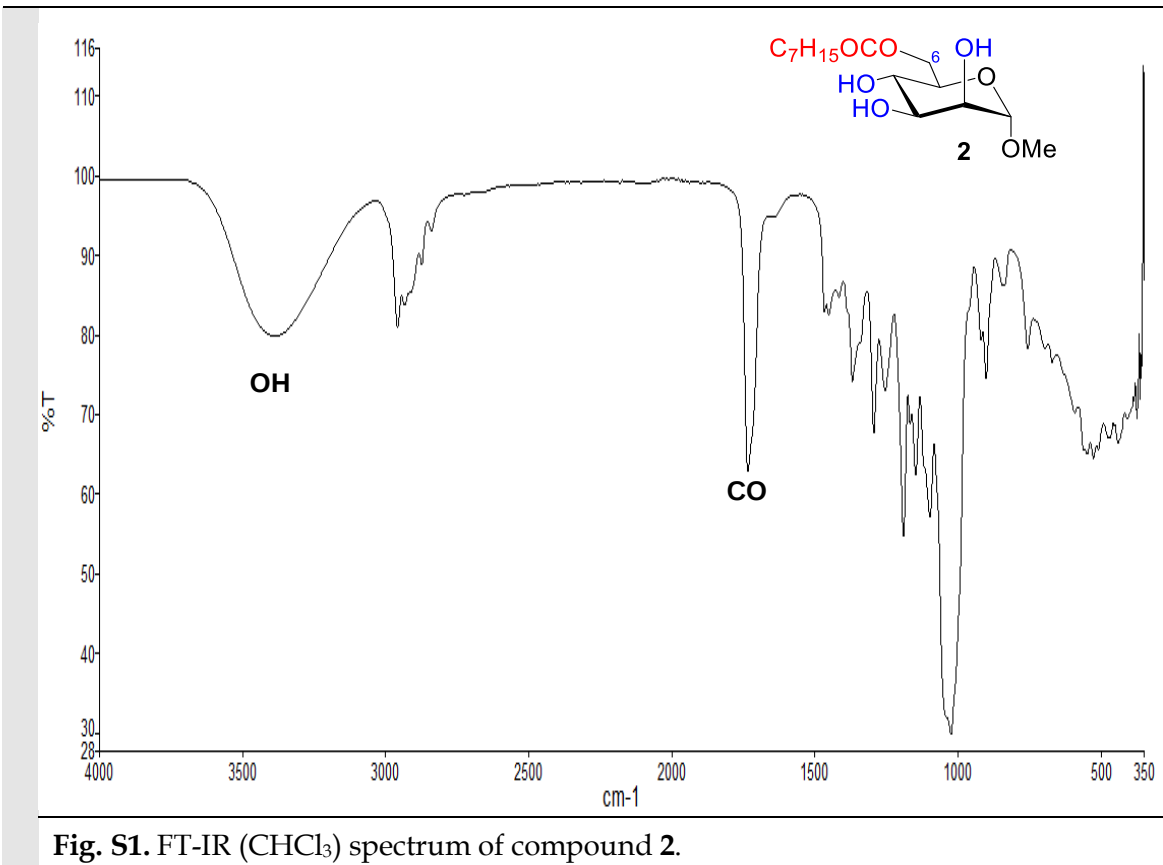
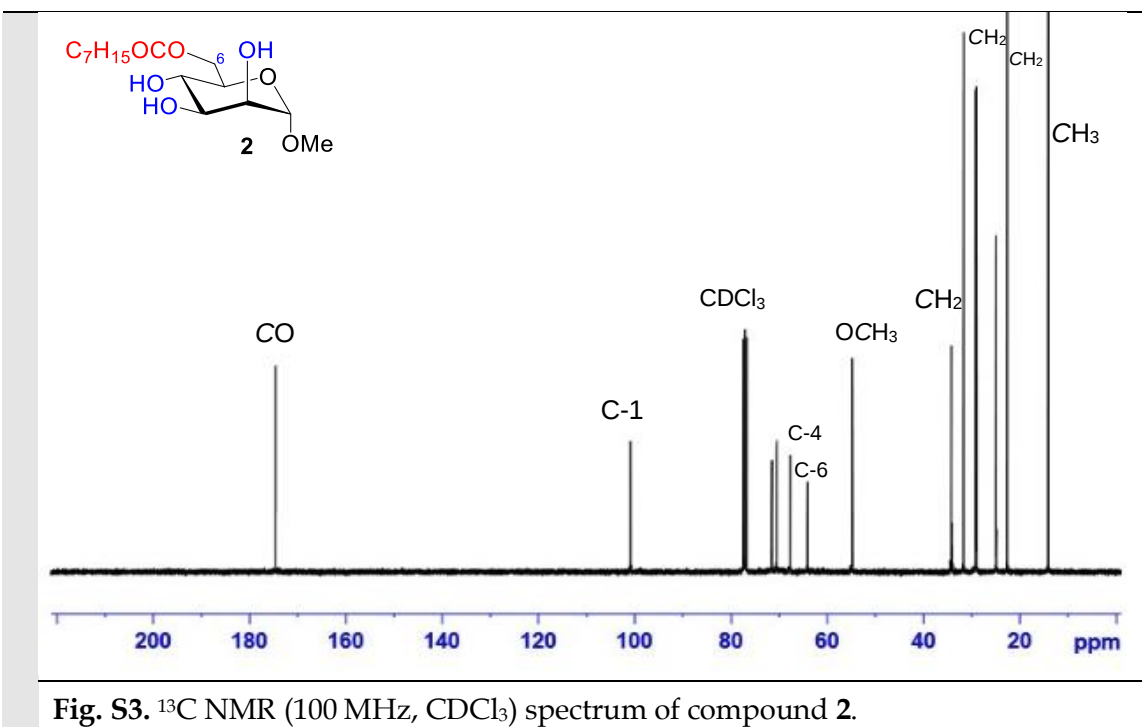
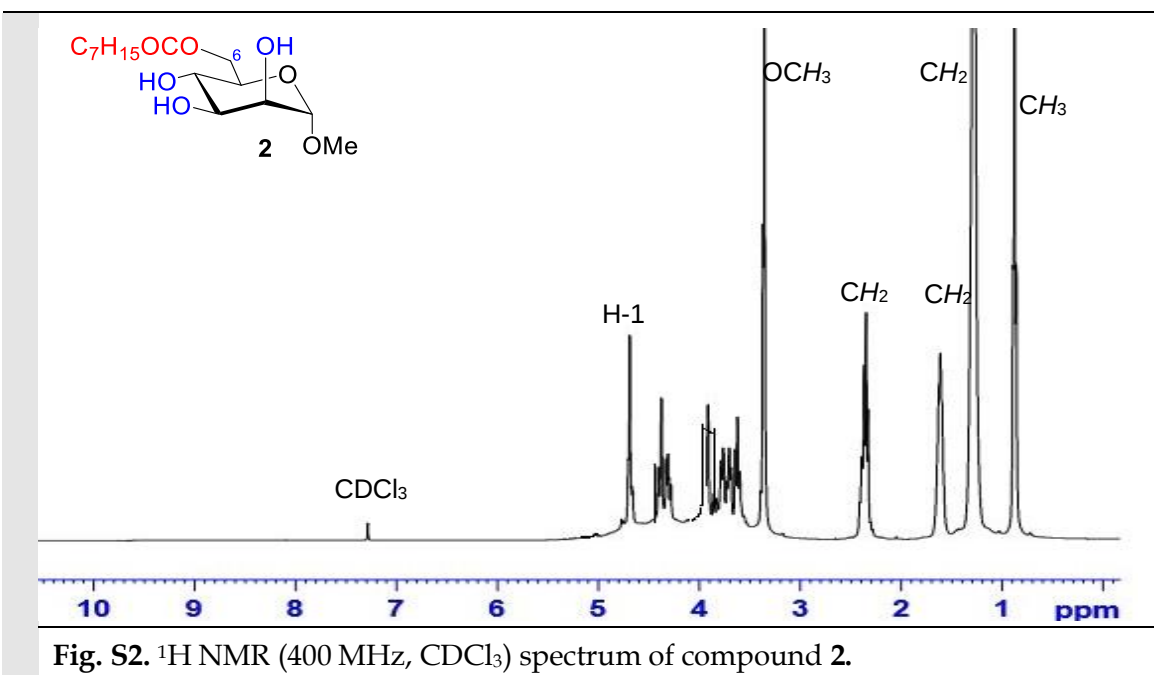


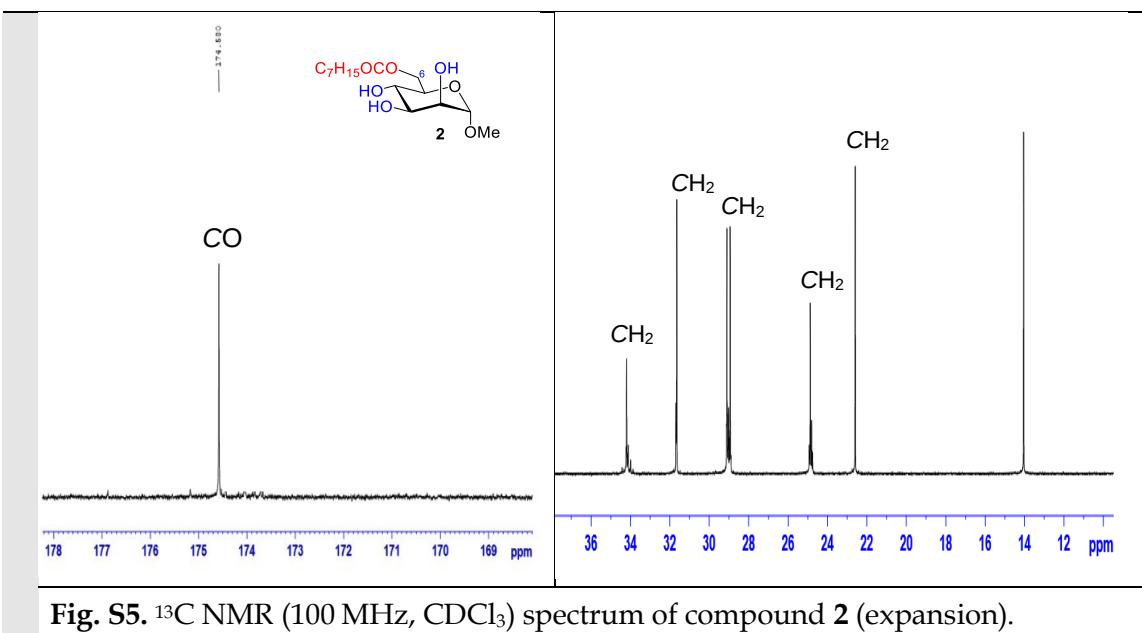
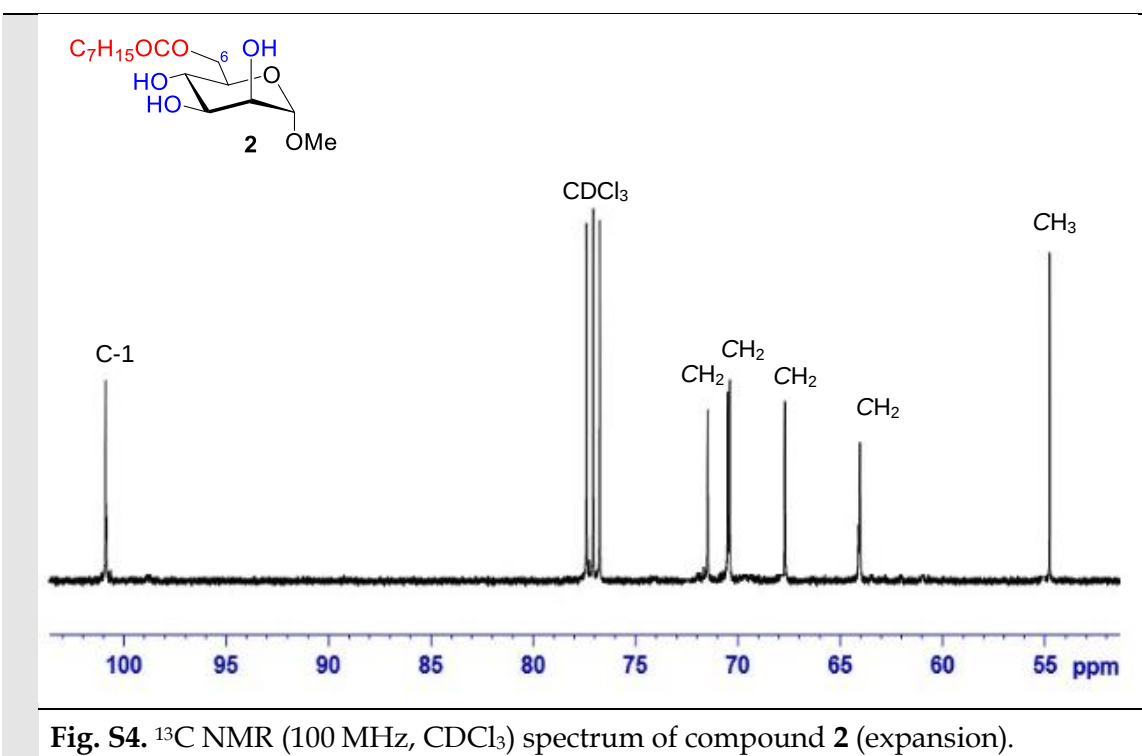
Efficient Synthesis of Mannopyranoside-Based Fatty Acyl Esters: Effects of Acyl Groups on Antimicrobial Activities

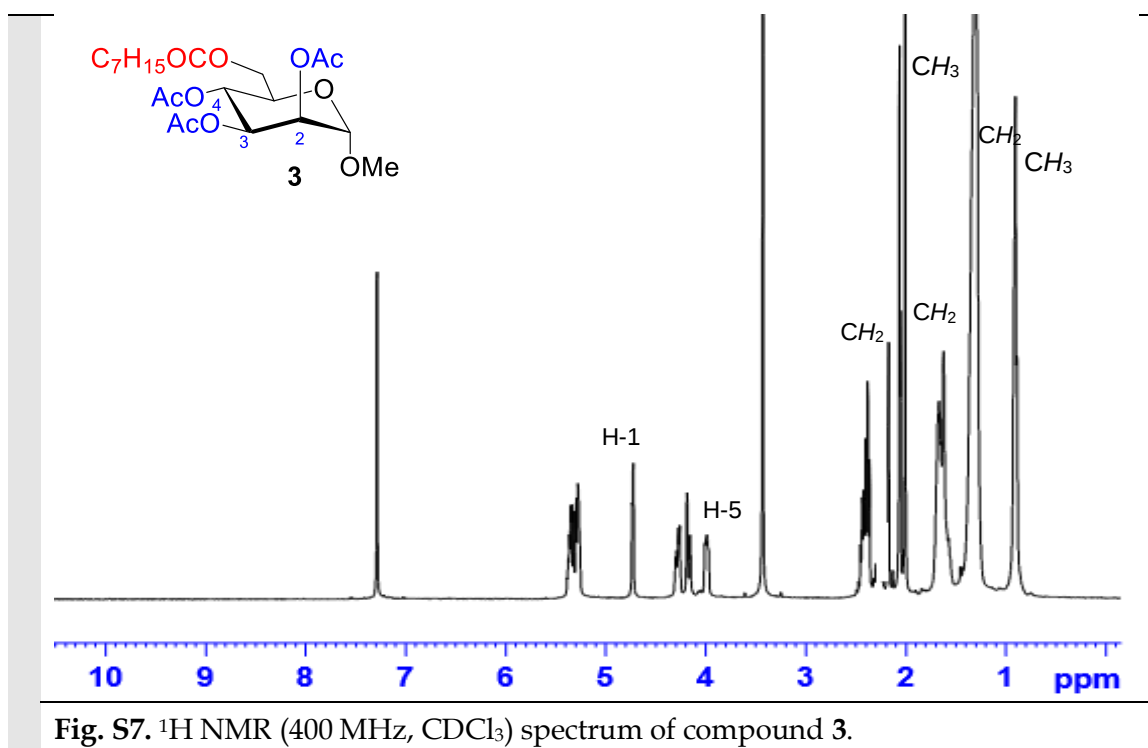
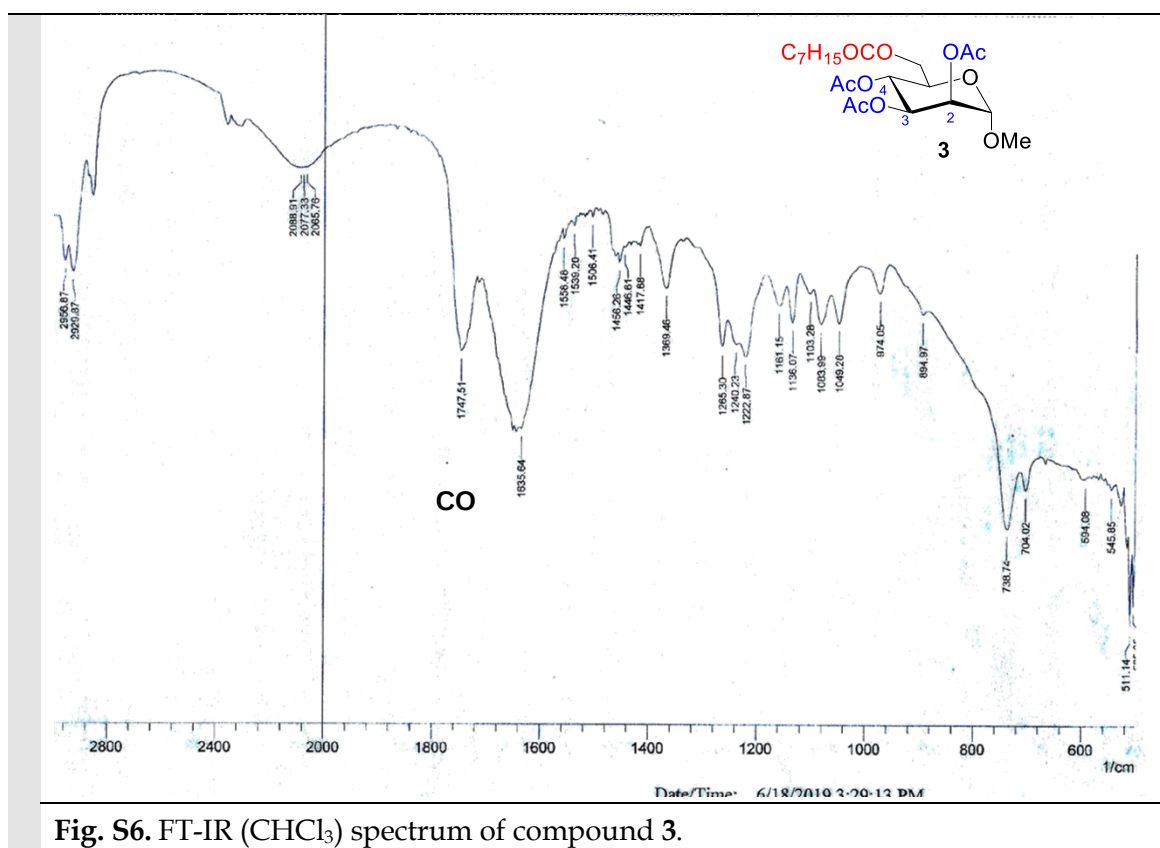
Md. Lutfur Rahaman ^{1, }, Md. Atiqur Rahman ^{1, }, Md. Mohin Hasnain ^{1, }, Mohammad Amran ^{1, }, Talha Bin Emran ^{2,3, }, Md Ashikur Rahaman Khan ¹, Md. Abdul Majed Patwary ^{4, }, Mohsin Kazi ^{5,* }, Mohammed Mahbubul Matin ^{1,* }

1. FT-IR spectra
2. ¹H NMR spectra
3. ¹³C NMR spectra
4. DEPT-135
5. 2D COSY, HSQC and HMBC spectra of compound 3, and 8









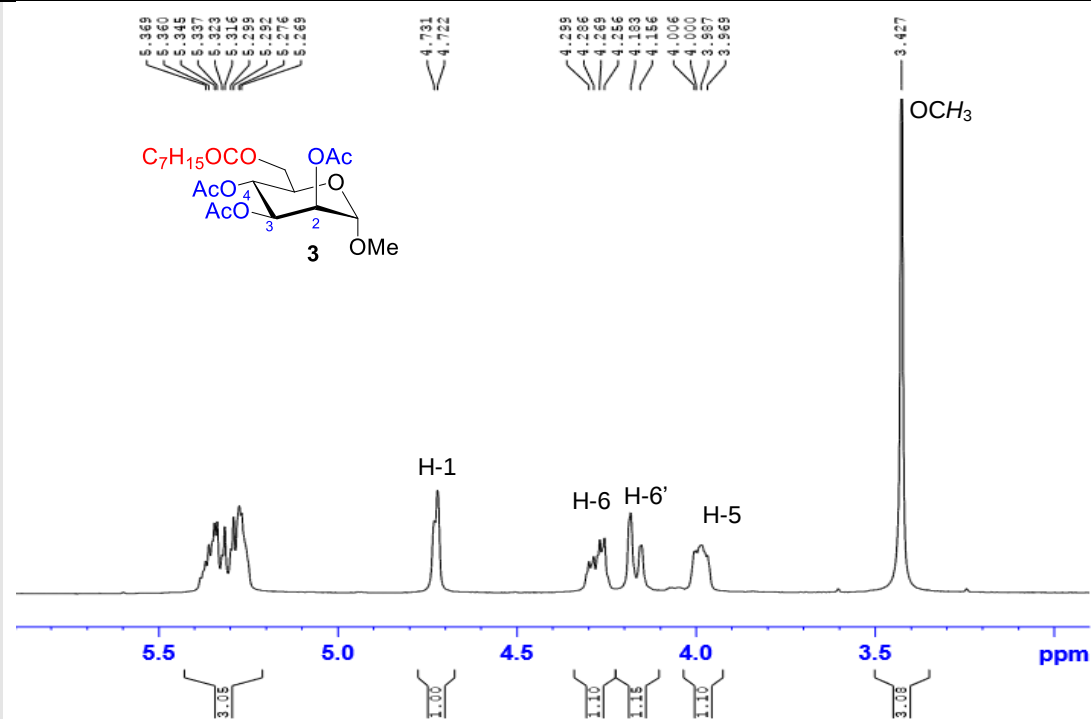


Fig. S8. ^1H NMR (400 MHz, CDCl_3) spectrum of compound **3** (expansion).

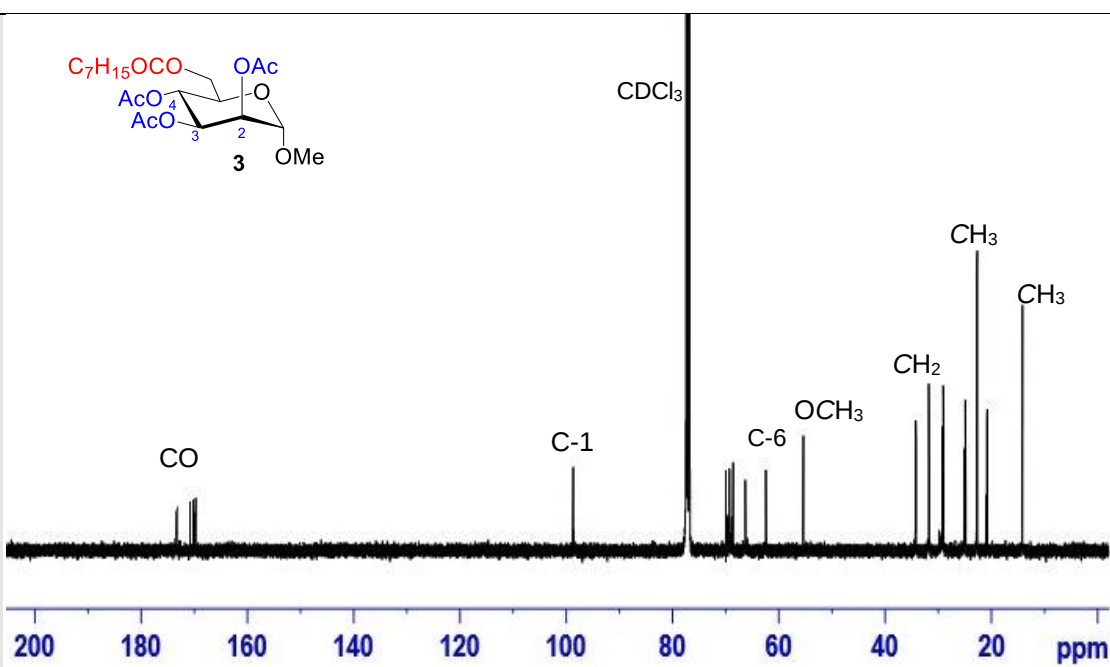
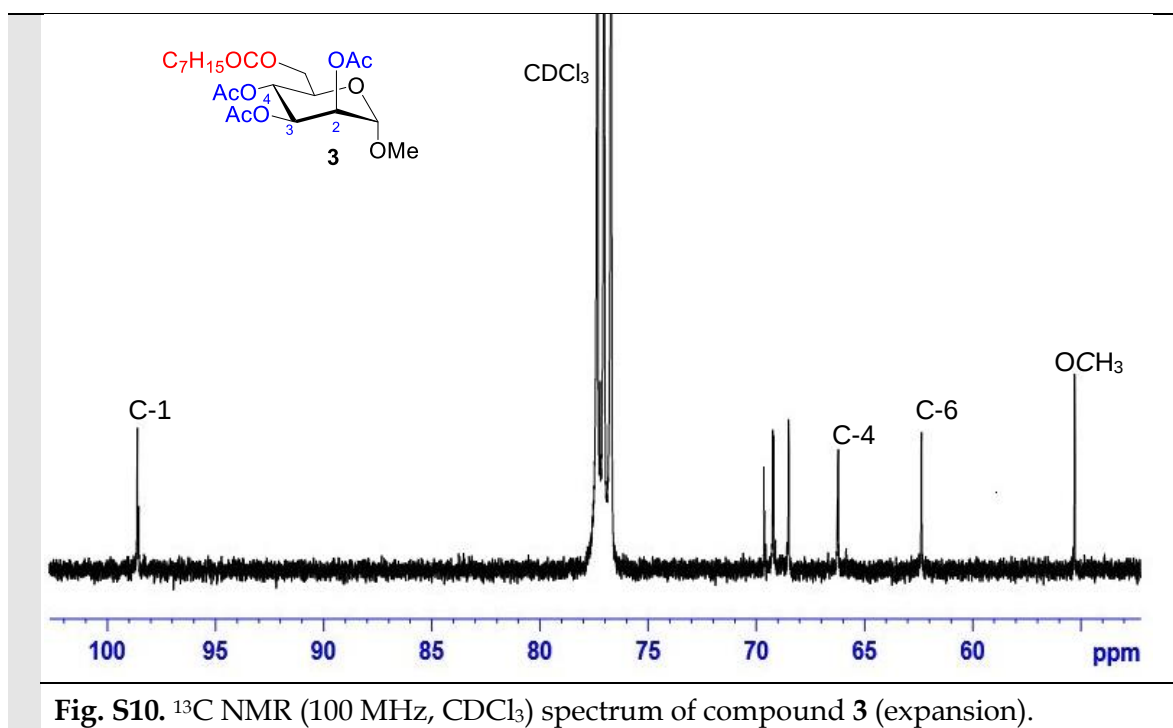
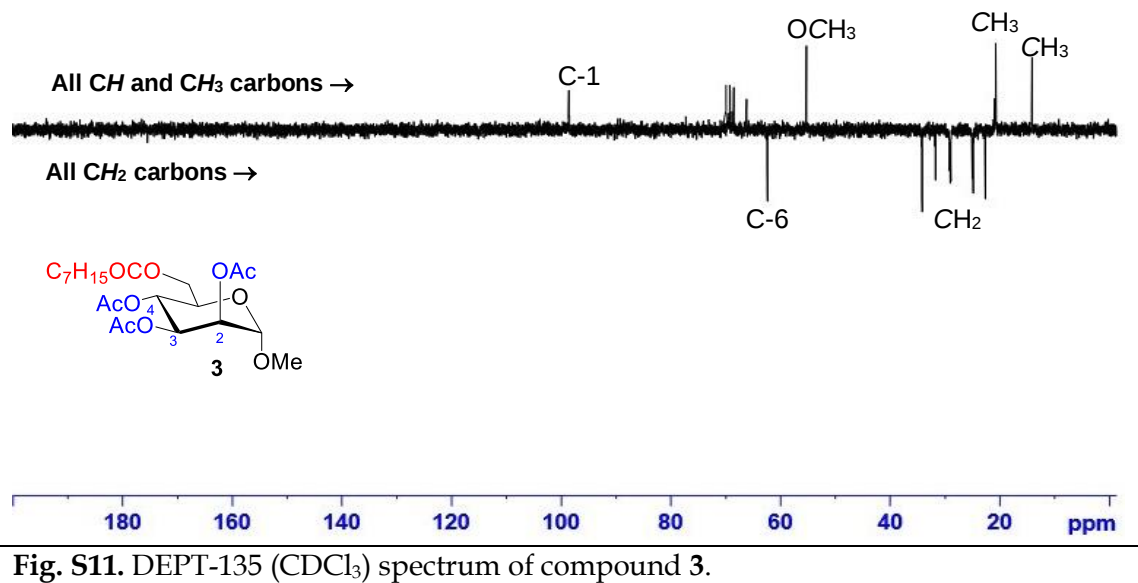


Fig. S9. ^{13}C NMR (100 MHz, CDCl_3) spectrum of compound **3**.



The structure of compound **5** and assignment of signals were also supported by its DEPT-135 (Figure S11), COSY (Figure S12), HSQC (Figure S13) and HMBC spectra (Figure S14).



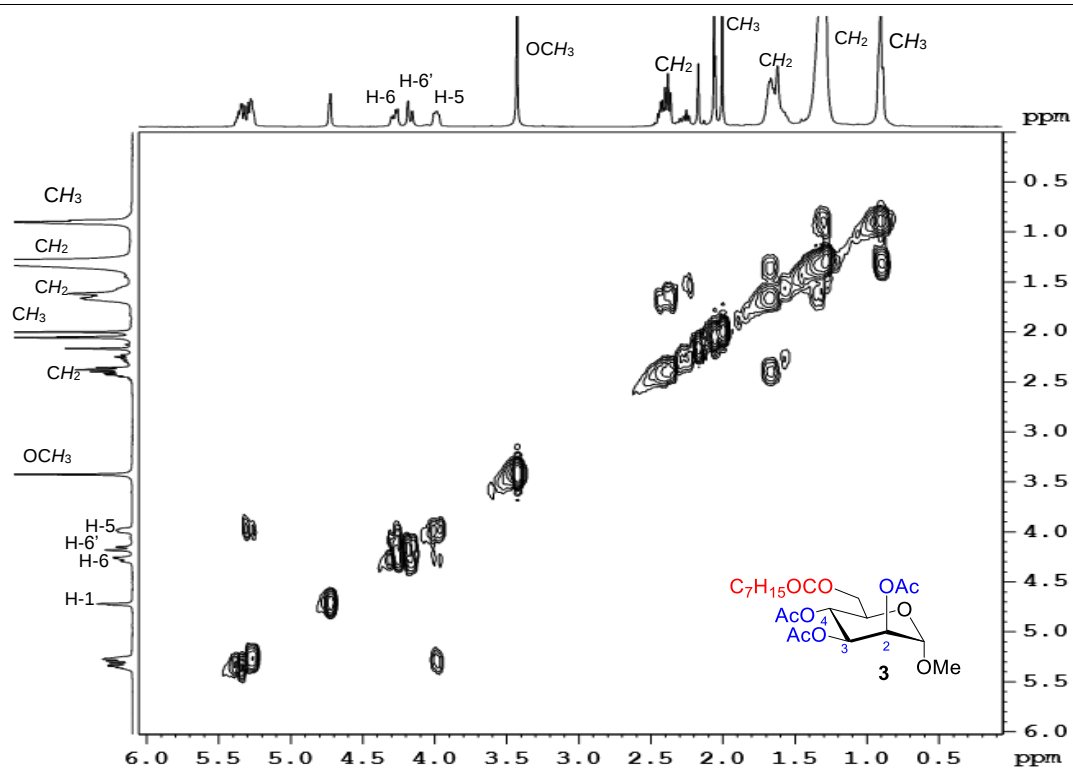


Fig. S12. 2D COSY (CDCl₃) spectrum of compound 3.

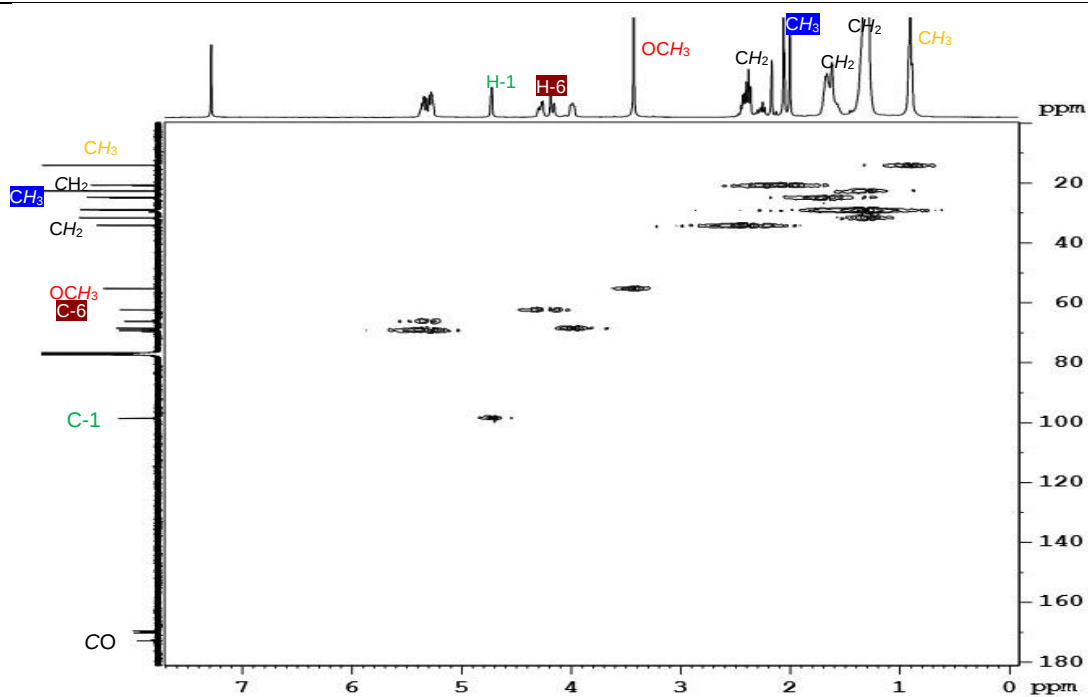


Fig. S13. 2D HSQC (CDCl₃) spectrum of compound 3.

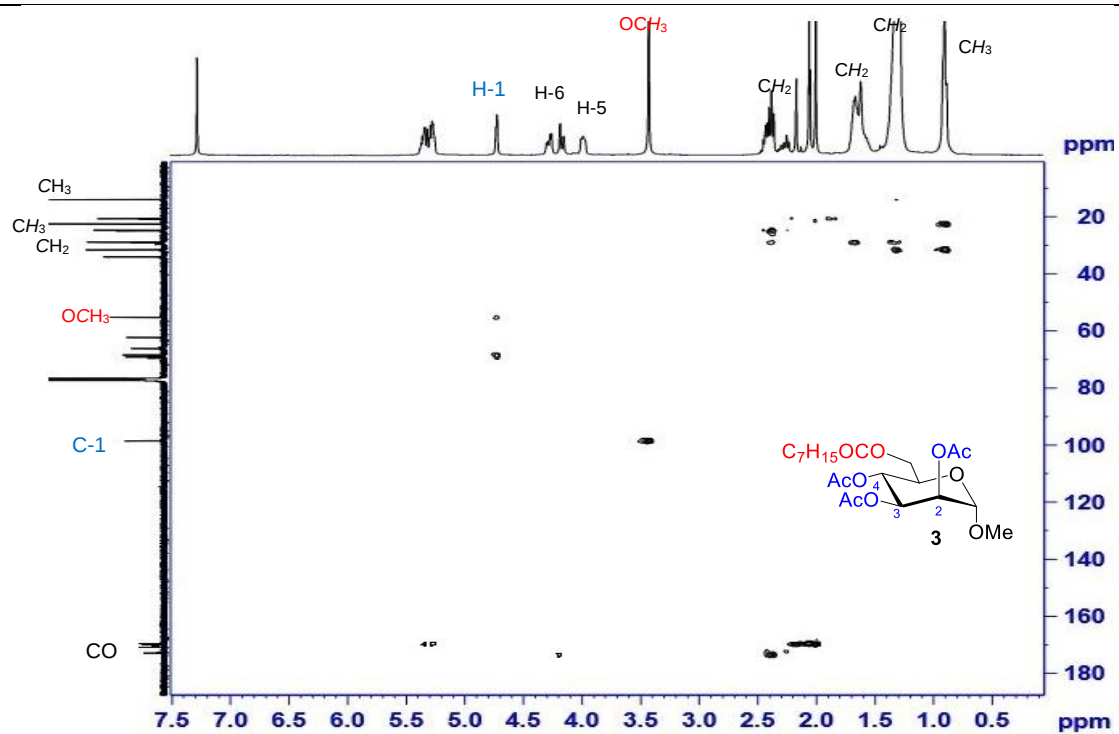


Fig. S14. 2D HMBC (CDCl₃) spectrum of compound 3.

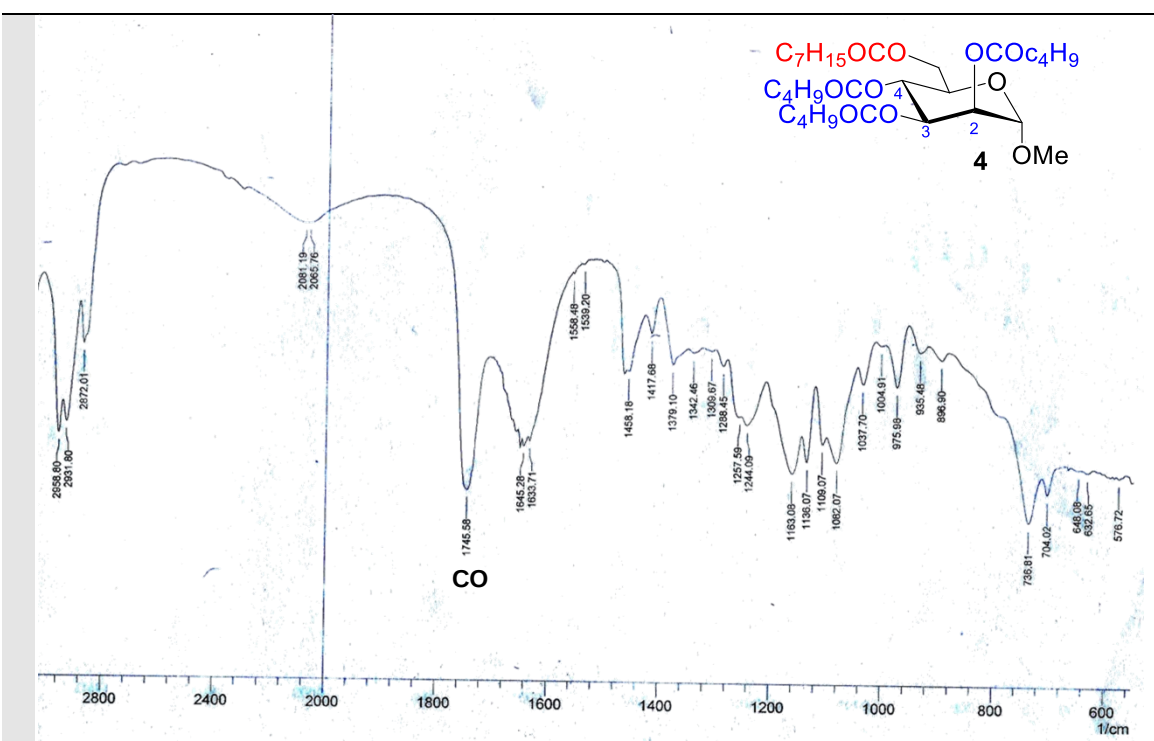
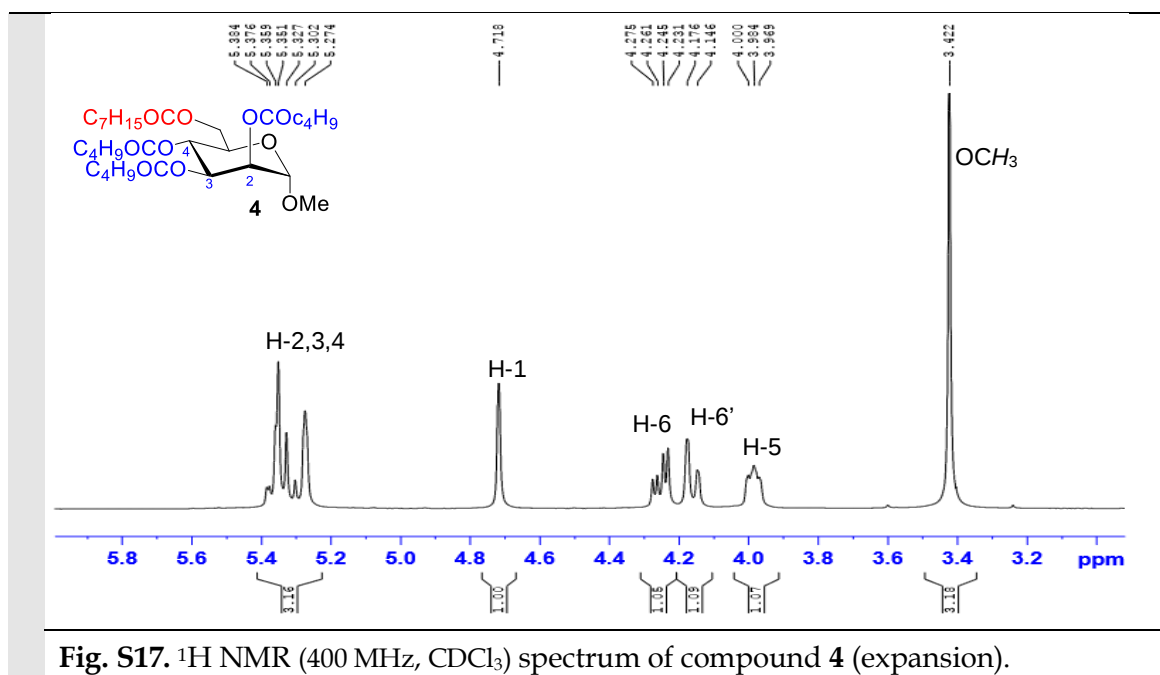
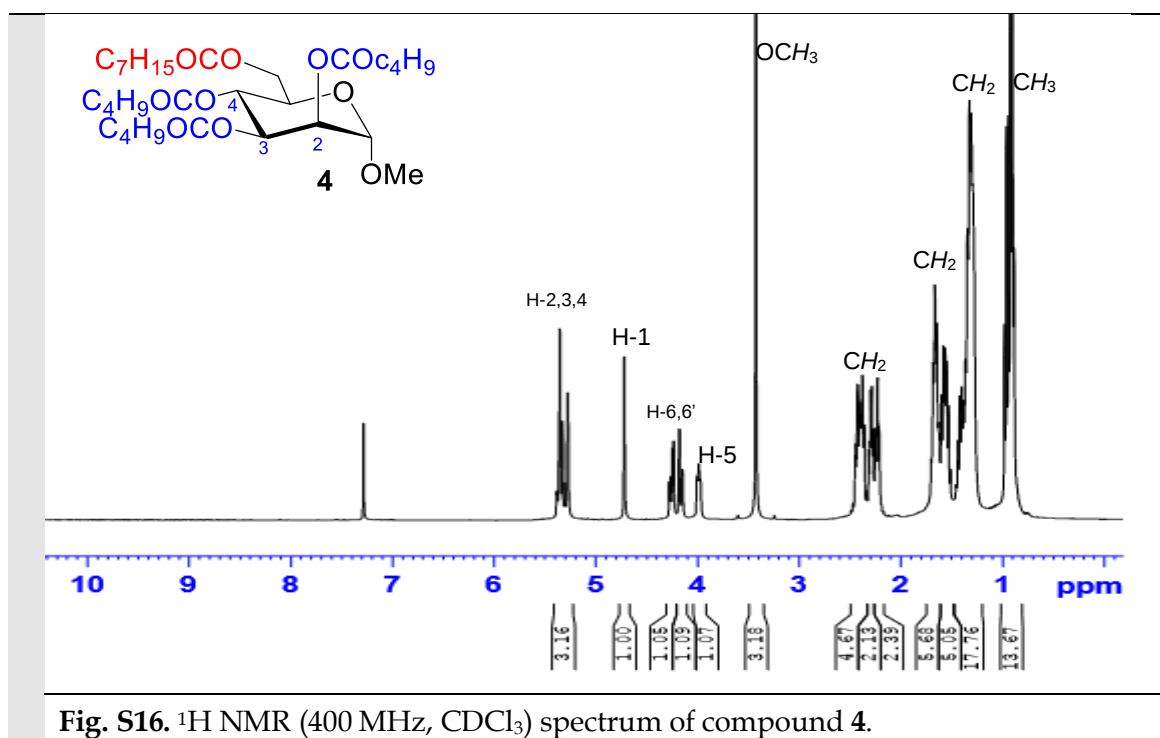
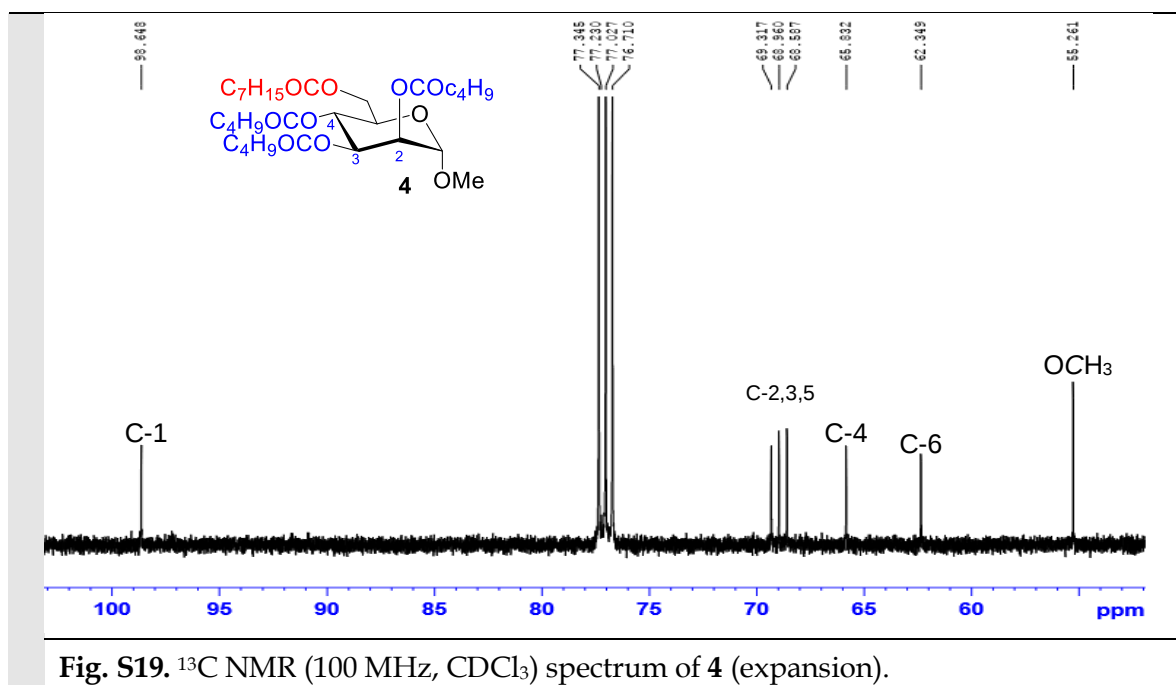
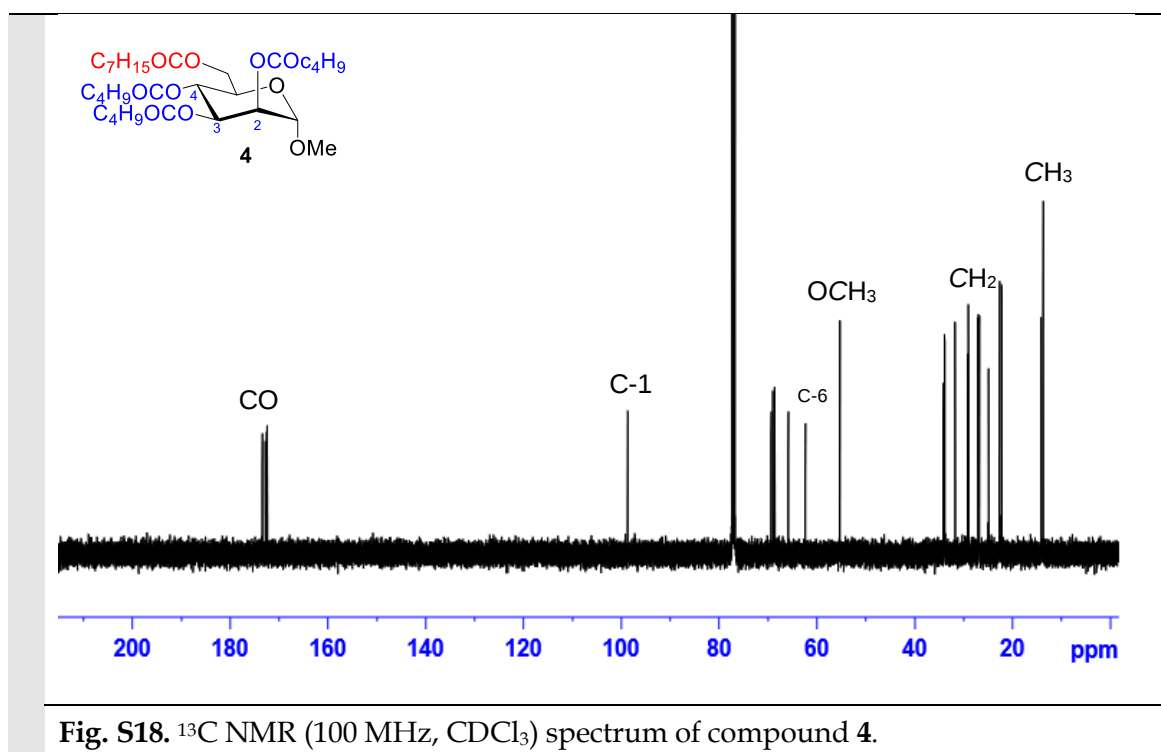


Fig. S15. FT-IR (CHCl₃) spectrum of compound 4.





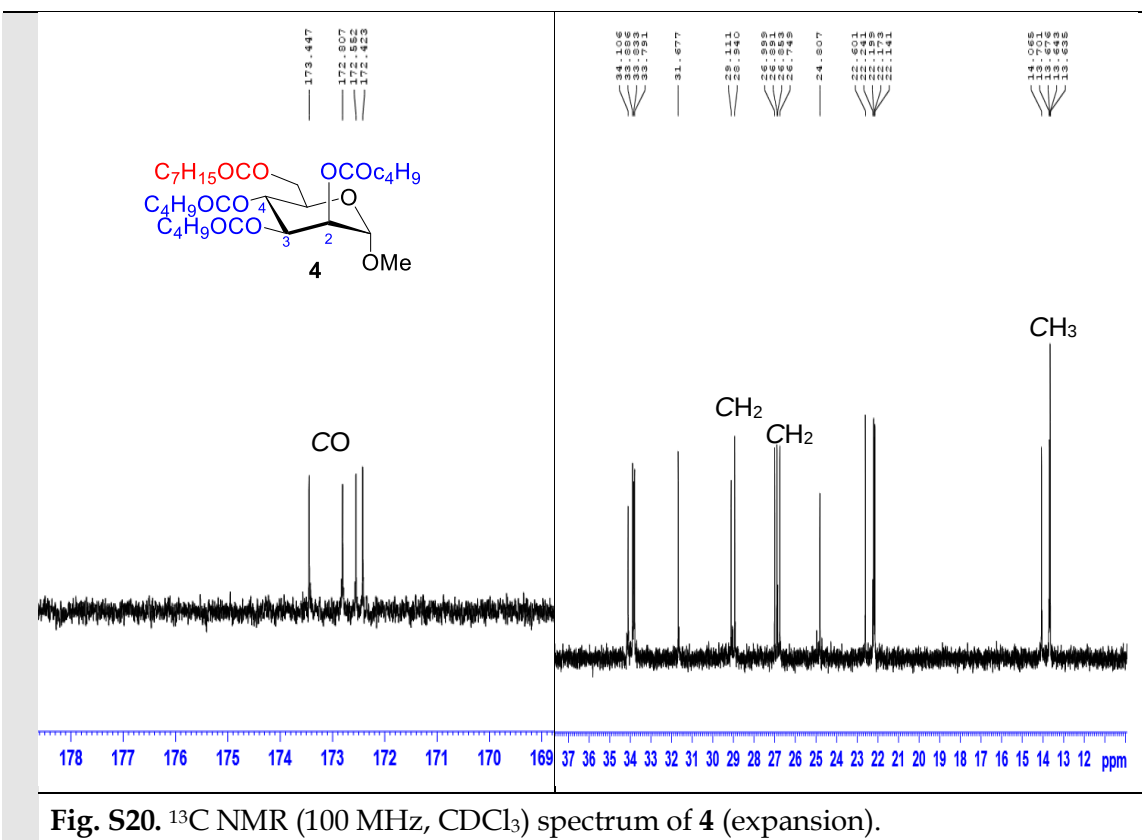


Fig. S20. ¹³C NMR (100 MHz, CDCl₃) spectrum of 4 (expansion).

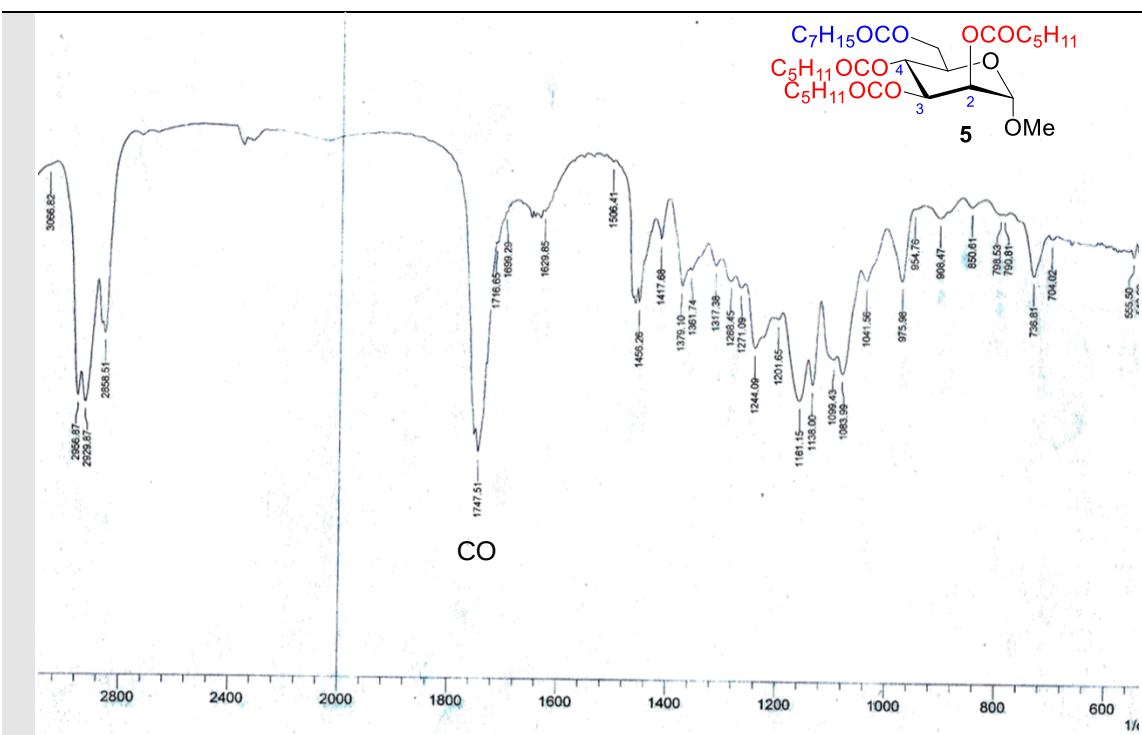
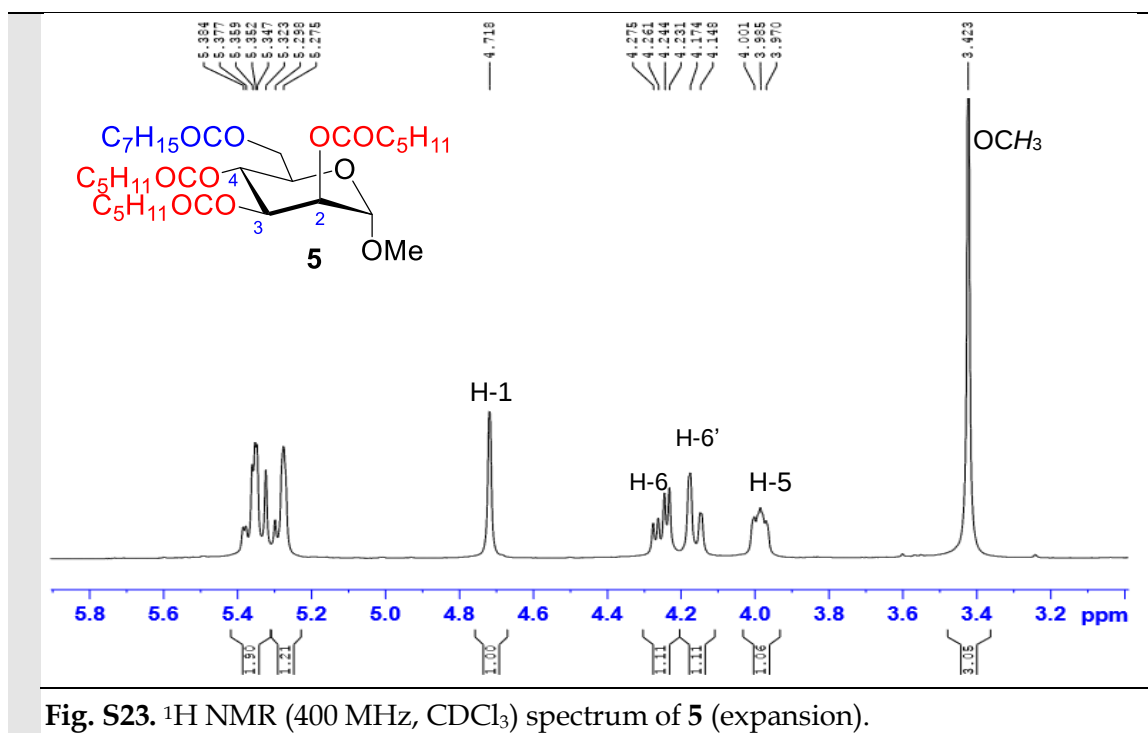
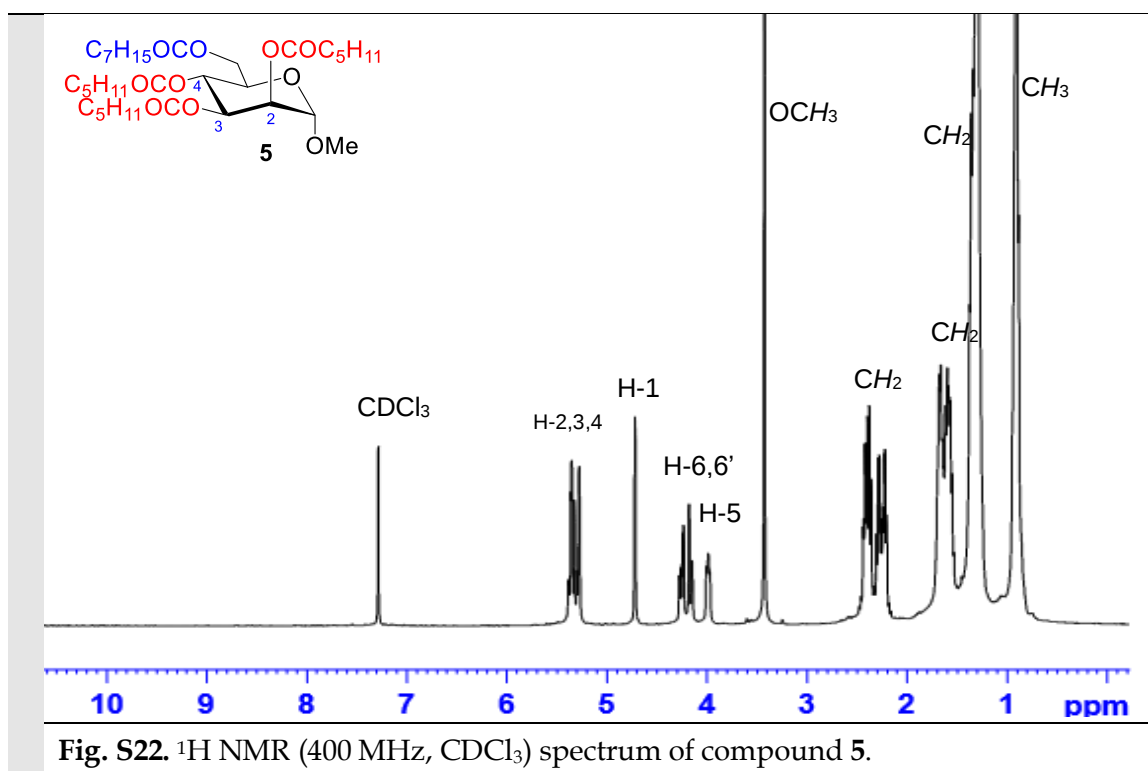


Fig. S21. FT-IR (CHCl₃) spectrum of compound 5.



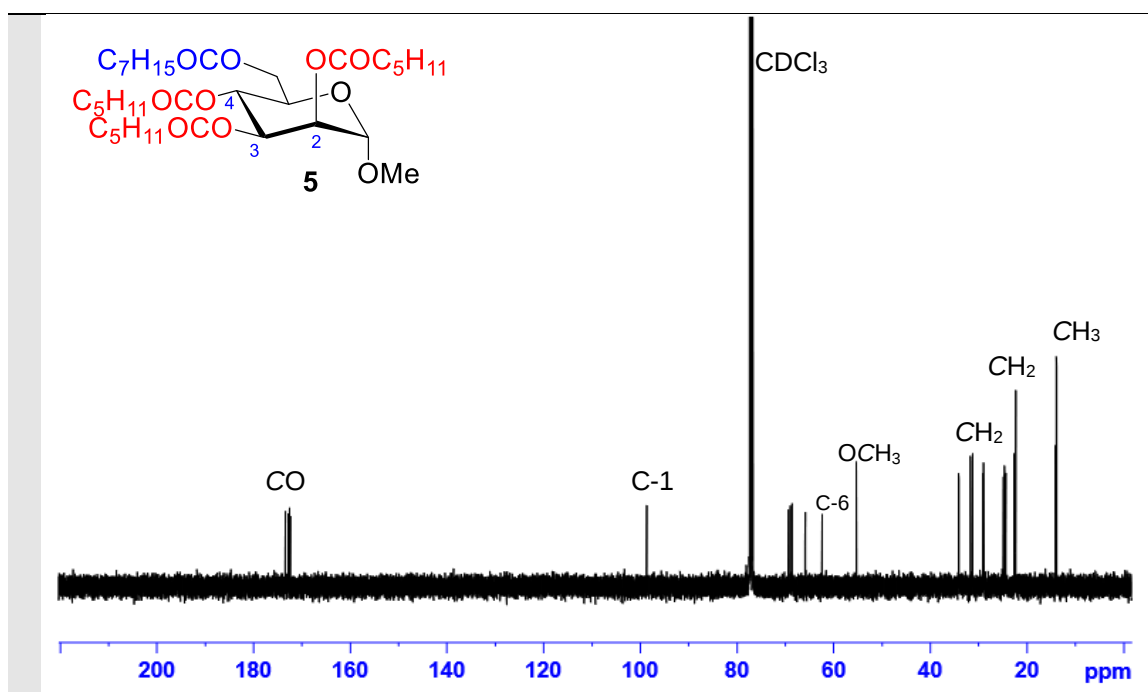


Fig. S24. ¹³C NMR (100 MHz, CDCl₃) spectrum of compound **5**.

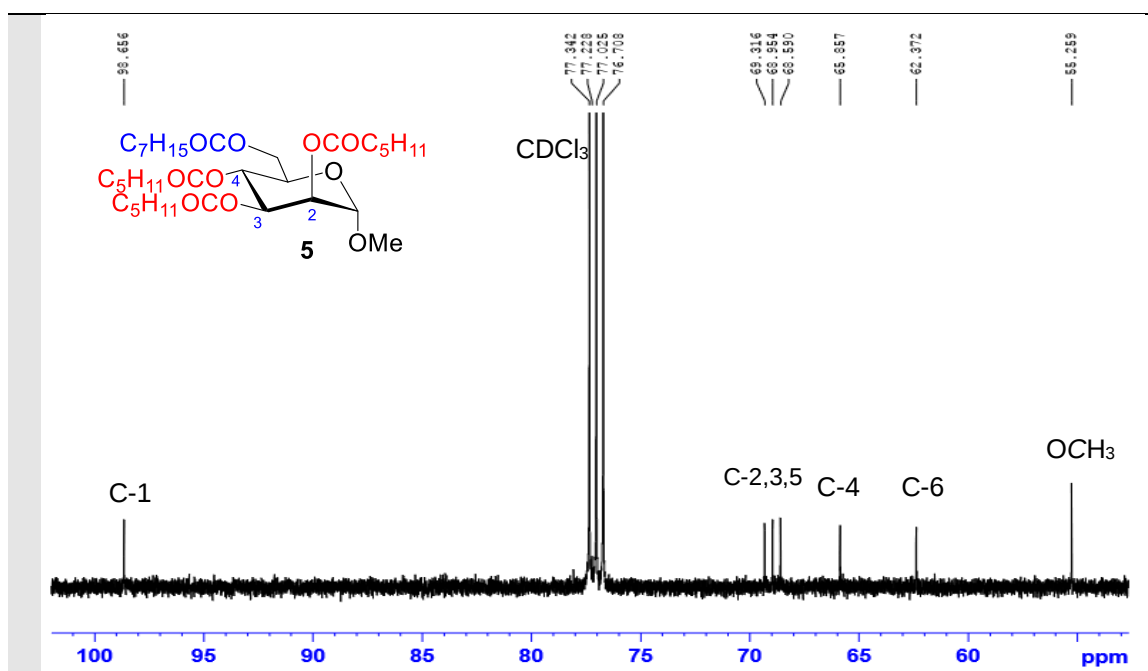


Fig. S25. ¹³C NMR (100 MHz, CDCl₃) spectrum of **5** (expansion).

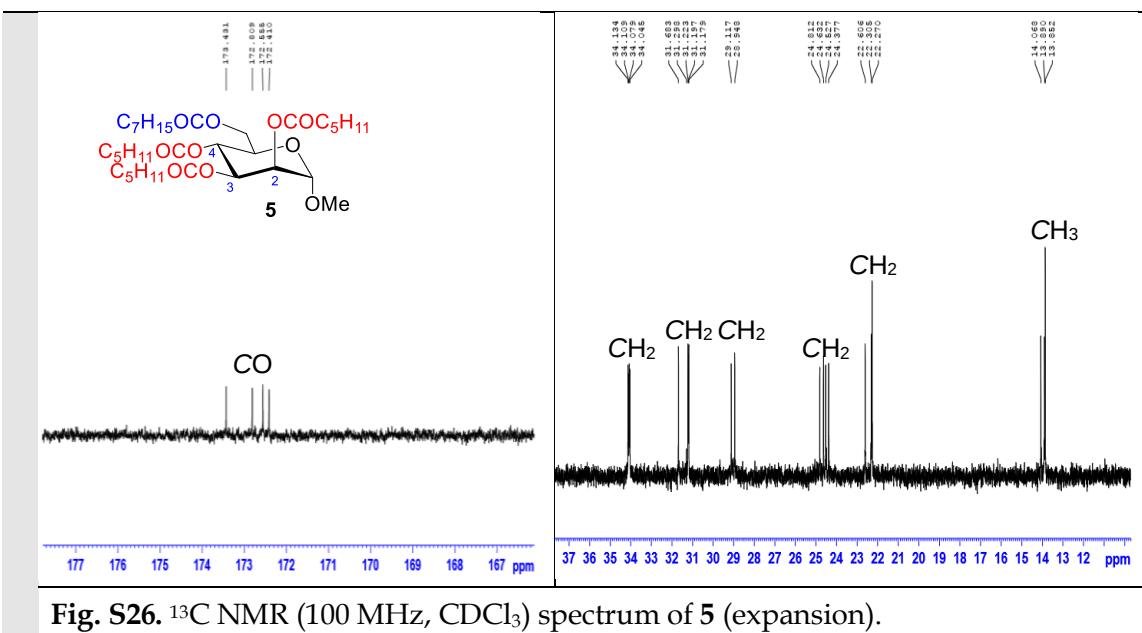


Fig. S26. ¹³C NMR (100 MHz, CDCl₃) spectrum of 5 (expansion).

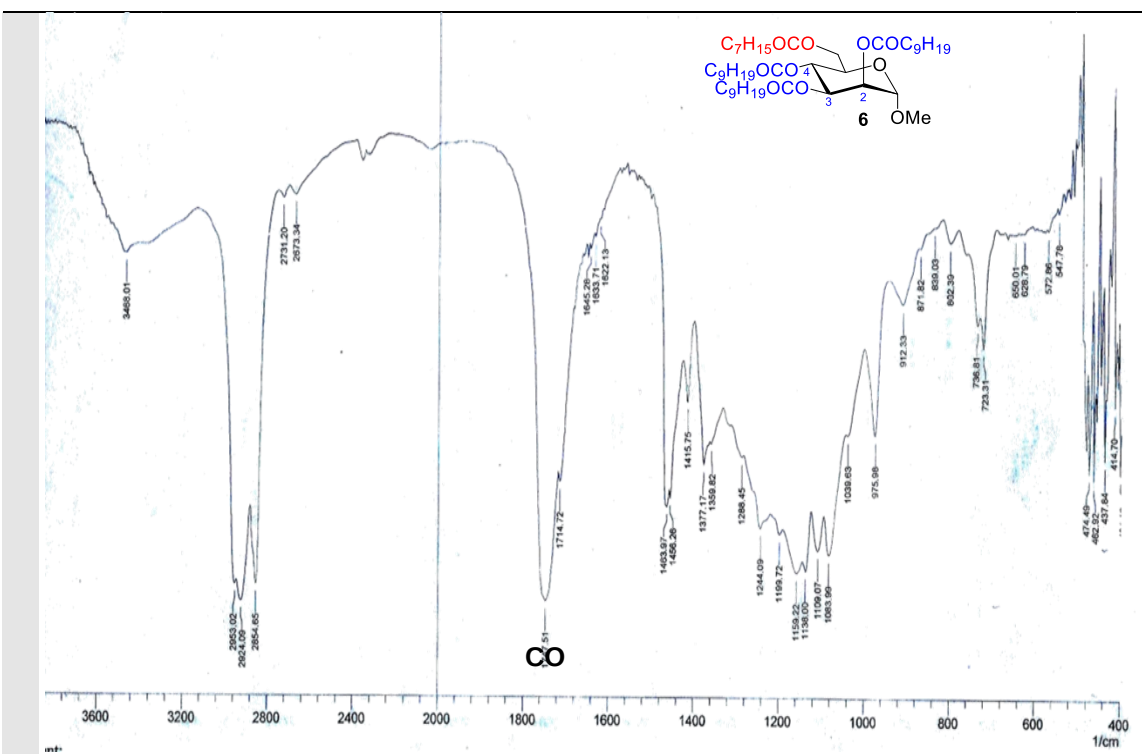


Fig. S27. FT-IR (CHCl₃) spectrum of compound 6.

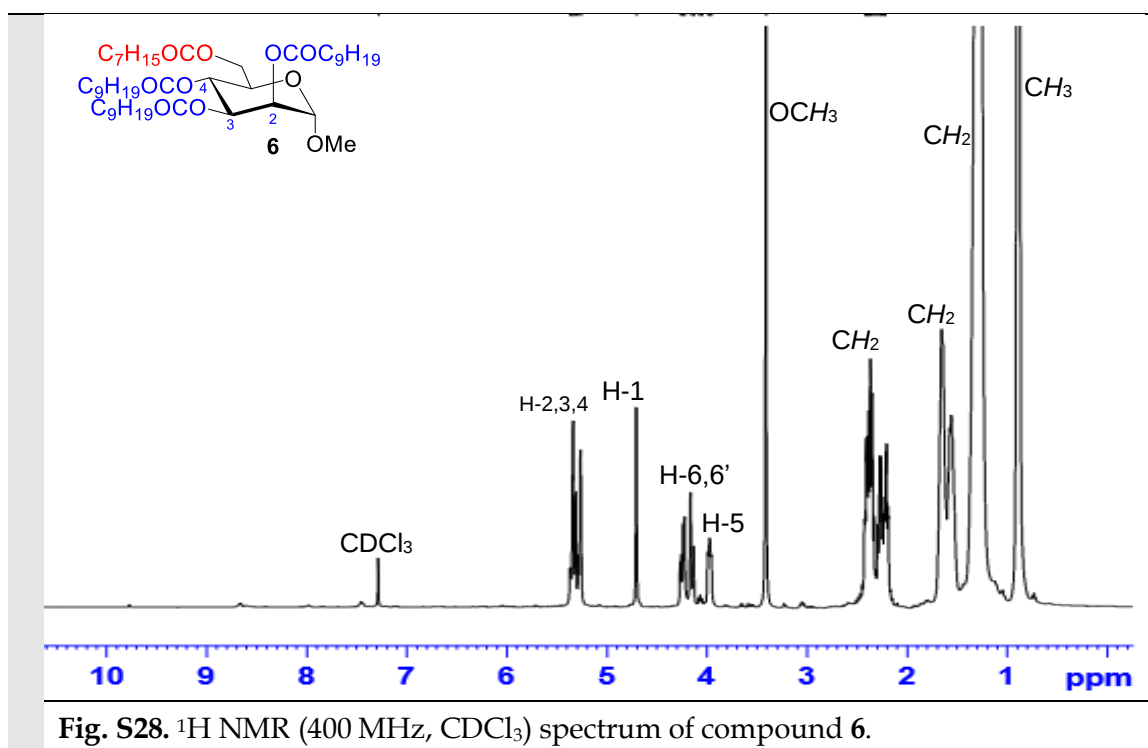


Fig. S28. ^1H NMR (400 MHz, CDCl_3) spectrum of compound 6.

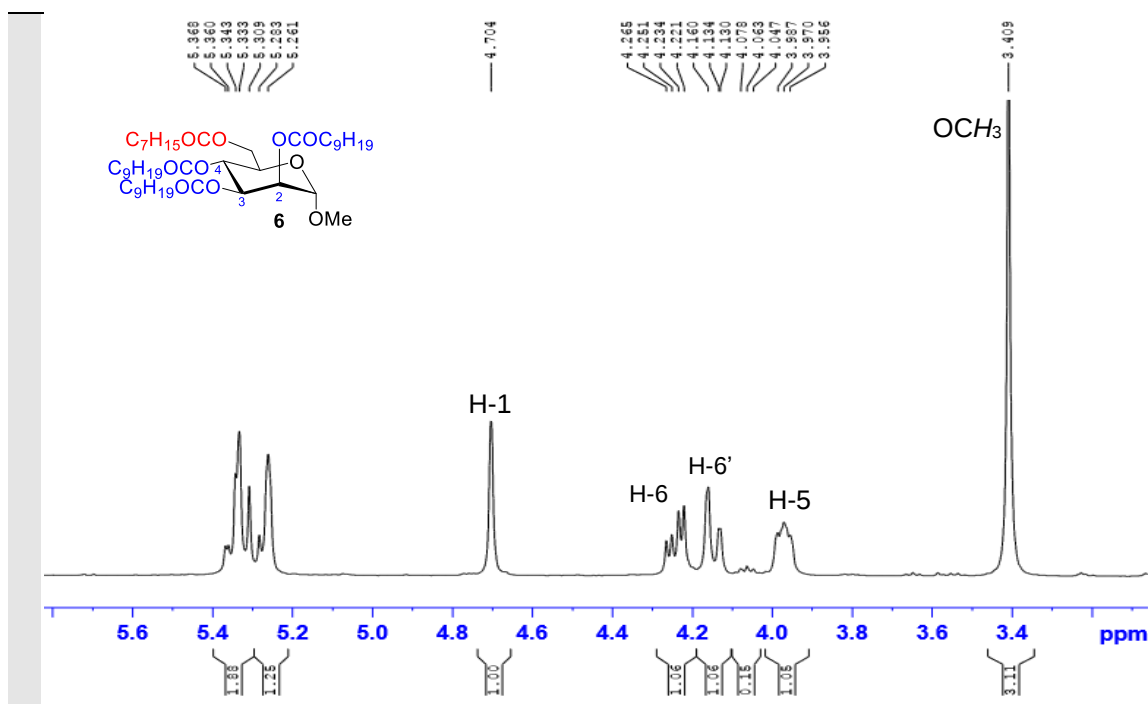


Fig. S29. ^1H NMR (400 MHz, CDCl_3) spectrum of 6 (expansion).

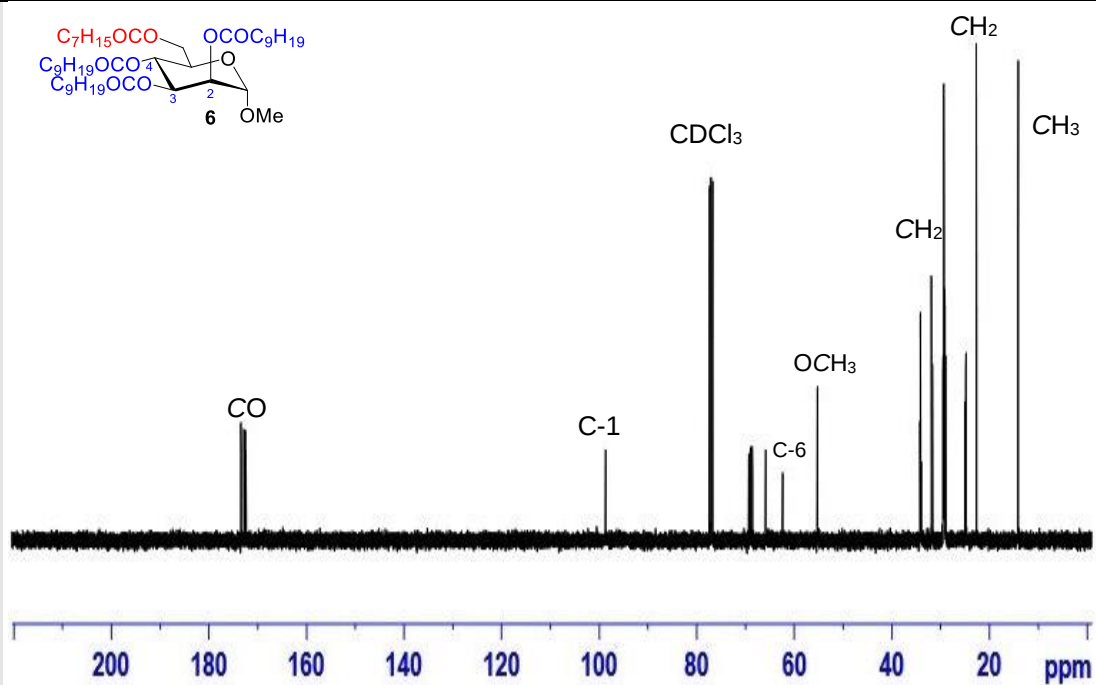


Fig. S30. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of compound 6.

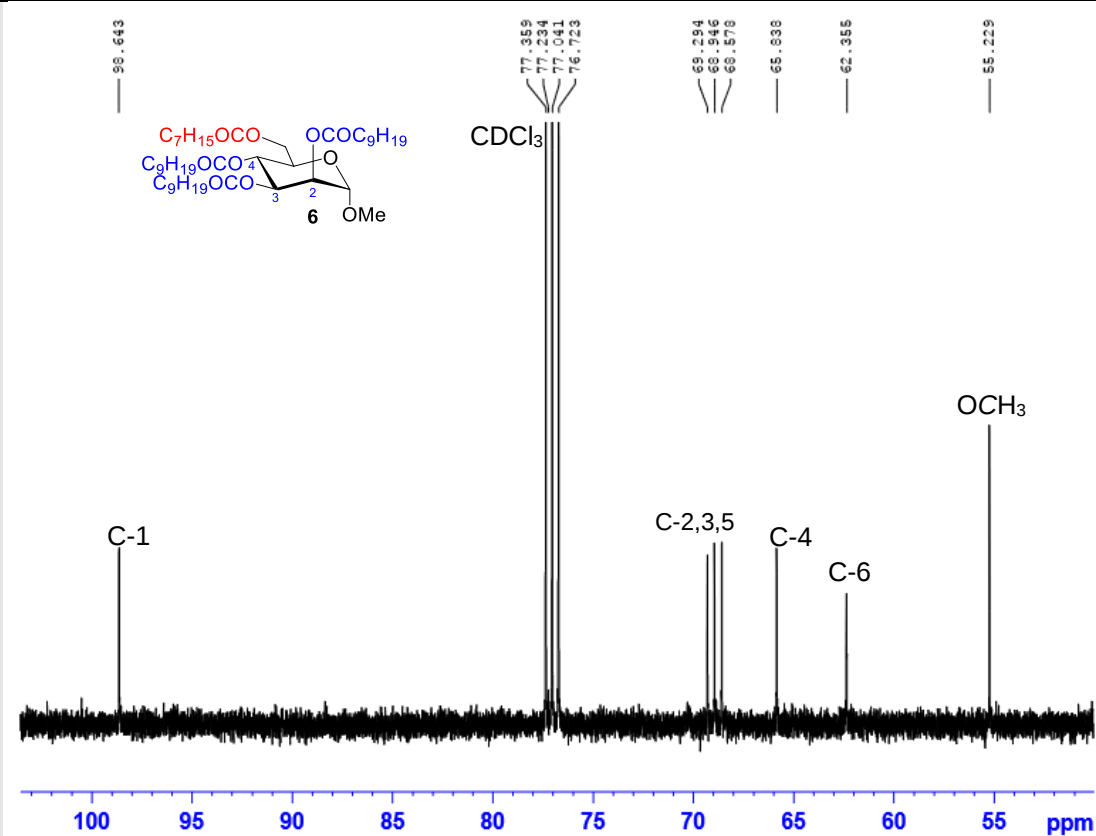
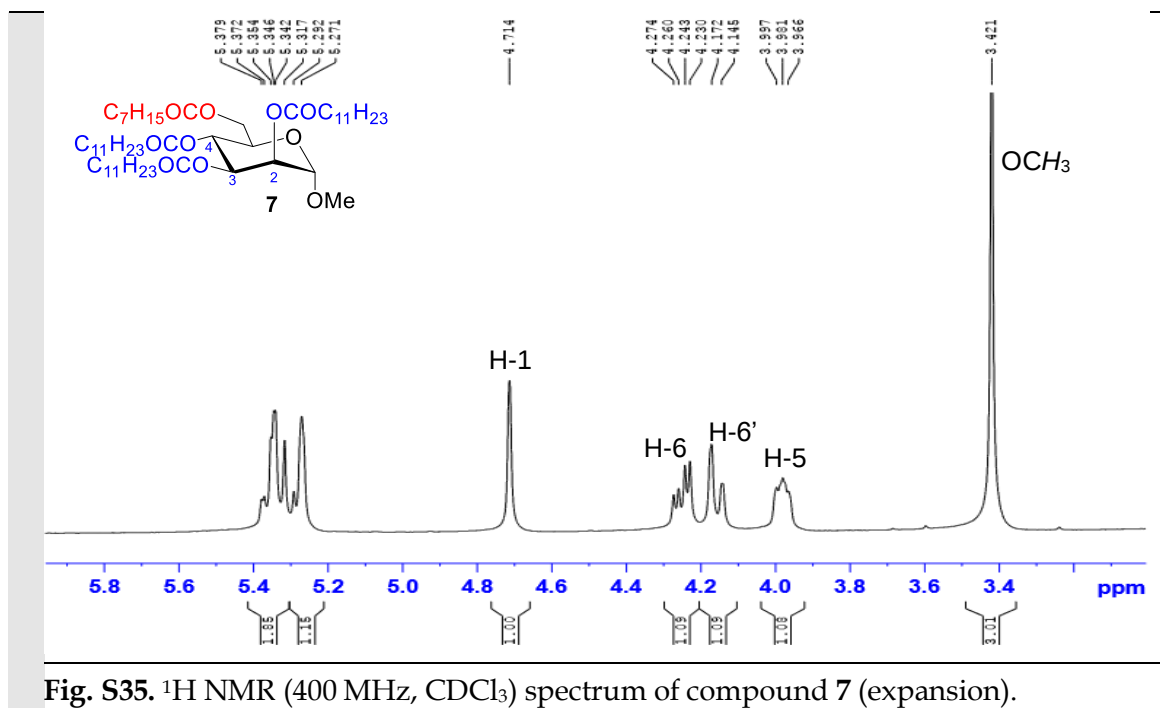
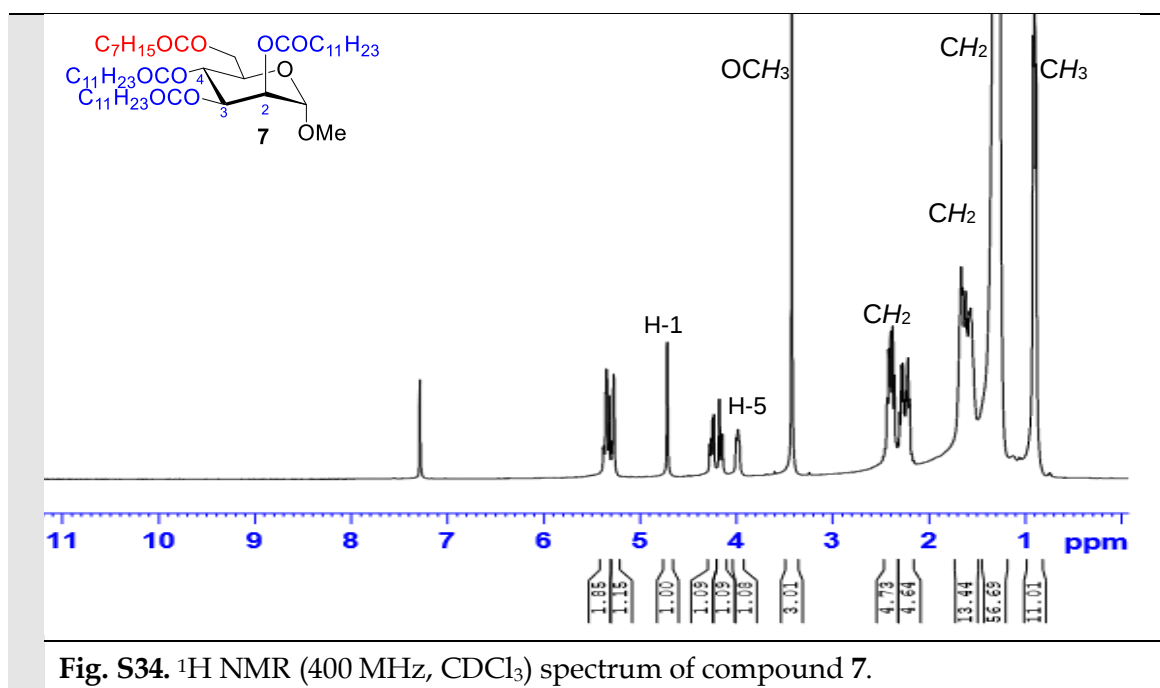


Fig. S31. ^{13}C NMR (100 MHz, $CDCl_3$) spectrum of 6 (expansion).



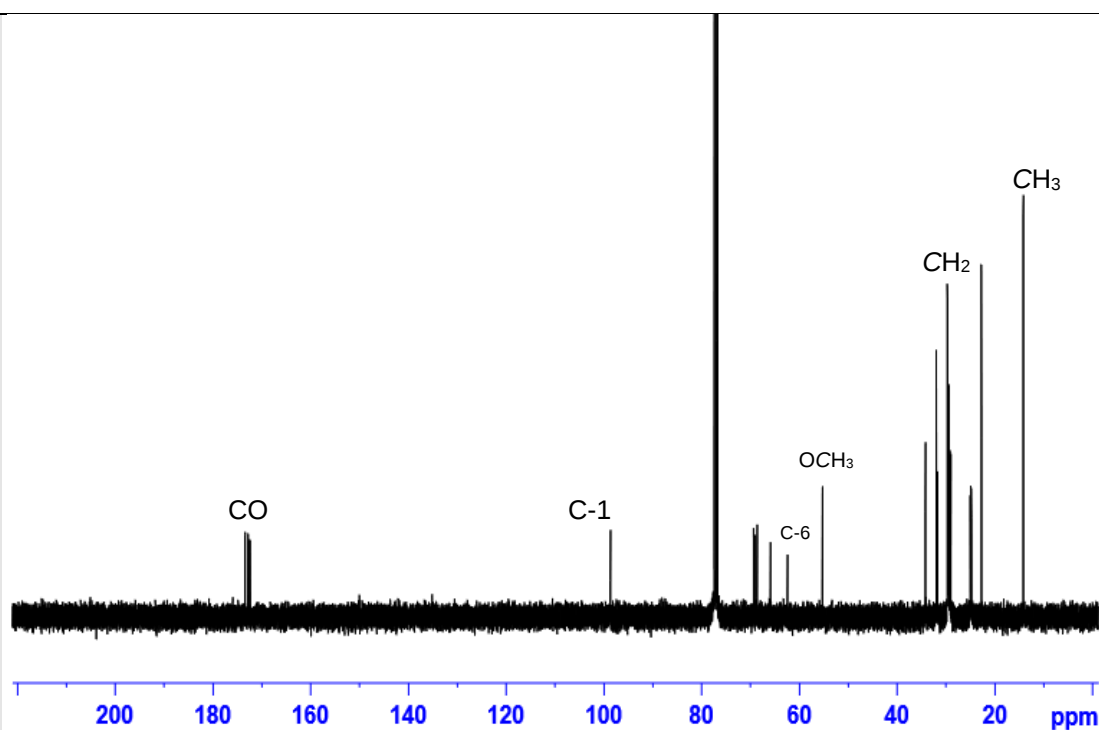


Fig. S36. ¹³C NMR (100 MHz, CDCl₃) spectrum of compound 7.

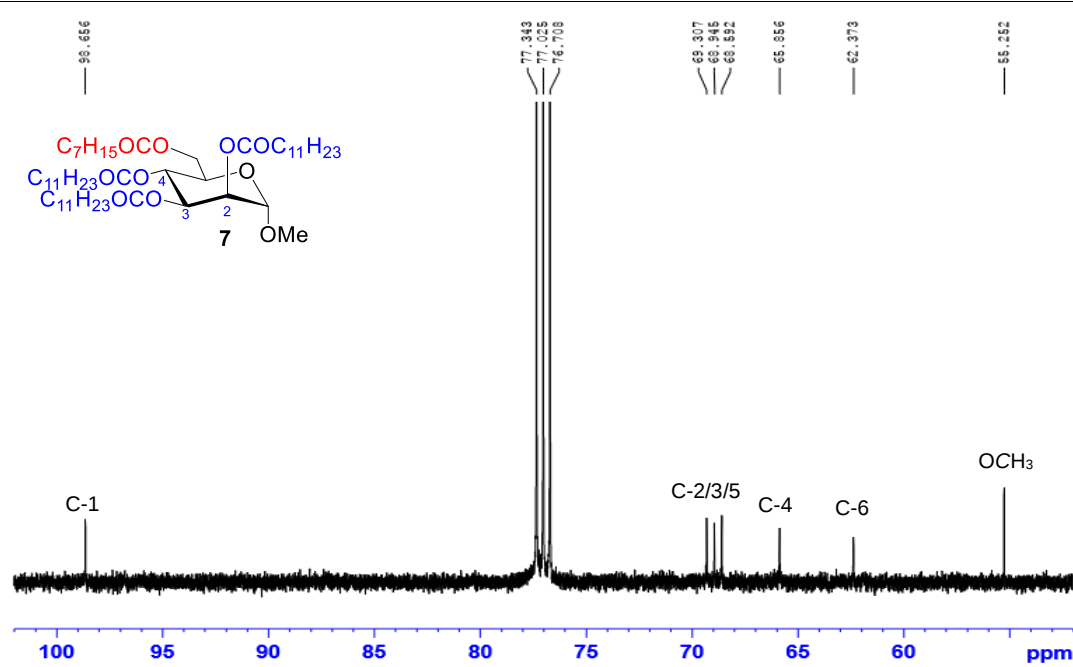


Fig. S37. ¹³C NMR (100 MHz, CDCl₃) spectrum of 7 (expansion).

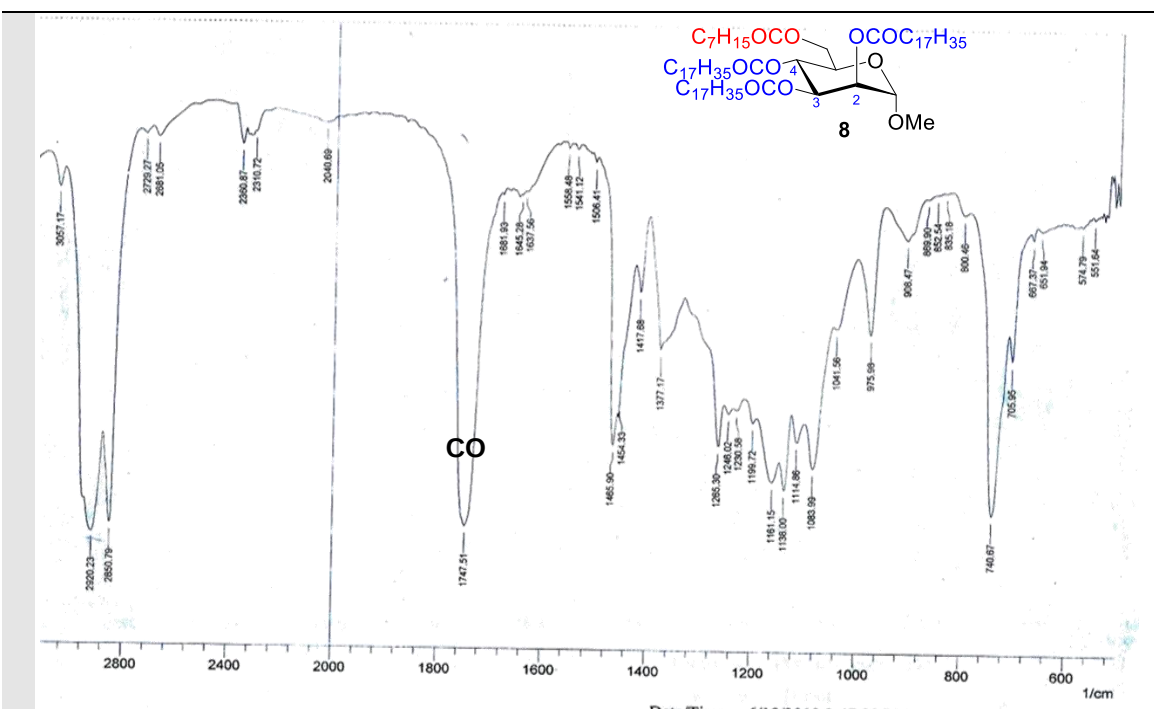


Fig. S38. FT-IR (CHCl_3) spectrum of compound 8.

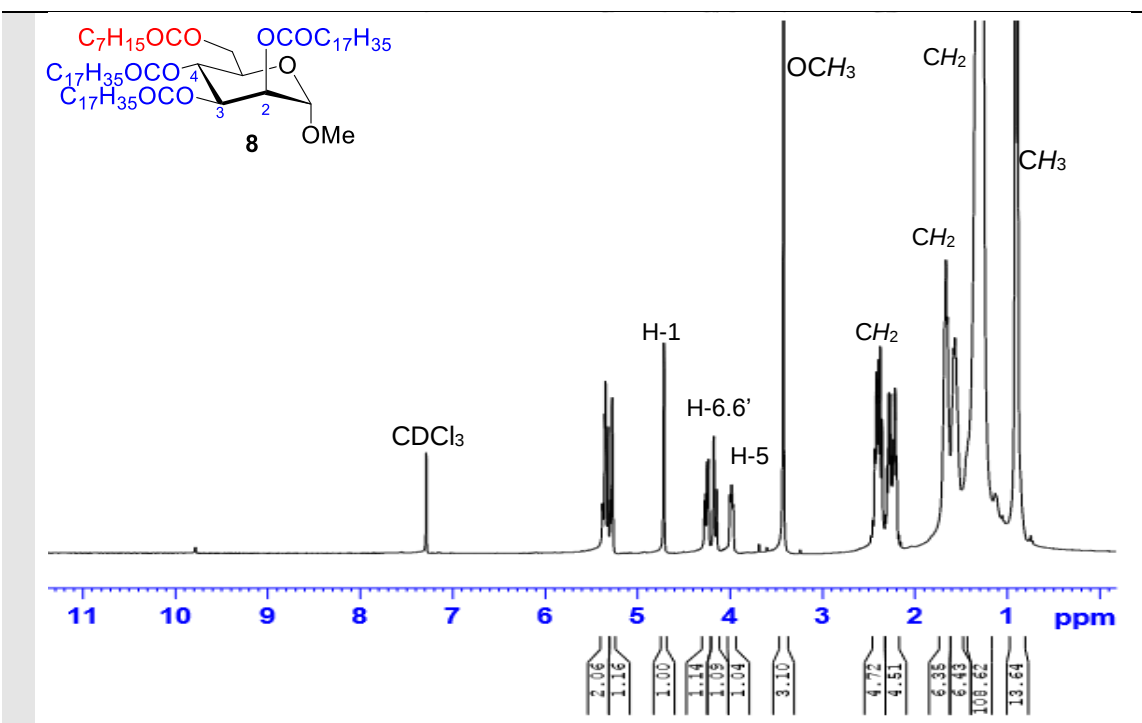


Fig. S39. ^1H NMR (400 MHz, CDCl_3) spectrum of compound 8.

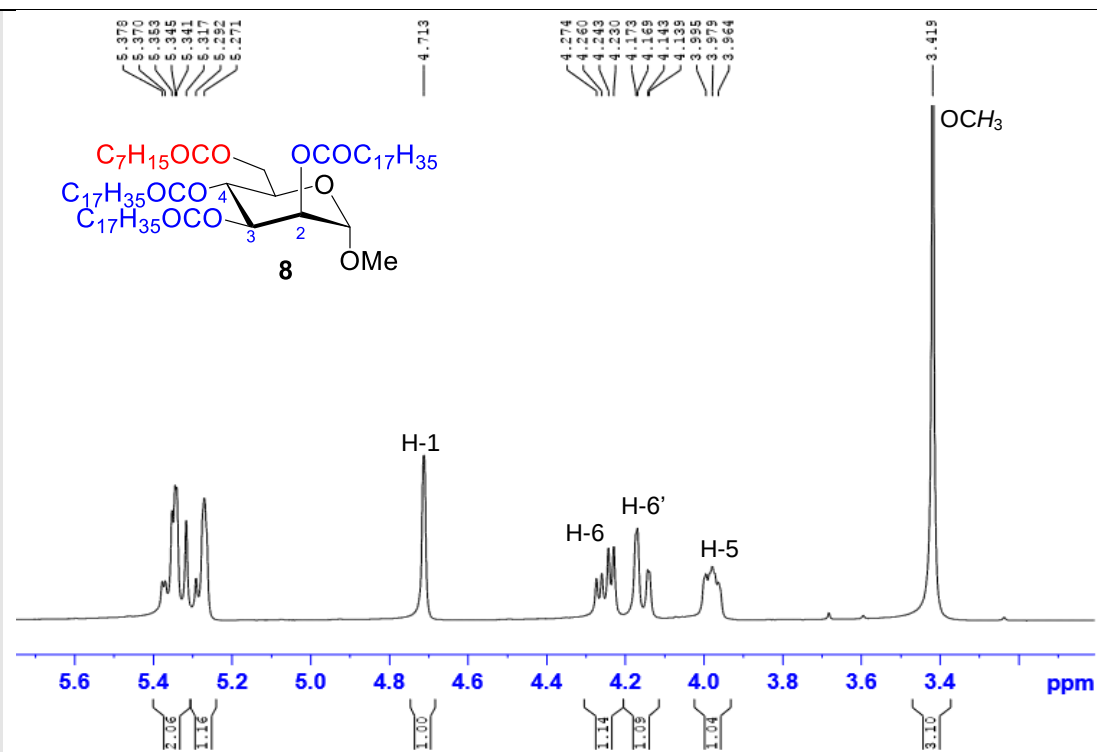


Fig. S40. ^1H NMR (400 MHz, CDCl_3) spectrum of compound **8** (expansion).

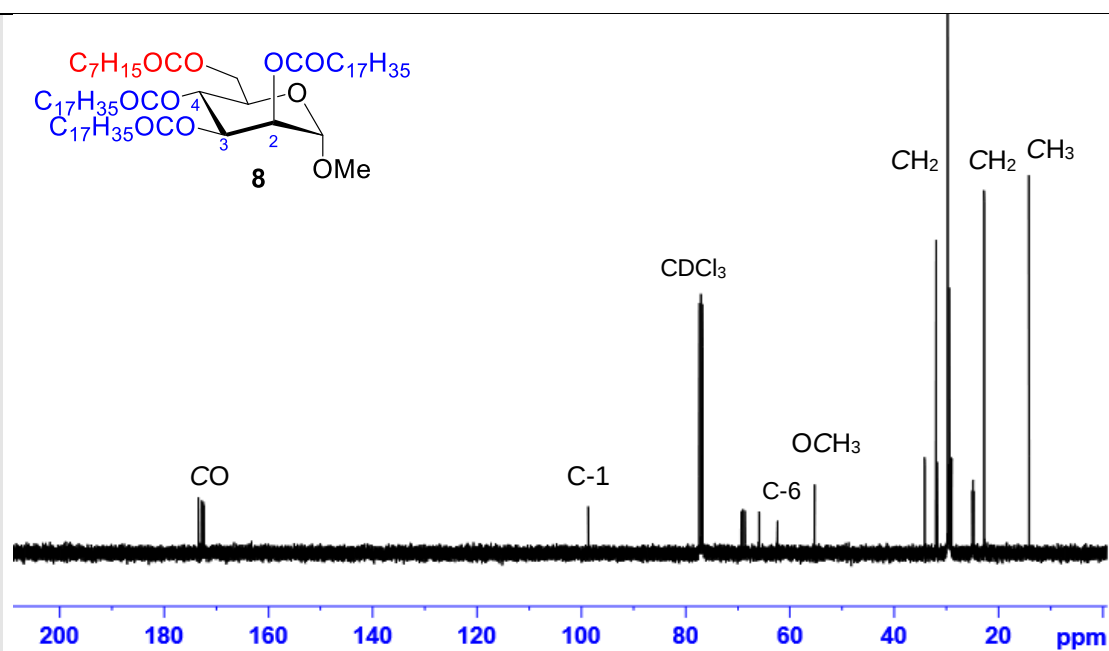
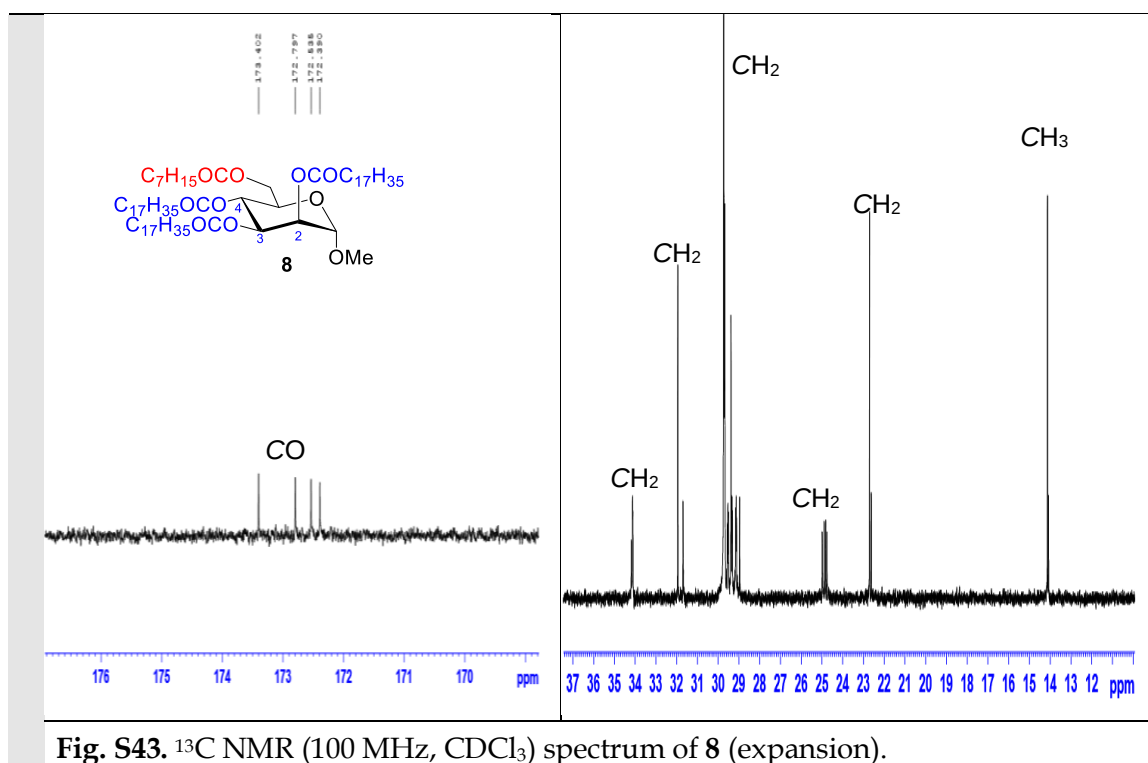
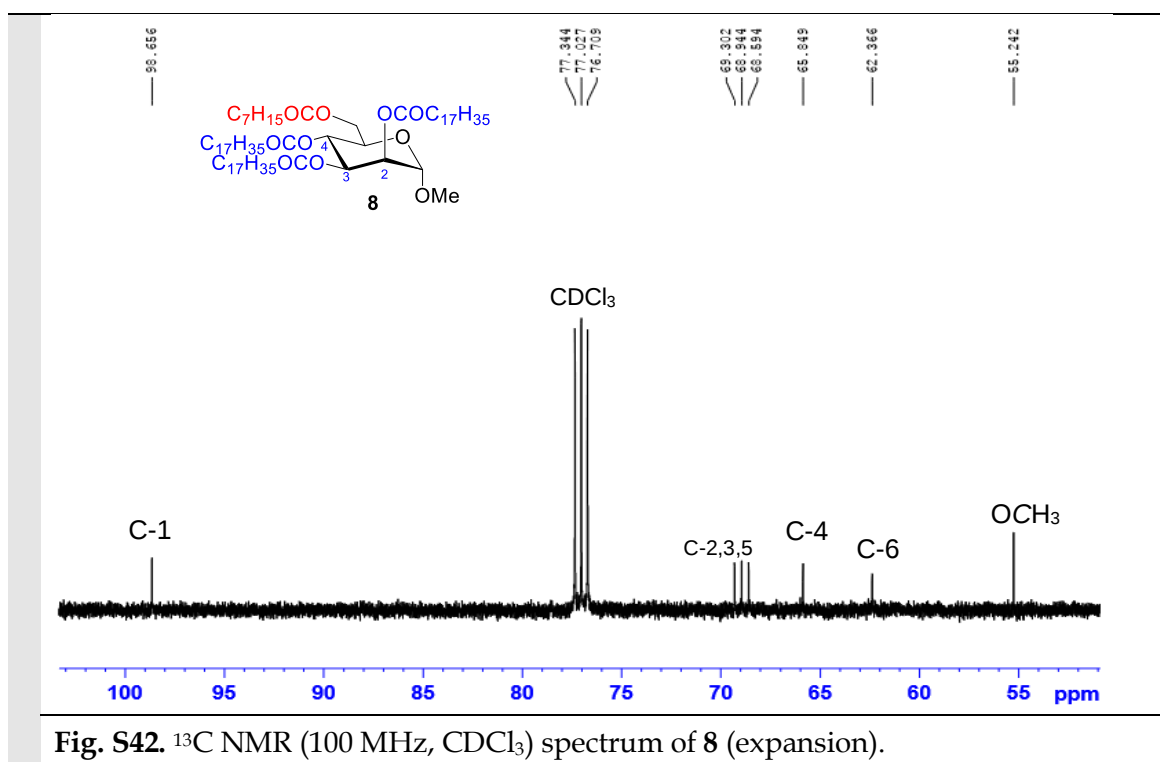


Fig. S41. ^{13}C NMR (100 MHz, CDCl_3) spectrum of compound **8**.



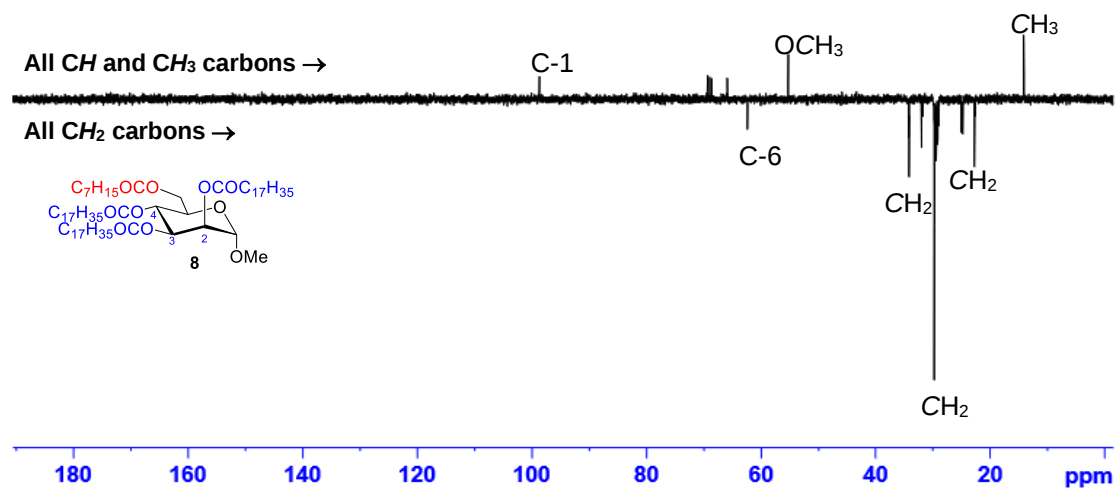


Fig. S44. DEPT-135 (CDCl₃) spectrum of compound 8.

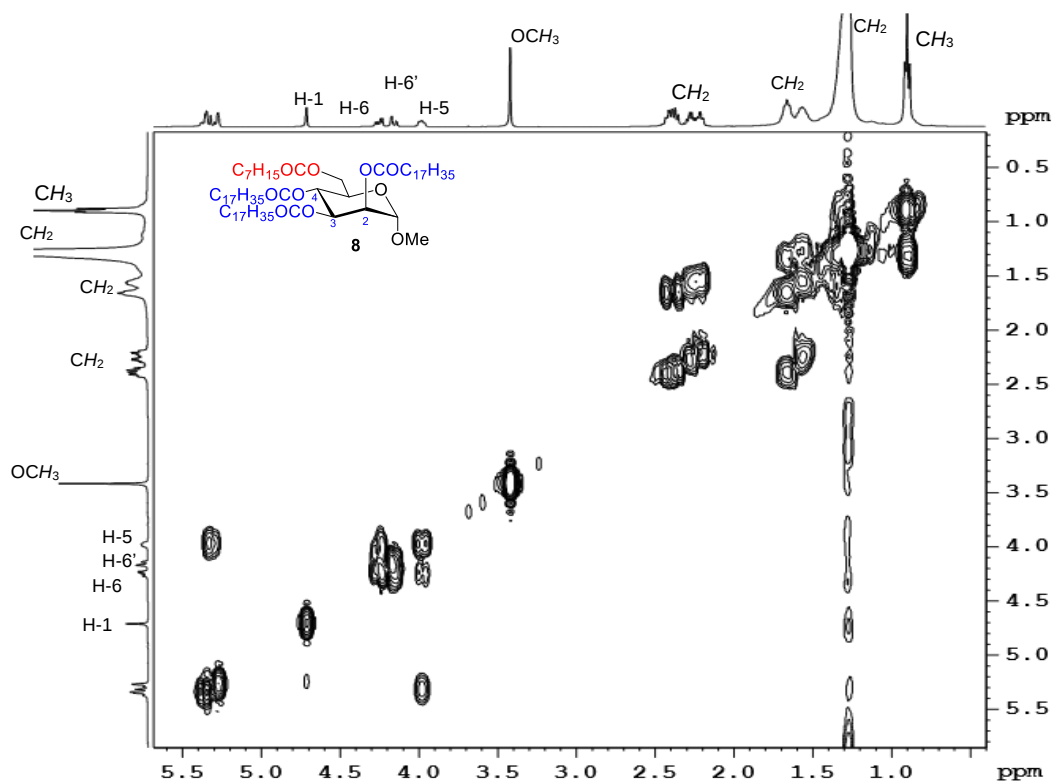


Fig. S45. 2D COSY (CDCl₃) spectrum of compound 8.

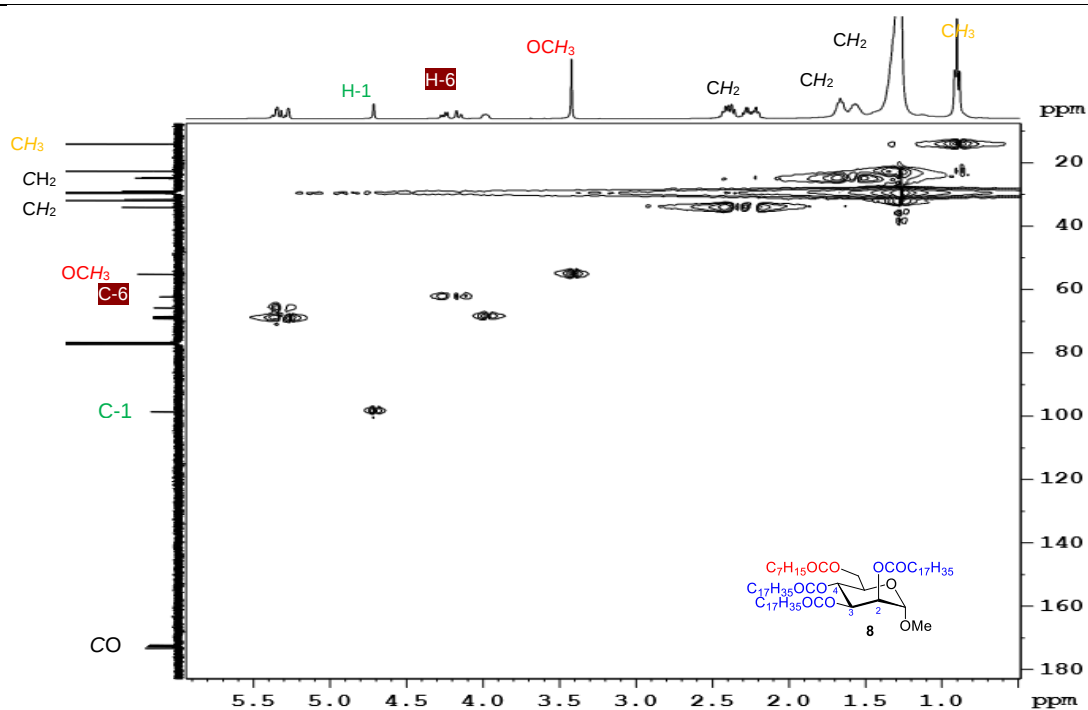


Fig. S46. 2D HSQC (CDCl_3) spectrum of compound **8**.

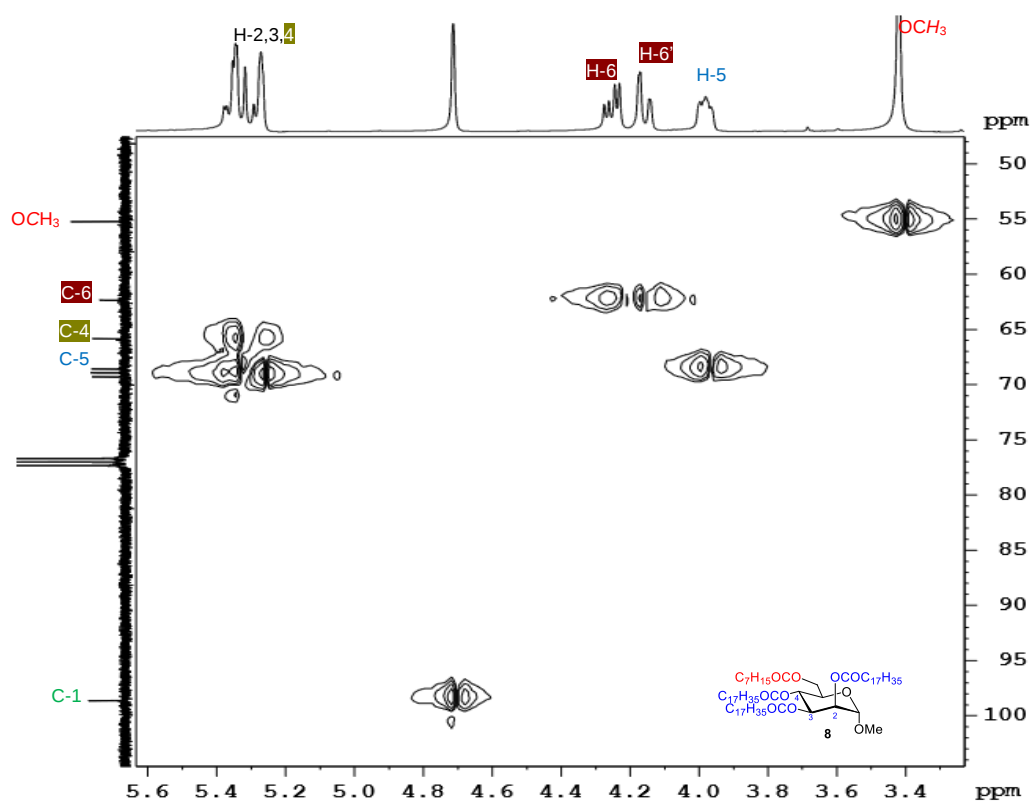


Fig. S47. 2D HSQC (CDCl_3) spectrum of compound **8** (expansion).

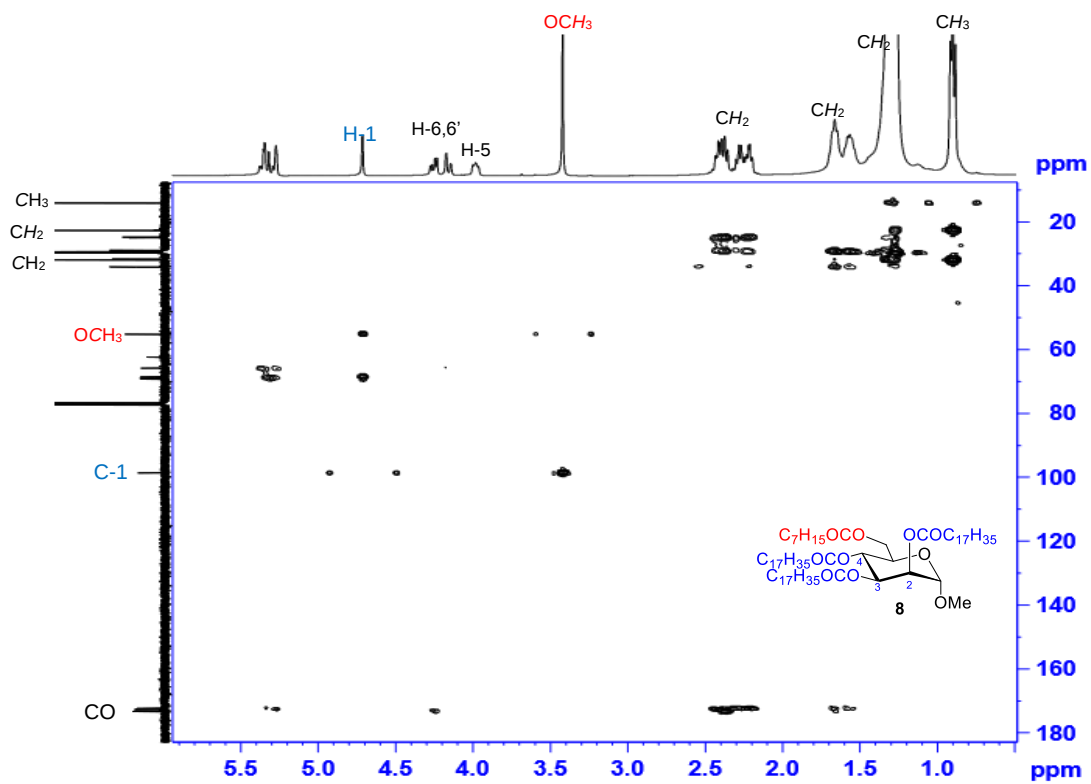


Fig. S48. 2D HMBC (CDCl_3) spectrum of compound 8.

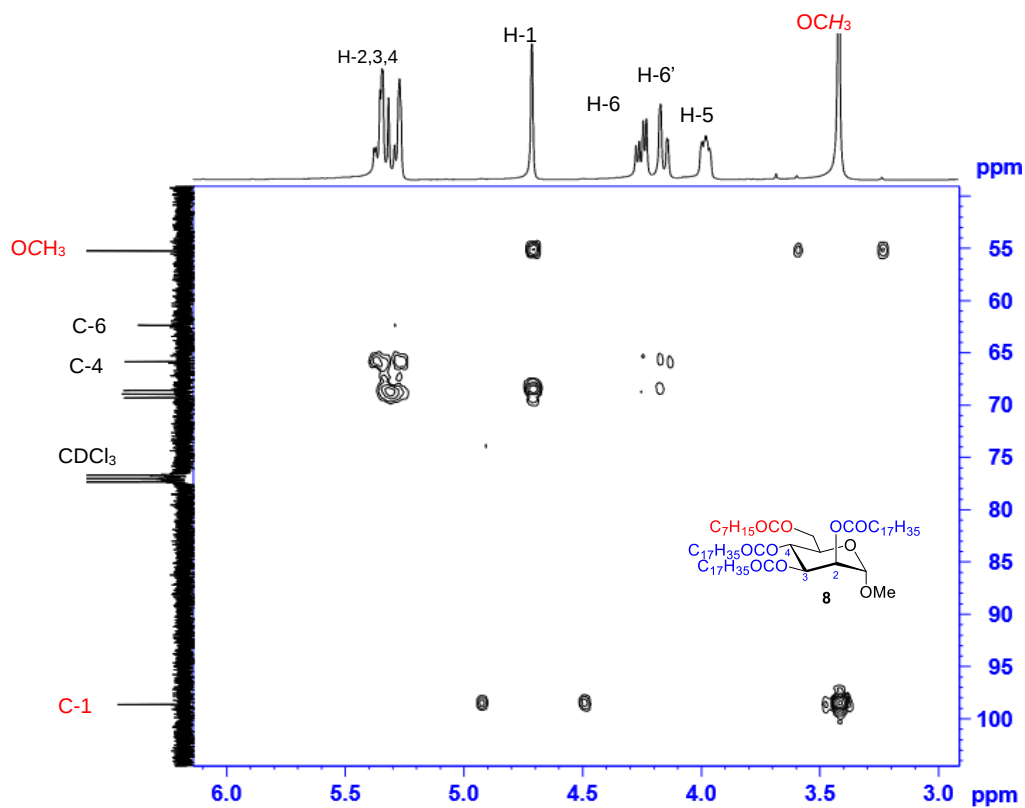


Fig. S49. 2D HMBC (CDCl₃) spectrum of compound 8 (expansion).

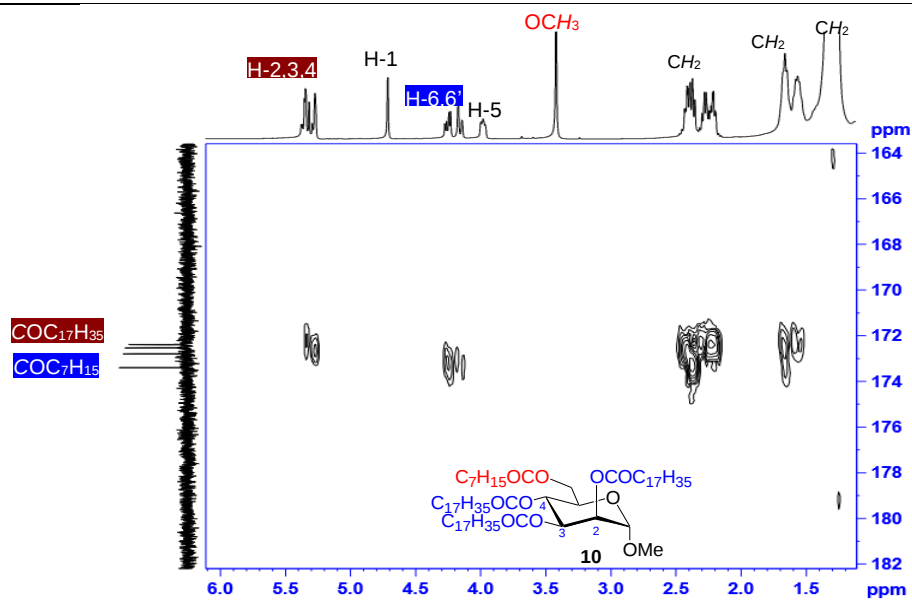


Fig. S50. 2D HMBC (CDCl₃) spectrum of compound 8 (expansion).