

## Supporting Information

### **Synthesis and evaluation of three azide-modified disaccharide oxazolines as enzyme substrates for single-step Fc glycan-mediated antibody-drug conjugation**

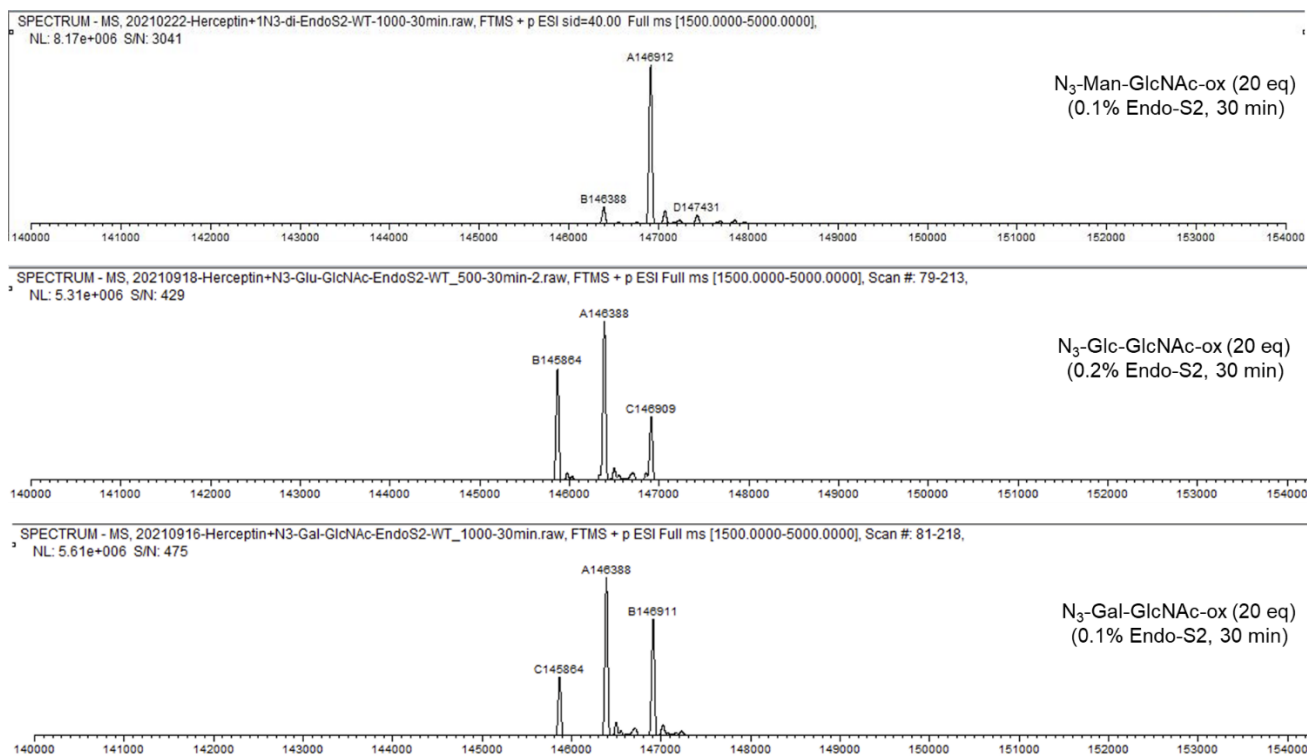
Xiao Zhang, Chong Ou, Huiying Liu, Lai-Xi Wang \*

Department of Chemistry and Biochemistry, University of Maryland, 8051 Regents Drive, College Park, Maryland 20742, United States.

\*Corresponding author: Email: [wang518@umd.edu](mailto:wang518@umd.edu)

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**Figure S1. LC-MS tracking of the transglycosylation reactions with azido-sugar oxazolines.**

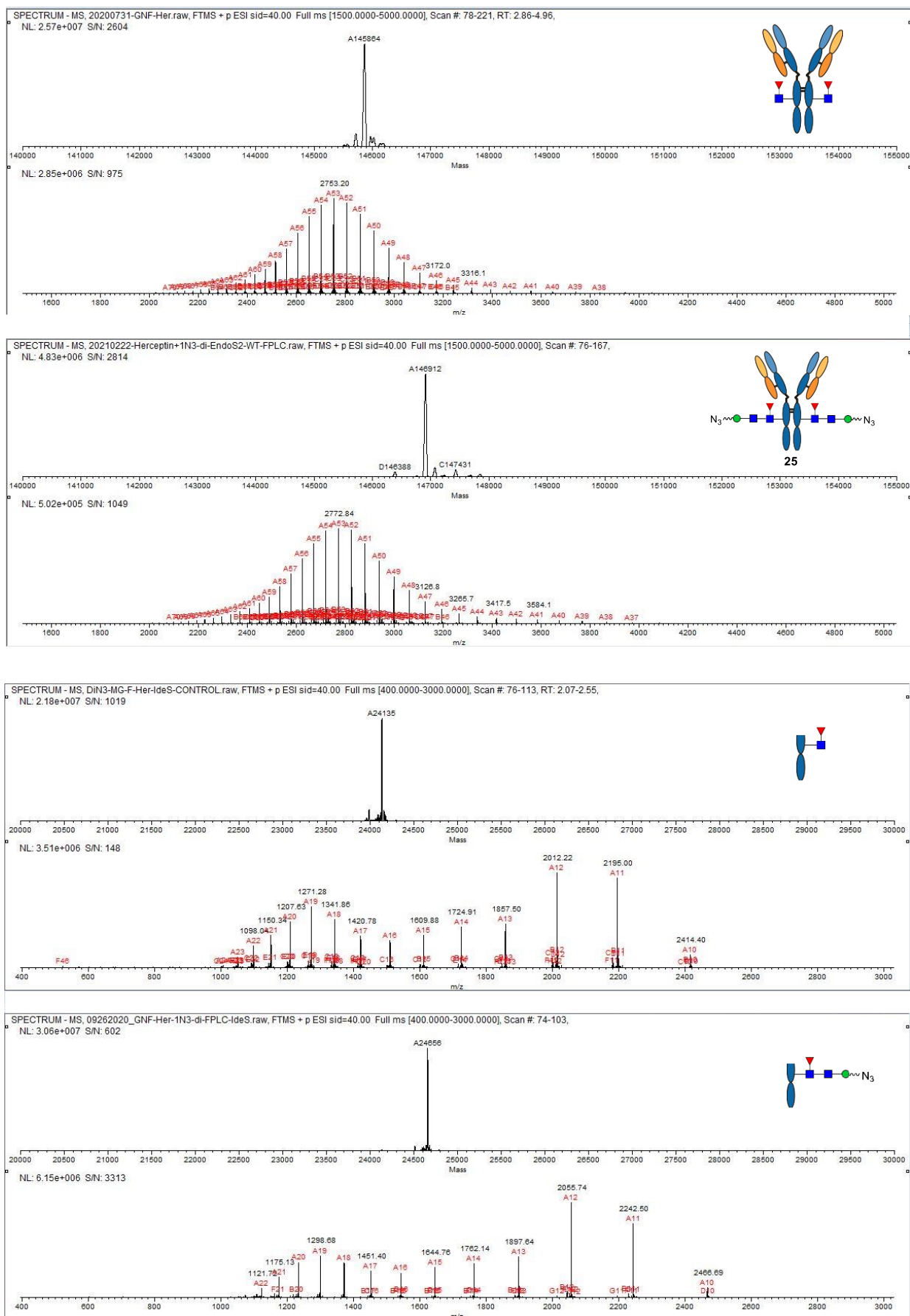


Figure S2. LC-MS analysis of compound 25.

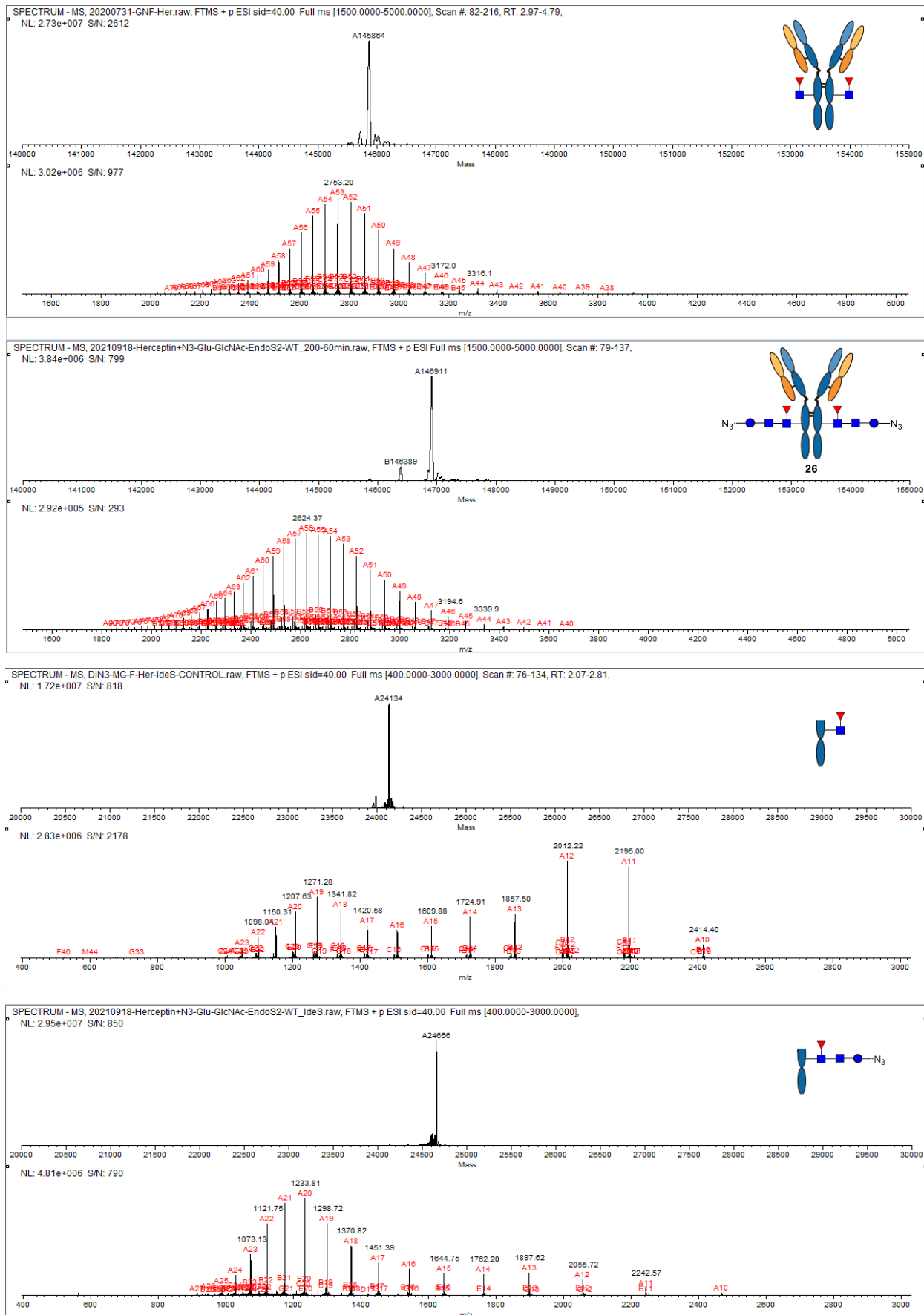


Figure S3. LC-MS analysis of compound 26.

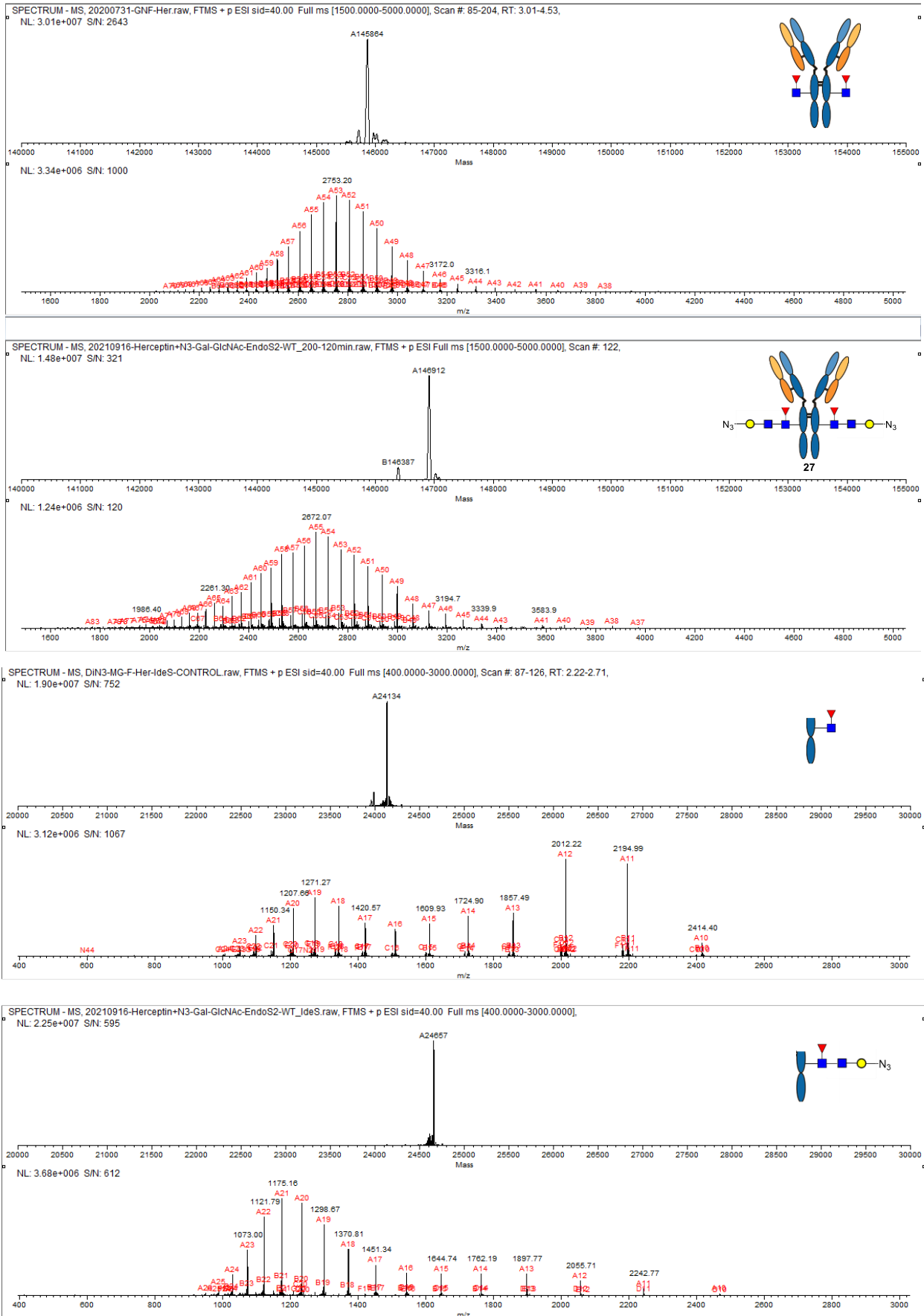
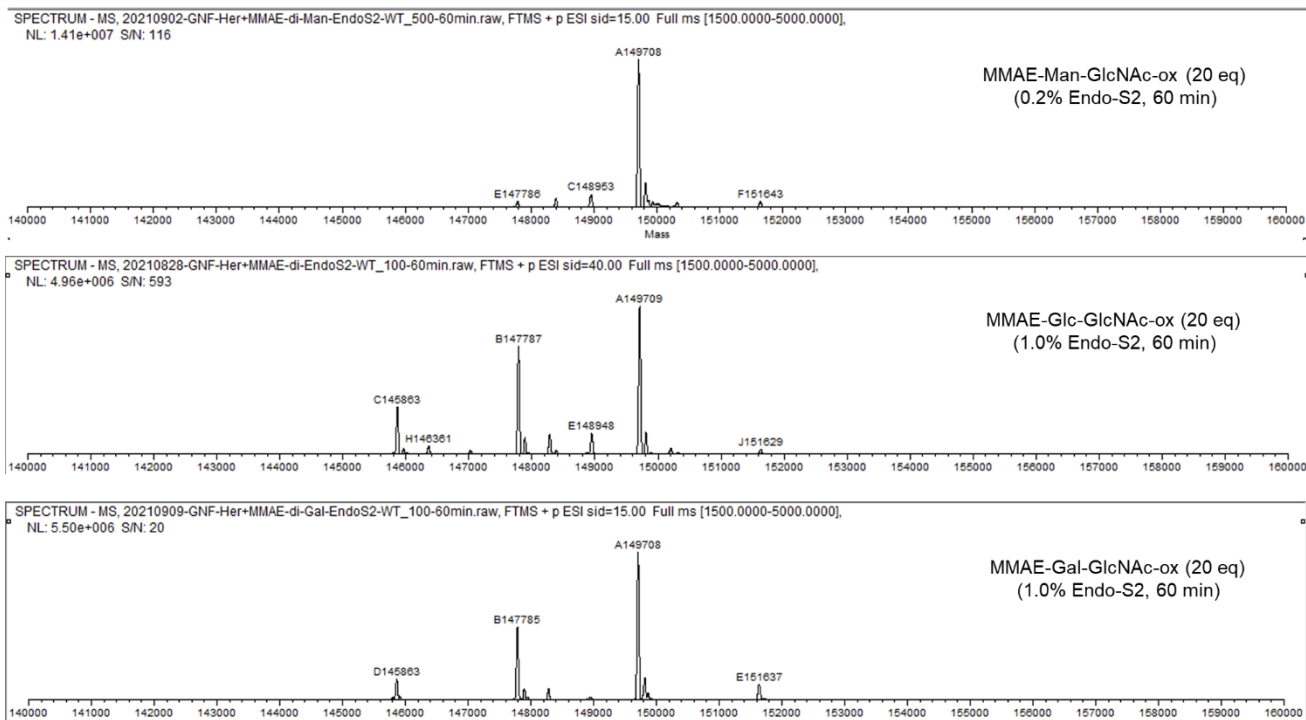


Figure S4. LC-MS analysis of compound 27.



**Figure S5. LC-MS tracking of the transglycosylation reactions with drug-sugar oxazolines.**

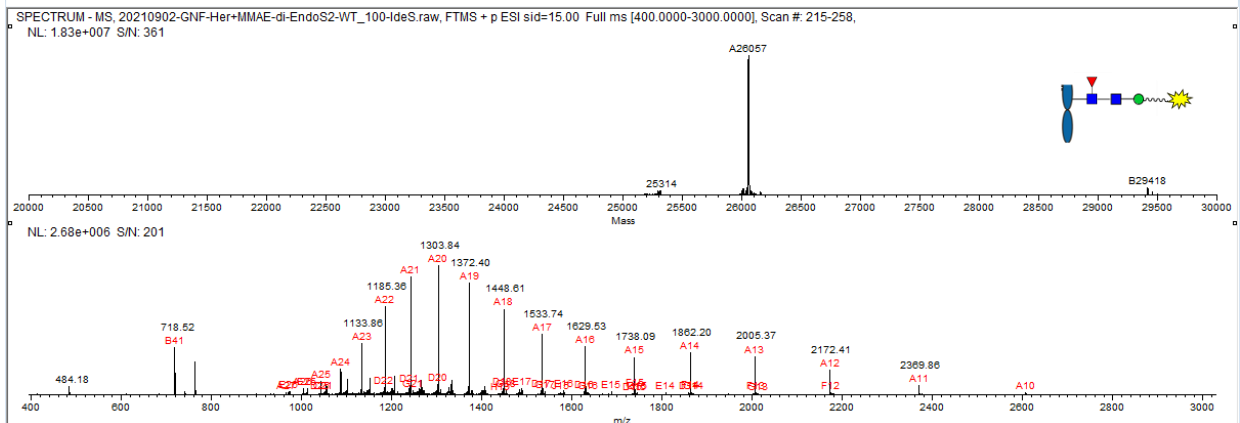
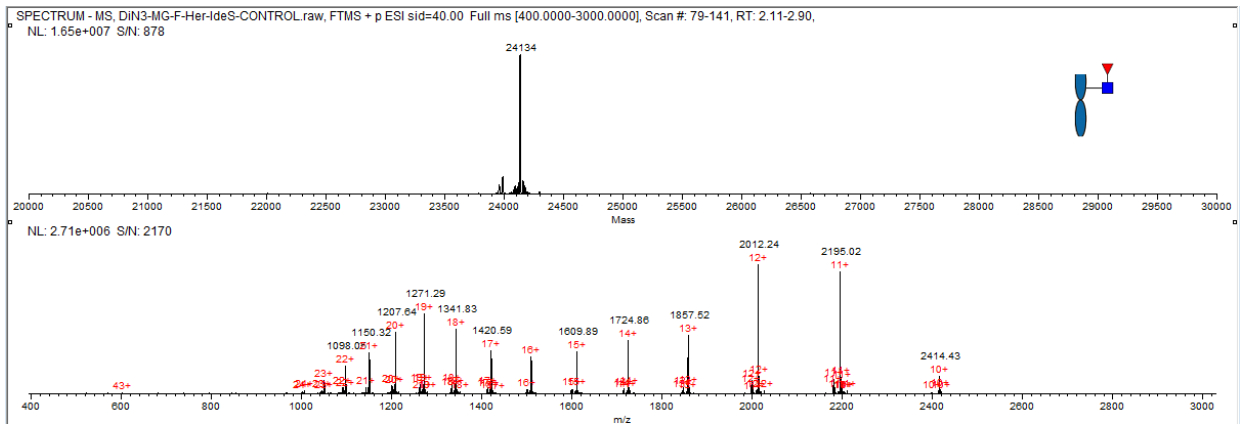
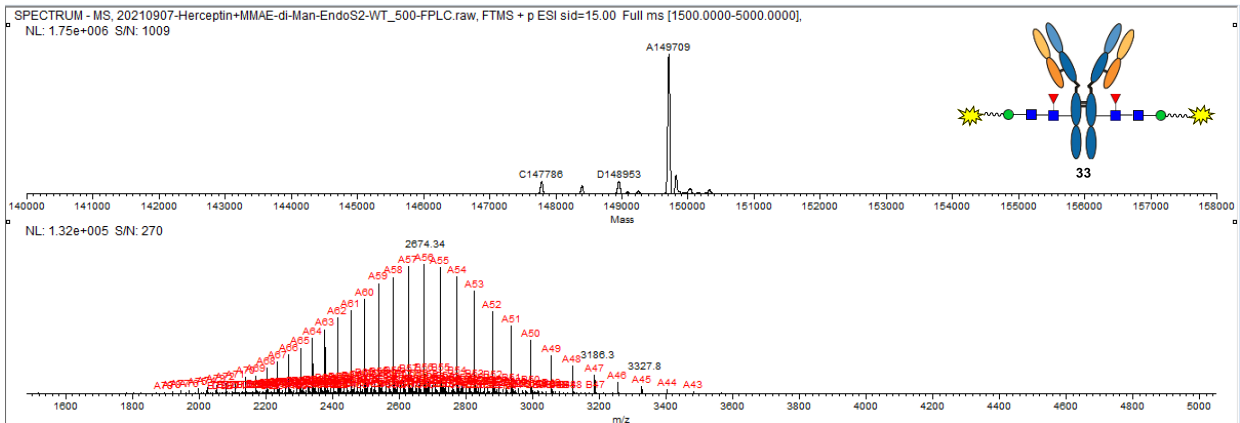
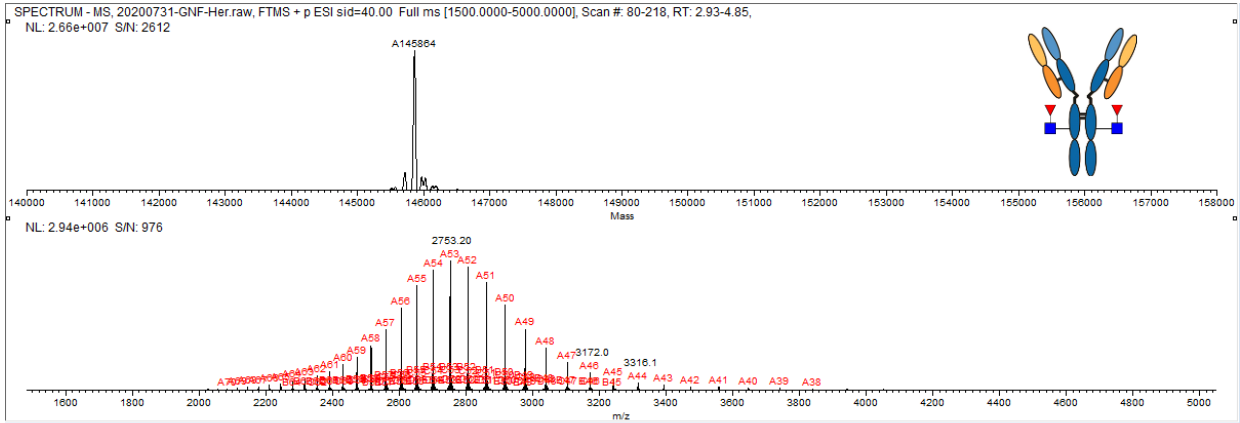


Figure S6. LC-MS analysis of compound 33.



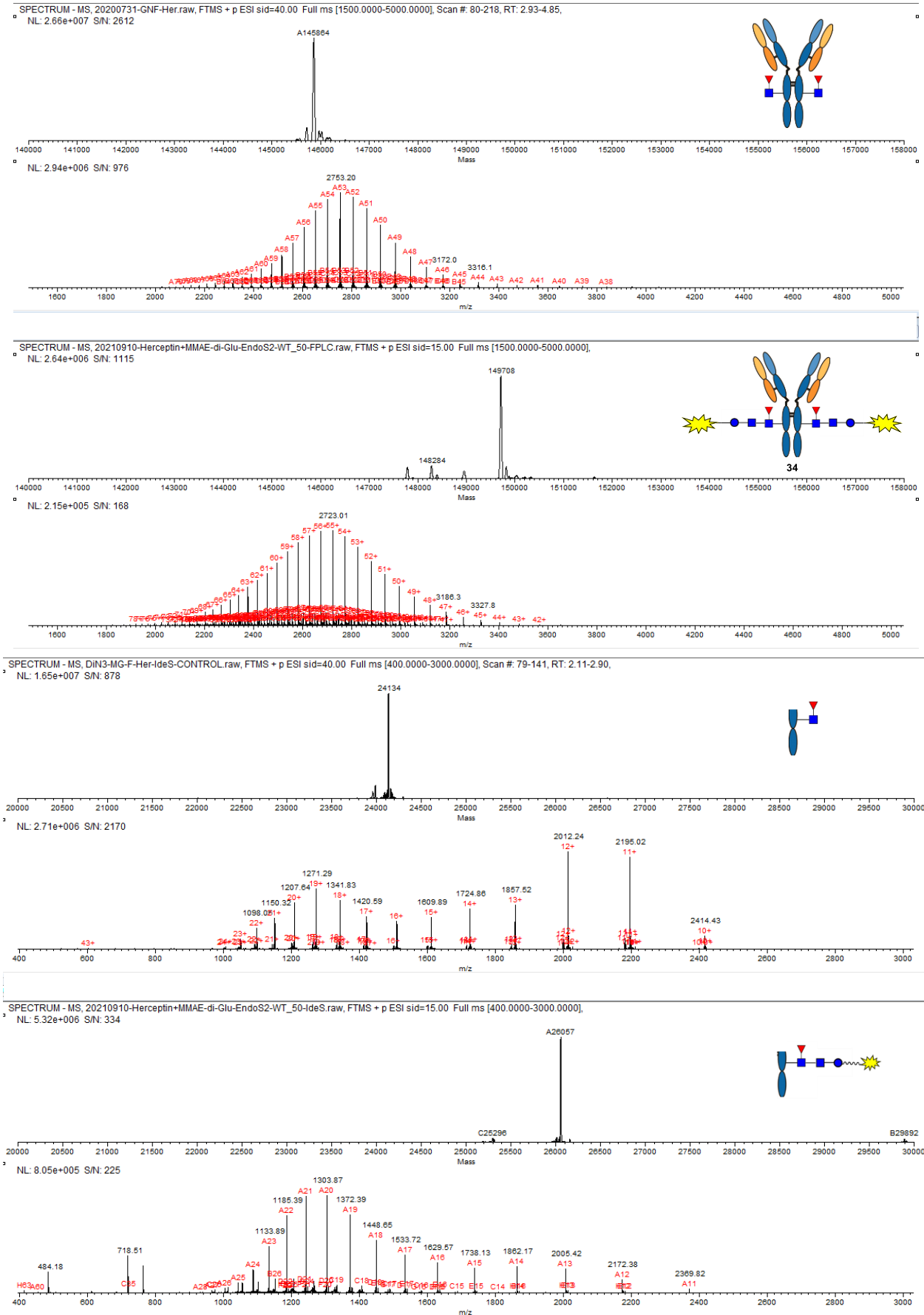


Figure S7. LC-MS analysis of compound 34.

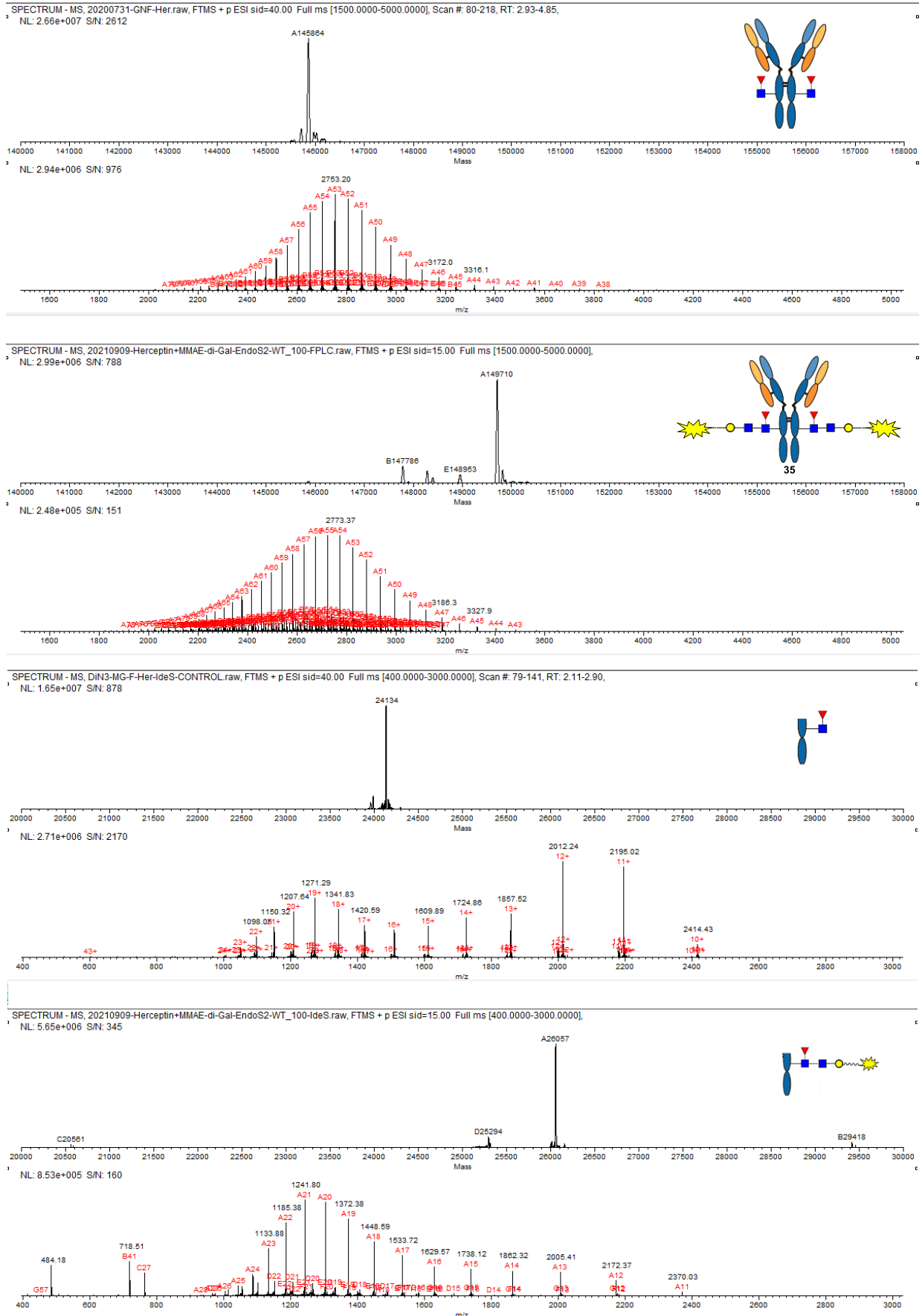
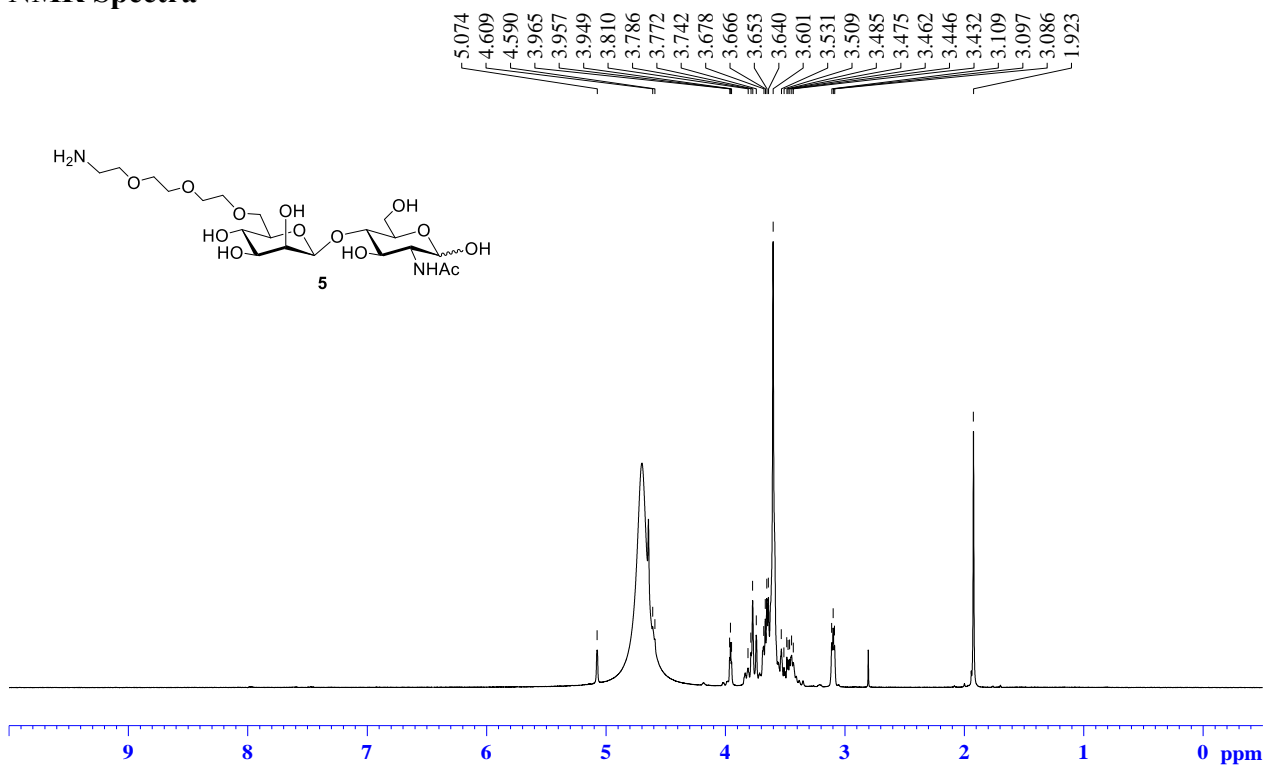
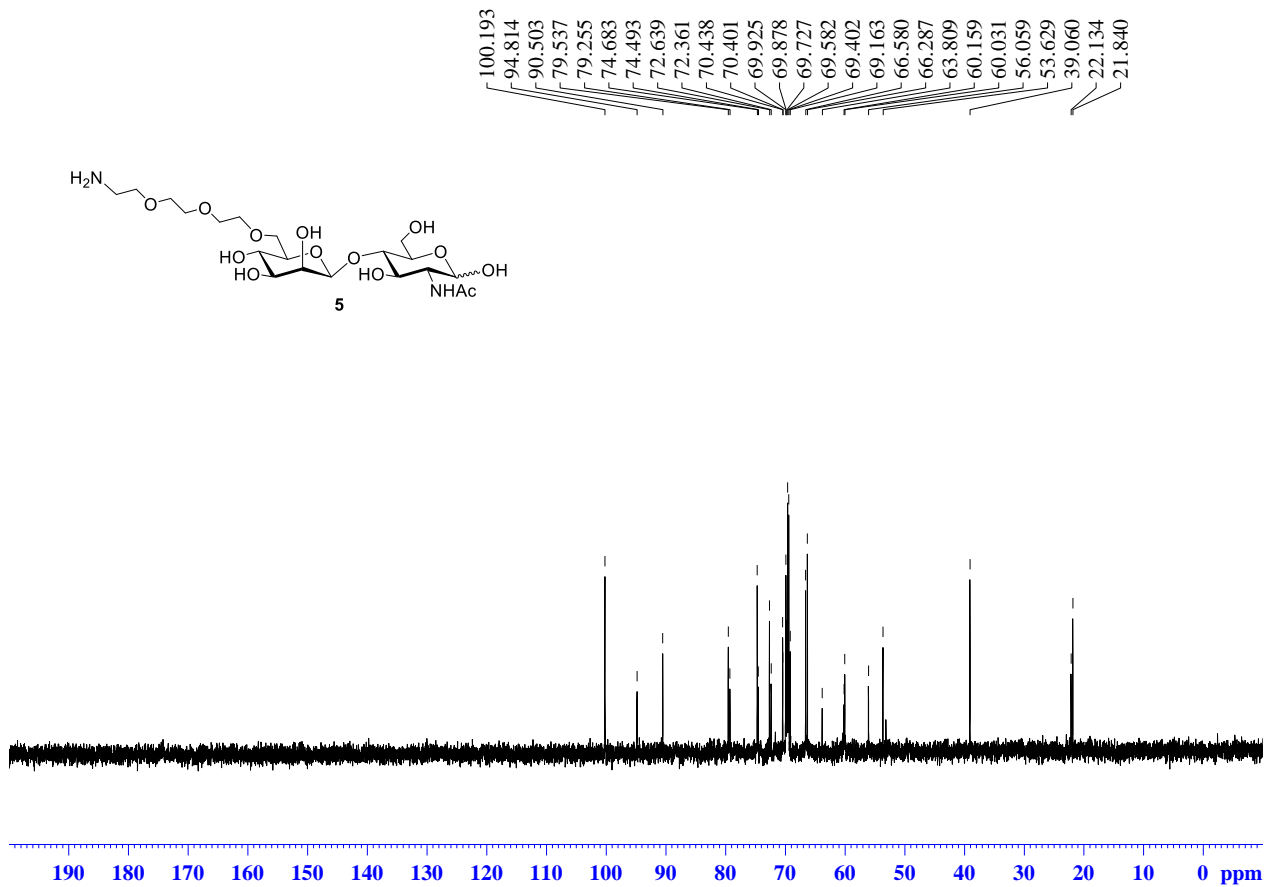


Figure S8. LC-MS analysis of compound 35.

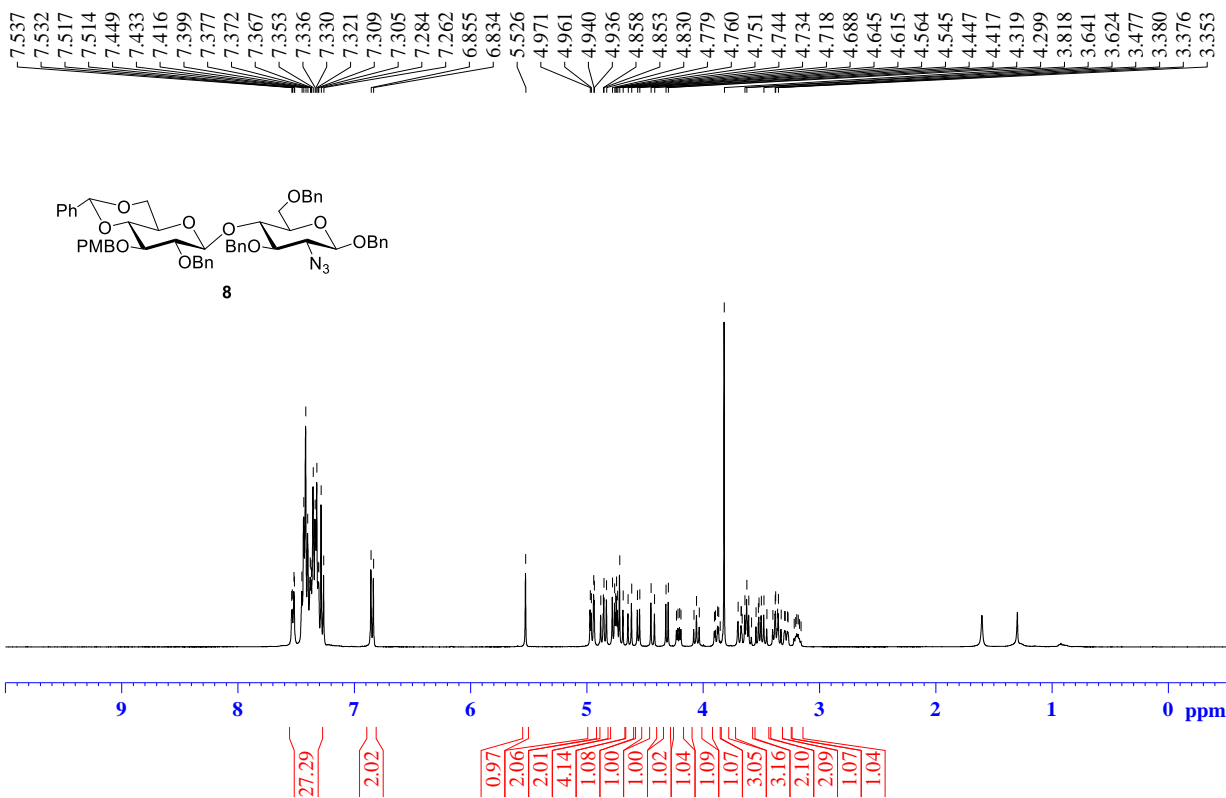
# NMR Spectra



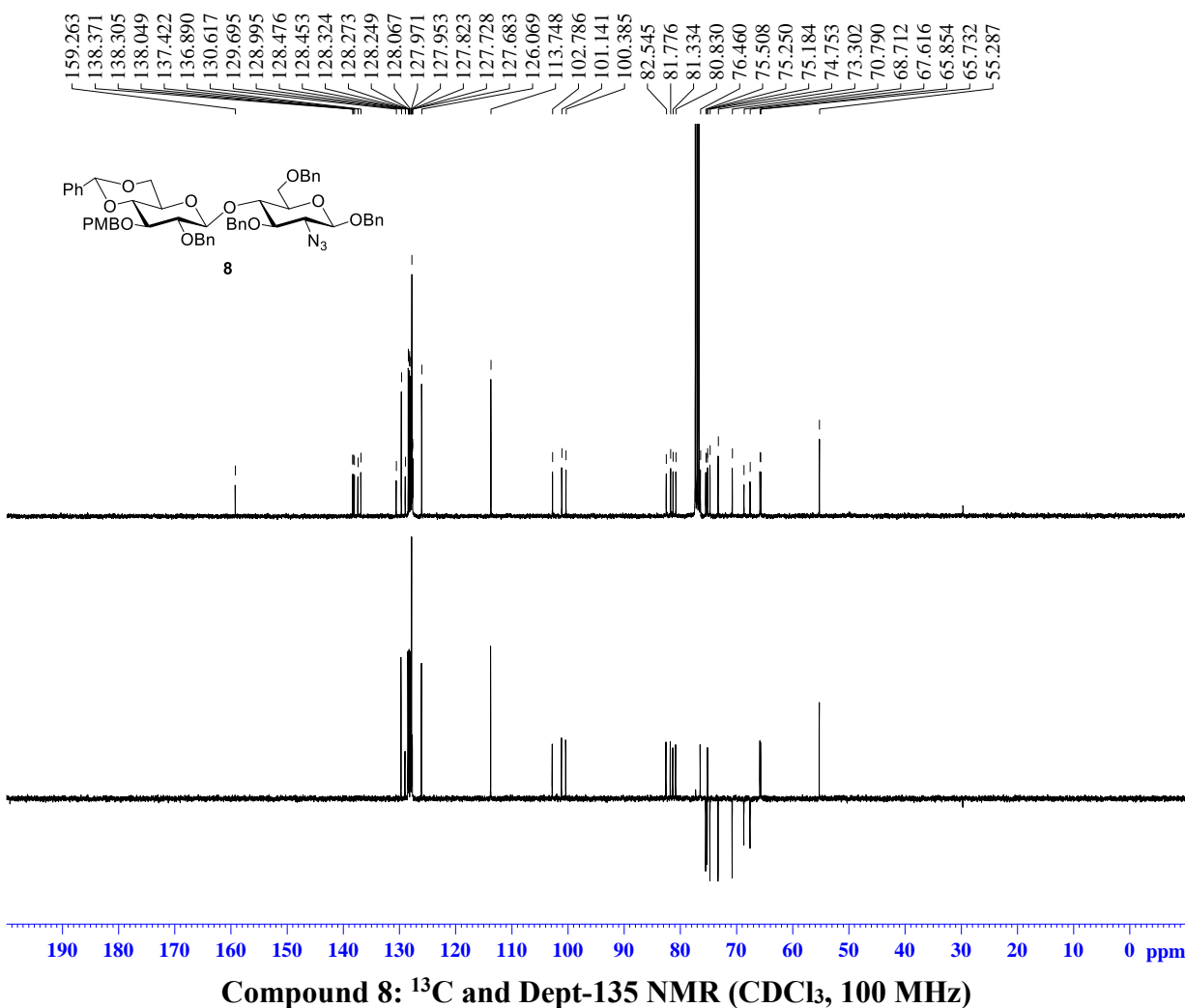
Compound 5: <sup>1</sup>H NMR (D<sub>2</sub>O, 400 MHz)



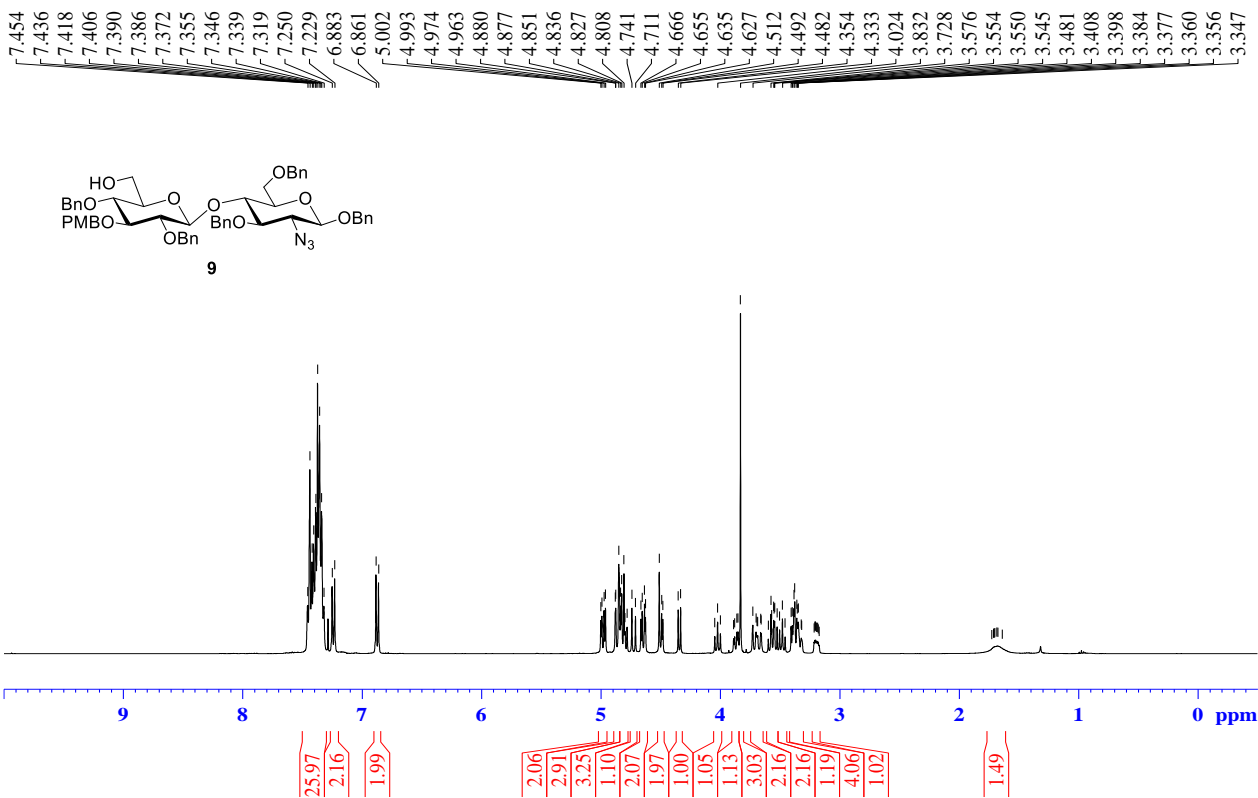
Compound 5: <sup>13</sup>C NMR (D<sub>2</sub>O, 100 MHz)



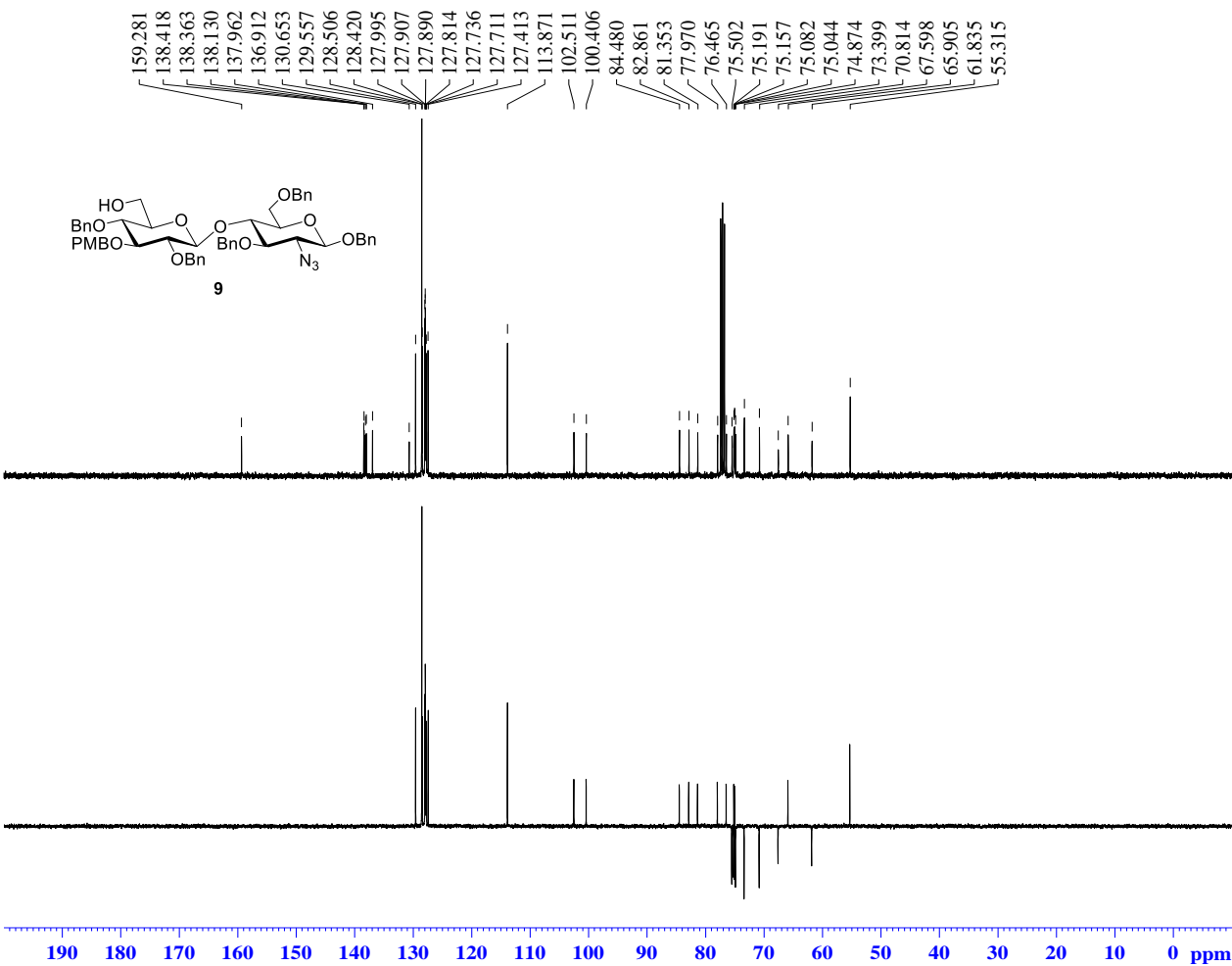
Compound 8:  $^1\text{H}$  NMR ( $\text{CDCl}_3$ , 400 MHz)



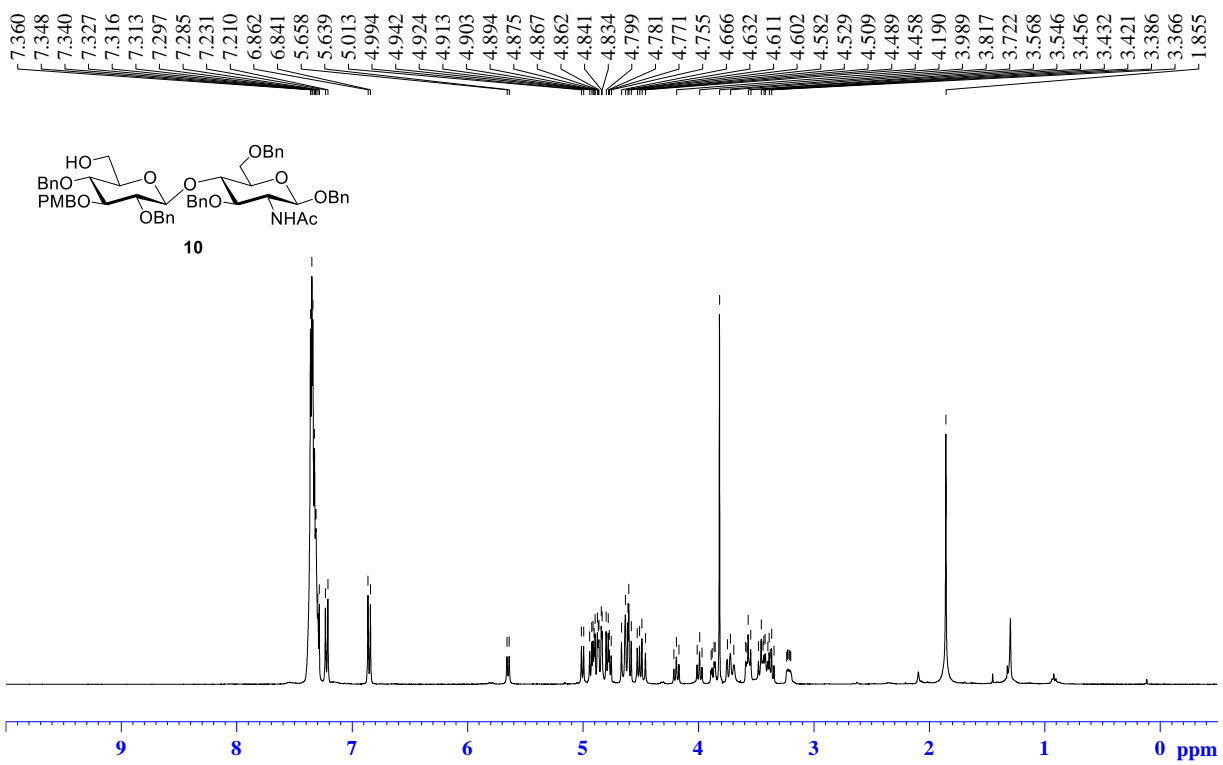
Compound 8:  $^{13}\text{C}$  and Dept- $^{135}\text{C}$  NMR ( $\text{CDCl}_3$ , 100 MHz)



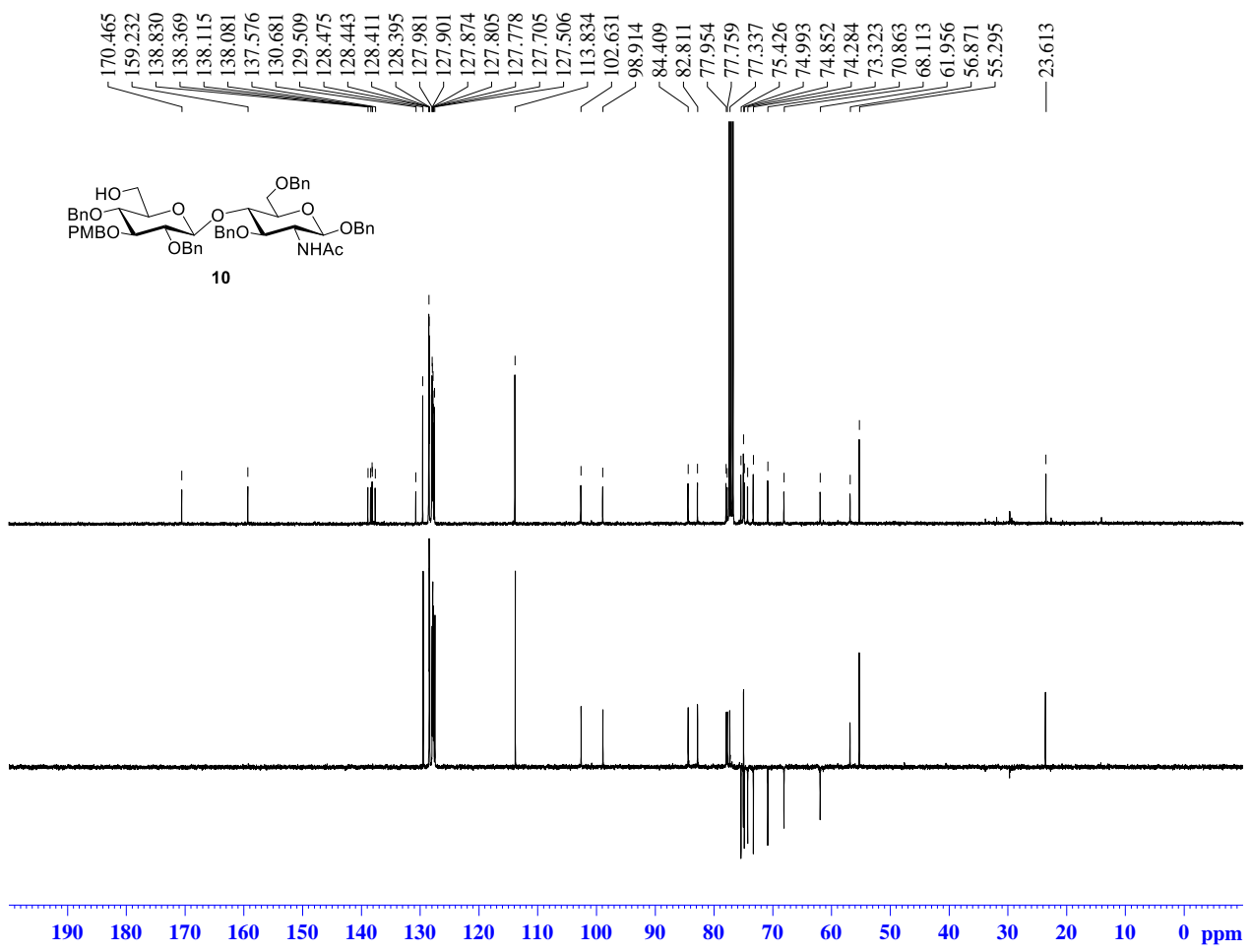
Compound 9:  $^1\text{H}$  NMR ( $\text{CDCl}_3$ , 400 MHz)



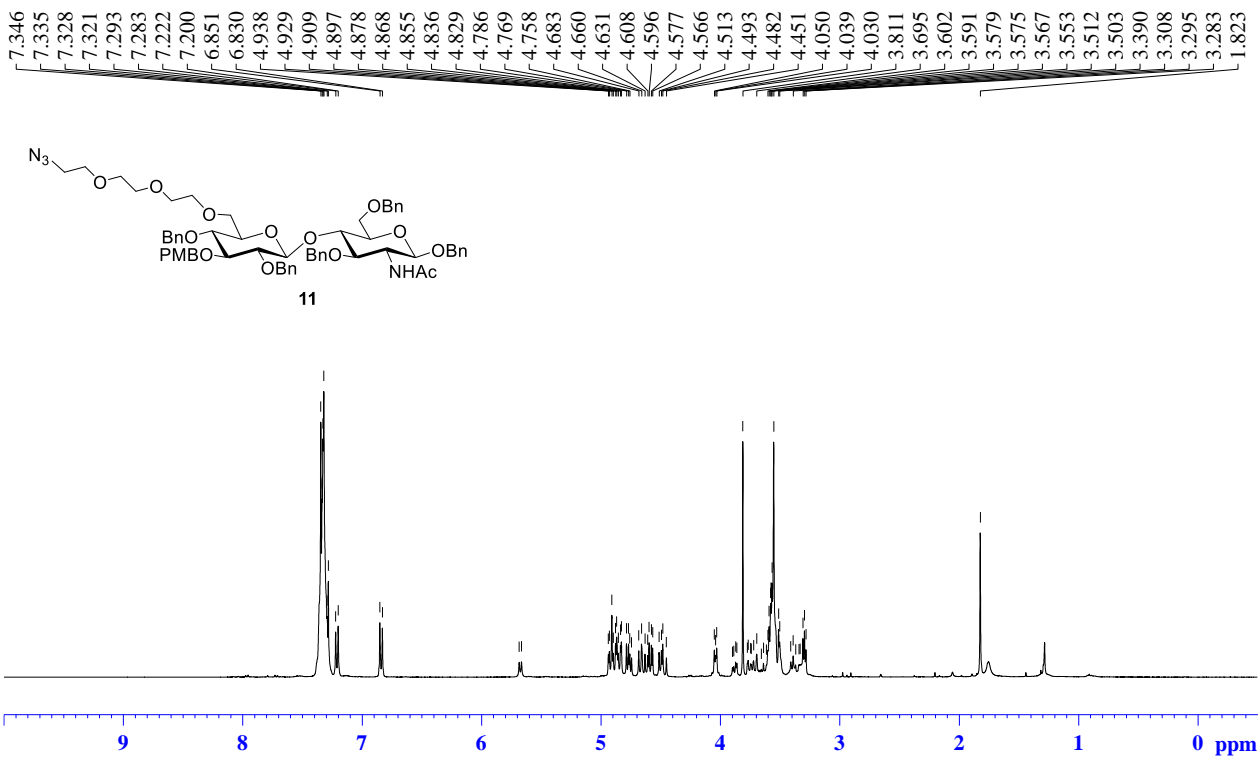
Compound 9:  $^{13}\text{C}$  and Dept-135 NMR ( $\text{CDCl}_3$ , 100 MHz)



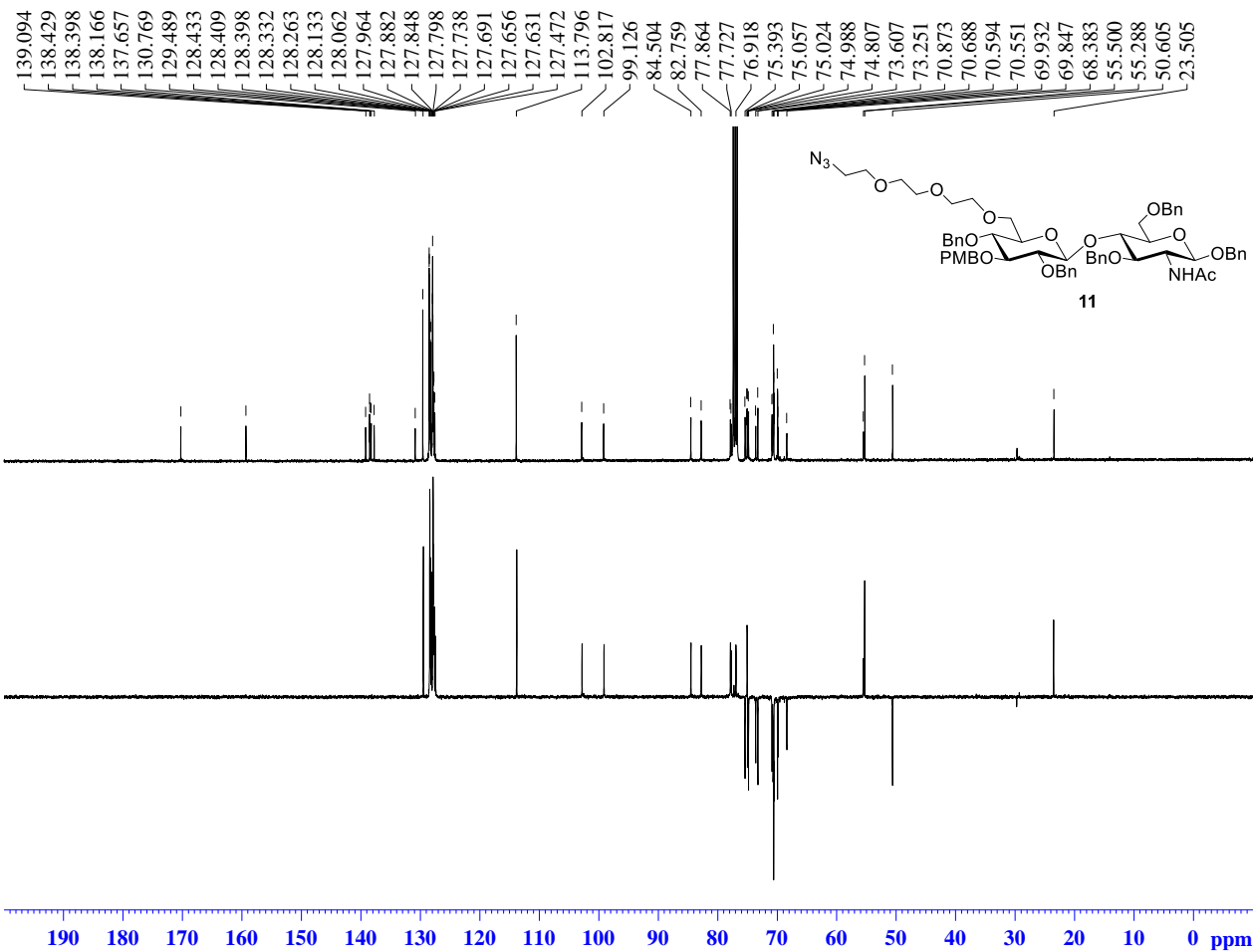
Compound 10: <sup>1</sup>H NMR (CDCl<sub>3</sub>, 400 MHz)



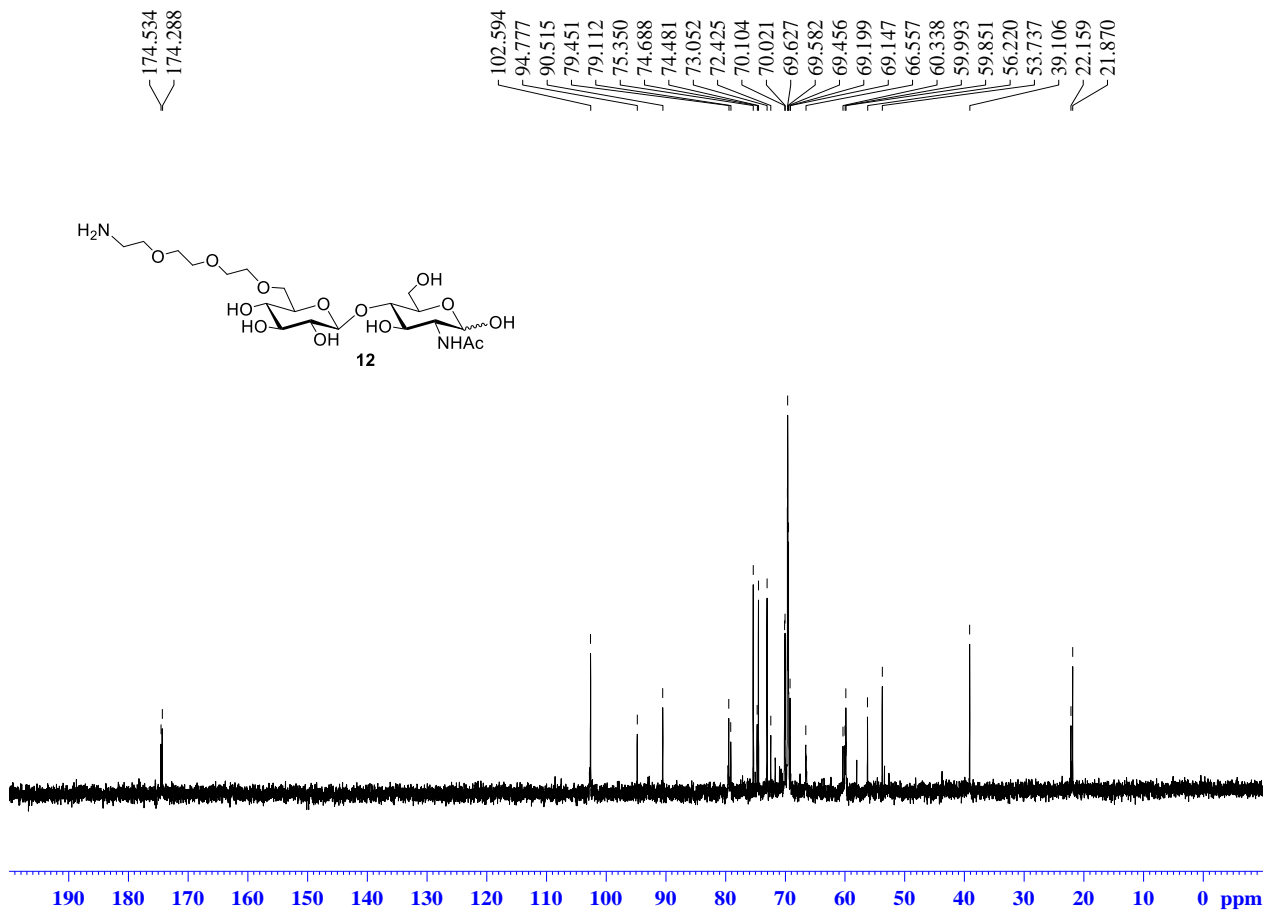
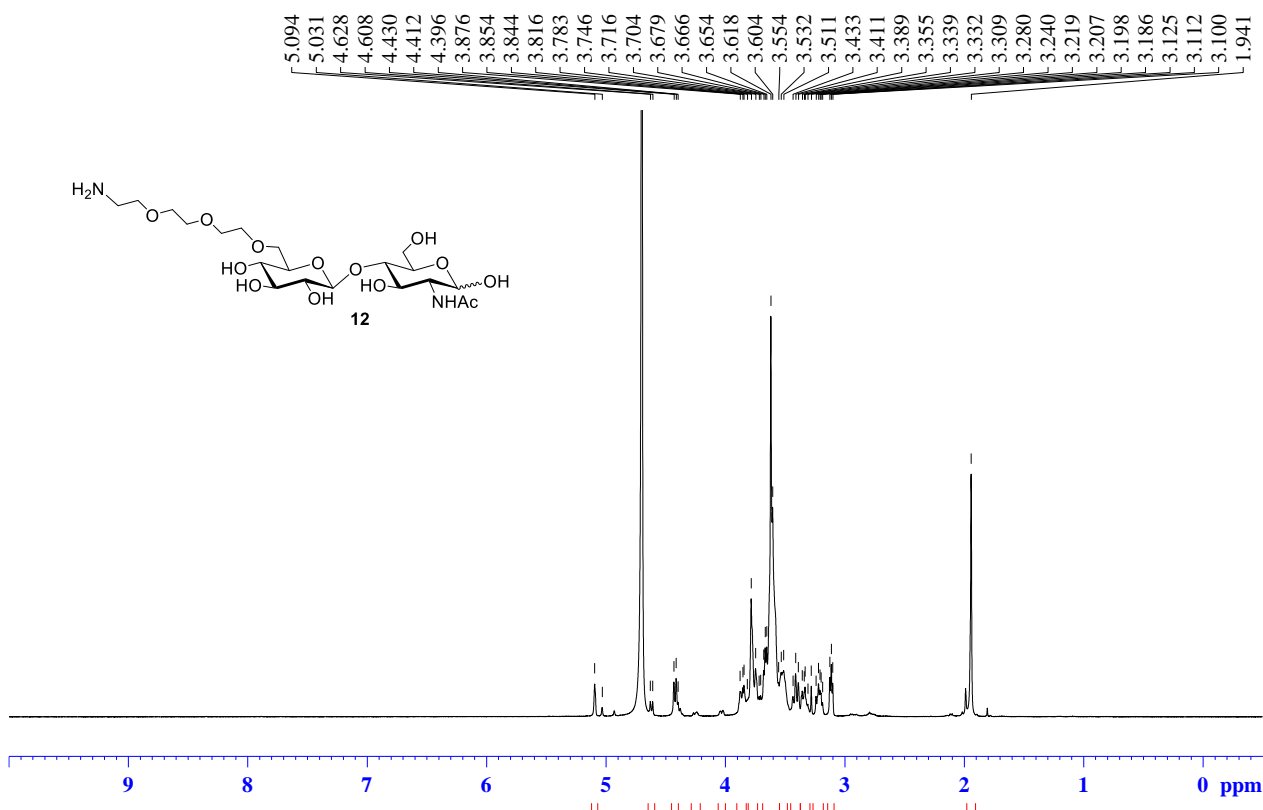
Compound 10: <sup>13</sup>C and Dept-135 NMR (CDCl<sub>3</sub>, 100 MHz)



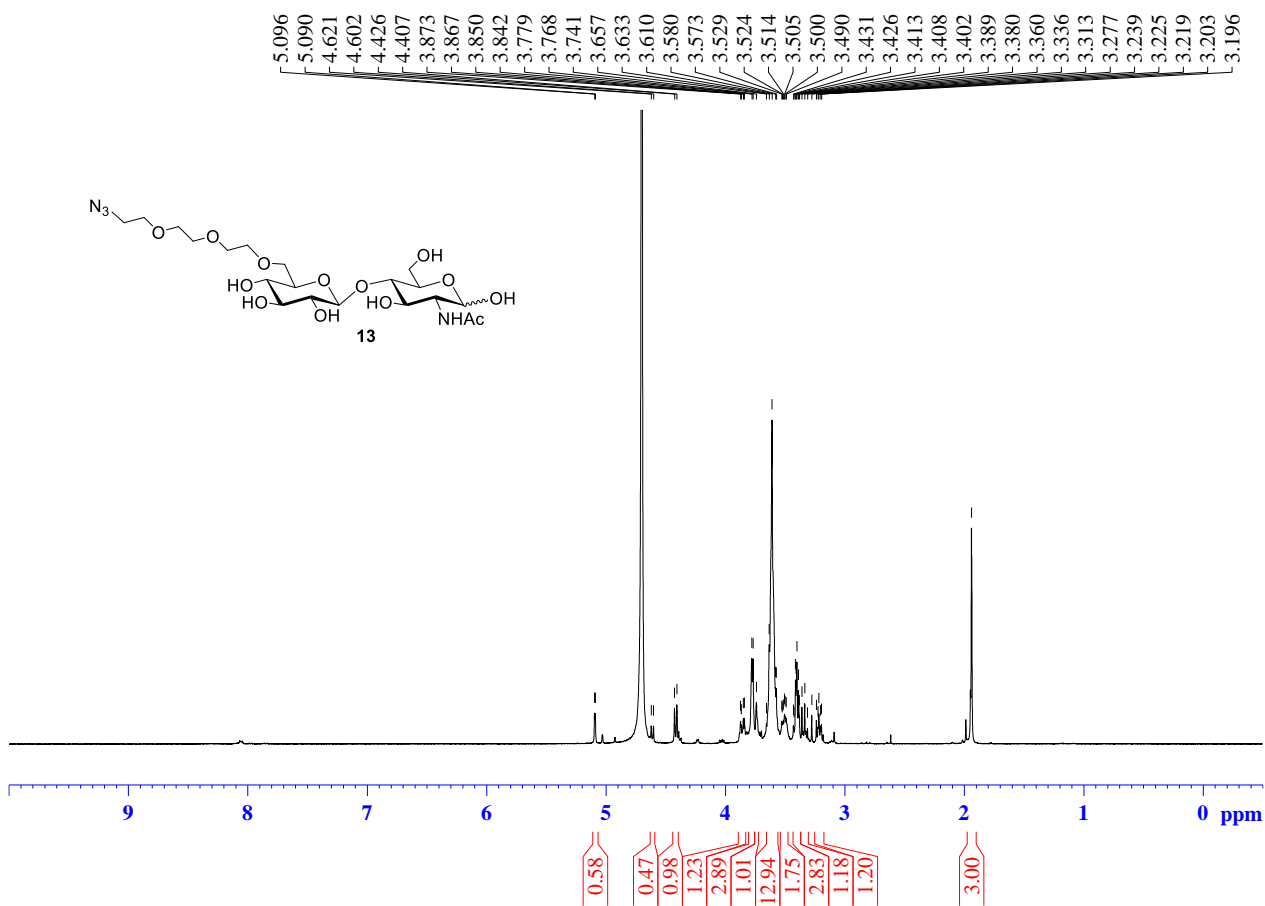
Compound 11: <sup>1</sup>H NMR (CDCl<sub>3</sub>, 400 MHz)



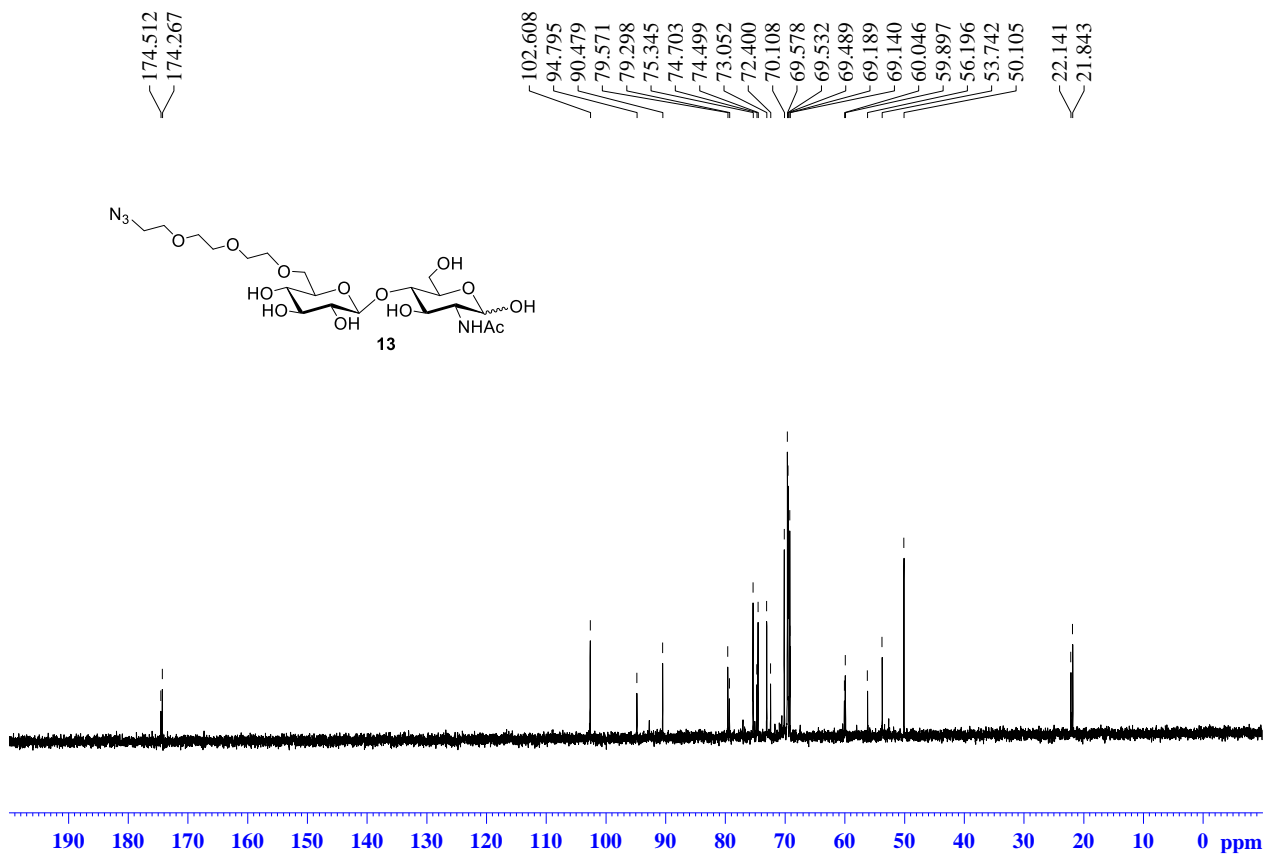
Compound 11: <sup>13</sup>C and Dept-135 NMR (CDCl<sub>3</sub>, 100 MHz)



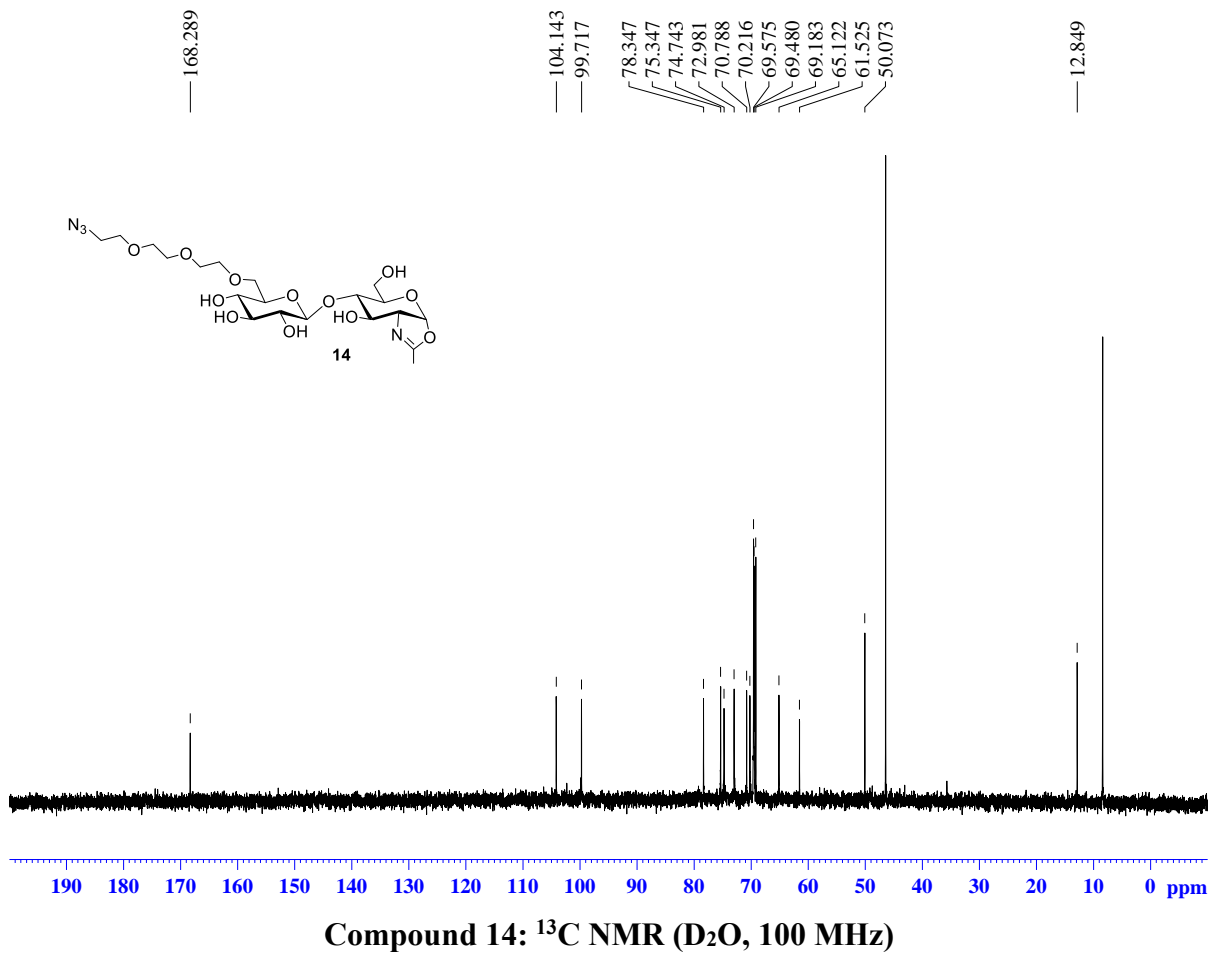
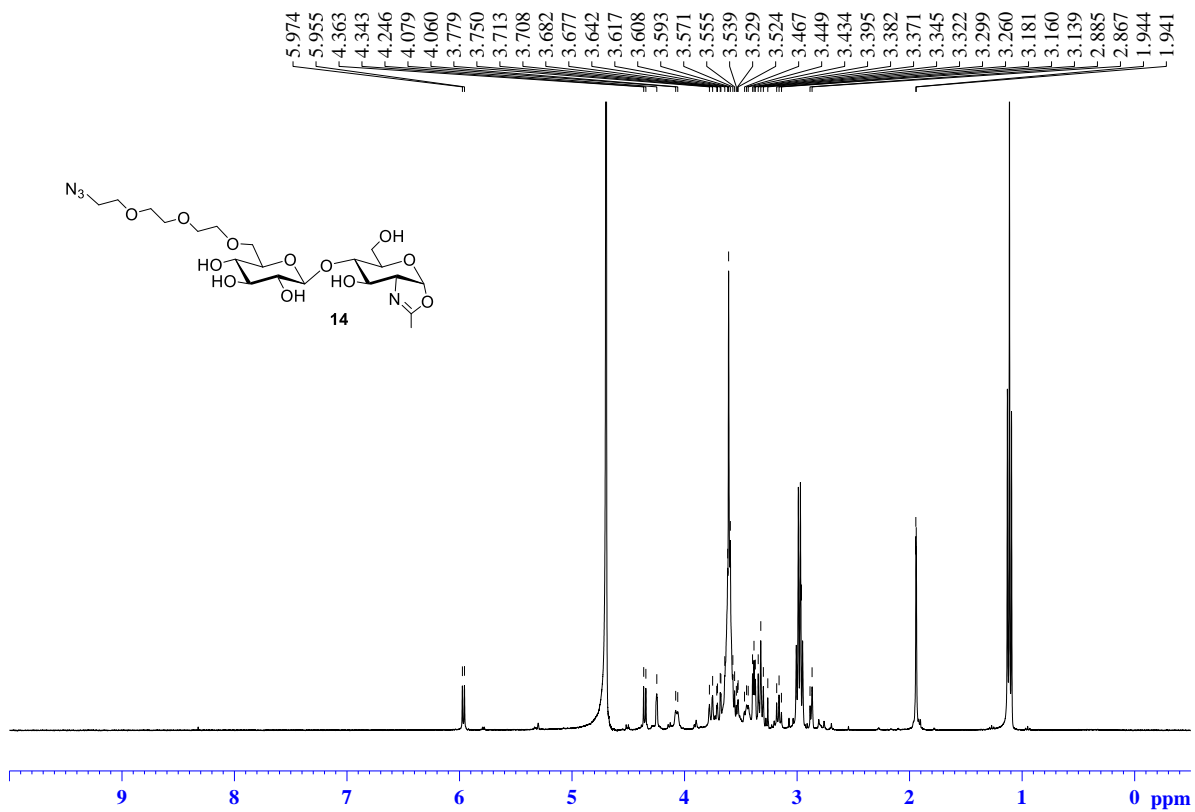


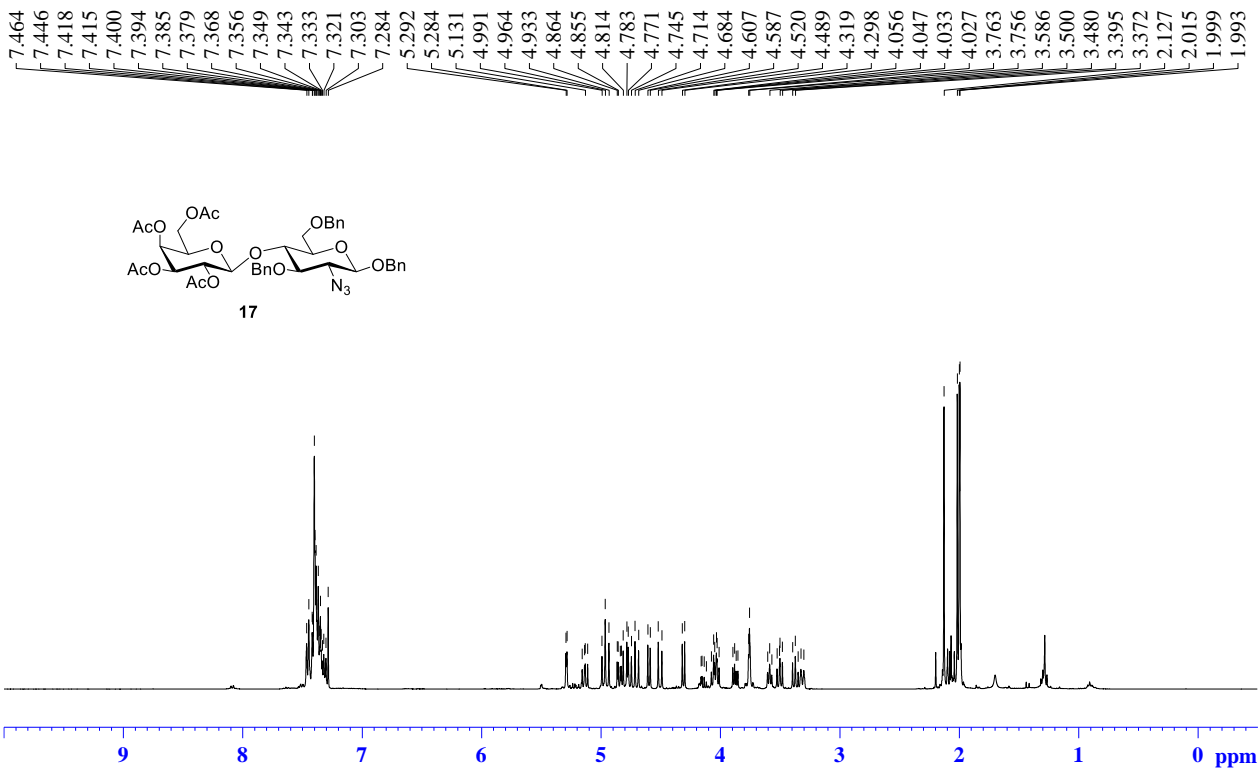


**Compound 13: <sup>1</sup>H NMR (D<sub>2</sub>O, 400 MHz)**

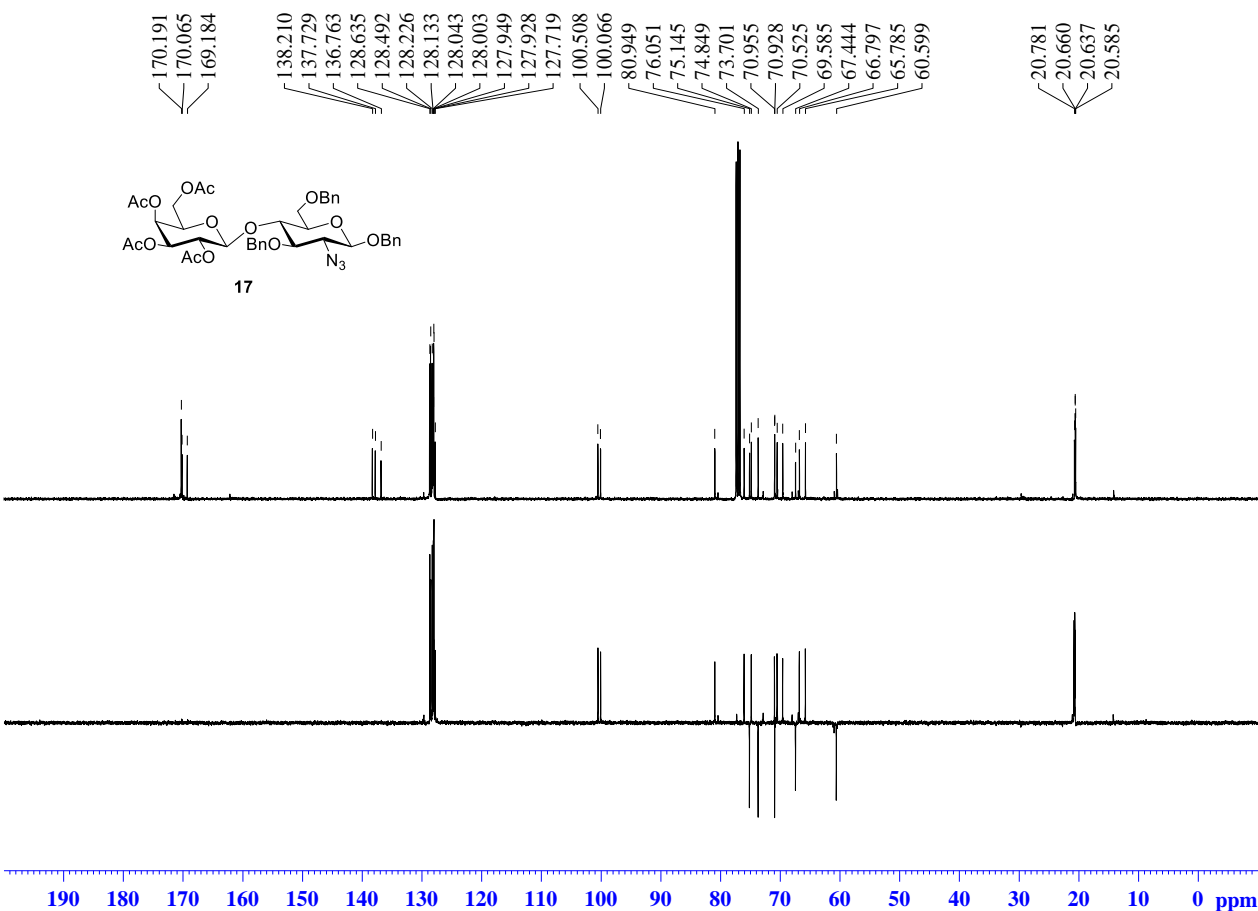


**Compound 13: <sup>13</sup>C NMR (D<sub>2</sub>O, 100 MHz)**

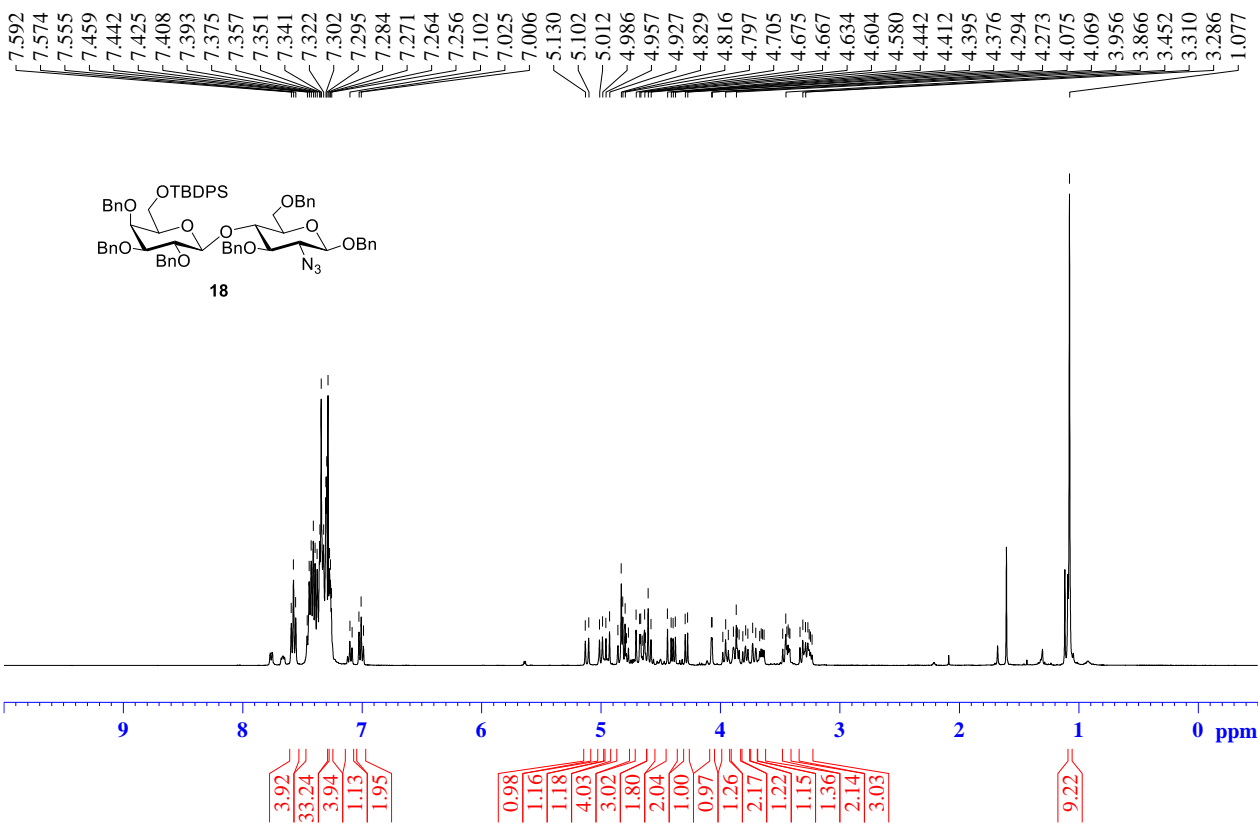




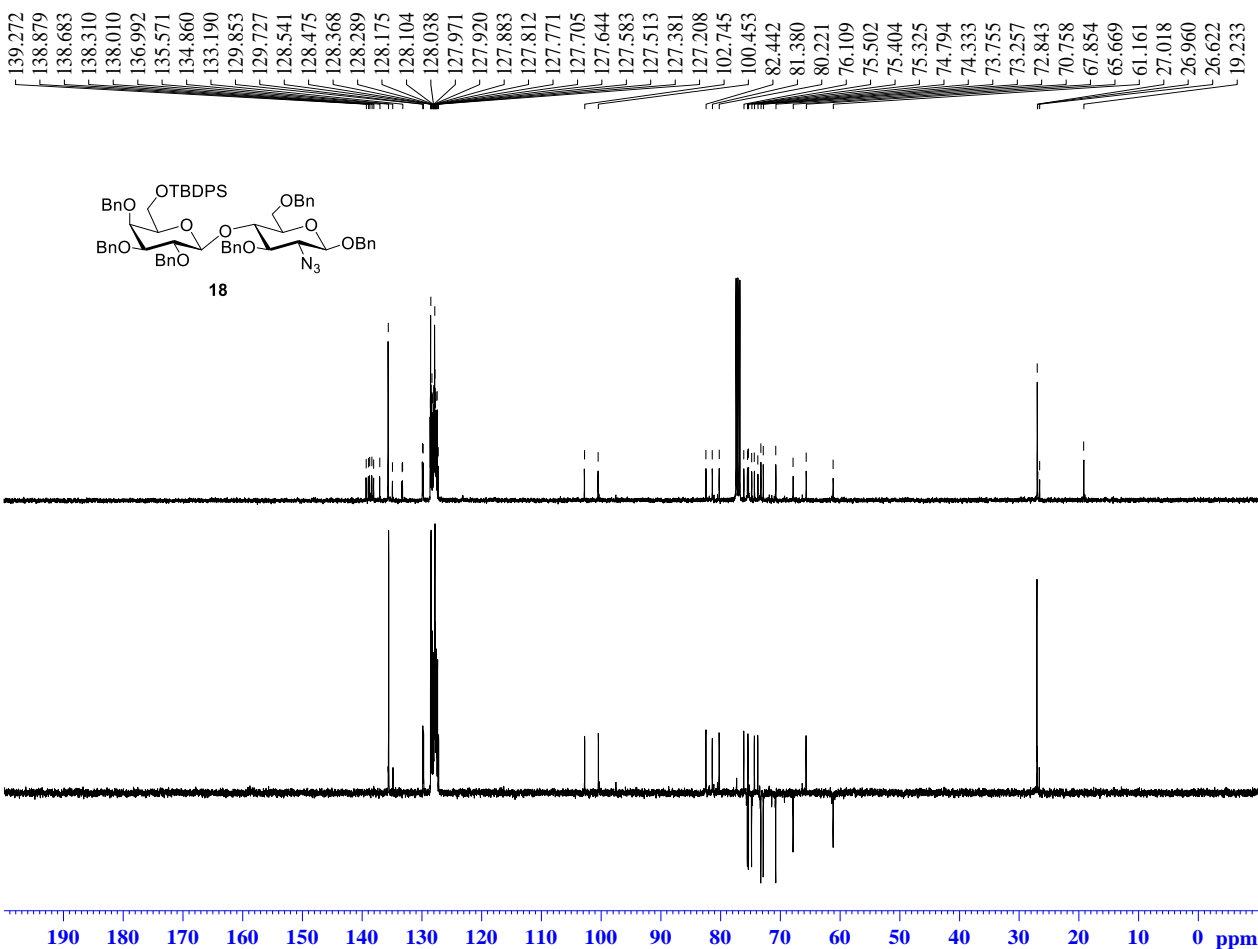
Compound 17:  $^1\text{H}$  NMR ( $\text{CDCl}_3$ , 400 MHz)



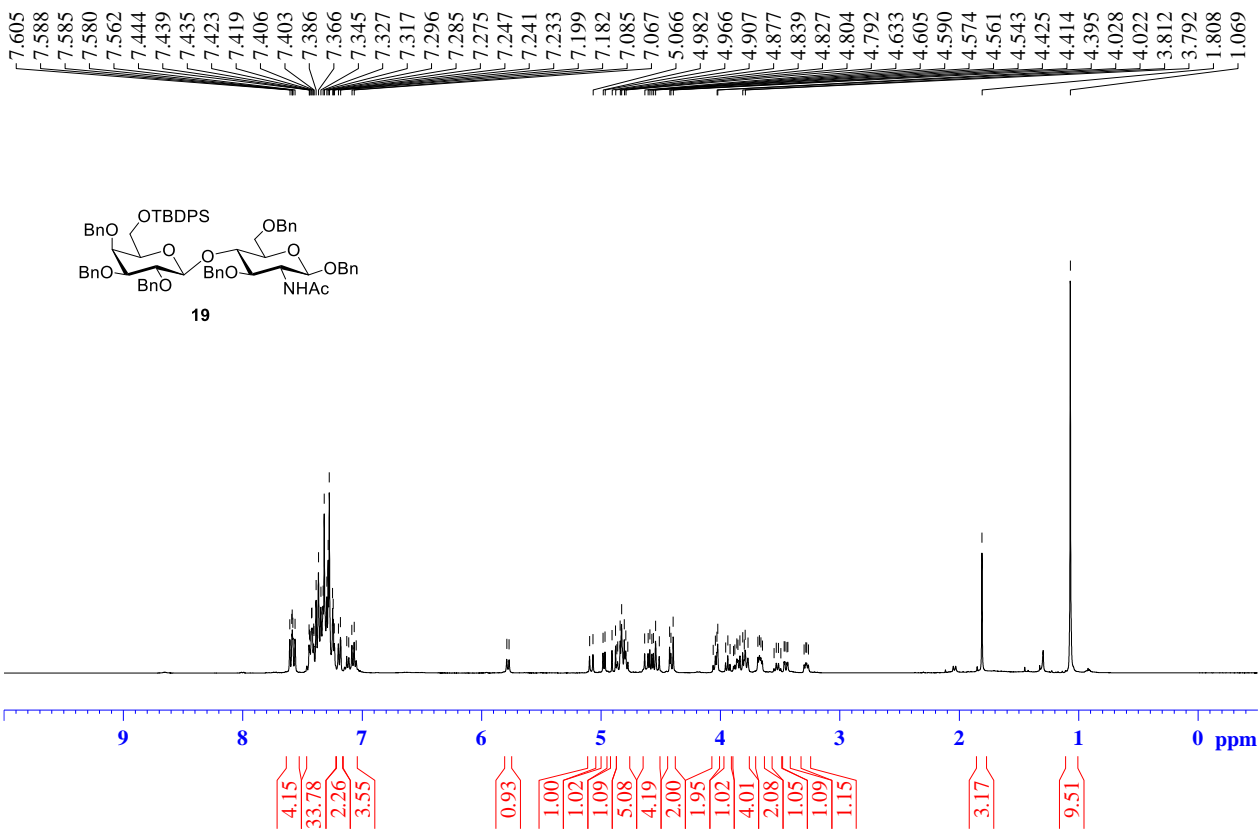
Compound 17:  $^{13}\text{C}$  and Dept- $^{135}\text{C}$  NMR ( $\text{CDCl}_3$ , 100 MHz)



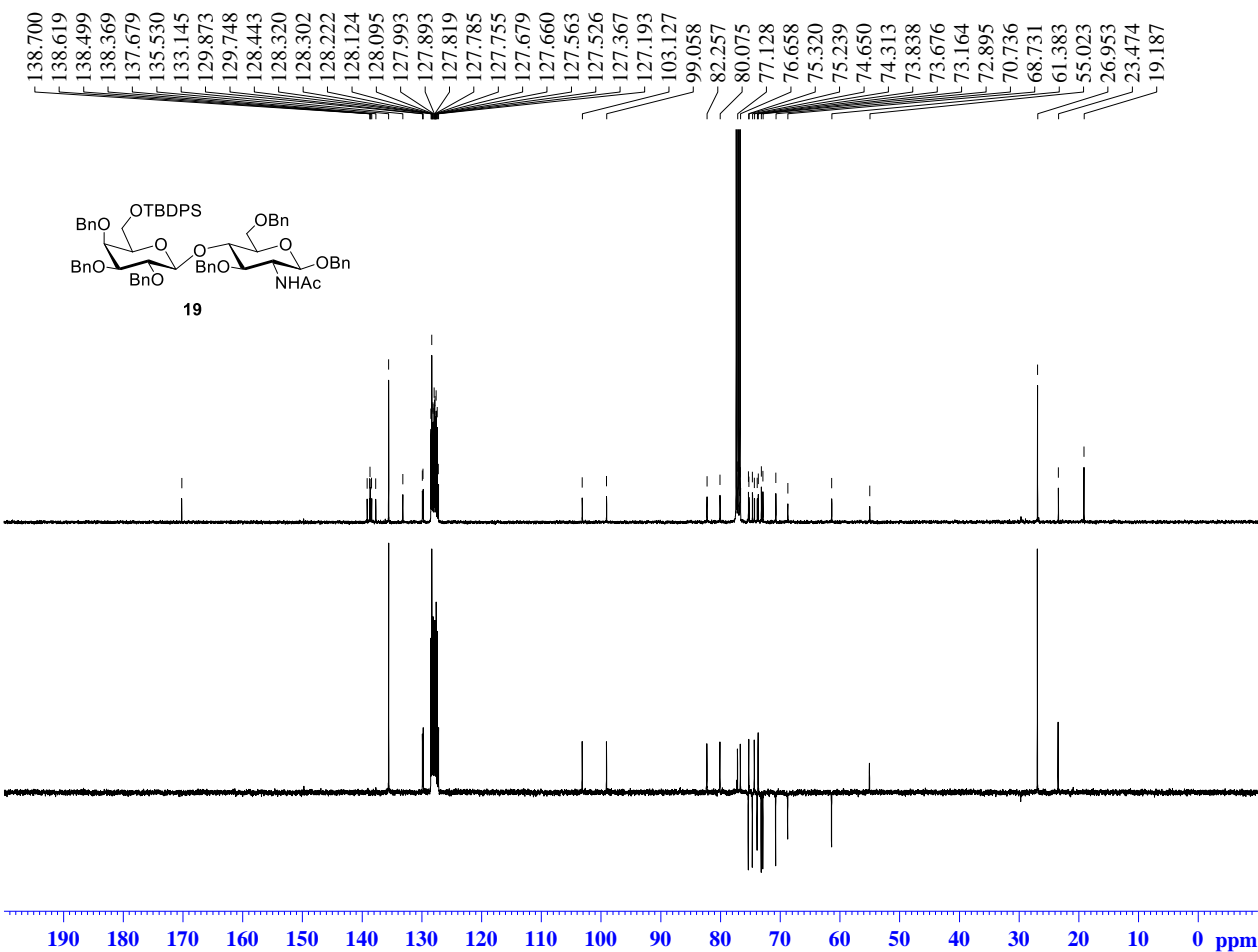
**Compound 18: <sup>1</sup>H NMR (CDCl<sub>3</sub>, 400 MHz)**



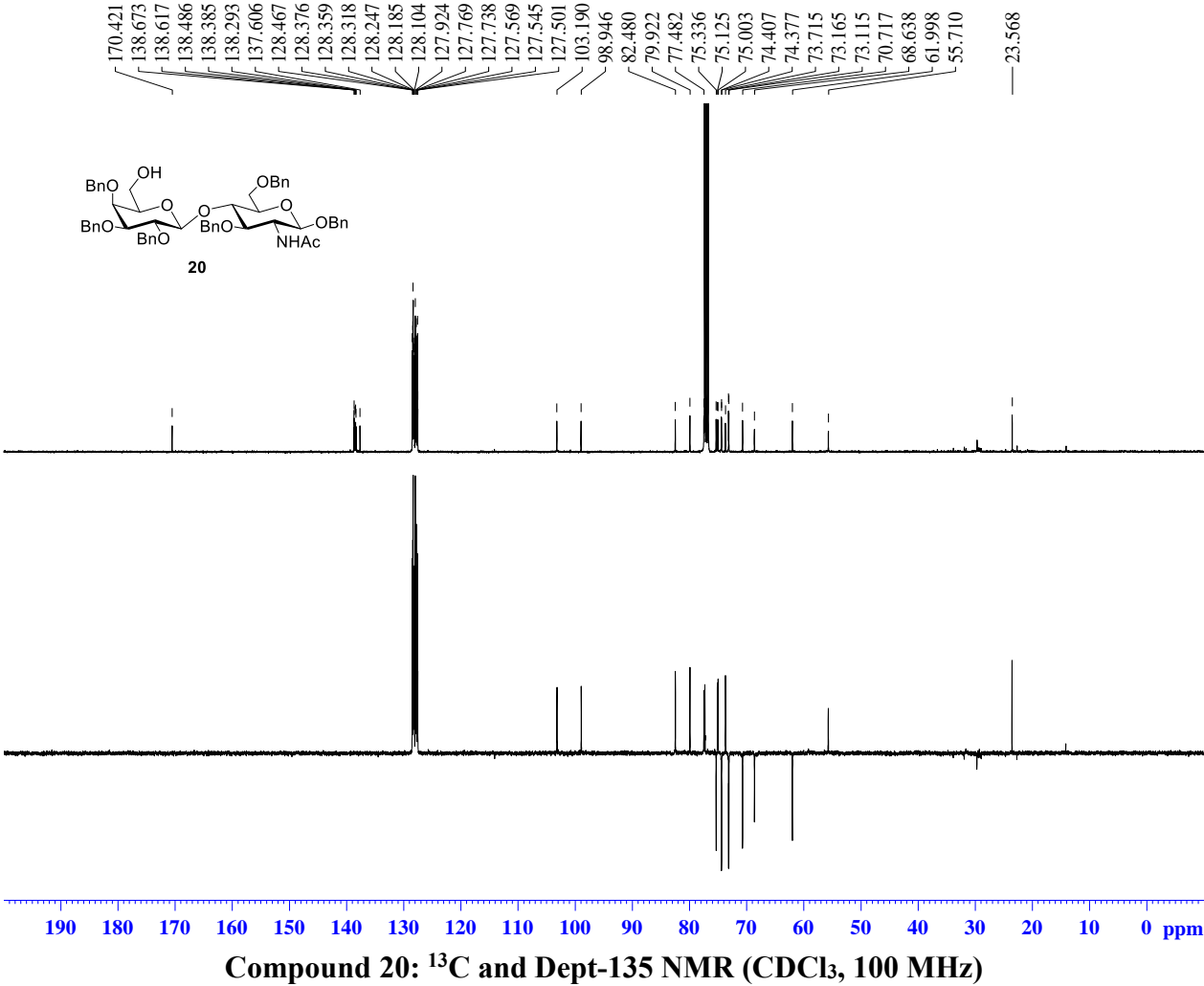
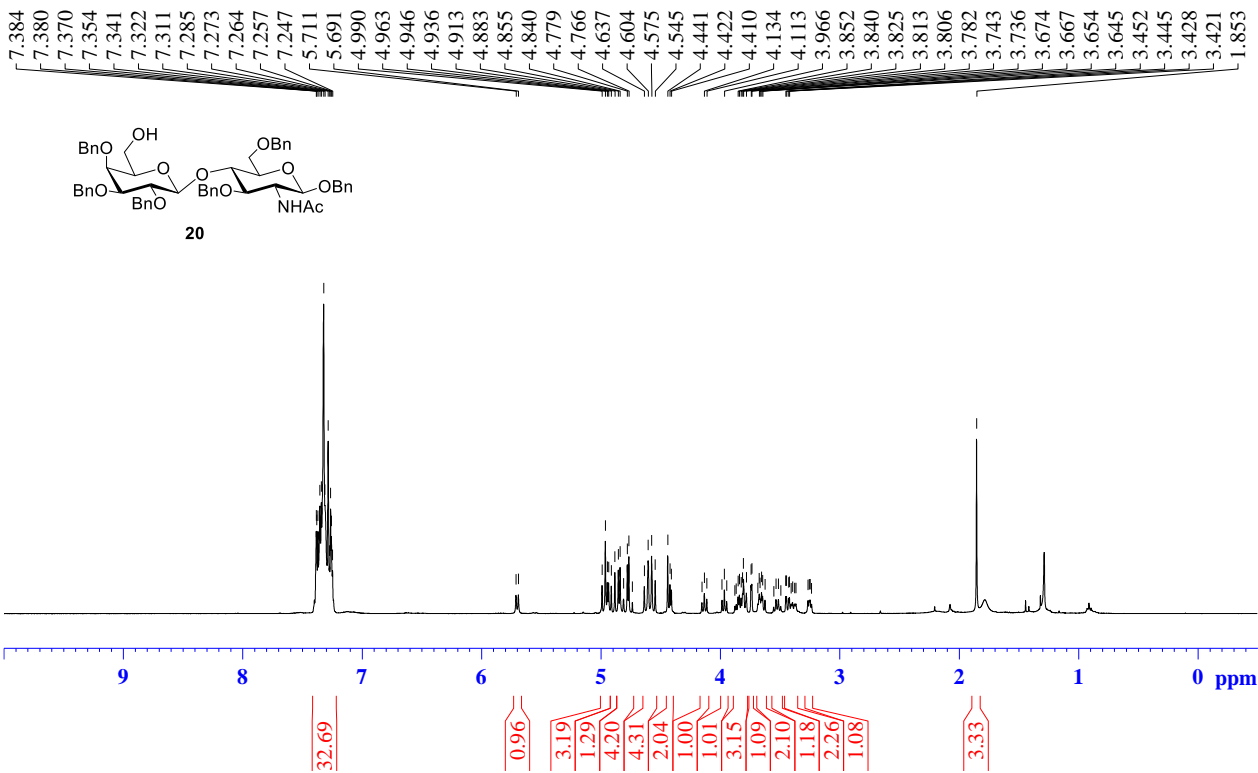
**Compound 18: <sup>13</sup>C and Dept-135 NMR (CDCl<sub>3</sub>, 100 MHz)**

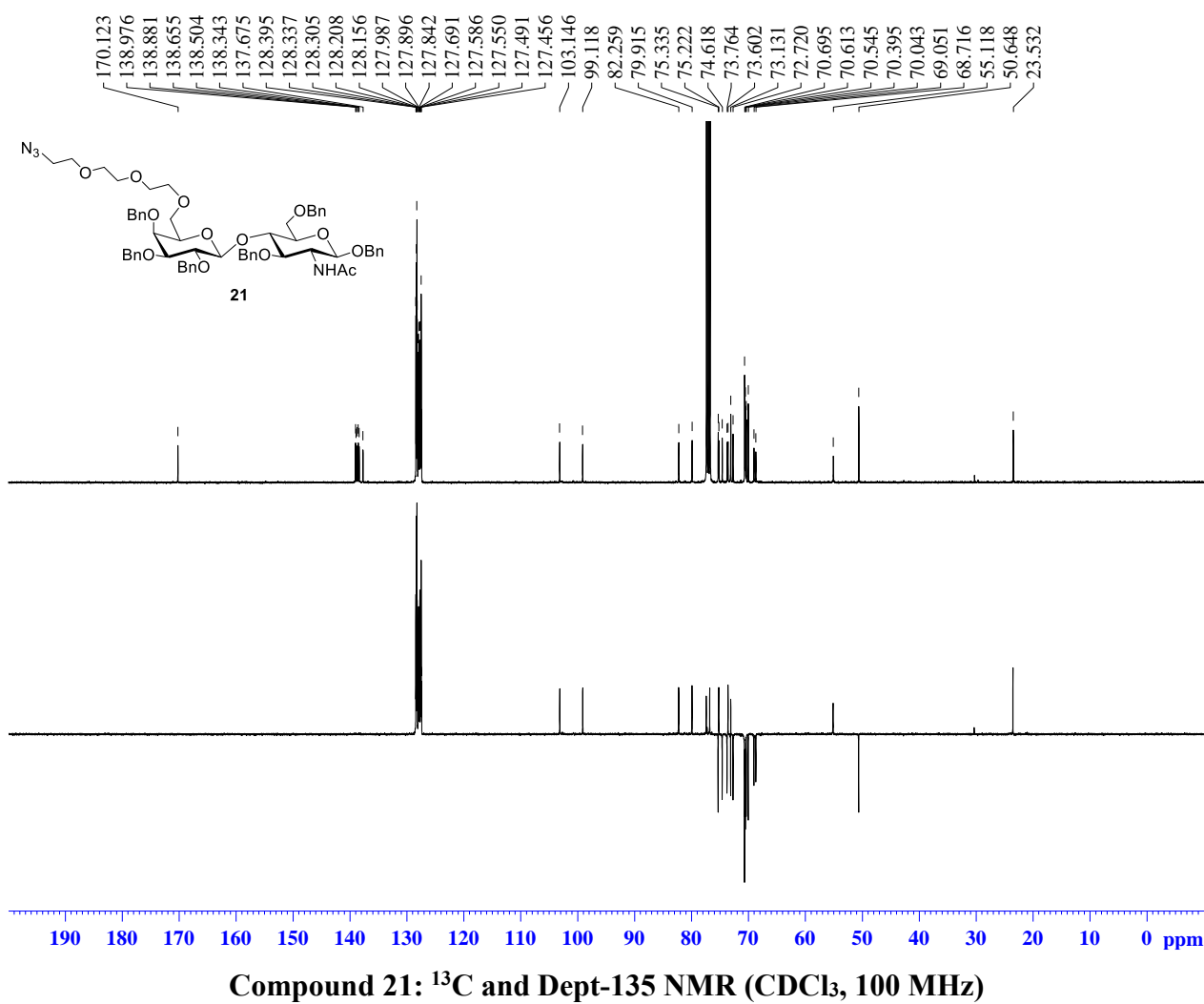
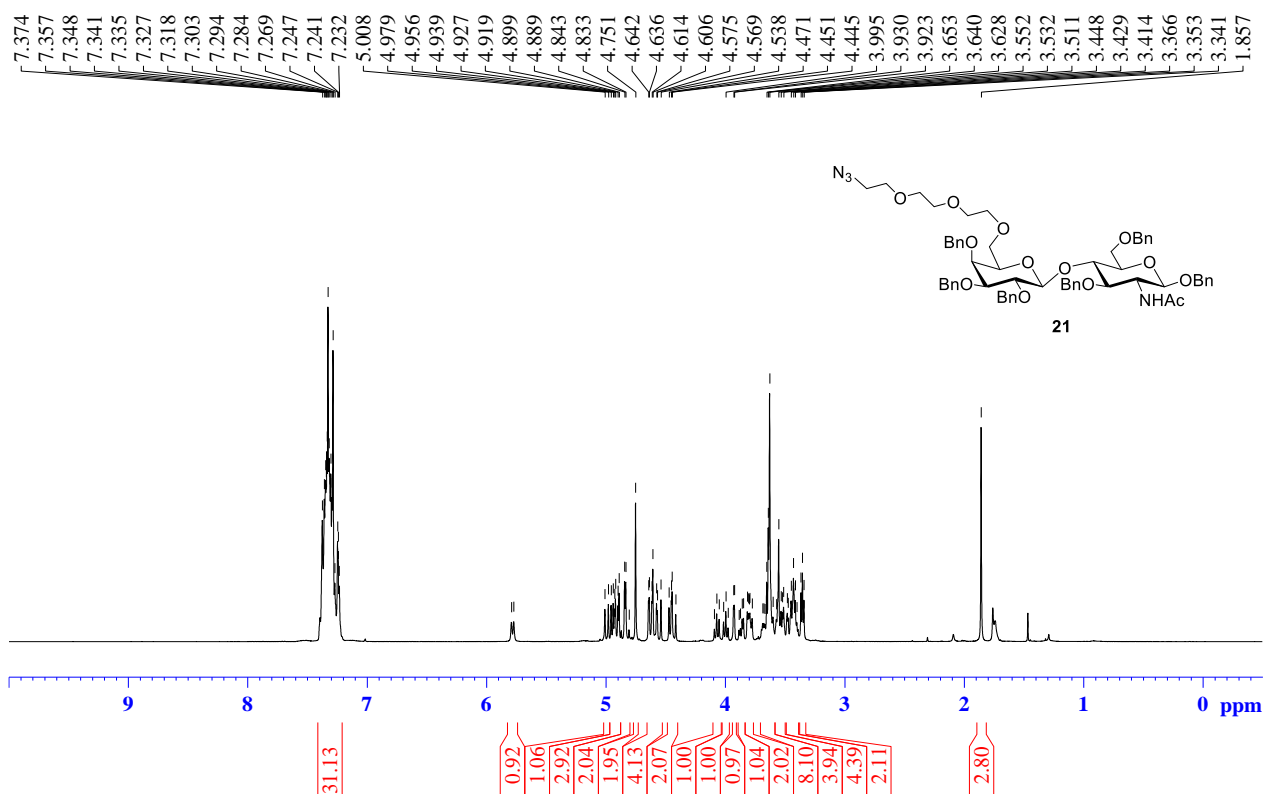


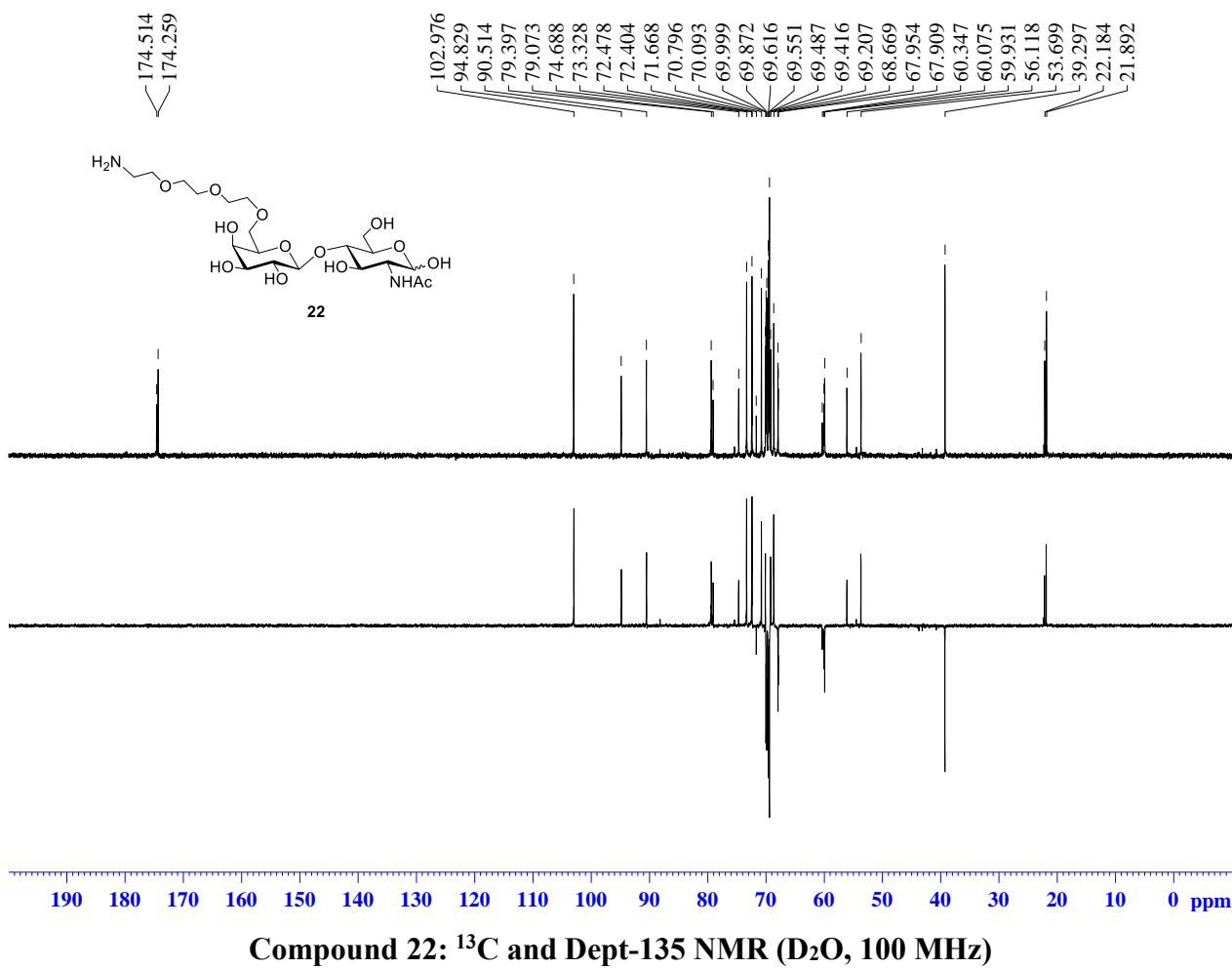
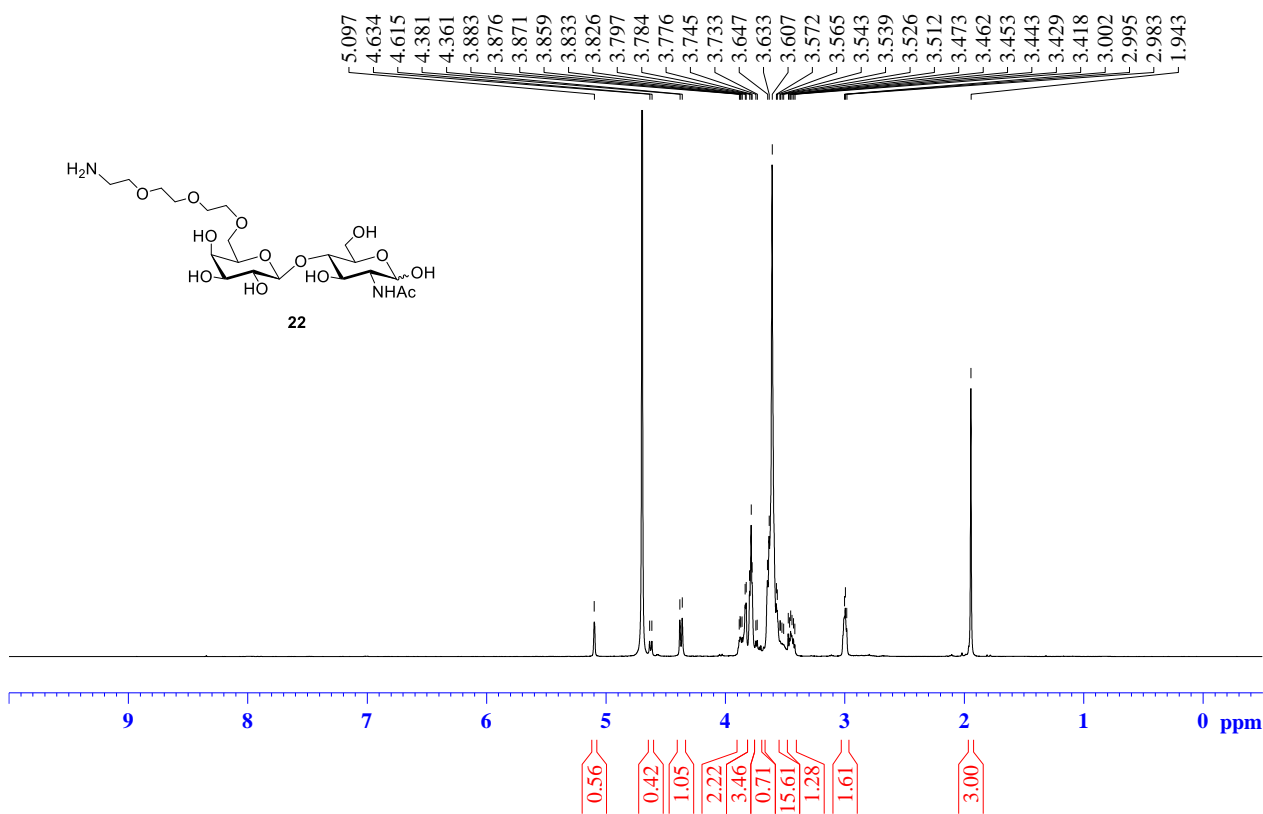
**Compound 19: <sup>1</sup>H NMR (CDCl<sub>3</sub>, 400 MHz)**



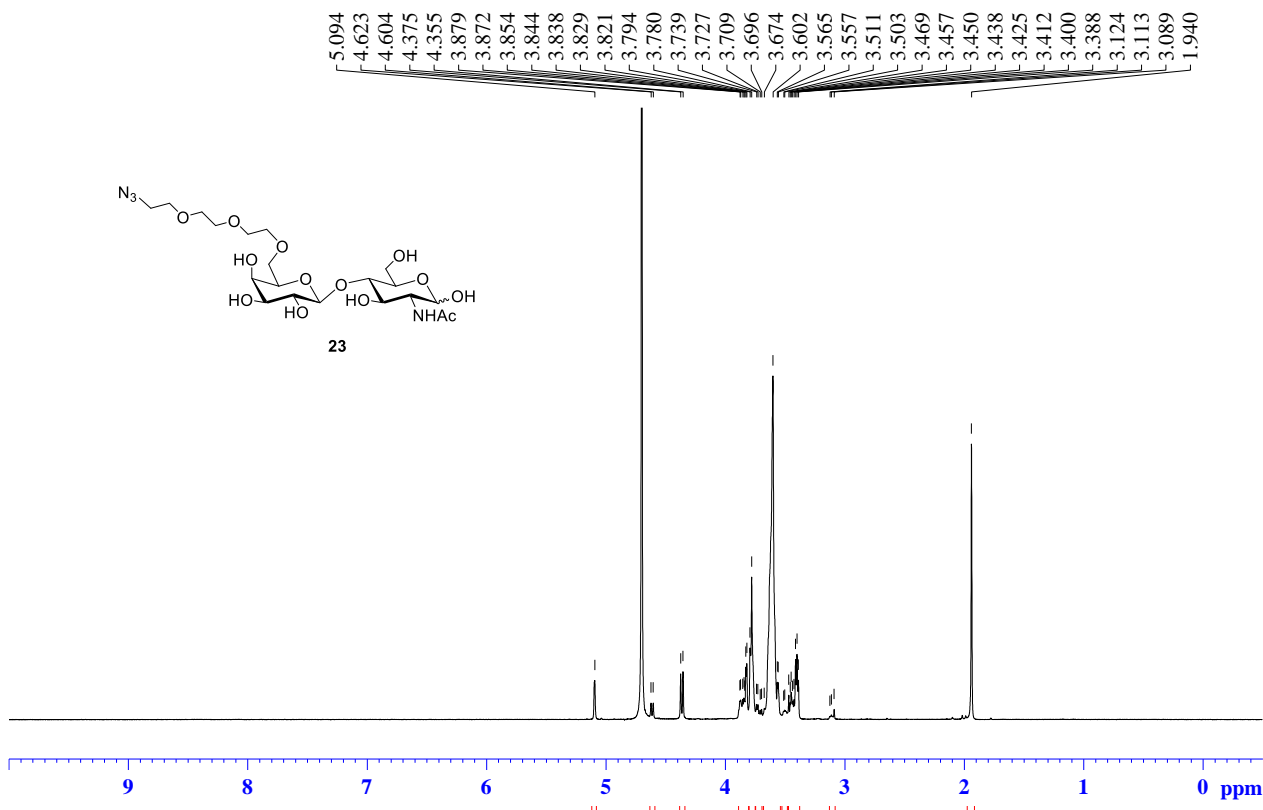
**Compound 19: <sup>13</sup>C and Dept-135 NMR (CDCl<sub>3</sub>, 100 MHz)**



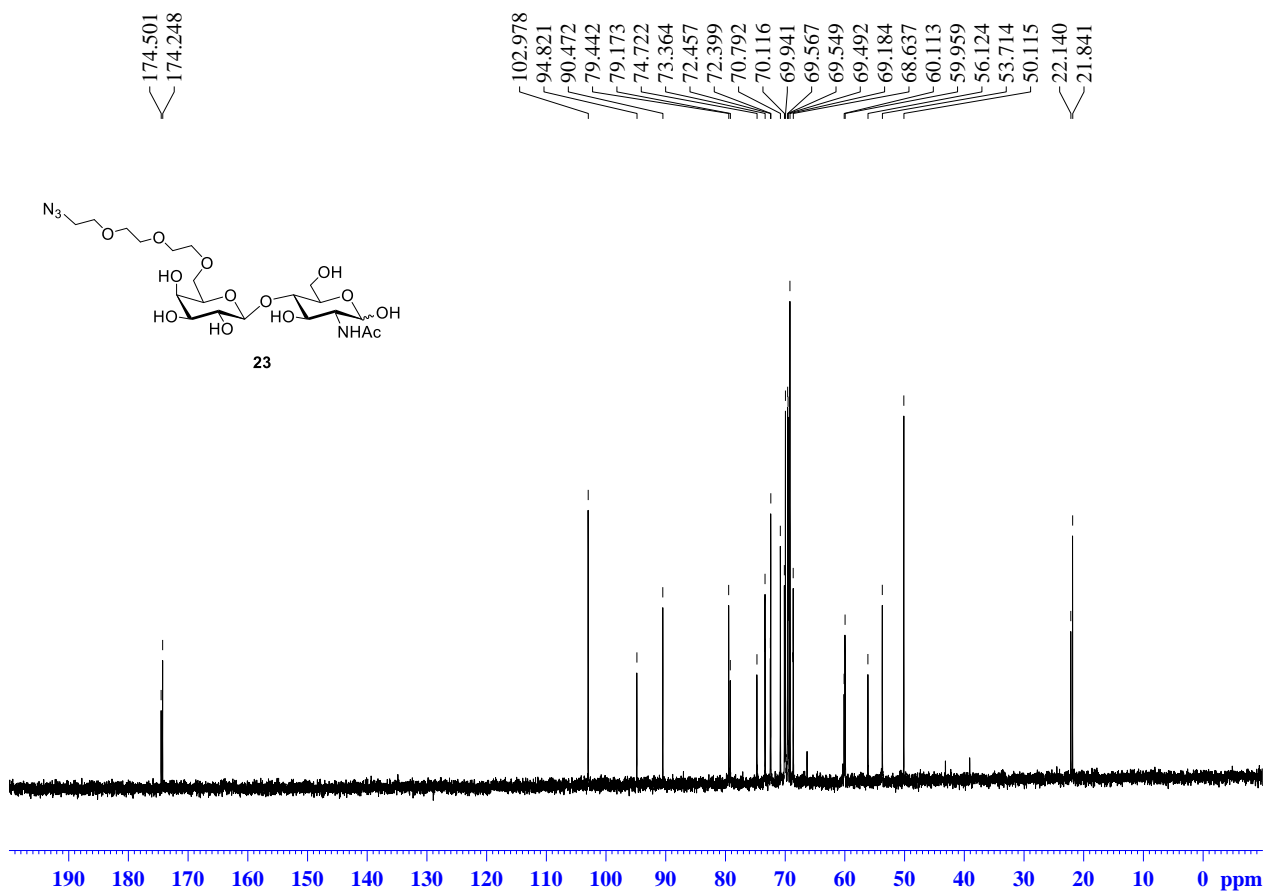








Compound 23:  $^1\text{H}$  NMR ( $\text{D}_2\text{O}$ , 400 MHz)



Compound 23:  $^{13}\text{C}$  NMR ( $\text{D}_2\text{O}$ , 100 MHz)

