

**Enantioselective Synthesis of Thailanstatin A Methyl Ester and Evaluation
of *in vitro* Splicing Inhibition**

Arun K. Ghosh,^{*,†} Anne M. Veitschegger,[†] Shenyue Nie,[†] Nicola Relitti[†]

Andrew J. MacRae,[‡] Melissa S. Jurica,[‡]

[†]*Department of Chemistry and Department of Medicinal Chemistry, Purdue University, 560 Oval Drive, West Lafayette, Indiana 47907;* [‡]*Department of Molecular, Cell and Developmental Biology and Center for Molecular Biology of RNA, University of California, Santa Cruz, California 95064*

akghosh@purdue.edu

Copies of ¹H and ¹³C spectra of new compounds-----S2-S37

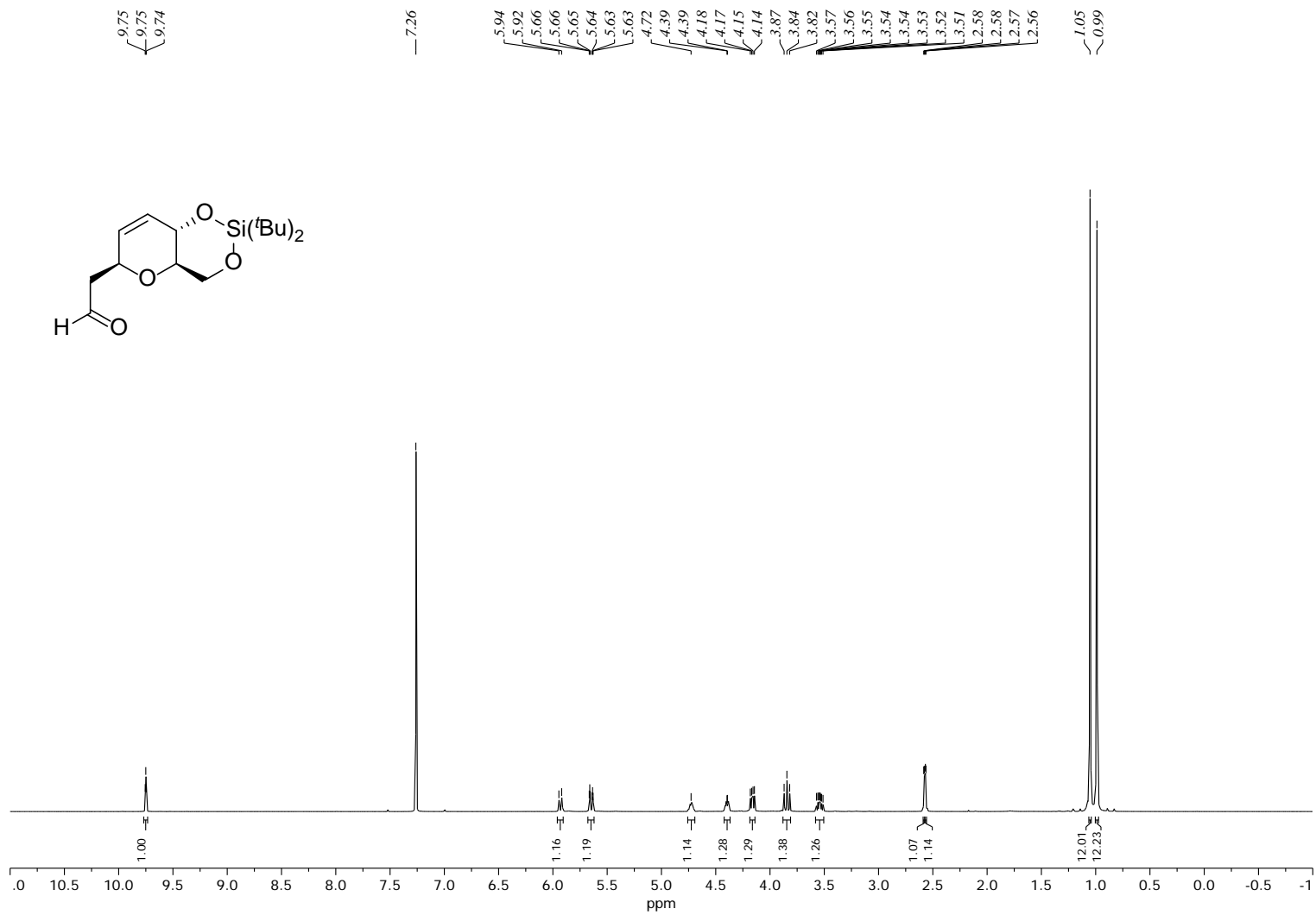


Figure S1. ¹H NMR (400 MHz, CDCl₃) of Aldehyde **15**

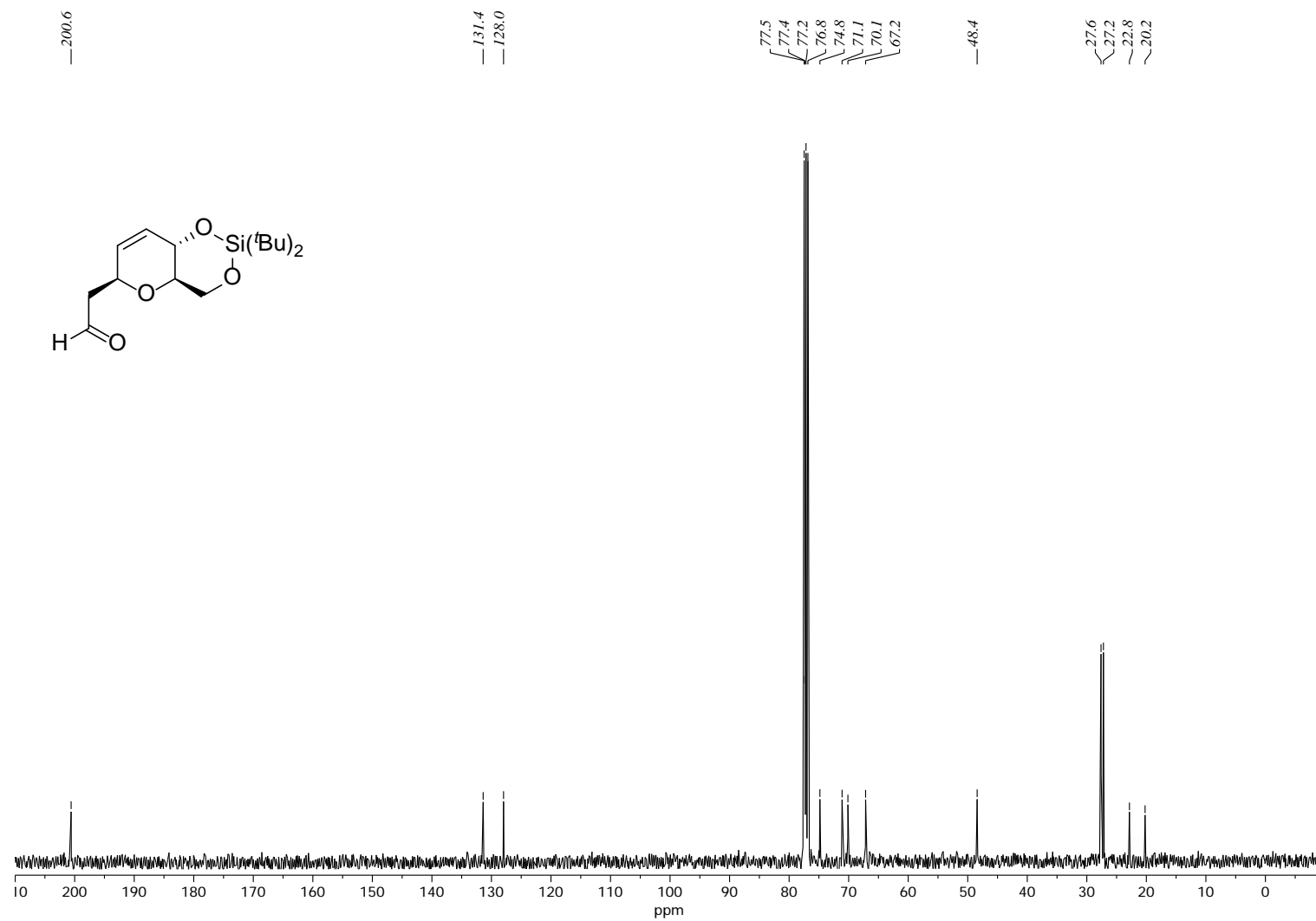


Figure S2. ¹³C NMR (100 MHz, CDCl₃) of Aldehyde **15**

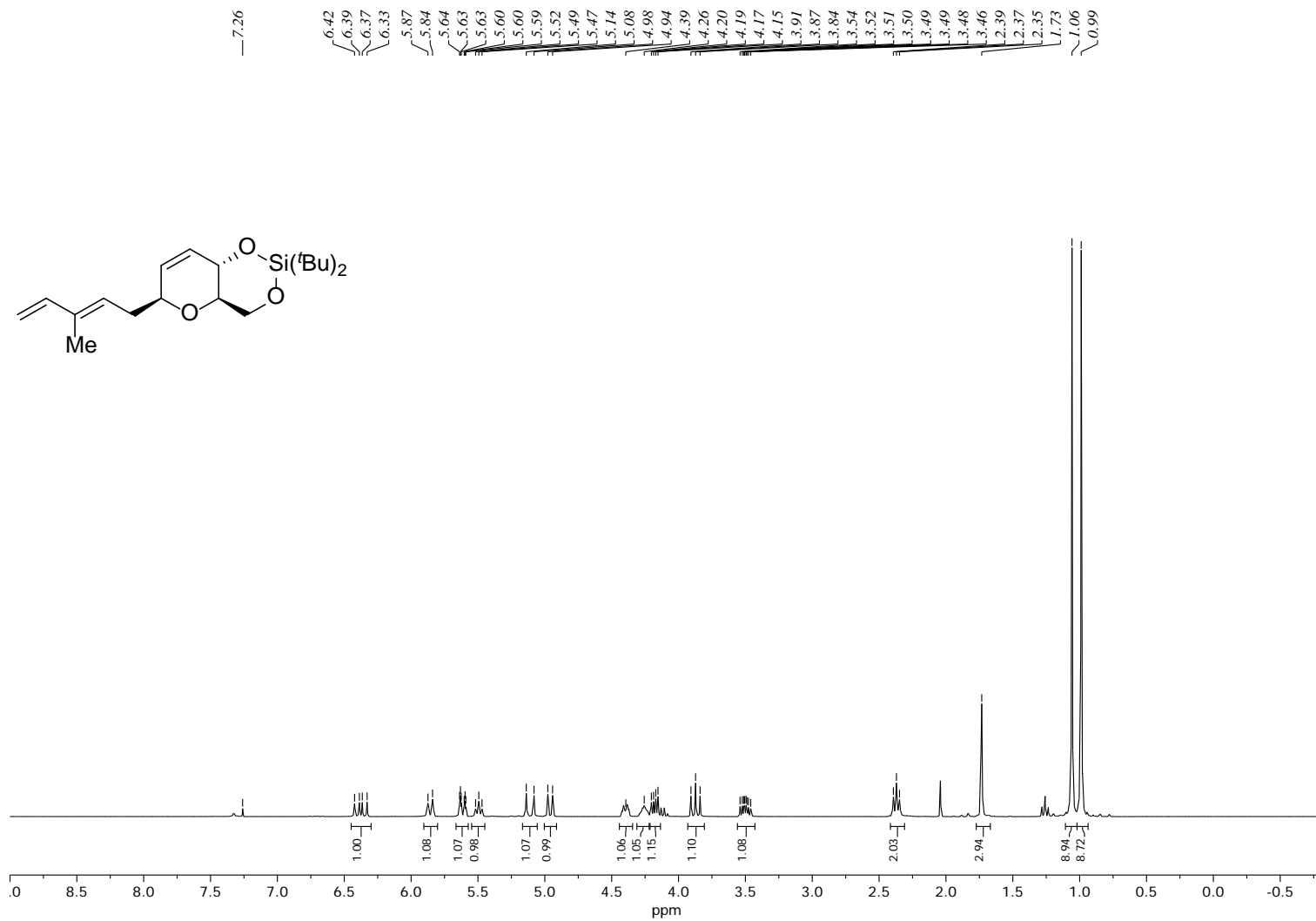


Figure S3. ¹H NMR (300 MHz, CDCl₃) of Diene **16**

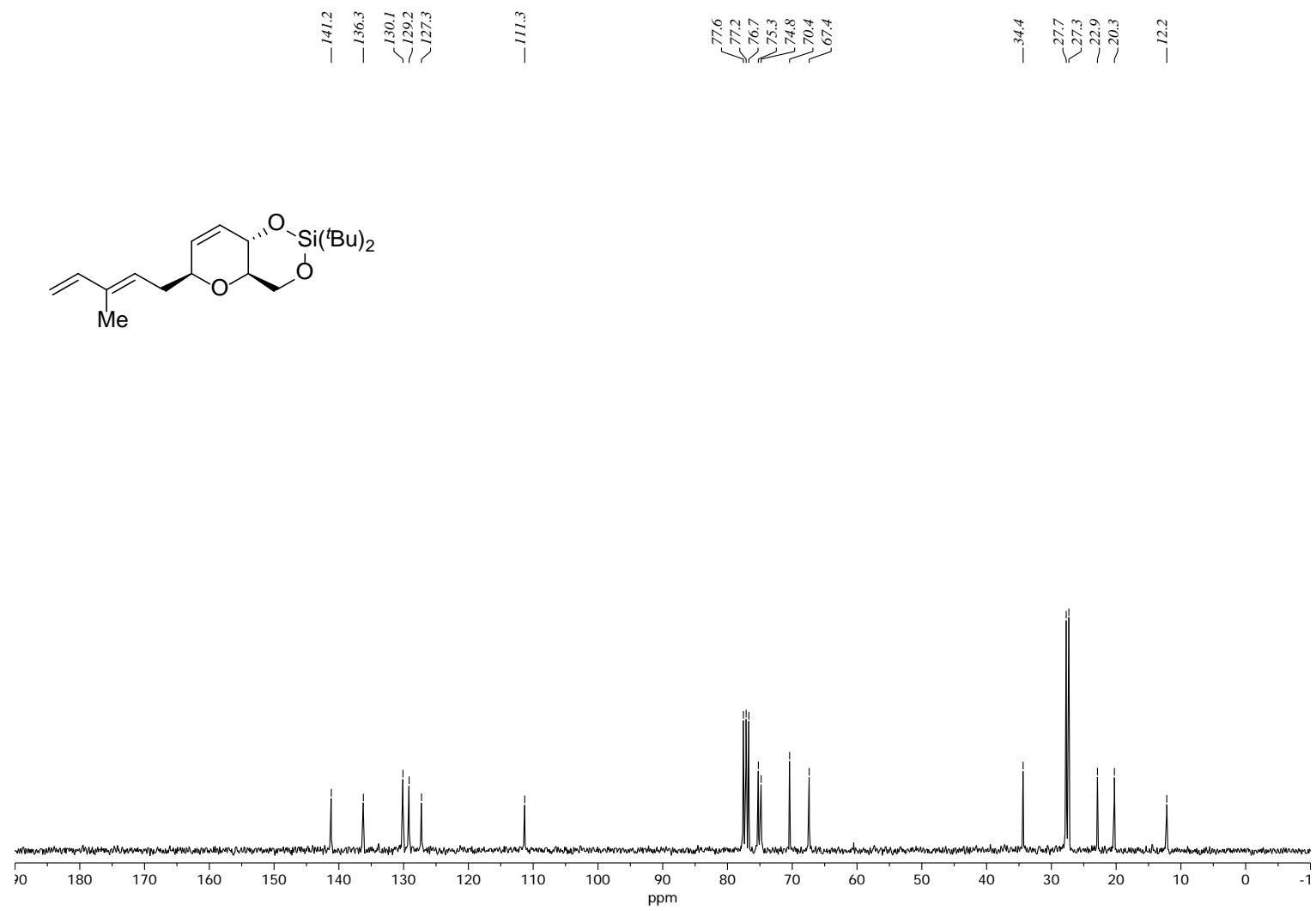


Figure S4. ¹³C NMR (75 MHz, CDCl₃) of Diene **16**

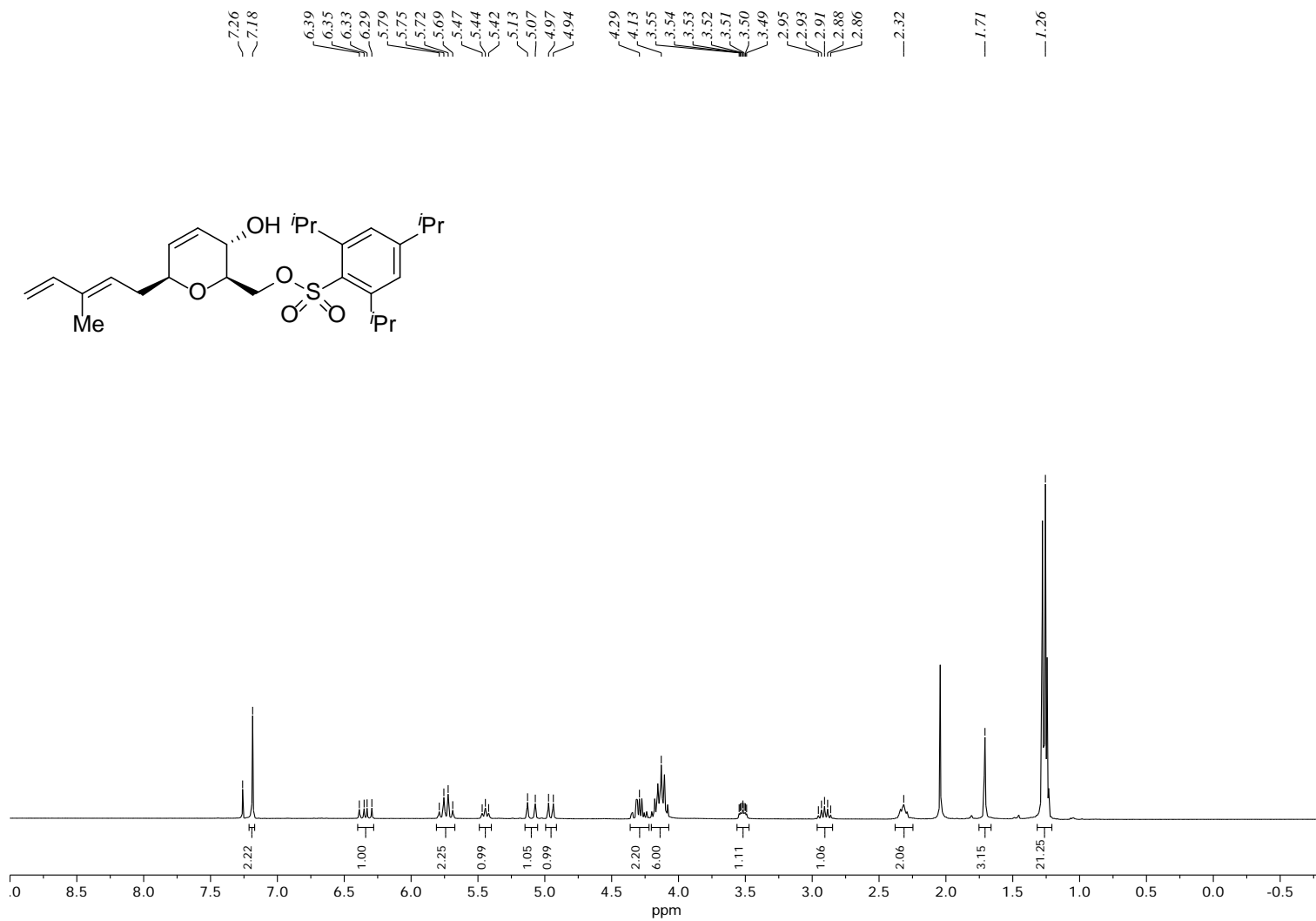


Figure S5. ¹H NMR (300 MHz, CDCl₃) of Sulfonate **17**

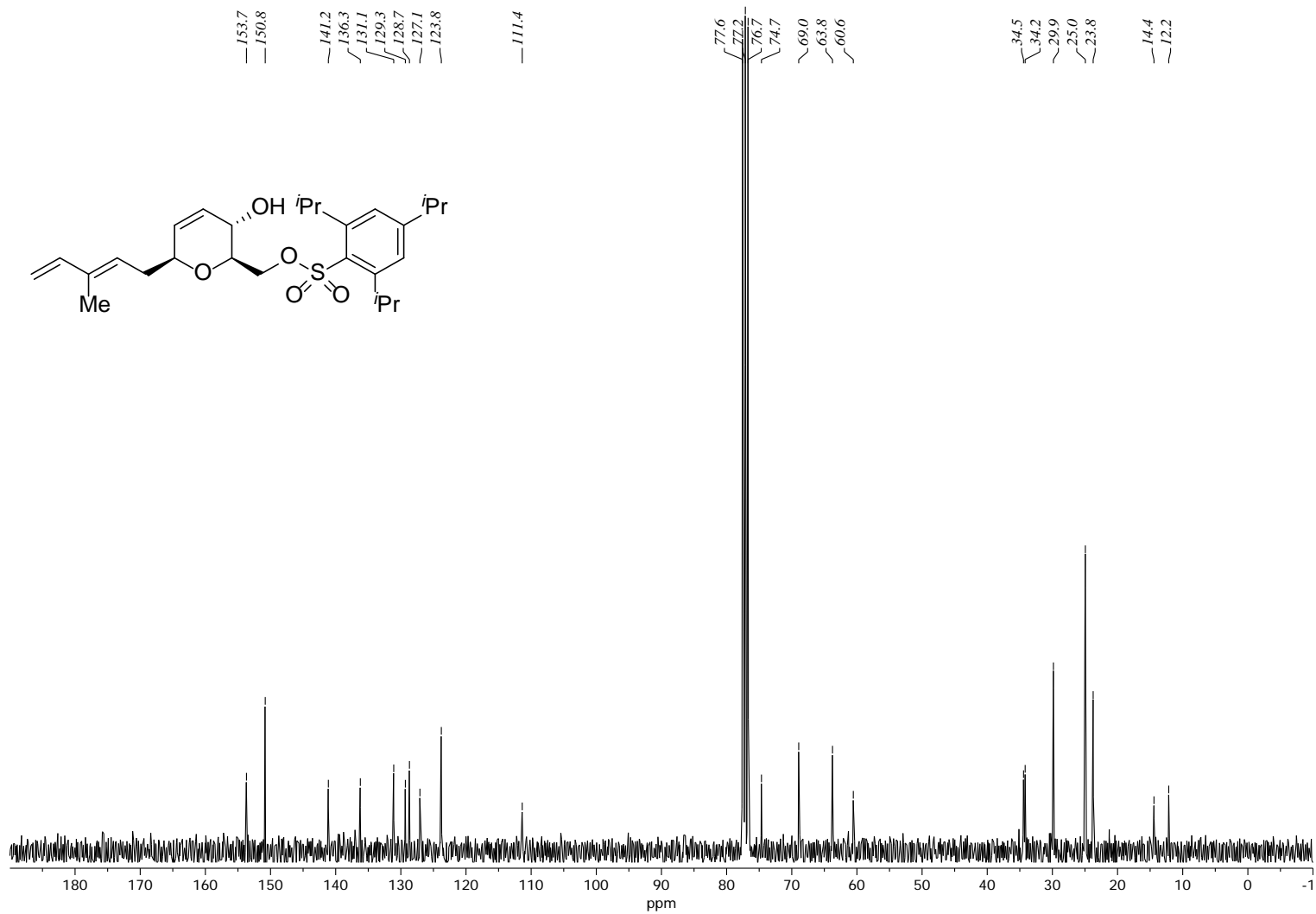


Figure S6. ¹³C NMR (75 MHz, CDCl₃) of Sulfonate **17**

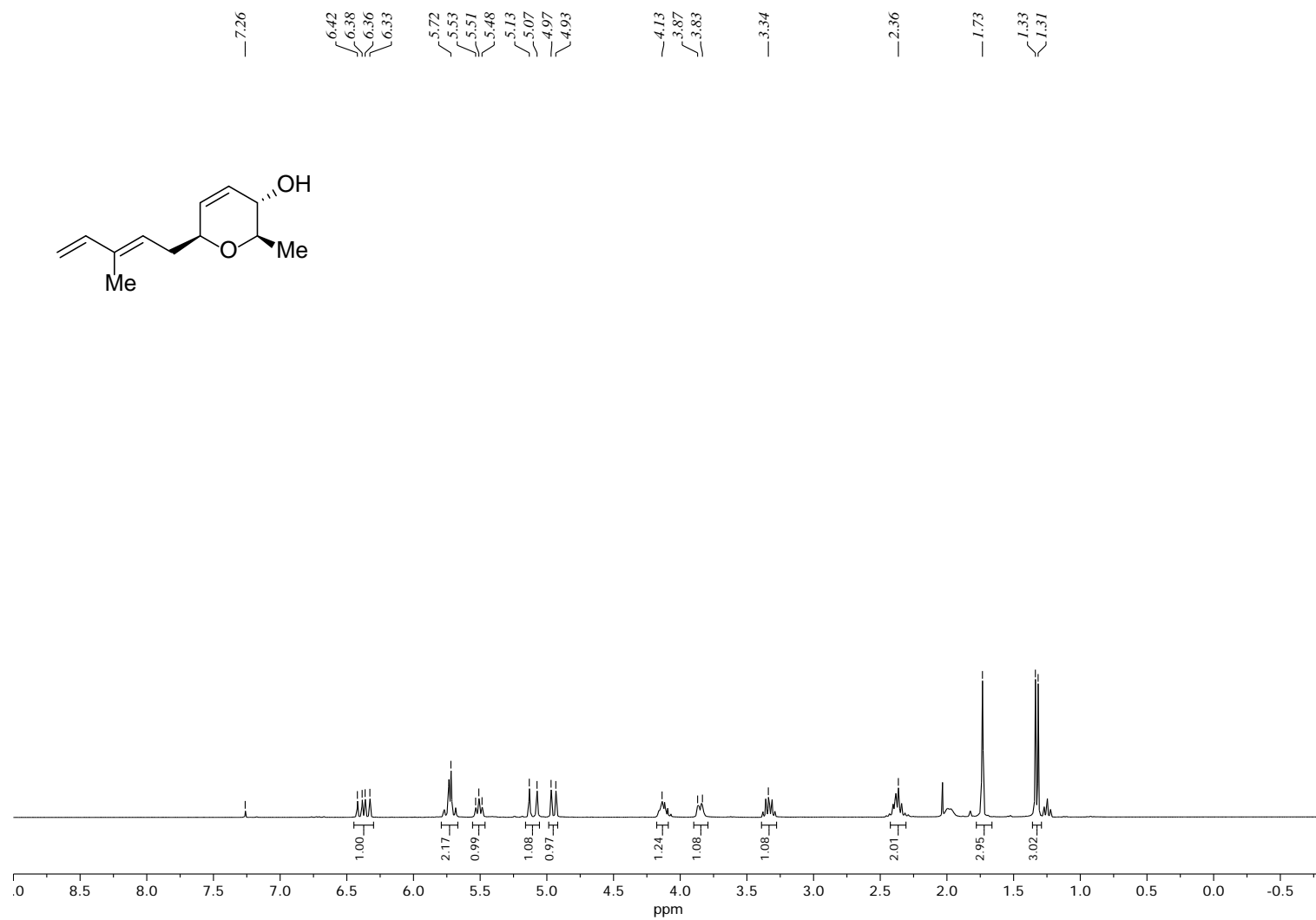


Figure S7. ^1H NMR (300 MHz, CDCl_3) of Dihydropyran **18**

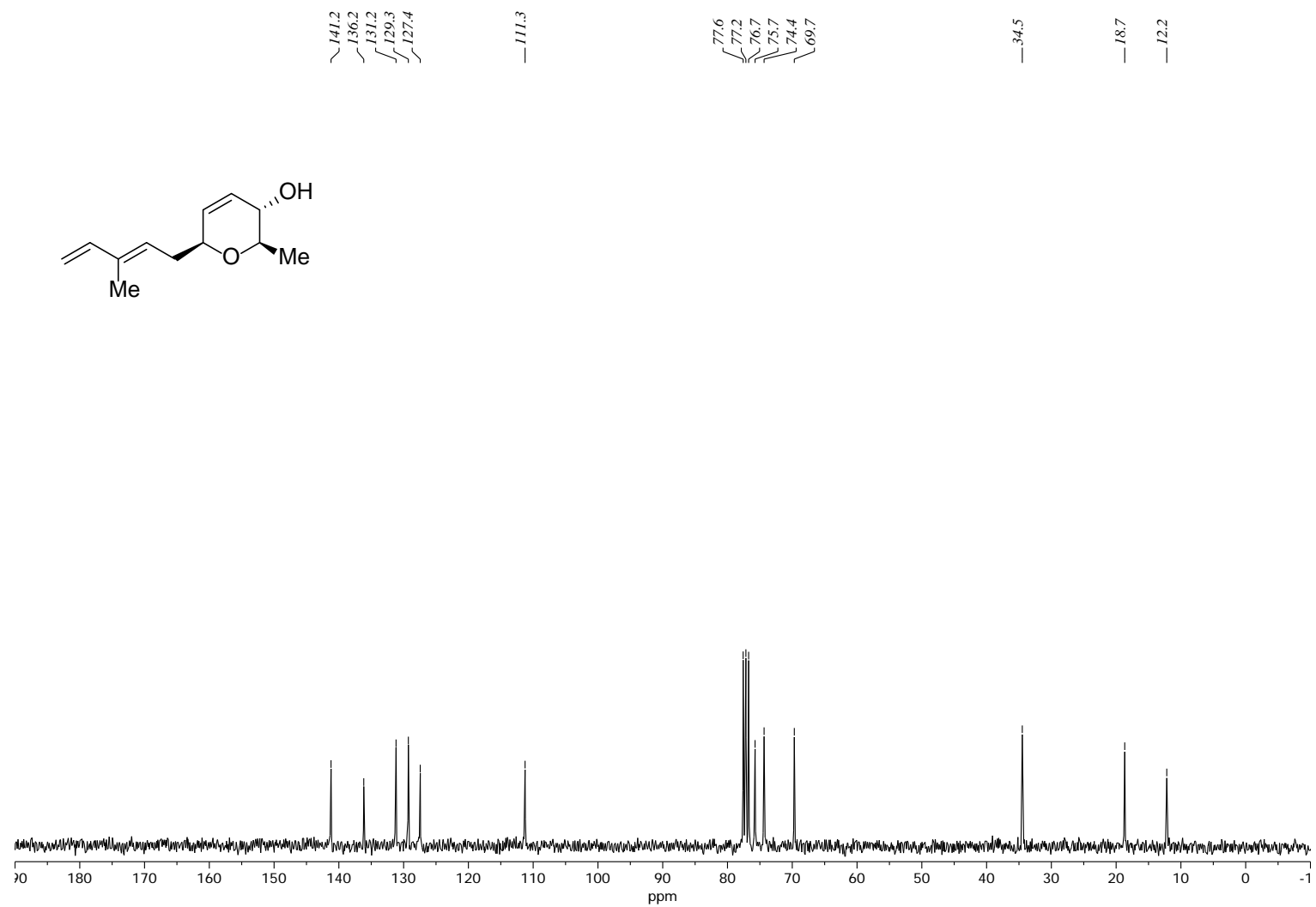


Figure S8. ¹³C NMR (75 MHz, CDCl₃) of Dihydropyran **18**

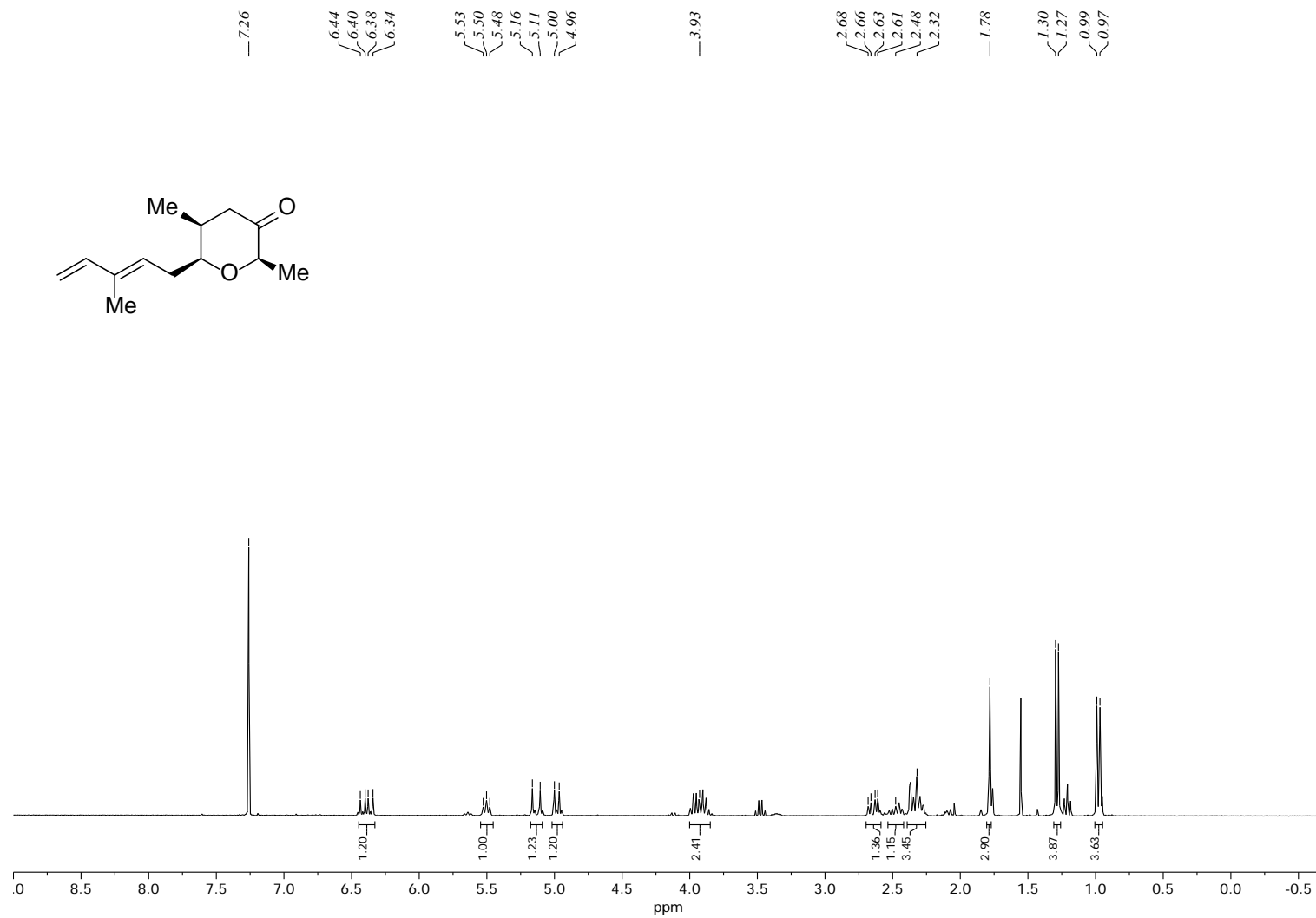


Figure S9. ¹H NMR (400 MHz, CDCl₃) of Ketone **19**

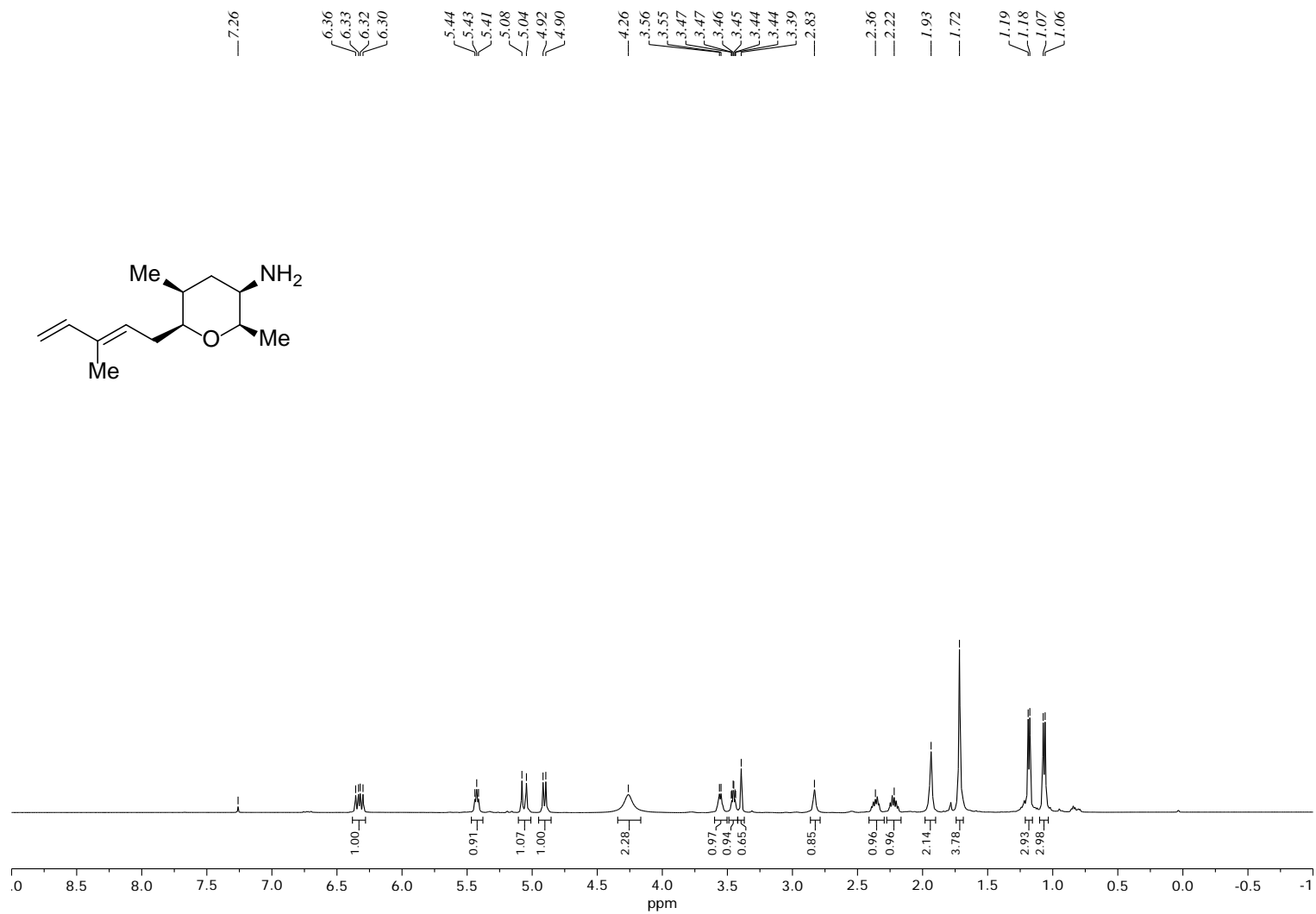


Figure S10. ¹H NMR (500 MHz, CDCl₃) of Amine 9

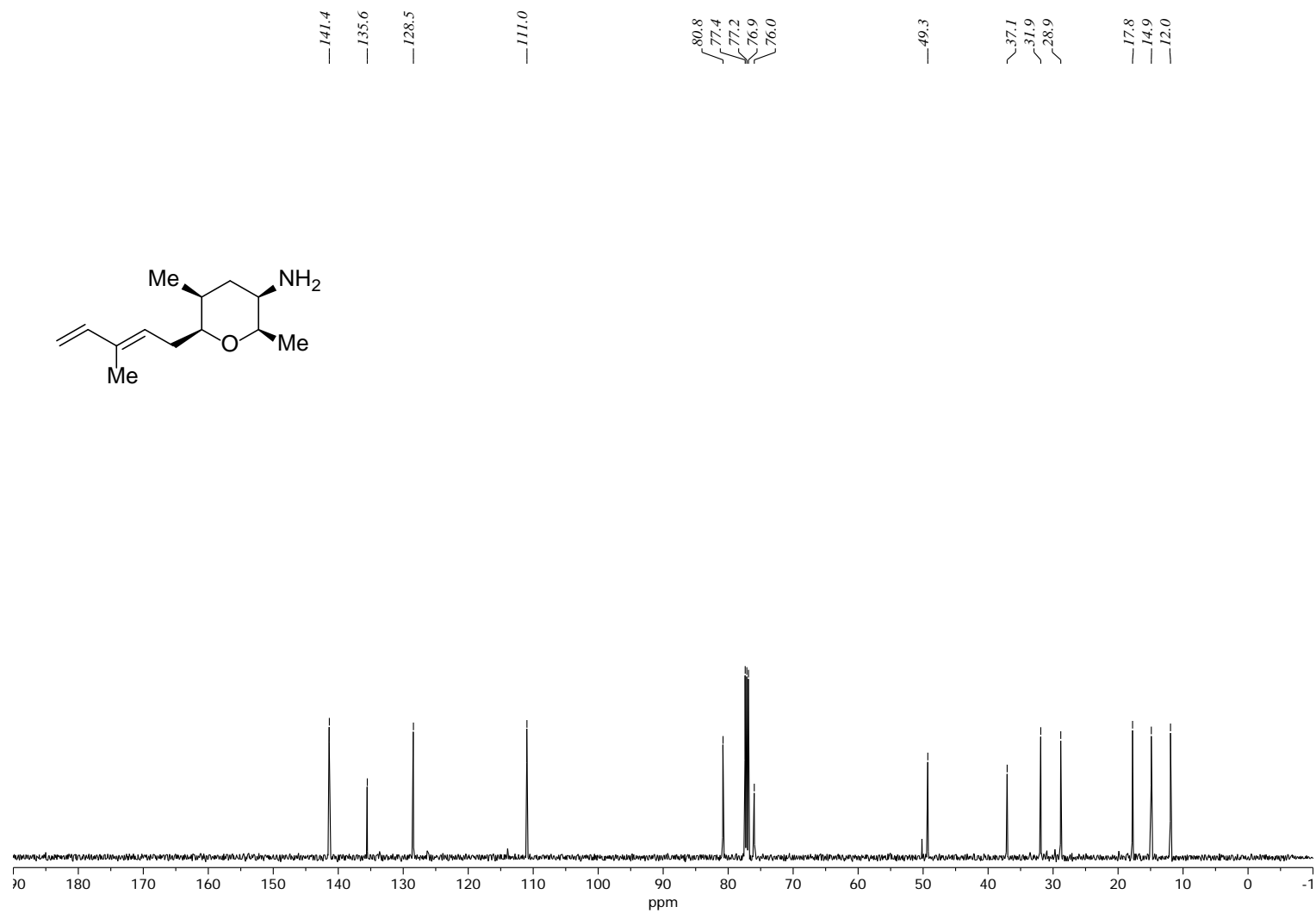


Figure S11. ^{13}C NMR (125 MHz, CDCl_3) of Amine 9

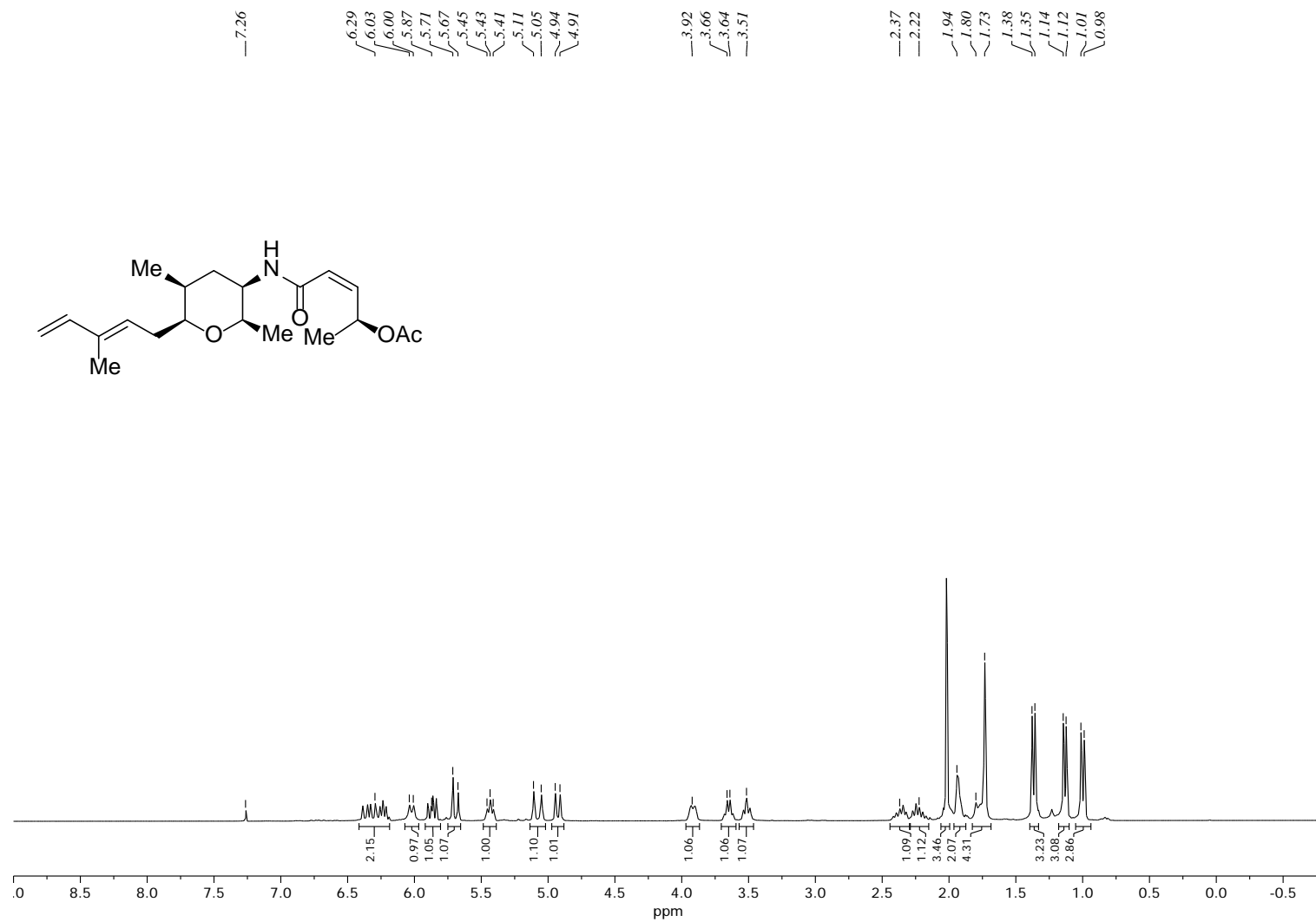


Figure S12. ¹H NMR (300 MHz, CDCl₃) of Amide 7

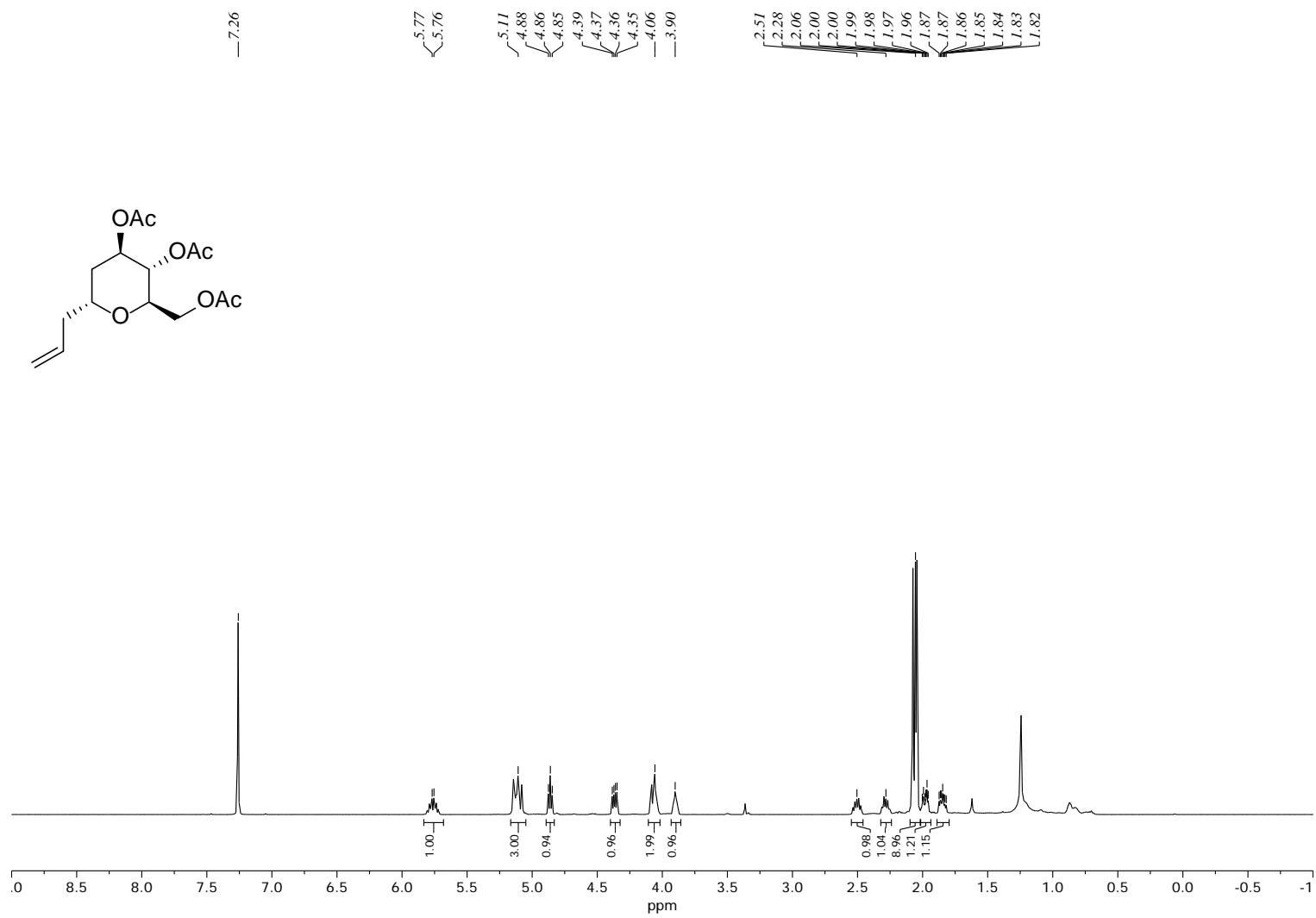


Figure S13. ¹H NMR (500 MHz, CDCl₃) of THP **22**

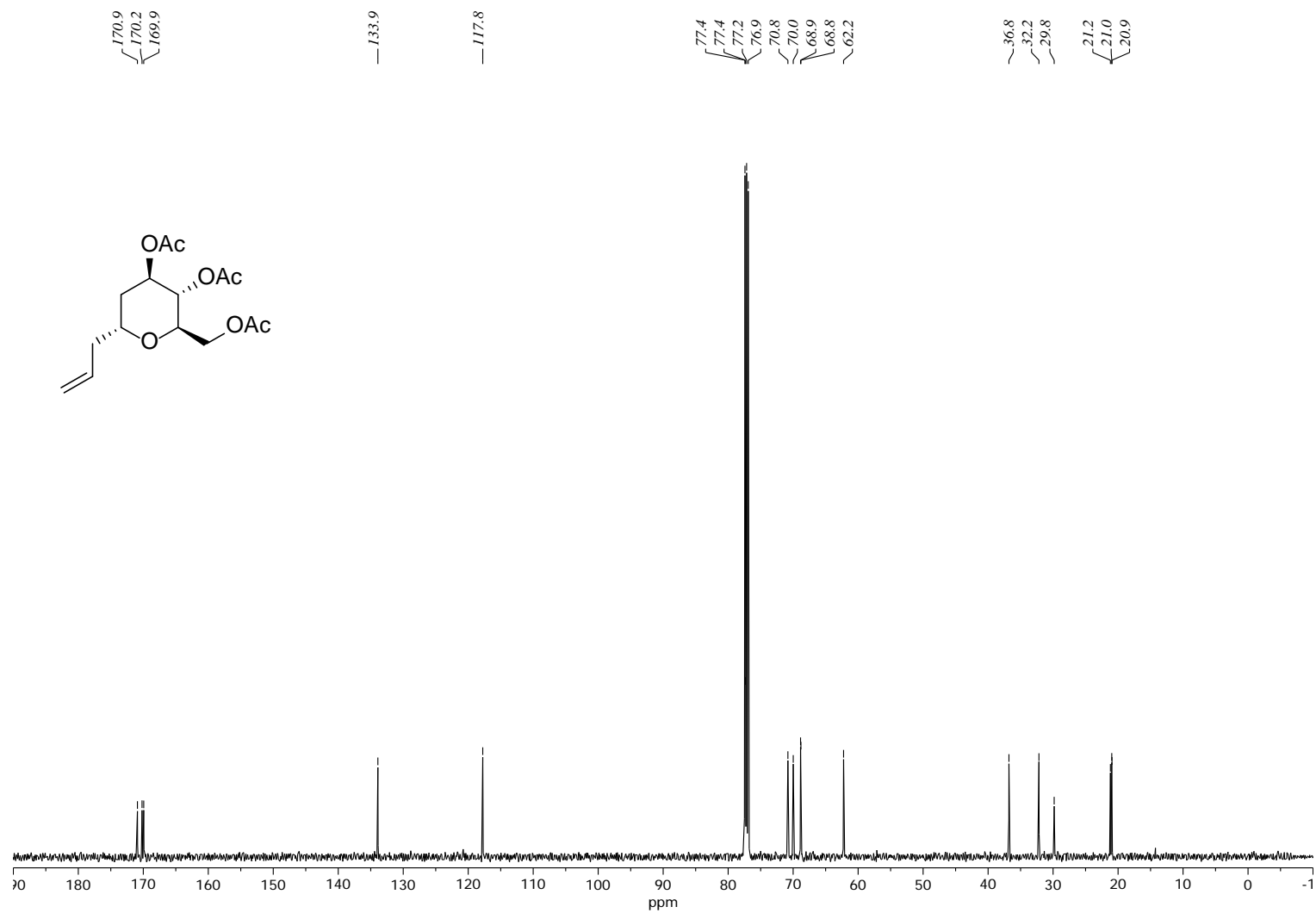


Figure S14. ^{13}C NMR (125 MHz, CDCl_3) of THP **22**

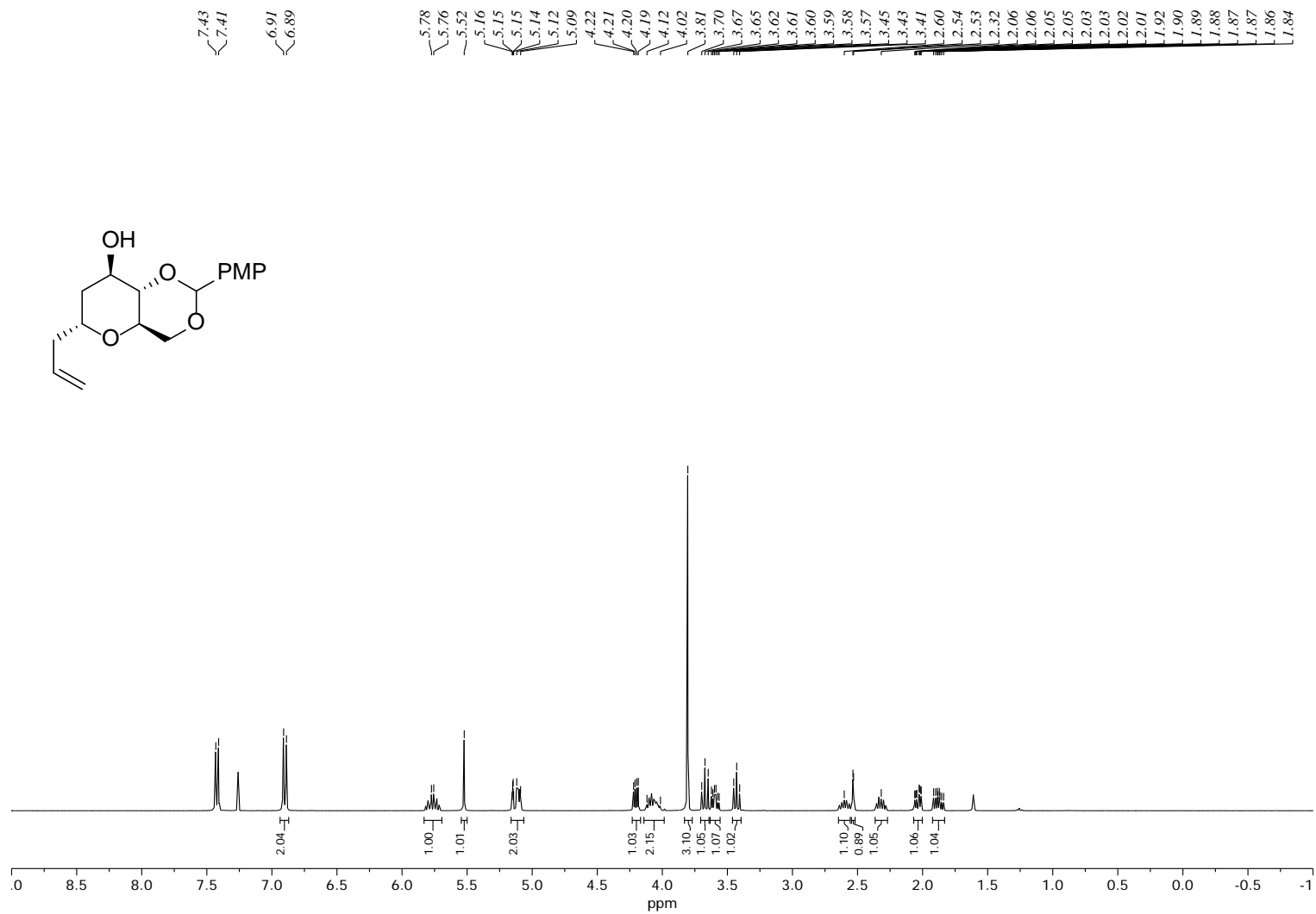


Figure S15. $^1\text{H NMR}$ (400 MHz, CDCl_3) of Benzylidene Acetal **23**

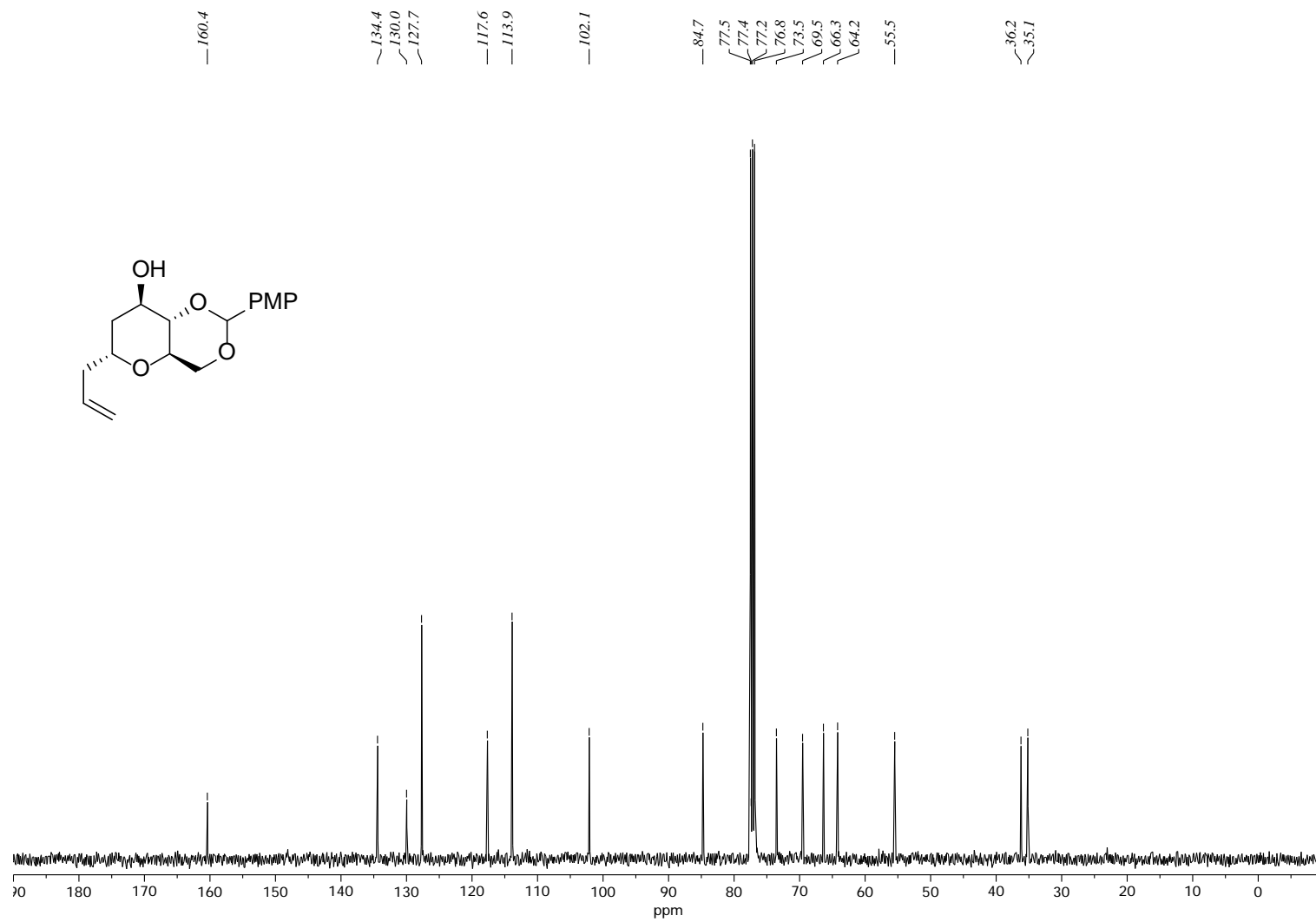


Figure S16. ¹³C NMR (100 MHz, CDCl₃) of Benzylidene Acetal **23**

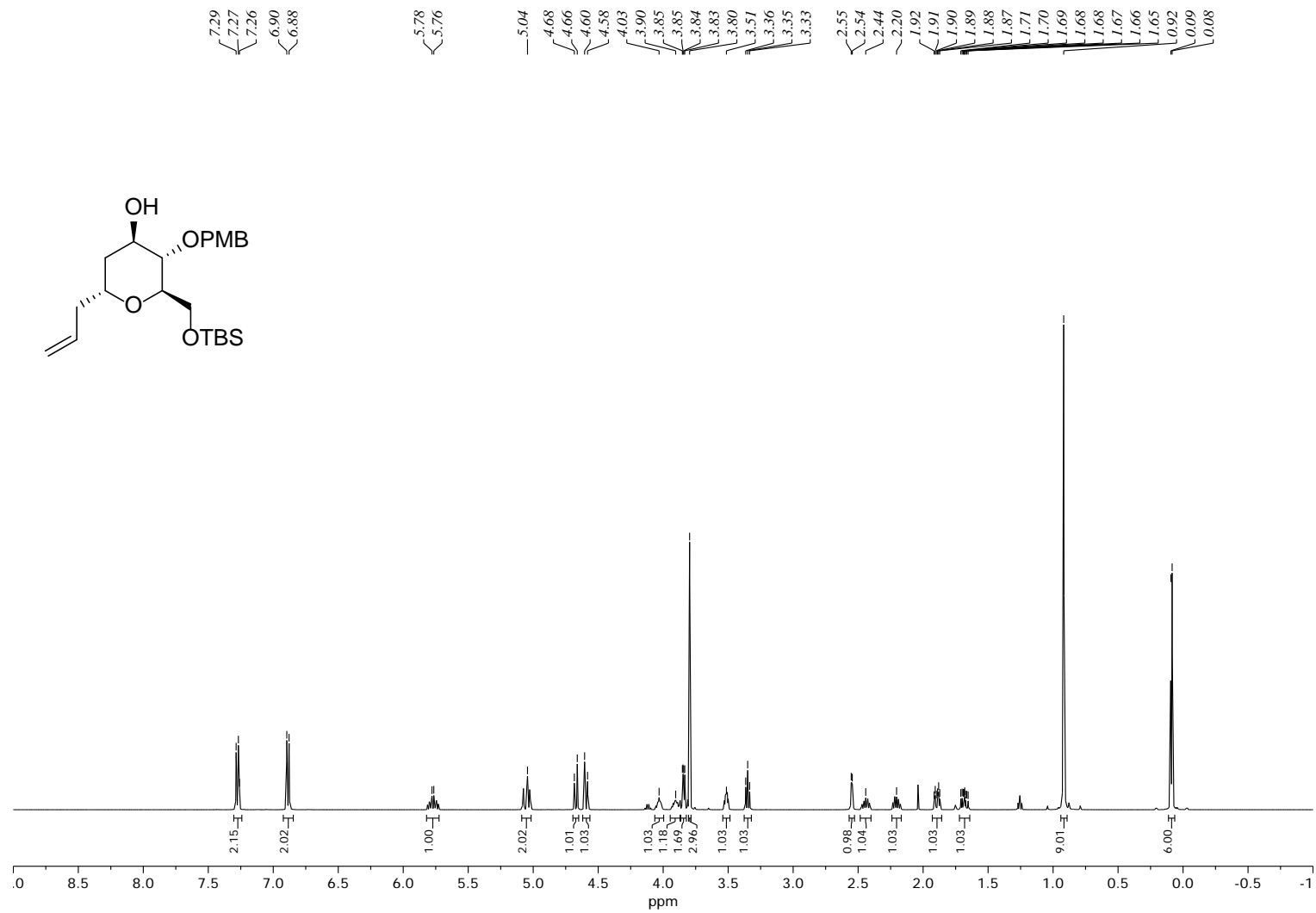


Figure S17. ¹H NMR (500 MHz, CDCl₃) of Silyl Ether **24**

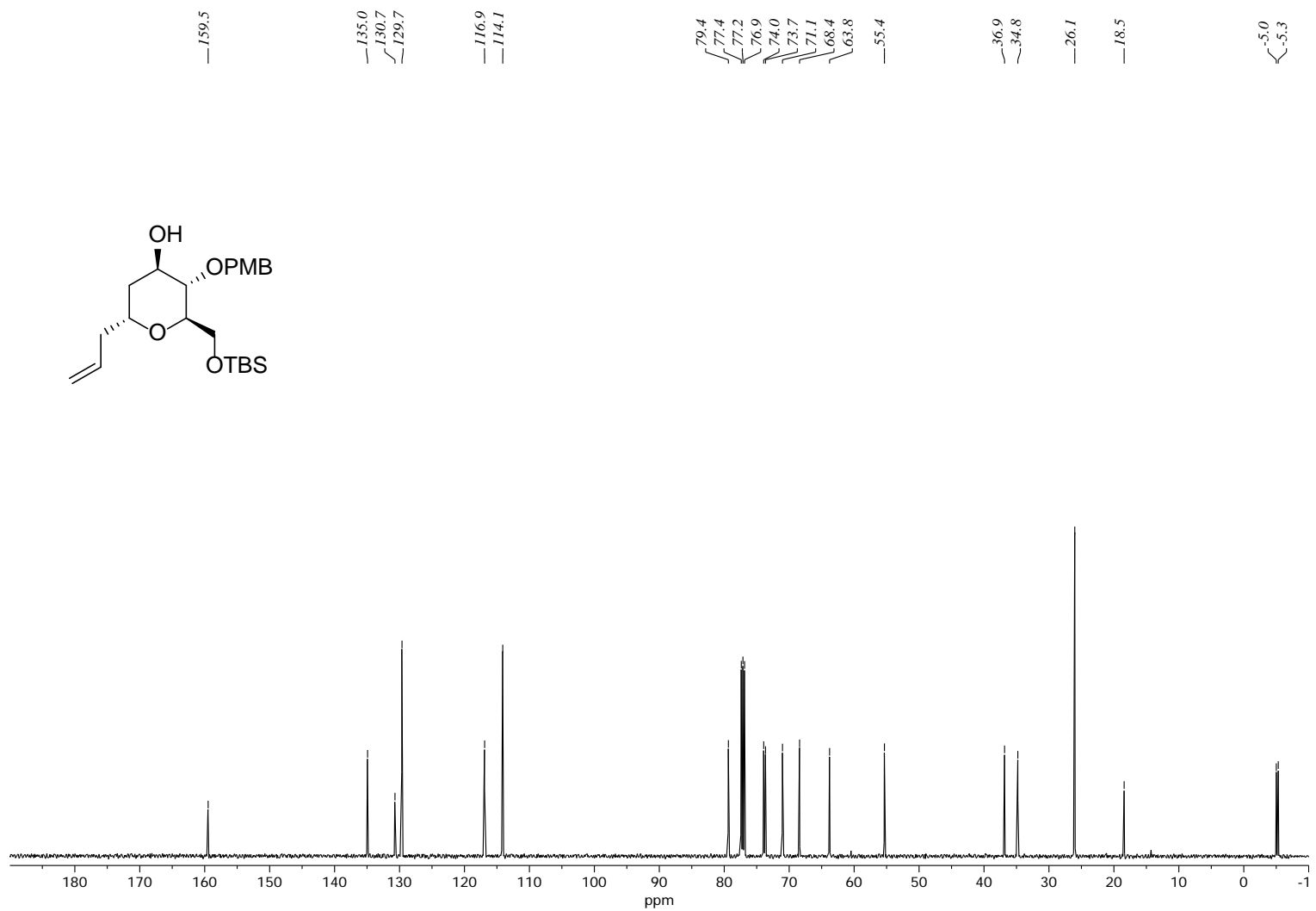


Figure S18. ^{13}C NMR (125 MHz, CDCl_3) of Silyl Ether **24**

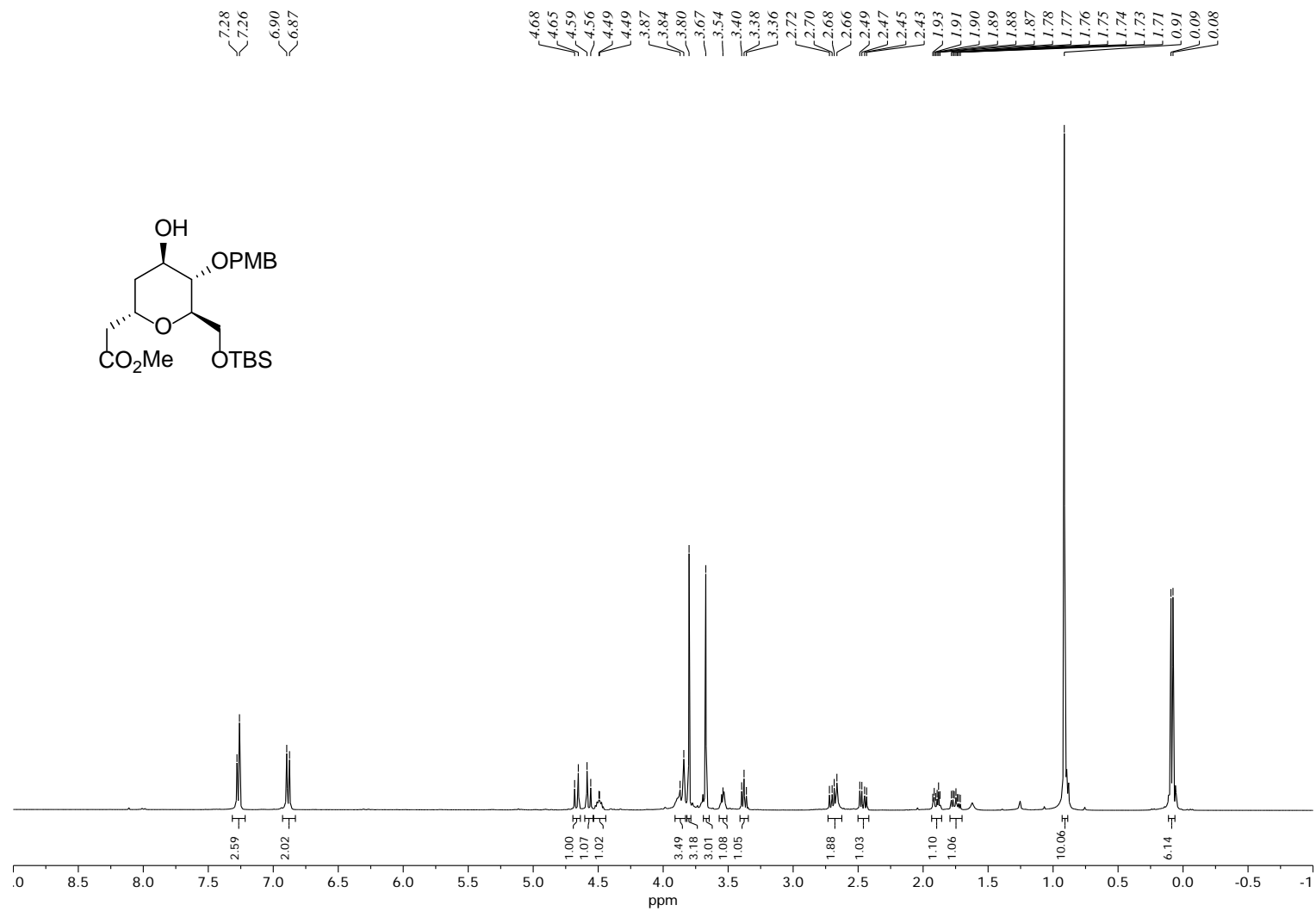


Figure S19. ¹H NMR (400 MHz, CDCl₃) of Methyl Ester **25**

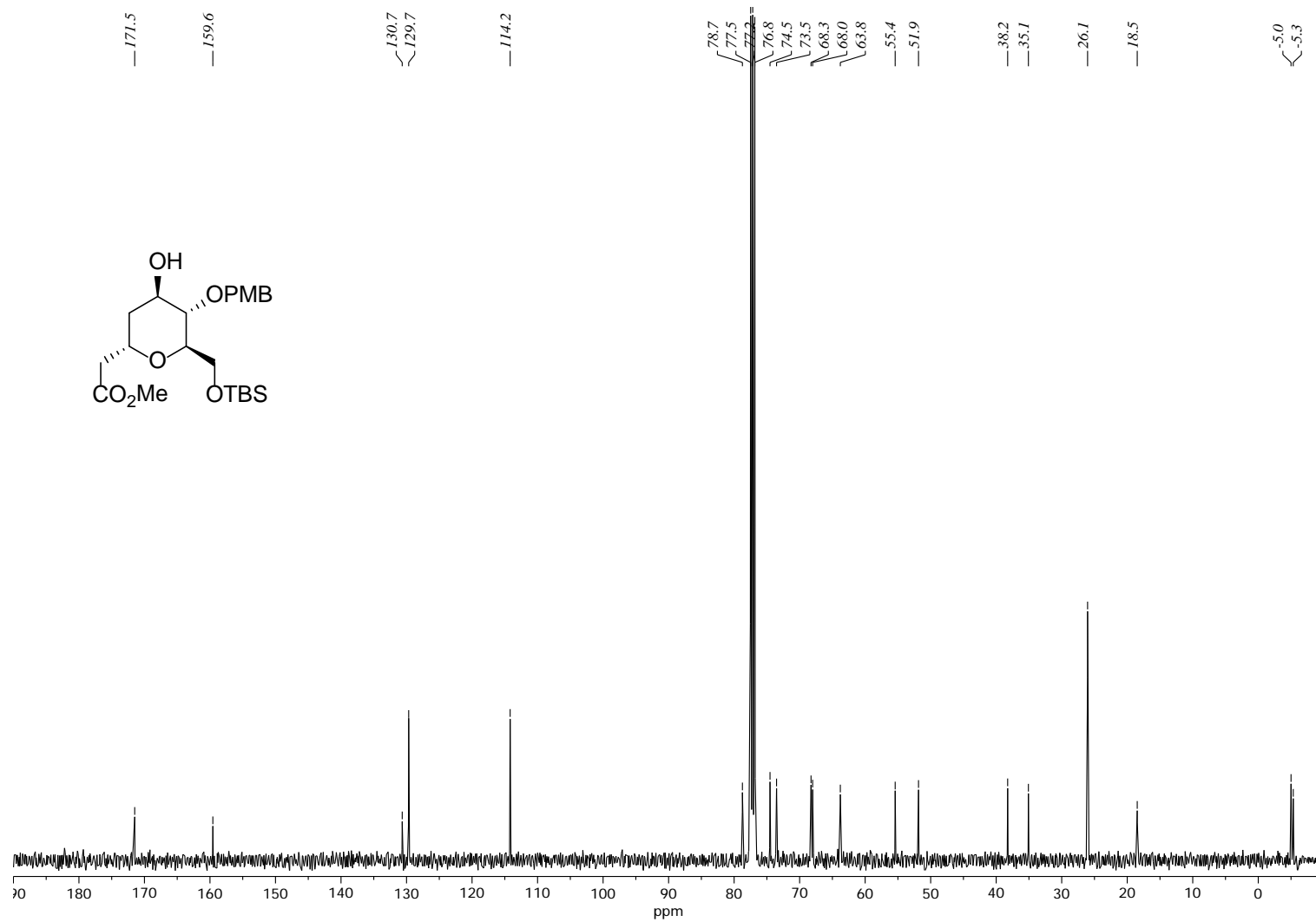


Figure S20. ¹³C NMR (100 MHz, CDCl₃) of Methyl Ester **25**

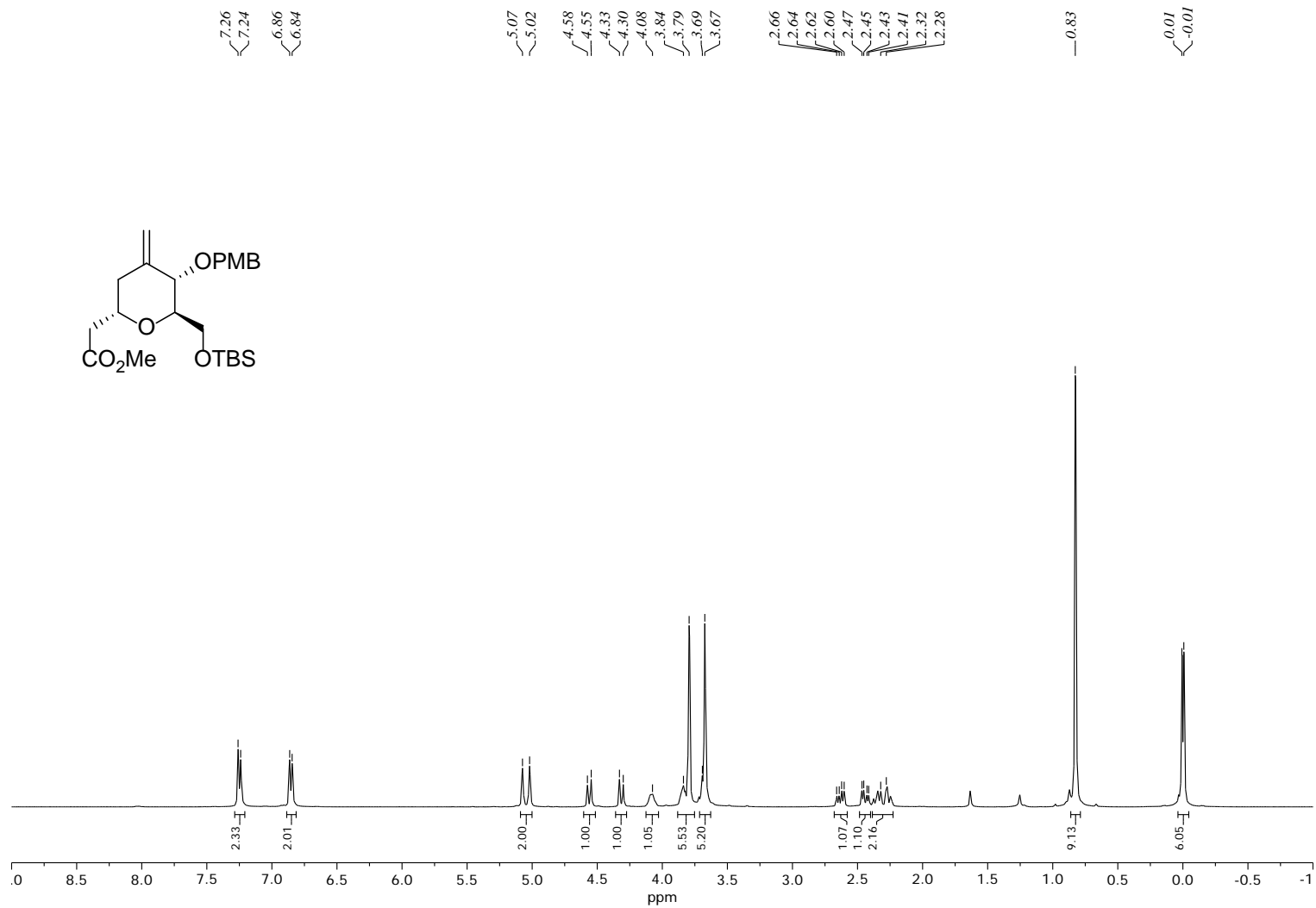


Figure S21. ¹H NMR (400 MHz, CDCl₃) of Olefin 26

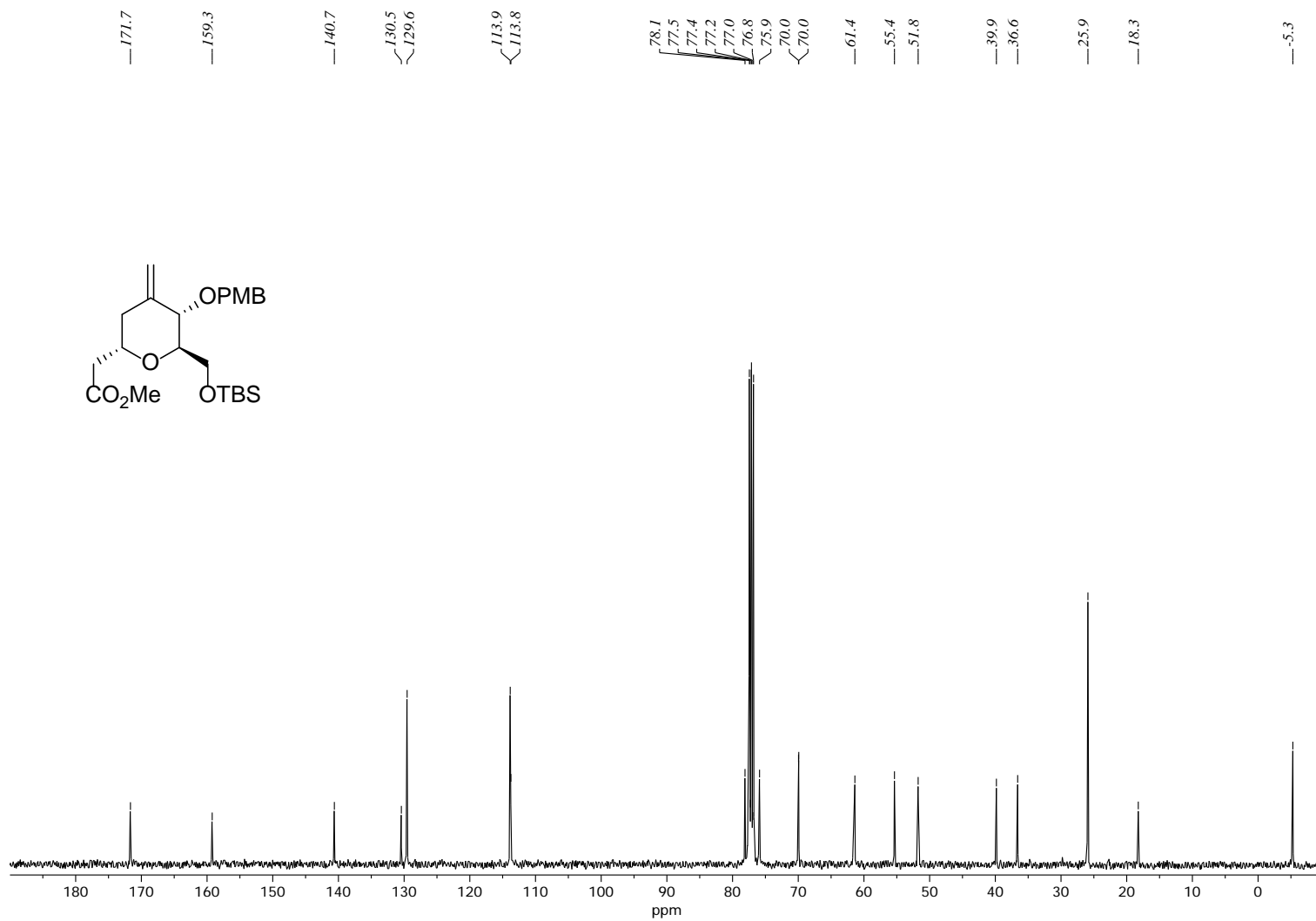


Figure S22. ^{13}C NMR (100 MHz, CDCl_3) of Olefin **26**

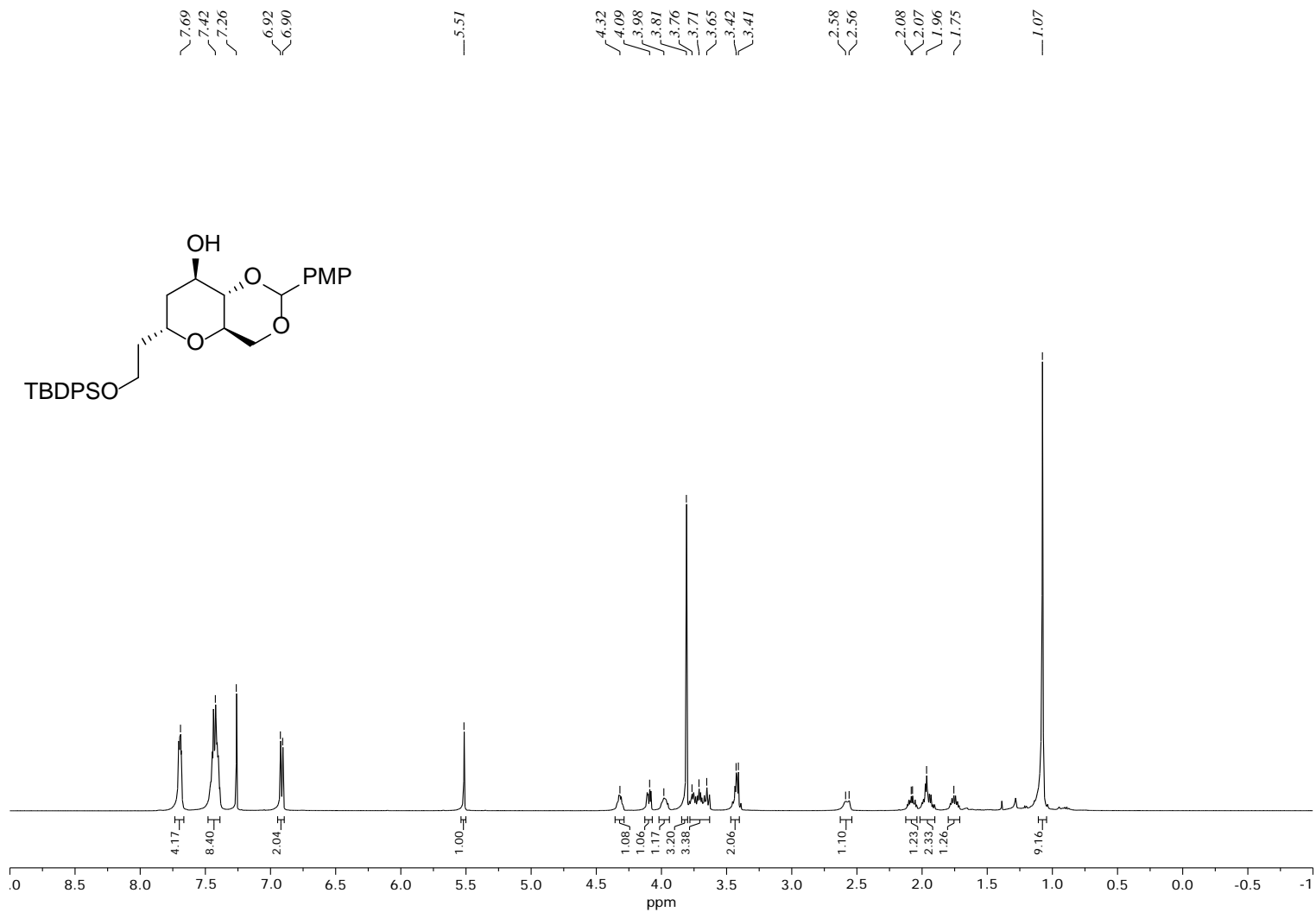


Figure S23. ^1H NMR (500 MHz, CDCl_3) of Silyl Ether **29**

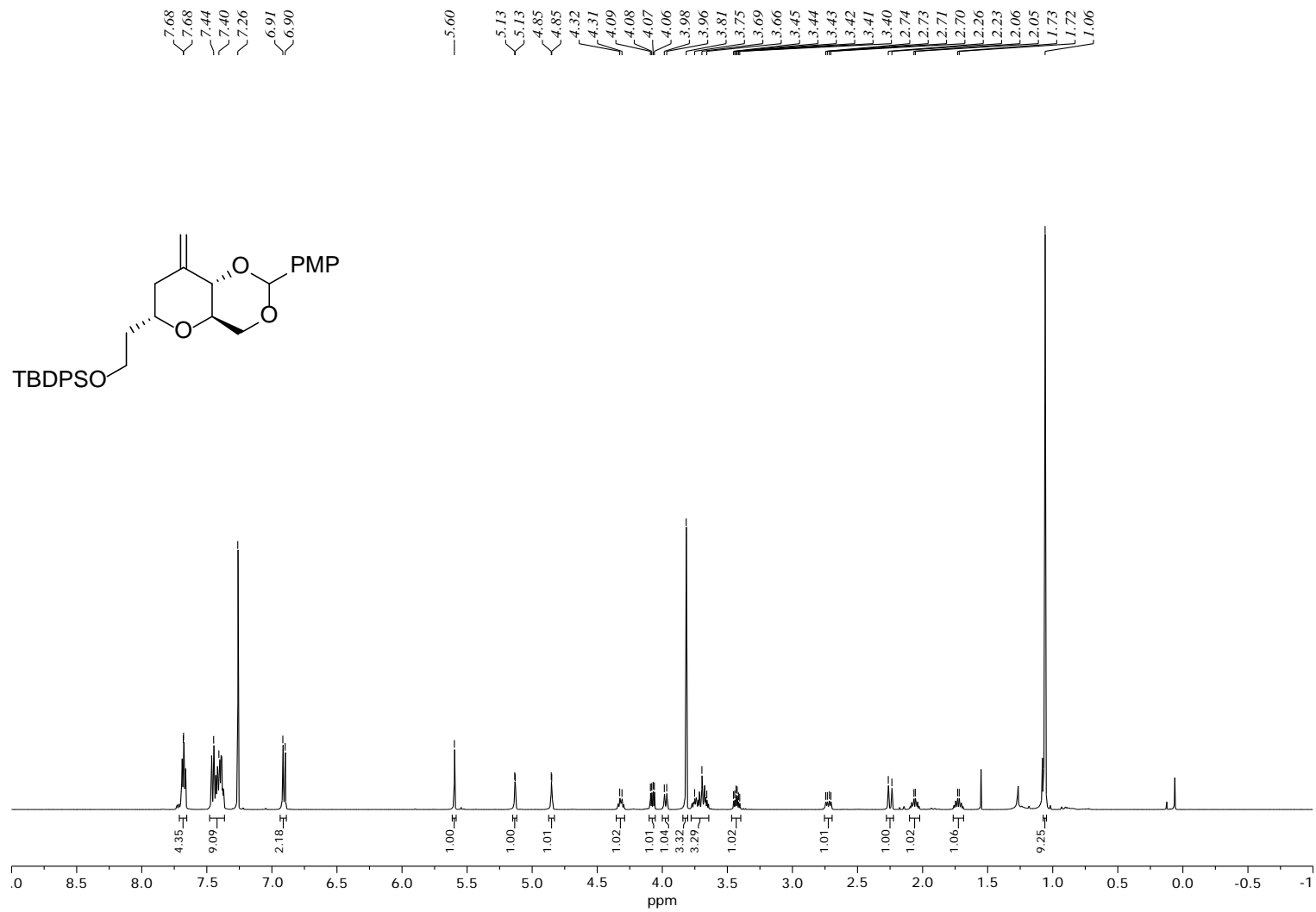


Figure S25. ¹H NMR (500 MHz, CDCl₃) of Olefin **30**

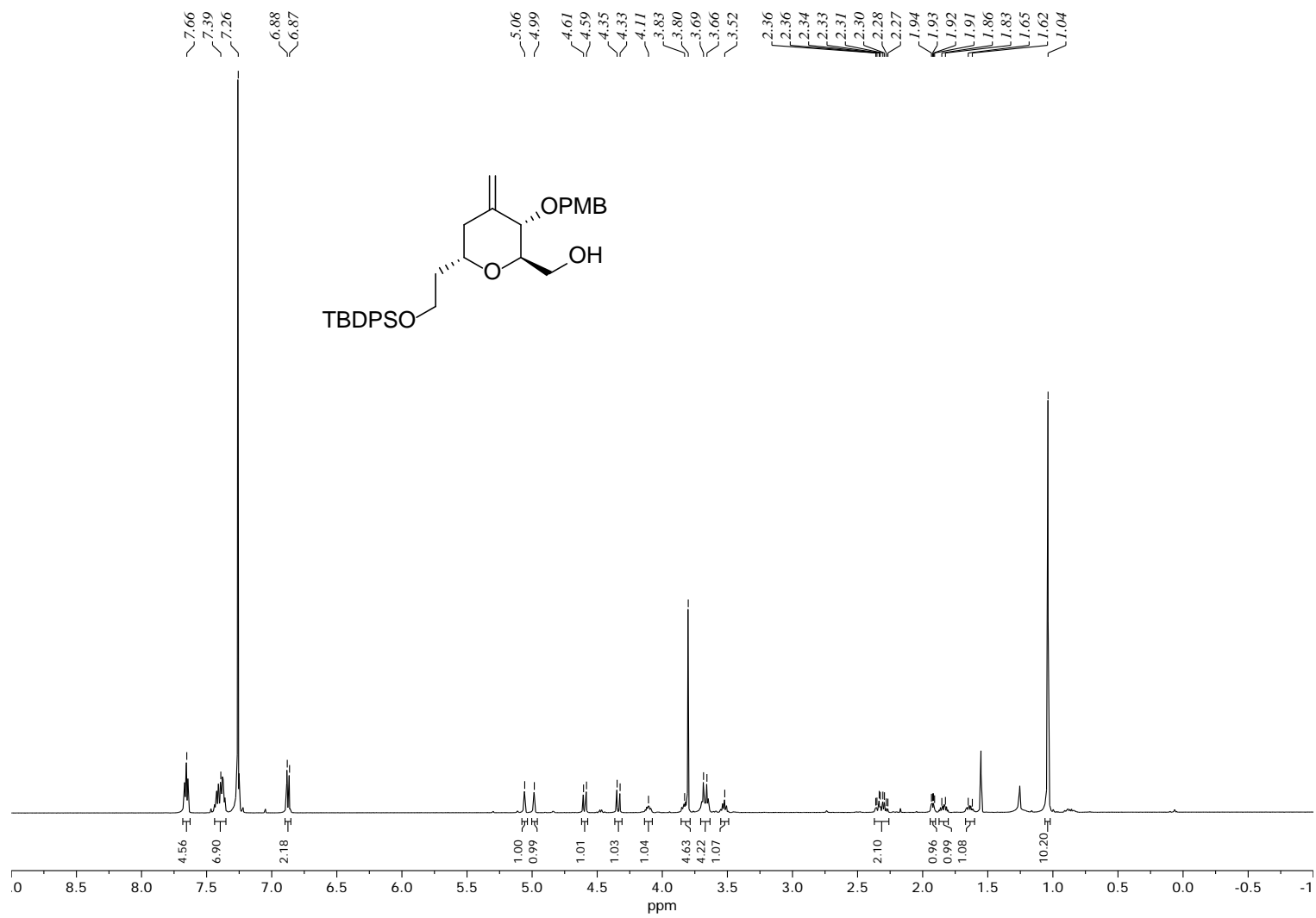


Figure S27. ¹H NMR (500 MHz, CDCl₃) of Alcohol **31**

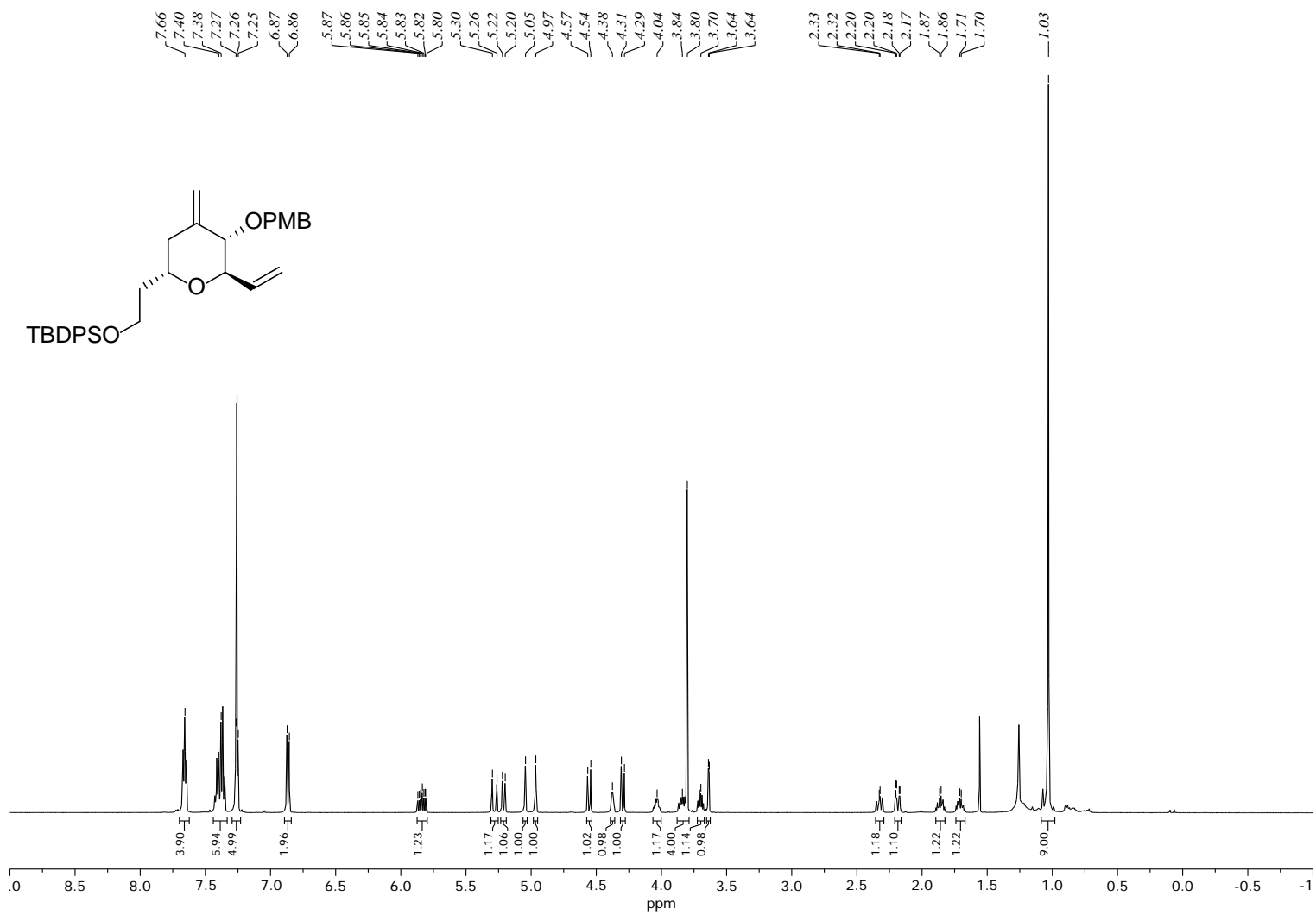


Figure S29. ¹H NMR (500 MHz, CDCl₃) of Olefin **32**

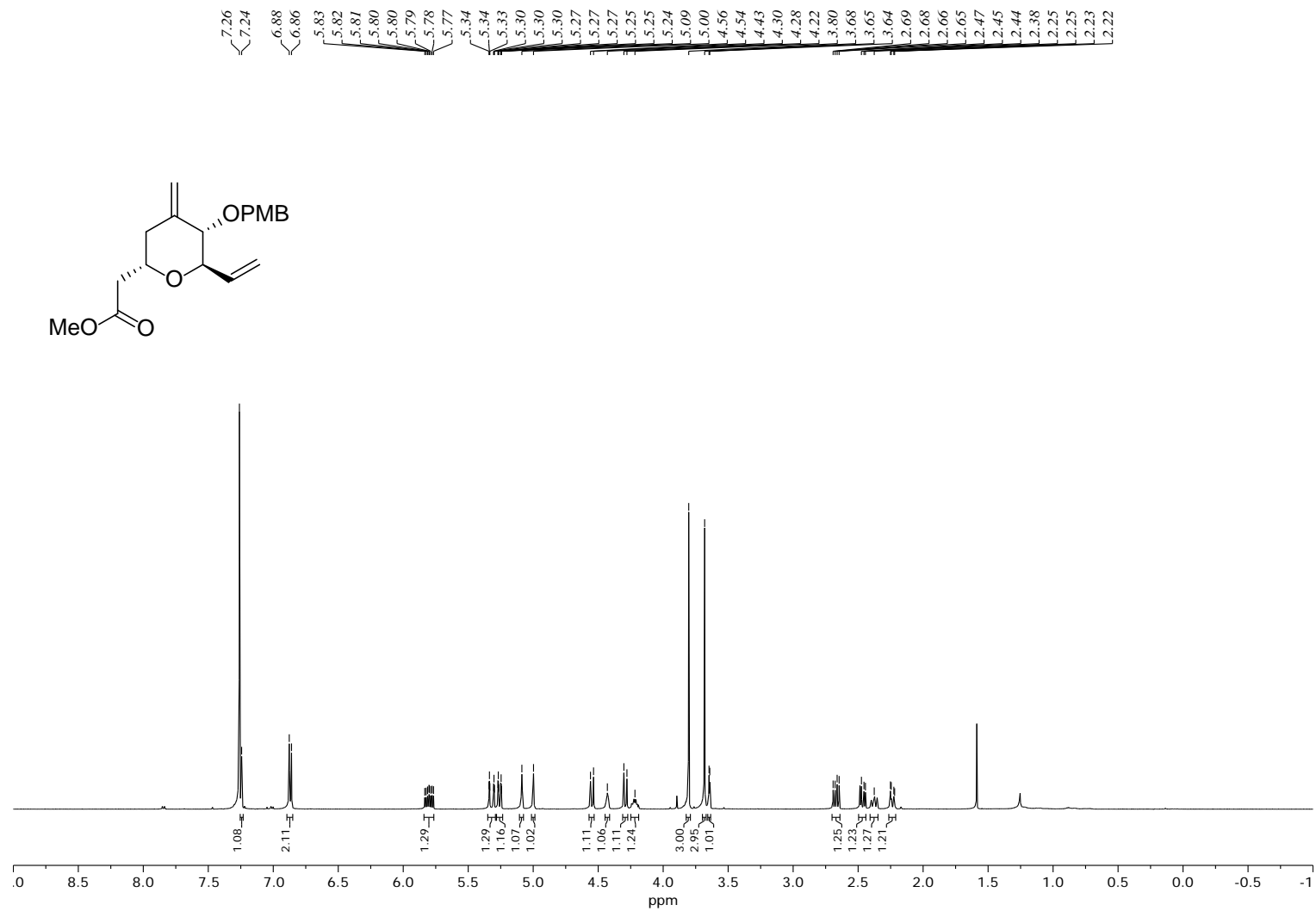


Figure S31. ^1H NMR (500 MHz, CDCl_3) of Methyl Ester **27**

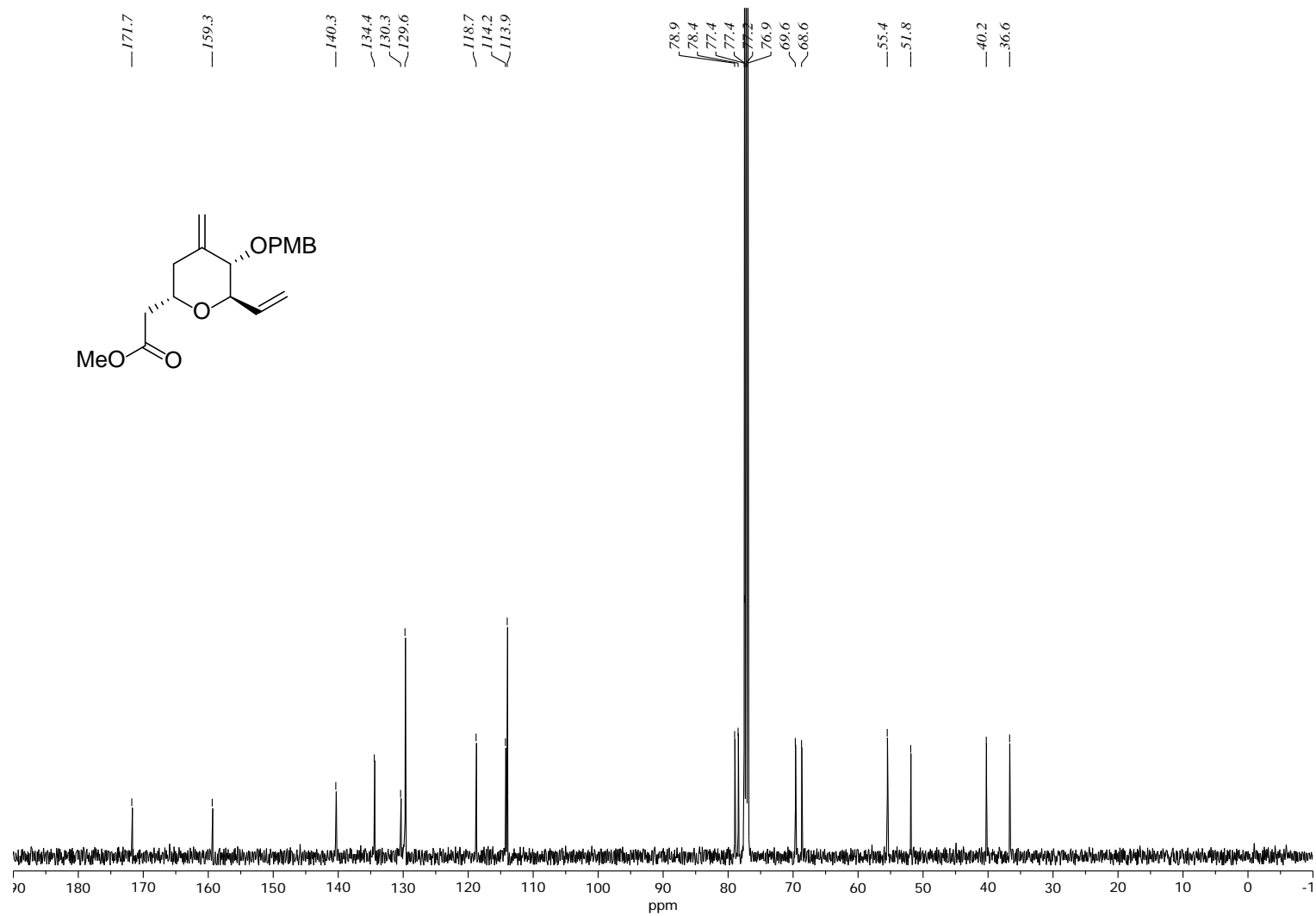


Figure S32. ¹³C NMR (125 MHz, CDCl₃) of Methyl Ester **27**

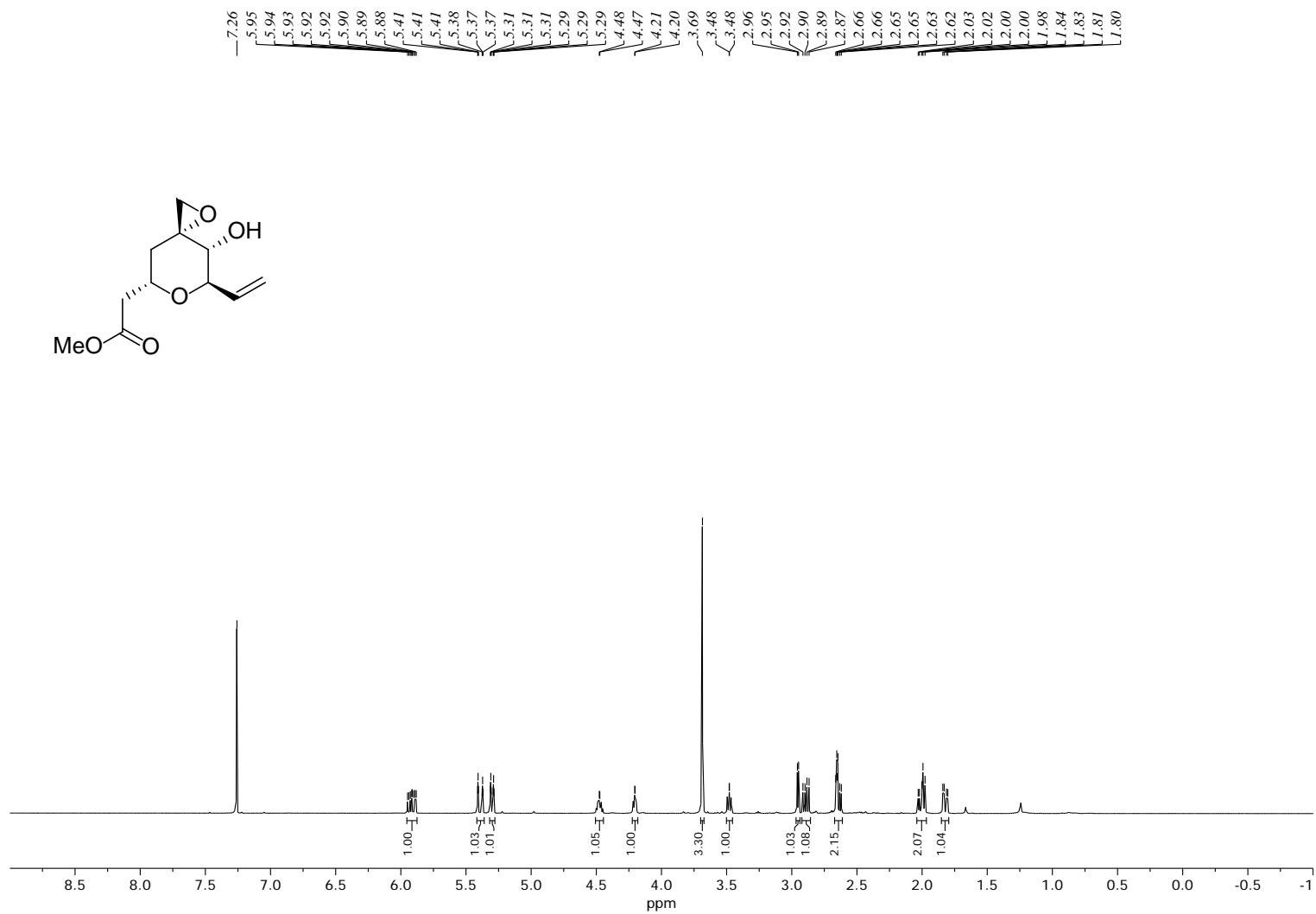


Figure S33. ¹H NMR (500 MHz, CDCl₃) of Epoxide 8

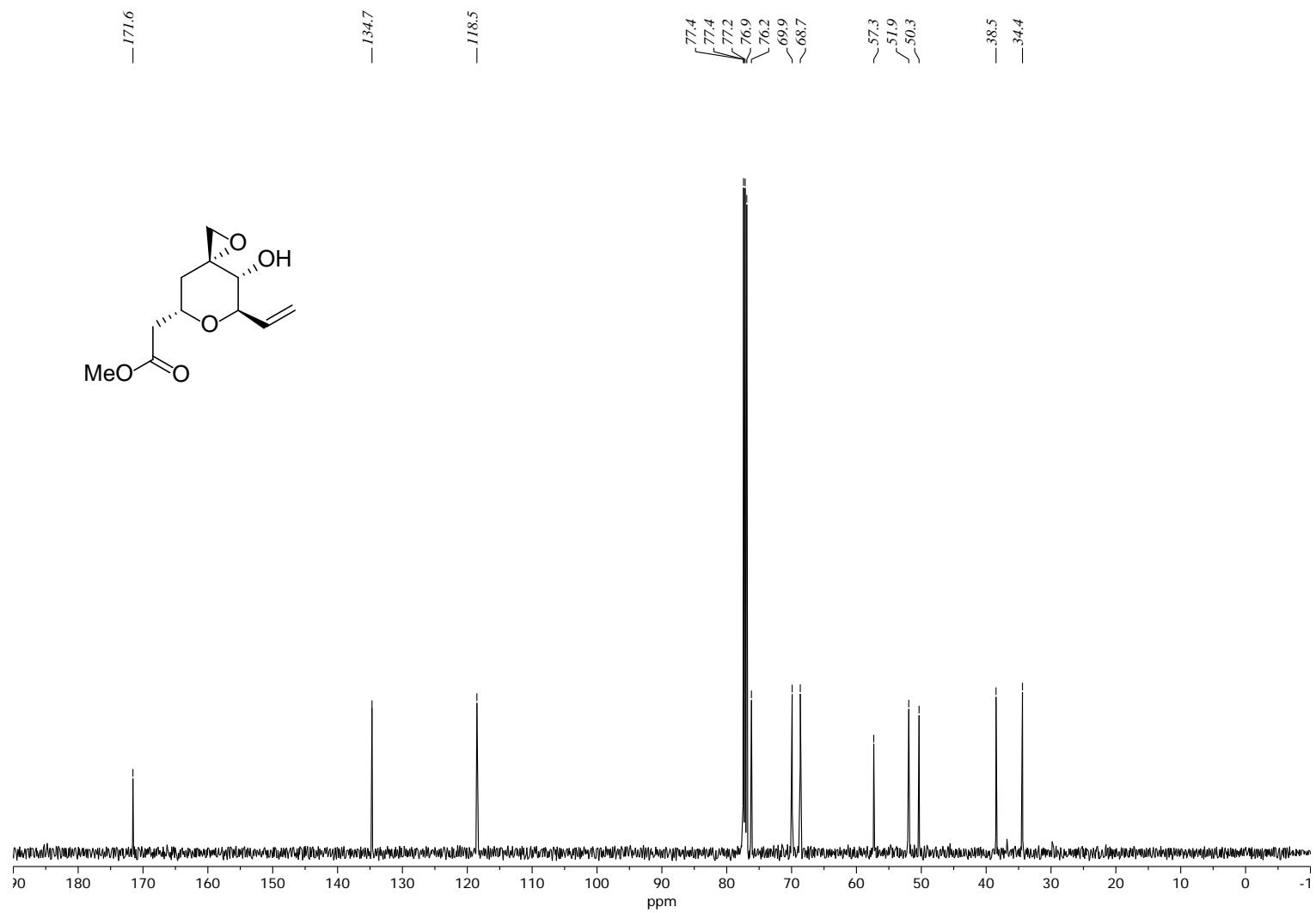


Figure S34. ¹³C NMR (125 MHz, CDCl₃) of Epoxide 8

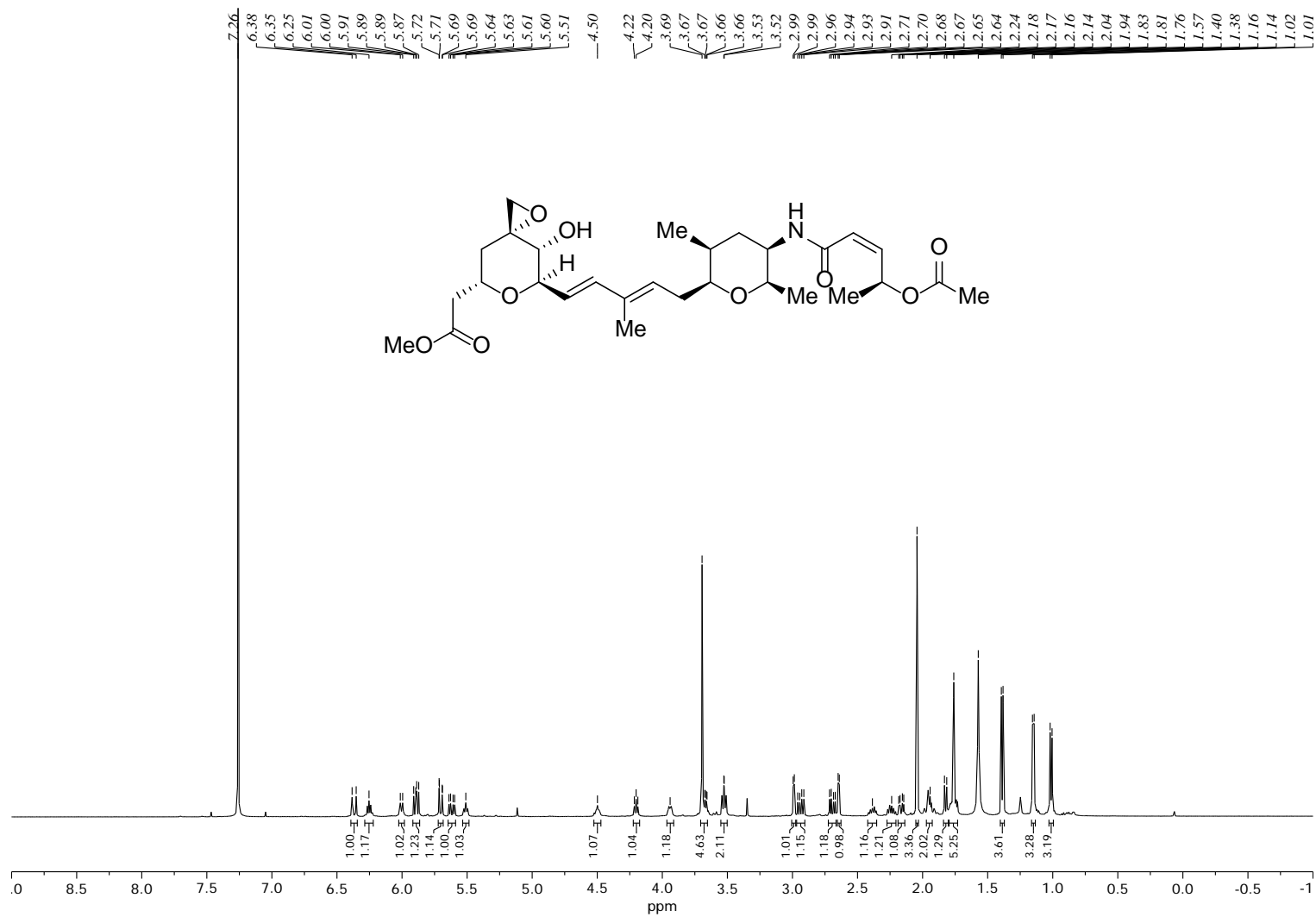


Figure S35. ¹H NMR (500 MHz, CDCl₃) of Thailanstatin A Methyl Ester (2)

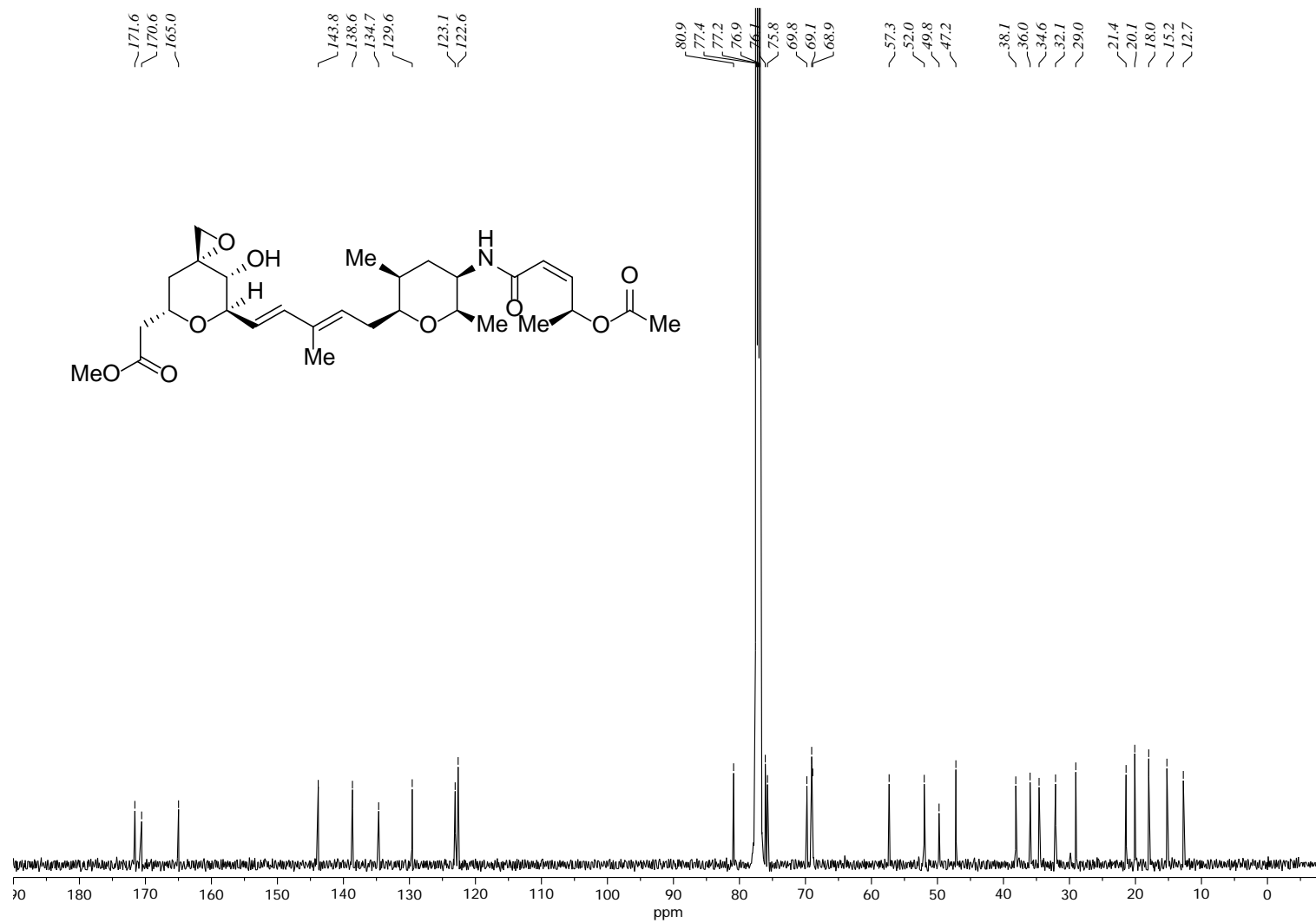


Figure S36. ¹³C NMR (125 MHz, CDCl₃) of Thailanstatin A Methyl Ester (**2**)