



**Geological Survey of Canada  
Commission Géologique du Canada**

**Open File 2074**

**GAS CHROMATOGRAPHY AND GAS CHROMATOGRAPHY-  
MASS SPECTROMETRY DATA OF SOME JEANNE  
D'ARC BASIN OIL SATURATE FRACTIONS**

M.G. Fowler, P.W. Brooks and L.R. Snowdon

GSC Project Number 243-7654

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**July 1989**

**GAS CHROMATOGRAPHY AND GAS CHROMATOGRAPHY-MASS SPECTROMETRY  
DATA OF SOME JEANNE D'ARC BASIN OIL SATURATE FRACTIONS**

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This Open File Report contains  $C_{15}^+$  saturate fraction gas chromatograms and gas chromatography-mass spectrometry data of oils obtained from drillstem tests undertaken on wells drilled in the Jeanne d'Arc Basin. Little attempt is made here to explain the significance of these data. This will be done in a series of papers currently in preparation.

Most of the oils in the Jeanne d'Arc Basin are believed to have a common source, the Kimmeridgian-aged Egret Member of the Rankin Formation (Powell, 1985; Creaney and Allison, 1987; Fowler et al., 1988; von der Dick et al., 1989). A characteristic feature of the oils and Egret Member extracts is the high concentration of 4-methylsteranes which suggests that a significant proportion of the organic matter in the source rock is derived from dinoflagellates (Summons et al., 1987). These compounds are normally detected using m/z 231 mass fragmentograms. However, in the Jeanne d'Arc Basin oils and Egret Member extracts they are present in such high concentrations that they interfere with the regular sterane patterns normally observed using m/z 217 mass fragmentograms. While this makes oil-oil and oil-source correlations apparently straightforward, the co-elution of 4-methylsteranes (especially with the  $C_{29}$  regular steranes) makes the calculation of maturation and other parameters of interest almost impossible. These difficulties can be overcome using GC-MS-MS techniques because of their greater specificity. Data from the CAD-GC-MS-MS (see experimental) analysis of a sample from Hibernia K-18 DST 8 is provided as an example of such data. These traces result from the monitoring of parent to daughter transitions (i.e. m/z 372 $\rightarrow$ 217 for  $C_{27}$  4-desmethylsteranes) rather than simply monitoring one fragment ion (i.e. m/z 217 for steranes). Also included for comparison with the GC-MS data are trace A, the sum of the  $C_{27}$ - $C_{30}$  4-desmethylsterane transitions; B, the sum of the  $C_{27}$   $C_{30}$  4 methylsteranes; and C the sum of the  $C_{27}$ - $C_{35}$  hopane

transitions (roughly equivalent to a m/z 191 fragmentogram) which have been achieved by combining the individual traces obtained from GC-MS-MS analysis.

The improved quality of the data obtained from GC-MS-MS analysis led Fowler et al. (1988) to suggest a contribution from a second source, possibly from an interval within the Voyager Formation, to oils in one area of the basin (eg. West Ben Nevis B-75, Fortune G-57 and some oils from Ben Nevis I-45).

## EXPERIMENTAL

Saturate fractions were obtained from de-asphalted oils (>210°C fraction) using open-column liquid chromatography (3/4 activated alumina and 1/4 activated silica gel with an adsorbent:sample mass ratio of 100:1) and eluting with 3.5 ml of pentane/g of adsorbent.

Saturate fraction gas chromatograms were run on a Varian 3700 FID gas chromatograph using a 30 m OV-1 or DB-1 column. The column temperature was programmed from 60 to 260°C at 4°C min<sup>-1</sup> and then held isothermal.

Gas chromatography-mass spectrometry was performed on a Carlo Erba 4200 gas chromatograph directly connected to a Kratos MS-80RF mass spectrometer (electron energy 70eV) under the control of a DS-55M data system. The GC was equipped with a 25 m x 0.3 mm id. fused-silica column coated with DB-5 (J and W Scientific). The temperature program employed was 50 to 325°C at 4°Cmin<sup>-1</sup>. The carrier gas for both GC and GC-MS was He (1-1.5 ml/min). Data were collected by multiple ion detection (MID), monitoring ions at m/z 177.1638, 191.1794, 217.1950, 218.2028, 231.2106 and 259.2262.

The GC-MS-MS data were obtained using a VG70 SQ hybrid MS-MS controlled by a VG11-205J + data system. Gas chromatographic separation was carried out using a 25 m DB-5 (J and W Scientific) fused silica column programmed from 60 to 310°C at 4°Cmin<sup>-1</sup> and then held isothermal. The column effluent was fed directly to the source of the mass spectrometer which was operated at 70eV electron energy, 100μA filament emission current and a temperature of 250°C. The data provided were obtained using a method called Collision Activated Decomposition MS-MS. This was carried out

using 10 Parent-Daughter ion relationships by focussing each parent ion into the collision cell (1st Quadropole) using electrostatic switching and then monitoring the appropriate daughter ion intensity by switching the quadrupole analyser RF and DC. Dwell time for each transition was 80 m sec with a 20 m sec reset time. Collision gas ( $N_2$ ) was added to the collision chamber and the collision activation energy was 18eV.

## SAMPLES

Gas chromatograms and GC-MS data are provided where indicated in the following table, in alphabetical order.

Well	DST No.	Depth (m)	GC	GC-MS	GSC Lab No.
Adolphus 2K-41	3	2609-2647	X	X	20149
Ben Nevis I-45	3	4426-4438	X	X	20185
Ben Nevis I-45	9	2890.5-2894	X		20186
Ben Nevis I-45	10	2428-2446	X		20184
Ben Nevis I-45	11	2420-2423	X	X	20183
Beothuk M-05	1	3057-3061	X		20445
Beothuk M-05	3	3022-3035	X	X	20446
Fortune G-57	1	4031-4040	X		20789
Fortune G-57	2	3989-4002	X		20788
Fortune G-57	3	3989-4002	X	X	20787
Fortune G-57	7	3786-4452	X		20773
Hebron I-13	1	4368-4381	X		20245
Hebron I-13	5	3842-3845	X	X	20246
Hebron I-13	6	2975-2986	X	X	20247
Hebron I-13	7	2923-2940	X	X	20250
Hebron I-13	9	1905.3-1915.5	X	X	20249
Hebron I-13	10	1866-1876	X		20248
Hibernia B-08	3	3705-3715	X		20189
Hibernia B-08	6	3604-3613.5	X		20190
Hibernia B-08	7	3581.5-3591	X		20222
Hibernia B-08	9	3557-3562	X		20221
Hibernia B-08	11	3530-3545	X		20220
Hibernia B-08	12	3485-3489	X		20219
Hibernia B-08	16	3018-3033	X		20218
Hibernia B-08	17	2954-2963	X		20217
Hibernia B-08	18	2648-2661	X		20216
Hibernia K-18	1	3850-3859	X		20251
Hibernia K-18	3	3831-3843	X	X	20253
Hibernia K-18	4	3804-3812	X		20254

Well	DST No.	Depth (m)	GC	GC-MS	GSC Lab No.
Hibernia K-18	5	3783-3788	X		20261
Hibernia K-18	6	3735-3740	X		20262
Hibernia K-18	8	3120-3135	X		20263
Hibernia K-18	11	2313-2330	X		20266
Hibernia K-18	13	2282-2293	X	X	20265
Hibernia O-35	2	2467-2476	X	X	20167
Hibernia O-35	6	2219-2226	X		20171
Hibernia O-35	8	2055-2066	X		20172
Hibernia P-15	2	4113-4134	X		20145
Hibernia P-15	8	3805-3822	X		20152
Hibernia P-15	11	2422-2443	X	X	20150
Mara M-54	1	2704-2708.5	X		20453
Mara M-54	2	2403-2408	X	X	20454
Mara M-54	3	1851-1857	X	X	20455
Nautilus C-92	3	3325-3336	X		20294
Nautilus C-92	4	3285-3300	X		20295
North Ben Nevis P-93	2	3091-3095	X		20483
North Ben Nevis P-93	3	3080-3085	X	X	20484
North Ben Nevis P-93	4	3062-3062	X		20482
North Dana J-43	2	4536.5-4548	X		20342
South Mara C-13	1	2952-2958	X		20433
South Mara C-13	2	2926-2932	X	X	20434
South Tempest G-88	1	4109-4117			20227
South Tempest G-88	2	4041-4049	X	X	20226
Terra Nova K-08	1	3530-3544	X	X	20783
Terra Nova K-08	2	3410-3423	X		20782
Terra Nova K-08	3	3380-3395	X		20781
Terra Nova K-08	4	3329-3336	X		20793
Trave E-87	1	2232-2237.5	X		20416

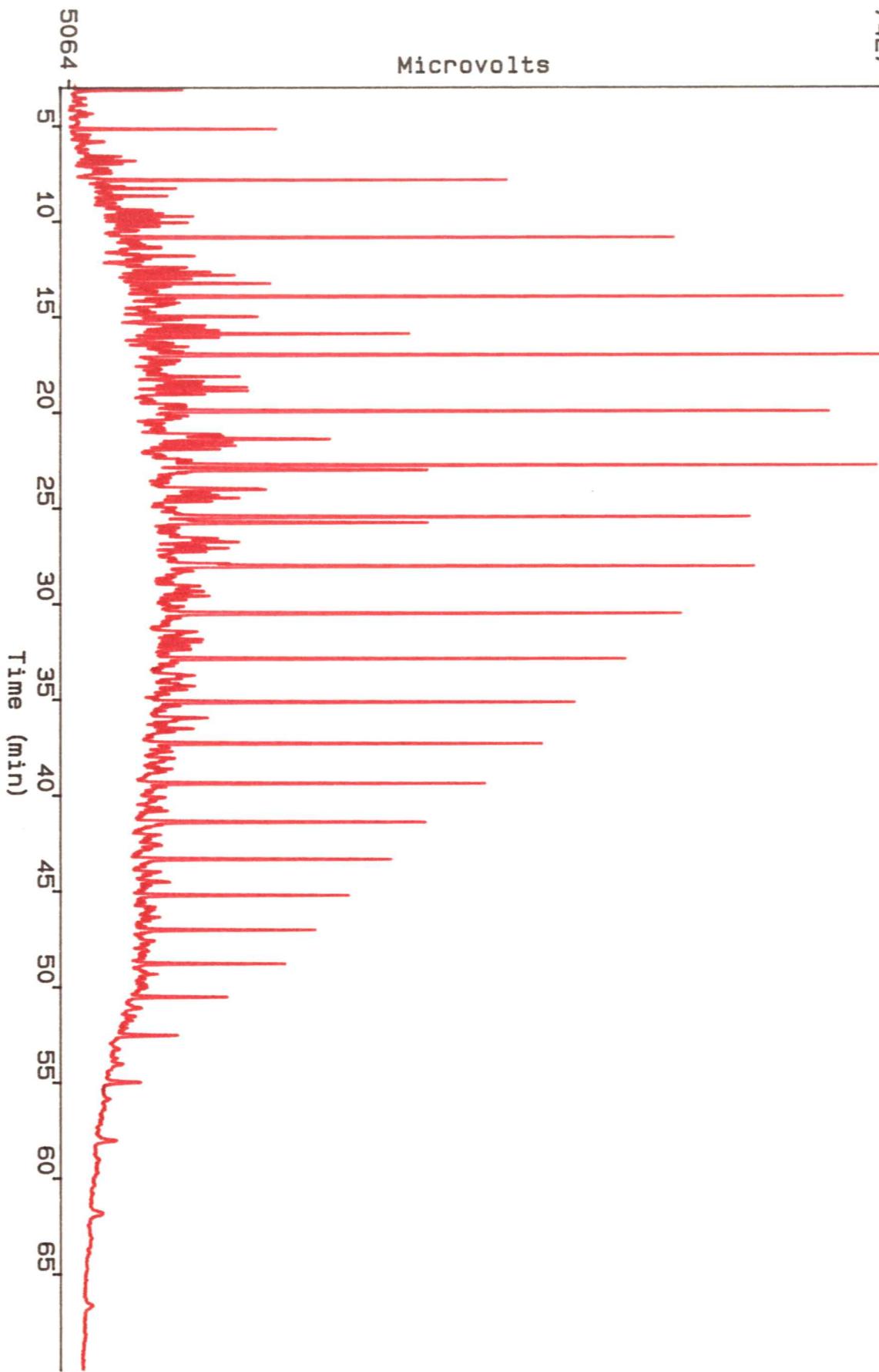
Well	DST No.	Depth (m)	GC	GC-MS	GSC Lab No.
Trave E-87	2	2144-2150	X		20417
West Ben Nevis B-75	6	2445-2465	X	X	20775
West Ben Nevis B-75	8	2002-2015	X		20774
Whiterose J-49	2	3212-3218.5	X		20477
Whiterose J-49	6	3124-3131	X	X	20479
Whiterose J-49	7	3093.5-3106	X	X	20480
Whiterose J-49	8	3063-3067	X	X	20478
Whiterose L-61	3	2527.5-2534	X	X	20769

## REFERENCES

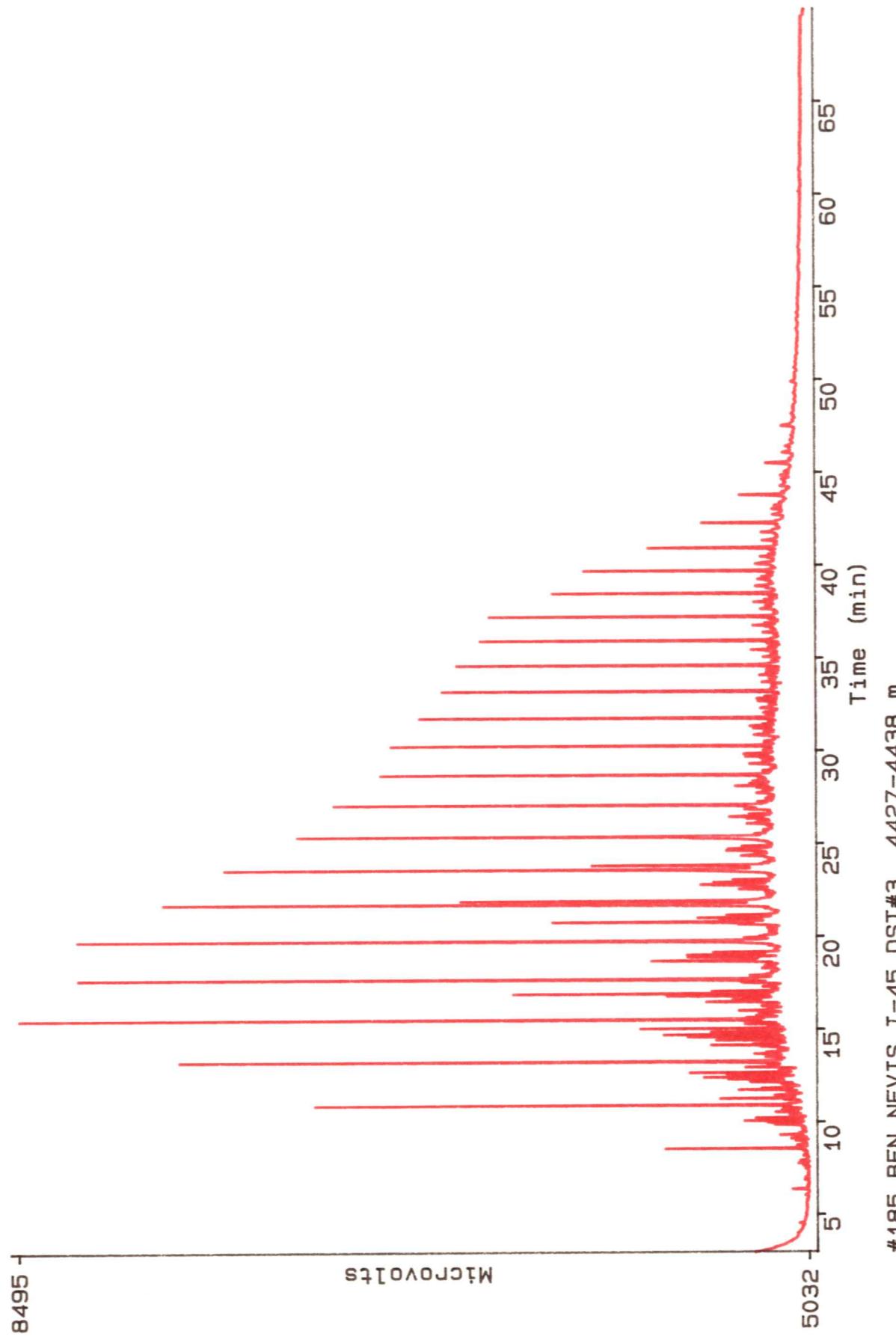
- Creaney, S. and Allison, B.H., 1987. An organic geochemical model of oil generation in the Avalon/Flemish Pass sub-basins, east coast Canada. Bull. Can. Petrol. Geol. **35**, p. 12-23.
- Fowler, M.G., Brooks, P.W., Snowdon, L.R. and McAlpine, K.D., 1988. Petroleum geochemistry of the Jeanne d'Arc Basin. GAC/MAC/CSPG Program with Abstracts, vol. 13, p. A40.
- Powell, T.G., 1985. Paleogeographic implications for the distribution of Upper Jurassic source beds: Offshore Eastern Canada. Bull. Can. Petrol. Geol. **33**, p. 116-119.
- Summons, R.E., Volkman, J.E. and Boreham, C.J., 1987. Dinosterane and other steroidial hydrocarbons of dinoflagellate origin in sediments and petroleum. Geochim. Cosmochim. Acta **51**, p. 3075-3082.
- von der Dick, H., Meloche, J.D., Dwyer, J. and Gunther, P., 1989. Source-rock geochemistry and hydrocarbon generation in the Jeanne d'Arc Basin, Grand Banks, Offshore Eastern Canada. Journal of Petroleum Geology **12**, p. 51-68.

7427

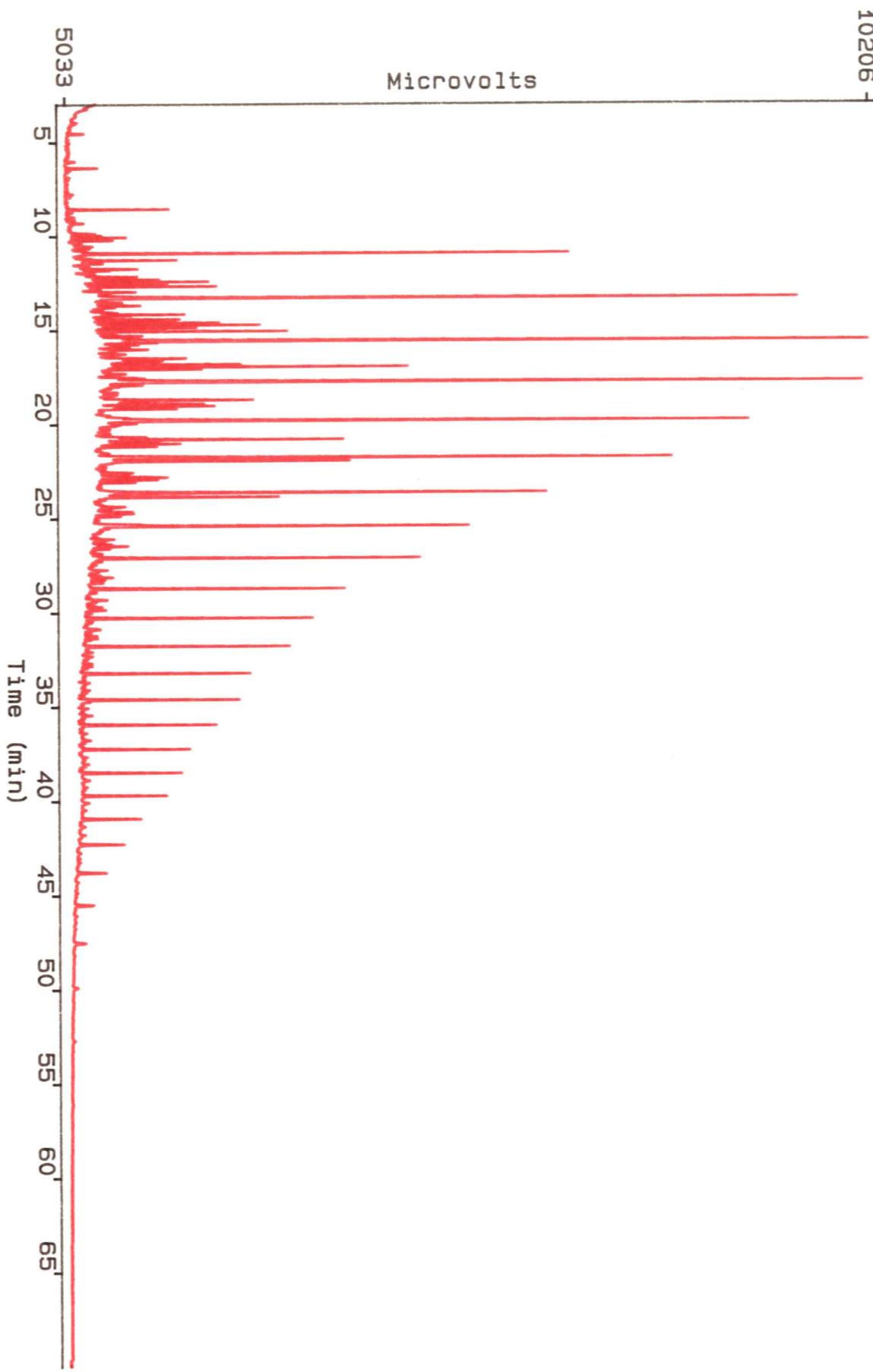
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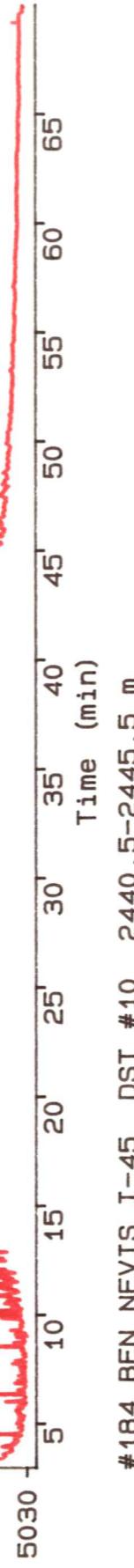
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8053 -

MICROVOLTS



8236

Microvolts

5037

5  
10  
15  
20  
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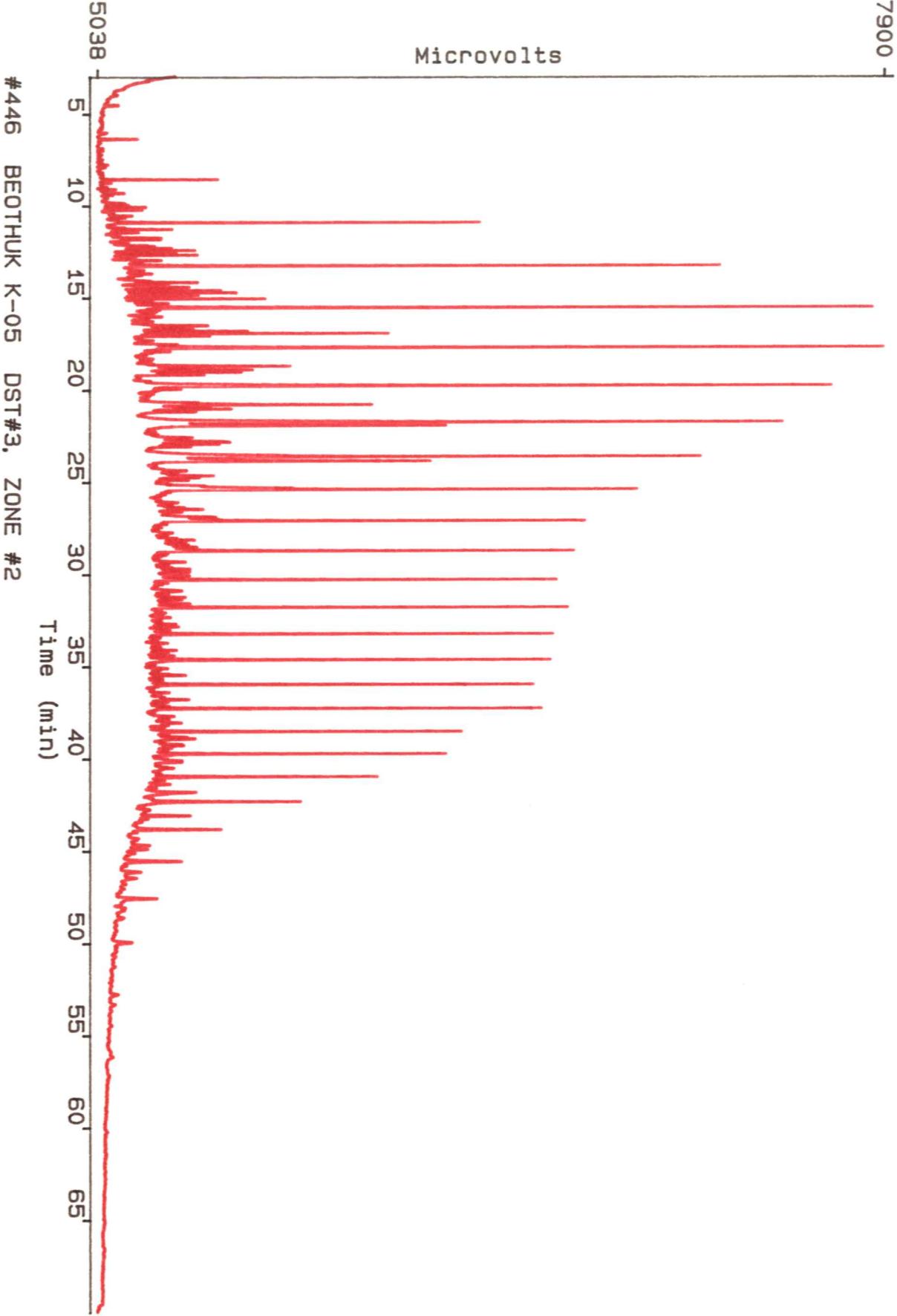
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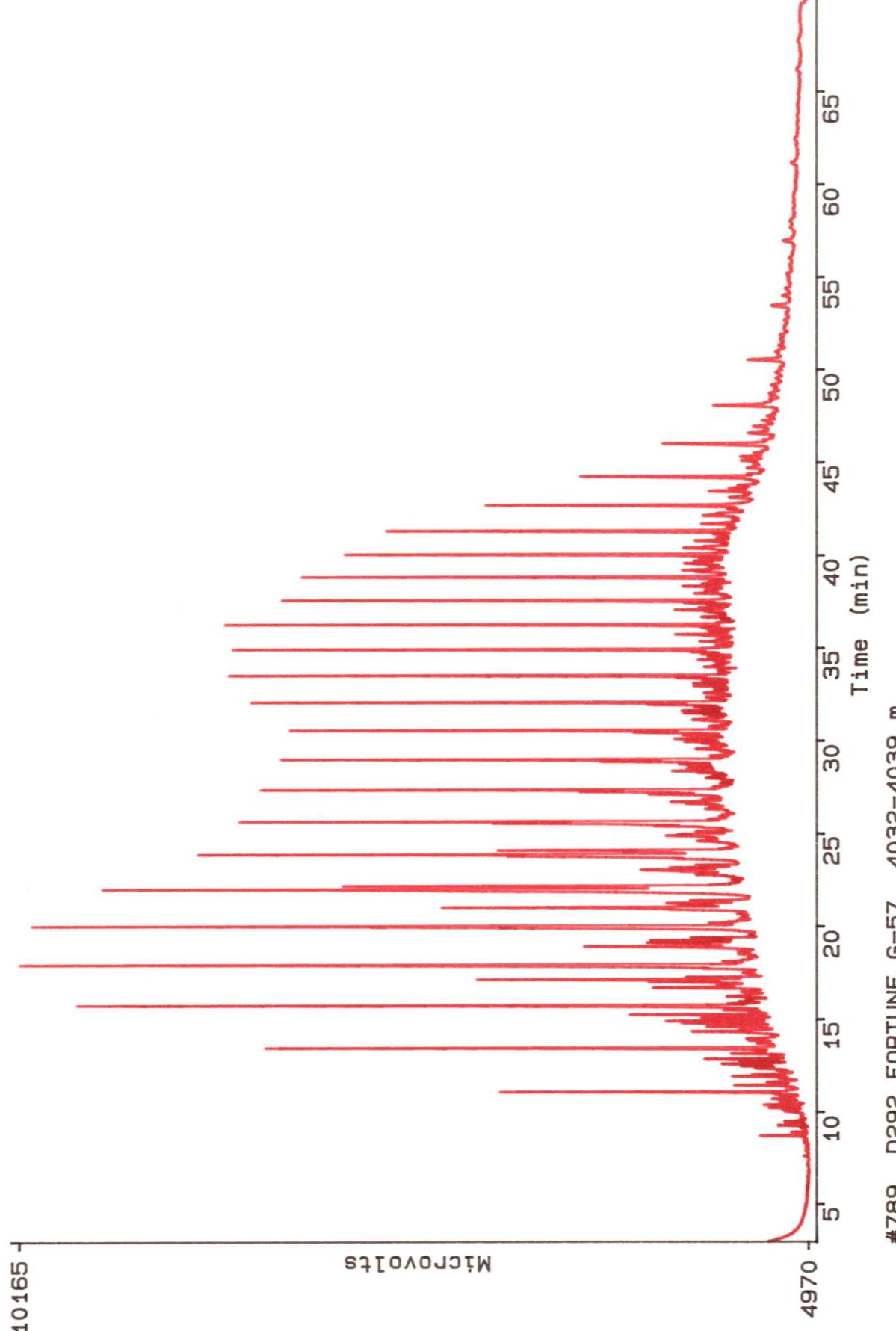
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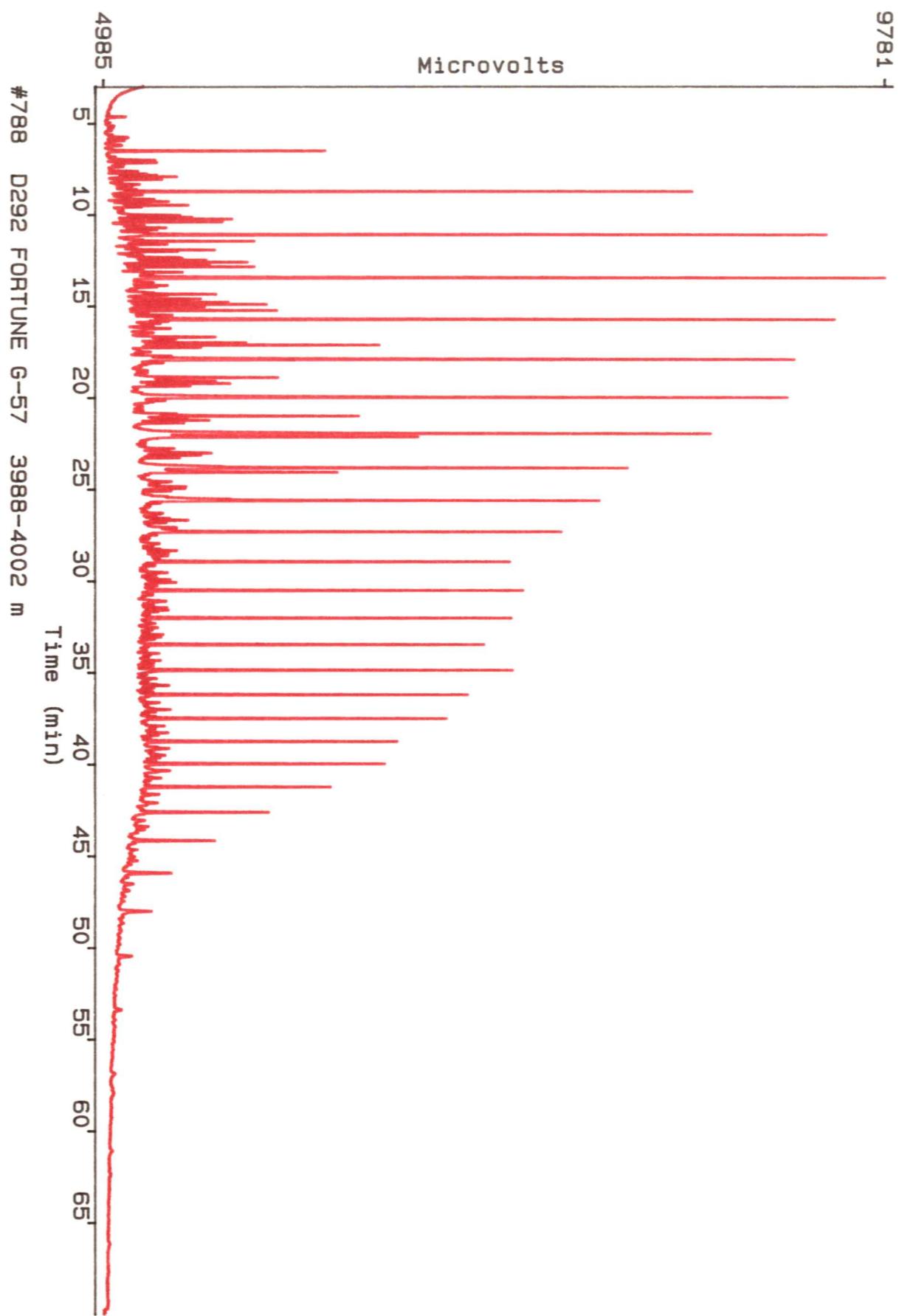
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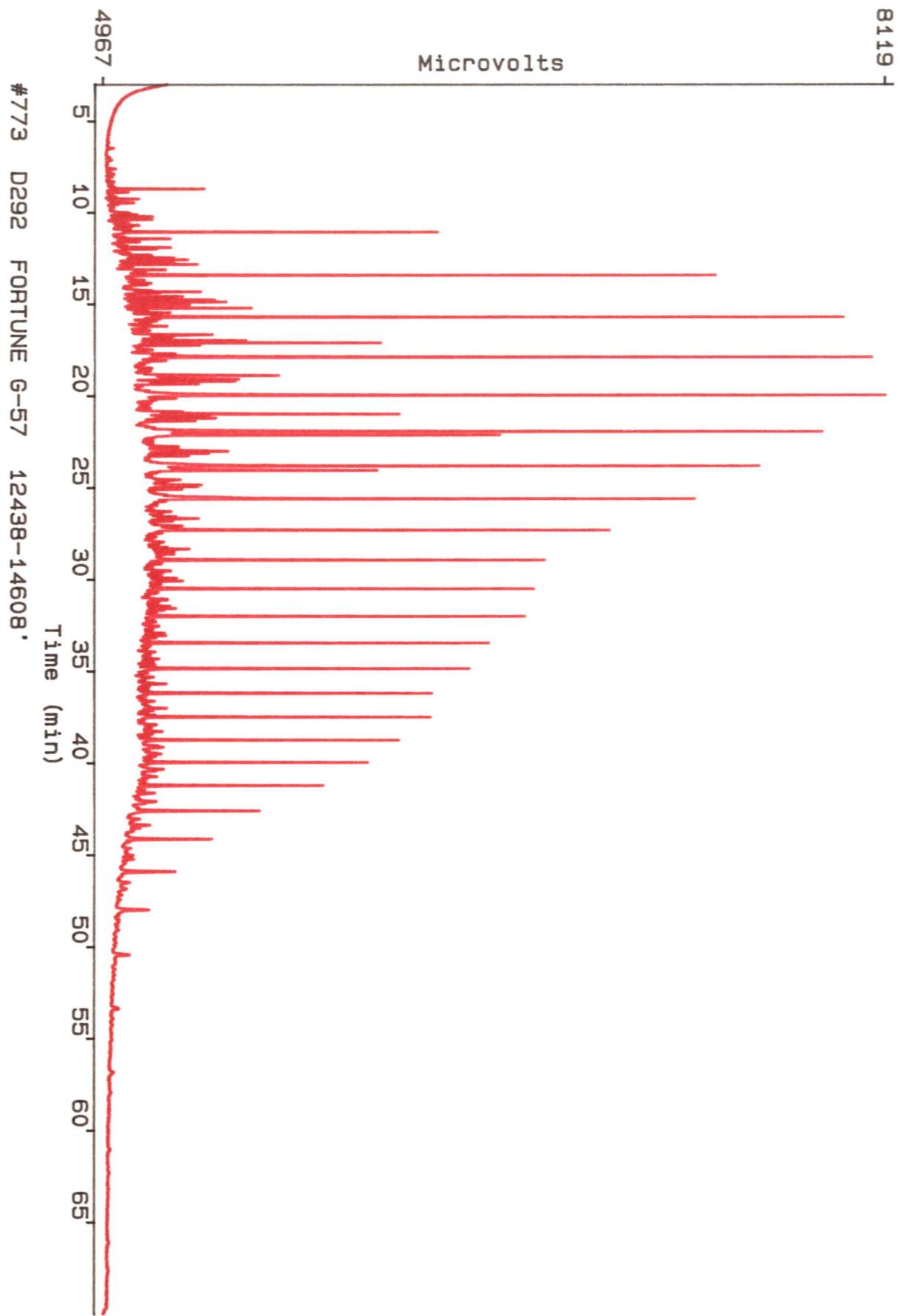
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7843 -

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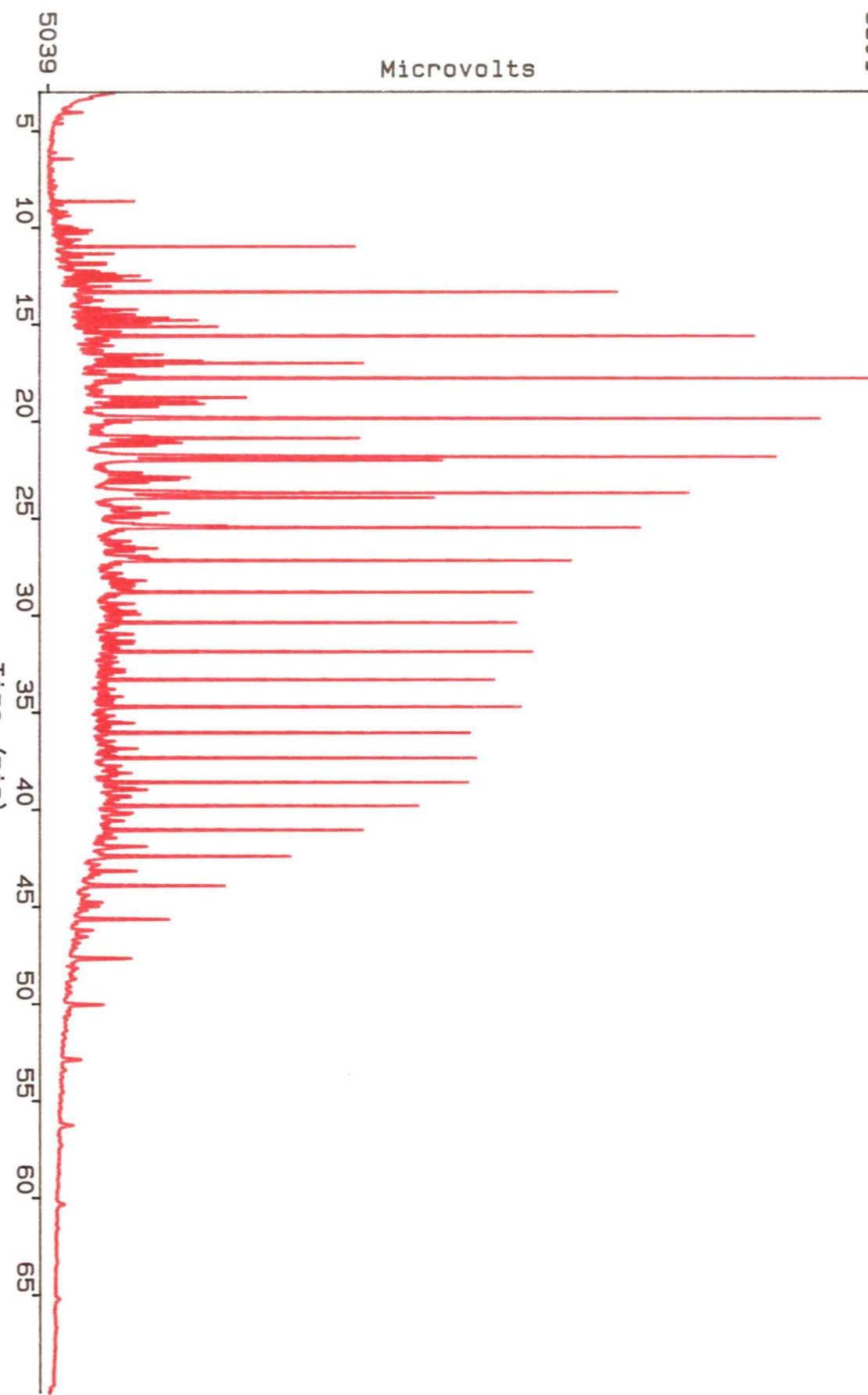
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8301

Microvolts



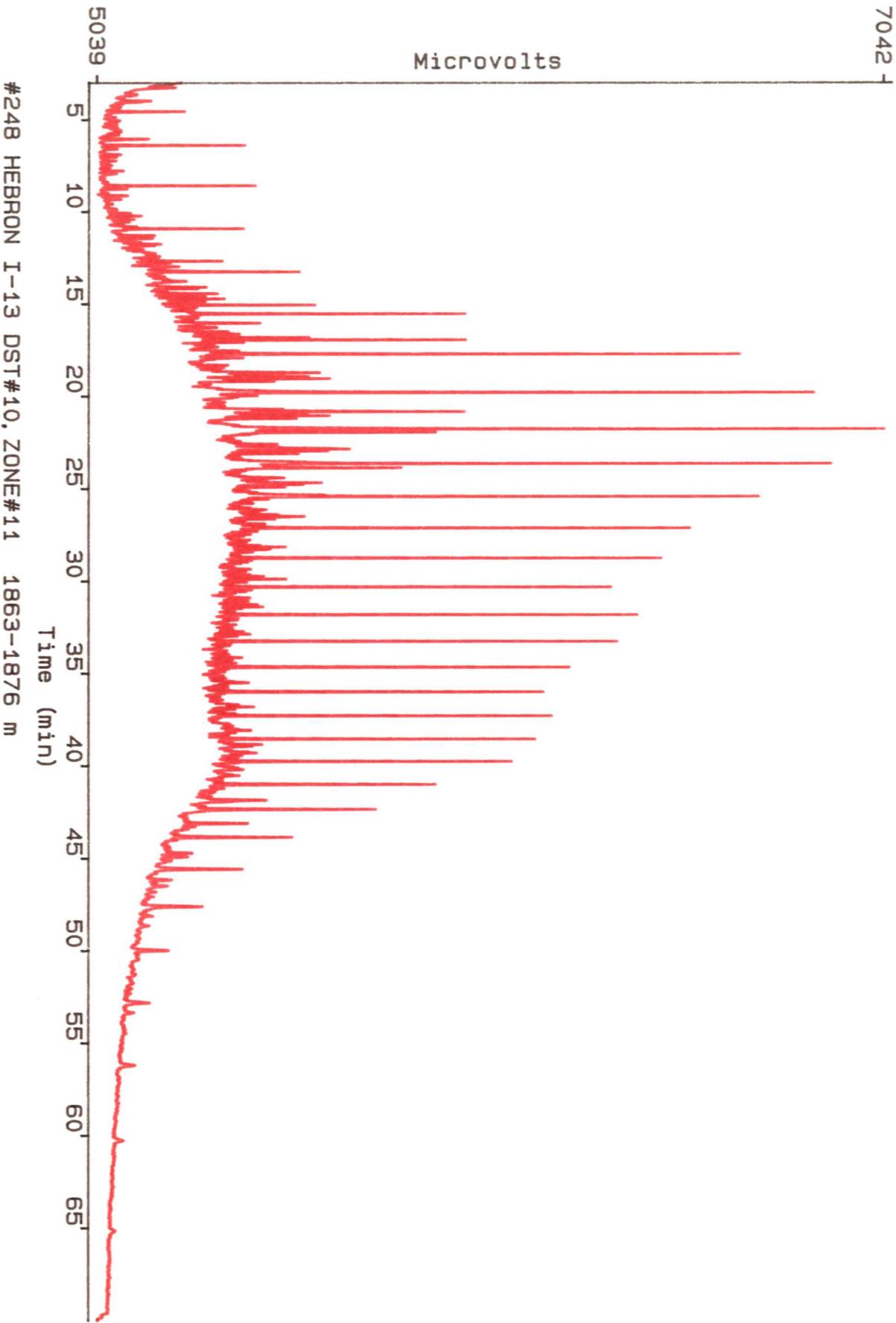
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7195 -

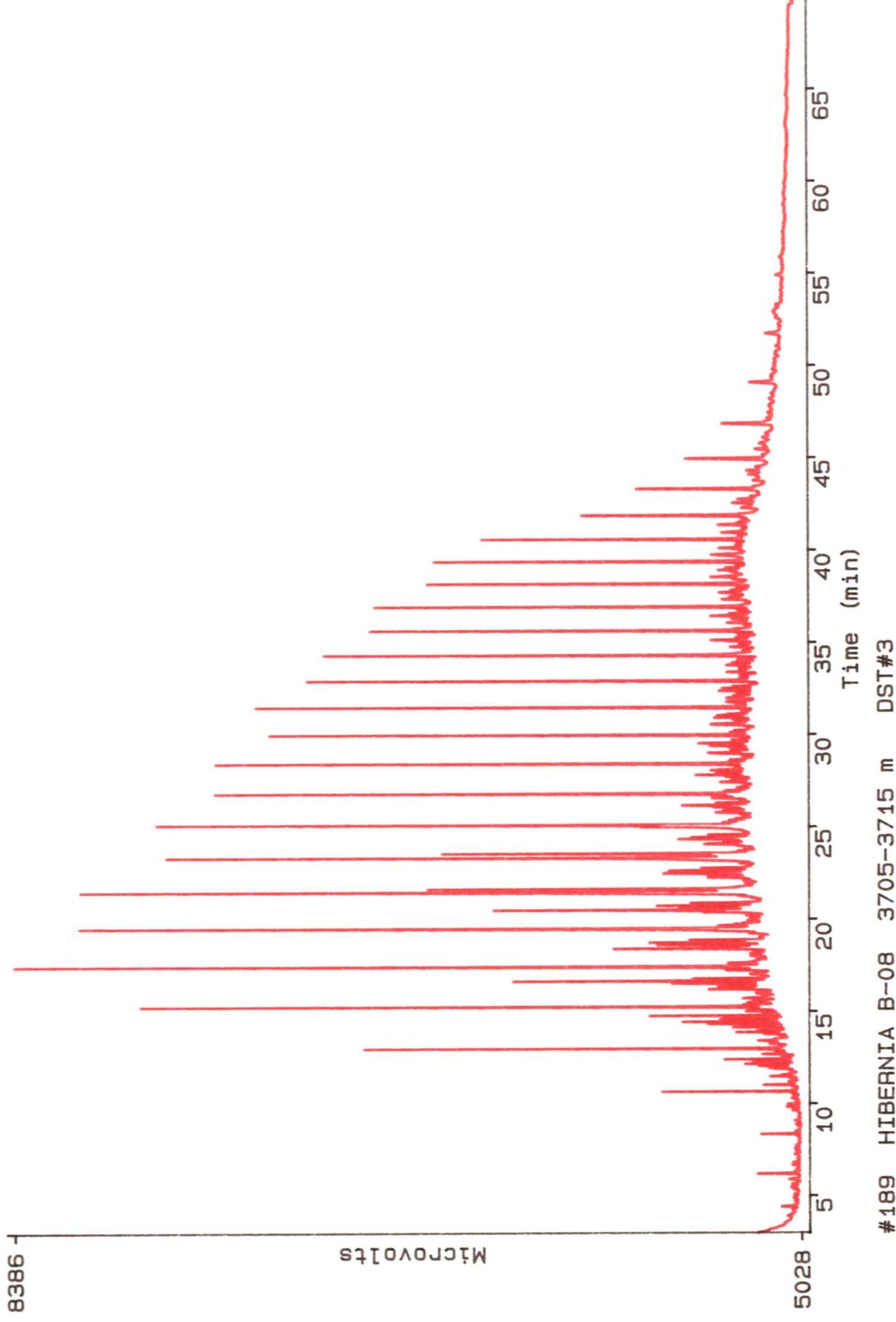
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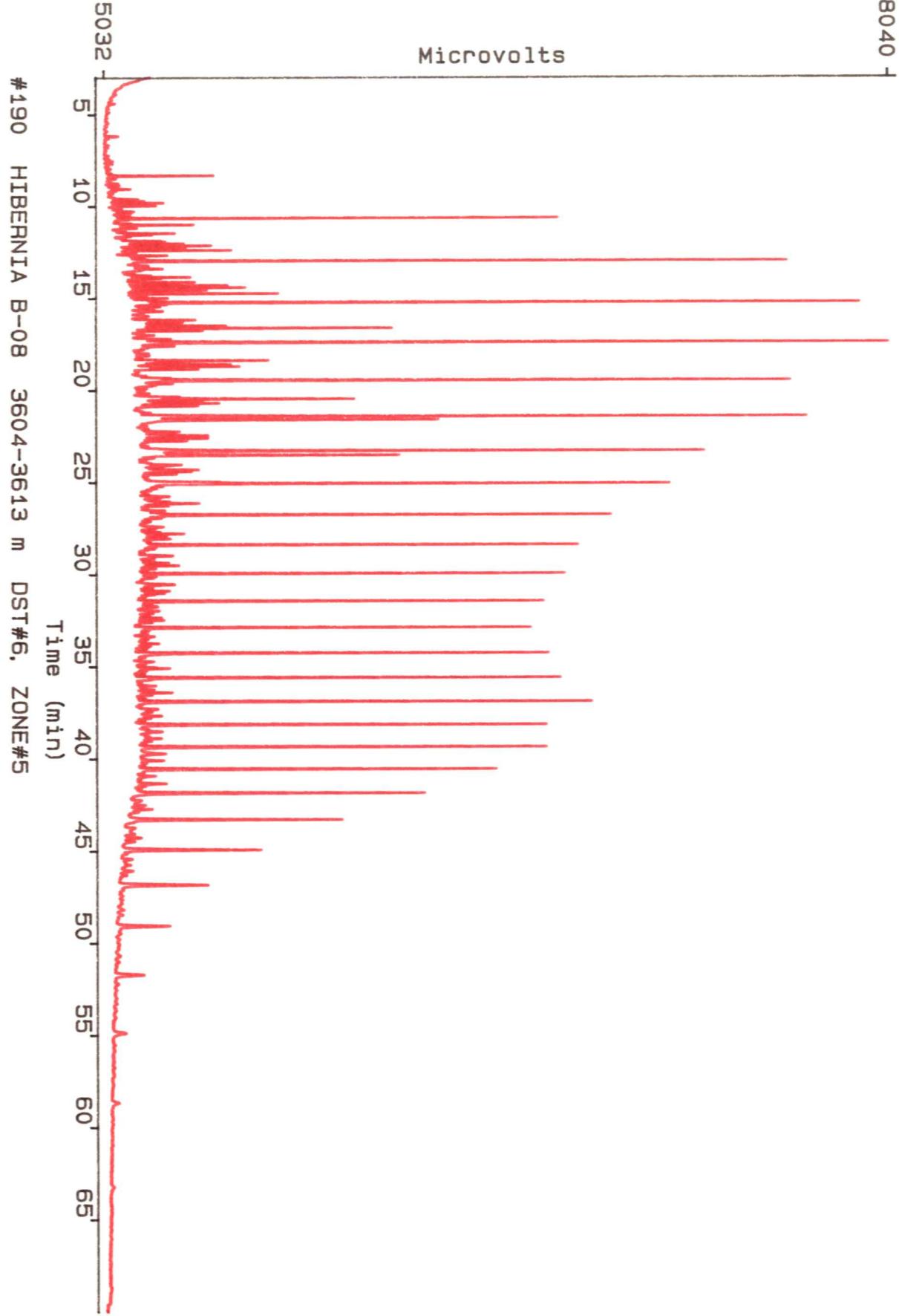
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Time (min)  
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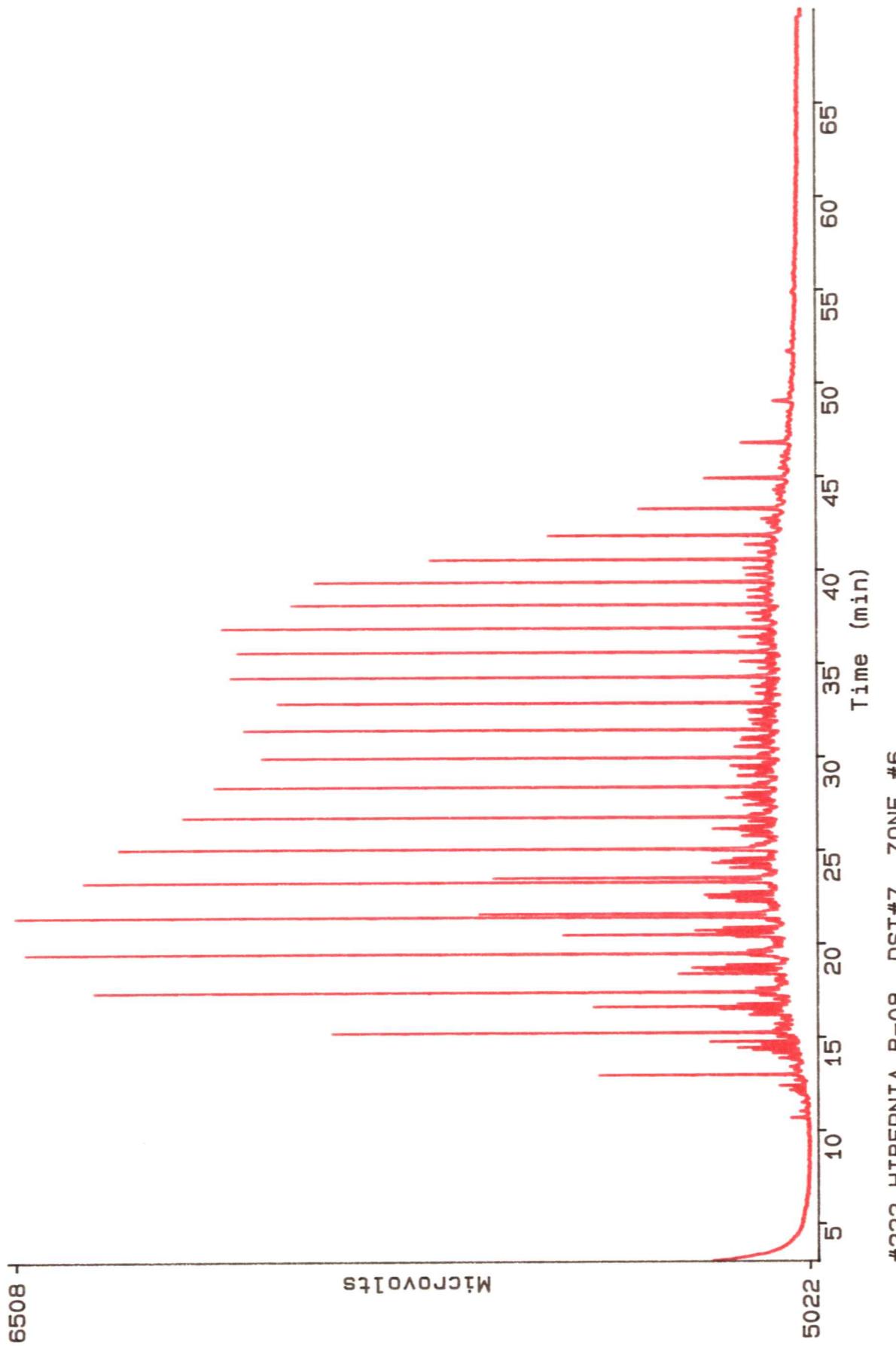


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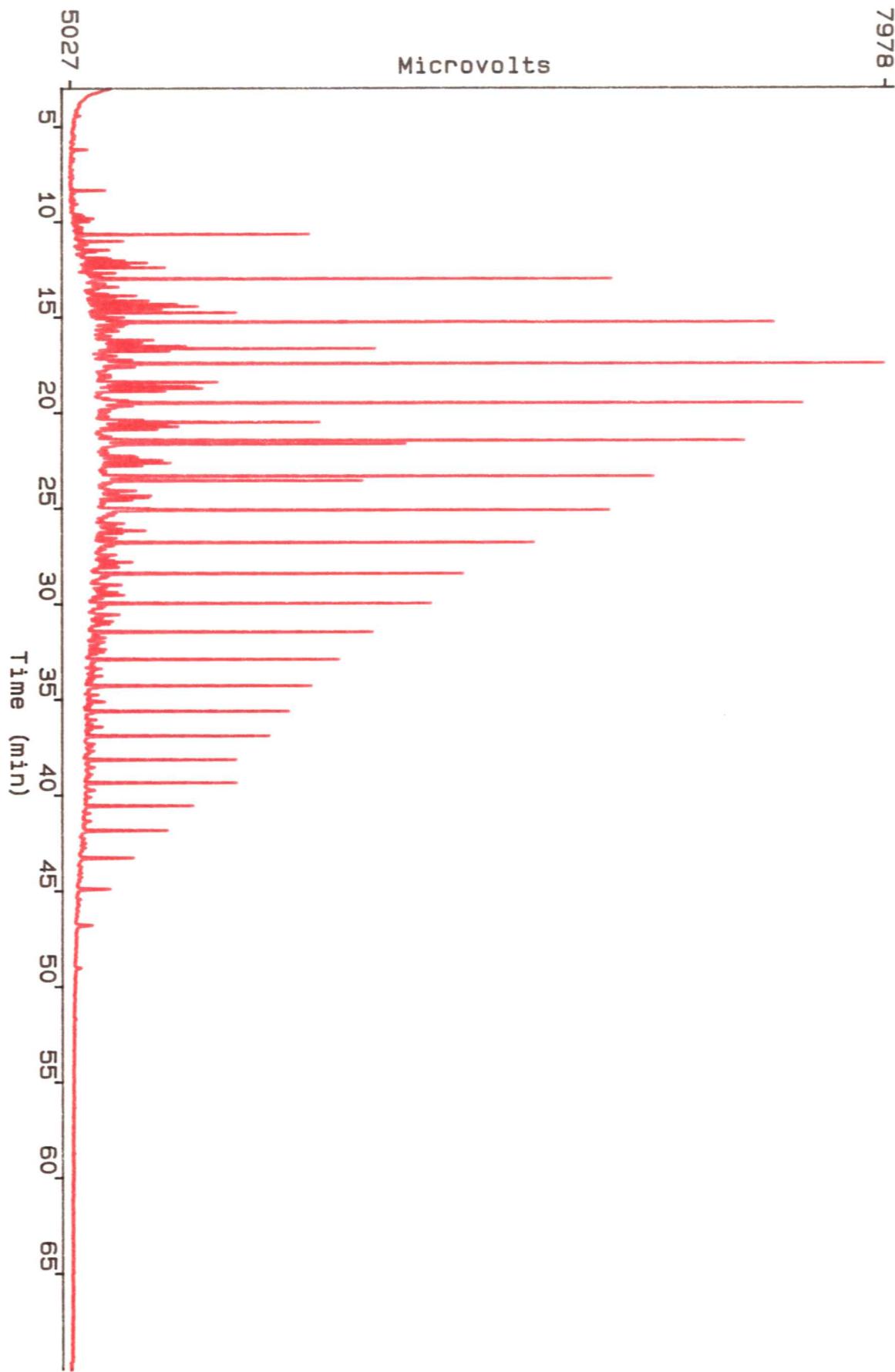


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#222 HIBERNIA B-08 DST#7, ZONE #6

#221 HIBERNIA B-08 DST#9, ZONE #7



9092

MICROVOLTS

5030

Time (min)

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60'

55'

50'

45'

40'

35'

30'

25'

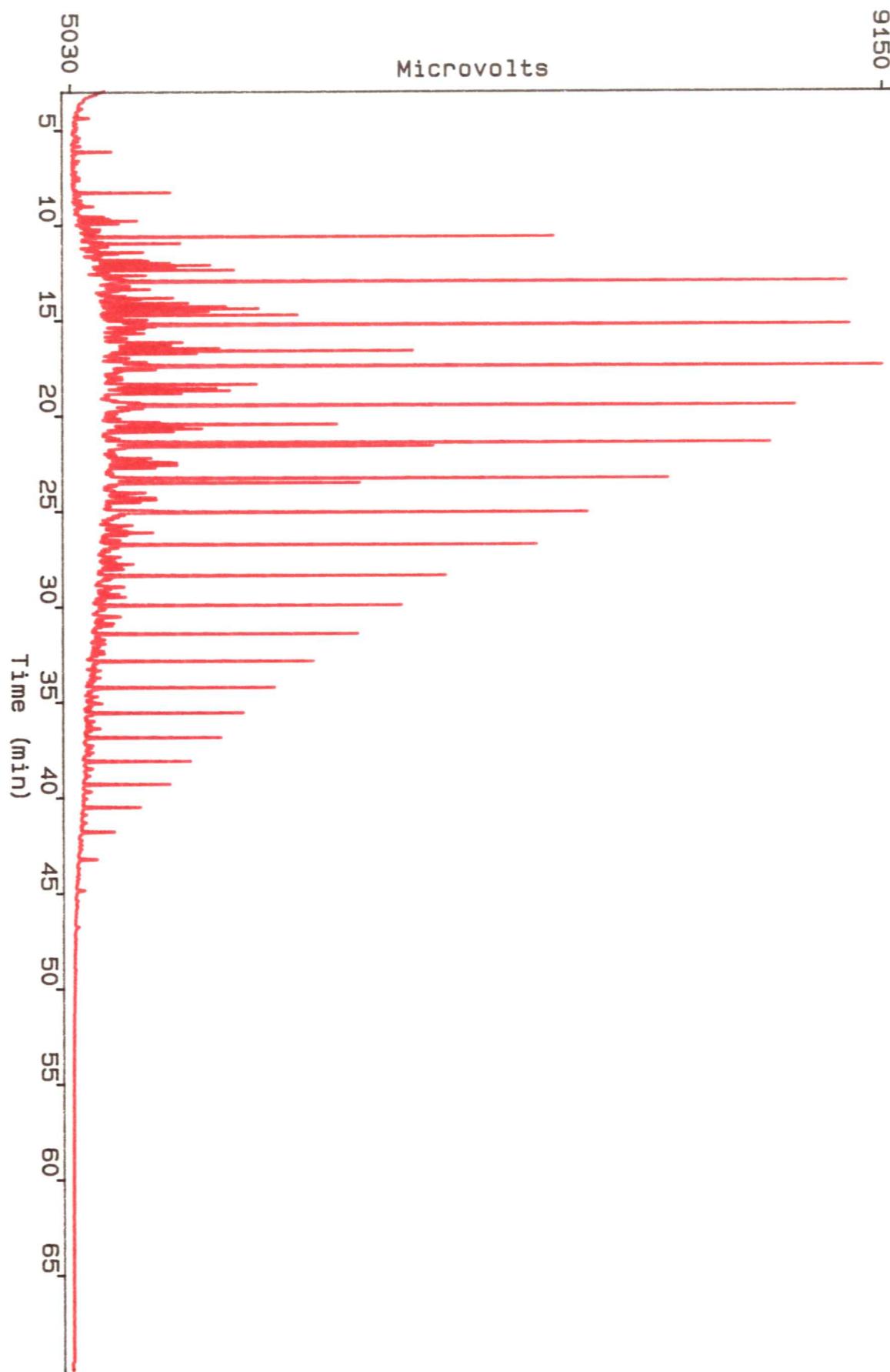
20'

15'

5'

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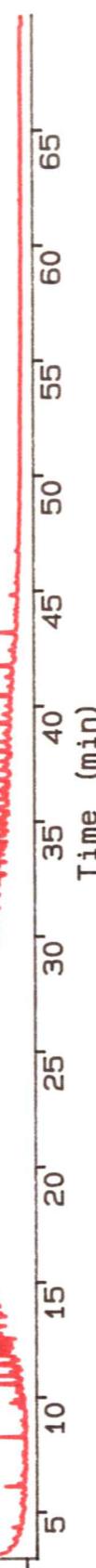
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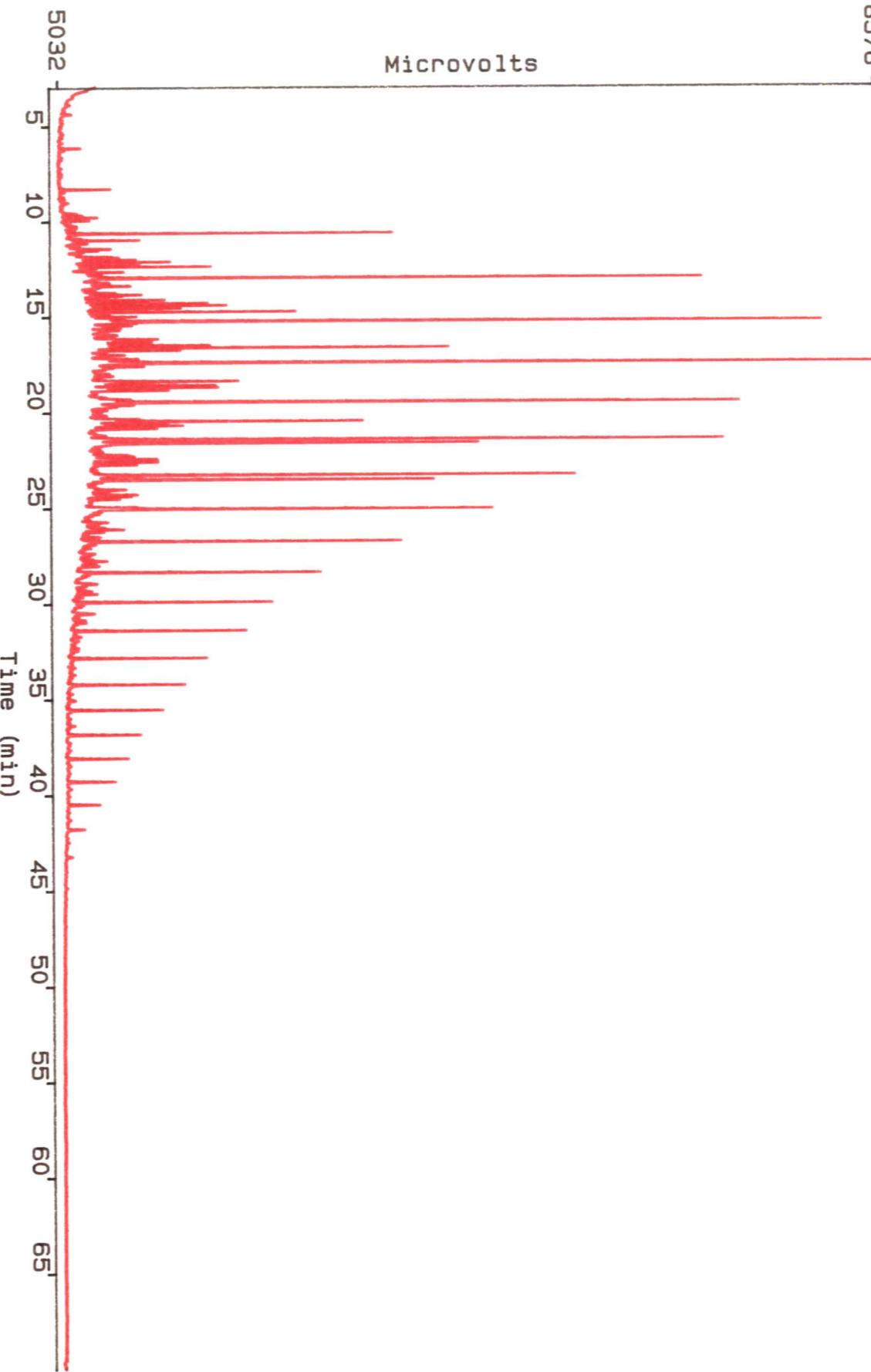
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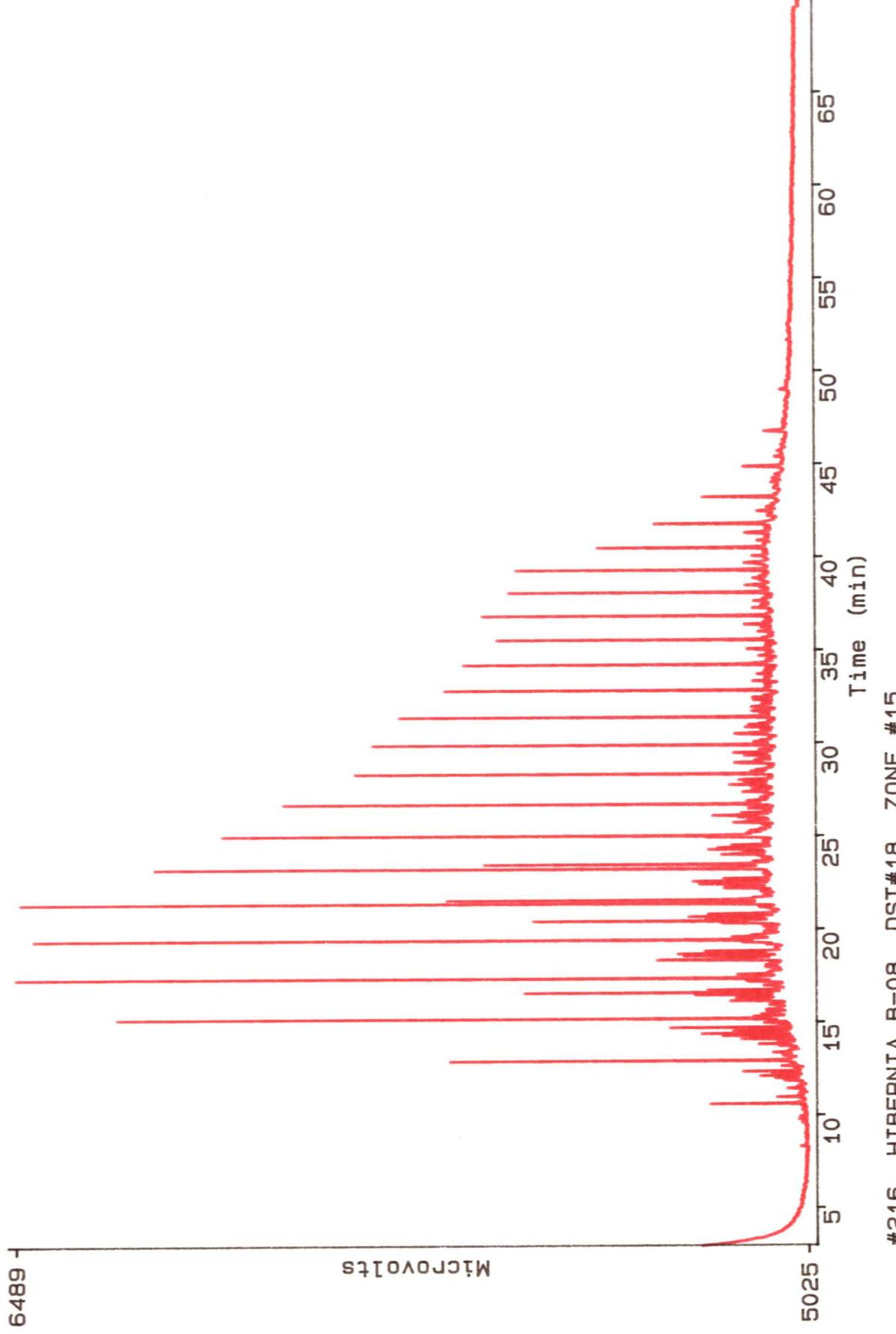
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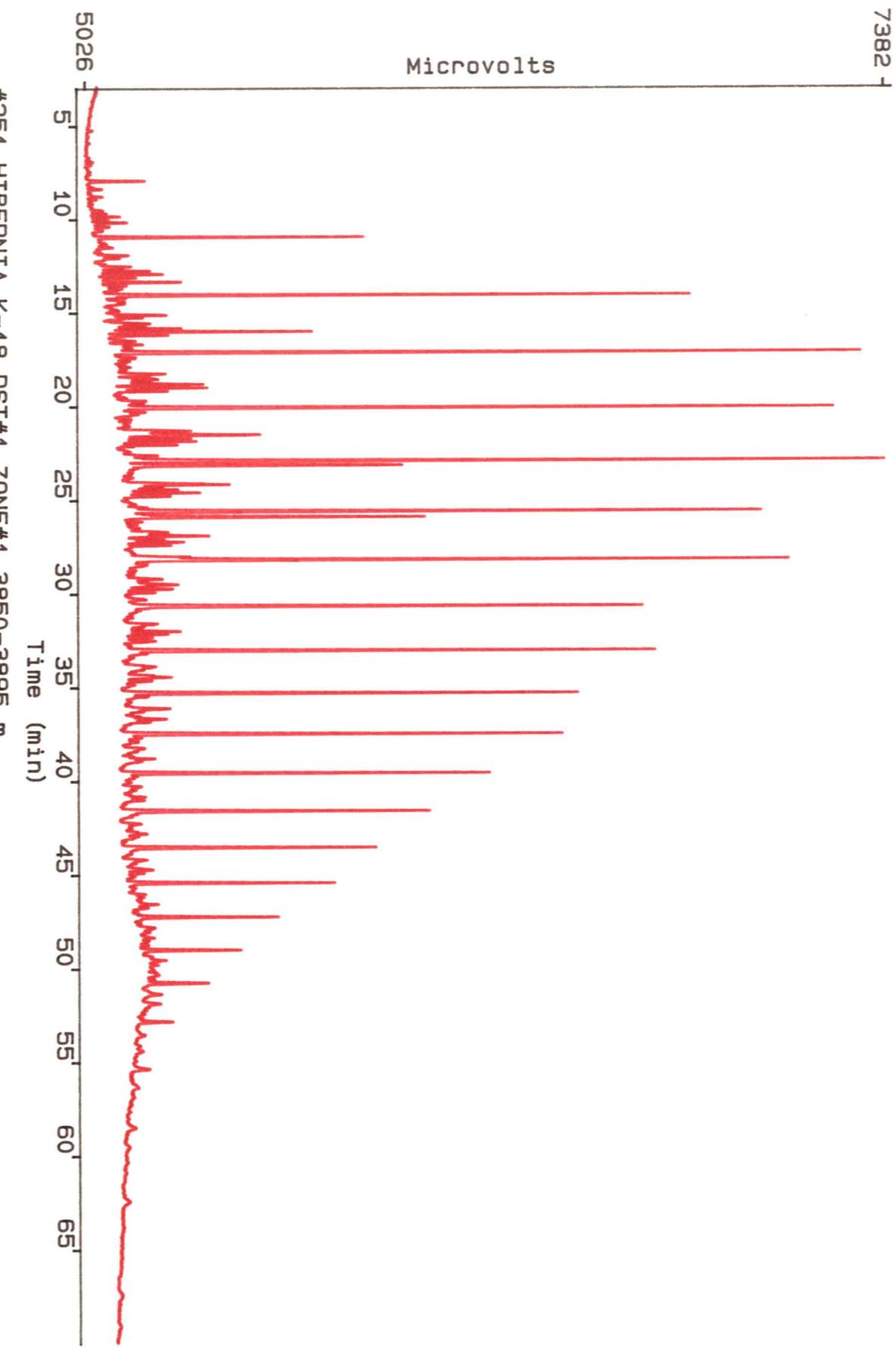
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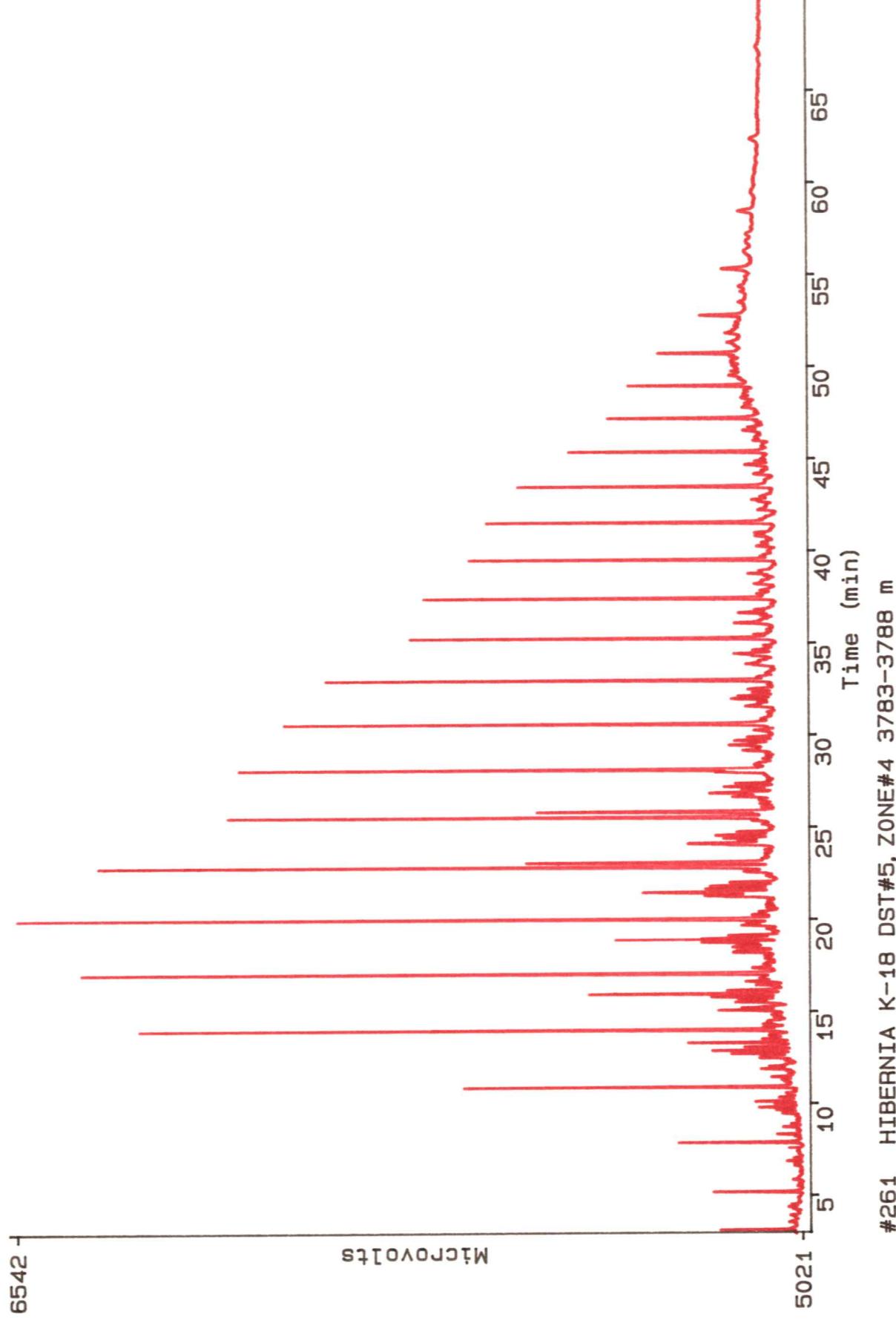


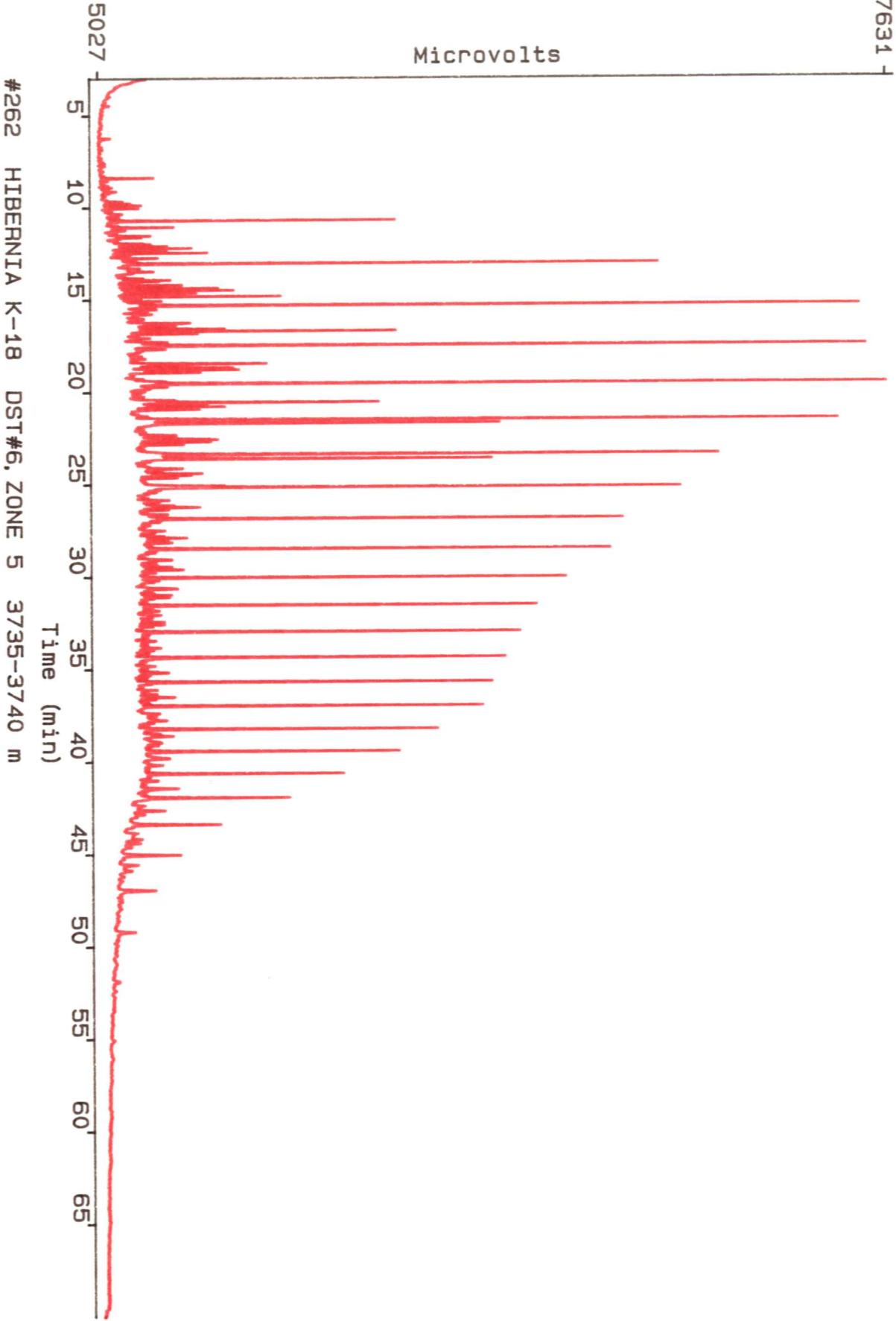
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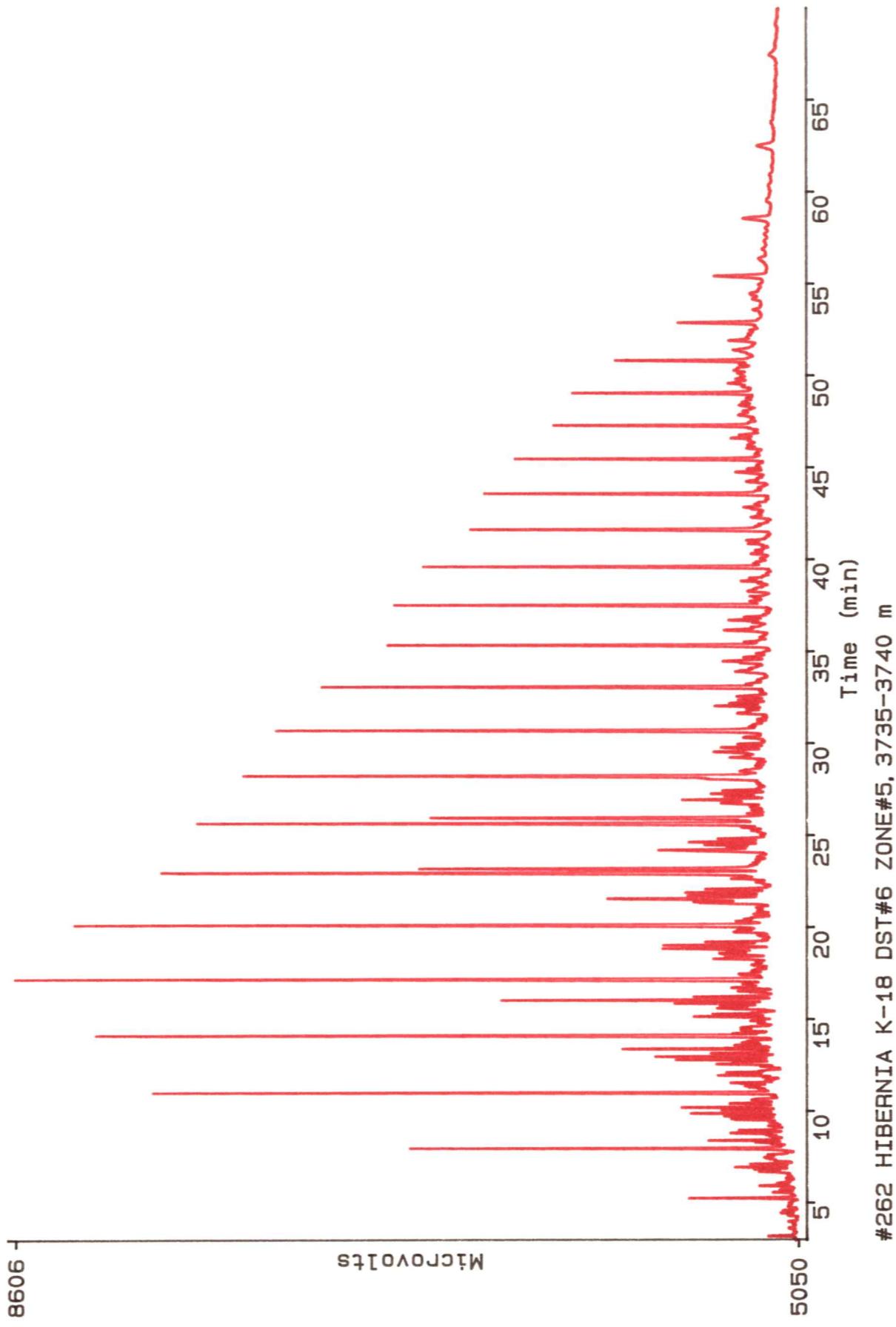


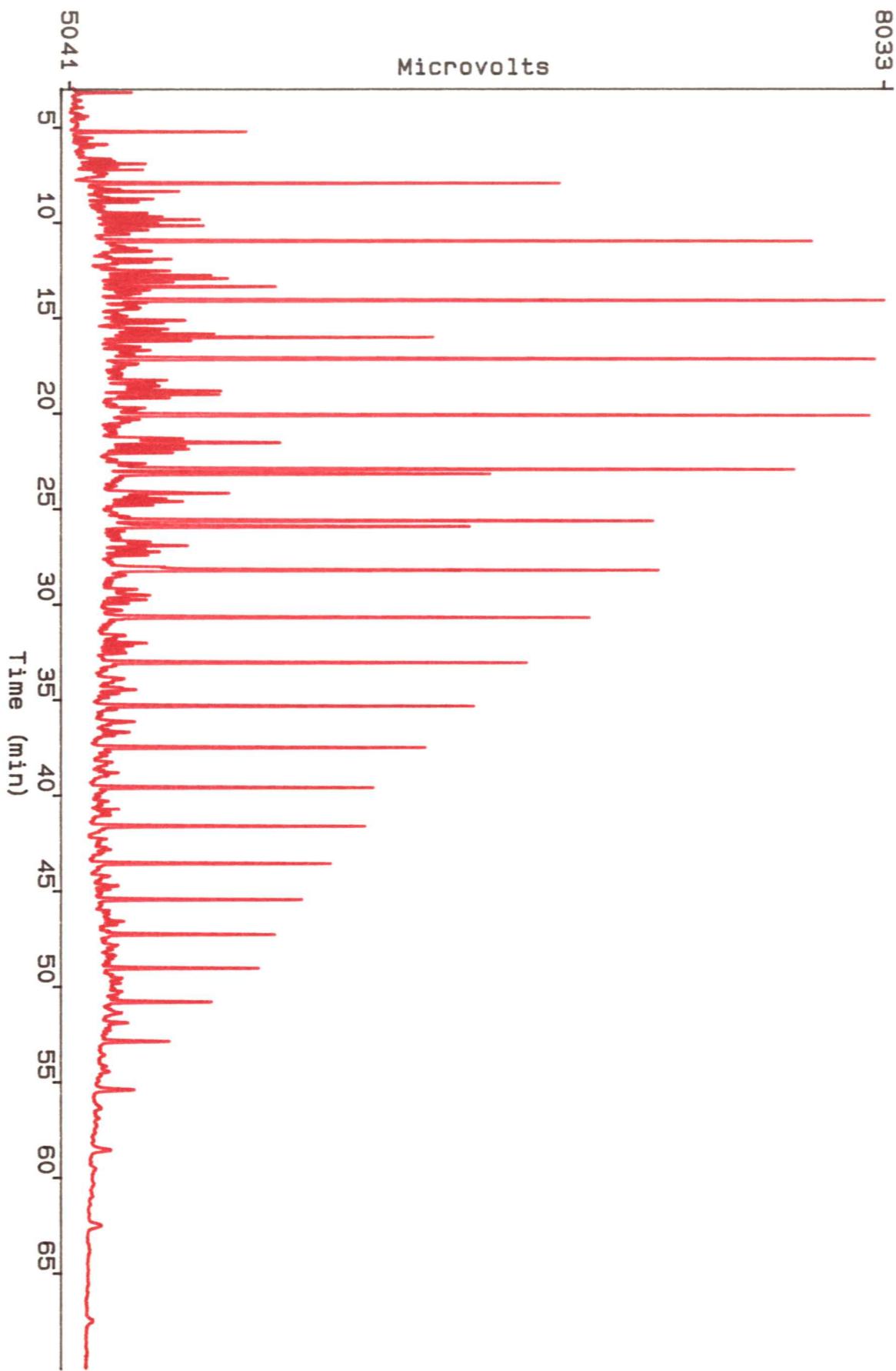
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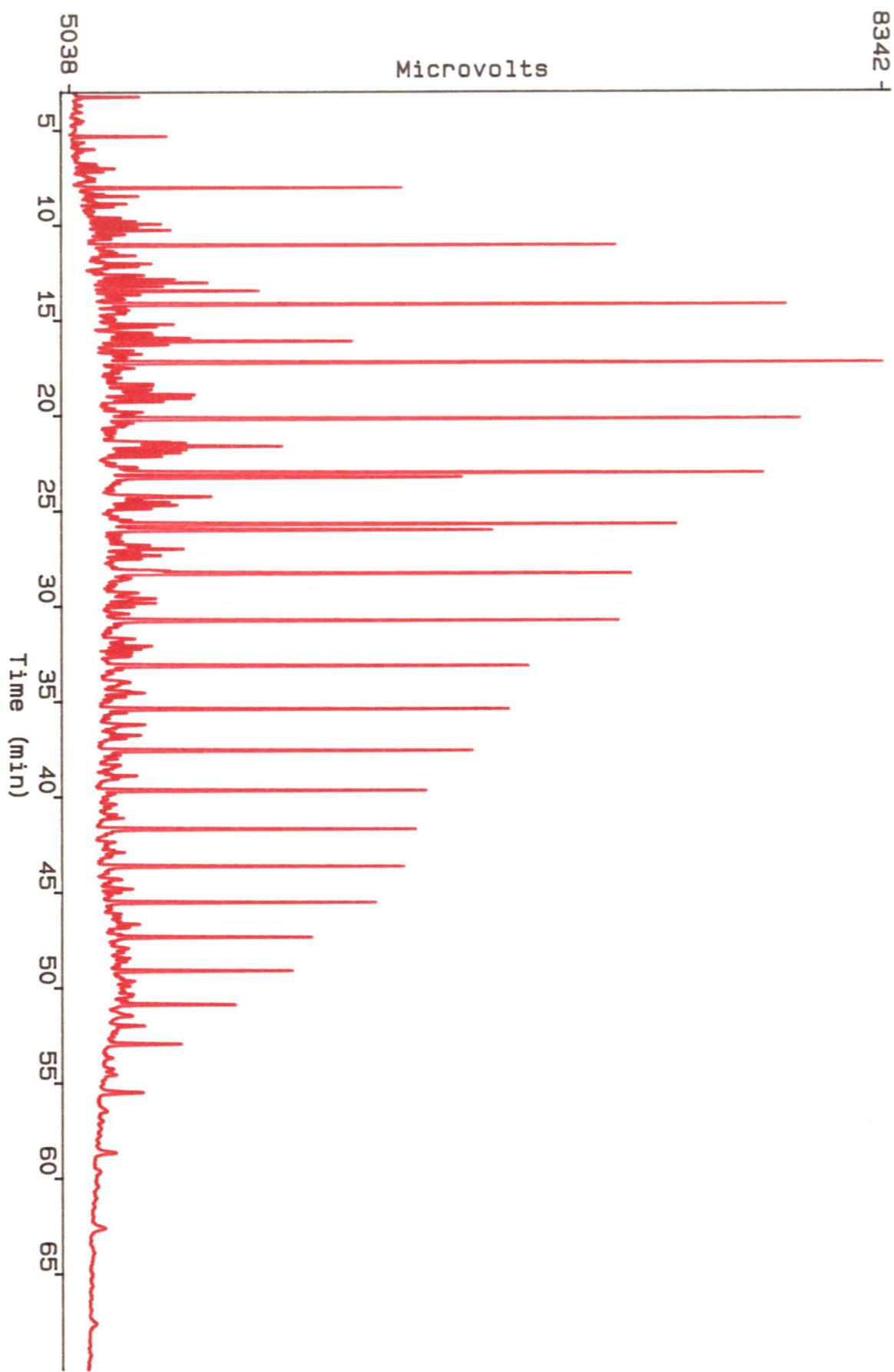
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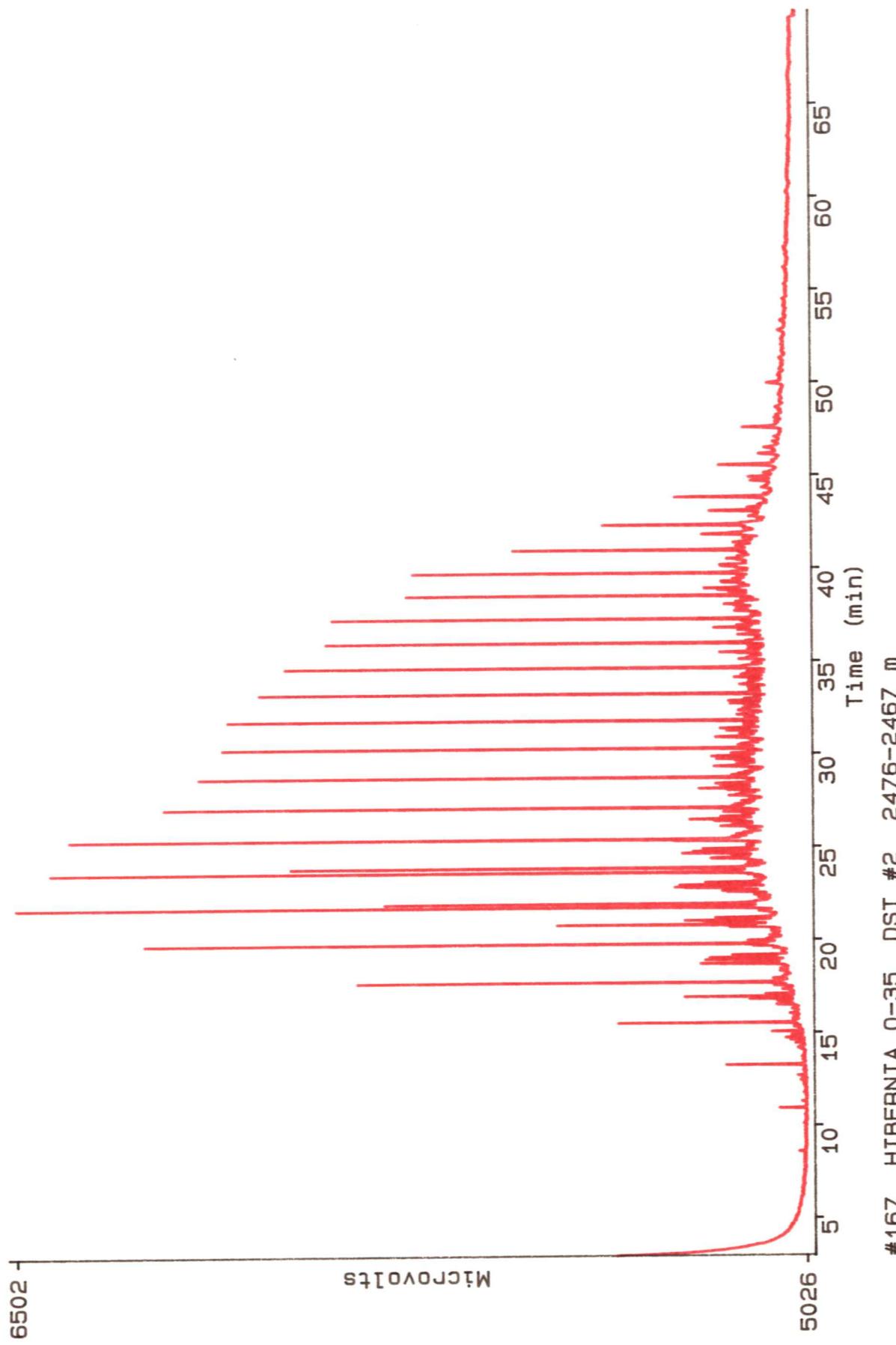
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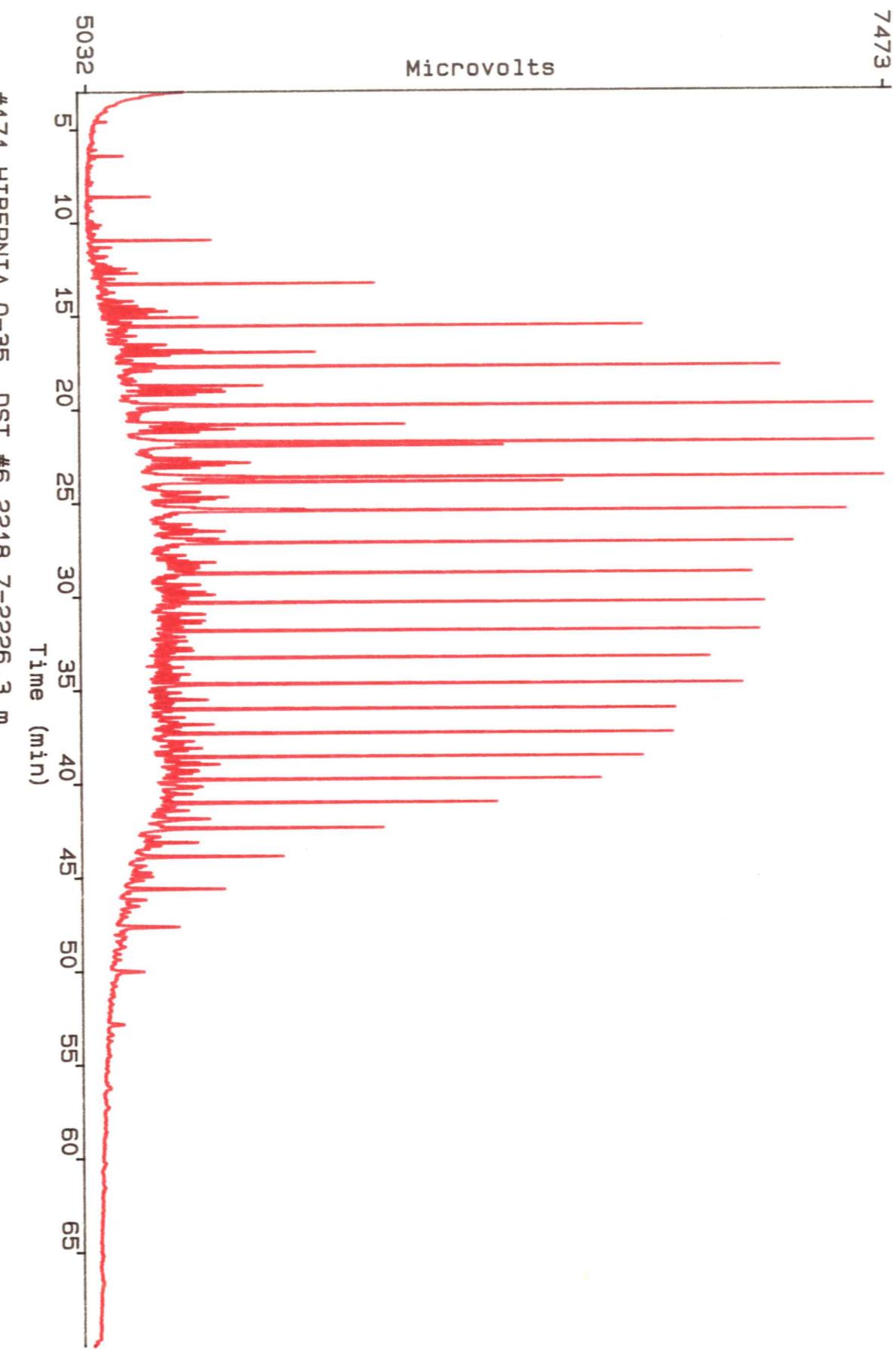
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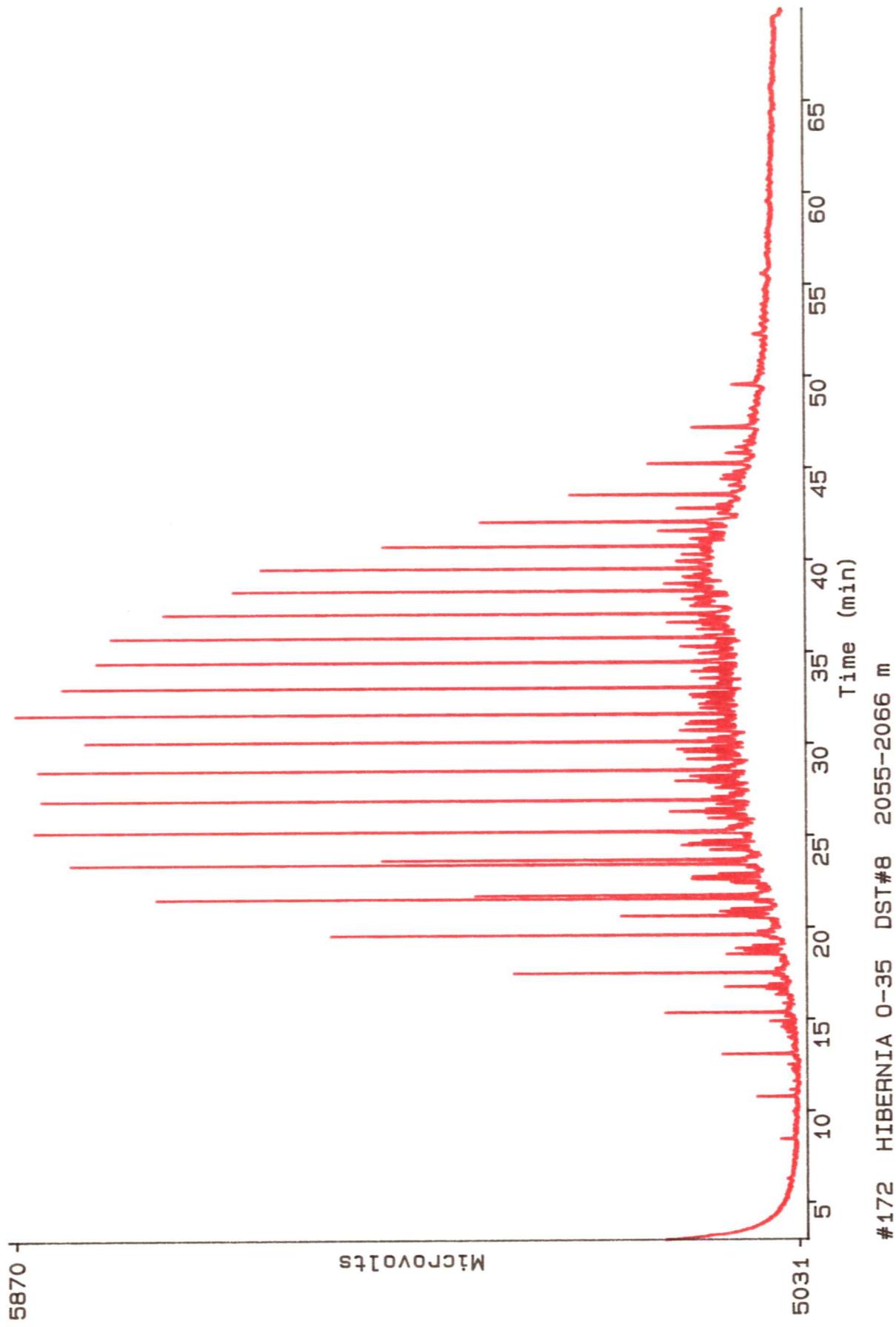


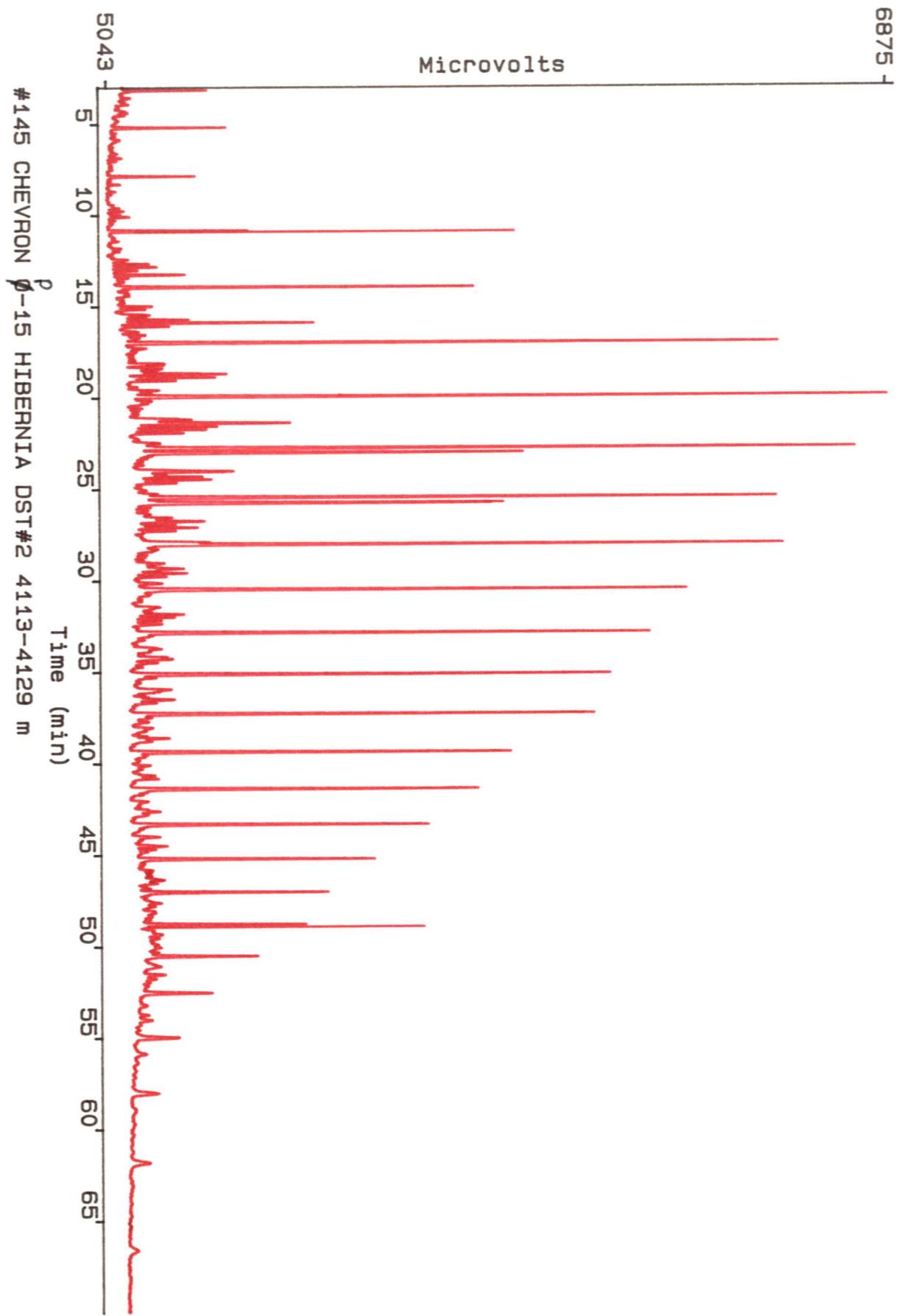
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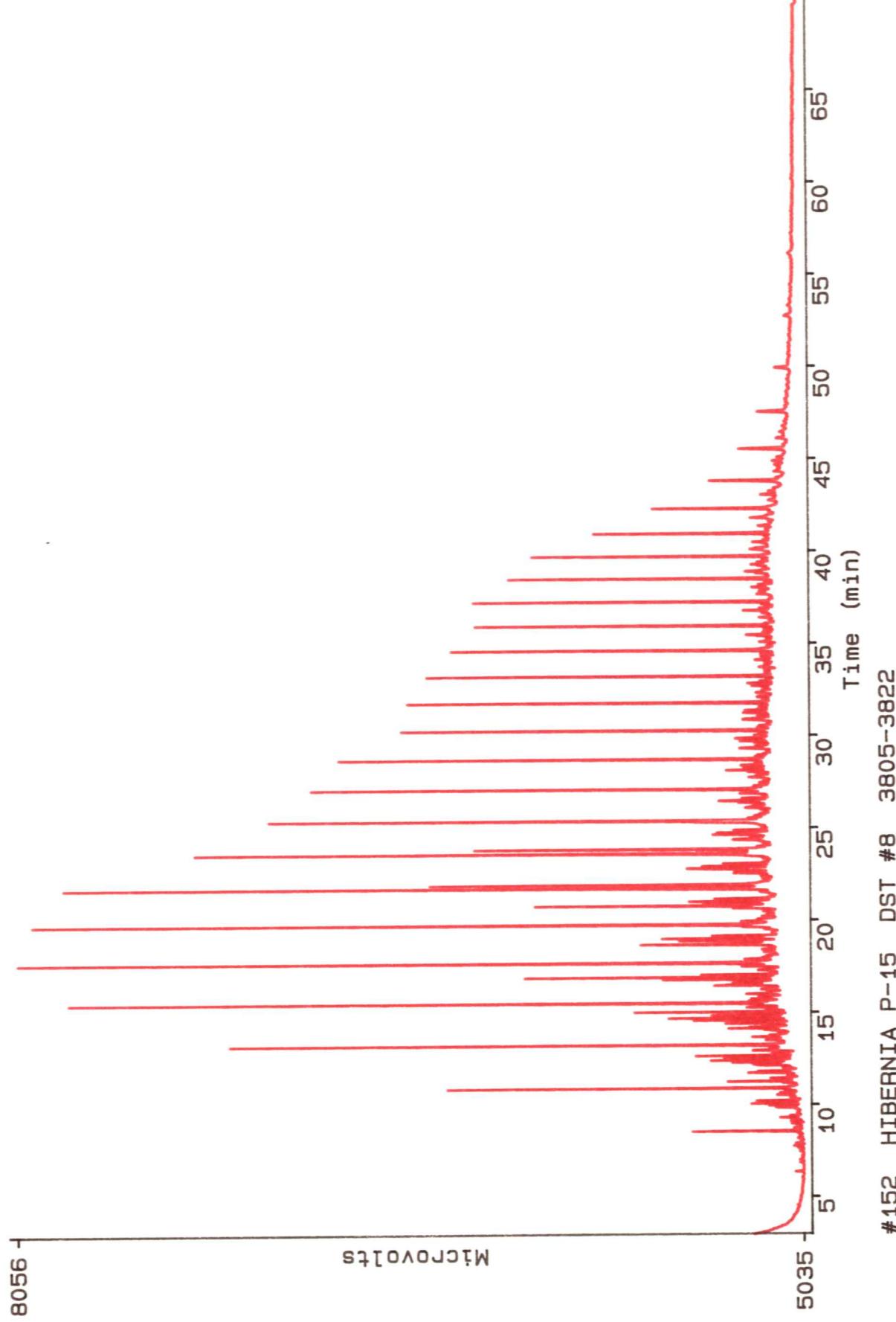


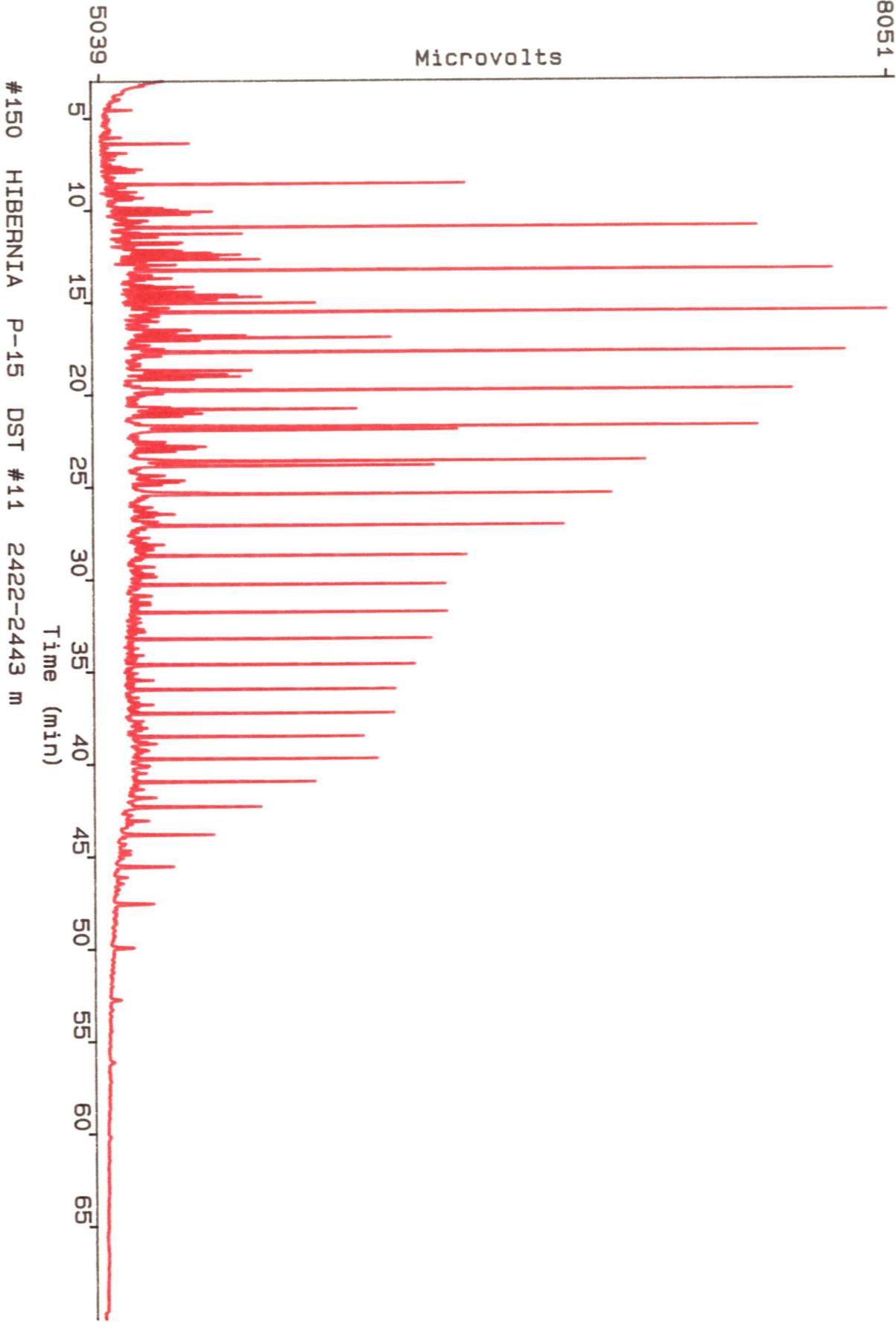
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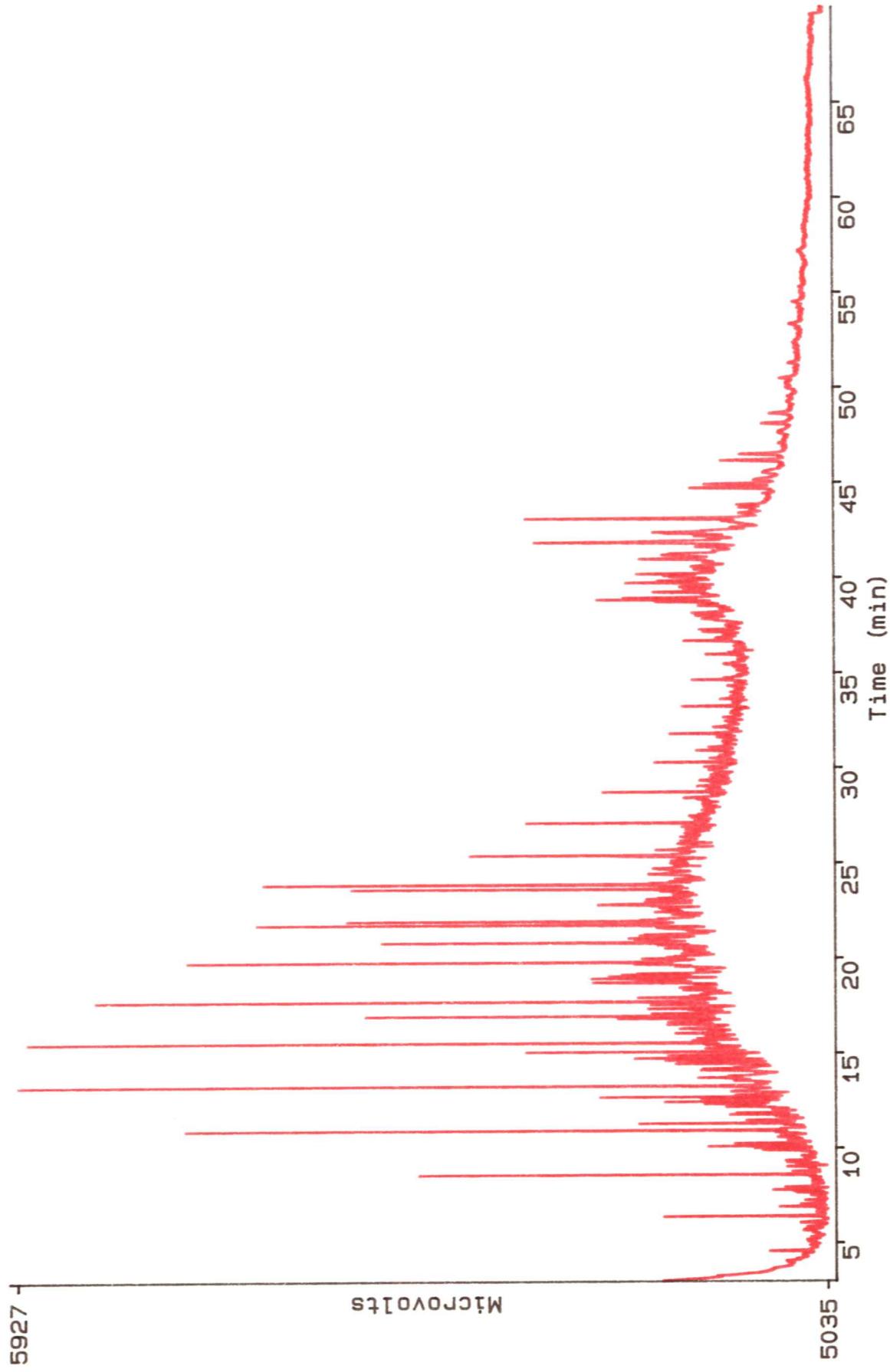


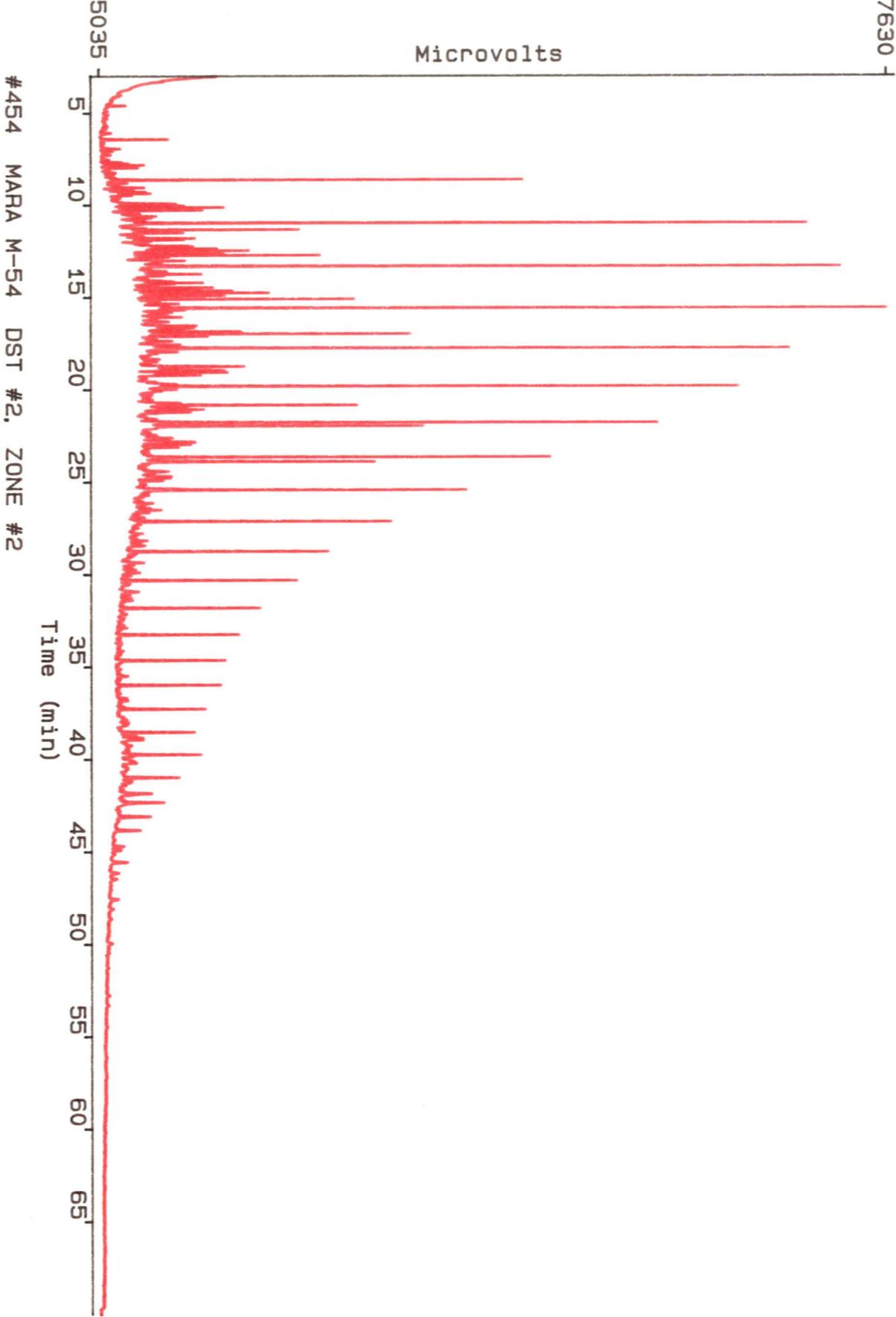


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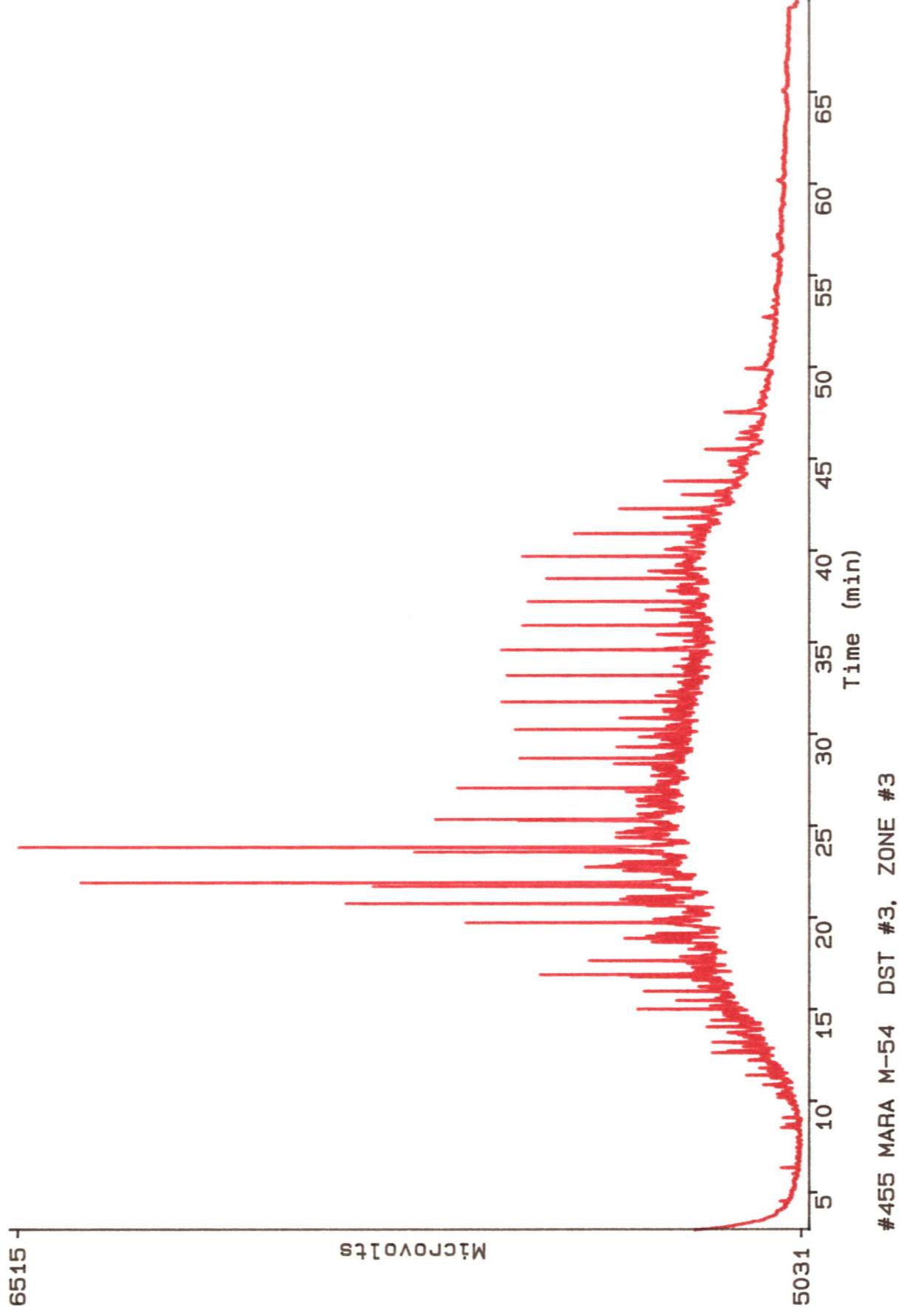


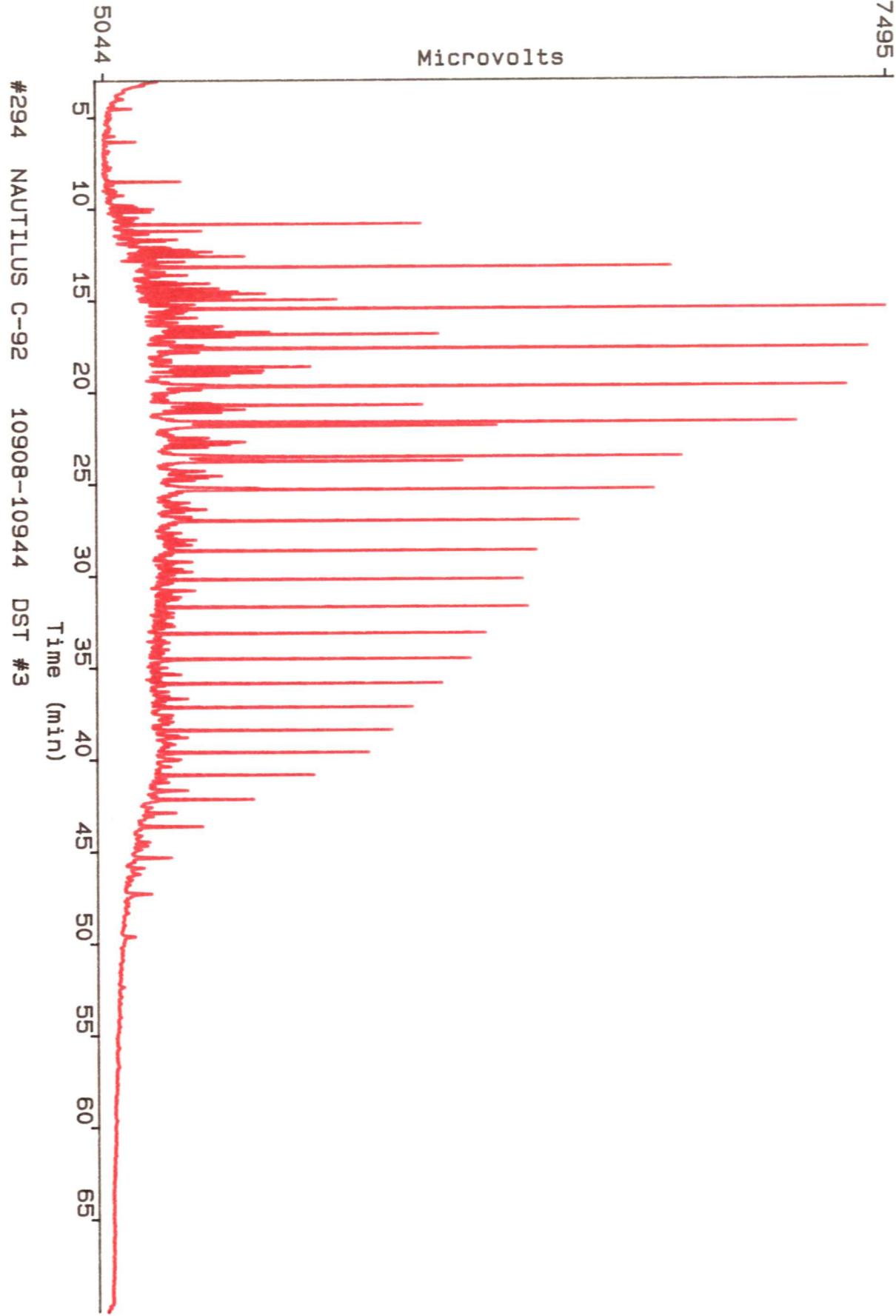


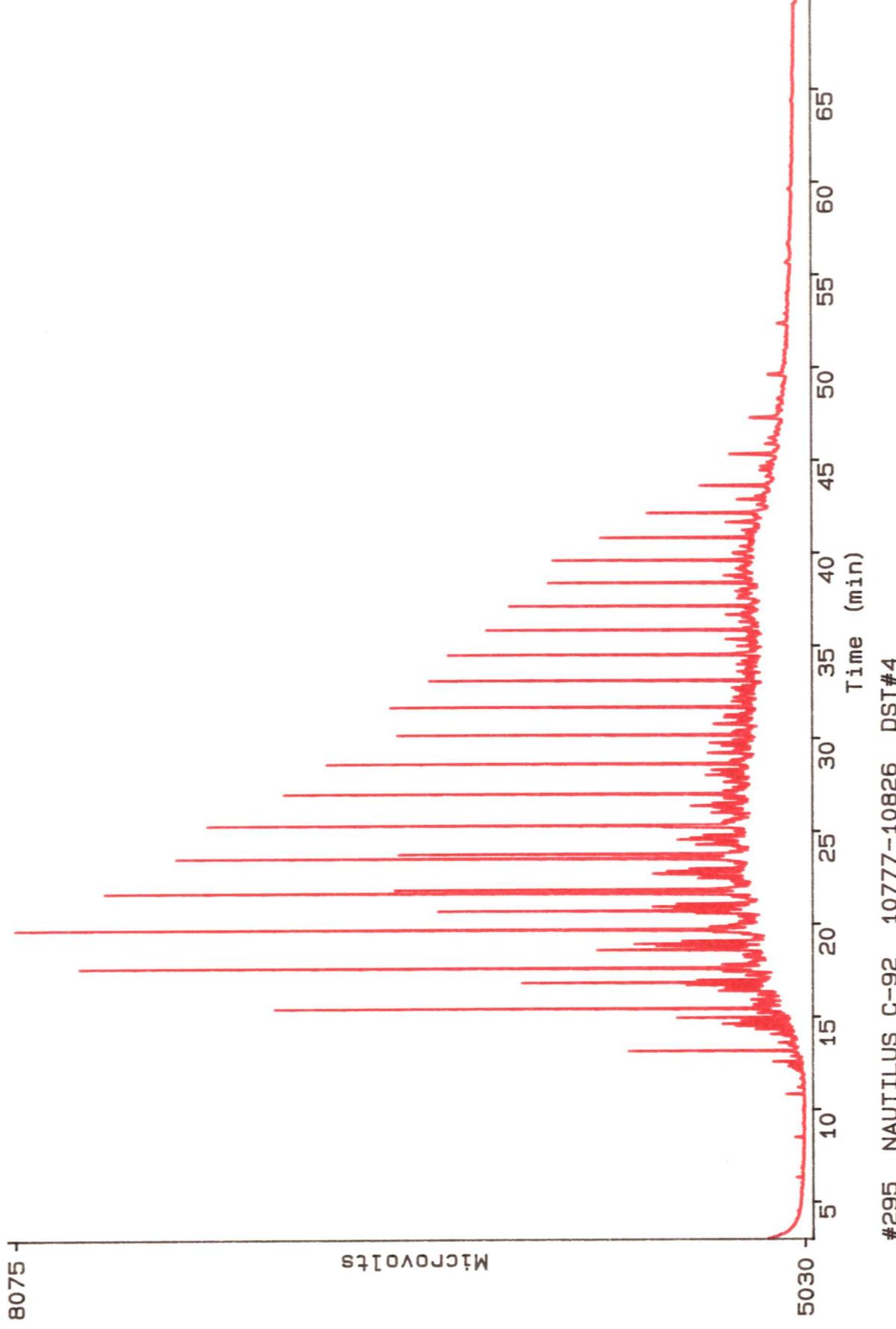




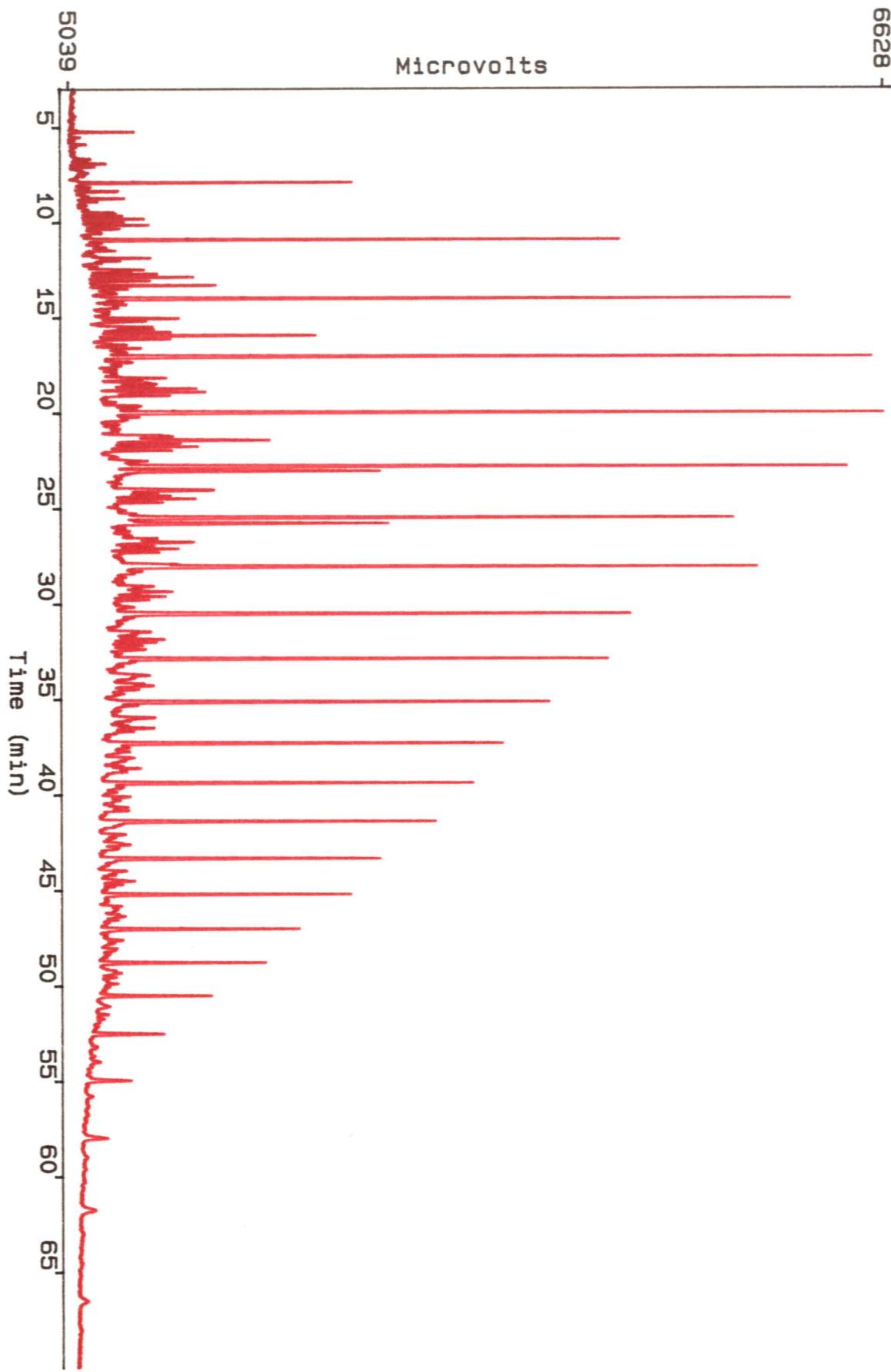
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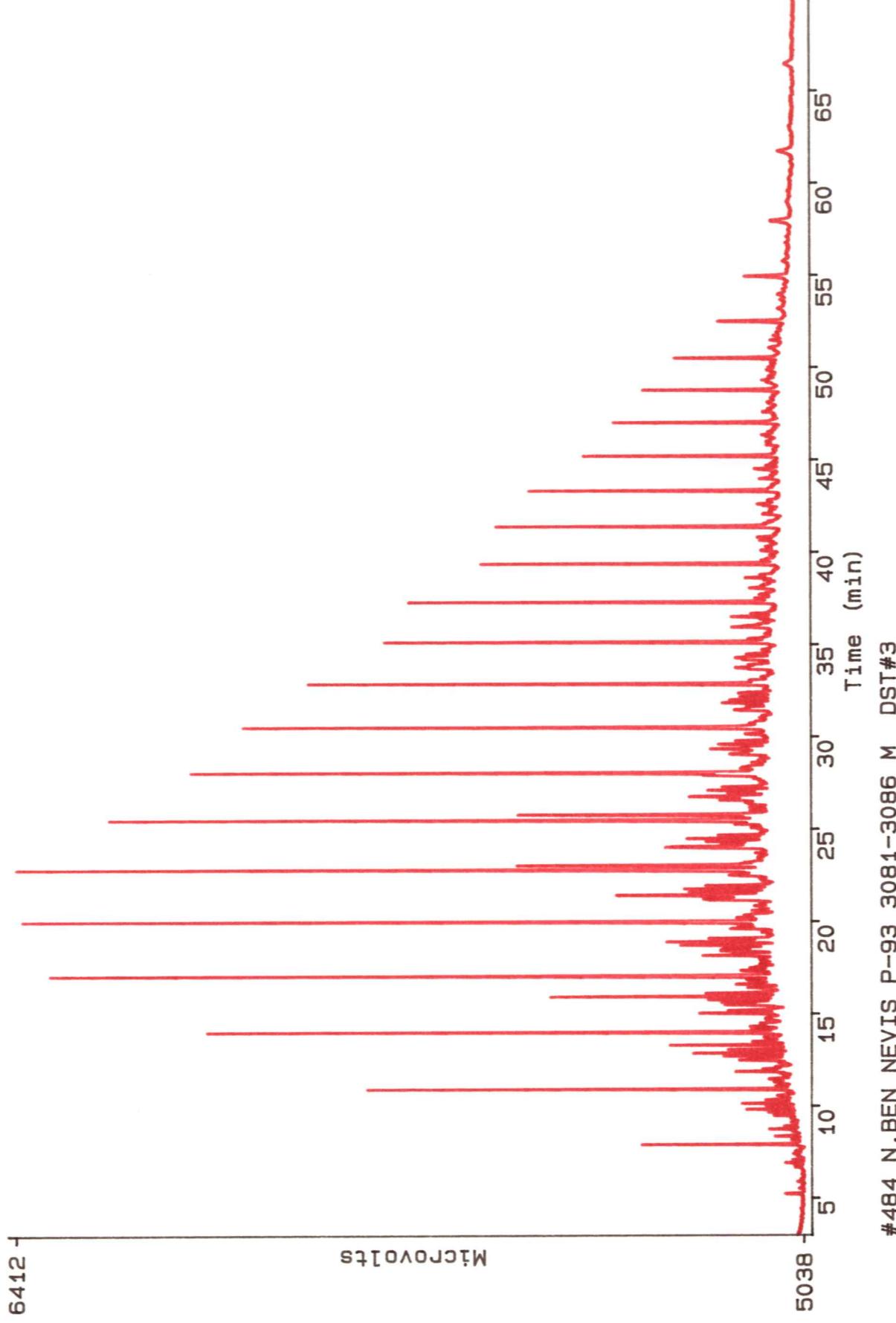


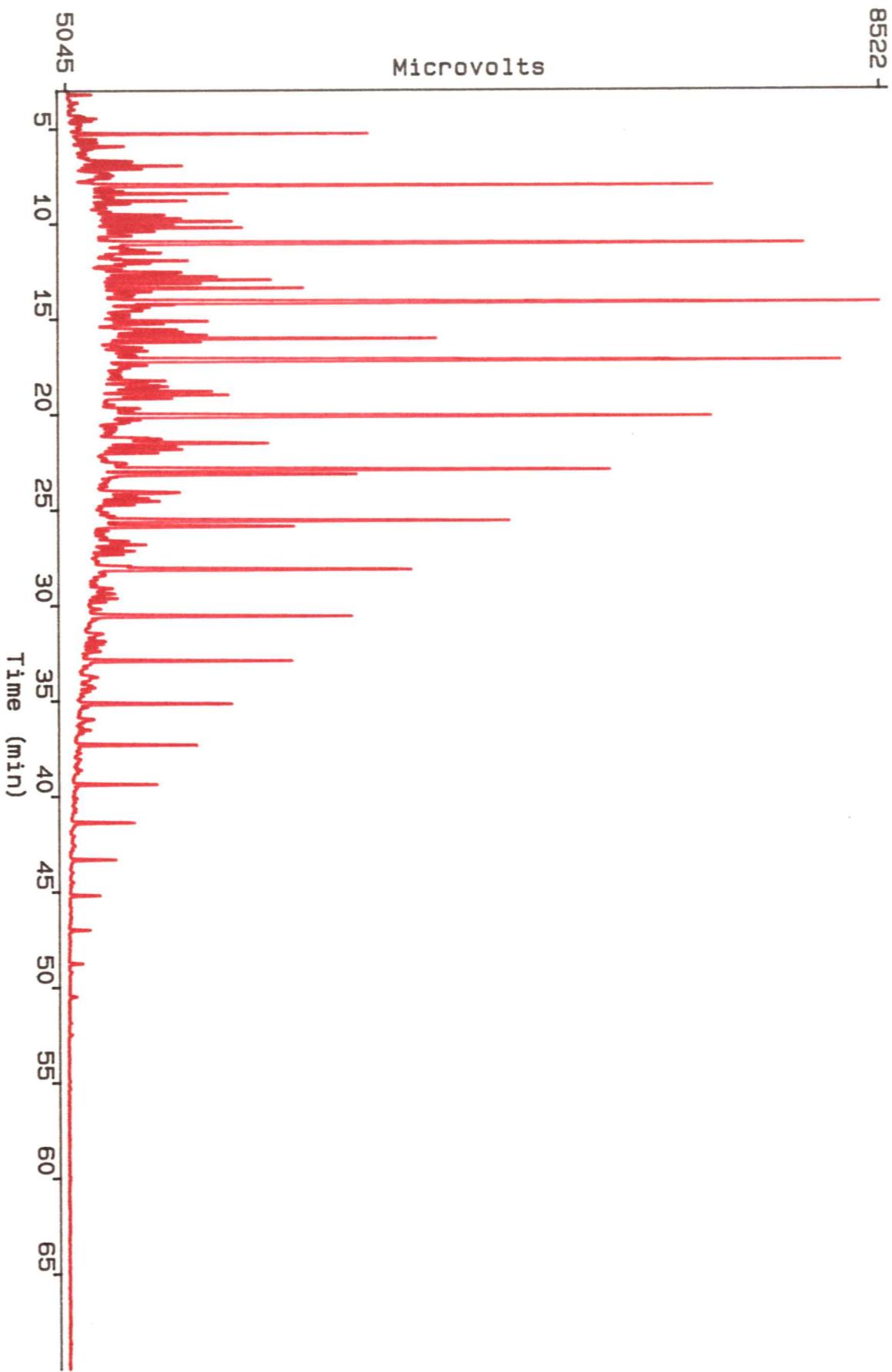




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8437 -

MICROVOLTS

5036

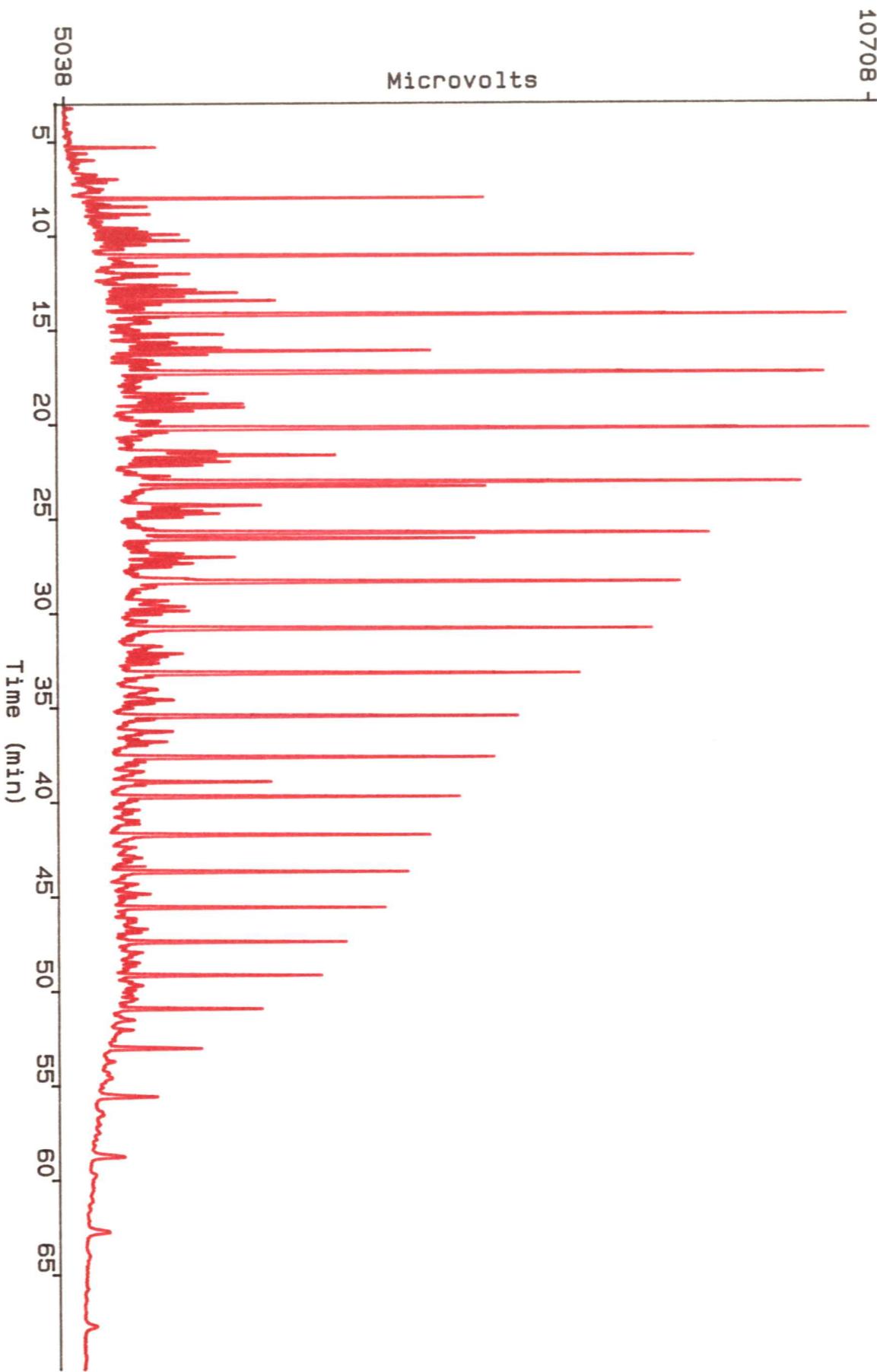
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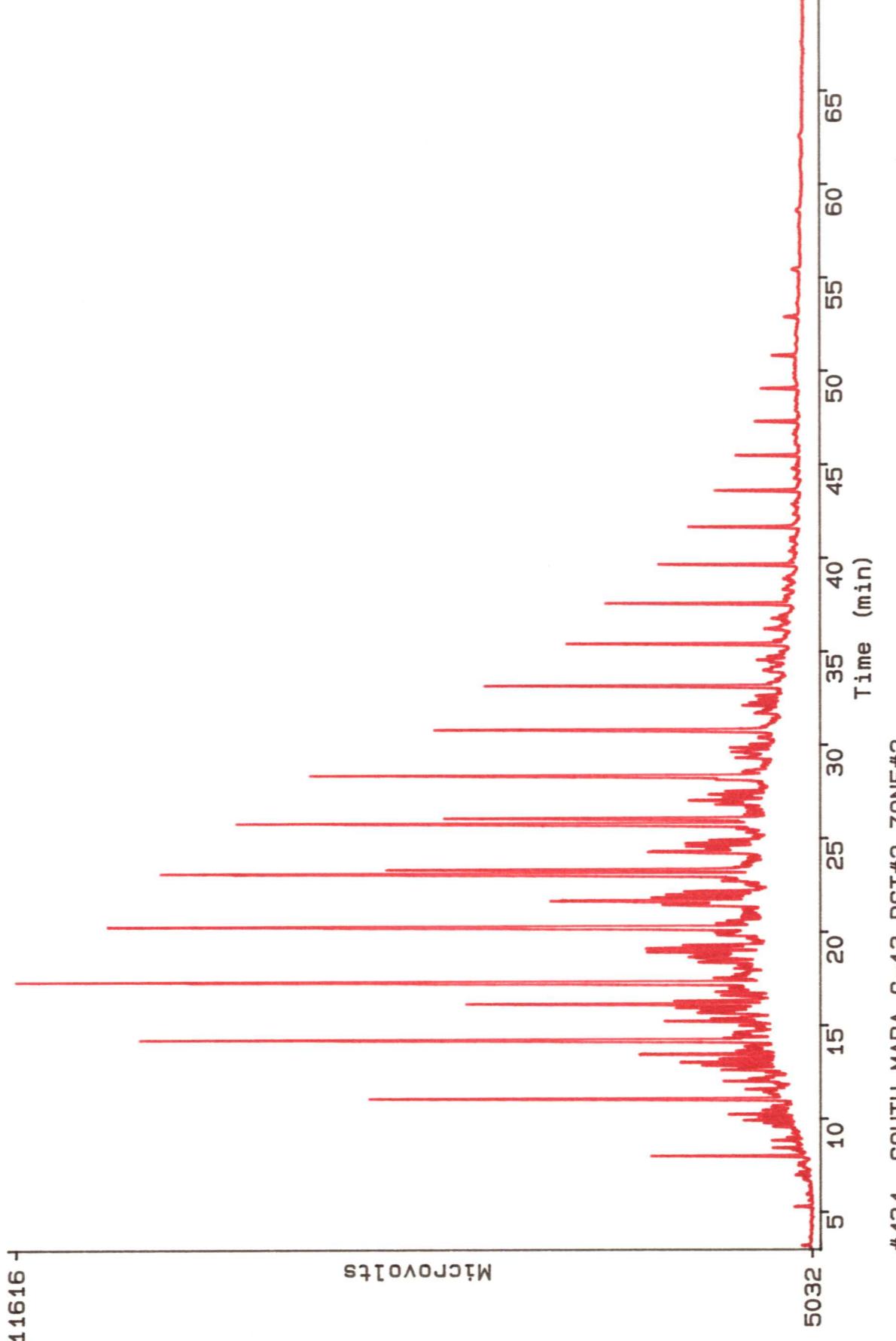
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55' 60' 65'

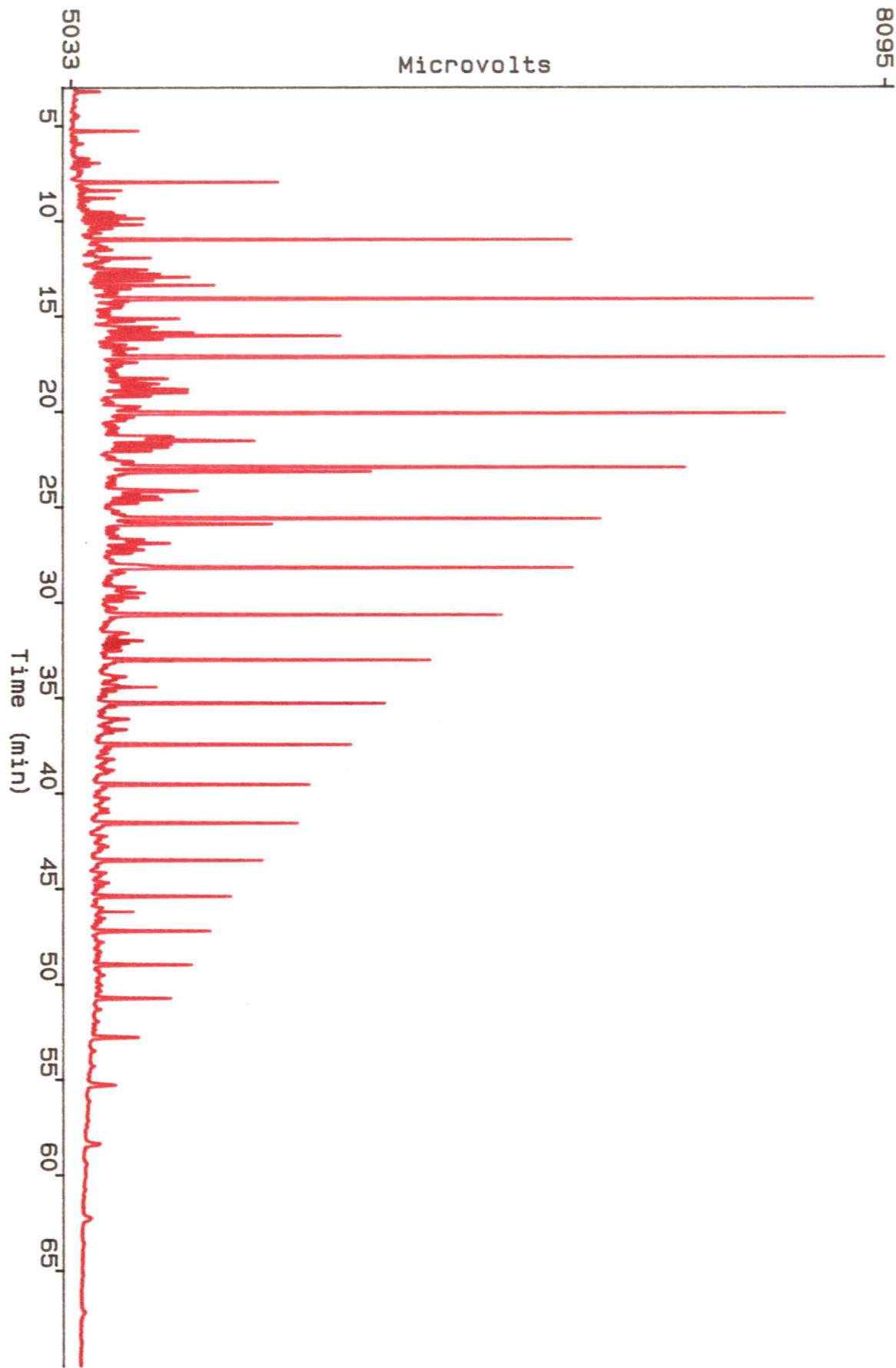
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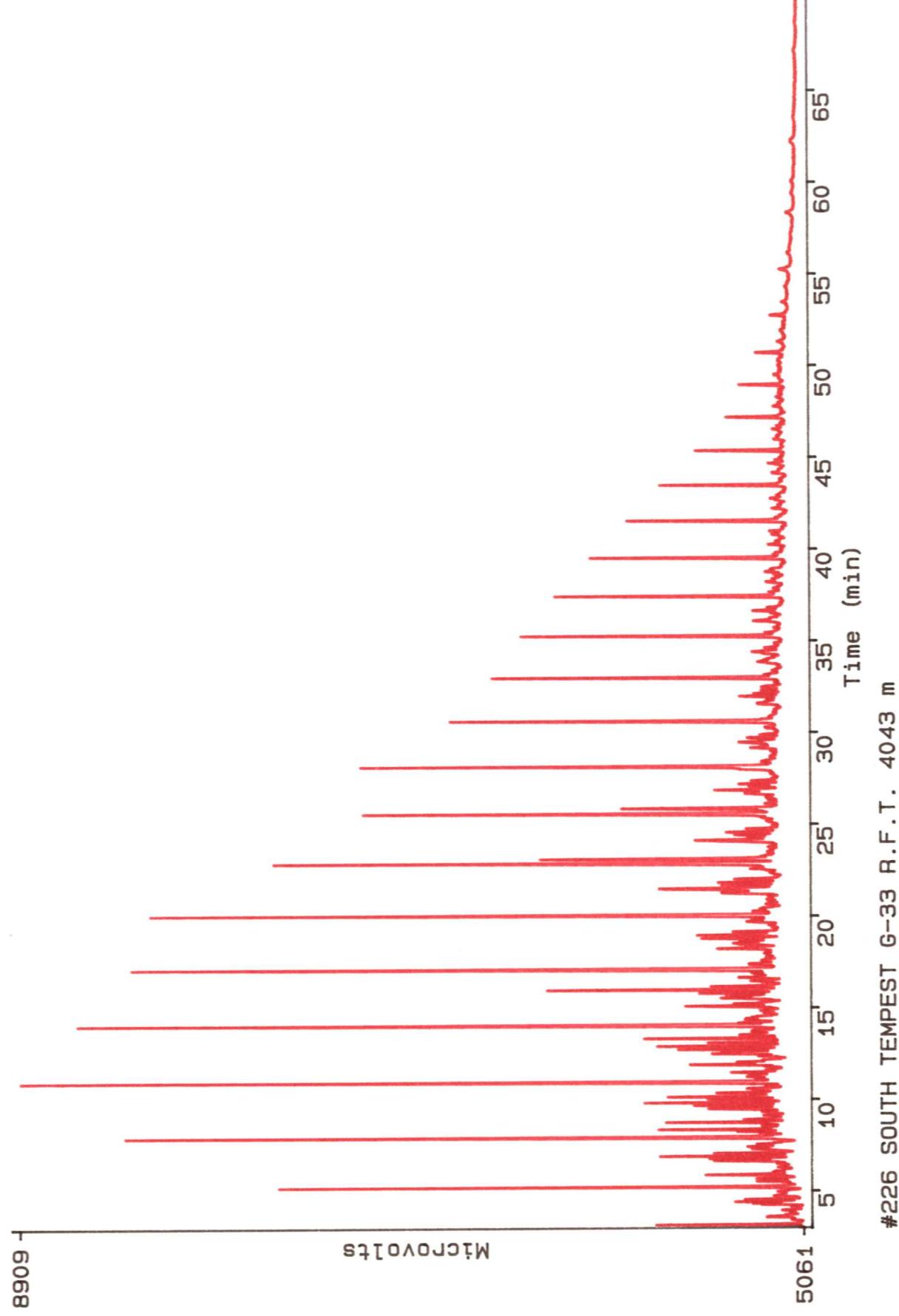
#433 SOUTH MARA C-13 DST#1, ZONE#1



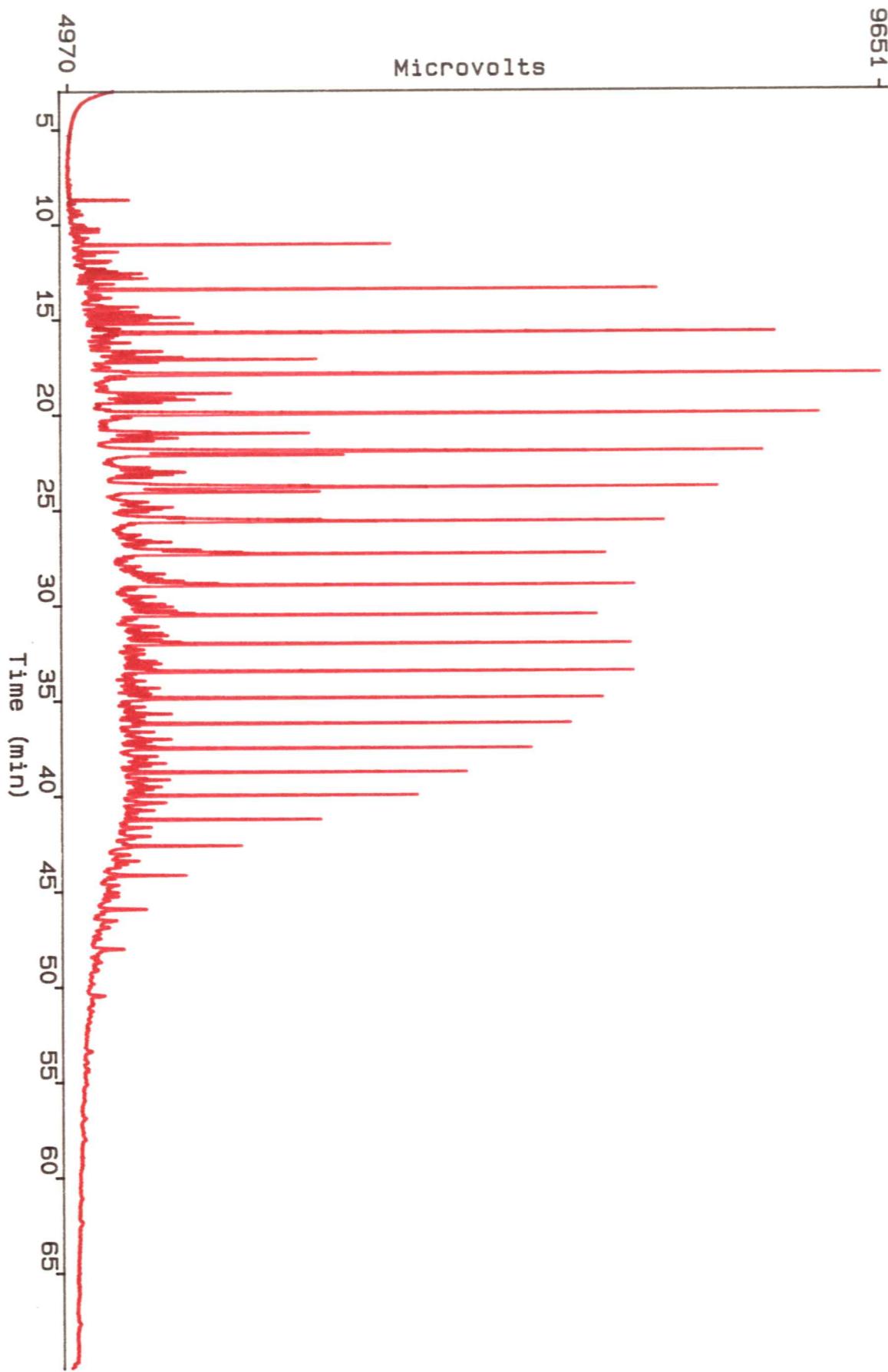


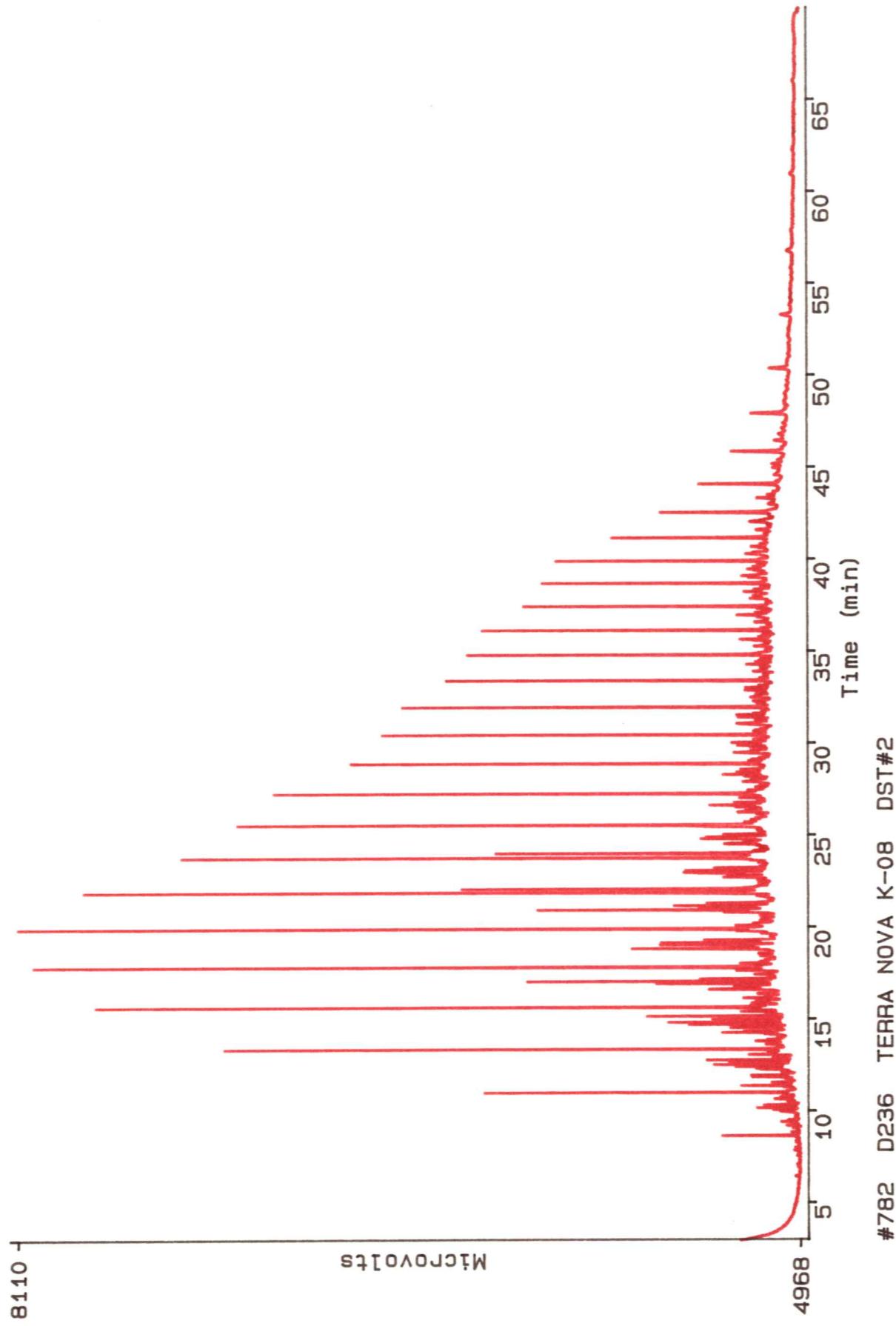
#227 SOUTH TEMPEST R.F.T. 6-88 4113.5 m



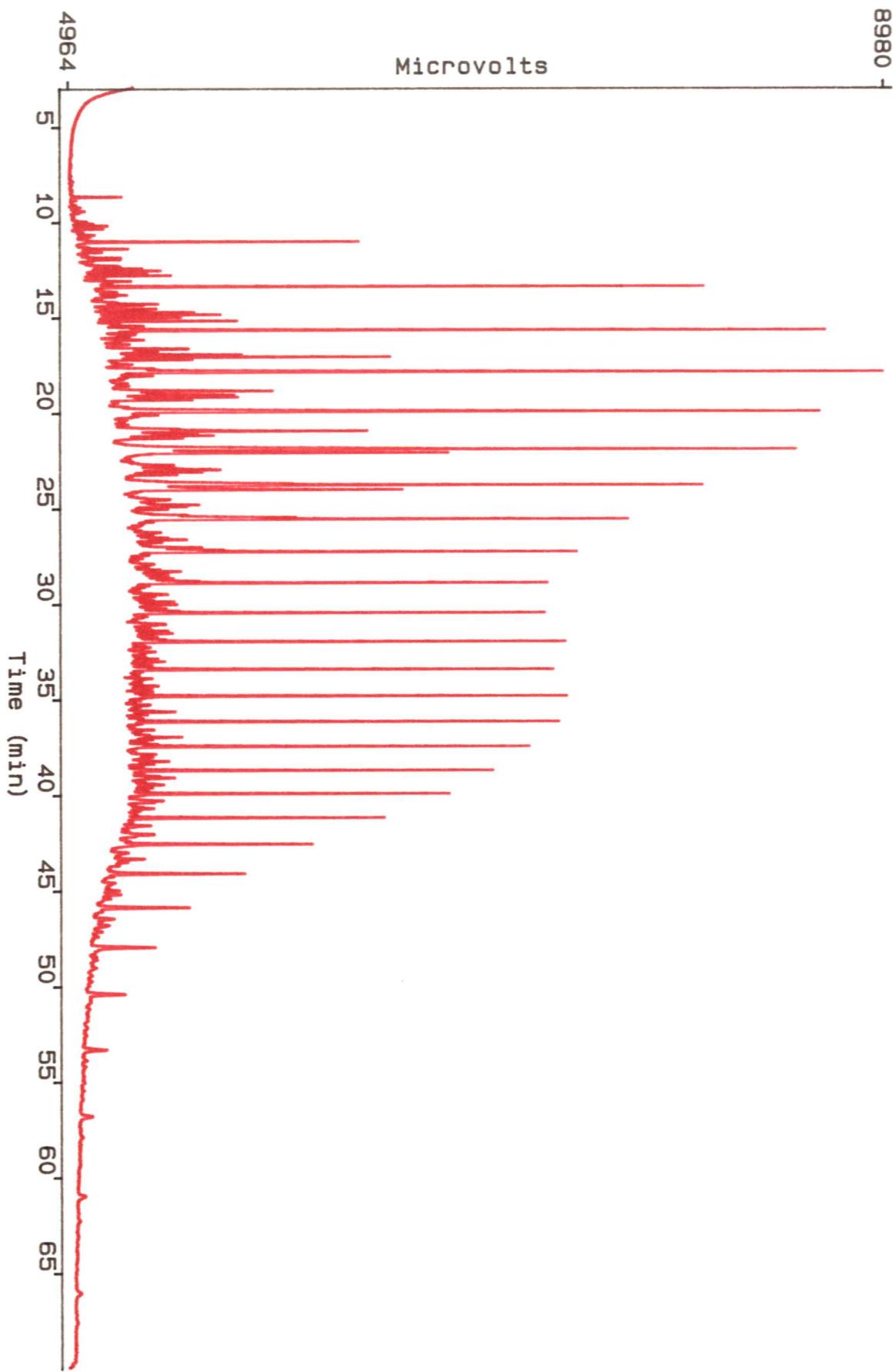


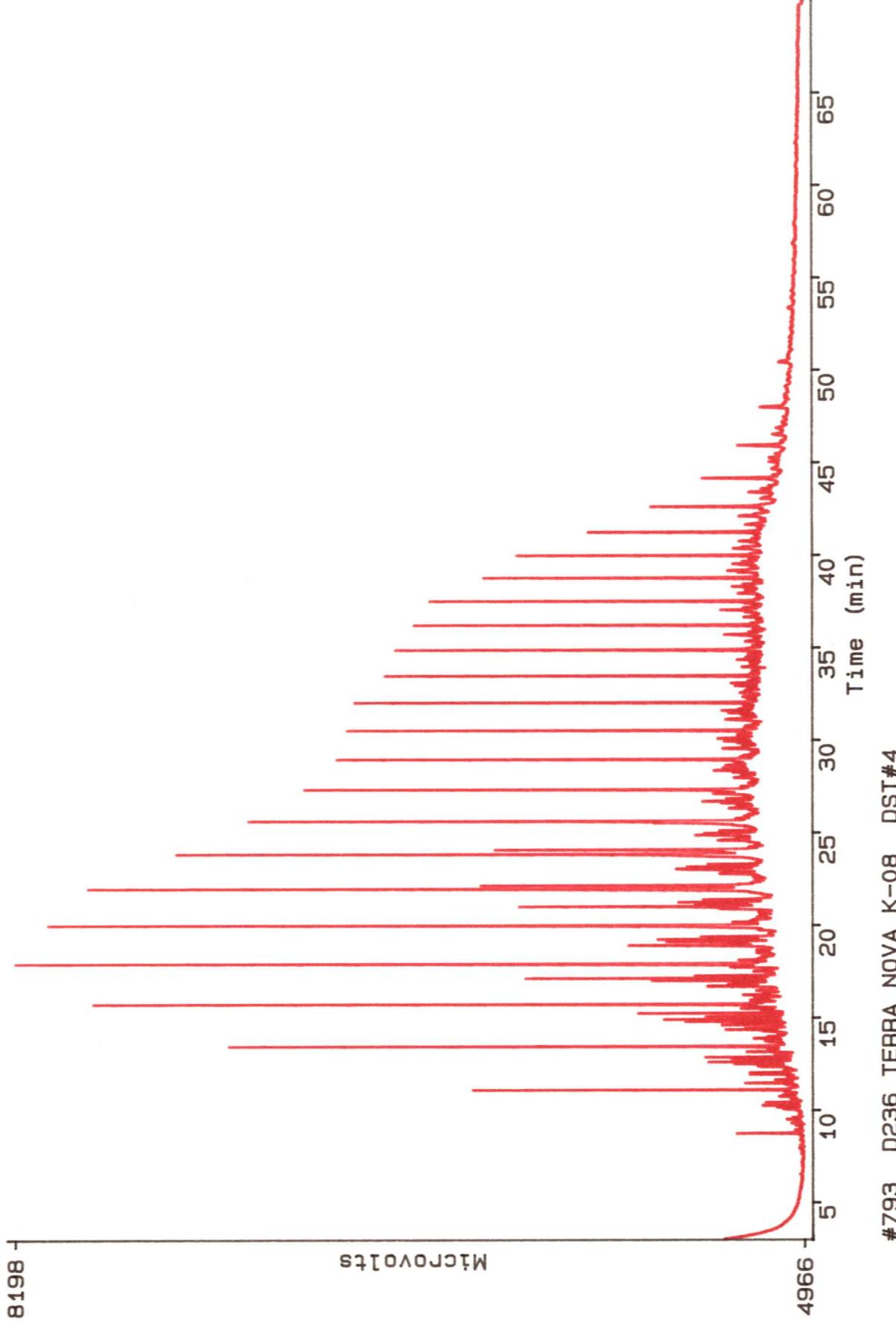
#783 D236 TERRA NOVA K-08 DST#1



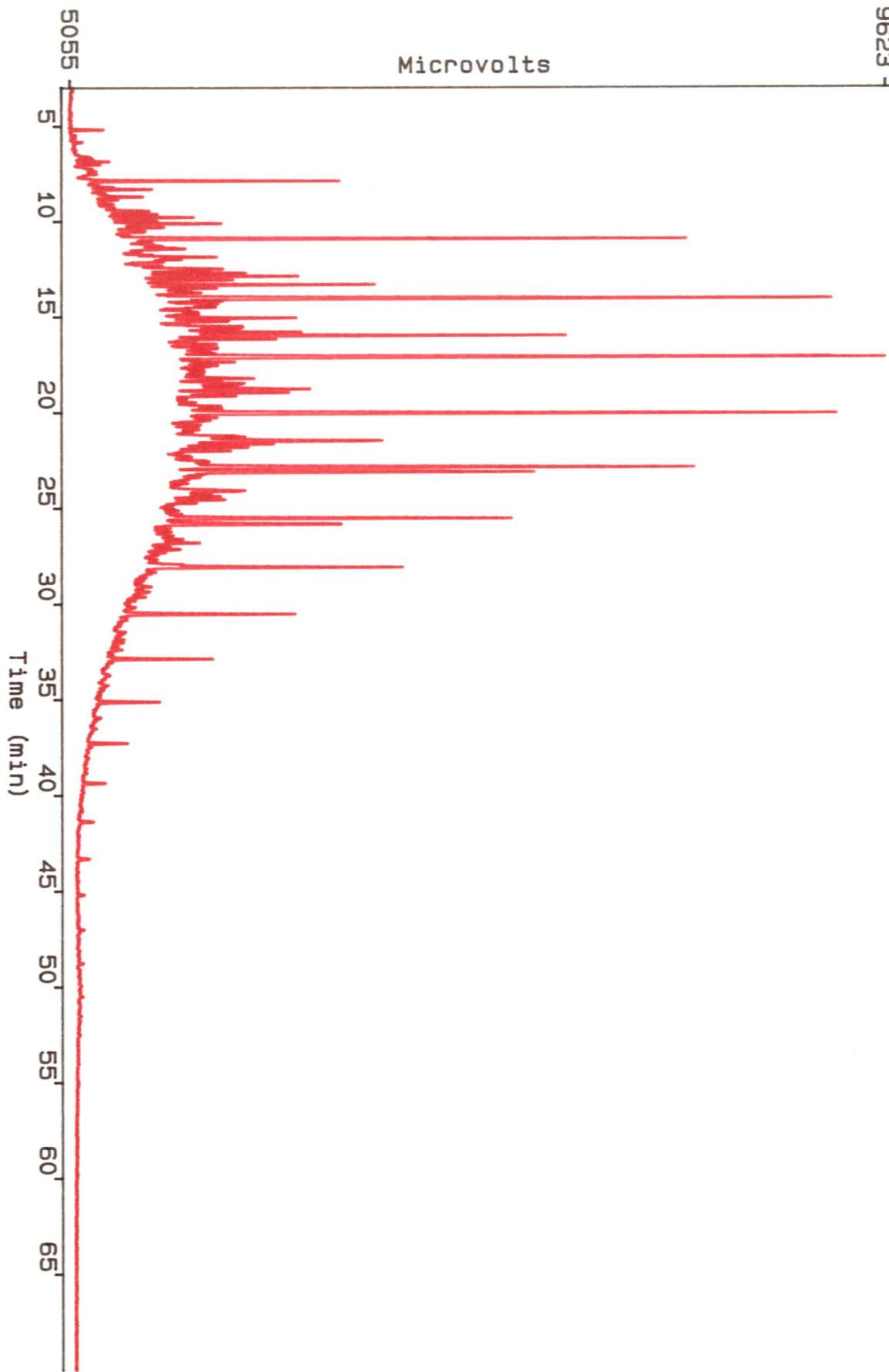


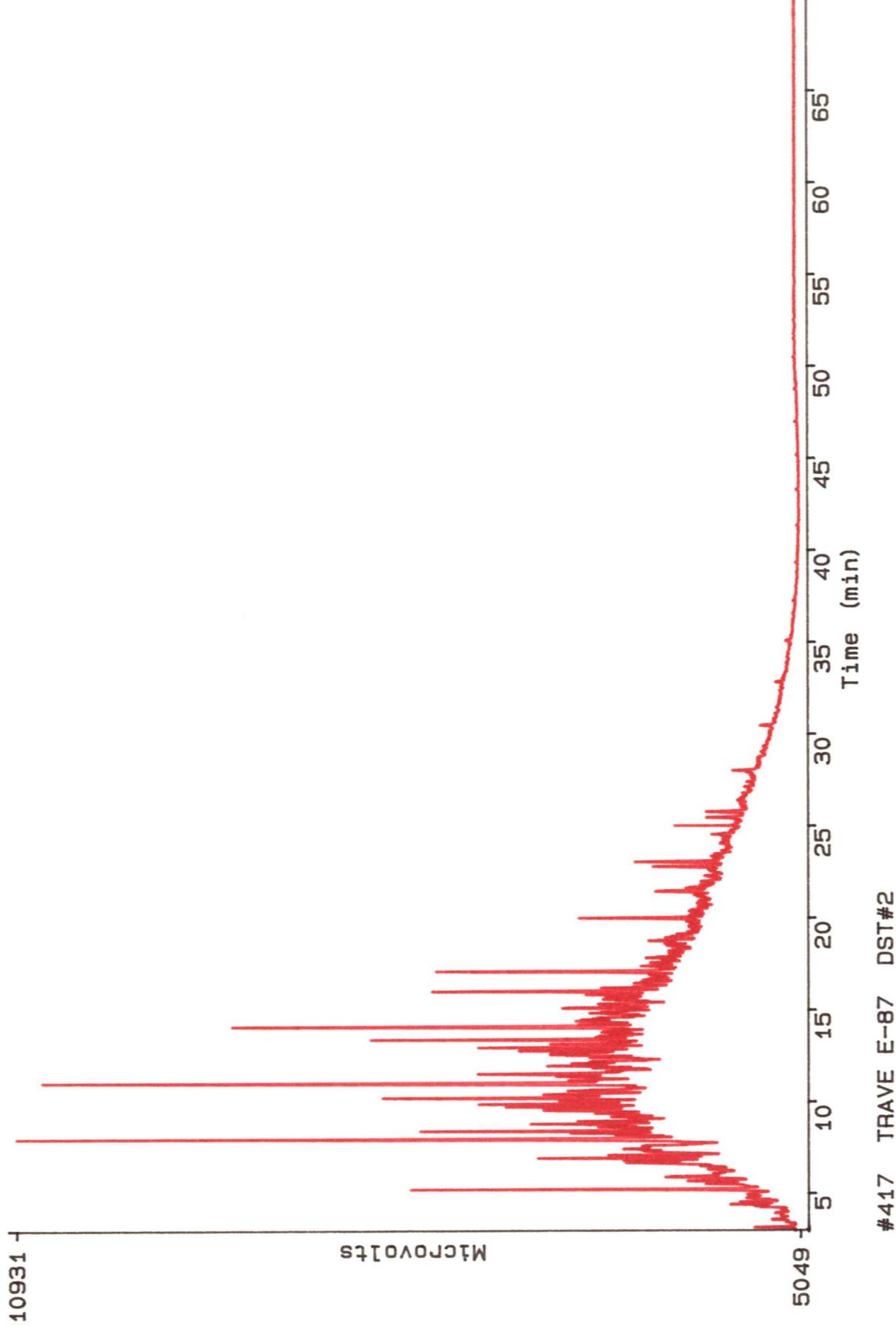
#781 D236 TERRA NOVA K-08 DST#3

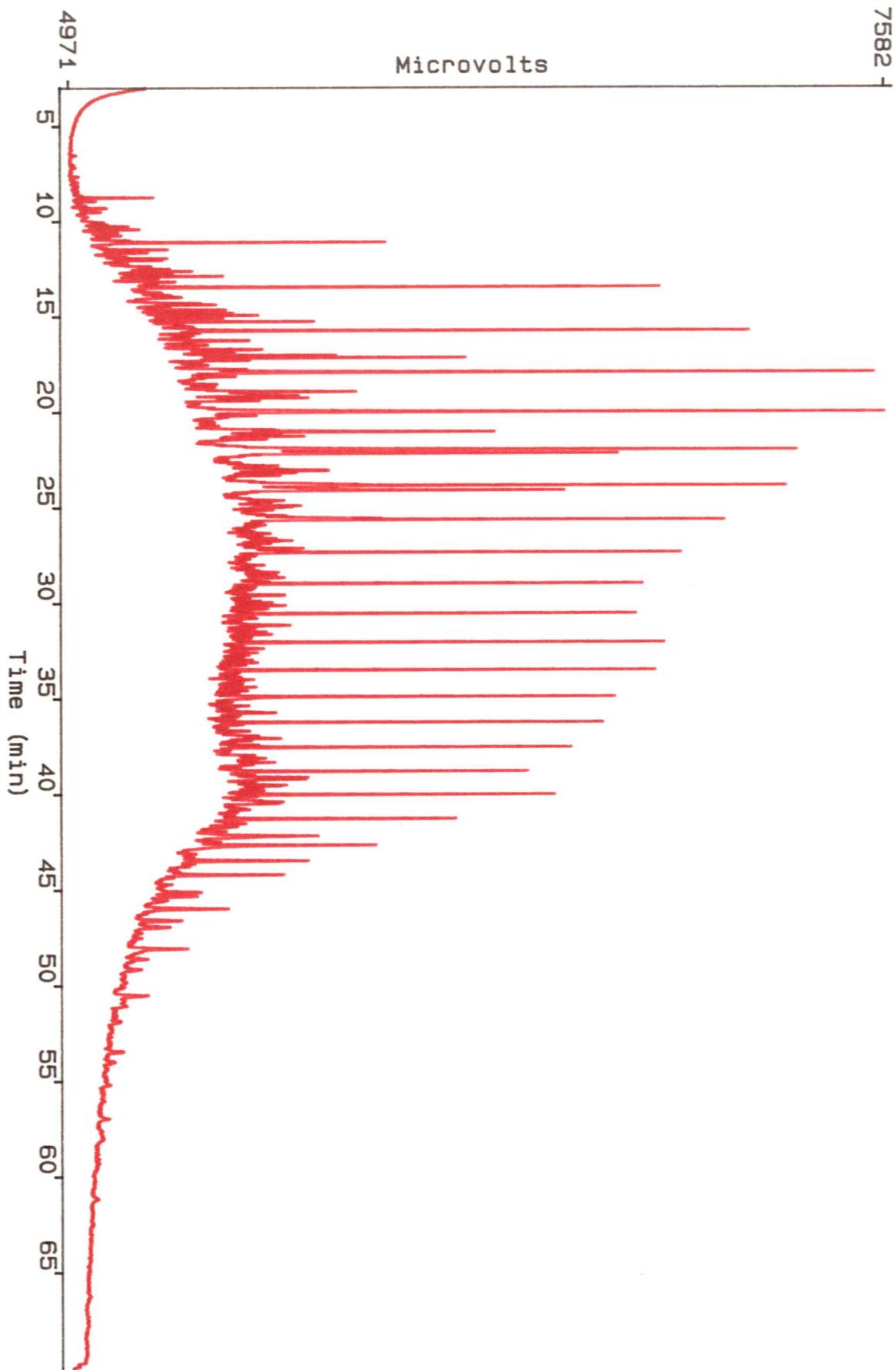




#416 TRAVE E-87 DST#1



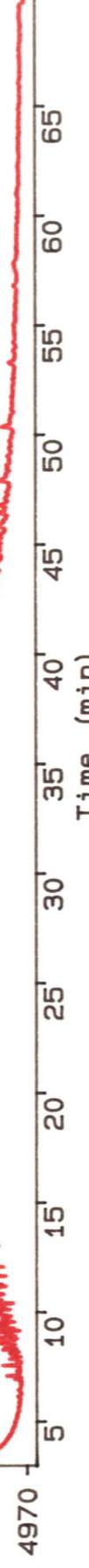




#775 D258 W.BEN NEVIS B-75 DST#6, ZONE 2

7493

MICROVOLTS

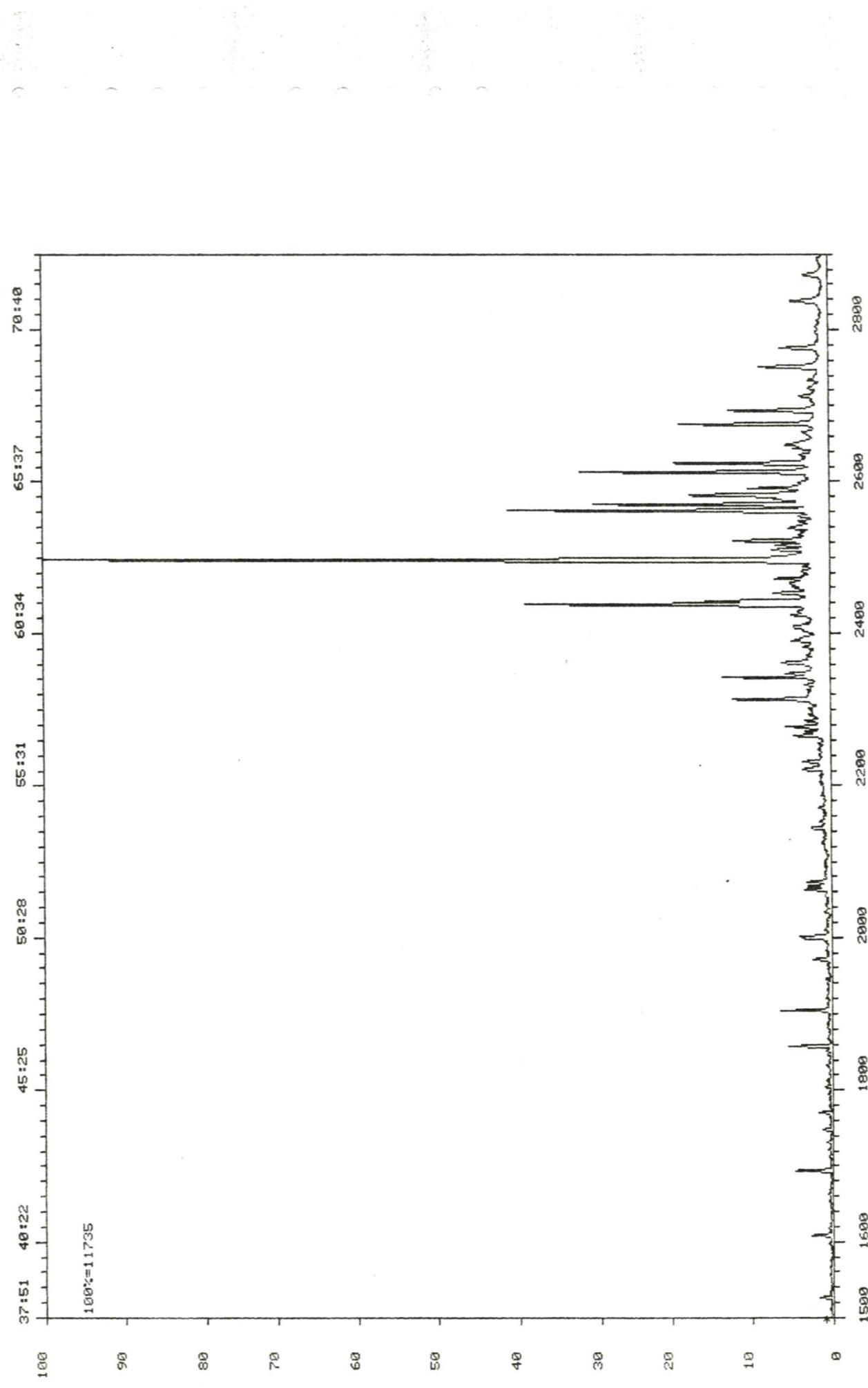


#774 D258 W.BEN NEVIS B-75 DST#8, ZONE 5

DS-55 CROSS SCAN REPORT, RUN: 202650001

HIBERNIA K-18 DST 13 2285-2294

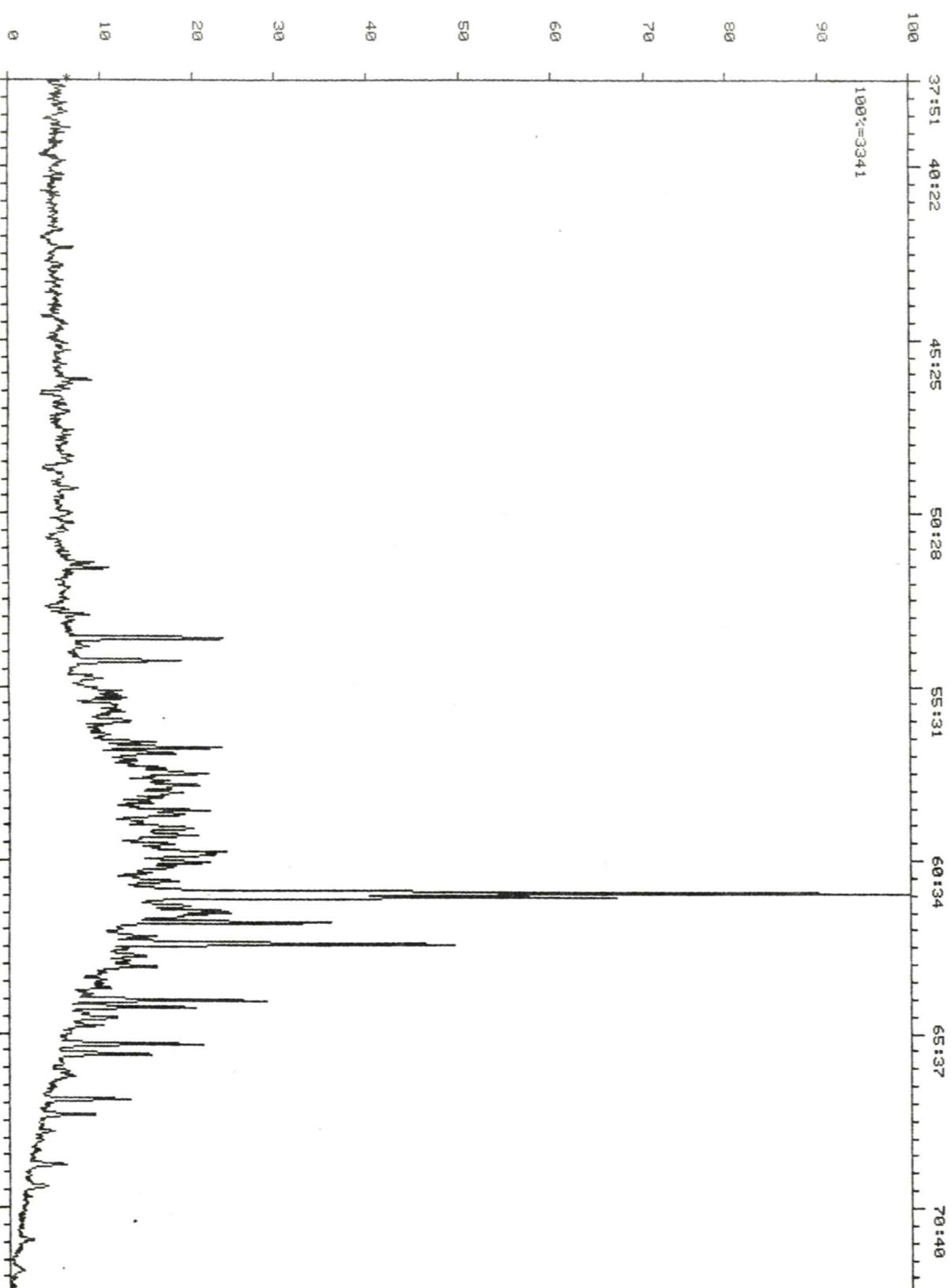
\* 191



DS-55 CROSS SCAN REPORT, RUN: 202650001

HIBERNIA K-18 DST 13 2285-2294

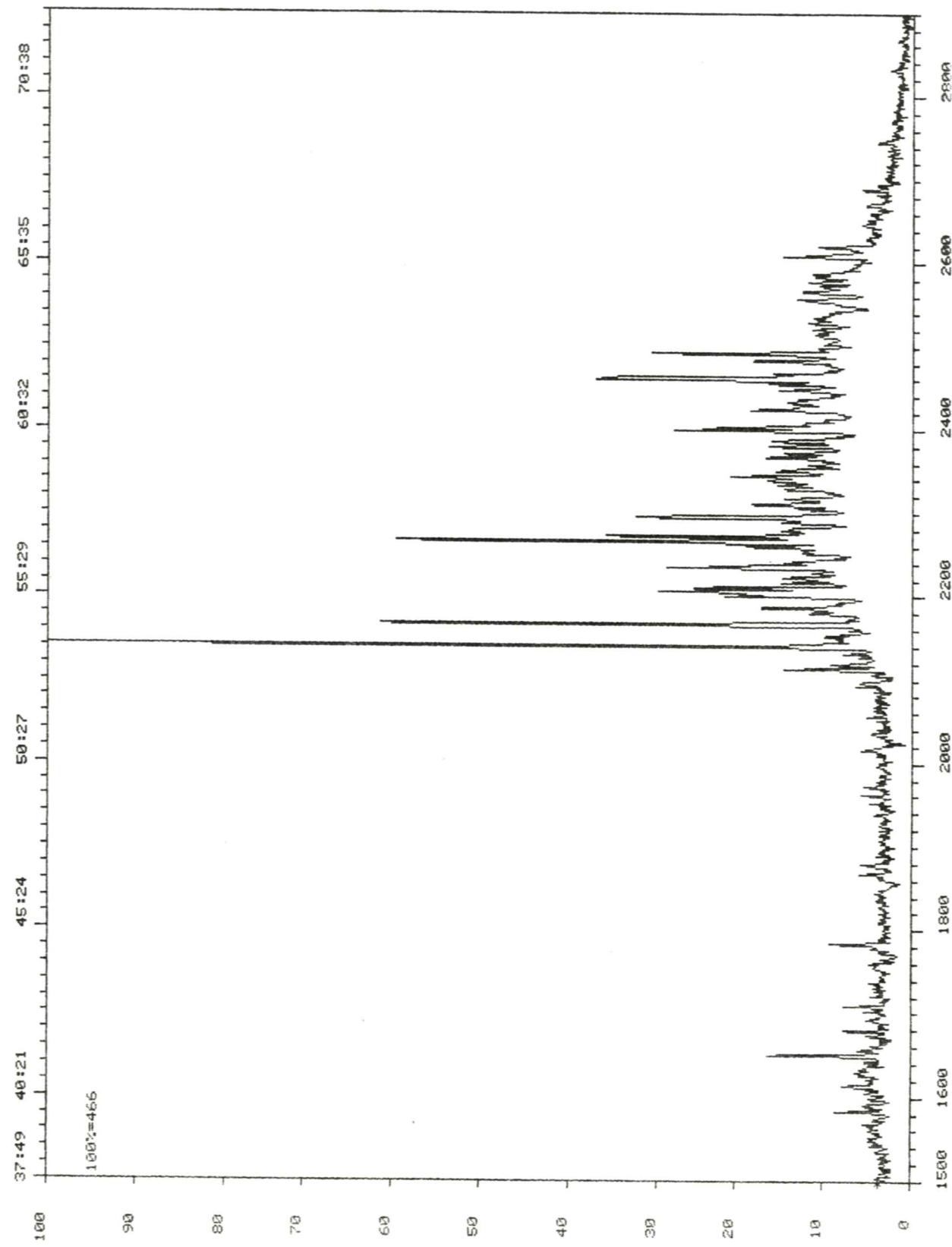
\* 177



DS-55 CROSS SCAN REPORT, RUN: 201670001

HIBERNIA O-35 DST#2 2476-2467N

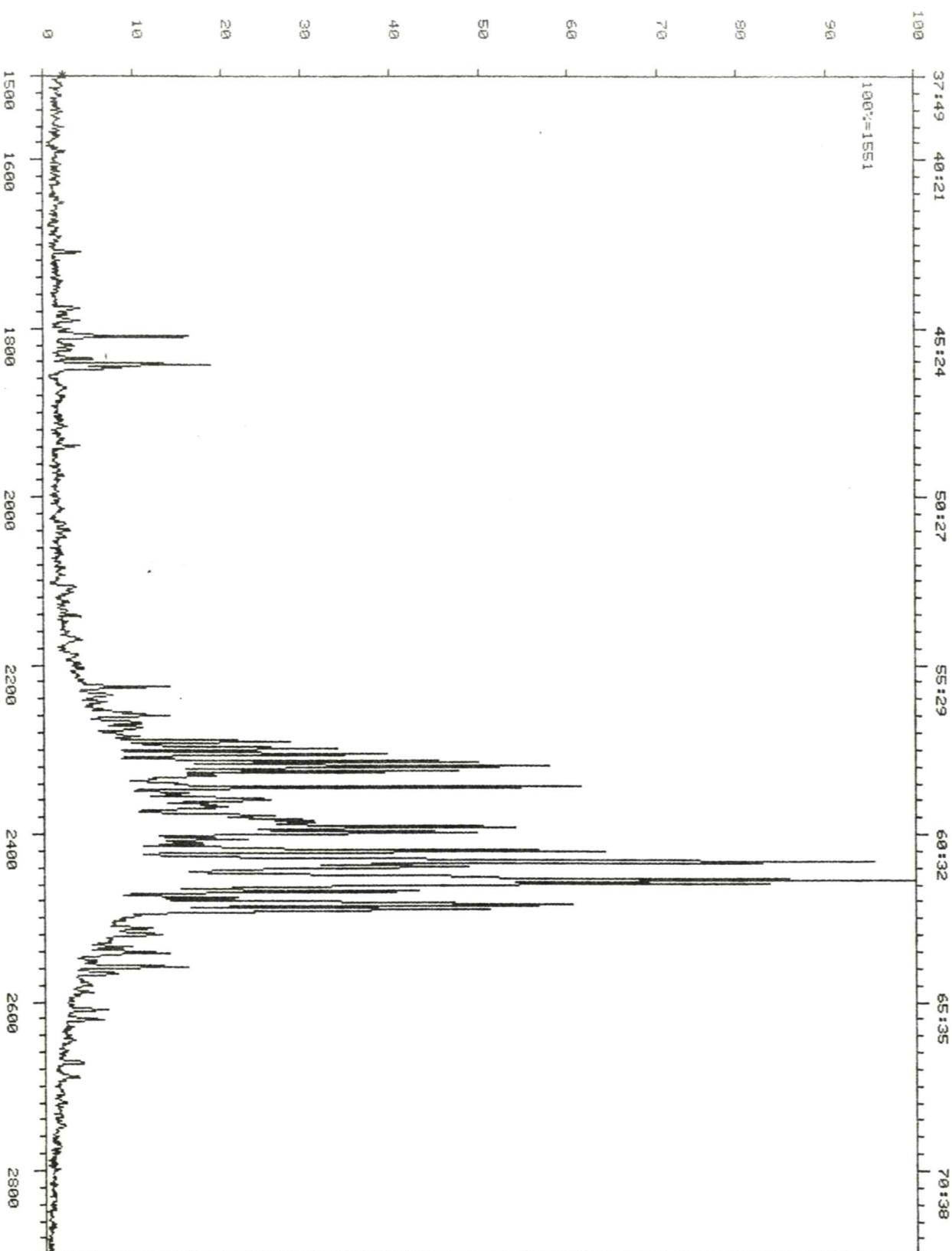
\* 259



DS-55 CROSS SCAN REPORT, RUN: 201670001

HIBERNIA 0-35 DST#2 2476-2467M

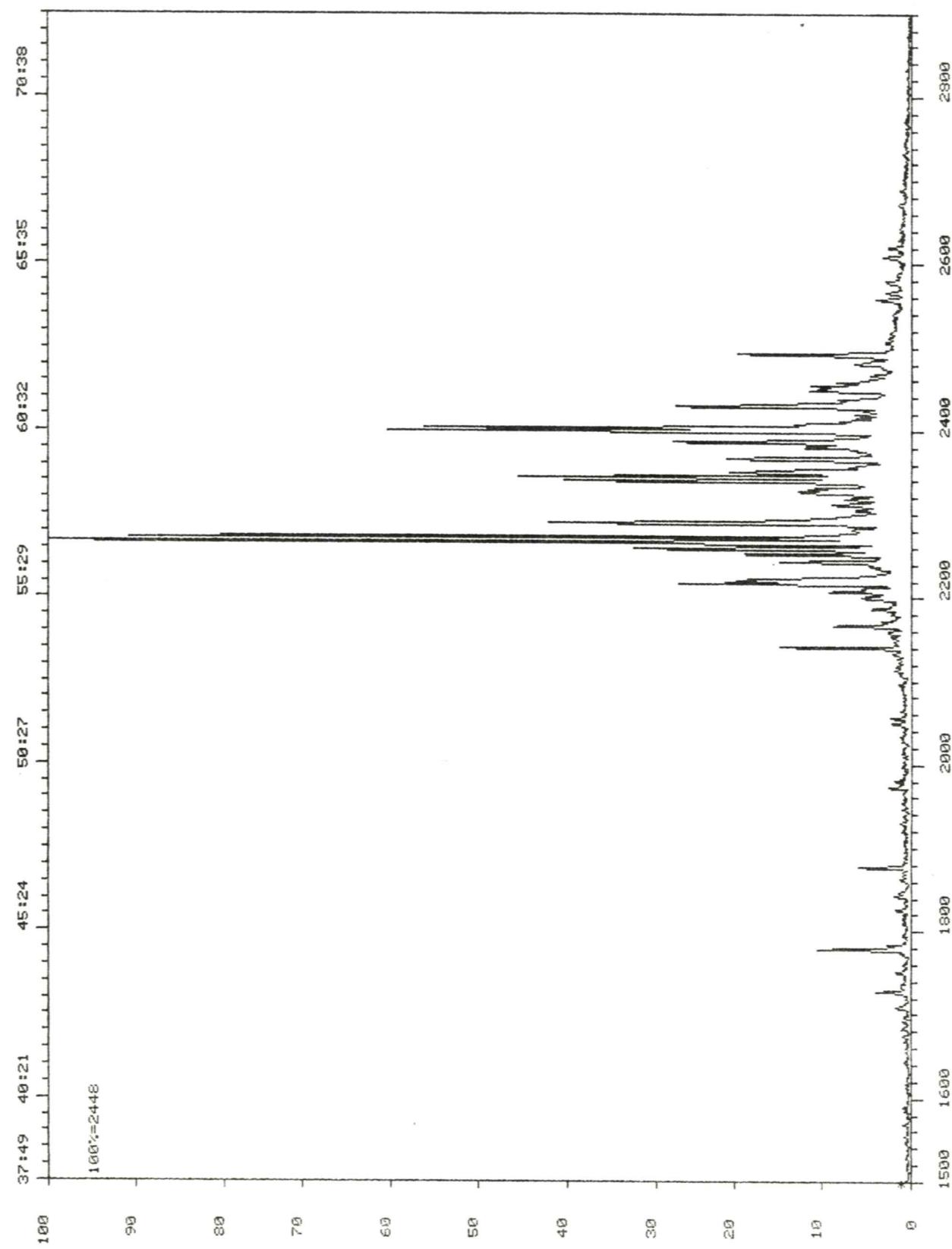
\* 231



DS-55 CROSS SCAN REPORT, RUN: 201670001

HIBERNIA 0-35 DST#2 2476-2467M

\* 218

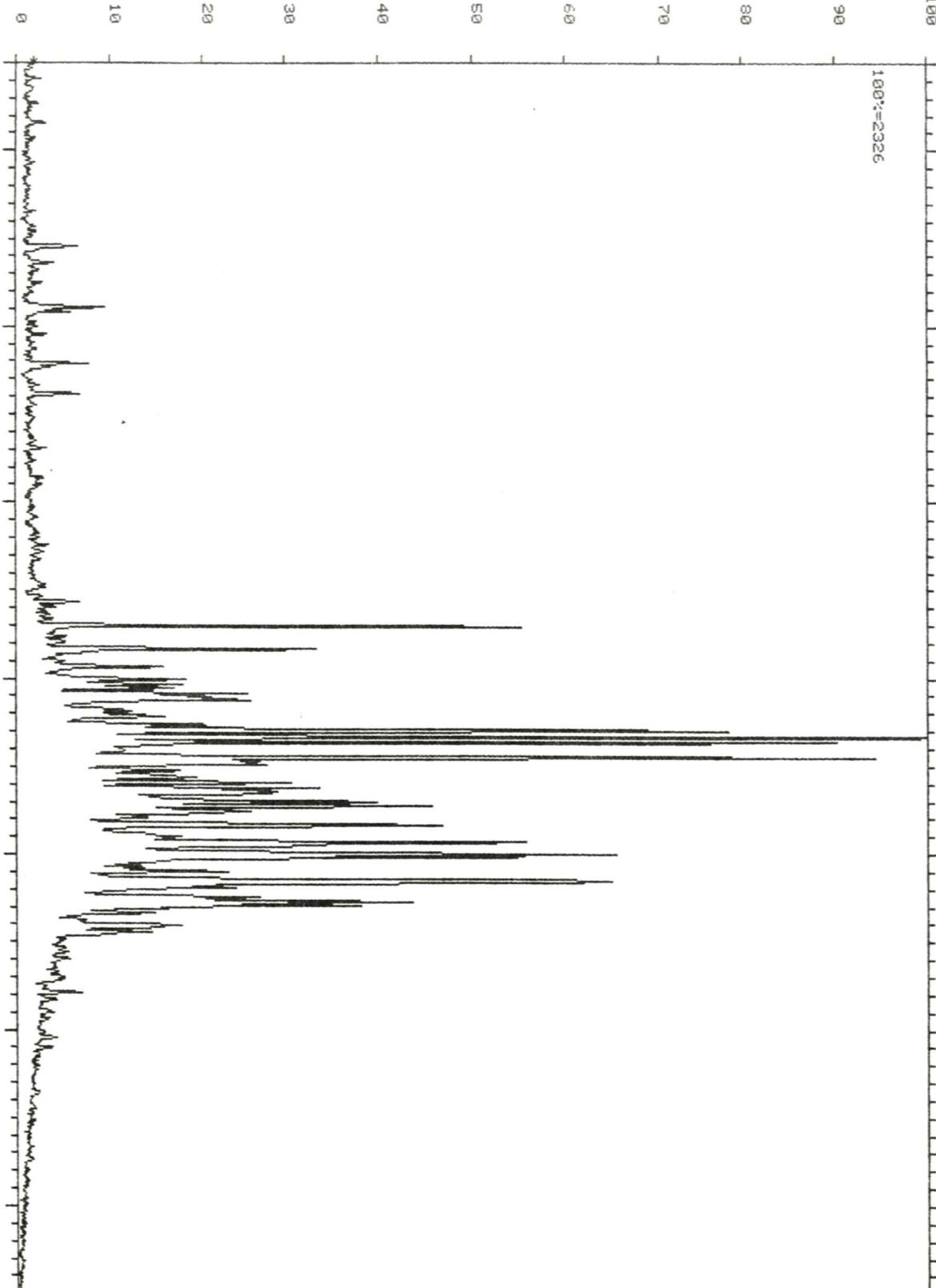


) DS-55 CROSS SCAN REPORT, RUN: 201670001

) HIBERNIA 0-35 DST#2 2476-2467M

) \* 217

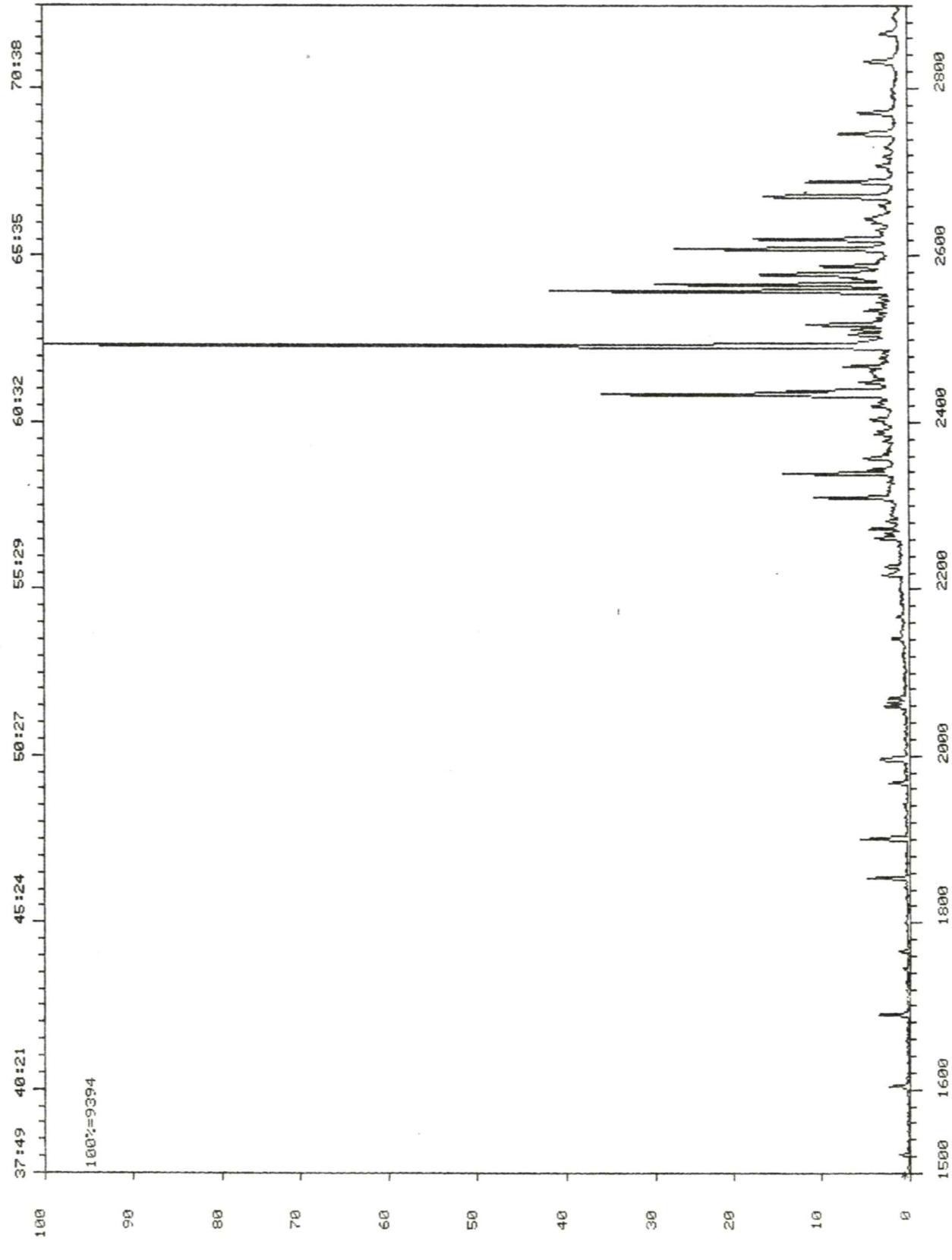
) 37:49 40:21 45:24 50:27 55:29 60:32 65:35 70:38  
100%:2326



DS-55 CROSS SCAN REPORT, RUN: 201670001

HIBERNIA 0-35 DST#2 2476-2467N

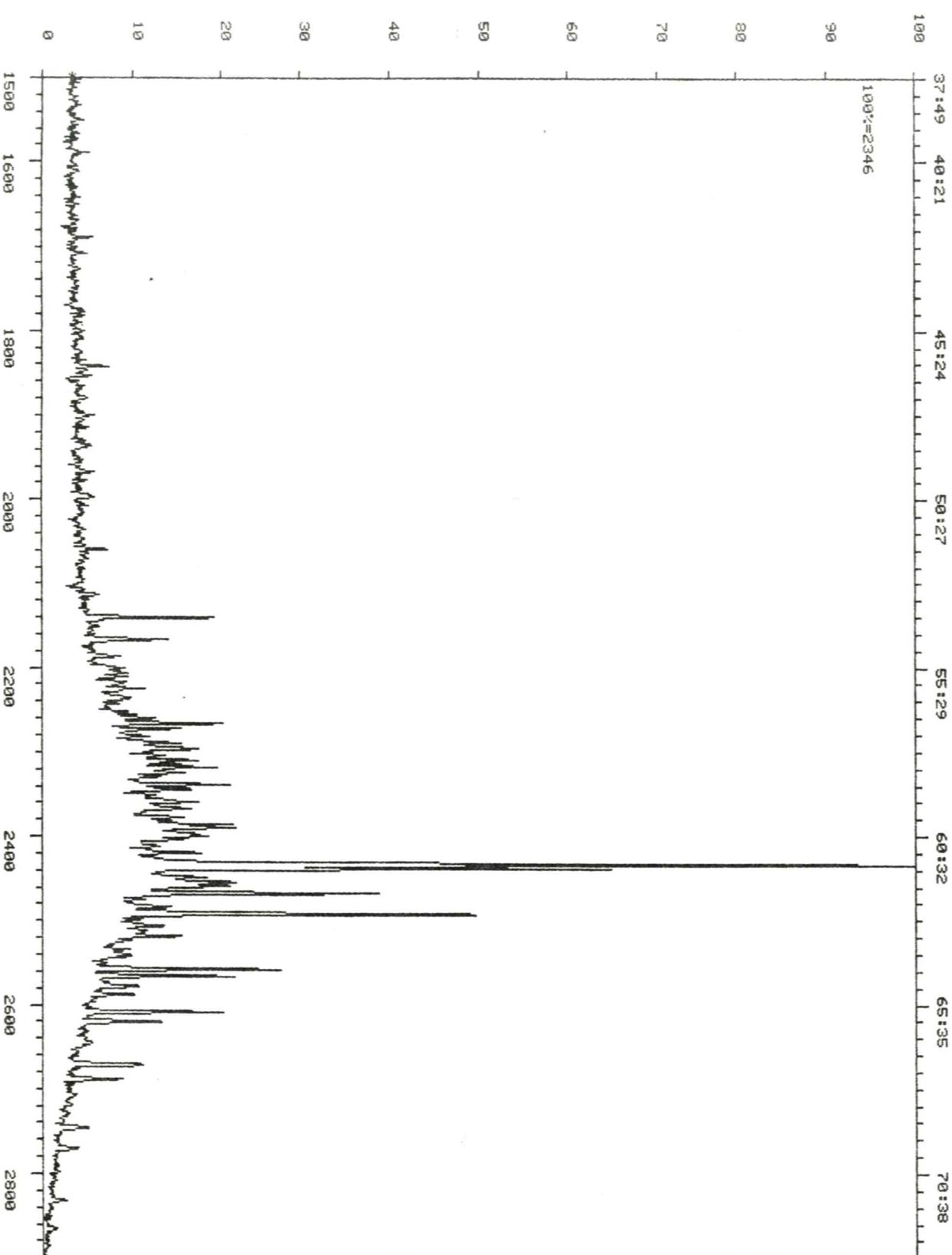
\* 191



NS-55 CROSS SCAN REPORT, RUN #: 201670001

HIBERNIA 0-35 DST#2 2476-2467H

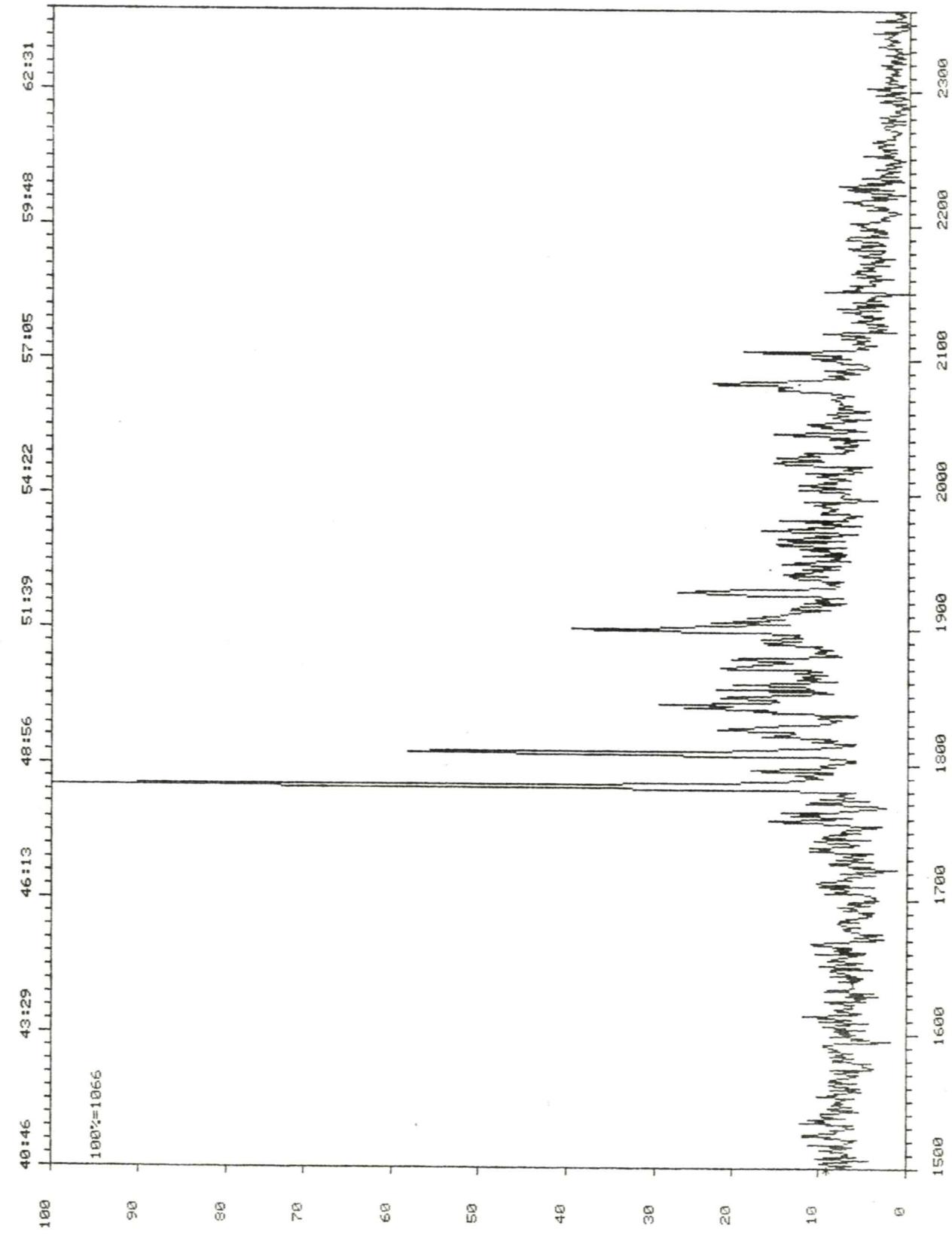
\* 177



DS-55 CROSS SCAN REPORT, RUN: HIB100001

HIBERNIA P-15 DST#11 2422-2443M

\* 259



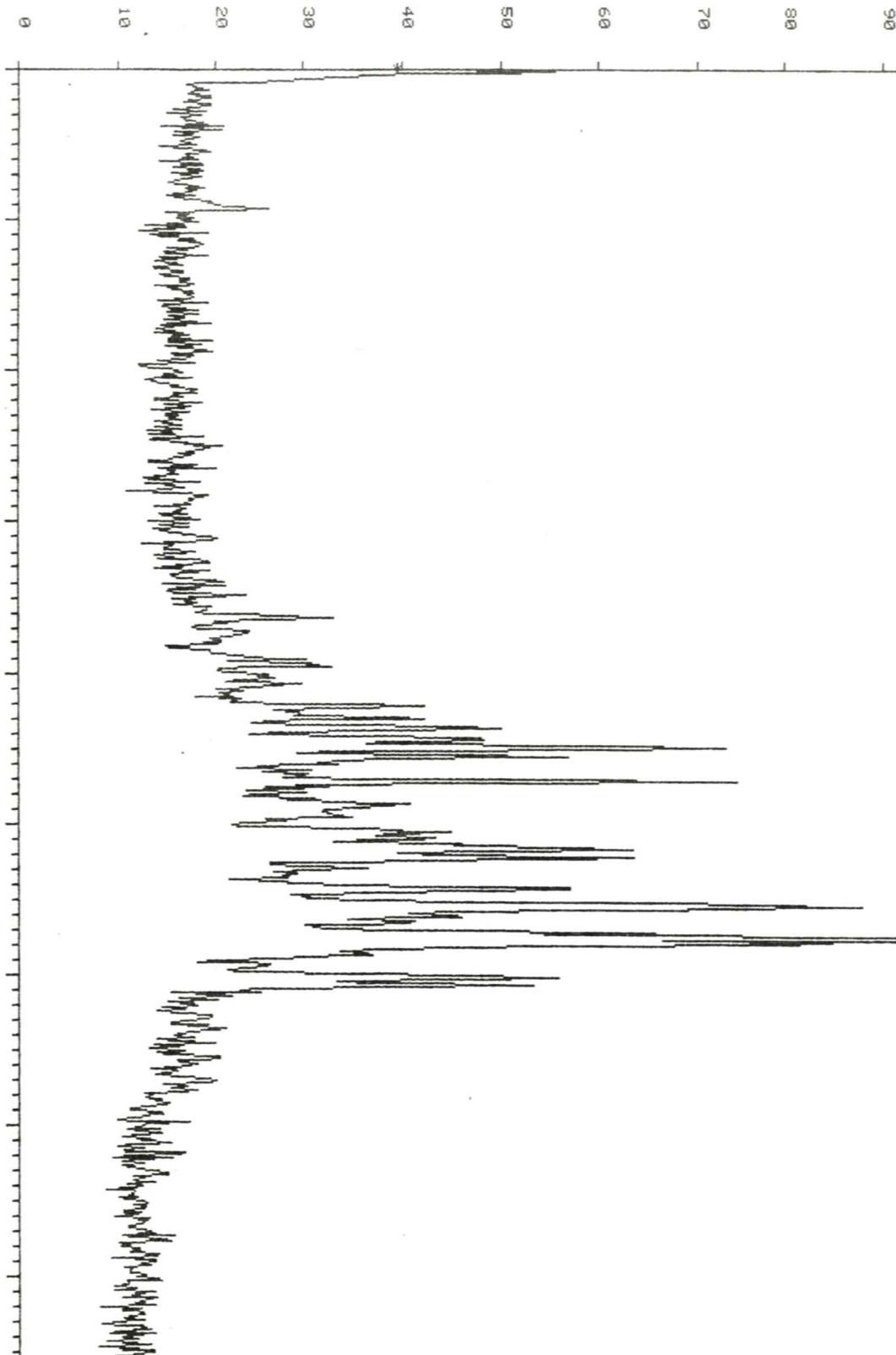
DS-55 CROSS SCAN REPORT, RUN: HIB110001

HIBERNIA P-15 DST#1 2422-2443M

\* 231

40:46 43:29 46:13 48:56 51:39 54:22 57:05 59:48 62:31

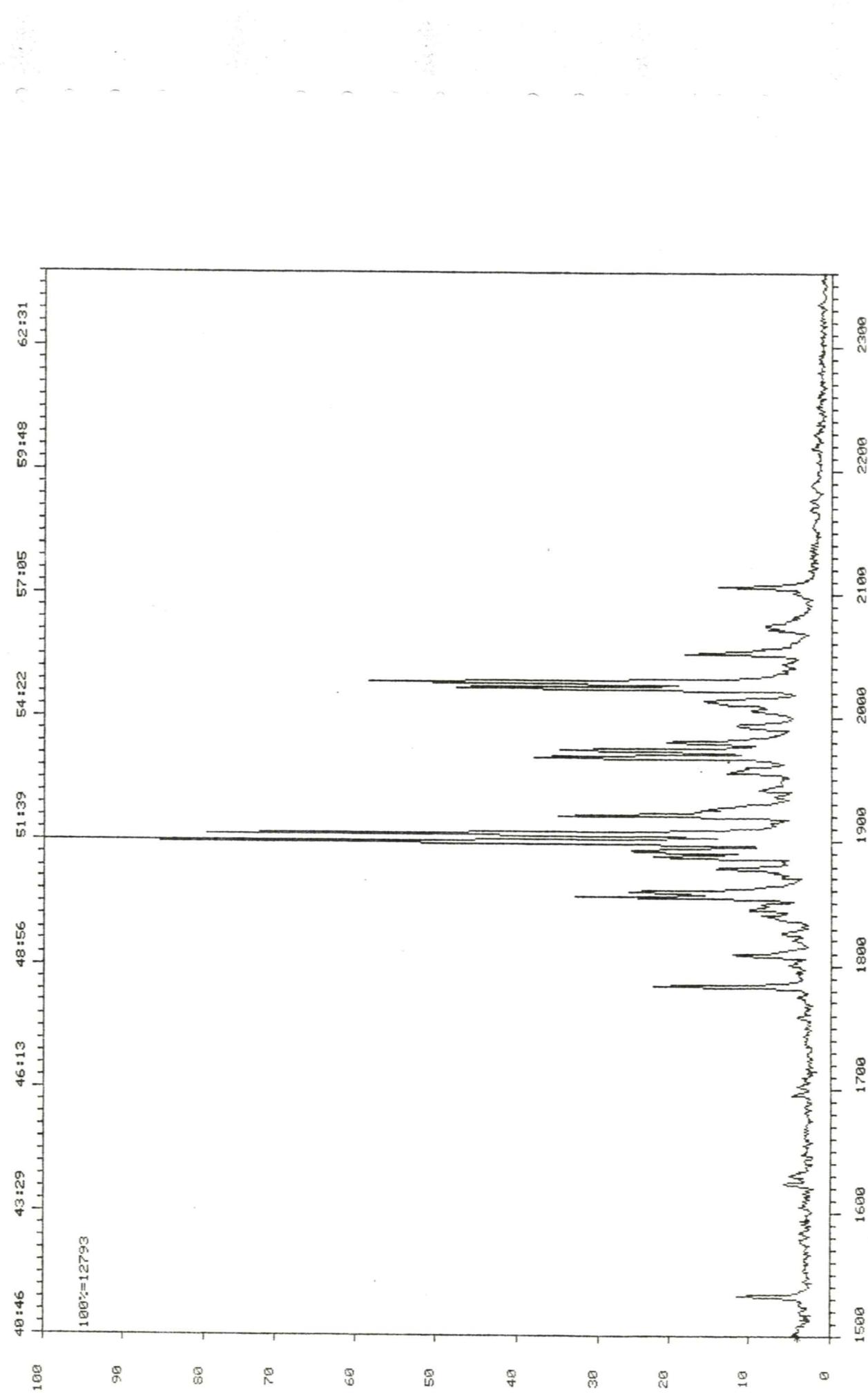
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DS-55 CROSS SCAN REPORT, RUN: HIB110001

HIBERNIA P-15 DST#11 2422-2443M

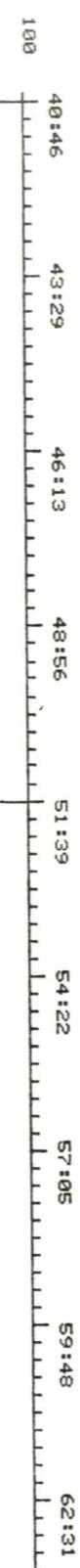
\* 218



DS-55 CROSS SCAN REPORT, RUN: HIB110001

HIBERNIA P-15 DST#11 2422-2443M

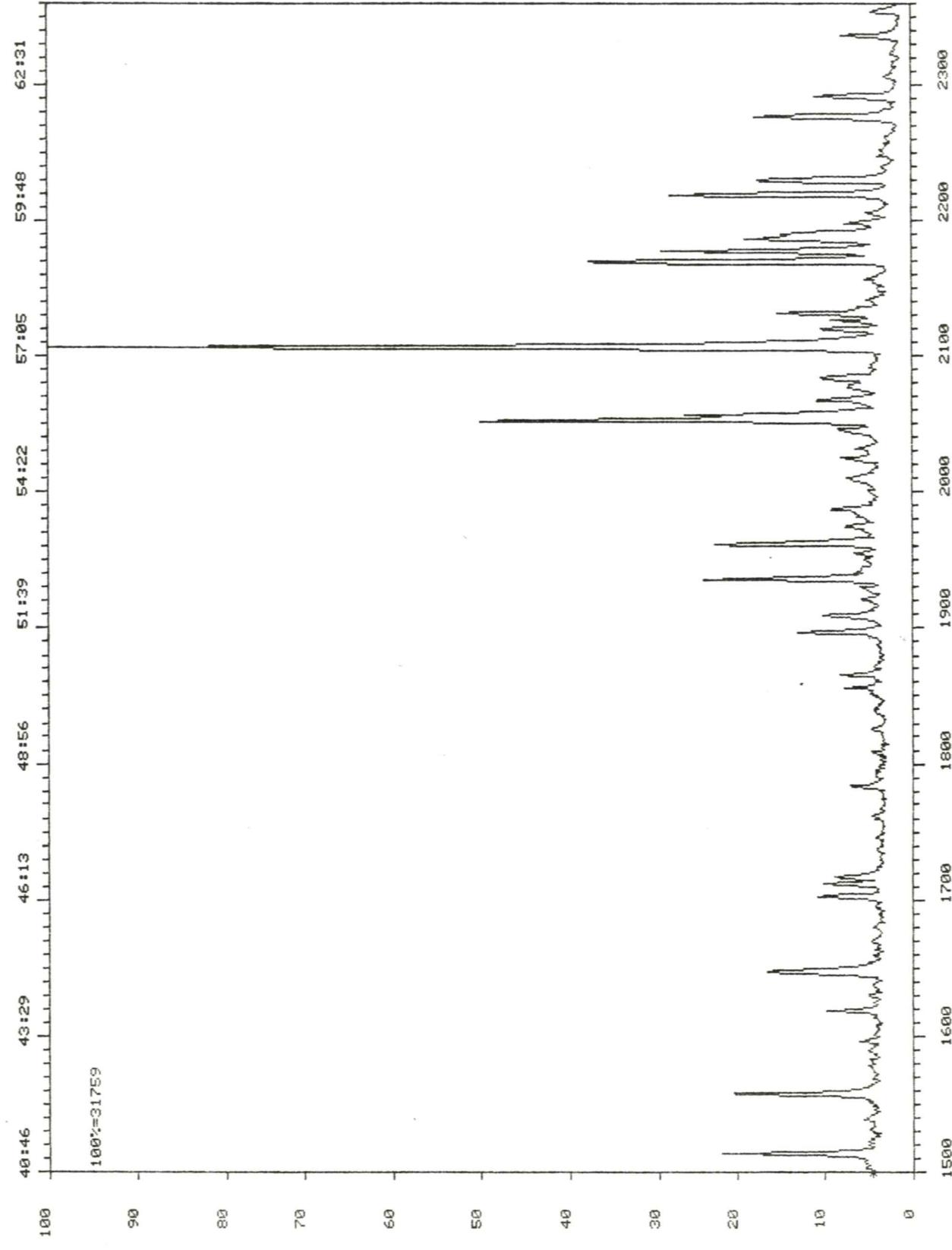
\* 217



DS-55 CROSS SCAFF REPORT, RUH: HIB110001

HIBERNIA P-15 DST#11 2422-2443M

\* 191



DS-55 CROSS SCAN REPORT, RUN: HIB110001

HIBERNIA P-15 DST#11 2422-2443M

\* 177

40:46 43:29 46:13 48:56 51:39 54:22 57:05 59:48 62:31

100%:15620

90

80

70

60

50

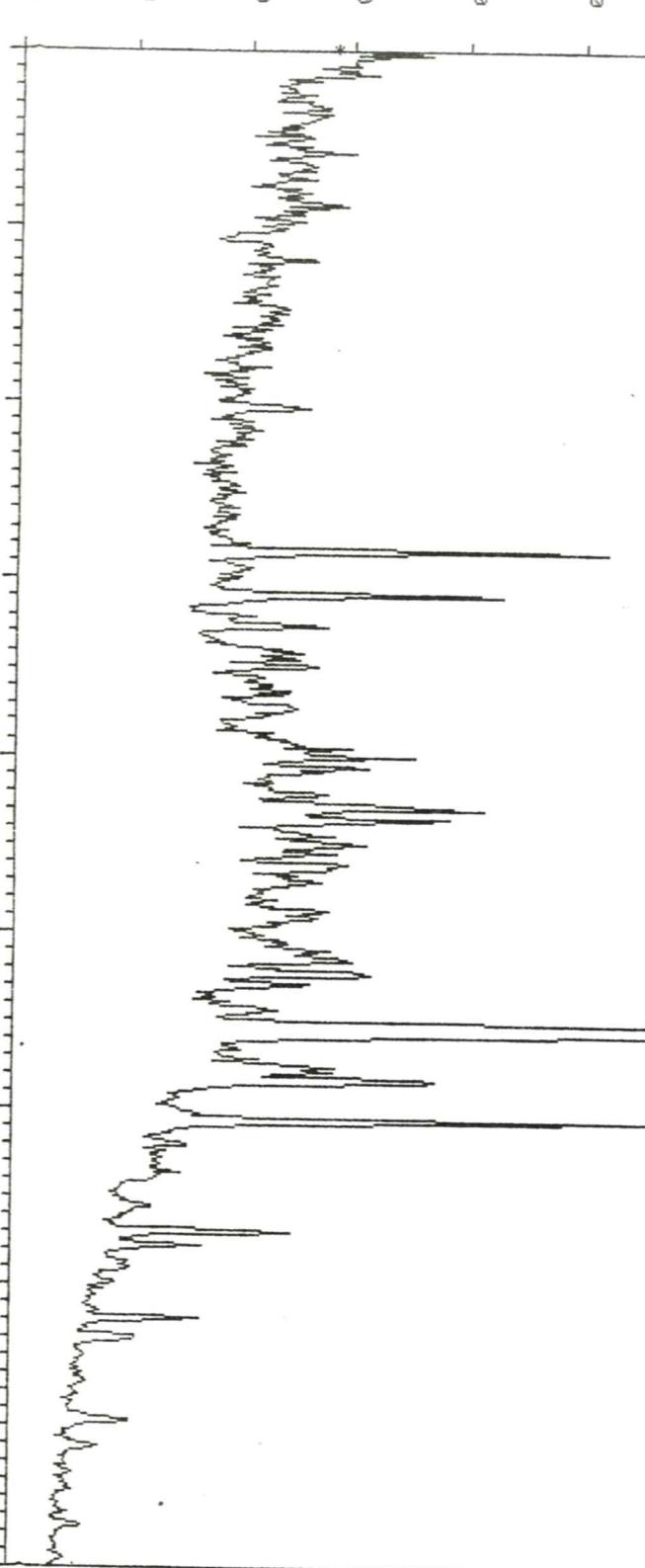
40

30

20

10

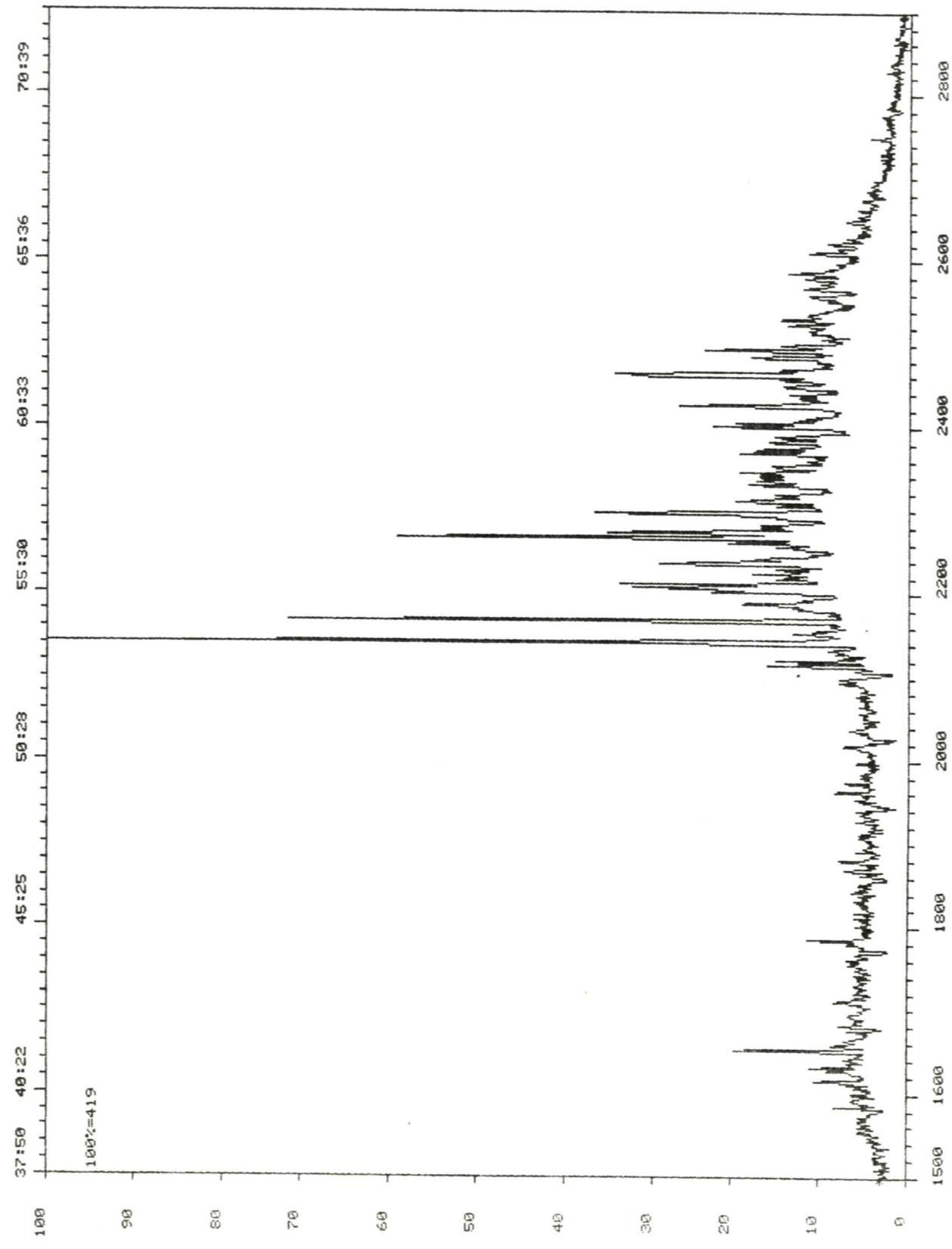
1500 1600 1700 1800 1900 2000 2100 2200 2300



DS-55 CROSS SCAN REPORT, RUN: 202610001

HIBERNIA K-18 DSTS 3783-3788M

\* 259

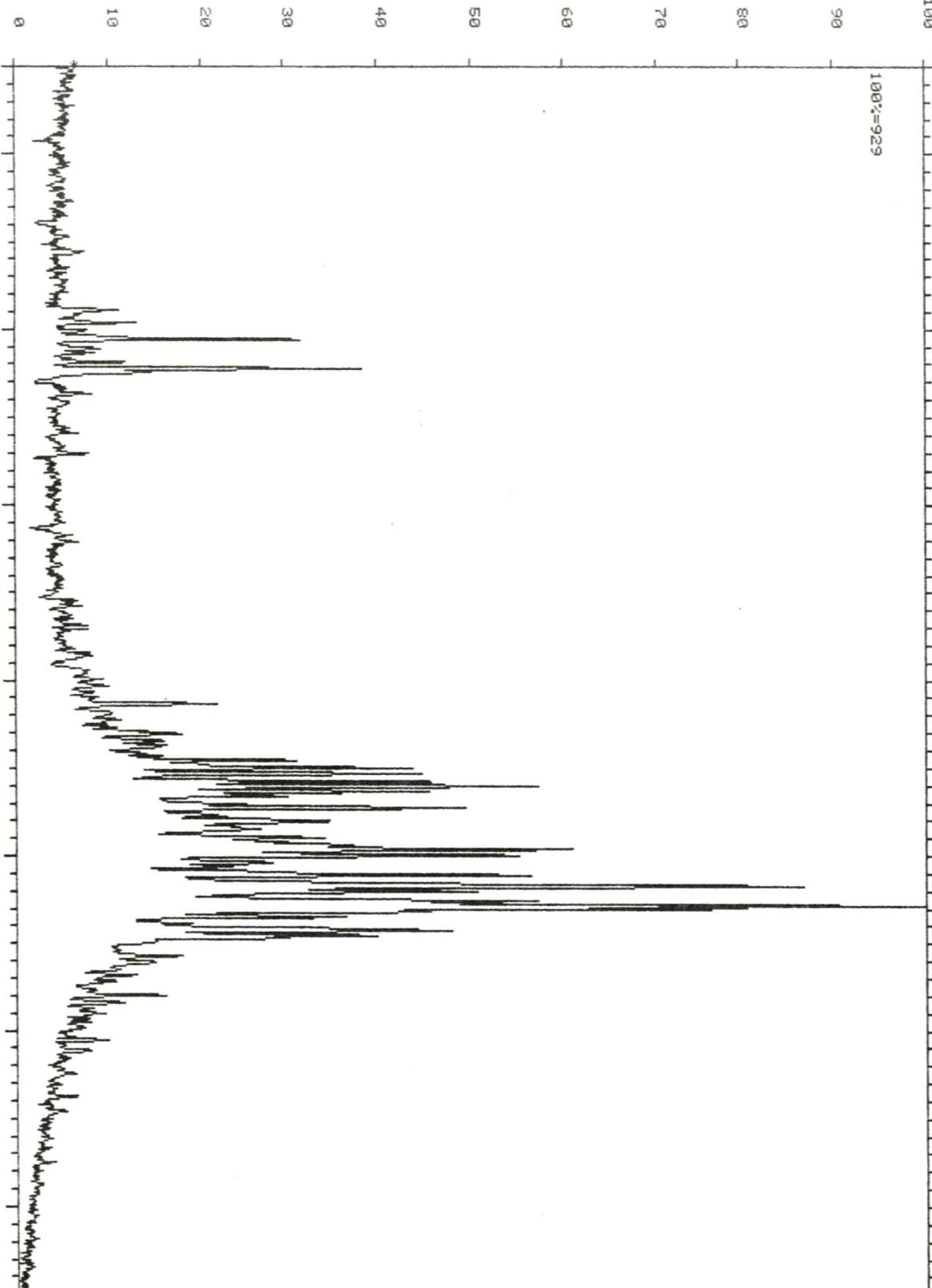


) DS-55 CROSS SCAN REPORT, RUN: 202610001

) HIBERNIA K-18 DST5 3783-3788M

) \* 231

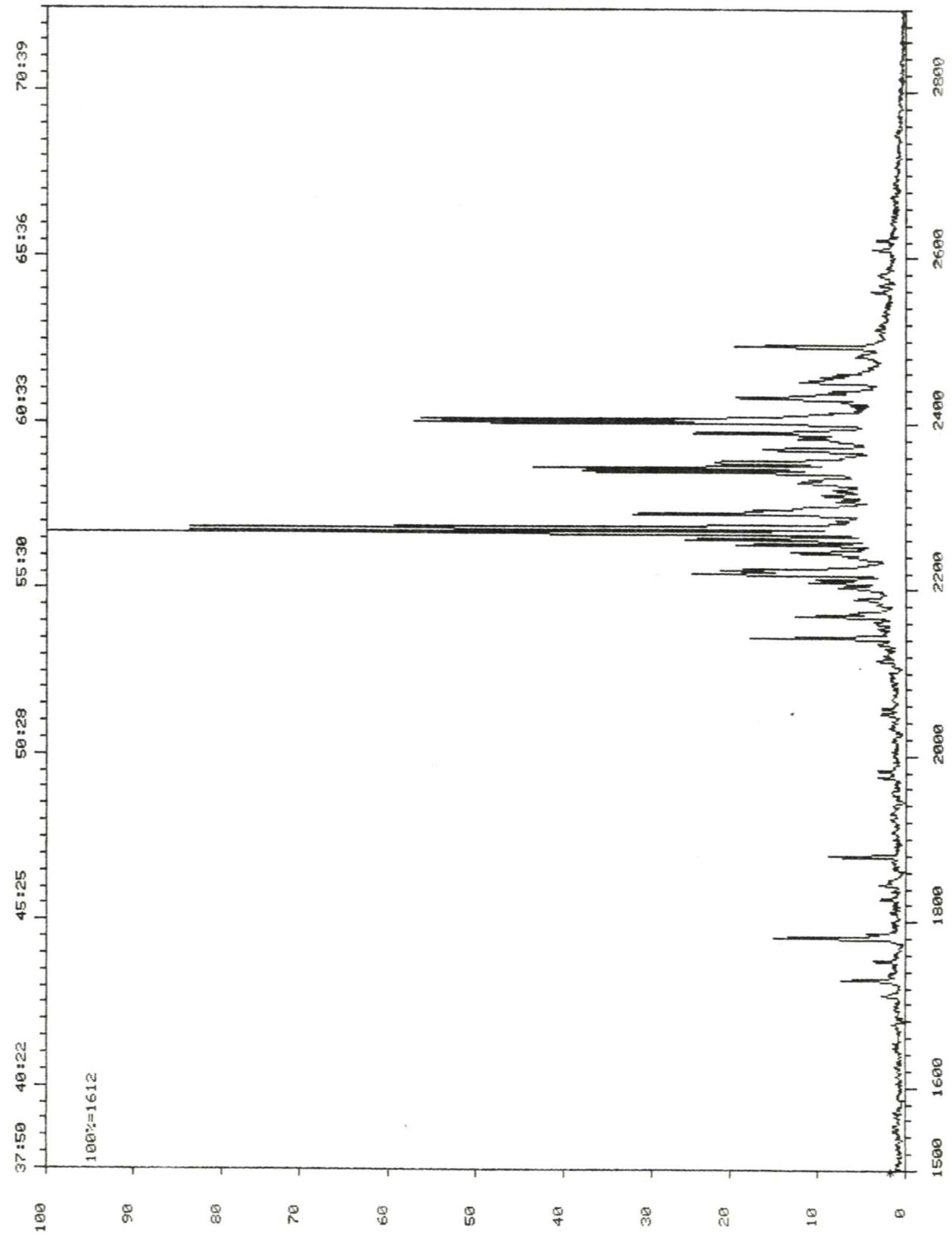
) 103 37:50 40:22 45:25 50:28 55:30 60:33 65:36 70:39  
100%:929



DS-55 CROSS SCAN REPORT, RUN: 202610001

HIBERNIA K-18 DST5 3783-3788M

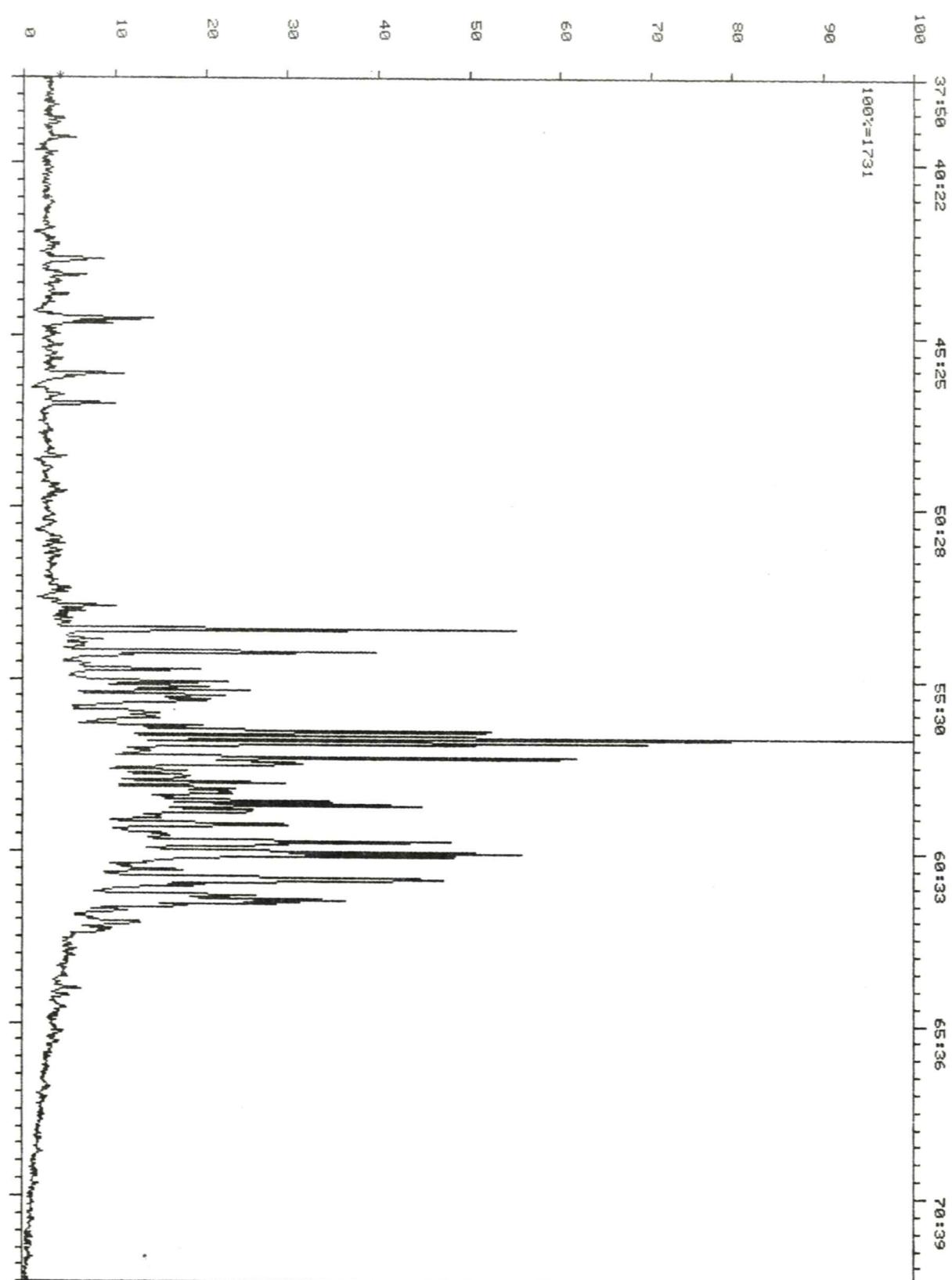
\* 218



DS-55 CROSS SCAN REPORT, RUN: 202610001

HIBERNIA K-18 DST5 3783-3788M

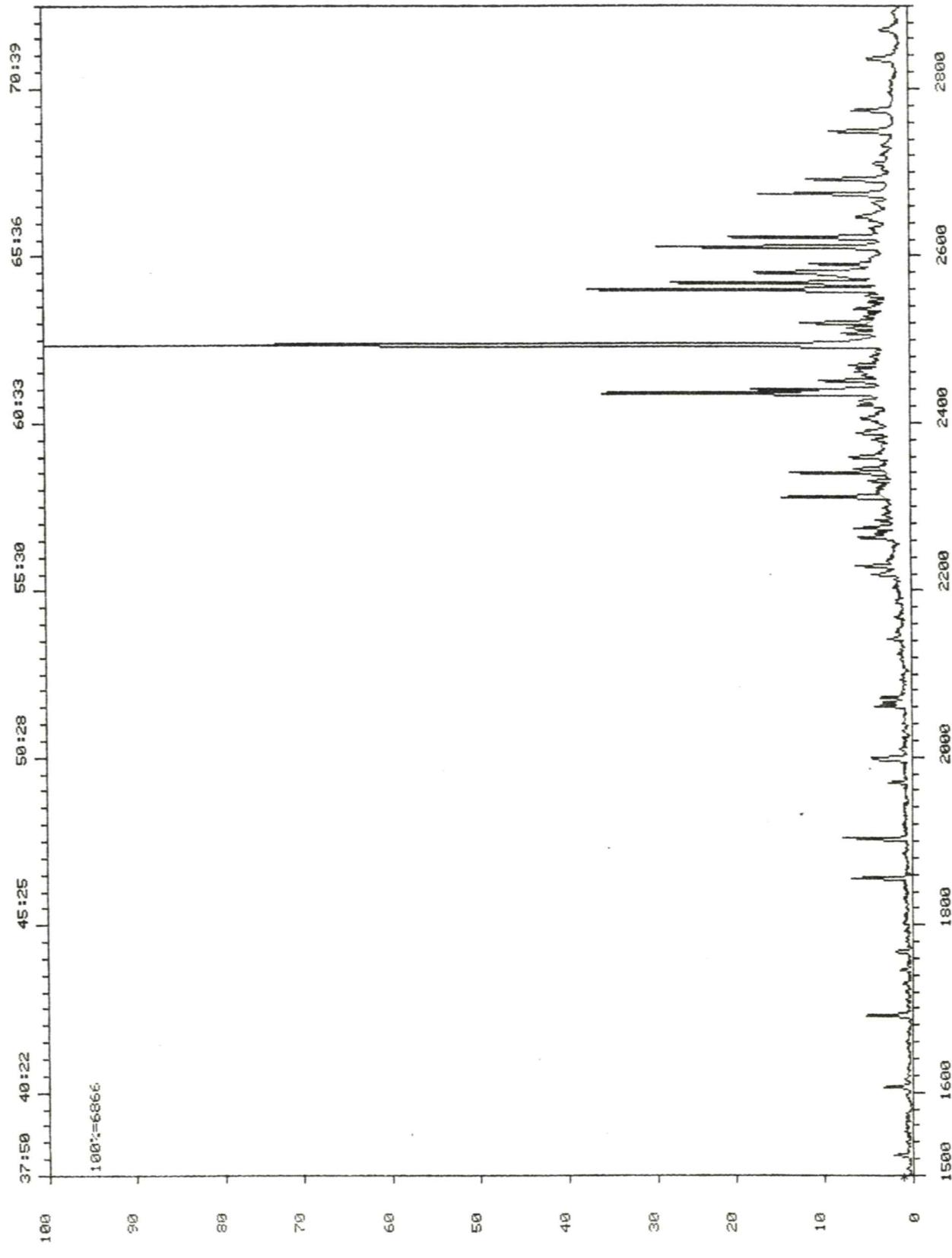
\* 217



DS-55 CROSS SCAN REPORT, RUN: 202610001

HIBERNIA K-18 DSTS 3783-3789M

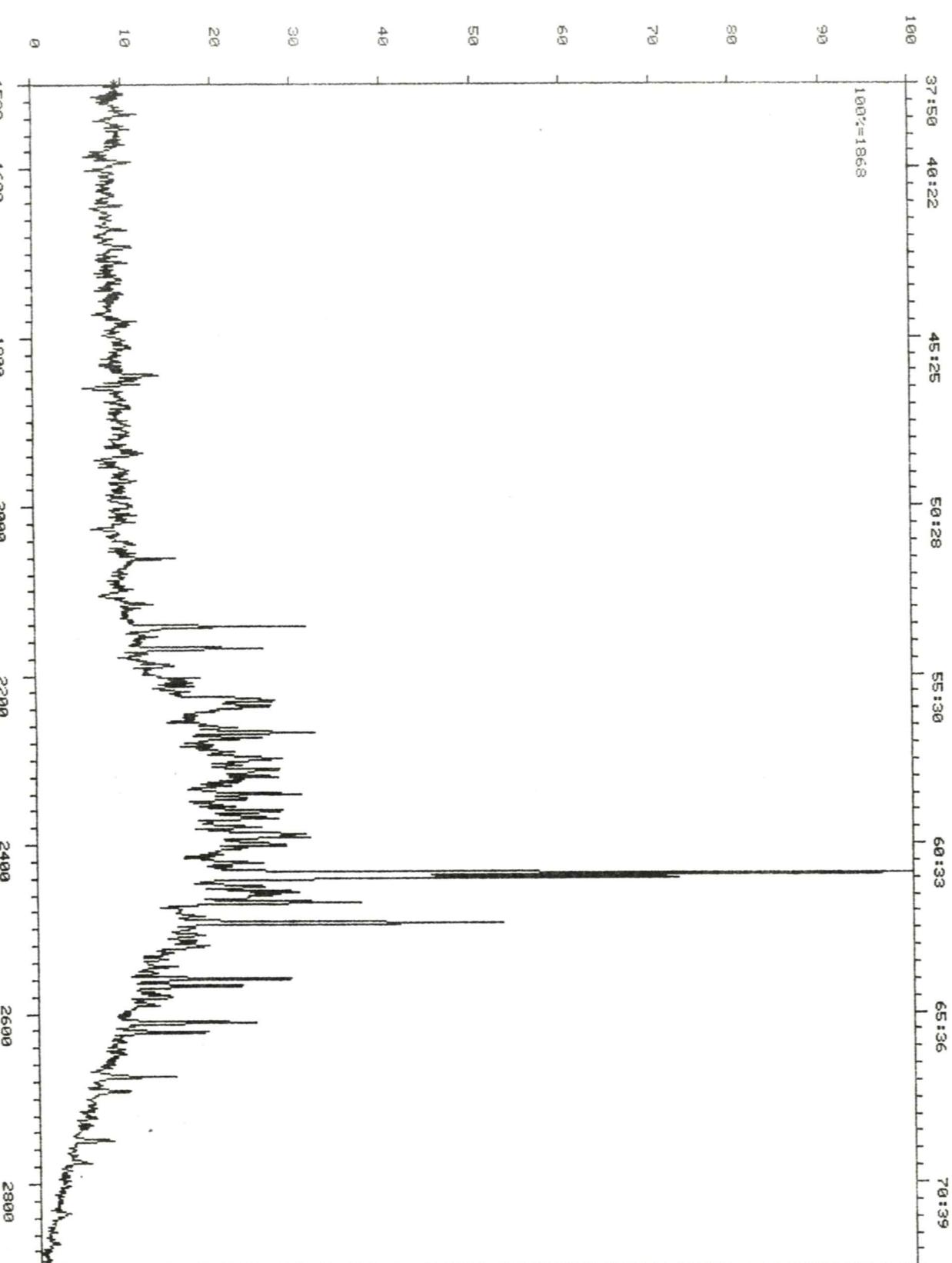
\* 191



DS-55 CROSS SCAN REPORT, RUN: 202610001

HIBERNIA K-18 DST5 3783-3788M

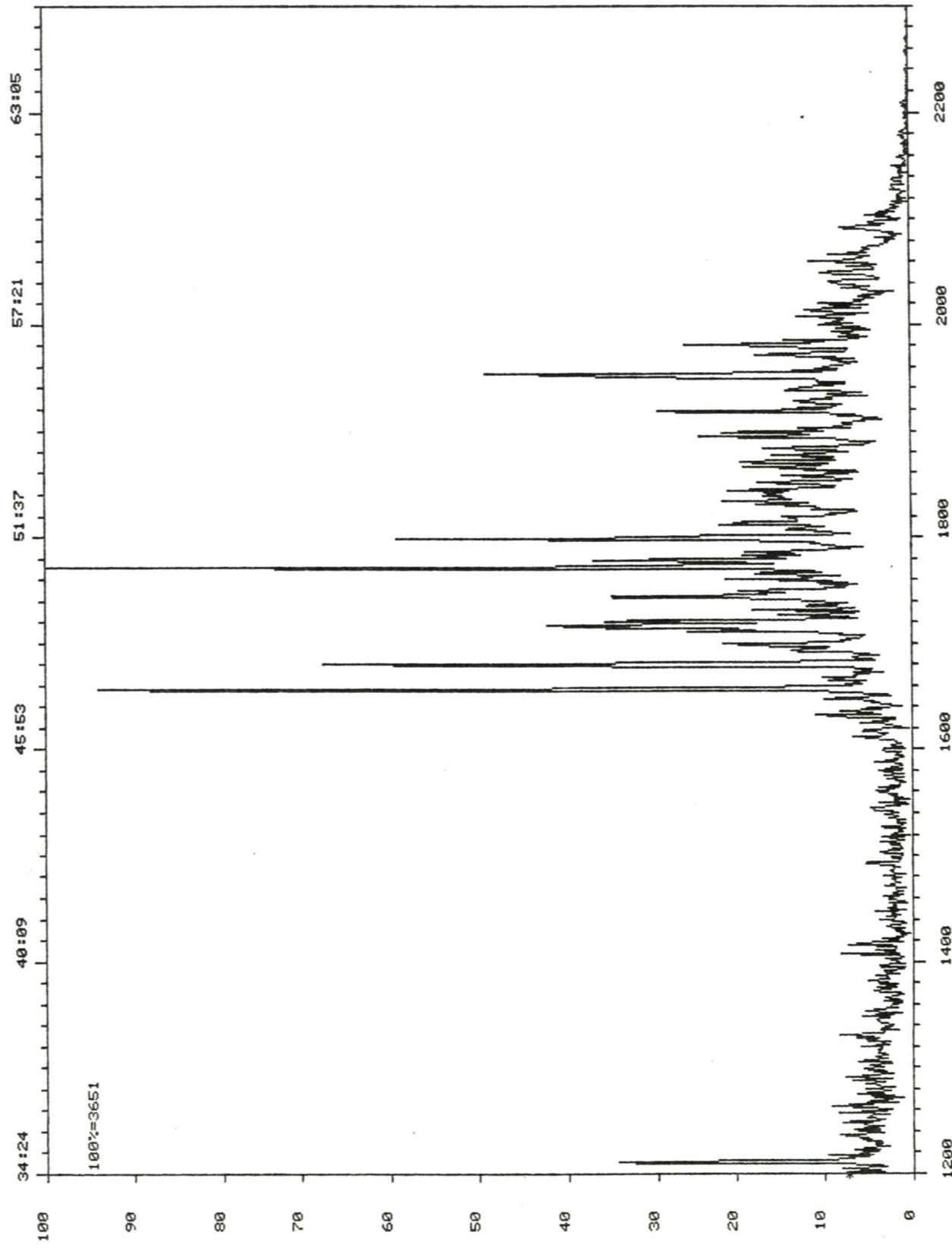
\* 177



) DS-55 CROSS SCAN REPORT, RUN: 249B0001

) HEBRON DST#9 1905-1915M

) \* 259



) DS-55 CROSS SCAN REPORT, RUN: 24980001

) HEBRON DST#9 1905-1915M

) \* 218

) 1000 34:24 40:09 45:53 51:37 57:21 63:05  
100%:38293

) 90

) 80

) 70

) 60

) 50

) 40

) 30

) 20

) 10

) 0

) 12000

) 14000

) 16000

) 18000

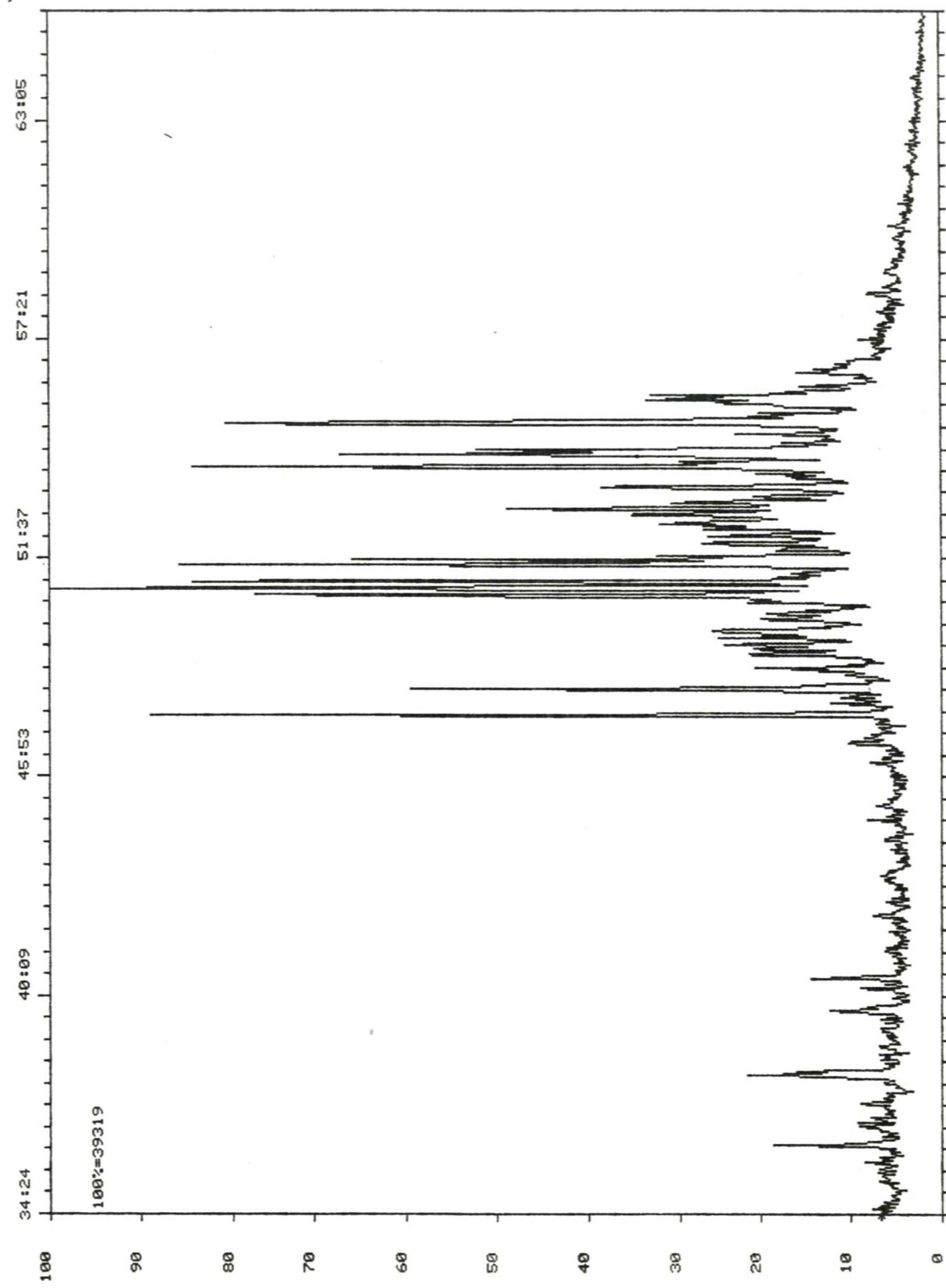
) 20000

) 22000

DS-55 CROSS SCAN REPORT, RUN: 249B0001

HEBRON DST#9 1905-1915M

\* 217

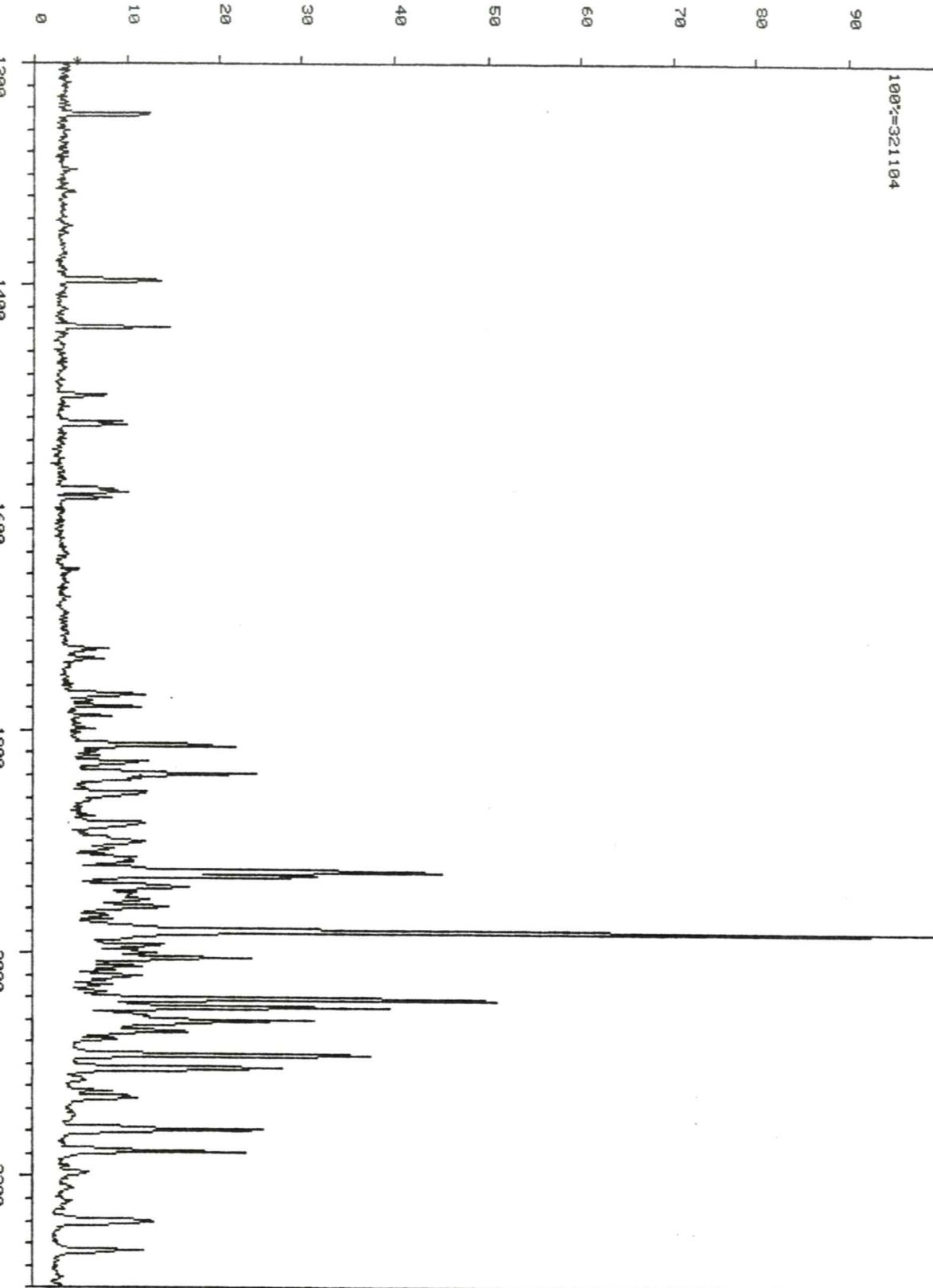


) DS-55 CROSS SCAN REPORT, RUN: 249B0001

) HEBRON DST#9 1905-1915M

) \* 191

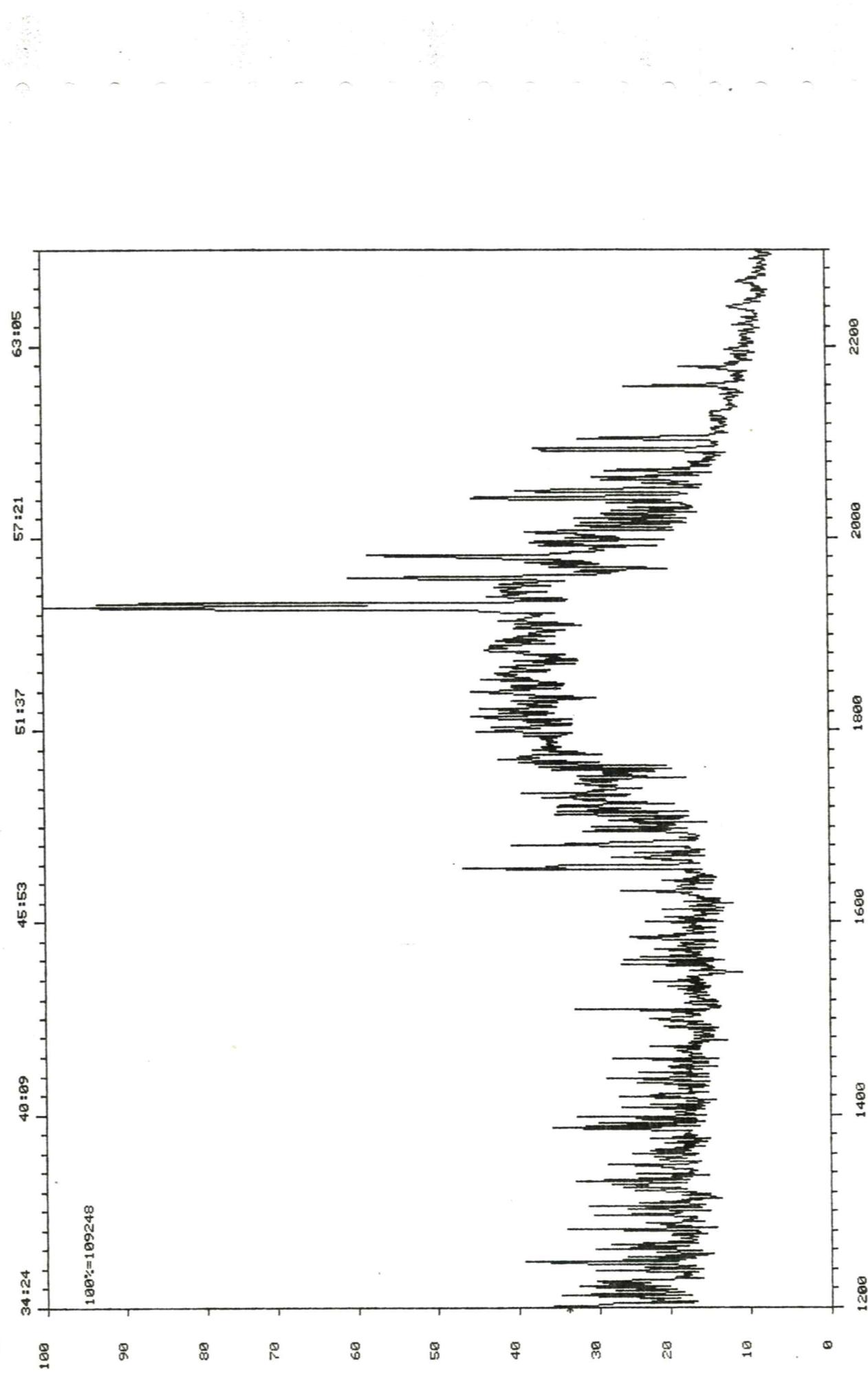
) 100 34:24 40:09 45:53 51:37 57:21 63:05  
100%:321104



DS-65 CROSS SCAN REPORT, RUN: 249B00001

HEBRON DST#9 1905-1915M

\* 177

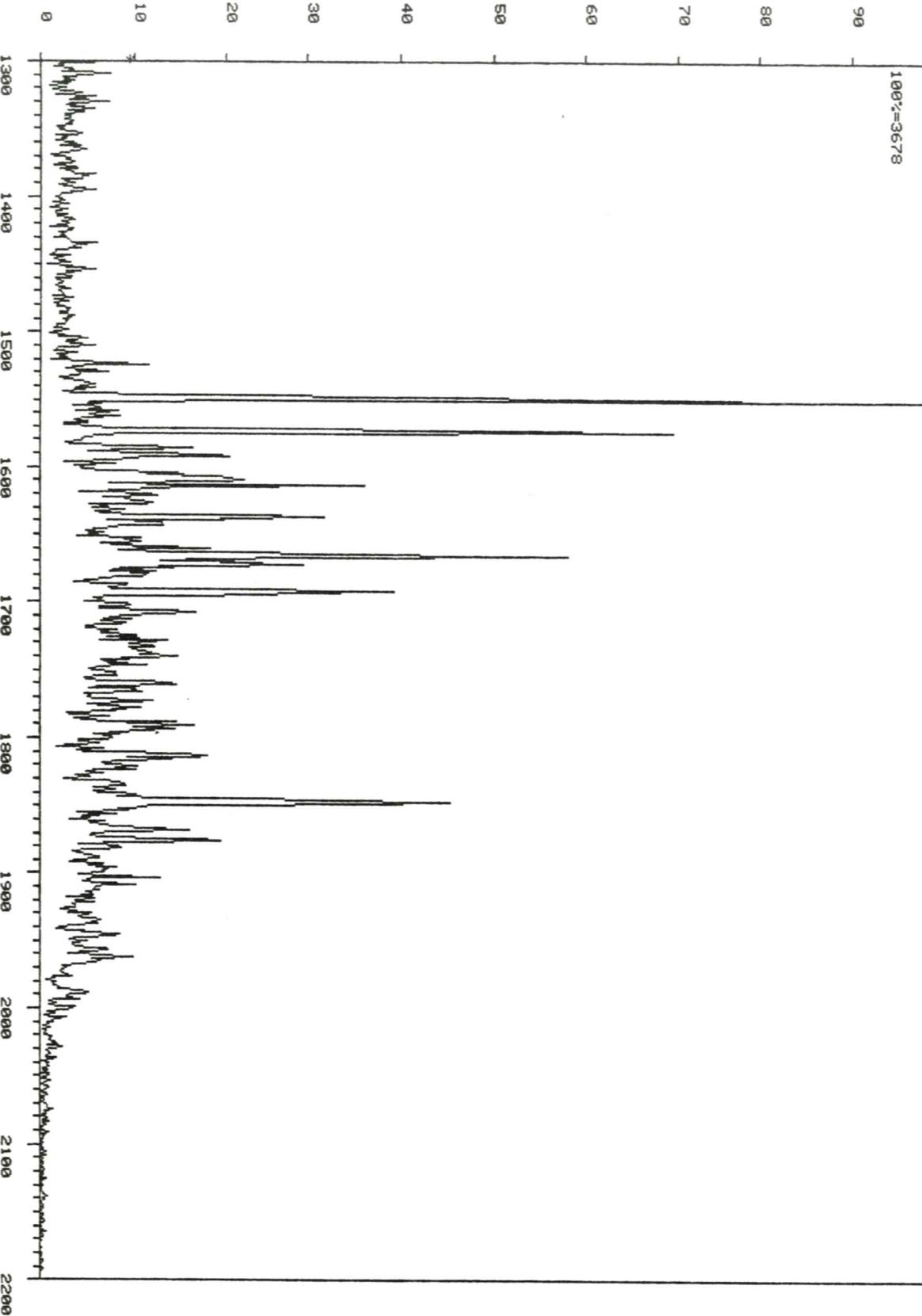


DS-55 CROSS SCAN REPORT, RUN: 25000001

HEBRON I-13 DST#7 ZONE 8

\* 259

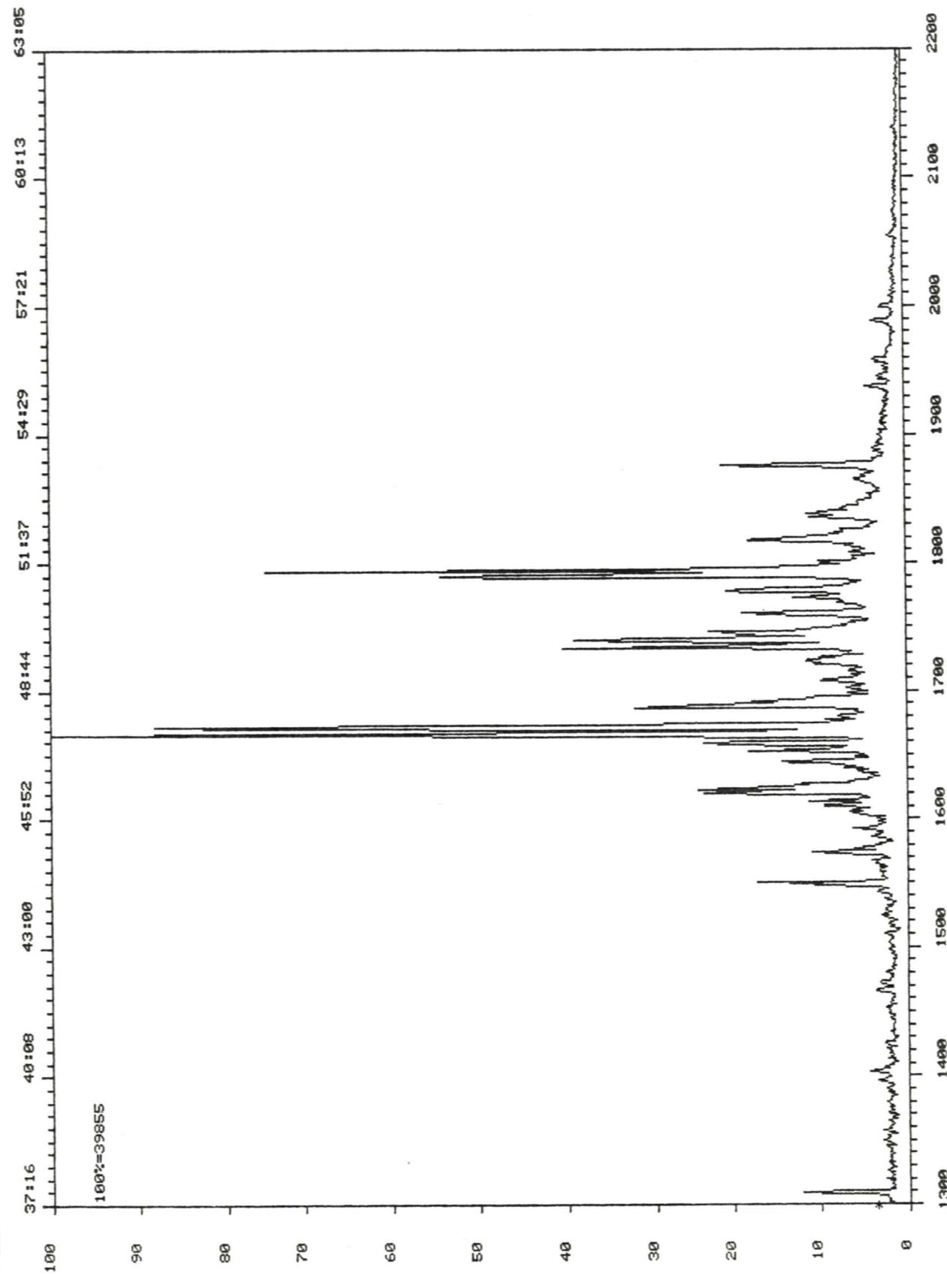
37:16      40:08      43:00      45:52      48:44      51:37      54:29      57:21      60:13      63:05  
100%:3678



DS-55 CROSS SCAN REPORT, RUN: 2500001

HEBRON I-13 DST#7 ZONE 8

\* 218

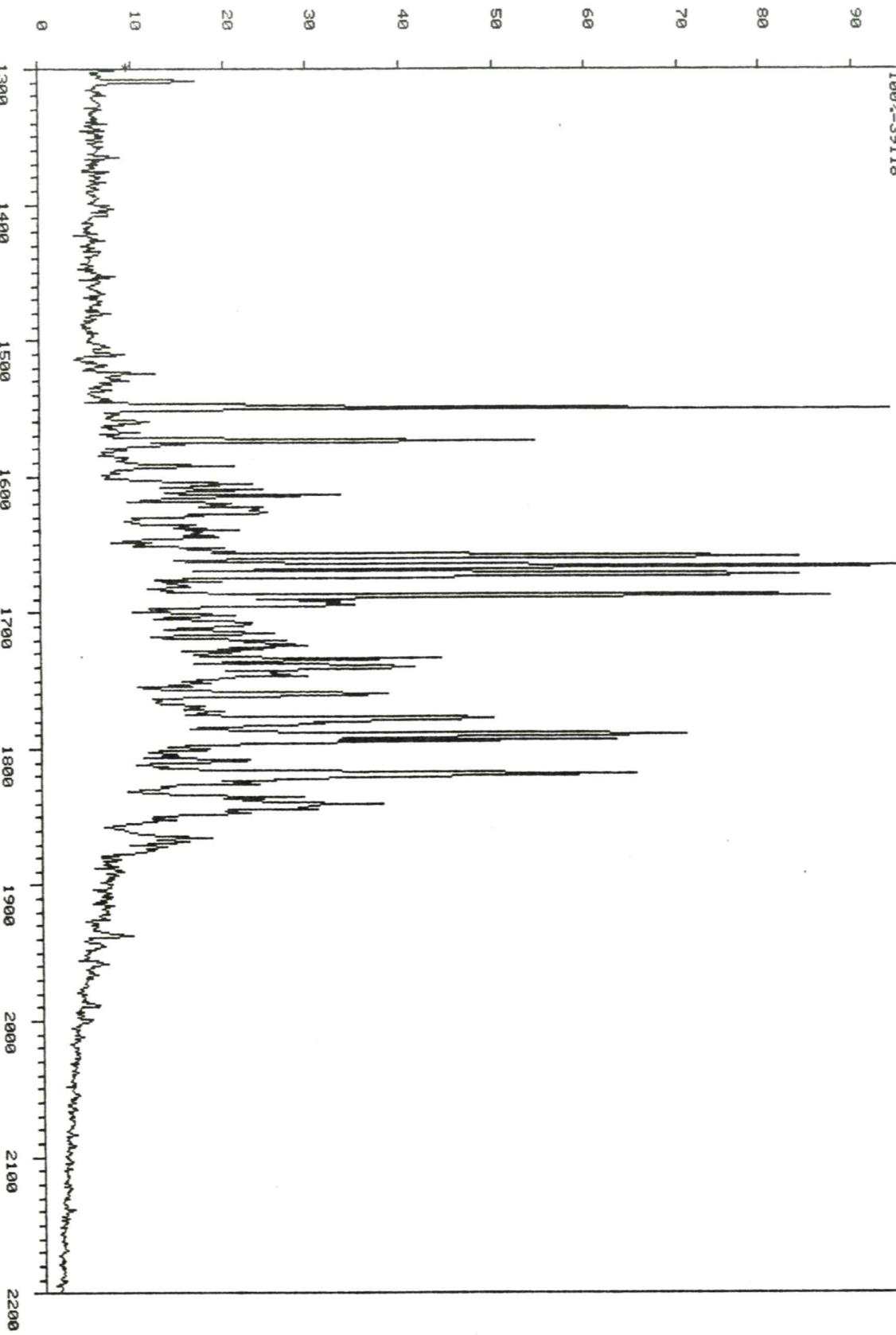


DS-55 CROSS SCAN REPORT, RUN: 2500001

HEBRON I-13 DST#7 ZONE 8

\* 217

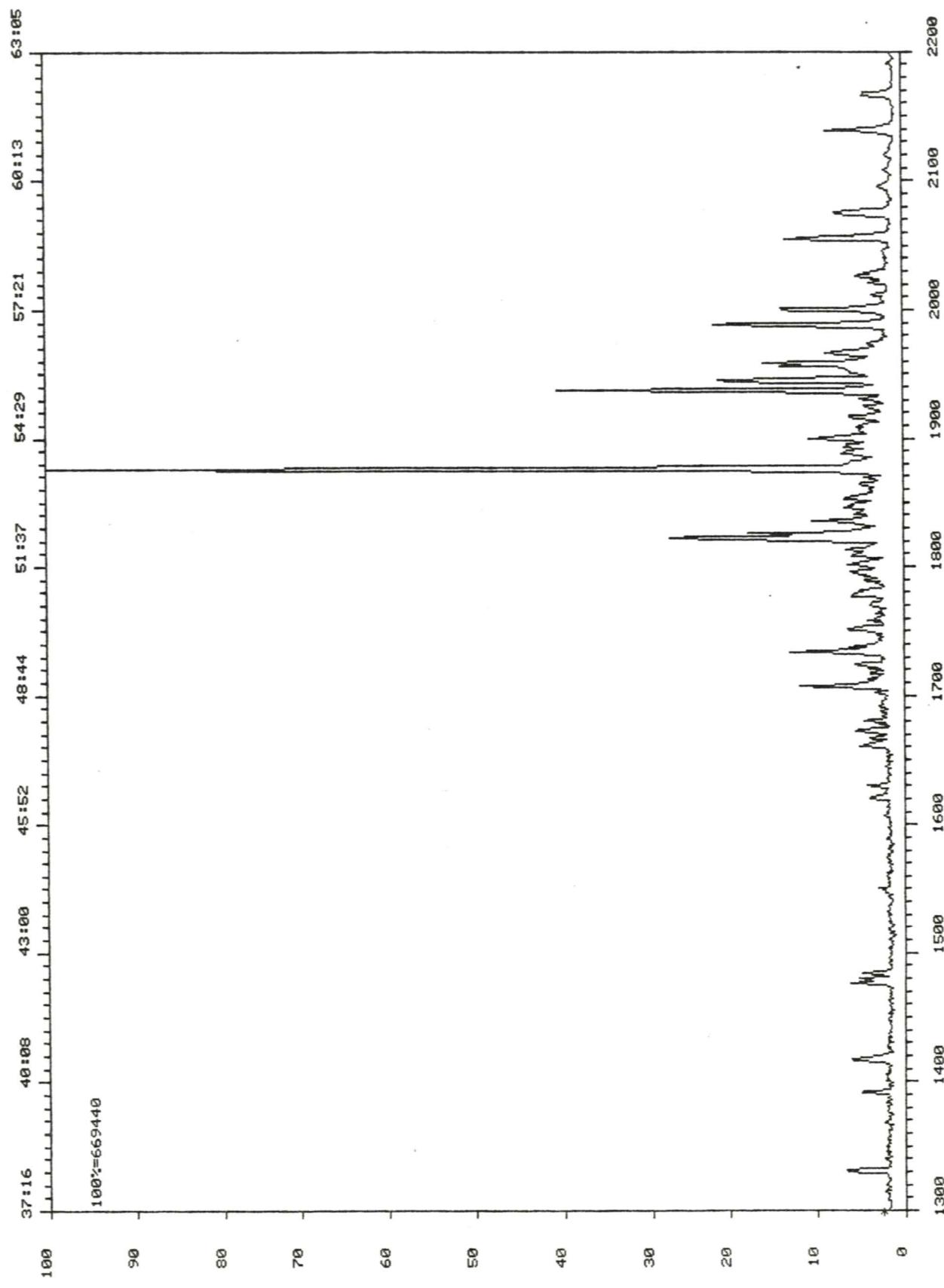
37:16      40:08      43:00      45:52      48:44      51:37      54:29      57:21      60:13      63:05  
100%:39118



DS-55 CROSS SCAN REPORT, RUN: 2500001

HEBRON I-13 DST#7 ZONE 8

\* 191



DS-55 CROSS SCAN REPORT, RUN: 2500001

HEBON I-13 DS1#7 ZONE 8

\* 177

37:16      40:08      43:00      45:52      48:44      51:37      54:29      57:21      60:13      63:05

100%:160600

90

80

70

60

50

40

30

20

10

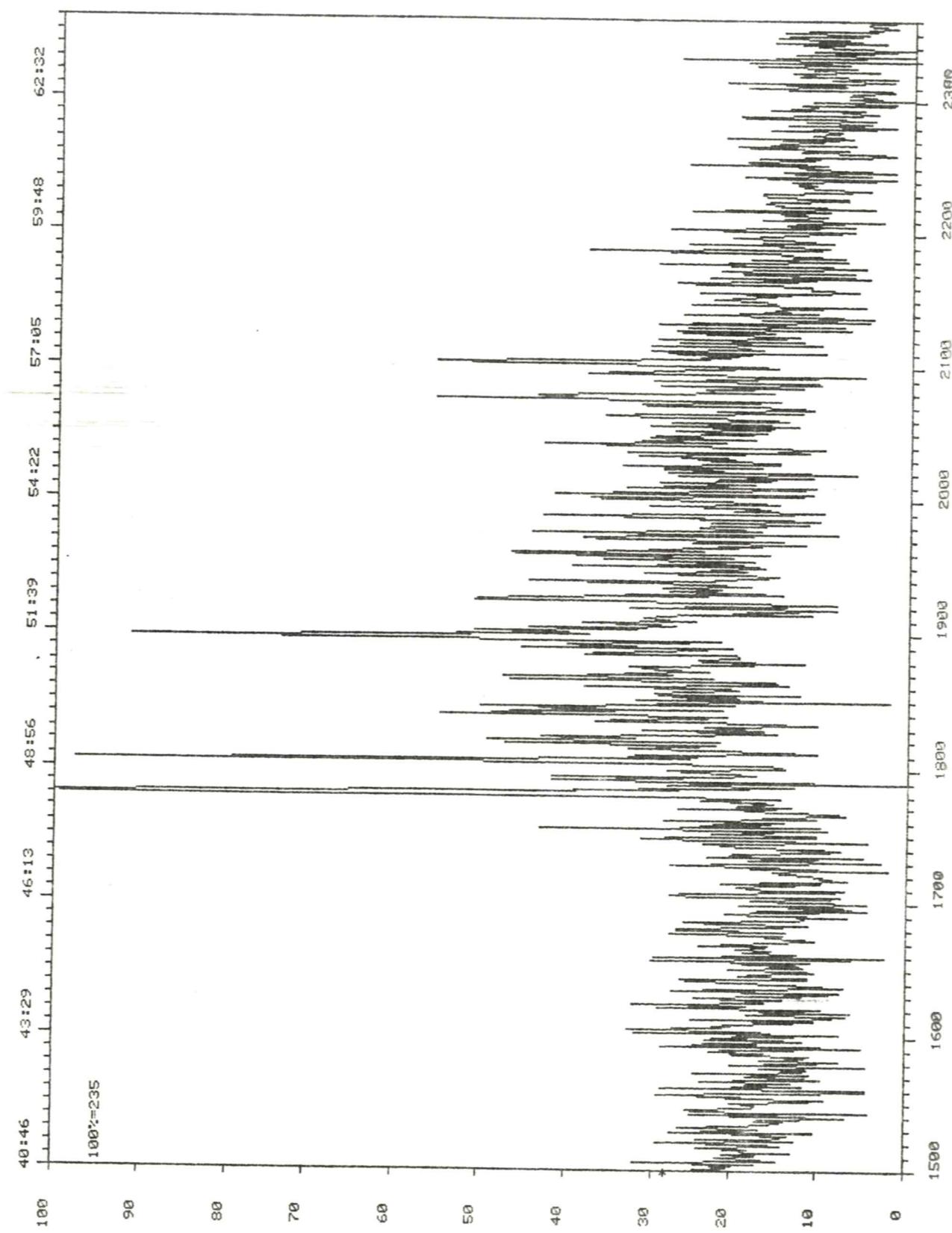
0

1300    1400    1500    1600    1700    1800    1900    2000    2100    2200

DS-55 CROSS SCAN REPORT, RUN: HEB60001

HEBTON 1-13 DST#6 2975-2986M

\* 259

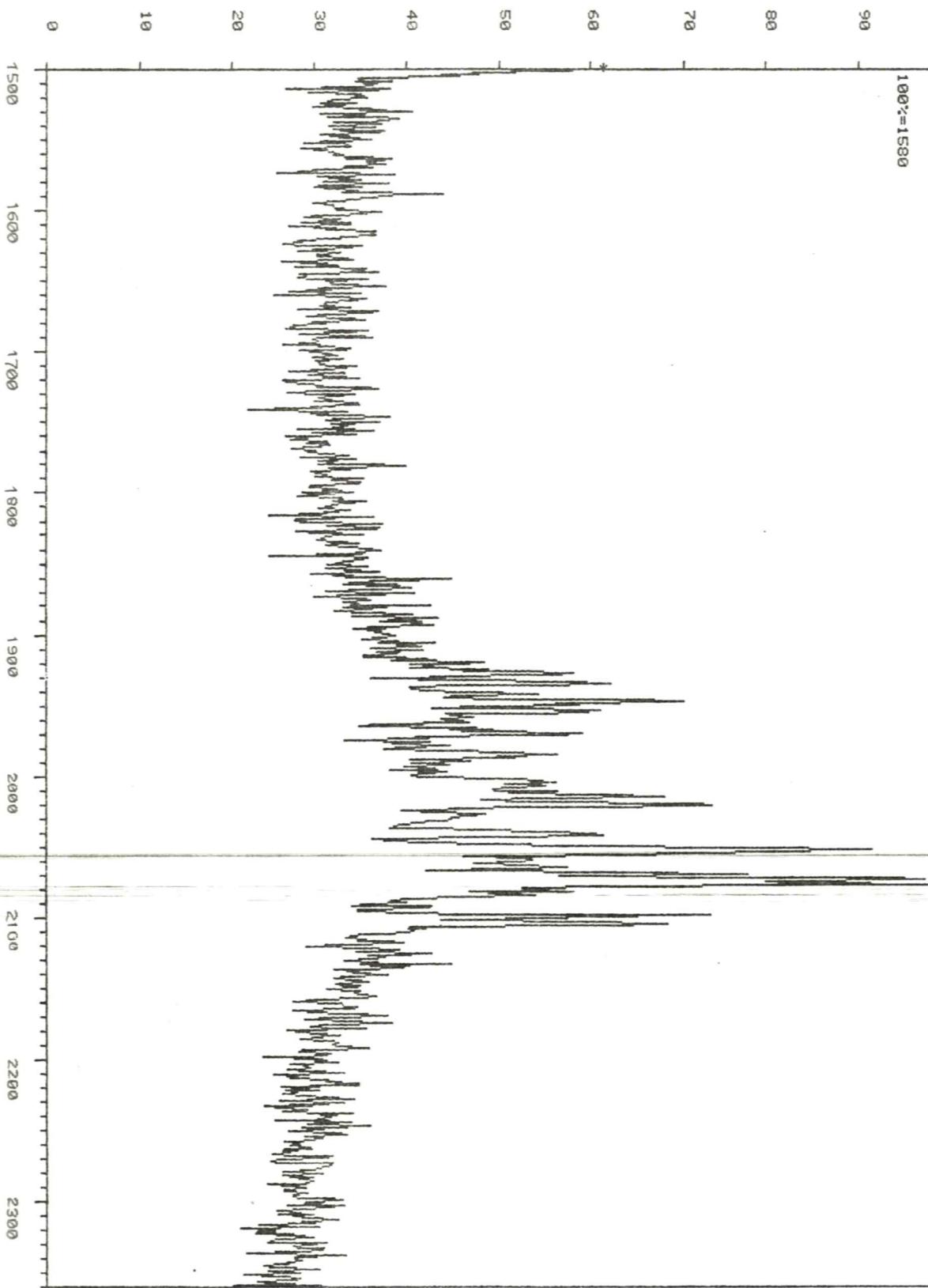


DS-55 CROSS SCAN REPORT, RUN: HEB60001

HEBRON I-13 DST#6 2975-2986M

\* 231

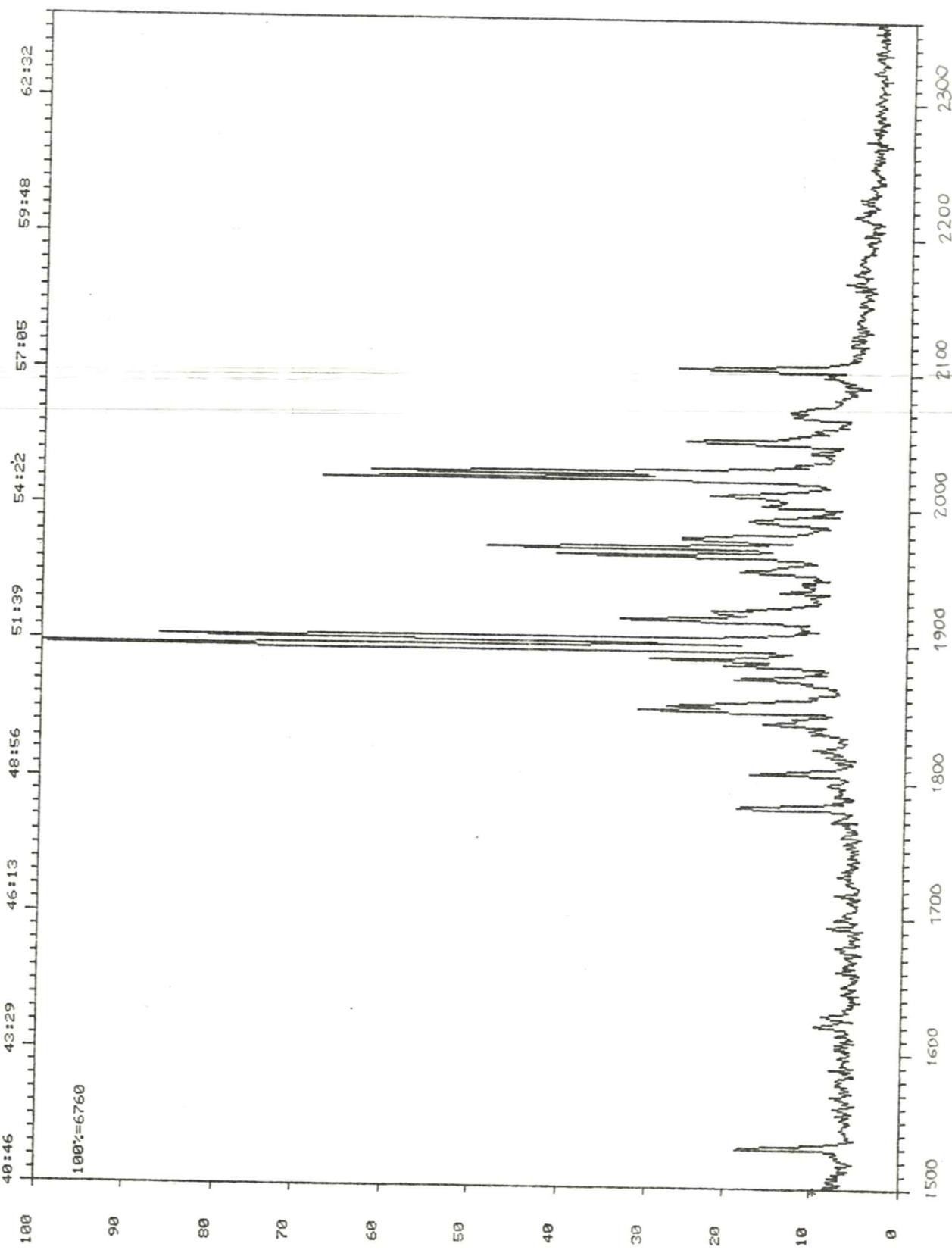
40:46      43:29      46:13      48:56      51:39      54:22  
100% = 1580      57:05      59:48      62:32



DS-55 CROSS SCAN REPORT, RUN: HEB60001

HEBON I-13 DST#6 2975-2986M

\* 218



DS-55 CROSS SCAN REPORT, RUN: HEB60001

HEBROWN I-13 DST#6 2975-2986M

\* 217

40:46 43:29 46:13 48:56 51:39 54:22 57:05 59:48 62:32

100%:5412

90

80

70

60

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40

30

20

10

0

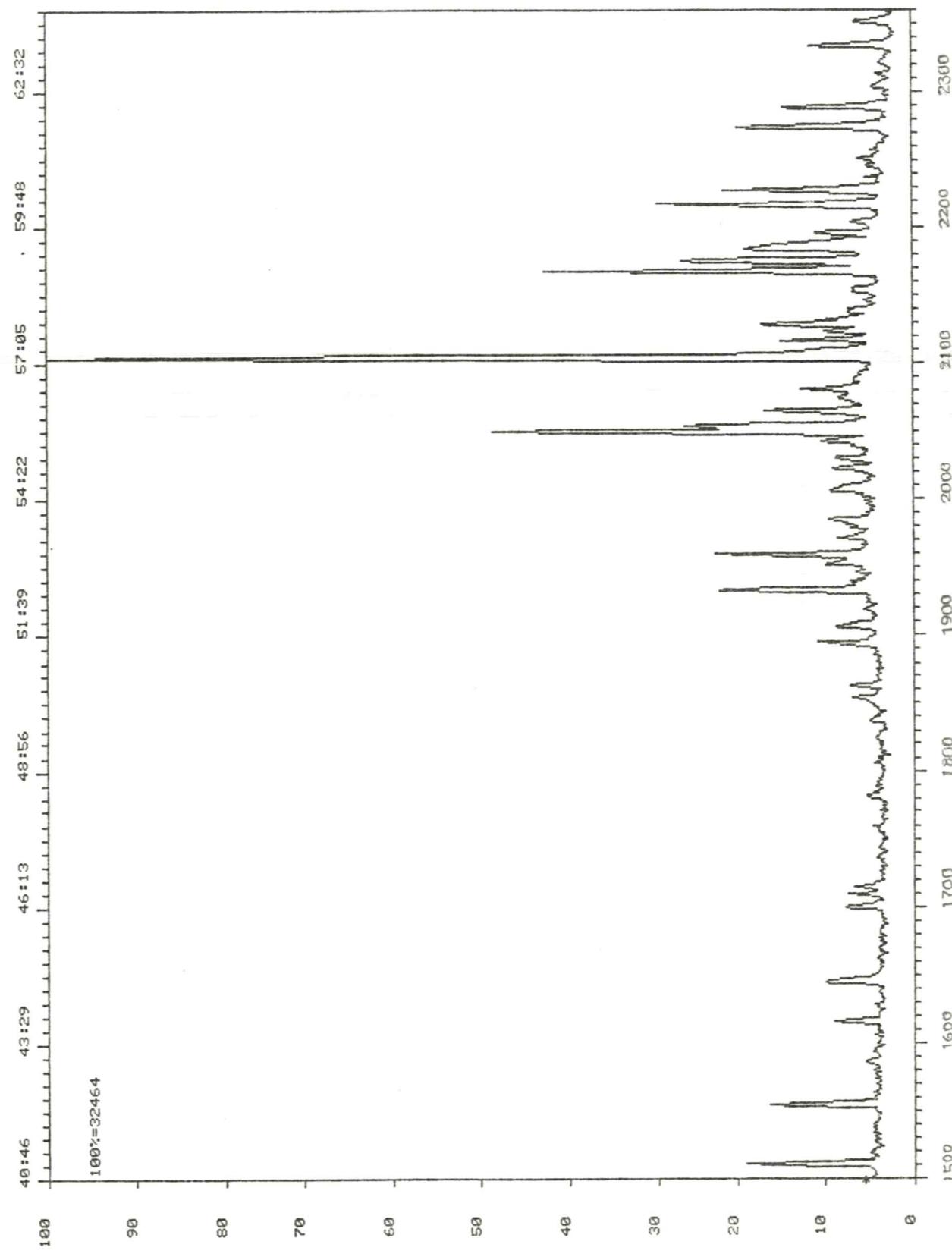
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DS-55 CROSS SCAN REPORT, RUN: HEB60001

HEBRON I-13 DST#6 2975-2986M

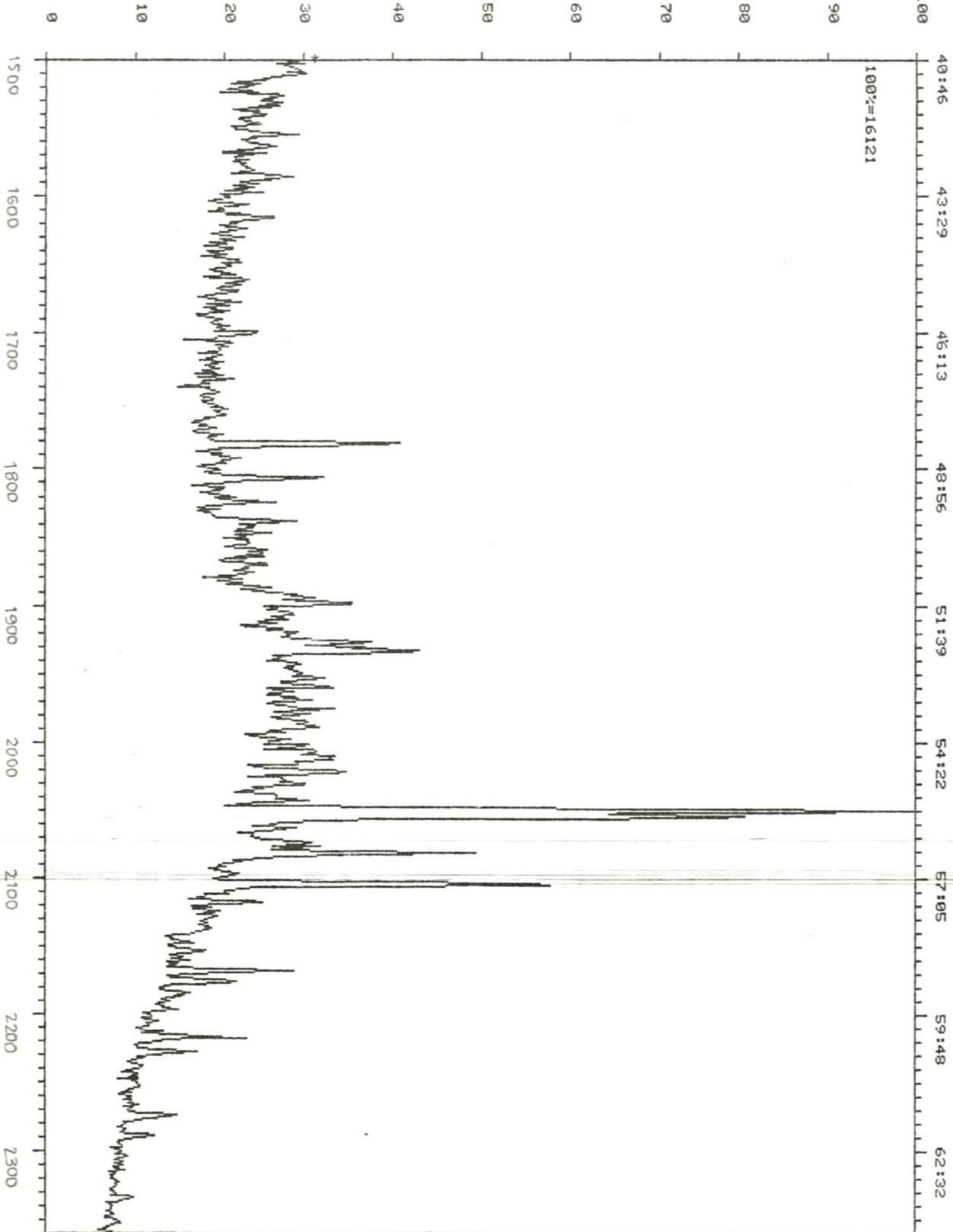
\* 191



DS-55 CROSS SCAN REPORT, RUN: HEB60001

HEBRON I-13 DST#6 2975-2986M

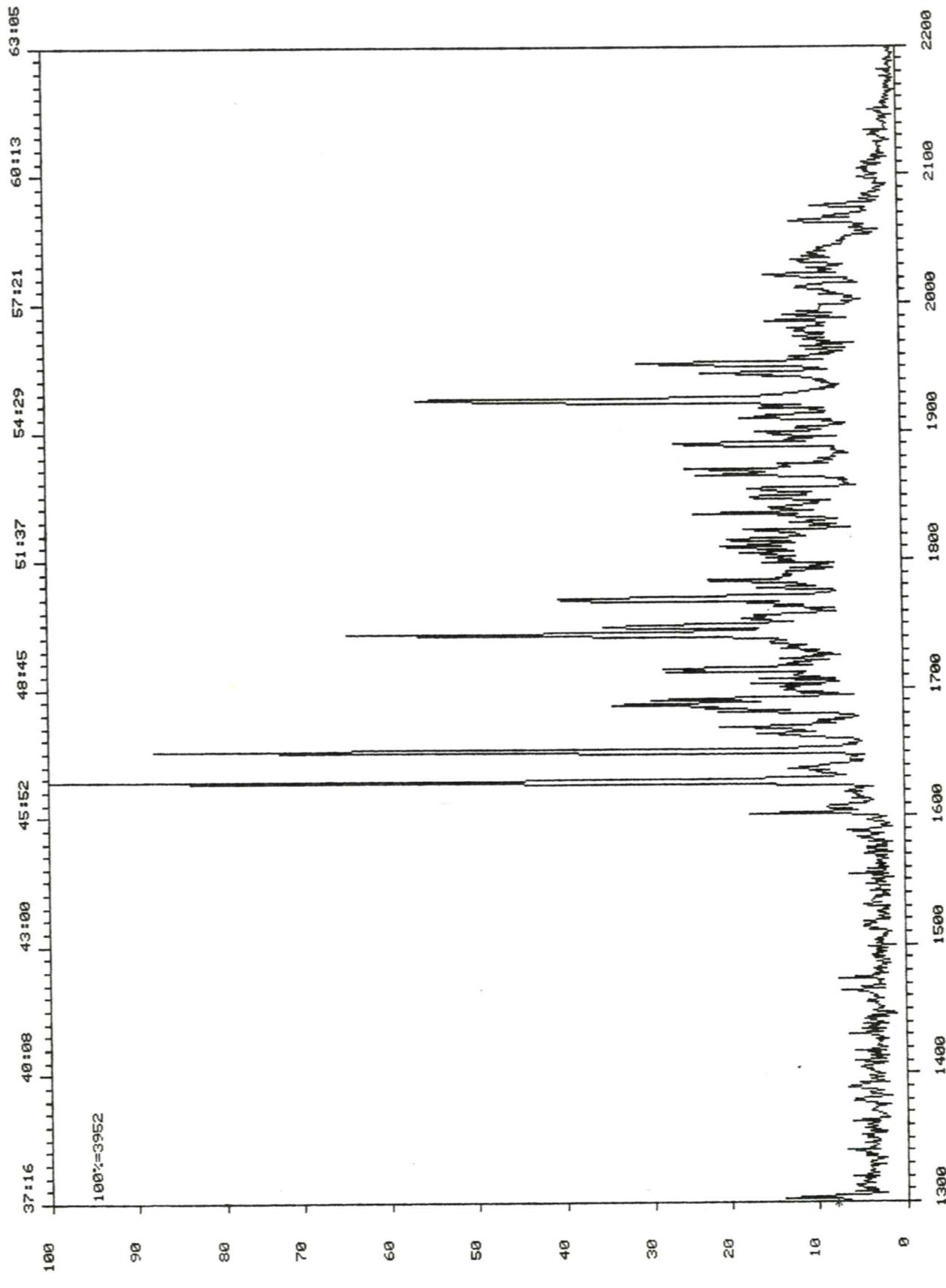
\* 177



DS-55 CROSS SCAN REPORT, RUN: 2460001

HEBRON I-13 DST#5

\* 259



DS-55 CROSS SCAN REPORT, RUN: 2460001

HEBRON I-13 DST#5

\* 218

37:16      40:08      43:00      45:52      48:45      51:37      54:29      57:21      60:13      63:05

100% = 49848

90

80

70

60

50

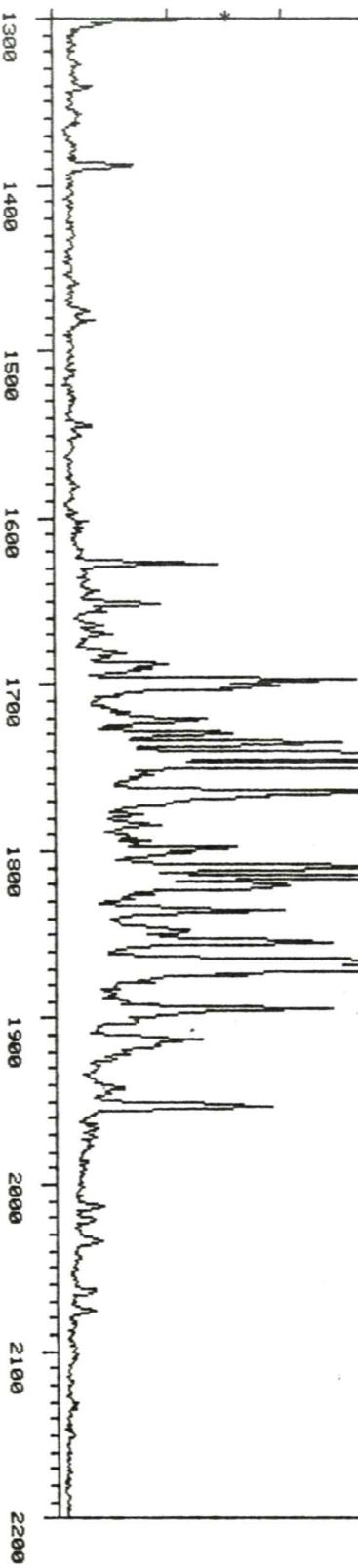
40

30

20

10

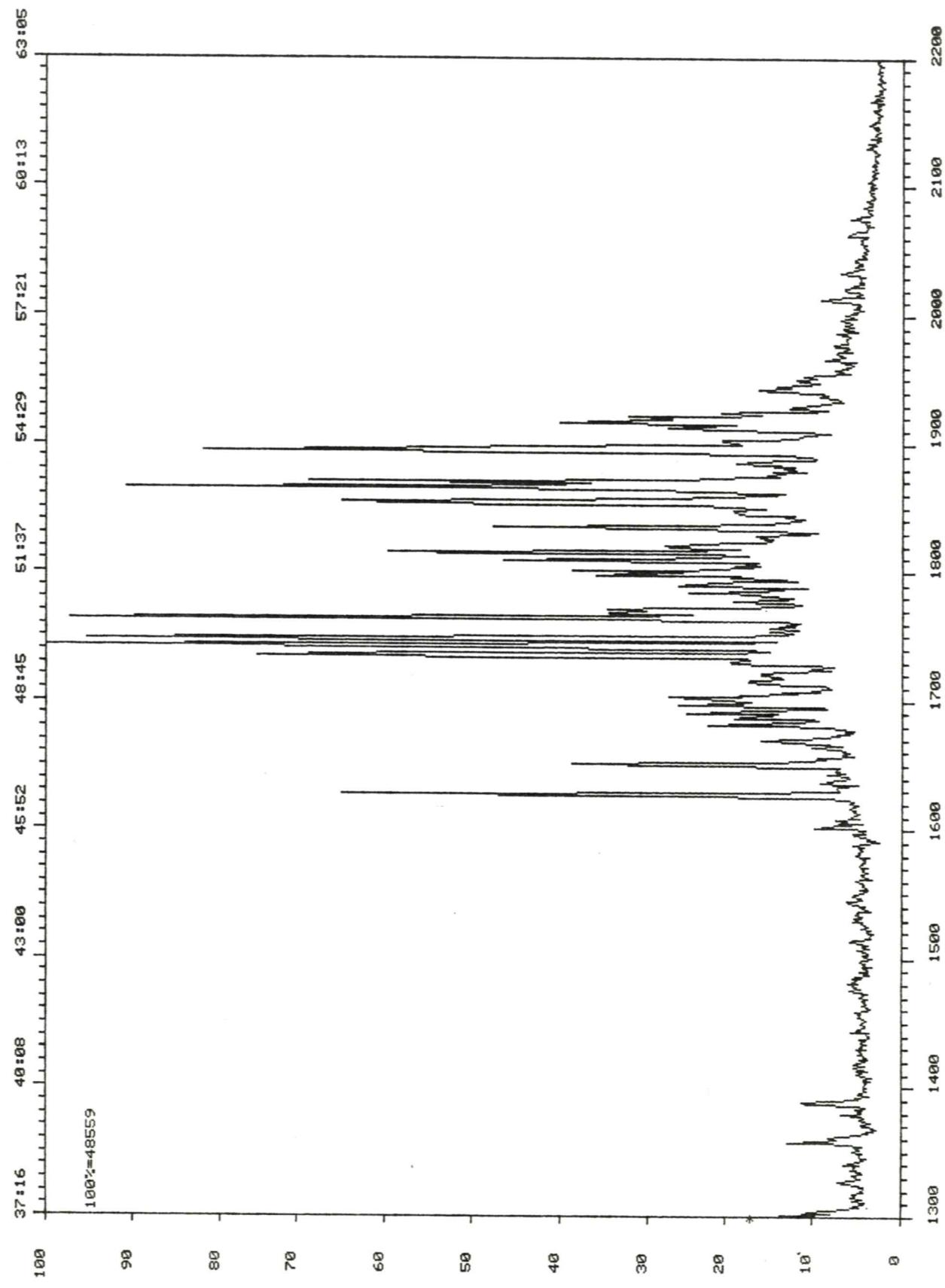
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) DS-55 CROSS SCAN REPORT, RUN: 2460001

) HEBRON I-13 DST#5

) \* 217



DS-65 CROSS SCAN REPORT, RUN: 2460001

HEBBON I-13 DST#5

\* 191

37:16      40:08      43:00      45:52      48:45      51:37      54:29      57:21      60:13      63:05

100% = 595536

90

80

70

60

50

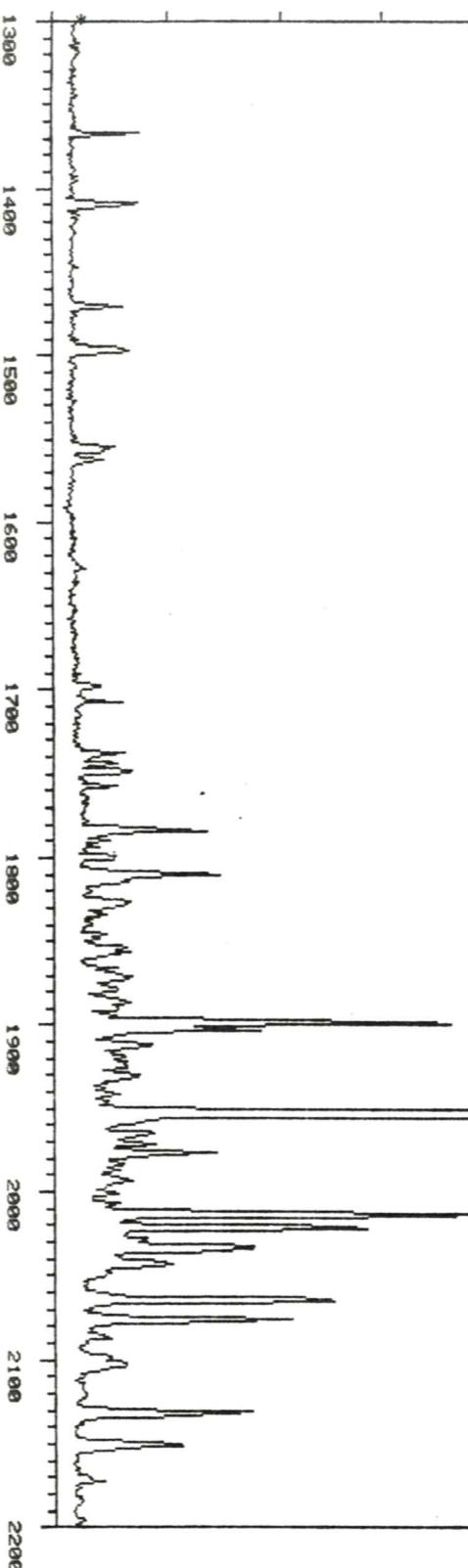
40

30

20

10

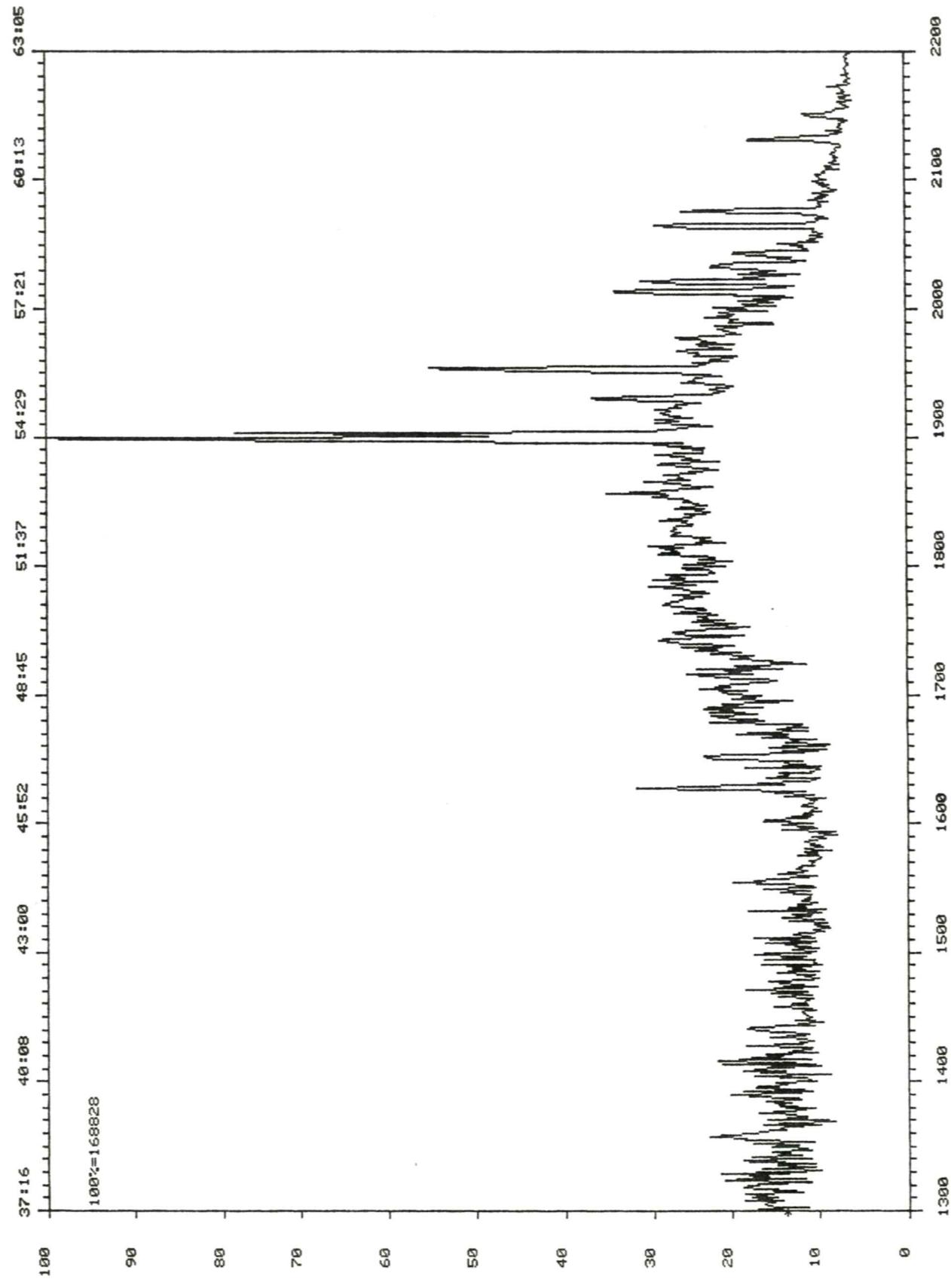
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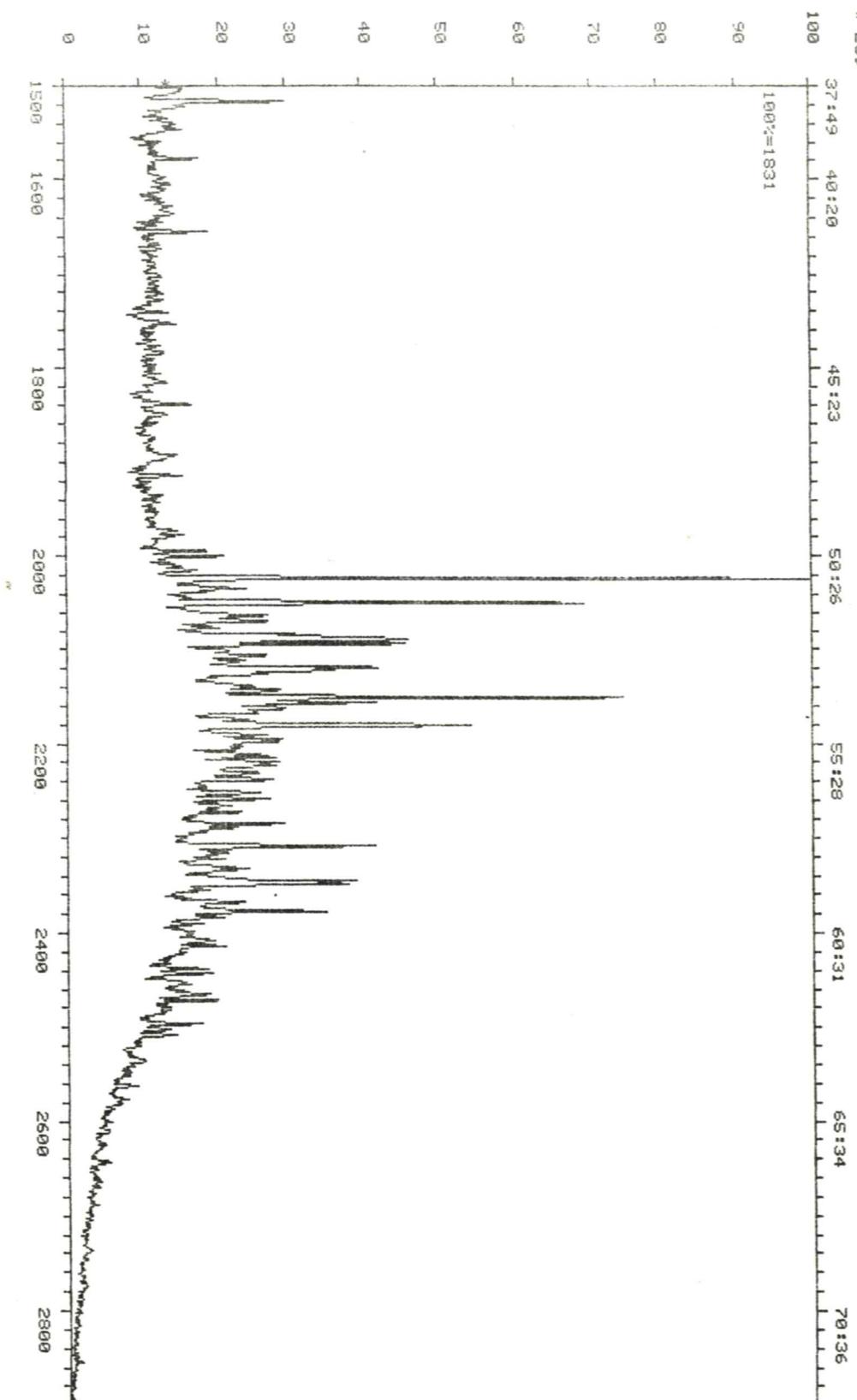
DS-55 CROSS SCAN REPORT, RUN: 2460001

HEBRON I-13 DST#5

\* 177



DS-55 CROSS SCAN REPORT, RUN #: 207870002  
FORTUNE G-57 DST#3  
\* 259



DS-55 CROSS SCAN REPORT, RUN: 207870002  
FORTUNE 6-57 DST#3

\* 231

37:49 46:26 45:23 50:26 50:26 60:31 65:34 70:36

100%=>113

55:28

60:

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90:

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60:

70:

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90:

100:

110:

120:

130:

140:

150:

160:

170:

180:

190:

200:

210:

220:

230:

240:

250:

260:

270:

280:

290:

300:

310:

320:

330:

340:

350:

360:

370:

380:

390:

400:

410:

420:

430:

440:

450:

460:

470:

480:

490:

500:

510:

520:

530:

540:

550:

560:

570:

580:

590:

600:

610:

620:

630:

640:

650:

660:

670:

680:

690:

700:

710:

720:

730:

740:

750:

760:

770:

780:

790:

800:

810:

820:

830:

840:

850:

860:

870:

880:

890:

900:

910:

920:

930:

940:

950:

960:

970:

980:

990:

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1010:

1020:

1030:

1040:

1050:

1060:

1070:

1080:

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1100:

1110:

1120:

1130:

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2120:

2130:

2140:

2150:

2160:

2170:

2180:

2190:

2200:

2210:

2220:

2230:

2240:

2250:

2260:

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2790:

2800:

2810:

2820:

2830:

2840:

2850:

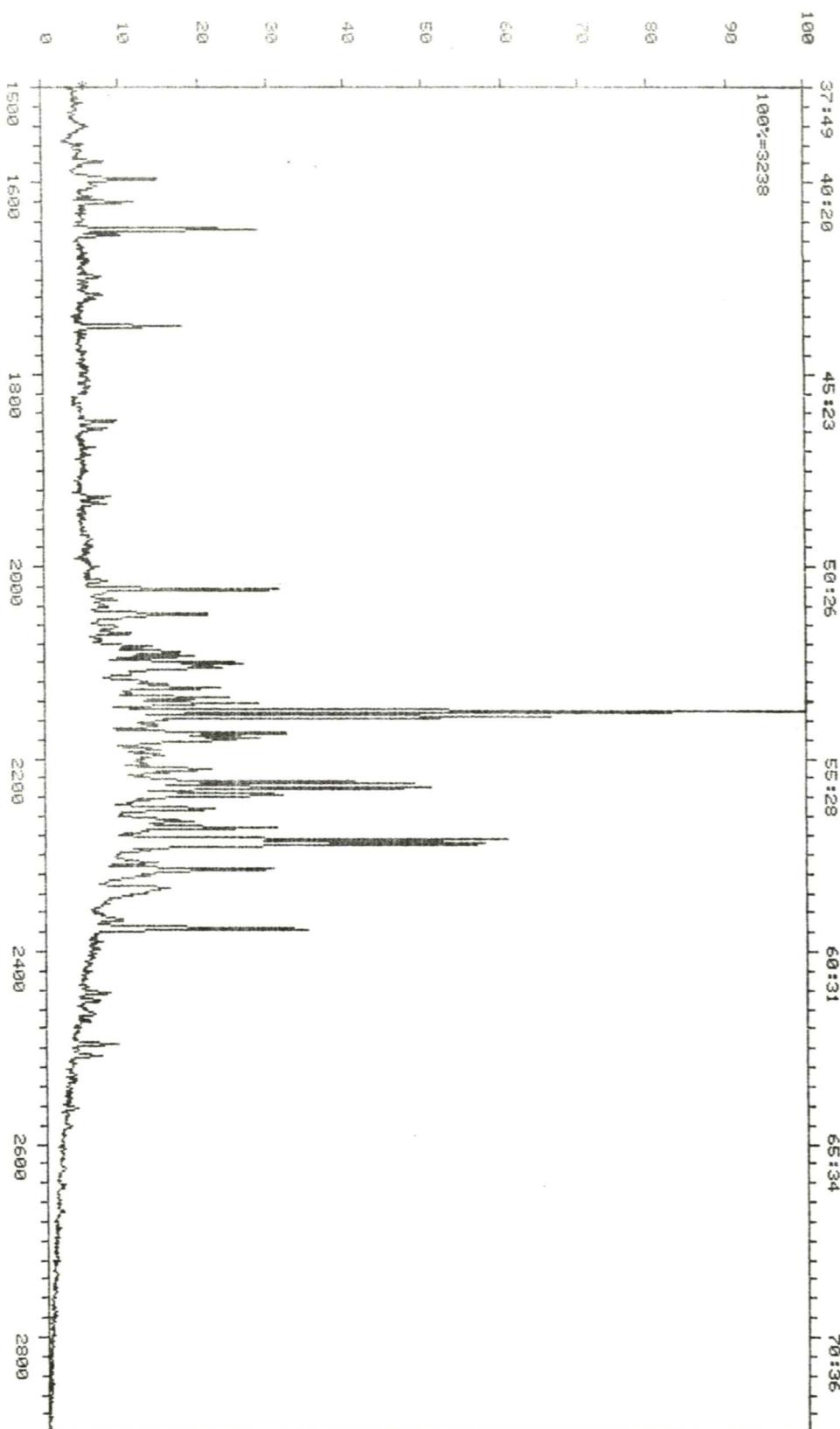
2860:

2870:

DS-55 CRUSS SCAN REPORT, RUH: 2817870042

FORTUNE G-57 DST#3

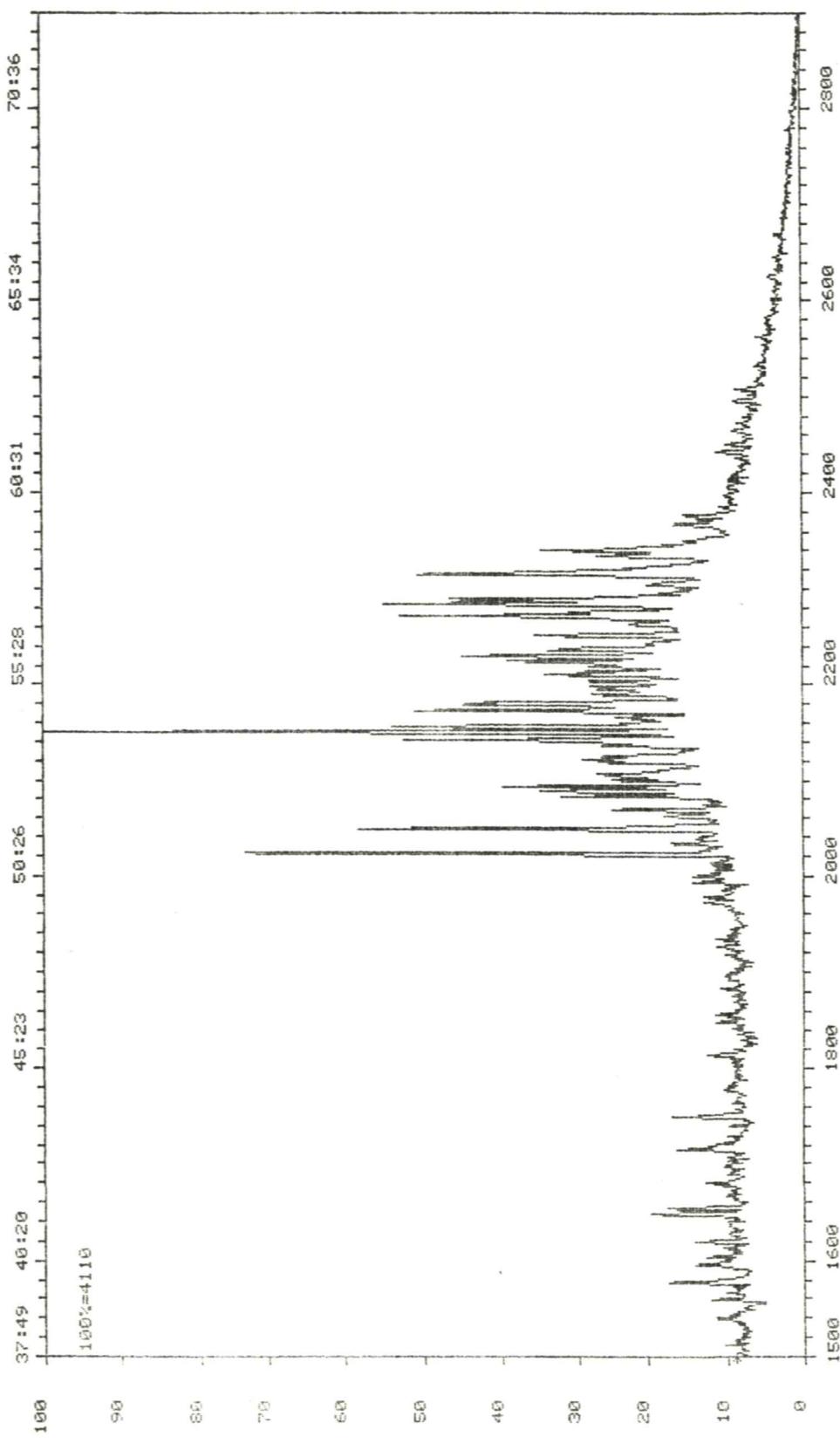
\* 218



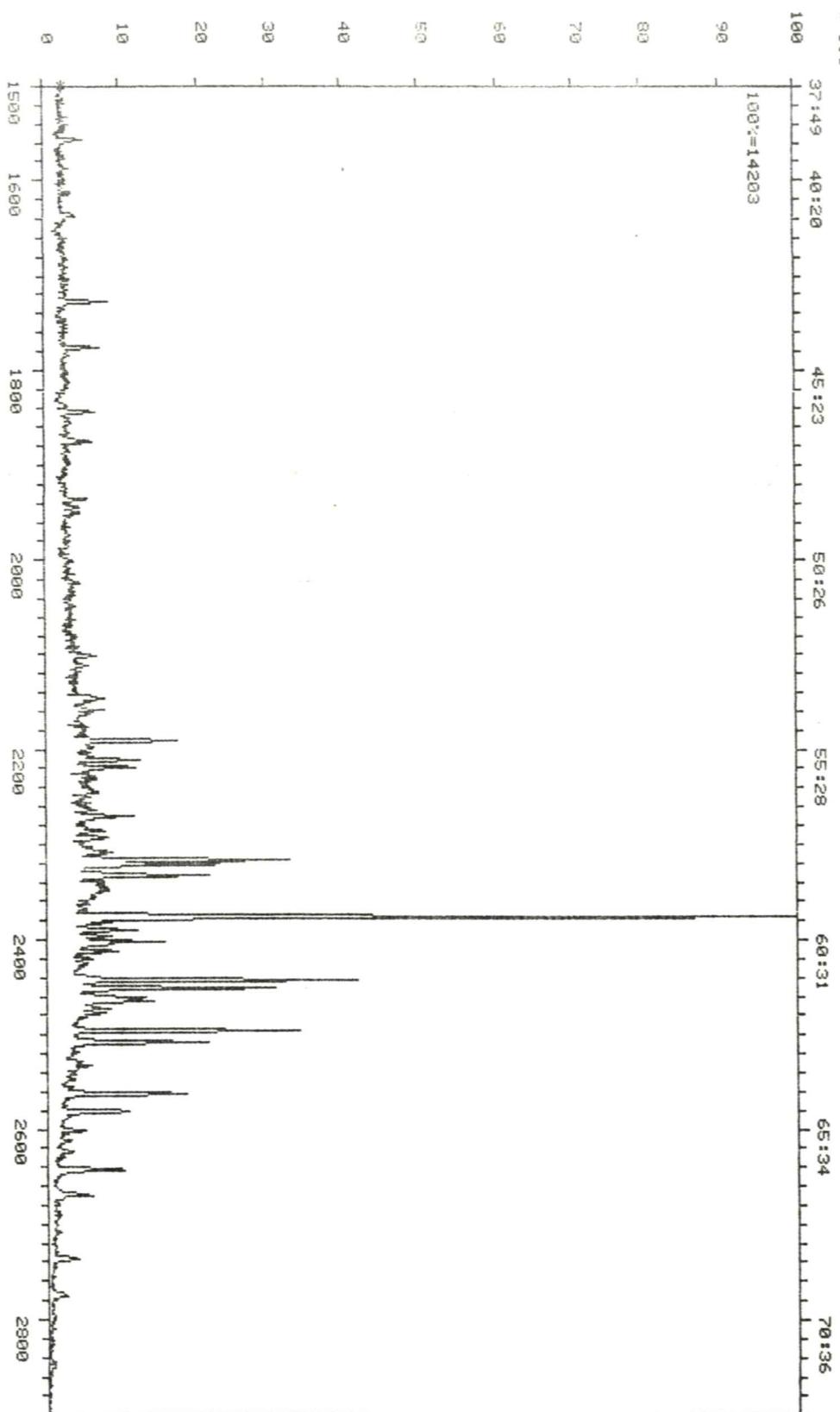
DS-55 CROSS SCAN REPORT, RUN: 207870002

FORTUNE 6-57 DST#3

\* 217



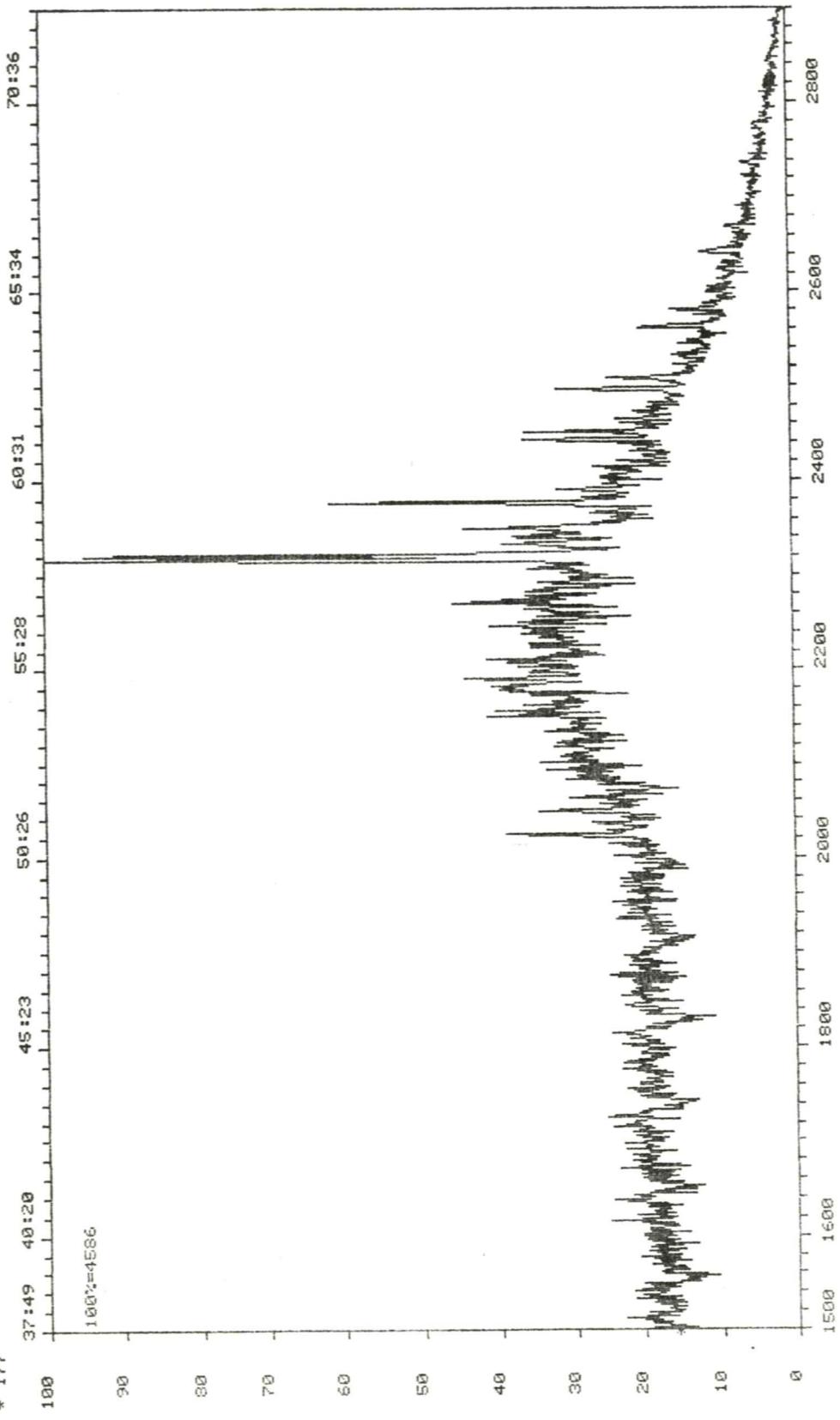
DS-55 CROSS SCAN REPORT, RUN: 207870002  
FORTUNE G-57 DST#3  
\* 191



DS-55 CROSS SCAN REPORT, RUN: 207870002

FORTUNE G-57 DST#3

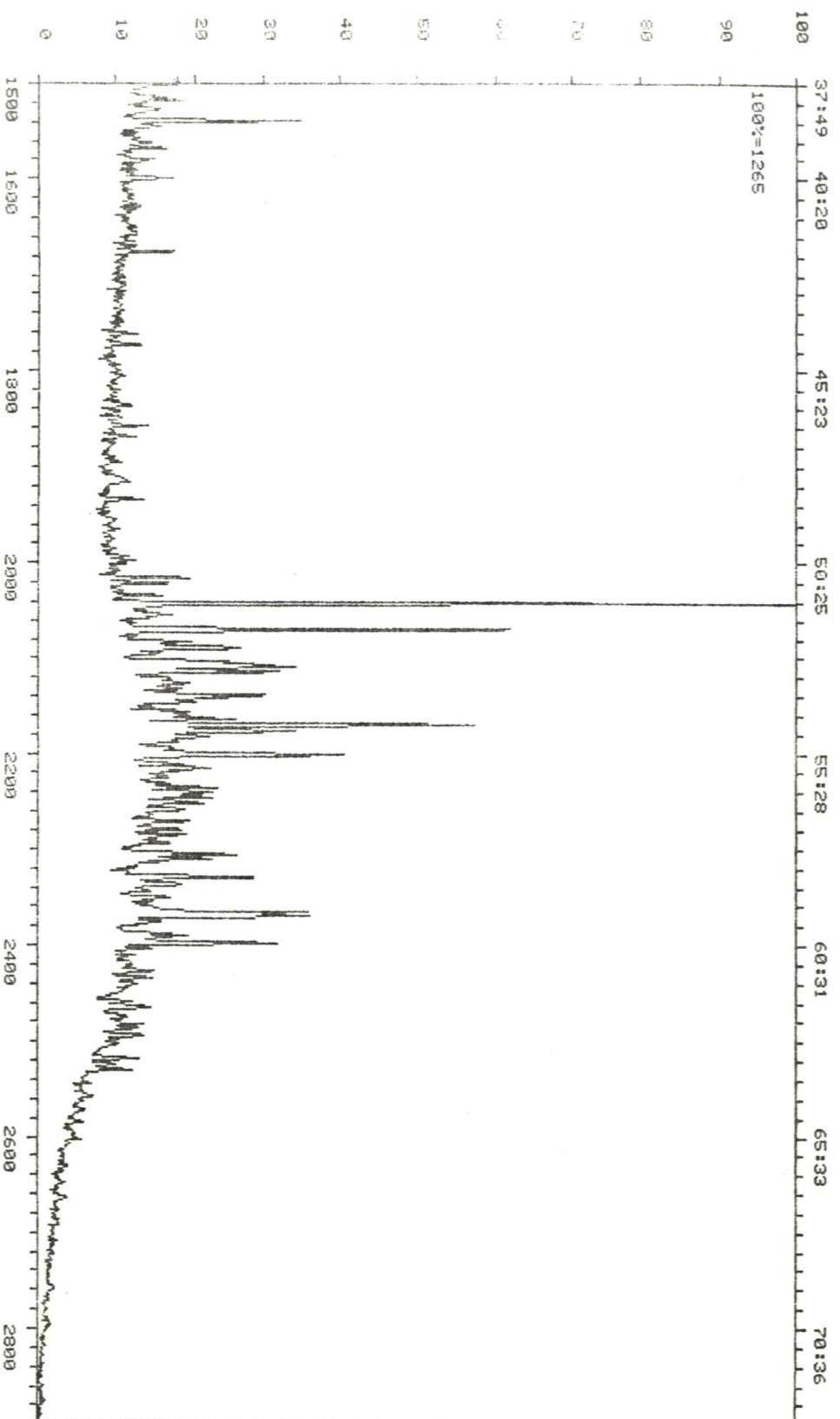
\* 177



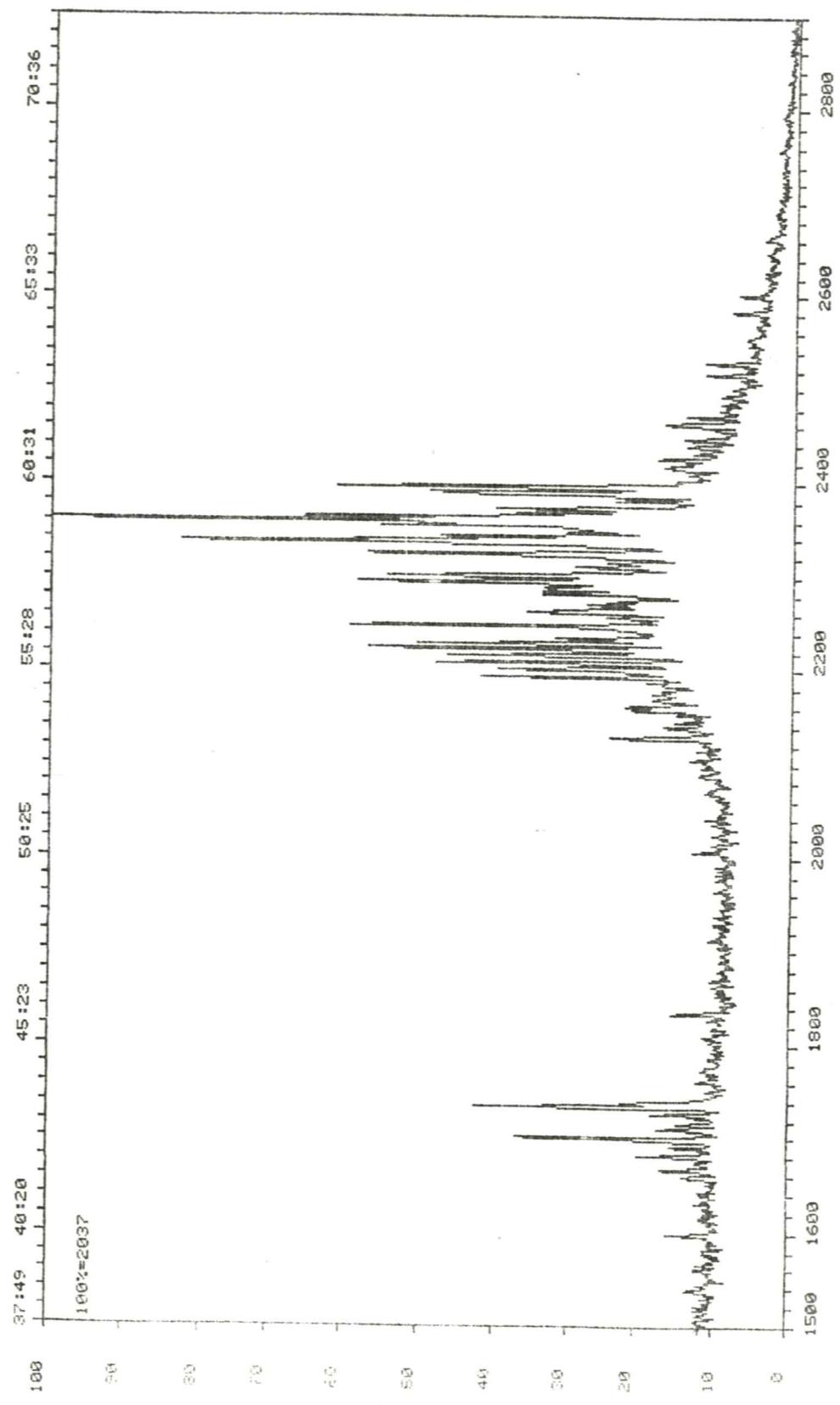
DS-55 CROSS SCAN REPORT, RUN: 261830604

BEN NEVIS I-45 DST#11

\* 259

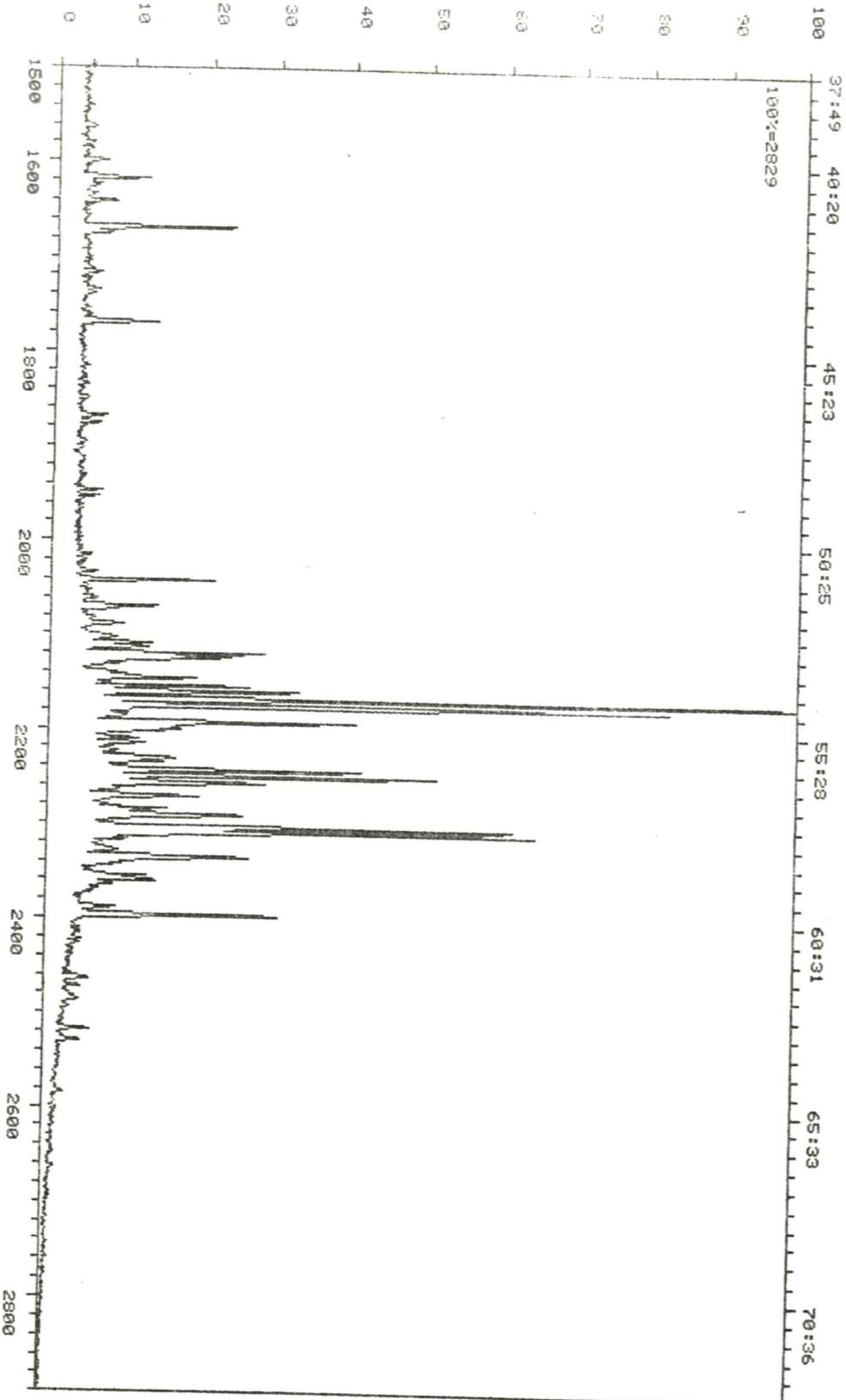


US-55 CROSS SCAN REPORT, RUN: 201830004  
BEN NEVIS I-45 DST#11  
\* 231



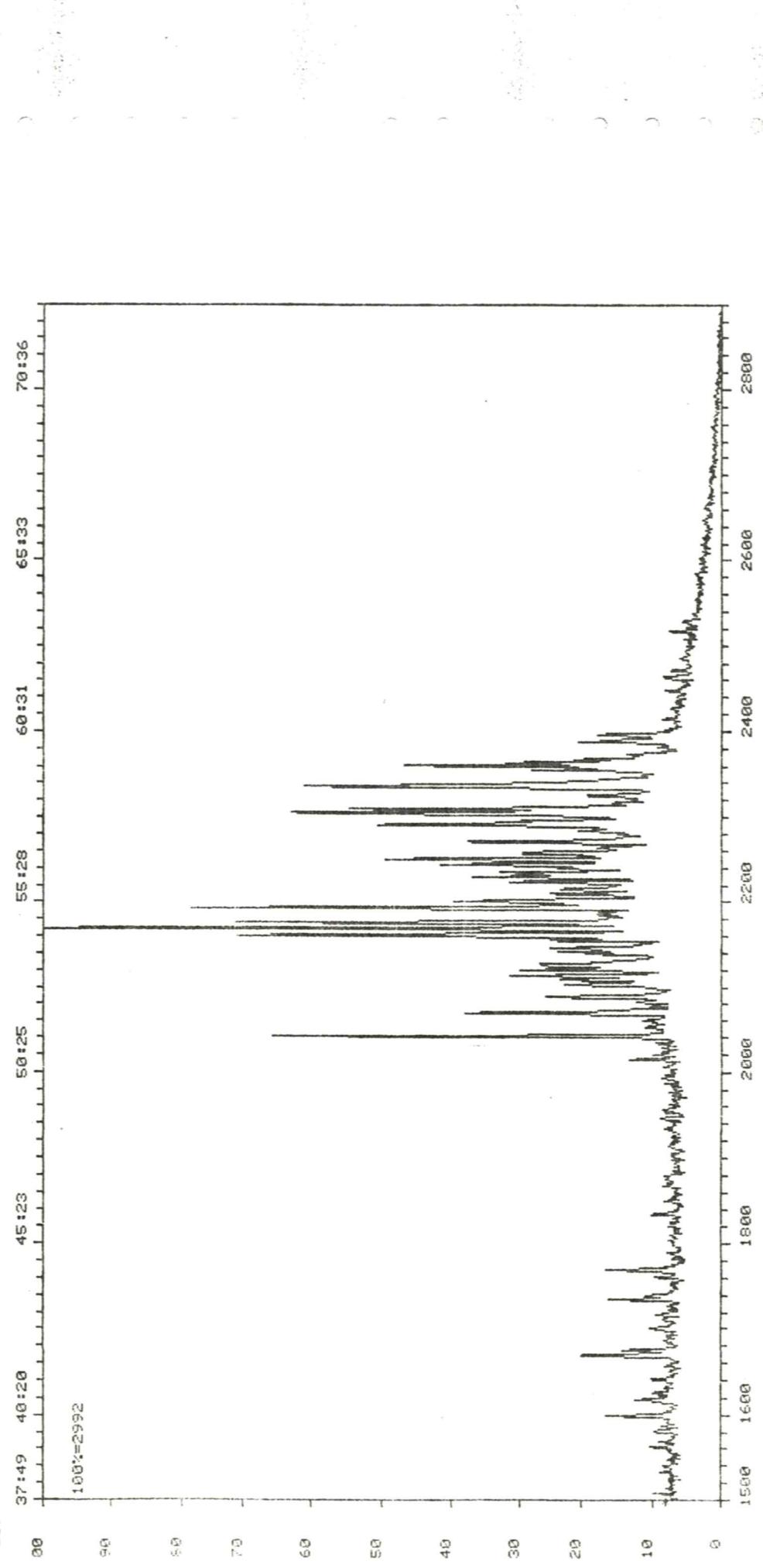
DS-55 CROSS SCAN REPORT, RUN: 201830004  
BEN NEVIS I-45 DST#11

\* 218



S-55 CROSS SCAN REPORT, RUN: 201830004  
EN NEVIS I-45 DST#11

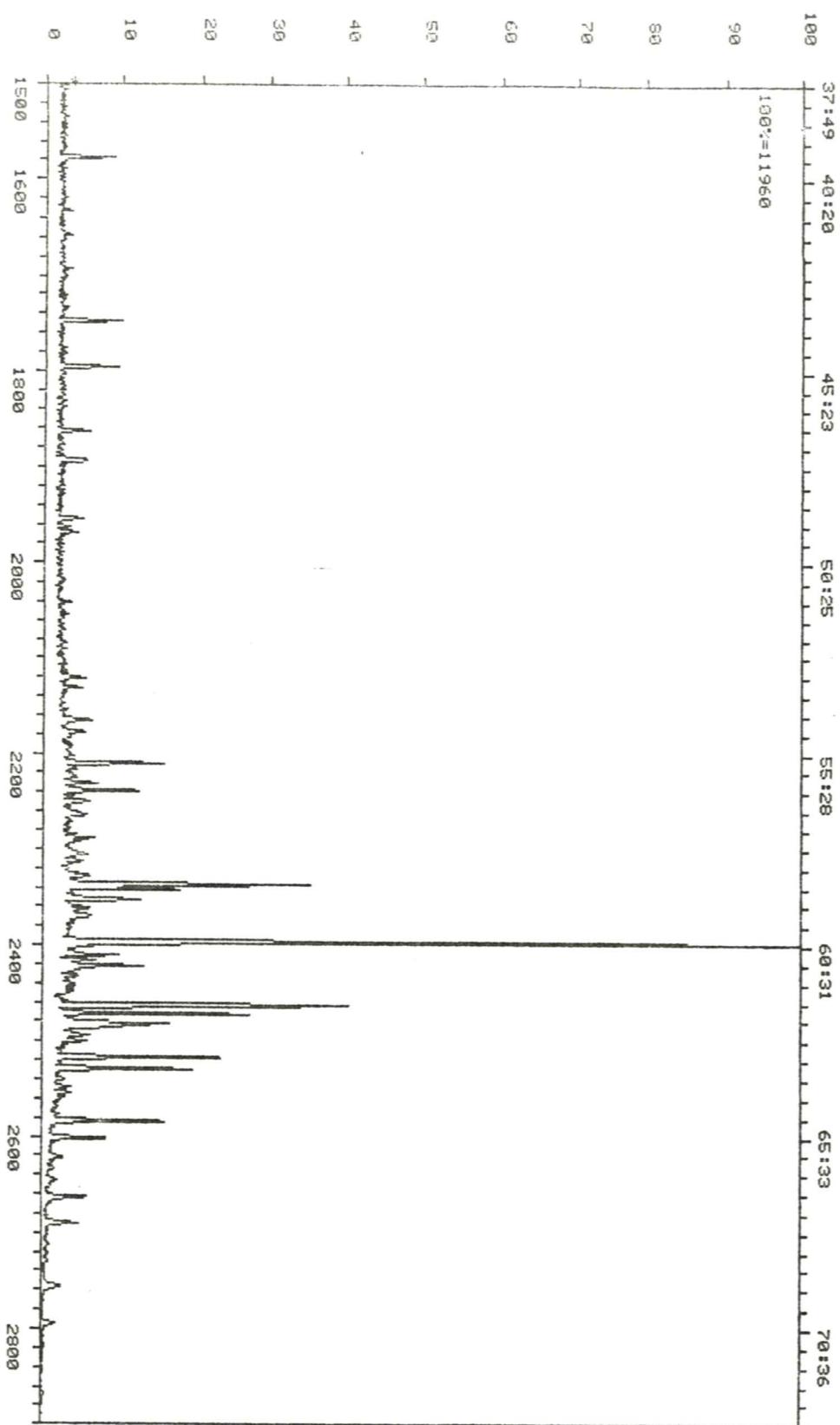
217



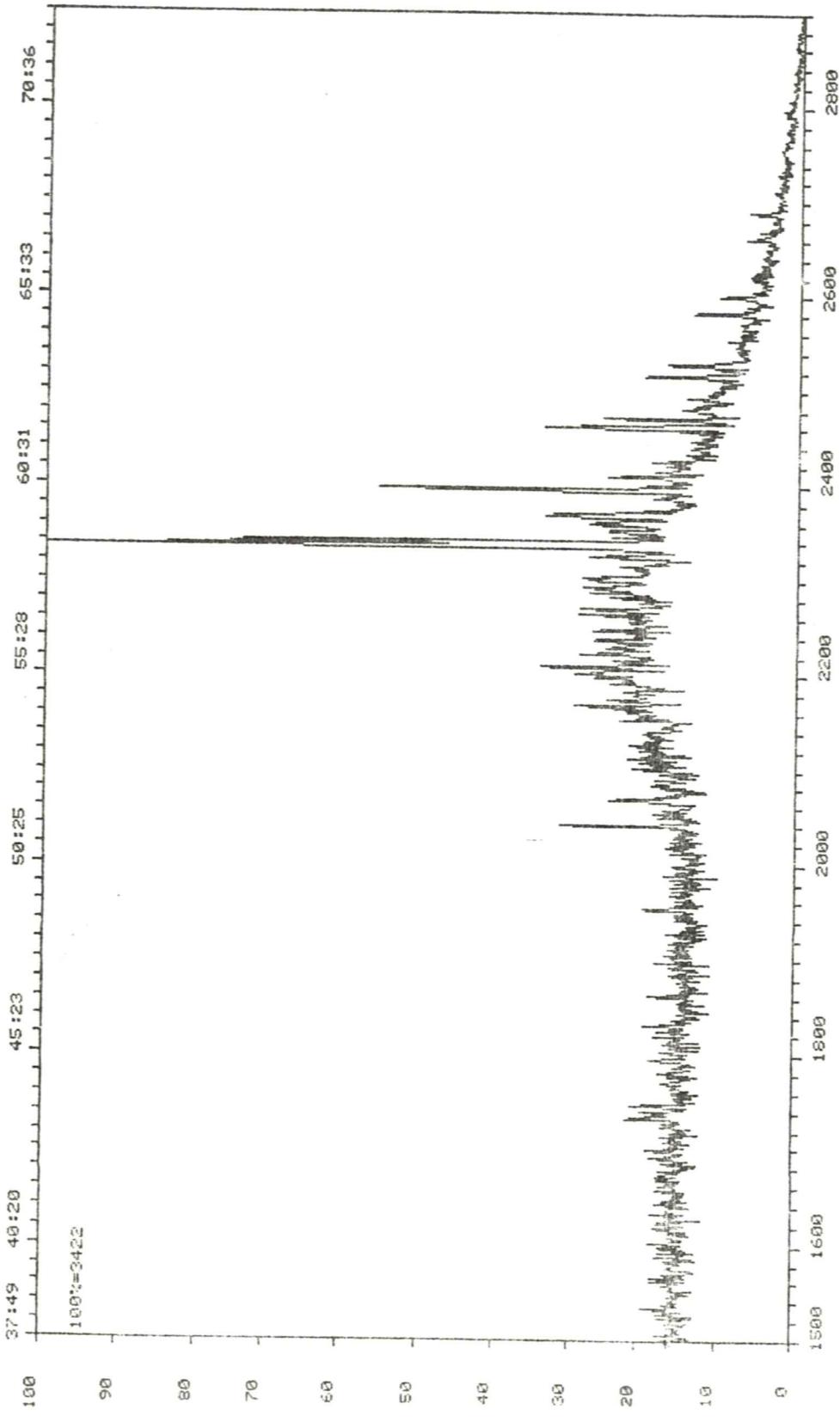
DIS-55 CROSS SCAN REPORT, RUN: 201838004

BEN NEVIS I-45 DST#11

\* 191



DS-55 CROSS SCRATCH REPORT, RUN: 201830004  
BEN NEVIS I-45 DST#11  
\* 177

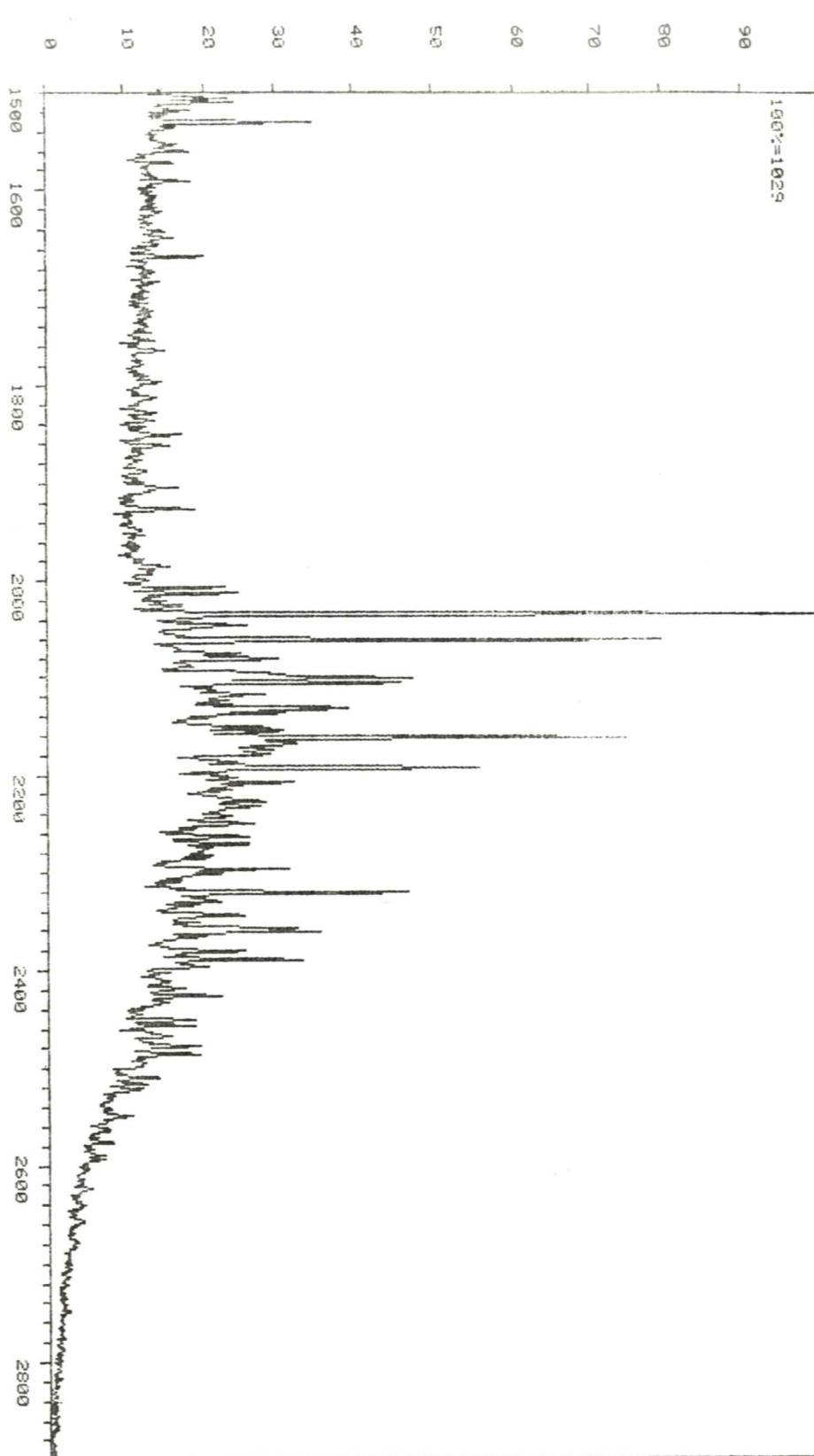


DS-55 CROSS SCAN REPORT, RUH: 201850001

BEN NEV IS I-45 DST#3

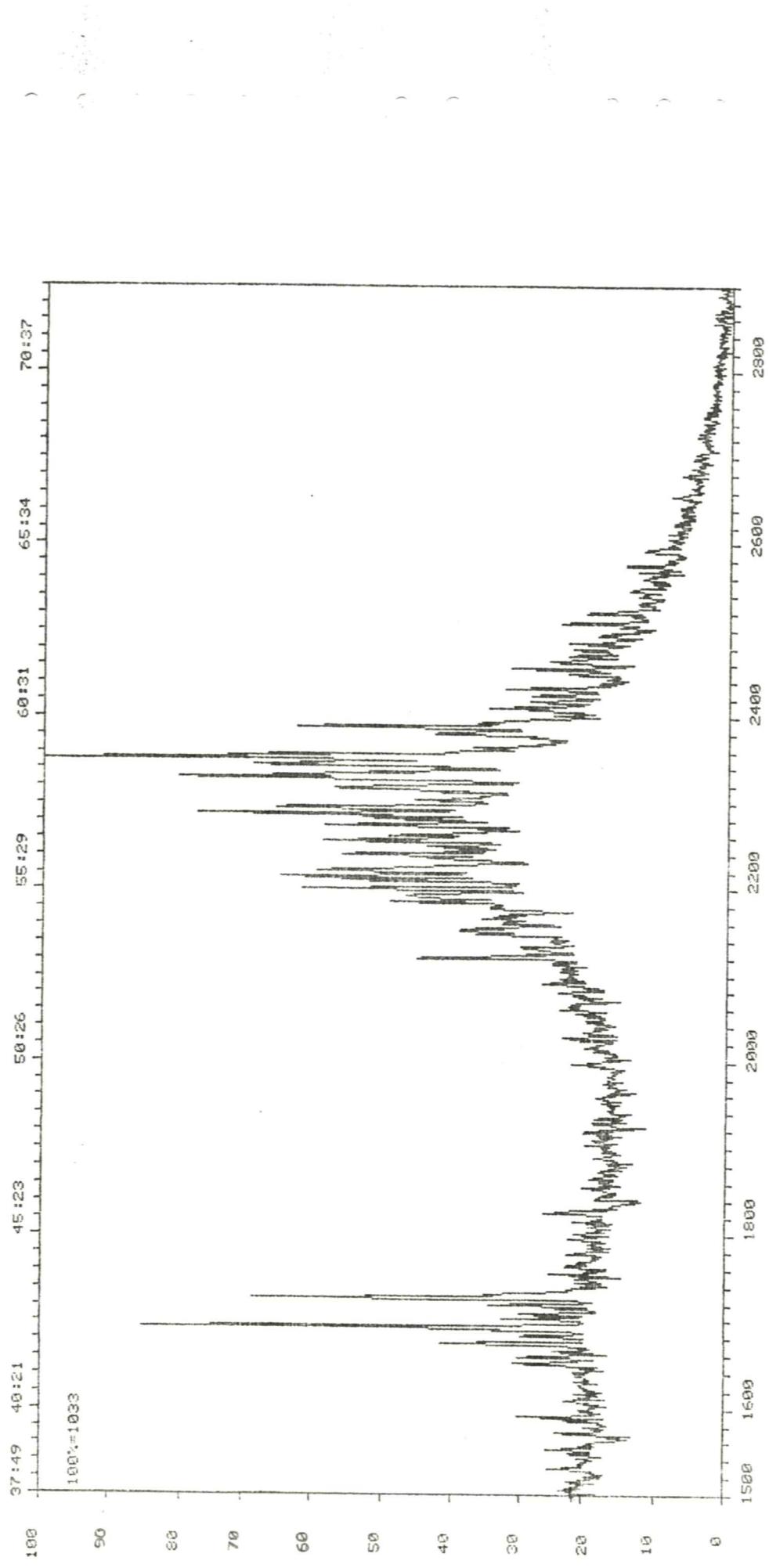
\* 259

37:49 40:21 45:23 50:26 55:29 60:31 65:34 70:37  
160%:1029



DS-55 CROSS SCAN REPORT, RUH: 201850001  
BEN NEW LS 1-45 DIST#3

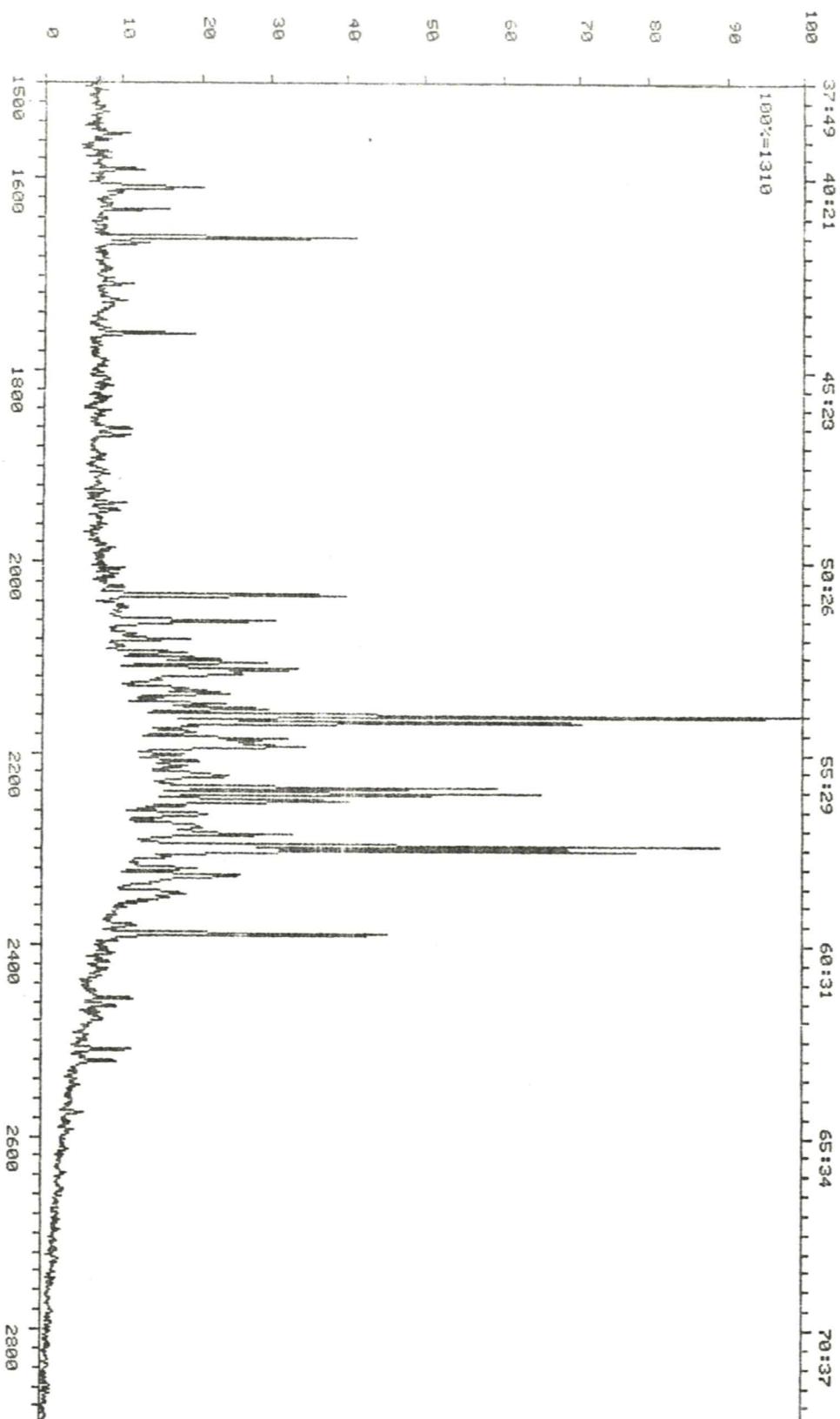
\* 231



DS-55 CROSS SCAN REPORT, RUN: 201850001

BEN NEV IS I-45 DST#3

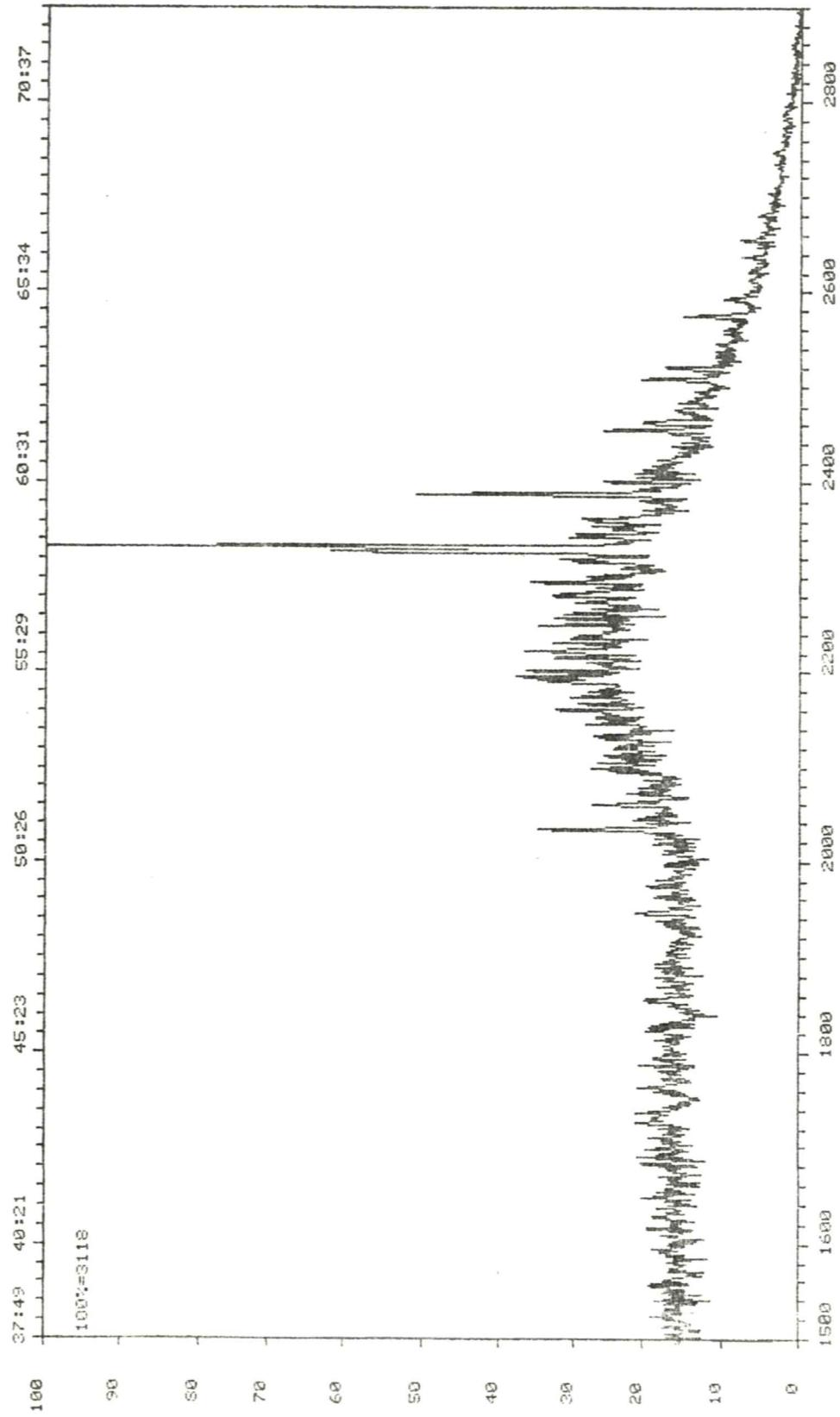
\* 218



DS-55 CROSS SECTION REPORT, RUN: 201850001

BEN REV IS I-45 DST#3

\* 177



DS-55 CROSS SCAN REPORT, RUN: 204460002

BEOHUK K-05 DST 3

\* 259

37:52 40:24 45:27 50:30 55:33 60:36 65:39 70:42

100a

100%:=797

90

80

70

60

50

40

30

20

10

0

1500 1600 1700

1800

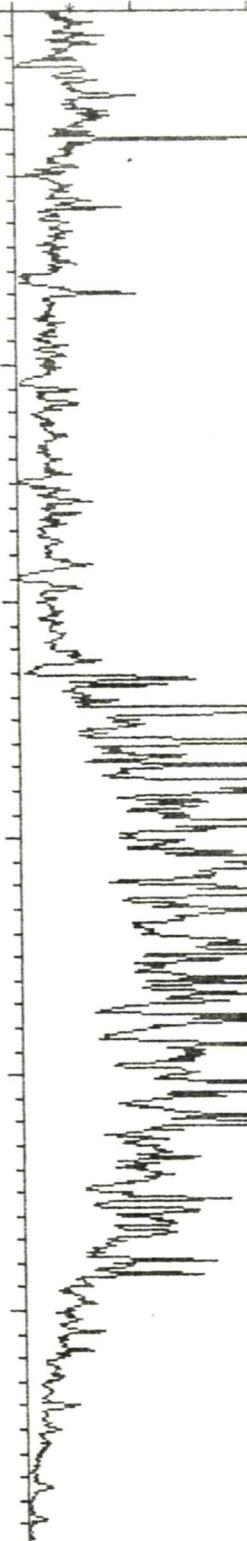
2000

2200

2400

2600

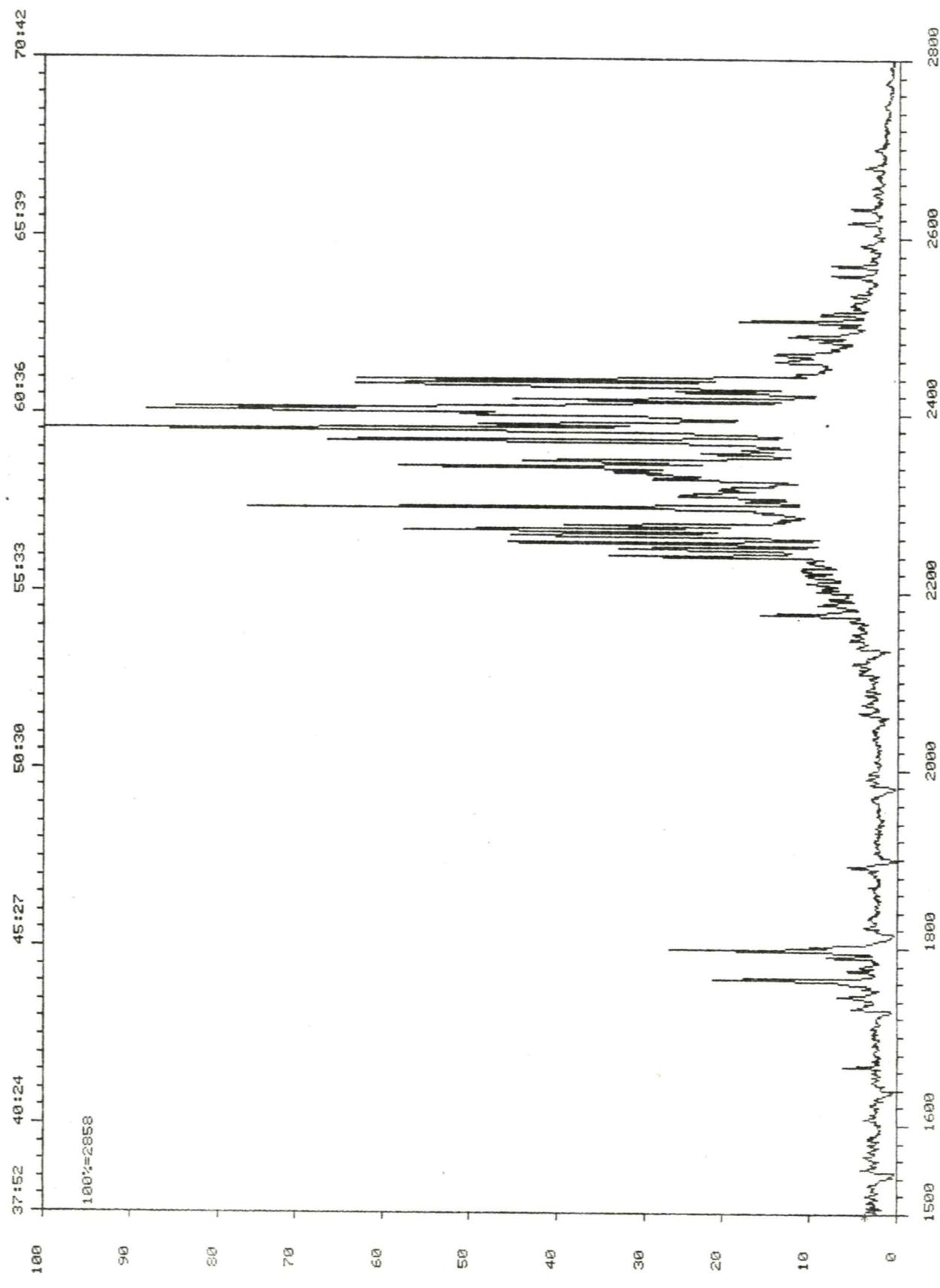
2800



TDS-55 CROSS SCAN REPORT, RUN. 204460002

EOTHUK K-05 DST 3

\* 231



DS-55 CROSS SCAN REPORT, RUN: 204460002

BEOTHUK K-05 DST 3

\* 218

) 37:52 40:24 45:27 50:30 55:33 ° 60:36 65:39 70:42  
) 1001=4209

90

80

70

60

50

40

30

20

10

2000

1800

1600

1500

1800

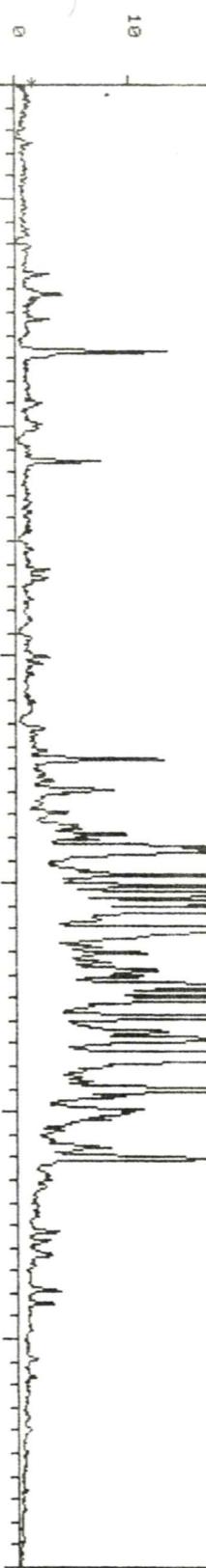
2000

2200

2400

2600

2800



DS-55 CROSS SCHR REPORT, RUN: 204460002

BEDTHUK K-05 DST 3

\* 217

37:52 40:24 45:27

50:30 55:33 60:36

70:42

65:39

55:36

50:39

45:42

40:45

35:48

30:51

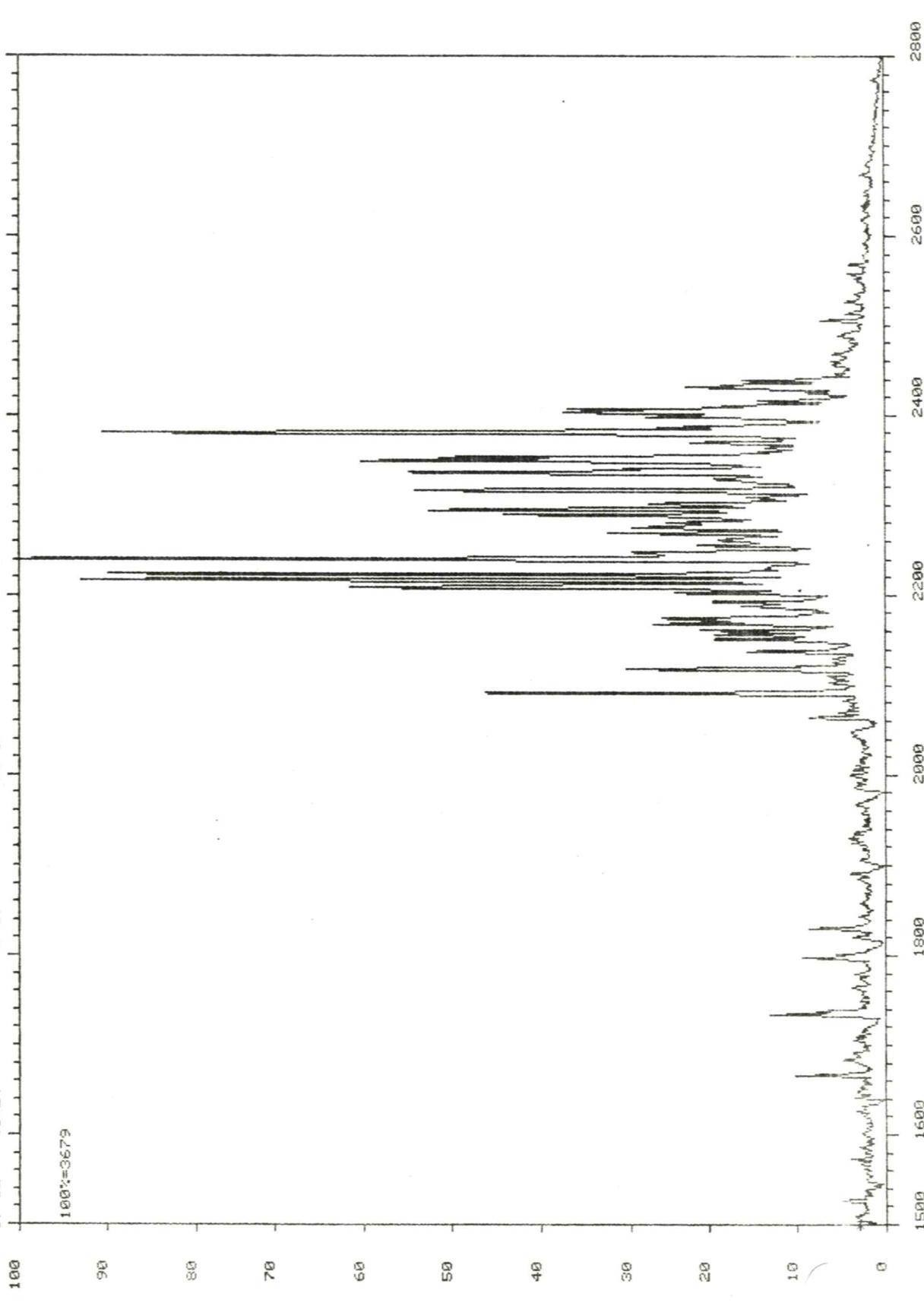
25:54

20:57

15:59

10:59

0:59



DS-55 CROSS SGN REPORT, RUN: 204460002

BEOTHUK K-05 DST 3

\* 191

37:52 40:24 45:27 50:38 55:33

60:36 65:39 70:42

100%:13513

90

80

70

60

50

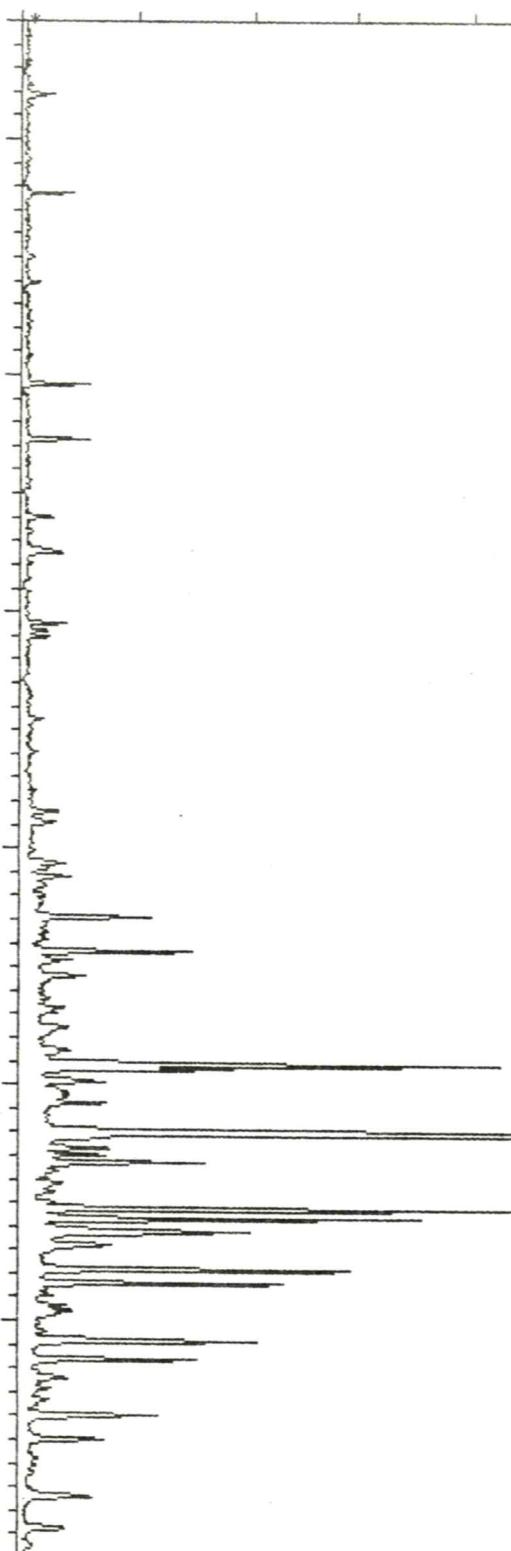
40

30

20

10

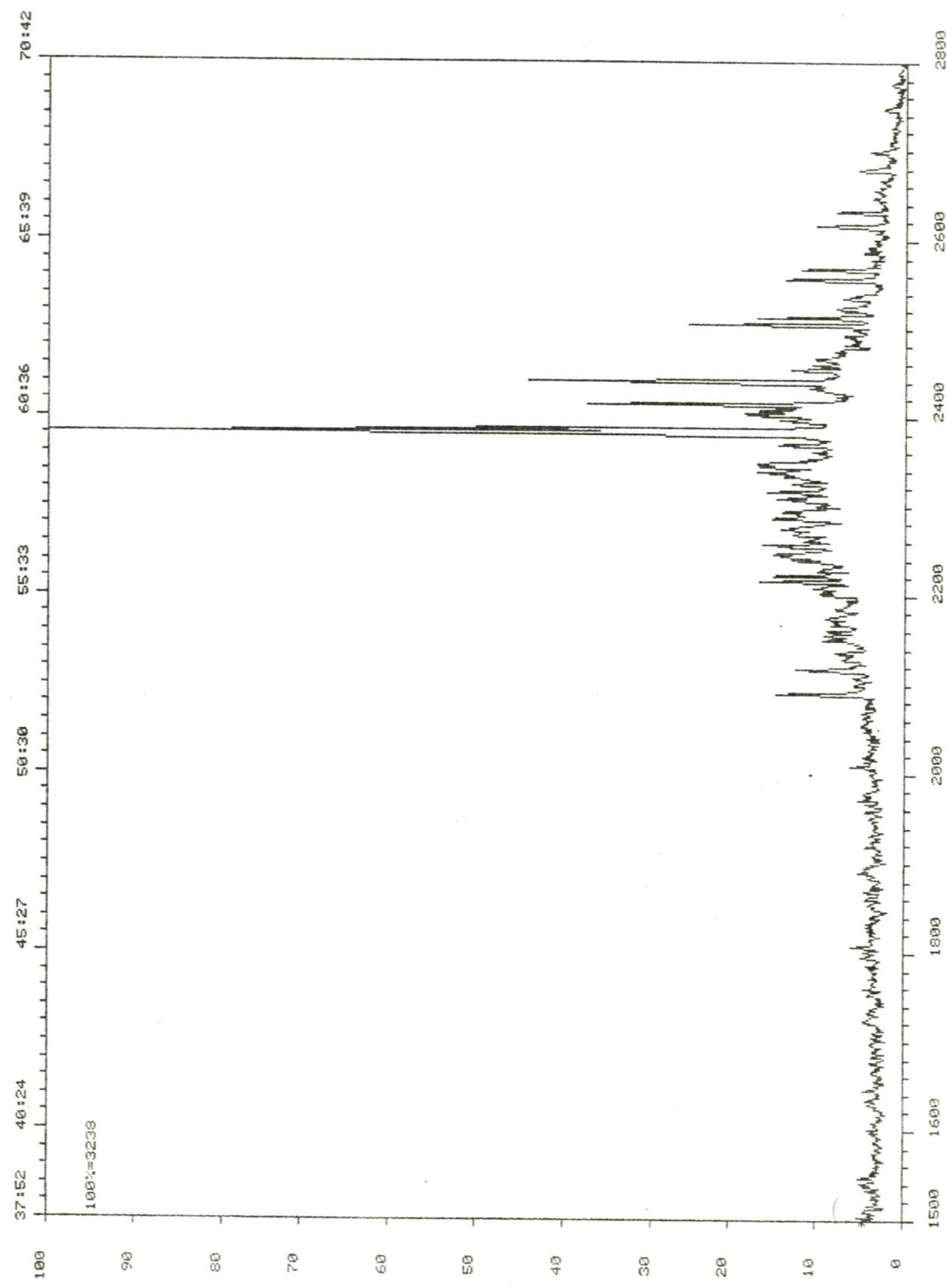
1500 1600 1800 2000 2200 2400 2600 2800



DS-55 CROSS SCAN REPORT, RUN: 204460002

) BEOTHUK K-05 DST 3

) \* 177



DS-55 CROSS SCAN REPORT, RUN: 201850001

BEN NEV IS I-45 DST#3

\* 259

37:49 40:21 45:23 50:26 55:29 60:31 65:34 70:37

100 100%:1029

90

80

70

60

50

40

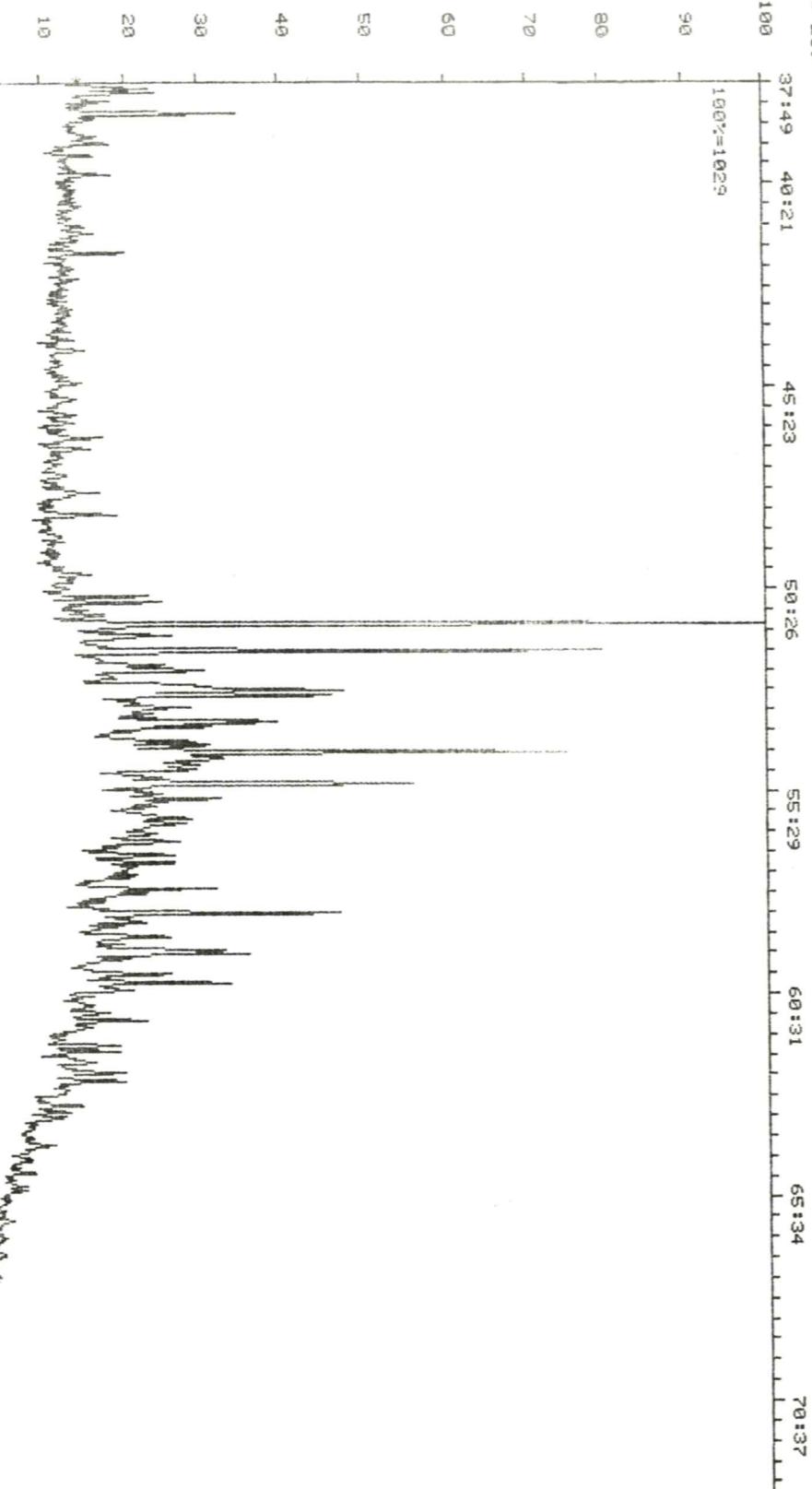
30

20

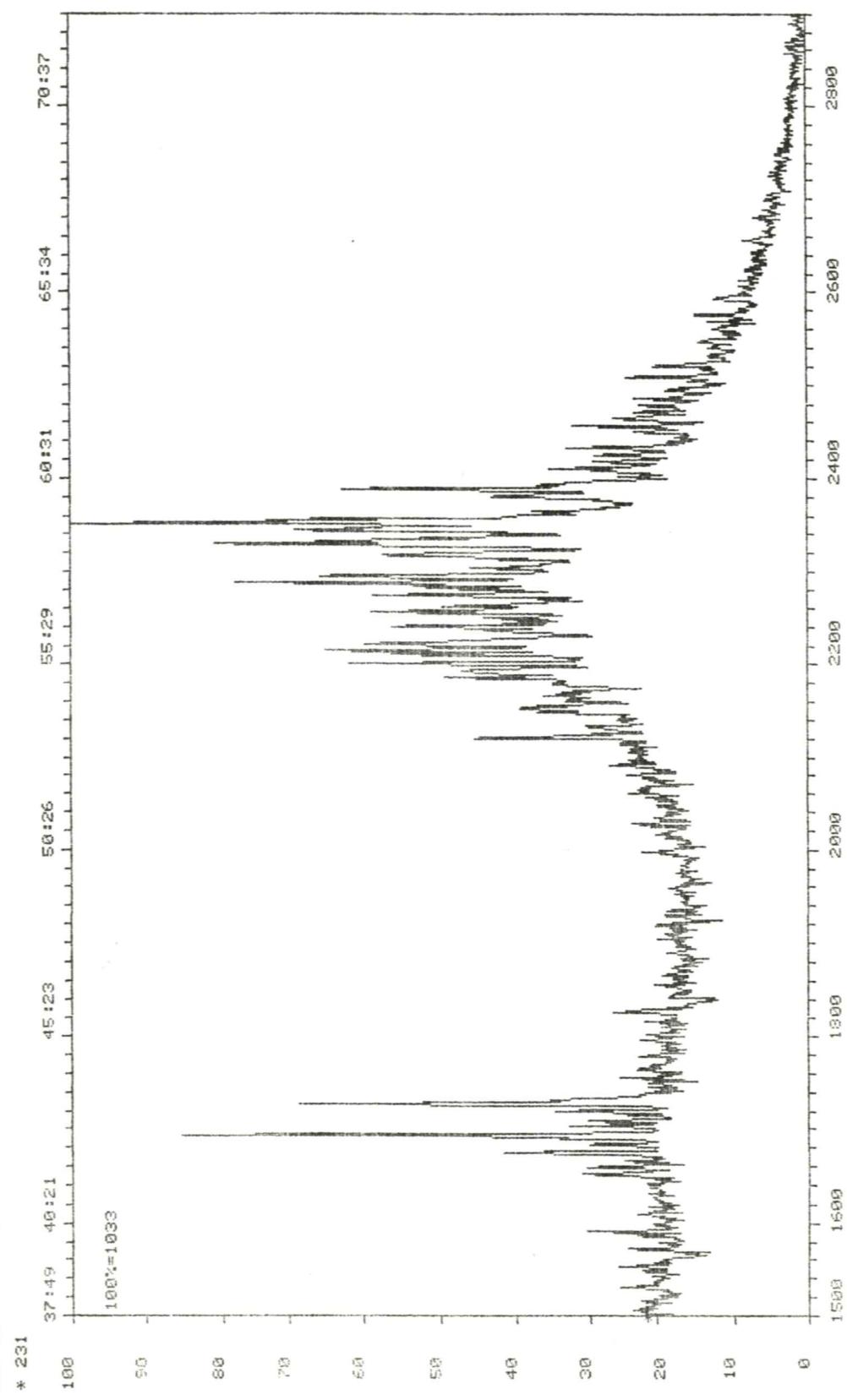
10

0

1500 1600 1800 2000 2200 2400 2600 2800



DS-55 CROSS SECTION REPORT, RUH: 201850001  
BEN NEV IS I-45 DST#3

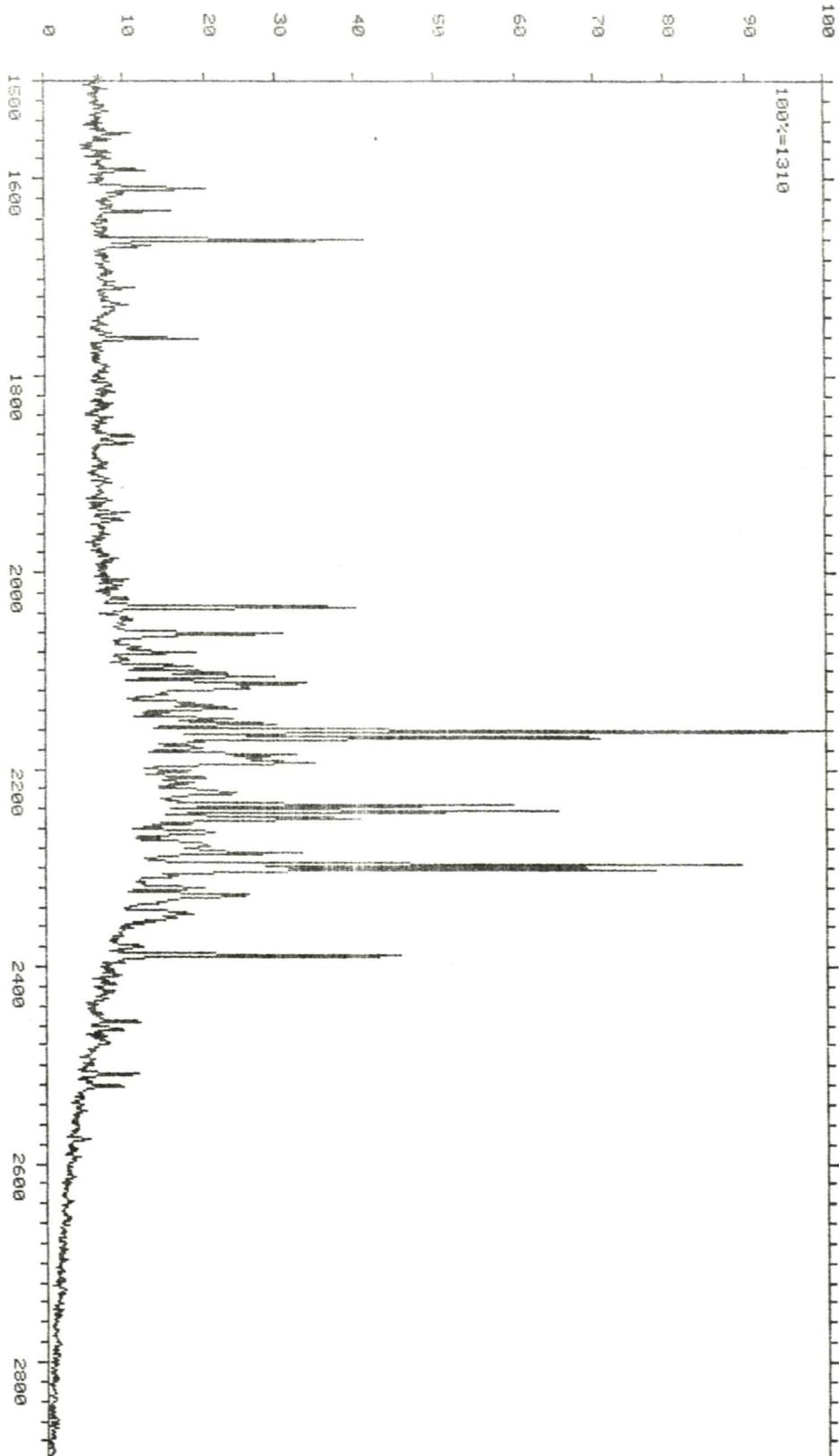


DS-55 CROSS SCAN REPORT, RUN: 201850001

BEN NEW IS I-45 DST#3

\* 218

37:49 40:21 45:23 50:26 55:29 60:31 65:34 70:37  
100% = 1310

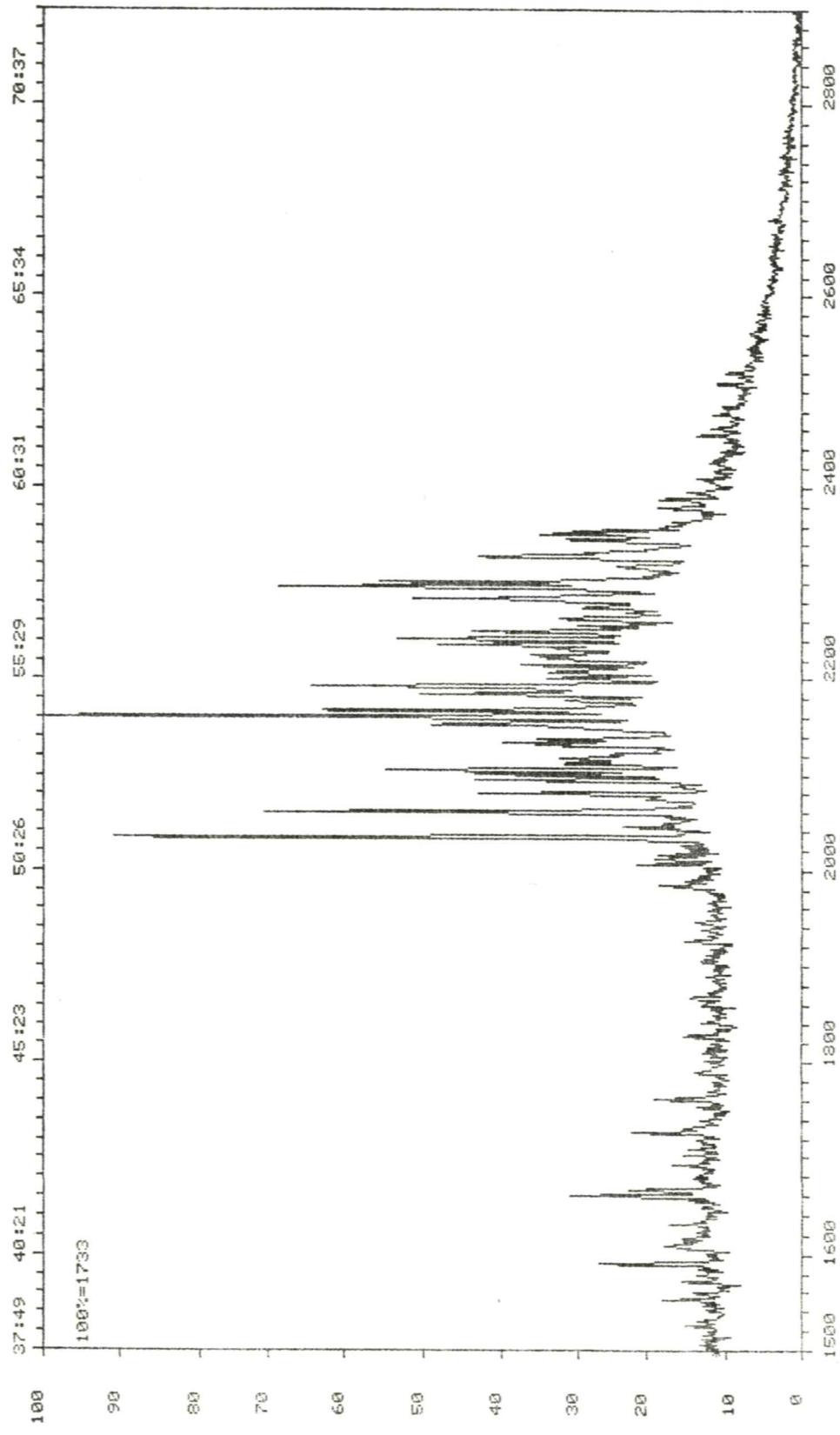


DS-55 CROSS SCAN REPORT, RUN: 201850001

BEN MEYER IS 1-A5 USE THIS

212

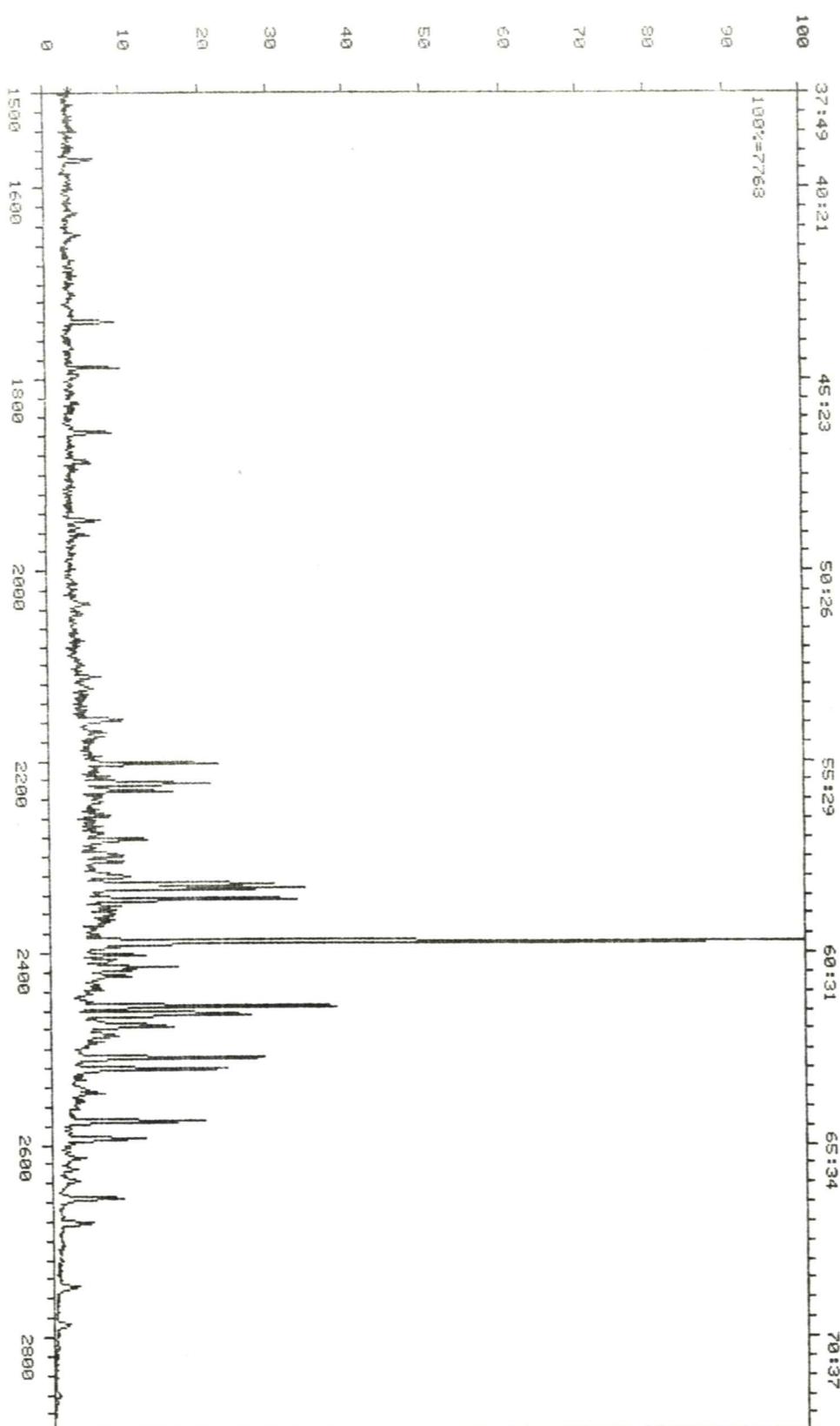
\* 217



DS-55 CROSS SCAN REPORT, RUH: 201850001

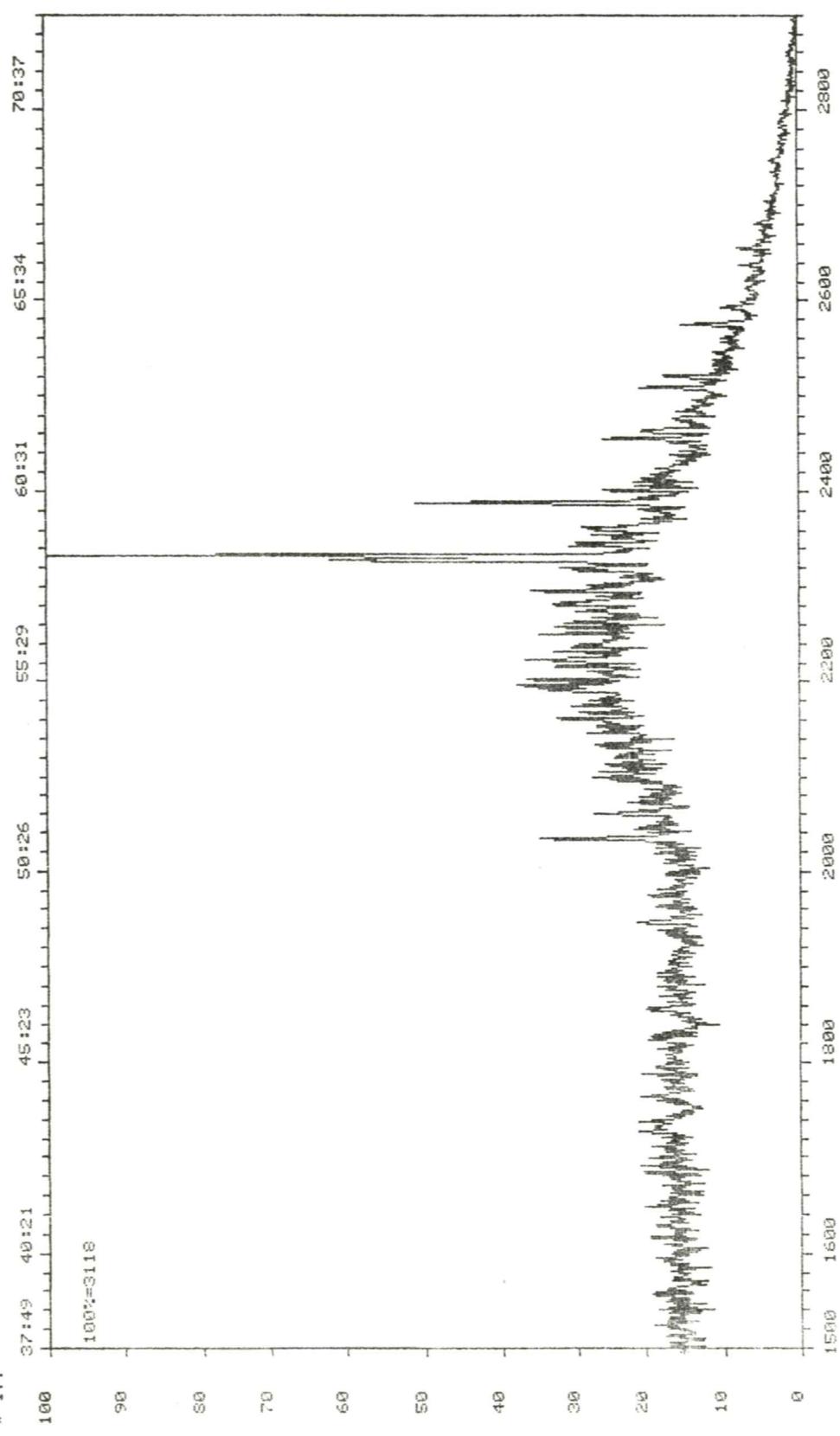
BEN NEW IS I-45 DST#3

\* 191



DS-55 CROSS SECTION REPORT, RUH: 201850001  
BEN HEY IS I-45 DST#3

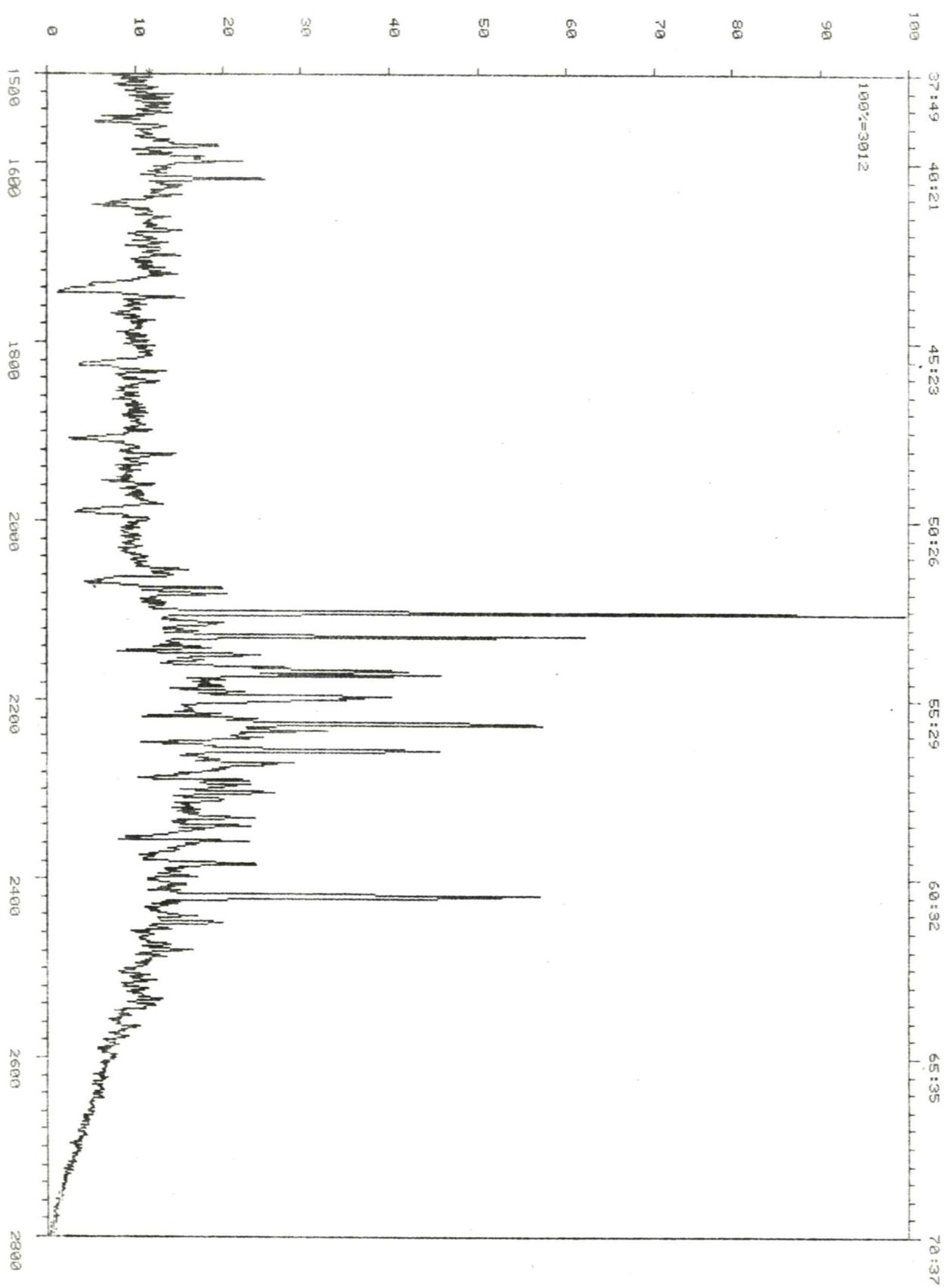
\* 177



DS-55 CROSS SCAN REPORT, RUN: 201250009

ADOLPHUS 2K-41 85601

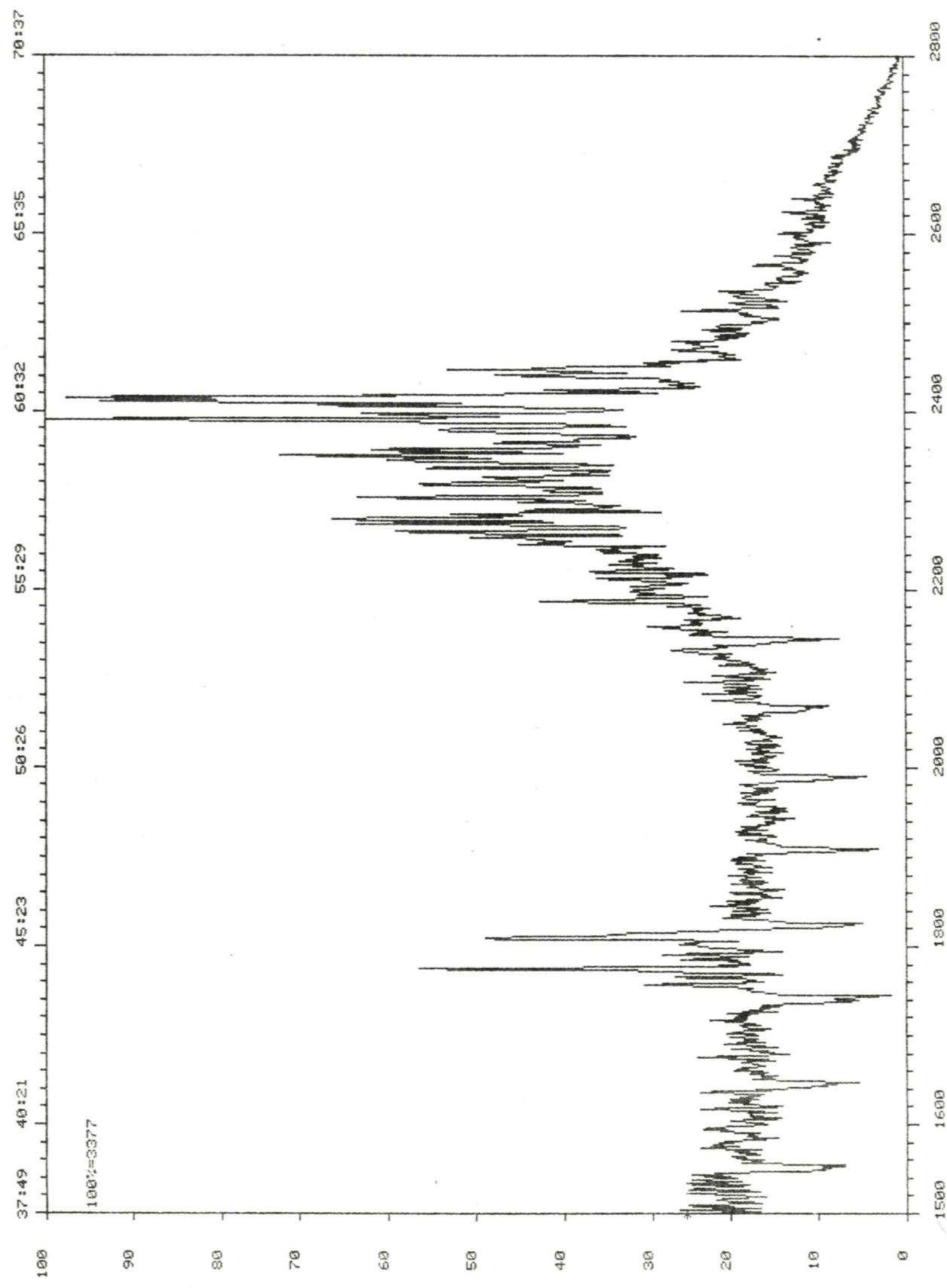
# 259



IG-55 CROSS SCAN REPORT, RUN: 201250009

ADOLPHUS 2K-41 8560M

\* 231



ADOLPHUS 2K-41 8560M

HJULPHJS 2K-41 85691

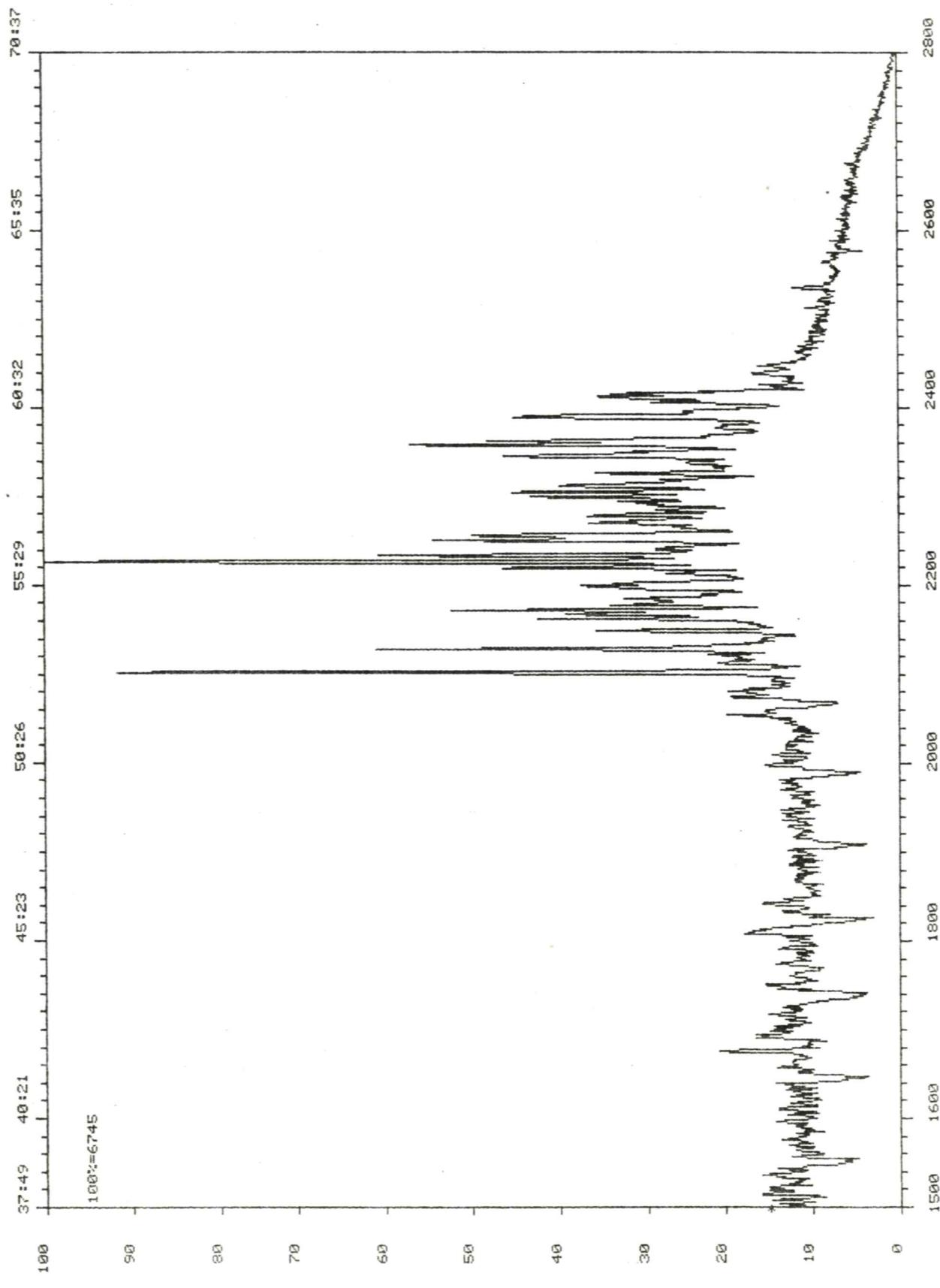
\* 218

37:49 40:21 45:23 50:26 55:29 60:32 65:35 70:37  
100% = 4682

DS-55 CROSS SCAN REPORT, RUN: 201250009

) ADOLPHUS 2K-41 8560M

) \* 217



RADOLPHUS 2K-41 8560M

\* 191

37:49 40:21 45:23 50:26 55:29 60:32 65:35 70:37  
100%:21828

1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800

1500

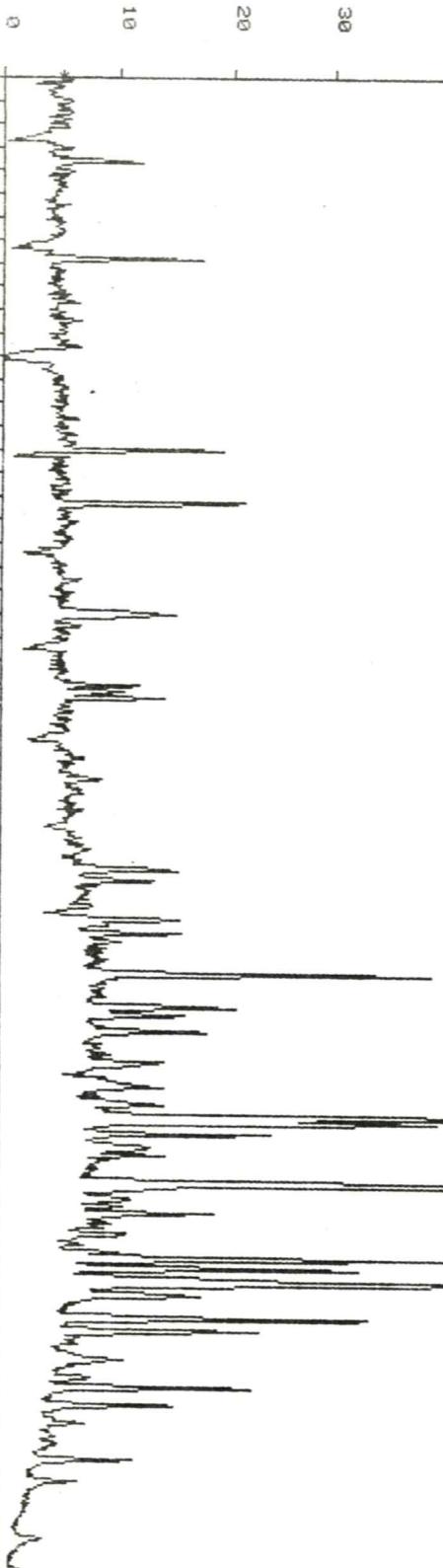
2000

2500

3000

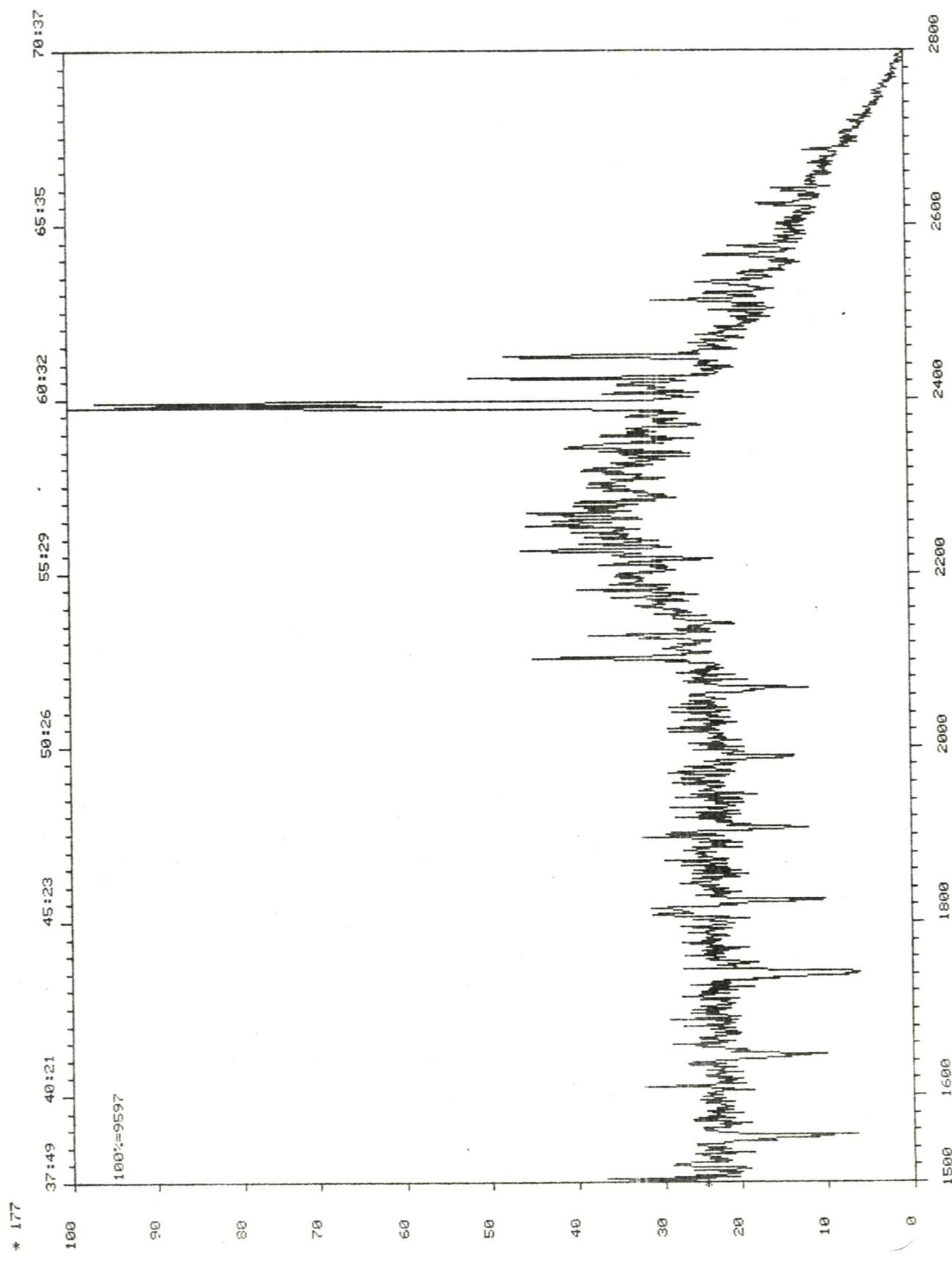
3500

4000



DS-55 CROSS SCAN REPORT, RUN: 201250009

ADOLPHUS 2K-41 8560M



DS-55 CROSS SGN REPORT, RUN: 202536091

HIBERNIA/DST3

\* 259

37:51 40:23 45:26 50:29 55:32 60:35 65:38 70:41

100%:1002

90

80

70

60

50

40

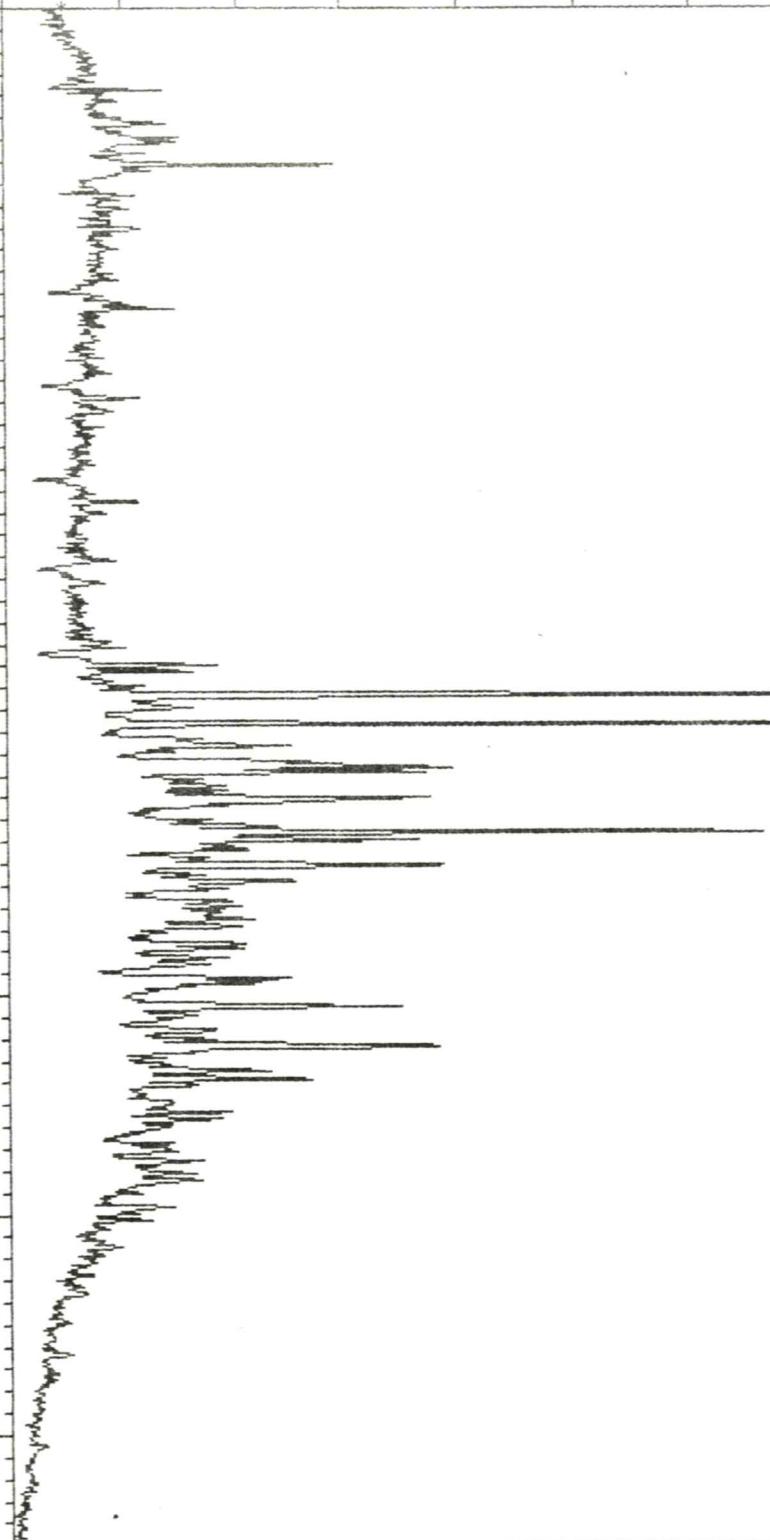
30

20

10

0

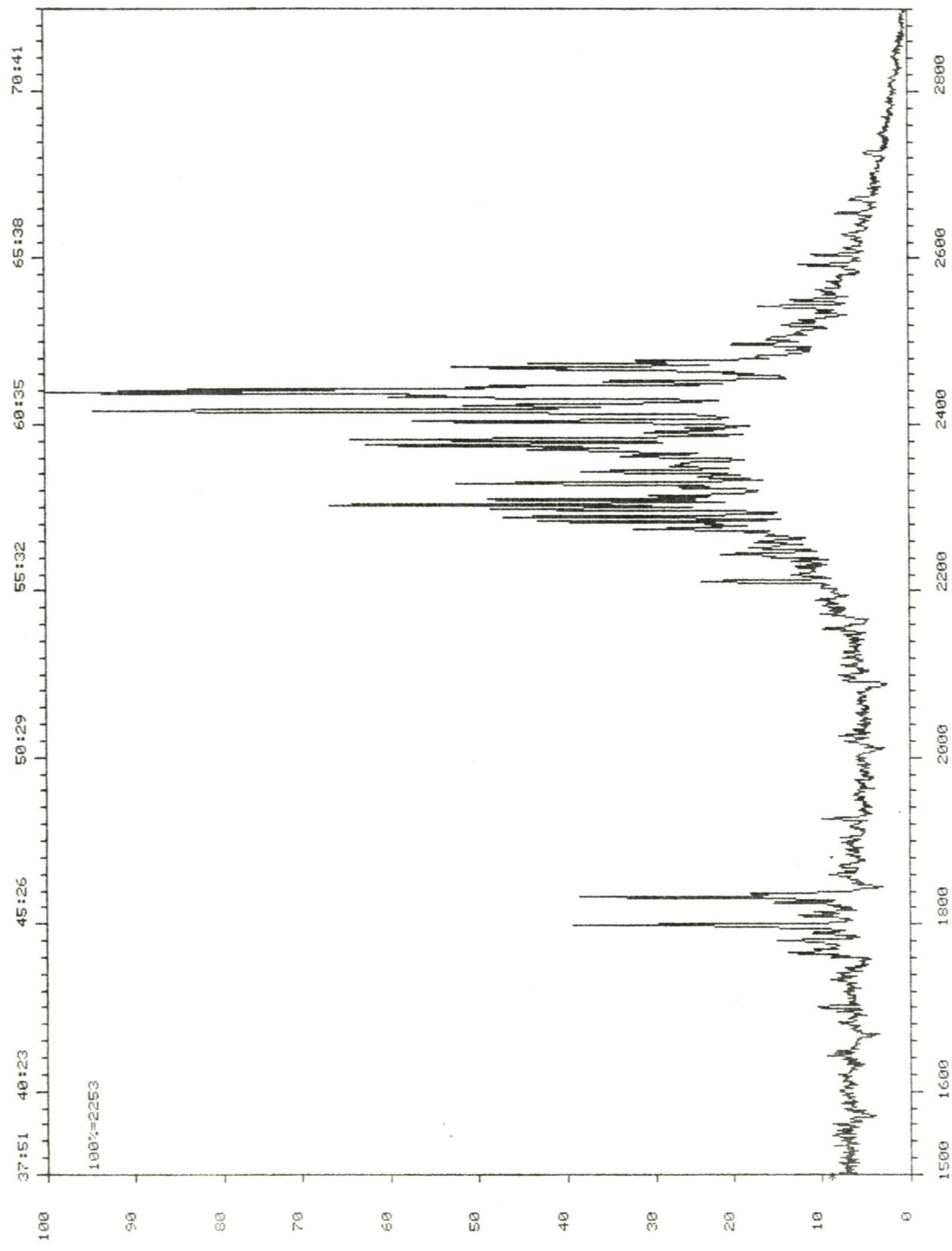
1500 1600 1800 2000 2200 2400 2600 2800



D5-55 CROSS SCAN REPORT, RUN: 20253001

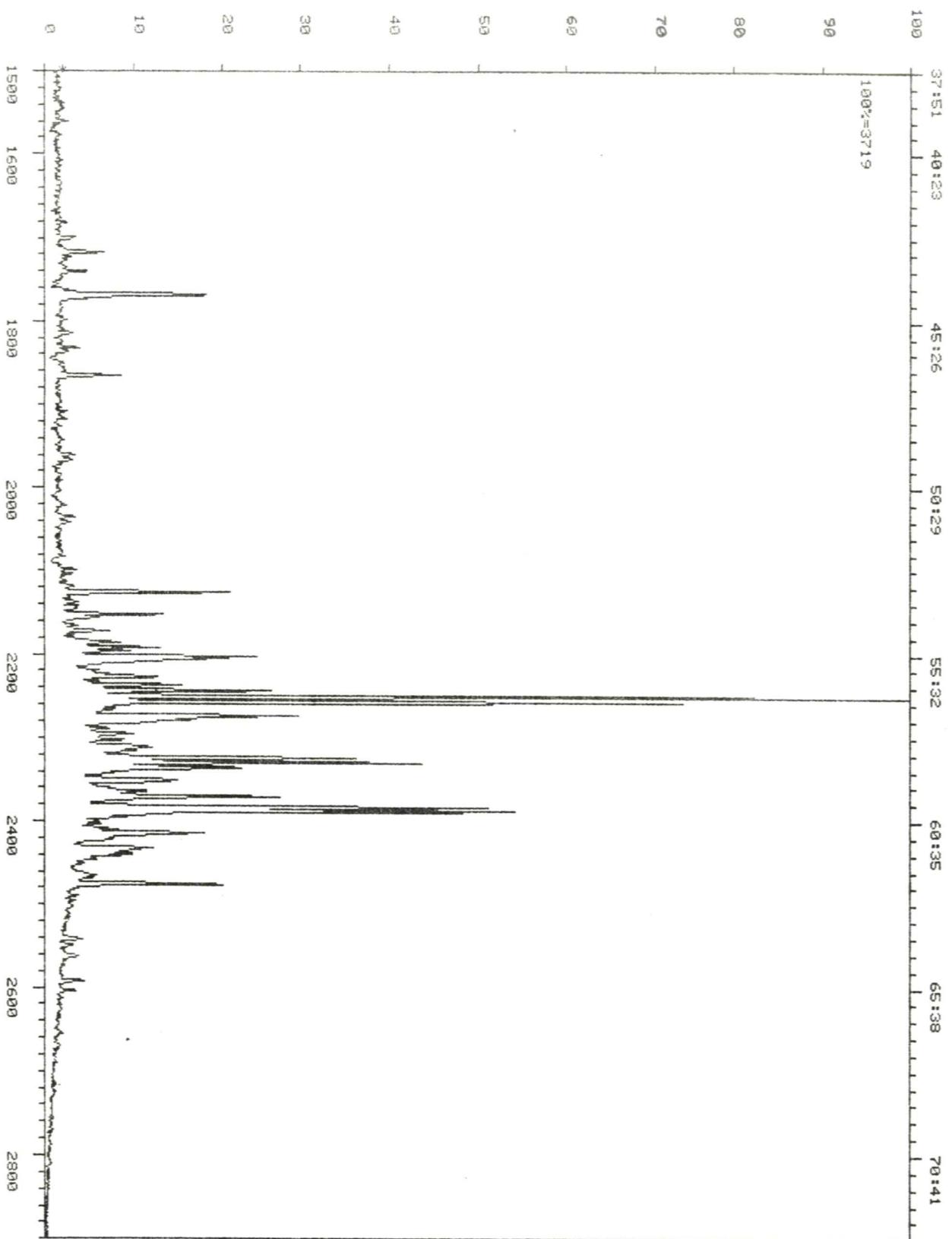
K-18  
HIBERNIA/ISTS

\* 231



L-155 KROOS JUHNU KLUJUT, RUUNI 2025.06.01  
K-13  
HIBERNIA/DST3

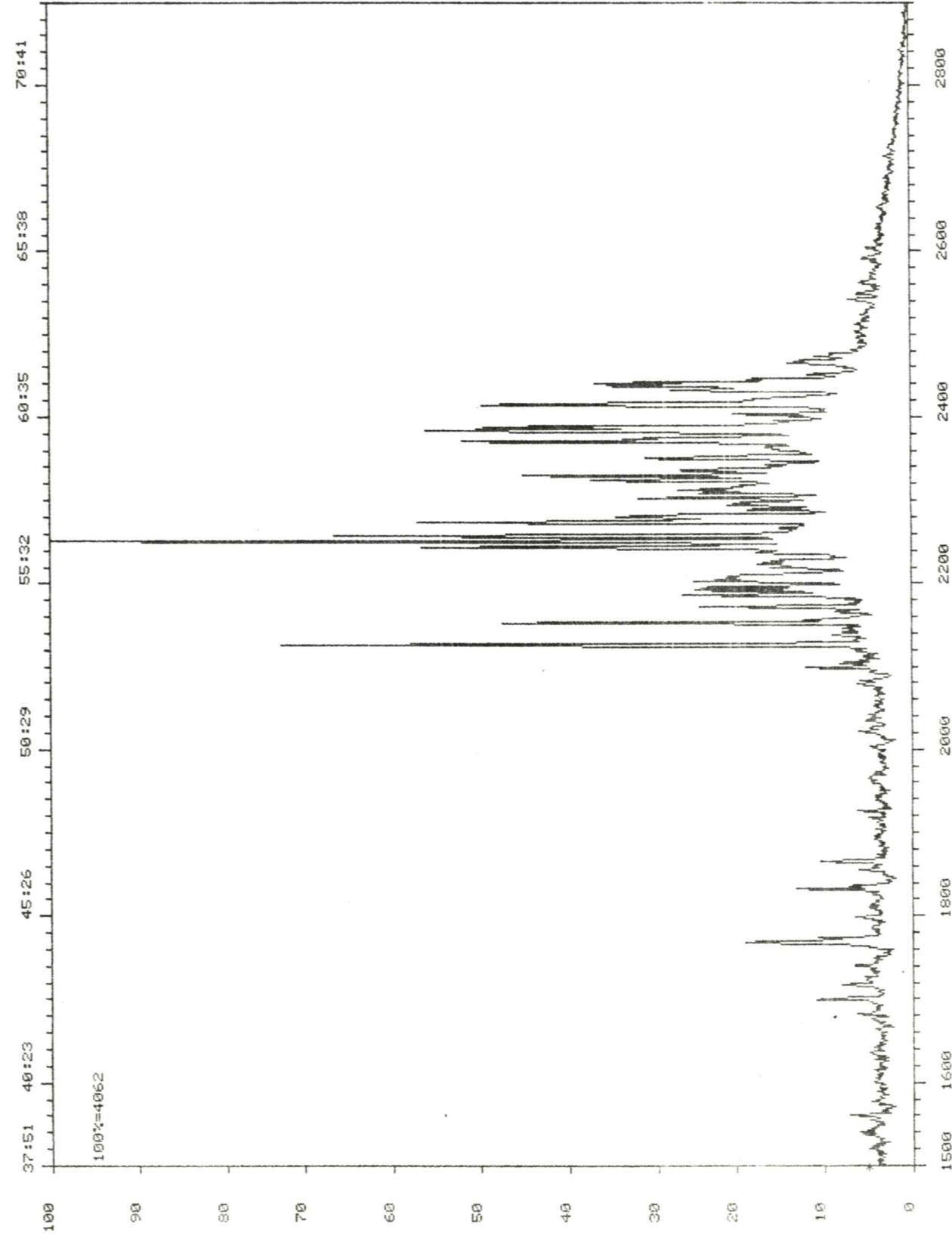
\* 218



DS-55 CROSS SCAN REPORT, RUN: 20250001

K-13  
HIBERNIA/DST3

\* 217



DS-55 CROSS SCAN REPORT, RUN: 202530001

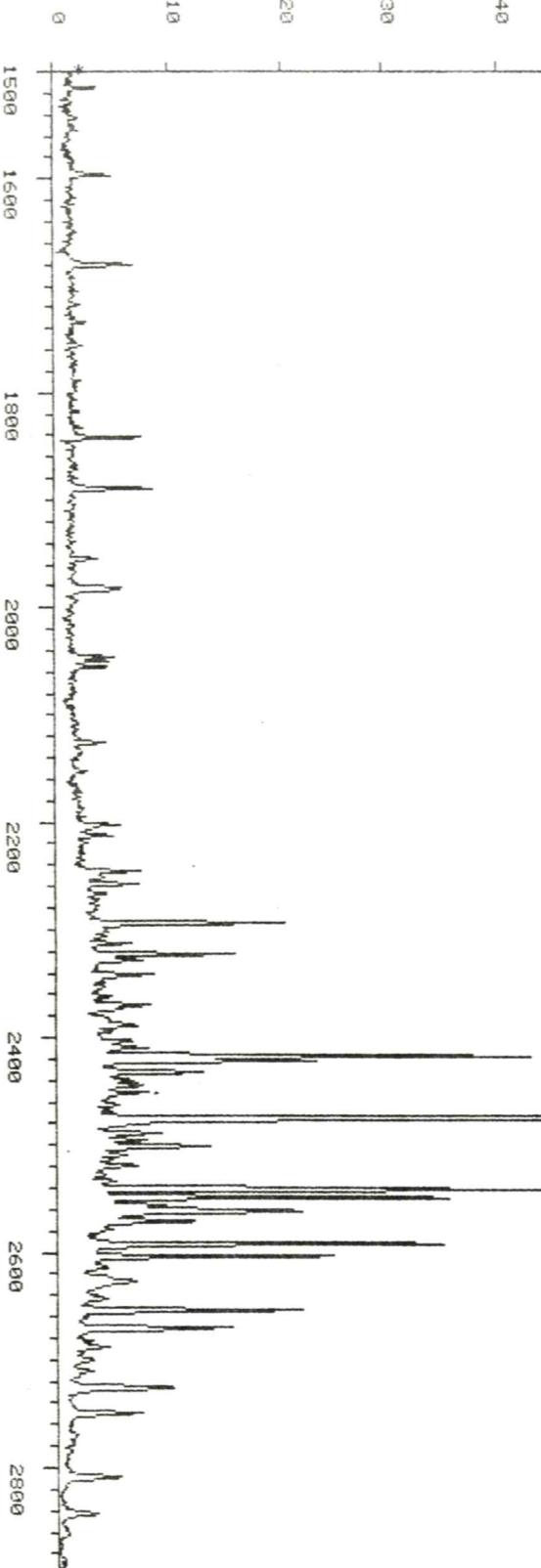
K-18  
HIBERNIA[DST3]

\* 191

100  
37:51 40:23 45:26 50:29 55:32 60:35  
65:38 70:41

100% = 9853

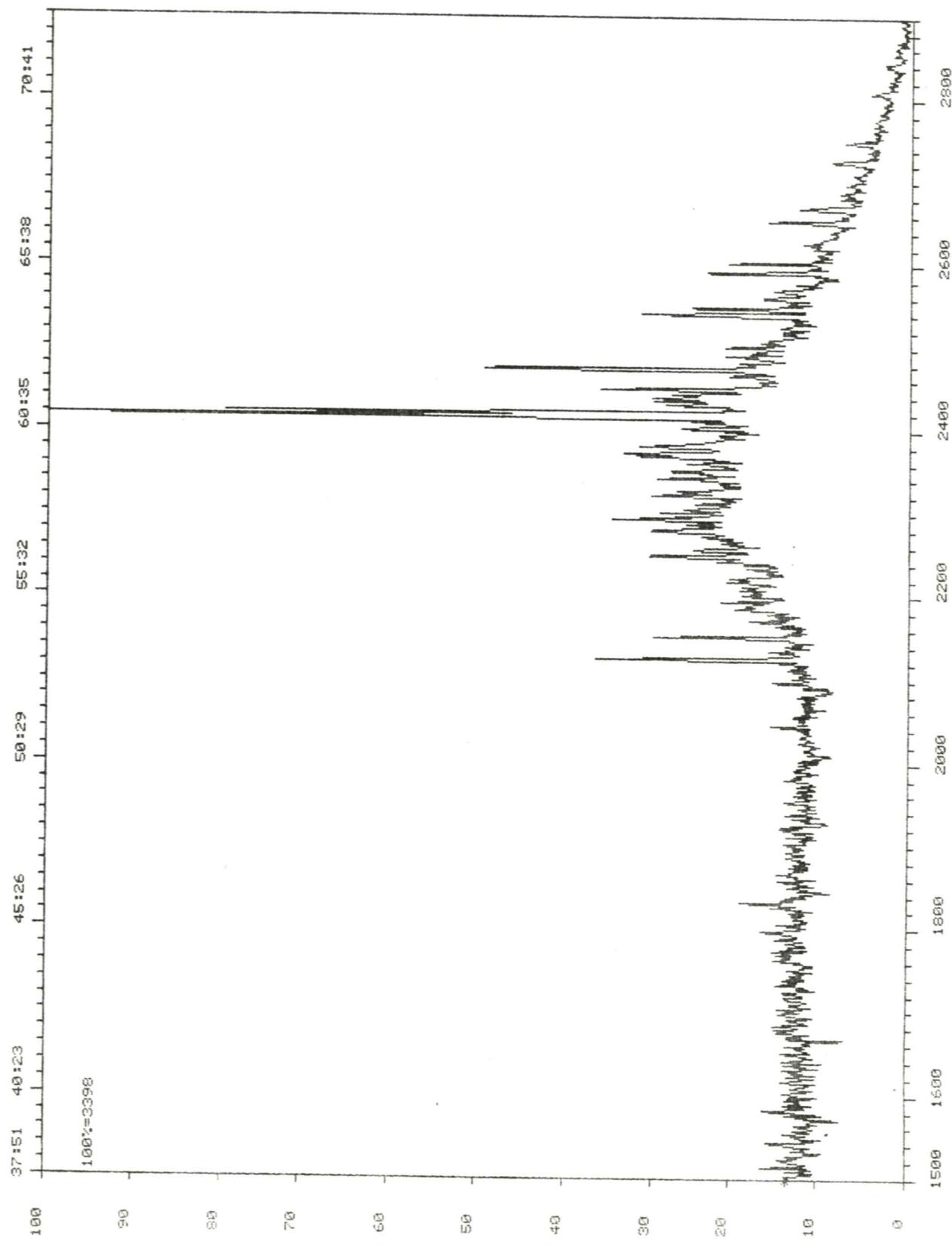
90  
80  
70  
60  
50  
40  
30  
20  
10  
0

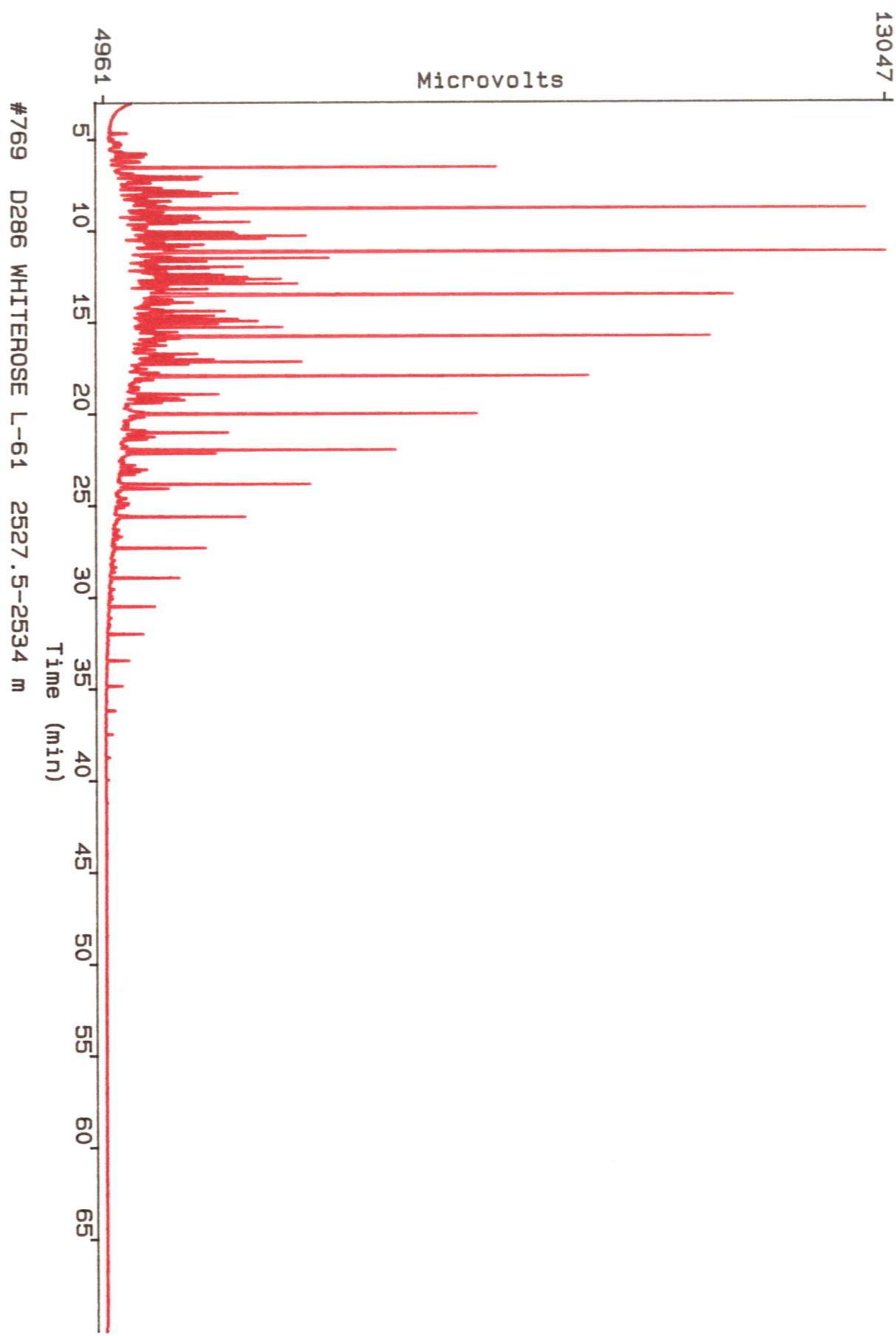


DS-55 CROSS SCAN REPORT, RUH: 2025300001

KC  
HIBERNIA/DST3

\* 177





8287

MICROVOI ts

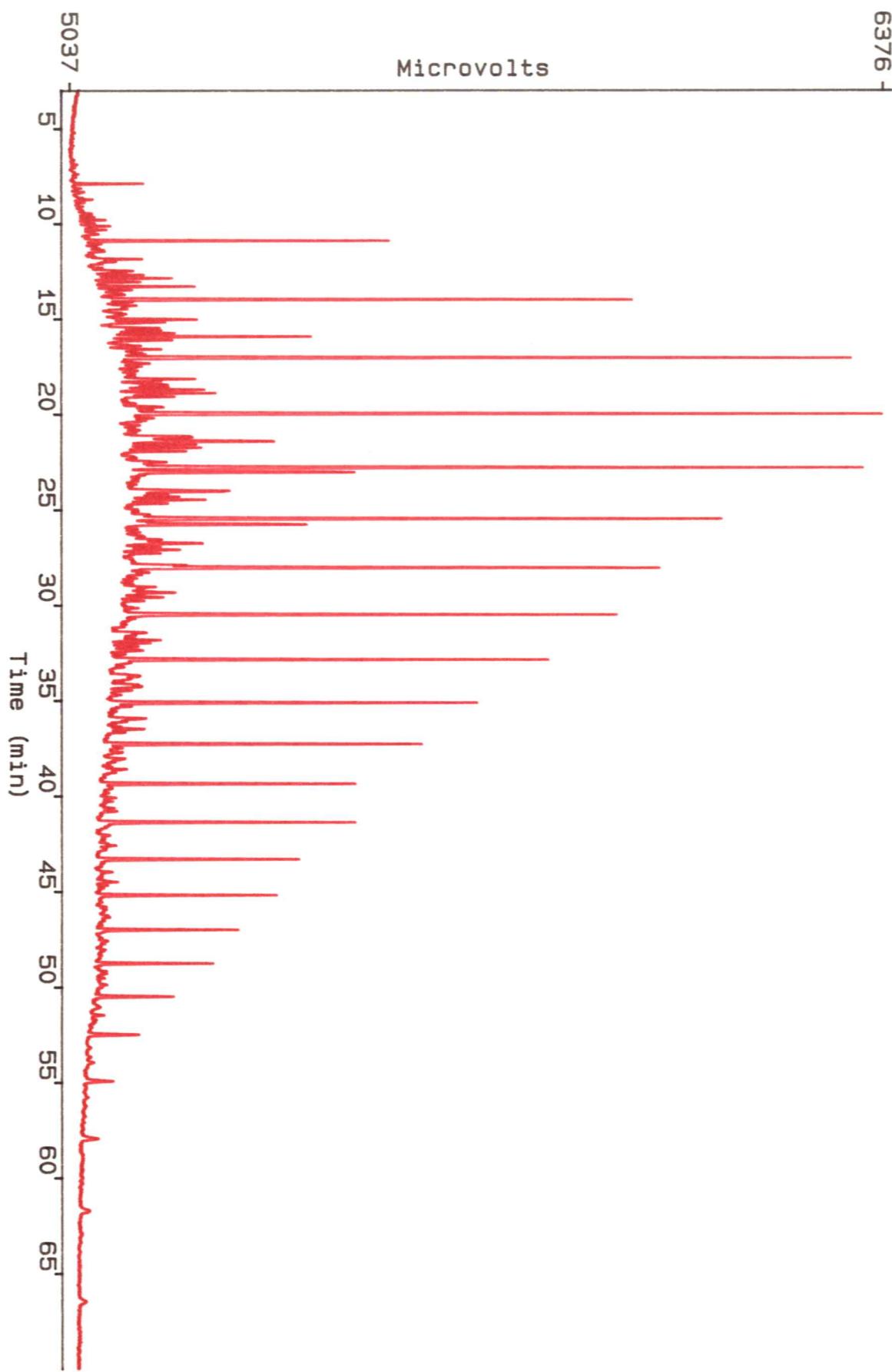
5033

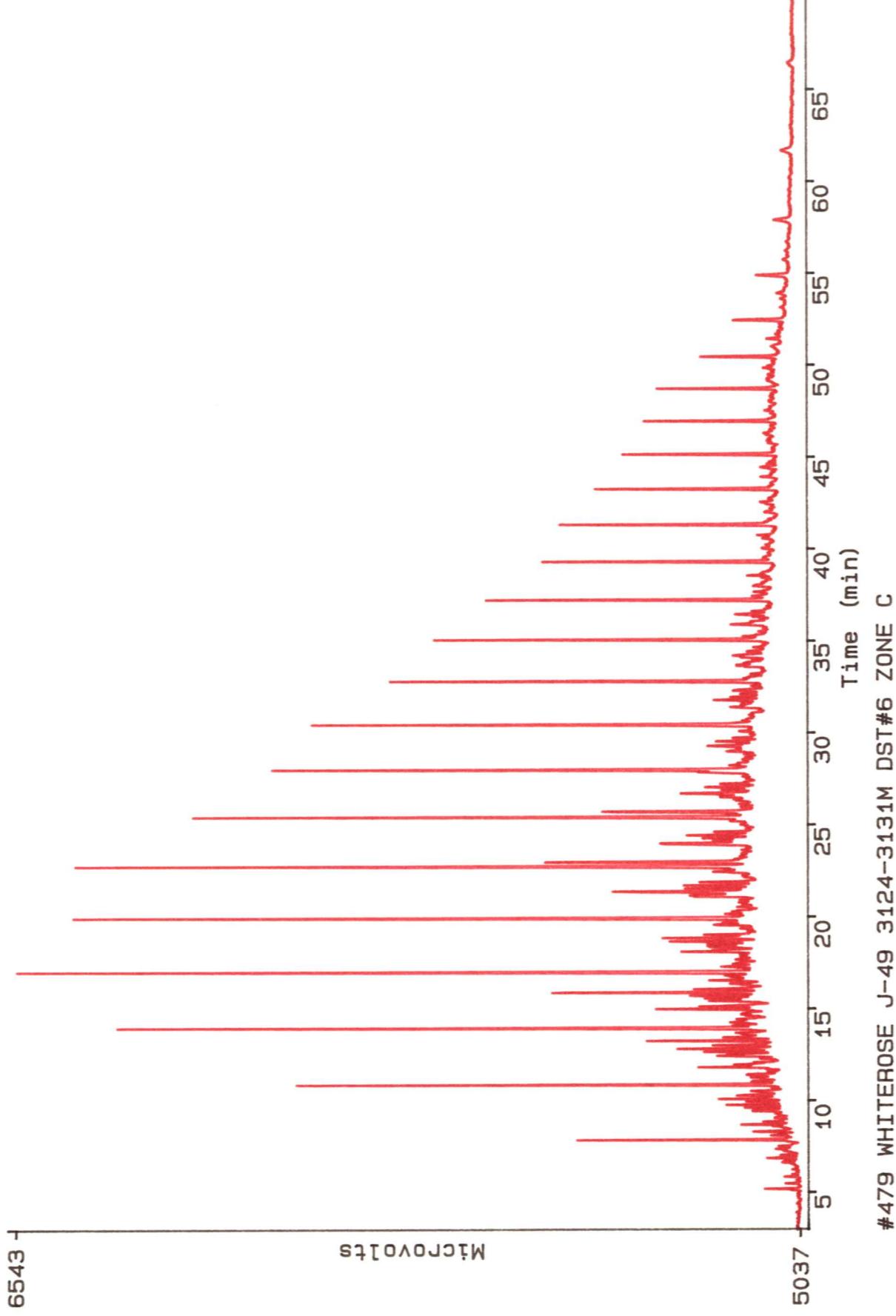
#478 WHITEROSE J-49 3063-3067M DST#8, ZONE F

Time (min)

65' 60' 55' 50' 45' 40' 35' 30' 25' 20' 15' 10' 5'

#480 WHITEROSE J-49 3093.5-3106M DST#7

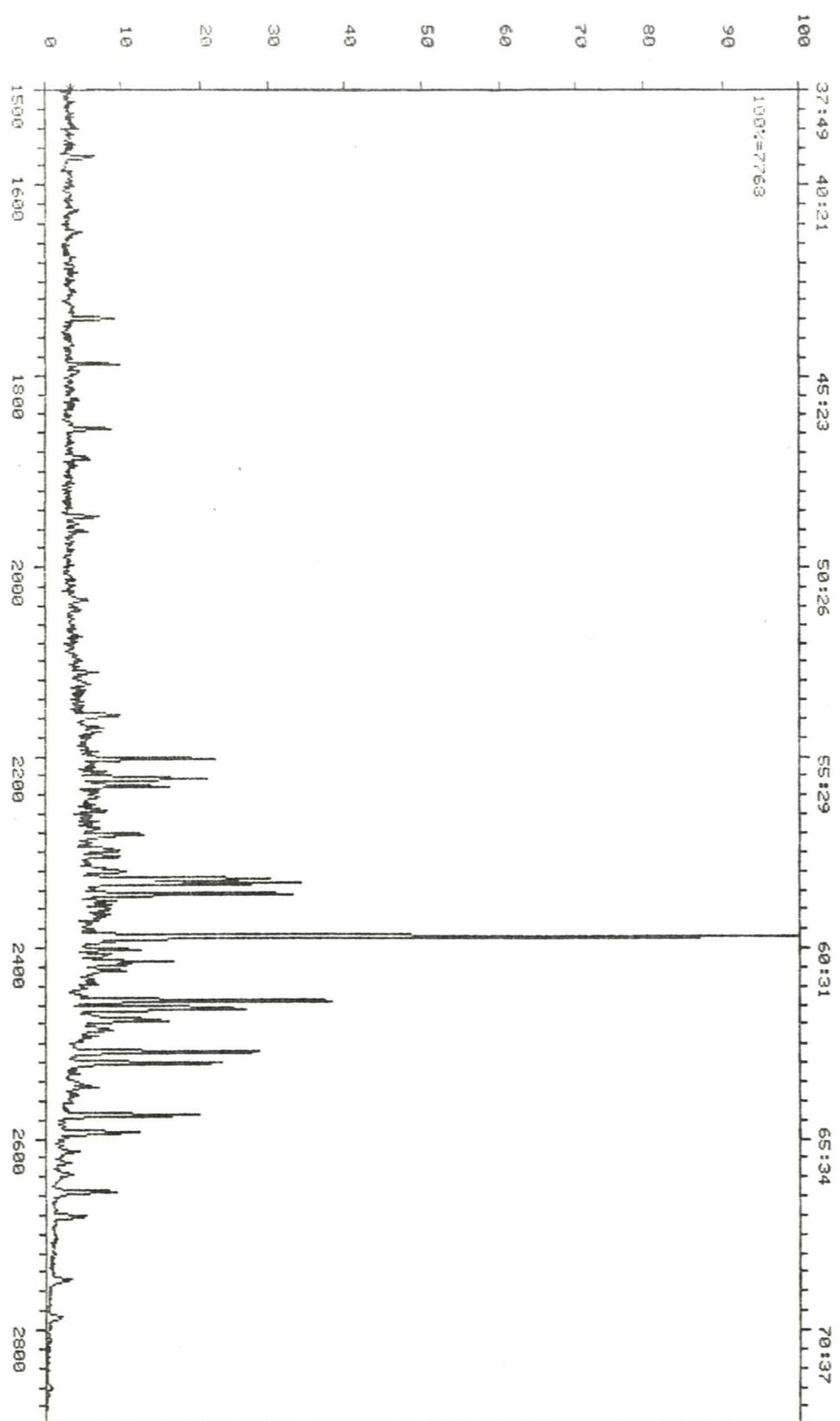




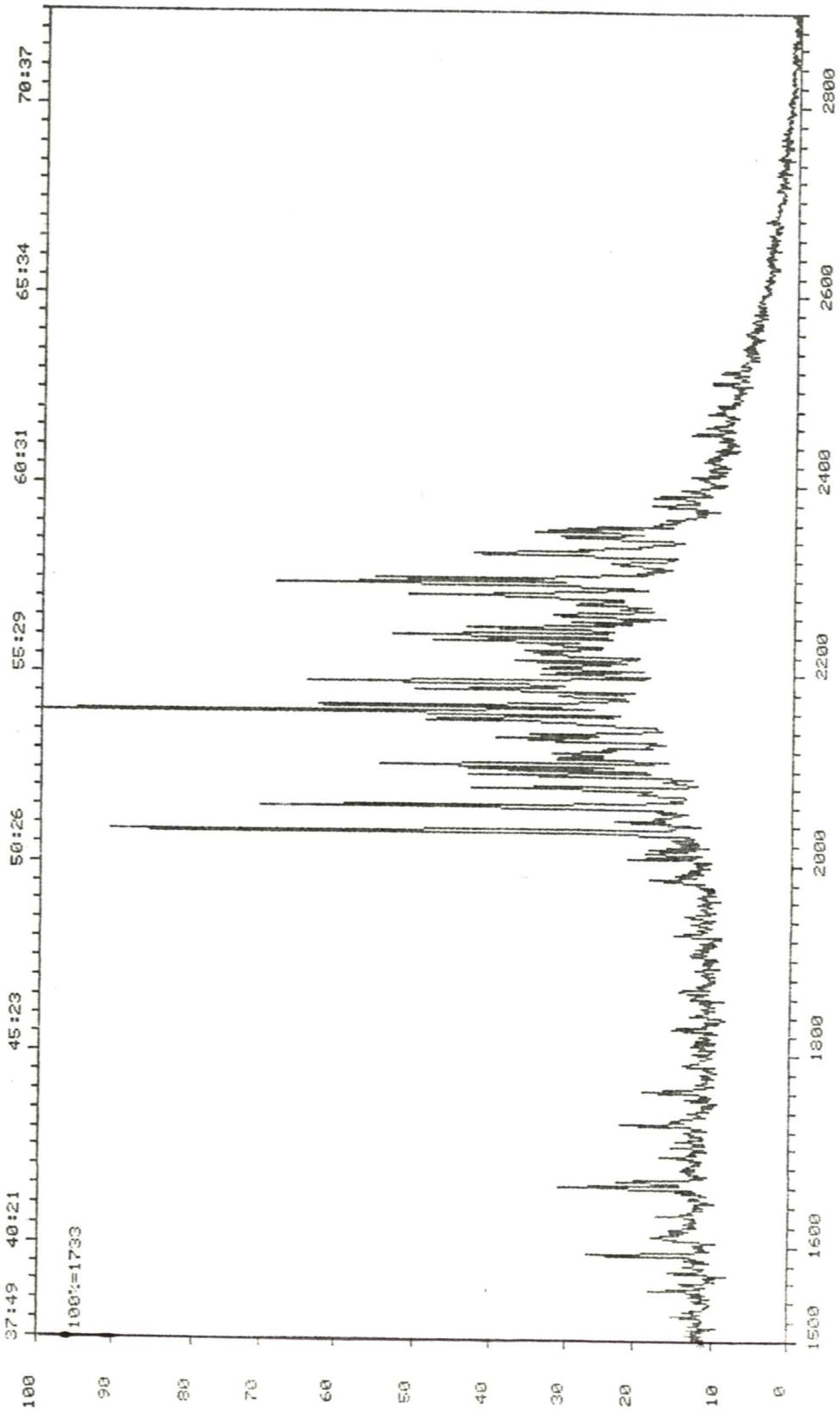
DS-55 CROSS SCAN REPORT, RUN: 201856001

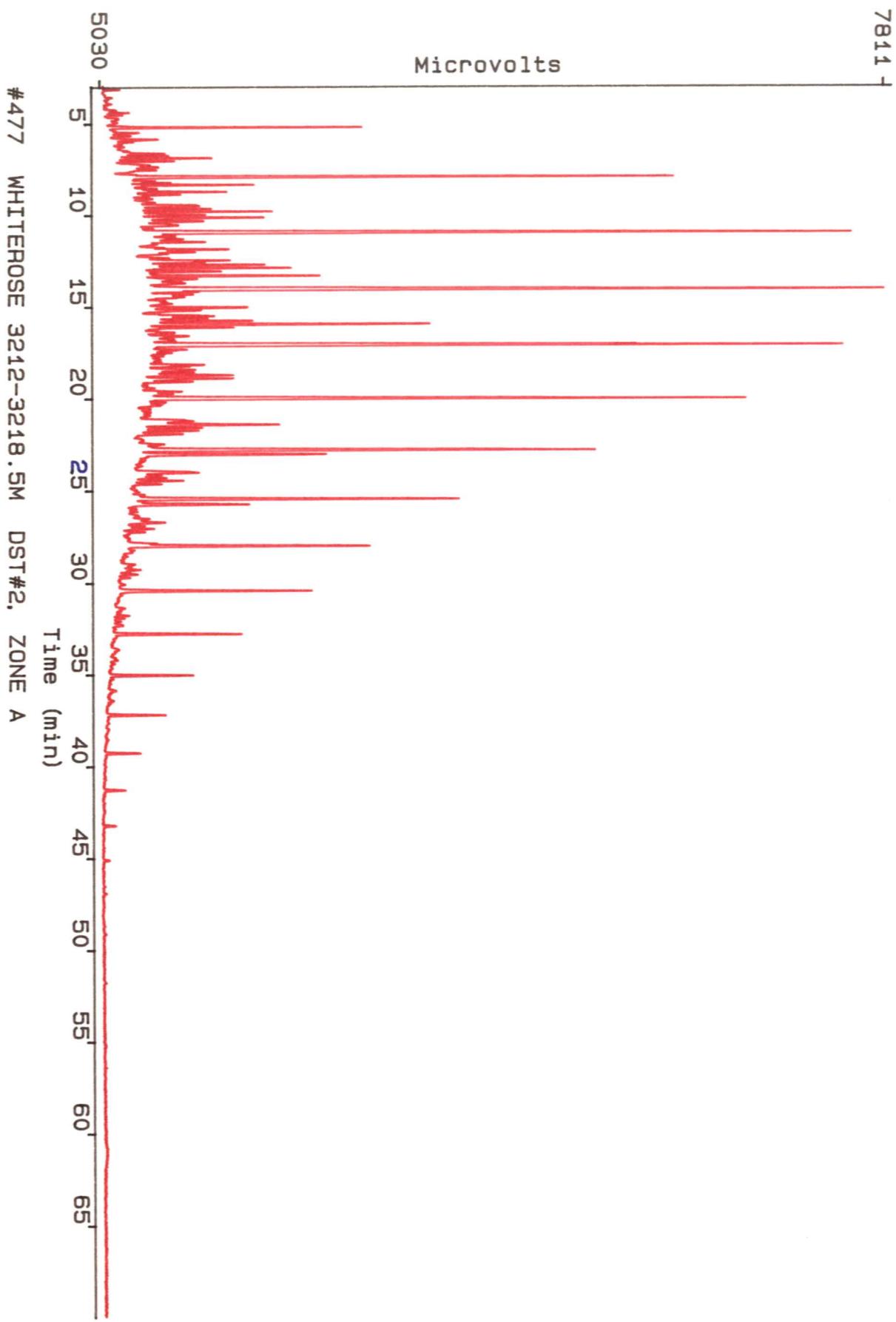
REN NEW IS I-45 DST#3

\* 191



DS-55 CROSS SCAN REPORT, RUN: 201850001  
BEN NEW IS I-45 DST#3  
\* 217





6197

MICROVOLTS

5029



#249 HEBRON I-13 DST#9, ZONE#10 1905-1915 m

263C 22-SEP-87 Sir:Reaction 7060 Sys: DARC  
Sample 1 Injection 1 Group 1  
Text:SUMMATION OF N-191

100

95

90

85

80

75

70

65

60

55

50

45

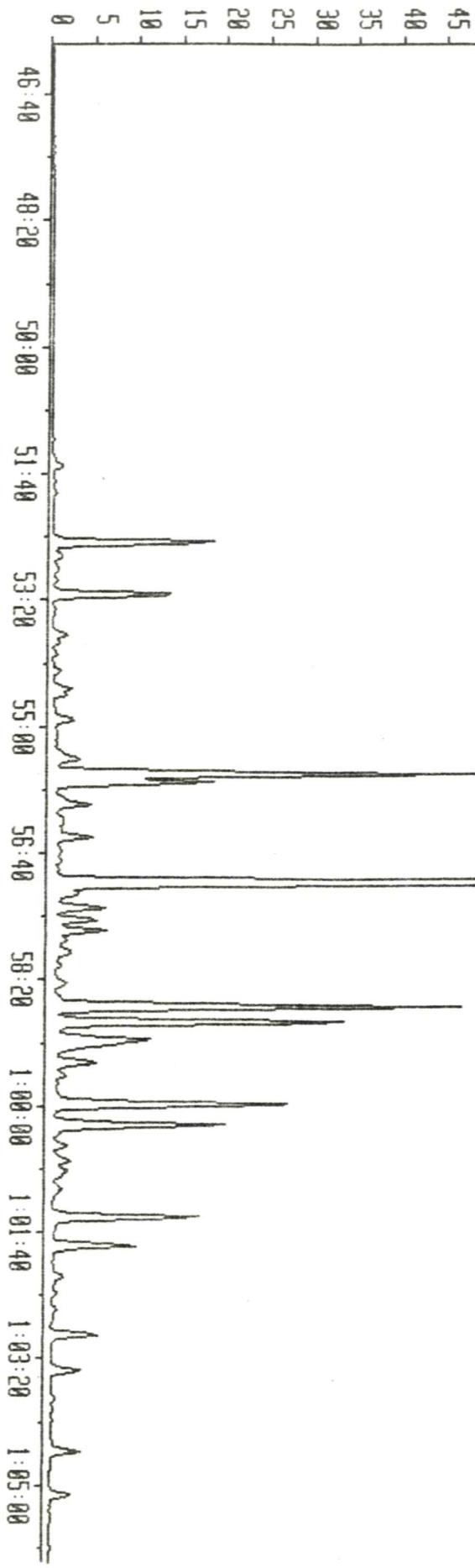
40

35

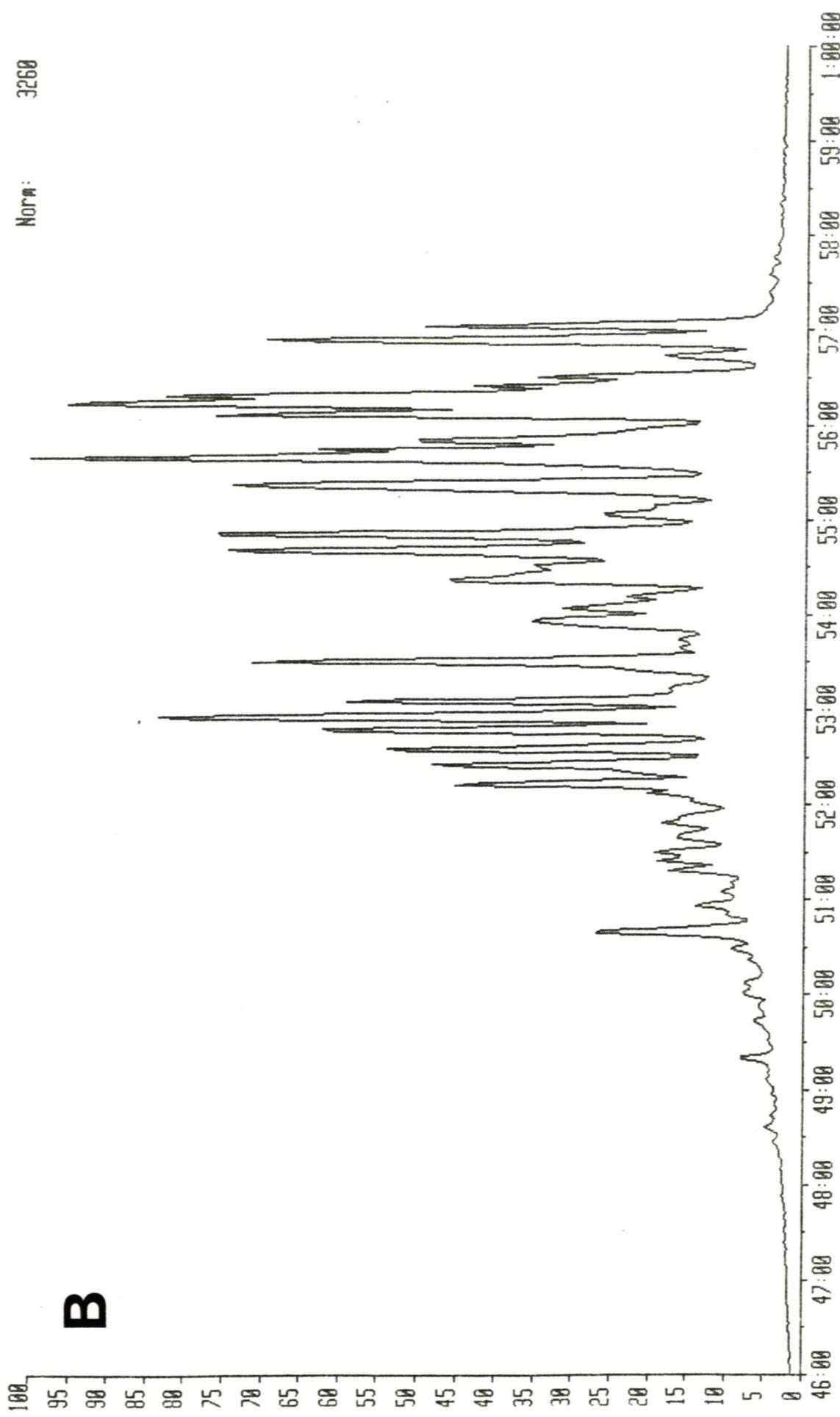
30  
25  
20  
15  
10  
5  
0

C

Norm: 20915



263B 22-SEP-87 Sir:Reaction 70S0 Sys: DARC  
Sample 1 Injection 1 Group 1  
Text:SUMMATION OF M-231



263A 22-SEP-87 Sir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1  
Text:SUMMATION OF M-217

100

95

90

85

80

75

70

65

60

55

50

45

40

35

30

25

20

15

10

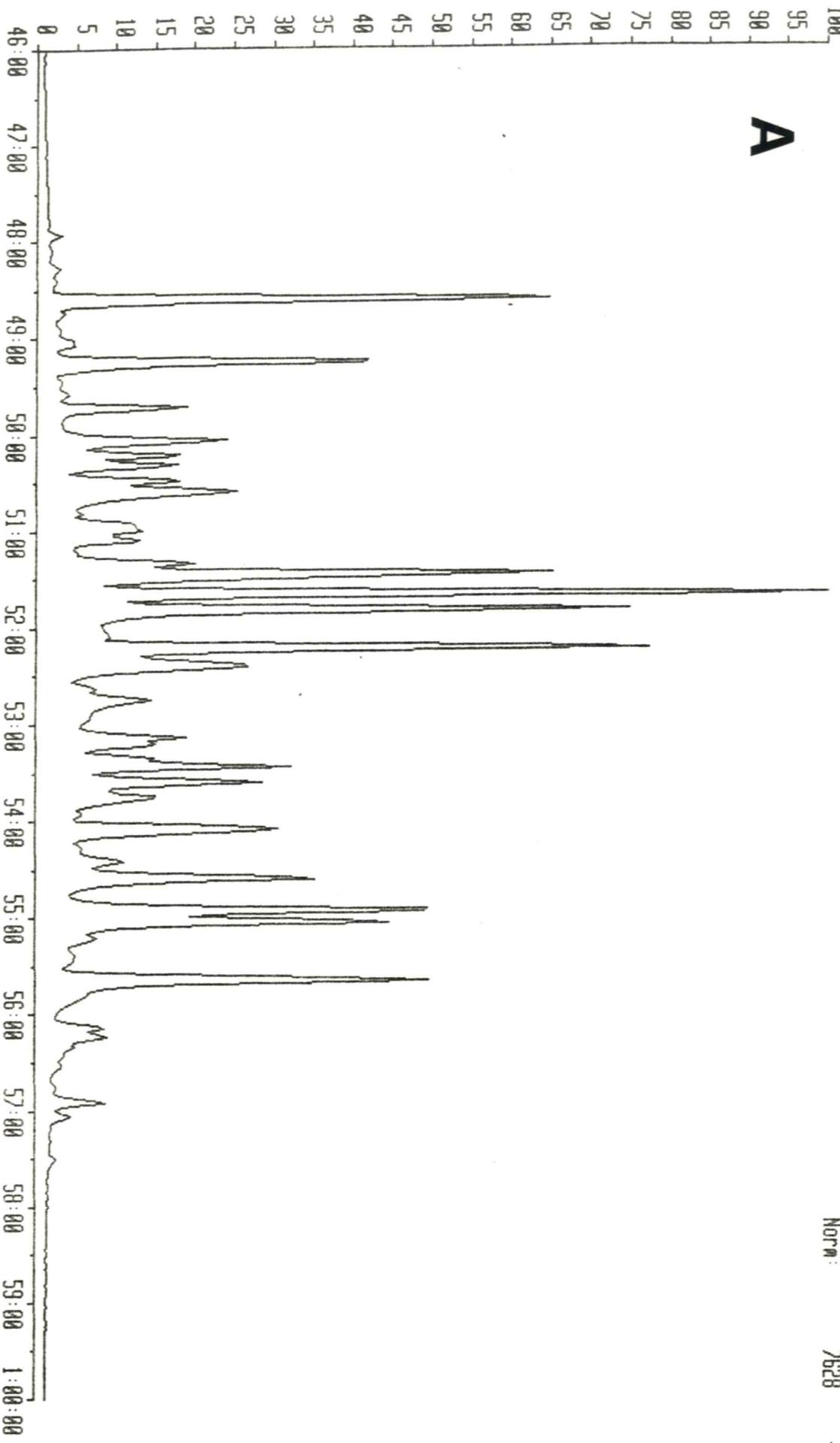
5

0

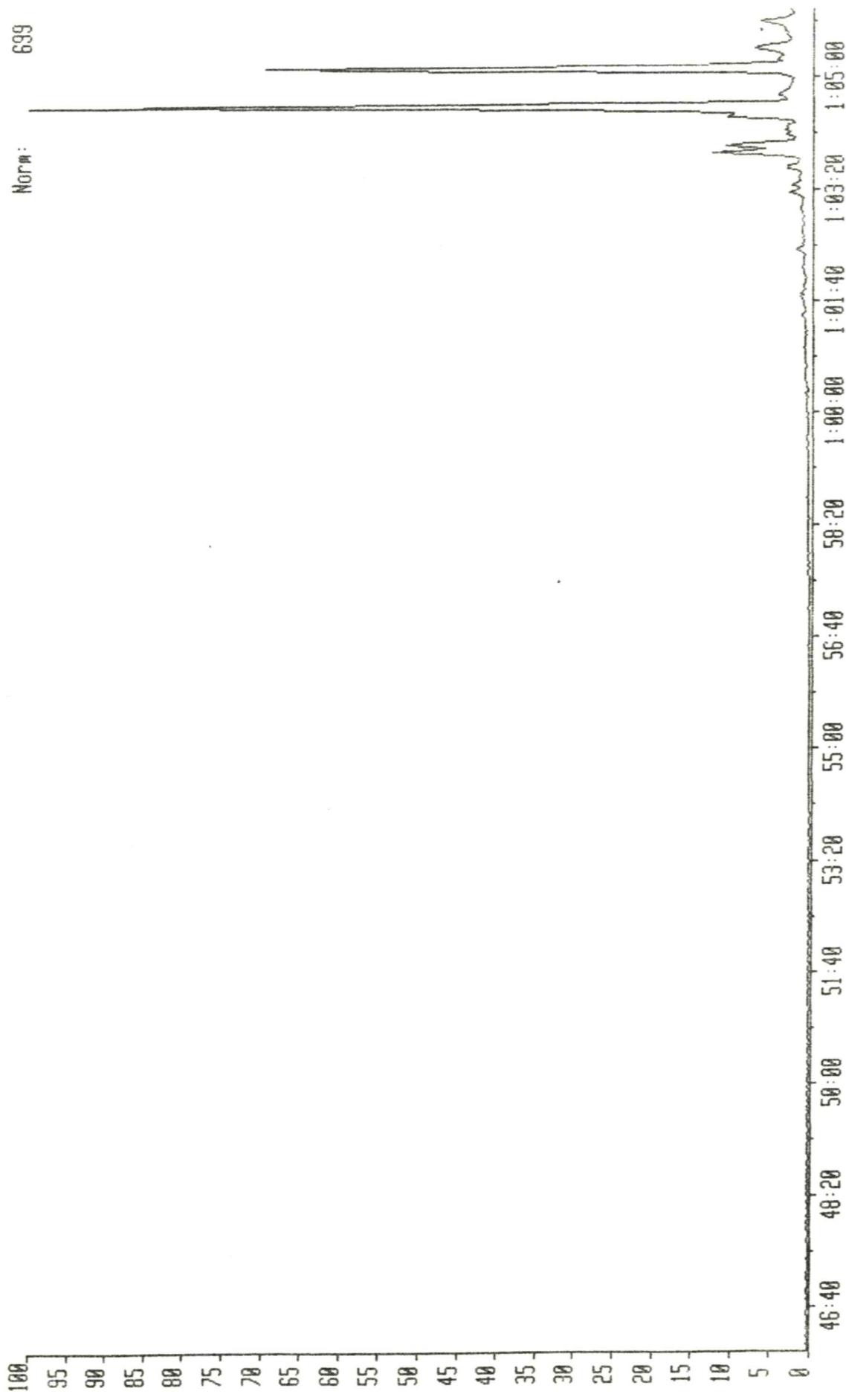
Norm:

7628

A



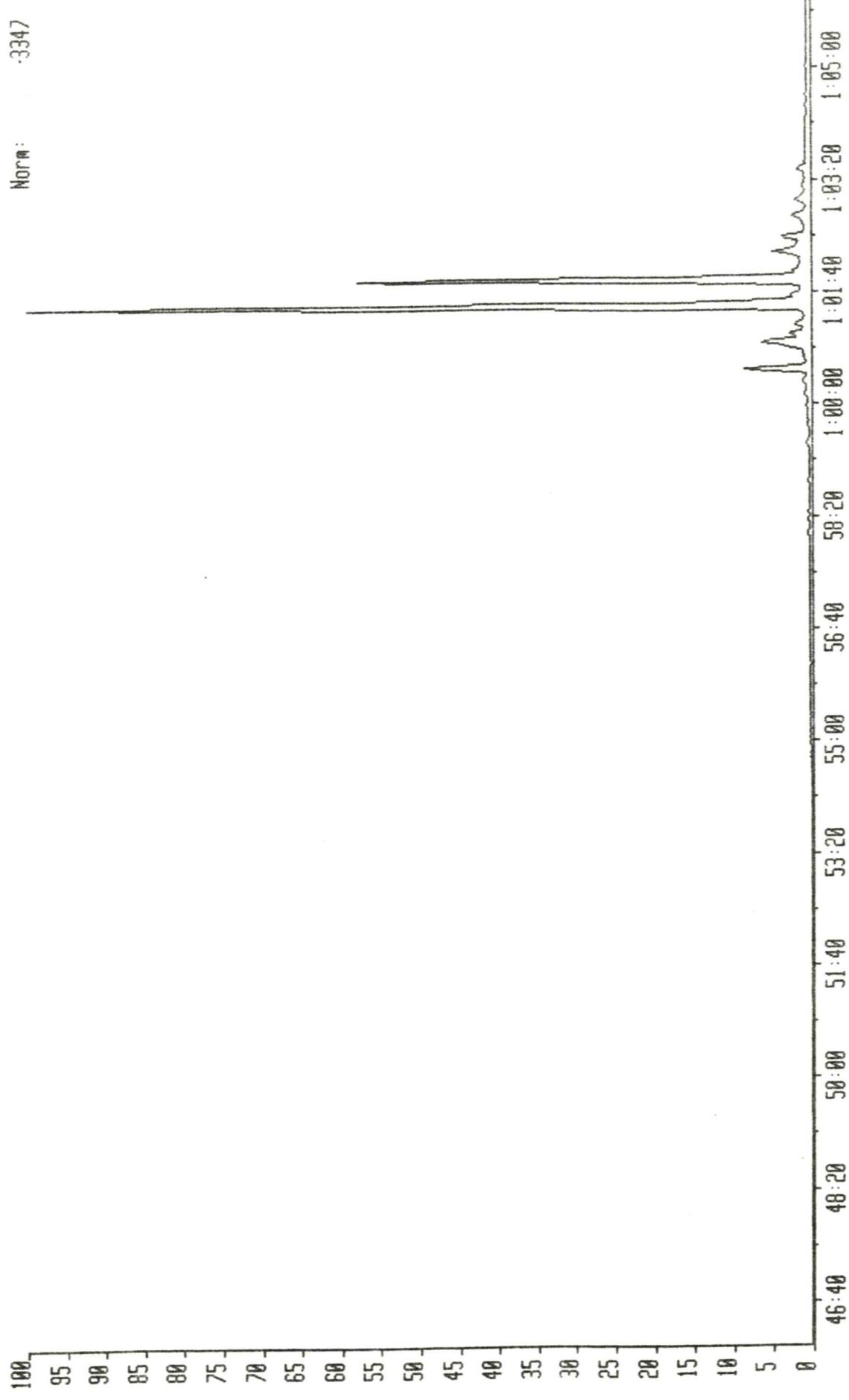
263 22-SEP-87 Stir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 482.4000 482.4000->191.1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135M



263 22-SEP-87 Sir:Reaction 7060 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 468.4000 468.4000->191.1000  
Text:HIBERNIA K-18 DSTG ZONE 7 3120-3135M



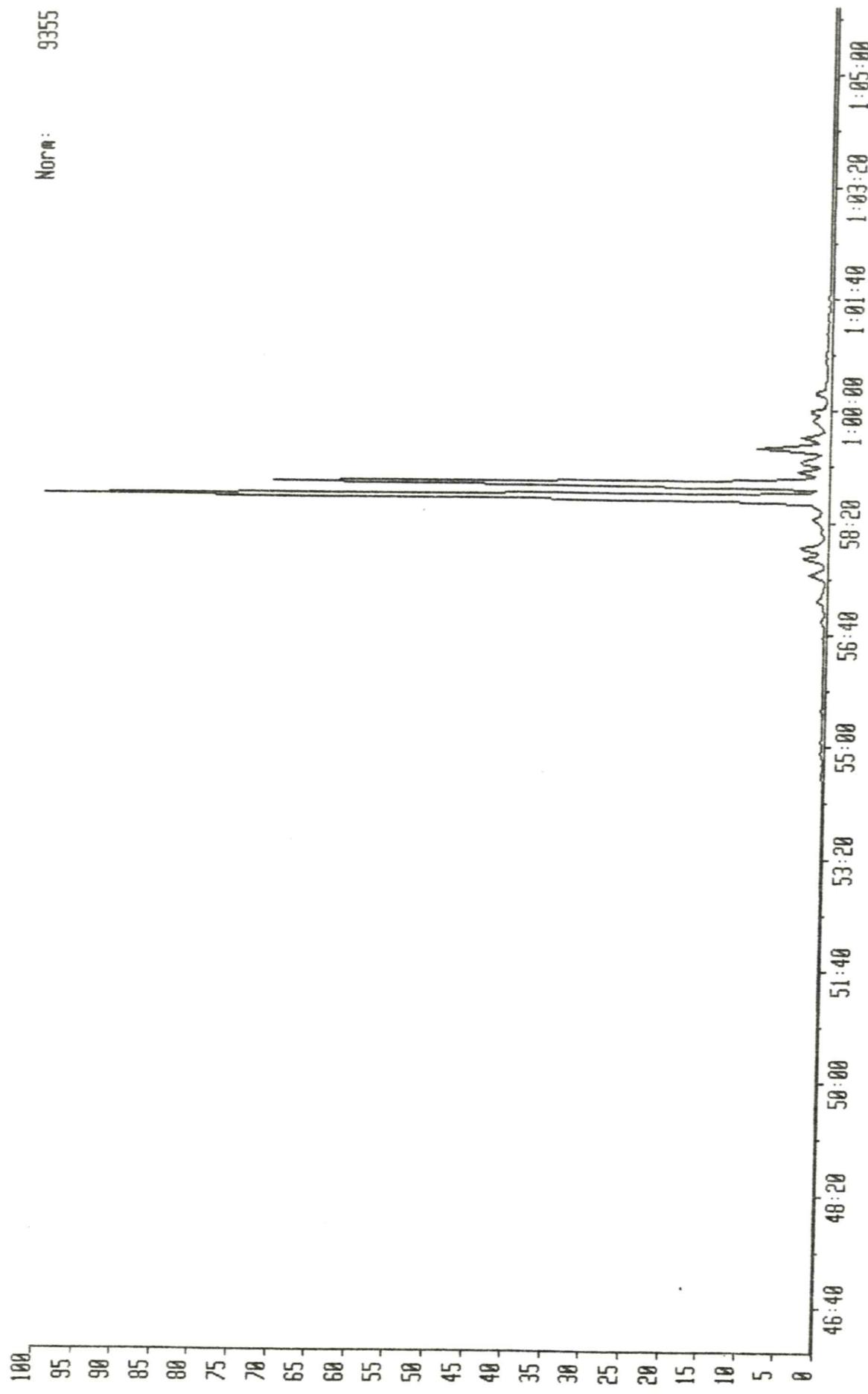
263 22-SEP-87 Str:Reaction 7060 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 454.4000 454.4000->191.1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135M



263 22-SEP-87 Str:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 440.4000 440.4000->191.1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135M

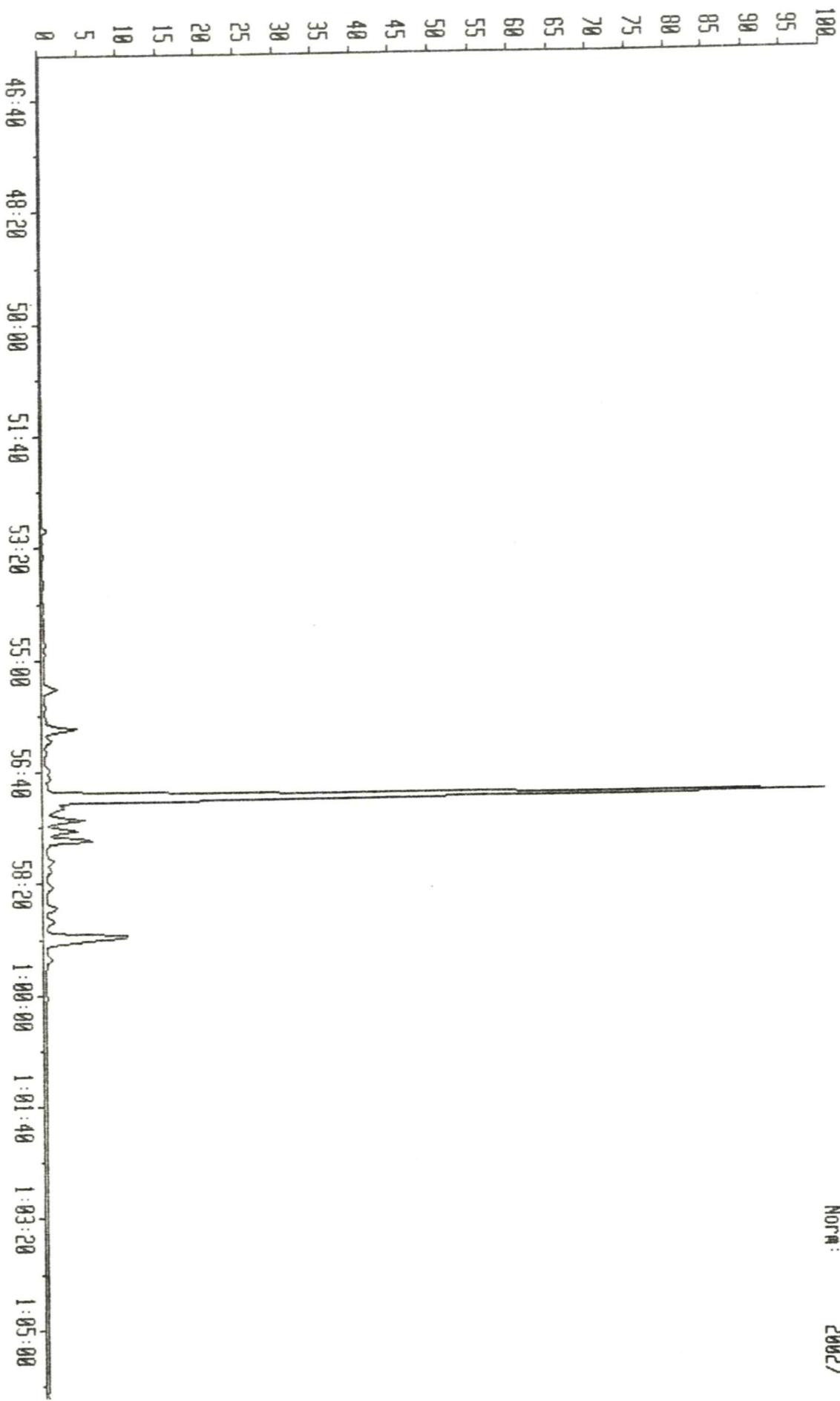


263 22-SEP-87 Stir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 426.4000 426.4000->191.1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135W

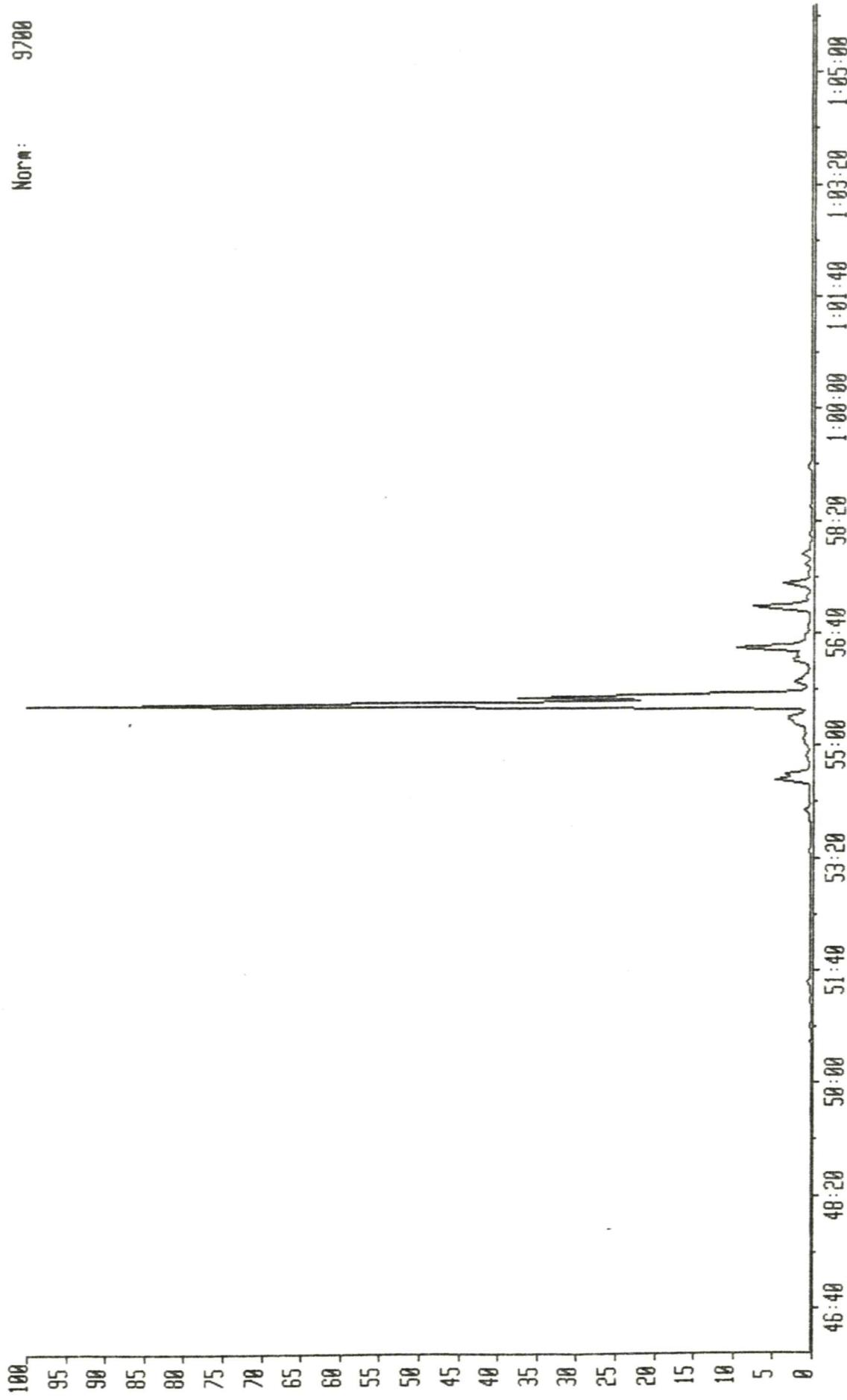


263 22-SEP-87 Sir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 412,40000 412,40000->191,10000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135M

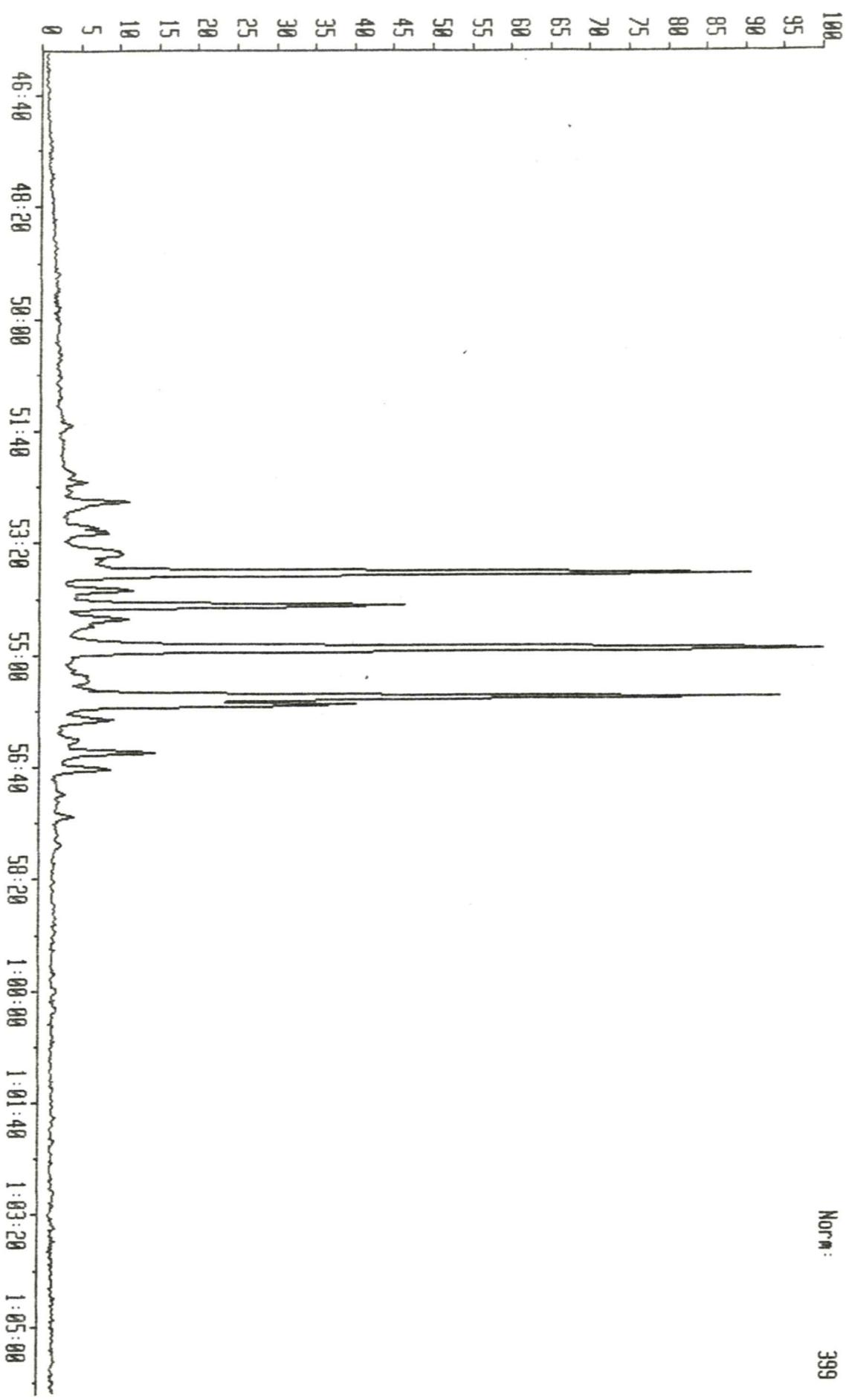
Norm: 20027



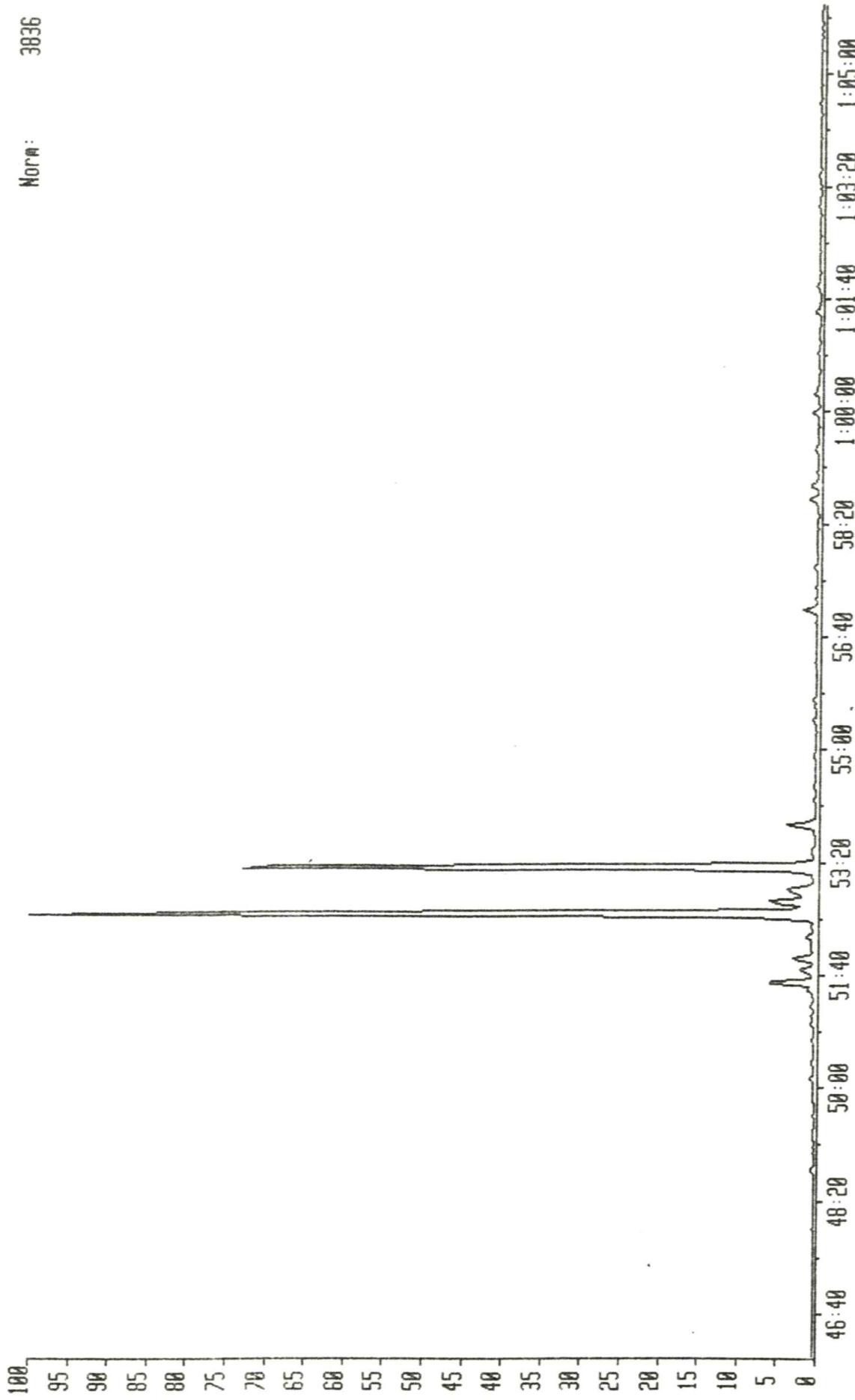
263 22-SEP-87 Stir:Reaction 70SQ Sys: DARC  
Sample 1: Injection 1 Group 1 Mass 398.4000 398.4000->191.1000  
Text:HIBERNIA K-10 DST#8 ZONE 7 3120-3135M



263 22-SEP-07 Sir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 384.4000 384.4000->191.1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135M

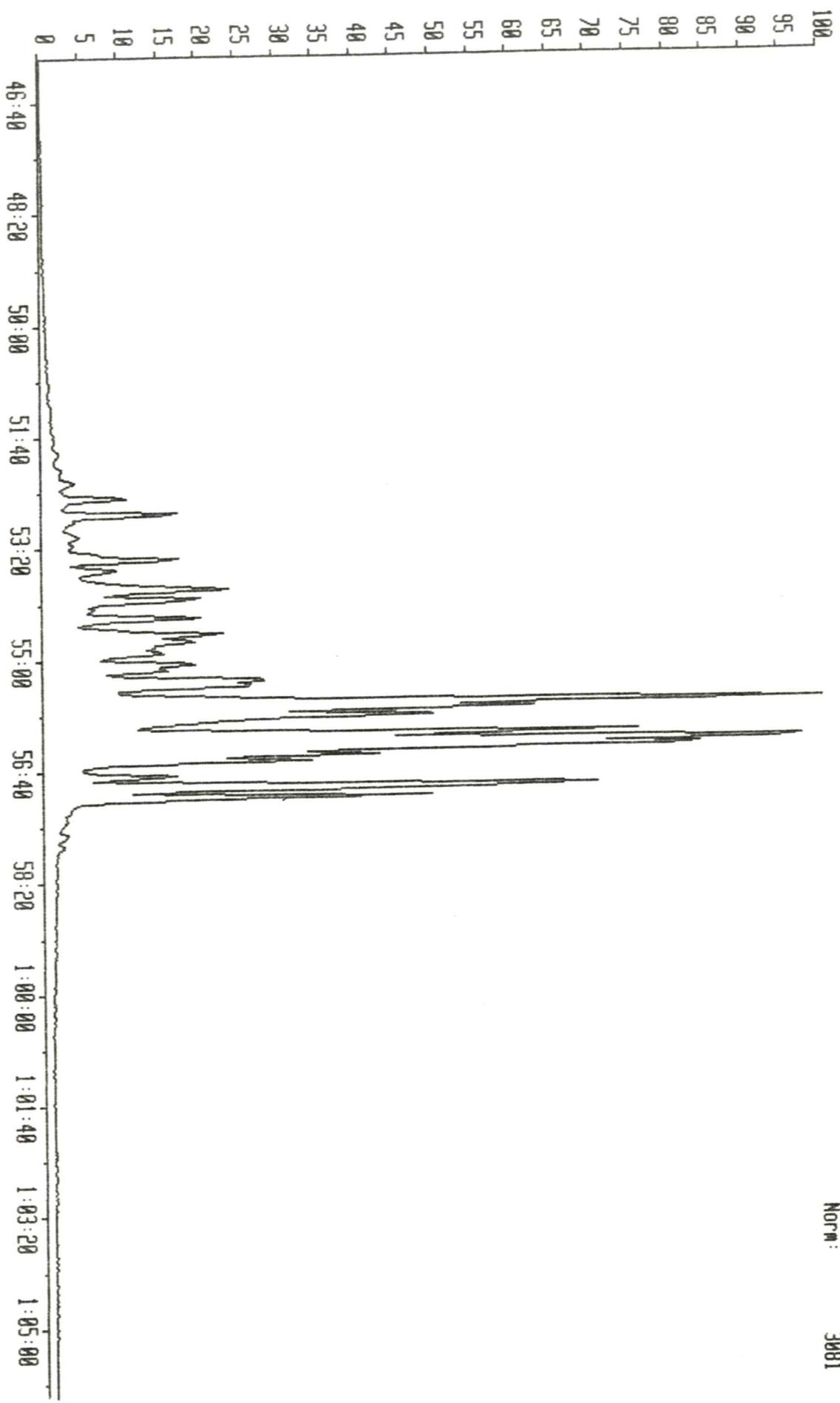


263 22-SEP-87 Stir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 370.40000 370.4000->191.1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135M

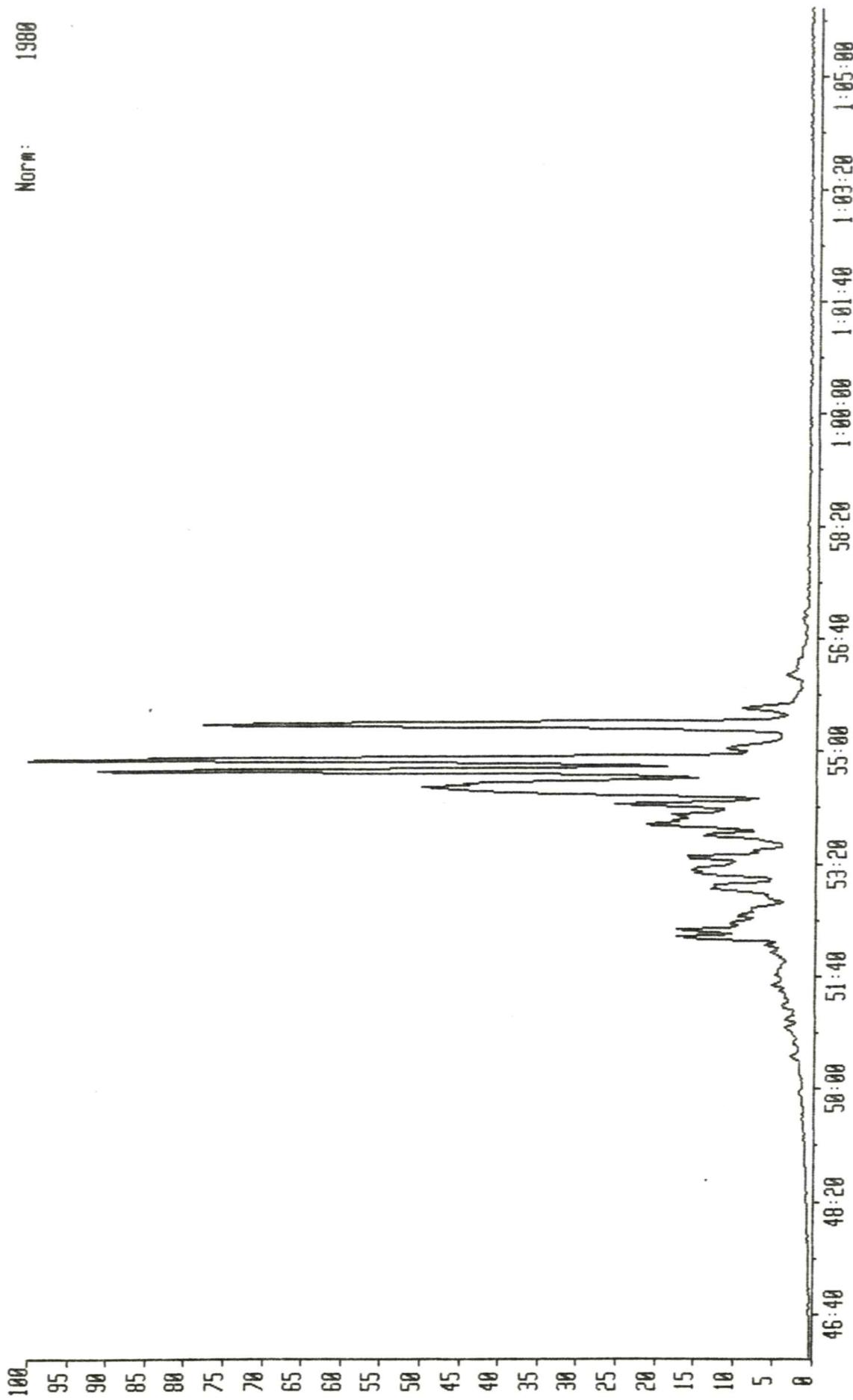


263 22-SEP-87 Sir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 414.4000 414.4000->231.1000  
Text: HIBERNIA K-18 DST#8 ZONE 7 3120-3135M

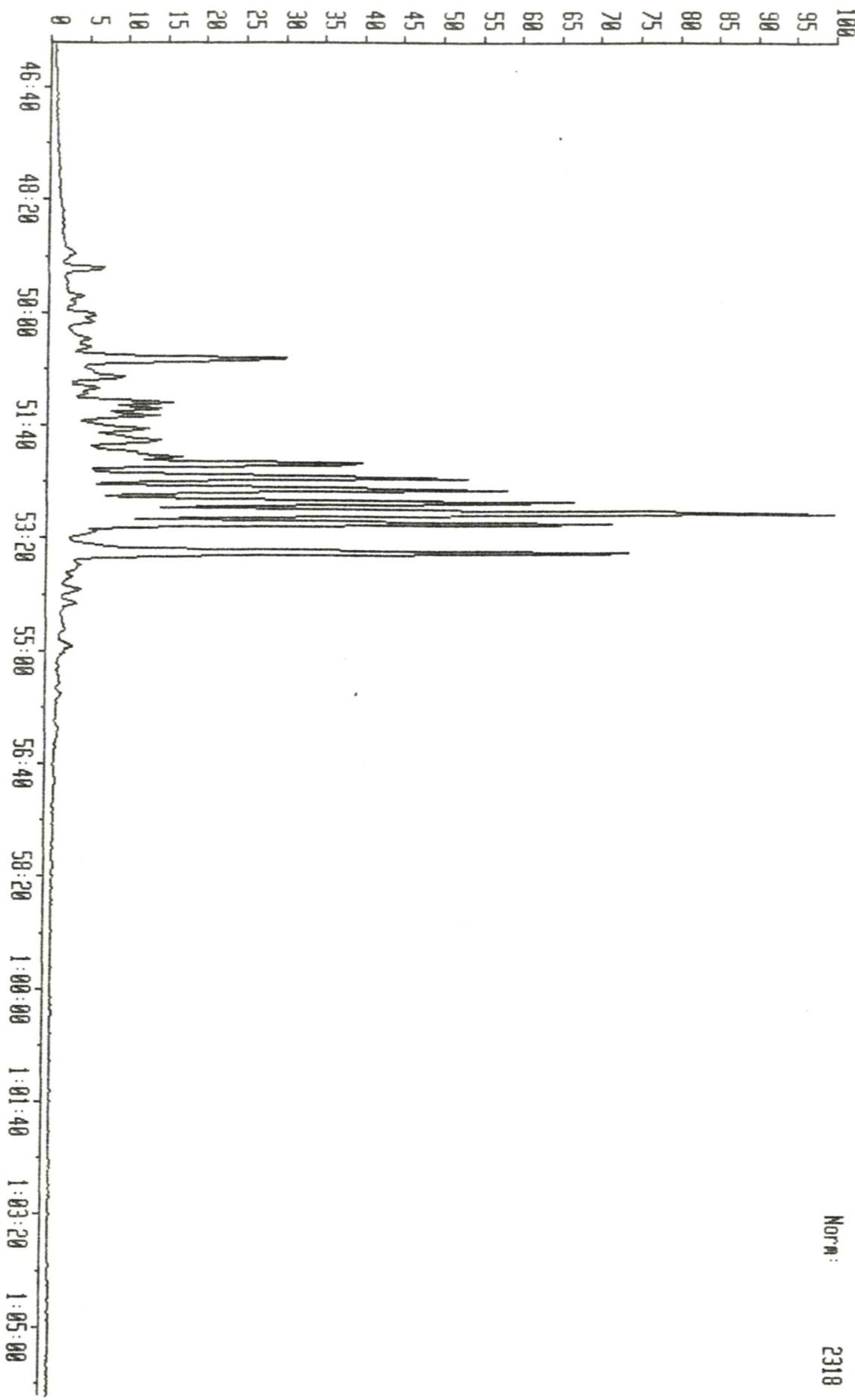
Norm: 3001



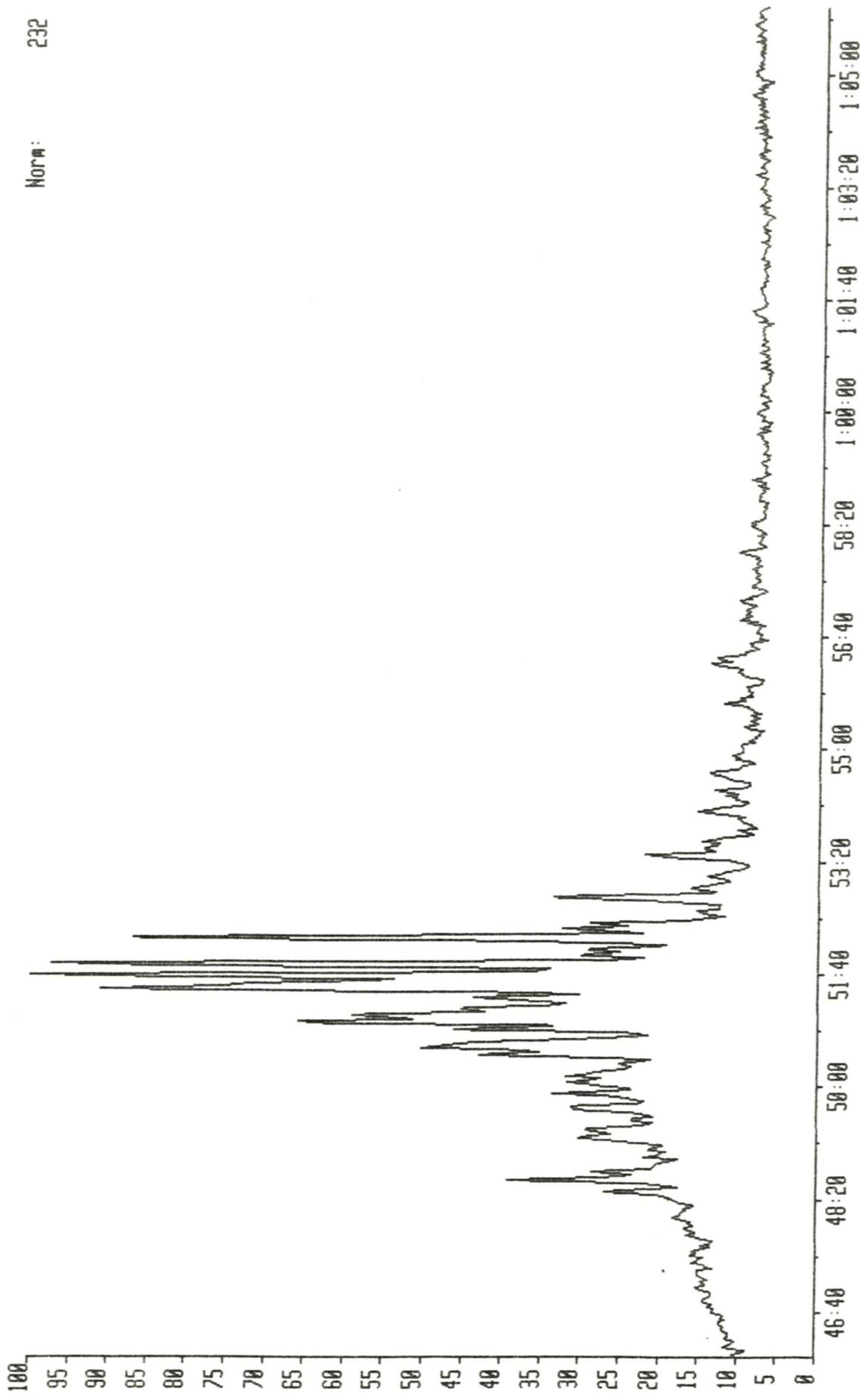
263 22-SEP-87 Stir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 400.4000 400.4000->231.1000  
Text: HIBERNIA K-18 DST#8 ZONE 7 3120-3135#



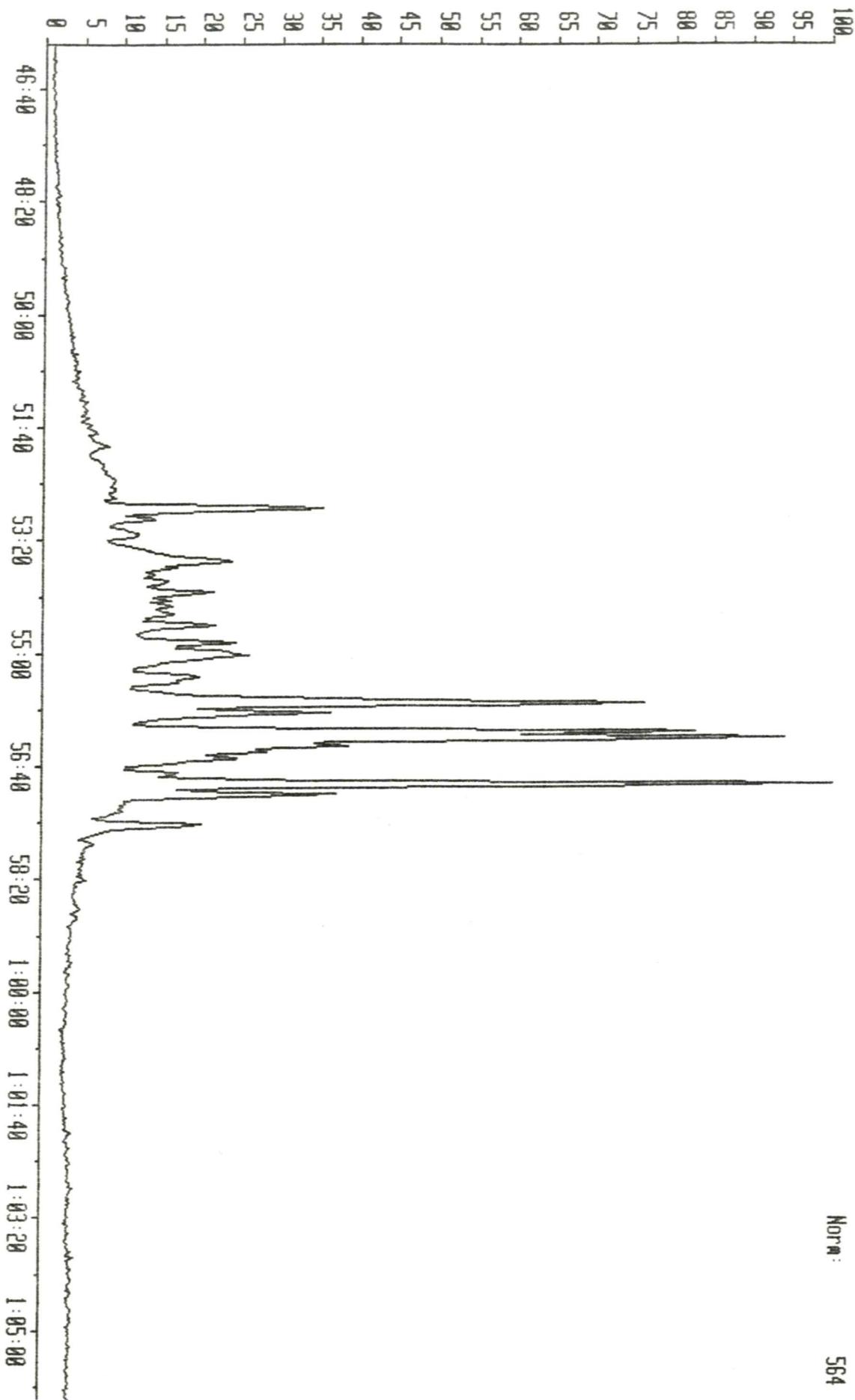
263 22-SEP-87 Sir: Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 386.4000 386.4000->231.1000  
Text: HIBERNIA K-18 DST#8 ZONE 7 3120-3135M



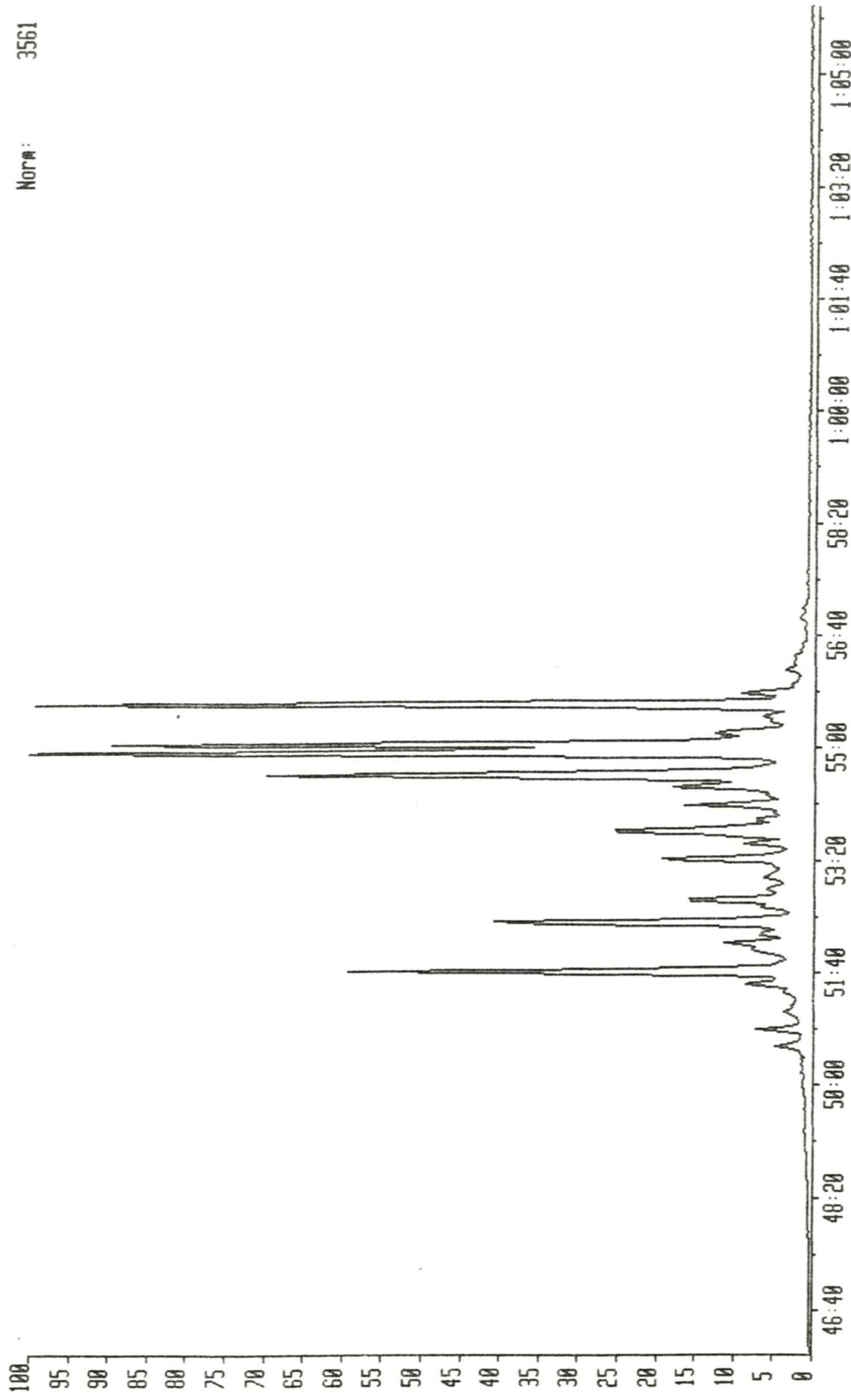
263 22-SEP-07 Stir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 372.4000 372.4000->231.1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135#



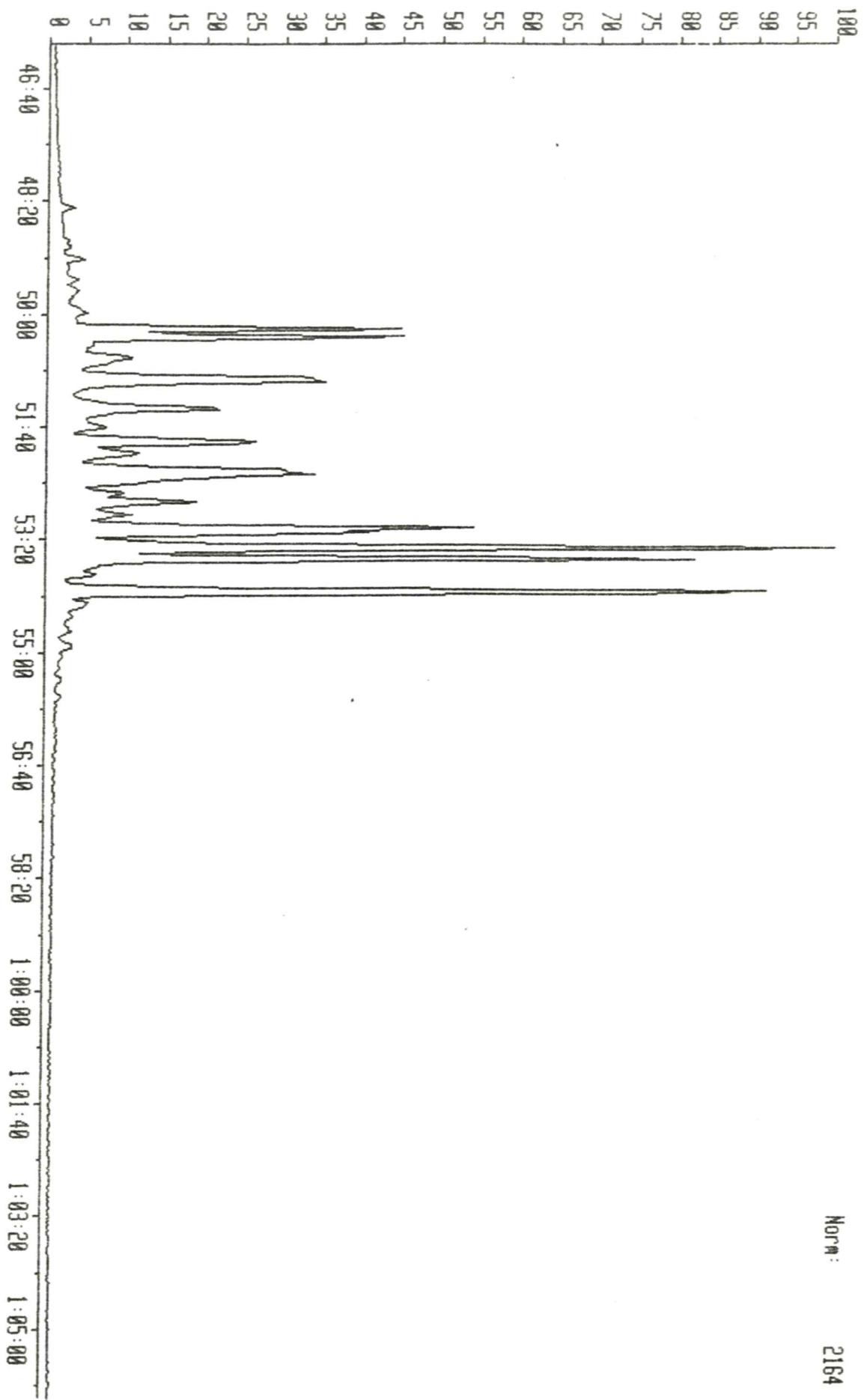
263 22-SEP-87 Str:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 414.4000 414.4000->217.1000  
Text: HIBERNIA K-18 DST#8 ZONE 7 3120-3135M



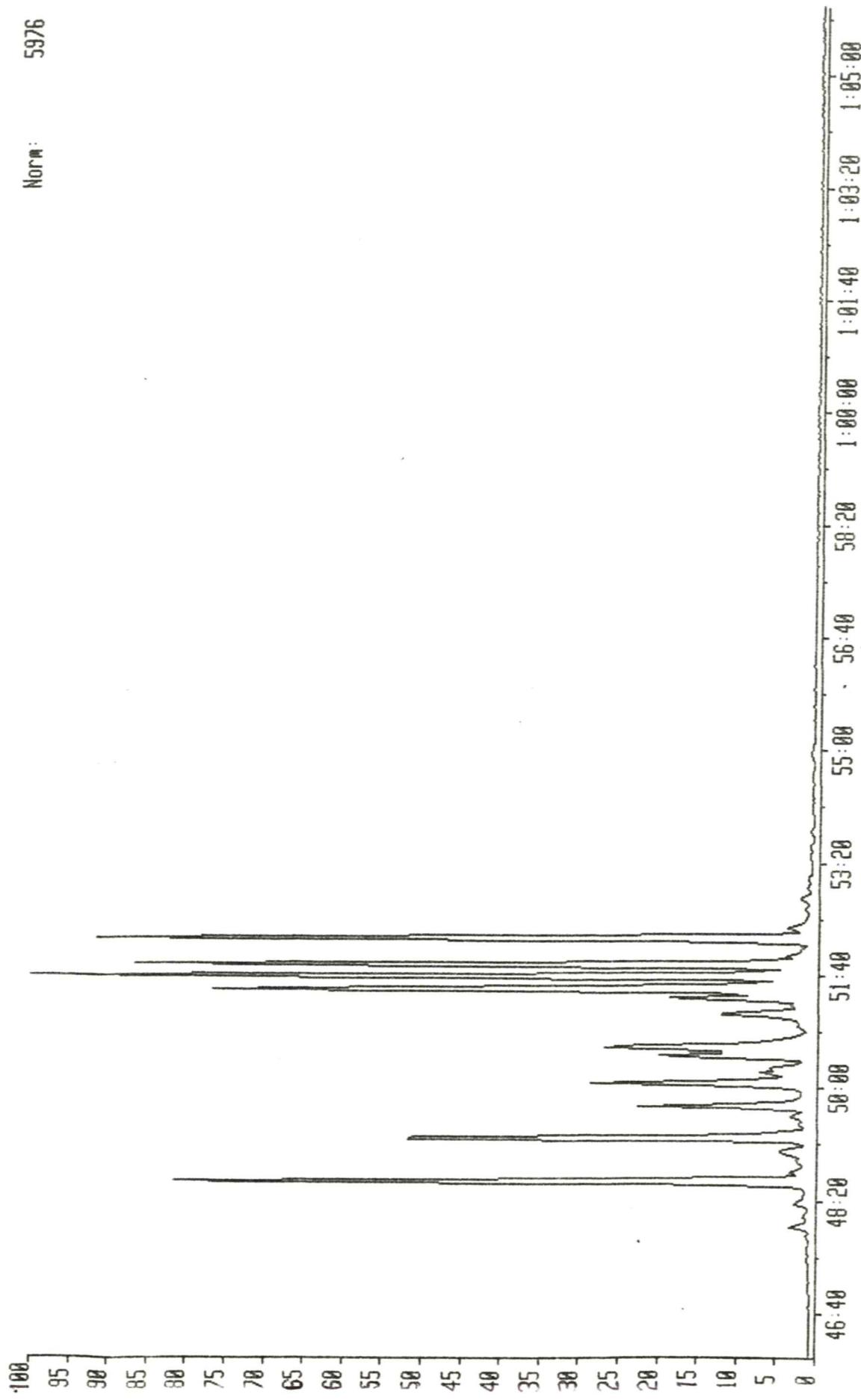
263 22-SEP-87 Sir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 400,4000 400,4000->217,1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135M



263 22-SEP-87 Sir:Reaction 7050 Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 386.4000 386.4000->217.1000  
Text:HIBERNIA K-18 DST#8 ZONE 7 3120-3135M



263 22-SEP-87 Stir:Reaction 70SQ Sys: DARC  
Sample 1 Injection 1 Group 1 Mass 372.4000 372.4000->217.1000  
Text:HIBERNIA K-18 051#8 ZONE 7 3120-3135#



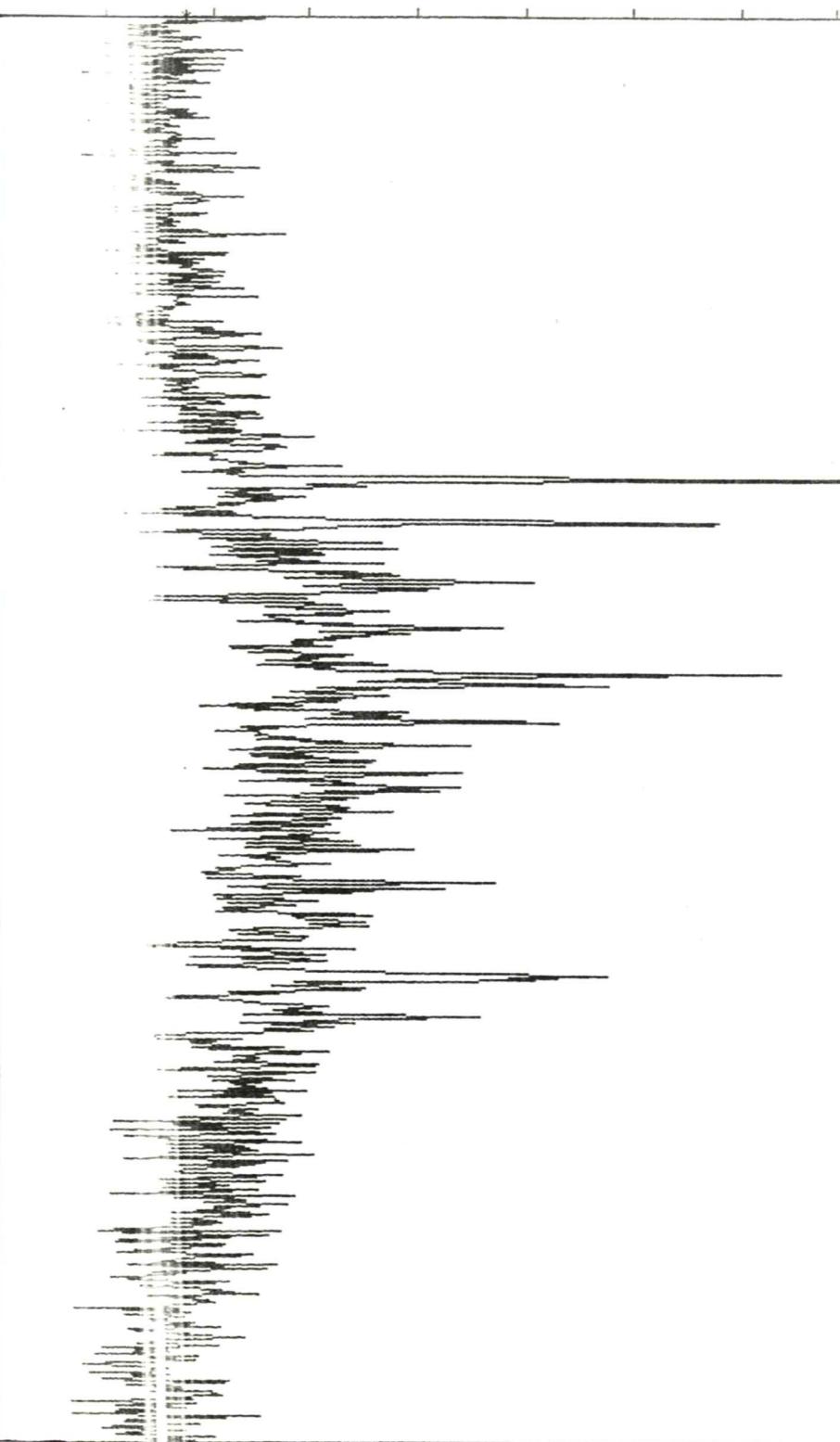
DS-55 CROSS SCAN REPORT, RUN: MARAR30001

MARRA DST#3 REPEAT SLOWER

\* 259

40:46      43:29      46:12      48:56      51:39      54:22      57:05      59:48      62:31

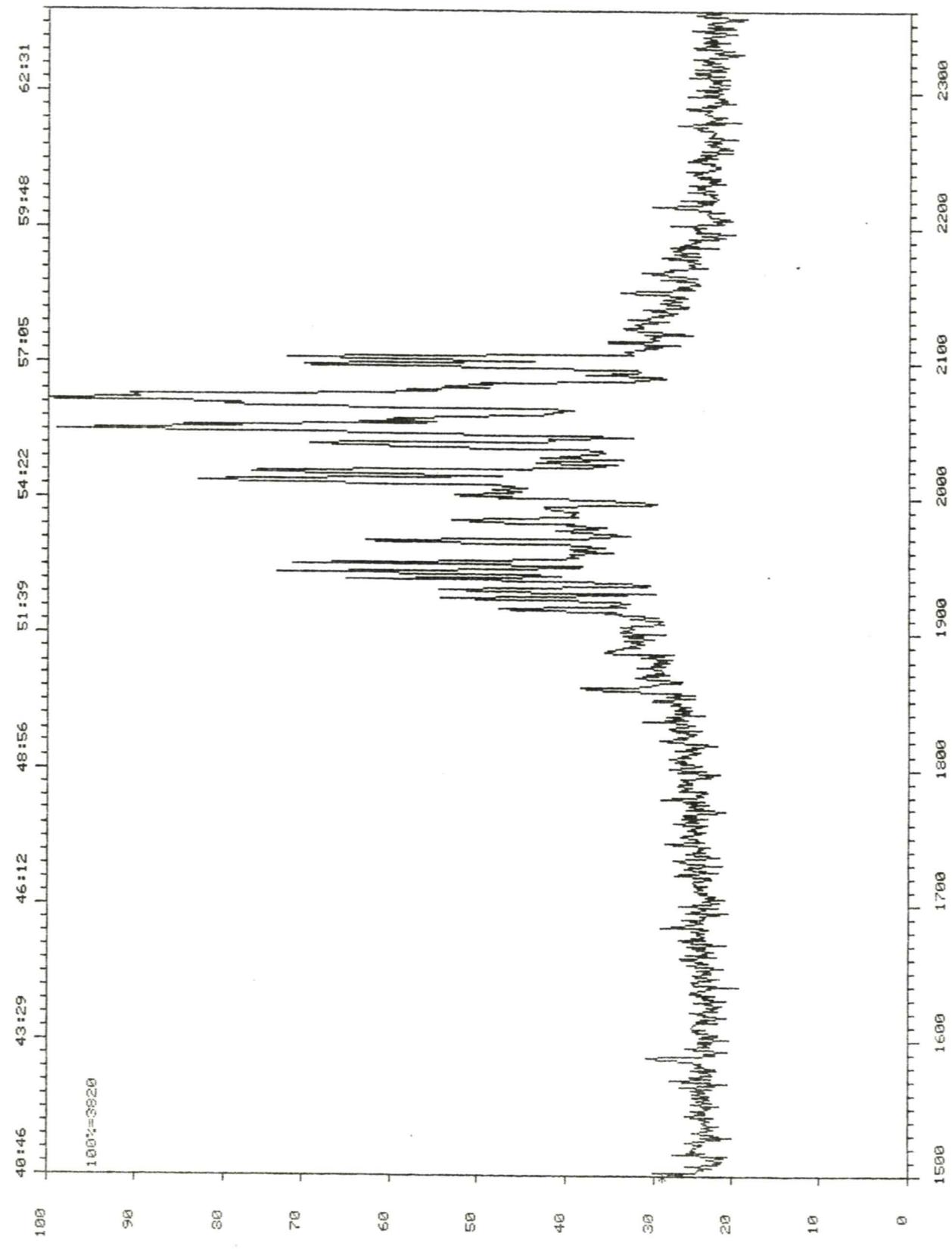
100:2=615



) DS-55 CROSS SCAN REPORT, RUN: MARAR30001

) MARA DST#3 REPEAT SLOWER

) \* 231



) DS-55 CROSS SCAN REPORT, RUN #: MARR30001

) MARR DST#3 REPEAT SLOWER

) \* 218

) 40:46 43:29 46:12 48:56 51:39 54:22 57:05 59:48 62:31

100%:=12516

90

80

70

60

50

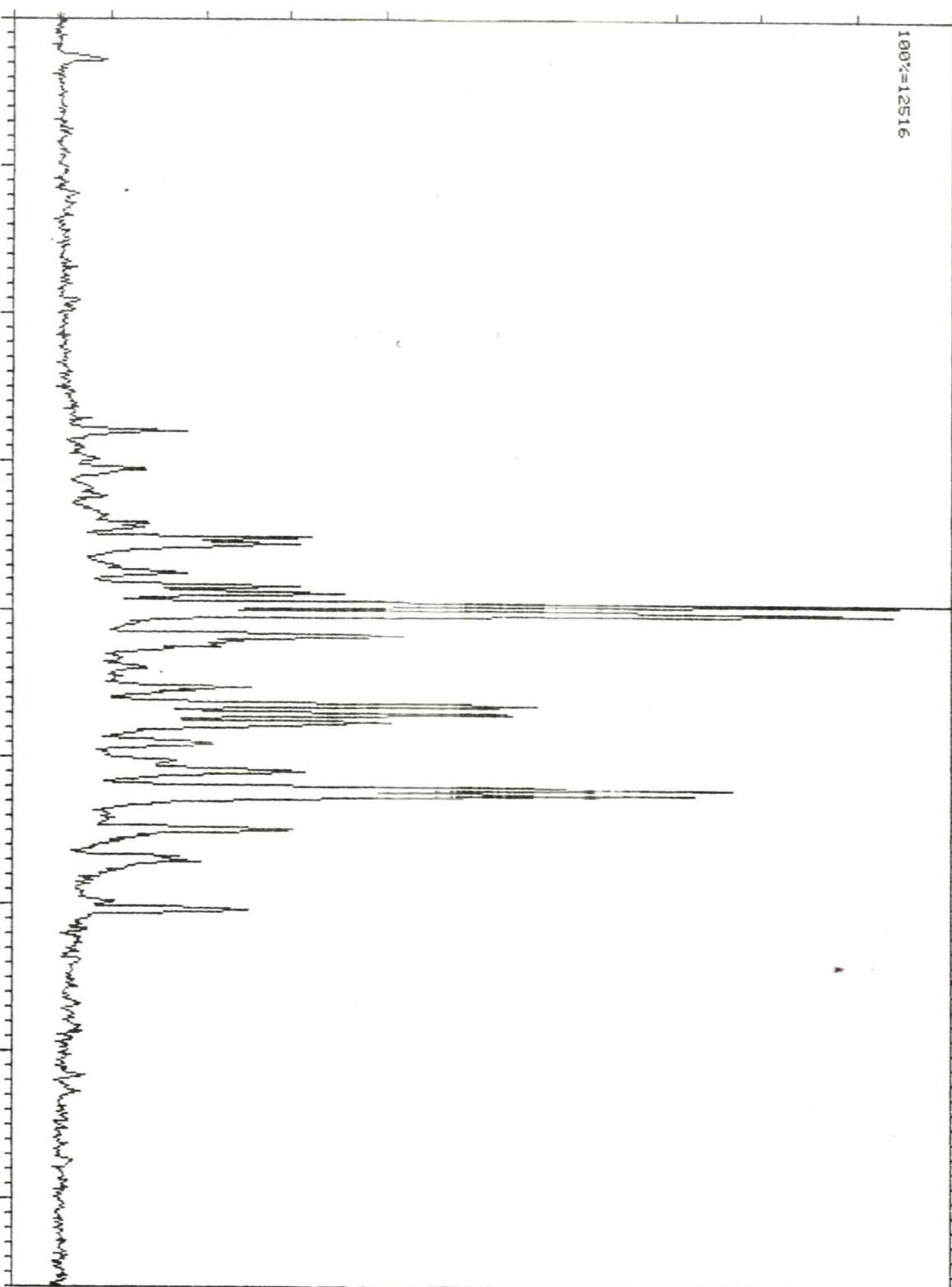
40

30

20

10

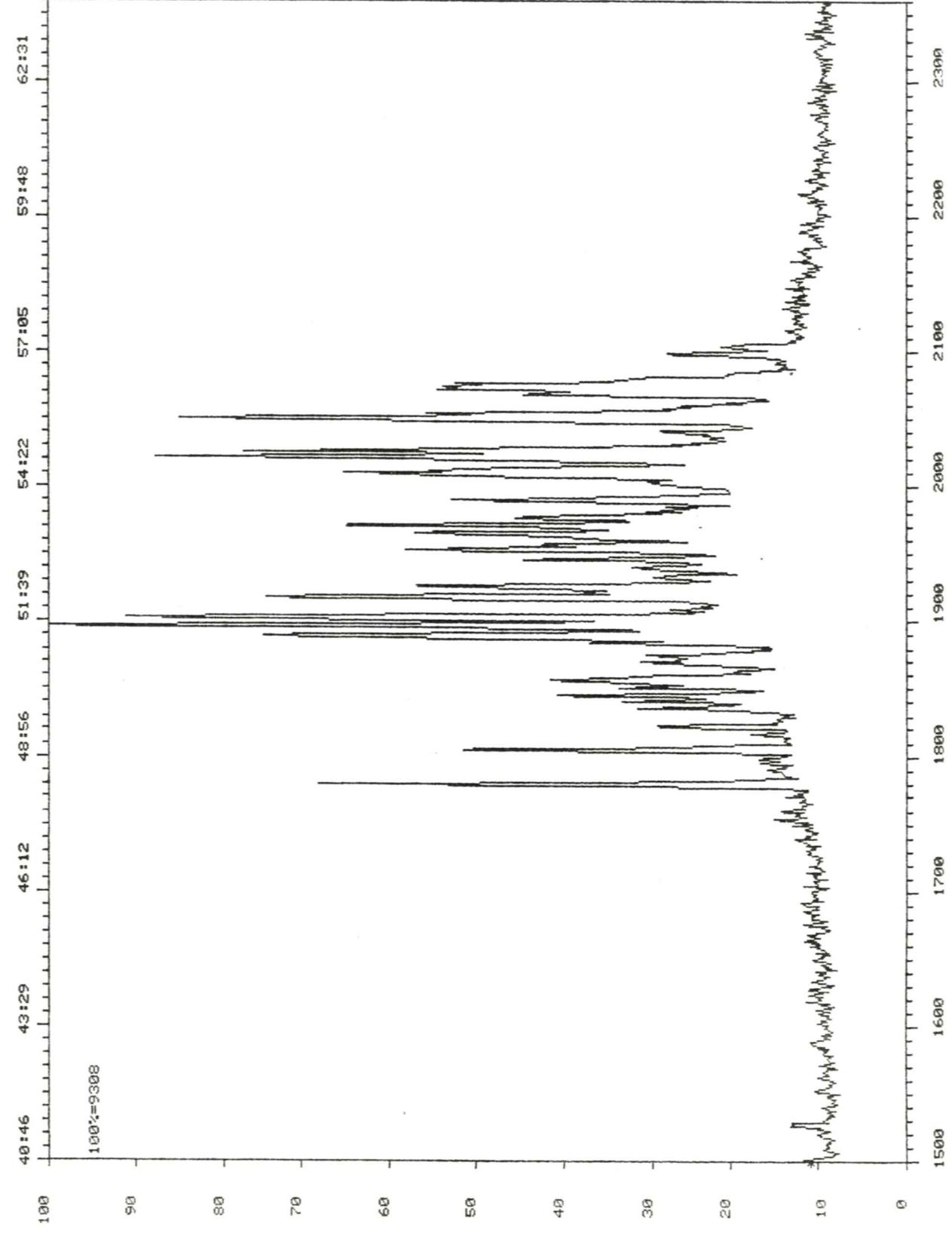
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DS-55 CROSS SCAN REPORT, RUN: MARR30001

MARA DST#3 REPEAT SLOWER

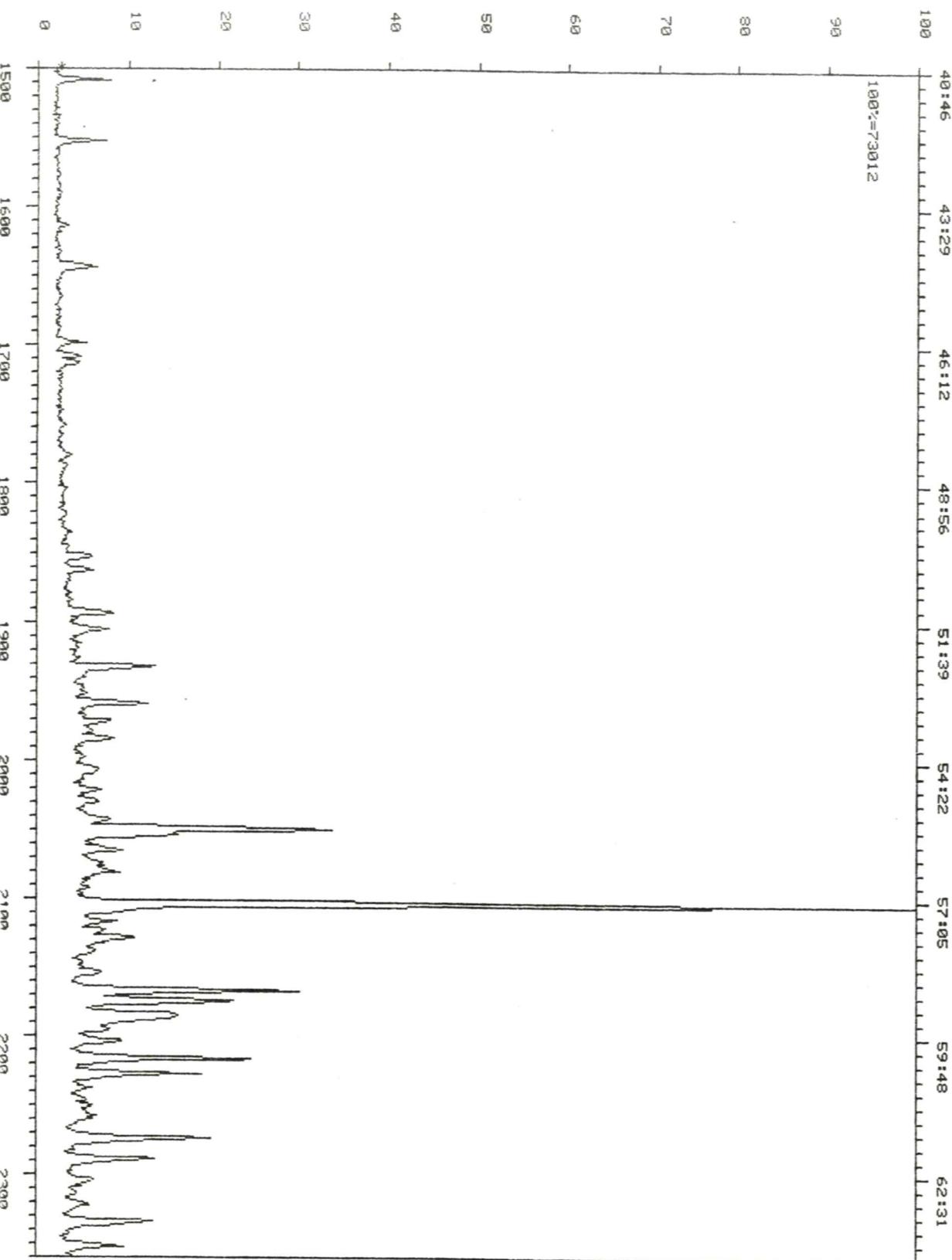
\* 217



DS-55 CROSS SCAN REPORT, RUN: MARRR30001

MARRA DST#3 REPEAT SLOWER

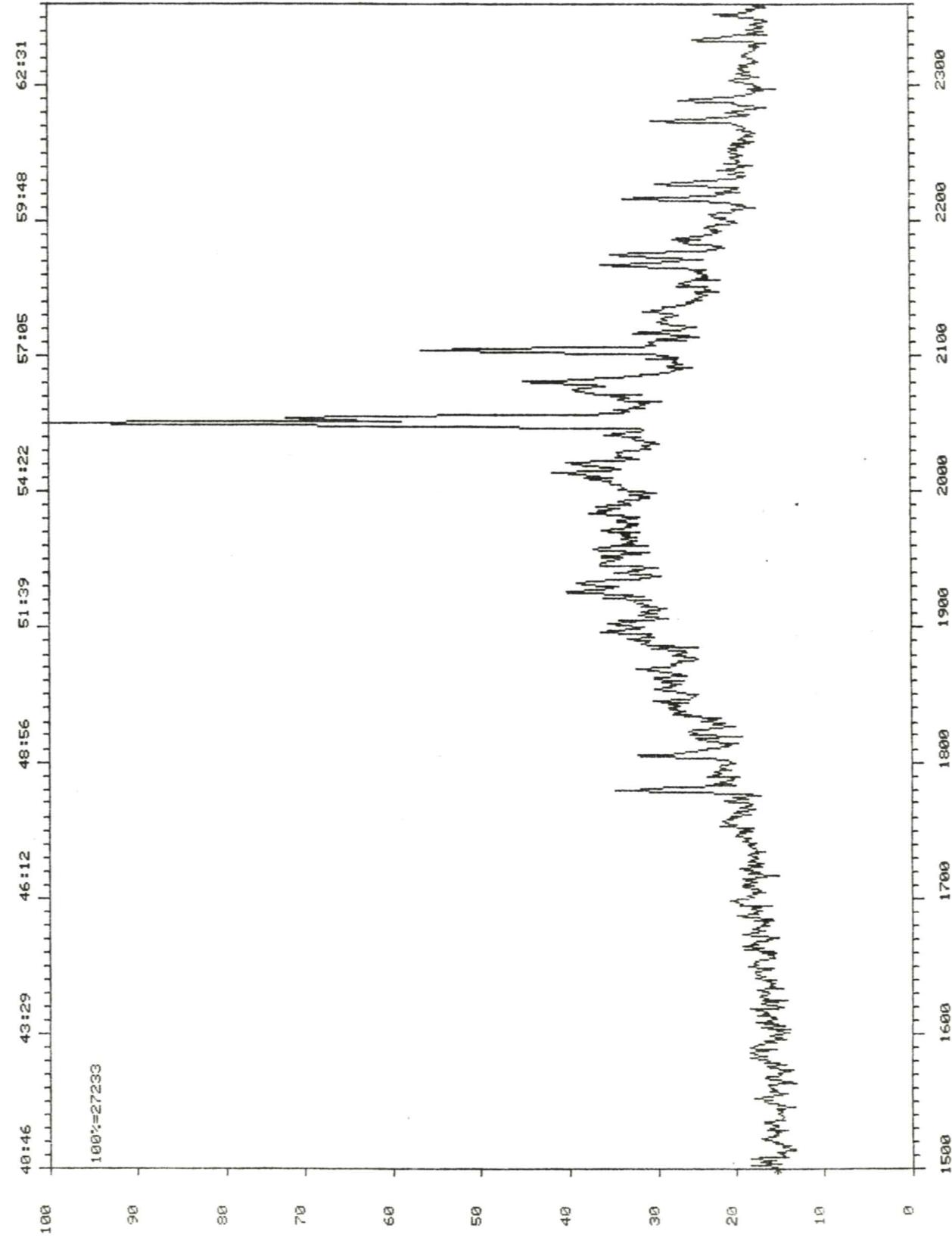
\* 191



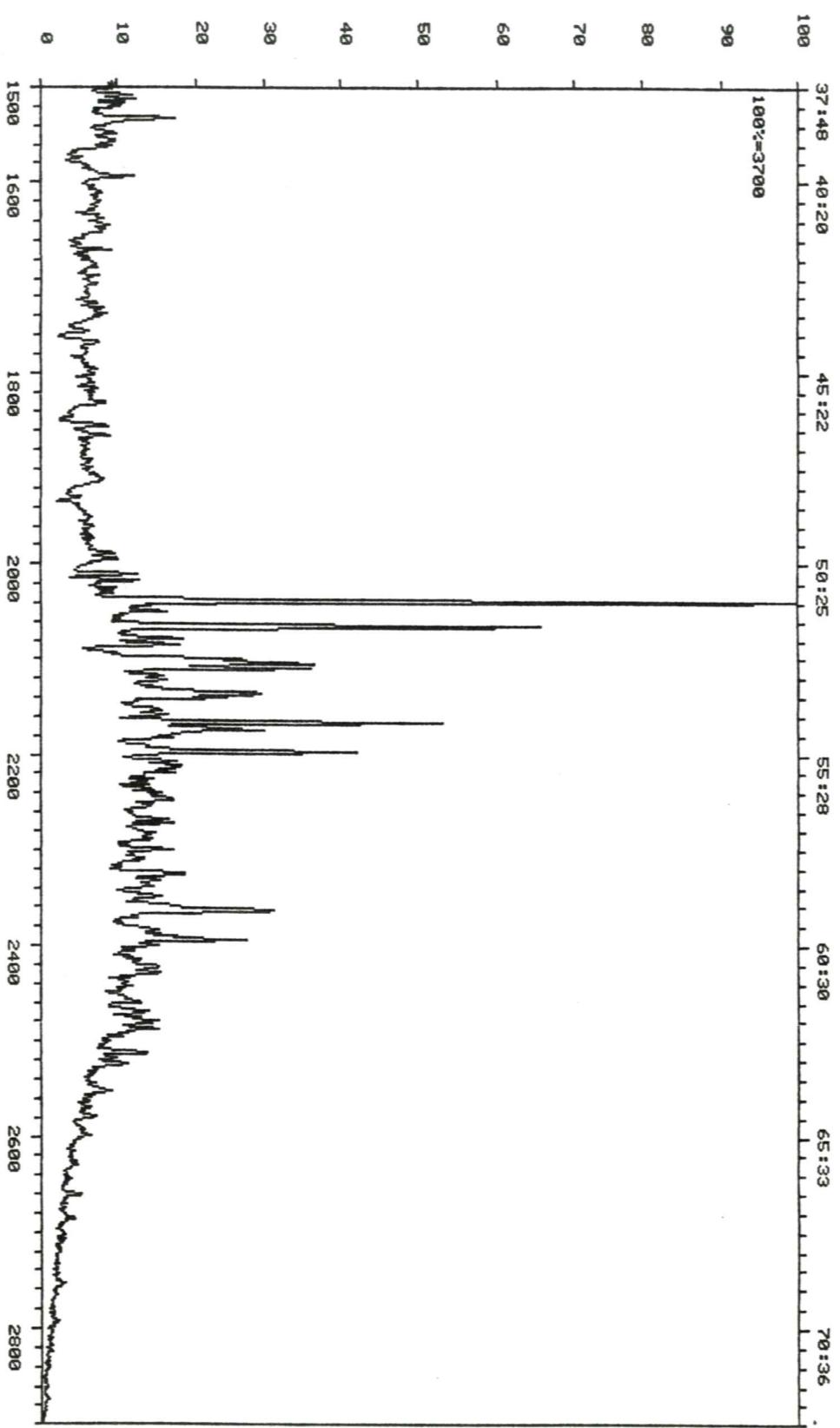
DS-55 CROSS SCAN REPORT, RUN: MARR30001

MARR DST#3 REPEAT SLOWER

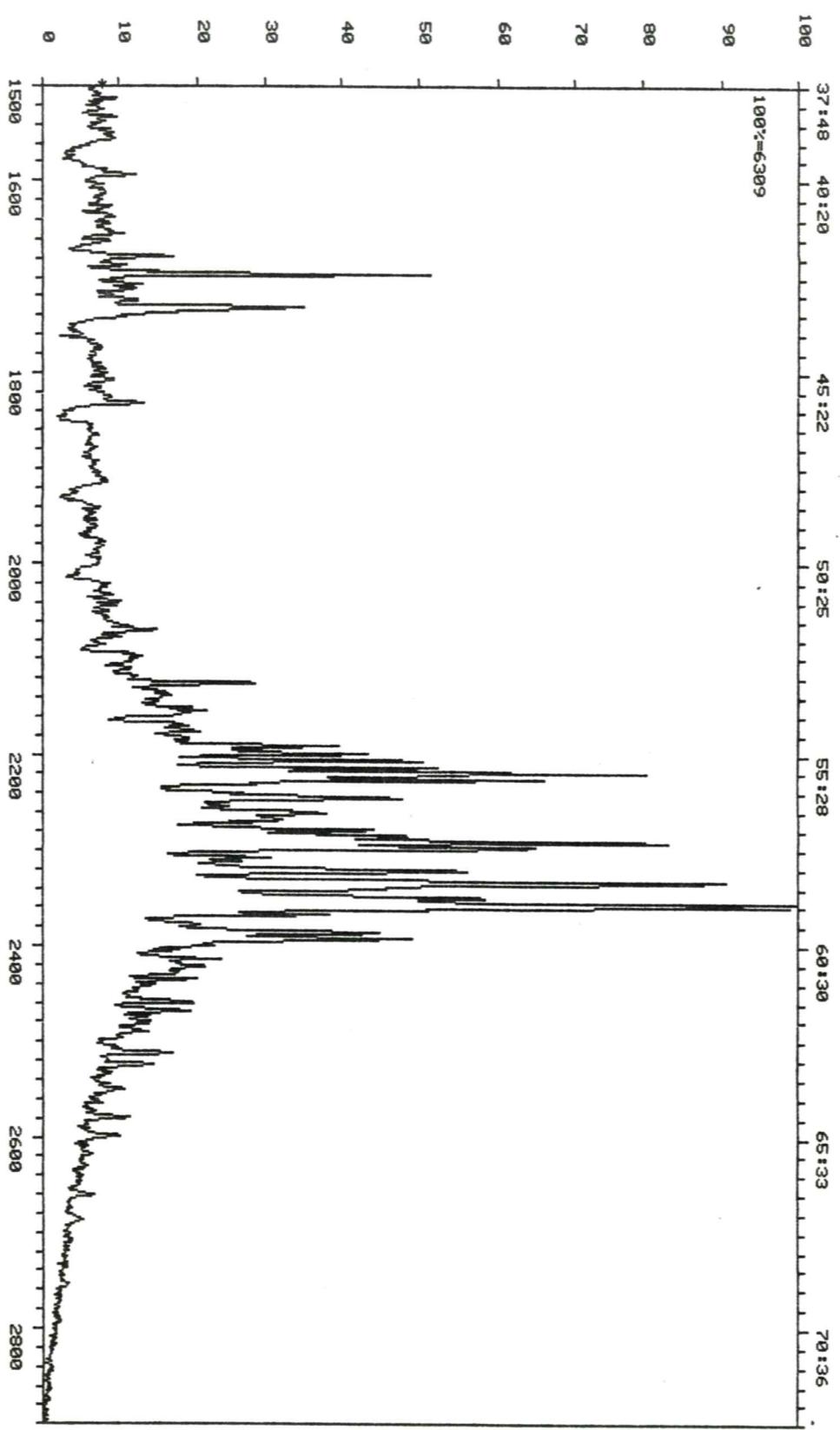
\* 177



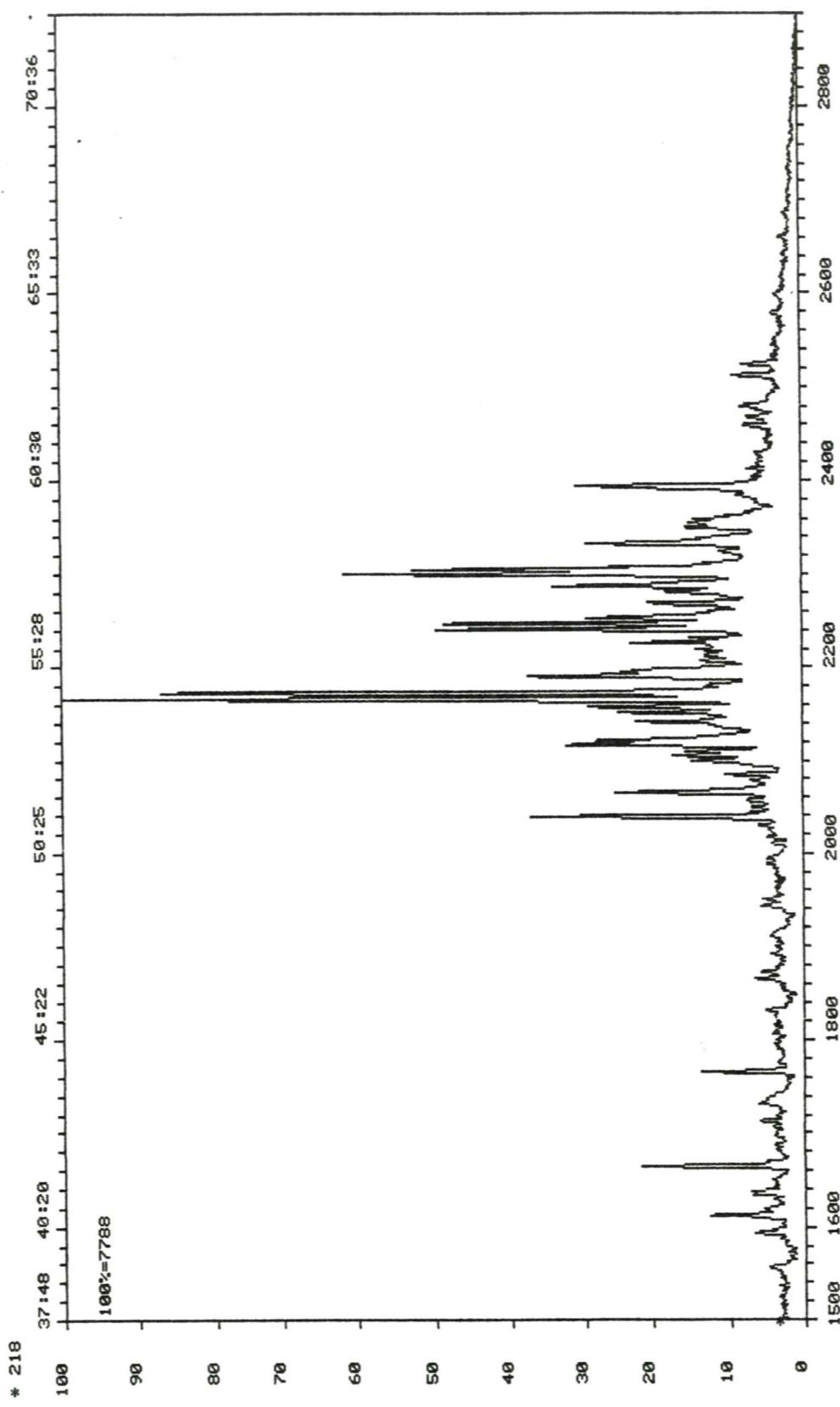
DS-55 CROSS SCAN REPORT, RUN: 7830002  
TERRA NOVA K-08 DST#1  
\* 259



DS-55 CROSS SCAN REPORT, RUN: 7830002  
TERRA NOVA K-08 DST#1  
\* 231

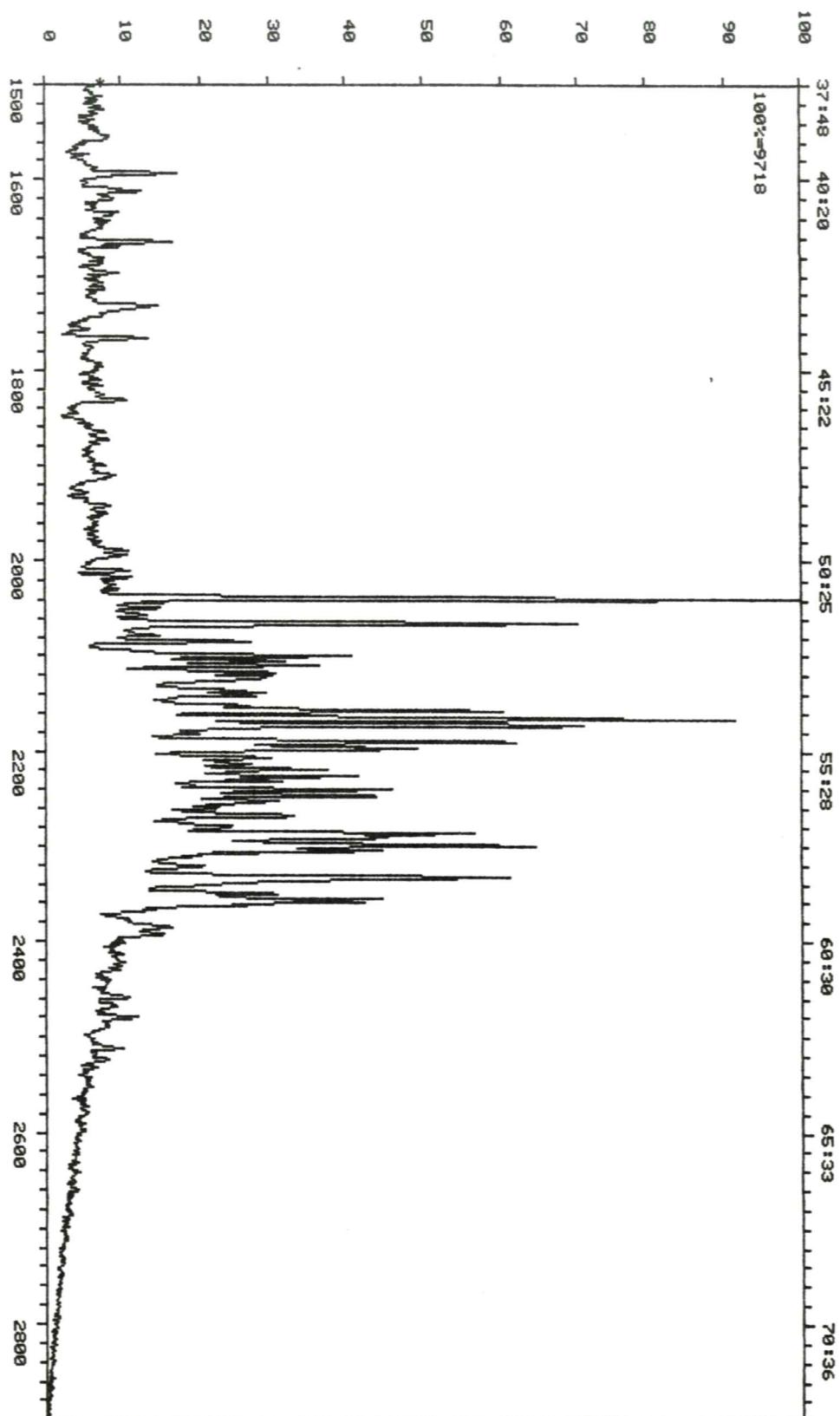


DS-55 CROSS SCAN REPORT, RUN: 7830002  
TERRA NOVA K-08 DST#1

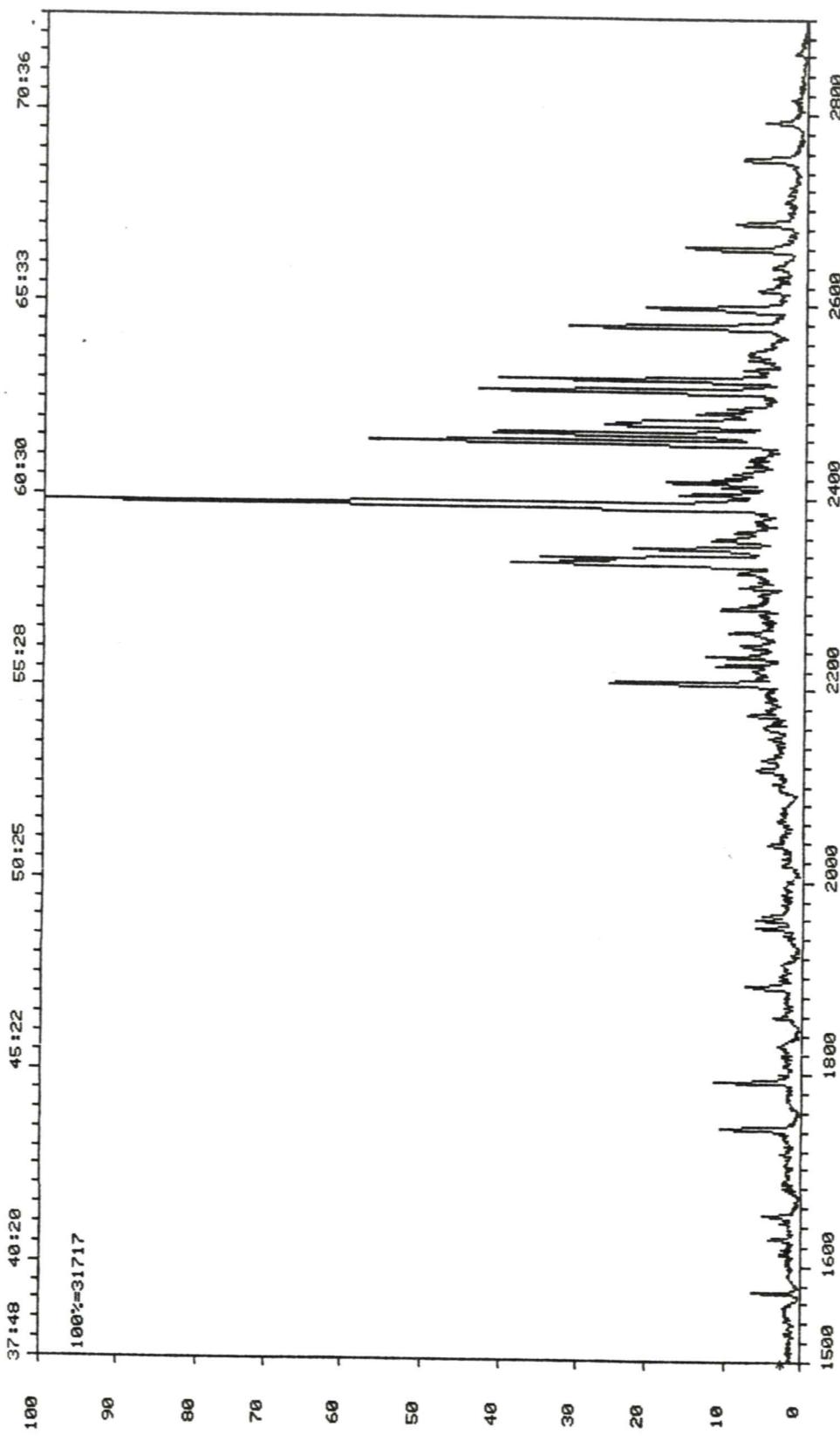


TERRA NOVA K-08 DST#1  
\* 217

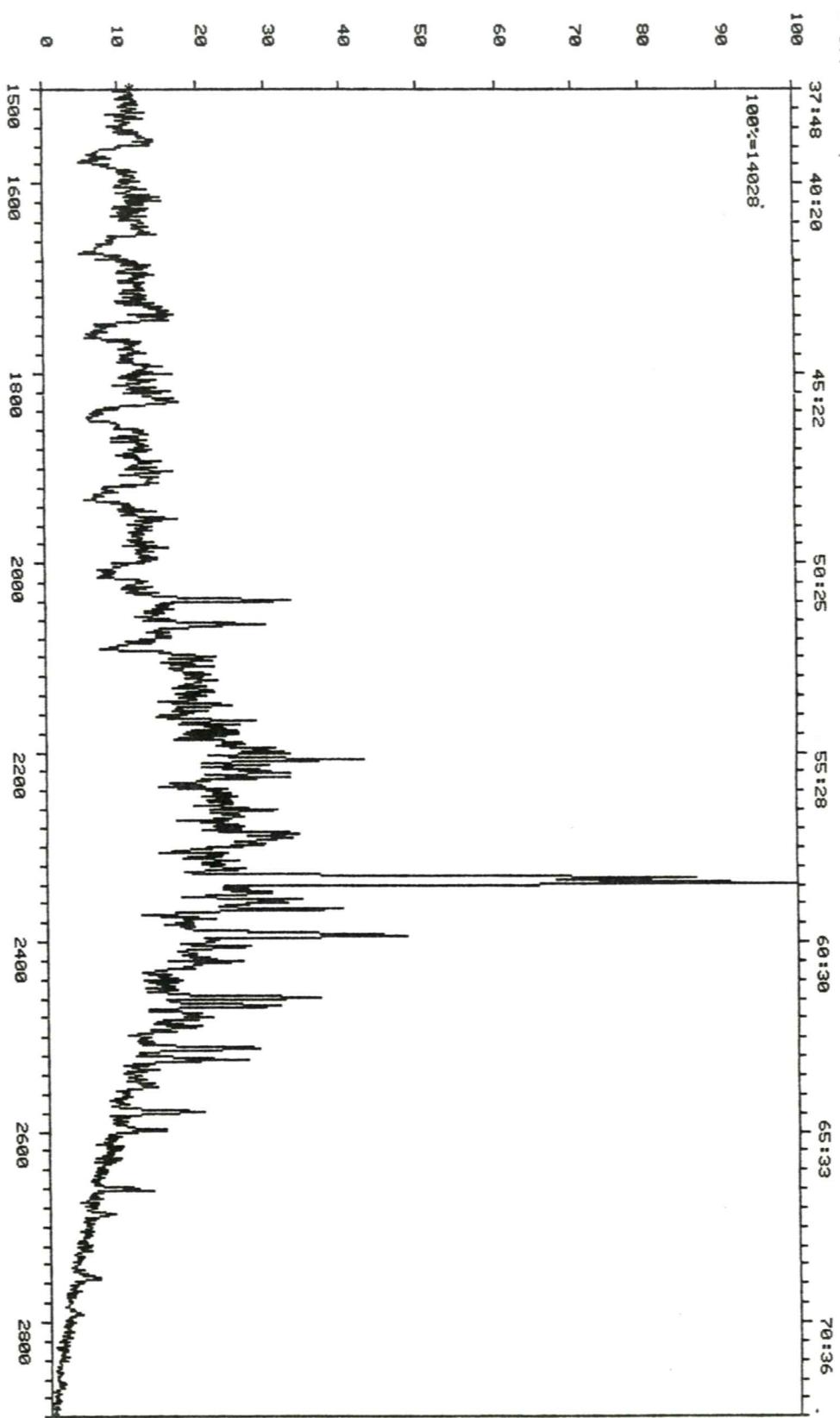
\* 217



DS-55 CROSS SCAN REPORT, RUN: 7830002  
TERRA NOVA K-08 DST#1  
\* 191



DS-55 CROSS SCAN REPORT, RUN: 7830002  
TERRA NOVA K-08 DST#1  
\* 177



DS-55 CROSS SCAN REPORT, RUN: 207750003

W. BEN NEVIS B-75 DST#6

\* 259

37:49 40:20 45:23

50:25 55:28 60:31

65:33 68:36

) 100 100 100% = 3797

90

80

70

60

50

40

30

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0

1500 1600 1600

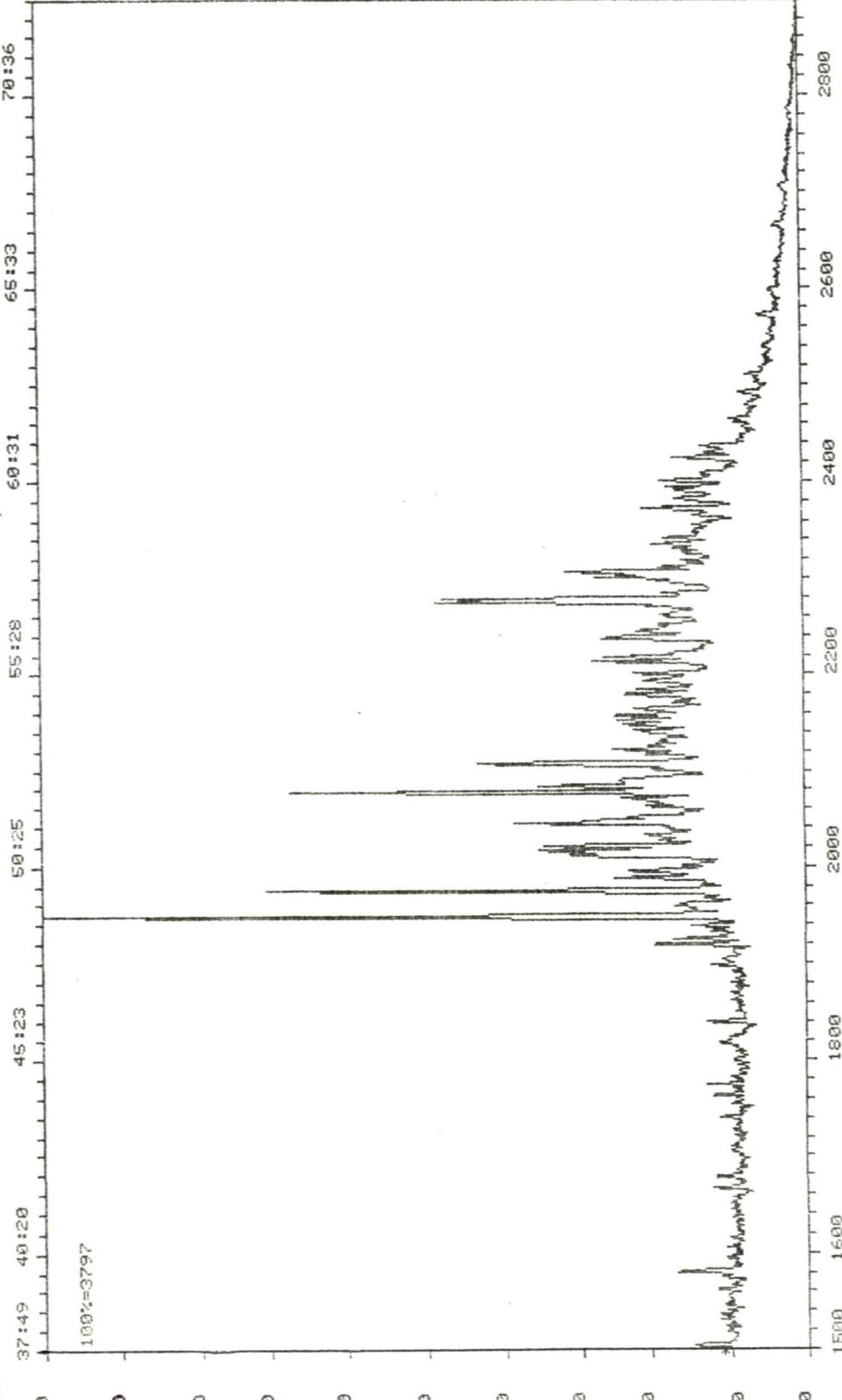
2000

2200

2400

2600

2800

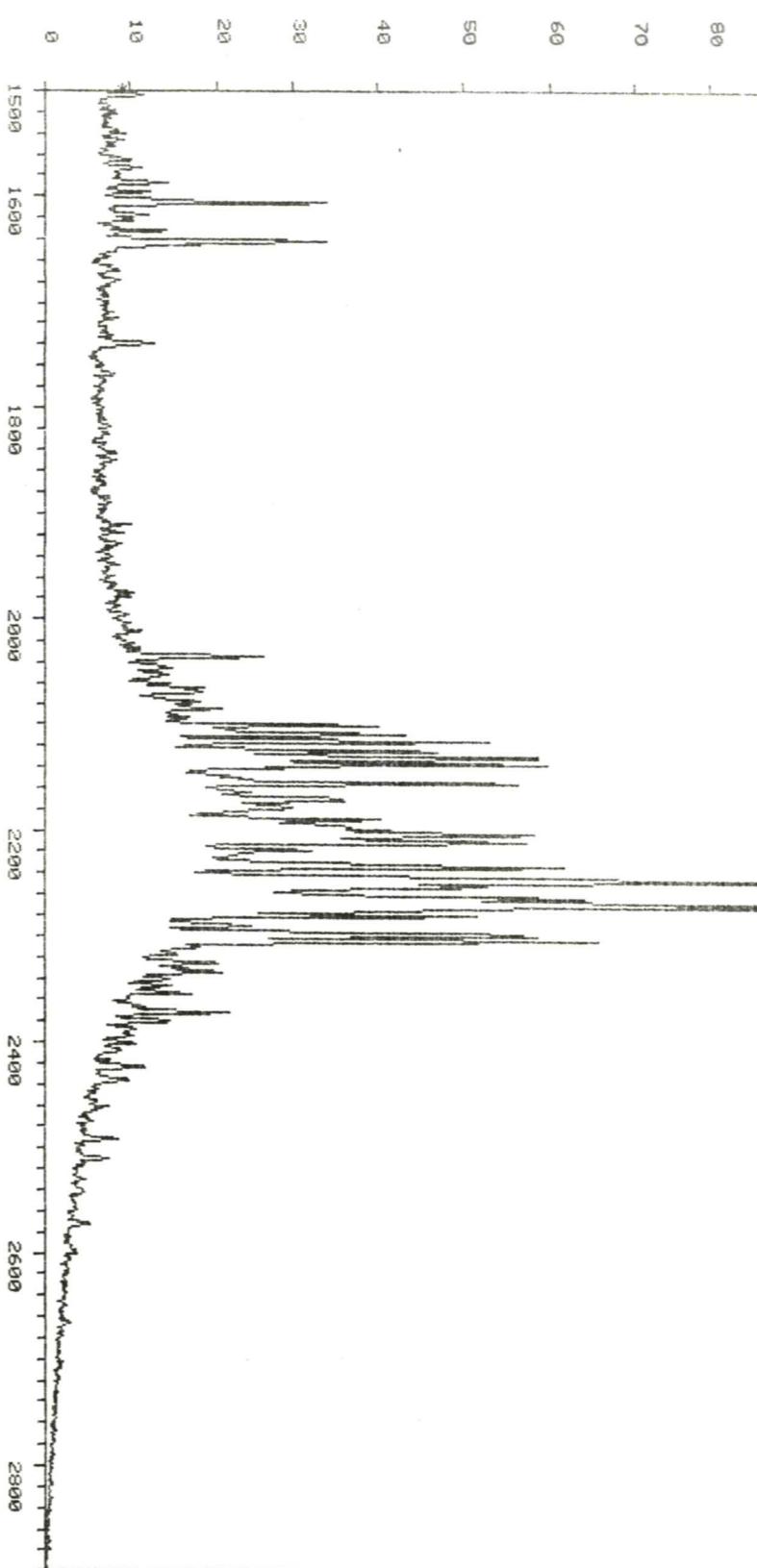


DS-55 CRUSS SCRN REPORT, RUN: 207750003

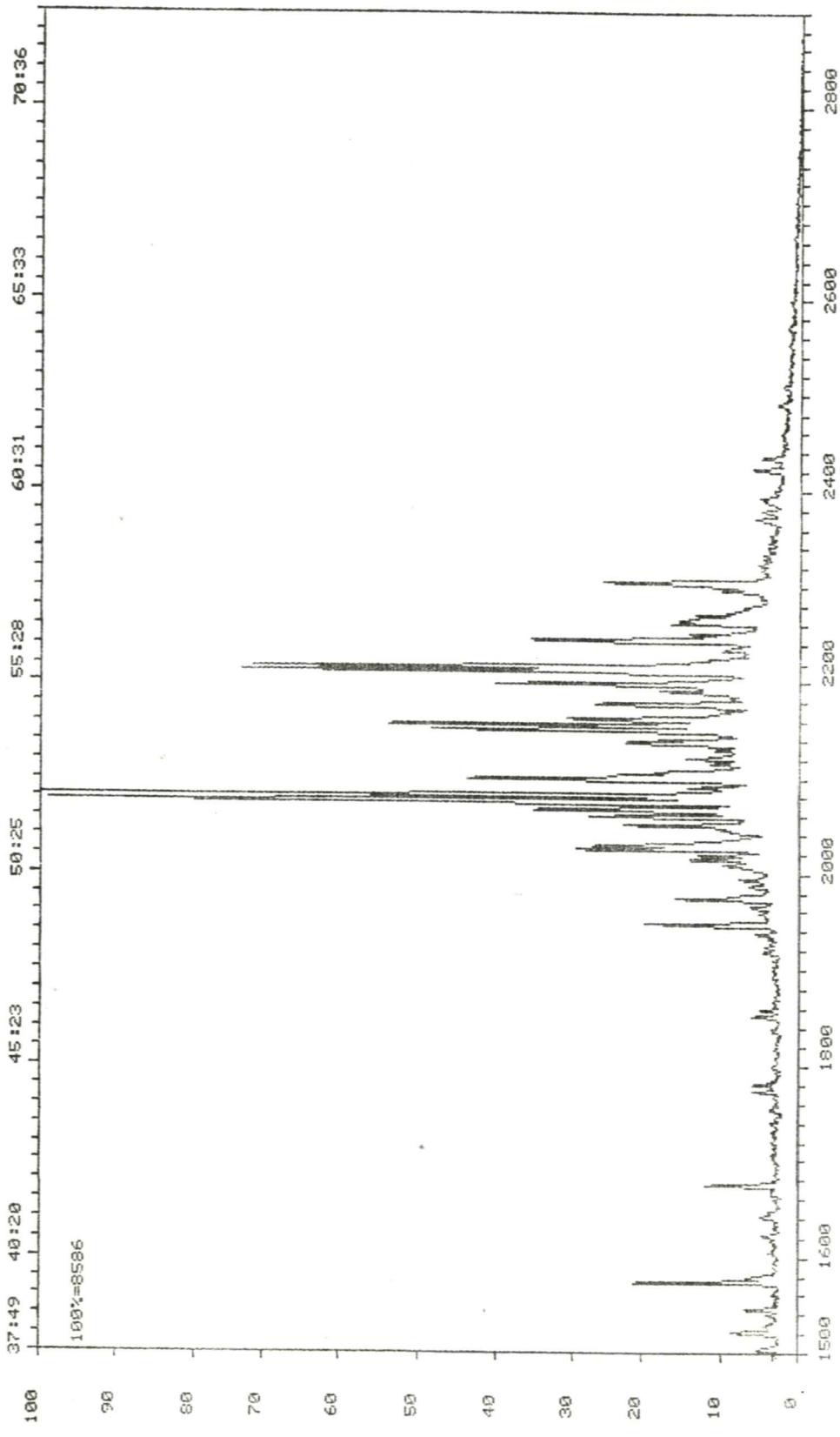
M. BEN NEVIS B-75 DST#6

\* 231

37:49 40:20 45:23 50:25 55:28 60:31 65:33 70:36  
100% = 6533



DS-55 CROSS SCAN REPORT, RUN: 287750003  
W. BEN NEVIS B-75 DST#6  
\* 218



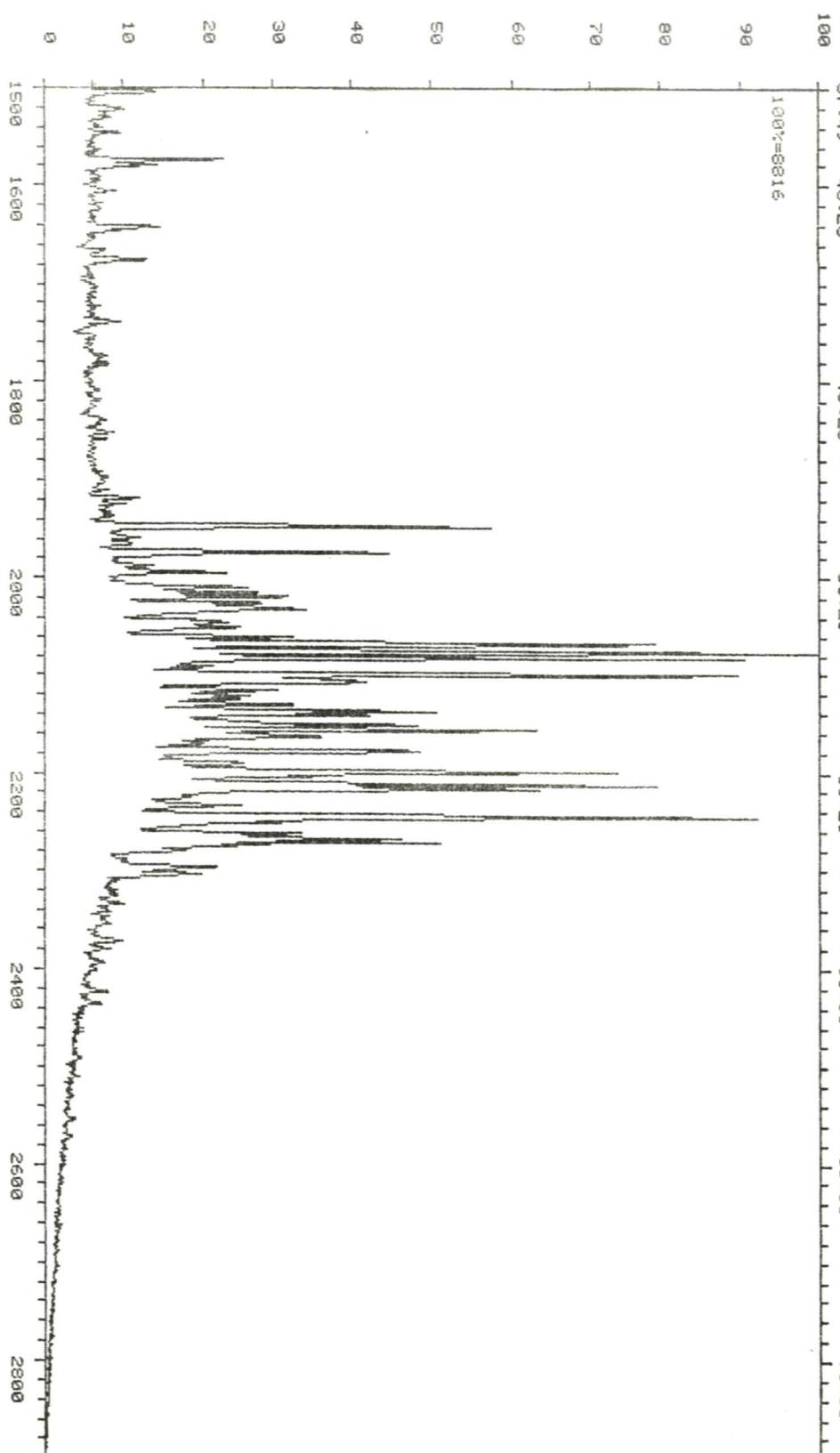
)  
DS-55 CROSS SCAN REPORT, RUN: 267750003

)  
W. BEN NEVIS B-75 DST#6

)  
\* 217

)  
37:49 40:20 45:23 50:25 55:28 60:31 65:33 70:36

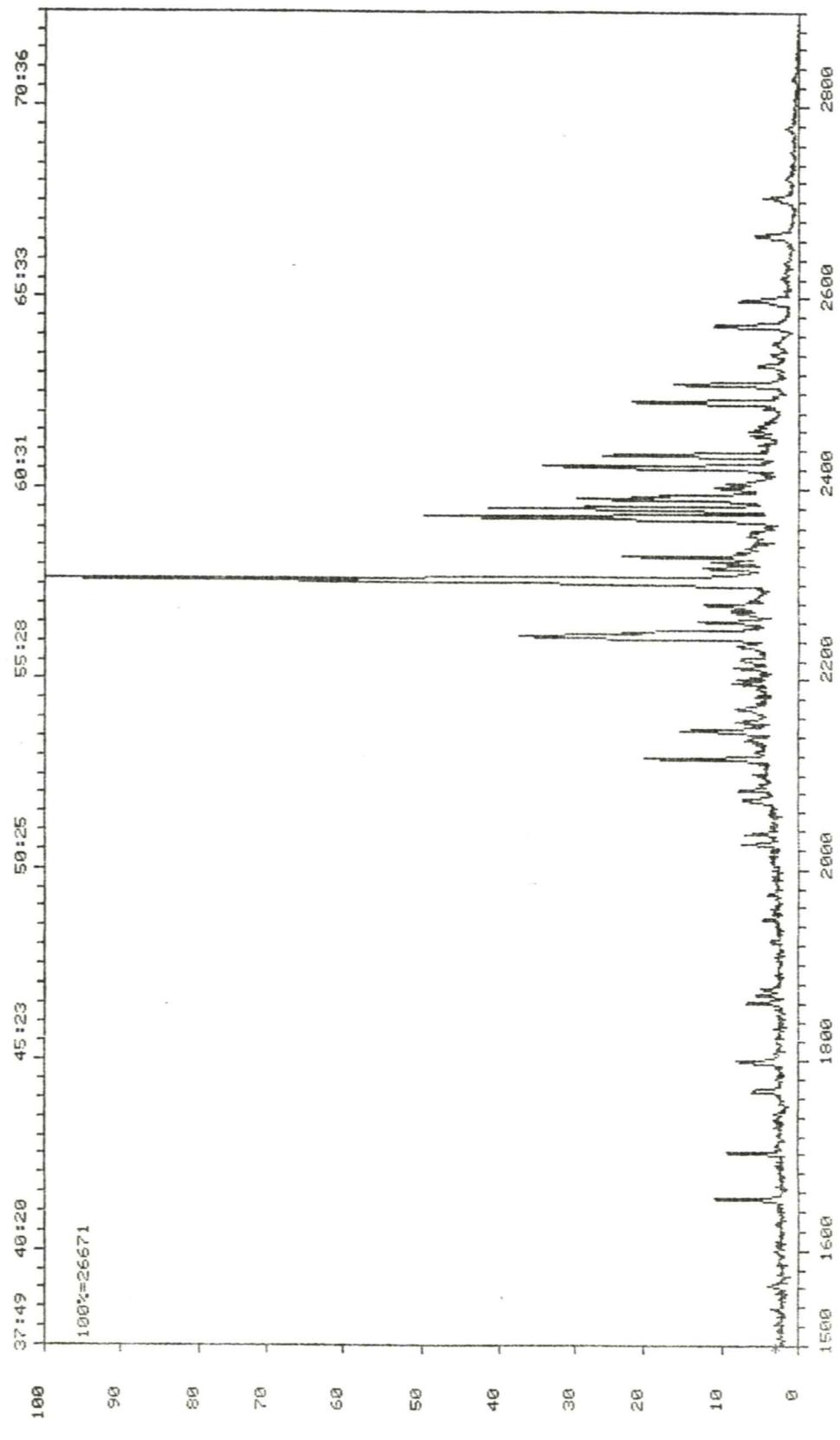
)  
100%:8816



DS-55 CROSS SCAN REPORT, RUN: 2077500003

W. BEN HEVIS B-75 DST#6

\* 191



DS-55 CROSS SCAN REPORT, RUN: 207750003

W. BEN NEVIS B-75 DST#6

\* 177

1000 37:49 40:20 45:23 50:25 55:28 60:31 65:33 70:36

1000 $\approx$ 9270

90

80

70

60

50

40

30

20

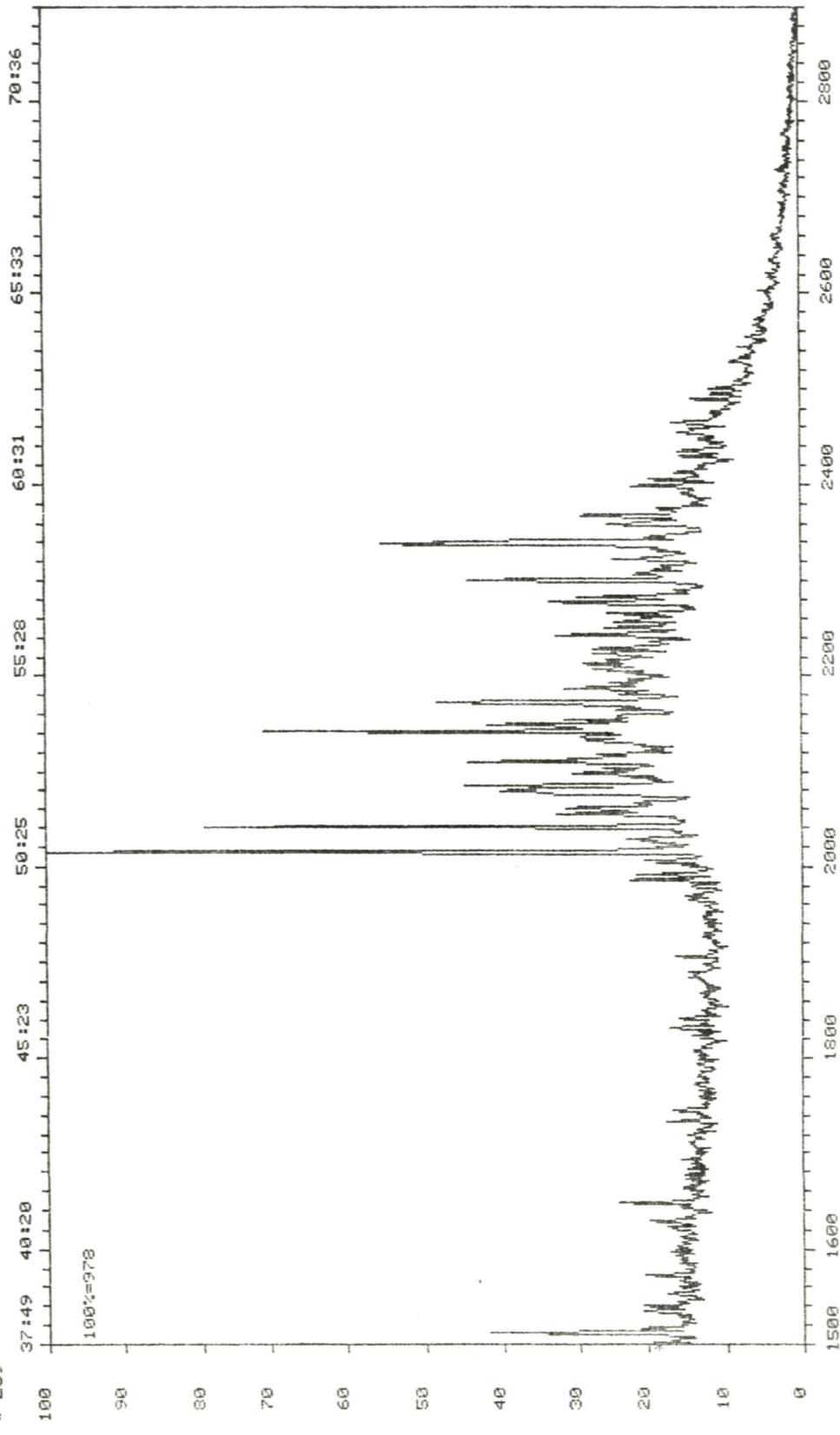
10

0 1500 1600 1800 2000 2200 2400 2600 2800



DS-55 CROSS SCAN REPORT, RUN: 204800002  
WHITEROSE J-49 DST#7

\* 259

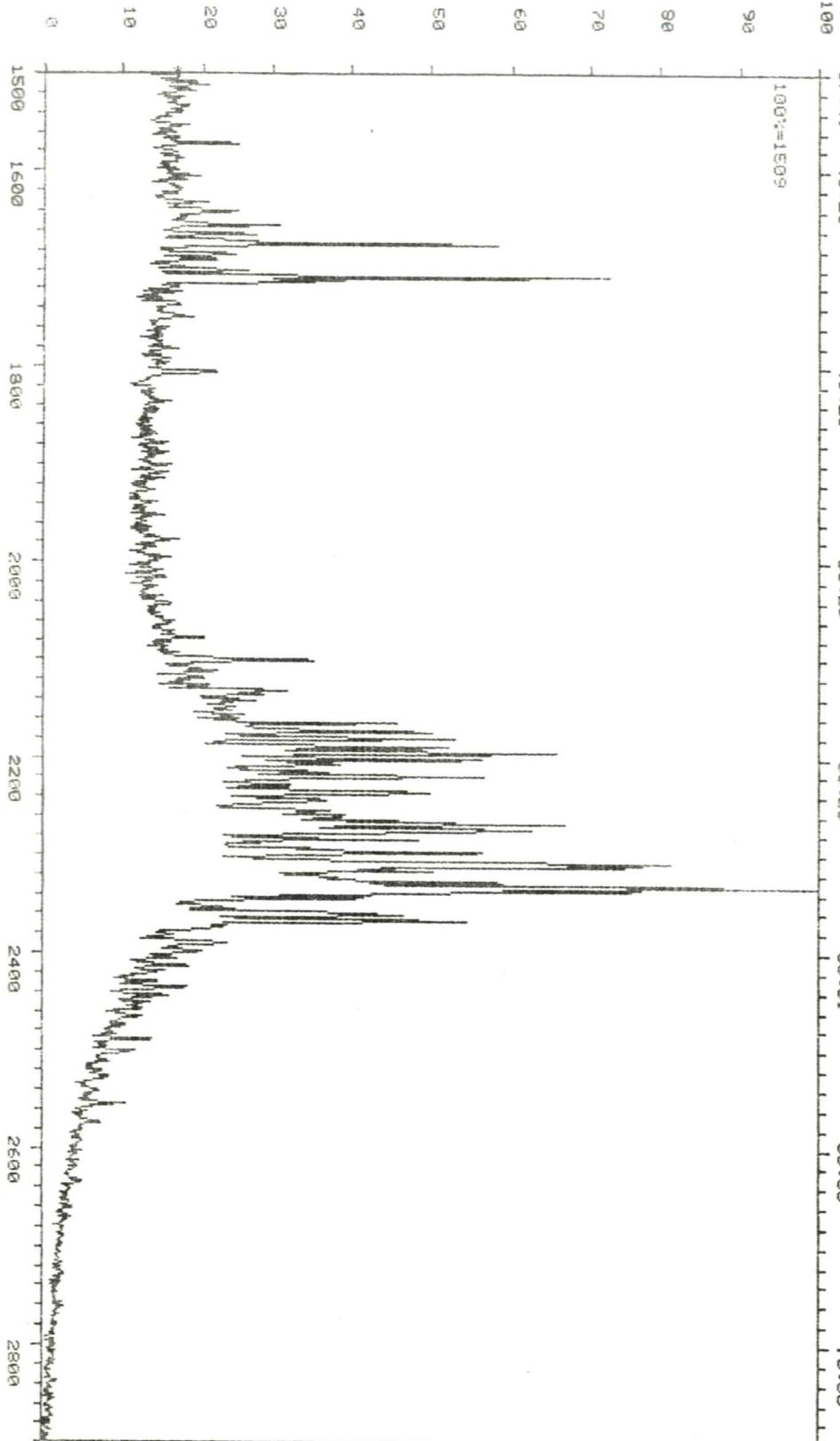


)  
DS-55 CROSS SCAN REPORT, RUN: 204800002

) WHITEROSE J-49 DST#7

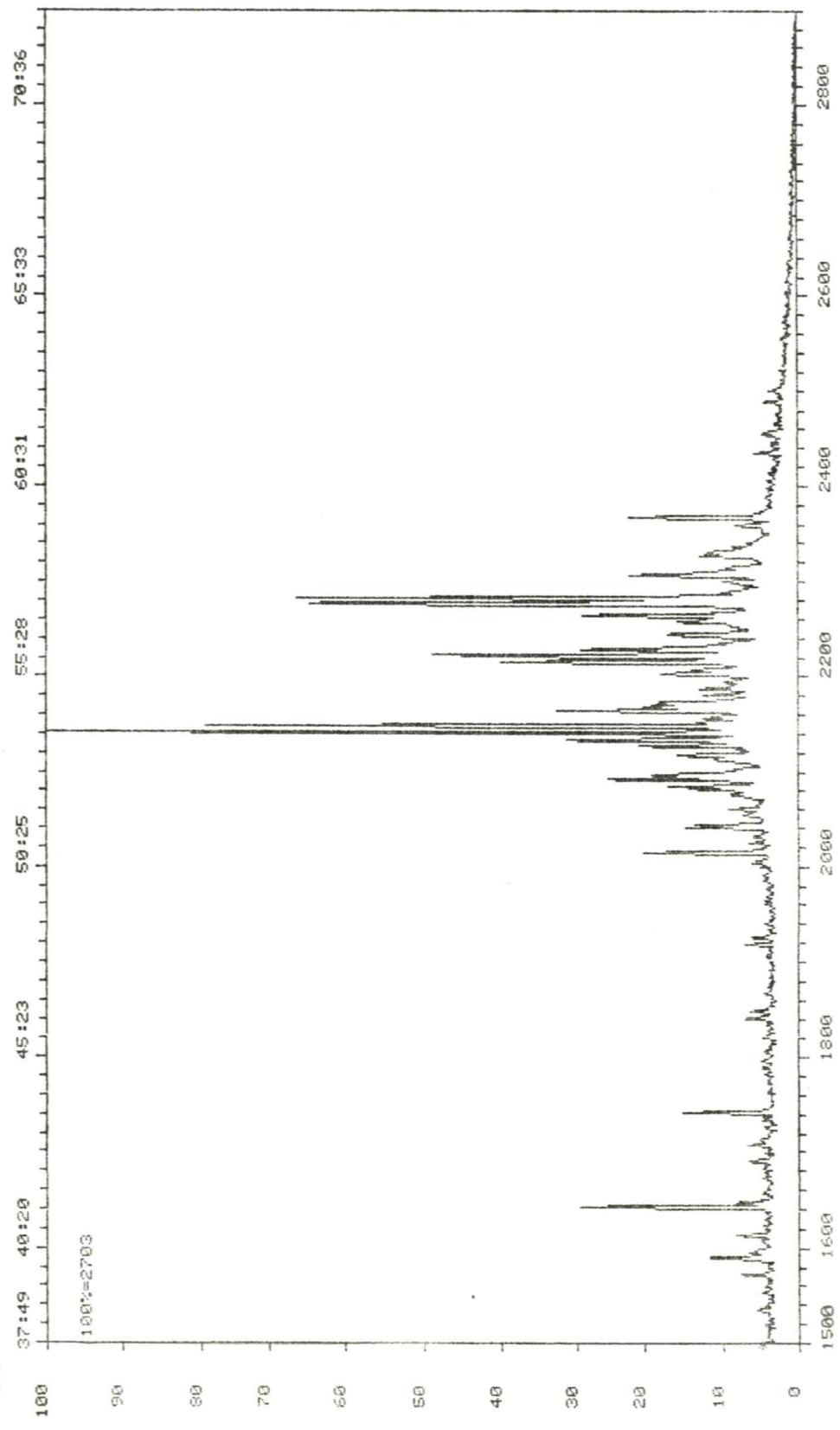
) \* 231

)  
100\*=1509  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0



)  
DS-55 CROSS SCAN REPORT, RUN: 204800002  
WHITEROSE J-49 DST#7

\* 218



DS-55 CROSS SCAN REPORT, RUN: 204800002

WHITEROSE J-49 DST#7

\* 217

37:49 40:20 45:23 50:25 55:28 60:31 65:33 70:36  
100%:2776

90

80

70

60

50

40

30

20

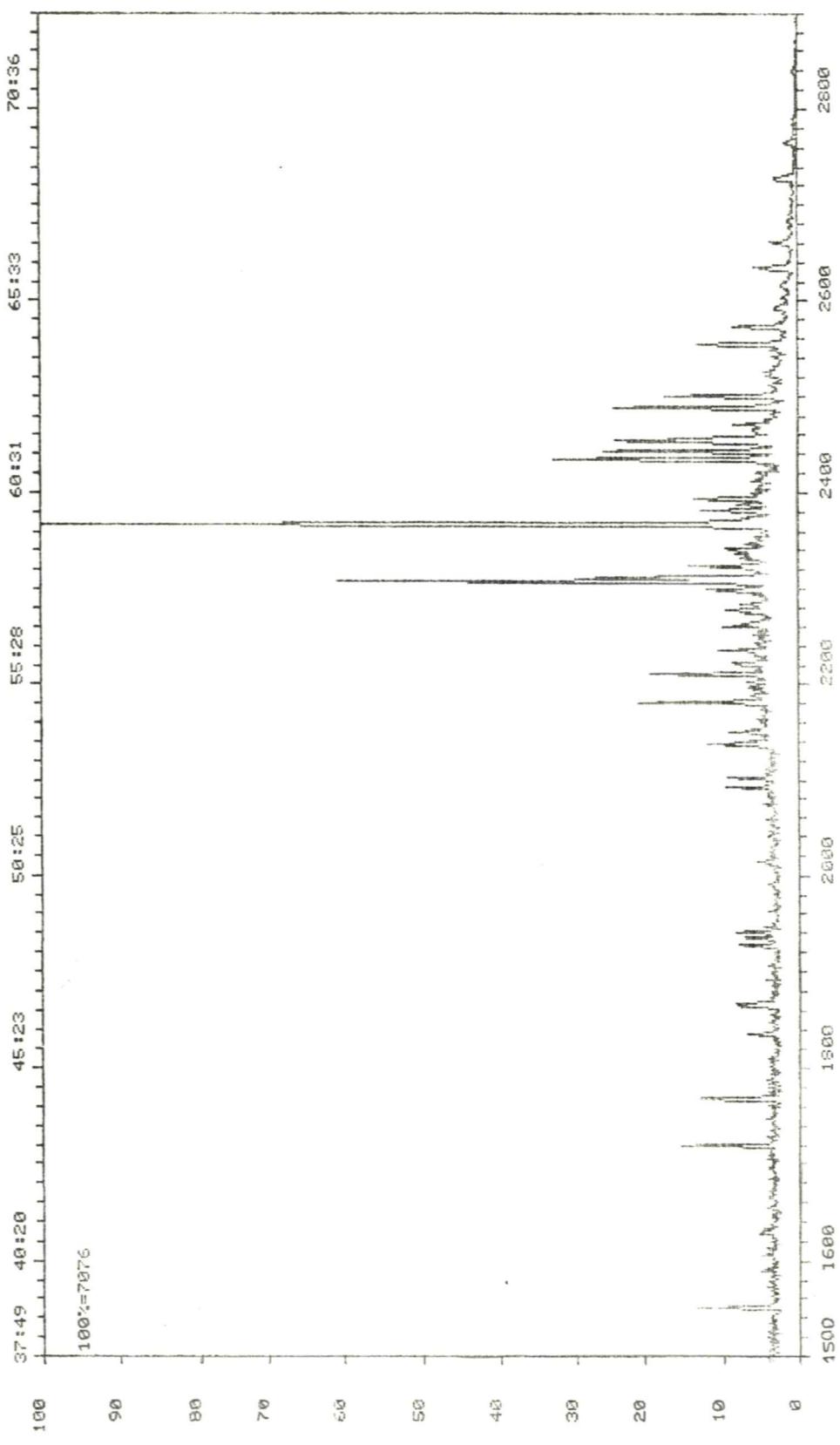
10



DS-55 CROSS SCAN REPORT, RUN: 204800002

WHITEROSE J-49 DST#7

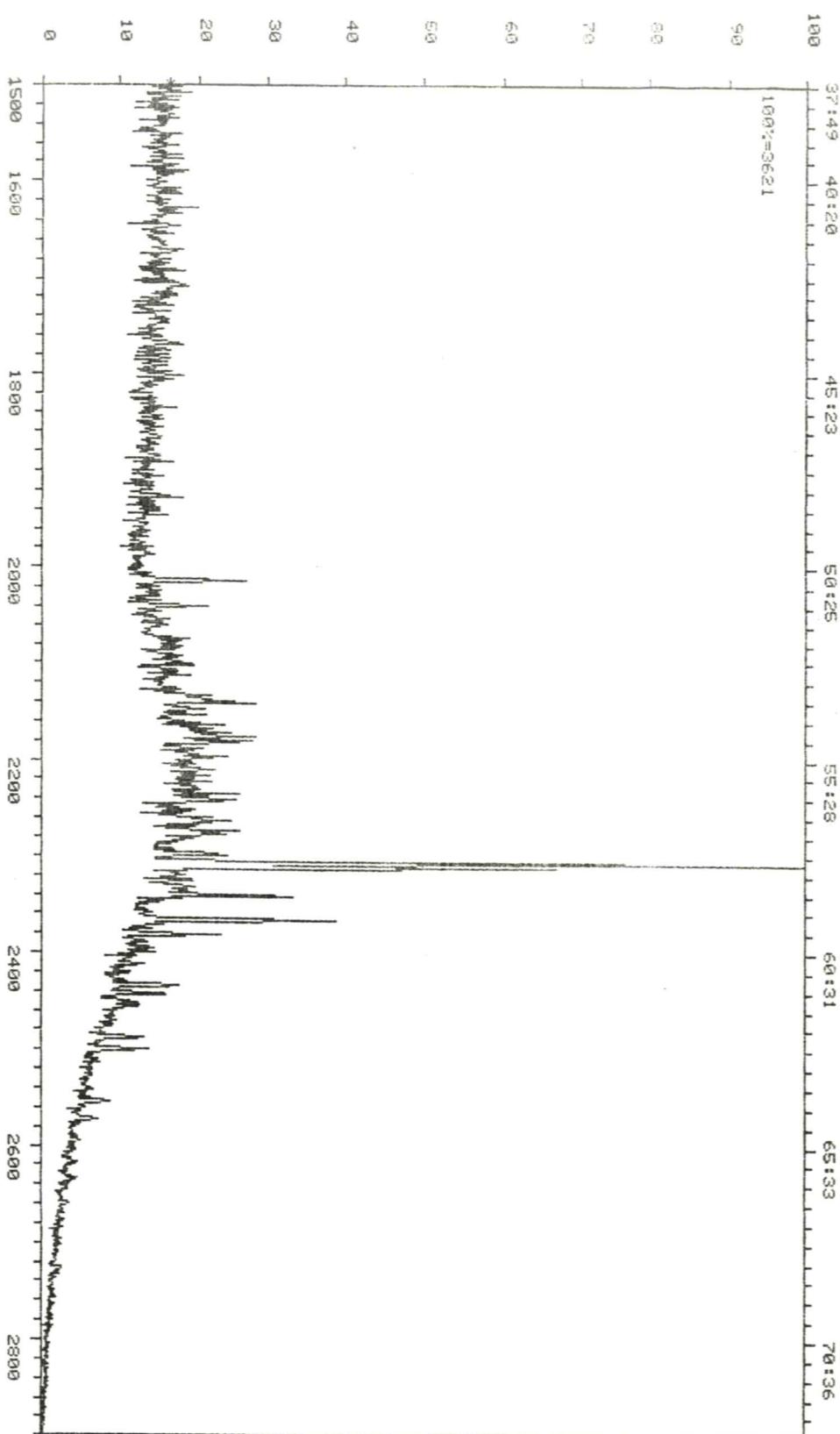
\* 191



DS-55 CROSS SCAN REPORT, RUN: 204300002

WHITEROSE J-49 DS#7

\* 177



DS-55 CROSS SCAN REPORT, RUN: 4540001

MARR M-54 DST#2

\* 259

43:01 45:53 48:45 51:37 54:29 57:21 60:13 63:05 65:57 68:49

100%:=7169

90

80

70

60

50

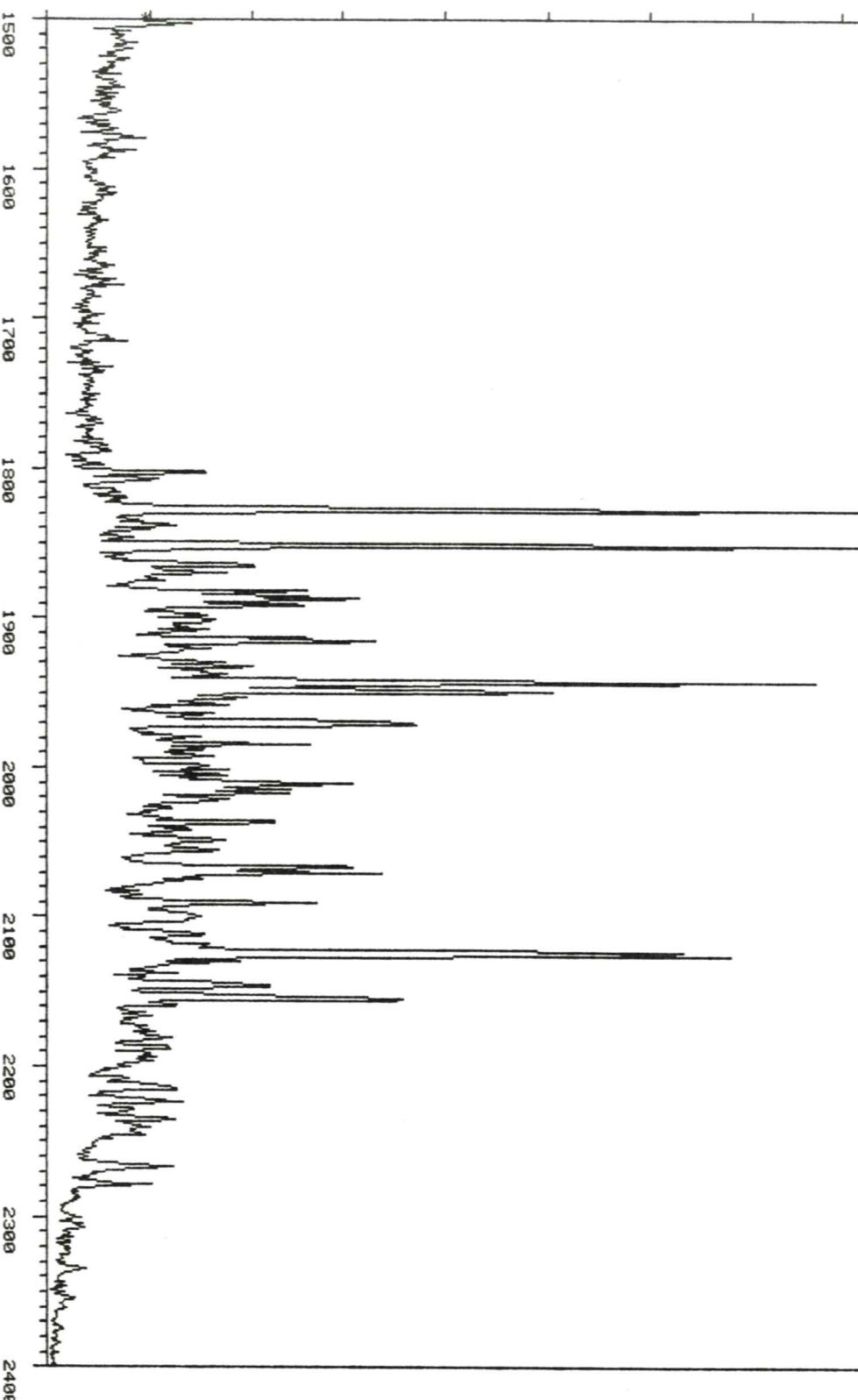
40

30

20

10

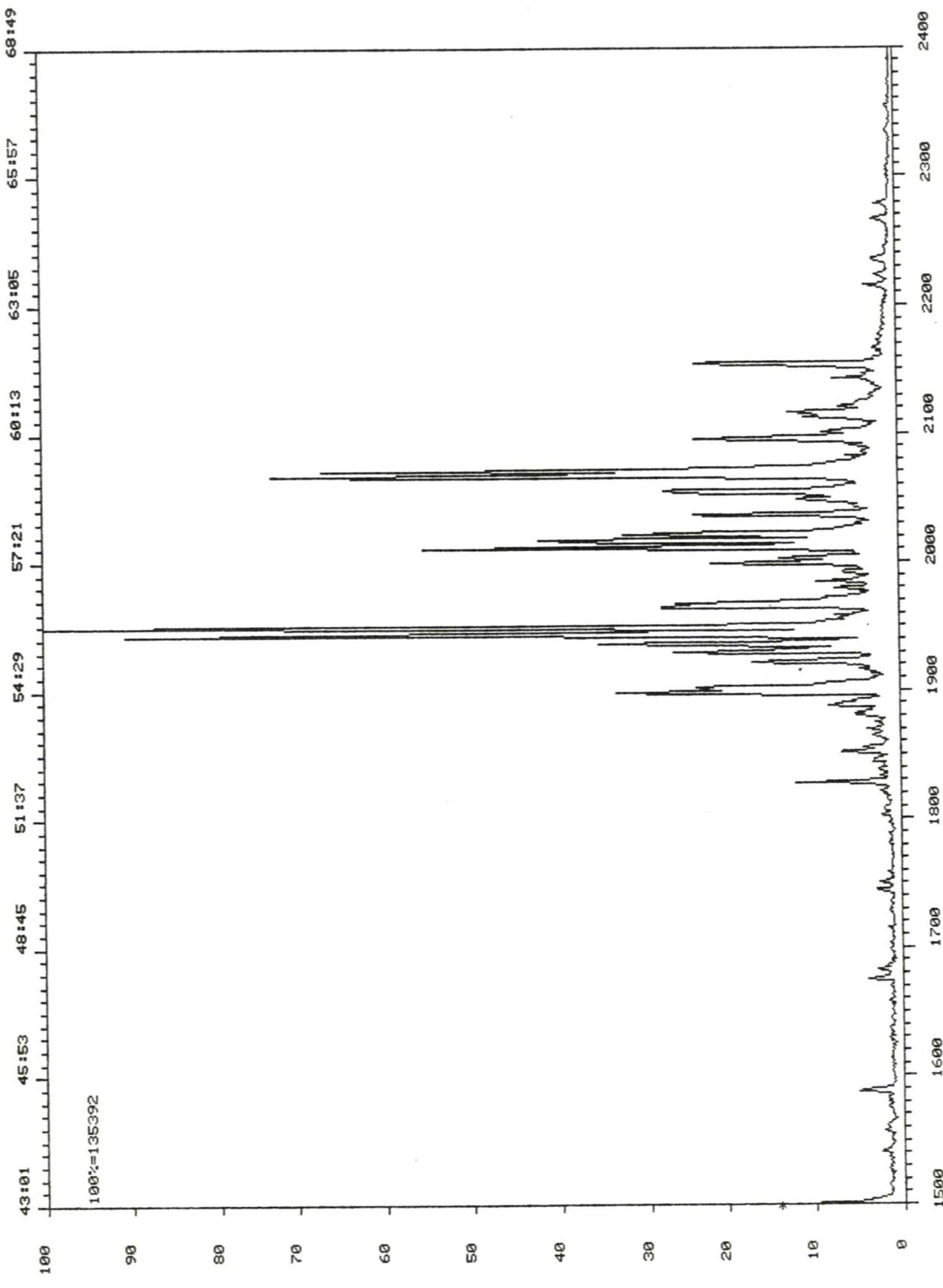
0



DS-55 CROSS SCAN REPORT, RUN: 4540001

MARA M-54 DST#2

\* 218



) DS-55 CROSS SCAN REPORT, RUN: 4540001

) MARRA M-54 DST#2

) \* 217

)

) 43:01 45:53 48:45 51:37 54:29 57:21 60:13 63:05 65:57 68:49

) 100%:110784

) 90

) 80

) 70

) 60

) 50

) 40

) 30

) 20

) 10

) 1a

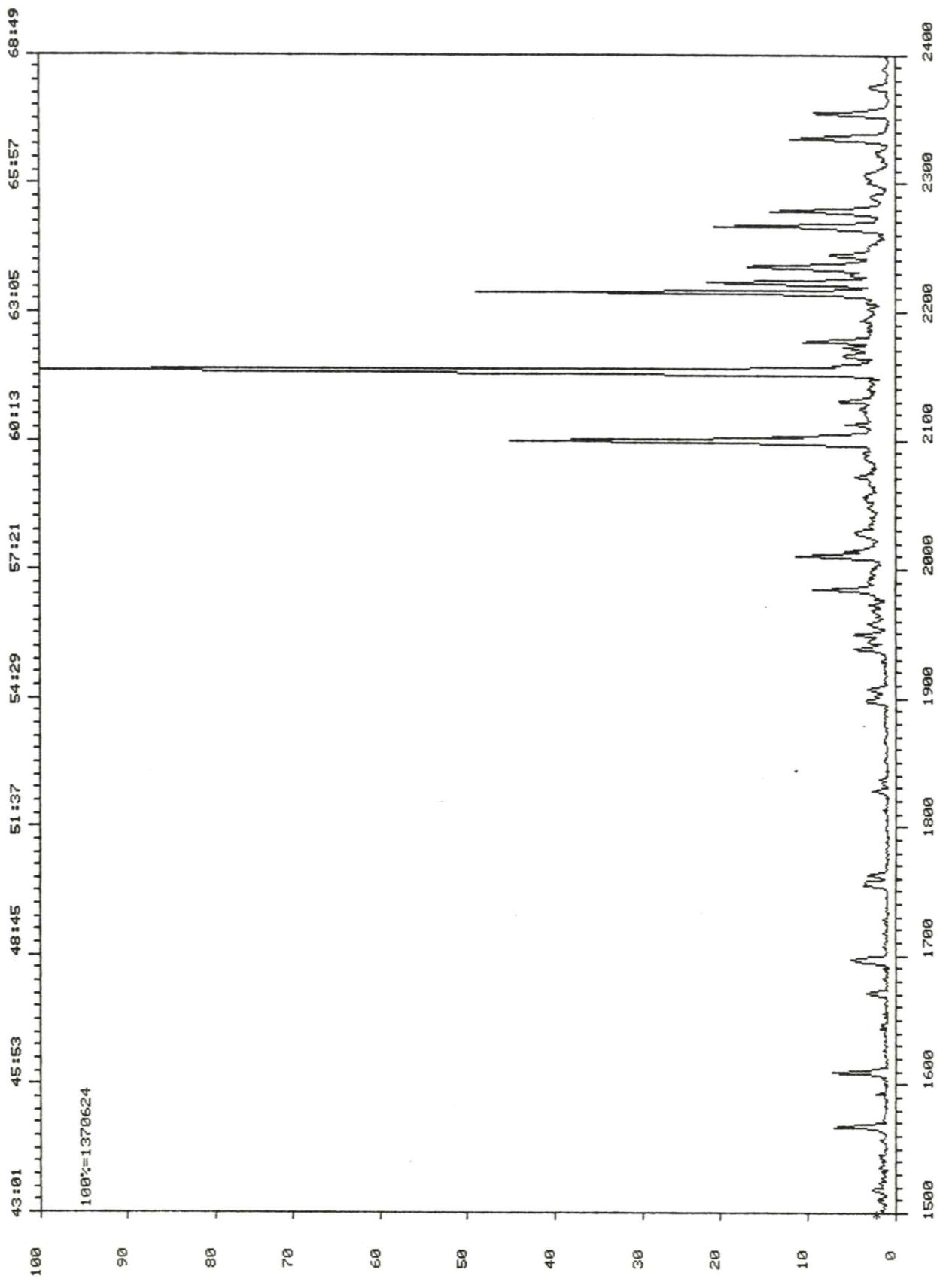
) 0



DS-55 CROSS SCAN REPORT, RUN: 4540001

MARA M-54 DST#2

\* 191



DS-55 CROSS SCAN REPORT, RUN: 4540001

MARR M-54 DST#2

\* 177

43:01      45:53      48:45      51:37      54:29      57:21      60:13      63:05      65:57      68:49

100%:=284992

90

80

70

60

50

40  
30

20

10

1500      1600      1700      1800      1900      2000      2100      2200      2300      2400

DS-55 CROSS SCAN REPORT, RUN: 204840004

N.BEN NEVIS P-93 3031M

\* 259

1904=366

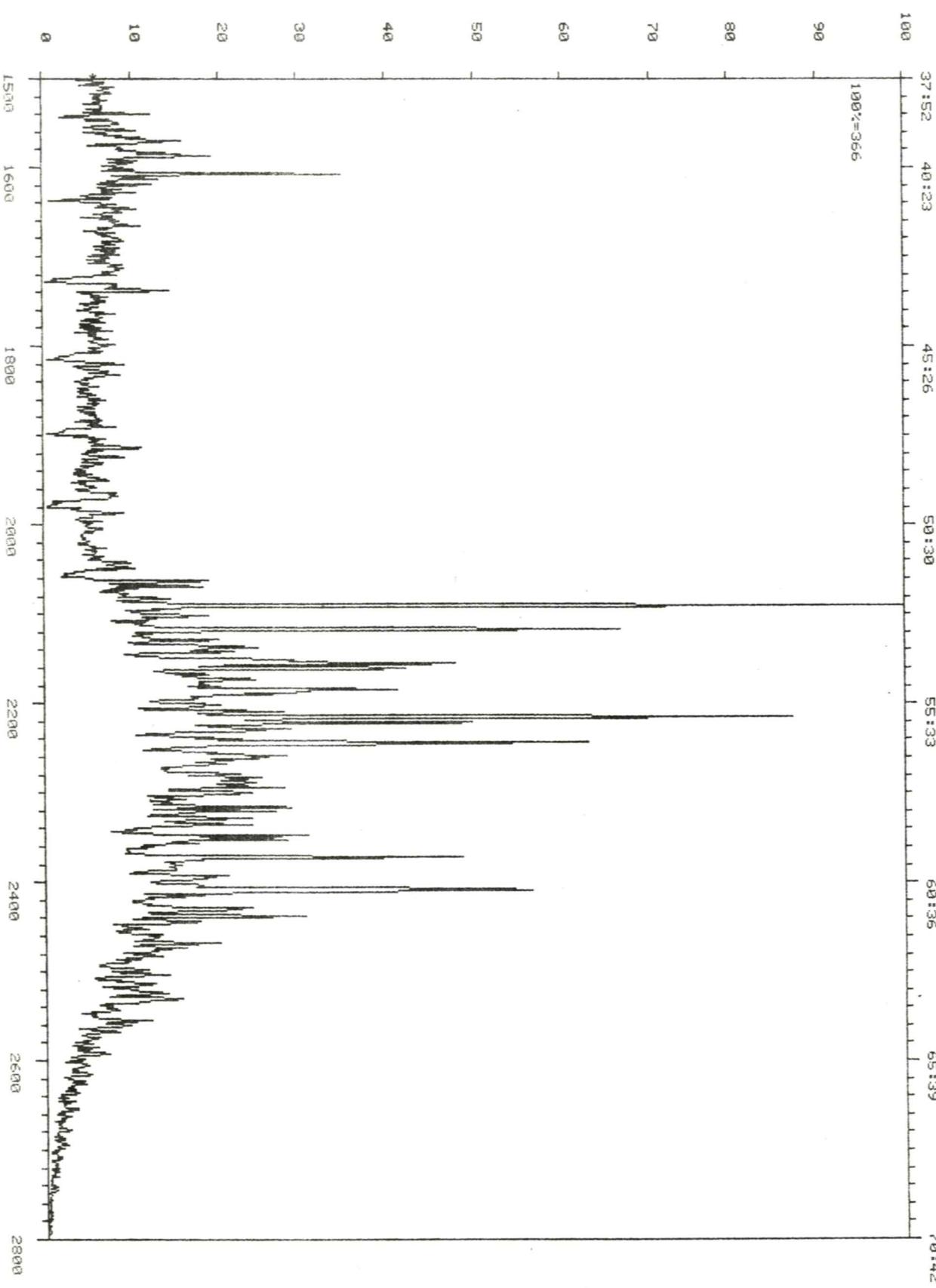
37:52 40:23 45:26 50:30 55:33 60:36 65:39 70:42

55:33

60:36

65:39

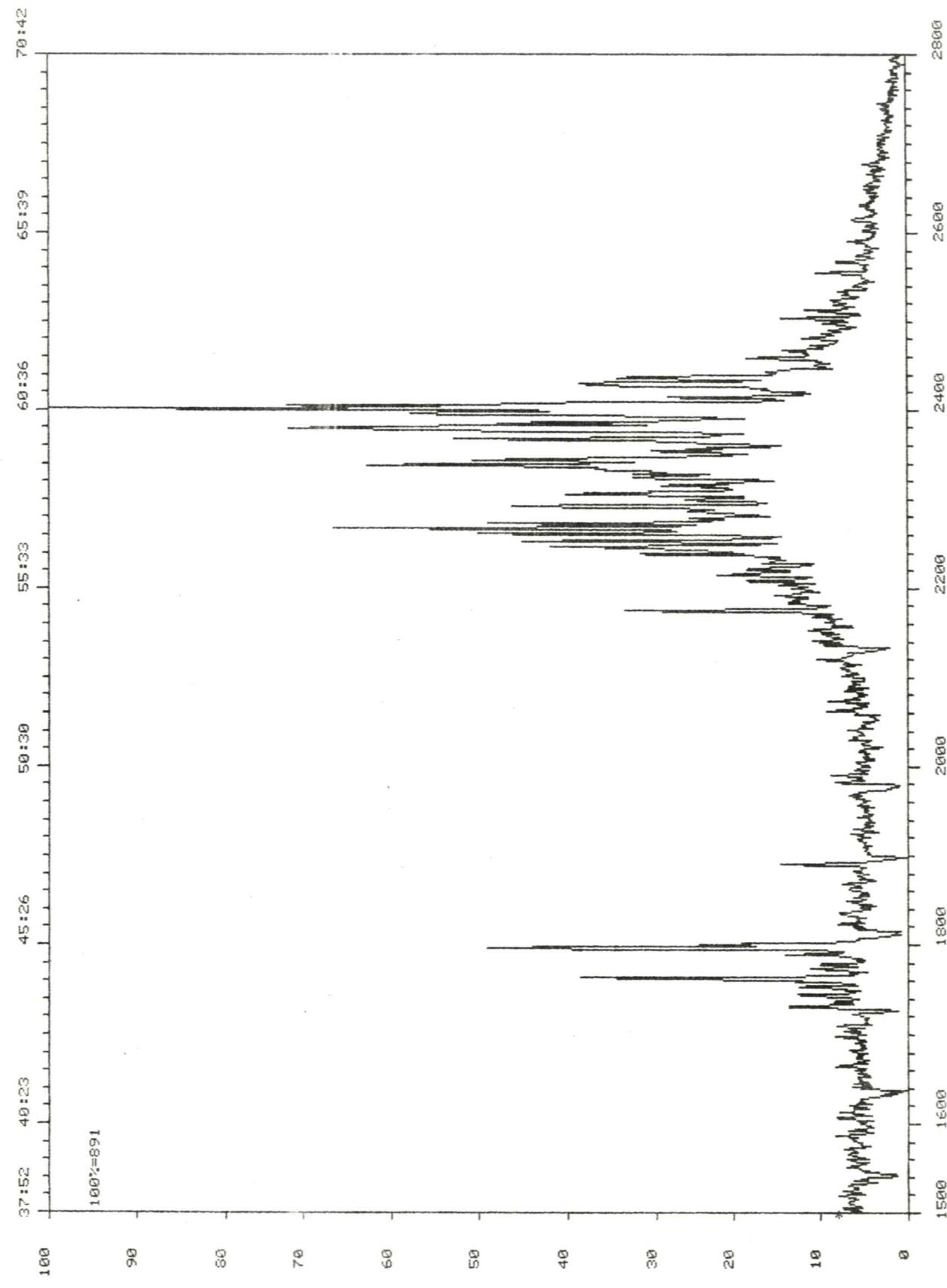
70:42



DS-55 CROSS SCAN REPORT, RUN: 204840004

H.BEN NEVIS P-93 3081M

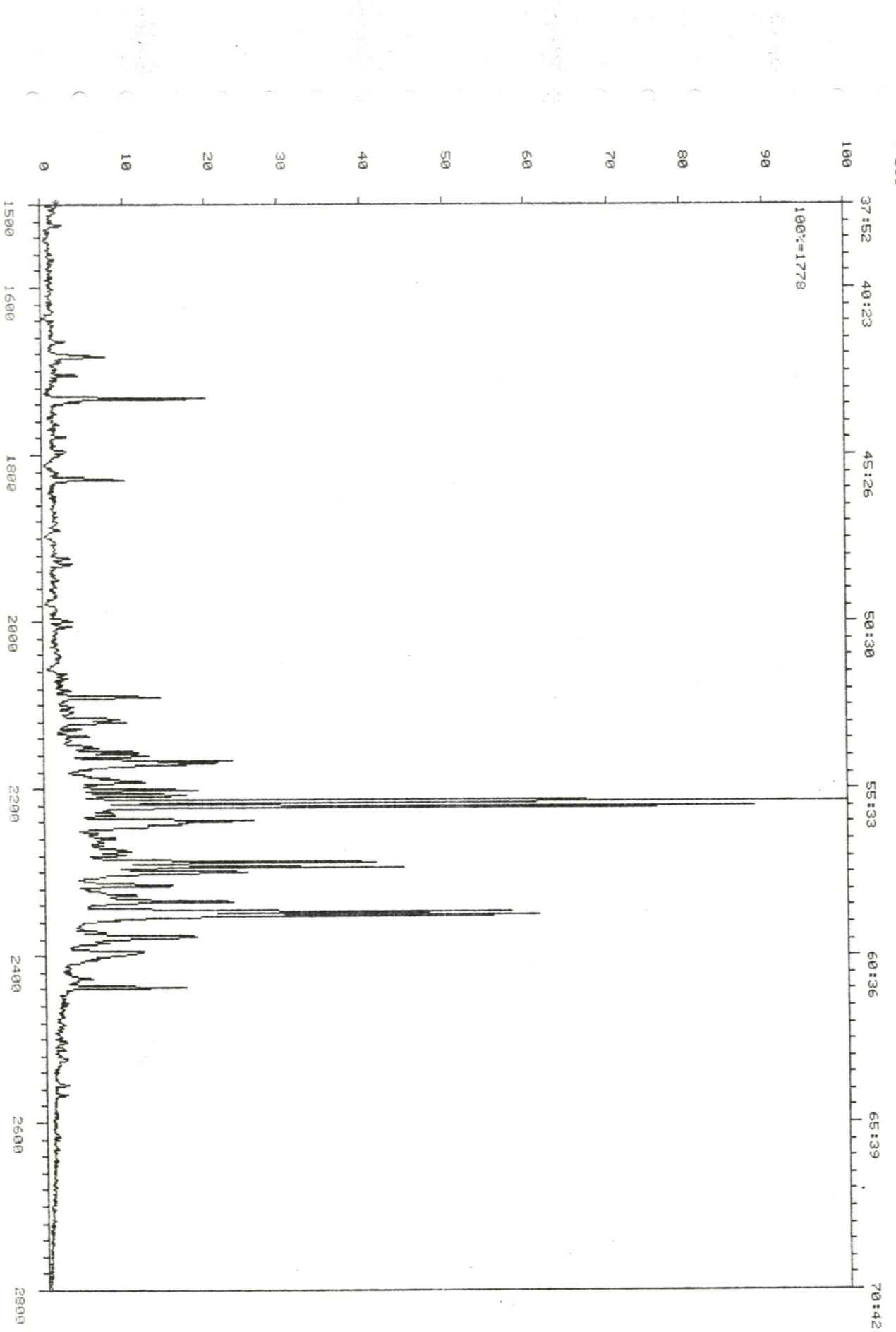
\* 231



DS-55 CROSS SCAN REPORT, RUN: 204840004

N.BEN HEVIS P-93 3081M

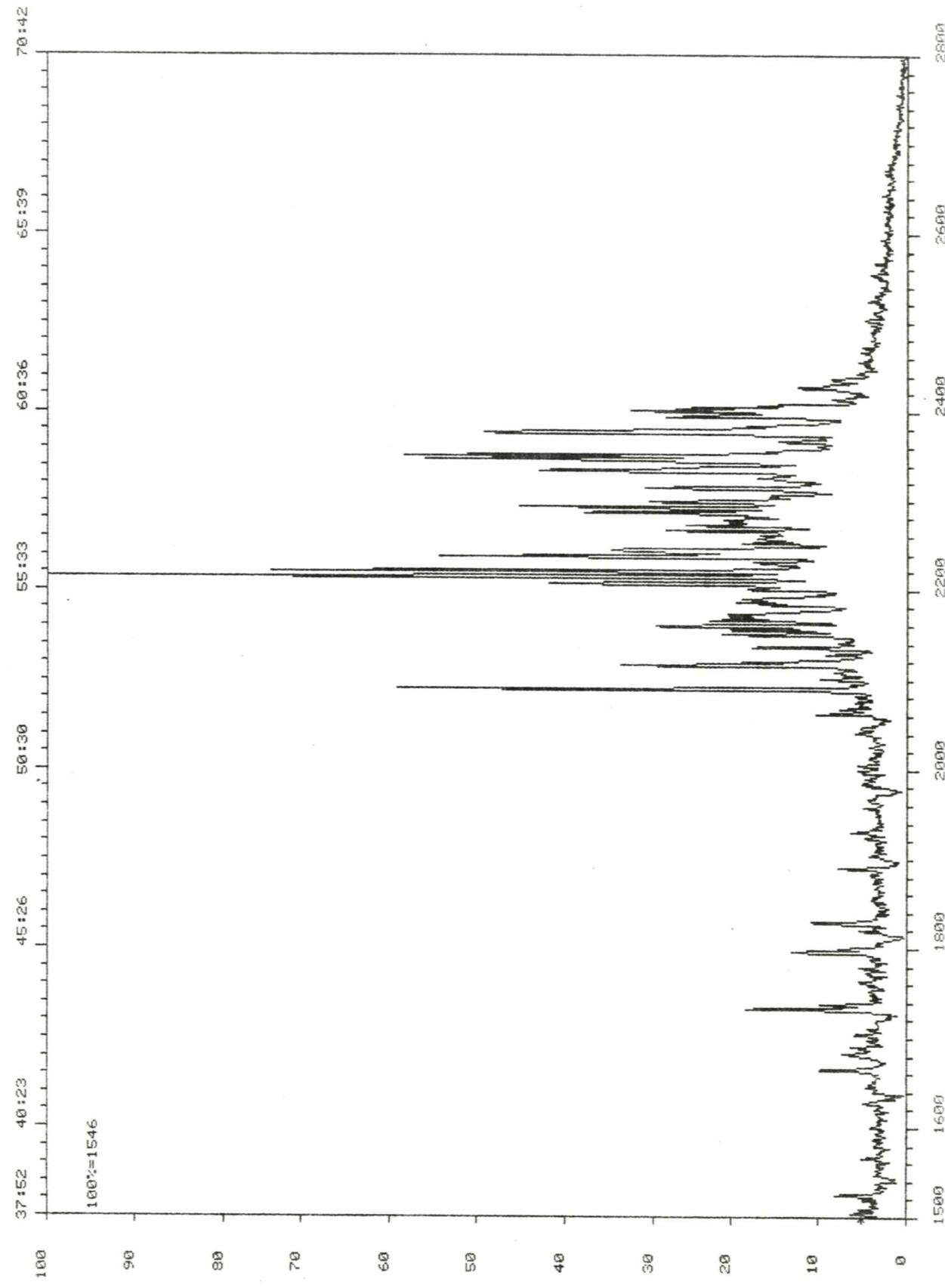
\* 218



DS-55 CROSS SCAN REPORT, RUN: 204840004

N.BEN HEVIS P-93 3081M

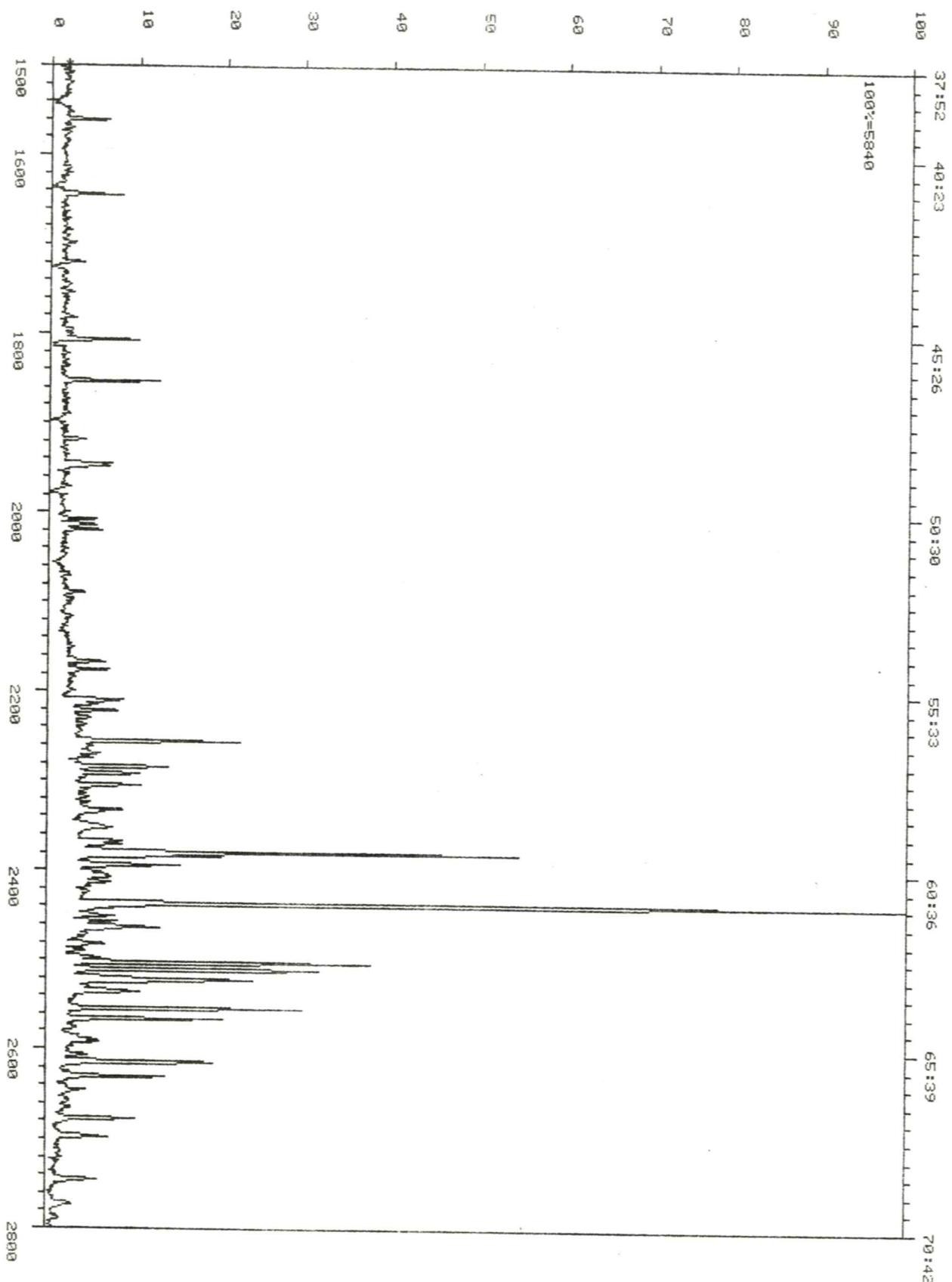
\* 217



DS-55 CROSS SCAN REPORT, RUN: 204840004

N.BEN NEVIS P-93 3031M

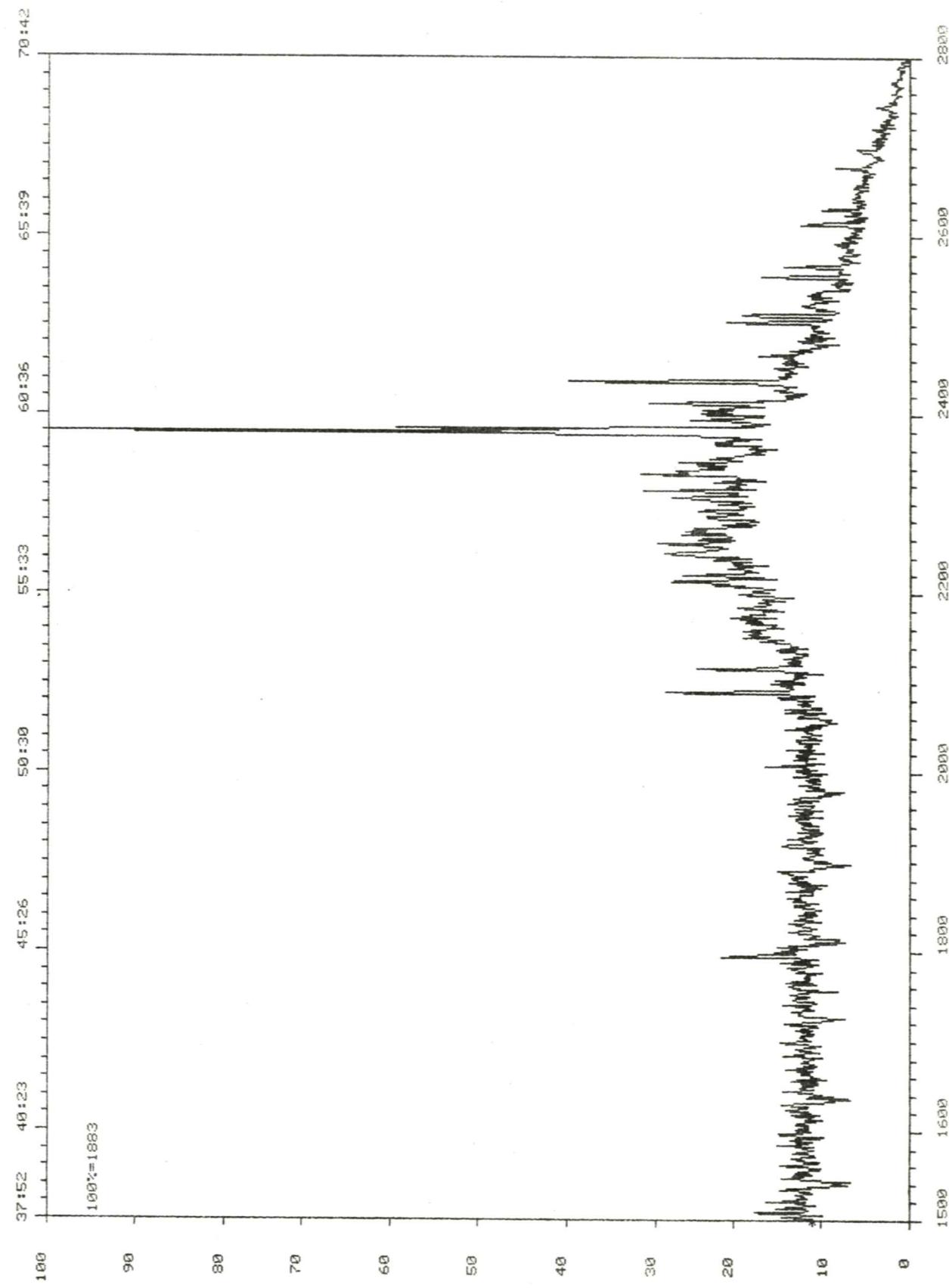
\* 191



DS-55 CROSS SCHR REPORT, RUN: 204840004

N.BEN NEVIS P-93 3001M

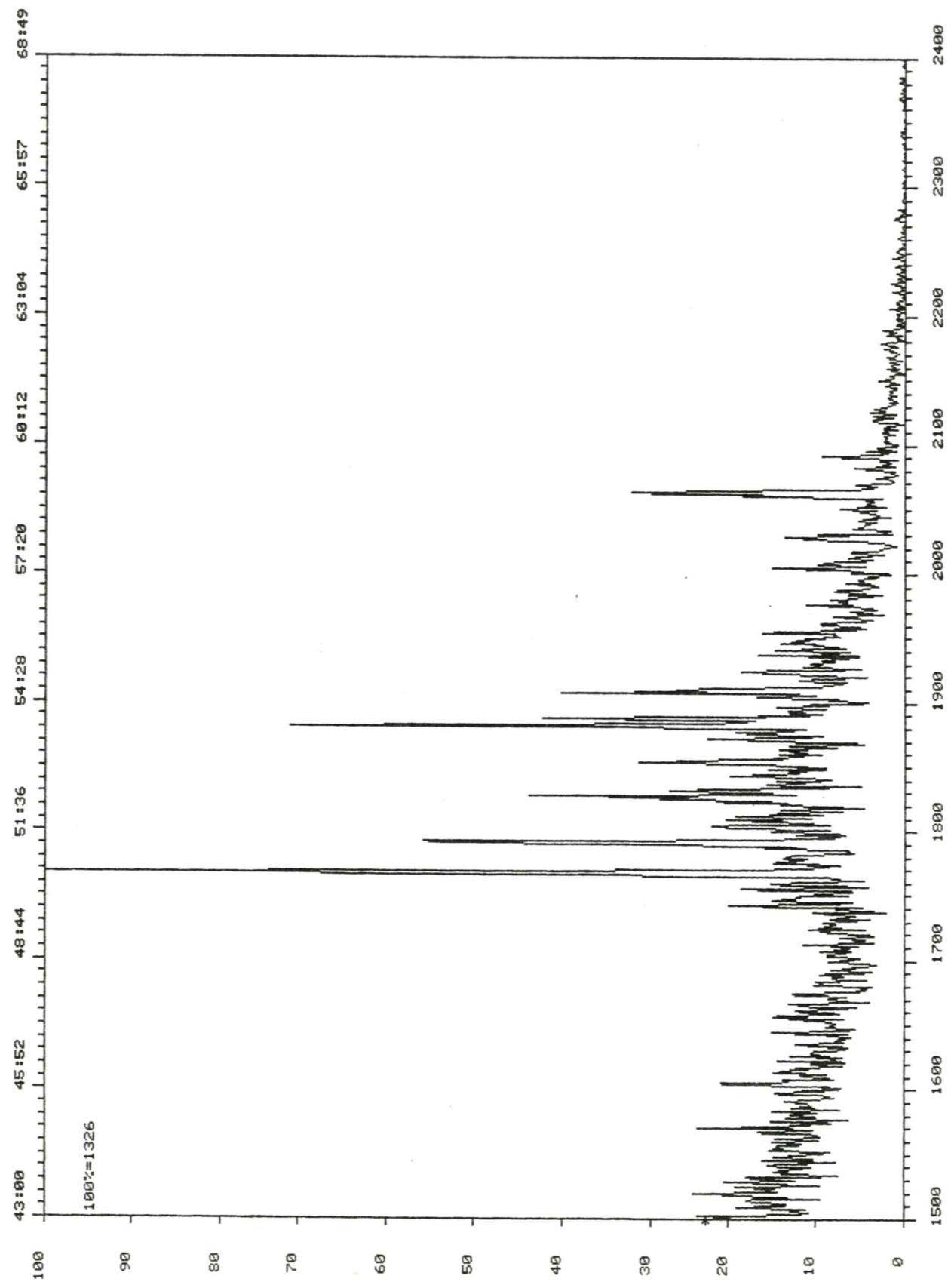
\* 177



DS-55 CROSS SCAN REPORT, RUN: 4340001

S MARA C-13 DST#2

\* 259

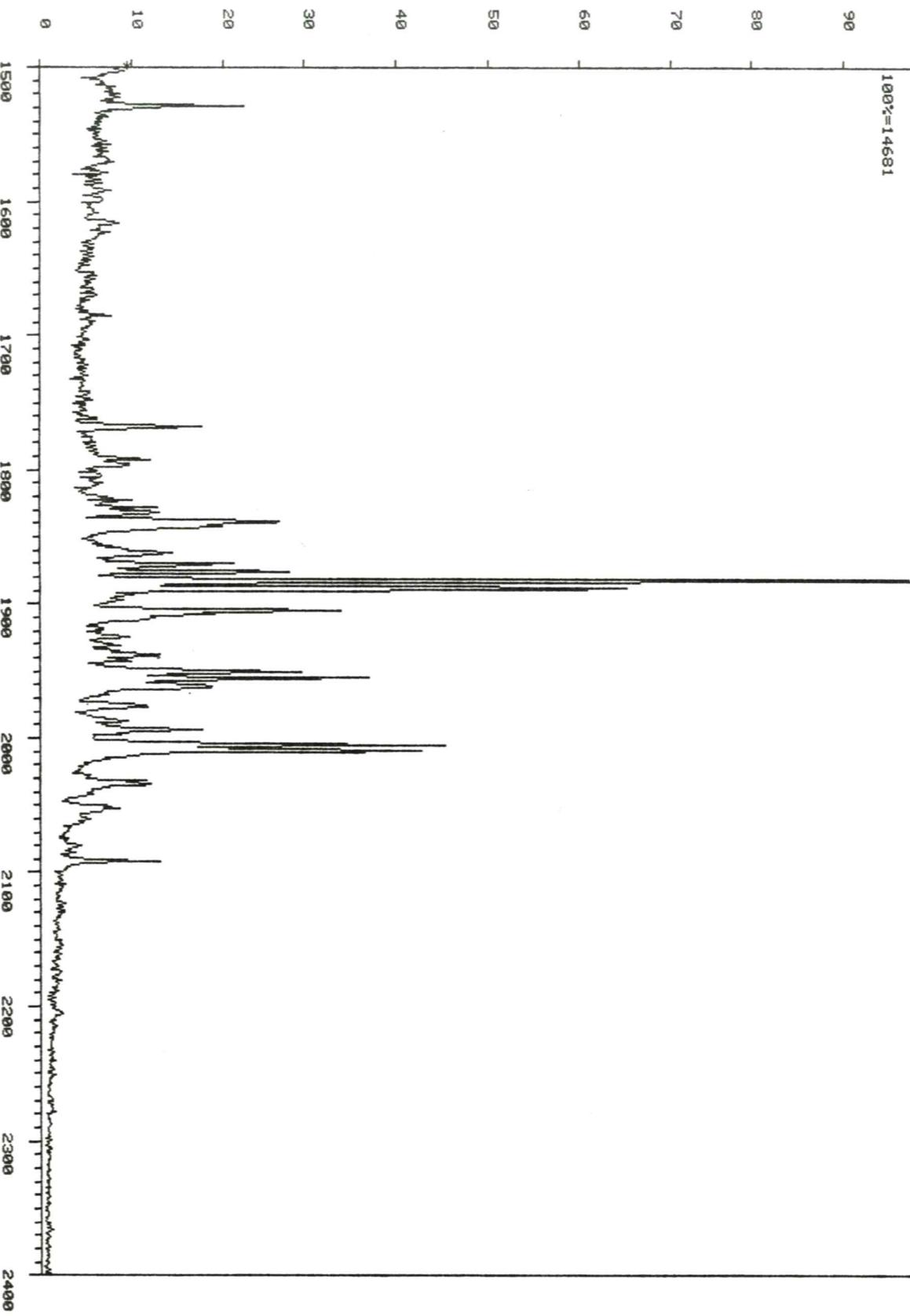


DS-55 CROSS SCAN REPORT, RUN: 433400001

S MARA C-13 DST#2

\* 218

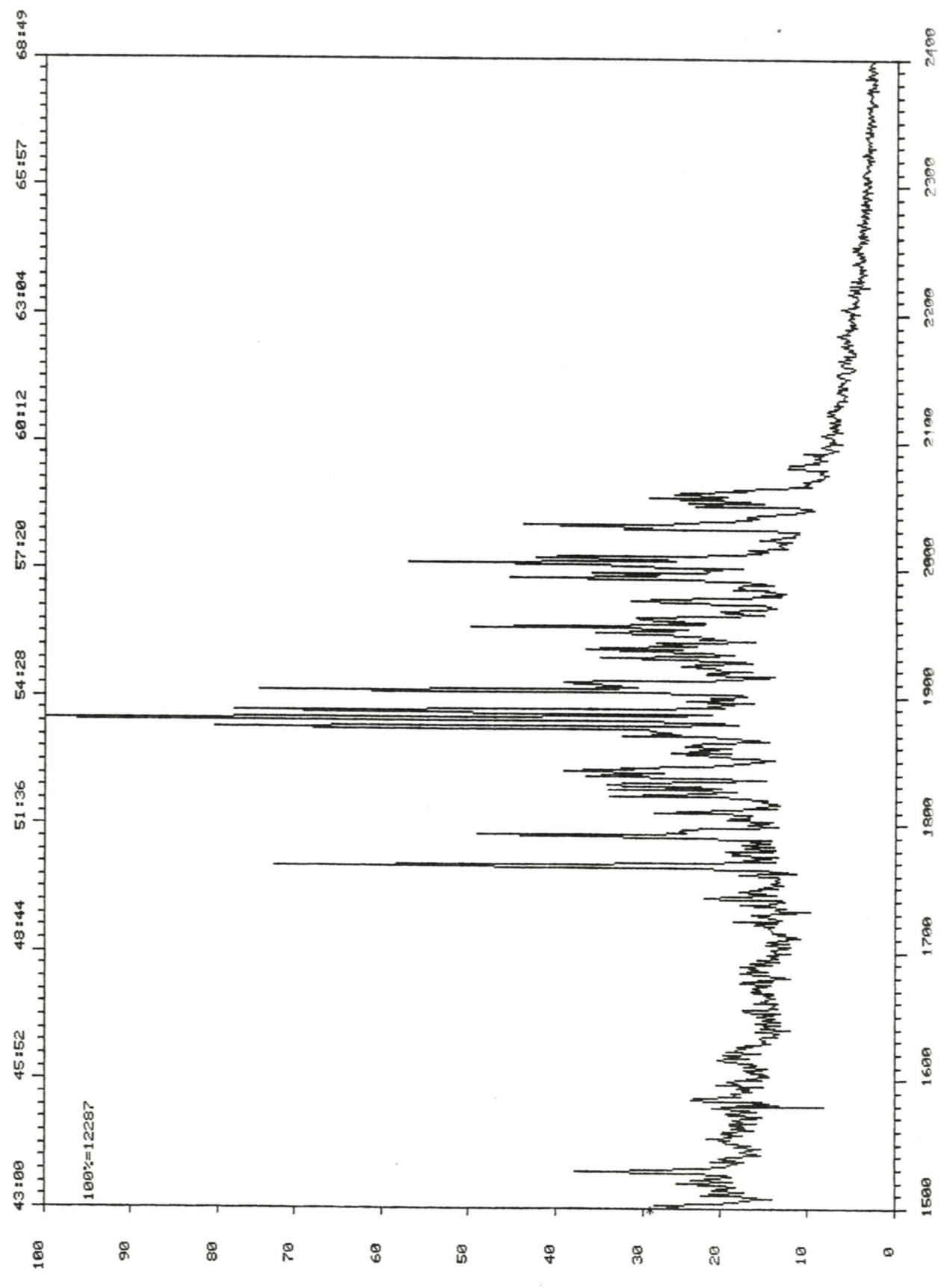
43:00 45:52 48:44 51:36 54:28 57:20 60:12 63:04 65:57 68:49  
100%:14681



) DS-55 CROSS SCAN REPORT , RUN# : 4340001

) S MARA C-13 DST#2

) \* 217



DS-55 CROSS SCAN REPORT, RUN: 4340001

S MARR C-13 DST#2

\* 191

43:00      45:52      48:44      51:36      54:28      57:20      60:12      63:04      65:57      68:49

100%:74080

90

80

70

60

50

40

30

20

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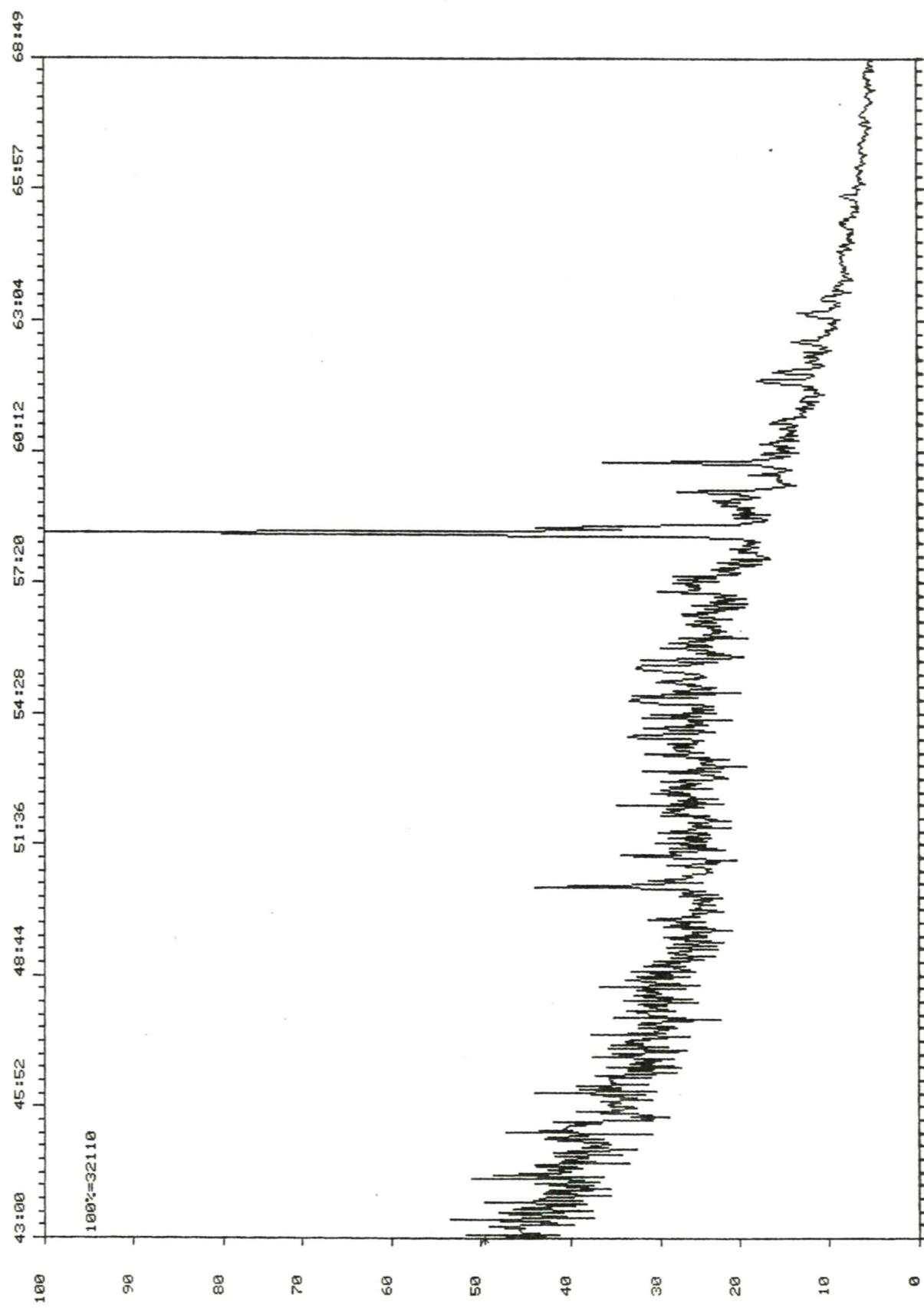
\*

1500    1600    1700    1800    1900    2000    2100    2200    2300    2400

DS-55 CROSS SCAN REPORT, RUN: 4340001

S MARA C-13 DST#2

\* 177

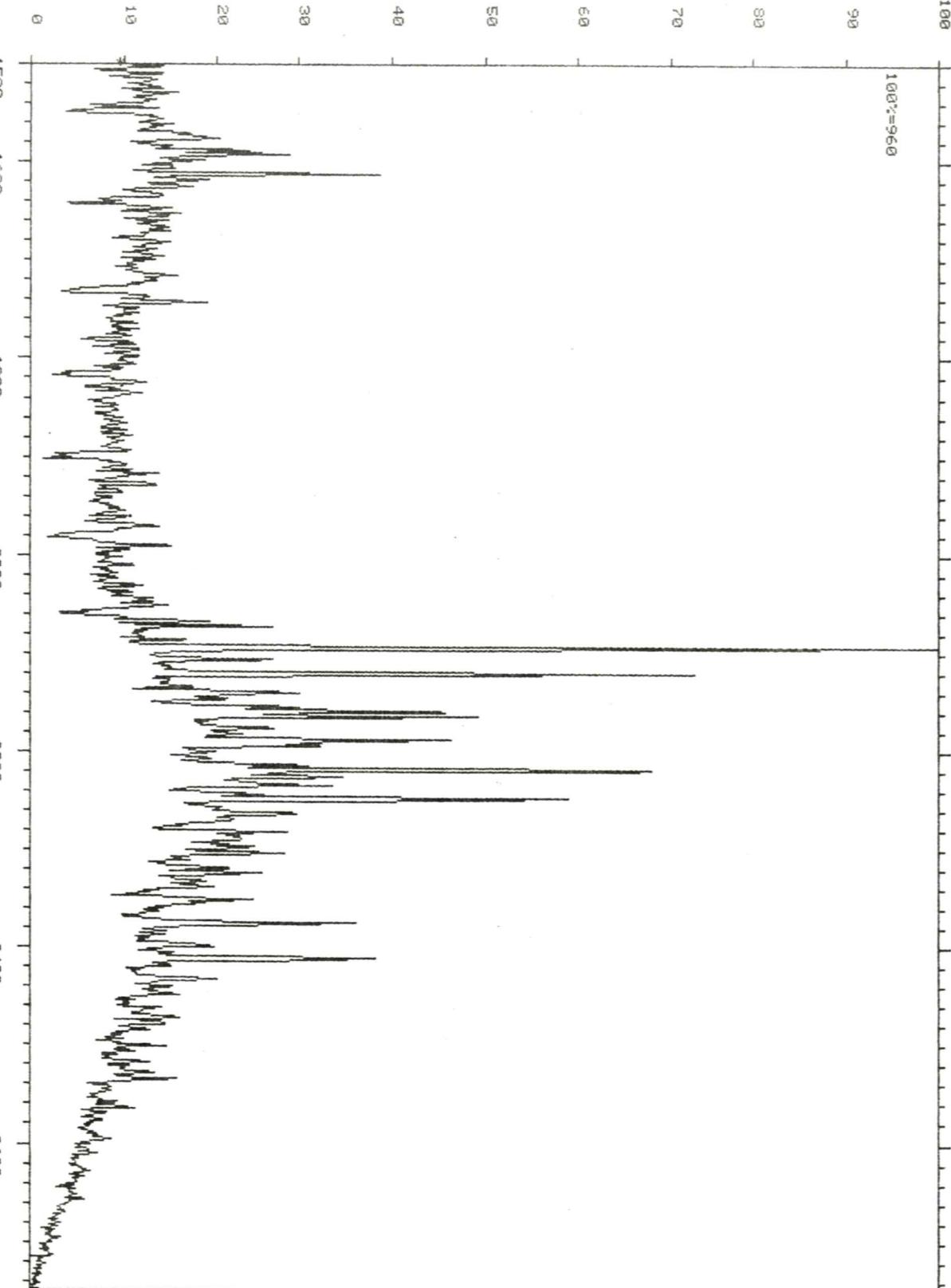


DS-55 CROSS SCAN REPORT, RUN: 20226001

S.TEMPEST G-33 RFT 4043M

\* 259

37:50 40:22 45:25 50:28 55:31 60:34 65:37  
100%:960



DS-55 CROSS SCAN REPORT, RUN: 202260001

S.TEMPEST G-33 RFT 4043M

\* 231

37:50 40:22

45:25

100% = 1005

100 90 80 70 60 50 40 30 20 10 0

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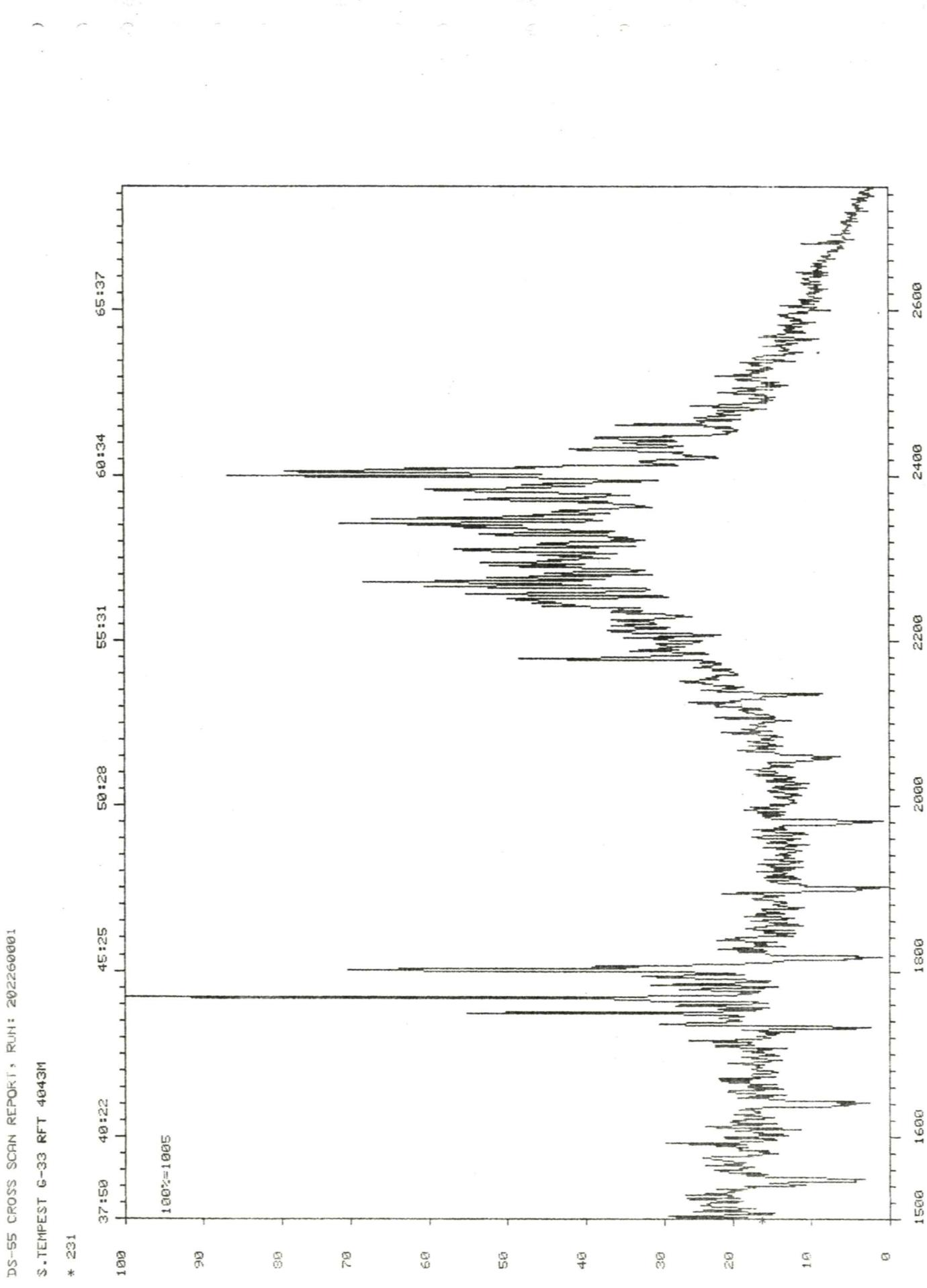
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DS-55 CROSS SCAN REPORT, RUN: 20220501

S.TEMPEST G-33 RFT 4043N  
\* 218

37:50 40:22 45:25 50:28 55:31 60:34 65:37

100

100% = 1386

90

80

70

60

50

40

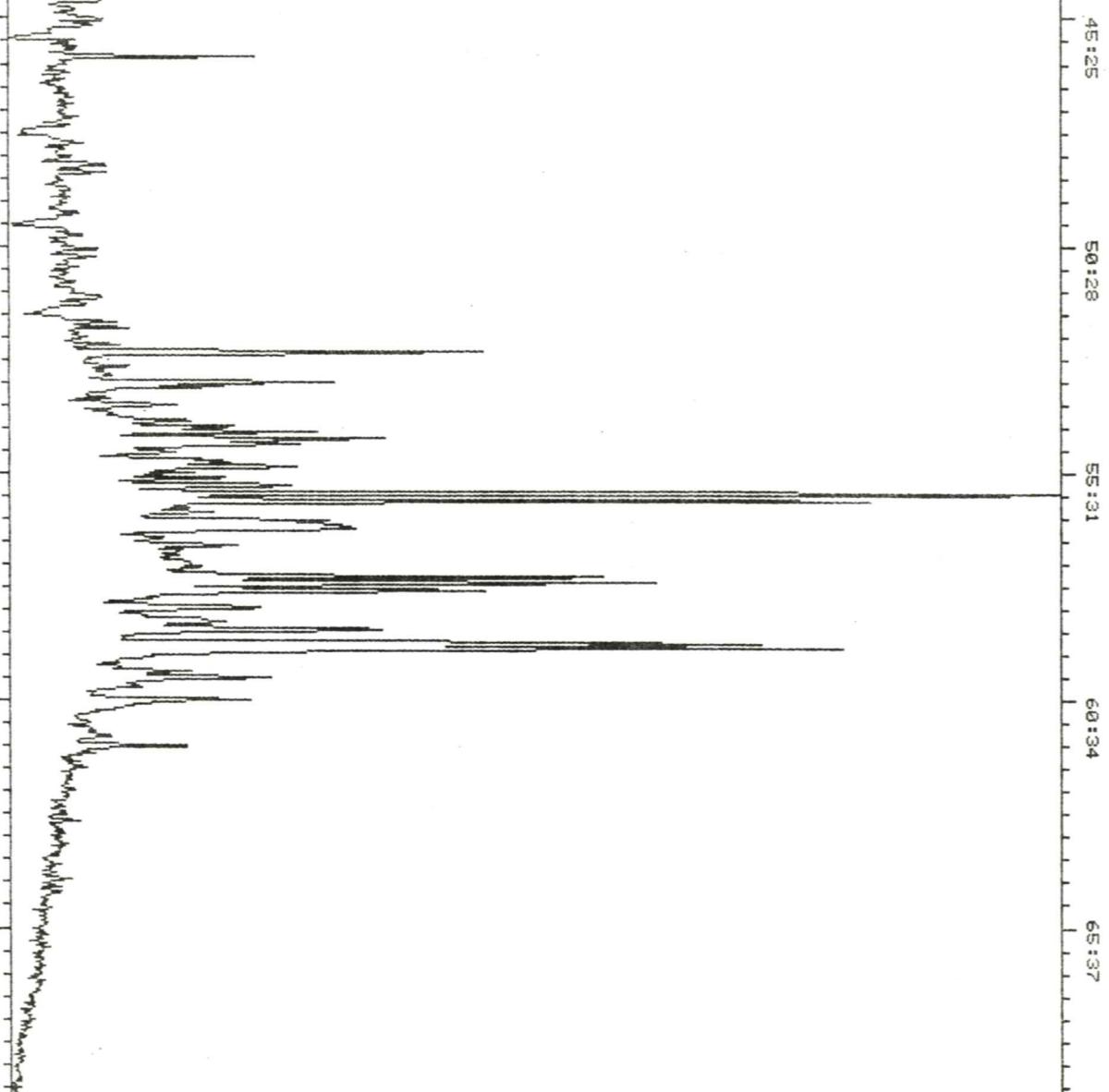
30

20

10

0

1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500



DS-55 CROSS SGN REPORT, RUN: 202260001

S.TEMPEST G-33 RFT 4043M

\* 217

37:50 40:22 45:25 50:28 55:31 60:34 65:37

100% = 1983

90

80

70

60

50

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30

20

10

0

1500 1600 1800 2000 2200 2400 2600

1983

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DSSS CROSS SCAN REPORT, KUNH: 202260001

S-TEMPEST G-33 RFT 4043M

\* 191

37:50 40:22 45:25 50:28 55:31 60:34 65:37

100%≈3271

90

80

70

60

50

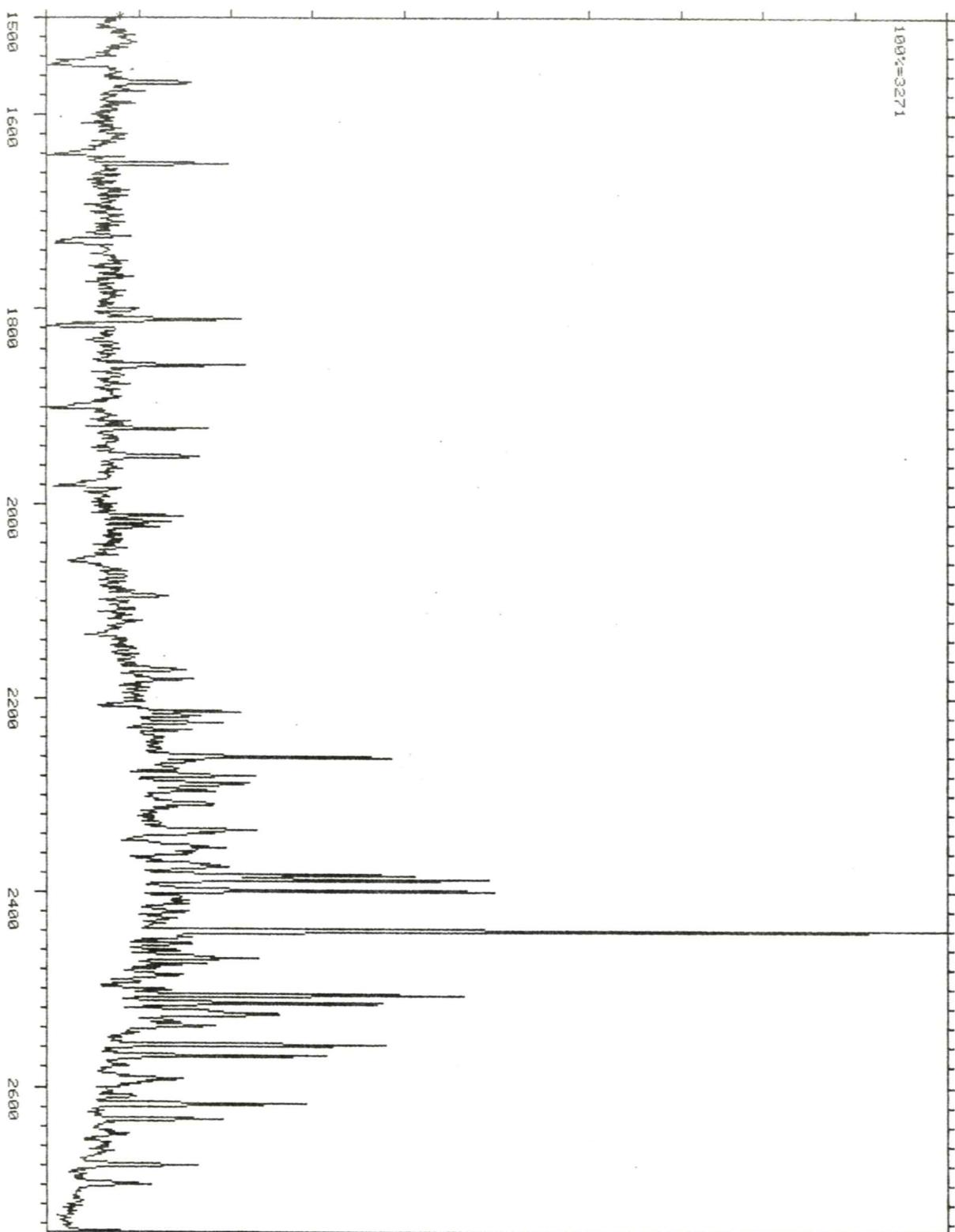
40

30

20

10

0



DS-55 CROSS SCAN REPORT, RUN: 20220001

S.TEMPEST G-33 RFT 4043N

\* 177

37:50 40:22 45:25 50:28 55:31 60:34 65:37

100% = 2341

90

80

70

60

50

40

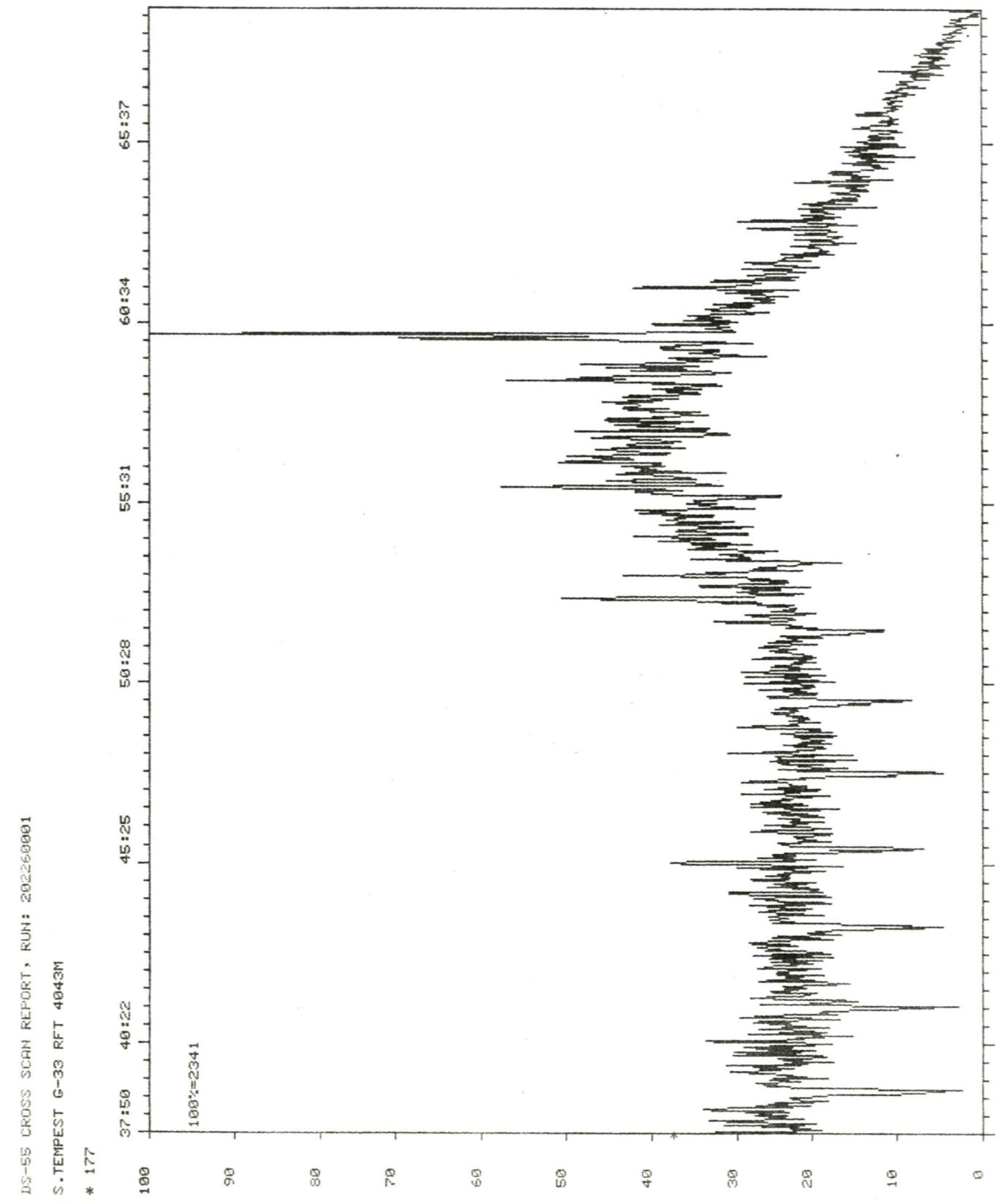
30

20

10

0

1500 1600 1800 2000 2200 2400 2600



DS-55 CROSS SCAN REPORT, RUN: 20254D001

HIBERNIA K-18DSTA

\* 259

37:52 40:23 45:26 50:29 55:32 60:35 65:38 70:42

100%:=2221

93

80

70

60

50

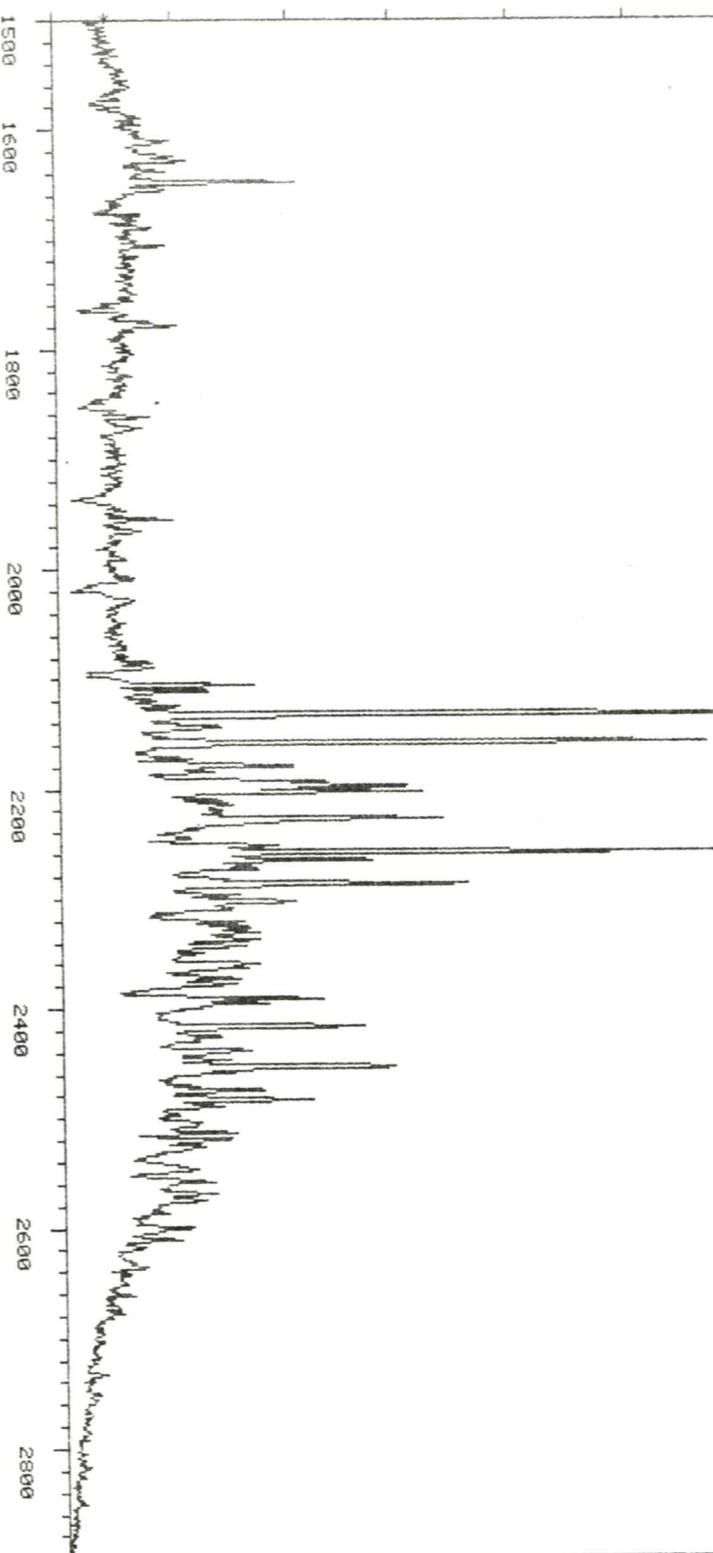
40

30

20

10

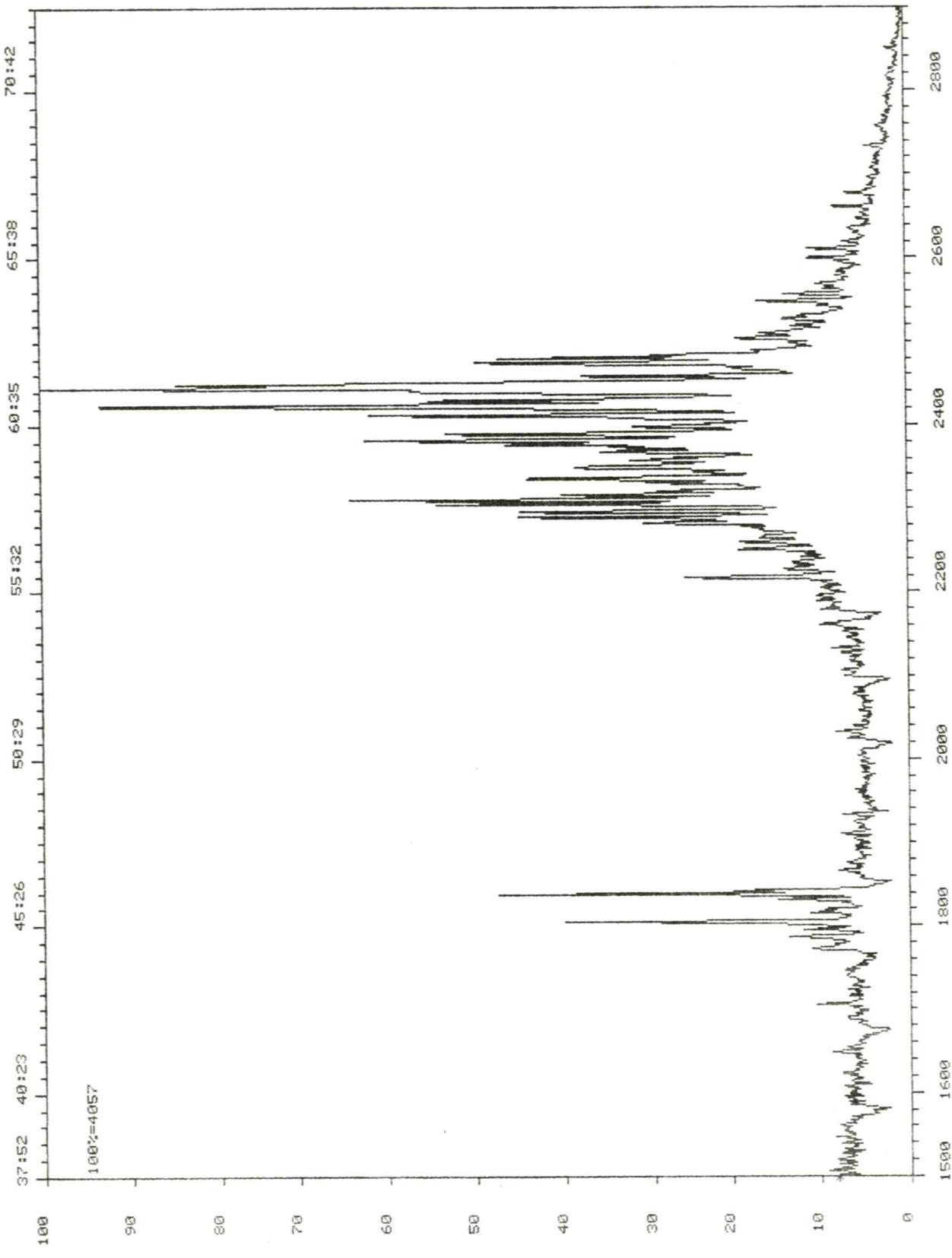
0



DS-55 CROSS SCAN REPORT, RUN: 202540001

HIBERNIA K-18UST4

\* 231



DS-55 CROSS SCAN REPORT ) RUN: 202540001

HIBERNIA K-18DSTA

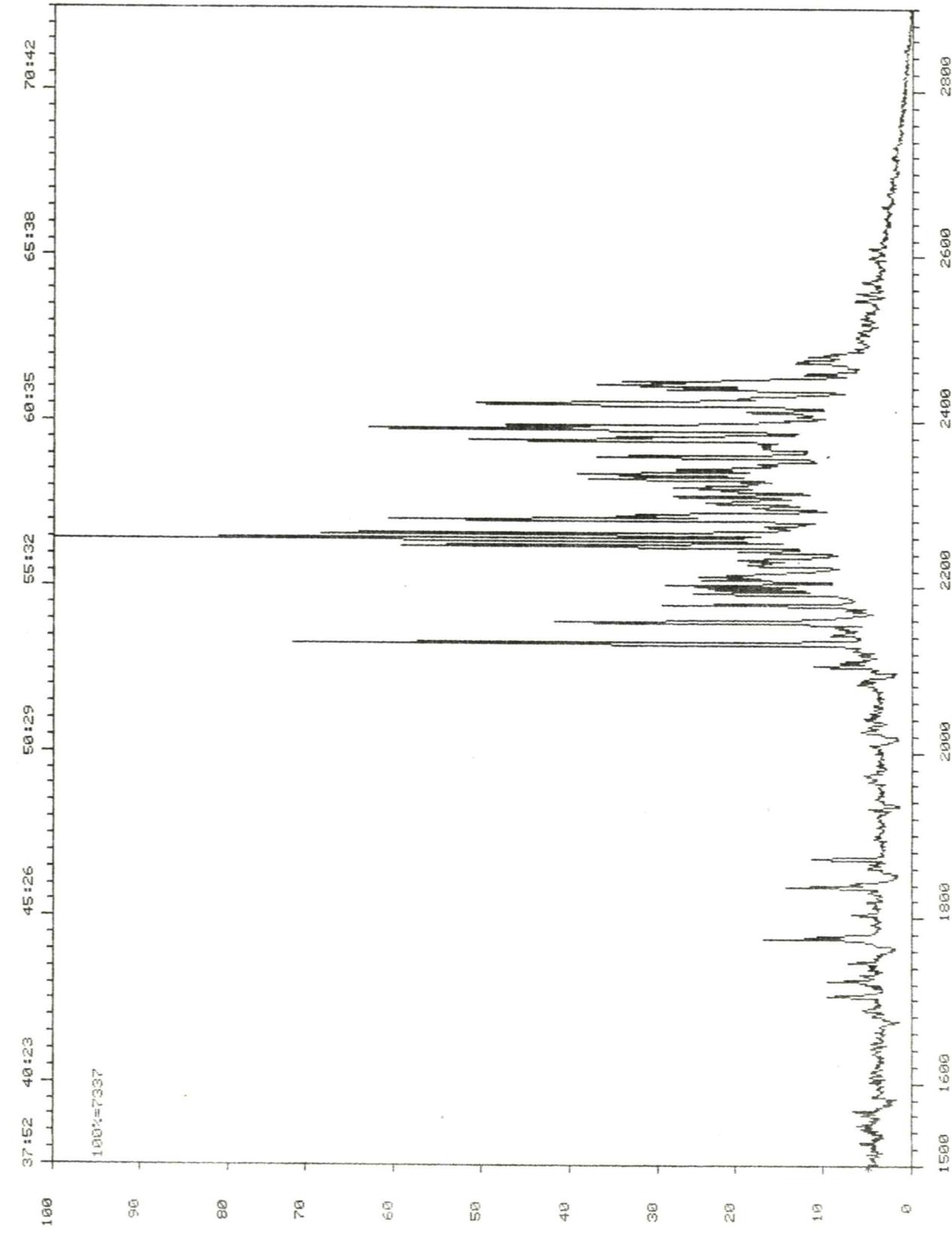
\* 218



DS-55 CROSS SCAN REPORT , RUN : 2025400001

HIBERNIA K-13DST4

\* 217



DS-55 CROSS SCAN REPORT, RUN: 202540001

HIBERNIA K-18DST4

\* 191

) 37:52 49:23 45:26 50:29 55:32 60:35 65:38 70:42  
100%

=18484

90

80

70

60

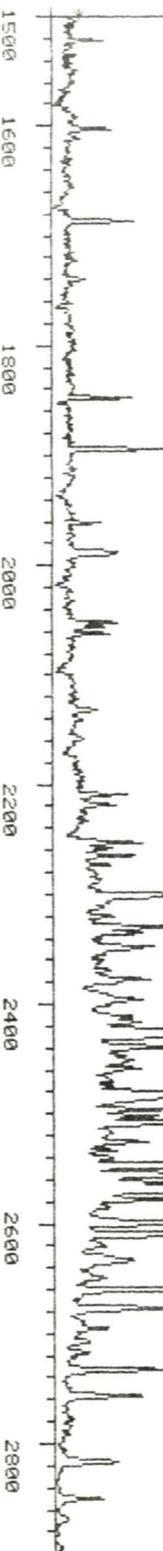
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40

30

20

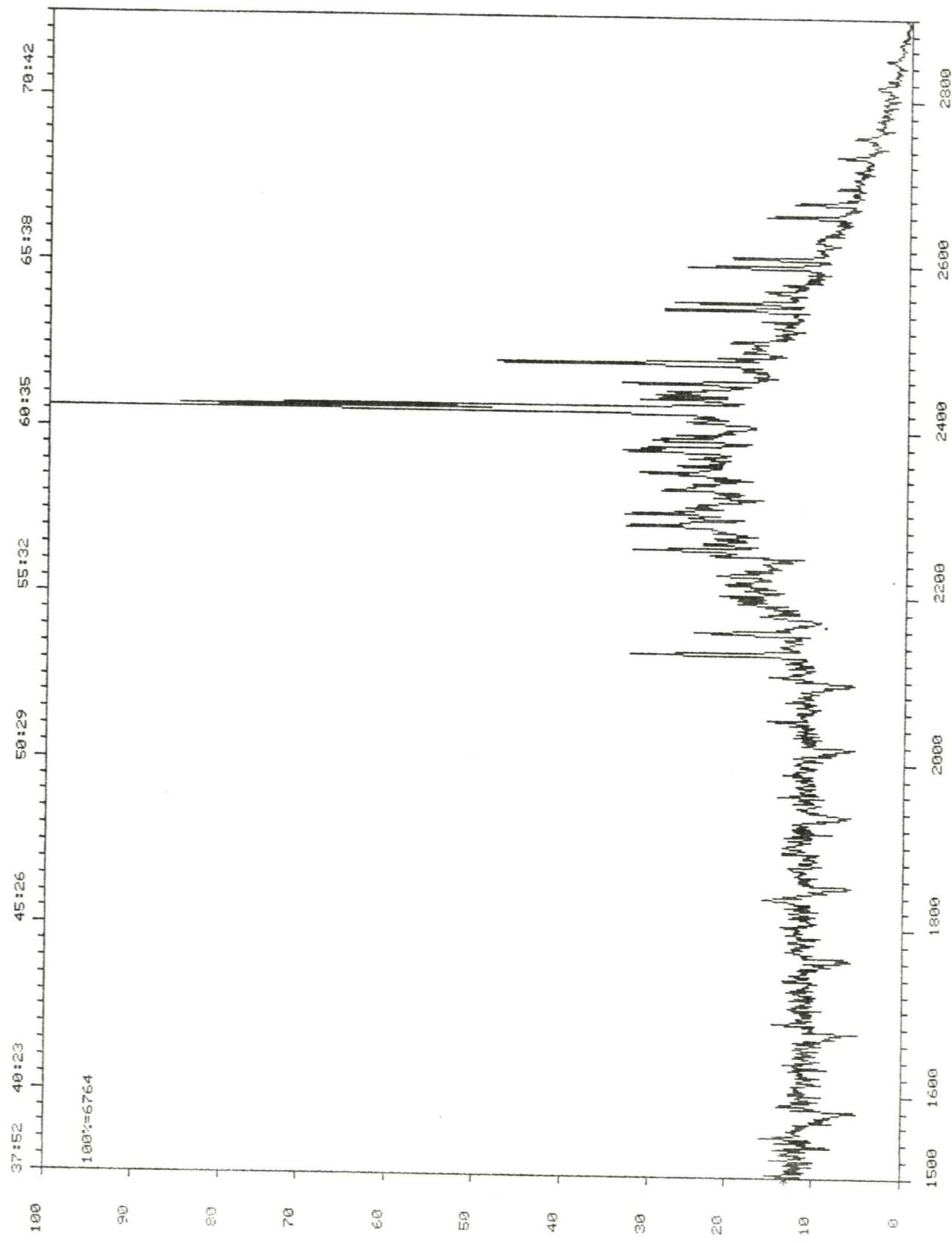
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DS-55 CROSS SCAN REPORT, RUN: 202540001

HIBERNIA K-18INST4

\* 177



DS-55 CROSS SCAN REPORT, RUN: 202650001

HIBERNIA K-18 DST 13 2285-2294

\* 259

37:51 40:22 45:25 50:28 55:31 60:34 65:37 70:40

100%:653

90

80

70

60

50

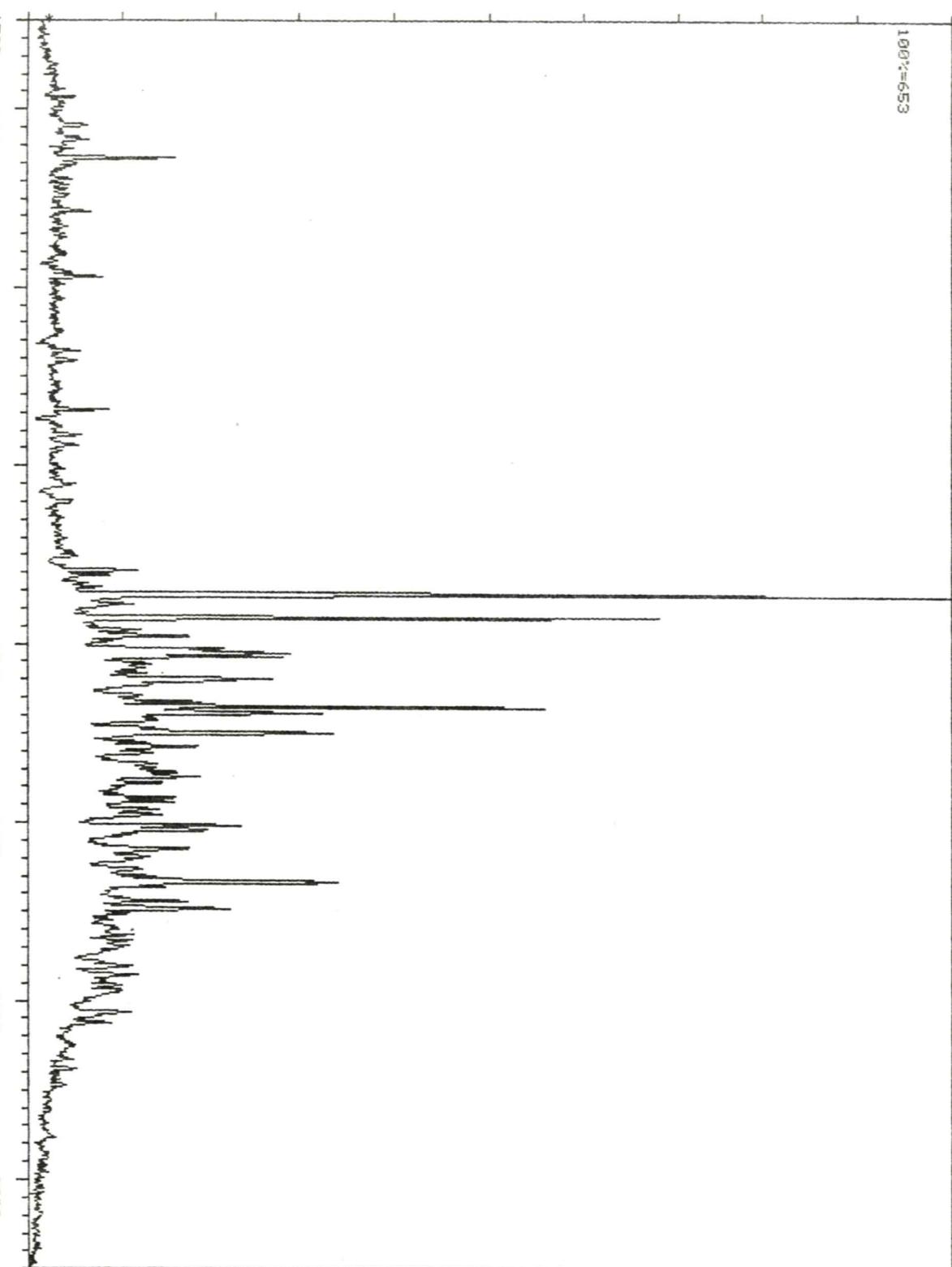
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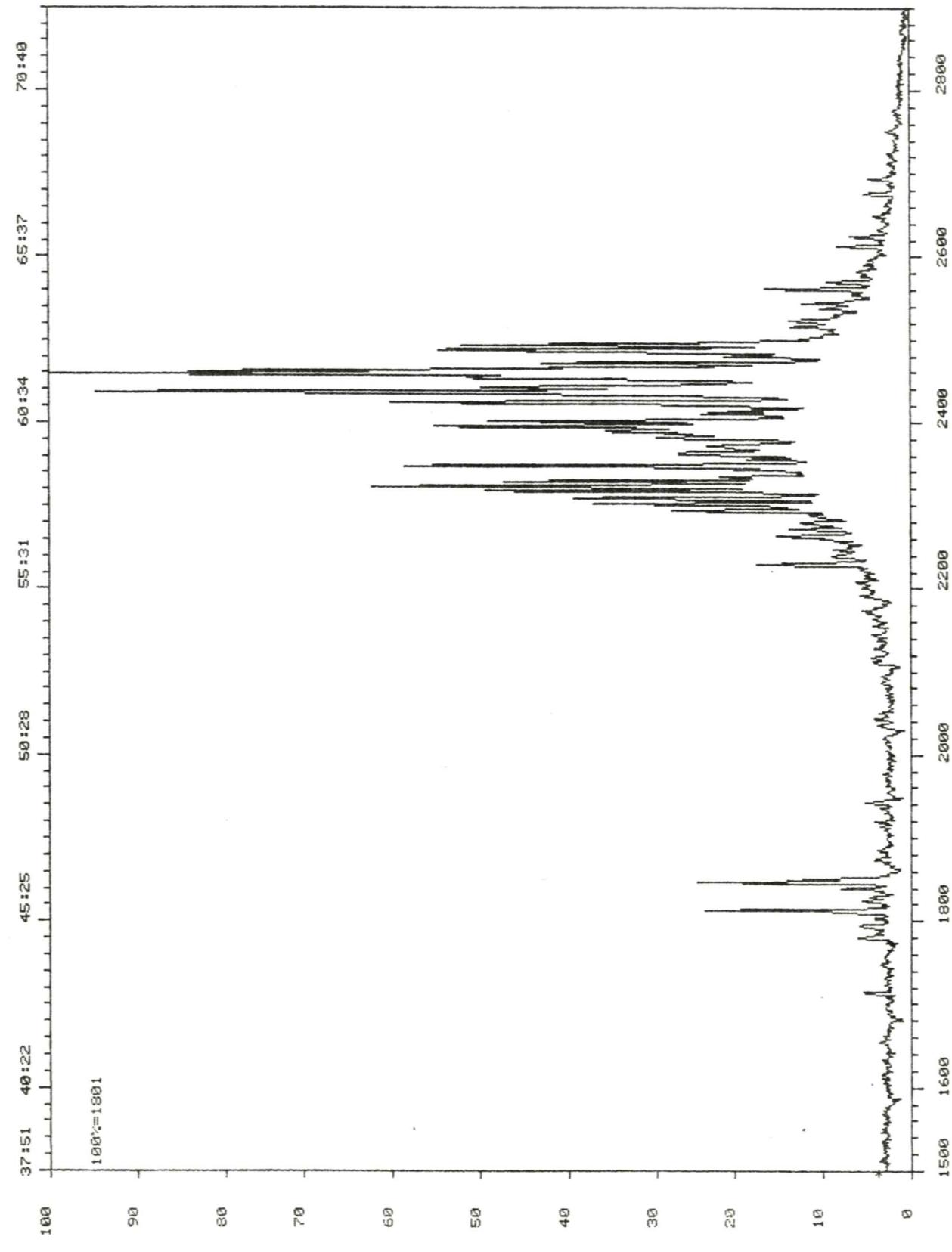
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) DS-55 CROSS SCAN REPORT, RUN: 202650001

) HIBERNIA K-18 DST 13 2285-2294

) \* 231



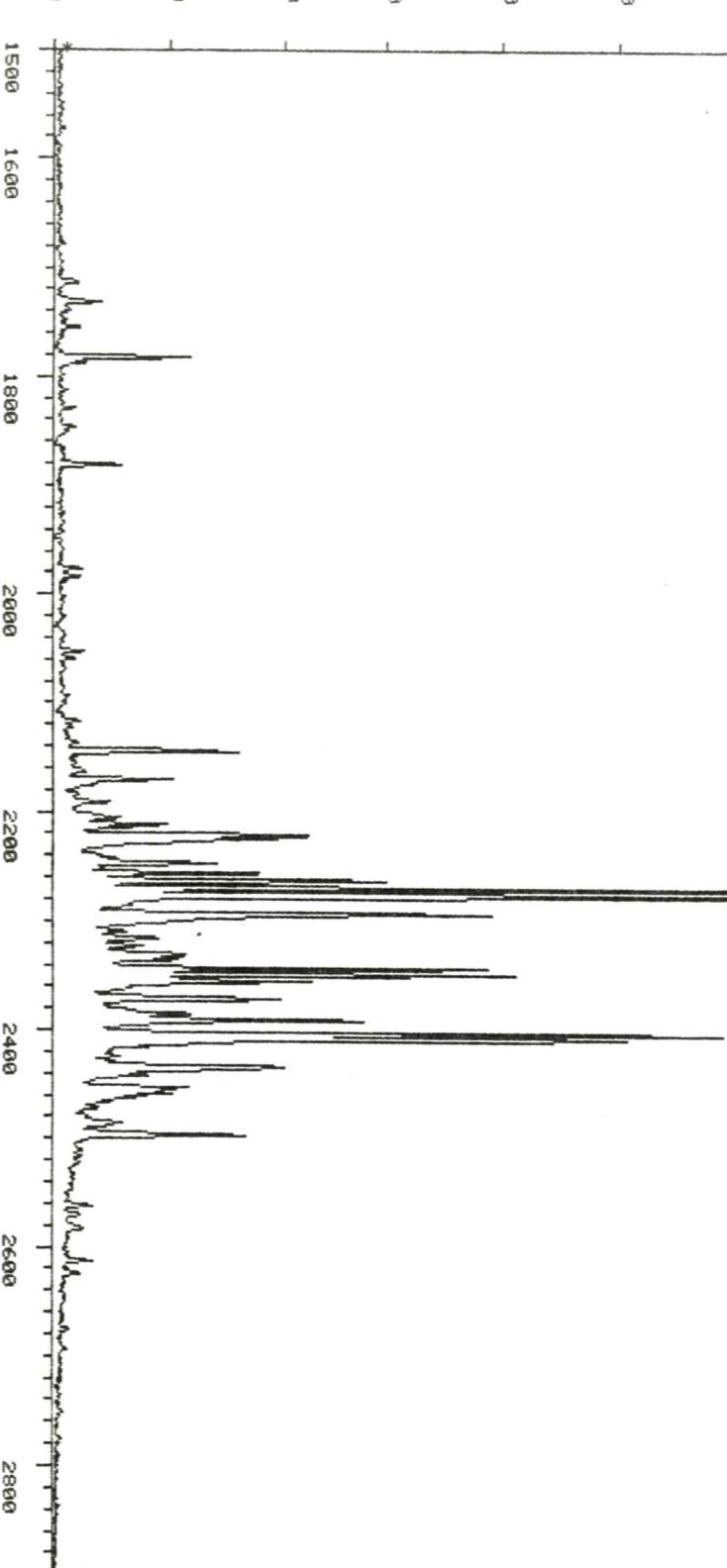
) DS-55 CROSS SCAN REPORT, RUN: 202650001

) HIBERNIA K-18 DST 13 2285-2294

) \* 218

)  
1000 37:51 40:22 45:25 50:28 55:31 60:34 65:37 70:40  
900  
800  
700  
600  
500  
400  
300  
200  
100  
0

1000=3081



DS-55 CROSS SCAN REPORT, RUN: 202650001

HIBERNIA K-18 DST 13 2285-2294

\* 217

