

**Supporting Information:**

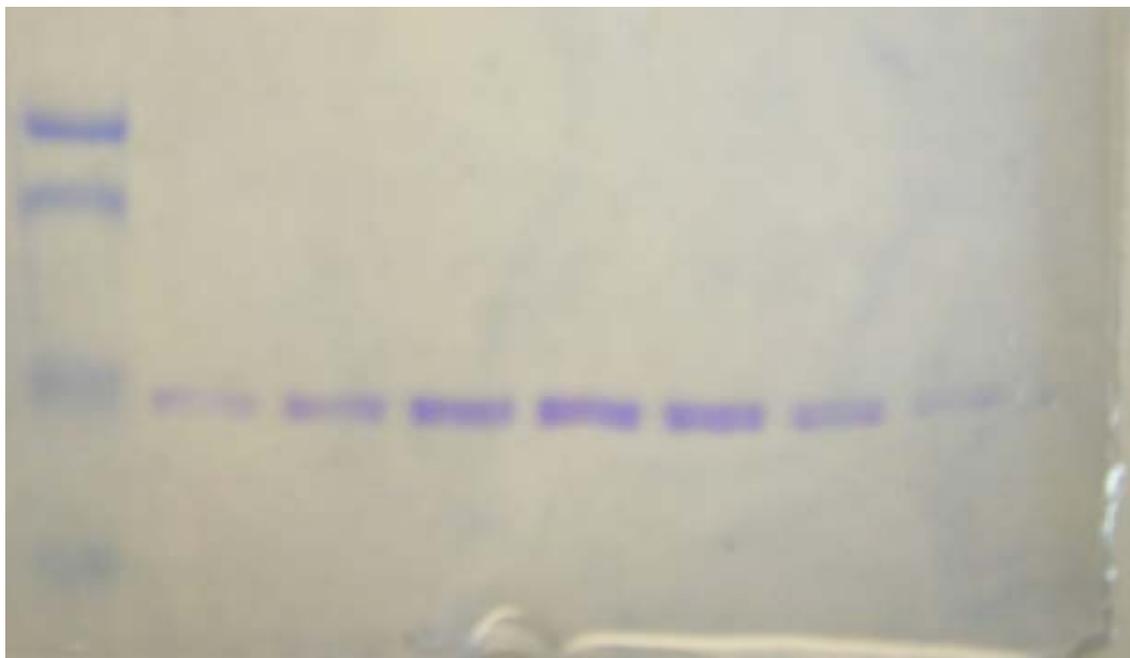
Brønsted Analysis of an Enzyme-Catalyzed Pseudo-Deglycosylation Reaction: Mechanism of  
Desialylation in Sialidases

Fahimah Shidmoosavee, Lydia Cheng, Jacqueline N. Watson and Andrew J. Bennet\*

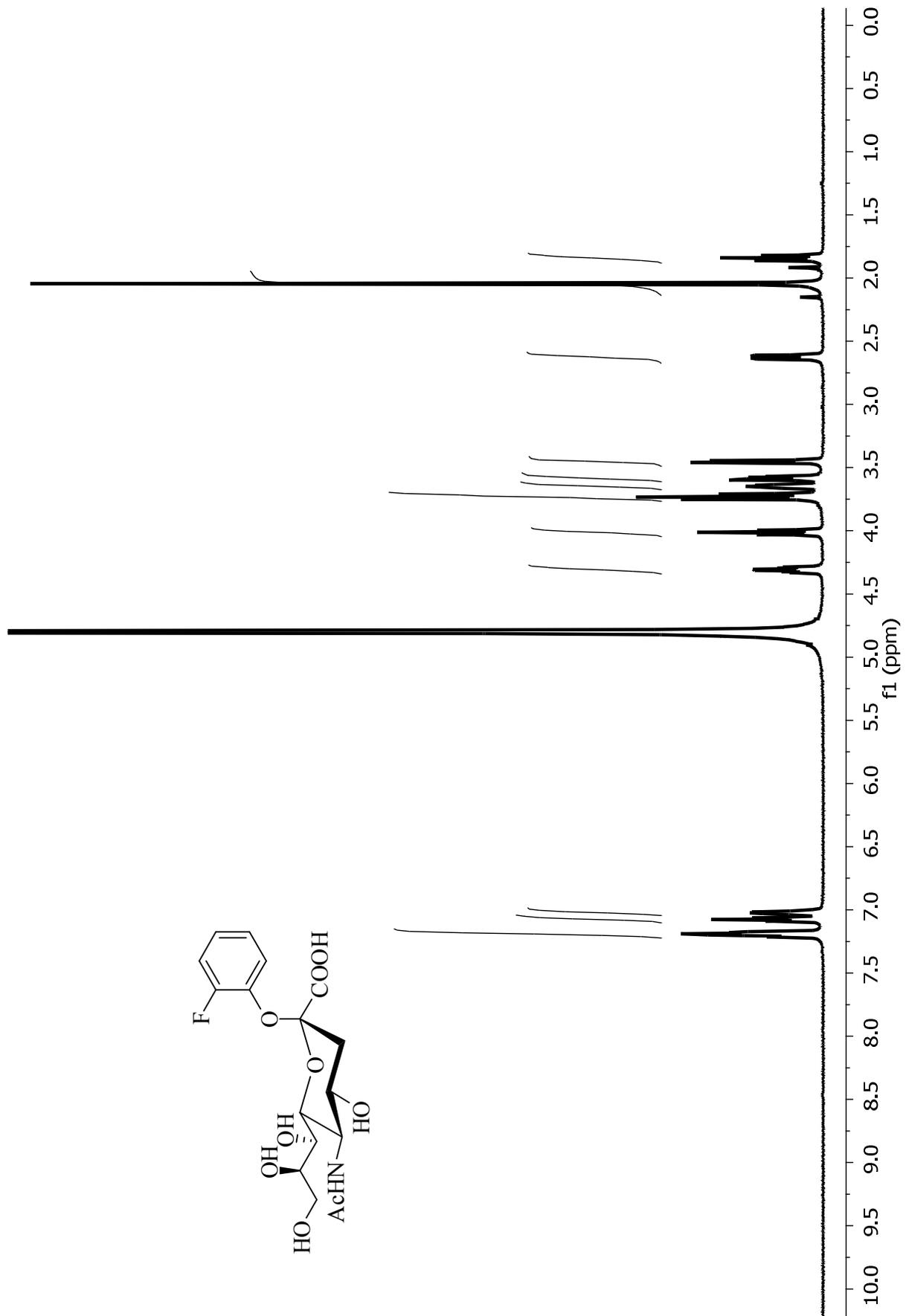
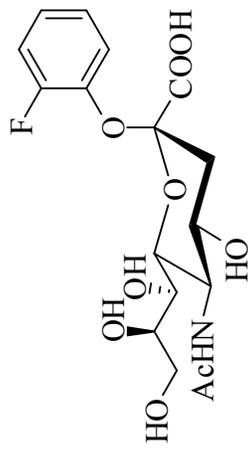
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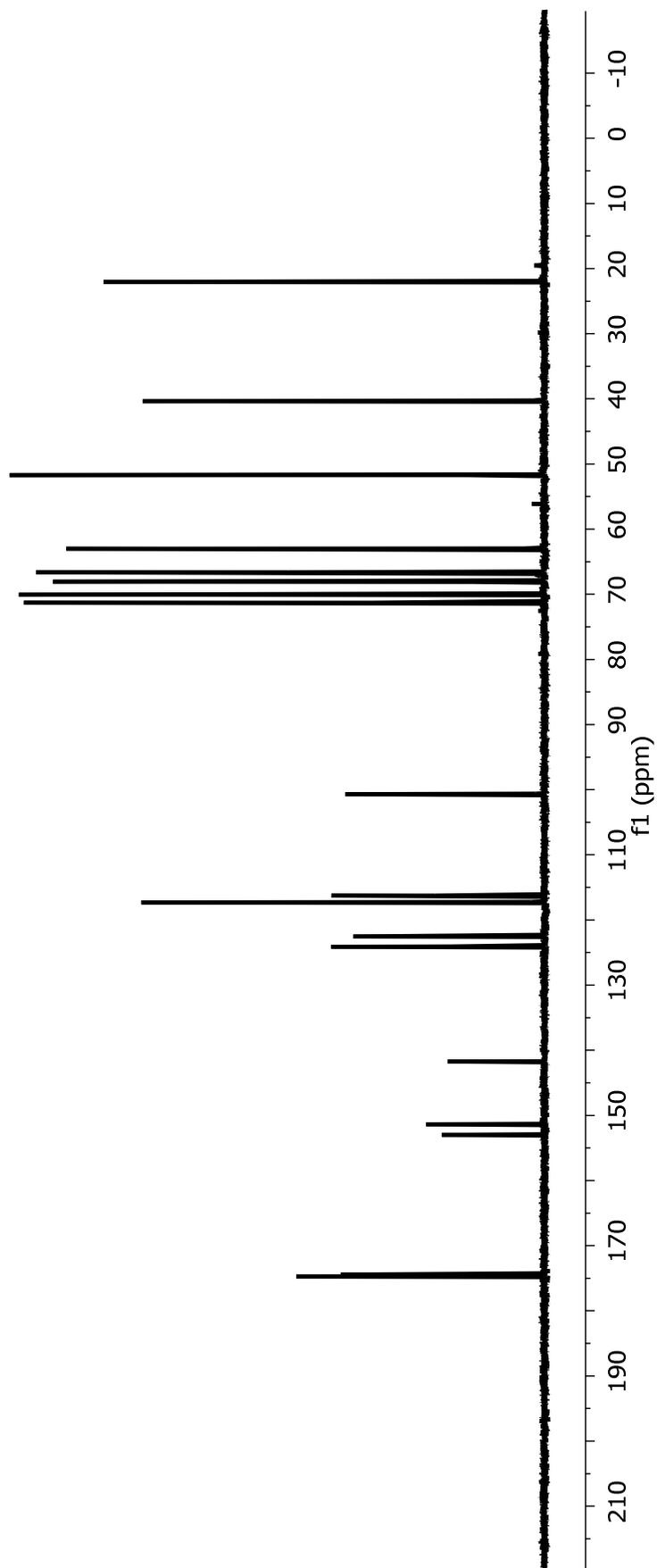
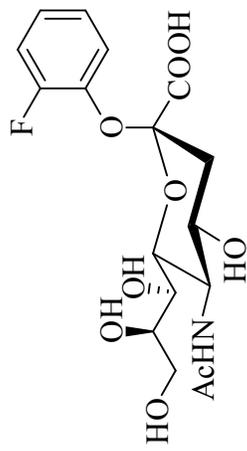
**Figure S1:** 10% SDS-PAGE Denaturing Gel Fractions after Size Exclusion Column were loaded. Left-hand channel, top to bottom, contains molecular weight markers of 104, 83, 49 and 37 KDa.



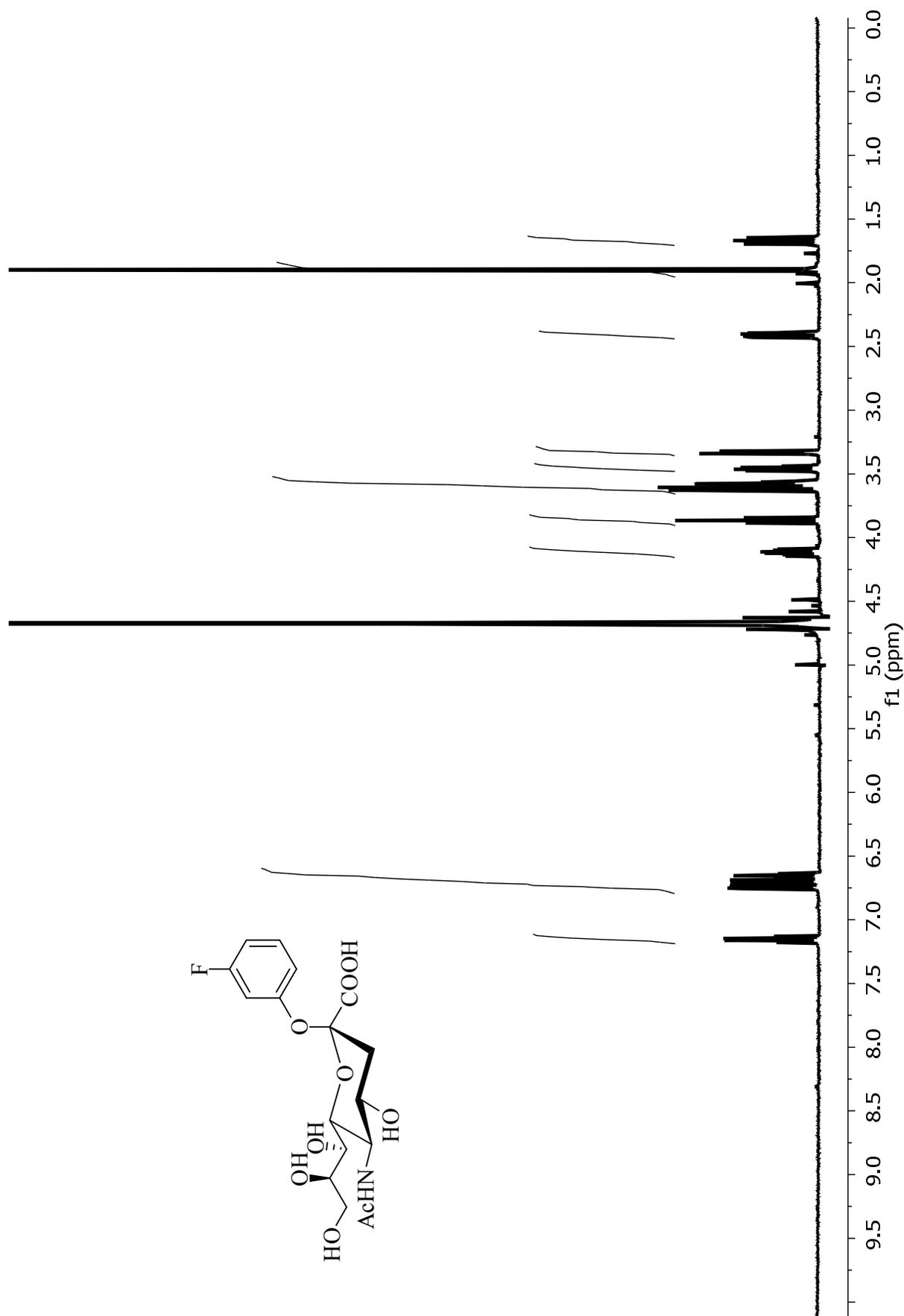
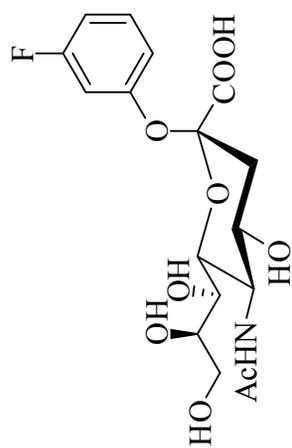
**<sup>1</sup>H-NMR of 2-fluorophenyl β-D-N-acetylneuraminide (in D<sub>2</sub>O) (2FP-βNeuAc) (1b)**



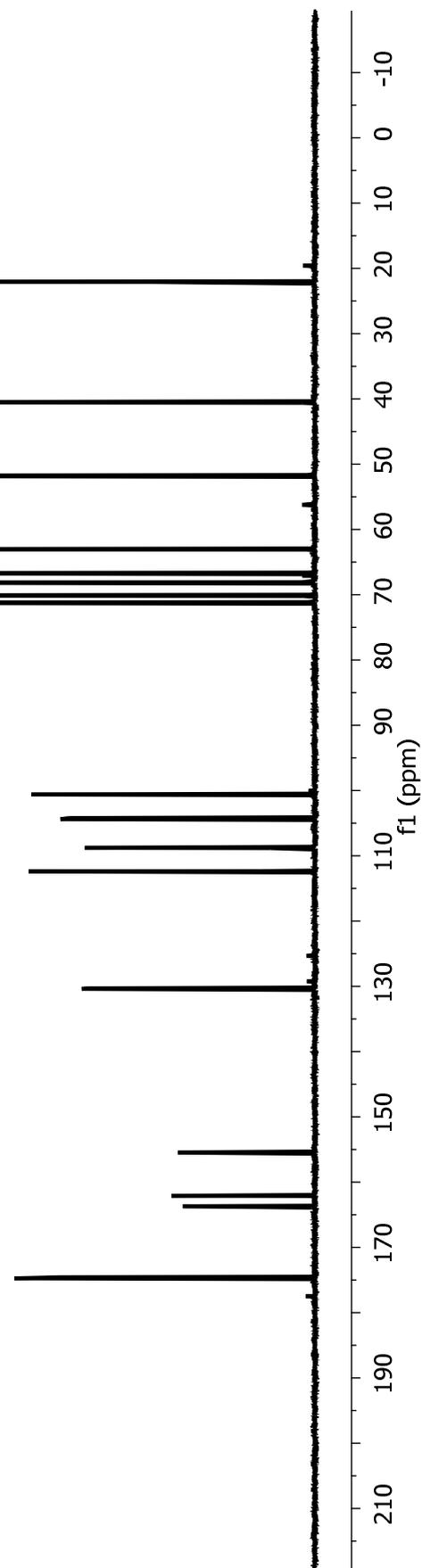
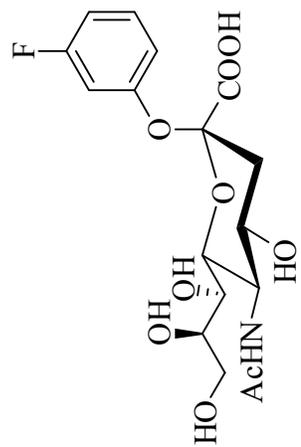
**$^{13}\text{C}$ -NMR of 2-fluorophenyl  $\beta$ -D-N-acetylneuraminide (in  $\text{D}_2\text{O}$ ) (2FP- $\beta$ NeuAc) (1b)**



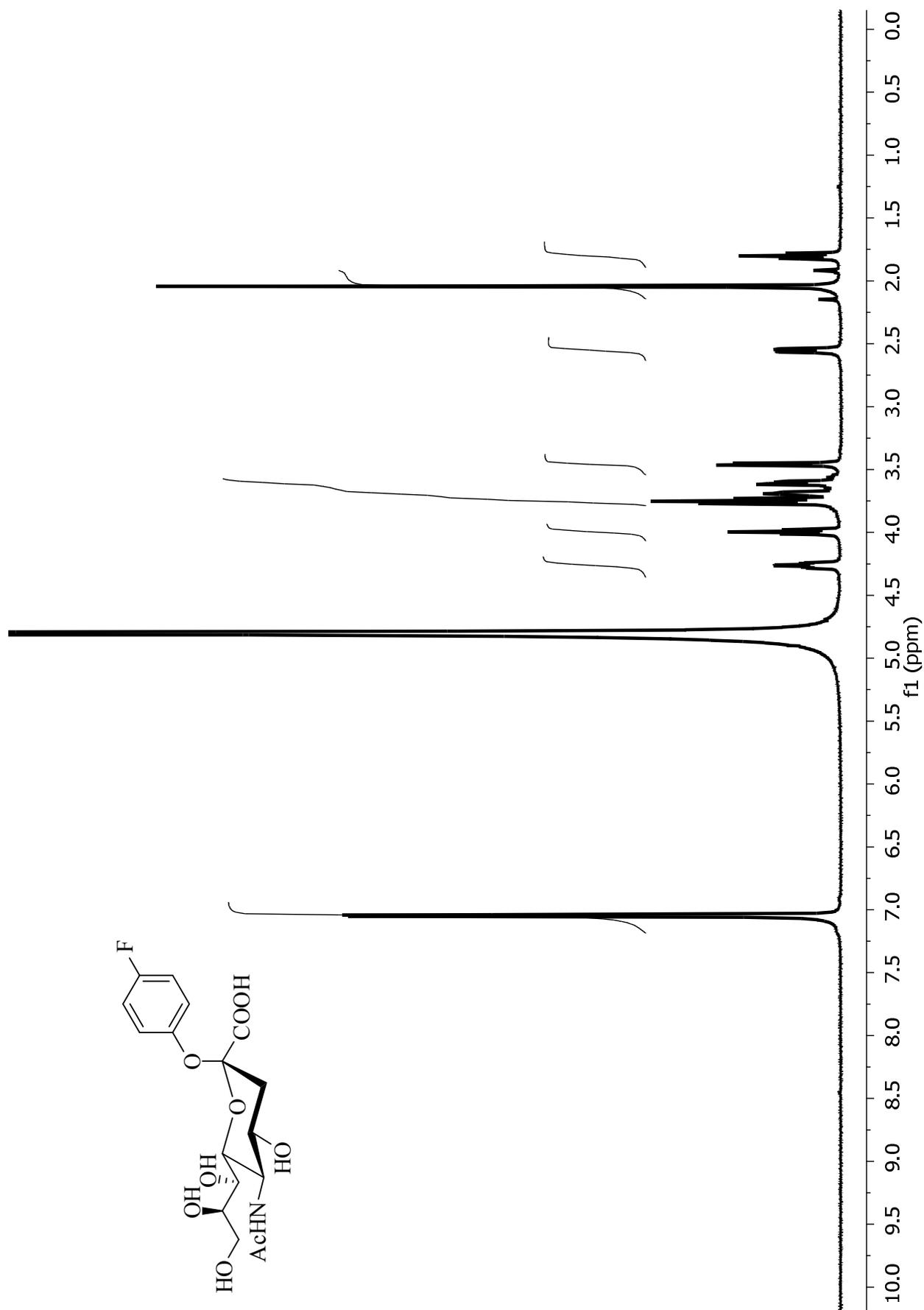
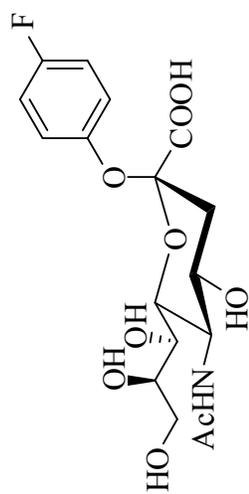
**<sup>1</sup>H-NMR of 3-fluorophenyl β-D-N-acetylneuraminide (in D<sub>2</sub>O) (3FP-βNeuAc) (1c)**



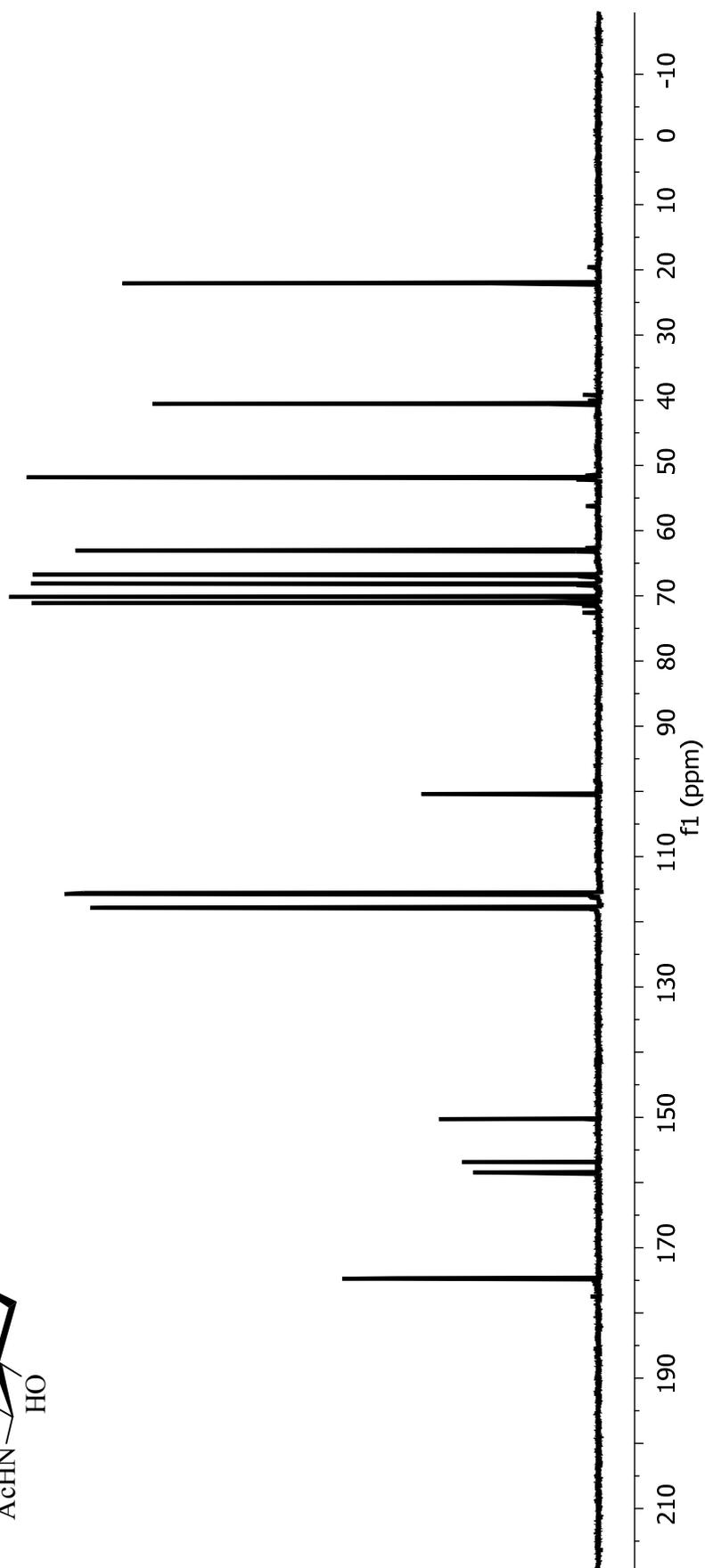
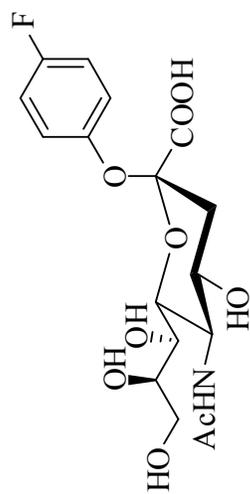
**$^{13}\text{C}$ -NMR of 3-fluorophenyl  $\beta$ -D-N-acetylneuraminide (in  $\text{D}_2\text{O}$ ) (3FP- $\beta$ NeuAc) (1c)**



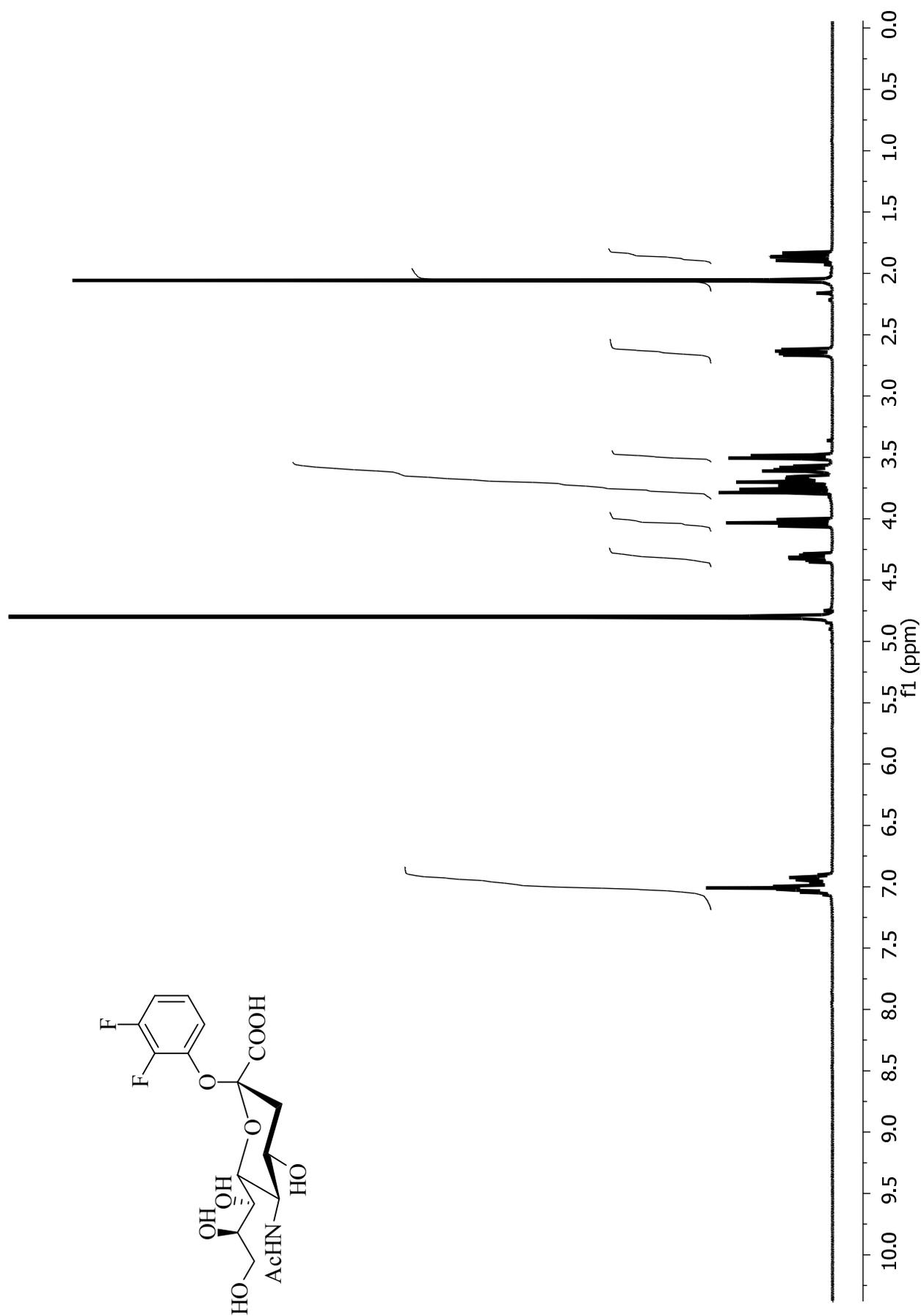
**<sup>1</sup>H-NMR of 4-fluorophenyl β-D-N-acetylneuraminide (in D<sub>2</sub>O) (4FP-βNeuAc) (1d)**



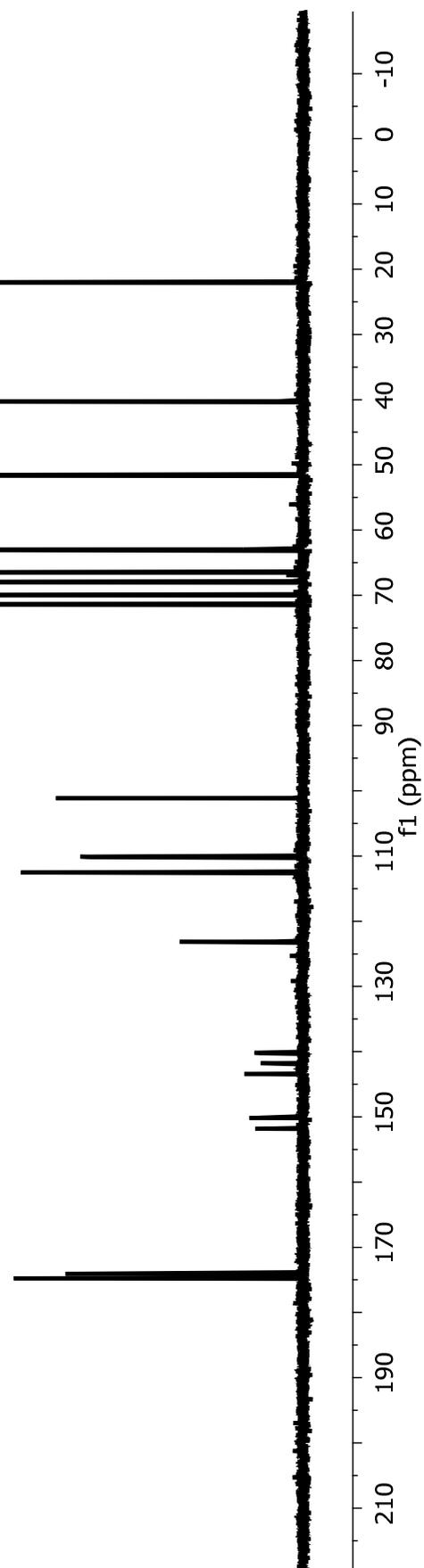
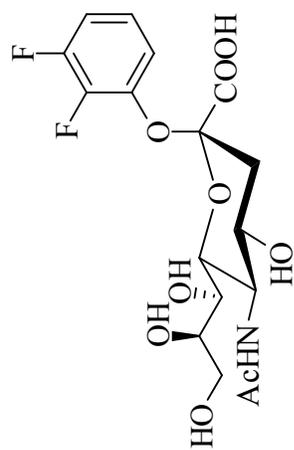
**$^{13}\text{C}$ -NMR of 4-fluorophenyl  $\beta$ -D-N-acetylneuraminide (in  $\text{D}_2\text{O}$ ) (4FP- $\beta$ NeuAc) (1d)**



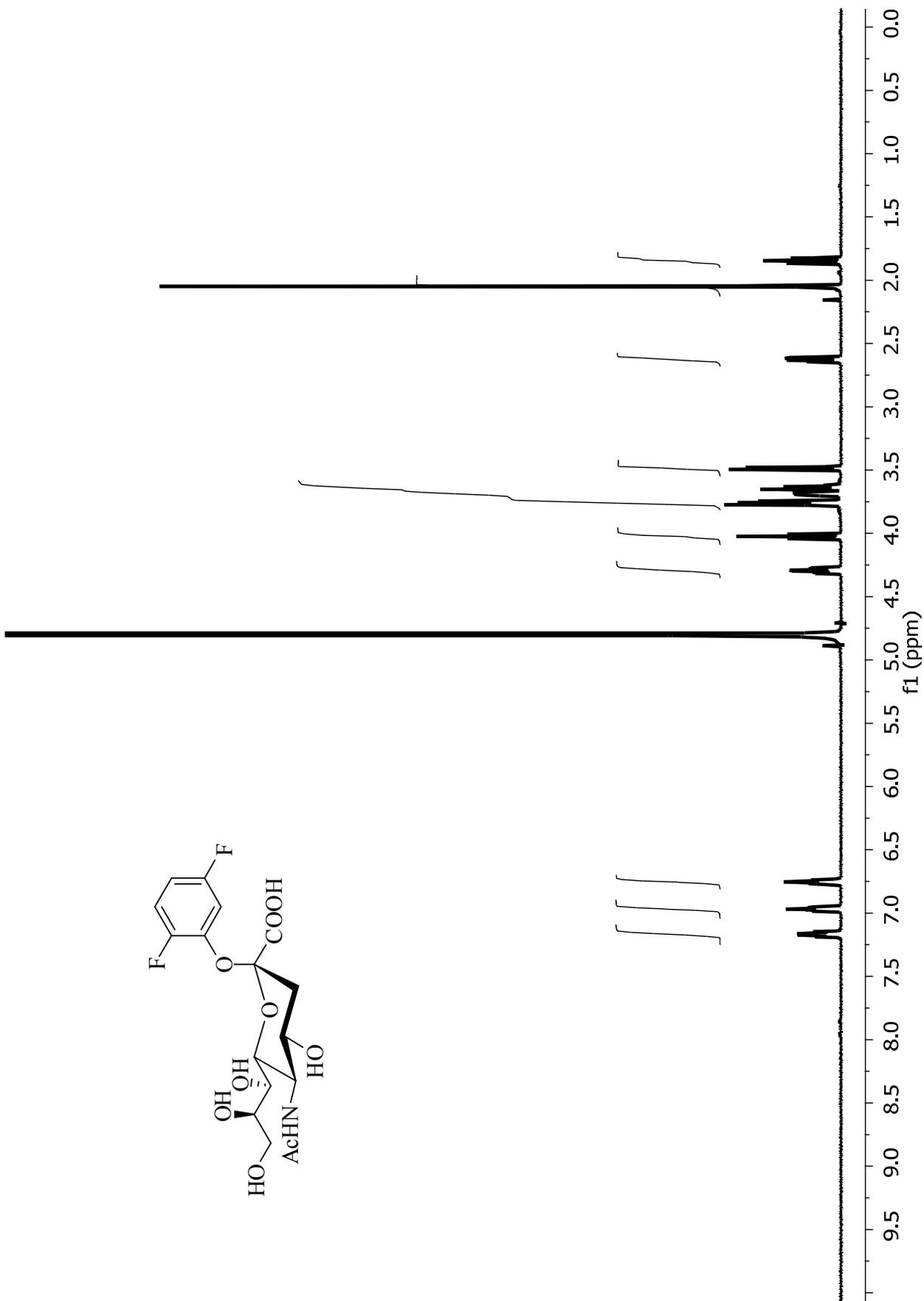
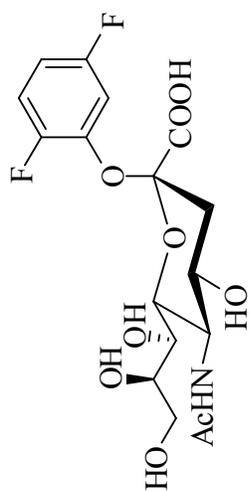
**<sup>1</sup>H-NMR of 2,3-difluorophenyl β-D-N-acetylneuraminide (in D<sub>2</sub>O) (23DFP-βNeuAc) (1e)**



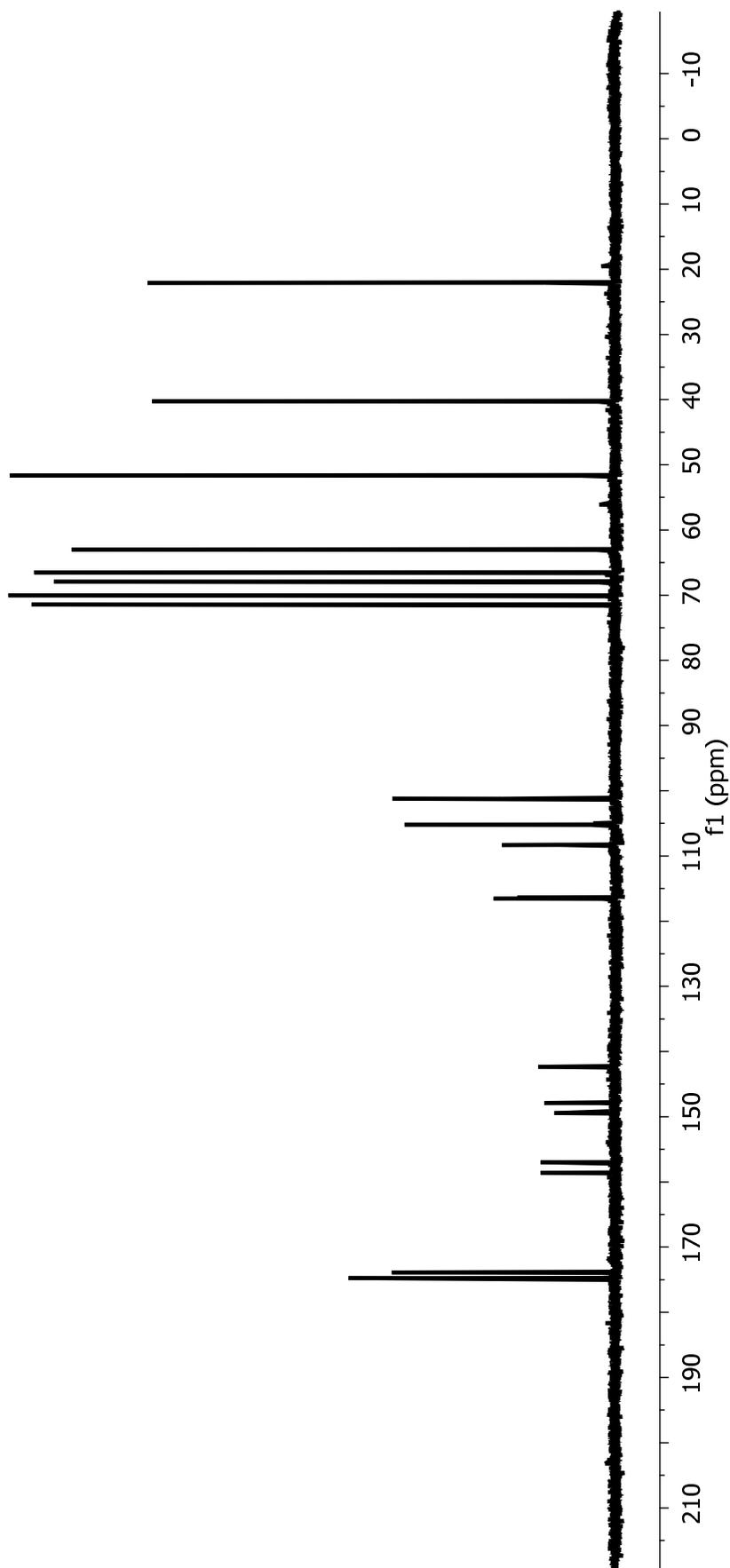
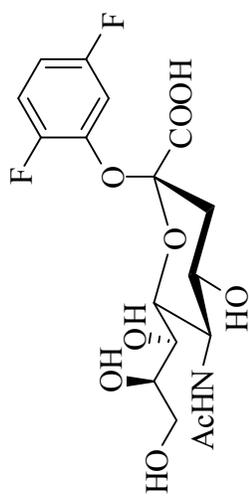
**$^{13}\text{C}$ -NMR of 2,3-difluorophenyl  $\beta$ -D-N-acetylneuraminide (in  $\text{D}_2\text{O}$ ) (23DFP- $\beta$ NeuAc) (1e)**



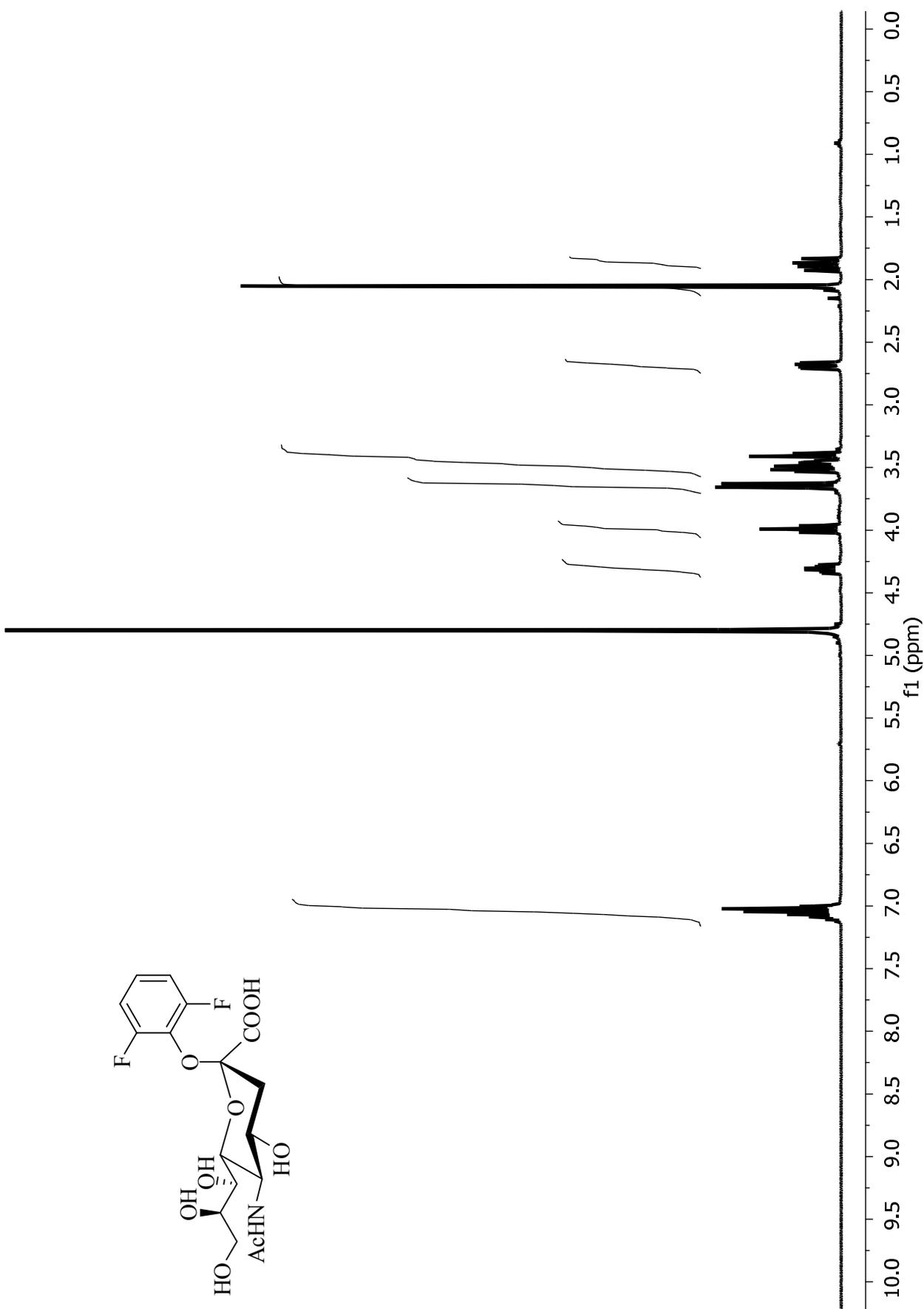
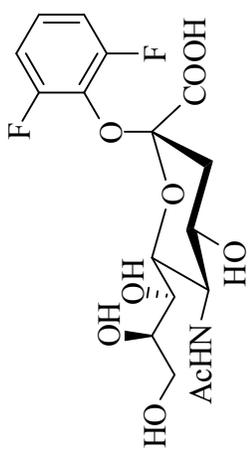
**<sup>1</sup>H-NMR of 2,5-difluorophenyl β-D-N-acetylneuraminide (in D<sub>2</sub>O) (25DFP-βNeuAc) (1f)**



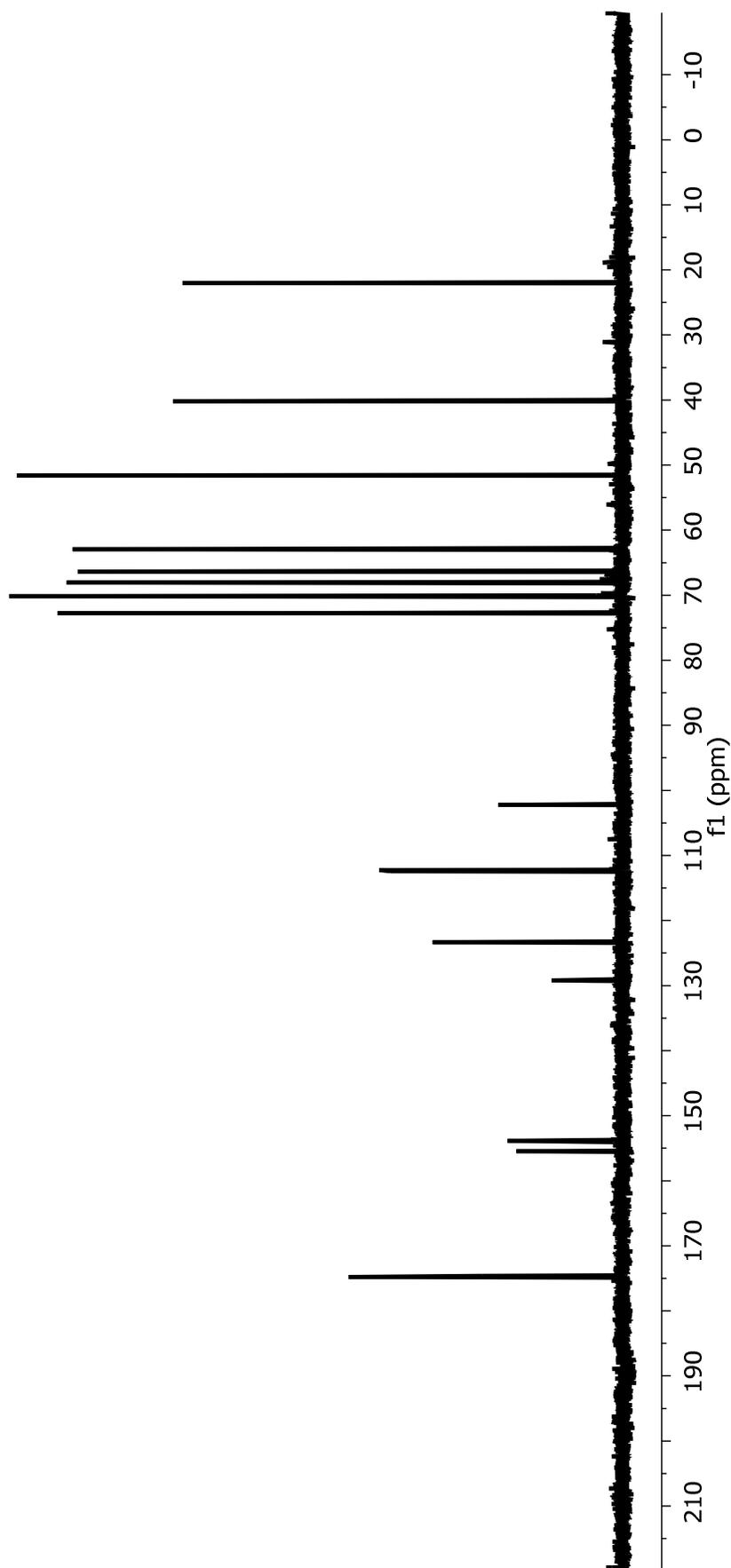
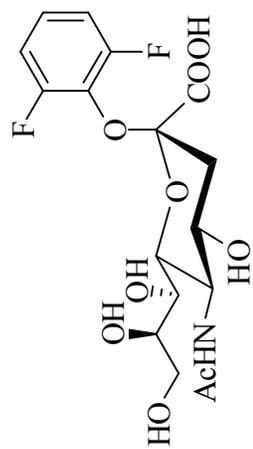
**$^{13}\text{C}$ -NMR of 2,5-difluorophenyl  $\beta$ -D-N-acetylneuraminide (in  $\text{D}_2\text{O}$ ) (25DFP- $\beta$ NeuAc) (1f)**



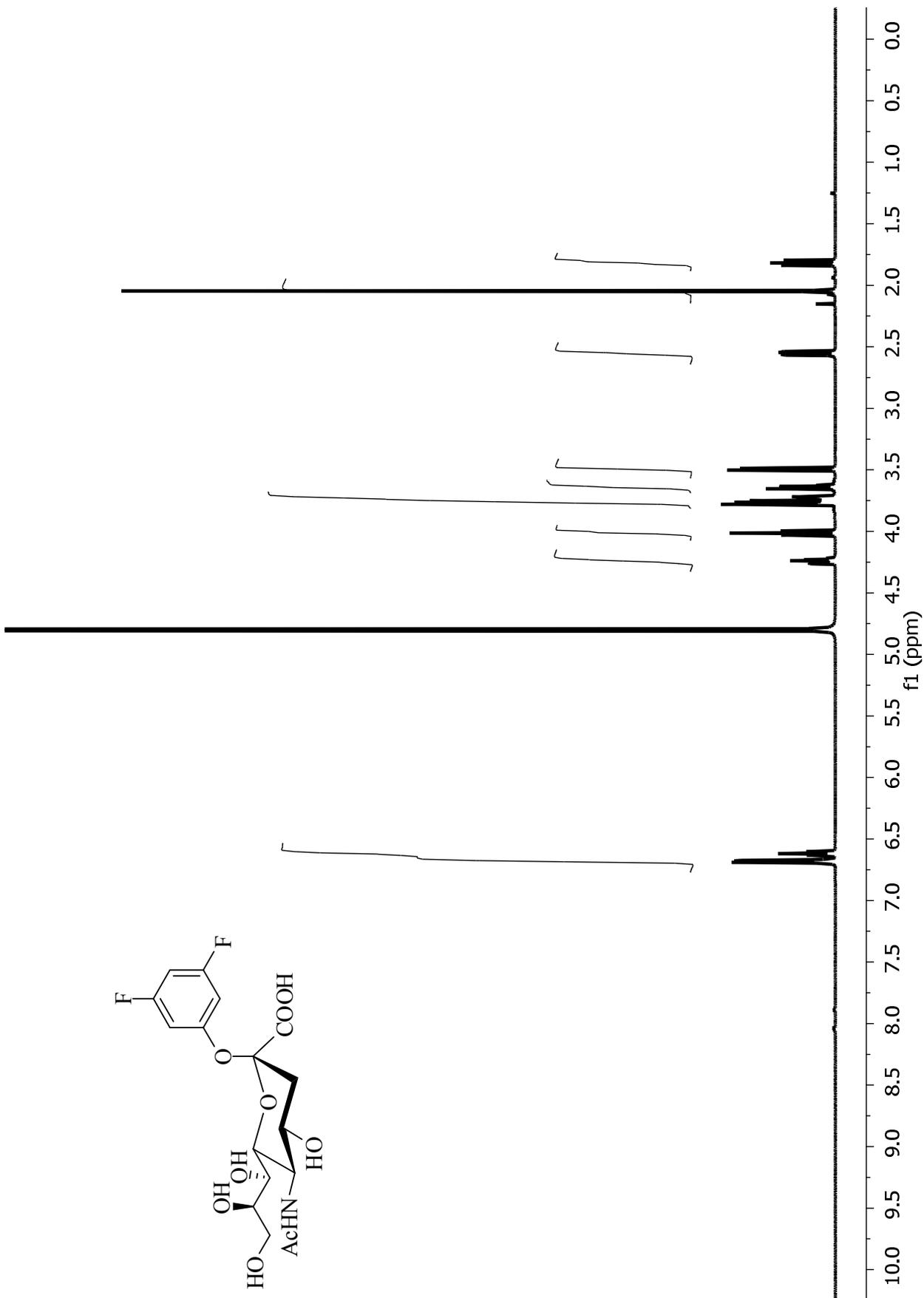
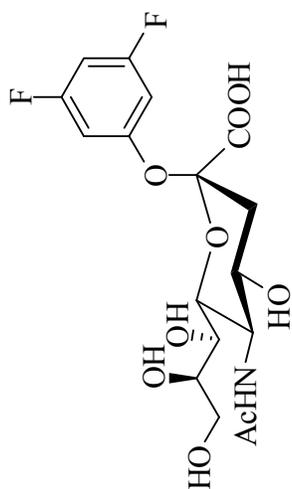
<sup>1</sup>H-NMR of 2,6-difluorophenyl β-D-N-acetylneuraminide (in D<sub>2</sub>O) (26DFP-βNeuAc) (1g)



**$^{13}\text{C}$ -NMR of 2,6-difluorophenyl  $\beta$ -D-N-acetylneuraminide (in  $\text{D}_2\text{O}$ ) (26DFP- $\beta$ NeuAc) (1g)**



**<sup>1</sup>H-NMR of 3,5-difluorophenyl β-D-N-acetylneuraminide (in D<sub>2</sub>O) (35DFP-βNeuAc) (1h)**



**<sup>13</sup>C-NMR of 3,5-difluorophenyl β-D-N-acetylneuraminide (in D<sub>2</sub>O) (35DFP-βNeuAc) (1h)**

