SUPPLIMENTARY INFORMATION.
(37 Pages) 1

Table 1: Spectral Data

1. **N–(*p*–Toluenesulfonyl)–2-formylaziridine :**

Liquid ,^{1}H NMR (200 MHz, $CDCl_3$) : δ 9.10 (1H, s), 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 4.25–4.40 (m, 1H), 4.15–4.20 (m, 1H), 3.25–3.35 (dd, 1H, J=4.4 & 2.9 Hz), 2.45 (s, 3H).

2. **N–(*p*–Toluenesulfonyl)-3-methyl–2-formylaziridine :**

m.p. 106°C, IR ($CHCl_3$, cm^{-1}) : 3020, 2955, 2928, 1596, 1540, 1437, 1403, 1336, 1277, 1215, 1153, 1082, 1037, 755; ^{1}H NMR (200 MHz, $CDCl_3$) : δ 9.19 (1H, s), 7.85 (2H, d, J = 8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 3.67 (1H, q, J=6.2 H), 2.45 (3H, s), 1.60 (1H, s), 1.49 (3H, d); Anal. Calcd for $C_{11}H_{13}NO_3S$: C, 55.21, H, 5.47, N, 5.85, S, 13.40%; Found : C, 55.19, H, 5.47, N, 5.85, S, 13.37 %.

3. **N–(*p*–Toluenesulfonyl)–2–acetylaziridine :**

Viscous liquid; IR (Nujol , cm^{-1}) : 3120, 3056, 2986, 2926, 1717, 1407, 1333, 1264, 1163, 1092, 902, 739; ^{1}H NMR (200 MHz, $CDCl_3$) : δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 3.29 (1H, dd, J=4.4, 2.9 Hz), 2.81 (1H, d, J=7.8 Hz), 2.50 (1H, d, J=2.9 Hz), 2.47 (3H, s), 2.08 (3H, s); Anal. Calcd for $C_{11}H_{13}NO_3S$: C, 55.21, H, 5.47, N, 5.85, S, 13.40 %; Found : C, 55.17, H, 5.48, N, 5.83, S, 13.37 %.

4. **N–(*p*–Toluenesulfonyl)–2–acetyl-3,3' dimethylaziridine :**

Viscous liquid; IR ($CHCl_3$, cm^{-1}) :3398, 3139, 3023, 2964, 2927, 1717, 1699, 1451, 1401, 1325, 1217, 1157, 1091, 1048; ^{1}H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 3.50 (1H, s), 2.45 (3H, s), 1.95 (3H, s), 1.80 (3H, s), 1.30 (3H, s); ^{13}C NMR (200 MHz, $CDCl_3$): δ 20.85, 21.37, 21.71, 28.39, 53.08, 55.03, 127.23, 129.49, 137.33, 144.13, 201.63; MS : m/z (% rel. intensity) : 224 (6),

155 (14), 139 (6), 113 (15), 112 (100), 91 (73), 84 (21), 71 (32), 70 (87), 65 (47), 55 (9); Anal. Calcd for $C_{13}H_{17}NO_3S$: C, 58.40; H, 6.40; N, 5.23; S, 11.99 %; Found : C, 58.41; H, 6.42; N, 5.25; S, 11.99 %.

5. **N–(p–Toluenesulfonyl)–2-hydroxymethylaziridine:**

m.p. 131°C; IR ($CHCl_3$, cm^{-1}) : 3524, 3300, 3175, 2922, 2854, 1456, 1376, 1317, 1154, 1081; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J =8.2 Hz, 7.35 (2H, d, J=8.2 Hz),5.5-5.8 (1H, m), 3.5-3.7 (2H, m), 2.9-3.1 (2H, m), 2.45 (3H, s); MS : m/z (rel. intensity) : 227 (M^+, 3), 225 (4), 215 (10), 214 (100), 197 (7), 184 (19), 155. (80), 139 (15), 133 (7), 92 (13), 91 (97), 77(5), 65(23); Anal. Calcd for $C_{10}H_{13}NO_3S$: C, 52.84, H, 5.76, N, 6.16, S, 14.10 %; Found: C, 52.80, H, 5.74, N, 6.15, S, 14.11 %.

6. **N–(p-Toluenesulfonyl)–2-methyl-3-hydroxymethylaziridine:**

IR (Nujol , cm^{-1}) : 3500, 3250, 3000, 2860, 2840, 1775, 1700, 1575, 1455; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 4.00 (1H, m), 3.80 (1H, m), 3.00 (2H, m), 2.45 (3H, s), 1.45 (3H, d, J=5.9 Hz); MS : m/z (% rel. intensity) : 241 (M^+,1), 223 (1), 210 (4), 198 (9), 171(8), 155(36), 139(6), 107(6), 91(95), 86(97), 77(5), 65(37), 58(100); Anal. Calcd for $C_{11}H_{15}NO_3S$: C, 54.75, H, 6.25, N, 5.80, S, 13.28 %; Found :C, 54.75, H,6.27, N, 5.83, S, 13.29 %.

7. **N–(*p*–Toluenesulfonyl)–2-methyl–2'-hydroxymethylaziridine:**

^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 3.50 (2H, d, J=6.5 Hz), 3.00 (2H, d J=6.5 Hz), 2.35 (2H, s), 0.95 (3H, s); ^{13}C NMR (200 MHz, $CDCl_3$): δ 19.13, 21.63, 48.87, 59.64, 66.88, 127.05, 129.88, 136.83, 143.59; MS : m/z (% rel. intensity) : 230 (4), 229 (7), 228 (42), 184 (5), 155 (40), 139 (8), 92

(22), 91 (100), 72 (21), 71 (27), 65 (66), 56 (23); Anal. Calcd for $C_{11}H_{15}NO_3S$: C, 54.75, H, 6.25, N, 5.80, S, 13.28 %; Found : C, 54.70, H, 6.23, N, 5.81, S, 13.26 %.

8. **2-Hydroxy-6-methyl-7-[Methyl-7-(phenylsulfonyl)-7-Azabicyclo[4.1.0]heptane:**

IR (Nujol , cm^{-1}) : 3540, 3400, 3300, 3040, 2950, 1620, 1460, 1425, 1345, 1230, 1180, 1105, 780, 685; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 3.9–4.1 (1H, m), 3.35 (1H, d, J=4.94 Hz), 2.45 (3H, s), 1.95–2.1 (2H, m), 1.85 (1H, bs), 1.75 (3H, s), 1.2–1.55 (4H, m); MS : m/z (rel. intensity) : 281(M^+, 4), 263 (2), 253 (4), 237 (10), 224 (10), 210 (5), 171 (28), 155 (38), 139 (5), 126 (71); Anal. Calcd for $C_{14}H_{19}NO_3S$: C, 59.76; H, 6.80; N,4.97; S, 11.39 %. Found : C, 59.75; H, 6.78; N, 4.97; S, 11.35%.

9. **2-(1′,3′-Dioxalane)-6-methyl7-[4-methyl-7-(phenylsulfonyl)-7-Azabicyclo[4.1.0] heptane:**

IR (Nujol , cm^{-1}) : 2890 – 2990, 1620, 1470, 1420, 1300 – 1335, 1230, 1170, 1105, 1045, 1010, 960, 900; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 4.4 (1H, d, J=7.3 Hz), 3.4–3.8 (4 H, m), 3.2 (1H, dd, J=7.3, 4.6 Hz), 2.45 (3H, s), 1.75–2.3 (2H, m), 1.70 (3H, m); MS : m/z (rel. intensity) : 337 (M^+, 12), 275 (14), 264 (16), 244 (10), 224 (10), 207 (8), 200 (2), 182 (100), 167 (10), 155 (10), 138 (10), 120 (27), 110 (22), 99 (17), 91 (40), 73 (70), 65 (15), 55 (7).

Anal. Calcd. for $C_{17}H_{23}NO_4S$: C, 60.51; H, 6.86; N,4.15; S, 18.96 %.Found : C, 60.53; H, 6.87; N,4.19; S, 18.97 %.

10. **N–(*p*–Toluenesulfonyl)–2-bromomethylaziridine :**

m.p. 76-77 °C; IR (Nujol, cm^{-1}) : 3277, 3200, 3175, 3164, 3150, 3132, 3029, 2981, 2957, 2926, 1597, 1403, 1328, 1292, 1160, 1119, 1093; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 5.0–5.25 (1H,m), 4.1-4.3 (1H, m), 3.7–3.8 (1H, m), 3.50–3.65 (1H, m), 2.45 (3H, s). MS : m/z (rel. intensity) : 290 (M+1,3), 210 (4), 184 (47), 155 (43), 91 (100, 89 (14), 65 (44), 56 (32), 134 (5), 105 (6), 79 (6); ^{13}C NMR (200 MHz, $CDCl_3$): δ 21.36, 32.82, 47.20, 49.92, 126.99, 129.77, 136.69, 143.77; Anal. Calcd for $C_{10}H_{12}NO_2S$: C, 41.39; H, 4.16; N,4.82; S, 11.05; Br, 27.53 %.Found : C,41.37; H, 4.17; N,4.81; S, 11.05; Br, 27.50 %.

11. **N–(*p*–Toluenesulfonyl)–2-phenylaziridine :**

m.p. 94 – 96 °C; IR (Nujol, cm^{-1}) : 3933, 3321, 3130, 3025, 2956, 2926, 1696, 1528, 1455, 1399, 1324, 1219, 1187, 1160, 1092, 911; ^1H NMR (200 MHz, $CDCl_3$): δ 7.90 (2H, d, J=8.2 Hz), 7.15–7.45 (7H, m), 3.80 (1H, dd, J=7.3 & 4.6 Hz), 3.00 (1H, d, J=7.3 Hz), 2.45 (3H, s), 2.40 (1H, d, J=4.6 Hz) ; ^{13}C NMR (200 MHz, $CDCl_3$): δ 23.5, 37, 42.5, 127, 128, 128.5, 129, 130, 135.5; MS : m/z (% rel. intensity) : 273 (M+, 2), 155 (2), 139 (2), 119 (10), 118 (100), 117 (18), 107 (5), 91 (93), 65 (7); Anal. Calcd. for $C_{15}H_{15}NO_2S$: C, 65.91, H, 5.52, N,5.12, S, 11.73 %; Found : C, 65.89, H, 5.52, N,5.11, S, 11.70 %.

12. **N-(*p*–Toluenesulfonyl) indeneaziridine :**

m.p. 165°C; IR (Nujol, cm^{-1}) : 3280, 2910–2980, 2880, 1480, 1400, 1355-1370, 1323, 1250, 1158, 1130, 1090, 915, 840, 770, 750, 675; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.15–7.50 (6H, m), 4.2–4.40 (1H, m), 3.6

(1H,dd, J=8.1 & 7.02 Hz), 3.15–3.35 (1H, dd, J=8.1 & 7.02 Hz), 2.45 (3H, s), 2.40 (1H, d, J=6.48 Hz); ^{13}C NMR (200 MHz, $CDCl_3$): δ 21.43, 41.02, 51.62, 67.09, 124.60, 127.26, 127.66, 129.07, 129.64, 137.42, 139.25, 140.07, 143.62; MS : m/z (% rel. intensity) : 214 (14), 212 (15), 134 (10), 133 (100), 132 (18), 115 (32), 105 (23), 103 (18), 91(6), 79 (11), 77 (27), 55 (16), 51(16); Anal. Calcd for $C_{16}H_{15}NO_2S$: C, 67.34, H, 5.29, N, 4.90, S, 11.23 %; Found : C, 67.0, H, 5.27, N, 4.91, S, 11.21%.

13. **N–(*p*–Toluenesulfonyl)–2,3-biphenylaziridine :**

IR (Nujol, cm^{-1}) : 3000, 2800, 2650, 1450, 1380, 1240, 1180, 1020, 980; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.05-7.7 (12H, m), 4.25 (2H, s), 2.40 (3H, s); MS : m/z (% rel. intensity) : 349 (M^+,7), 261 (3), 260 (3), 195 (12), 194 (100), 180 (8), 179 (6), 178 (6), 167 (15), 165 (21), 152 (7), 116 (12), 105 (9), 91 (20), 89 (12), 77 (7), 65 (13); Anal. Calcd for $C_{21}H_{19}NO_2S$: C, 72.18; H, 5.47; N, 4.00; S, 9.17%. Found : C, 72.20, 5.41, N, 3.98, S, 9.12%.

14. **7-[4-Methyl-7-(phenylsulfonyl)-7-azabicyclo[4.1.0] heptane :**

Viscous liquid; IR (Neat, cm^{-1}) : 2937, 2862, 1597, 1439, 1400, 1320, 1238, 1184, 1156, 1091, 964, 920; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 2.95 (2H, t, J=4.3 Hz), 2.40 (3H, s), 1.65-1.80 (4H, m), 1.05-1.45 (4H, m); ^{13}C NMR (200 MHz, $CDCl_3$) : δ 19.5, 21.5, 22.9, 40, 127.23, 129.49, 137.3, 144.1; MS : m/z (% rel. intensity) : 252 (M+1,7), 96 (100), 55 (8), 65 (22), 69 (45), 91 (50), 96 (100), 97 (8), 133 (2), 155 (18), 172 (6), 200 (2), 210 (15), 252 (6); Anal. Calcd for $C_{13}H_{17}NO_2S$: C, 62.12, H, 6.81, N, 5.57, S, 12.75 %; Found : C, 62.08, H,6.81, N, 5.52, S, 12.74 %.

15. **9-[4-Methyl-9-(phenylsulfonyl)-9-azabicyclo[6.1.0] nonane :**

m.p. 123 °C; IR (nujol, cm^{-1}): 2940, 2860, 1597, 1442, 1403, 1320, 1237, 1184, 1159, 1091, 964; ^1H NMR (200 MHz, $CDCl_3$) : δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J= 8.2 Hz), 2.80 (2H, m), 2.45 (3H, m), 2.05 (2H, m), 1.30–1.70 (10H, m); MS : m/z (% rel. intensity) : 279 (M^+, 2), 250 (1), 210 (10), 155 (5), 125 (10), 124 (100), 98 (15), 91 (23), 90 (15), 79 (6), 65 (12), 55 (21), 28 (1); Anal. Calcd for $C_{15}H_{21}NO_2S$: C, 64.48, H, 7.56, N, 5.01, S, 11.47 %; Found : C, 64.52, H, 7.59, N, 5.01, S,11.50 %.

16. **N-(*p*-Toluenesulphonyl)-3-azatricyclo[3.2.1.$0^{2,4exo}$] octane :**

m.p. 123 °C ; IR ($CHCl_3$) 3017, 1310, 1296, 1277, 1138, 1080, 961, 895, cm^{-1}; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J= 8.2 Hz), 3.8-4.0 (2H, m), 2.45 (3H, s), 2.0-2.2 (2H, m), 1.7-1.9 (2H, m), 1.4 –1.6 (2H, m), 1.1-1.3 (2H, m); MS : m/z (% rel. intensity) : 264 (M^+, 83), 198(100), 155(65), 139(7), 133(18), 106(7), 91(73), 81(10), 78(8), 67(56), 65(23), 53(5). Anal. Calcd for $C_{14}H_{17}NO_2S$: C, 63.85, H, 6.50, N, 5.31, S, 12.17 %; Found : C, 63.80 H, 6.50, N, 5.27, S, 12.14 %.

17. **N–(*p*–Toluenesulfonyl)–2-butylaziridine :**

Viscous liquid; IR (Neat, cm^{-1}): 3300, 3000, 2255, 1600, 1518, 1405, 1355, 1330, 1250, 1146; ^1H NMR (200 MHz, $CDCl_3$) : δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 2.70 (1H, m), 2.45 (3H, s), 2.20 (1H, d, J=7.3 Hz), 1.9 (1H, d, J=5.2 Hz), 1.10-1.50 (m, 5H), 0.6-0.9 (m, 4H); Anal. Calcd for $C_{13}H_{19}NO_2S$: C, 61.63, H, 7.55, N, 5.52, S, 12.65%; Found: C, 61.67, H, 7.56 N, 5.52, S, 12.69 %.

18. **N–(*p*–Toluenesulfonyl)–2-decylaziridine :**

Viscous liquid; IR (neat, cm^{-1}): 3300, 3000, 2250, 1600, 1520, 1400, 1355, 1330, 1250, 1140, 1090; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 2.70 (1H, m), 2.45 (3H, s), 2.20 (1H, d), 2.10 (1H, d, J=7.4 Hz), 1.05 – 1.50 (18H, m), 0.95 (3H, t, J = 6.3 Hz); Anal. Calcd for $C_{19}H_{31}NO_2S$: C, 61.63, H, 9.24, N, 4.14, S, 9.50 %; Found : C, 61.59, H, 9.24, N, 4.12, S, 9.48 %.

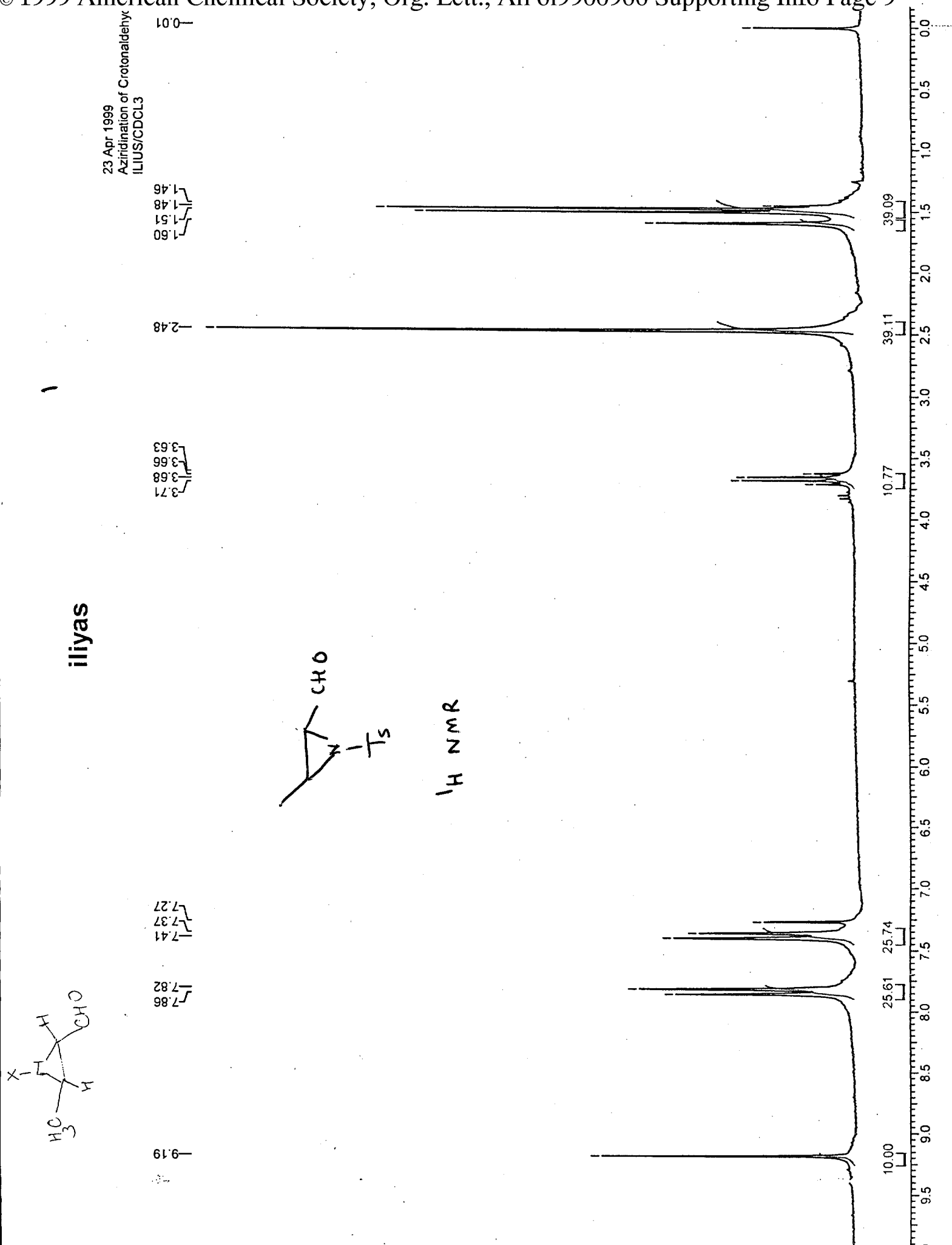
19. **N–(*p*–Toluenesulfonyl)–2-vinylaziridine :**

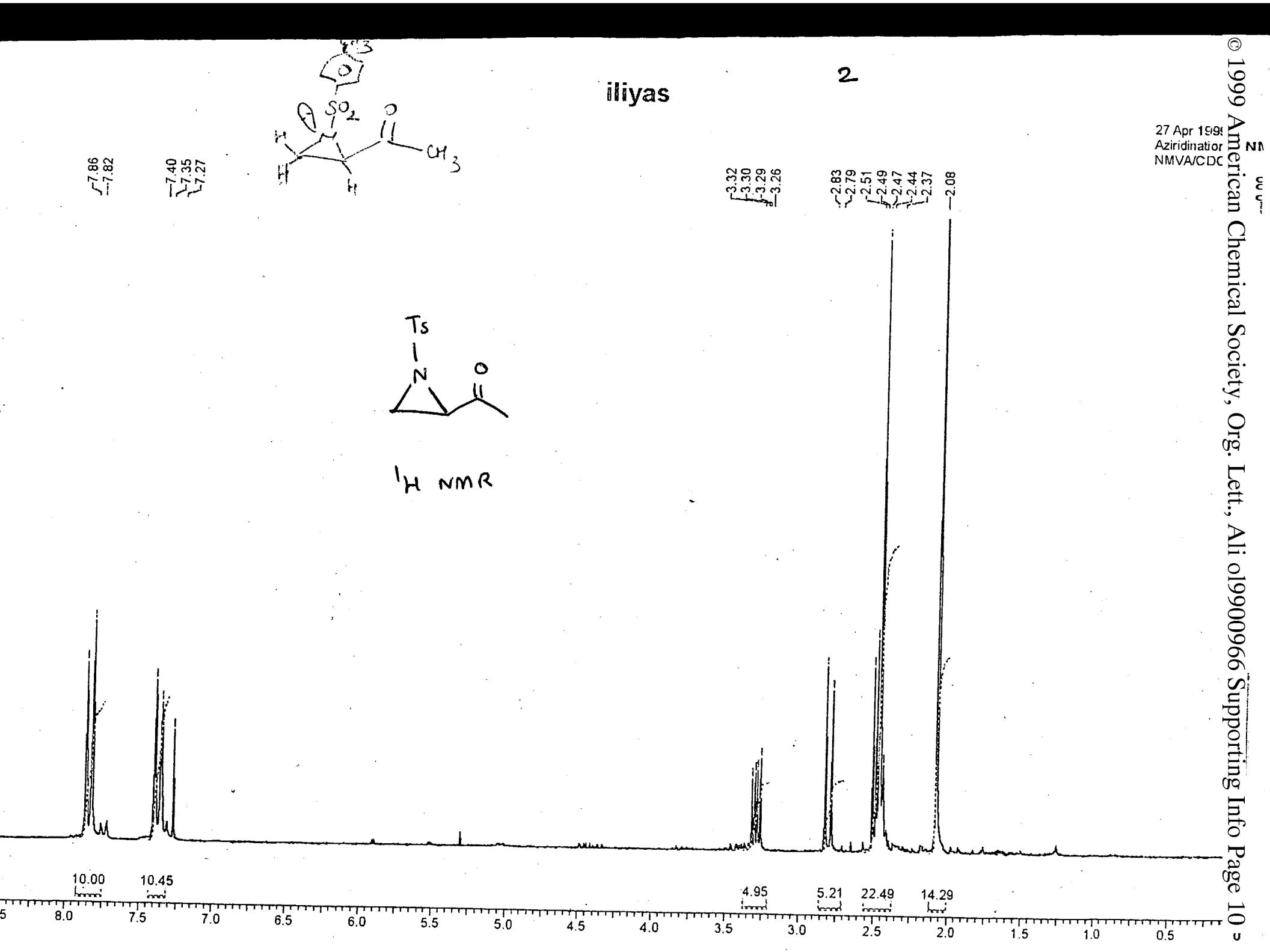
Viscous liquid; IR (Neat, cm^{-1}): 3134, 3090, 3023, 2996, 2957, 2925, 1597, 1447, 1404, 1325,1220, 1159, 1092, 984, 933, 841; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 5.45 (2H, m), 5.25 (1H, dd, J=5.21 & 2.79 Hz), 3.25 (1H, m), 2.80 (1H, d, J=7.2 Hz), 2.45 (3H, s), 2.25(1H, d, J=4.51 Hz); ^{13}C NMR (200 MHz, $CDCl_3$) : δ 21.72, 34.34, 41.07, 120.24, 128.02, 129.89, 133.21, 135.63, 144.70; MS : m/z (% rel. intensity) : 223 (M^+, 31), 222 (12), 155 (47), 92 (17), 91 (68), 68 (100), 65 (30), 41 (59), 49 (42); Anal. Calcd for $C_{11}H_{13}NO_2S$: C, 59.17; H, 5.90; N, 6.27, S, 14.36 %; Found : C, 59.14; H, 5.91; N, 6.26, S, 14.31 %.

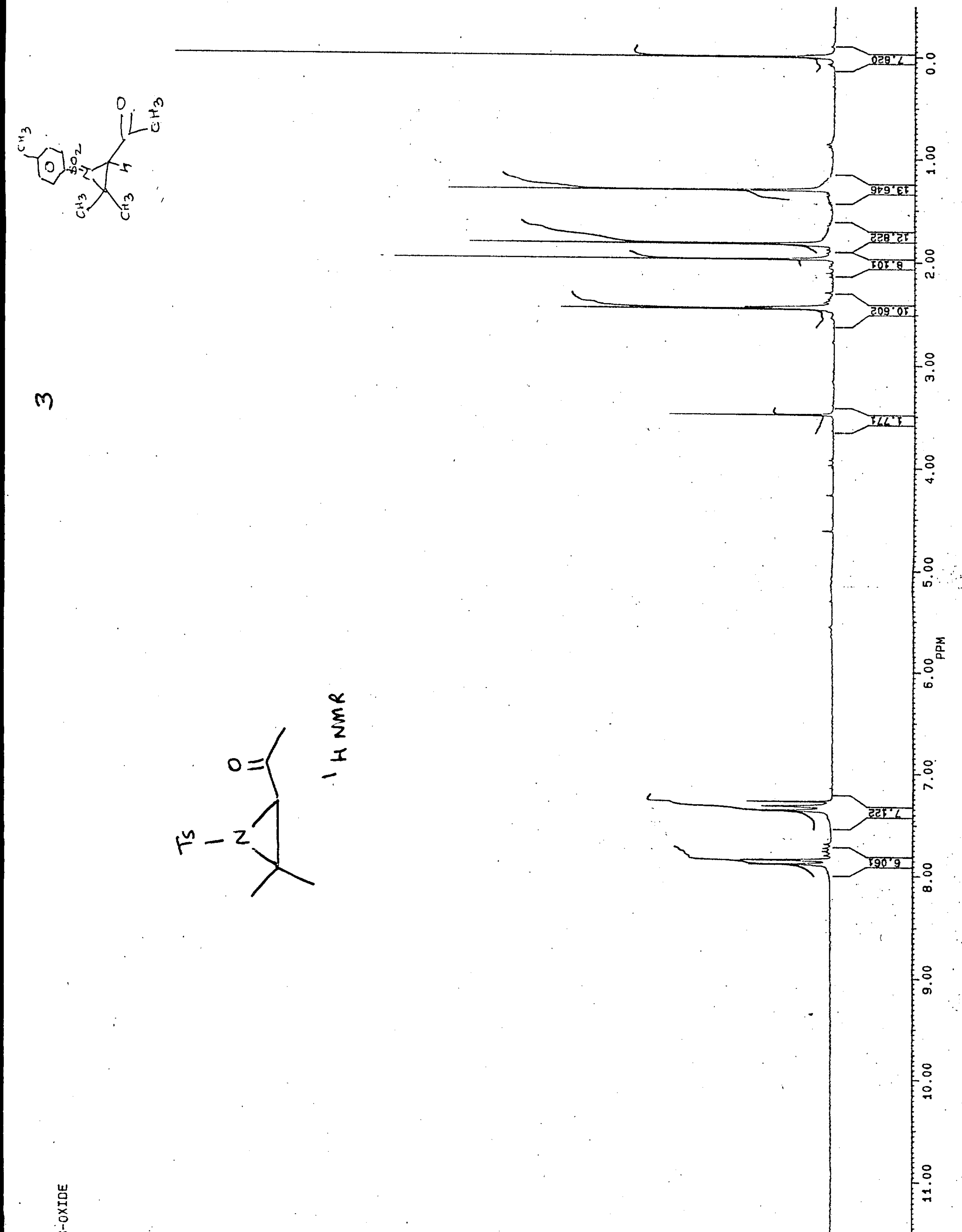
20. **2 -oxo-7-[Methyl-(7-phenylsulphonyl)-7-azabicyclo[4.1.0]heptane:**

Viscous liquid; IR (Neat, cm^{-1}) : 3410, 3284, 3275, 3132, 3020, 2955, 2928, 2859, 1596, 1540, 1437, 1403, 1336, 1277, 1215, 1153, 1082, 1037, 755; ^1H NMR (200 MHz, $CDCl_3$): δ 7.85 (2H, d, J=8.2 Hz), 7.35 (2H, d, J=8.2 Hz), 5.1-5.3 (1H, m), 3.8-4.1 (1H, m), 3.5-3.7 (2H, m), 2.45 (3H, s), 1.5- 2.1 (4H, m); MS : m/z (% rel. intensity) : 253 (M^+,3), 236 (2), 213 (4), 175 (5), 155 (51), 139 (66),

98 (37), 91 (100), 71 (87), 65 (34); Anal. Calcd for $C_{12}H_{15}NO_3S$: C, 56.90, H, 5.96, N, 5.52, S, 12.65 %; Found : C, 56.91, H, 5.98, N, 5.55, S, 12.69 %.



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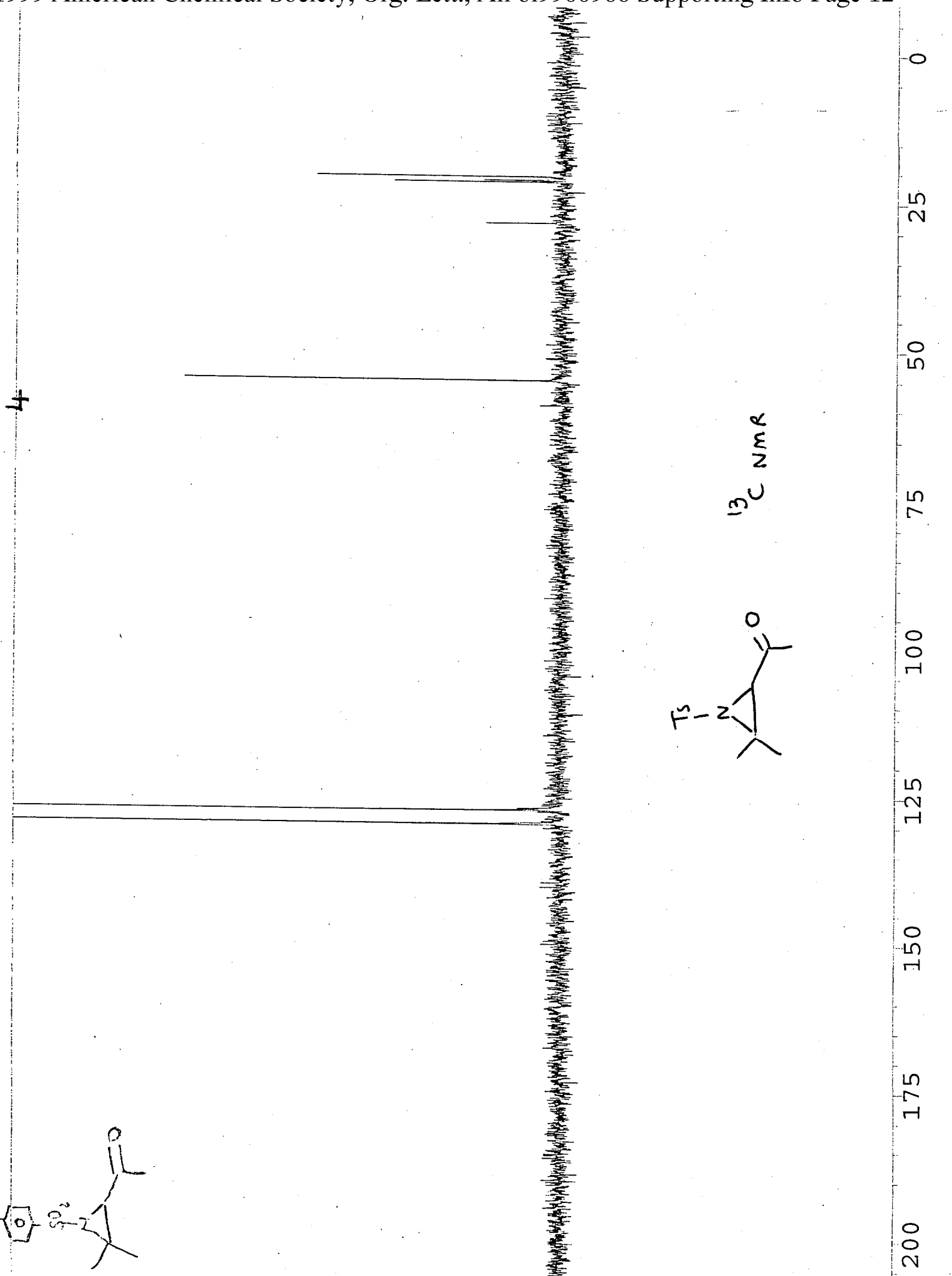

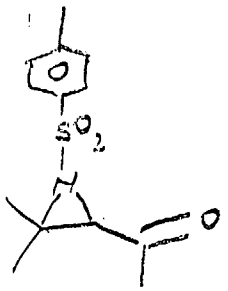

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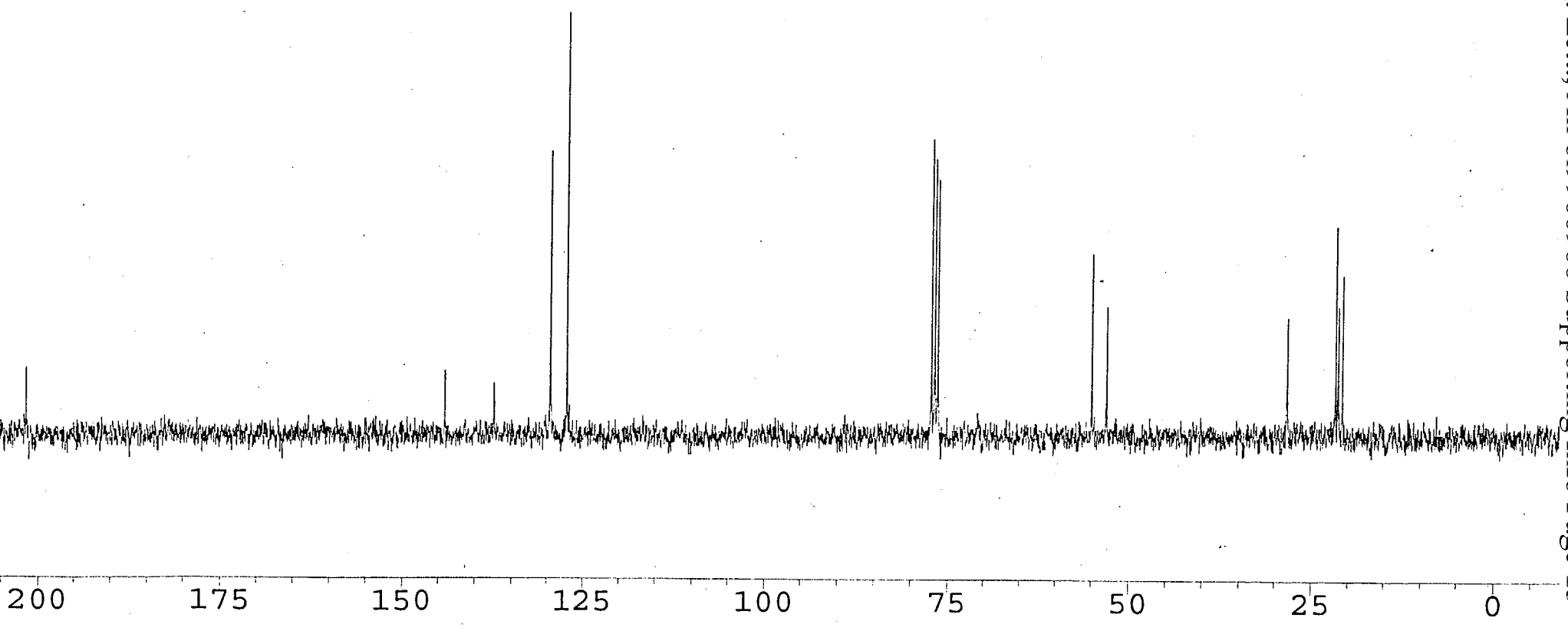

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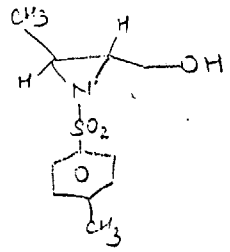

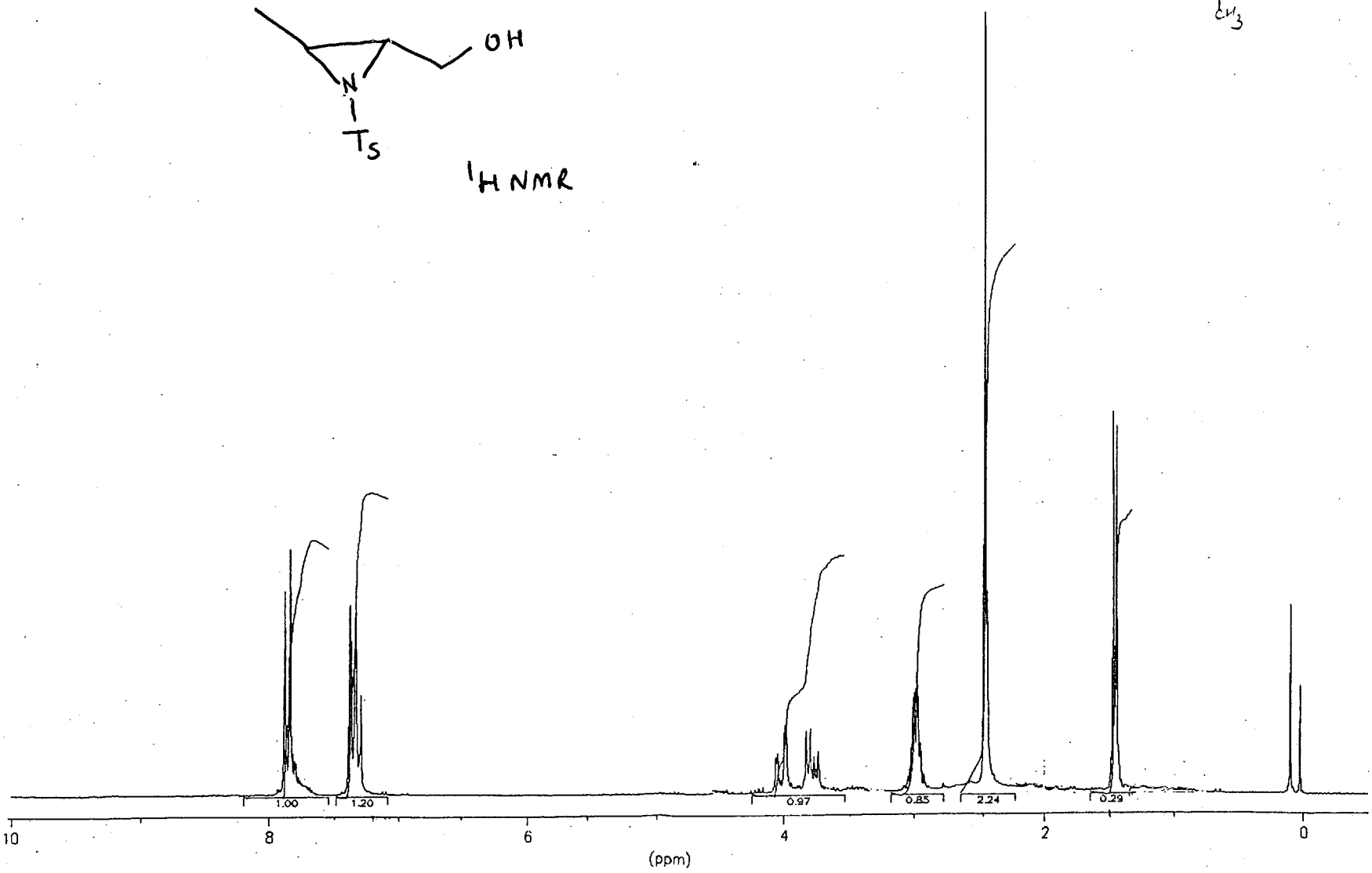

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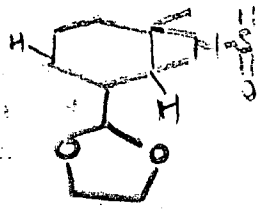

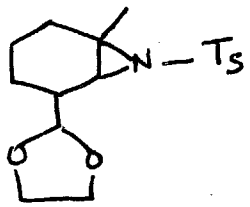

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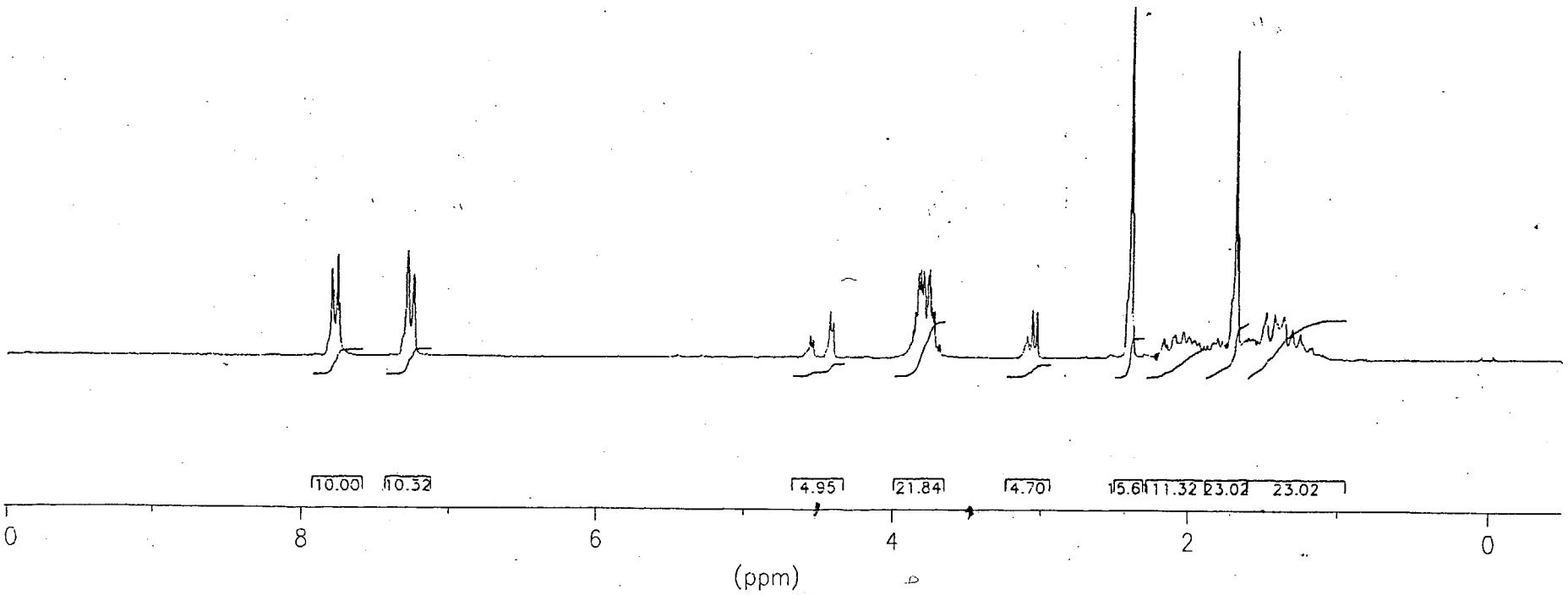
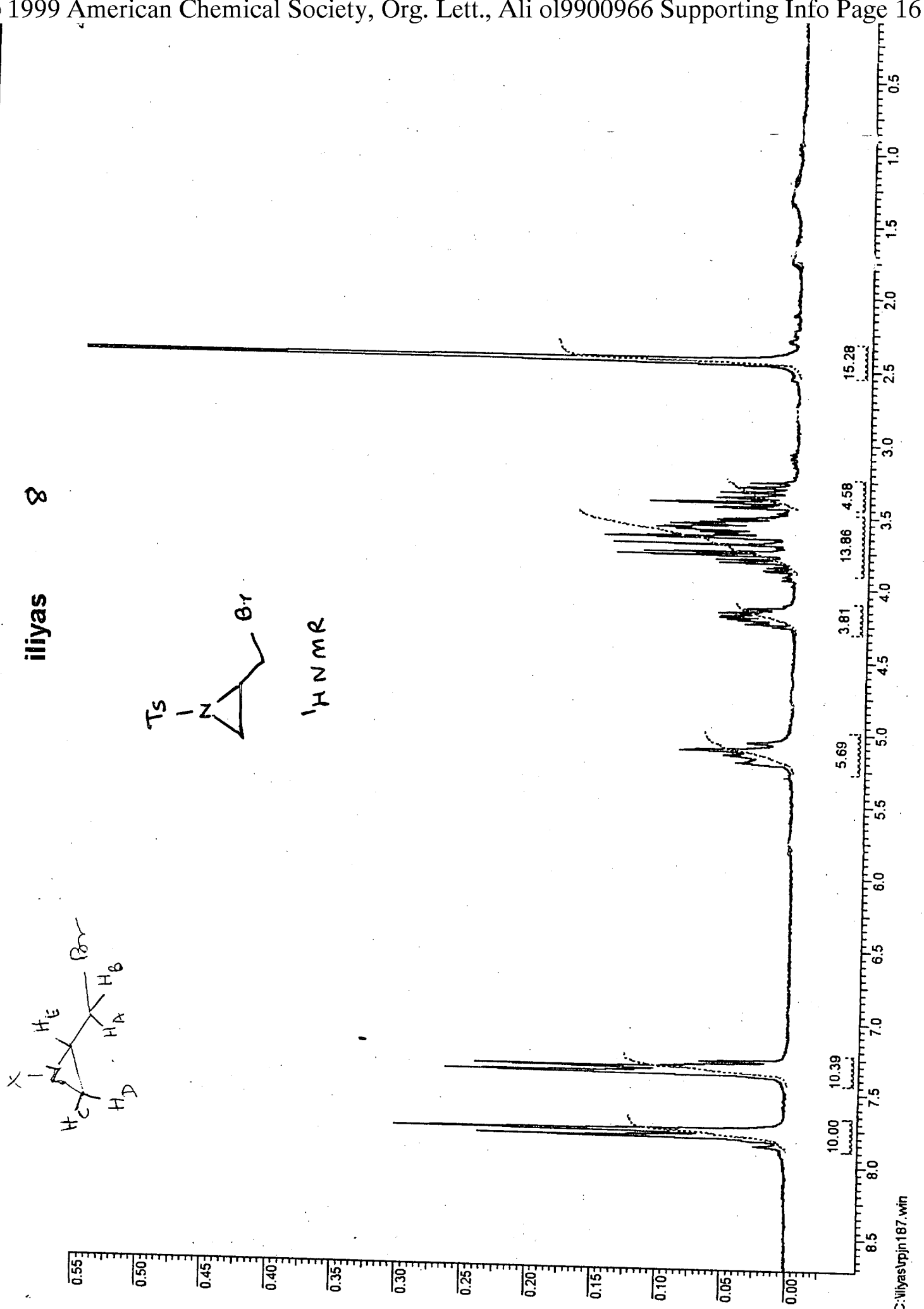
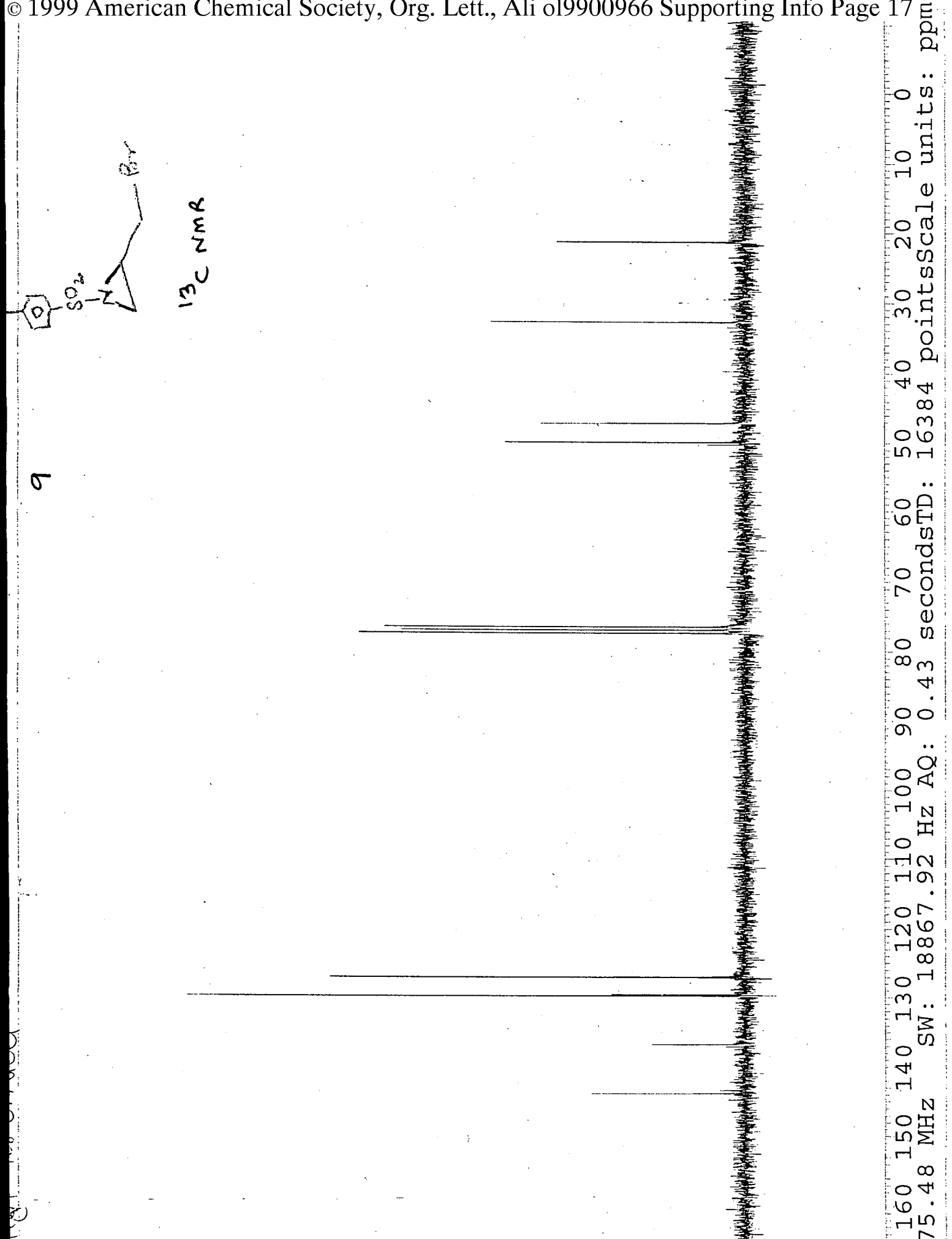
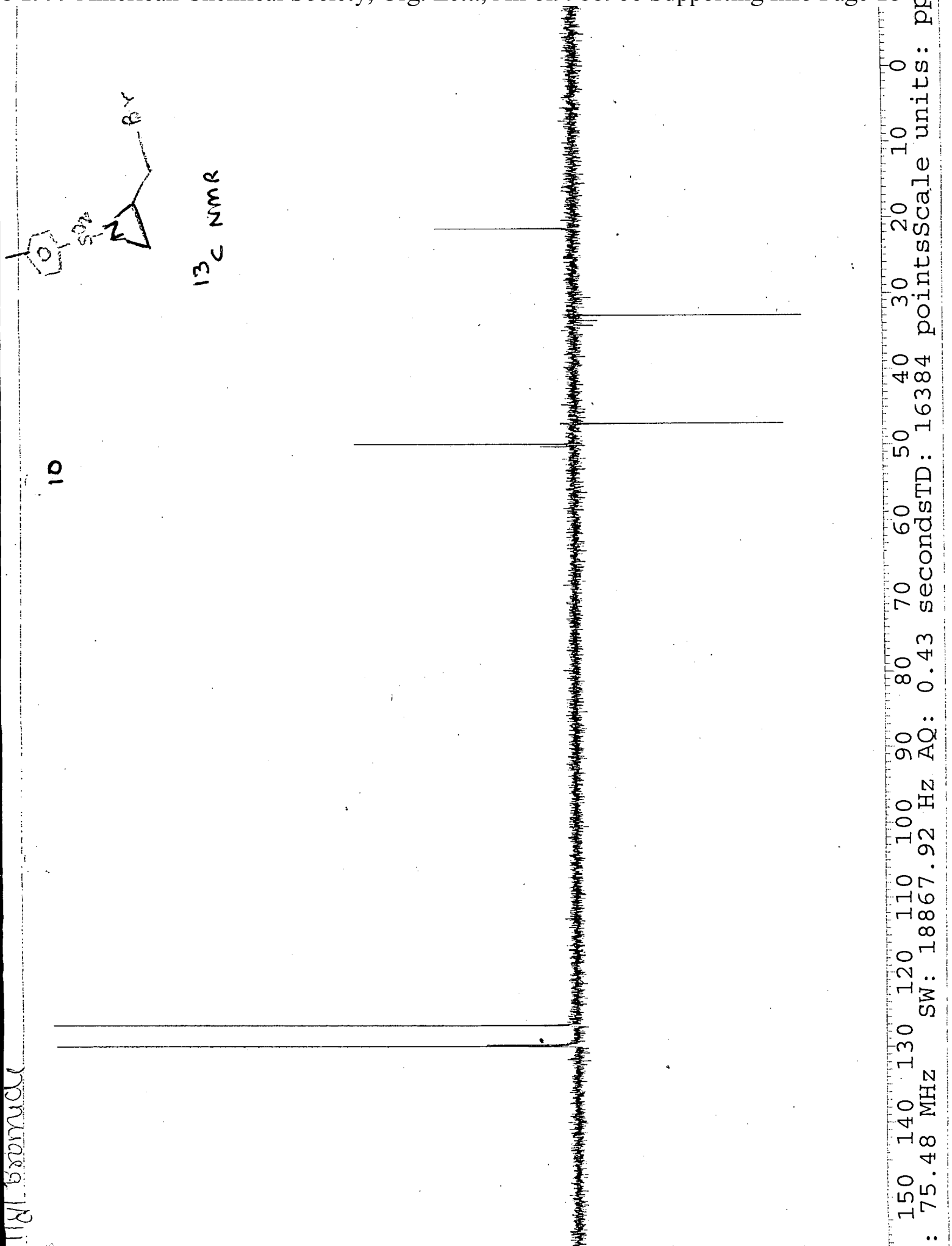





9
13C NMR
160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
75.48 MHz SW: 18867.92 Hz AQ: 0.43 secondsTD: 16384 pointsScale units: ppm



None

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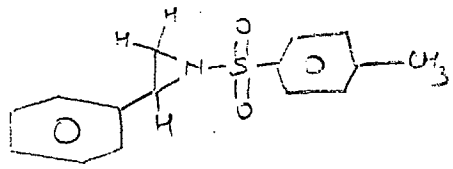
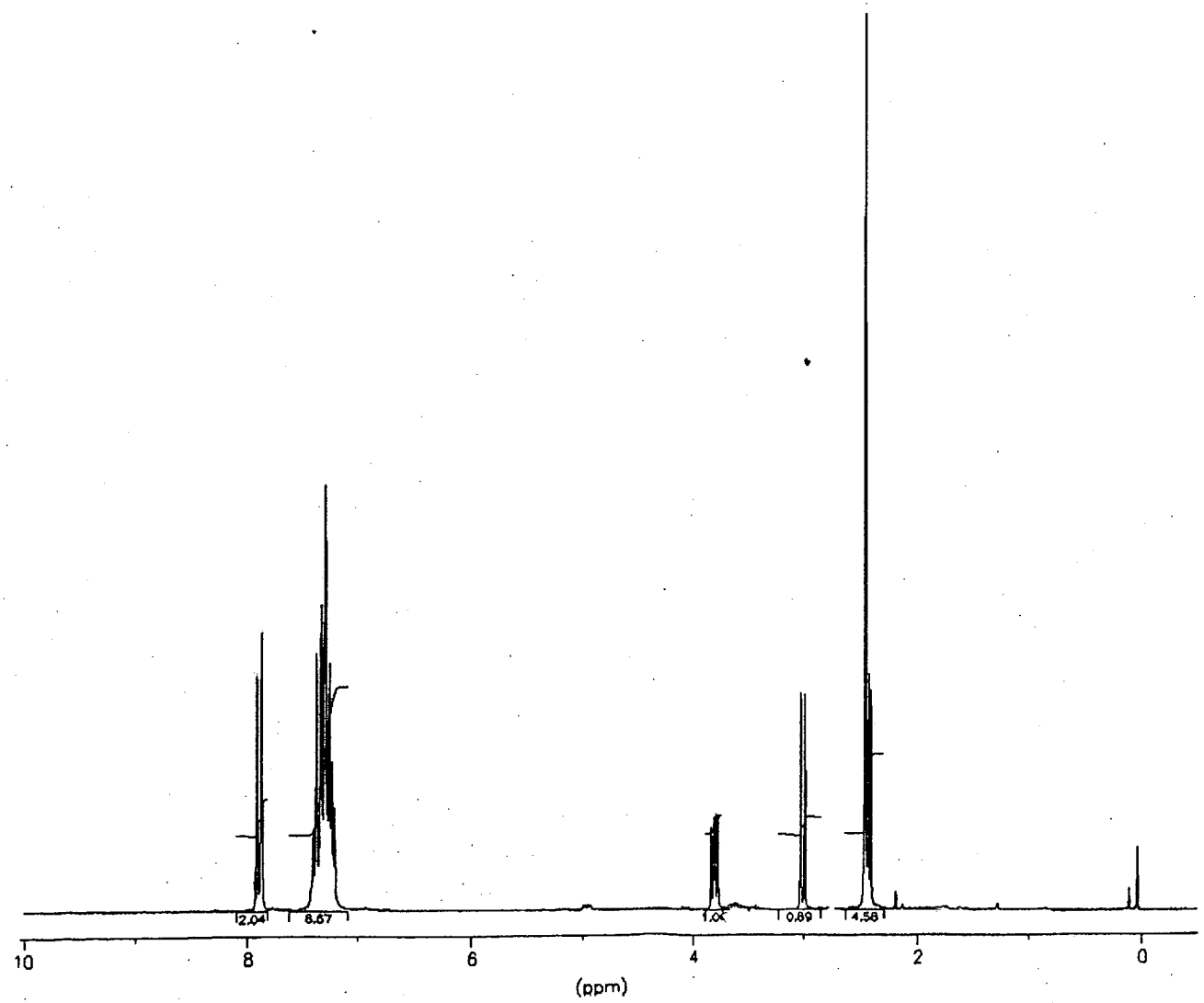
Date: 3.12.1998 Time: 13:31



^1H NMR

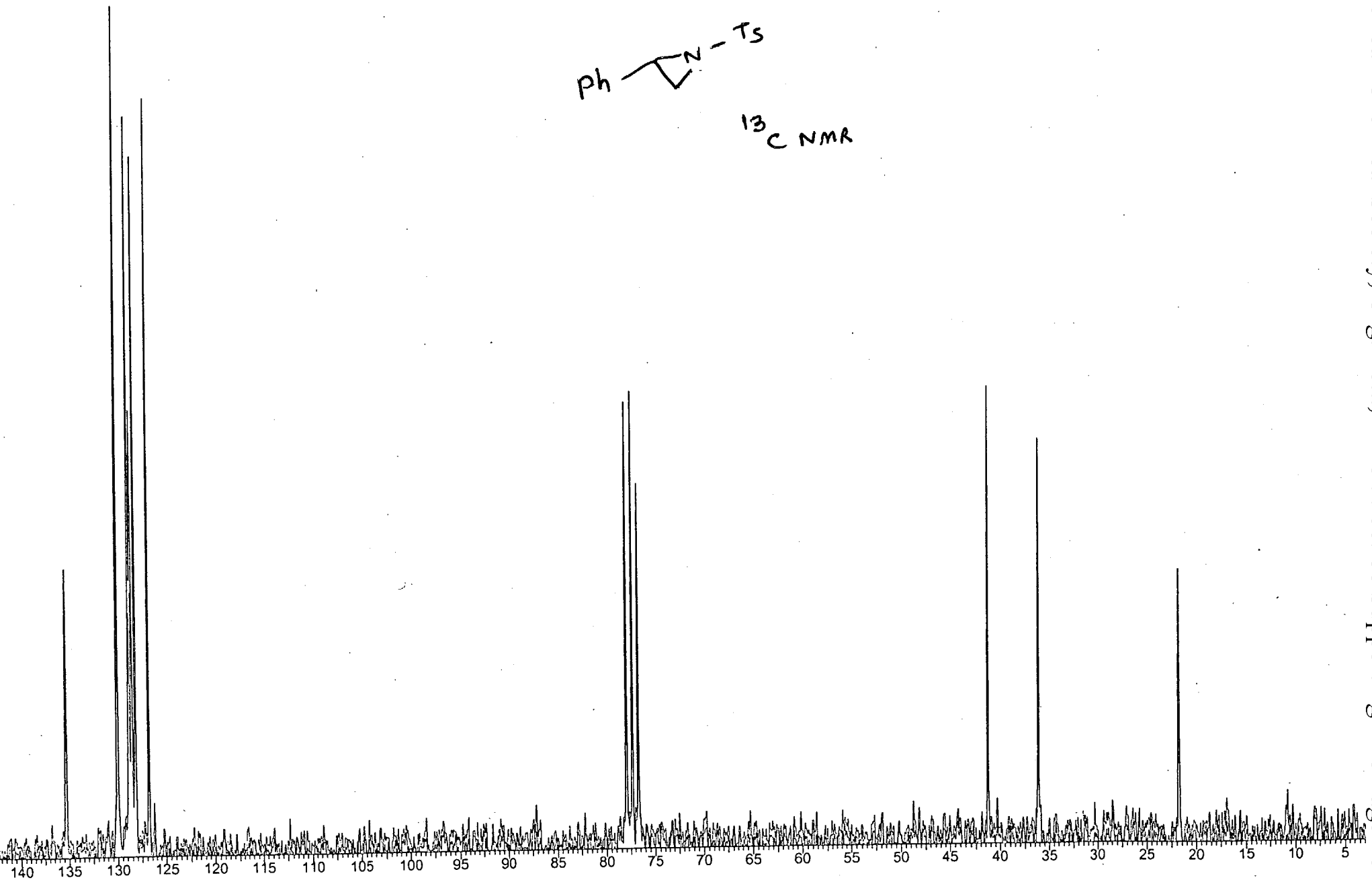


TRIAL 12

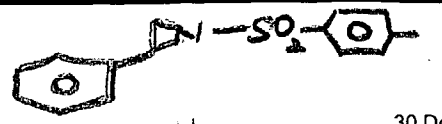
30 Dec 199

Ph — N — Ts

^{13}C NMR



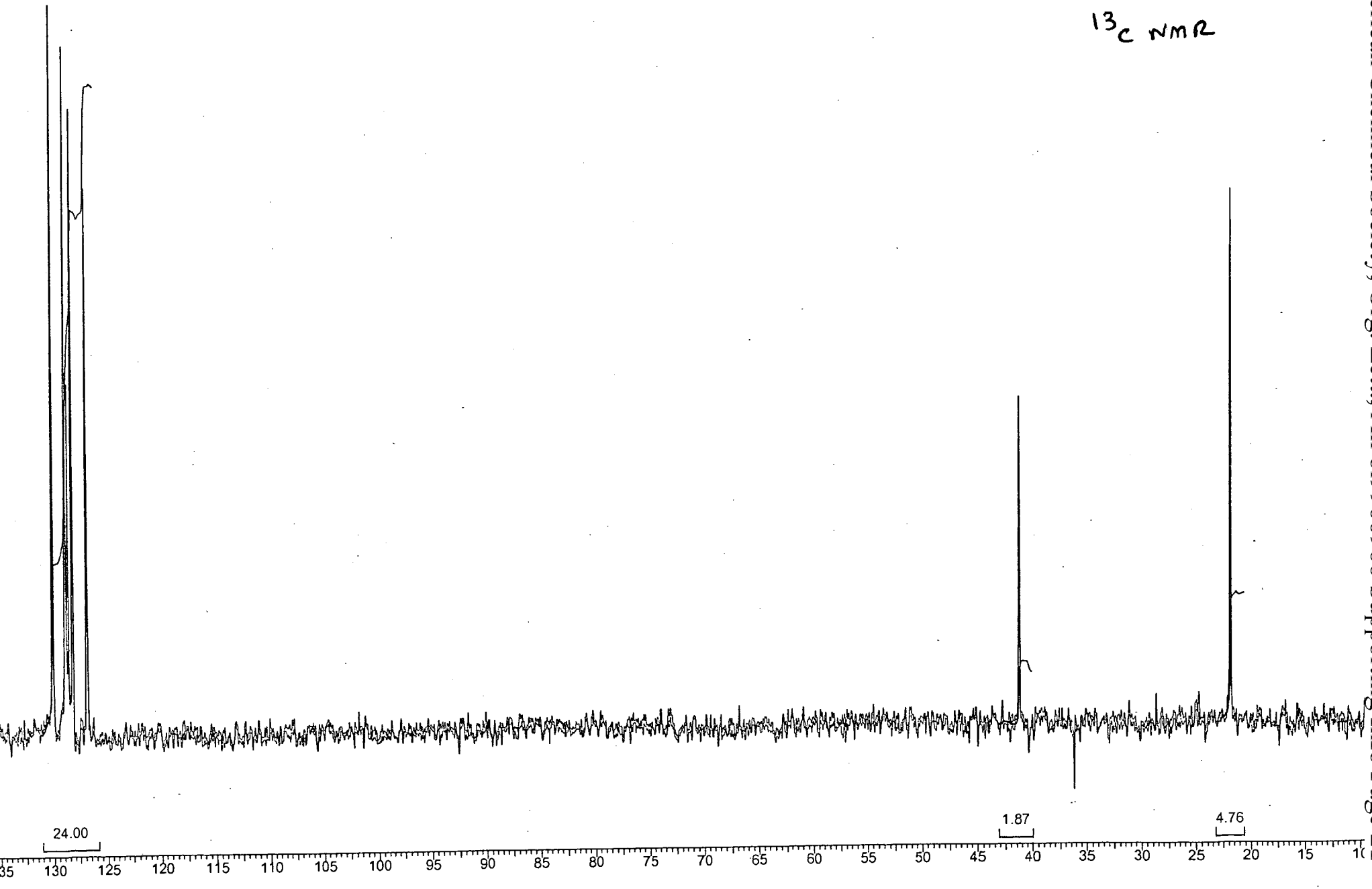
TRIAL 13

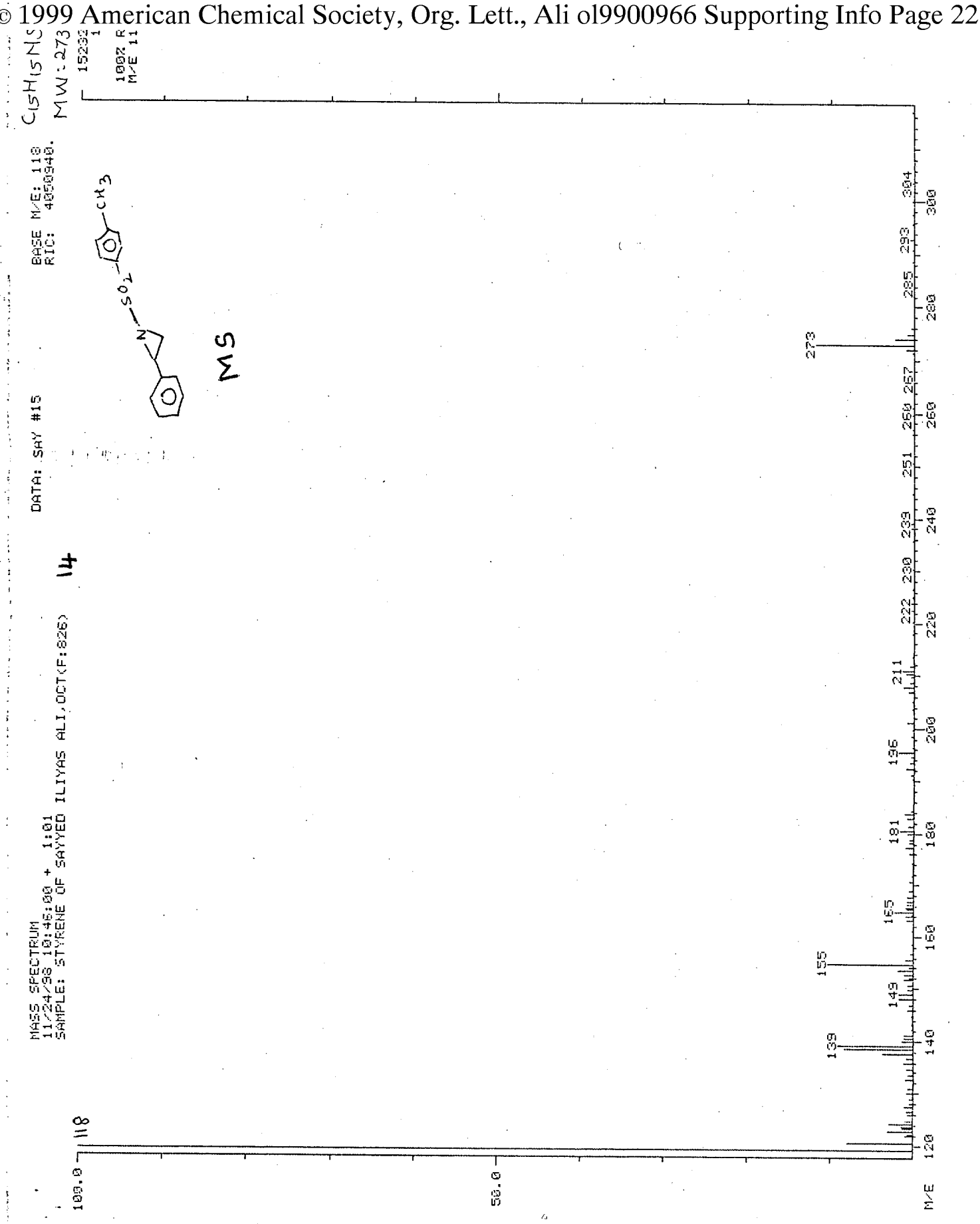


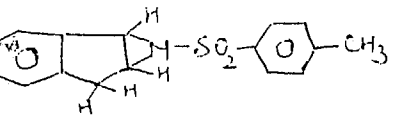
30 Dec 199

Depth.

^{13}C NMR



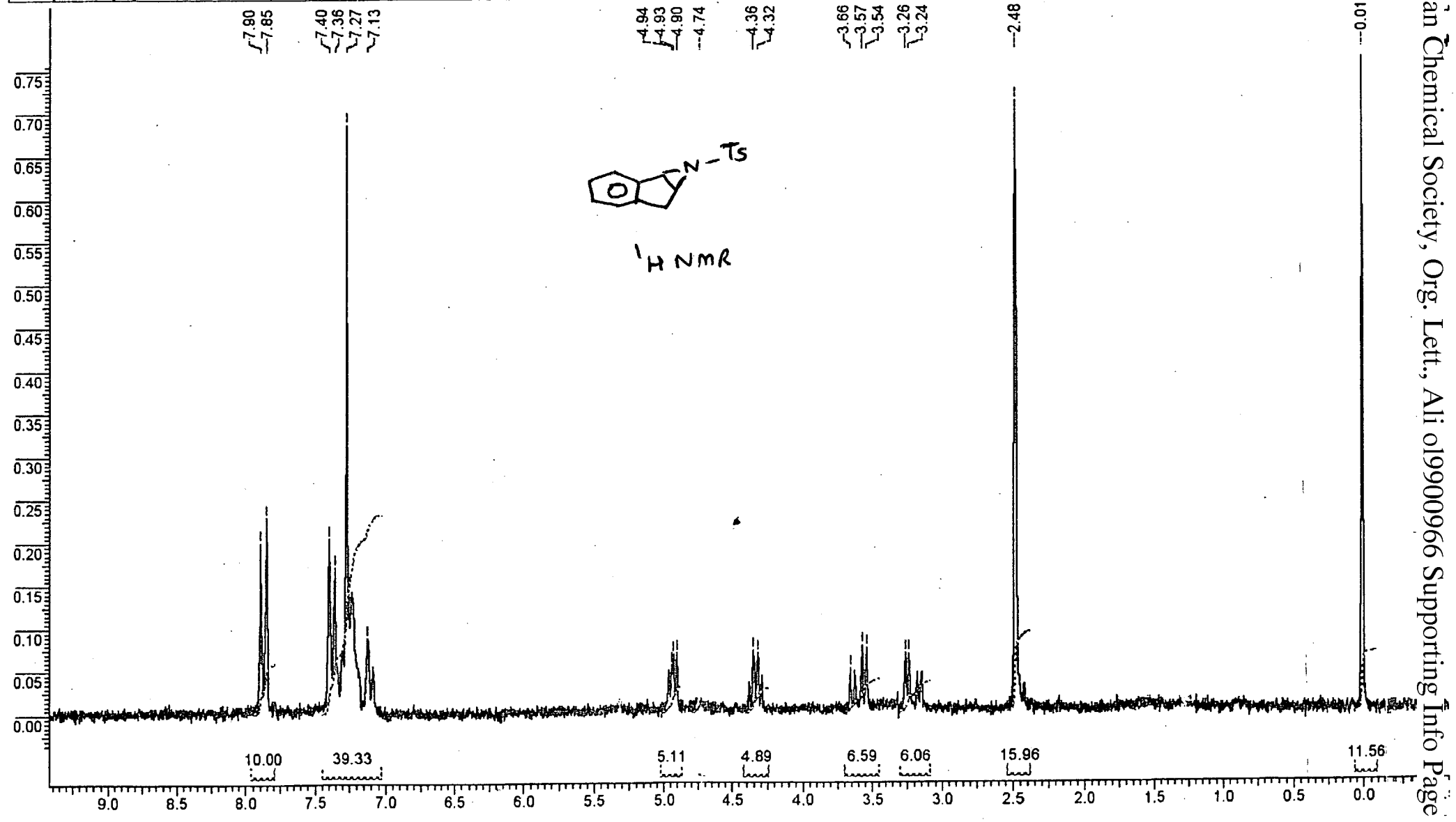




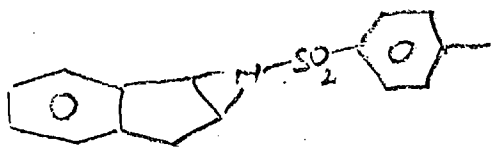
Indene 15

11 Mar 1999
K.C. BRAHME/KLN-39/CDCL3/**SVTAK

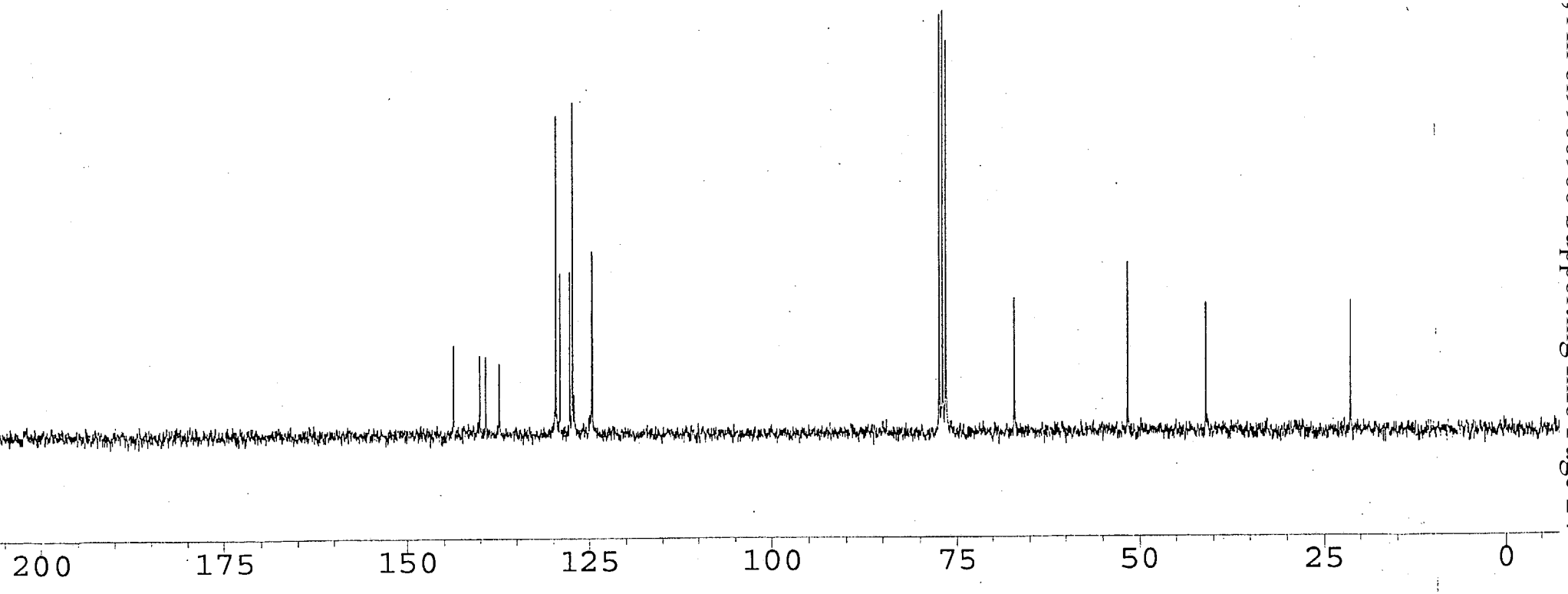
Acquisition Time (sec)	2.0480	*Comment*	K.C. BRAHME/KLN-39/CDCL3/**SVTAKLN3.WIN	*Date*	11/03/99 12:02:33		
Frequency (MHz)	200.13	*Nucleus*	1H	*Number of Transients*	512	*Original Points Count*	8192	*Points Count*	8192
Sweep Width (Hz)	4000.00	*Temperature (grad C)*	24.000				

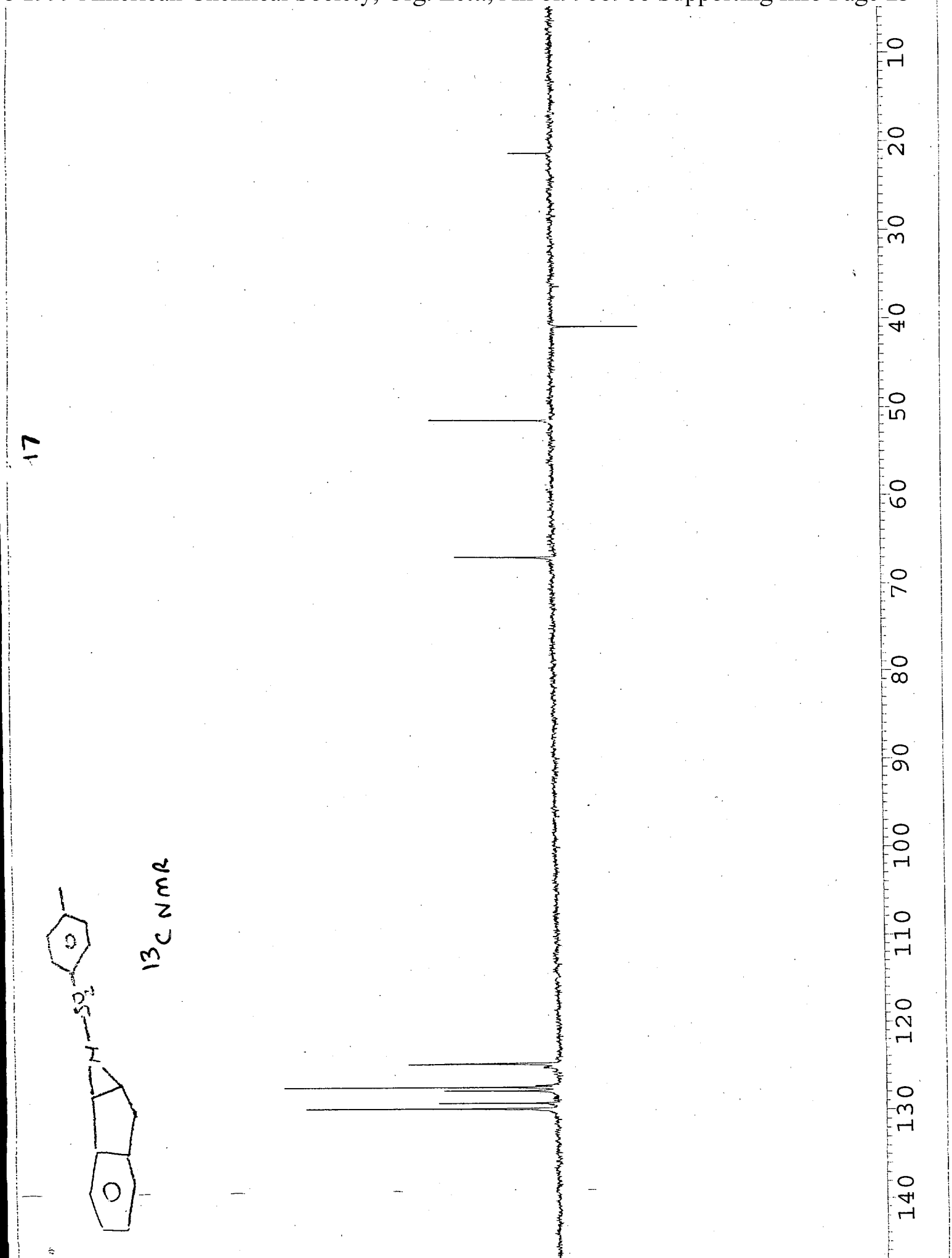


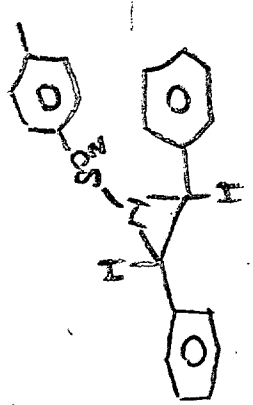
C:\liyas\santsrc.win



^{13}C NMR

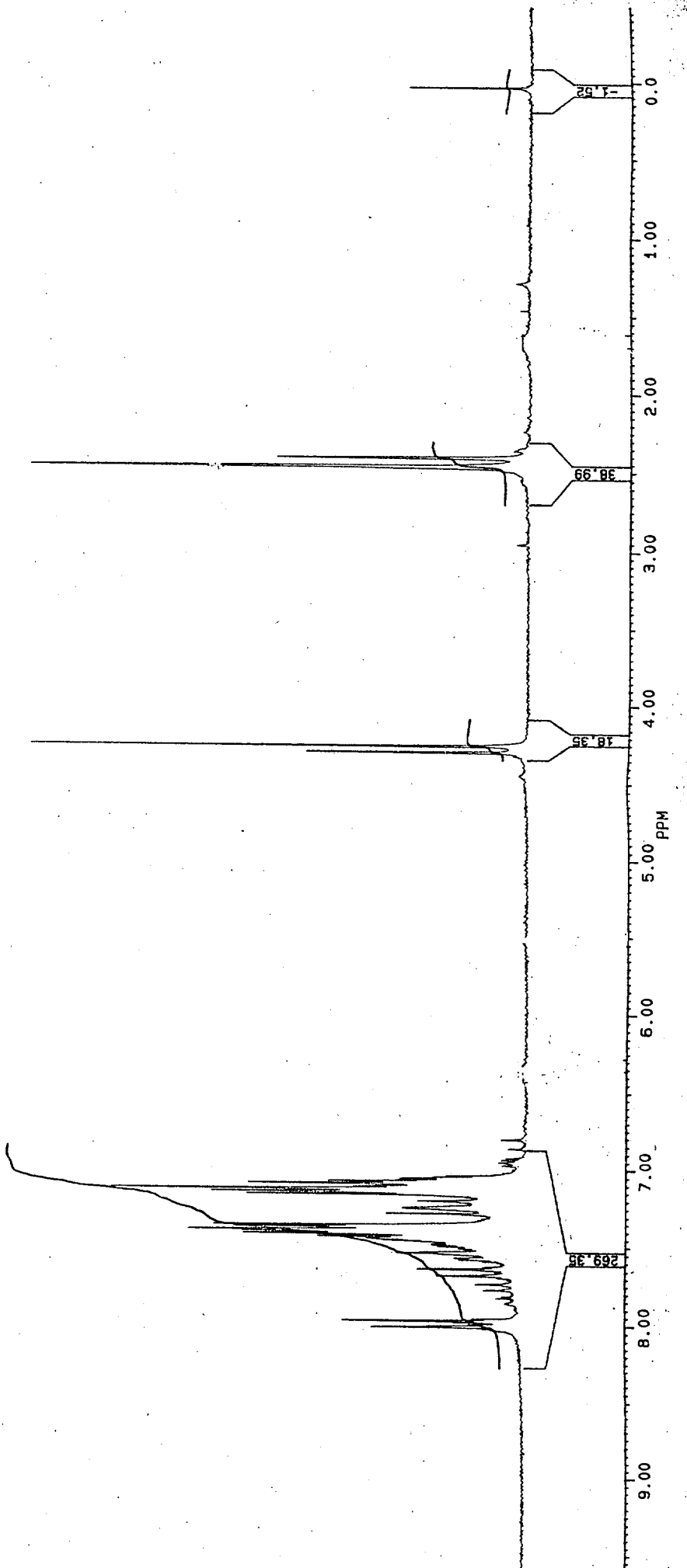




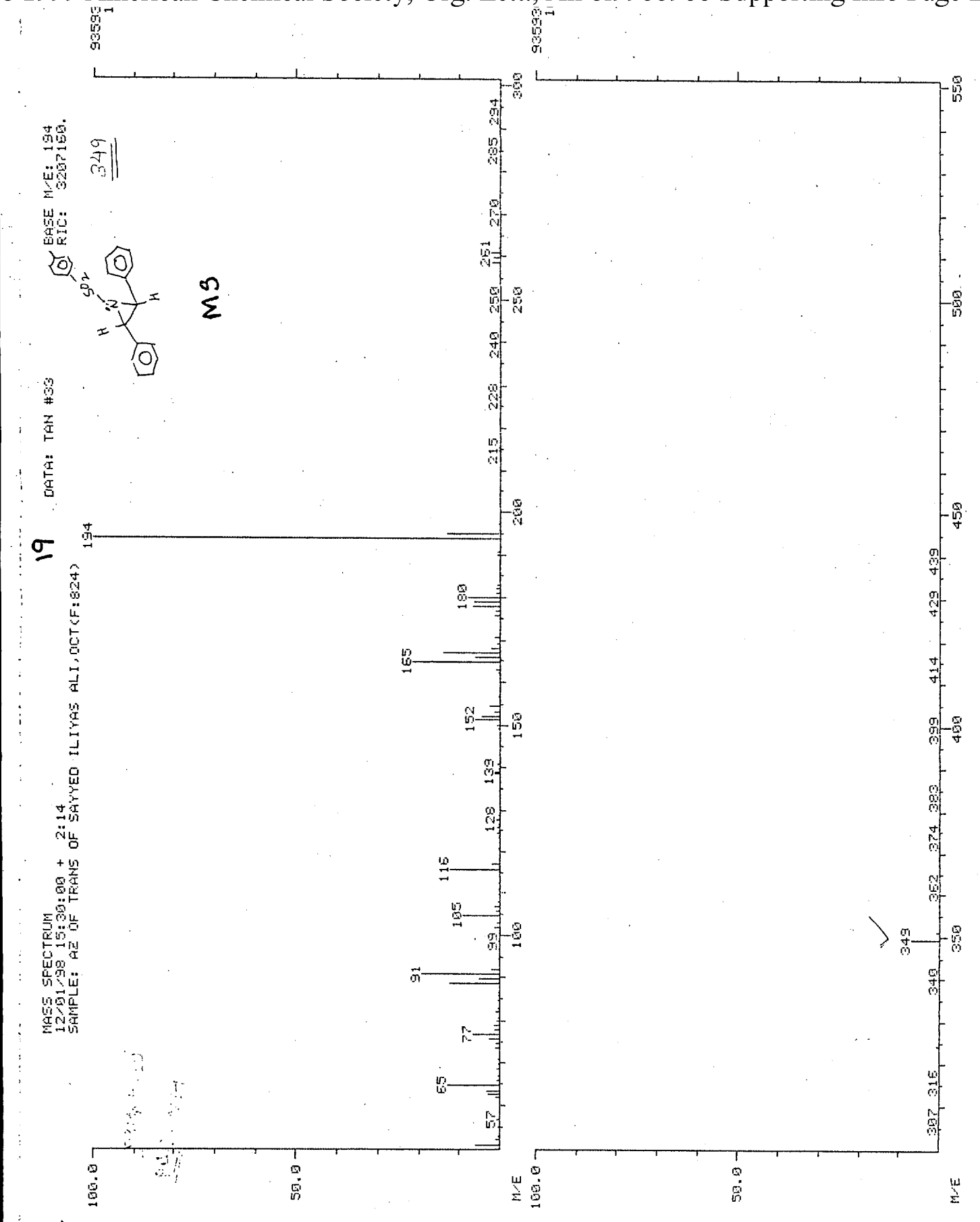


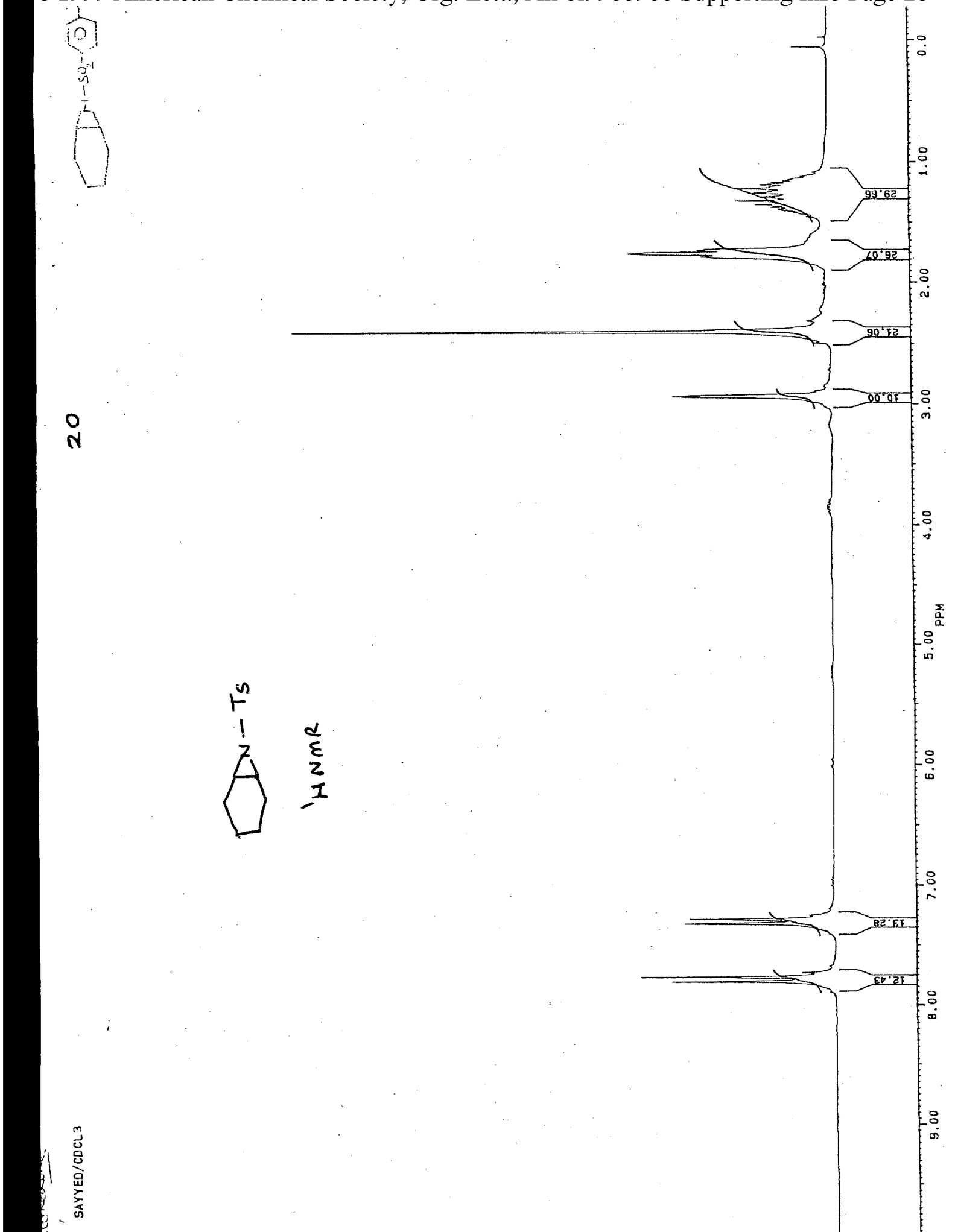
18

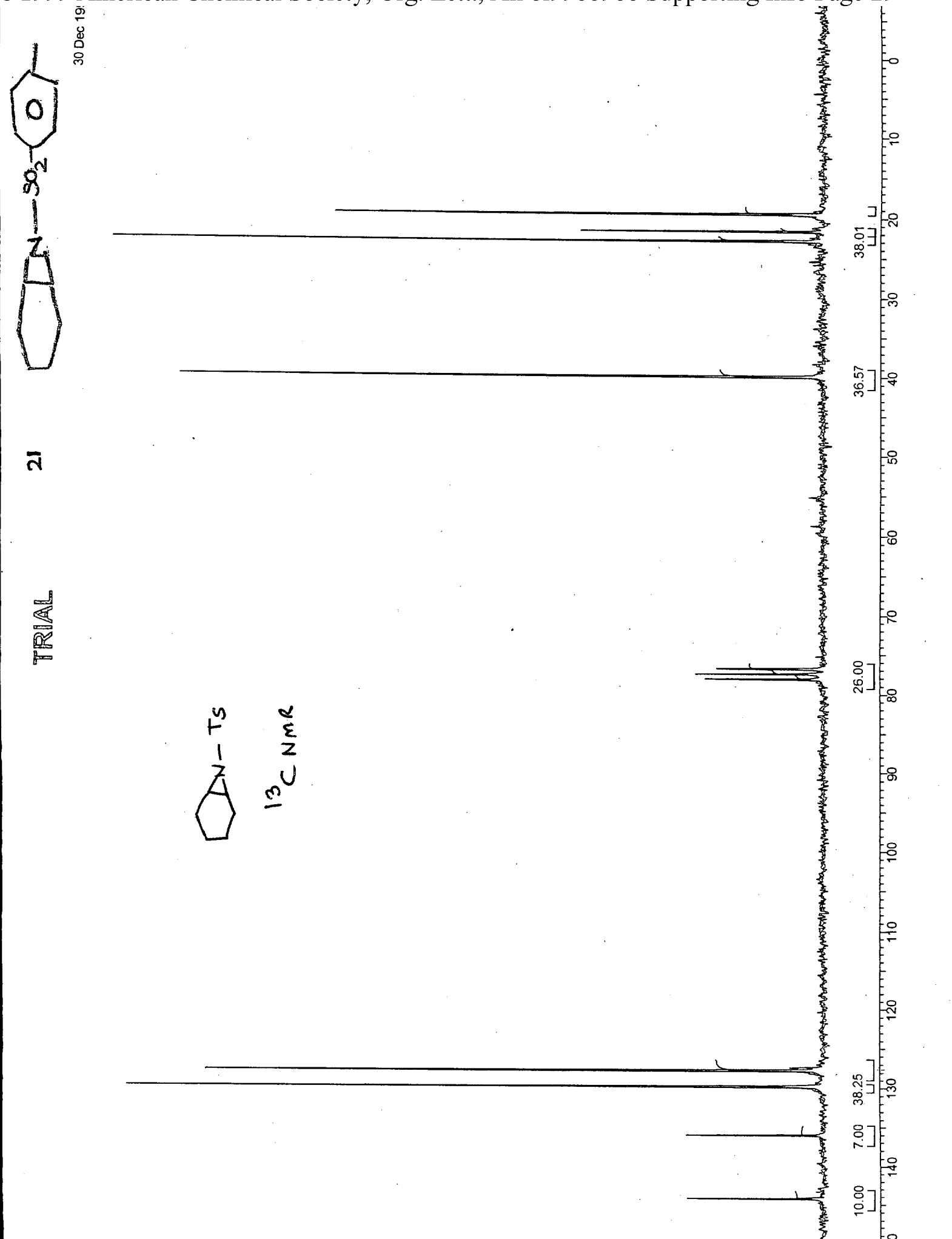
^{1}H NMR

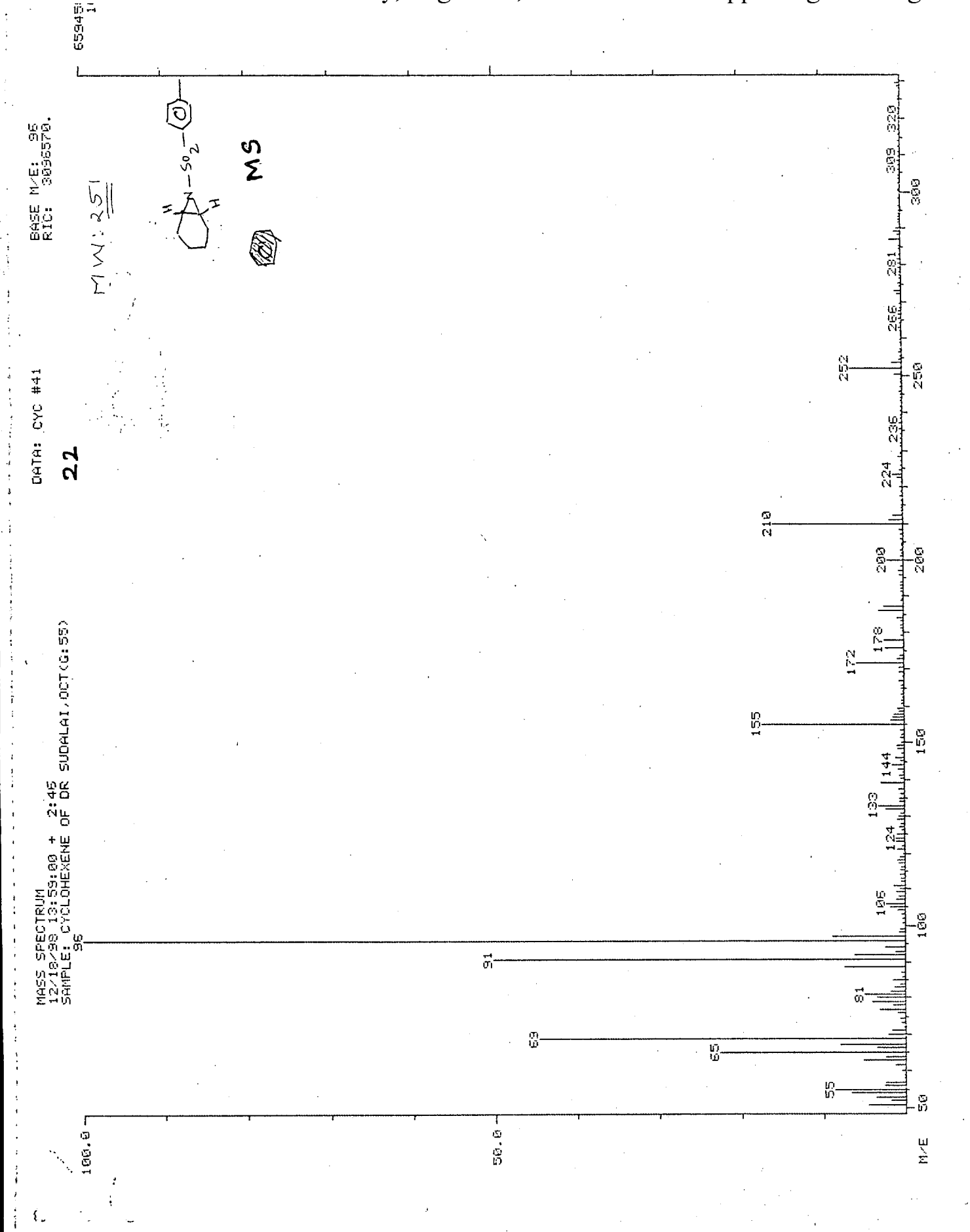


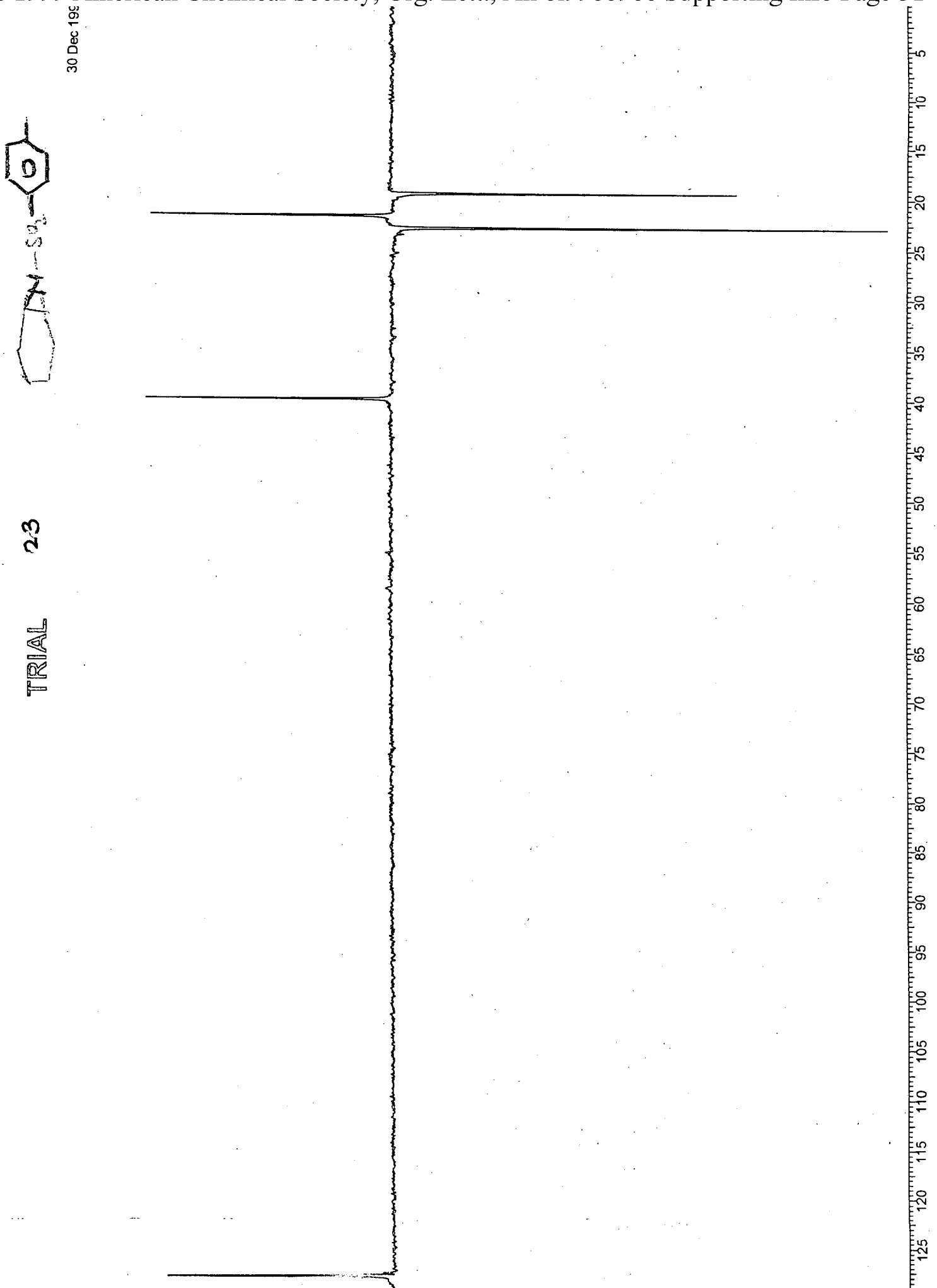
TRANS-ST







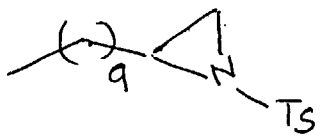




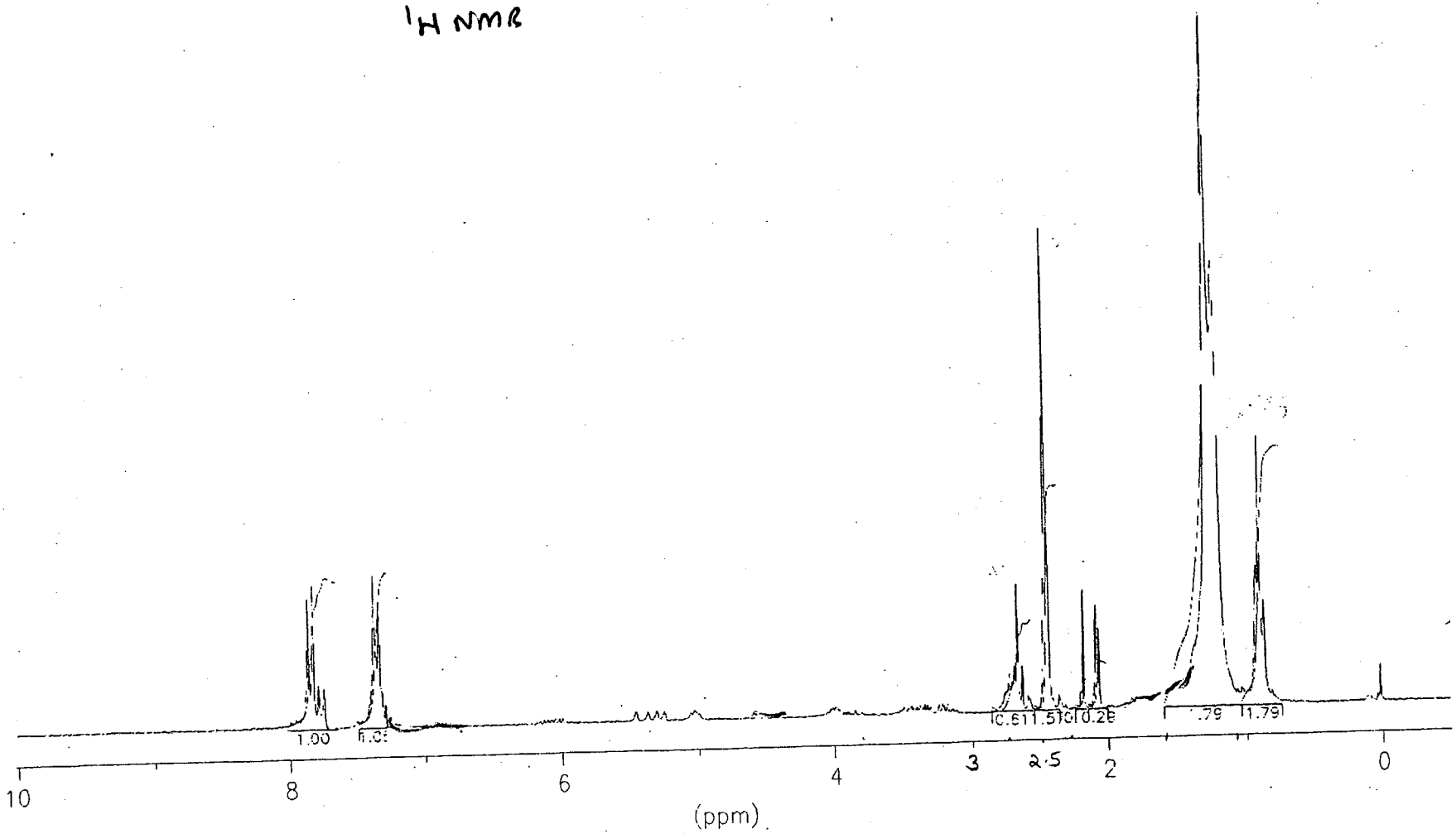
Integration
D:\NMR\AGS\DOD\001001.1R

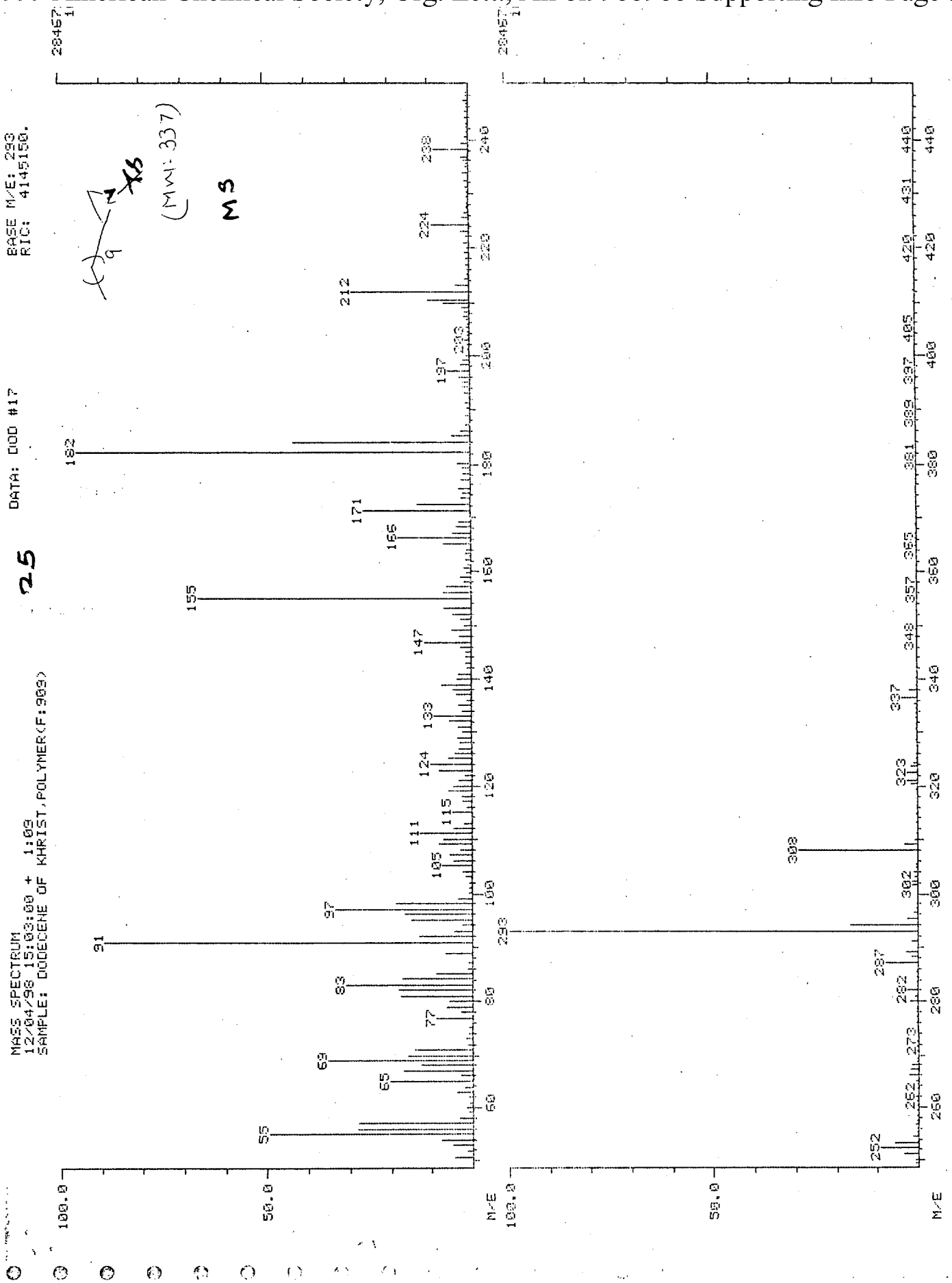
Date: 30.11.1998 Time: 15:05

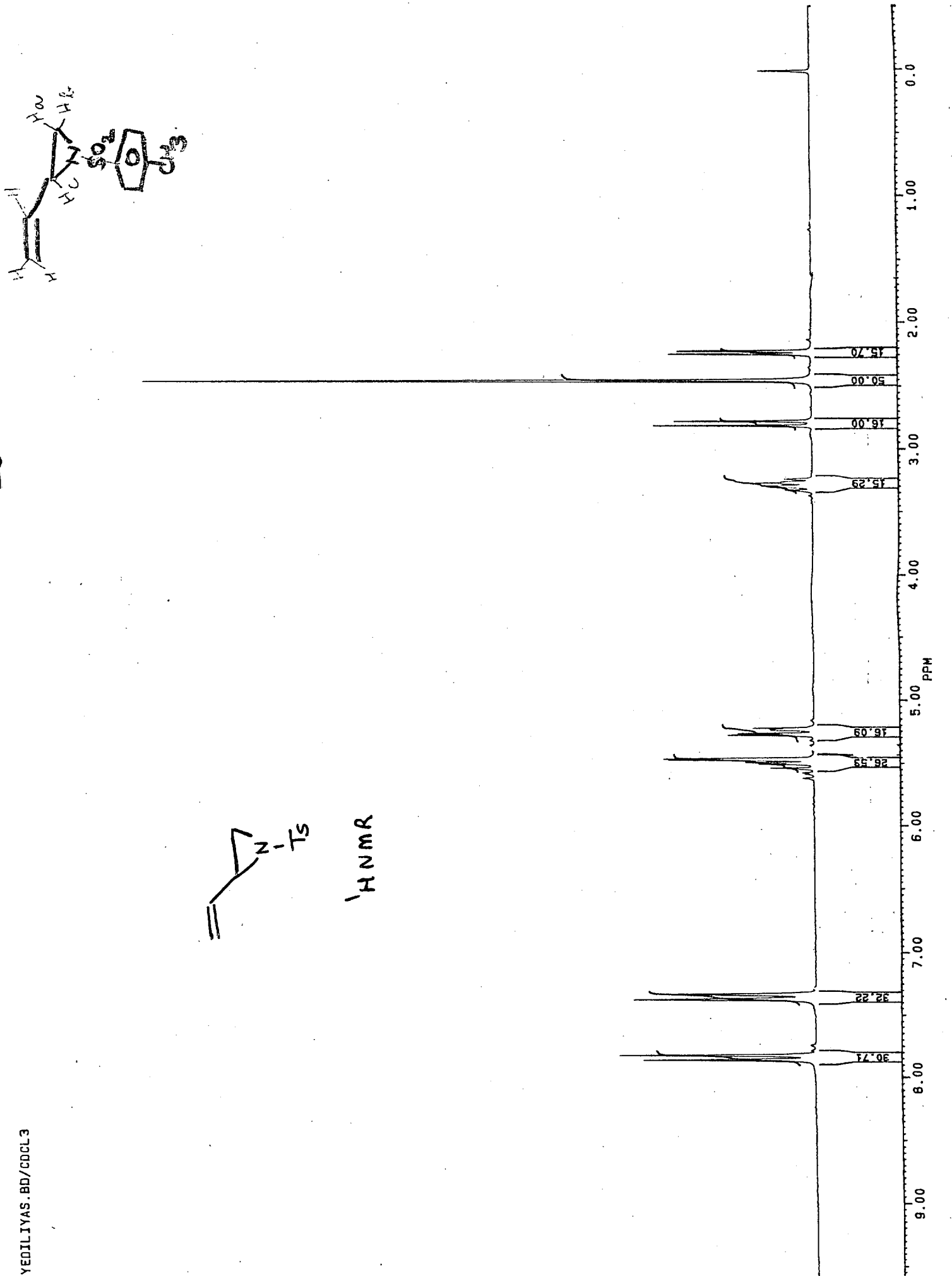
24

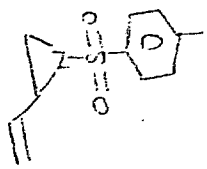


^1H NMR









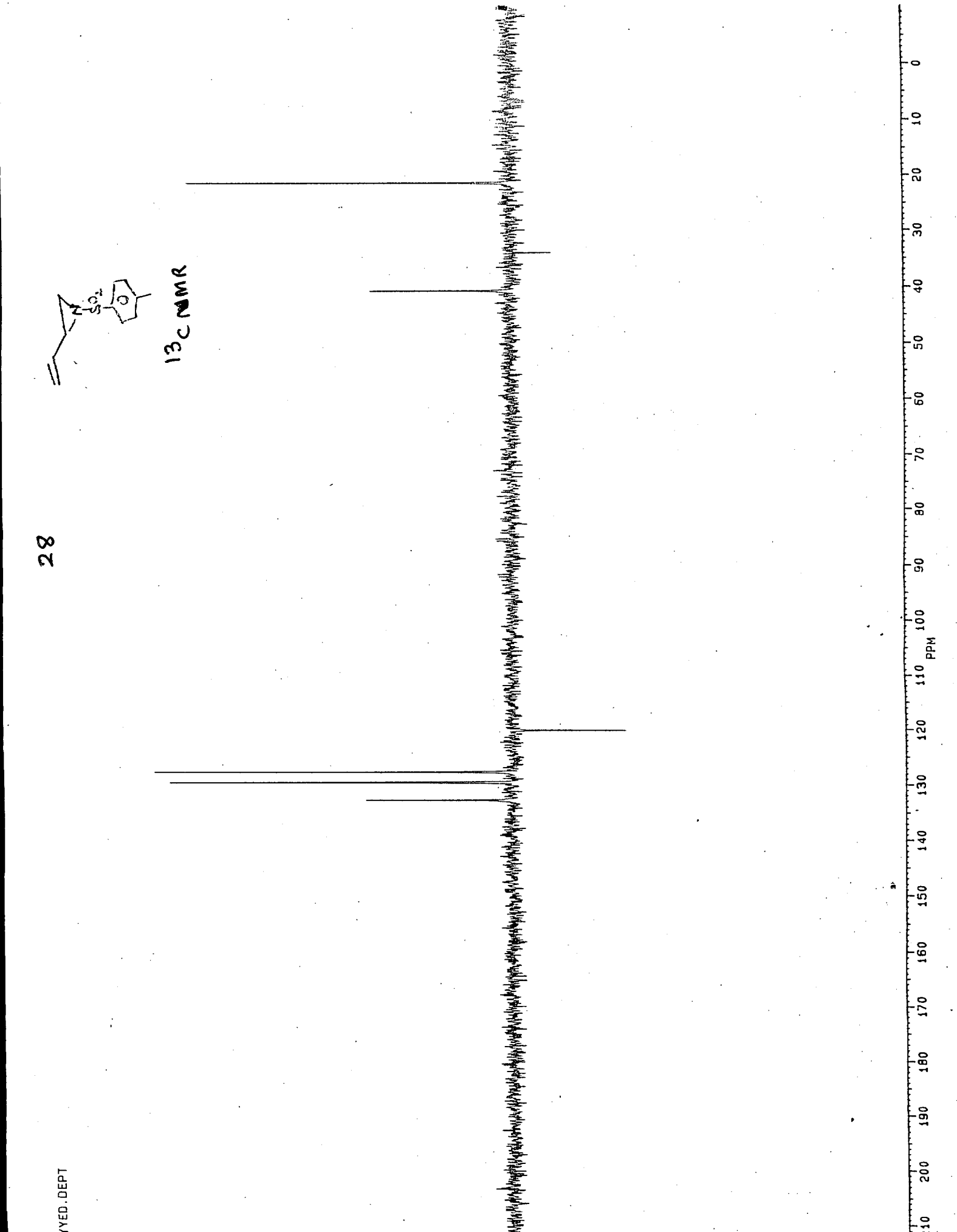
^{13}C NMR

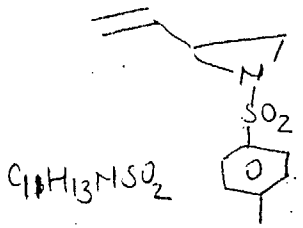
27

21.232
34.345
41.072
76.702
77.342
77.974
120.248
128.020
129.899
133.217
135.630
144.706

PPM

YED.C13





$C_{11}H_{13}NSO_2$

MS

Mass Spectrum File: PAR .01 98-11-25 04:46
Comment: Butadiene (100 4 20 260)

Scan: 322 (0- 0) R.T.: 15.00min Base Peak: 68.0 Int: 16700(=100%)