Supporting Informations

Benzylamine as arylcarboxy surrogate: A copper catalysed *o*-benzoxylation of 2-phenylpyridines using benzyl amines

Ahalya Behera, Saroj K. Rout, Srimanta Guin and Bhisma K. Patel*

Department of Chemistry, Indian Institute of Technology Guwahati

Email: patel@iitg.ernet.in

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General information:

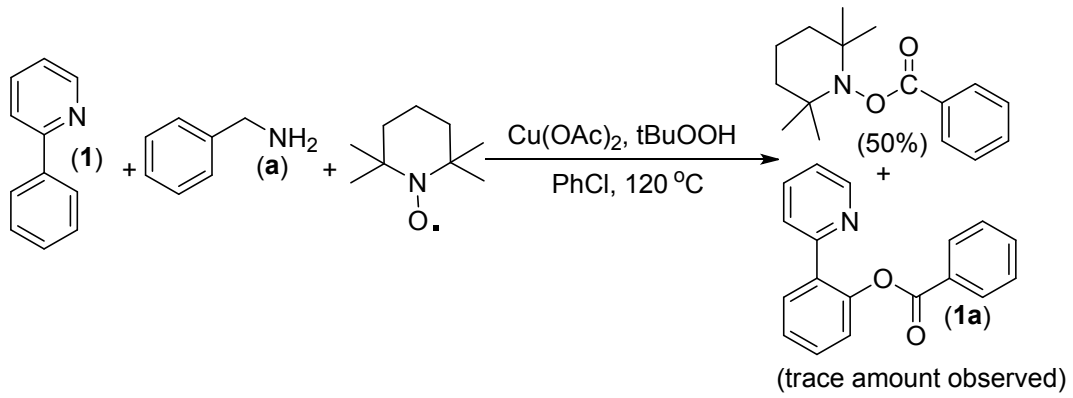
All the reagents were commercial grade and purified according to the established procedures. Organic extracts were dried over anhydrous sodium sulphate. Solvents were removed in a rotary evaporator under reduced pressure. Silica gel (60–120 mesh size) was used for the column chromatography. Reactions were monitored by TLC on silica gel 60 F_{254} (0.25 mm). NMR spectra were recorded in $CDCl_3$ with tetramethylsilane as the internal standard for ^1H NMR (400 and 600 MHz) $CDCl_3$ solvent as the internal standard for ^{13}C NMR (100 and 150 MHz). Mass spectra were recorded using WATERS MS system, Q-tof premier and data analyzed using Mass Lynx 4.1. IR spectra were recorded in KBr or neat on a Nicolet Impact 410 spectrophotometer.

General Procedure for the Synthesis of 2-(Pyridin-2-yl)phenyl benzoate (1a):

A mixture of 2-phenylpyridine (**1**) (77.5 mg, 0.5 mmol), $Cu(OAc)_2$ (18 mg, 20 mol %), benzylamine (**a**) (107 mg, 1 mmol) in chlorobenzene (2 mL) were taken in an oven dried round bottom flask fitted with a reflux condenser. To this mixture a decane solution of TBHP

(5−6 M) (1200 µL, 6 equivalent with respect to benzylamine) was added and the reaction mixture was heated in an oil bath at 120 °C for 16 h. The reaction mixture was cooled to room temperature and admixed with ethyl acetate (15 mL) and the residual particles were filtered through a filter paper which was washed with ethyl acetate (2 x 2.5 mL). The ethyl acetate layer was washed with a 5% solution of sodium bicarbonate (2 x 5 mL) and water (2 x 5 mL) and the organic layer was dried over anhydrous Na_2SO_4 and the solvent was evaporated under reduced pressure. The crude product was purified over a column of silica gel and eluted with (92:8, hexane/ethyl acetate) to afford 2-(pyridine-2-yl)phenyl benzoate (**1a**) (89 mg, 65% yield).

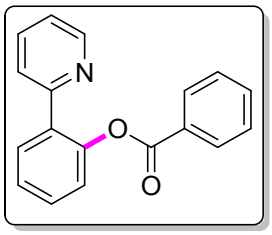
Mechanistic investigation in the presence of radical scavenger TEMPO: An oven-dried round bottom flask fitted with a reflux condenser was charged with 2-phenylpyridine (**1**) (77.5 mg, 0.5 mmol), benzylamine (**a**) (54 mg, 0.5 mmol), $Cu(OAc)_2$ (18 mg, 0.1 mmol), TBHP in decane (5–6 M) (600 µL, 6 equivalent with respect to benzylamine), TEMPO (78 mg, 0.5 mmol) in chlorobenzene (1 mL). The resultant reaction mixture was stirred in a preheated oil bath at 120 °C for 15 h. The reaction mixture was cooled to room temperature and admixed with ethyl acetate (15 mL) and the residual particles were filtered through a filter paper which was washed with ethyl acetate (2 x 2.5 mL). The ethyl acetate layer was washed with a 5% solution of sodium bicarbonate (2 x 5 mL) and water (2 x 5 mL) and the organic layer was dried over anhydrous Na_2SO_4 and the solvent was evaporated under reduced pressure. The crude product was purified over a column of silica gel which afforded the benzoyl-TEMPO adduct 2,2,6,6-tetramethylpiperidin-1-yl benzoate (**F**) (65 mg, 50% yield) and traces (<6%) of the desired product (**1a**) was observed. This experiment supports the formation of benzoyl radical (**B´**) in the medium from benzylamine.



Scheme S1: Trapping the intermediate with TEMPO

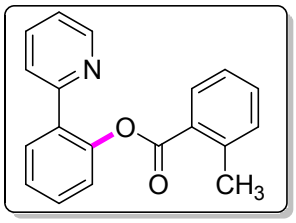
Spectral Data

2-(Pyridine-2-yl)phenyl benzoate (1a):



^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 7.14–7.17 (m, 1H), 7.29–7.32 (m, 1H), 7.38–7.43 (m, 2H), 7.45–7.48 (m, 2H), 7.55–7.64 (m, 3H), 7.77–7.79 (m, 1H), 8.07–8.09 (m, 2H), 8.59–8.60 (m, 1H); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 122.3, 123.5, 123.9, 126.6, 128.7, 129.7, 129.9, 130.3, 131.1, 133.5, 133.6, 136.3, 148.5, 149.8, 155.8, 165.3; IR (KBr): 3442, 2918, 2853, 1736, 1634, 1585, 1446, 1262, 1194, 1061, 847, 754, 706, 614 cm^{-1}; HRMS (ESI): calcd. for $C_{18}H_{13}NO_2$ (MH^+) 276.1019; found 276.1062.

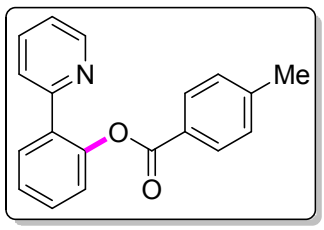
2-(Pyridin-2-yl)phenyl 2-methylbenzoate (1b):



^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 2.53 (s, 3H), 7.17–7.20 (m, 1H), 7.25–7.30 (m, 3H), 7.38–7.51 (m, 3H), 7.54–7.57 (m, 1H), 7.60–7.67 (m, 1H), 7.74–7.77 (m, 1H), 7.98–8.02 (m,

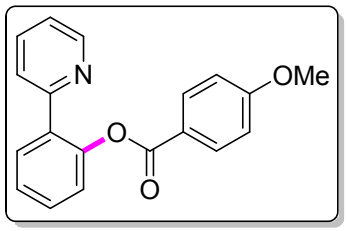
1H), 8.61–8.63 (m, 1H); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 21.8, 122.3, 123.6, 123.9, 125.9, 126.5, 128.7, 129.9, 131.0, 131.2, 131.9, 132.7, 133.6, 136.4, 141.3, 148.5, 149.6, 155.9, 165.8; IR (KBr): 3062, 2962, 2856, 1743, 1585, 1492, 1467, 1426, 1289, 1250, 1197, 1115, 1040, 1021, 884, 794, 693, 616 cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{15}NO_2$ (MH^+) 290.1176; found 290.1171.

2-(Pyridin-2-yl)phenyl 4-methylbenzoate (1c):



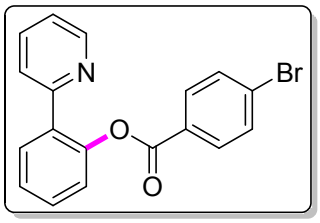
^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 2.43 (s, 3H), 7.14–7.18 (m, 1H), 7.26 (d, 2H, *J* = 8.0 Hz), 7.29–7.31 (m, 1H), 7.38–7.42 (m, 1H), 7.46–7.50 (m, 1H), 7.54–7.57 (m, 1H), 7.60–7.64 (m, 1H), 7.77–7.80 (m, 1H), 7.96–7.98 (m, 2H), 8.60–8.62 (m, 1H); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 21.9, 122.3, 123.6, 123.9, 126.5, 127.0 129.4, 129.9, 130.4, 131.1, 133.6, 136.3, 144.5, 148.6, 149.8, 155.8, 165.4; IR (KBr): 3436, 2917, 1733, 1643, 1582, 1454, 1265, 1193, 1066, 985, 894, 748, 677 cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{15}NO_2$ (MH^+) 290.1176; found 290.1167.

2-(Pyridin-2-yl)phenyl 4-methoxybenzoate (1d):



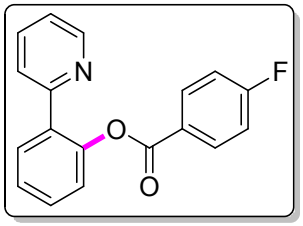
^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 3.88 (s, 3H), 6.93 (d, 2H, *J* = 9.2 Hz), 7.15–7.18 (m, 1H), 7.28–7.31 (m, 1H), 7.37–7.41 (m, 1H), 7.46–7.50 (m, 1H), 7.56 (d, 1H, *J* = 8.0 Hz), 7.60–7.64 (m, 1H), 7.77–7.79 (m, 1H), 8.04 (d, 2H, *J* = 8.8 Hz), 8.62 (d, 1H, *J* = 4.4 Hz); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 55.7, 113.9, 122.0, 122.3, 123.6, 124.0 126.4, 129.9, 131.1, 132.5, 133.5, 136.3, 148.6, 149.8, 155.8, 164.0, 165.0; IR (KBr): 3413, 2925, 1731, 1605, 1511, 1463, 1254, 1166, 1067, 846, 752, 697, 572.cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{15}NO_3$ (MH^+) 306.1125; found 306.1133.

2-(Pyridin-2-yl)phenyl 4-bromobenzoate (1e):



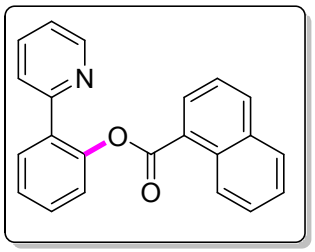
^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 7.15–7.18 (m, 1H), 7.29 (d, 1H, *J* = 8.4 Hz), 7.39–7.43 (m, 1H), 7.46–7.53 (m, 2H), 7.58–7.66 (m, 3H), 7.74–7.76 (m, 1H), 7.93 (d, 2H, *J* = 8.8 Hz), 8.56 (d, 1H, *J* = 8.8 Hz); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 122.4, 123.4, 123.8, 126.7, 128.6, 128.7, 128.9, 130.3, 131.1, 131.8, 132.0, 136.4, 148.3, 149.7, 155.7, 164.7; IR (KBr): 3052, 2925, 2850, 1733, 1587, 1492, 1482, 1465, 1450, 1423, 1395, 1261, 1186, 1166, 1068, 1058, 1023, 1008, 849, 795, 761, 749 cm^{-1}; HRMS (ESI): calcd. for $C_{18}H_{12}BrNO_2$ (MH^+) 354.0124; found 354.0117.

2-(Pyridin-2-yl)phenyl 4-fluorobenzoate (1f):



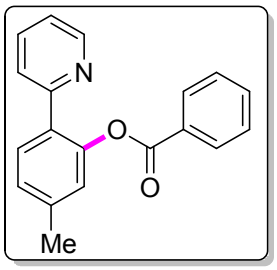
^{1}H NMR (600 MHz, $CDCl_3$): δ (ppm) 7.08–7.12 (m, 4H), 7.14–7.16 (m, 1H), 7.27–7.40 (m, 1H), 7.45–7.48 (m, 1H), 7.51 (d, 1H, *J* = 7.8 Hz), 7.60–7.75 (m, 1H), 8.06–8.09 (m, 2H), 8.56 (d, 1H, *J* = 3.0 Hz); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 115.8, 116.0, 122.4, 123.5, 123.9, 126.0, 126.7, 130.0, 131.1, 132.9, 133.0, 133.5, 136.4, 148.4, 149.7, 155.8, 164.4, 165.4, 167.1; IR (KBr): 3419, 2929, 1739, 1633, 1501, 1462, 1263, 1193, 1068, 860, 753, 682, 573.cm^{-1}; HRMS (ESI): calcd. for $C_{18}H_{12}FNO_2$ (MH^+) 294.0925; found 294.0965.

2-(Pyridin-2-yl)phenyl 1-naphthoate (1g):



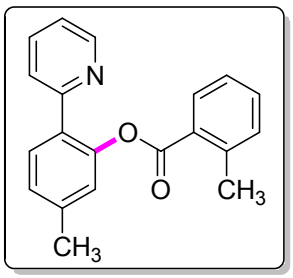
^{1}H NMR (600 MHz, $CDCl_3$): δ (ppm) 7.14–7.15 (m, 1H), 7.37 (d, 1H, *J* = 7.8 Hz), 7.42–7.44 (m, 1H), 7.49–7.55 (m, 3H), 7.56–7.63 (m, 2H), 7.78–7.79 (m, 2H), 7.89 (d, 1H, *J* = 7.6 Hz), 8.05 (d, 1H, *J* = 7.8 Hz), 8.30 (d, 1H, *J* = 7.8 Hz), 8.58–8.59 (m, 1H), 8.86 (d, 1H. *J* = 8.4 Hz); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 122.4, 123.7, 123.9, 124.7, 125.9, 126.2, 126.5, 126.7, 128.2, 128.7, 130.0, 131.1, 131.2, 131.8, 133.8, 134.0, 134.2, 136.5, 148.6, 149.8, 156.1, 165.9; IR (KBr): 3058, 2919, 2846, 1732, 1602, 1586, 1509, 1493, 1471, 1463, 1452, 1425, 1276, 1240, 1186, 1120, 1059, 982, 885, 813, 780, 659, cm^{-1}; HRMS (ESI): calcd. for $C_{22}H_{15}NO_2$ (MH^+) 326.1176; found 326.1179.

5-Methyl-2-(pyridin-2-yl)phenyl benzoate (2a):



^{1}H NMR (600 MHz, $CDCl_3$): δ (ppm) 2.43 (s, 3H), 7.12 (d, 2H, *J* = 9.6 Hz), 7.20 (d, 1H, *J* = 7.2Hz), 7.45 (t, 2H, *J* = 7.8 Hz), 7.53 (d, 1H, *J* = 7.8 Hz), 7.57–7.60 (m, 2H), 7.68 (d, 1H, *J* = 7.8 Hz), 8.08–8.10 (m, 2H,), 8.57 (d, 1H, *J* = 4.8 Hz); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 21.4, 122.1, 123.7, 124.0, 127.5, 128.7, 129.8, 130.3, 130.6, 130.8, 133.6, 136.3, 140.4, 148.3, 149.7, 155.8, 165.5; IR (KBr): 3505, 2916, 1737, 1622, 1586, 1465, 1256, 1131, 1062, 892, 784, 707, 683, 545 cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{15}NO_2$ (MH^+) 290.1176; found 290.1159.

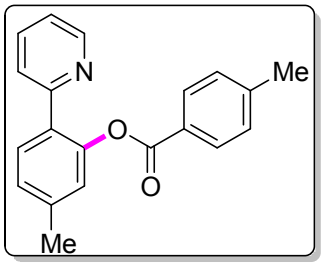
5-Methyl-2-(pyridin-2-yl)phenyl 2-methylbenzoate (2b):



^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 2.43 (s, 3H), 2.53 (s, 3H), 7.09 (s, 1H), 7.11–7.15 (m, 1H), 7.18–7.25 (m, 3H), 7.40 (t, 1H, *J* = 7.6 Hz), 7.51–7.53 (m, 1H), 7.58–7.66 (m, 2H), 8.01

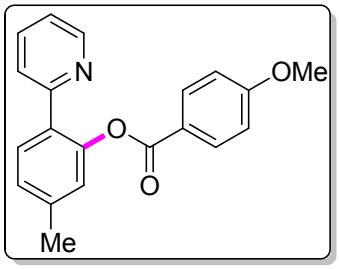
(d, 1H, *J* = 7.6 Hz), 8.57–8.59 (m, 1H); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 21.4, 21.8, 122.1, 123.8, 124.0, 125.9, 127.4, 128.9, 130.8, 131.2, 131.9, 132.6, 136.3, 140.4, 141.3, 148.3, 149.7, 156.0, 166.0; IR (KBr) 3062, 2961, 2926, 1737, 1623, 1586, 1573, 1466, 1431, 1288, 1245, 1151, 1135, 1045, 893, 782, 736, 691 cm^{-1}; HRMS (ESI): calcd.for $C_{20}H_{17}NO_2$ (MH^+) 304.1332; found 304.1335.

5-Methyl-2-(pyridin-2-yl)phenyl 4-methylbenzoate (2c):



^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 2.428 (s, 3H), 2.434 (s, 3H), 7.11– 7.15 (m, 1H), 7.20 (d, 1H, *J* = 7.6 Hz), 7.25 (d, 3H, *J* = 6.8 Hz), 7.53 (d, 1H, *J* = 7.6 Hz), 7.57–7.61 (m, 1H), 7.68 (d, 1H, *J* = 8.0 Hz), 7.97 (d, 2H, *J* = 8.4 Hz), 8.59 (d, 1H, *J* = 4.4 Hz); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 21.4, 21.9, 122.1, 123.8, 124.0, 127.1, 127.4, 129.4, 130.4, 130.7, 130.9, 136.3, 140.4, 144.4, 148.4, 149.8, 155.9, 165.5; IR (KBr): 3442, 2923, 1735, 1612, 1586, 1464, 1257, 1130, 1069, 925, 831, 746, 668, 543 cm^{-1}; HRMS (ESI): calcd. for $C_{20}H_{17}NO_2$ (MH^+) 304.1332; found 304.1348.

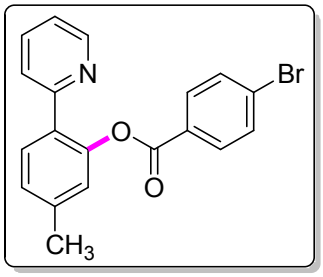
5-Methyl-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (2d):



^{1}H NMR (600 MHz, $CDCl_3$): δ (ppm) 2.43 (s, 3H), 3.87 (s, 3H), 6.92–6.94 (m, 2H), 7.10–7.14 (m, 2H), 7.20 (d, 1H, *J* = 7.8 Hz), 7.53 (d, 1H, *J* = 7.8 Hz), 7.57–7.60 (m, 1H), 7.68 (d, 1H, *J* = 7.8 Hz), 8.03–8.05 (m, 2H,), 8.59 (d, 1H, *J* = 4.8 Hz); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 21.4, 55.7, 113.9, 122.0, 122.1, 123.8, 124.0, 127.3, 130.6, 130.8, 132.5, 136.2, 140.3, 148.4, 149.7, 155.9, 164.0, 165.2; IR (KBr): 3464, 2918, 1731, 1606, 1581,

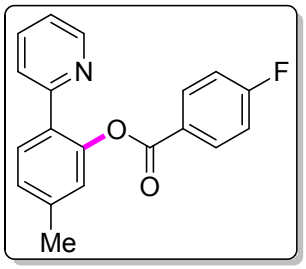
1464, 1254, 1167, 1069, 845, 774, 693, 569.cm^{-1}; HRMS (ESI): calcd. for $C_{20}H_{17}NO_3$ (MH^+) 320.1281; found 320.1276.

5-Methyl-2-(pyridin-2-yl)phenyl 4-bromobenzoate (2e):



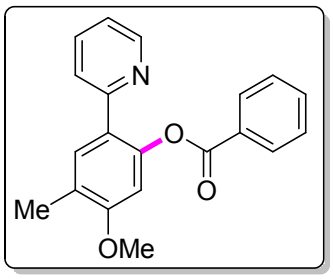
^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 2.42 (s, 3H), 7.08–7.13 (m, 2H), 7.19 (d, 1H, *J* = 8.0 Hz), 7.47 (d, 1H, *J* = 8.0 Hz), 7.57 (d, 3H, *J* = 8.8 Hz), 7.63 (d, 1H, *J* = 8.0 Hz), 7.91 (d, 2H, *J* = 8.8 Hz), 8.51–8.52 (m, 1H); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 21.4, 122.2, 123.6, 123.9, 127.6, 128.7, 128.8, 130.4, 130.8, 131.8, 132.0, 136.4, 140.5, 148.1, 149.7, 155.7, 164.8; IR (KBr): 2955, 2922, 2853, 1737, 1621, 1589, 1465, 1431, 1397, 1258, 1173, 1152, 1131, 1071, 1027, 1010, 783, 747, 678 cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{14}BrNO_2$ (MH^+) 368.0281; found 368.0275.

5-Methyl-2-(pyridin-2-yl)phenyl 4-fluorobenzoate (2f):



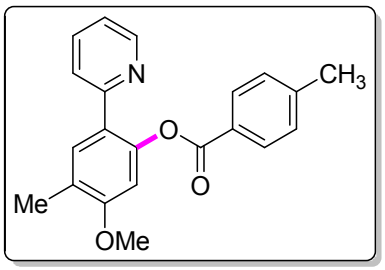
^{1}H NMR (600 MHz, $CDCl_3$): δ (ppm) 2.42 (s, 3H), 7.09–7.12 (m, 4H), 7.19 (d, 1H, *J* = 8.4 Hz), 7.49 (d, 1H, *J* = 7.8 Hz), 7.59 (t, 1H, *J* = 7.2 Hz), 7.64 (d, 1H, *J* = 7.8 Hz), 8.07–8.09 (m, 2H), 8.53 (d, 1H, *J* = 4.8 Hz); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 21.4, 115.8, 115.9, 122.1, 123.9, 126.1 127.6, 127.7, 130.6, 130.8, 132.9, 133.0, 136.4, 140.5, 148.2, 149.7, 155.9, 164.6, 165.4, 167.1; IR (KBr): 3722, 2920, 1739, 1604, 1507, 1226, 1151, 1071, 782, 684 cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{17}FNO_2$ (MH^+) 308.1081; found 308.1073.

5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl benzoate (3a):



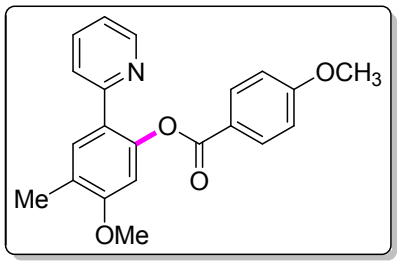
^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 2.26 (s, 3H), 3.85 (s, 3H), 6.72 (s, 1H), 7.06–7.10 (m, 1H), 7.45 (t, 2H, *J* = 7.6 Hz), 7.49–7.53 (m, 1H), 7.55–7.61 (m, 3H), 8.08–8.10 (m, 2H), 8.55–8.56 (m, 1H); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 16.0, 55.8, 105.4, 121.7, 123.6, 125.0, 125.2 128.7, 129.8, 130.4, 132.3, 133.6, 136.2, 147.3, 149.7, 155.7, 158.8, 165.5; IR (KBr): 3443, 2925, 1736, 1618, 1589, 1464, 1260, 1143, 1060, 968, 890, 747, 612, 574 cm^{-1}; HRMS (ESI): calcd. for $C_{20}H_{17}NO_3$ (MH^+) 320.1281; found 320.1293.

5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl 4-methylbenzoate (3c):



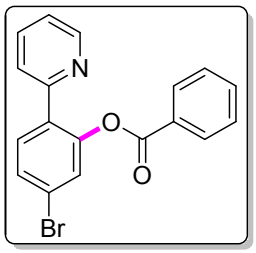
^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 2.28 (s, 3H), 2.43 (s, 3H), 3.87 (s, 3H), 6.74 (s, 1H), 7.08–7.12 (m, 1H), 7.27 (d, 2H, *J* = 8.0 Hz), 7.51–7.58 (m, 2H), 7.61 (s, 1H), 8.00 (d, 2H, *J* = 8.0 Hz), 8.58 (d, 1H, *J* = 4.4 Hz); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 16.0, 21.9, 55.8, 105.4, 121.7, 123.7, 125.0, 125.1 127.0, 129.4, 130.5, 132.3, 136.2, 144.5, 147.3, 149.7, 155.7, 158.8, 165.6; IR (KBr): 3442, 2924, 1735, 1614, 1507, 1464, 1263, 1143, 1069, 968, 835, 747, 667, 571 cm^{-1}; HRMS (ESI): calcd. for $C_{21}H_{19}NO_3$ (MH^+) 334.1438; found 334.1430.

5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (3d):



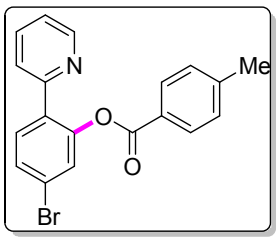
^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 2.28 (s, 3H), 3.87 (s, 3H), 3.88 (s, 3H), 6.73 (s, 1H), 6.94 (d, 2H, *J* = 9.2 Hz), 7.10 (t, 1H, *J* = 5.6 Hz), 7.50–7.60 (m, 3H), 8.06 (d, 2H, *J* = 9.2 Hz), 8.59 (d, 1H, *J* = 4.8 Hz); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 15.8, 55.5, 55.6, 105.2, 113.8, 121.5, 121.8, 123.5, 124.7, 124.8, 132.1, 132.3, 136.0, 147.1, 149.5, 155.5, 158.5, 163.8, 165.0; IR (KBr): 3402, 2922, 1730, 1606, 1511, 1464, 1256, 1167, 1069, 965, 895, 781, 610, 574 cm^{-1}; HRMS (ESI): calcd. for $C_{21}H_{19}NO_4$ (MH^+) 350.1387; found 350.1356.

5-Bromo-2-(pyridin-2-yl)phenyl benzoate (4a):



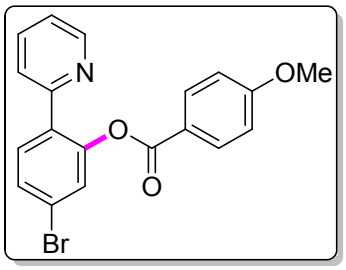
^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 7.14–7.17 (m, 1H), 7.43–7.48 (m, 3H), 7.51–7.53 (m, 2H), 7.57–7.63 (m, 2H), 7.66 (d, 1H, *J* = 8.8 Hz), 8.03–8.06 (m, 2H), 8.56–8.57 (m, 1H); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 122.6, 122.9, 123.8, 126.9, 128.8, 129.2, 129.8, 130.4, 132.2, 132.6, 133.9, 136.5, 148.9, 149.9, 154.8, 164.9; IR (KBr): 3512, 2918, 1740, 1643, 1595, 1461, 1254, 1195, 1056, 868, 706, 551 cm^{-1}; HRMS (ESI): calcd. for $C_{18}H_{12}BrNO_2$ (MH^+) 354.0124; found 354.0132.

5-Bromo-2-(pyridin-2-yl)phenyl 4-methylbenzoate (4c):



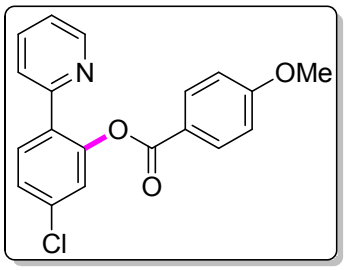
^{1}H NMR (600 MHz, $CDCl_3$): δ (ppm) 2.43 (s, 3H), 7.16–7.18 (m, 1H), 7.26 (d, 2H, *J* = 7.8 Hz), 7.490–7.493 (m, 1H), 7.52–7.54 (m, 2H), 7.59–7.63 (m, 1H), 7.69 (d, 1H, *J* = 8.4 Hz), 7.95 (d, 2H, *J* = 7.8 Hz), 8.60 (d, 1H, *J* = 4.8 Hz); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 21.9, 122.6, 122.8, 123.8, 126.4, 126.9, 129.5, 129.7, 130.5, 132.2, 132.6, 136.5, 144.8, 148.9, 149.9, 154.8, 165.0; IR (KBr): 3438, 2917, 1738, 1612, 1595, 1462, 1259, 1176, 1061, 987, 830, 744, 668, 545 cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{14}BrNO_2$ (MH^+) 368.0281; found 368.0274.

5-Bromo-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (4d):



^{1}H NMR (600 MHz, $CDCl_3$): δ (ppm) 3.87 (s, 3H), 6.92–6.94 (m, 2H), 7.16–7.18 (m, 1H), 7.486–7.489 (m, 1H), 7.51–7.54 (m, 2H), 7.59–7.63 (m, 1H), 7.68 (d, 1H, *J* = 8.4 Hz), 8.01–8.03 (m, 2H), 8.60 (d, 1H, *J* = 4.2 Hz); ^{13}C NMR (100 MHz, $CDCl_3$): δ (ppm) 55.7, 114.1, 121.4, 122.6, 122.8, 123.8, 126.9, 129.7, 132.2, 132.5, 132.6, 136.4, 149.1, 149.9, 154.8, 164.2, 164.6; IR (KBr): 3422, 2926, 1734, 1605, 1511, 1462, 1254, 1166, 1058, 874, 781, 692, 583 cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{14}BrNO_3$ (MH^+) 384.0230; found 384.0259.

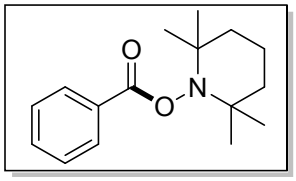
5-Chloro-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (5d)



^{1}H NMR (400 MHz, $CDCl_3$): δ (ppm) 3.87 (s, 3H), 6.94 (d, 2H, *J* = 8.8 Hz), 7.16–7.19 (m, 1H), 7.34–7.38 (m, 2H), 7.53 (d, 1H, *J* = 7.6 Hz), 7.62 (t, 1H, *J* = 7.2 Hz), 7.75 (d, 1H, *J* = 8.4 Hz), 8.02 (d, 2H, *J* = 8.8 Hz), 8.61 (d, 1H, *J* = 4.8 Hz); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 55.7, 114.1, 121.5, 122.6, 123.9, 124.1, 126.8, 131.9, 132.2, 132.6, 135.1, 136.4,

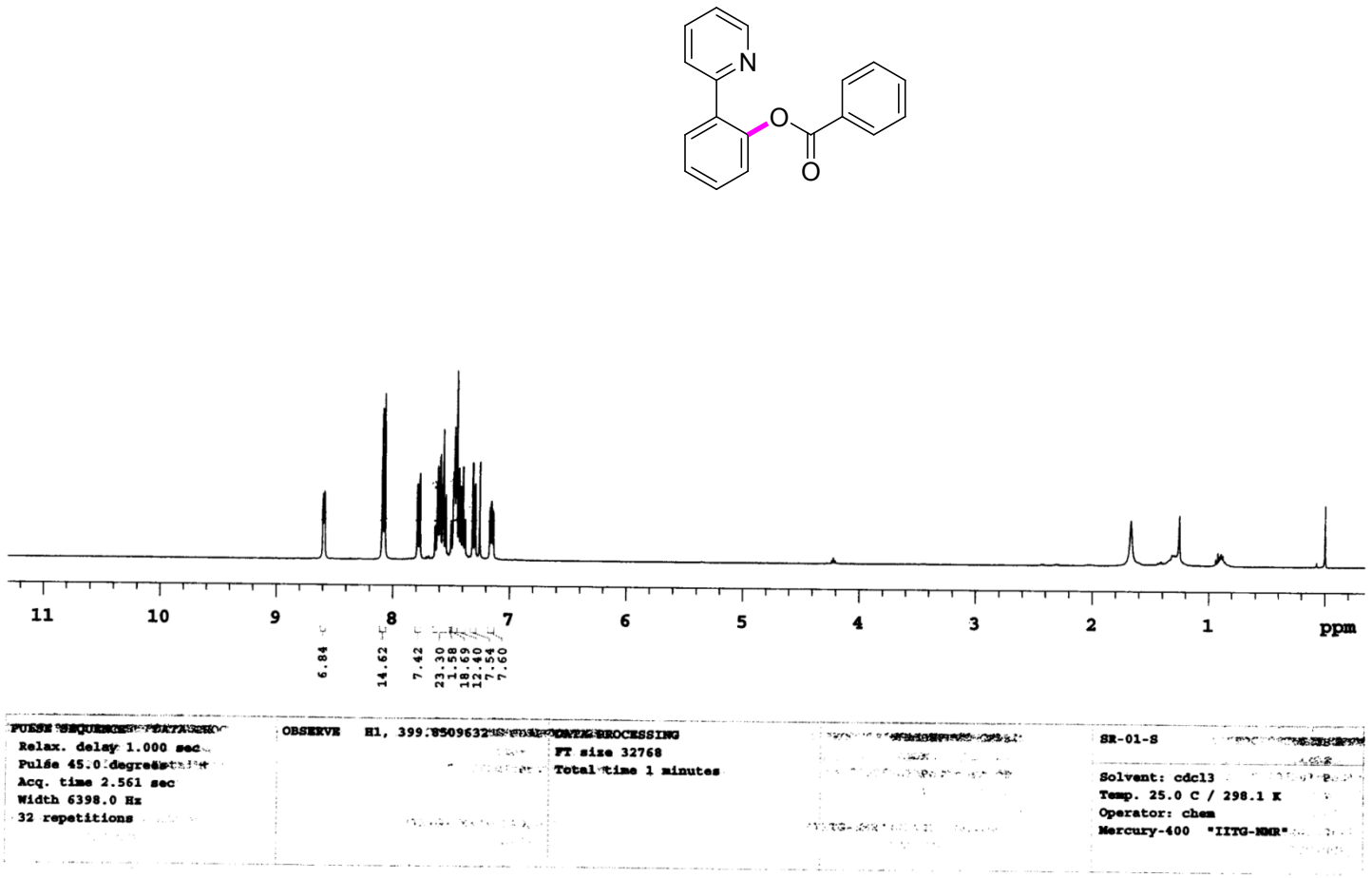
149.0, 149.9, 154.8, 164.2, 164.6; IR (KBr): 3442, 2924, 1733, 1604, 1461, 1253, 1166, 1059, 844, 762, 646, 587 cm^{-1}; HRMS (ESI): calcd. for $C_{19}H_{14}ClNO_3$ (MH^+) 340.0735; found 340.0748.

2,2,6,6-Tetramethylpiperidin-1-yl benzoate (F):

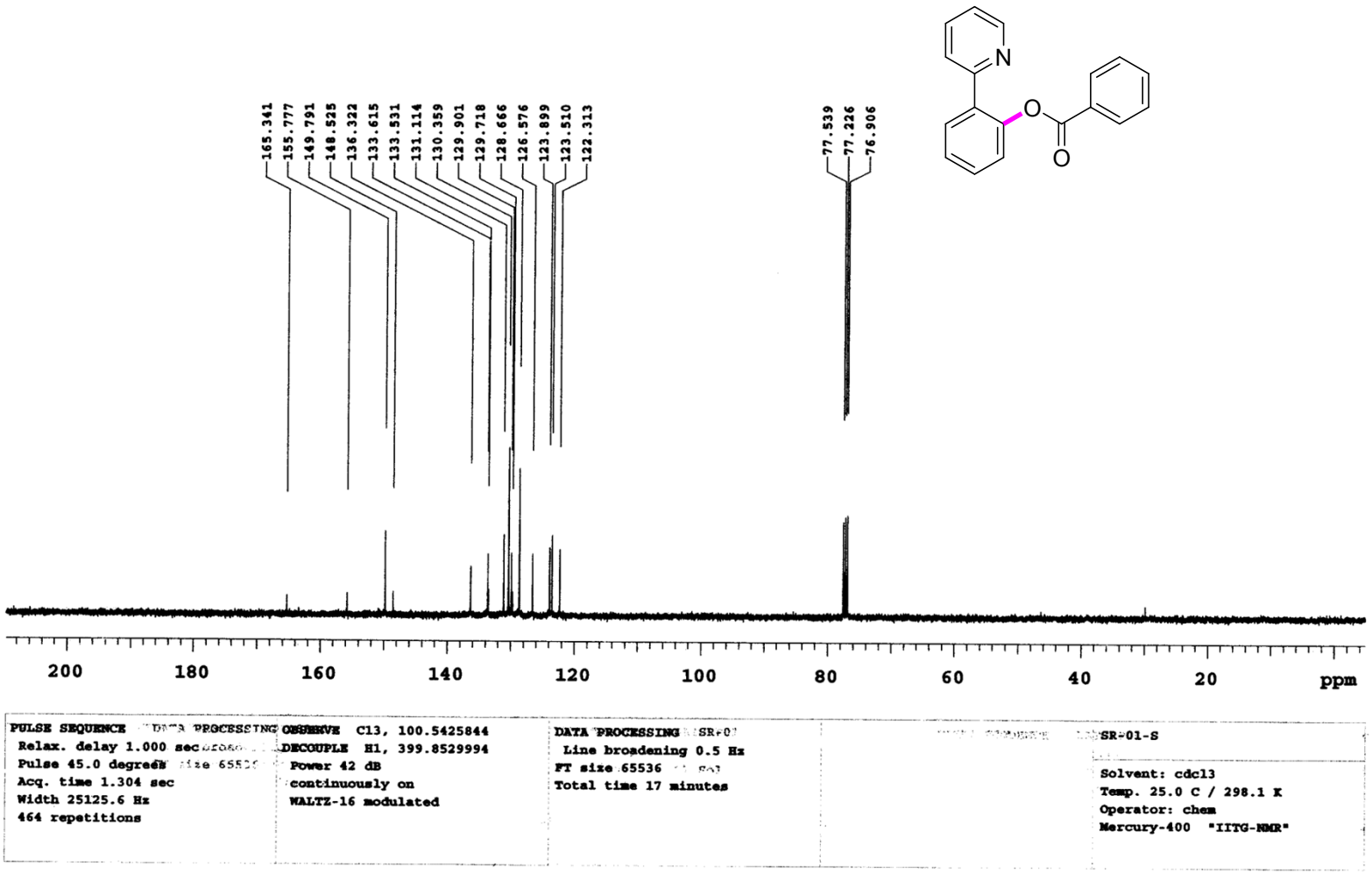


White solid; ^1H NMR (600 MHz, $CDCl_3$):δ (ppm) 1.12 (s, 6H), 1.26 (s, 6H), 1.42–1.45 (m, 1H), 1.55–1.58 (m, 2H), 1.66–1.78 (m, 3H), 7.43 (t, 2H, J = 7.8 Hz), 7.54 (t, 1H, J = 7.8 Hz), 8.03–8.06 (m, 2H); ^{13}C NMR (150 MHz, $CDCl_3$): δ (ppm) 17.2, 21.0, 32.1, 39.2, 60.6, 128.6, 129.7, 129.9, 133.0, 166.6; IR (KBr): 3007, 2973, 2940, 1741, 1641, 1452, 1365, 1253, 1238, 1083, 1062, 1026, 913, 718 cm^{-1}; HRMS (ESI): calcd. for $C_{16}H_{23}NO_2$ (MH^+) 262.1802; found 262.1801.

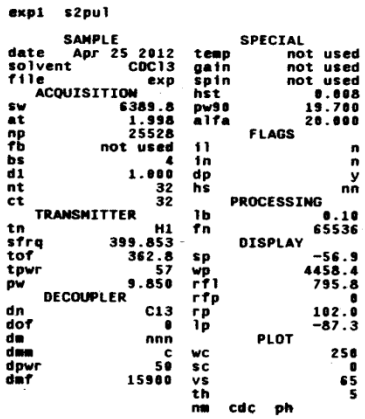
2-(Pyridin-2-yl)phenyl benzoate (1a): ^{1}H NMR (400 MHz, $CDCl_3$)



2-(Pyridin-2-yl)phenyl benzoate (1a): ^{13}C NMR (100 MHz, $CDCl_3$)



2-(Pyridin-2-yl)phenyl 2-methylbenzoate (1b): ^{1}H NMR (400 MHz, $CDCl_3$)



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file            exp   spin        not used
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sw             6389.8  pw90           19.700
at             1.998   alfa           20.000
np             25528         FLAGS
fb         not used    il                 n
bs                4    in                 n
d1            1.000    dp                 y
nt               32    hs                nn
ct               32       PROCESSING
   TRANSMITTER         lb              0.10
tn               H1    fn             65536
sfrq         399.853       DISPLAY
tof            362.8    sp             -56.9
tpwr              57    wp            4458.4
pw             9.850    rfl            795.8
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dn               C13    rp             102.0
dof                0    lp             -87.3
dm               nnn          PLOT
dmm                C    wc               250
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                        th                 5
                        nm  cdc  ph
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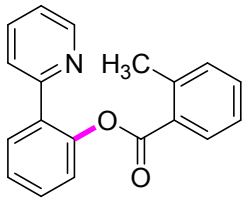
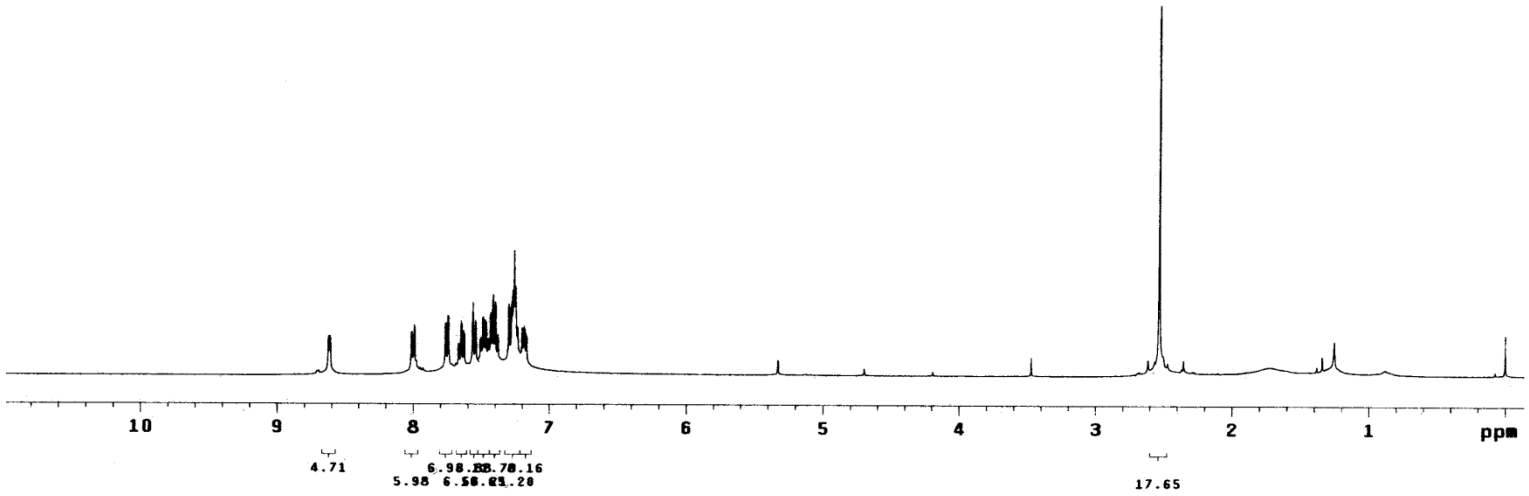
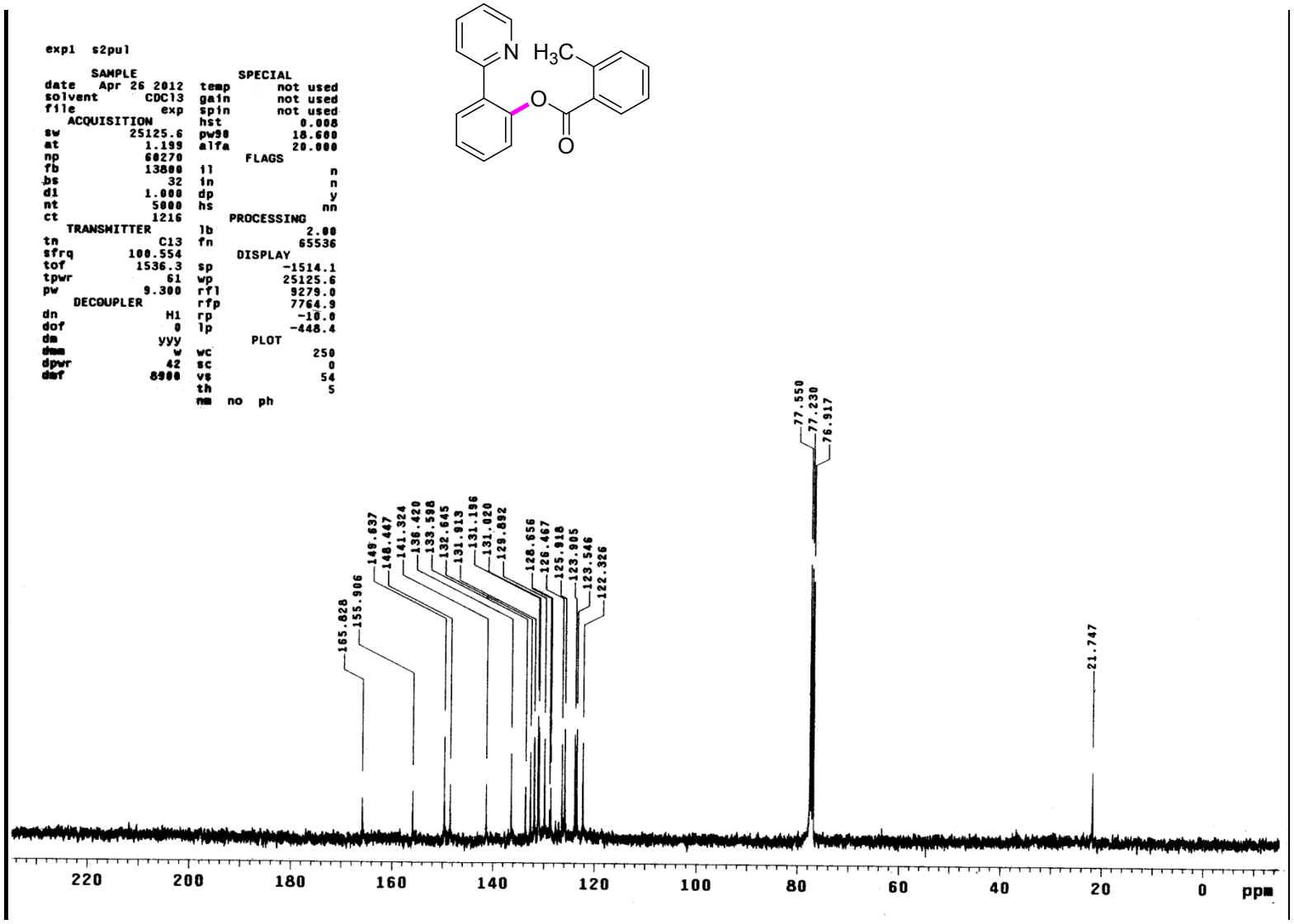
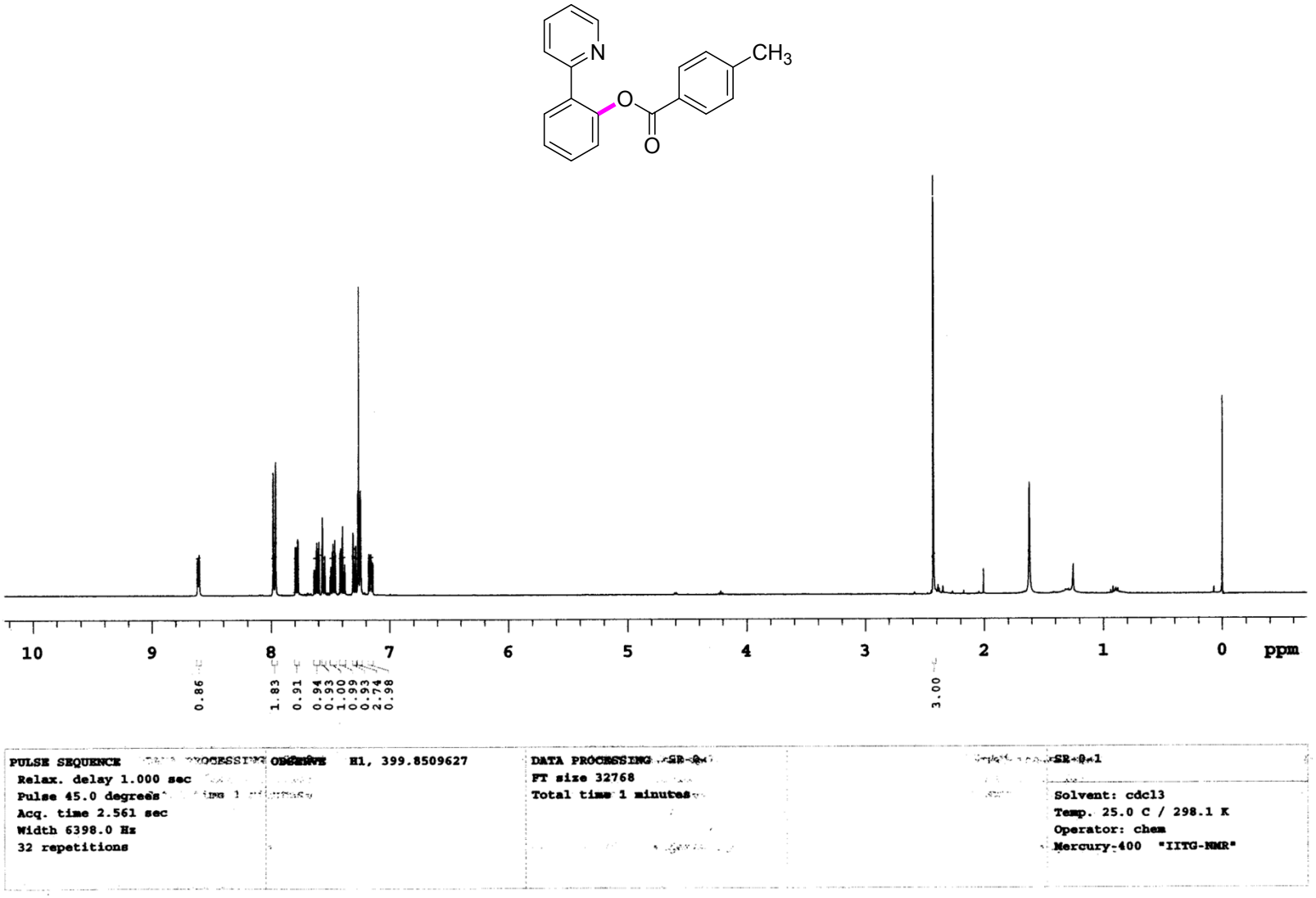




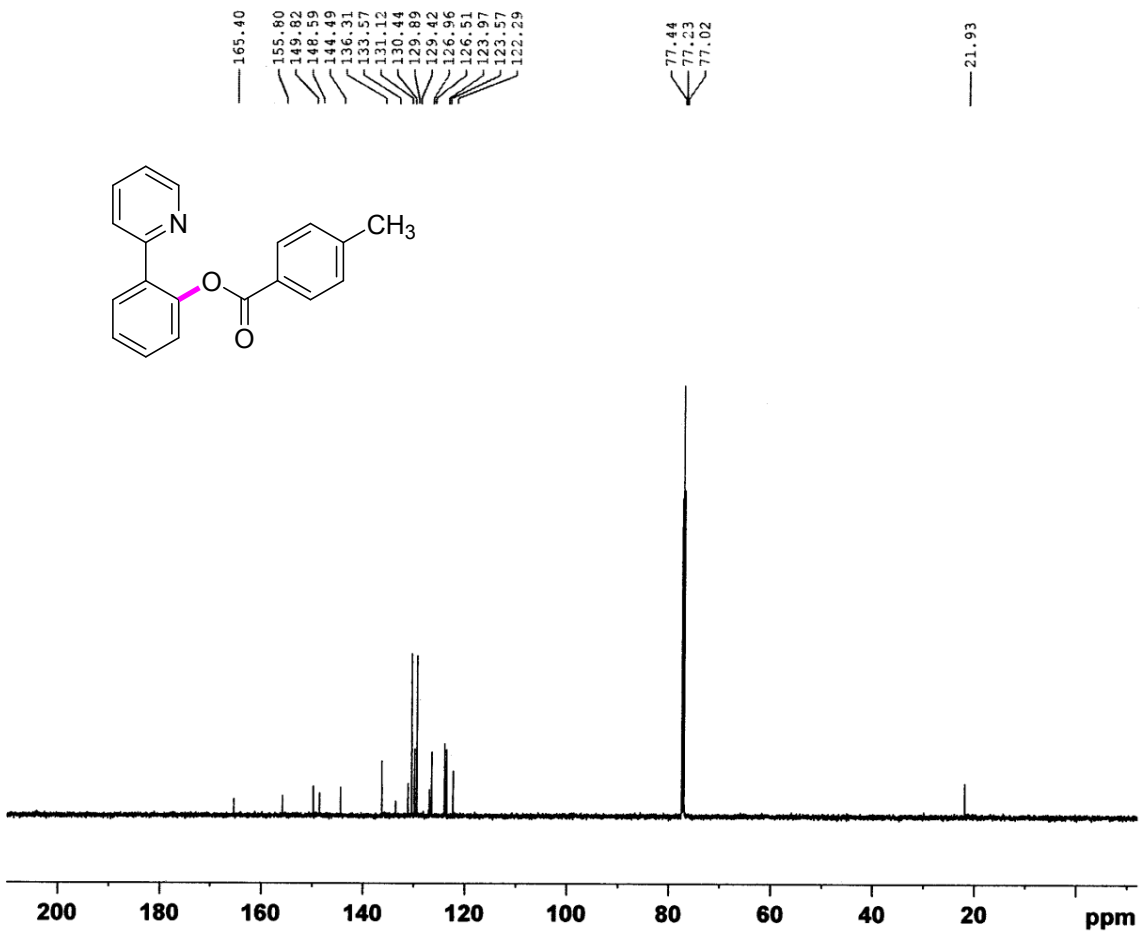
2-(Pyridin-2-yl)phenyl-2-methylbenzoate(1b):^{13}CNMR (100 MHz, $CDCl_3$)



2-(Pyridin-2-yl)phenyl 4-methylbenzoate (1c): ^{1}H NMR (400 MHz, $CDCl_3$)



2-(Pyridin-2-yl)phenyl-4-methylbenzoate (1c):^{13}C NMR (150MHz, $CDCl_3$)



BRUKER

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NUC1                        13C
P1                        10.50 usec
PLW1                95.00000000 W

======== CHANNEL f2 ========
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NUC2                        1H
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PLW2                21.00000000 W
PLW12                0.61714000 W
PLW13                0.30239999 W

F2 - Processing parameters
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SF                  150.9128348 MHz
WDW                          EM
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PC                        1.40
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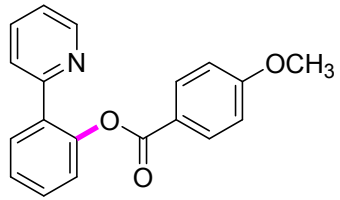
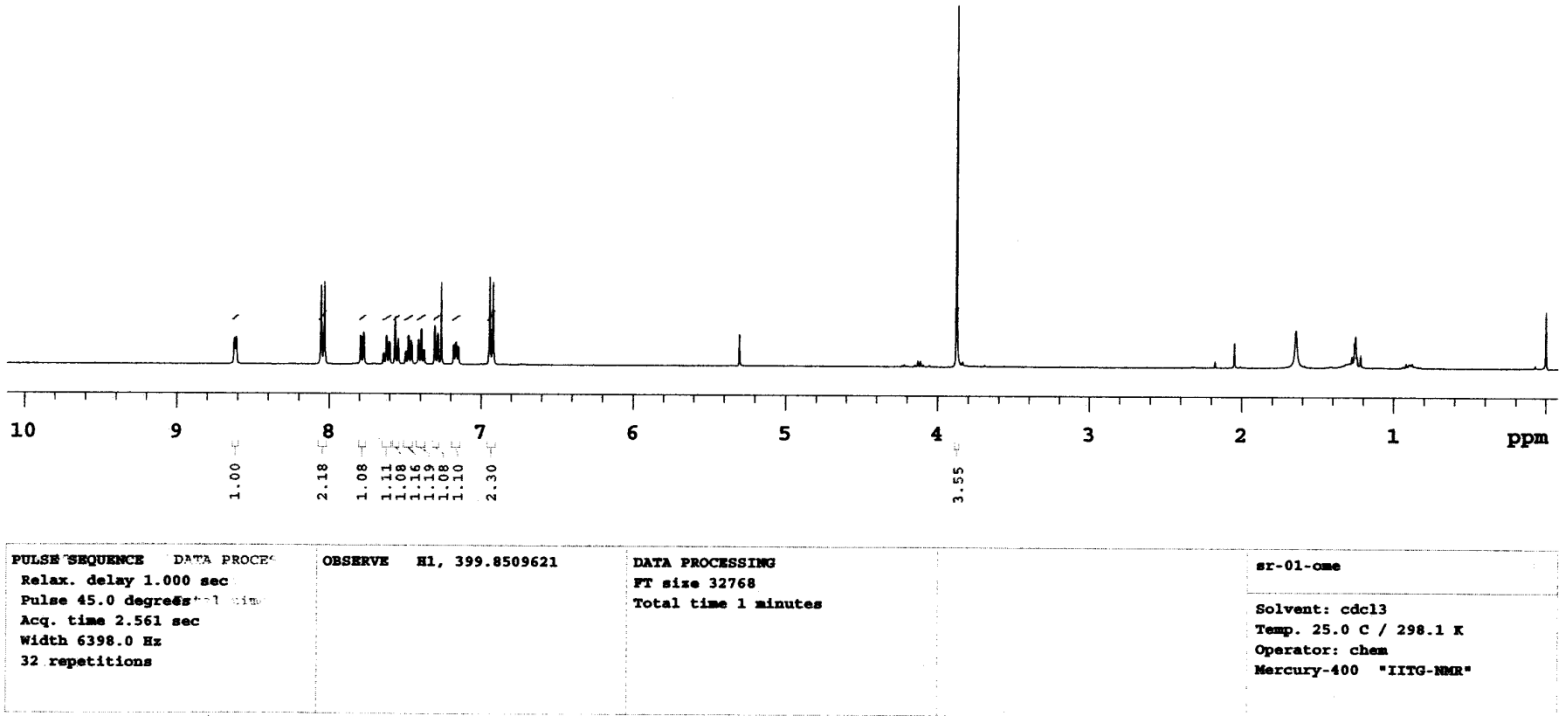
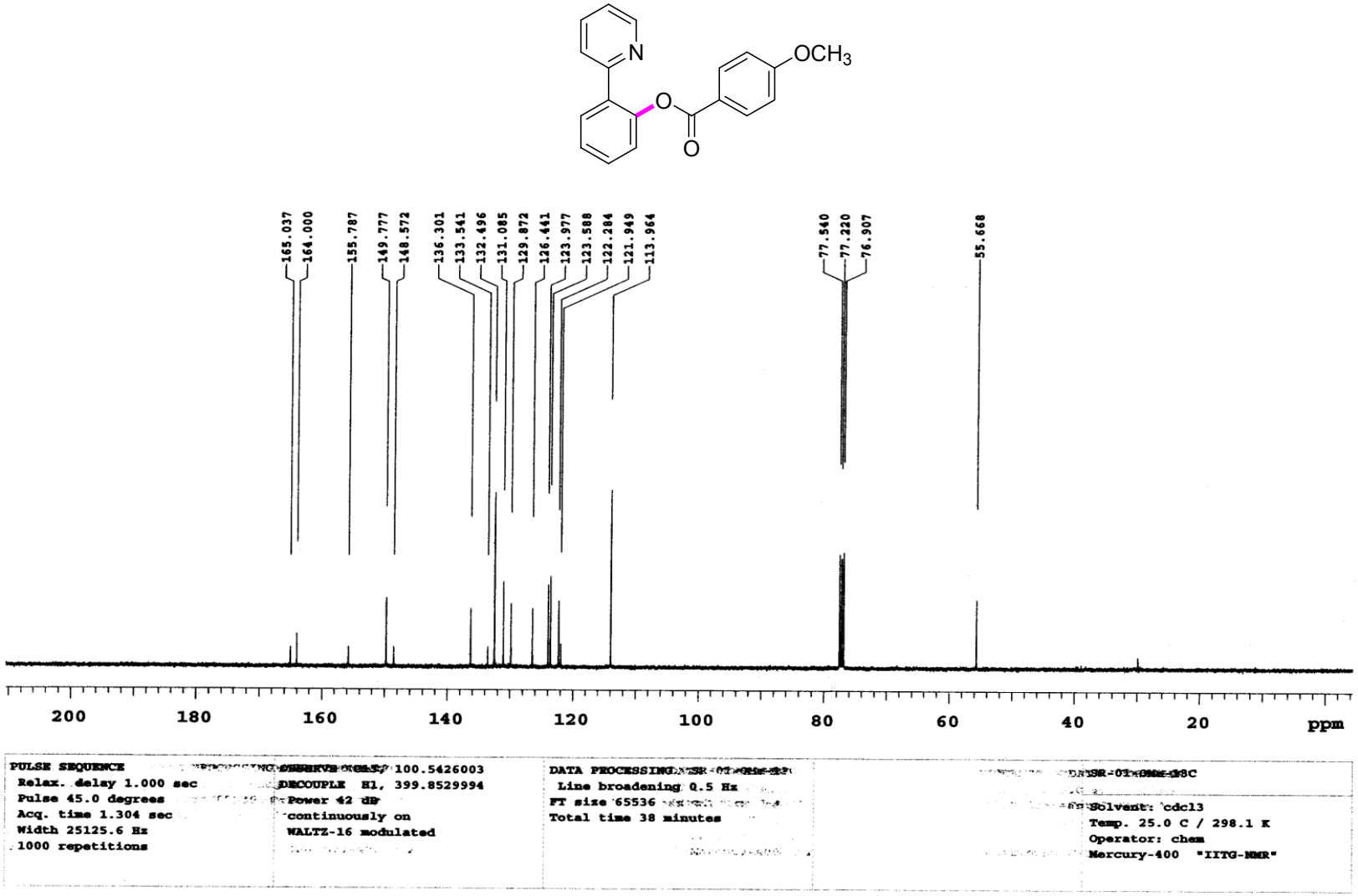
2-(Pyridin-2-yl)phenyl 4-methoxybenzoate (1d): ^{1}H NMR (400 MHz, $CDCl_3$)

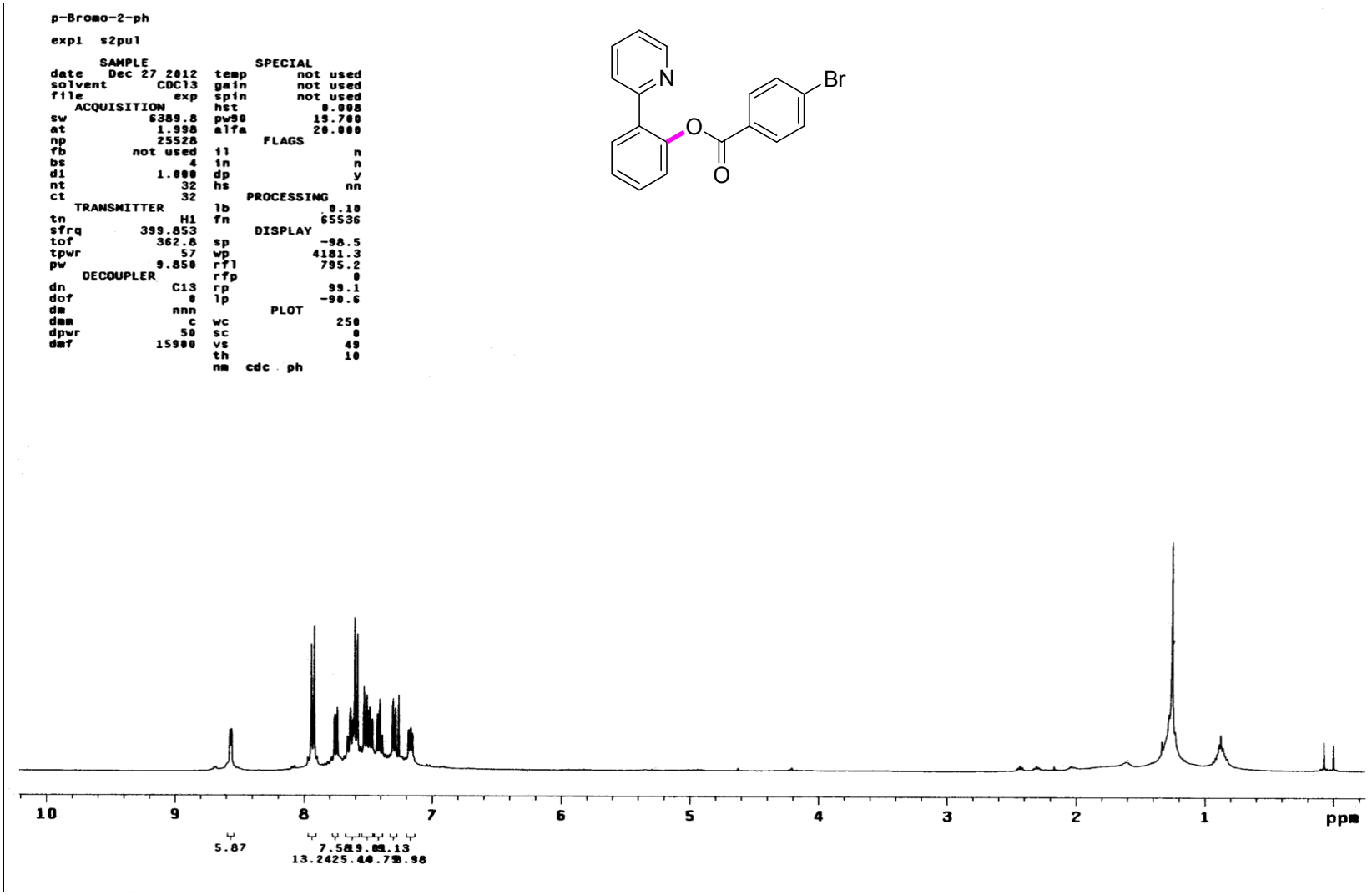




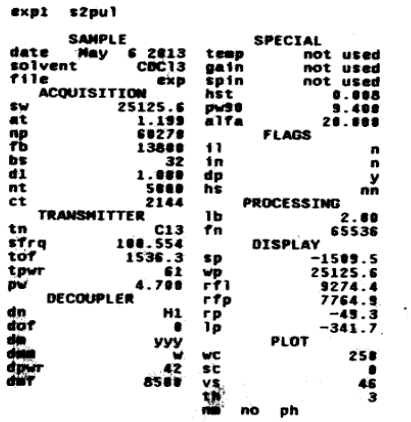
2-(Pyridin-2-yl)phenyl 4-methoxybenzoate (1d):^{13}C NMR (100 MHz, $CDCl_3$)

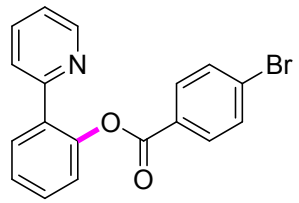


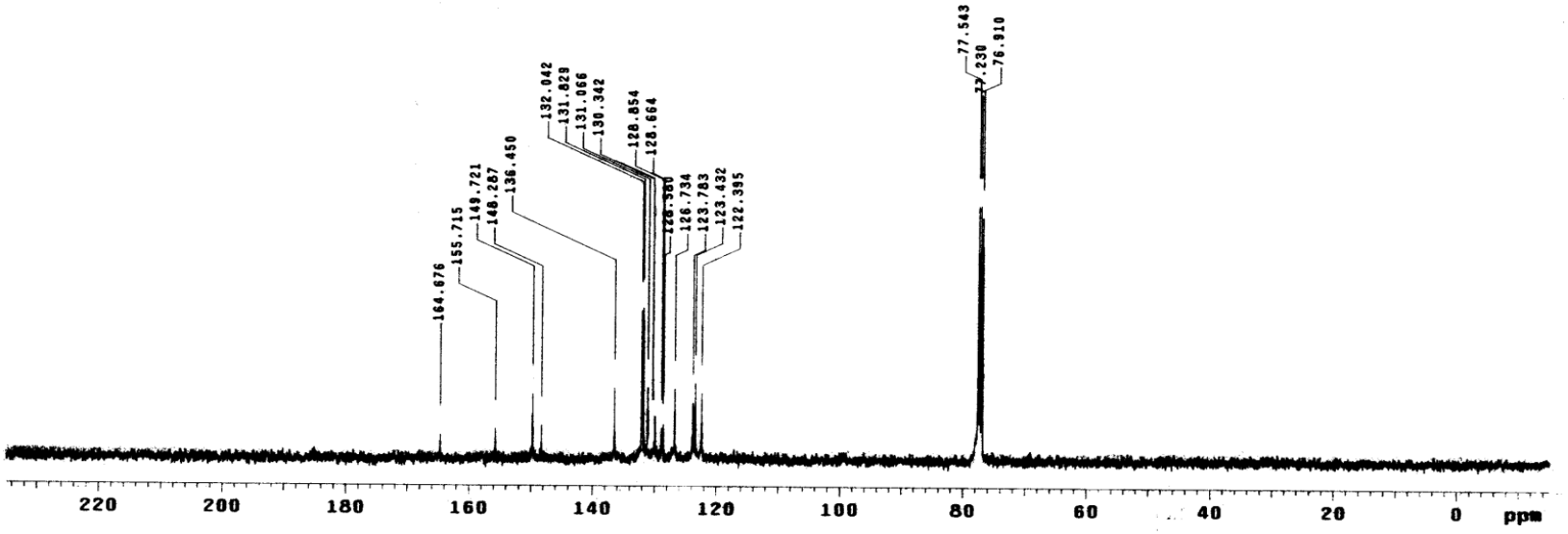
2-(Pyridin-2-yl)phenyl -4-bromobenzoate (1e):^{1}H NMR (400 MHz, $CDCl_3$)



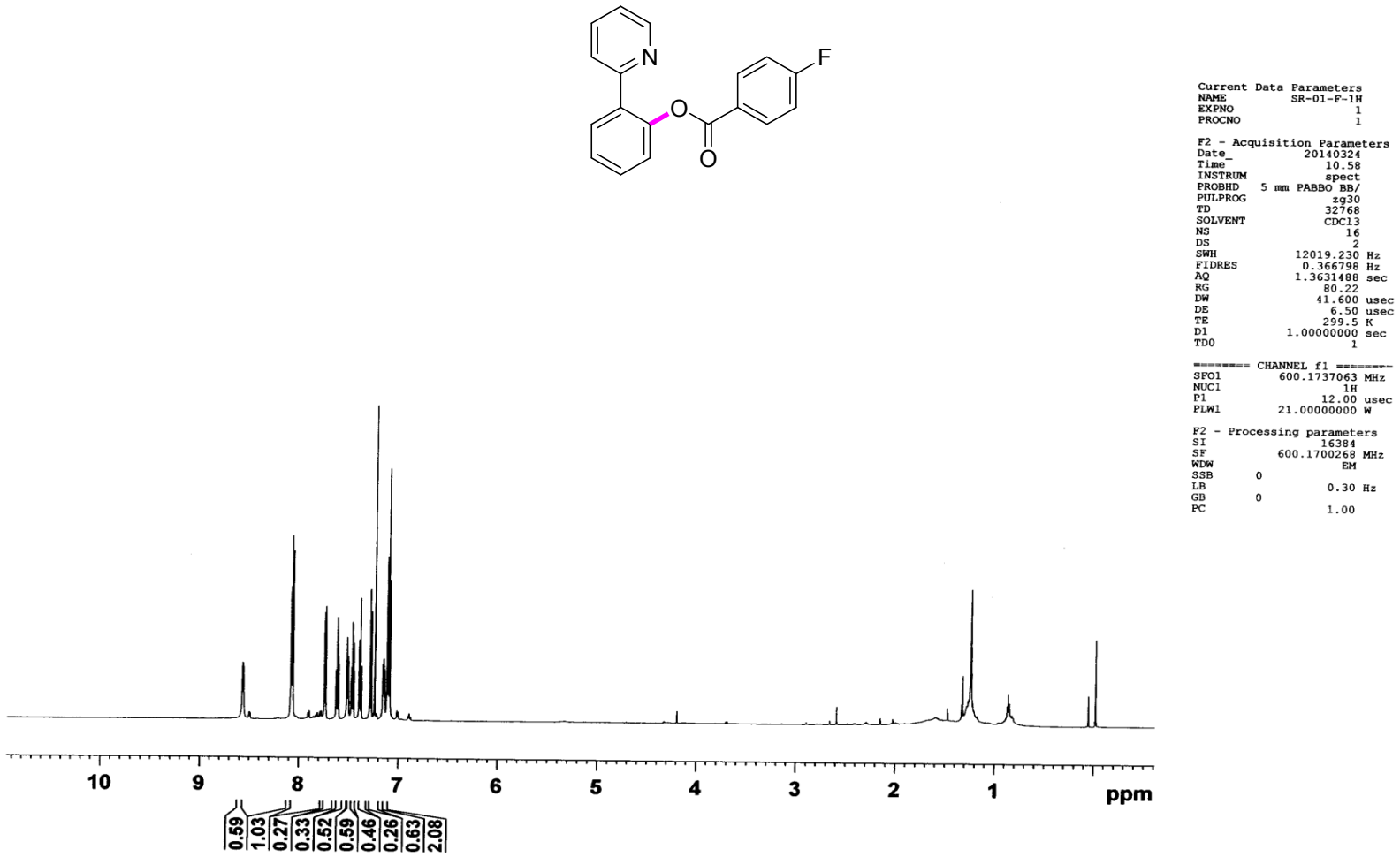
2-(Pyridin-2-yl)phenyl -4-bromobenzoate (1e): ^{13}C NMR (100 MHz, $CDCl_3$)







2-(Pyridin-2-yl)phenyl 4-fluorobenzoate (1f): ^{1}H NMR (600 MHz, $CDCl_3$)

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F2 - Processing parameters
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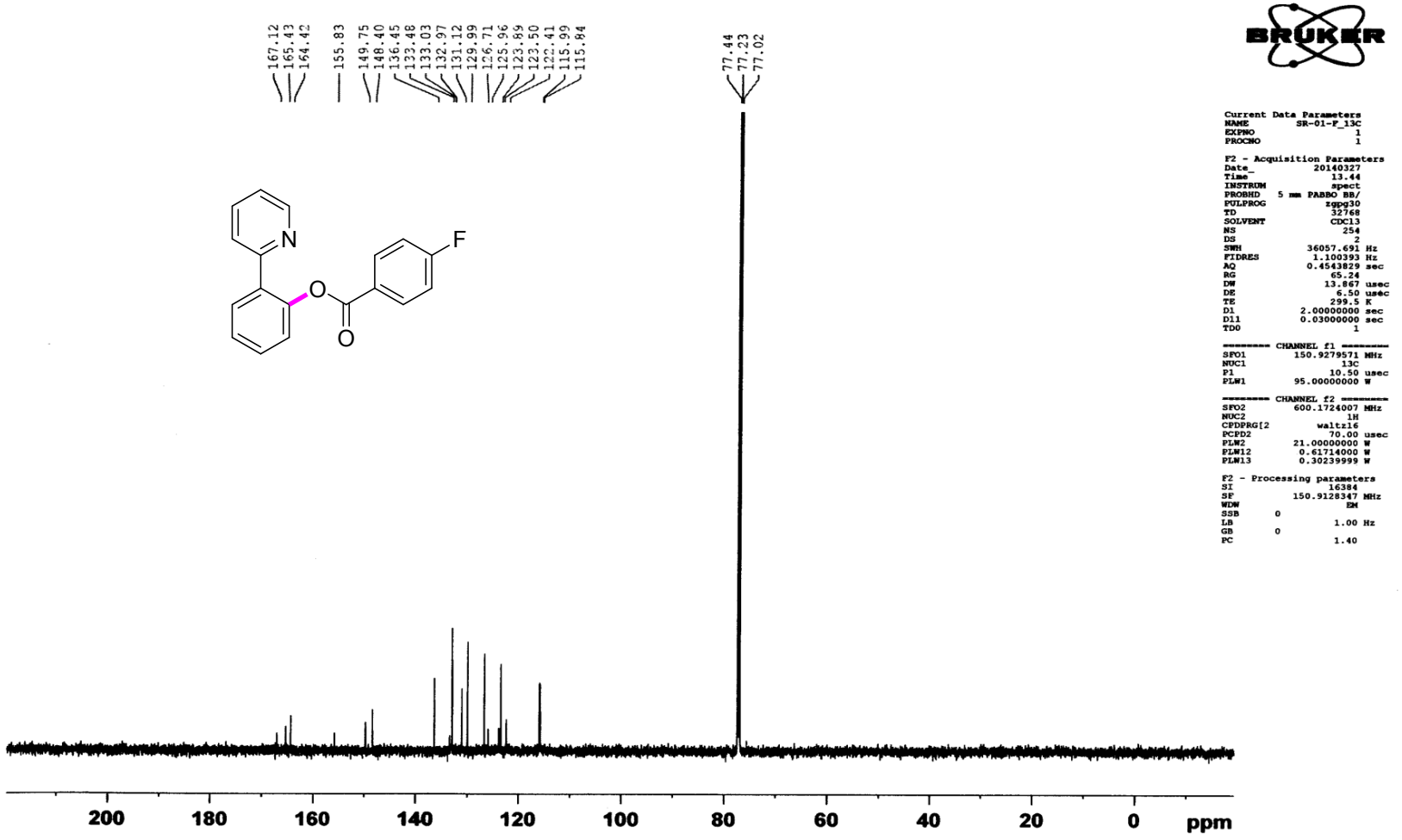
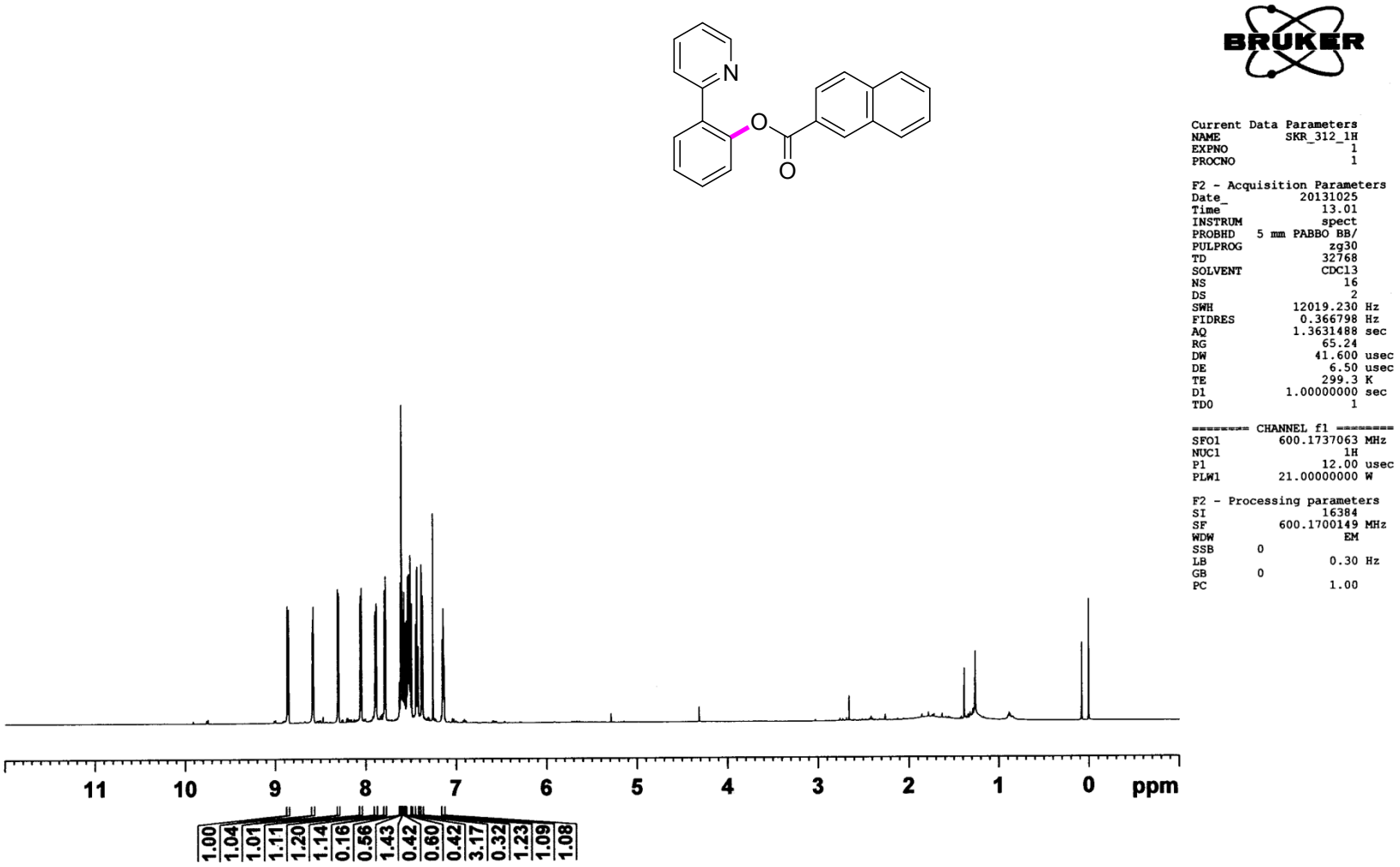
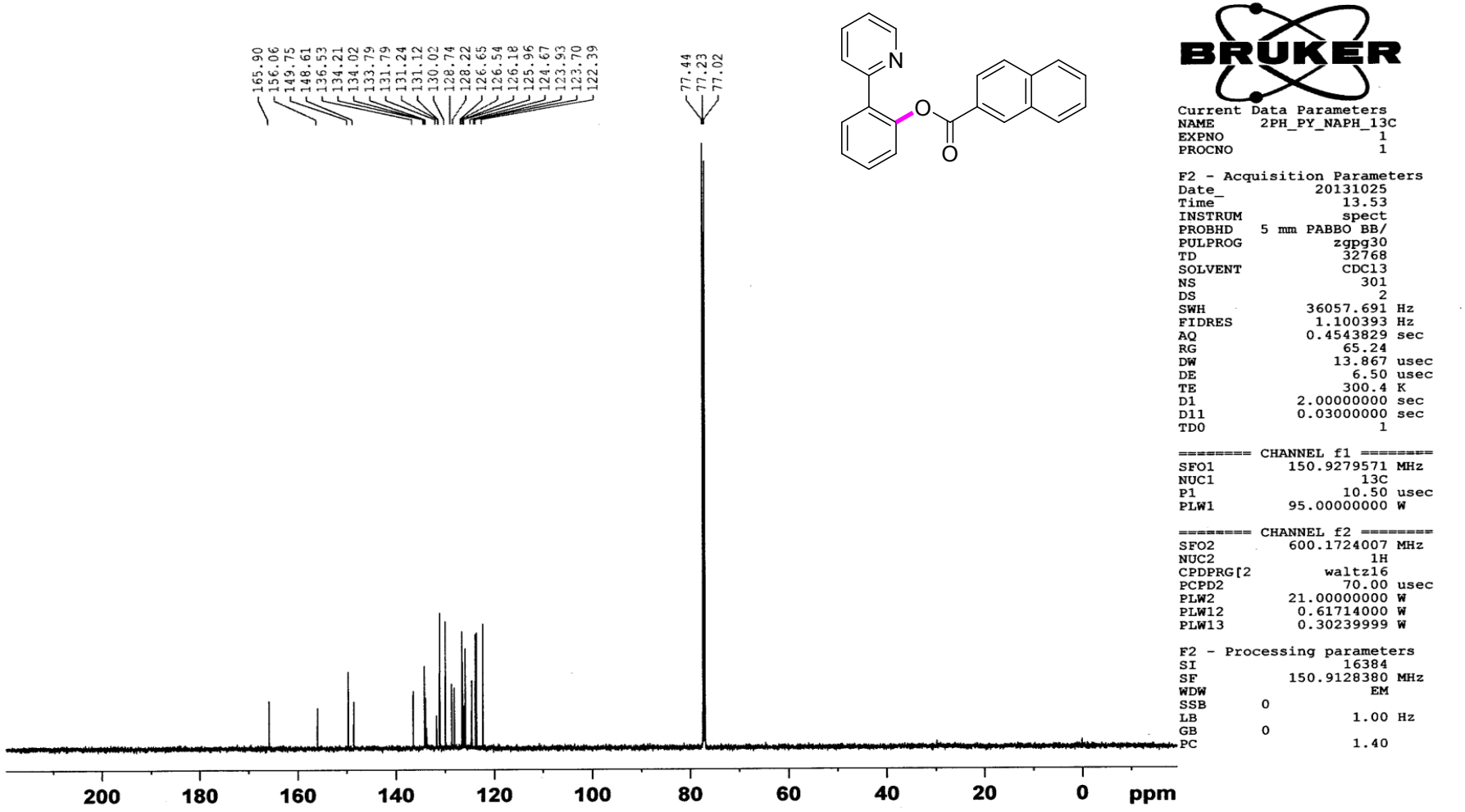
2-(Pyridin-2-yl)phenyl 4-fluorobenzoate (1f): ^{13}C NMR (150 MHz, $CDCl_3$)



2-(Pyridin-2-yl)phenyl-2-naphthoate (1g): ^{1}H NMR (600 MHz, $CDCl_3$)



2-(Pyridin-2-yl)phenyl 2-naphthoate (1g): ^{13}C NMR (150 MHz, $CDCl_3$)



BRUKER

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TD0                   1

======== CHANNEL f1 ========
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======== CHANNEL f2 ========
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PLW13        0.30239999 W

F2 - Processing parameters
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WDW                    EM
SSB       0
LB                 1.00 Hz
GB        0
PC                 1.40
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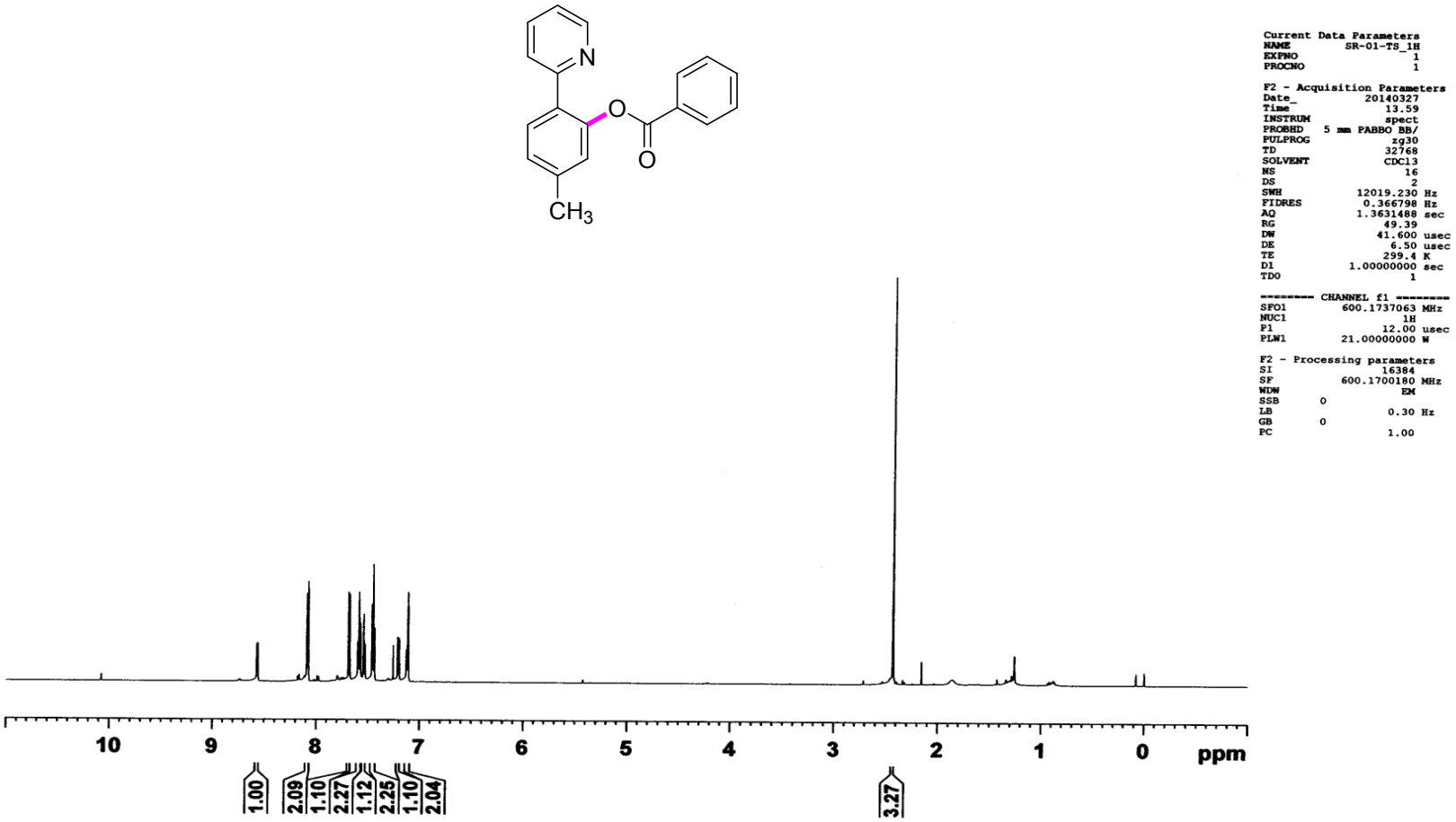
5-Methyl-2-(pyridine-2-yl)phenyl benzoate (2a): ^{1}H NMR (600 MHz, $CDCl_3$)

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Current Data Parameters
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TE                       299.4 K
D1                    1.00000000 sec
TD0                             1

======== CHANNEL f1 ========
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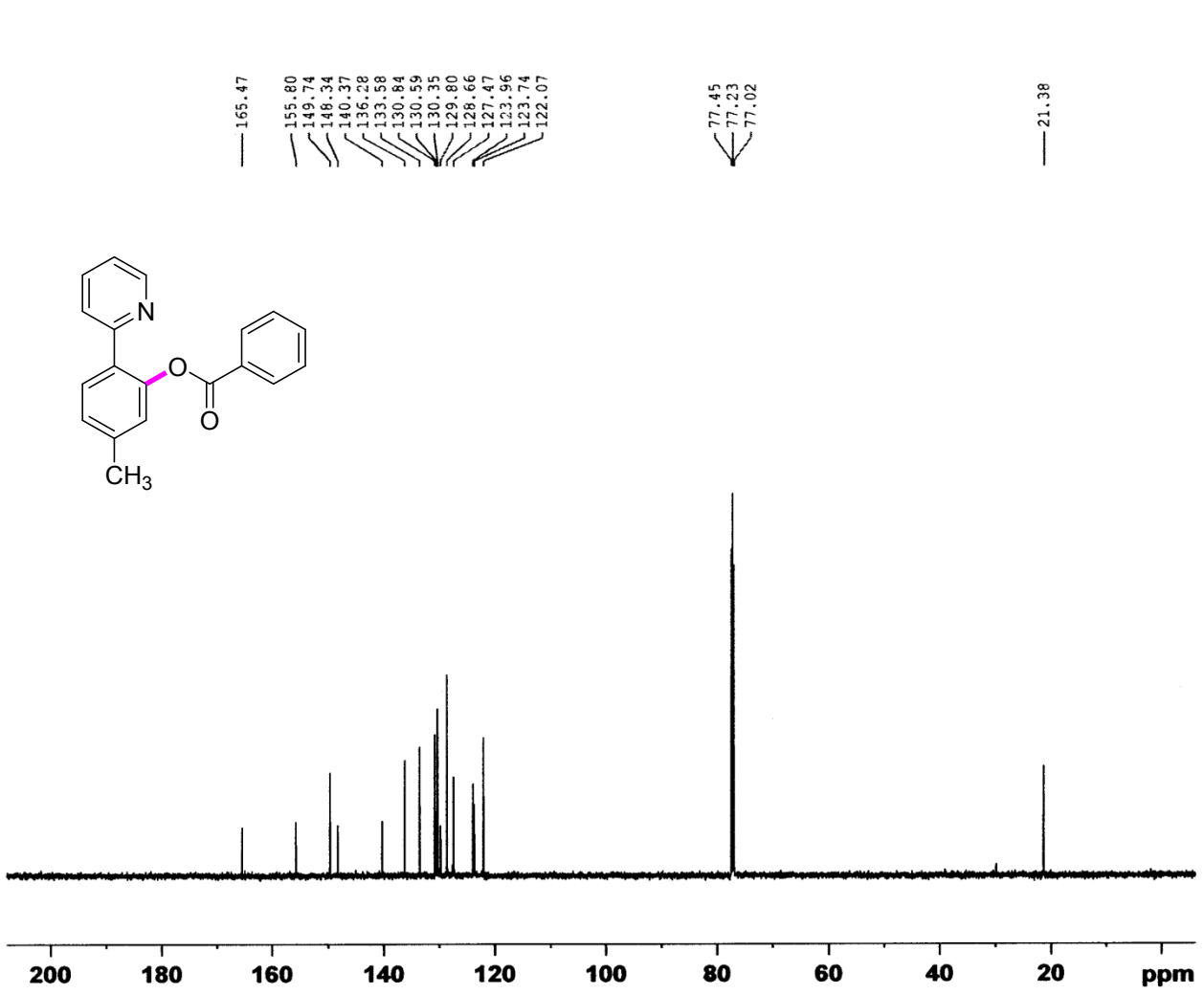
NUC1                        1H
P1                       12.00 usec
PLW1                21.00000000 W

F2 - Processing parameters
SI                         16384
SF                  600.1700180 MHz
WDW                           EM
SSB                0
LB                           0.30 Hz
GB                 0
PC                           1.00
```

5-Methyl-2-(pyridine-2-yl)phenyl benzoate (2a): ^{13}C NMR (150 MHz, $CDCl_3$)



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```
Current Data Parameters
NAME          SR-01-TS-13C
EXPNO                    1
PROCNO                   1

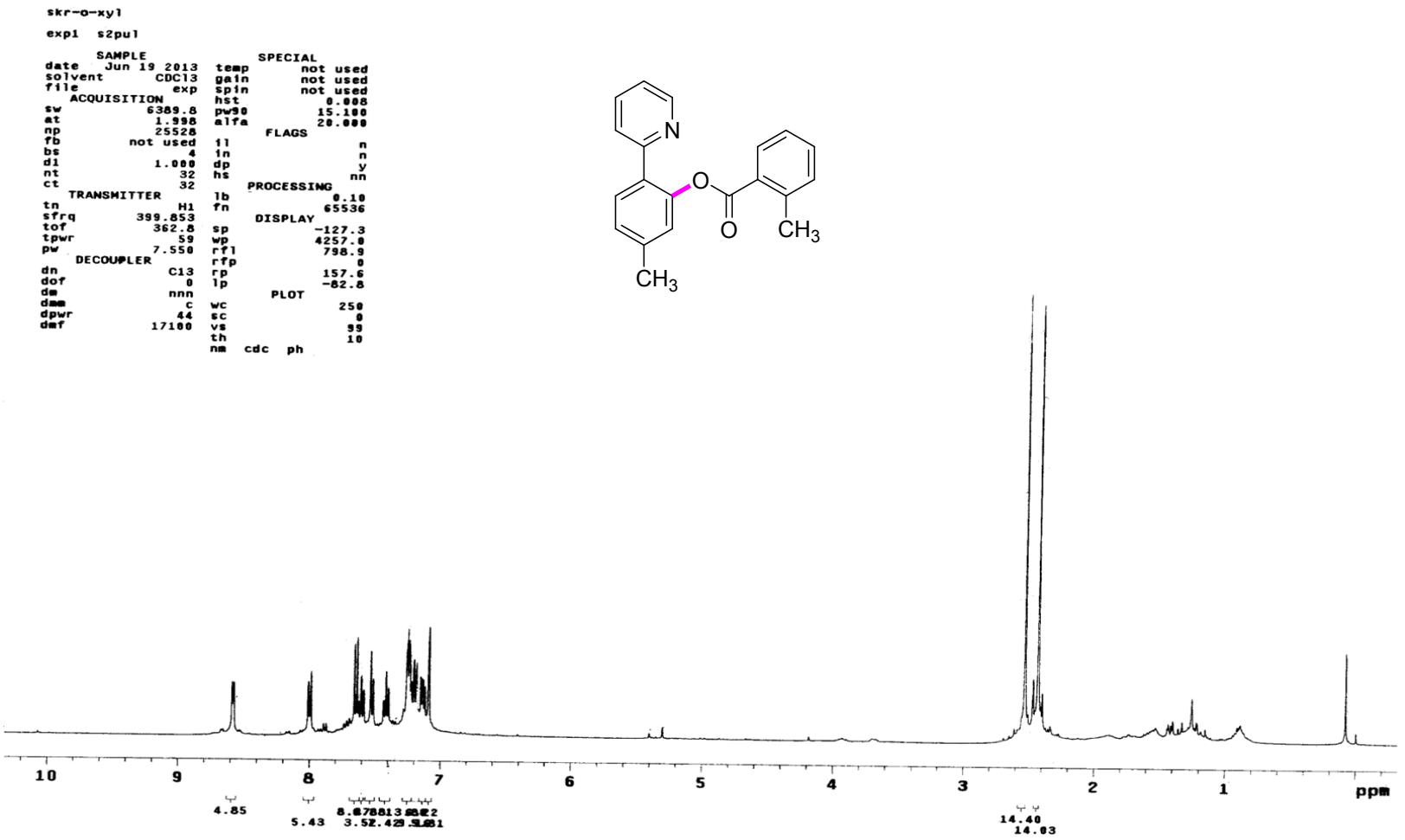
F2 - Acquisition Parameters
Date_             20140321
Time                 9.51
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG           zgpg30
TD                 32768
SOLVENT            CDCl3
NS                    90
DS                     2
SWH            36057.691 Hz
FIDRES          1.100393 Hz
AQ             0.4543829 sec
RG                 65.24
DW                13.867 usec
DE                 6.50 usec
TE                301.8 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                    1

======== CHANNEL f1 ========
SFO1          150.9279571 MHz
NUC1                 13C
P1                 10.50 usec
PLW1          95.00000000 W

======== CHANNEL f2 ========
SFO2          600.1724007 MHz
NUC2                 1H
CPDPRG[2          waltz16
PCPD2              70.00 usec
PLW2          21.00000000 W
PLW12          0.61714000 W
PLW13          0.30239999 W

F2 - Processing parameters
SI                   16384
SF            150.9128392 MHz
WDW                    EM
SSB       0
LB                  1.00 Hz
GB        0
PC                  1.40
```

5-Methyl-2-(pyridine-2-yl)phenyl 2-methylbenzoate (2b): ^{1}H NMR (400 MHz, $CDCl_3$)

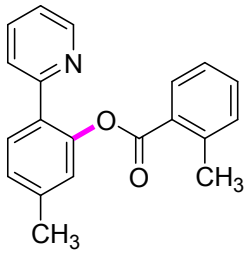


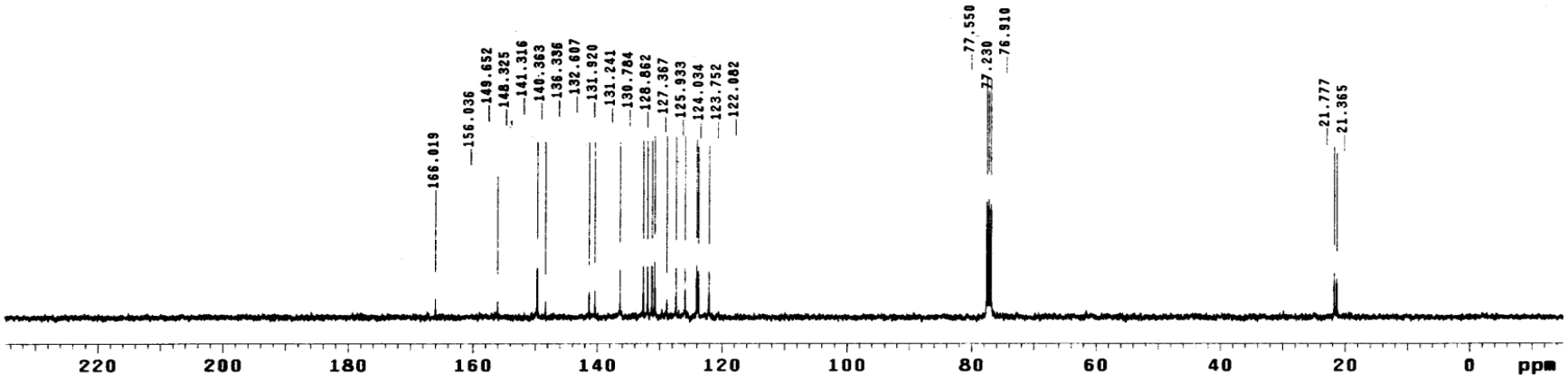
5-Methyl-2-(pyridine-2-yl)phenyl 2-methylbenzoate (2b): ^{13}C NMR (100 MHz, $CDCl_3$)

```
skr-o-xyl-13c

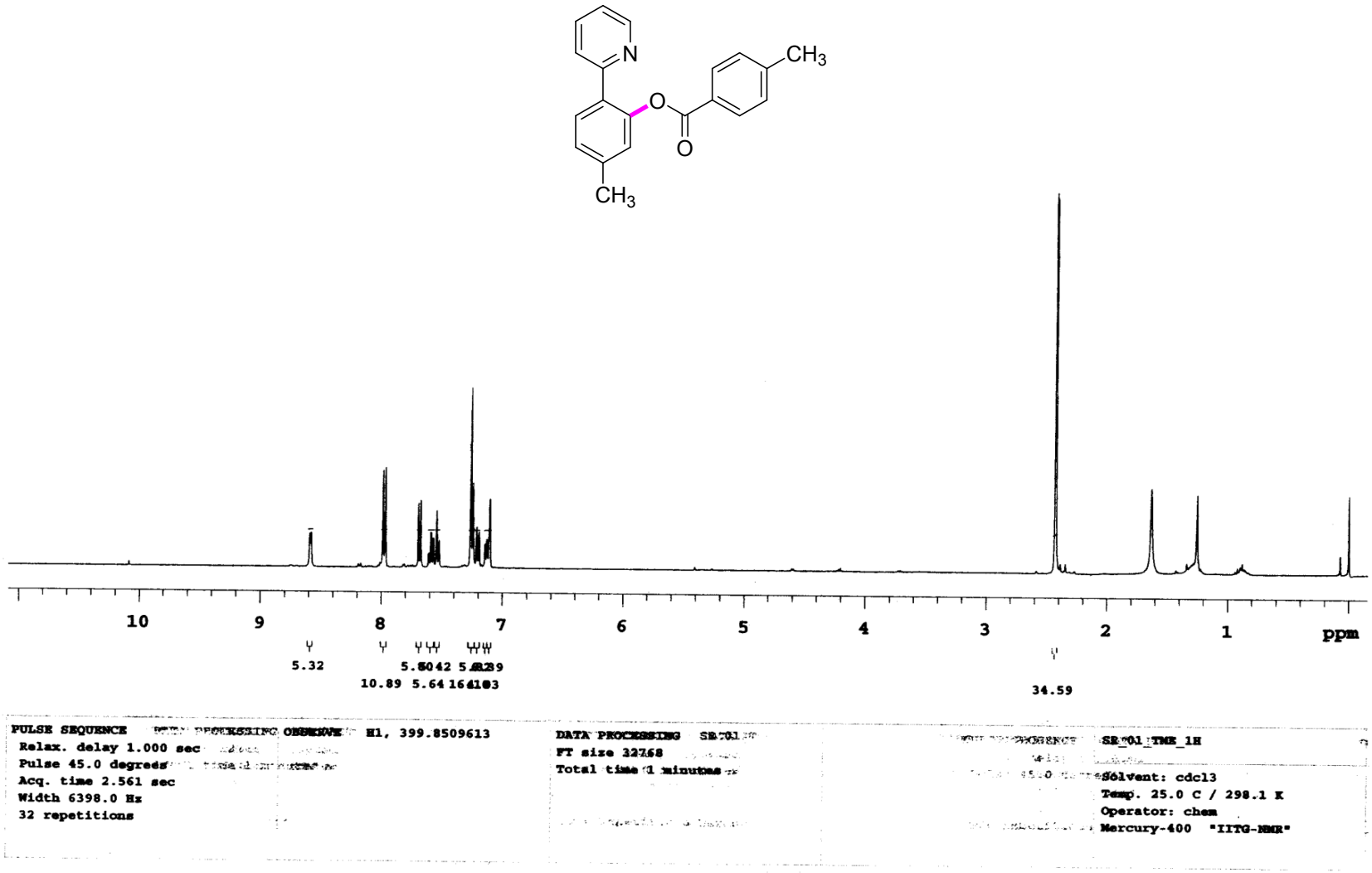
exp1  s2pul

      SAMPLE                SPECIAL
date    Jun 19 2013   temp        not used
solvent       CDCl3   gain        not used
file            exp   spin        not used
   ACQUISITION        hst             0.005
sw           25125.6   pw90            9.400
at             1.199   alfa           20.000
np             60270          FLAGS
fb             13800   il                  n
bs                32   in                  n
d1             1.000   dp                  y
nt              5000   hs                 nn
ct              1024        PROCESSING
   TRANSMITTER        lb              2.00
tn               C13   fn             65536
sfrq         100.554         DISPLAY
tof           1536.3   sp           -1508.7
tpwr              61   wp           25125.6
pw             4.700   rfl           9273.6
    DECOUPLER         rfp           7764.9
dn                H1   rp            -74.2
dof                0   lp           -271.4
dm               yyy            PLOT
dmm                w   wc               250
dpwr              42   sc                 0
dmf             8500   vs                22
                       th                 2
                       nm  no  ph
```

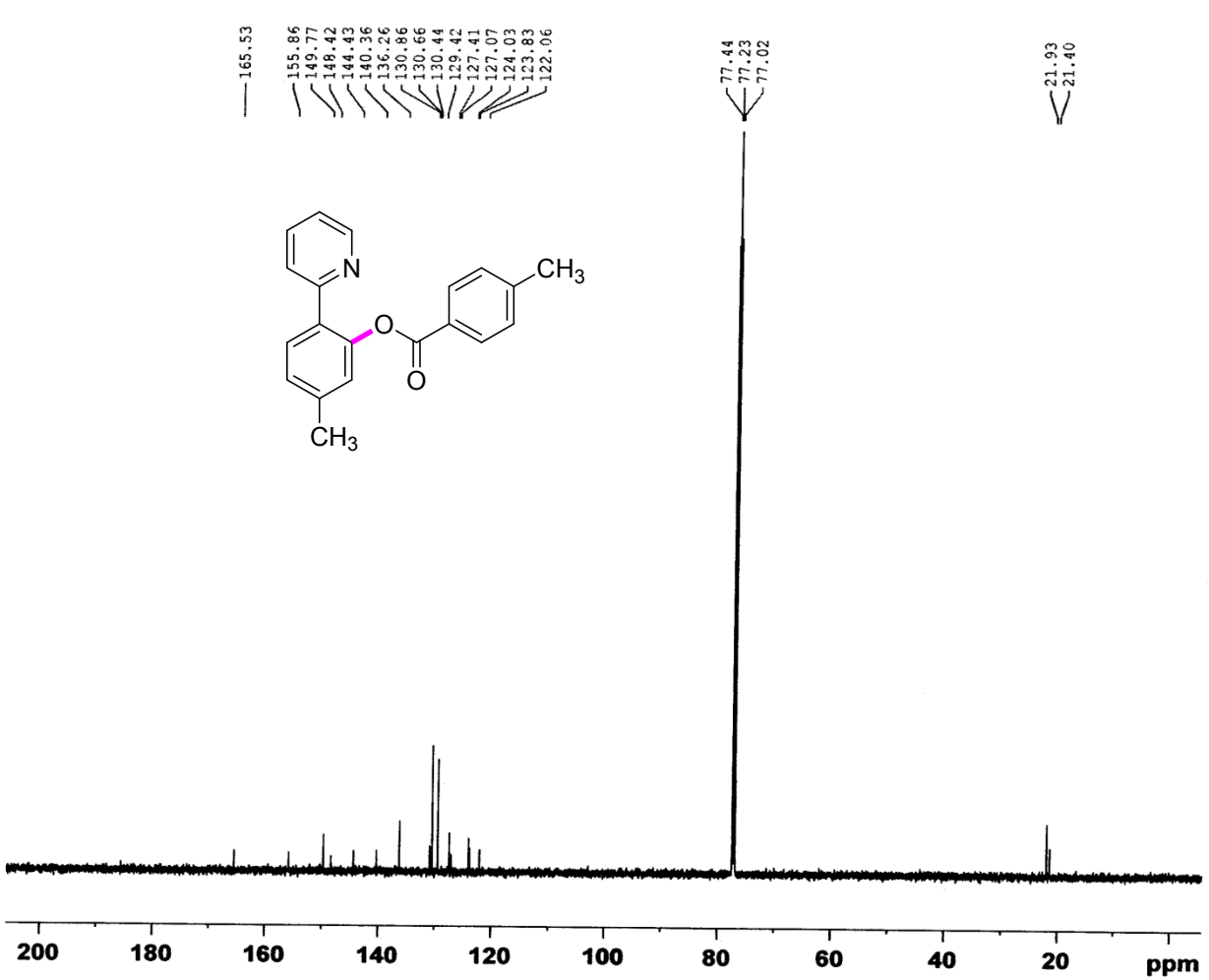




5-Methyl-2-(pyridine-2-yl)phenyl 4-methylbenzoate (2c): ^{1}H NMR (400 MHz, $CDCl_3$)



5-Methyl-2-(pyridine-2-yl)phenyl 4-methylbenzoate (2c): ^{13}C NMR (150 MHz, $CDCl_3$)




```
Current Data Parameters
NAME       SR-01-TME-13C
EXPNO                  1
PROCNO                 1

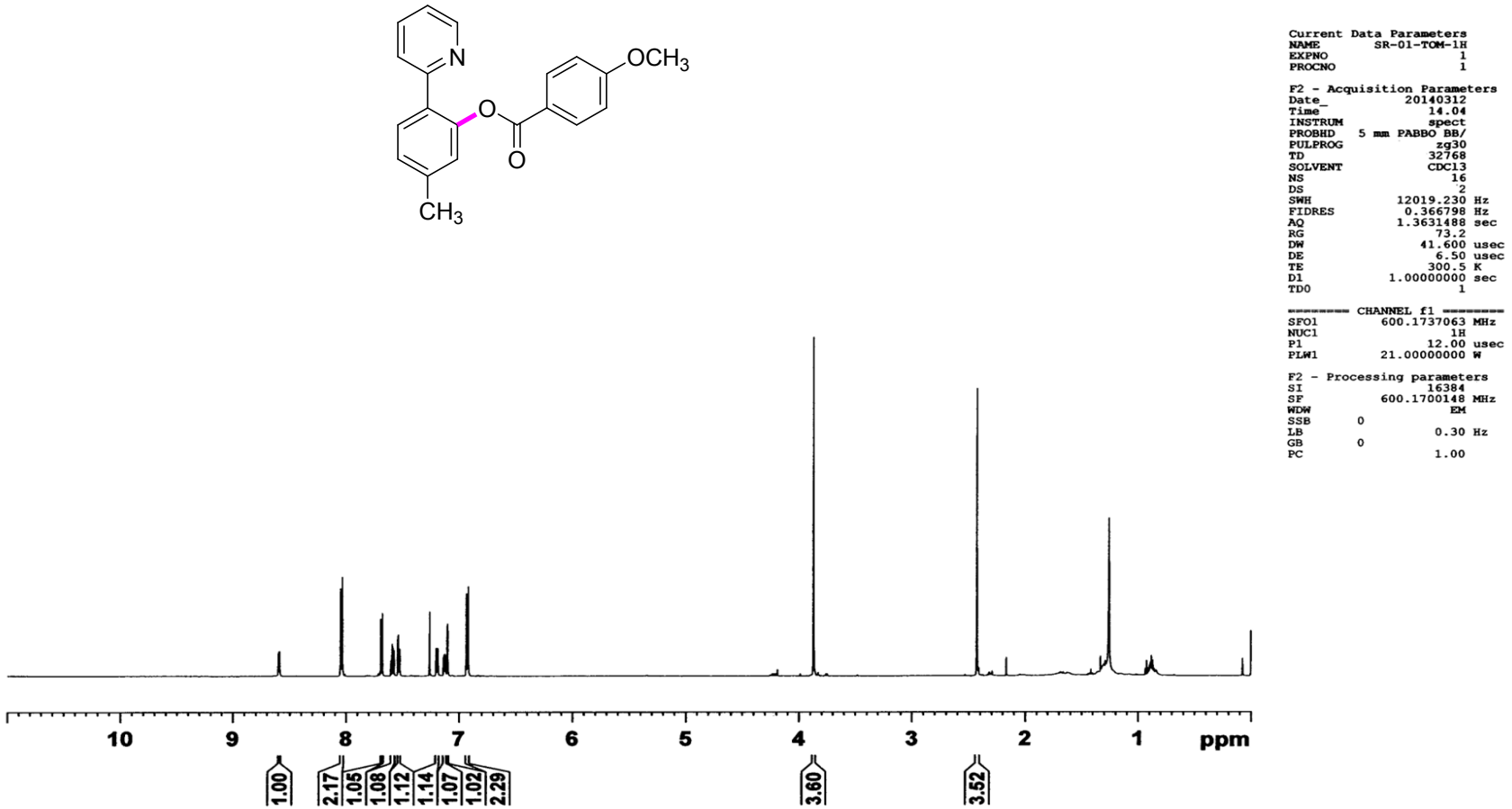
F2 - Acquisition Parameters
Date_           20140318
Time              13.24
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG         zgpg30
TD                32768
SOLVENT           CDCl3
NS                  260
DS                    2
SWH           36057.691 Hz
FIDRES         1.100393 Hz
AQ            0.4543829 sec
RG                65.24
DW               13.867 usec
DE                 6.50 usec
TE                303.3 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1        150.9279571 MHz
NUC1                13C
P1                10.50 usec
PLW1         95.00000000 W

======== CHANNEL f2 ========
SFO2        600.1724007 MHz
NUC2                1H
CPDPRG[2         waltz16
PCPD2             70.00 usec
PLW2         21.00000000 W
PLW12         0.61714000 W
PLW13         0.30239999 W

F2 - Processing parameters
SI                 16384
SF          150.9128326 MHz
WDW                  EM
SSB       0
LB                1.00 Hz
GB        0
PC                1.40
```

5-Methyl-2-(pyridine-2-yl)phenyl 4-methoxybenzoate (2d): ^{1}H NMR (600 MHz, $CDCl_3$)



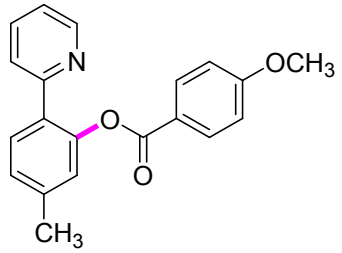

```
Current Data Parameters
NAME          SR-01-TOM-1H
EXPNO                    1
PROCNO                   1

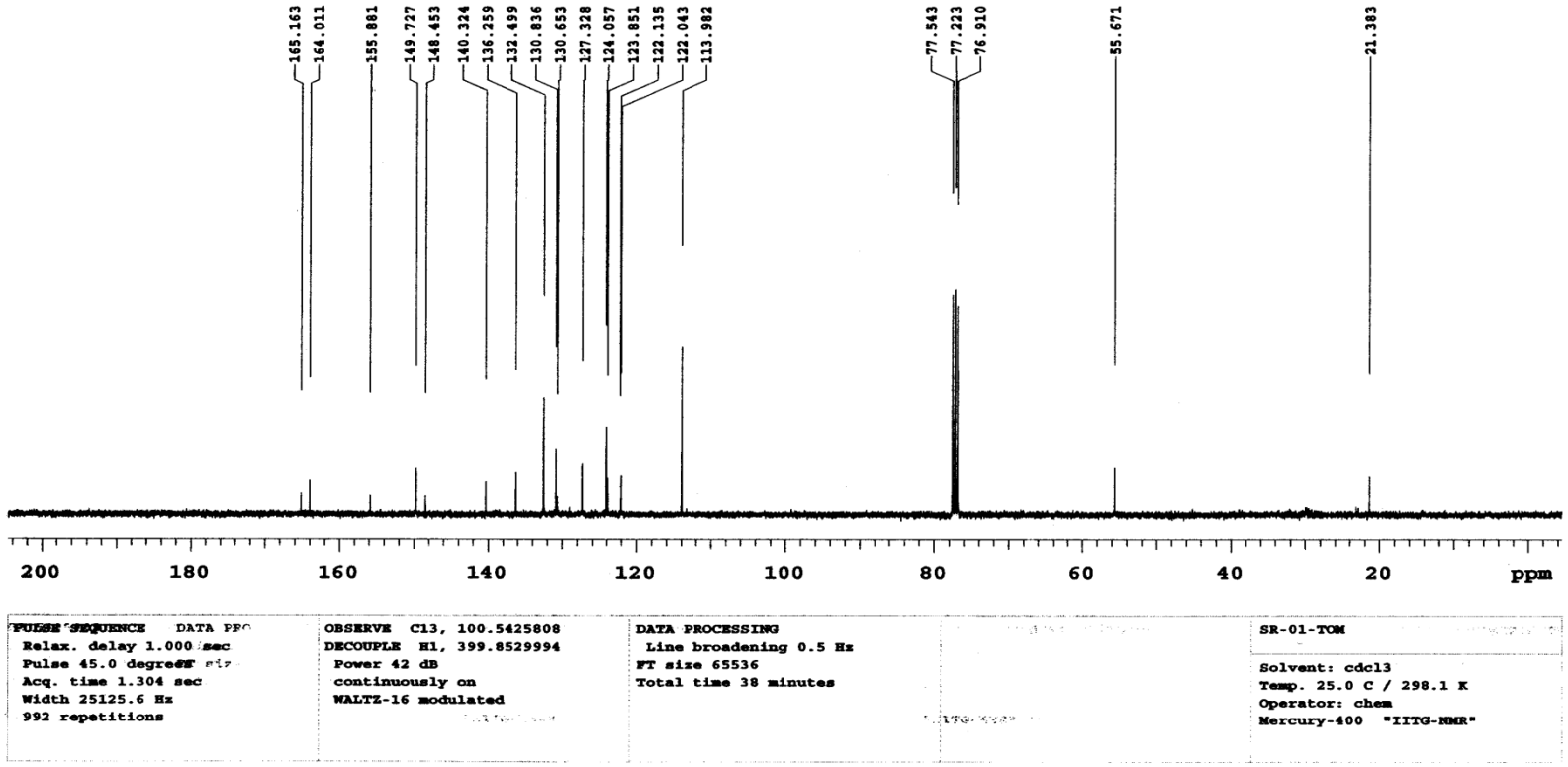
F2 - Acquisition Parameters
Date_             20140312
Time                 14.04
INSTRUM              spect
PROBHD    5 mm PABBO BB/
PULPROG              zg30
TD                  32768
SOLVENT             CDCl3
NS                     16
DS                      2
SWH           12019.230 Hz
FIDRES         0.366798 Hz
AQ             1.3631488 sec
RG                  73.2
DW                41.600 usec
DE                 6.50 usec
TE                300.5 K
D1            1.00000000 sec
TD0                     1

======== CHANNEL f1 ========
SFO1          600.1737063 MHz
NUC1                  1H
P1                 12.00 usec
PLW1          21.00000000 W

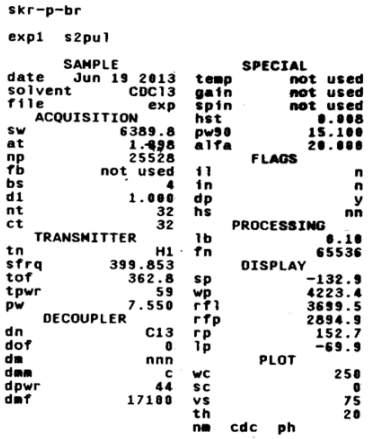
F2 - Processing parameters
SI                  16384
SF            600.1700148 MHz
WDW                   EM
SSB          0
LB                 0.30 Hz
GB           0
PC                 1.00
```

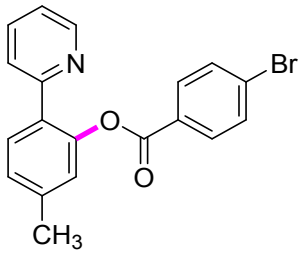
5-Methyl-2-(pyridine-2-yl)phenyl 4-methoxybenzoate (2d): ^{13}C NMR (100 MHz, $CDCl_3$)

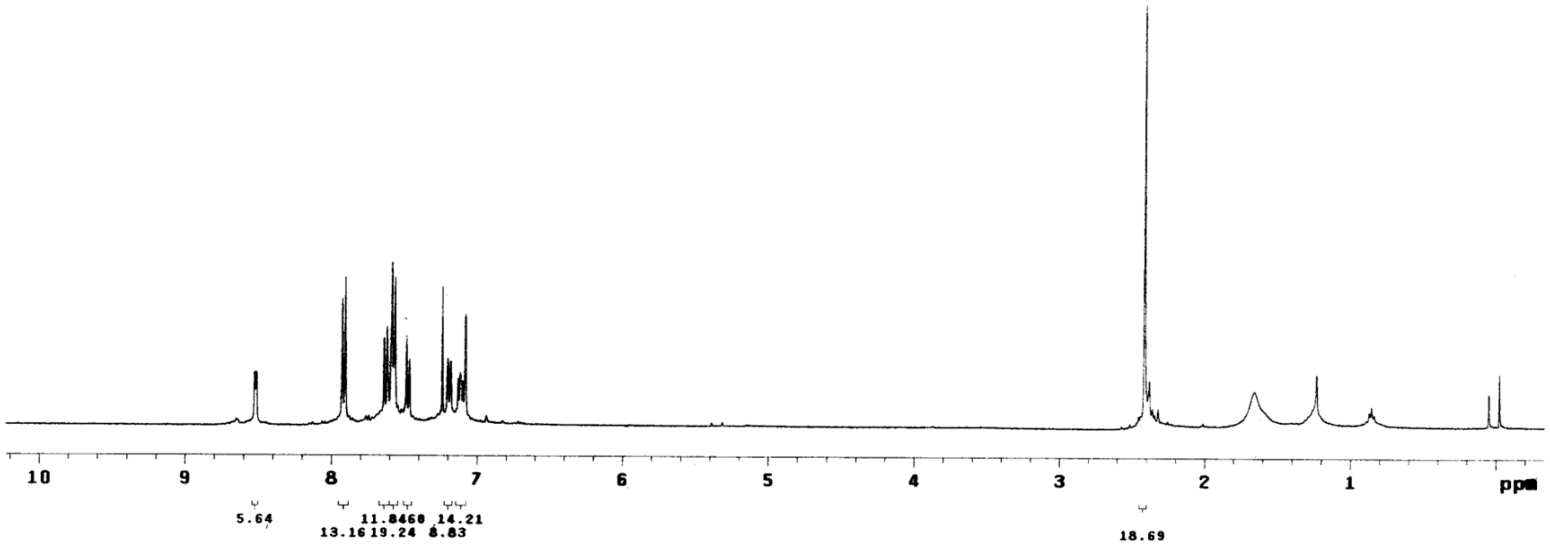




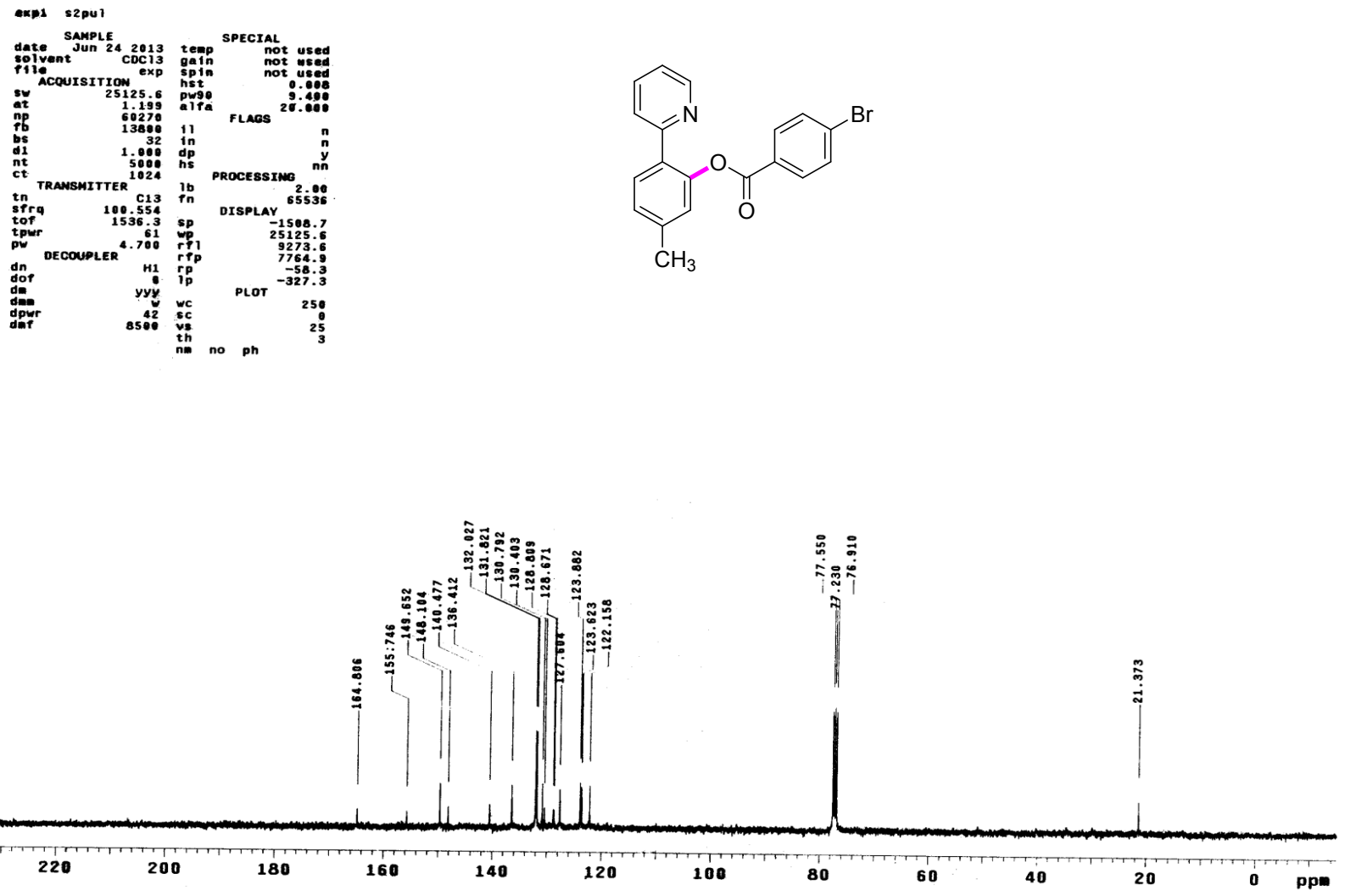
5-Methyl-2-(pyridin-2-yl)phenyl 4-bromobenzoate (2e): ^{1}H NMR (400 MHz, $CDCl_3$)



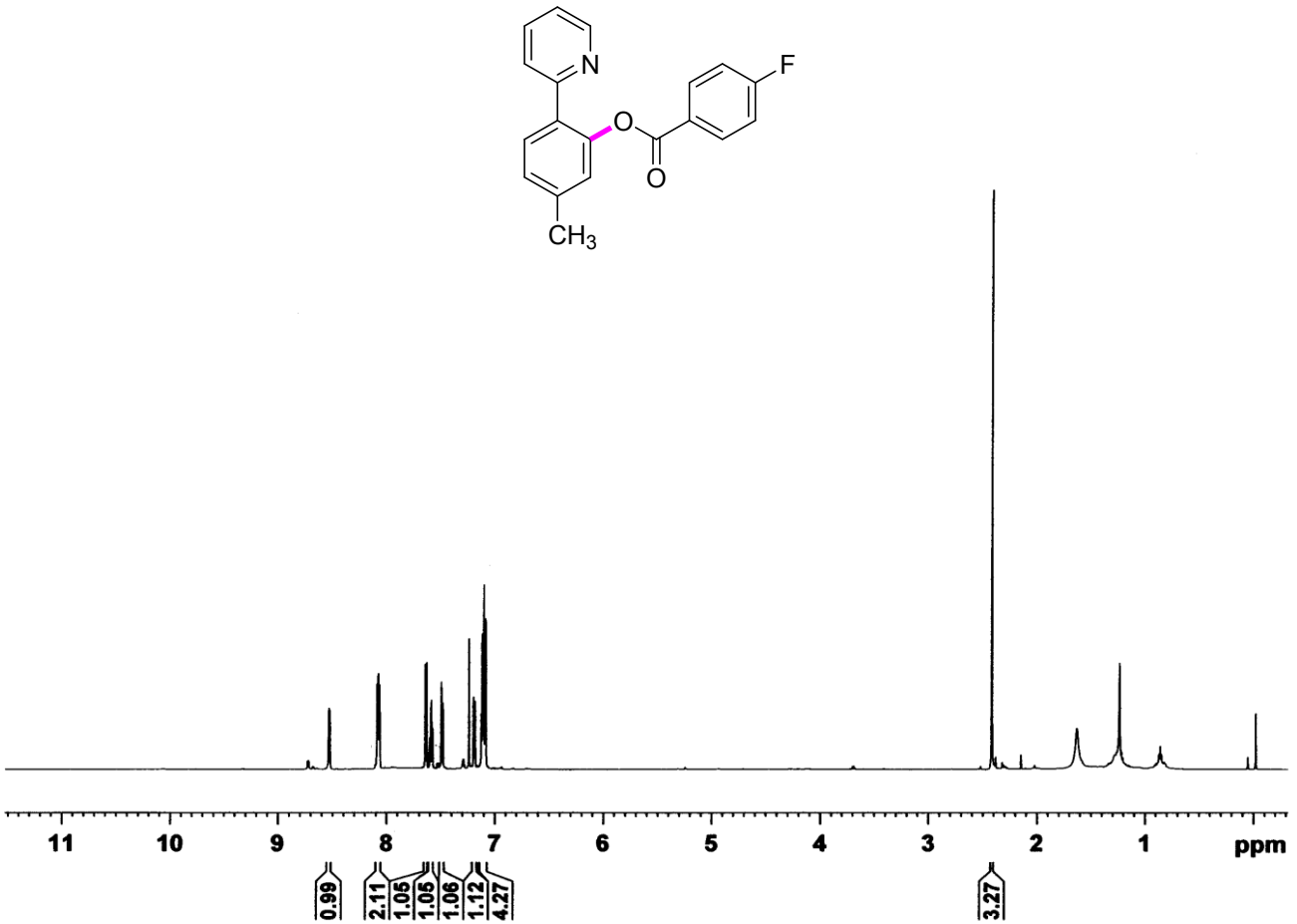




5-Methyl-2-(pyridine-2-yl)phenyl 4-bromobenzoate (2e): ^{13}C NMR (100 MHz, $CDCl_3$)



5-Methyl-2-(pyridin-2-yl)phenyl 4-fluorobenzoate (2f): ^{1}H NMR (600 MHz, $CDCl_3$)



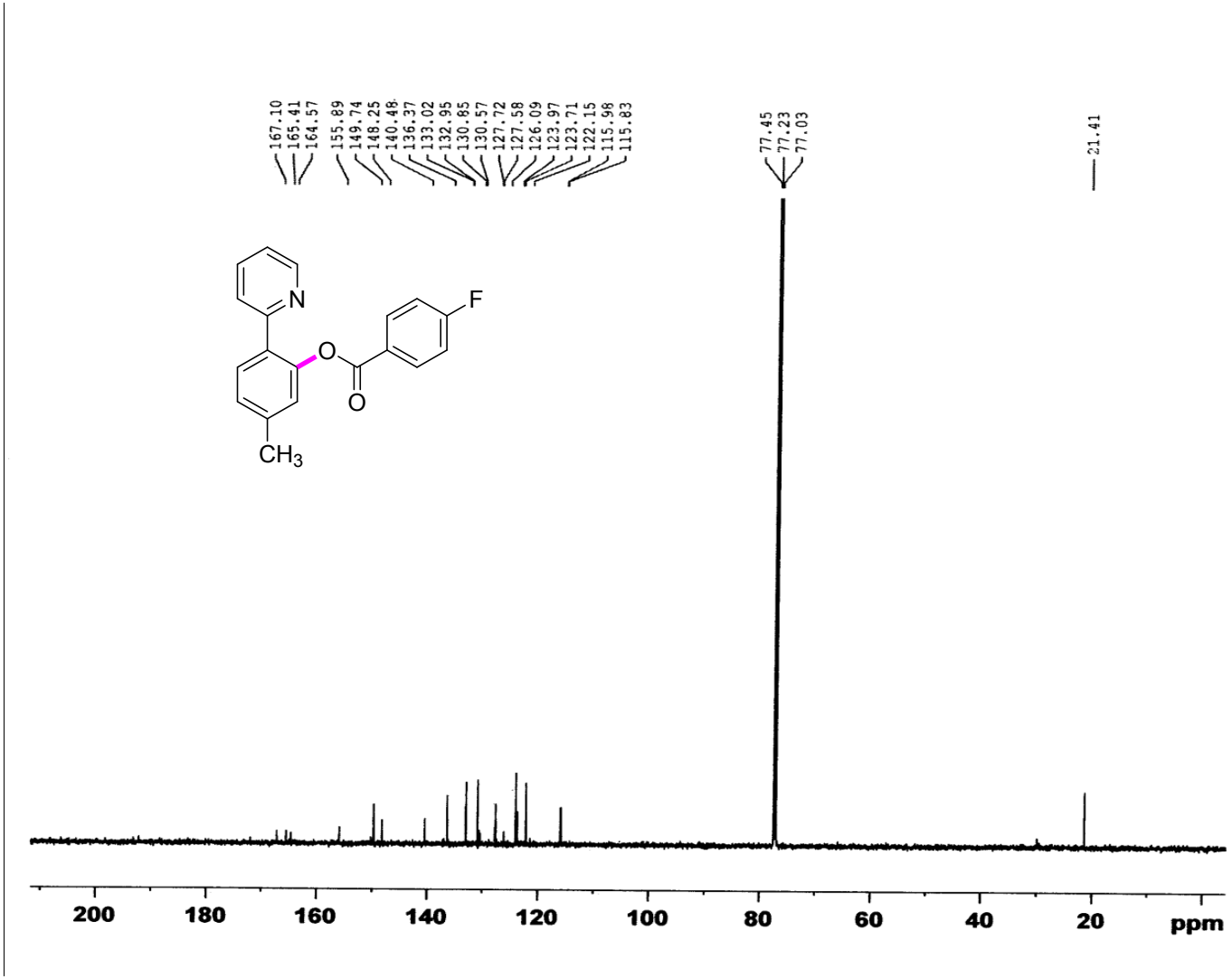

```
Current Data Parameters
NAME                  SR-01-TF-1H
EXPNO                           1
PROCNO                          1

F2 - Acquisition Parameters
Date_                    20140324
Time                        12.48
INSTRUM                     spect
PROBHD    5 mm PABBO BB/
PULPROG                     zg30
TD                         32768
SOLVENT                    CDCl3
NS                             16
DS                              2
SWH                  12019.230 Hz
FIDRES                0.366798 Hz
AQ                    1.3631488 sec
RG                         80.22
DW                        41.600 usec
DE                         6.50 usec
TE                        299.9 K
D1                    1.00000000 sec
TD0                             1

======== CHANNEL f1 ========
SFO1                600.1737063 MHz
NUC1                        1H
P1                        12.00 usec
PLW1               21.00000000 W

F2 - Processing parameters
SI                         16384
SF                  600.1700275 MHz
WDW                           EM
SSB                0
LB                         0.30 Hz
GB                 0
PC                         1.00
```

5-Methyl-2-(pyridine-2-yl)phenyl 4-fluorobenzoate (2f): ^{13}C NMR (150 MHz, $CDCl_3$)



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Current Data Parameters
NAME SR-01-TF-13C
EXPNO 1
PROCNO 1

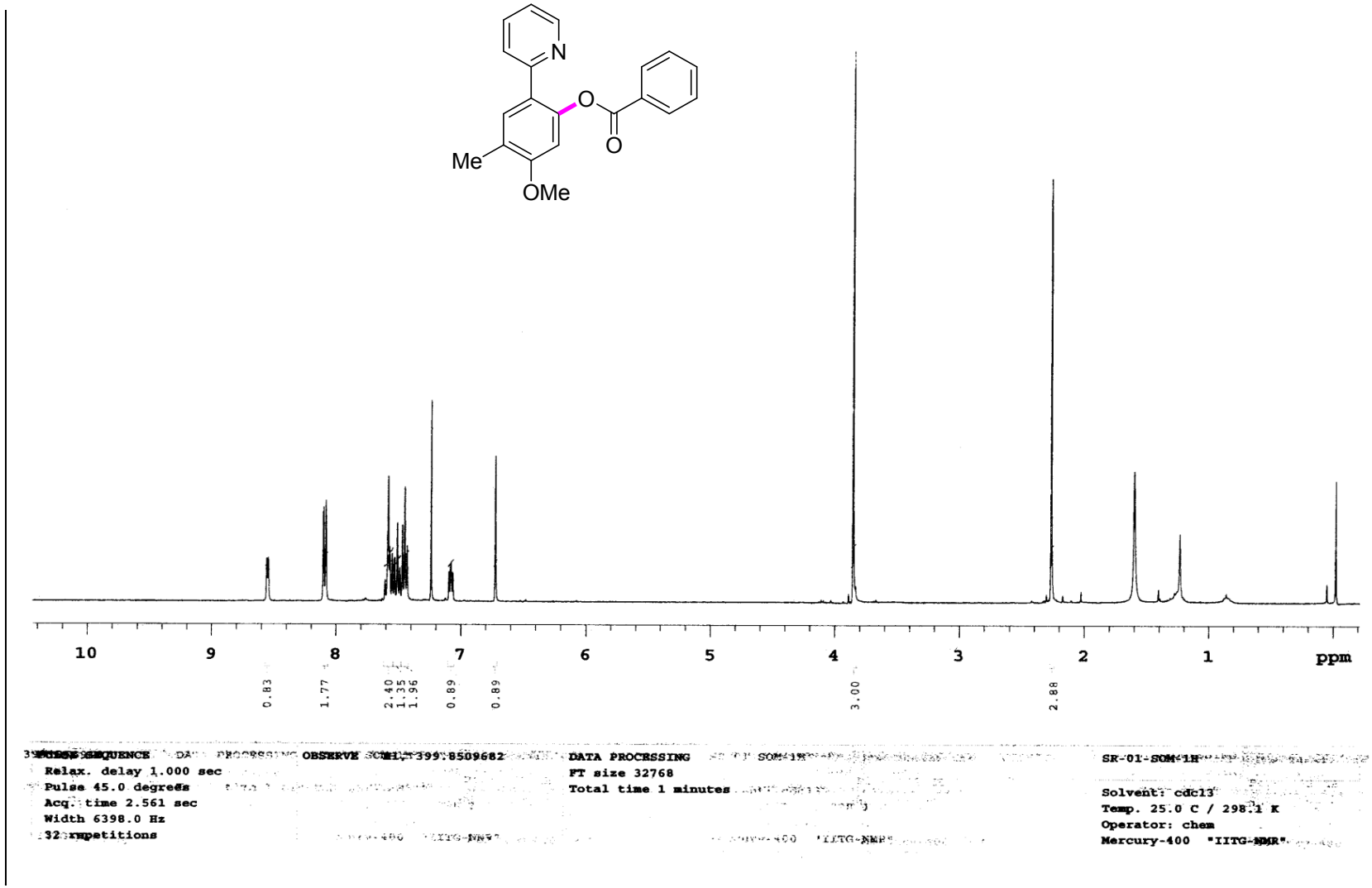
F2 - Acquisition Parameters
Date_ 20140321
Time 10.01
INSTRUM spect
PROBHD 5 mm PABBO BB/
PULPROG zgpg30
TD 32768
SOLVENT CDC13
NS 392
DS 2
SWH 36057.691 Hz
FIDRES 1.100393 Hz
AQ 0.4543829 sec
RG 65.24
DW 13.867 usec
DE 6.50 usec
TE 301.6 K
D1 2.00000000 sec
D11 0.03000000 sec
TD0 1

======== CHANNEL f1 ========
SFO1 150.9279571 MHz
NUC1 13C
P1 10.50 usec
PLW1 95.00000000 W

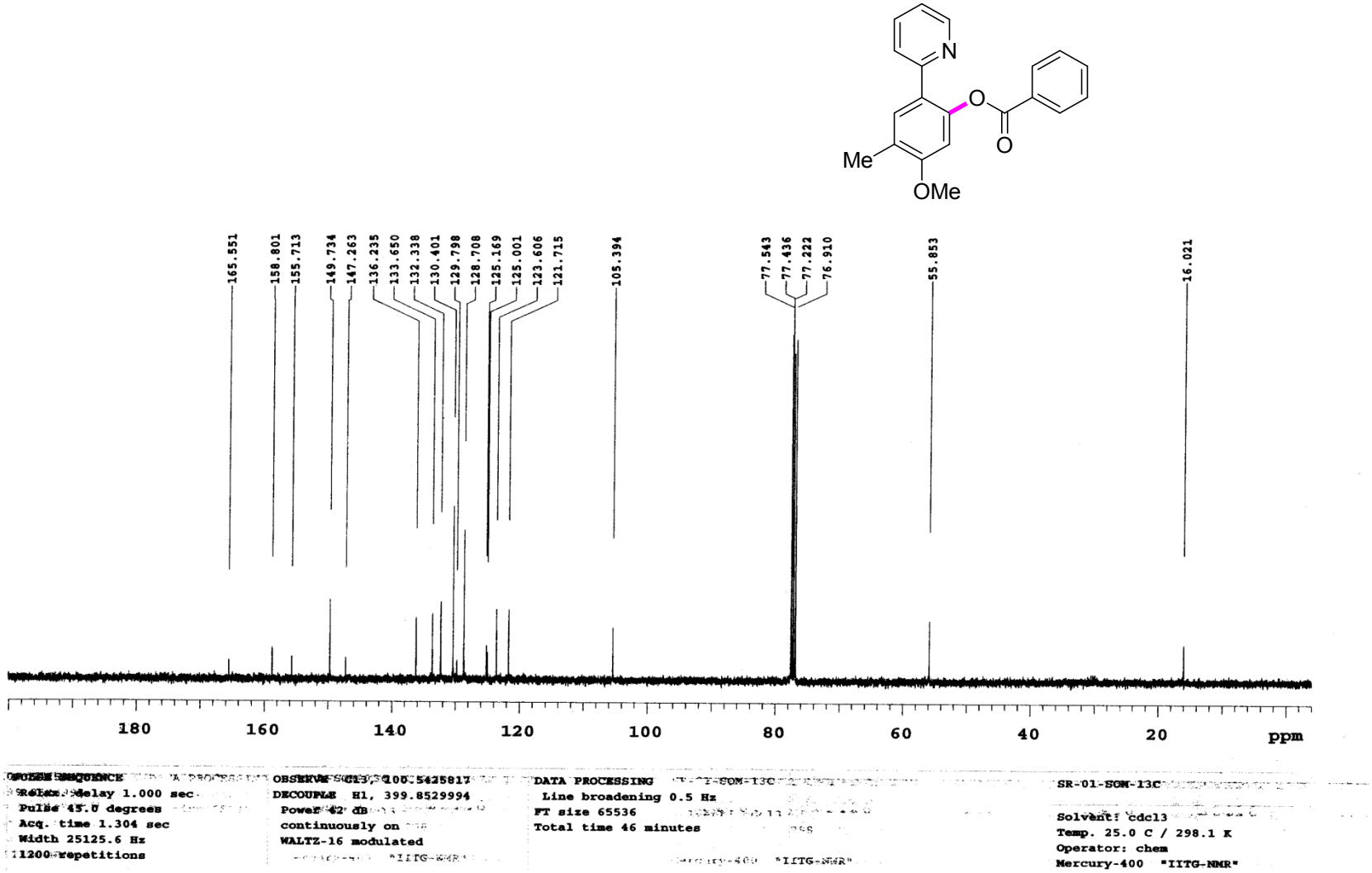
======== CHANNEL f2 ========
SFO2 600.1724007 MHz
NUC2 1H
CPDPRG[2 waltz16
PCPD2 70.00 usec
PLW2 21.00000000 W
PLW12 0.61714000 W
PLW13 0.30239999 W

F2 - Processing parameters
SI 16384
SF 150.9128326 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

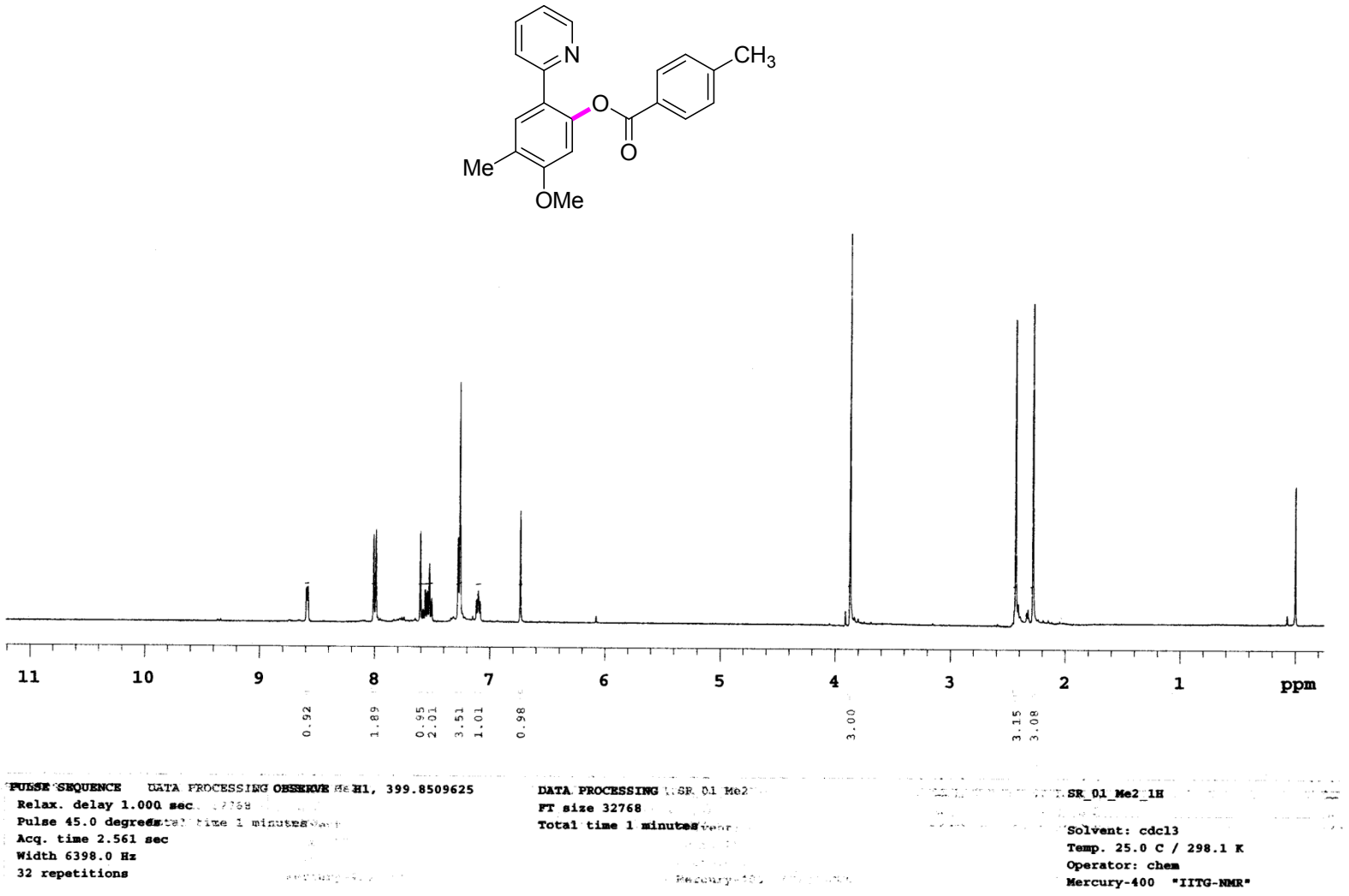
5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl benzoate (3a):^{1}HNMR (400 MHz, $CDCl_3$)



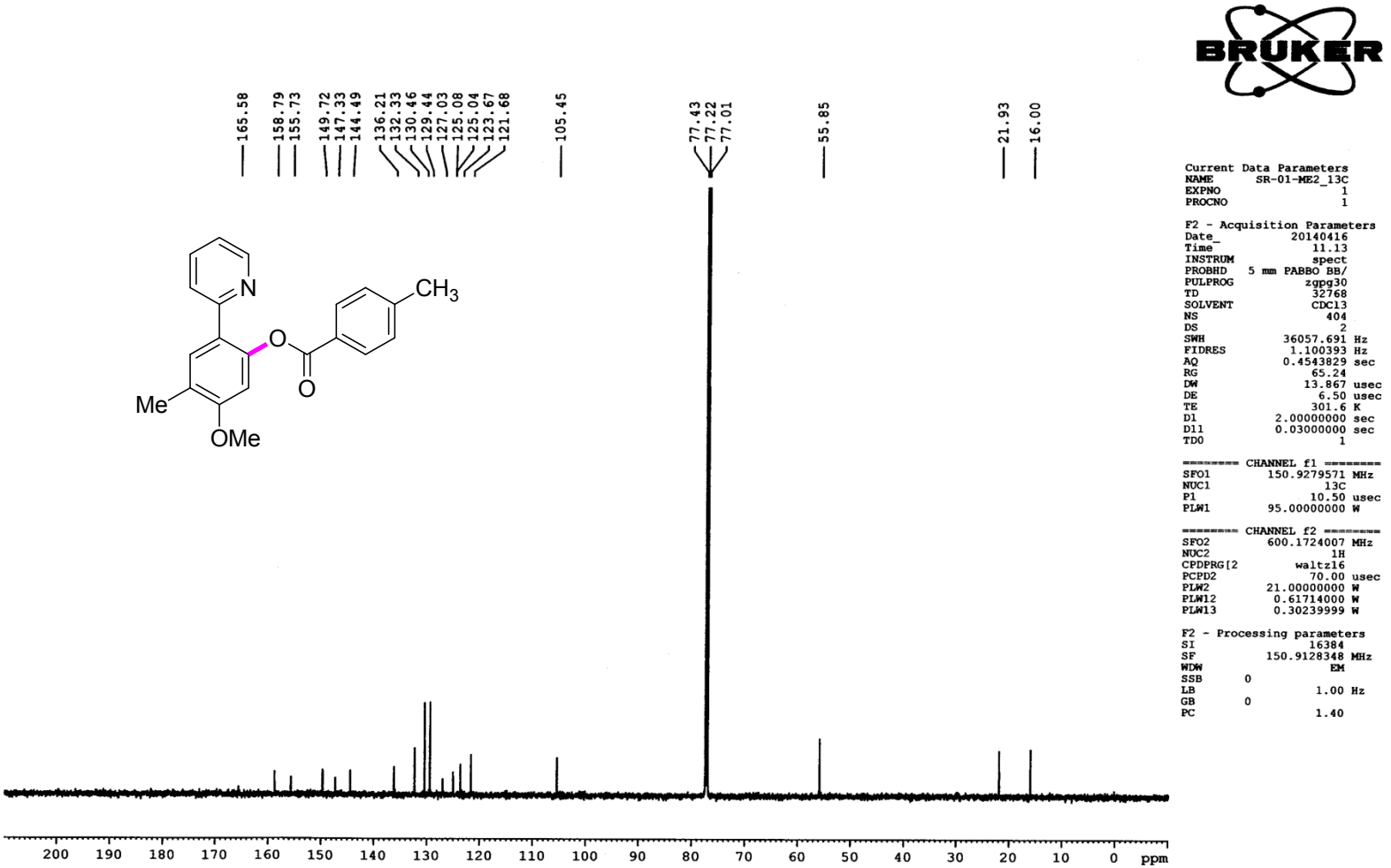
5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl benzoate (3a):^{13}C NMR (100 MHz, $CDCl_3$)



5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl 4-methylbenzoate (3c):^{1}H NMR (400 MHz, $CDCl_3$)



5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl 4-methylbenzoate (3c):^{13}C NMR (150 MHz, $CDCl_3$)




```
Current Data Parameters
NAME          SR-01-ME2_13C
EXPNO                     1
PROCNO                    1

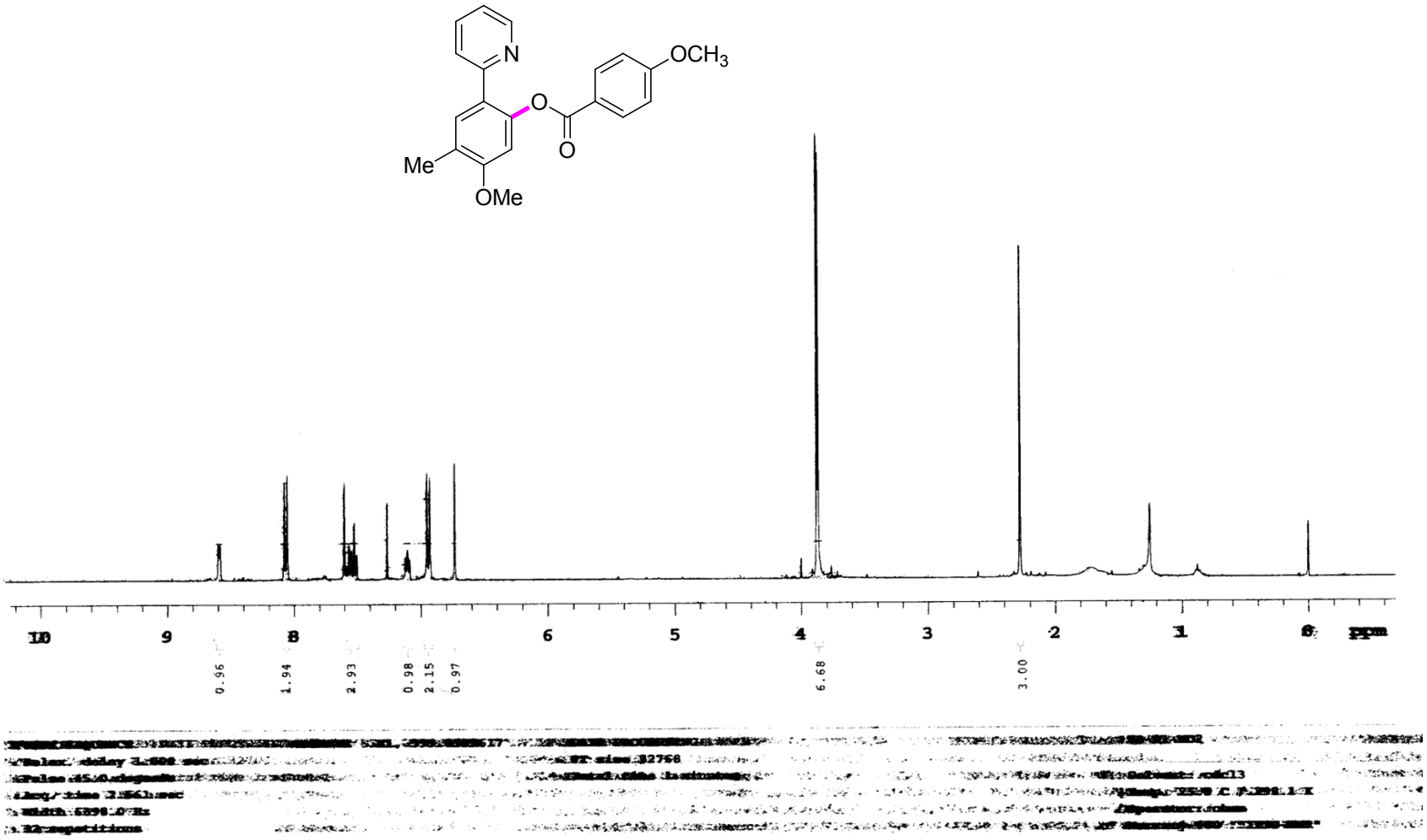
F2 - Acquisition Parameters
Date_              20140416
Time                  11.13
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG             zgpg30
TD                   32768
SOLVENT              CDCl3
NS                     404
DS                       2
SWH               36057.691 Hz
FIDRES             1.100393 Hz
AQ                0.4543829 sec
RG                    65.24
DW                13.867 usec
DE                 6.50 usec
TE                   301.6 K
D1             2.00000000 sec
D11            0.03000000 sec
TD0                      1

======== CHANNEL f1 ========
SFO1          150.9279571 MHz
NUC1                    13C
P1                 10.50 usec
PLW1          95.00000000 W

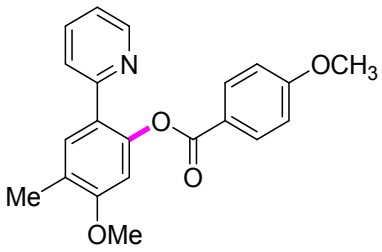
======== CHANNEL f2 ========
SFO2          600.1724007 MHz
NUC2                    1H
CPDPRG[2             waltz16
PCPD2              70.00 usec
PLW2          21.00000000 W
PLW12          0.61714000 W
PLW13          0.30239999 W

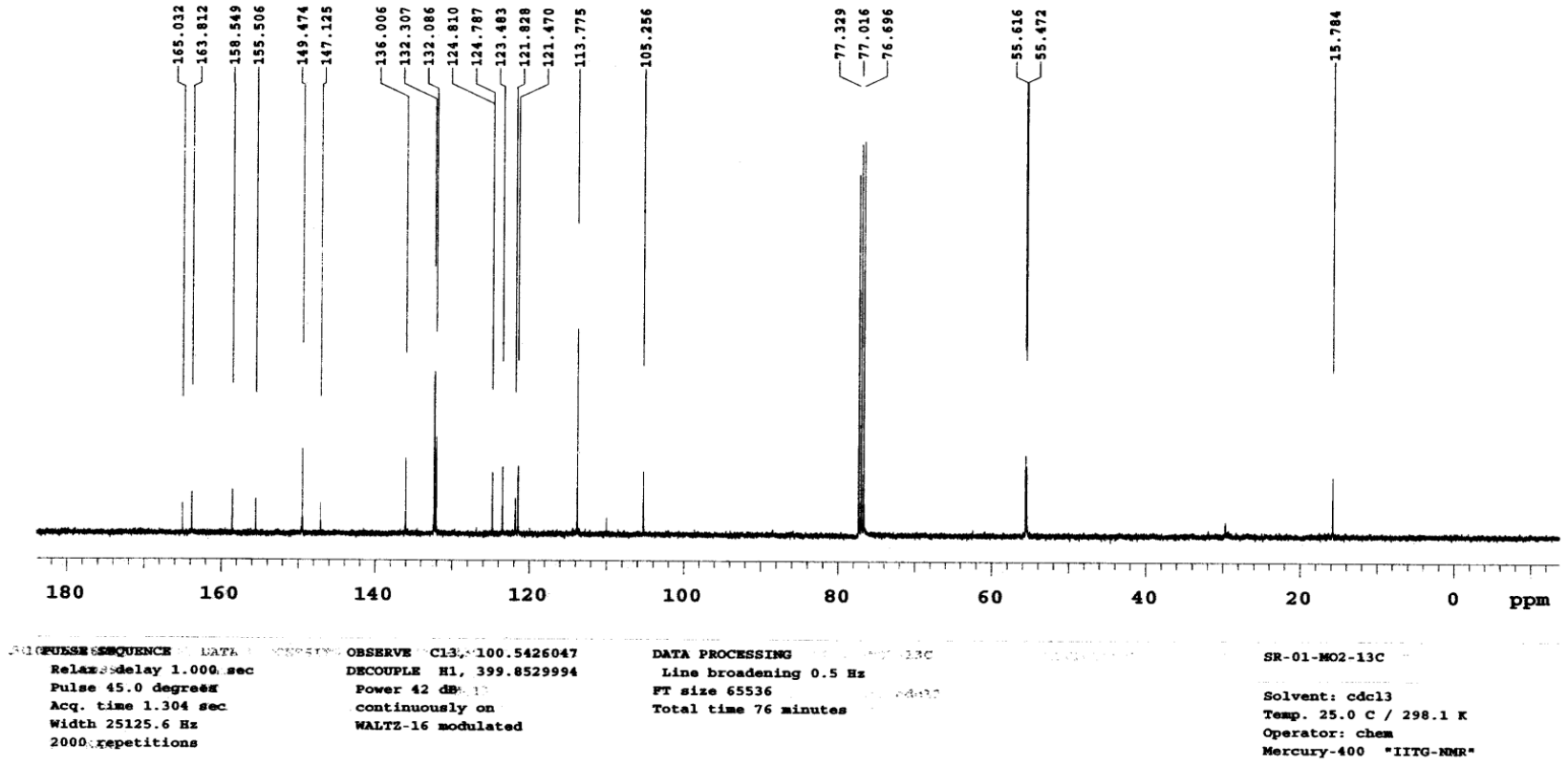
F2 - Processing parameters
SI                     16384
SF            150.9128348 MHz
WDW                       EM
SSB       0
LB                  1.00 Hz
GB        0
PC                  1.40
```

5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (3d):^{1}H NMR (400 MHz, $CDCl_3$)

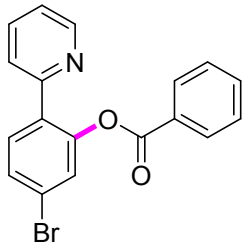


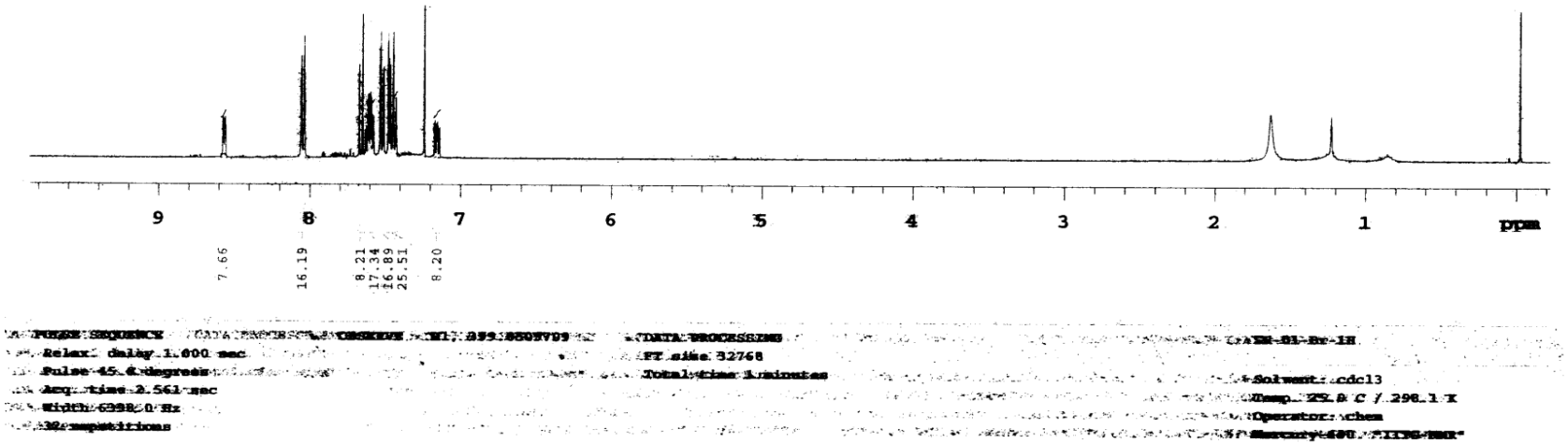
5-Methoxy-4-methyl-2-(pyridin-2-yl)phenyl-4-methoxybenzoate (3d):^{13}C NMR (100 MHz, $CDCl_3$)



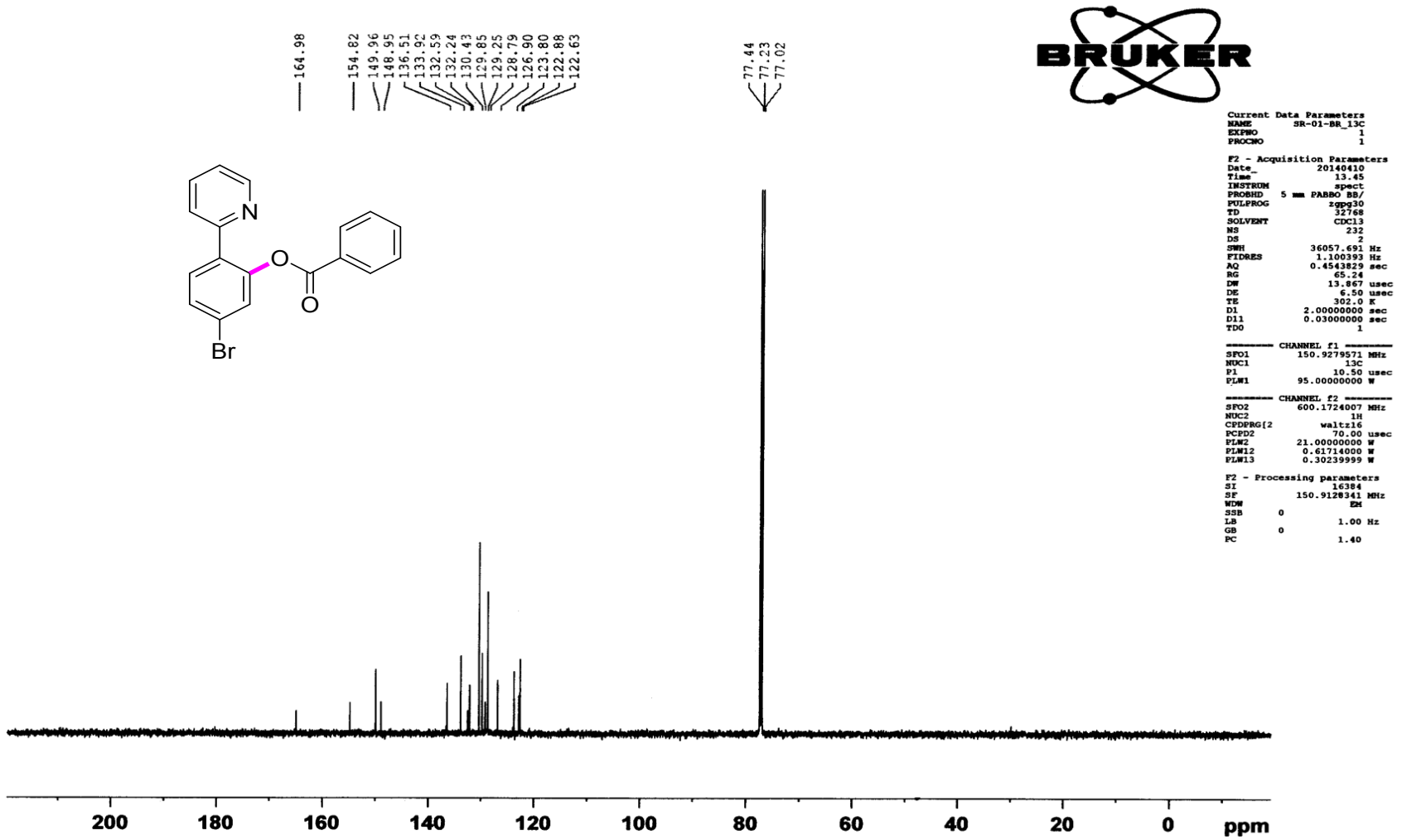


5-Bromo-2-(pyridin-2-yl)phenyl benzoate (4a):^{1}H NMR (400 MHz, $CDCl_3$)





5-Bromo-2-(pyridin-2-yl)phenyl benzoate (4a):^{13}C NMR (150 MHz, $CDCl_3$)



BRUKER

```
Current Data Parameters
NAME          SR-01-BR_13C
EXPNO                    1
PROCNO                   1

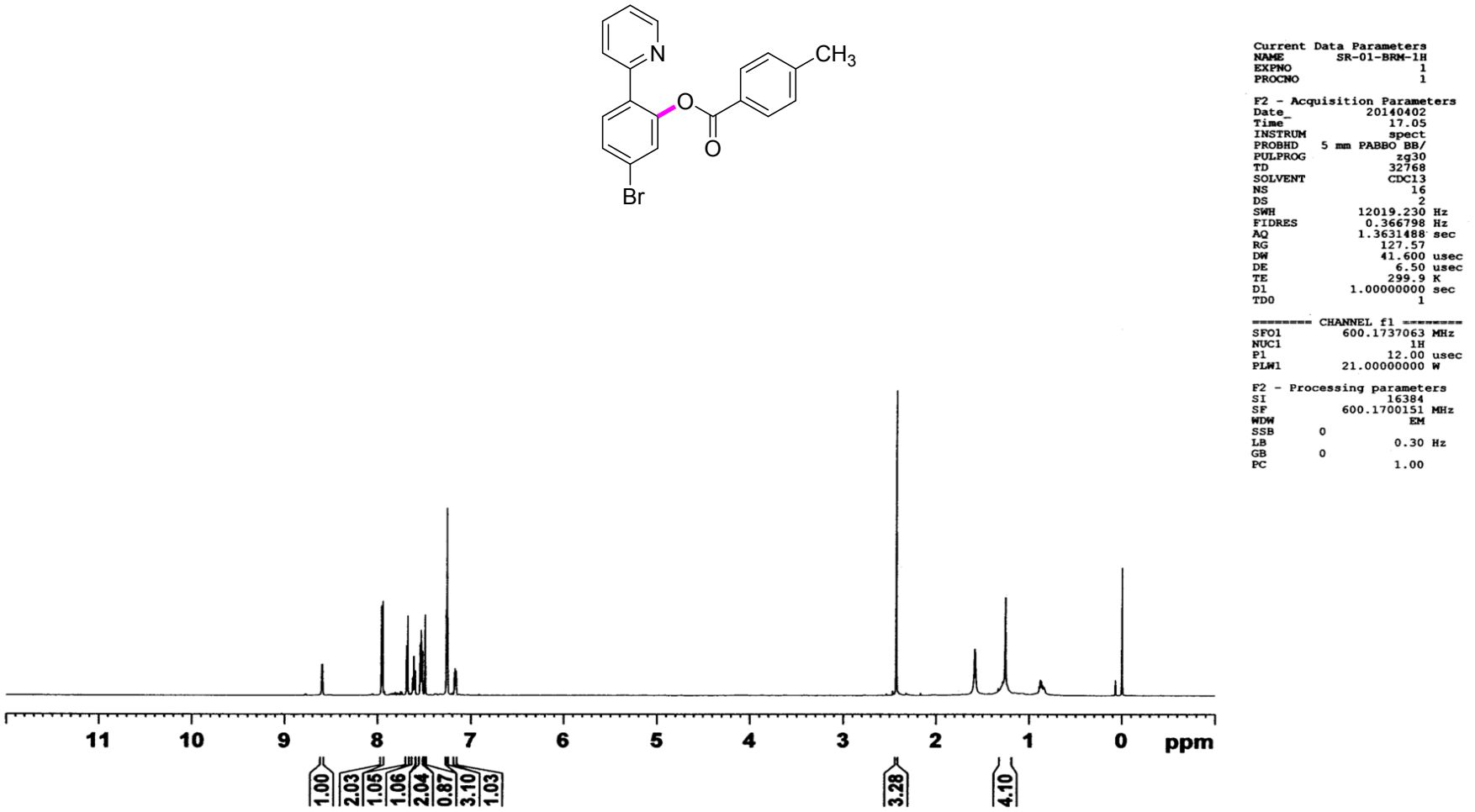
F2 - Acquisition Parameters
Date_              20140410
Time_                 13.45
INSTRUM               spect
PROBHD   5 mm PABBO BB/
PULPROG              zgpg30
TD                    32768
SOLVENT               CDCl3
NS                      232
DS                        2
SWH               36057.691 Hz
FIDRES             1.100393 Hz
AQ                0.4543829 sec
RG                    65.24
DW                   13.867 usec
DE                    6.50 usec
TE                   302.0 K
D1                2.00000000 sec
D11               0.03000000 sec
TD0                       1

======== CHANNEL f1 ========
SFO1           150.9279571 MHz
NUC1                    13C
P1                    10.50 usec
PLW1          95.00000000 W

======== CHANNEL f2 ========
SFO2           600.1724007 MHz
NUC2                    1H
CPDPRG[2             waltz16
PCPD2                 70.00 usec
PLW2          21.00000000 W
PLW12          0.61714000 W
PLW13          0.30239999 W

F2 - Processing parameters
SI                      16384
SF             150.9128341 MHz
WDW                        EM
SSB                     0
LB                     1.00 Hz
GB                      0
PC                     1.40
```

5-Bromo-2-(pyridin-2-yl)phenyl 4-methylbenzoate (4c):^{1}H NMR (600 MHz, $CDCl_3$)



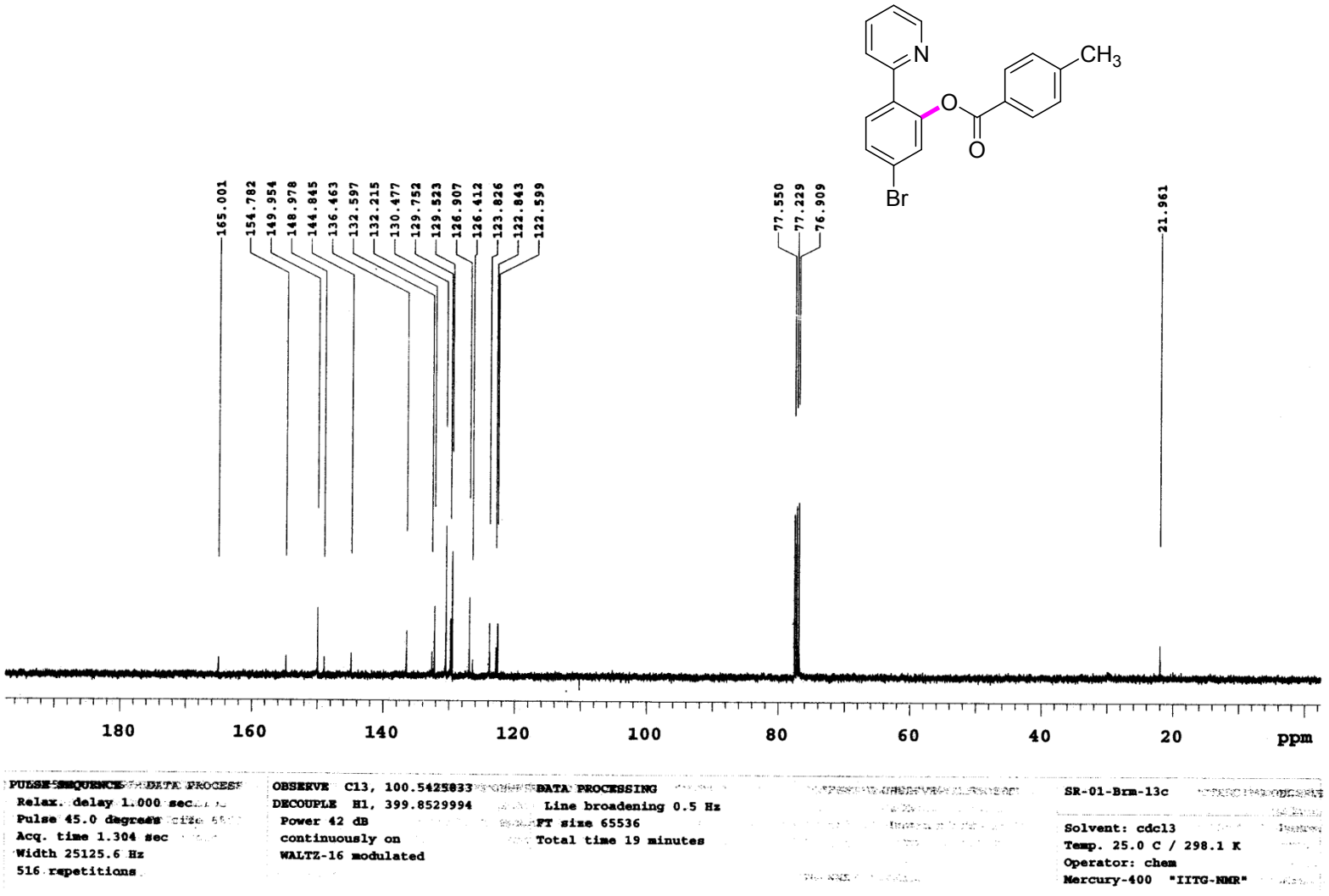

```
Current Data Parameters
NAME        SR-01-BRM-1H
EXPNO                  1
PROCNO                 1

F2 - Acquisition Parameters
Date_           20140402
Time              17.05
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG            zg30
TD                32768
SOLVENT           CDCl3
NS                   16
DS                    2
SWH           12019.230 Hz
FIDRES         0.366798 Hz
AQ             1.3631488 sec
RG                127.57
DW                41.600 usec
DE                 6.50 usec
TE                299.9 K
D1           1.00000000 sec
TD0                   1

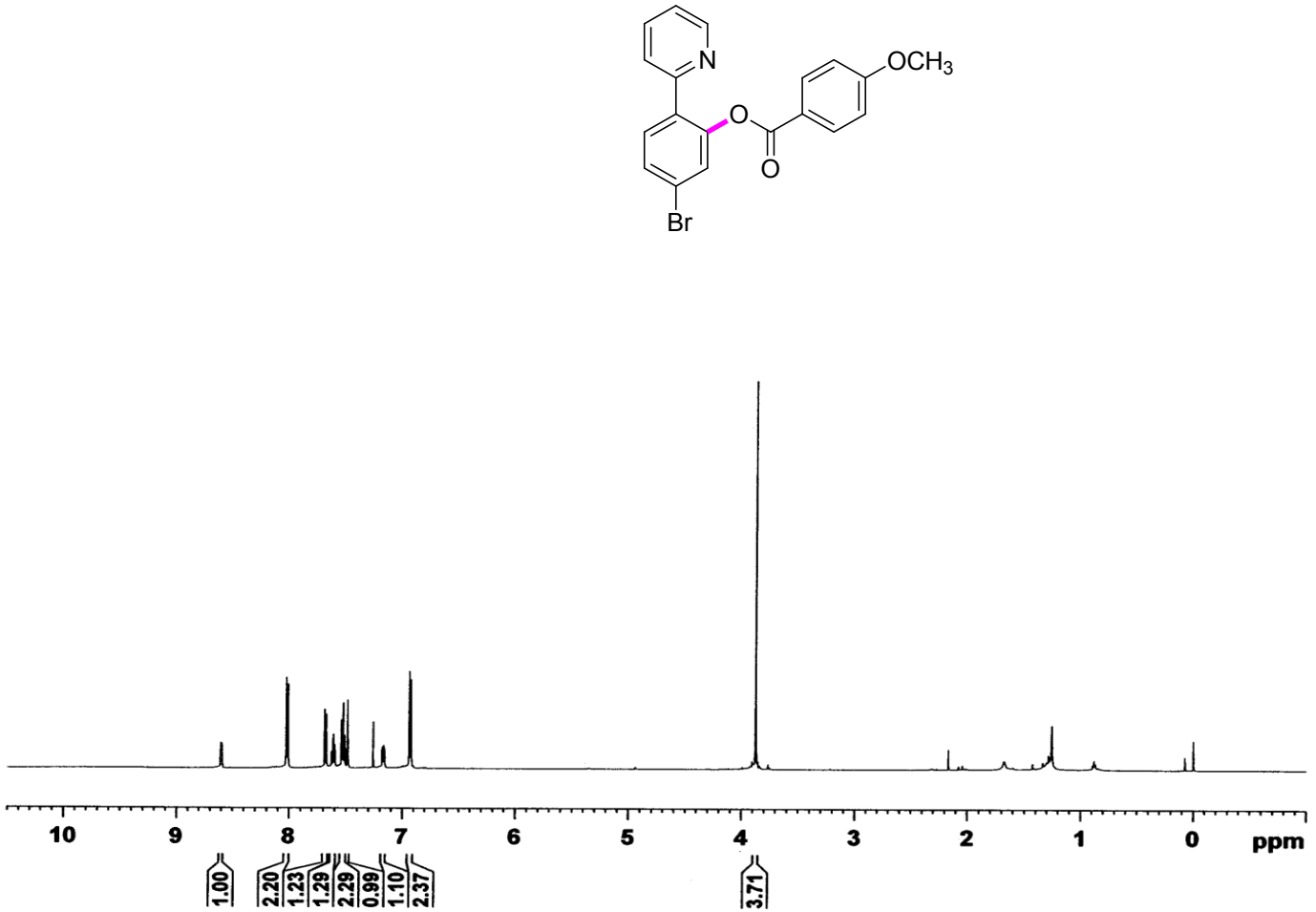
======== CHANNEL f1 ========
SFO1         600.1737063 MHz
NUC1                 1H
P1                12.00 usec
PLW1         21.00000000 W

F2 - Processing parameters
SI                16384
SF           600.1700151 MHz
WDW                  EM
SSB       0
LB                0.30 Hz
GB        0
PC                1.00
```

5-Bromo-2-(pyridin-2-yl)phenyl 4-methylbenzoate (4c):^{13}C NMR (100 MHz, $CDCl_3$)



5-Bromo-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (4d):^{1}H NMR (600 MHz, $CDCl_3$)



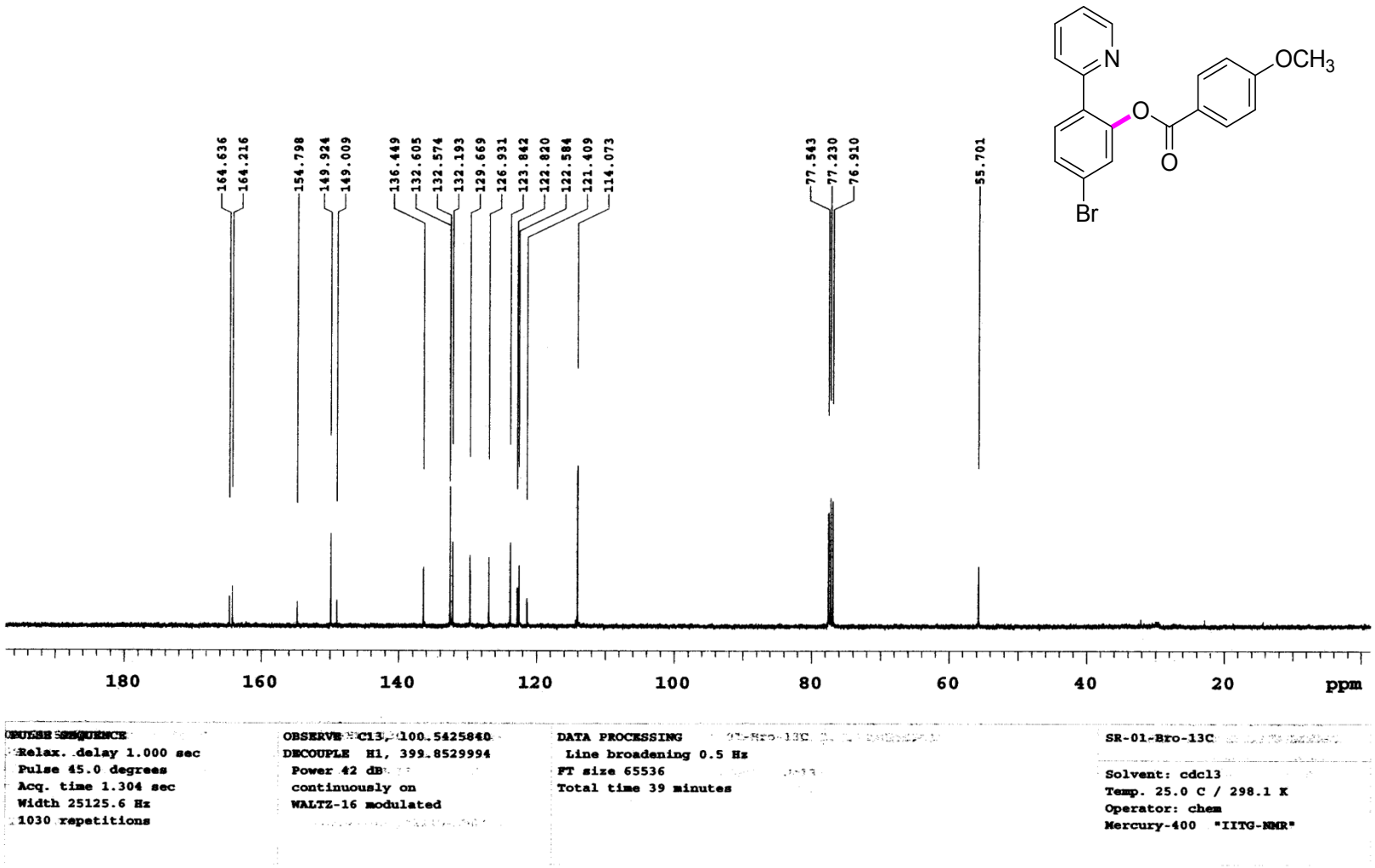

```
Current Data Parameters
NAME          SR-01-BrO-1H
EXPNO                    1
PROCNO                   1

F2 - Acquisition Parameters
Date_              20140327
Time                 12.50
INSTRUM              spect
PROBHD   5 mm PABBO BB/
PULPROG              zg30
TD                  32768
SOLVENT             CDCl3
NS                     16
DS                      2
SWH              12019.230 Hz
FIDRES           0.366798 Hz
AQ               1.3631488 sec
RG                   80.22
DW                  41.600 usec
DE                   6.50 usec
TE                  299.3 K
D1               1.00000000 sec
TD0                      1

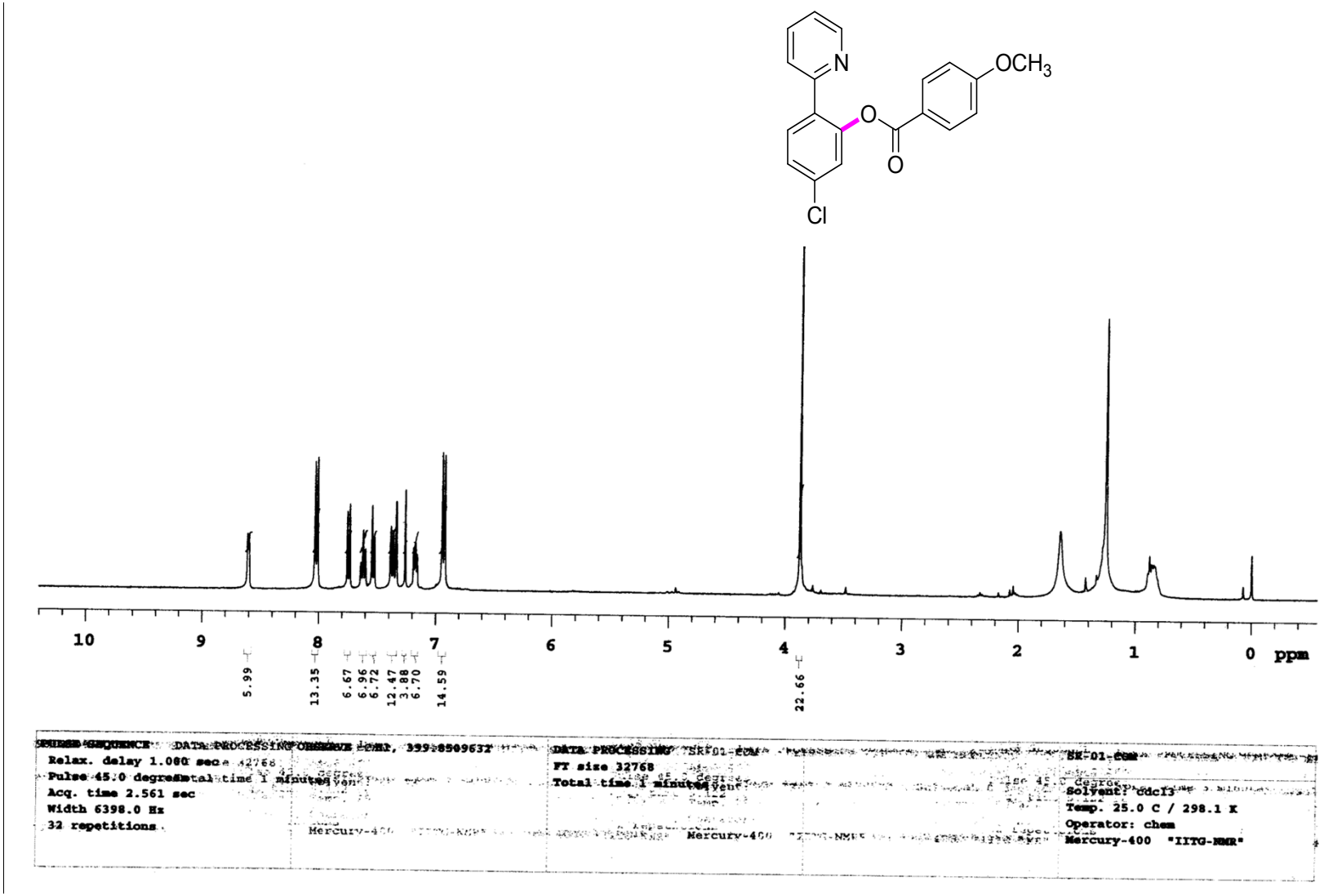
======== CHANNEL f1 ========
SFO1          600.1737063 MHz
NUC1                    1H
P1                   12.00 usec
PLW1         21.00000000 W

F2 - Processing parameters
SI                   16384
SF            600.1700145 MHz
WDW                     EM
SSB          0
LB                    0.30 Hz
GB           0
PC                    1.00
```

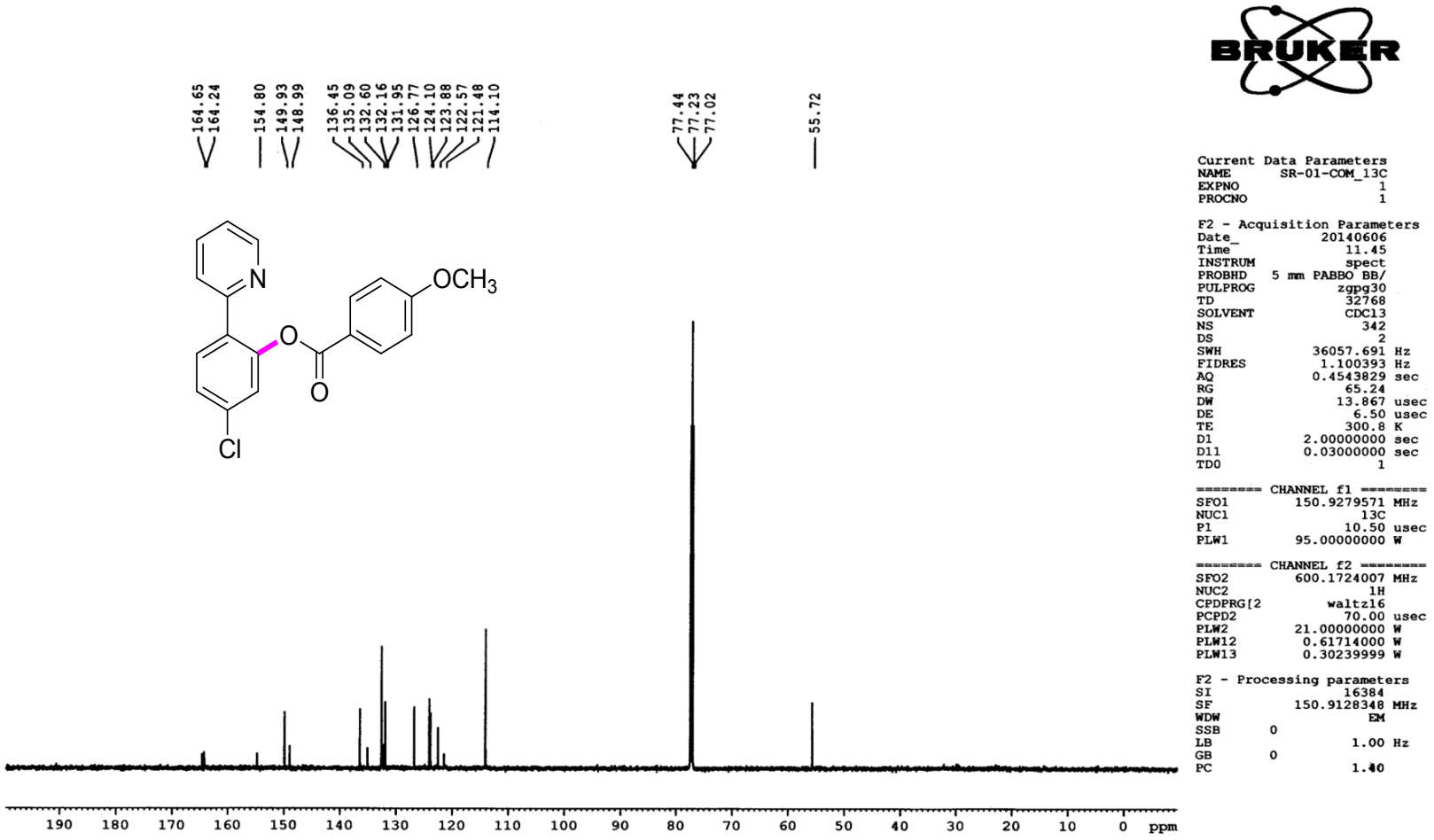
5-Bromo-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (4d):^{13}C NMR (100 MHz, $CDCl_3$)



5-Chloro-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (5d):^{1}H NMR (400 MHz, $CDCl_3$)



5-Chloro-2-(pyridin-2-yl)phenyl 4-methoxybenzoate (5d):^{13}C NMR (150 MHz, $CDCl_3$)



BRUKER

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Current Data Parameters
NAME        SR-01-COM_13C
EXPNO                   1
PROCNO                  1

F2 - Acquisition Parameters
Date_            20140606
Time                11.45
INSTRUM             spect
PROBHD   5 mm PABBO BB/
PULPROG          zgpg30
TD                32768
SOLVENT           CDCl3
NS                  342
DS                    2
SWH           36057.691 Hz
FIDRES         1.100393 Hz
AQ            0.4543829 sec
RG                65.24
DW               13.867 usec
DE                6.50 usec
TE               300.8 K
D1           2.00000000 sec
D11          0.03000000 sec
TD0                   1

======== CHANNEL f1 ========
SFO1        150.9279571 MHz
NUC1               13C
P1               10.50 usec
PLW1        95.00000000 W

======== CHANNEL f2 ========
SFO2        600.1724007 MHz
NUC2               1H
CPDPRG[2         waltz16
PCPD2            70.00 usec
PLW2        21.00000000 W
PLW12        0.61714000 W
PLW13        0.30239999 W

F2 - Processing parameters
SI                 16384
SF          150.9128348 MHz
WDW                EM
SSB       0
LB               1.00 Hz
GB        0
PC               1.40
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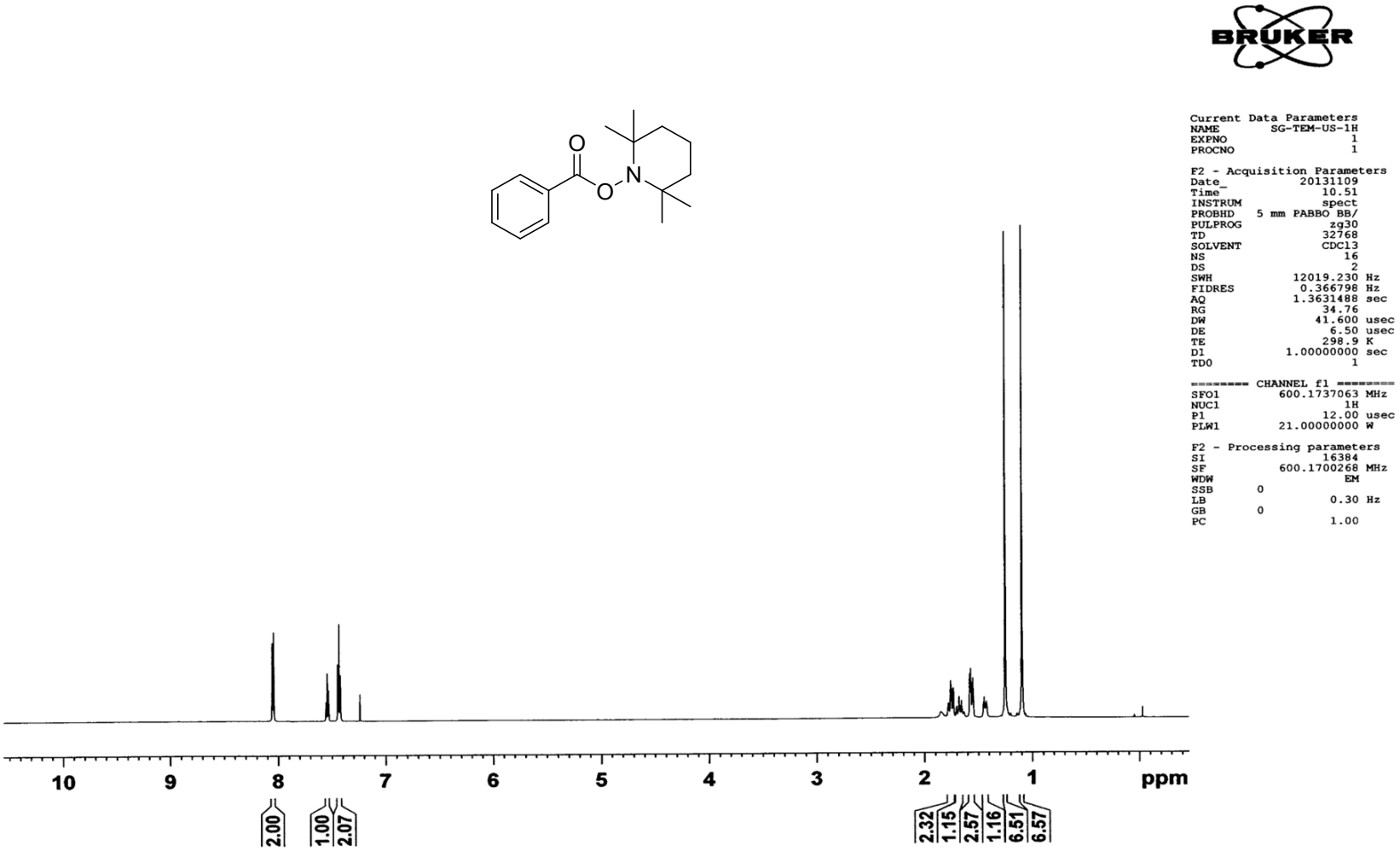
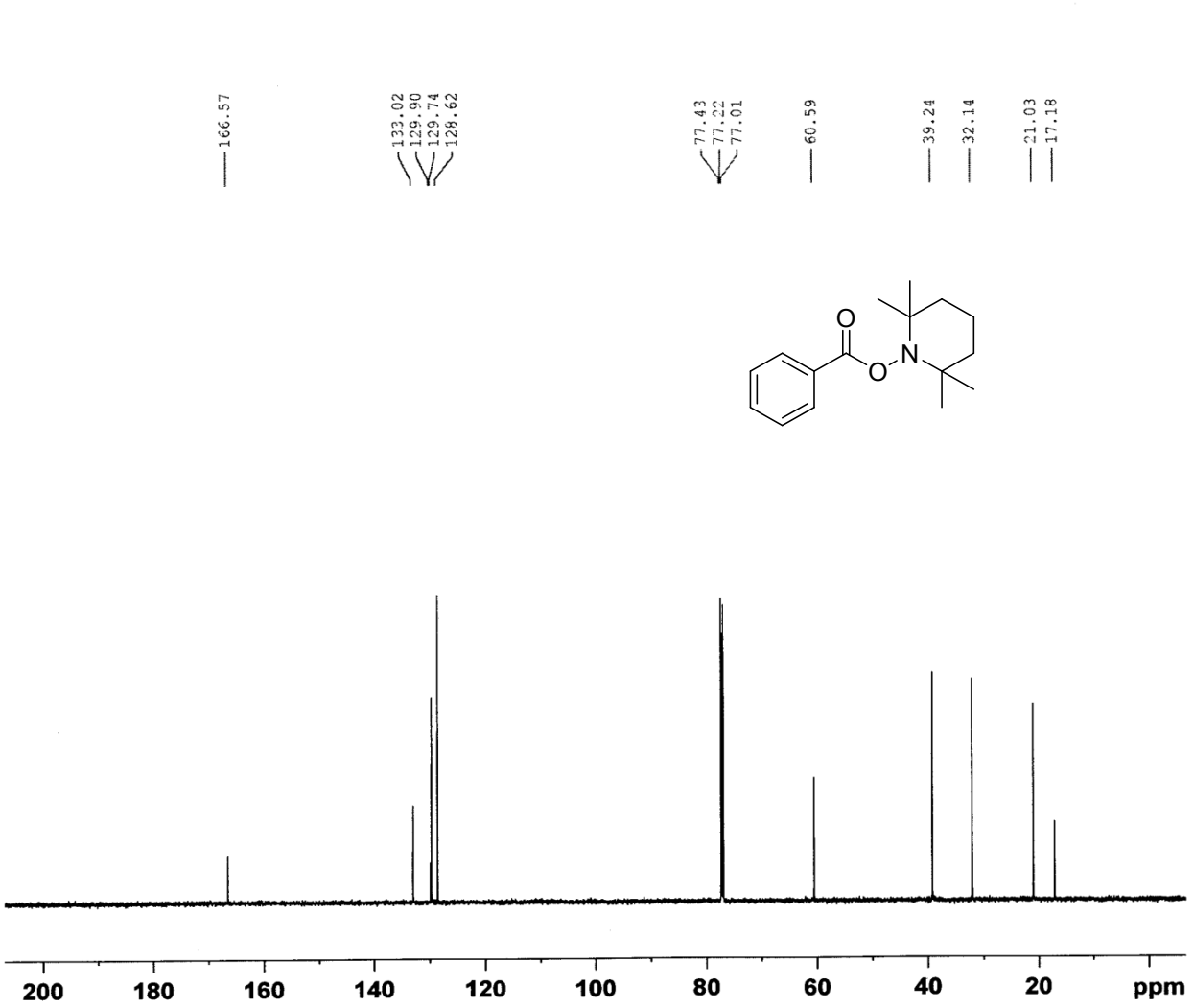
2,2,6,6-Tetramethylpiperidin-1-yl benzoate (F): ^{1}H NMR (600 MHz, $CDCl_3$)



2,2,6,6-Tetramethylpiperidin-1-yl benzoate (F): ^{13}C NMR (150 MHz, $CDCl_3$)

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Current Data Parameters
NAME       SG-TEM-US-13C
EXPNO                 1
PROCNO                1

F2 - Acquisition Parameters
Date_          20131109
Time              10.59
INSTRUM           spect
PROBHD   5 mm PABBO BB/
PULPROG         zgpg30
TD              32768
SOLVENT          CDCl3
NS                  65
DS                   2
SWH          36057.691 Hz
FIDRES        1.100393 Hz
AQ           0.4543829 sec
RG               65.24
DW              13.867 usec
DE                6.50 usec
TE               299.3 K
D1          2.00000000 sec
D11         0.03000000 sec
TD0                  1

======== CHANNEL f1 ========
SFO1       150.9279571 MHz
NUC1               13C
P1               10.50 usec
PLW1       95.00000000 W

======== CHANNEL f2 ========
SFO2       600.1724007 MHz
NUC2               1H
CPDPRG[2        waltz16
PCPD2            70.00 usec
PLW2       21.00000000 W
PLW12       0.61714000 W
PLW13       0.30239999 W

F2 - Processing parameters
SI                16384
SF         150.9128415 MHz
WDW                EM
SSB       0
LB               1.00 Hz
GB        0
PC               1.40
```