Electronic Supplementary Material (ESI) for Chemical Communications

Desymmetrization of Cyclic Olefins via Asymmetric Heck Reaction and Hydroarylation

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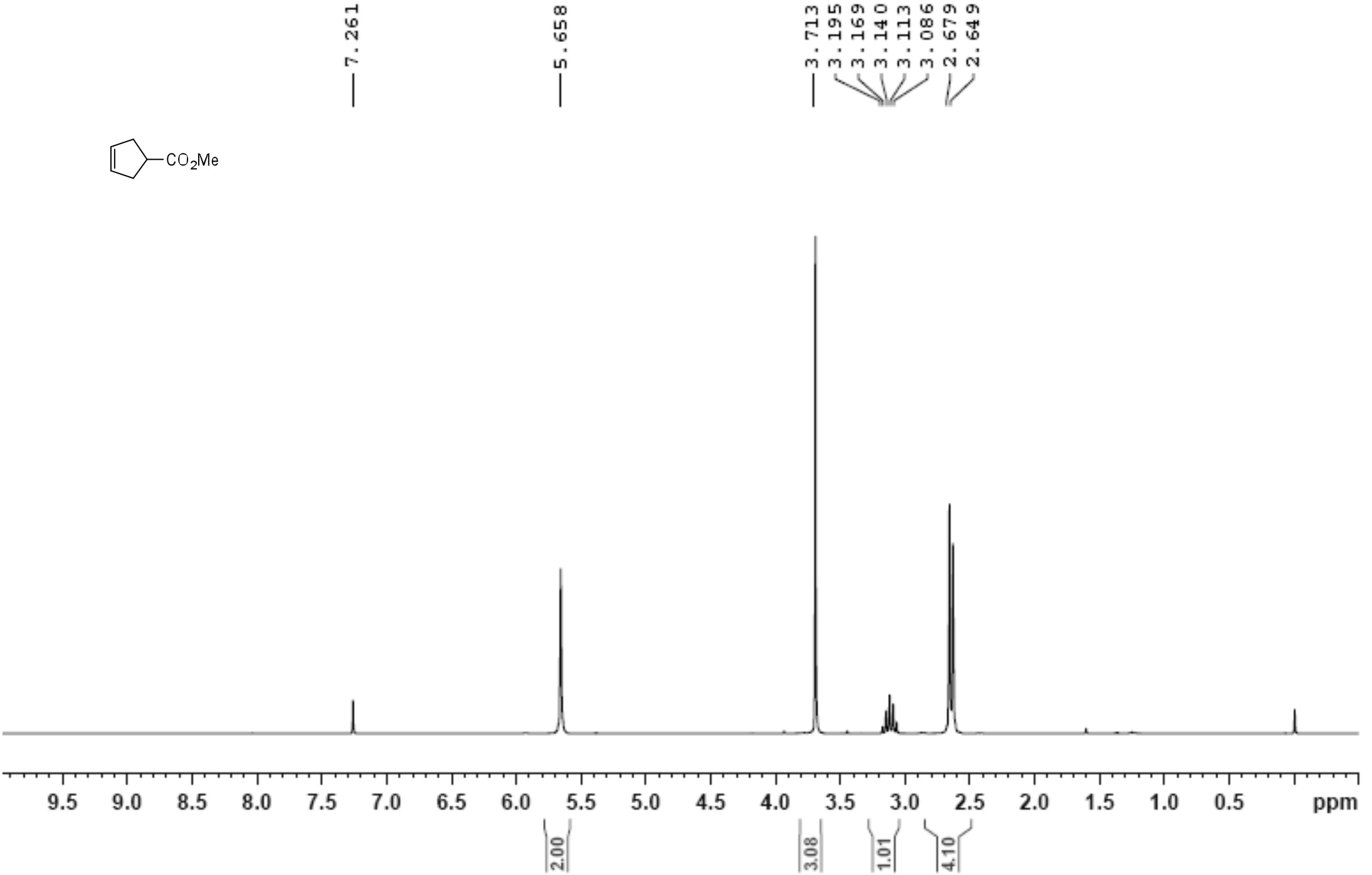
Supporting Information: NMR Spectra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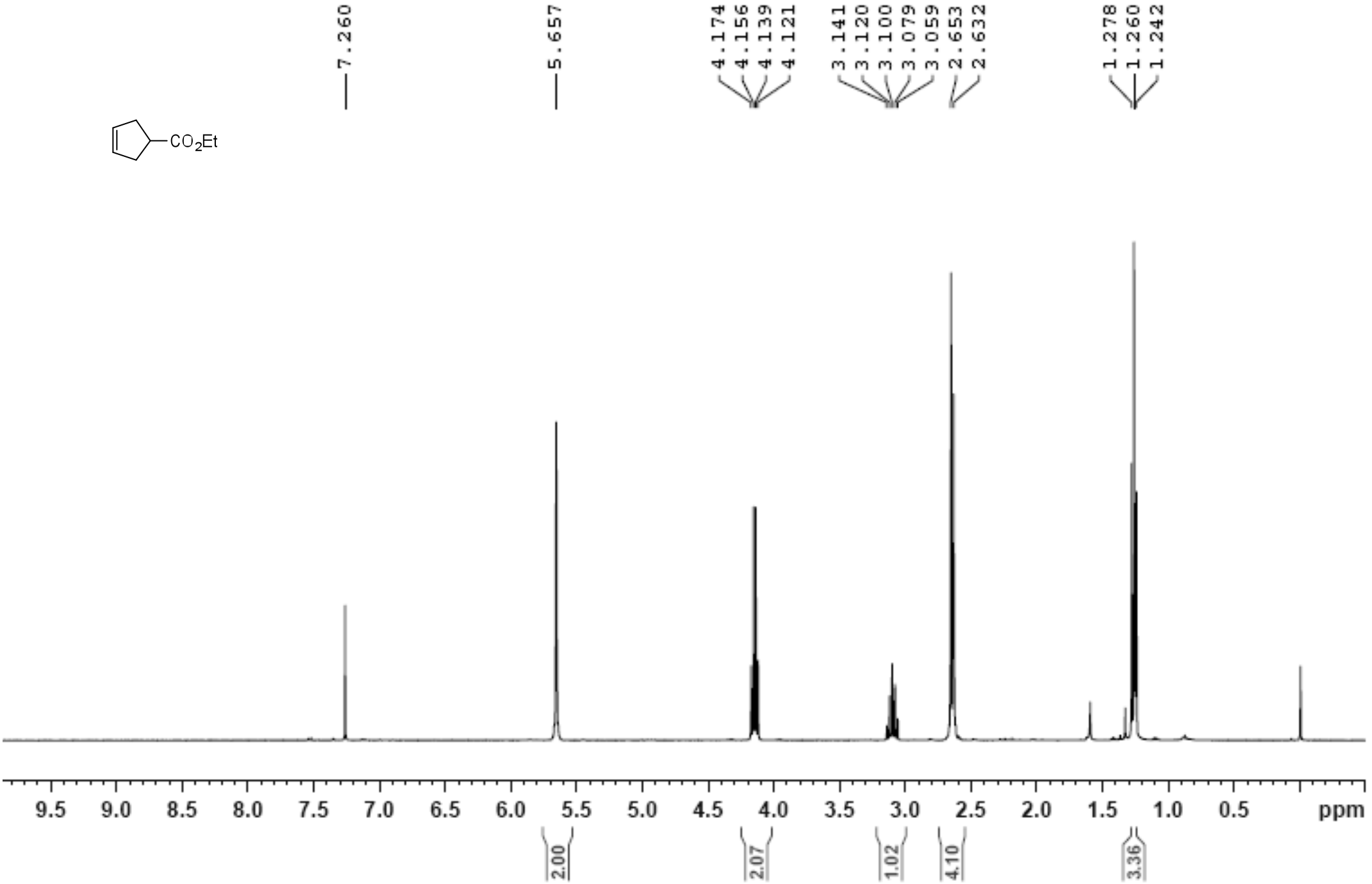
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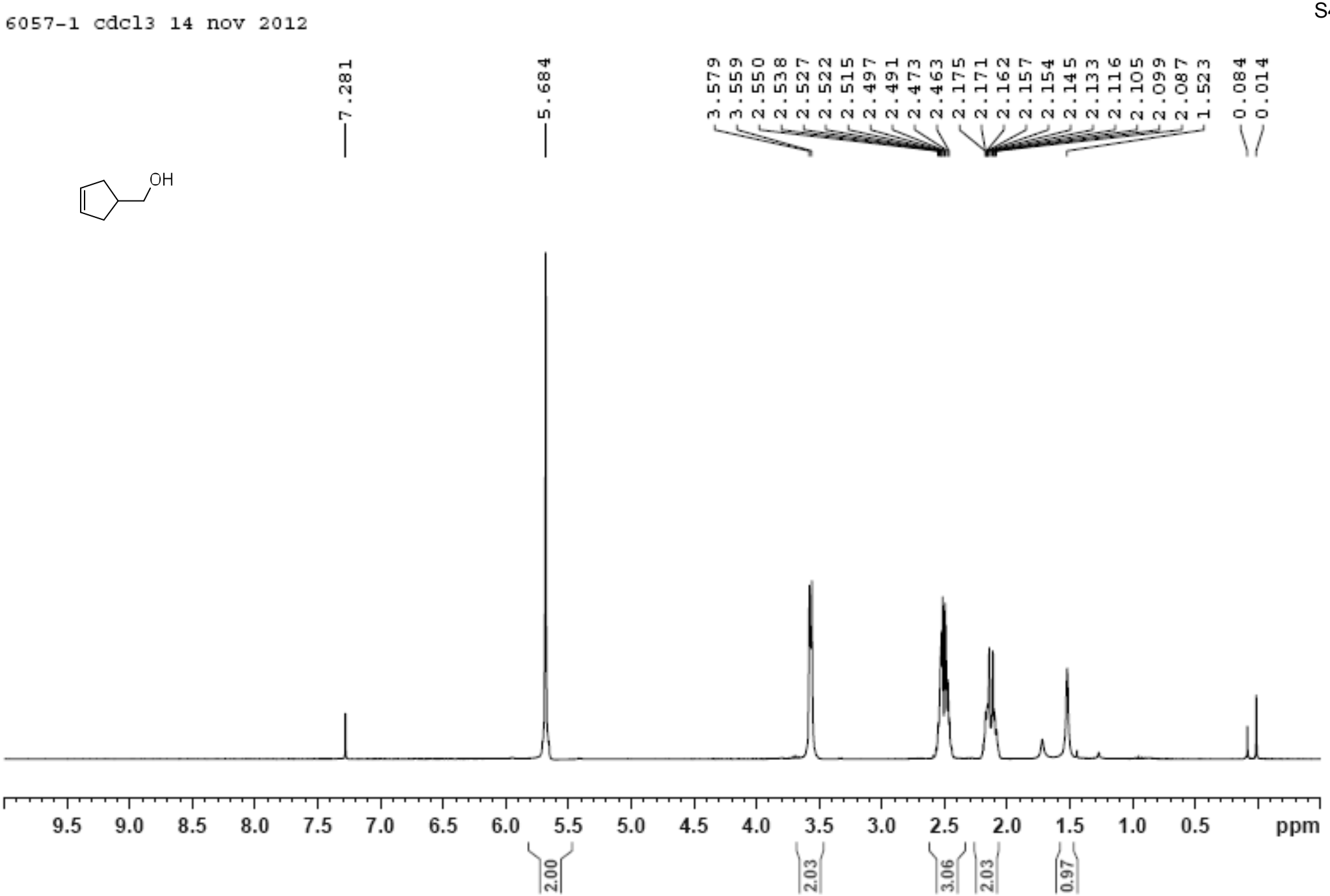

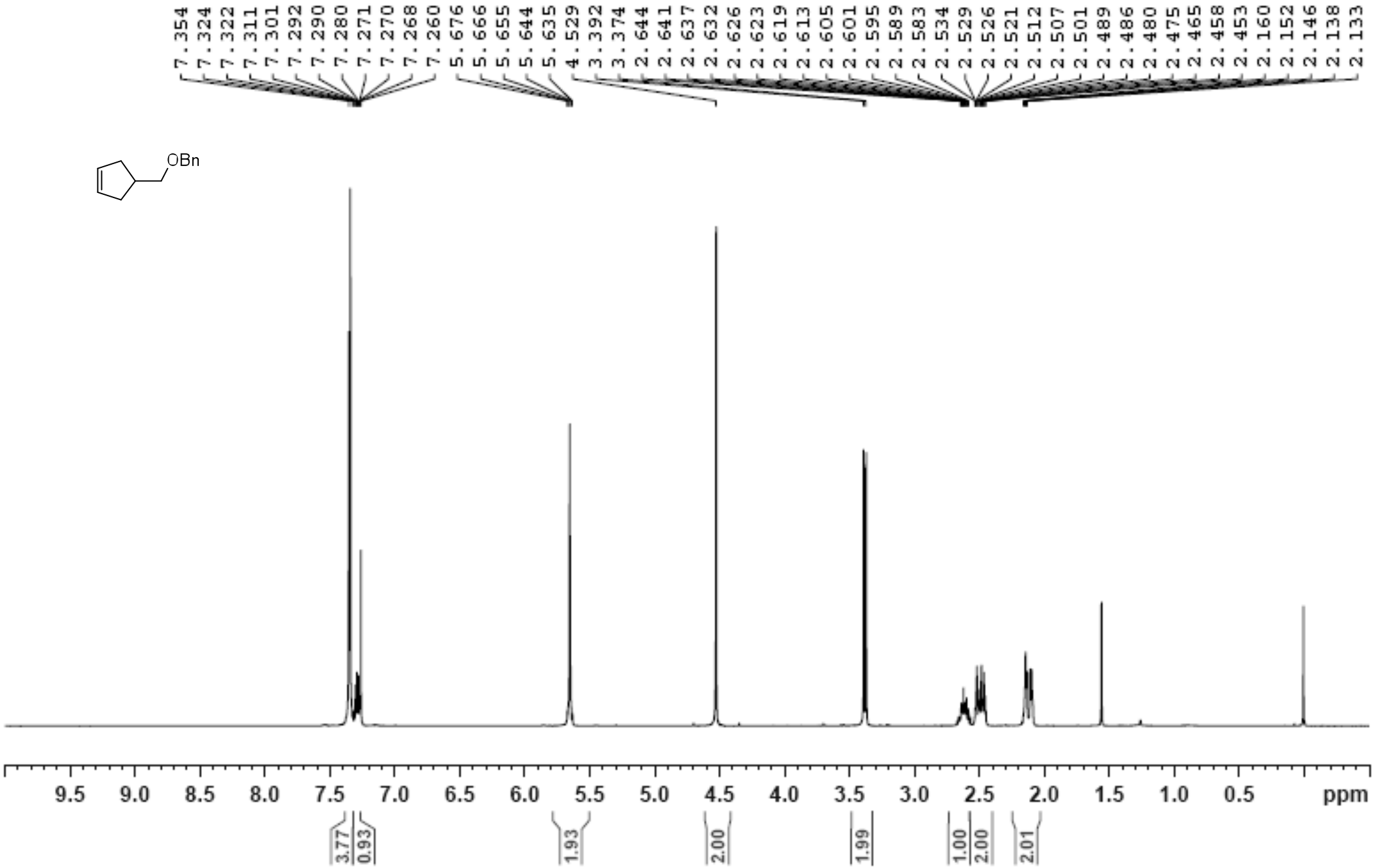

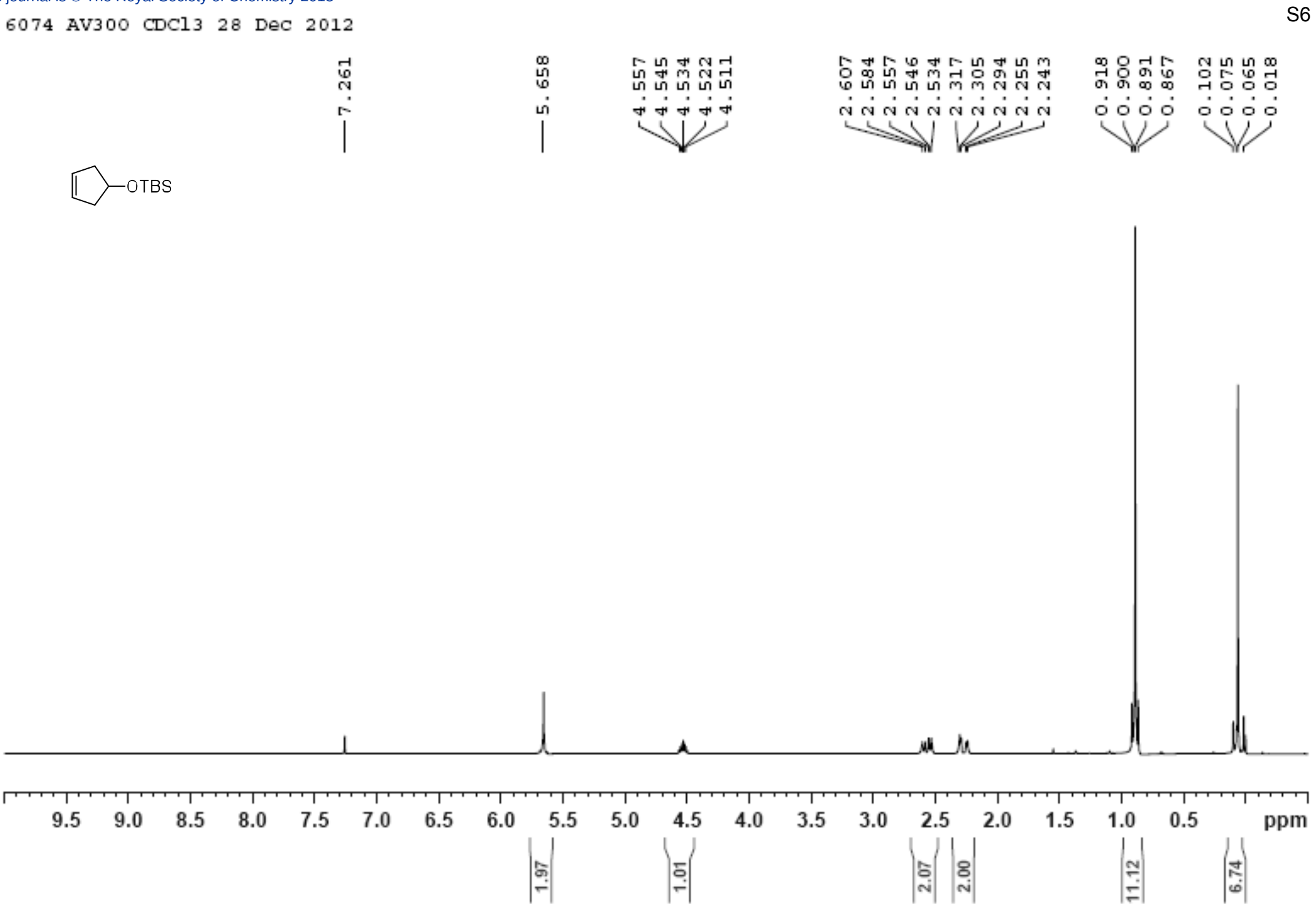
6074 AV300 CDCl3 28 Dec 2012
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2.255
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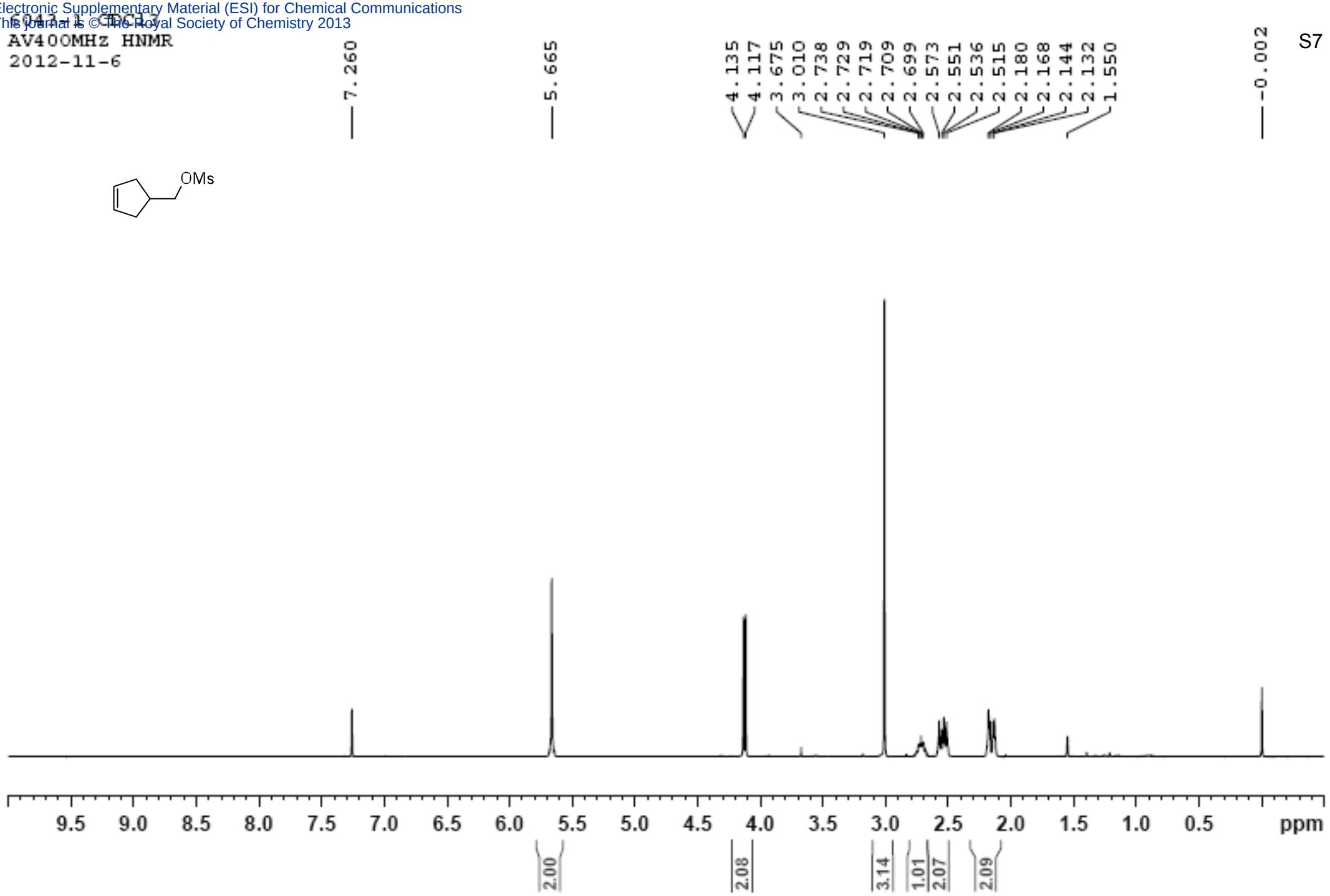

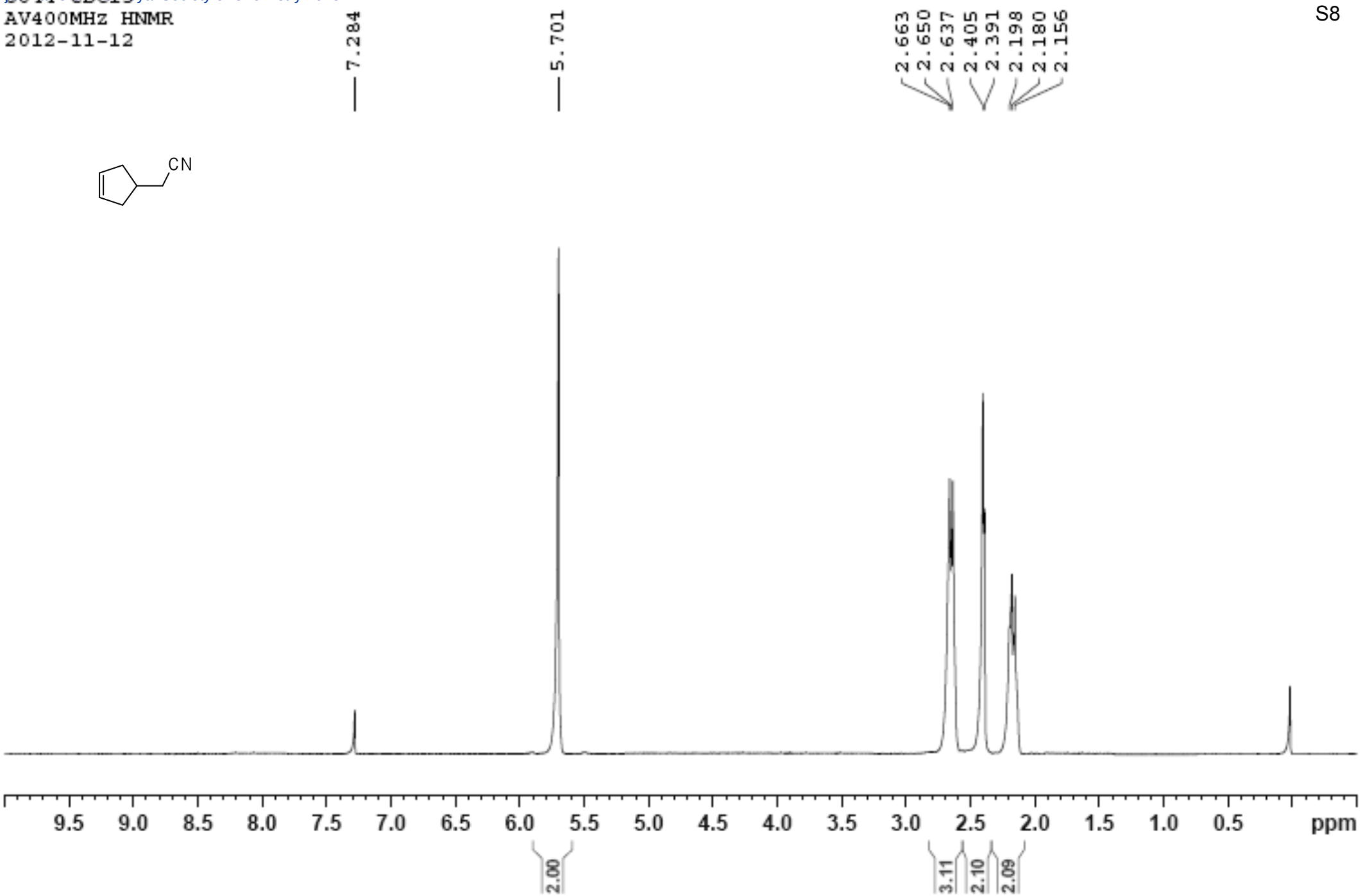

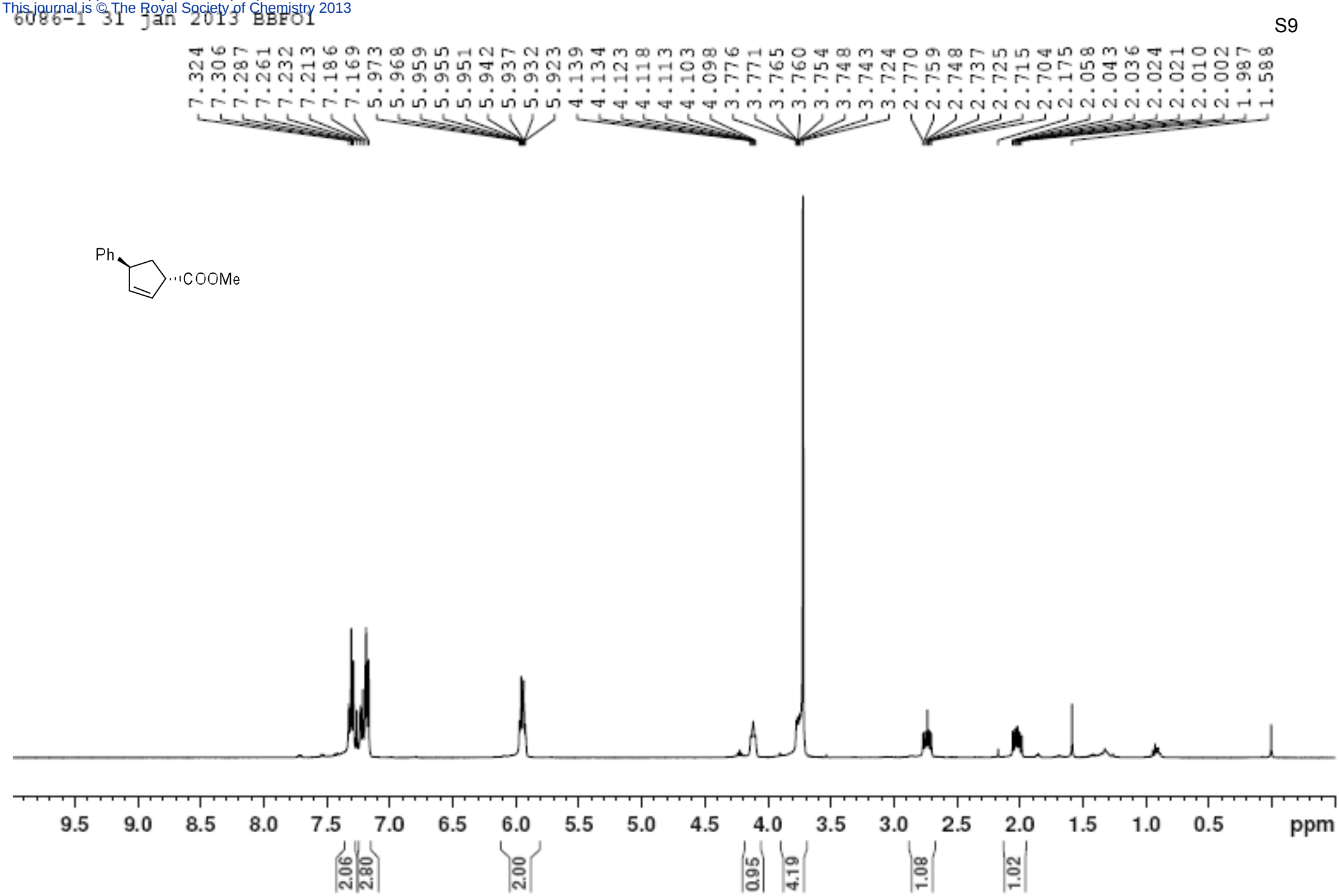

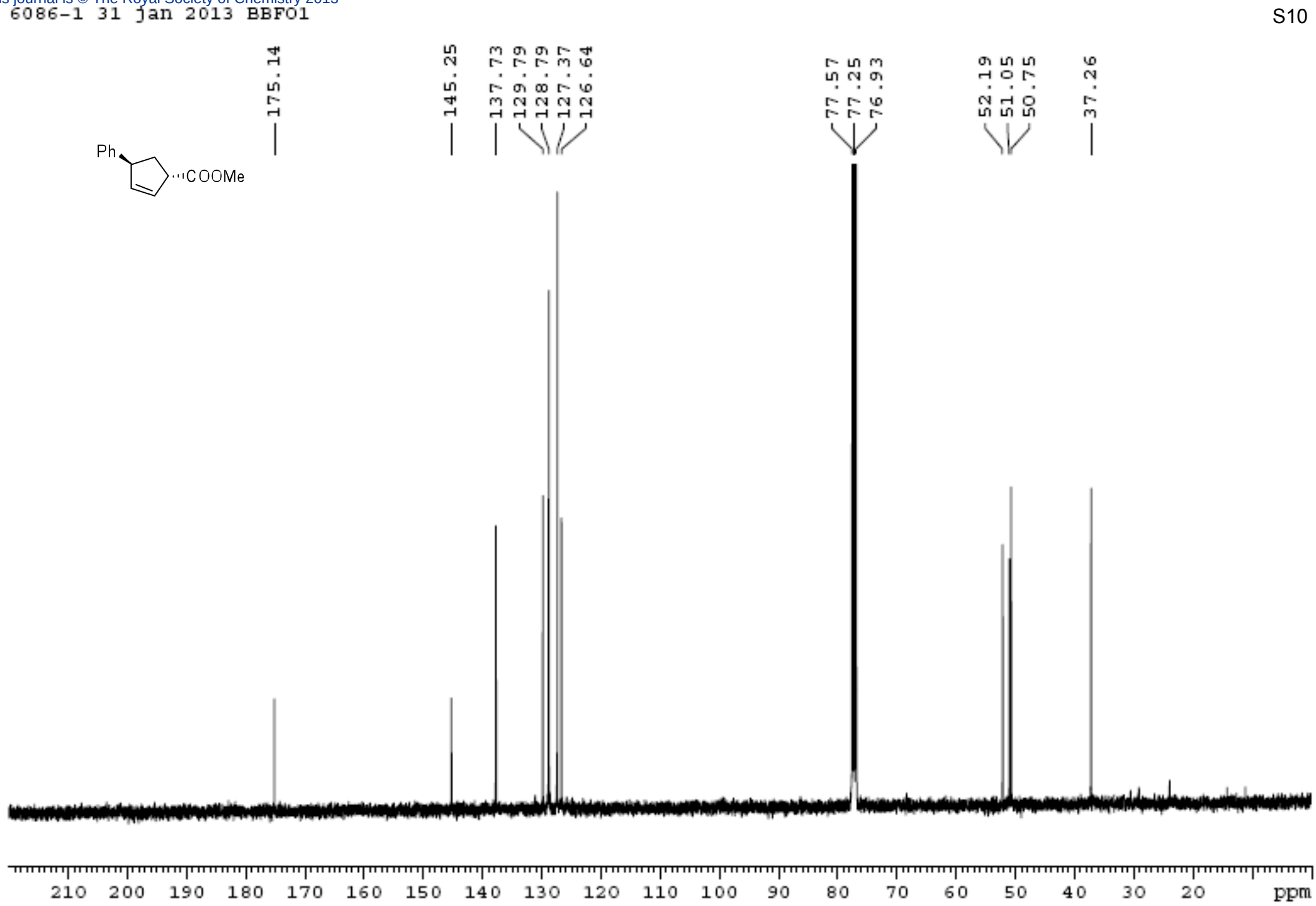

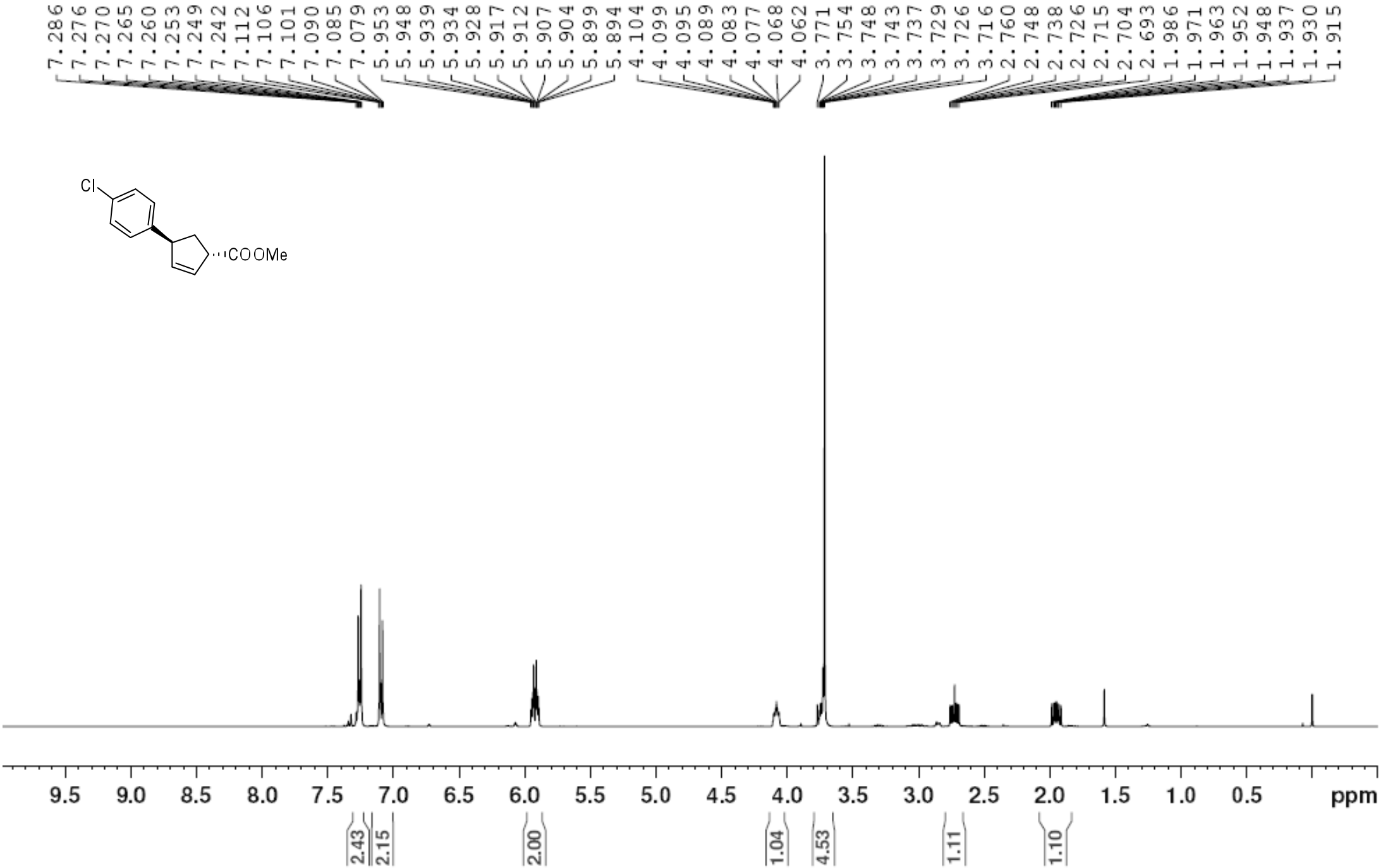

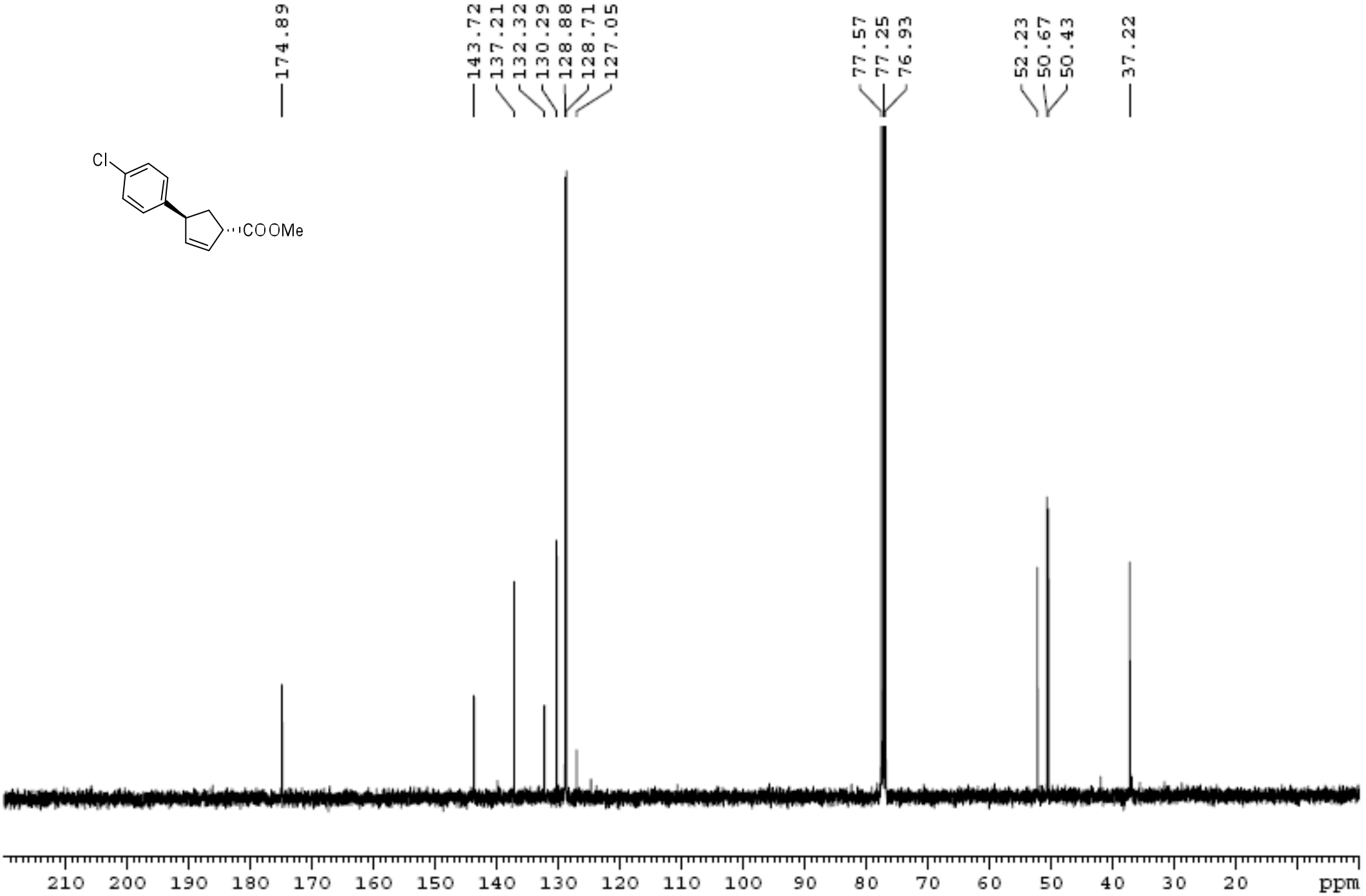
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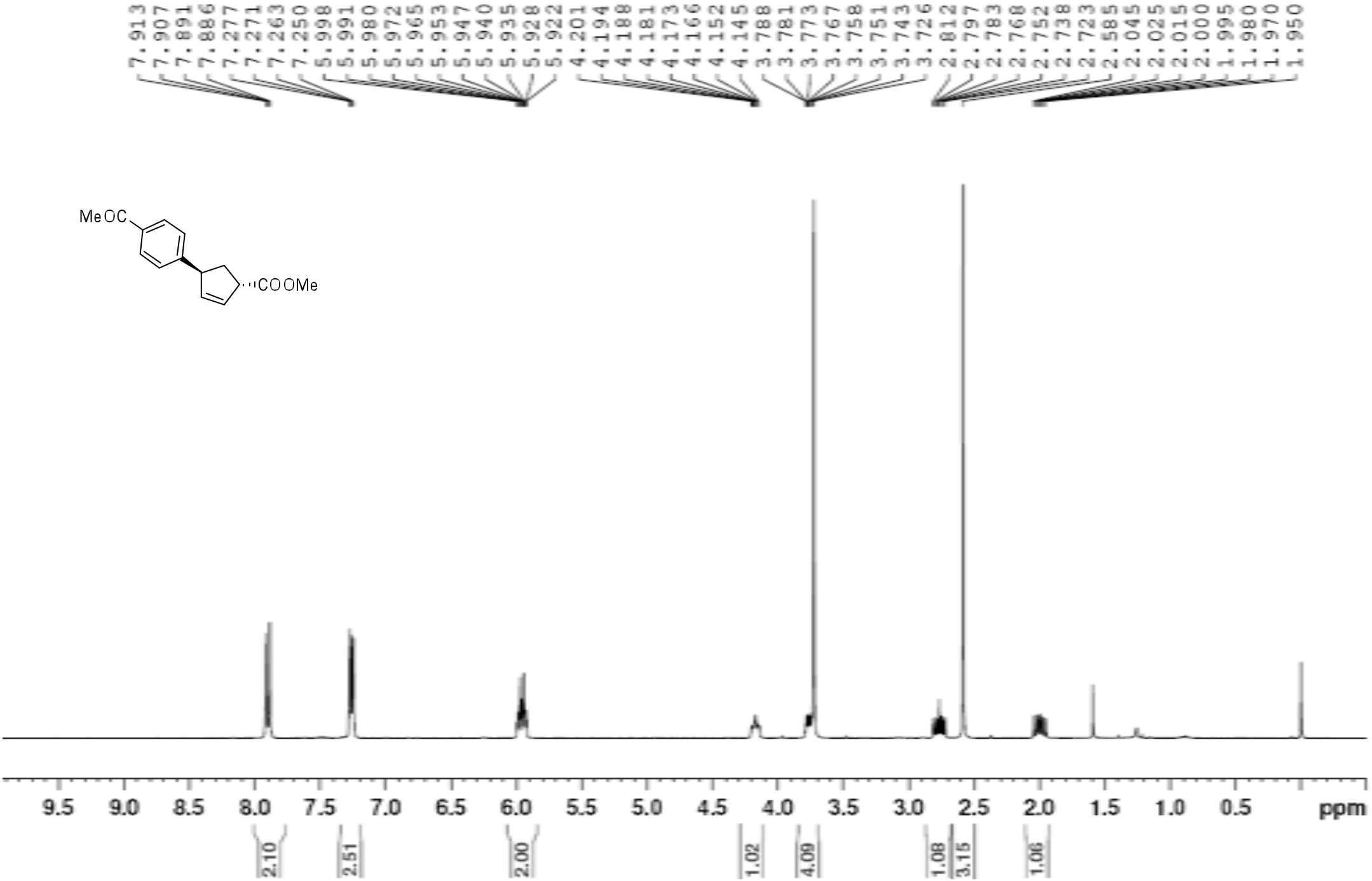

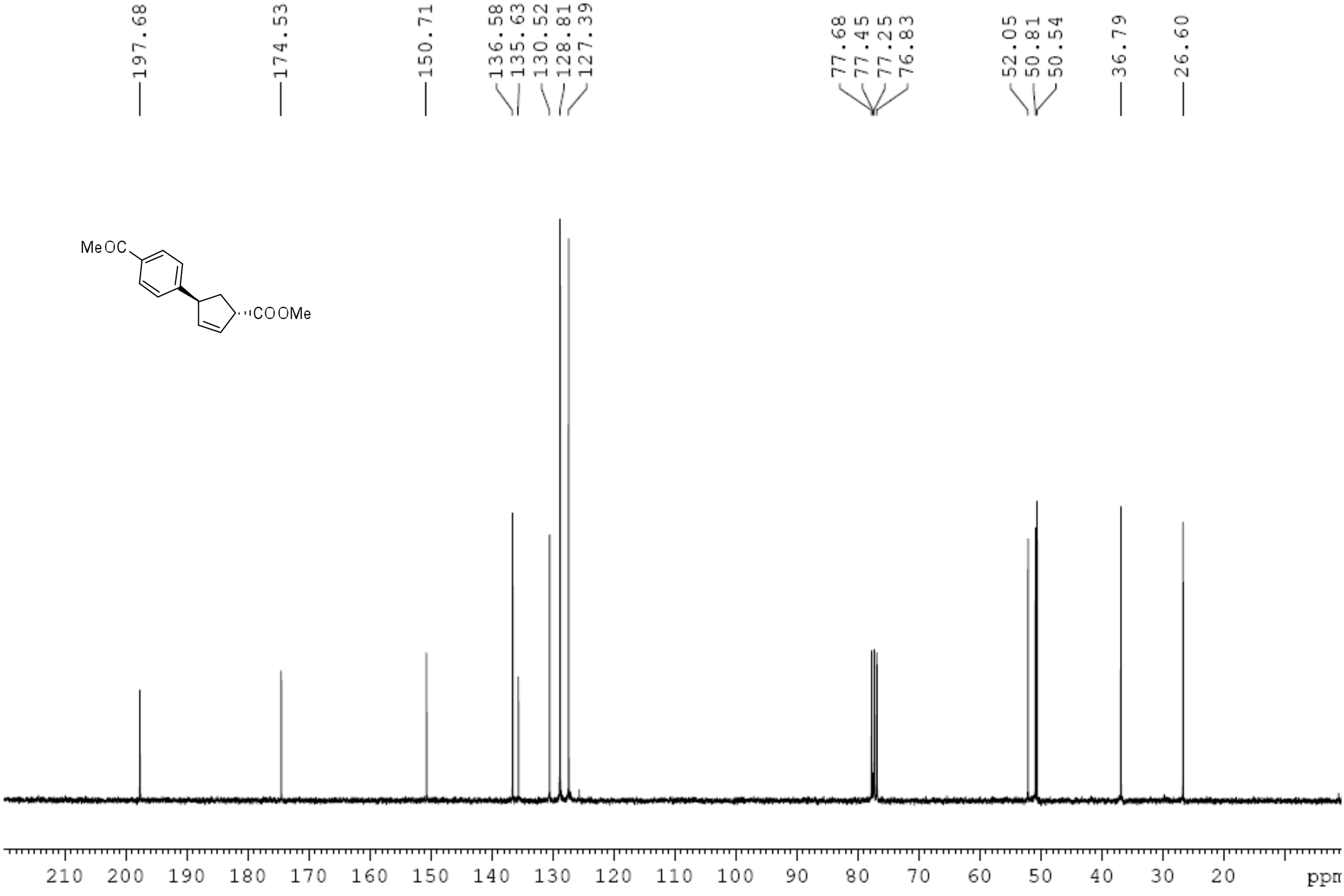

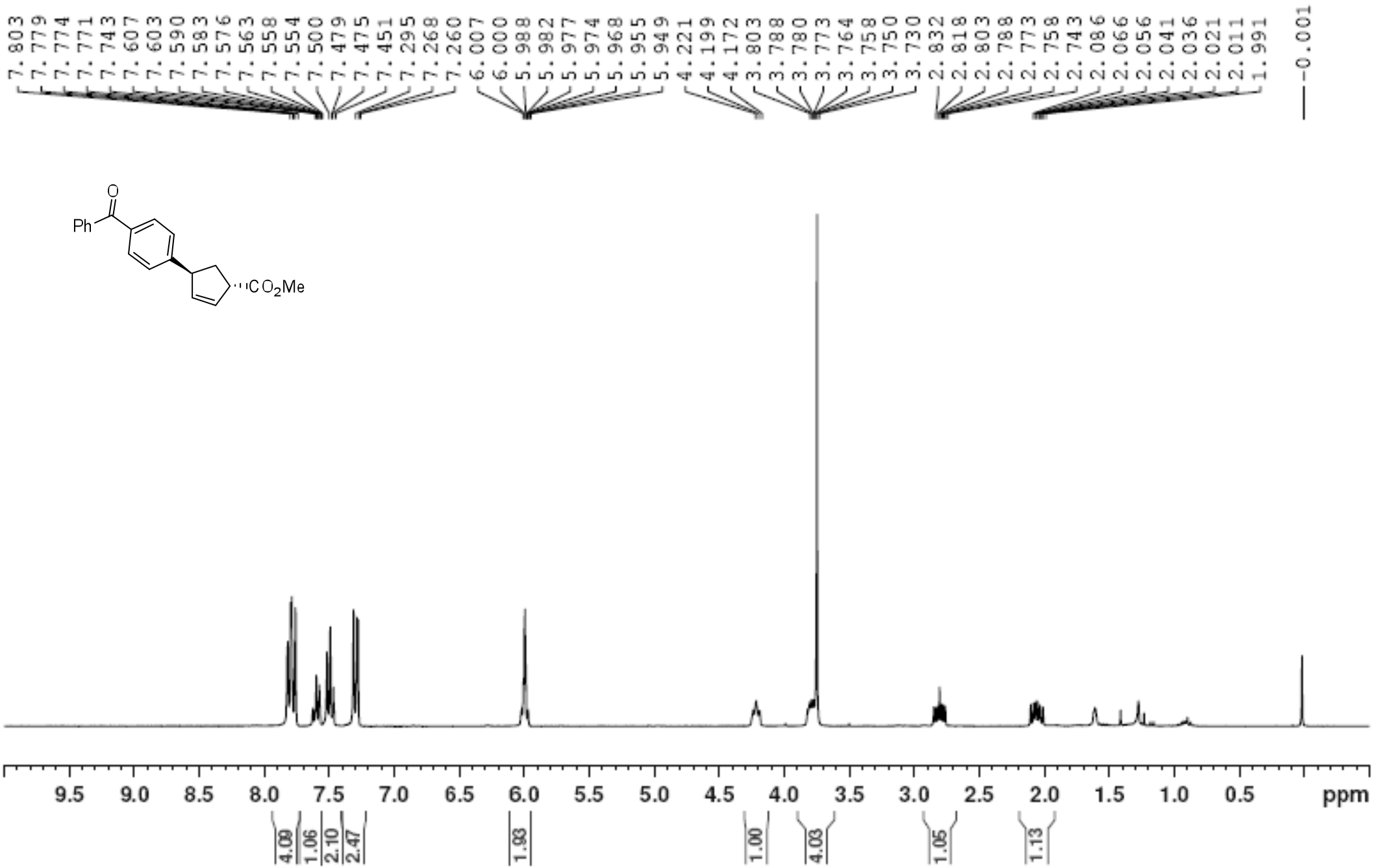

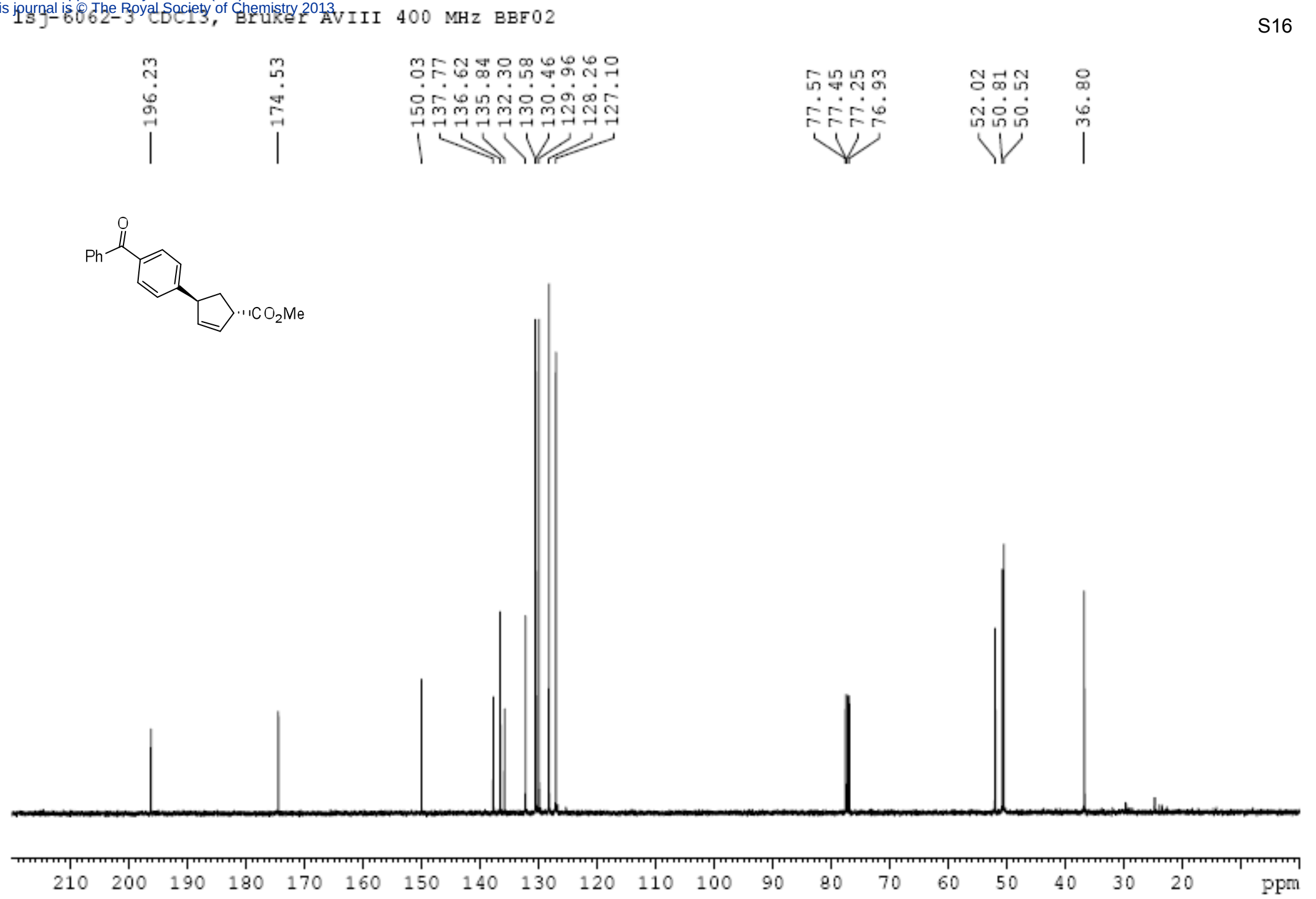

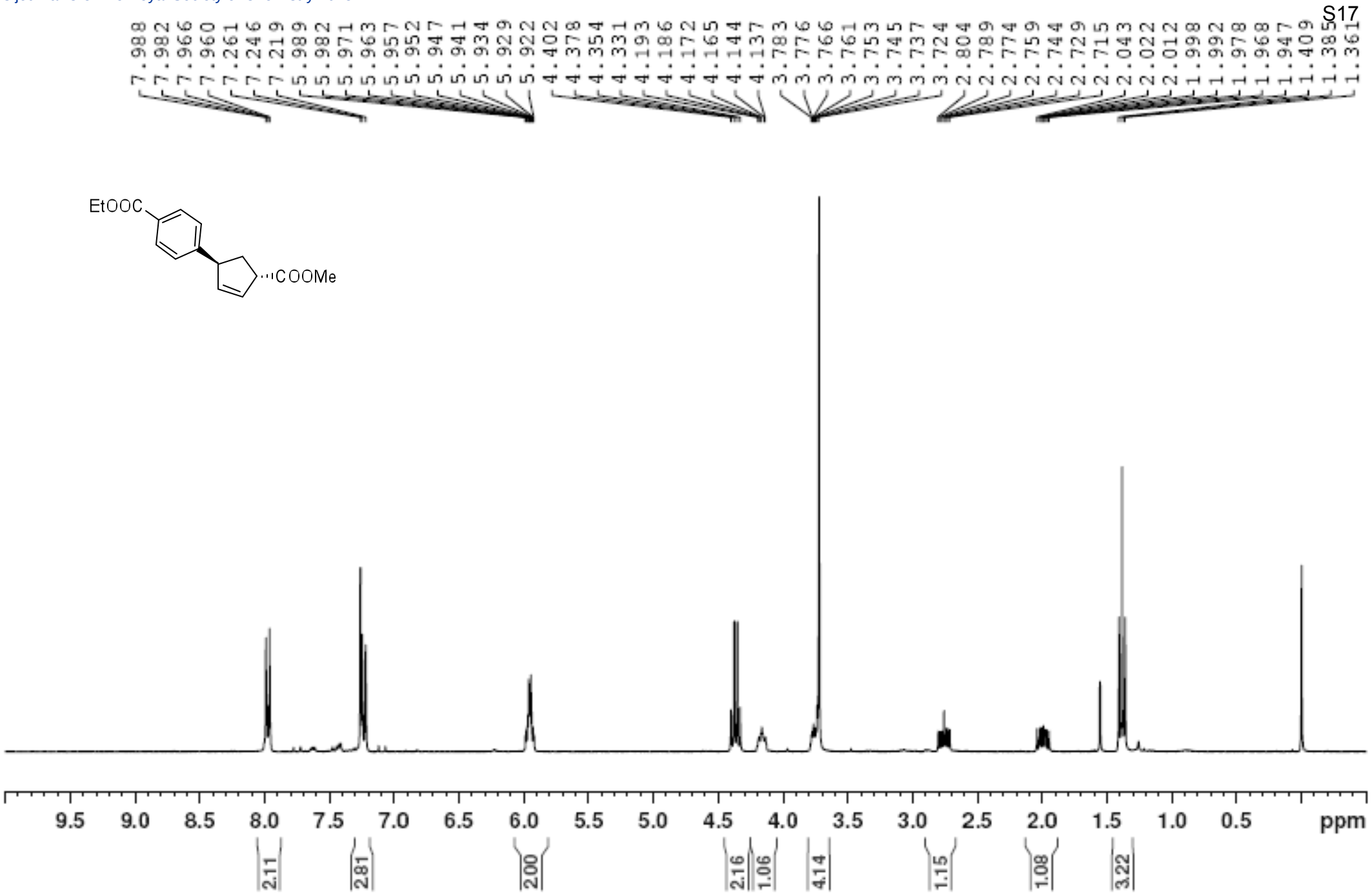
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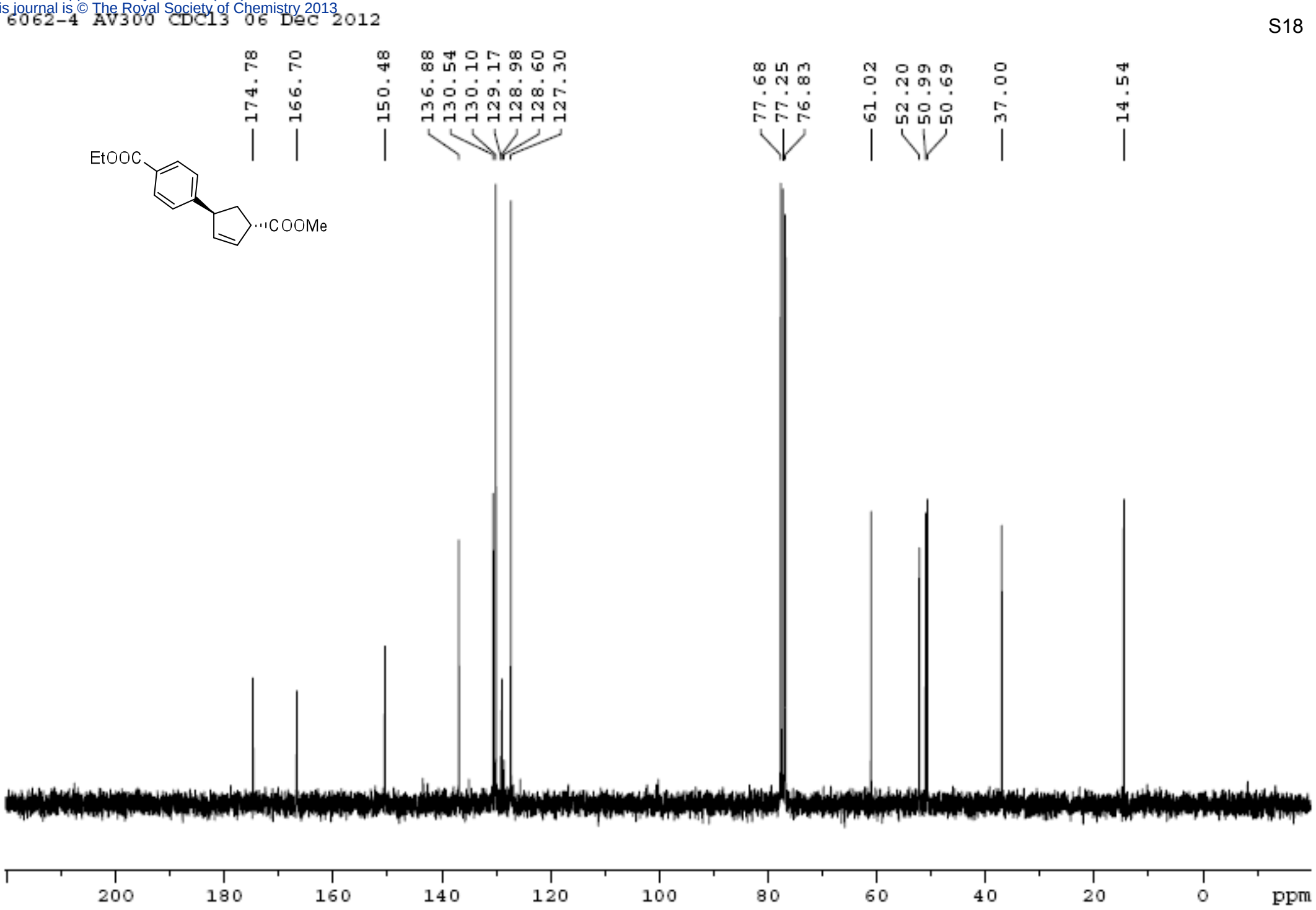
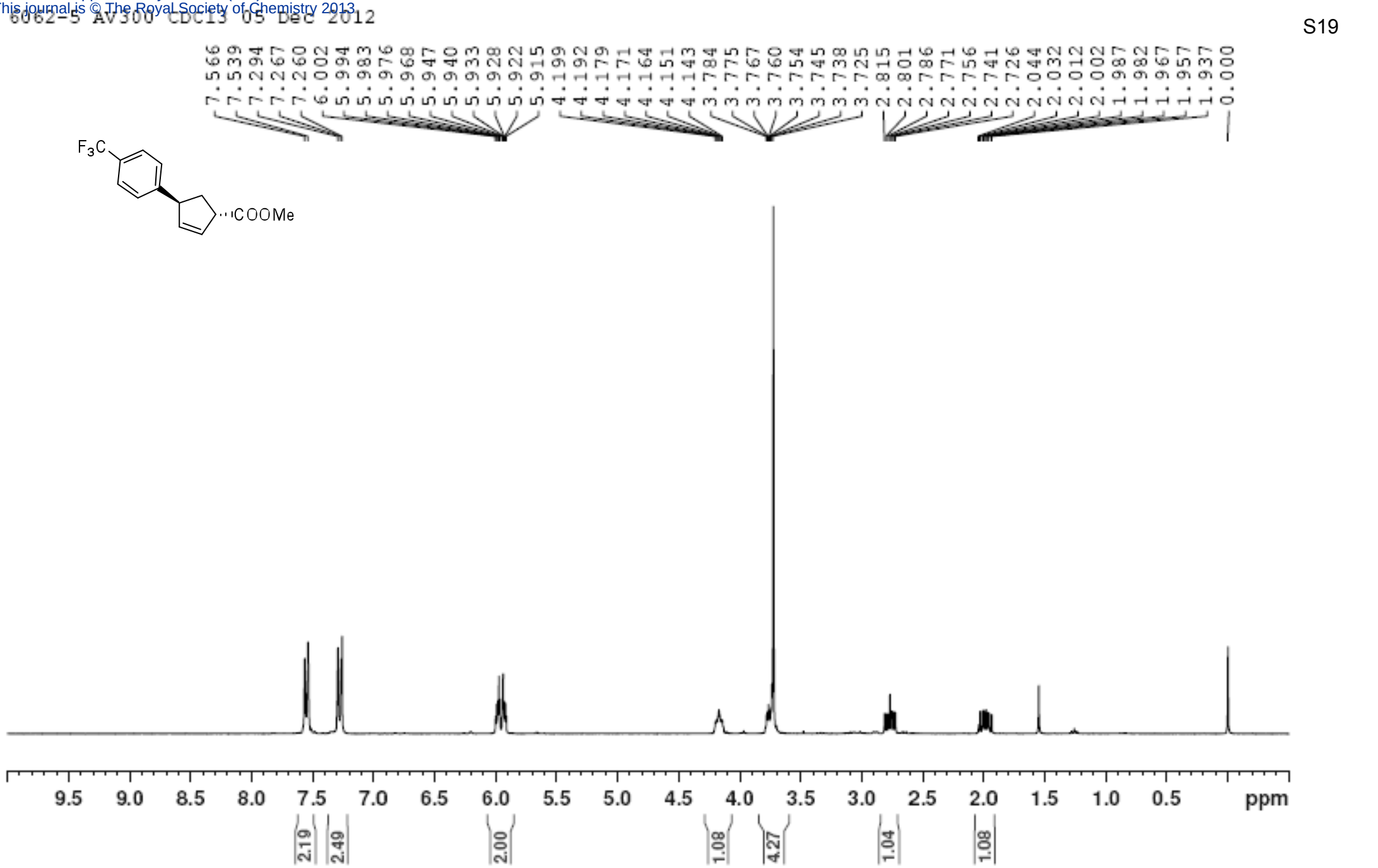
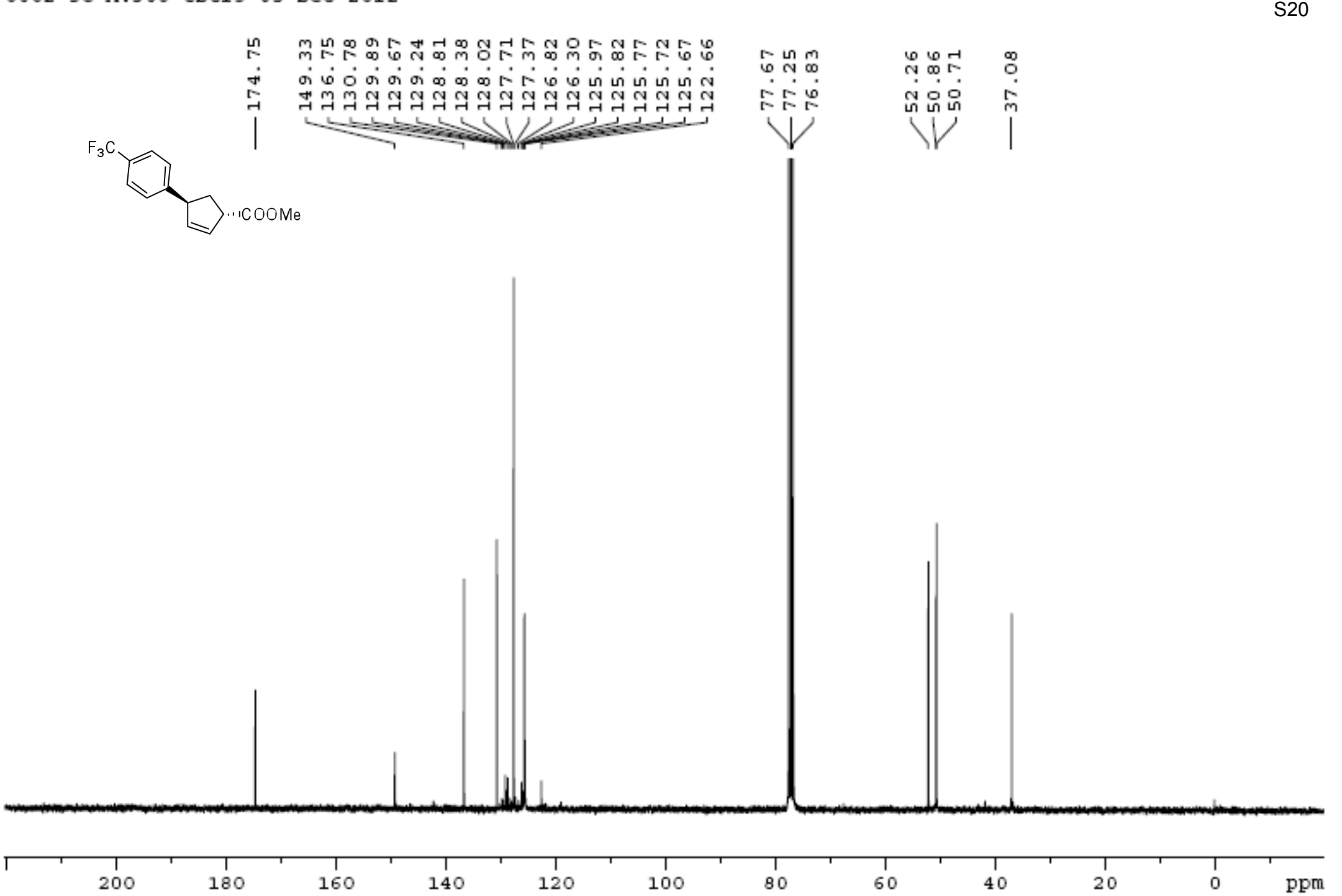
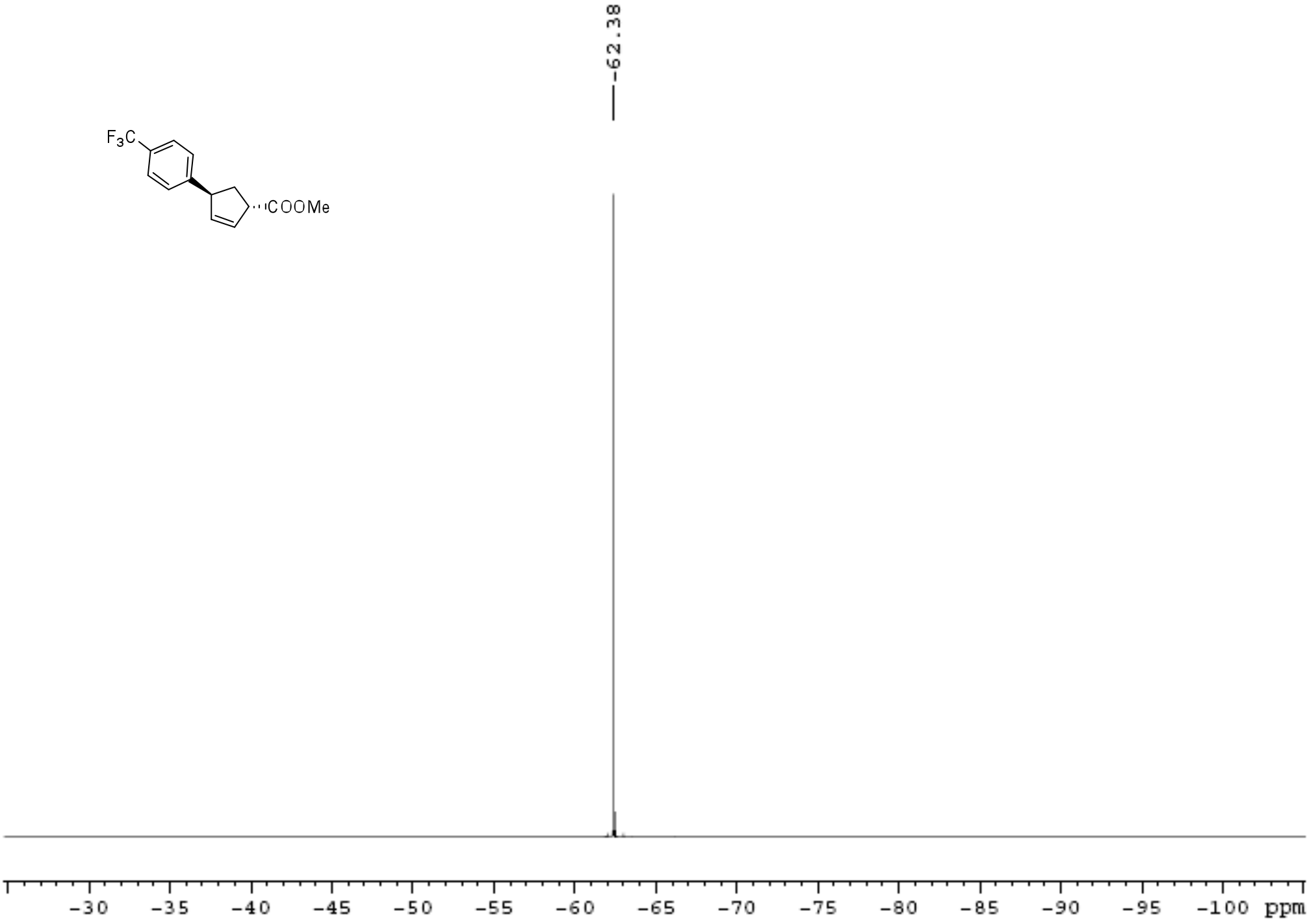
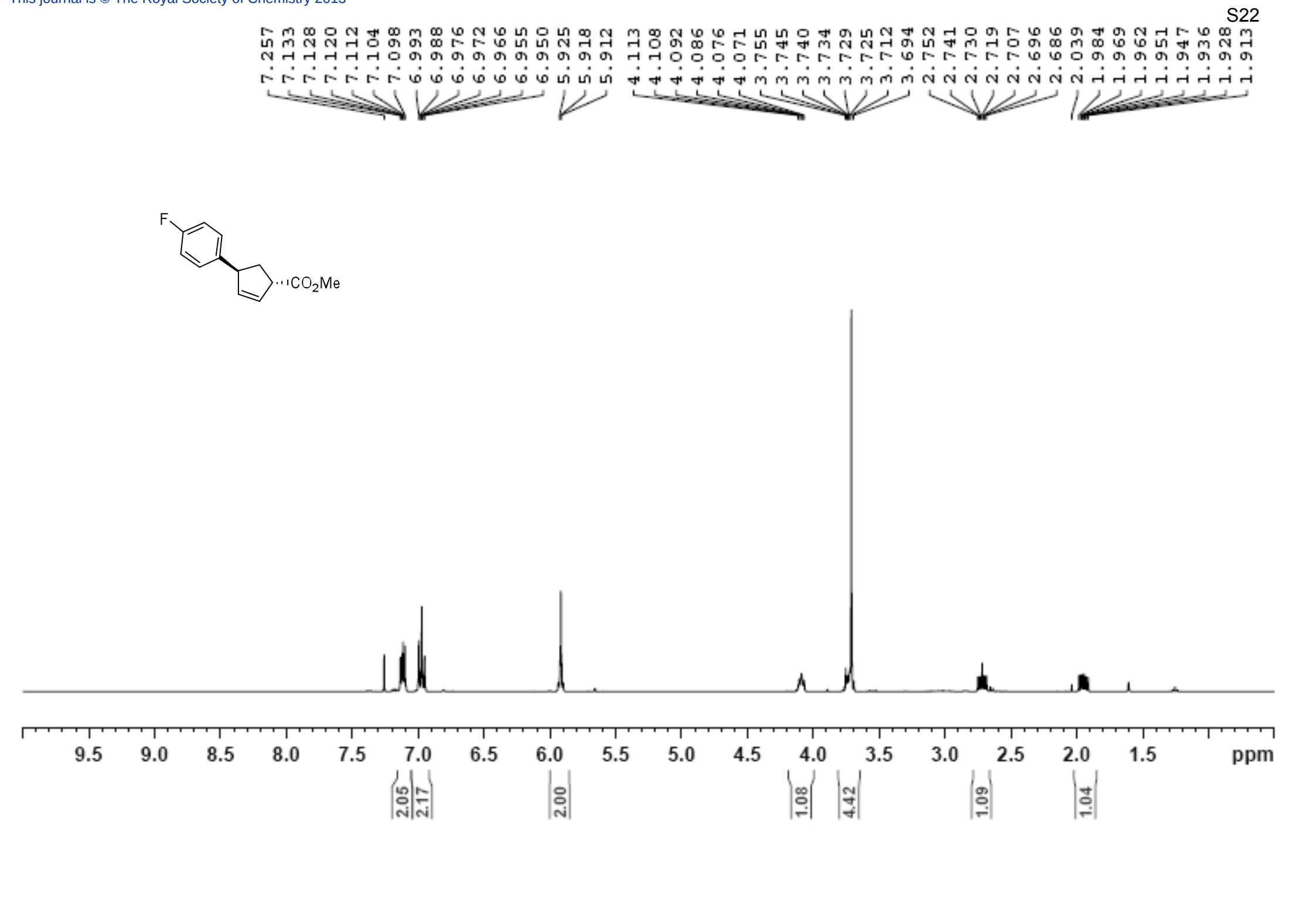


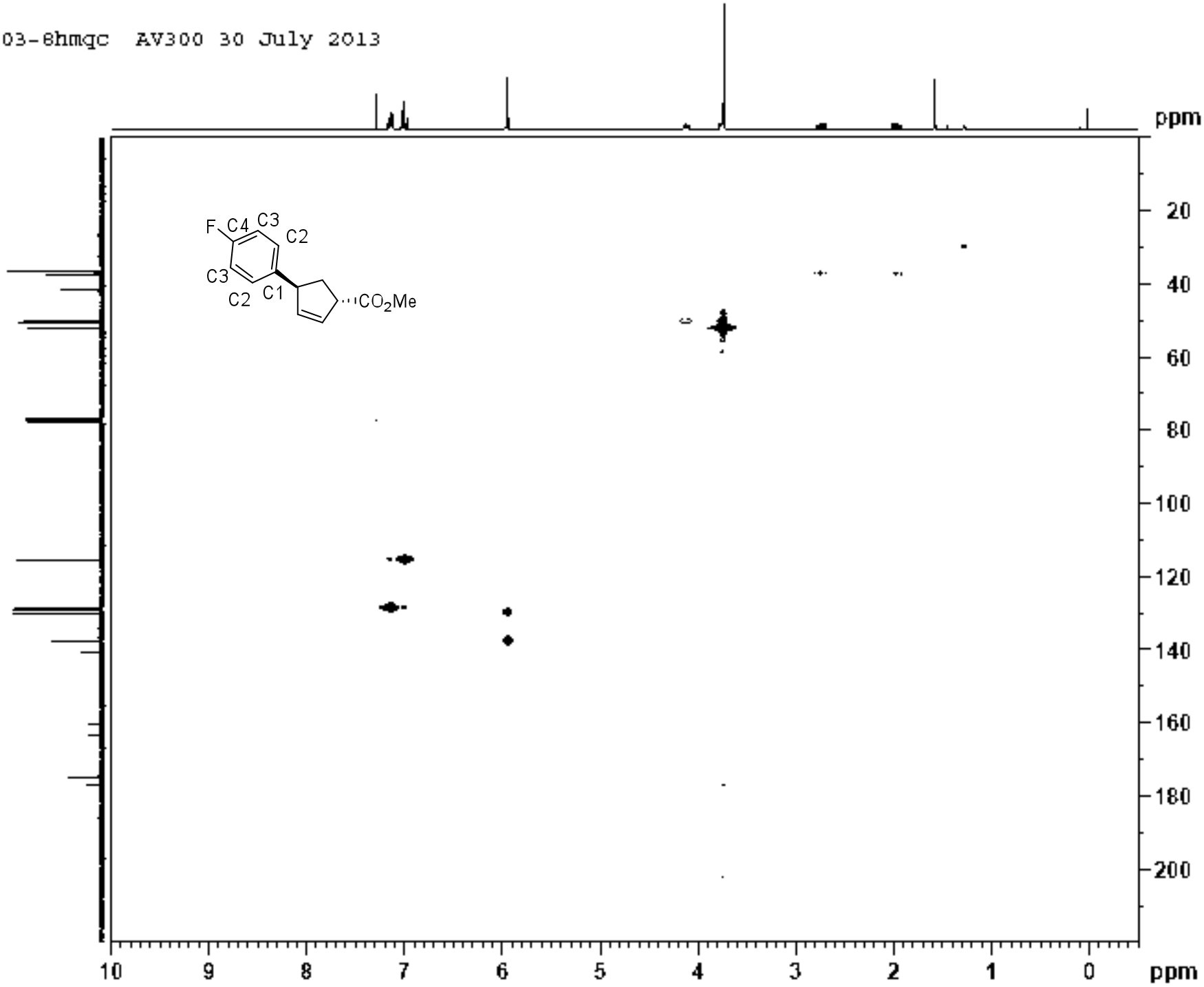


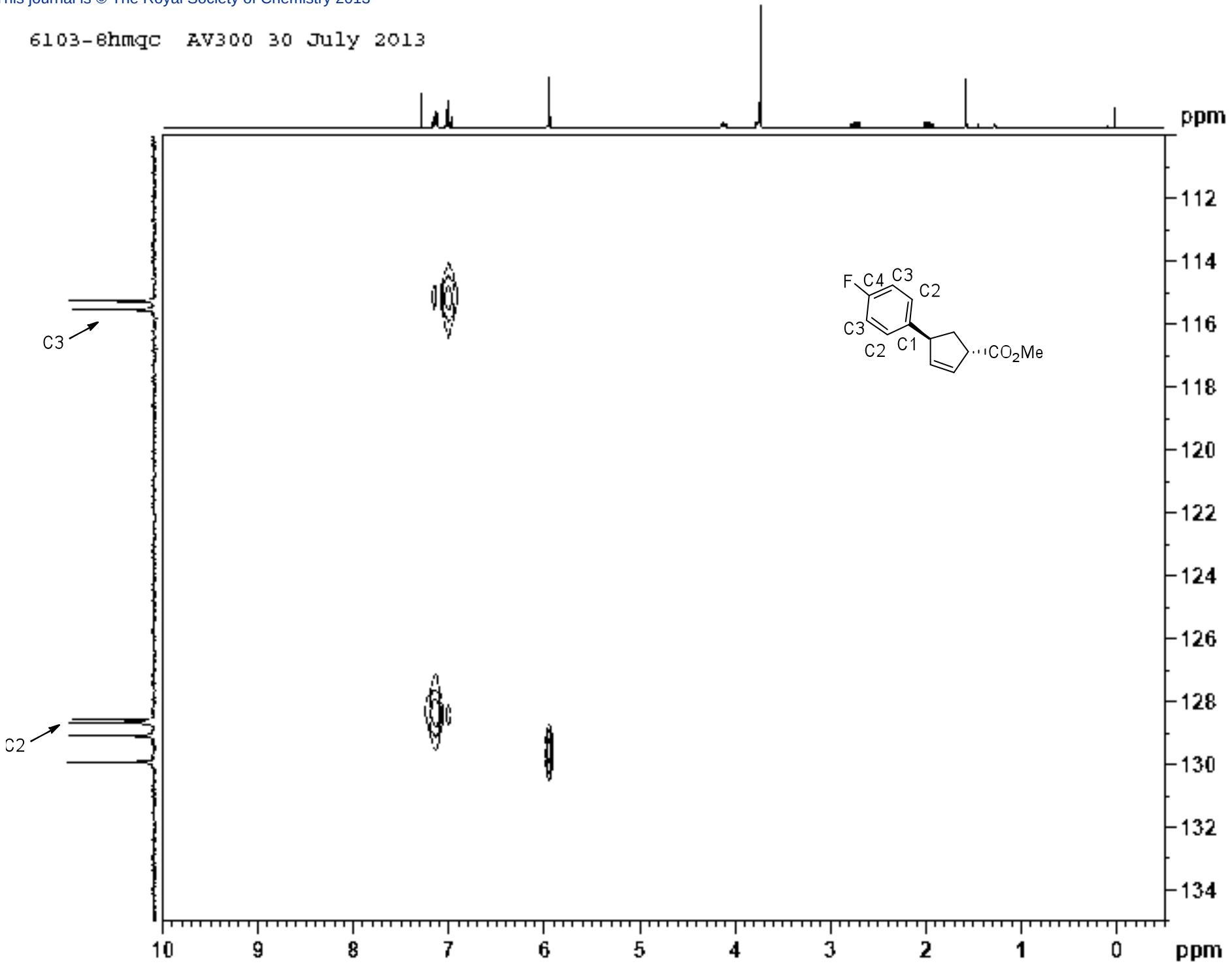


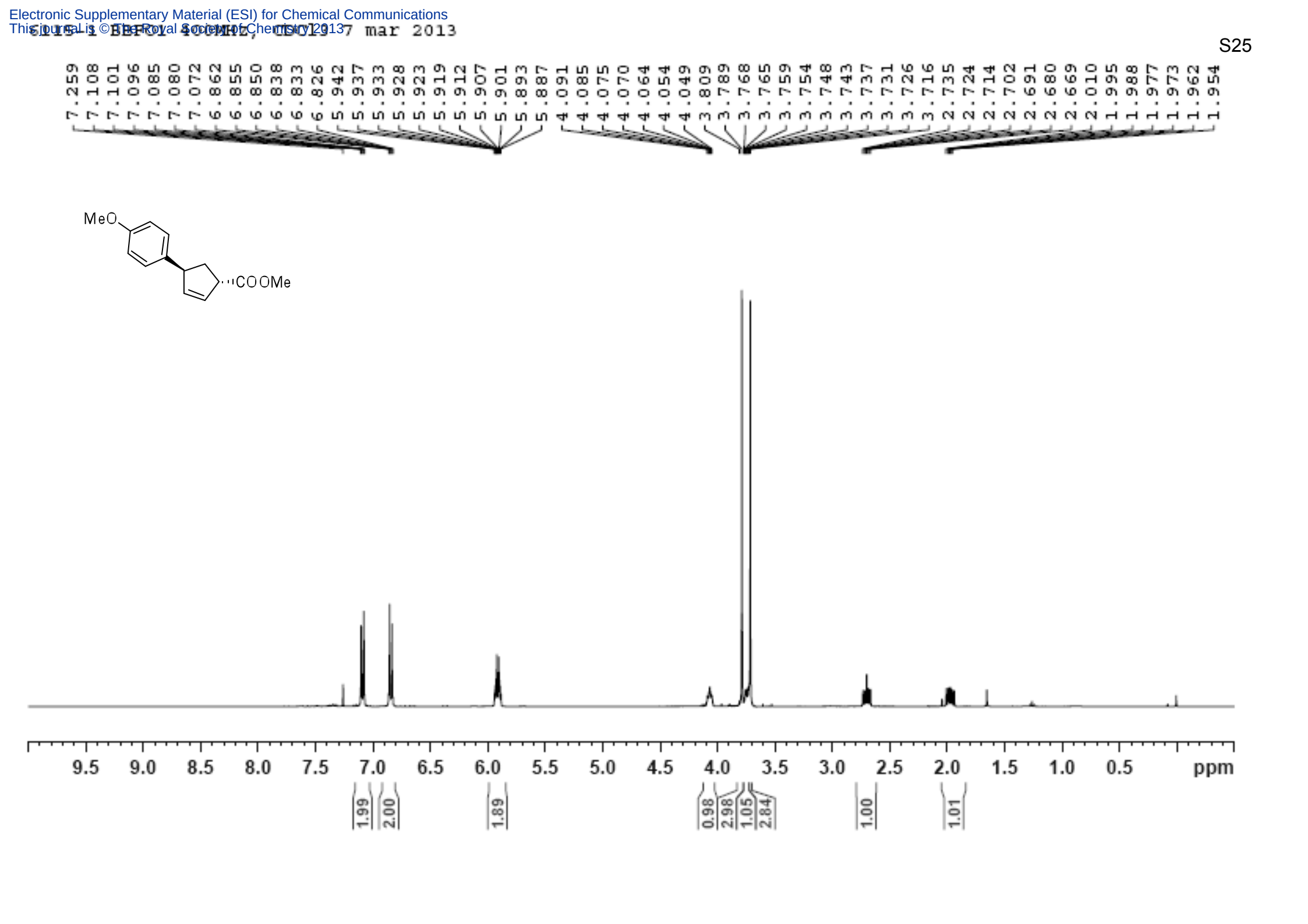
6062-5f AV300 CDCl3 05 Dec 2012

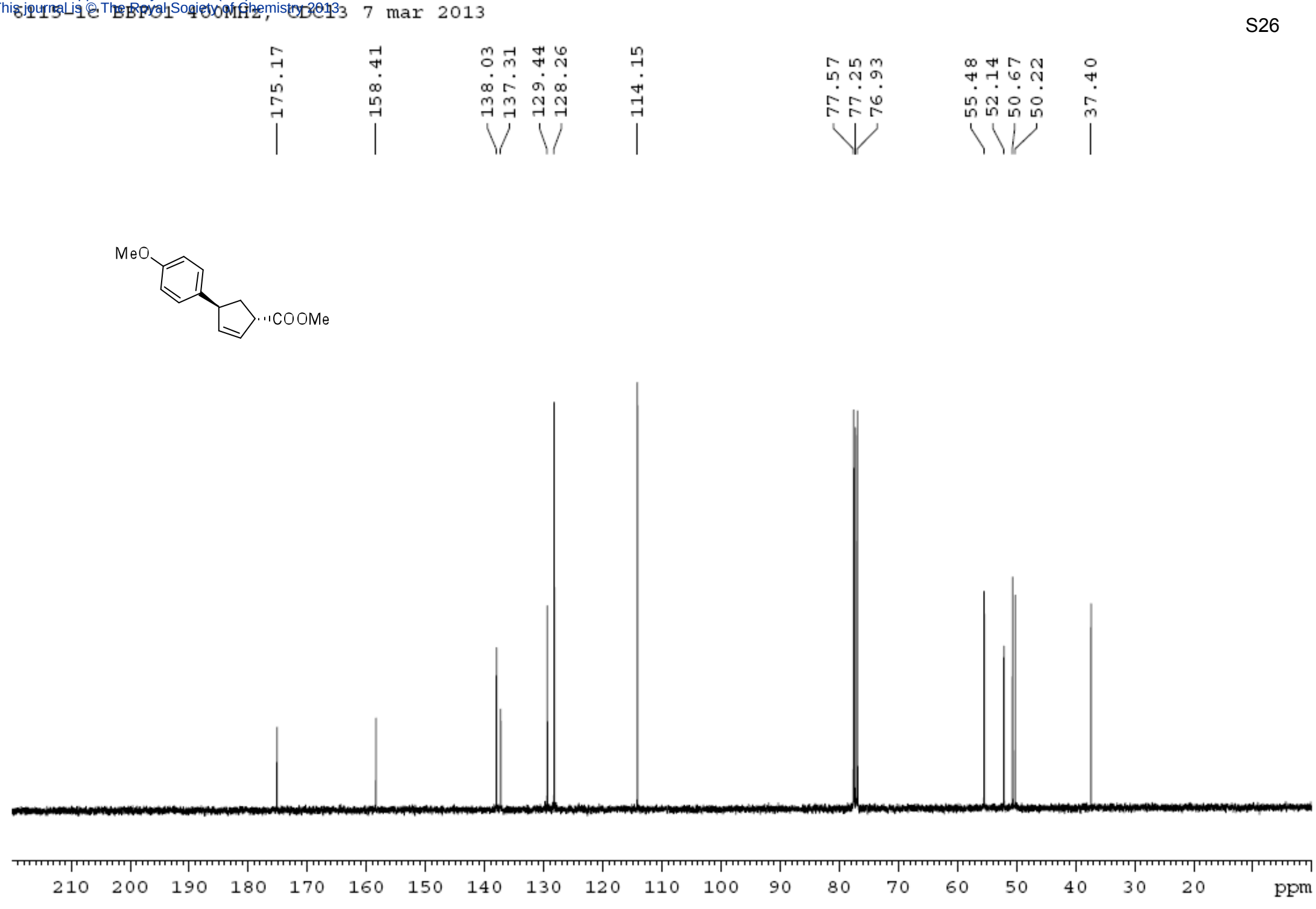


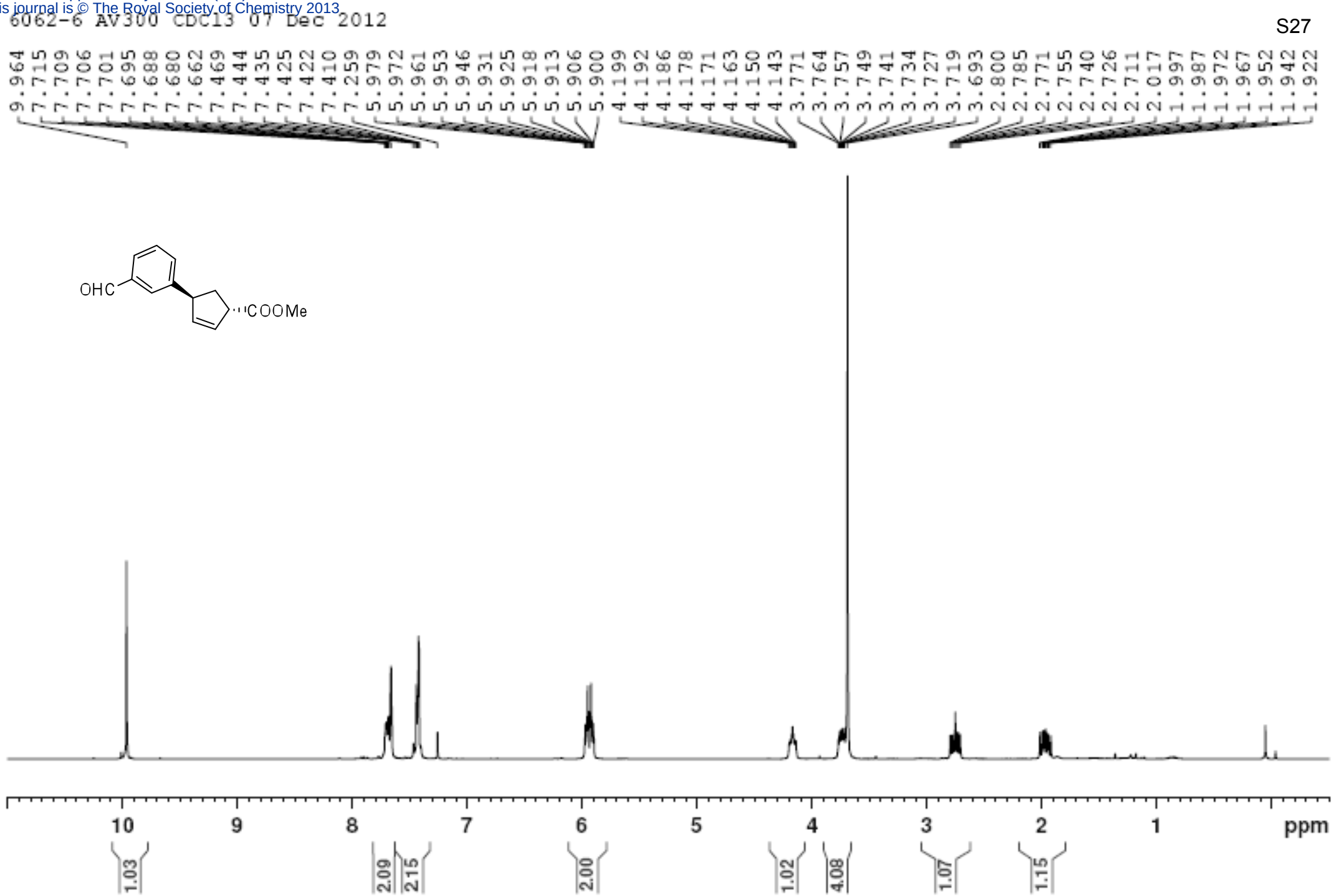












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146.35
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136.72
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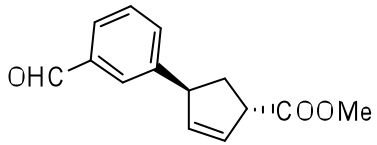

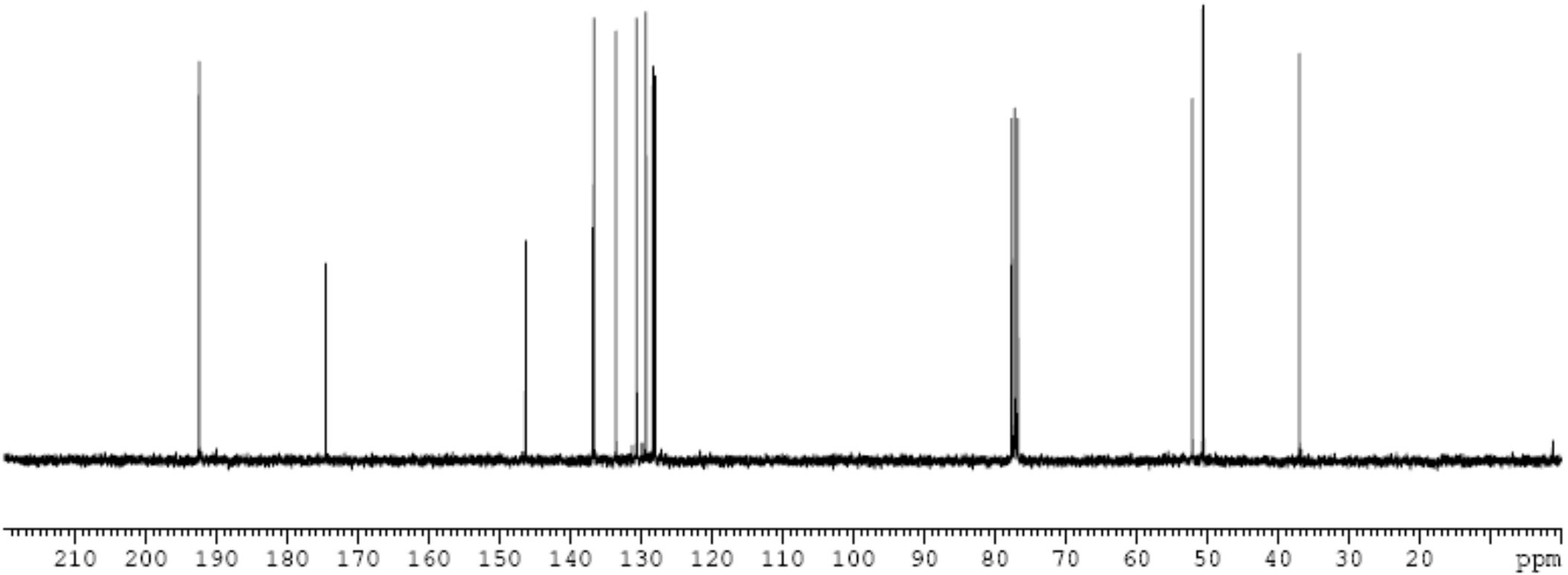

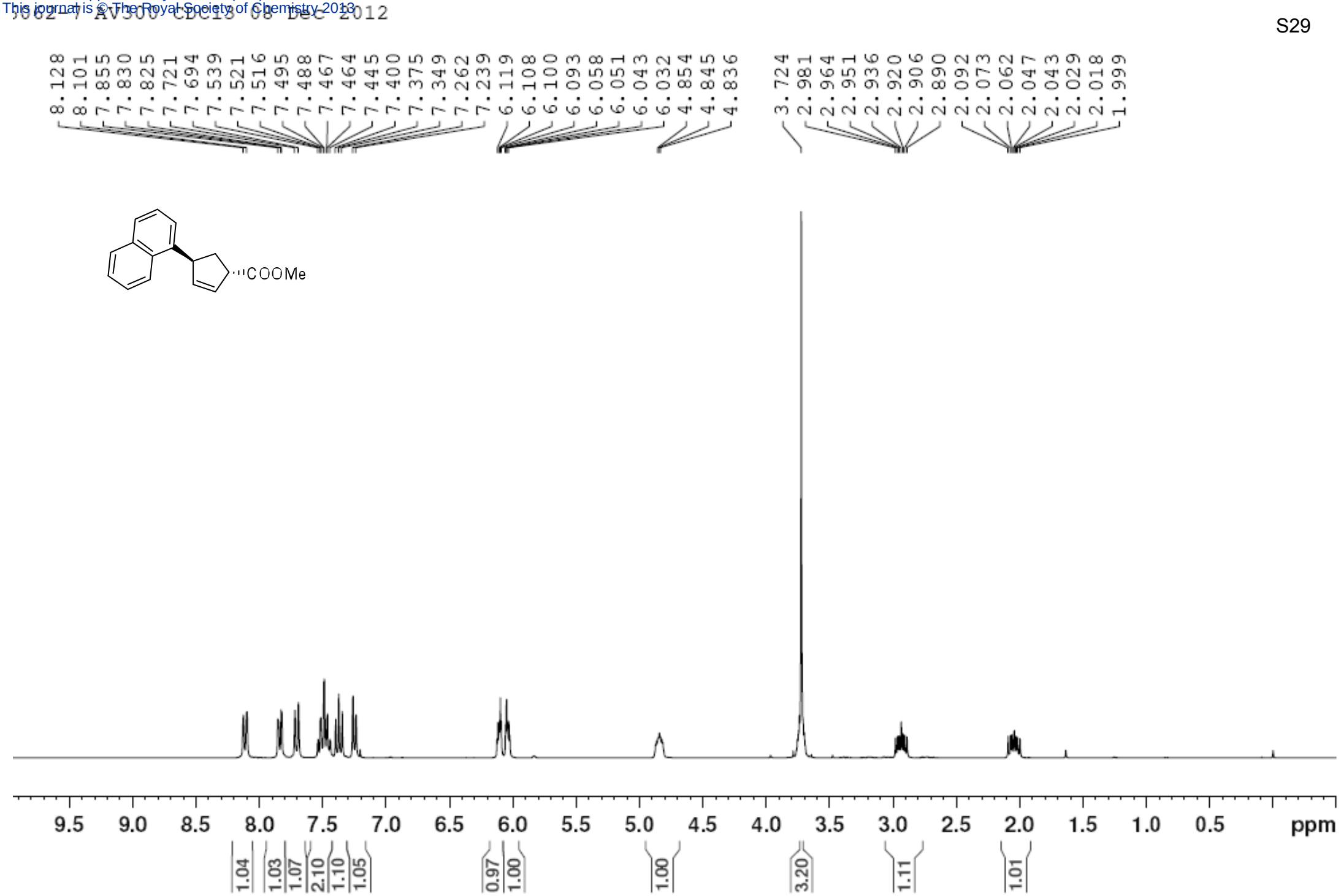

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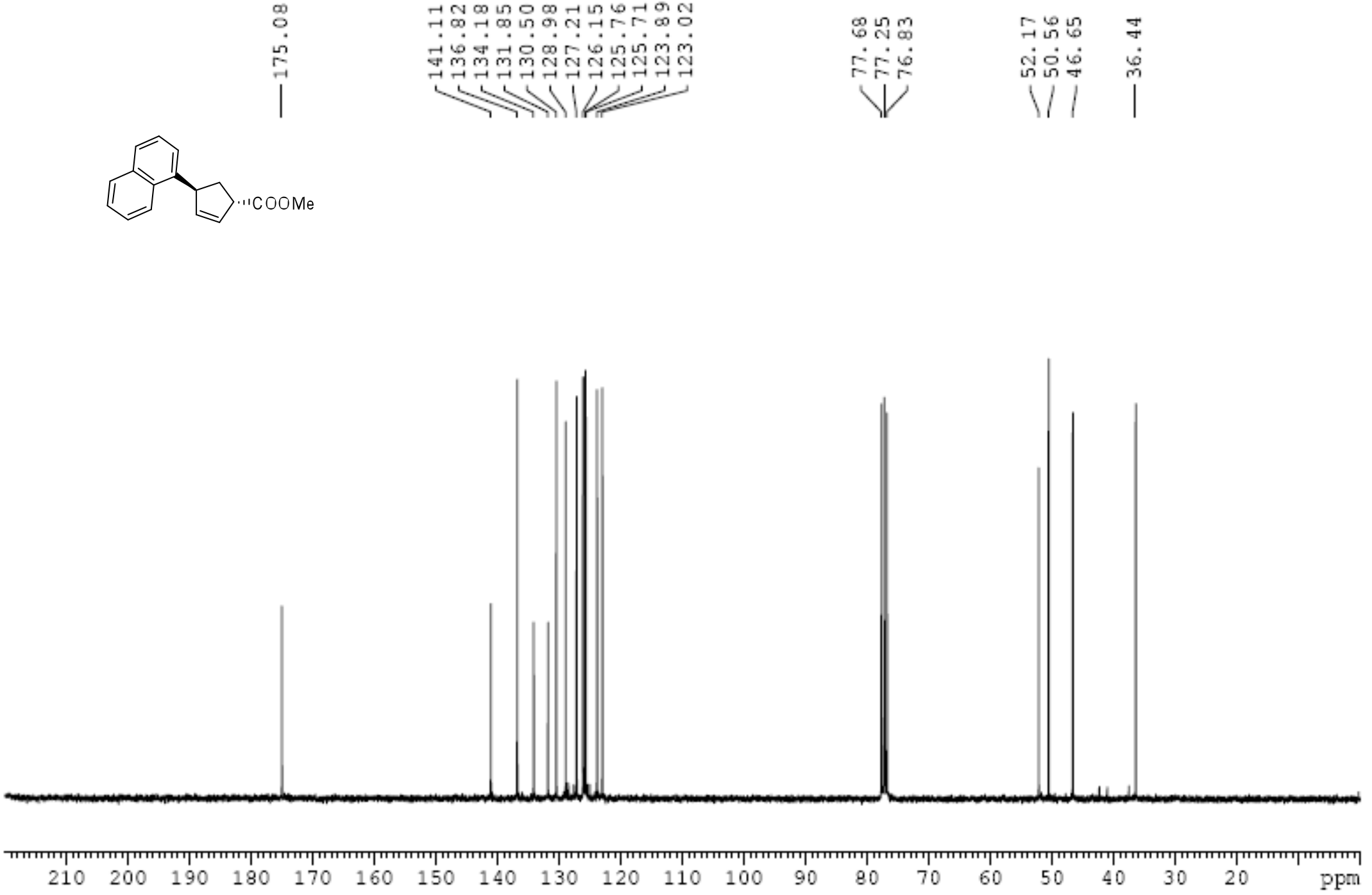

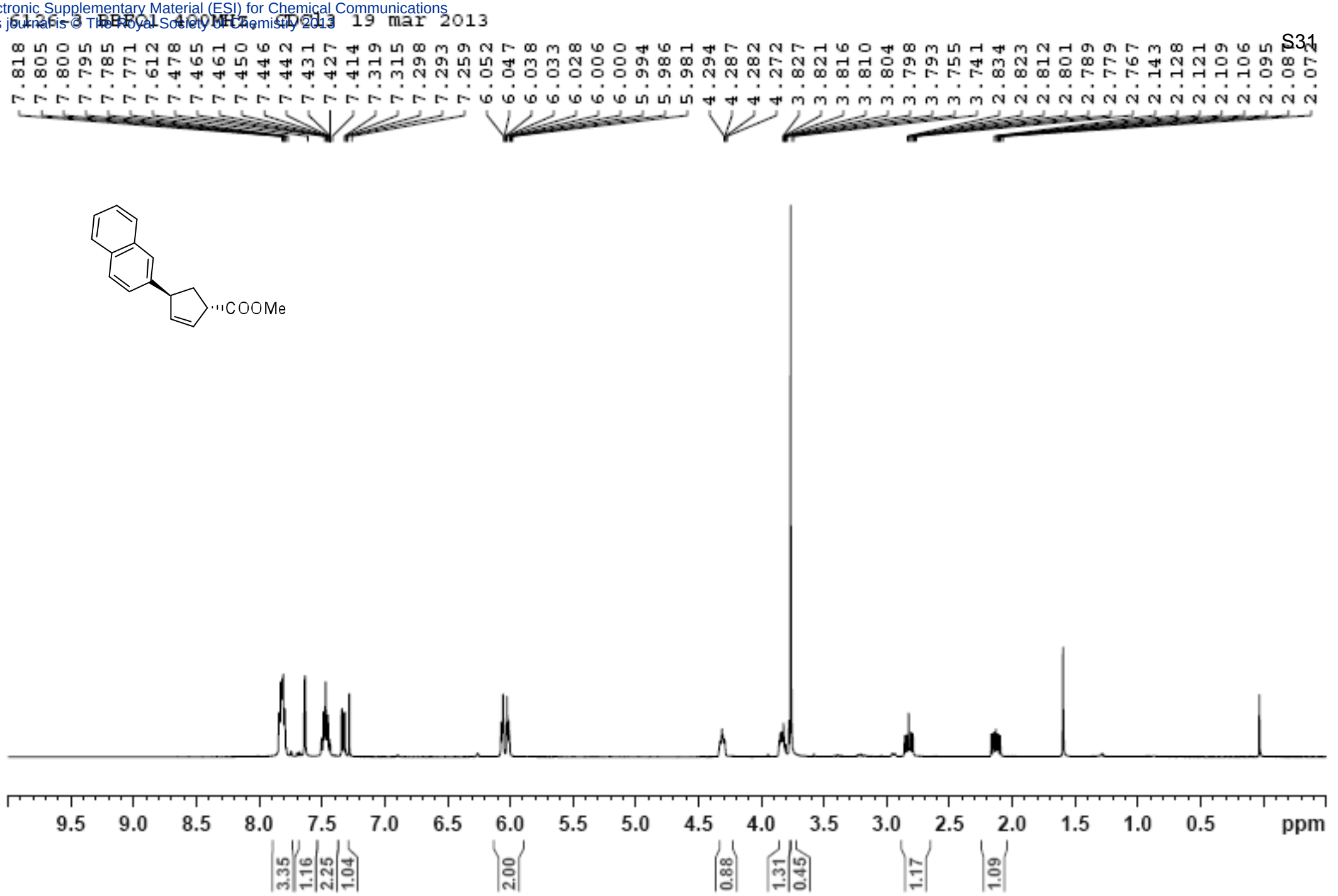

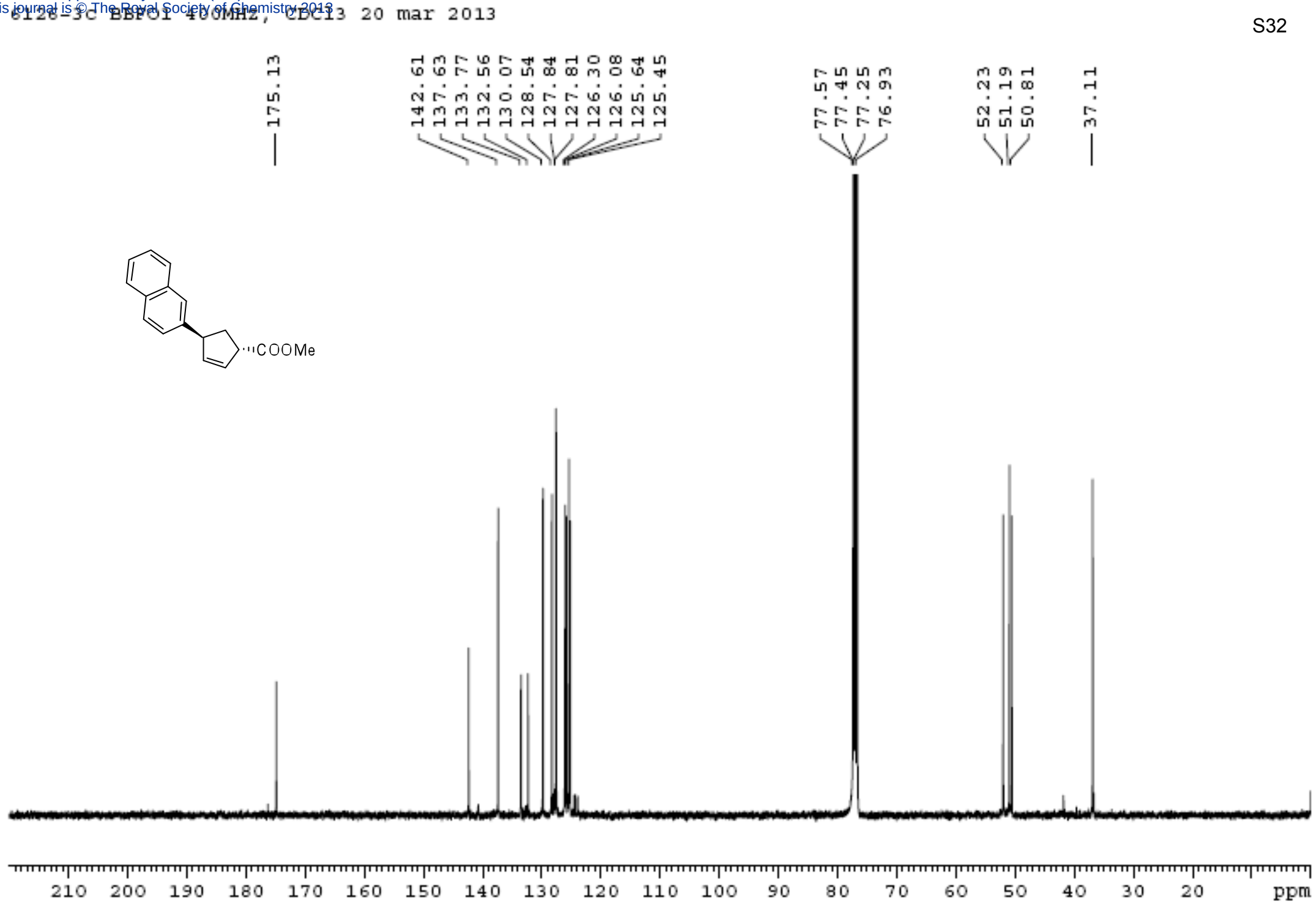

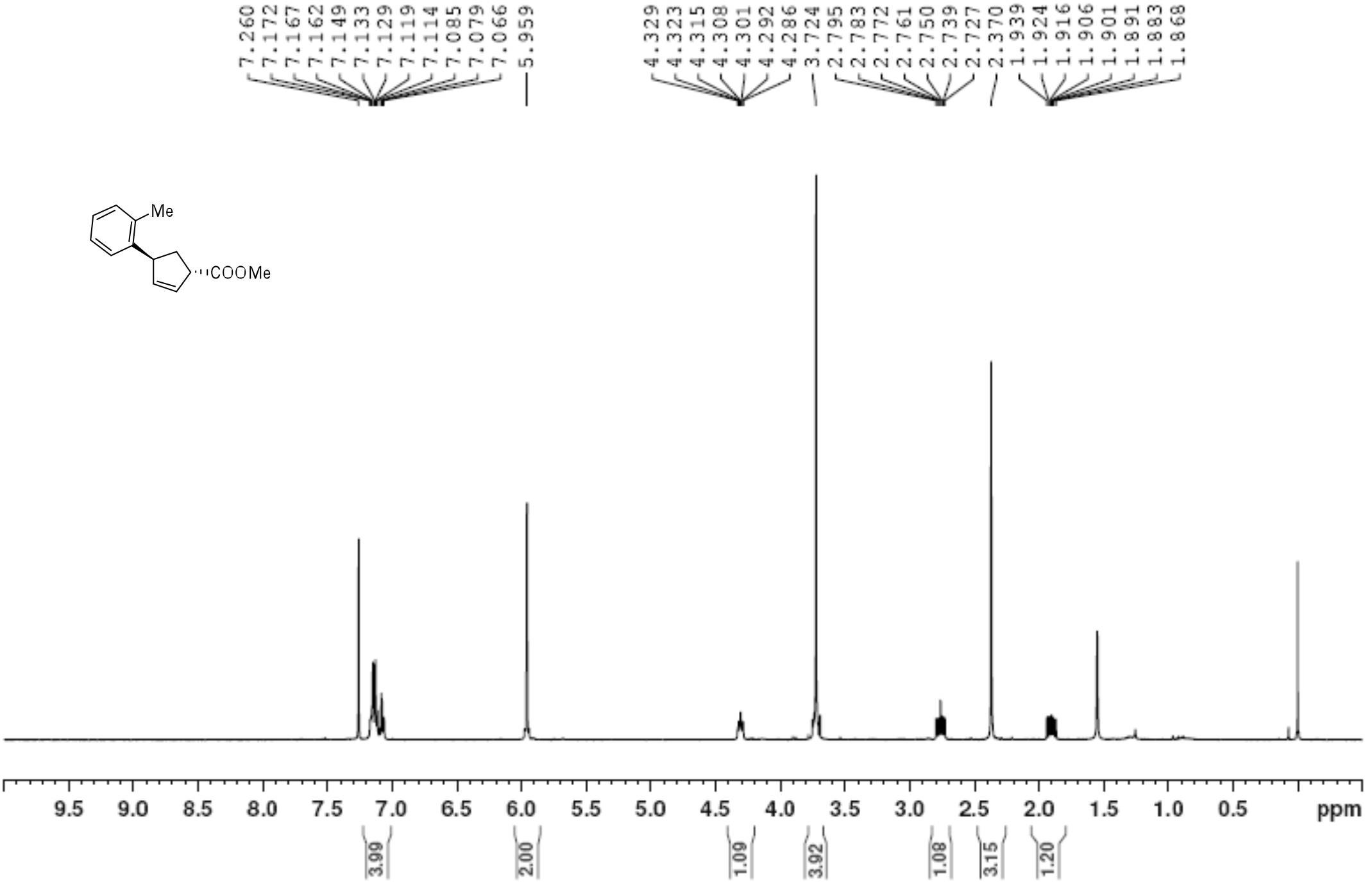

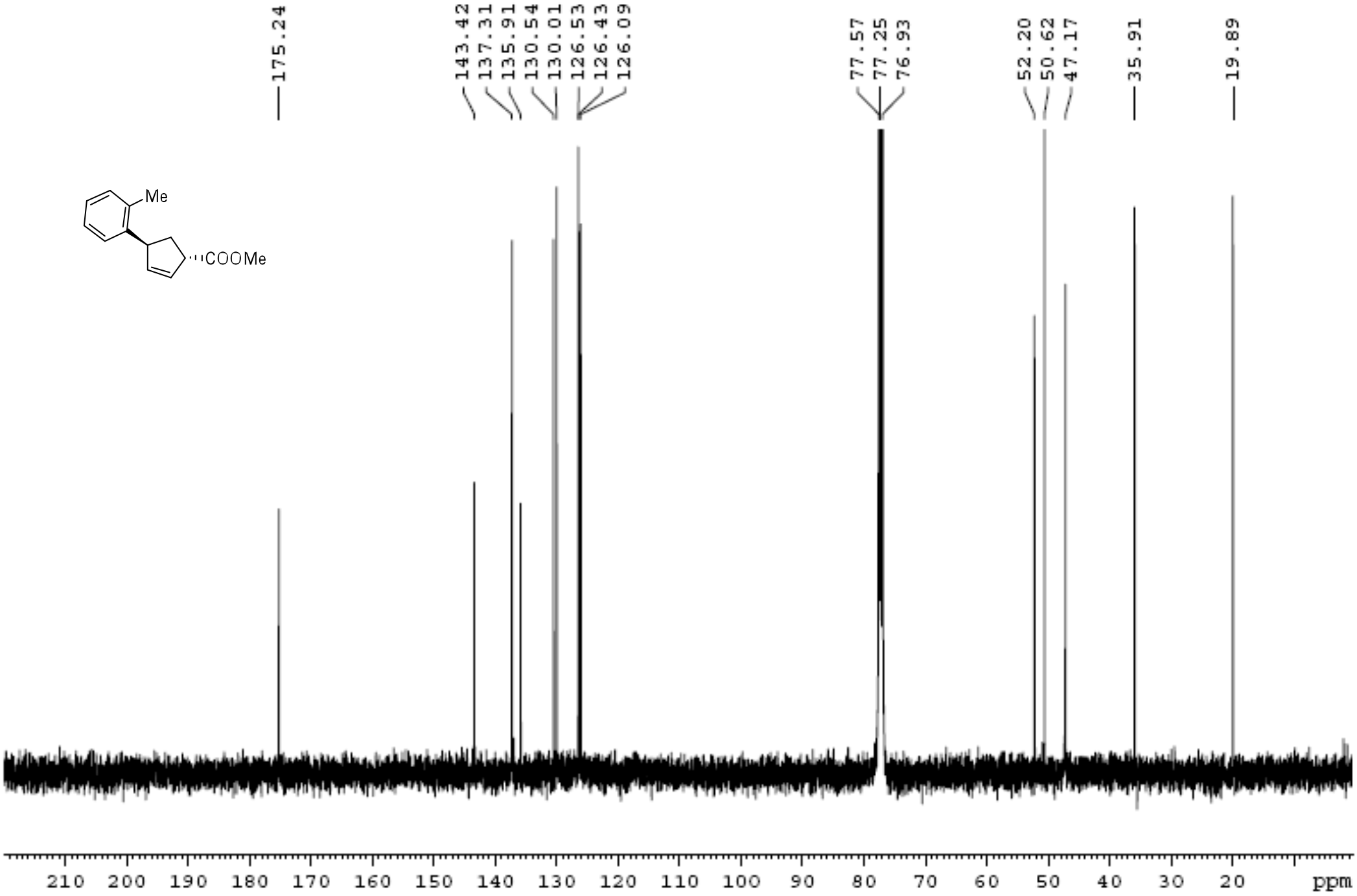
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77.25
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50.62
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35.91
19.89
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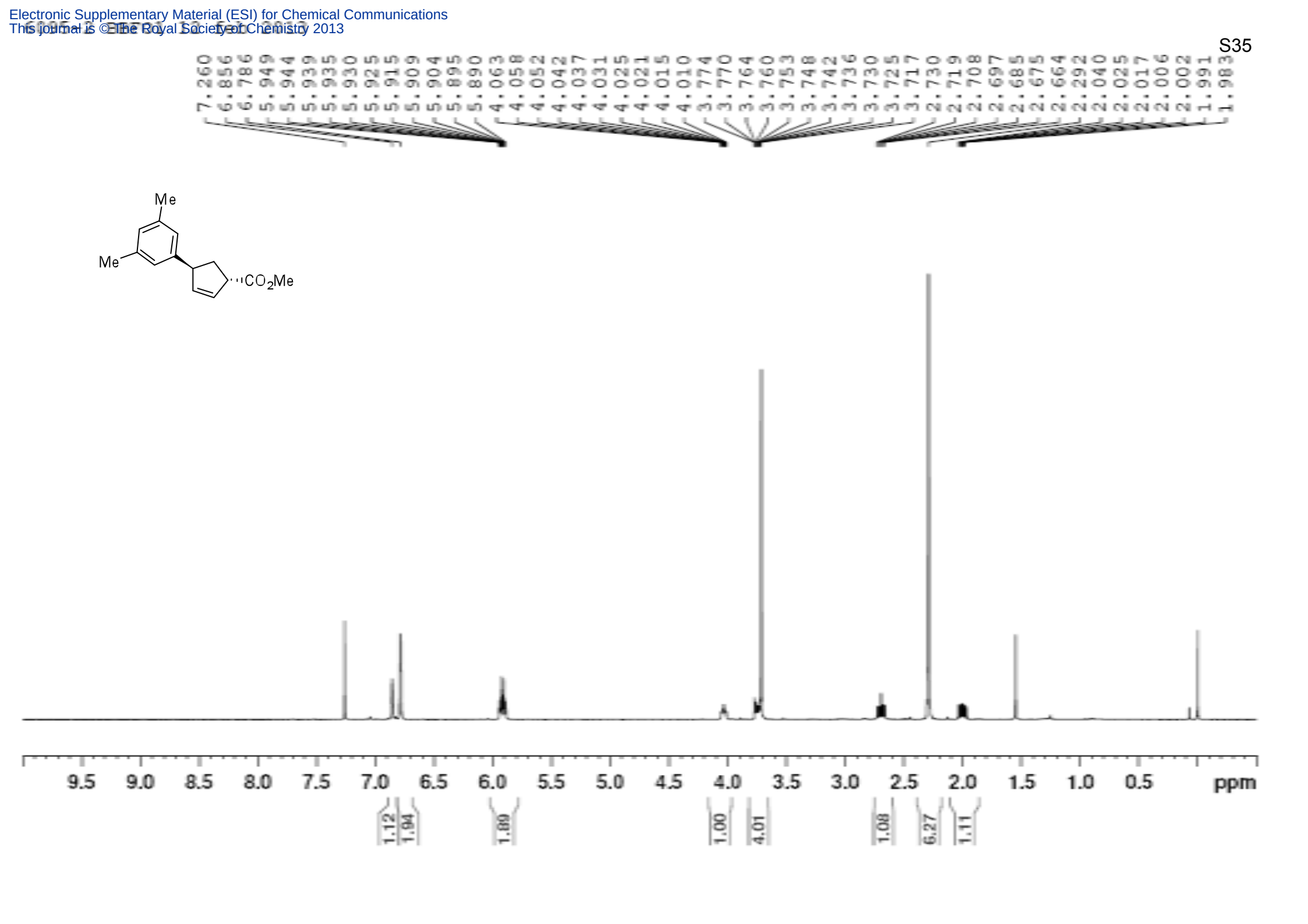
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5.890
4.063
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4.052
4.042
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4.010
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3.730
3.725
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1.983
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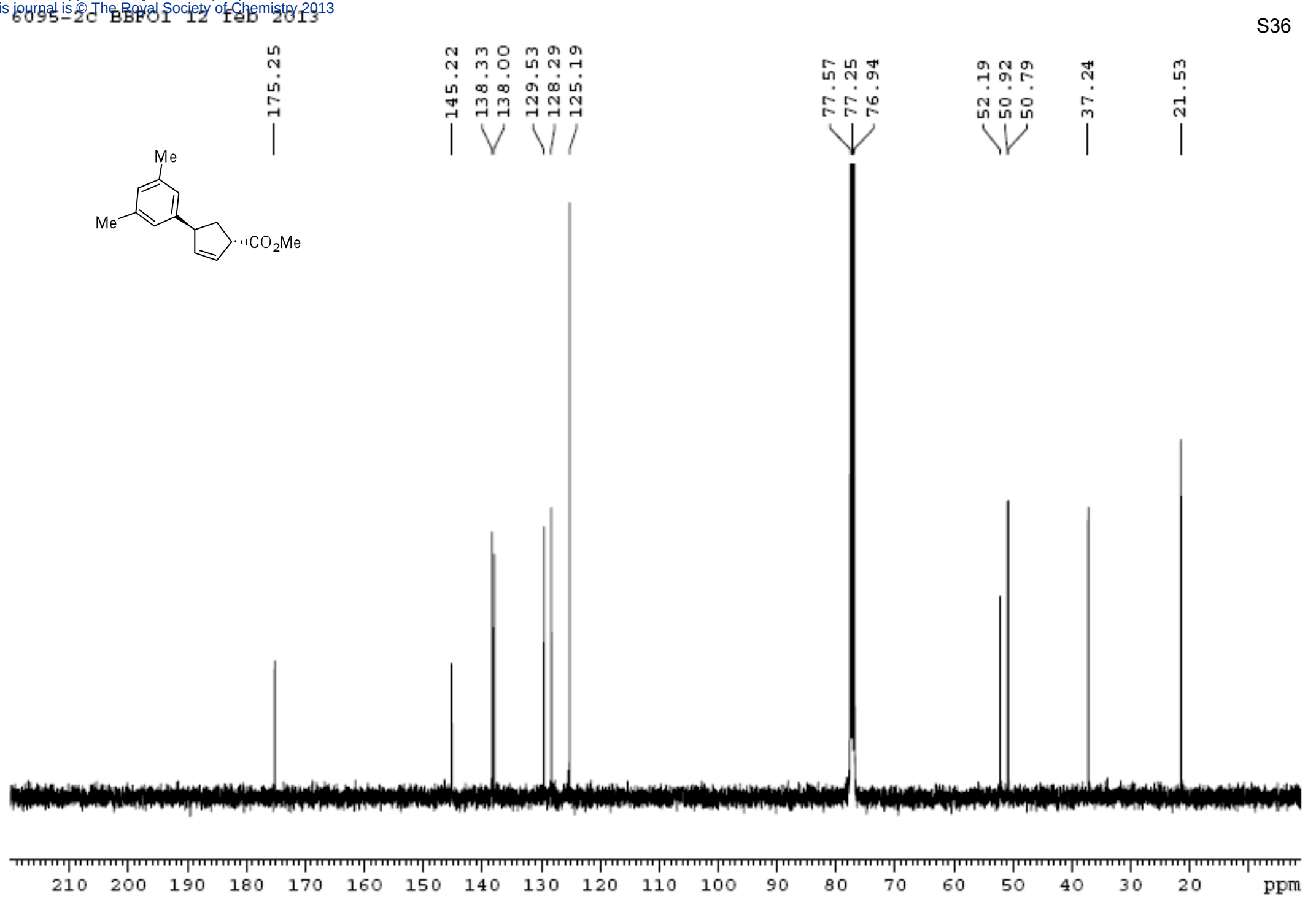

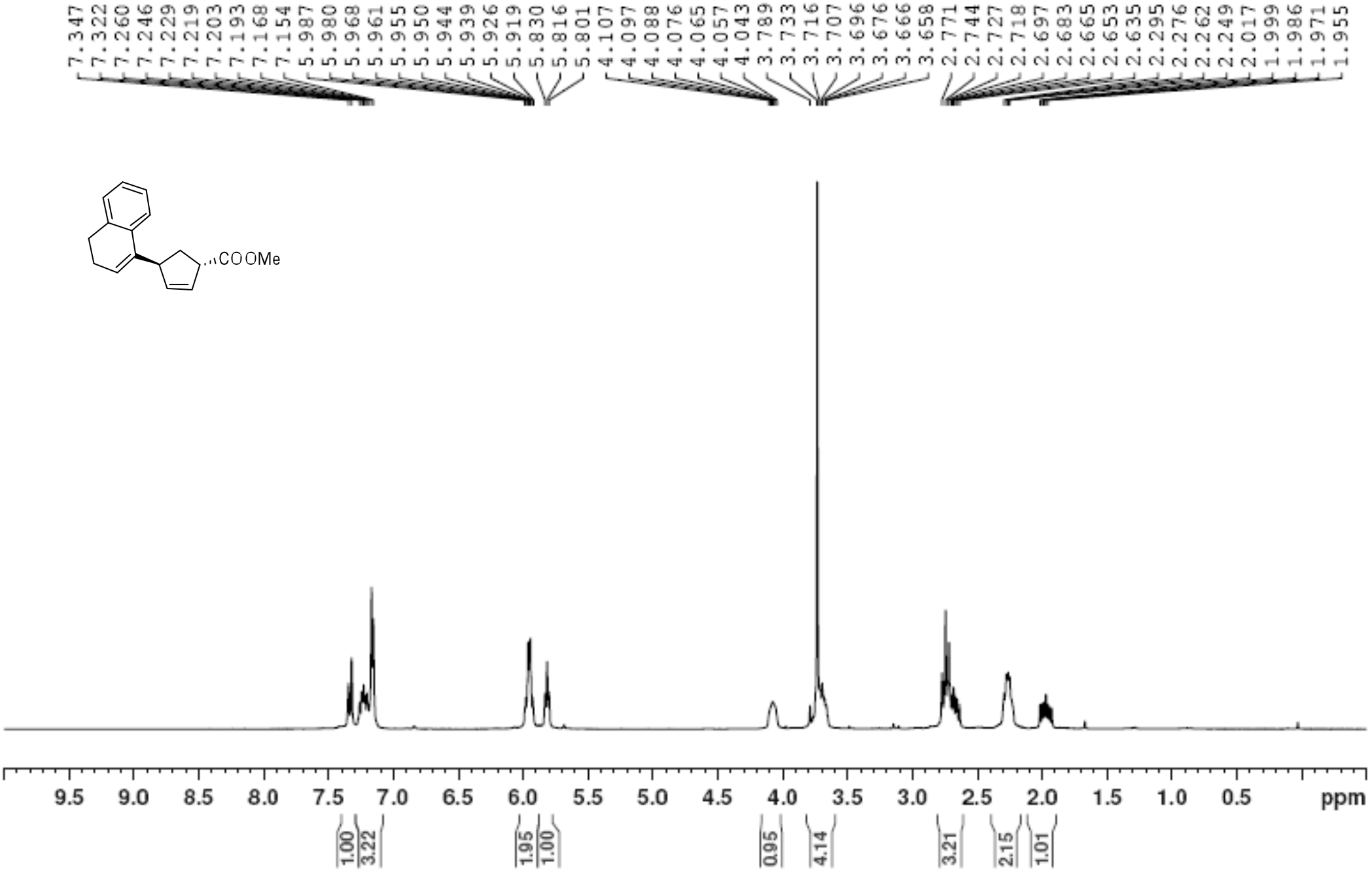

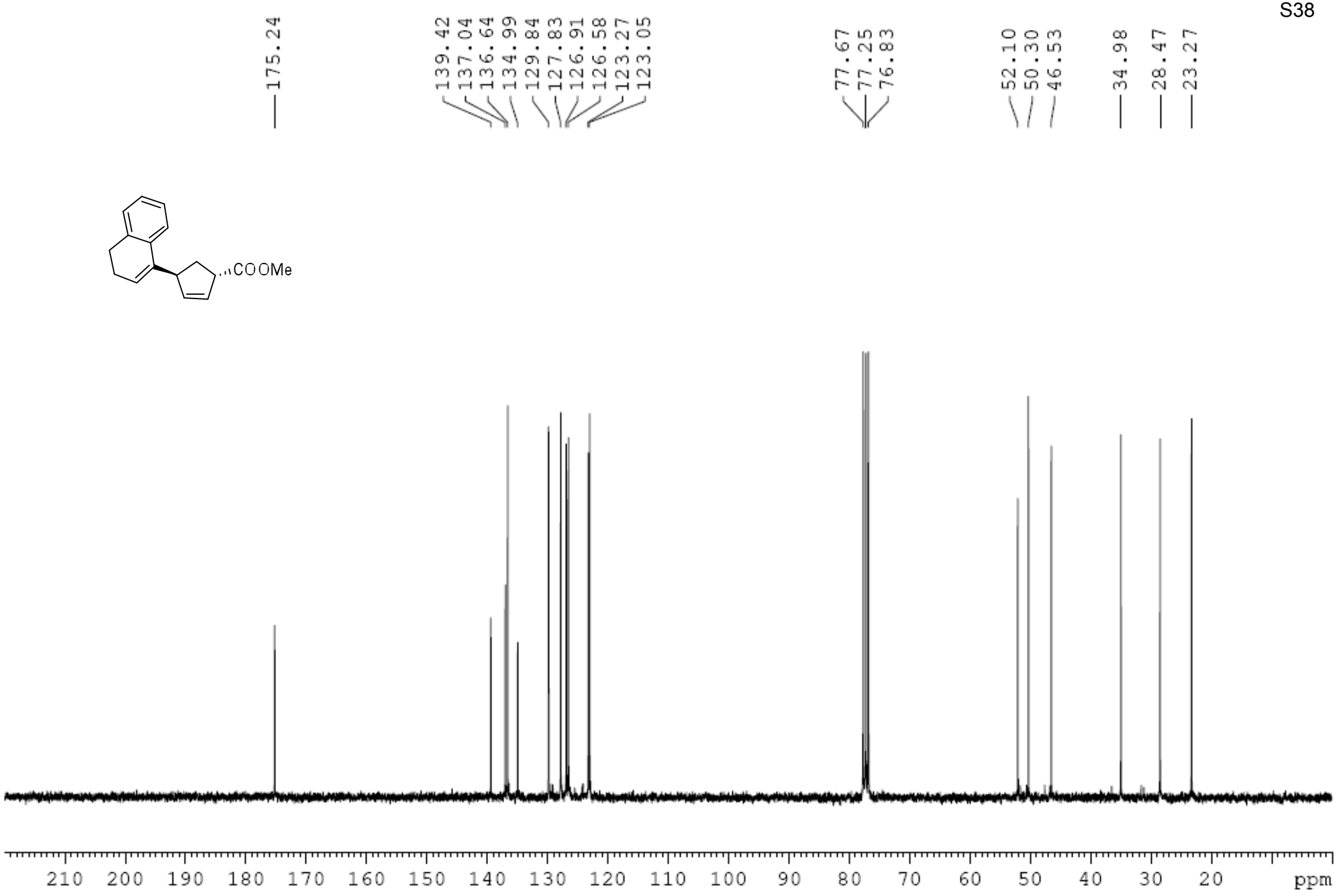

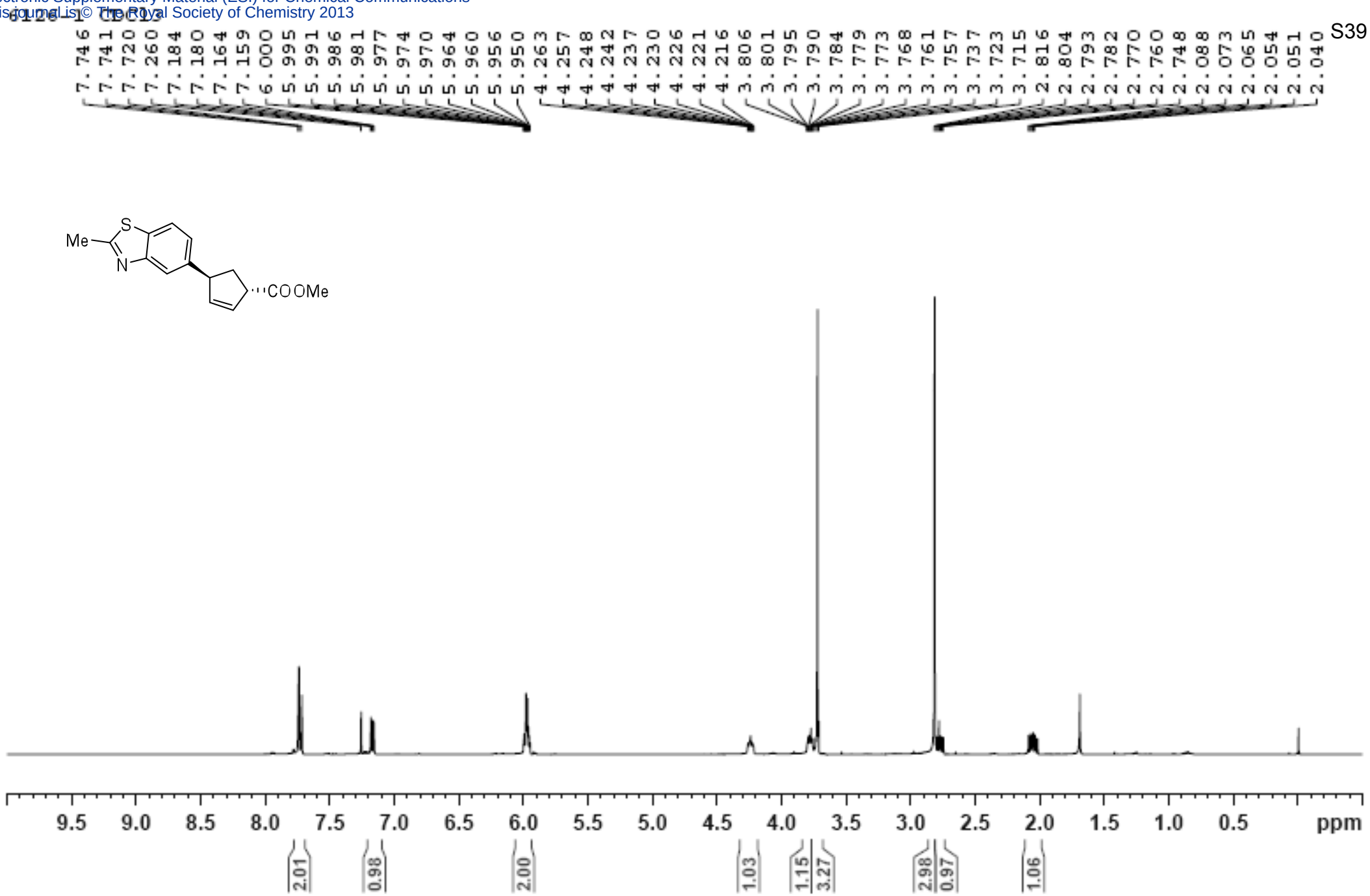
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5.970
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5.956
5.950
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4.248
4.242
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Me
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COOMe
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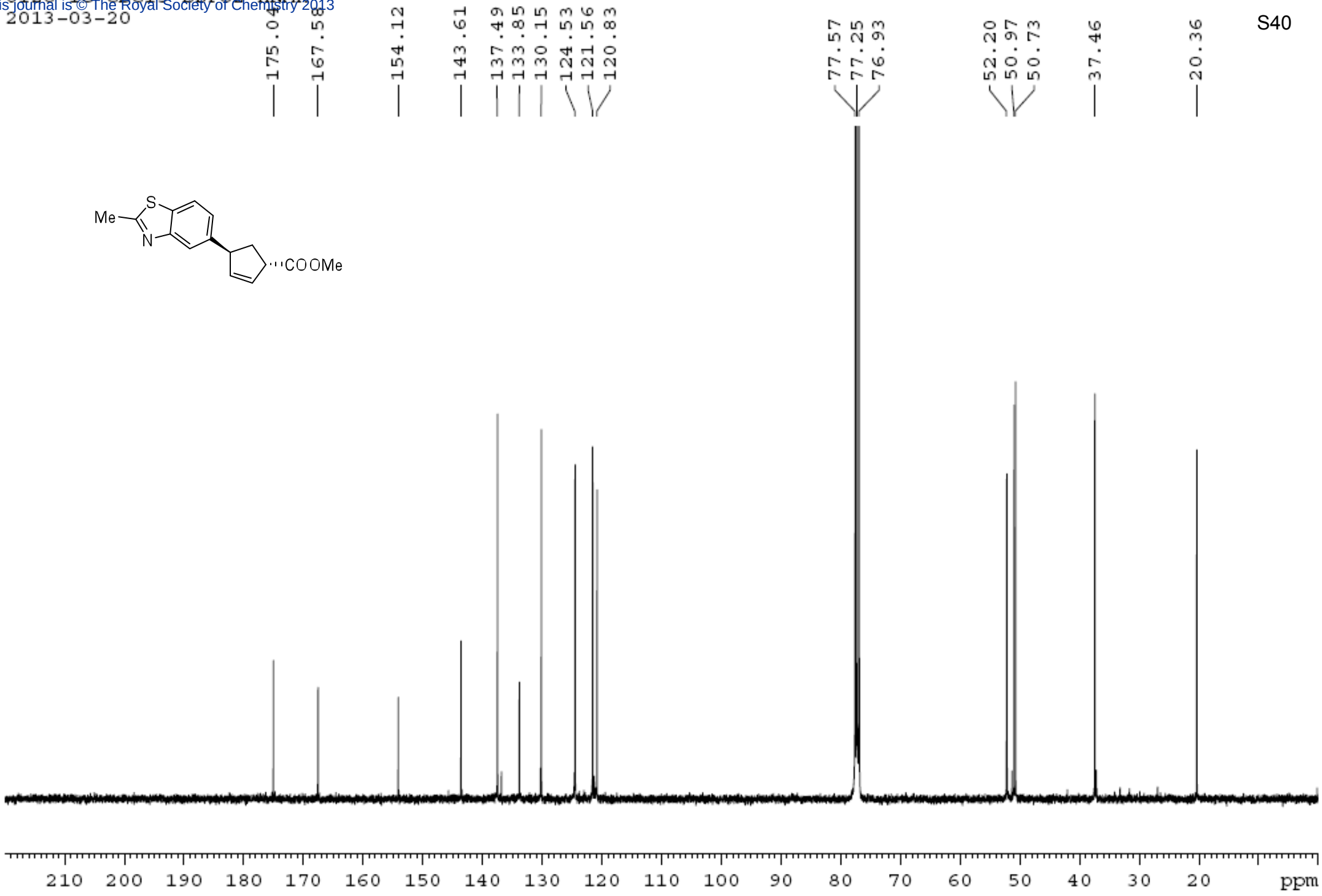

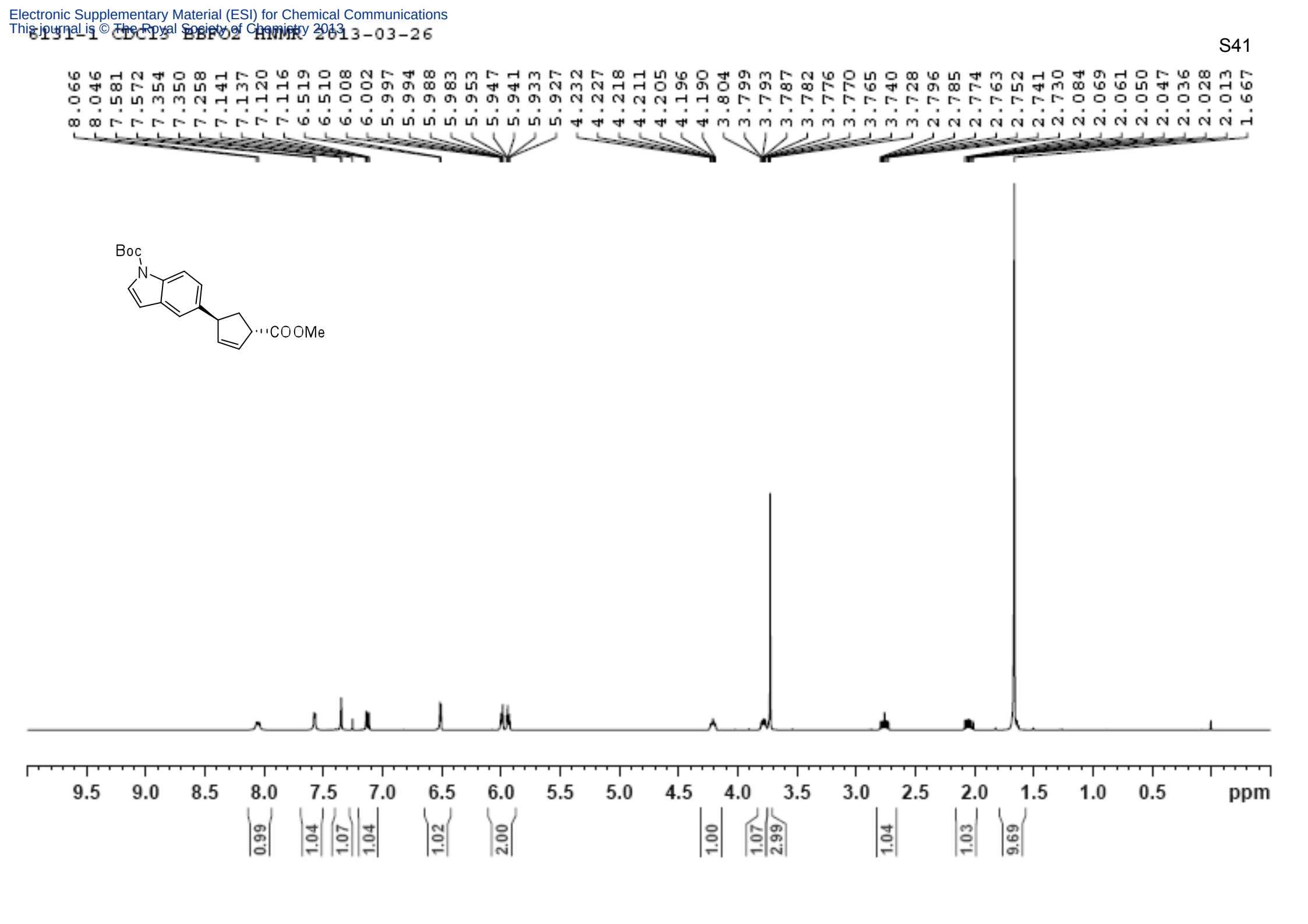

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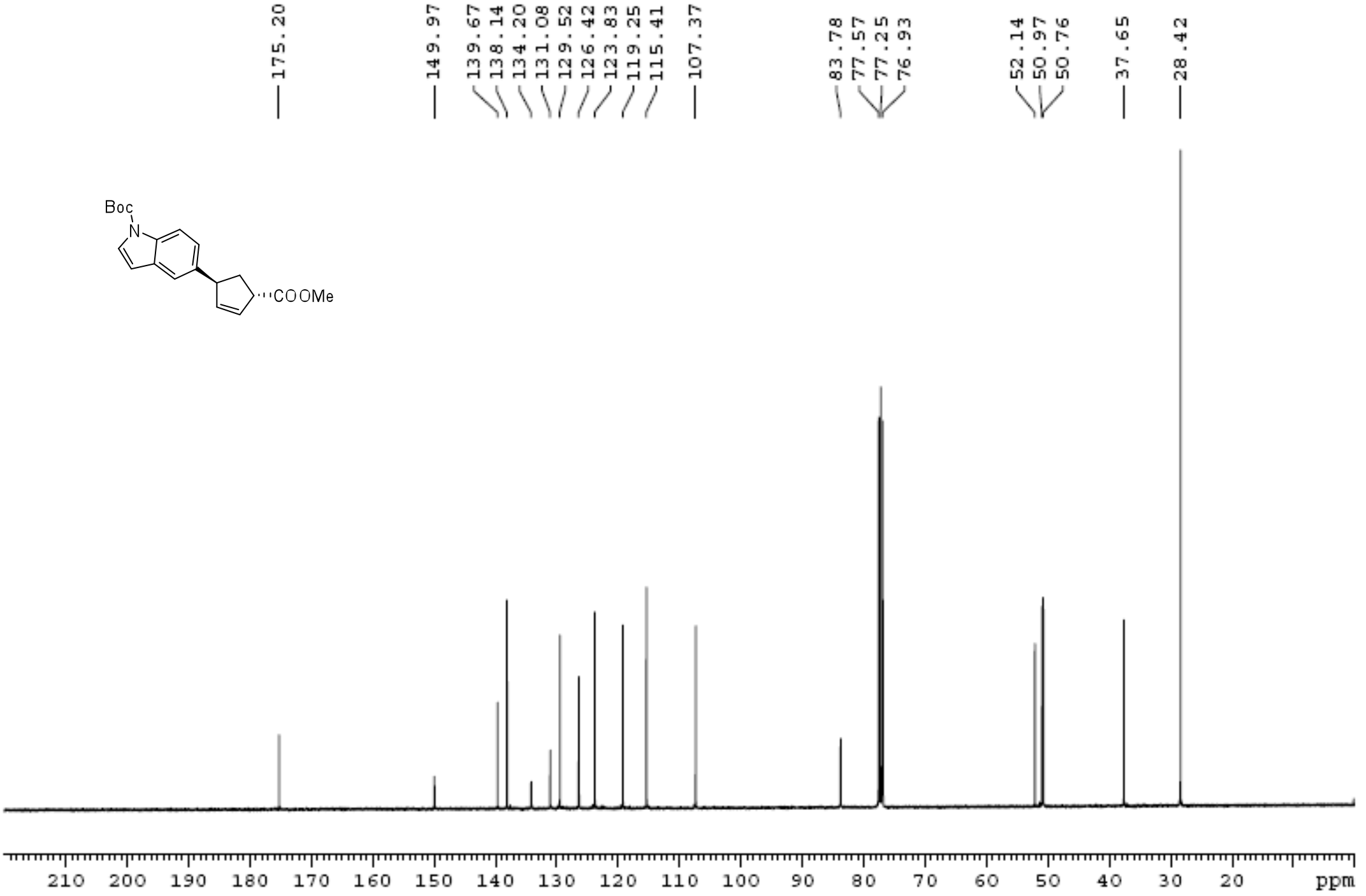

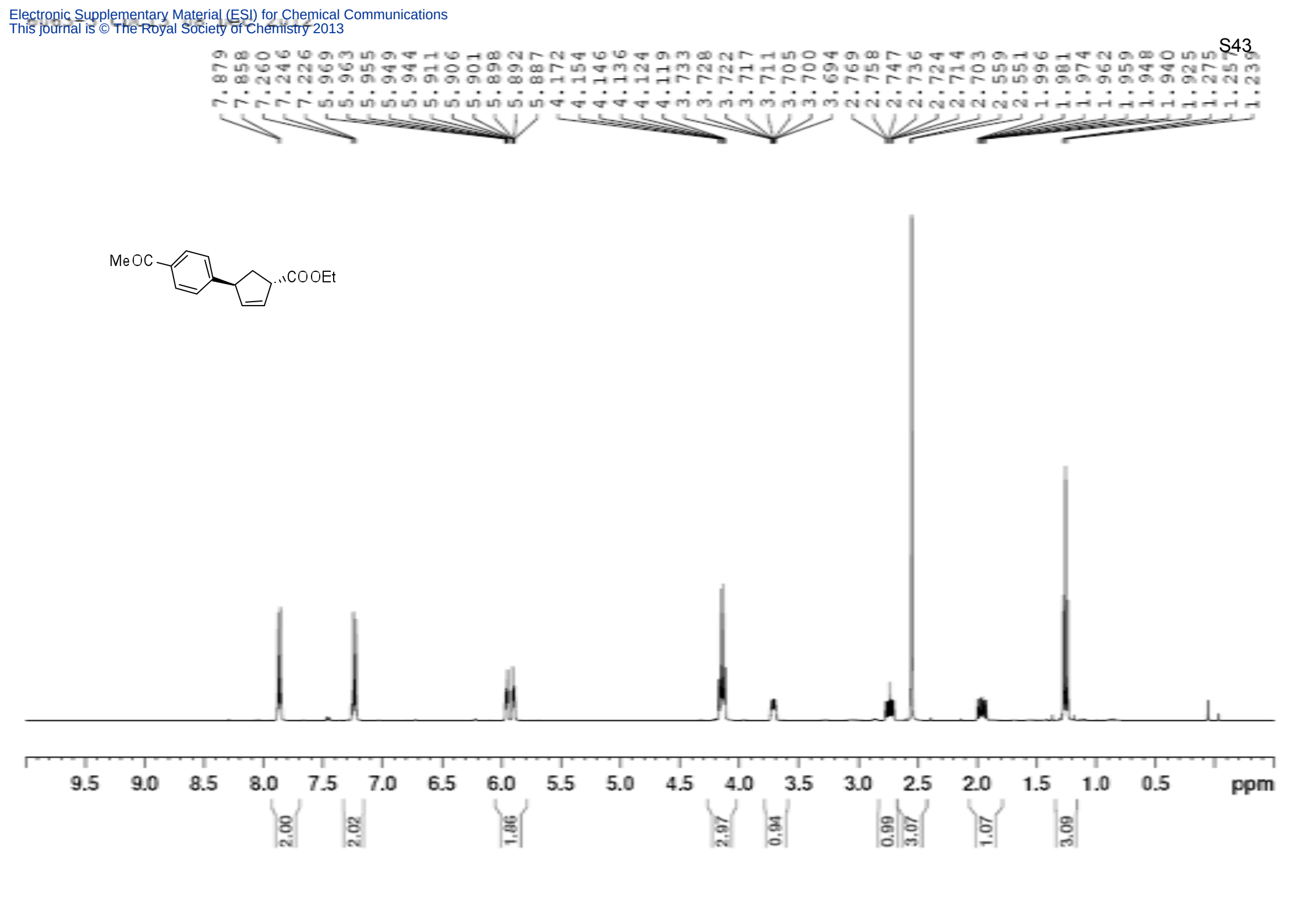

6063-3c CDCl3 08 Dec 2012

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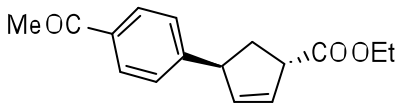

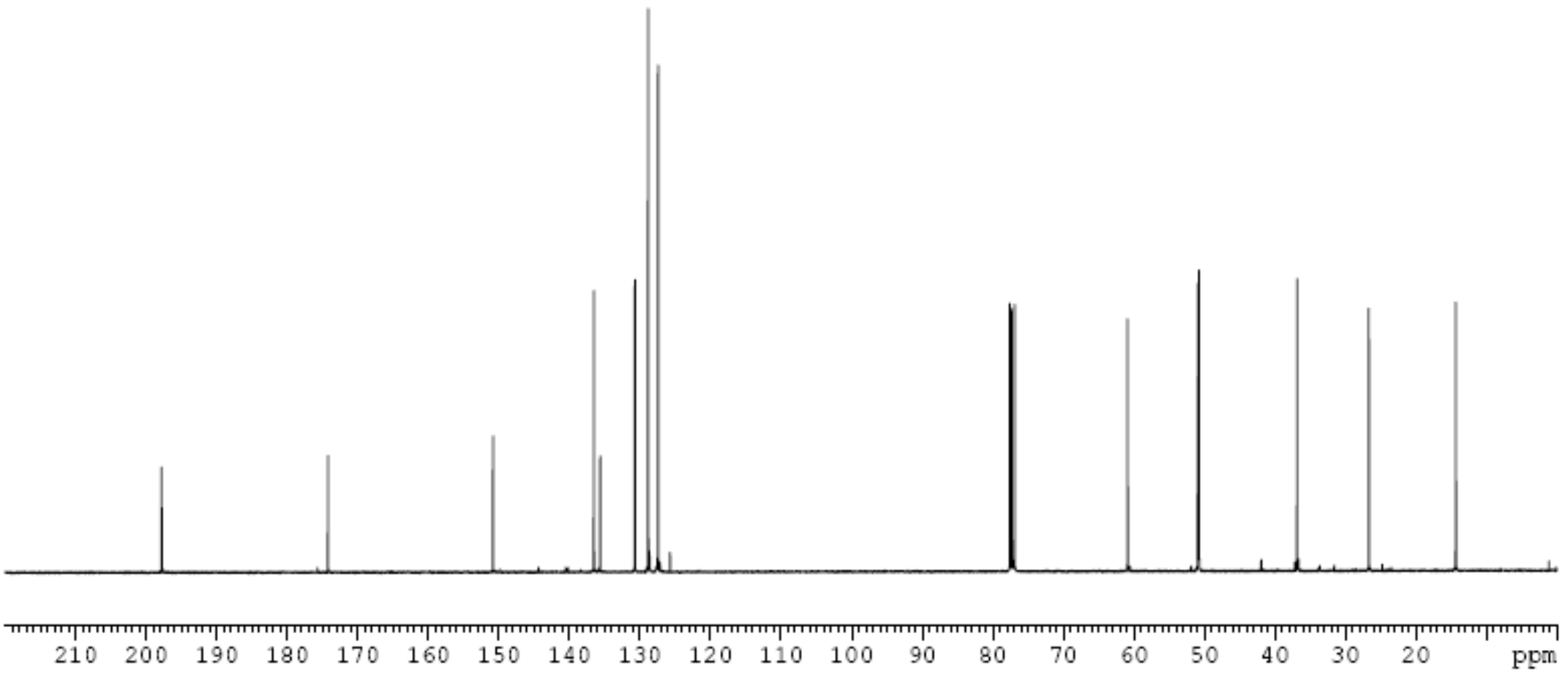

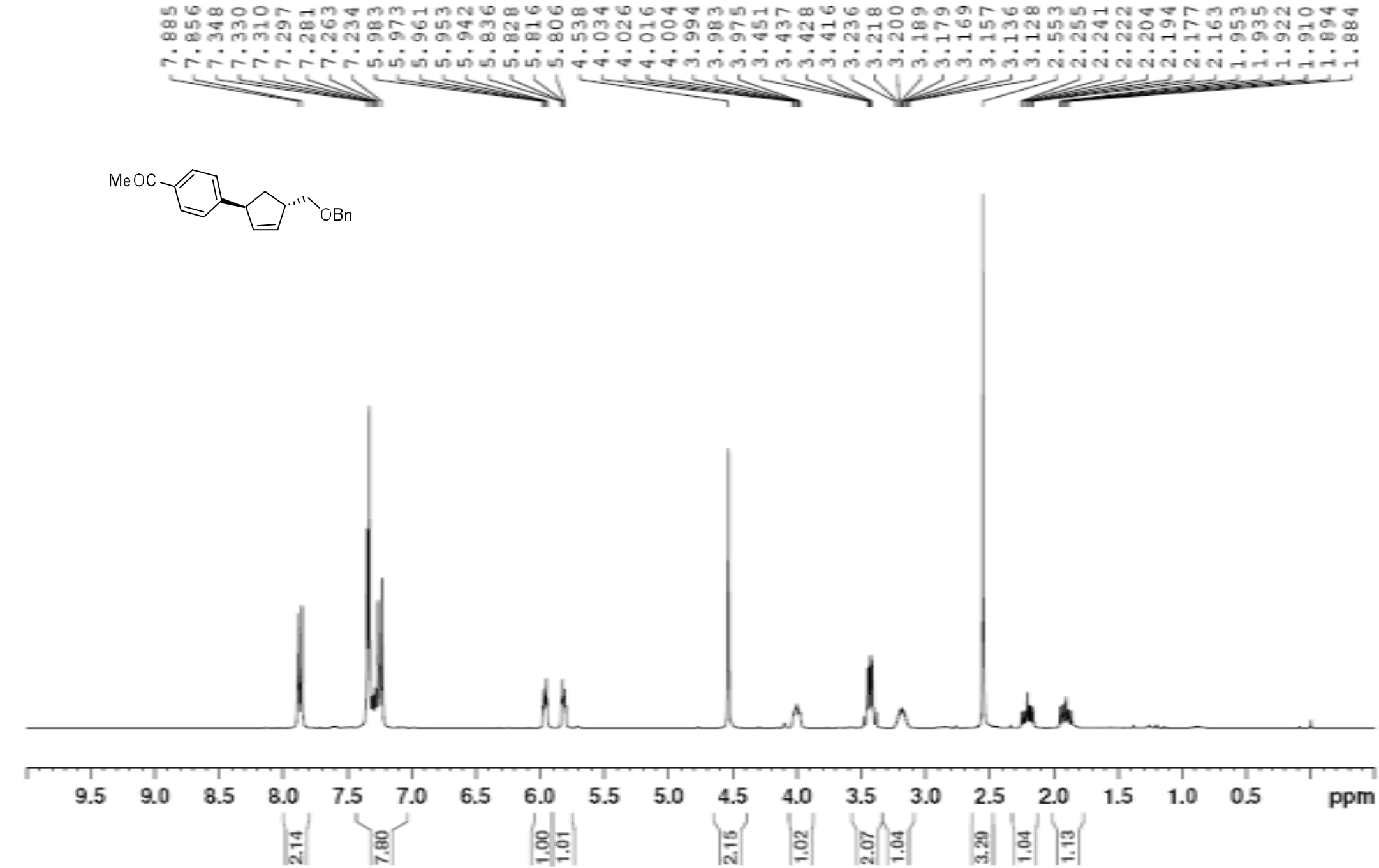

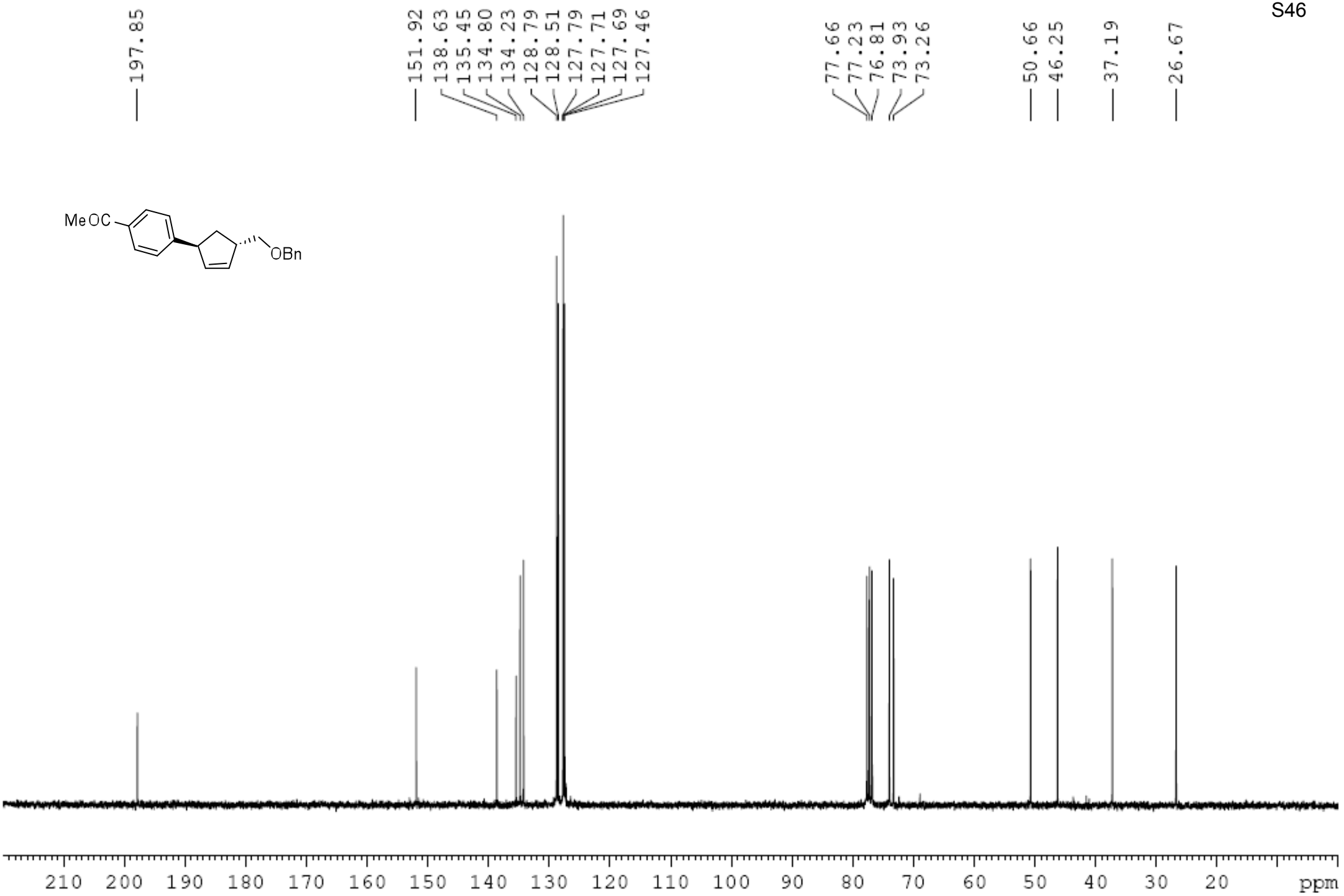

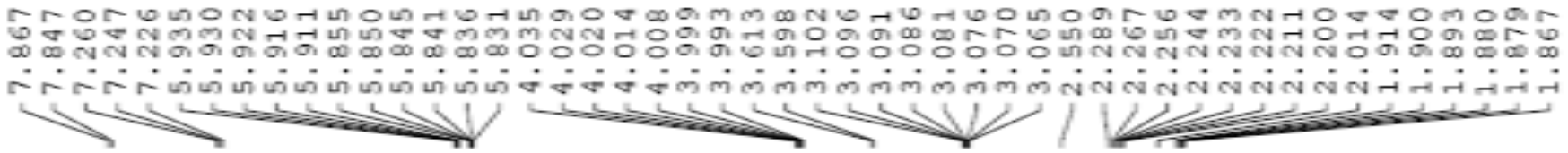
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5.911
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5.850
5.845
5.841
5.836
5.831
4.035
4.029
4.020
4.014
4.008
3.999
3.993
3.613
3.598
3.102
3.096
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3.086
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3.076
3.070
3.065
2.550
2.289
2.267
2.256
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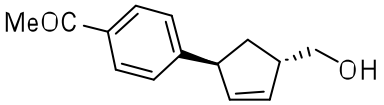
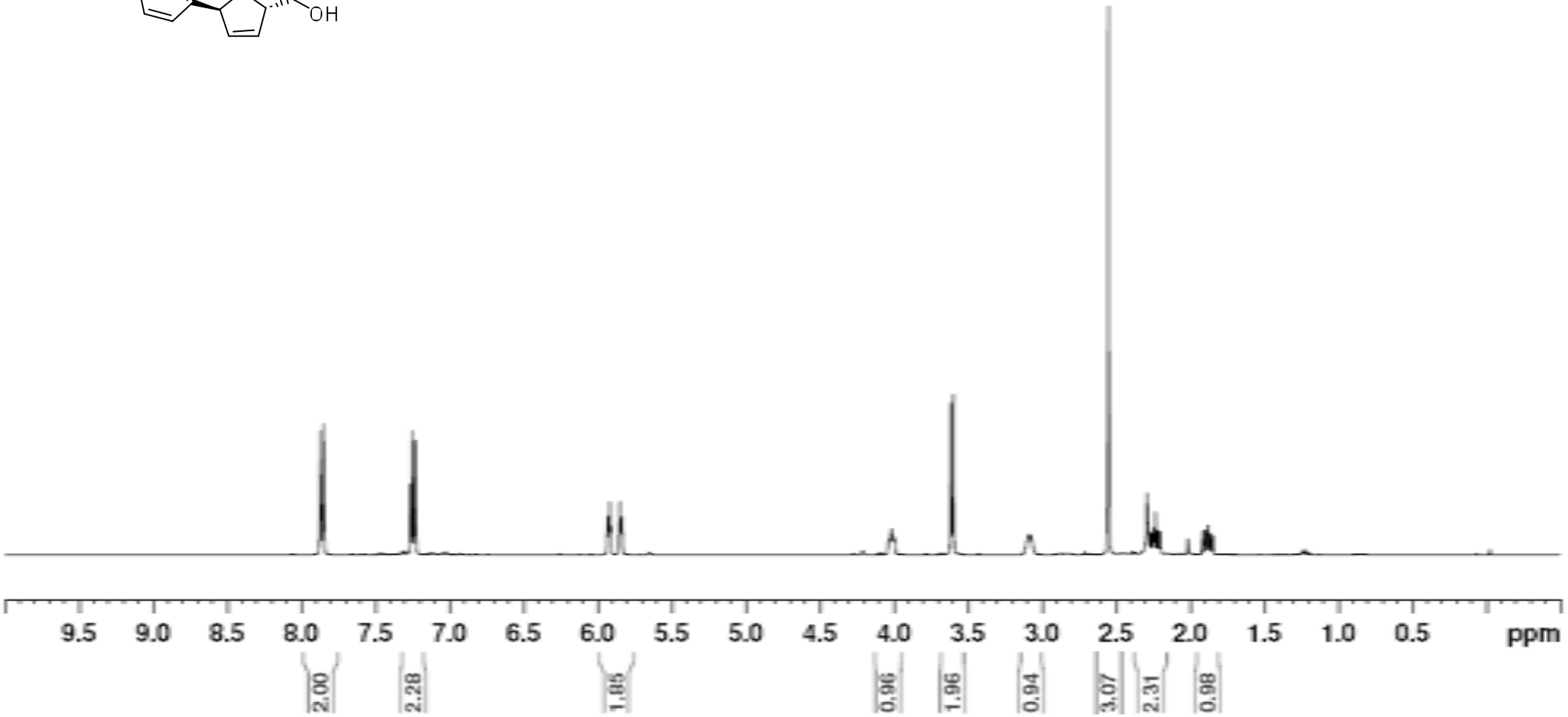
1.867


MeOC
OH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6.0
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3.5
3.0
2.5
2.0
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ppm
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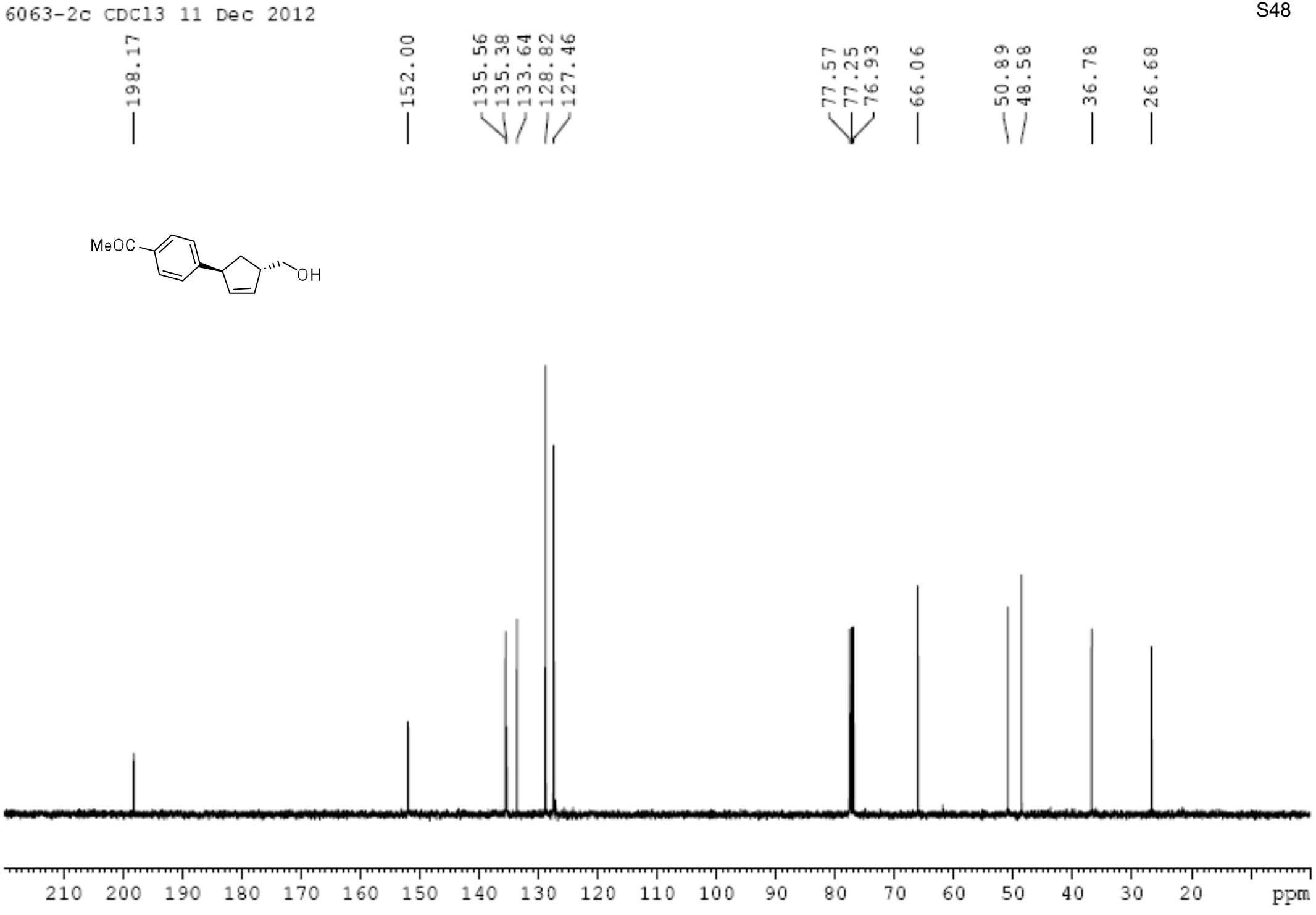
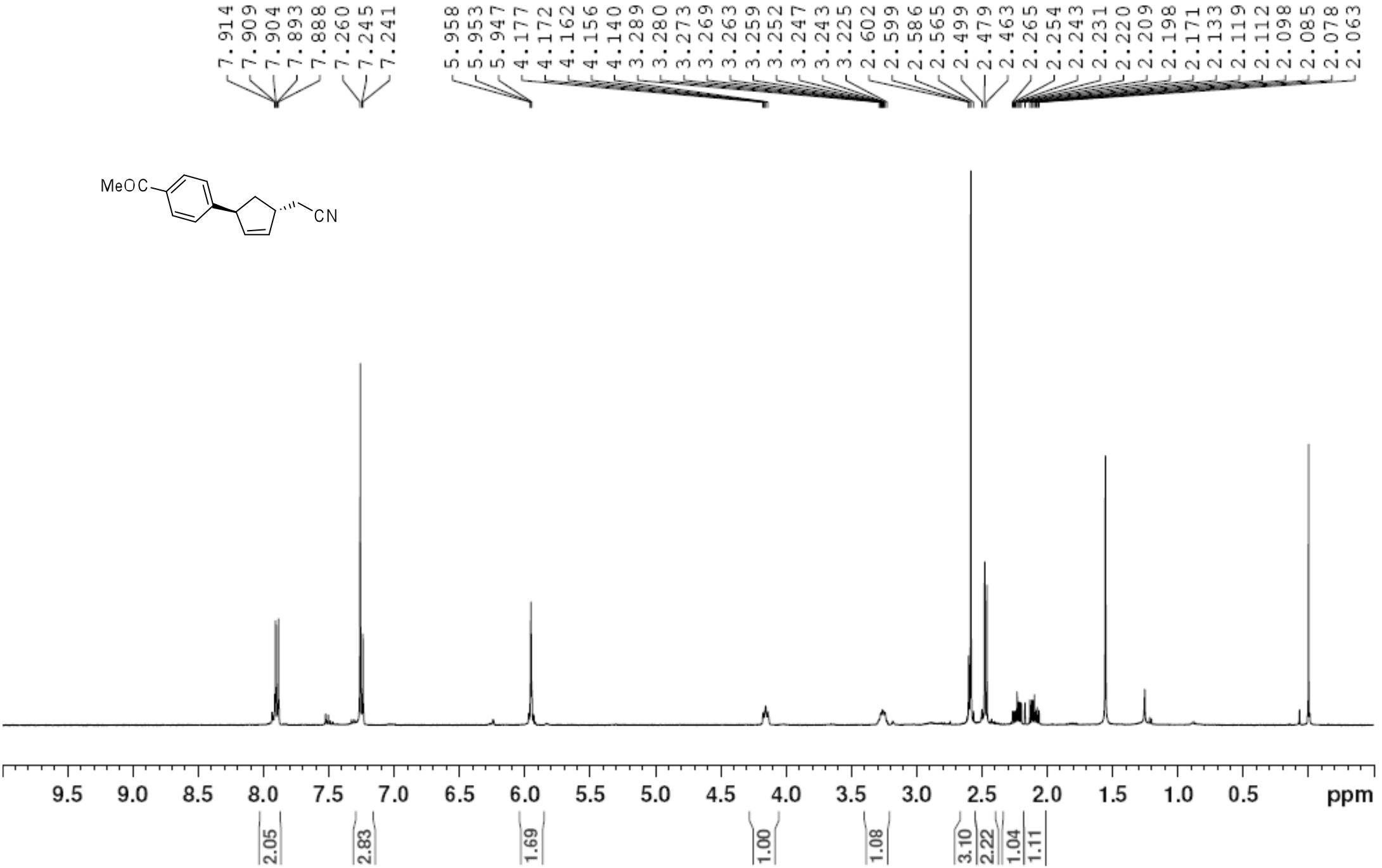
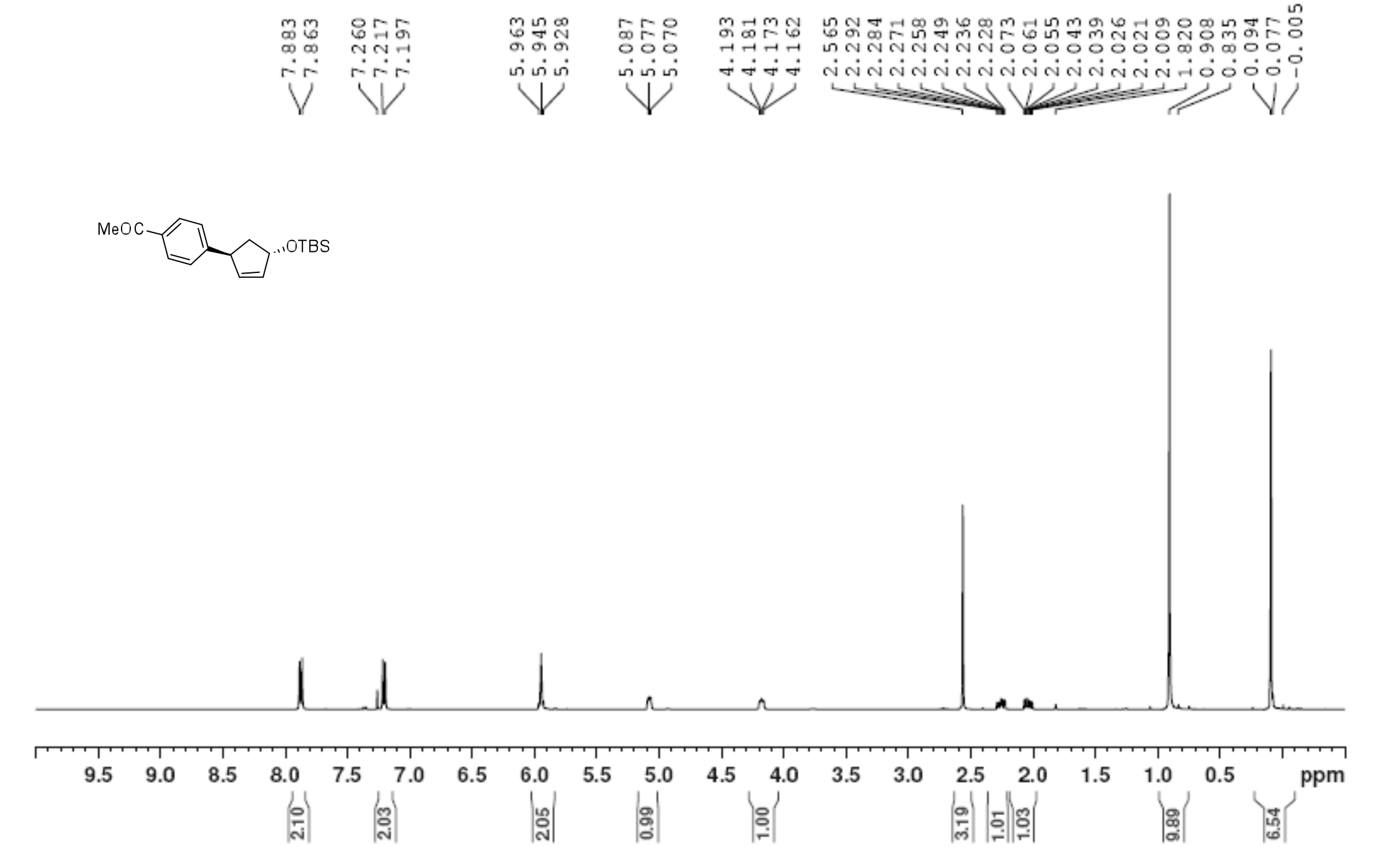
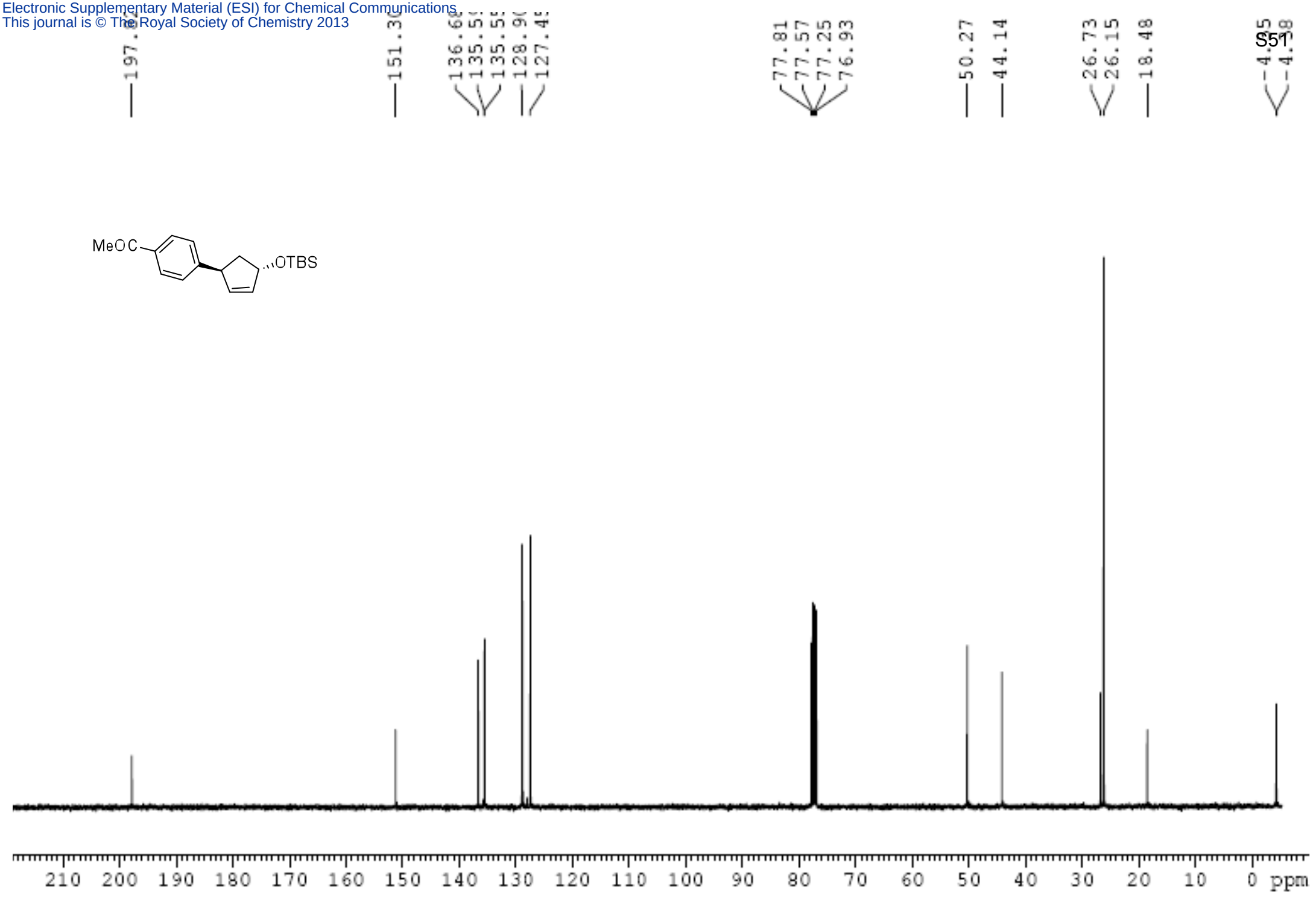
1.96
0.94
3.07
2.31
0.98





6076-2 BBF01 24 JAN 2013

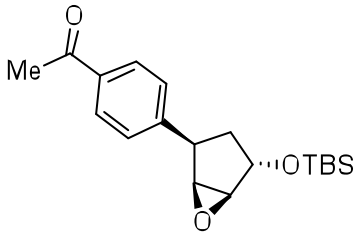


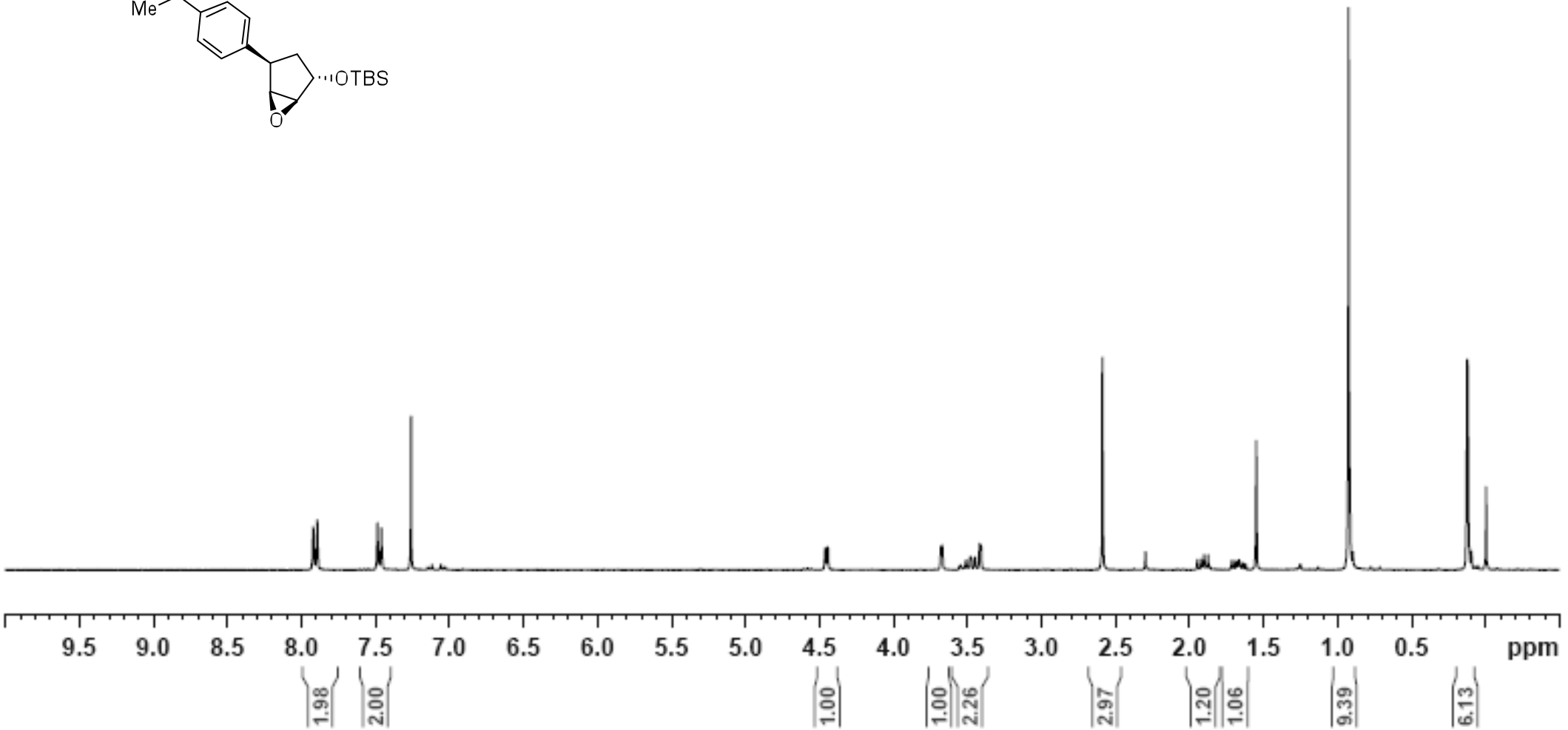


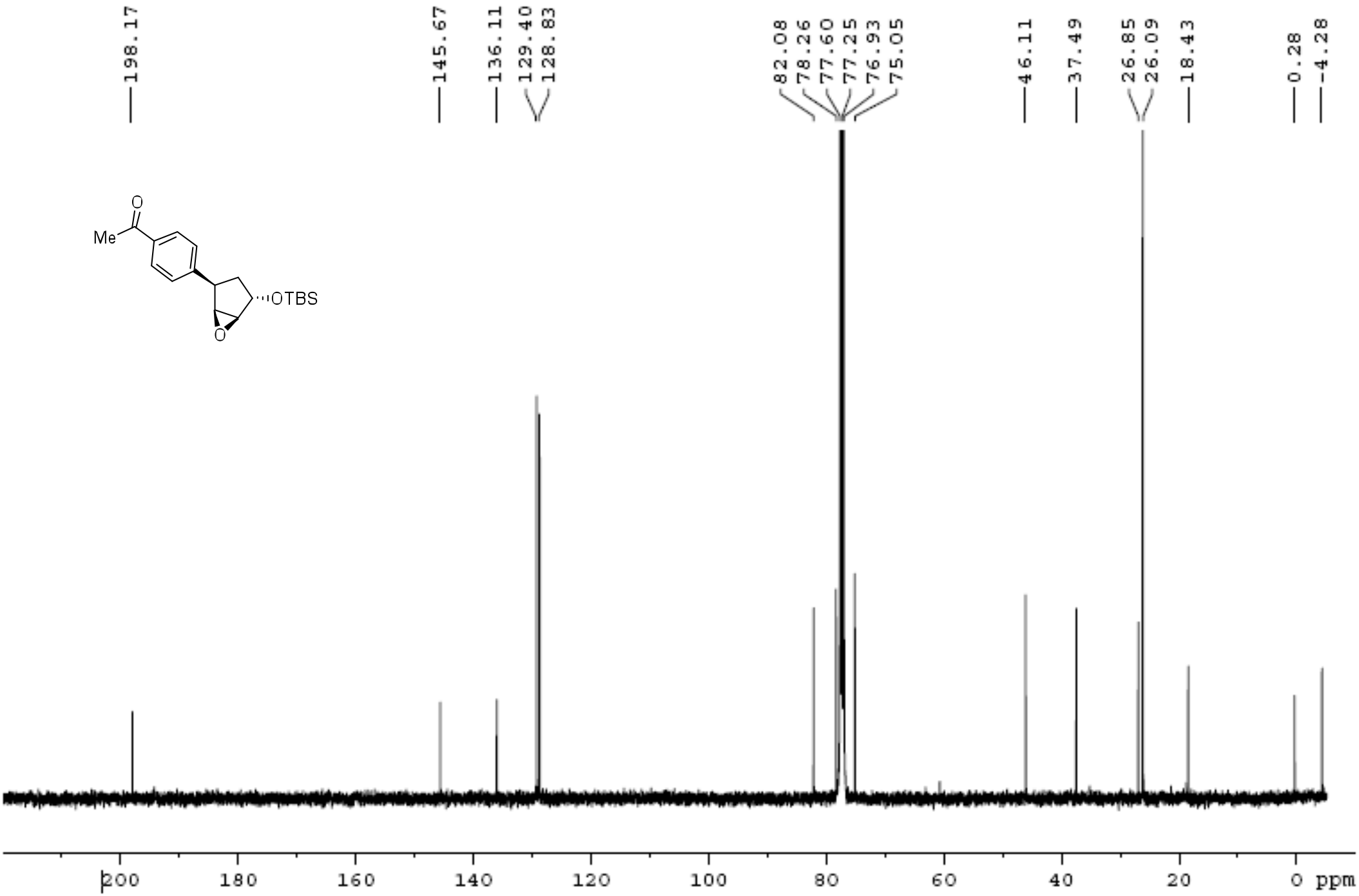
6144-4 av300 13 Apr 2013

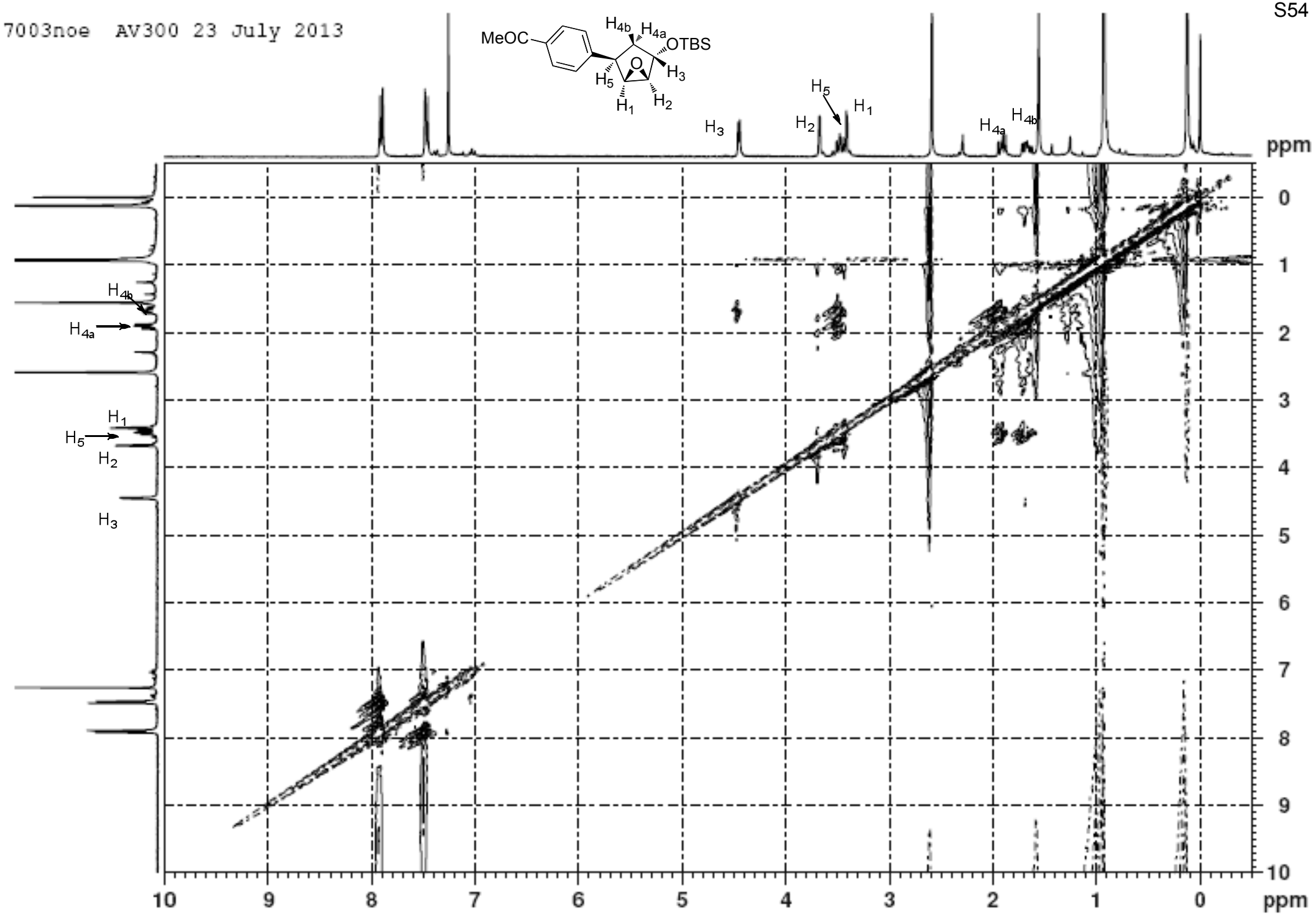
7.920 7.893 7.486 7.459 7.259 7.117 7.056

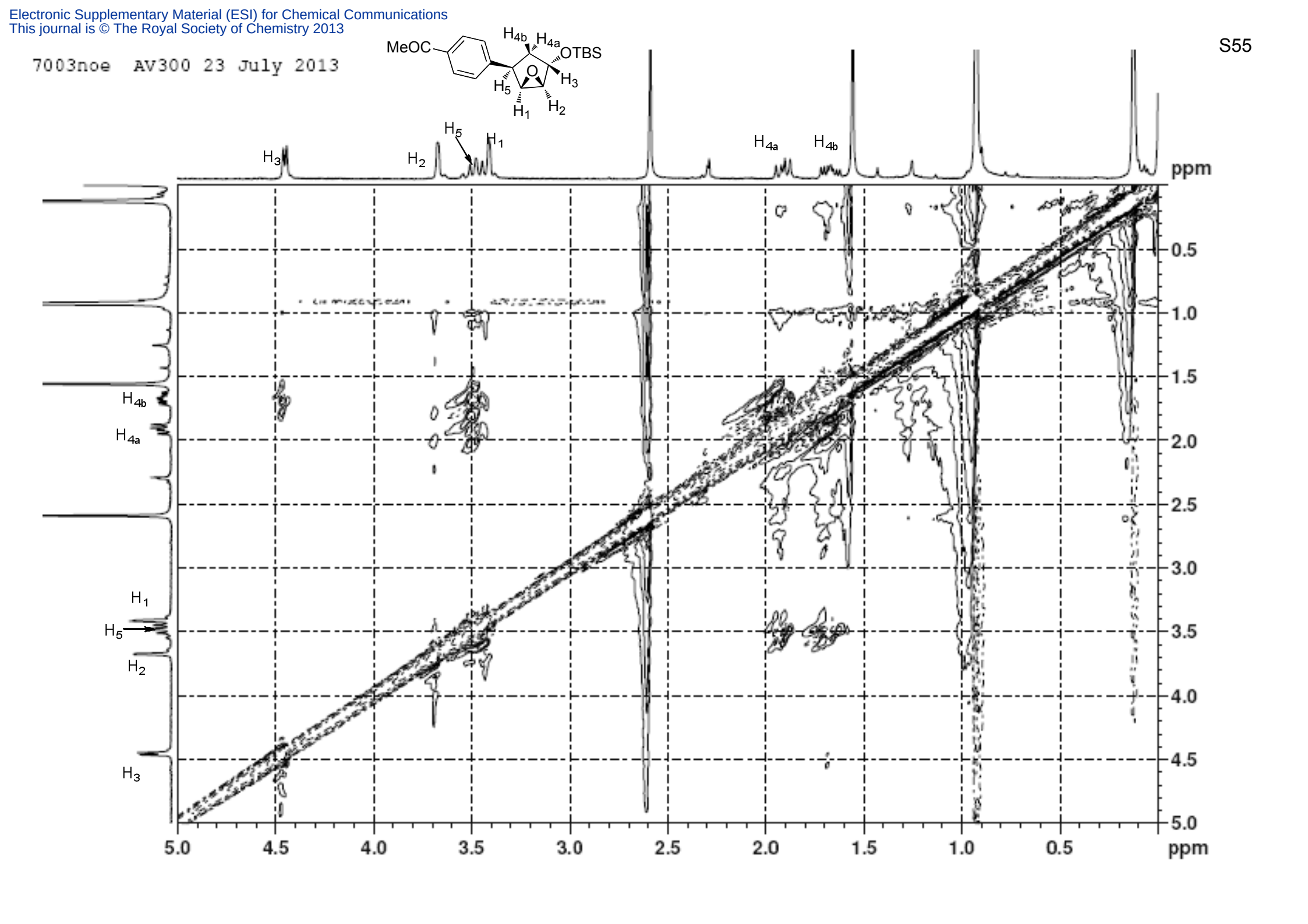
4.460 4.444 3.677 3.671 3.545 3.509 3.478 3.447 3.416 3.409 2.590 1.948 1.921 1.903 1.876 1.718 1.701 1.683 1.673 1.667 1.656 1.639 1.622 1.551 0.927 0.127 0.121

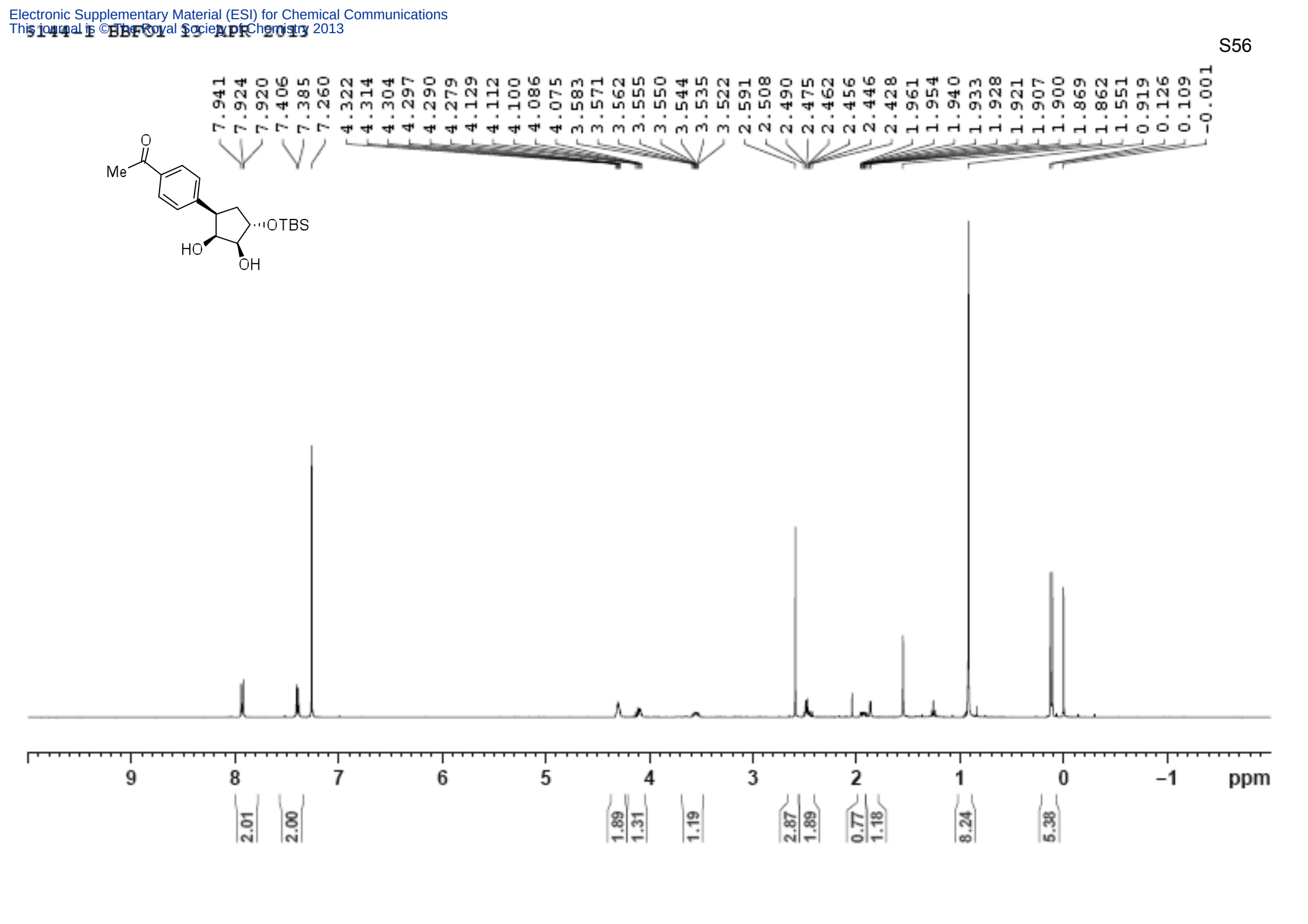


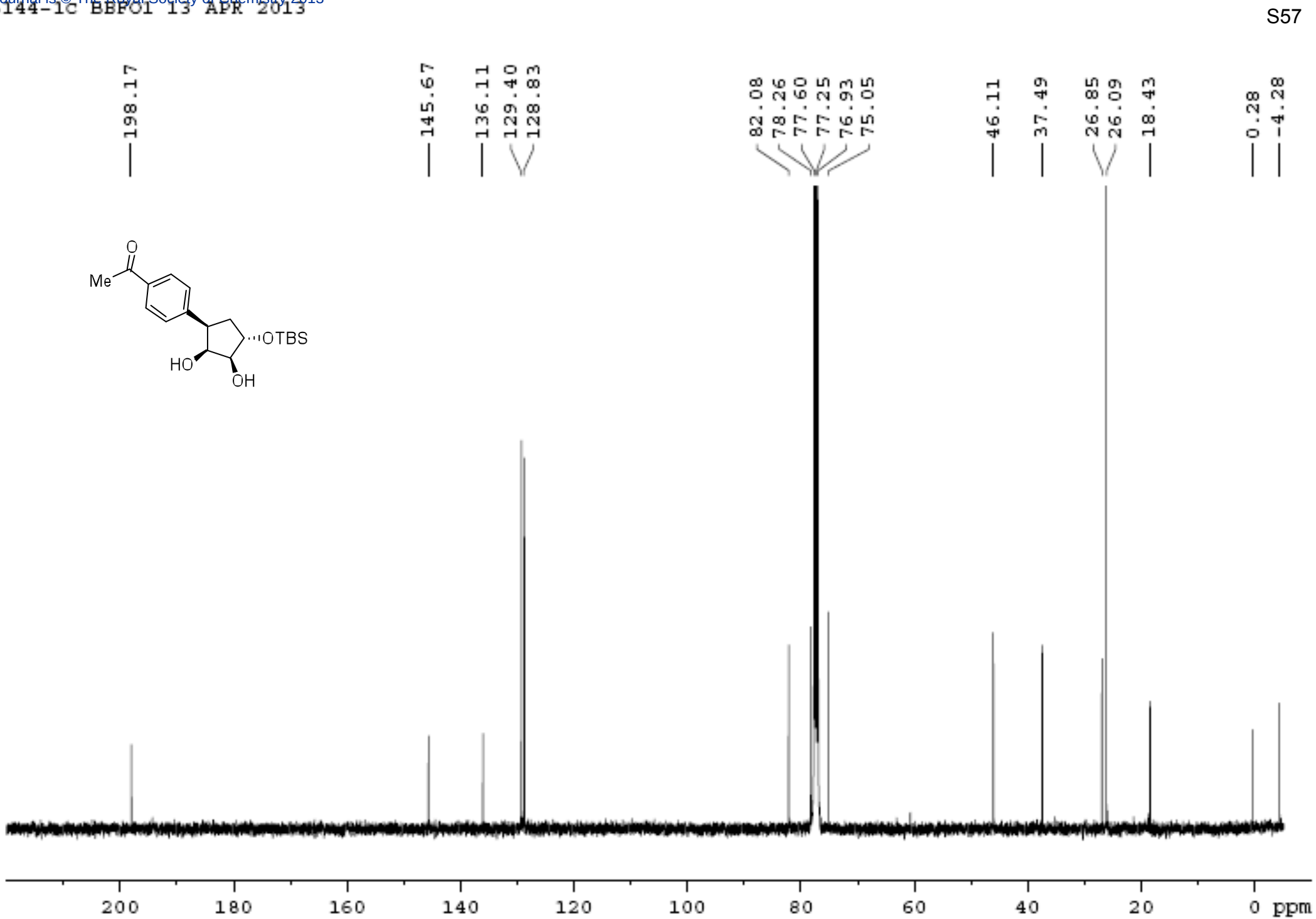












7003 BEFO1 17 APR 2013

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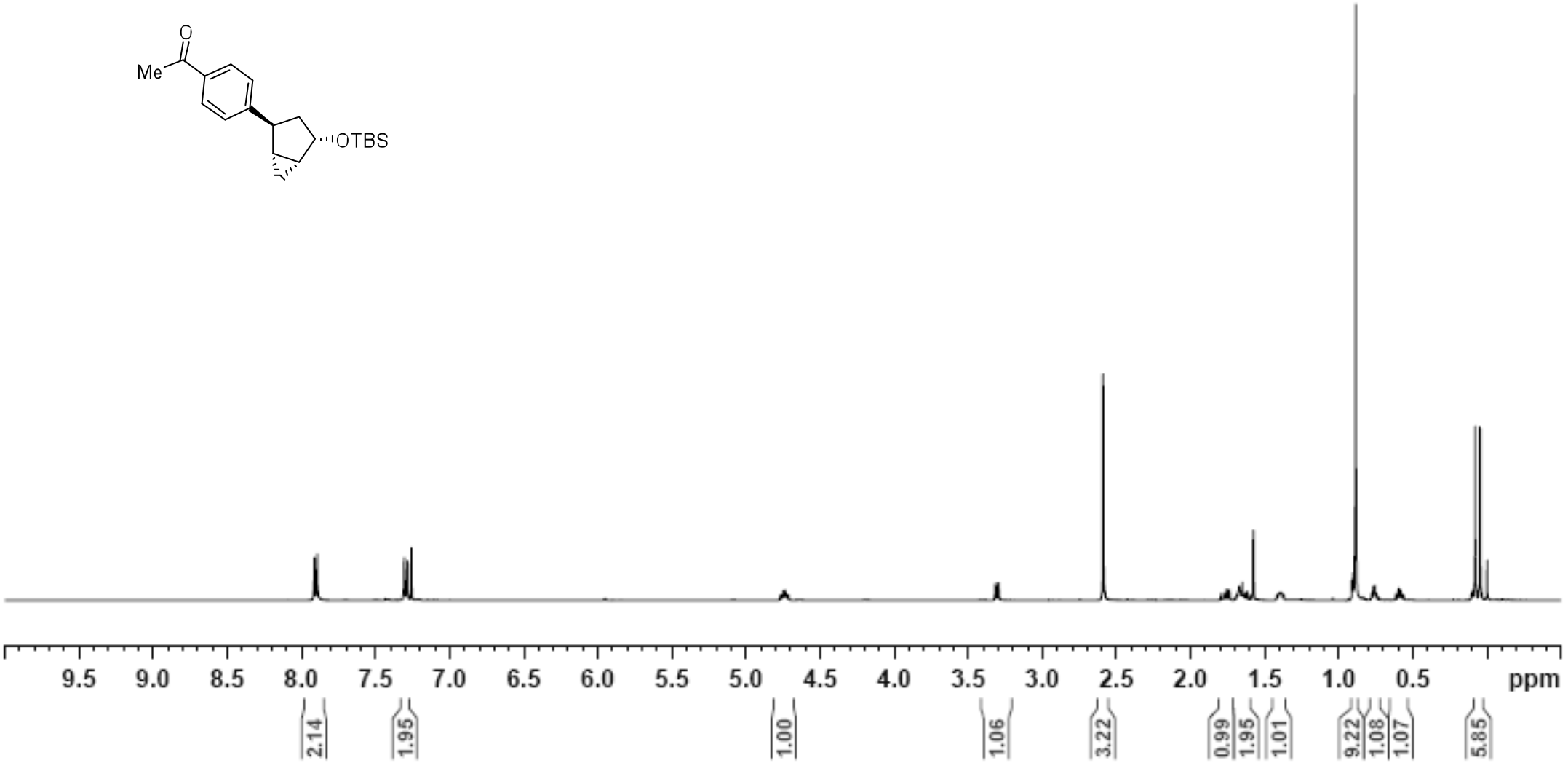

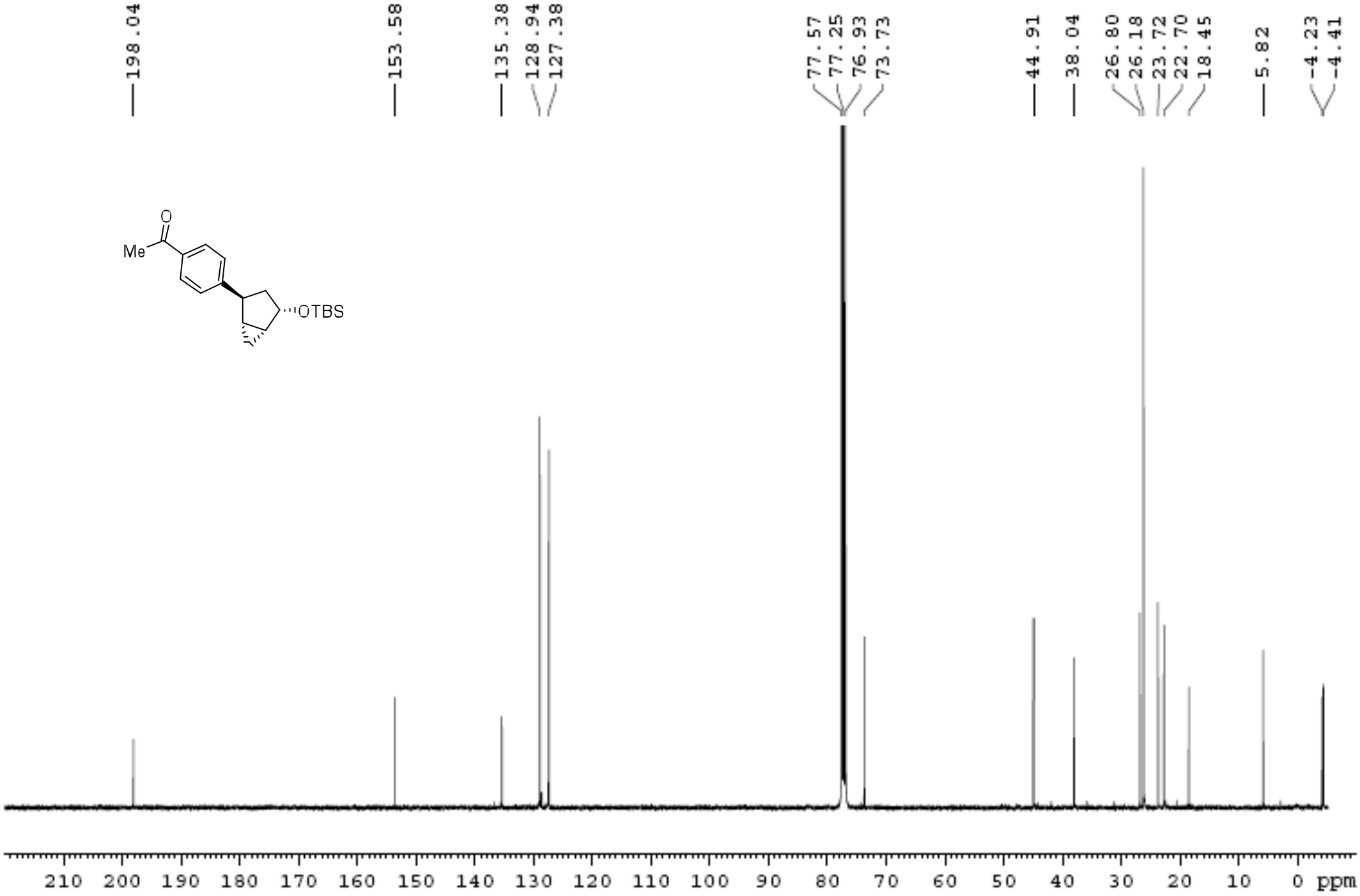
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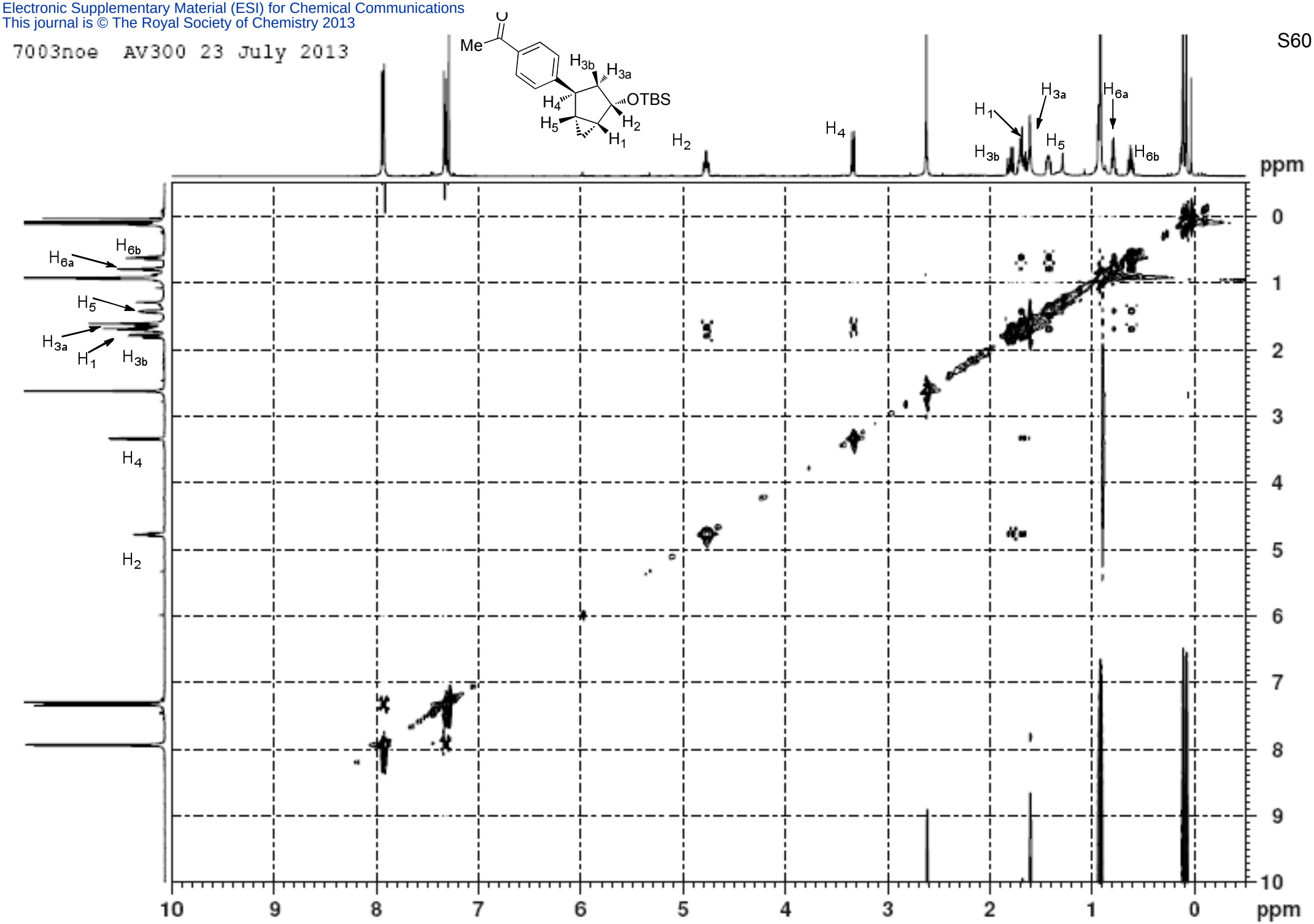
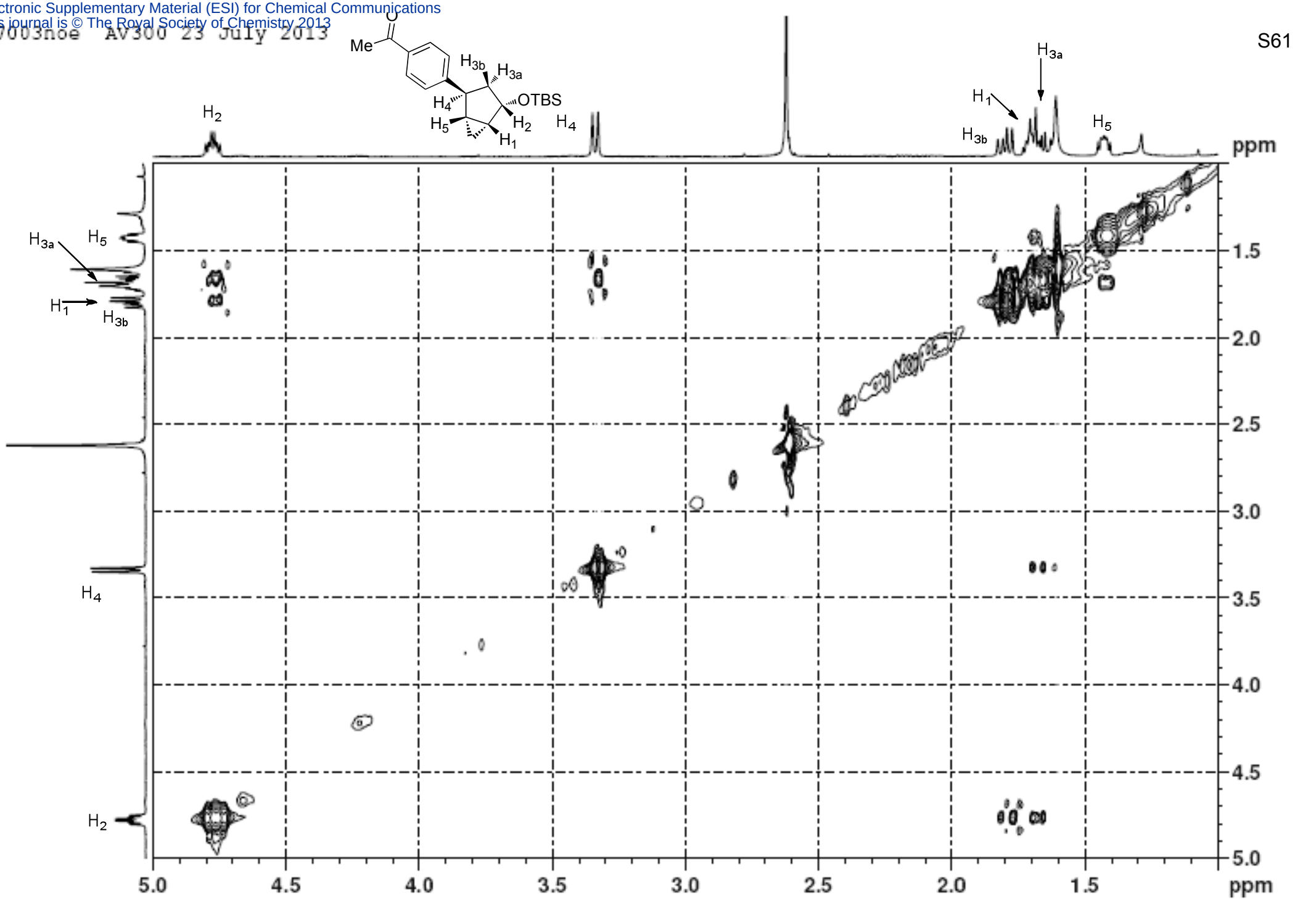
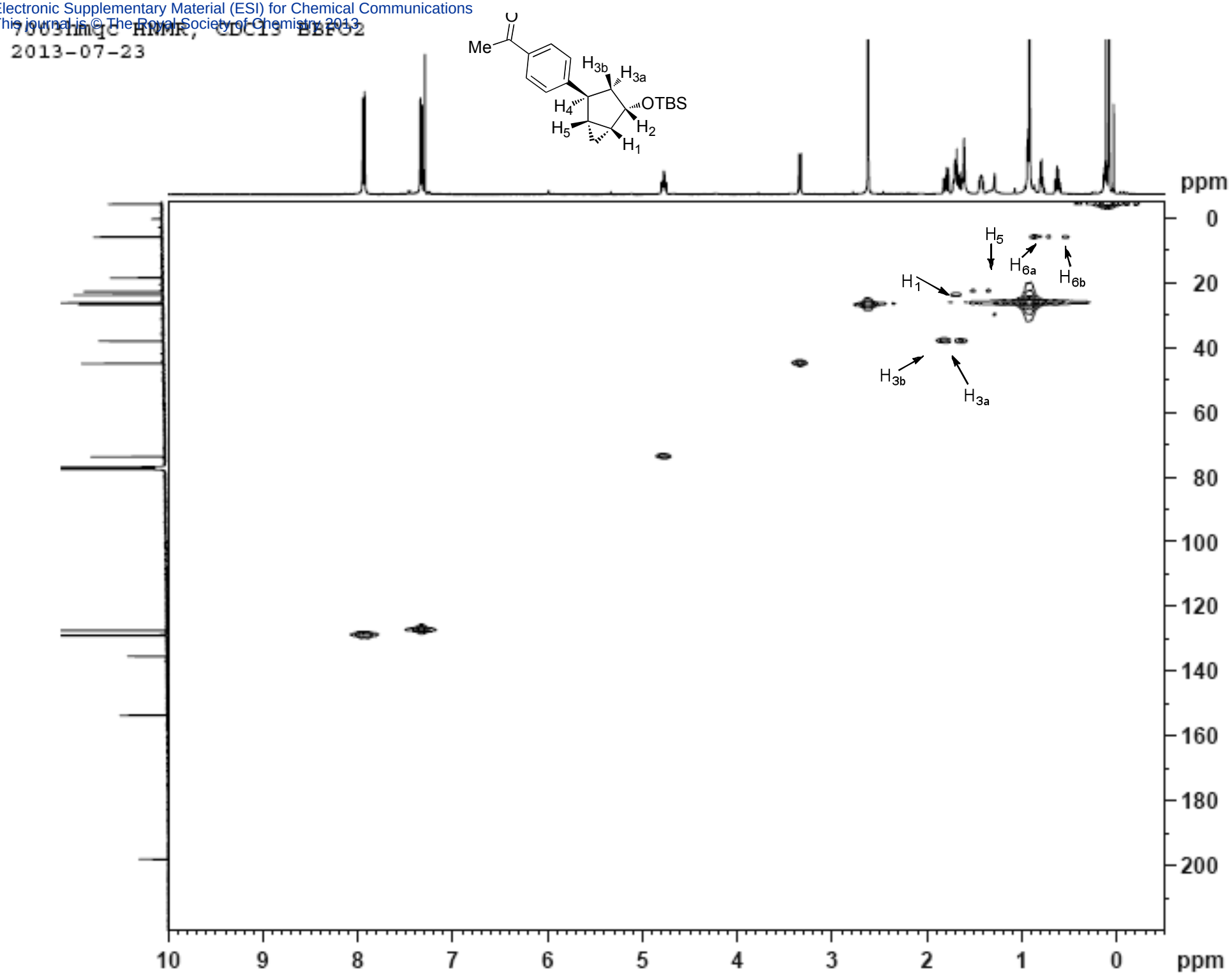
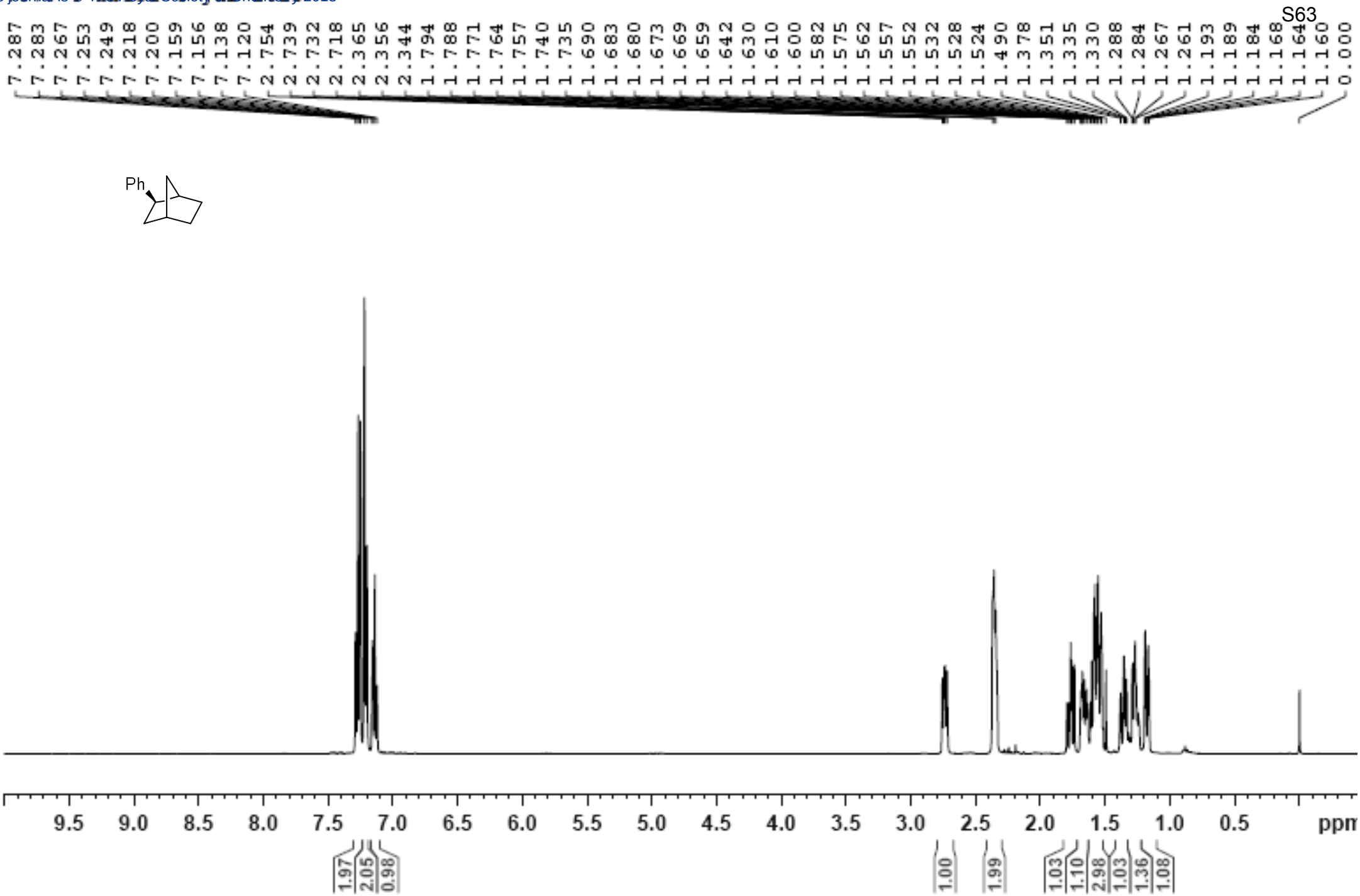
77.57
77.25
76.93
73.73
44.91
38.04
26.80
26.18
23.72
22.70
18.45
5.82
-4.23
-4.41
Me
O
OTBS
210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 ppm

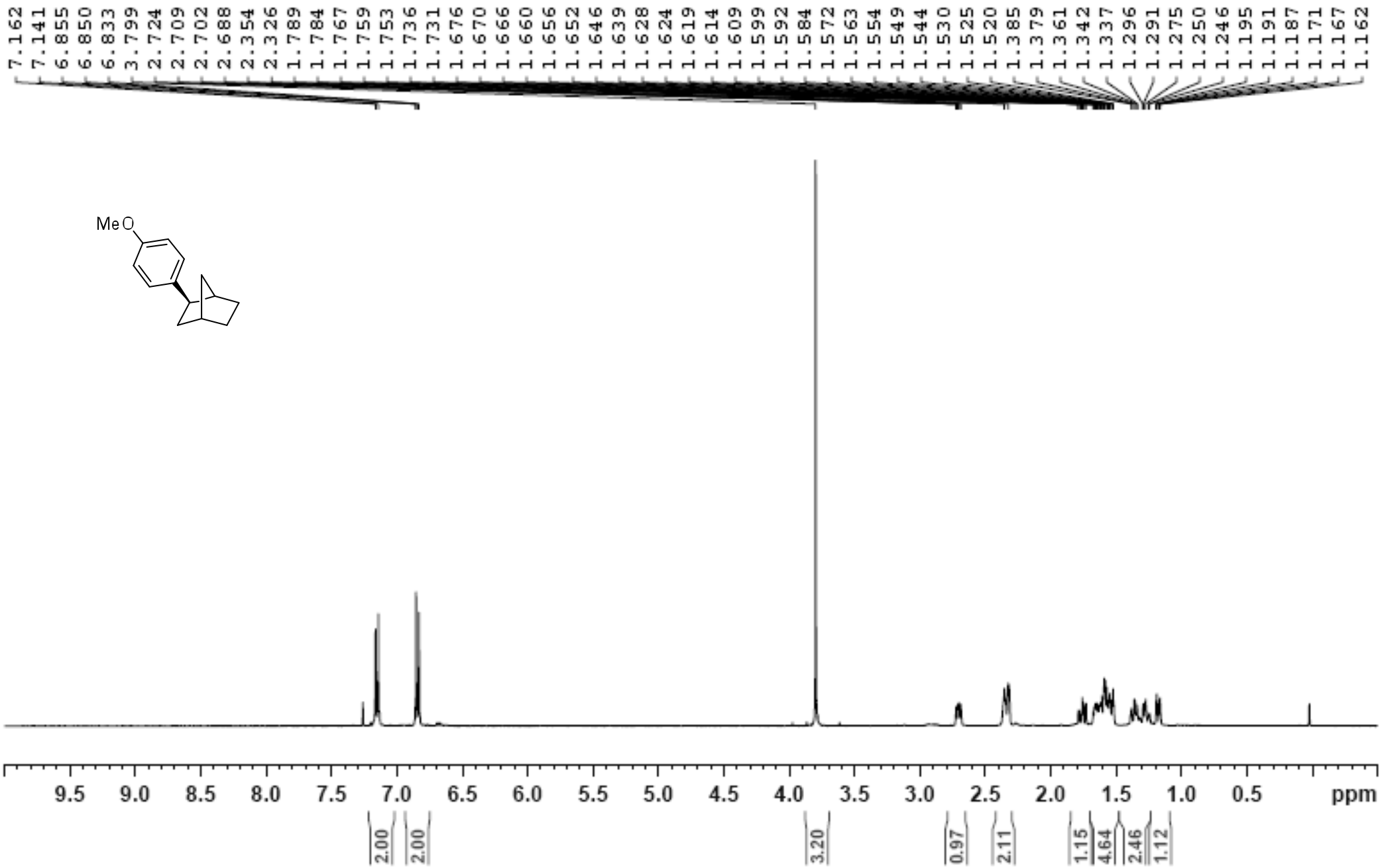








7063 BBFO1 16JUN13



7059 AV300 15 Jun 13

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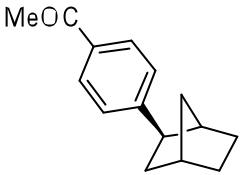

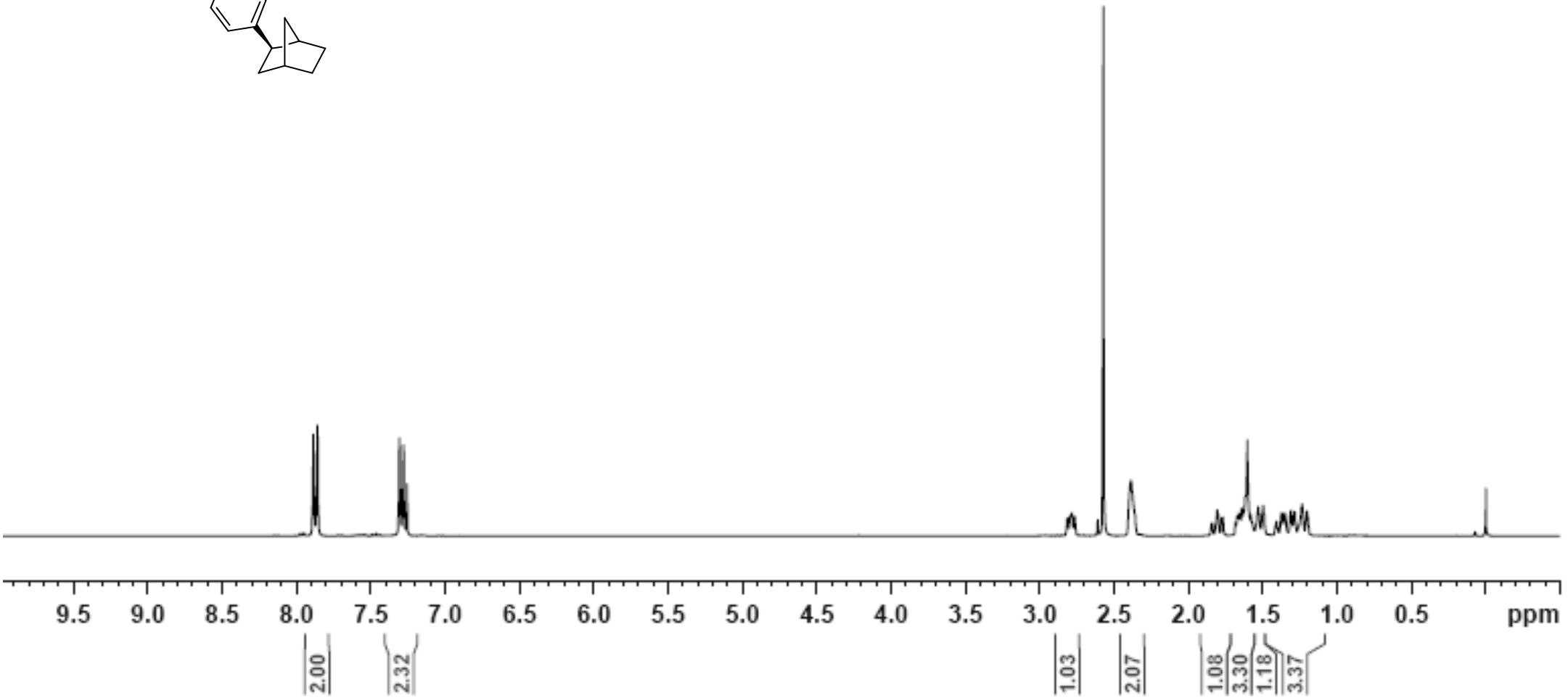

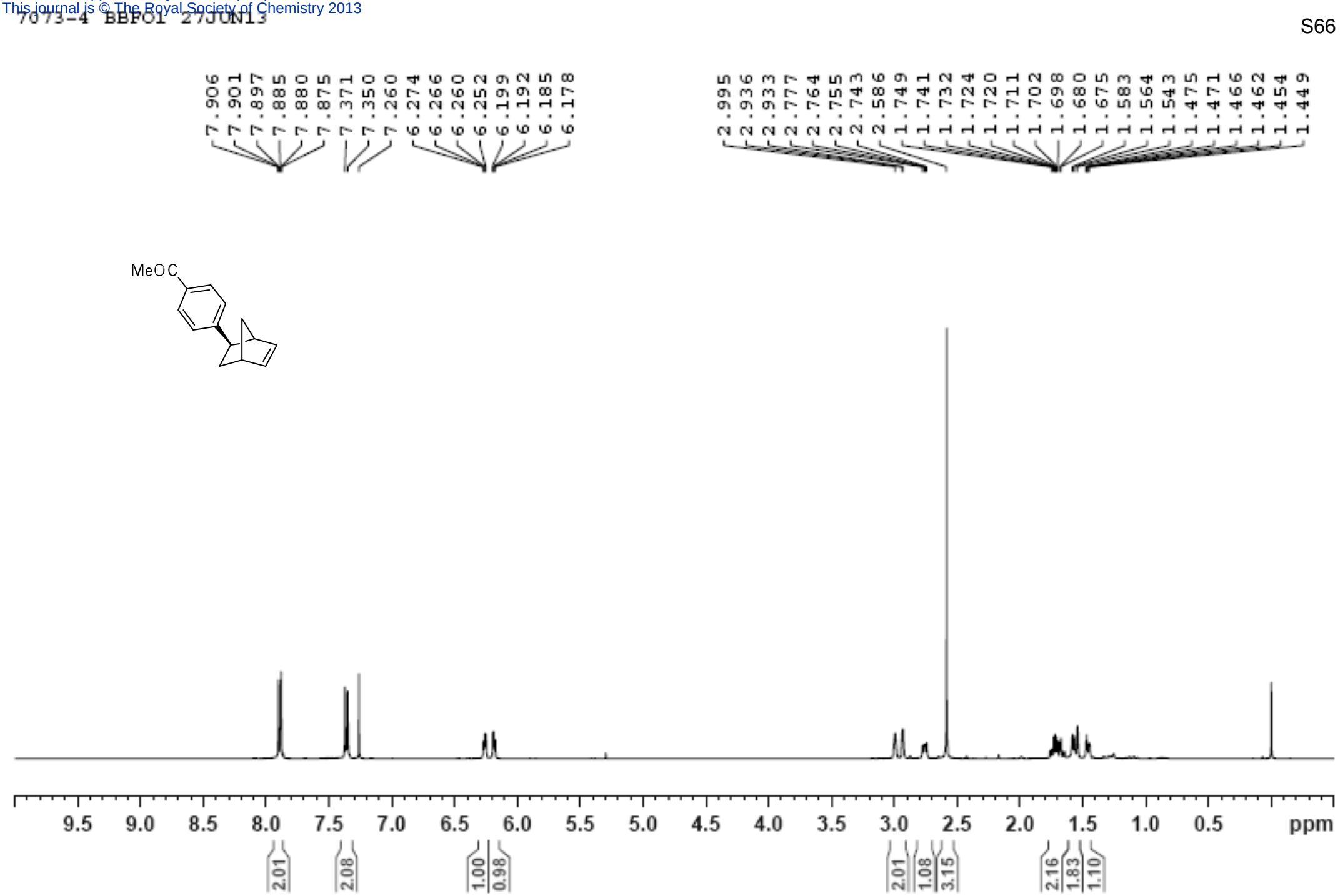

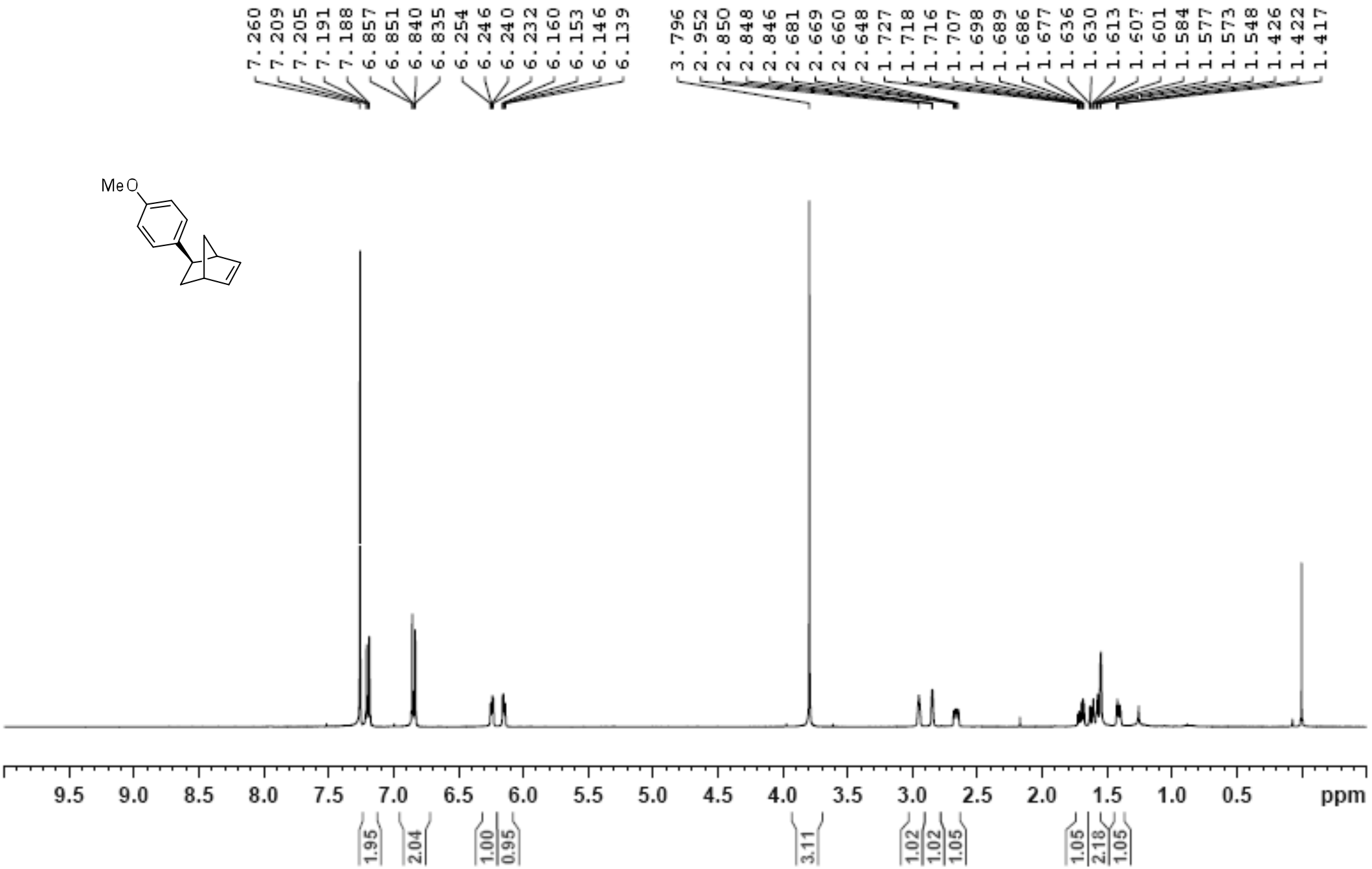

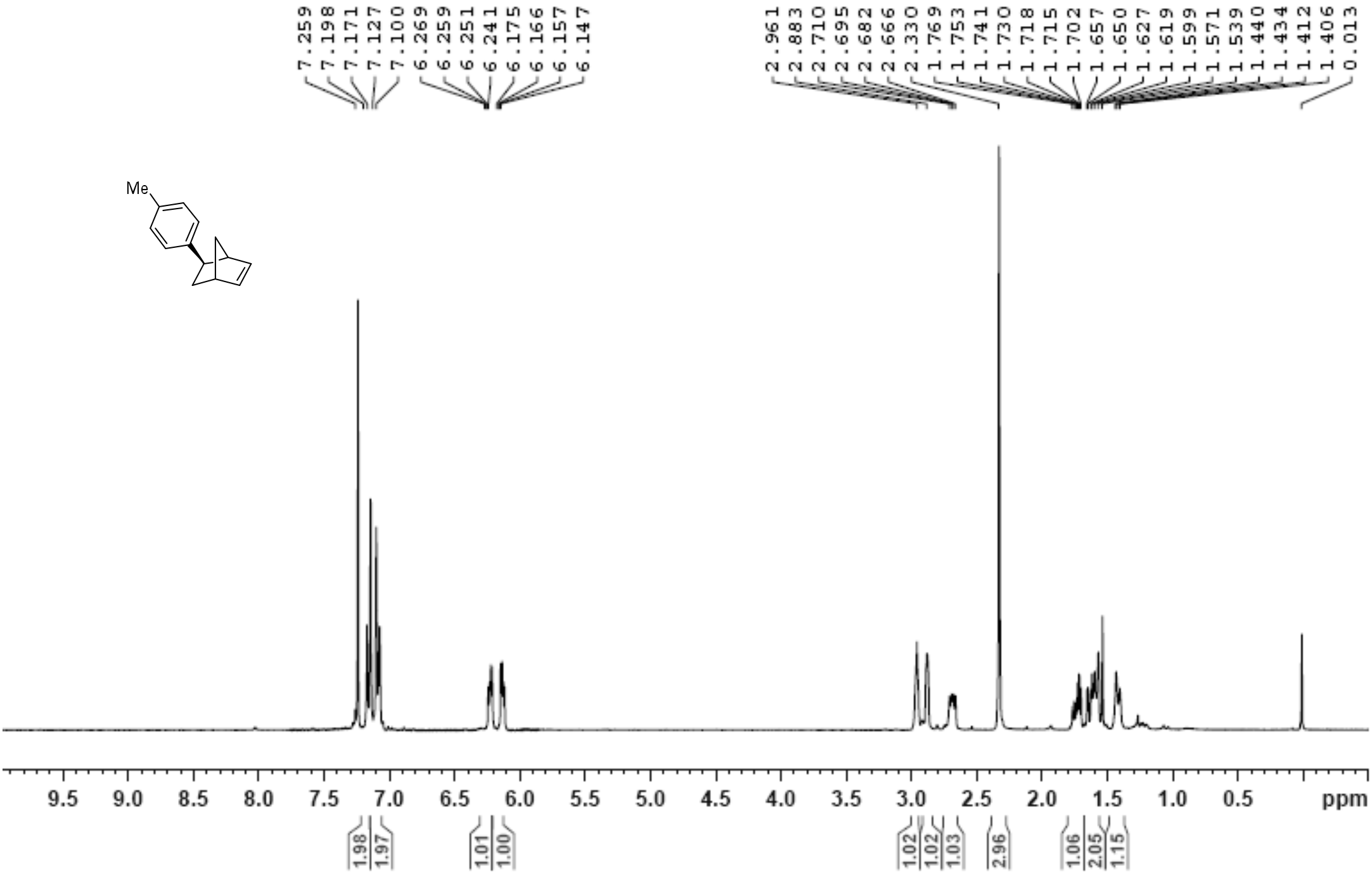

7088 AV300 19 July 2013