

## Supporting Information-III

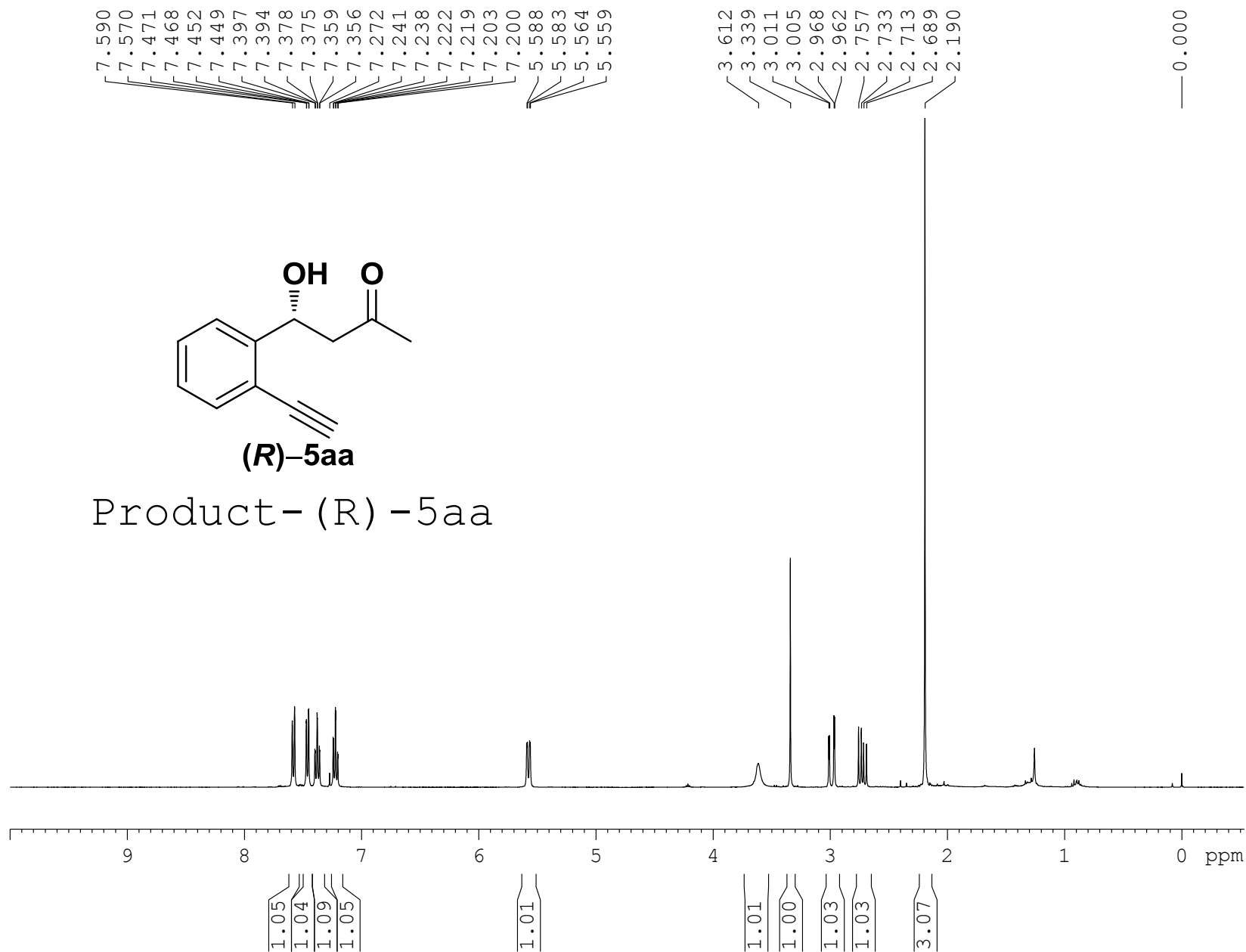
# Direct Catalytic Asymmetric Synthesis of Highly Functionalized (2-Ethynylphenyl)alcohols *via* Barbos-List Aldol Reaction: Scope and Synthetic Applications

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*Hyderabad 500 046, India*

[ramsc@uohyd.ernet.in](mailto:ramsc@uohyd.ernet.in)



— 209.124

— 145.140

— 132.701

— 129.302

— 127.059

— 125.155

— 118.783

— 82.612

— 81.029

— 77.317

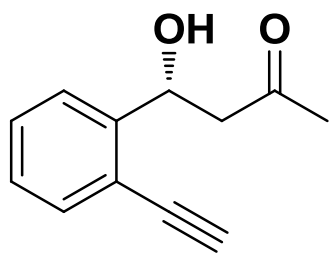
— 77.000

— 76.682

— 67.648

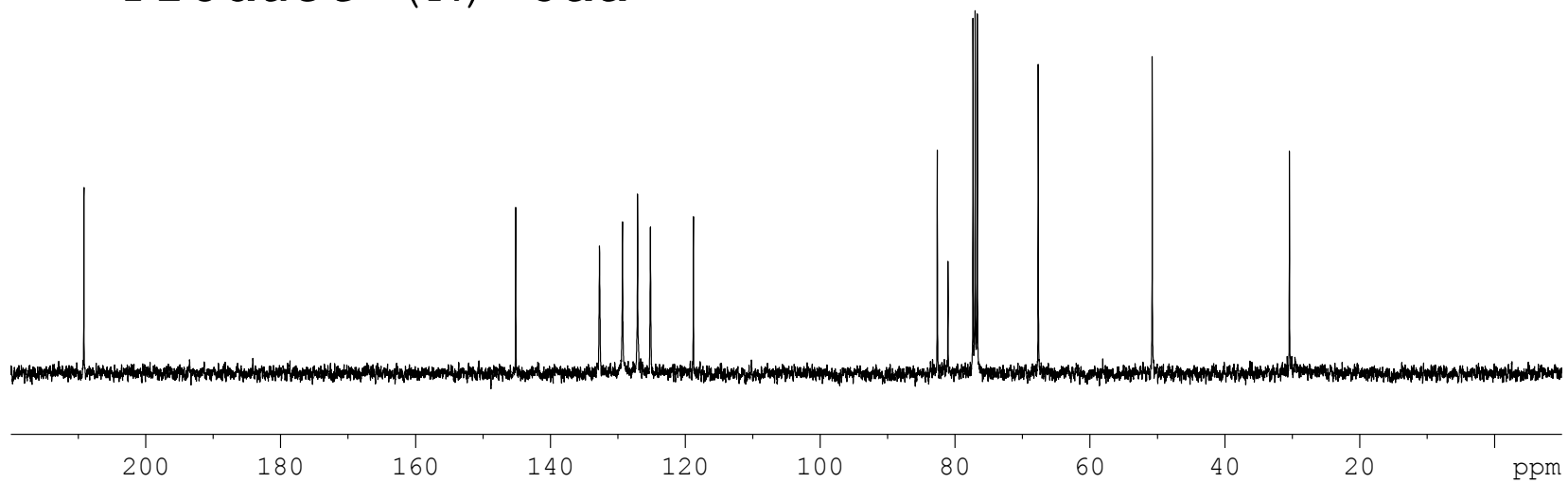
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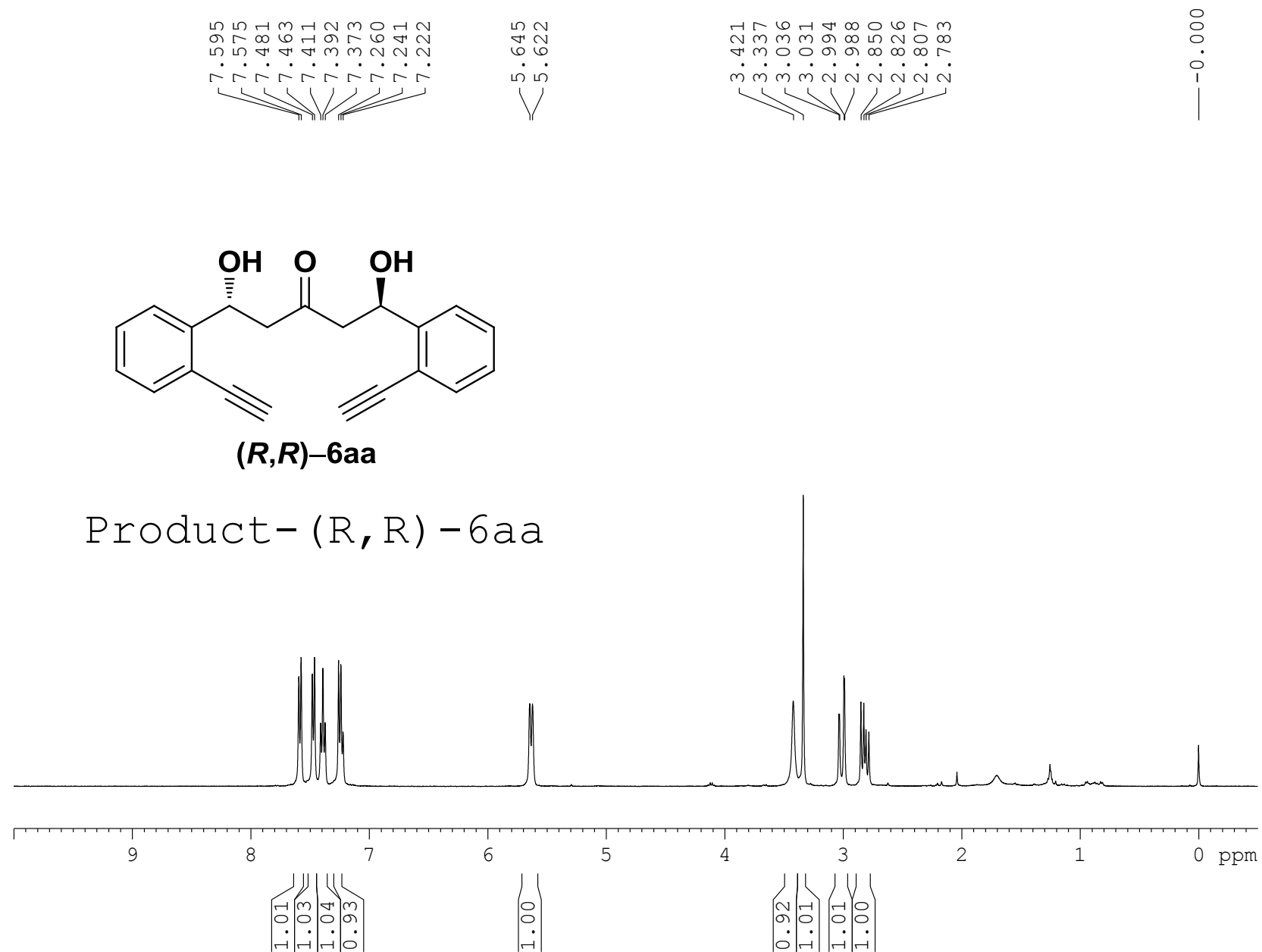
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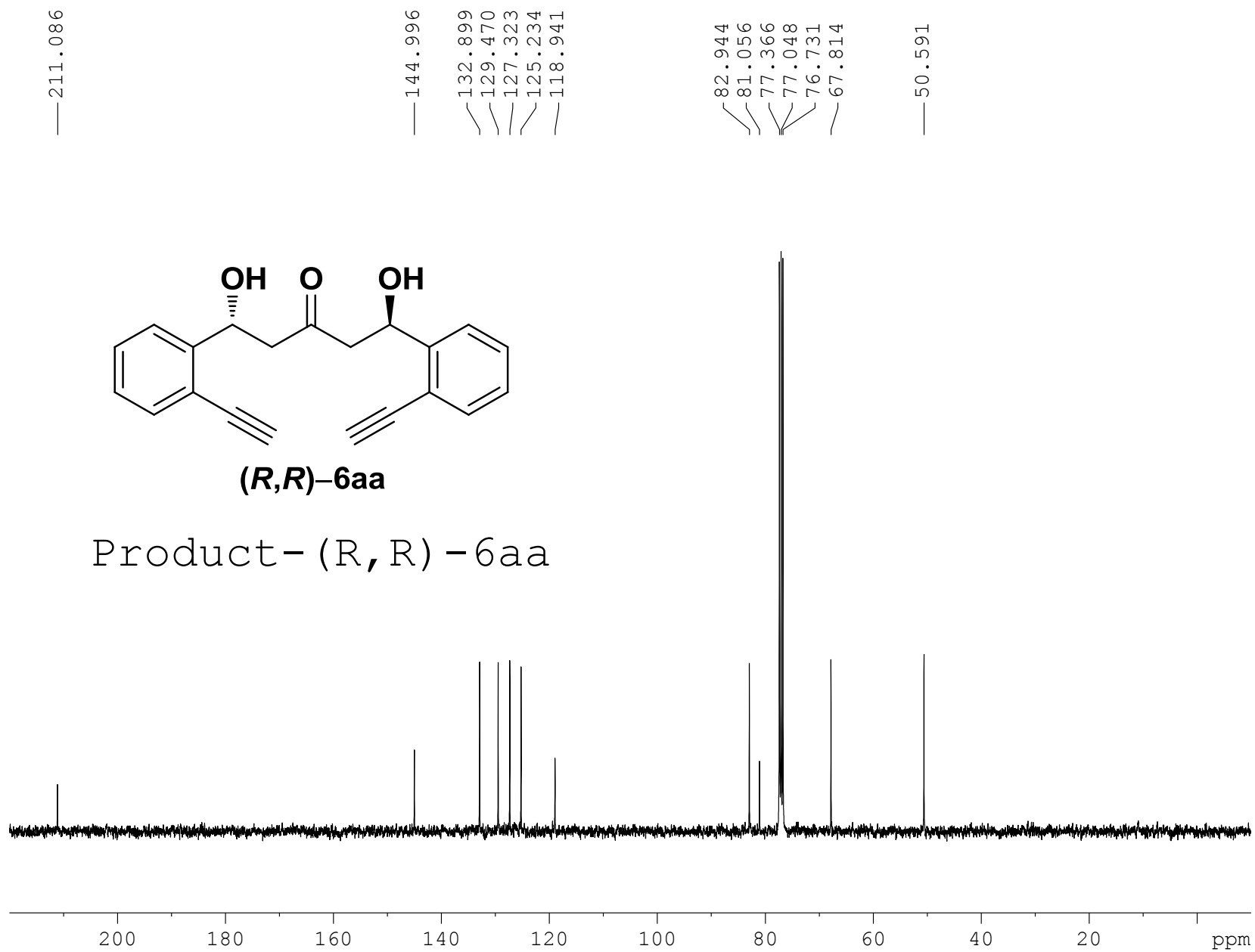


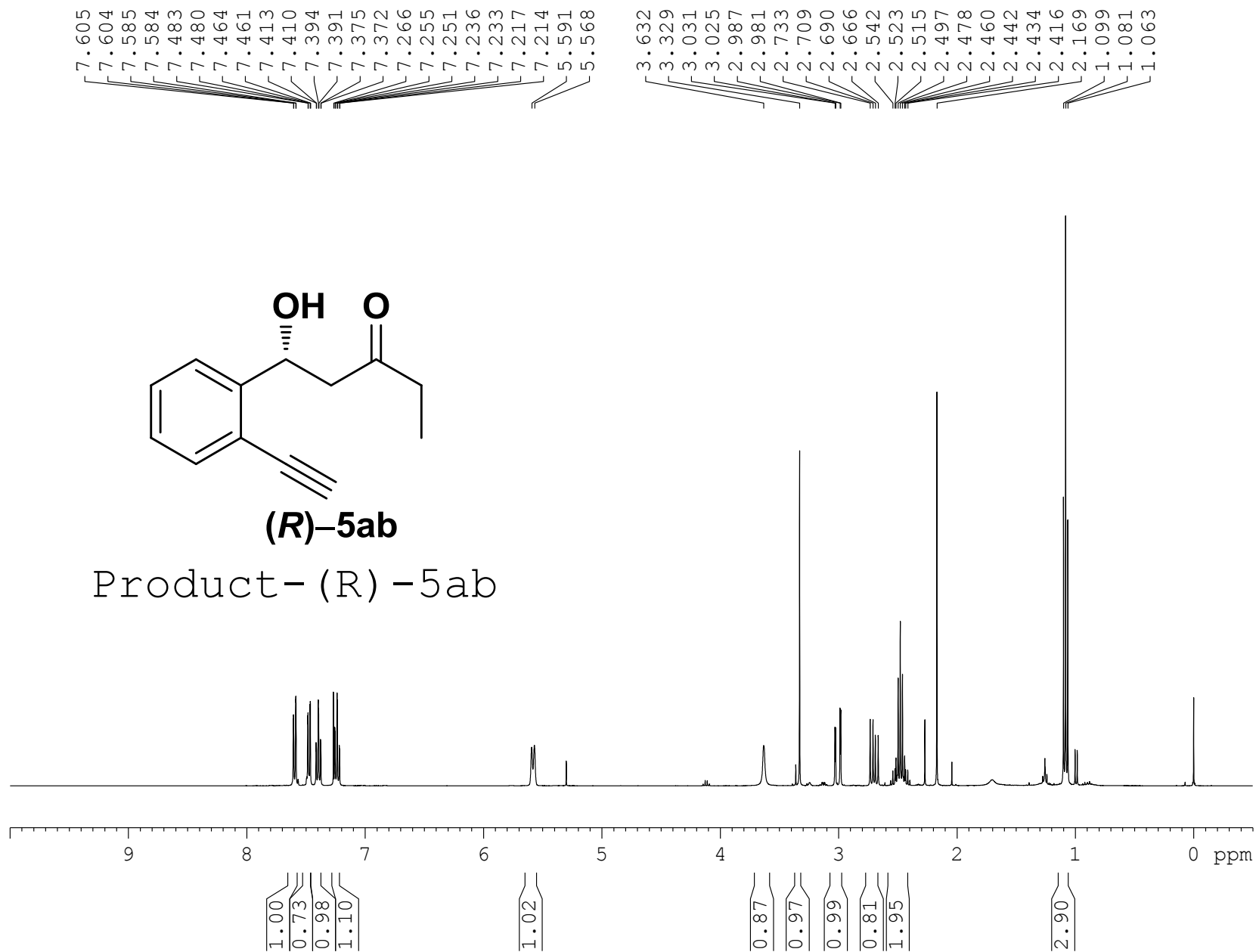
**(R)-5aa**

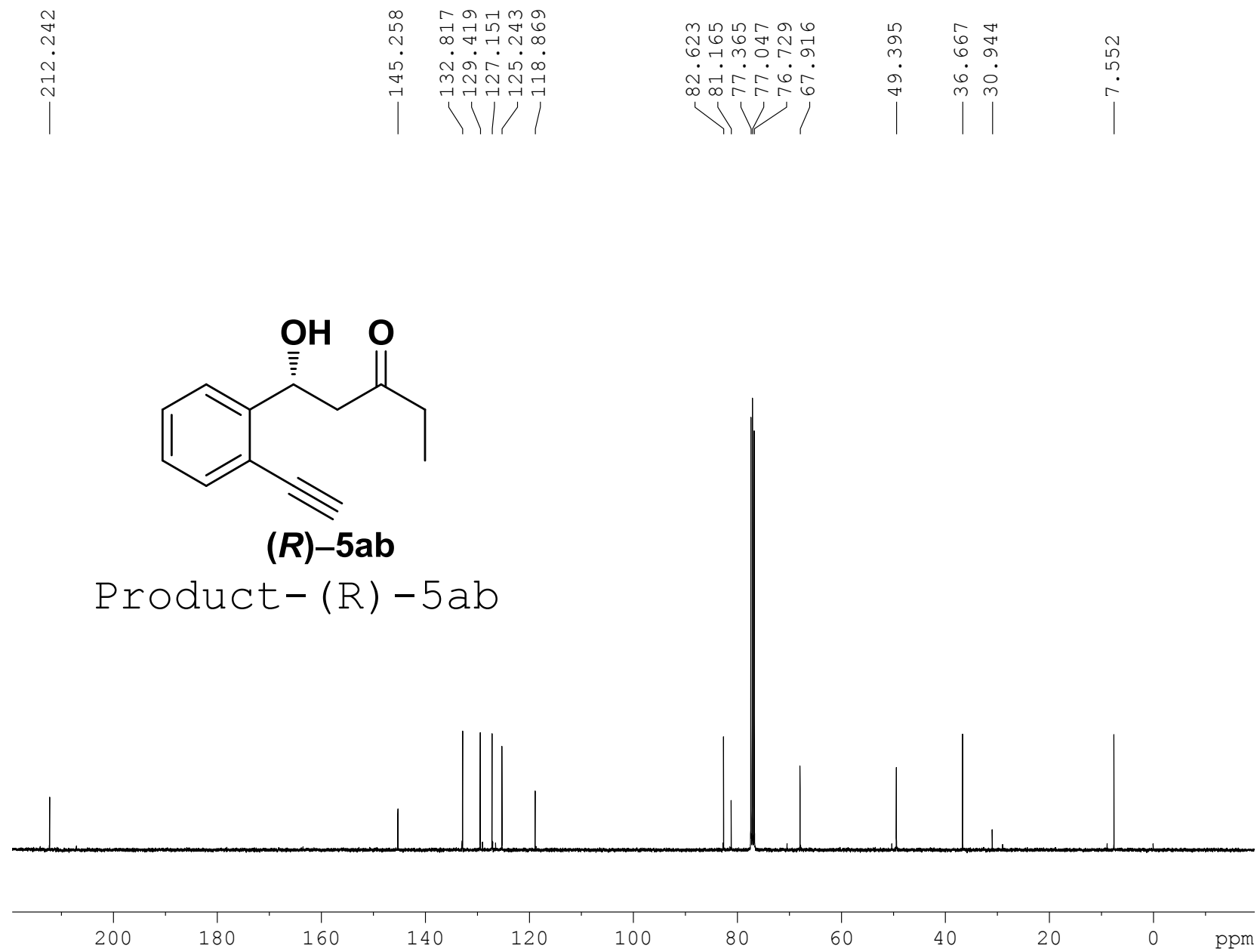
Product - (R) - 5aa

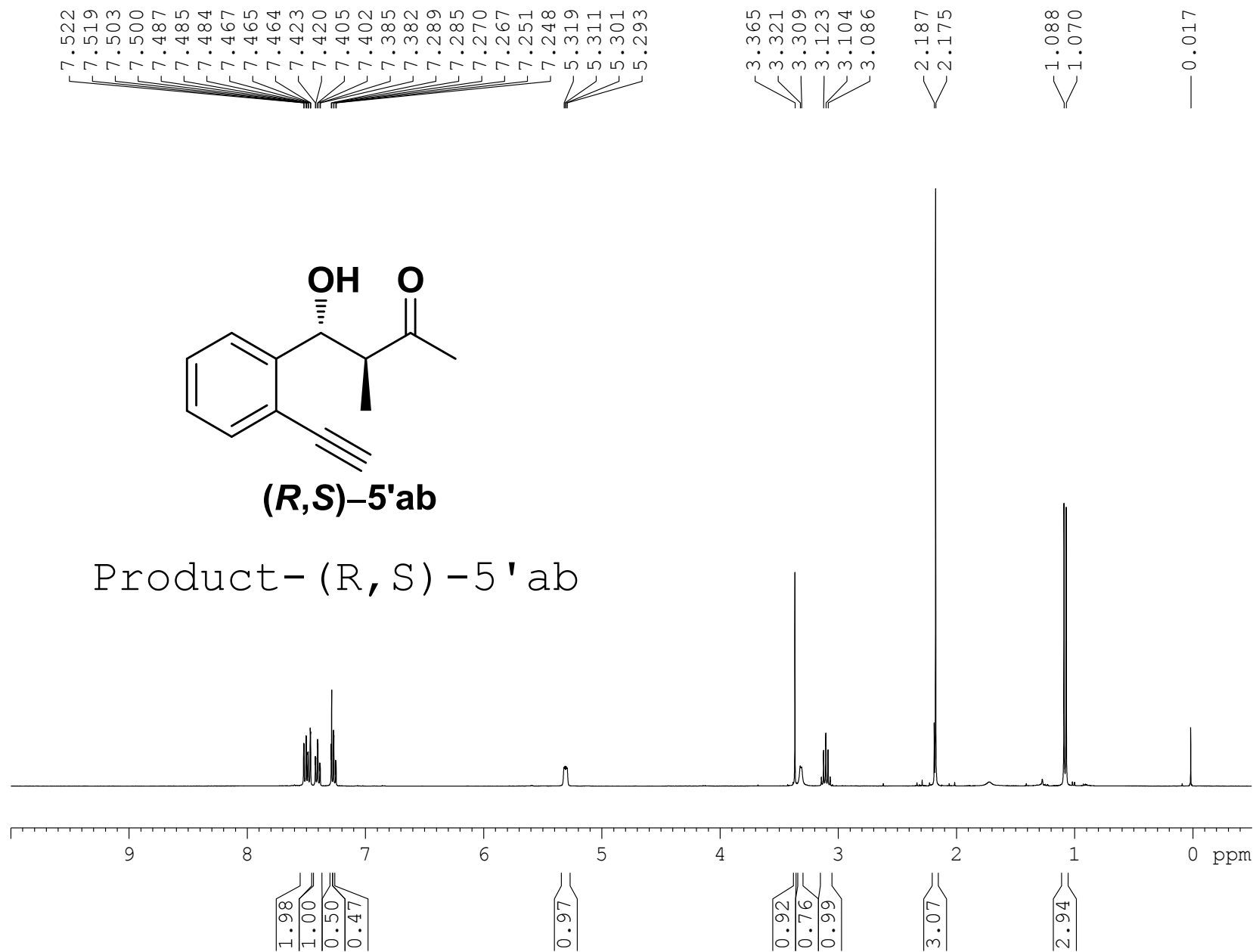




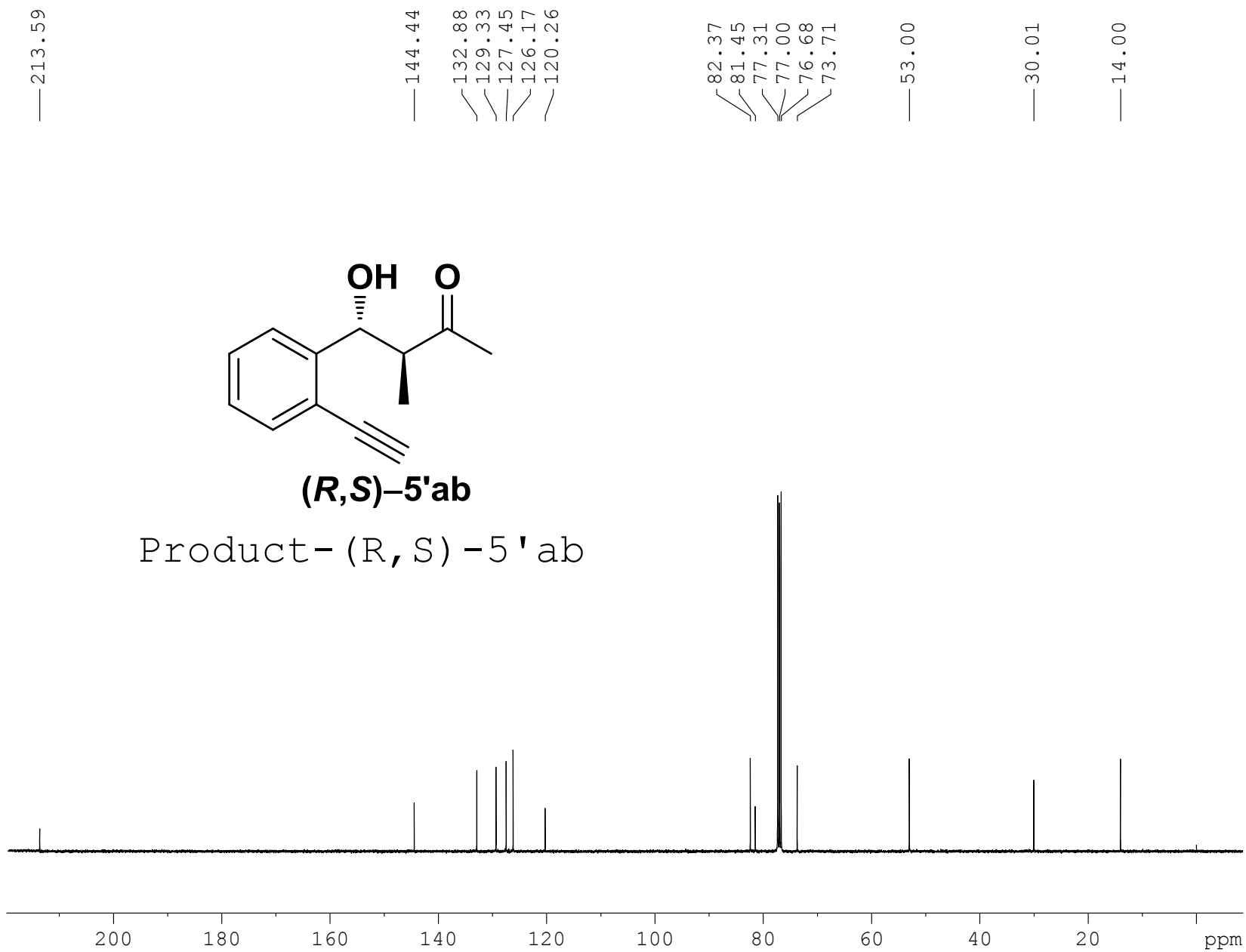


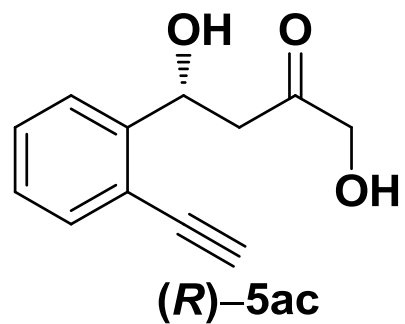




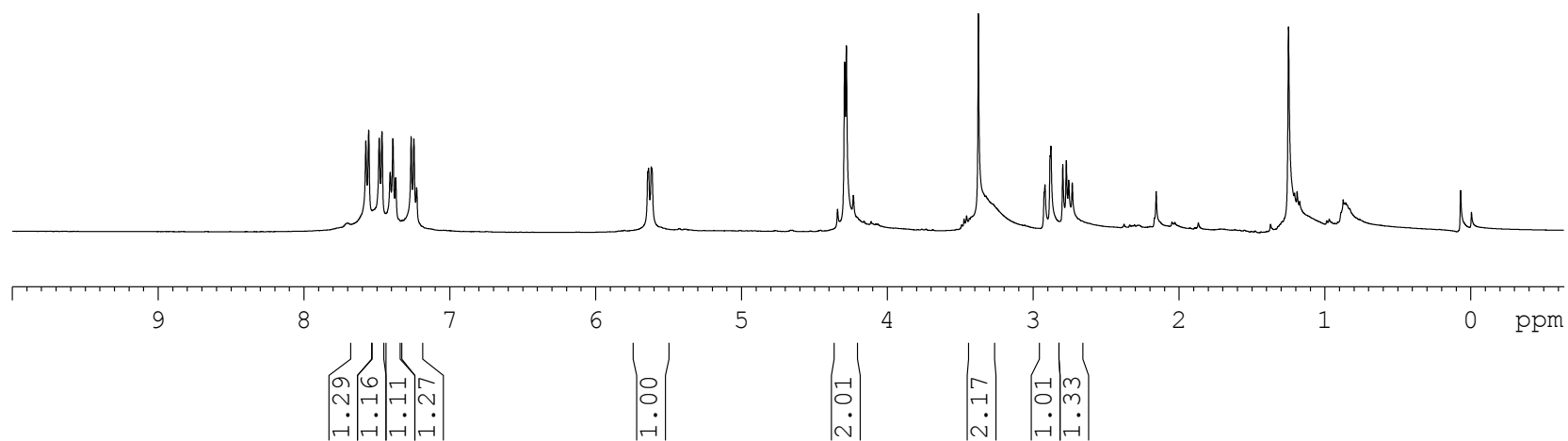








Product - (R) - 5ac



—209.333

—144.945

—132.960

—129.525

—127.521

—125.114

—118.918

—83.146

—80.911

—77.398

—77.081

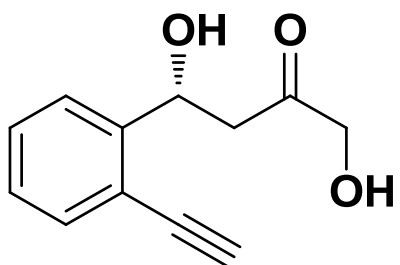
—76.763

—68.774

—67.864

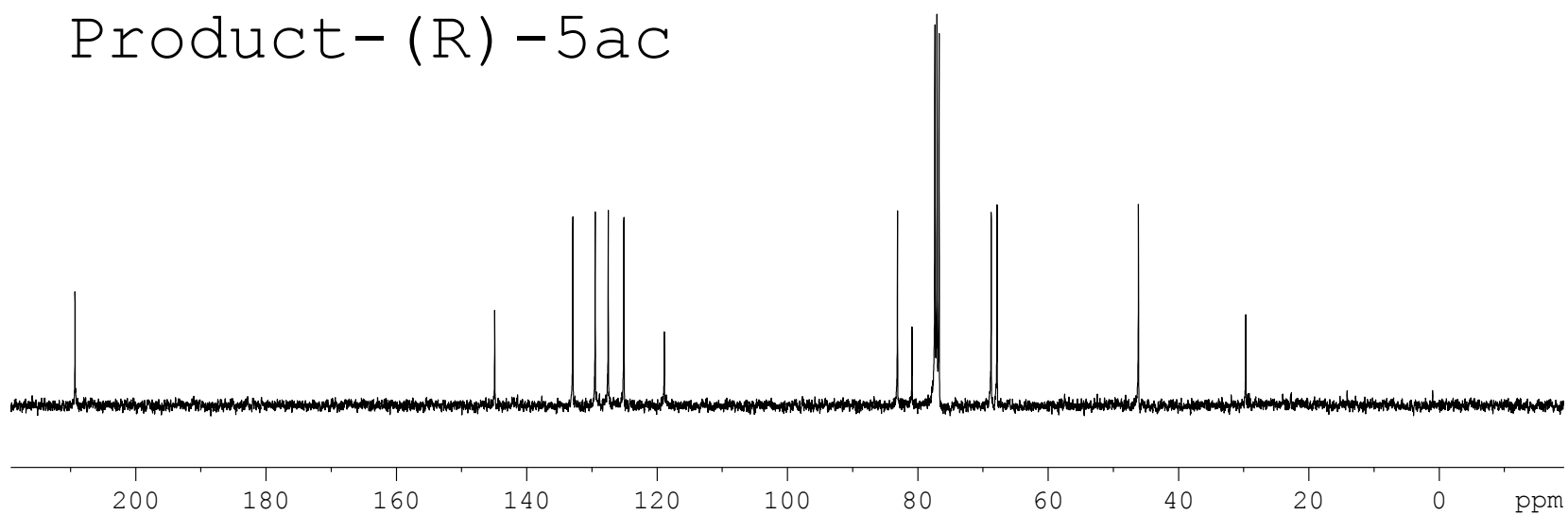
—46.176

—29.713



**(R)-5ac**

Product - (R) - 5ac



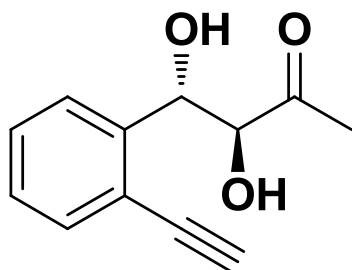
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7.524  
7.512  
7.422  
7.404  
7.386  
7.307  
7.288  
7.267

5.604  
5.433  
5.423

4.769  
4.528

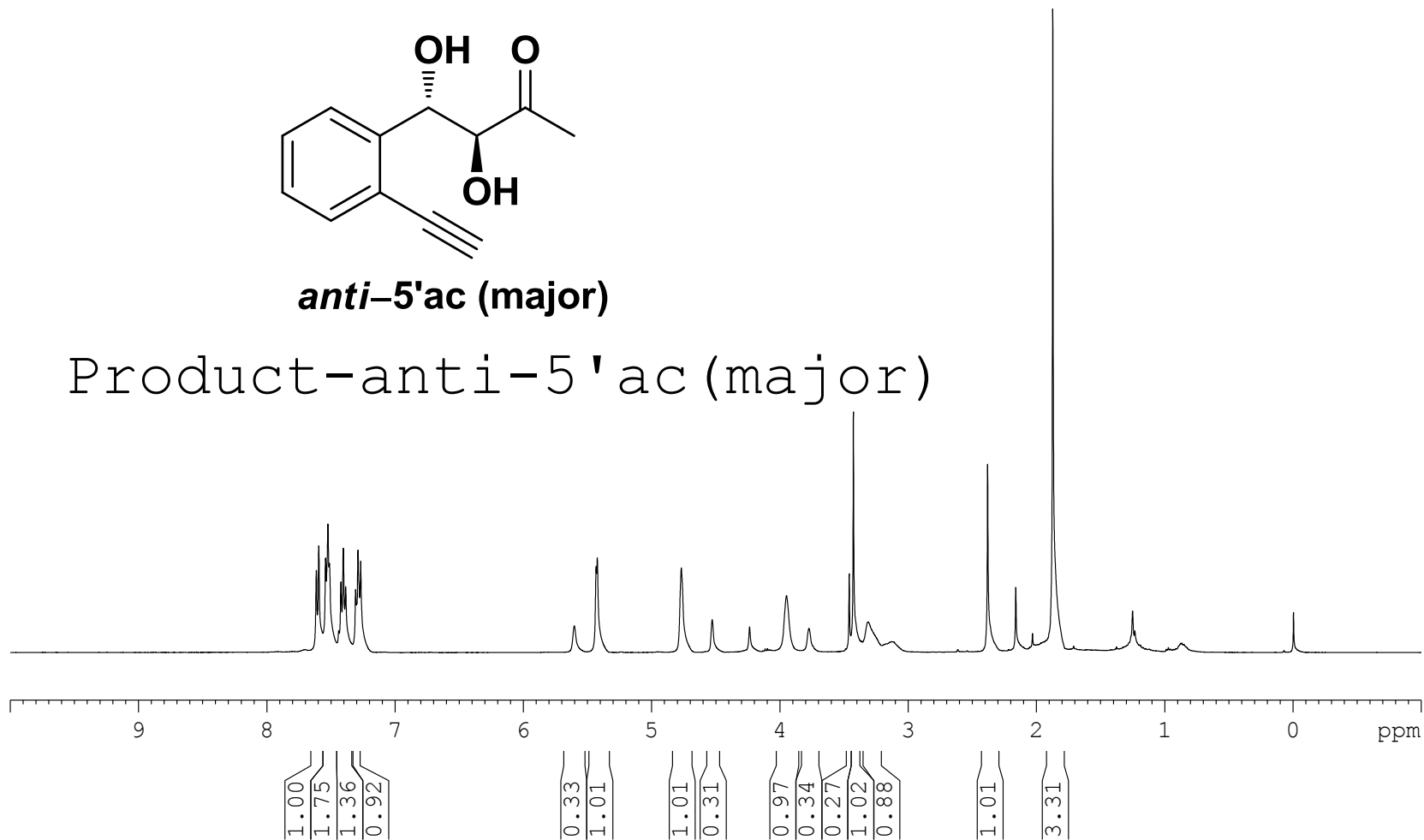
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3.771  
3.459  
3.426  
3.313

2.380  
2.162  
1.874



***anti*-5'ac (major)**

Product-*anti*-5'ac (major)

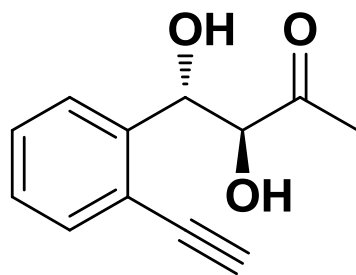


208.113  
207.528

142.819  
141.273  
133.125  
132.889  
129.268  
127.853  
127.575  
126.248  
125.975  
119.796  
118.868

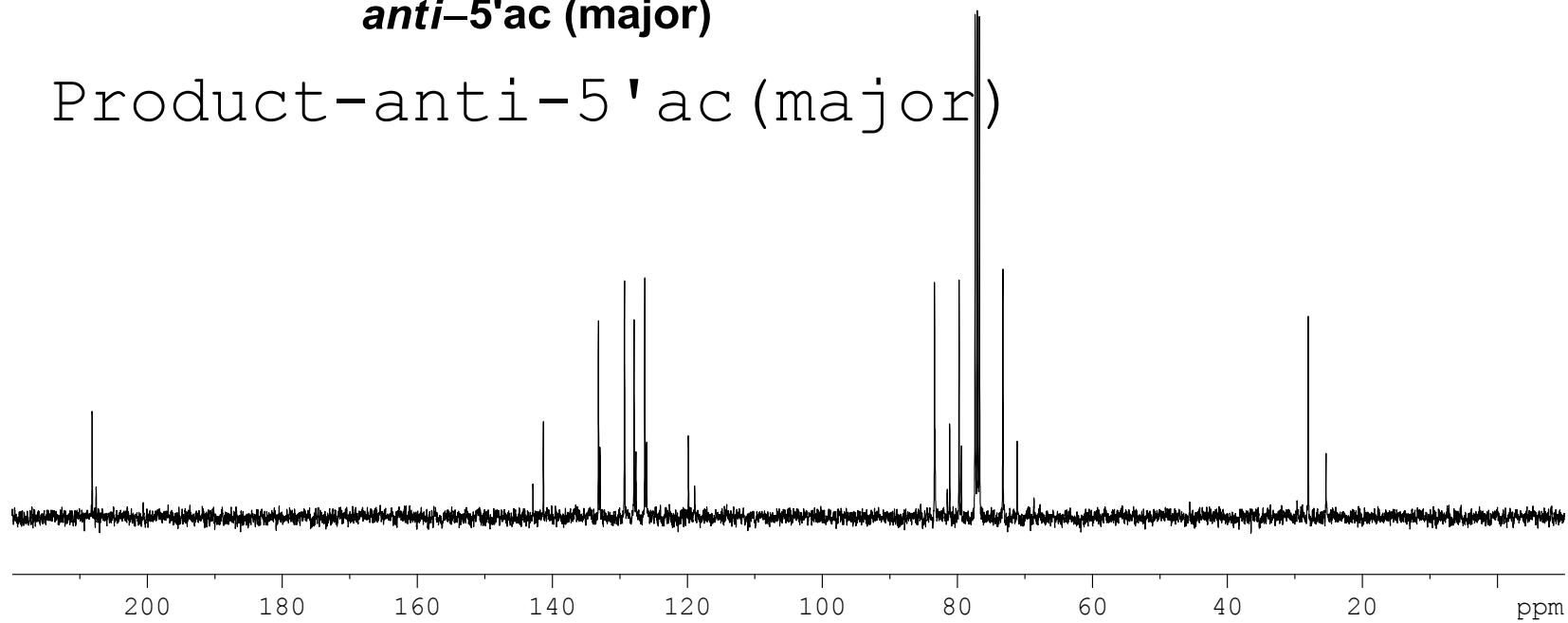
83.347  
83.249  
81.452  
81.094  
79.702  
79.358  
77.324  
77.006  
76.689  
73.212  
71.099

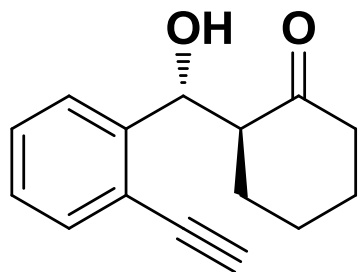
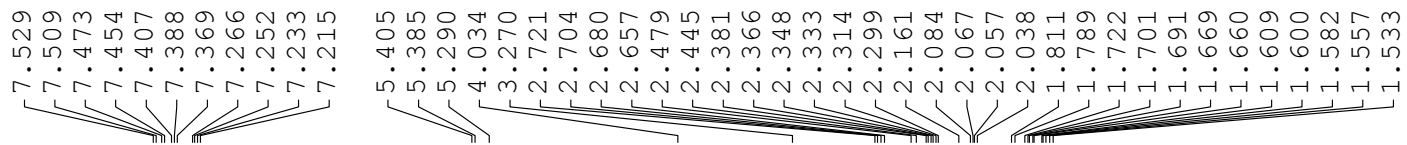
27.977  
25.349



***anti-5'ac* (major)**

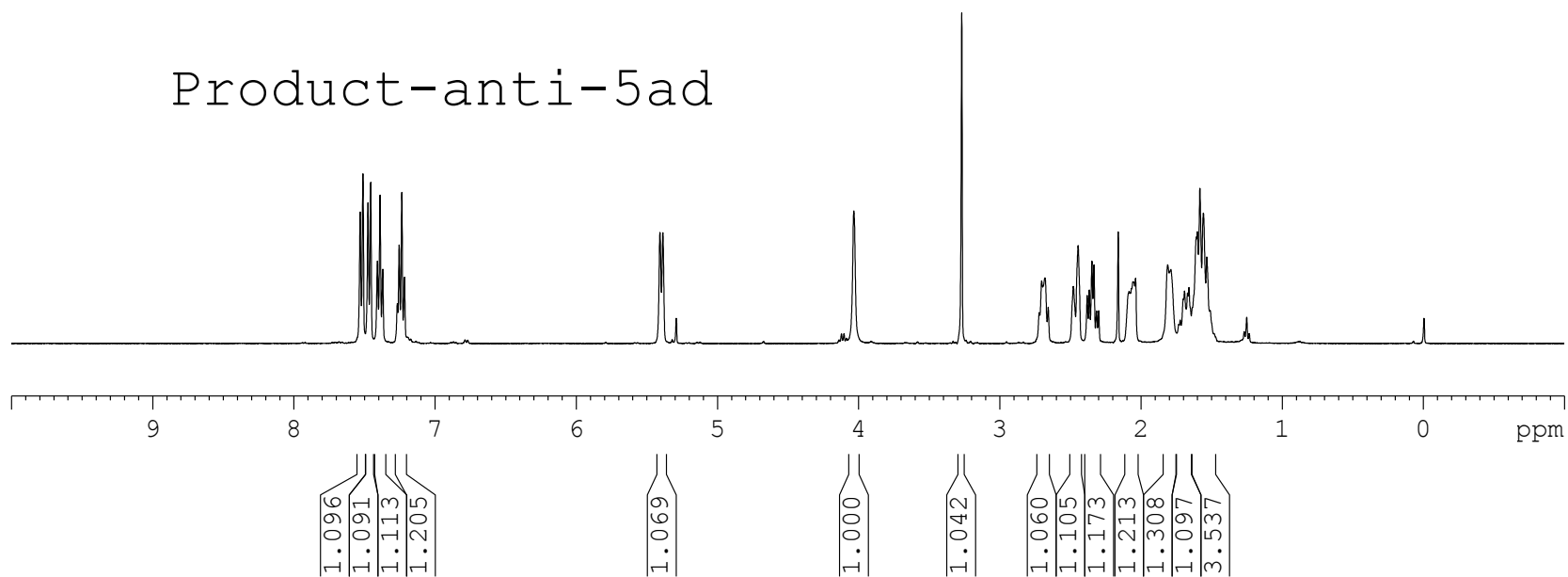
Product-*anti-5'ac* (major)

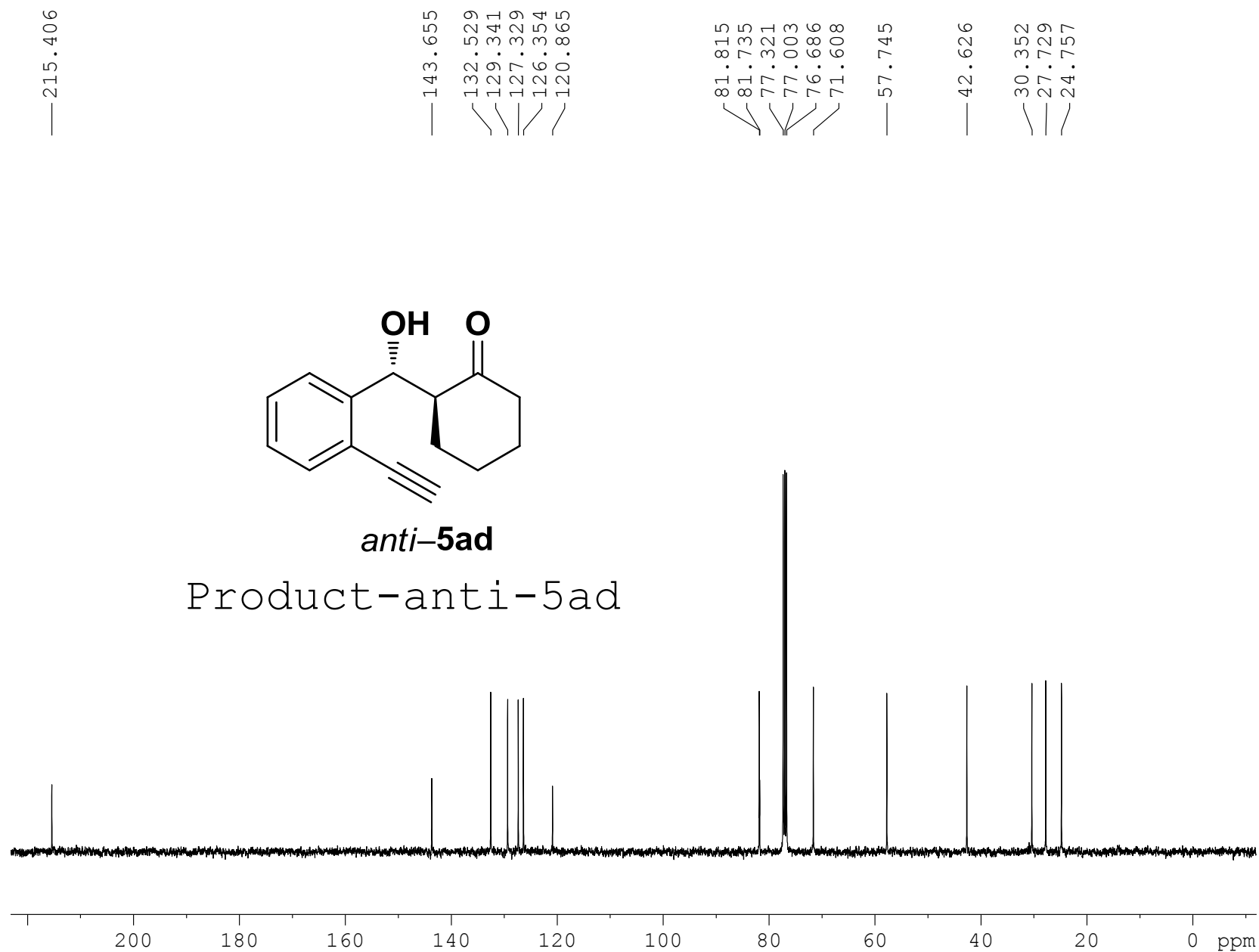


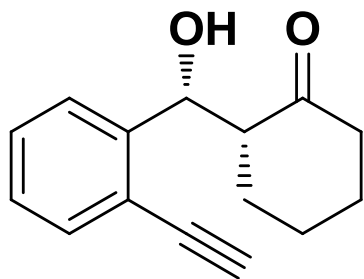
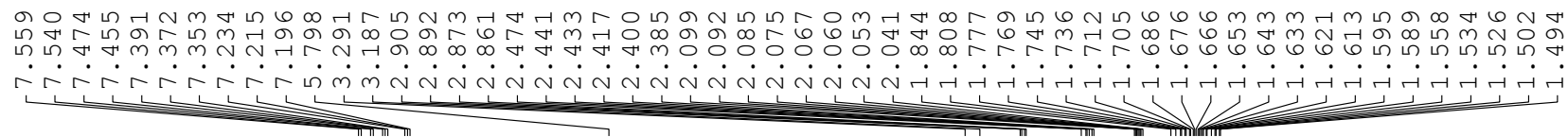


*anti-5ad*

Product-*anti-5ad*

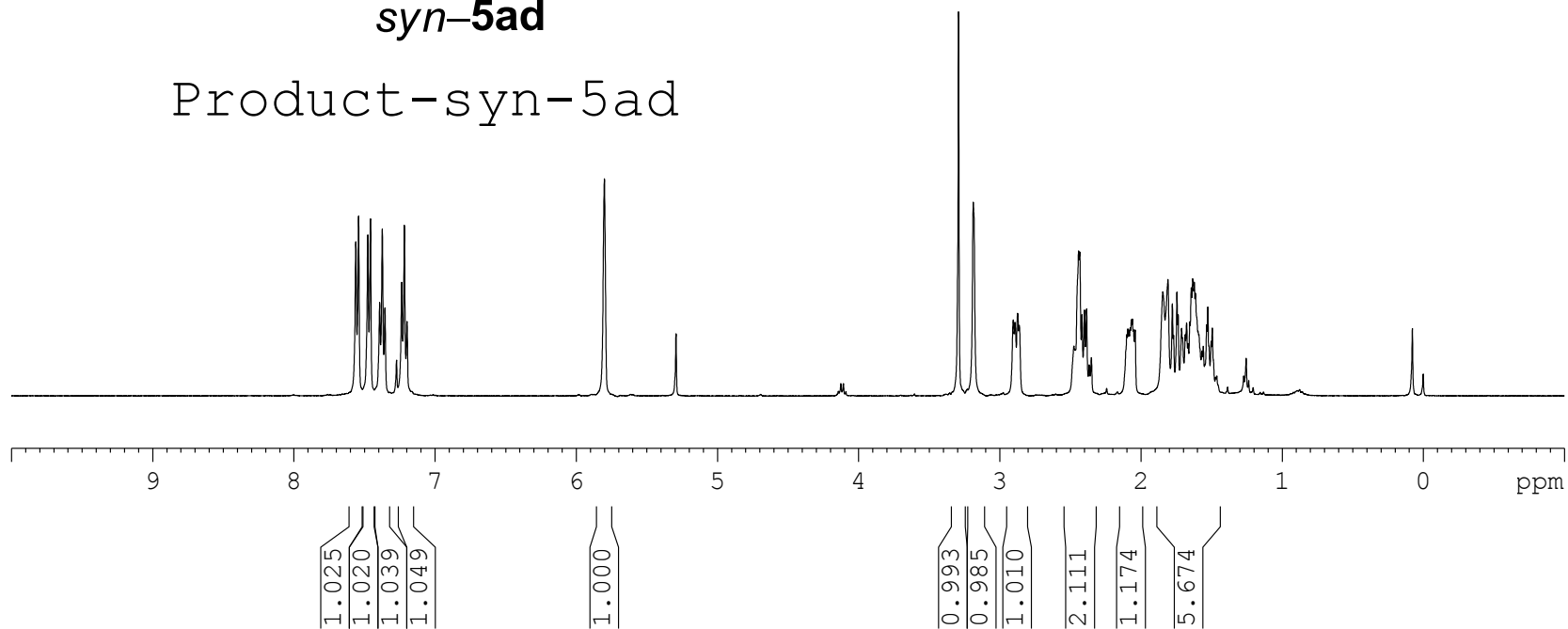






*syn-5ad*

Product-*syn-5ad*





— 214.825

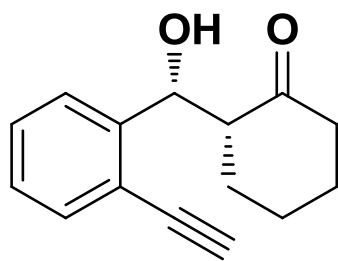
— 143.754  
— 132.660  
— 128.710  
— 126.655  
— 126.539  
— 118.508

— 82.590  
— 81.194  
— 77.318  
— 77.001  
— 76.683  
— 68.657

— 54.550

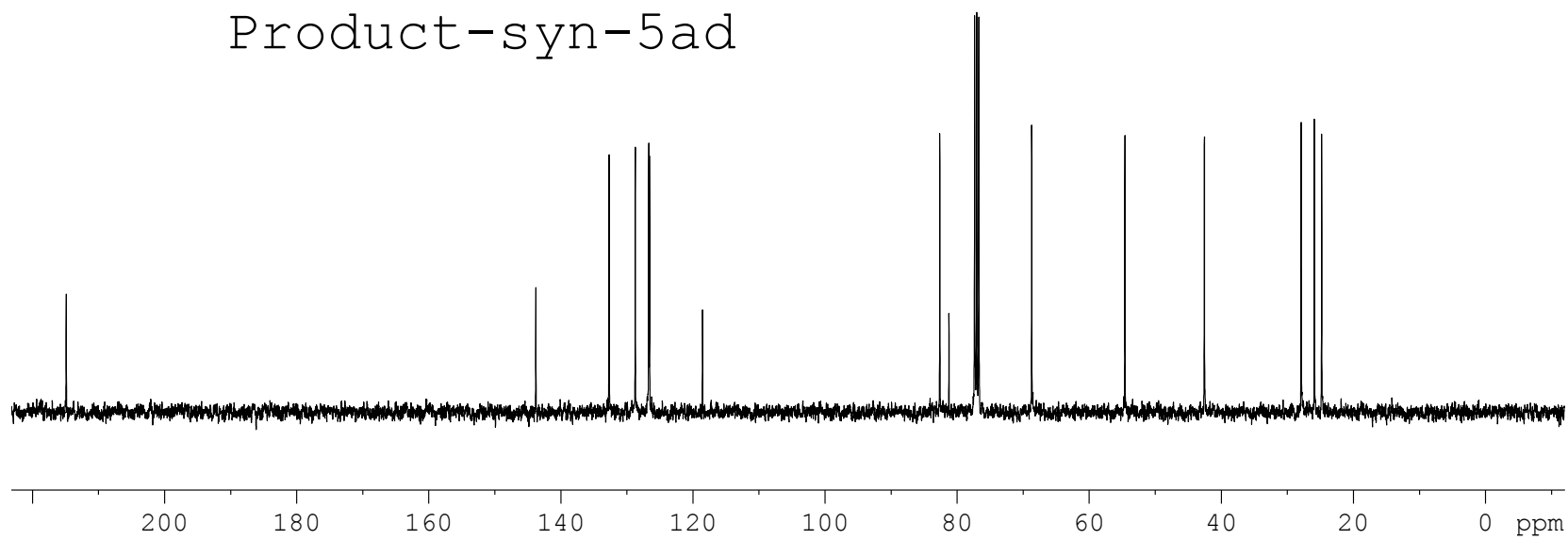
— 42.515

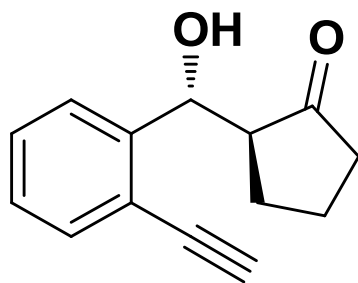
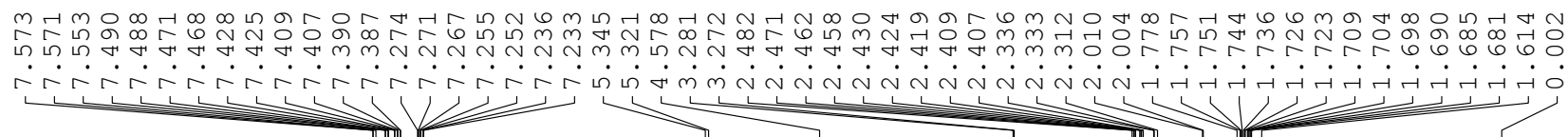
— 27.867  
— 25.864  
— 24.757



*syn-5ad*

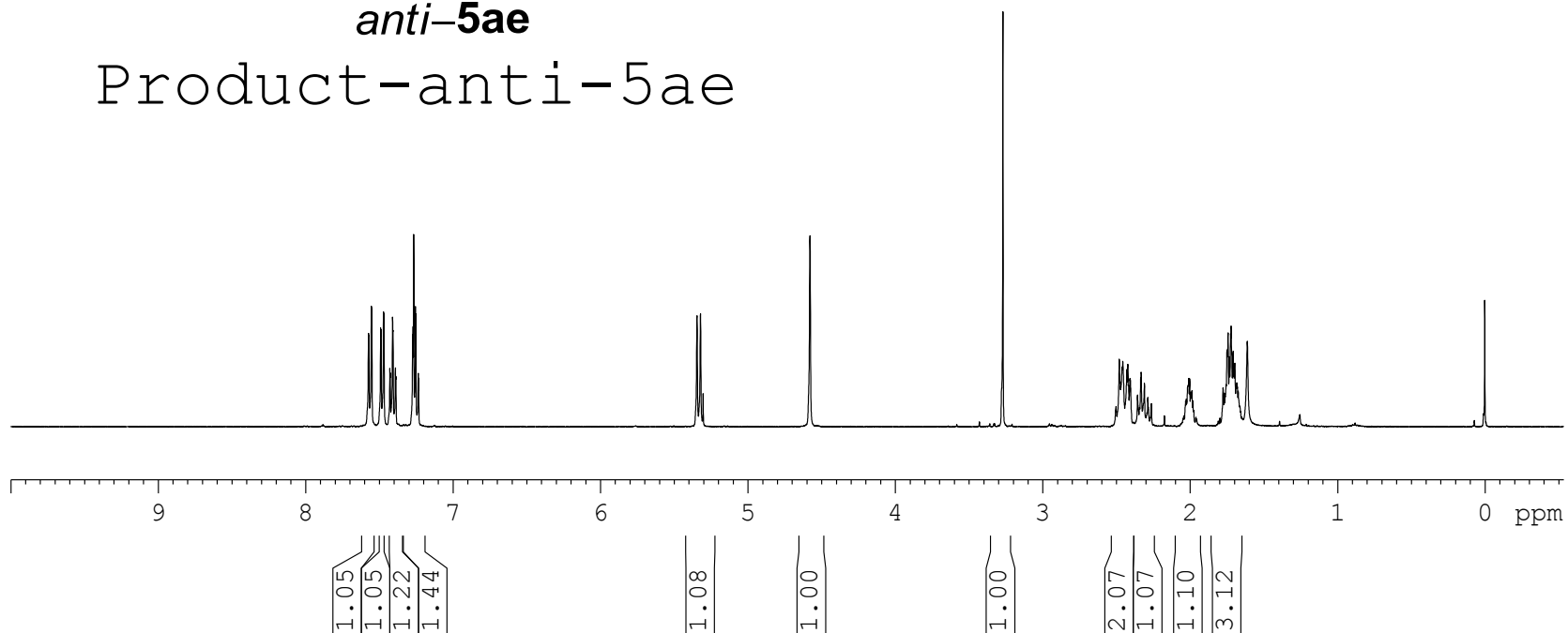
Product-*syn-5ad*

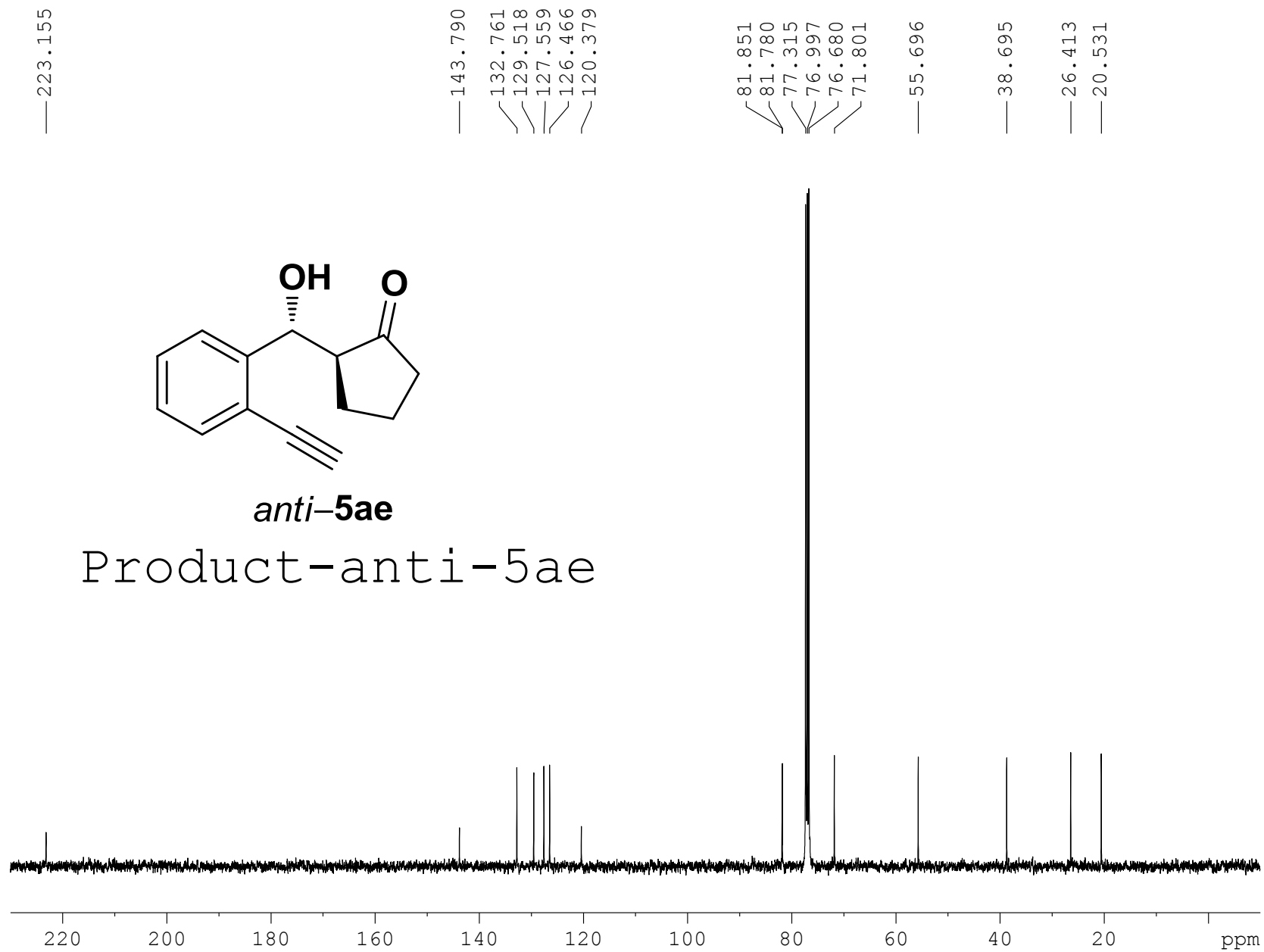




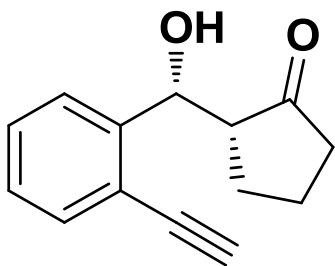
*anti-5ae*

Product-*anti-5ae*



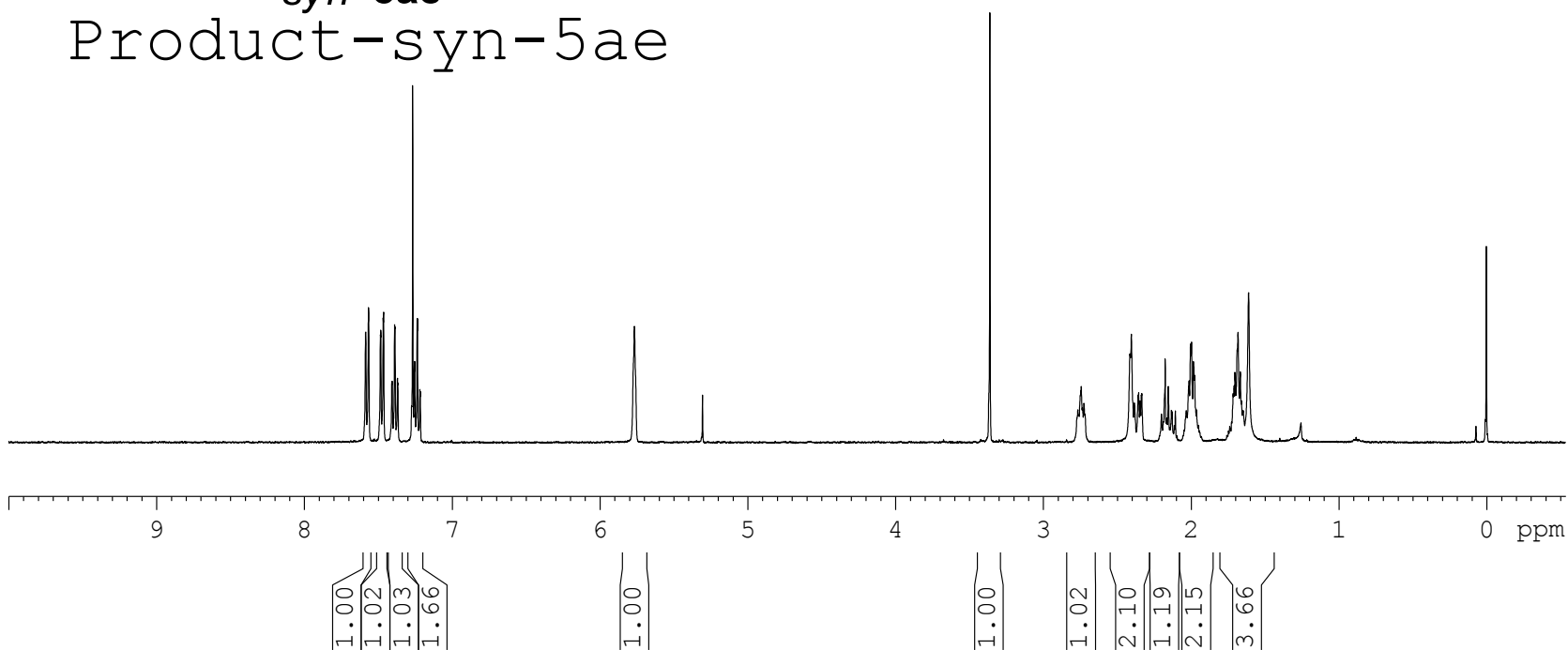


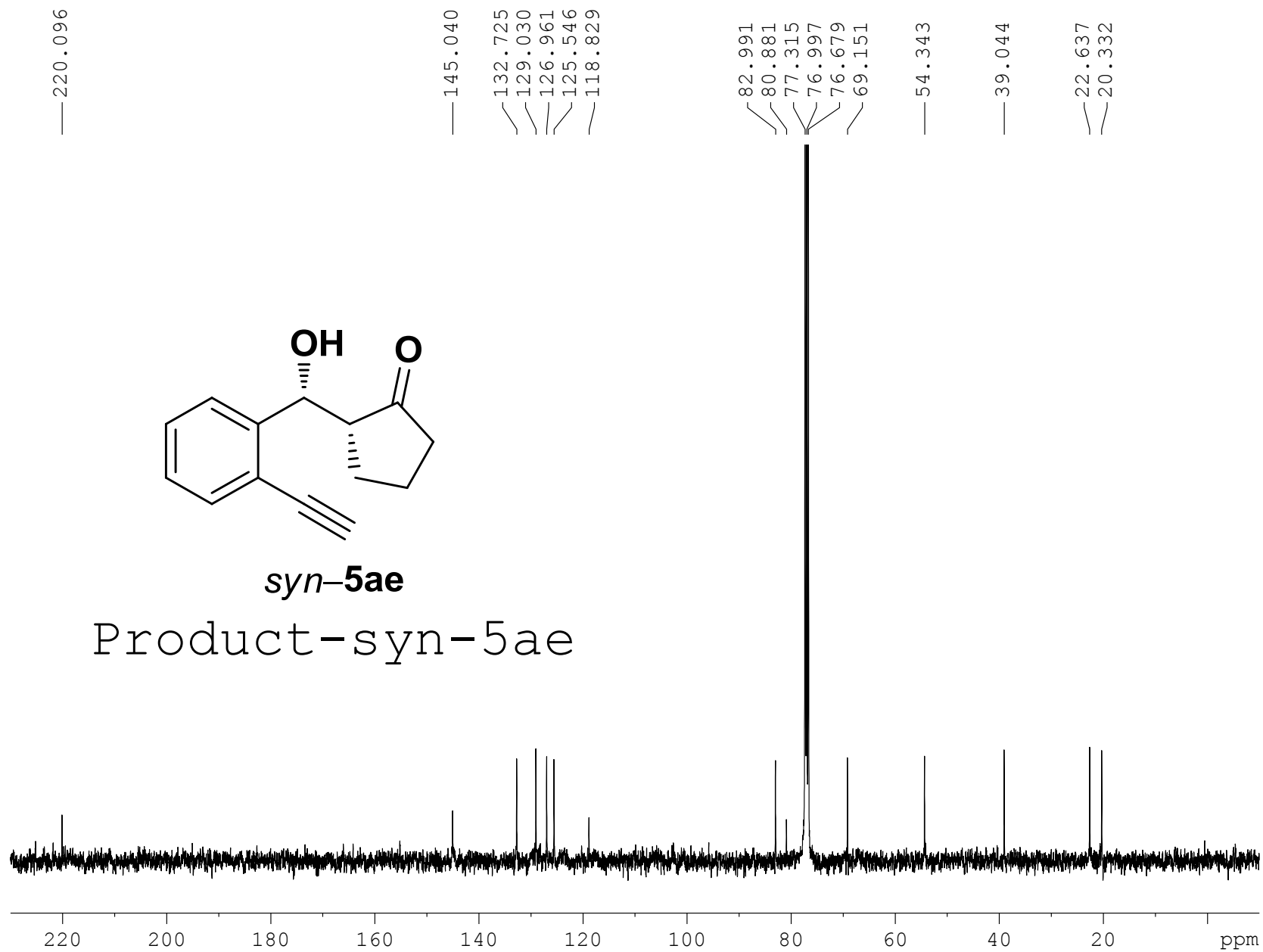
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7.565  
7.484  
7.481  
7.465  
7.462  
7.407  
7.405  
7.388  
7.386  
7.369  
7.367  
7.274  
7.267  
7.255  
7.252  
7.236  
7.234  
7.217  
7.215  
5.766  
5.305  
3.361  
2.768  
2.747  
2.744  
2.736  
2.726  
2.415  
2.405  
2.385  
2.382  
2.360  
2.356  
2.346  
2.334  
2.176  
2.155  
2.134  
2.014  
2.004  
1.998  
1.985  
1.977  
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1.688  
1.683  
1.667  
1.659  
1.612  
0.003

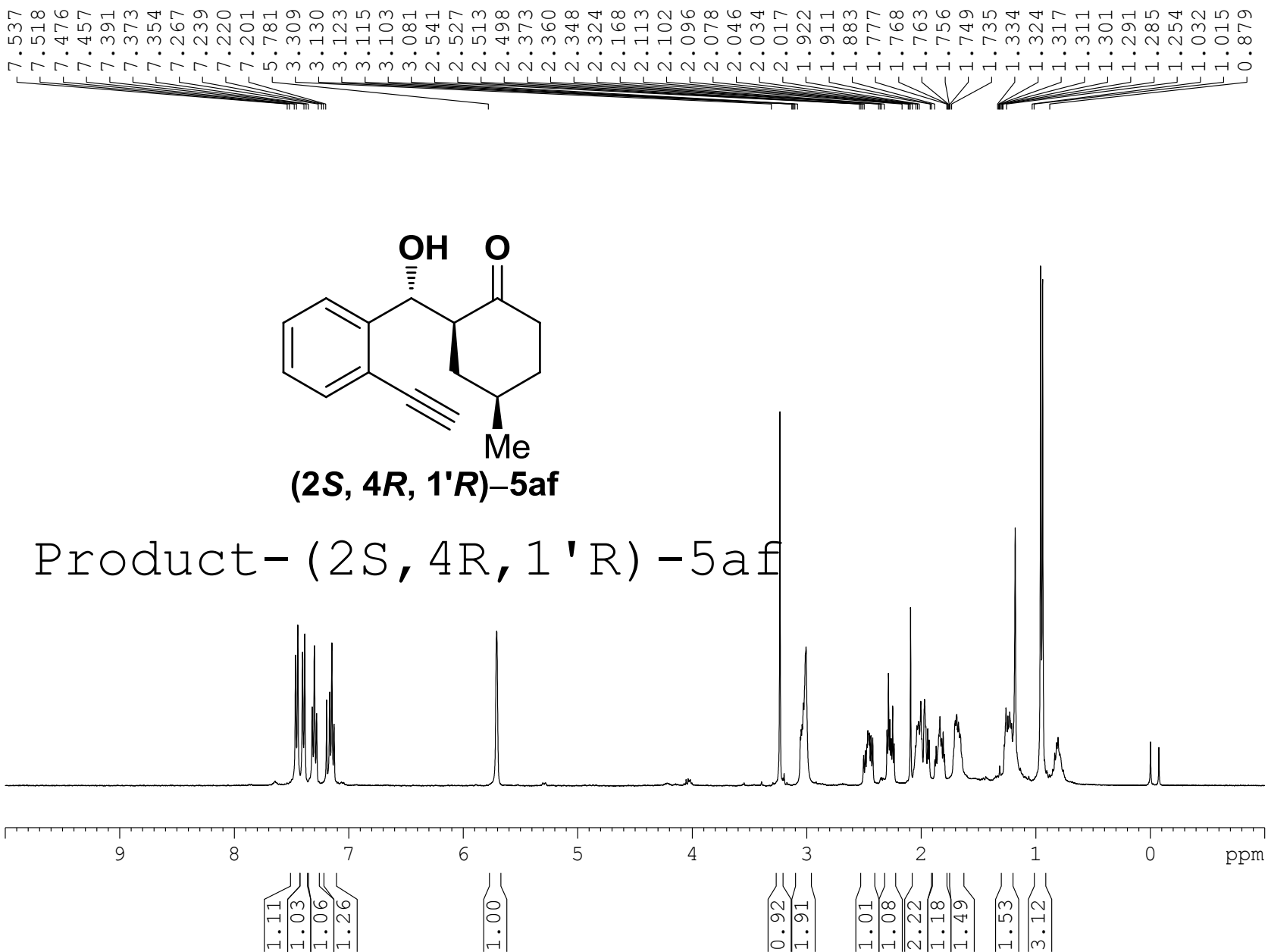


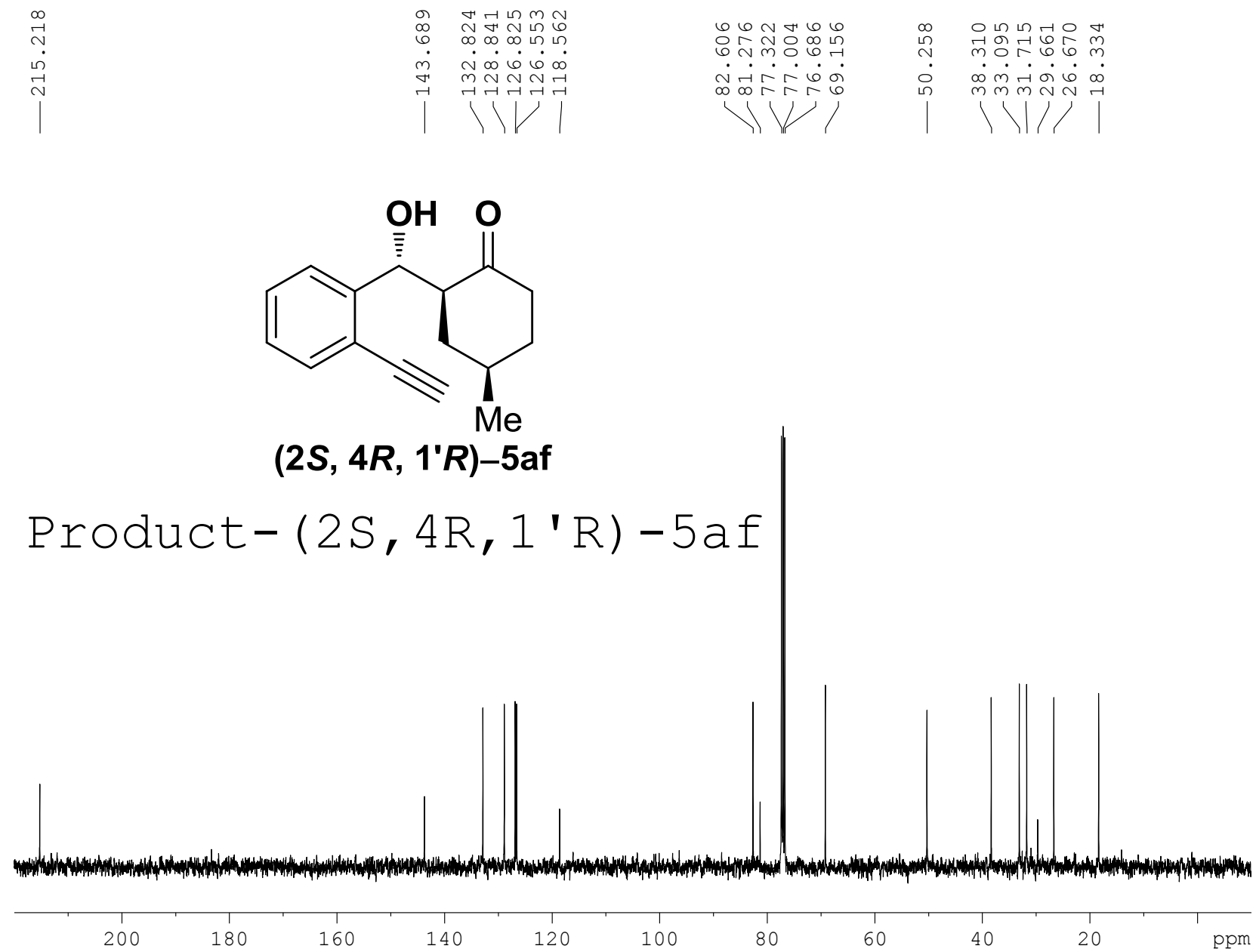
*syn*-5ae

Product-*syn*-5ae

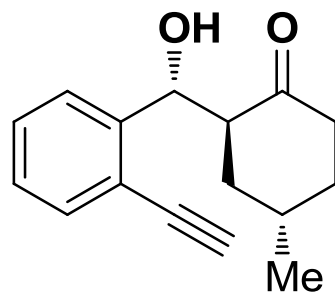






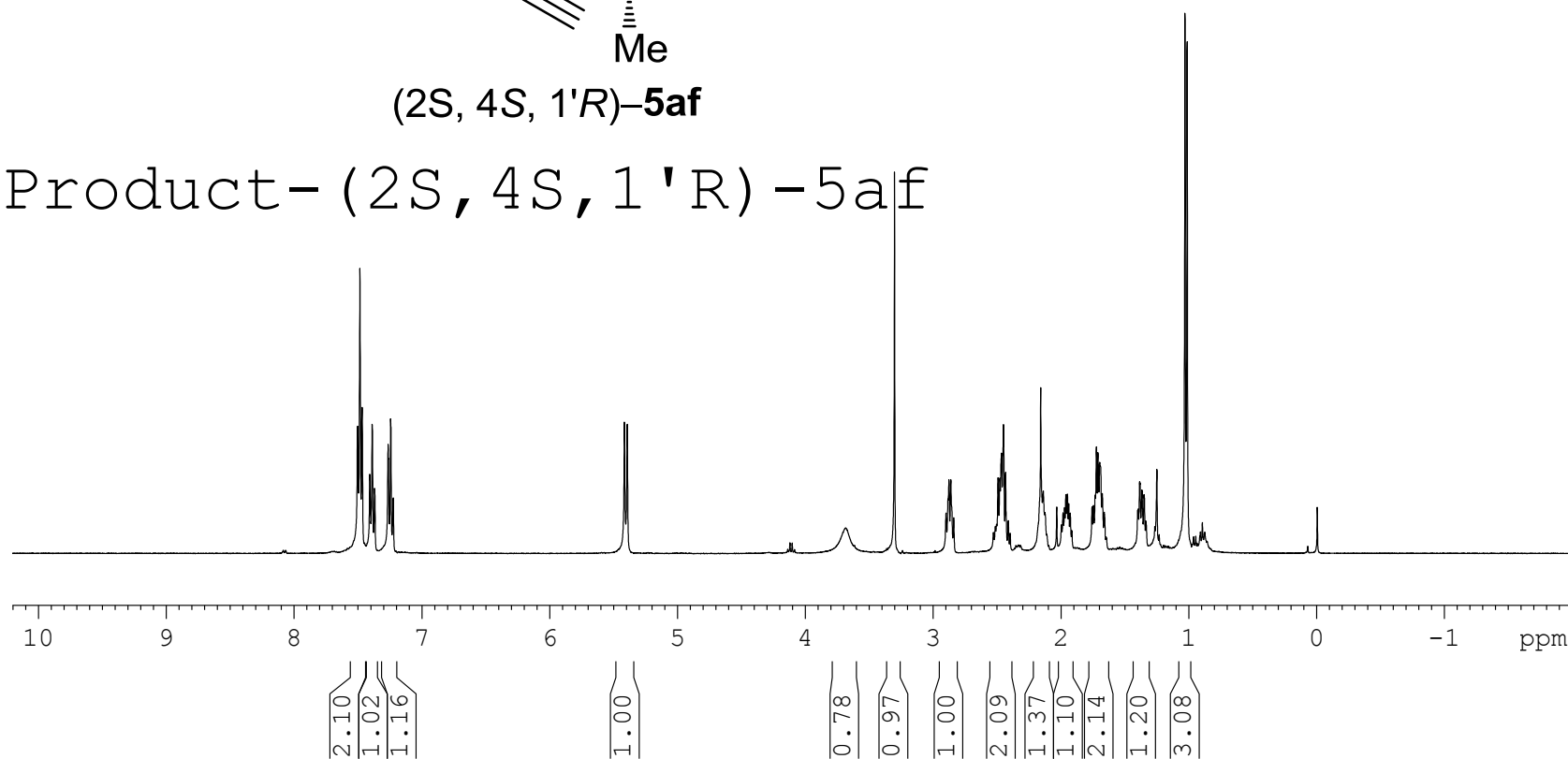


7.503  
7.484  
7.468  
7.466  
7.407  
7.388  
7.370  
7.264  
7.261  
7.244  
7.225  
7.223  
5.414  
5.393  
3.303  
2.900  
2.884  
2.877  
2.863  
2.493  
2.478  
2.469  
2.465  
2.451  
2.434  
2.160  
2.139  
2.127  
2.034  
1.985  
1.973  
1.963  
1.951  
1.940  
1.928  
1.758  
1.747  
1.733  
1.723  
1.712  
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1.662  
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1.397  
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1.382  
1.367  
1.351  
1.348

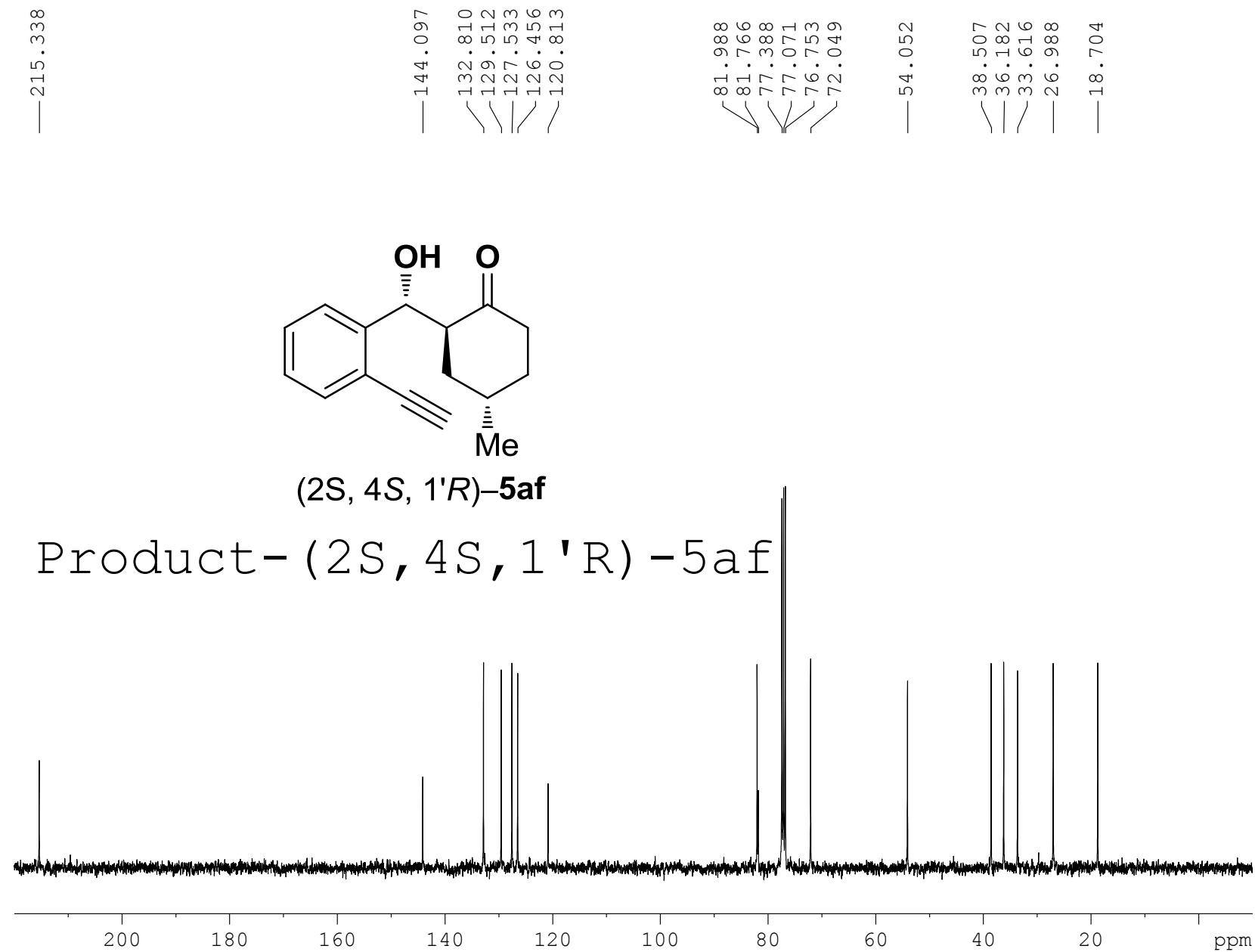


(2S, 4S, 1'R)-5af

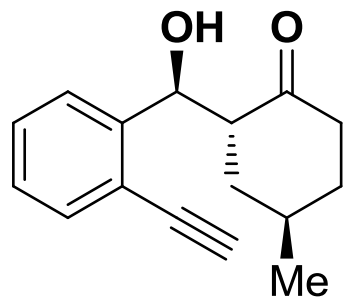
Product - (2S, 4S, 1'R) - 5af





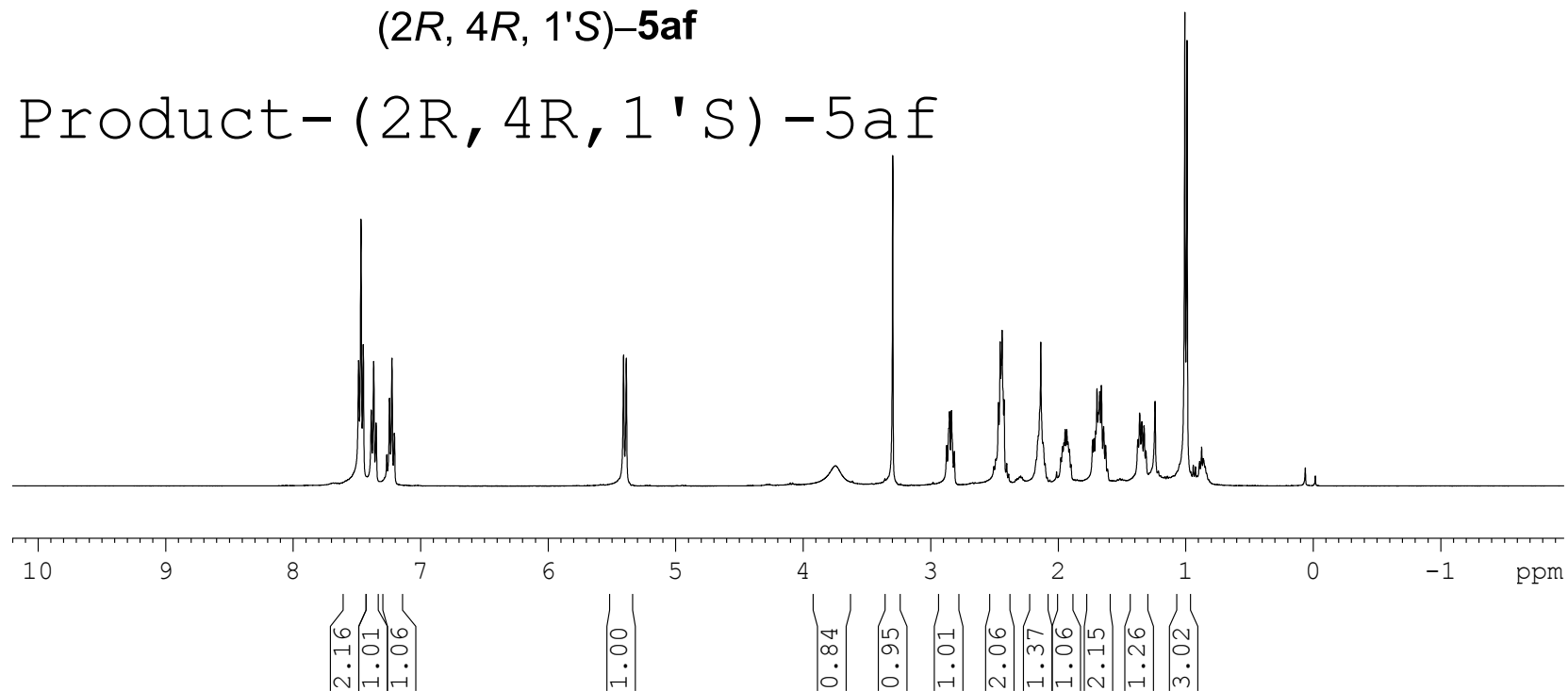


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7.468  
7.450  
7.388  
7.369  
7.350  
7.244  
7.225  
7.206  
5.409  
5.387  
3.300  
2.876  
2.854  
2.839  
2.817  
2.470  
2.457  
2.448  
2.442  
2.426  
2.157  
2.138  
2.120  
1.968  
1.957  
1.947  
1.934  
1.925  
1.914  
1.732  
1.721  
1.708  
1.697  
1.686  
1.676  
1.663  
1.646  
1.629  
1.376  
1.363  
1.345  
1.329  
1.314  
1.242  
1.008



(2R, 4R, 1'S)-5af

Product - (2R, 4R, 1'S) - 5af



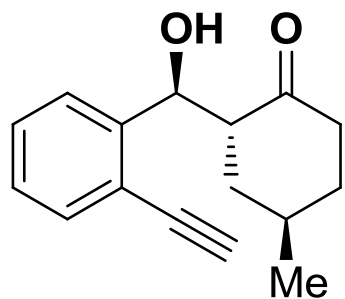
—215.179

—144.044  
—132.654  
—129.383  
—127.394  
—126.341  
—120.677

81.886  
81.640  
77.322  
77.003  
76.686  
71.864

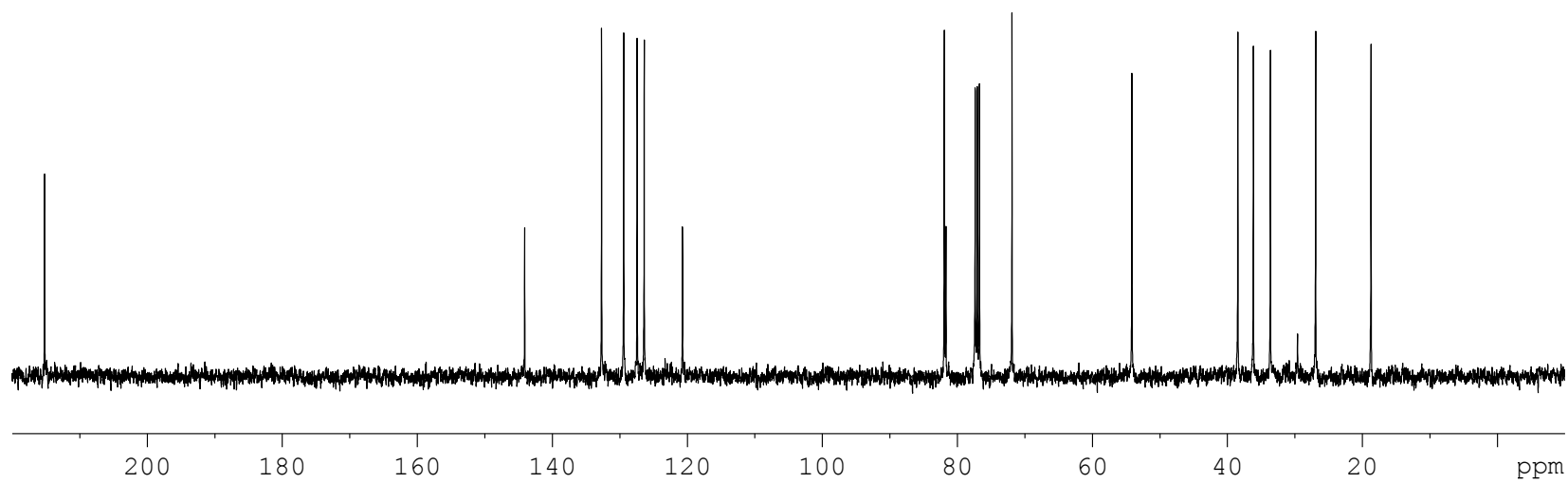
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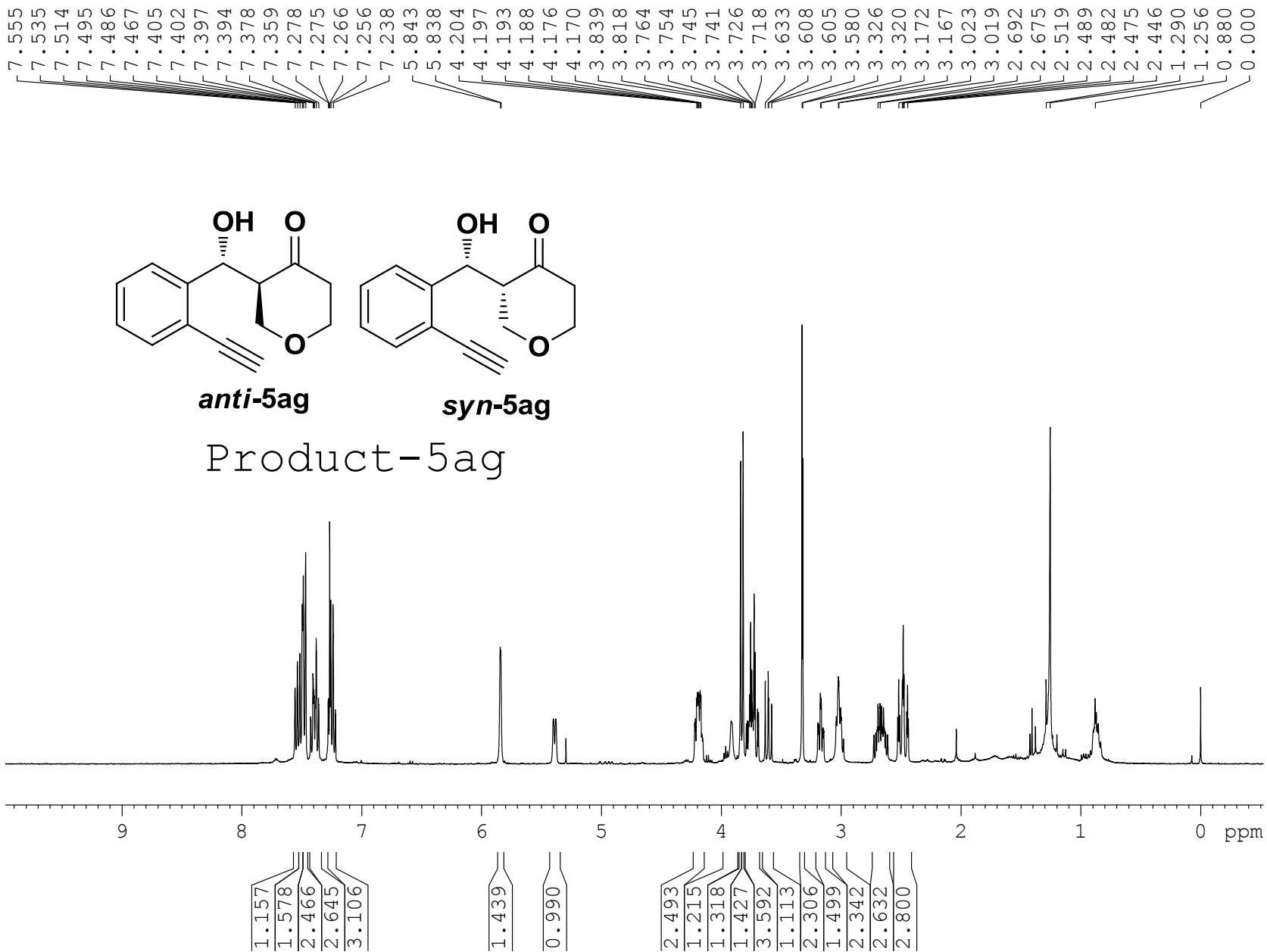
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33.580  
29.566  
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—18.674

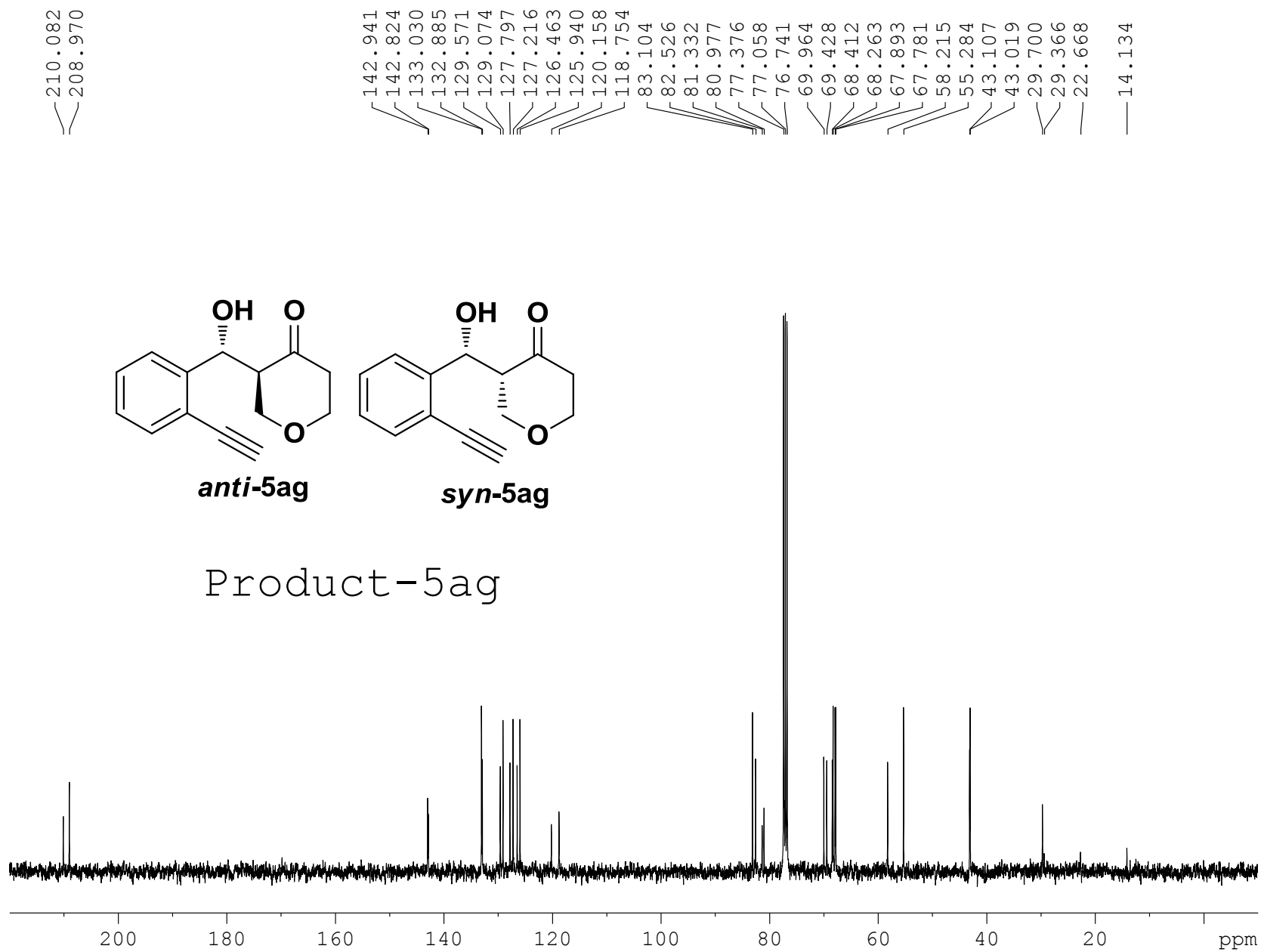


(2*R*, 4*R*, 1'*S*)-5af

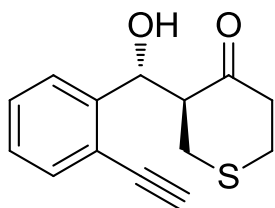
Product- (2*R*, 4*R*, 1'*S*)-5af





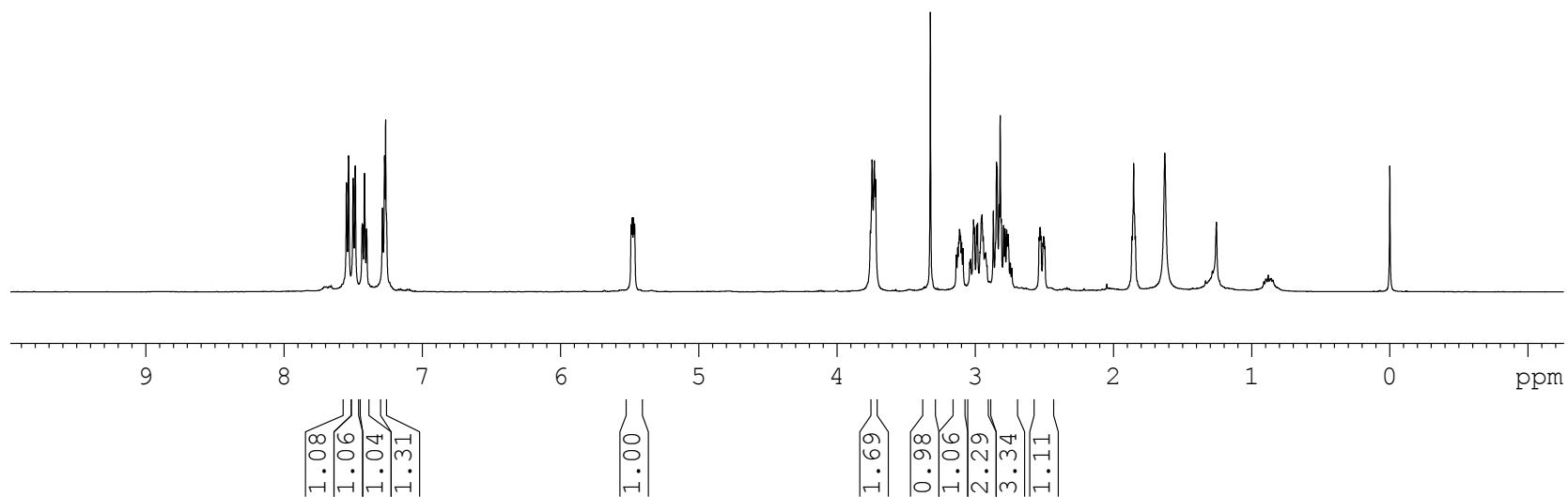


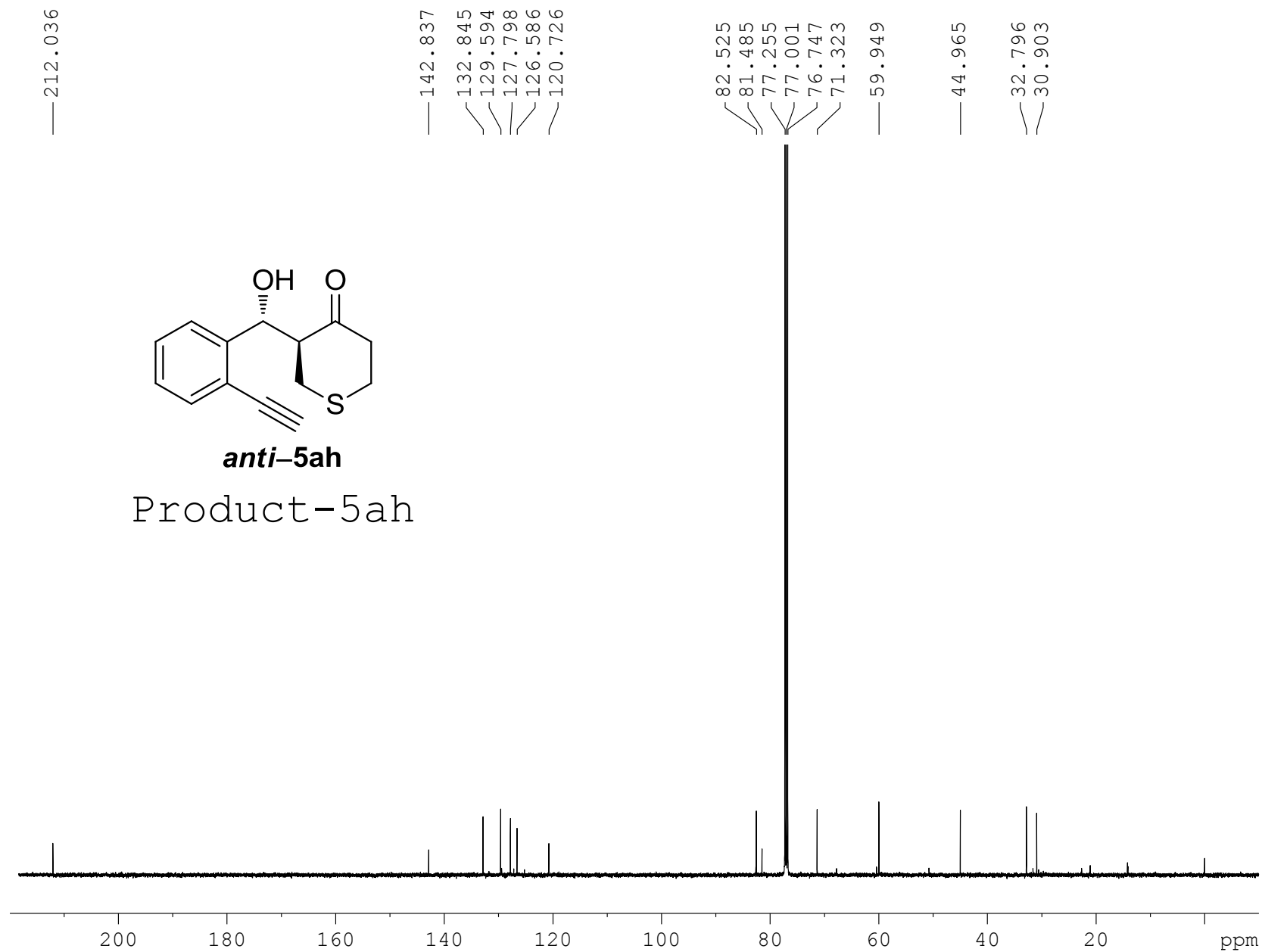
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7.432  
7.417  
7.402  
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7.272  
7.264  
7.259  
5.487  
5.480  
5.471  
5.463  
3.757  
3.745  
3.728  
3.719  
3.323  
3.126  
3.118  
3.112  
3.104  
3.097  
3.010  
3.004  
2.989  
2.982  
2.954  
2.950  
2.845  
2.840  
2.826  
2.818  
2.536  
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1.253  
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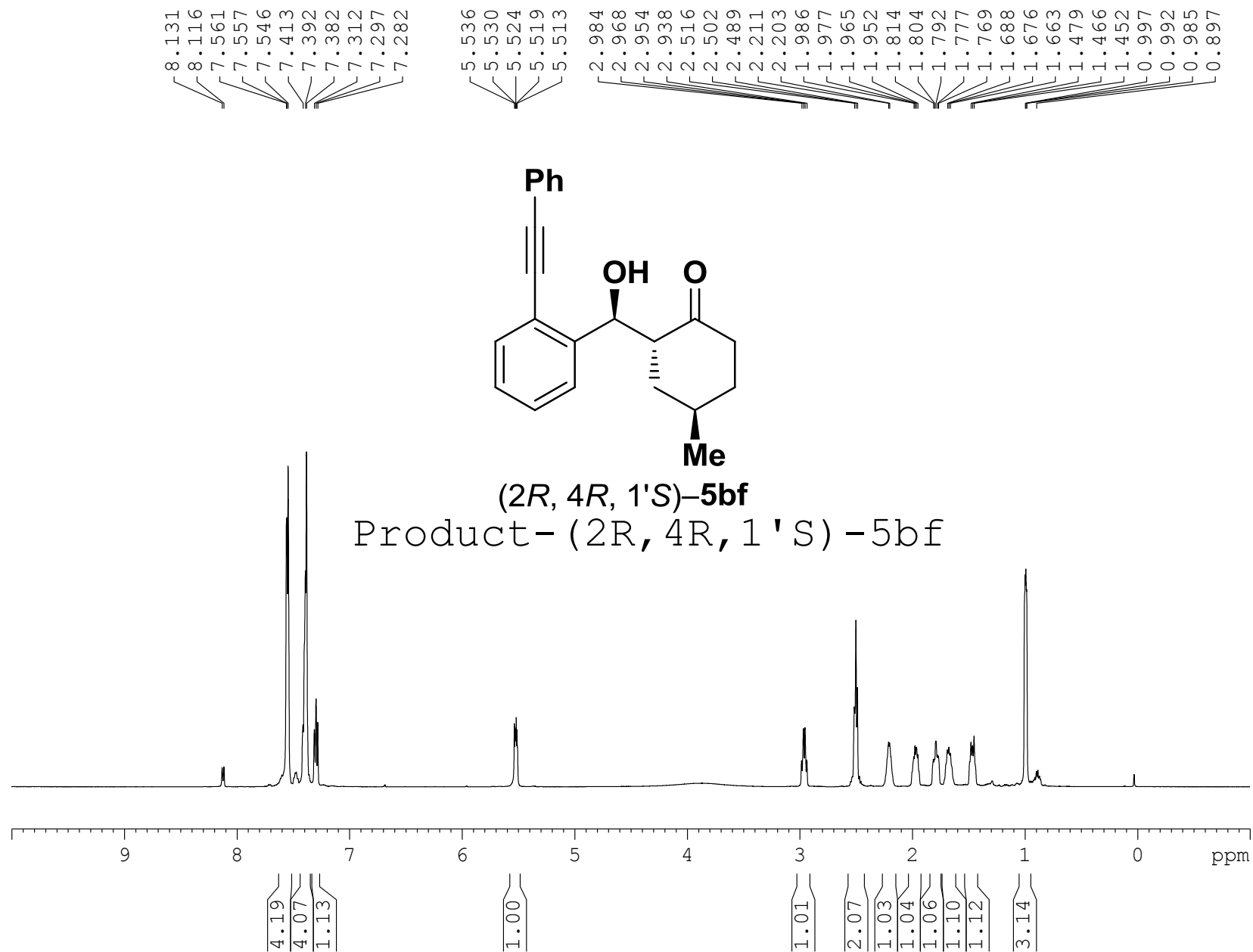
***anti-5ah***

Product-5ah

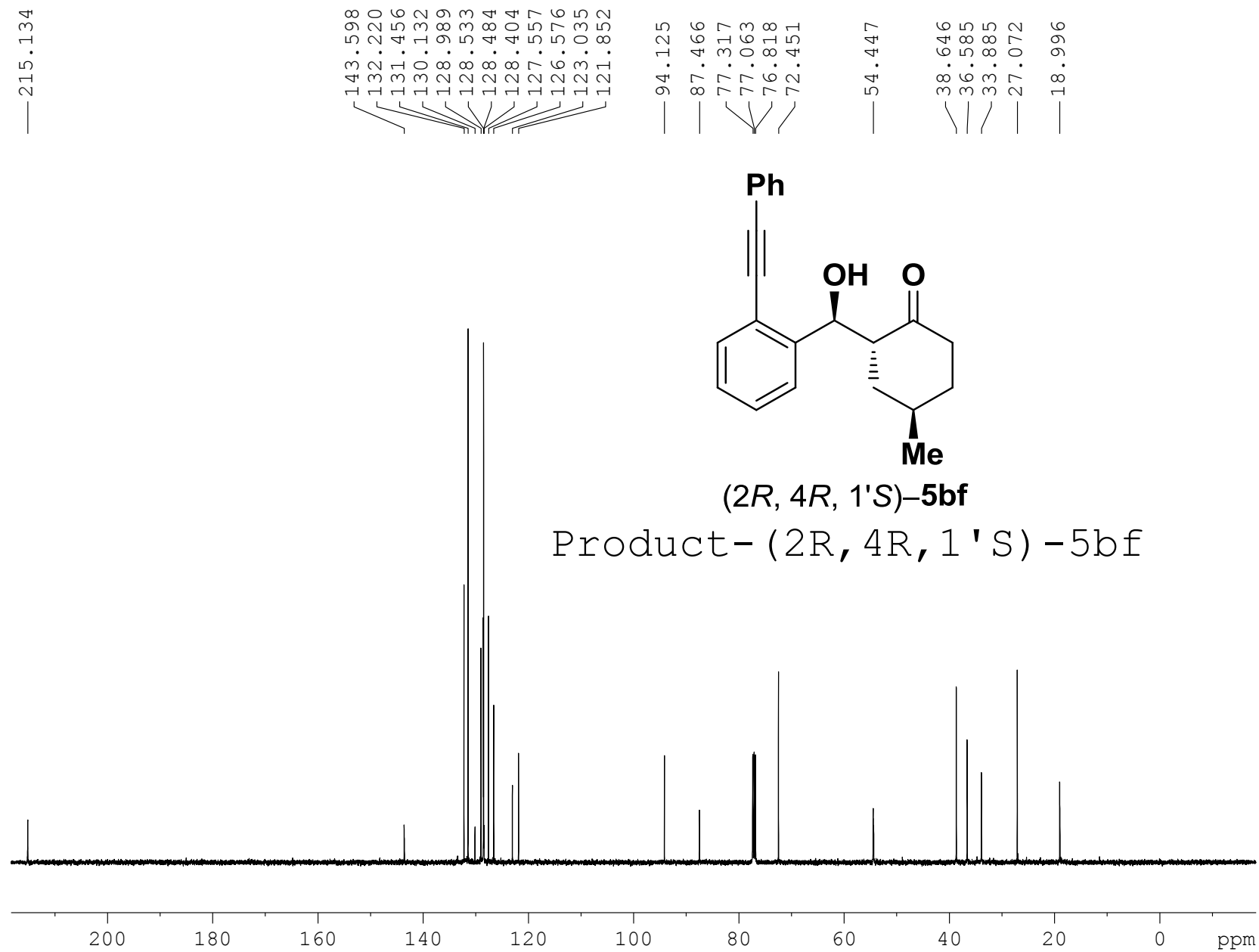


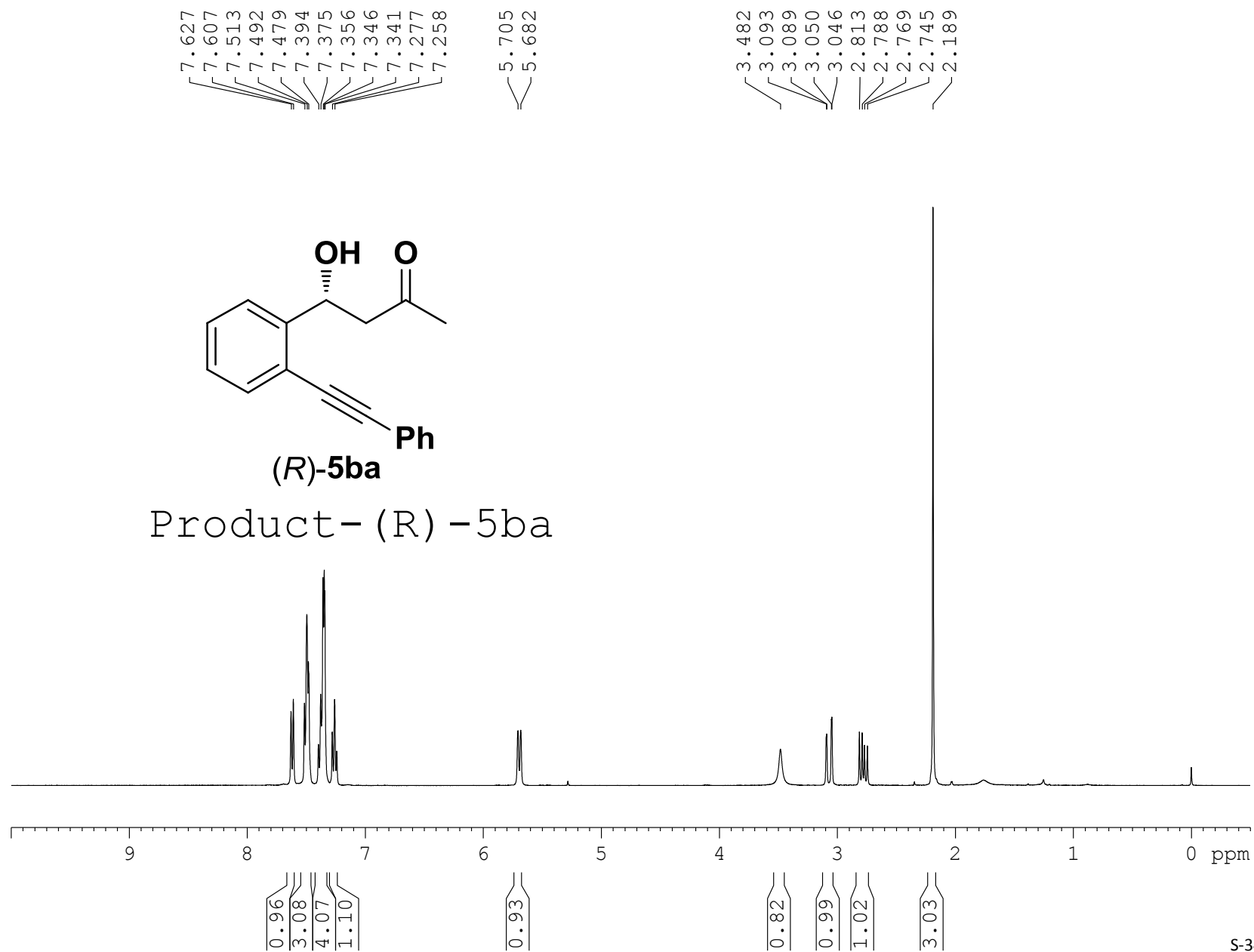


**anti-5ah**  
Product-5ah









— 209.224

144.524  
131.985  
131.378  
128.858  
128.518  
128.452  
127.159  
125.097  
122.825  
119.900

— 94.930

— 86.633

77.321

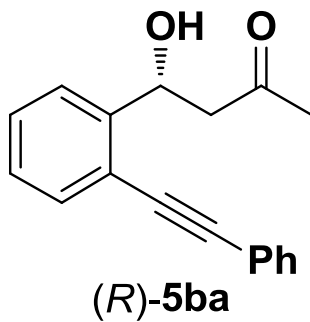
77.003

76.685

— 67.972

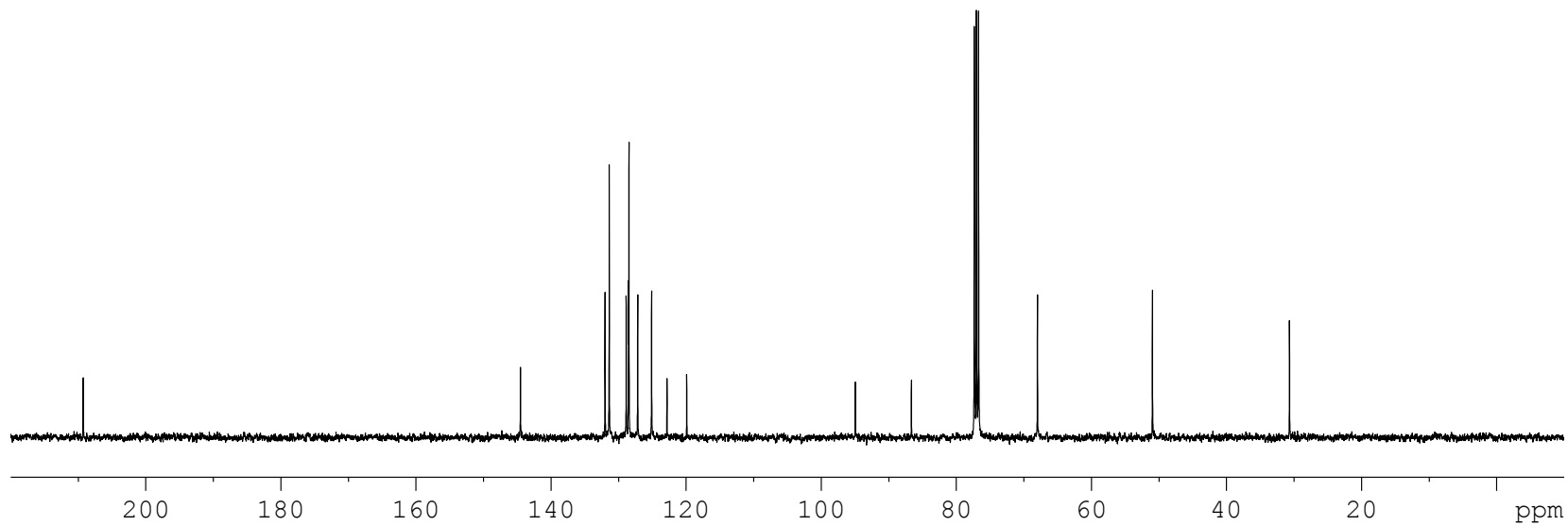
— 50.941

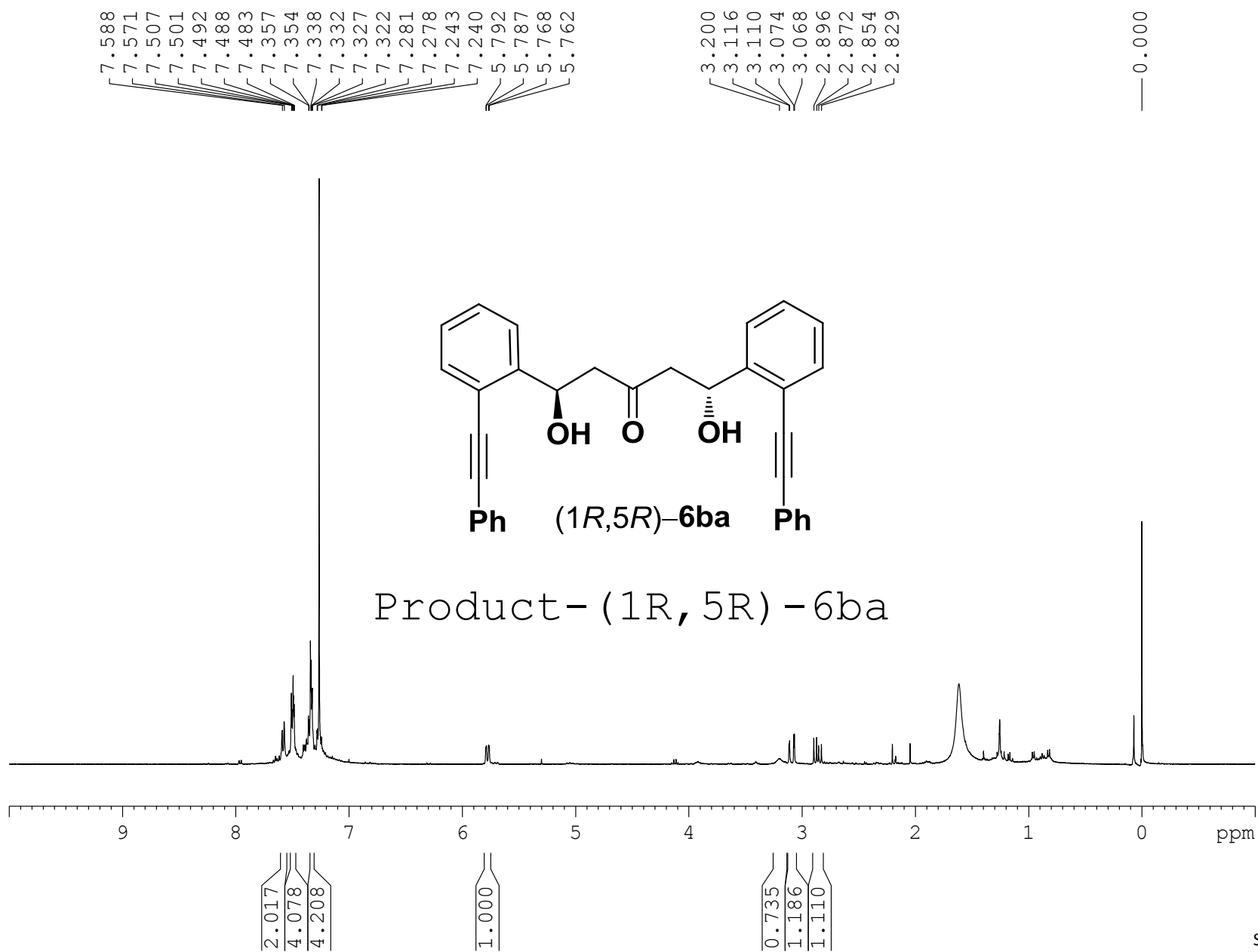
— 30.653

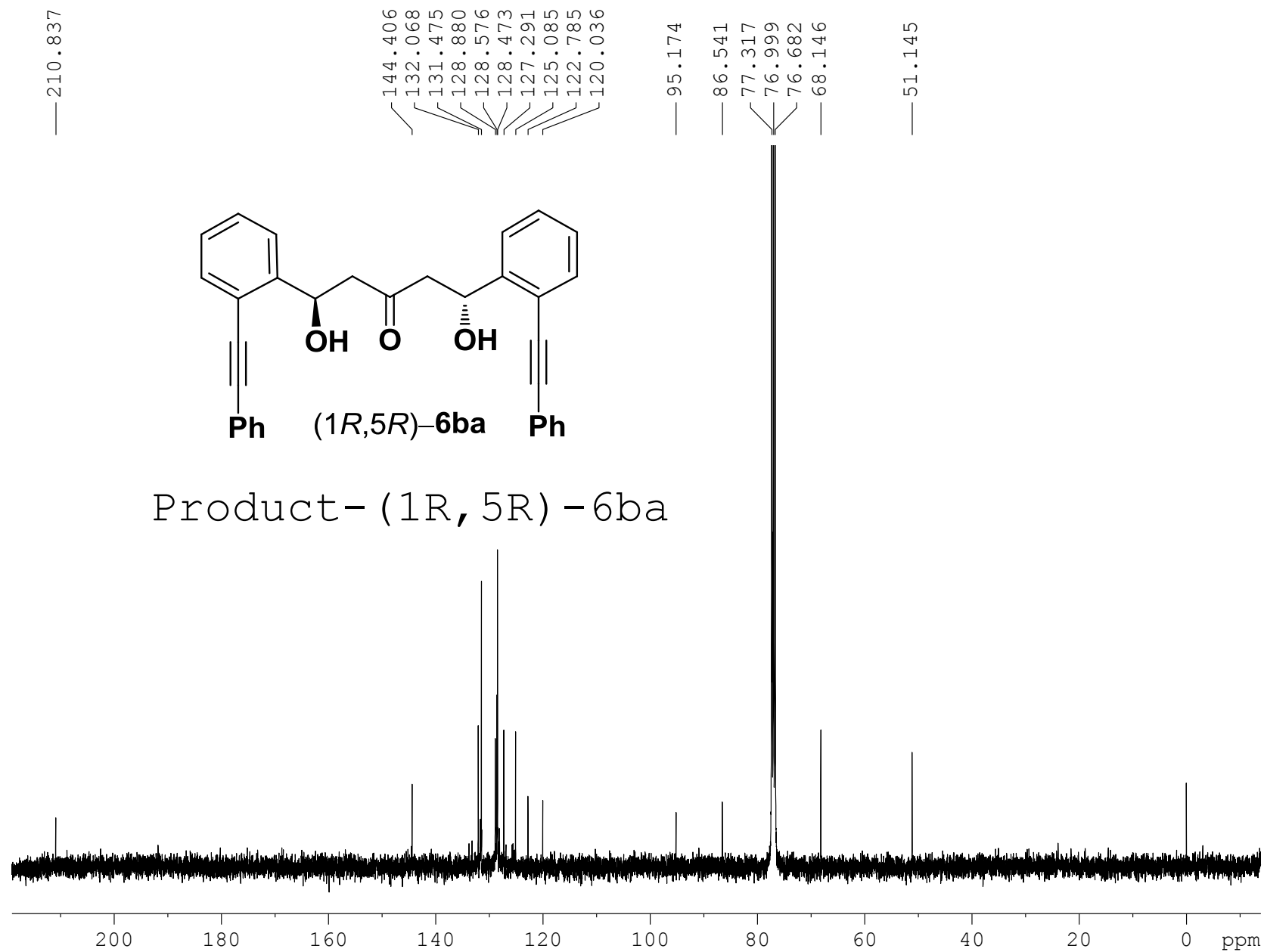


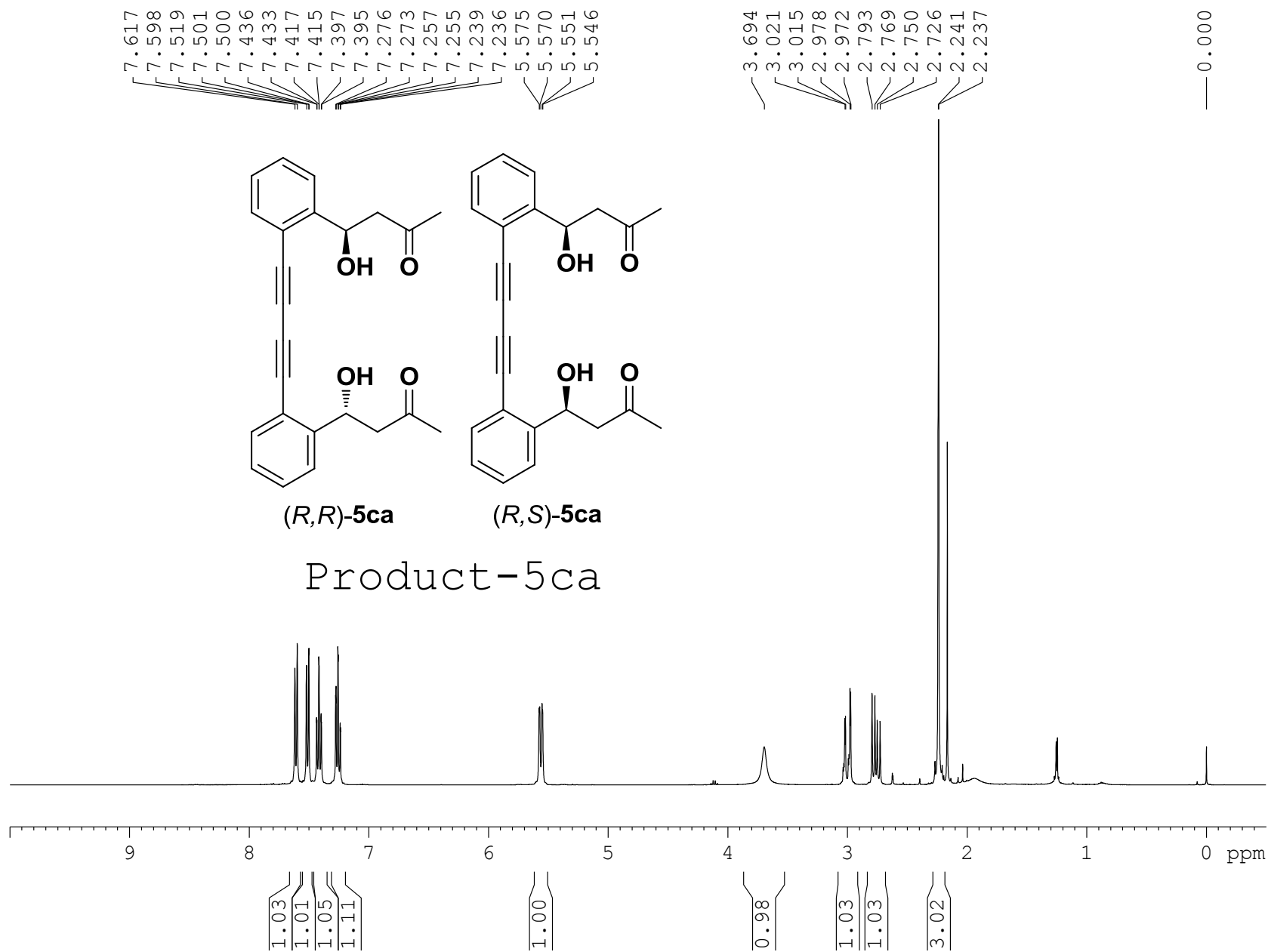
(R)-5ba

Product - (R) - 5ba

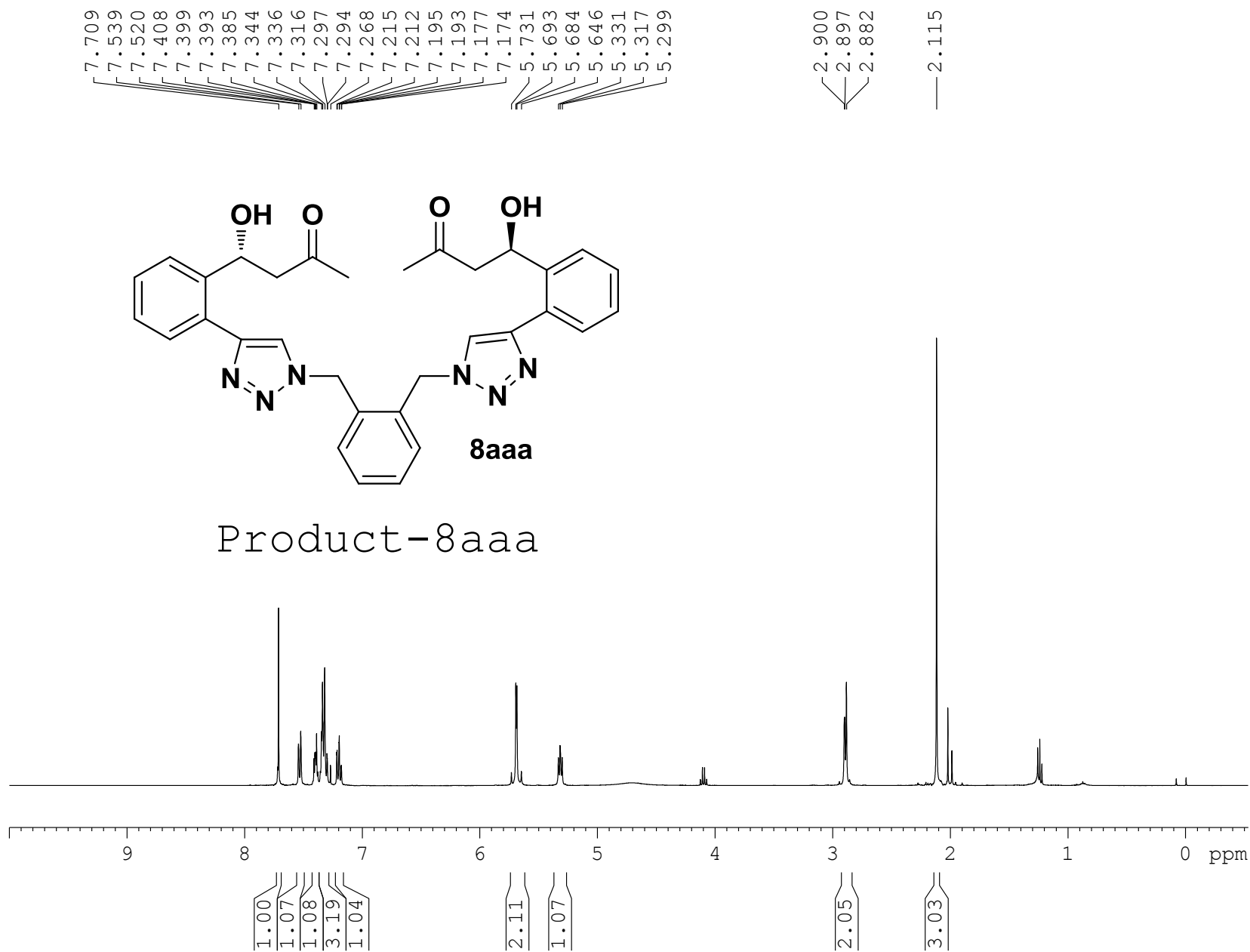




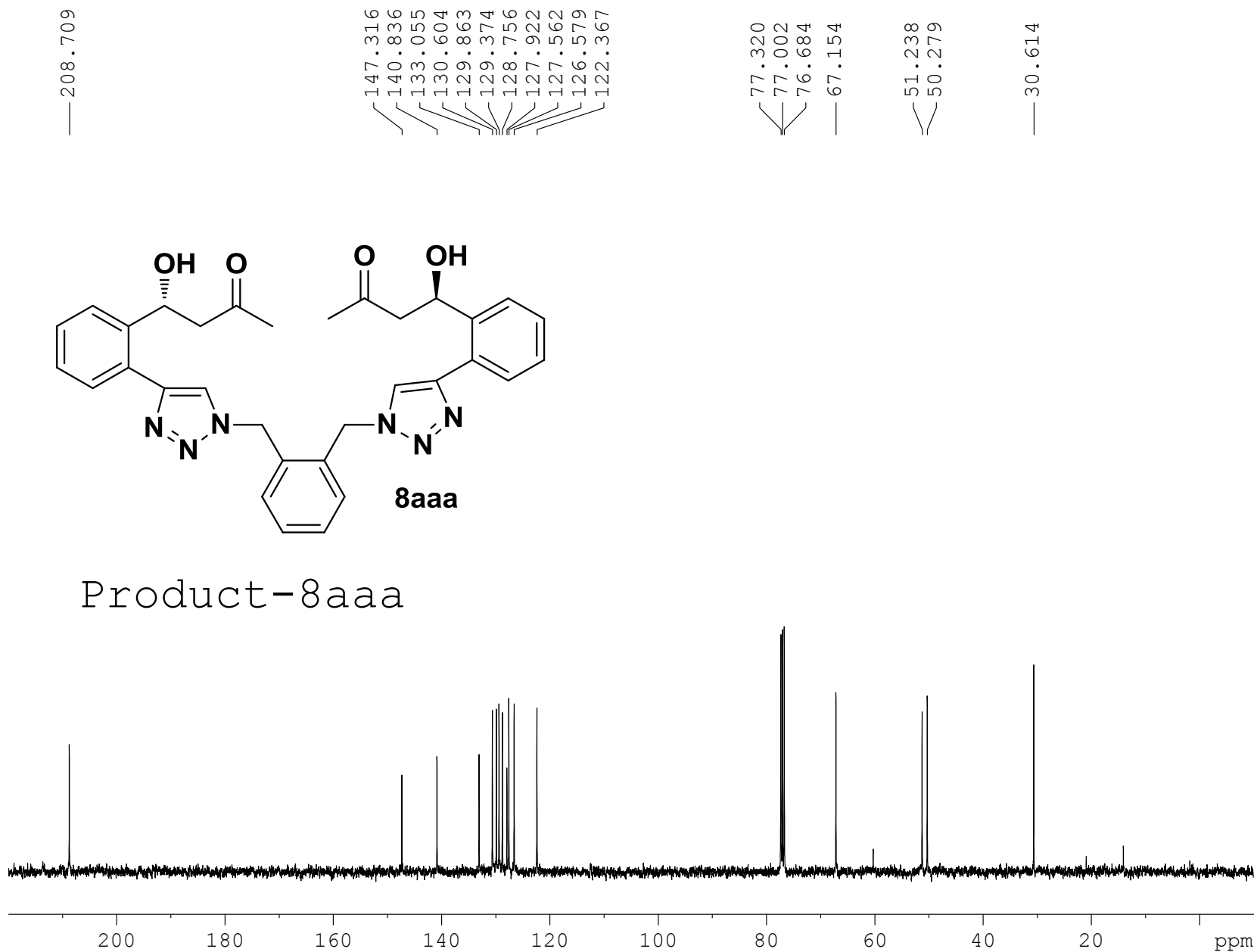


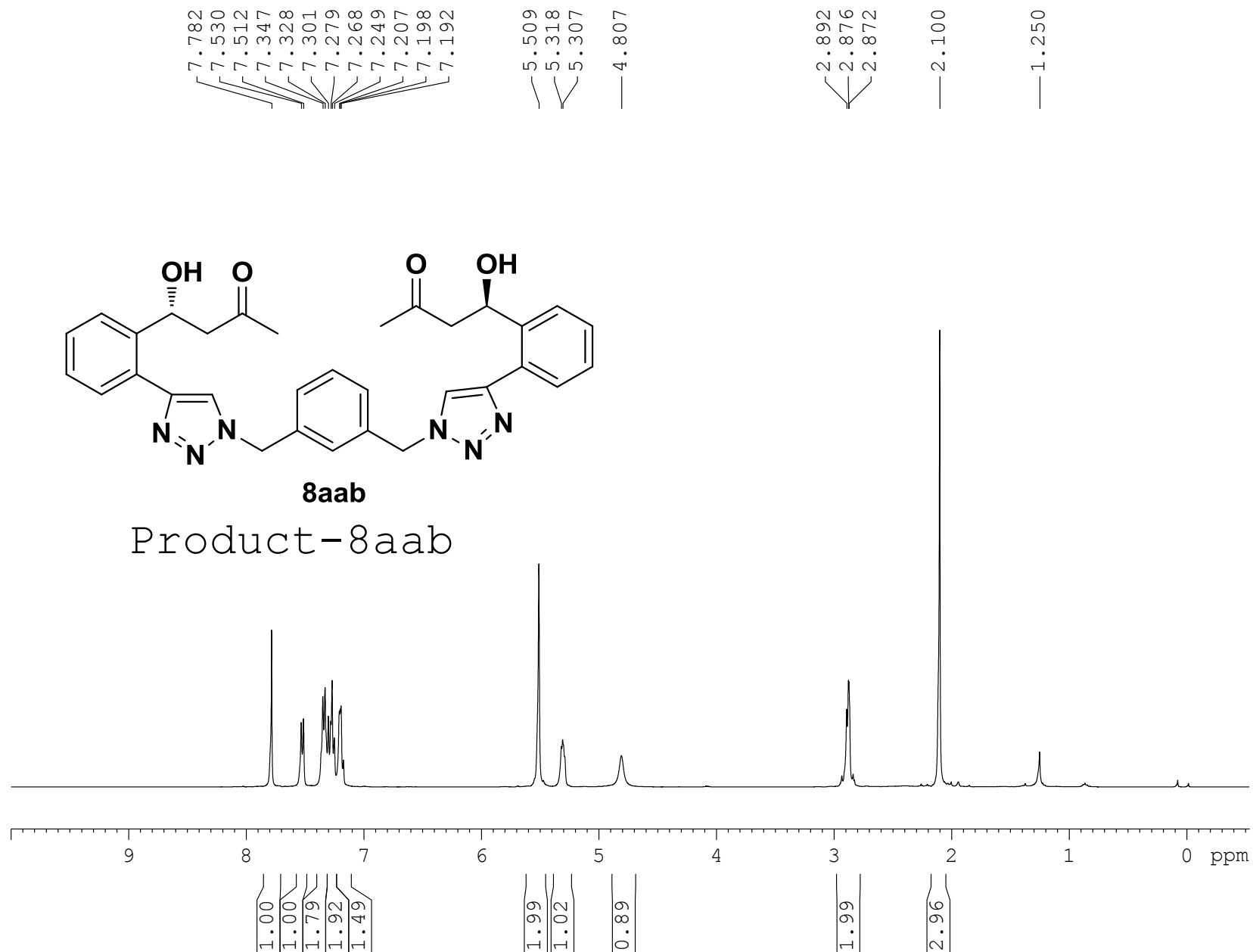


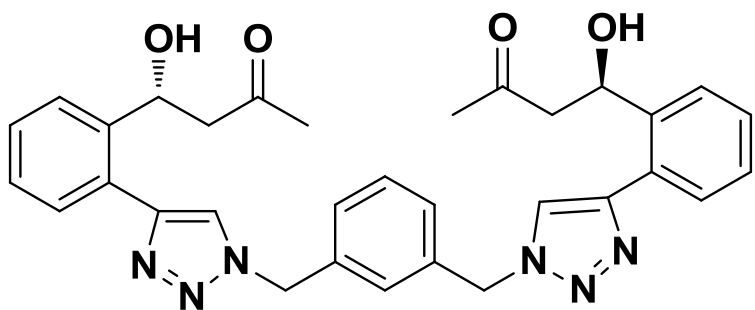
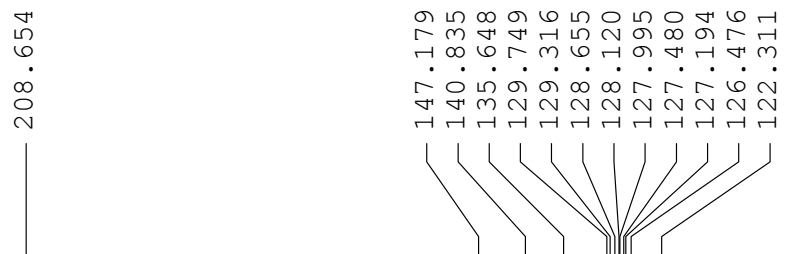




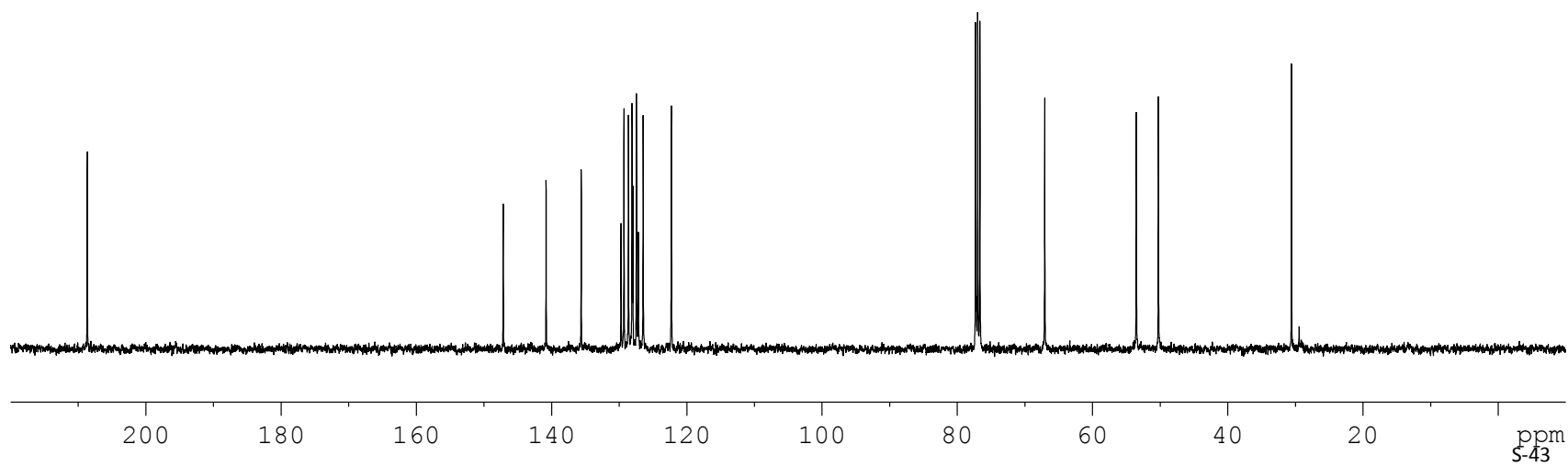


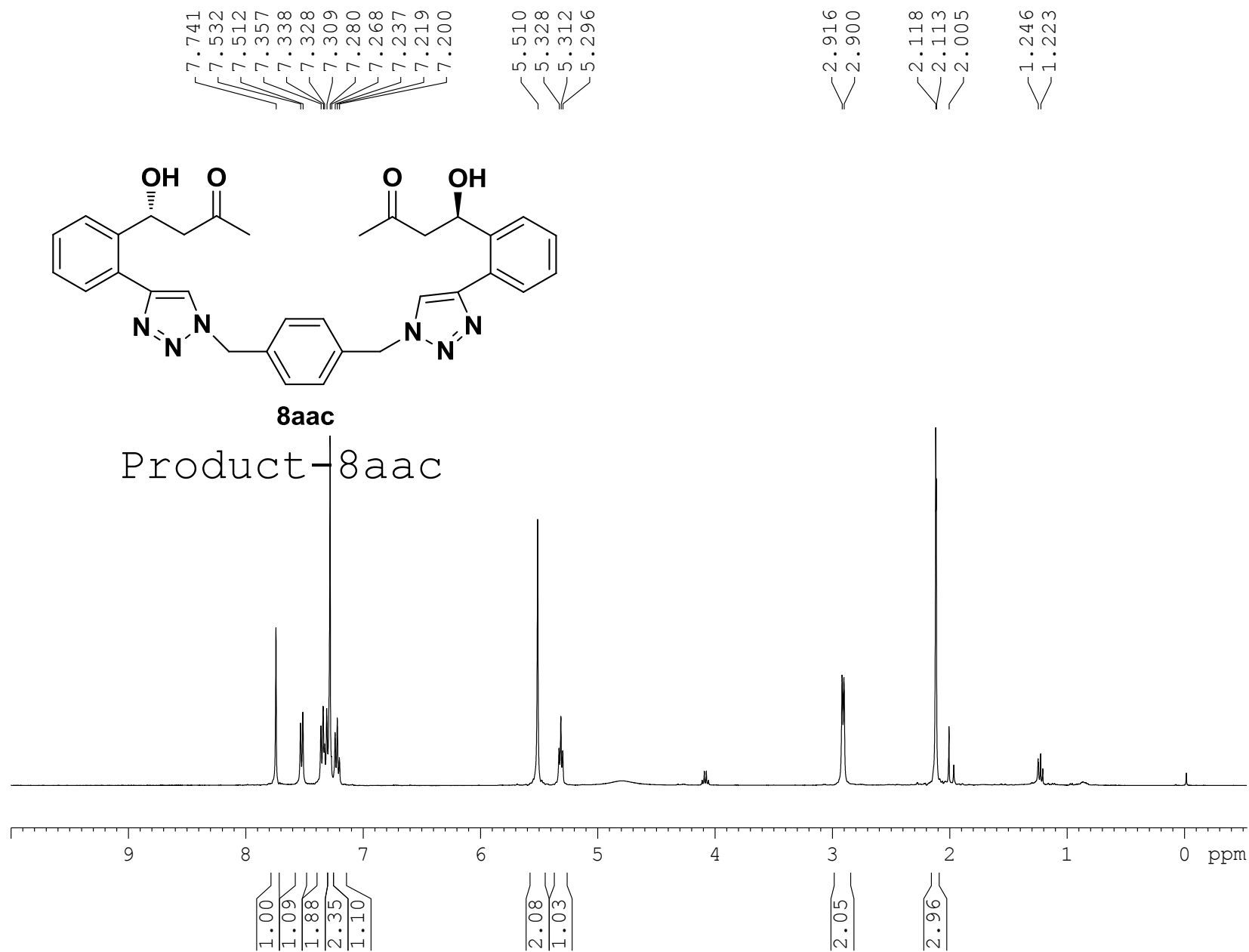


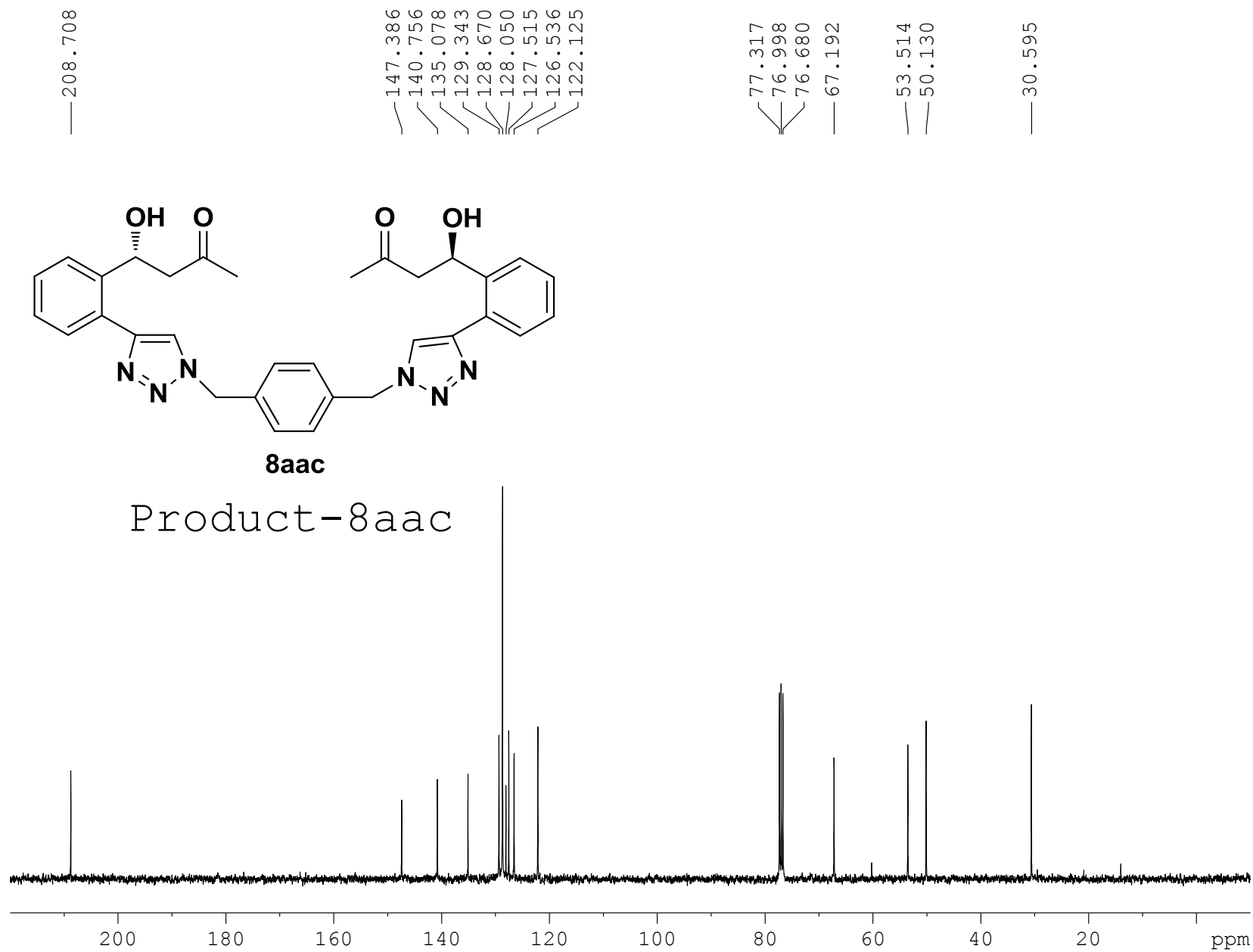


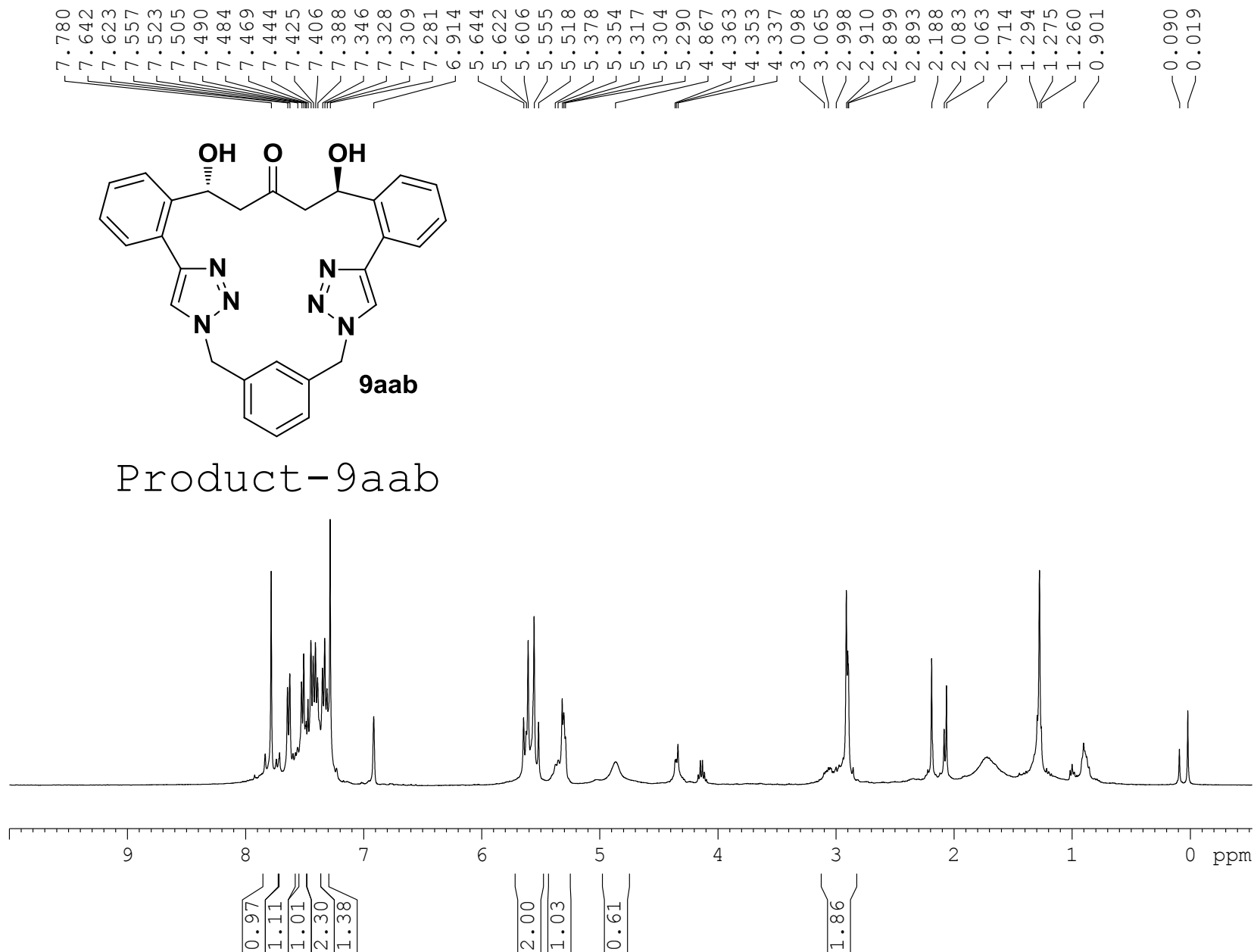


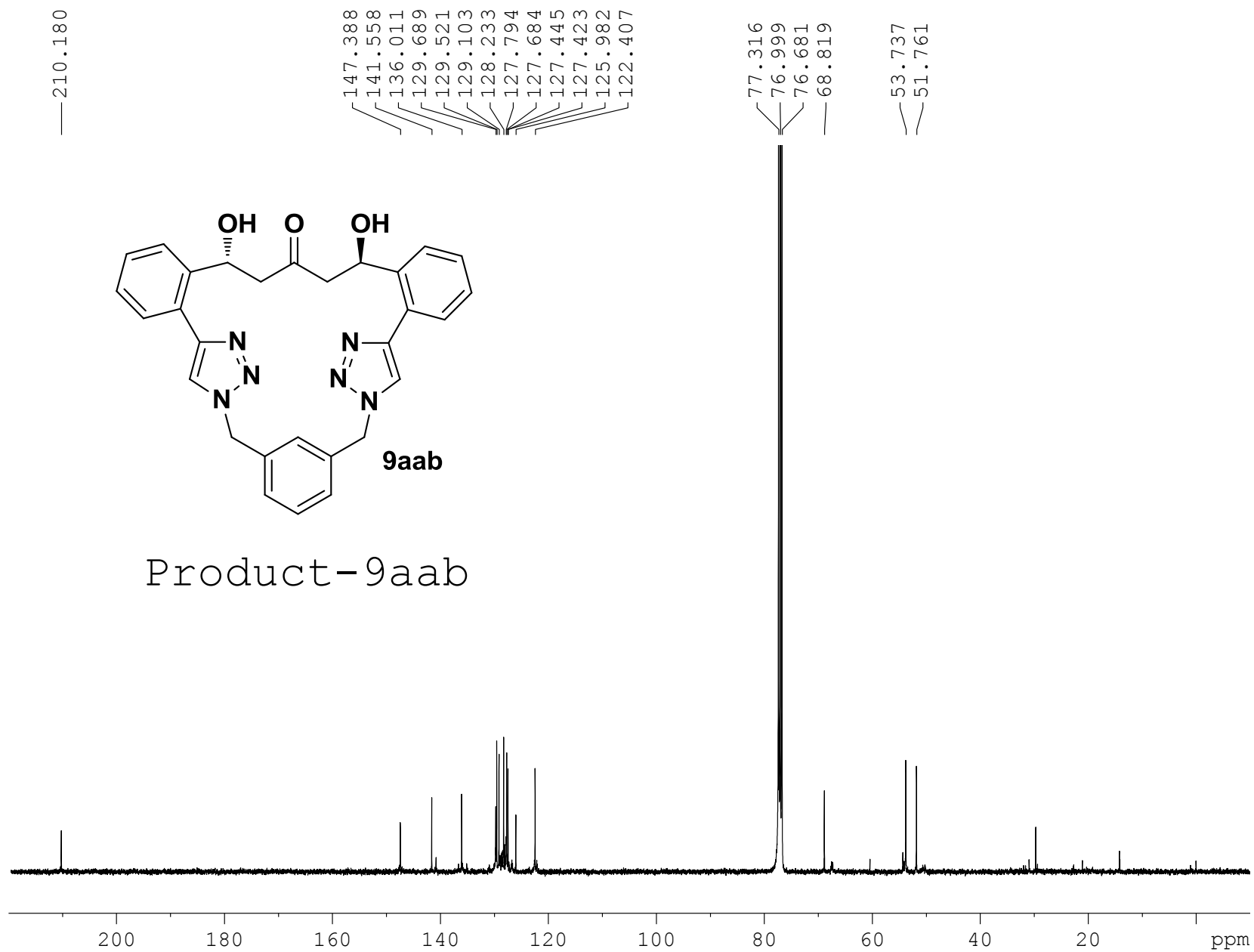
**8aab**  
Product-8aab

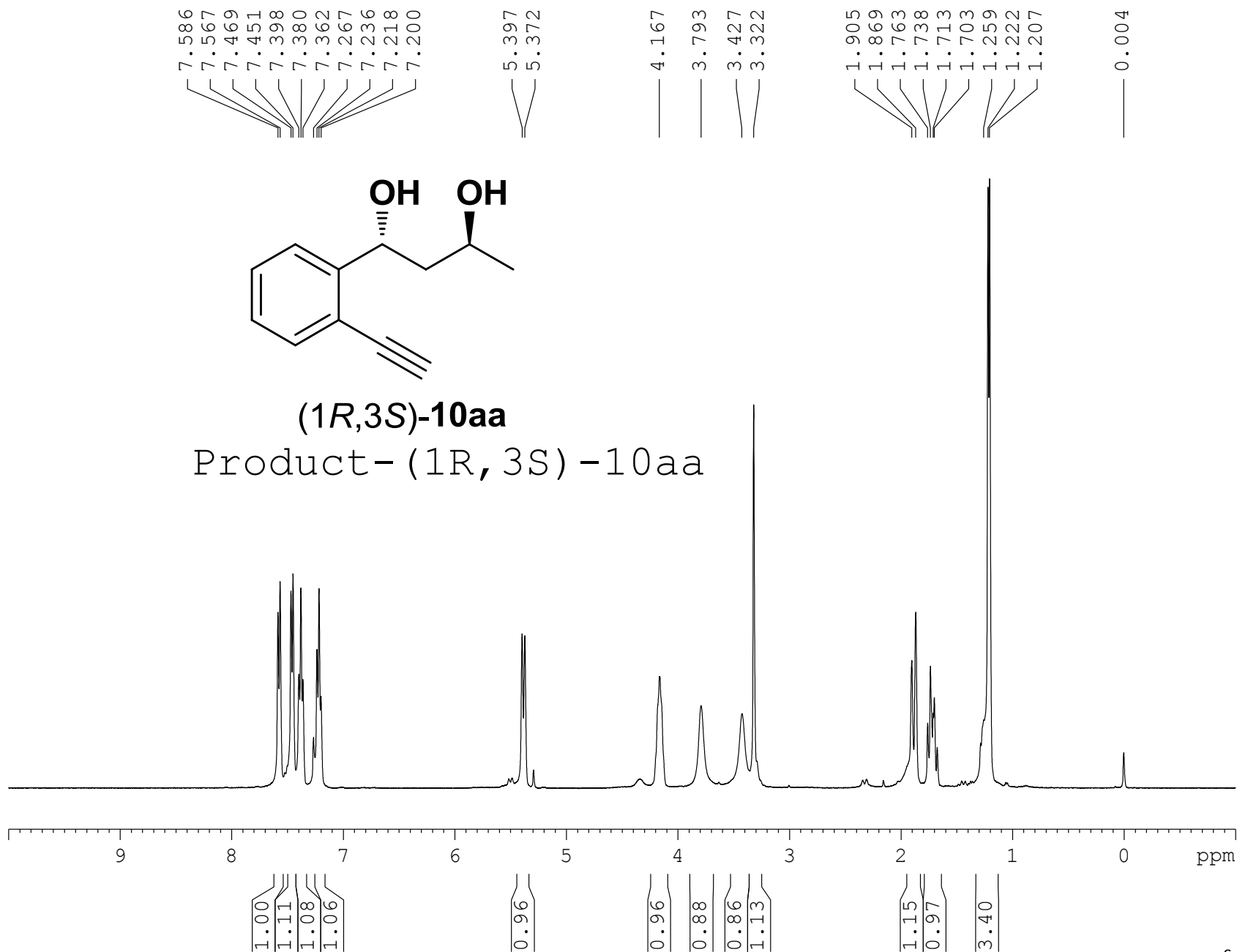




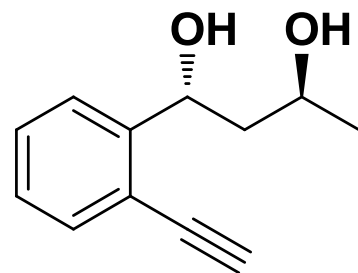
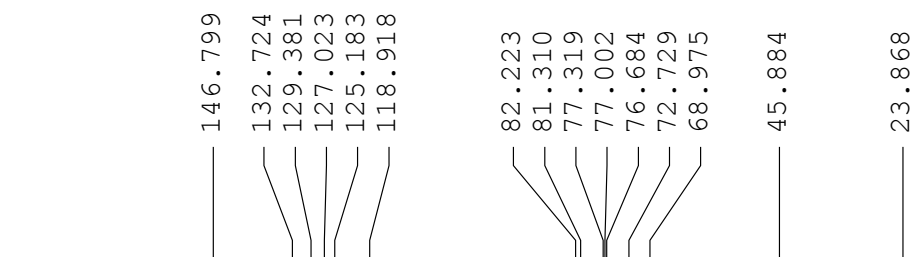






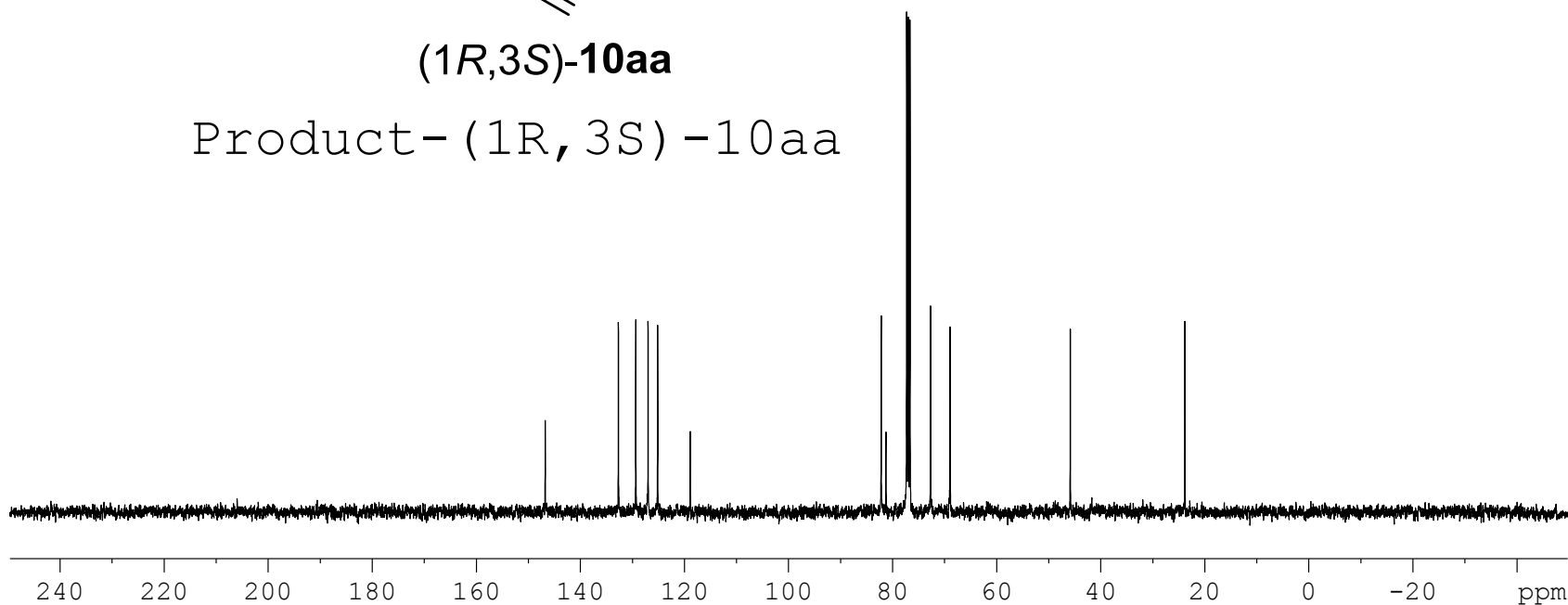


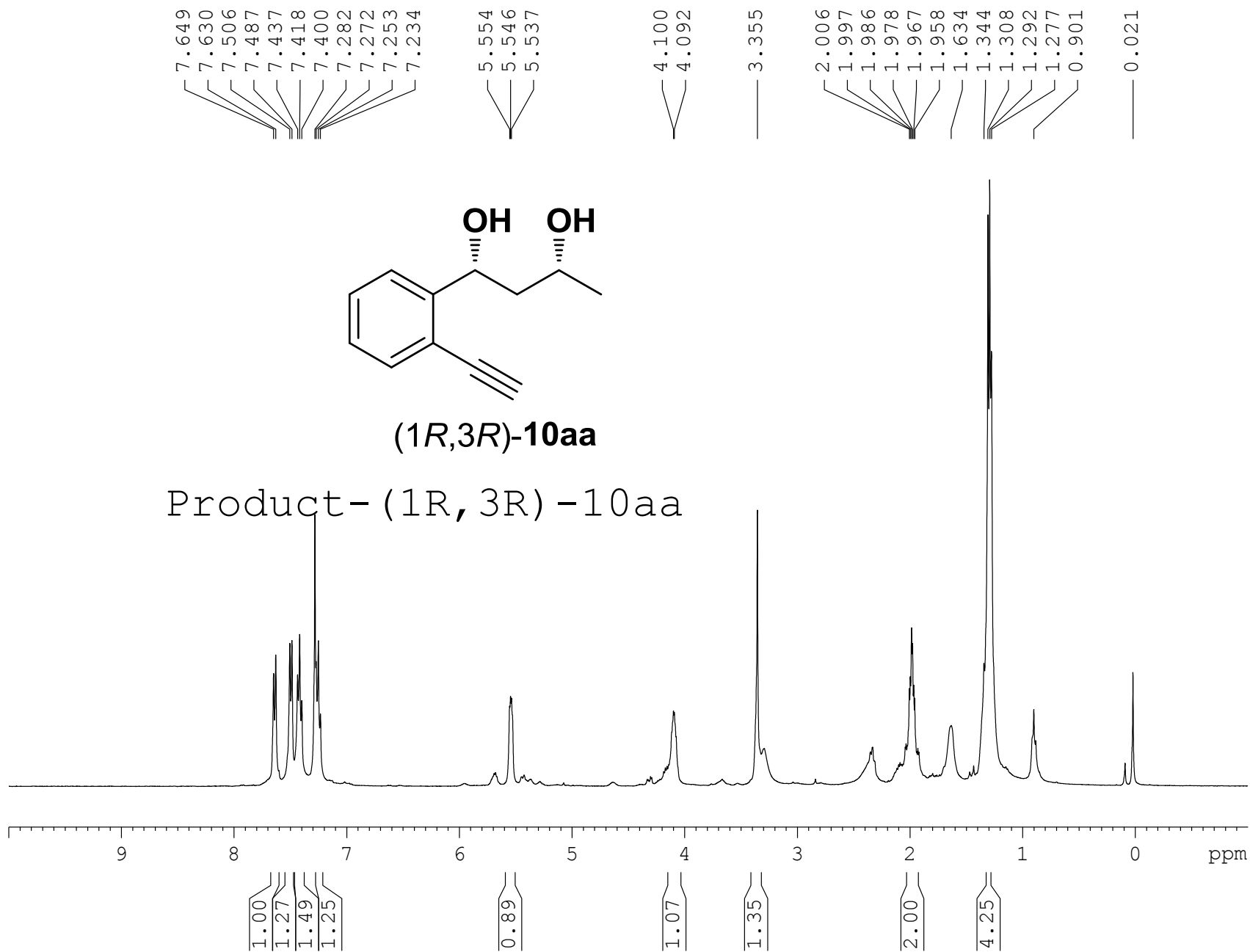


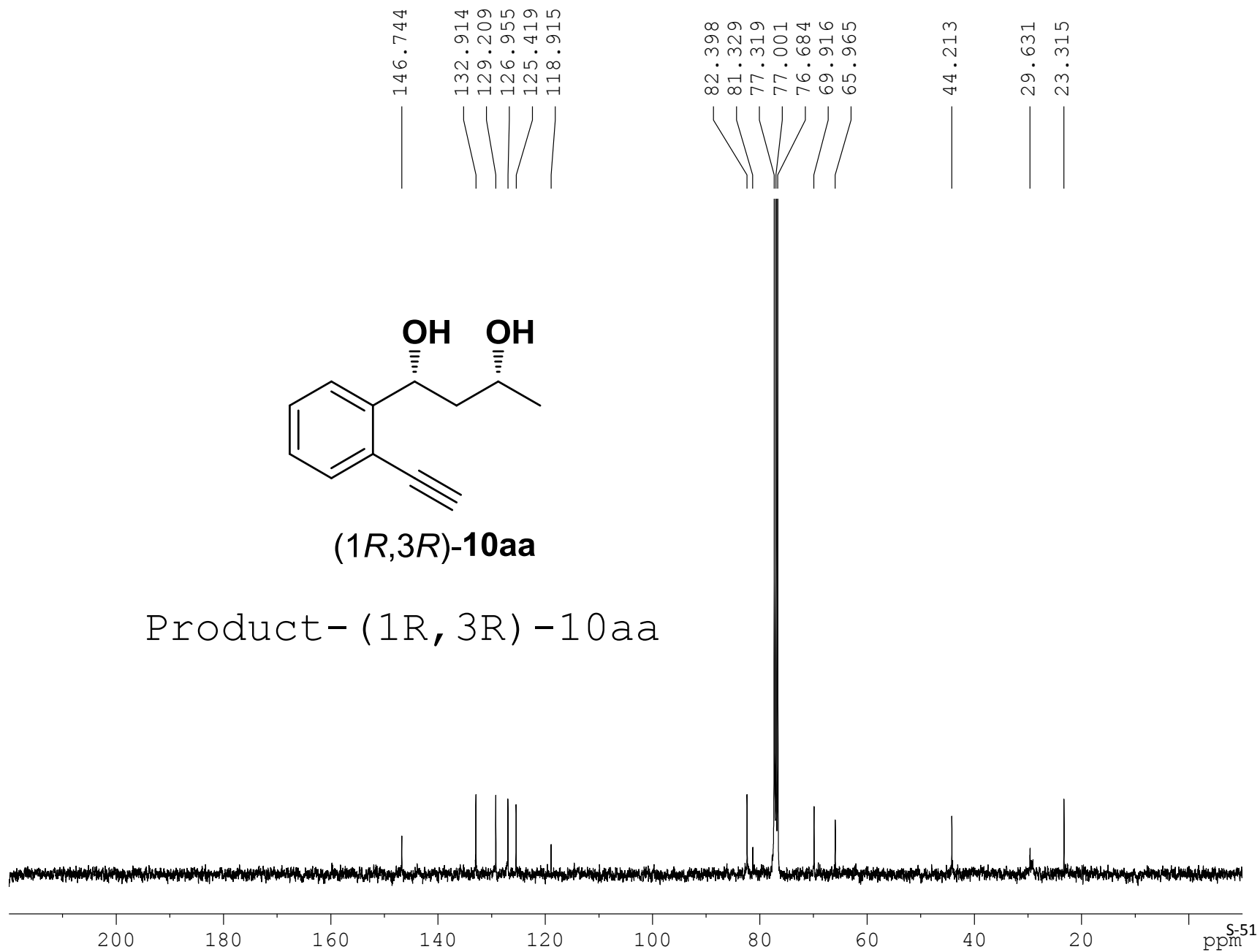


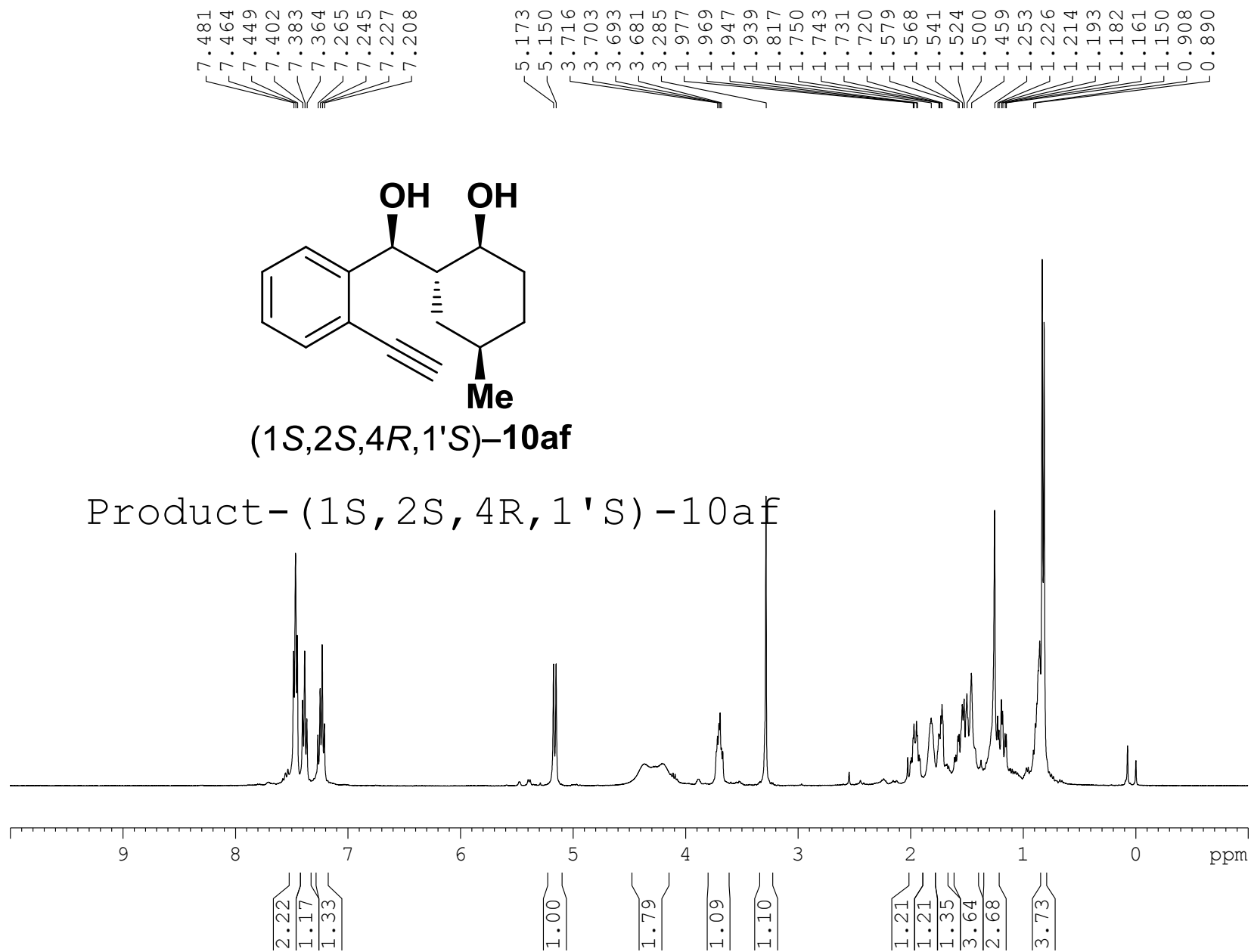
**(1R,3S)-10aa**

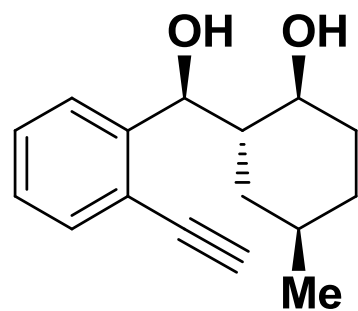
Product - (1R, 3S) -10aa





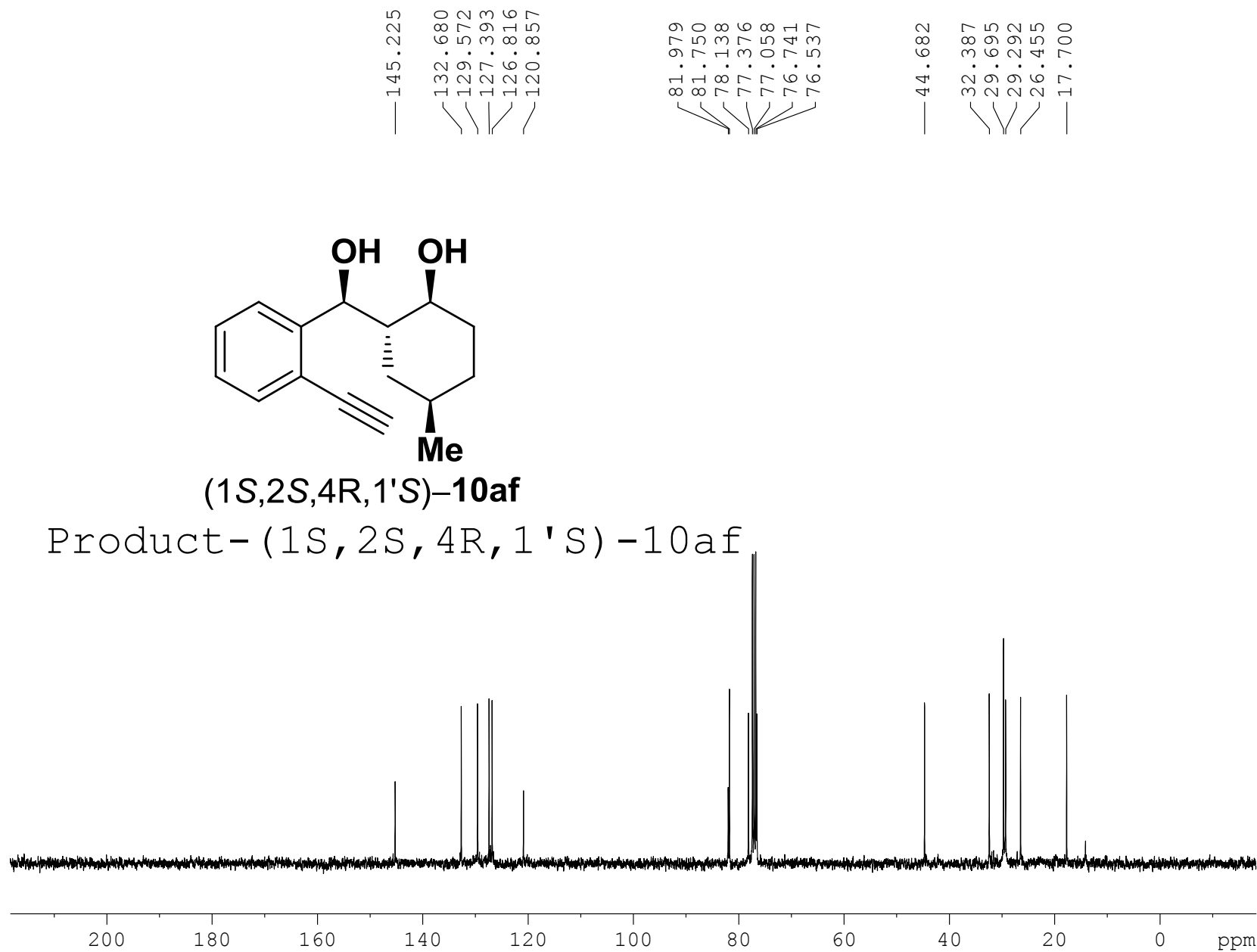


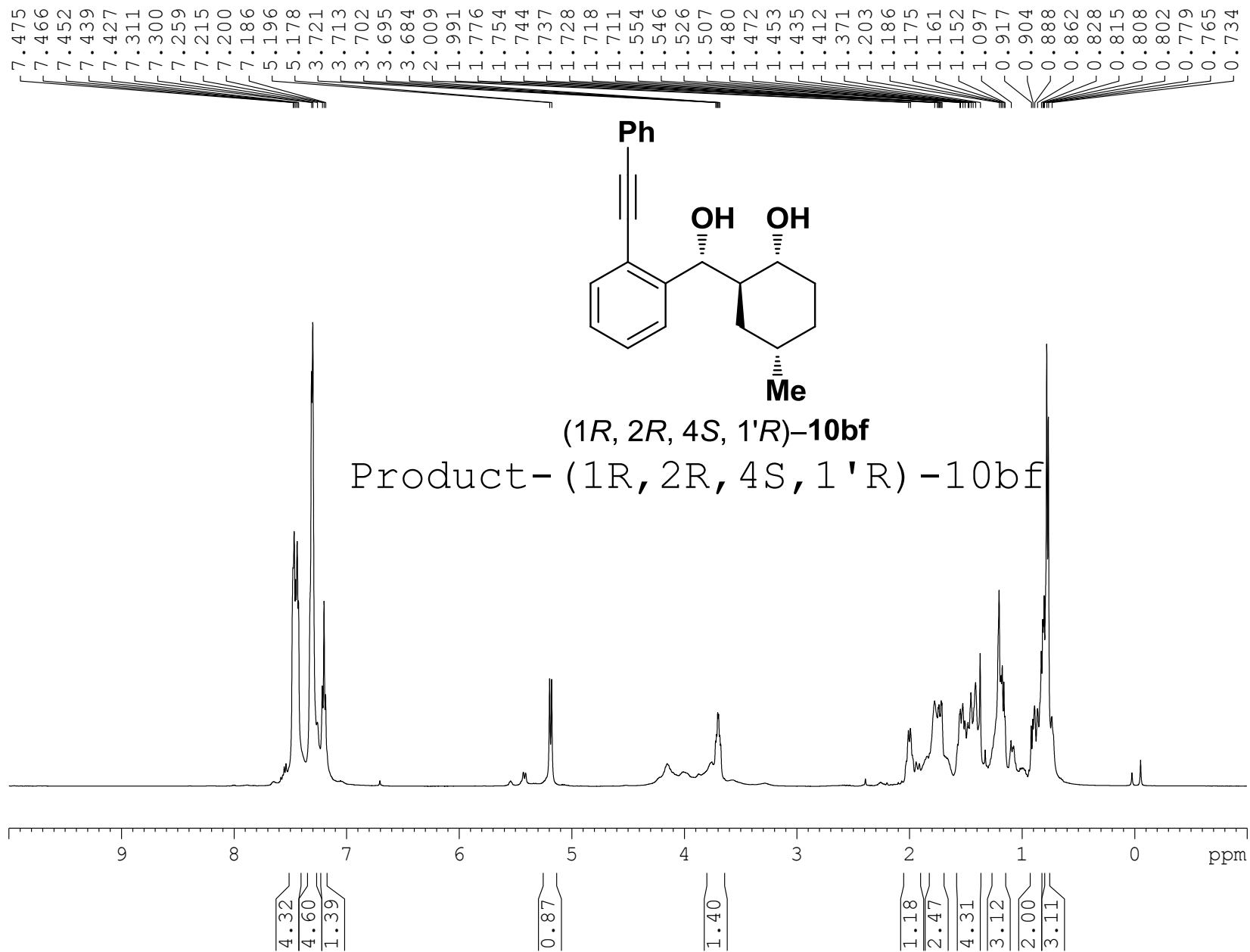


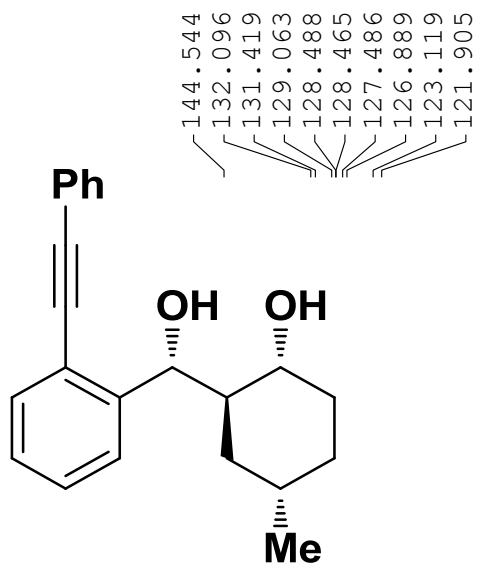


**(1S,2S,4R,1'S)-10af**

Product - (1S, 2S, 4R, 1'S) - 10af

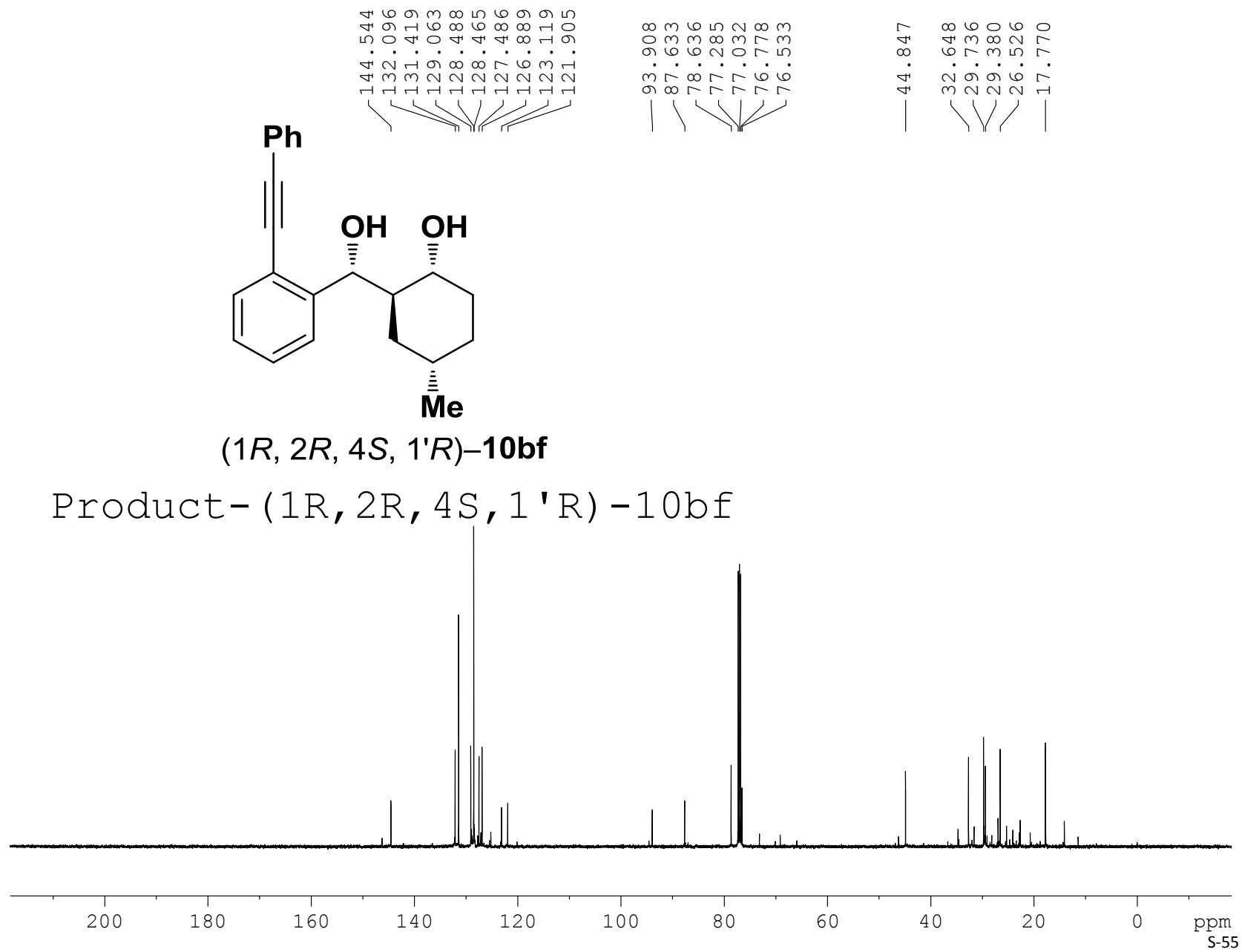


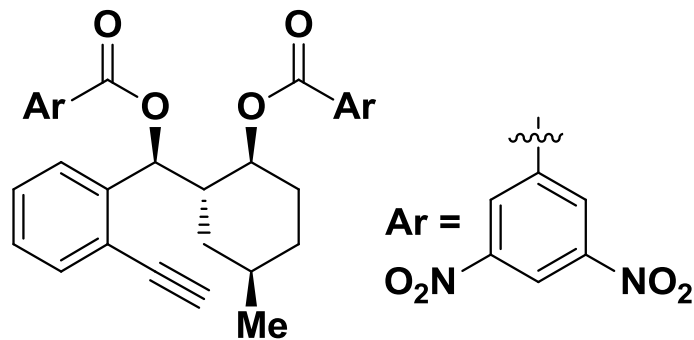
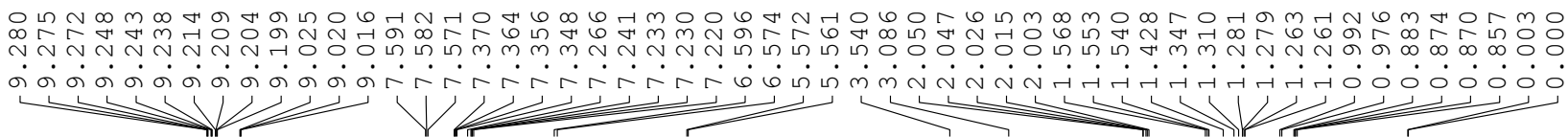




**(1*R*, 2*R*, 4*S*, 1'*R*)-10bf**

Product - (1*R*, 2*R*, 4*S*, 1'*R*)-10bf





(1S,2S,4R,1'S)-11af

Product - (1S, 2S, 4R, 1'S) - 11af

