

SUPPORTING INFORMATION

Ring Closing Alkyne Metathesis. Stereoselective Synthesis of the Cytotoxic Marine Alkaloid Motuporamine C

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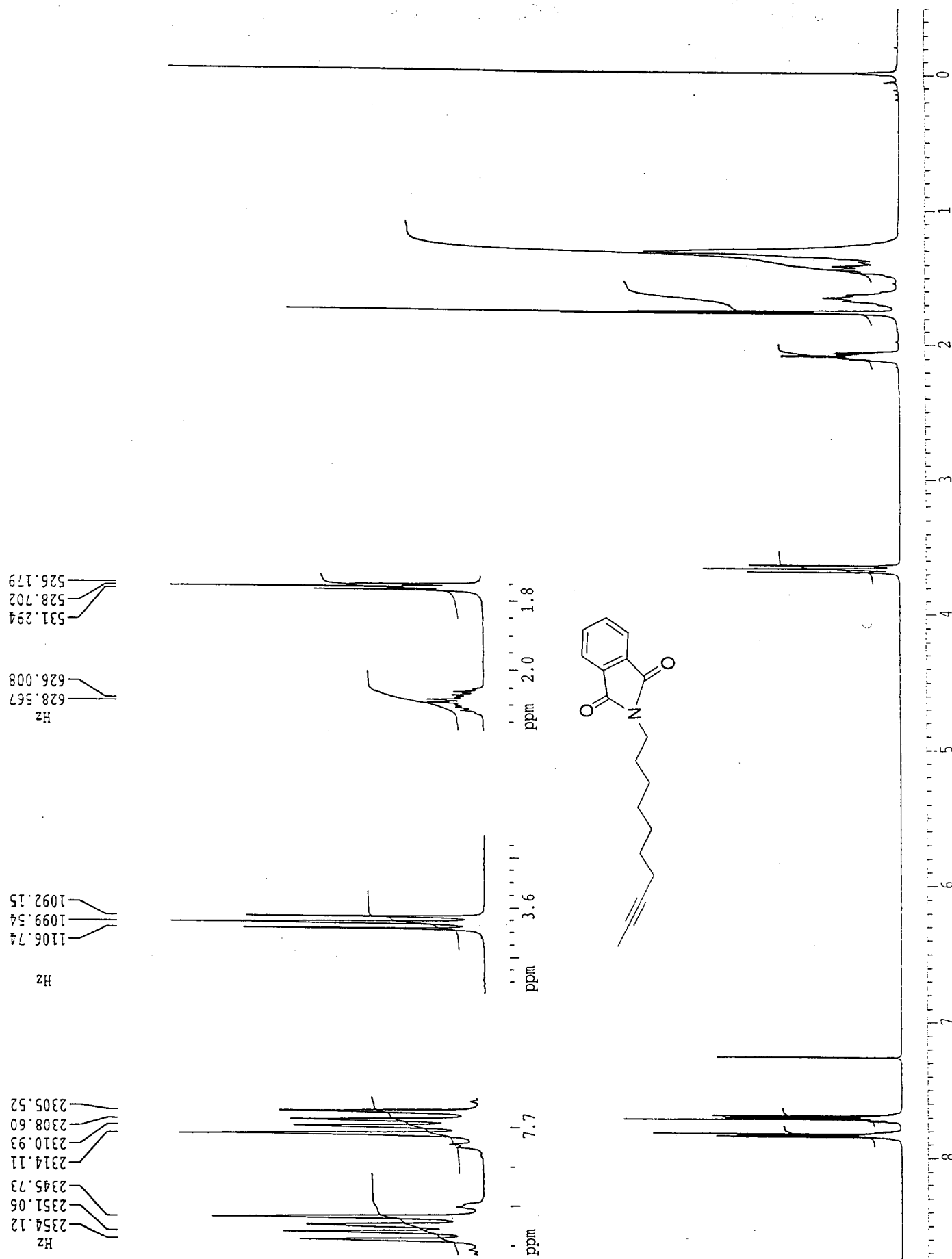
Instrumentation and Spectra Formats: NMR: Spectra were recorded on a Bruker AC 200 or DMX 300 spectrometer in the solvents indicated; chemical shifts (δ) are given in ppm relative to TMS, coupling constants (J) in Hz. IR: Nicolet FT-7199, wavenumbers in cm^{-1} . MS (EI): Finnigan MAT 8200 (70 eV). HRMS: Finnigan MAT SSQ 7000 (70 eV).

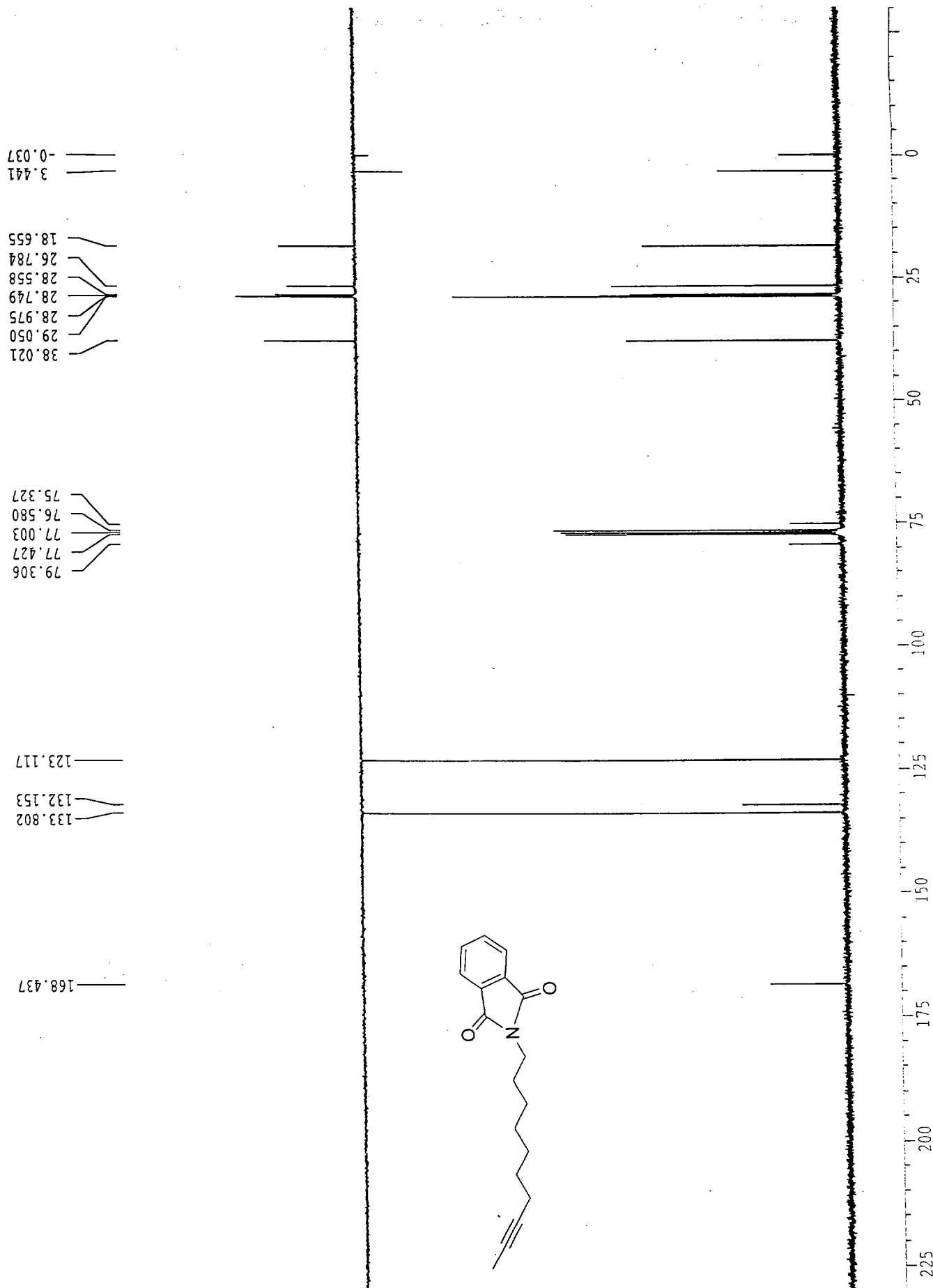
Table 1. Characteristic Infrared Absorptions of New Compounds (cm⁻¹)

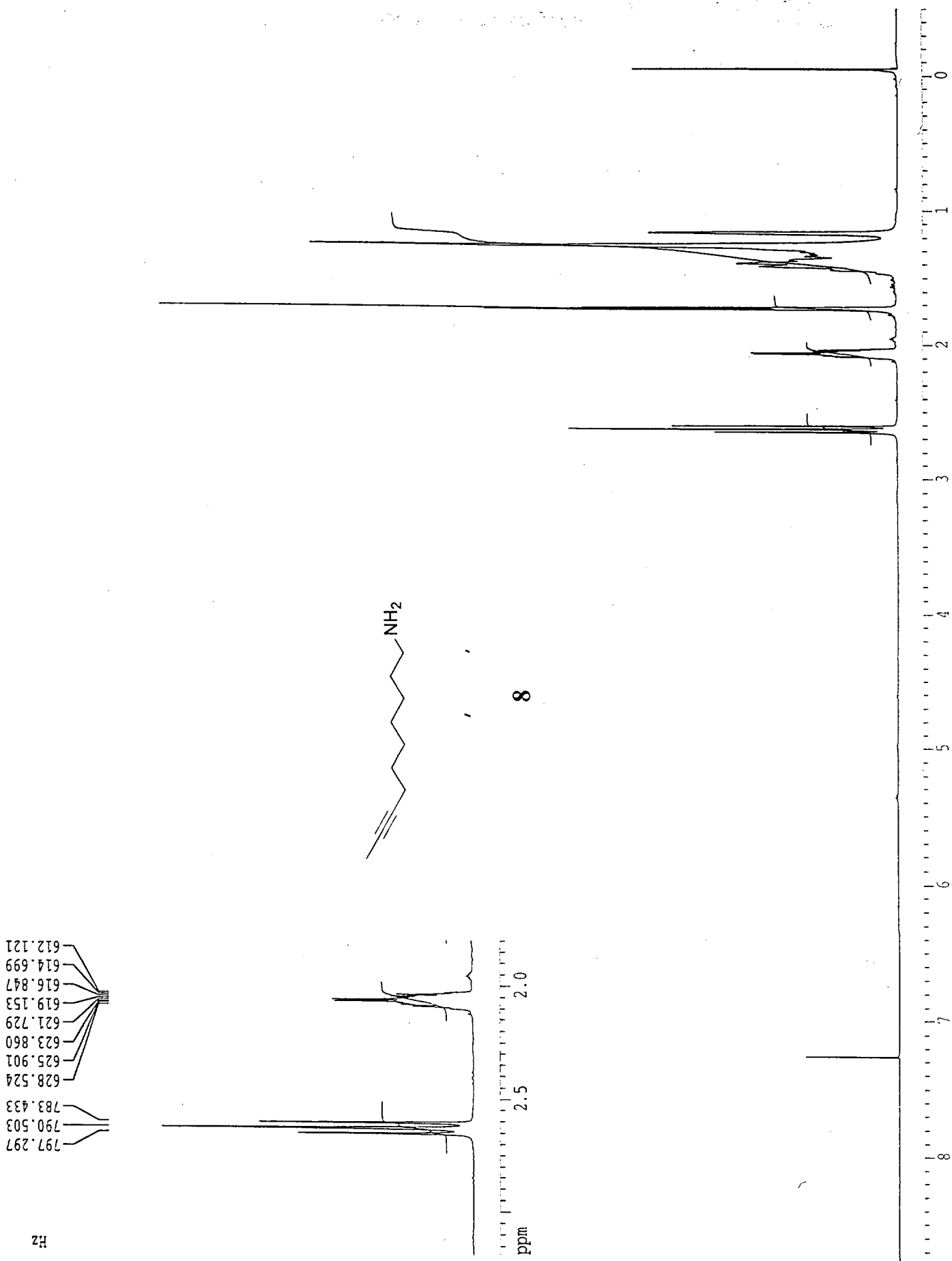
Product	IR
3	3371, 2925, 2778, 2778, 2520, 2061, 1638, 1608, 1515, 1480, 1489, 1404, 1179, 1058, 771
4	3370, 2927, 2773, 2771, 2526, 2060, 1637, 1608, 1515, 1480, 1489, 1404, 1181, 1053, 770
8	3315, 2927, 2852, 2632, 1571, 1486, 1465, 732
9	3025, 2939, 2864, 1437, 1416, 1352, 1171, 1097, 1081, 1040, 1014, 975, 932, 828
10	3066, 3040, 3017, 2930, 2856, 1700, 1478, 1478, 1450, 1430, 1257, 741
11	3065, 3041, 3015, 2926, 2854, 1701, 1609, 1582, 1525, 1474, 1454, 1423, 1259, 1179, 739
12	3040, 3066, 3000, 2928, 2855, 1699, 1609, 1582, 1535, 1478, 1450, 1421, 1380, 1349, 1299, 739
15	3361, 3001, 2974, 2930, 2857, 2800, 1713, 1696, 1510, 1479, 1460, 1417, 1391, 1366, 1300, 1250, 1172, 1082, 1040, 867, 774
17	3360, 2929, 2853, 1567, 1438, 1416, 1396, 827
18	3025, 2940, 2862, 1462, 1437, 1416, 1353, 1175, 1075, 1028, 976, 946
19	3066, 3041, 3018, 2931, 2857, 1700, 1609, 1582, 1531, 1478, 1450, 1450, 1423, 1295, 1244, 1178, 1118, 1084, 1032, 759, 741, 728
20	3066, 3040, 3018, 2931, 2857, 1698, 1609, 1583, 1535, 1478, 1450, 1422, 1379, 1350, 1294, 1294, 1243, 1208, 1120, 1084, 759, 740
21	3065, 3040, 3928, 2856, 1699, 1609, 1580, 1539, 1477, 1450, 1421, 1377, 1350, 1293, 1241, 1192, 1109, 758, 740
23	3361, 3001, 2974, 2930, 2857, 2800, 1713, 1696, 1510, 1479, 1460, 1417, 1391, 1366, 1300, 1250, 1172, 1082, 1040, 867, 774

Table 2. MS Data (EI) of New Compounds

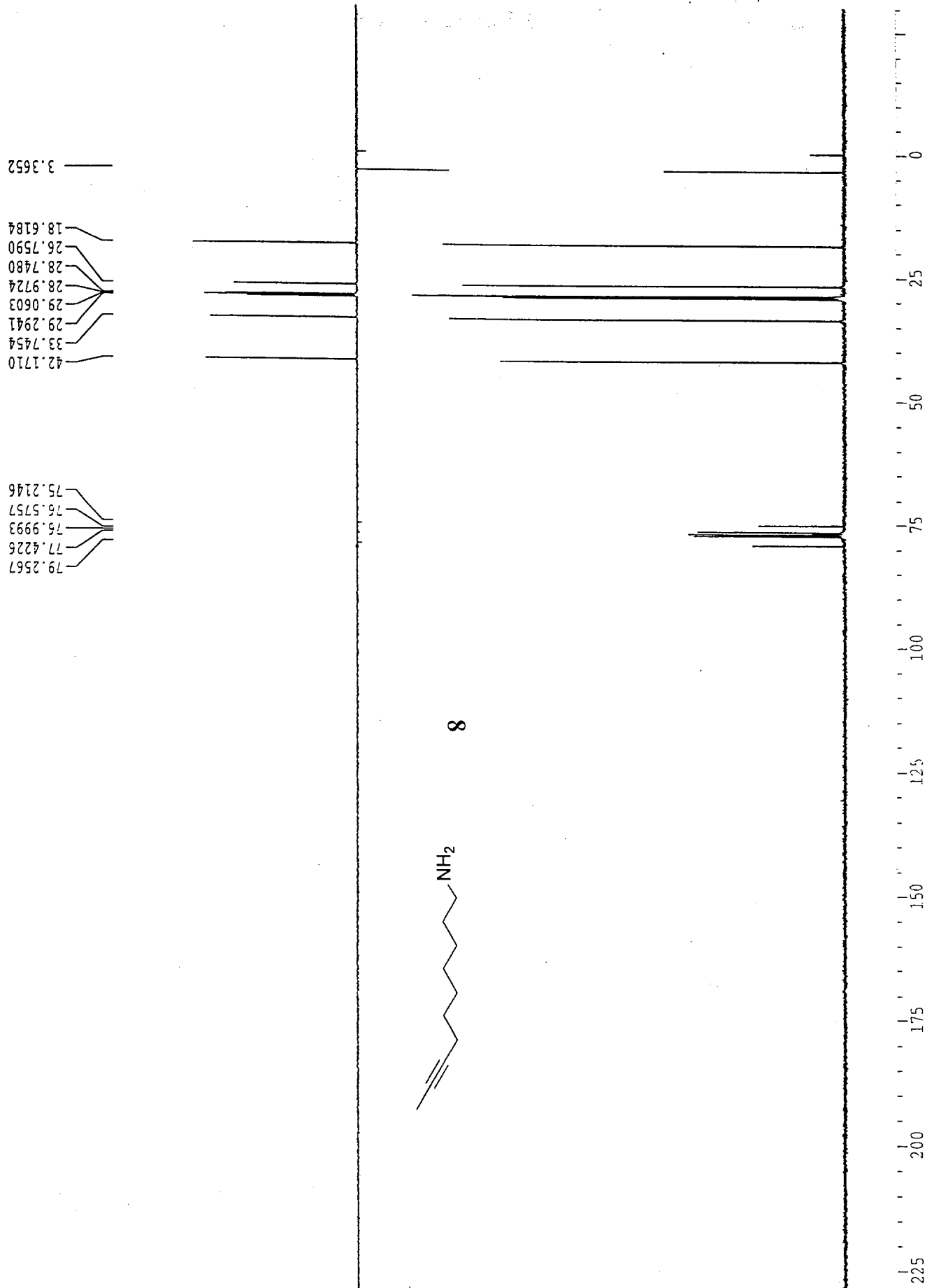
Product	<i>m/z</i> (rel. intensity)
3	324 ([M+1] ⁺ , 11), 323 ([M ⁺], 43), 279 (7), 249 (9), 236 (13), 223 (21), 222 (100), 201 (12), 220 (63), 210 (50), 208 (22), 114 (12), 110 (12), 99 (13), 98 (15), 96 (10), 87 (12), 82 (10), 72 (11), 71 (31), 70 (26), 67 (10), 58 (47), 57 (17), 56 (16), 55 (17), 44 (60), 42 (13), 41 (18), 38 (14), 36 (42), 30 (19)
4	324 ([M+1] ⁺ , 10), 323 ([M ⁺], 42), 249 (9), 236 (10), 223 (21), 222 (100), 220 (63), 210 (50), 208 (22), 114 (12), 99 (13), 98 (15), 96 (10), 87 (12), 82 (10), 71 (30), 70 (26), 67 (10), 58 (47), 57 (17), 56 (16), 55 (17), 44 (60), 42 (13), 41 (18), 38 (14), 36 (42), 30 (19)
8	167 ([M ⁺], <1), 56 (10), 30 (100)
9	190 ([M ⁺], <1), 111 (20), 94 (24), 93 (14), 91 (10), 79 (100), 77 (27), 68 (31), 67 (15), 66 (88), 65 (10), 55 (12), 53 (25), 52 (11), 41 (21)
10	483 ([M ⁺], <1), 180 (3), 179 (26), 178 (100)
11	429 ([M ⁺], 0.2), 179 (24), 178 (100)
12	431 ([M ⁺], <1), 179 (24), 178 (100)
15	524 ([M+1] ⁺ , 14), 523 ([M ⁺], 40), 249 (15), 236 (11), 223 (19), 222 (100), 208 (18), 84 (9), 58 (13), 57 (36), 44 (20), 41 (13)
17	153 ([M ⁺], <1), 121 (6), 107 (7), 56 (12), 44 (19), 30 (100)
18	204 ([M ⁺], <1), 162 (83), 108 (19), 93 (100), 91 (20), 80 (19), 79 (50), 77 (20), 68 (16), 67 (22), 66 (63), 65 (10), 55 (35), 54 (14), 53 (21), 41 (22), 39 (16)
19	483 ([M ⁺], <1), 179 (26), 178 (100), 138 (7), 44 (7)
20	429 ([M ⁺], <1), 179 (28), 178 (100)
21	431 ([M ⁺], <1), 179 (30), 178 (100)
23	524 ([M+1] ⁺ , 14), 523 ([M ⁺], 40), 249 (15), 236 (11), 223 (19), 222 (100), 208 (18), 84 (9), 58 (13), 57 (36), 44 (20), 41 (13)

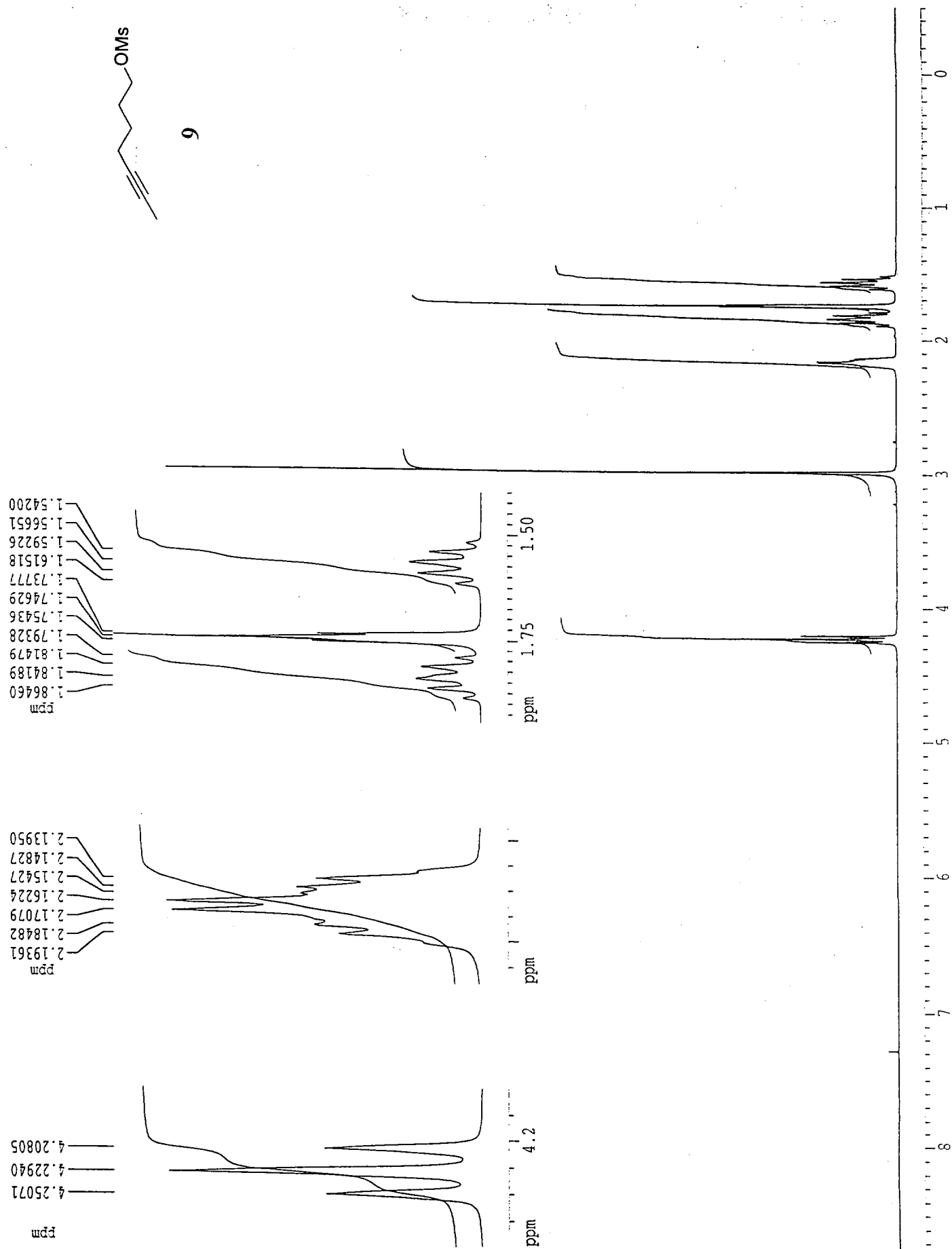


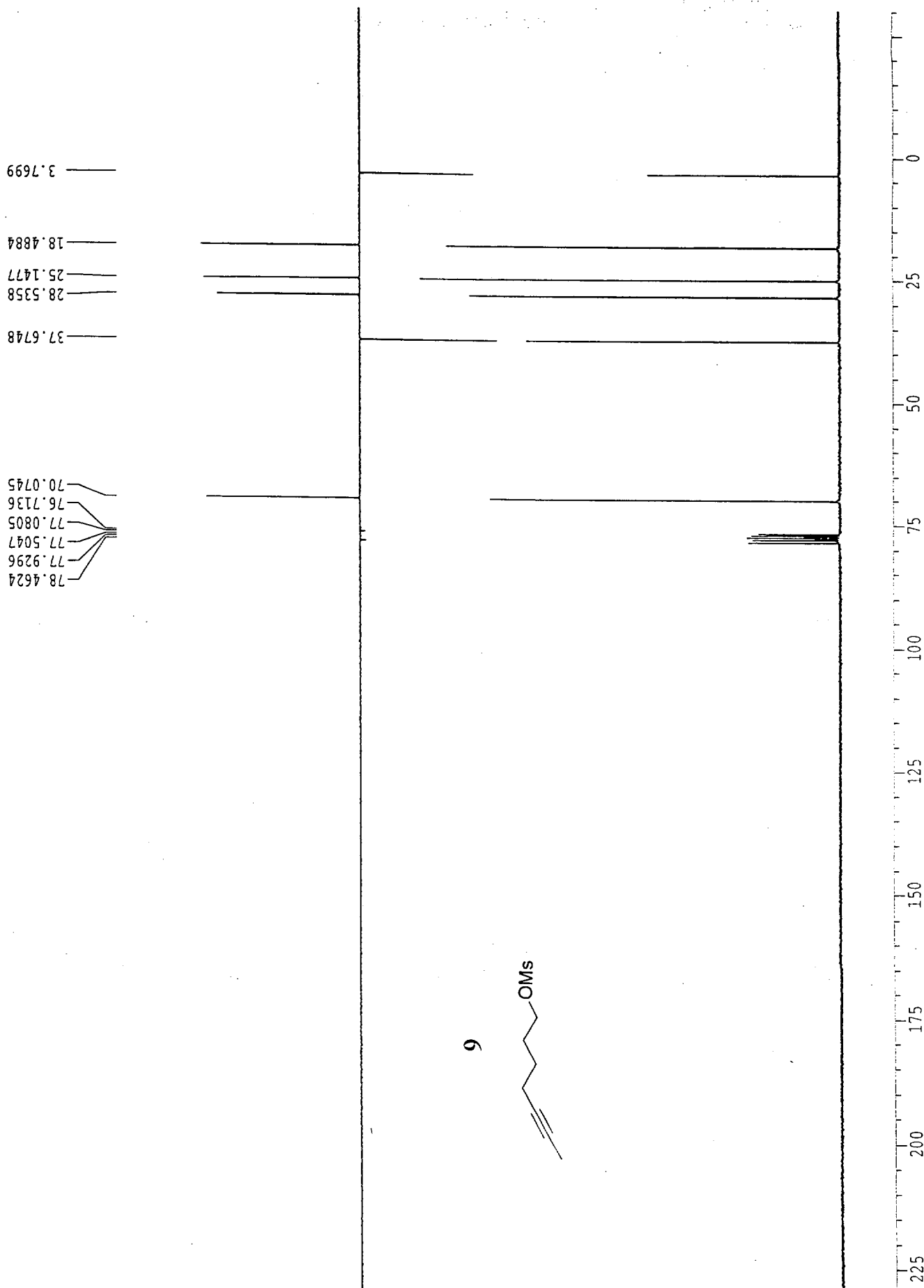


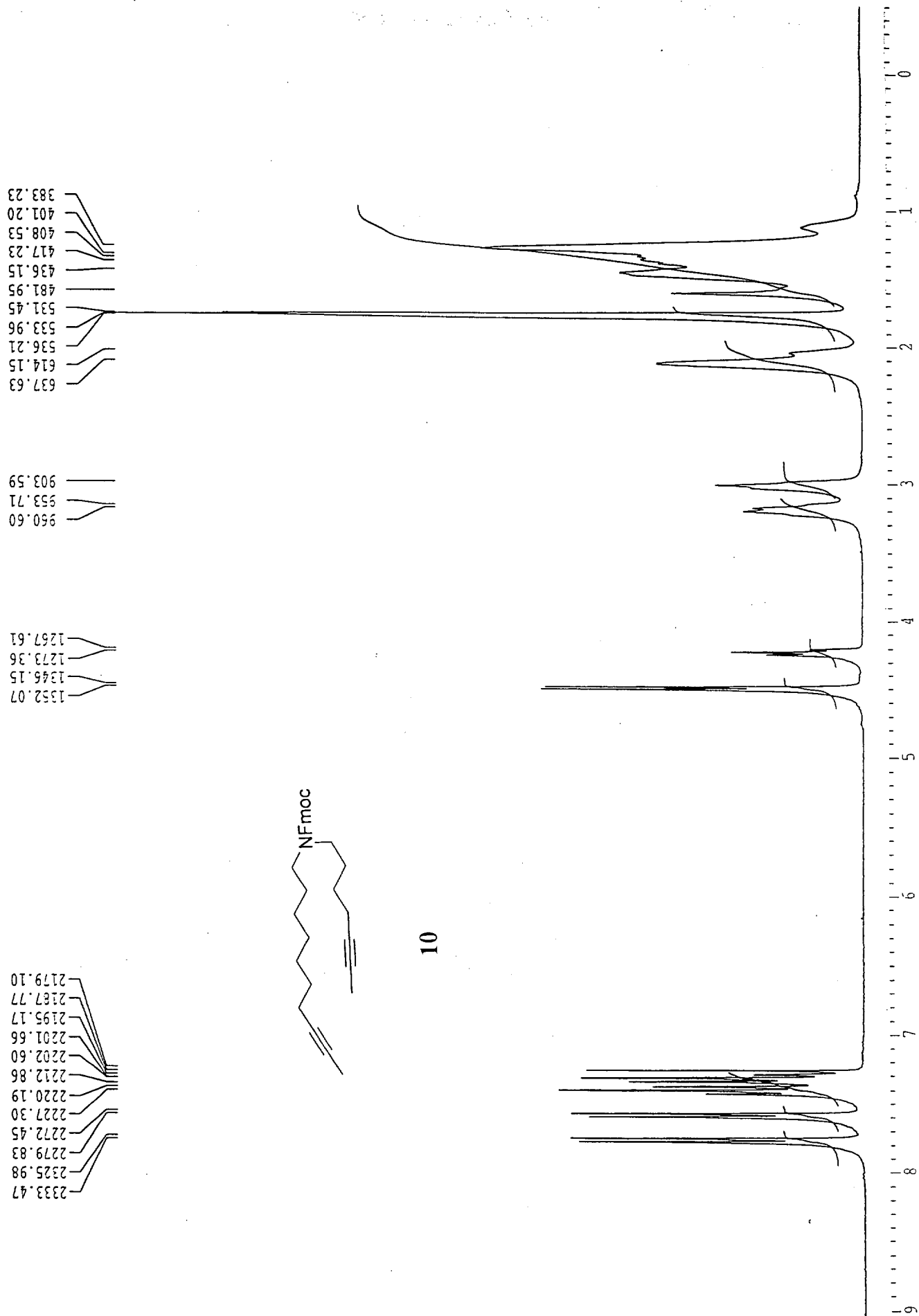


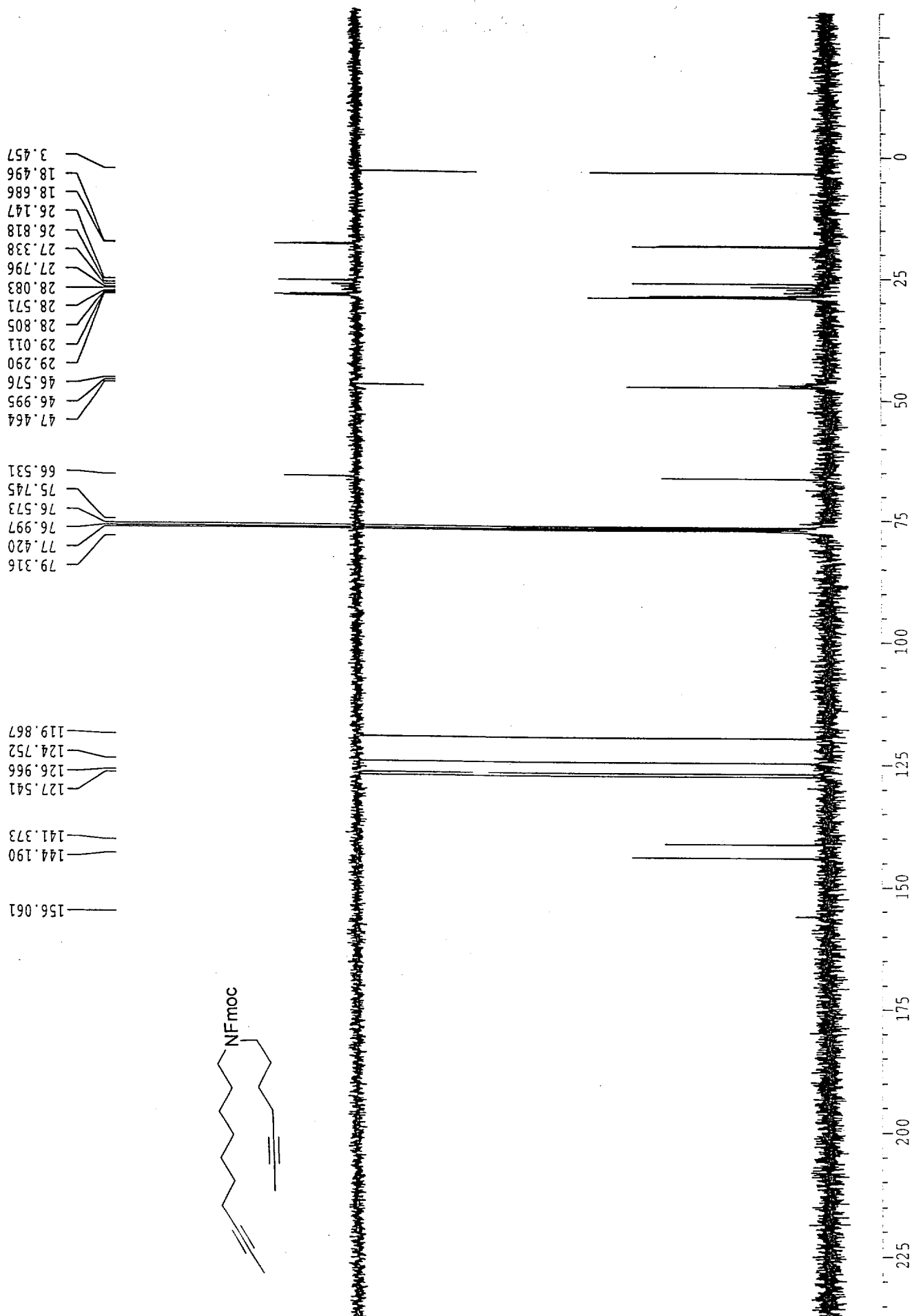
H₂

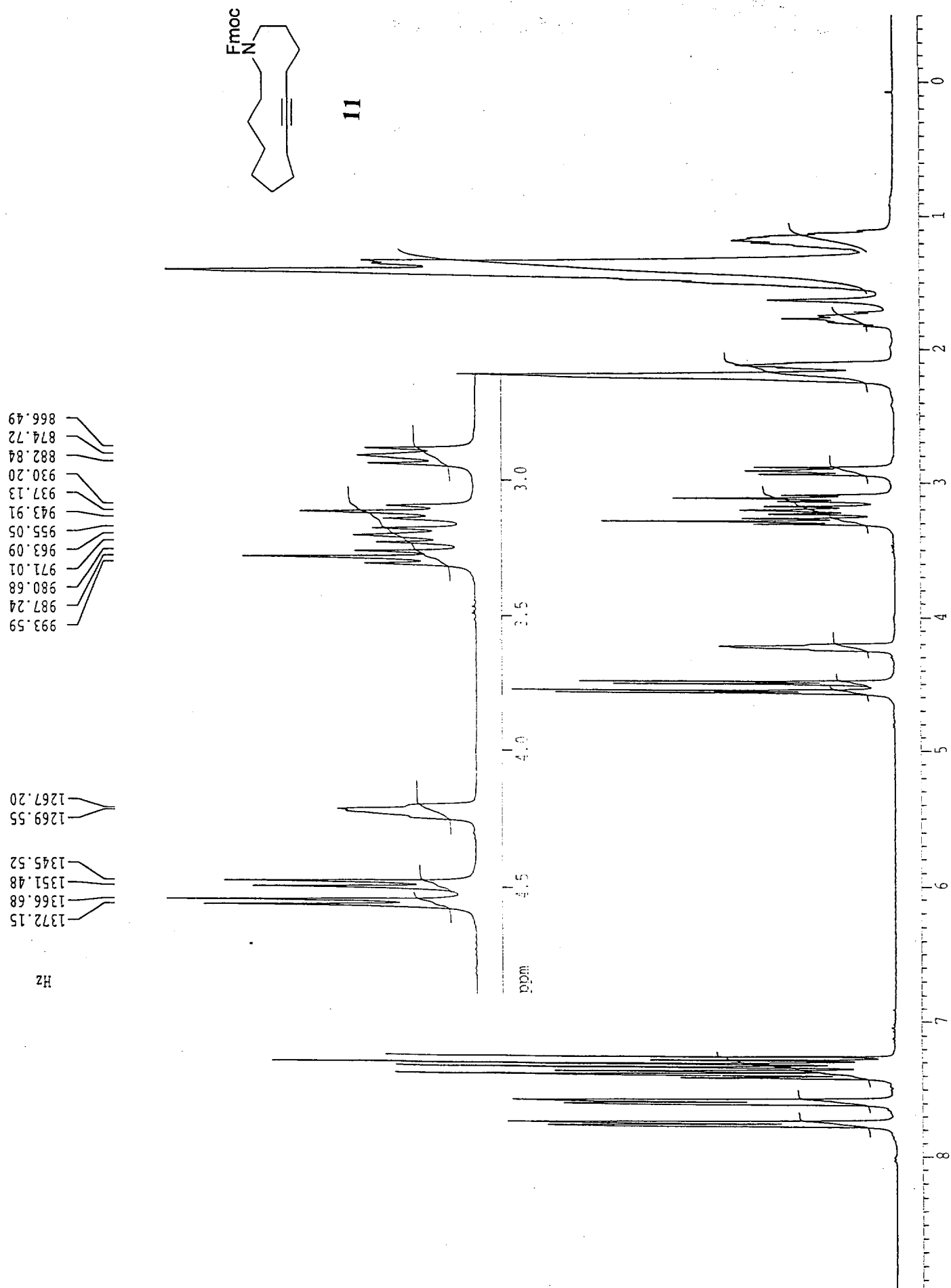




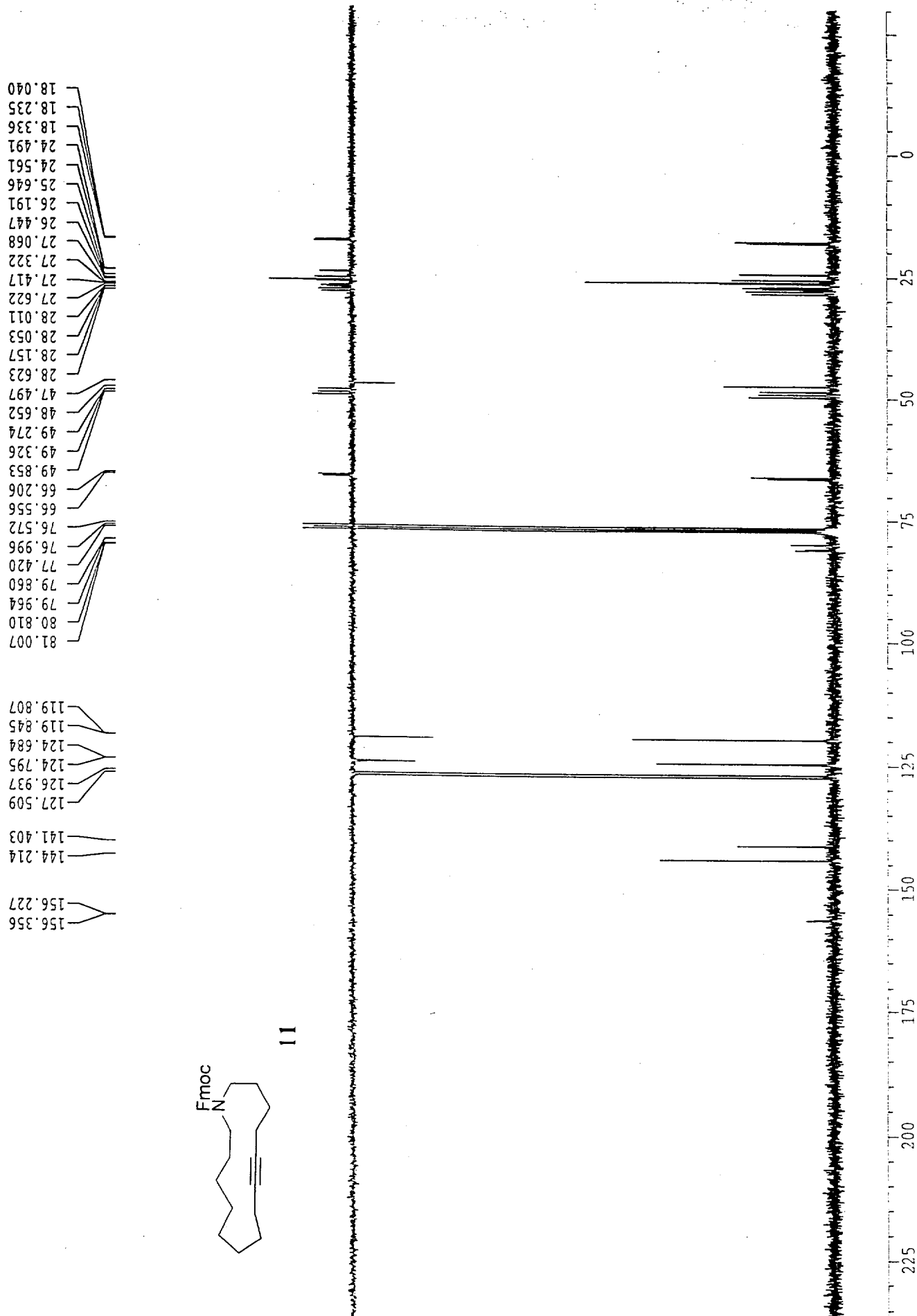


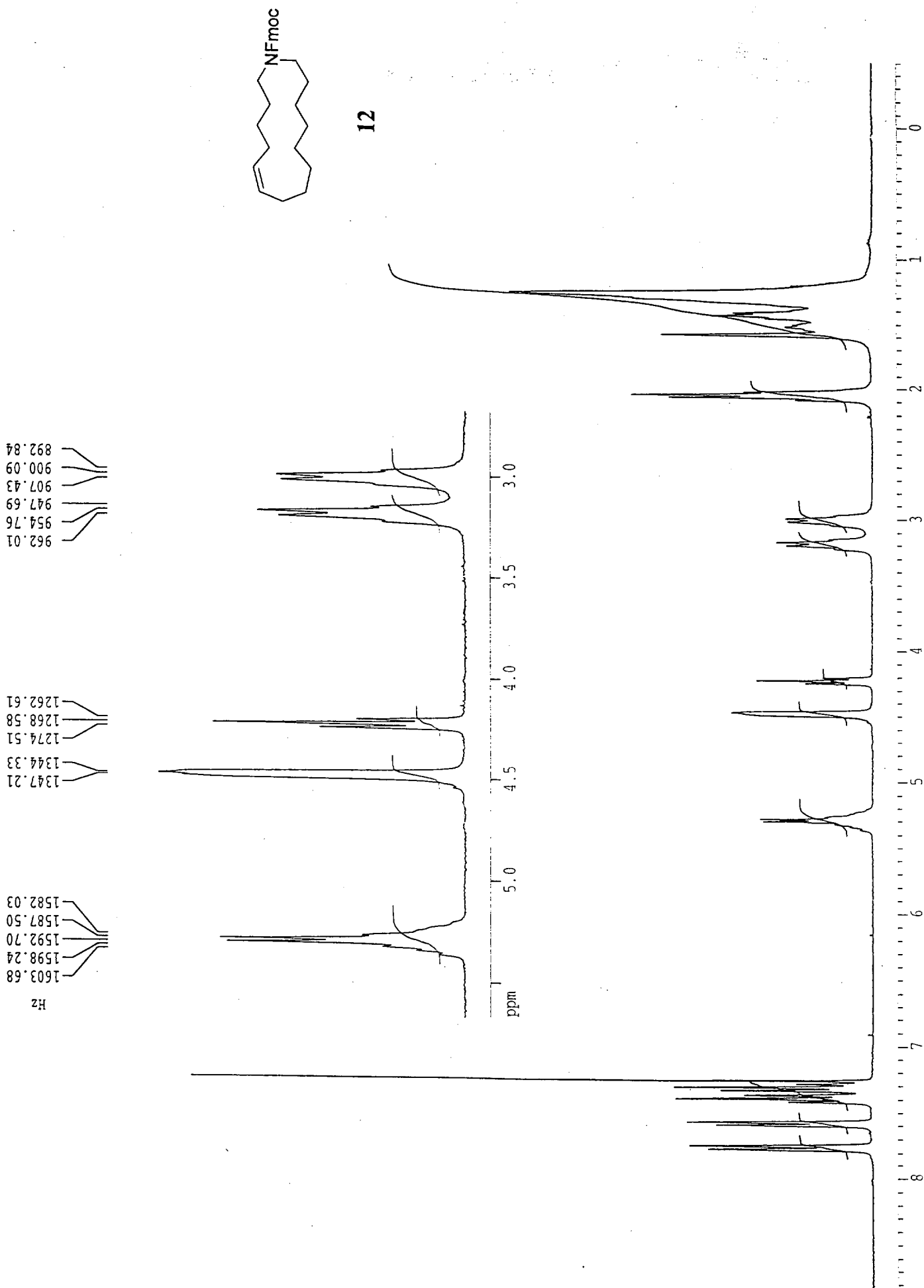




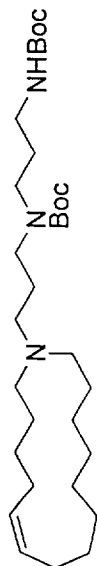
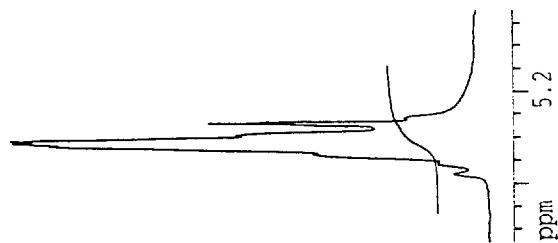


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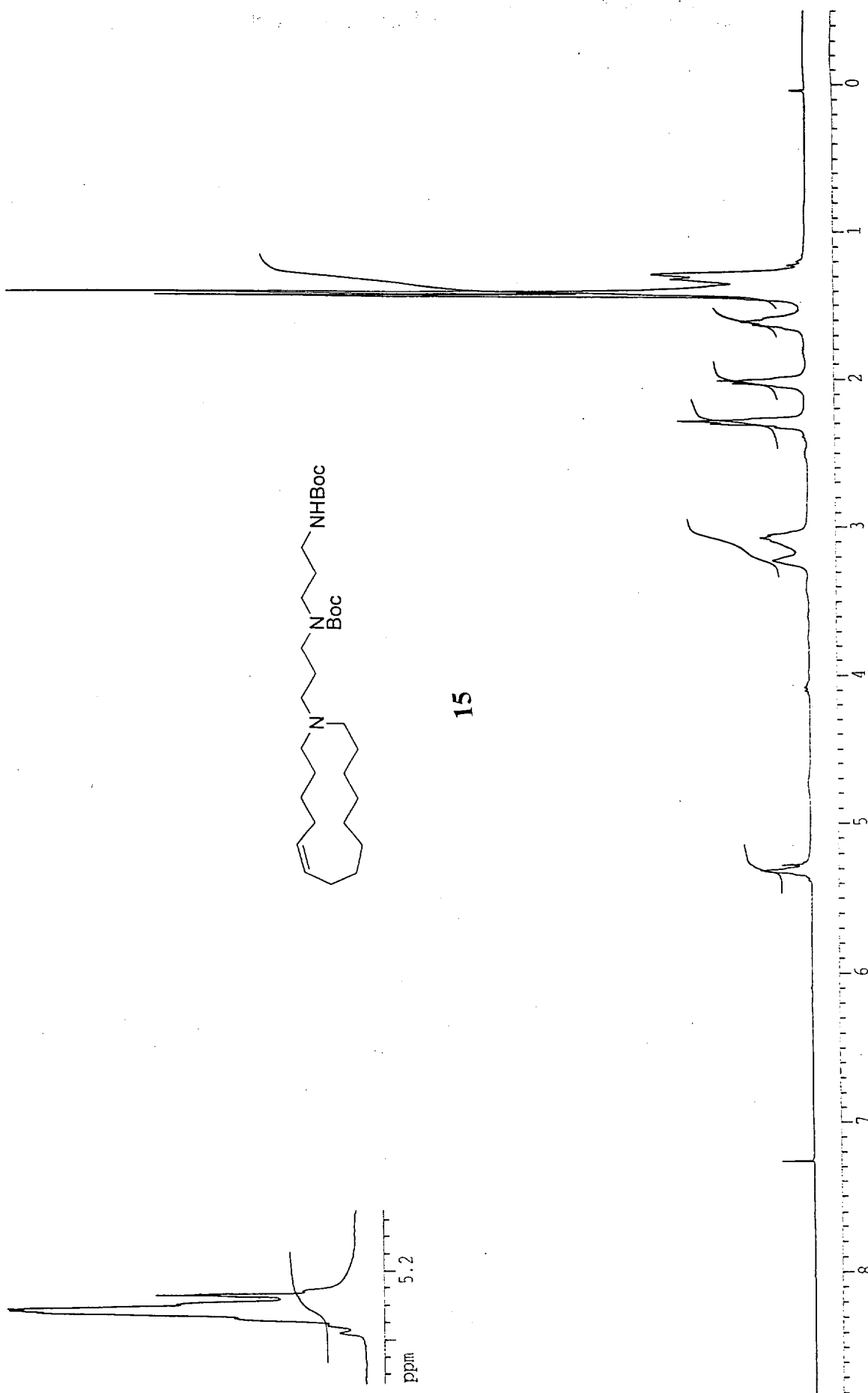


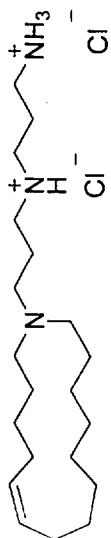
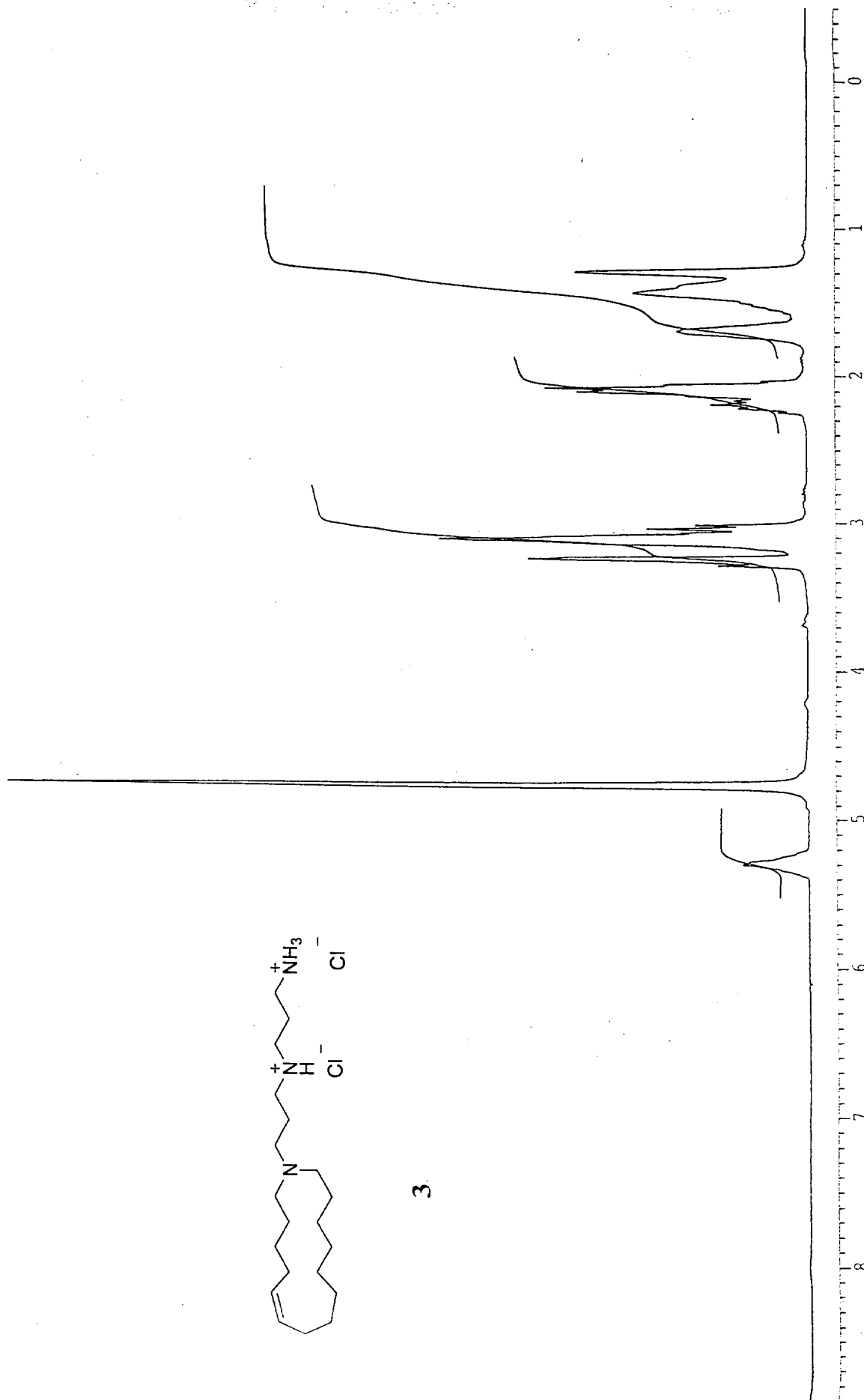


1581.86
1582.94
1590.34
1594.66
1596.36
1597.98
1602.79
Hz

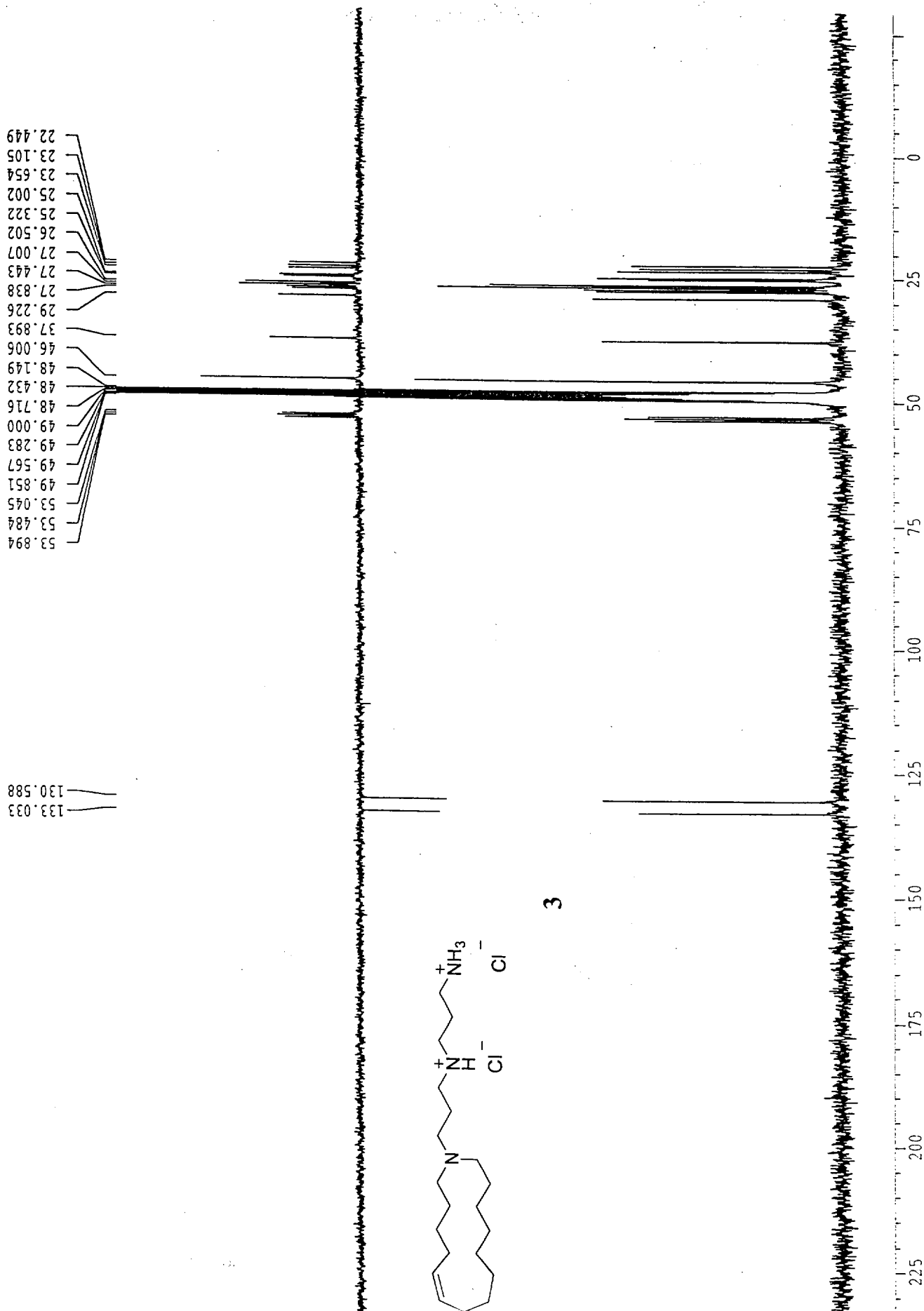


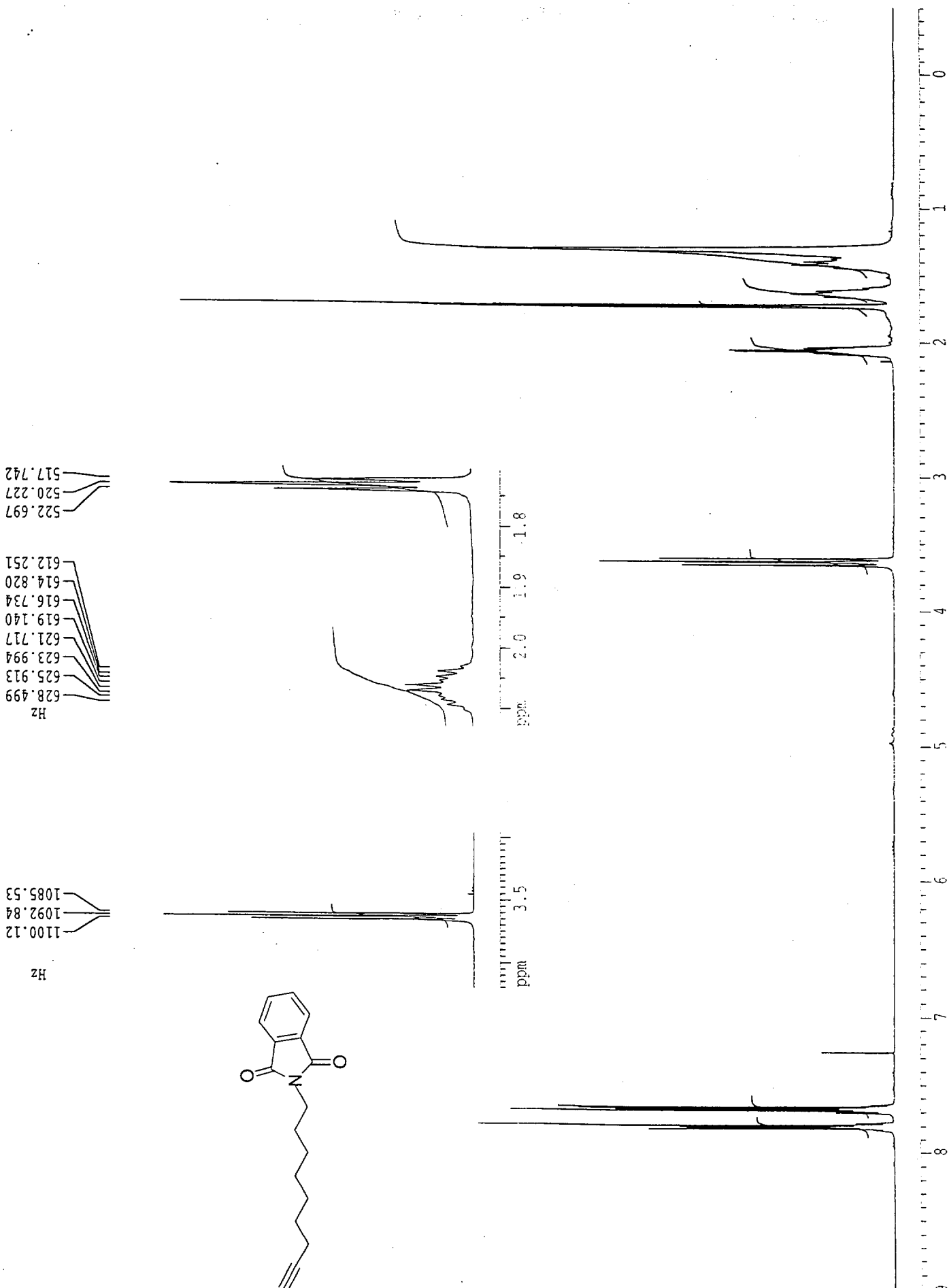
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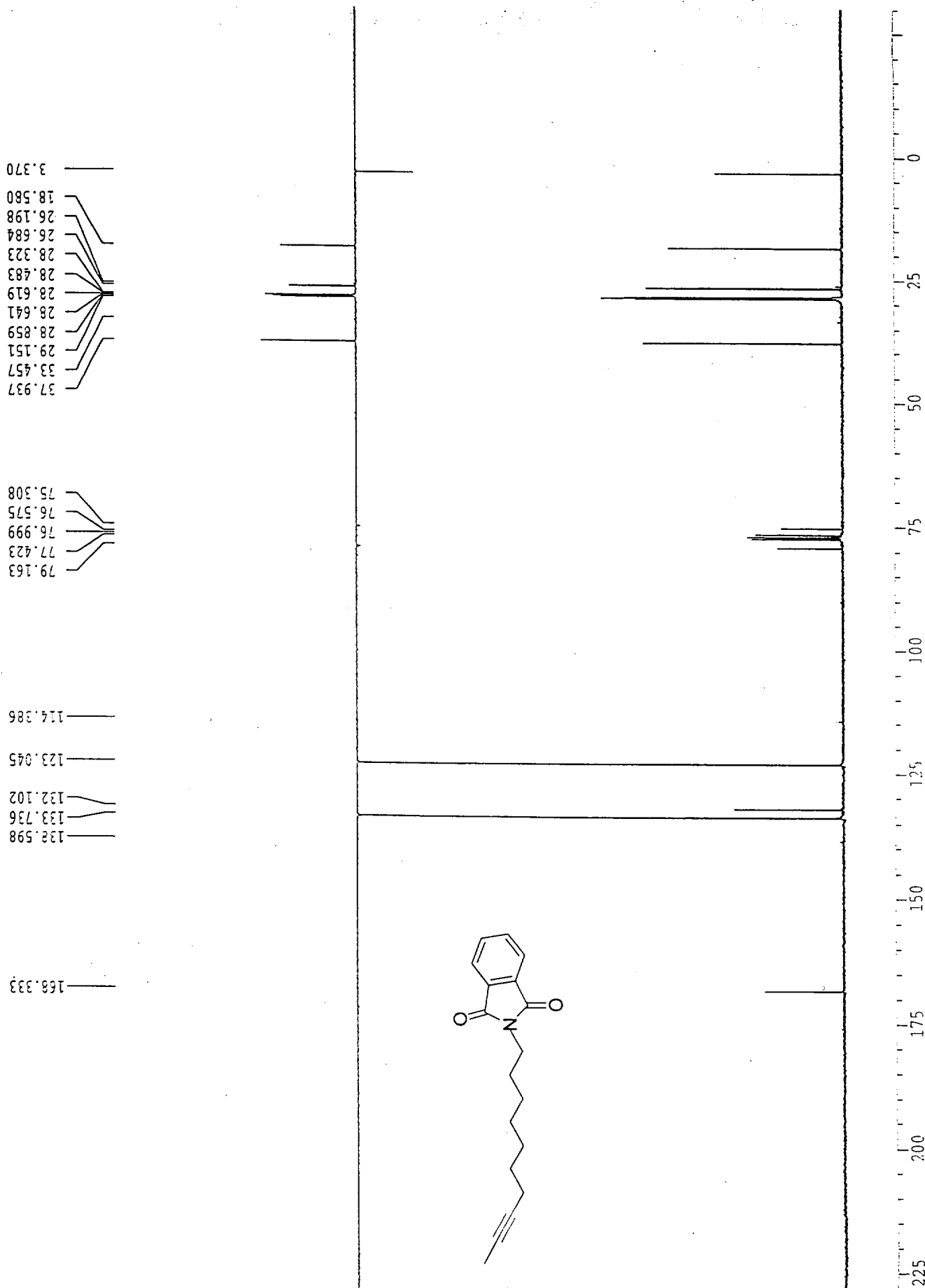


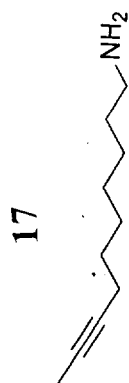
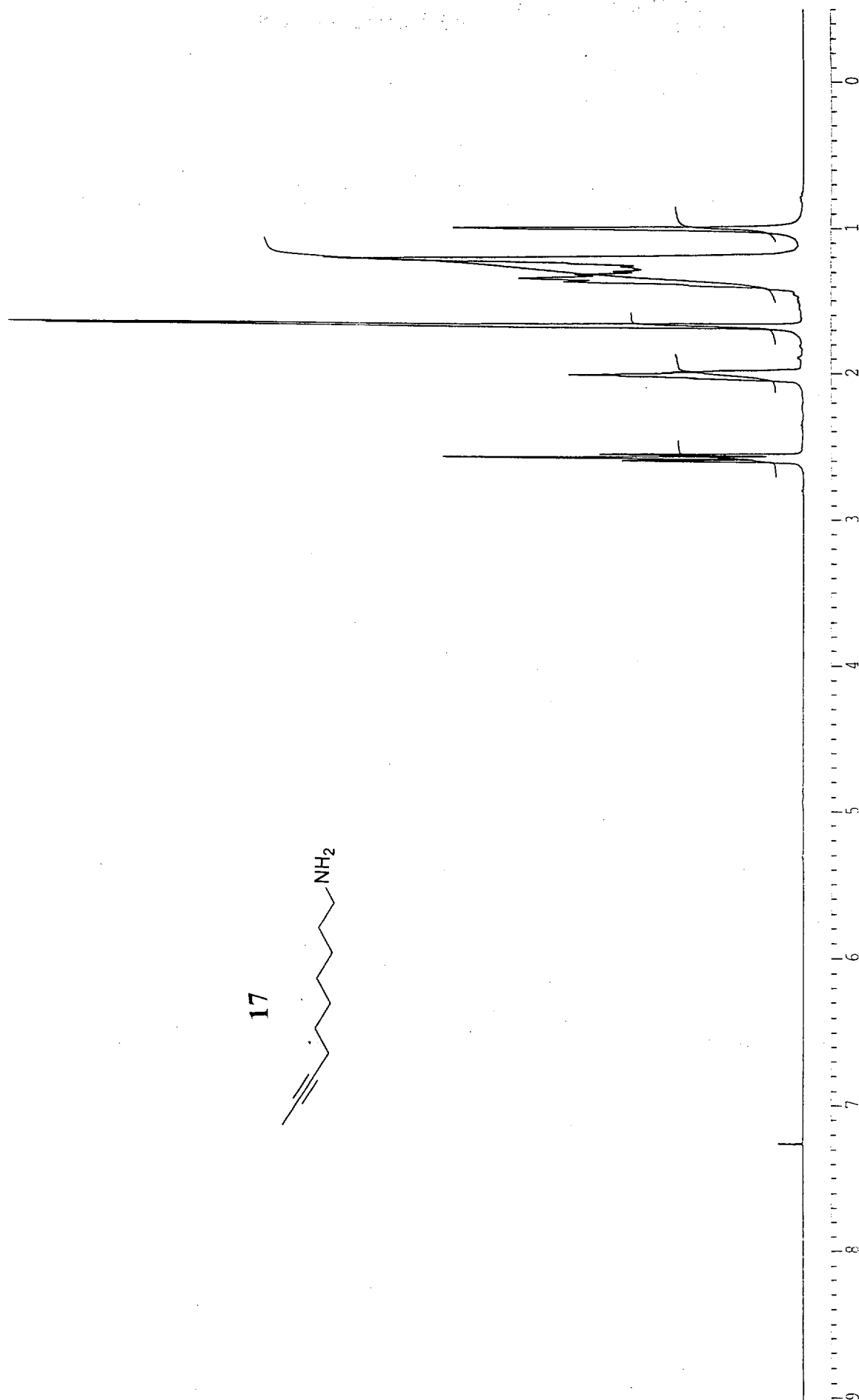


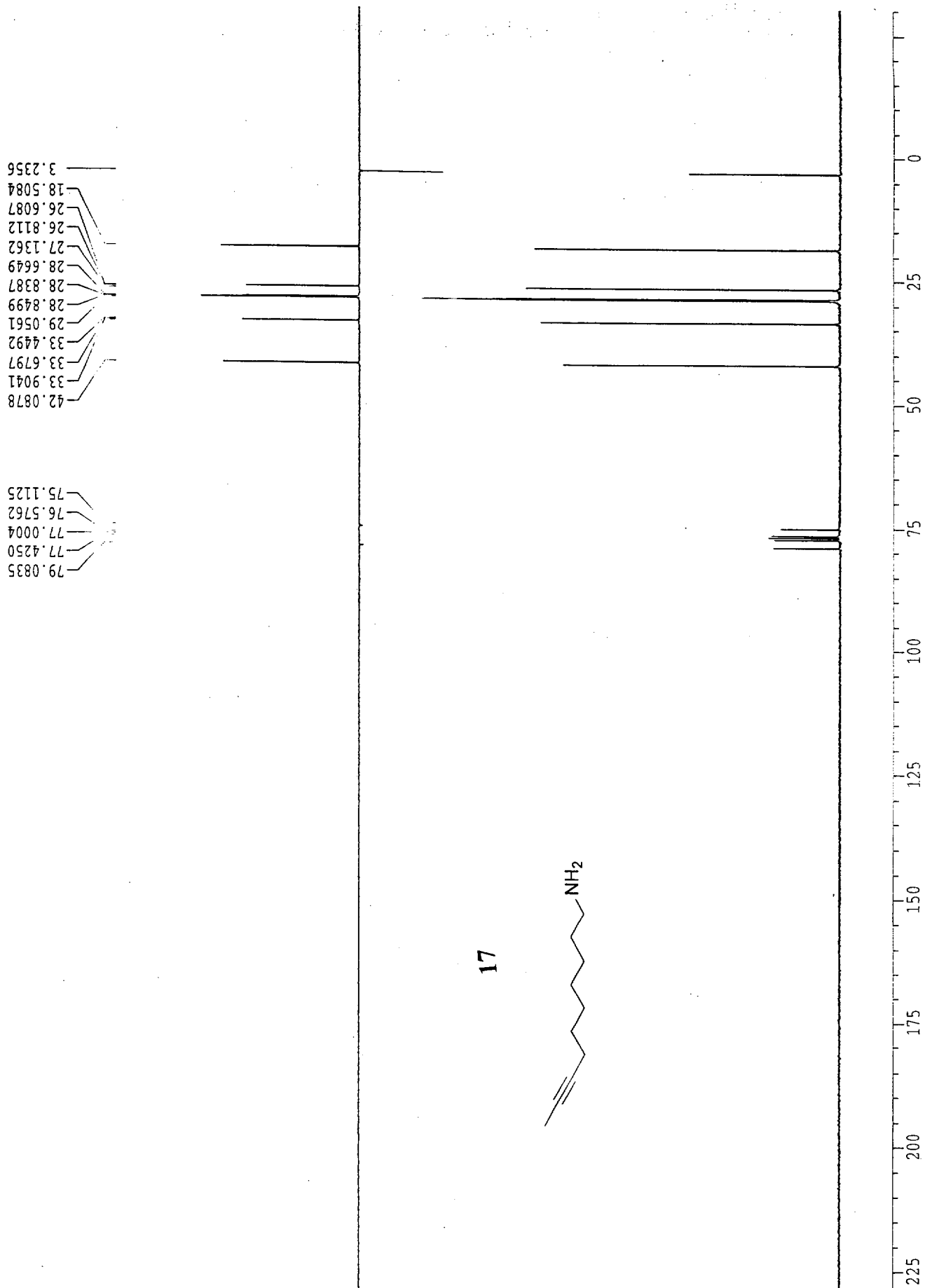
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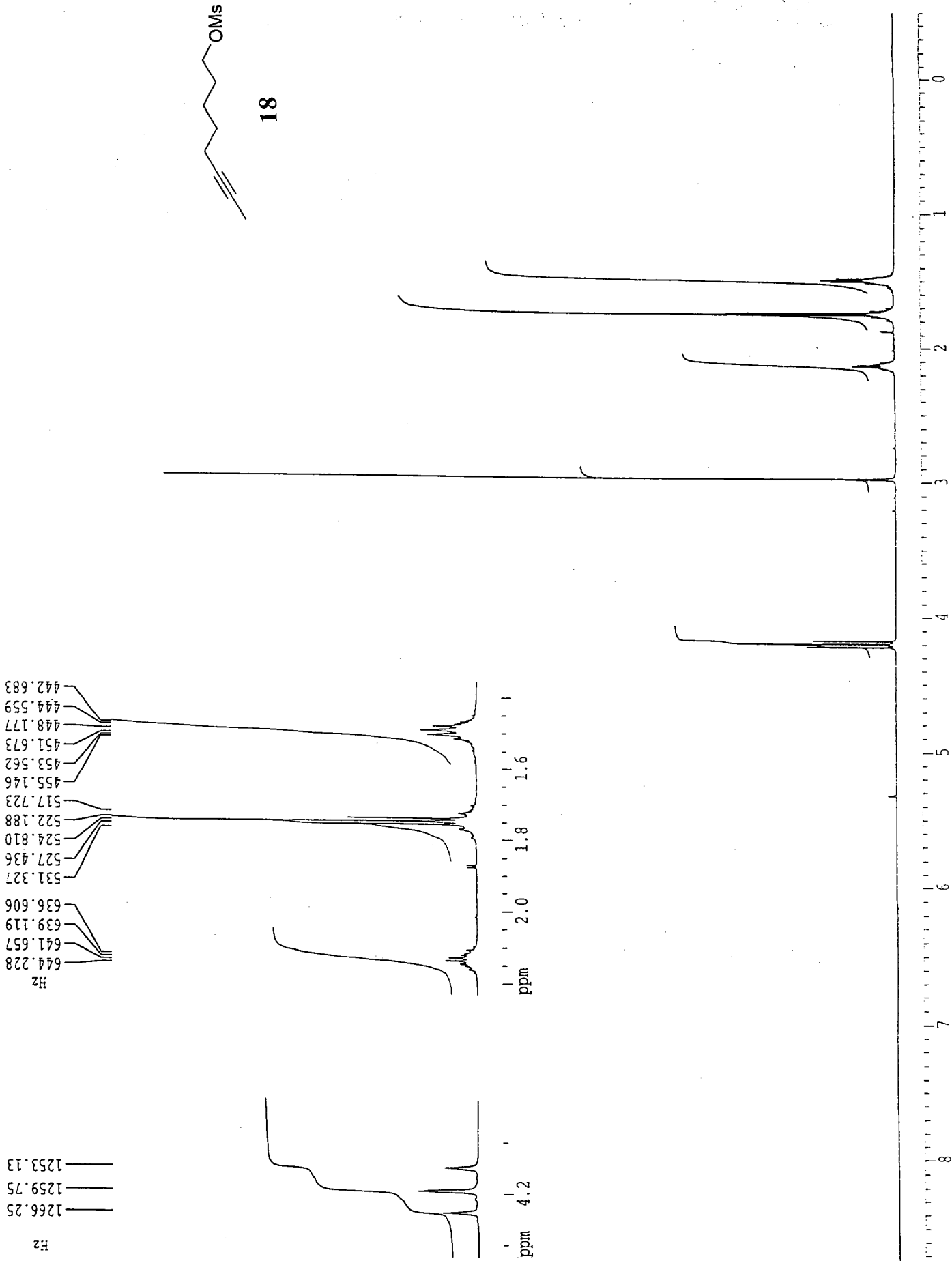


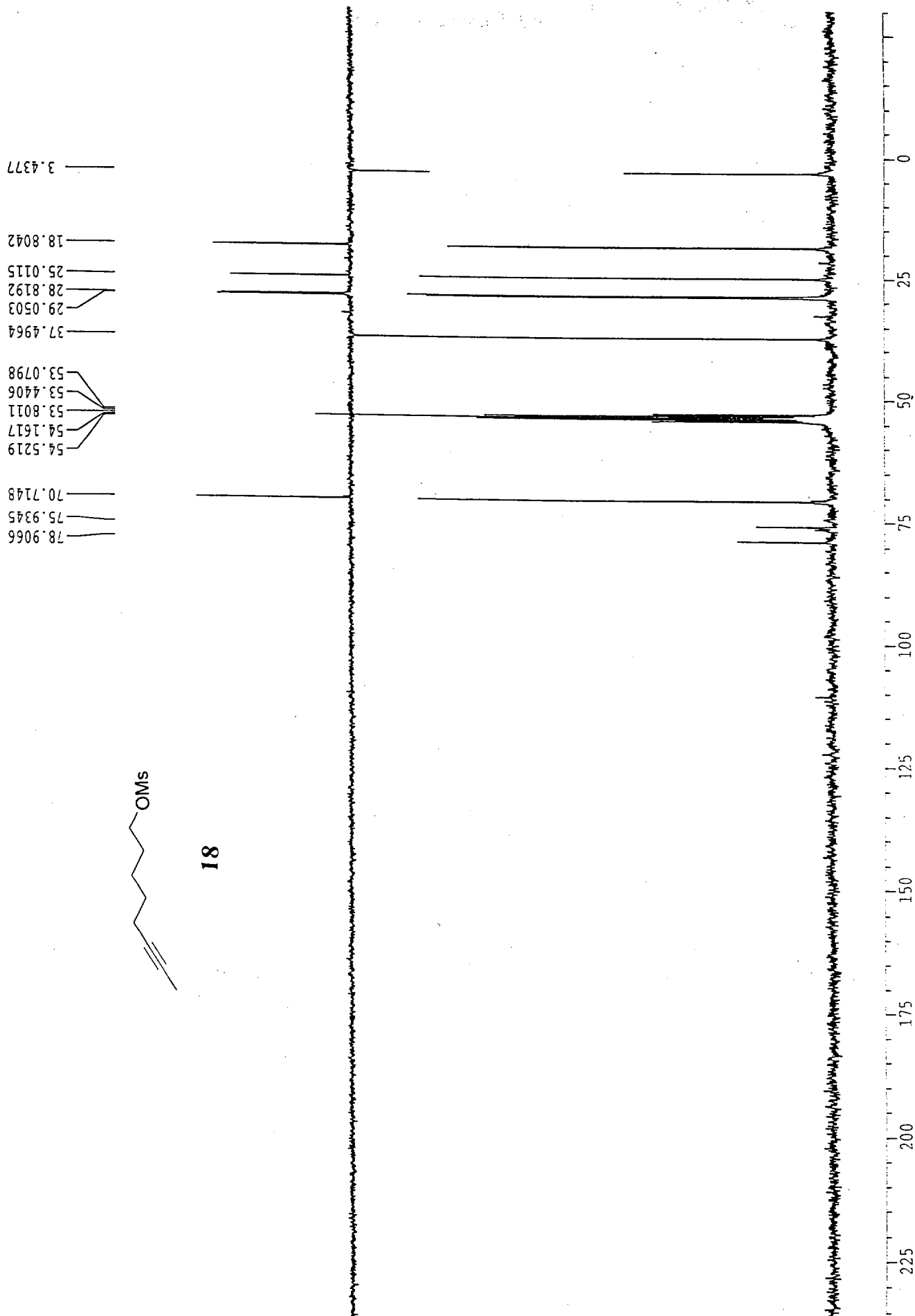




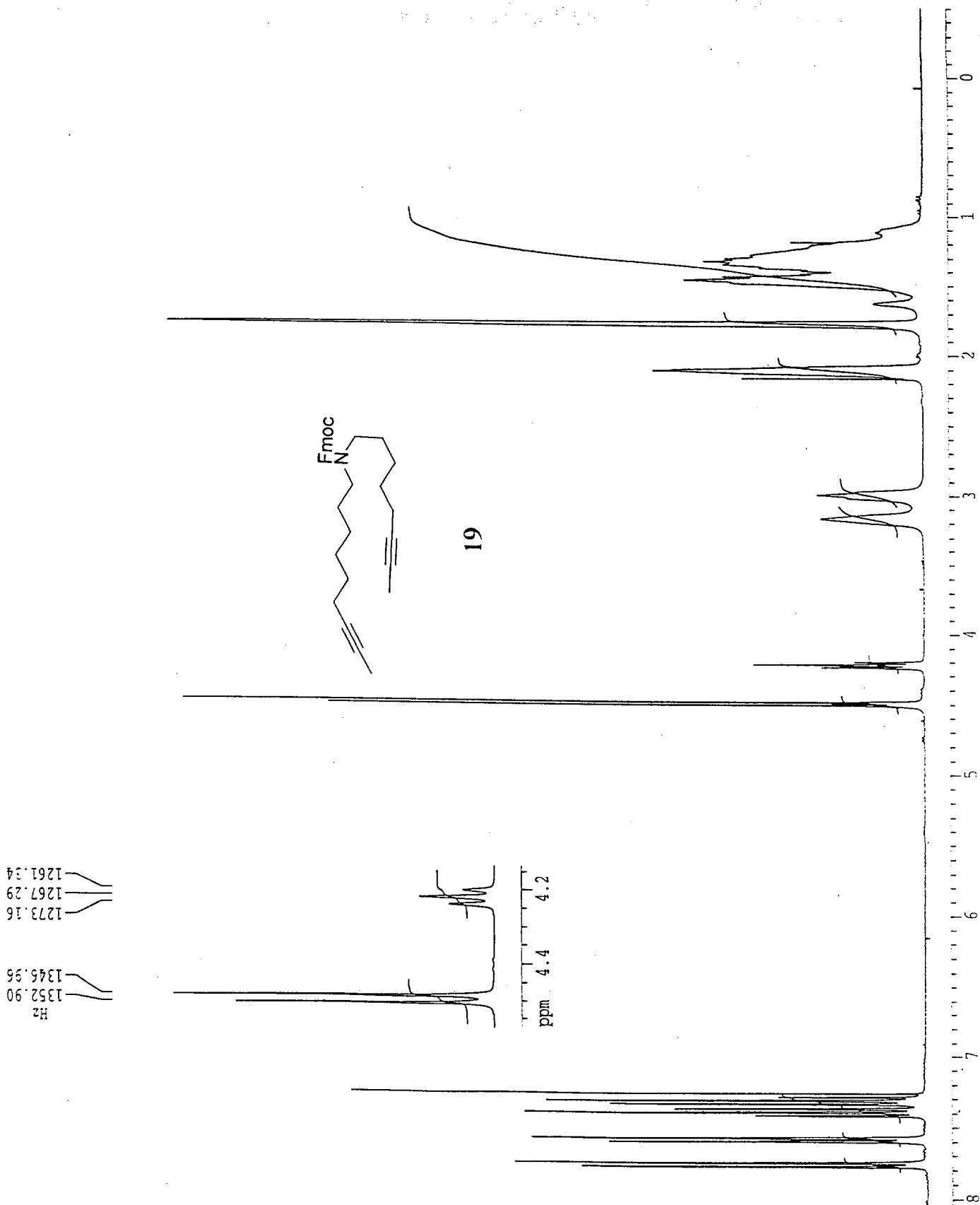


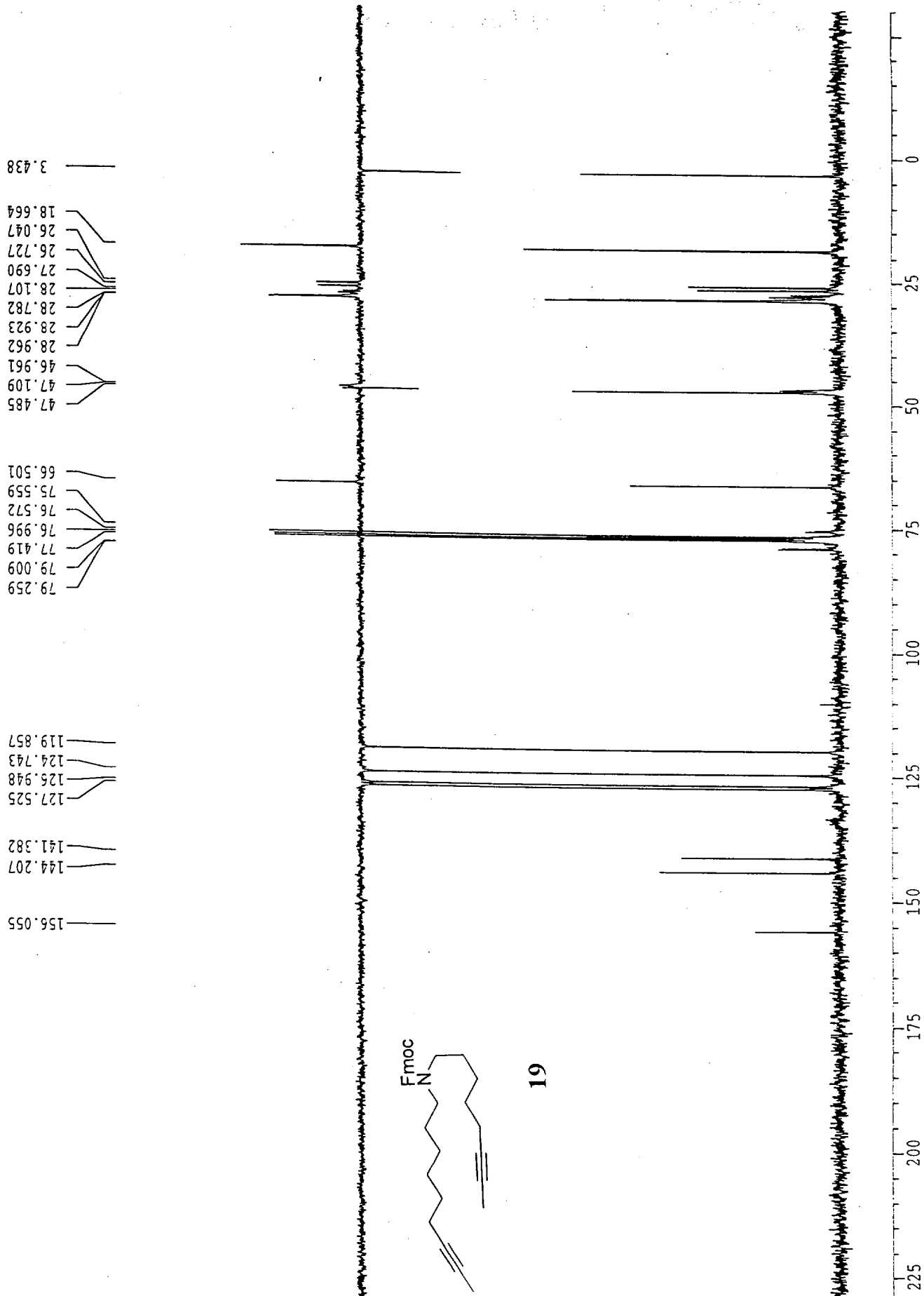


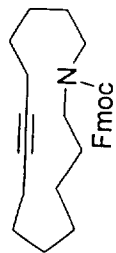
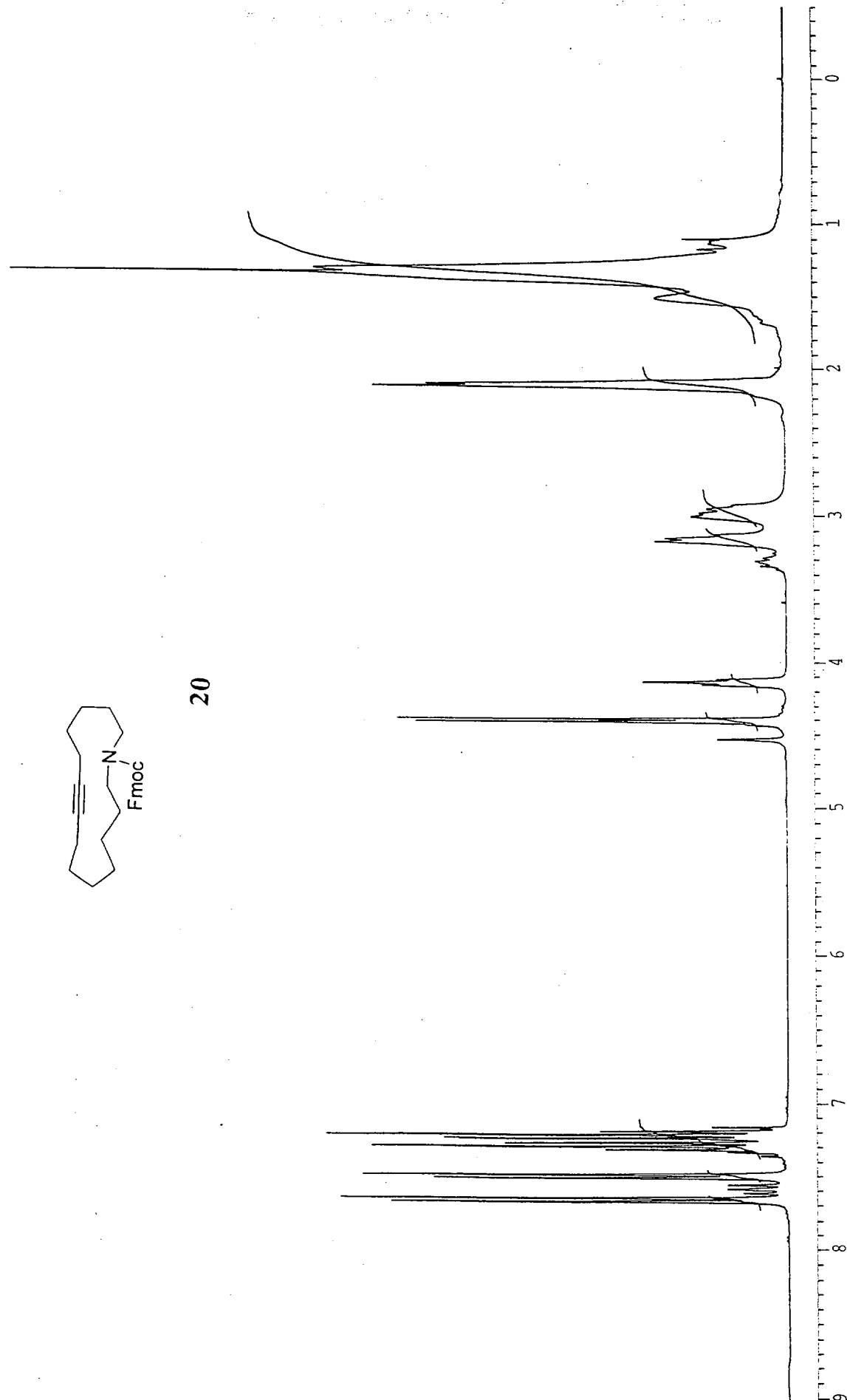




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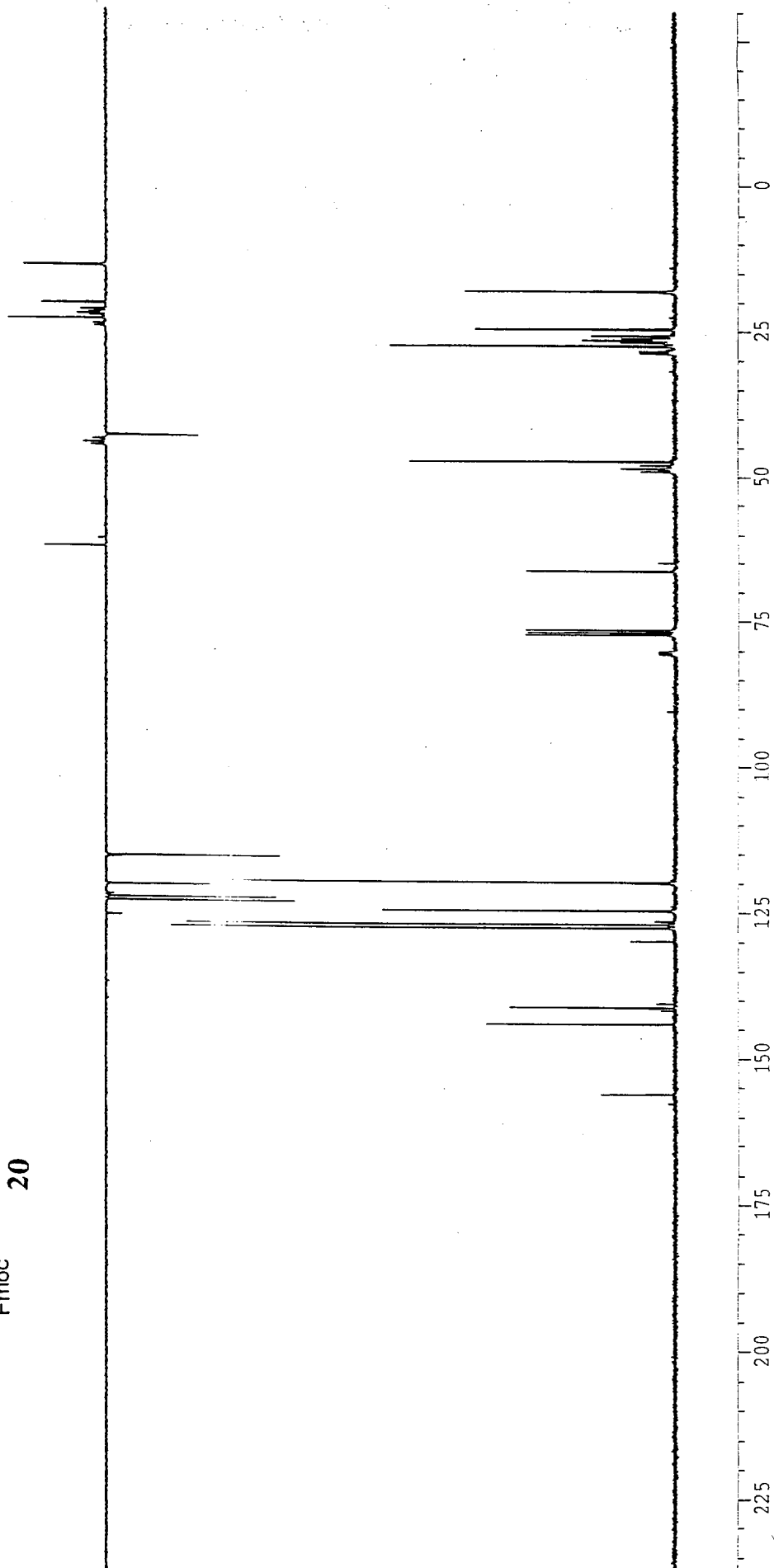
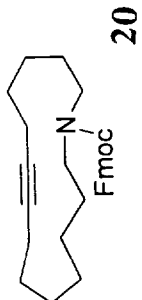


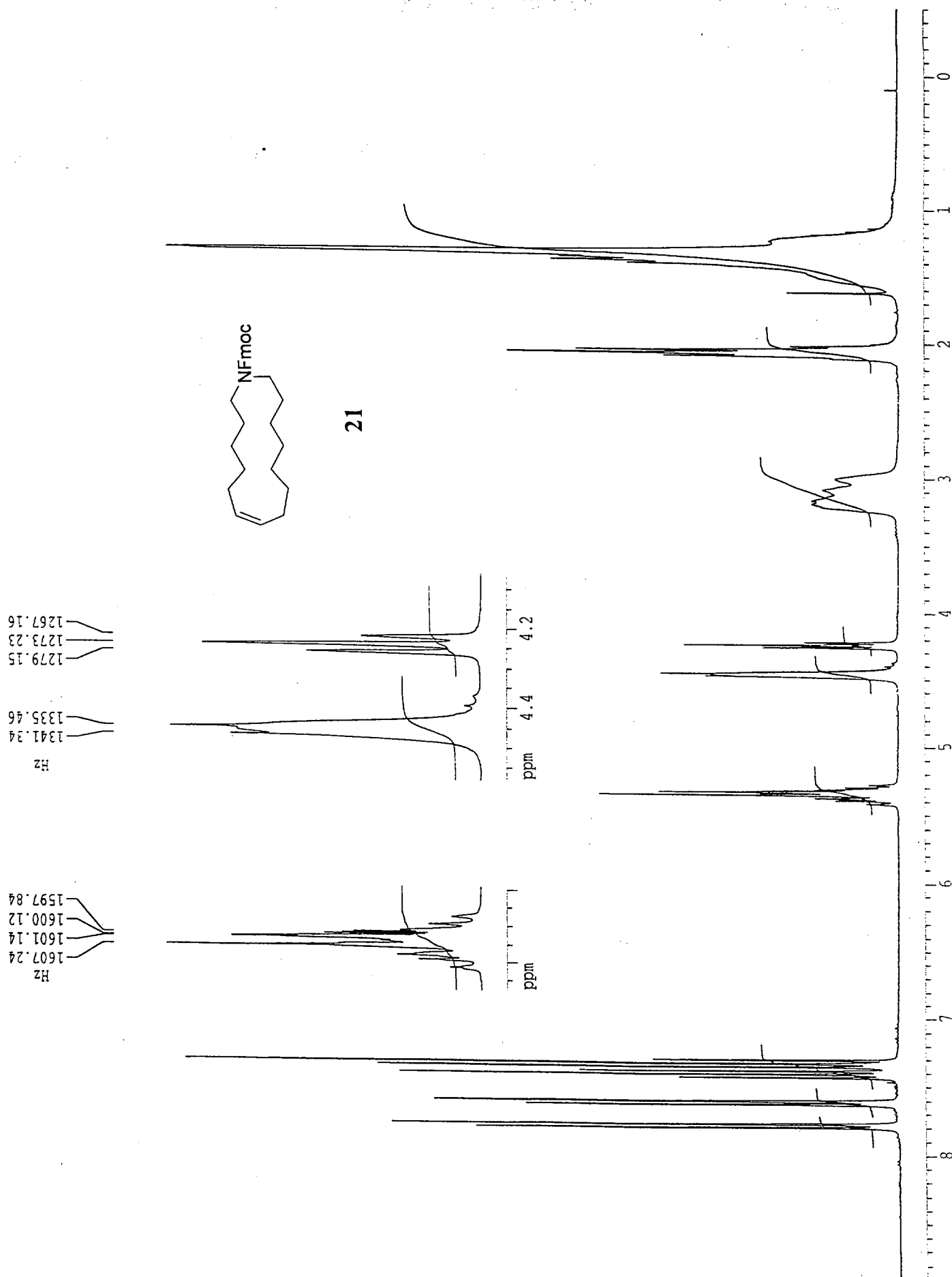


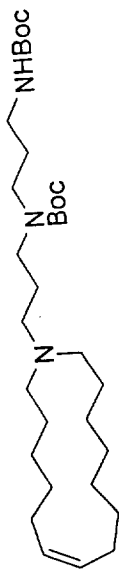


20

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