Electronic Supplementary Material (ESI) for RSC Advances.

Supporting information

Three-component access to 2-pyrrolin-5-ones and their use in target-oriented and diversity-oriented synthesis

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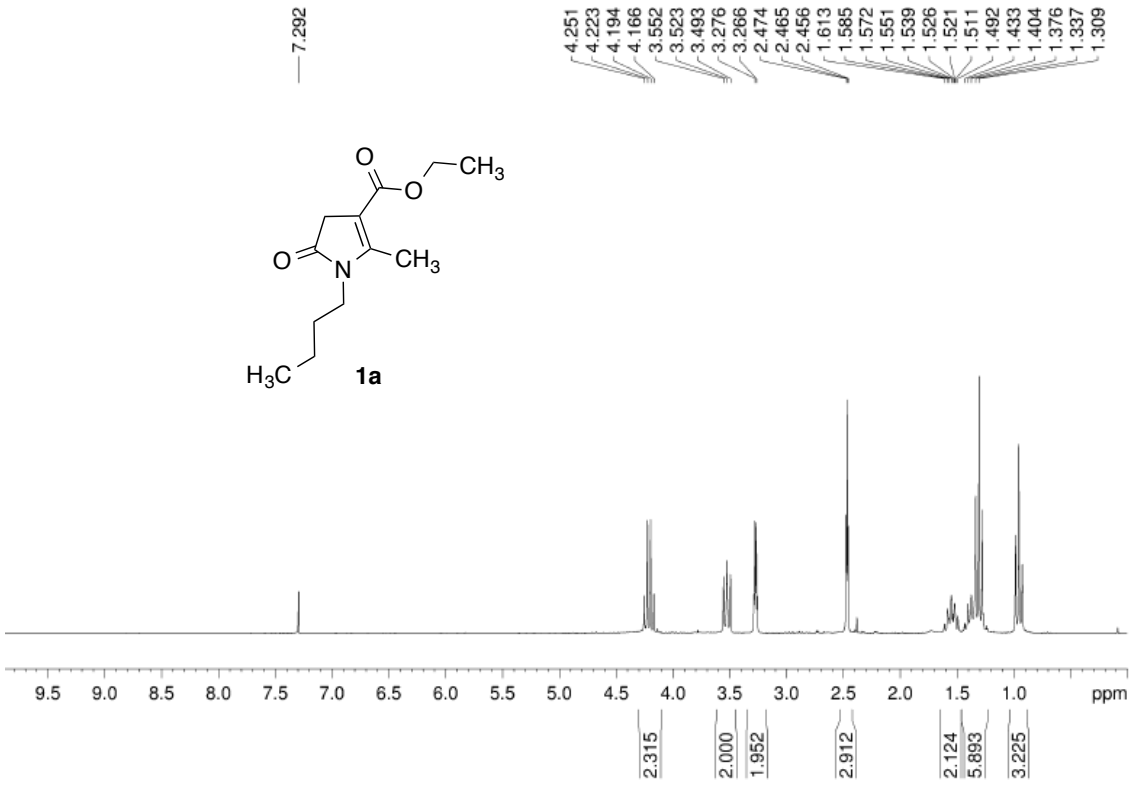
josecm@farm.ucm.es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1.572
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1.521
1.511
1.492
1.433
1.404
1.376
1.337
1.309
O
O
CH3
O
N
CH3
H3C
1a
9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 ppm
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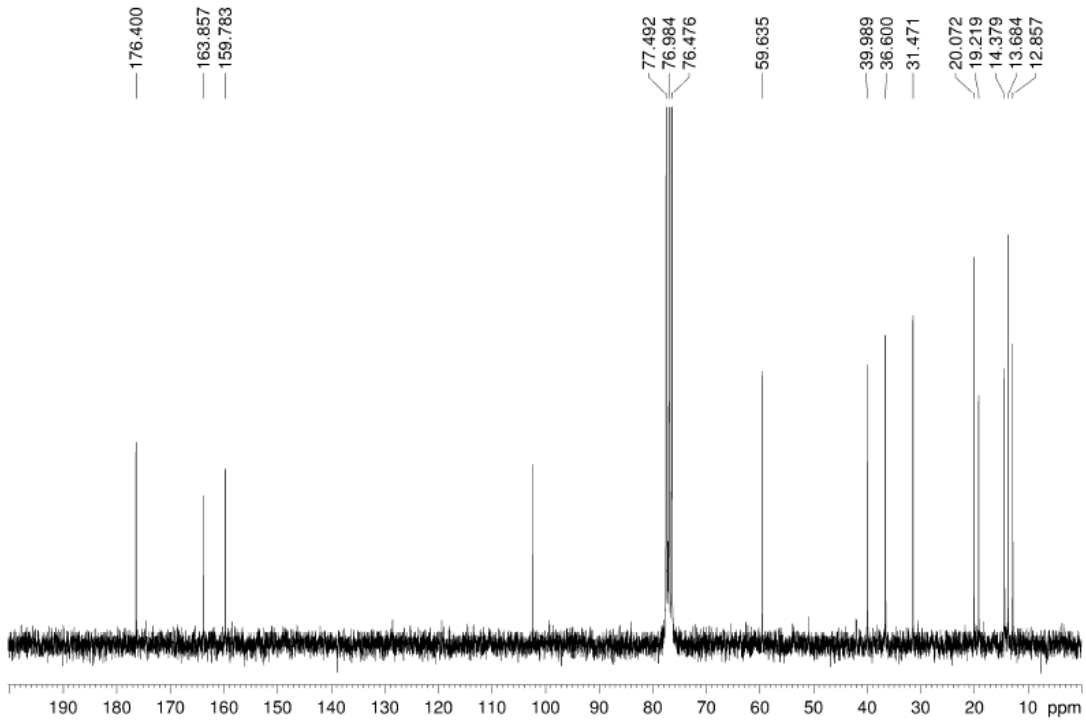
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13.684
12.857
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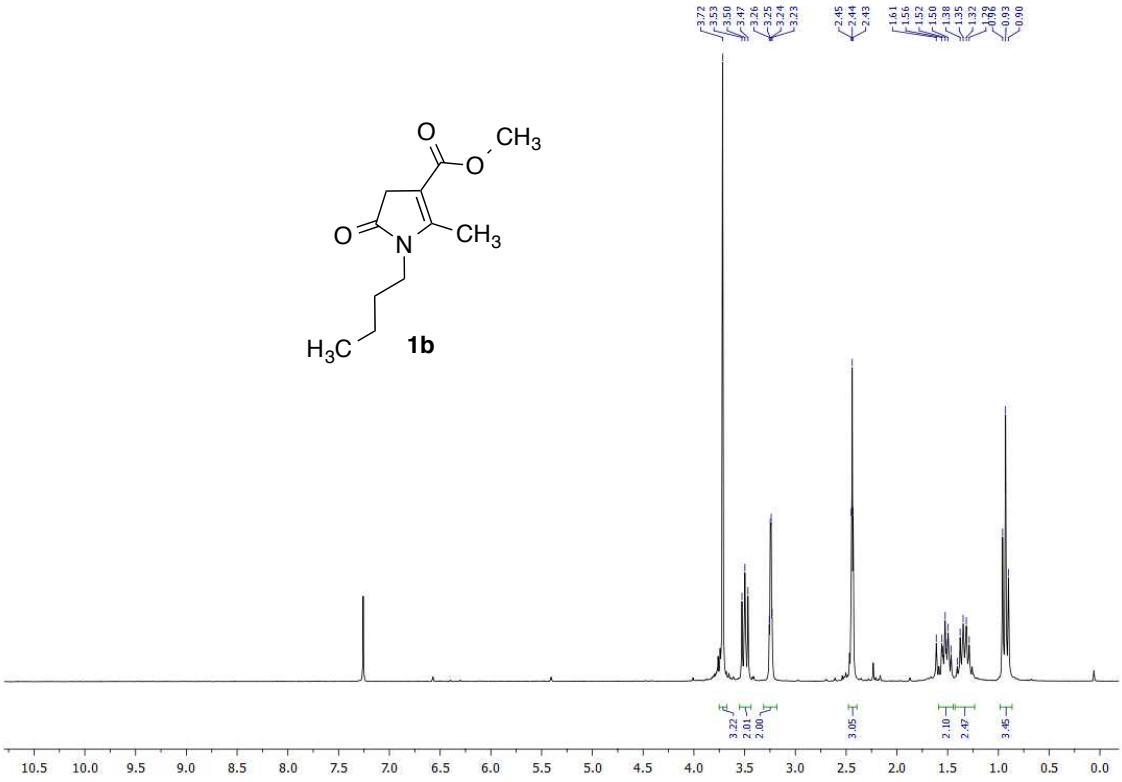
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3.05
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2.47
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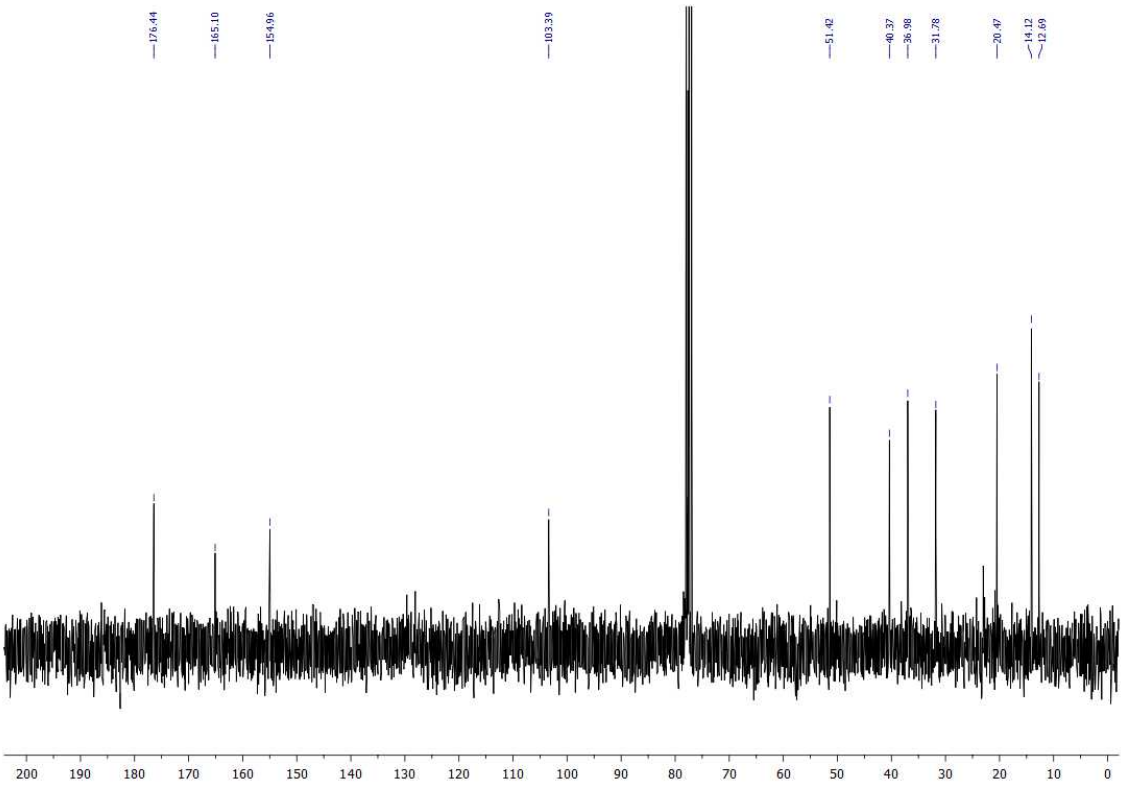
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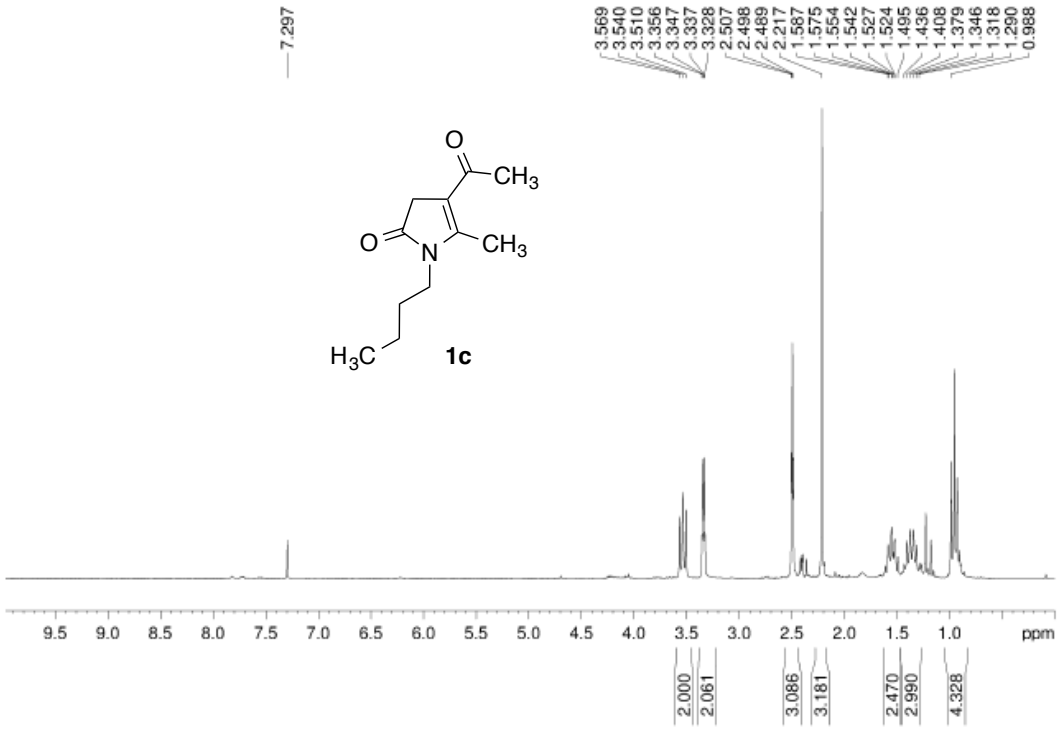
1b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1.575
1.554
1.542
1.527
1.524
1.485
1.436
1.408
1.379
1.346
1.318
1.290
0.988
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CH3
O
N
CH3
H3C
1c
9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 ppm
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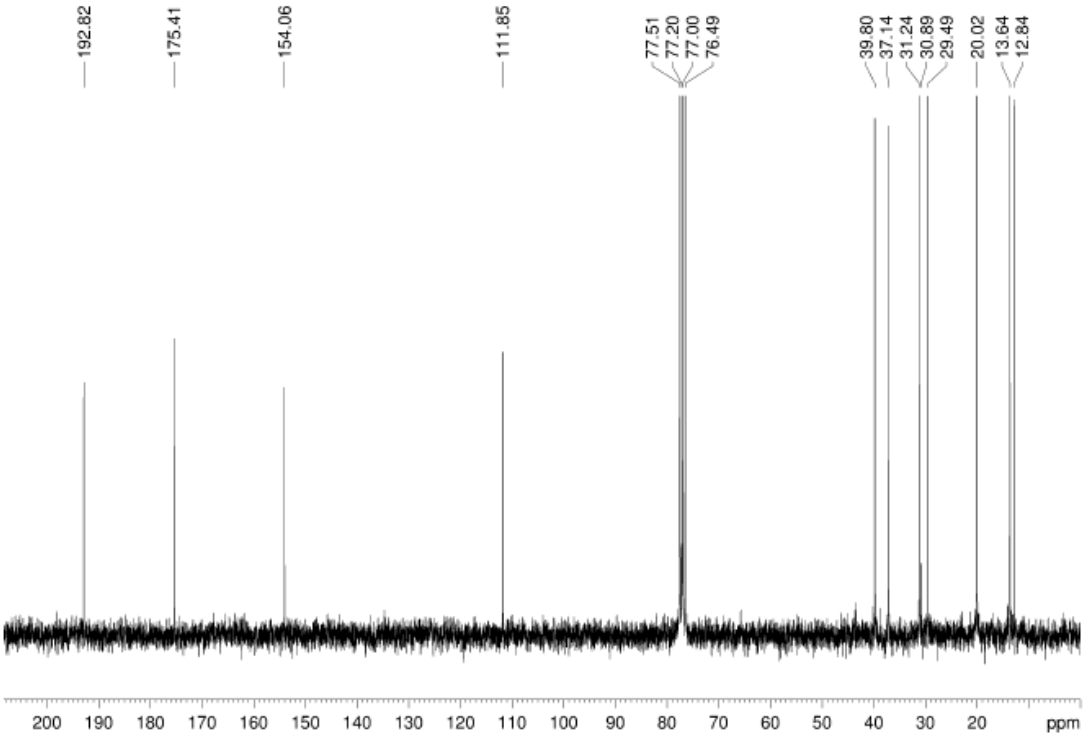
4.328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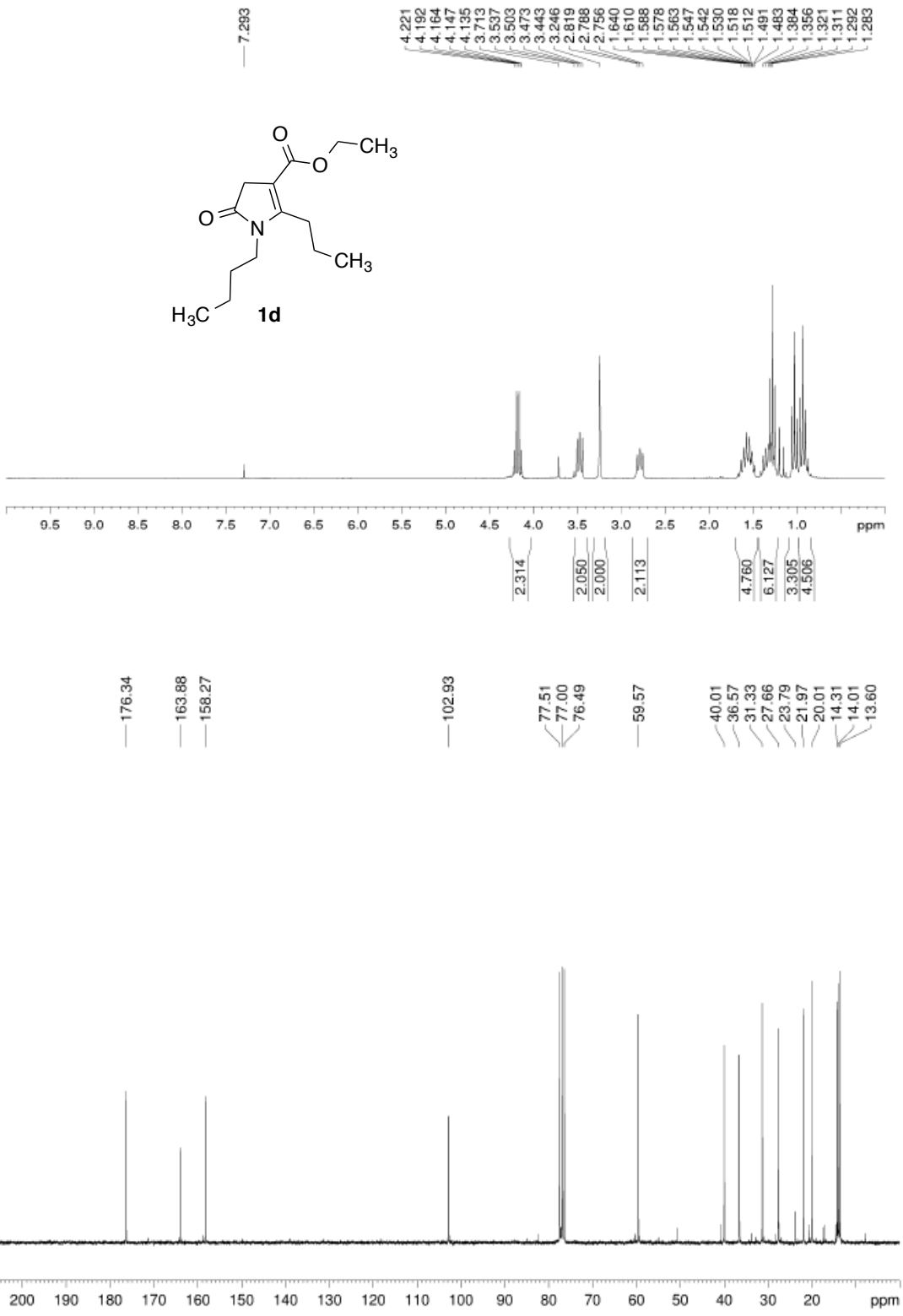
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2.788
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1.610
1.588
1.578
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1.547
1.542
1.530
1.518
1.512
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1.483
1.384
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1.321
1.311
1.292
1.283
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O
CH3
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CH3
H3C
1d
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 ppm
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2.050
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4.506
176.34
163.88
158.27
102.93
77.51
77.00
76.49
59.57
40.01
36.57
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14.01
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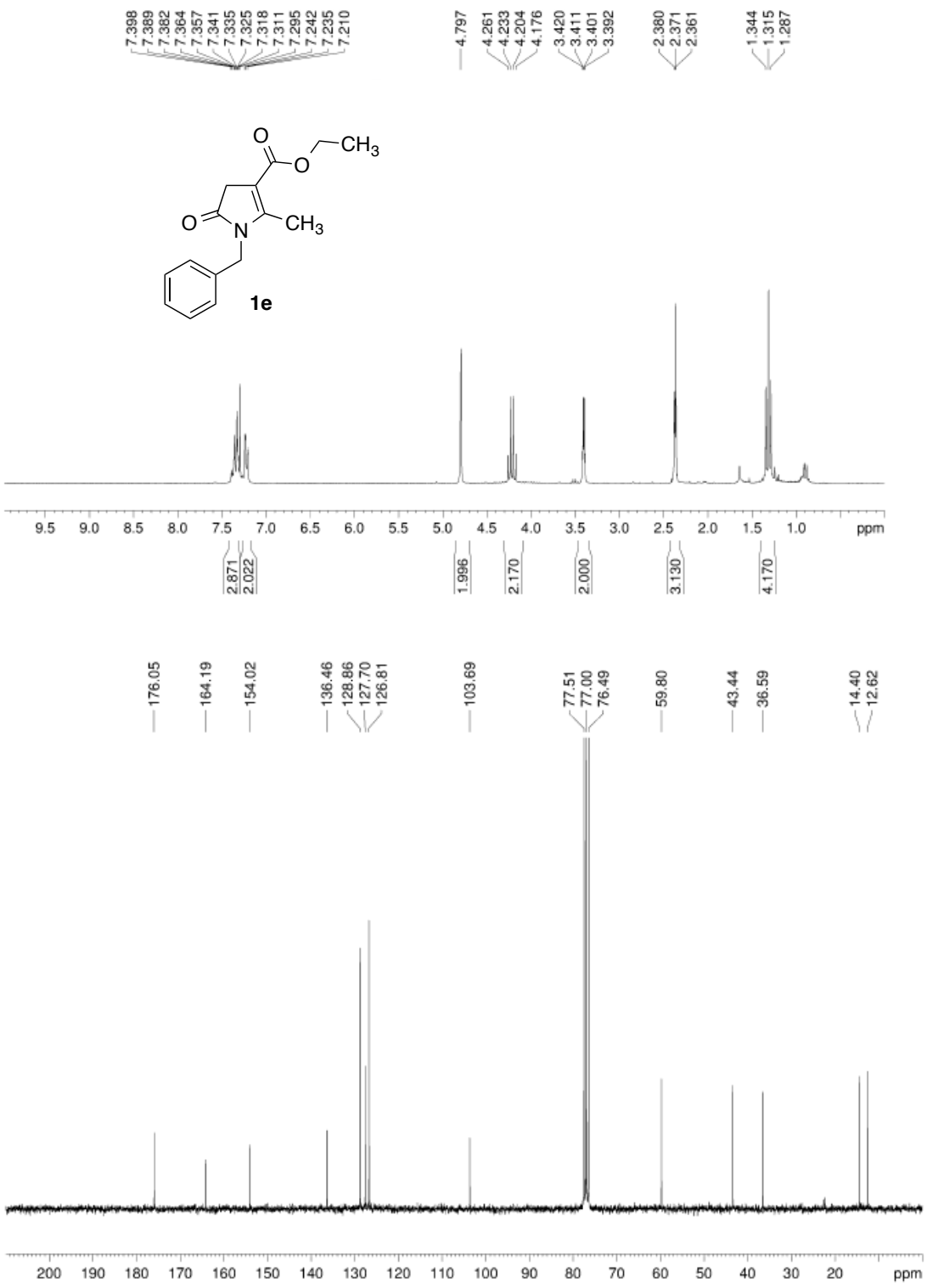
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7.210
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4.261
4.233
4.204
4.176
3.420
3.411
3.401
3.392
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2.371
2.361
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1.315
1.287
O
O
CH3
O
N
CH3
1e
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1.996
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2.000
3.130
4.170
176.05
164.19
154.02
136.46
128.86
127.70
126.81
103.69
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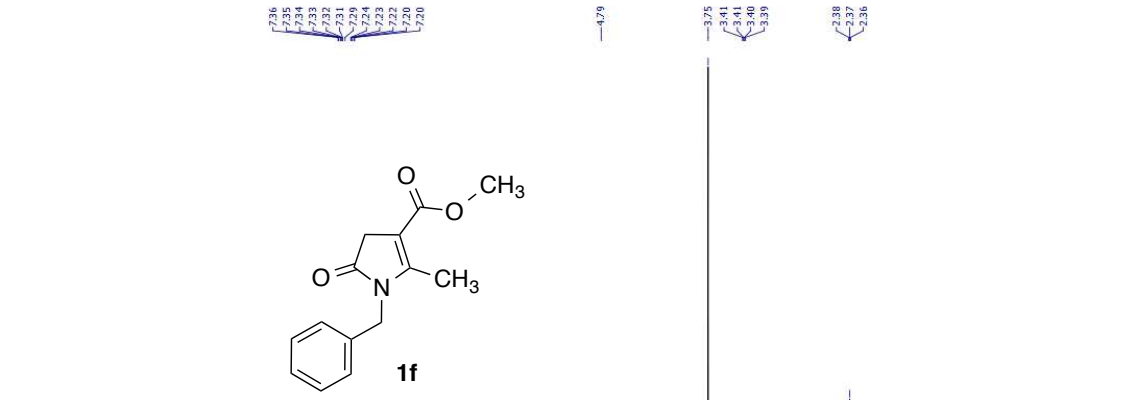
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3.75
3.41
3.41
3.40
3.39
2.38
2.37
2.36
O
O
CH3
O
N
CH3
1f
6.79
1.99
3.10
2.00
2.89
10.5
10.0
9.5
9.0
8.5
8.0
7.5
7.0
6.5
6.0
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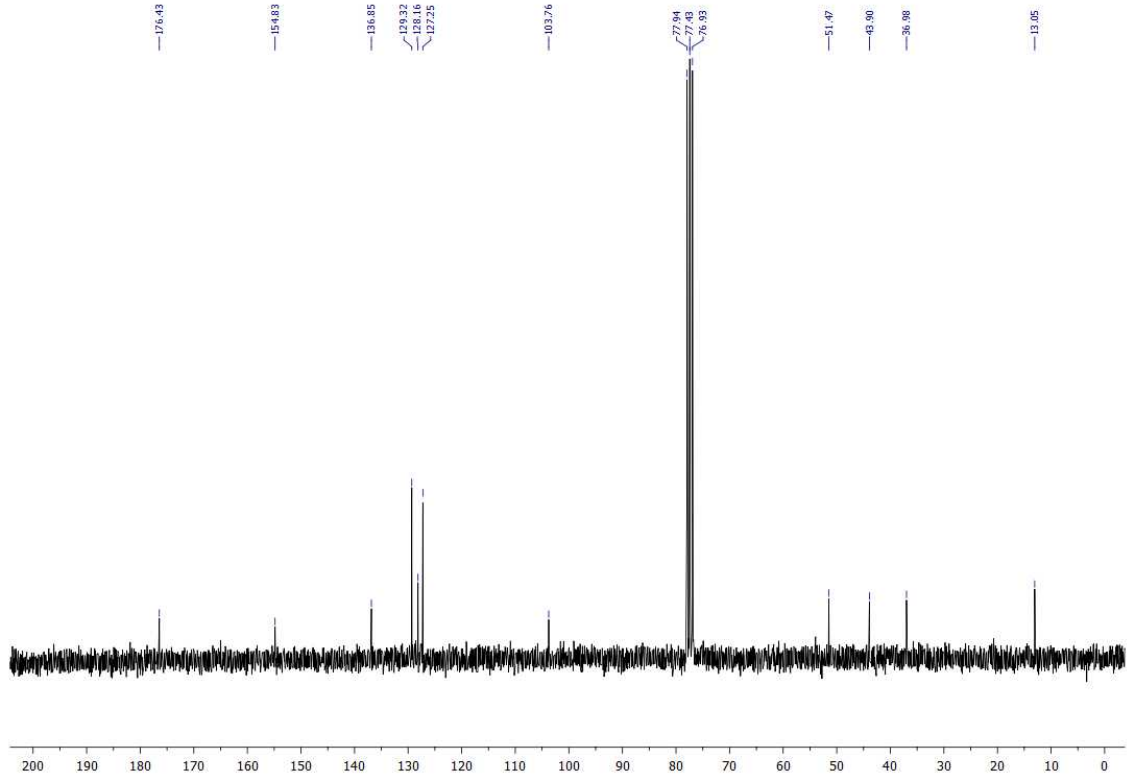
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77.94
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13.05
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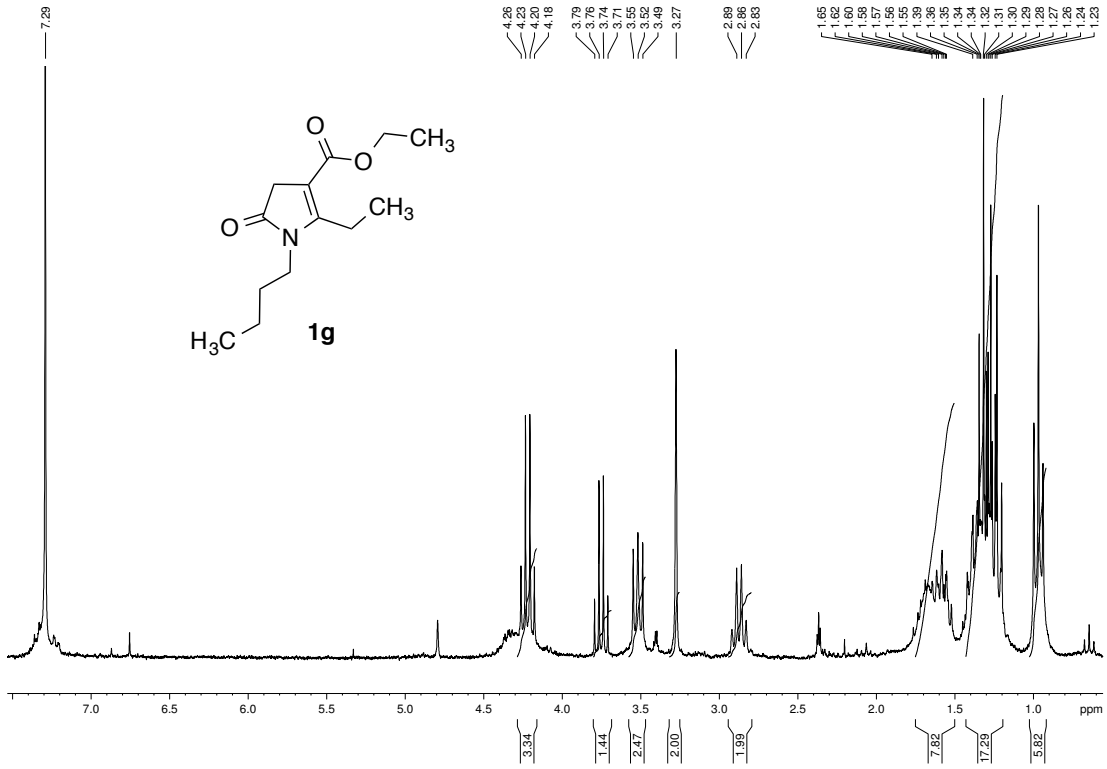
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1.65
1.62
1.60
1.58
1.57
1.56
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1.39
1.36
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1.34
1.32
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1.30
1.29
1.28
1.27
1.26
1.24
1.23
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O
CH3
CH3
O
N
H3C
1g
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6.0
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4.5
4.0
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3.0
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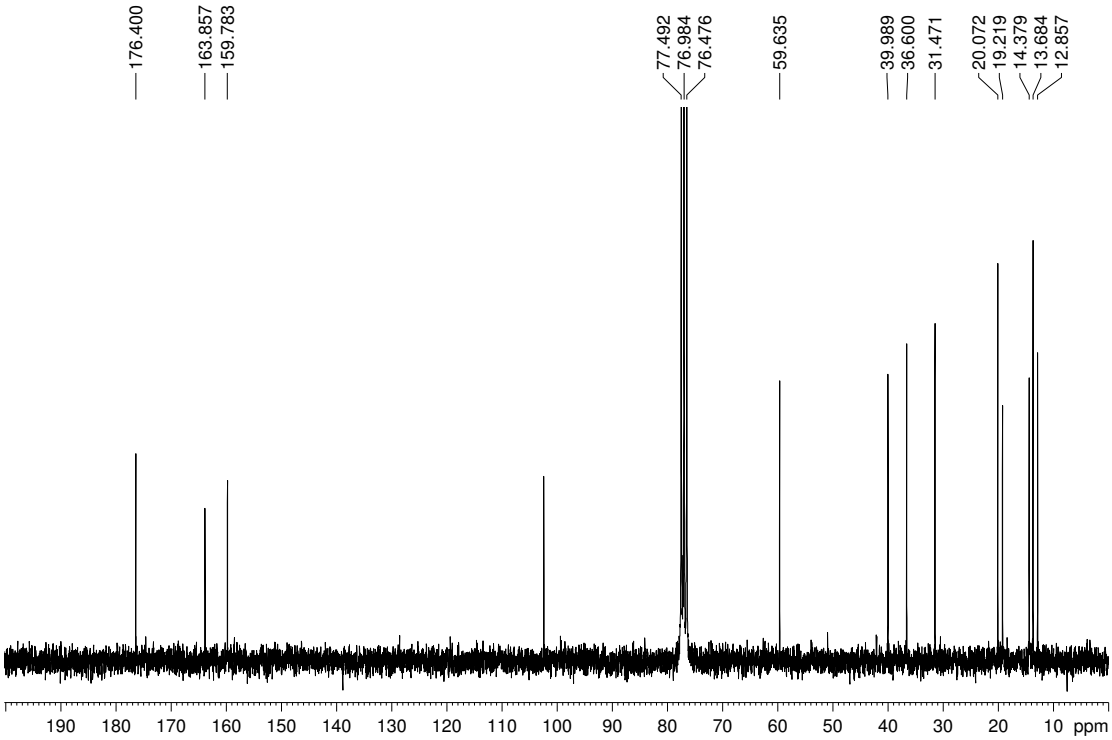
5.82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12.857
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150
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130
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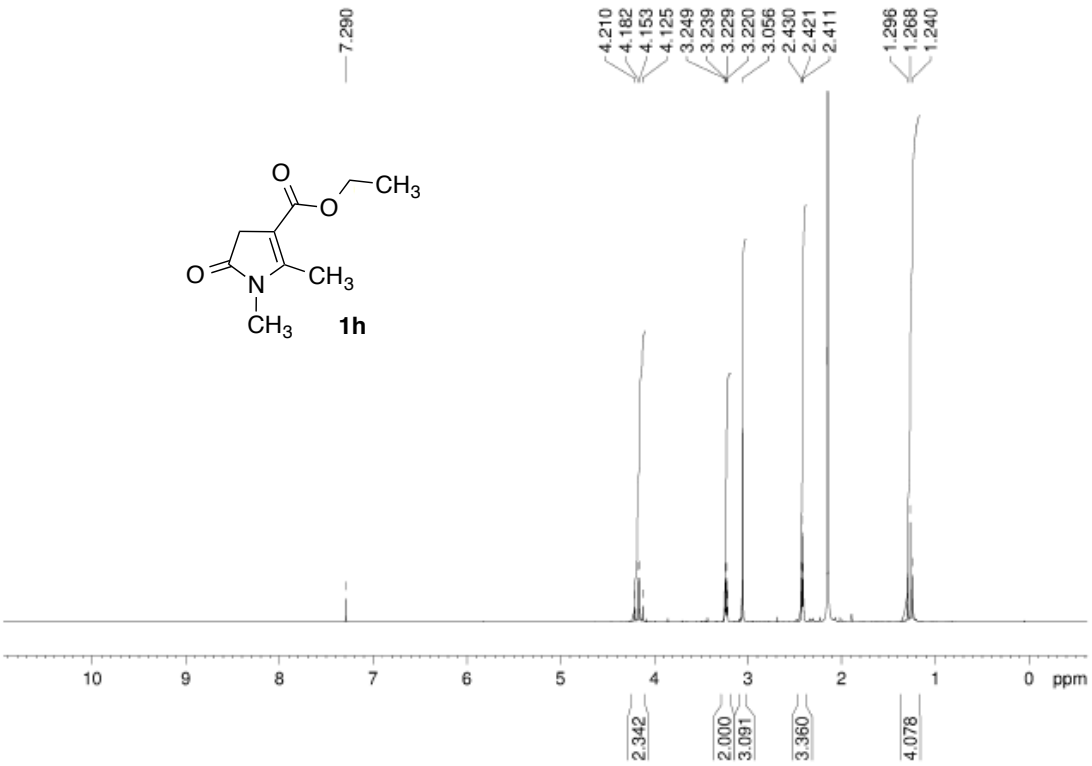
ppm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1.268
1.240
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O
CH3
O
N
CH3
CH3
1h
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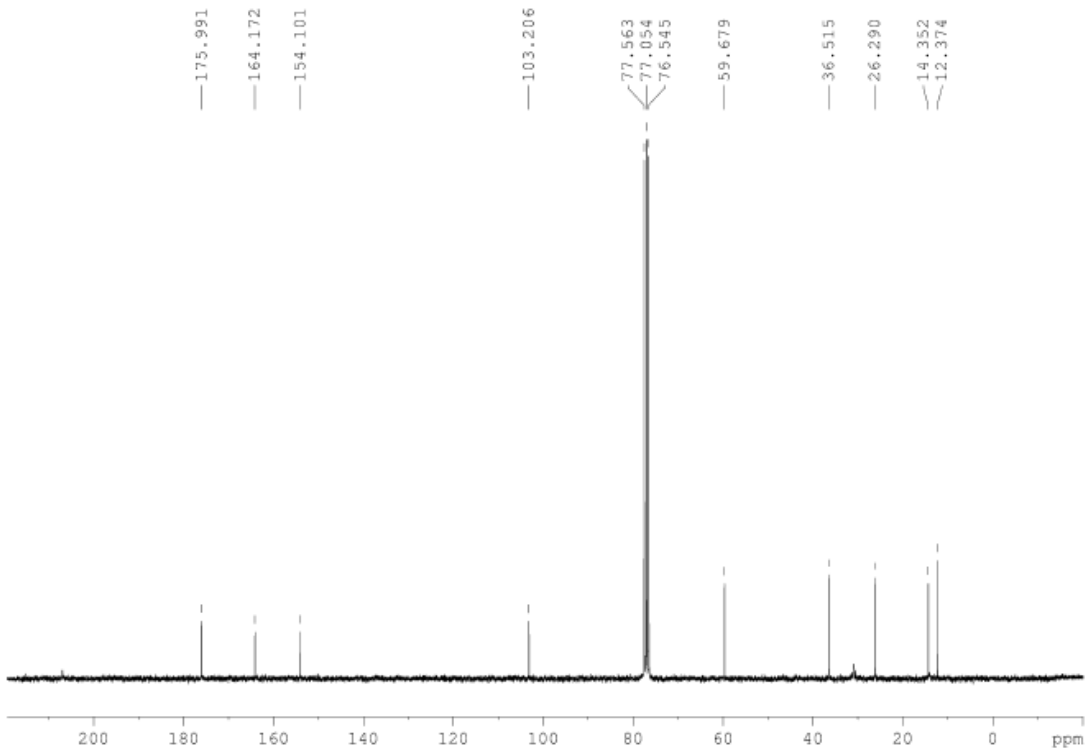
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0
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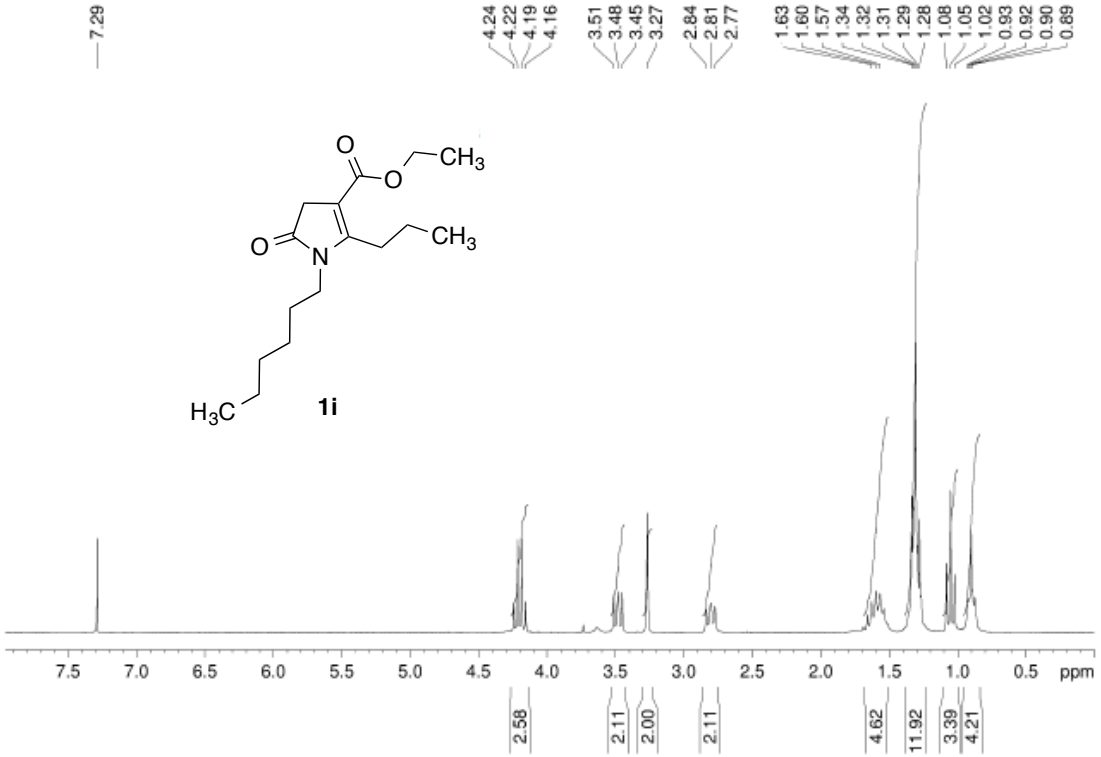
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1.60
1.57
1.34
1.32
1.31
1.29
1.28
1.08
1.05
1.02
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0.92
0.90
0.89
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O
CH3
O
N
CH3
H3C
1i
7.5
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6.5
6.0
5.5
5.0
4.5
4.0
3.5
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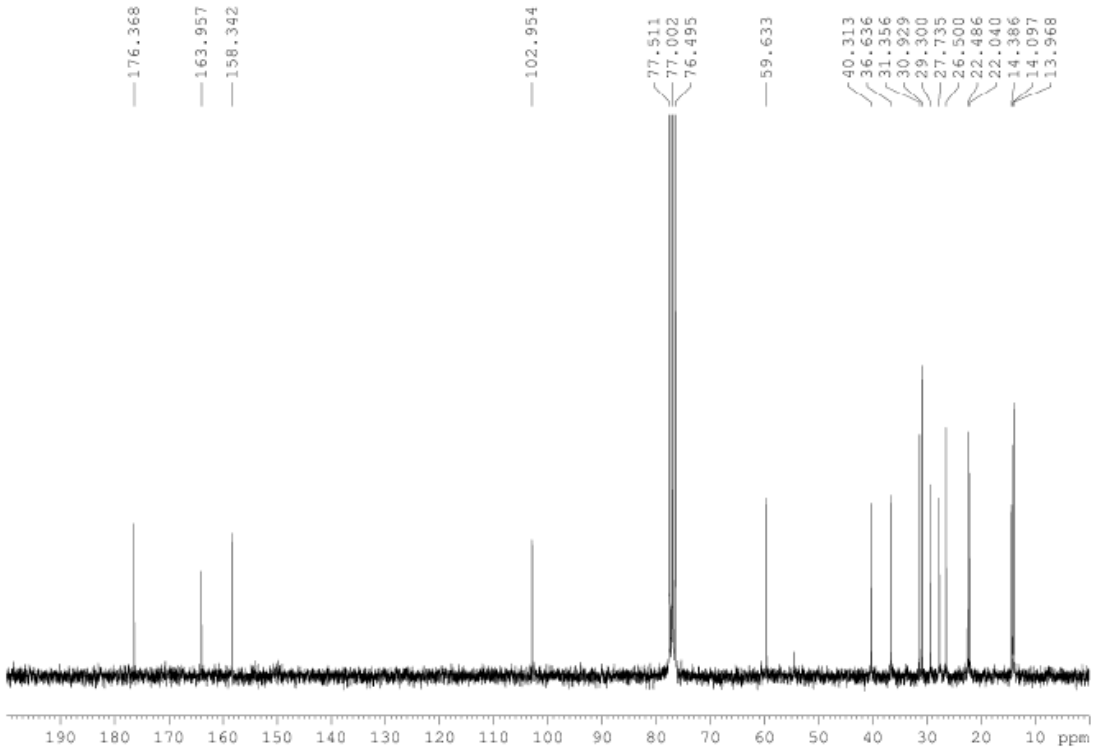
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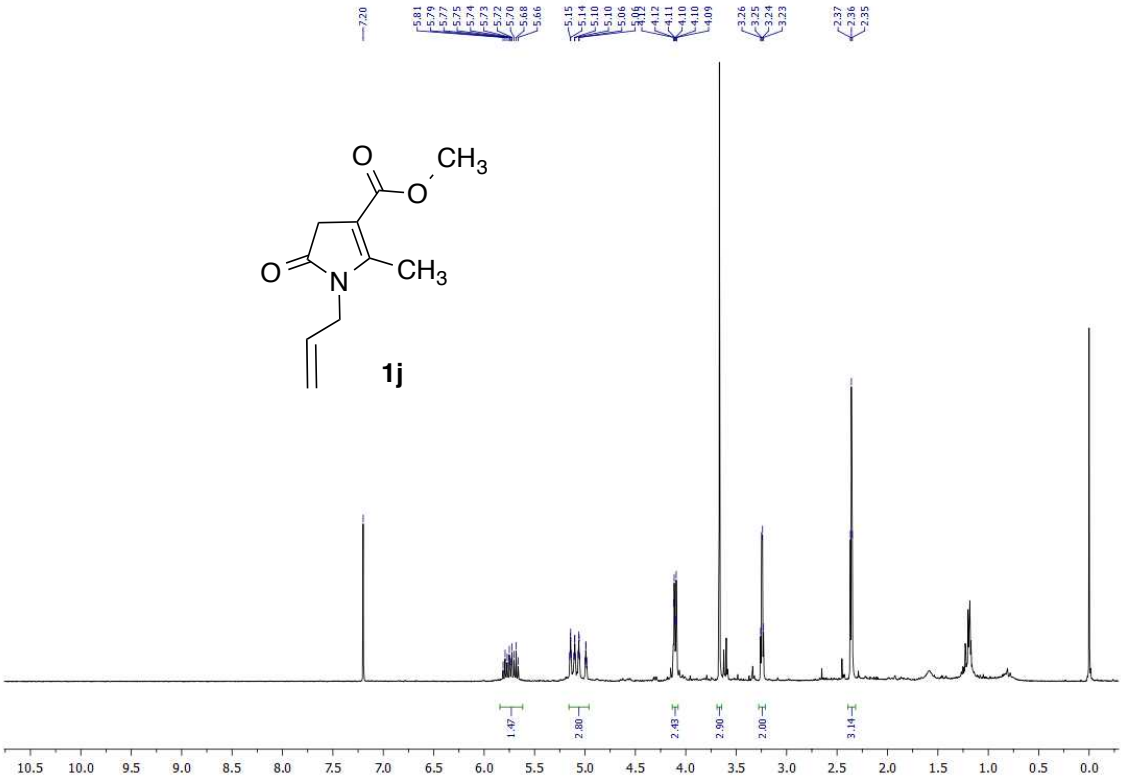
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4.11
4.10
4.10
4.09
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3.24
3.23
2.37
2.36
2.35
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O
CH3
O
N
CH3
1j
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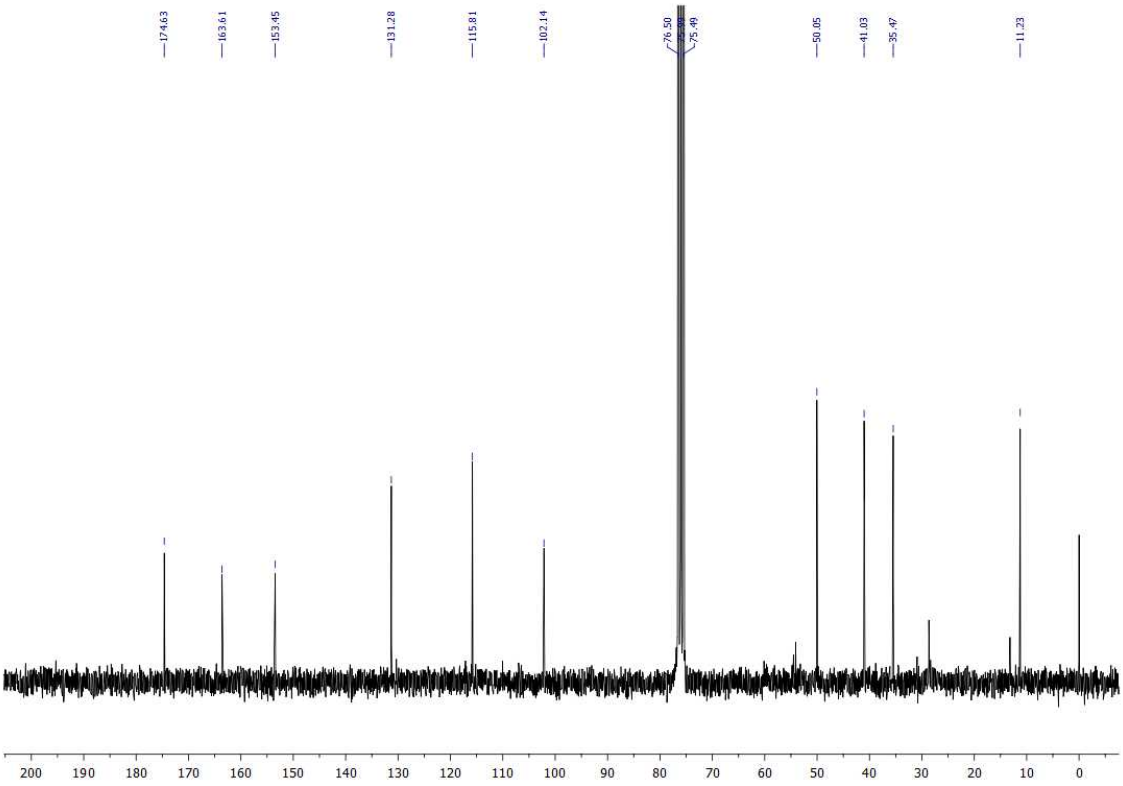
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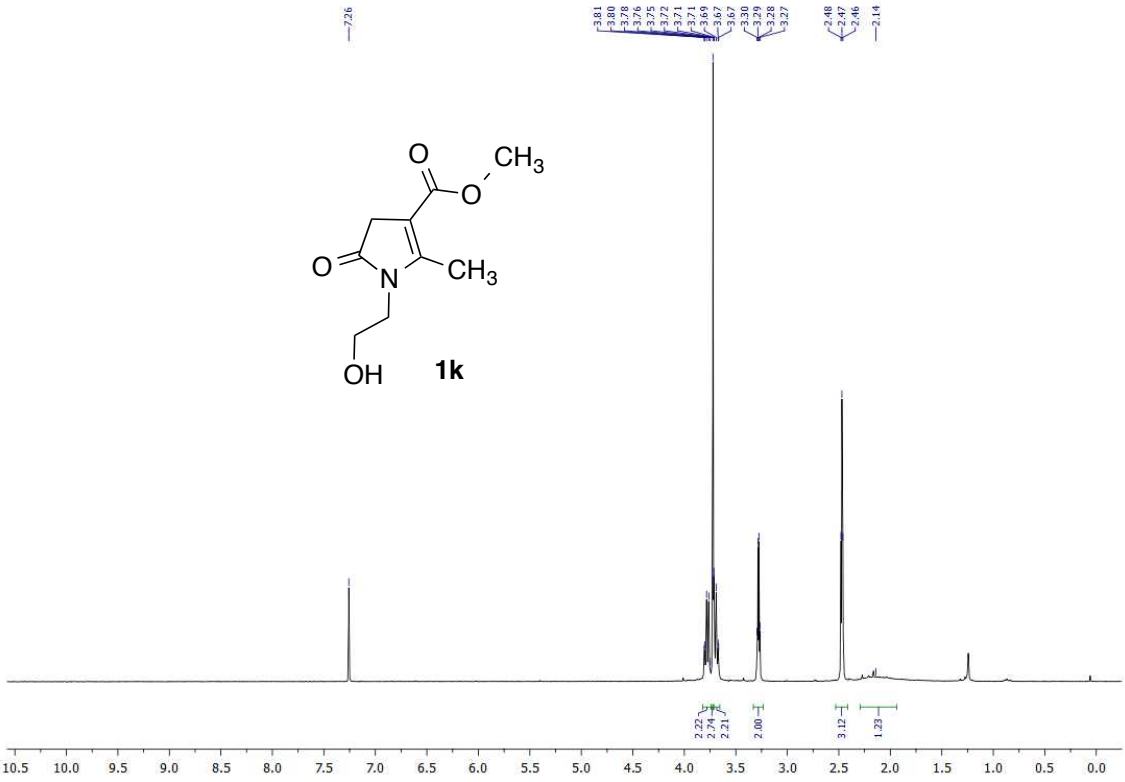
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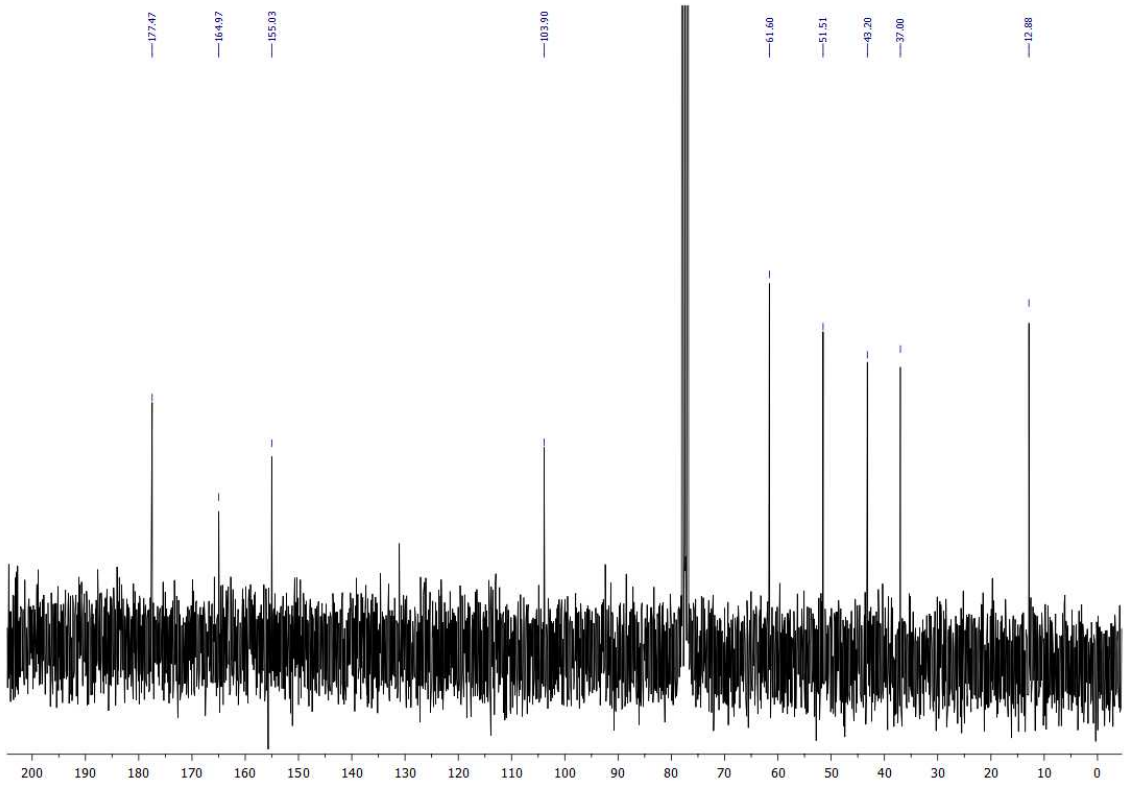
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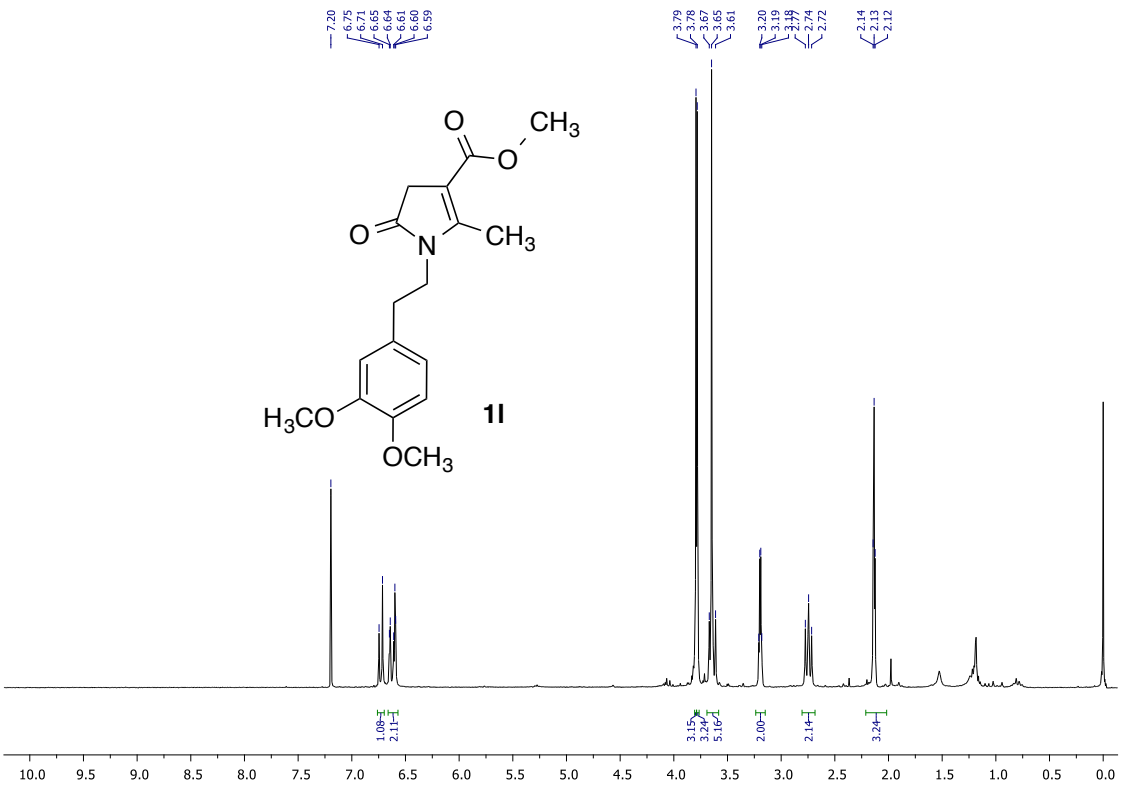
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3.20
3.19
2.74
2.72
2.14
2.13
2.12
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O
O
CH3
N
H3CO
OCH3
1l
1.08
2.11
3.15
3.24
5.16
2.00
2.14
3.24
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9.0
8.5
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7.5
7.0
6.5
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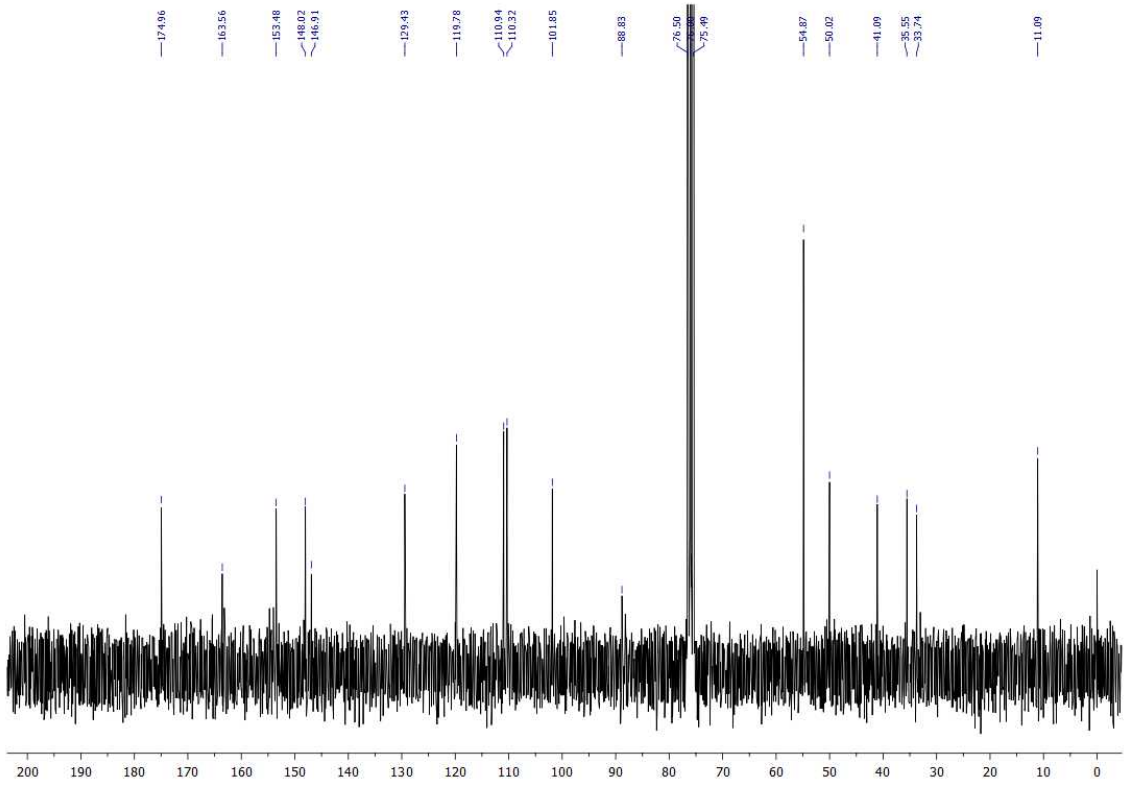
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76.50
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11.09
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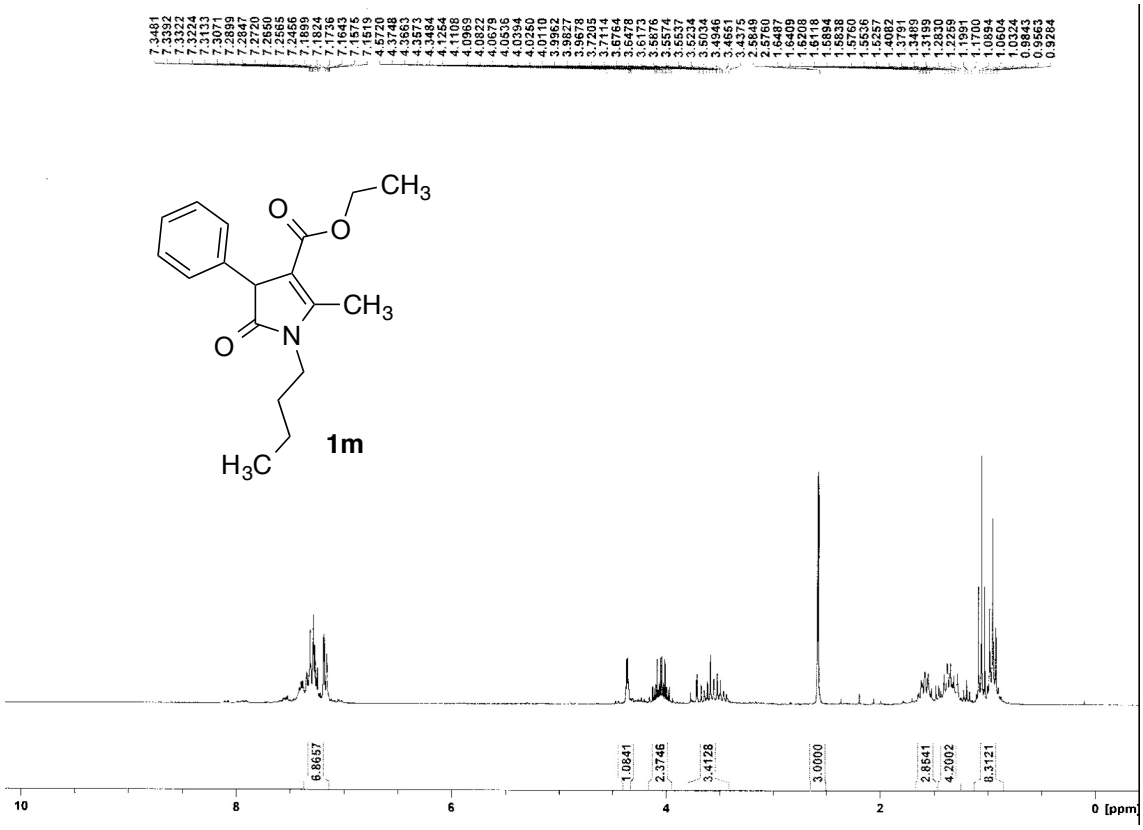
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CH3
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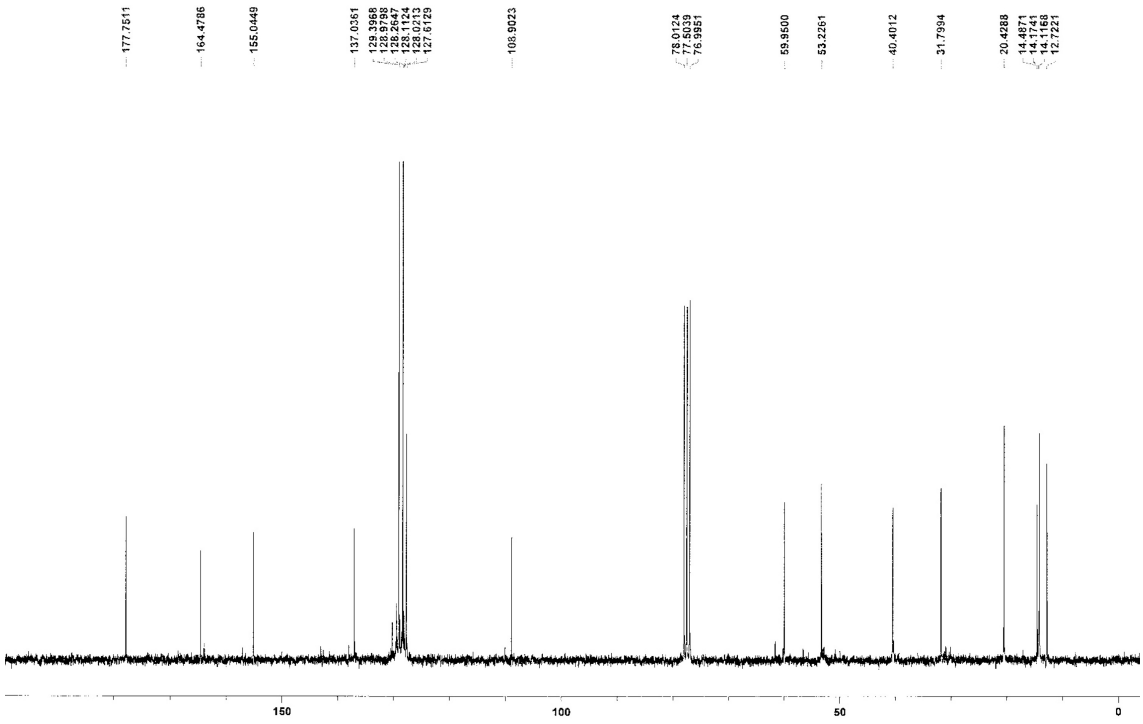
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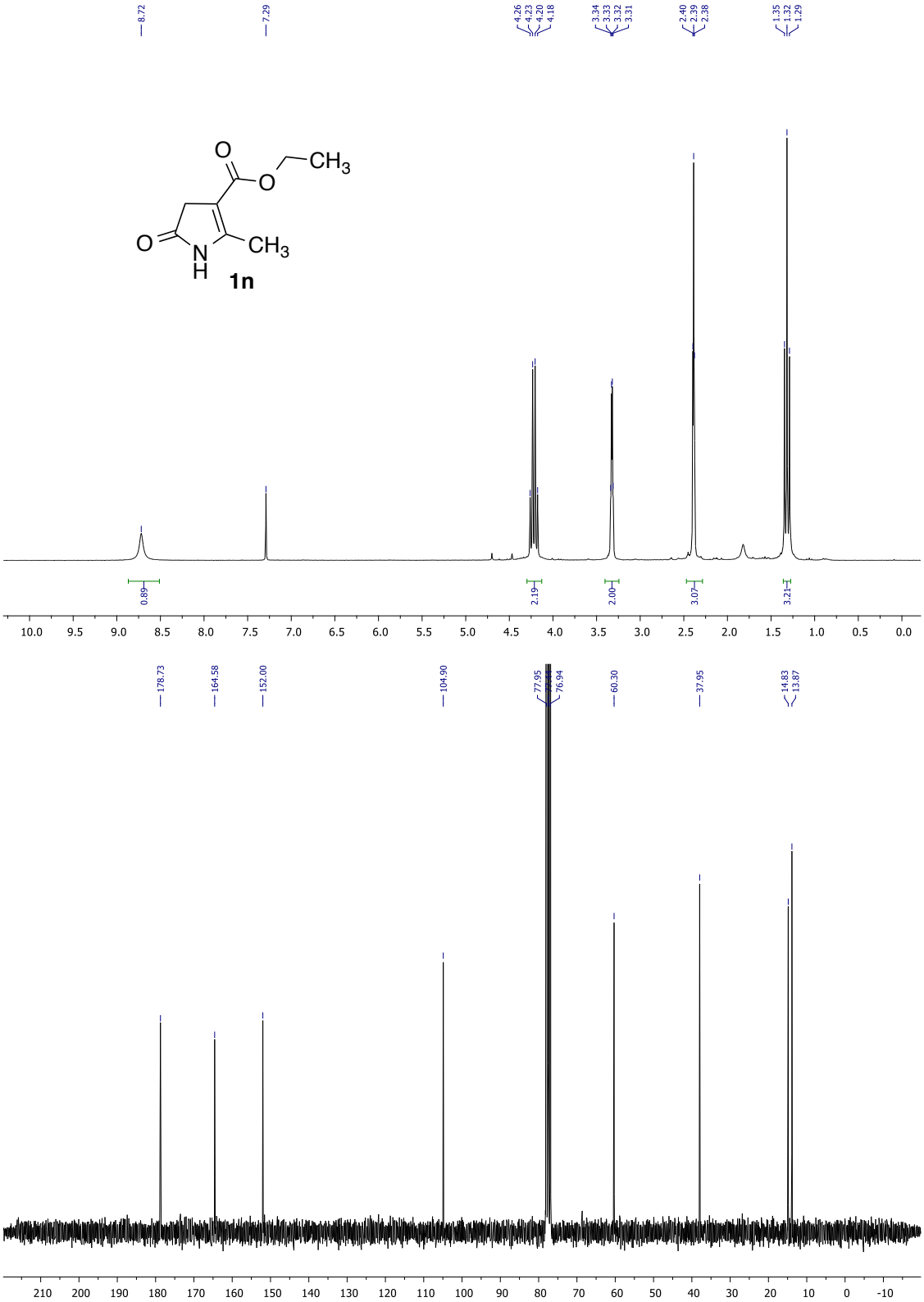
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H
CH3
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2.00
3.07
3.21
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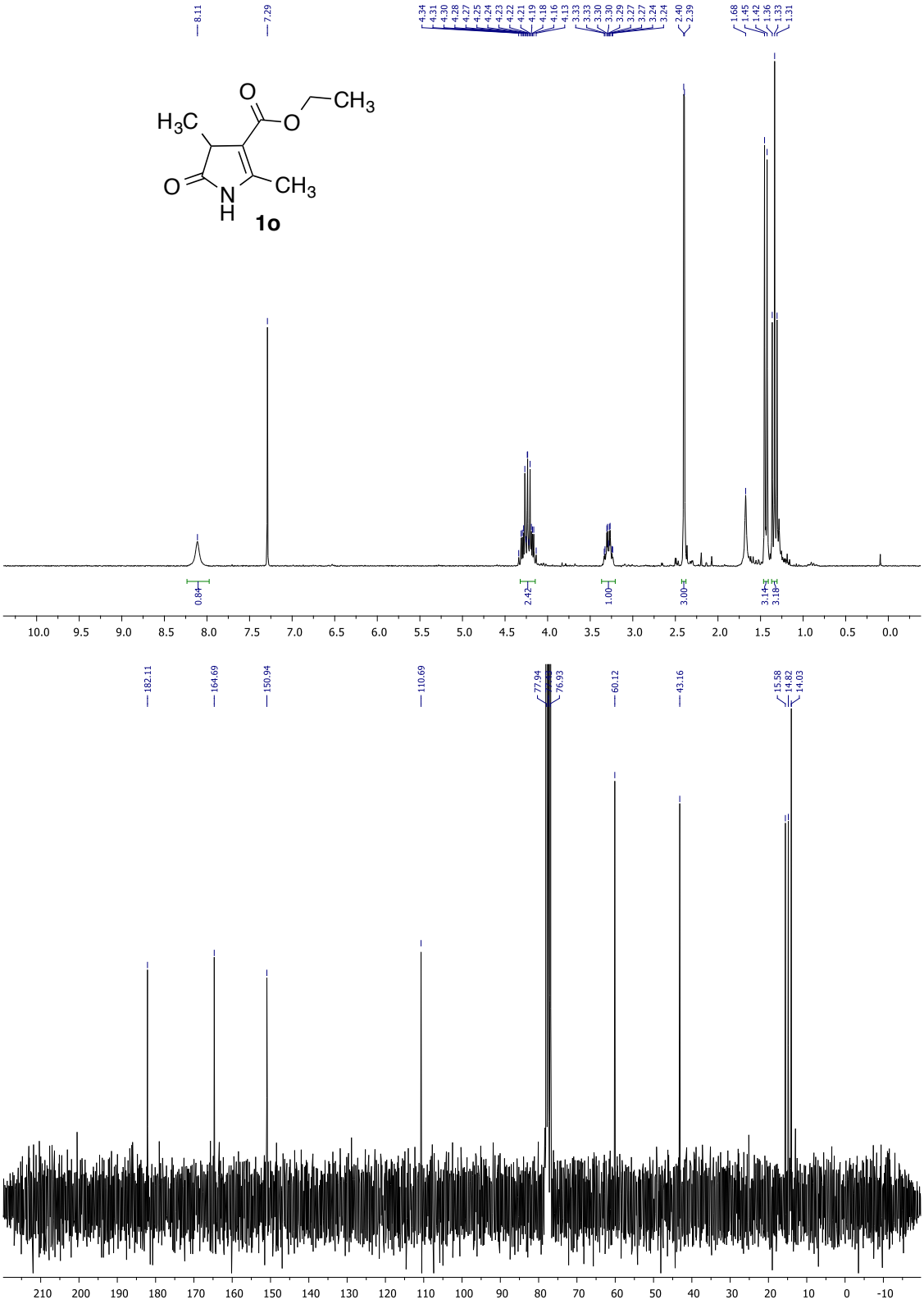
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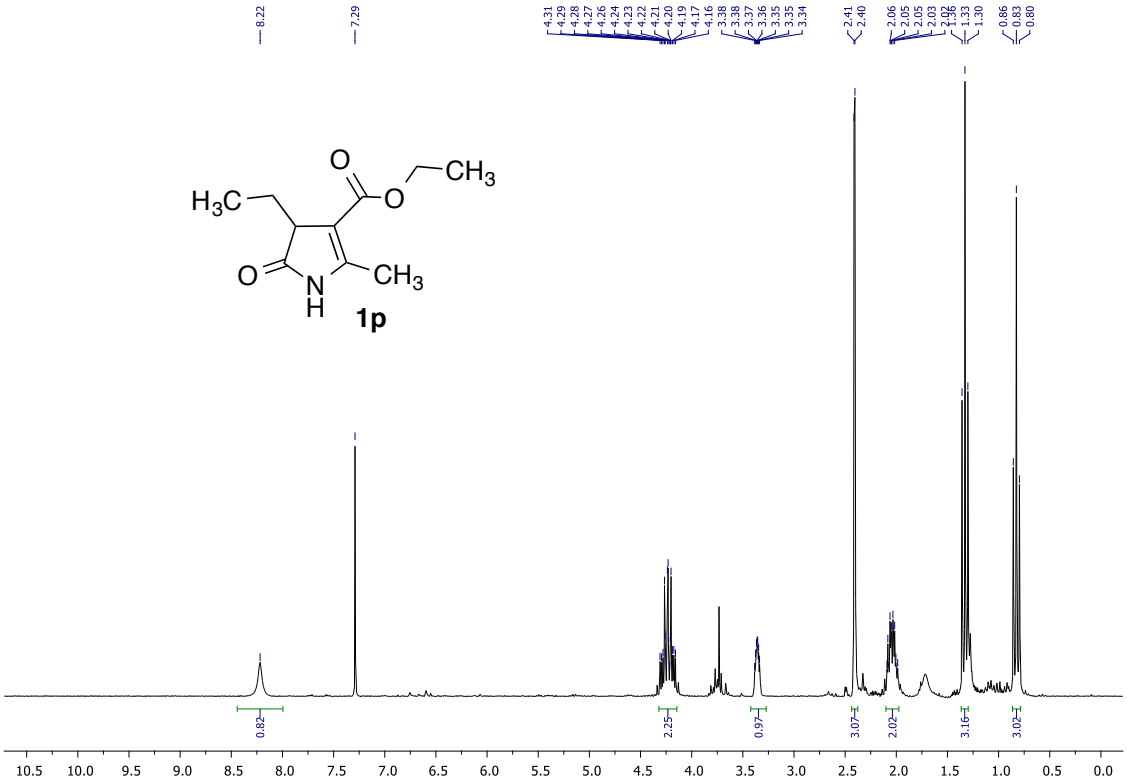
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2.05
2.05
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0.80
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N
H
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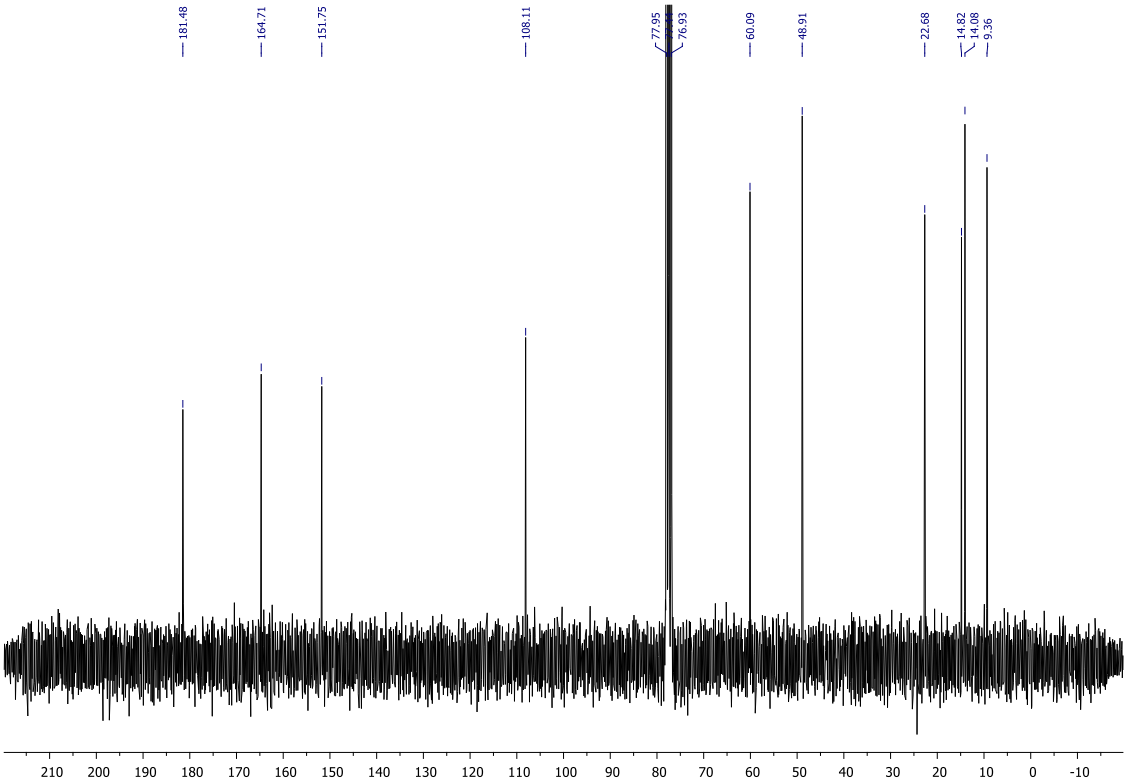
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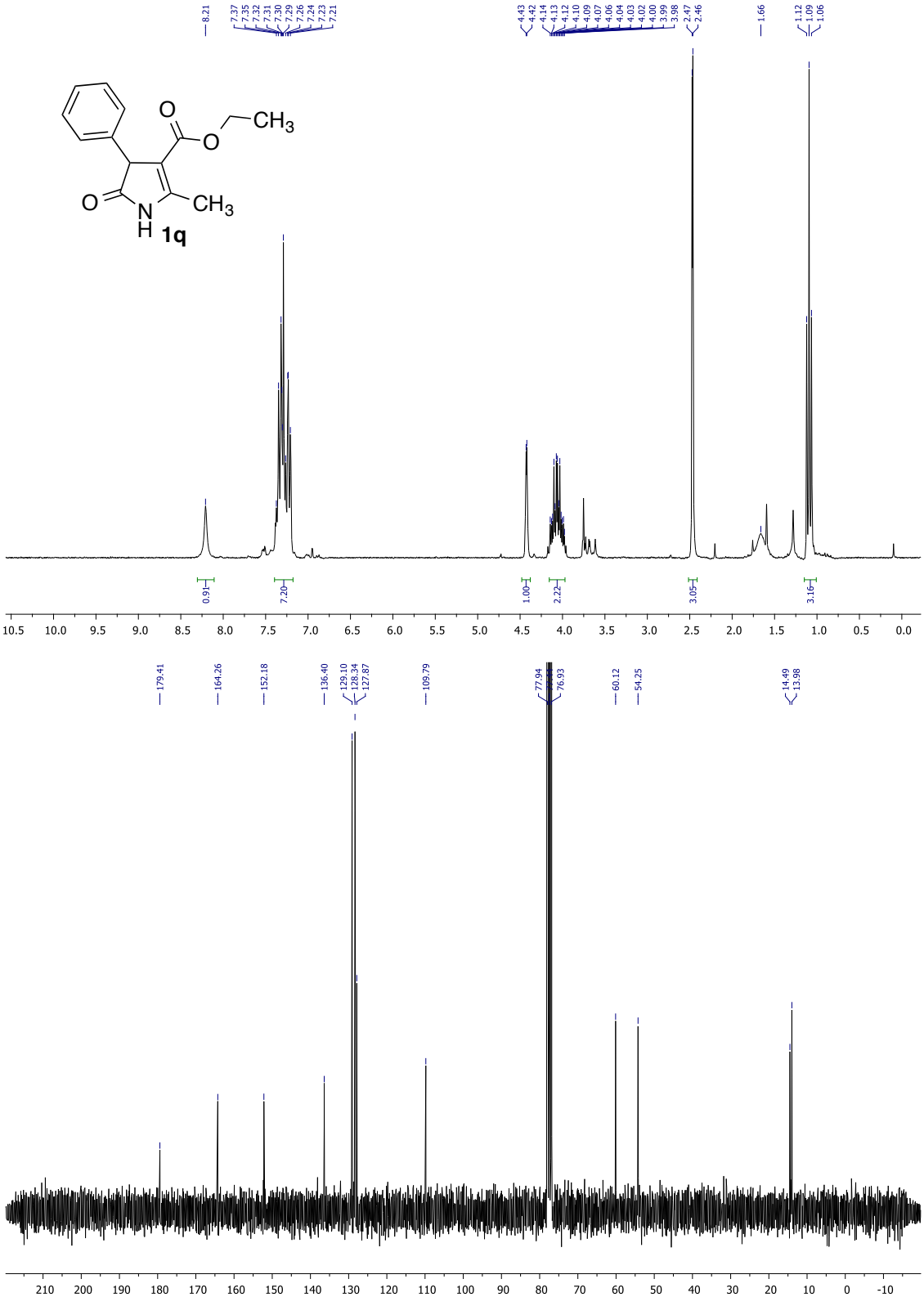
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4.13
4.12
4.10
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4.07
4.06
4.04
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4.02
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2.46
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1.12
1.09
1.06
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O
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O
N
H
CH3
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1.00
2.22
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3.16
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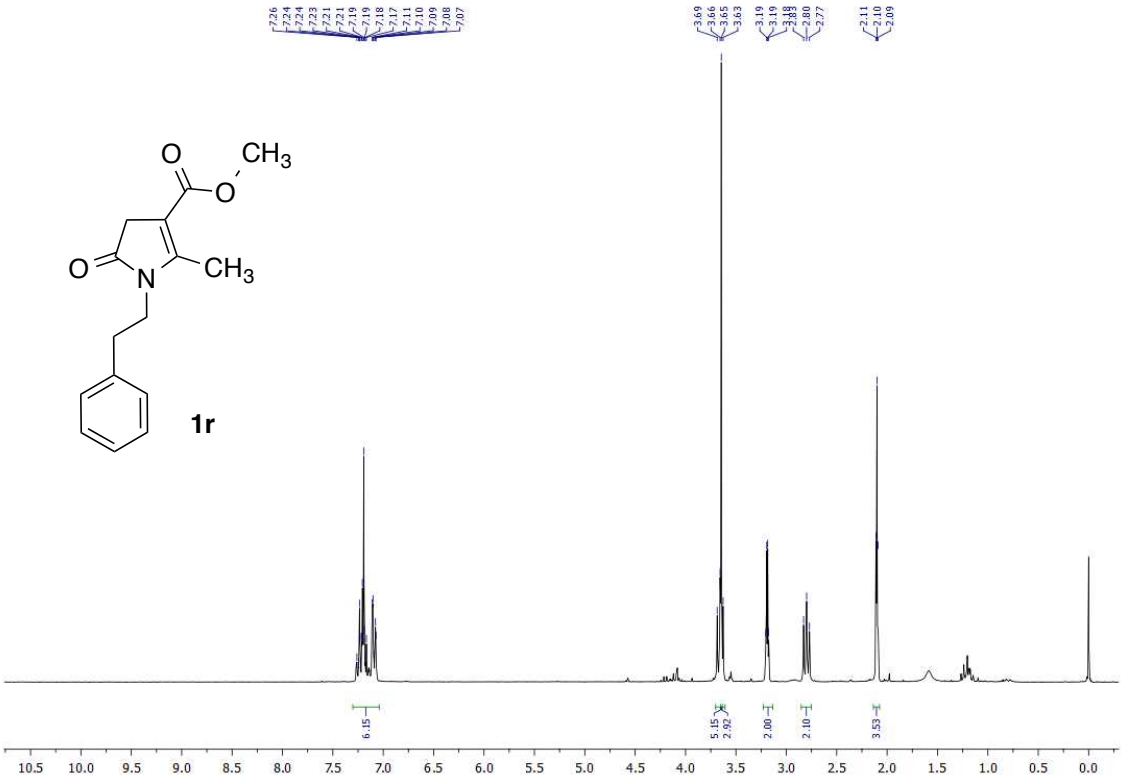
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2.09
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CH3
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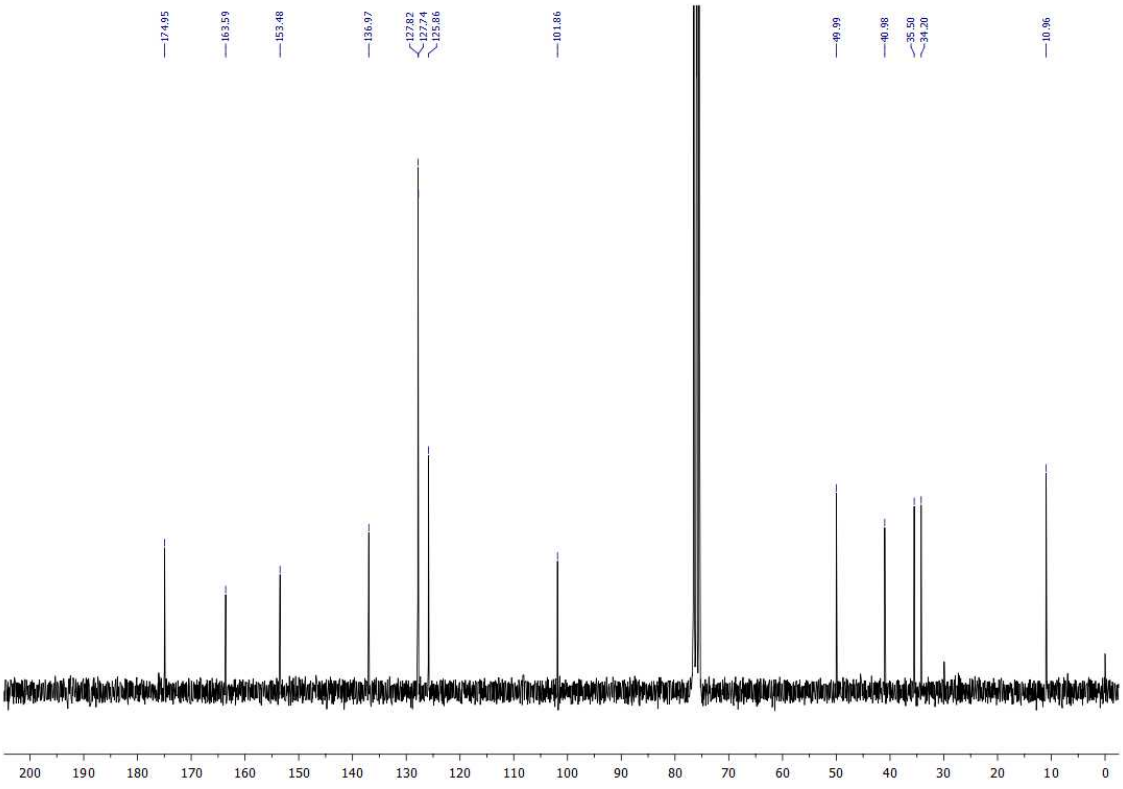
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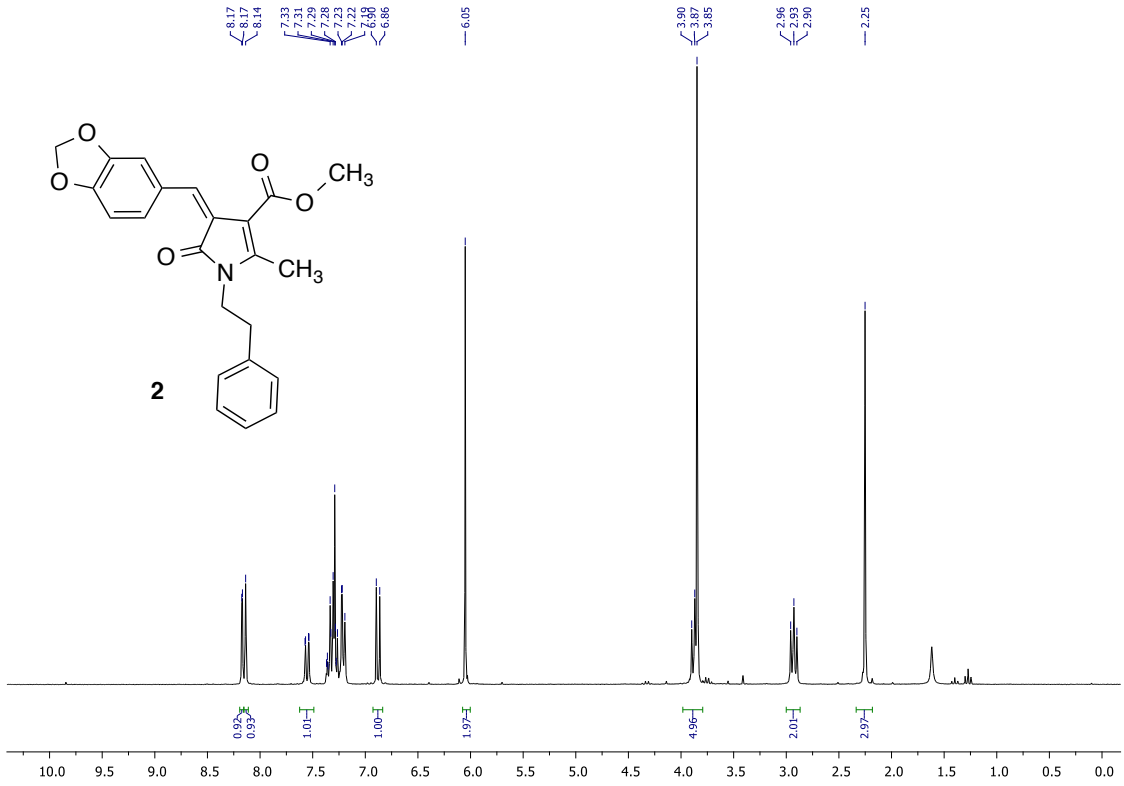
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2.90
2.25
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0.93
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2.97
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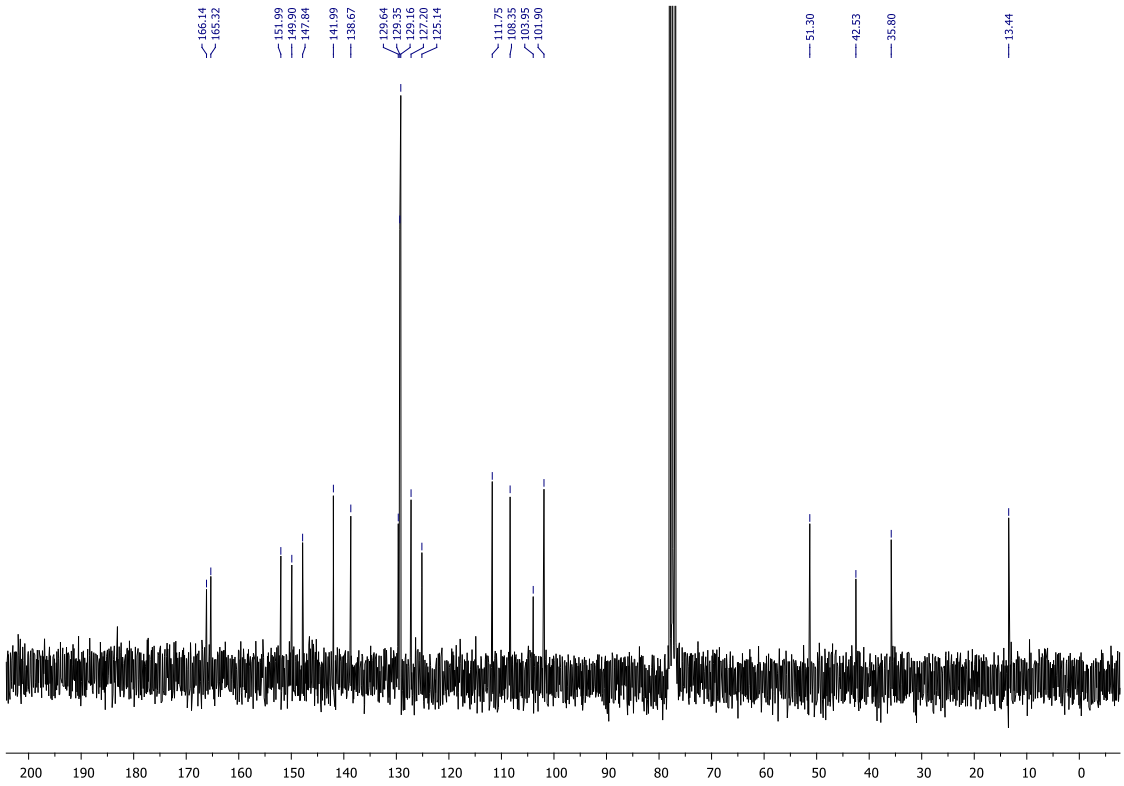
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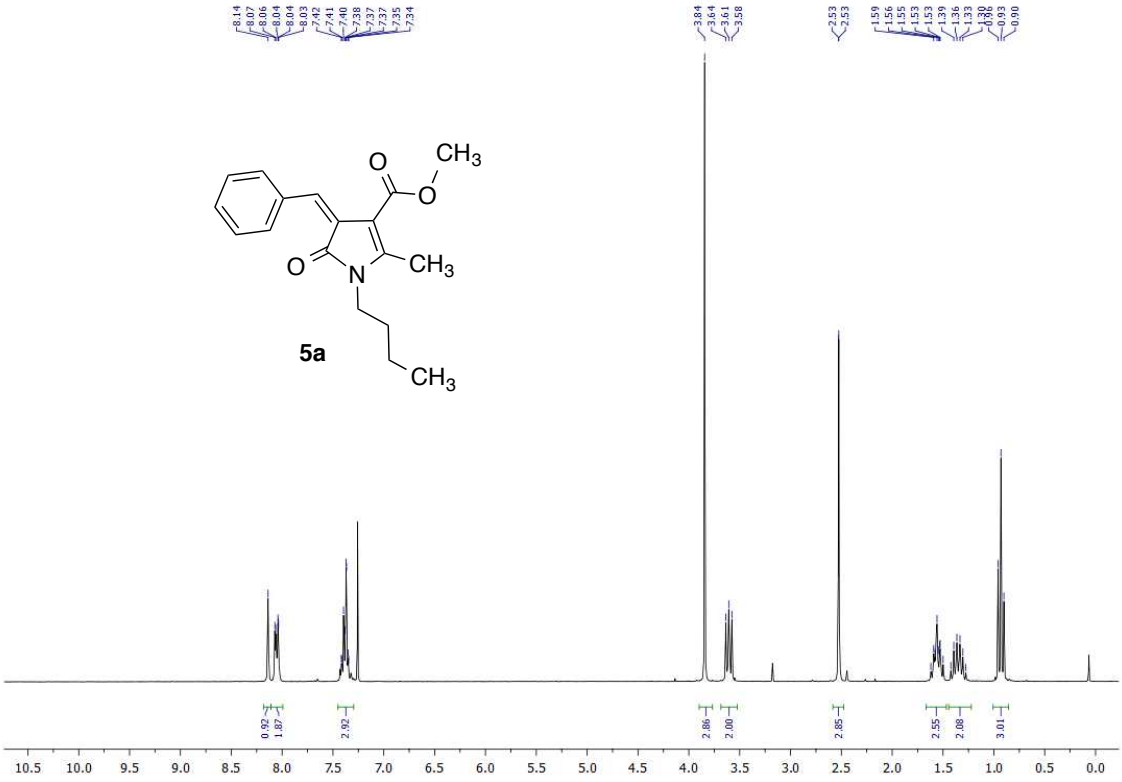
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CH3
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CH3
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2.85
2.55
2.08
3.01
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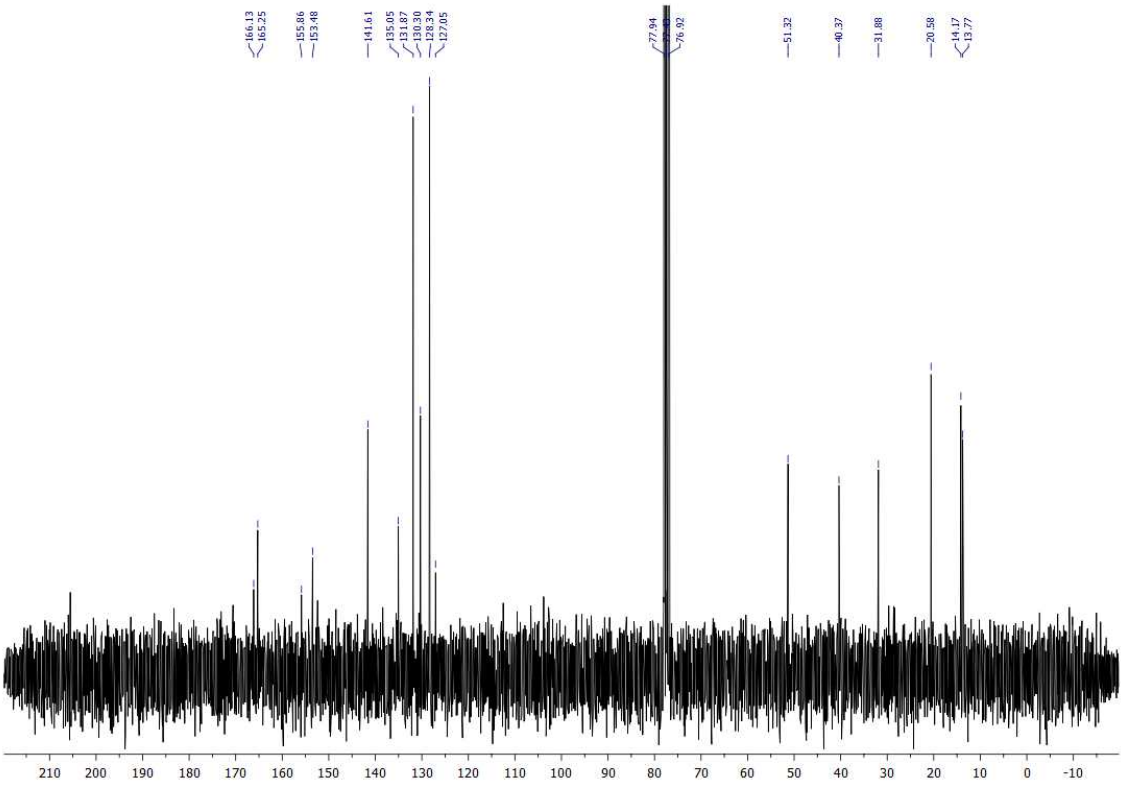
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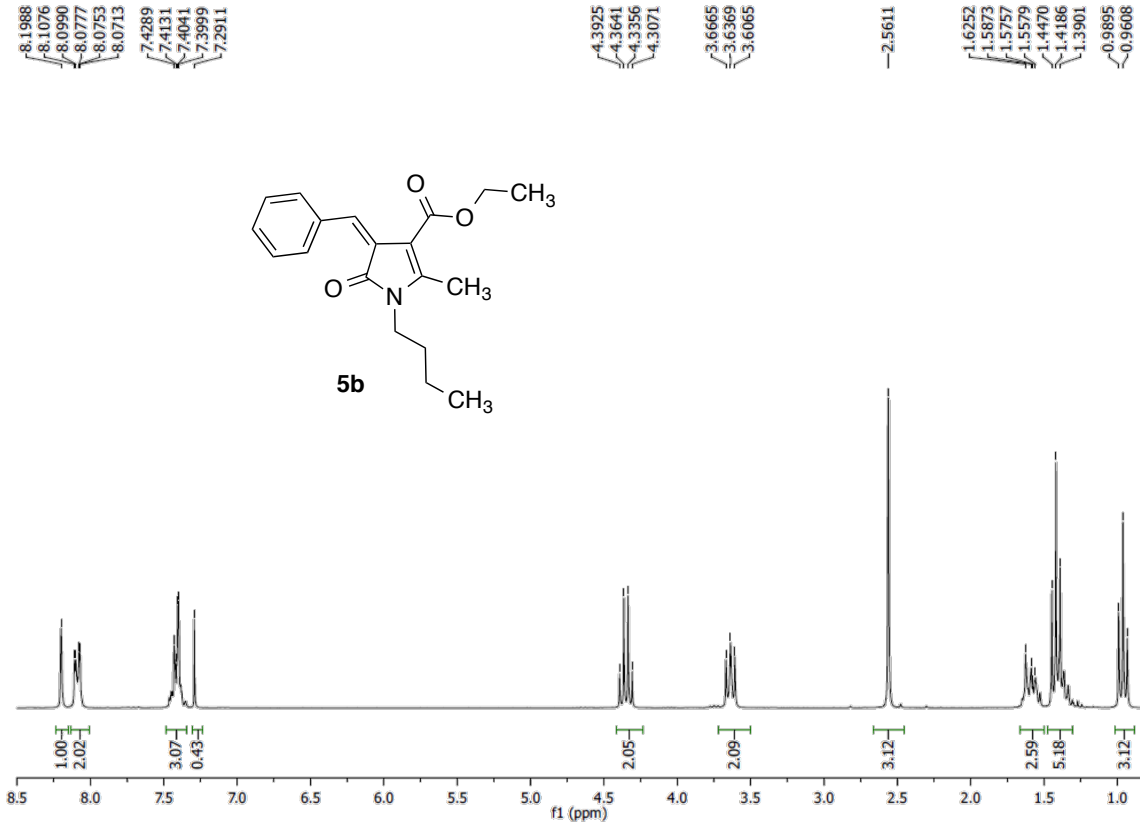
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CH3
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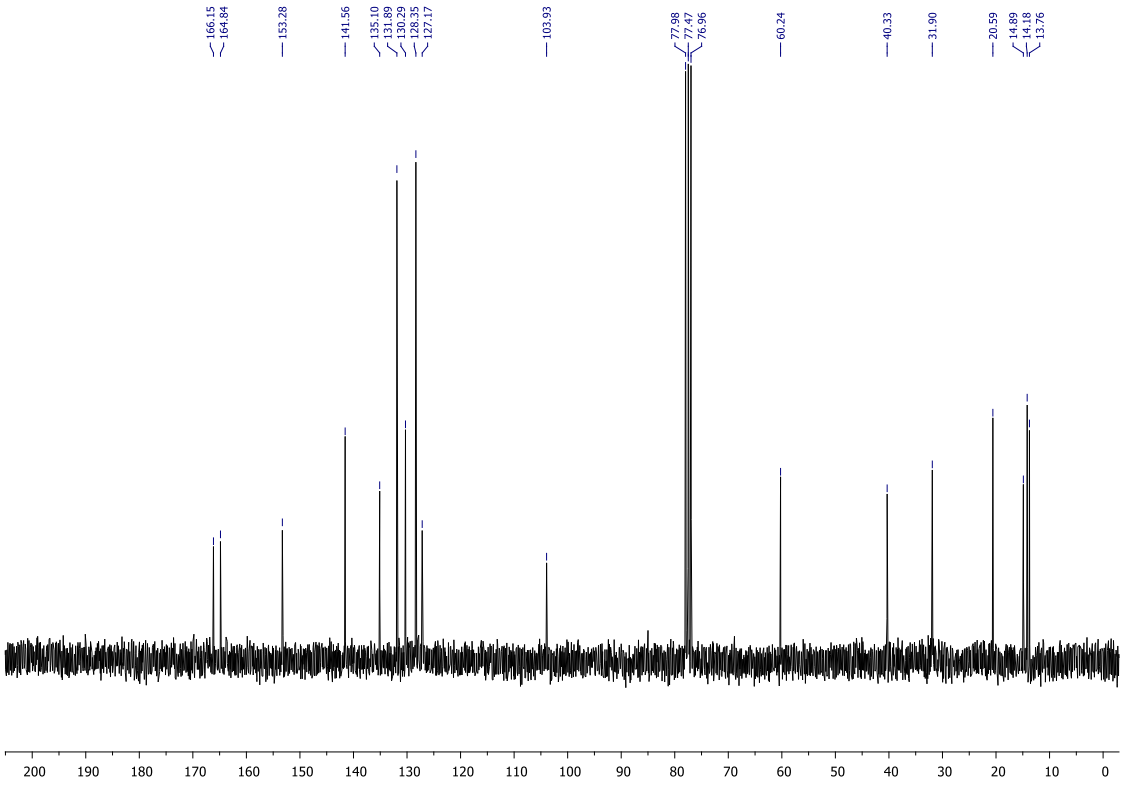
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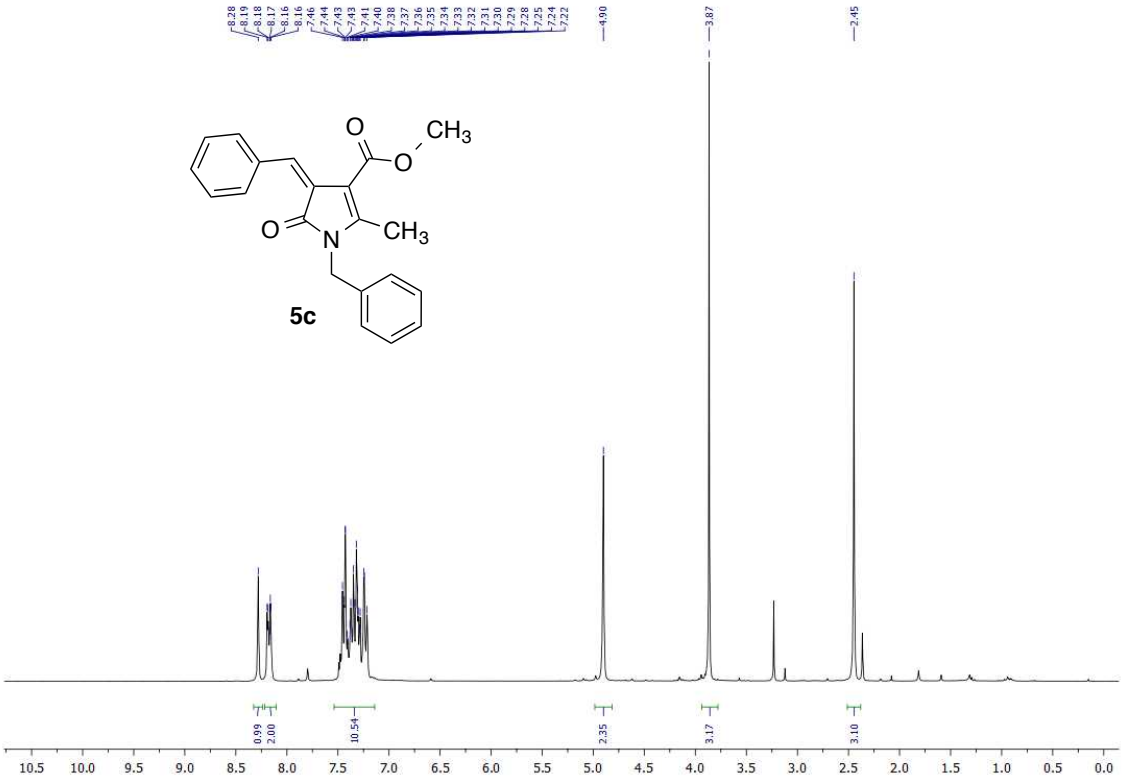
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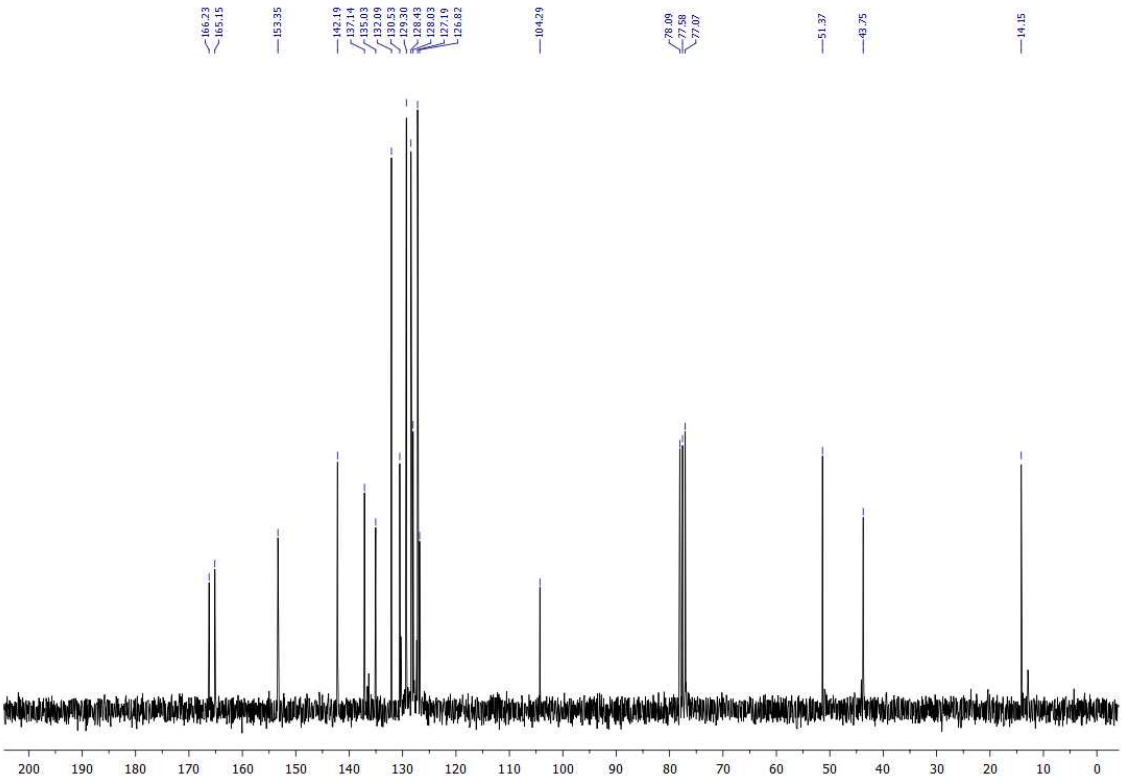
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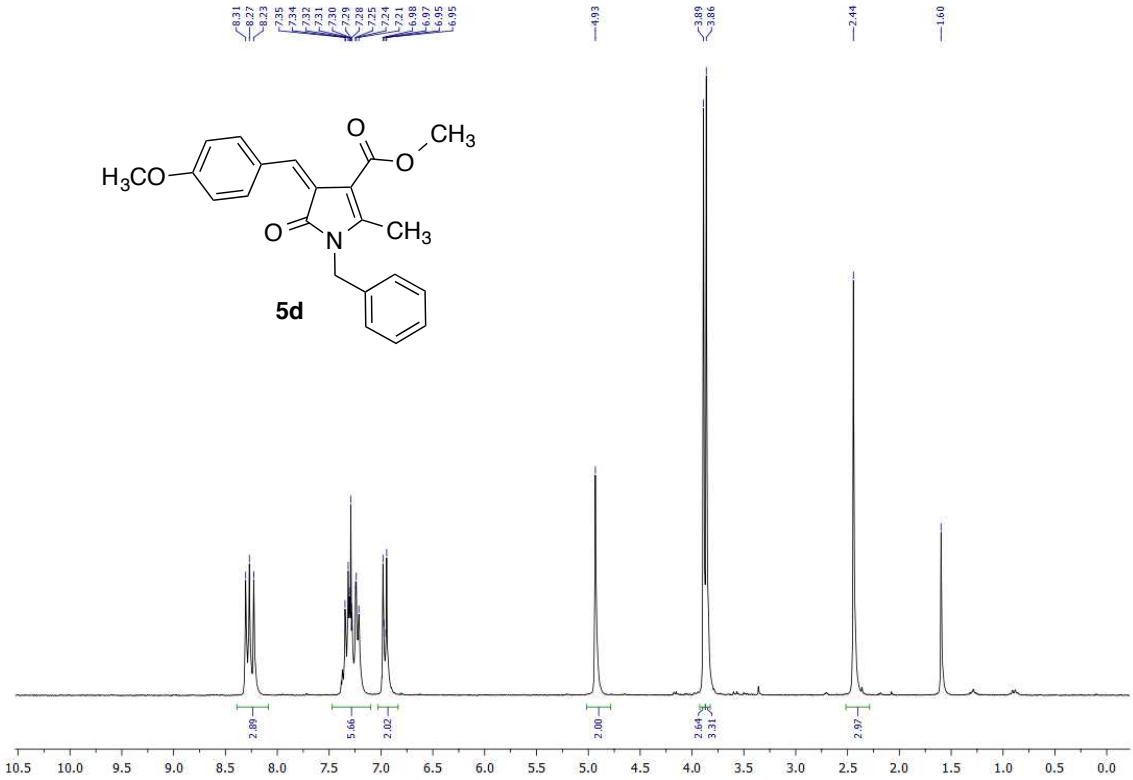
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2.97
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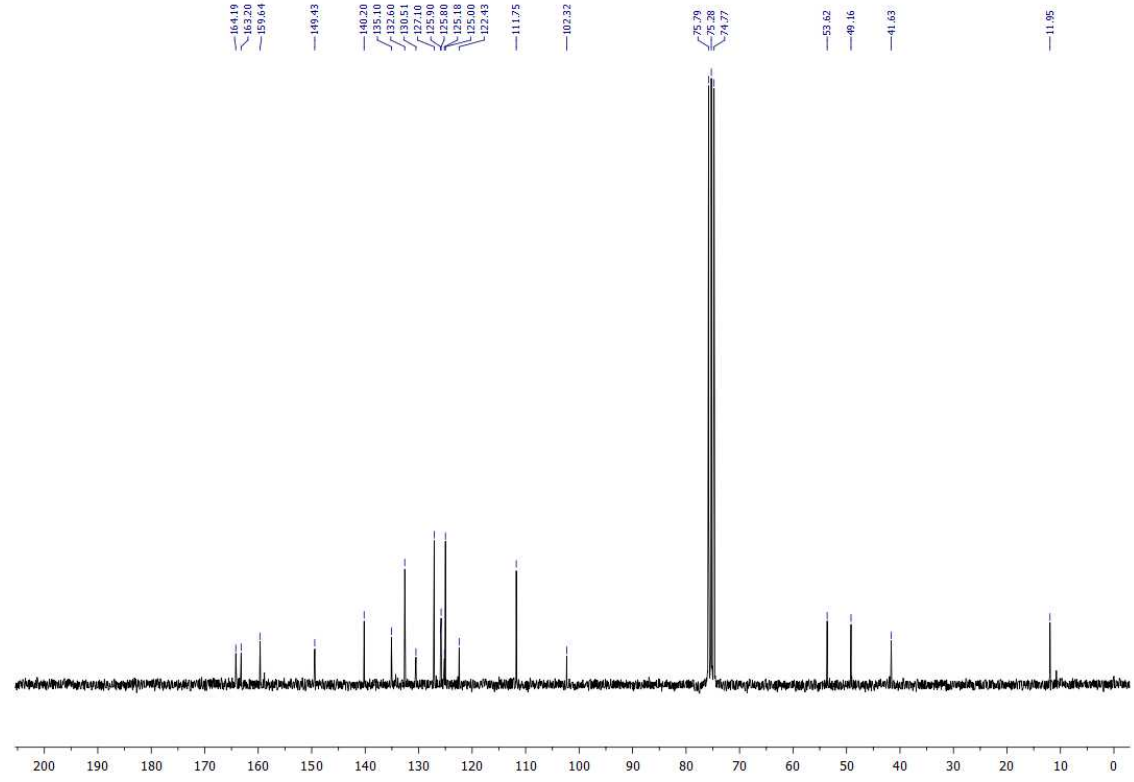
5d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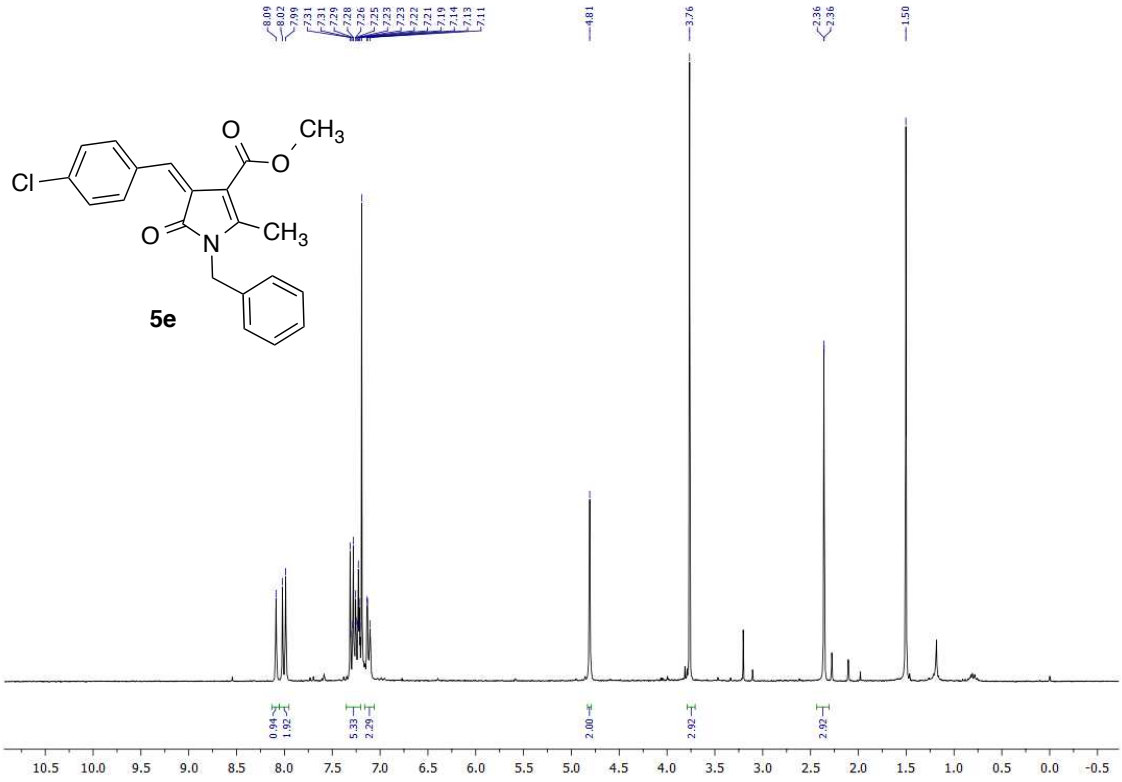
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CH3
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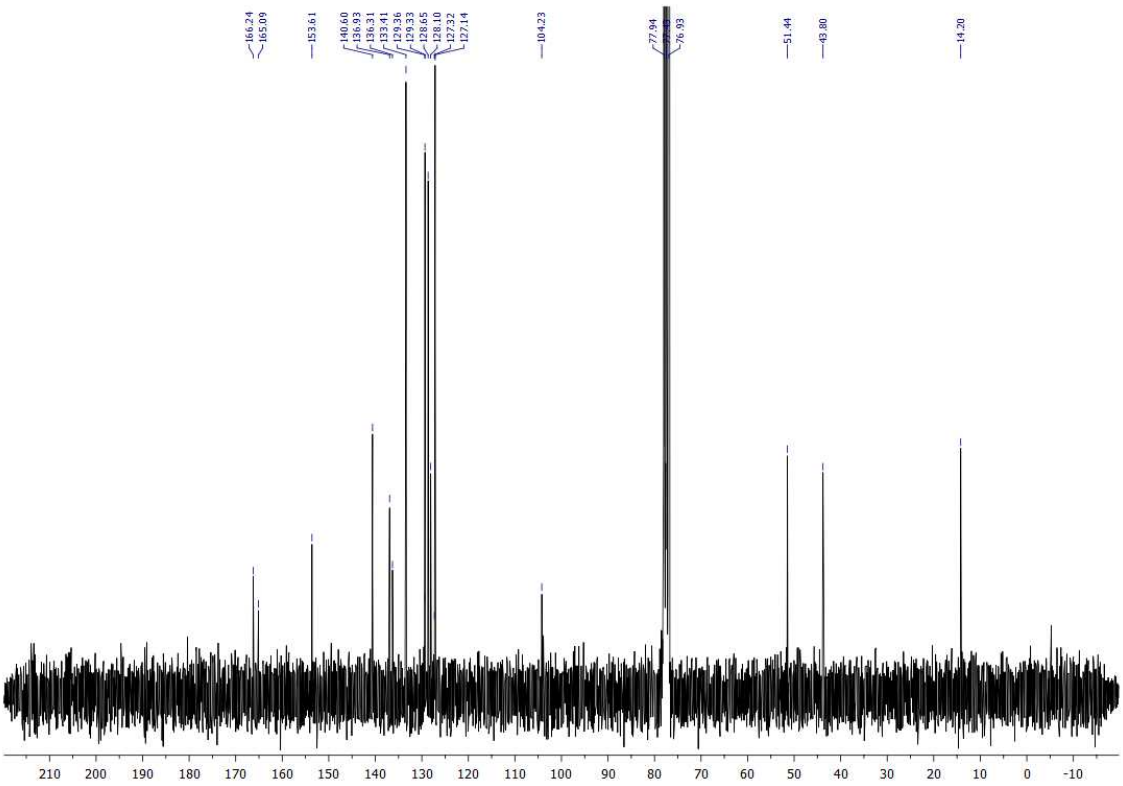

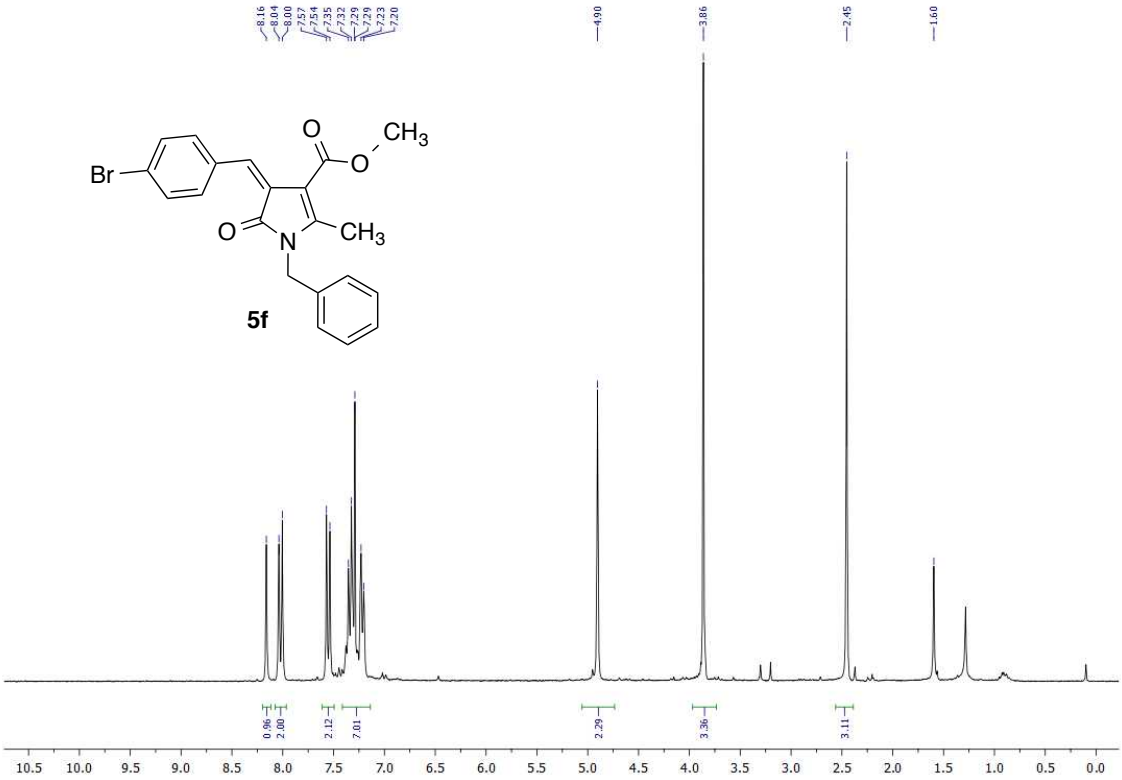
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1.60
Br
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O
CH3
O
N
CH3
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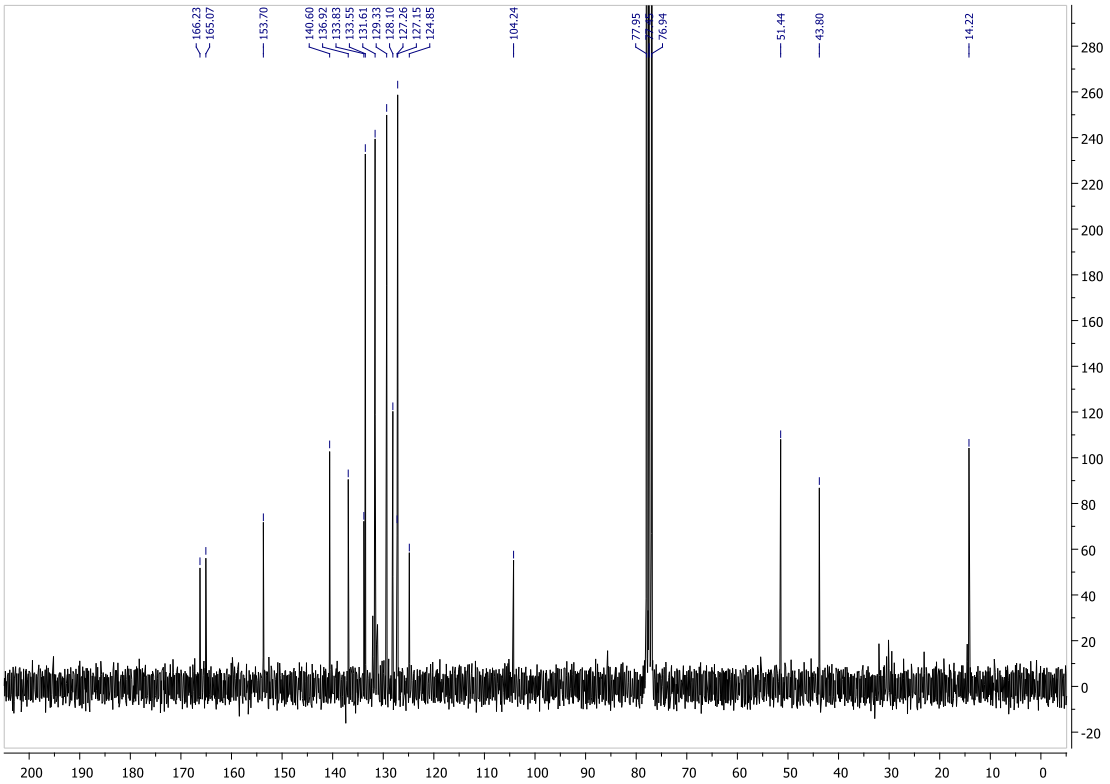
2.00
2.12
7.01
2.29
3.36
3.11
10.5 10.0 9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0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77.95
76.94
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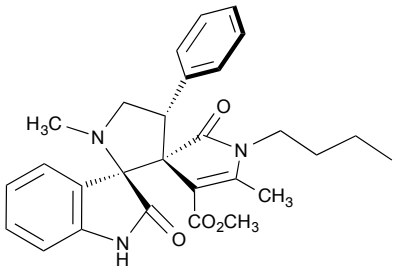

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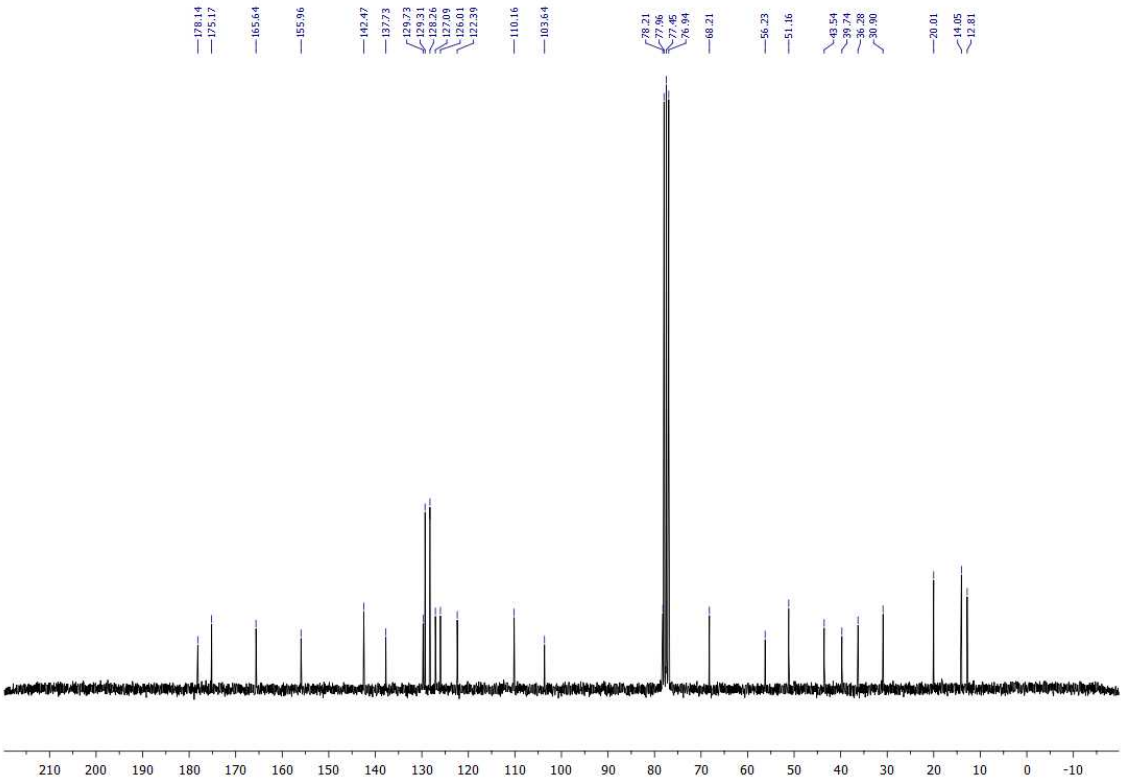

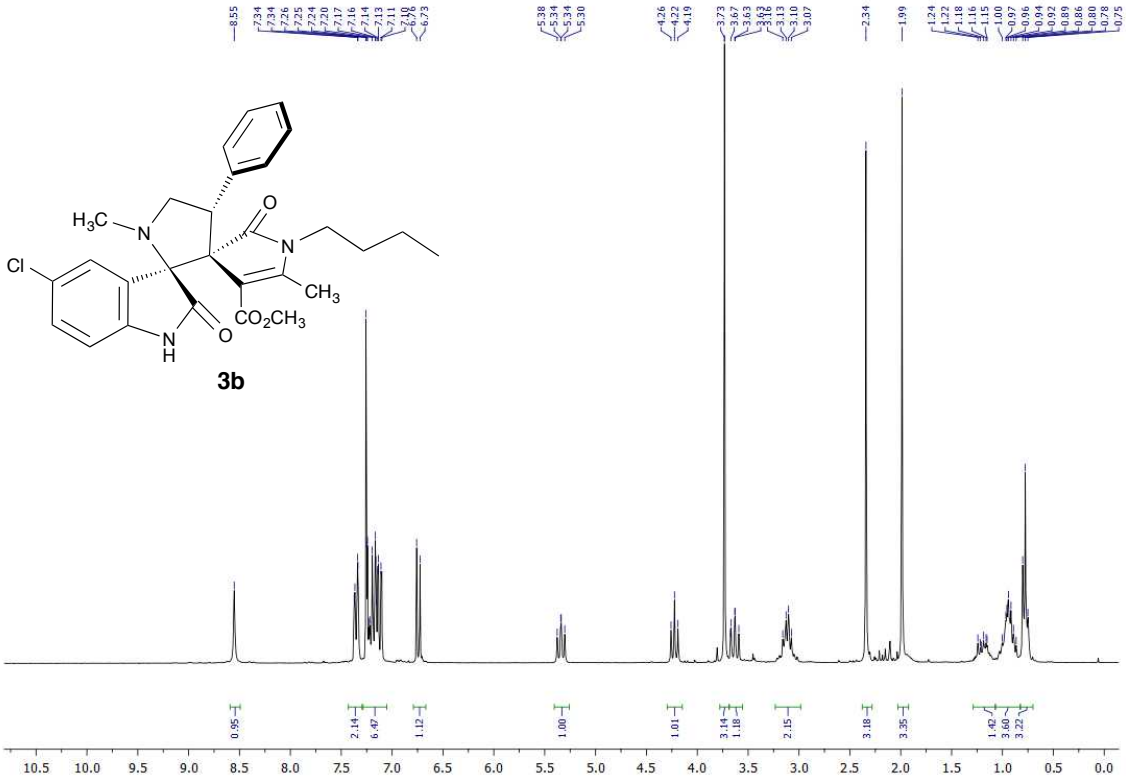
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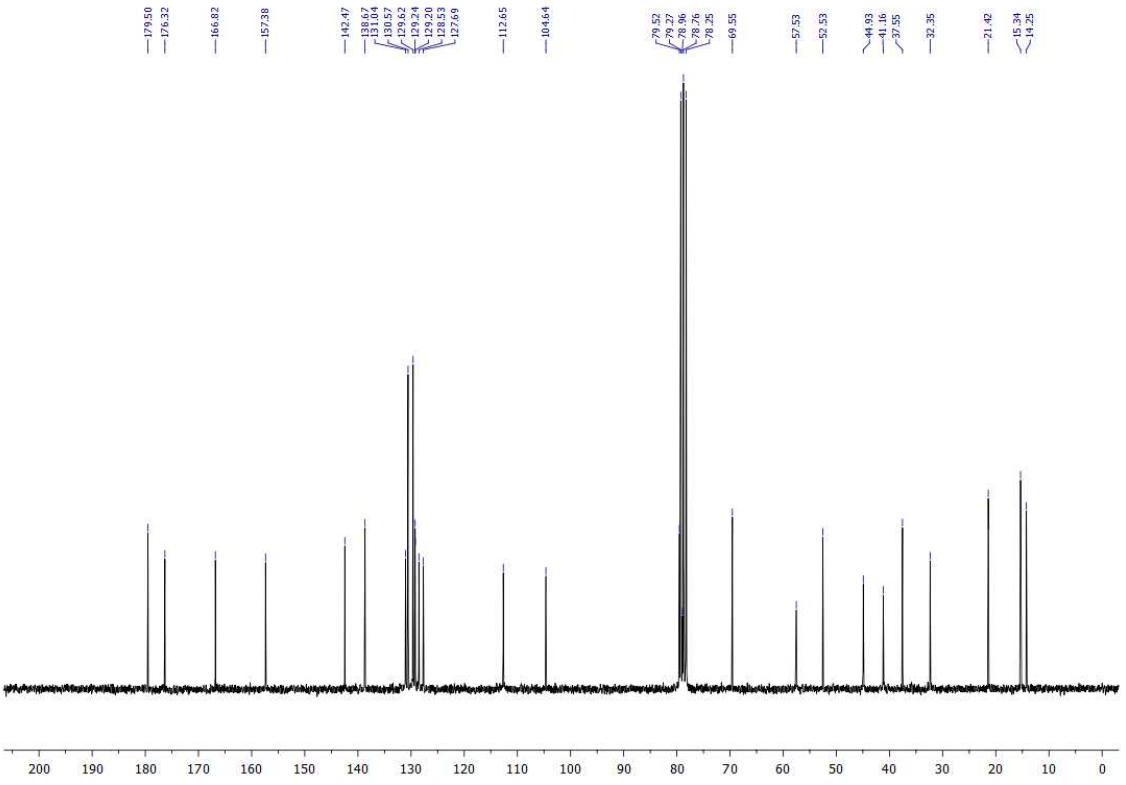
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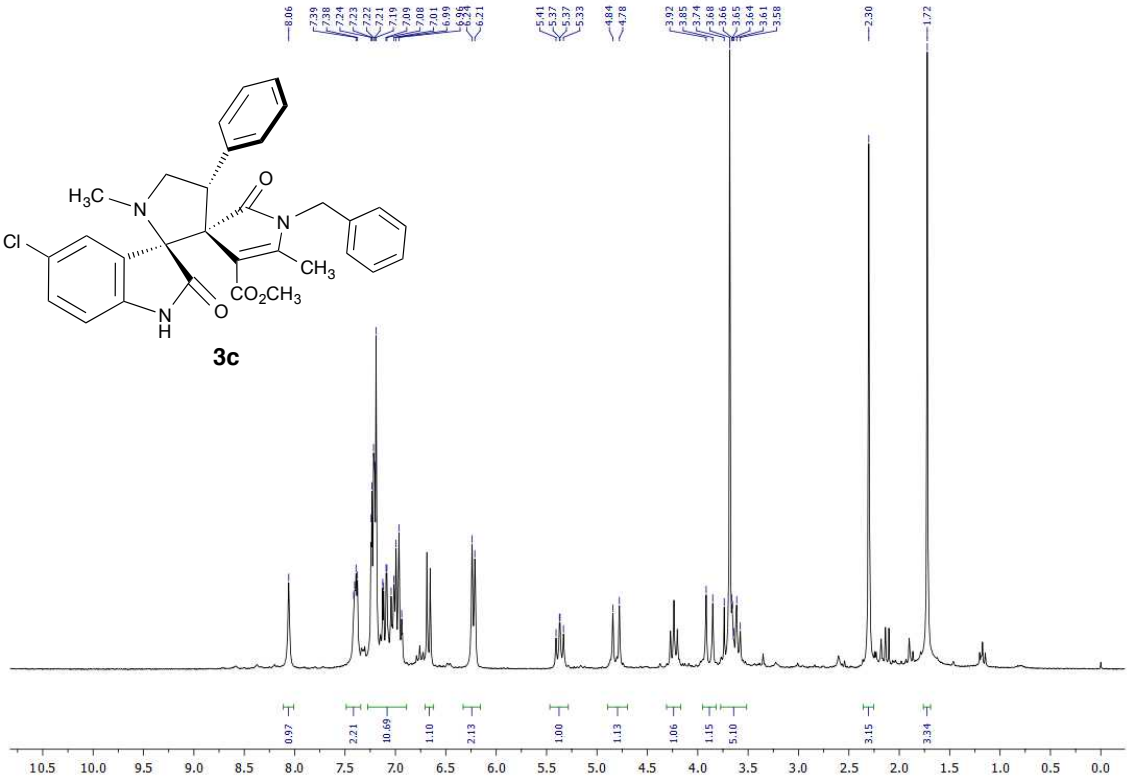
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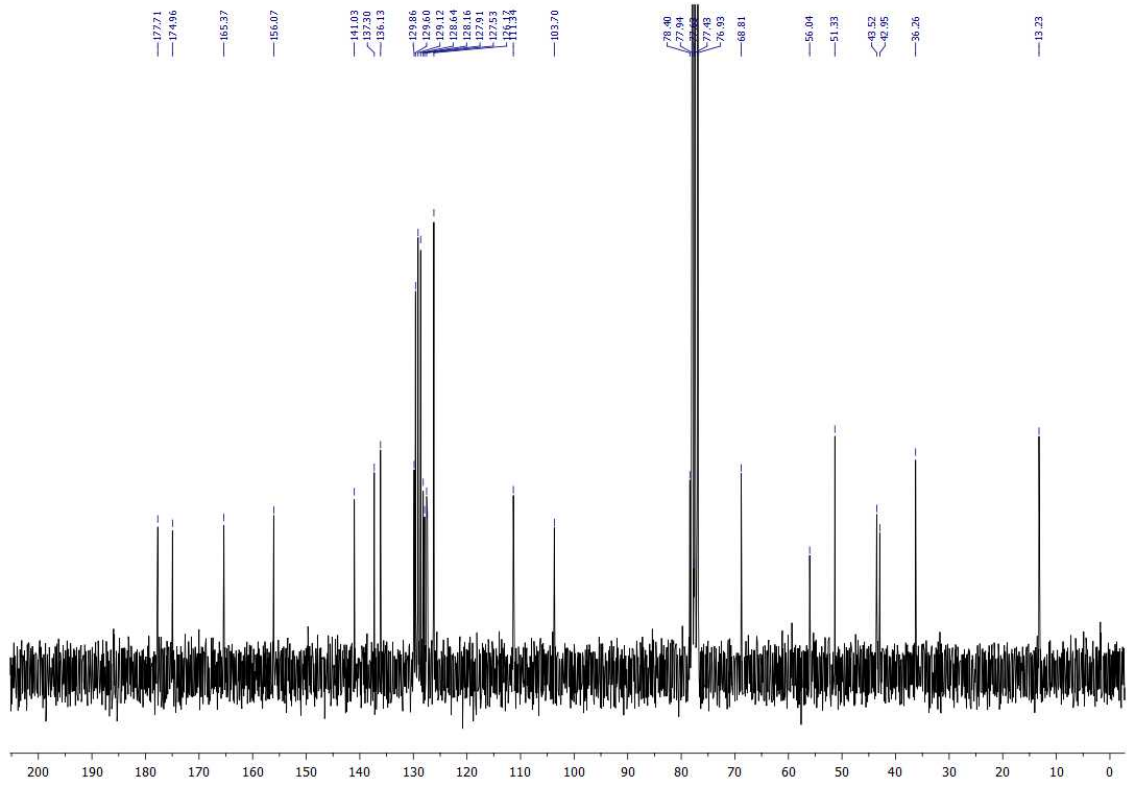
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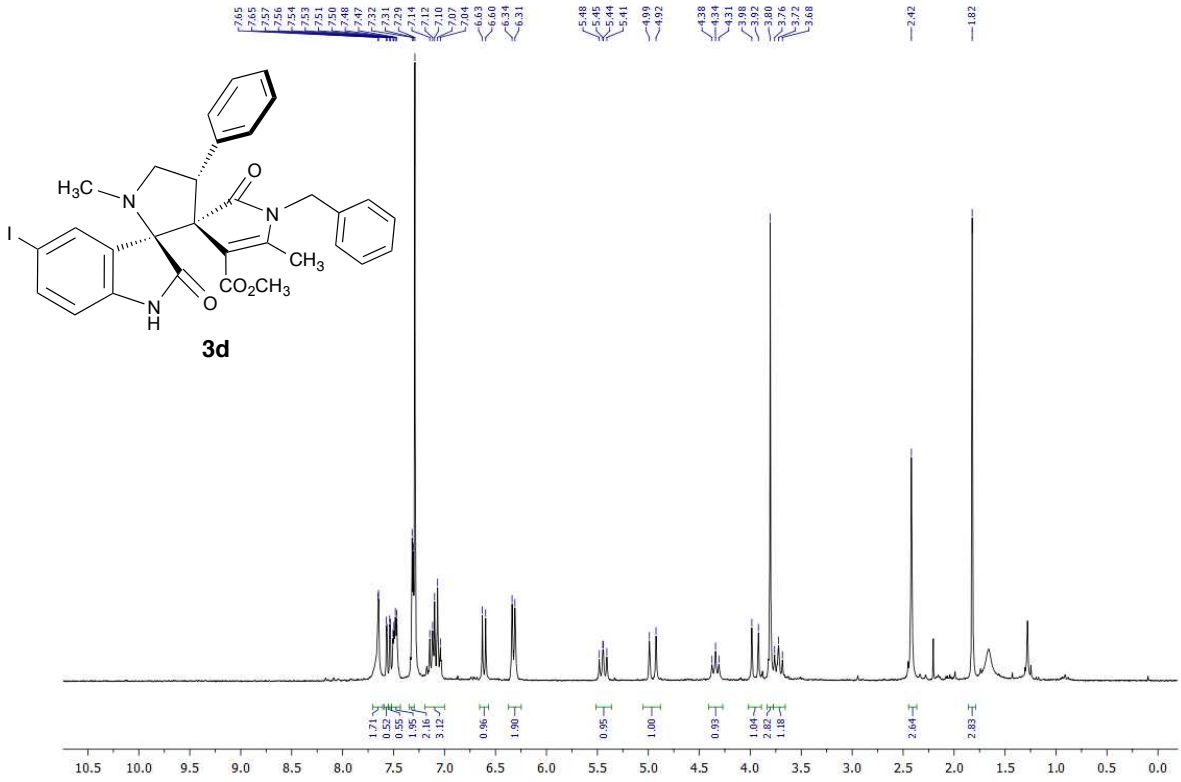
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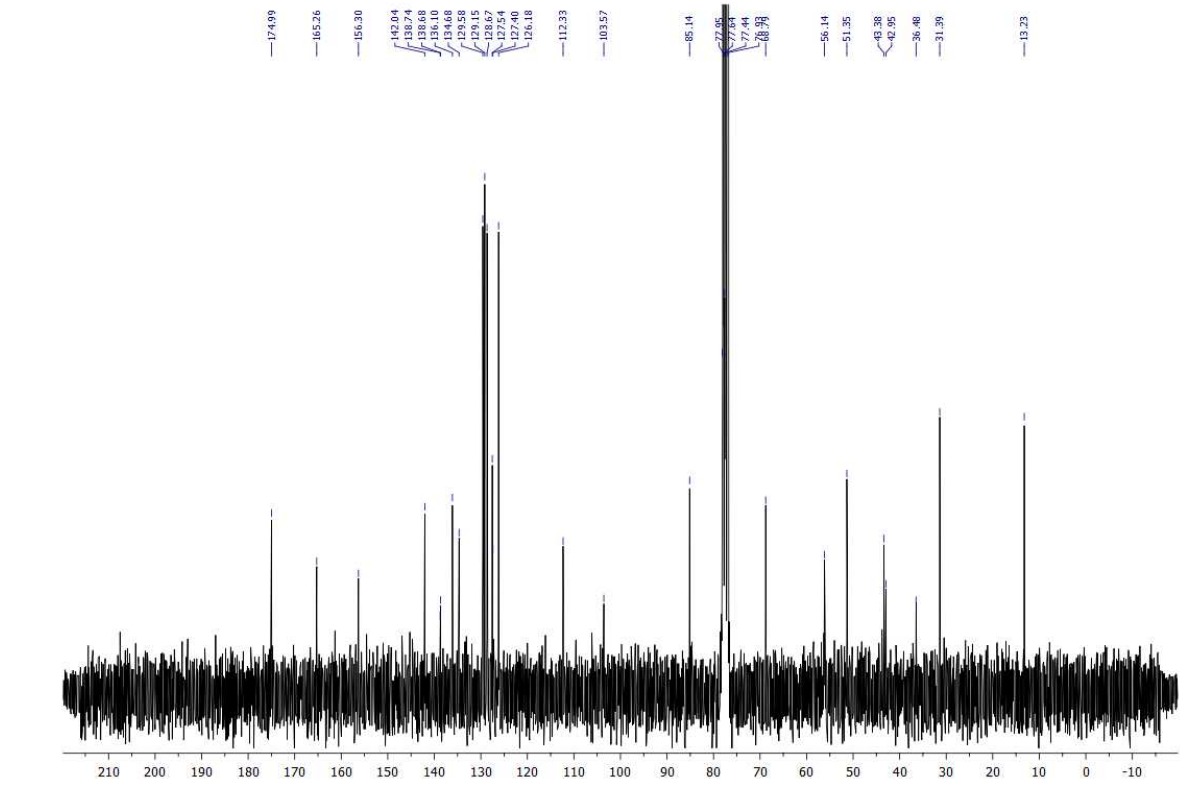
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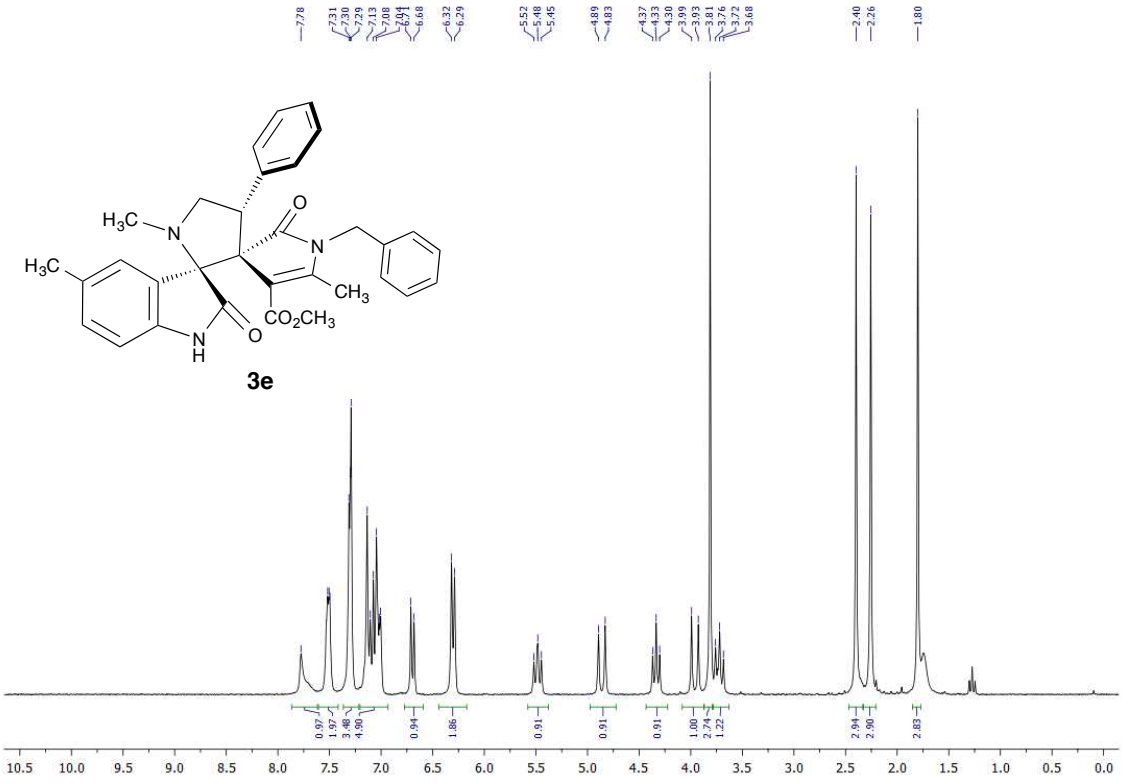
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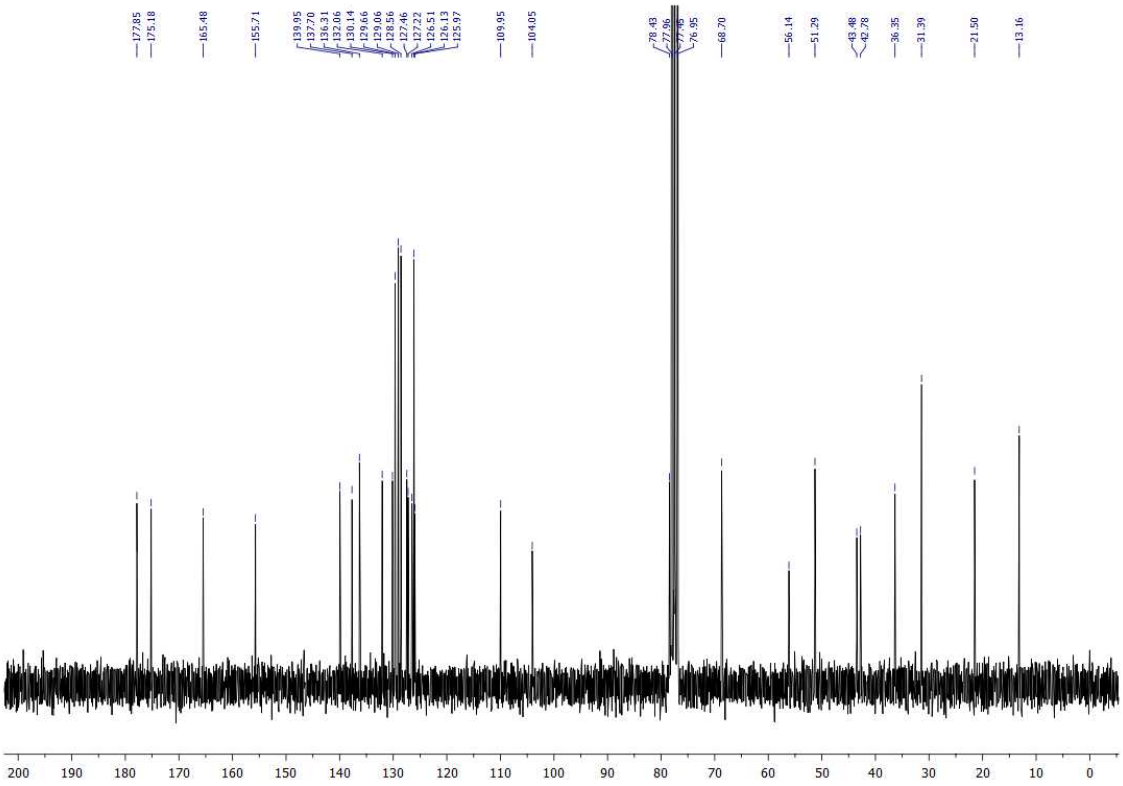
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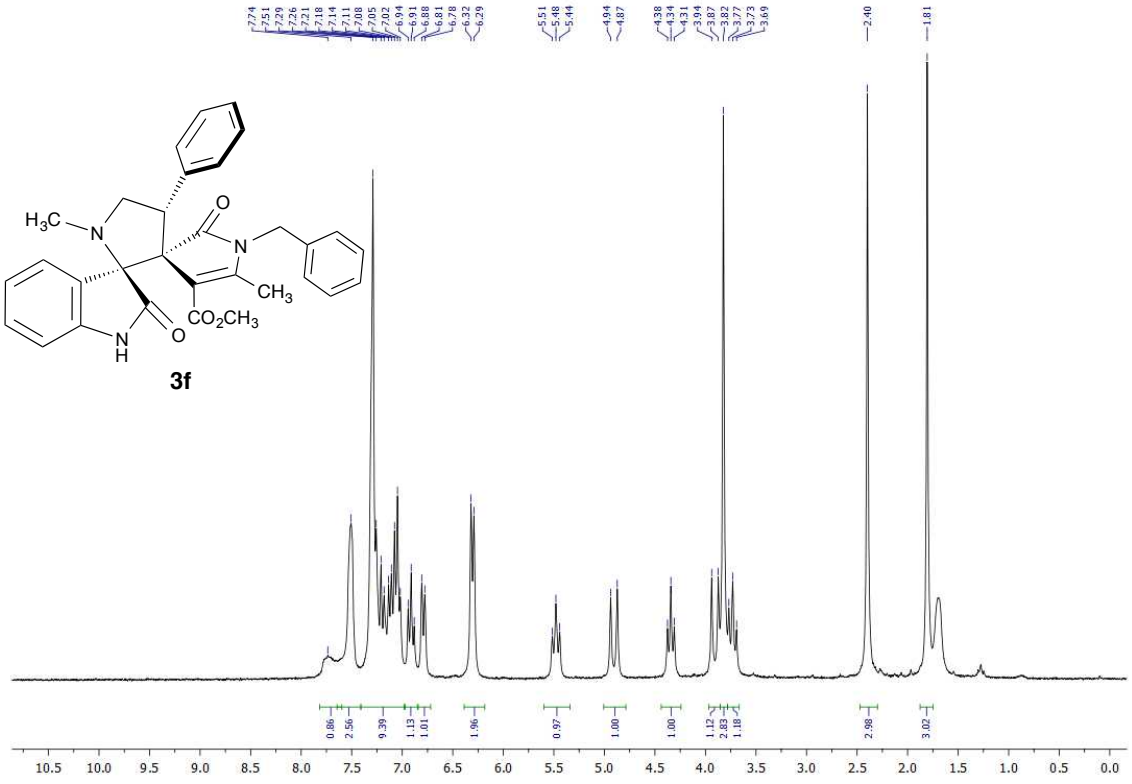
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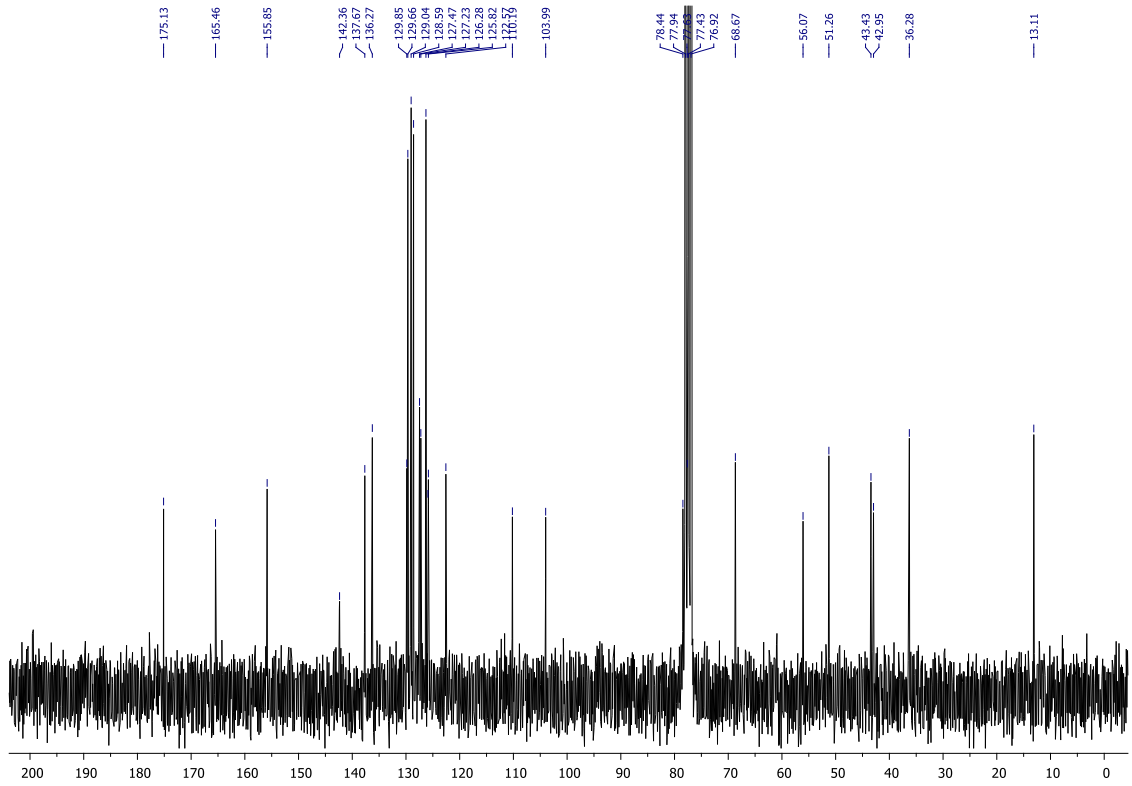
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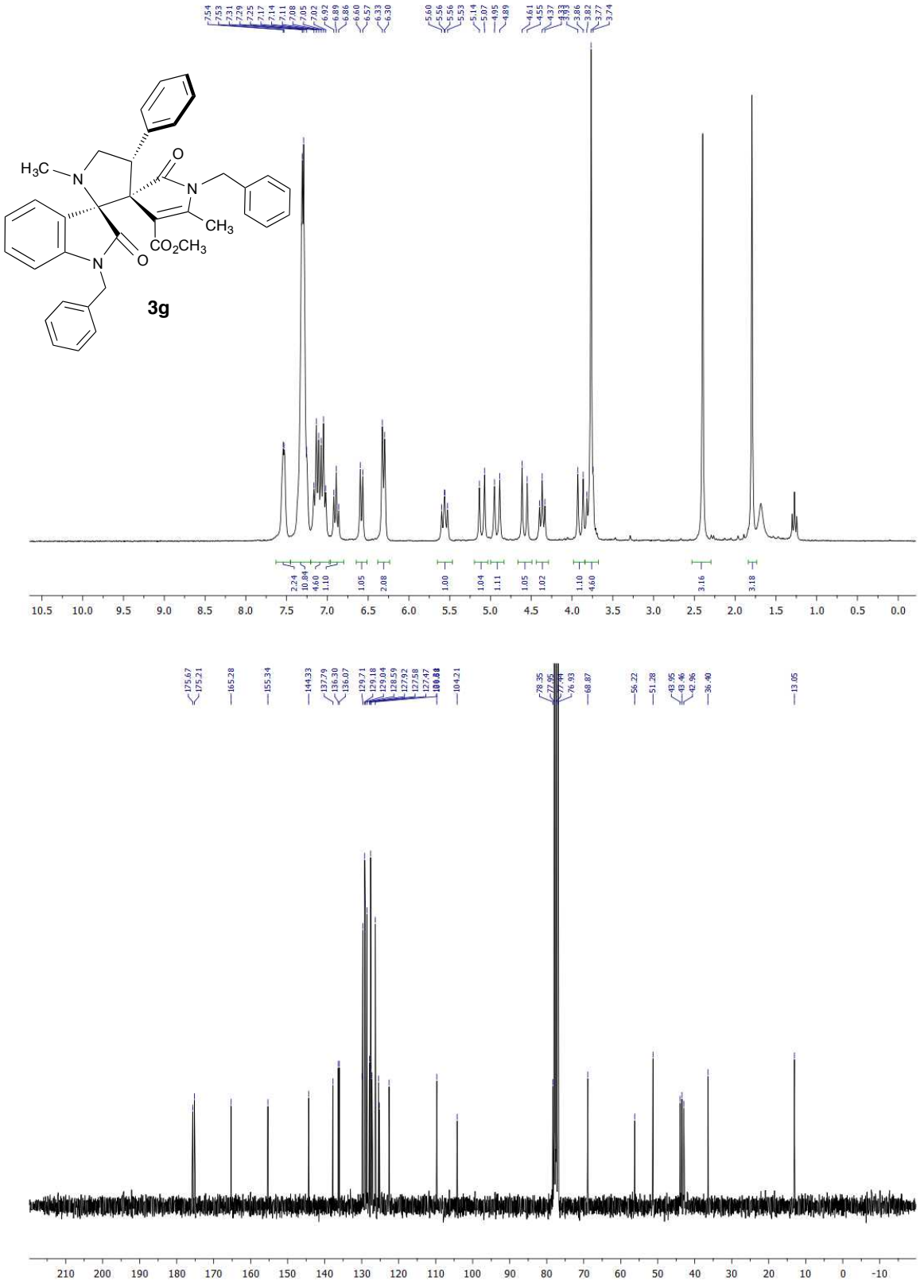
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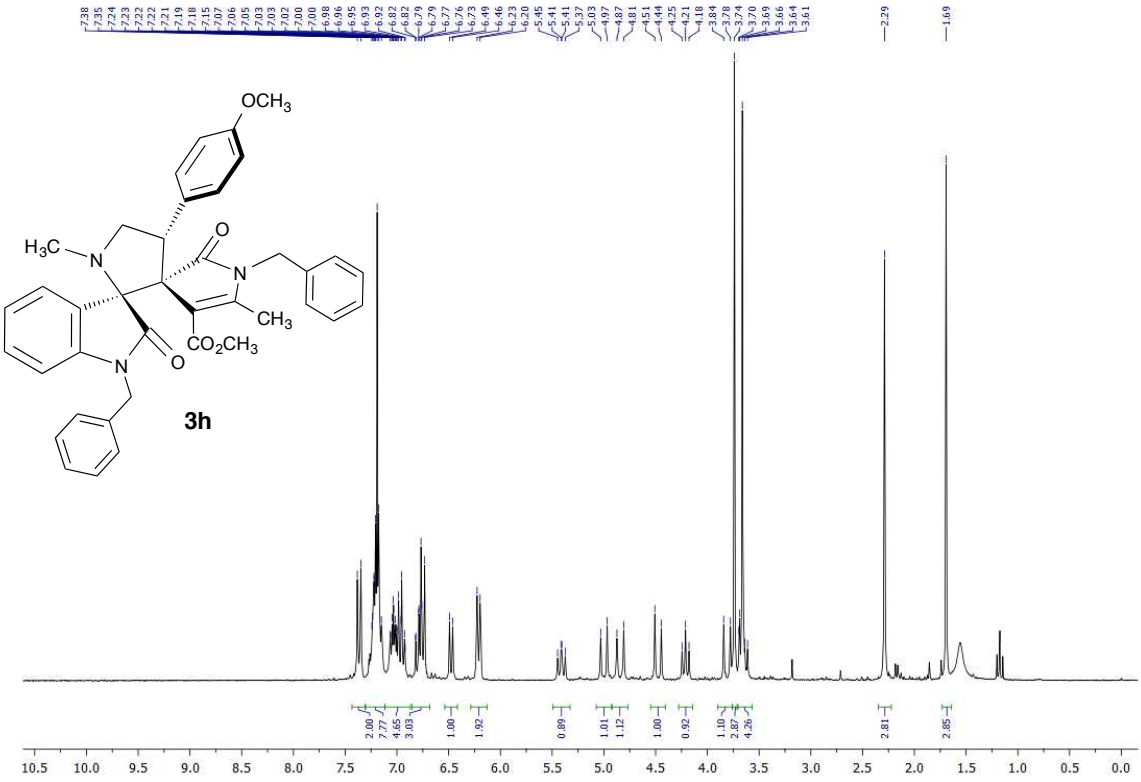
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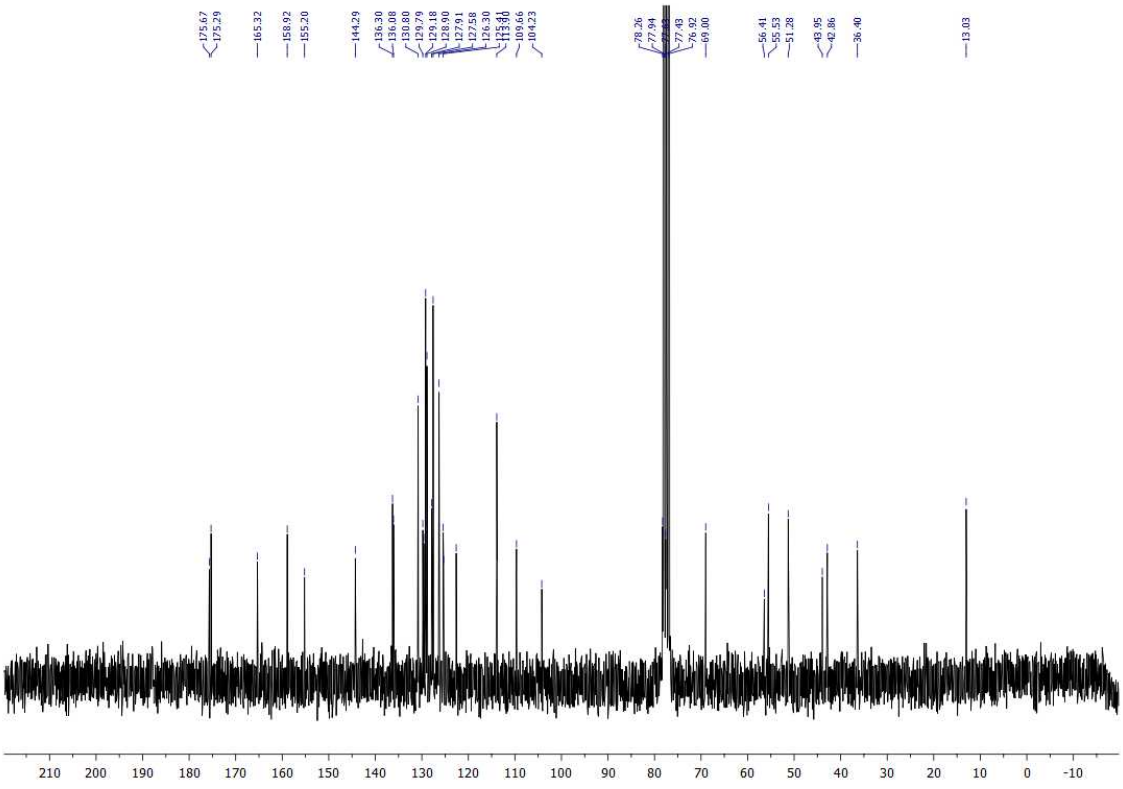

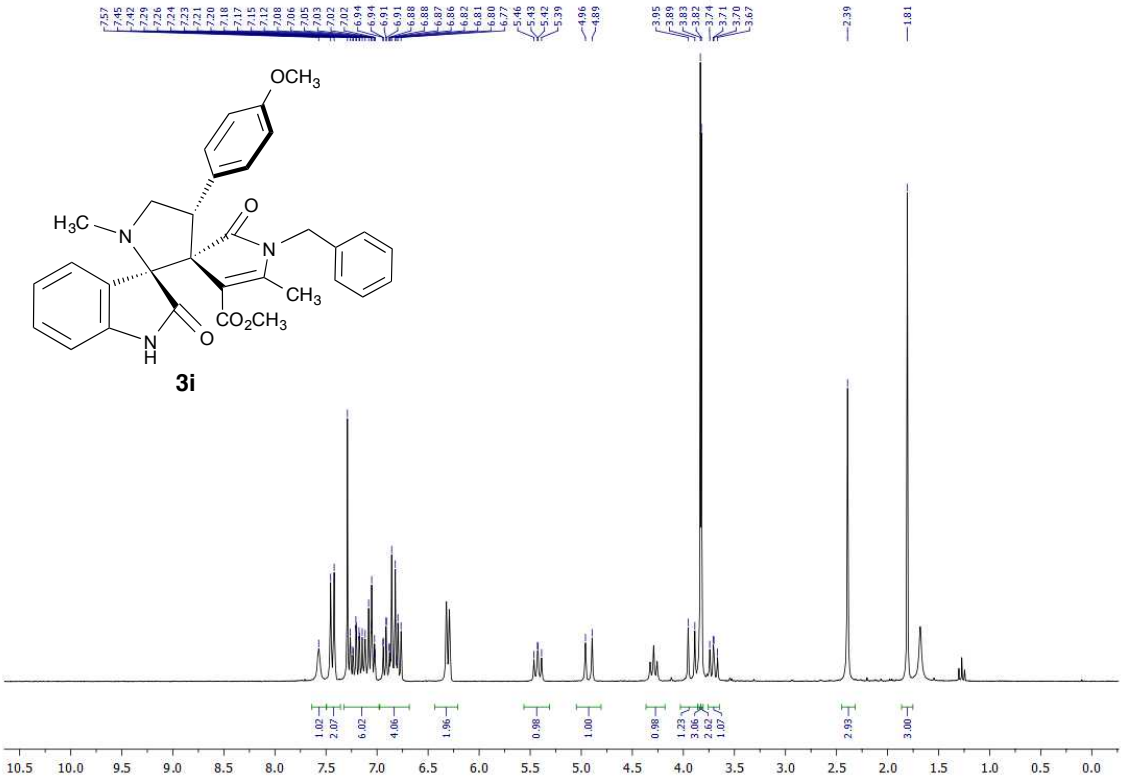

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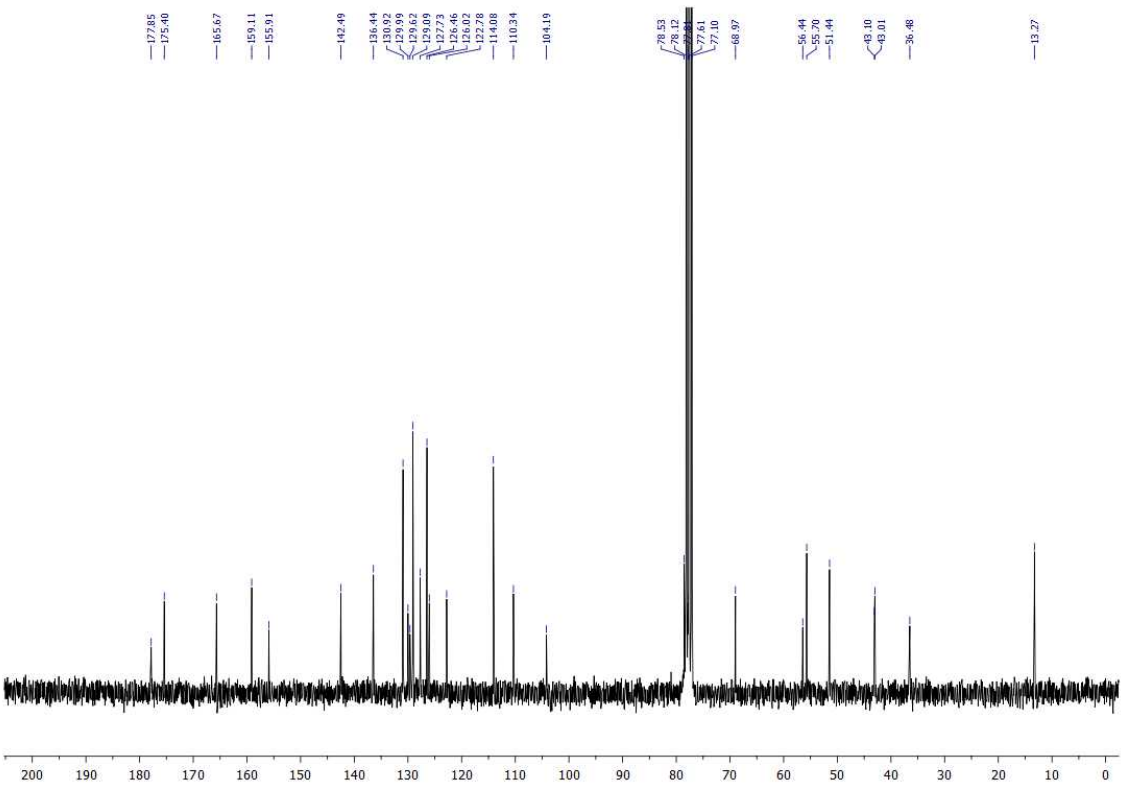

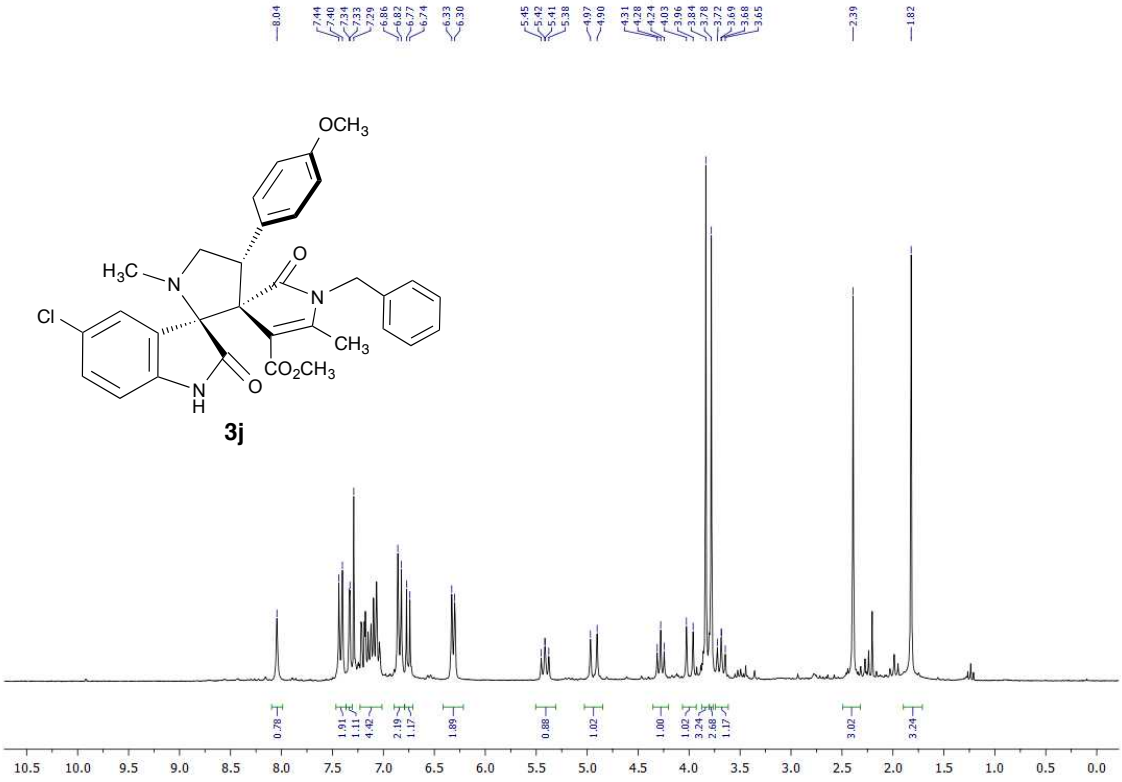
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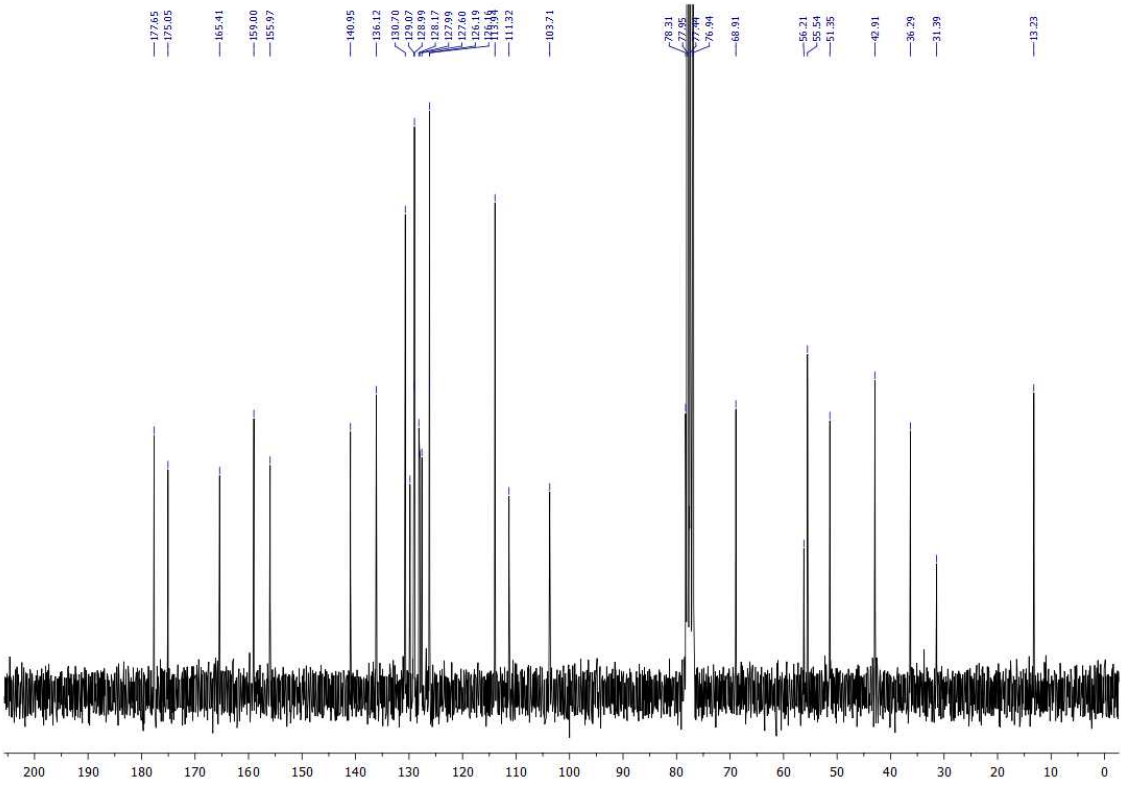
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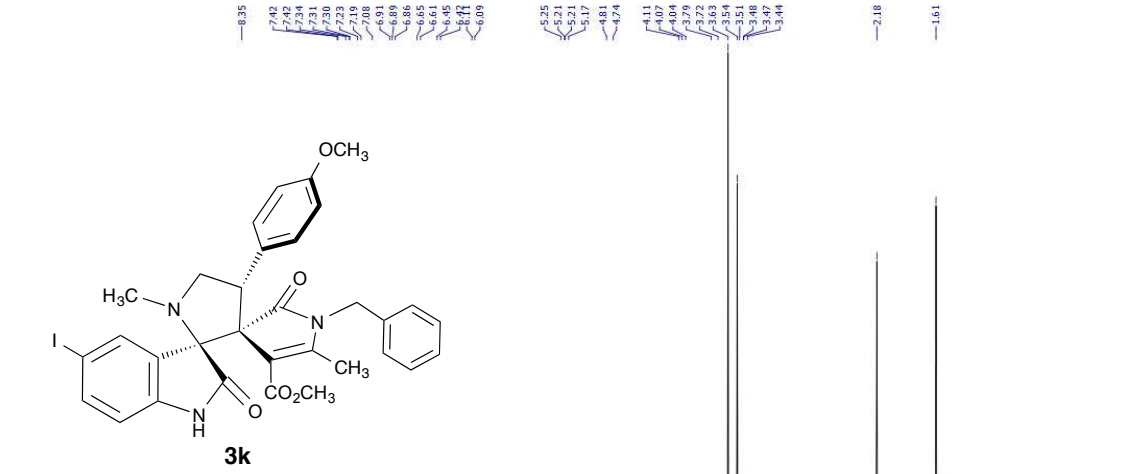

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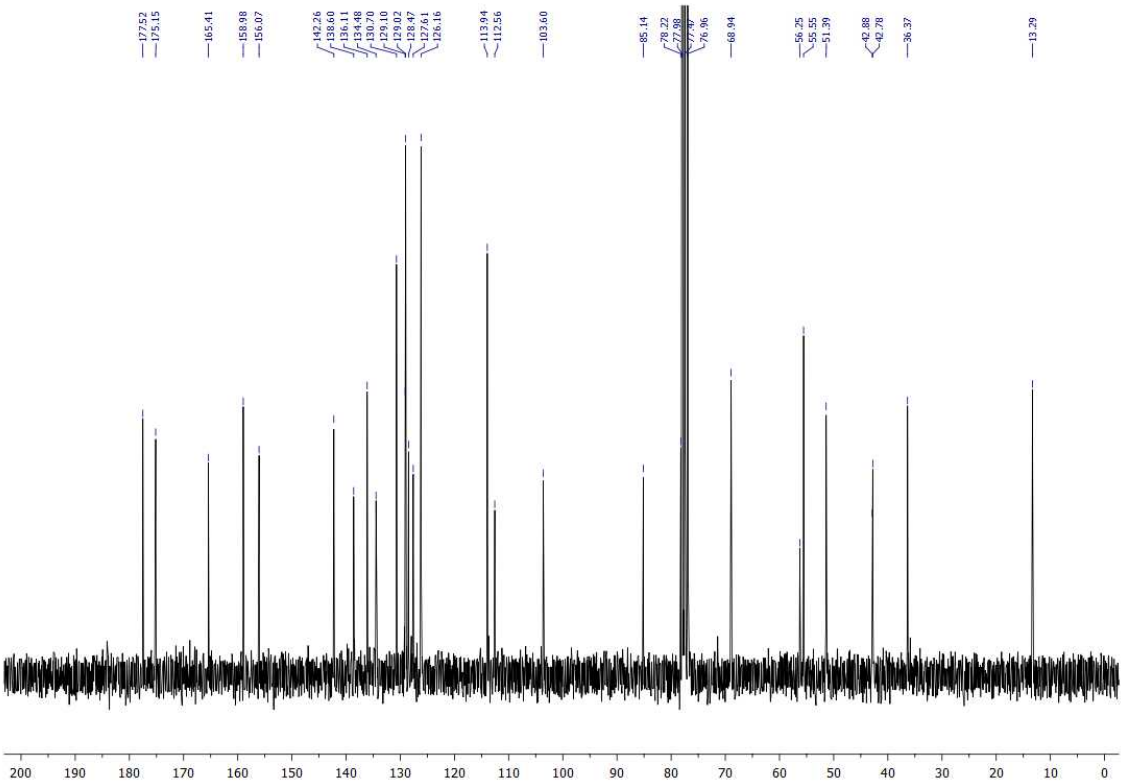

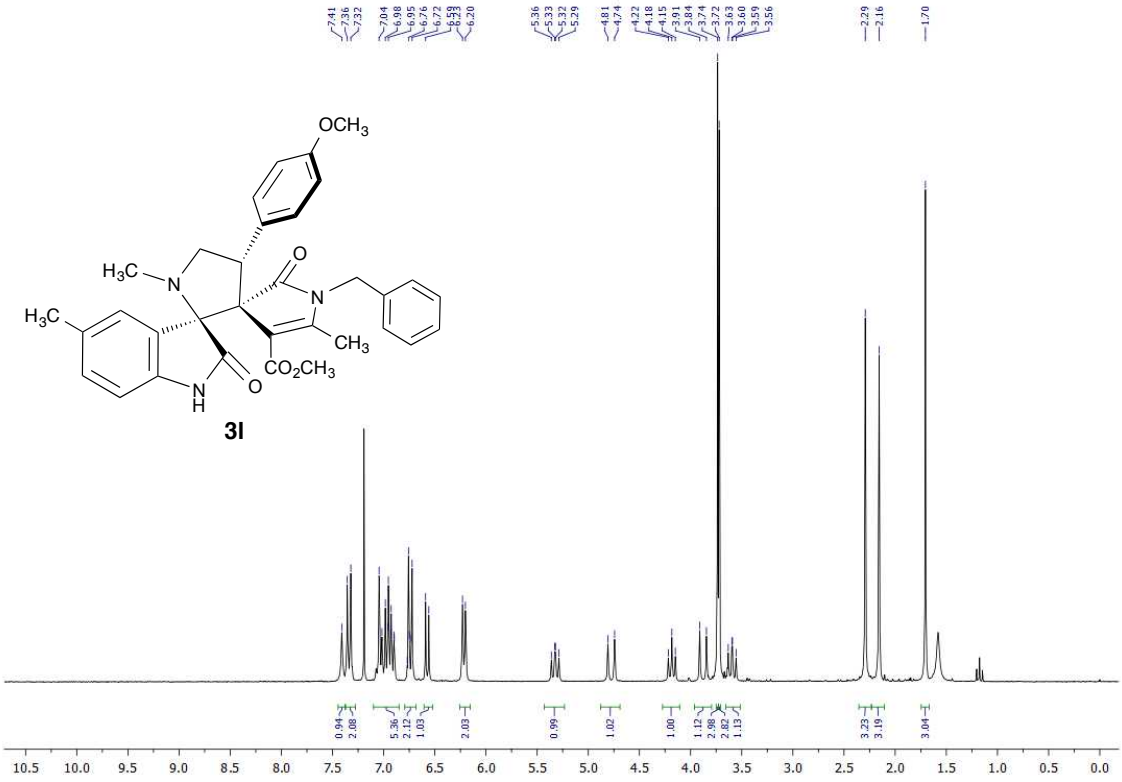

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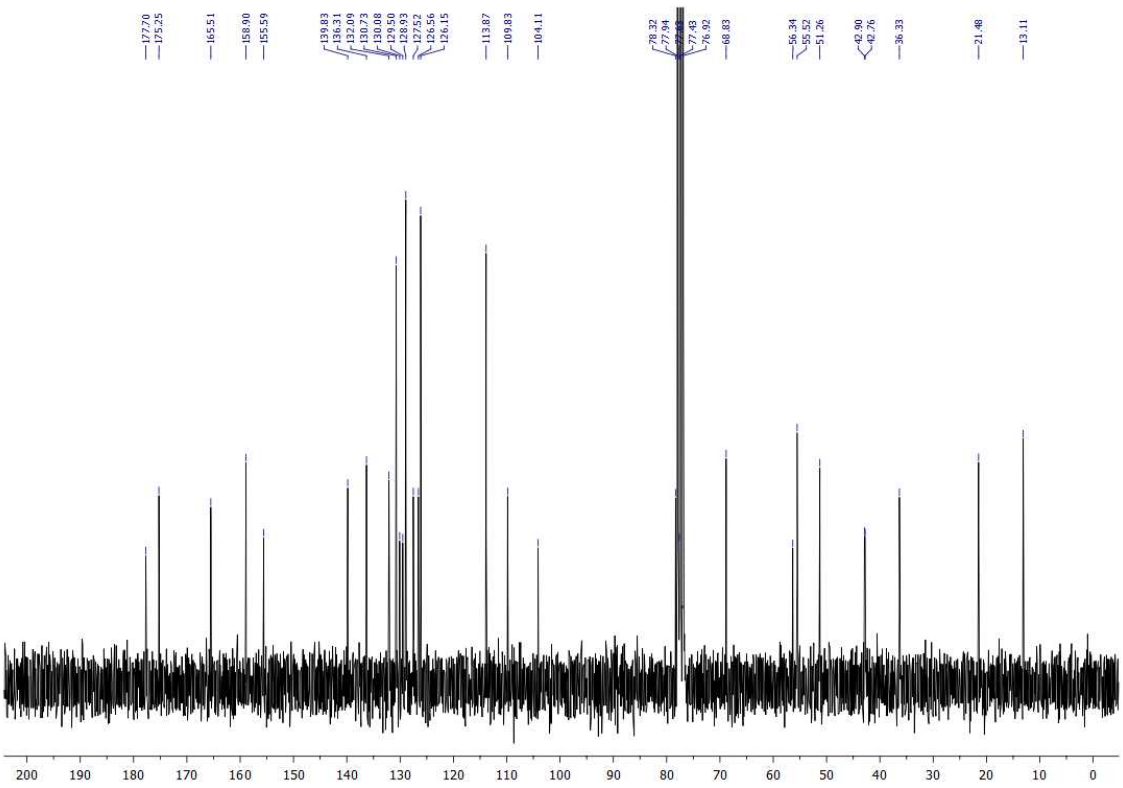

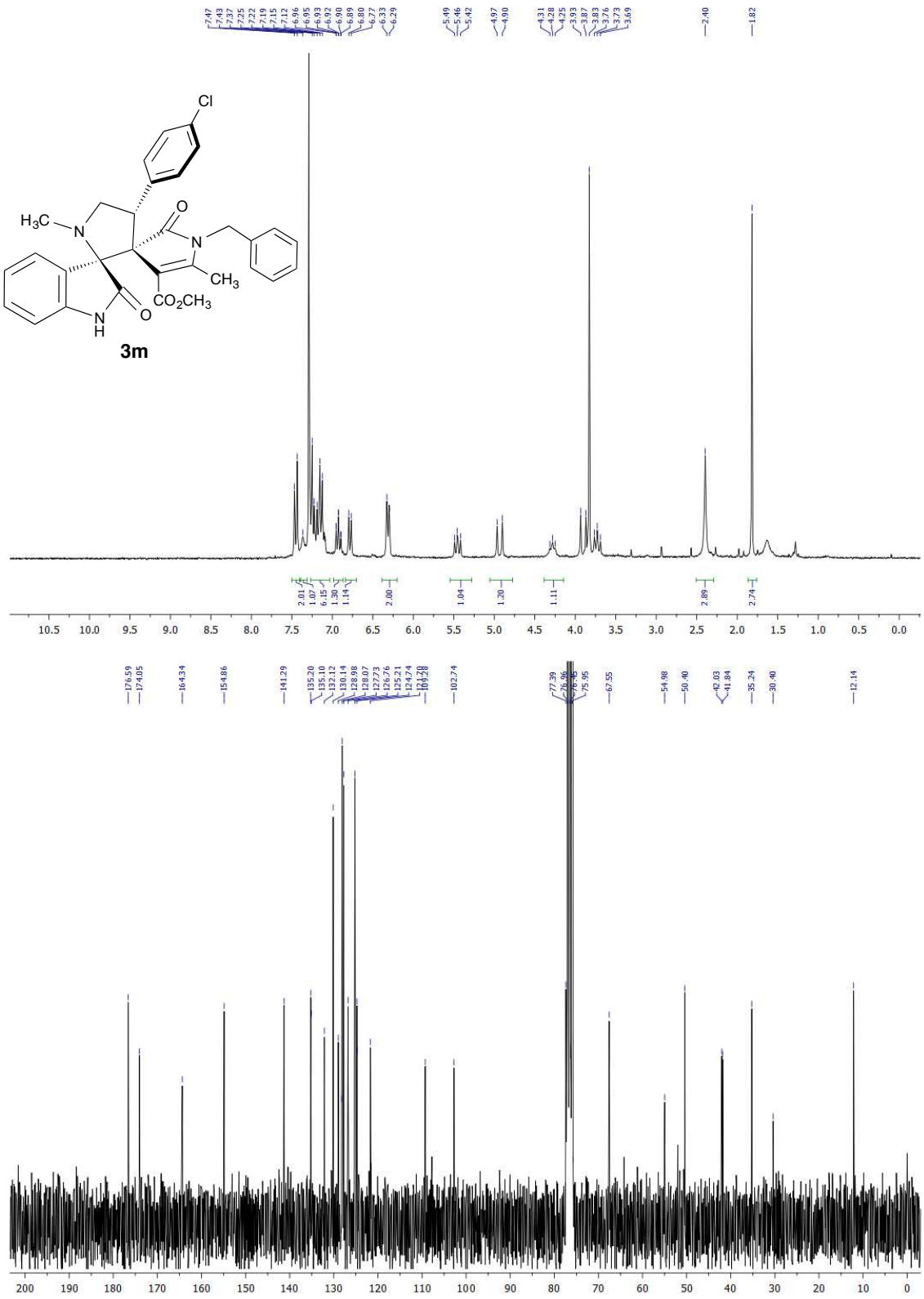
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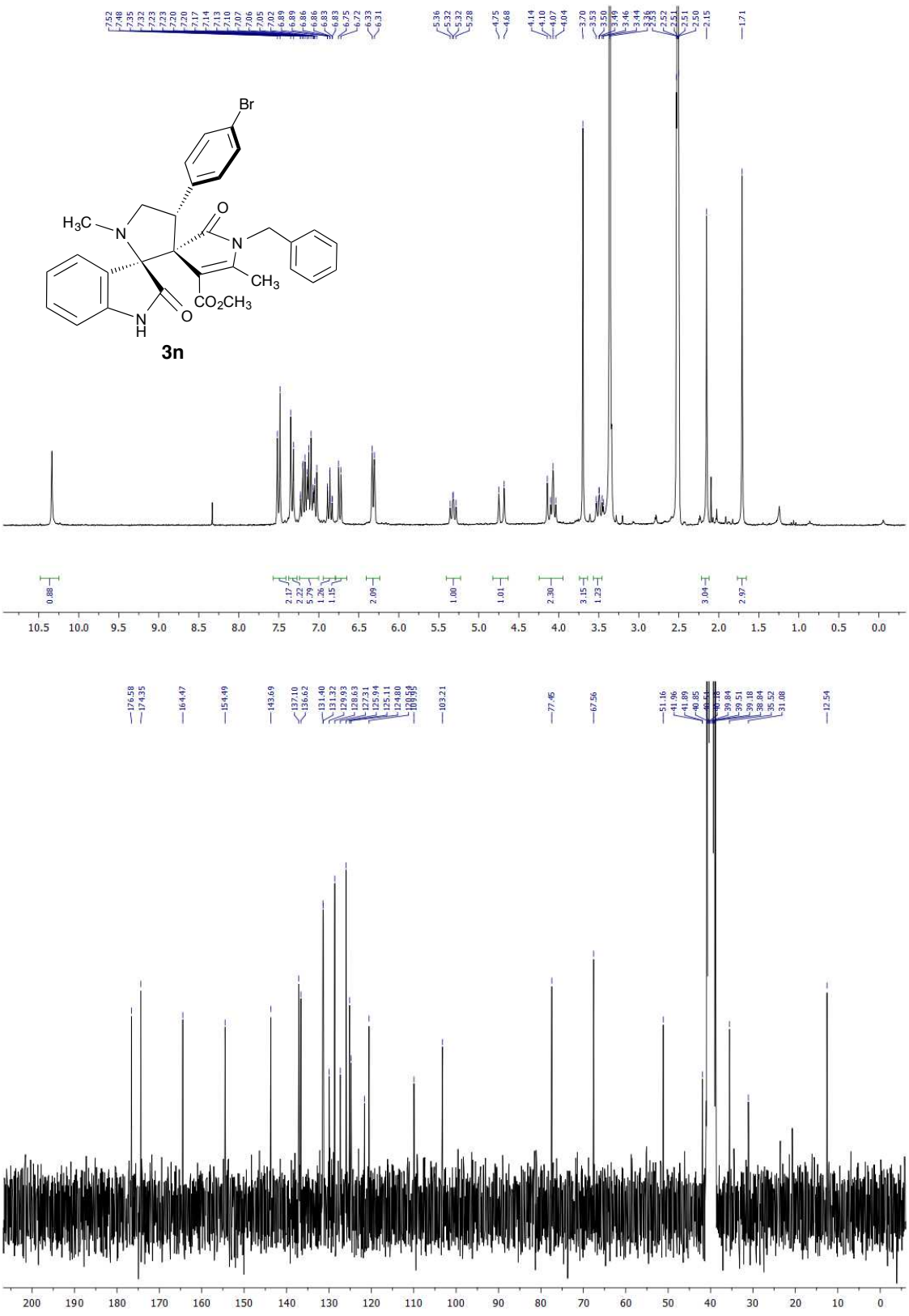

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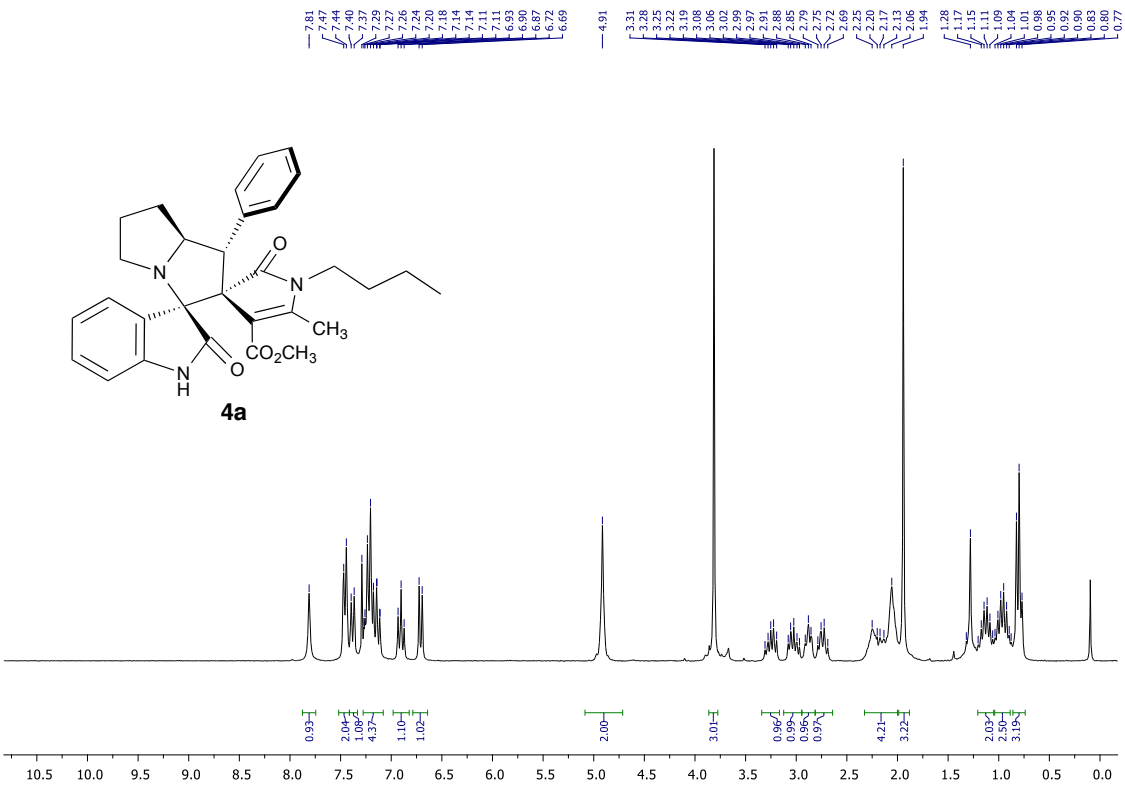
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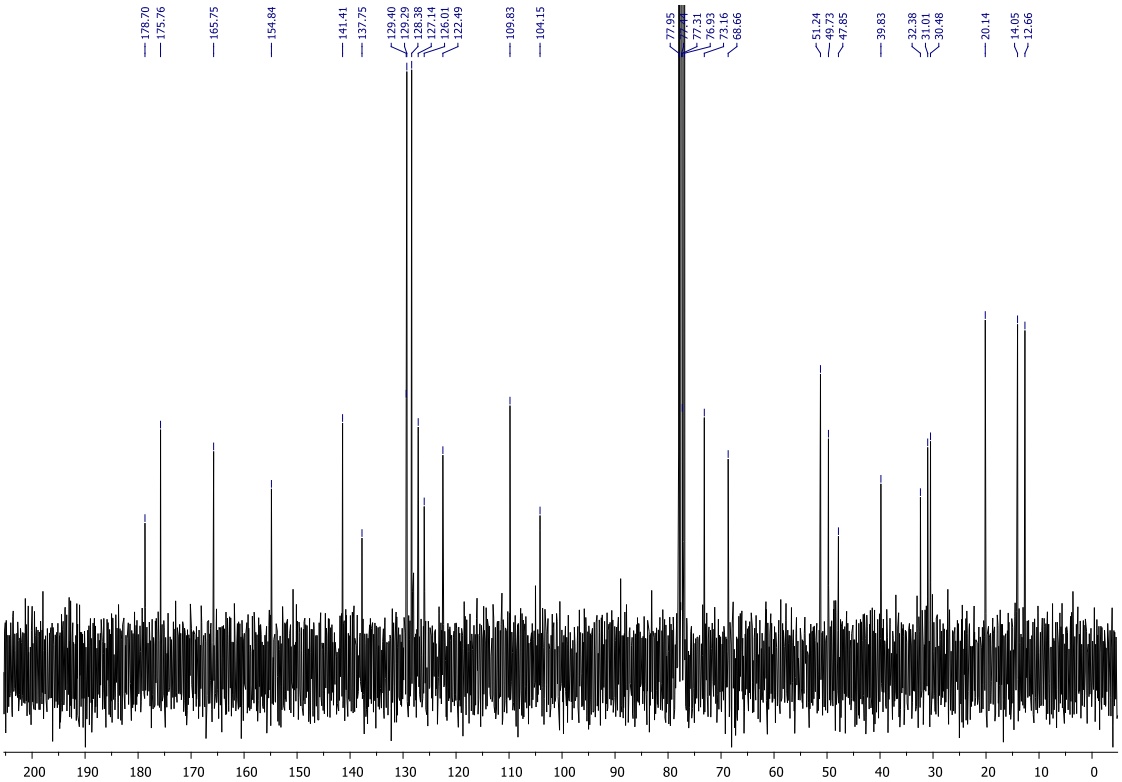
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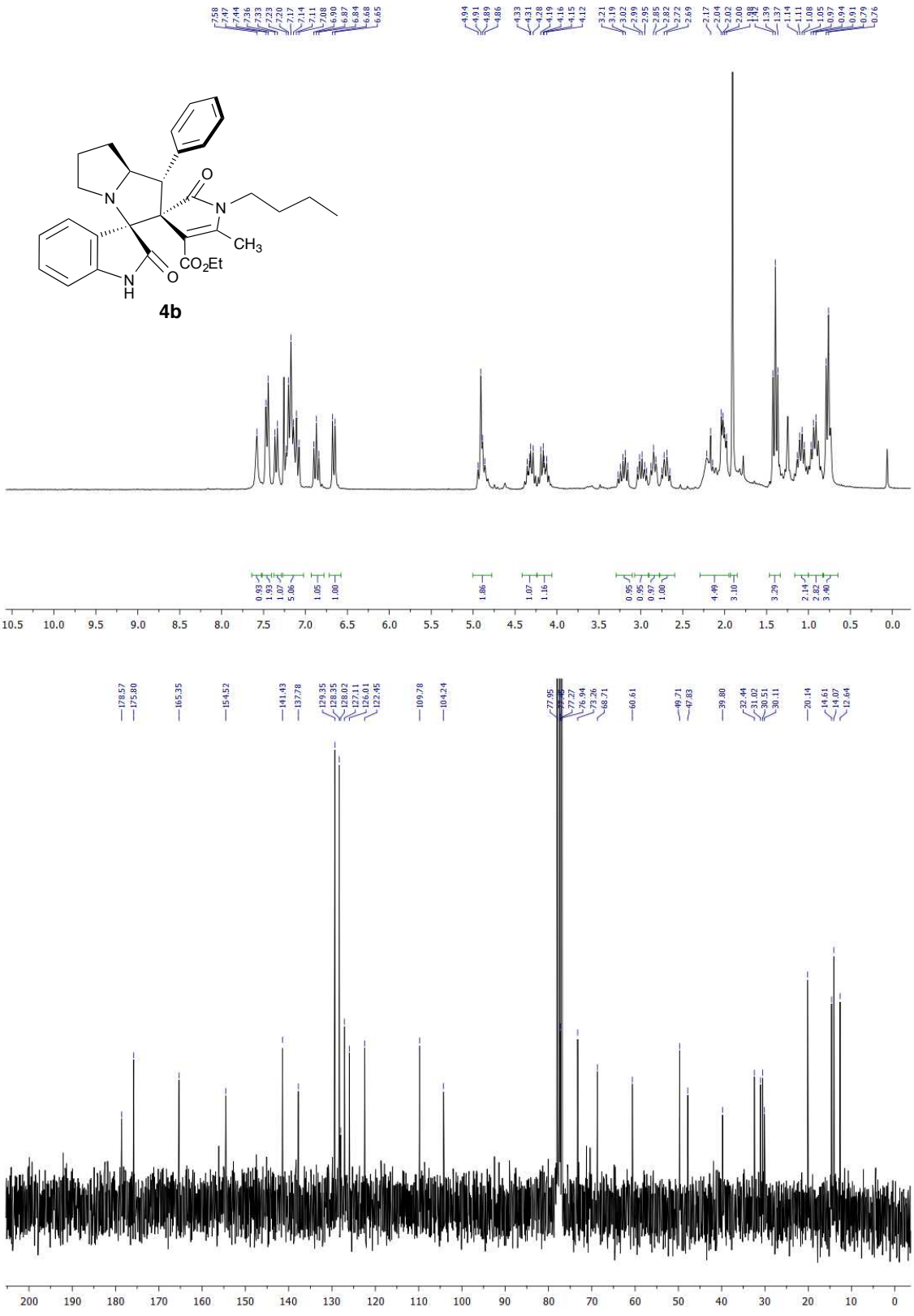
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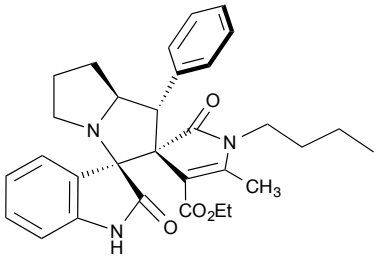
4b NOESY



4b