

SUPPORTING INFORMATION

Stereoselective Intermolecular [2 + 2]-Photocycloaddition Reactions of Maleic Anhydride: Stereocontrolled and Regiocontrolled Access to 1,2,3-Trifunctionalized Cyclobutanes

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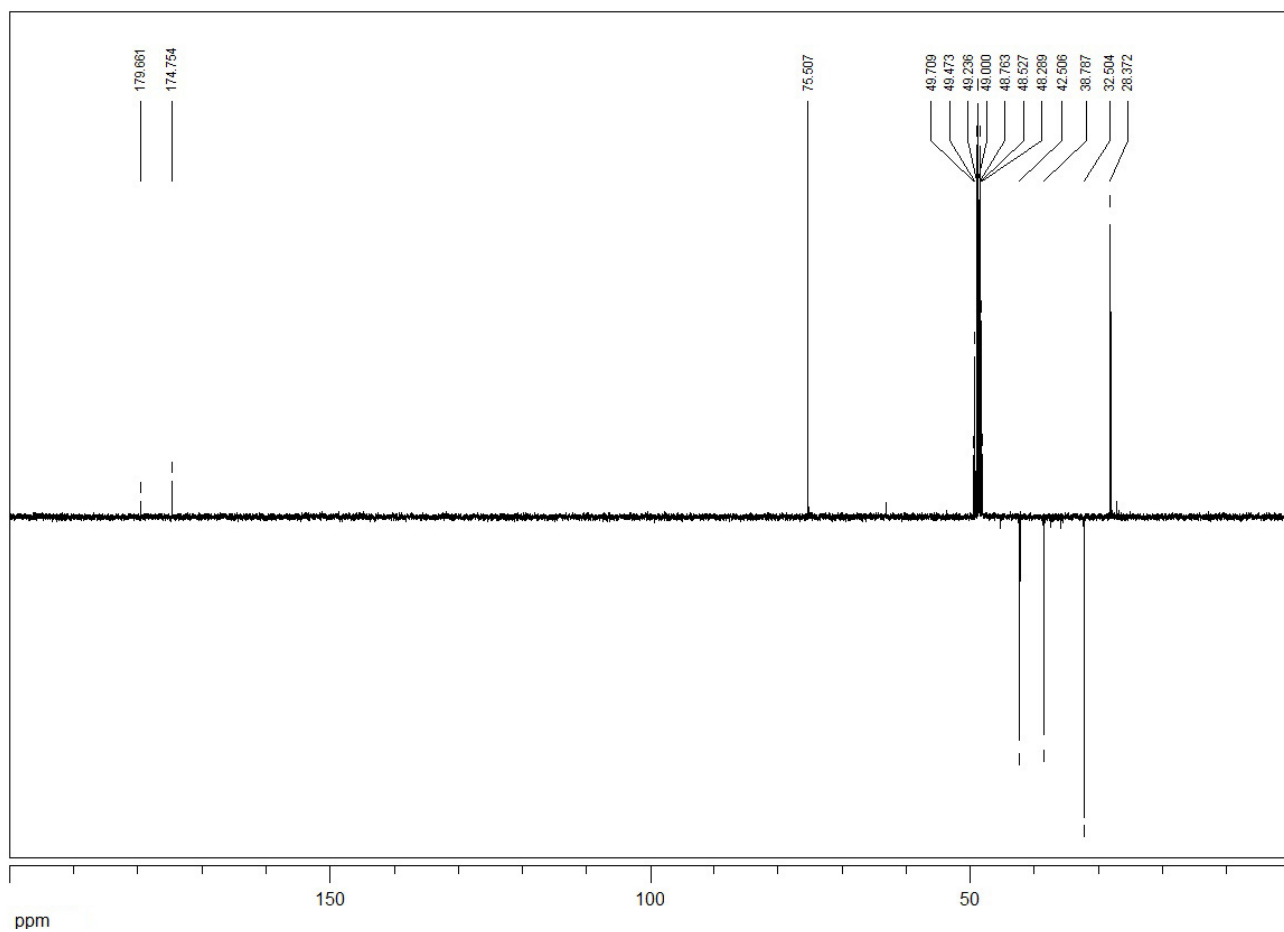
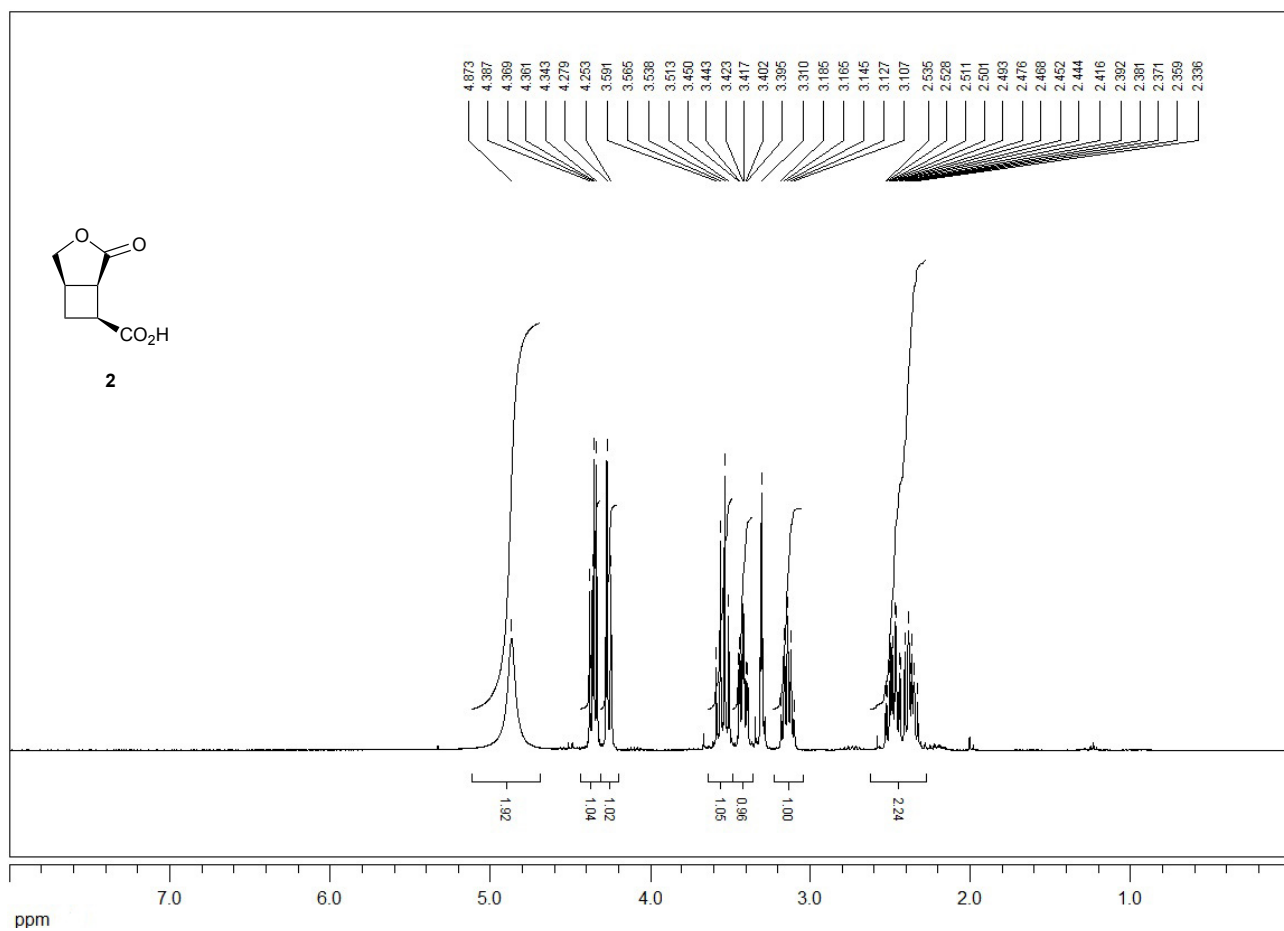
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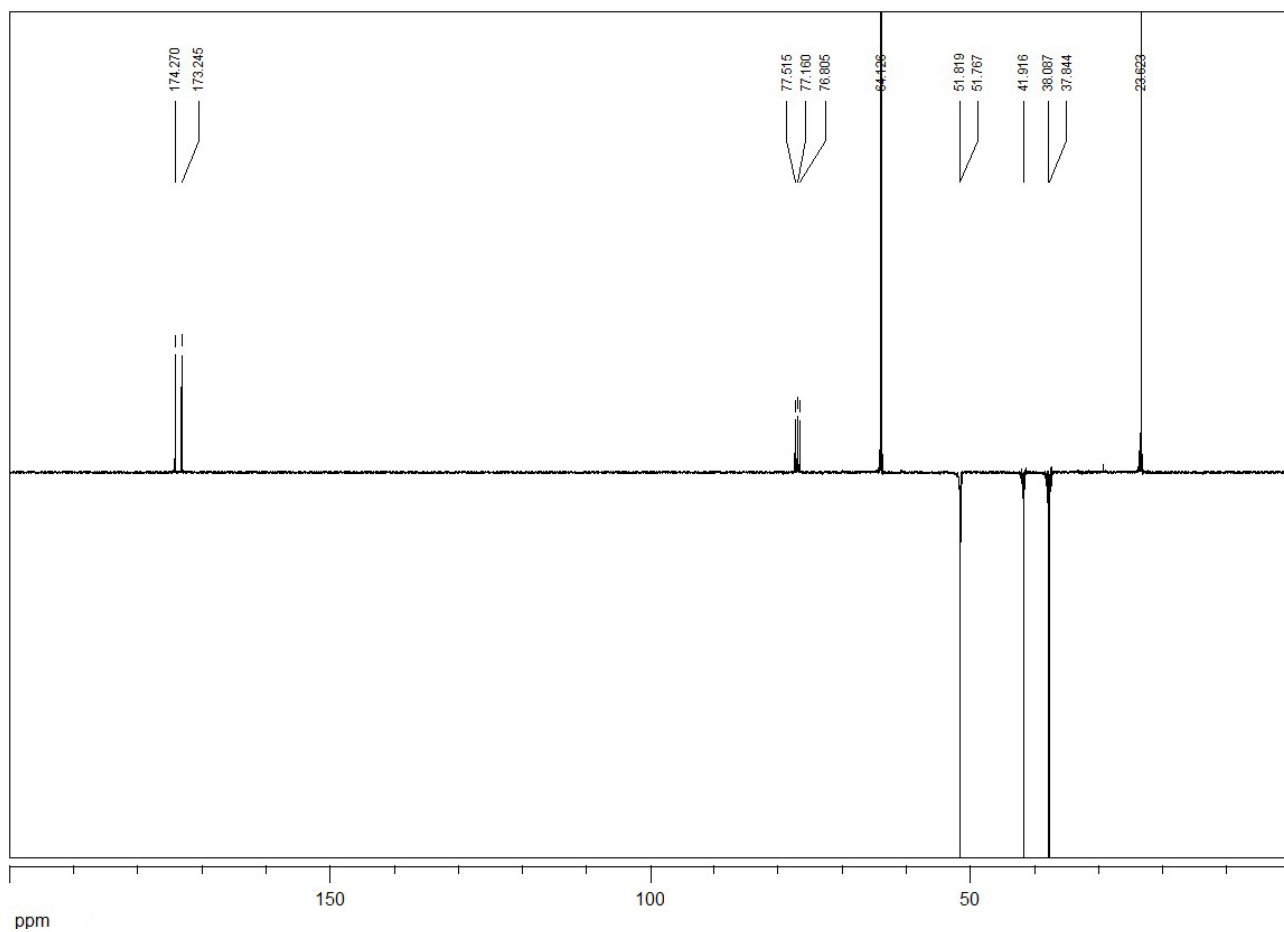
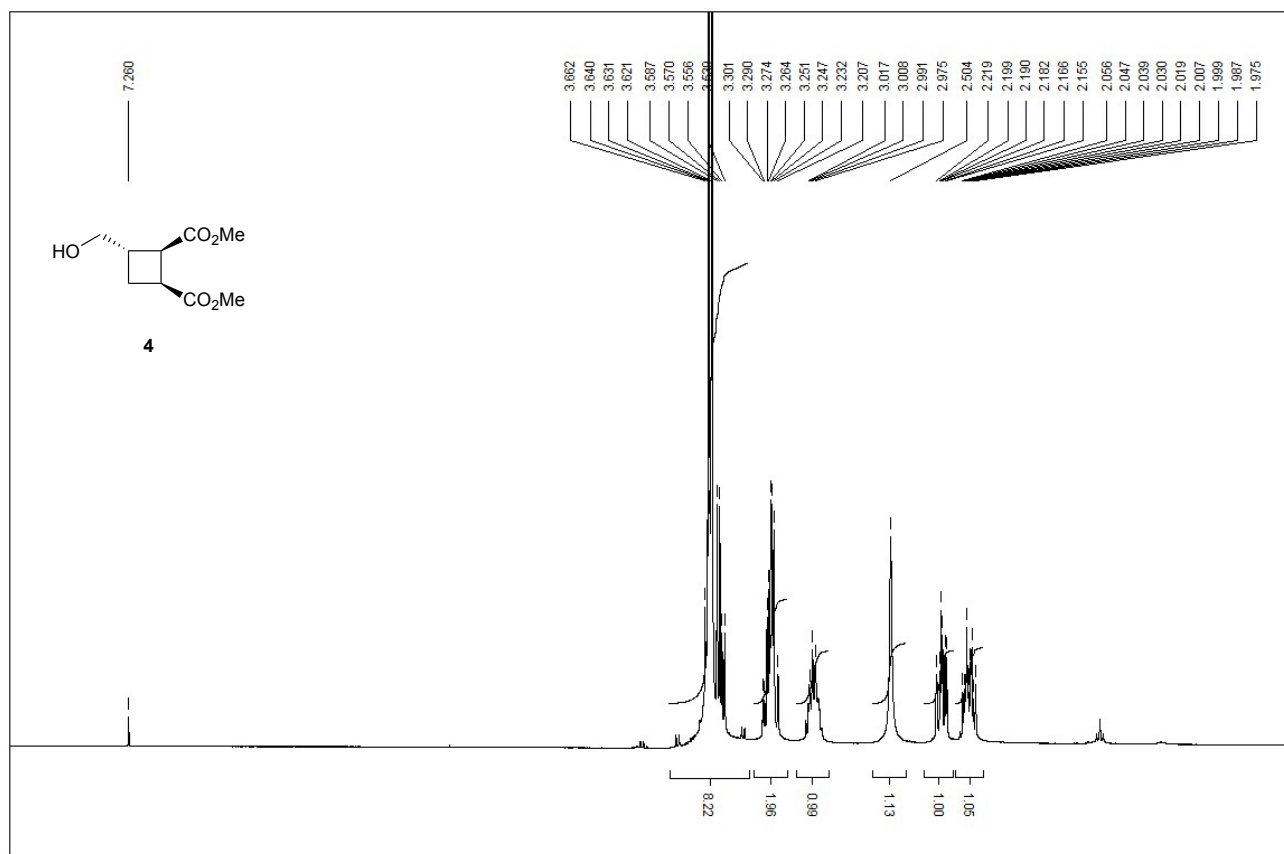
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Copies of ¹ H and ¹³ C NMR spectra for compounds 2 , 4 , 5 , 9-11 , 13-16	S2-S10
Copies of NOESY NMR spectra for compounds 15 and 16	S11
Copies of ¹ H and ¹³ C NMR spectra for compounds 17-21 , 23 and 26-28	S12-S20

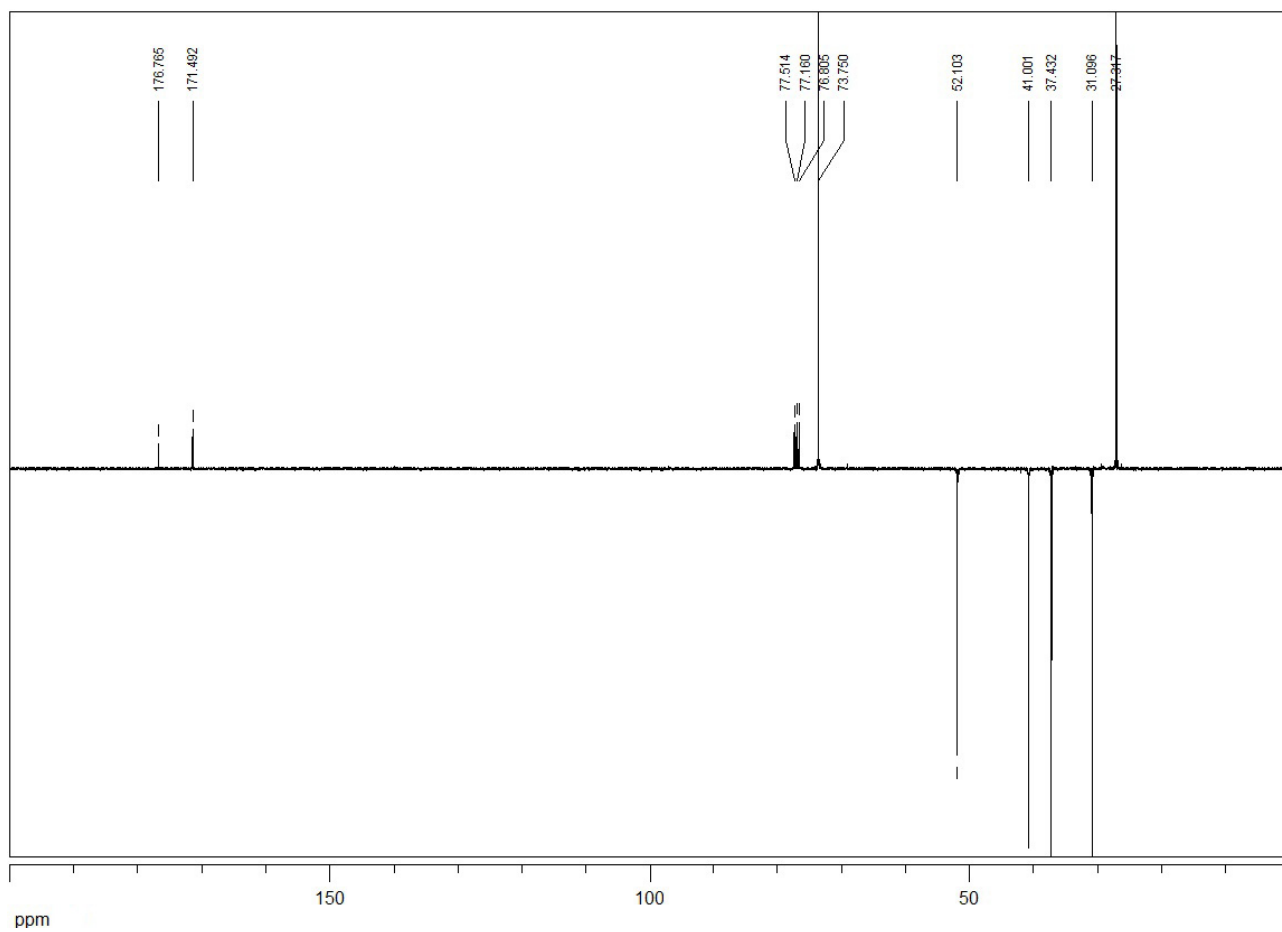
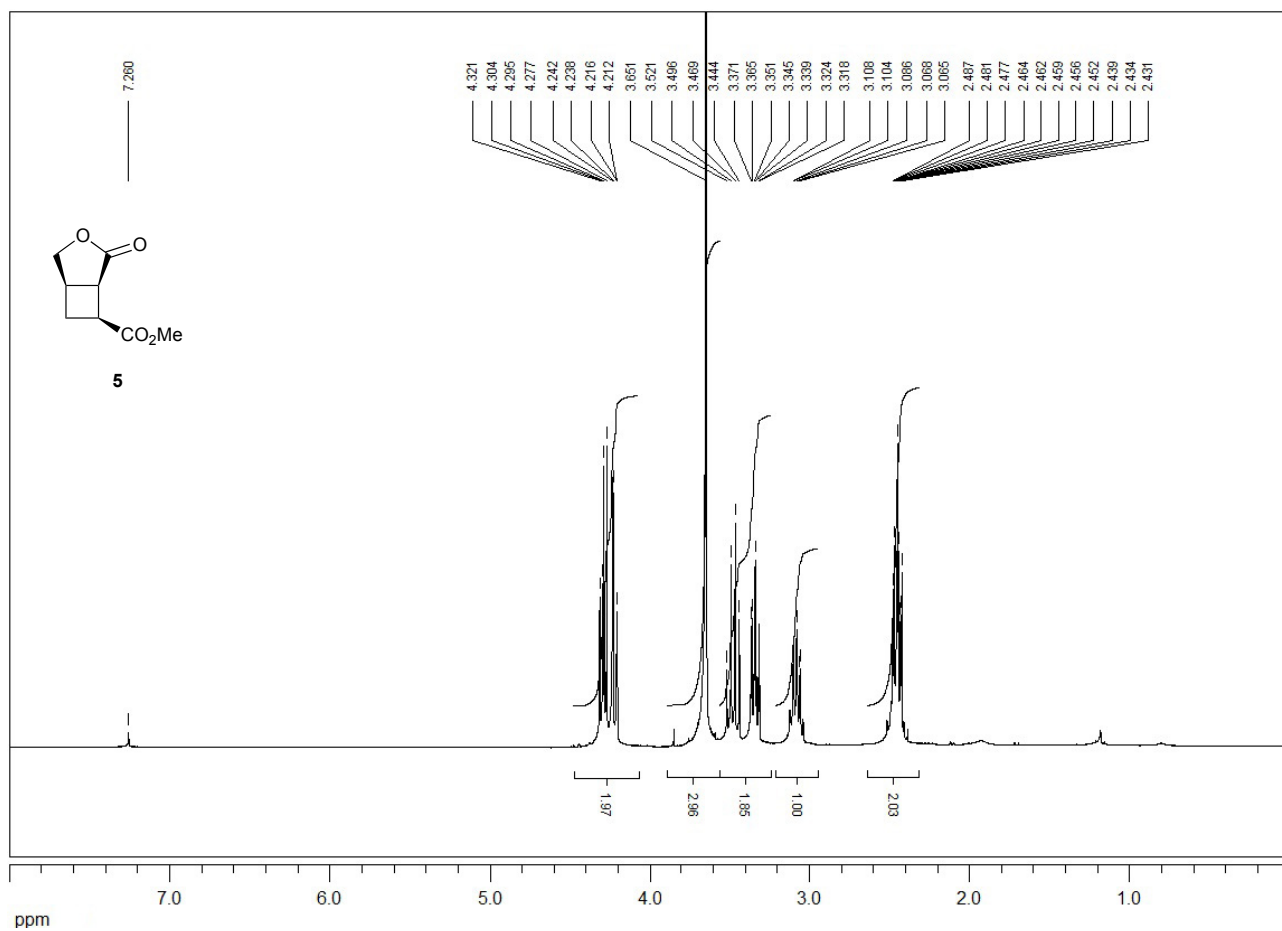
^1H and ^{13}C NMR of **2** (CD_3OD)



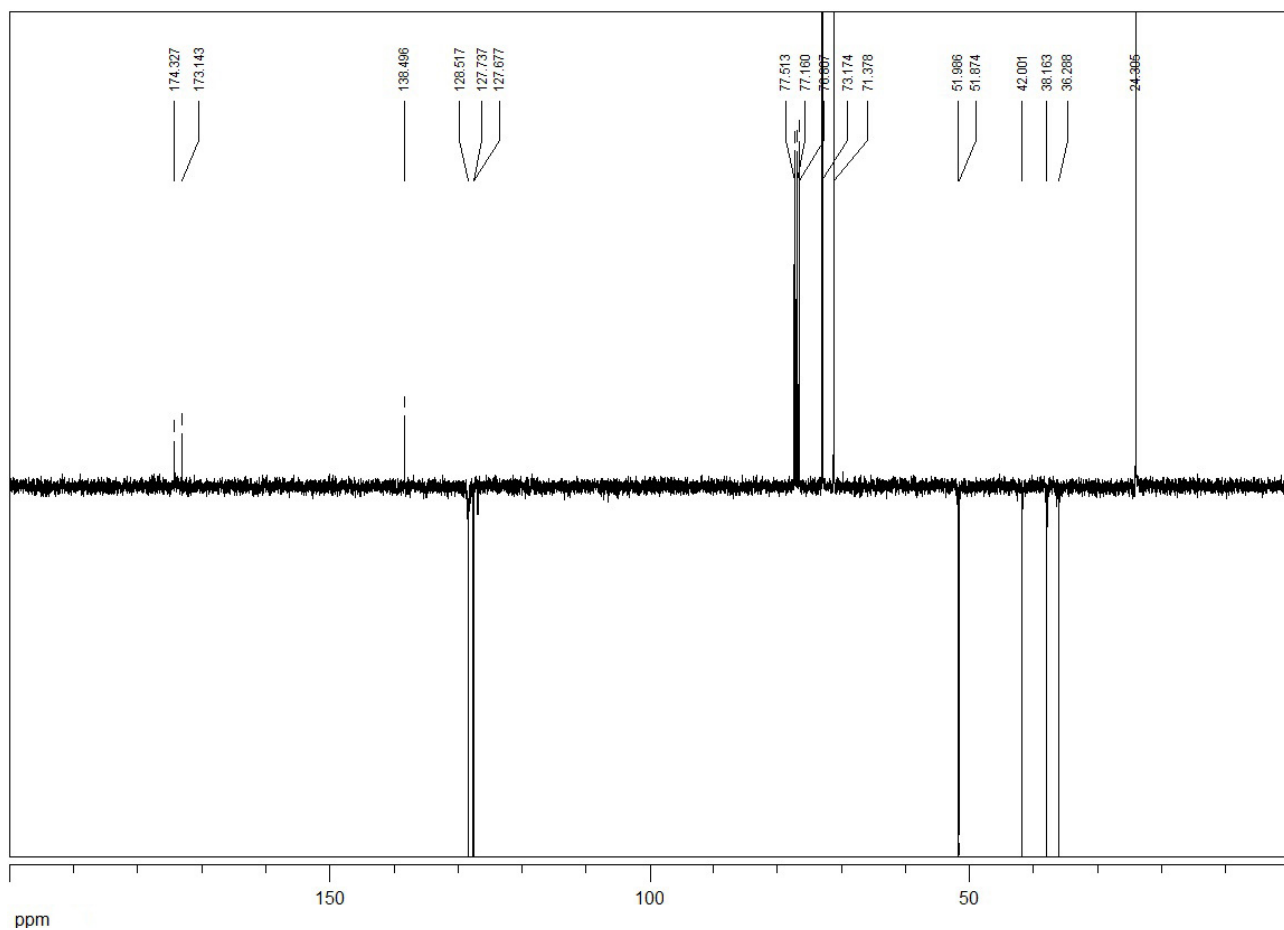
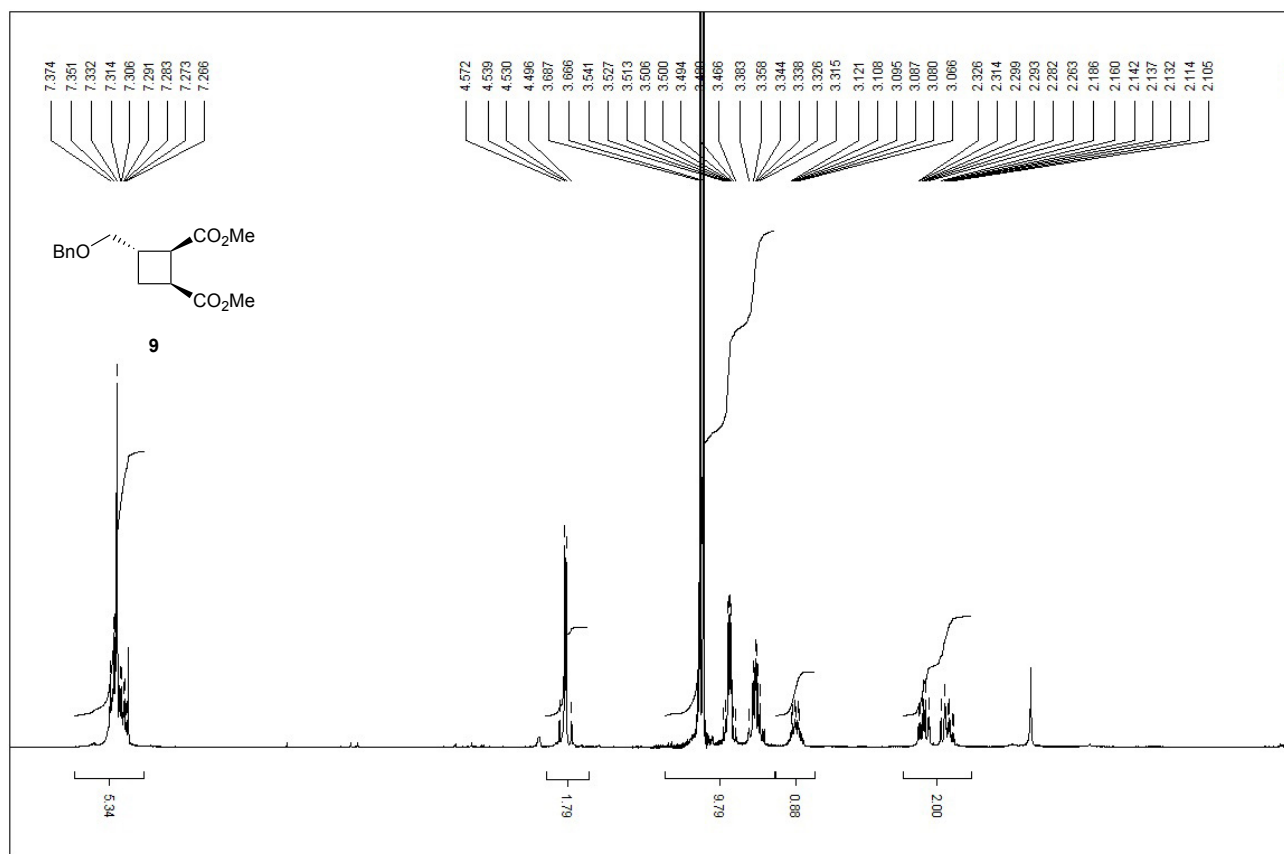
^1H and ^{13}C NMR of **4** (CDCl_3)



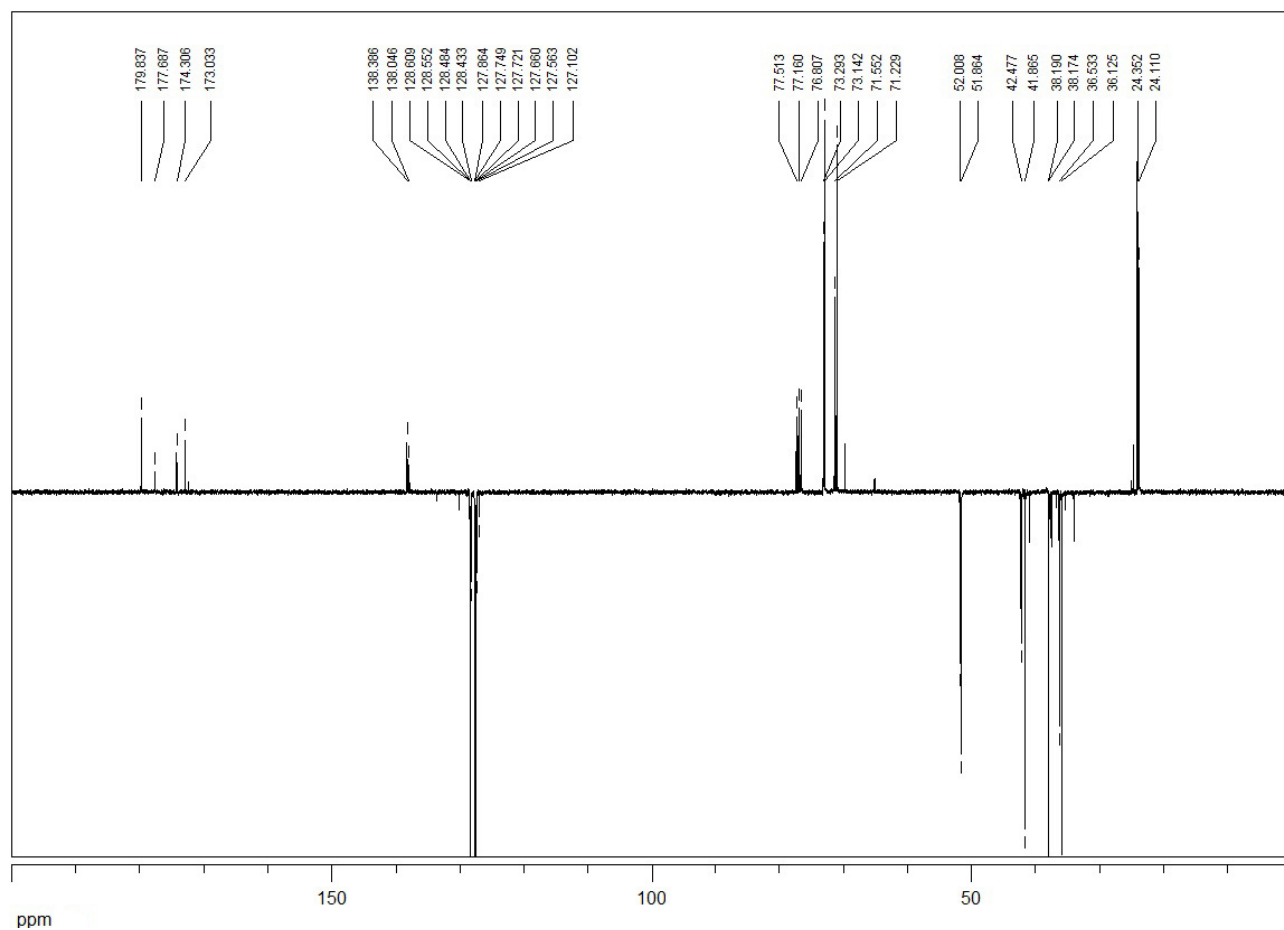
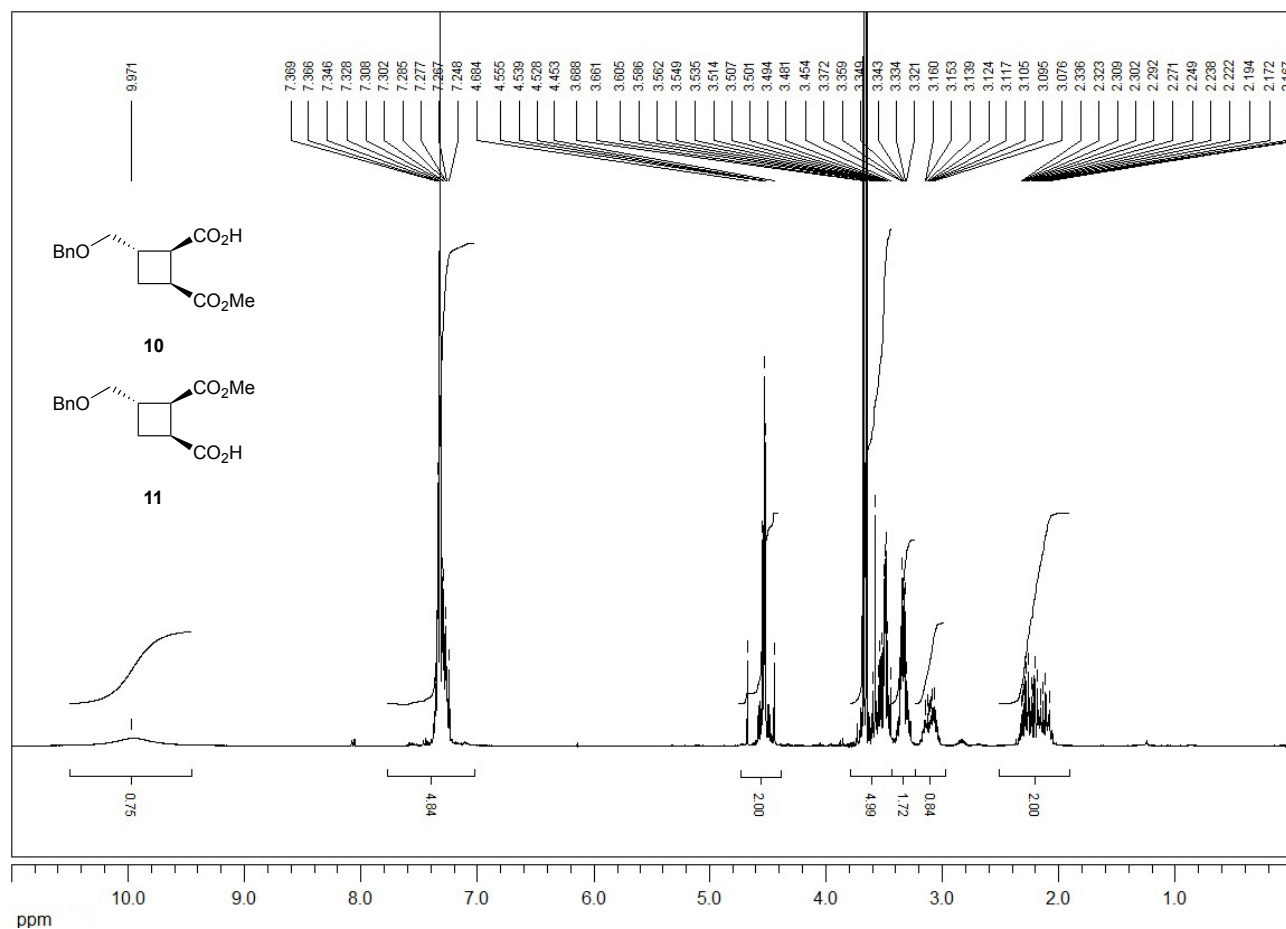
^1H and ^{13}C NMR of **5** (CDCl_3)



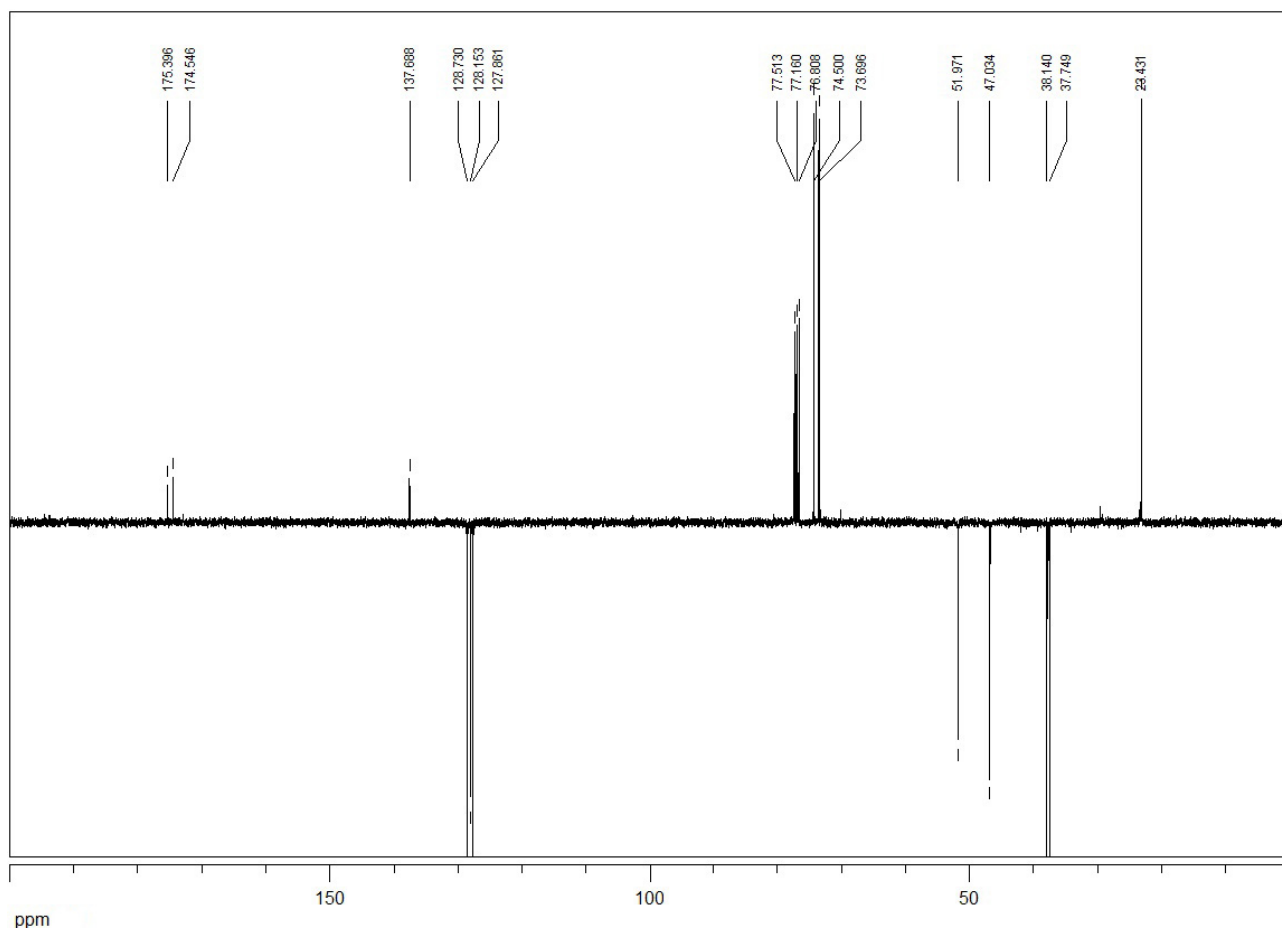
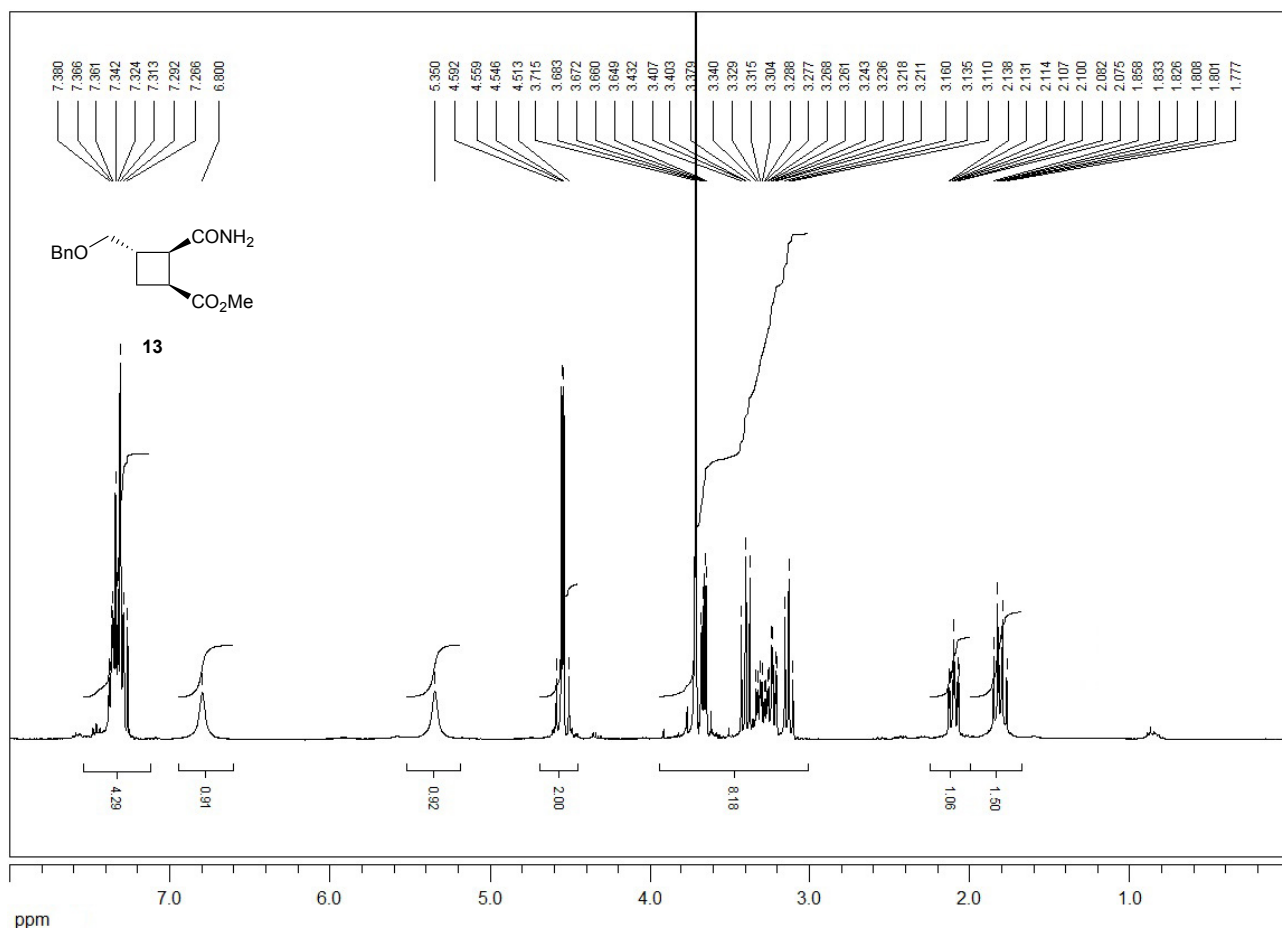
^1H and ^{13}C NMR of **9** (CDCl_3)



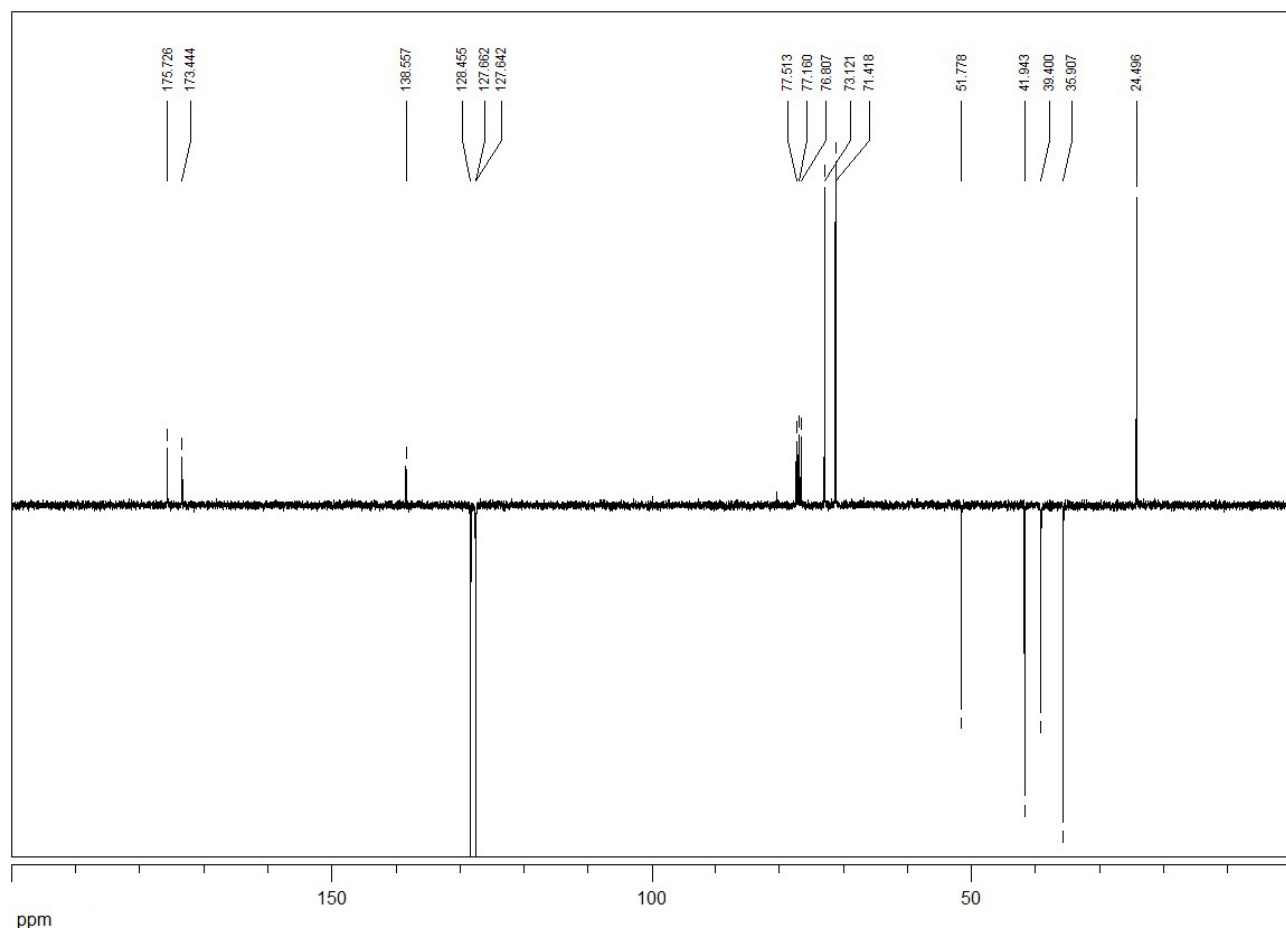
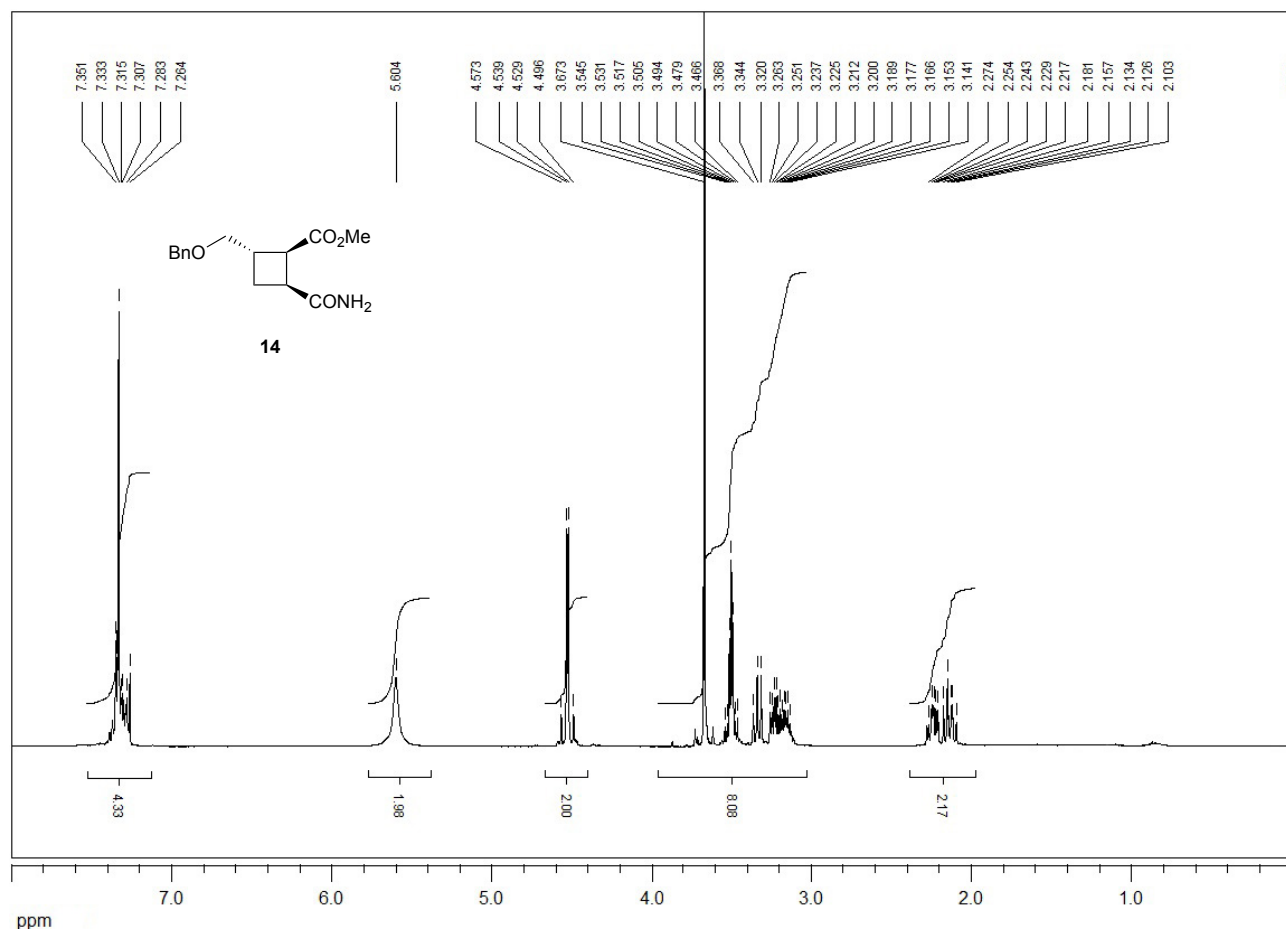
^1H and ^{13}C NMR of the mixture of **10** and **11** (CDCl_3)



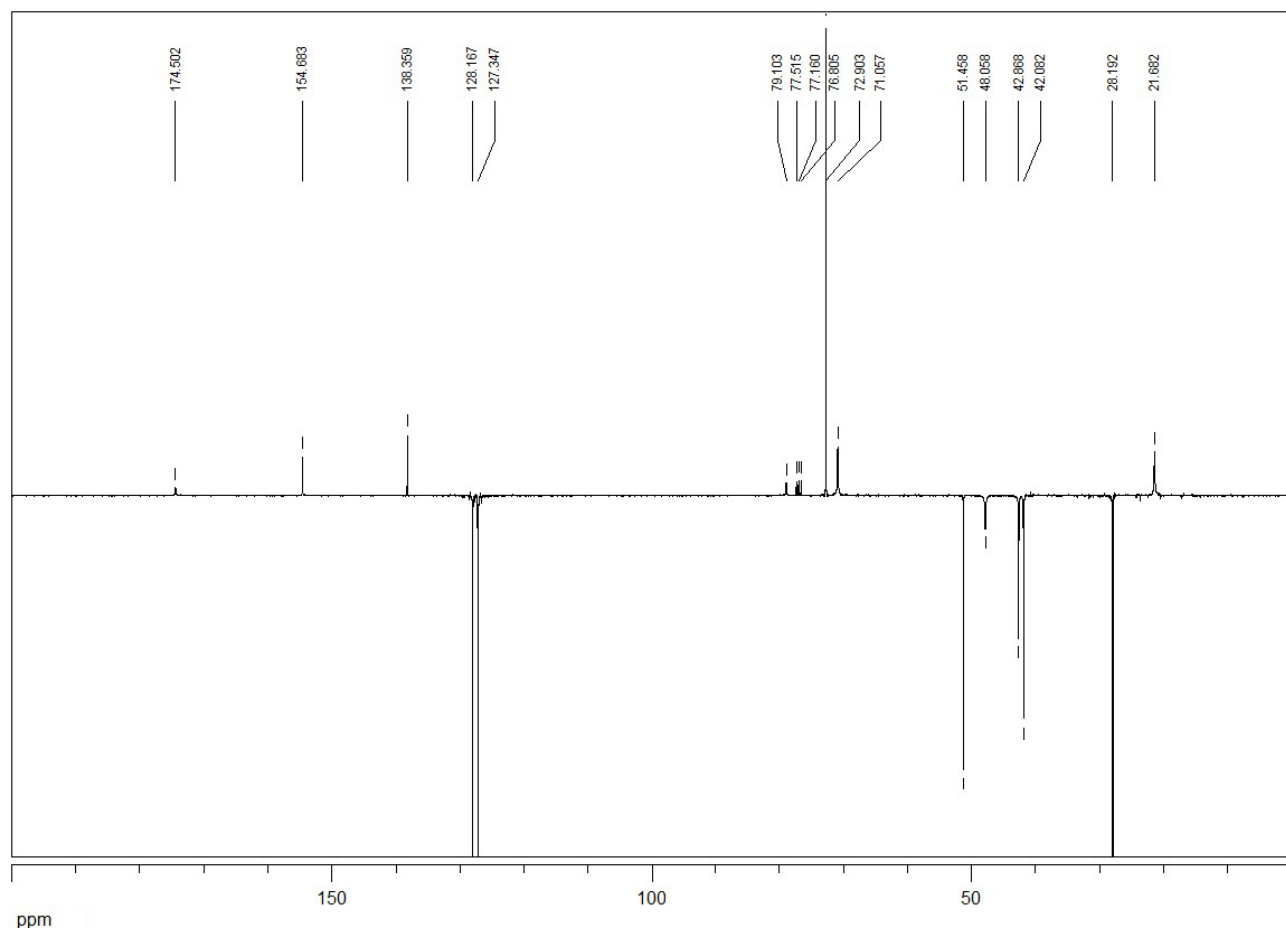
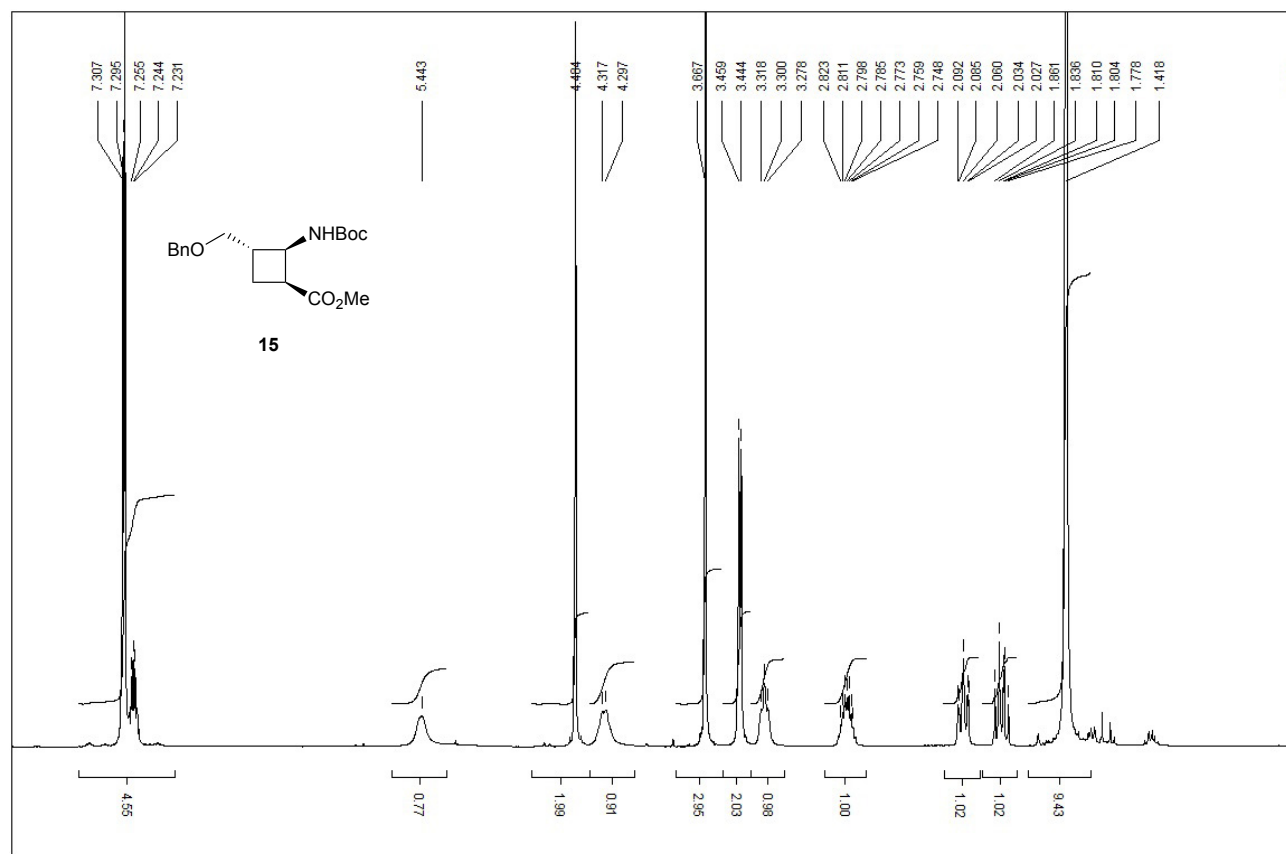
^1H and ^{13}C NMR of **13** (CDCl_3)



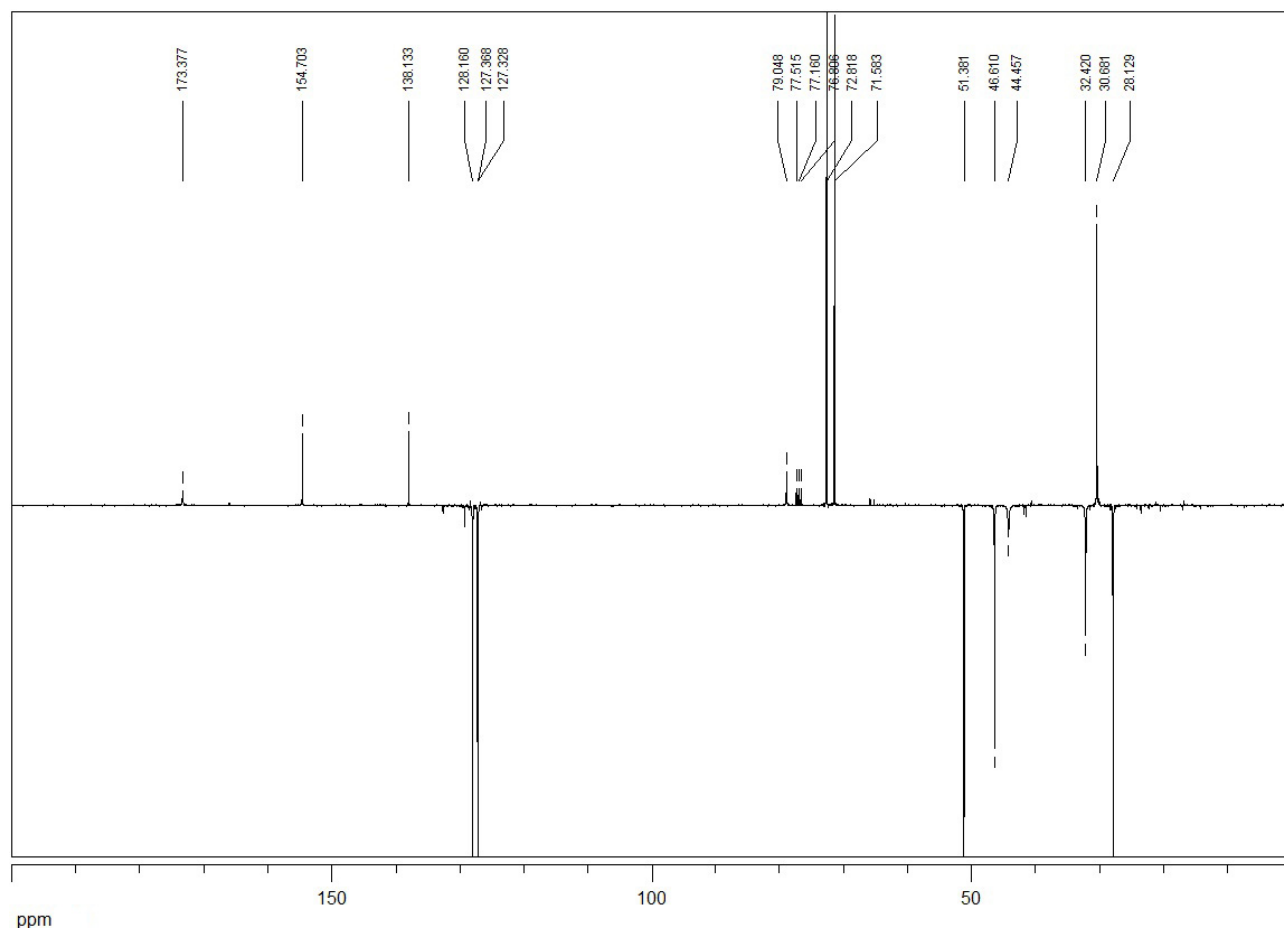
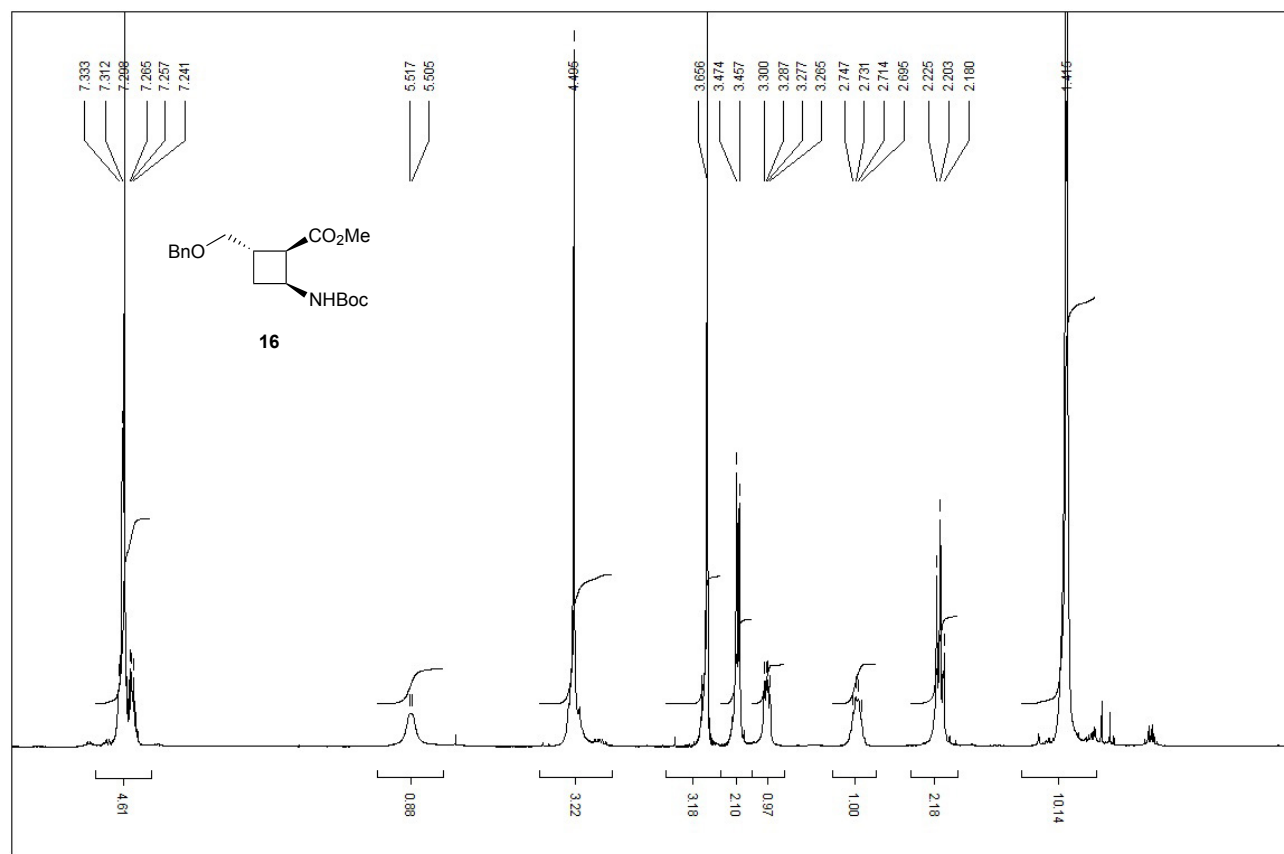
^1H and ^{13}C NMR of **14** (CDCl_3)



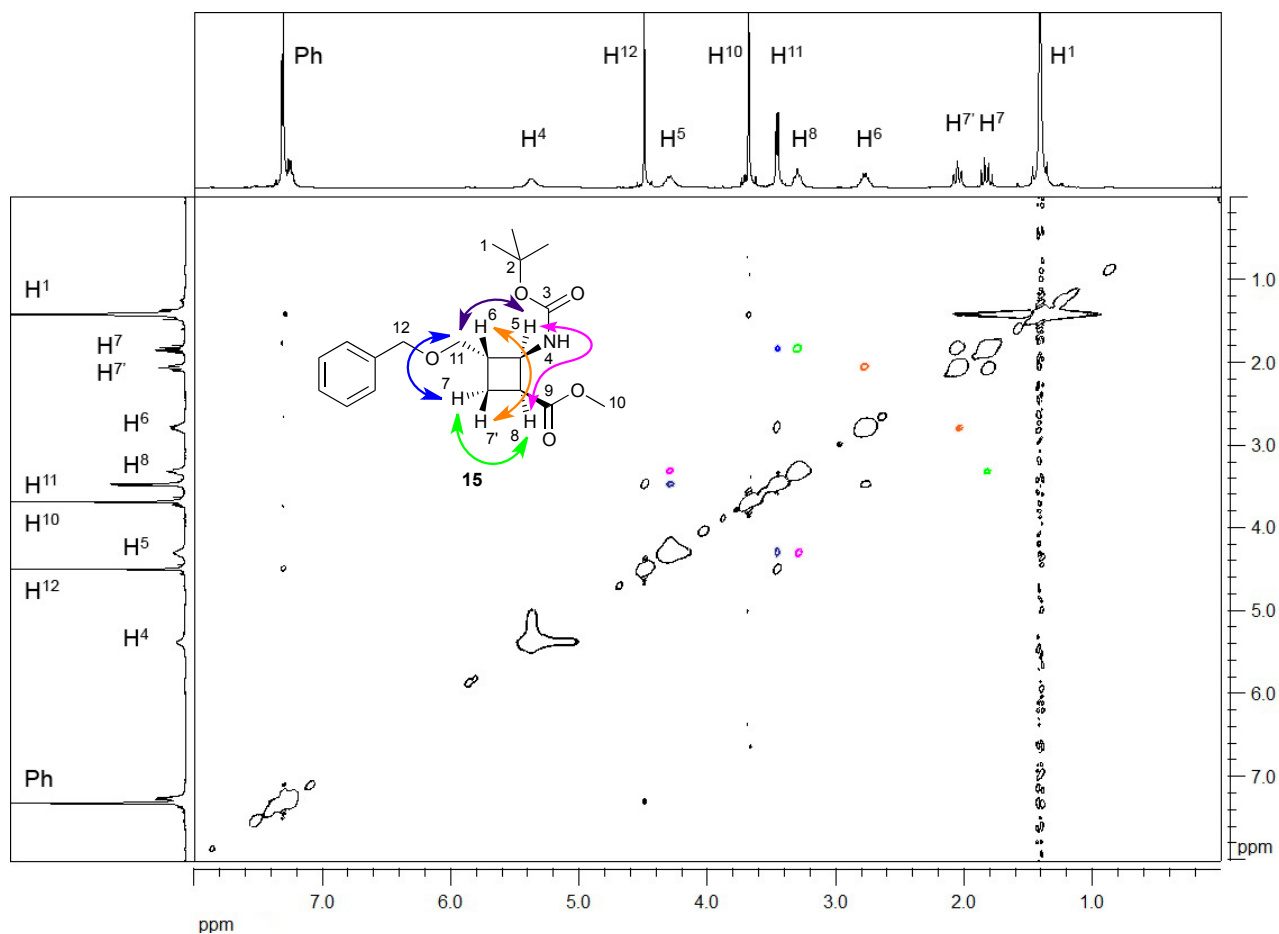
^1H and ^{13}C NMR of **15** (CDCl_3)



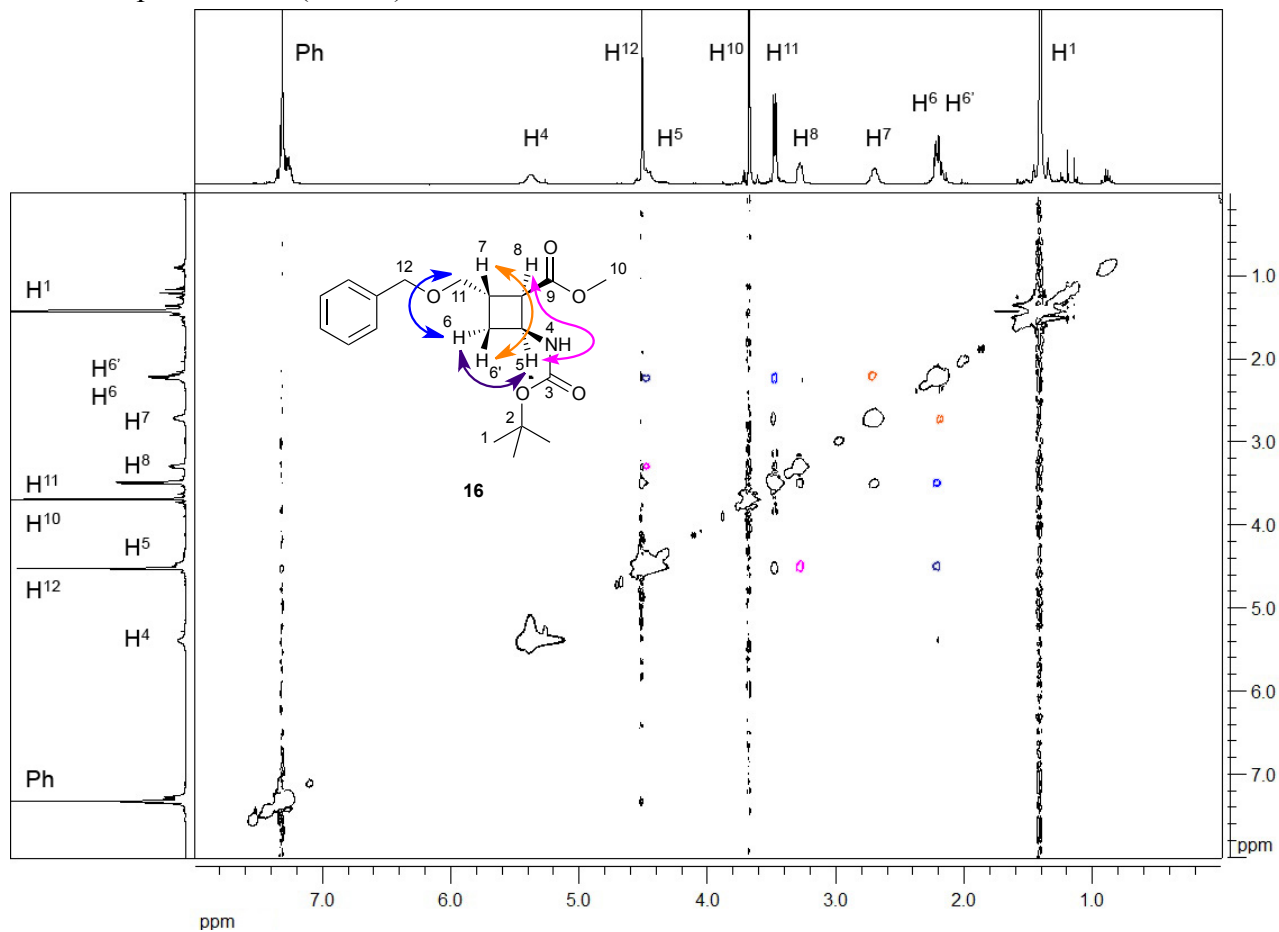
^1H and ^{13}C NMR of **16** (CDCl_3)



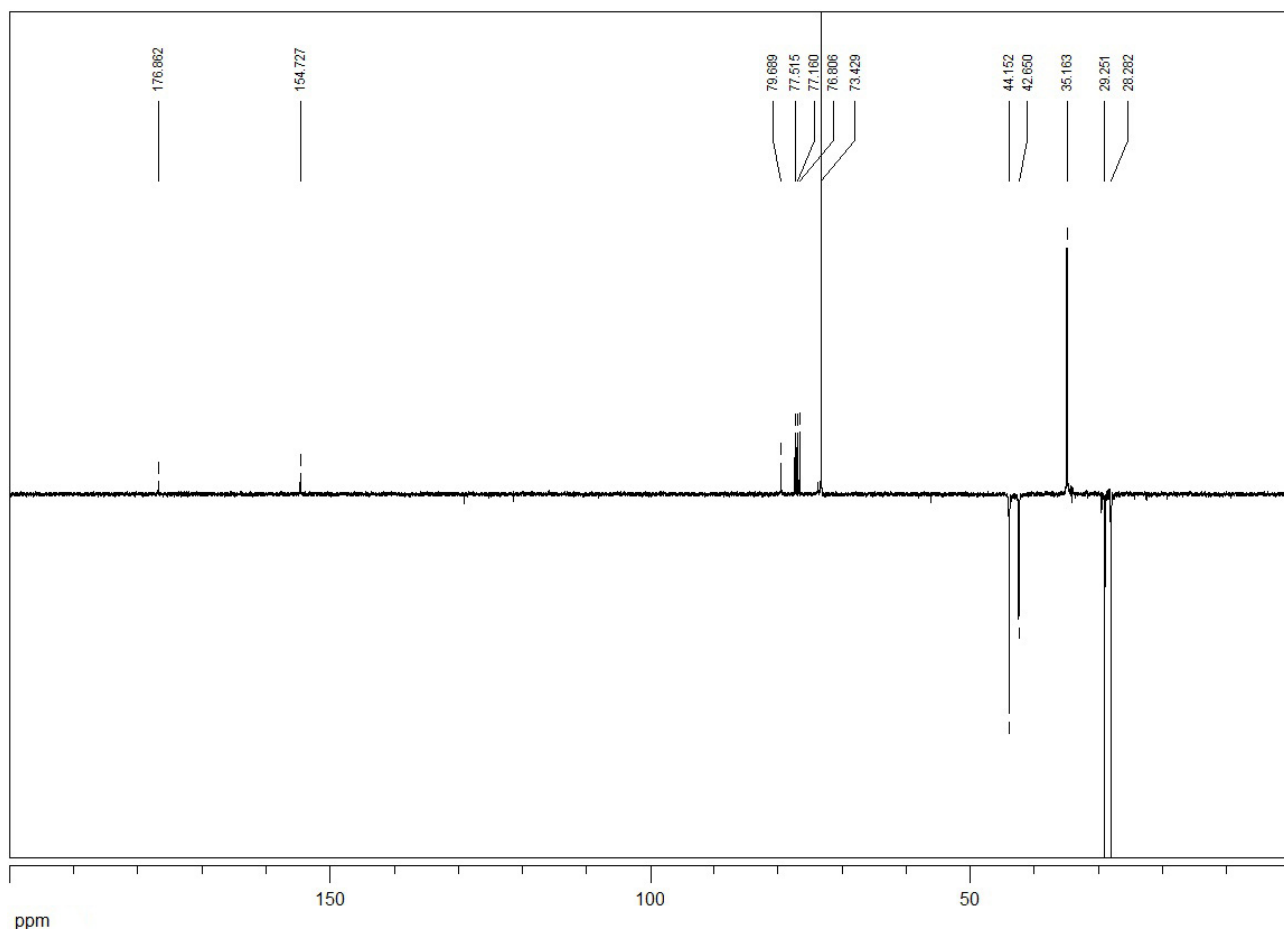
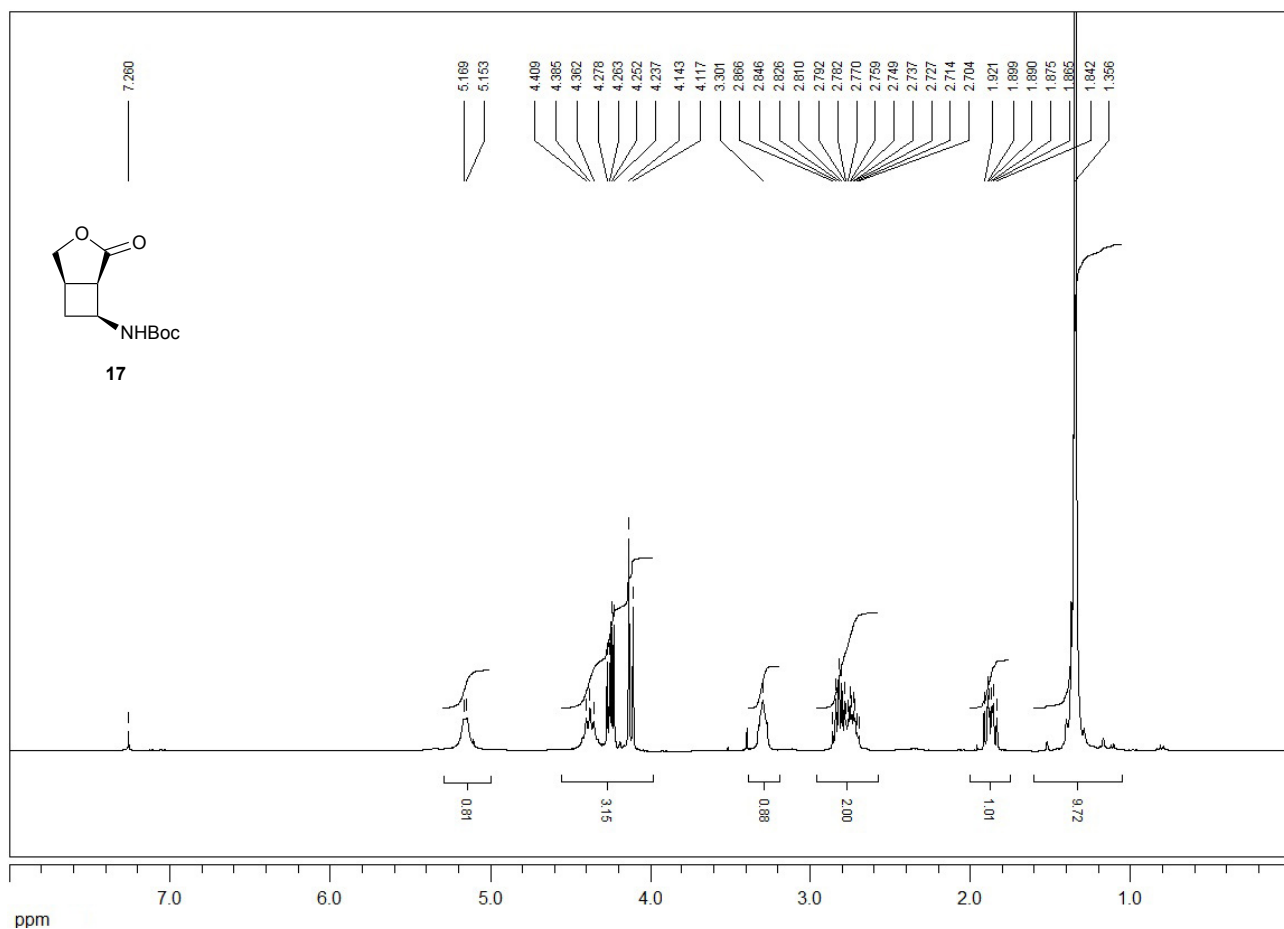
NOESY spectra of **15** (CDCl₃)



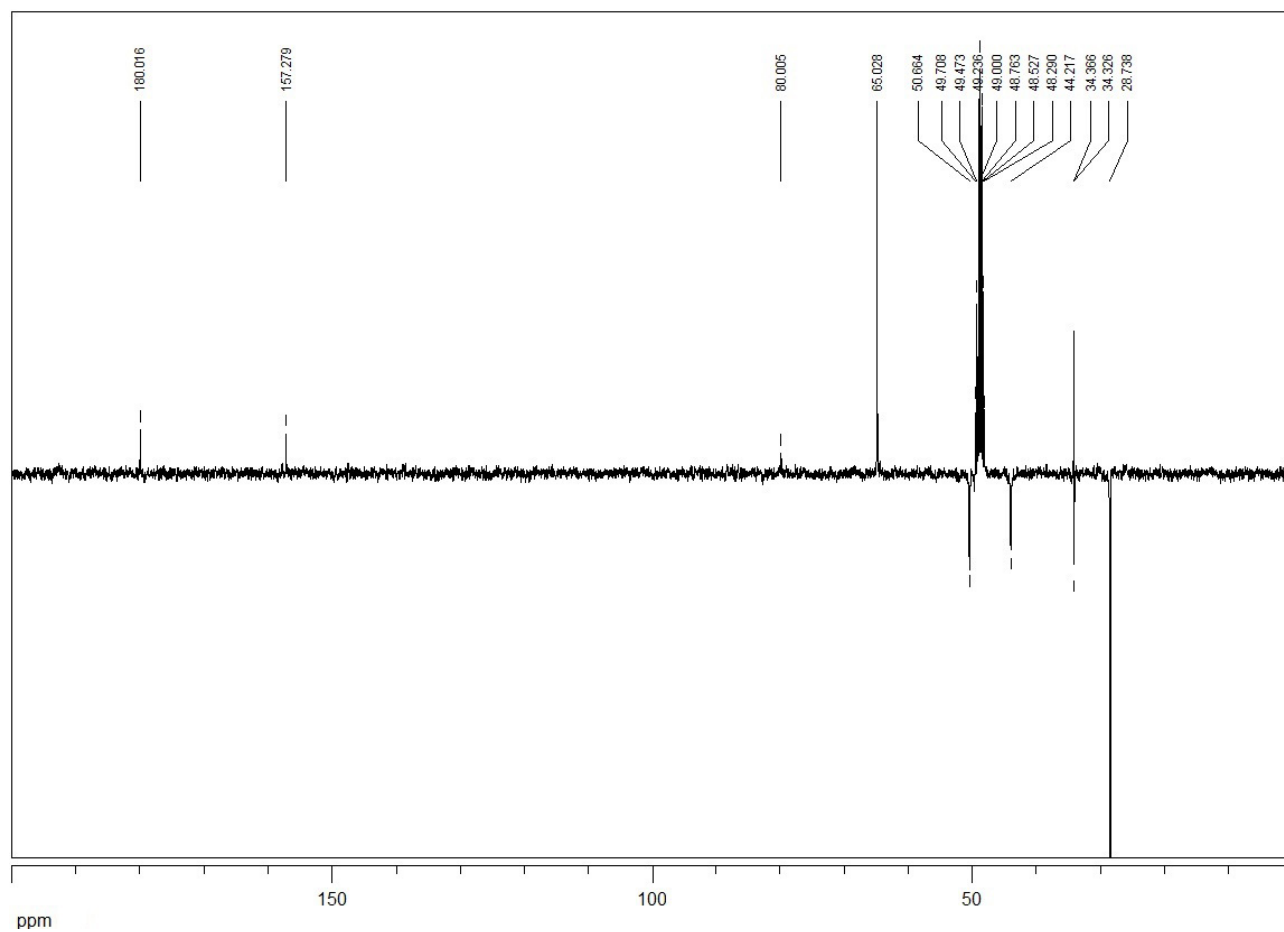
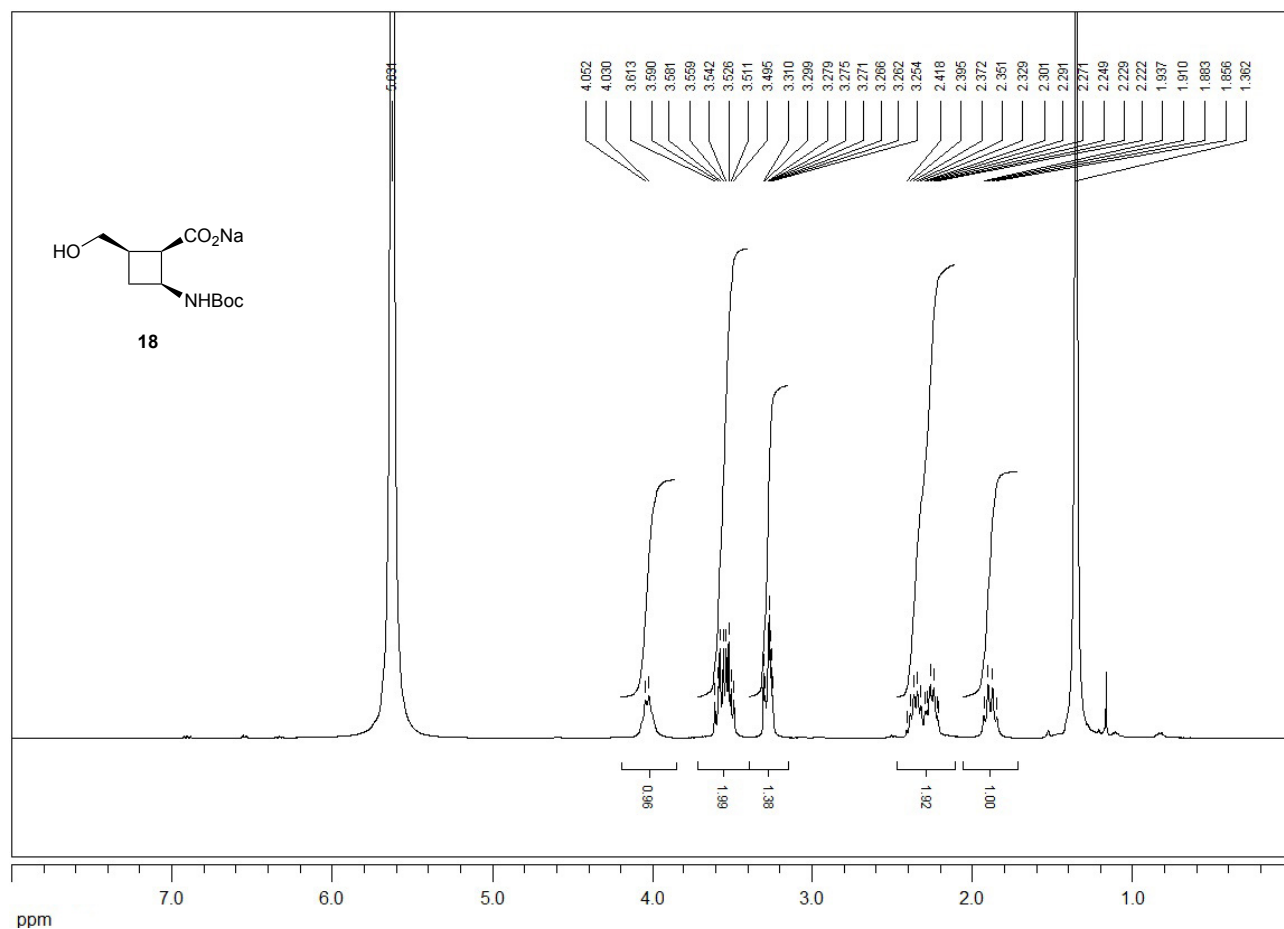
NOESY spectra of **16** (CDCl₃)



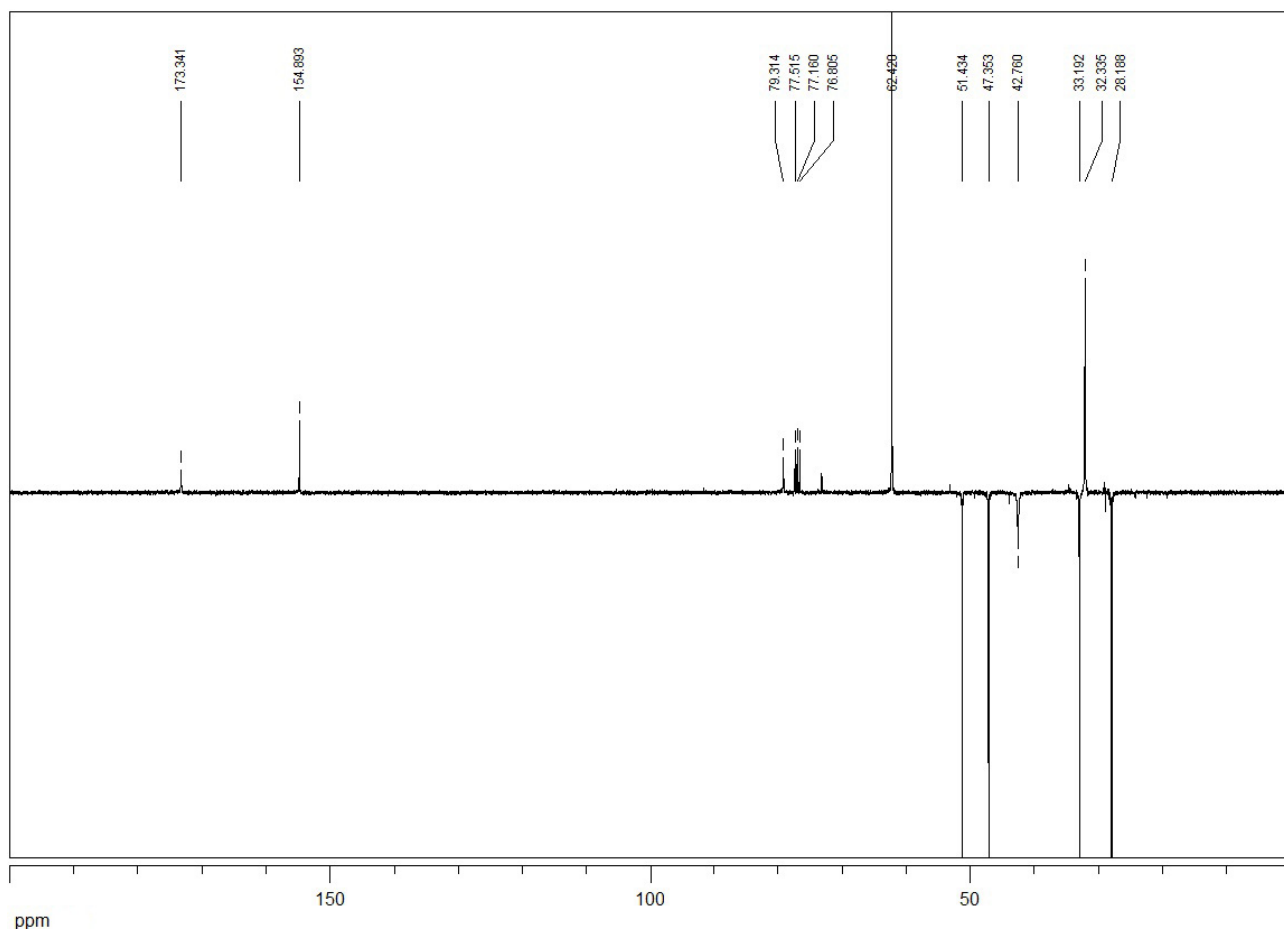
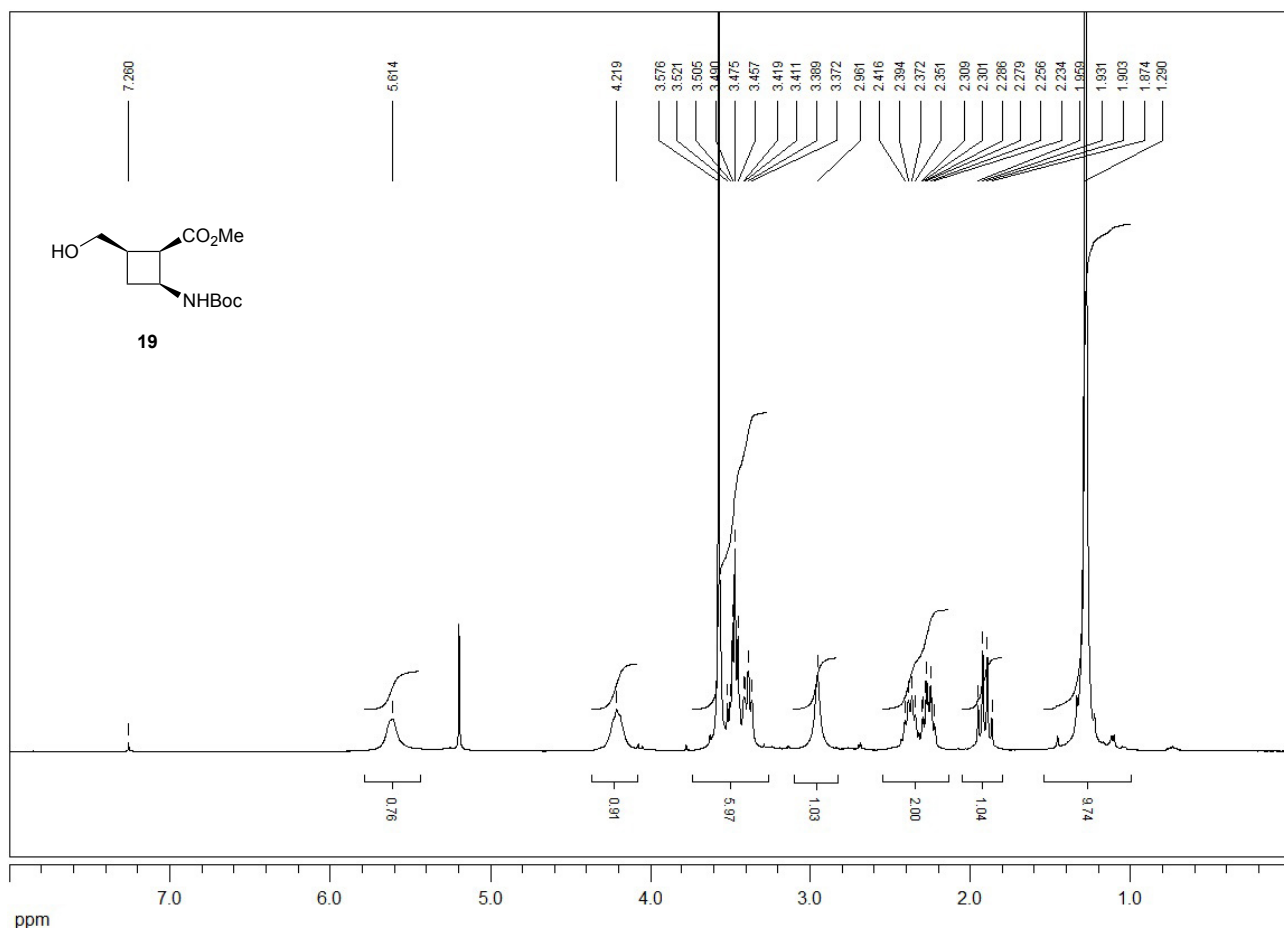
^1H and ^{13}C NMR of **17** (CDCl_3)



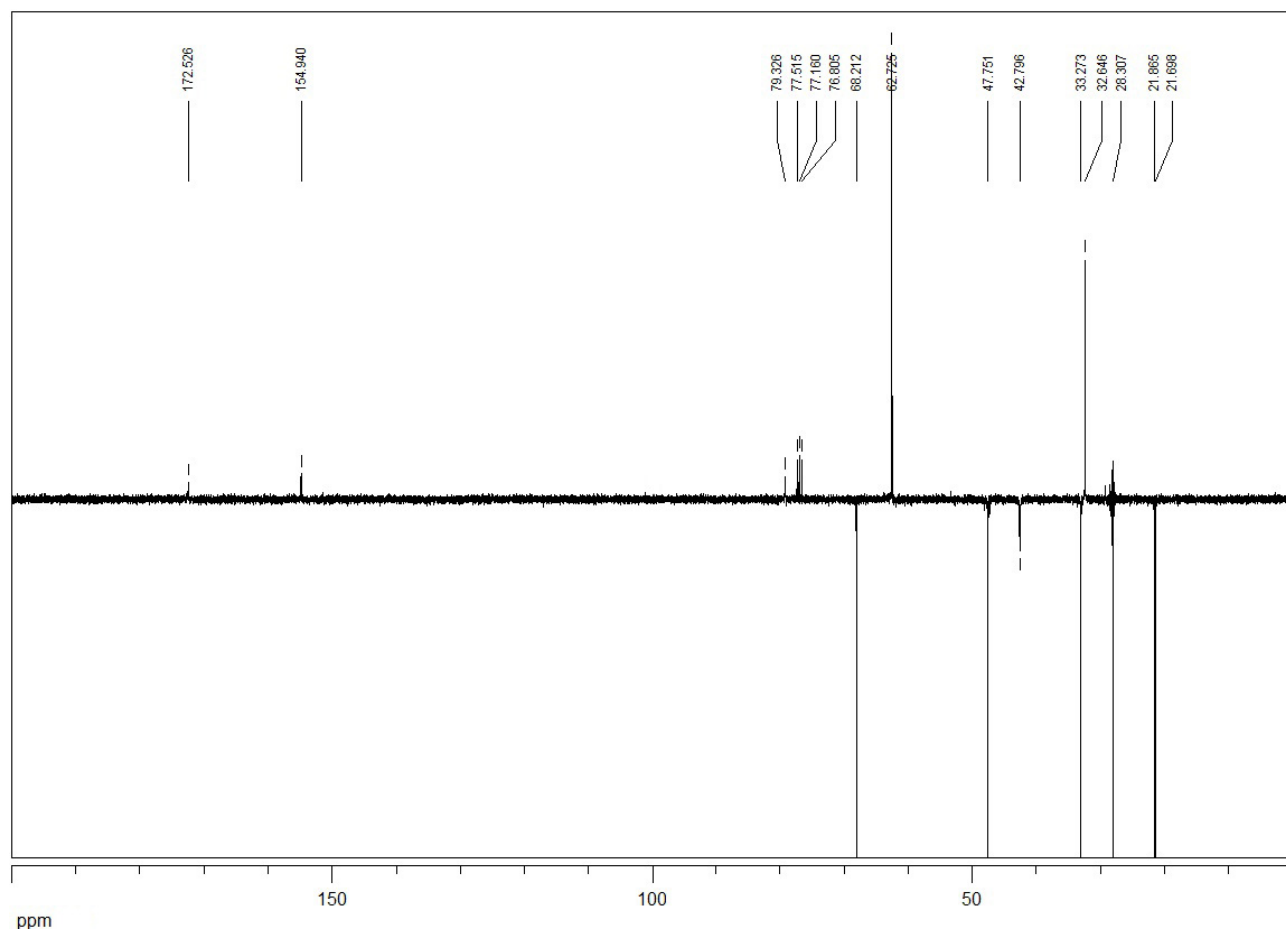
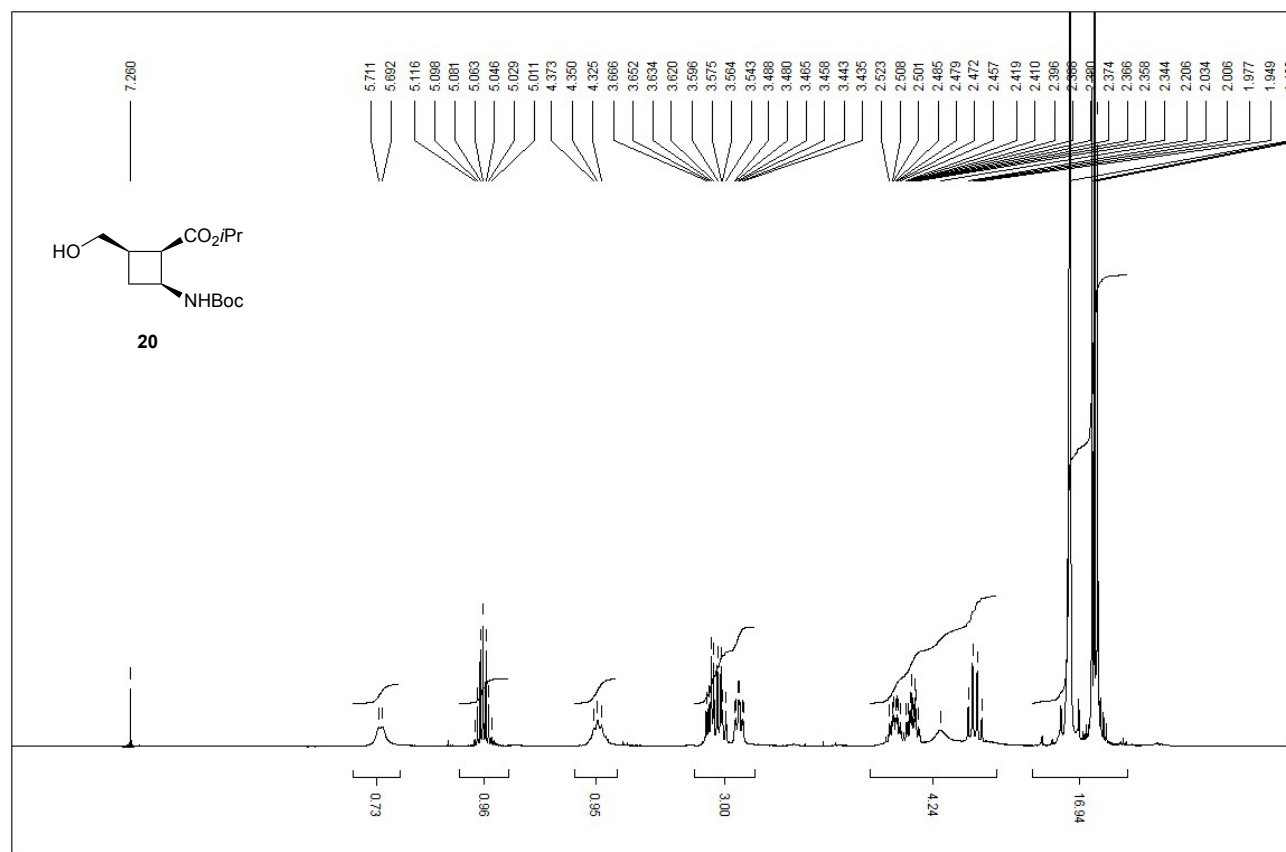
^1H and ^{13}C NMR of **18** (CD_3OD)



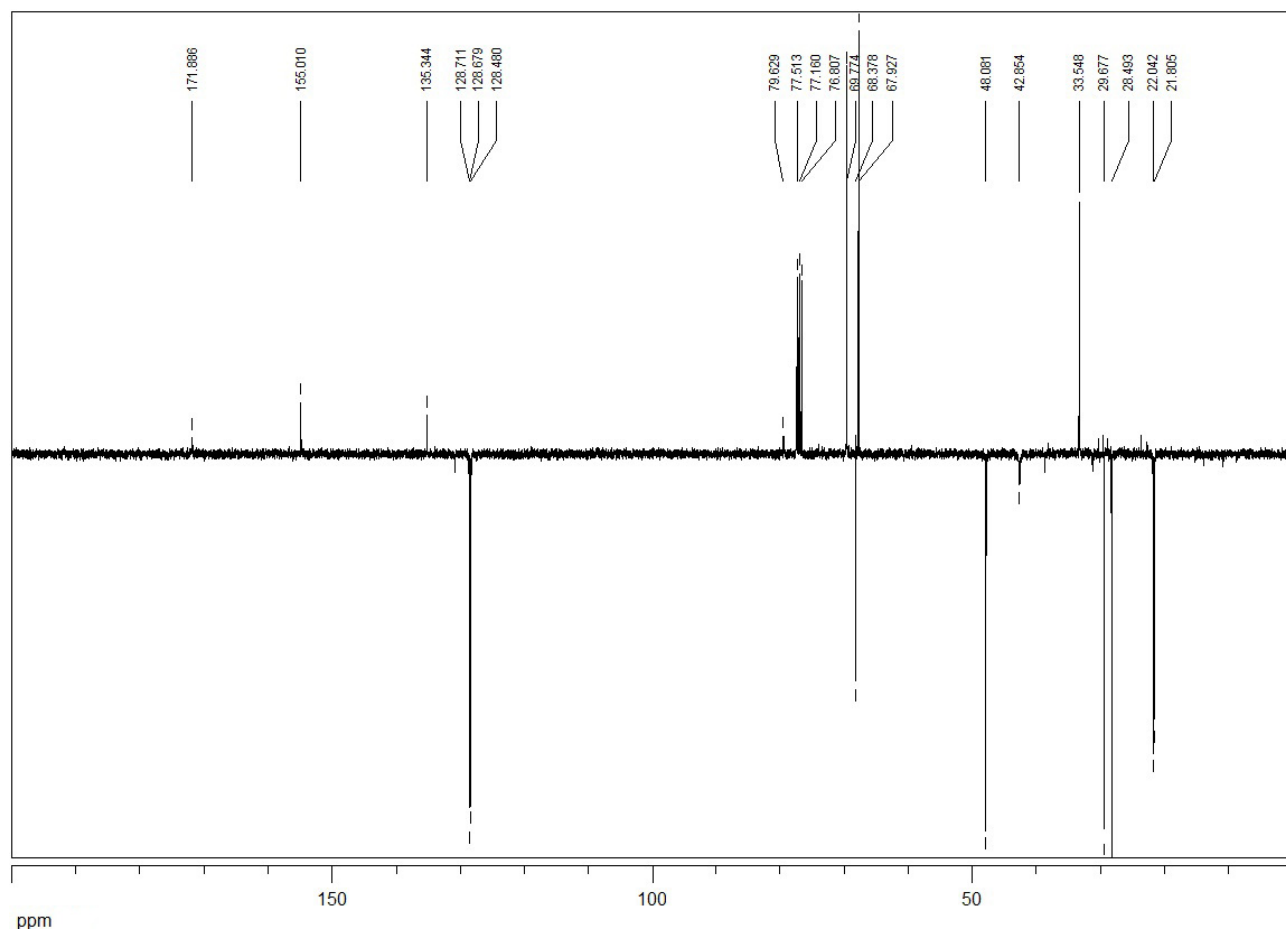
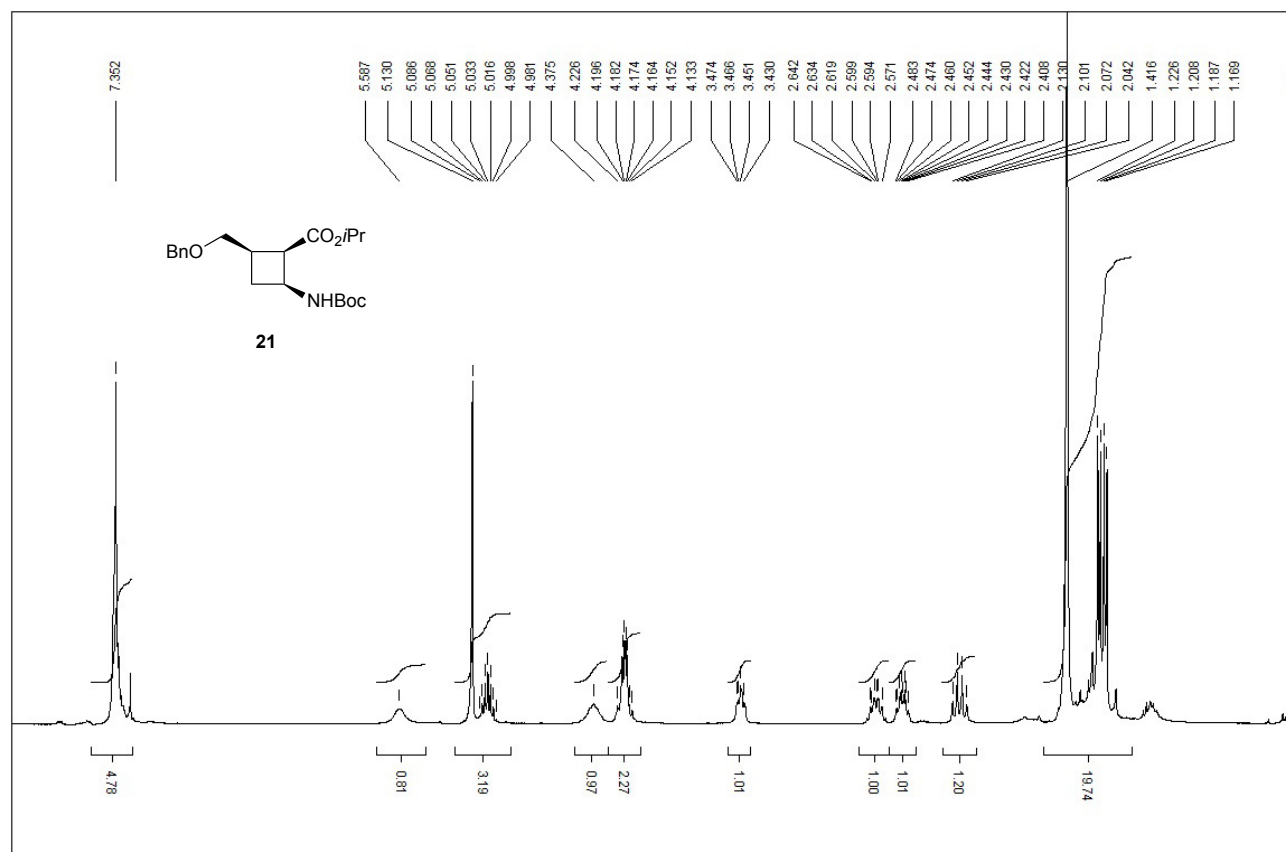
^1H and ^{13}C NMR of **19** (CDCl_3)



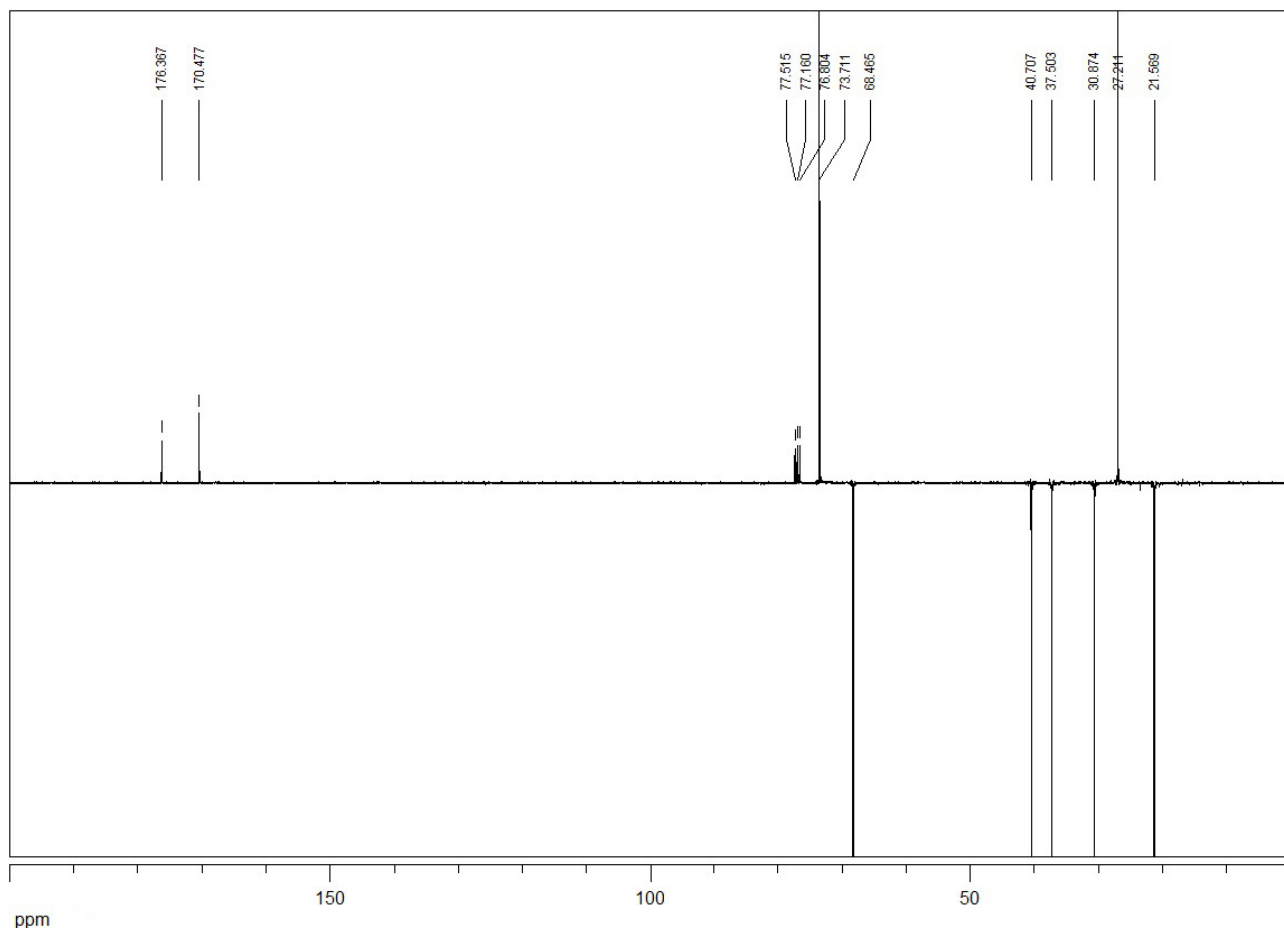
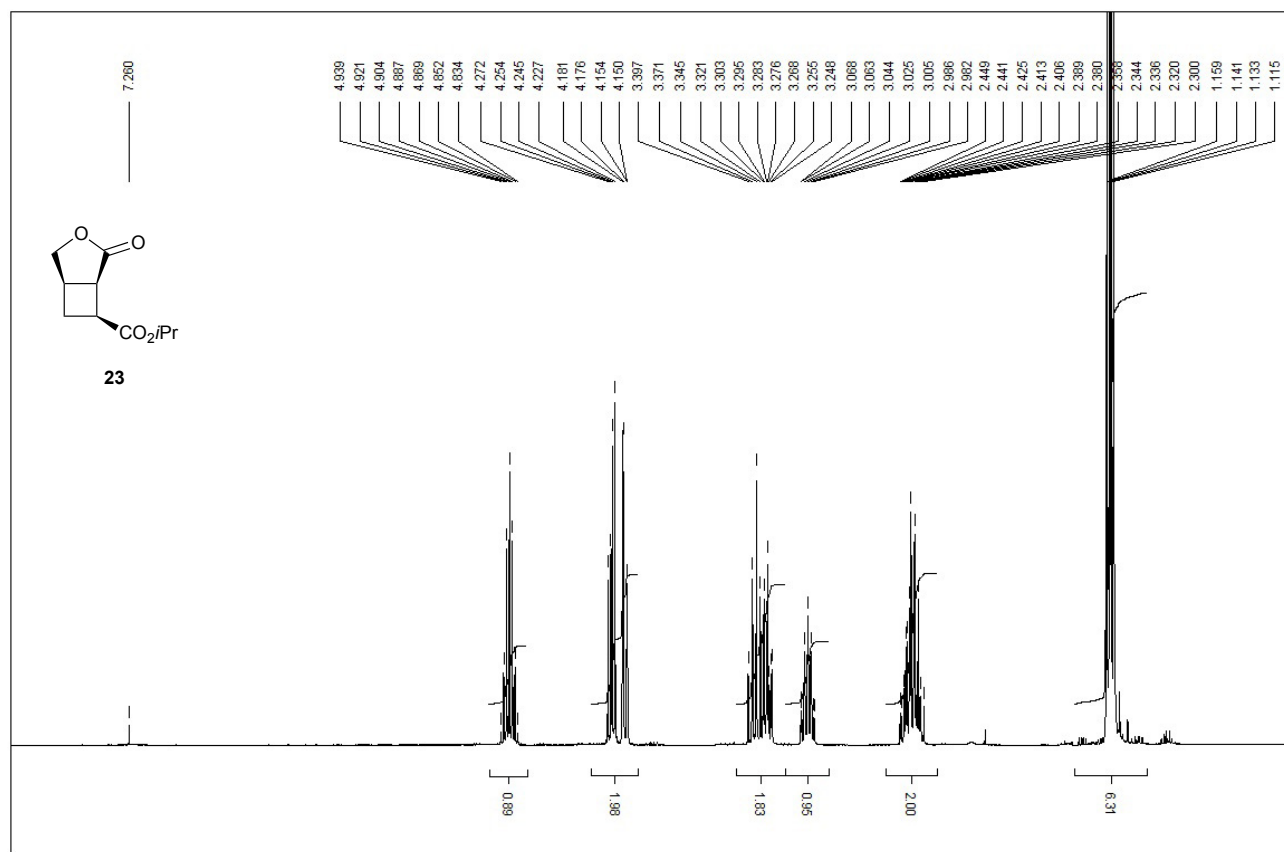
^1H and ^{13}C NMR of **20** (CDCl_3)



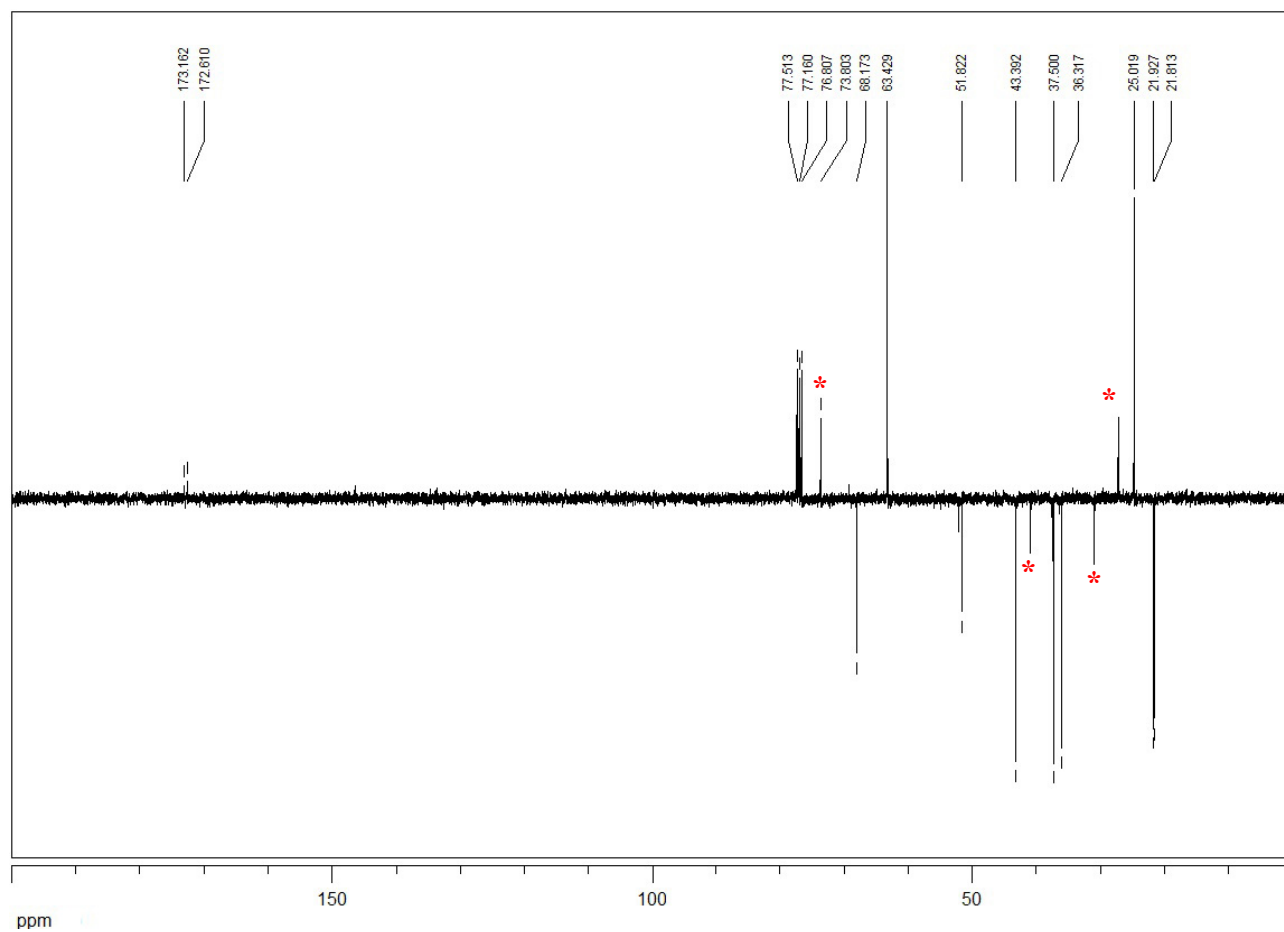
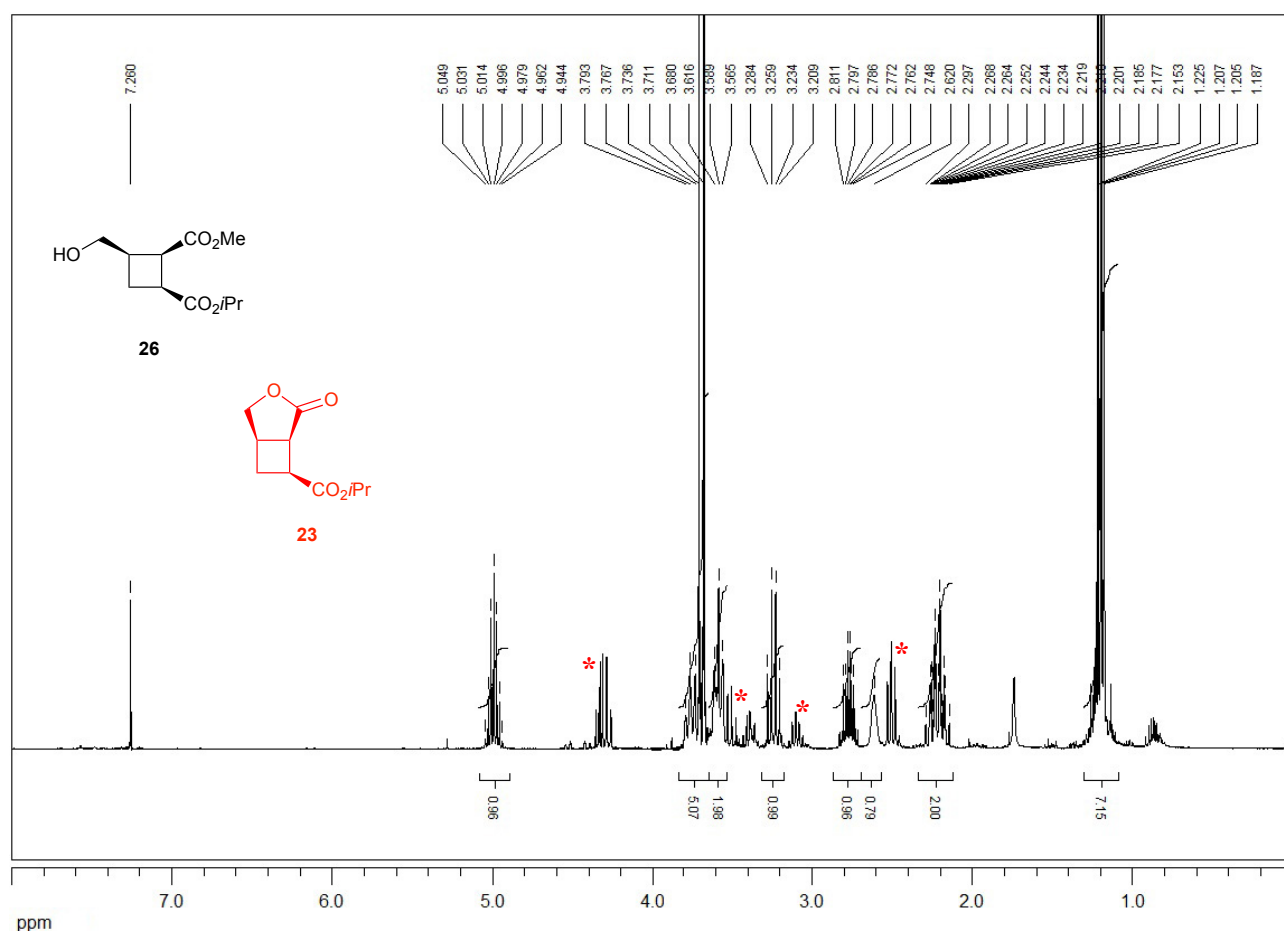
^1H and ^{13}C NMR of **21** (CDCl_3)



^1H and ^{13}C NMR of **23** (CDCl_3)



^1H and ^{13}C NMR of **26** (CDCl_3)

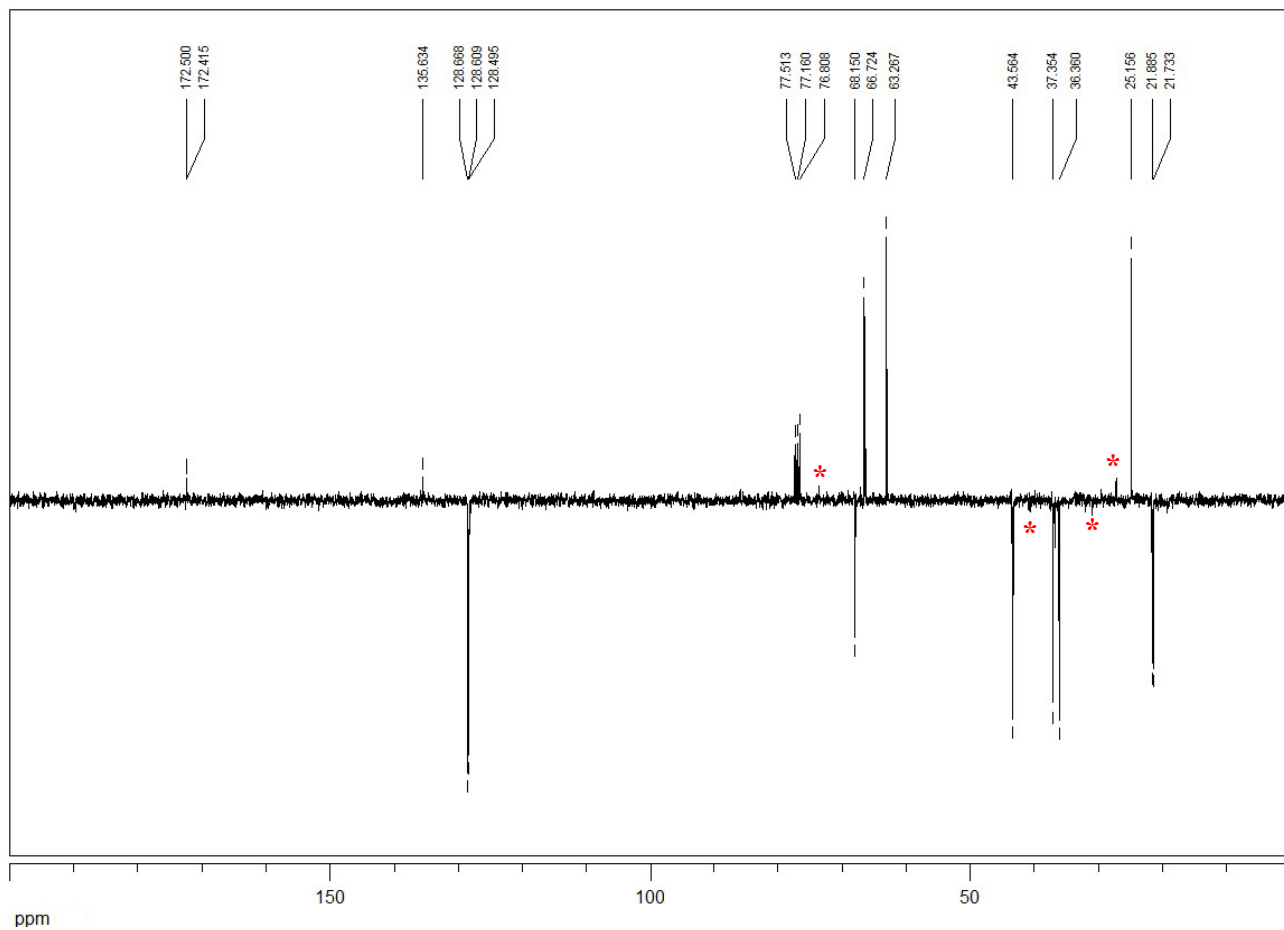


Chemical Structure 27: CCOC(=O)[C@H]1[C@@H](O)[C@H](C(=O)OCC)[C@H]1C

Chemical Structure 23: CCOC(=O)[C@H]1[C@@H]2C(=O)OC[C@H]2[C@H]1C

¹H NMR Spectrum (CDCl₃):

- Peak List (ppm):** 7.362, 7.357, 7.349, 7.336, 7.326, 7.314, 7.288, 7.280, 5.188, 5.155, 5.096, 5.062, 4.987, 4.978, 4.970, 4.952, 4.945, 4.935, 4.917, 3.733, 3.708, 3.701, 3.676, 3.660, 3.637, 3.613, 3.567, 3.570, 3.556, 3.538, 3.524, 3.277, 3.252, 3.227, 3.202, 2.381, 2.299, 2.293, 2.263, 2.275, 2.265, 2.257, 2.232, 2.214, 2.207, 2.200, 1.200, 1.182, 1.141, 1.124.
- Integration Values:** 5.67, 3.30, 3.07, 0.65, 1.00, 3.09, 5.54.
- Peak Assignments:** The aromatic region (7.2-7.4 ppm) corresponds to the benzyl ester of 27. The aliphatic region (1.1-5.2 ppm) contains signals for both 27 and 23. Red asterisks (*) mark peaks at approximately 4.5, 3.5, 3.2, and 2.2 ppm, which are assigned to the impurity 23.



^1H and ^{13}C NMR of **28** (CDCl_3)

