Electronic Supplementary Material (ESI) for RSC Advances.
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Supporting Information

A two-step continuous flow synthesis of amides from alcohol with metal-free catalyst

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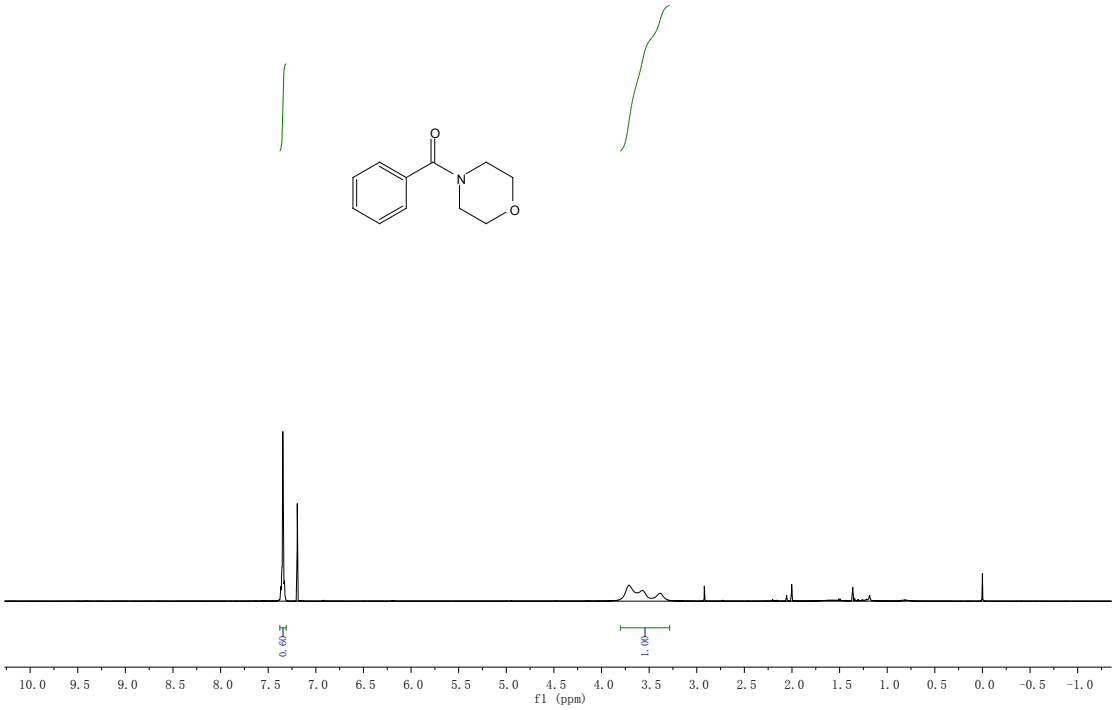
1. NMR Spectra S2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N
O
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1.00
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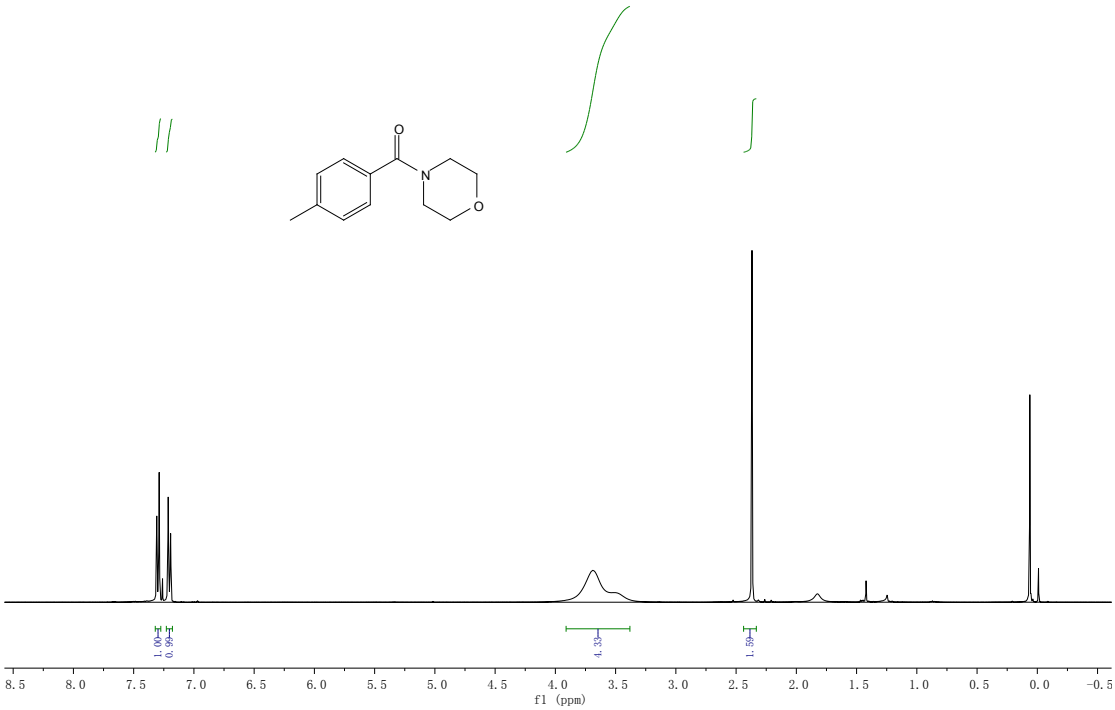
f1 (ppm)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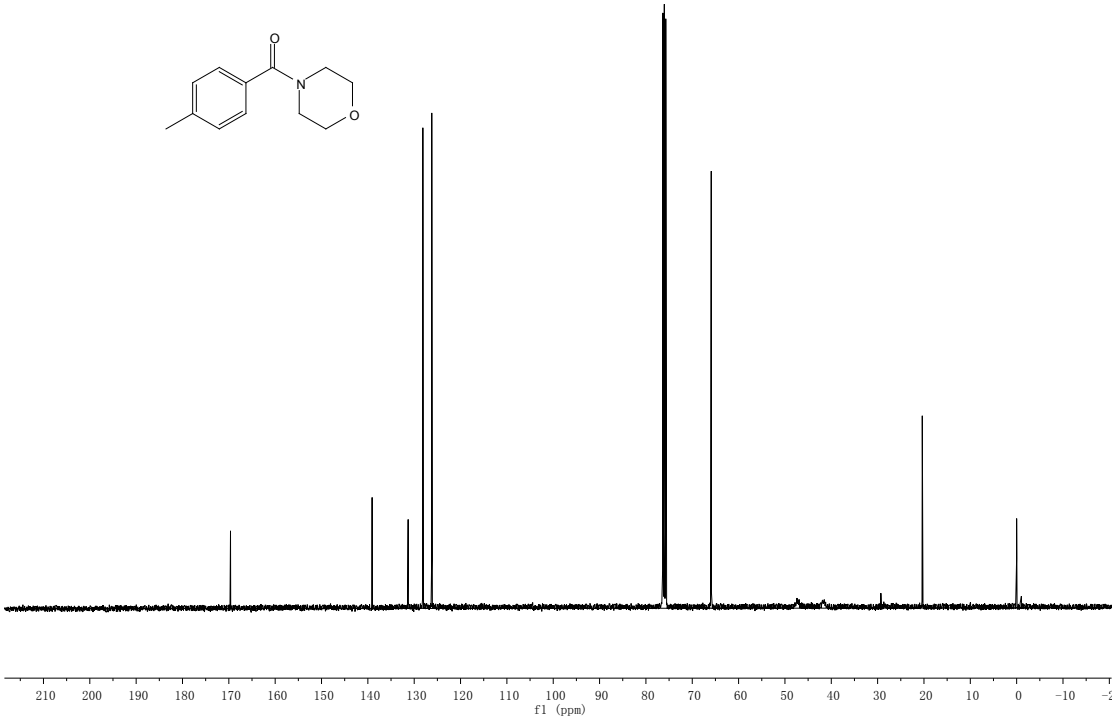
f1 (ppm)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N
O
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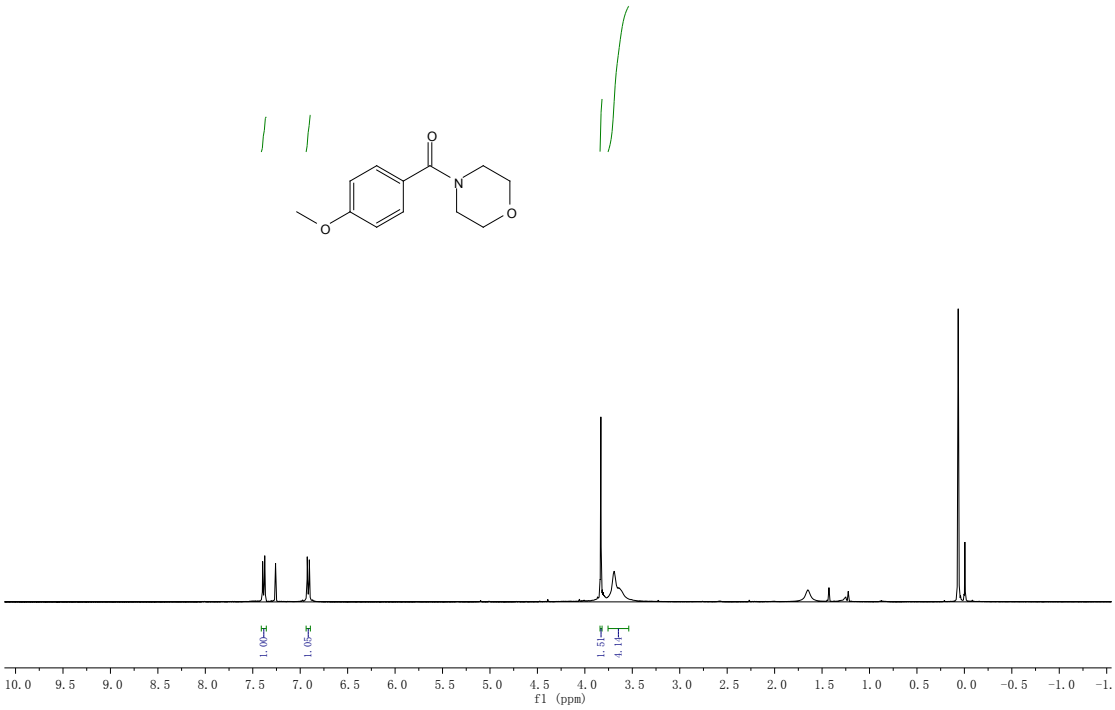
f1 (ppm)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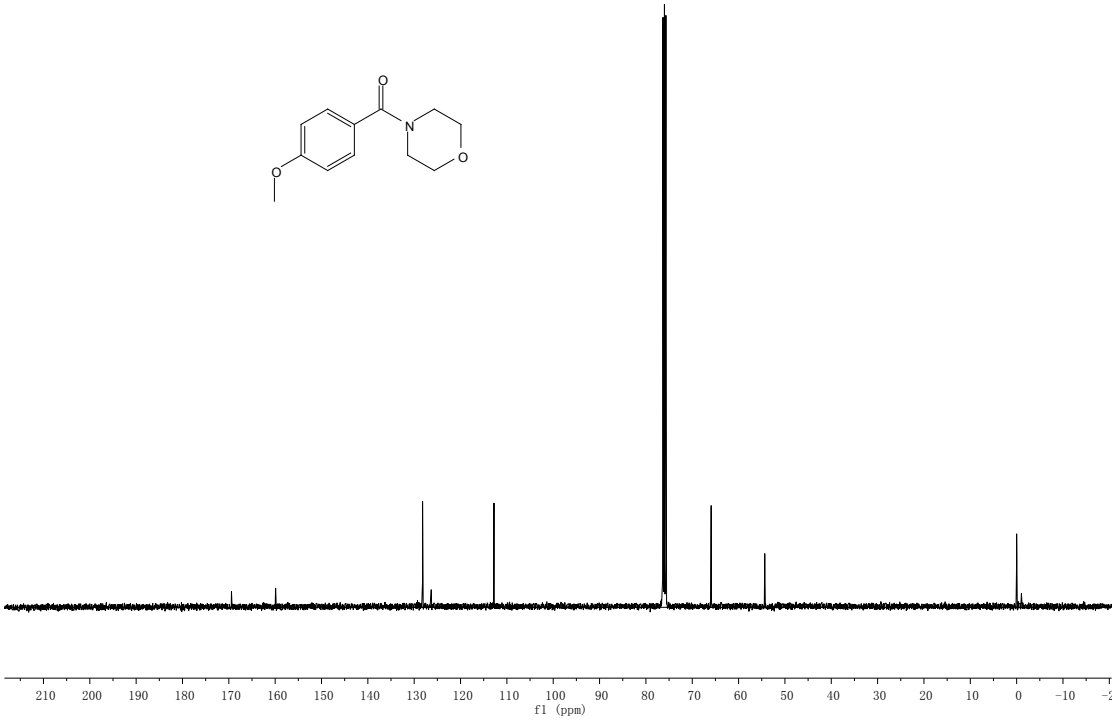
f1 (ppm)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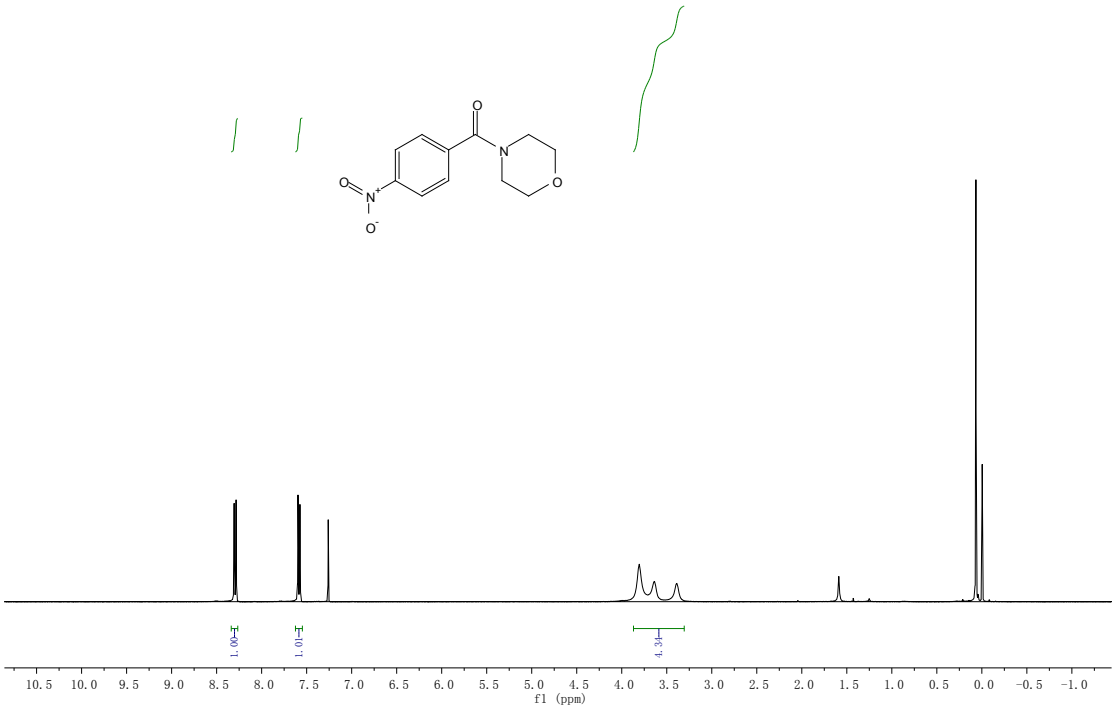
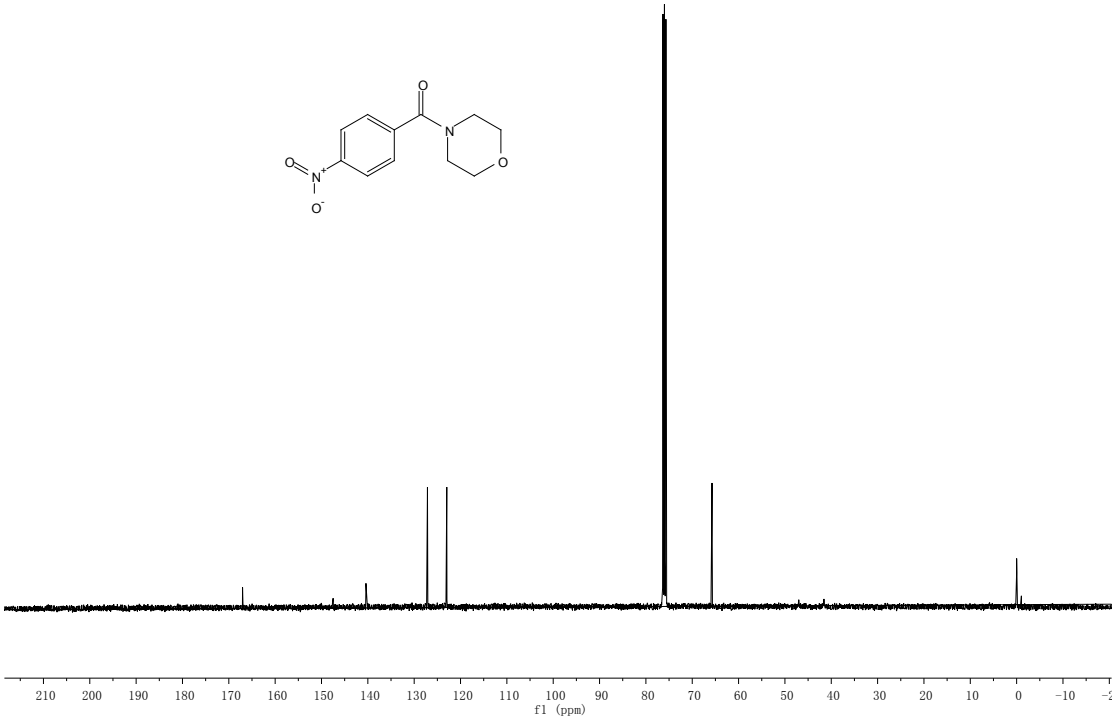
O
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10
f1 (ppm)


O
N
O
O
N+
O-
1.00
1.01
4.39
10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5 -1.0
f1 (ppm)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O
O
N+
O-
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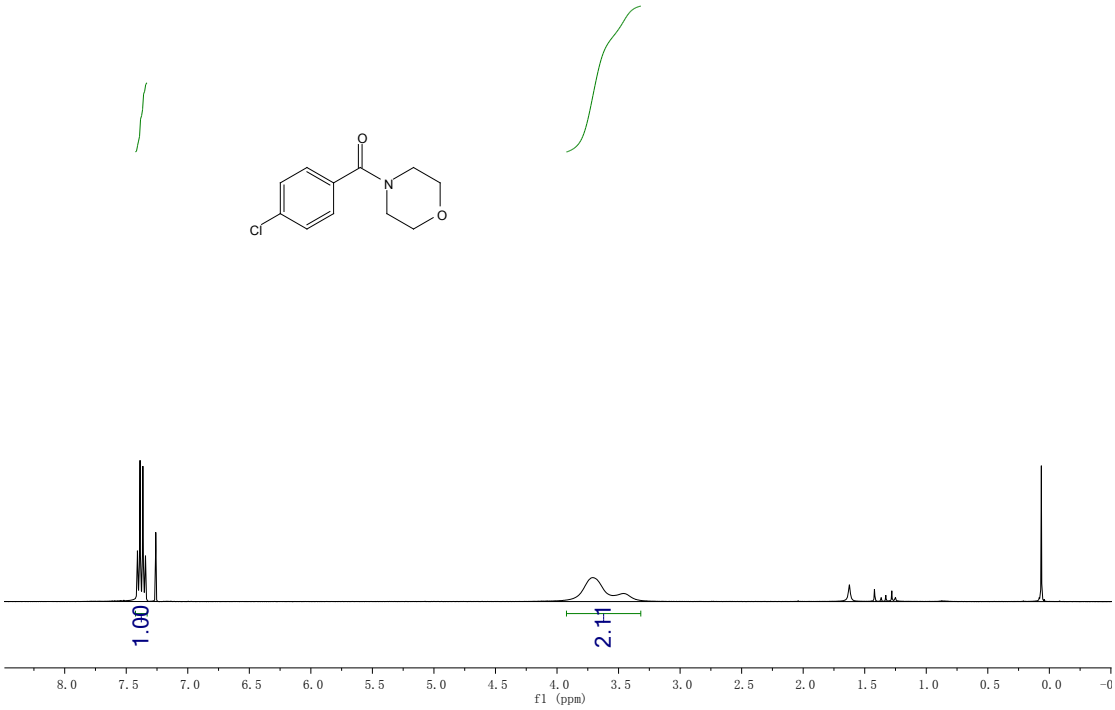
f1 (ppm)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O
Cl
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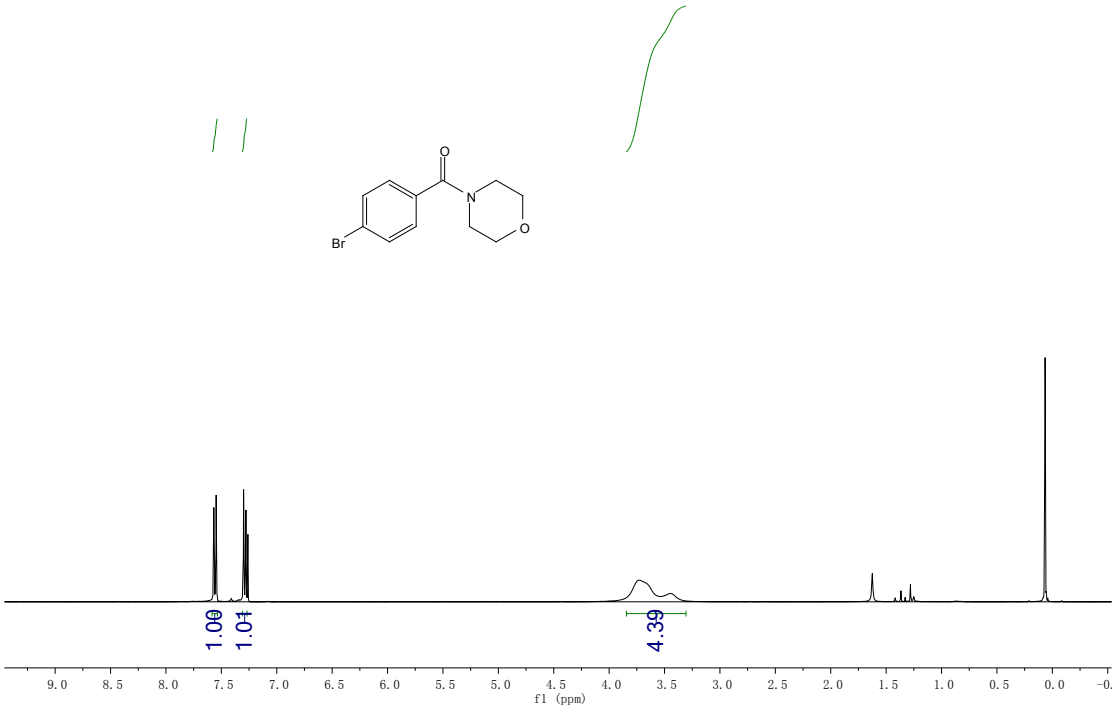
2.11
8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0
f1 (ppm)

O
N
O
Cl
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 −10
f1 (ppm)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O
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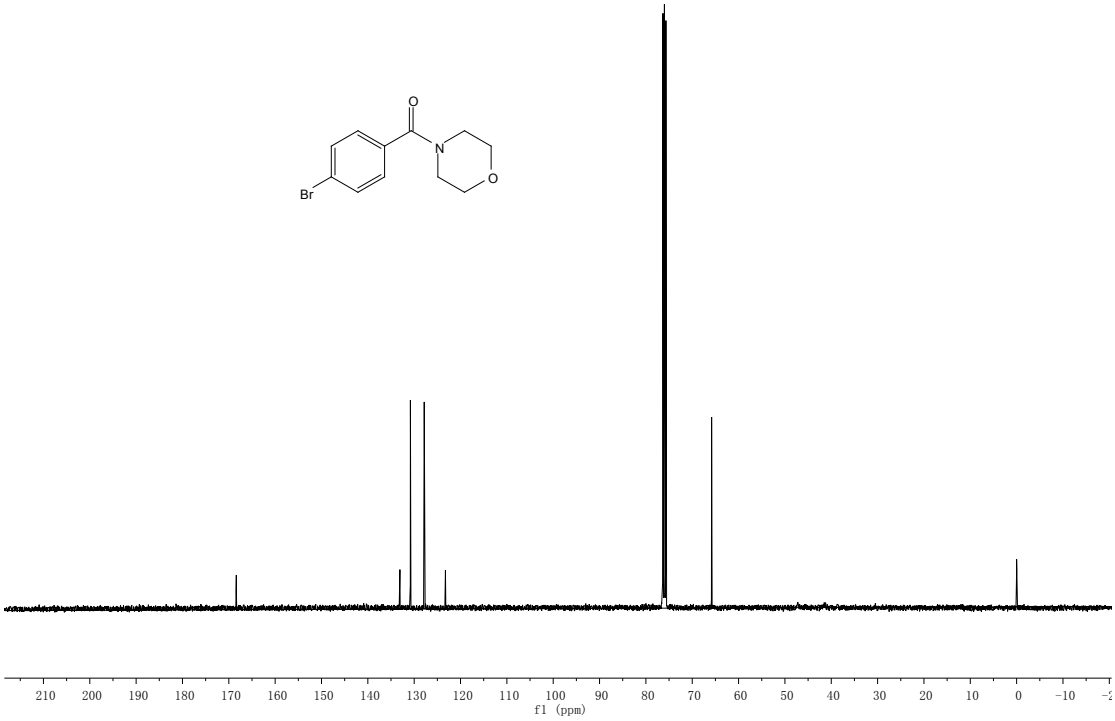
f1 (ppm)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Br
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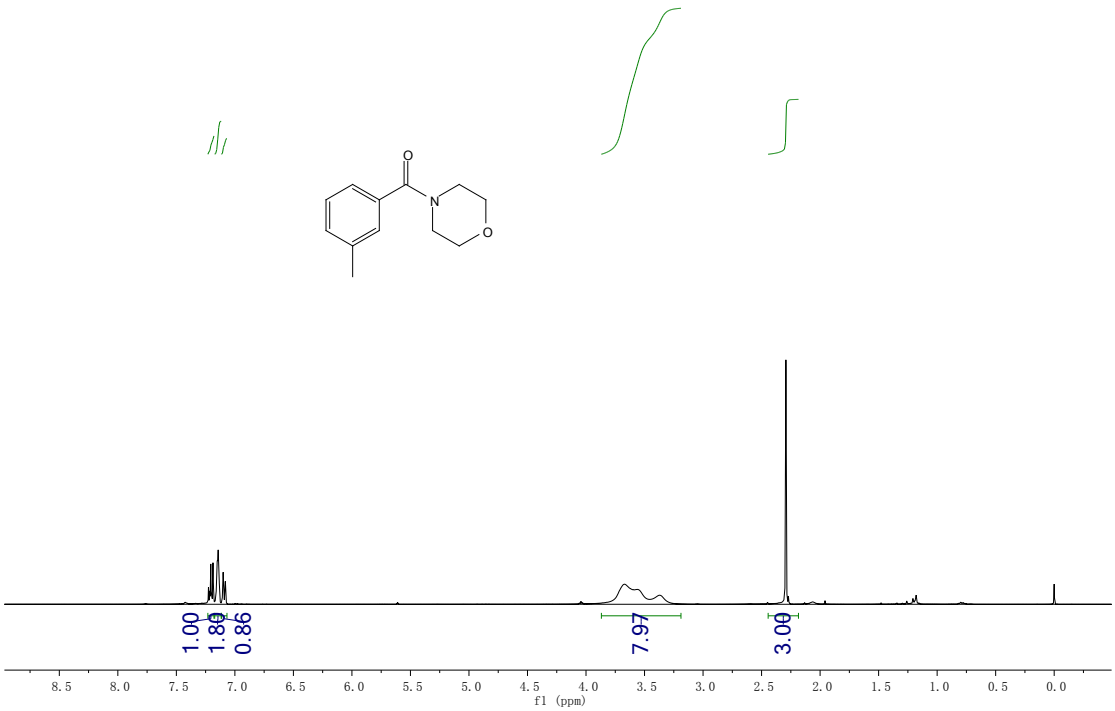
f1 (ppm)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N
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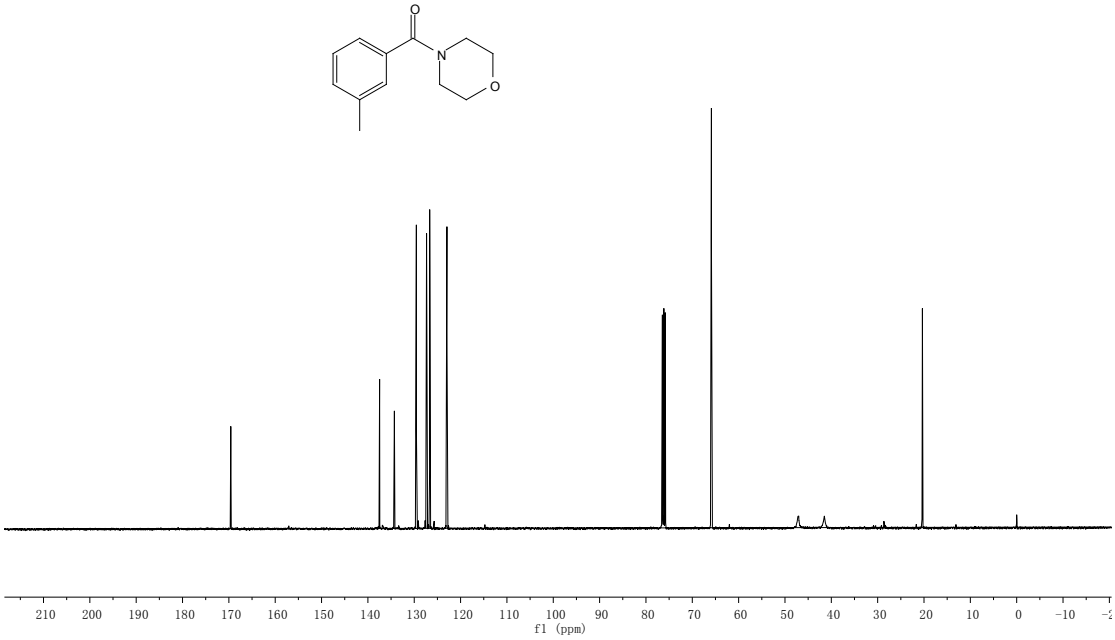
f1 (ppm)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O
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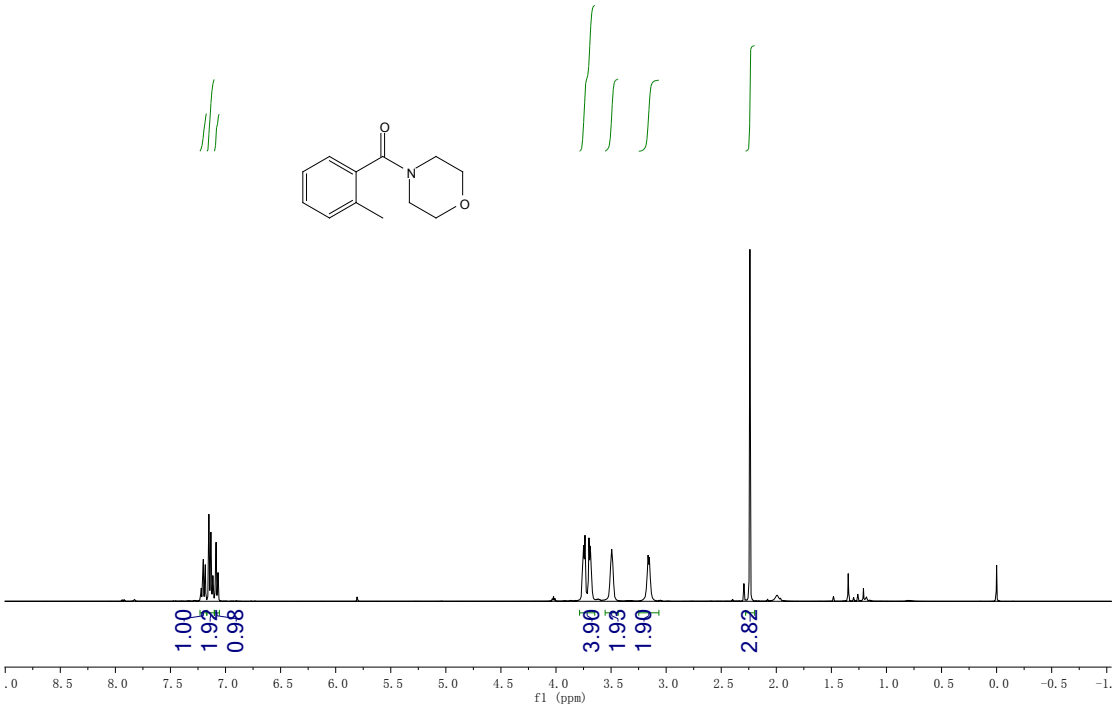
f1 (ppm)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O
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1.93
1.90
2.82
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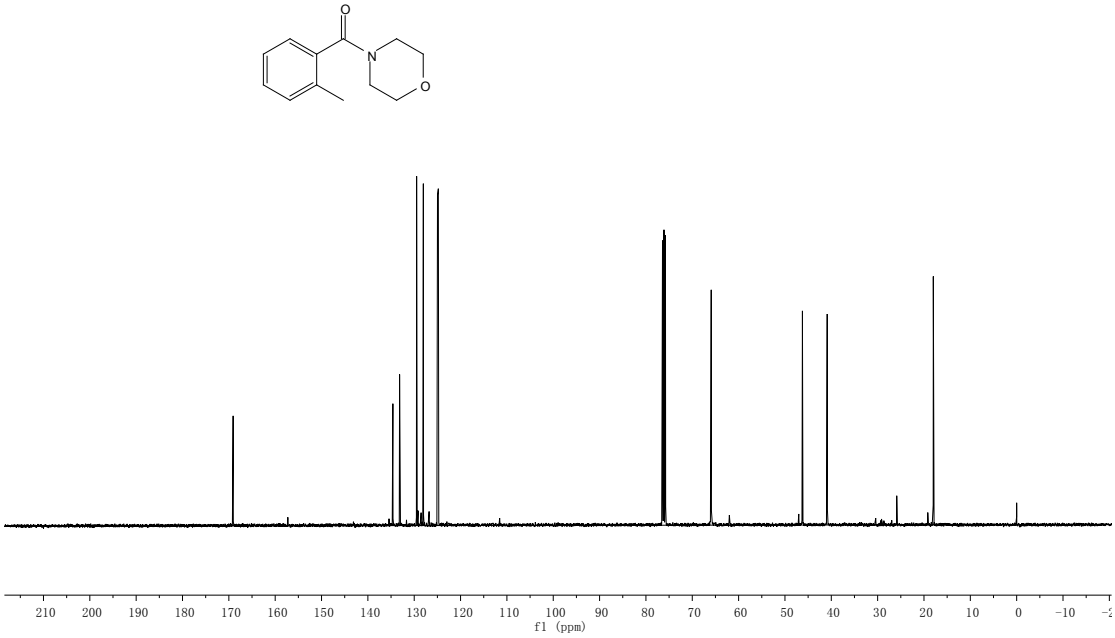
f1 (ppm)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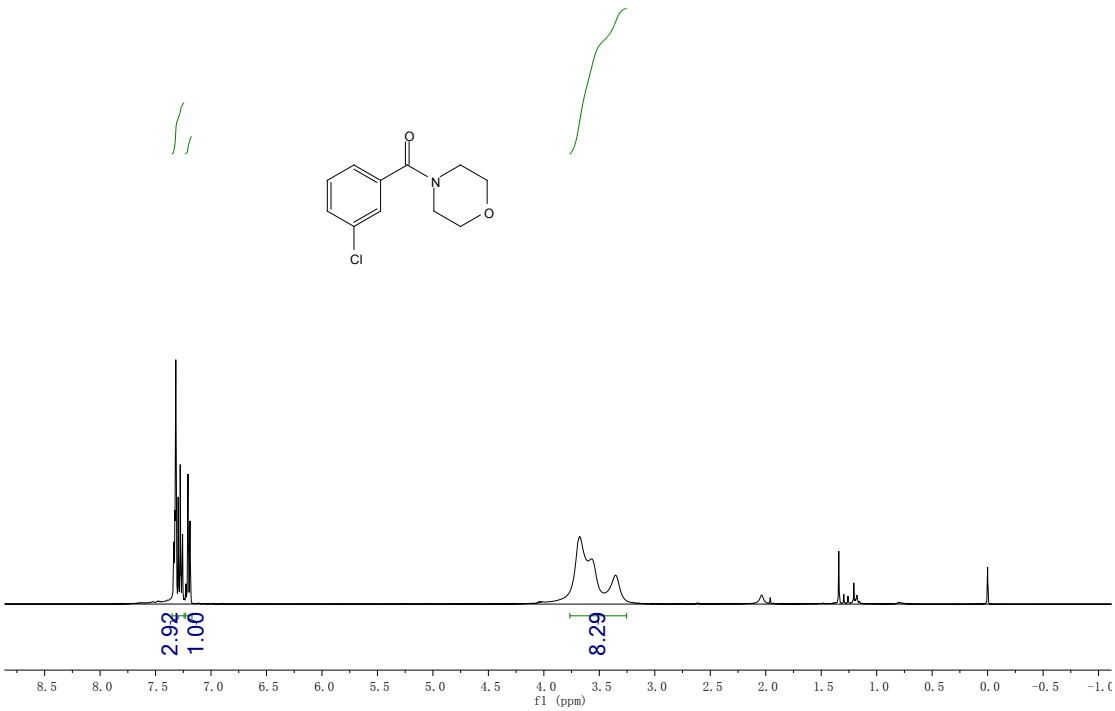
f1 (ppm)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O
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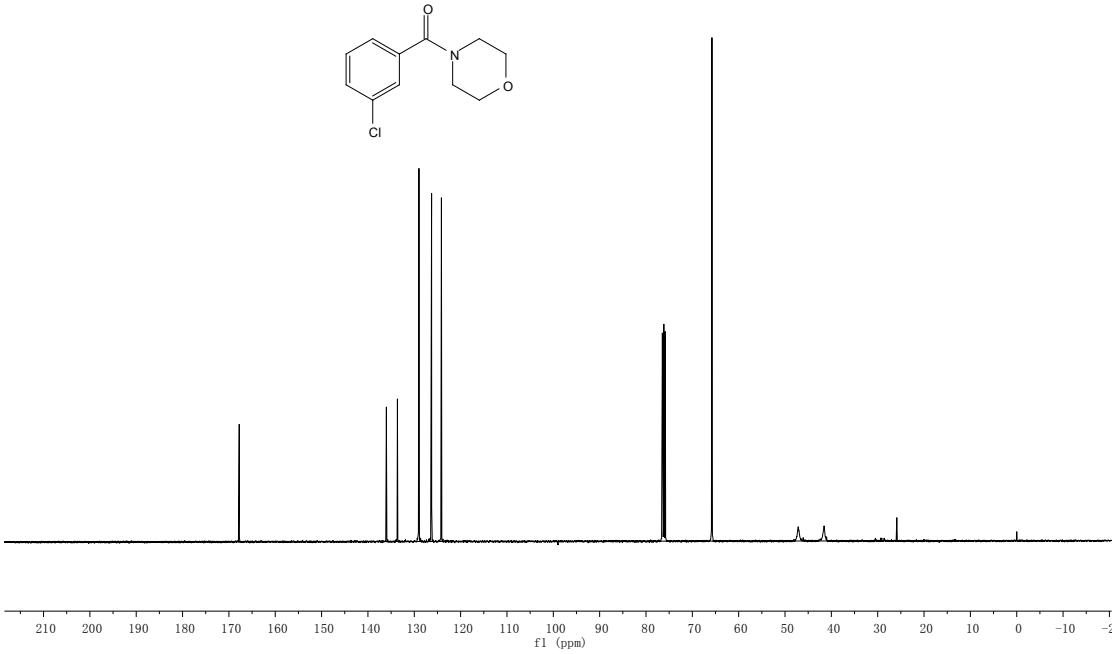
f1 (ppm)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O
Cl
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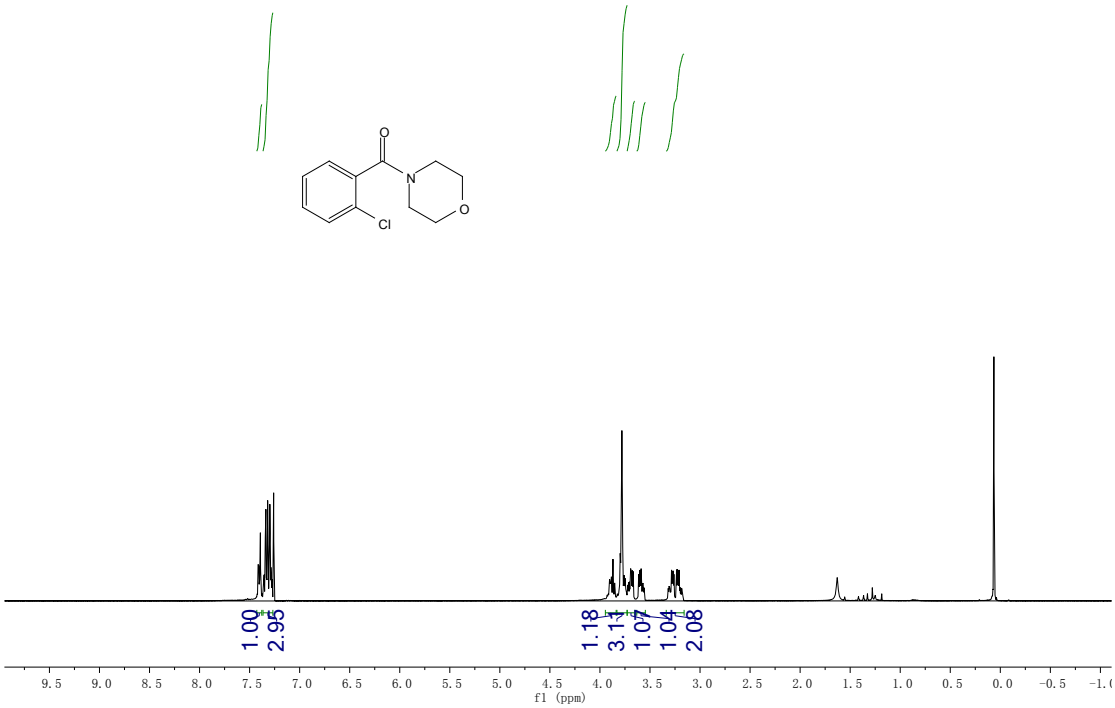
f1 (ppm)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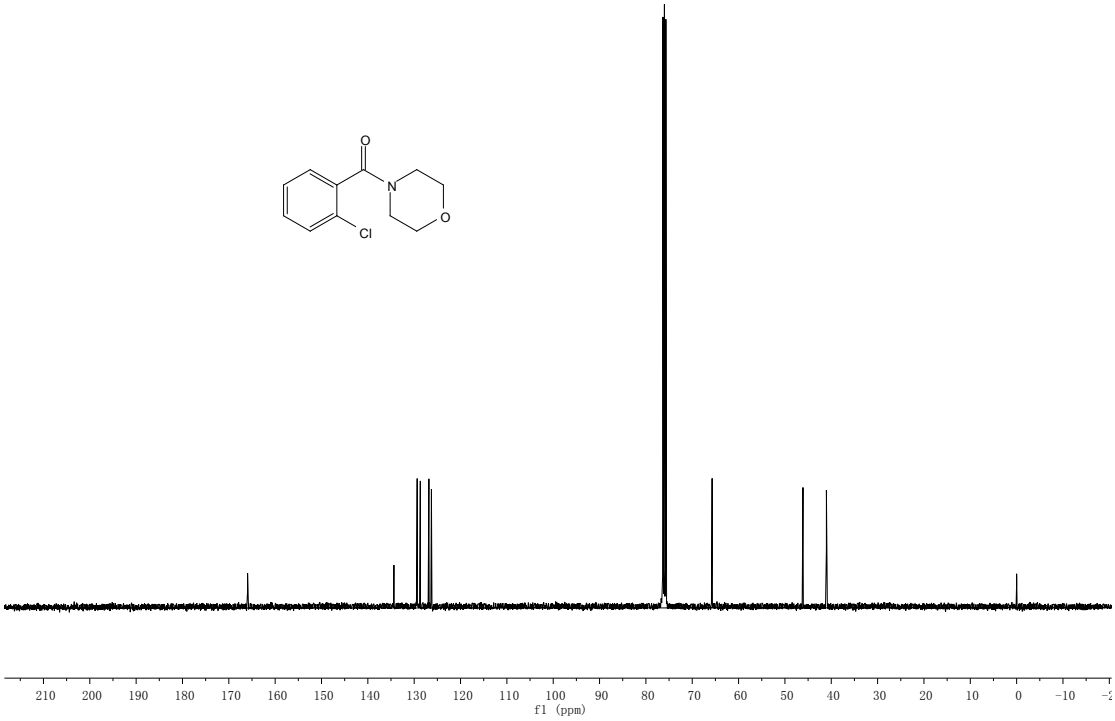
f1 (ppm)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O
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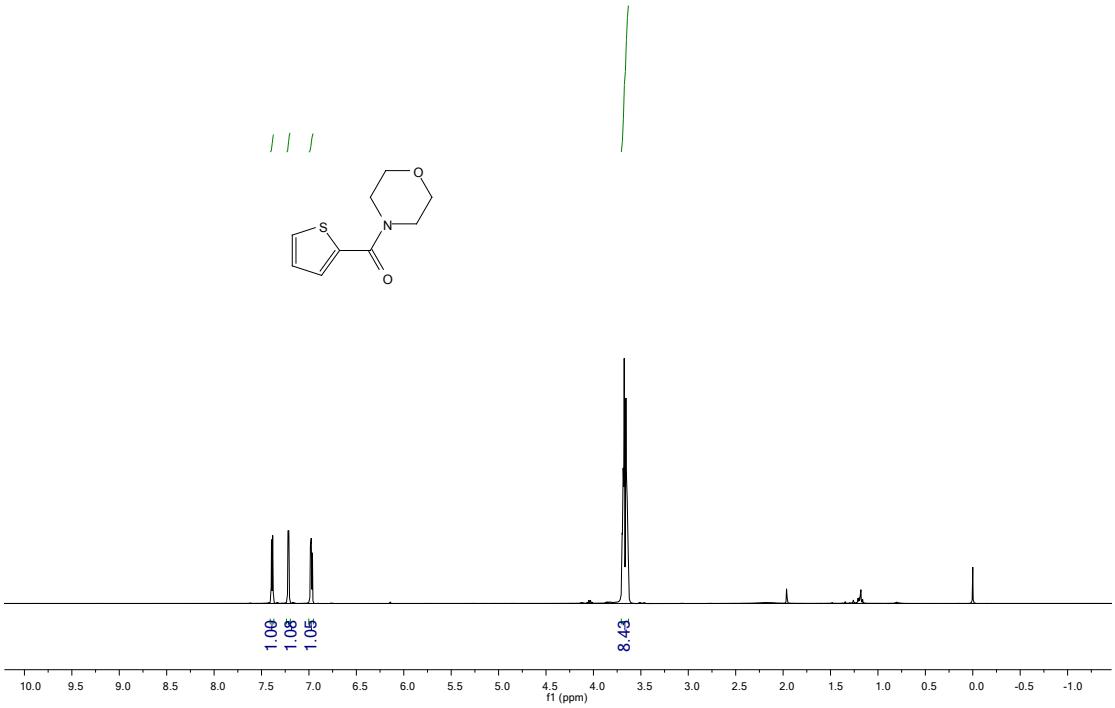
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N
O
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1.08
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8.43
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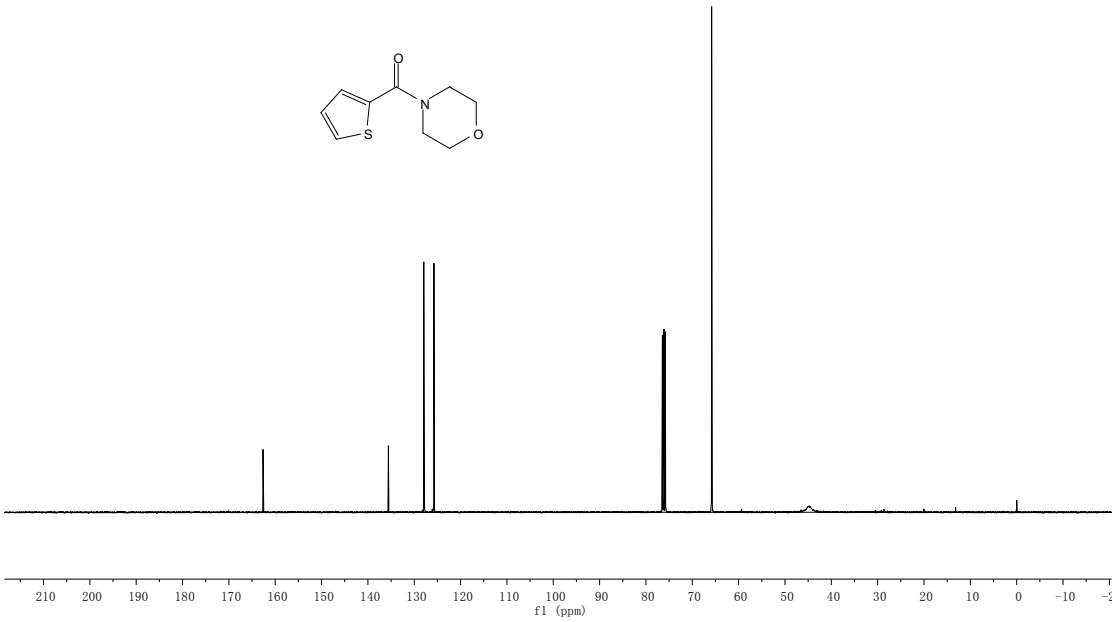
f1 (ppm)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S
O
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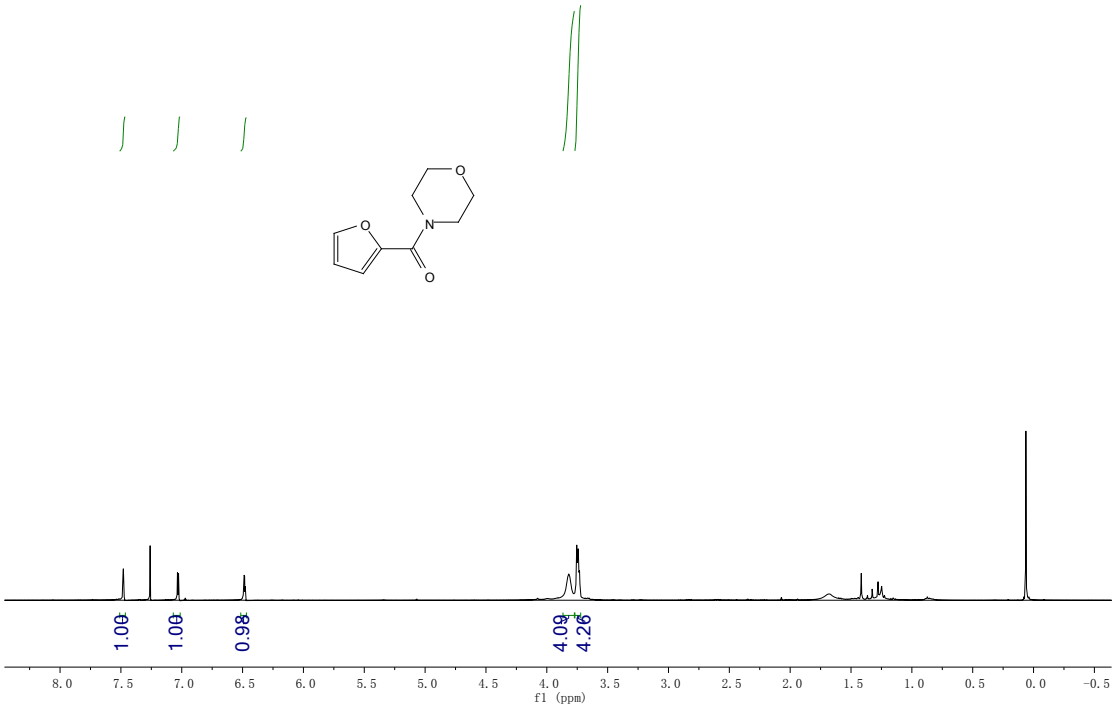
f1 (ppm)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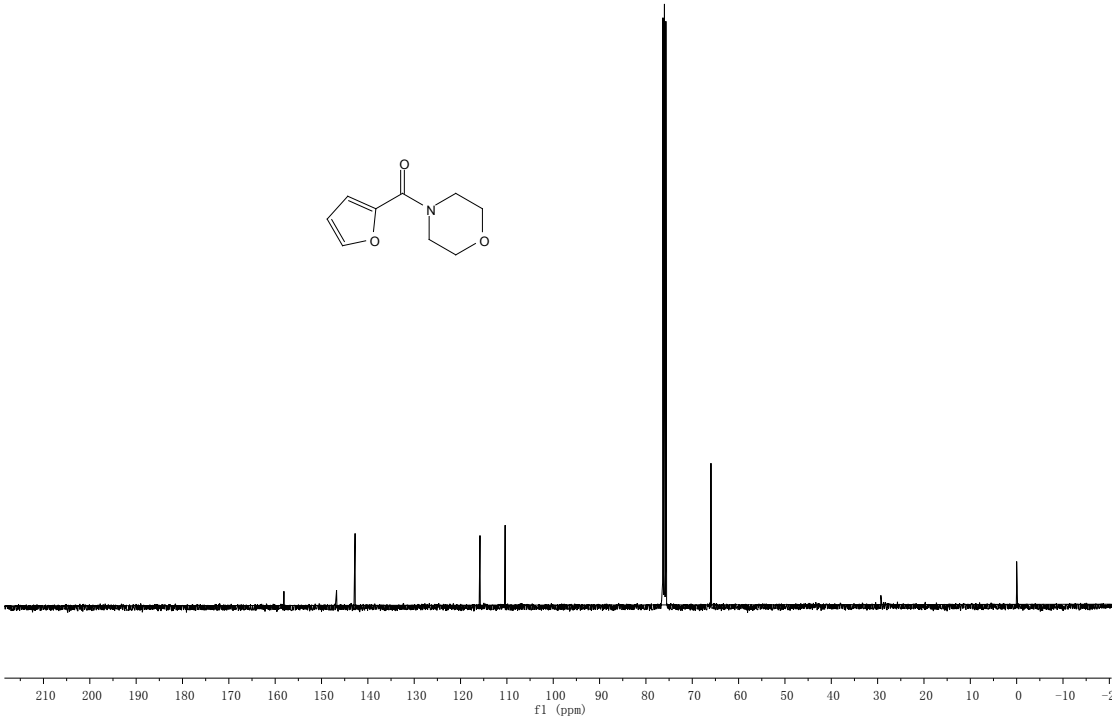
f1 (ppm)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O
O
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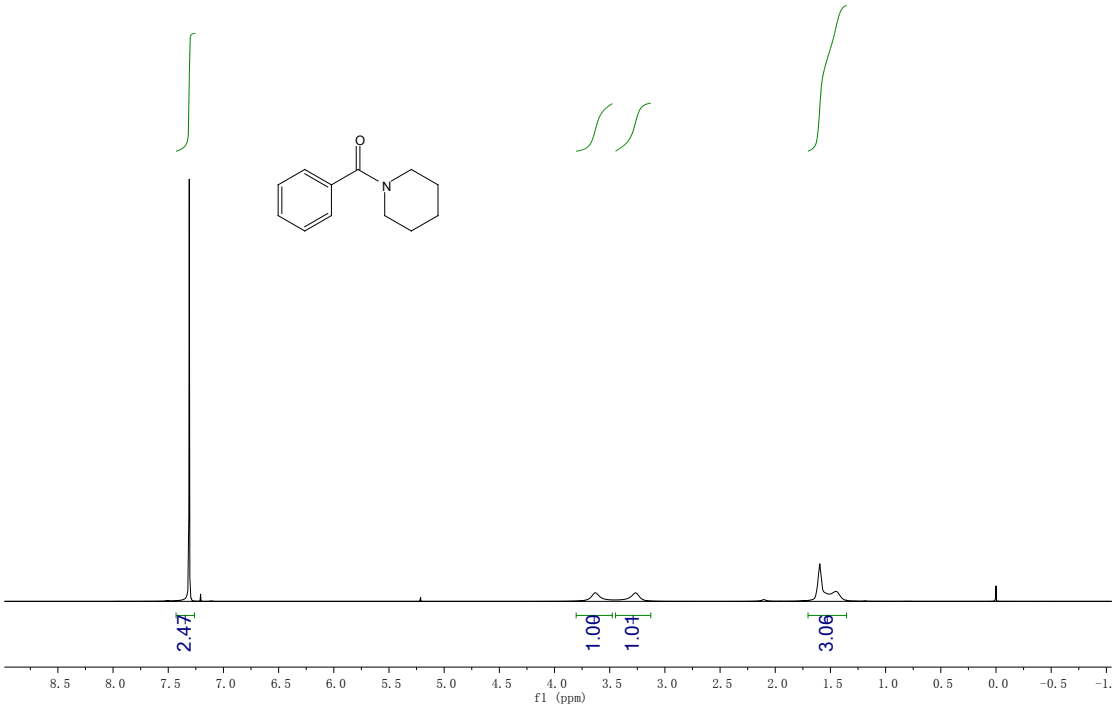
f1 (ppm)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3.06
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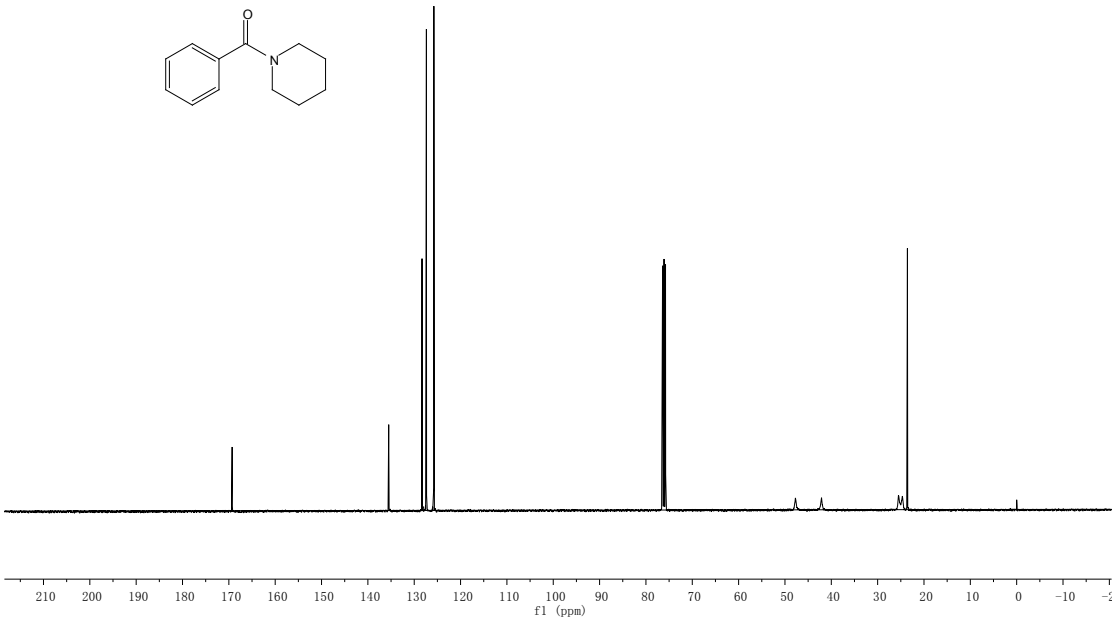
f1 (ppm)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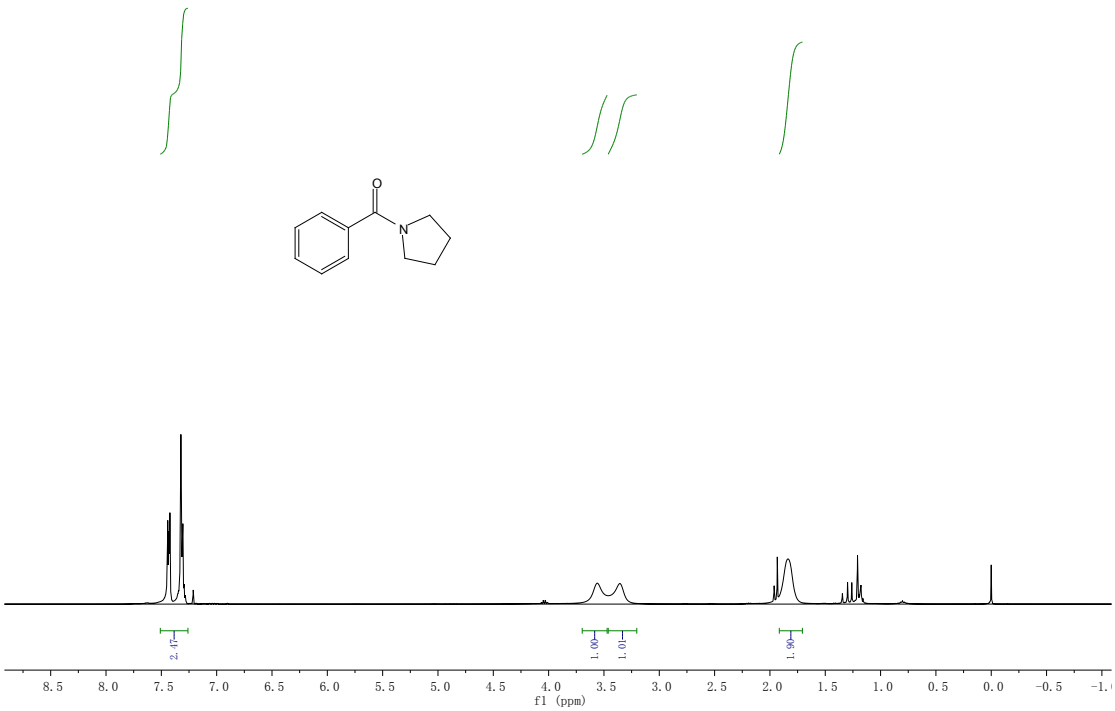
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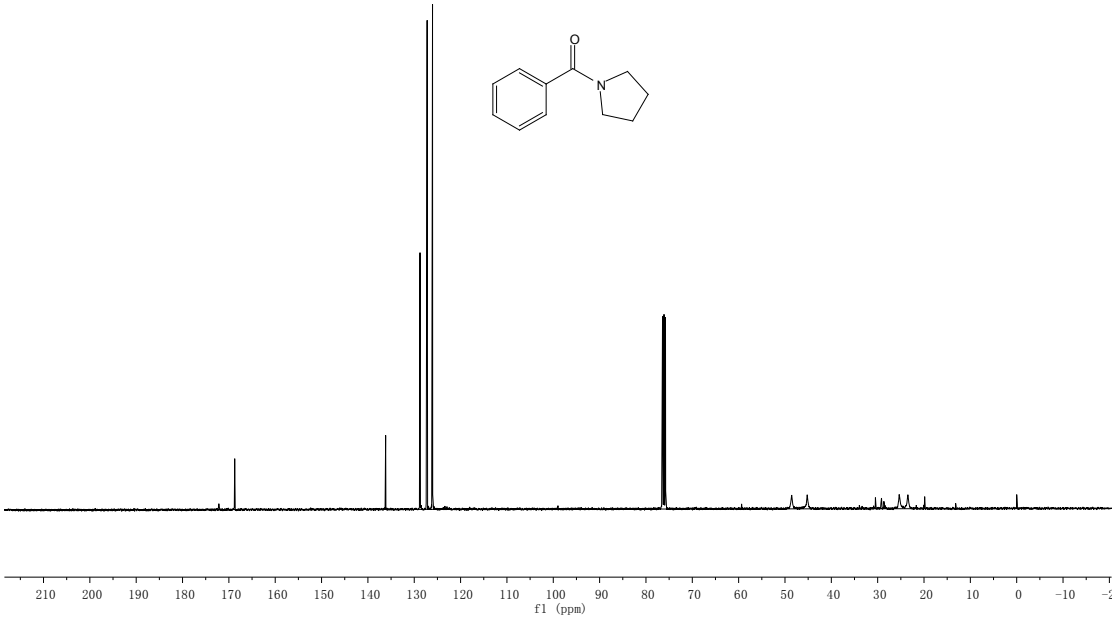
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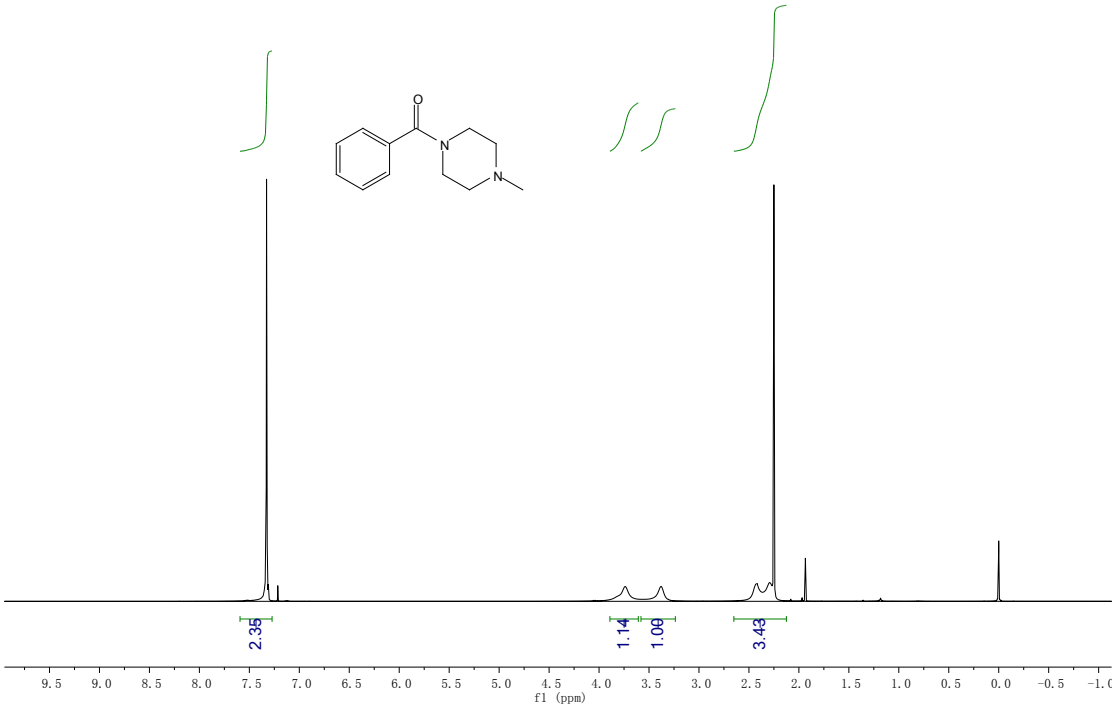
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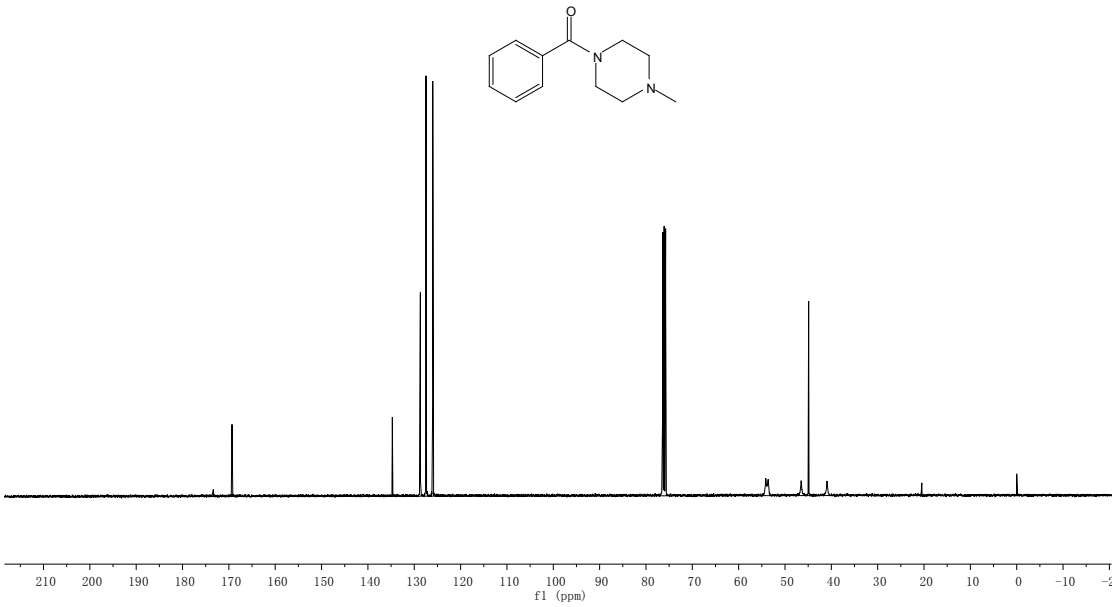
f1 (ppm)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N
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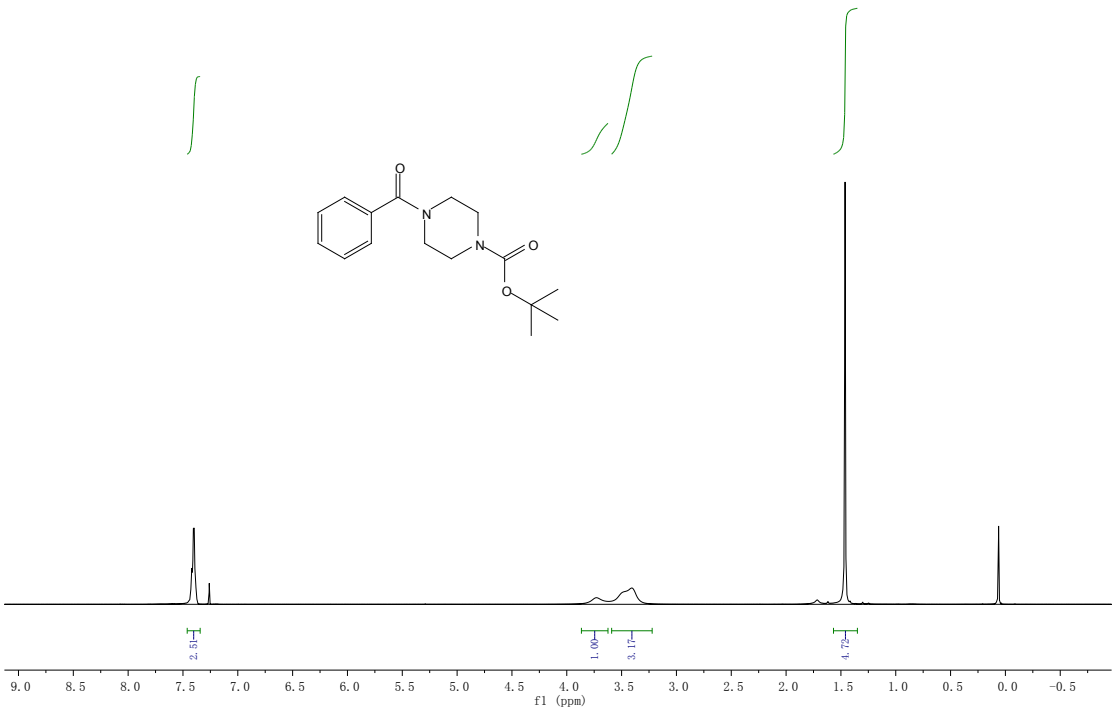
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N
O
O
2.51
1.00
3.17
4.72
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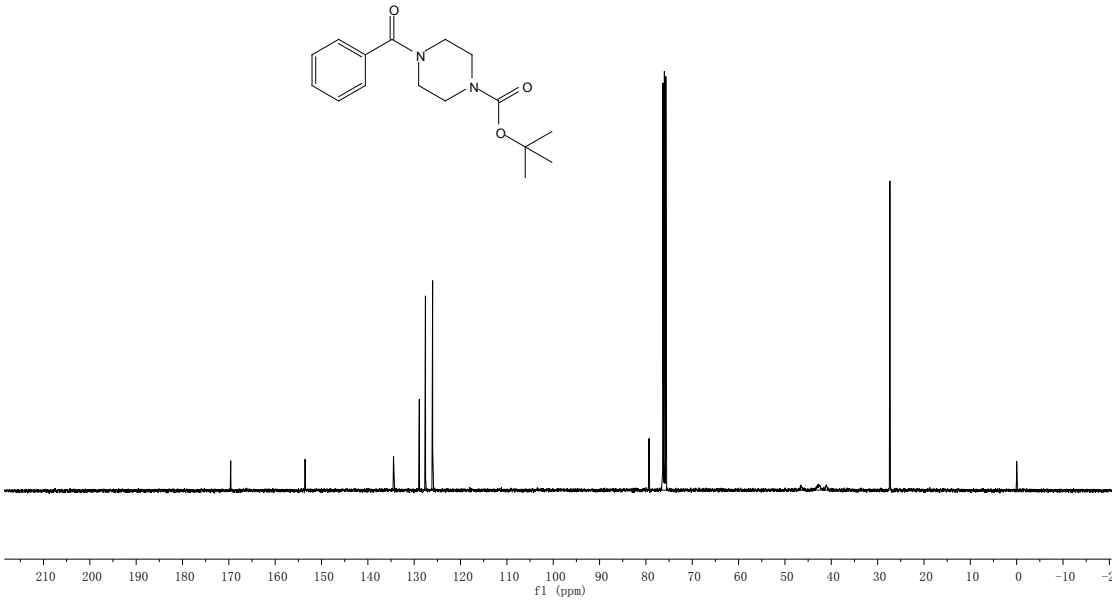
f1 (ppm)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N
N
O
O
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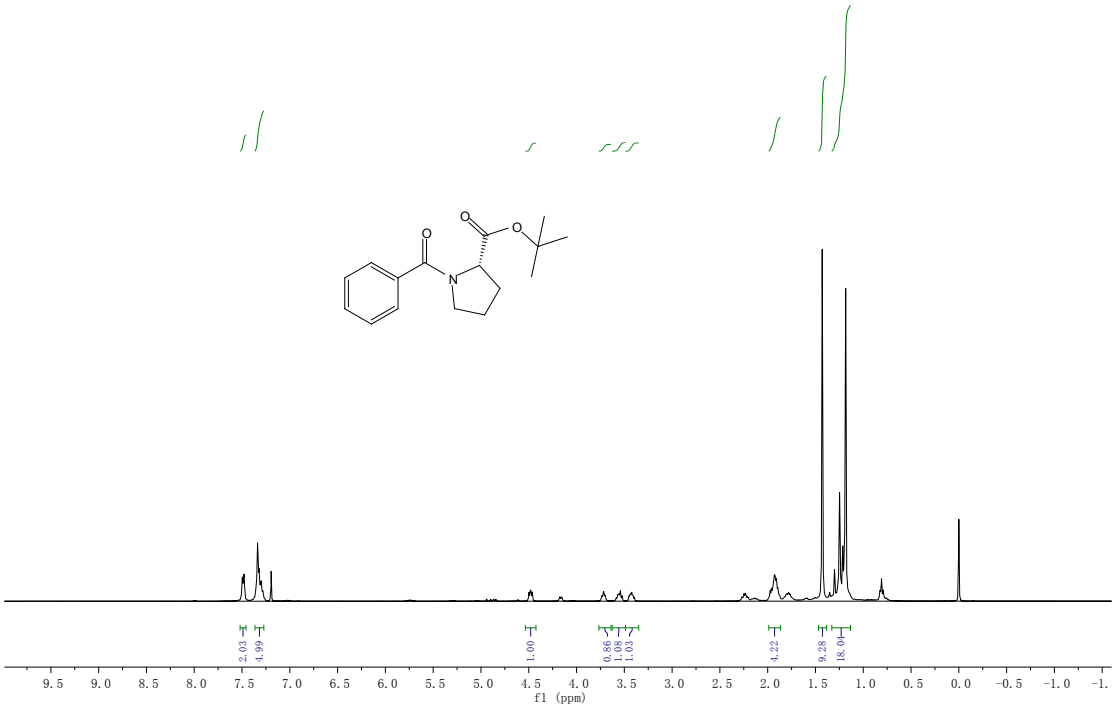
O
O
O
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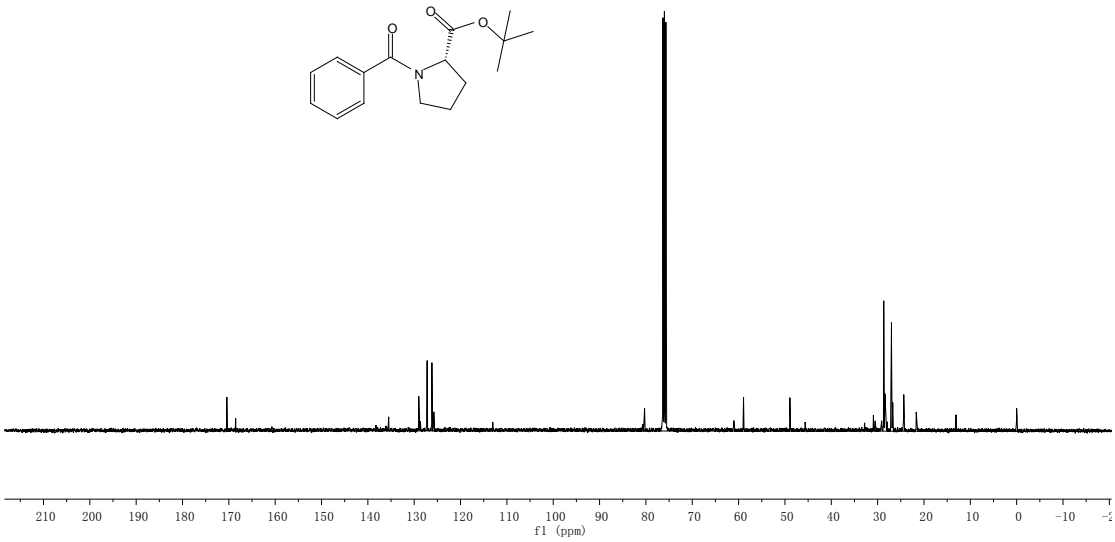
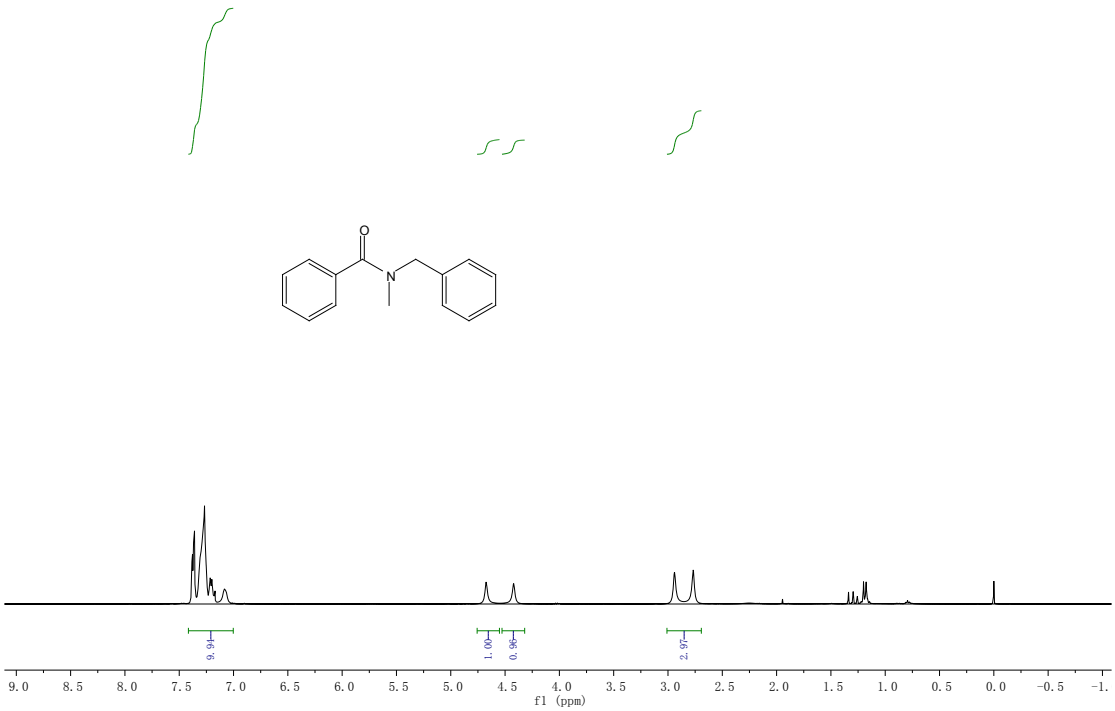
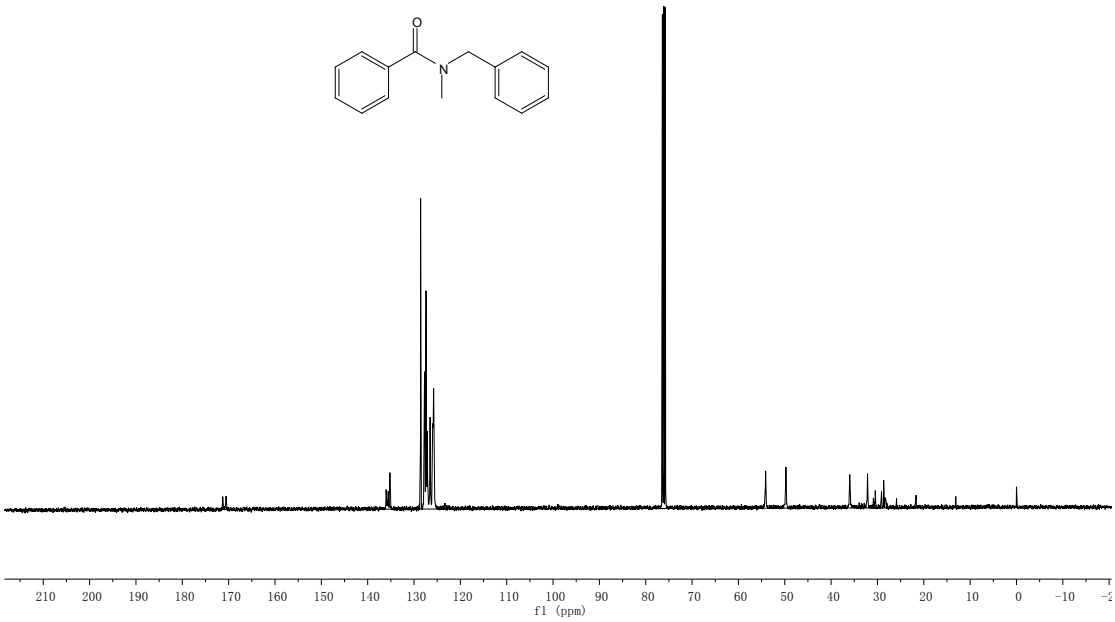
1.08
1.03
4.22
9.28
18.04
9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5 -1.0
f1 (ppm)


O
O
O
N
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 -10
f1 (ppm)


O
N
9.94
1.00
0.96
2.97
9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)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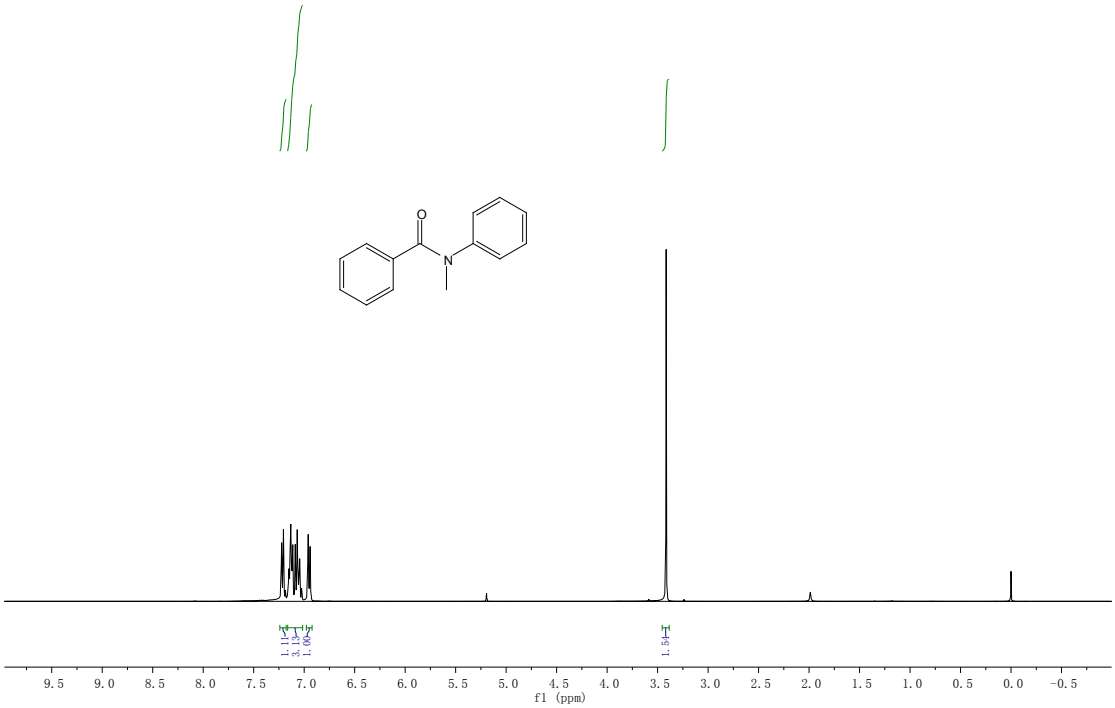
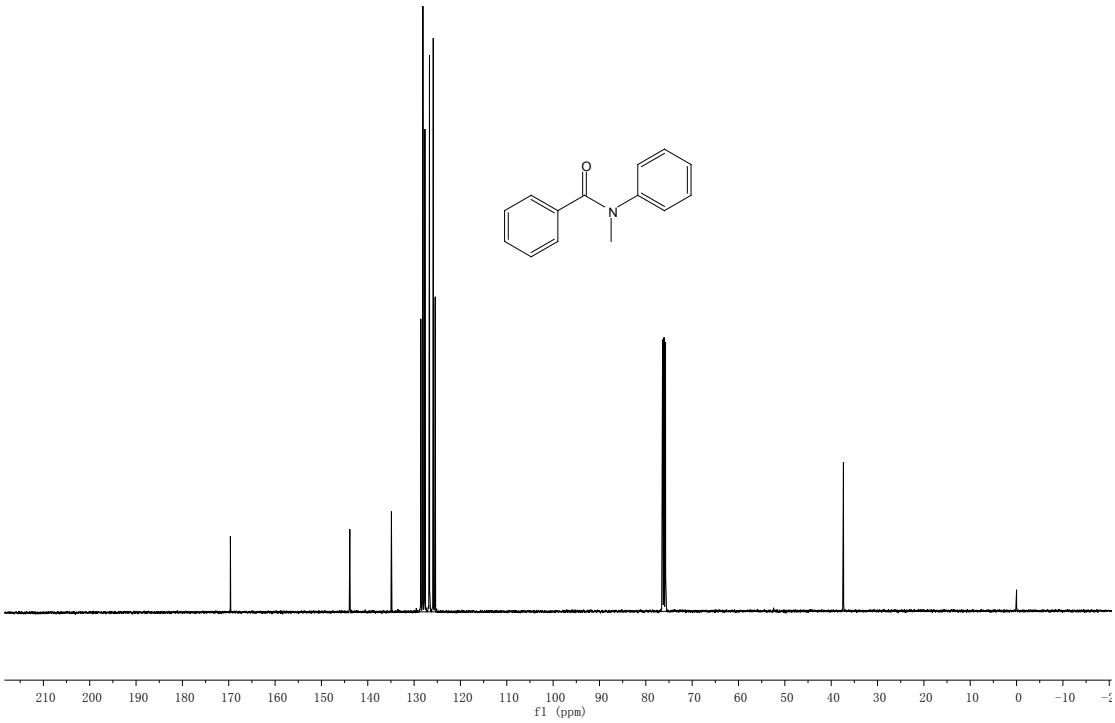
N
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 −10
f1 (ppm)


O
N
1.11
3.14
1.00
1.54
9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 −0.5
f1 (ppm)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N
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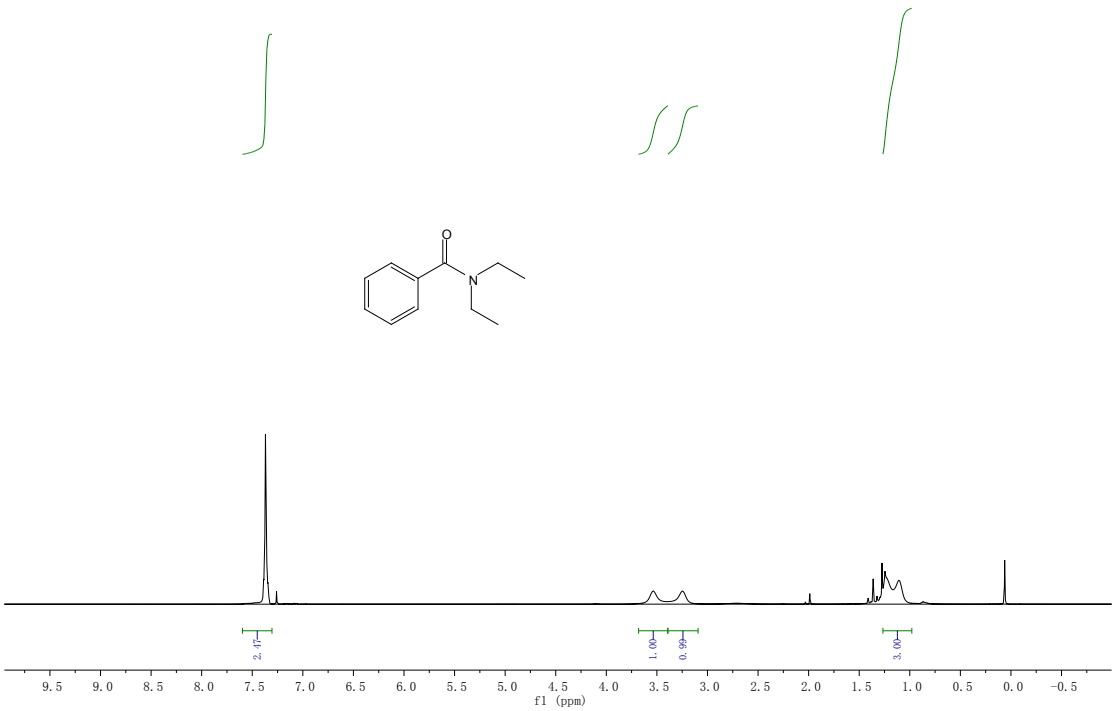
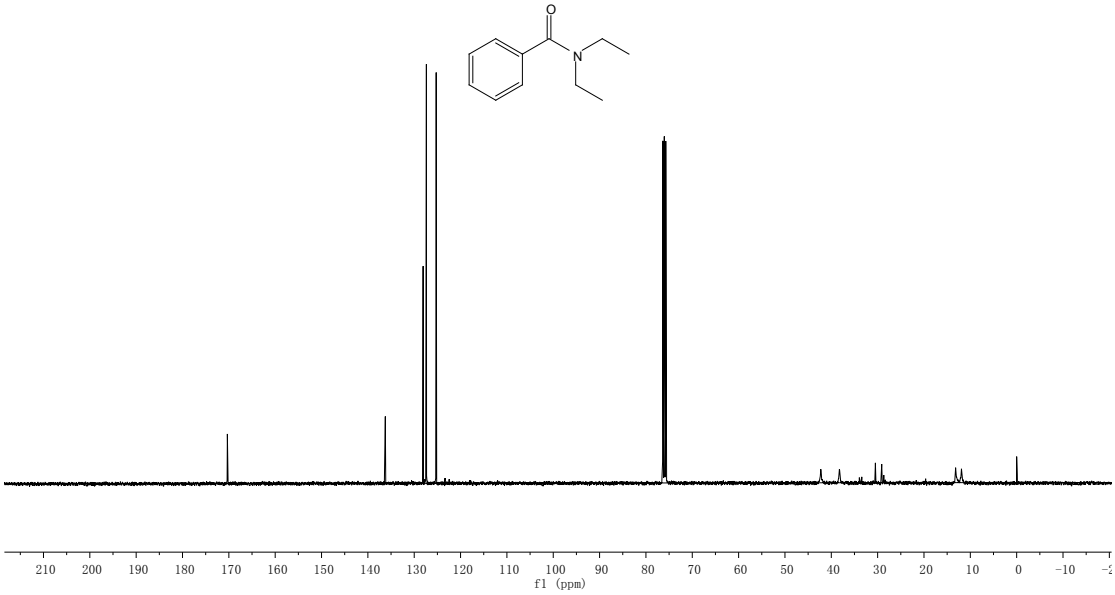
f1 (ppm)


O
N
2.47
1.00
0.99
3.00
9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 -0.5
f1 (ppm)


O
N
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 −10
f1 (ppm)