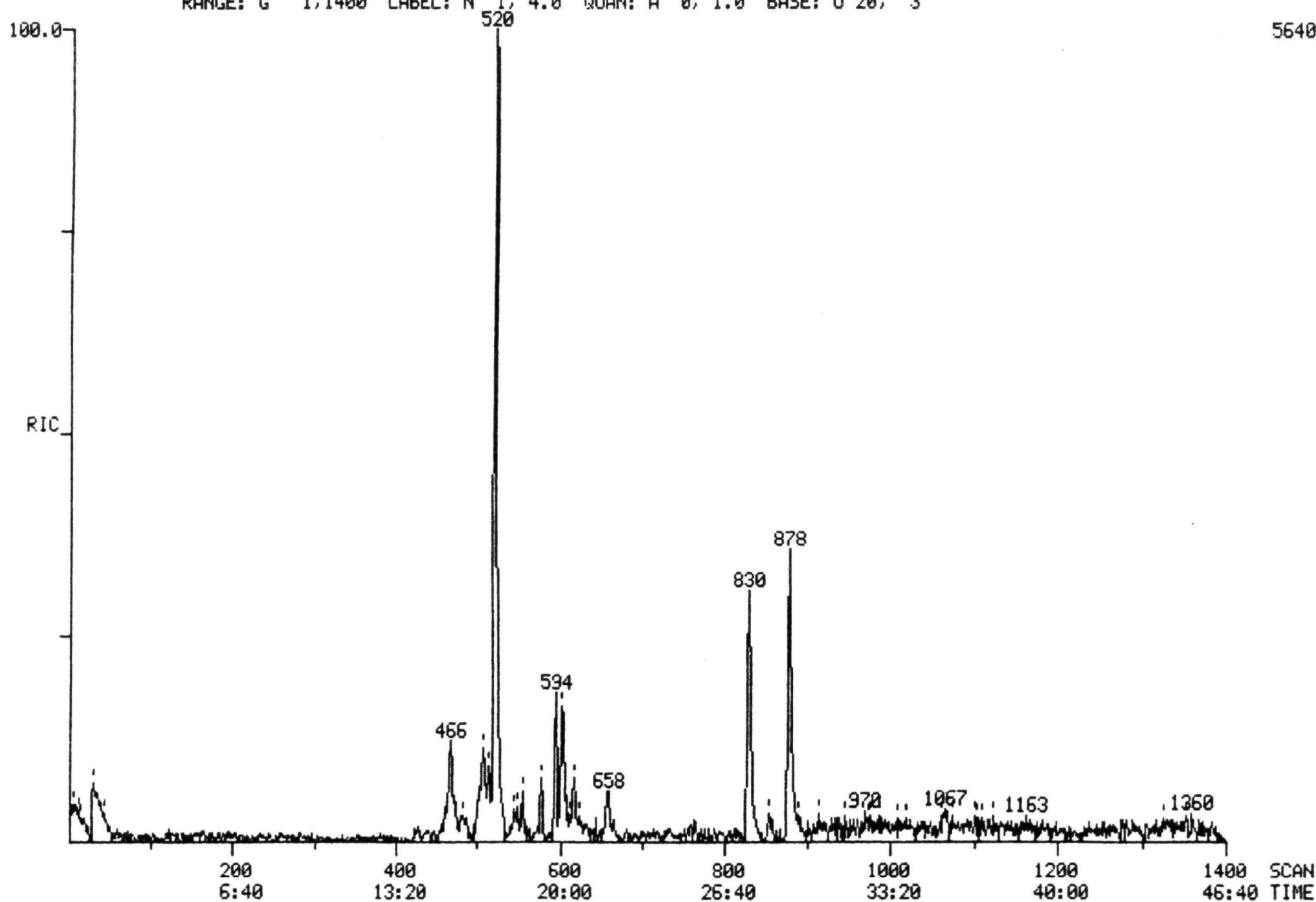
RIC
02/06/80 10:28:00
SAMPLE: B41317 FISH
RANGE: G 1,1400 LABEL: N 1, 4.0

DATA: B41317 #1
CALI: CAL3200 #1

SCANS 1 TO 1400

QUAN: A 0, 1.0 BASE: U 20, 3

5640



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41C20

MATRIX FISH

ERG SAMPLE # 41318

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

1100

ETHYL HEXYL PHTHALATE

340

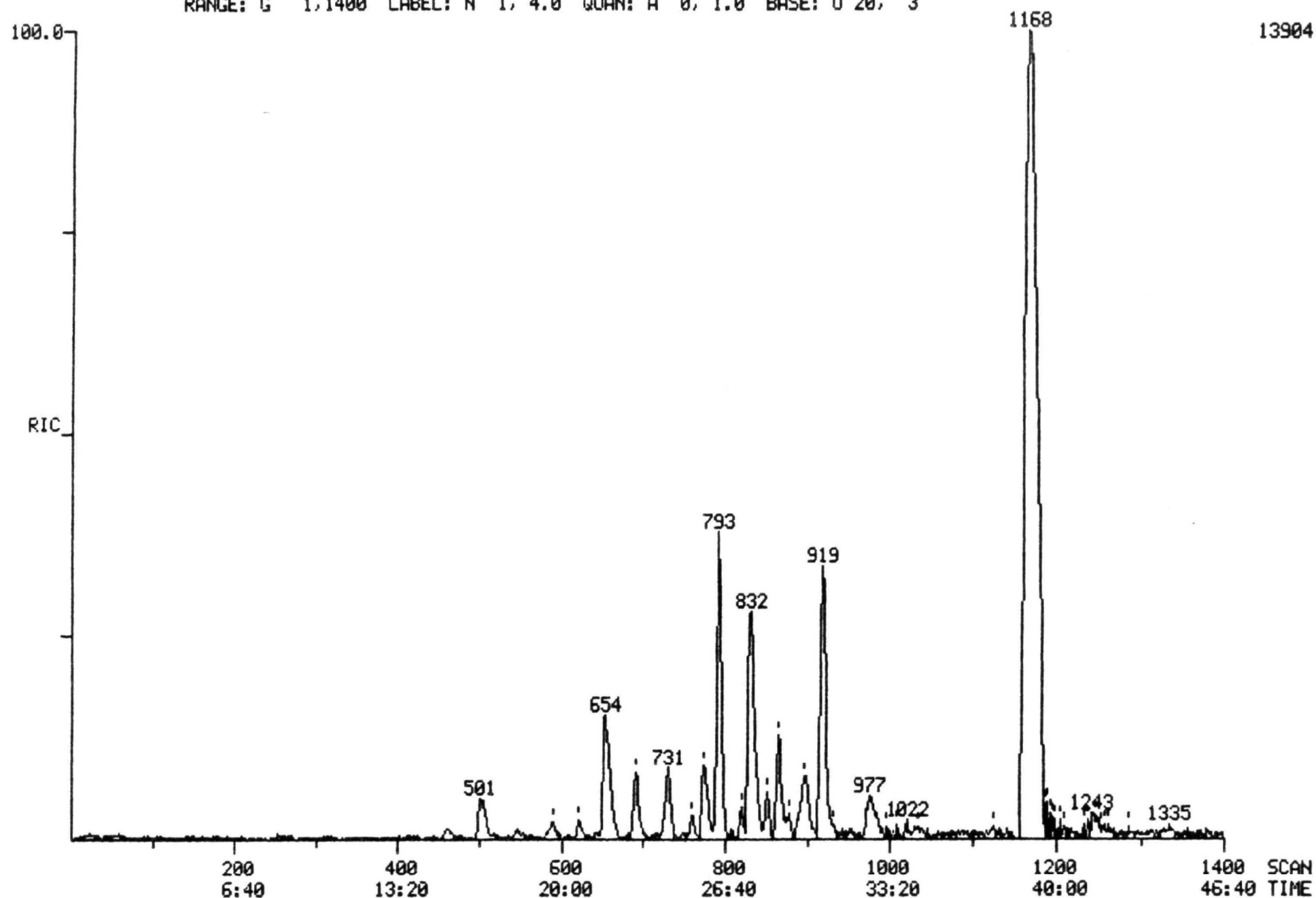
OTHER COMPOUNDS

NONE

RIC
02/11/80 17:37:00
SAMPLE: B41318 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41318 #1
CALI: CAL211 #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D01

MATRIX FISH

ERG SAMPLE # 41319

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE	1100
DIBUTYL PHTHALATE	420
ETHYL HEXYL PHTHALATE	400

OTHER COMPOUNDS

NONE

RIC
02/12/80 14:13:00

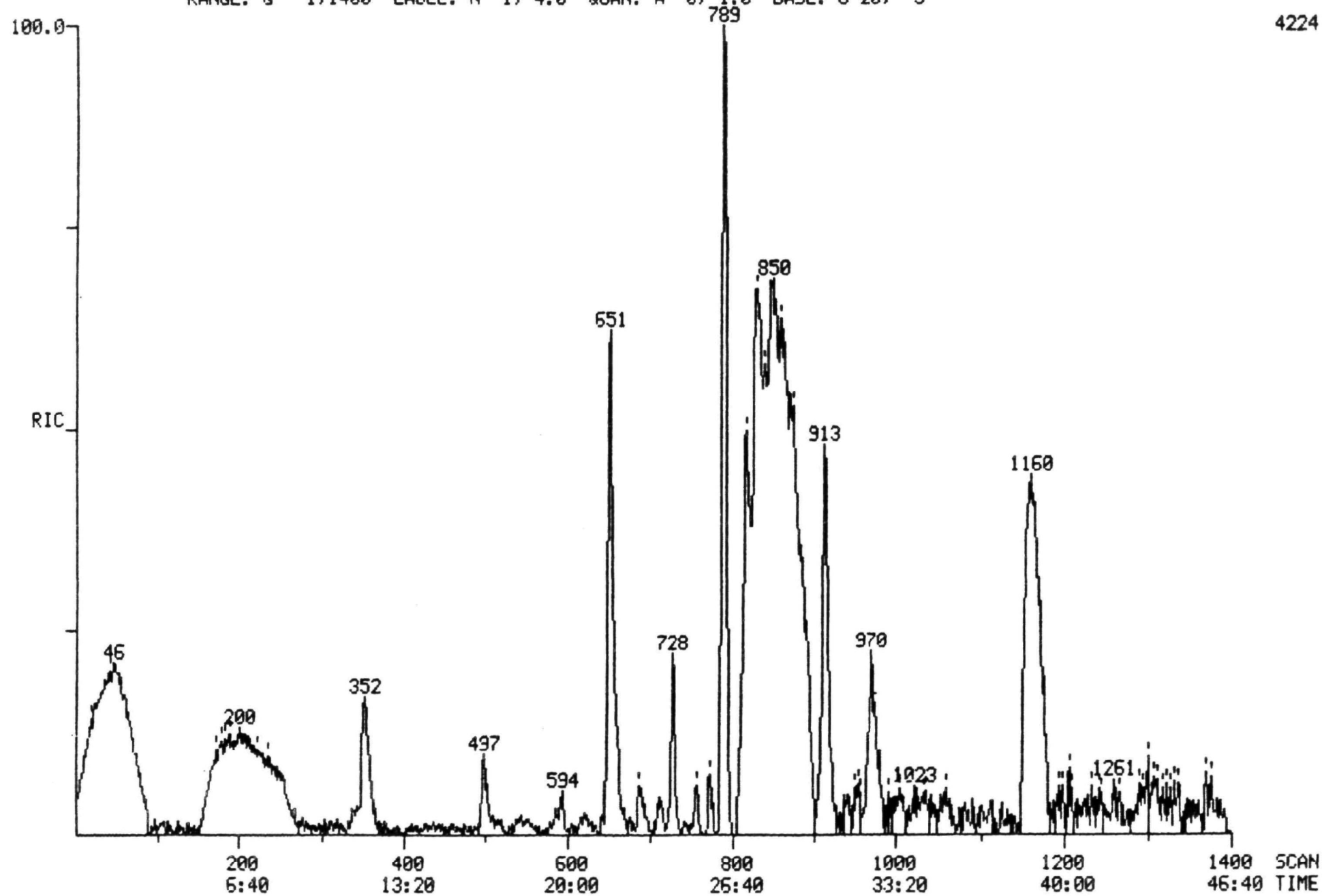
SAMPLE: B41319 EPA FISH

RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41319 #859

CALI: CAL212 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D02

MATRIX FISH

ERG SAMPLE # 41320

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

3900
710
260

OTHER COMPOUNDS

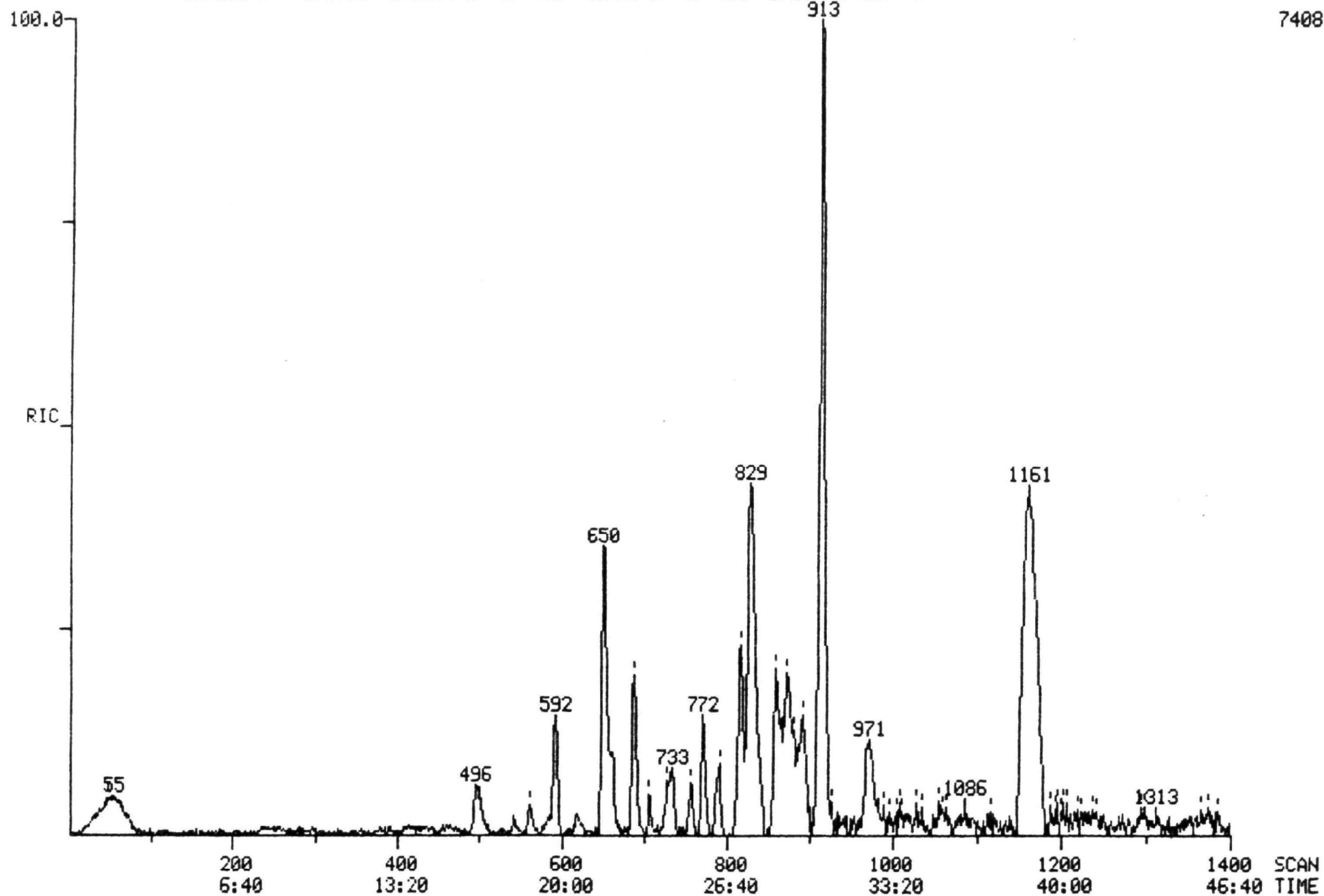
PCB's

780

RIC
02/12/80 17:14:00
SAMPLE: B41320 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41320 #1
CALI: CAL28 #1

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41C03

MATRIX FISH

ERG SAMPLE # 41321

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
HEXACHLOROBENZENE	3400
DIBUTYL PHTHALATE	710
ETHYL HEXYL PHTHALATE	260

OTHER COMPOUNDS

PCB's	450
-------	-----

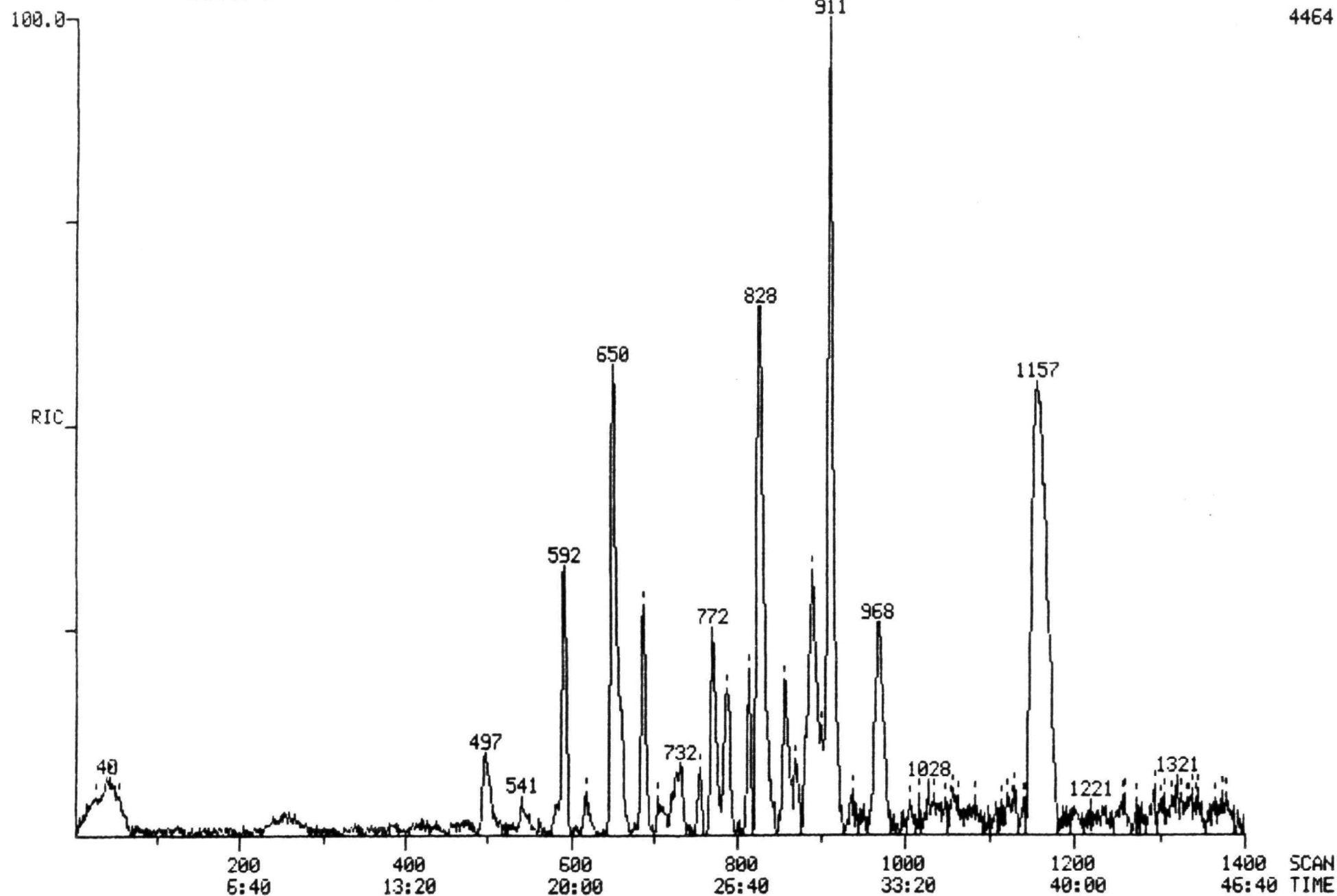
RIC
02/12/80 15:14:00

DATA: B41321 #1
CALI: CAL28 #1

SCANS 1 TO 1400

SAMPLE: B41321 EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D04

MATRIX FISH

ERG SAMPLE # 41322

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

--
--
--
--
--
--
--
--
--
--
--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

2000
3200
560

OTHER COMPOUNDS

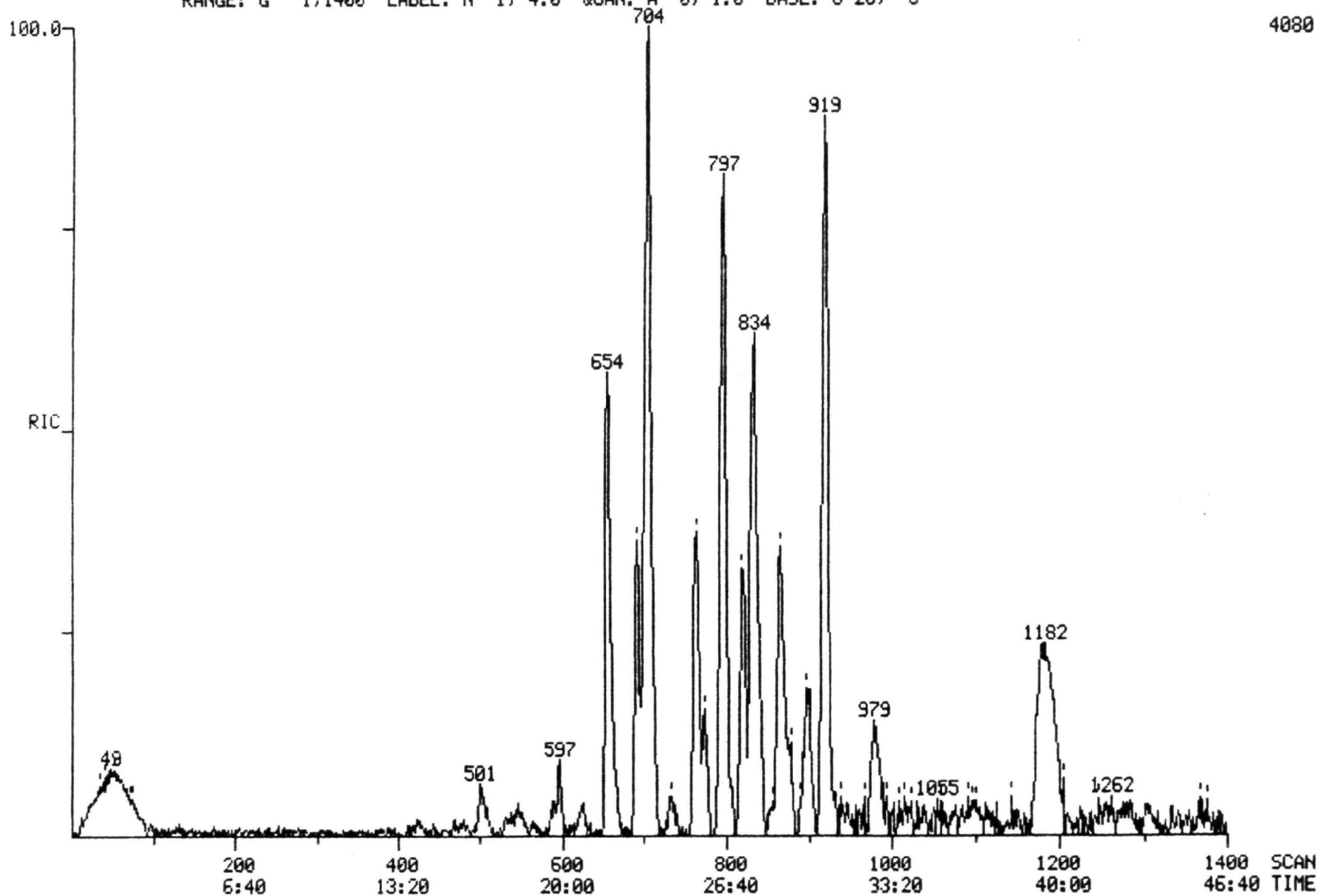
NONE

RIC
02/12/80 8:56:00
SAMPLE: B41322 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41322 #1
CALI: CAL212 #1

SCANS 1 TO 1400

4080



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D05

MATRIX FISH

ERG SAMPLE # 41323

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

2400
2100
740

OTHER COMPOUNDS

PCB's

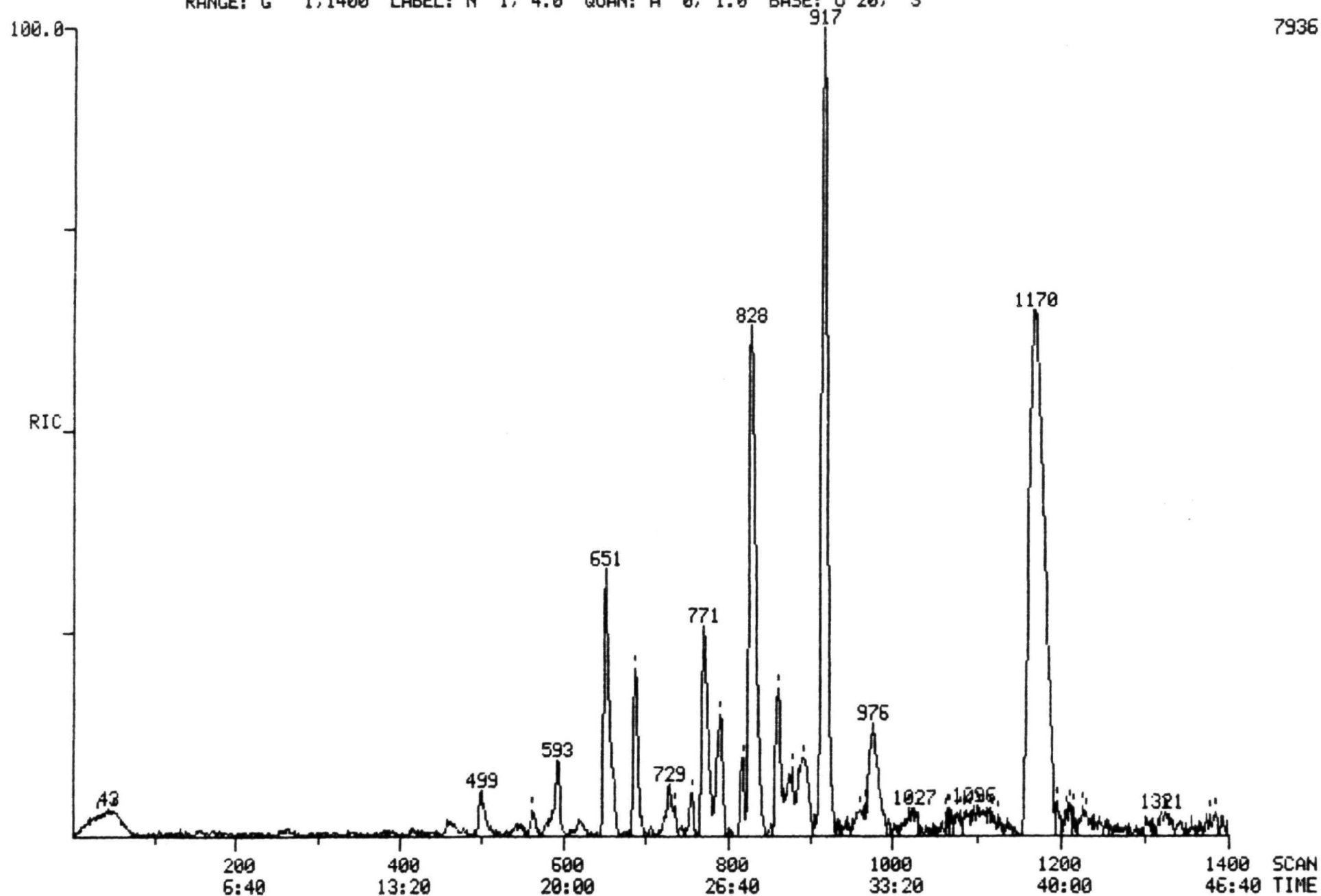
60

RIC
02/12/80 11:12:00
SAMPLE: B41323 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0

DATA: B41323 #861
CALI: CAL212 #1

SCANS 1 TO 1400

QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41D06

MATRIX FISH

ERG SAMPLE # 41324

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
HEXACHLOROBENZENE	120
DIBUTYL PHTHALATE	310
ETHYL HEXYL PHTHALATE	180

OTHER COMPOUNDS

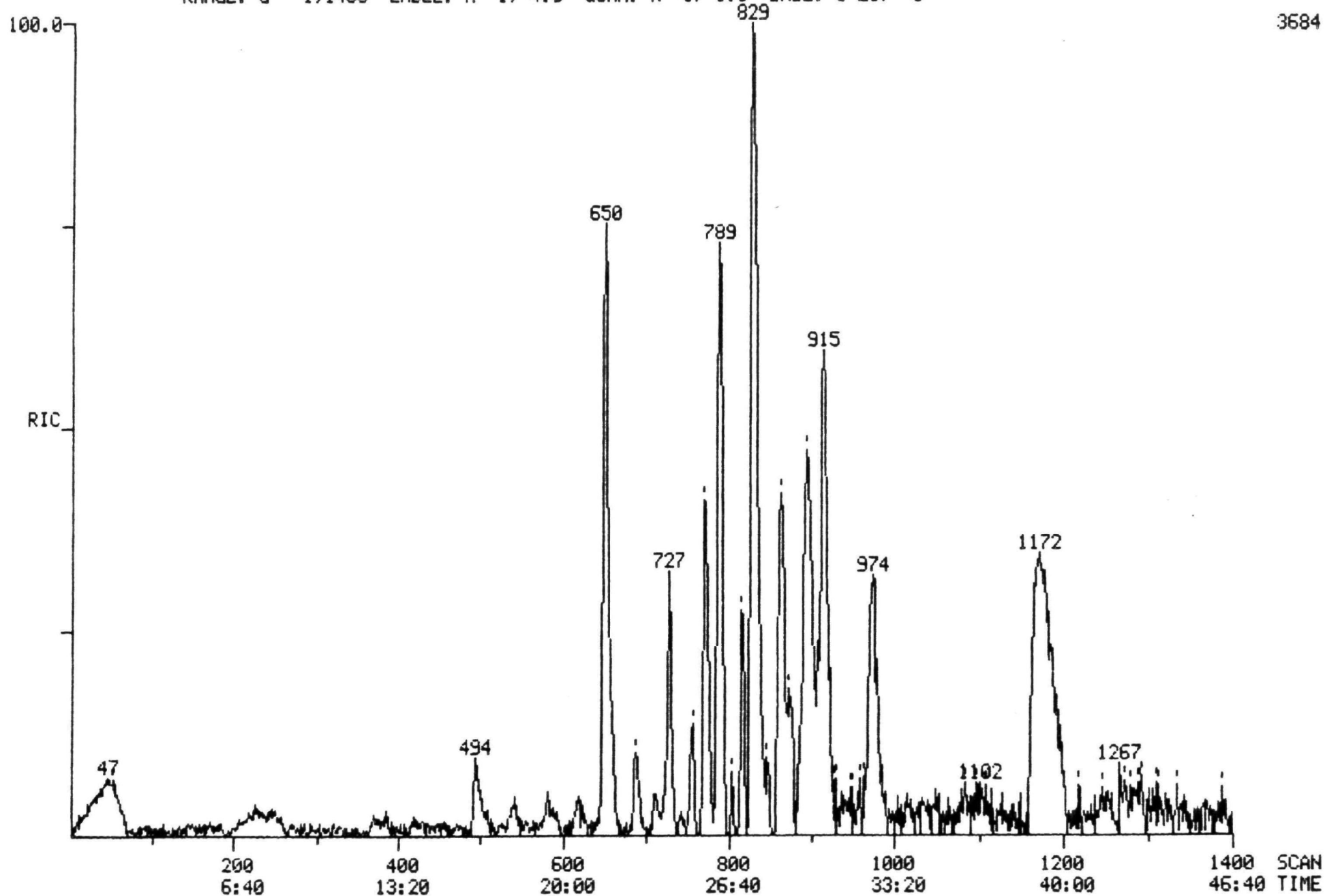
NONE

RIC
02/12/80 18:19:00
SAMPLE: B41324 EPA FISH

DATA: B41324 #1
CALI: CAL28 #1

SCANS 1 TO 1400

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41D07

MATRIX FISH

ERG SAMPLE # 41325

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

800
520

OTHER COMPOUNDS

NONE

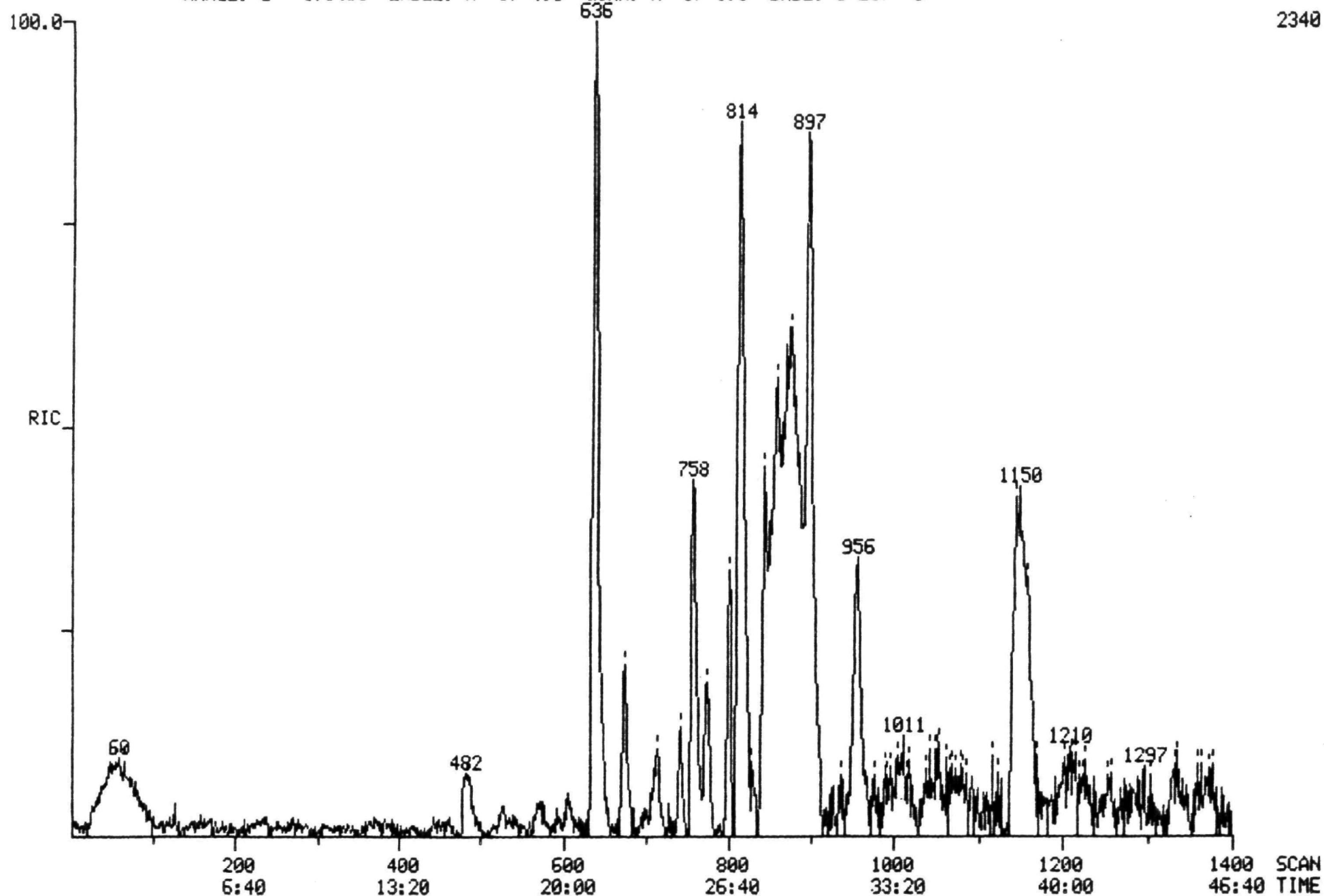
RIC
02/12/80 19:20:00

DATA: B41325 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400

SAMPLE: B41325 EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41D08

MATRIX FISH

ERG SAMPLE # 41326

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	490
ETHYL HEXYL PHTHALATE	1200

OTHER COMPOUNDS

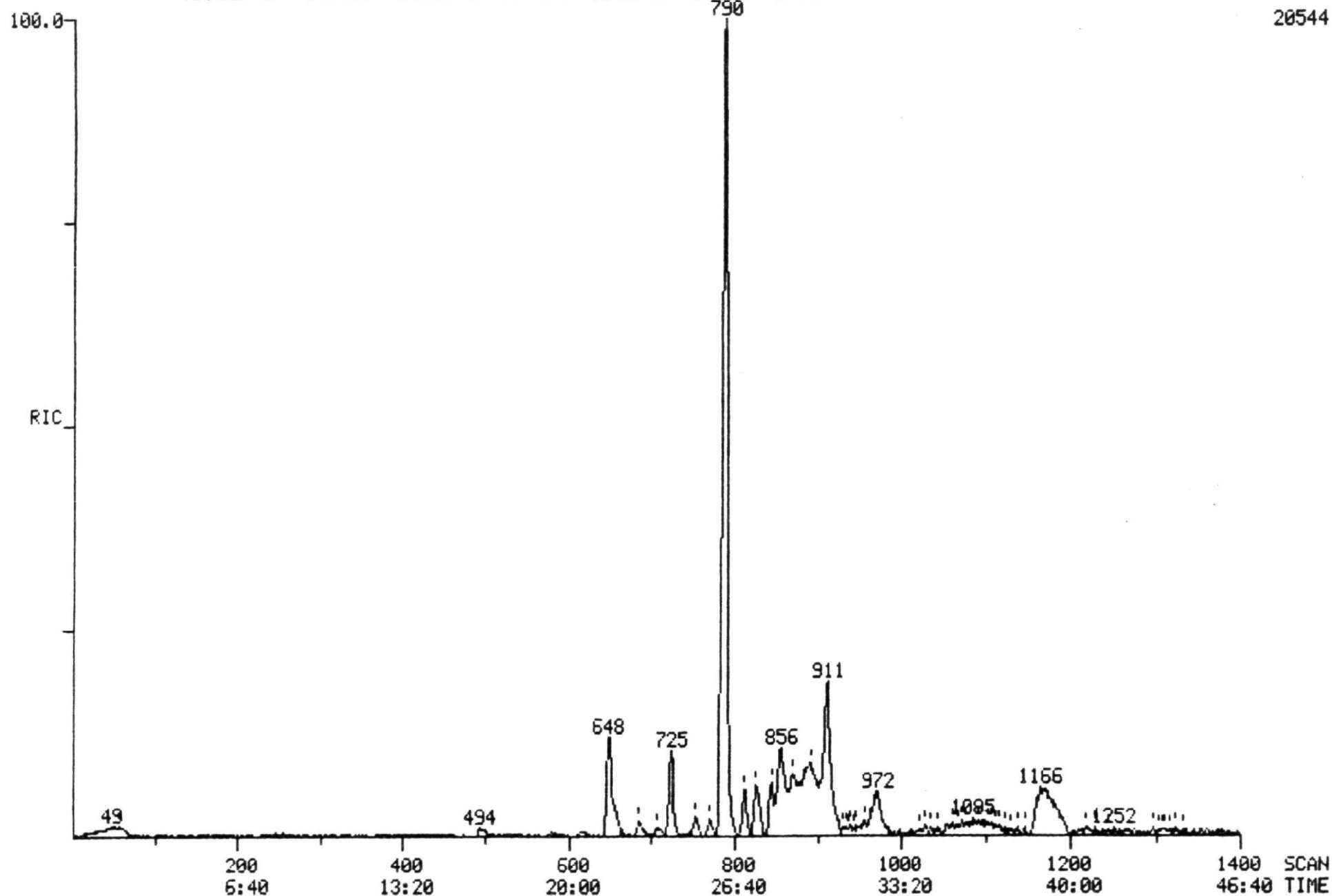
HEXANEDIOIC ACID, bis (1-METHYL PROPYL) ESTER	14800
---	-------

RIC
02/12/80 20:20:00
SAMPLE: B41326 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41326 #1
CALI: CAL28 #1

SCANS 1 TO 1400

20544



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41D09

MATRIX FISH

ERG SAMPLE # 41327

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	580
ETHYL HEXYL PHTHALATE	680

OTHER COMPOUNDS

NONE

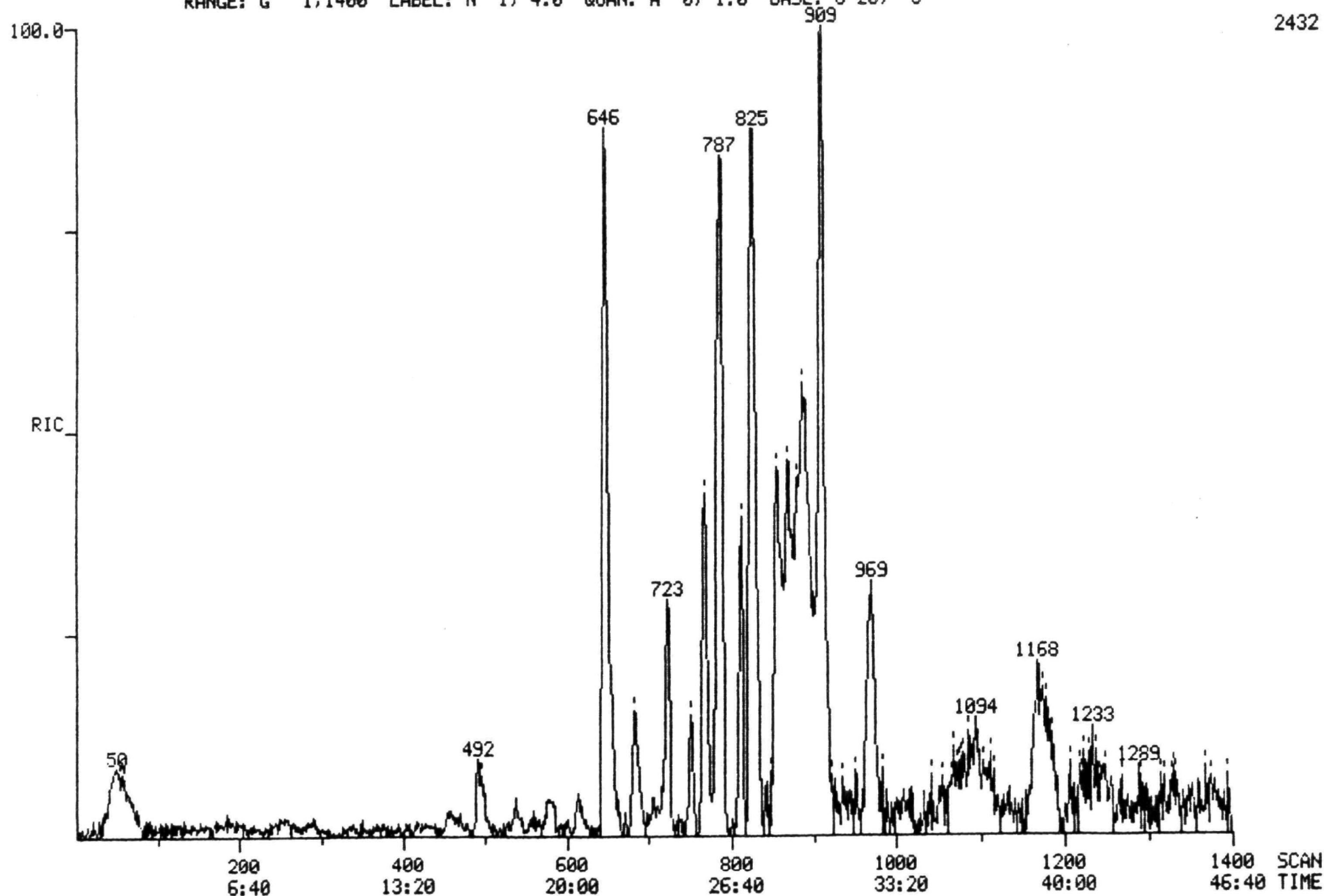
RIC
02/12/80 21:27:00

DATA: B41327 #1
CALI: CAL28 #1

SCANS 1 TO 1400

SAMPLE: B41327 EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41D10

MATRIX FISH

ERG SAMPLE # 41328

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

CADMIUM

COBALT

COPPER

CHROMIUM

LEAD

MERCURY

SELENIUM

TIN

ZINC

% MOISTURE

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

790

ETHYL HEXYL PHTHALATE

360

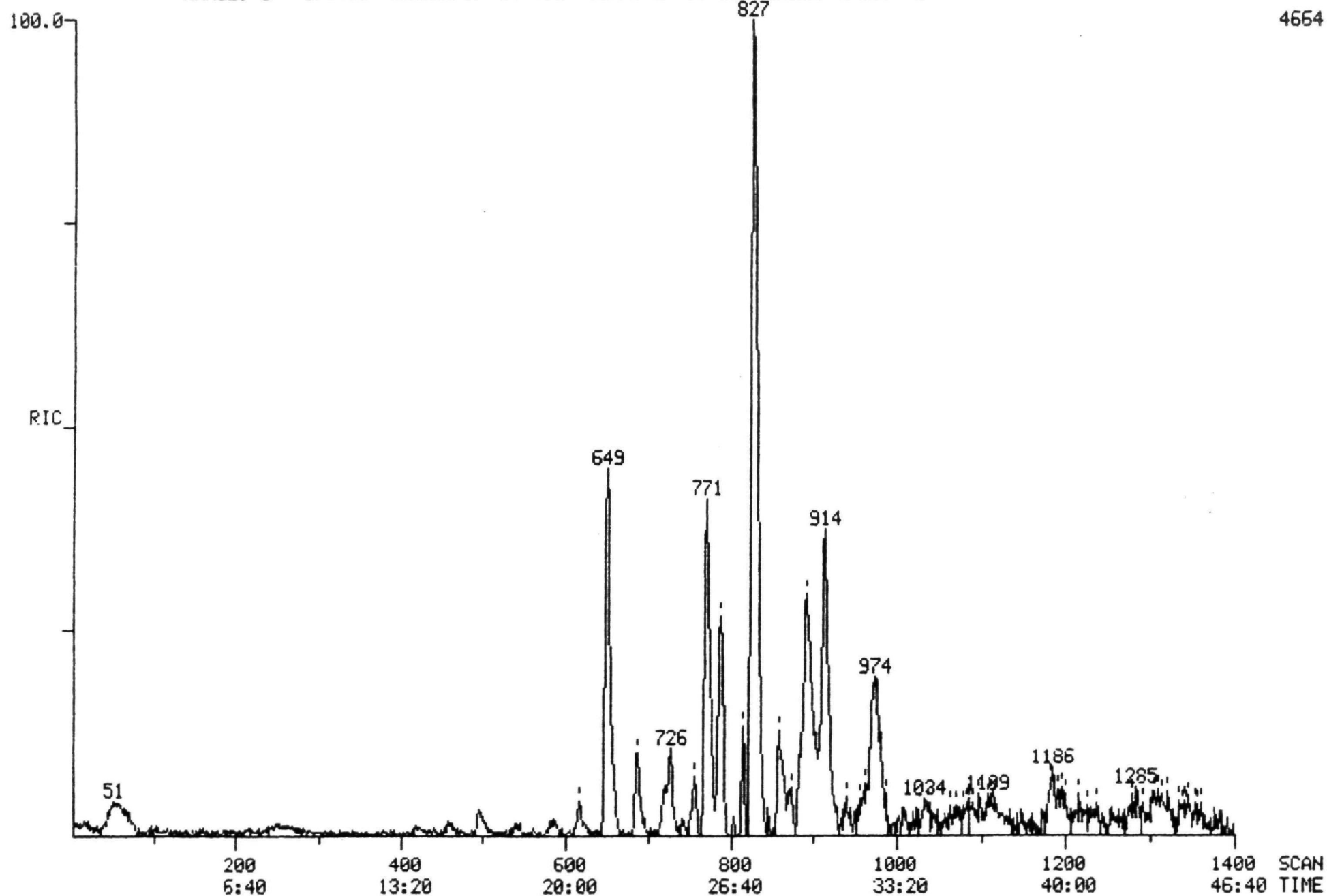
OTHER COMPOUNDS

NONE

RIC
02/12/80 22:27:00
SAMPLE: B41328 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41328 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41D11

MATRIX FISH

ERG SAMPLE # 41329A

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

560

ETHYL HEXYL PHTHALATE

2000

OTHER COMPOUNDS

NONE

RIC
02/13/80 16:41:00

SAMPLE: B41329A EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

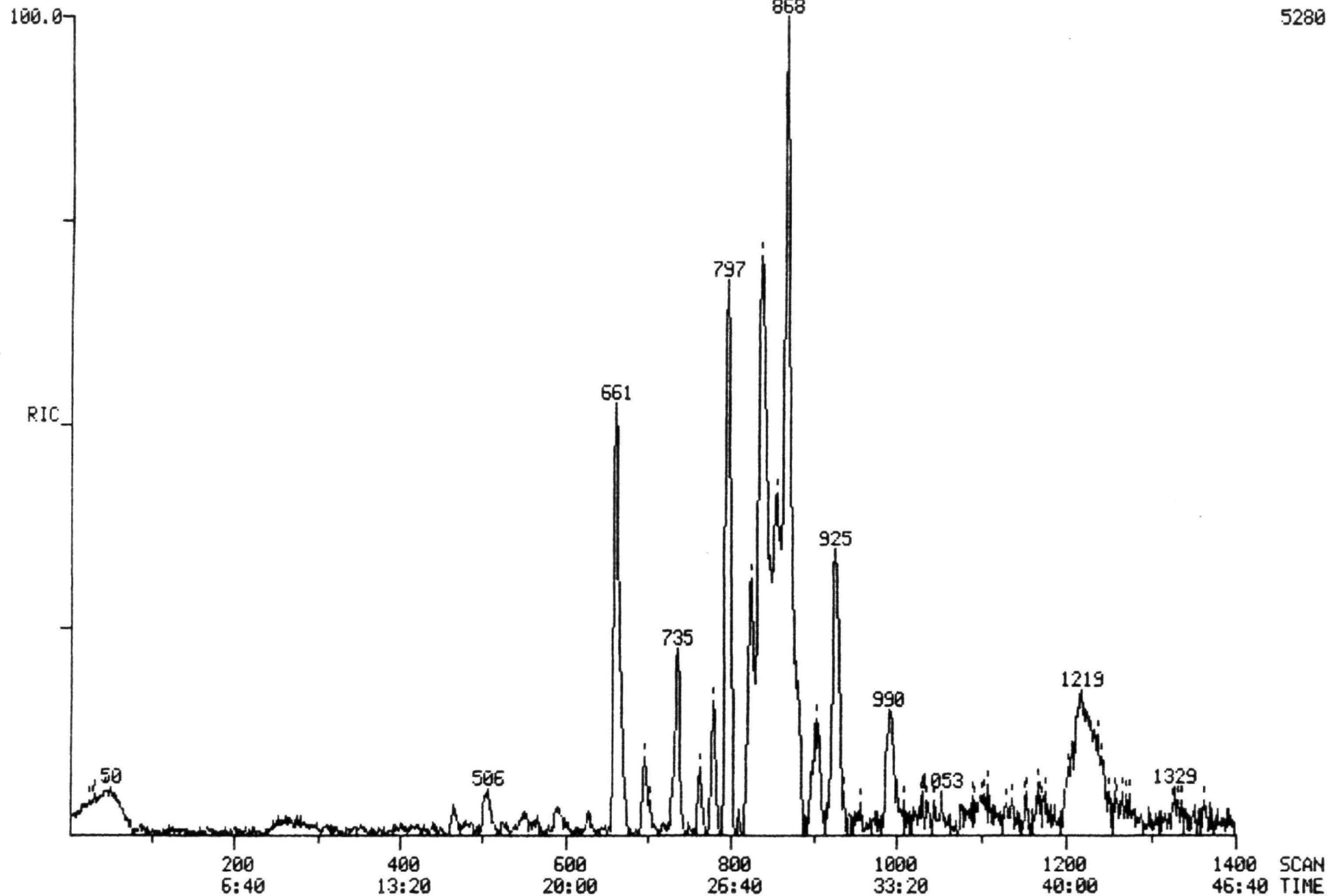
DATA: B41329A #1

CALI: CAL213 #3

SCANS 1 TO 1400

868

5280



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D11

MATRIX FISH

ERG SAMPLE # 41329B

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

Results reported in --- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

HEXACHLOROBENZENE
DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

1500
950
17500

OTHER COMPOUNDS

NONANEDIOIC ACID, bis (2-ETHYL HEXYL) ESTER

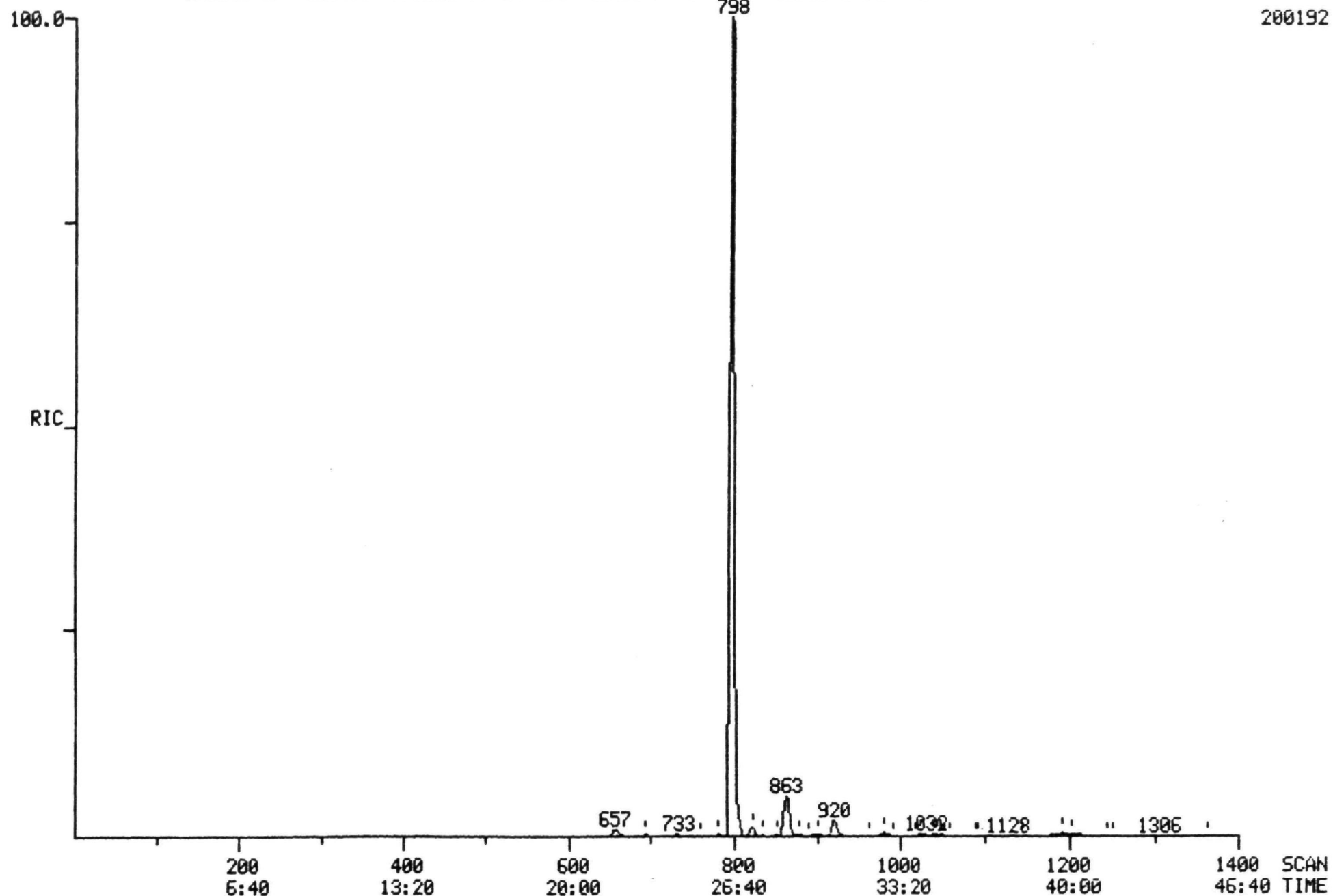
212000

RIC
02/11/80 20:45:00
SAMPLE: B41329B EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41329B #1
CALI: CAL211 #3

SCANS 1 TO 1400

200192



ANALYTICAL RESULTS

U.S.E.P.A. - 11783NBSX

E.P.A. SAMPLE # LB 41D12

MATRIX FISH

ERG SAMPLE # 41330

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIETHYL PHTHALATE	20000
DIBUTYL PHTHALATE	1700
FLUORANTHENE	190
ETHYL HEXYL PHTHALATE	5800

OTHER COMPOUNDS

NONE

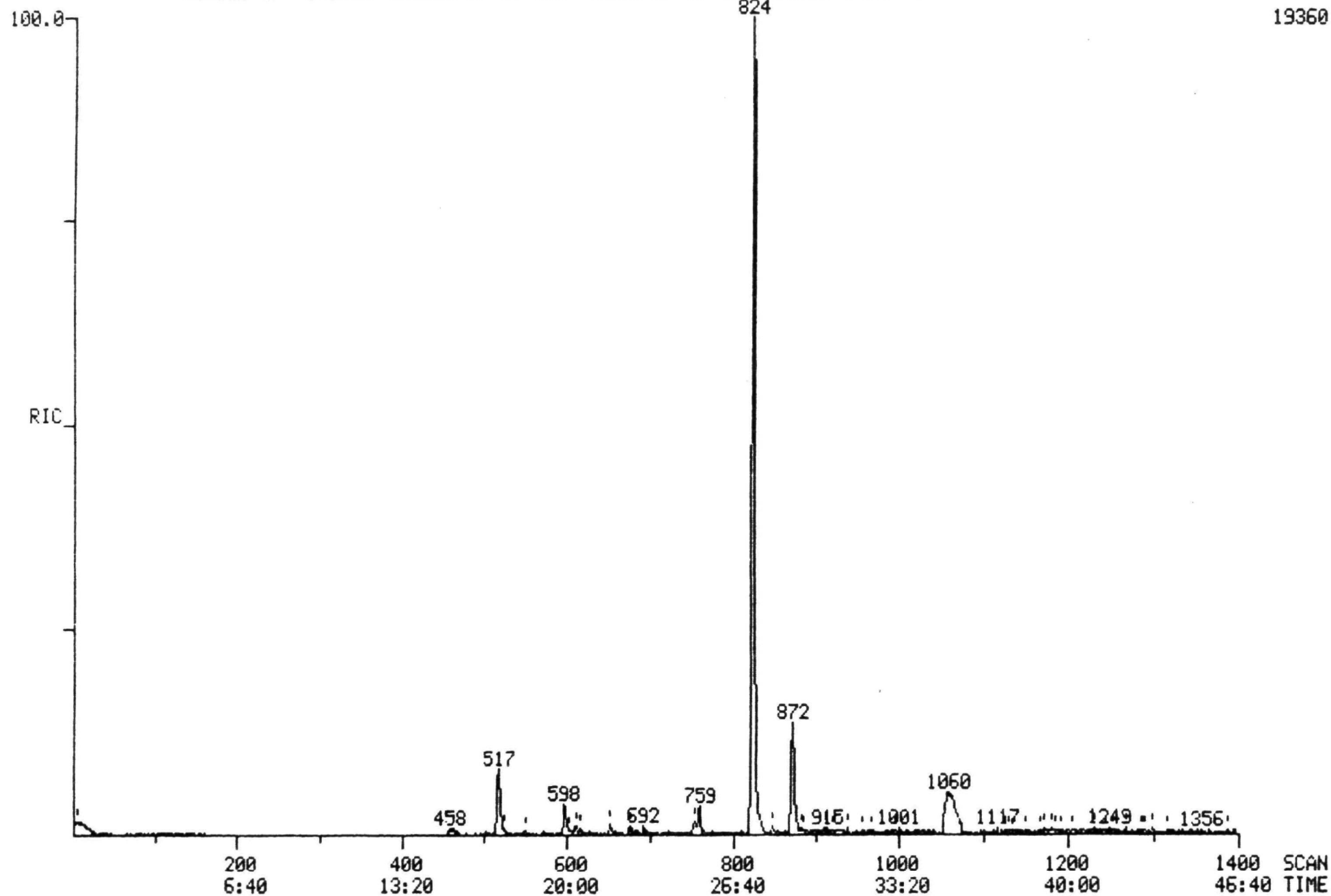
RIC
02/05/80 14:18:00

DATA: B41330 #1
CALI: CAL3200 #1

SCANS 1 TO 1400

SAMPLE:

RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D13

MATRIX FISH

ERG SAMPLE # 41331

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC
CADMIUM
COBALT
COPPER
CHROMIUM
LEAD
MERCURY
SELENIUM
TIN
ZINC
% MOISTURE

--
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Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIETHYL PHTHALATE
DIBUTYL PHTHALATE
PYRENE
ETHYL HEXYL PHTHALATE
BENZO (a) ANTHRACENE
CHRYSENE

1100
640
970
66000
640
640

OTHER COMPOUNDS

DIETHYL PHTHALATE
DIBUTYL PHTHALATE
PYRENE
ETHYL HEXYL PHTHALATE
BENZO (a) ANTHRACENE
CHRYSENE

1100
640
970
66000
640
640

OTHER COMPOUNDS

NONANEDIOIC ACID, bis (2-ETHYL HEXYL) ESTER

6000

RIC
02/08/80 11:08:00
SAMPLE: B41331
RANGE: G 1,1400

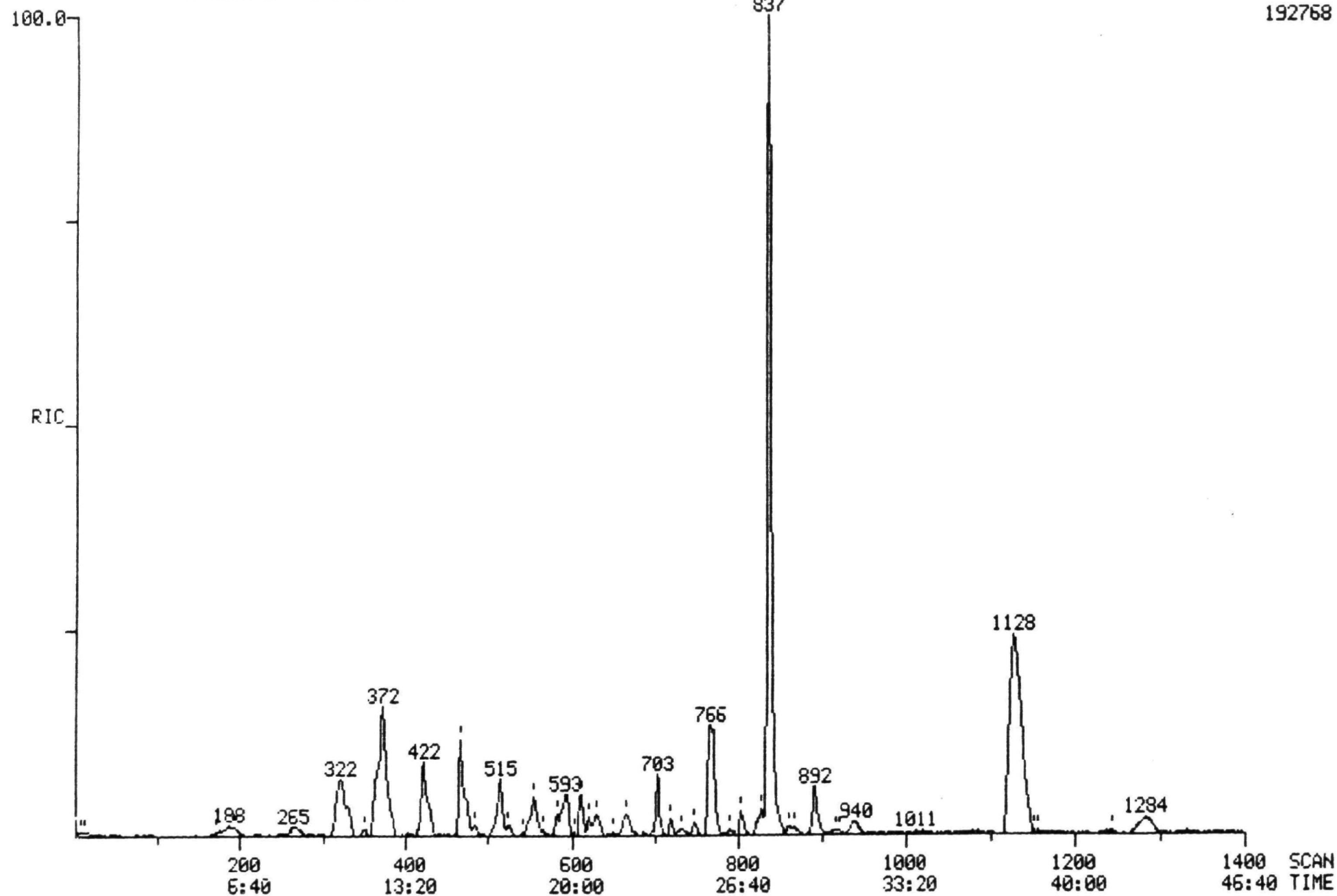
DATA: B41331 #1
CALI: CAL32008FEB #2

SCANS 1 TO 1400

LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

837

192768



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D14
ERG SAMPLE # 41332

MATRIX FISH
SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

1600
23000

OTHER COMPOUNDS

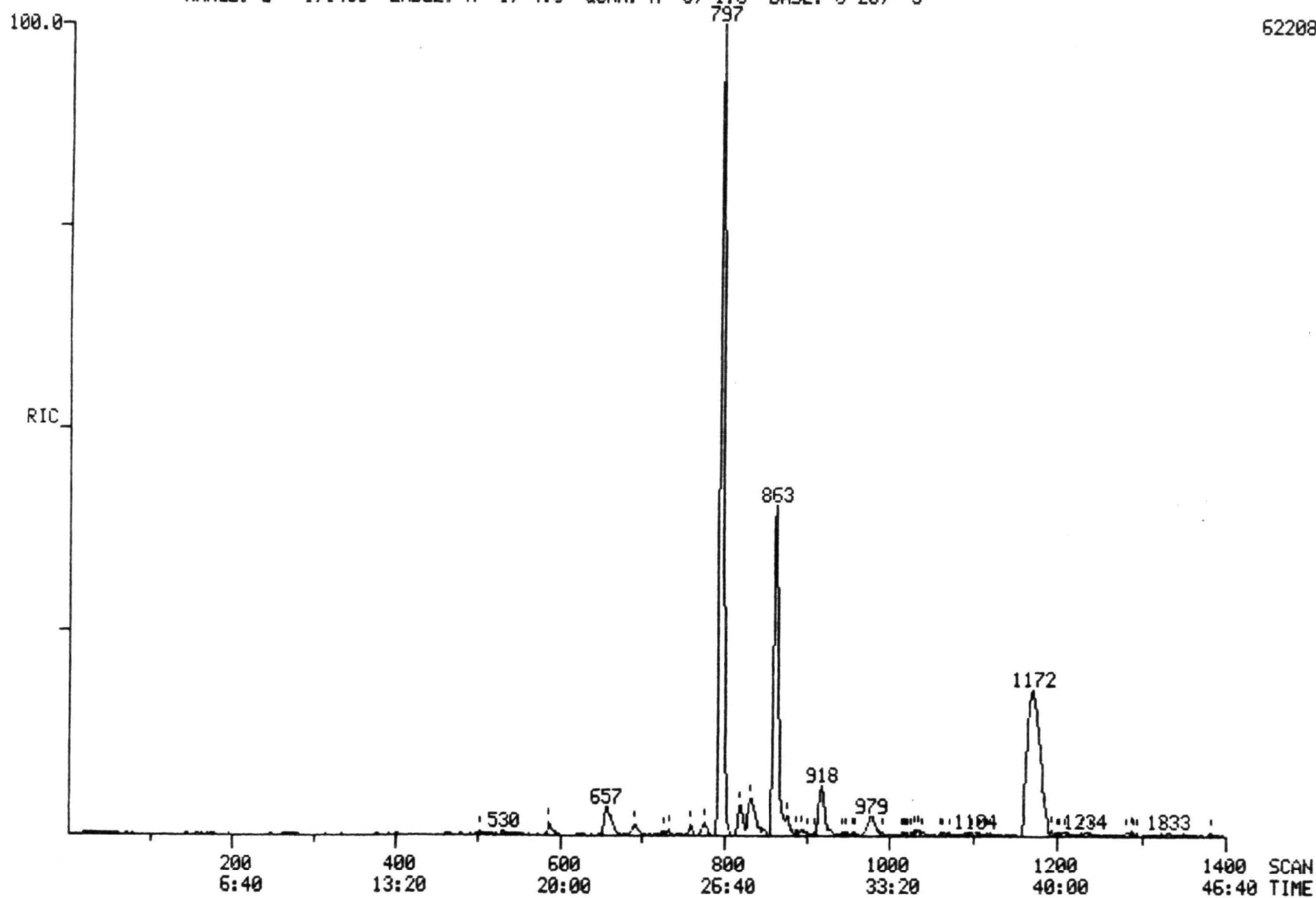
NONE

RIC
02/13/80 11:20:00
SAMPLE: B41332 EPA FISH
RANGE: G 1.1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41332 #1
CALI: CAL213 #3

SCANS 1 TO 1400

62208



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB41D16

MATRIX FISH

ERG SAMPLE # 41334

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

720

ETHYL HEXYL PHTHALATE

20000

OTHER COMPOUNDS

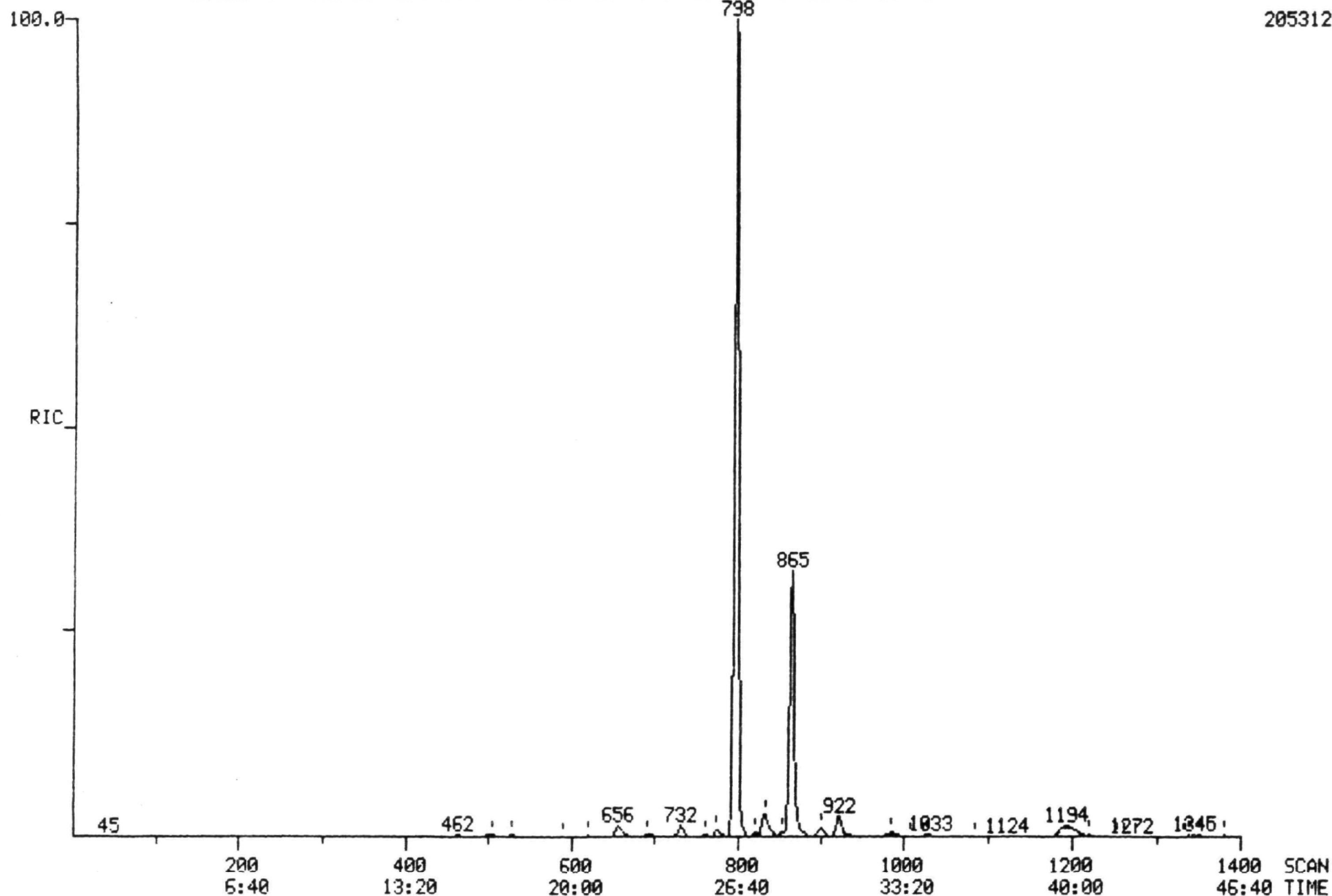
NONE

RIC
02/13/80 18:40:00
SAMPLE: B41334 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41334 #1
CALI: CAL213 #3

SCANS 1 TO 1400

205312



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D17

MATRIX FISH

ERG SAMPLE # 41335

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE
ETHYL HEXYL PHTHALATE

770
9400

OTHER COMPOUNDS

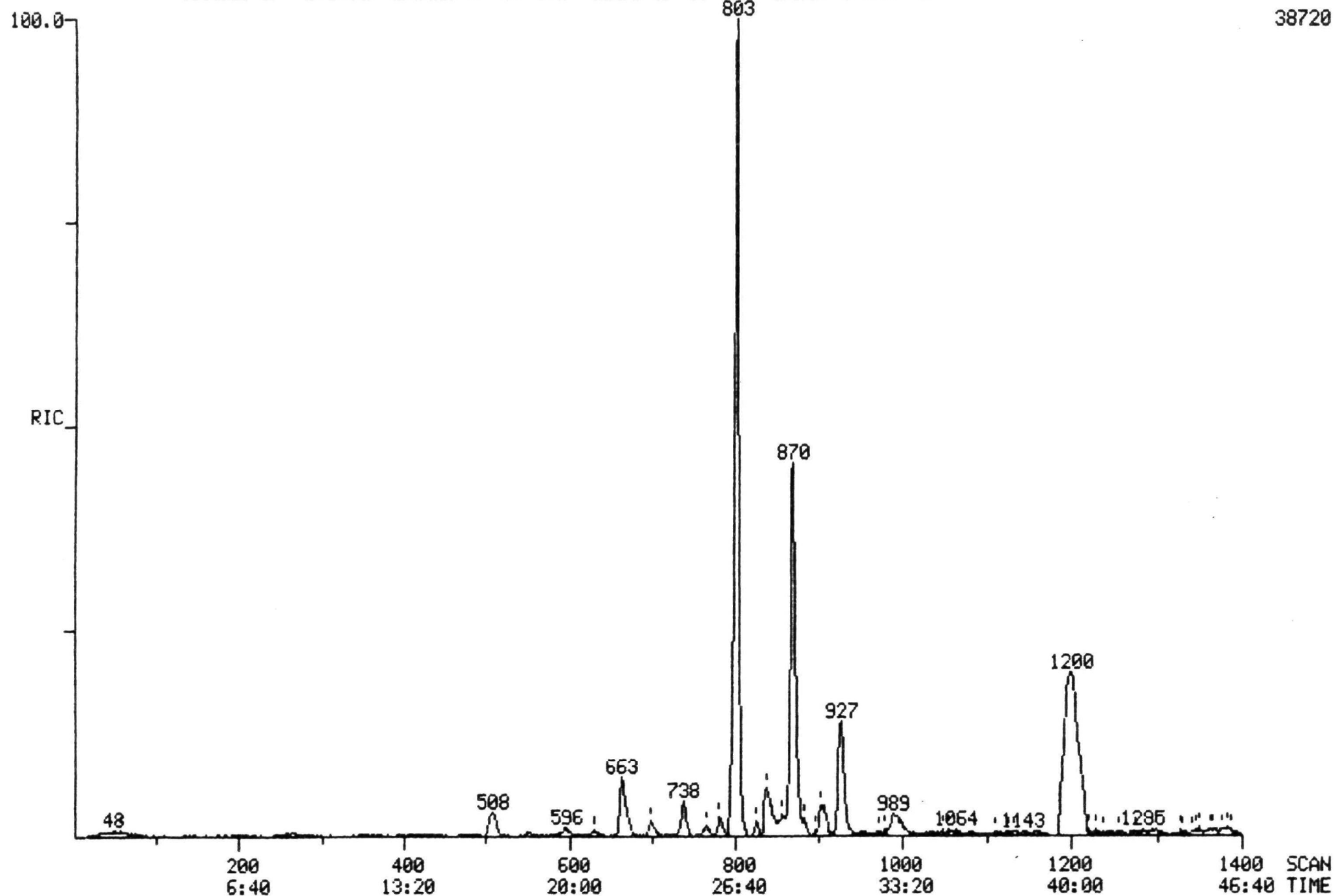
NONE

RIC
02/13/80 13:23:00
SAMPLE: B41335 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41335 #869
CALI: CAL213 #3

SCANS 1 TO 1400

38720



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D18

MATRIX FISH

ERG SAMPLE # 41336

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	800
ETHYL HEXYL PHTHALATE	4200
DI-n-OCTYL PHTHALATE	4400

OTHER COMPOUNDS

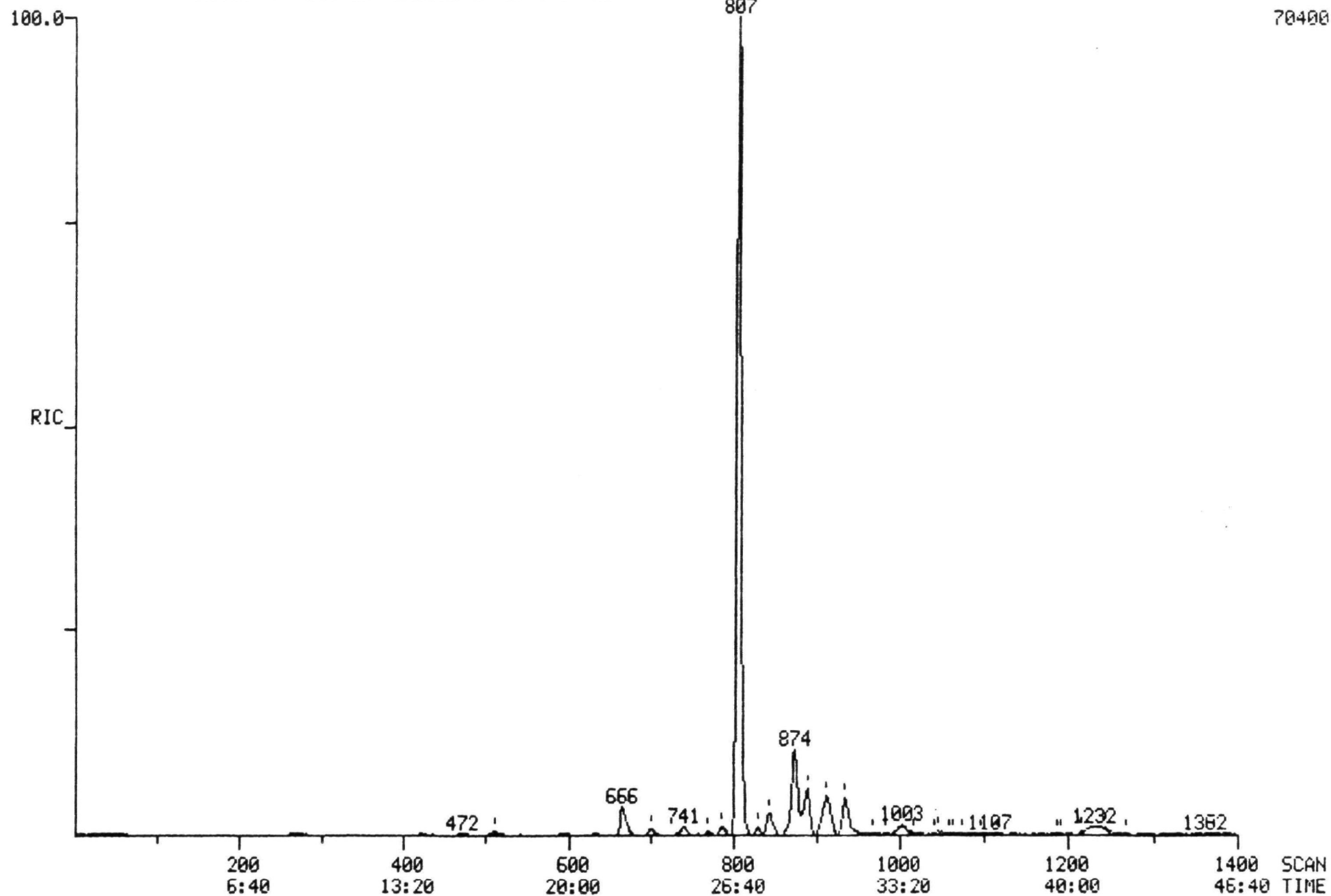
NONE

RIC
02/13/80 19:42:00
SAMPLE: B41335 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41335 #1
CALI: CAL213 #3

SCANS 1 TO 1400

70400



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D19

MATRIX FISH

ERG SAMPLE # 41337

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

<u>P A R A M E T E R</u>	<u>C O N C E N T R A T I O N</u>
ARSENIC	--
CADMIUM	--
COBALT	--
COPPER	--
CHROMIUM	--
LEAD	--
MERCURY	--
SELENIUM	--
TIN	--
ZINC	--
% MOISTURE	--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

BASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

<u>C O M P O U N D</u>	<u>C O N C E N T R A T I O N (PPB)</u>
DIBUTYL PHTHALATE	410
ETHYL HEXYL PHTHALATE	5600
DI-n-OCTYL PHTHALATE	610

OTHER COMPOUNDS

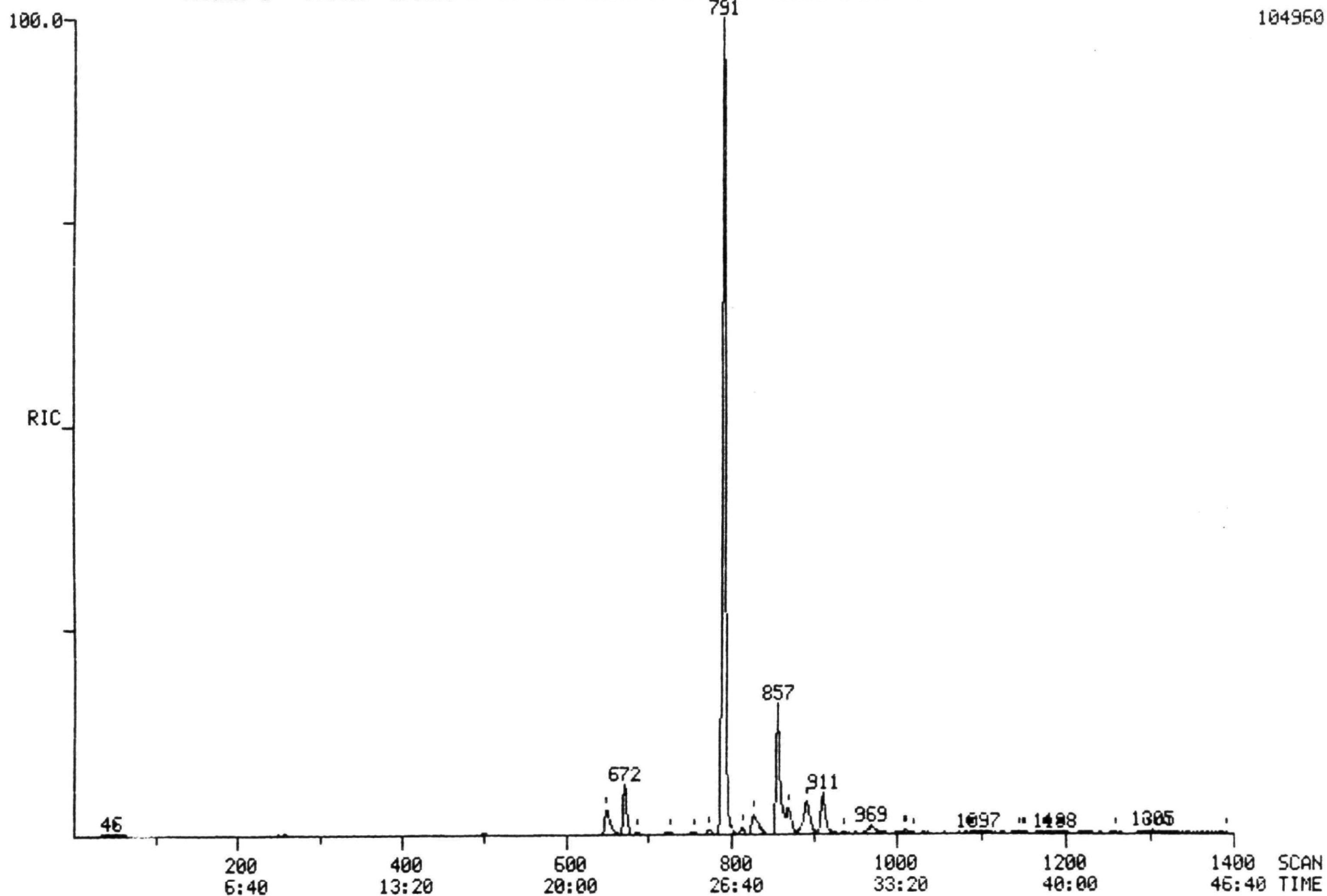
NONE

RIC
02/13/80 15:23:00
SAMPLE: B41337 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: 041337 #1
CALI: CAL213 #3

SCANS 1 to 1460

104960



ANALYTICAL RESULTS

U.S.E.P.A. - I1783NBSX

E.P.A. SAMPLE # LB 41D20

MATRIX FISH

ERG SAMPLE # 41338

SAMPLE RECEIVED 11/14/79

INORGANIC RESULTS

P A R A M E T E R

C O N C E N T R A T I O N

ARSENIC

--

CADMIUM

--

COBALT

--

COPPER

--

CHROMIUM

--

LEAD

--

MERCURY

--

SELENIUM

--

TIN

--

ZINC

--

% MOISTURE

--

Results reported in -- unless otherwise noted.

ORGANIC RESULTS

EASE NEUTRAL GC/MS SCAN

PRIORITY POLLUTANTS

C O M P O U N D

C O N C E N T R A T I O N (PPB)

DIBUTYL PHTHALATE

360

ETHYL HEXYL PHTHALATE

18000

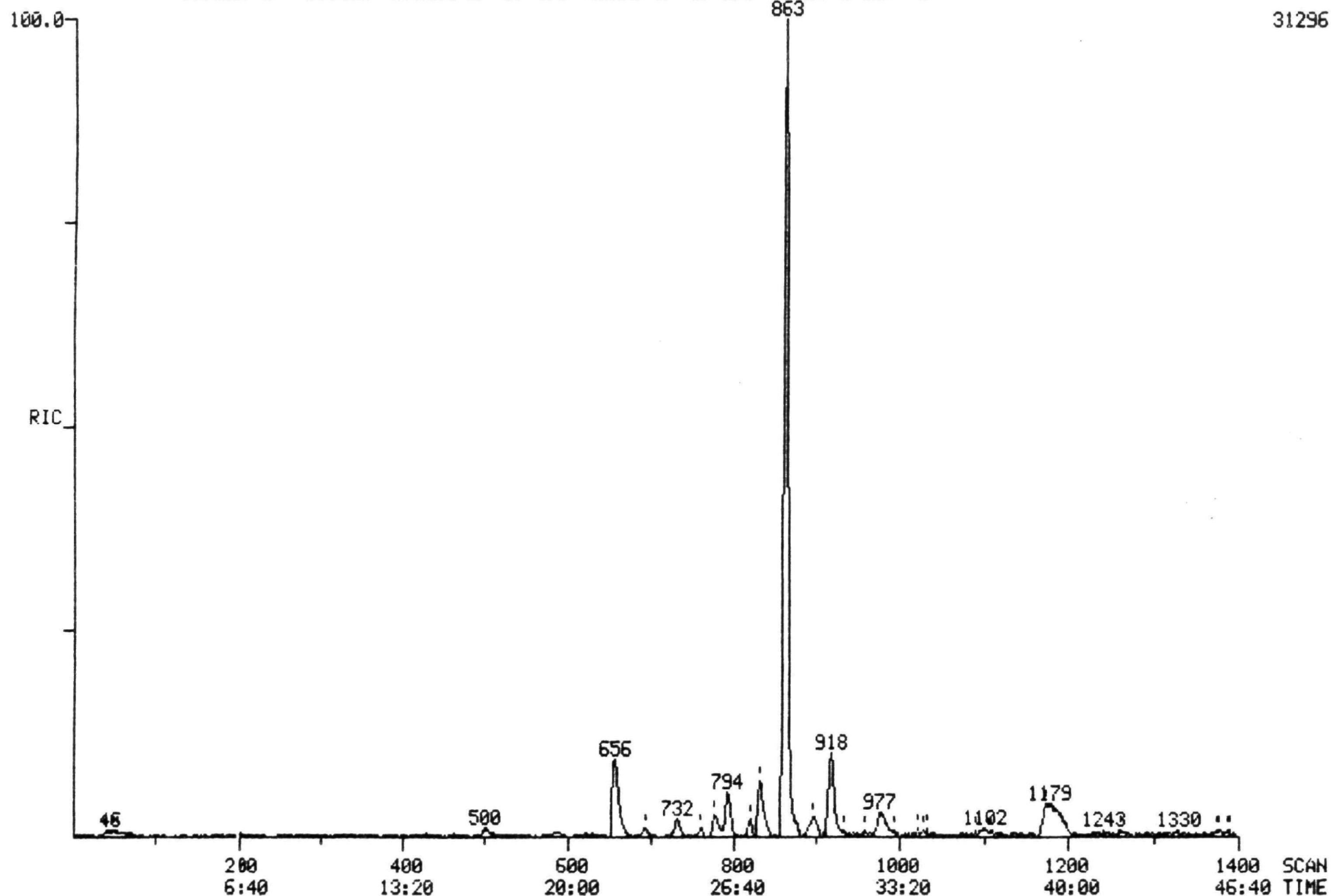
OTHER COMPOUNDS

NONE

RIC
02/13/80 12:24:00
SAMPLE: B41338 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: B41338 #1
CALI: CAL213 #3

SCANS 1 TO 1400



QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER % Moisture (% by weight)

DETECTION LIMIT (WATER)

(SEDIMENT)

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
40391	LB34C17	Sediment	20.6	20.6	0	20.6			

REAGENT BLANKS

WATER

SEDIMENT

CONTROL STANDARDS

TYPE -

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER CADMIUM

DETECTION LIMIT (WATER) .003 mg/l

(SEDIMENT) .71 mg/kg

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
41278	LB40C01	Water	-.001	-1002	67	-.0015	.0625	.055	90
41279	LB40C02	Water	.005	.003	50	.004	.0625	.063	94
40360	LB37C02	Water	.001	.000	200	.0005	.050	.042	83
40362	LB37C04	Water	.000	.001	200	.0005	.050	.039	77
40395	LB39C501	Fish Food	.235	0	200	.1175			
44103	Not EPA	Sediment	8.28	7.86	5.2	8.07			

REAGENT BLANKS

WATER

-.001 mg/l
-.001 mg/l
-.001 mg/l
-.001 mg/l
.000 mg/l
-.001 mg/l

SEDIMENT

.001 mg/kg
.001 mg/kg
.002 mg/kg

CONTROL STANDARDS

TYPE - NBS 1645

(Actual Value 10.2 µg/g)

6.35
6.58

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER CHROMIUM

DETECTION LIMIT (WATER) .005 mg/l

(SEDIMENT) 1.2 mg/kg

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
41278	LB40C01	Water	.001	.001	0	.001	.125	.093	74
41279	LB40C02	Water	.001	.001	0	.001	.125	.090	71
40360	LB37C02	Water	.003	.004	28	.0035	.100	.066	62
40362	LB37C04	Water	.001	.001	0	.001	.100	.064	63
40395	LB39C501	Fish Food	.4761	.476	0	.476			
44103	Not EPA	Sediment	121	121	0	121			

REAGENT BLANKS

WATER

.002 mg/l
.003 mg/l
.002 mg/l
.000 mg/l
.001 mg/l
.001 mg/l

SEDIMENT

.000 mg/kg
.001 mg/kg
-.002 mg/kg

CONTROL STANDARDS

TYPE - NBS 1645

(Actual Value 2.96%)

2.37%
2.35%

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER COBALT

DETECTION LIMIT (WATER) .005 mg/l

(SEDIMENT) 1.2 mg/kg

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
41278	LB40C01	Water	.008	.005	.46	.0065			
41279	LB40C02	Water	.005	.008	46	.0065			
40360	LB37C02	Water	.000	.001	200	.0005			
40362	LB37C04	Water	.001	.000	200	.0005			
40395	LB39C501	Fish Food	.238	.238	0	.238			
43739	Not EPA	Sediment	10.2	11.5	12	10.85			

REAGENT BLANKS

<u>WATER</u>	<u>SEDIMENT</u>
.000 mg/l	.001 mg/kg
-.002 mg/l	-.002 mg/kg
.000 mg/l	-.001 mg/kg
.001 mg/l	
-.002 mg/l	
-.001 mg/l	

CONTROL STANDARDS

TYPE - NBS 1645

(Actual Value 8µg/g)

5.4

5.5

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER COPPER

DETECTION LIMIT (WATER) .005 mg/l

(SEDIMENT) 1.2 mg/kg

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
41278	LB40C01	Water	.010	.013	26	.0115	.125	.113	81
41279	LB40C02	Water	.008	.006	28	.007	.125	.125	94
40360	LB37C02	Water	.006	.006	0	.006	.100	.086	80
40362	LB37C04	Water	.005	.006	18	.0055	.100	.080	74
40395	LB39C501	Fish Food	6.7	6.7	0	6.7			
44103	Not EPA	Sediment	699	708	1.3	703.5			

REAGENT BLANKS

WATER

.000 mg/l
.000 mg/l
.002 mg/l
.000 mg/l
.000 mg/l
.001 mg/l

SEDIMENT

.001 mg/kg
.002 mg/kg
.002 mg/kg

CONTROL STANDARDS

TYPE - NBS 1645

(Actual Value 109 µg/g)

99.3
91.1

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER LEAD

DETECTION LIMIT (WATER) .010 mg/l

(SEDIMENT) 2.5 mg/kg

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
41278	LB40C01	Water	.013	.010	26	.0115	.125	.120	87
41279	LB40C02	Water	.015	.015	0	.015	.125	.130	92
40360	LB37C02	Water	.001	.001	0	.001	.100	.078	77
40361	LB37C04	Water	.002	-.003	1000	-.0005	.100	.071	71
40395	LB39C501	Fish Food	2.86	2.62	8.8	2.74			
44103	Not EPA	Sediment	475	440	8.2	457.5			

REAGENT BLANKS

WATER

.002 mg/l
.002 mg/l
.003 mg/l
.000 mg/l
-.002 mg/l
-.001 mg/l

SEDIMENT

.006 mg/kg
-.001 mg/kg
-.005 mg/kg

CONTROL STANDARDS

TYPE - NBS 1645

(Actual Value 714 µg/g)

585
556

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER MERCURY

DETECTION LIMIT (WATER) .0002 mg/l

(SEDIMENT) .1 mg/kg

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
40365	LB37C07	Water	-.00019	-.00019	0	-.00019			
40361	LB37C03	Water	-.00019	-.00006	104	-.000125			
* DONE IN TRIPLICATE									
ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	VALUE C	% DEV.	AVG. VALUE		
40380	LB34C01	Sediment	4.033	3.422	4.045	9.2	3.833		
40381	LB34C03	Sediment	3.475	2.825	.718	62	2.339		
40382	LB34C04	Sediment	2.922	2.322	2.033	19	2.425		
40383	LB34C05	Sediment	1.252	1.451	1.660	14	1.454		

REAGENT BLANKS

WATER

.0004 mg/l
.0004 mg/l
.0003 mg/l
.0004 mg/l
.0002 mg/l
.0004 mg/l
.0001 mg/l
.0001 mg/l

SEDIMENT

.01 µg Reading
.03 µg Reading
.00 µg Reading
.01 µg Reading
.01 µg Reading
.01 µg Reading

CONTROL STANDARDS

TYPE - NBS 1645

(Actual Value 1.1 µg/g)

1.14
1.10
1.14

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER TIN

DETECTION LIMIT (WATER) .08 mg/l

(SEDIMENT) 19 mg/kg

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
41278	LB40C01	Water	.10	.075	28	.0875			
41279	LB40C02	Water	.00	-.01	200	-.005			
40360	LB37C02	Water	.02	.01	67	.015			
40362	LB37C04	Water	.01	.04	120	.025			
40395	LB39C501	Fish Food	32.6	42.2	26	37.4			

REAGENT BLANKS

<u>WATER</u>	<u>SEDIMENT</u>
.00 mg/l	.04 mg/kg
-.03 mg/l	.01 mg/kg
-.02 mg/l	.02 mg/kg
-.02 mg/l	
.00 mg/l	
-.01 mg/l	

CONTROL STANDARDS

TYPE - _____

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER ZINC

DETECTION LIMIT (WATER) .005 mg/l

(SEDIMENT) _____

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
41278	LB40C01	Water	.009	.006	40	.0075	.125	.118	88
41279	LB40C02	Water	.008	.005	46	.0065	.125	.130	99
40360	LB37C02	Water	.007	.006	15	.0065	.100	.080	74
40362	LB37C04	Water	.005	.005	0	.005	.100	.082	77
40395	LB39C501	Fish Food	44.8	42.2	6.0	43.5			
44103	Not EPA	Sediment	653	657	.61	655			

REAGENT BLANKS

WATER

.000 mg/l
-.001 mg/l
.002 mg/l
.000 mg/l
.001 mg/l
.001 mg/l

SEDIMENT

-.004 mg/kg
-.007 mg/kg
-.008 mg/kg

CONTROL STANDARDS

TYPE - NBS 1645

(Actual Value 1720 µg/g)

1009
1086

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER ARSENIC

DETECTION LIMIT (WATER) .5 µg/l

(SEDIMENT) _____

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
40365	LB37C07	Water	.374	.374	0	.374	5.0	7.66	145
40375	LB37C017	Water	0	0	0	0	5.0	4.86	97
41278	LB40C01	Water	.781	1.17	40	.975	5.0	6.63	113
41287	LB40C10	Water	0	0	0	0	5.0	5.73	115
40385	LB34C08	Sediment	12.0	9.7	21	10.8			

REAGENT BLANKS

WATER

SEDIMENT

0 µg
0 µg
0 µg

CONTROL STANDARDS

TYPE - _____

QUALITY CONTROL RESULTS

PROJECT EPA - BIO ASSAY

PARAMETER SELENIUM

DETECTION LIMIT (WATER) 1.0 µg/l

(SEDIMENT) _____

ERG #	SAMPLE I.D.	MATRIX	VALUE A	VALUE B	% DEVIATION	AVG. VALUE	SPIKE INCREMENT	SAMPLE SPIKE	% RECOVERY
40365	LB37C07	Water	.794	0	200	.379	5.0	4.45	81
40375	LB37C017	Water	.635	.953	40	.794	5.0	3.18	48
41278	LB40C01	Water	2.29	1.31	54	1.80	5.0	5.57	75
41287	LB40C10	Water	.666	.666	0	.666	5.0	4.33	73
40385	LB34C08	Sediment	3.6	2.2	43	2.8			

REAGENT BLANKS

WATER

SEDIMENT

0 µg

CONTROL STANDARDS

TYPE - _____

QUALITY CONTROL COMMENTARY

BIO ASSAY

GENERAL

This project involved analysis of water, sediment, fish food and fish samples. A limited quantity of all sample matrices were provided by the EPA for analysis. A list of parameters indicating the priority of analysis to be completed, was provided by the EPA due to the lack of sufficient sample quantities to complete the entire list of parameters originally requested.

Quality control was performed on all analyses that were reported, but due to the lack of sample quantity, there was little or no sample left to reanalyze samples with questionable results indicated by the quality control statistics.

% MOISTURE - (15 Sediments)

One (1) duplicate was run and was within acceptable % deviation range.

CADMIUM - (41 Water Samples, 15 Sediment Samples)

Four (4) water duplicates were run, only One (1) sample was above the detection limit and had a high % deviation but, was in a low analytical range. Four (4) water spikes were run with an 86% recovery average. One (1) fish food duplicate was run and was below the detection limit. One (1) sediment duplicate on a non-EPA sample was run and was within acceptable % deviation range.

NBS SR 1645 - Actual Value - 10.2 µg/g - Average Value Found - 6.4 µg/g -
Average % Recovery - 63%

CHROMIUM - (41 Water Samples, 15 Sediment Samples)

Four (4) water duplicates were run all were below the detection limit. Four (4) water spikes were run with an average of 68% recovery. One (1) fish food duplicate was run and was below the detection limit. One (1) sediment duplicate on a non-EPA sample was run and was within acceptable % deviation range.

NBS SR 1645 - Actual Value 2.96% - Average Value Found 2.36% - Average %
Recovery - 80%

COBALT - (41 Water Samples, 15 Sediment Samples)

Four (4) water duplicates were run all were below the detection limit. Mixed spike solution did not contain cobalt, no spikes run. One (1) fish food duplicate was run and was below the detection limit. One (1) sediment duplicate on a non-EPA sample was run and was slightly above acceptable % deviation range, but only at 12% in a low analytical range.

NBS SR 1645 - Actual Value 8µg/g - Average Value Found 5.45 µg/g - Average
% Recovery - 68%

QUALITY CONTROL COMMENTARY
BIO ASSAY

COPPER - (41 Water Samples, 15 Sediment Samples)

Four (4) water duplicates were run, some high % deviation but, in a low analytical range. Four (4) water spikes were run with an average of 82% recovery. One (1) fish food duplicate was run and was within acceptable % deviation range. One (1) sediment duplicate on a non-EPA sample was run and was within acceptable % deviation range.

NBS SR 1645 - Actual Value 109 $\mu\text{g/g}$ - Average Value Found - 95.2 $\mu\text{g/g}$ - Average % Recovery - 87%

LEAD - (41 Water Samples, 15 Sediment Samples)

Four (4) water duplicates were run, two (2) are within acceptable % deviation range and two (2) have high % deviations but, are either below or near the detection limit. Four (4) water spikes were run with an average of 82% recovery. One (1) fish food duplicate was run within acceptable % deviation range. One (1) sediment duplicate on a non-EPA sample was run within acceptable % deviation range.

NBS SR 1645 - Actual Value 714 $\mu\text{g/g}$ - Average Value Found 570 $\mu\text{g/g}$ - Average % Recovery - 80%

MERCURY - (41 Water Samples, 15 Sediment Samples)

Two (2) water duplicates were run both were below the detection limit. No spikes were run on water. Four (4) sediments were chosen randomly, as all were done in triplicate. High % relative s.d. were found, but I believe this deviation is to be expected for the methodology used and is the reason for requiring triplicate analysis.

NBS SR 1645 - Actual Value 1.1 $\mu\text{g/g}$ - Average Value Found - 1.13 $\mu\text{g/g}$ - Average % Recovery - 102%

TIN - (41 Water Samples, 15 Sediment Samples)

Four (4) water duplicates were run, all below the detection limit. Mixed spike solution did not contain tin, no spikes run. One (1) fish food duplicate was run with a high % deviation, but low analytical range for parameter and matrix involved.

No NBS reference standard available.

ZINC - (41 Water Samples, 15 Sediment Samples)

Four (4) water duplicates were run with high % deviations, but all were in a low analytical range. Four (4) water spikes were run with an average of 84% recovery. One (1) fish food duplicate was run within acceptable % deviation range. One (1) sediment duplicate on a non-EPA sample was run within acceptable % deviation range.

NBS SR 1645 - Actual Value 1720 $\mu\text{g/g}$ - Average Value Found 1047 $\mu\text{g/g}$ - Average % Recovery - 61%

QUALITY CONTROL COMMENTARY
BIO ASSAY

* ARSENIC - (41 Water Samples, 15 Sediment Samples)

Four water duplicates were run, one (1) % deviation high, but in a low analytical range. Four (4) water spikes were run with an average of 118% recovery. One (1) sediment duplicate was run and had a high % deviation at 21%.

No NBS reference standard available.

* SELENIUM - (41 Water Samples, 15 Sediment Samples)

Four (4) water duplicates were run, high % deviations below or near detection limit. Four (4) water spikes were run with an average of 69% recovery. One (1) sediment duplicate was run with a high % deviation, but in a low analytical range.

No NBS reference standard available.

- * The reproducibility and spike recovery of As and Se should be looked at in light of recent EPA interlaboratory check sample statistics for low level reference samples.

(WP004) 4/27/79

As

(Real Value 18 ppb)

Warning limits - 5.4 - 30

Acceptable limits - 1.3 - 34.2

Se

(Real Value 3.5 ppb)

Warning limits - 0 - 9.79

Acceptable limits - 0 - 11.7

(WP005) 5/10/79

As

(Real Value 22 ppb)

Warning limits - 11.3 - 31.7

Acceptable limits - 7.89 - 35.2

U.S.E.P.A. I1783 NBSX

GC/MS QUALITY CONTROL

ALL SCANS - BASE NEUTRAL

DUPLICATE COMPARISONS

<u>SAMPLE NUMBER</u>	<u>INJECTION A</u>		<u>INJECTION B</u>	
	<u>COMPOUND</u>	<u>CONC. (PPB)</u>	<u>COMPOUND</u>	<u>CONC. (PPB)</u>
40345 (Fish)	Dibutyl Phthalate	220	Naphthalene	410*
	Ethyl Hexyl Phthalate	2300	Hexachlorobenzene	110*
			Ethyl Hexyl Phthalate	3100
40351 (Fish)	Dibutyl Phthalate	580	Dibutyl Phthalate	1900
	Ethyl Hexyl Phthalate	18000	Butyl Benzyl Phthalate	12000
			Ethyl Hexyl Phthalate	1100
40355 (Fish)	Dibutyl Phthalate	160	Dibutyl Phthalate	280
	Ethyl Hexyl Phthalate	2700	Ethyl Hexyl Phthalate	1300
40385 (Sediment)	Hexachlorobenzene	130*	Phenanthrene	20
	Phenanthrene	130	Anthracene	20
	Anthracene	130	Dibutyl Phthalate	70
	Dibutyl Phthalate	50	Pyrene	20
	Fluoranthene	160	Ethyl Hexyl Phthalate	740
	Pyrene	170		
	Ethyl Hexyl Phthalate	1400		
	Chrysene	30		
	Benzo (a) Anthracene	30		
40388 (Sediment)	1,4 Dichlorobenzene	2900	1,4 Dichlorobenzene	2700
	Hexachlorobenzene	20*	Phenanthrene	230
	Phenanthrene	530	Anthracene	230
	Anthracene	530	Dibutyl Phthalate	60
	Dibutyl Phthalate	220	Fluoranthene	440
	Fluoranthene	780	Pyrene	490
	Pyrene	780	Ethyl Hexyl Phthalate	1100
	Ethyl Hexyl Phthalate	1700	Chrysene	150
	Chrysene	380	Benzo (a) Anthracene	150
	Benzo (a) Anthracene	380		
	Benzo (k) Fluoranthene	220*		

*Please refer to correspondence PE/ES, 4/8/80

ENVIRONMENTAL RESEARCH GROUP, INC.

CG/MS QUALITY CONTROL

<u>SAMPLE NUMBER</u>	<u>INJECTION A</u>		<u>INJECTION B</u>	
	<u>COMPOUND</u>	<u>CONC. (PPB)</u>	<u>COMPOUND</u>	<u>CONC. (PPB)</u>
41285 (Water)	Ethyl Hexyl Phthalate	100	Ethyl Hexyl Phthalate	79
41288 (Water)	Ethyl Hexyl Phthalate	53	Ethyl Hexyl Phthalate	67
41299 (Fish)	Hexachlorobenzene Dibutyl Phthalate Ethyl Hexyl Phthalate	380 2700 6200	Hexachlorobenzene Dibutyl Phthalate Butyl Benzyl Phthalate Ethyl Hexyl Phthalate	1900 8000 2600 6300
41309 (Fish)	Dibutyl Phthalate Ehtyl Hexyl Phthalate	2100 1700	Dibutyl Phthalate Ethyl Hexyl Phthalate	5000 1200
41314 (Fish)	Dibutyl Phthalate Ehtyl Hexyl Phthalate	670 600	Dibutyl Phthalate Ethyl Hexyl Phthalate	610 270
41329 (Fish)	Dibutyl Phthalate Ehtyl Hexyl Phthalate	560 2000	Dibutyl Phthalate Ehtyl Hexyl Phthalate	950 17500

Chromatograms are included with regular data set.

BLANKS

Procedure blanks typically showed only internal standards, with trace concentrations of phthalates. Typical blank values are shown here; the chromatograms are found below.

B Blank # 5 - 2/13/80	
Dibutyl Phthalate	- 730 ppb
Bis (Ethyl Hexyl) Phthalate	- 700 ppb
B Blank # 1 - 2/11/80	
Dibutyl Phthalate	- 670 ppb
Bis (Ehtyl Hexyl) Phthalate	- 300 ppb

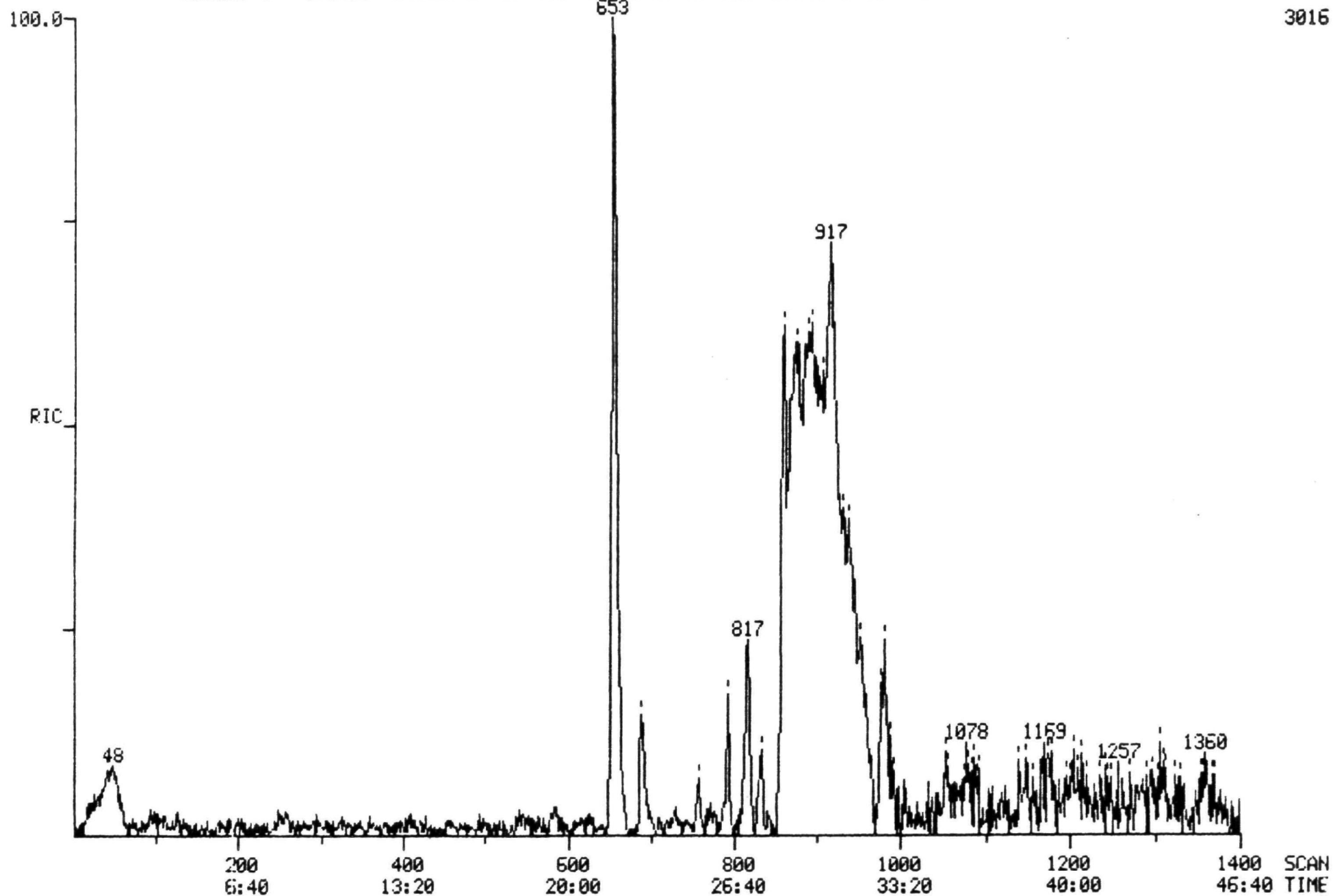
RIC
02/13/80 17:43:00
SAMPLE: BBLK5 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0

DATA: BBLK5 #1
CALI: CAL213 #3

SCANS 1 TO 1400

QUAN: A 0, 1.0 BASE: U 20, 3

3016



RIC
02/11/80 16:37:00

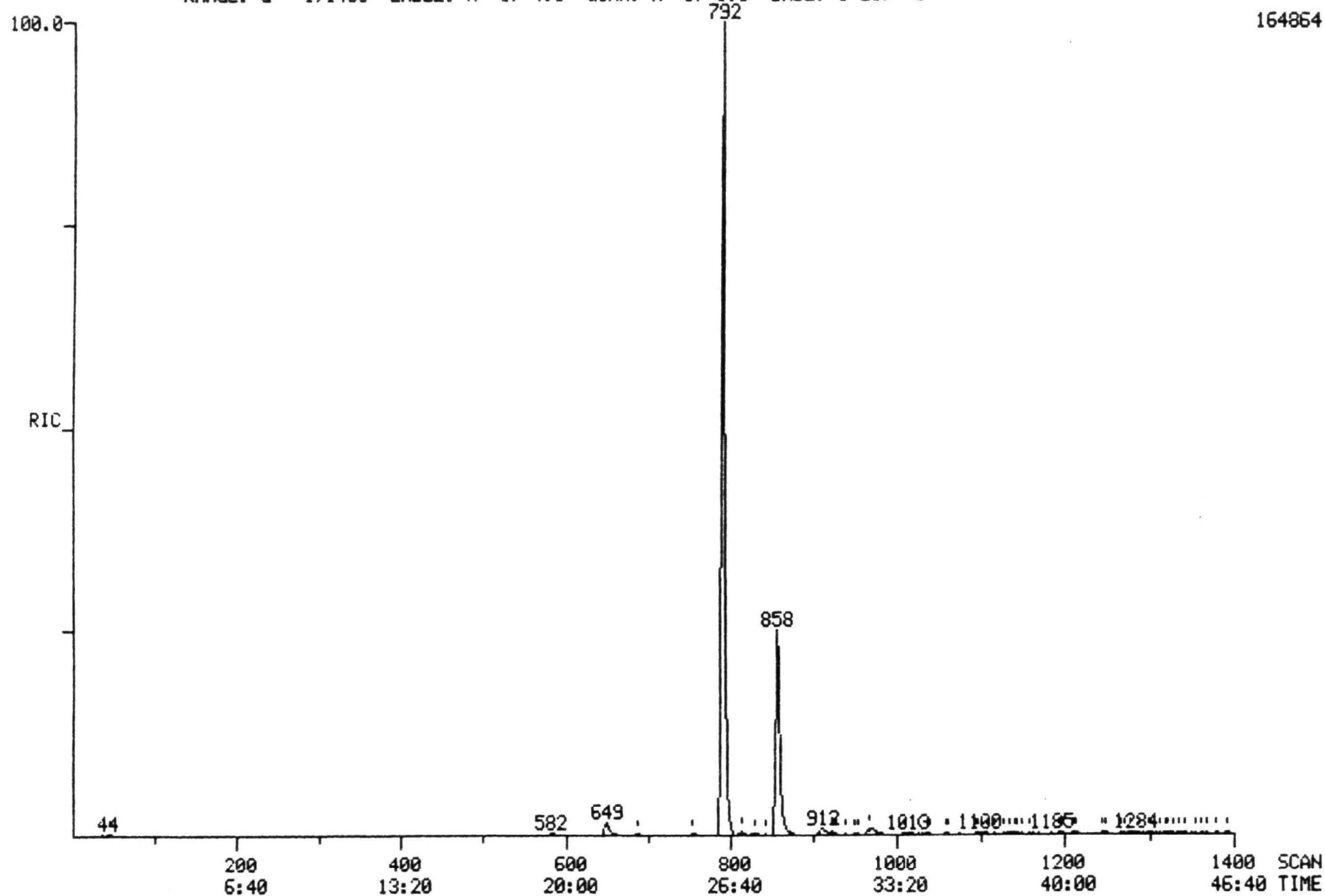
DATA: BBLK1 #1
CALI: CAL2FEB #3

SCANS 1 TO 1400

SAMPLE: BBLK1 EPA FISH

RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

164864



E.P.A. 11783 NBSX

GC/MS QUALITY CONTROL

ALL SCANS - BASE NEUTRAL

SPIKE STATISTICS

<u>SPIKE I.D.</u>	<u>DATE</u>	<u>COMPOUND</u>	<u>ORIGINAL CONCENTRATION</u>	<u>DETECTED CONCENTRATION</u>	<u>% RECOVERY</u>
#2R Water	1/25/80	Hexachloroethane	430 ppb	110 ppb	26
		2,4 -Dinitrotoluene	490 ppb	430 ppb	88
		Pyrene	460 ppb	330 ppb	72
		Benzo (a) Anthracene	410 ppb	330 ppb	80
Composite Water (41295, 96, 97)	1/30/80	Hexachloroethane	710 ppb	430 ppb	61
		2,4 -Dinitrotoluene	810 ppb	1000 ppb	123
		Pyrene	760 ppb	770 ppb	101
		Benzo (a) Anthracene	690 ppb	750 ppb	109
#2 Fish	2/9/80	Hexachloroethane	122 mg/kg	52.7 mg/kg	43
		2,4 -Dinitrotoluene	138 mg/kg	123 mg/kg	89
		Pyrene	130 mg/kg	118 mg/kg	91
		Benzo (a) Anthracene	118 mg/kg	101 mg/kg	86
#3 Fish	2/12/80	Hexachloroethane	145 mg/kg	39 mg/kg	27
		2,4-Dinitrotoluene	164 mg/kg	75 mg/kg	46
		Pyrene	155 mg/kg	105 mg/kg	68
		Benzo (a) Anthracene	140 mg/kg	97 mg/kg	69
#5R Fish	2/13/80	Hexachloroethane	130 mg/kg	47.3 mg/kg	36
		2,4 -Dinitrotoluene	146 mg/kg	80.4 mg/kg	55
		Pyrene	138 mg/kg	78.5 mg/kg	57
		Benzo (a) Anthracene	125 mg/kg	62.5 mg/kg	50

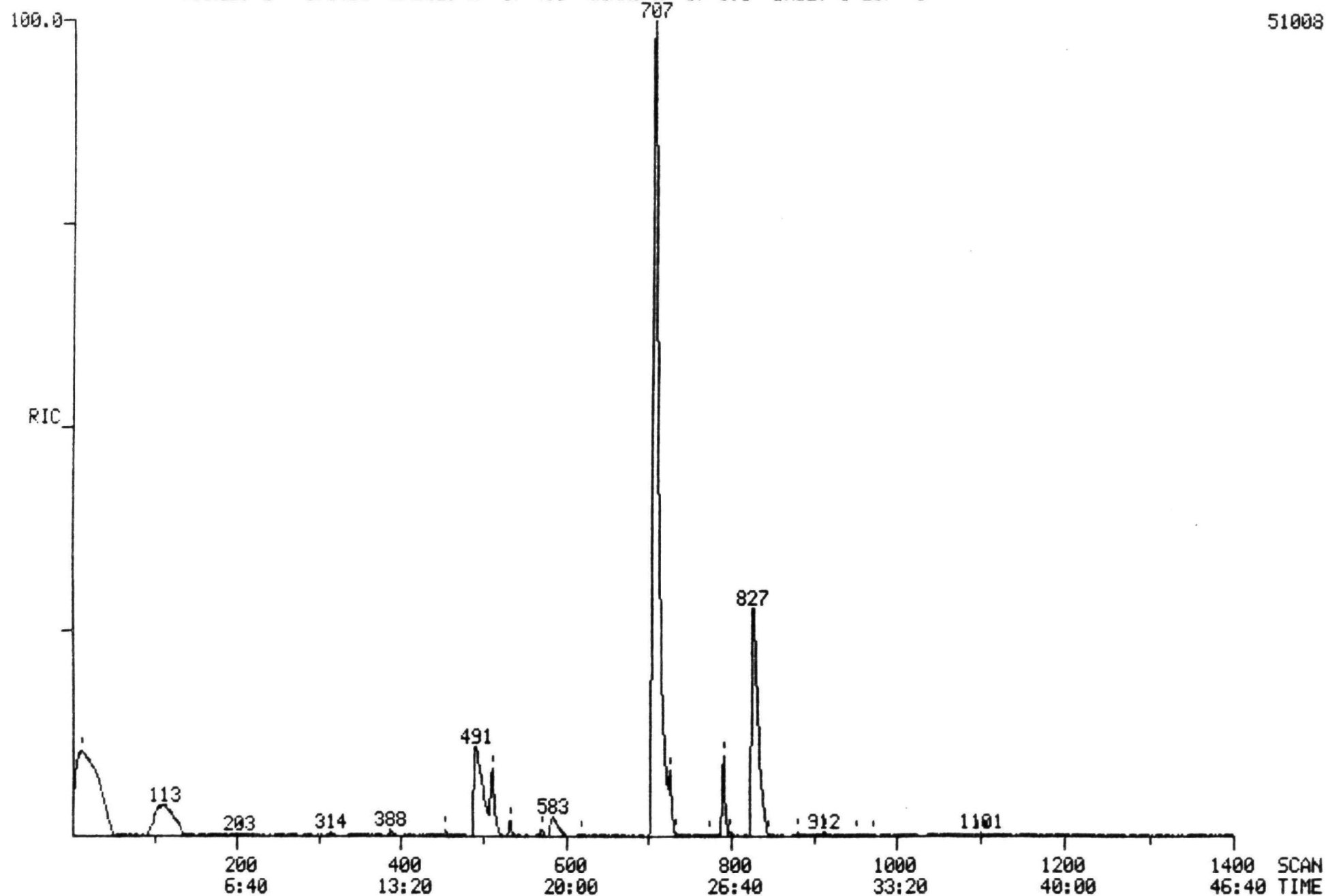
Chromatograms are found below.

RIC
01/25/80 18:32:00
SAMPLE: BSPK2, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: BSPK2 #1
CALI: CAL125 #1

SCANS 1 TO 1400

51008

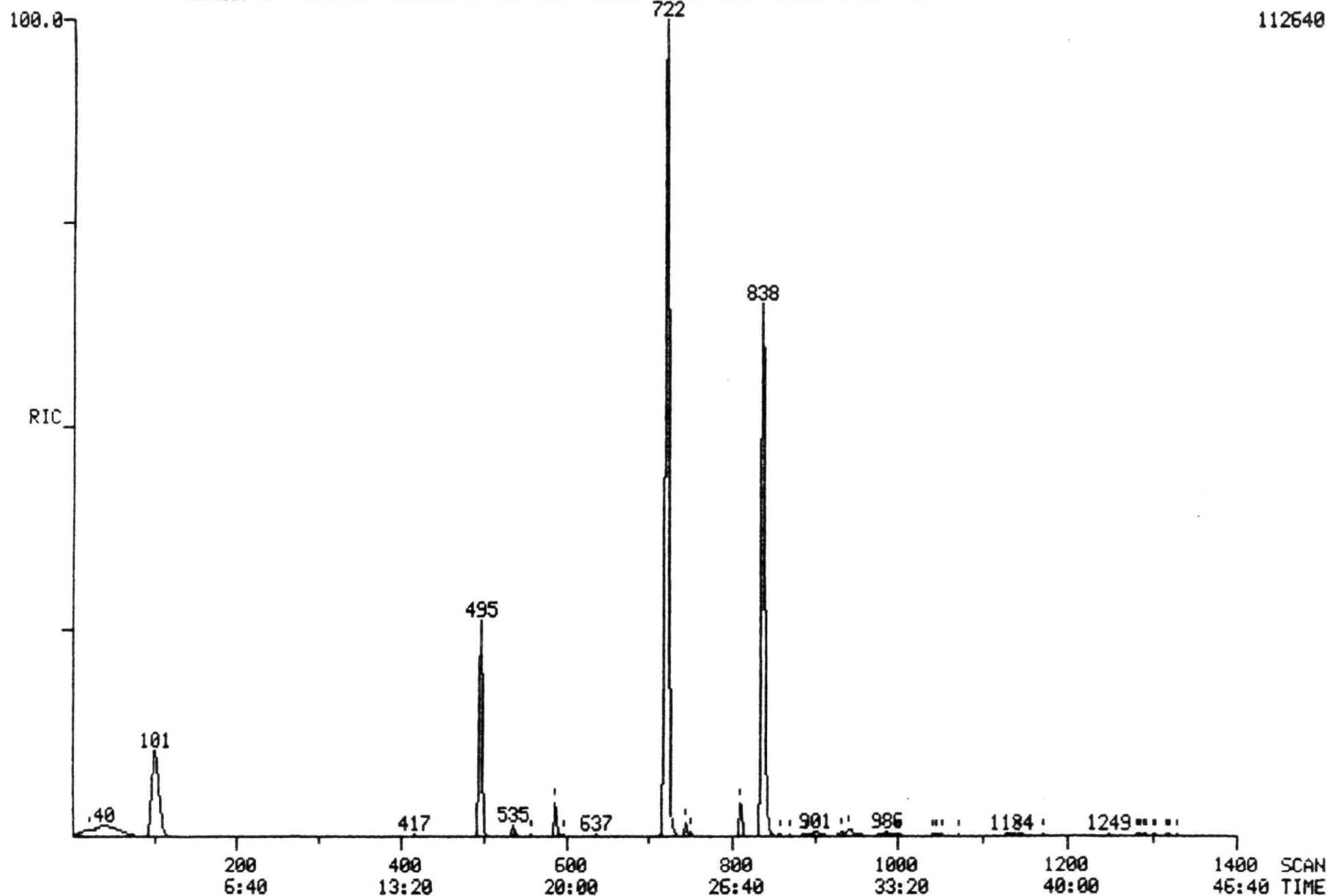


RIC
01/30/80 19:55:00
SAMPLE: BCOMPSPK, 3 UL + 1 UL IS
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: BCOMPSPK #1
CALI: CAL130 #1

SCANS 1 TO 1400

112640

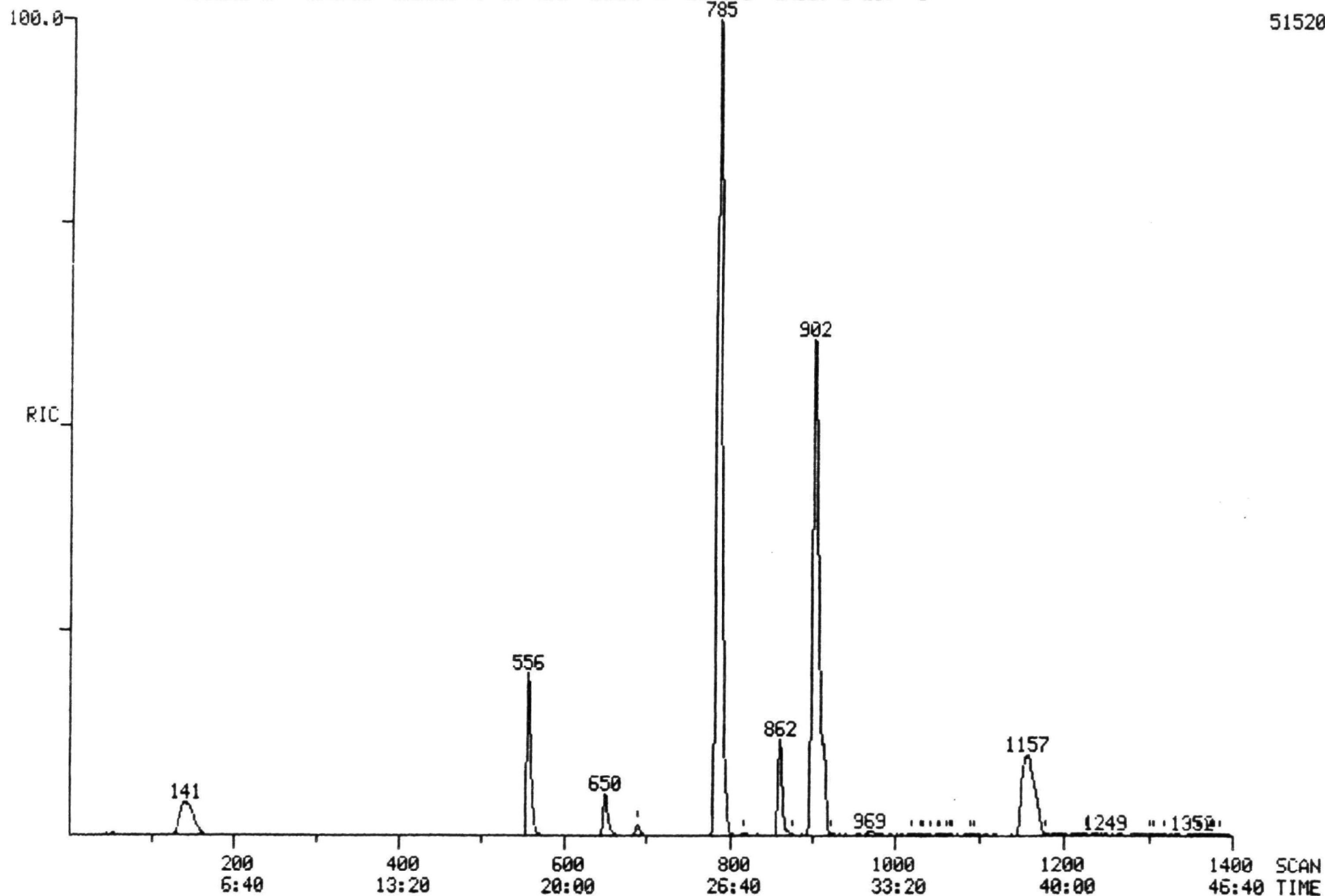


RIC
02/09/80 17:22:00
SAMPLE: BSPK2 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: BSPK2 #1
CALI: CAL31JAN2 #1

SCANS 1 TO 1400

51520



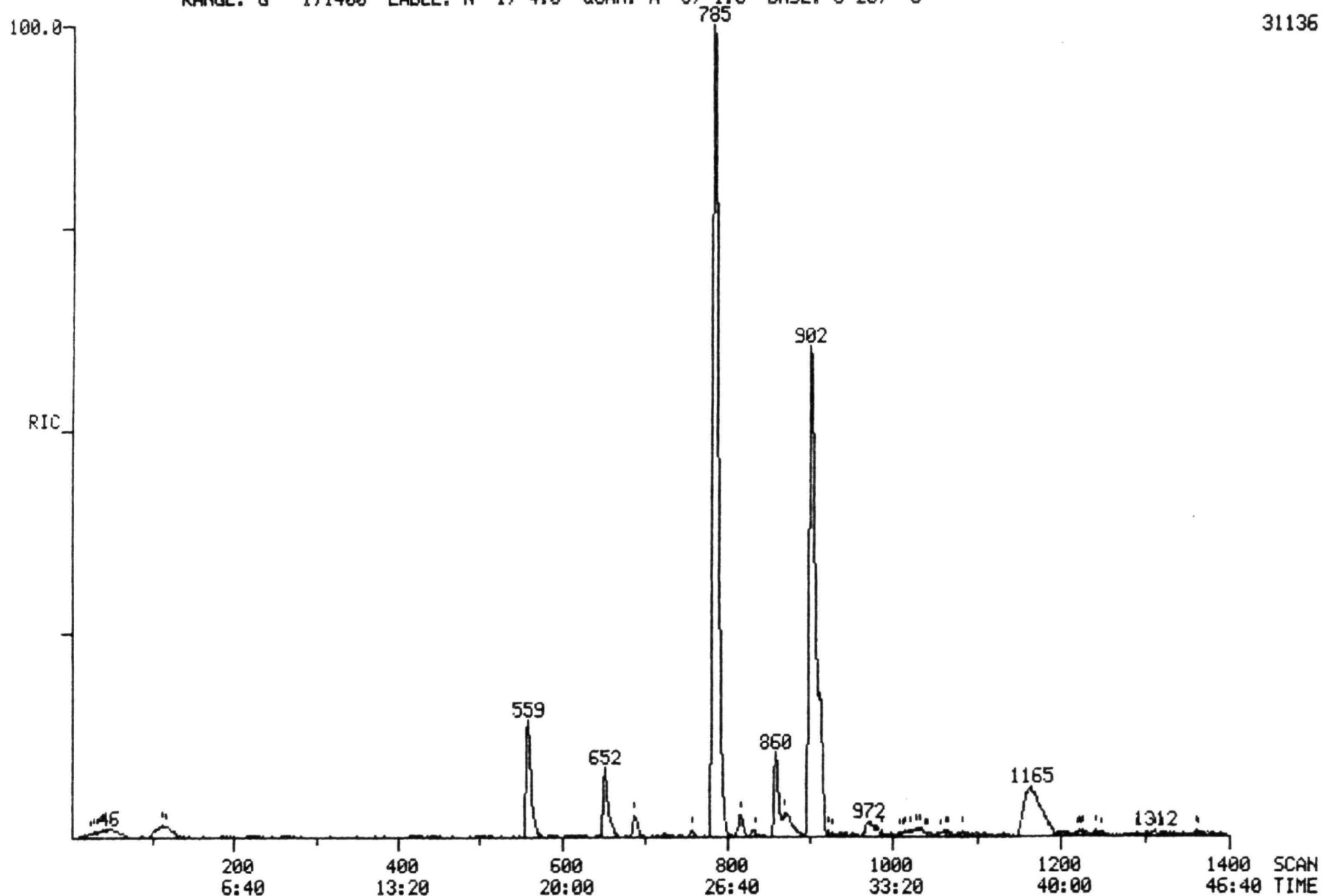
RIC
02/12/80 16:13:00
SAMPLE: BSPK3 EPA FISH
RANGE: G 1,1400 LABEL: N 1, 4.0

DATA: BSPK3 #559
CALI: CAL28 #1

SCANS 1 TO 1400

QUAN: A 0, 1.0 BASE: U 20, 3

31136



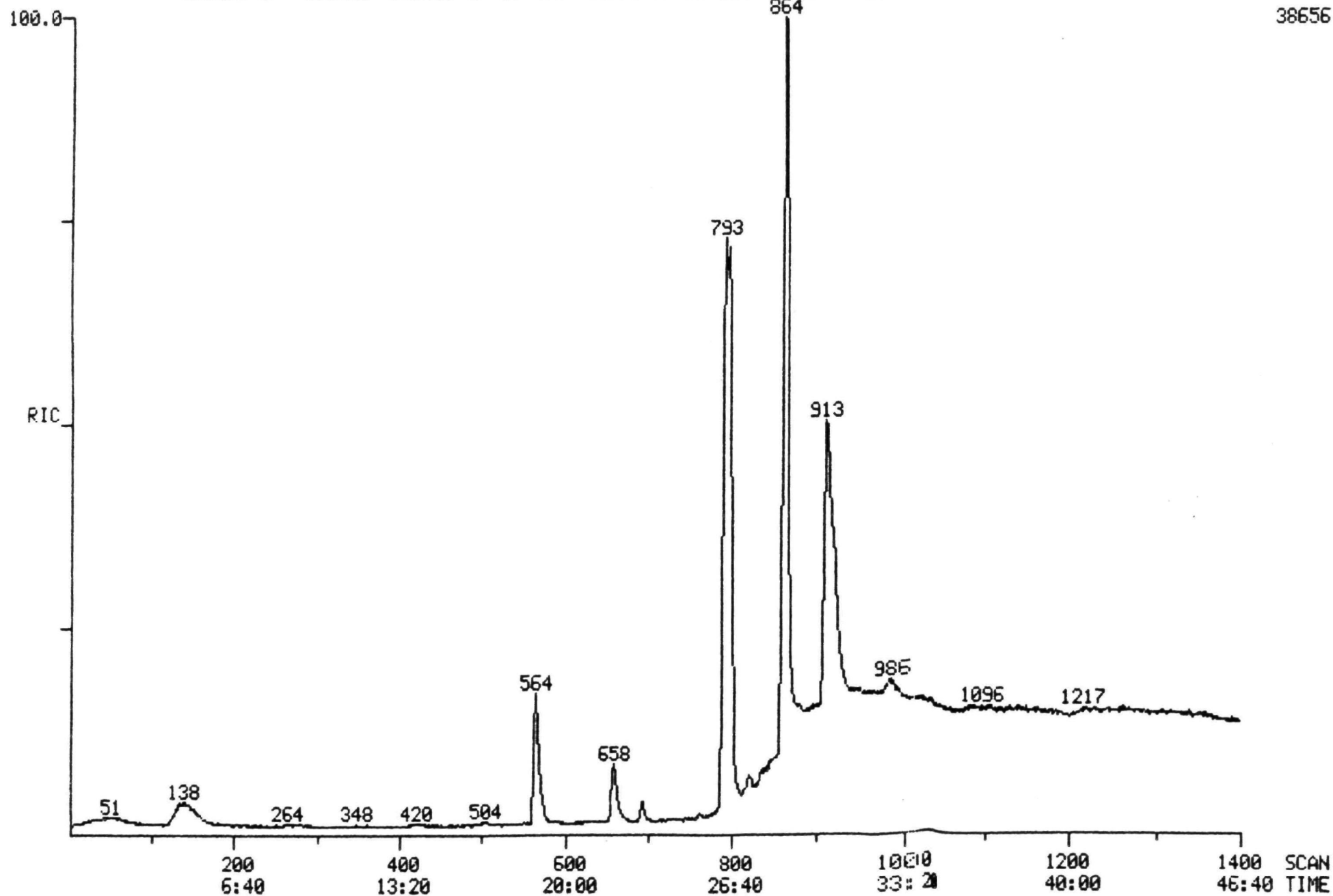
RIC
02/13/80 20:41:00

SAMPLE: BSPK5R EPA FISH

RANGE: G 1,1400 LABEL: N 0, 4.0 QUAN: A 0, 1.0 BASE: U 20, 3

DATA: BSPK5R #1
CALI: CAL213 #3

SCANS 1 TO 1400



U. S. ENVIRONMENTAL PROTECTION AGENCY

METHODOLOGY

<u>ANALYTE</u>	<u>METHODOLOGY</u>	<u>REFERENCE</u>
Cadmium, Cobalt, Chromium, Copper Lead, Tin, Zinc		
A) Water Sample Digestion	Nitric Acid Digestion	Std. Methods p. 147
B) Sediment Digestion	H ₂ O ₂ , Aqua Regia Digestion	ERG Procedure 11-176 Attached
C) Analysis	Flame Atomic Absorption	EPA Manual p. 213.1, 219.1, 218.1, 220.1, 239.1, 282.1, 289.1
Arsenic (Water)	Flameless Atomic Absorption	EPA Manual p. 206.2
Arsenic (Soil)	Neutron Activation Analysis	Advances in Activation Analysis
Selenium (Water)	Flameless Atomic Absorption	EPA Manual p. 270.2
Selenium (Soil)	Neutron Activation Analysis	Advances in Activation Analysis
Mercury (Water)	Cold Vapor, Manual	EPA Manual p. 245.1
Mercury (Soil)	Cold Vapor, Sediments	EPA Manual p. 245.5

REFERENCES

1. EPA Manual for Chemical Analysis of Water and Wastes, EPA 1979.
2. Standard Methods for the Examination of Water and Wastewater, APHA 1976.
3. Advances in Activation Analysis, Lehihan and Thomson, Vol. 1, Academic Press, 1969.

SEDIMENT AND SLUDGE TRACE METALS DIGESTION PROCEDURE
(BLOCK DIGESTOR METHOD)

PRINCIPLE

Organic matter in sediment and sludge is destroyed by oxidation with hydrogen peroxide. Metallic complexes are further digested by a reflux of aqua regia under controlled temperature.

REAGENTS

- (1) 15% H_2O_2 prepare by diluting 30% H_2O_2 1:1 with deionized water.
- (2) Aqua regia - prepare by cautiously mixing 3 parts HCl to 1 part conc. HNO_3 . Prepare just before use as this mixture is unstable.

PROCEDURE

- (1) Rinse Technicon constricted neck test tubes with deionized water. Add 5 ml of 25% HNO_3 and heat at 150 - 160° for 30 minutes.
- (2) Rinse tubes thoroughly with deionized water.
- (3) Weigh approx. 200 mg of dried sediment into the test tube. Record sample weight to the nearest 0.1 mg on metals data sheet. Prepare 2 NBS River Sediment Standard (SRM 1645) and 10% of the samples in duplicate.
- (4) 3 reagent blanks should be prepared with each set of samples.
- (5) Add 4 ml of 15% H_2O_2 to each test tube and heat carefully as the sample may boil over. Heat until effervescence ceases.
- (6) Cool the samples and add 5 ml of aqua regia to each tube.
- (7) Heat at 150 - 160° C. Do not let the samples go dry. Rinse down sides of the tubes periodically with a minimum amount of H_2O if spattering occurs. When fully digested, samples should be light colored. Normally three to four hours of digestion is sufficient.
- (8) Dilute each sample to 10 ml with distilled H_2O . Transfer sample into a labeled plastic vial.

U. S. ENVIRONMENTAL PROTECTION AGENCY

ORGANIC (GC/MS) METHODOLOGY

Samples were prepared according to the method outlined in the "Interim Methods for the Sampling and Analysis of Priority Pollutants in Sediments and Fish Tissue" prepared by the U. S. Environmental Protection Agency, EMSL Laboratory, Cincinnati, Ohio.

The fish samples were prepared by the method "Analysis of Fish for General Organics by Solvent Extraction, P. 15.

The water samples were prepared following the methods outlined in the December 3, 1979 issue of the Federal Register.

The sediments were prepared following the above mentioned "Interim Methods."

ENVIRONMENTAL RESEARCH GROUP, INC.



117 N. First Ann Arbor, Michigan 48104 (313) 662-3104

April 8, 1980

Dr. Emilio Sturino
U.S. Environmental Protection
Agency
Central Region Laboratory
536 S. Clark Street
Tenth Floor
Chicago, Illinois 60605

Dear Dr. Sturino:

In accordance with your letter of March 12, 1980 to Jim Bolger and your instructions at our meeting of March 19, 1980, I have compiled the following information:

- (1) Copies of the mass spectral and chromatographic data indicating the presence of chloroalkyl ethers in ERG Samples 40563, 40564, and 40801. As you can see on the enclosed chromatograms, the data clearly indicates the presence of chloroalkyl ethers. The correct identification should be as follows:

ERG# 40563	
Ethane, 1, 1' - oxybis/2-chloro	1320 PPB
Propane, 1, 1' - oxybis/3-chloro	
(This could be any one of several isomers)	5410 PPB
ERG# 40564	
Propane, 1, 1' - oxybis/3-chloro	2620 PPB
ERG# 40801	
Propane, 2, 2' - oxybis/1-chloro	4550 PPB

- (2) A reanalysis of 20% of the raw data of the two projects in question. Enclosed you will find a list of the ERG samples that were reanalyzed and a summary of the results of this reanalysis.

Files Reanalyzed from the BASF Project

These files were reviewed from the BASF Project:

B40561, A40561, B40568, B40799, B40805, B40808, B39034

All ion count data reviewed agreed with the original data to +/- 3%. The principal differences were several compounds which were found in the review had been deleted from the final report to comply with the .01 mg/kg detection limit called for in the contract. As a result of our discussions, these compounds will be included in the final version of the report.

Dr. Emilio Sturino
April 8, 1980
Page Two

Files Reanalyzed from the Bioassay Project

The following files were reanalyzed from the Bioassay Project:

B41288	B40379	B41285	B41299	B41309	B41329	B40368
B40370	B40351	B40385A	B40385B	B40390	B40362	B40367
B40371	B40375	B40381	B40385	B41283	B41290	B41296
B40561	B40808	B40805	B40799			

As with the review of the BASF Project, all ion count data agreed with the reported values to +/- 3%. In one sample there was a mistaken identification of isophorone. All samples in which isophorone was reported were rechecked and the one positive report (ERG# B40395) was deleted. The sample in question did have the major fragment of isophorone at the correct retention time. However, on closer examination, it became obvious that the material in question was not isophorone. In addition, all samples that had positive results for any priority pollutants were checked for transcription errors. Only one error was found. In that review it was found that sample # B41320 was reported to contain 3400 PPB hexachlorobenzene. That figure should have been 3900 PPB, and is being incorporated in the final report.

As part of our review, a careful analysis was made of the blank, spike, and duplicate data. The following is a summary of this review.

Analysis of Blanks

Based on the data from the blanks that were run, it became evident that we were incorporating phthalates into our samples during the preparation for analysis. Taking this fact into consideration, we will not report any phthalates as positive unless they exceed the 10,000 PPB level in the fish matrices, and 1,000 PPB in the waters and sediments. In addition, considering the small sample sizes involved in the fish and the sediments, one should view with skepticism any phthalate values that do not exceed 20,000 PPB. This is four times a reasonable detection limit of 5,000 PPB for a 2-10 gram initial sample. Very low levels of the heavier PNA's (<100 PPB) were also difficult to detect reproducibly. The total ion counts were in the 50-500 ion range, making replicate analysis difficult.

Spike Data

The spike recoveries were excellent in the water samples and fair to very good in the fish. The recoveries of hexachloroethane were lower in all cases than the other compounds that were spiked into the samples.

Dr. Emilio Sturino
April 8, 1980
Page Three

Considering the small sample sizes encountered in the fish and sediment samples, a reasonable detection limit at which quantification is reliable is 5,000 PPB. We have, however, included data below this level for the qualitative purpose of identifying the materials present in the sample. In any case, wherever we detected a measurable quantity of the characteristic ions (within the expected retention time window) of any of the compounds suspected in this study, we have now included that data in the reports.

PCB's were identified and quantified by using an extracted ion current profile for the characteristic ions. During the rechecking of the data, it was discovered that two samples containing PCB's were quantified using an ion count for the wrong ion. All positive PCB's were then rechecked. There were no other occurrences of this error. Samples 40382 and 40383 should have been reported as containing PCB's at the following levels:

ERG# B40382	2420 PPB
ERG# B40383	1890 PPB

This change is being incorporated in the final report.

Duplicate Data

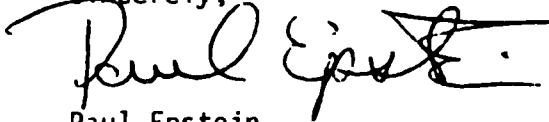
On reviewing the duplicate data previously submitted, it appears that much of the confusion stems from our failure to edit the report as carefully as we should have. For example, ERG Sample #B41329B was reported to contain hexachlorobenzene. This was a transcription error. Several other questions were resolved as a result of the reanalysis. Sample B40385A contained 500 ions of hexachlorobenzene. This was not detected in the B injection. We also reported 30 PPB chrysene in the A injection that was not in the B injection. This represented a total of 130 ions at M/E 228. The non-reproducibility of this data at two orders of magnitude below a reasonable detection limit is real but I do not feel it is indicative of poor performance. An additional factor that affected the replicate data was the use of separate fish as duplicate samples, rather than preferred method of homogenizing the entire sample and then splitting the homogenized material for extraction.

In reviewing all the correspondence on these projects, I discovered that my last letter to you also had several typographical errors. I have included corrected copies of the pages that were incorrect. Having now spent more than one month reviewing the data on these two projects, I believe the data in its present form is a reliable representation of the samples involved in the two projects.

Dr. Emilio Sturino
April 8, 1980
Page Four

We have undergone several changes of personnel and control systems, and increased our capacity since the completion of these projects. As a result of these changes, we do not anticipate any further recurrences of the problems encountered during the fulfillment of these contracts. We have recently completed the first part of EPA Order #53342 NBSX. I believe our performance on this is a better indicator of the type of results you can expect from us in the future.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Epstein". The signature is fluid and cursive, with a horizontal line extending from the end.

Paul Epstein
Manager GC/MS

PE:pa

ENVIRONMENTAL RESEARCH GROUP, INC.

file



117 N. First Ann Arbor, Michigan 48104 (313) 662-3104

16 April 1980

Dr. Emilio Sturino
U.S. Environmental Protection Agency
Central Regional Laboratory
536 South Clark Street, Tenth Floor
Chicago, Illinois 60608

Dr. Sturino:

The following information is submitted in answer to your letter concerning samples which your records indicate were received at ERG but for which you have not received any data.

1. BASF project, sample number 820232. This sample was received at ERG. The inorganic analysis was completed and reported. Our records also indicate that the organic extraction was completed, but that the sample was not analyzed. We are unable to locate the extracted vial and I must assume it was lost when we moved our GC/MS equipment, which occurred at about the same time.

2. Ashtabula project, sample numbers LB34C02, LB34C07, LB34C15, LB34D15. These samples were not received at ERG. The records technician who signed for the shipping container did not log in the samples until after the delivery person had left. When the samples were logged in, the fact that samples were missing was noted and your office was contacted by telephone.

Our log-in person should not have signed without first checking the samples, but since the containers were not damaged it was felt that all of the samples would be present as listed.

If you have any additional questions, please feel free to contact me.

Yours truly,

Richard R. Encelewski

Richard R. Encelewski
Operations Manager

RRE:mgl