

Supplementary Information
for

KOH-Mediated Transition-Metal-Free Synthesis of Imines from Alcohols and Amines

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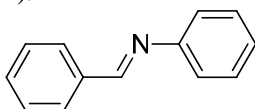
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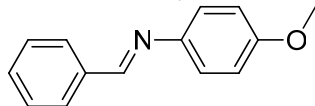
Spectral Data

N-Benzylideneaniline (3a, CAS Number: 538-51-2).



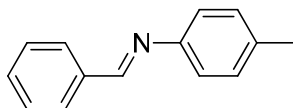
^1H NMR (400 MHz, CDCl_3): δ 8.44 (s, 1H), 7.92-7.87 (m, 2 H), 7.49-7.43 (m, 3 H), 7.41-7.34 (m, 2 H), 7.26-7.20 (m, 3 H).
 ^{13}C NMR (100 MHz, CDCl_3): δ 160.4, 152.1, 136.2, 131.3, 129.1, 128.8, 128.8, 125.9, 120.8. MS-ESI: m/z 181.9 $[\text{M}+\text{H}]^+$.

N-Benzylidene-4-methoxyaniline (3b, CAS Number: 783-08-4).



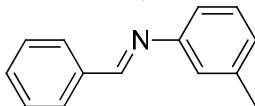
^1H NMR (400 MHz, CDCl_3): δ 8.46 (s, 1 H), 7.89-7.85 (m, 2 H), 7.46-7.42 (m, 3 H), 7.22 (d, $J = 9.0$ Hz, 2 H), 6.94-6.90 (m, 2 H), 3.80 (s, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 158.3, 158.2, 144.9, 136.4, 131.0, 128.7, 128.5, 122.1, 114.3, 55.4. MS-ESI: m/z 211.8 $[\text{M}+\text{H}]^+$.

N-Benzylidene-4-methylaniline (3c, CAS Number: 2272-45-9).



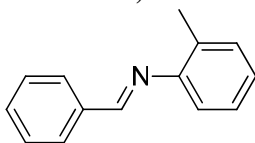
^1H NMR (400 MHz, CDCl_3): δ 8.43 (s, 1 H), 7.90-7.86 (m, 2 H), 7.47-7.40 (m, 3 H), 7.17 (d, $J = 8.4$ Hz, 2 H), 7.14 (d, $J = 8.2$ Hz, 2 H), 2.35 (s, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 159.5, 149.4, 136.3, 135.7, 131.1, 129.7, 128.7, 128.6, 120.8, 20.9. MS-ESI: m/z 195.8 $[\text{M}+\text{H}]^+$.

N-Benzylidene-3-methylaniline (3d, CAS Number: 5877-58-7)



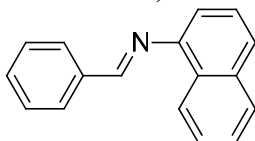
^1H NMR (400 MHz, CDCl_3): δ 8.43 (s, 1 H), 7.91-7.86 (m, 2 H), 7.47-7.43 (m, 3 H), 7.26 (t, $J = 7.5$ Hz, 1 H), 7.05-7.00 (t, $J = 9.3$ Hz, 3 H), 2.38 (s, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 160.1, 152.1, 138.9, 136.3, 131.3, 128.9, 128.7, 128.6, 126.7, 121.6, 117.8, 21.4. MS-ESI: m/z 195.9 $[\text{M}+\text{H}]^+$.

N-benzylidene-2-methylaniline (3e, CAS Number: 5877-55-4)



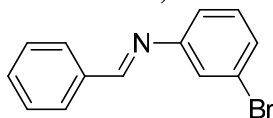
^1H NMR (400 MHz, CDCl_3): δ 8.36 (s, 1 H), 7.95-7.89 (m, 2 H), 7.50-7.45 (m, 3 H), 7.24-7.18 (m, 2 H), 7.15-7.10 (m, 1 H), 6.94-6.90 (m, 1 H), 2.36 (s, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 159.4, 151.1, 136.5, 131.8, 131.2, 130.2, 128.7, 126.7, 125.6, 117.8, 17.8. MS-ESI: m/z 195.8 $[\text{M}+\text{H}]^+$.

N-benzylidenenaphthalen-1-amine (3f, CAS Number: 890-51-7)



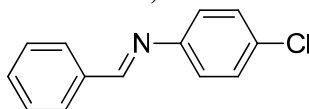
^1H NMR (400 MHz, CDCl_3): δ 8.49 (s, 1 H), δ 8.38-8.31 (m, 1H), δ 8.01-7.95 (m, 2 H), δ 7.85-7.78 (m, 1 H), δ 7.71-7.65 (m, 1 H), δ 7.52-7.38 (m, 6 H), δ 8.557.04-6.98 (m, 1 H). ^{13}C NMR (100 MHz, CDCl_3): δ 160.3, 149.3, 136.4, 134.0, 131.4, 128.9, 128.8, 127.6, 126.4, 126.0, 125.8, 125.7, 124.0, 112.8. MS-ESI: m/z 231.7 $[\text{M}+\text{H}]^+$.

***N*-Benzylidene-3-bromoaniline (3g, CAS Number: 20534-67-2)**



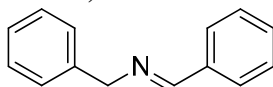
^1H NMR (400 MHz, CDCl_3): δ 8.38 (s, 1 H), 7.89-7.84 (m, 2 H), 7.50-7.43 (m, 3 H), 7.36-7.32 (m, 2 H), 7.25-7.20 (m, 1 H), 7.14-7.10 (m, 1 H). ^{13}C NMR (100 MHz, CDCl_3): δ 161.3, 153.4, 135.8, 131.7, 130.4, 128.9, 128.8, 128.7, 123.7, 122.7, 119.9. MS-ESI: m/z 259.6 $[\text{M}+\text{H}]^+$.

***N*-Benzylidene-4-chloroaniline (3h, CAS Number: 780-21-2).**



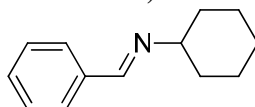
^1H NMR (400 MHz, CDCl_3): δ 8.40 (s, 1 H), 7.90-7.84 (m, 2 H), 7.49-7.42 (m, 3 H), 7.36-7.30 (m, 2 H), 7.16-7.09 (m, 2 H). ^{13}C NMR (100 MHz, CDCl_3): δ 160.6, 150.4, 135.9, 131.6, 131.4, 129.2, 128.8, 128.7, 122.2. MS-ESI: m/z 215.8 $[\text{M}+\text{H}]^+$.

***N*-Benzylidenebenzylamine (3i, CAS Number: 780-25-6).**



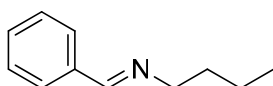
^1H NMR (400 MHz, CDCl_3): δ 8.36 (s, 1 H), 7.82-7.71 (m, 2 H), 7.40 (m, 3 H), 7.33 (m, 4 H), 7.27-7.21 (m, 1 H), 4.80 (s, 2 H). ^{13}C NMR (100 MHz, CDCl_3): δ 161.9, 139.3, 136.1, 130.7, 128.5, 128.4, 128.2, 127.9, 126.9, 65.0. MS-ESI: m/z 195.8 $[\text{M}+\text{H}]^+$.

***N*-Benzylidenecyclohexanamine (3j, CAS Number: 2211-66-7).**



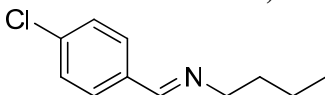
^1H NMR (400 MHz, CDCl_3): δ 8.29 (s, 1 H), 7.74-7.68 (m, 2 H), 7.42-7.33 (m, 3 H), 3.23-3.12 (m, 1 H), 1.86-1.54 (m, 7 H), 1.43-1.22 (m, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 158.5, 136.6, 130.2, 128.4, 128.0, 69.9, 34.3, 25.6, 24.7. MS-ESI: m/z 187.9 $[\text{M}+\text{H}]^+$.

***N*-Benzylidenebutan-1-amine (3k, CAS Number: 119719-32-3).**



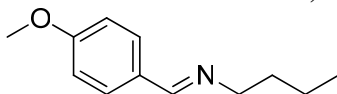
^1H NMR (400 MHz, CDCl_3): δ 8.23 (s, 1 H), 7.67-7.64 (m, 2 H), 7.39-7.36 (m, 2 H), 3.60 (t, $J = 7.0$ Hz, 2 H), 1.73-1.66 (m, 2 H), 1.45-1.34 (m, 2 H), 0.95 (t, $J = 7.4$ Hz, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 160.7, 136.4, 130.4, 128.5, 128.0, 61.5, 33.0, 20.4, 13.9. MS-ESI: m/z 162.0 $[\text{M}+\text{H}]^+$.

***N*-(4-chlorobenzylidene) butan-1-amine (3l, CAS Number: 7173-86-6)**



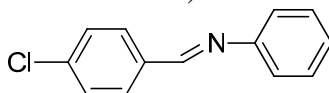
^1H NMR (400 MHz, CDCl_3): δ 8.21 (s, 1 H), 7.71-7.66 (m, 2 H), 6.96-6.90 (m, 2 H), 3.84 (s, 2 H), 1.71-1.63 (m, 2 H), 1.45-1.35 (m, 2 H), 0.94 (t, $J = 7.5$ Hz, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 159.3, 136.3, 134.9, 129.2, 128.8, 61.4, 32.9, 20.4, 13.9. MS-ESI: m/z 195.8 $[\text{M}+\text{H}]^+$.

***N*-(4-Methoxybenzylidene) butan-1-amine (3m CAS Number: 3910-55-2).**



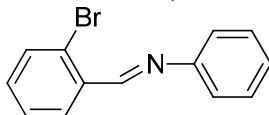
^1H NMR (400 MHz, CDCl_3): δ 8.19 (s, 1 H), 7.66 (d, $J = 8.8$ Hz, 2 H), 6.91 (d, $J = 8.9$ Hz, 2 H), 3.82 (s, 3 H), 3.57 (t, $J = 6.9$ Hz, 2 H), 1.70-1.62 (m, 2 H), 1.43-1.32 (m, 2 H), 0.94 (t, $J = 7.3$ Hz, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 161.4, 160.0, 129.5, 129.3, 113.9, 61.3, 55.3, 33.1, 20.4, 13.9. MS-ESI: m/z 191.9 $[\text{M}+\text{H}]^+$.

***N*-(4-chlorobenzylidene) aniline (3n, CAS Number: 2362-79-0)**



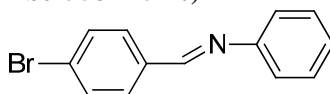
^1H NMR (400 MHz, CDCl_3): δ 8.41 (s, 1 H), 7.85-7.82 (m, 2 H), 7.46-7.36 (m, 4 H), 7.26-7.18 (m, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 158.8, 151.7, 137.4, 134.7, 129.9, 129.2, 129.1, 126.2, 120.8. MS-ESI: m/z 215.7 $[\text{M}+\text{H}]^+$.

***N*-(2-bromobenzylidene) aniline (3o, CAS Number: 41077-23-0)**



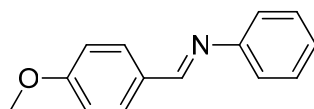
^1H NMR (400 MHz, CDCl_3): δ 8.91 (s, 1 H), 8.29 (d, $J = 7.7$ Hz, 1 H), 7.66 (d, $J = 8.2$ Hz, 1 H), 7.49-7.42 (m, 3 H), 7.37-7.29 (m, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 159.2, 151.6, 134.5, 133.1, 132.3, 129.1, 129.0, 127.7, 126.3, 126.0, 121.0. MS-ESI: m/z 259.6 $[\text{M}+\text{H}]^+$.

***N*-(4-bromobenzylidene) aniline (3p, CAS Number: 5877-51-0)**



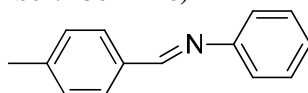
^1H NMR (400 MHz, CDCl_3): δ 8.39 (s, 1 H), 7.78-7.74 (m, 2 H), 7.62 (d, $J = 1.85$ Hz, 2 H), 7.42-7.36 (m, 2 H), 7.26-7.18 (m, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 158.8, 151.6, 135.1, 132.0, 130.1, 129.2, 126.2, 125.9, 120.8. MS-ESI: m/z 259.6 $[\text{M}+\text{H}]^+$.

***N*-(4-Methoxybenzylidene) aniline (3q, CAS Number: 836-41-9).**



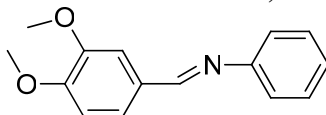
^1H NMR (400 MHz, CDCl_3): δ 8.37 (s, 1 H), 7.86-7.82 (d, $J = 8.75$ Hz, 2 H), 7.39-7.34 (m, 2 H), 7.23-7.16 (m, 3 H), 7.00-6.96 (d, $J = 9.01$ Hz, 2 H), 3.85 (s, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 162.2, 159.6, 152.4, 130.5, 129.3, 129.1, 125.5, 120.8, 114.1, 55.4. MS-ESI: m/z 211.8 $[\text{M}+\text{H}]^+$.

***N*-(4-methylbenzylidene) aniline (3r, CAS Number: 2362-77-8)**



^1H NMR (400 MHz, CDCl_3): δ 8.39 (s, 1 H), 7.79-7.76 (m, 2 H), 7.39-7.34 (m, 2 H), 7.29-7.24 (m, 2 H), 7.22-7.17 (m, 3 H), 2.39 (s, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 160.2, 152.2, 141.8, 133.7, 129.5, 129.1, 128.8, 125.7, 120.8, 21.6. MS-ESI: m/z 195.9 $[\text{M}+\text{H}]^+$.

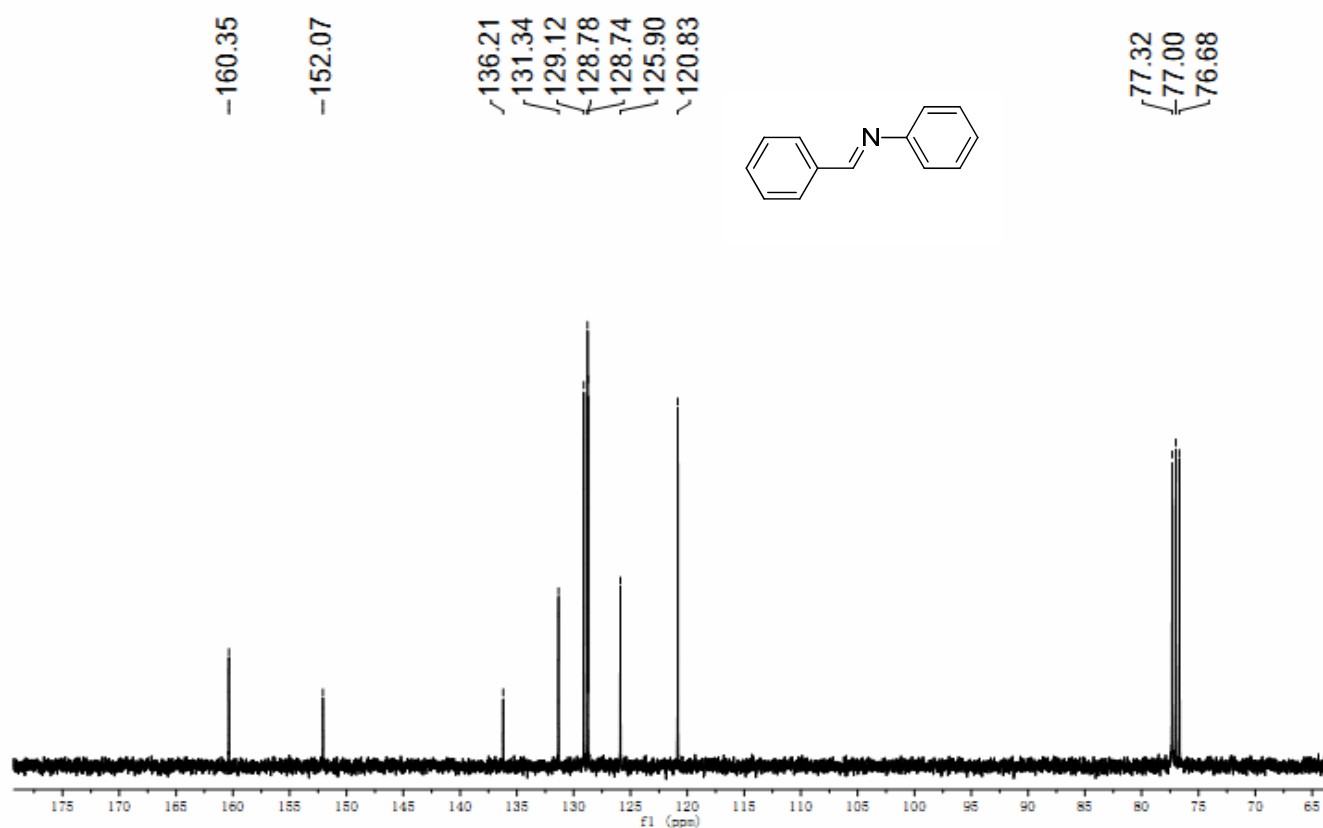
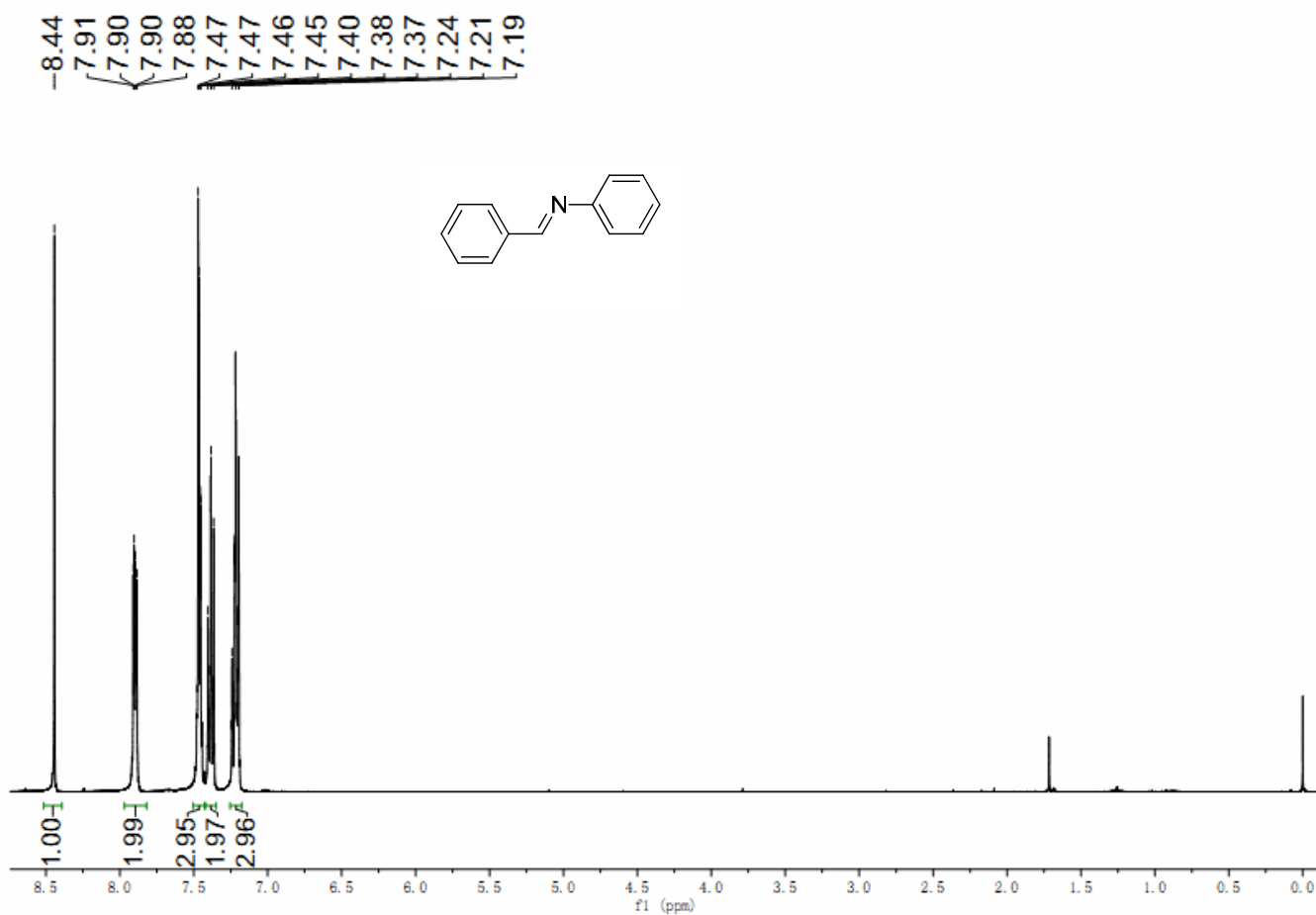
***N*-(3,4-dimethoxybenzylidene) aniline (3s, CAS Number: 27895-67-6)**



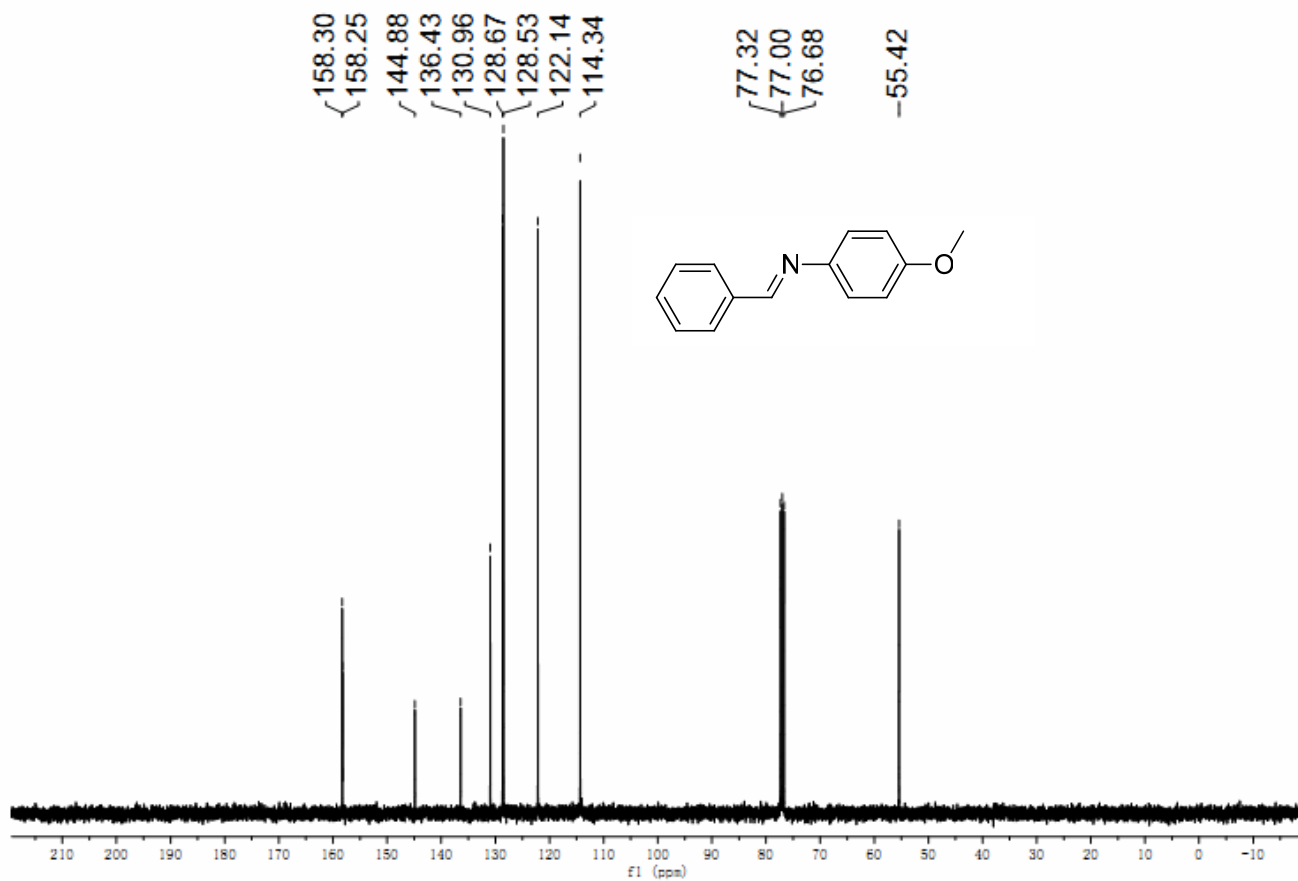
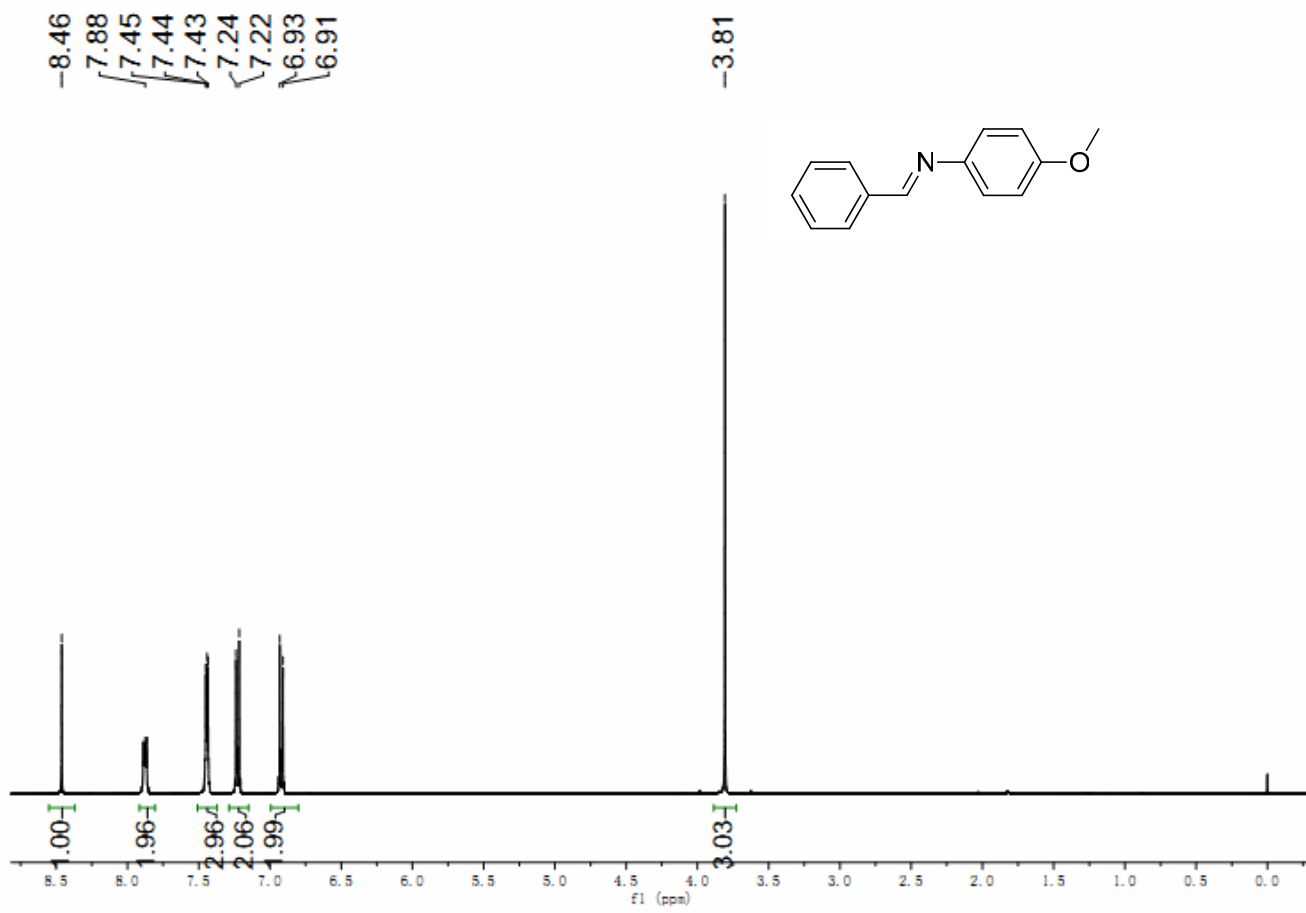
^1H NMR (400 MHz, CDCl_3): δ 8.36 (s, 1 H), 7.63-7.61 (m, 1 H), 7.40-7.36 (m, 2 H), 7.31-7.28 (m, 1 H), 7.23-7.17 (m, 3 H), 6.92 (d, $J = 8.2$ Hz, 1 H), 3.98 (s, 3 H), 3.94 (s, 3 H). ^{13}C NMR (100 MHz, CDCl_3): δ 159.8, 152.2, 152.0, 149.5, 129.6, 129.1, 125.6, 124.4, 120.8, 110.5, 108.9, 56.0. MS-ESI: m/z 241.7 $[\text{M}+\text{H}]^+$.

^1H and ^{13}C NMR spectra of all compounds

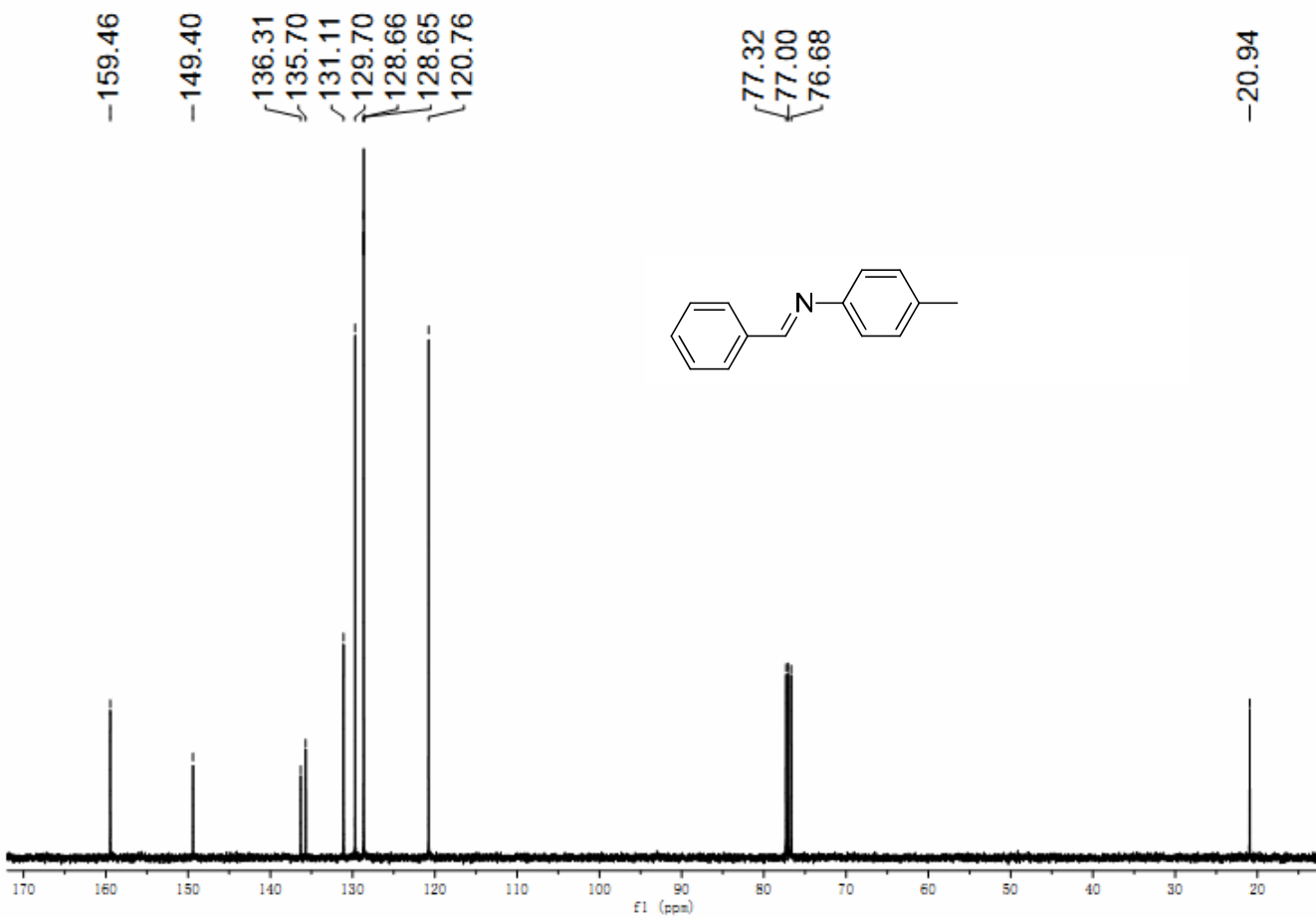
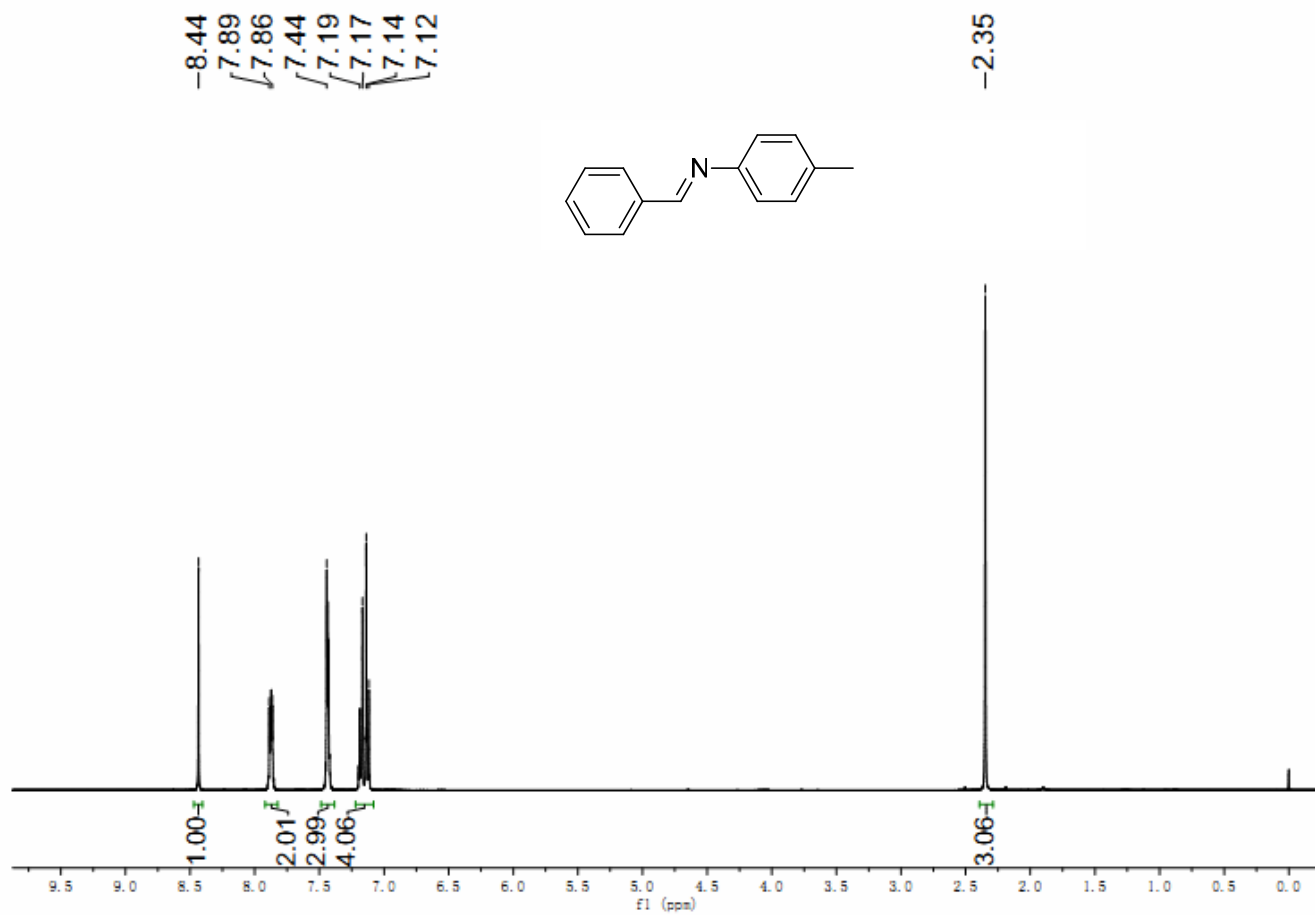
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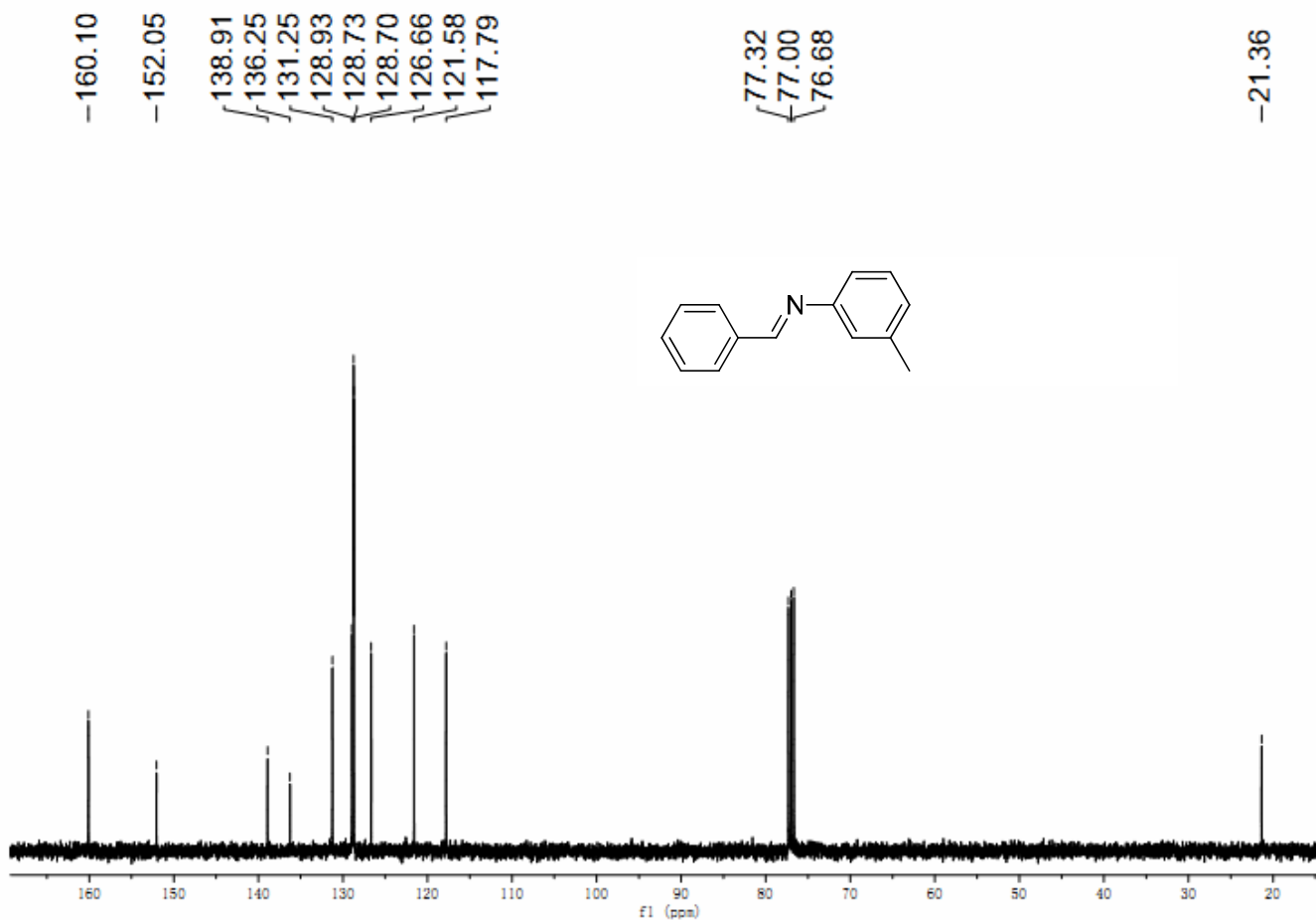
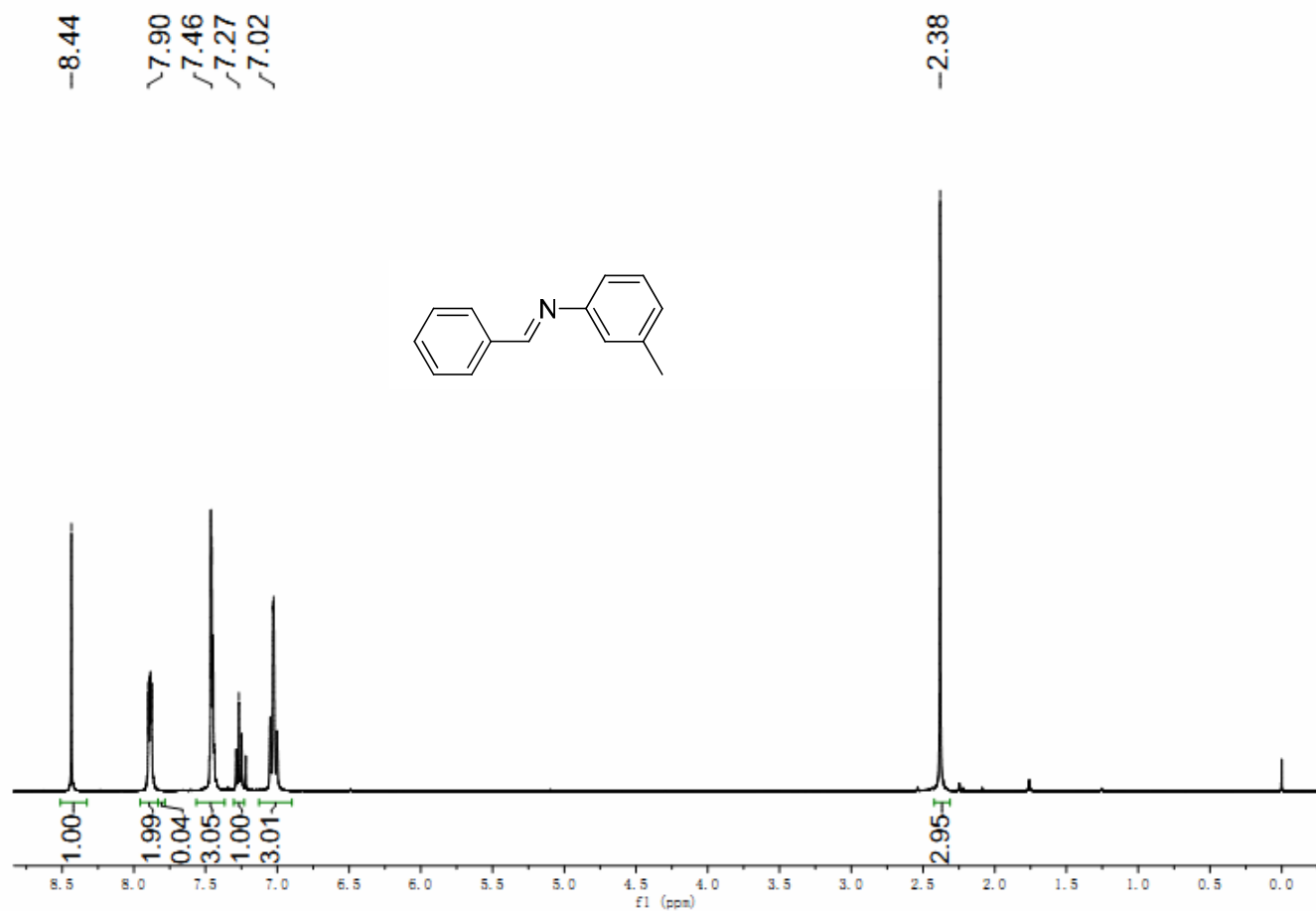
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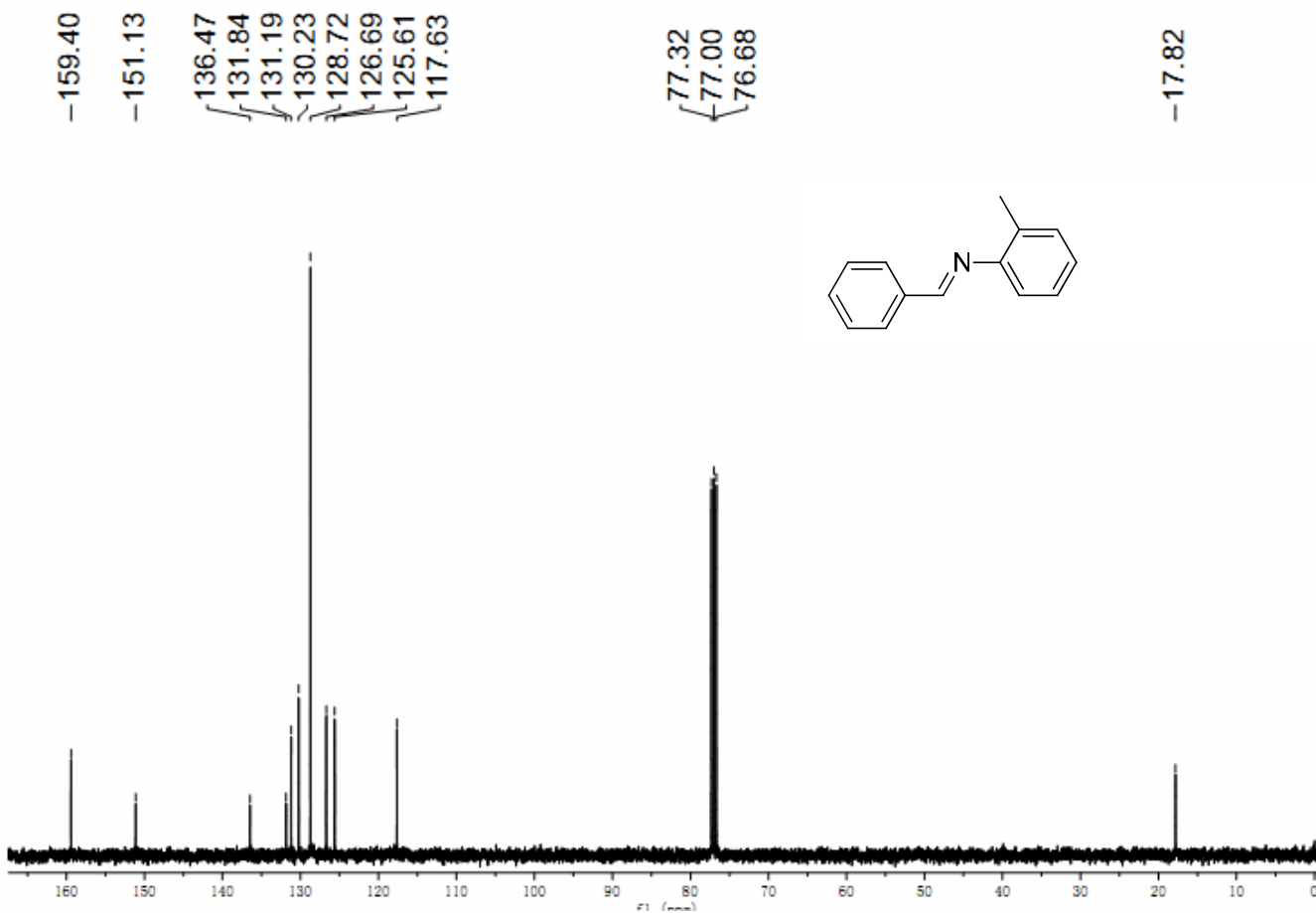
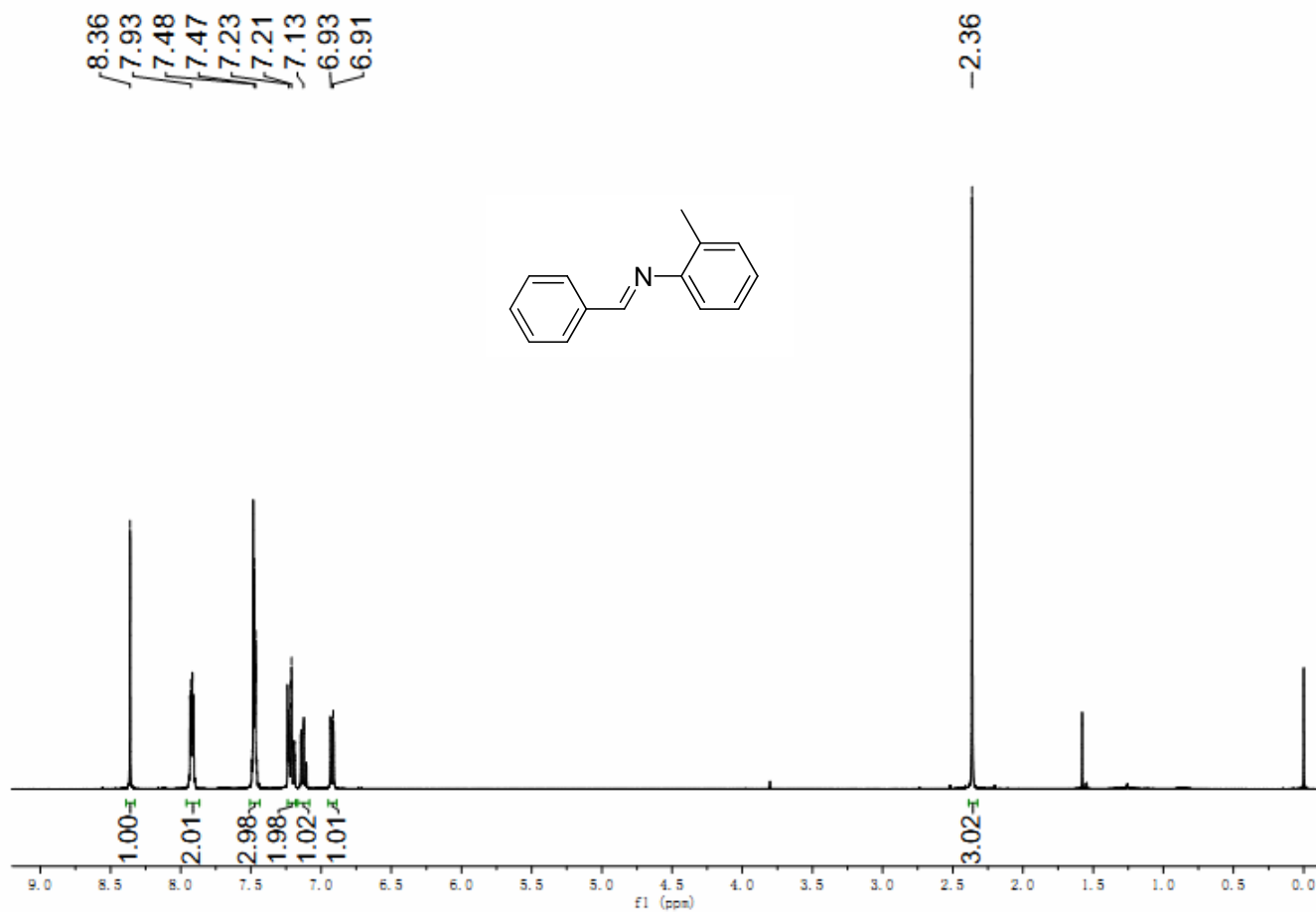
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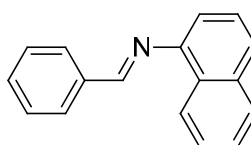
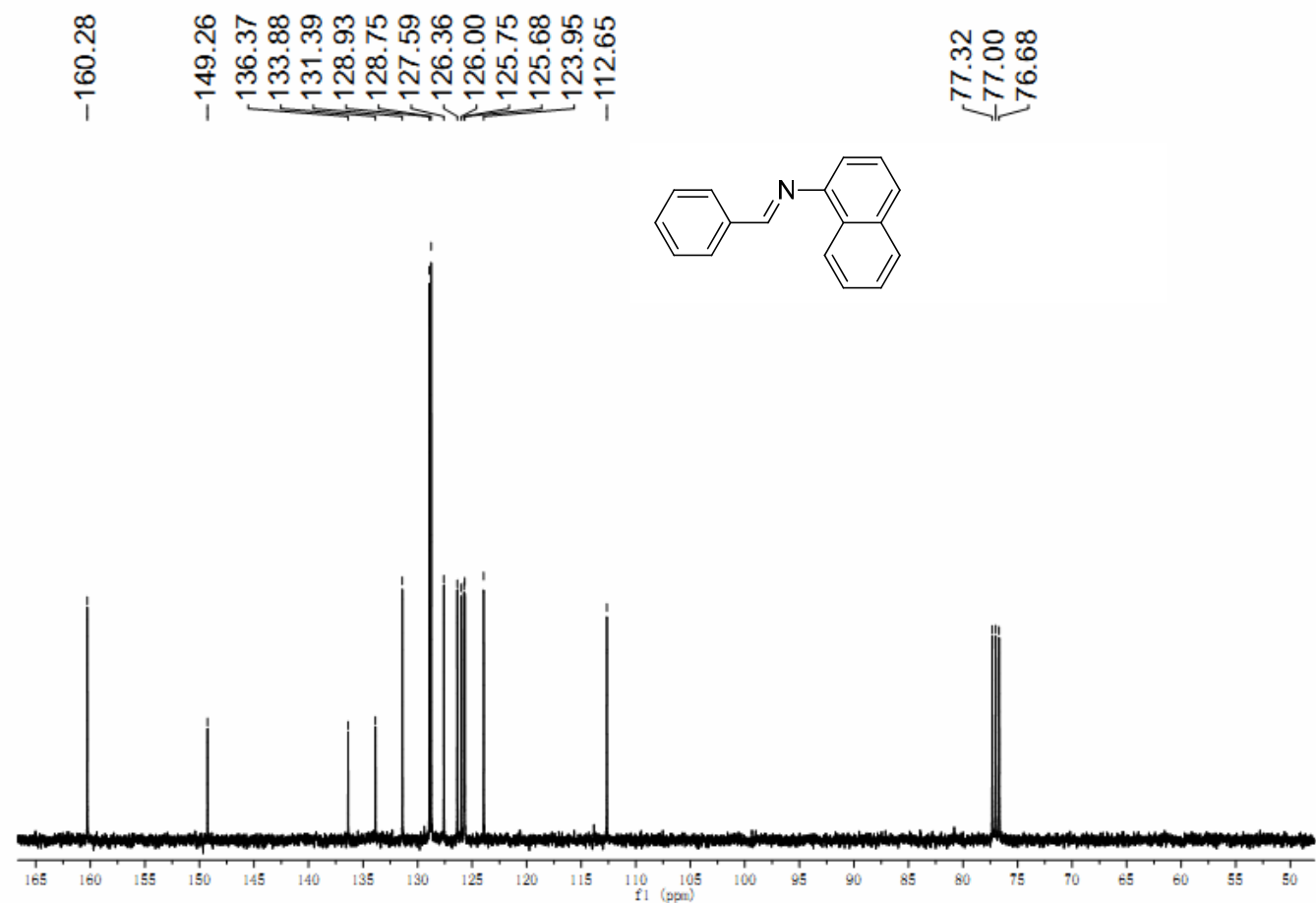
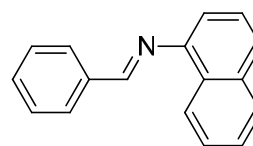
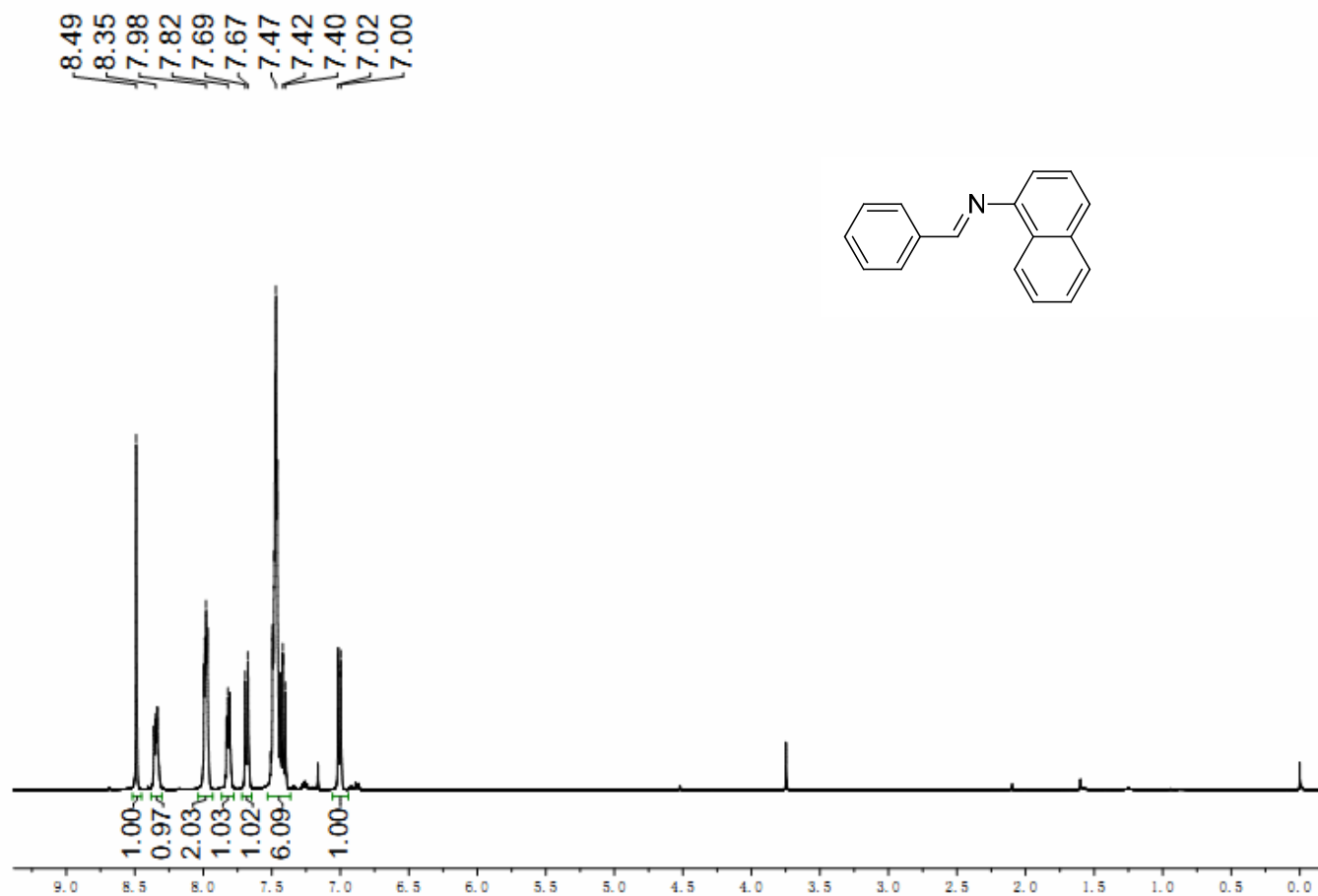
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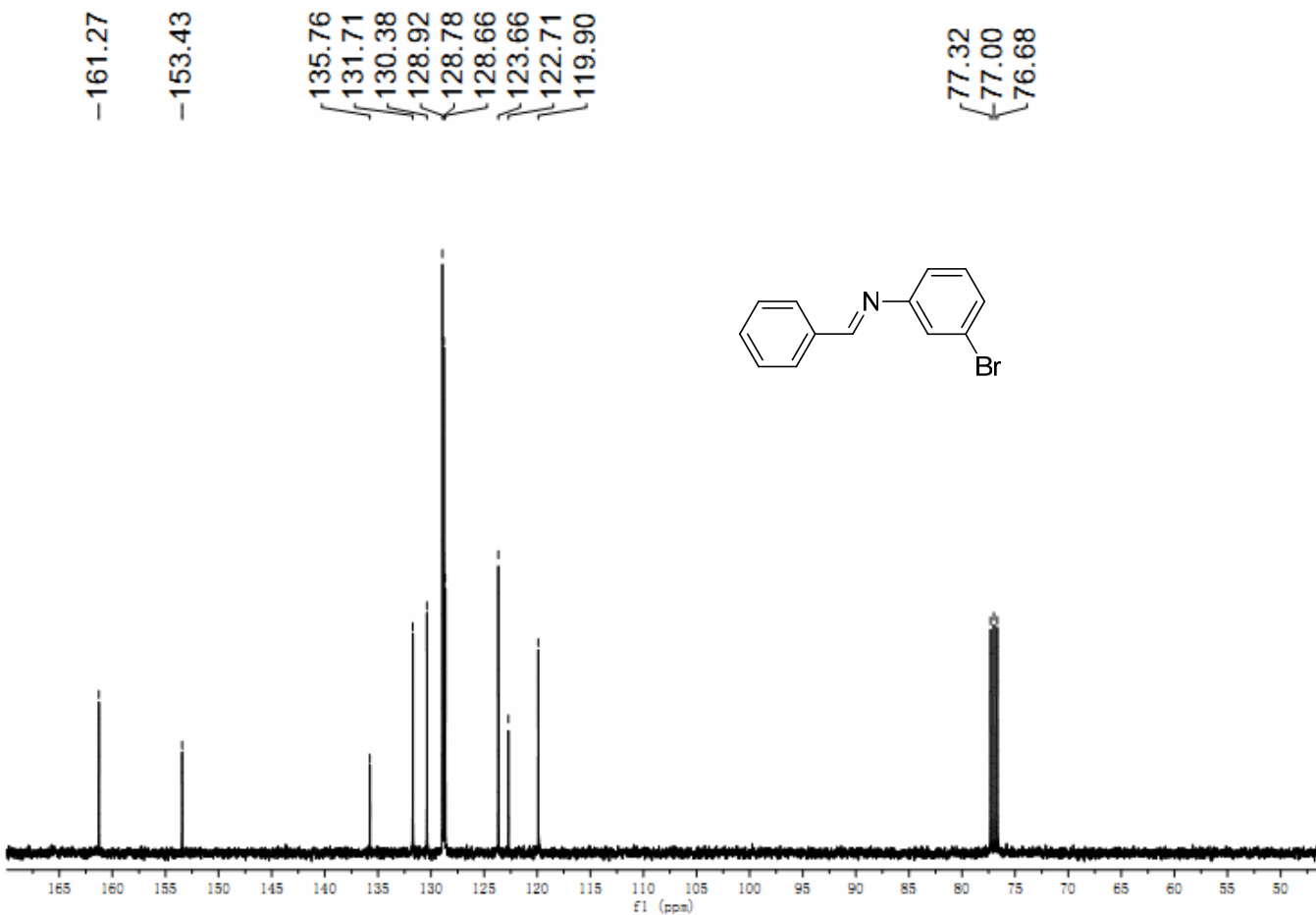
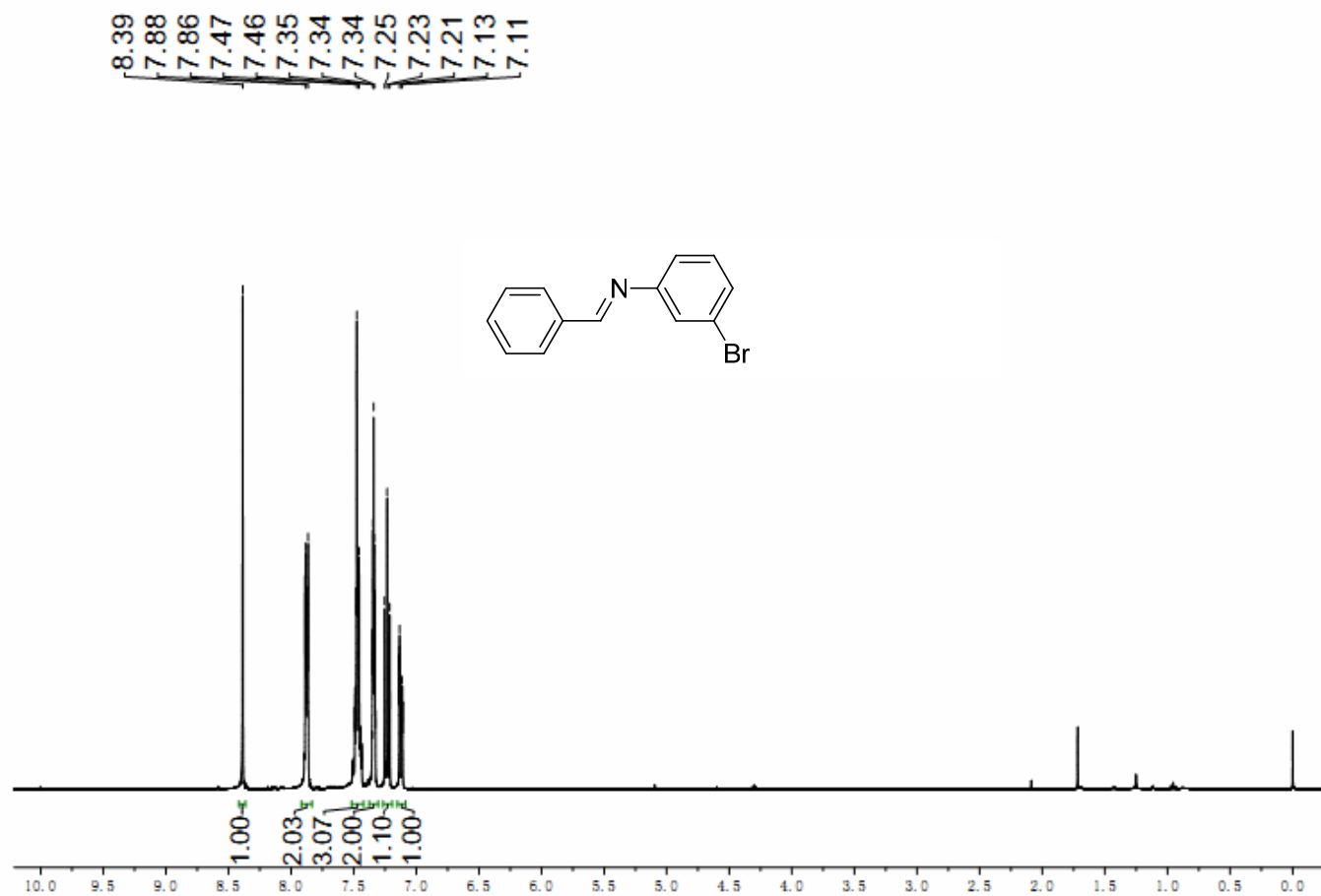
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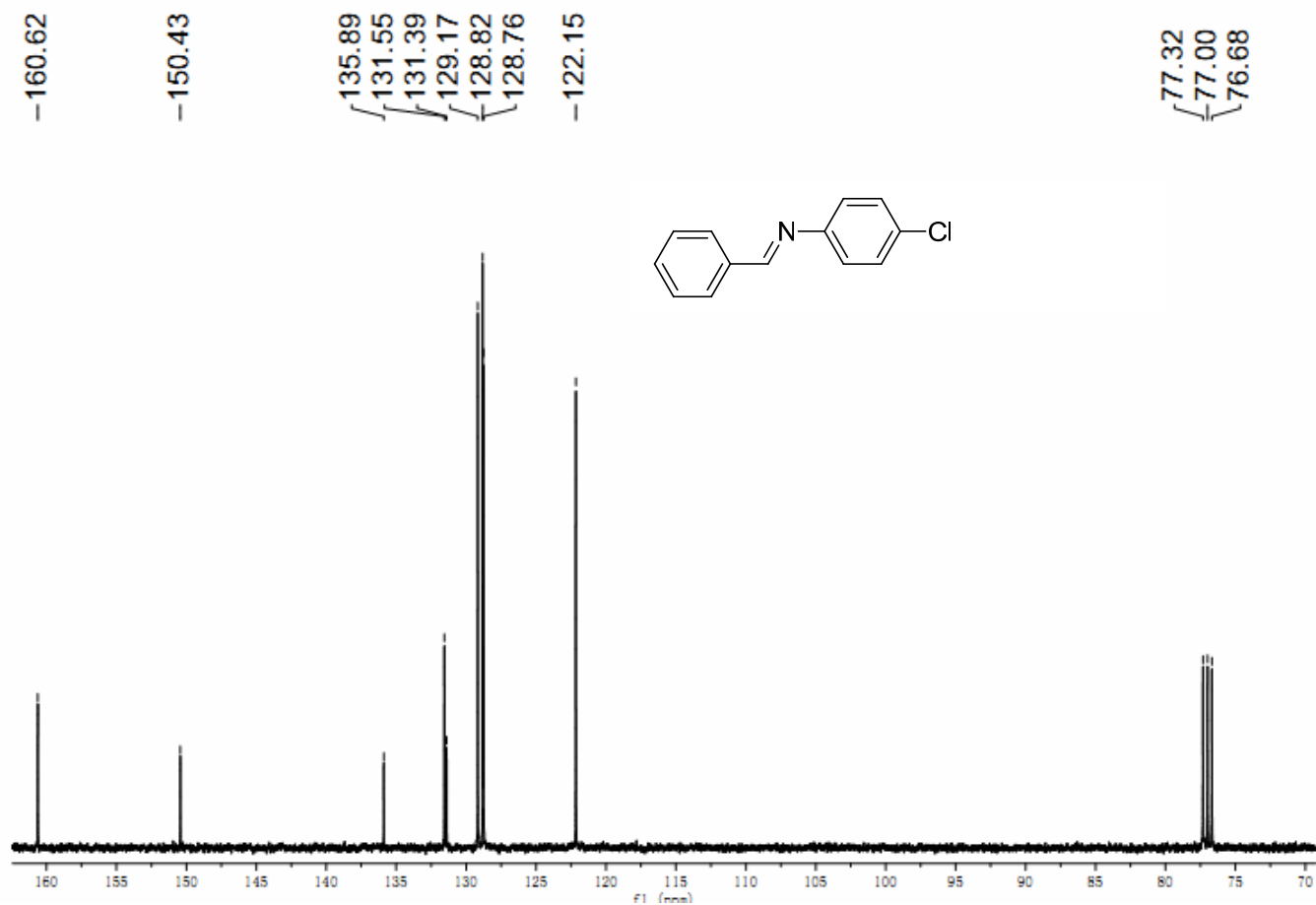
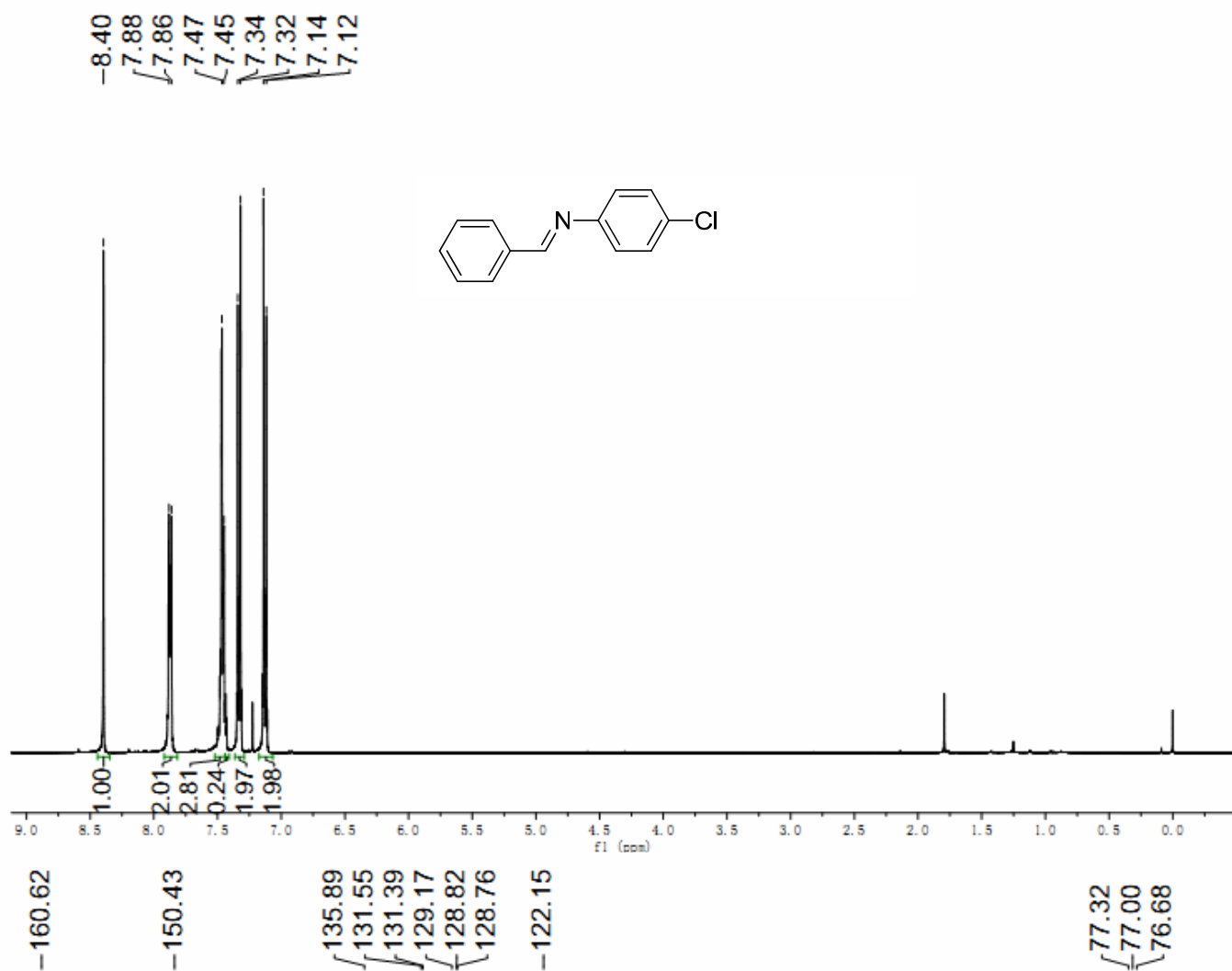
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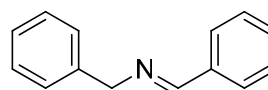
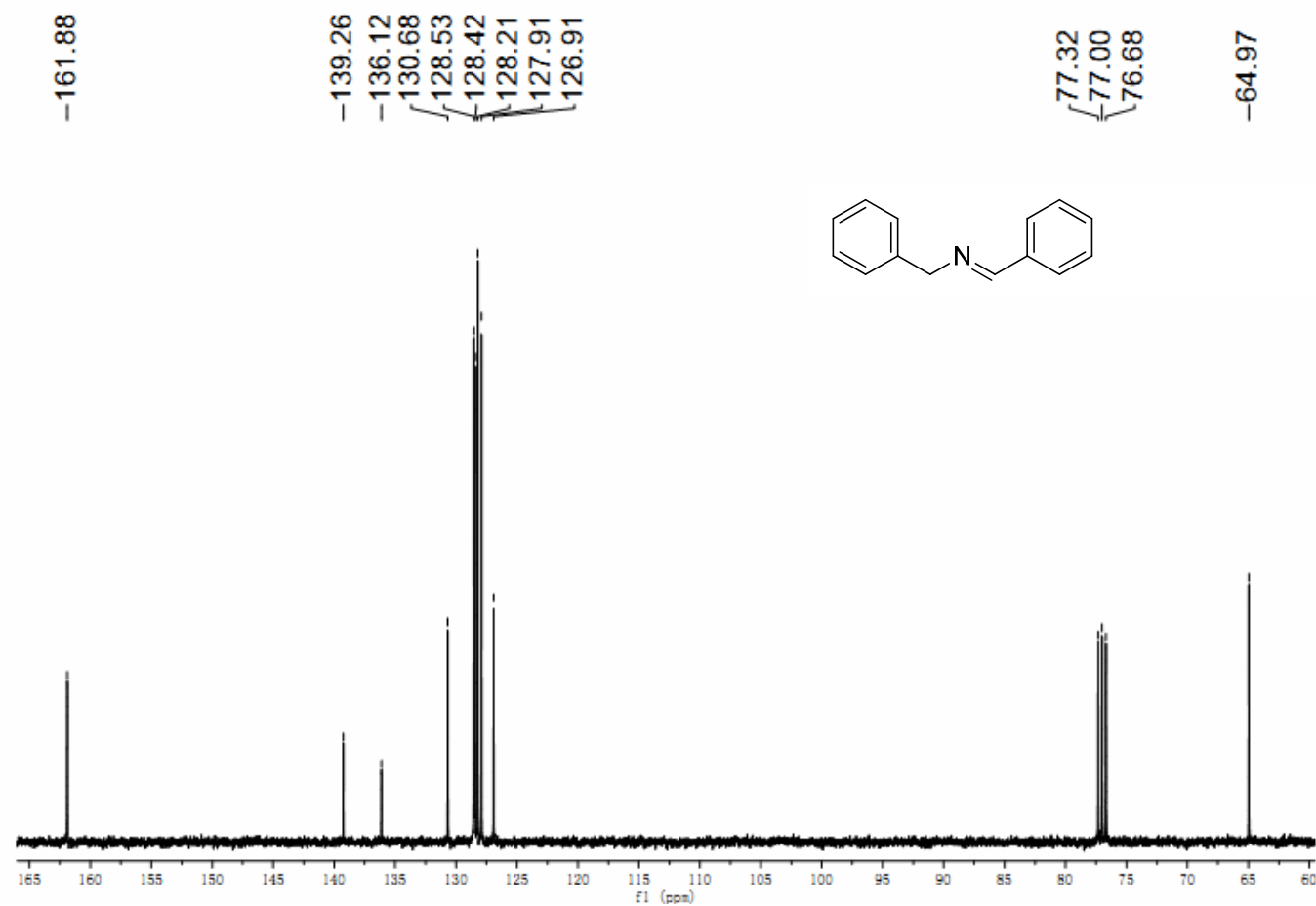
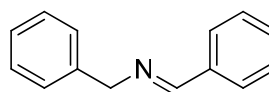
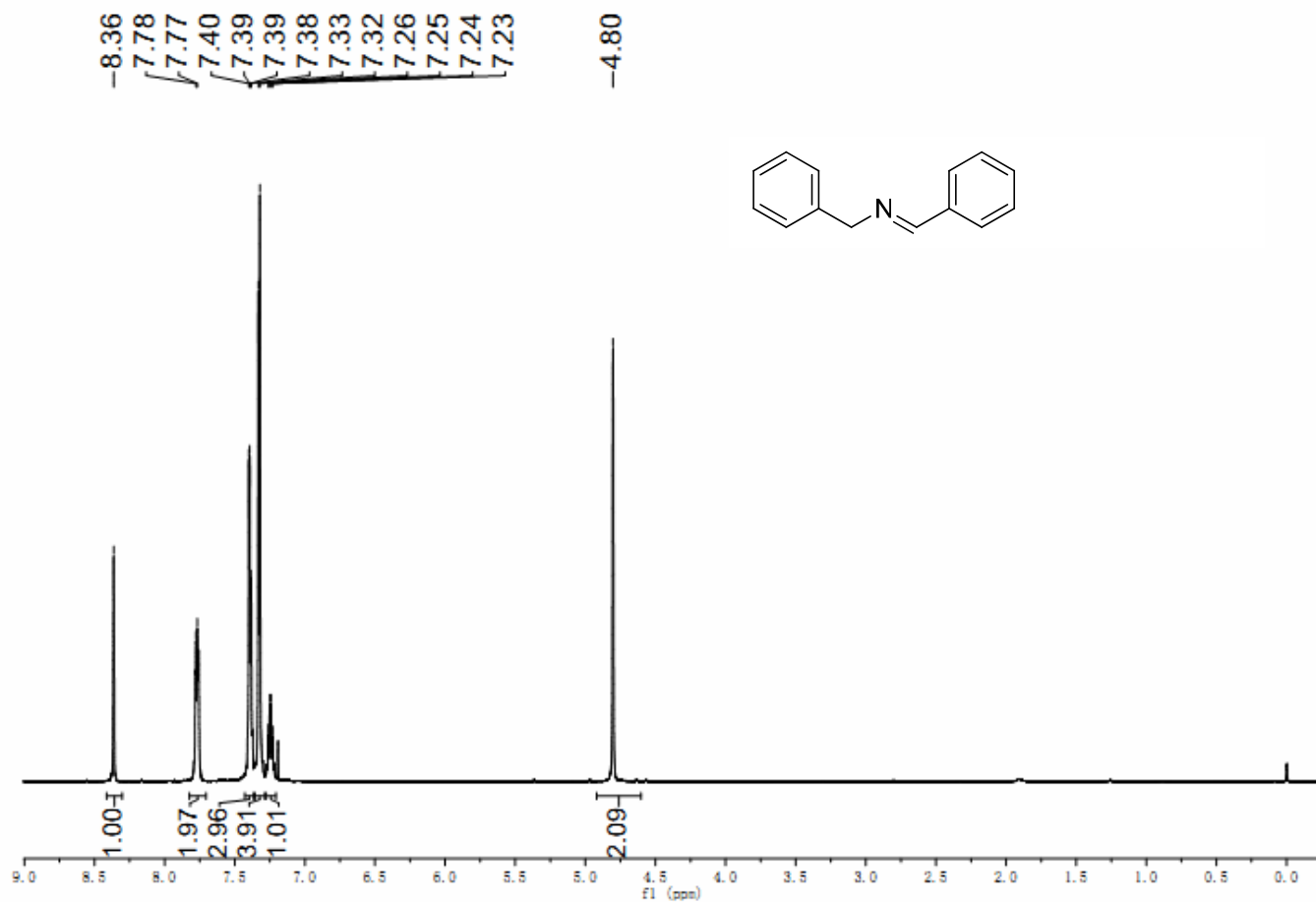
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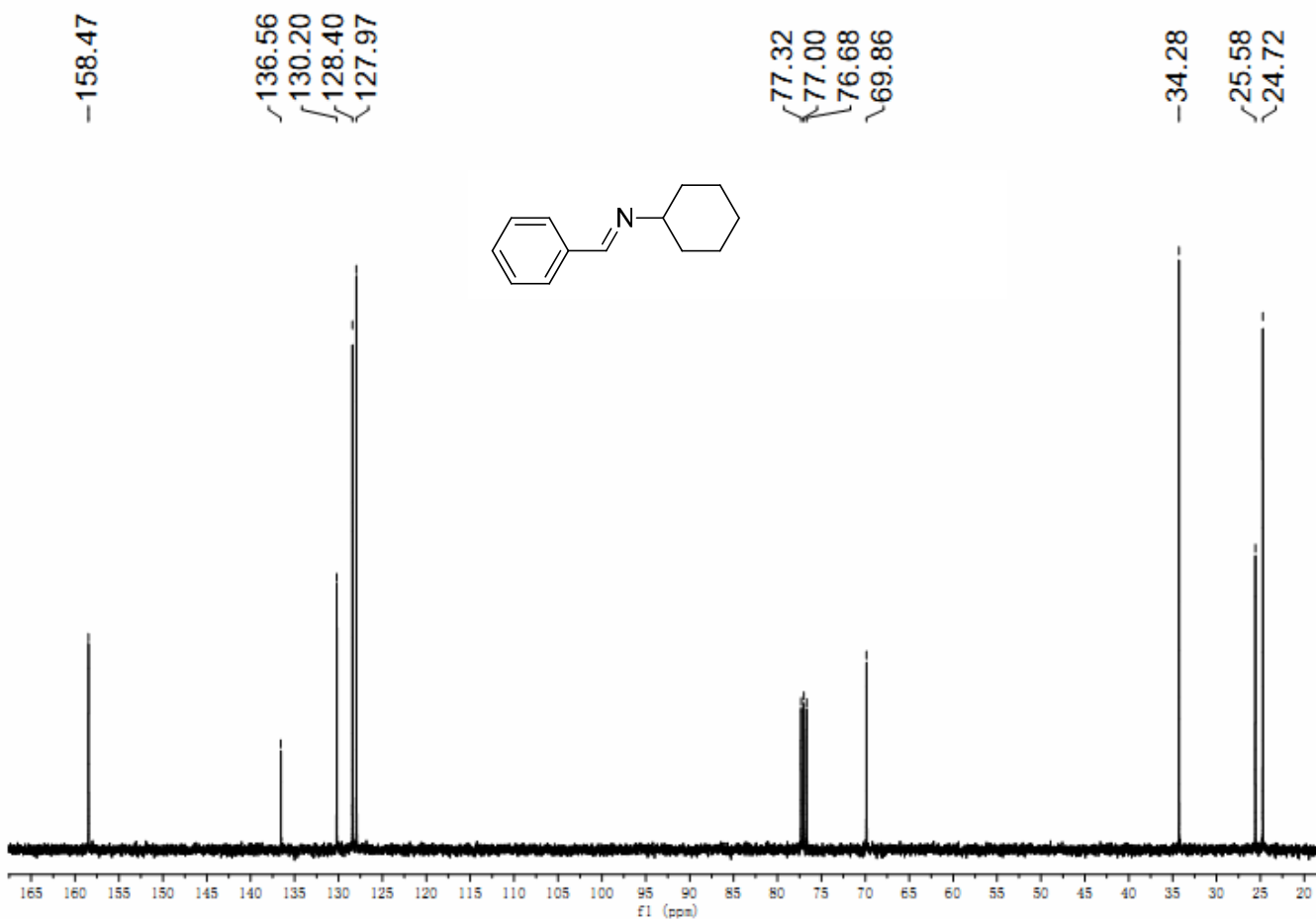
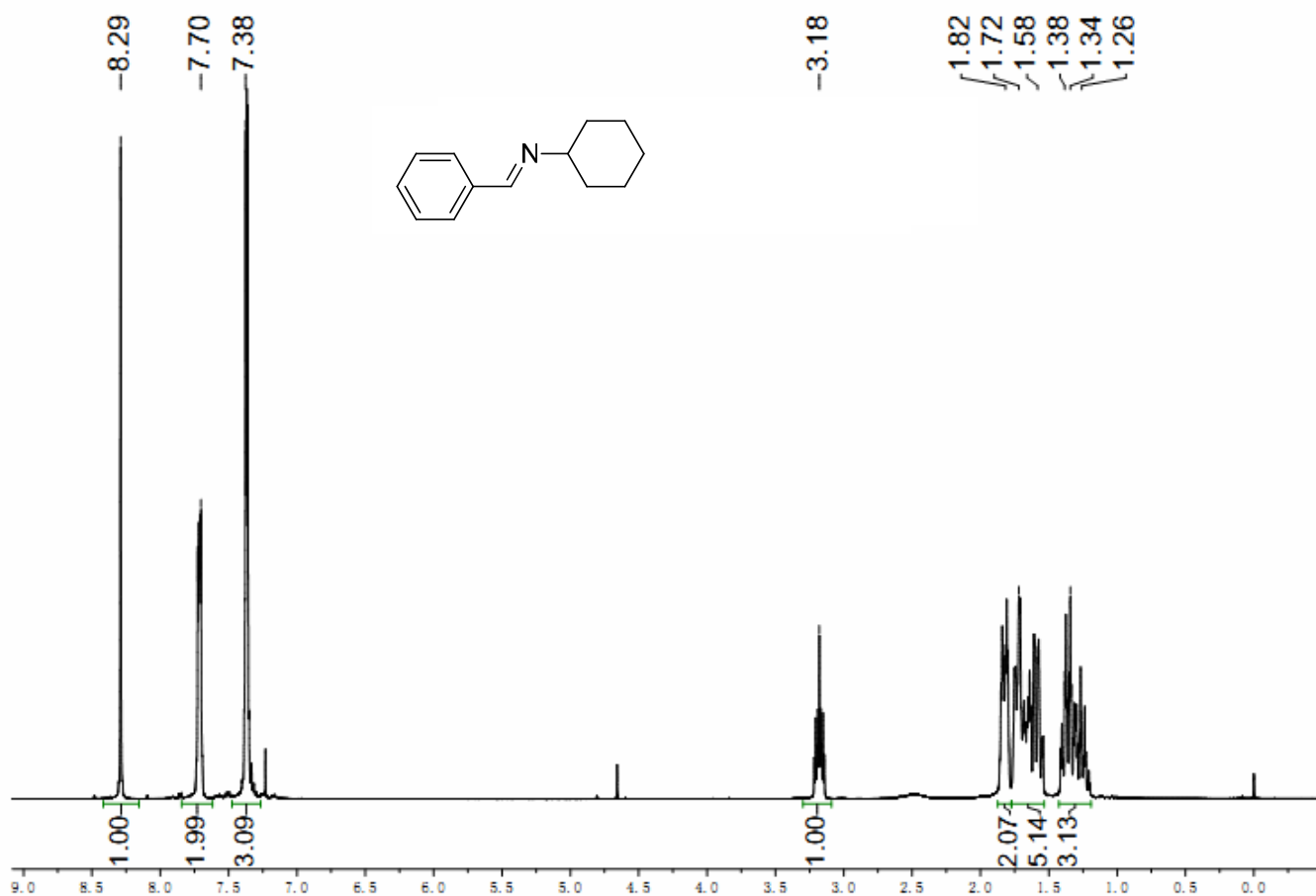
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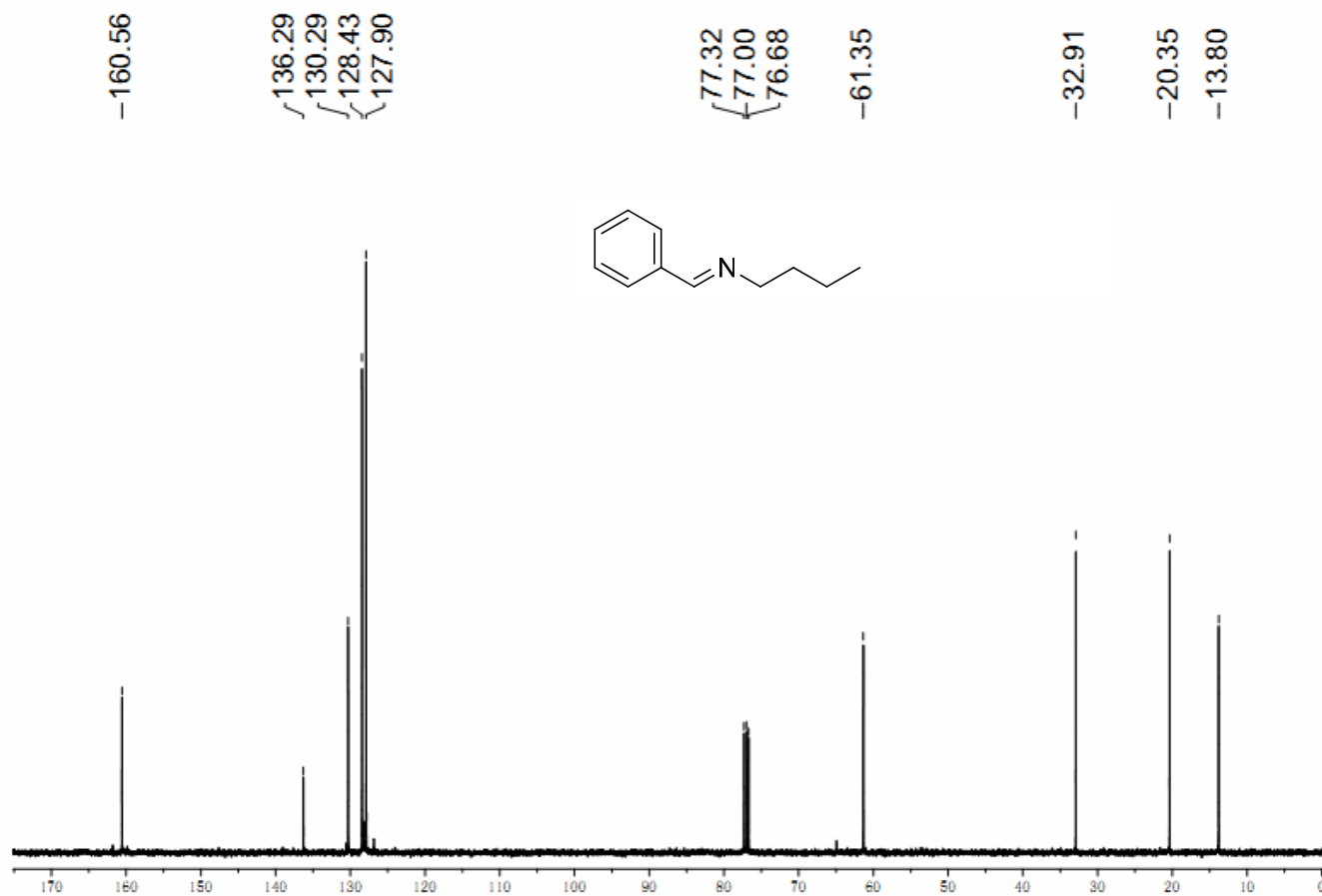
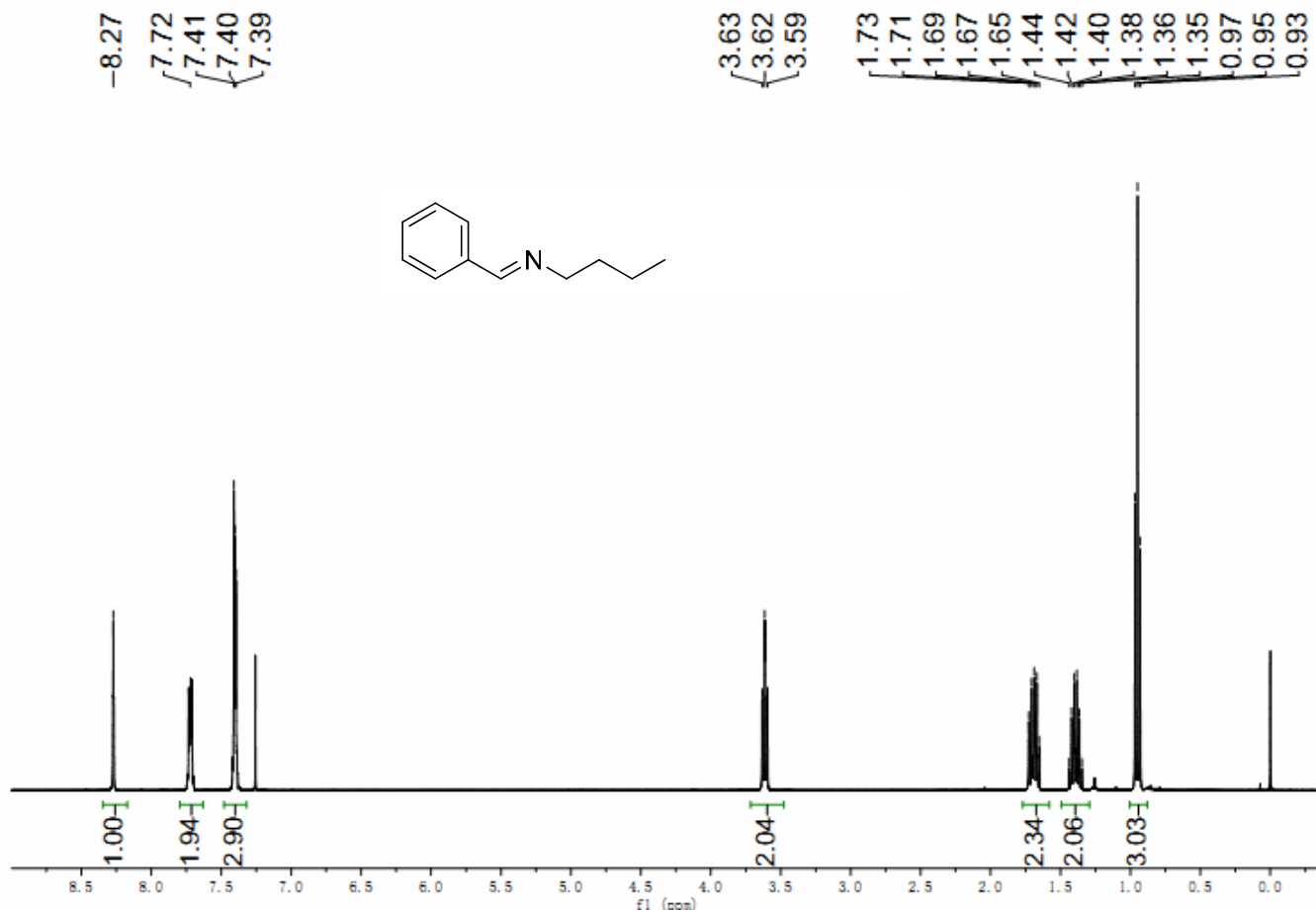
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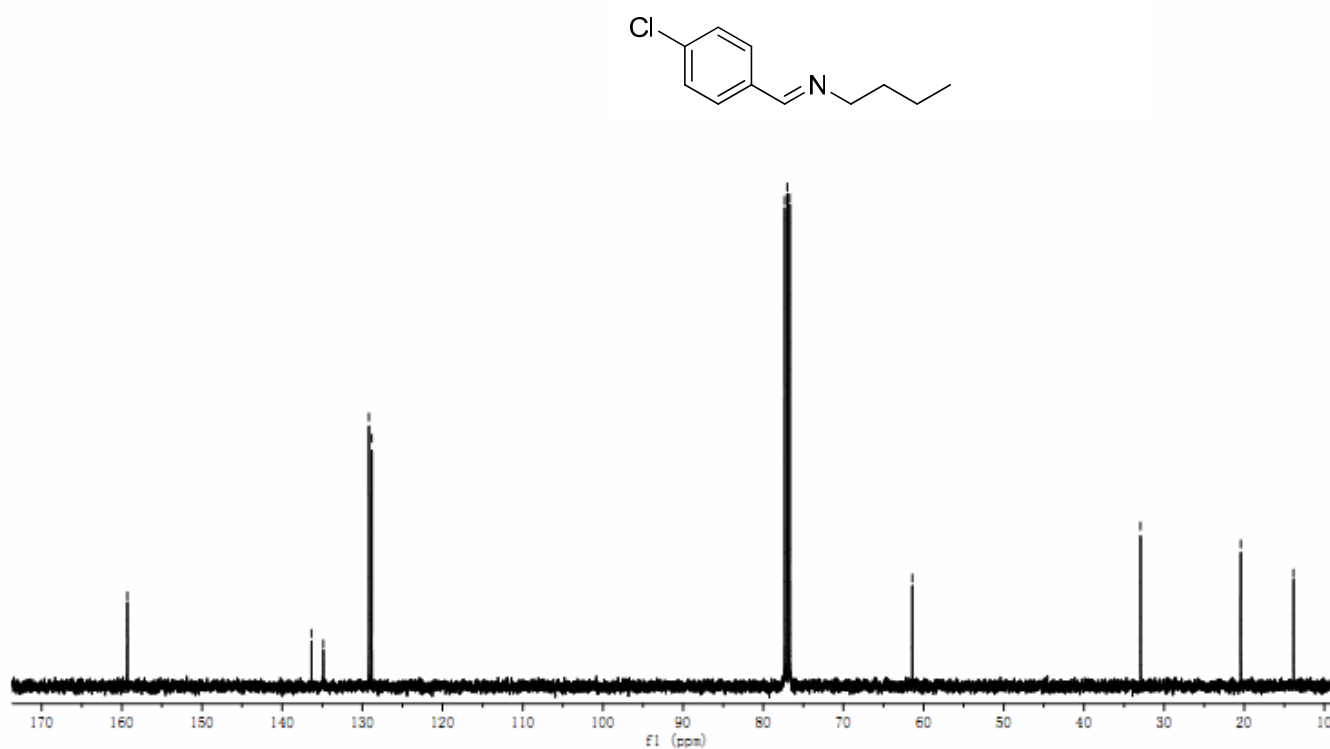
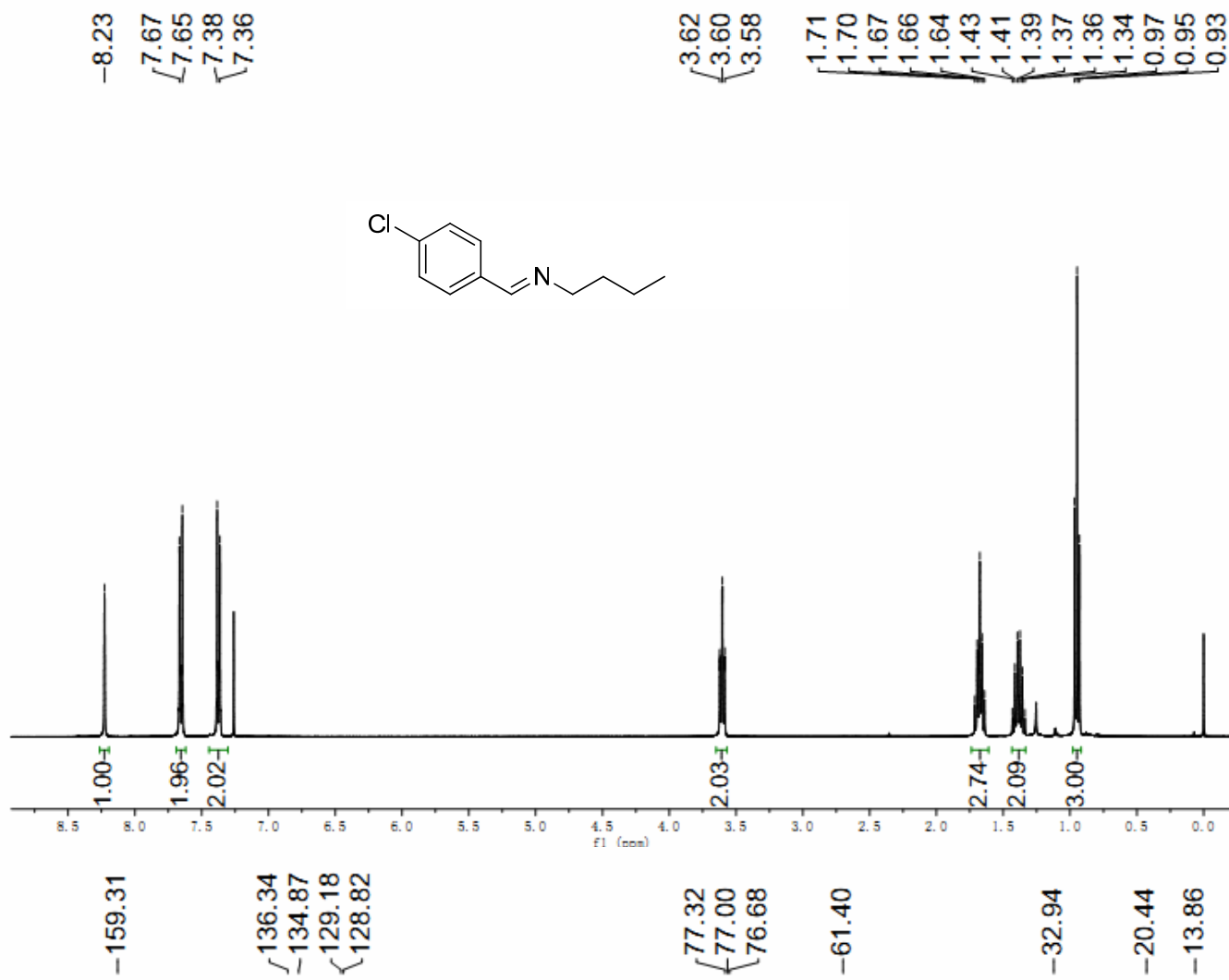
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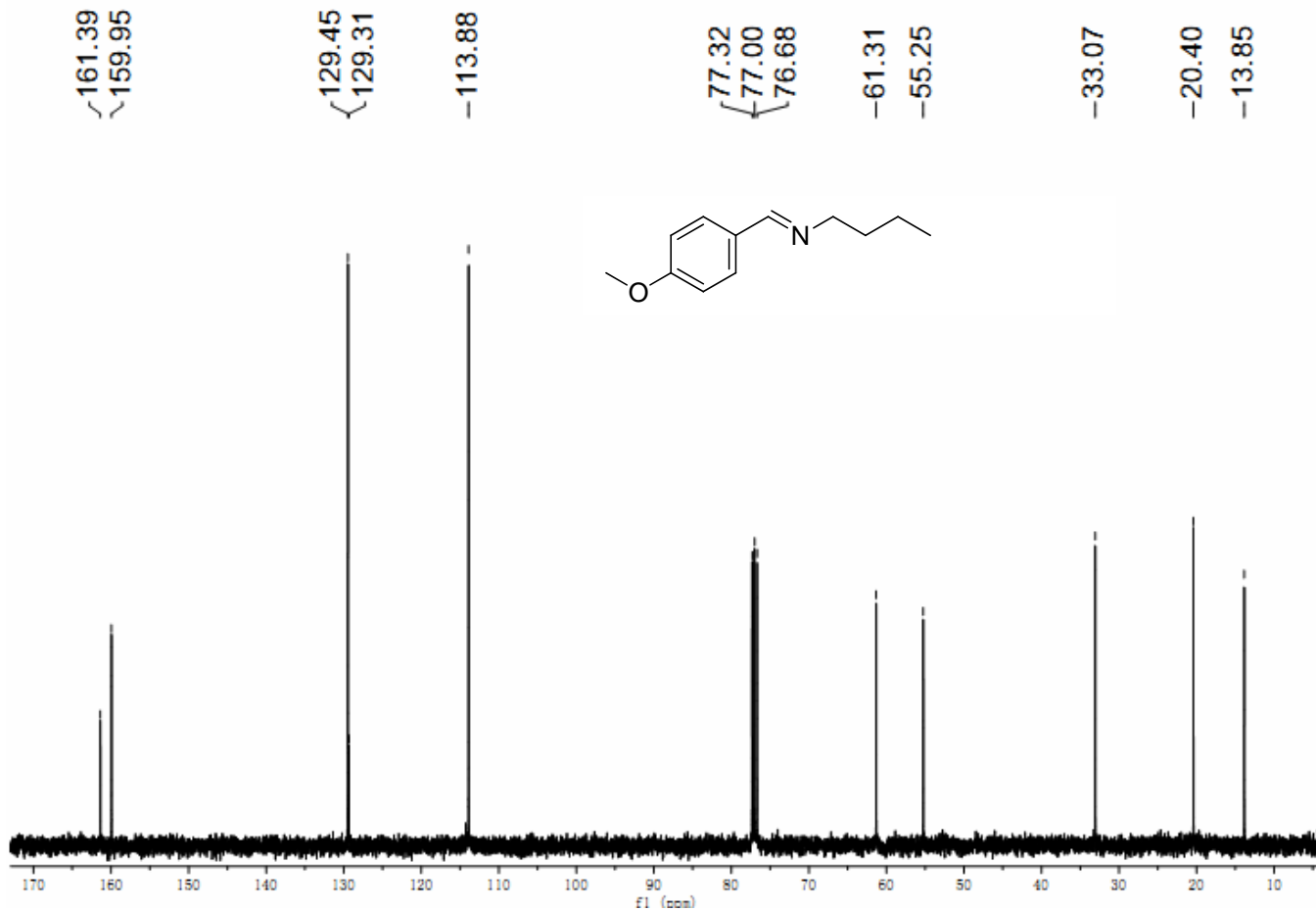
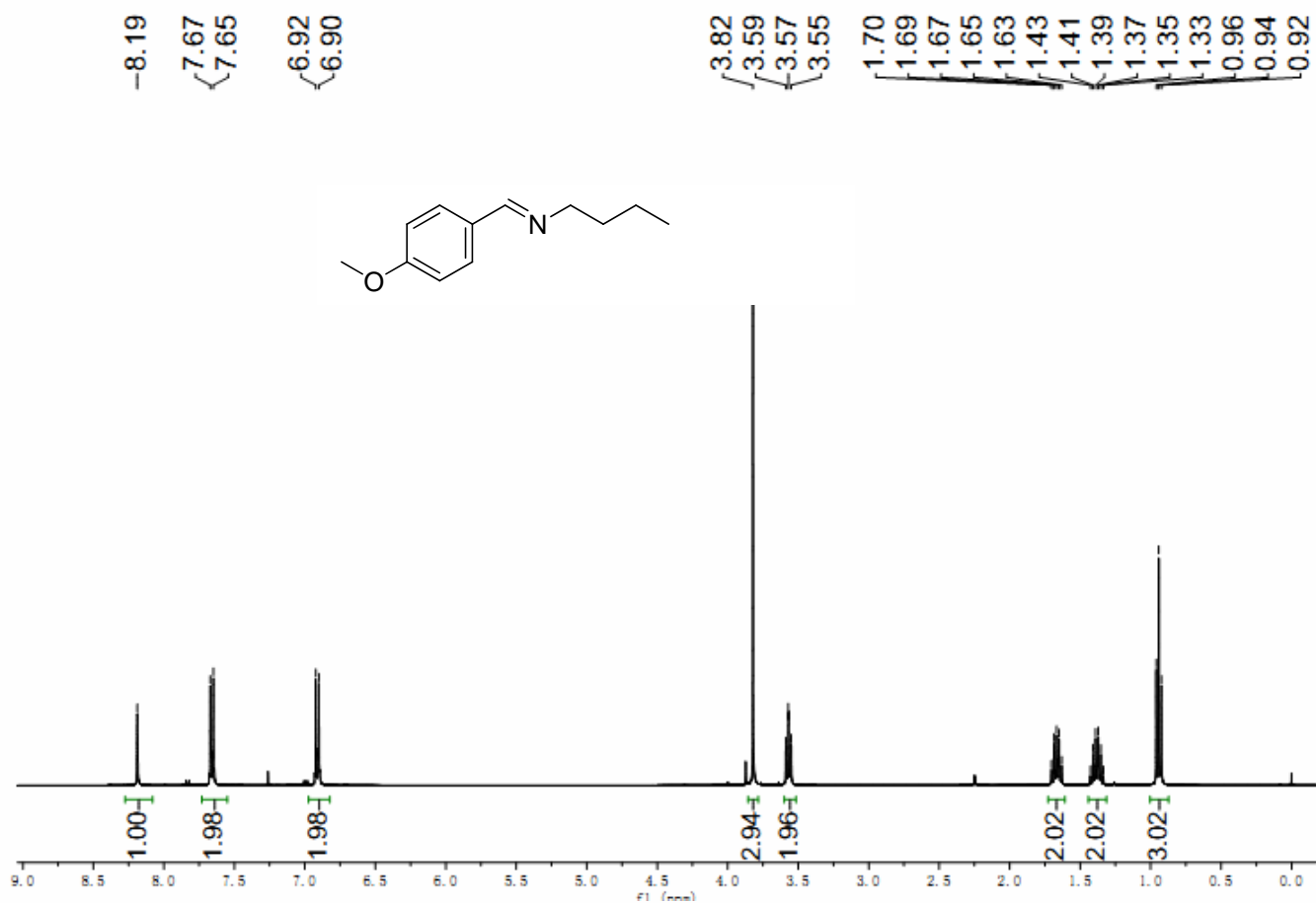
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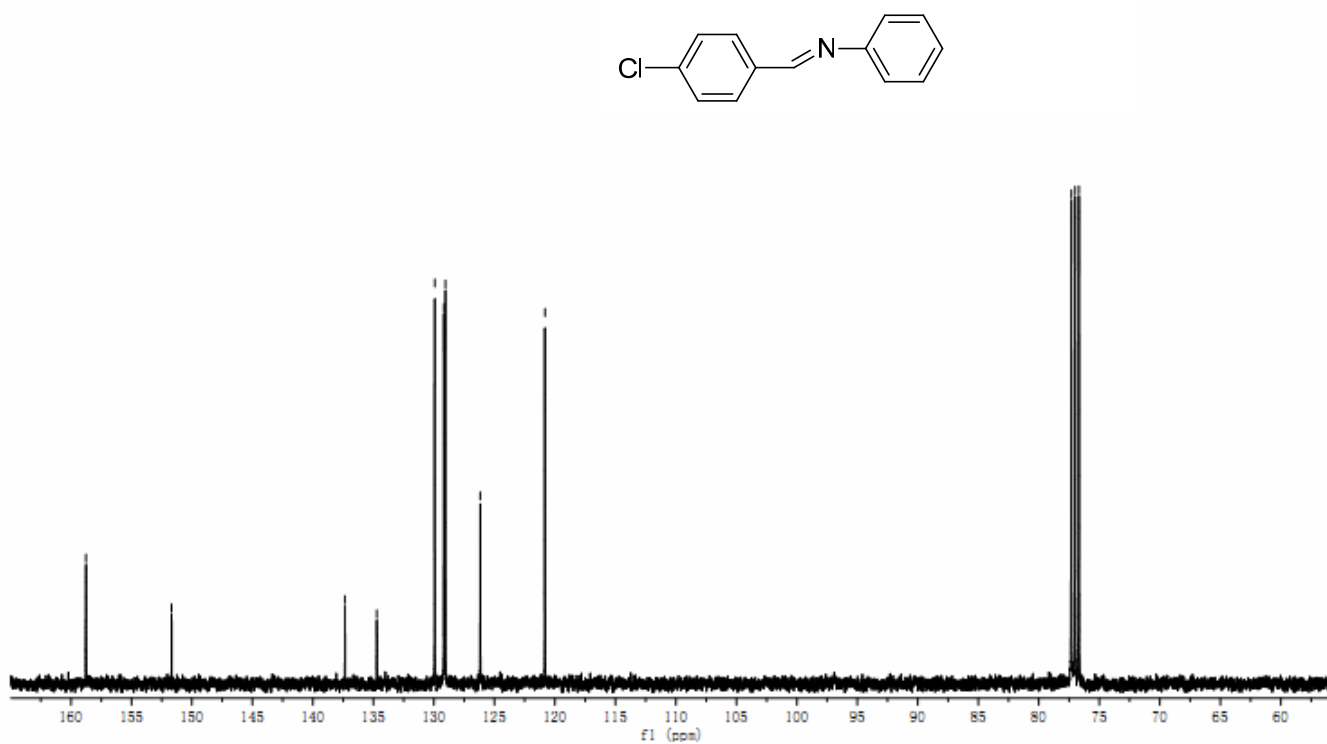
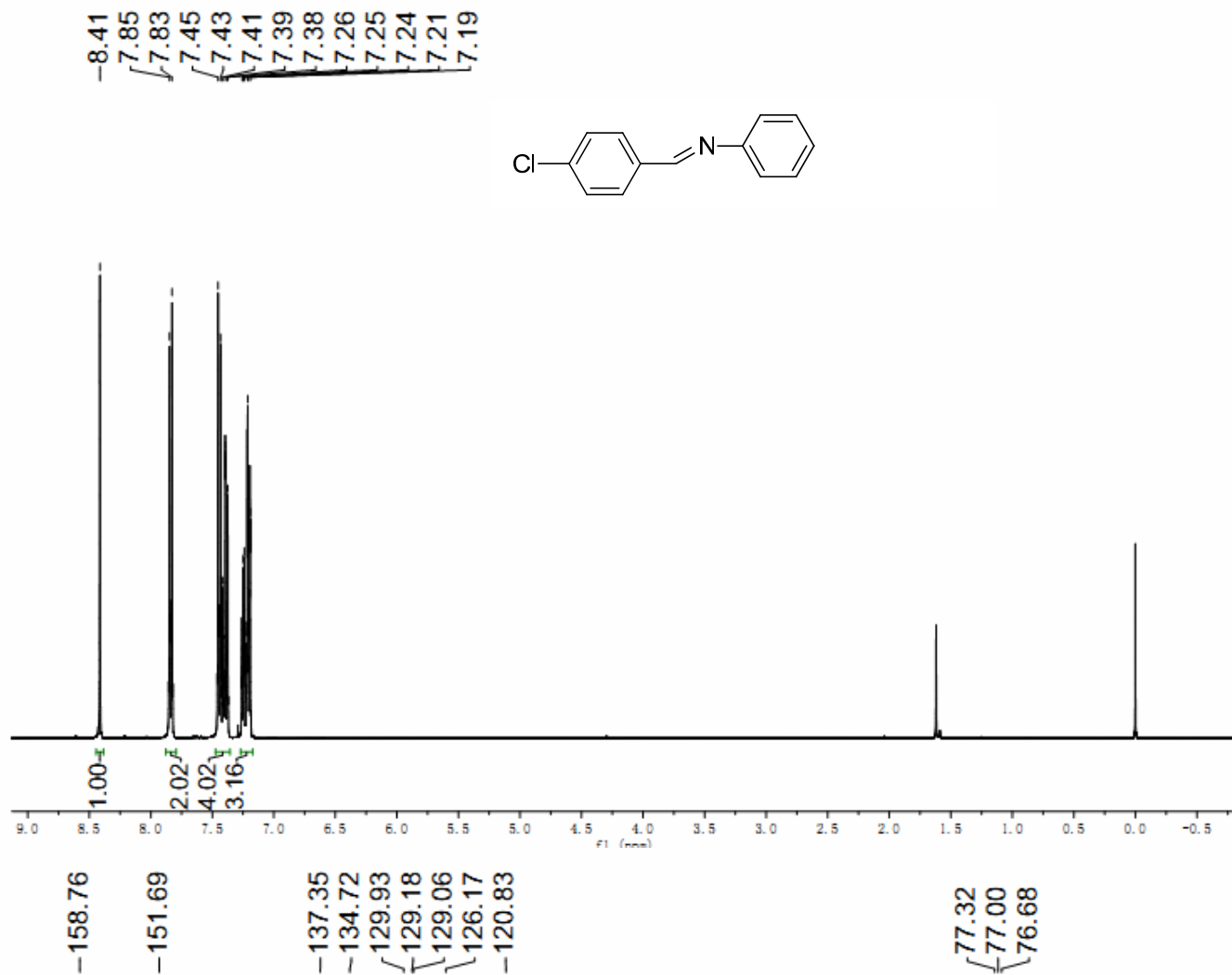
31



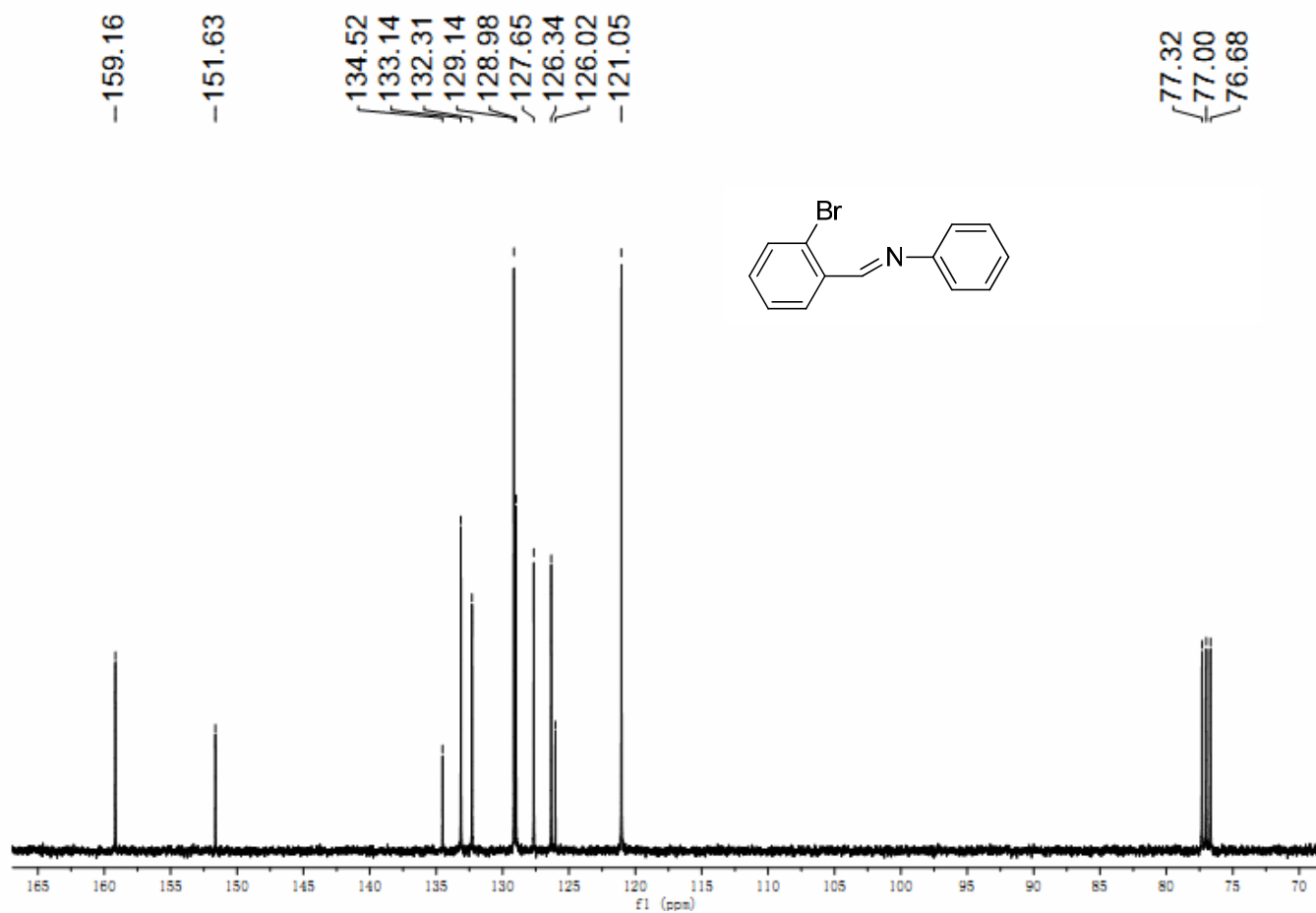
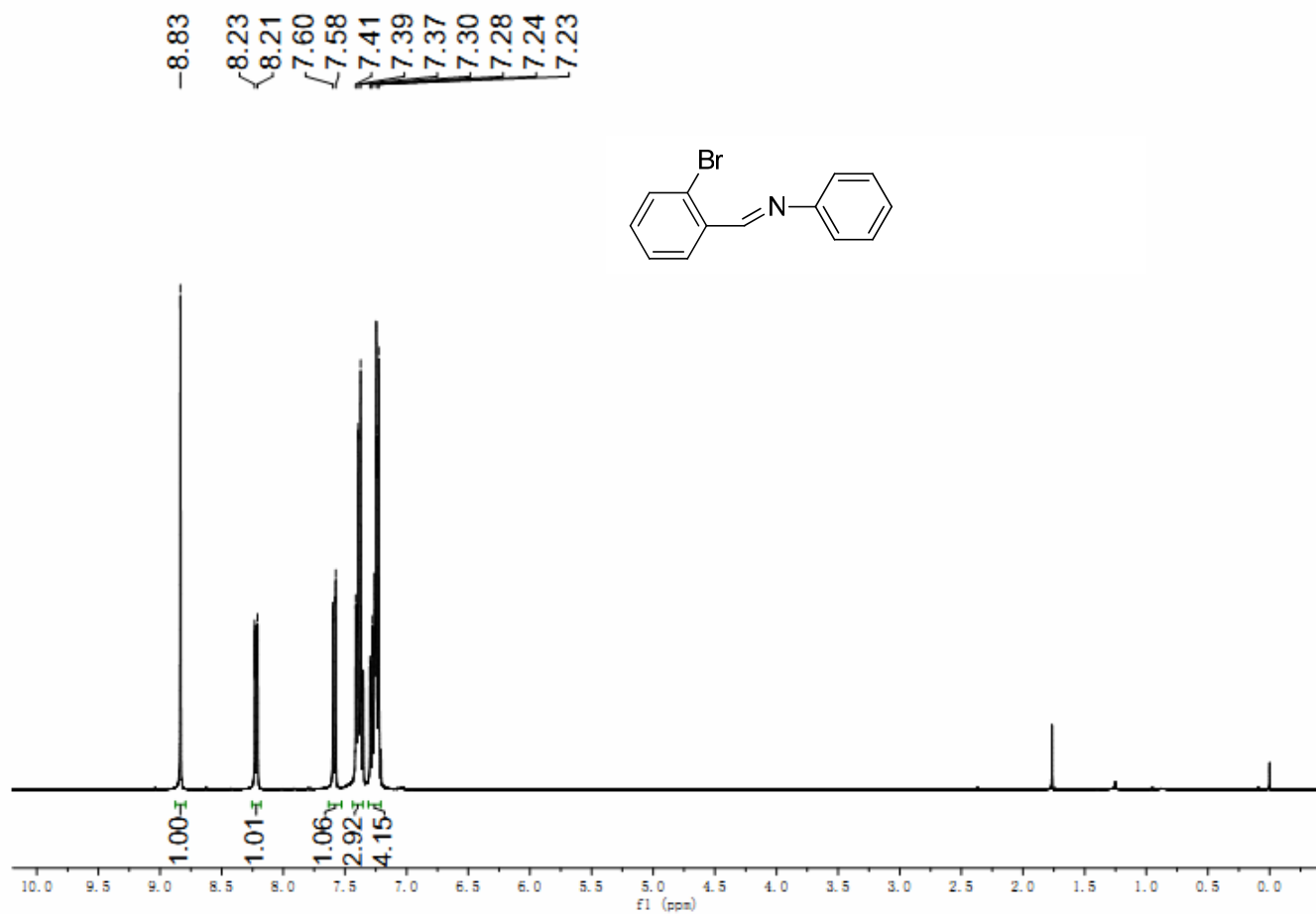
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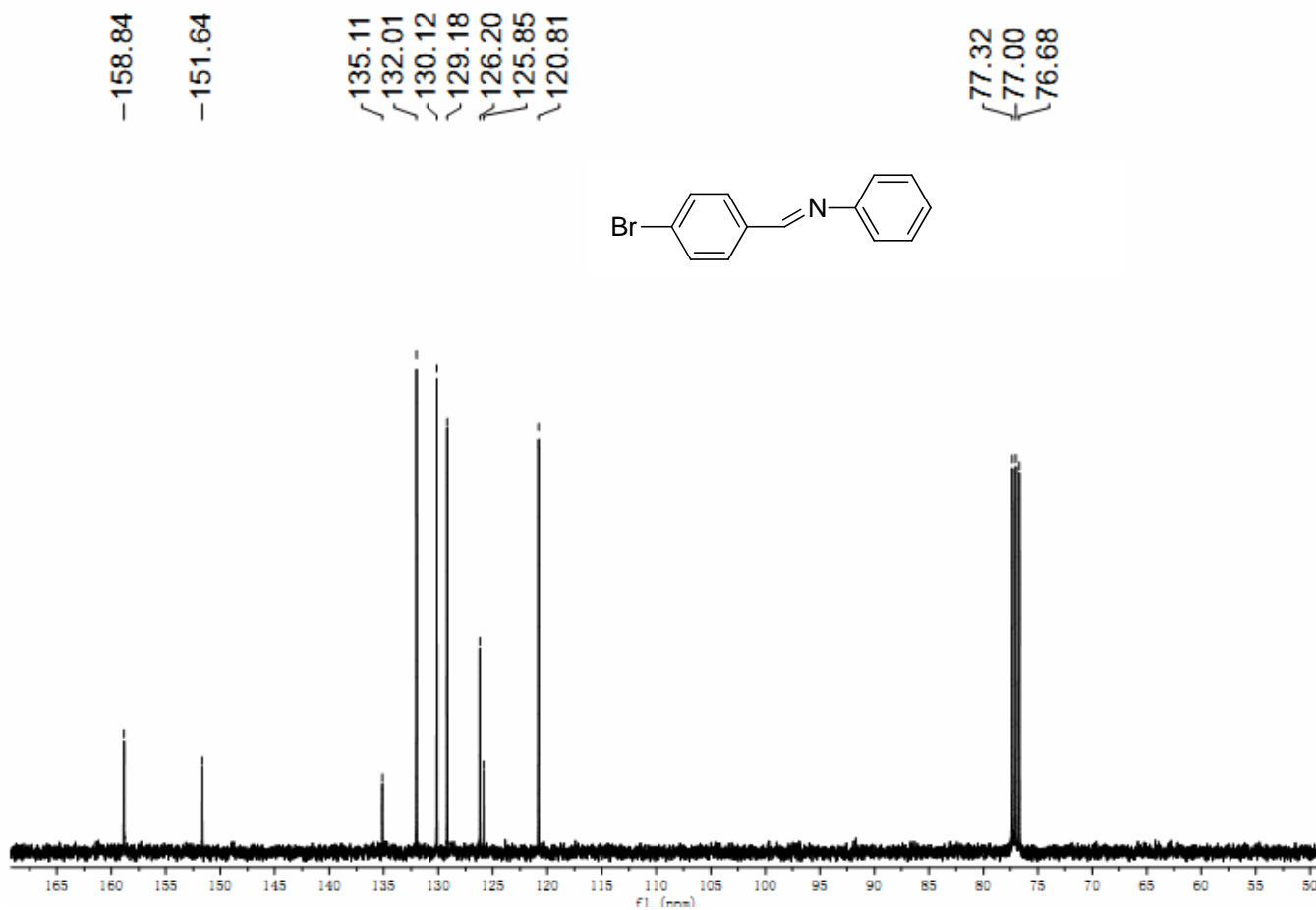
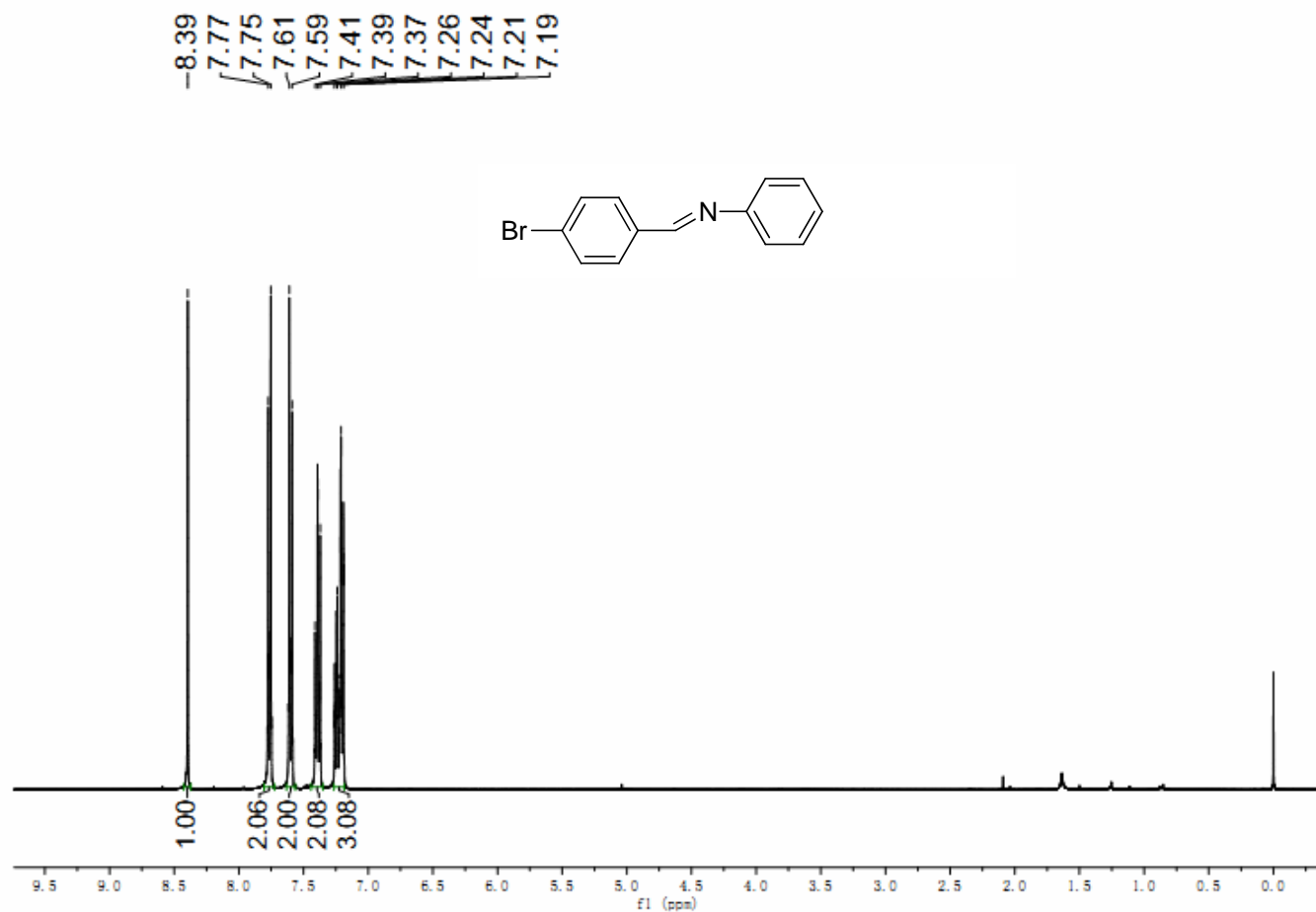
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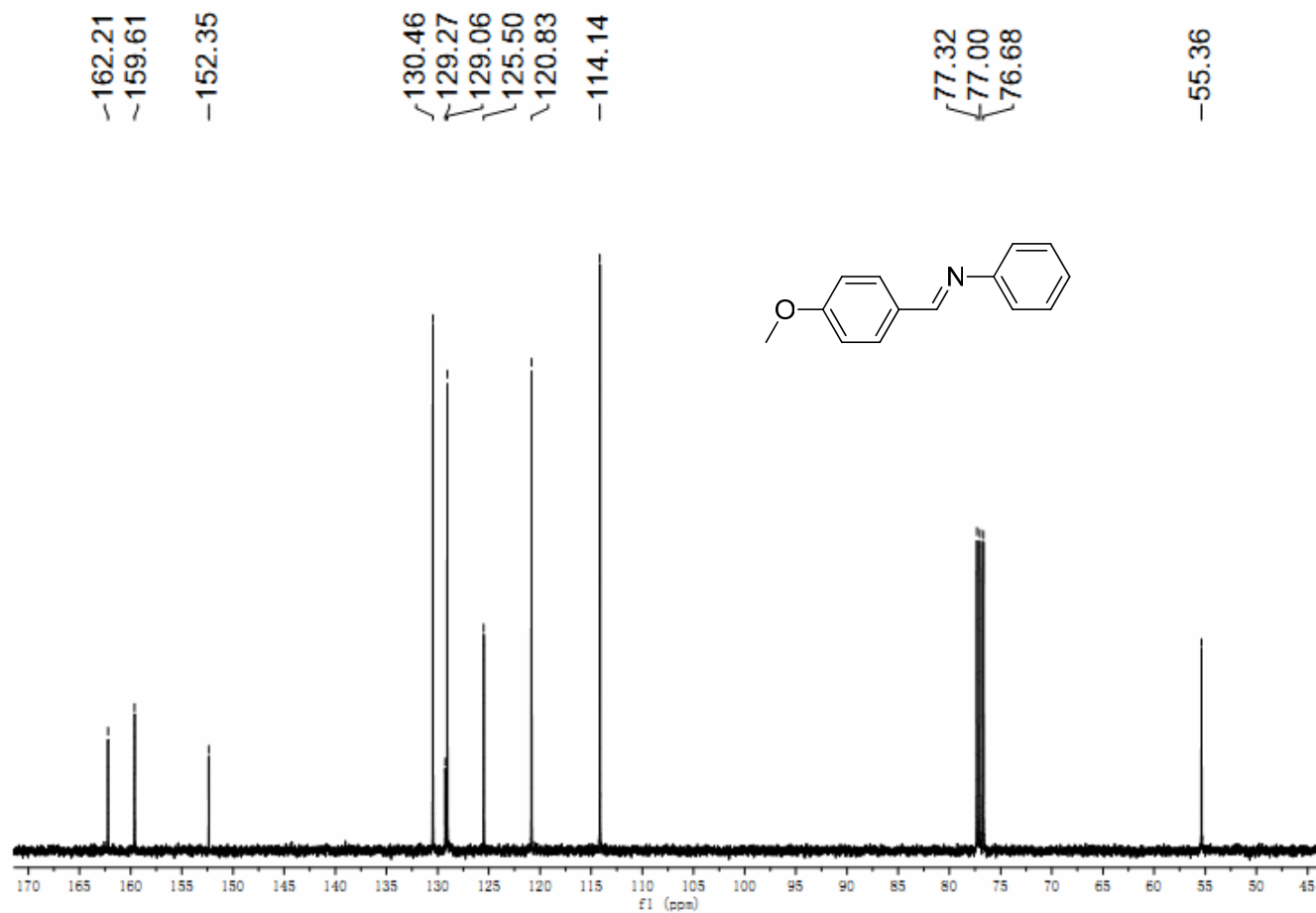
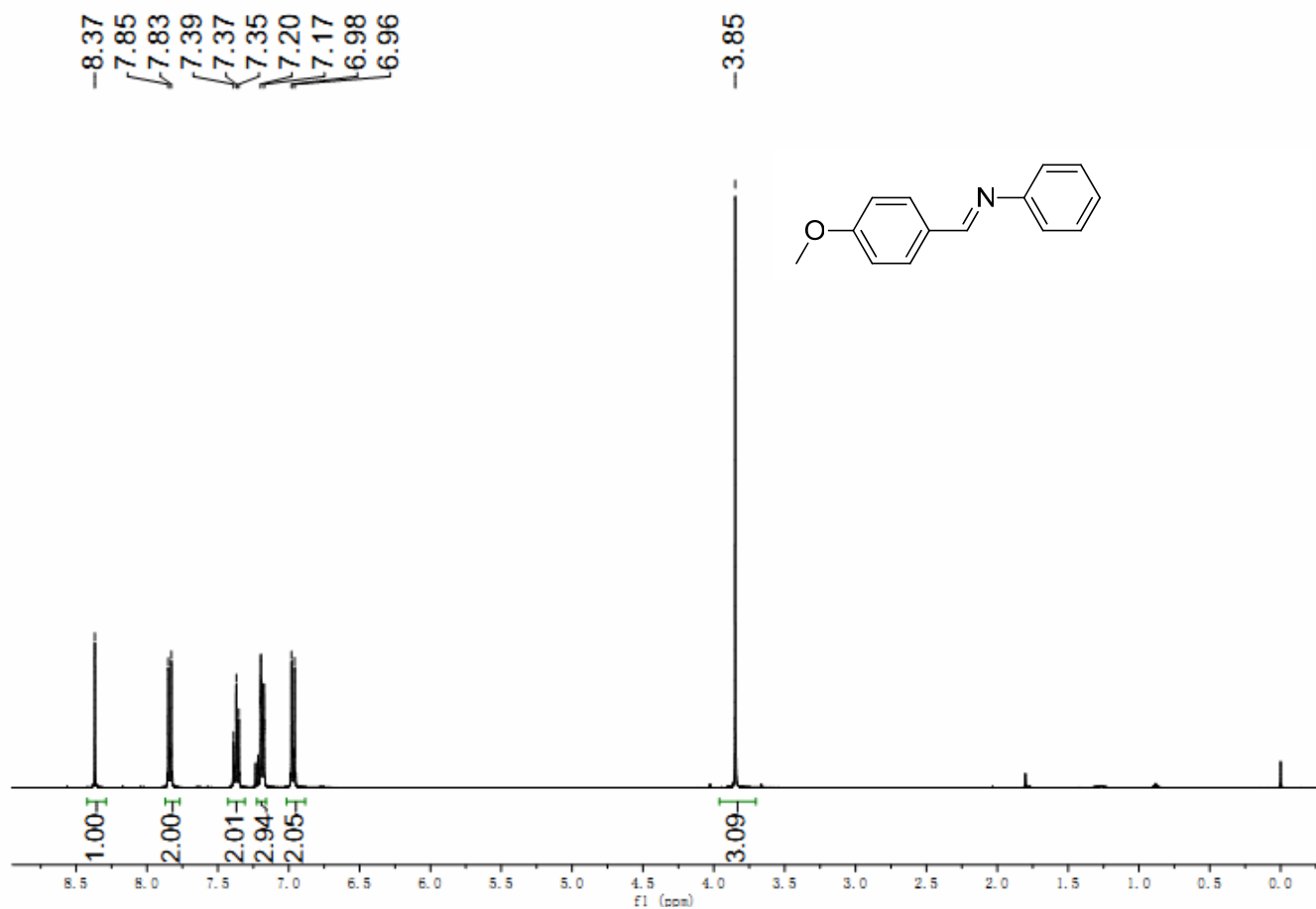
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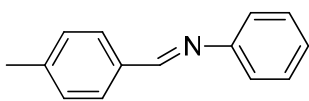
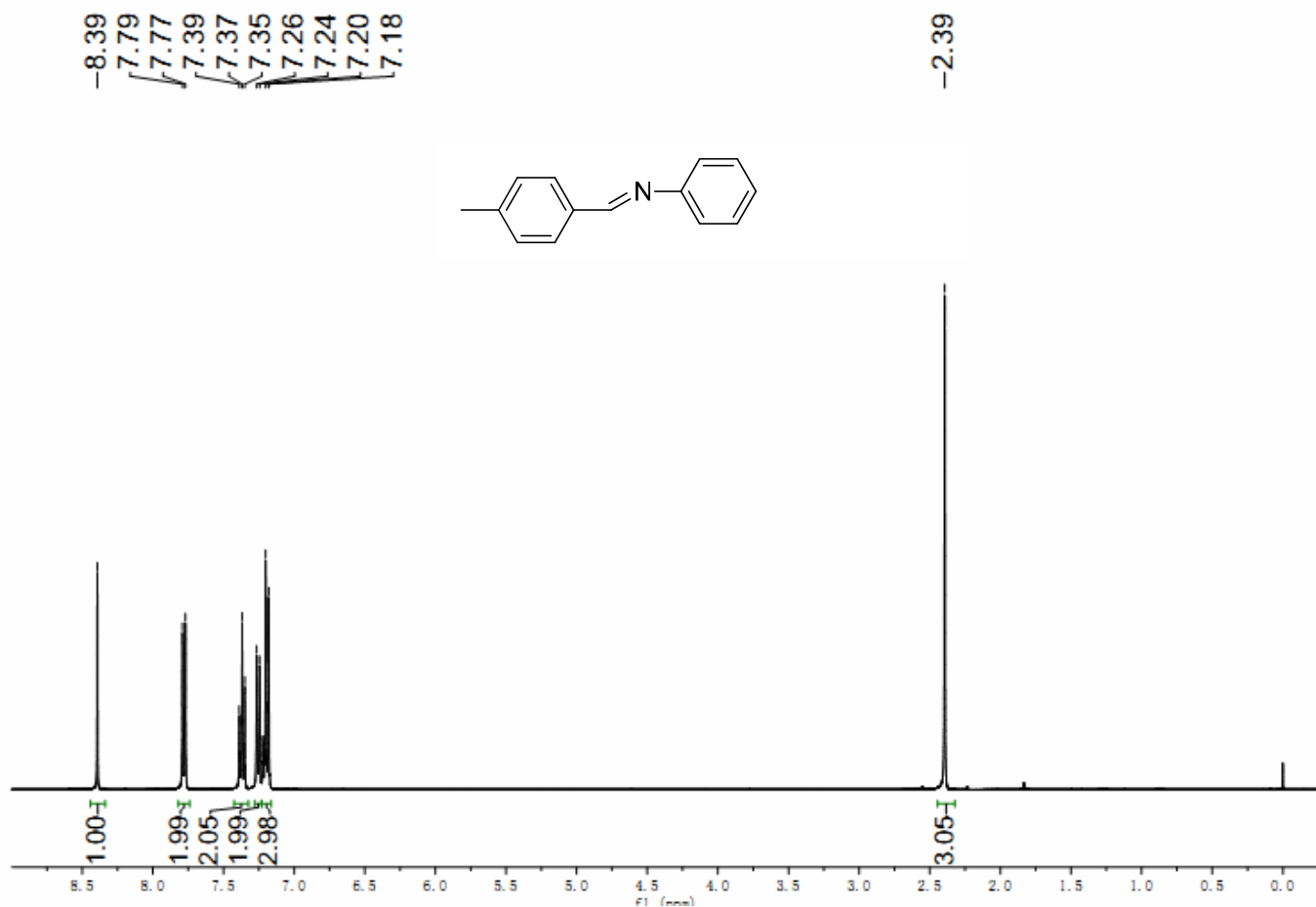
3p



3q

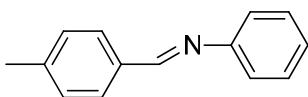
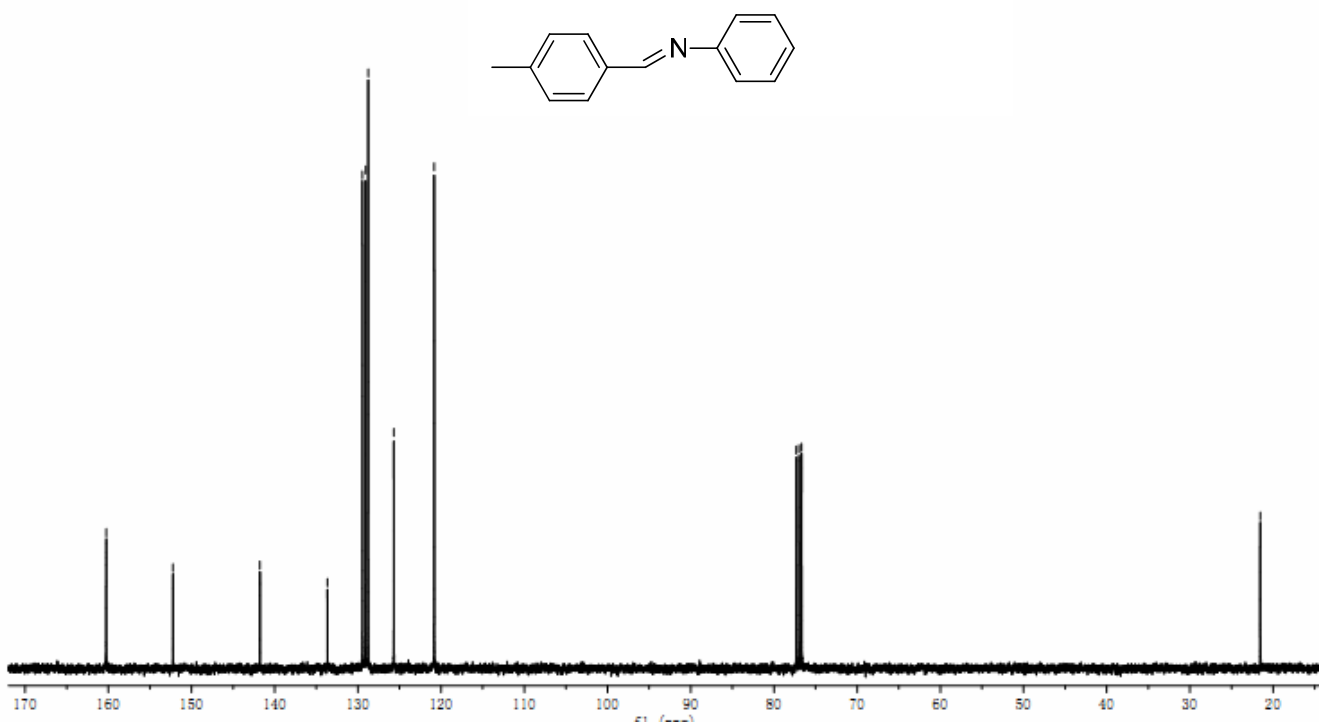


3r



Chemical shift values (ppm) for the ¹H NMR spectrum:

-160.24	-152.23	-141.77	133.66	129.45	129.06	128.76	125.68	120.82	77.32	77.00	76.68	-21.56
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3s

