

## Supporting Information

### Structural variation of the 3-acetamido-4,5,6-trihydroxyazepane iminosugar through epimerization and C-alkylation leads to low micromolar HexAB and NagZ inhibitors

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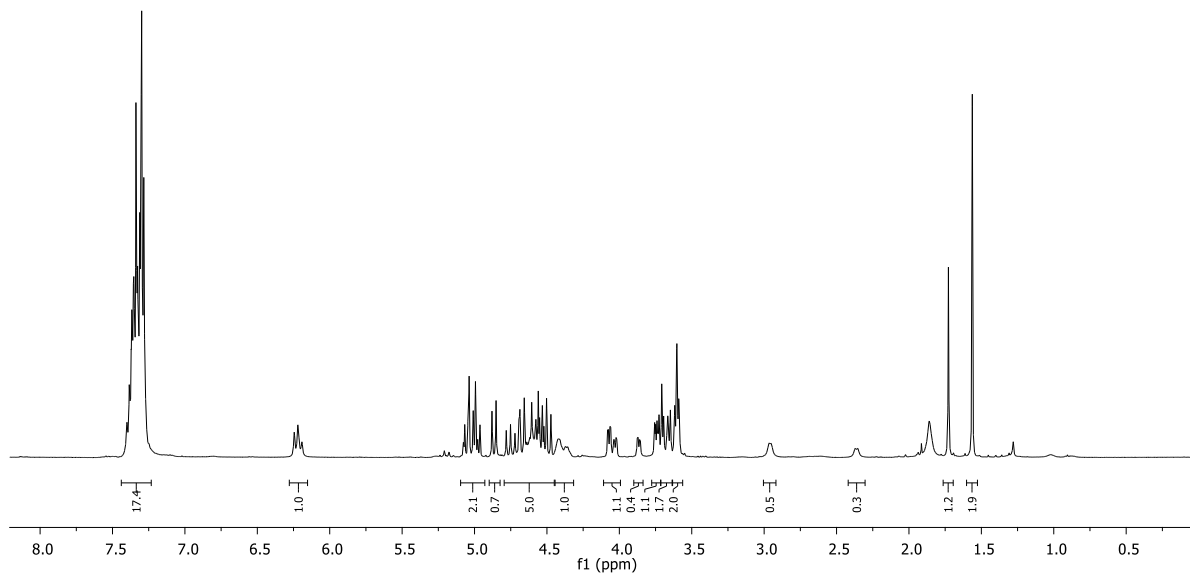
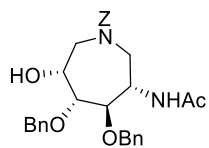
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### Table of Contents

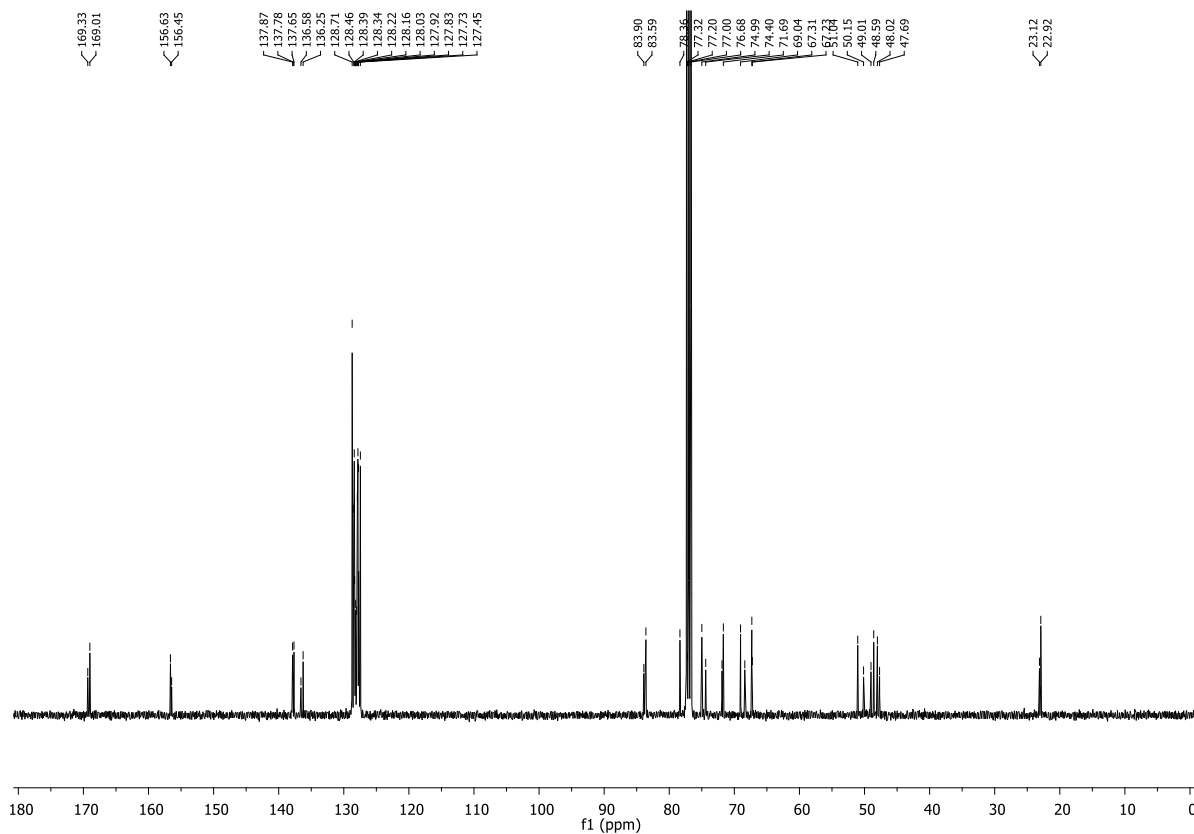
Copies of <sup>1</sup>H and <sup>13</sup>C NMR spectra

p. 2-19

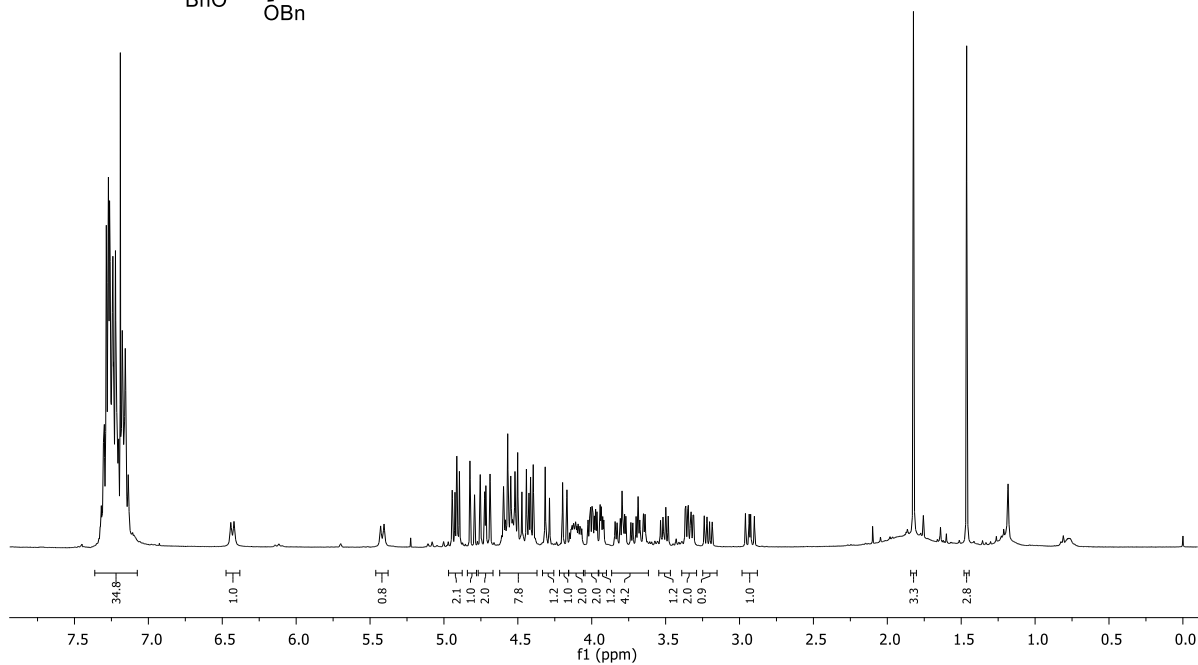
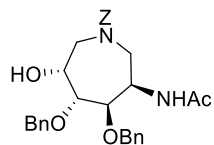
$^1\text{H}$  NMR spectrum of **15**, 400 MHz,  $\text{CDCl}_3$



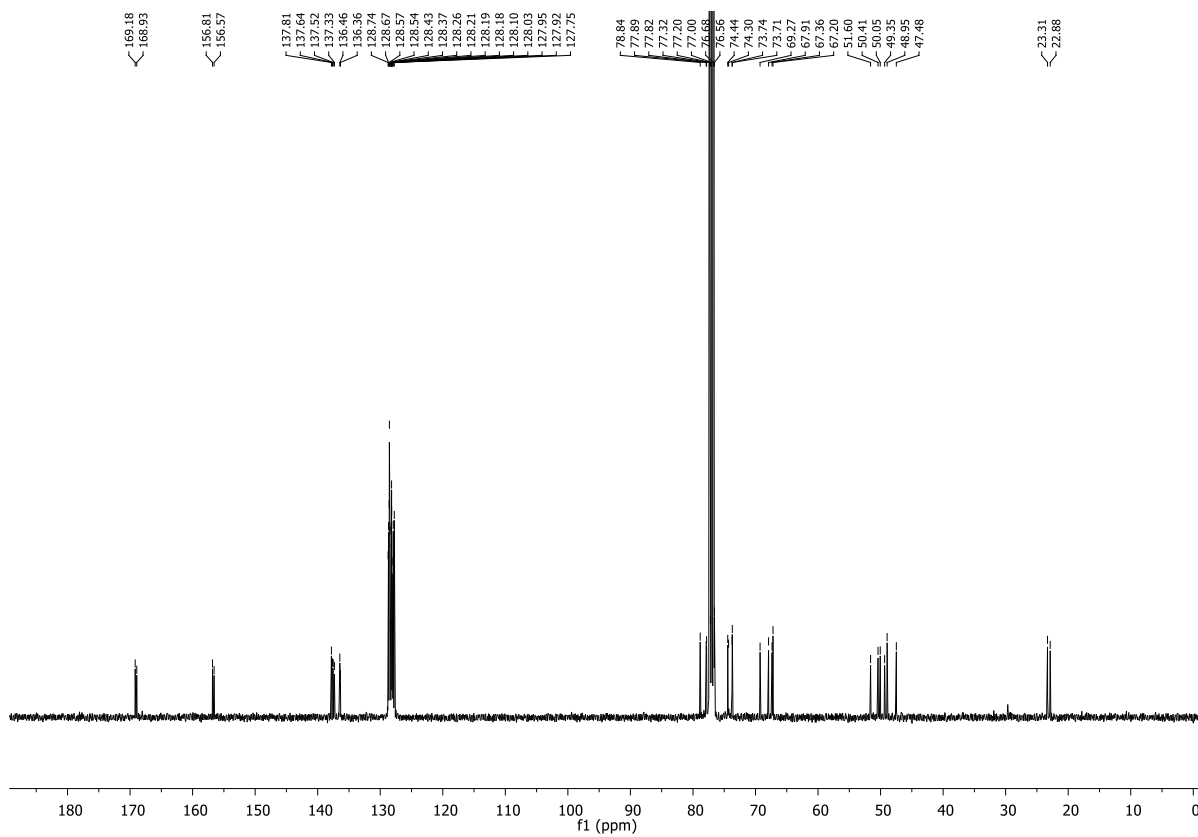
$^{13}\text{C}$  NMR spectrum of **15**, 100 MHz,  $\text{CDCl}_3$



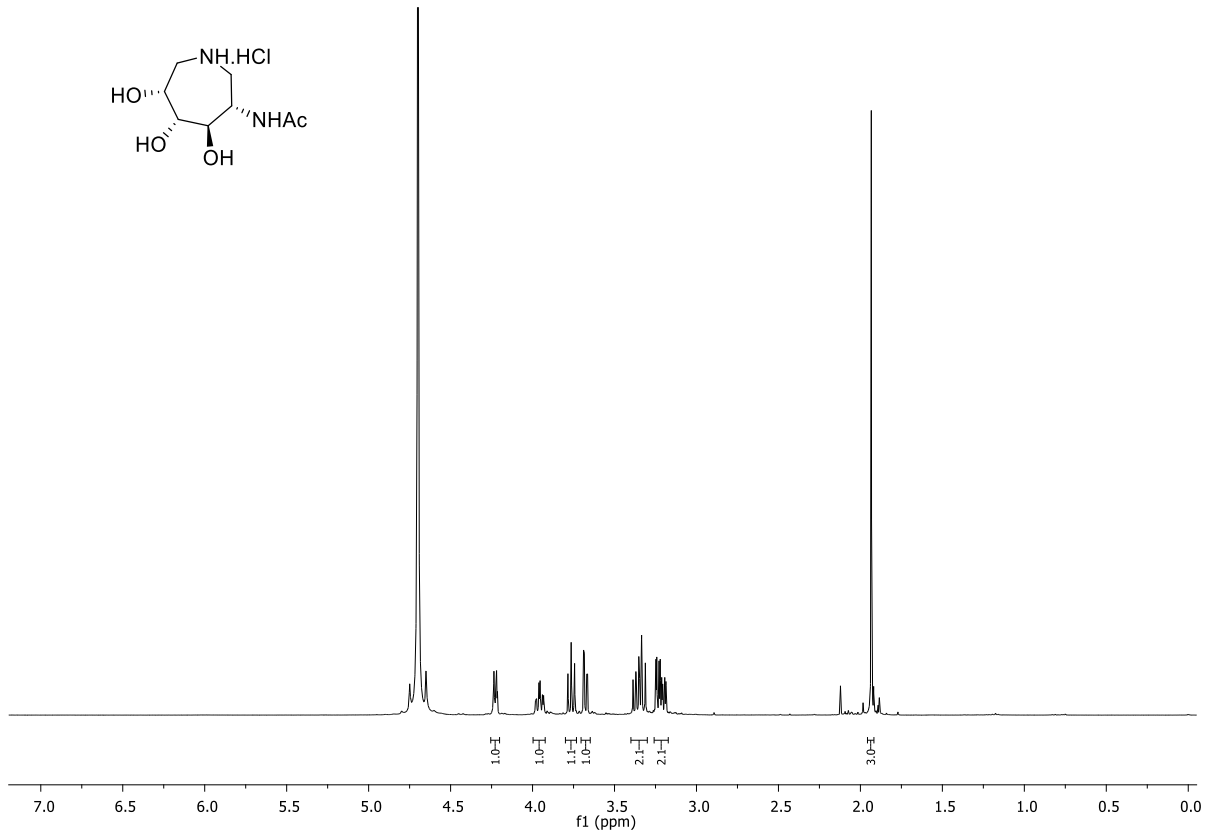
$^1\text{H}$  NMR spectrum of **16**, 400 MHz,  $\text{CDCl}_3$



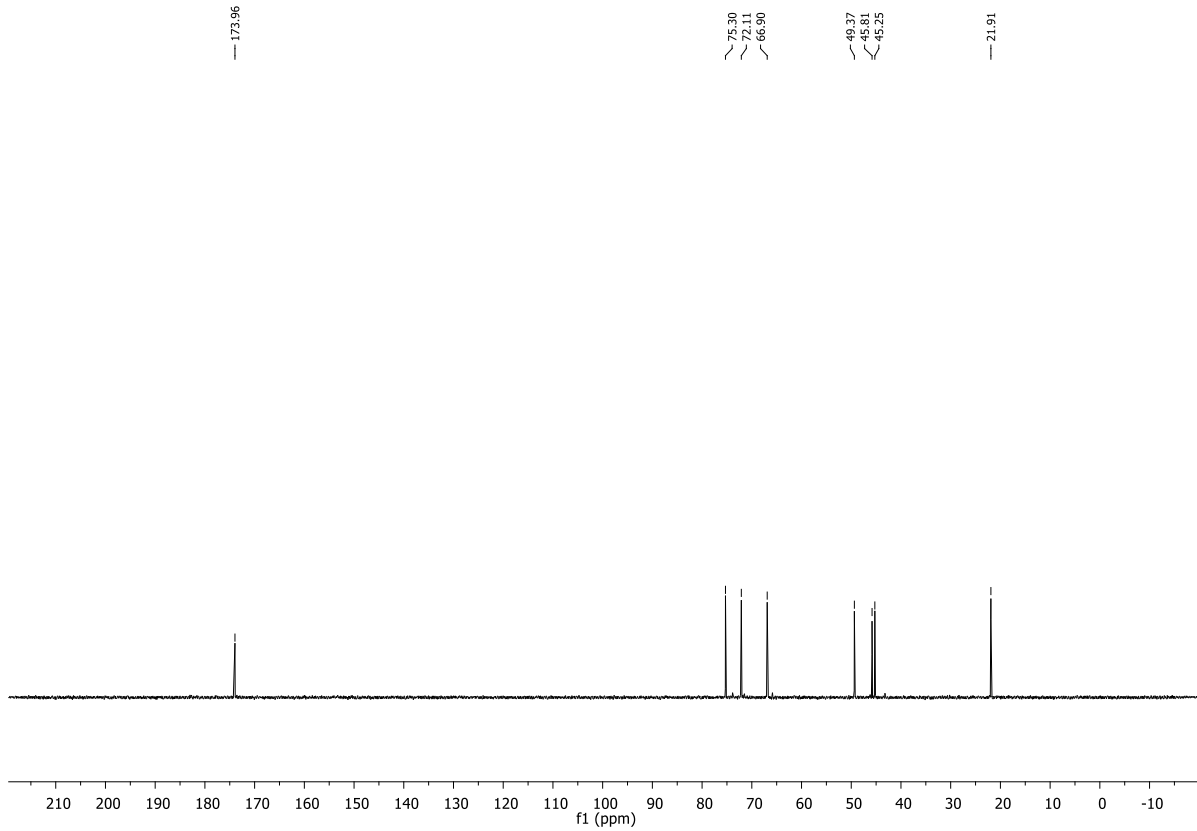
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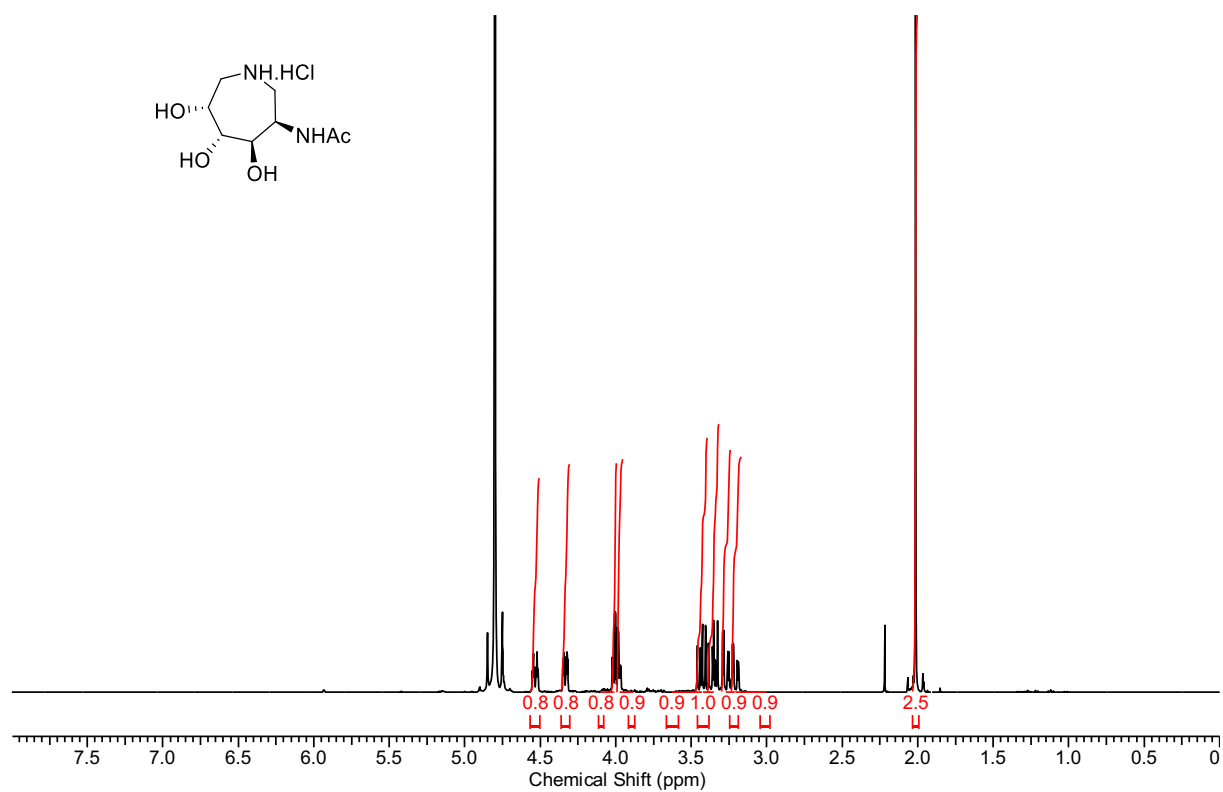
$^1\text{H}$  NMR spectrum of **18**, 400 MHz,  $\text{D}_2\text{O}$



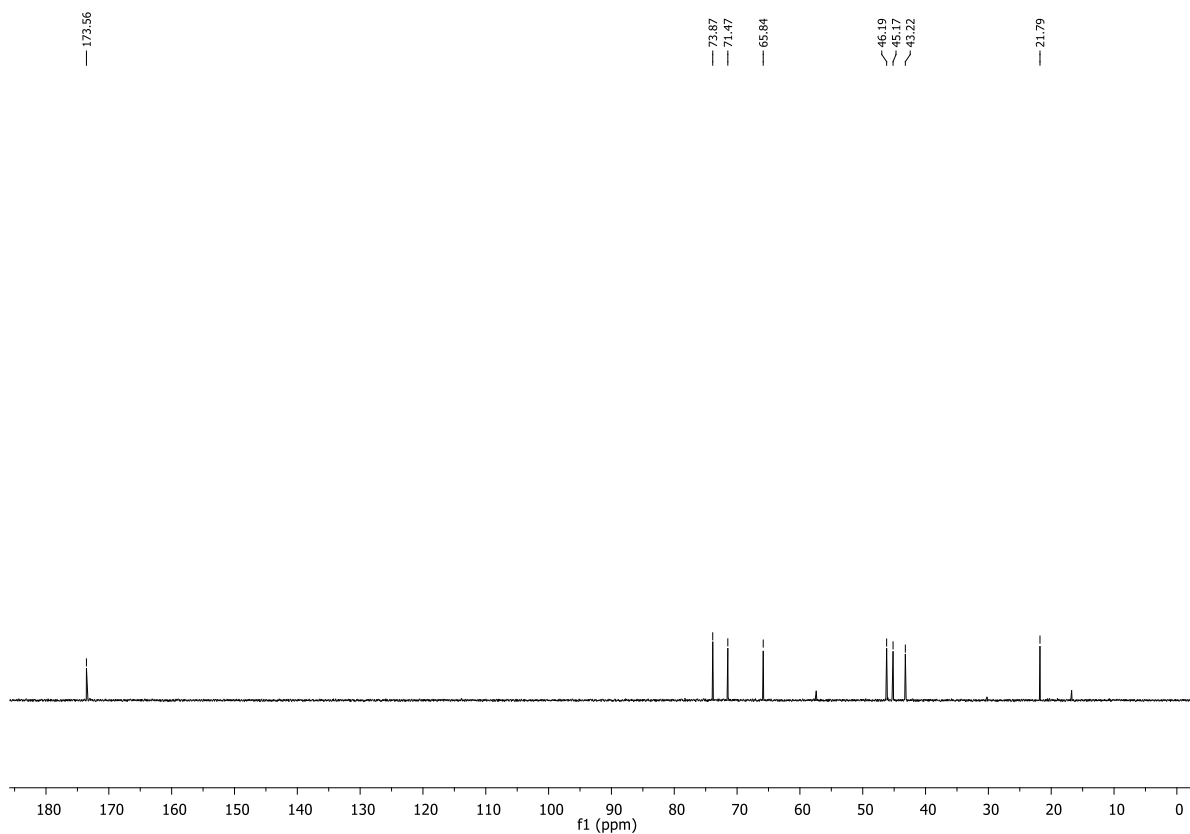
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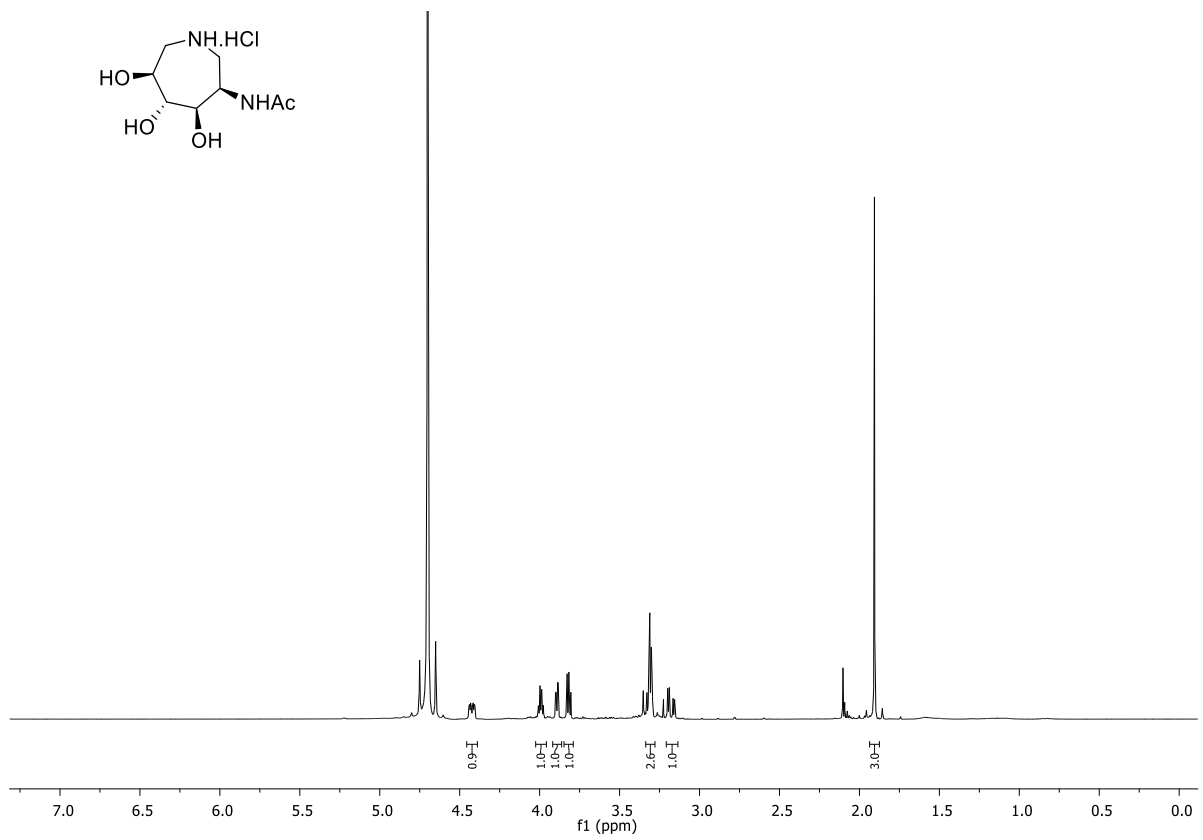
$^1\text{H}$  NMR spectrum of **19**, 400 MHz,  $\text{D}_2\text{O}$



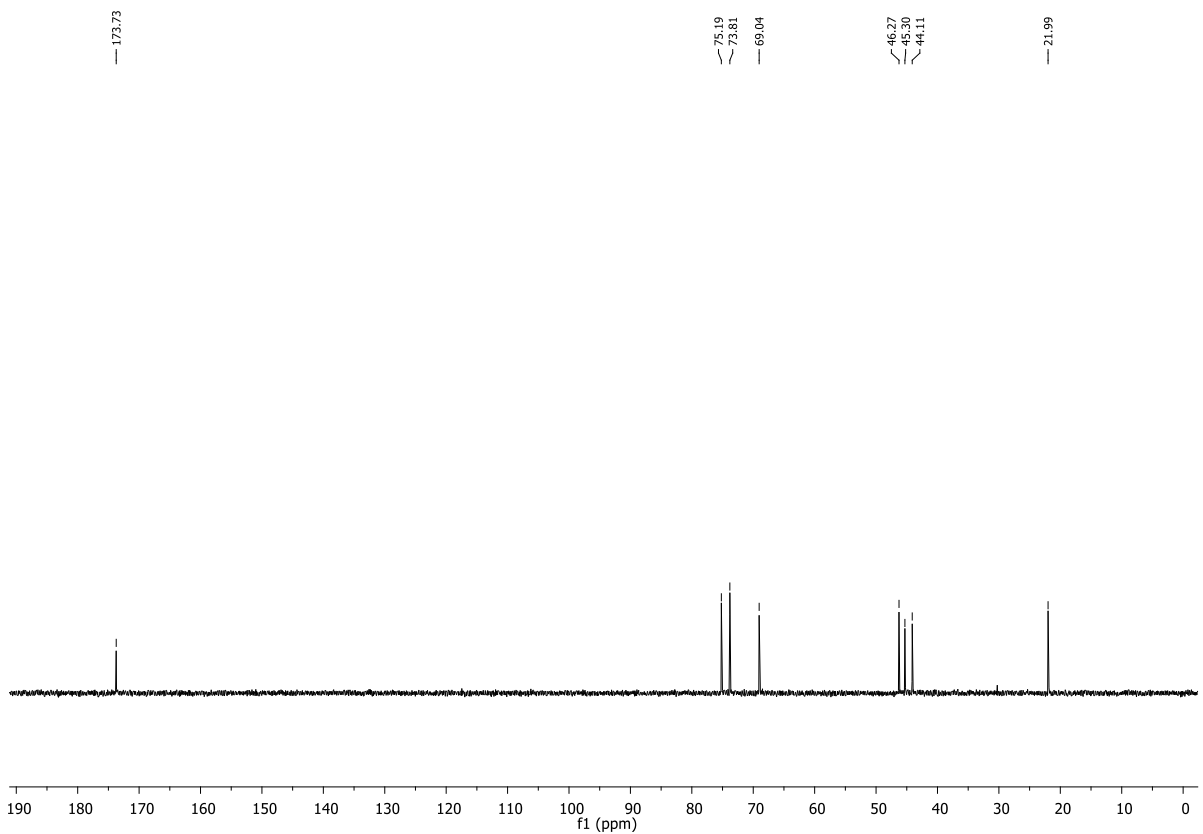
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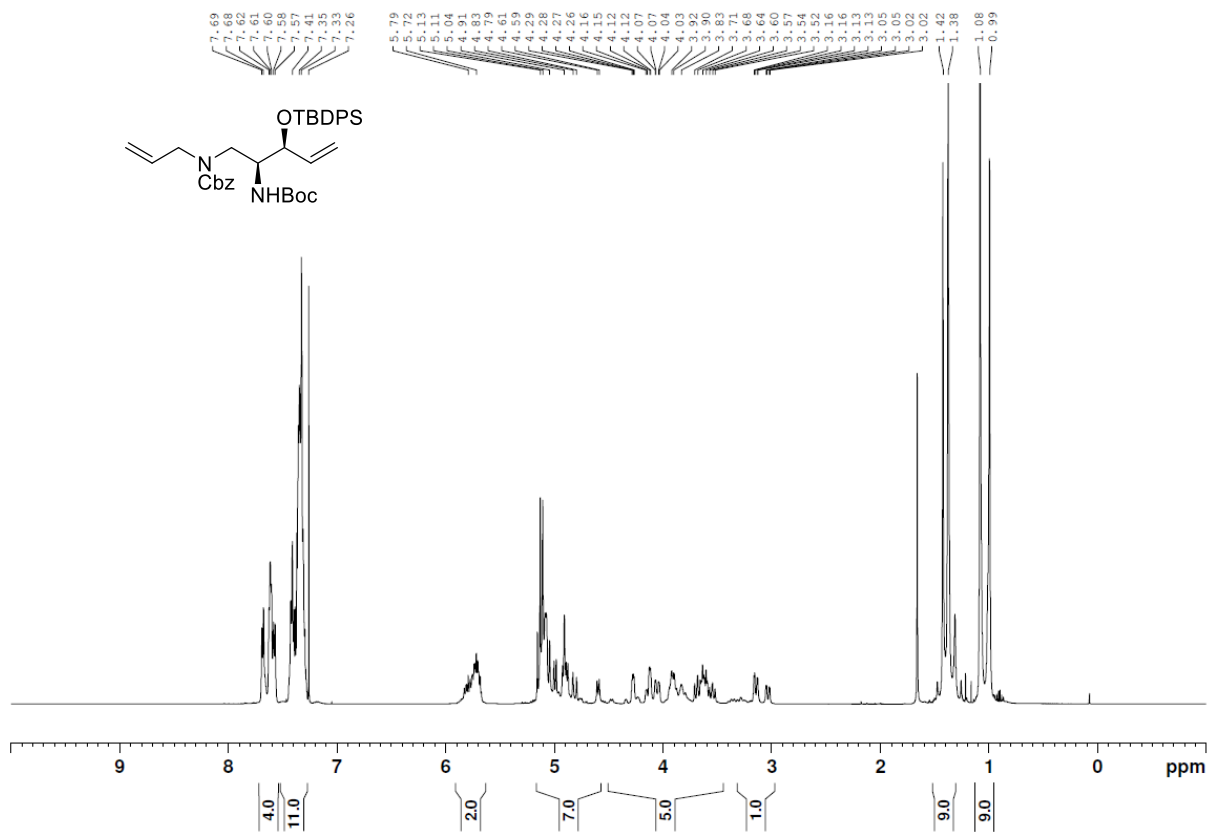
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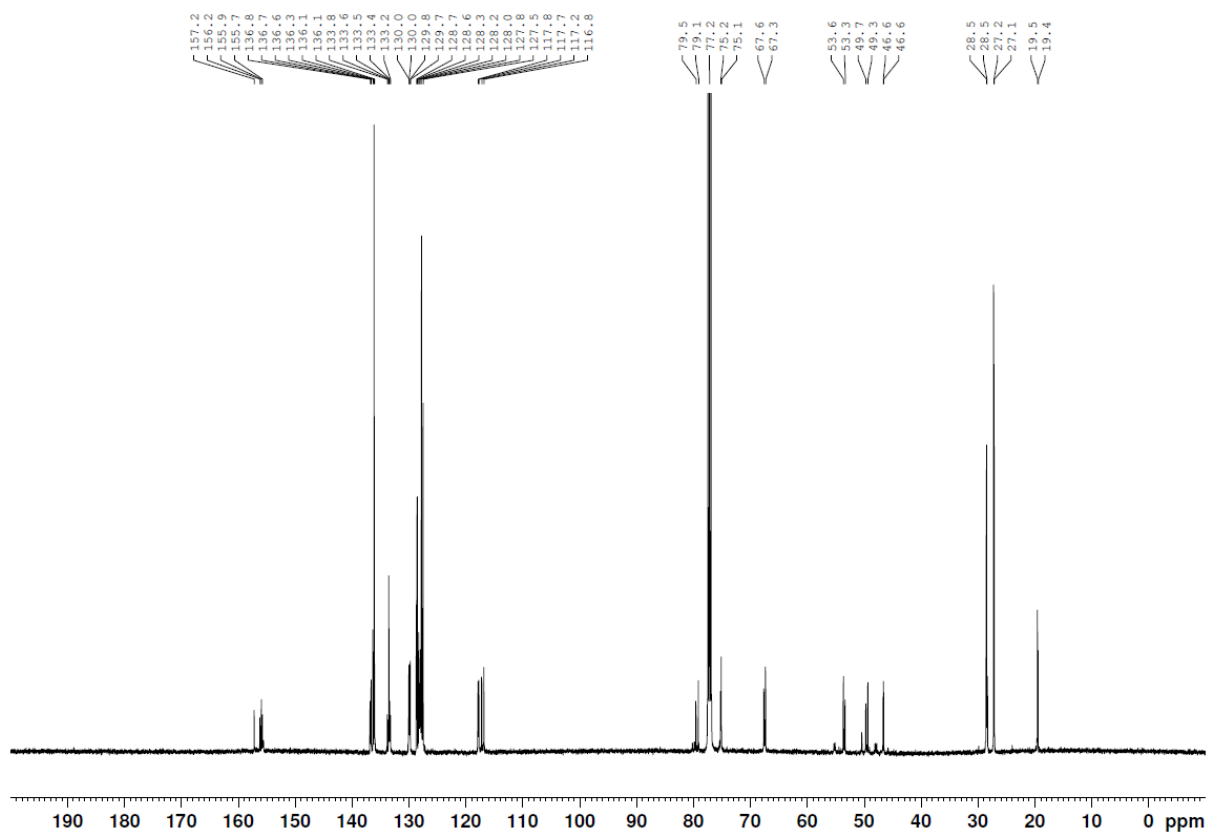
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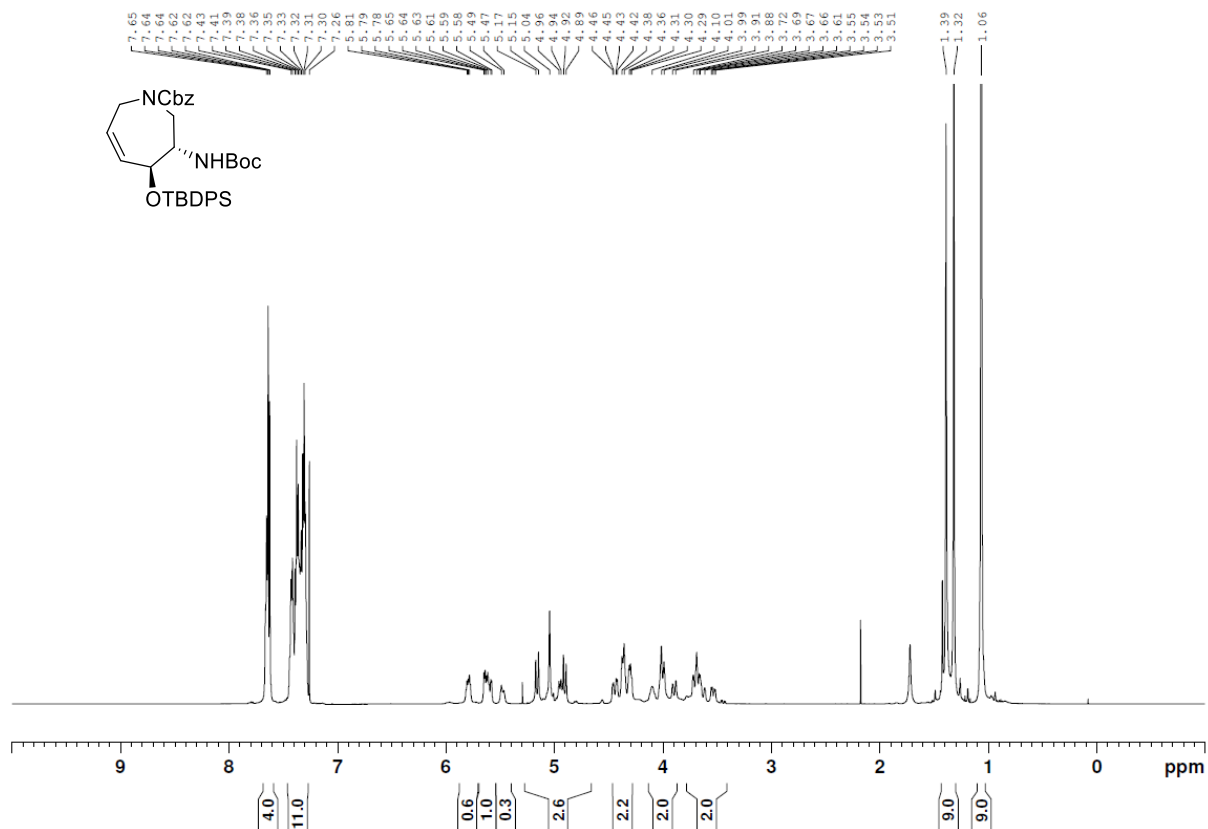
<sup>1</sup>H NMR spectrum of **22**, 500 MHz, CDCl<sub>3</sub>



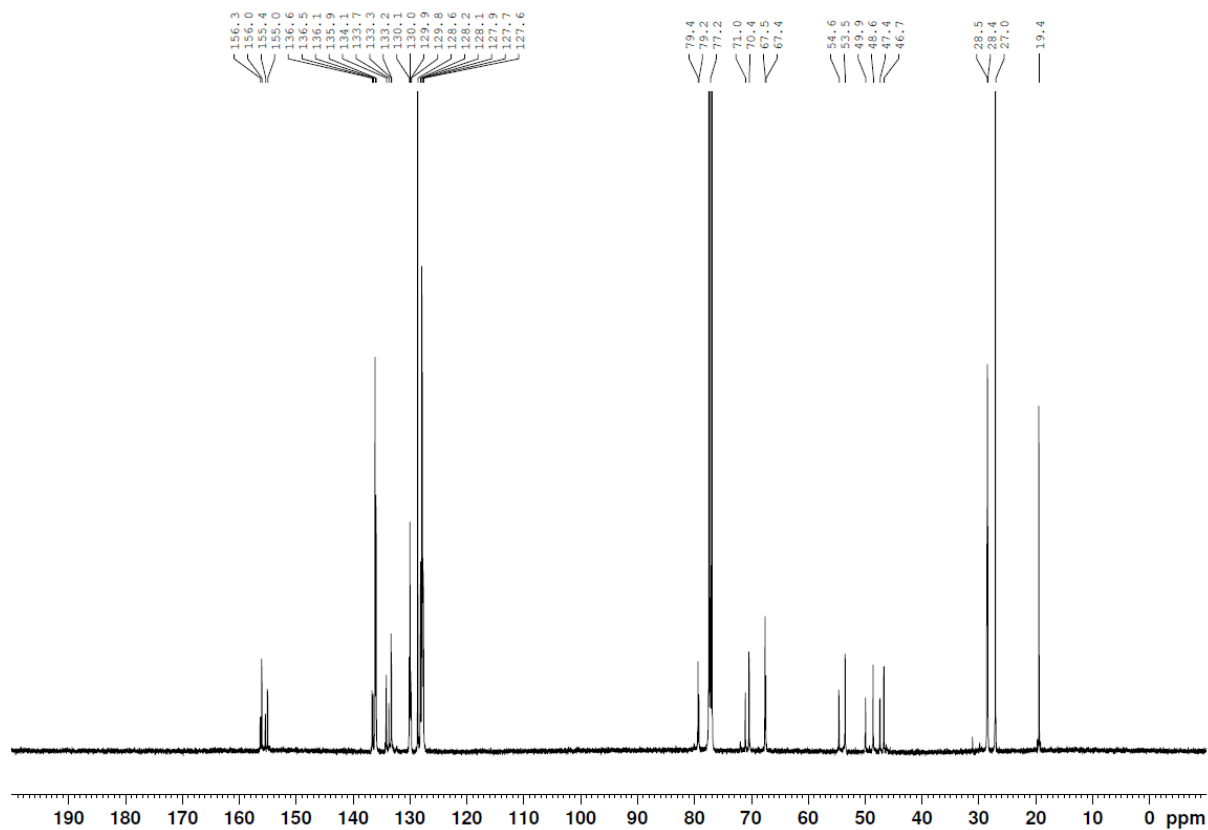
<sup>13</sup>C NMR spectrum of **22**, 125 MHz, CDCl<sub>3</sub>



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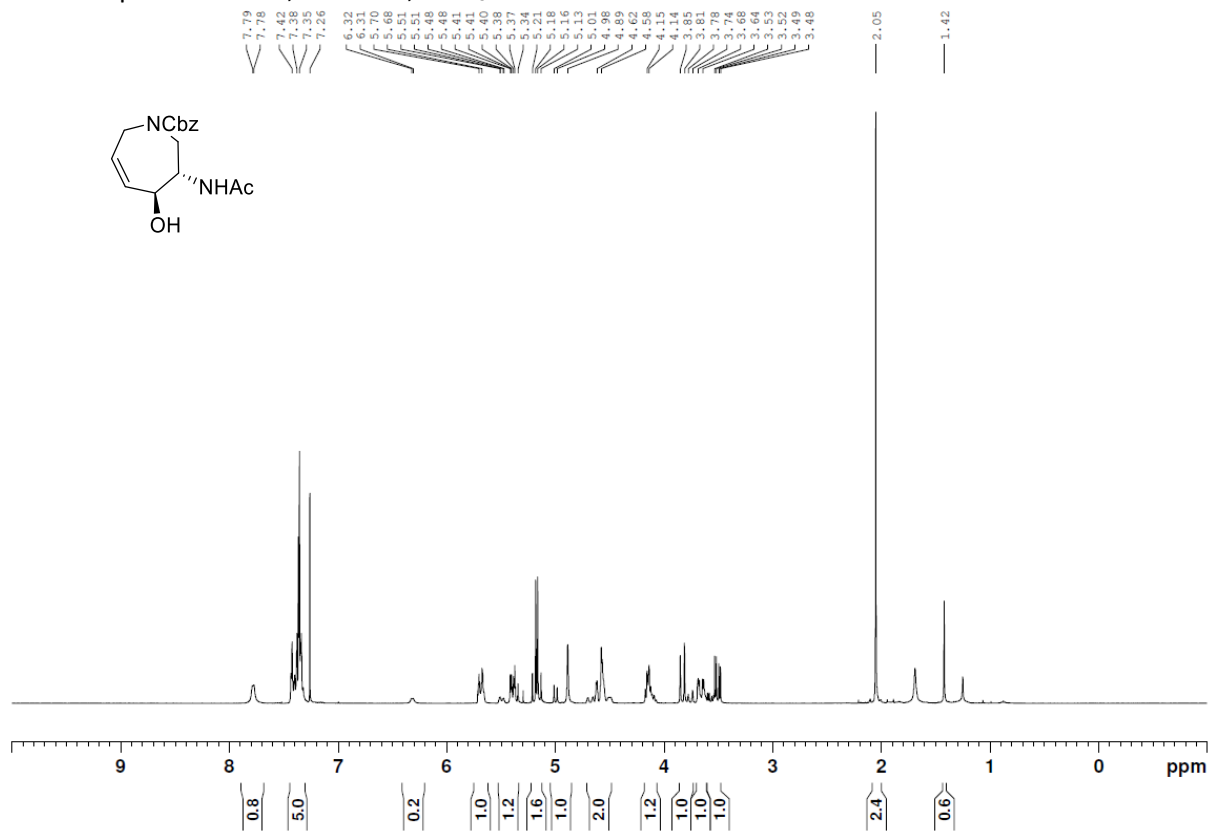


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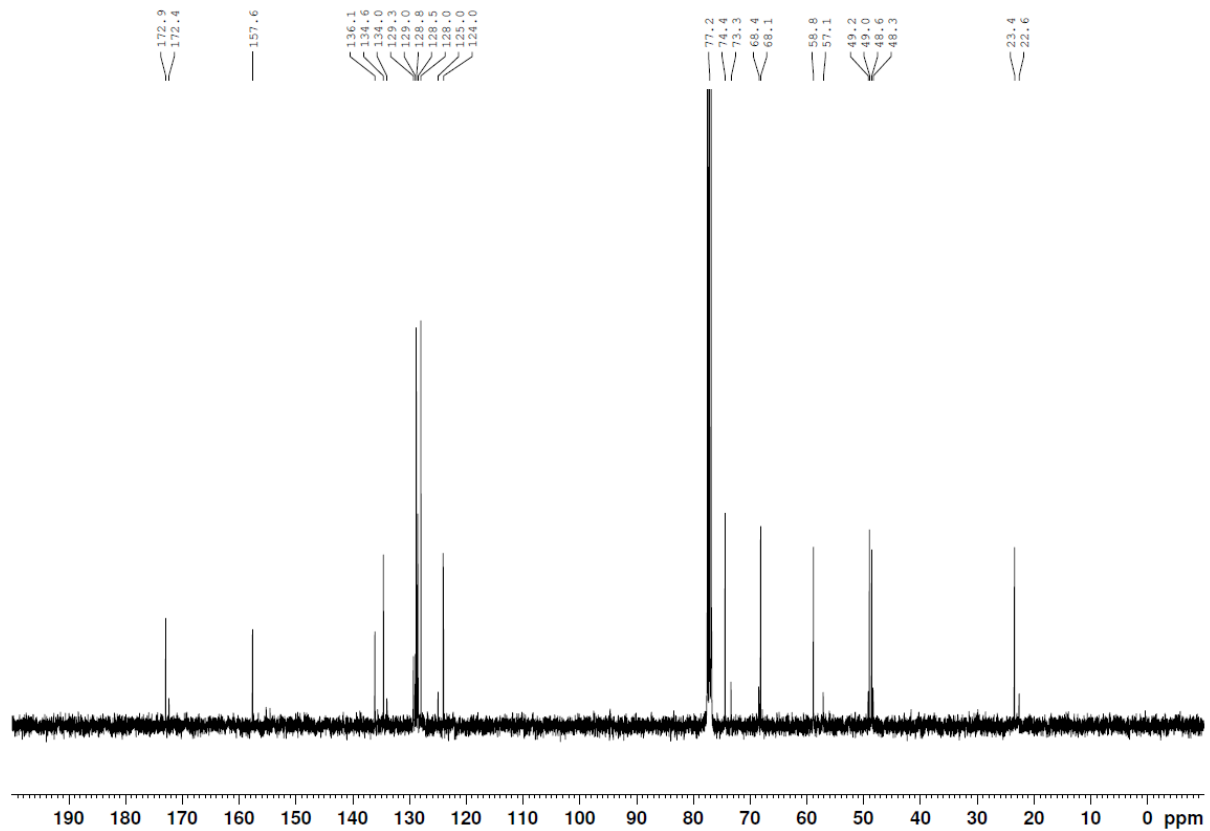




<sup>1</sup>H NMR spectrum of **24**, 400 MHz, CDCl<sub>3</sub>

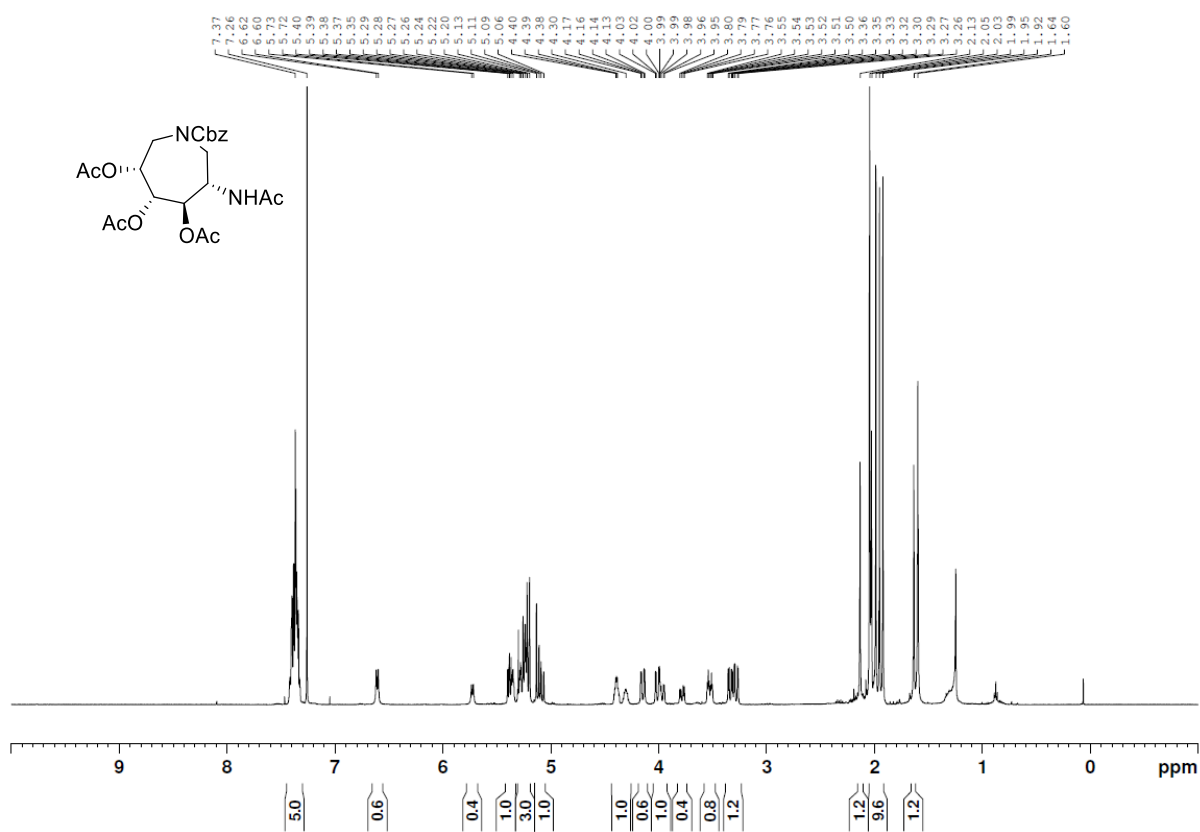


<sup>13</sup>C NMR spectrum of **24**, 100 MHz, CDCl<sub>3</sub>

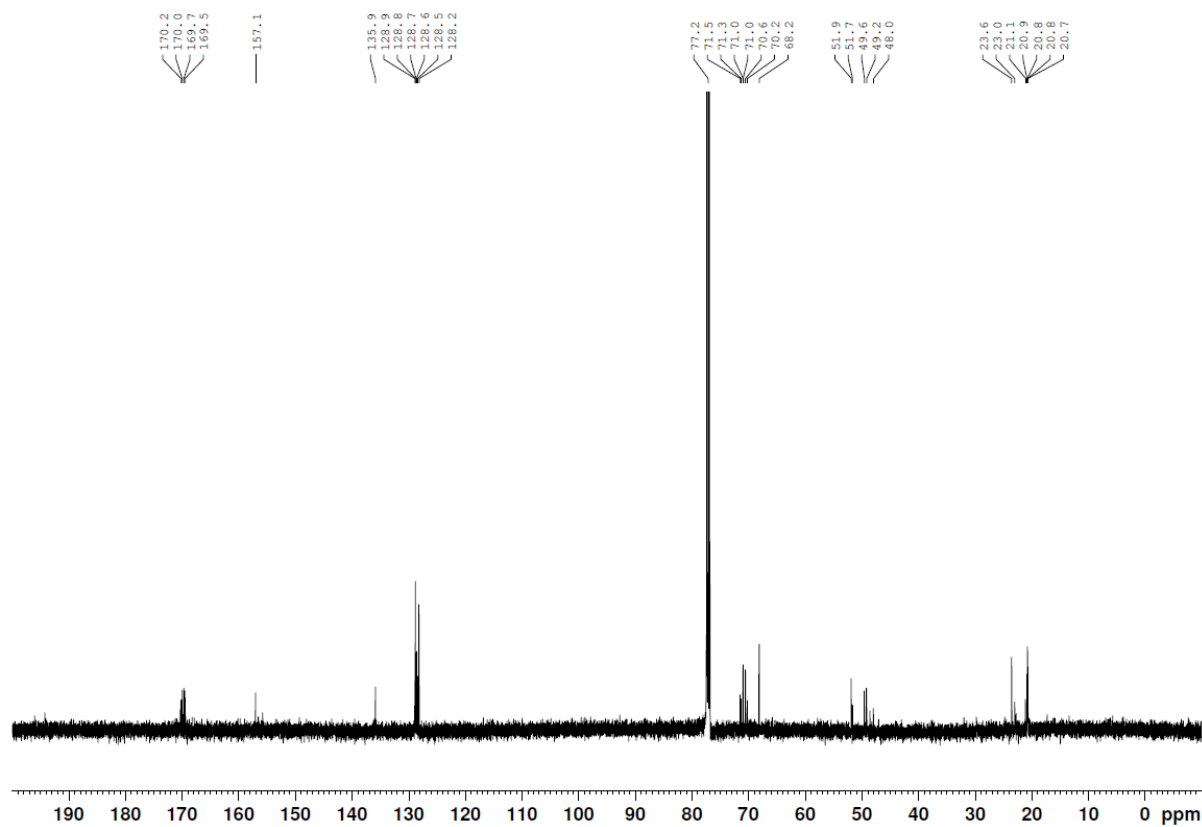




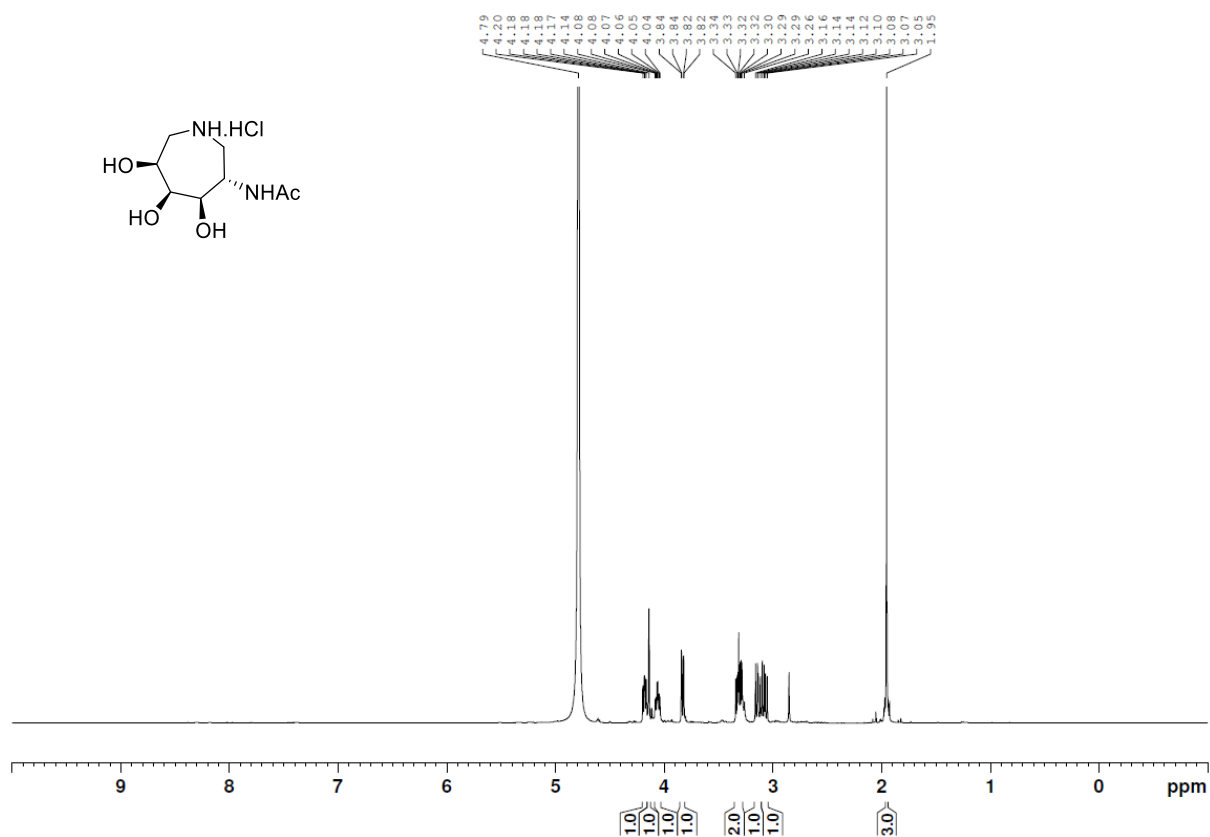
$^1\text{H}$  NMR spectrum of **26**, 500 MHz,  $\text{CDCl}_3$



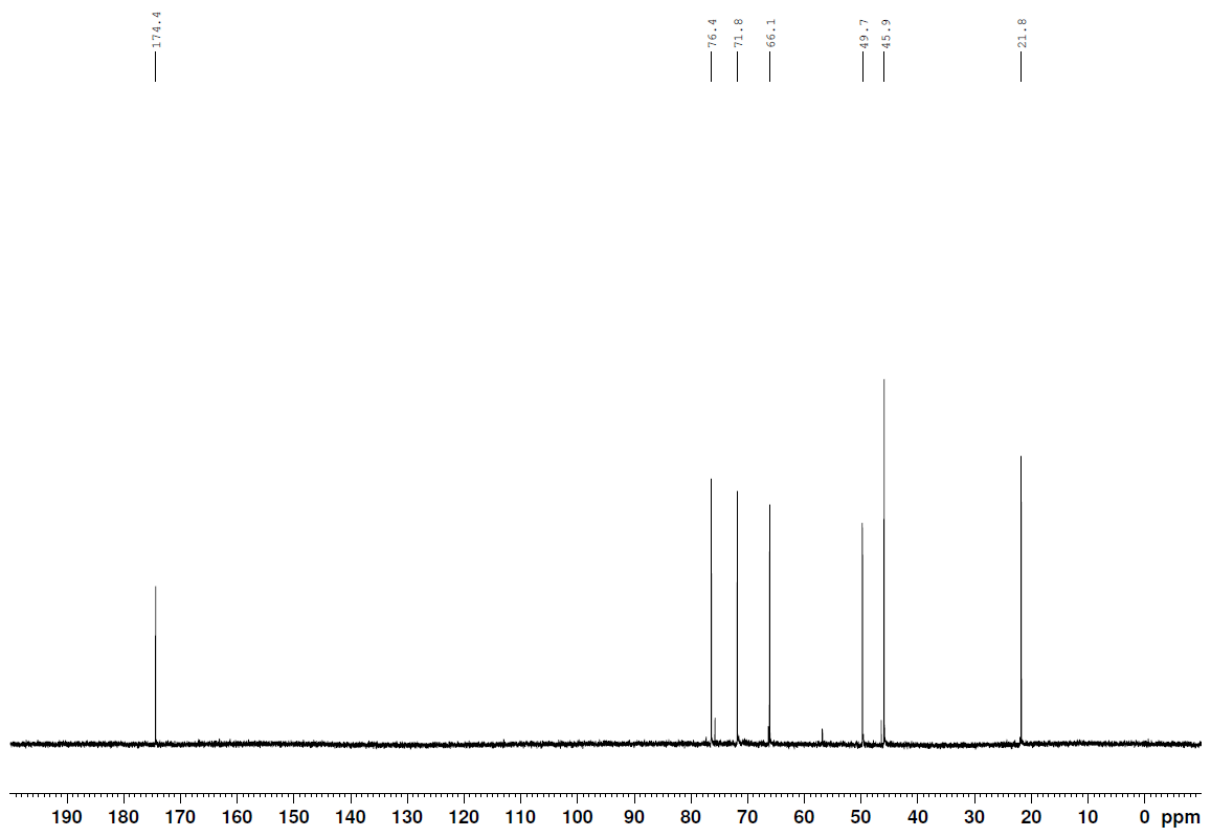
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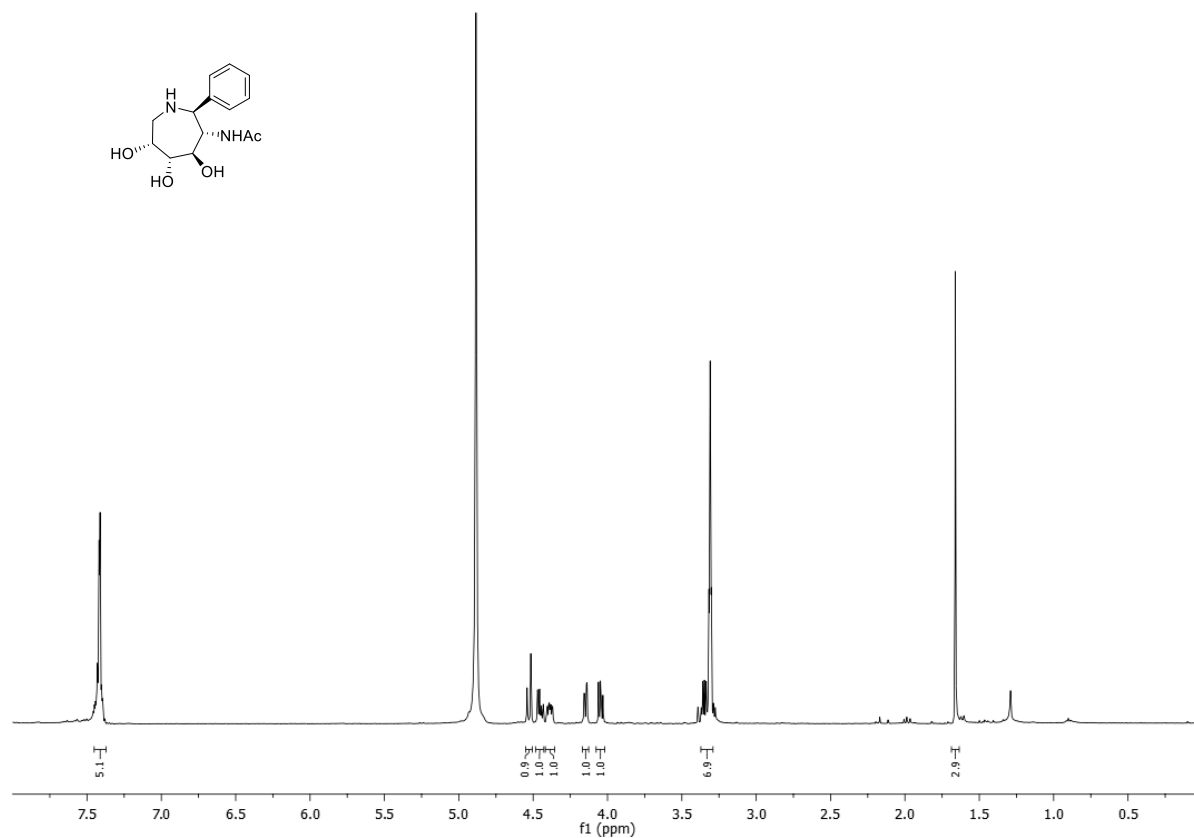
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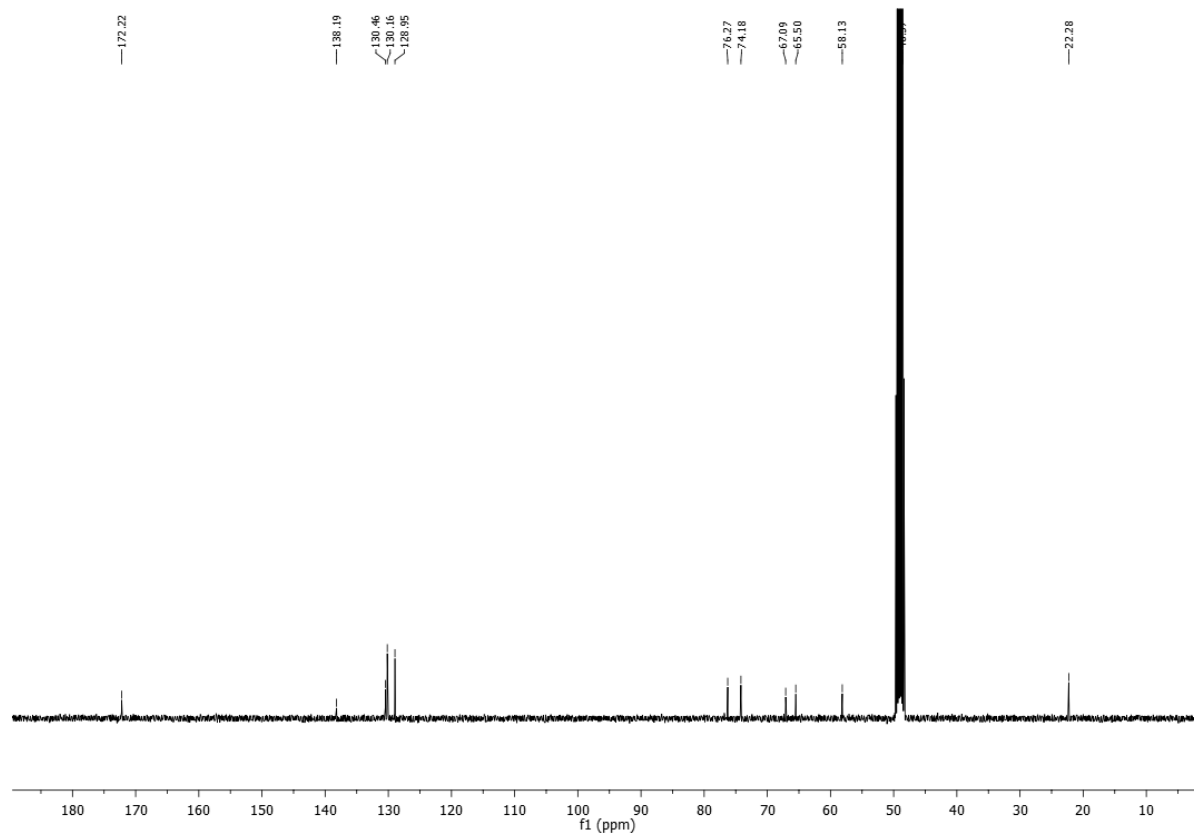
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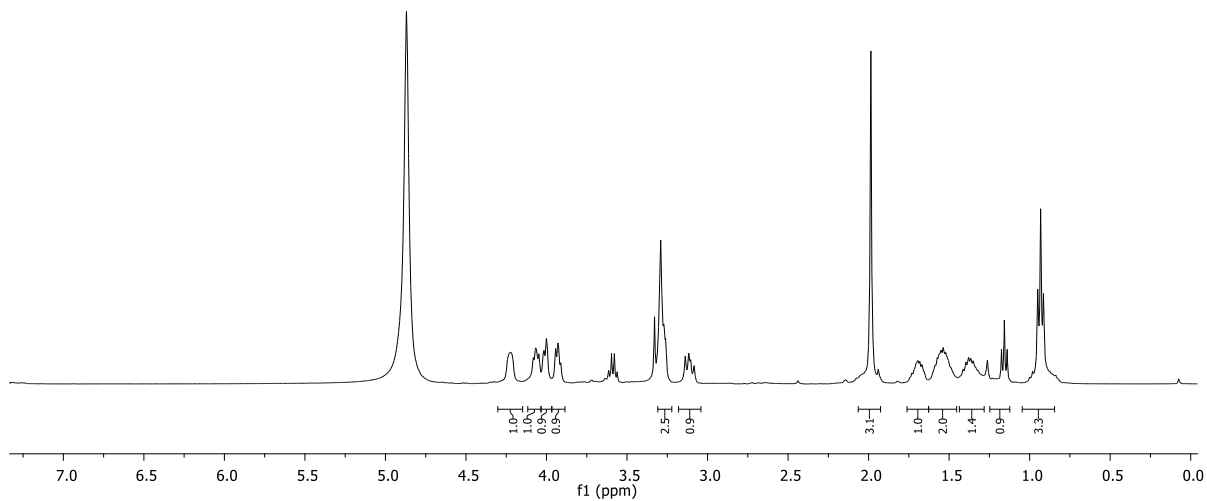
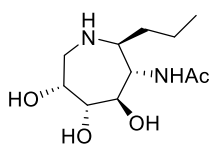
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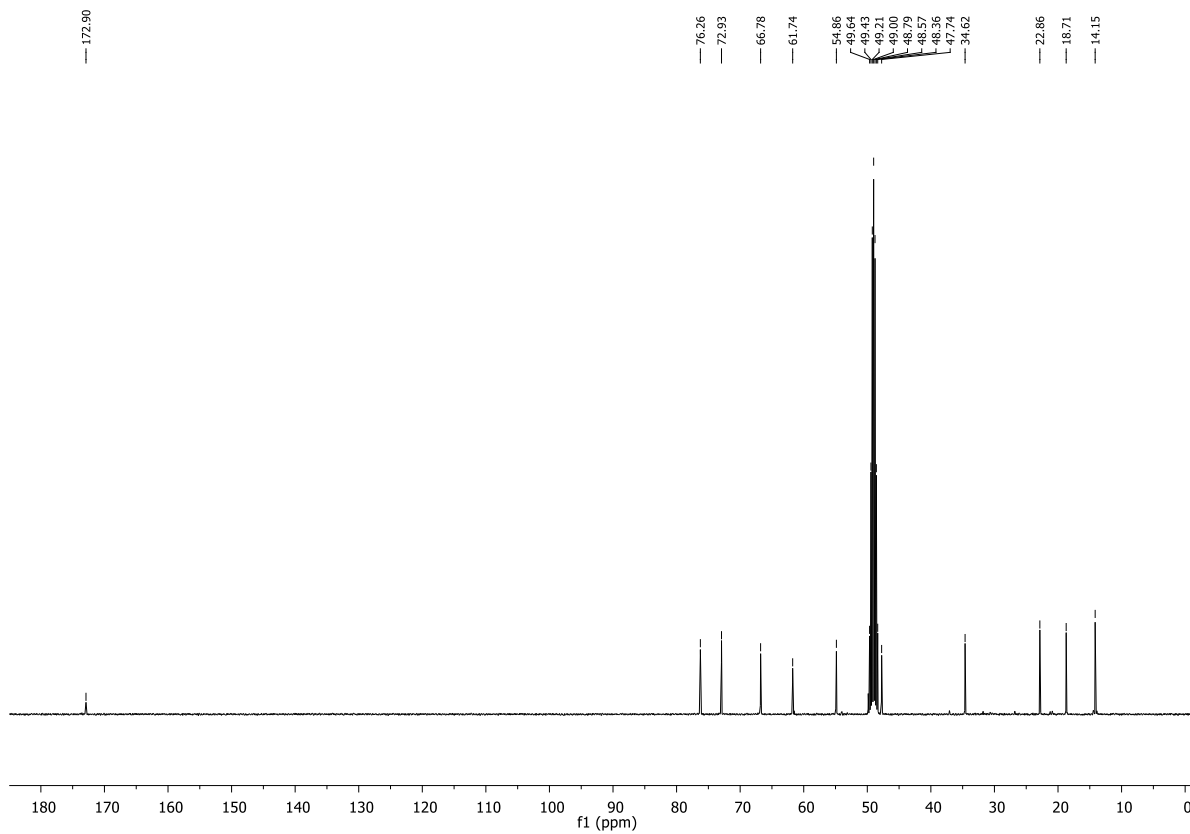
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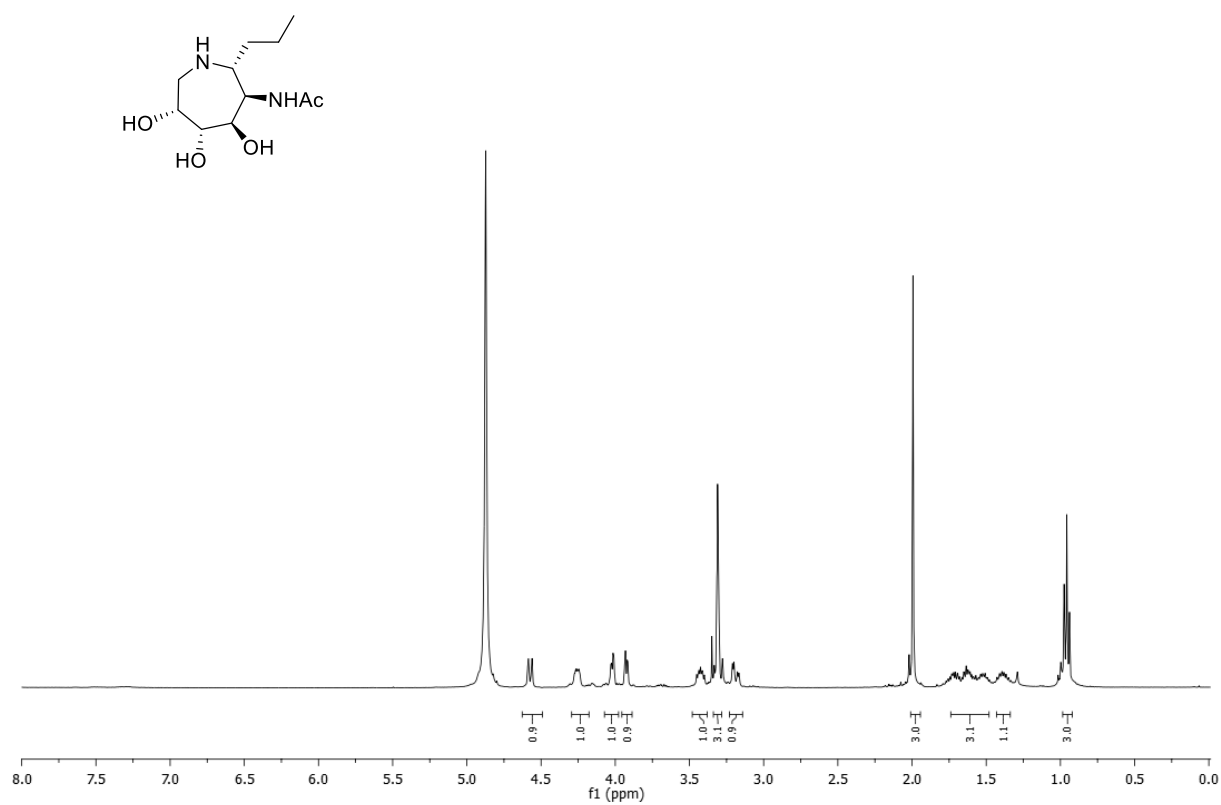
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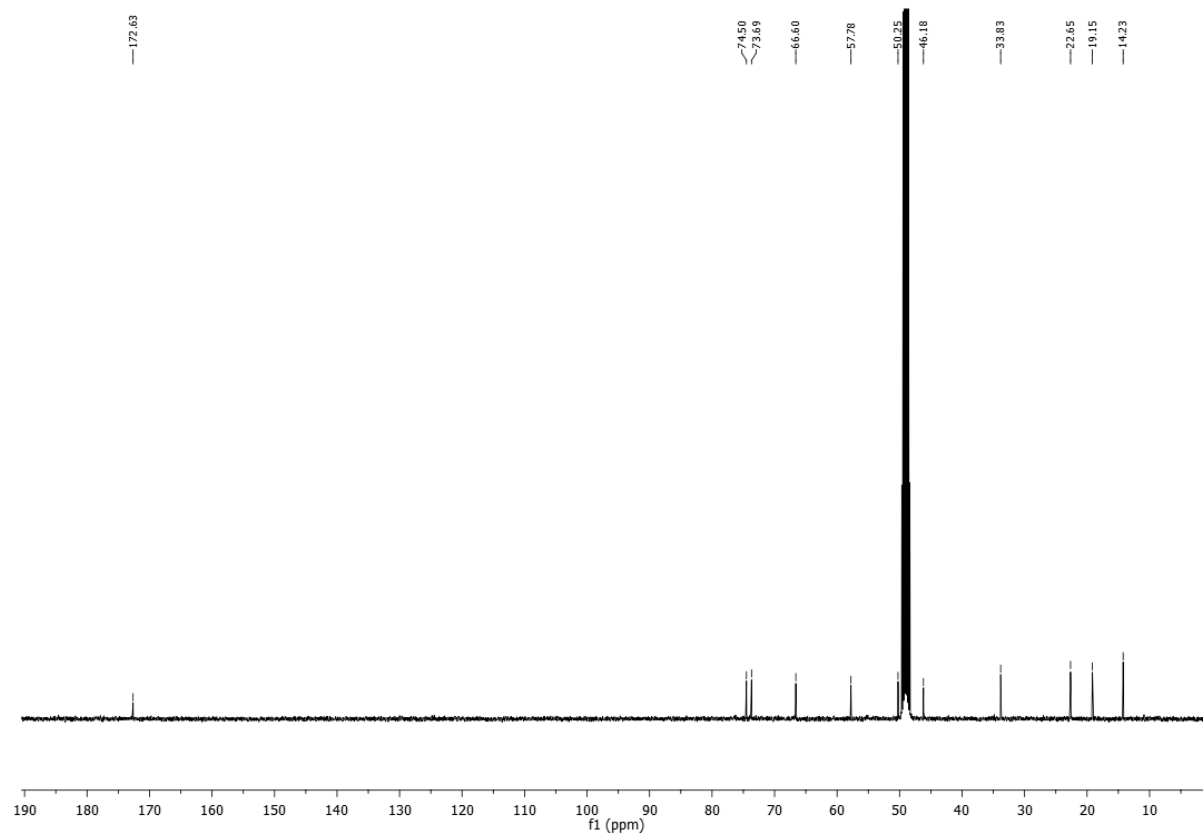
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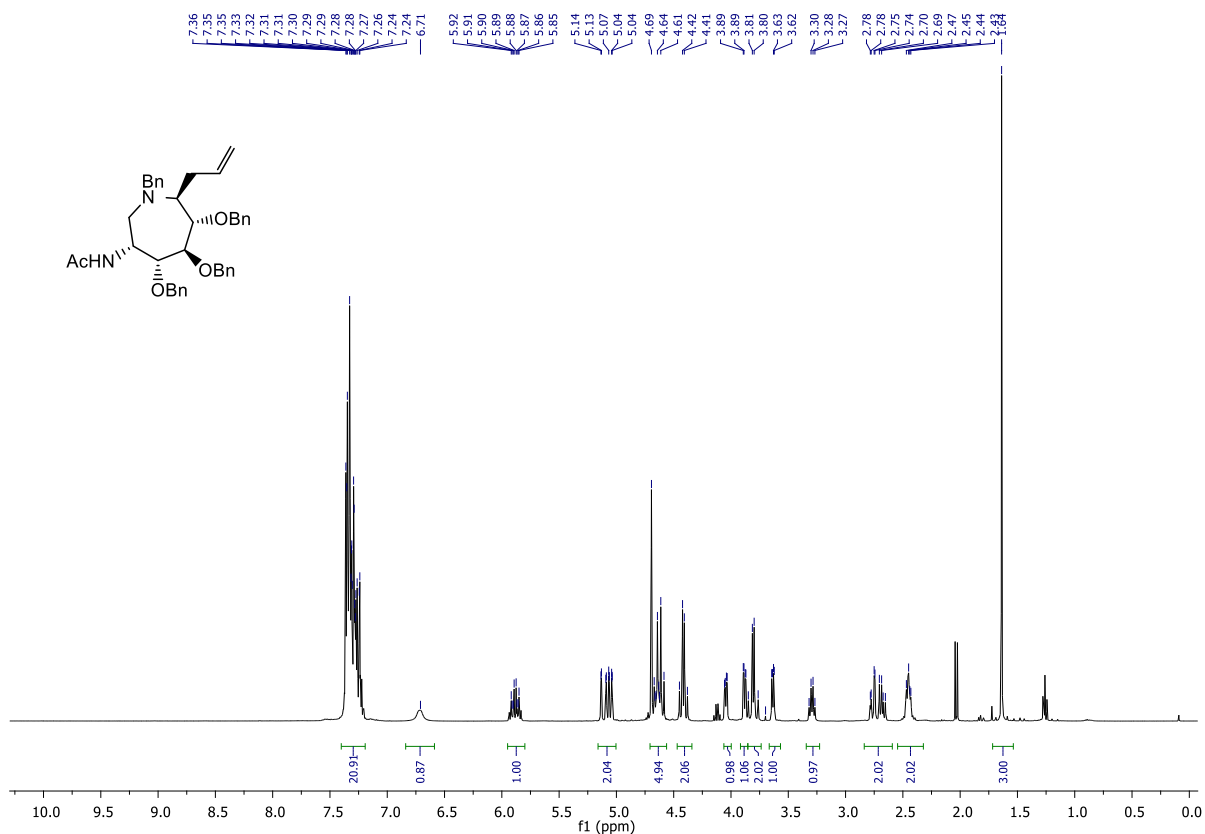
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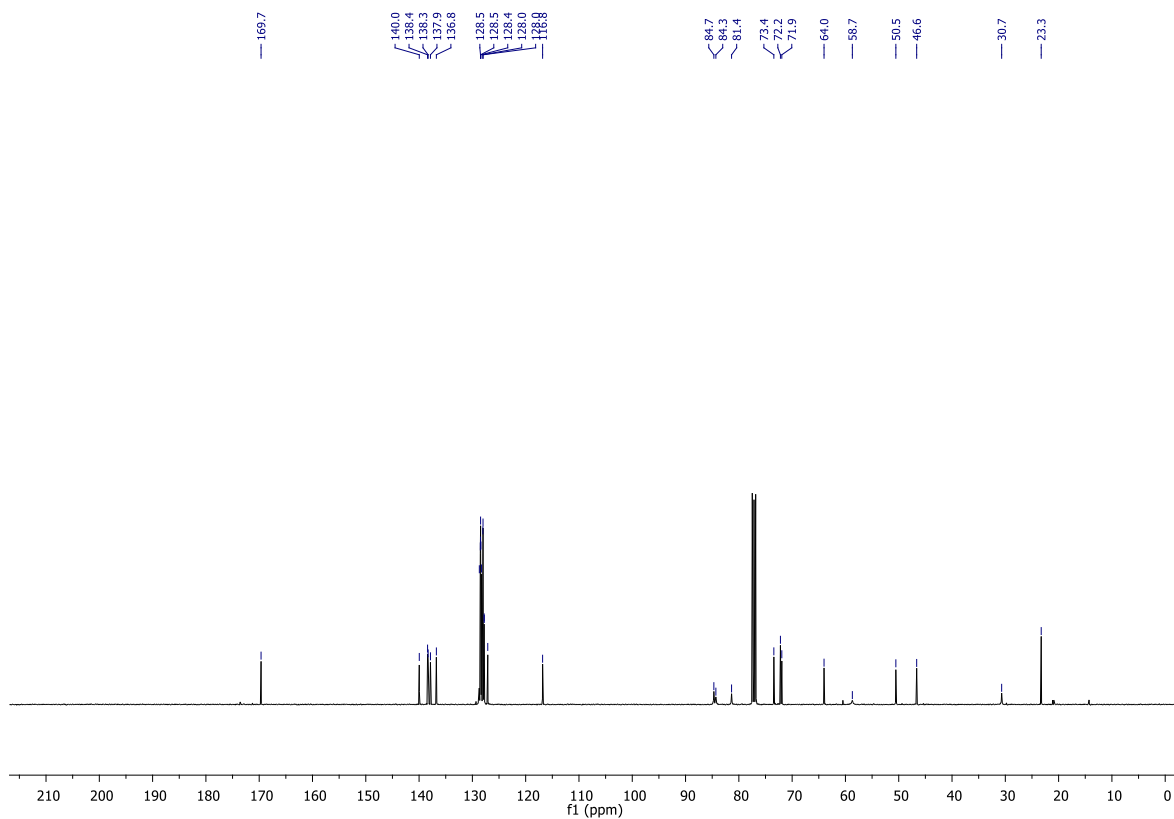
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<sup>1</sup>H NMR spectrum of **35**, 400 MHz, CDCl<sub>3</sub>

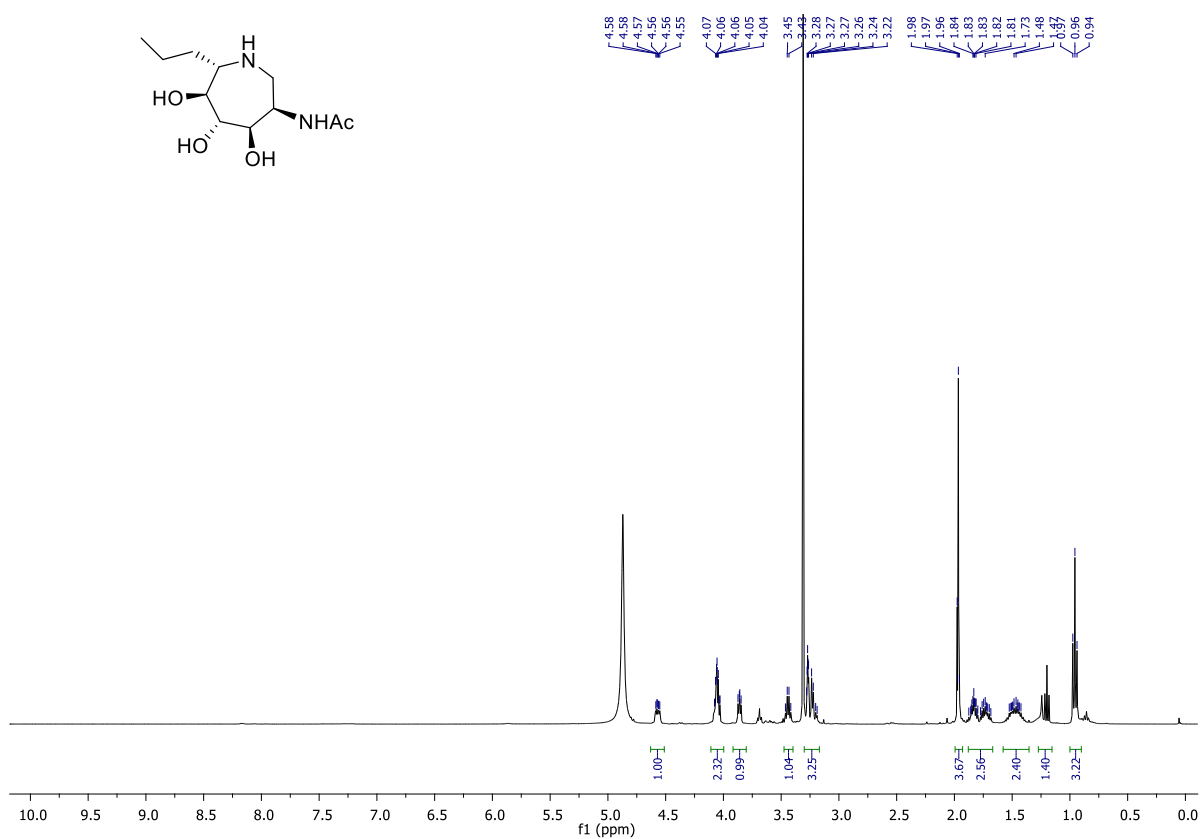


<sup>13</sup>C NMR spectrum of **35**, 100 MHz, CDCl<sub>3</sub>

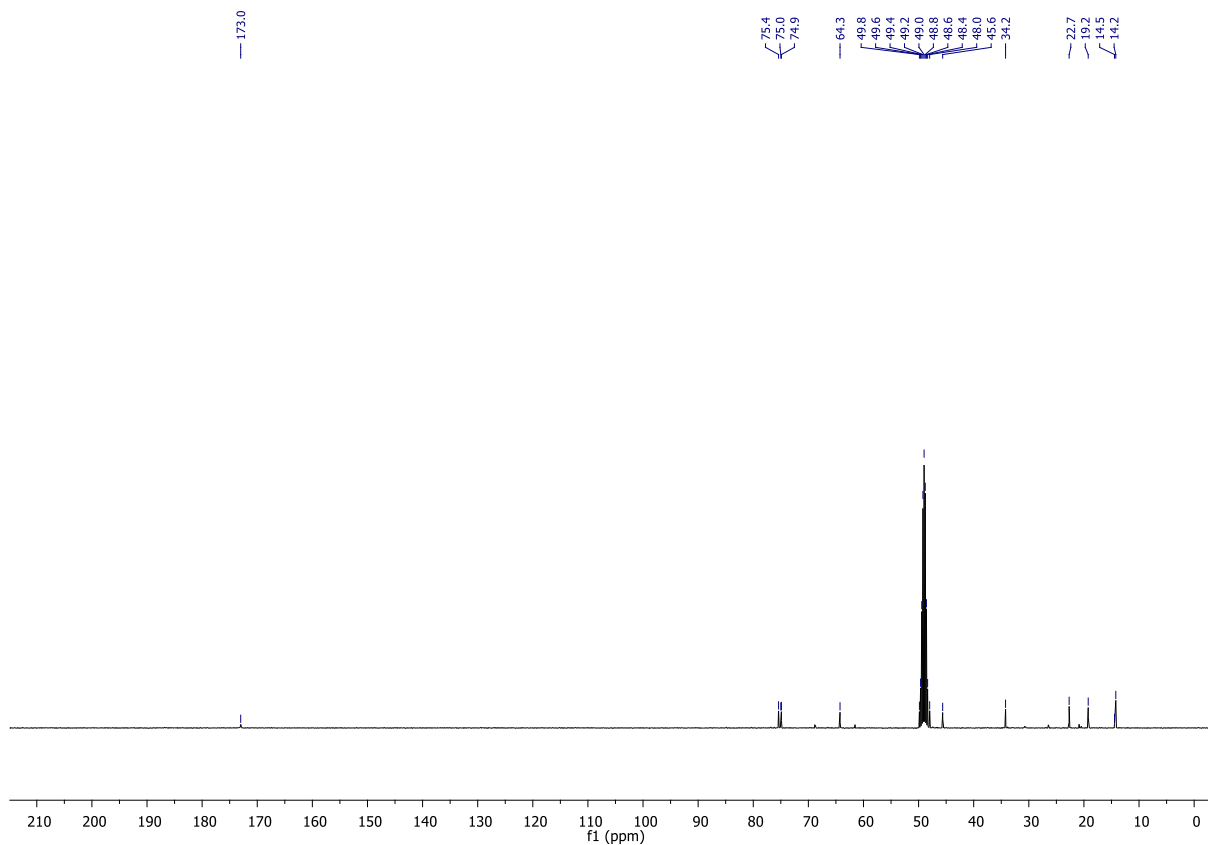




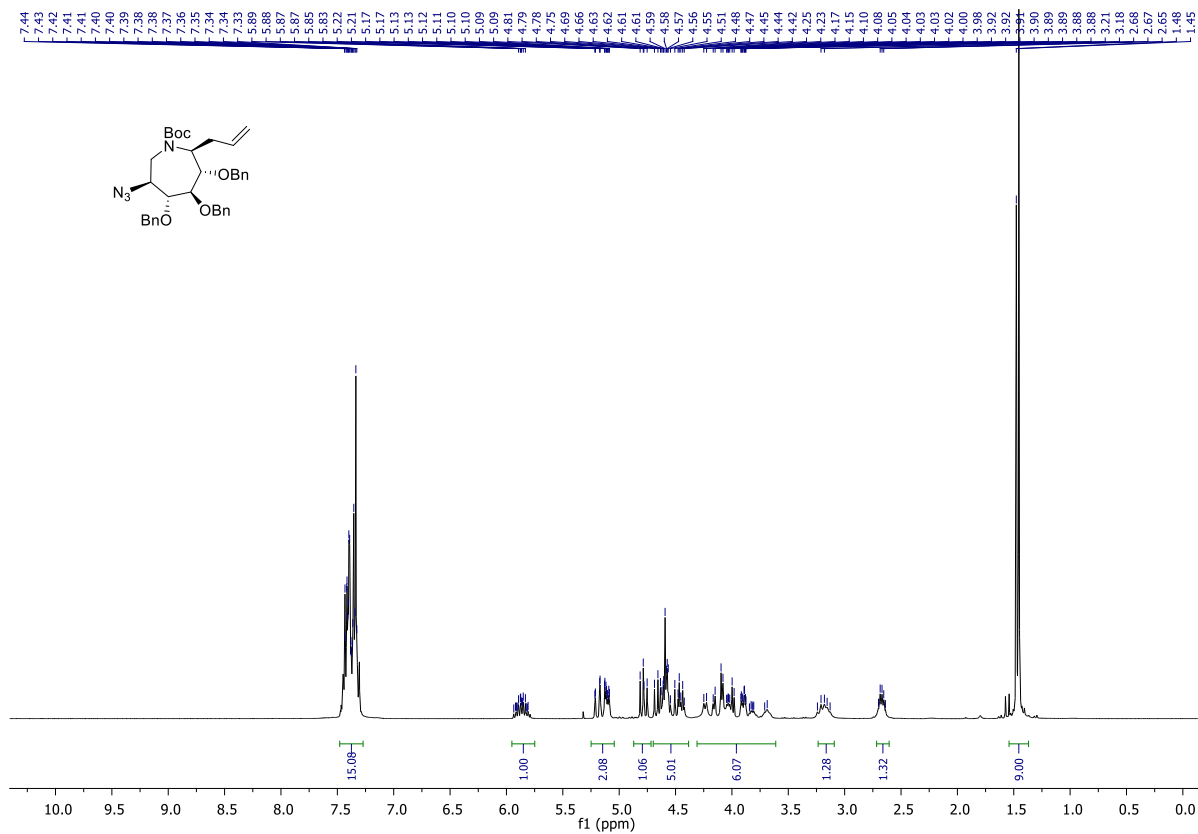
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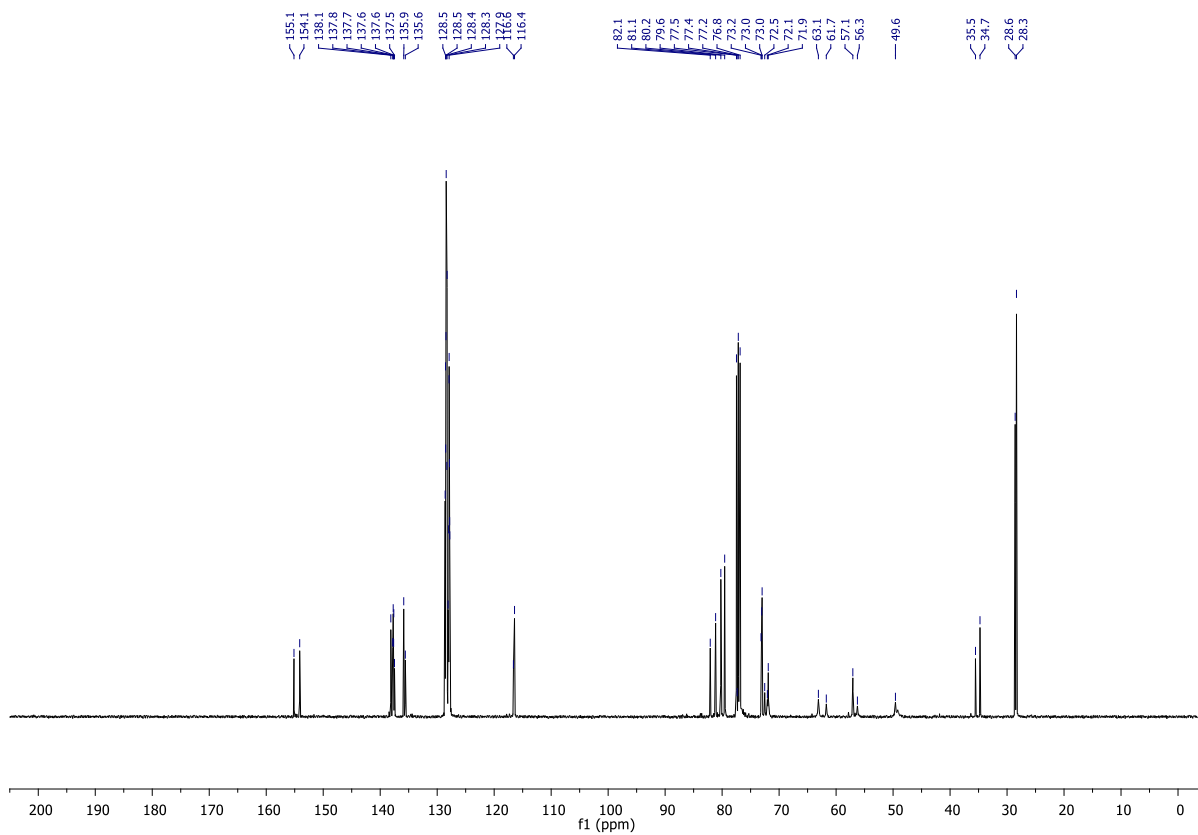
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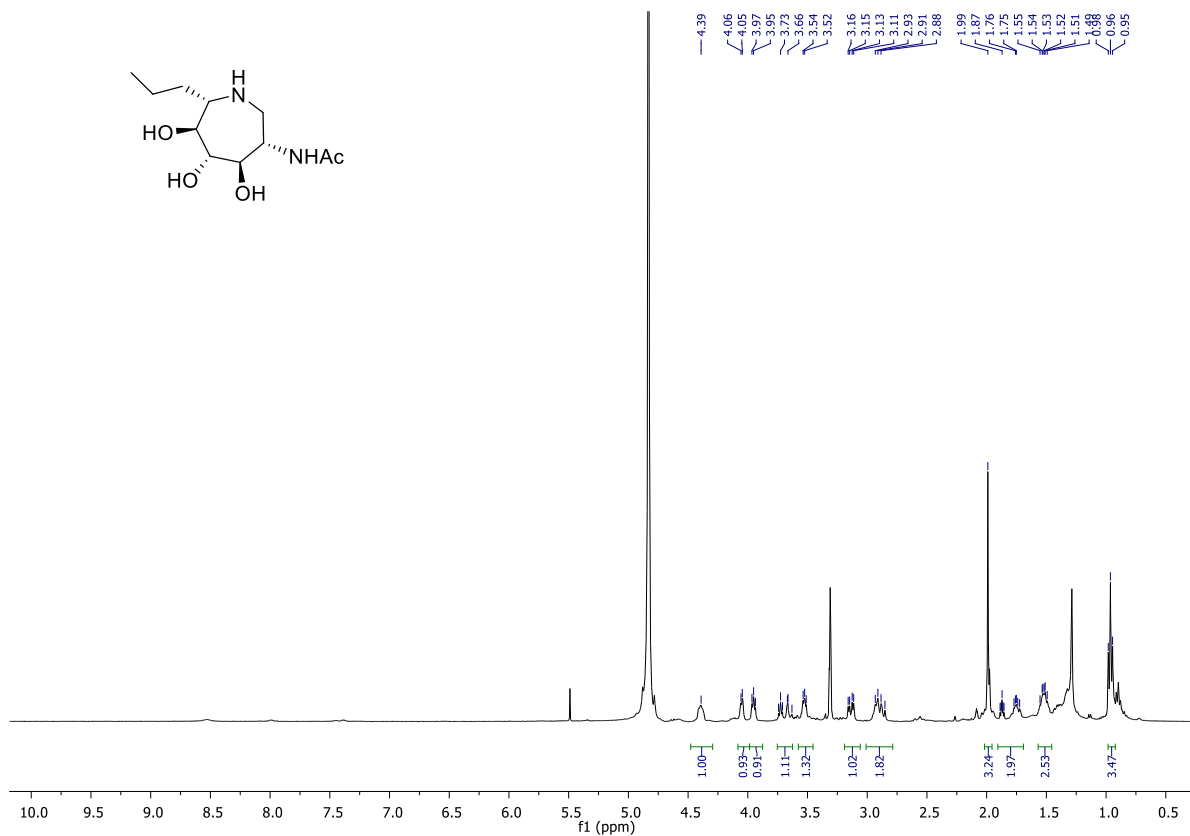
<sup>1</sup>H NMR spectrum of **38**, 400 MHz, CDCl<sub>3</sub>



<sup>13</sup>C NMR spectrum of **38**, 100 MHz, CDCl<sub>3</sub>



<sup>1</sup>H NMR spectrum of **39**, 400 MHz, CD<sub>3</sub>OD



<sup>13</sup>C NMR spectrum of **39**, 100 MHz, CD<sub>3</sub>OD

