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Electronic Supplementary Information

Design of recyclable TEMPO derivatives bearing ionic liquid moiety and NN-bidentate group for highly efficient Cu(I)-catalyzed conversion of alcohols into aldehydes and imines

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Fig. S1 The positive-ion ESI mass spectrum of **1a**, the observed isotopic patterns for $[M]^+$.

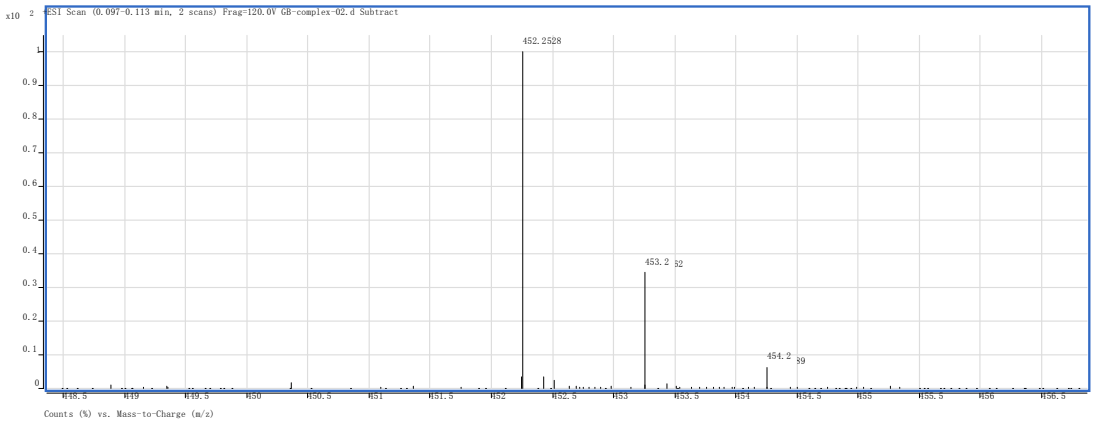


Fig. S2 The positive-ion ESI mass spectrum of **1b**, the observed isotopic patterns for $[M]^+$.

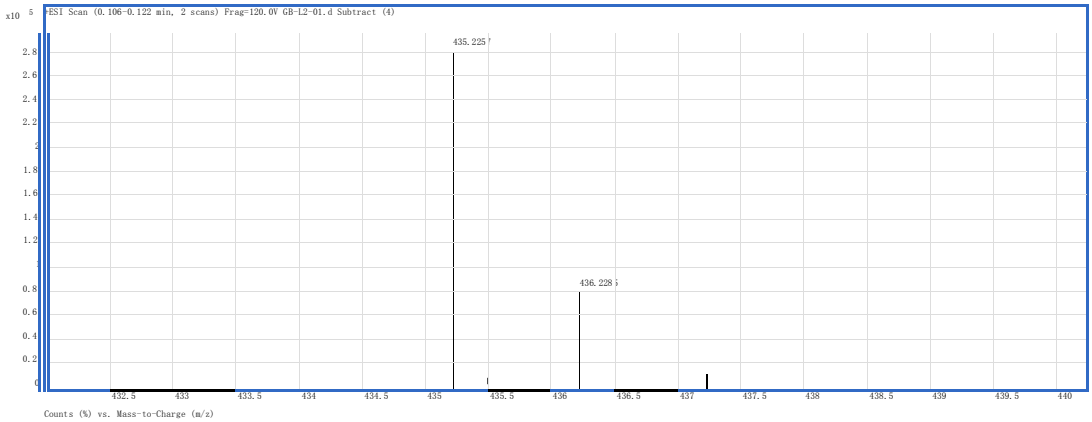


Fig. S3 The positive-ion ESI mass spectrum of **1c**, the observed isotopic patterns for $[M]^+$.

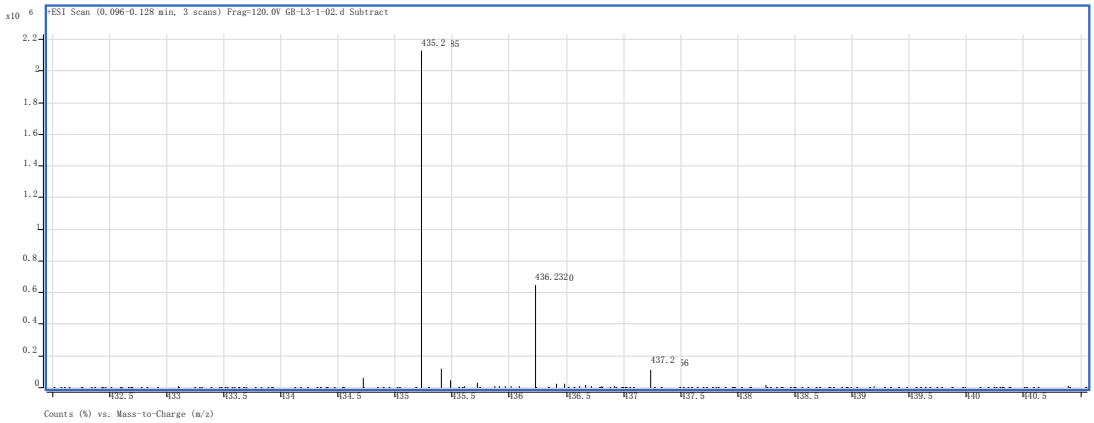
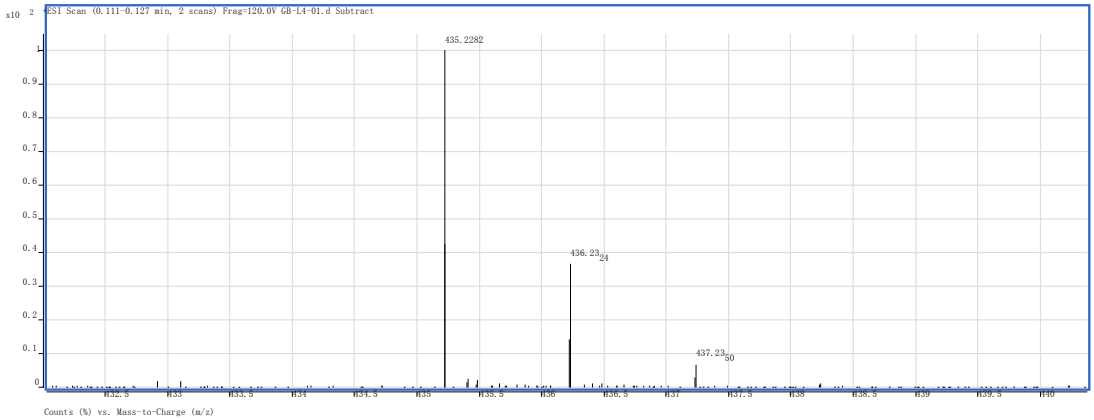
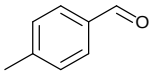


Fig. S4 The positive-ion ESI mass spectrum of **1d**, the observed isotopic patterns for $[M]^+$.



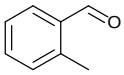
^{1}H and ^{13}CNMR data of the aldehydes and imines

4-methylbenzaldehyde



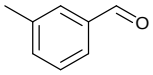
^{1}H NMR (400 MHz, DMSO-d$_6$) δ 9.95 (s, 1H), 7.80 (d, *J* = 7.9 Hz, 2H), 7.40 (d, *J* = 7.8 Hz, 2H), 2.39 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 192.6, 145.2, 134.0, 129.7, 129.6, 21.4.

2-methylbenzaldehyde



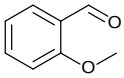
^{1}H NMR (400 MHz, DMSO-d$_6$) δ 10.23 (s, 1H), 7.82 (d, *J* = 7.5 Hz, 1H), 7.55 (t, *J* = 7.3 Hz, 1H), 7.41 (t, *J* = 7.4 Hz, 1H), 7.34 (d, *J* = 7.5 Hz, 1H), 2.61 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 193.3, 140.1, 133.9, 133.8, 131.7, 131.3, 126.4, 19.0.

3-methylbenzaldehyde



^{1}H NMR (400 MHz, DMSO-d$_6$) δ 9.98 (s, 1H), 7.71 (s, 2H), 7.51 (dt, *J* = 15.3, 7.5 Hz, 2H), 2.39 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 193.3, 138.7, 136.3, 135.2, 129.7, 129.1, 126.9, 20.7.

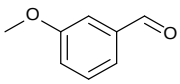
2-methoxybenzaldehyde



^{1}H NMR (400 MHz, DMSO-d$_6$) δ 9.46 (s, 1H), 6.80 (d, *J* = 7.7 Hz, 1H), 6.76 (t, *J* = 8.0 Hz, 1H), 6.31 (d, *J* = 8.4 Hz, 1H), 6.17 (t, *J* = 7.4 Hz, 1H), 3.01 (s, 3H).

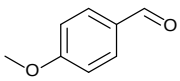
^{13}C NMR (151 MHz, DMSO-d$_6$) δ 189.0, 161.5, 136.4, 127.7, 124.1, 120.5, 112.6, 55.8.

3-methoxybenzaldehyde



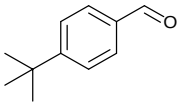
^{1}H NMR (400 MHz, DMSO-d$_6$) δ 9.98 (s, 1H), 7.51 (d, *J* = 6.2 Hz, 2H), 7.41 (s, 1H), 7.30 – 7.25 (m, 1H), 3.82 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 193.0, 159.8, 137.6, 130.3, 122.5, 121.0, 112.9, 55.4.

4-methoxybenzaldehyde



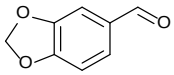
^{1}H NMR (400 MHz, DMSO-d$_6$) δ 9.87 (s, 1H), 7.87 (d, *J* = 8.6 Hz, 2H), 7.12 (d, *J* = 8.6 Hz, 2H), 3.86 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 191.3, 164.2, 131.8, 129.7, 114.5, 55.7.

4-(tert-butyl)benzaldehyde



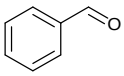
^{1}H NMR (400 MHz, DMSO-d_6) δ 9.97 (s, 1H), 7.84 (d, *J* = 8.1 Hz, 2H), 7.63 (d, *J* = 7.8 Hz, 2H), 1.31 (s, 9H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 192.7, 157.8, 133.9, 129.4, 125.9, 35.0, 30.7.

piperonyl aldehyde



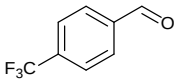
^{1}H NMR (400 MHz, DMSO-d_6) δ 9.80 (s, 1H), 7.53 (d, *J* = 7.9 Hz, 1H), 7.31 (s, 1H), 7.13 (d, *J* = 7.9 Hz, 1H), 6.17 (s, 2H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 190.9, 152.7, 148.3, 131.5, 128.5, 108.5, 106.2, 102.3.

benzaldehyde



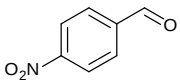
^{1}H NMR (400 MHz, DMSO-d_6) δ 10.01 (s, 1H), 7.90 (s, 2H), 7.69 (d, *J* = 4.8 Hz, 1H), 7.58 (d, *J* = 5.5 Hz, 2H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 193.0, 136.2, 134.5, 129.4, 129.1.

4-(trifluoromethyl)benzaldehyde



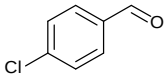
^{1}H NMR (400 MHz, DMSO-d_6) δ 10.12 (s, 1H), 8.12 (d, *J* = 7.9 Hz, 2H), 7.97 (d, *J* = 7.8 Hz, 2H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 192.6, 138.9, 133.8 - 133.2 (q, *J* = 90.6 Hz), 130.1, 126.09 (q, *J* = 3.7 Hz), 124.5, 122.7.

4-nitrobenzaldehyde



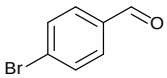
^{1}H NMR (400 MHz, DMSO-d_6) δ 10.16 (s, 1H), 8.41 (d, *J* = 6.6 Hz, 2H), 8.16 (d, *J* = 6.6 Hz, 2H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 192.3, 150.6, 140.0, 130.6, 124.2.

4-chlorobenzaldehyde



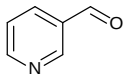
^{1}H NMR (400 MHz, DMSO-d_6) δ 10.00 (s, 1H), 7.93 (d, *J* = 7.4 Hz, 2H), 7.68 (d, *J* = 7.5 Hz, 2H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 192.0, 139.3, 134.8, 131.1, 129.3.

4-bromobenzaldehyde



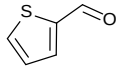
^{1}H NMR (400 MHz, DMSO-d_6) δ 9.99 (s, 1H), 7.87 – 7.81 (m, 4H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 192.3, 135.1, 132.3, 131.2, 128.6.

3-pyridinecarboxaldehyde



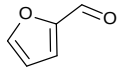
H NMR (400 MHz, DMSO-d_6) δ 10.11 (s, 1H), 9.08 (s, 1H), 8.85 (d, *J* = 3.6 Hz, 1H), 8.24 (d, *J* = 7.7 Hz, 1H), 7.63 (dd, *J* = 7.3, 5.1 Hz, 1H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 192.5, 154.6, 151.4, 136.0, 131.3, 124.4.

2-thiophenecarbaldehyde



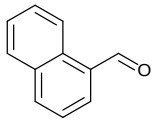
^{1}H NMR (400 MHz, DMSO-d_6) δ 9.95 (s, 1H), 8.13 (d, *J* = 4.6 Hz, 1H), 8.03 (d, *J* = 3.0 Hz, 1H), 7.33 (t, *J* = 4.1 Hz, 1H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 184.2, 143.5, 137.8, 136.0, 128.9.

2-furancarbaldehyde



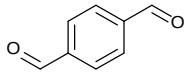
^{1}H NMR (400 MHz, DMSO-d_6) δ 9.61 (s, 1H), 8.10 (s, 1H), 7.55 (d, *J* = 3.4 Hz, 1H), 6.78 (d, *J* = 1.9 Hz, 1H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 178.4, 152.5, 149.2, 123.0, 112.9.

1-naphthaldehyde



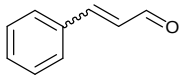
^{1}H NMR (400 MHz, DMSO-d_6) δ 10.37 (s, 1H), 9.16 (d, *J* = 8.5 Hz, 1H), 8.20 (d, *J* = 8.2 Hz, 1H), 8.11 (d, *J* = 7.0 Hz, 1H), 8.01 (d, *J* = 8.1 Hz, 1H), 7.68 (q, *J* = 7.2 Hz, 2H), 7.60 (t, *J* = 7.5 Hz, 1H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 194.1, 136.6, 135.1, 133.2, 130.8, 129.7, 128.9, 128.6, 126.8, 125.2, 124.1.

1,4-benzenedicarboxaldehyde



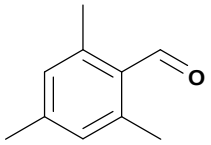
^{1}H NMR (400 MHz, DMSO-d_6) δ 10.13 (s, 2H), 8.11 (s, 4H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 193.1, 139.7, 130.0.

cinnamaldehyde



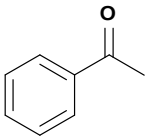
^{1}H NMR (400 MHz, DMSO-d_6) δ 9.68 (d, *J* = 7.8 Hz, 1H), 7.74 (dd, *J* = 9.6, 6.0 Hz, 3H), 7.50 – 7.45 (m, 3H), 6.88 (dd, *J* = 16.0, 7.8 Hz, 1H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 194.4, 153.1, 134.0, 131.2, 129.0, 128.7, 128.5.

2,4,6-trimethylbenzaldehyde



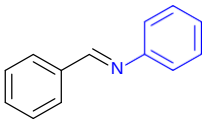
^{1}H NMR (400 MHz, $CDCl_3$) δ 10.55 (s, 1H), 6.88 (s, 2H), 2.57 (s, 6H), 2.31 (s, 3H). ^{13}C NMR (151 MHz, $CDCl_3$) δ 193.0, 143.9, 141.6, 130.6, 130.1, 21.6, 20.6.

acetophenone



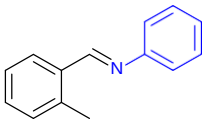
^{1}H NMR (600 MHz, $CDCl_3$) δ 7.95 (d, *J* = 8.1 Hz, 2H), 7.56 (t, *J* = 7.8 Hz, 1H), 7.46 (t, *J* = 7.7 Hz, 2H), 2.60 (s, 3H). ^{13}C NMR (151 MHz, $CDCl_3$) δ 198.3, 137.3, 133.3, 128.7, 128.5, 26.8.

N,1-diphenylmethanimine



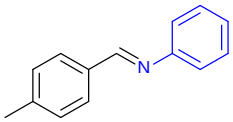
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.61 (s, 1H), 7.95 (d, *J* = 5.0 Hz, 2H), 7.53 (s, 3H), 7.42 (t, *J* = 7.5 Hz, 2H), 7.30–7.22 (m, 3H). ^{13}C NMR (151 MHz, DMSO-d_6) δ 160.7, 151.4, 136.0, 131.4, 129.1, 128.8, 128.6, 125.9, 120.9.

N-phenyl-1-(o-tolyl)methanimine



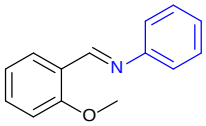
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.79 (s, 1H), 8.02 (d, *J* = 7.5 Hz, 1H), 7.44–7.38 (m, 3H), 7.34–7.23 (m, 5H), 2.58 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 159.2, 152.0, 138.8, 133.8, 131.0, 129.2, 127.5, 126.1, 125.8, 121.0, 19.0.

N-phenyl-1-(p-tolyl)methanimine



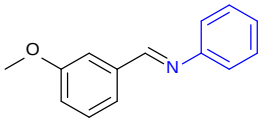
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.56 (s, 1H), 7.83 (d, *J* = 7.8 Hz, 2H), 7.41 (t, *J* = 7.7 Hz, 2H), 7.33 (d, *J* = 7.7 Hz, 2H), 7.24 (d, *J* = 7.3 Hz, 3H), 2.38 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 160.5, 151.6, 141.5, 133.5, 129.4, 129.2, 128.7, 125.8, 120.9, 21.2.

1-(2-methoxyphenyl)-N-phenylmethanimine



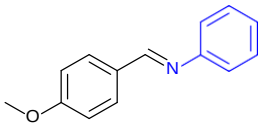
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.83 (s, 1H), 8.02 (d, *J* = 7.6 Hz, 1H), 7.52 (t, *J* = 7.7 Hz, 1H), 7.40 (t, *J* = 7.5 Hz, 2H), 7.22 (dd, *J* = 16.0, 7.6 Hz, 3H), 7.15 (d, *J* = 8.4 Hz, 1H), 7.06 (t, *J* = 7.4 Hz, 1H), 3.88 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 159.3, 155.6, 152.1, 133.2, 129.2, 126.8, 125.8, 123.8, 120.8, 120.6, 112.0, 55.8.

1-(3-methoxyphenyl)-N-phenylmethanimine



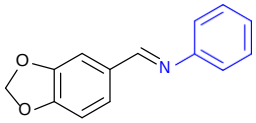
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.57 (s, 1H), 7.52 (d, *J* = 10.2 Hz, 2H), 7.42 (t, *J* = 7.7 Hz, 3H), 7.32 – 7.21 (m, 3H), 7.10 (d, *J* = 7.8 Hz, 1H), 3.81 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 160.4, 159.5, 151.4, 137.5, 129.8, 129.2, 126.0, 121.7, 122.0, 117.7, 112.5, 55.1.

1-(4-methoxyphenyl)-N-phenylmethanimine



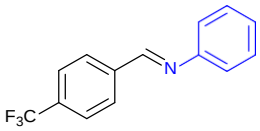
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.52 (s, 1H), 7.89 (d, *J* = 8.4 Hz, 2H), 7.40 (t, *J* = 7.6 Hz, 2H), 7.22 (d, *J* = 7.0 Hz, 3H), 7.07 (d, *J* = 8.4 Hz, 2H), 3.84 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 161.9, 159.9, 151.8, 130.5, 129.2, 128.9, 125.5, 120.9, 114.3, 55.4.

1-(benzo[d][1,3]dioxol-5-yl)-N-phenylmethanimine



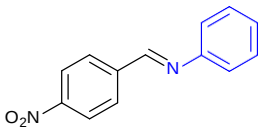
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.50 (s, 1H), 7.48 (s, 1H), 7.41 (dd, *J* = 14.8, 7.6 Hz, 3H), 7.22 (d, *J* = 7.7 Hz, 3H), 7.06 (d, *J* = 7.9 Hz, 1H), 6.13 (s, 2H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 159.8, 151.5, 150.2, 148.0, 130.8, 129.2, 125.8, 125.7, 121.0, 108.4, 106.2, 101.8.

N-phenyl-1-(4-(trifluoromethyl)phenyl)methanimine



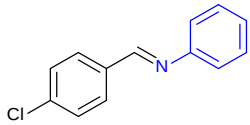
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.76 (s, 1H), 8.15 (d, *J* = 8.0 Hz, 2H), 7.89 (d, *J* = 8.2 Hz, 2H), 7.47 – 7.42 (m, 2H), 7.34 – 7.27 (m, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 159.5, 150.8, 139.6, 131.1, 130.8, 129.3 (d, *J* = 2.6 Hz), 126.6, 125.7 (q, *J* = 3.8 Hz), 122.7, 121.1.

1-(4-nitrophenyl)-N-phenylmethanimine



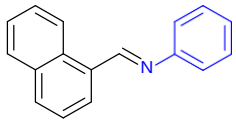
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.82 (s, 1H), 8.37 (d, *J* = 8.5 Hz, 2H), 8.20 (d, *J* = 8.5 Hz, 2H), 7.46 (t, *J* = 7.6 Hz, 2H), 7.37 – 7.29 (m, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 159.0, 150.6, 148.9, 141.5, 129.7, 129.4, 127.0, 124.1, 121.3.

1-(4-chlorophenyl)-N-phenylmethanimine



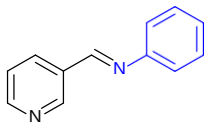
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.64 (s, 1H), 7.96 (d, *J* = 8.3 Hz, 2H), 7.60 (d, *J* = 8.3 Hz, 2H), 7.43 (t, *J* = 7.6 Hz, 2H), 7.26 (t, *J* = 7.9 Hz, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 159.5, 151.1, 136.0, 134.9, 130.3, 129.2, 129.0, 126.2, 121.0.

1-(naphthalen-1-yl)-N-phenylmethanimine



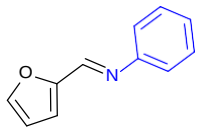
^{1}H NMR (400 MHz, DMSO-d_6) δ 9.27 – 9.19 (m, 2H), 8.18 (d, *J* = 7.0 Hz, 1H), 8.12 (d, *J* = 8.1 Hz, 1H), 8.04 (d, *J* = 7.9 Hz, 1H), 7.70 – 7.59 (m, 3H), 7.46 (t, *J* = 7.4 Hz, 2H), 7.38 (d, *J* = 7.6 Hz, 2H), 7.29 (t, *J* = 7.1 Hz, 1H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 160.6, 151.9, 133.5, 131.9, 131.0, 130.8, 130.5, 129.2, 128.7, 127.6, 126.3, 126.0, 125.5, 124.6, 121.1.

N-phenyl-1-(pyridin-3-yl)methanimine



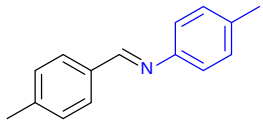
^{1}H NMR (400 MHz, DMSO-d_6) δ 9.07 (s, 1H), 8.71 (s, 2H), 8.32 (d, *J* = 7.8 Hz, 1H), 7.55 (dd, *J* = 7.2, 5.2 Hz, 1H), 7.44 (t, *J* = 7.5 Hz, 2H), 7.29 (dd, *J* = 13.2, 7.3 Hz, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 158.6 (d, *J* = 6.6 Hz), 152.0 (d, *J* = 16.5 Hz), 151.1, 150.3, 135.0, 131.5, 129.2, 126.4, 124.0, 121.1.

1-(furan-2-yl)-N-phenylmethanimine



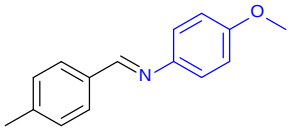
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.43 (s, 1H), 7.95 (s, 1H), 7.40 (t, *J* = 7.6 Hz, 2H), 7.24 (d, *J* = 7.6 Hz, 3H), 7.16 (d, *J* = 2.9 Hz, 1H), 6.71 (s, 1H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 151.9, 151.1, 148.4, 146.4, 129.2, 126.0, 120.9, 117.0, 112.5.

N,1-di-p-tolylmethanimine



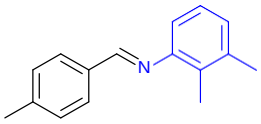
^{1}H NMR (400 MHz, DMSO-d_6) δ 8.56 (s, 1H), 7.81 (d, *J* = 7.6 Hz, 2H), 7.32 (d, *J* = 7.5 Hz, 2H), 7.19 (dd, *J* = 17.7, 7.8 Hz, 4H), 2.37 (s, 3H), 2.32 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d_6) δ 159.5, 148.9, 141.3, 135.1, 133.6, 129.7, 129.4, 128.6, 120.9, 21.2, 20.6.

N-(4-methoxyphenyl)-1-(p-tolyl)methanimine



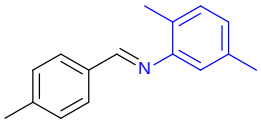
^{1}H NMR (400 MHz, DMSO-d$_6$) δ 8.58 (s, 1H), 7.80 (d, *J* = 7.8 Hz, 2H), 7.29 (dd, *J* = 14.9, 8.3 Hz, 4H), 6.97 (d, *J* = 8.7 Hz, 2H), 3.77 (s, 3H), 2.37 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 158.2, 157.8, 144.2, 141.0, 133.8, 129.4, 128.4, 122.3, 114.4, 55.3, 21.1.

N-(2,3-dimethylphenyl)-1-(p-tolyl)methanimine



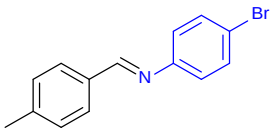
^{1}H NMR (400 MHz, DMSO-d$_6$) δ 8.41 (s, 1H), 7.83 (d, *J* = 7.8 Hz, 2H), 7.33 (d, *J* = 7.7 Hz, 2H), 7.10 (t, *J* = 7.6 Hz, 1H), 7.02 (d, *J* = 7.3 Hz, 1H), 6.85 (d, *J* = 7.6 Hz, 1H), 2.38 (s, 3H), 2.26 (s, 3H), 2.22 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 159.4, 150.5, 141.3, 136.9, 133.8, 129.7, 129.4, 128.5, 126.9, 126.0, 115.6, 21.1, 19.8, 13.5.

N-(2,5-dimethylphenyl)-1-(p-tolyl)methanimine



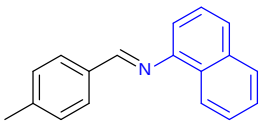
^{1}H NMR (400 MHz, DMSO-d$_6$) δ 8.44 (s, 1H), 7.83 (d, *J* = 7.8 Hz, 2H), 7.33 (d, *J* = 7.7 Hz, 2H), 7.10 (d, *J* = 7.5 Hz, 1H), 6.93 (d, *J* = 7.4 Hz, 1H), 6.83 (s, 1H), 2.38 (s, 3H), 2.29 (s, 3H), 2.23 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 159.3, 150.4, 141.3, 135.8, 133.7, 129.9, 129.4, 128.6, 128.0, 126.0, 118.3, 21.2, 20.6, 17.1.

N-(4-bromophenyl)-1-(p-tolyl)methanimine



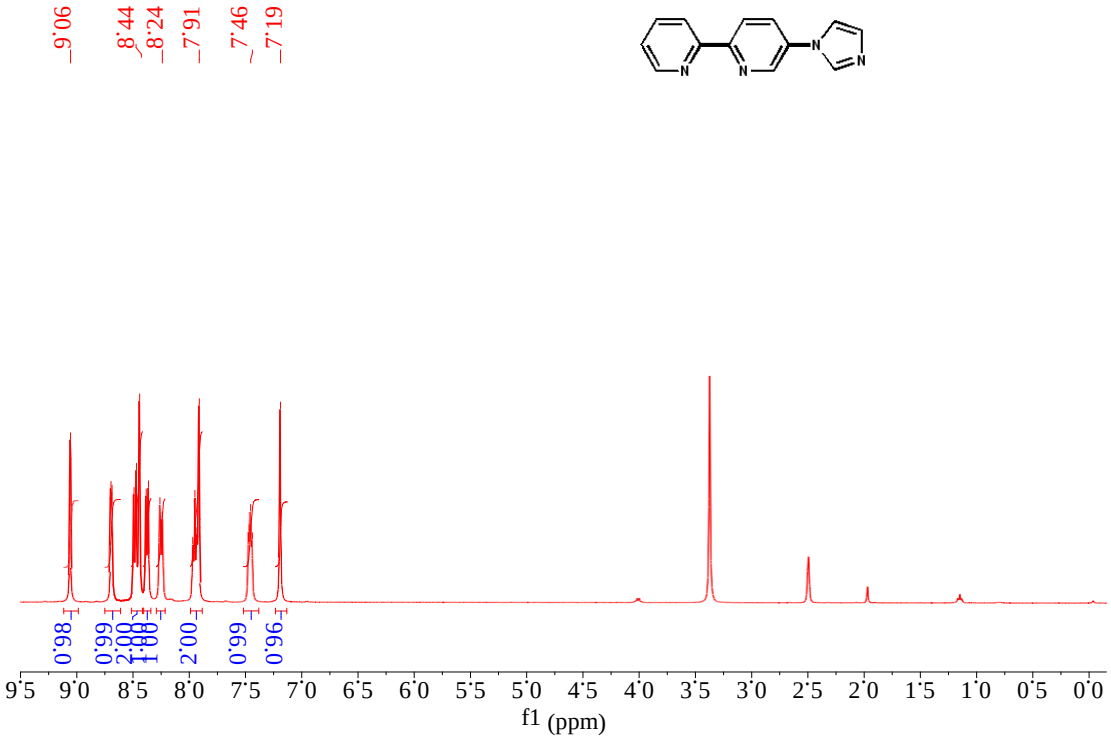
^{1}H NMR (400 MHz, DMSO-d$_6$) δ 8.57 (s, 1H), 7.82 (d, *J* = 7.7 Hz, 2H), 7.57 (d, *J* = 8.3 Hz, 2H), 7.33 (d, *J* = 7.6 Hz, 2H), 7.21 (d, *J* = 8.3 Hz, 2H), 2.37 (s, 3H). ^{13}C NMR (101 MHz, DMSO-d$_6$) δ 161.2, 150.7, 141.8, 133.3, 132.0, 129.4, 128.8, 123.2, 118.3, 21.2.

N-(naphthalen-1-yl)-1-(p-tolyl)methanimine



^{1}H NMR (400 MHz, DMSO-d$_6$) δ 8.65 (s, 1H), 8.29 (d, *J* = 8.0 Hz, 1H), 7.94 (t, *J* = 8.5 Hz, 3H), 7.79 (d, *J* = 8.2 Hz, 1H), 7.58 – 7.49 (m, 3H), 7.37 (d, *J* = 7.6 Hz, 2H), 7.20 (d, *J* = 7.2 Hz, 1H), 2.40 (s, 3H). ^{13}C NMR (151 MHz, DMSO-d$_6$) δ 160.7, 148.4, 141.7, 133.6, 133.5, 129.5, 128.9, 128.4, 127.6, 126.4, 126.3, 125.8, 125.4, 123.4, 112.9, 21.2.

Fig. 5 The ^{1}H and ^{13}C NMR spectra for 5-(1H-imidazol-1-yl)-2,2'-bipyridine.



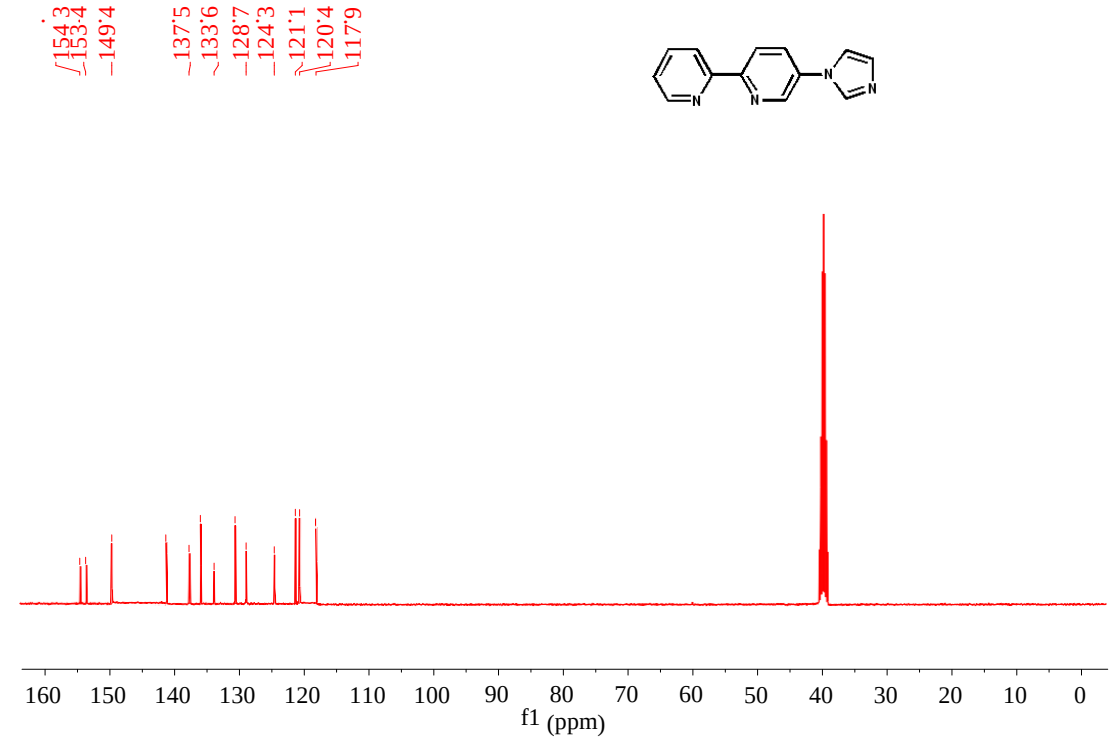


Fig. 6 The ^{1}H NMR spectrum for 4-(2-iodineacetoxy)-2,2,6,6-tetramethylpiperidine 1-oxyl.

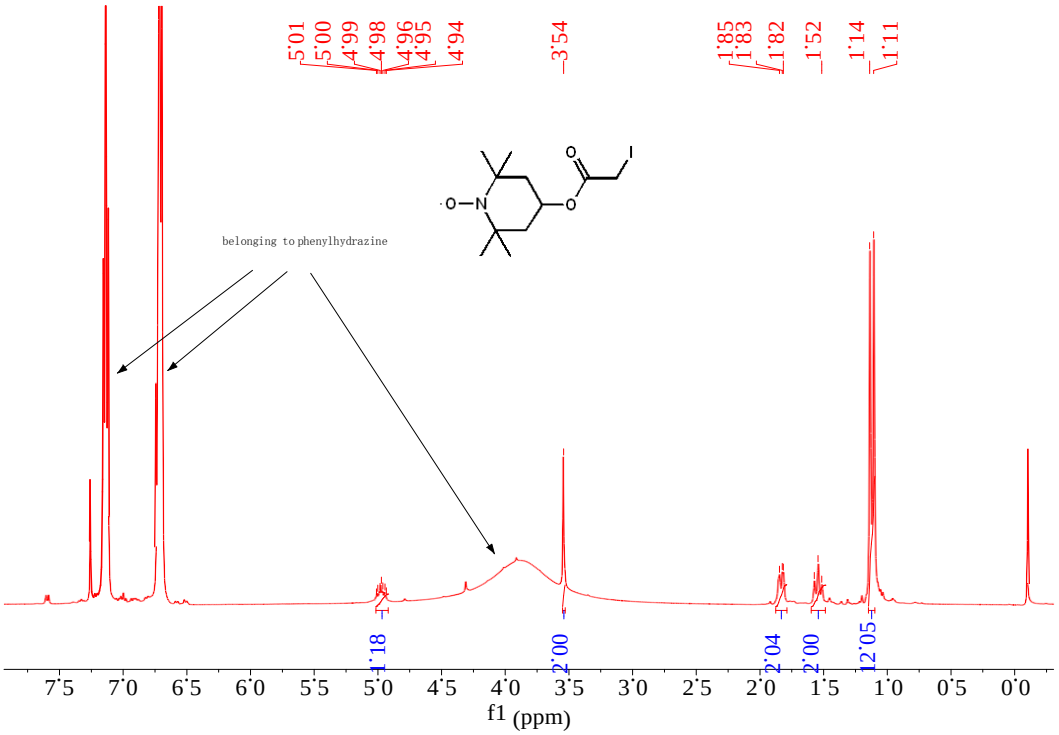


Fig. 7 The ^{1}H NMR spectrum for **1a.**

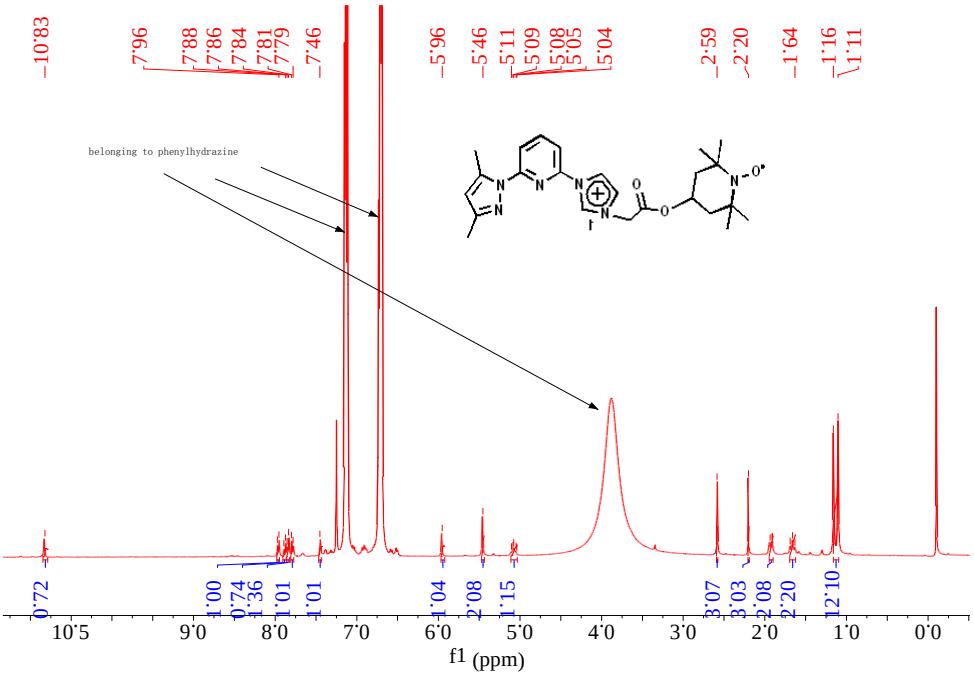


Fig. 8 The ^{1}H NMR spectrum for **1b.**

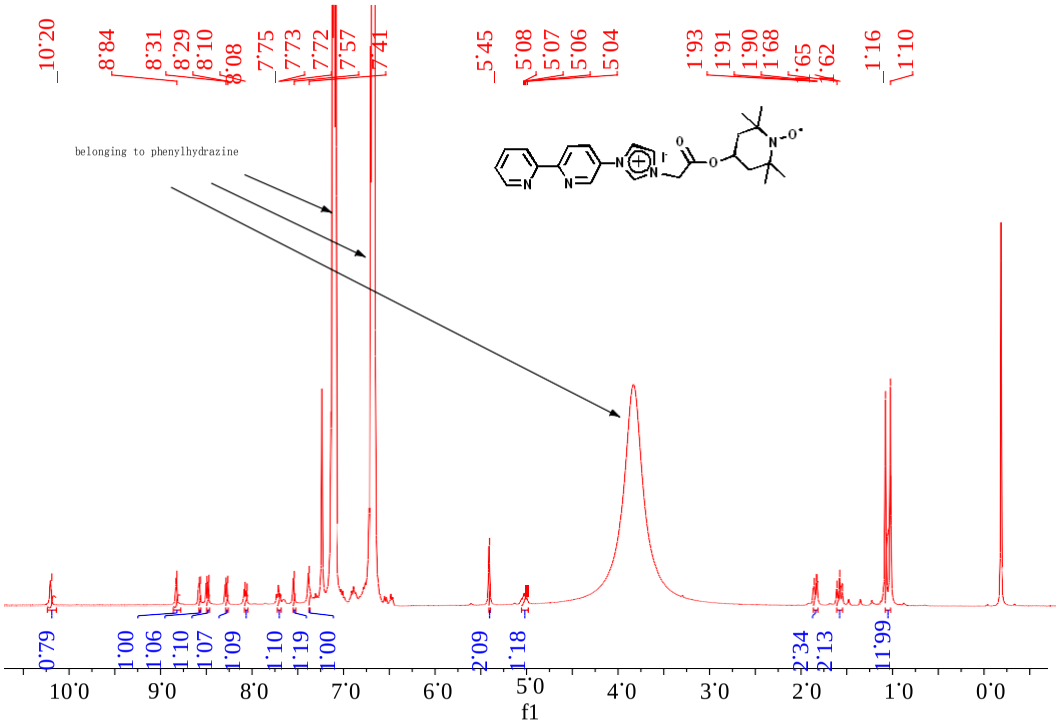


Fig. 9 The ^{1}H NMR spectrum for **1c.**

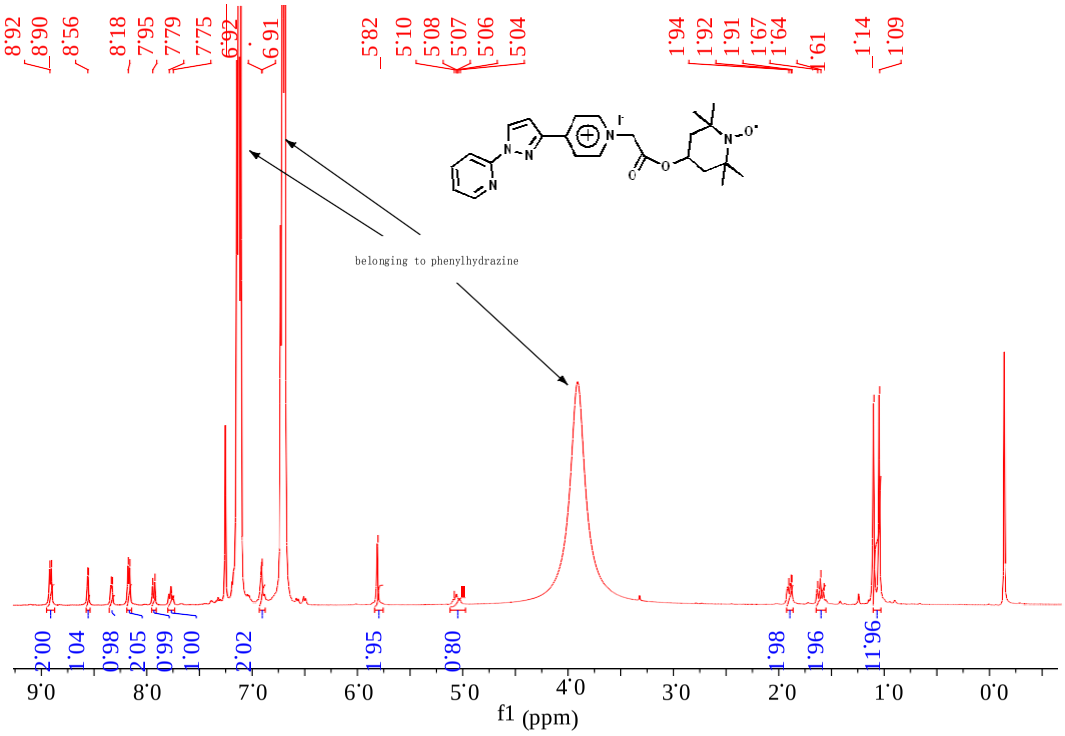


Fig. 10 The ^{1}H NMR spectrum for **1d.**

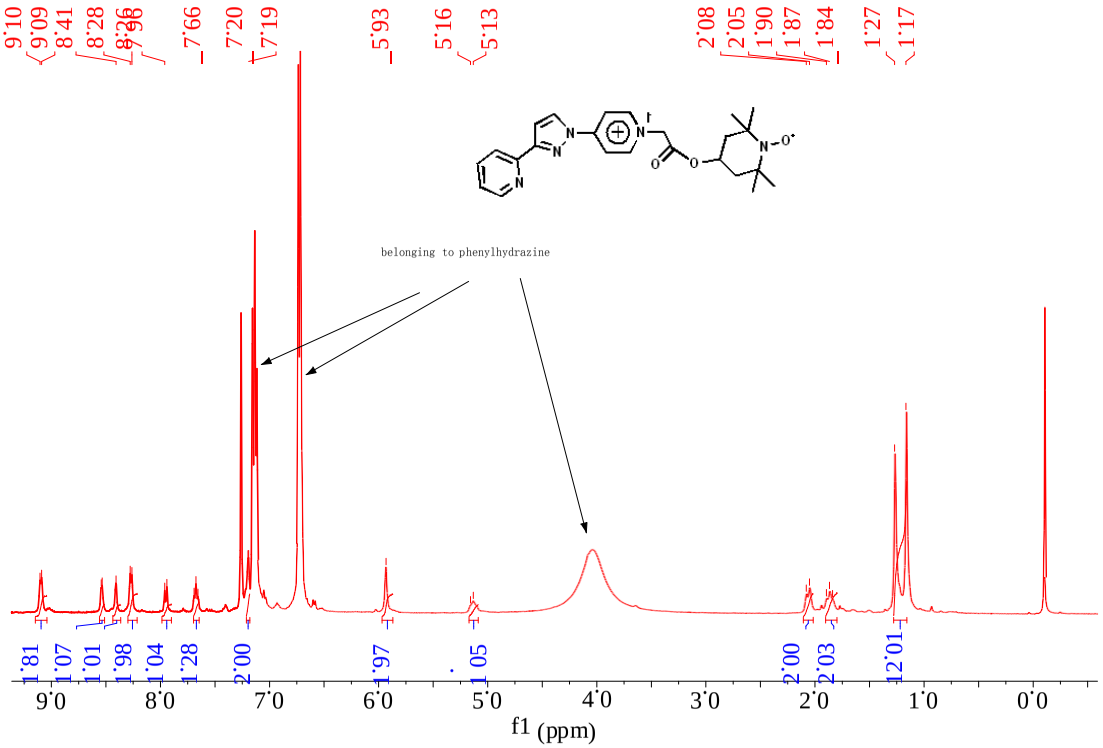
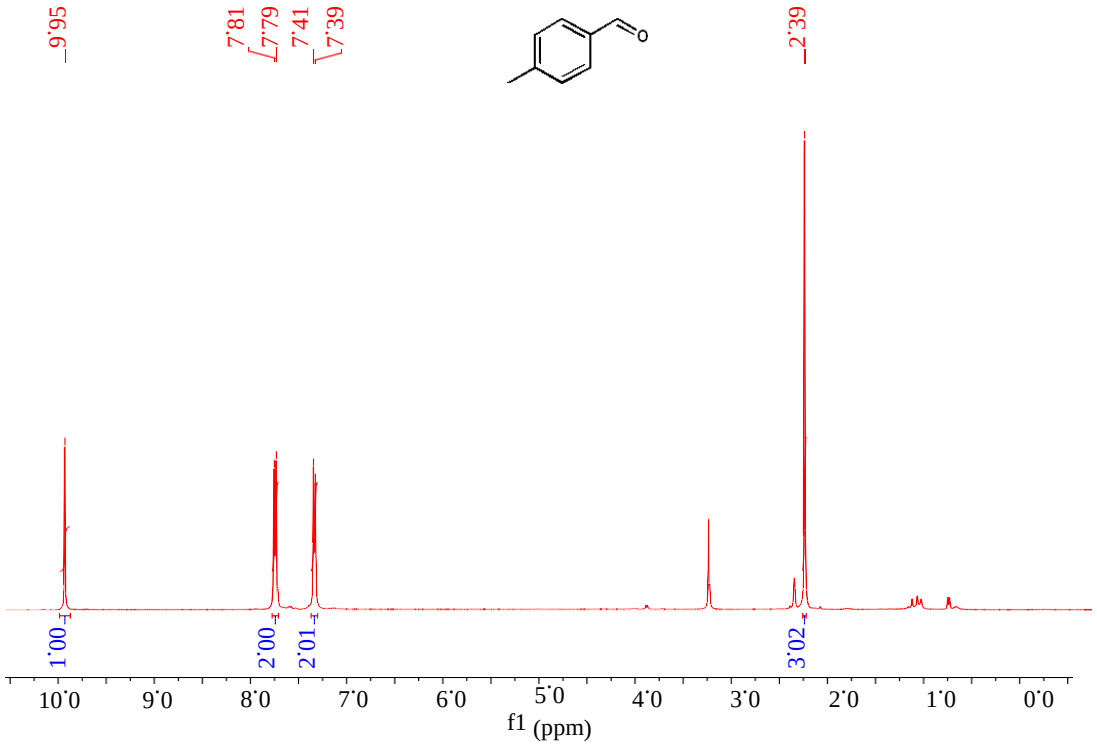


Fig. 11 The ^{1}H and ^{13}C NMR spectra for 4-methylbenzaldehyde**.**



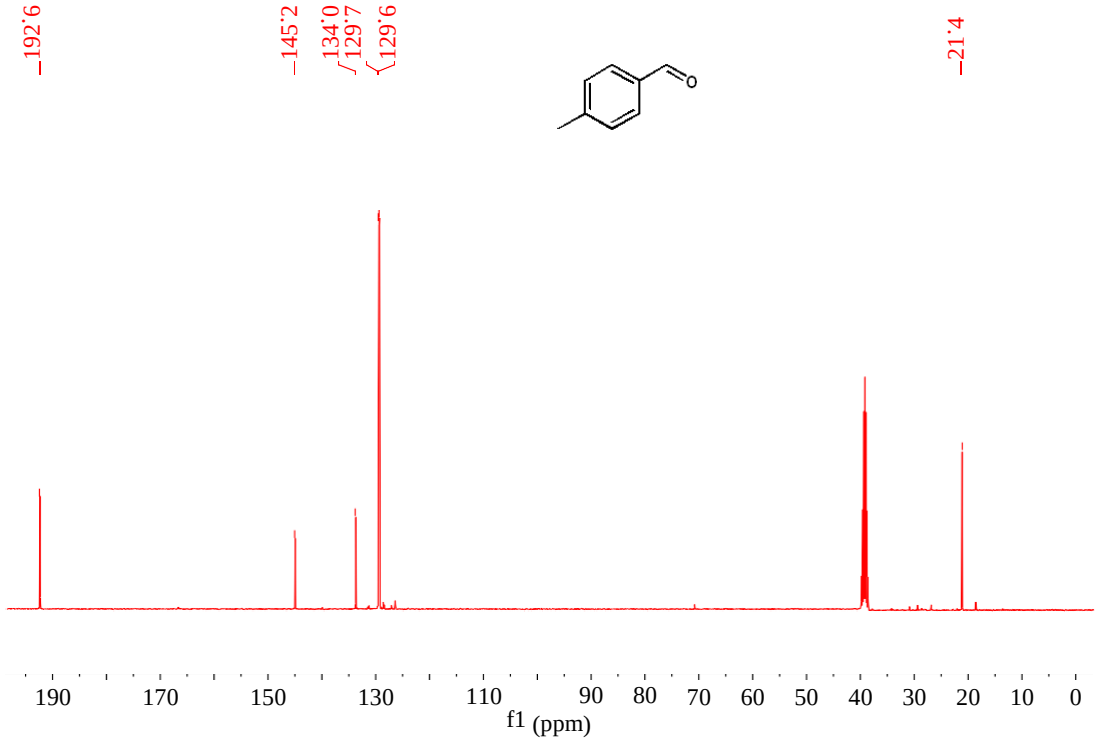
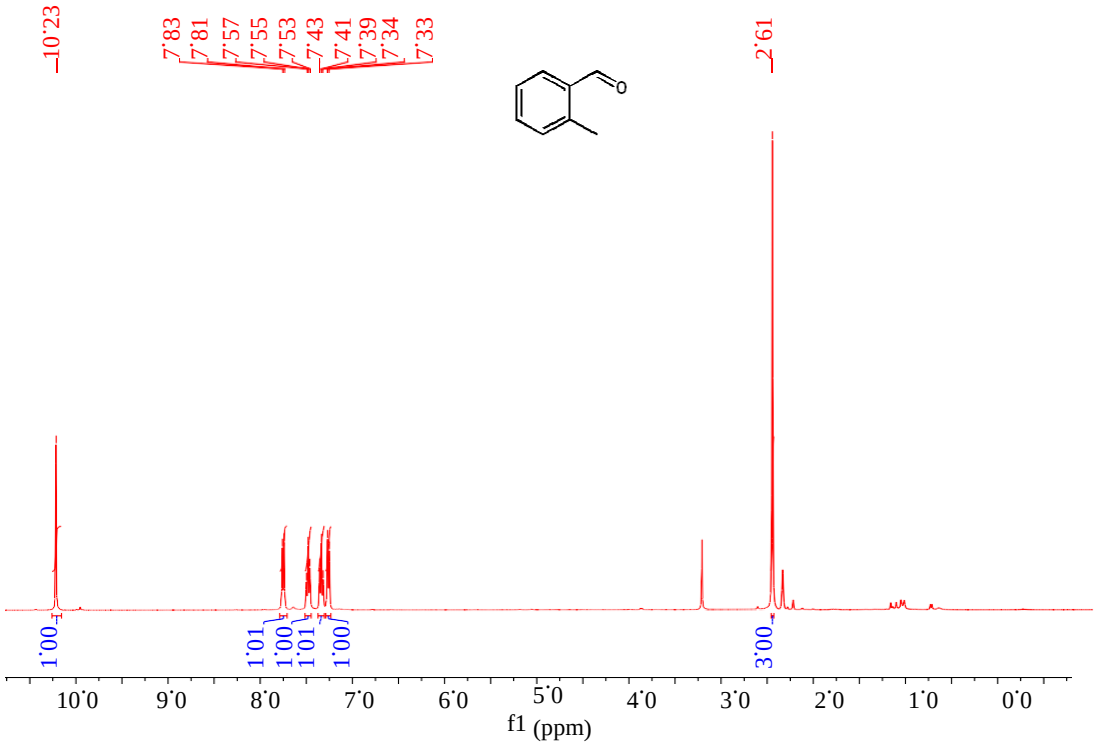


Fig. 12 The ^{1}H and ^{13}C NMR spectra for 2-methylbenzaldehyde**.**



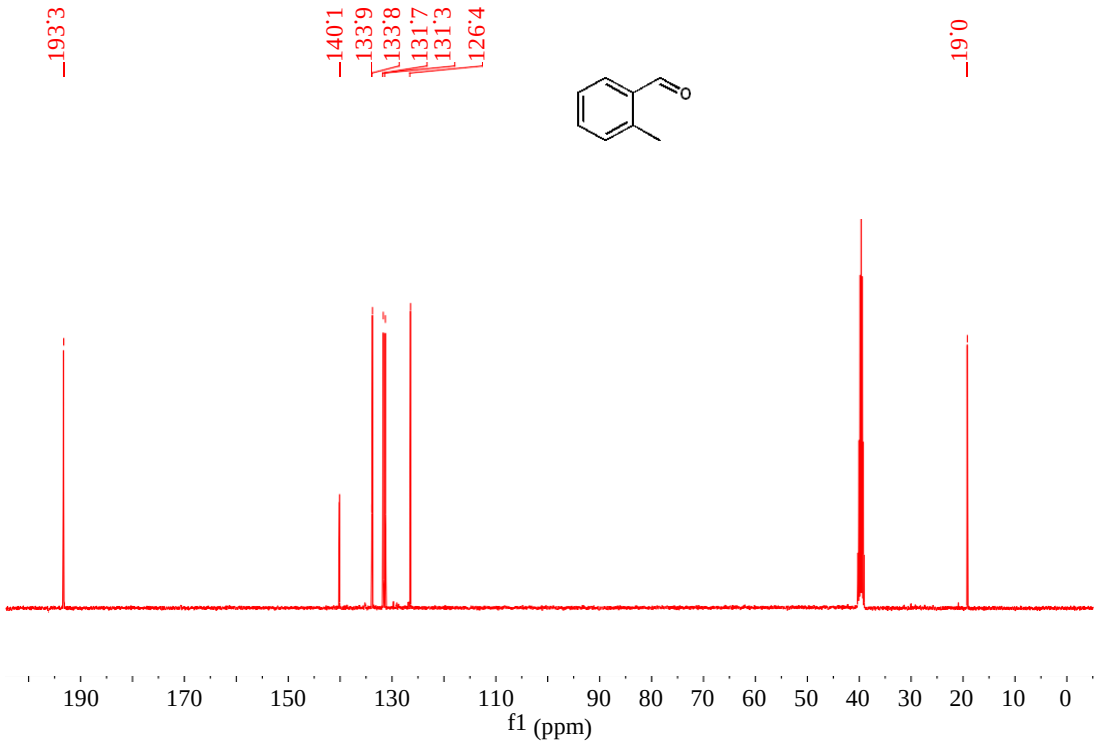
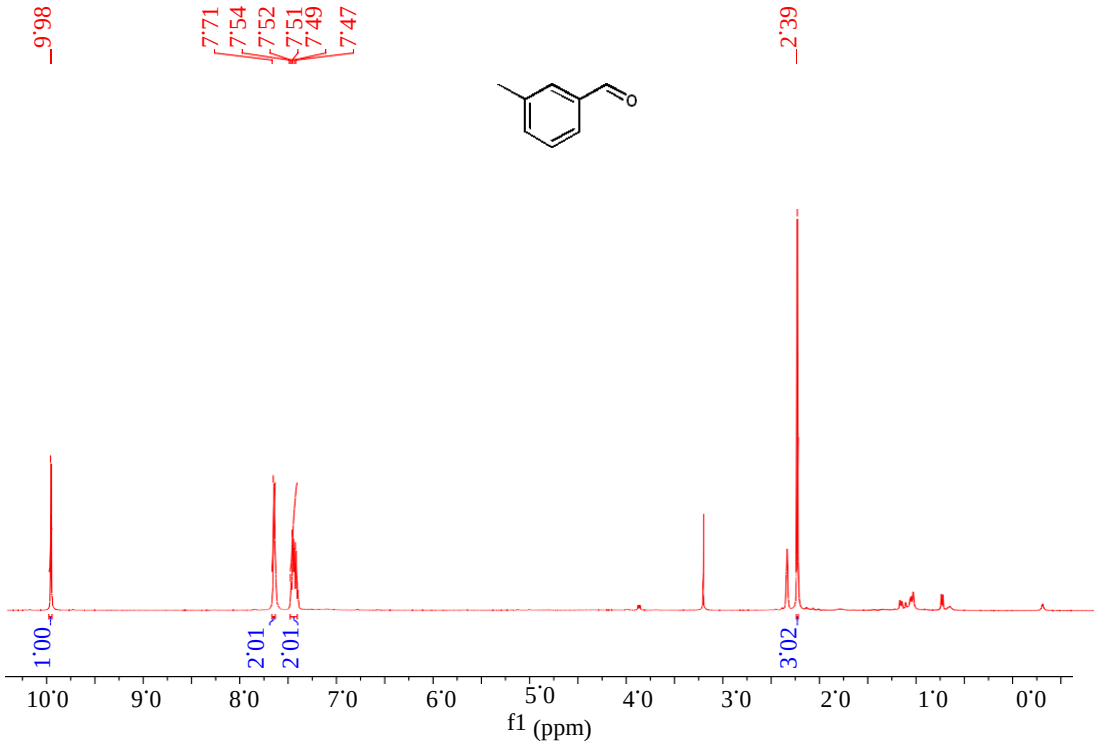


Fig. 13 The ^{1}H and ^{13}C NMR spectra for 3-methylbenzaldehyde**.**



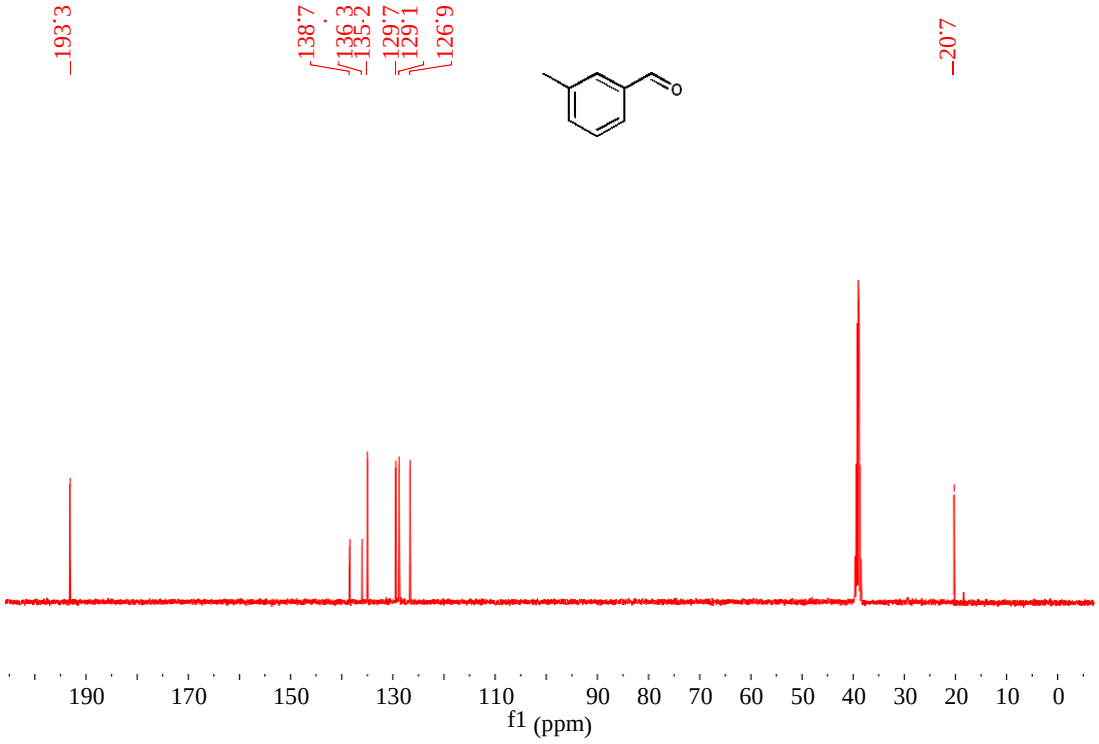


Fig. 14 The ^{1}H and ^{13}C NMR spectra for 2-methoxybenzaldehyde**.**

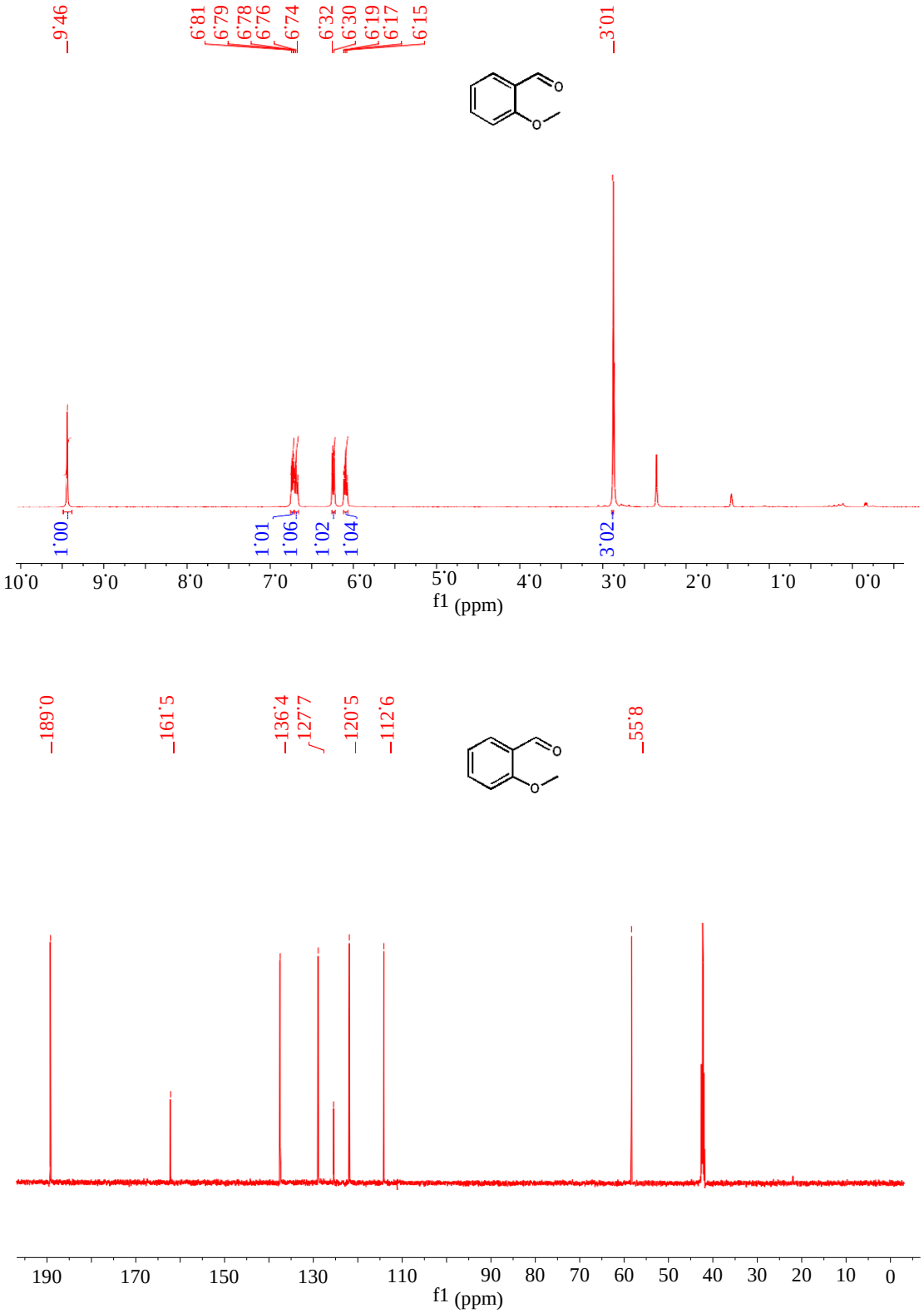
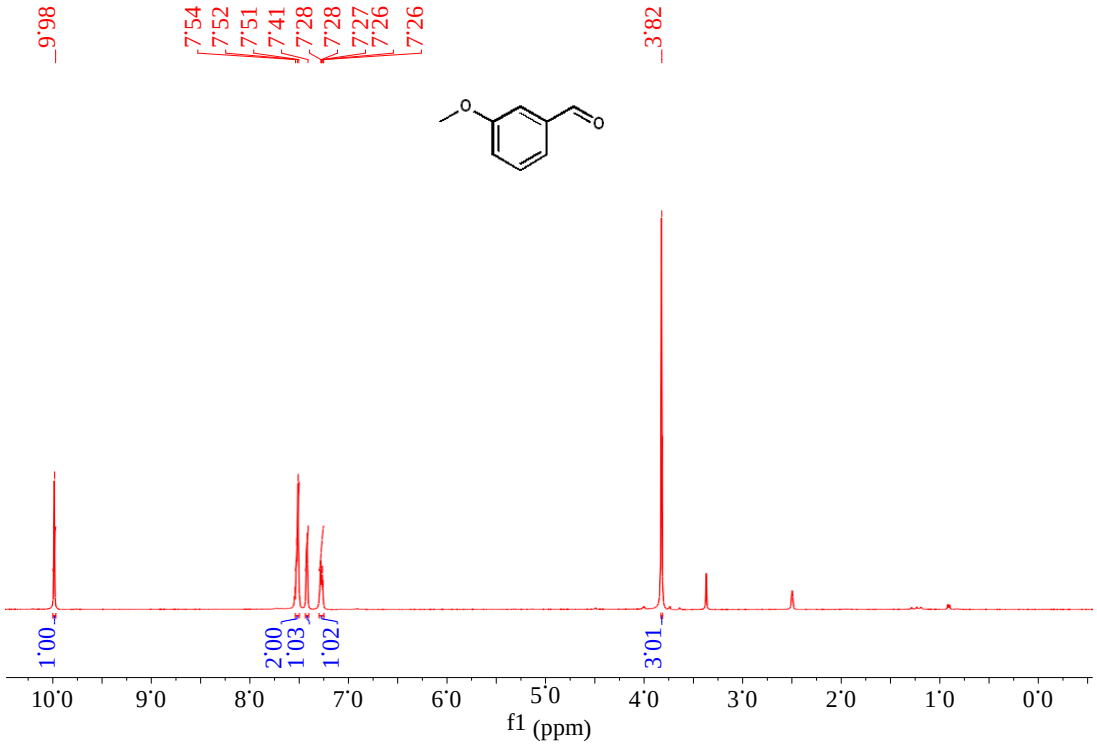


Fig. 15 The ^{1}H and ^{13}C NMR spectra for 3-methoxybenzaldehyde**.**



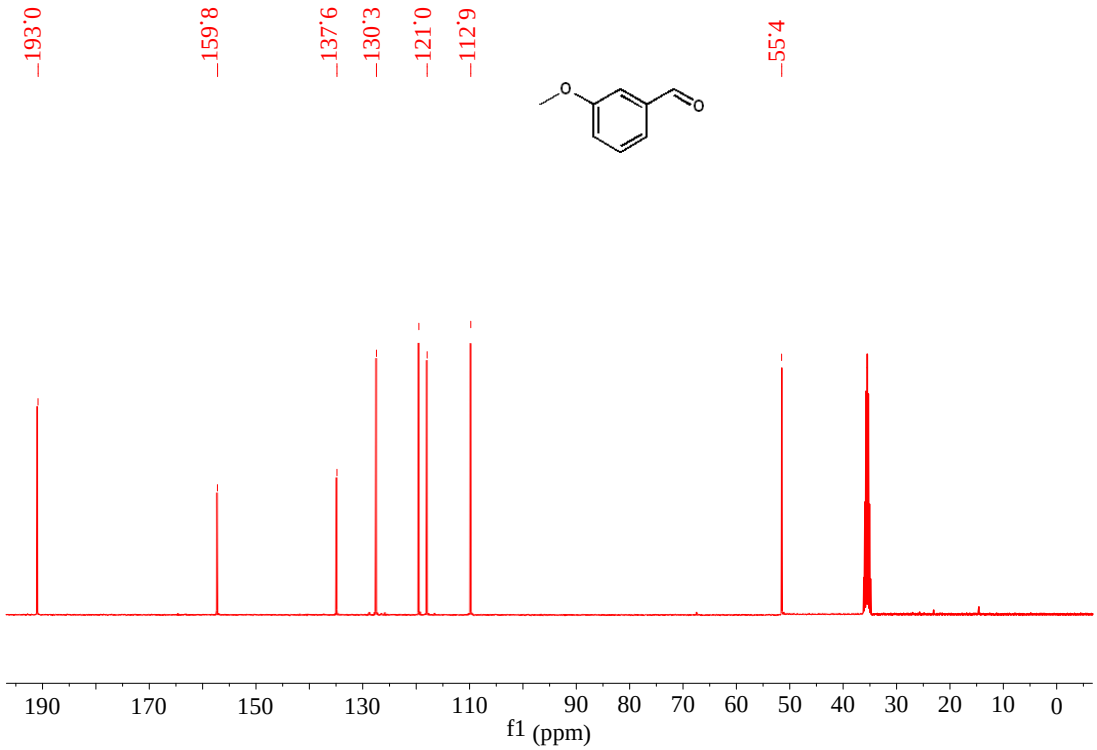


Fig. 16 The ^{1}H and ^{13}C NMR spectra for 4-methoxybenzaldehyde**.**

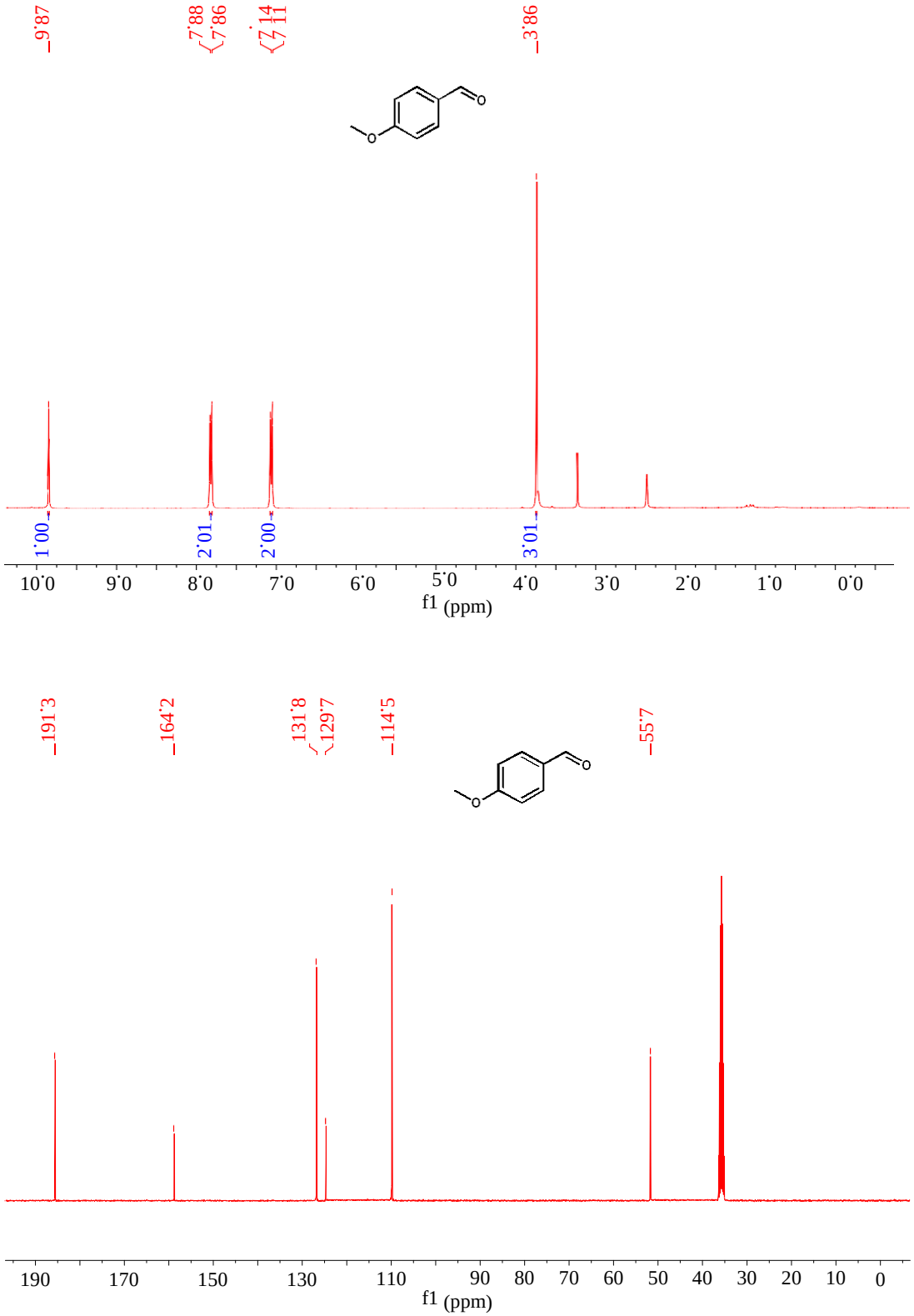


Fig. 17 The ^{1}H and ^{13}C NMR spectra for 4-(tert-butyl)benzaldehyde**.**

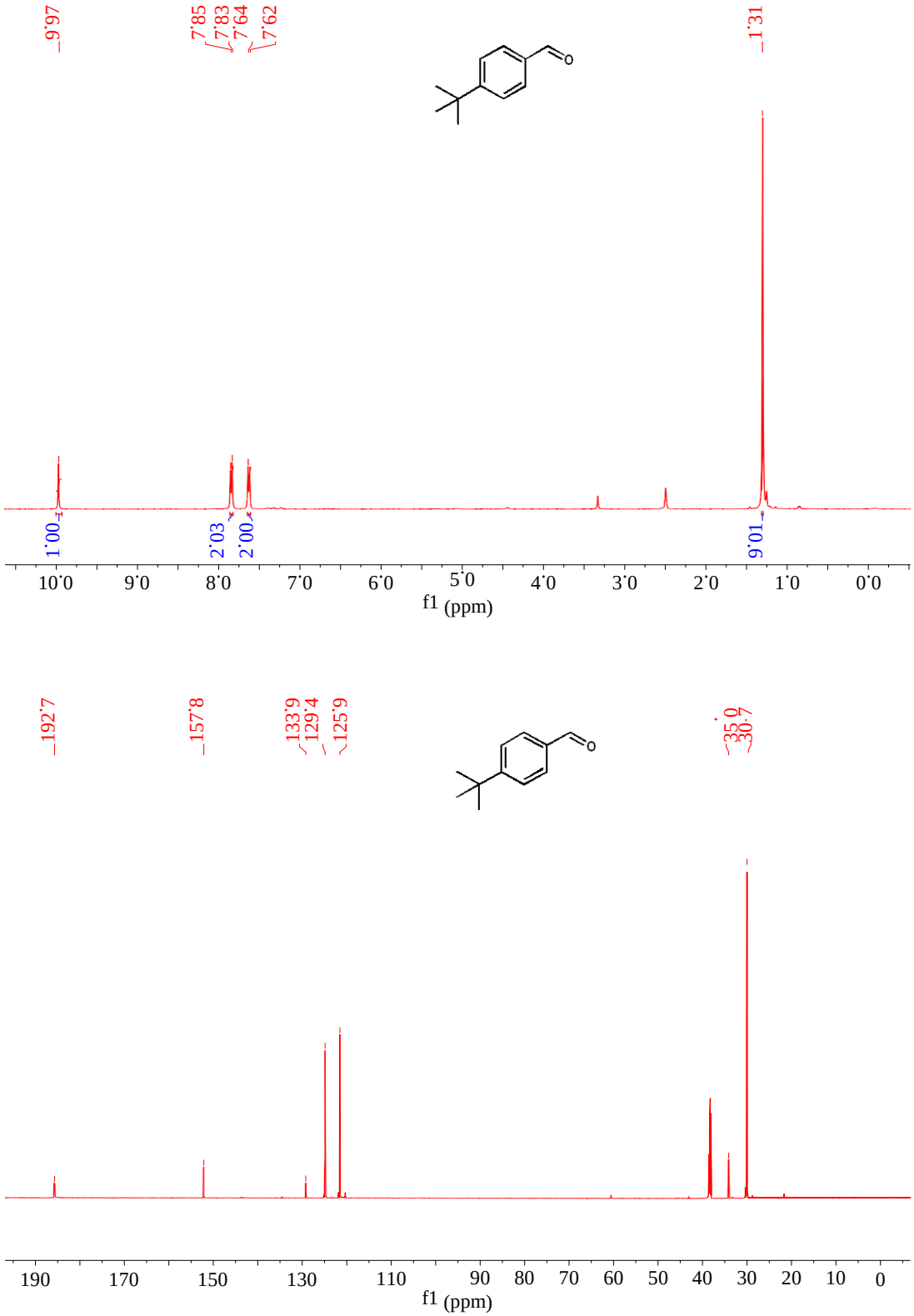


Fig. 18 The ^{1}H and ^{13}C NMR spectra for piperonyl aldehyde**.**

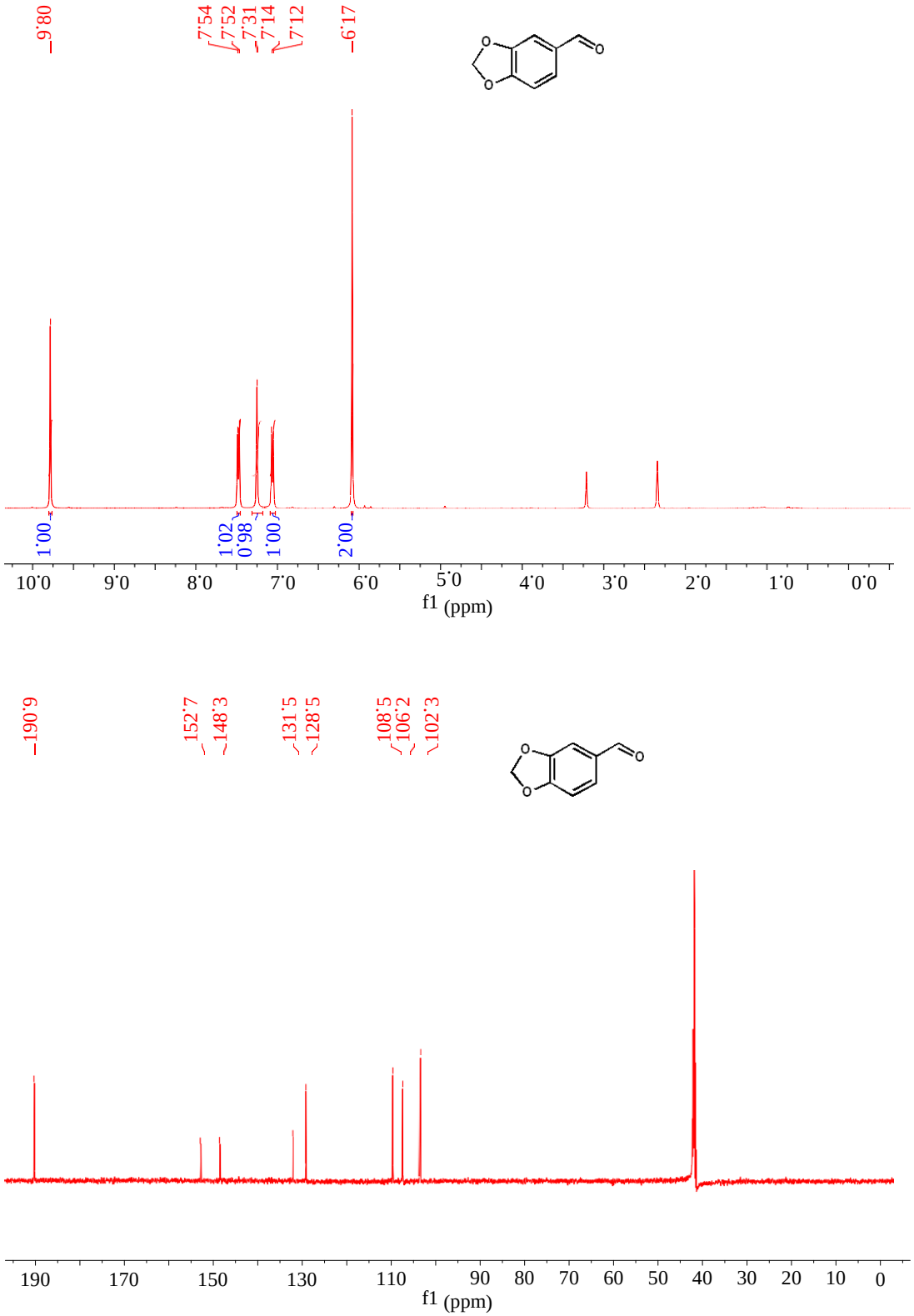
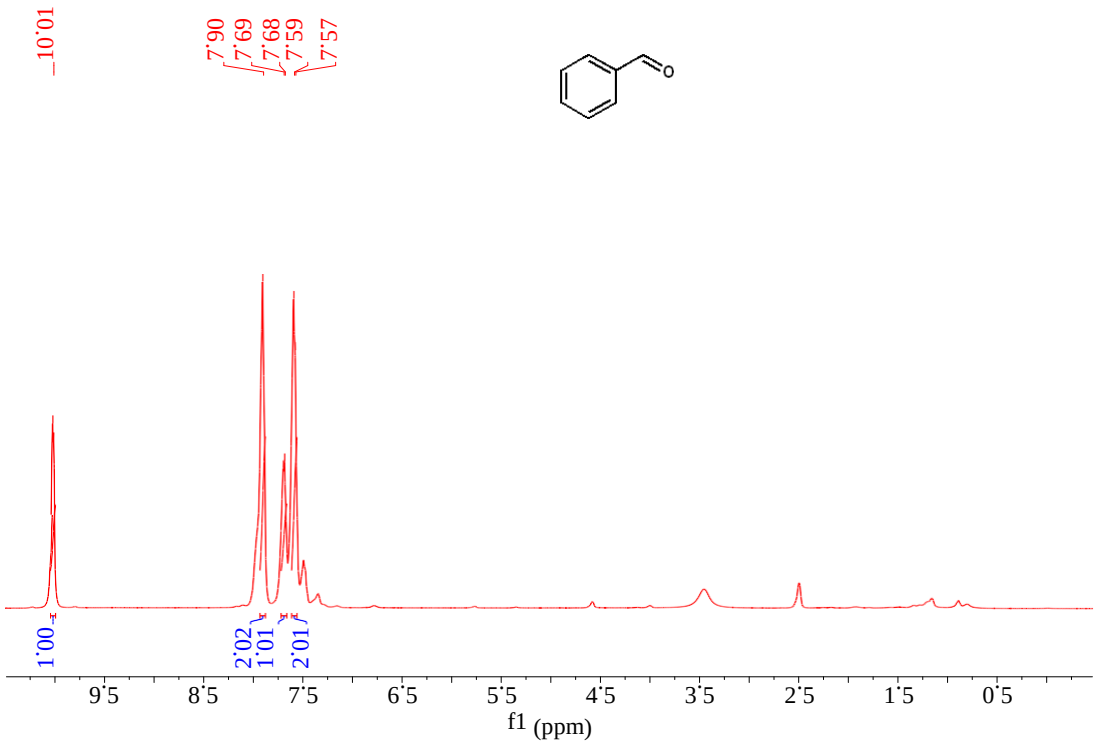


Fig. 19 The ^{1}H and ^{13}C NMR spectra for benzaldehyde**.**



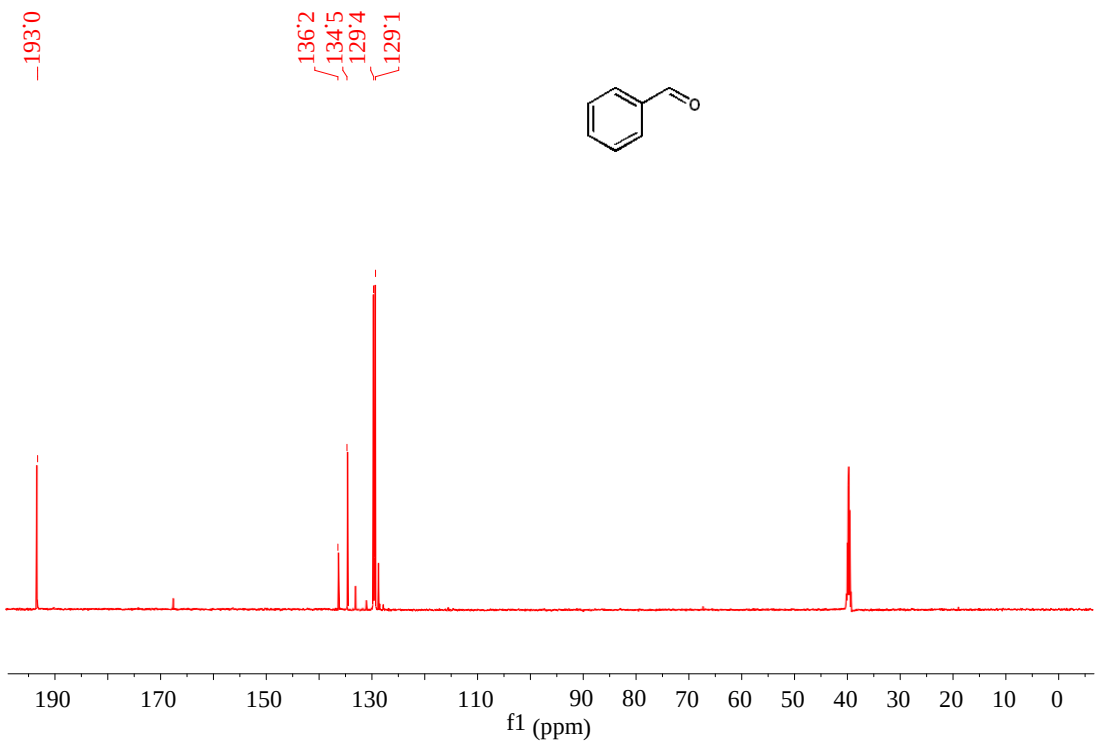
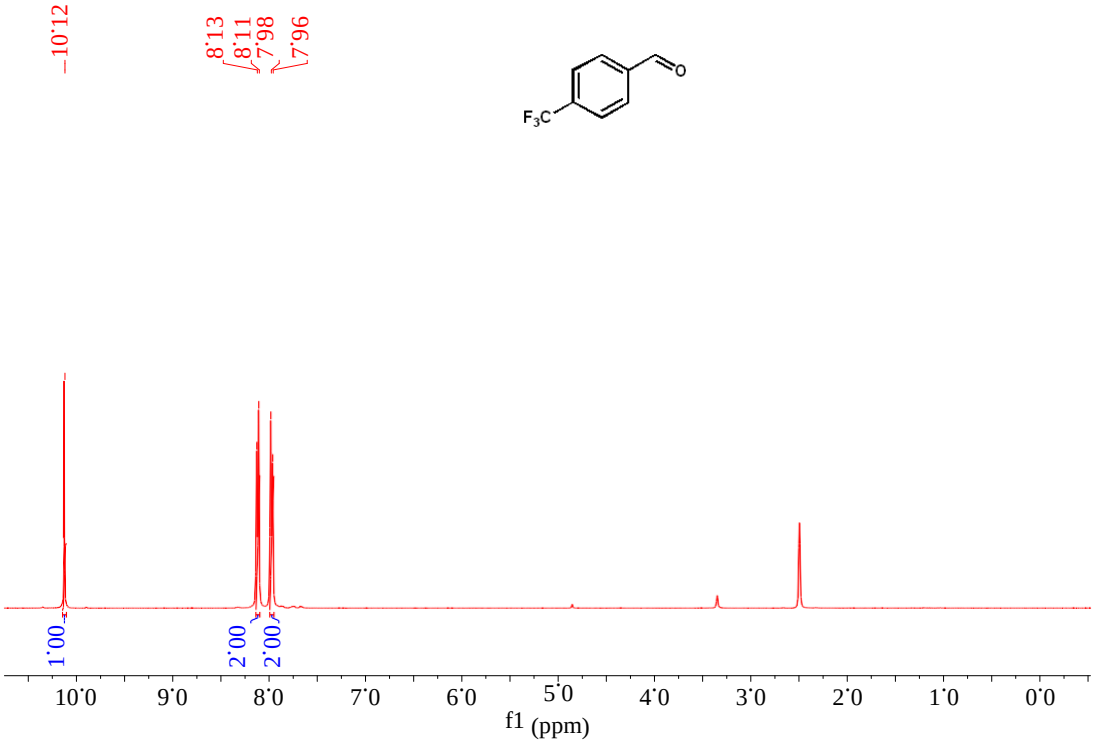


Fig. 20 The ^{1}H and ^{13}C NMR spectra for 4-(trifluoromethyl)benzaldehyde**.**



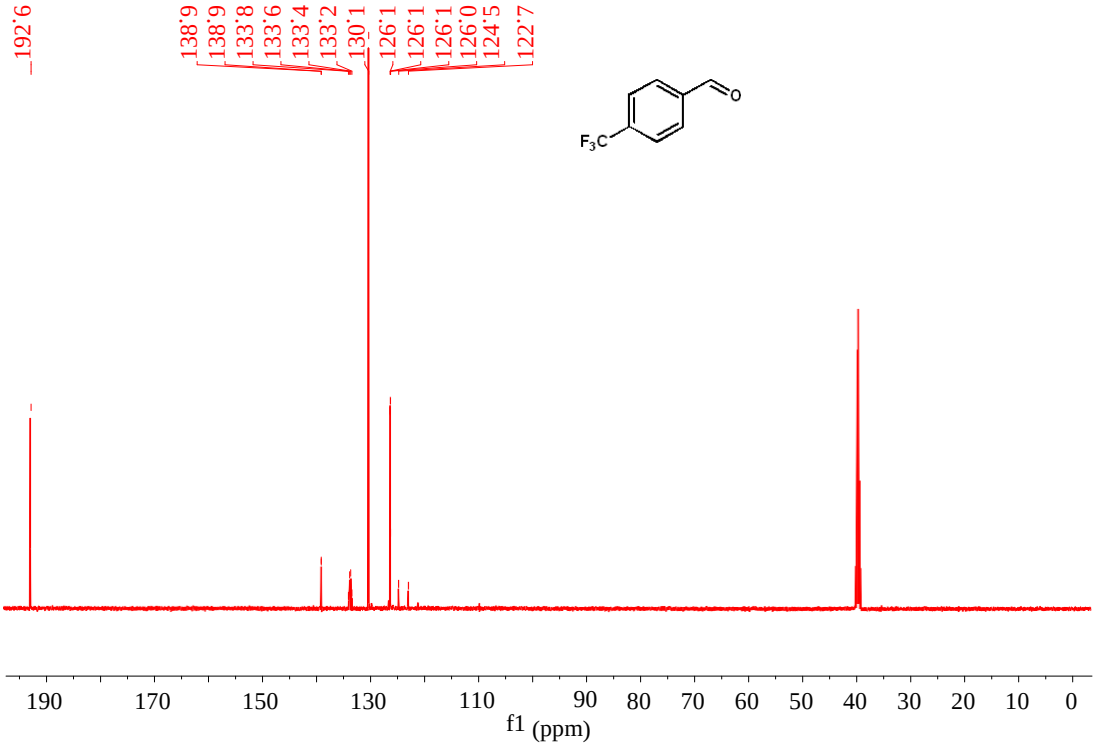
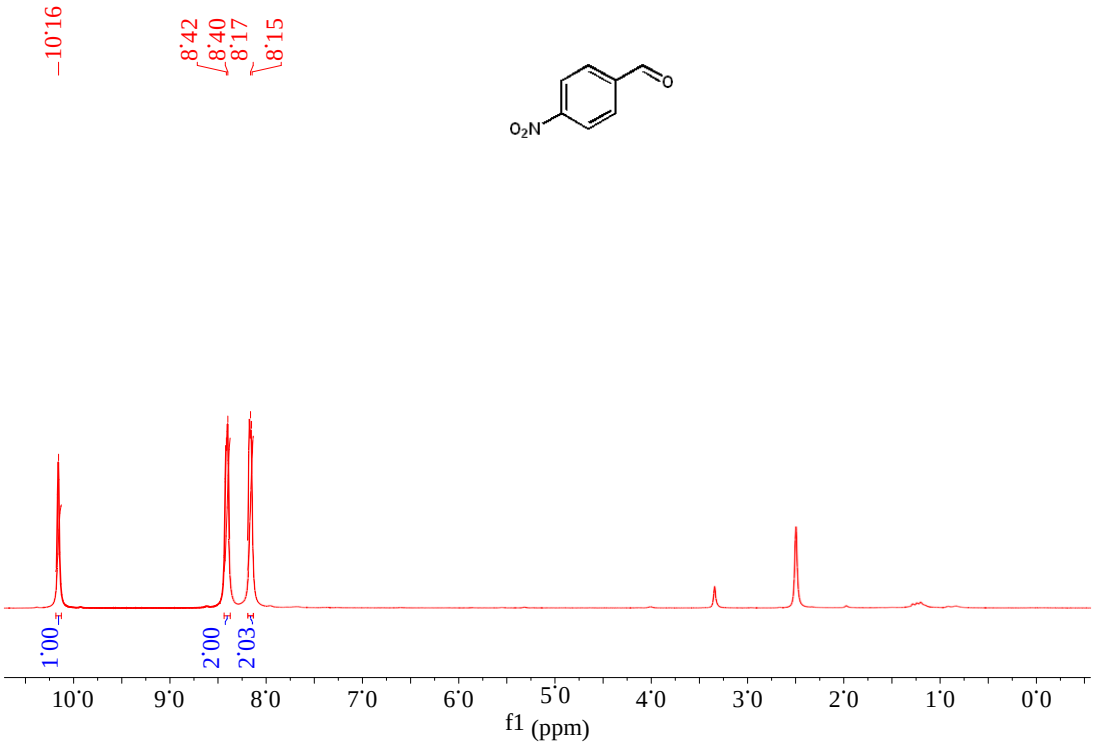


Fig. 21 The ^{1}H and ^{13}C NMR spectra for 4-nitrobenzaldehyde**.**



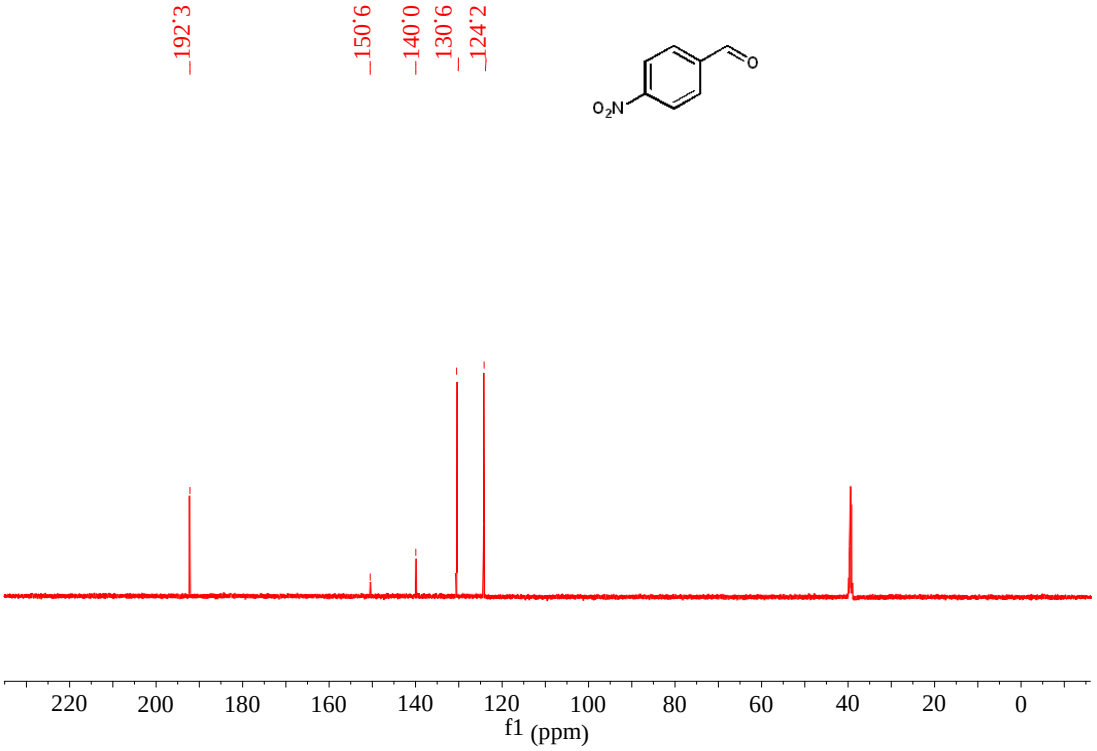
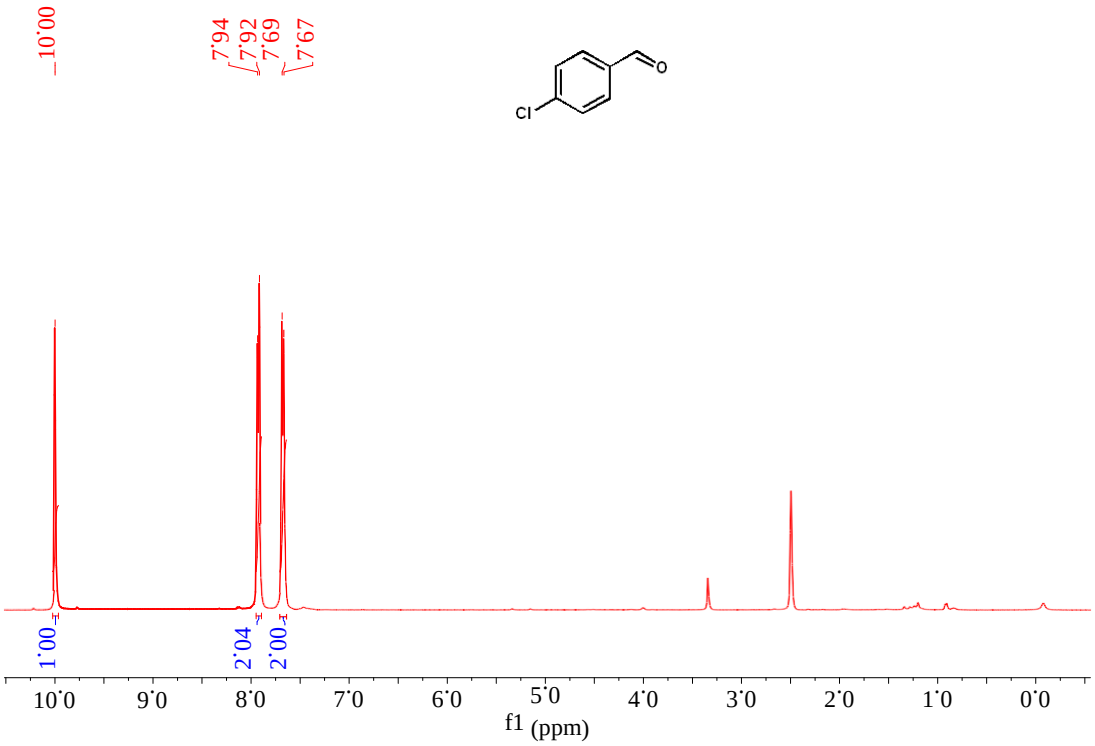


Fig. 22 The ^{1}H and ^{13}C NMR spectra for 4-chlorobenzaldehyde**.**



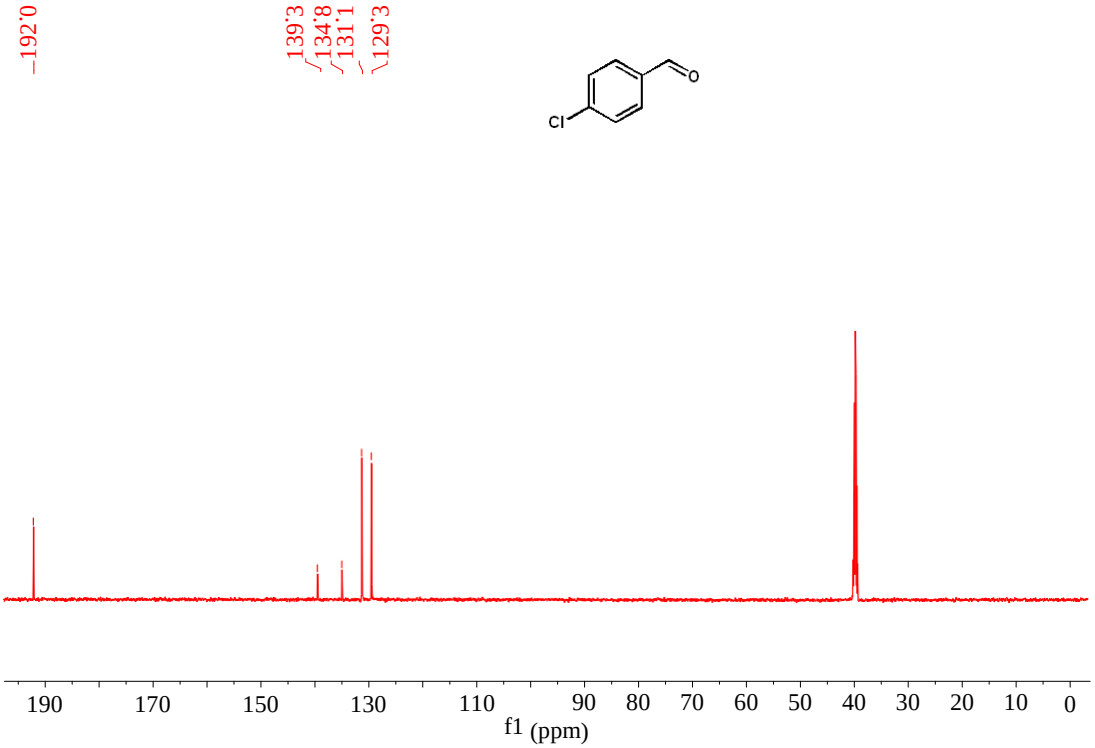
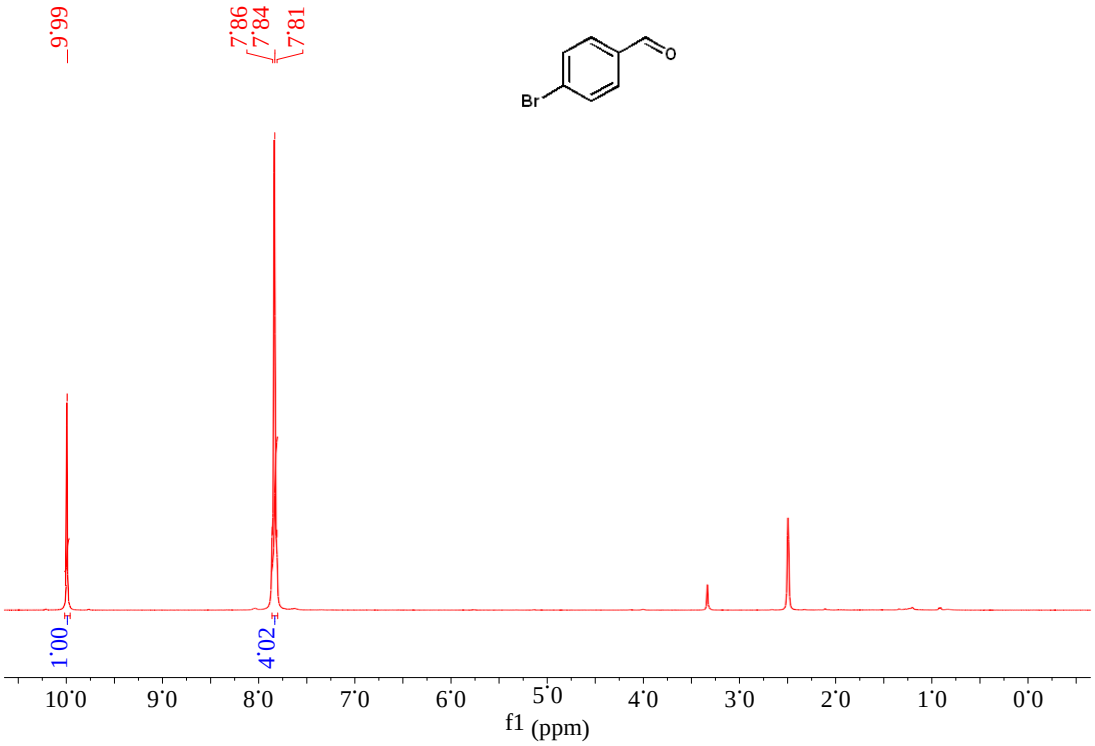


Fig. 23 The ^{1}H and ^{13}C NMR spectra for 4-bromobenzaldehyde**.**



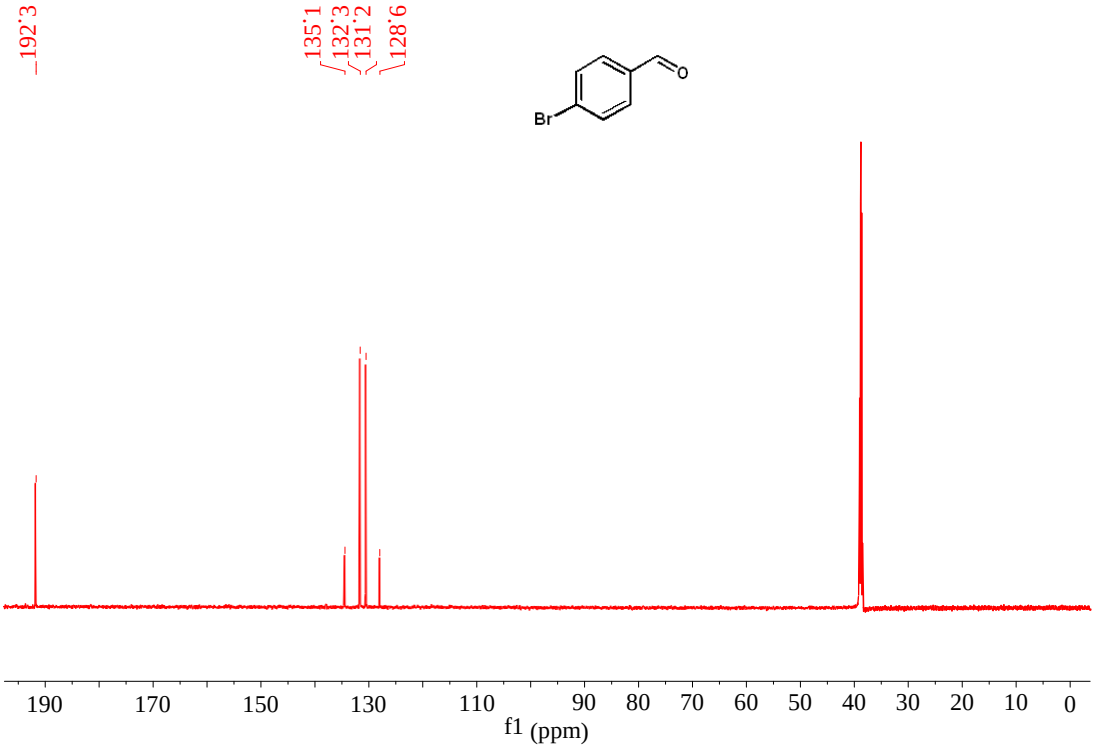
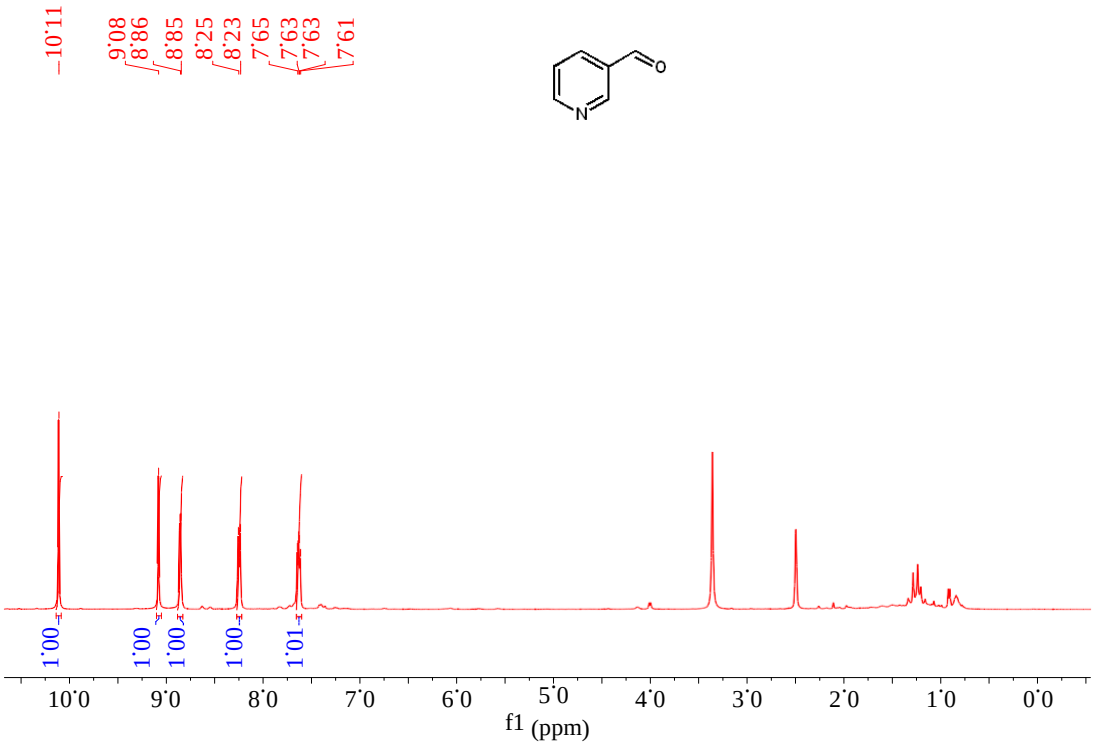


Fig. 24 The ^{1}H and ^{13}C NMR spectra for 3-pyridinecarboxaldehyde**.**



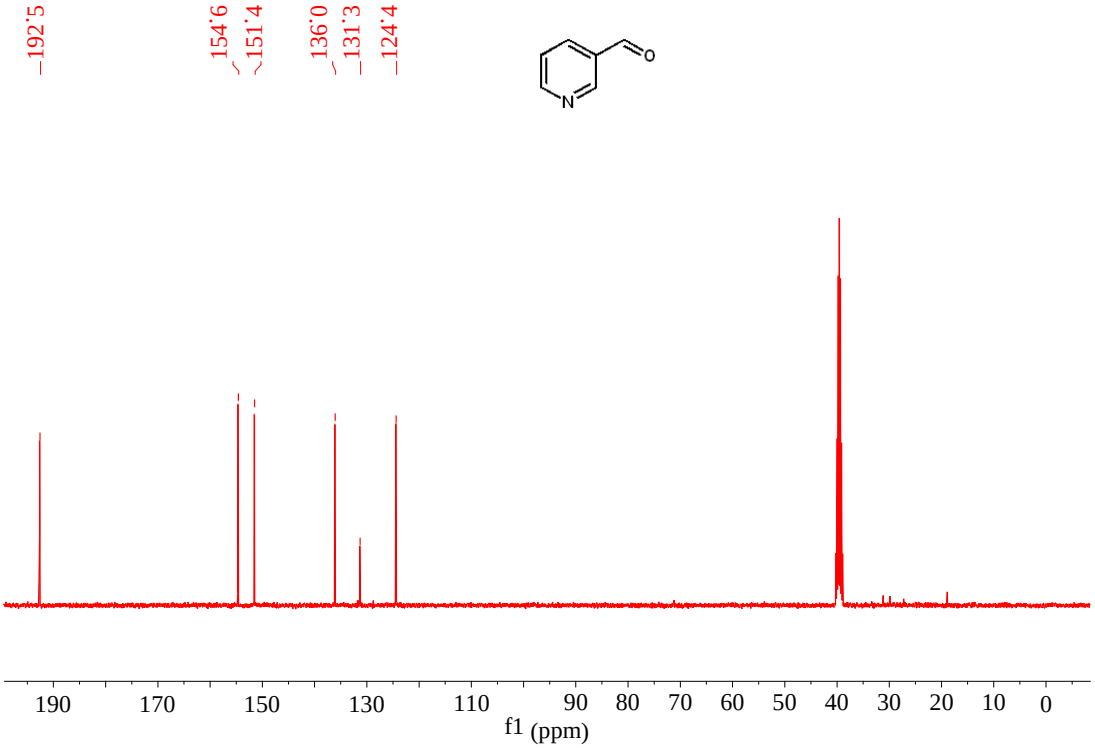
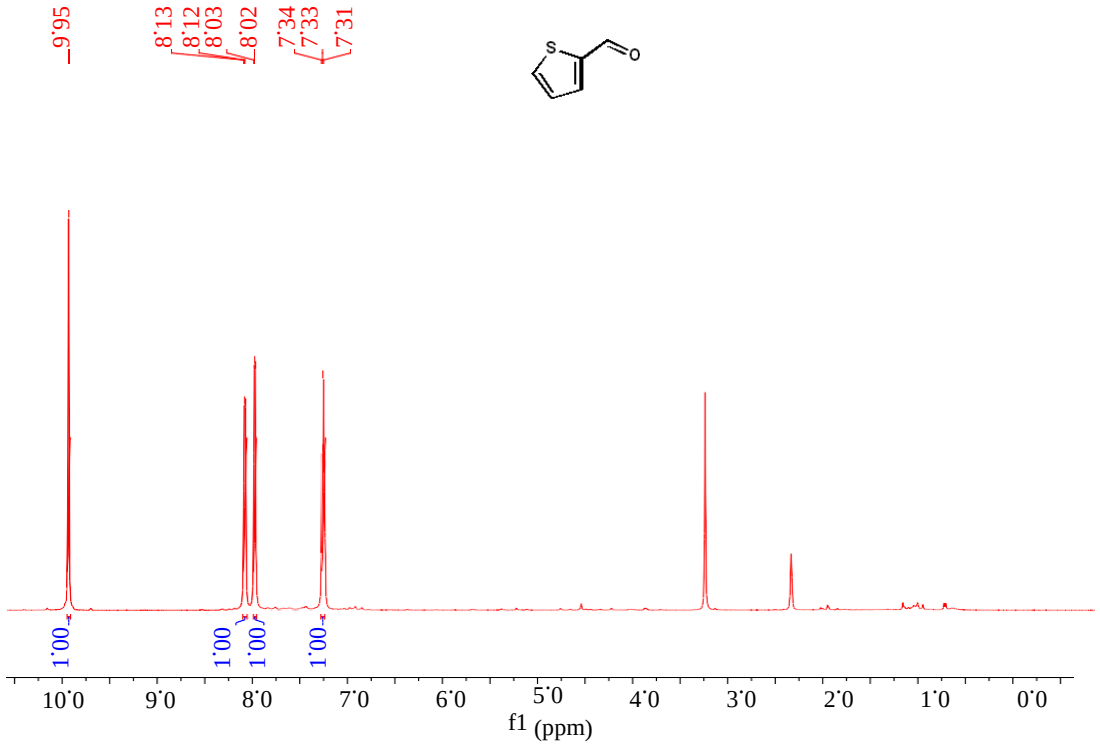


Fig. 25 The ^{1}H and ^{13}C NMR spectra for 2-thiophenecarbaldehyde**.**



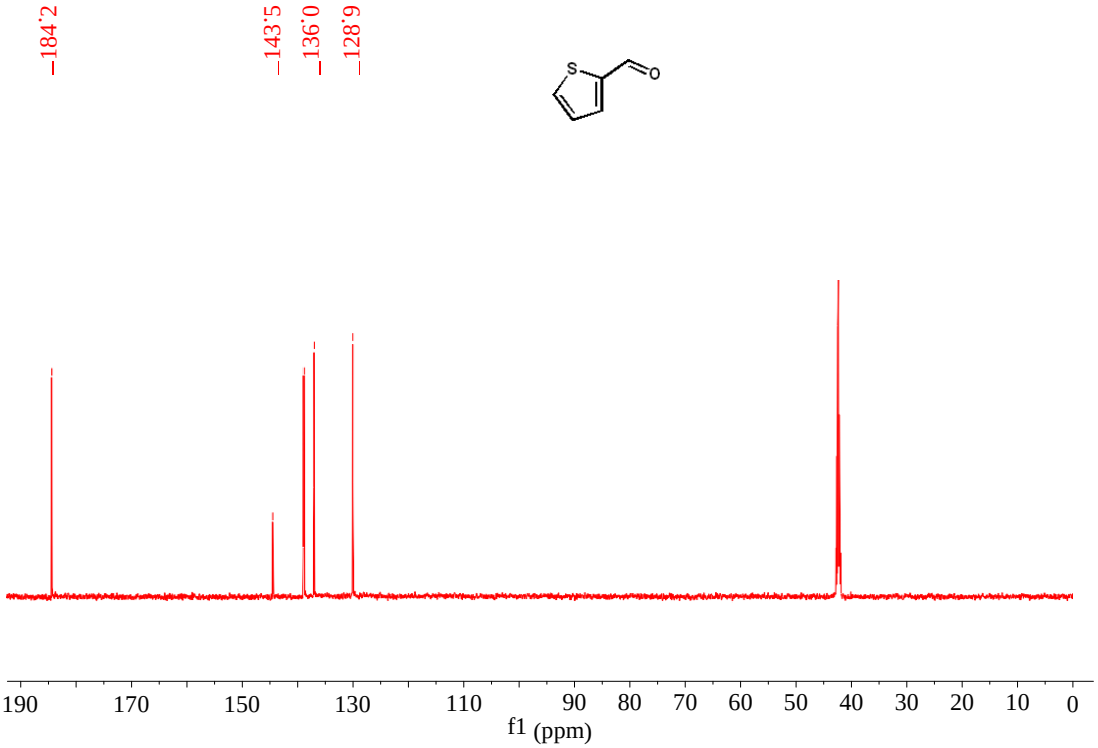
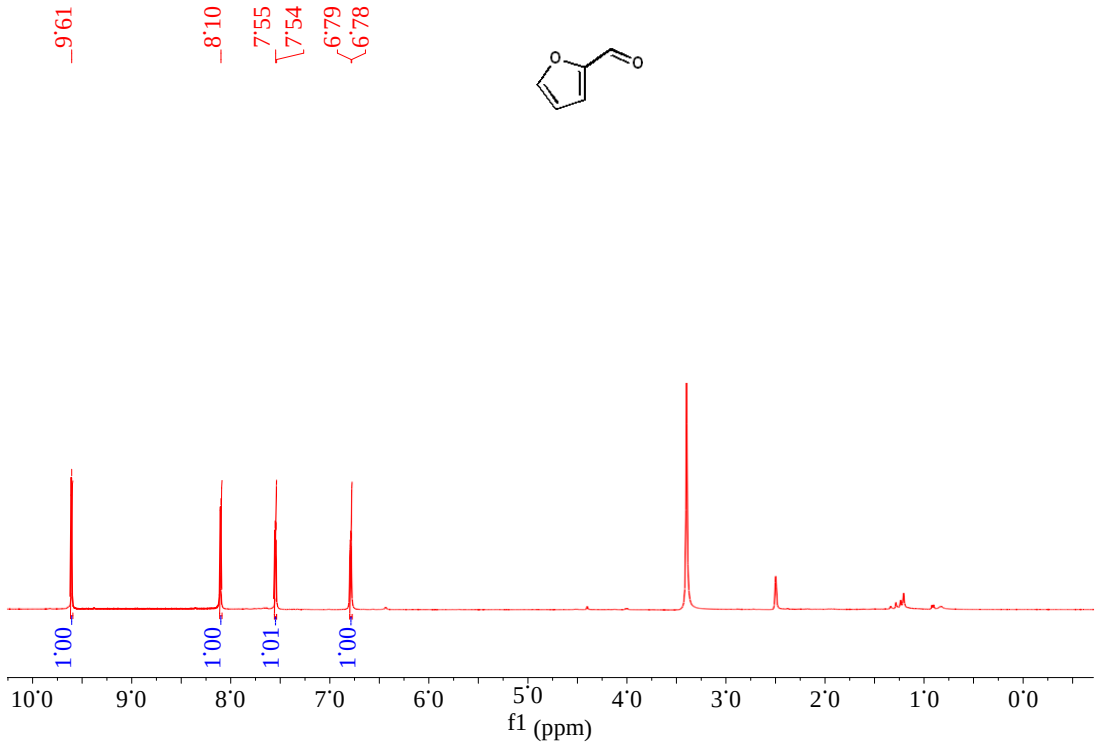


Fig. 26 The ^{1}H and ^{13}C NMR spectra for 2-furancarbaldehyde**.**



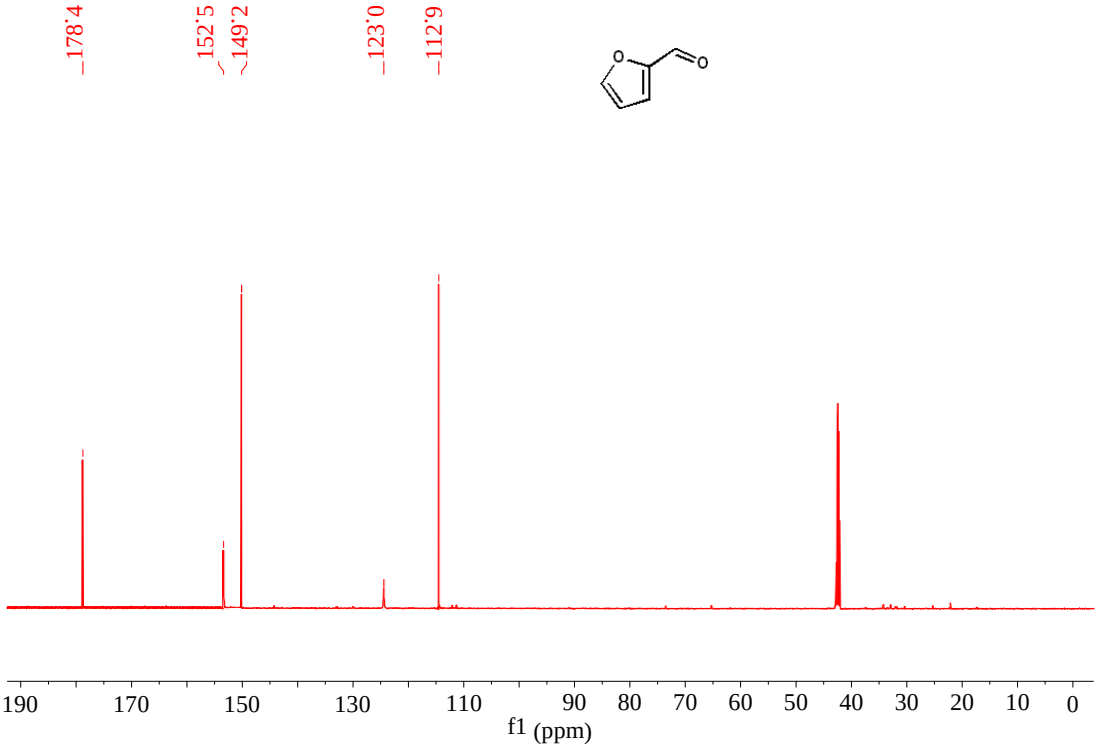
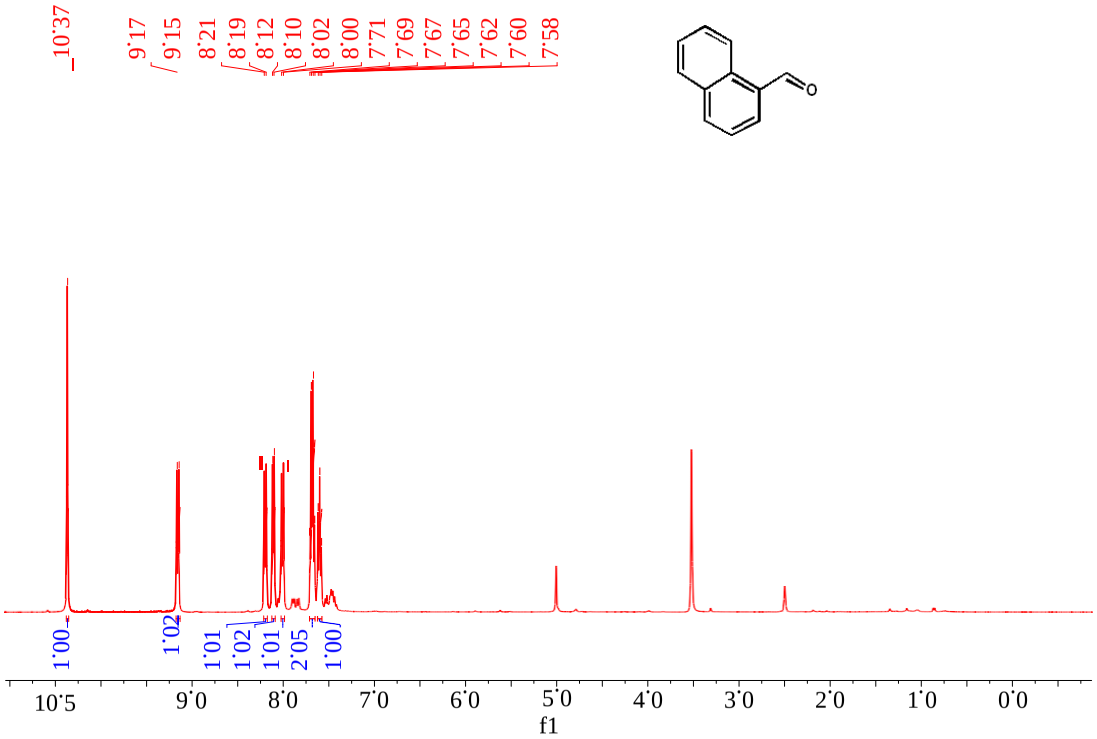


Fig. 27 The ^{1}H and ^{13}C NMR spectra for 1-naphthaldehyde**.**



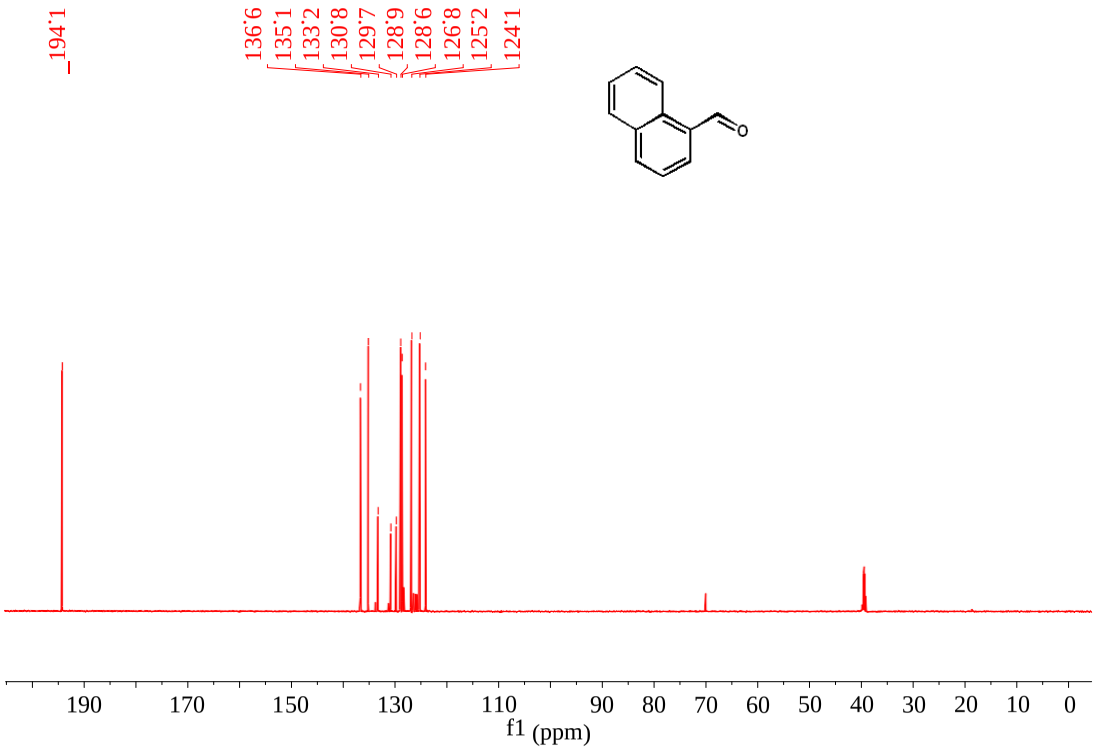
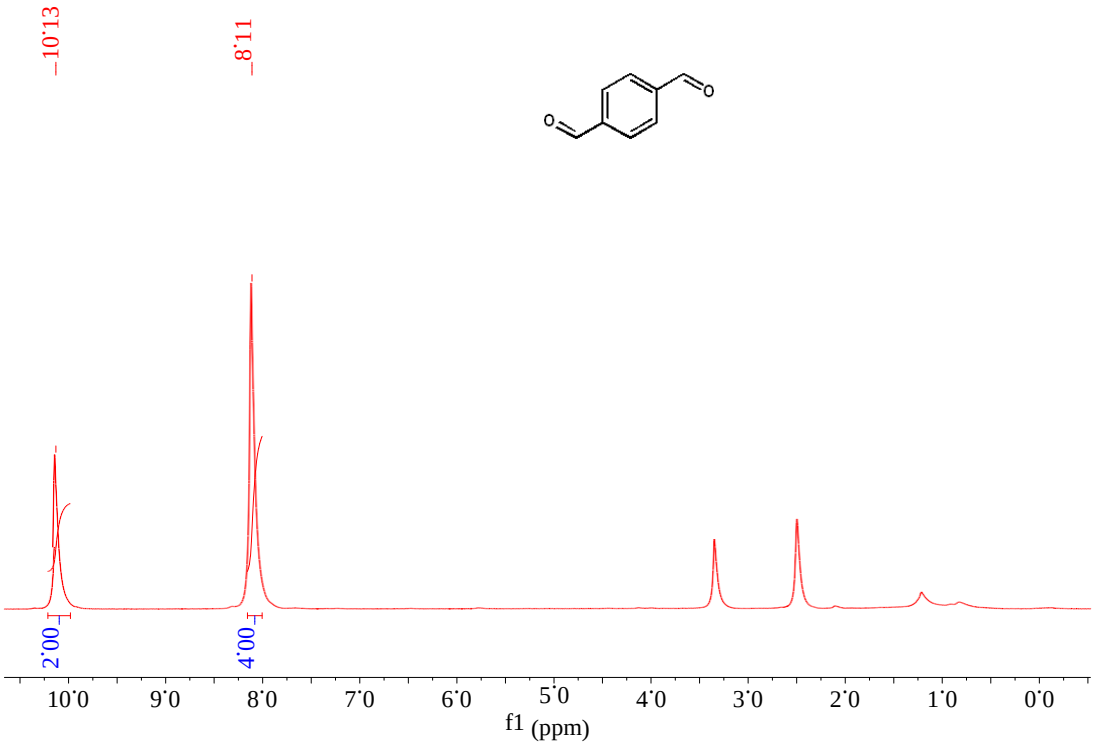


Fig. 28 The ^{1}H and ^{13}C NMR spectra for 1,4-benzenedicarboxaldehyde**.**



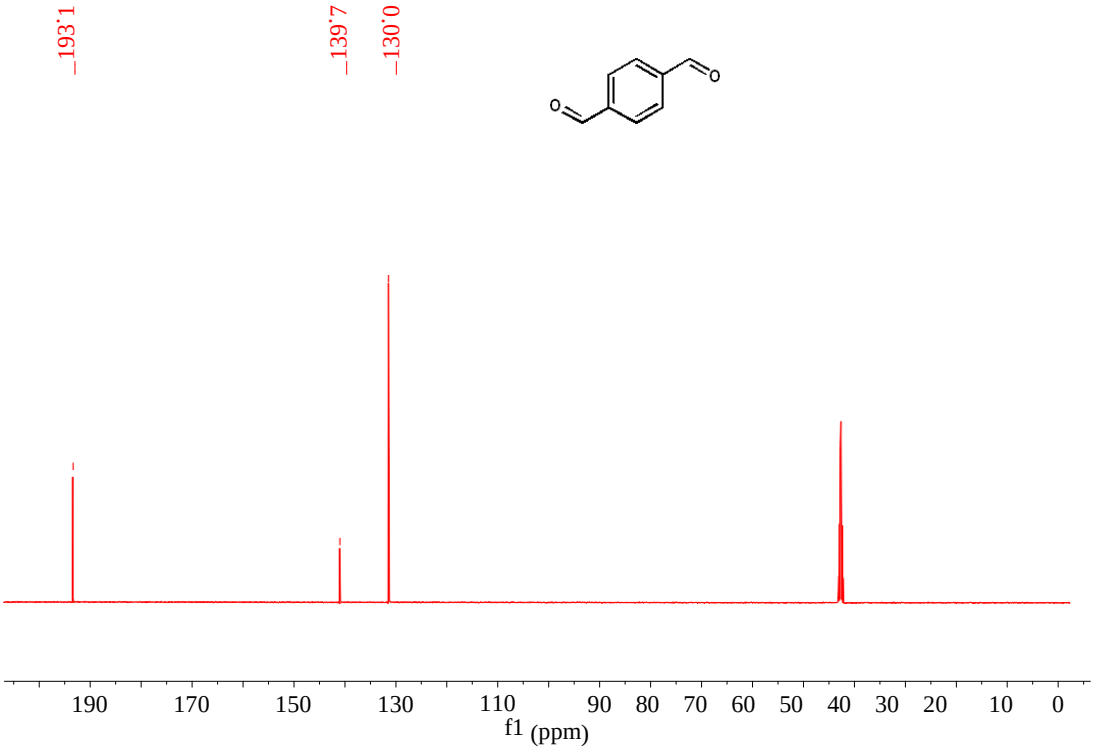
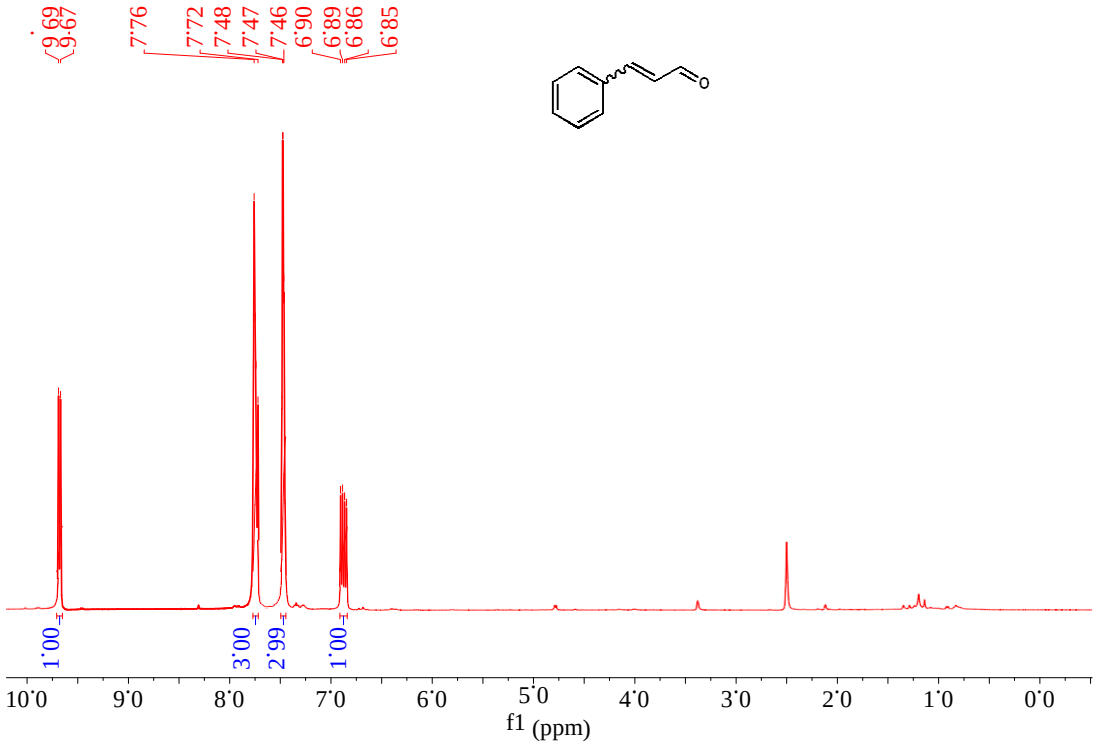


Fig. 29 The ^{1}H and ^{13}C NMR spectra for cinnamaldehyde**.**



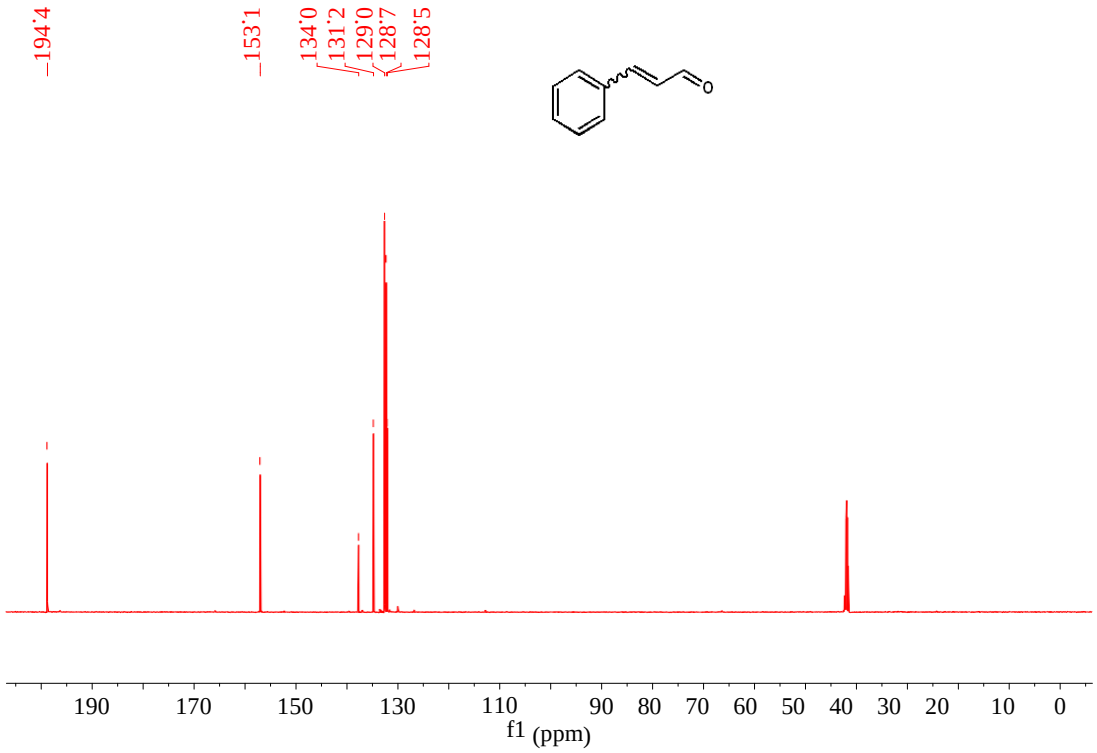


Fig. 30 The ^{1}H and ^{13}C NMR spectra for 2,4,6-trimethylbenzaldehyde**.**

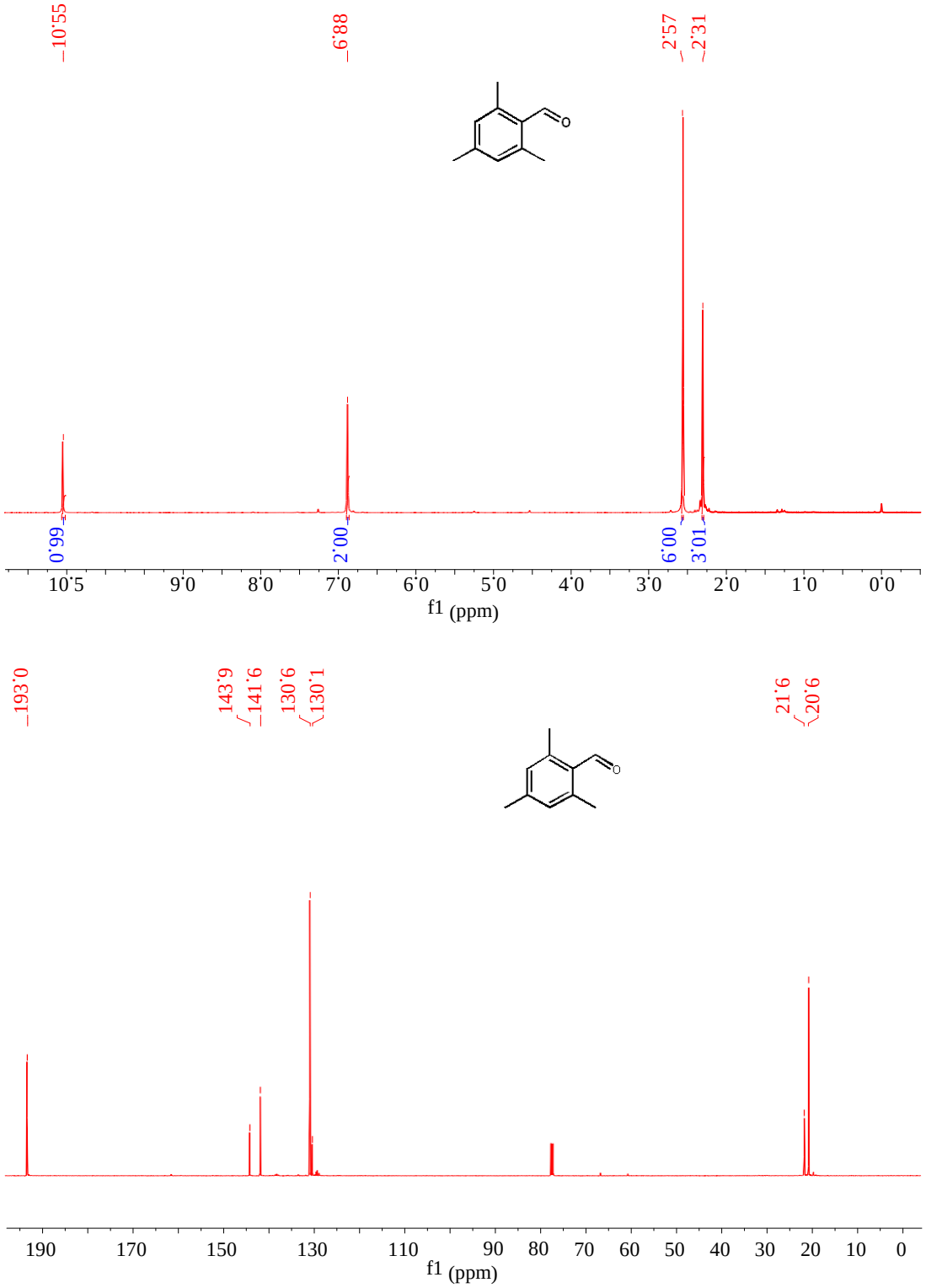
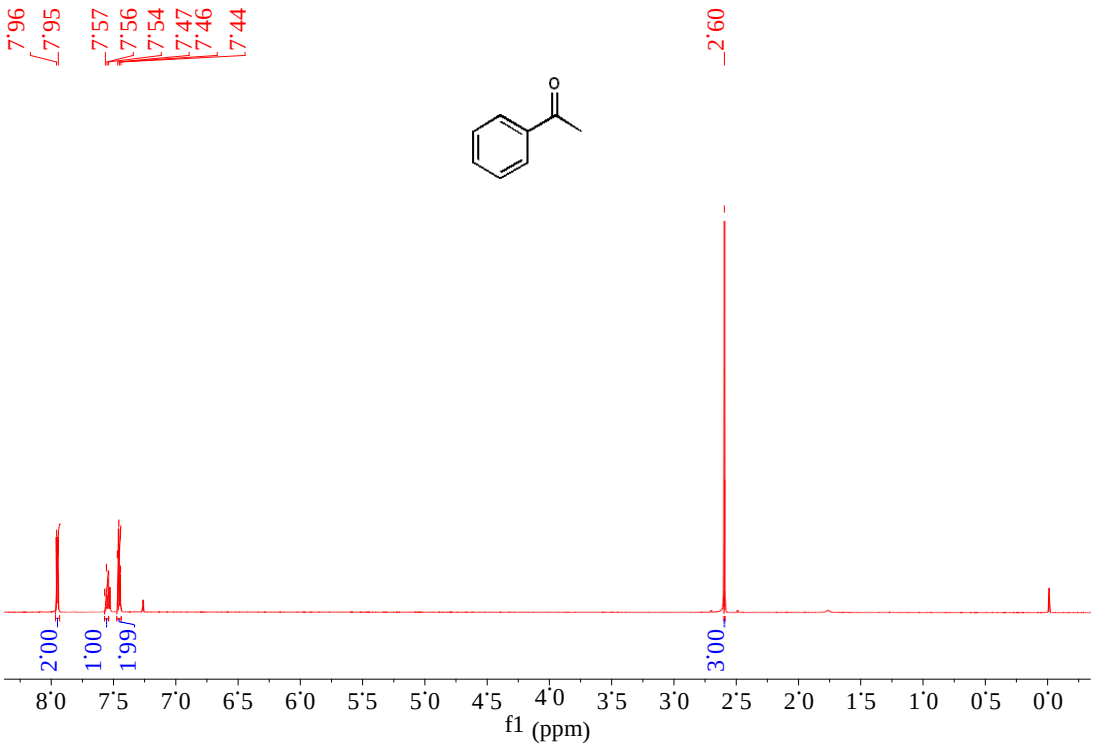


Fig. 31 The ^{1}H and ^{13}C NMR spectra for acetophenone**.**



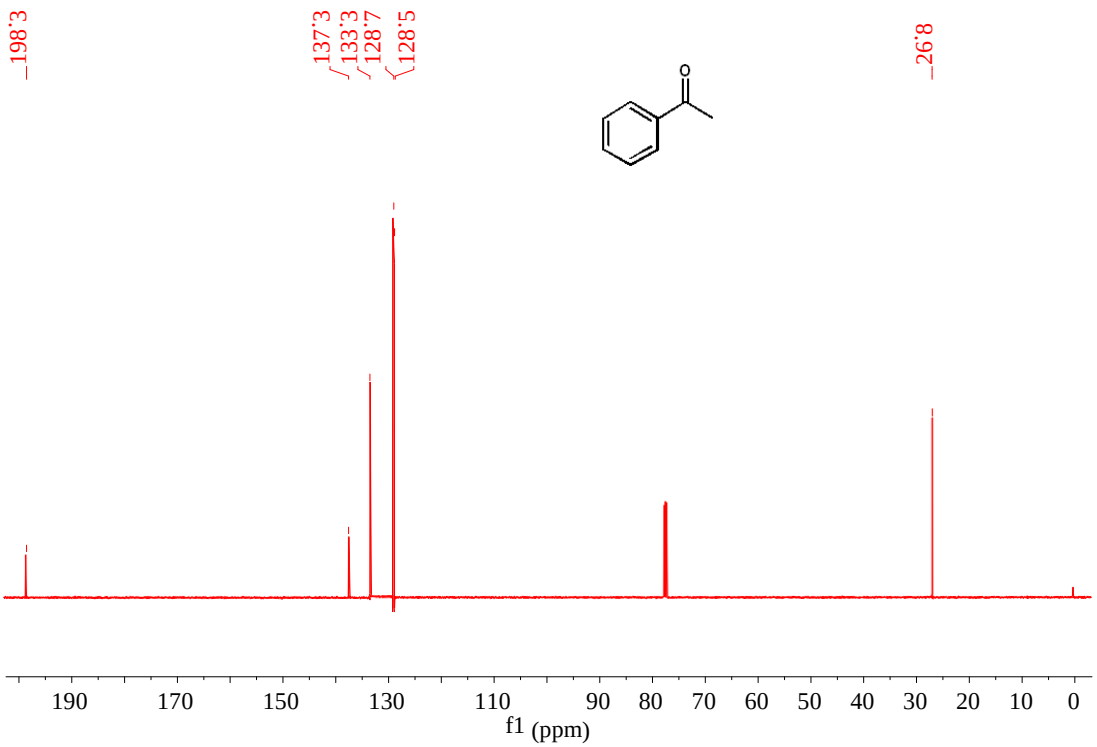
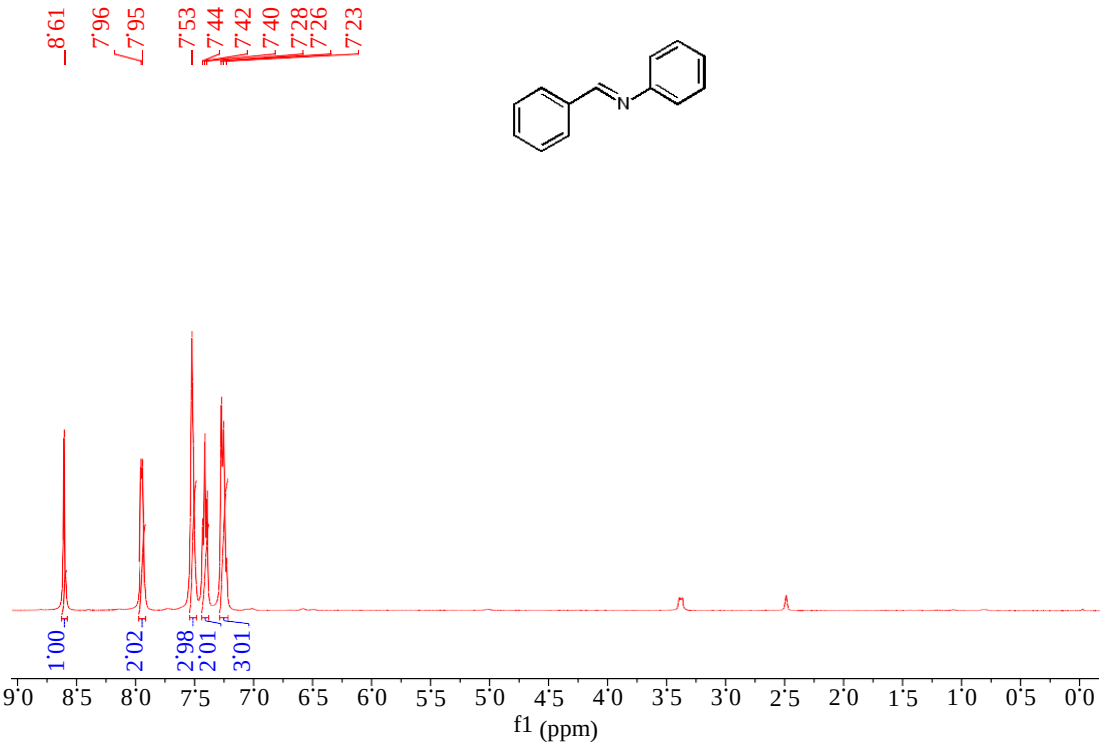


Fig. 32 The ^{1}H and ^{13}C NMR spectra for N,1-diphenylmethanimine**.**



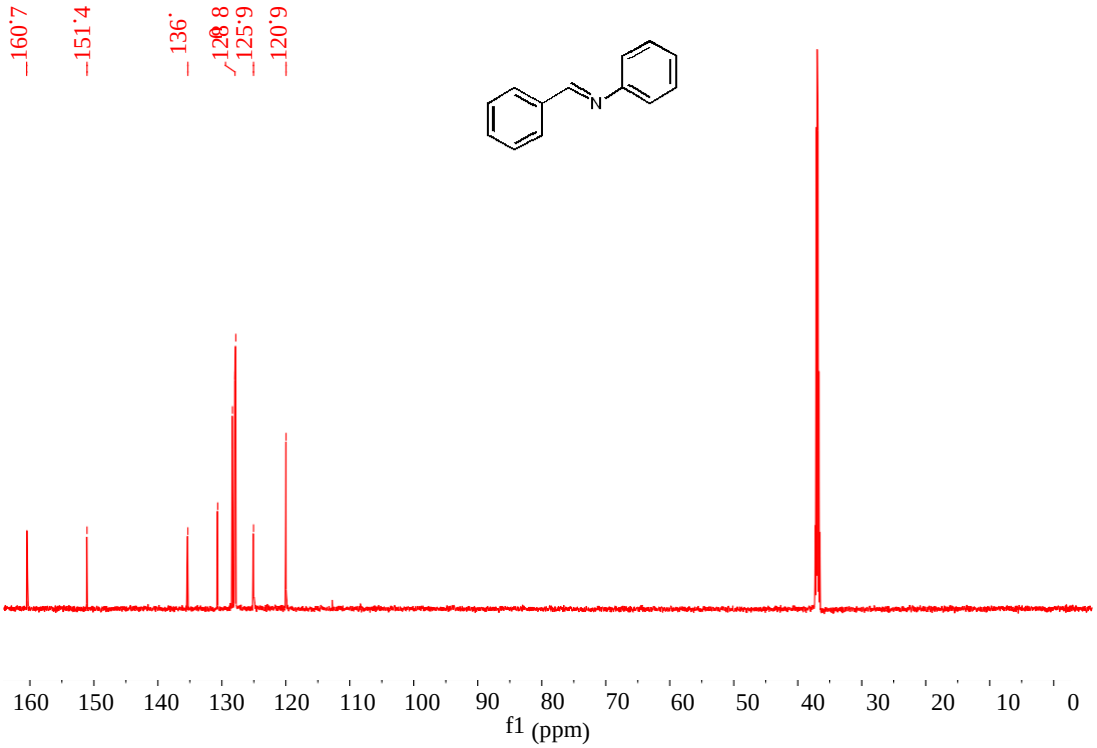
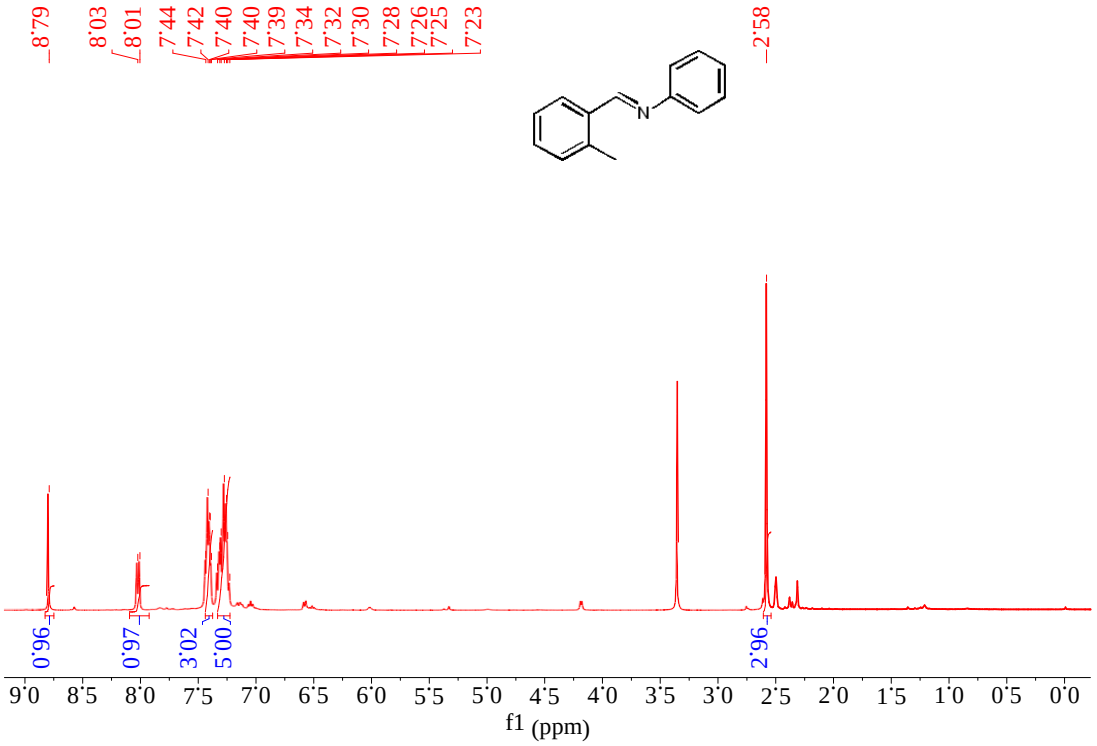


Fig. 33 The ^{1}H and ^{13}C NMR spectra for N-phenyl-1-(o-tolyl)methanimine**.**



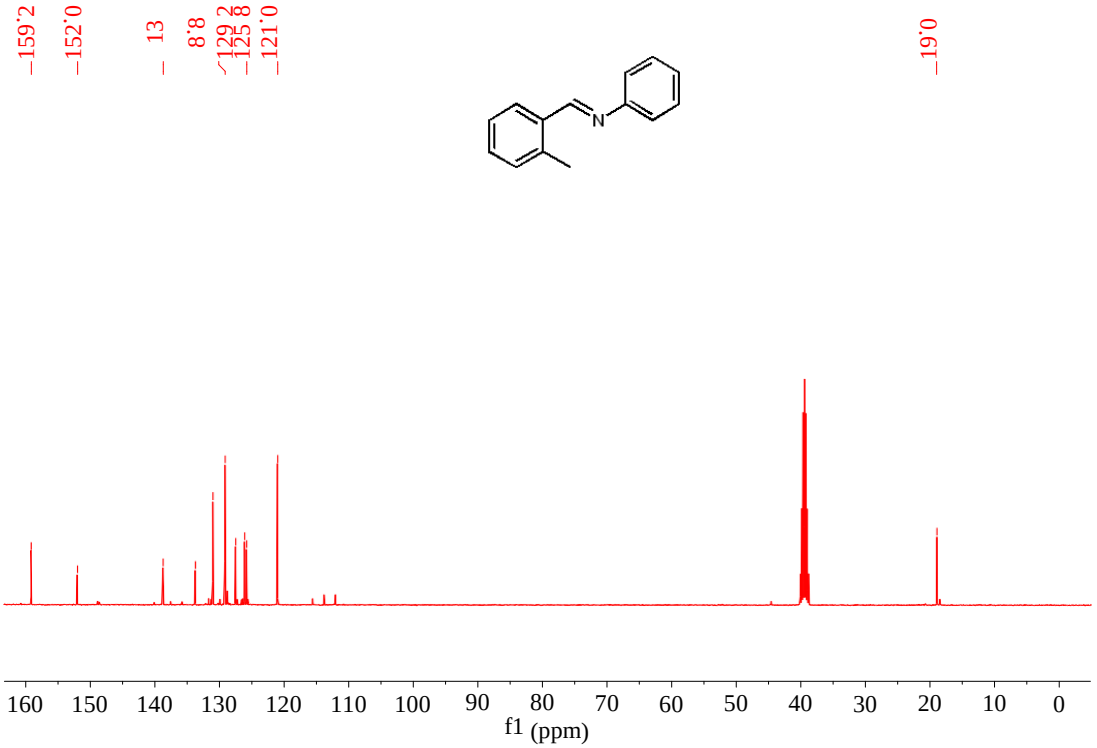
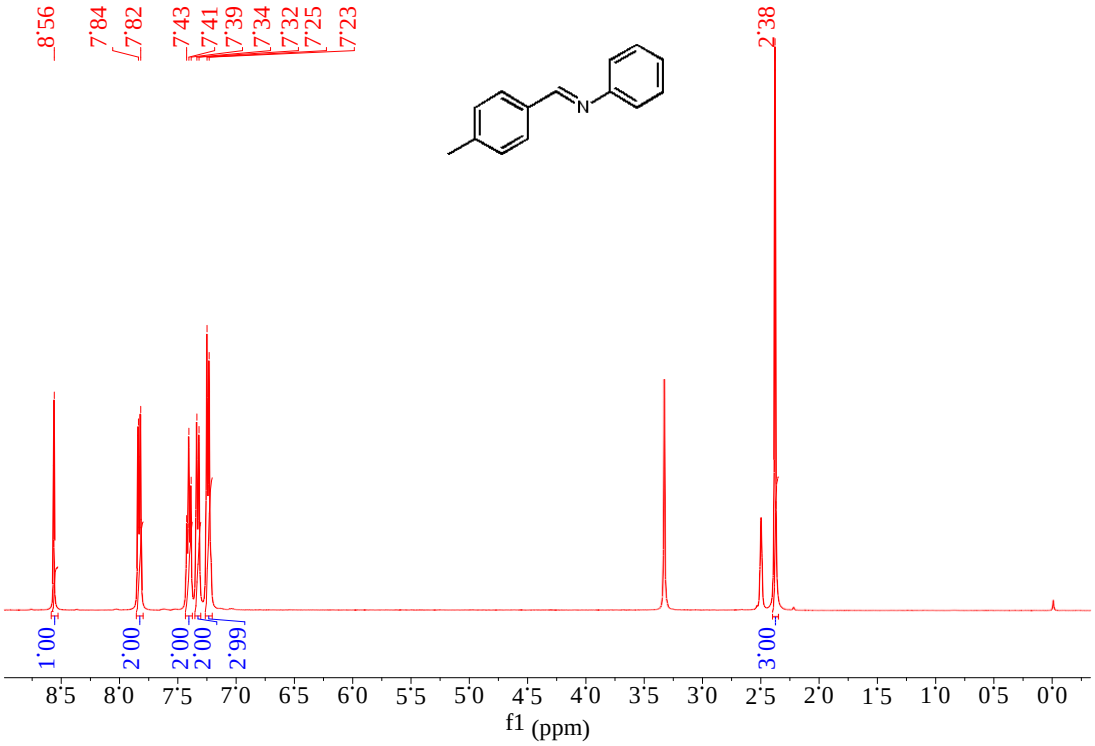


Fig. 34 The ^{1}H and ^{13}C NMR spectra for N-phenyl-1-(p-tolyl)methanimine



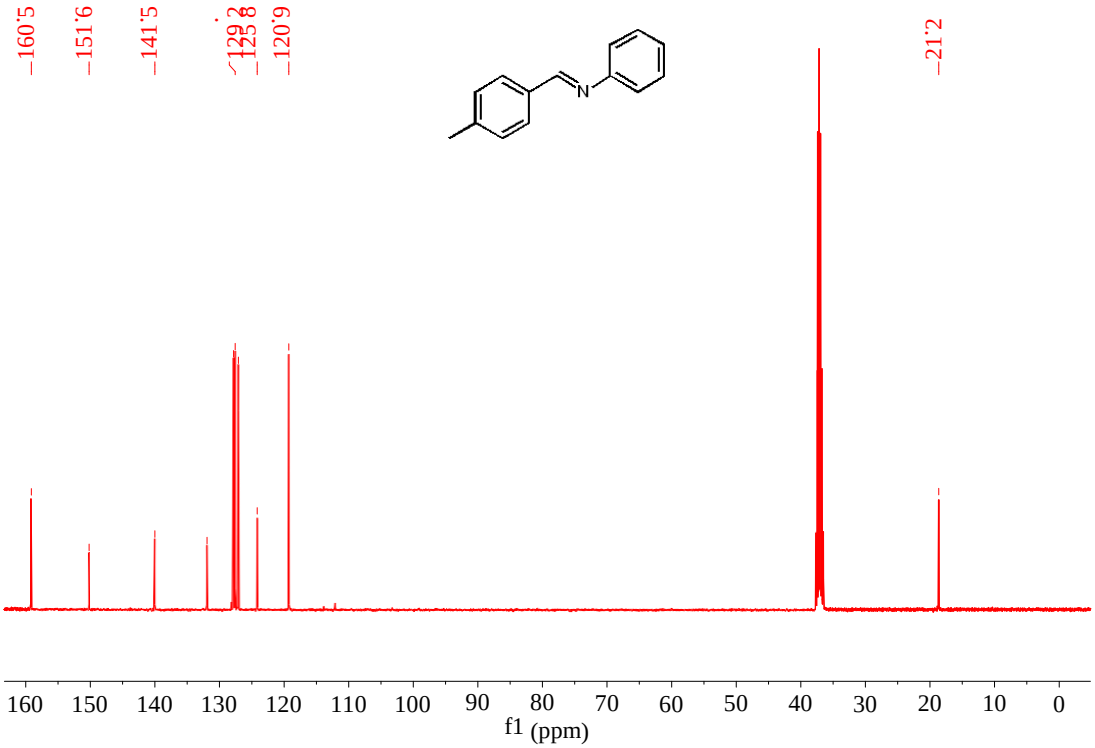
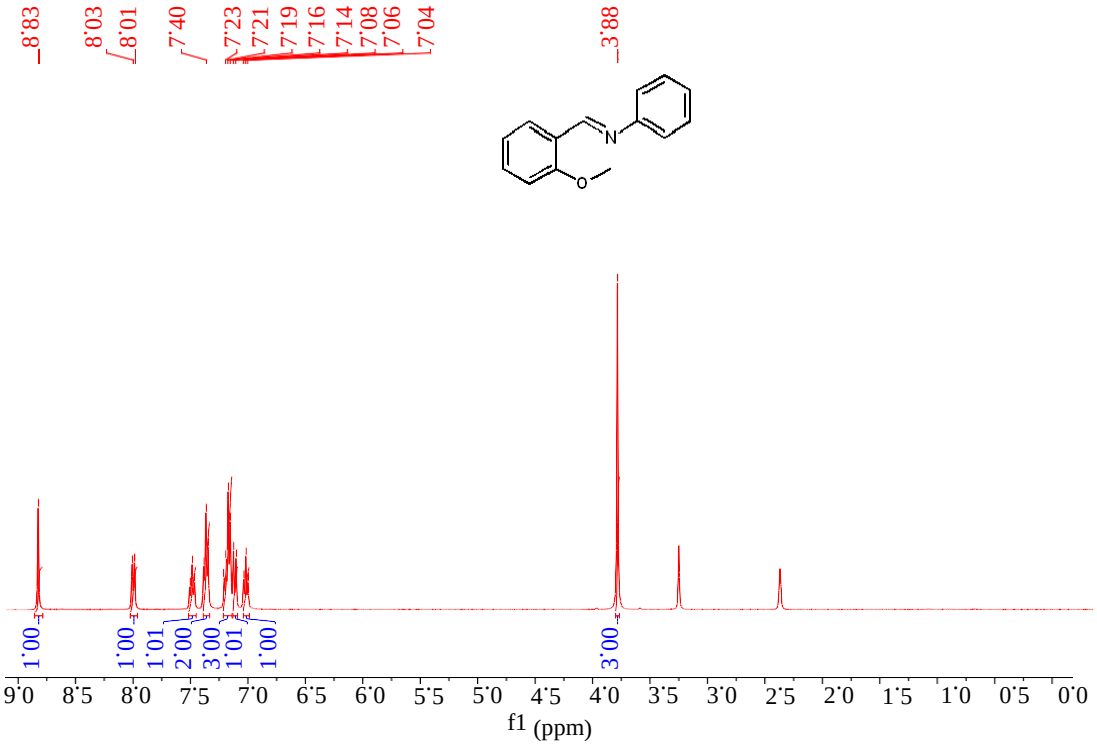


Fig. 35 The ^{1}H and ^{13}C NMR spectra for 1-(2-methoxyphenyl)-N-phenylmethanimine



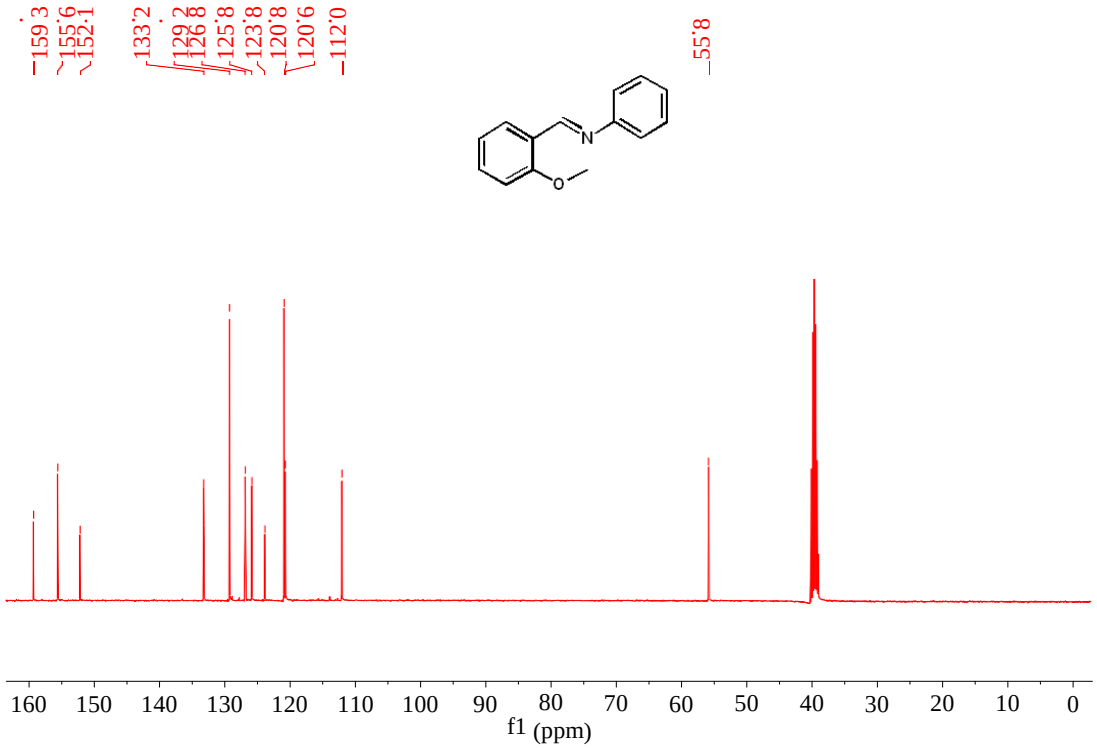
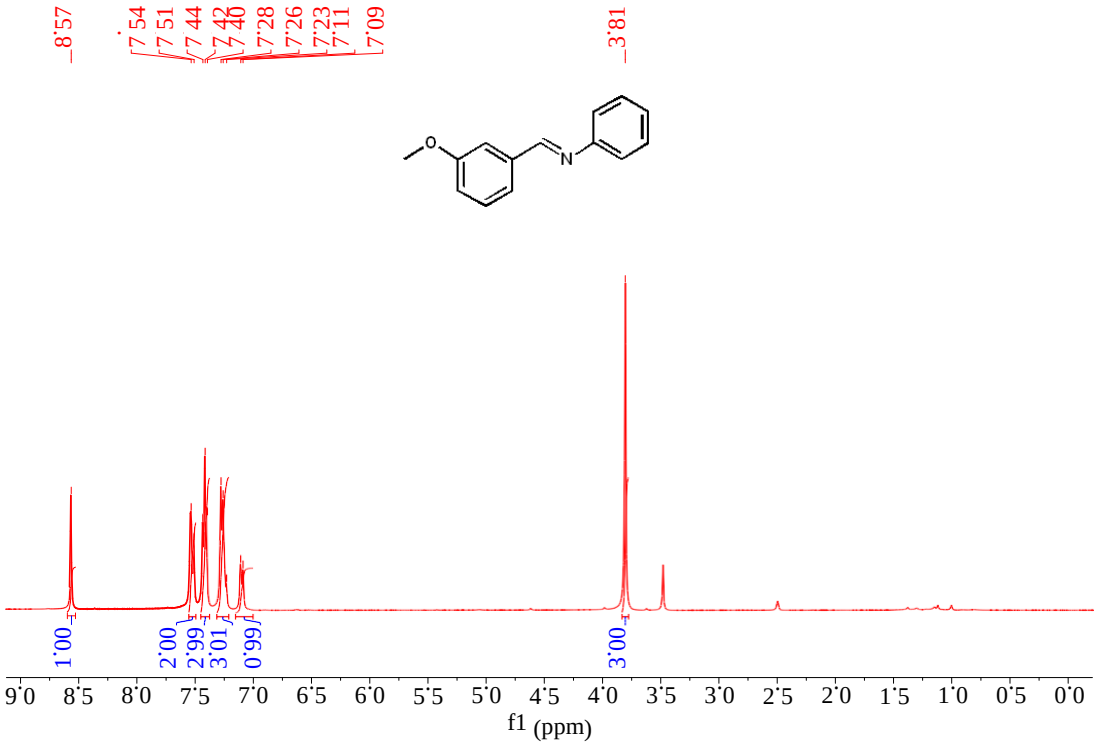


Fig. 36 The ^{1}H and ^{13}C NMR spectra for 1-(3-methoxyphenyl)-N-phenylmethanimine



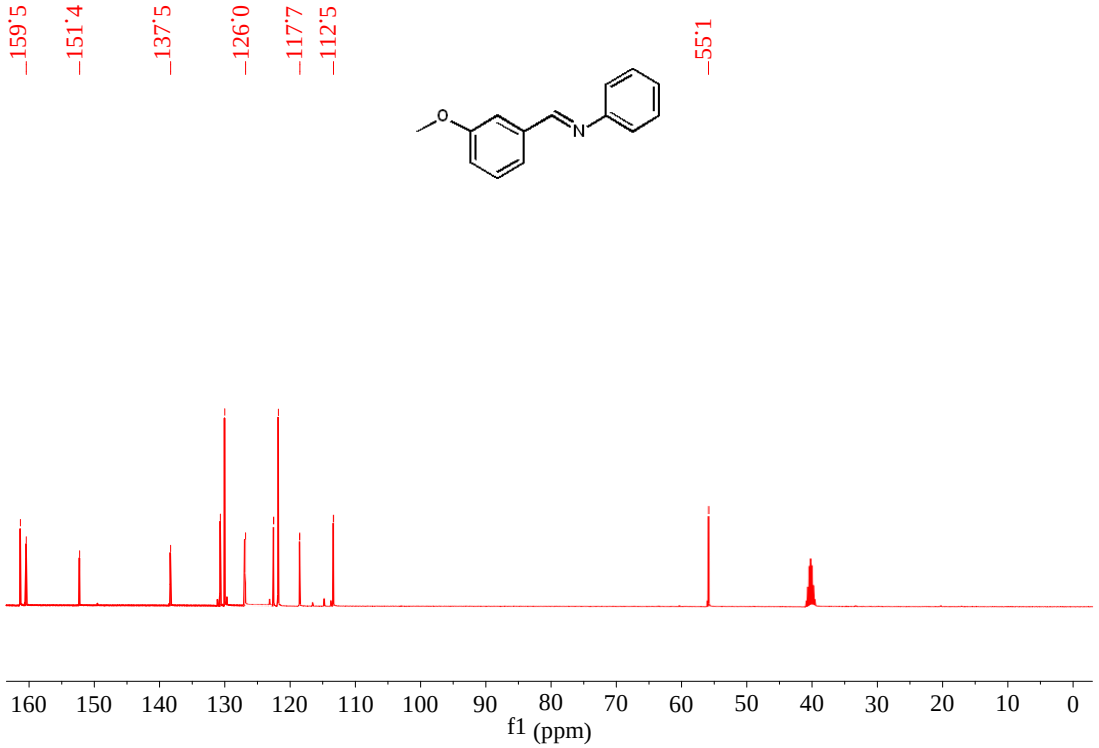
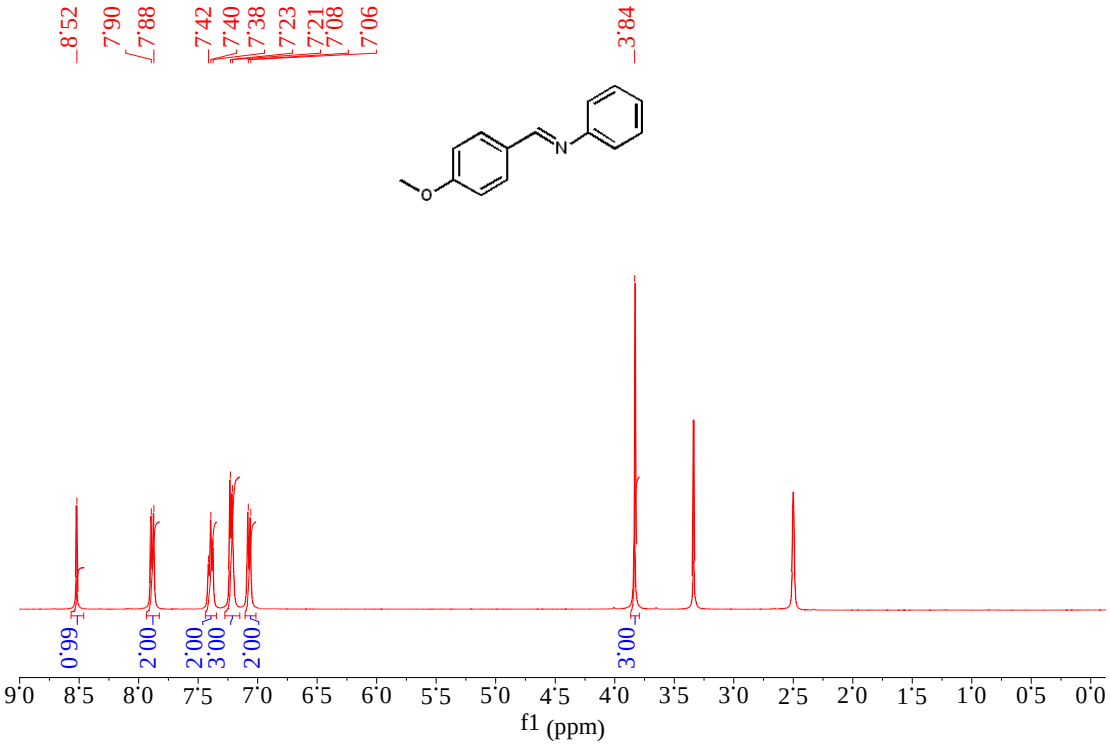


Fig. 37 The ^{1}H and ^{13}C NMR spectra for 1-(4-methoxyphenyl)-N-phenylmethanimine



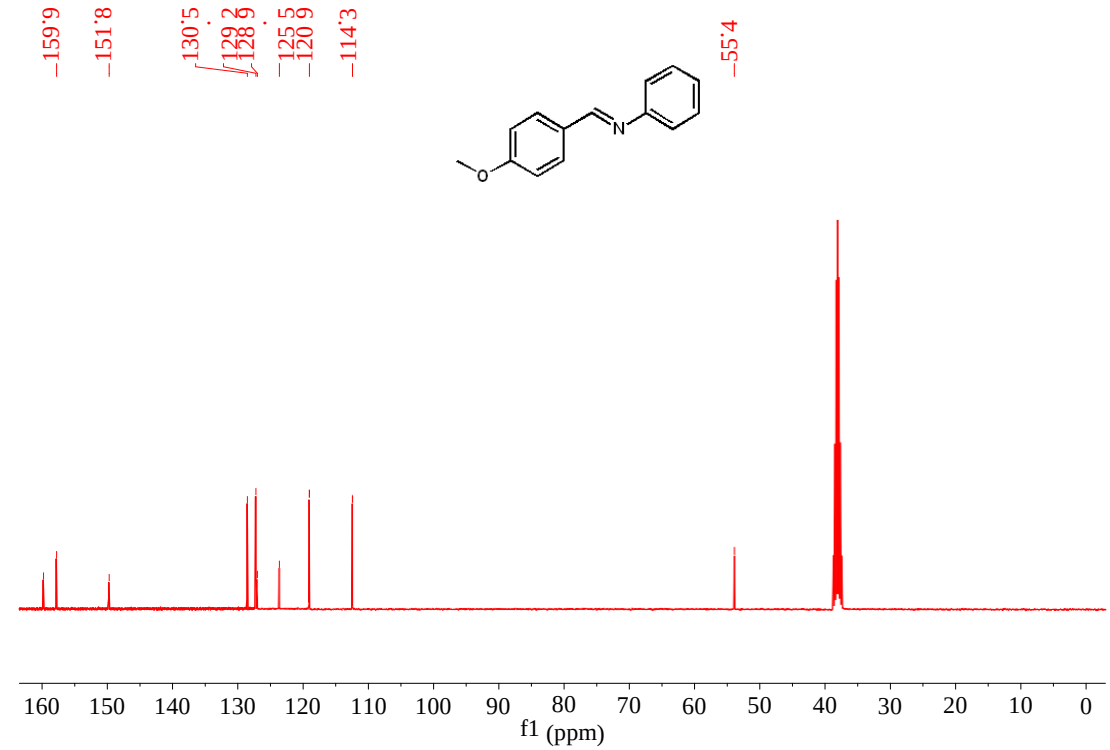
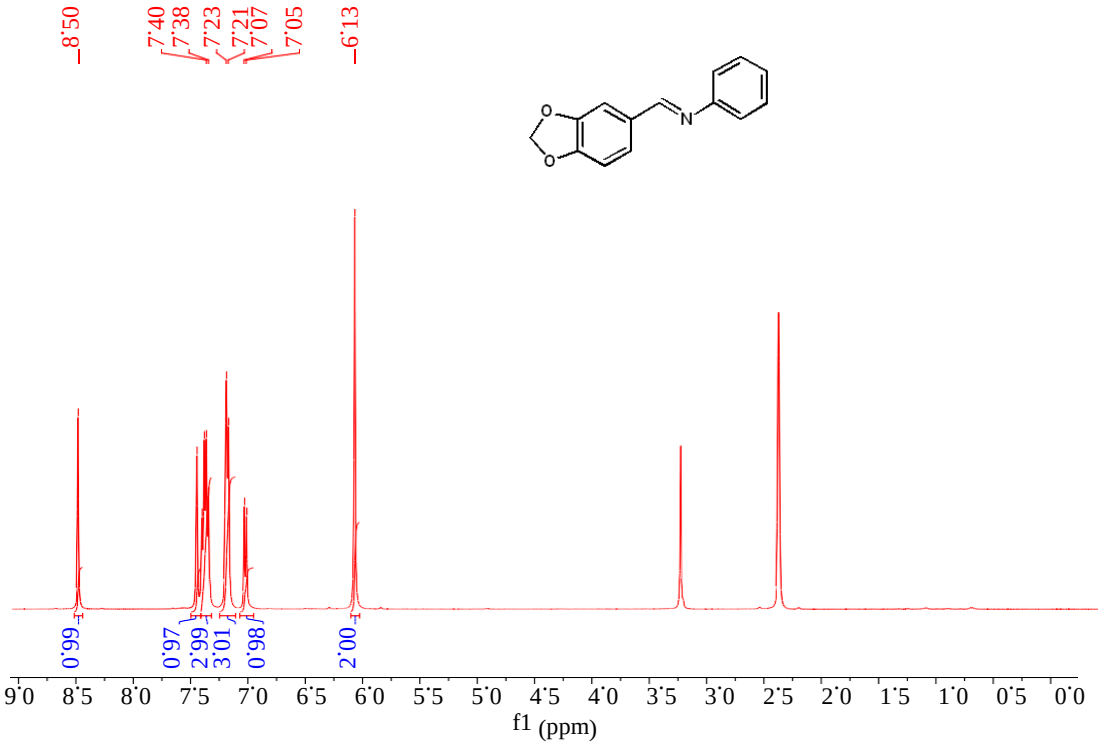


Fig. 38 The ^{1}H and ^{13}C NMR spectra for 1-(benzo[d][1,3]dioxol-5-yl)-N-phenylmethanimine



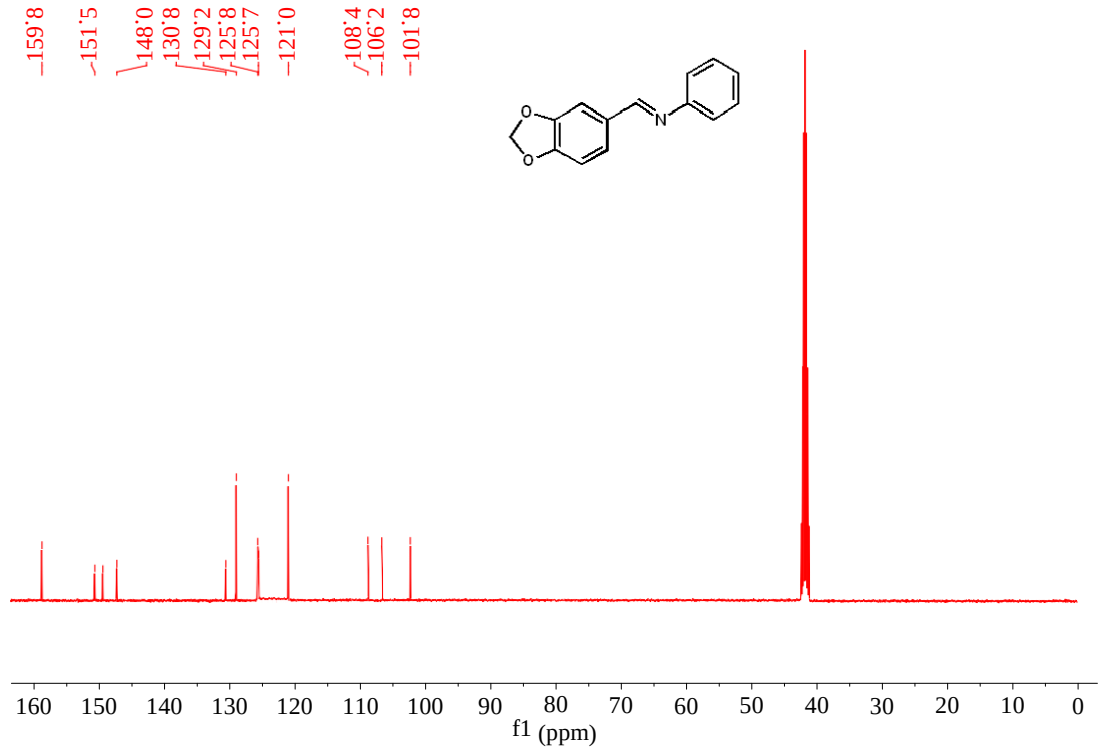
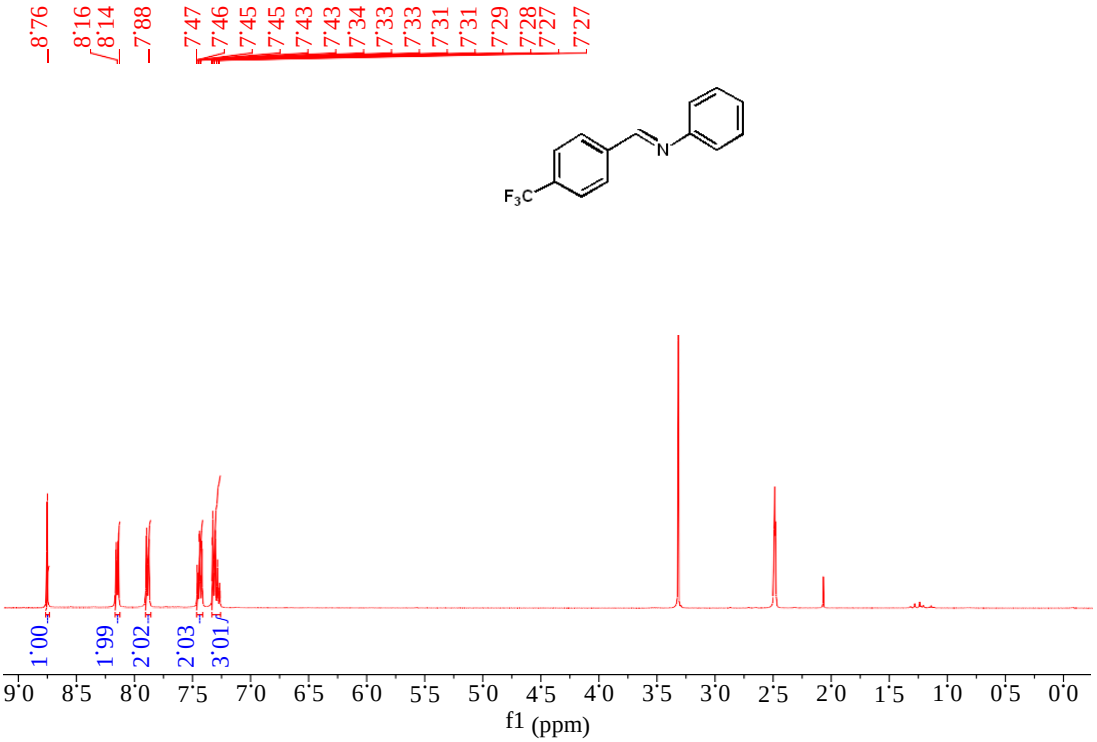


Fig. 39 The ^{1}H and ^{13}C NMR spectra for N-phenyl-1-(4-(trifluoromethyl)phenyl)methanimine



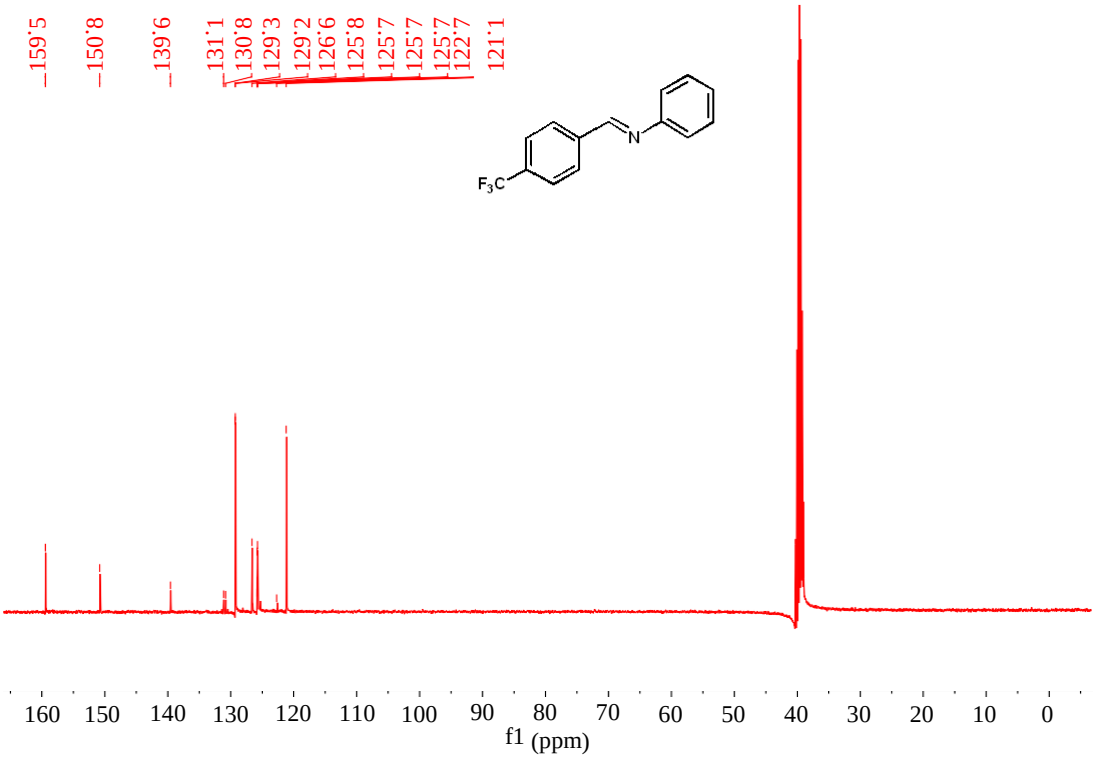
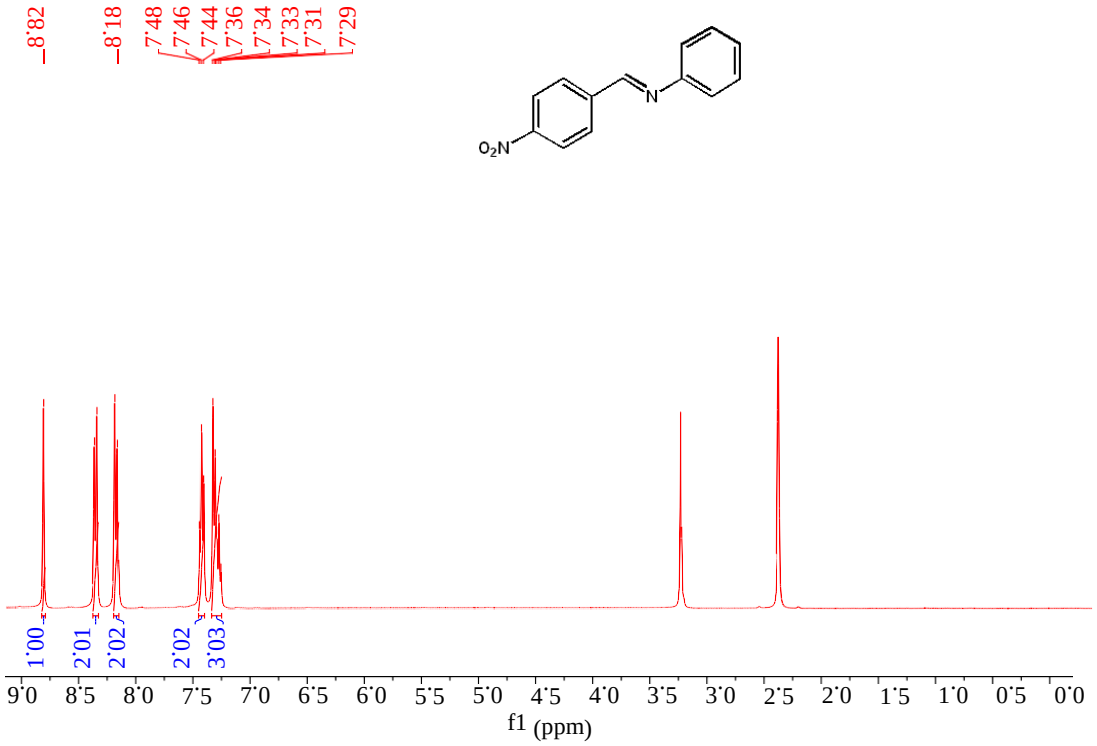


Fig. 40 The ^{1}H and ^{13}C NMR spectra for 1-(4-nitrophenyl)-N-phenylmethanimine



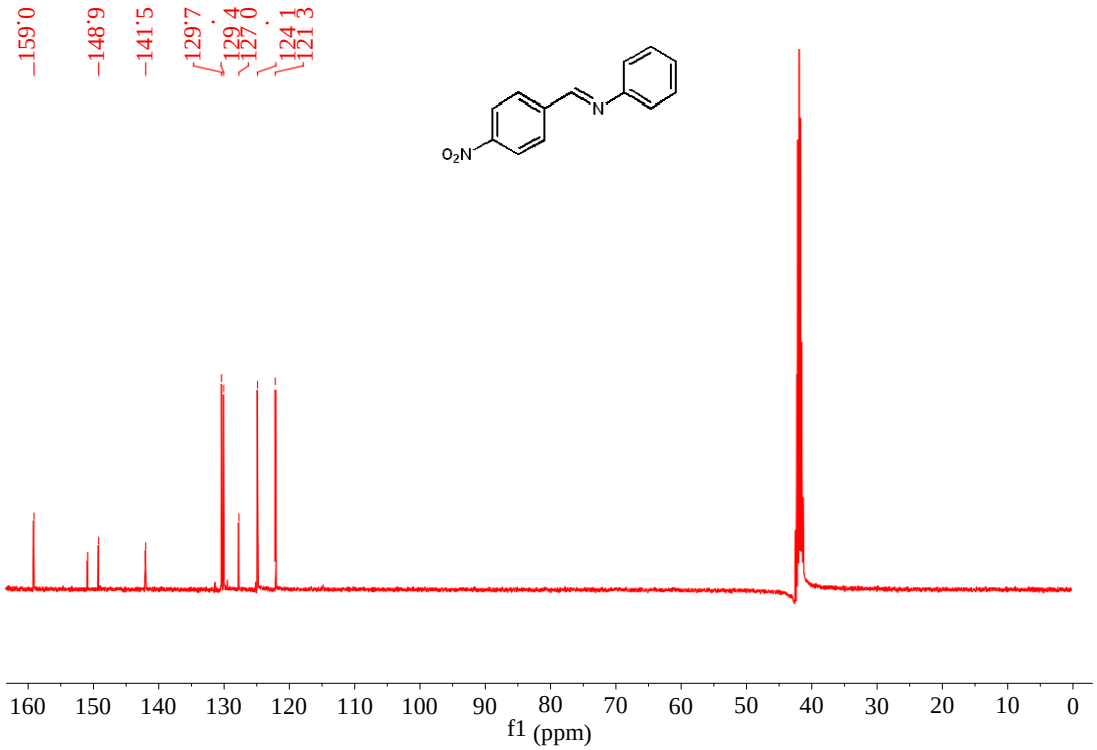
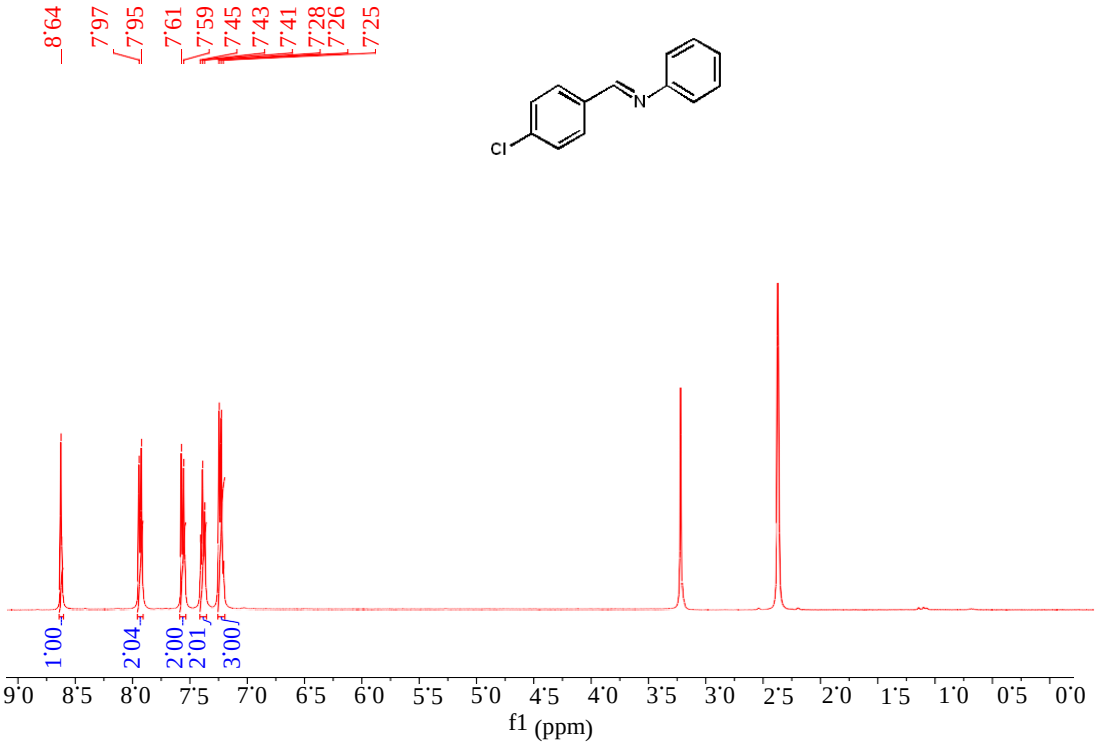


Fig. 41 The ^{1}H and ^{13}C NMR spectra for 1-(4-chlorophenyl)-N-phenylmethanimine



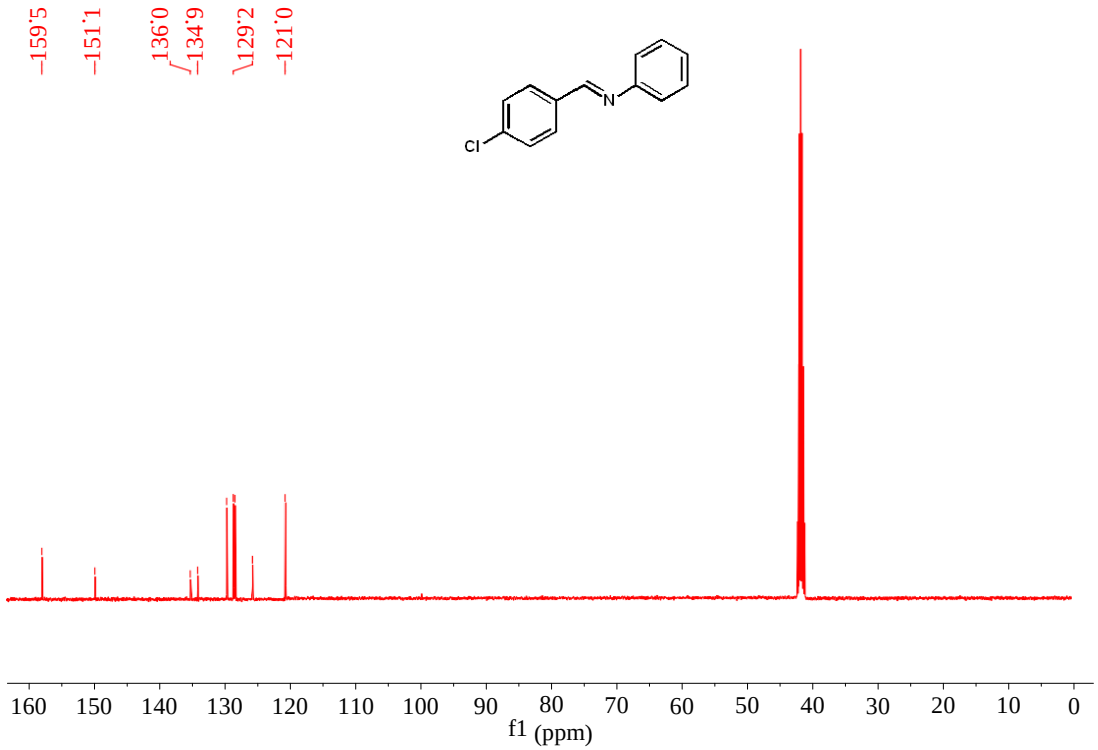
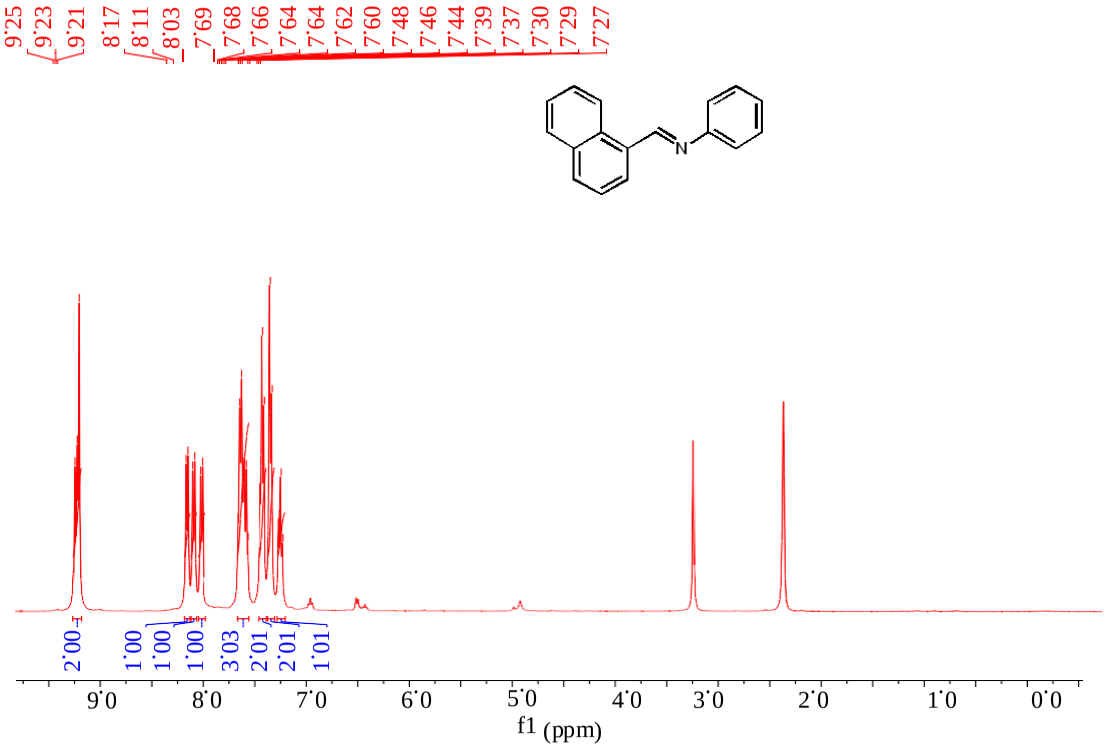


Fig. 42 The ^{1}H and ^{13}C NMR spectra for 1-(naphthalen-1-yl)-N-phenylmethanimine



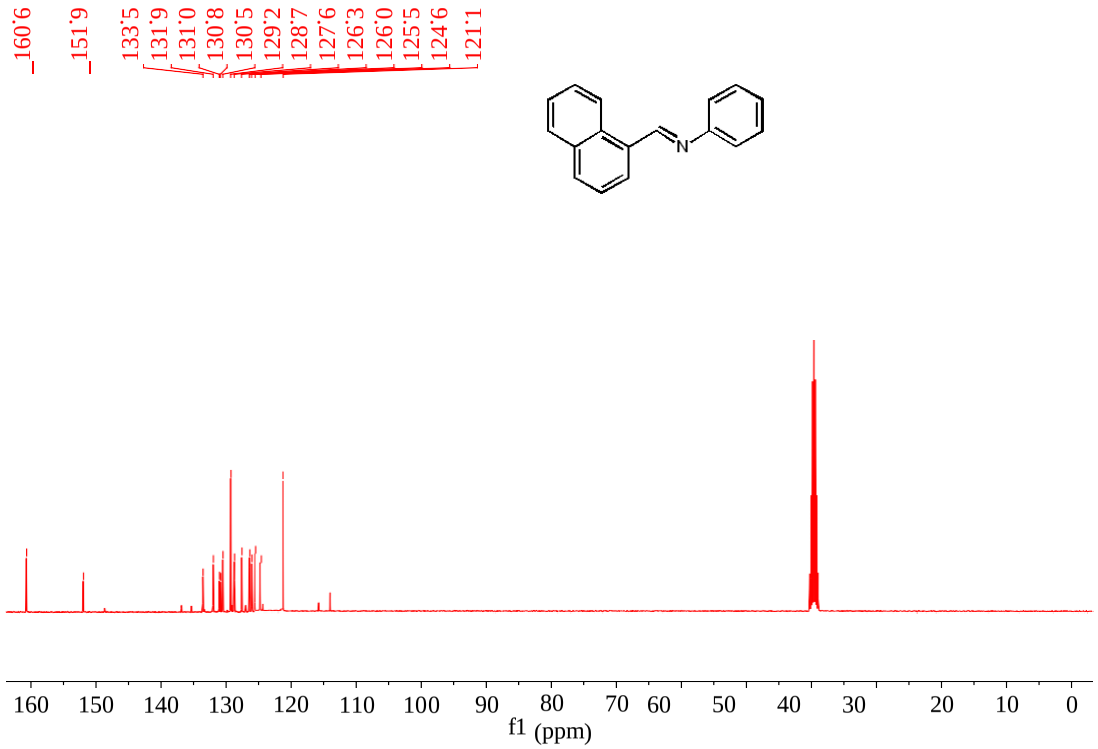
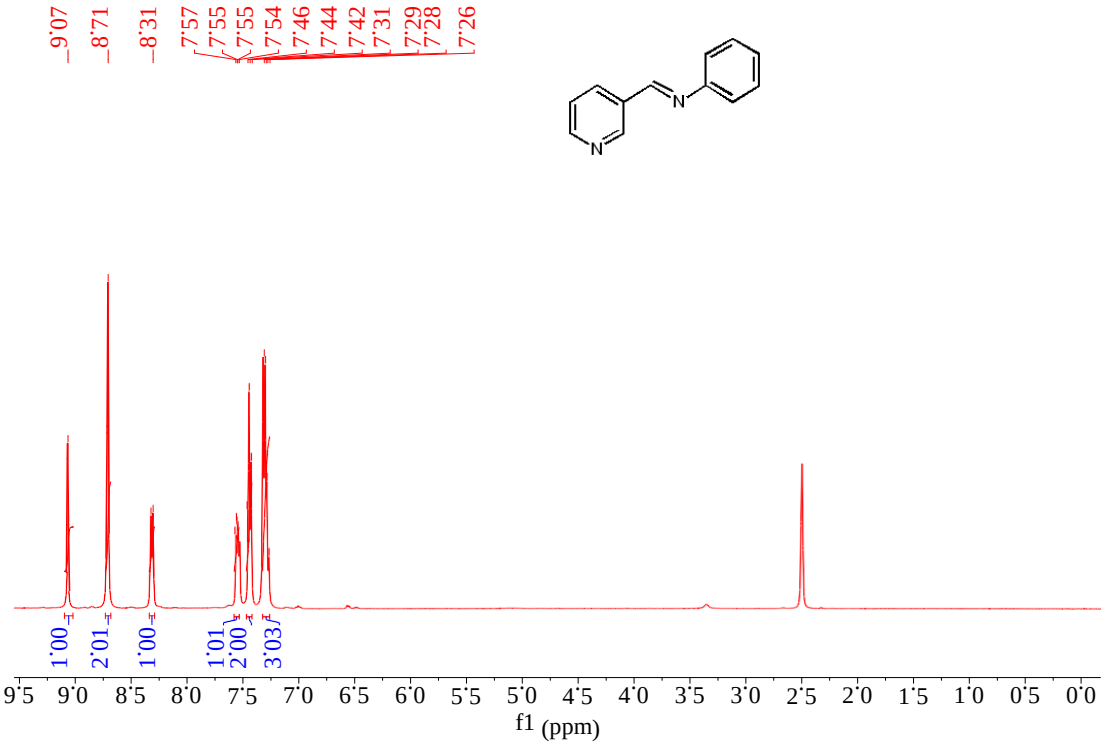


Fig. 43 The ^{1}H and ^{13}C NMR spectra for N-phenyl-1-(pyridin-3-yl)methanimine



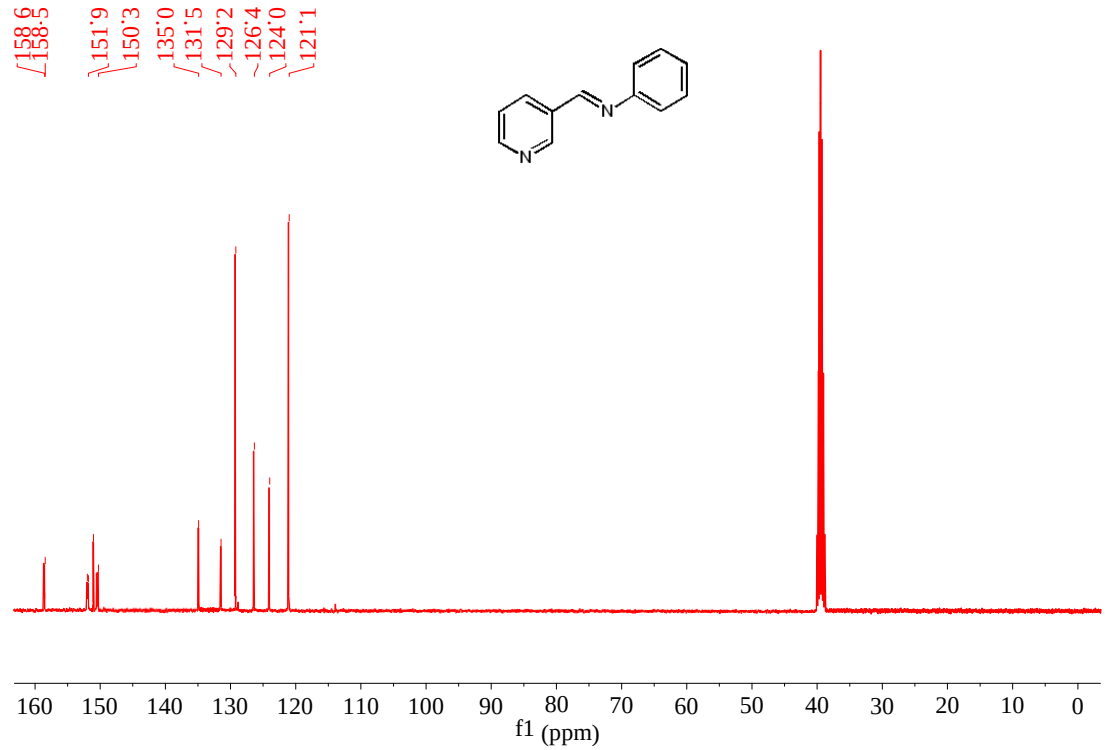
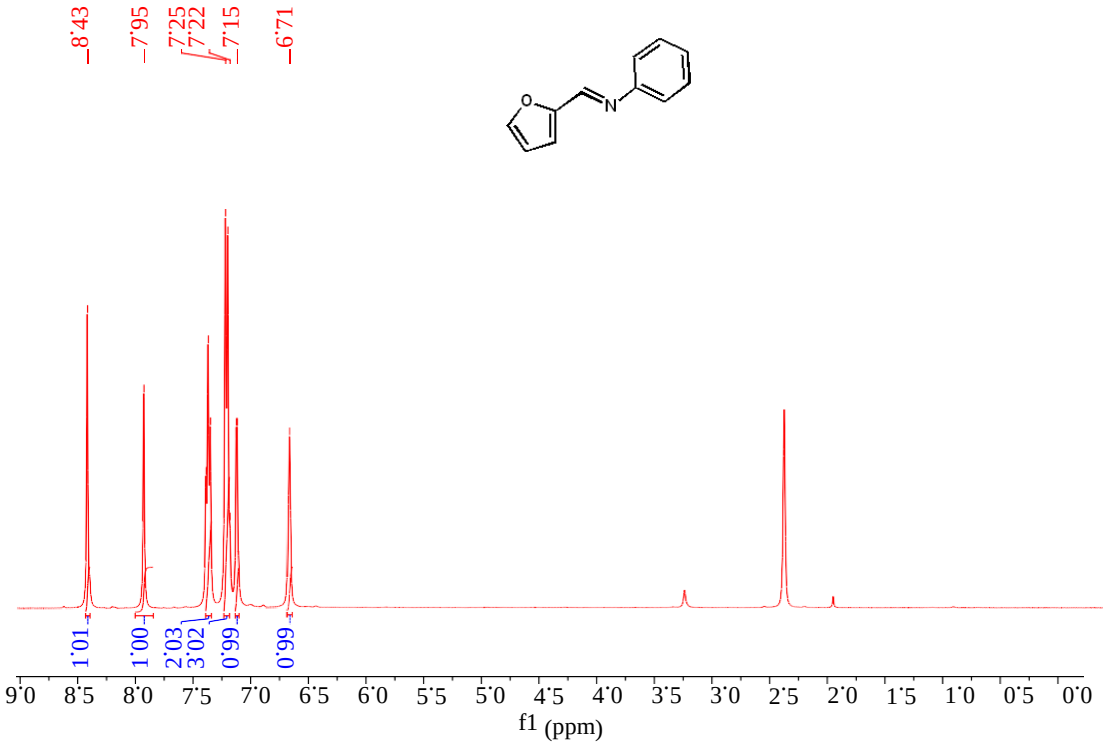


Fig. 44 The ^{1}H and ^{13}C NMR spectra for 1-(furan-2-yl)-N-phenylmethanimine



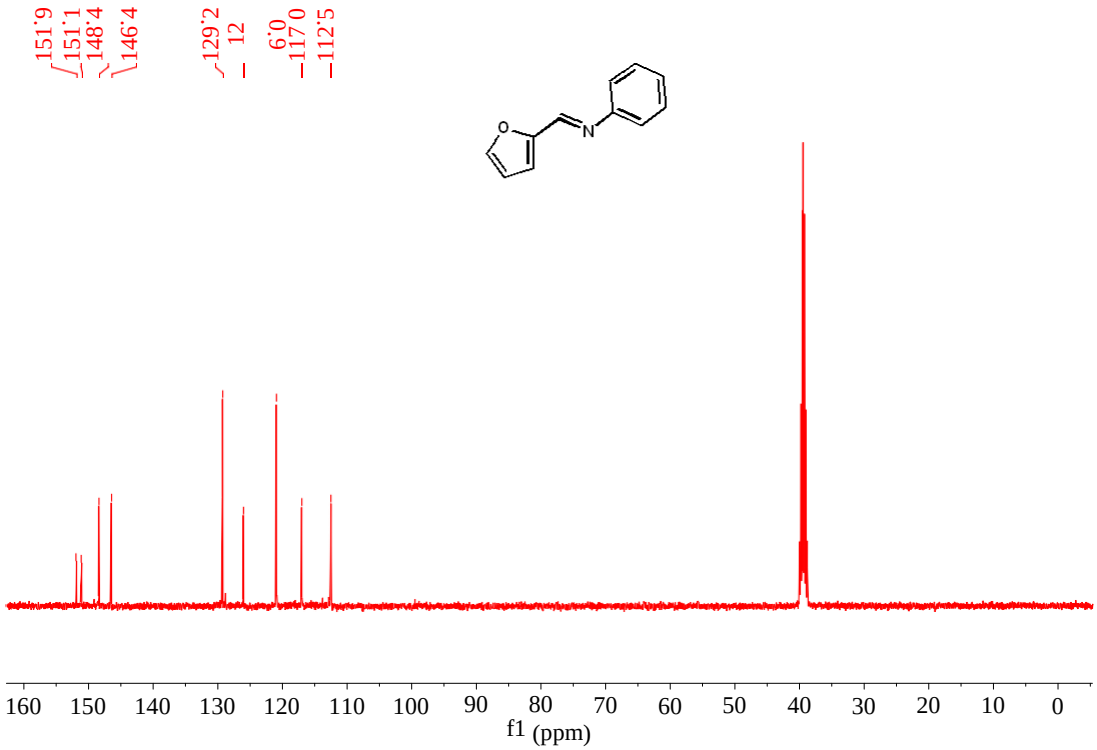
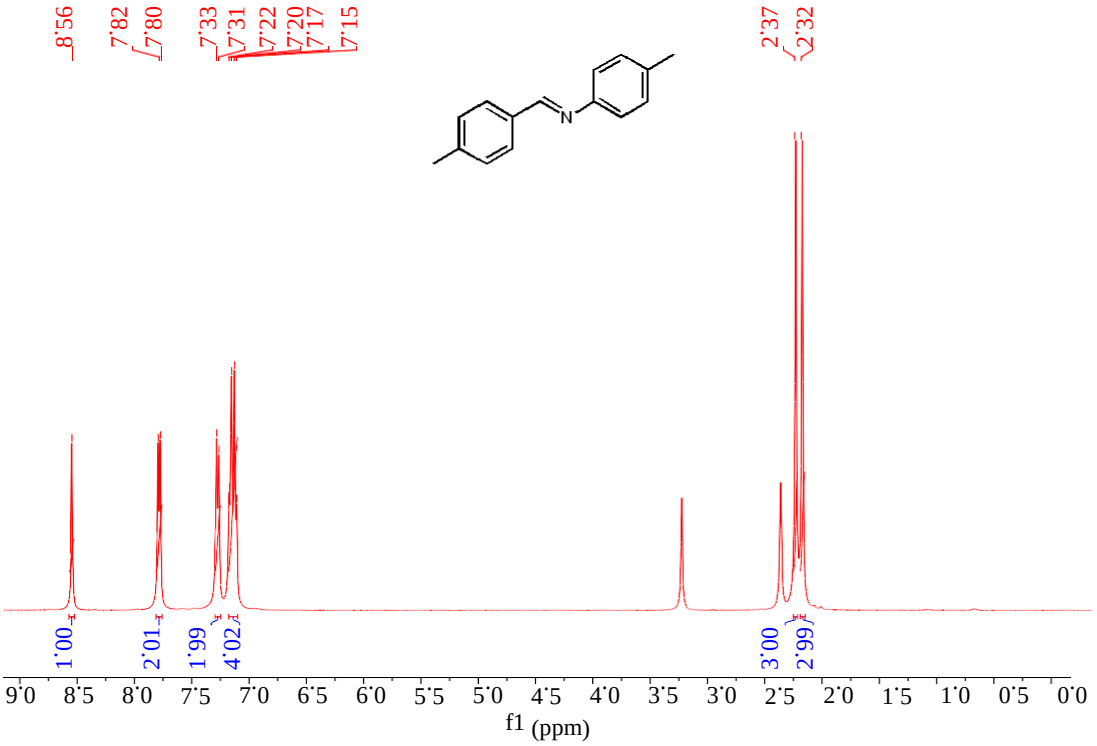


Fig. 45 The ^{1}H and ^{13}C NMR spectra for N,1-di-p-tolylmethanimine



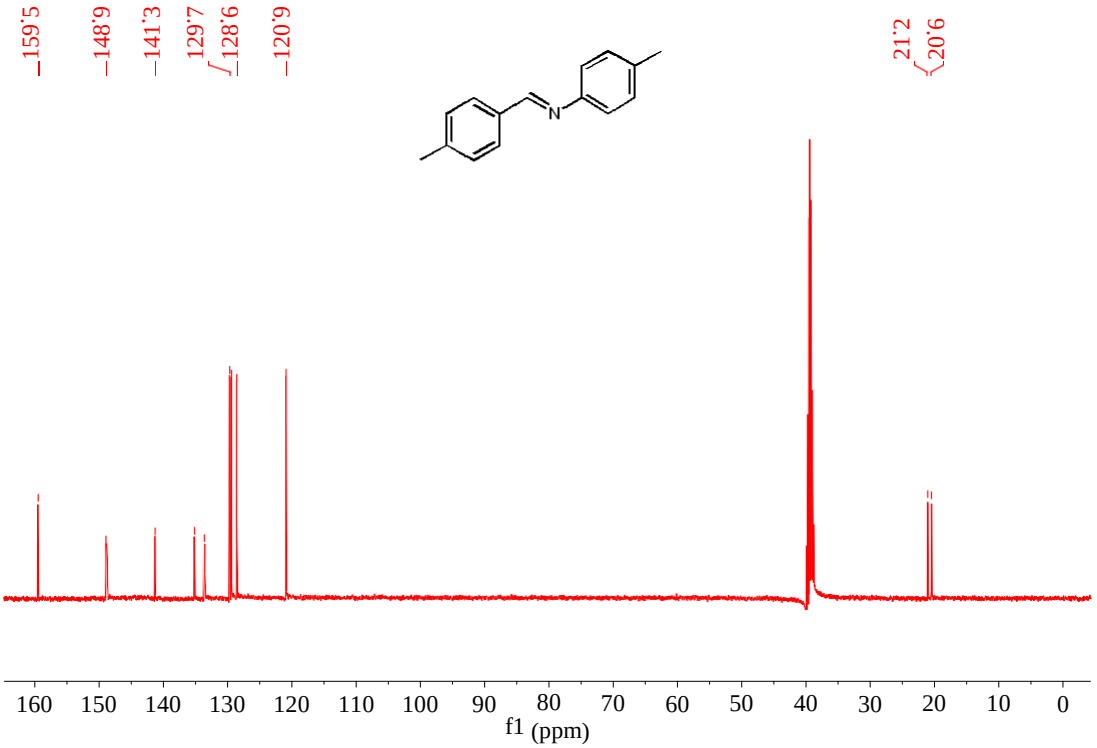
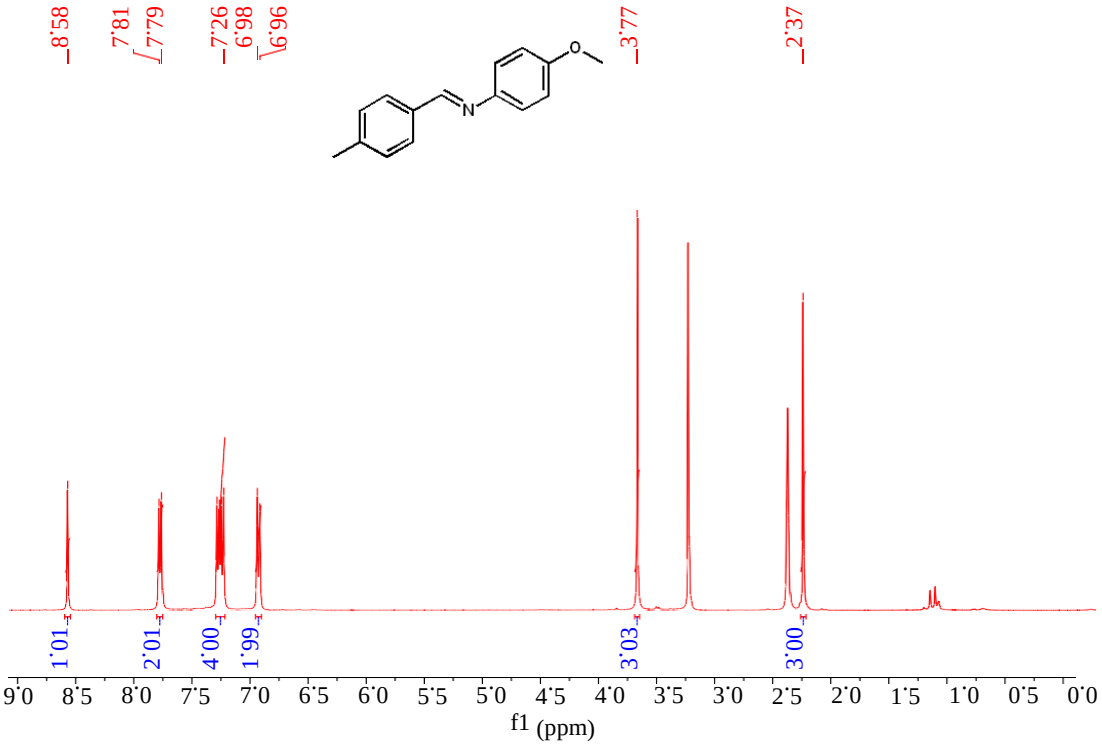


Fig. 46 The ^{1}H and ^{13}C NMR spectra for N-(4-methoxyphenyl)-1-(p-tolyl)methanimine



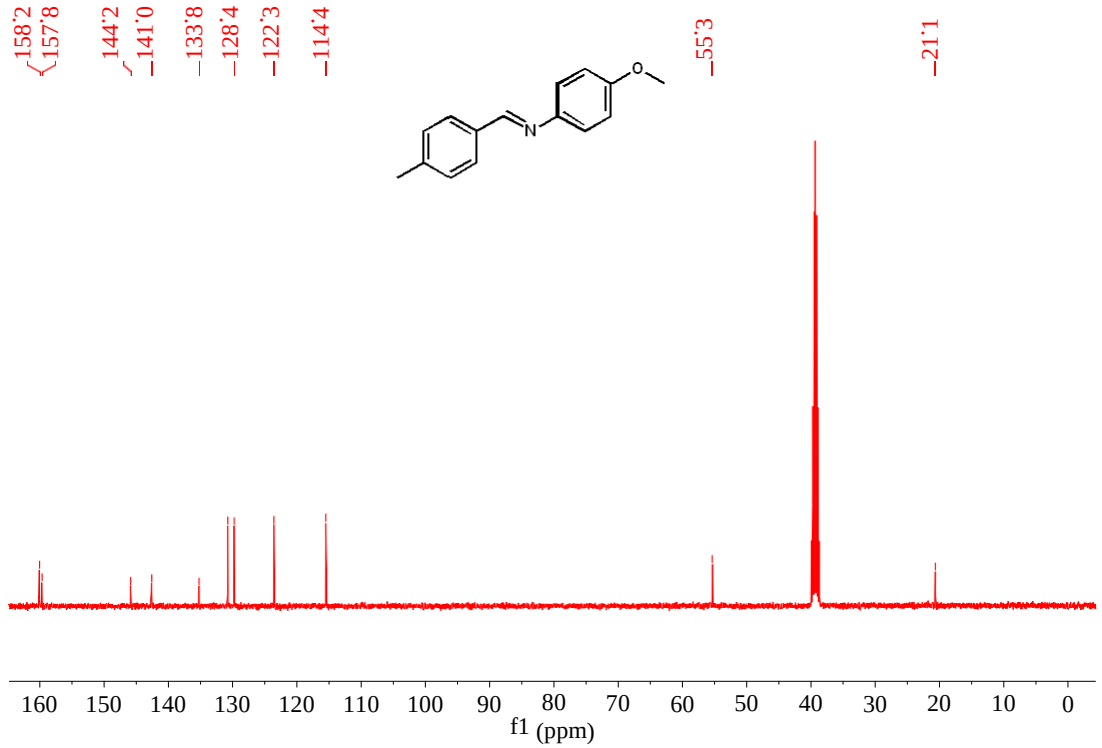
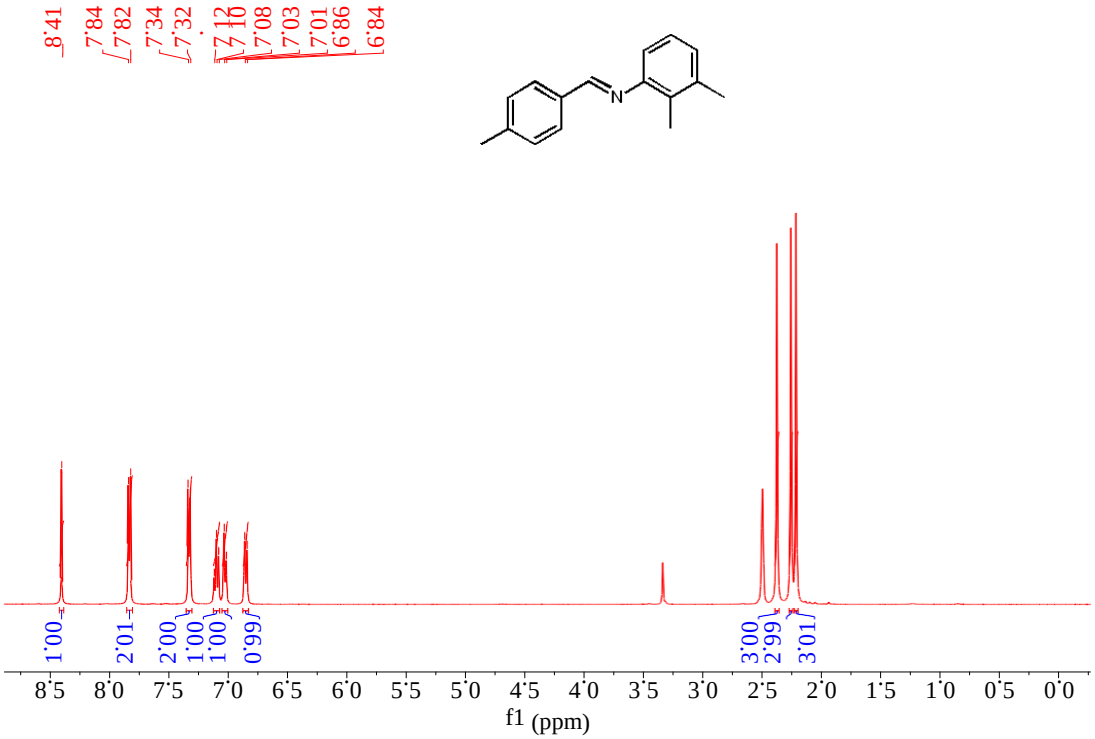


Fig. 47 The ^{1}H and ^{13}C NMR spectra for N-(2,3-dimethylphenyl)-1-(p-tolyl)methanimine



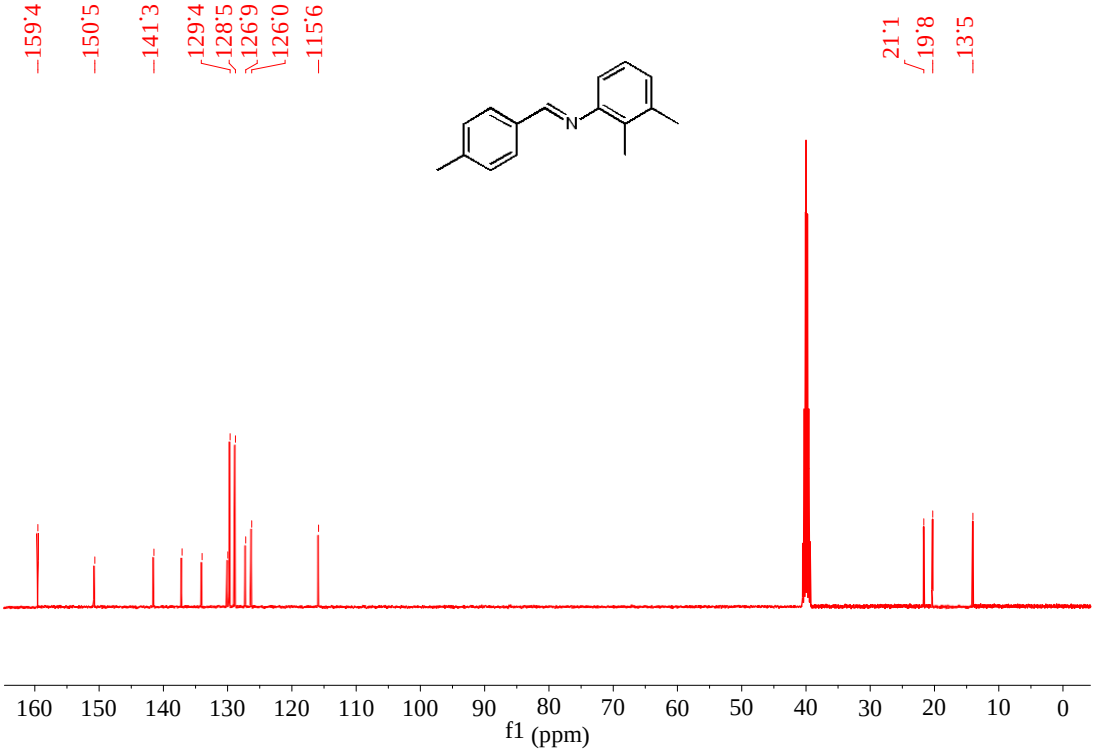
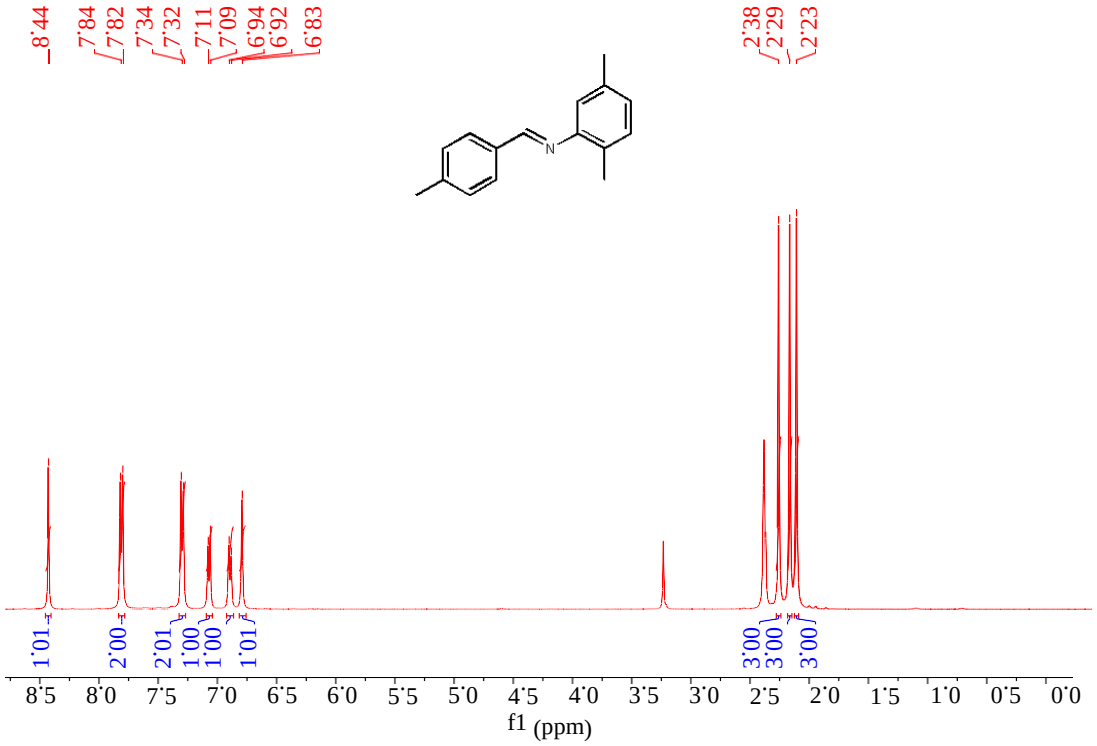


Fig. 48 The ^{1}H and ^{13}C NMR spectra for N-(2,5-dimethylphenyl)-1-(p-tolyl)methanimine



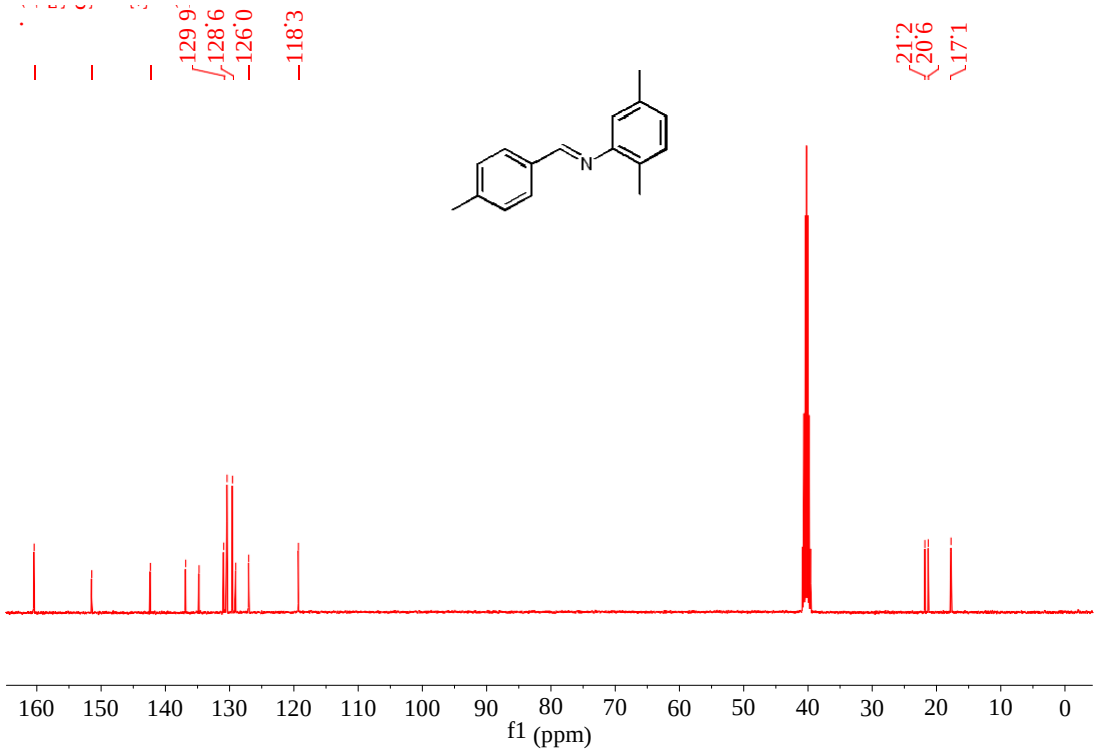
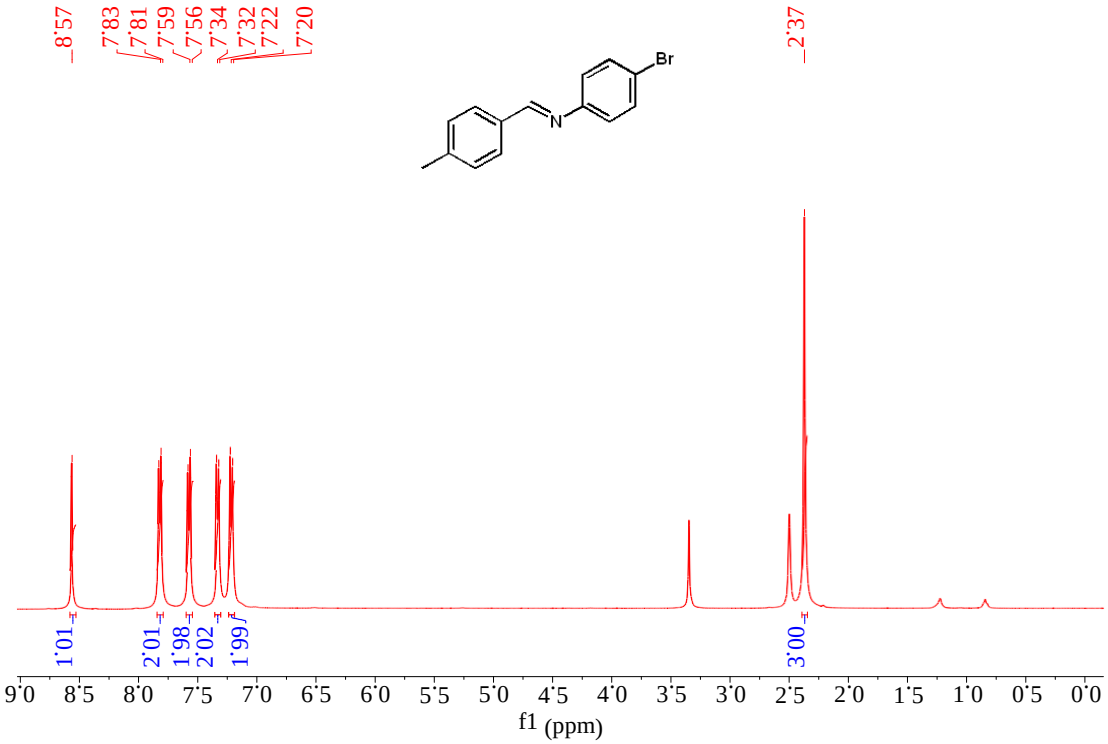


Fig. 49 The ^{1}H and ^{13}C NMR spectra for N-(4-bromophenyl)-1-(p-tolyl)methanimine



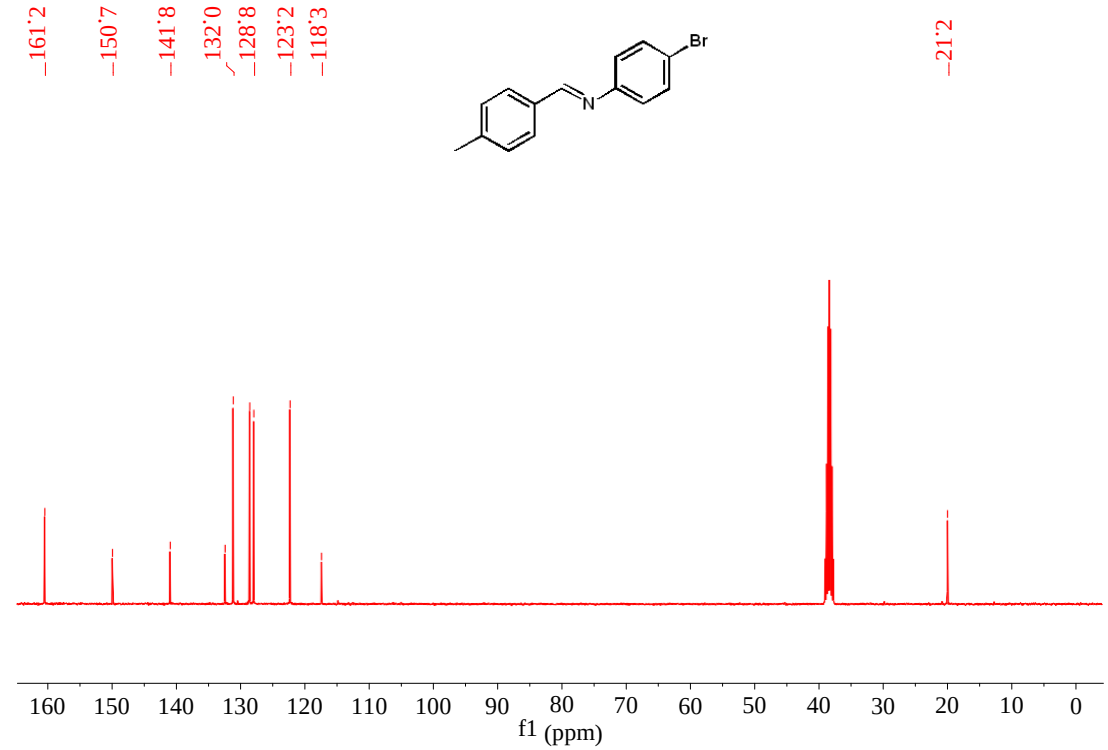
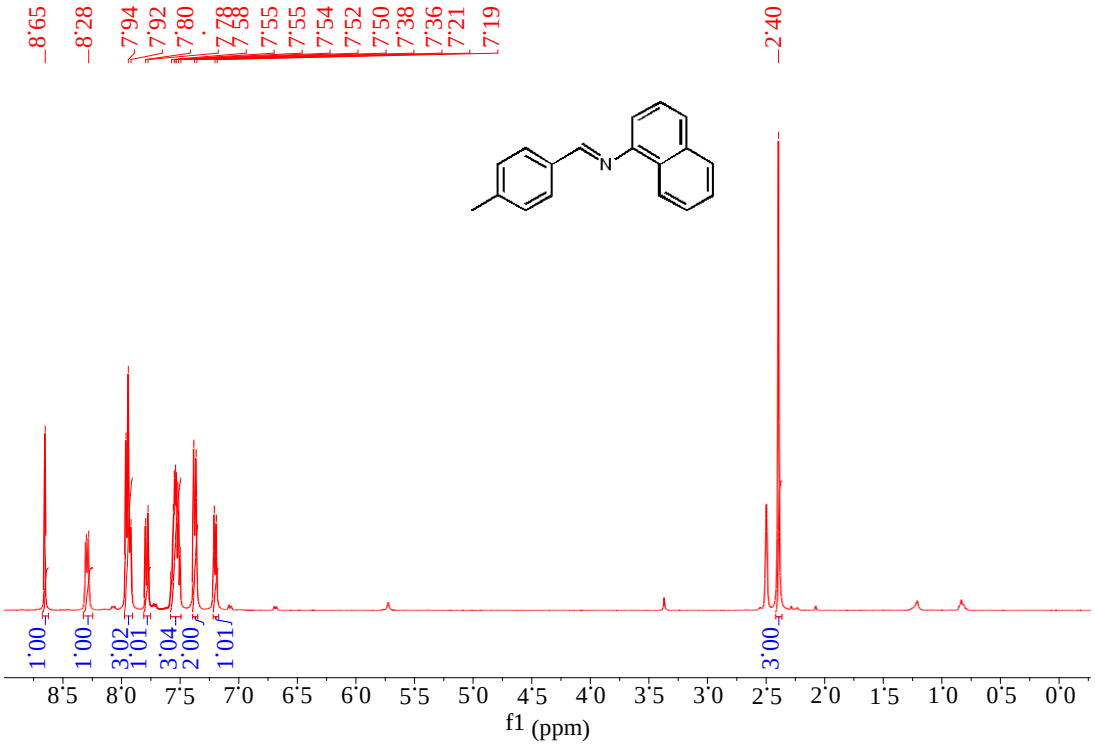
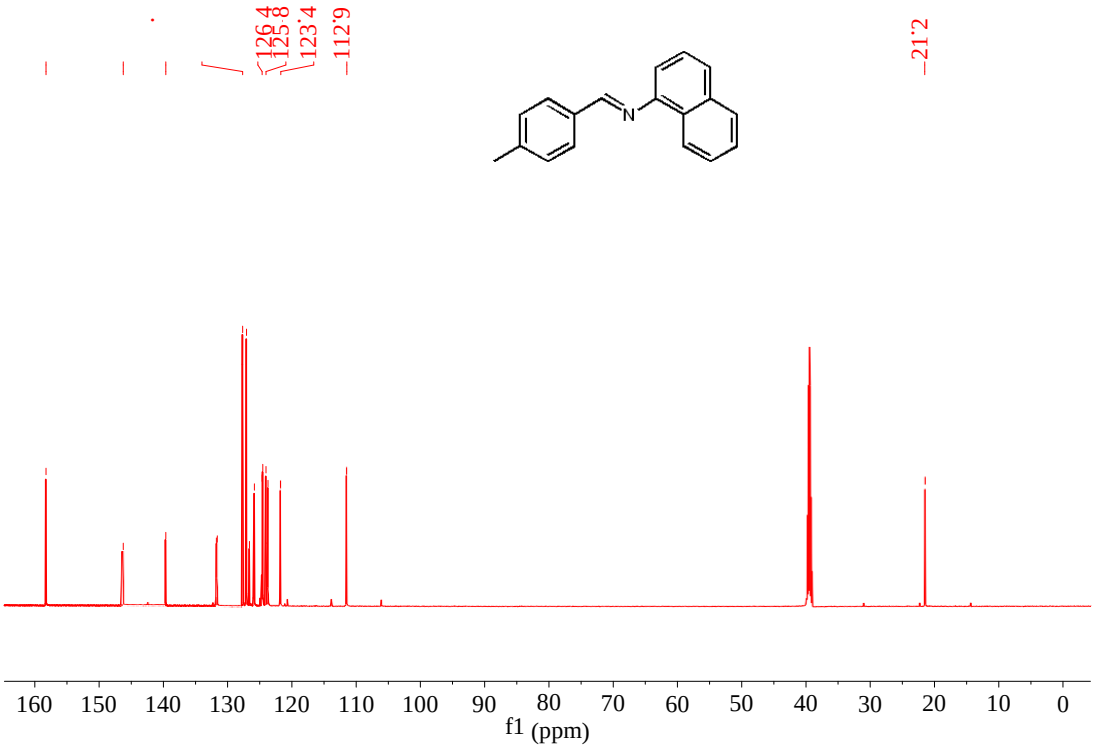



Fig. 50 The ^{1}H and ^{13}C NMR spectra for N-(naphthalen-1-yl)-1-(p-tolyl)methanimine