

# Supporting Information

## Spectra

### **Stereoselective *C*-Glycoside Formation with 2-*O*-Benzyl-4,6-*O*-BenzylideneProtected 3-Deoxy Gluco- and Mannopyranoside Donors: Comparison with *O*-Glycoside Formation**

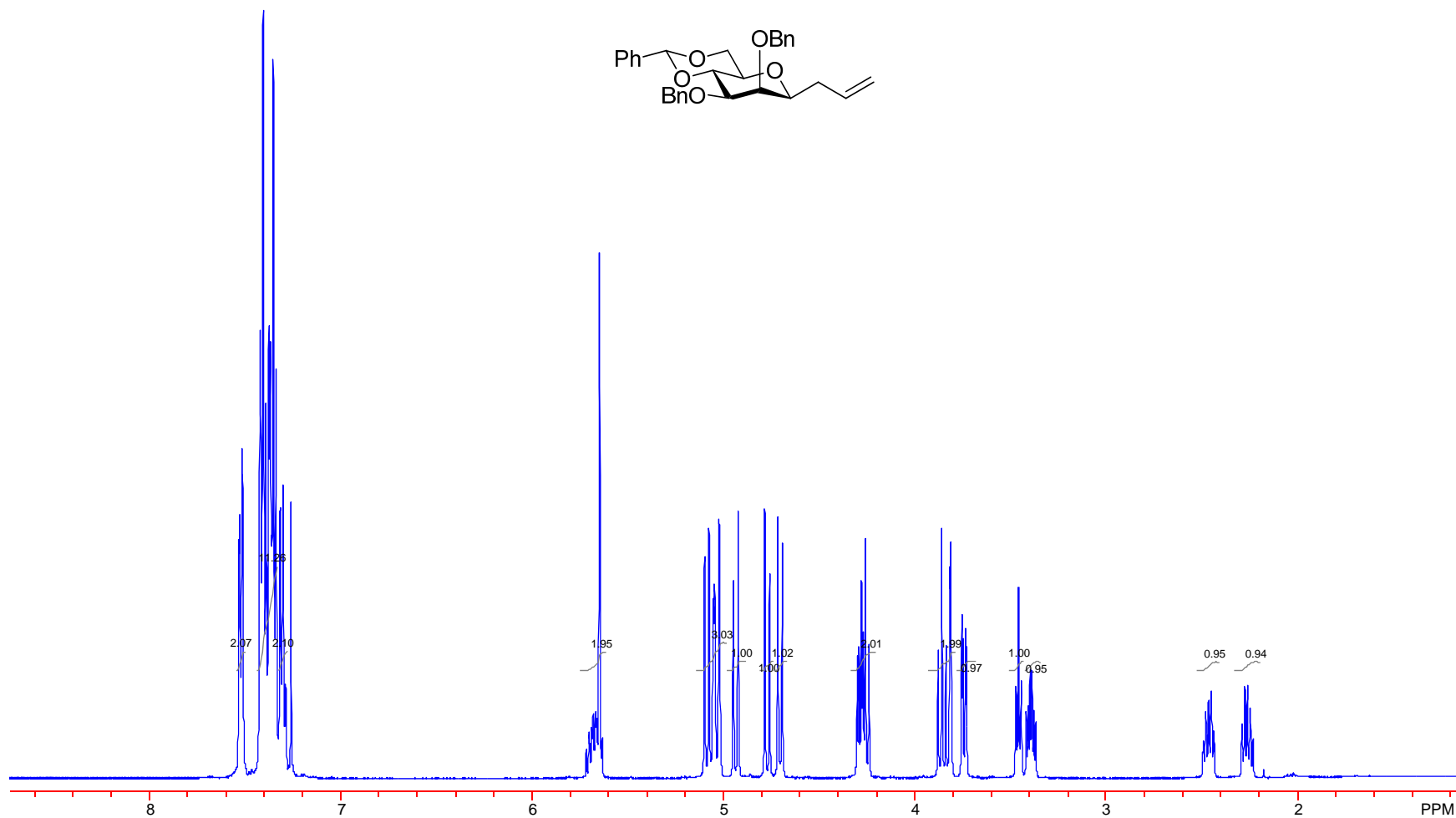
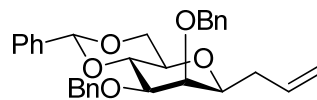
*Myriame Moumé-Pymbock, and David Crich\**

Department of Chemistry, Wayne State University, 5101 Cass Avenue,  
Detroit, MI, 48202

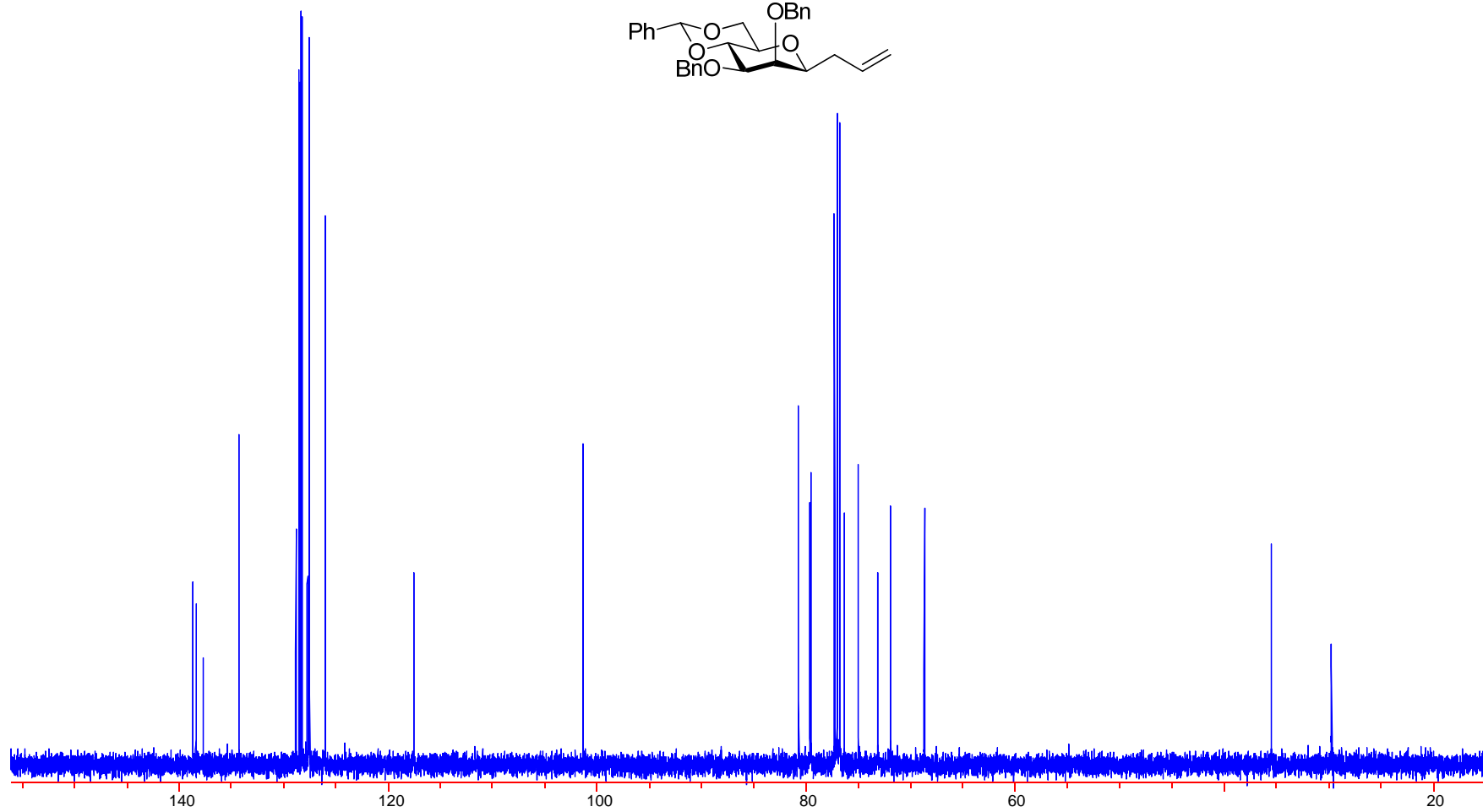
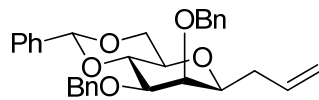
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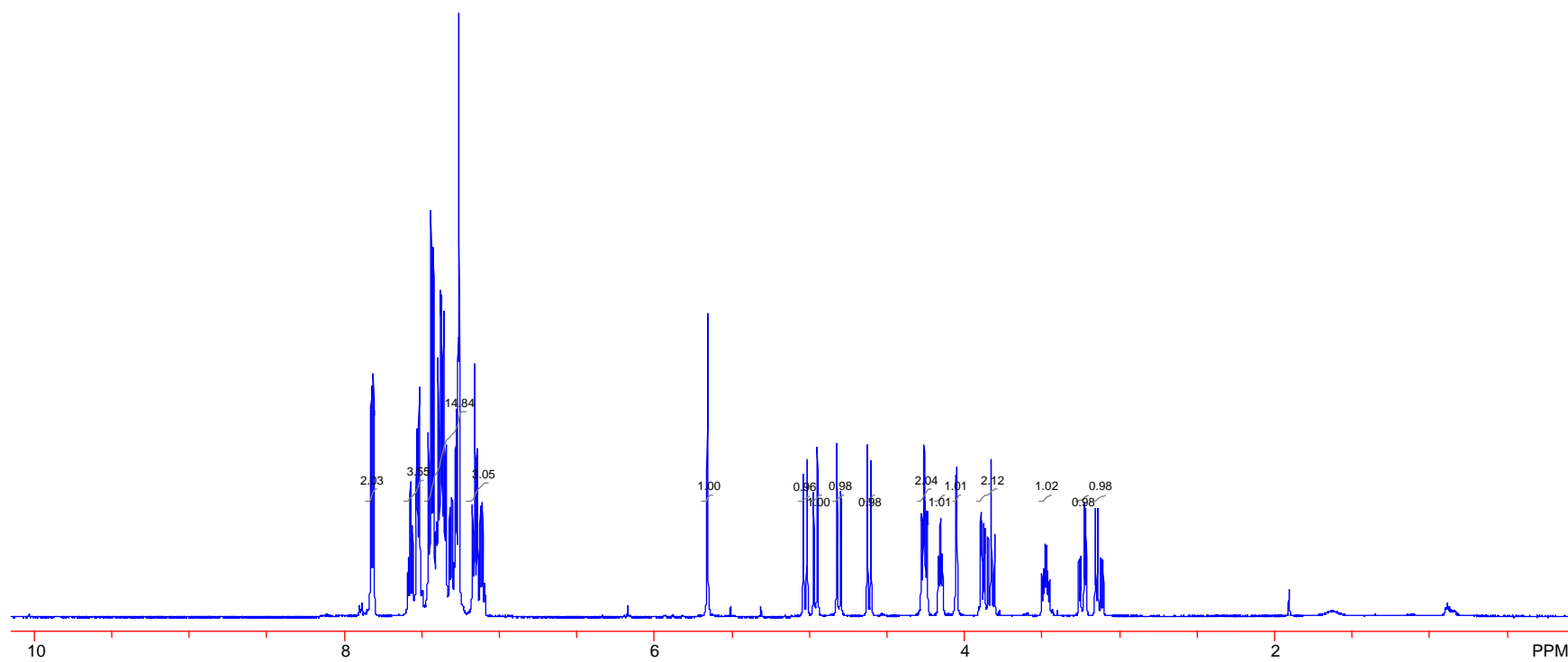
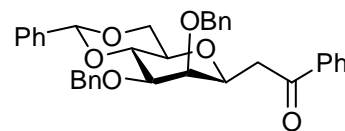
$^1\text{H-NMR}$  ( $\text{CDCl}_3$ , 500 MHz) of 2,3-*O*-Di-benzyl-4,6-*O*-benzylidene-1-allyl-1-deoxy- $\beta$ -D-mannopyranose(**5**)



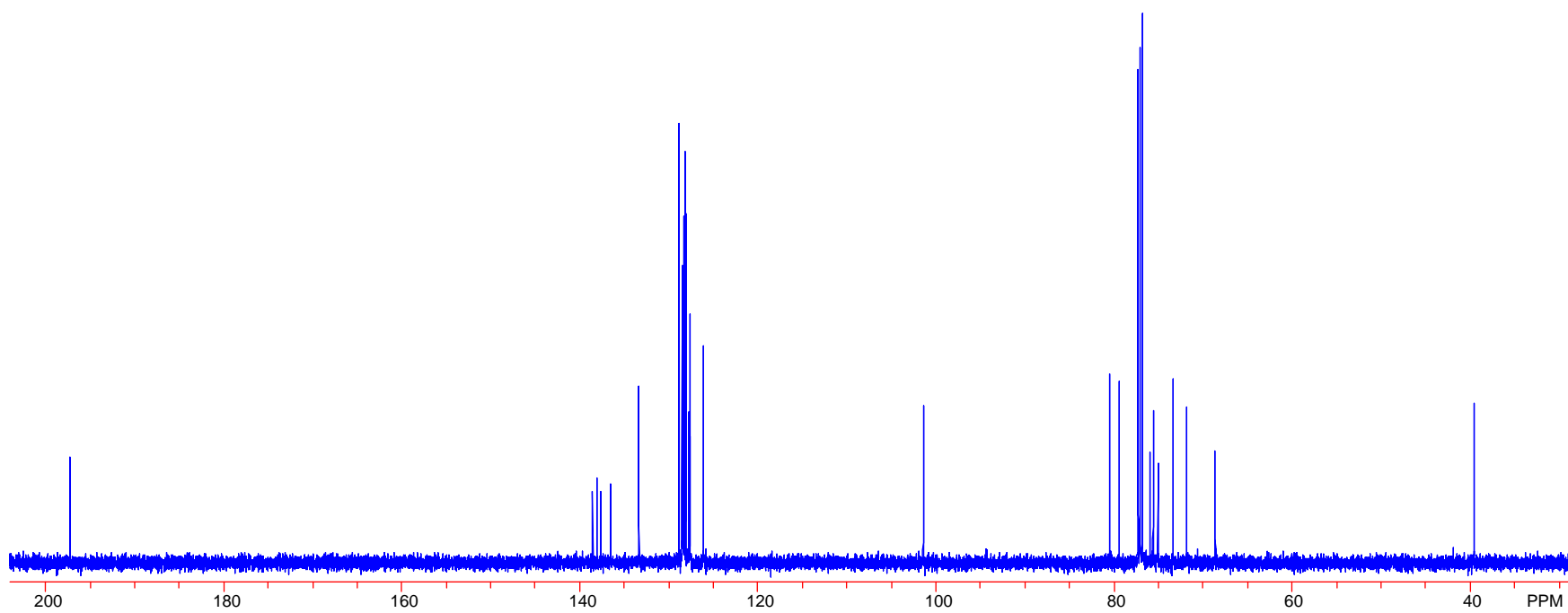
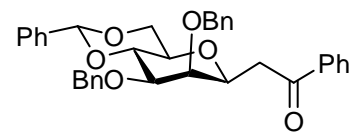
$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of 2,3-*O*-Di-benzyl-4,6-*O*-benzylidene-1-allyl-1-deoxy- $\beta$ -D-mannopyranose(**5**)



$^1\text{H-NMR}$  ( $\text{CDCl}_3$ , 500 MHz) of 2,3-Di-*O*-benzyl-4,6-*O*-benzylidene-1-deoxy-1-(2-oxo-2-phenylethyl)- $\beta$ -D-mannopyranose(**6**)

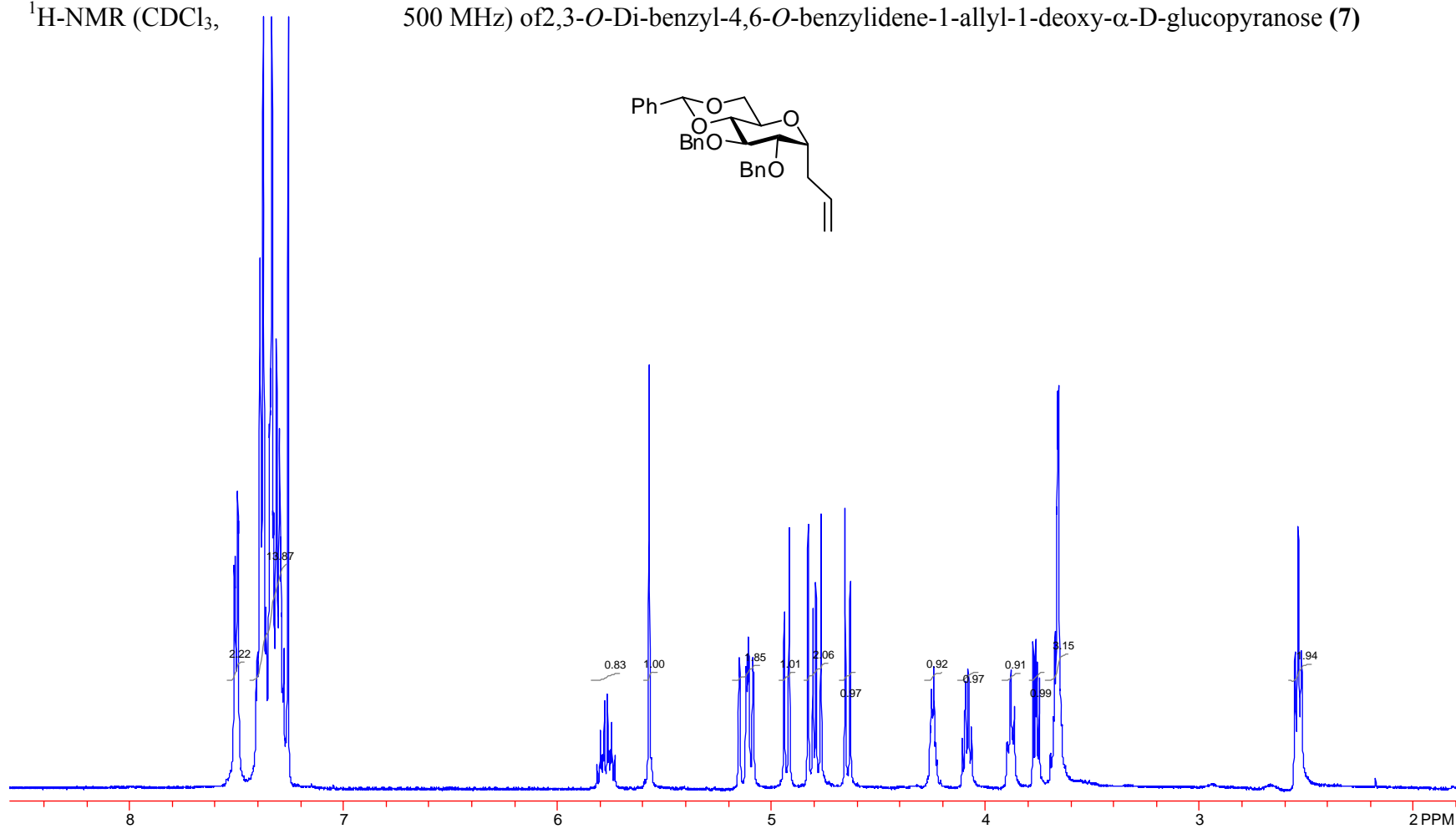
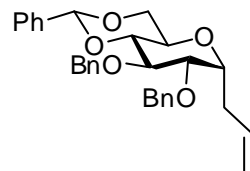


$^{13}\text{C-NMR}$  ( $\text{CDCl}_3$ , 125 MHz) of 2,3-Di-*O*-benzyl-4,6-*O*-benzylidene-1-deoxy-1-(2-oxo-2-phenylethyl)- $\beta$ -D-mannopyranose(**6**)

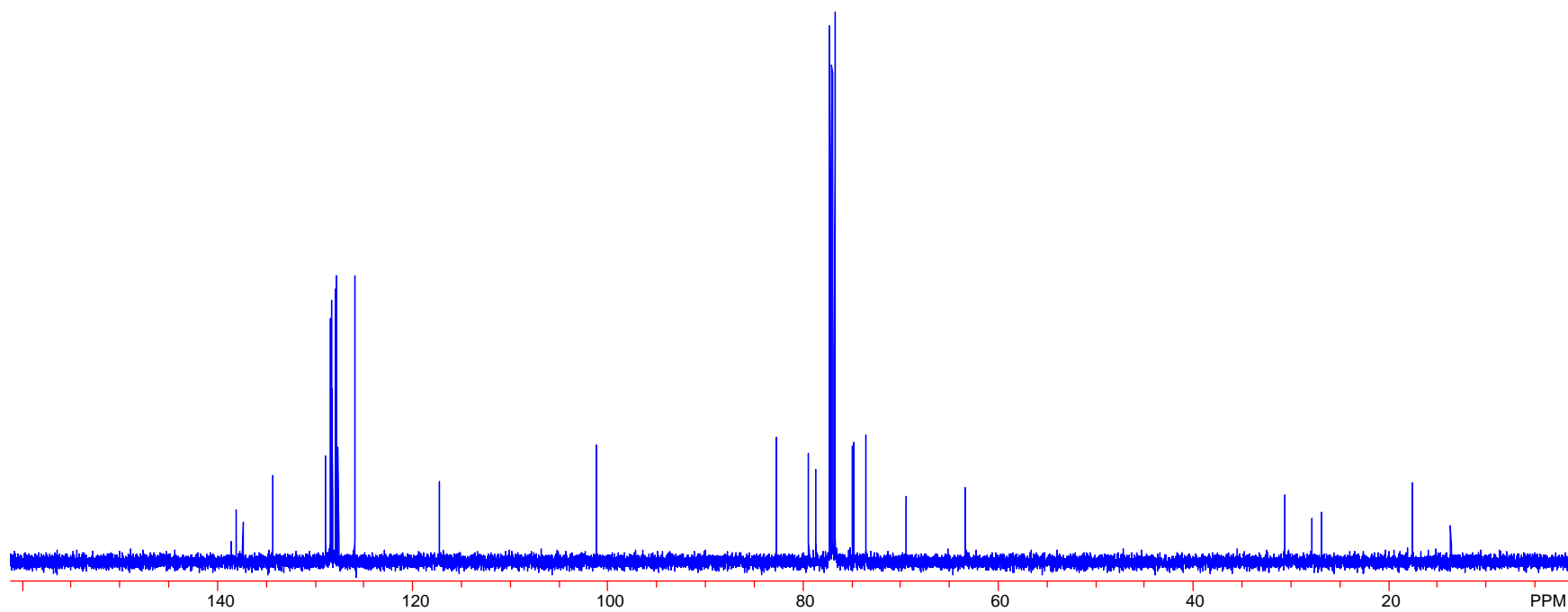
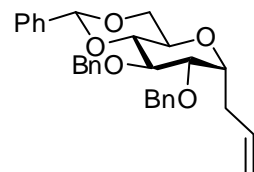


$^1\text{H-NMR}$  ( $\text{CDCl}_3$ ,

500 MHz) of 2,3-*O*-Di-benzyl-4,6-*O*-benzylidene-1-allyl-1-deoxy- $\alpha$ -D-glucopyranose (**7**)

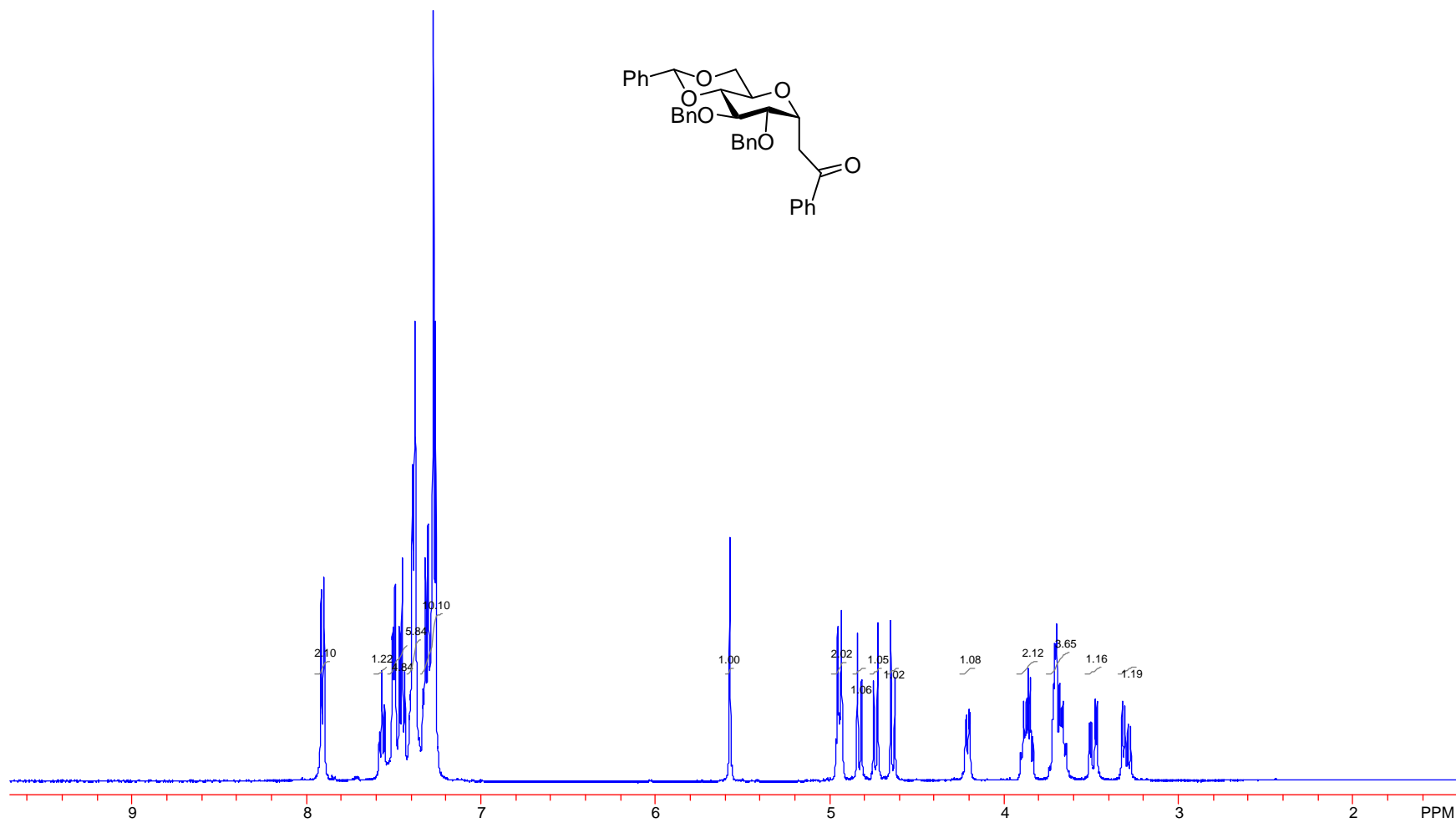
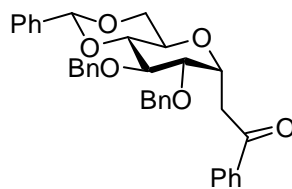


$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of 2,3-*O*-Di-benzyl-4,6-*O*-benzylidene-1-allyl-1-deoxy- $\alpha$ -D-glucopyranose (7)

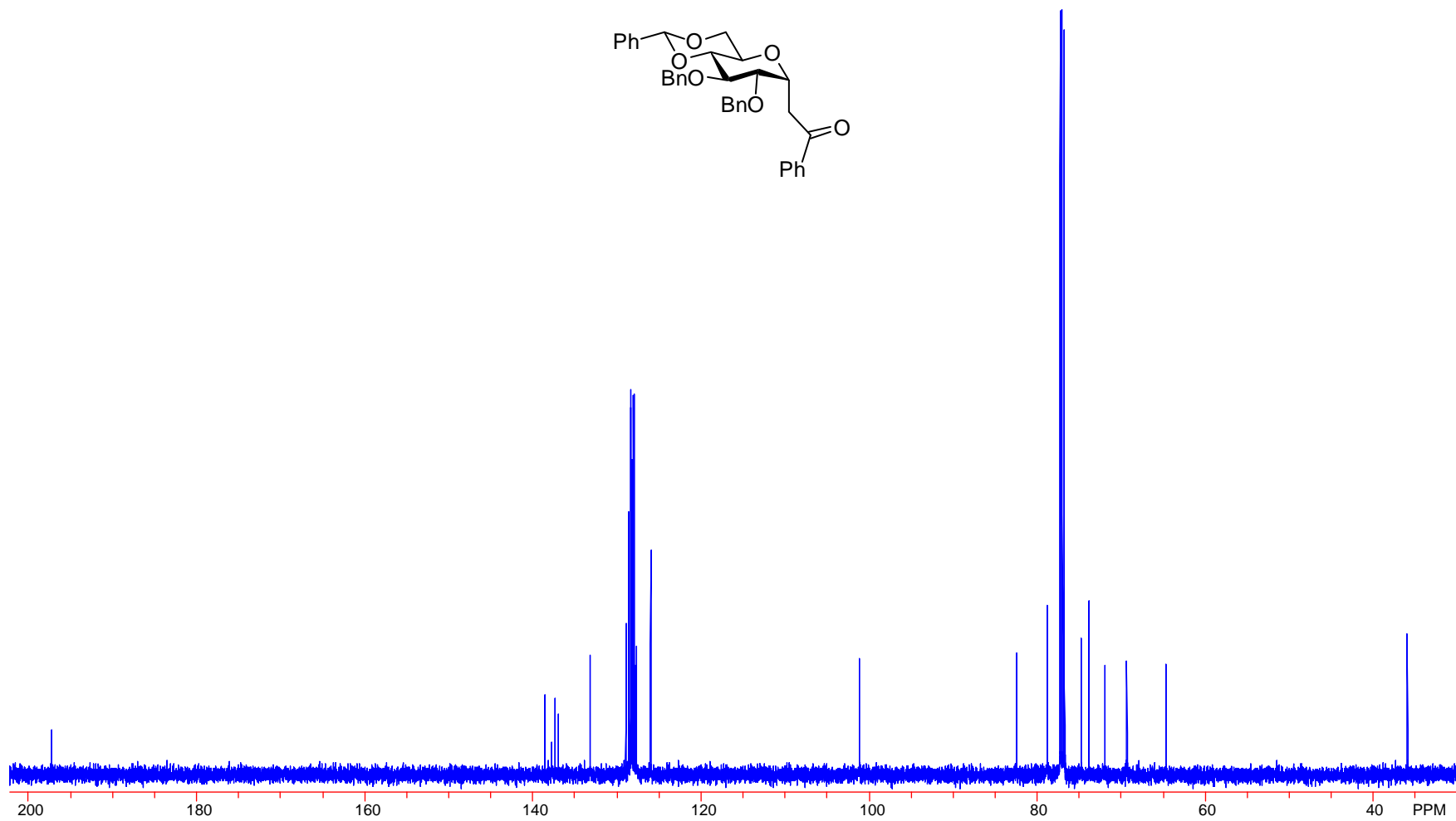
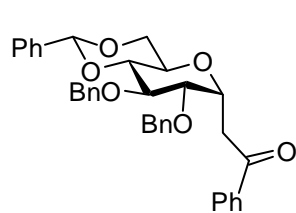




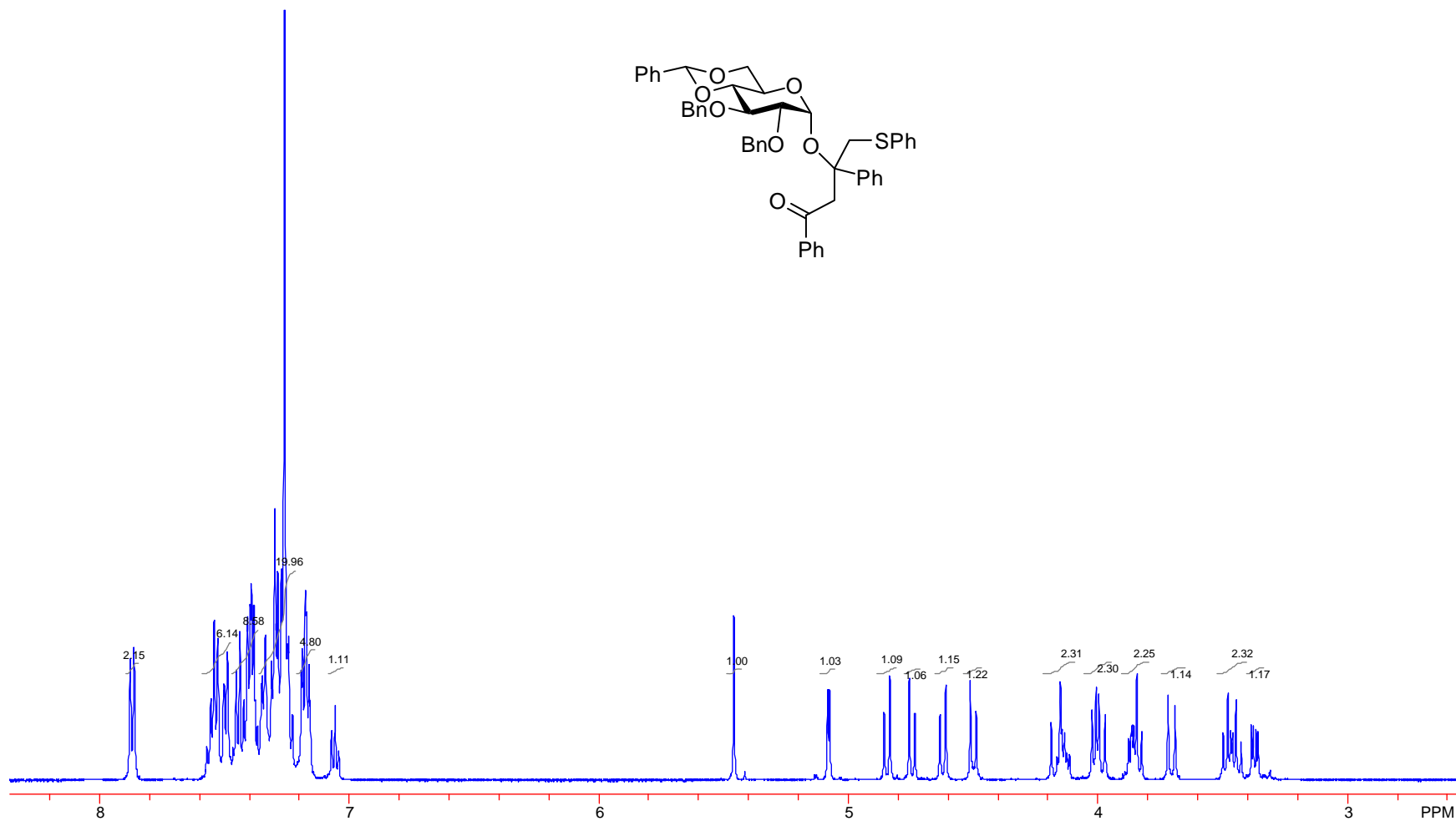
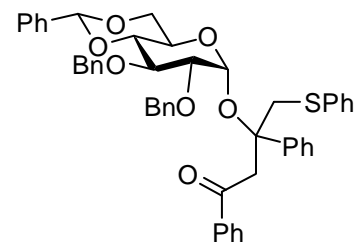
$^1\text{H-NMR}$  ( $\text{CDCl}_3$ , 500 MHz) of 2,3-Di-*O*-benzyl-4,6-*O*-benzylidene-1-(2-oxo-2-phenylethyl)- $\alpha$ -D-glucopyranose (**8**)



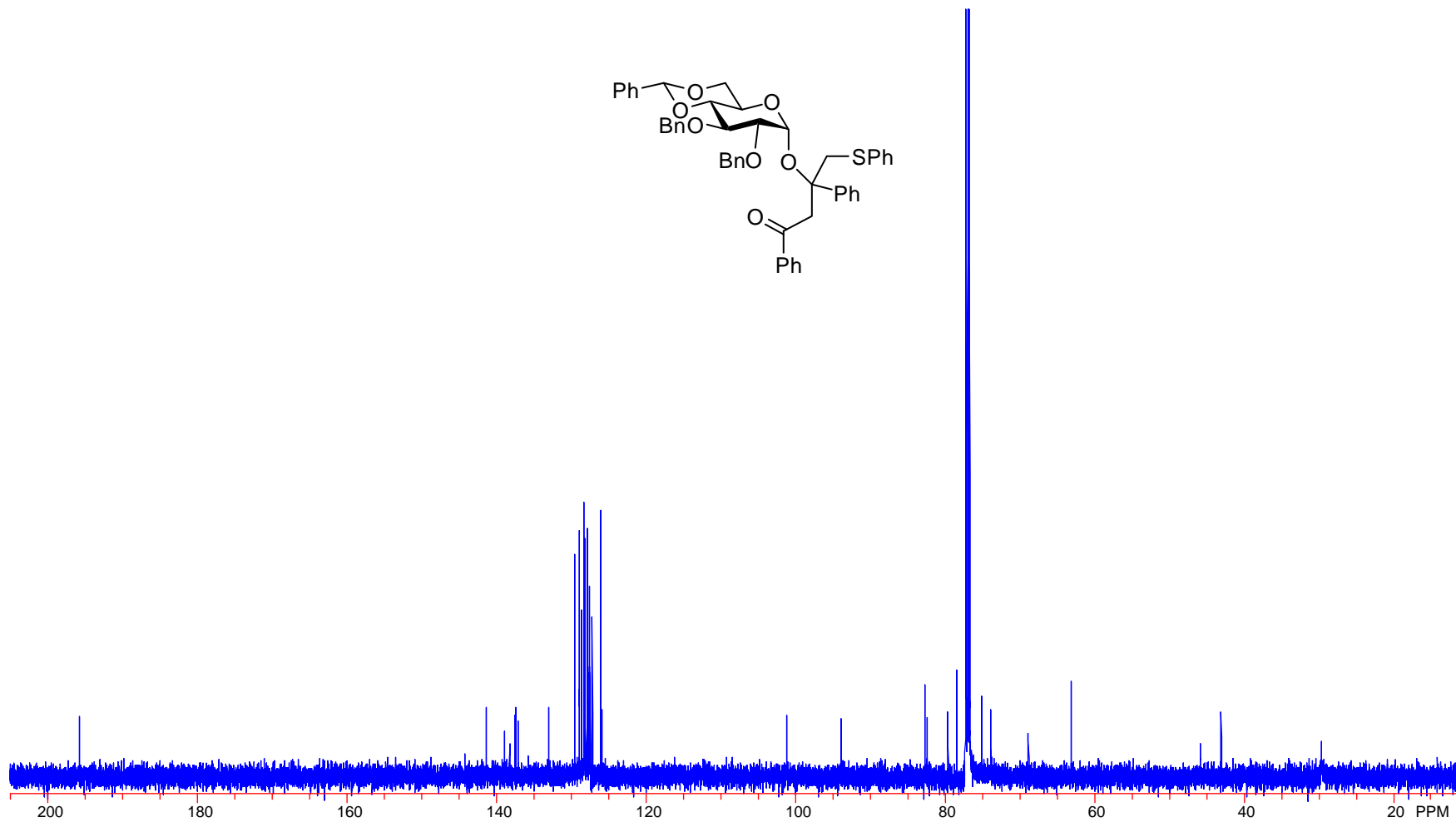
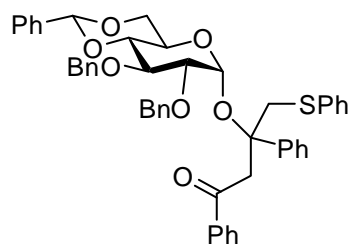
$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) 2,3-Di-*O*-benzyl-4,6-*O*-benzylidene-1-(2-oxo-2-phenylethyl)- $\alpha$ -D-glucopyranose (**8**)



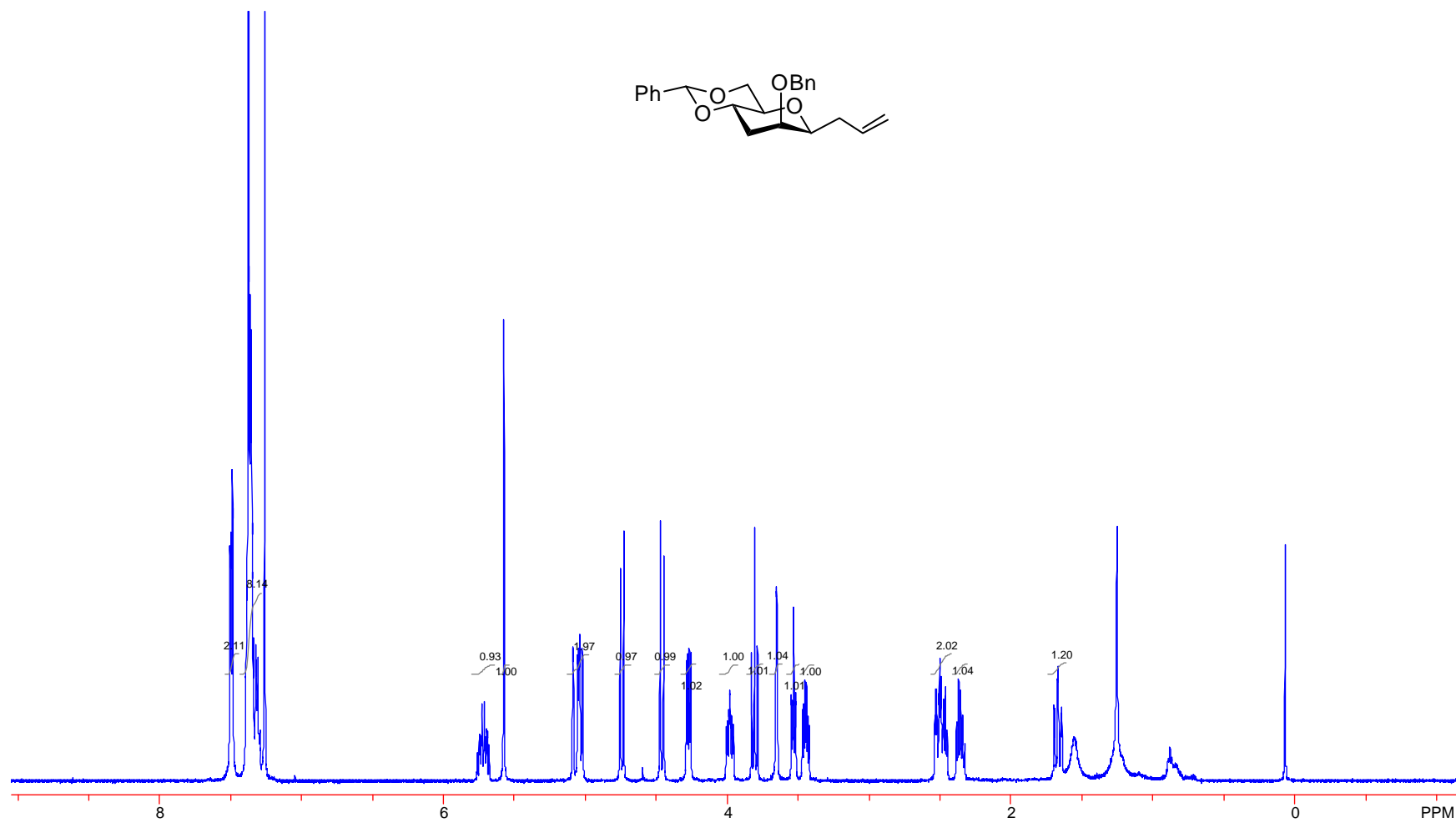
$^1\text{H-NMR}$  ( $\text{CDCl}_3$ , 500 MHz) of [(1*R*)-2-Oxo-1,2-diphenyl-1-(phenylthiomethyl)ethyl] 2,3-di-*O*-benzyl-4,6-*O*-benzylidene- $\alpha$ -D-glucopyranoside (**9**)



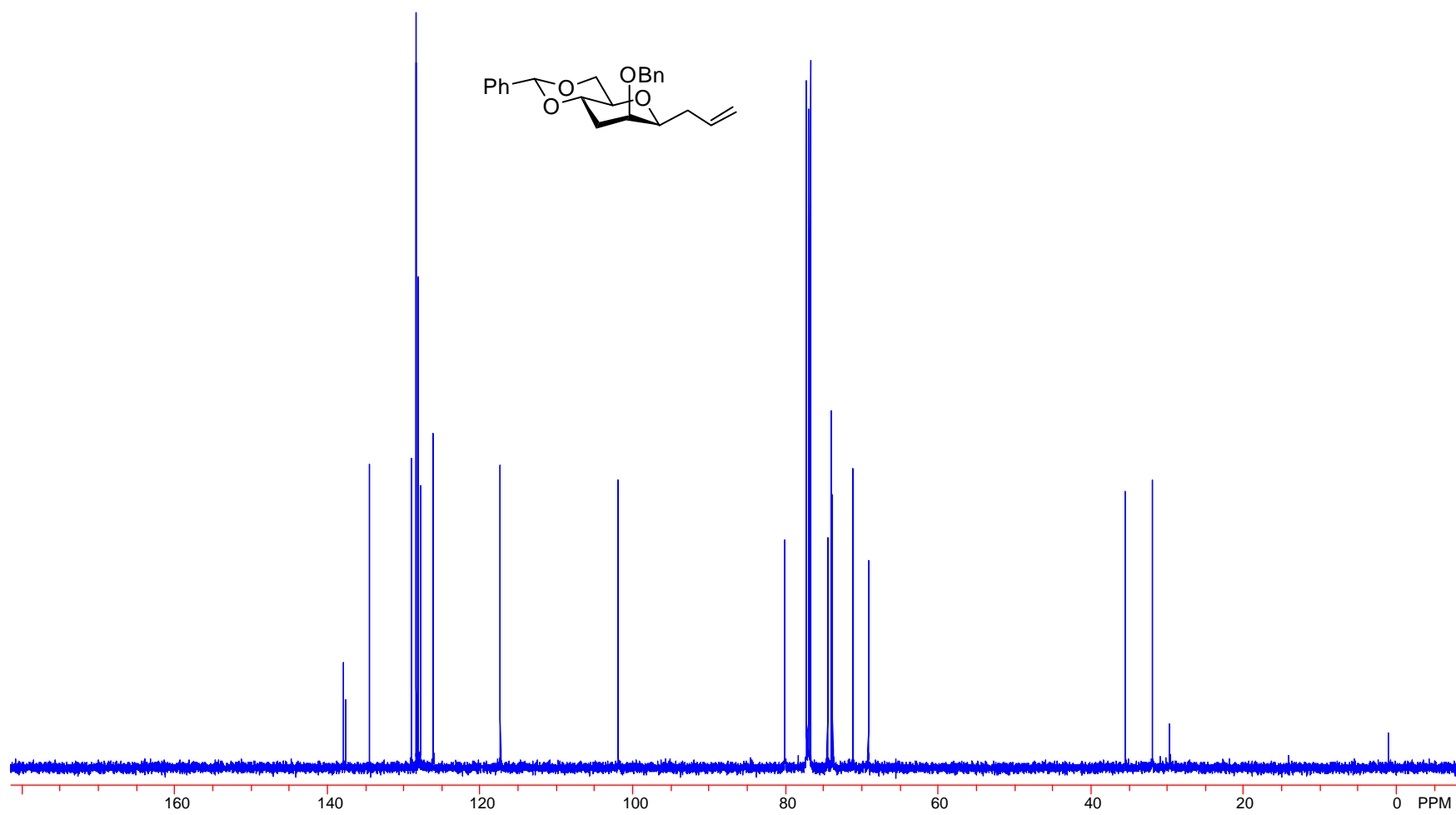
$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of [(1*R*)-2-Oxo-1,2-diphenyl-1-(phenylthiomethyl)ethyl] 2,3-di-*O*-benzyl-4,6-*O*-benzylidene- $\alpha$ -D-glucopyranoside (**9**)



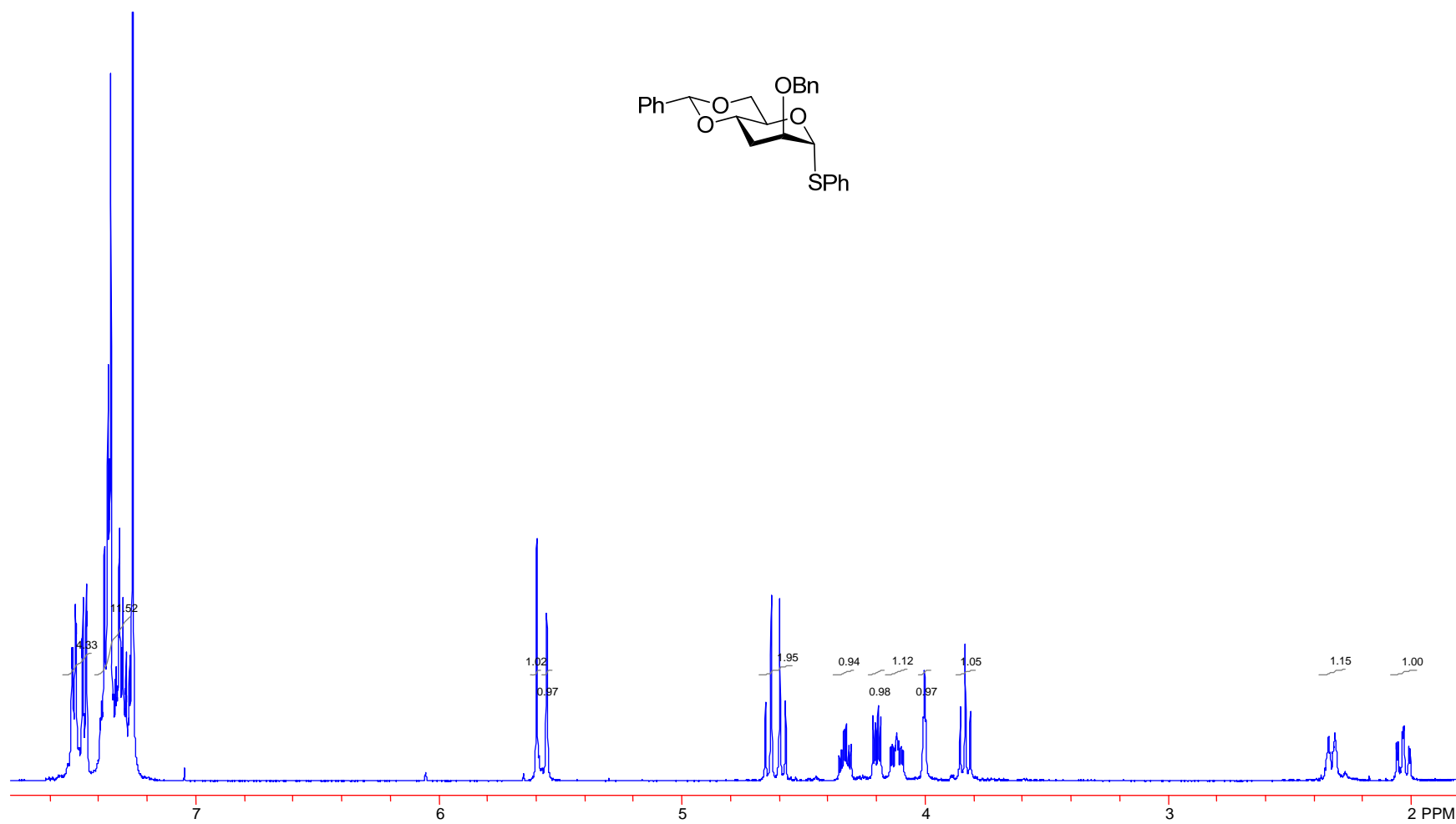
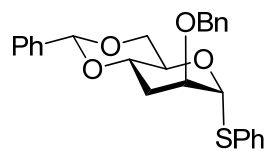
<sup>1</sup>H-NMR (CDCl<sub>3</sub>, 500 MHz) of 2-*O*-Benzyl-4,6-*O*-benzylidene-1-allyl-1,3-dideoxy- β-D-mannopyranose (**10**)



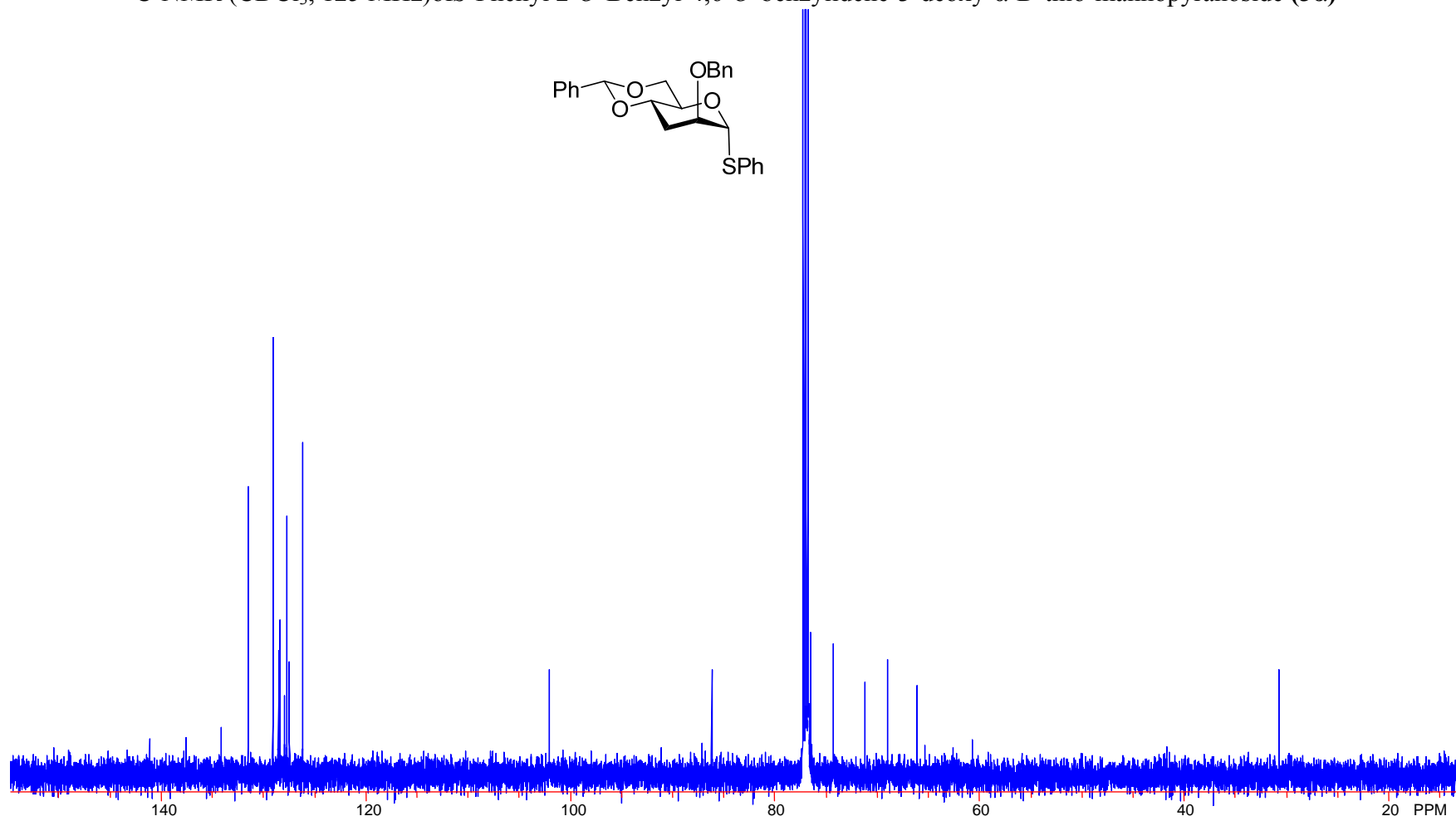
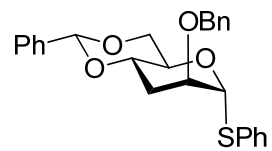
$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of 2-*O*-Benzyl-4,6-*O*-benzylidene-1-allyl-1,3-dideoxy- $\beta$ -D-mannopyranose (**10**)



$^1\text{H-NMR}$  ( $\text{CDCl}_3$ , 500 MHz) of *S*-Phenyl 2-*O*-Benzyl-4,6-*O*-benzylidene-3-deoxy- $\alpha$ -D-thio-mannopyranoside (**3a**)

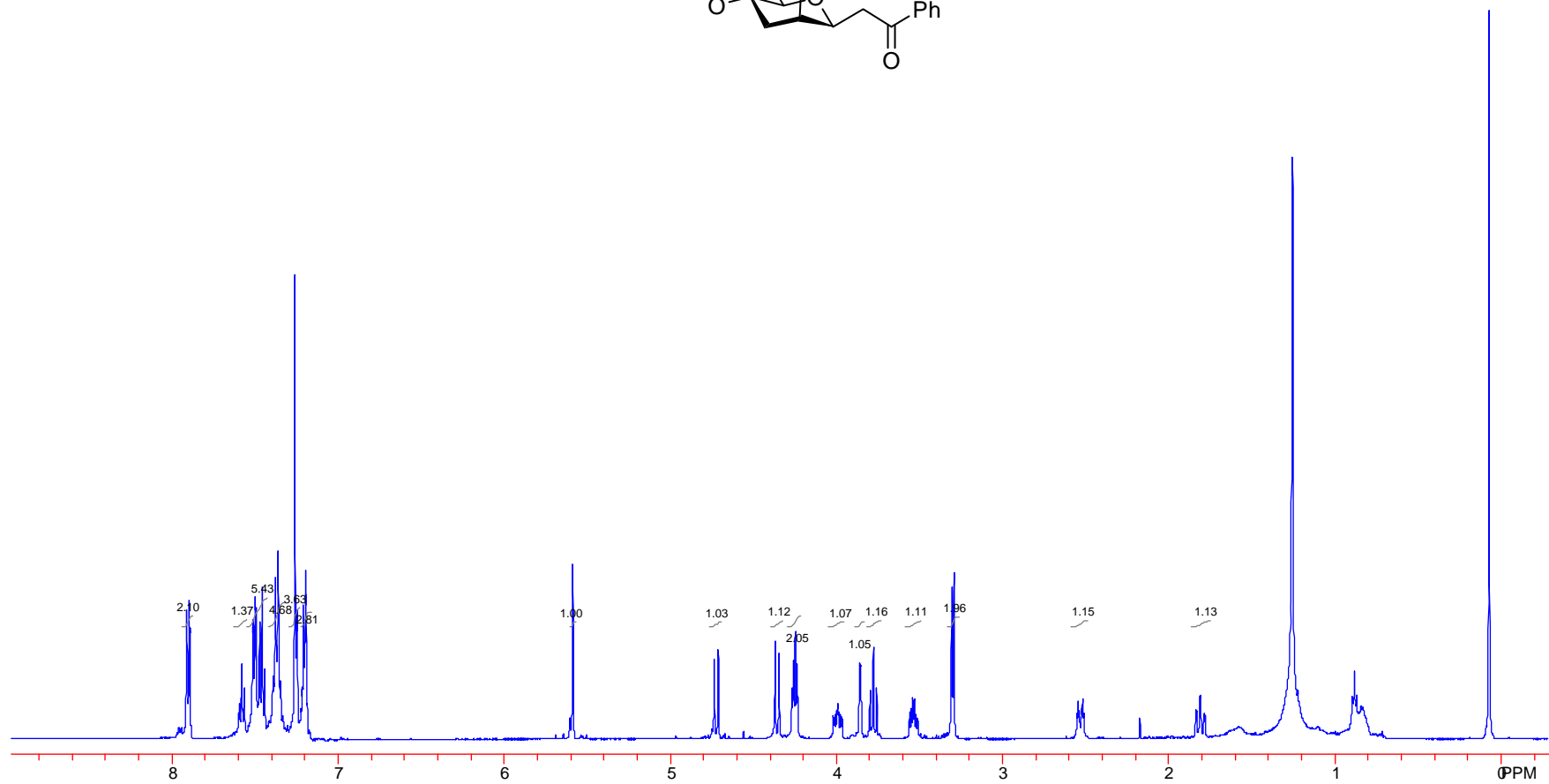
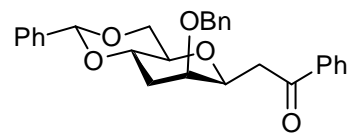


$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of *S*-Phenyl 2-*O*-Benzyl-4,6-*O*-benzylidene-3-deoxy- $\alpha$ -D-thio-mannopyranoside (**3a**)

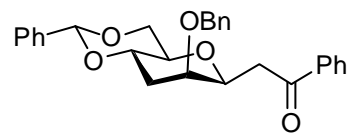




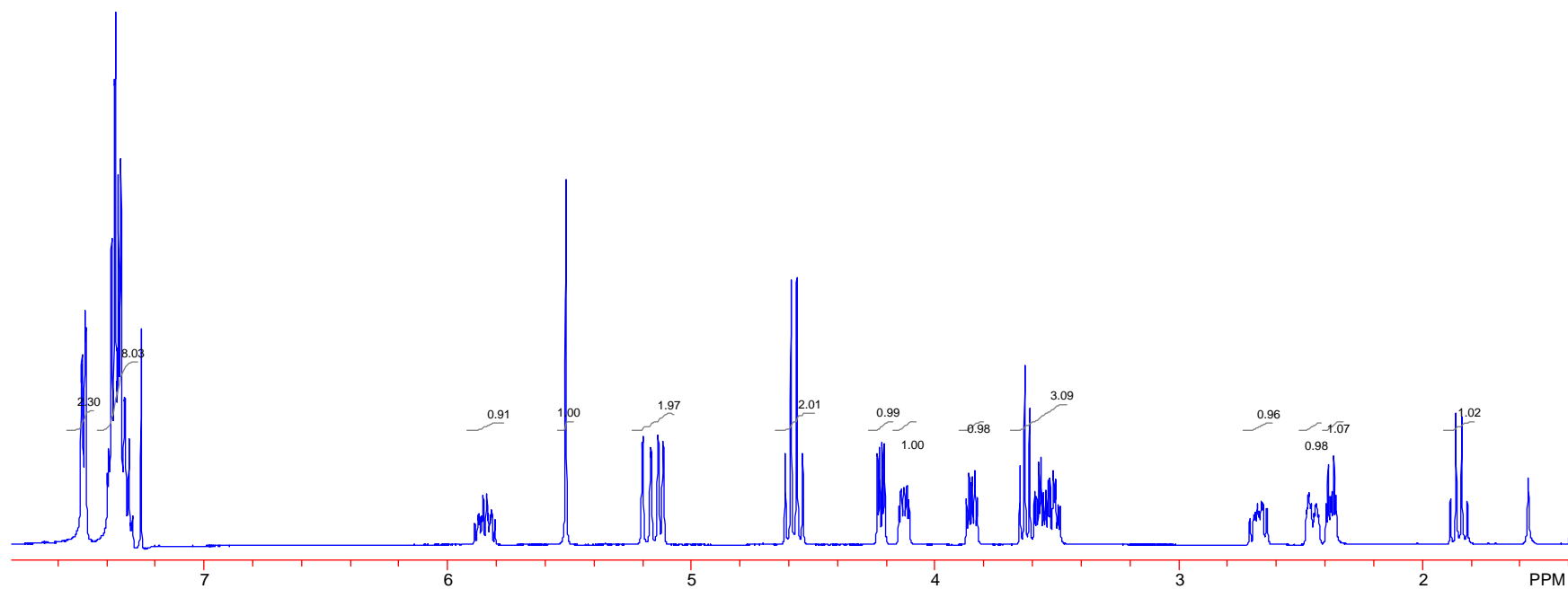
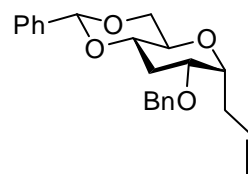
$^1\text{H-NMR}$  ( $\text{CDCl}_3$ , 500 MHz) of 2-*O*-Benzyl-4,6-*O*-benzylidene-1,3-dideoxy-1-(2-oxo-2-phenylethyl)-  $\beta$ -D-mannopyranose (**11**)



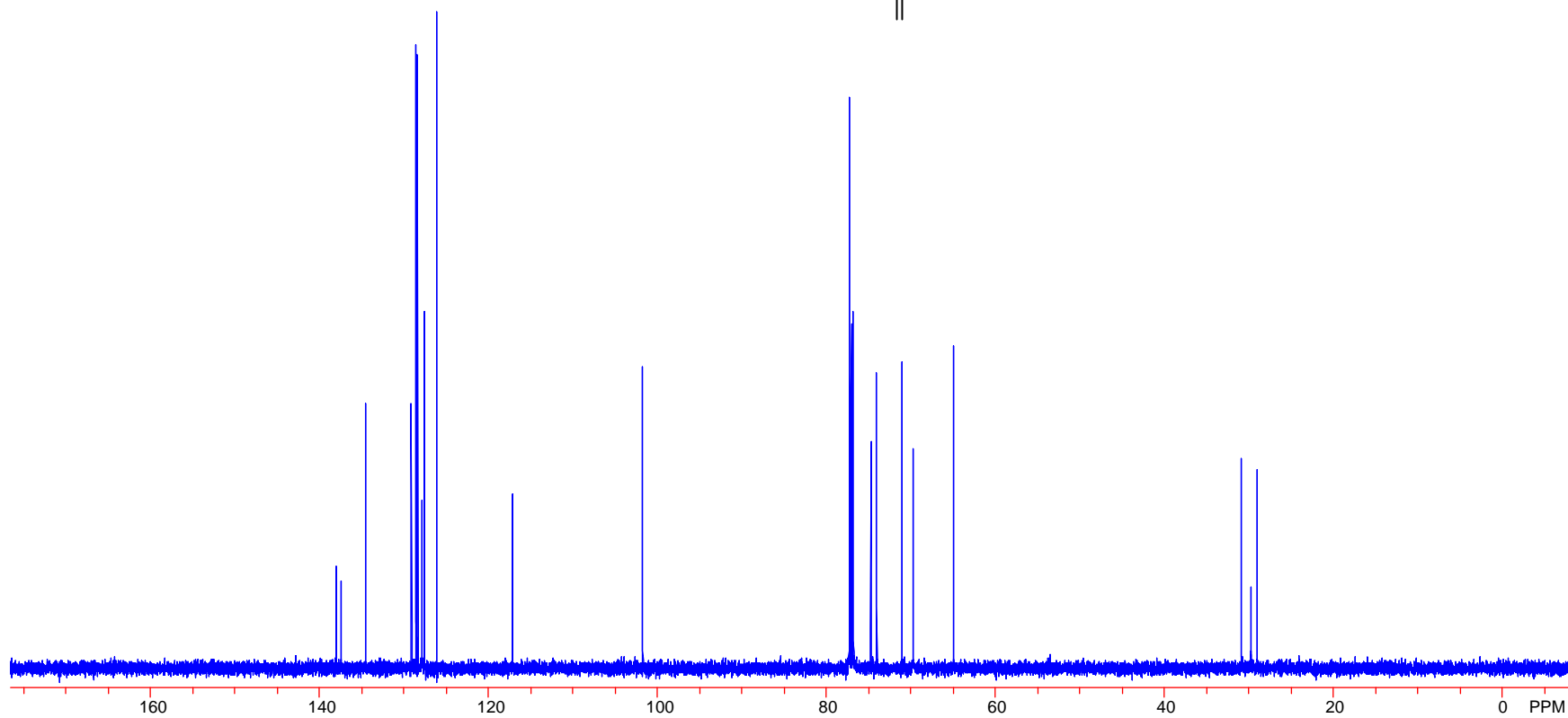
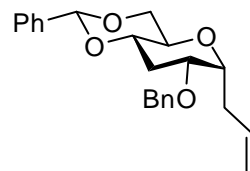
$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of 2-*O*-Benzyl-4,6-*O*-benzylidene-1,3-dideoxy-1-(2-oxo-2-phenylethyl)- $\beta$ -D-mannopyranose (**11**)



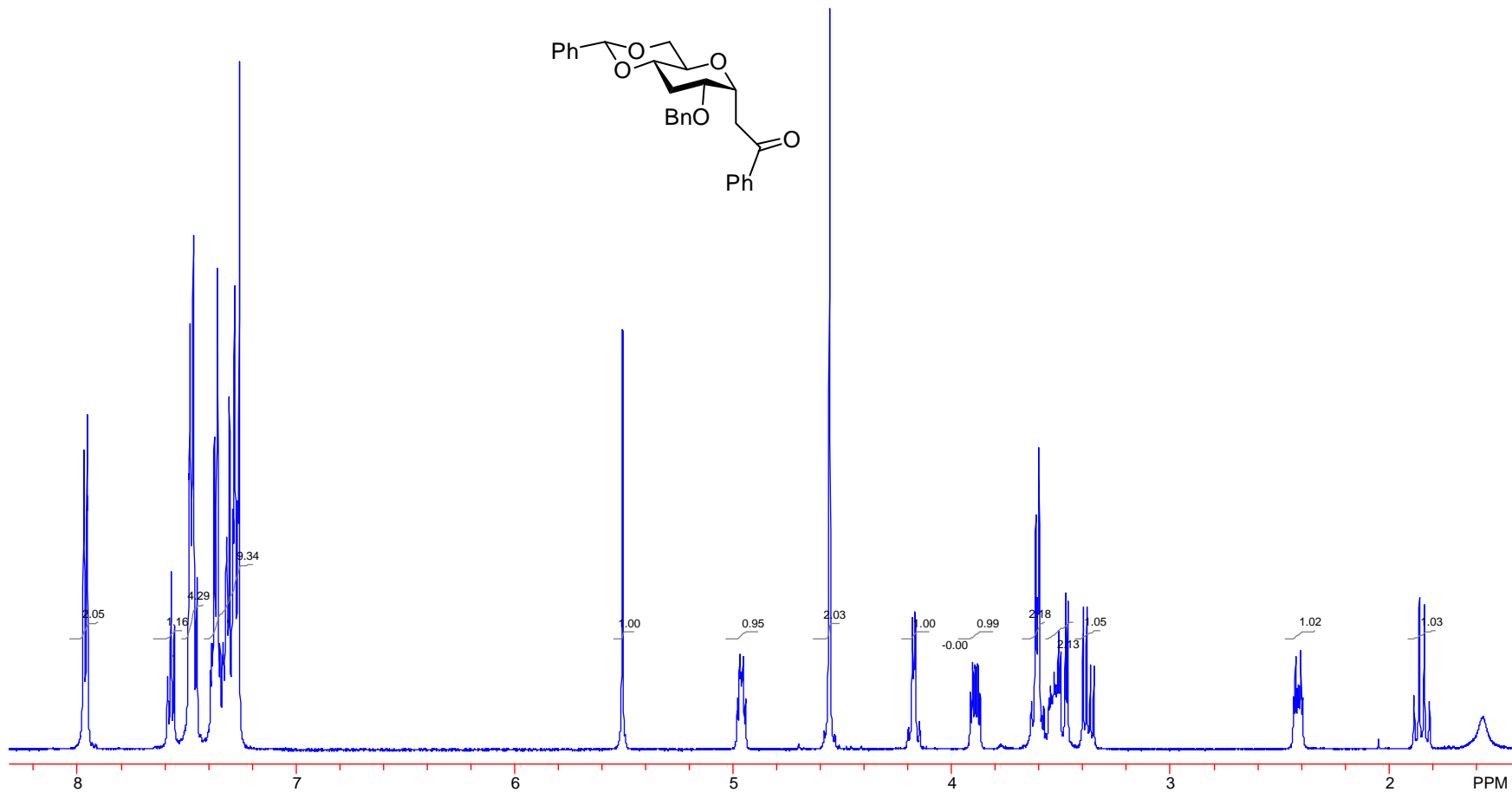
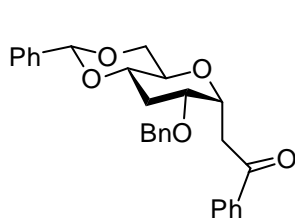
$^1\text{H-NMR}$  ( $\text{CDCl}_3$ , 500 MHz) of 2-*O*-Benzyl-4,6-*O*-benzylidene-1-allyl-1,3-dideoxy- $\alpha$ -D-glucopyranose (**12**)



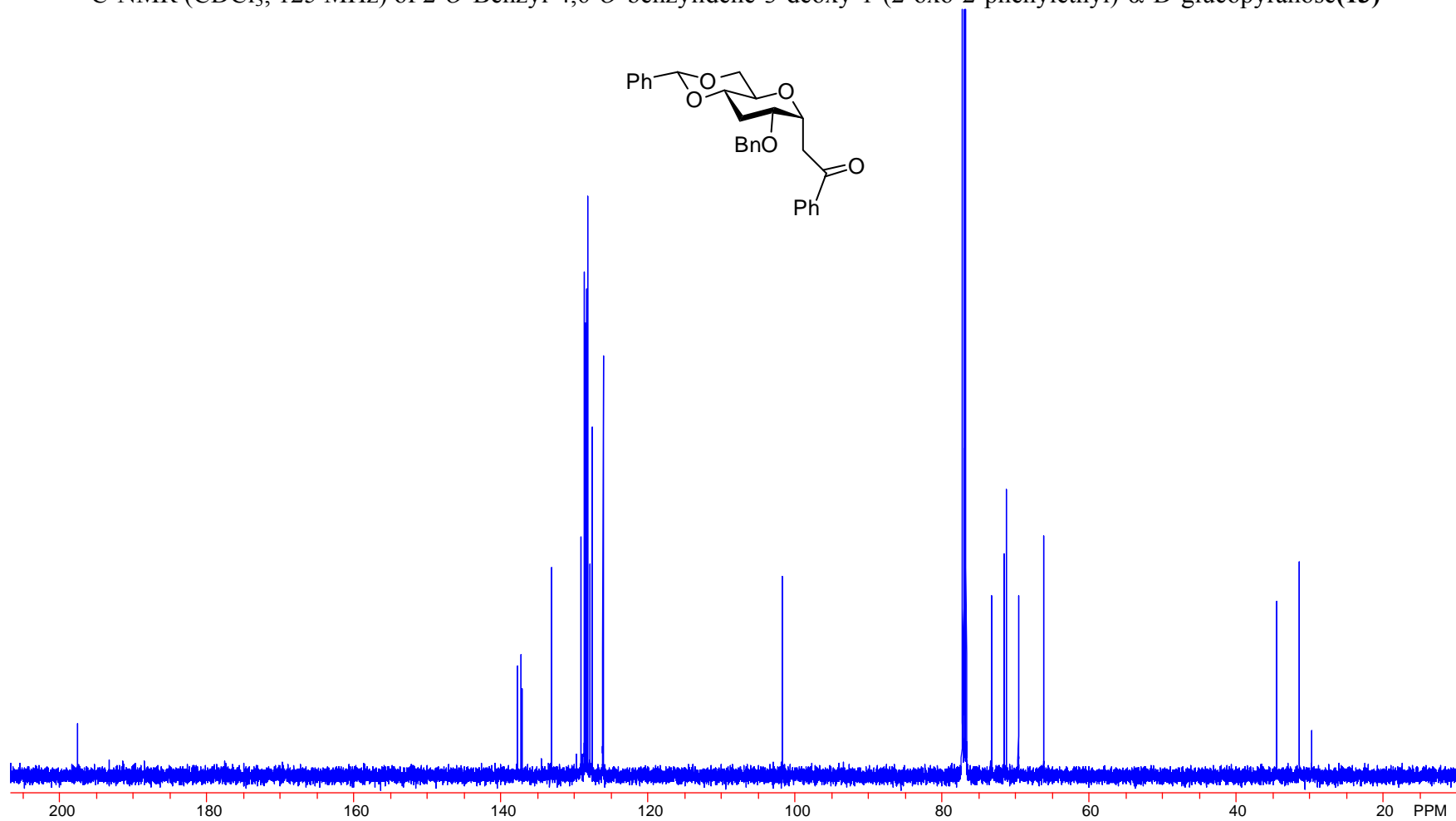
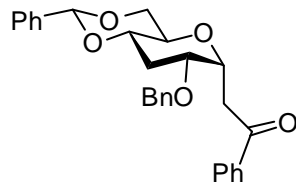
$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of 2-*O*-Benzyl-4,6-*O*-benzylidene-1-allyl-1,3-dideoxy- $\alpha$ -D-glucopyranose (**12**)



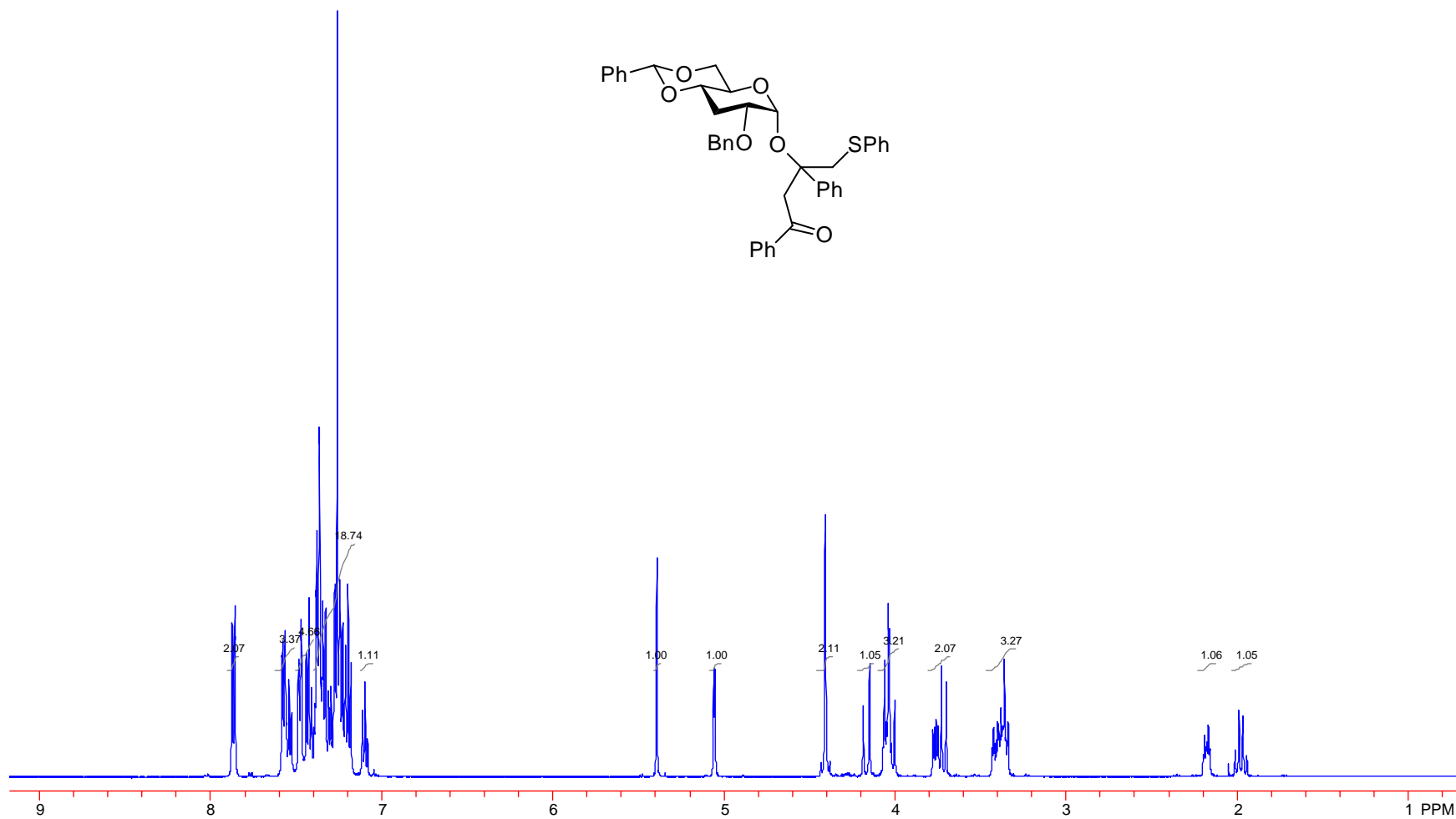
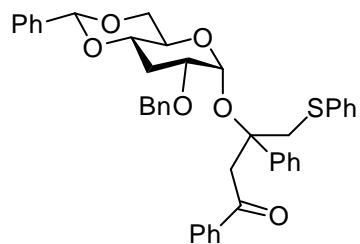
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$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of 2-*O*-Benzyl-4,6-*O*-benzylidene-3-deoxy-1-(2-oxo-2-phenylethyl)- $\alpha$ -D-glucopyranose(**13**)



$^1\text{H-NMR}$  ( $\text{CDCl}_3$ , 500 MHz) of [(1*R*)-2-Oxo-1,2-diphenyl-1-(phenylthiomethyl)ethyl] 2-*O*-benzyl-4,6-*O*-benzylidene-3-deoxy- $\alpha$ -D-glucopyranoside (**14**)



$^{13}\text{C}$ -NMR ( $\text{CDCl}_3$ , 125 MHz) of [(1*R*)-2-Oxo-1,2-diphenyl-1-(phenylthiomethyl)ethyl] 2-*O*-benzyl-4,6-*O*-benzylidene-3-deoxy- $\alpha$ -D-glucopyranoside (**14**)

