Supplemental Information

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General procedures for synthesis:

Picolyl esters 2a-h

Method 1. Esters **2a-d** and **2h** were prepared using this procedure. [33] 4- Pyridyl carbinol (3.45g, 31.6 mmol) is dissolved in 40 ml of benzene and triethylamine (7.97 ml, 56.8 mmol) is added. A solution of the corresponding acyl chloride (50.5 mmol) in 15 ml of benzene is added dropwise. The reaction mixture is stirred at room temperature for 16 h. 30 ml of H_2O is added and the organic layer is separated, dried over $MgSO_4$, and concentrated in vacuo.

Method 2. Esters **2e, 2f,** and **2g** were prepared using this procedure. [28] N, N'-Dicyclohexylcarbodiimide (DCC) (3.40g, 16.4 mmol) is added to a solution of the carboxylic acid (16.4 mmol) and 4- pyridyl carbinol (1.62g, 14.8 mmol) in 50 ml of dichloromethane. The reaction mixture is stirred at room temperature for about 24 h, and checked by TLC for disappearance of starting material. The urea precipitate is filtered off and the filtrate is washed with $NaHCO_3$ (2 x 25 ml) and H_2O (2 x 10 ml). The organic layers are collected and dried over $MgSO_4$ and the solvent is evaporated.

Methylated picolinium esters 5a-h

0.02 mol of the corresponding picolyl ester was dissolved in 15 ml of CH_3OH, and methyl iodide (4.26 g, 0.03 mol) was added slowly. The reaction mixture was refluxed at 75 ºC for 8 h. The solvent was removed under reduced pressure and the residue was recrystallized from hot methanol or ethanol.

Picolinium esters 6a-h by counter –ion exchange

The picolyl methiodide (5 mmol) is dissolved in the minimum amount of acetonitrile. A solution of silver perchlorate (1.04 g, 5 mmol) in acetonitrile is added and the reaction mixture is stirred overnight at room temperature. The yellow AgI precipitate is filtered off and the filtrate is concentrated in vacuo and recrystallized from hot ethanol.

Compound characterization data:

Picolyl Acetate (2a).

Compound **2a** was prepared by the above general procedure, method 1, from acetyl chloride. The product is a dark brown liquid (4.64 g, 94 %). IR (CCl_4) 3036 (m), 2935 (s), 1735 (s), 1603 (m); LRMS (FAB) 152 ($(M+H)^+$, 6), 151 (41), 109 (100), 92 (26), 80 (29), 65 (21). ^{1}H NMR data was consistent with the data previously reported by Abele et al. [33]

Picolyl Benzoate (2b).

Compound **2b** is prepared using the general method 1 described above, using benzoyl chloride. The product was purified by flash column chromatography (EtOAc: hexanes, 60:40) and obtained as a dark-brown liquid (4.01 g, 60%). TLC R_f = 0.30 (EtOAc: hexanes, 60:40); ^{1}H NMR (CD_3CN): δ 5.36 (s, 2H), 7.39 (d, *J*= 6.0, 2H), 7.52 (t, *J*=7.6, 2H), 7.64 (d, *J*=7.2, 1H), 8.08-8.06 (m, 2H), 8.57-8.56 (m, 2H); ^{13}C (CD_3CN): δ 65.4, 122.8, 129.6, 130.4, 130.7, 134.3, 146.3, 150.9, 166.7; LRMS (FAB) 214 ($(M+H)^+$, 100),

154 (94), 136 (71), 105 (40), 77 (25); HRMS (FAB) calcd for $C_{13}H_{12}NO_2$ 214.0868 $(M+H)^+$, found 214.0871.

Picolyl Phenylacetate (2c).

Compound **2c** is prepared using the general method 1 described above using phenylacetyl chloride. The product is a thick dark brown liquid (6.33 g, 87%). IR (CCl_4) 3036 (m), 2942 (s), 1747 (s), 1603 (m); ^{1}H NMR (CD_3CN): δ 3.74 (s, 2H), 5.13 (s, 2H), 7.34-7.23 (m, 7H), 8.52-8.50 (m, 2H); ^{13}C NMR (CD_3CN): δ 41.4, 65.1, 122.7, 128.0, 129.4, 130.3, 135.2, 146.5, 150.5, 171.9; MS (EI) 227 (60), 91 (100), 41 (35); HRMS (FAB) calcd for $C_{14}H_{13}NO_2$ 227.0946 $(M)^+$, found 227.0943.

Picolyl Trimethylacetate (2d)

Compound **2d** is prepared using the general method 1 described above using trimethylacetyl chloride. The product is a dark brown liquid, which was distilled to give the pure ester (5.06g, 82 %). ^{1}H NMR (CD_3CN): δ 1.22 (s, 9H), 5.10 (s, 2H), 7.29-7.27 (m, 2H), 8.54 (d, *J*=6.0, 2H); ^{13}C NMR (CD_3CN): δ 26.5, 39.4, 64.8, 122.4, 146.9, 150.6, 178.5; LRMS (FAB) 194 ($(M+H)^+$, 100), 57 (30); DCI 193 (36), 92 (22), 85 (20), 57 (100); HRMS (FAB) calcd for $C_{11}H_{15}NO_2$ 193.1103 $(M)^+$, found 193.1101.

Picolyl Diphenylacetate (2e)

Compound **2e** is prepared using the general method 2 described above using diphenylacetic acid. The product is a brown semisolid, which upon recrystallization from hot ethanol yielded a white solid (7.84g, 83%). ^{1}H NMR (CD_3CN): δ 5.18 (s, 2H), 5.22

(s, 1H), 7.16 (d, *J*=5.2, 2H), 7.36-7.28 (m, 10H), 8.48 (d, *J*=5.6, 2H); ^{13}C NMR (CD_3CN) δ 51.2, 57.3, 65.6, 122.6, 128.2, 129.5, 139.8, 145.9, 150.7, 172.9; LRMS (FAB) 304 ($(M+H)^+$, 100), 154 (40), 136 (31); HRMS (FAB) calcd for $C_{20}H_{18}NO_2$ 304.1338 $(M+H)^+$, found 304.1349.

Picolyl *p*-Tolylacetate (2f)

Compound **2f** is prepared using the general method 2 described above using *p*-tolylacetic acid. The product is a light brown semisolid (5.24g, 73%). ^{1}H NMR (CD_3CN): δ 2.30 (s, 3H), 3.68 (s, 2H), 5.11 (s, 2H), 7.23-7.11 (m, 6H), 8.52-8.51 (m, 2H); ^{13}C NMR (CD_3CN) δ 21.0, 40.1, 65.1, 122.9, 130.0, 130.2, 132.1, 137.6, 146.3, 150.7, 172.2; LRMS (FAB) 242 ($(M+H)^+$, 100); HRMS (FAB) calcd for $C_{15}H_{16}NO_2$ 242.1181 $(M+H)^+$, found 242.1185.

Picolyl Bromophenylacetate (2g)

Compound **2g** is prepared using the general method 2 described above using 4-bromophenylacetic acid. The product is a brown liquid (3.25g, 71%). ^{1}H NMR (CD_3CN): δ 3.72 (s, 2H), 5.13 (s, 2H), 7.21-7.24 (m, 4H), 7.48-7.50 (m, 2H), 8.52-8.53 (m, 2H); ^{13}C NMR (CD_3CN): δ 40.1, 65.3, 121.4, 122.6, 132.3, 132.4, 134.5, 146.1, 150.8, 171.6; LRMS (FAB) 306 ($(M+H)^+$, 100); DEI 305 (60), 169 (100), 92 (40); HRMS (FAB) calcd for $C_{14}H_{13}NO_2Br$ 306.0130 $(M)^+$, found 306.0135, calcd for $C_{14}H_{13}NO_2Br$ 308.0109 $(M)^+$, found 308.0117.

Picolyl Cinnamate (2h).

Compound **2h** is prepared using the general method 1 described above using cinnamoyl chloride. The product is a thick brown liquid (7.48 g, 98%). IR (CCl_4) 3062 (m), 3027 (m), 2951 (s), 1712 (s), 1635 (m), 1603 (m); ^{1}H NMR (CD_3CN): δ 5.25 (s, 2H), 6.61 (d, *J*=16, 1H), 7.35-7.43 (m, 5H), 7.63-7.65 (m, 2H), 7.76 (d, *J*=16, 1H), 8.56-8.57 (m, 2H); ^{13}C NMR (CD_3CN): δ 52.2, 64.9, 122.8, 129.1, 129.9, 131.5, 135.1, 146.3, 147.1, 150.2, 167.0; LRMS (FAB) 240 ($(M+H)^+$, 100), 131(37); HRMS (FAB) calcd for $C_{15}H_{14}NO_2$ 240.1025 $(M+H)^+$, found 240.1035.

N-Methyl Picolinium Acetate Iodide (5a).

Compound **5a** was prepared by the same method as above. The product was a brown solid (4.81 g, 91%). Recrystallization from hot methanol yielded pale orange crystals. Mp 140-142 ºC; IR (nujol) 2965 (s), 2905 (m), 2851 (m), 1743 (s), 1638 (m), 1464 (s); ^{1}H NMR (CD_3CN) δ 2.16 (s, 3H), 4.28 (s, 3H), 5.34 (s, 2H), 7.93 (d, *J*=6.0, 2H), 8.62 (d, *J*=6.8, 2H); ^{13}C NMR (CD_3CN) δ 20.7, 48.8, 63.8, 125.8, 146.0, 157.4, 171.0; LRMS (FAB) 166 (12), 122(100); HRMS (FAB) calcd for $C_9H_{12}NO_2$ 166.0868, found 166.0872.

N-Methyl Picolinium Benzoate Iodide (5b).

Compound **5b** was prepared by the same general methylation procedure as above, and is a dark brown liquid (2.98 g, 84%). ^{1}H NMR (CD_3CN) δ 4.28 (s, 3H), 5.60 (s, 2H), 7.56 (t, *J*= 7.6, 2H), 7.71-7.68 (m, 1H), 8.03 (d, *J*=6.0, 2H), 8.13-8.11 (m, 2H), 8.62 (d, *J*=6.8, 2H); ^{13}C NMR (CD_3CN) δ 48.4, 64.5, 126.2, 129.5, 129.9, 130.2, 134.8, 146.0, 157.2, 166.3; LRMS (FAB) 228 ($(M)^+$, 17), 133 (28), 89 (50), 45 (50); HRMS (FAB) calcd for $C_{14}H_{14}NO_2$ 228.1025, found 228.1027.

N-Methyl Picolinium Phenylacetate Iodide (5c).

Compound **5c** was prepared by the same general methylation procedure as above, and is a dark brown liquid (7.03 g, 95%). ^{1}H NMR (CD_3CN) δ 3.83 (s, 2H), 4.28 (s, 3H), 5.37 (d, 2H), 7.36-7.30 (m, 5H), 7.88 (d, *J*=5.2, 2H), 8.62 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 40.9, 48.8, 64.1, 125.7, 128.0, 129.3, 130.3, 134.7, 146.0, 157.1, 171.8; LRMS (FAB) 242 (20), 133 (24), 89 (30), 45 (30); HRMS (FAB) calcd for $C_{16}H_{16}NO_2$ 242.1181, found 242.1169.

N-Methyl Picolinium Trimethylacetate Iodide (5d).

Compound **5d** was methylated by the above general methylation procedure, and is a thick dark brown liquid (4.30g, 88%). ^{1}H NMR (CD_3CN) δ 1.26 (s, 9H), 4.27 (s, 3H), 5.33 (s, 2H), 7.90 (d, *J*=6.0, 2H), 8.60 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 30.8, 39.4, 48.8, 64.0, 125.9, 146.0, 157.8, 178.2; LRMS (FAB) 208 ($(M)^+$, 40), 166 (23), 122 (70); HRMS (FAB) calcd for $C_{12}H_{18}NO_2$ 208.1338, found 208.1331.

N-Methyl Picolinium Diphenylacetate Iodide (5e).

Compound **5e** was prepared by the same general methylation procedure as above, and is a dark yellow solid, which upon recrystallization from hot methanol yielded yellow crystals (3.17g, 74%). Mp 130-134 ºC; ^{1}H NMR (CD_3CN) δ 4.23 (s, 3H), 5.32 (s, 1H), 5.42 (s, 2H), 7.37-7.29 (m, 10H), 7.77 (d, *J*=6.4, 2H), 8.54 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 48.9, 57.0, 64.6, 126.0, 128.4, 129.5, 129.6, 139.4, 146.0, 157.0, 172.6; LRMS (FAB) 318 ($(M)^+$, 100), 107 (17); HRMS (FAB) calcd for $C_{21}H_{20}NO_2$ 318.1494, found 318.1503.

N-Methyl Picolinium *p*-Tolylacetate Iodide (5f).

Compound **5f** was prepared by the above general methylation procedure, and is a dark orange semisolid (7.66g, 100%). ^{1}H NMR (CD_3CN) δ 2.31 (s, 3H), 3.77 (s, 2H), 4.28 (s, 3H), 5.36 (s, 2H), 7.15-7.21 (m, 4H), 7.87 (d, *J*=6.0, 2H), 8.63 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 20.9, 40.6, 48.9, 64.2, 125.8, 130.0, 130.2, 131.7, 137.7, 146.0, 157.2, 172.0; LRMS (FAB) 256 ($(M)^+$, 100); HRMS (FAB) calcd for $C_{16}H_{18}NO_2$ 256.1338 $(M)^+$, found 256.1340.

N-Methyl Picolinium Bromophenylacetate Iodide (5g).

Compound **5g** was prepared by the general methylation procedure above, and is a dark brown solid after recrystallization from hot methanol (2.78g, 89%). Mp 110-114 ºC; ^{1}H NMR (CD_3CN) δ 3.80 (s, 2H), 4.25 (s, 3H), 5.36 (s, 2H), 7.25 (d, *J*=8.4, 2H), 7.52 (d, *J*=8.4, 2H), 7.87 (d, *J*=5.6, 2H), 8.57 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 40.3, 48.9, 64.3, 121.5, 125.9, 132.4, 132.5, 134.2, 146.0, 157.2, 171.4; LRMS (FAB) 320 ($(M)^+$, 55), 122 (25), 108 (100), 94 (20); HRMS (FAB) calcd for $C_{15}H_{15}NO_2Br$ 320.0286 $(M)^+$, found 320.0302, calcd for $C_{15}H_{15}NO_2Br$ 322.0266 $(M)^+$, found 322.0271.

N-Methyl Picolinium Cinnamate Iodide (5h).

Compound **5c** was obtained as pale yellow crystals after recystallization from hot methanol (3.06 g, 73%). Mp 104-106 ºC; IR (nujol) 2955 (s), 2916 (m), 1712 (s), 1631 (s), 1465 (m); ^{1}H NMR (CD_3CN) δ 4.26 (s, 3H), 5.48 (s, 2H), 6.67 (d, *J*=16, 1H), 7.45-7.46 (m, 3H), 7.67-7.68 (m, 2H), 7.83 (d, *J*=16, 1H), 7.98 (d, *J*=6.0, 2H), 8.58 (d, *J*=6.0, 2H); ^{13}C NMR (CD_3CN) δ 48.8, 64.0, 117.6, 125.9, 129.2, 129.9, 131.7, 134.9, 146.0,

146.9, 157.9, 166.6; LRMS (FAB) 254 (6), 177 (9), 133 (11), 89 (11), 45 (11); HRMS (FAB) calcd for $C_{16}H_{16}NO_2$ 254.1181, found 254.1183.

N-Methyl Picolinium Acetate Perchlorate (6a).

Compound **6a** was obtained as a pale yellow solid (1.09 g, 82%). Shiny, pale cream-colored crystals were formed upon recrystallization from hot ethanol. Mp 128-132 ºC; IR (nujol) 3067 (m), 2959 (m), 1747 (s), 1646 (m); ^{1}H NMR (CD_3CN) δ 2.16 (s, 3H), 4.26 (s, 3H), 5.33 (s, 2H), 7.92 (d, *J*=5.6, 2H), 8.58 (d, *J*=6.0, 2H); ^{13}C NMR (CD_3CN) δ 20.8, 48.7, 63.9, 125.9, 146.1, 157.6, 171.0; LRMS (FAB) 166($(M)^+$, 100); HRMS (FAB) calcd for $C_9H_{12}NO_2$ 166.0868 $(M)^+$, found 166.0876.

N-Methyl Picolinium Benzoate Perchlorate (6b).

Compound **6b** was obtained as pale cream-colored crystals (0.33 g, 51 %). Mp 146-150 ºC; IR (nujol) 3071 (m), 2939 (m), 2897 (m), 1716 (s), 1646 (m), 1460 (s); ^{1}H NMR (CD_3CN) δ 4.27 (s, 3H), 5.60 (s, 2H), 7.56 (t, *J*=7.6, 2H), 7.69 (d, *J*=7.2, 1H), 8.02 (d, *J*=6.0, 2H), 8.13-8.11 (m, 2H), 8.58 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 48.7, 64.5, 126.2, 129.6, 129.9, 130.4, 134.7, 146.0, 157.3, 166.3; LRMS (FAB) 228 ($(M)^+$, 100), 122 (10), 108 (25); HRMS (FAB) calcd for $C_{14}H_{14}NO_2$ 228.1025, found 228.1022.

N-Methyl Picolinium Phenylacetate Perchlorate (6c).

Compound **6c** was obtained as a thick brown liquid. About 20 ml of CH_3OH was added and the solution was stirred vigorously. A thick precipitate was formed. Filtration and drying of the precipitate yielded a cream-colored solid (2.27 g, 80 %). Mp 98-100 ºC; IR

(nujol) 3060 (m), 2924 (m), 1735 (s), 1646 (m), 1095 (s); ^{1}H NMR (CD_3CN) δ 3.82 (s, 2H), 4.24 (s, 3H), 5.36 (s, 2H), 7.36-7.33 (m, 5H), 7.85 (d, *J*=5.6, 2H), 8.53 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 41.1, 48.8, 64.2, 125.9, 128.1, 129.4, 130.4, 134.8, 146.0, 157.4, 171.8; MS (EI) 241 ($(M-1)^+$, 20), 136 (30), 122 (88), 91 (100); LRMS (FAB) 242 ($(M+H)^+$, 100), 152 (25), 108 (21), 45 (33); HRMS (FAB) calcd for $C_{15}H_{16}NO_2$ 242.1181, found 242.1181.

N-Methyl Trimethylacetate Perchlorate (6d).

Compound **6d** was obtained as a pale yellow solid after recrystallization from hot ethanol (2.72g, 88%). Mp 54-56 ºC; ^{1}H NMR (CD_3CN) δ 1.26 (s, 9H), 4.25 (s, 3H), 5.32 (s, 2H), 7.89 (d, *J*=6.0, 2H), 8.54 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 27.2, 30.8, 39.4, 48.8, 64.0, 125.9, 146.0, 157.8, 178.2; LRMS (FAB) 208 ($(M)^+$, 100), 107 (13), 93 (11); HRMS (FAB) calcd for $C_{12}H_{18}NO_2$ 208.1338, found 208.1339.

N-Methyl Picolinium Diphenylacetate Perchlorate (6e).

Compound **6e** was obtained as a white solid upon recyrstallization from hot ethanol (2.70g, 88%). ^{1}H NMR (CD_3CN) δ 4.23 (s, 3H), 5.31 (s, 1H), 5.41 (s, 2H), 7.37-7.35 (m, 10H), 7.76 (d, *J*=6.4, 2H), 8.51 (d, *J*=6.8, 2H); ^{13}C NMR (CD_3CN) δ 48.8, 57.0, 64.6, 126.0, 128.4, 129.5, 129.6, 139.4, 146.0, 157.0, 172.6; LRMS (FAB) 318 ($(M)^+$, 100); HRMS (FAB) calcd for $C_{21}H_{20}NO_2$ 318.1494, found 318.1508.

N-Methyl Picolinium *p*-Tolylacetate Perchlorate (6f).

Compound **6f** was obtained as a yellow sticky semisolid (3.07g, 86%). ^{1}H NMR (CD_3CN) δ 2.31 (s, 3H), 3.77 (s, 2H), 4.25 (s, 3H), 5.35 (s, 2H), 7.17-7.19 (m, 4H), 7.85 (d, *J*=6.0, 2H), 8.56 (d, *J*=6.8, 2H); ^{13}C NMR (CD_3CN) δ 20.9, 40.6, 48.7, 64.1, 125.8, 130.0, 130.2, 131.7, 137.8, 145.9, 157.3, 172.0; LRMS (FAB) 256 ($(M)^+$, 100), 122 (27), 107 (77); HRMS (FAB) calcd for $C_{16}H_{18}NO_2$ 256.1338 $(M)^+$, found 256.1346.

N-Methyl Bromophenylacetate Perchlorate (6g).

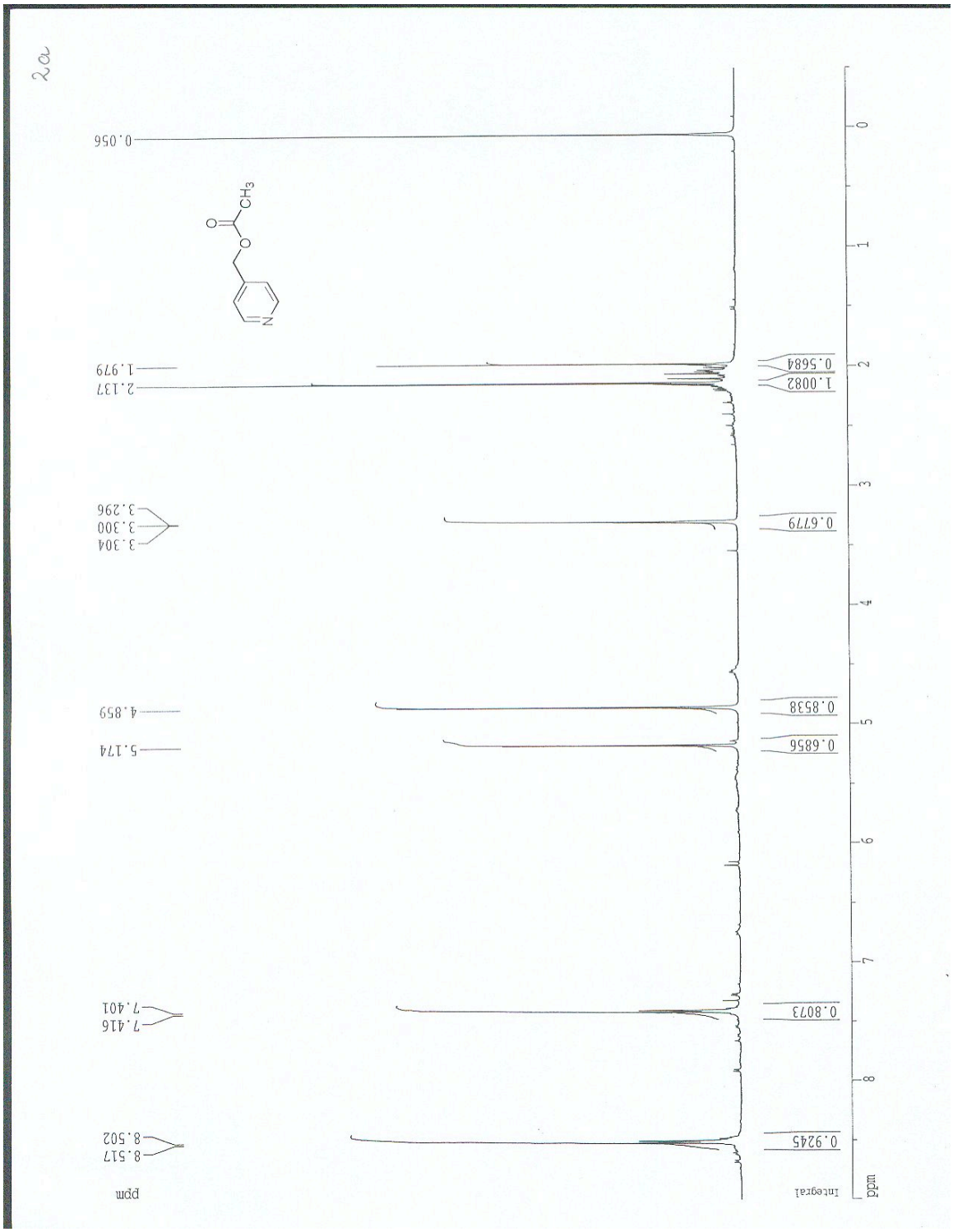
Compound **6g** was obtained as a pale yellow solid after recrystallization from hot ethanol (1.09g, 64%). Mp 74-78 ºC; ^{1}H NMR (CD_3CN) δ 3.80 (s, 2H), 4.24 (s, 3H), 5.36 (s, 2H), 7.24-7.26 (m, 2H), 7.50-7.53 (m, 2H), 7.86 (d, *J*=6.0, 2H), 8.54 (d, *J*=6.8, 2H); ^{13}C NMR (CD_3CN) δ 40.3, 48.8, 64.3, 121.5, 125.9, 132.4, 132.5, 134.2, 146.0, 157.2, 171.4; LRMS (FAB) 320 ($(M)^+$, 100); HRMS (FAB) calcd for $C_{15}H_{15}NO_2Br$ 320.0286 $(M)^+$, found 320.0275, calcd for $C_{15}H_{15}NO_2Br$ 322.0266 $(M)^+$, found 322.0278.

N-Methyl Picolinium Cinnamate Perchlorate (6h).

2.5 mmol of the ester was combined with silver perchlorate to afford pale cream-colored crystals (0.69 g, 78 %). Mp 132-134 ºC; IR (nujol) 2963 (m), 2866 (m), 1708 (s), 1642 (m), 1460 (s); ^{1}H NMR (CD_3CN) δ 4.26 (s, 3H), 5.48 (s, 2H), 6.67 (d, *J*=16.4, 1H), 7.45-7.46 (m, 3H), 7.66-7.69 (m, 2H), 7.83 (d, *J*=16, 1H), 7.97 (d, *J*=6.0, 2H), 8.57 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 48.4, 63.6, 117.3, 125.7, 128.8, 129.6, 131.3, 134.6, 146.7, 147.7, 157.3, 166.2; LRMS (FAB) 254 ($(M)^+$, 100); DCI 254 (5), 148 (20), 122 (88), 91(15), 77 (17); HRMS (FAB) calcd for $C_{16}H_{16}NO_2$ 254.1181, found 254.1192.

N-Methyl Picolinium Perchlorate (9).

Compound **9** was prepared from N-methyl picolinium iodide by the counter-ion exchange procedure described above and obtained as white crystals (0.64 g, 61 %). Mp 132-134 ºC; IR (nujol) 2957 (m), 2854 (m), 1646 (m), 1460 (s), 1095 (s); ^{1}H NMR (CD3CN) δ 2.60 (s, 3H), 4.20 (s, 3H), 7.78 (d, *J*=6.0, 2H), 8.42 (d, *J*=6.4, 2H); ^{13}C NMR (CD_3CN) δ 21.9, 48.2, 129.2, 145.0, 160.3; LRMS (FAB) 108 ($(M)^+$, 85), 45 (85); HRMS (FAB) calcd for $C_7H_{10}N$ 108.0813, found 108.0809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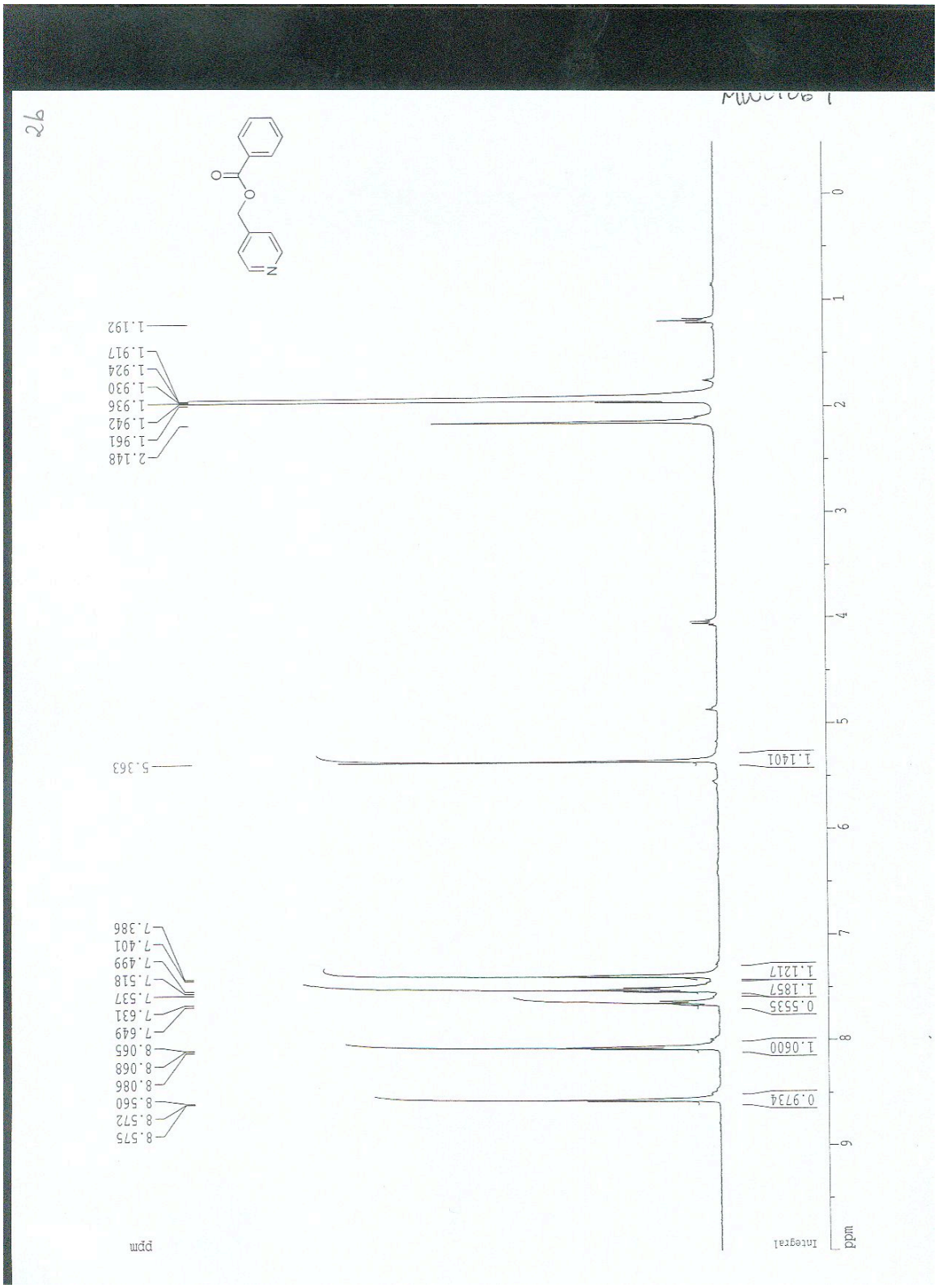
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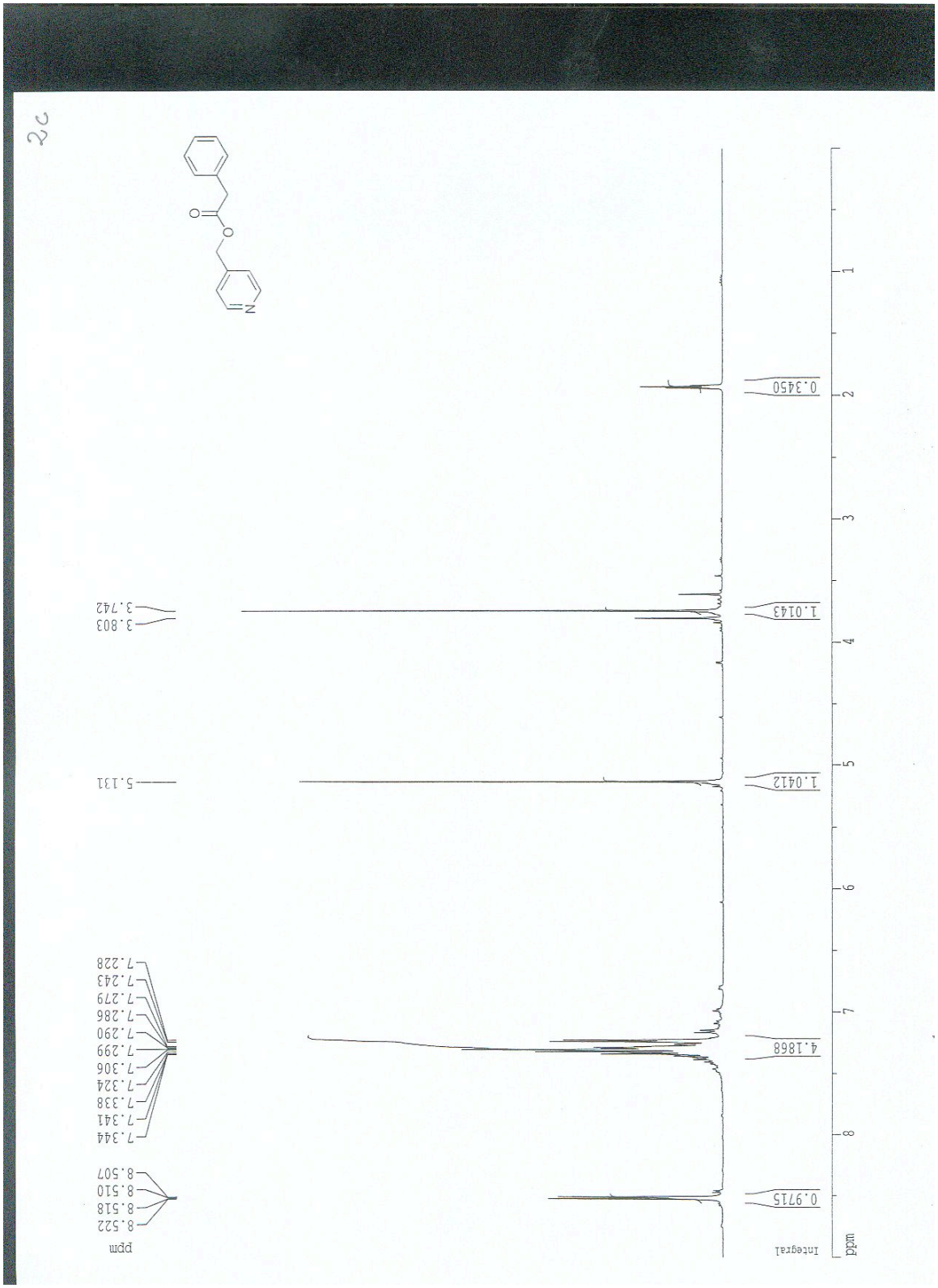
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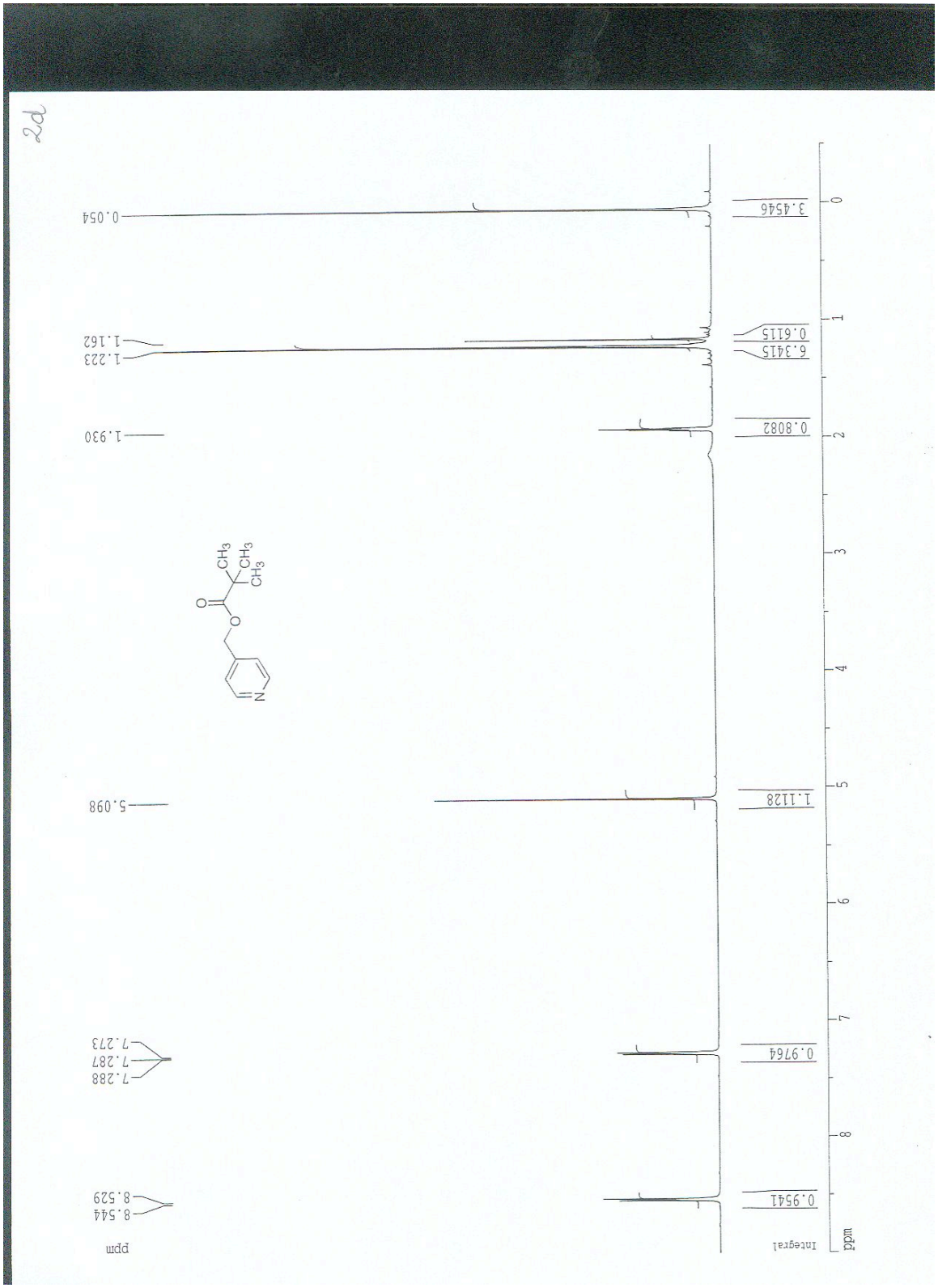
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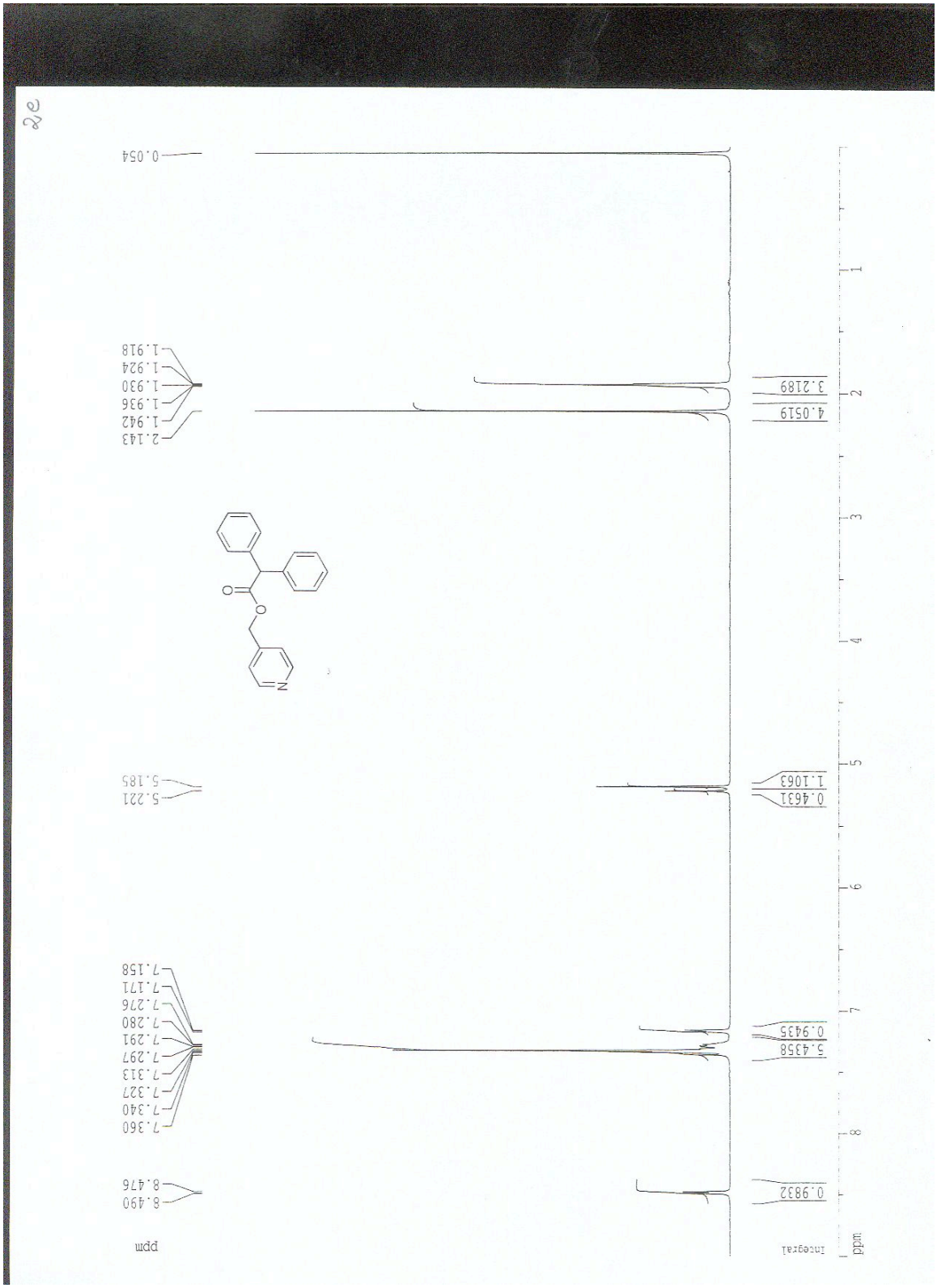
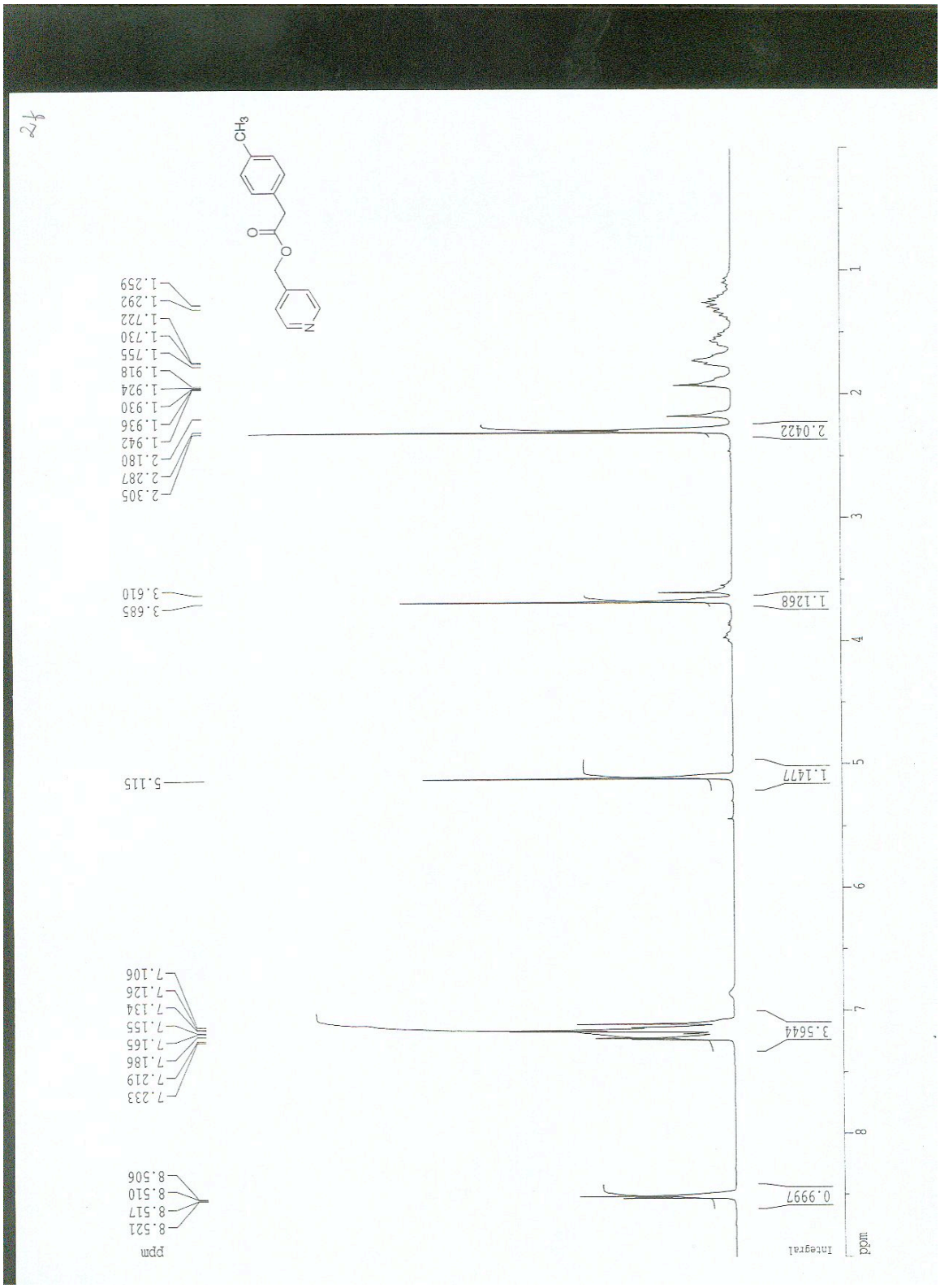
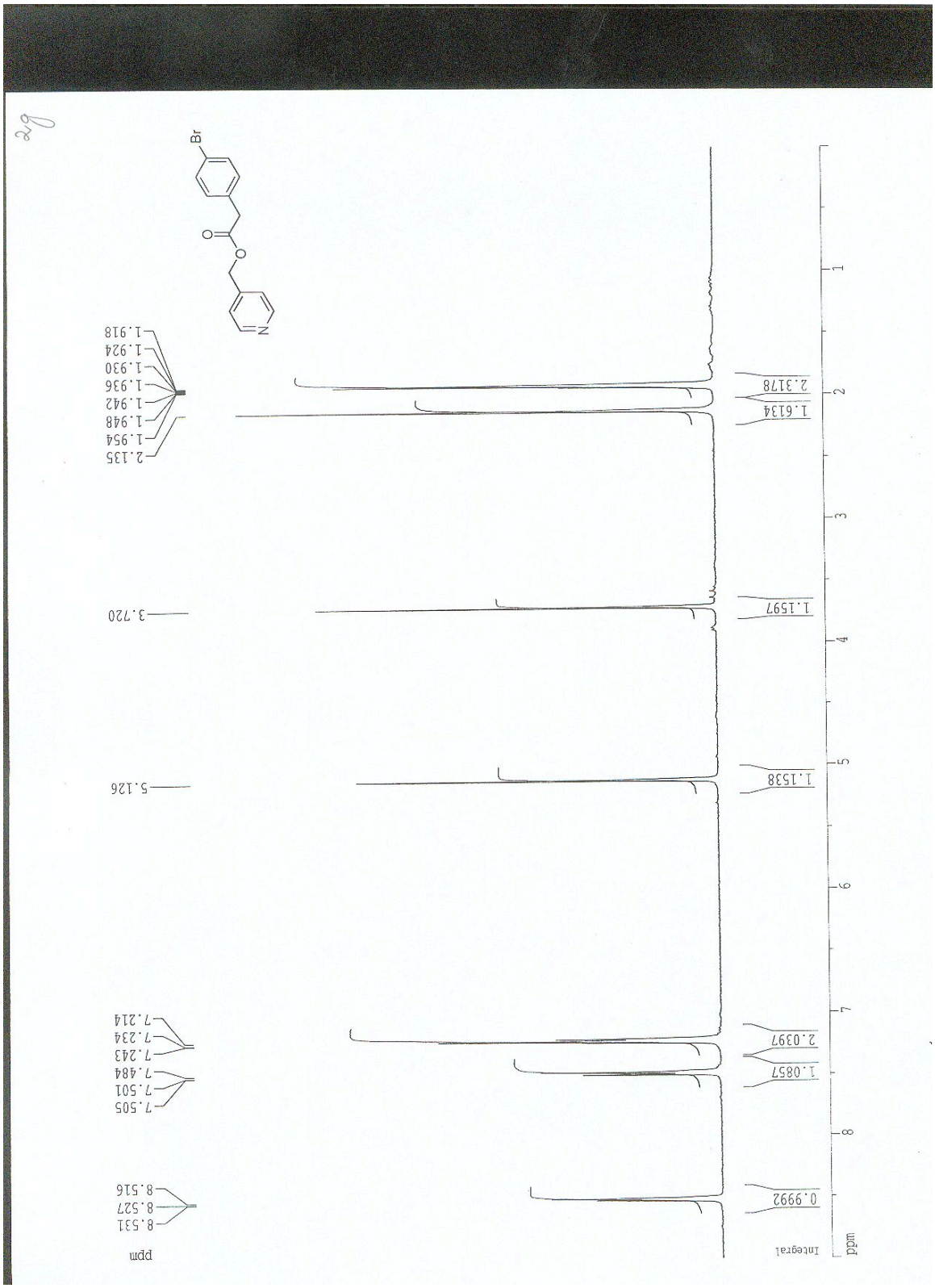
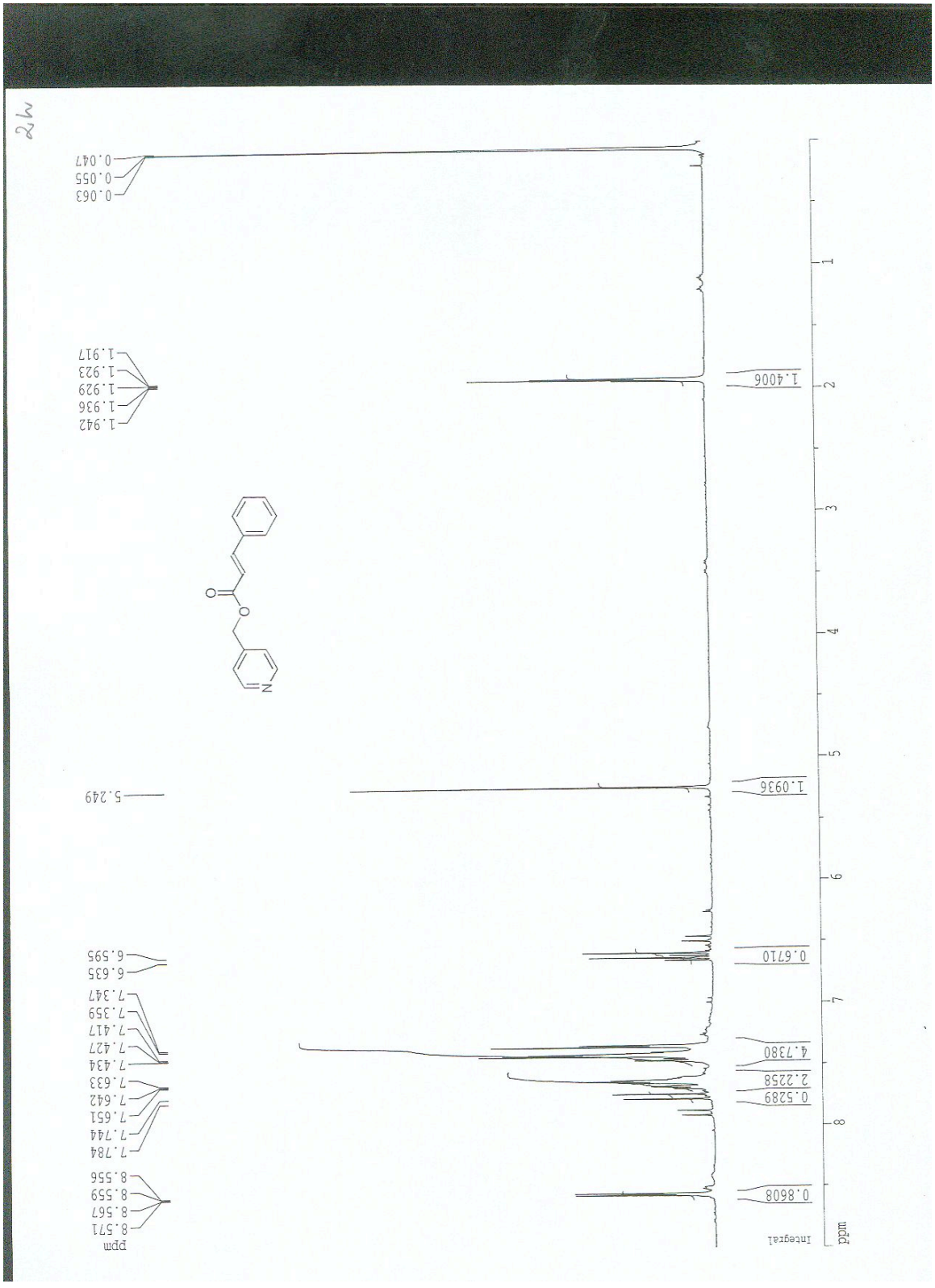
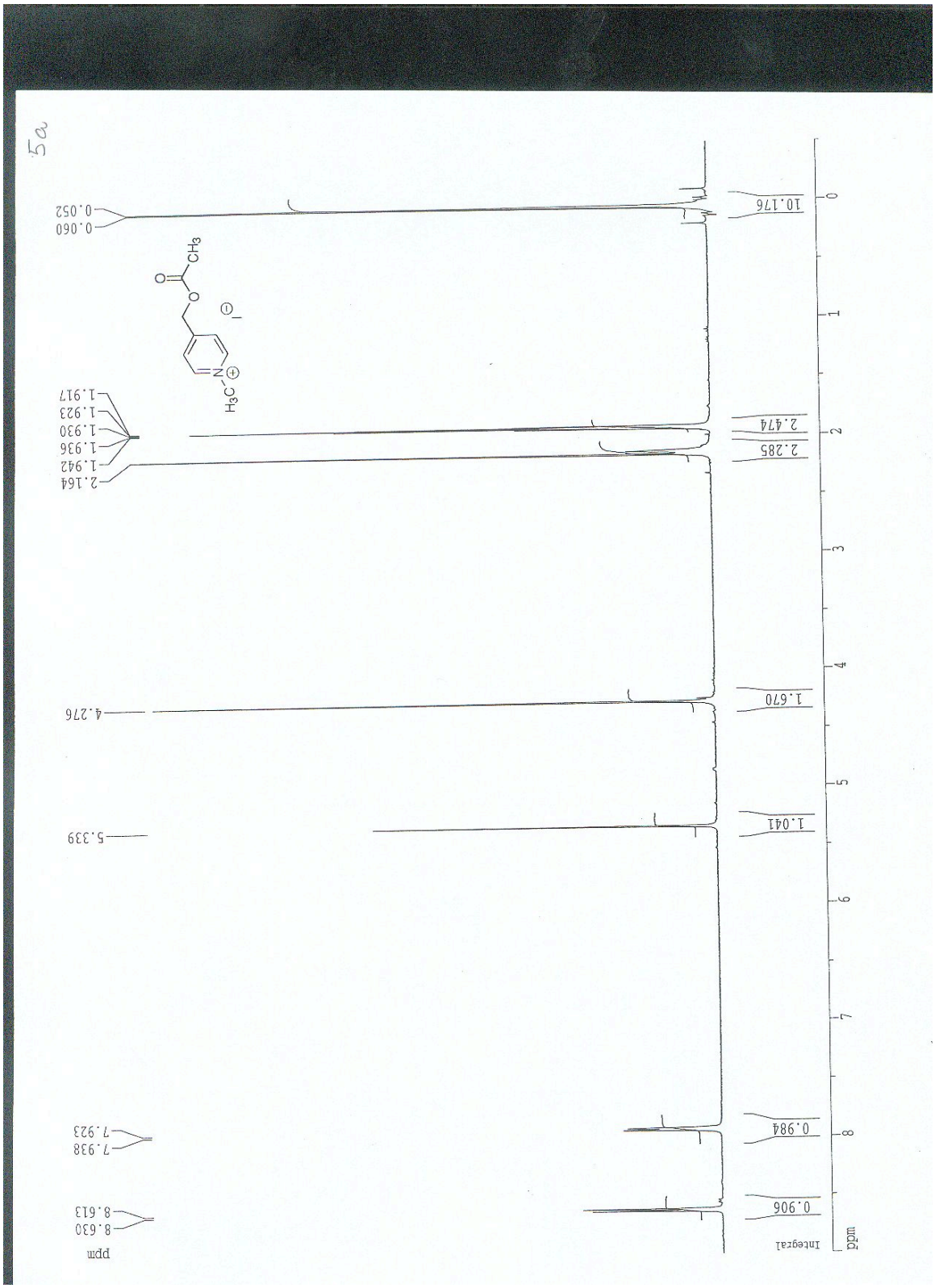
7.273
5.098
1.930
1.223
1.162
0.054
Integral
0.9541
0.9764
1.1128
0.8082
6.3415
0.6115
3.4546
O
O
N
CH3
CH3
CH3


2e
0.054
1.918
1.924
1.930
1.936
1.942
2.143
3.2189
4.0519
5.185
5.221
1.1063
0.4631
5.4358
0.9435
7.158
7.171
7.276
7.280
7.291
7.297
7.313
7.327
7.340
7.360
8.476
8.490
0.9832
ppm
Integral


24
CH3
O
O
N
ppm
8.521
8.517
8.510
8.506
7.233
7.219
7.186
7.165
7.155
7.134
7.126
7.106
5.115
3.685
3.610
2.305
2.287
2.180
1.942
1.936
1.930
1.924
1.918
1.755
1.730
1.722
1.292
1.259
Integral
0.9997
3.5644
1.1477
1.1268
2.0422
wdd
8
7
6
5
4
3
2
1


2g
Br
O
O
N
ppm
8.531
8.527
8.516
7.505
7.501
7.484
7.243
7.234
7.214
5.126
3.720
2.135
1.954
1.948
1.942
1.936
1.930
1.924
1.918
Integral
0.9992
1.0857
2.0397
1.1538
1.1597
1.6134
2.3178
ppm


2w
ppm
8.571
8.567
8.559
8.556
7.784
7.744
7.651
7.642
7.633
7.434
7.427
7.417
7.359
7.347
6.635
6.595
5.249
1.942
1.936
1.929
1.923
1.917
0.063
0.055
0.047
Integral
0.8608
0.5289
2.2258
4.7380
0.6710
1.0936
1.4006
O
O
N


5a
ppm
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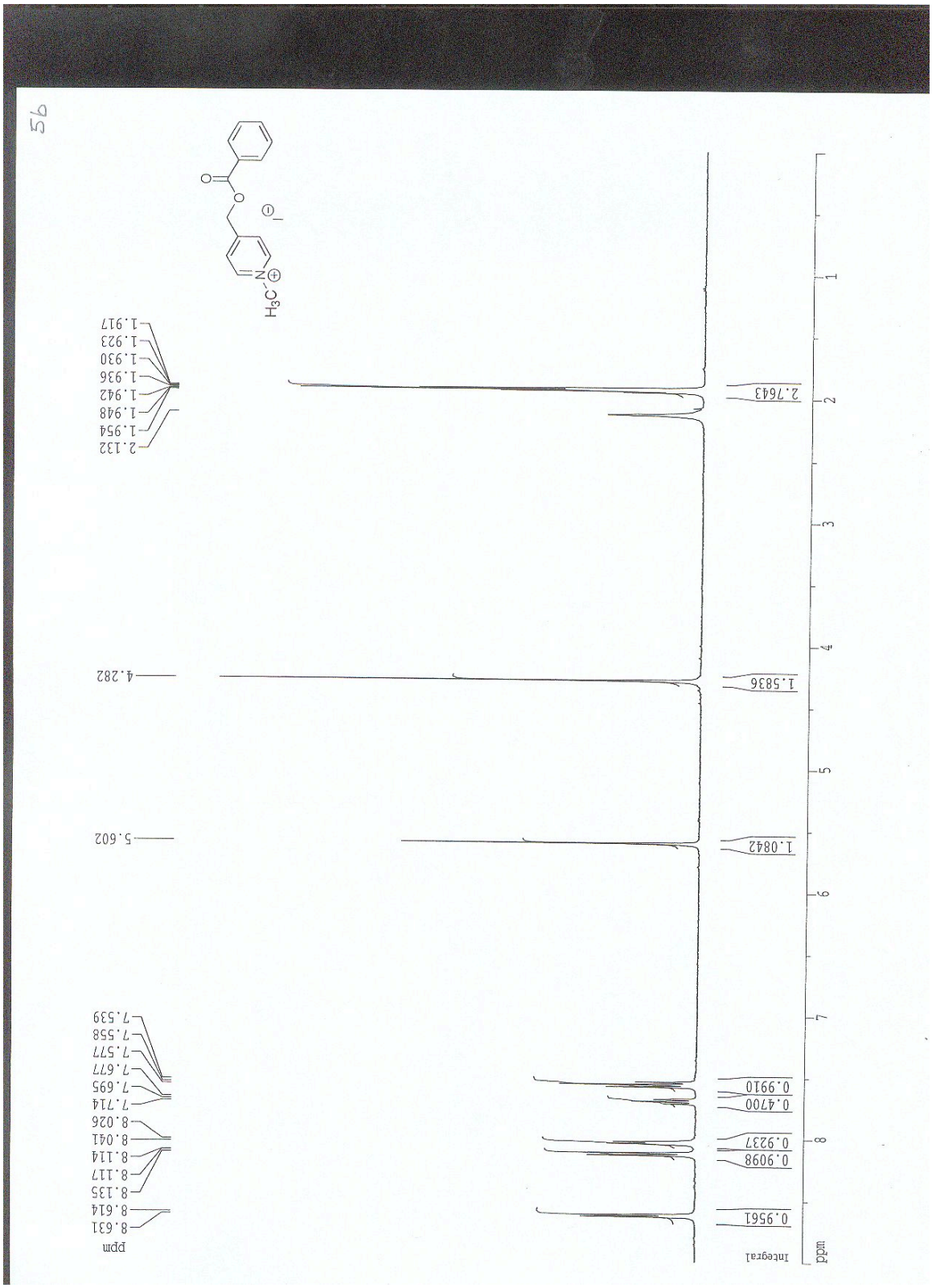
8.613
7.938
7.923
5.339
4.276
2.164
1.942
1.936
1.930
1.923
1.917
0.060
0.052
Integral
0.906
0.984
1.041
1.670
2.474
2.285
10.176


56
ppm
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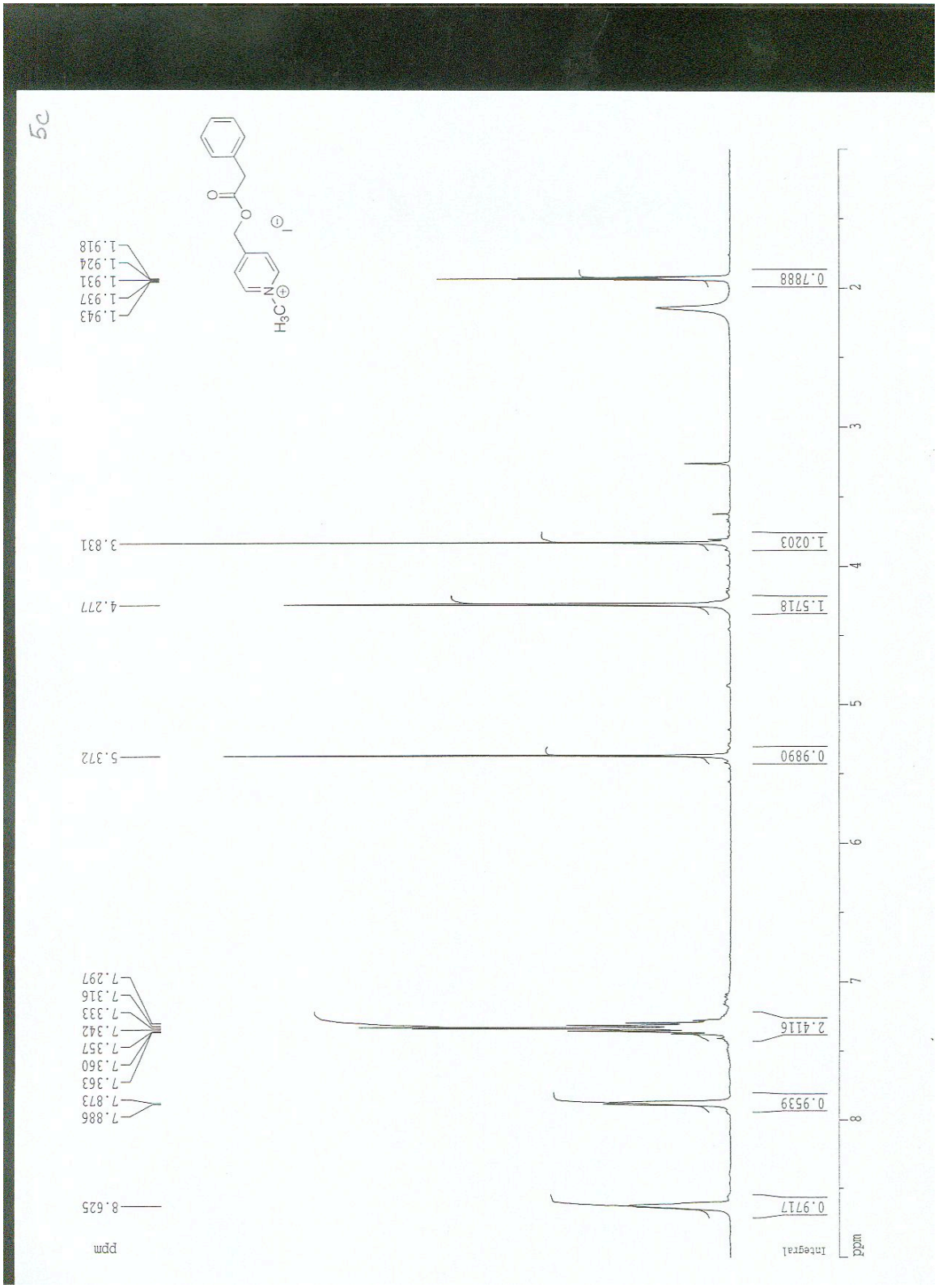
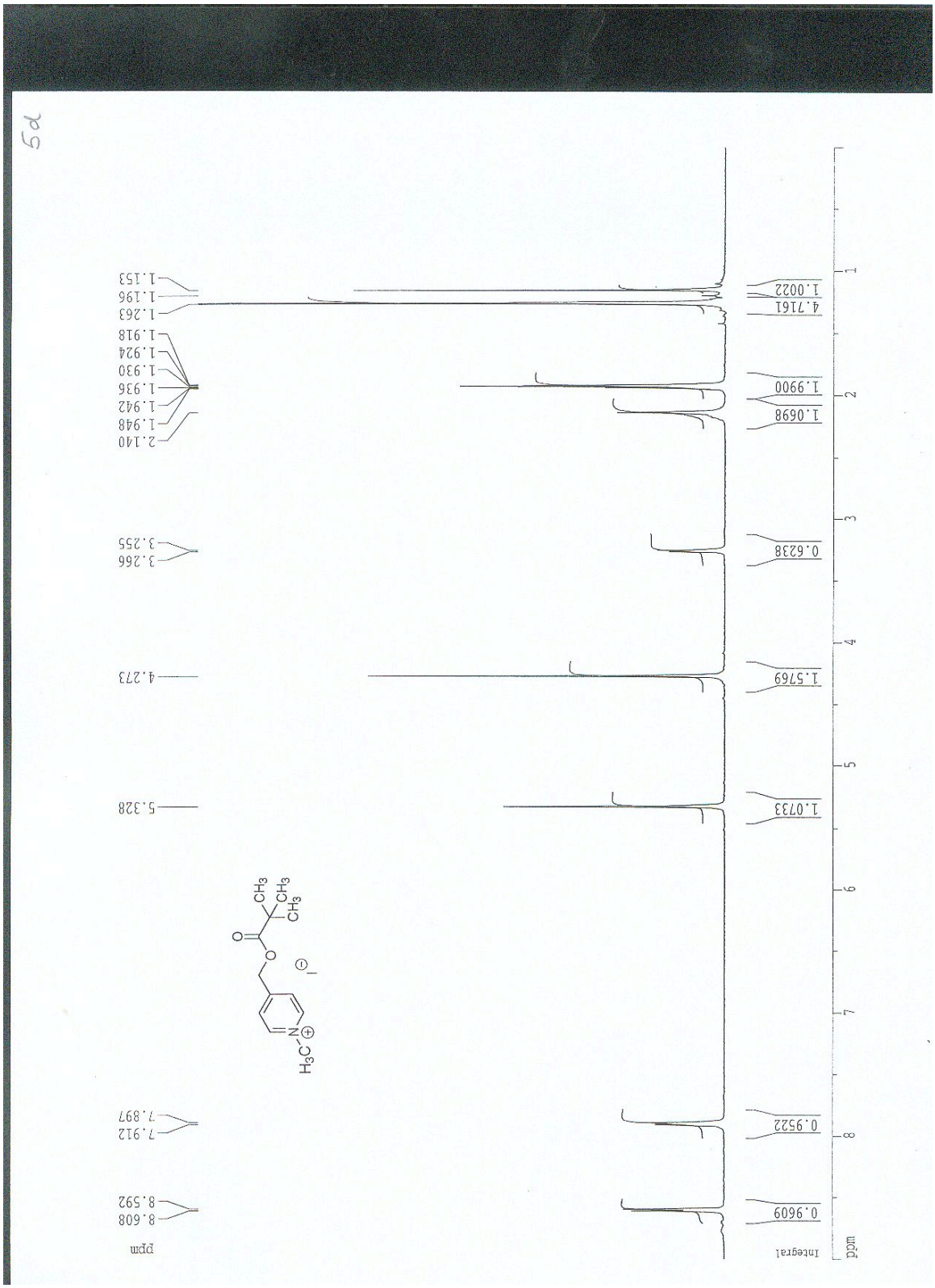
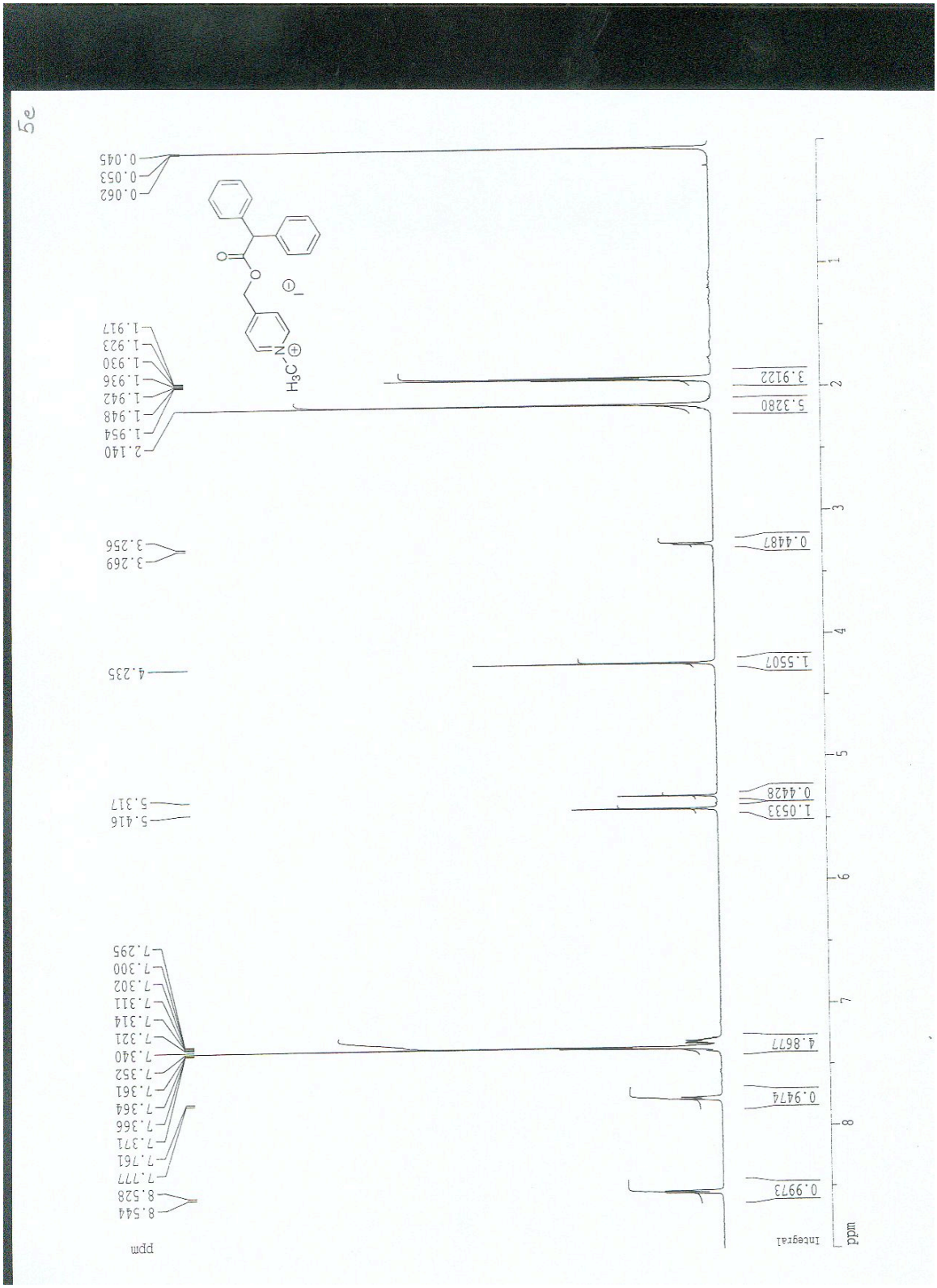
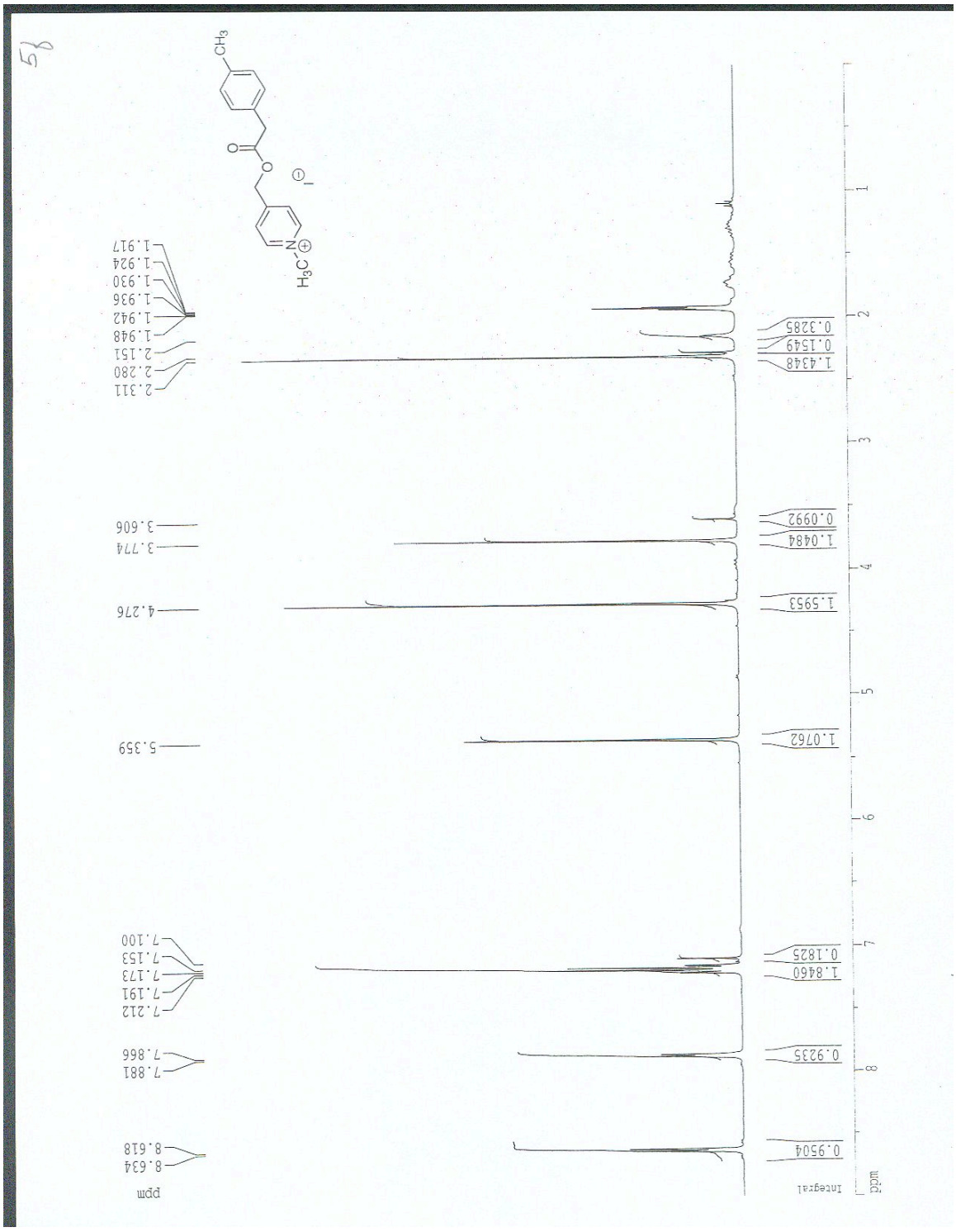
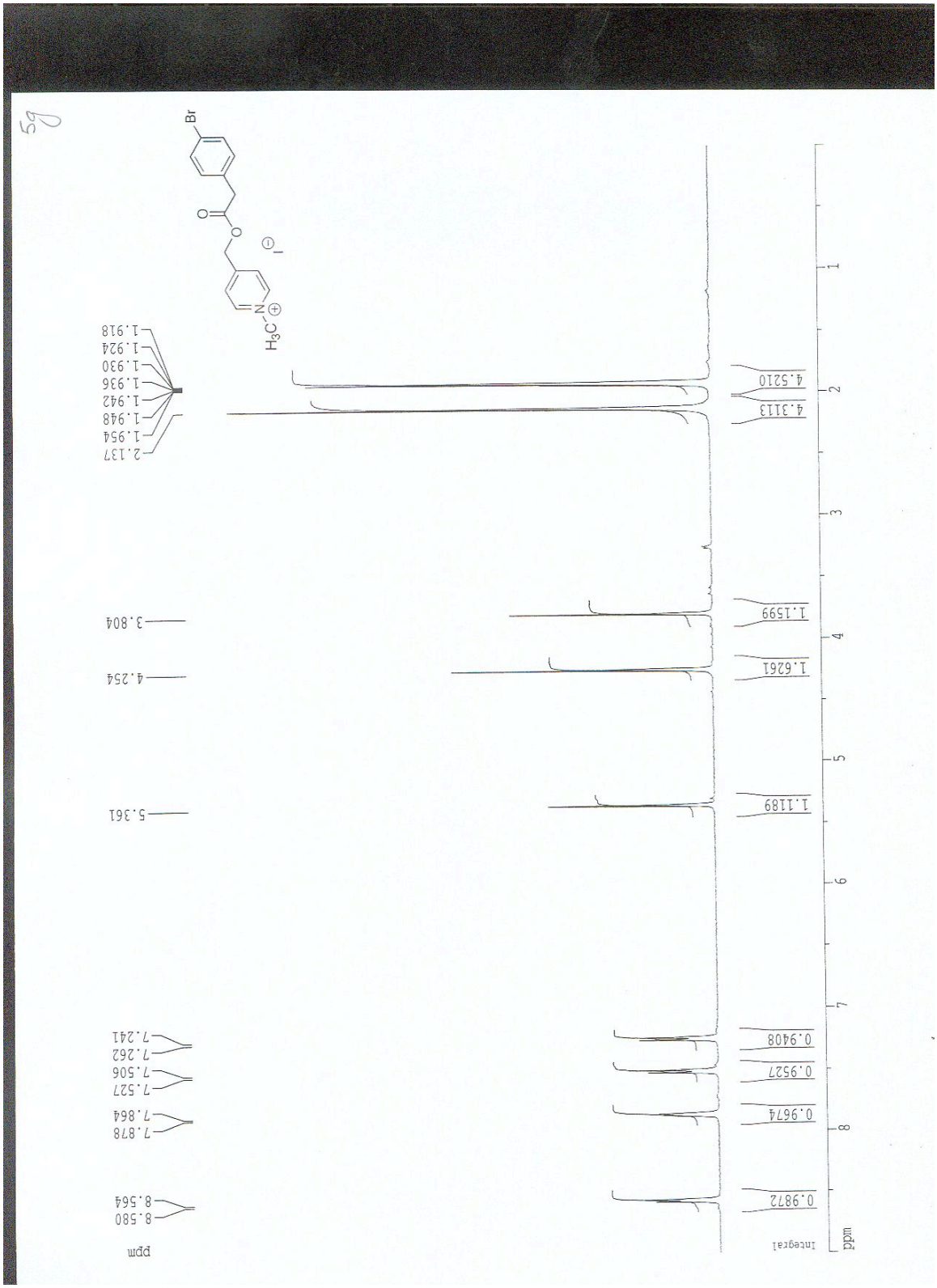
8.614
8.135
8.117
8.114
8.041
8.026
7.714
7.695
7.677
7.577
7.558
7.539
5.602
4.282
2.132
1.954
1.948
1.942
1.936
1.930
1.923
1.917
Integral
0.9561
0.9098
0.9237
0.4700
0.9910
1.0842
1.5836
2.7643

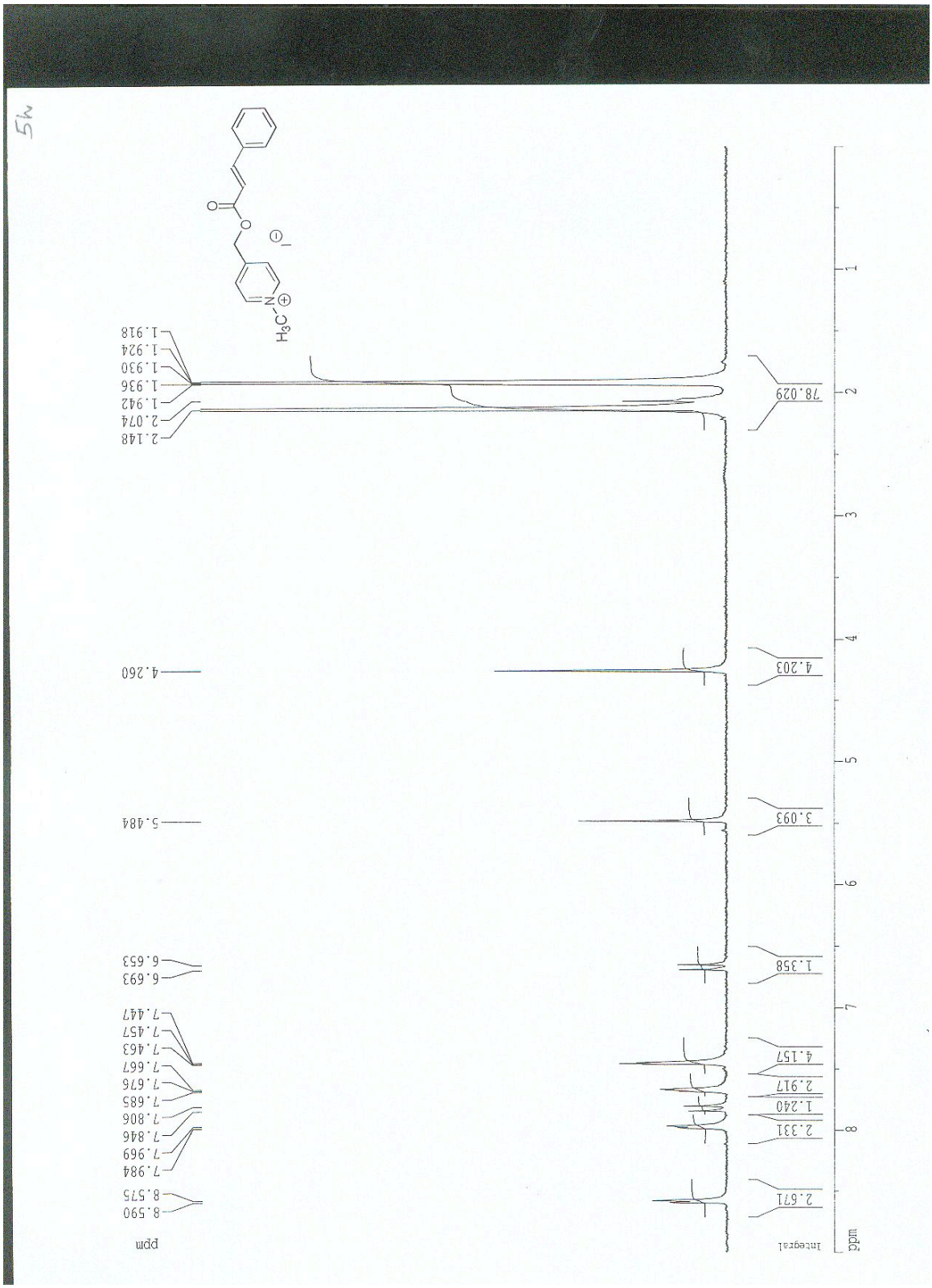

5c
ppm
Integral
8.625
7.886
7.873
7.363
7.360
7.357
7.342
7.333
7.316
7.297
5.372
4.277
3.831
1.943
1.937
1.931
1.924
1.918
0.9717
0.9539
2.4116
0.9890
1.5718
1.0203
0.7888

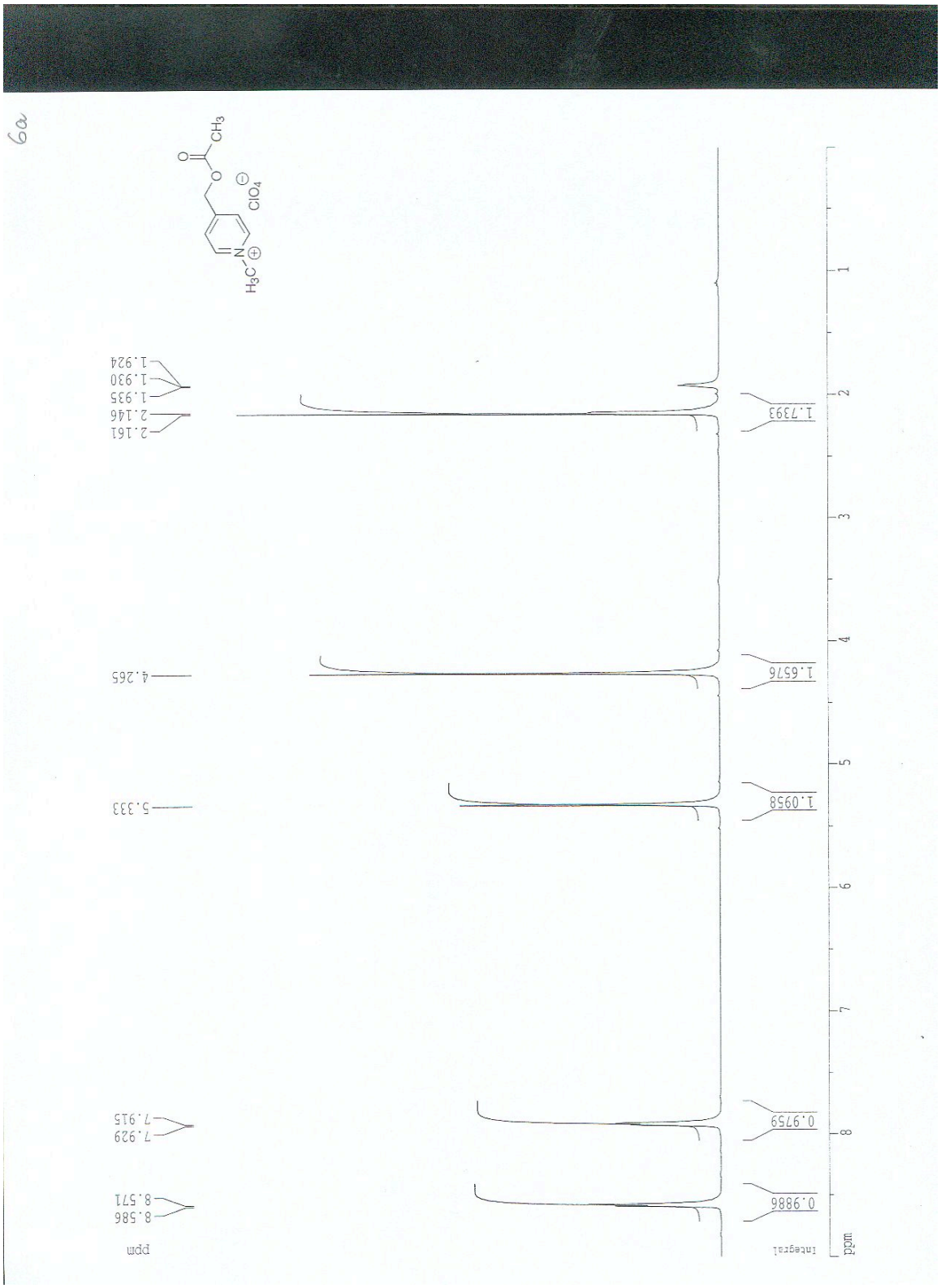

5d
ppm
8.608
8.592
7.912
7.897
5.328
4.273
3.266
3.255
2.140
1.948
1.942
1.936
1.930
1.924
1.918
1.263
1.196
1.153
Integral
0.9609
0.9522
1.0733
1.5769
0.6238
1.0698
1.9900
4.7161
1.0022
H3C
N
O
O
CH3
CH3
CH3
I

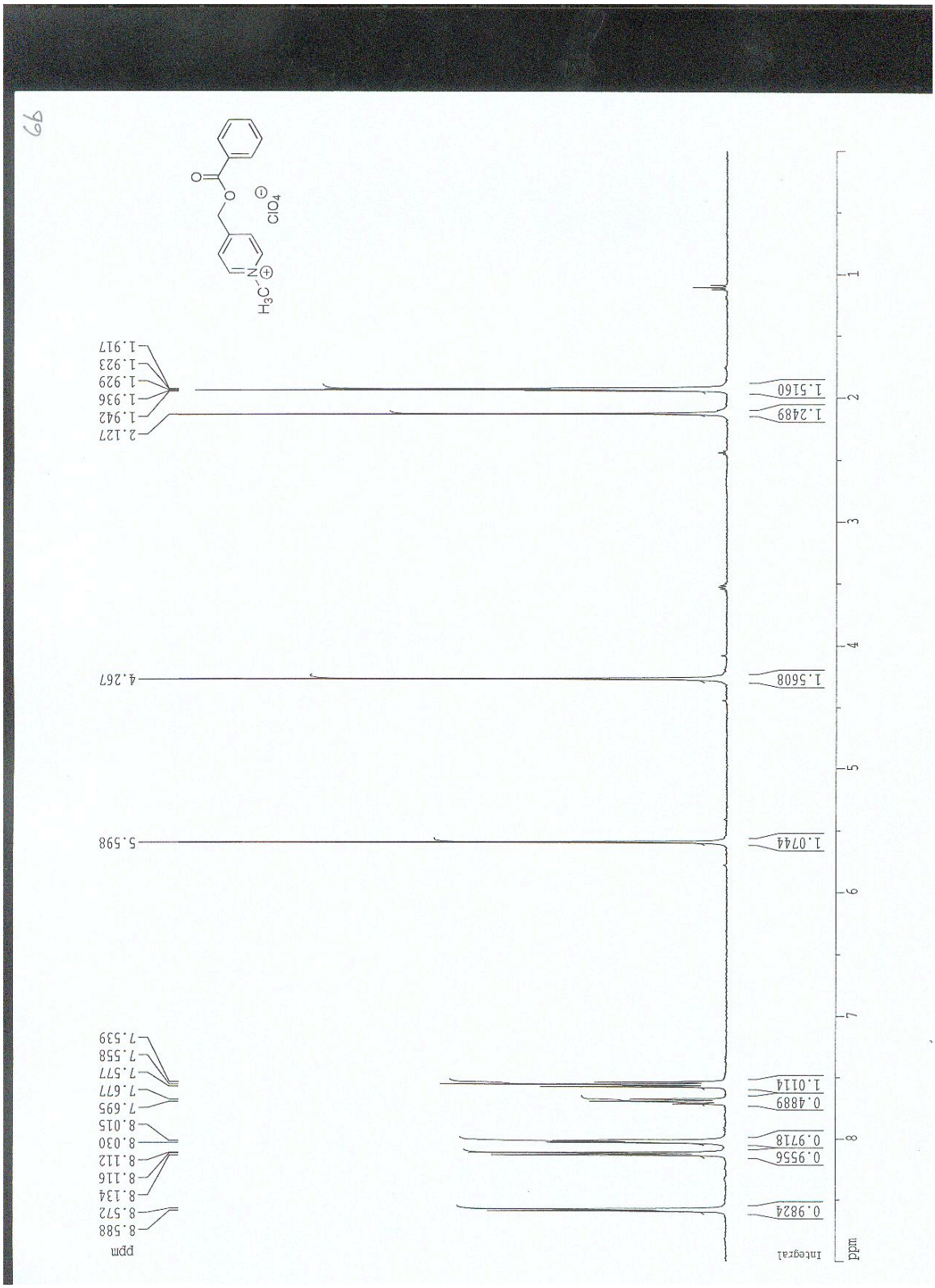

5e
ppm
Integral
8.544
8.528
7.777
7.761
7.371
7.366
7.364
7.361
7.352
7.340
7.321
7.314
7.311
7.302
7.300
7.295
5.416
5.317
4.235
3.269
3.256
2.140
1.954
1.948
1.942
1.936
1.930
1.923
1.917
0.062
0.053
0.045
0.99731
0.9474
4.8677
1.0533
0.4428
1.5507
0.4487
5.3280
3.9122

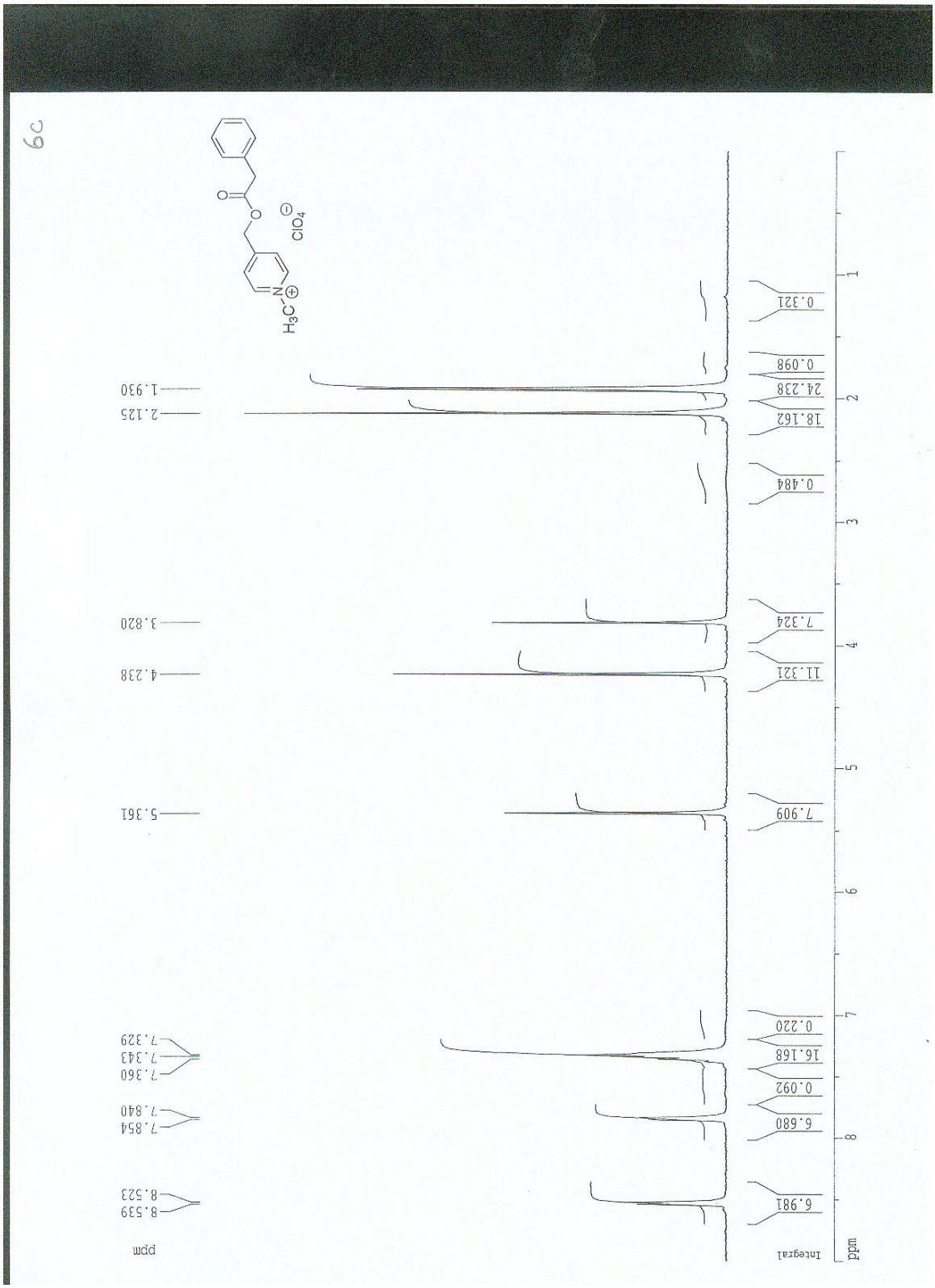

5b
CH3
O
O
N
H3C
I
ppm
8.634
8.618
7.881
7.866
7.212
7.191
7.173
7.153
7.100
5.359
4.276
3.774
3.606
2.311
2.280
2.151
1.948
1.942
1.936
1.930
1.924
1.917
Integral
0.9504
0.9235
1.8460
0.1825
1.0762
1.5953
1.0484
0.0992
1.4348
0.1549
0.3285
ppm


5g
Br
O
O
N
H3C
I
ppm
8.580
8.564
7.878
7.864
7.527
7.506
7.262
7.241
5.361
4.254
3.804
2.137
1.954
1.948
1.942
1.936
1.930
1.924
1.918
Integral
0.9872
0.9674
0.9527
0.9408
1.1189
1.6261
1.1599
4.3113
4.5210


5h
ppm
Integral
8.590
8.575
7.984
7.969
7.846
7.806
7.685
7.676
7.667
7.463
7.457
7.447
6.693
6.653
5.484
4.260
2.148
2.074
1.942
1.936
1.930
1.924
1.918
2.671
2.331
1.240
2.917
4.157
1.358
3.093
4.203
78.029


6a
ppm
integral
8.586
8.571
7.929
7.915
5.333
4.265
2.161
2.146
1.935
1.930
1.924
0.9886
0.9759
1.0958
1.6576
1.7393
ClO4
CH3


99
ppm
8.588
8.572
8.134
8.116
8.112
8.030
8.015
7.695
7.677
7.577
7.558
7.539
5.598
4.267
2.127
1.942
1.936
1.929
1.923
1.917
Integral
0.9824
0.9556
0.9718
0.4889
1.0114
1.0744
1.5608
1.2489
1.5160
ppm
1
2
3
4
5
6
7
8
O
O
ClO4
H3C
N


6c
ppm
Integral
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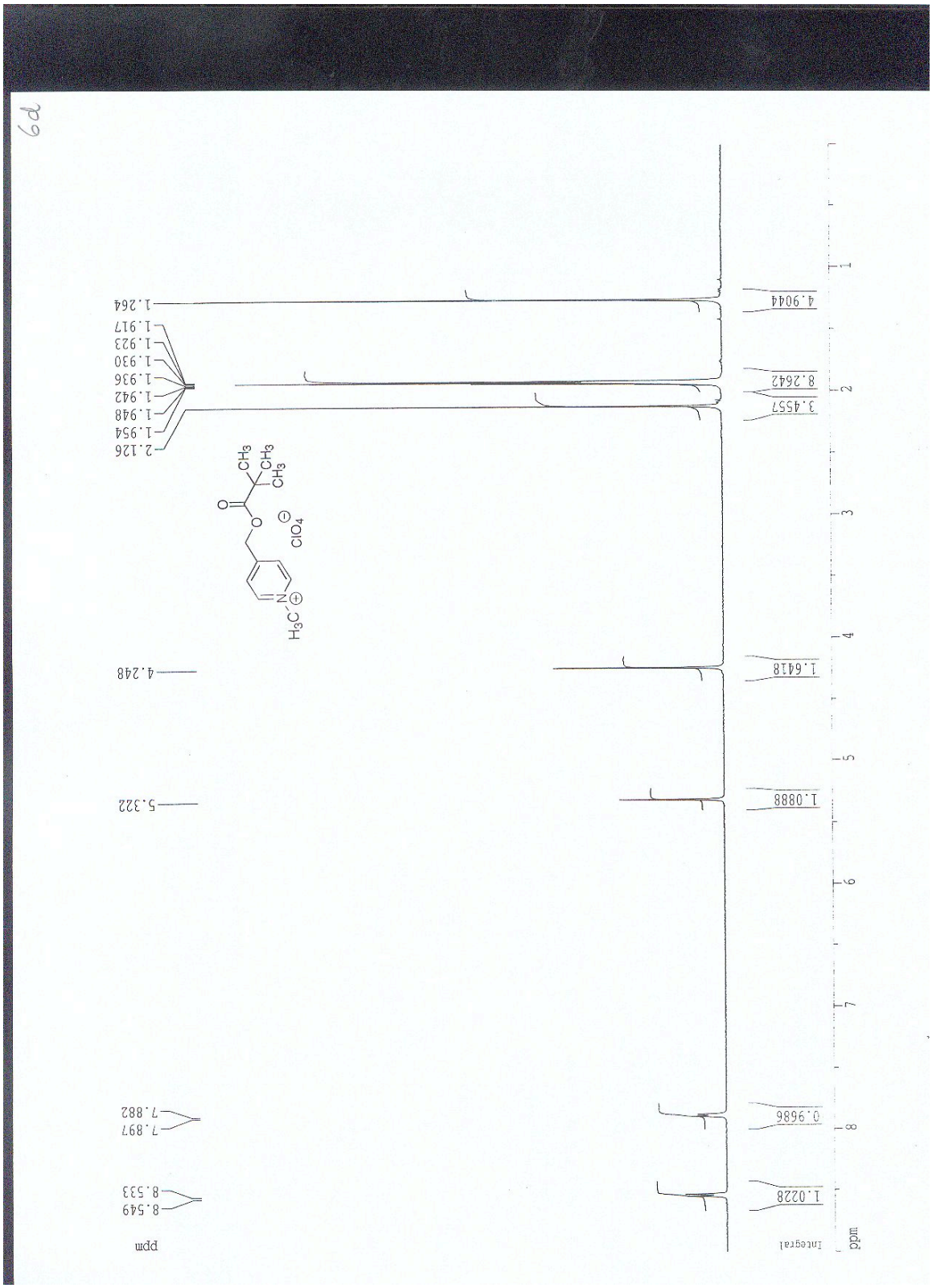
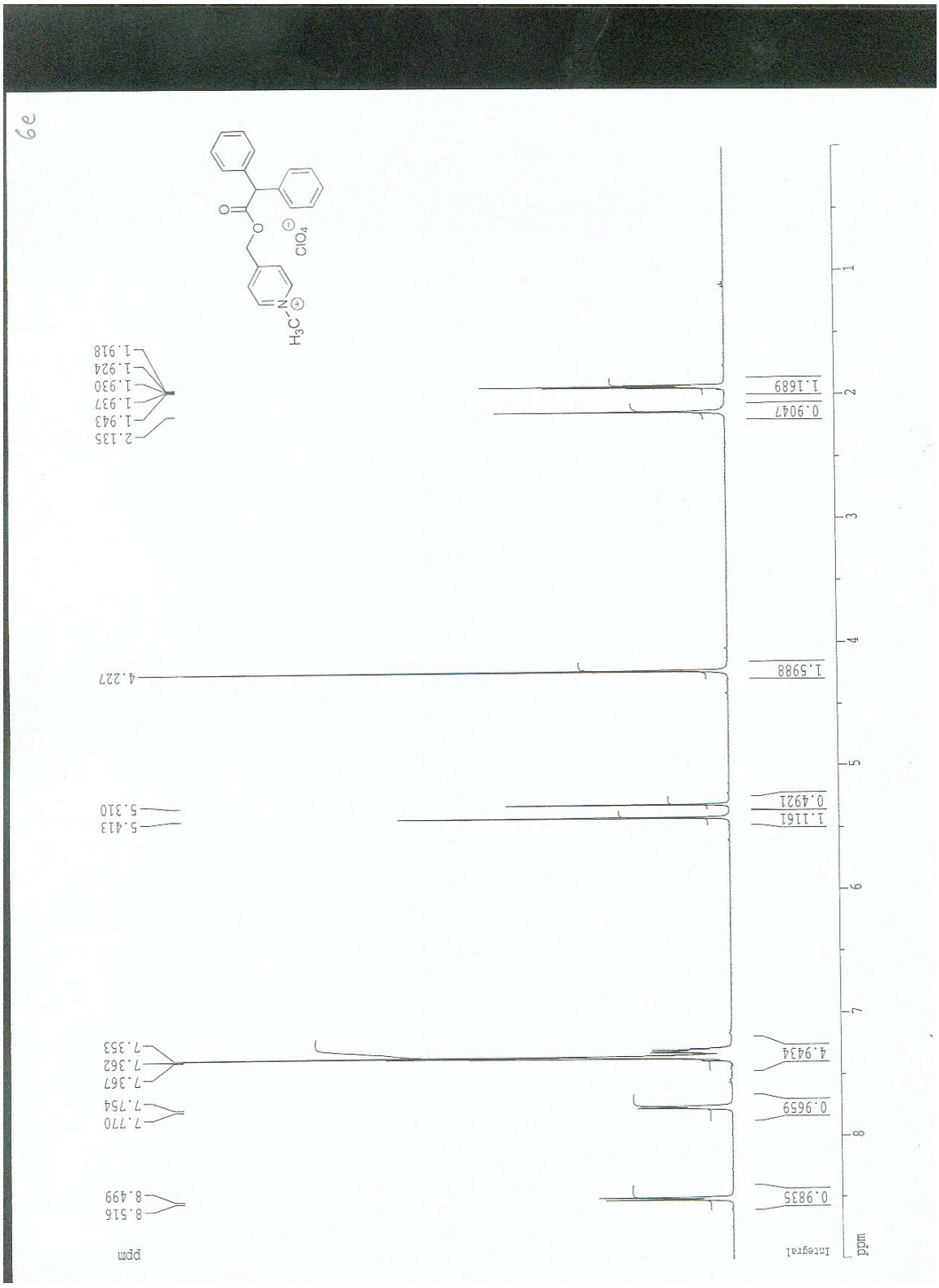
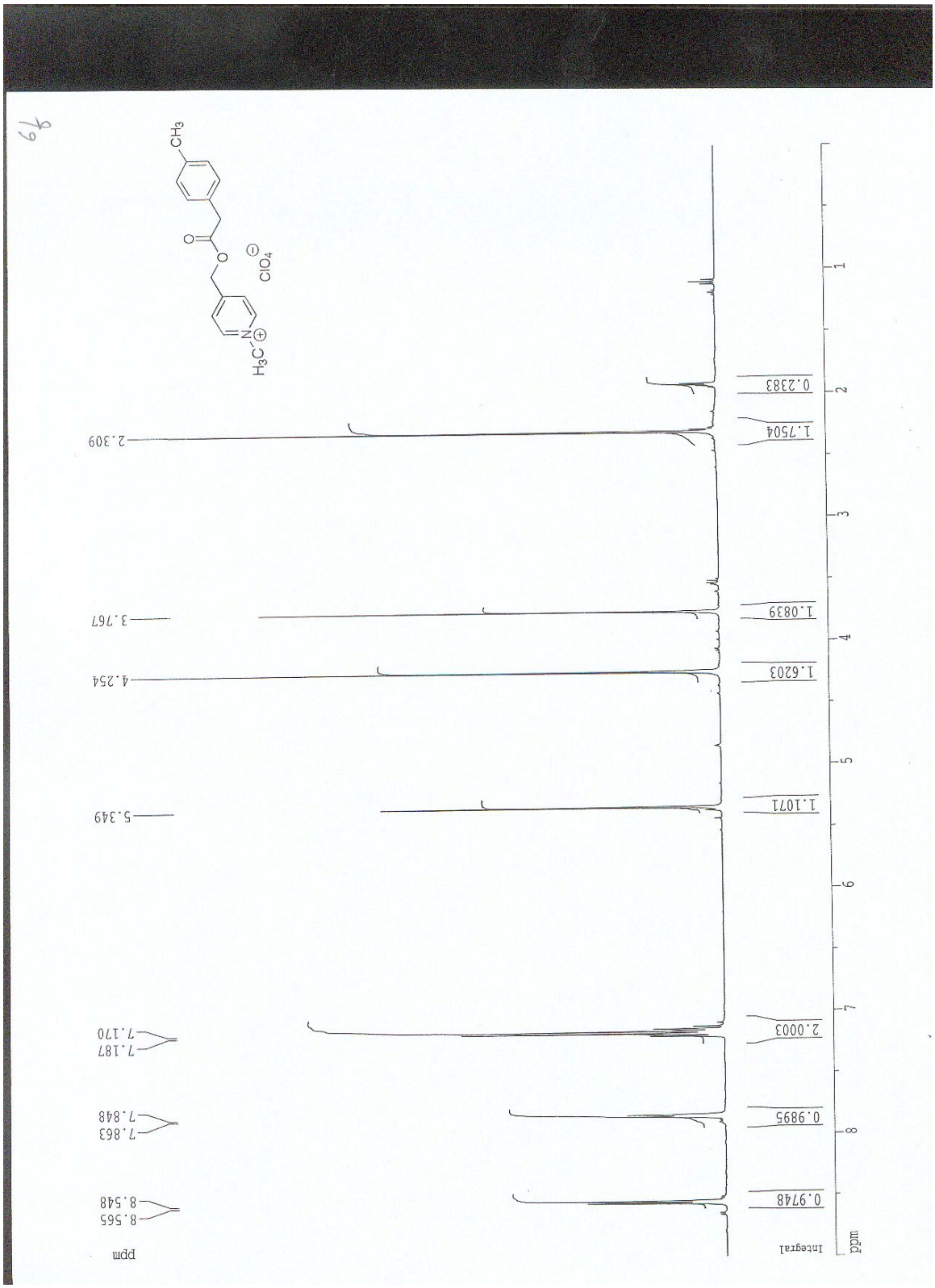
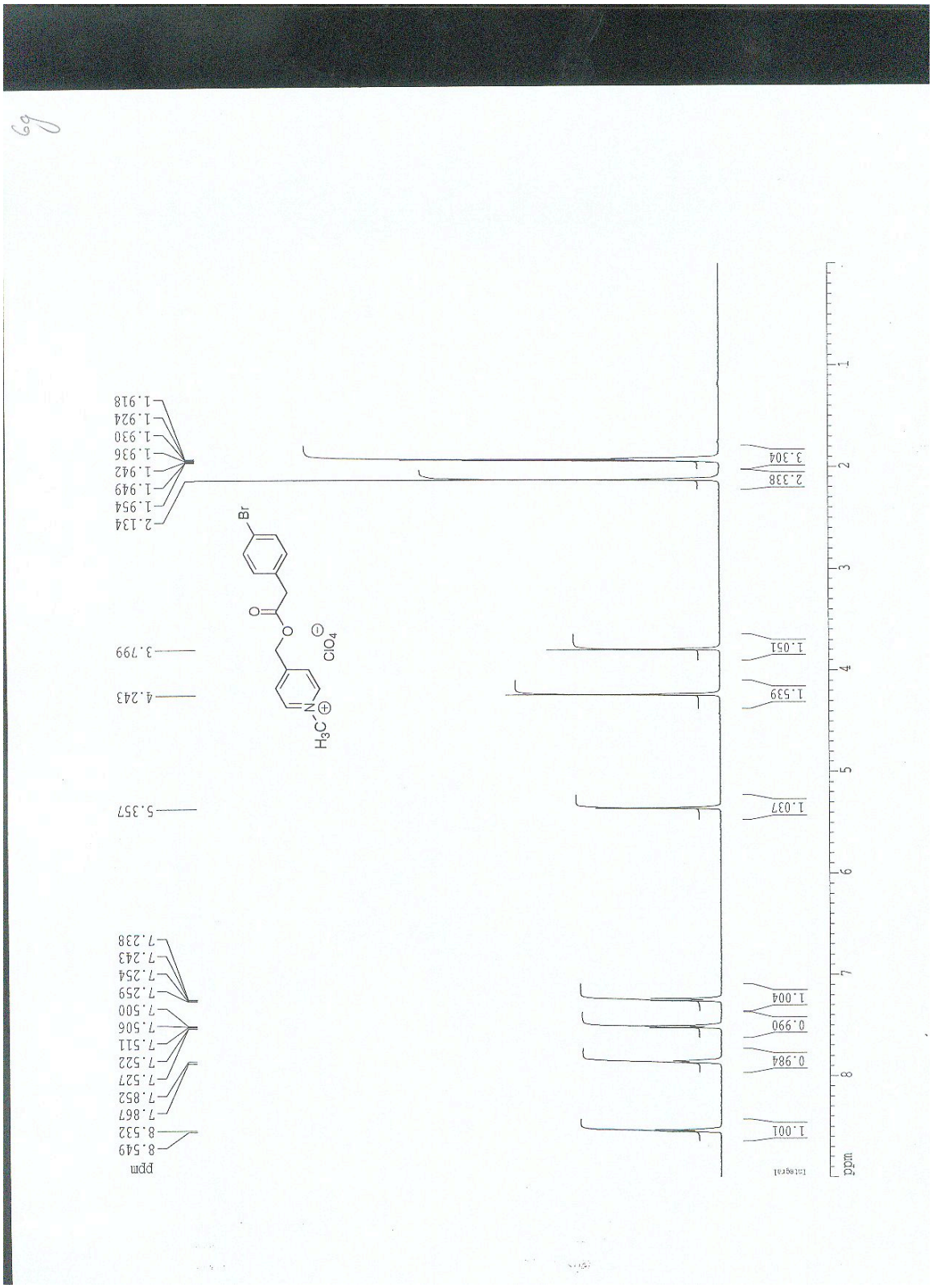
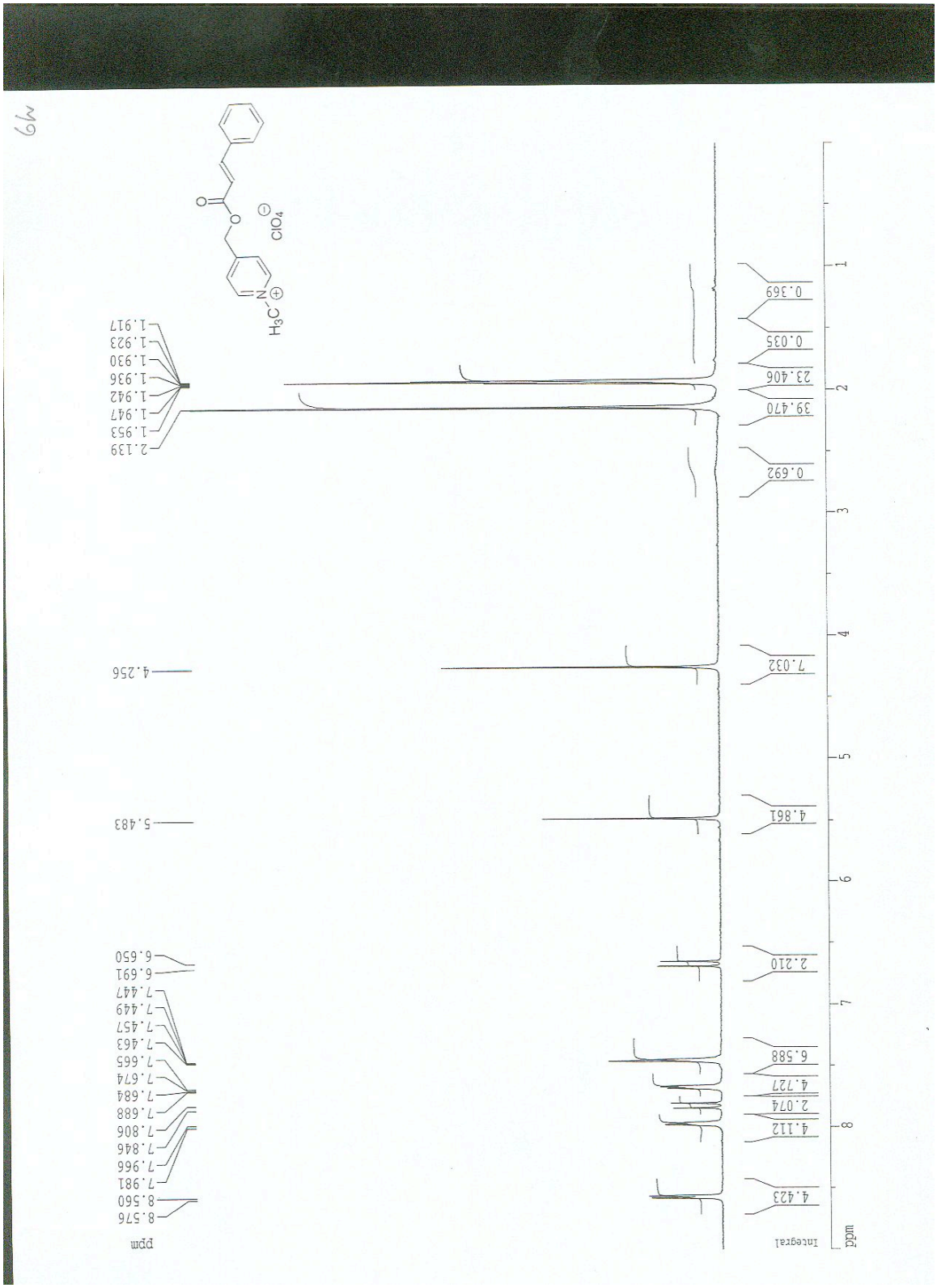
8.523
7.854
7.840
7.360
7.343
7.329
5.361
4.238
3.820
2.125
1.930
6.981
6.680
0.092
16.168
0.220
7.909
11.321
7.324
0.484
18.162
24.238
0.098
0.321

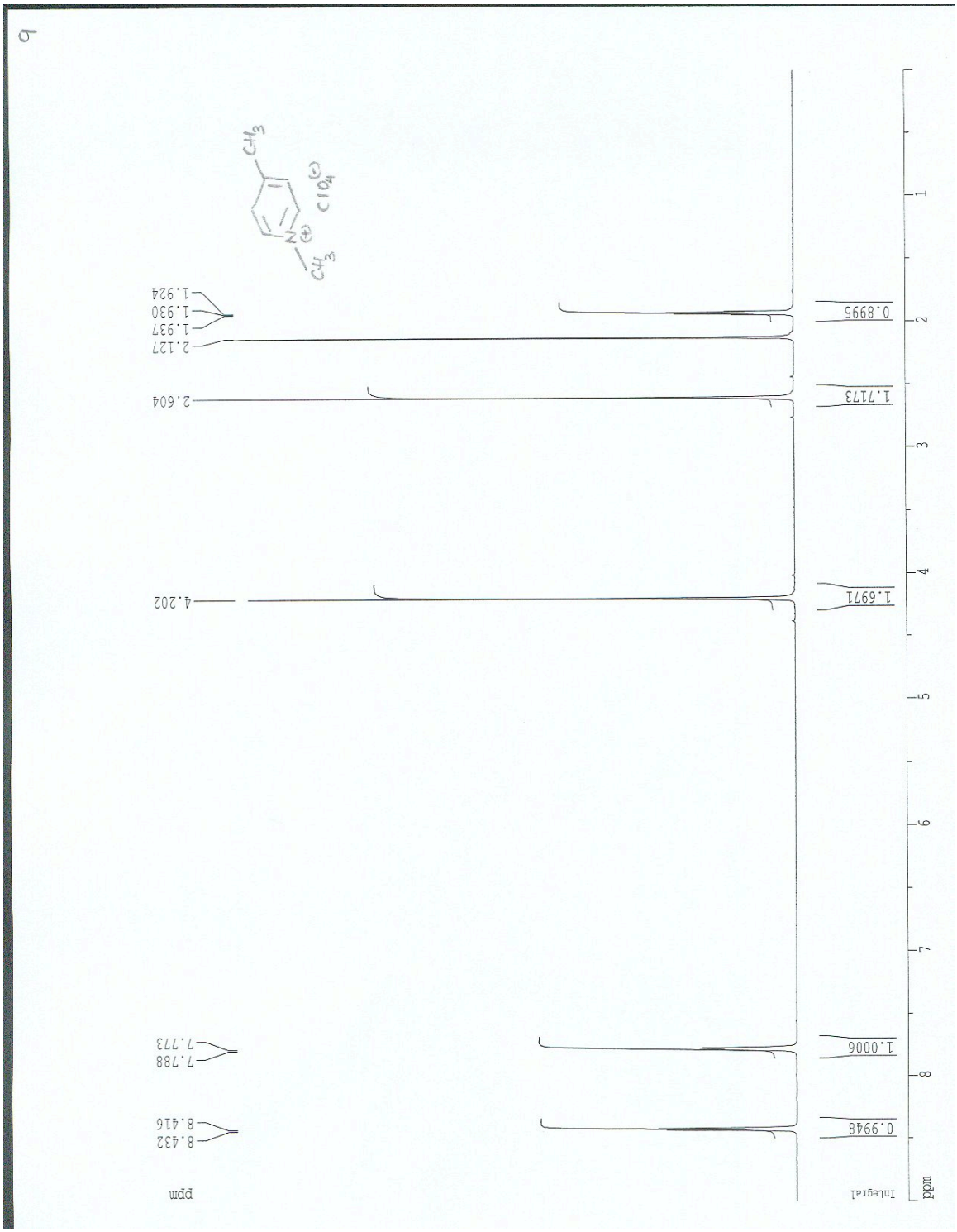

6d
ppm
8.549
8.533
7.897
7.882
5.322
4.248
2.126
1.954
1.948
1.942
1.936
1.930
1.923
1.917
1.264
integral
1.0228
0.9686
1.0888
1.6418
3.4557
8.2642
4.9044
ClO4
CH3
CH3
CH3
O
O
N
H3C


6e
ppm
Integral
8.516
8.499
7.770
7.754
7.367
7.362
7.353
5.413
5.310
4.227
2.135
1.943
1.937
1.930
1.924
1.918
0.9835
0.9659
4.9434
1.1161
0.4921
1.5988
0.9047
1.1689
ClO4
H3C
N
O
O
O


CH3
O
O
ClO4
H3C
N
ppm
8.565
8.548
7.863
7.848
7.187
7.170
5.349
4.254
3.767
2.309
Integral
0.9748
0.9895
2.0003
1.1071
1.6203
1.0839
1.7504
0.2383

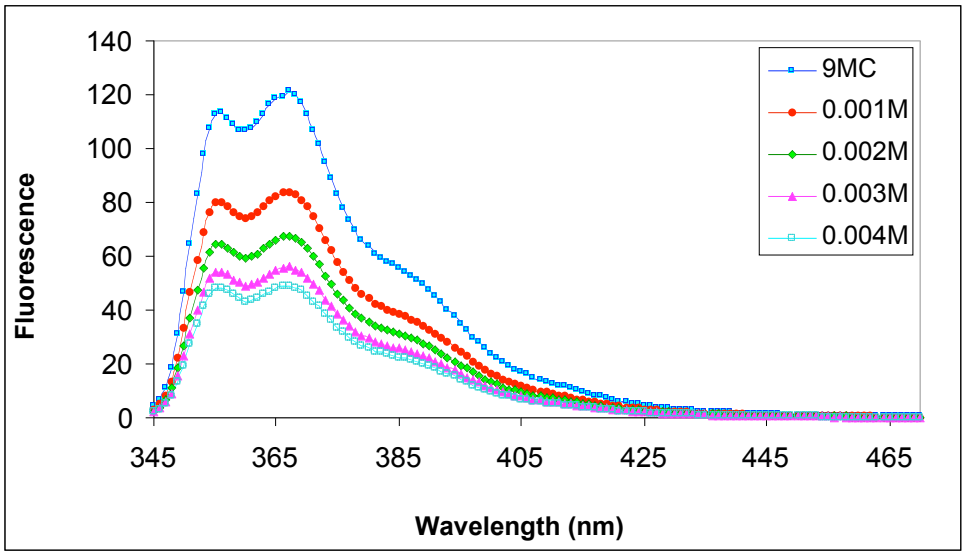

Br
O
O
ClO4
H3C
N
1.918
1.924
1.930
1.936
1.942
1.949
1.954
2.134
3.799
4.243
5.357
7.238
7.243
7.254
7.259
7.500
7.506
7.511
7.522
7.527
7.852
7.867
8.532
8.549
ppm
1.001
0.984
0.990
1.004
1.037
1.051
1.539
2.338
3.304
ppm


M9
ppm
integral
8.576
8.560
7.981
7.966
7.846
7.806
7.688
7.684
7.674
7.665
7.463
7.457
7.449
7.447
6.691
6.650
5.483
4.256
2.139
1.953
1.947
1.942
1.936
1.930
1.923
1.917
4.423
4.112
2.074
4.727
6.588
2.210
4.861
7.032
0.692
39.470
23.406
0.035
0.369

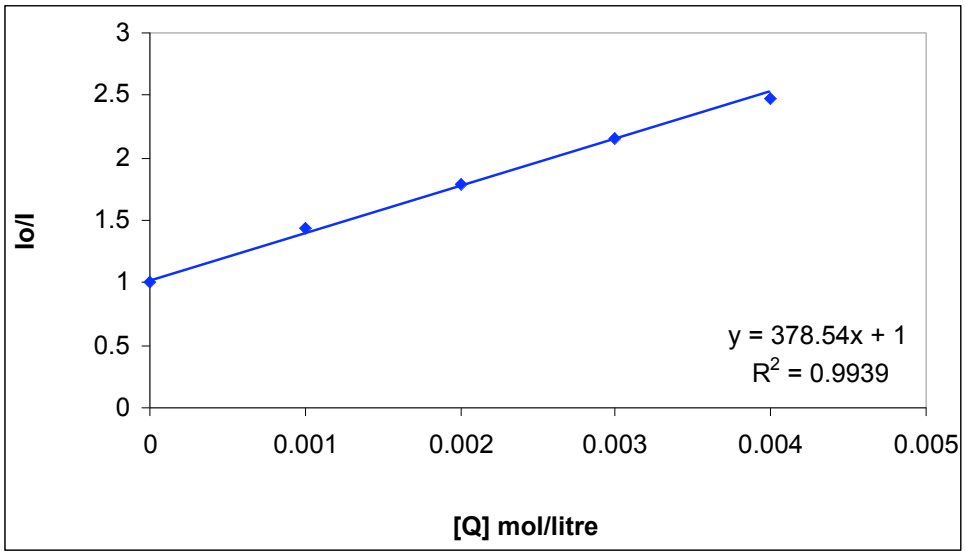

b
ppm
Integral
8.432
8.416
7.788
7.773
4.202
2.604
2.127
1.937
1.930
1.924
0.9948
1.0006
1.6971
1.7173
0.8995
CH3
ClO4
N
CH3

Fluorescence data for **6e** with 9-MC

a. Fluorescence quenching of 9-MC by **6e**

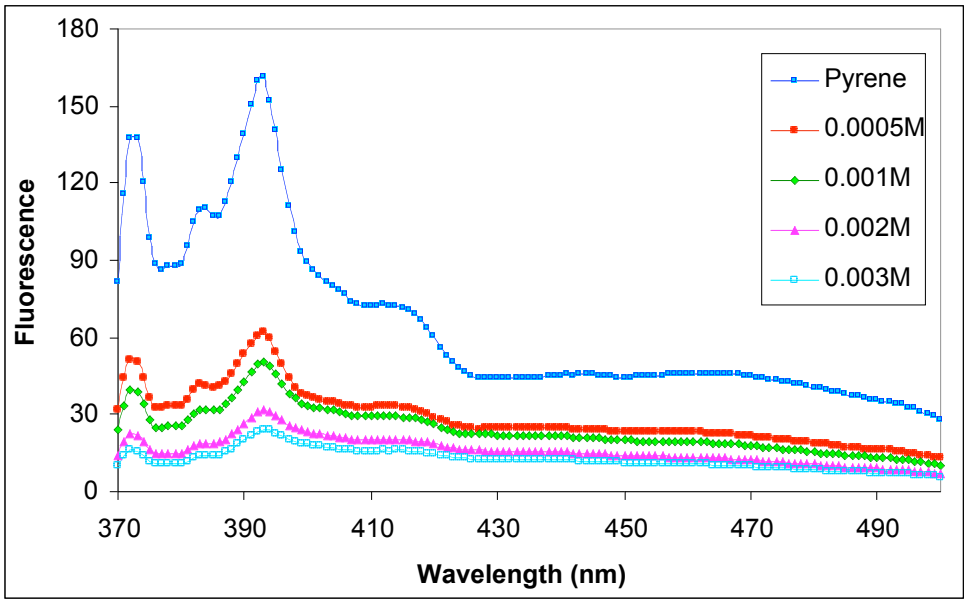


b. Stern-Volmer plot for fluorescence quenching of 9-MC by **6e**

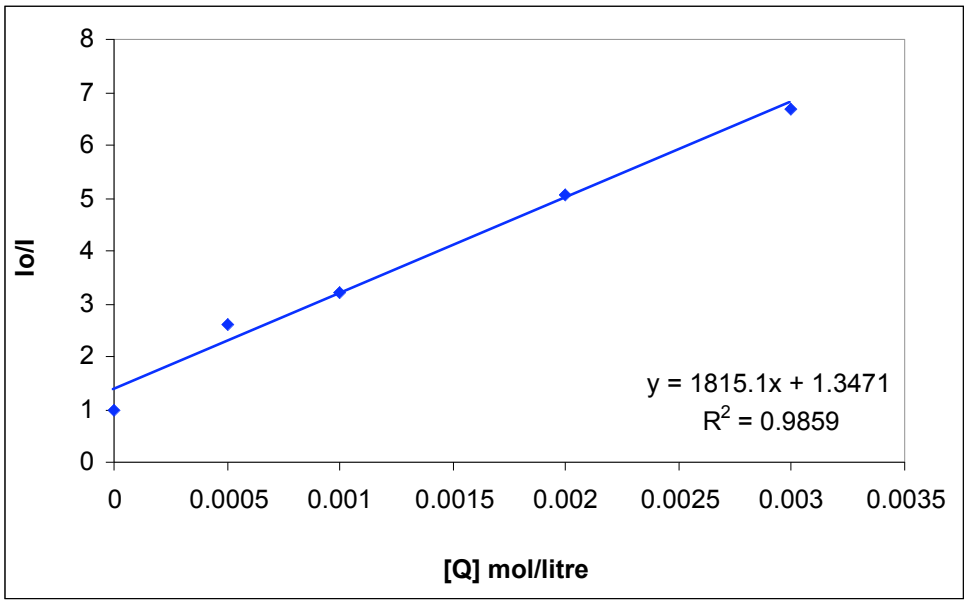


Fluorescence data for ester **6e** with pyrene

a. Fluorescence quenching of pyrene by **6e**

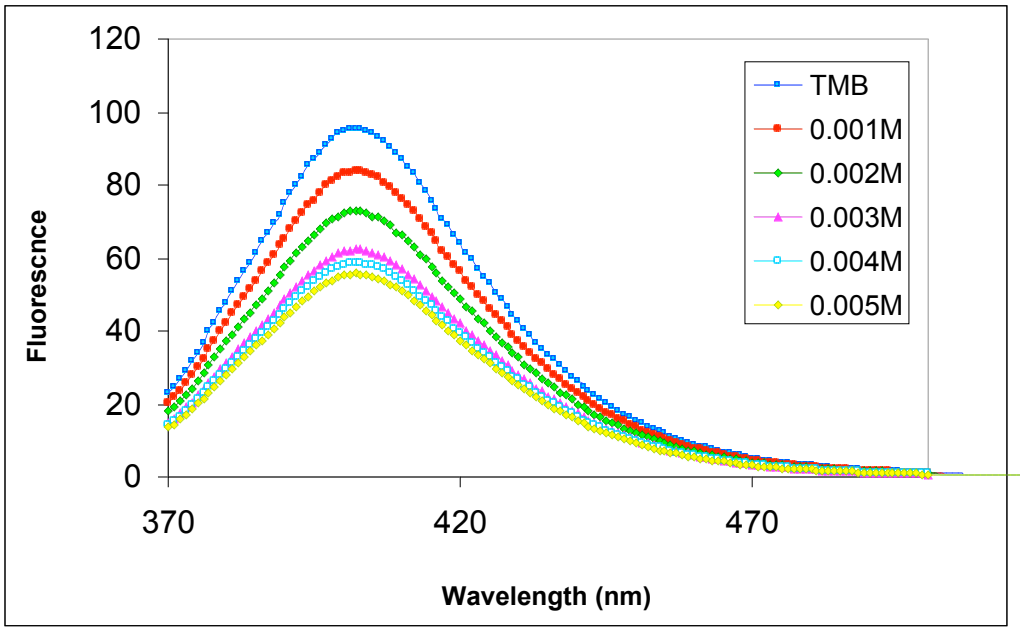


b. Stern-Volmer plot for fluorescence quenching of pyrene by **6e**

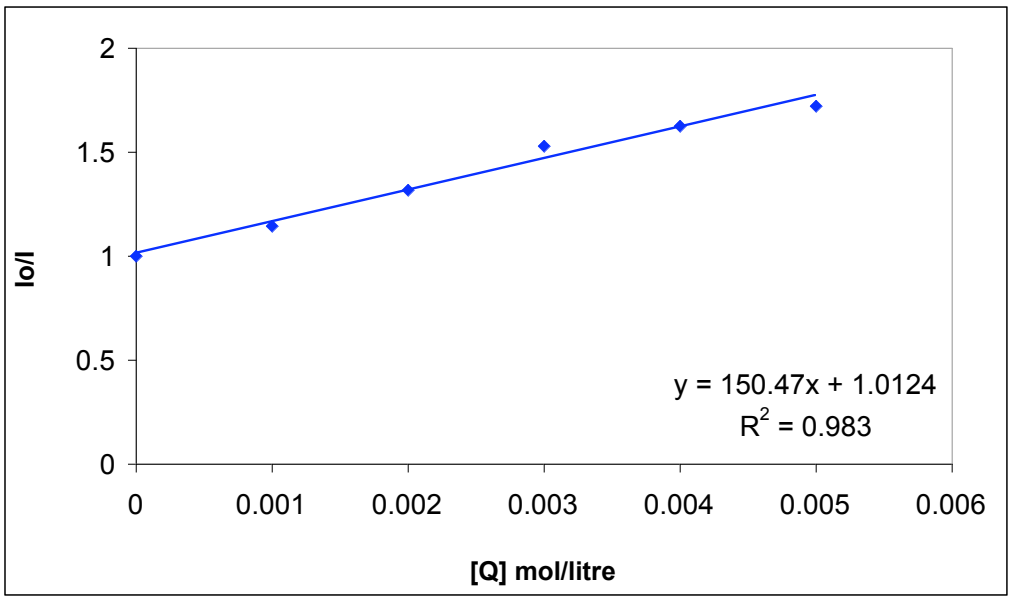


Fluorescence data for **2e** with TMB

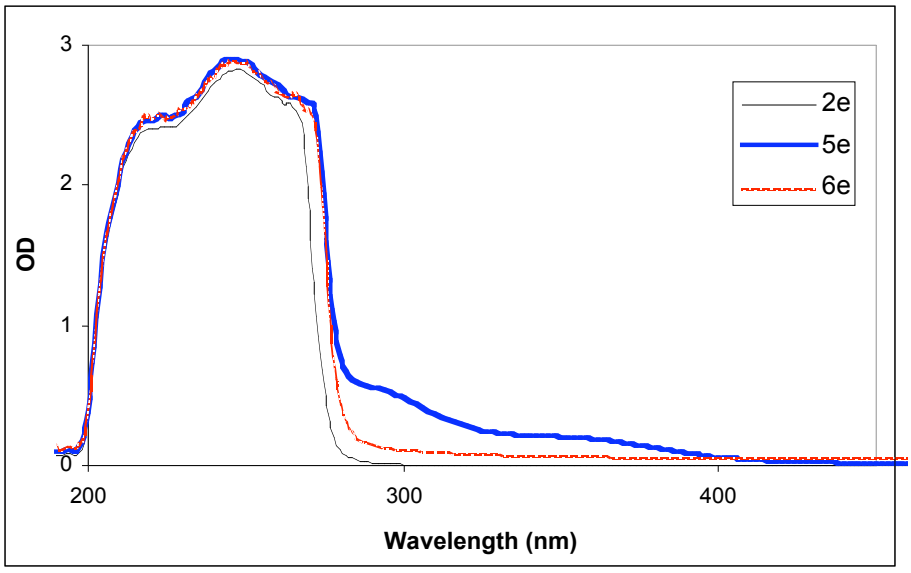
a. Fluorescence quenching of TMB by **2e**



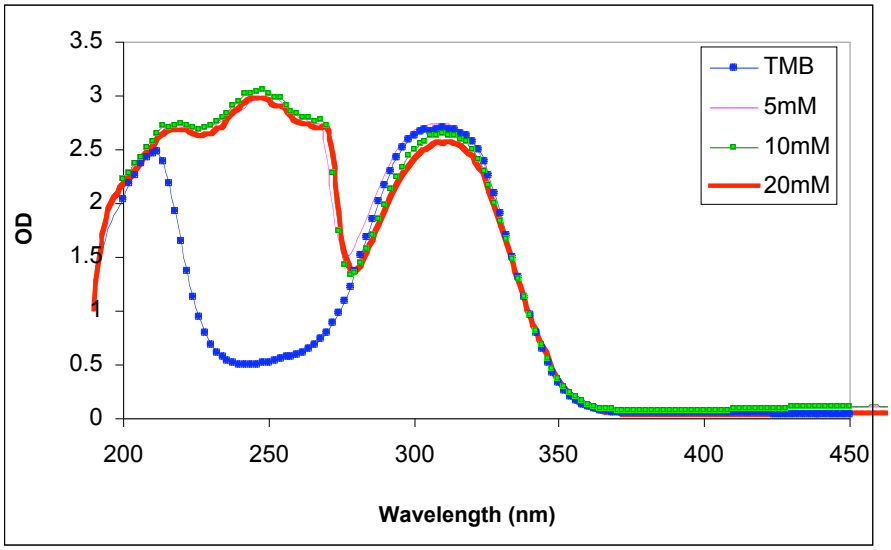
b. Stern-Volmer plot for fluorescence quenching of TMB by **2e**



Uv-vis spectra of esters **2e**, **5e** and **6e** (in MeOH)

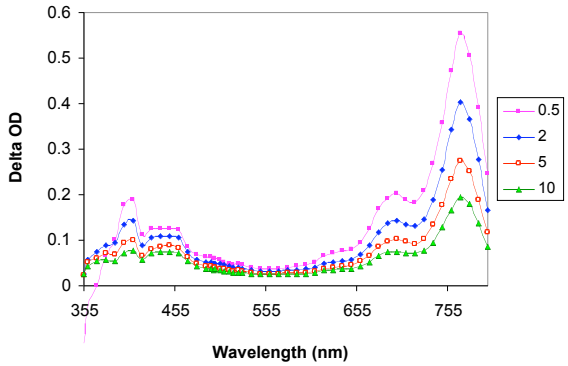


UV spectra of TMB with different concentrations of ester **6e** (in MeCN)

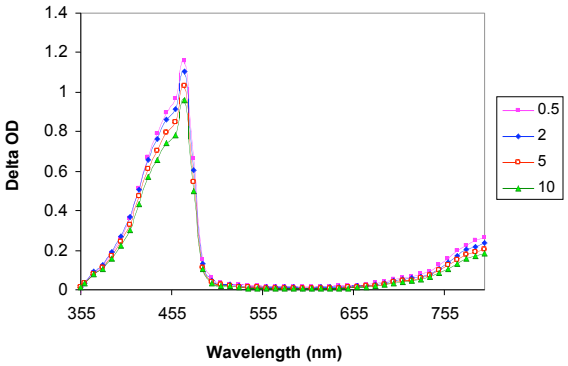


Transient absorption spectra of **6e** with:

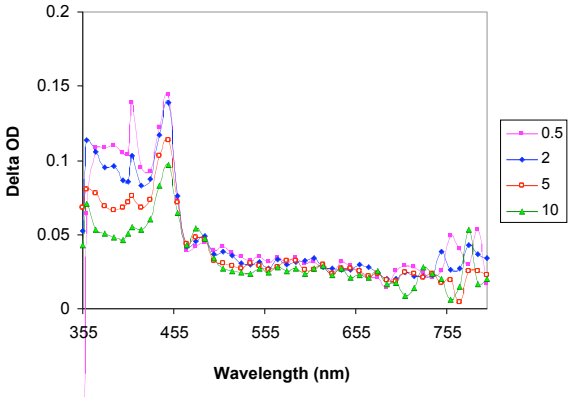
1. 9-MC



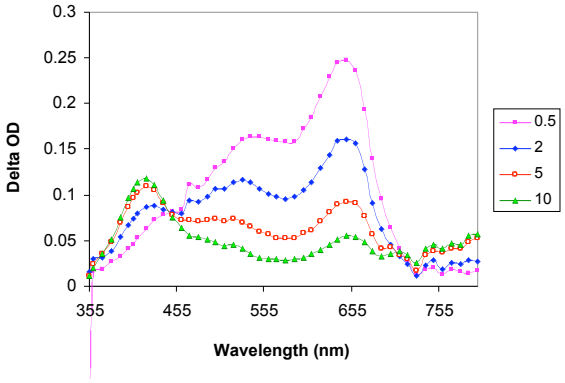
2. TMB



3. Pyrene



4. TPA


0.3
0.25
0.2
0.15
0.1
0.05
0
Delta OD
355
455
555
655
755
Wavelength (nm)
0.5
2
5
10