

## Supporting Information

For the manuscript entitled

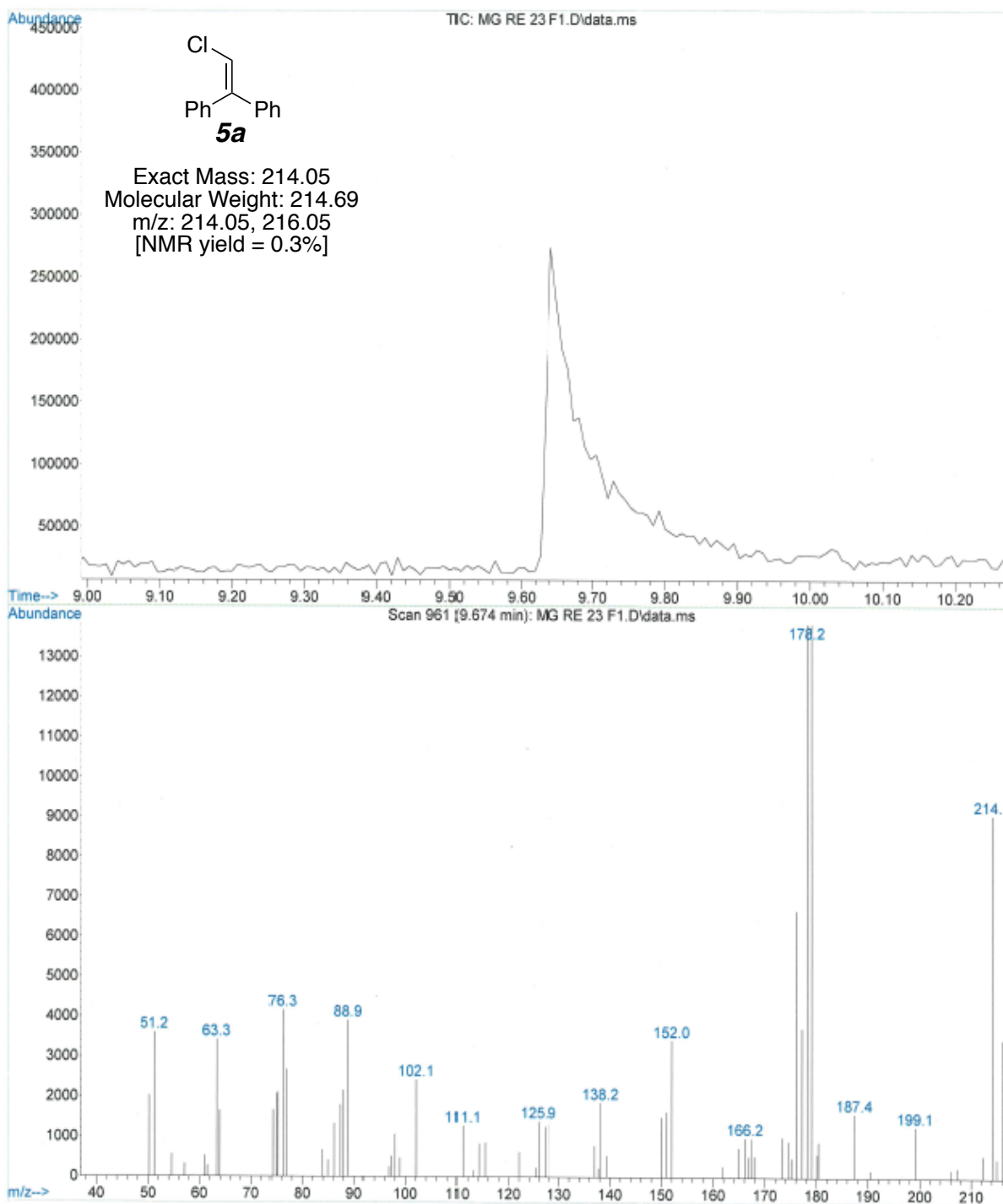
### **Regioselective $\alpha$ -Amination of Ethers Using Stable *N*-Chloroimides and Lithium *tert*-butoxide**

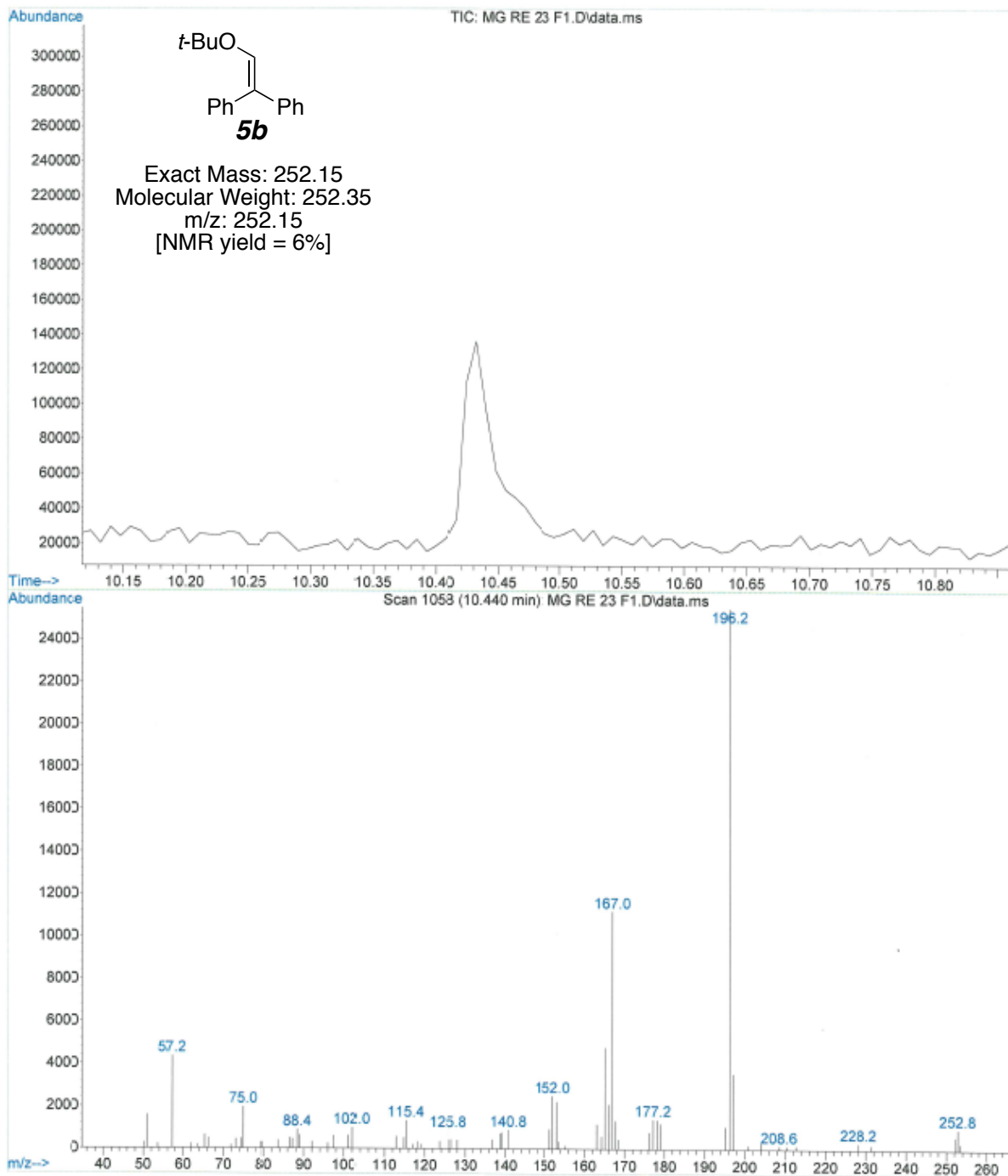
Makafui Gasonoo, Zachary W. Thom, and Sébastien Laulhé\*

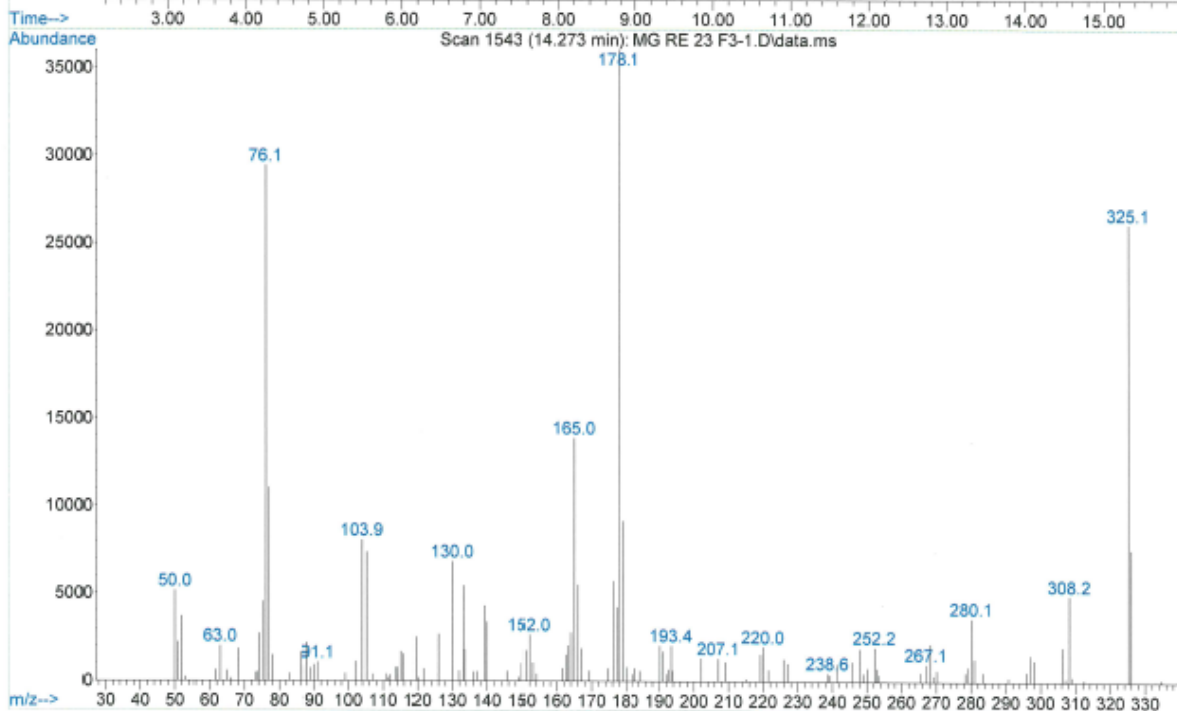
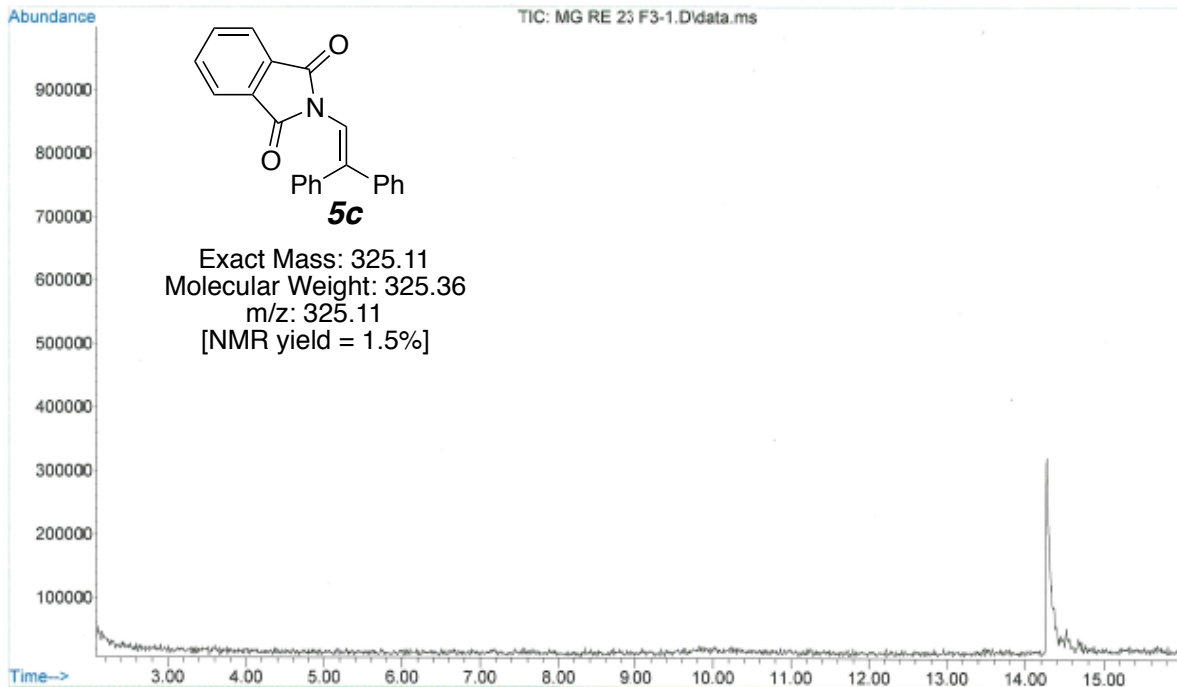
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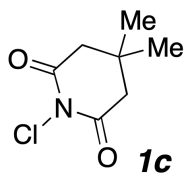
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<b>II. NMR Spectra of Compounds 1c and 3.....</b>	<b>S5</b>

## I. GC-MS Spectra from Radical Trapping Experiment





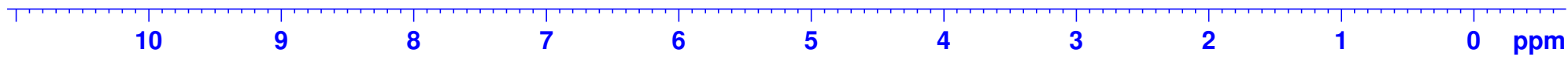




— 7.286

— 2.733

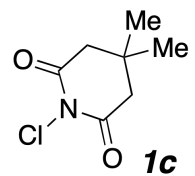
— 1.152



S5

4.00

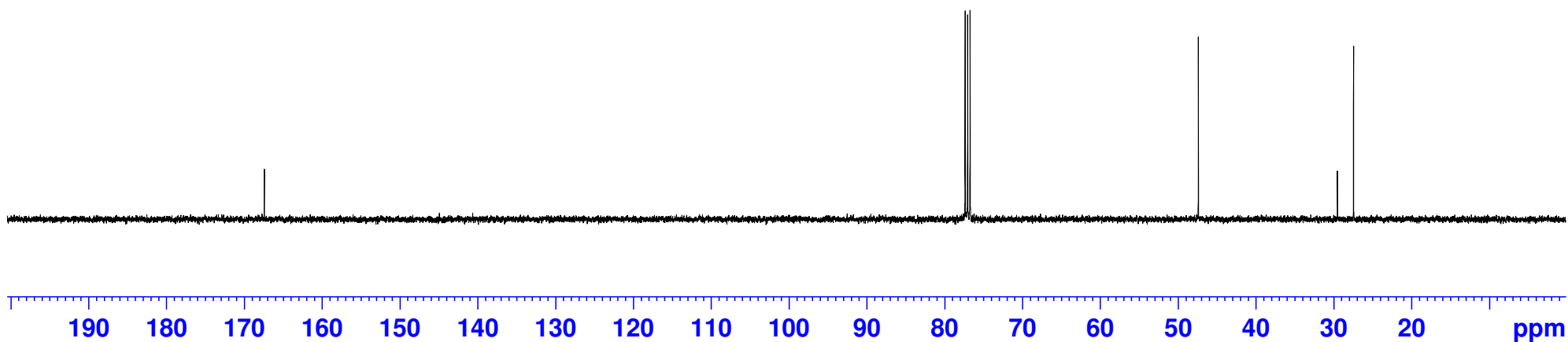
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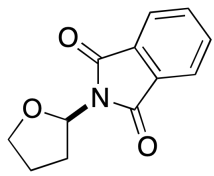
— 167.40

— 47.37

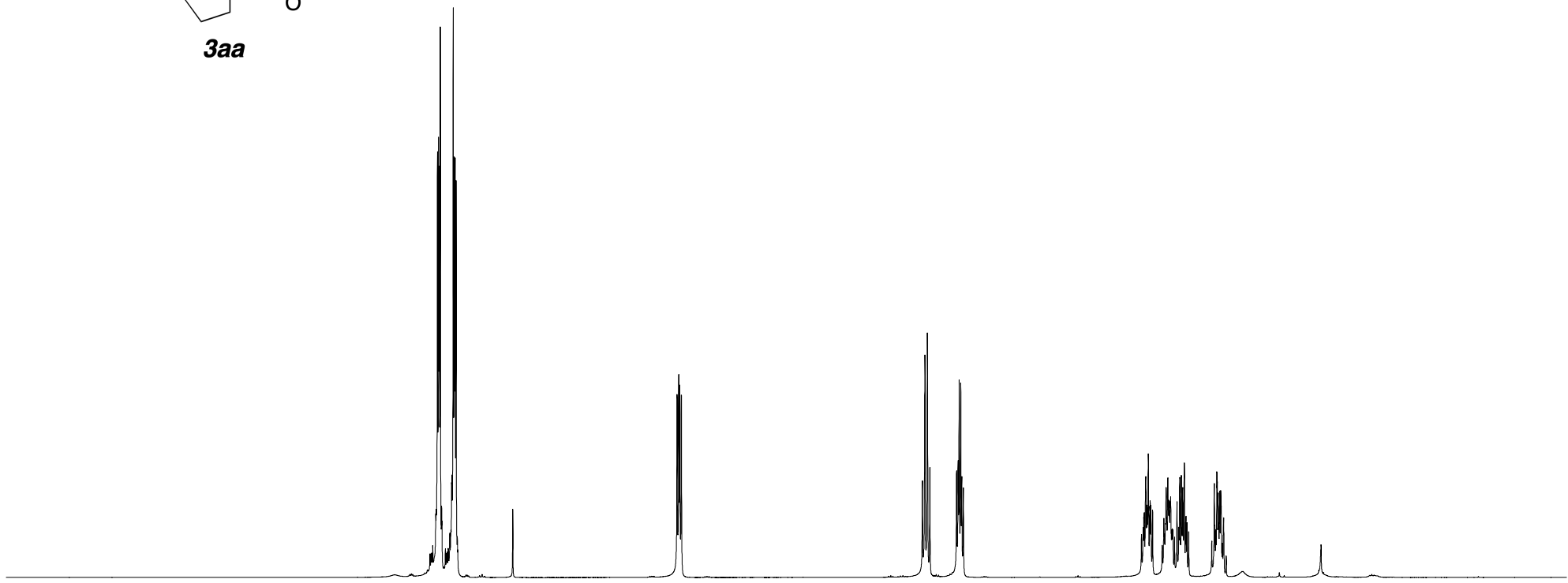
— 29.49  
— 27.42



7.848  
7.841  
7.835  
7.827  
7.730  
7.723  
7.717  
7.709  
6.060  
6.048  
6.040  
6.028  
4.230  
4.210  
4.193  
4.174  
3.974  
3.963  
3.955  
3.943  
3.936  
3.924  
2.577  
2.574  
2.563  
2.556  
2.551  
2.544  
2.533  
2.530  
2.524  
2.512  
2.428  
2.415  
2.411  
2.406  
2.398  
2.394  
2.389  
2.381  
2.377  
2.329  
2.309  
2.297  
2.287  
2.275  
2.263  
2.255  
2.051  
2.048  
2.032  
2.029  
2.022  
2.018  
2.010  
2.004  
1.999  
1.981



**3aa**

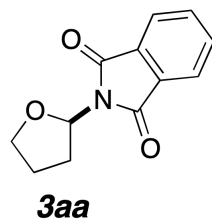


2.23  
2.21

1.00

1.08  
1.07

1.06  
1.07  
1.04  
1.05



— 167.85

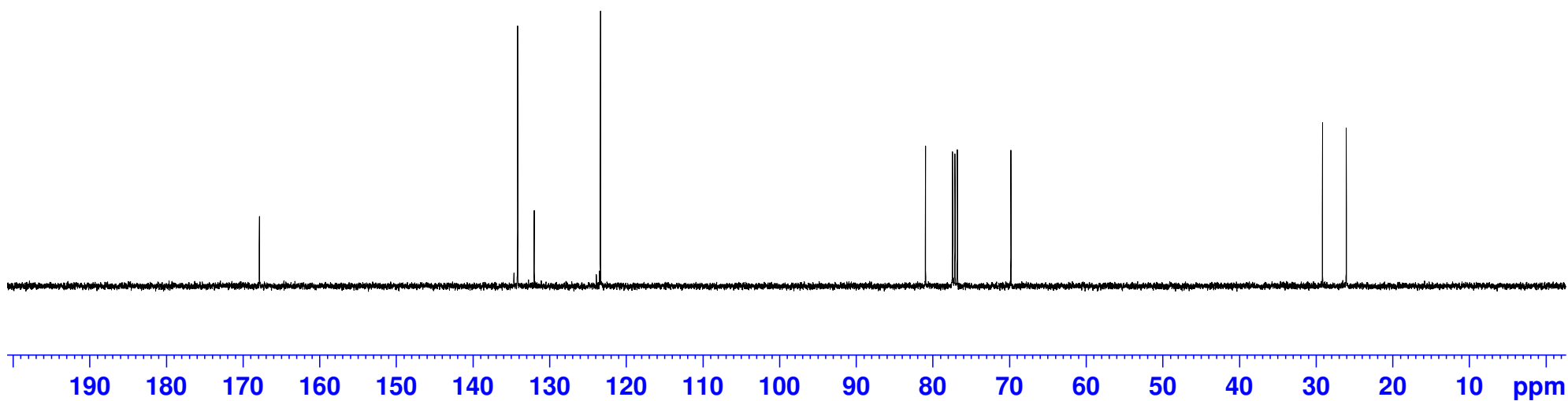
— 134.14  
— 131.98

— 123.34

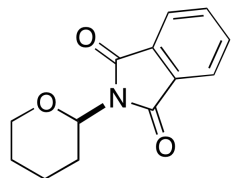
— 80.92

— 69.78

— 29.12  
— 26.02

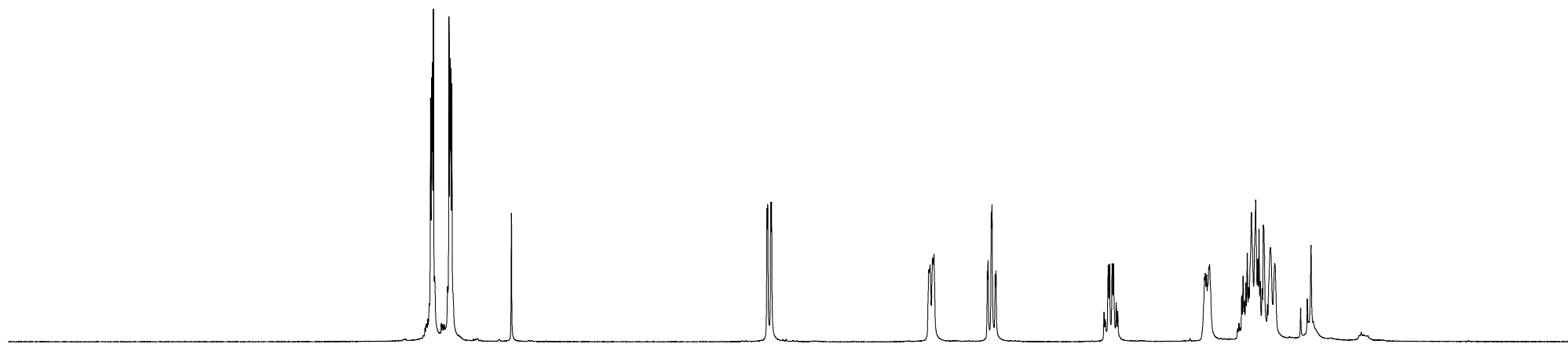






**3ab**

7.895  
7.887  
7.882  
7.874  
7.757  
7.749  
7.743  
7.736  
5.367  
5.362  
5.339  
5.333  
4.152  
4.147  
4.142  
4.124  
4.118  
4.113  
3.711  
3.706  
3.682  
3.676  
3.652  
3.647  
2.803  
2.793  
2.774  
2.764  
2.743  
2.080  
2.074  
2.063  
2.047  
2.041  
1.800  
1.790  
1.780  
1.769  
1.758  
1.748  
1.727  
1.695  
1.679  
1.670  
1.661



10 9 8 7 6 5 4 3 2 1 0 ppm

2.05  
2.15

1.00

1.06

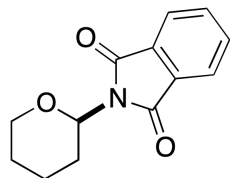
1.07

1.06

1.10

4.04

S9



**3ab**

— 167.41

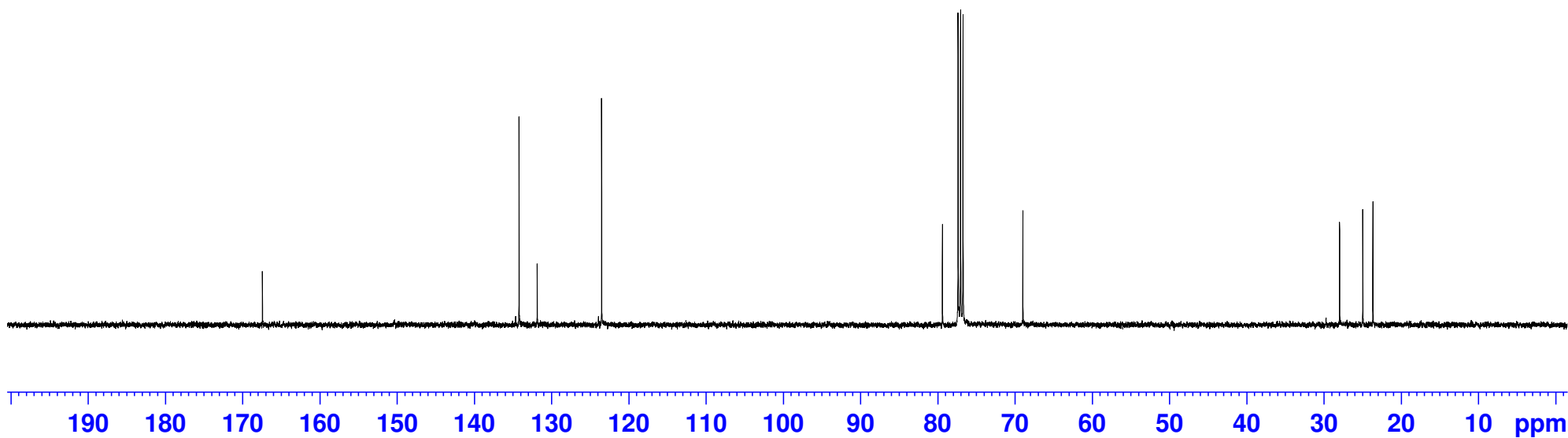
— 134.18  
— 131.84

— 123.49

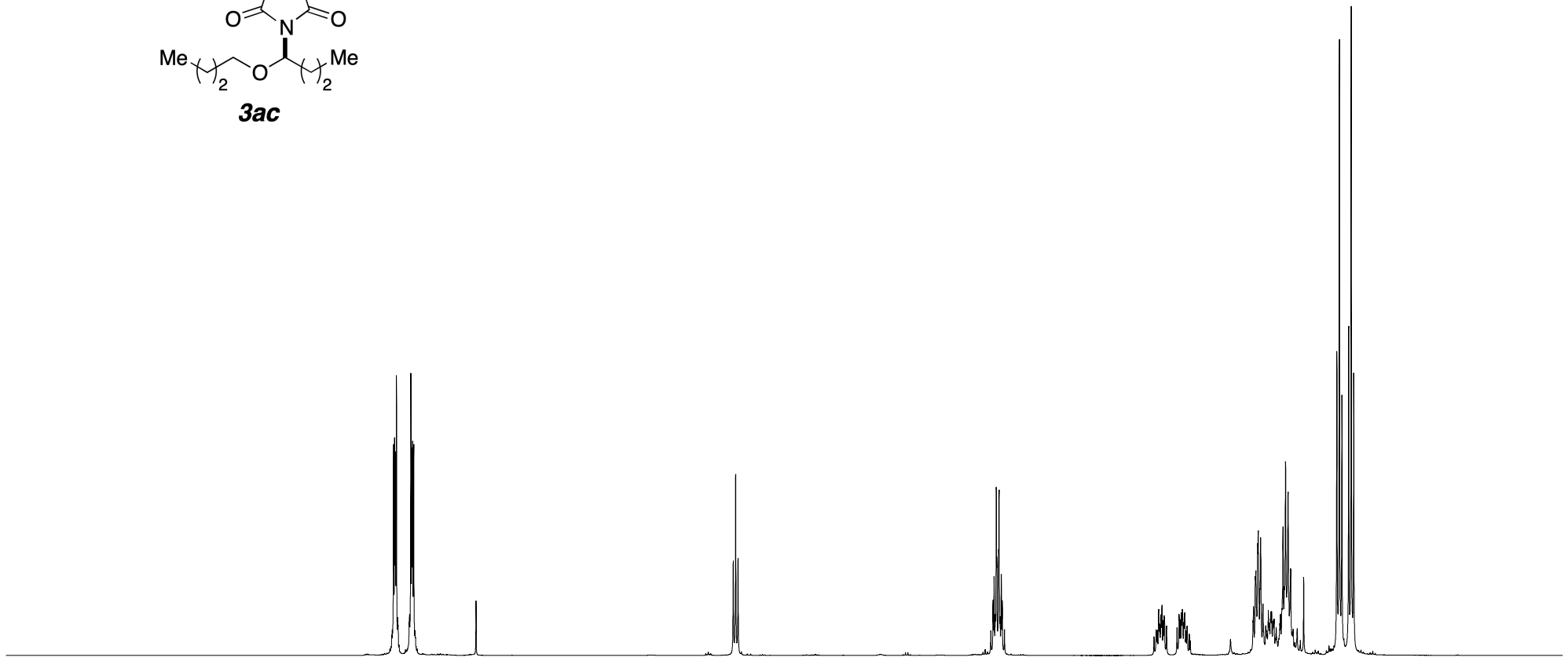
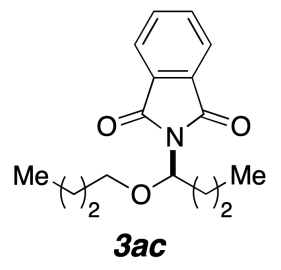
— 79.36

— 68.94

— 27.94  
— 24.94  
— 23.62



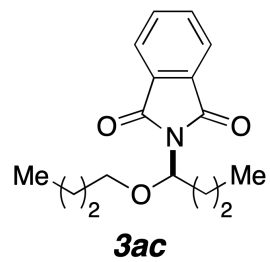
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7.870  
7.774  
7.764  
7.757  
7.751  
7.743  
5.400  
5.383  
5.365  
3.495  
3.488  
3.479  
3.472  
3.468  
3.455  
3.451  
3.444  
3.435  
3.428  
2.281  
2.265  
2.262  
2.256  
2.241  
2.132  
2.115  
2.107  
2.105  
2.090  
1.585  
1.572  
1.570  
1.568  
1.554  
1.551  
1.538  
1.534  
1.516  
1.477  
1.458  
1.453  
1.388  
1.378  
1.369  
1.359  
1.350  
1.332  
1.313  
1.217  
0.974  
0.956  
0.937  
0.887  
0.869  
0.851



10 9 8 7 6 5 4 3 2 1 0 ppm

2.03 2.03 1.00 2.03 1.01 1.04 2.15 1.08 2.87 3.09 3.06

S11



— 168.09

— 134.16  
— 131.72

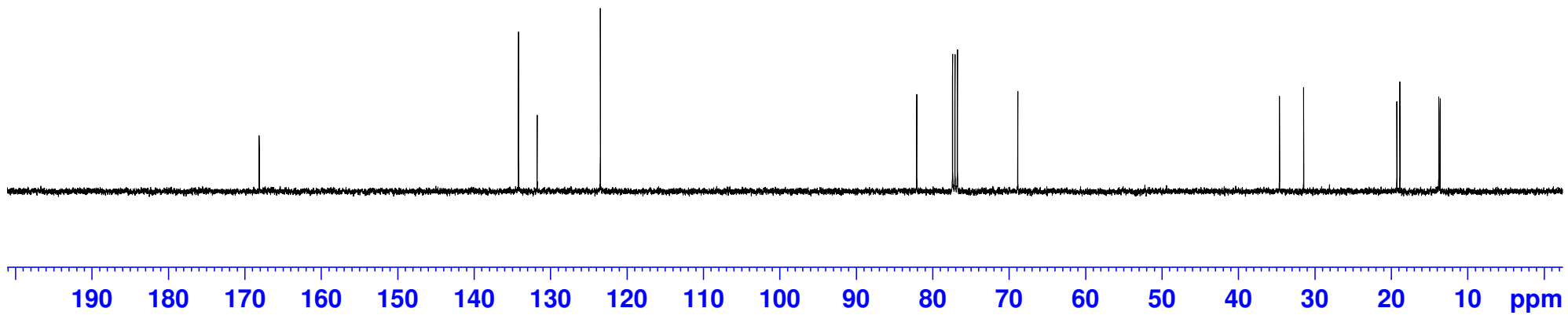
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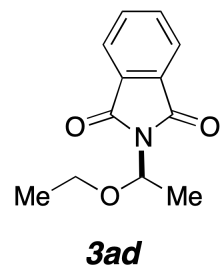
— 82.05

— 68.82

— 34.58  
— 31.42

∨ 19.22  
∨ 18.83  
∨ 13.74  
∨ 13.56



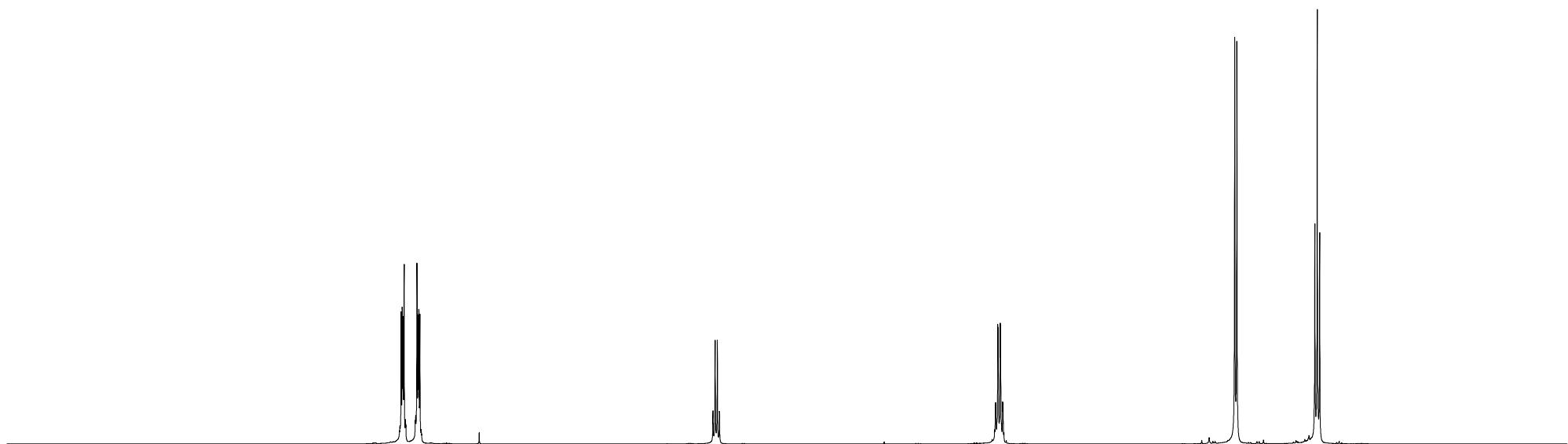


7.854  
7.847  
7.841  
7.833  
7.739  
7.732  
7.726  
7.718

5.579  
5.563  
5.547  
5.532

3.518  
3.514  
3.500  
3.497  
3.483  
3.479  
3.465  
3.462

1.771  
1.755  
1.186  
1.169  
1.151



10

9

8

7

6

5

4

3

2

1

0

ppm

2.16

2.03

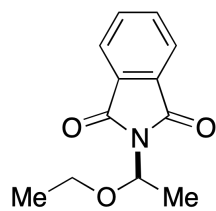
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2.05

3.11

3.17

S13



**3ad**

— 167.88

— 134.17

— 131.73

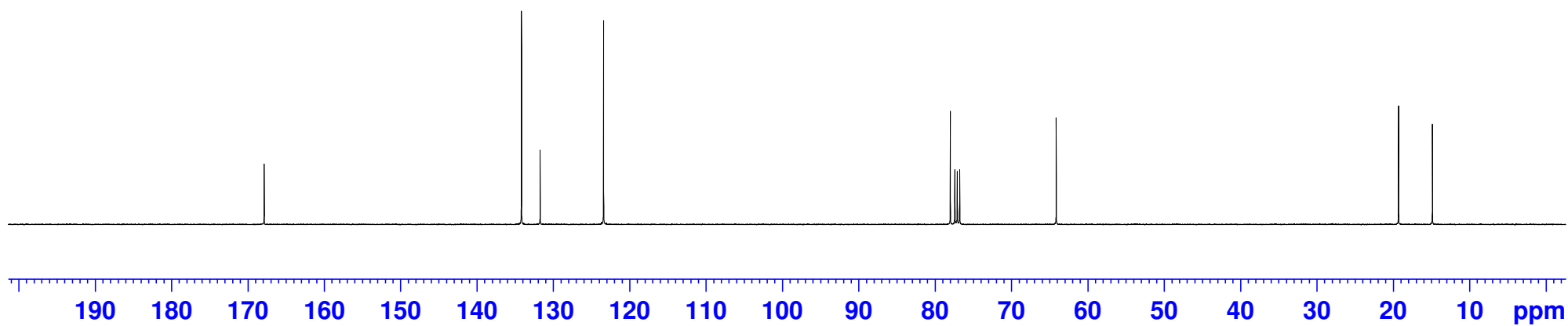
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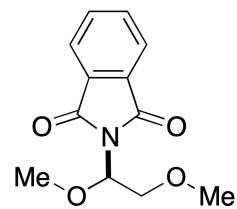
— 78.01

— 64.14

— 19.30

— 14.87



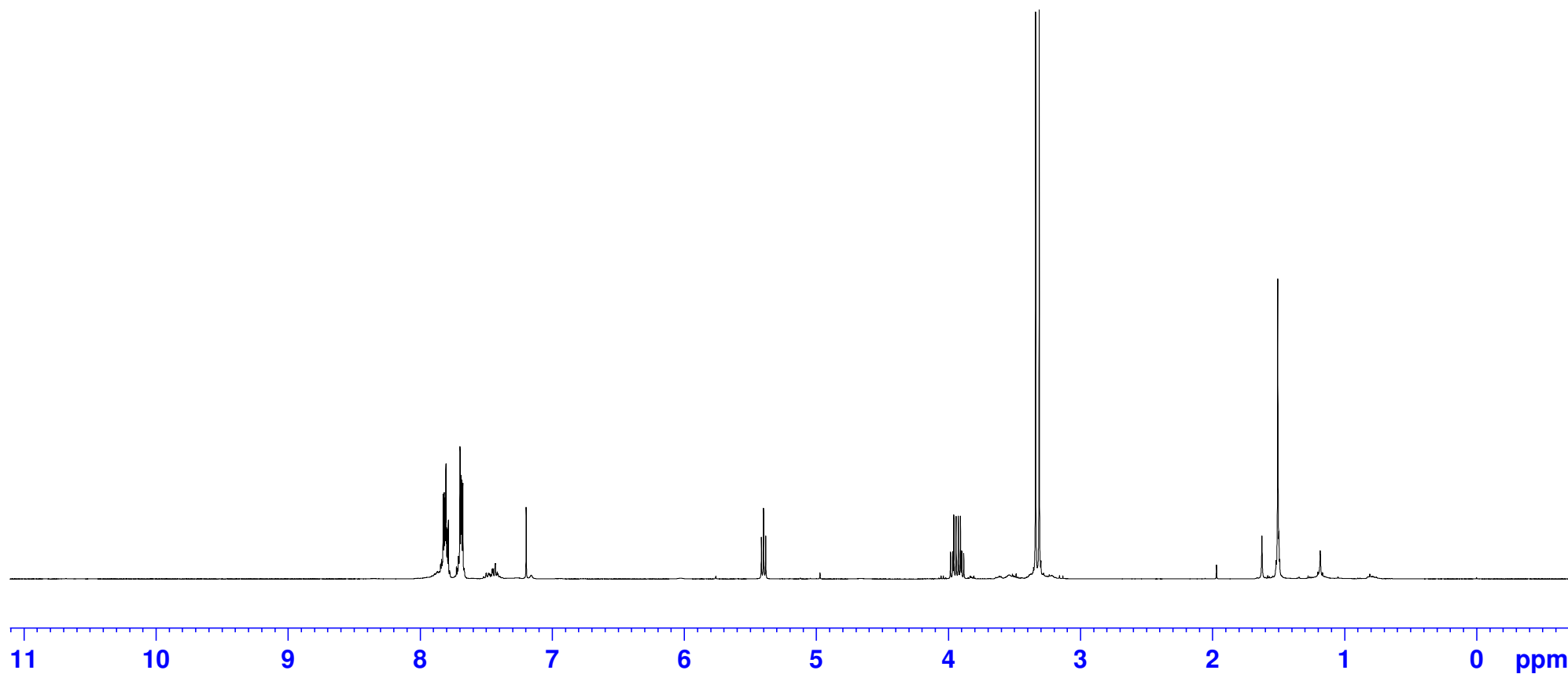


**3ae**

7.826  
7.818  
7.812  
7.808  
7.805  
7.800  
7.795  
7.787  
7.698  
7.690  
7.684  
7.677

5.416  
5.400  
5.383

3.984  
3.967  
3.958  
3.941  
3.924  
3.909  
3.899  
3.883  
3.339  
3.312

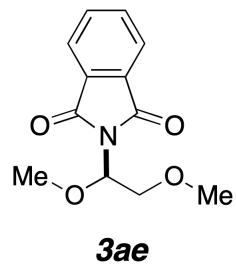


2.20  
2.34

1.00

2.15

3.00  
2.92



168.01

134.34

131.69

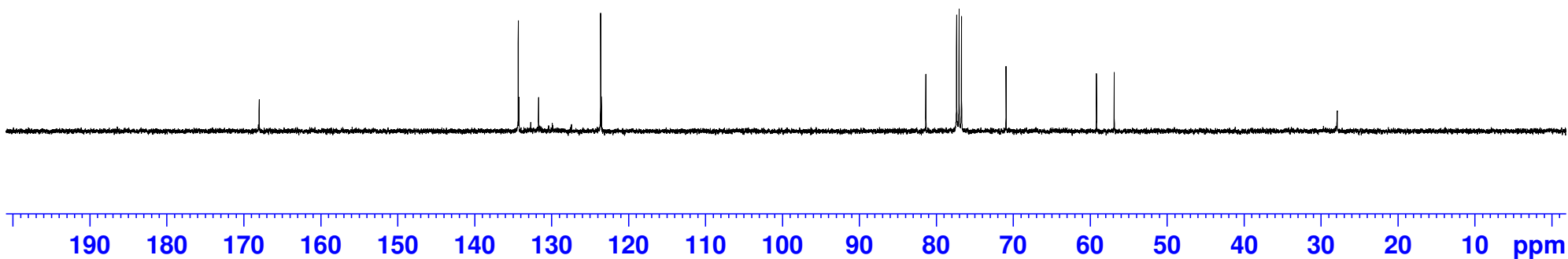
123.63

81.35

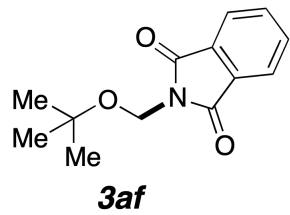
70.94

59.19

56.88



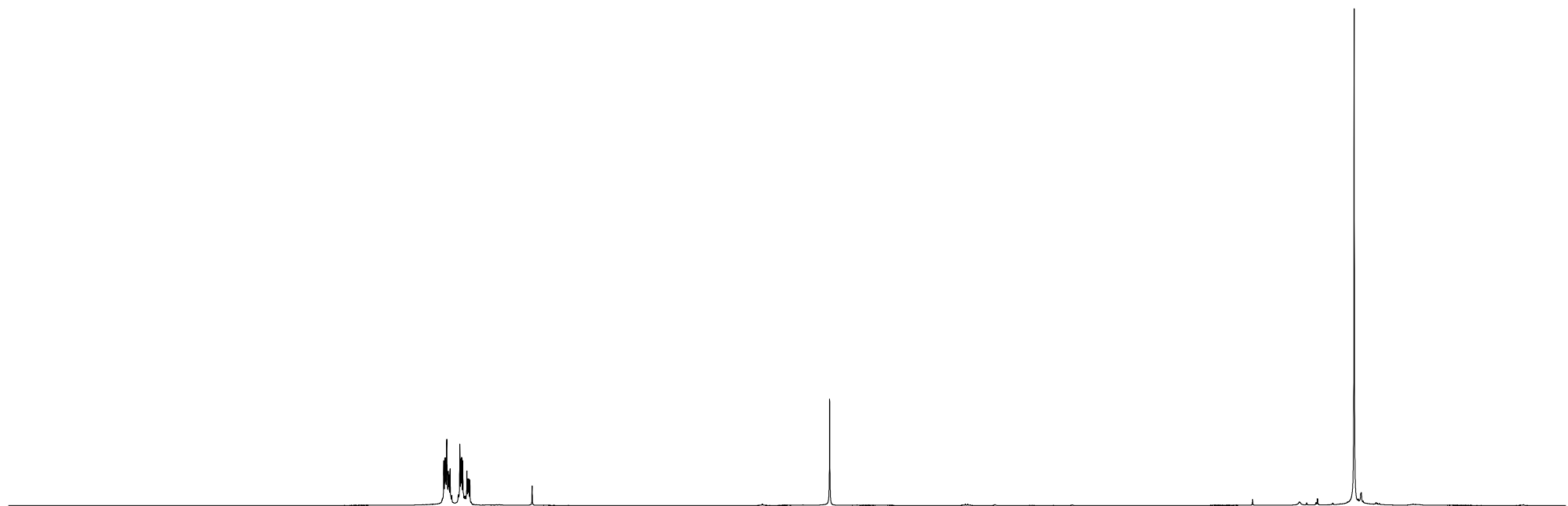




7.841  
7.833  
7.827  
7.820  
7.817  
7.809  
7.803  
7.795  
7.725  
7.717  
7.711  
7.703  
7.673  
7.666  
7.660  
7.652

5.039

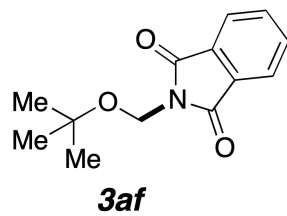
1.230



2.12  
2.12

2.00

8.96



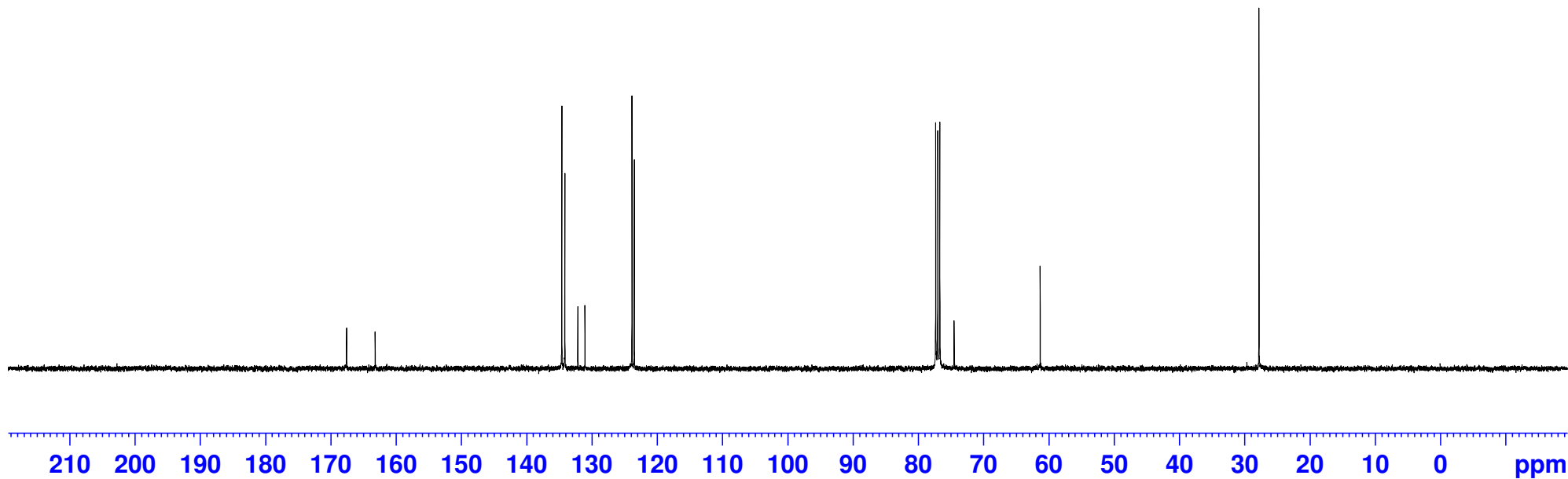
— 167.59  
— 163.23

134.63  
134.16  
132.17  
131.08  
123.88  
123.52

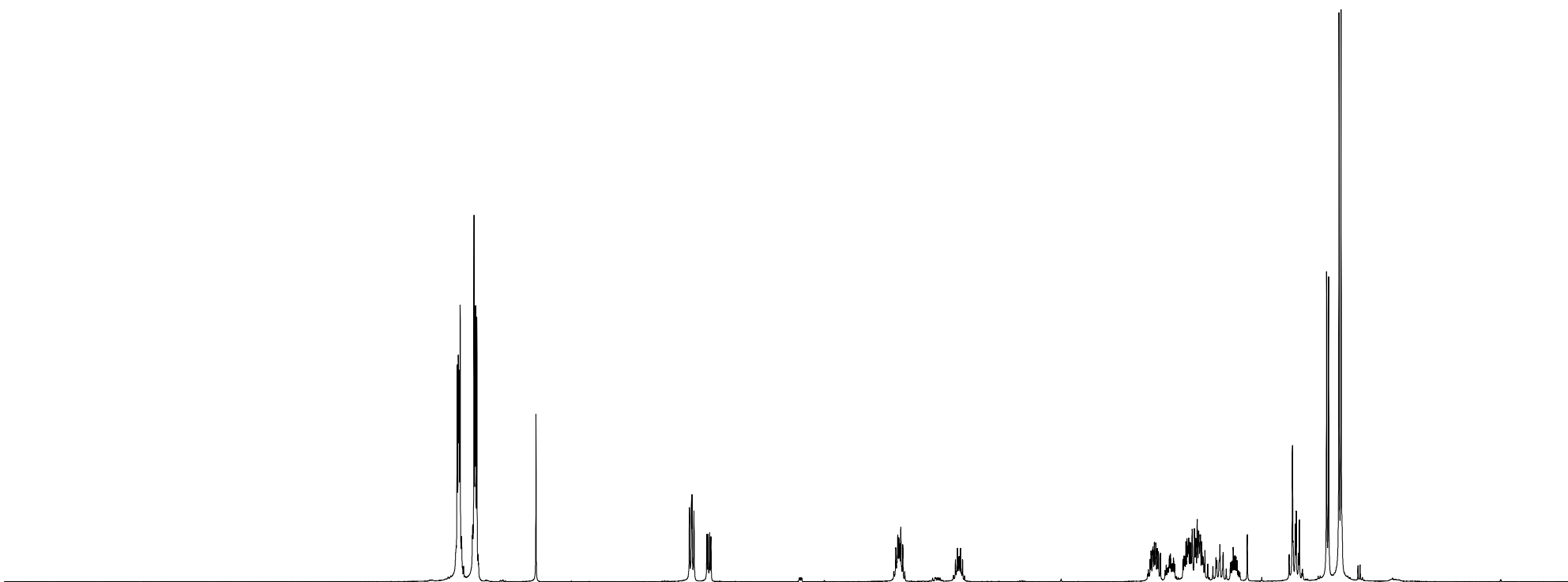
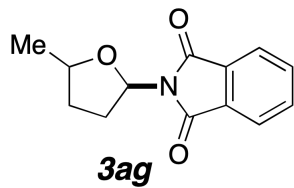
— 74.53

— 61.34

— 27.82



7.783  
7.781  
7.775  
7.773  
7.767  
7.762  
7.760  
7.752  
7.750  
7.669  
7.666  
7.656  
7.649  
7.643  
7.635  
7.194  
6.050  
6.035  
6.031  
6.016  
5.920  
5.911  
5.899  
5.890  
4.497  
4.489  
4.483  
4.474  
4.460  
2.583  
2.574  
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2.340  
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2.312  
2.302  
2.300  
2.285  
2.283  
2.274  
2.264  
2.253  
2.250  
2.243  
2.239  
2.231  
2.095  
1.890  
1.554  
1.548  
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1.299  
1.284  
1.206  
1.191



11 10 9 8 7 6 5 4 3 2 1 ppm

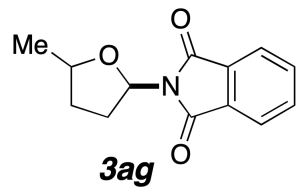
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3.34

1.00  
0.56

1.03  
0.60

1.10  
0.65  
0.90  
1.62  
0.79

1.49  
1.94  
3.43



— 168.00

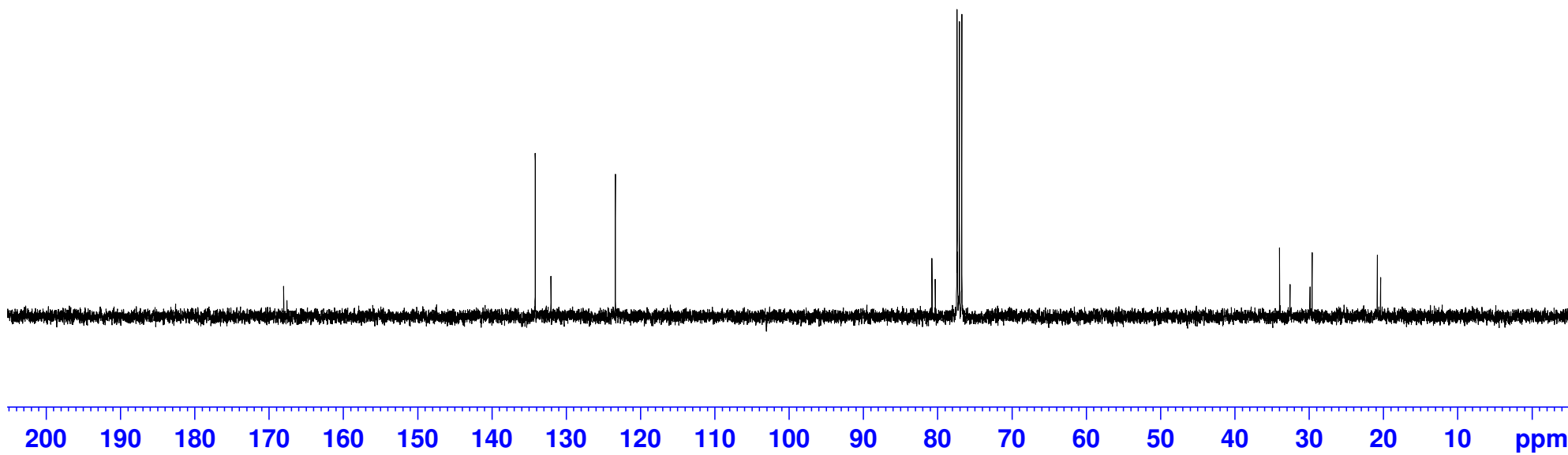
— 134.13  
— 132.02

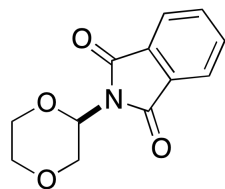
— 123.34

— 80.72  
— 80.28

— 33.93  
— 32.51  
— 29.83  
— 29.55

— 20.76  
— 20.33

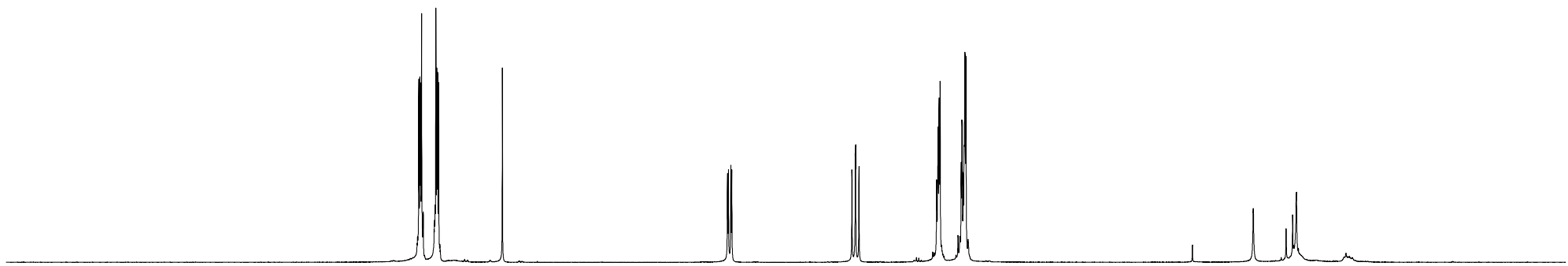




**3ah**

7.919  
7.911  
7.905  
7.898  
7.885  
7.796  
7.790  
7.782  
7.776  
7.769

5.583  
5.576  
5.558  
5.551  
4.642  
4.617  
4.614  
4.589  
4.001  
3.990  
3.982  
3.975  
3.815  
3.810  
3.800  
3.794  
3.791  
3.787  
3.780



10 9 8 7 6 5 4 3 2 1 0 ppm

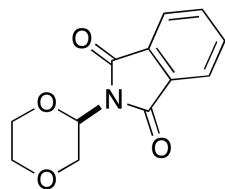
2.23  
2.28

1.00

1.03

2.13  
3.12

S21



**3ah**

— 167.09

— 134.49

— 131.65

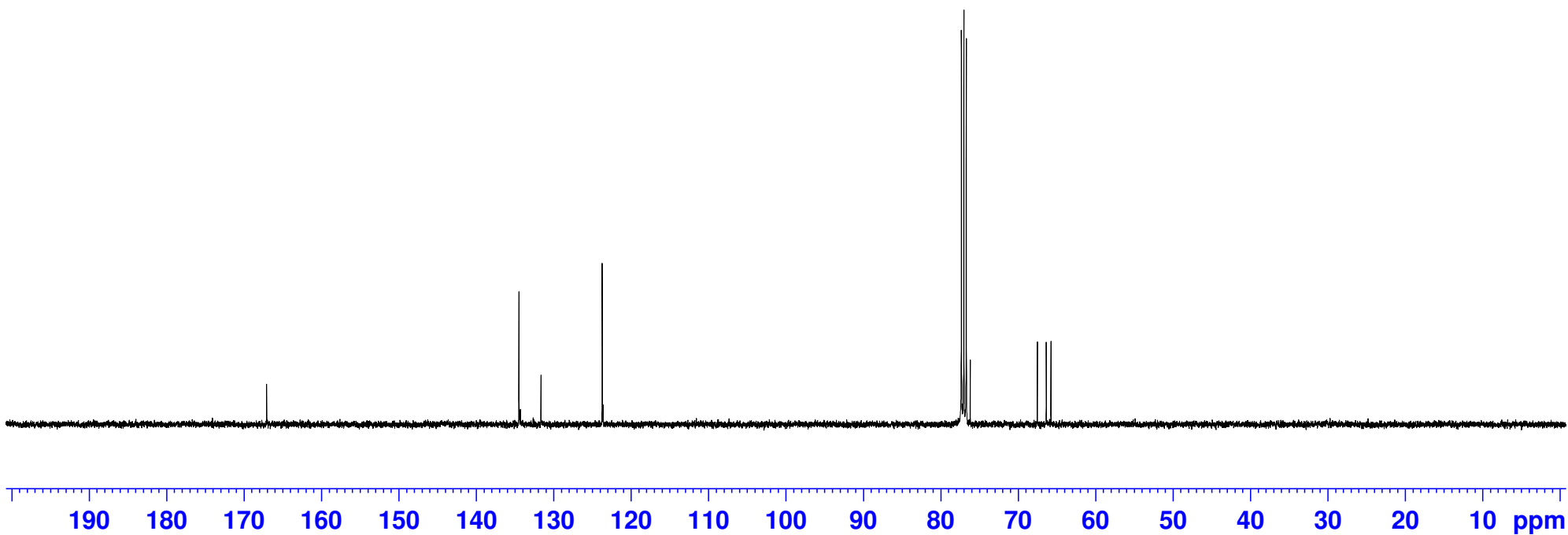
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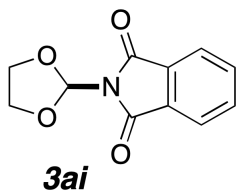
— 76.19

— 67.52

— 66.38

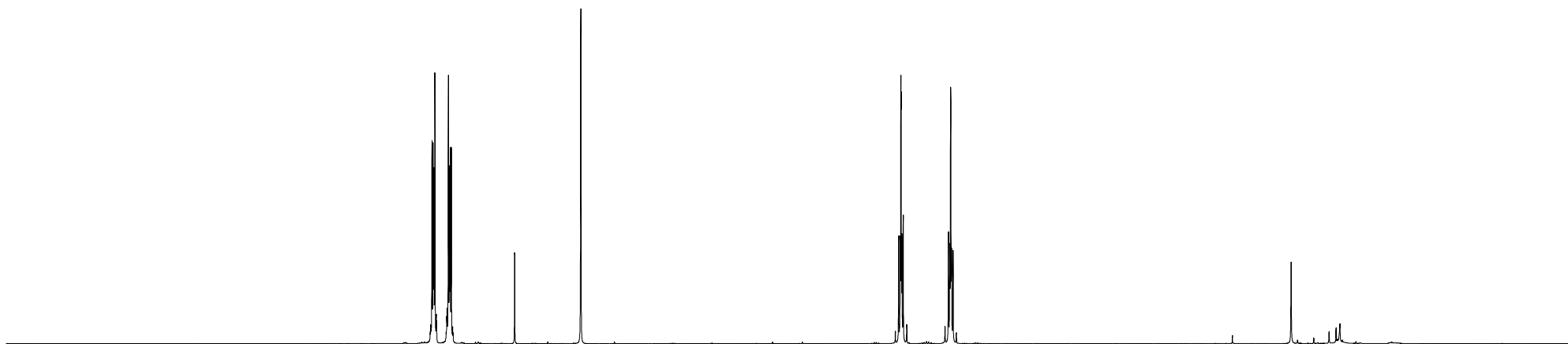
— 65.77





7.889  
7.881  
7.875  
7.867  
7.769  
7.762  
7.755  
7.748  
7.286  
6.805

4.490  
4.480  
4.474  
4.472  
4.466  
4.457  
4.128  
4.118  
4.112  
4.105  
4.094



10

9

8

7

6

5

4

3

2

1

ppm

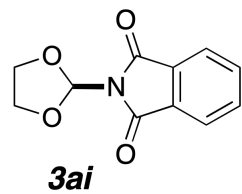
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1.00

2.15

2.22

S23



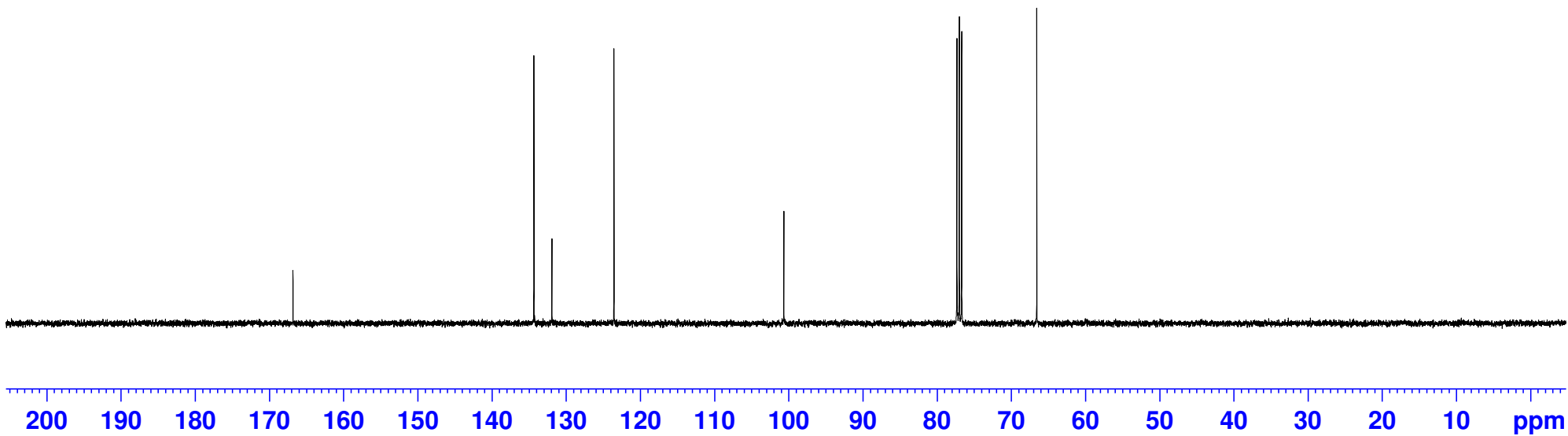
— 166.84

— 134.36  
— 131.93

— 123.57

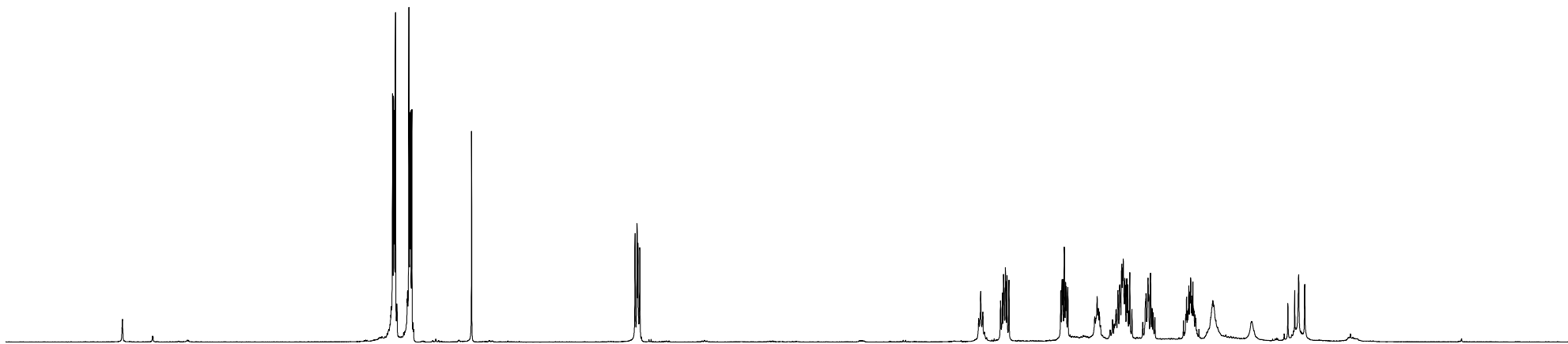
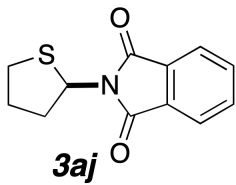
— 100.67

— 66.57





7.767  
7.760  
7.754  
7.746  
7.748  
7.648  
7.641  
7.635  
7.627  
6.005  
5.991  
5.984  
5.970  
3.493  
3.350  
3.336  
3.328  
3.324  
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3.311  
3.303  
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2.886  
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2.871  
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2.509  
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2.293  
2.277  
2.273  
2.260  
2.249  
1.998  
1.990  
1.982  
1.975  
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1.952  
1.946



10

9

8

7

6

5

4

3

2

1

0

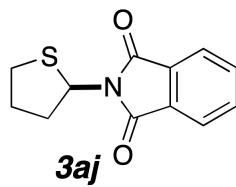
ppm

2.25  
2.14

1.00

0.54  
1.08

1.20  
0.70  
2.19  
1.21  
1.35



— 167.42

— 134.09

— 131.99

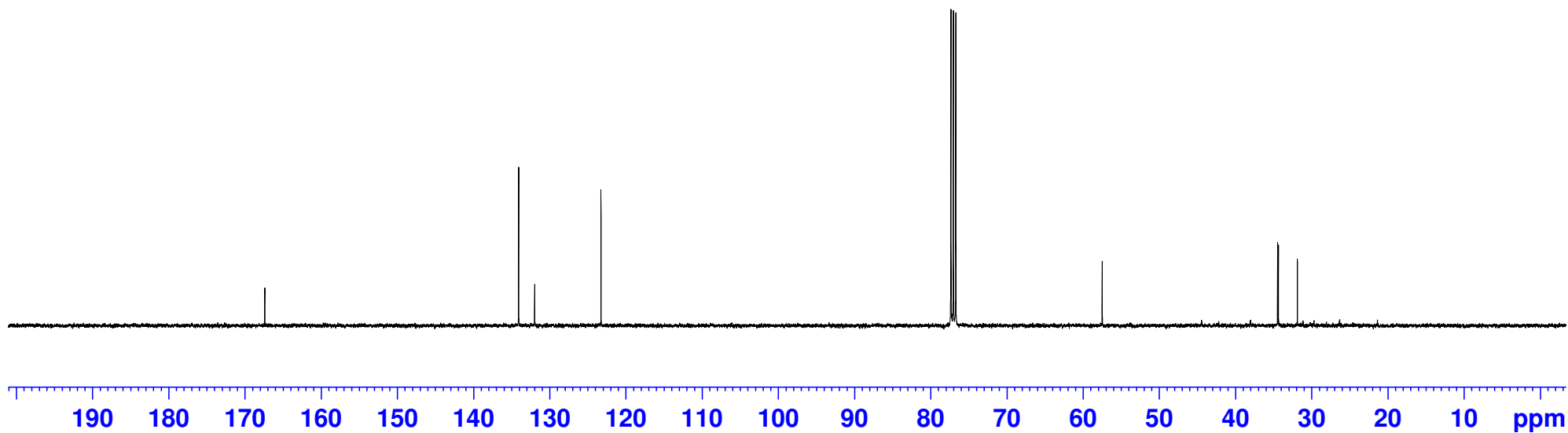
— 123.28

— 57.49

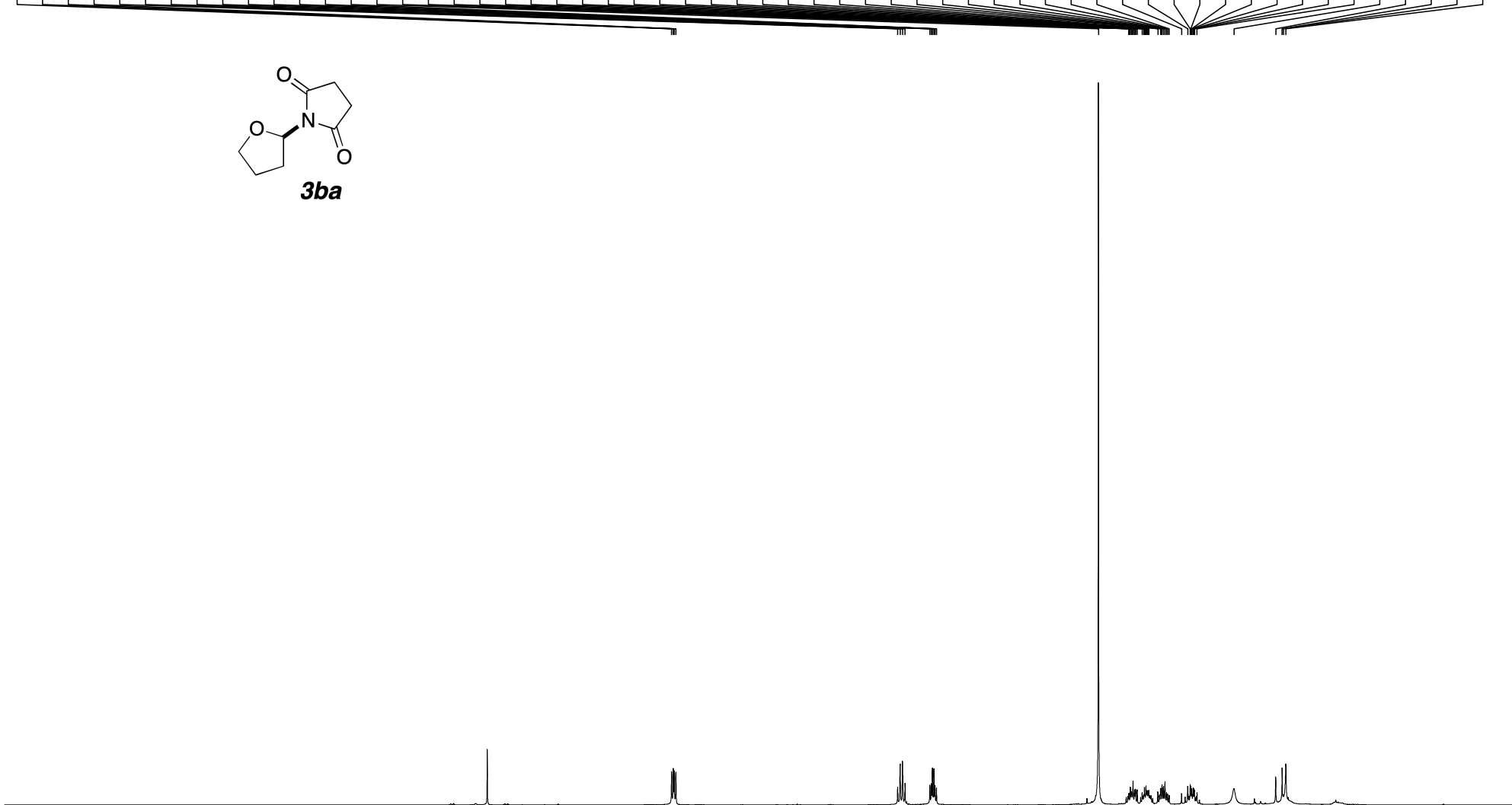
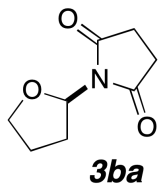
— 34.47

— 34.36

— 31.87



5.812  
5.799  
5.792  
5.779  
4.110  
4.090  
4.073  
4.054  
3.867  
3.856  
3.848  
3.836  
3.828  
3.817  
2.598  
2.371  
2.368  
2.358  
2.350  
2.345  
2.337  
2.327  
2.324  
2.318  
2.306  
2.269  
2.257  
2.252  
2.247  
2.240  
2.235  
2.229  
2.222  
2.218  
2.151  
2.130  
2.129  
2.119  
2.107  
2.097  
2.085  
2.077  
2.065  
1.972  
1.926  
1.907  
1.904  
1.897  
1.894  
1.885  
1.878  
1.874  
1.856  
1.578  
1.263  
1.215  
1.206  
1.187



10

9

8

7

6

5

4

3

2

1

0 ppm

1.00

1.13

1.14

4.26

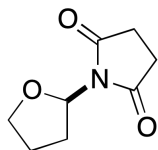
0.89

1.36

1.19

1.29

— 176.74

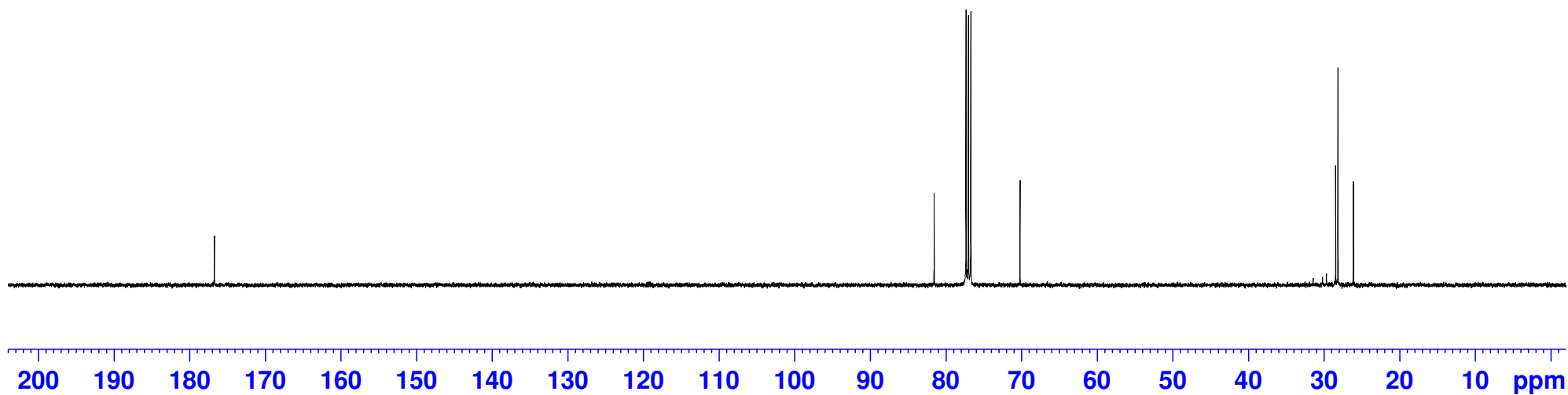


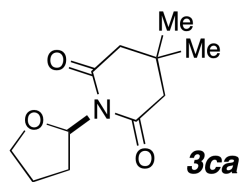
**3ba**

— 81.56

— 70.21

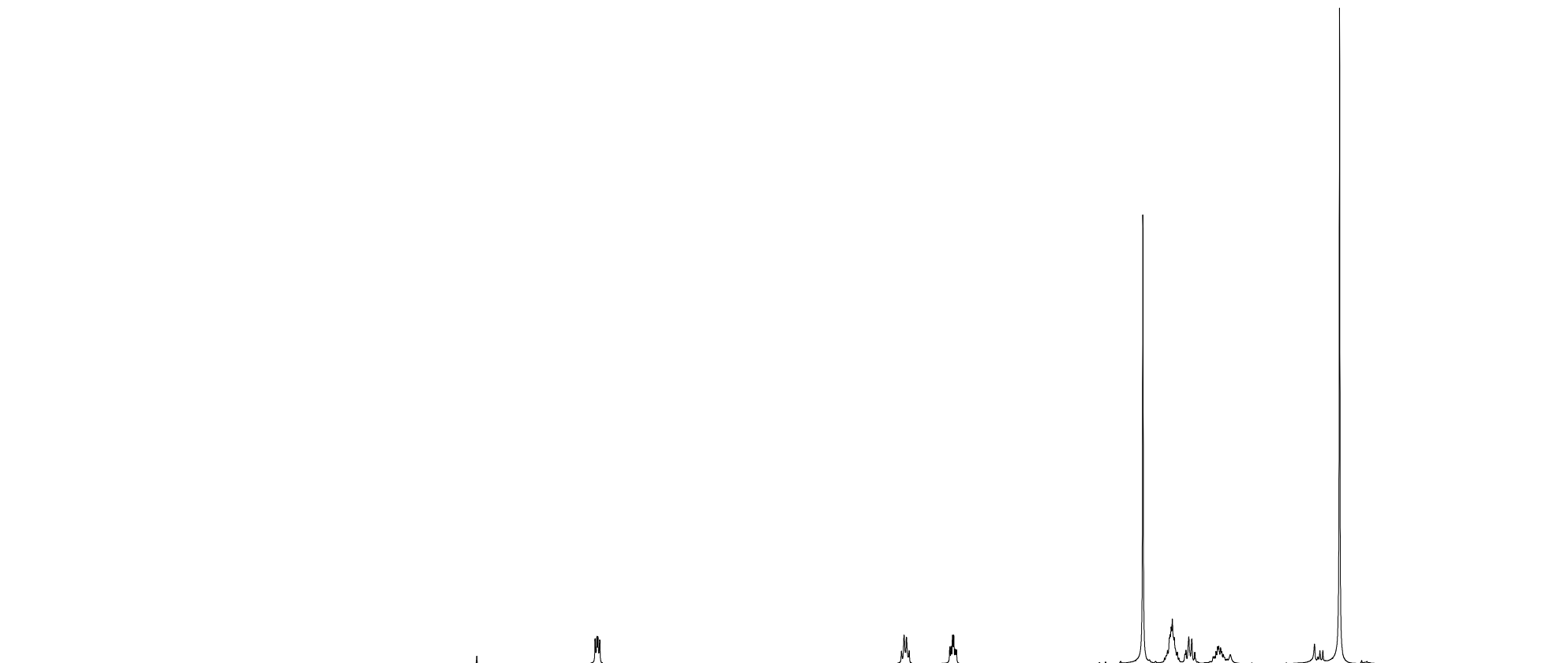
— 28.47  
— 28.16  
— 26.12





6.371  
6.358  
6.351  
6.338

4.163  
4.144  
4.127  
4.107  
3.815  
3.805  
3.795  
3.786  
3.776  
3.767  
2.423  
2.246  
2.232  
2.227  
2.219  
2.211  
2.197  
2.174  
2.120  
2.112  
2.092  
2.070  
2.049  
1.896  
1.884  
1.876  
1.863  
1.854  
1.005



10

9

8

7

6

5

4

3

2

1

0

ppm

1.00

1.11

1.09

4.41

2.31

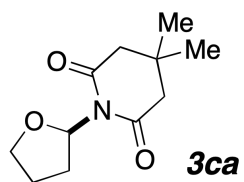
1.26

1.13

6.40

S29

— 172.01

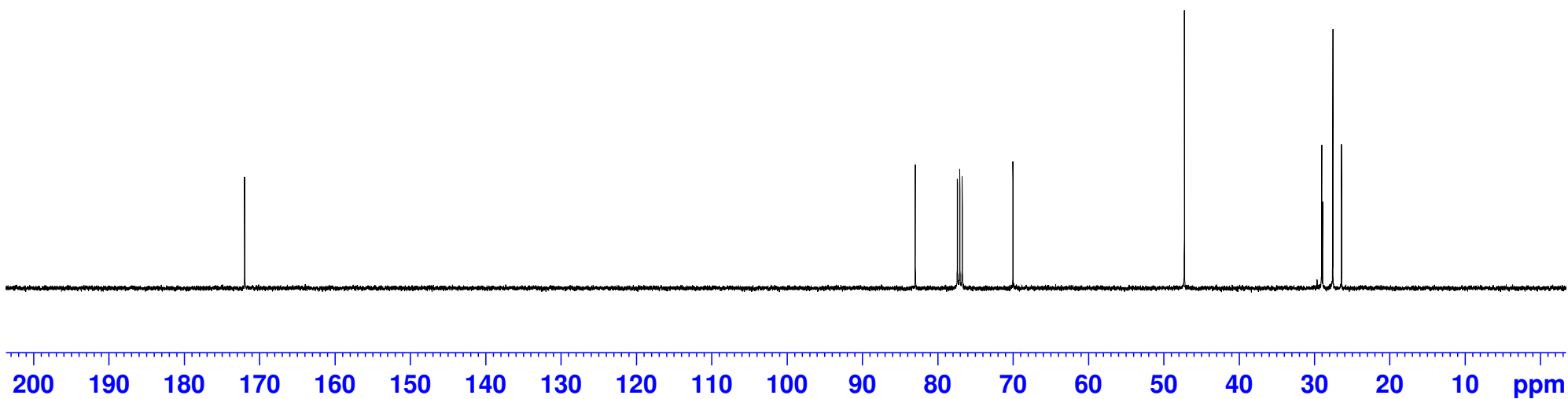


— 82.99

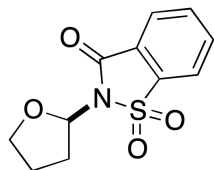
— 70.01

— 47.26

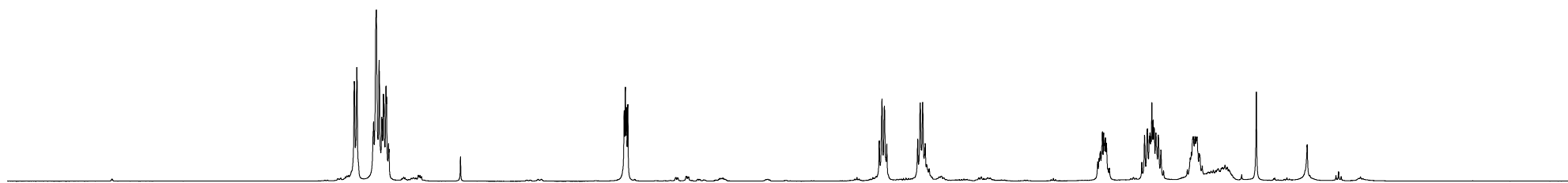
— 29.04  
— 28.92  
— 27.56  
— 26.40



8.043  
8.026  
7.906  
7.890  
7.887  
7.867  
7.865  
7.848  
7.845  
7.836  
7.832  
7.818  
7.814  
6.123  
6.115  
6.106  
6.097  
4.308  
4.288  
4.271  
4.254  
4.034  
4.016  
4.008  
3.999  
3.986  
3.981  
2.754  
2.744  
2.734  
2.724  
2.720  
2.711  
2.706  
2.699  
2.691  
2.420  
2.399  
2.386  
2.381  
2.376  
2.368  
2.359  
2.351  
2.339  
2.334  
2.322  
2.304  
2.095  
2.087  
2.077  
2.073  
2.069  
2.061  
2.054  
2.046  
2.031  
2.028



**3da**



10

9

1.22  
3.39

7

1.00

5

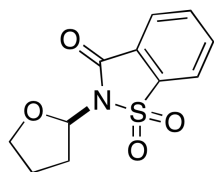
1.41  
1.43

3

1.12  
2.26  
1.34

1

0 ppm



**3da**

— 159.18

— 138.36

— 134.96

— 134.23

— 126.83

— 125.09

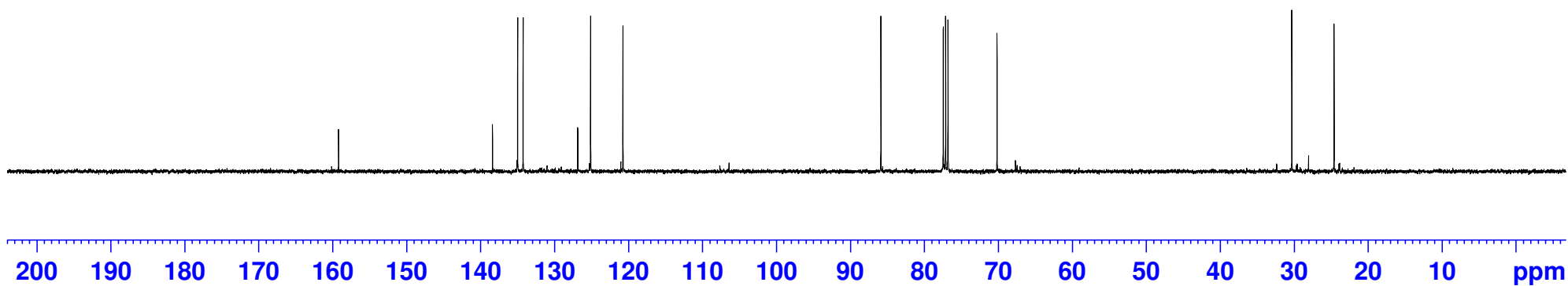
— 120.72

— 85.85

— 70.13

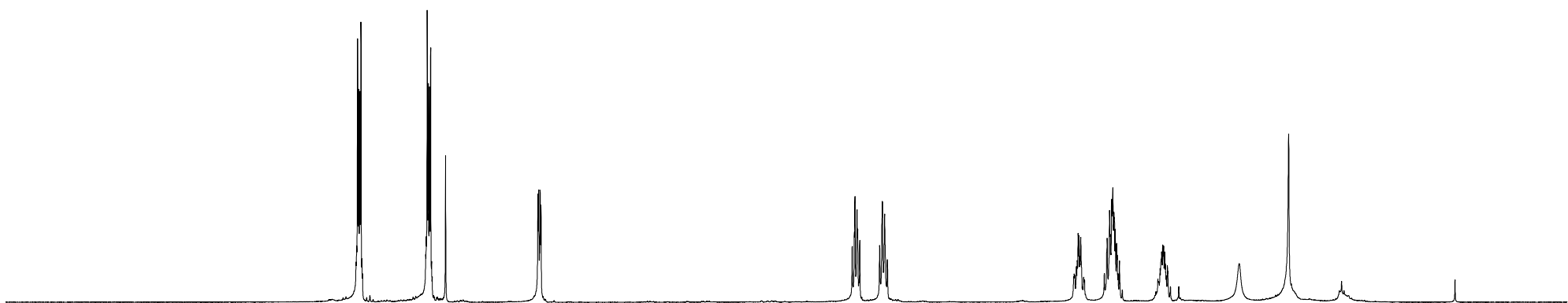
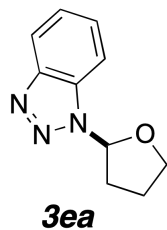
— 30.27

— 24.56





7.821  
7.814  
7.807  
7.798  
7.790  
7.325  
7.318  
7.311  
7.302  
7.294  
6.530  
6.525  
6.514  
6.509  
4.292  
4.277  
4.273  
4.258  
4.253  
4.238  
4.097  
4.077  
4.062  
4.042  
2.696  
2.690  
2.684  
2.678  
2.672  
2.665  
2.497  
2.480  
2.477  
2.460  
2.455  
2.451  
2.445  
2.441  
2.436  
2.429  
2.425  
2.419  
2.409  
2.405  
2.399  
2.389  
2.100  
2.093  
2.089  
2.085  
2.082  
2.078  
2.074  
2.067  
2.063  
2.060  
2.048  
2.045



10 9 8 7 6 5 4 3 2 1 0 ppm

2.08

2.04

1.00

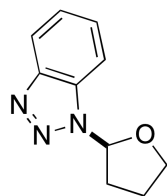
1.10

1.16

1.11

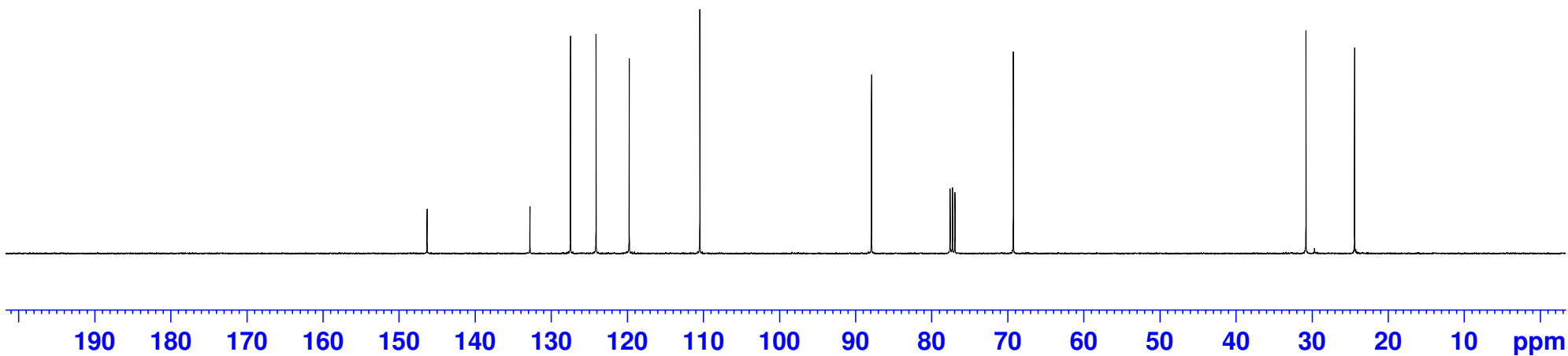
2.22

1.14

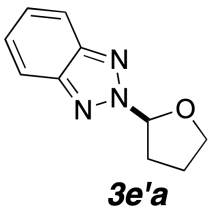


**3ea**

- 146.28
- 132.76
- 127.44
- 124.07
- 119.72
- 110.43
- 87.87
- 69.22
- 30.76
- 24.37

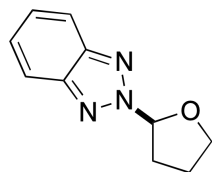


8.038  
8.017  
7.689  
7.668  
7.475  
7.473  
7.455  
7.437  
7.435  
7.361  
7.359  
7.341  
7.323  
7.321  
6.493  
6.487  
6.476  
6.470  
4.070  
4.054  
4.035  
4.020  
4.016  
4.000  
3.995  
3.119  
3.111  
3.106  
3.100  
3.094  
3.087  
3.085  
2.508  
2.505  
2.491  
2.488  
2.485  
2.475  
2.472  
2.468  
2.457  
2.455  
2.452  
2.386  
2.370  
2.366  
2.355  
2.350  
2.339  
2.335  
2.319  
2.156  
2.152  
2.144  
2.141  
2.136  
2.133  
2.129



10 9 8 7 6 5 4 3 2 1 0 ppm

1.01  
1.04  
1.05  
1.17  
1.00  
2.13  
1.08  
1.13  
1.12  
1.10



**3e'a**

— 144.30

— 126.57

— 118.47

— 94.18

— 70.23

— 32.34

— 24.31

