

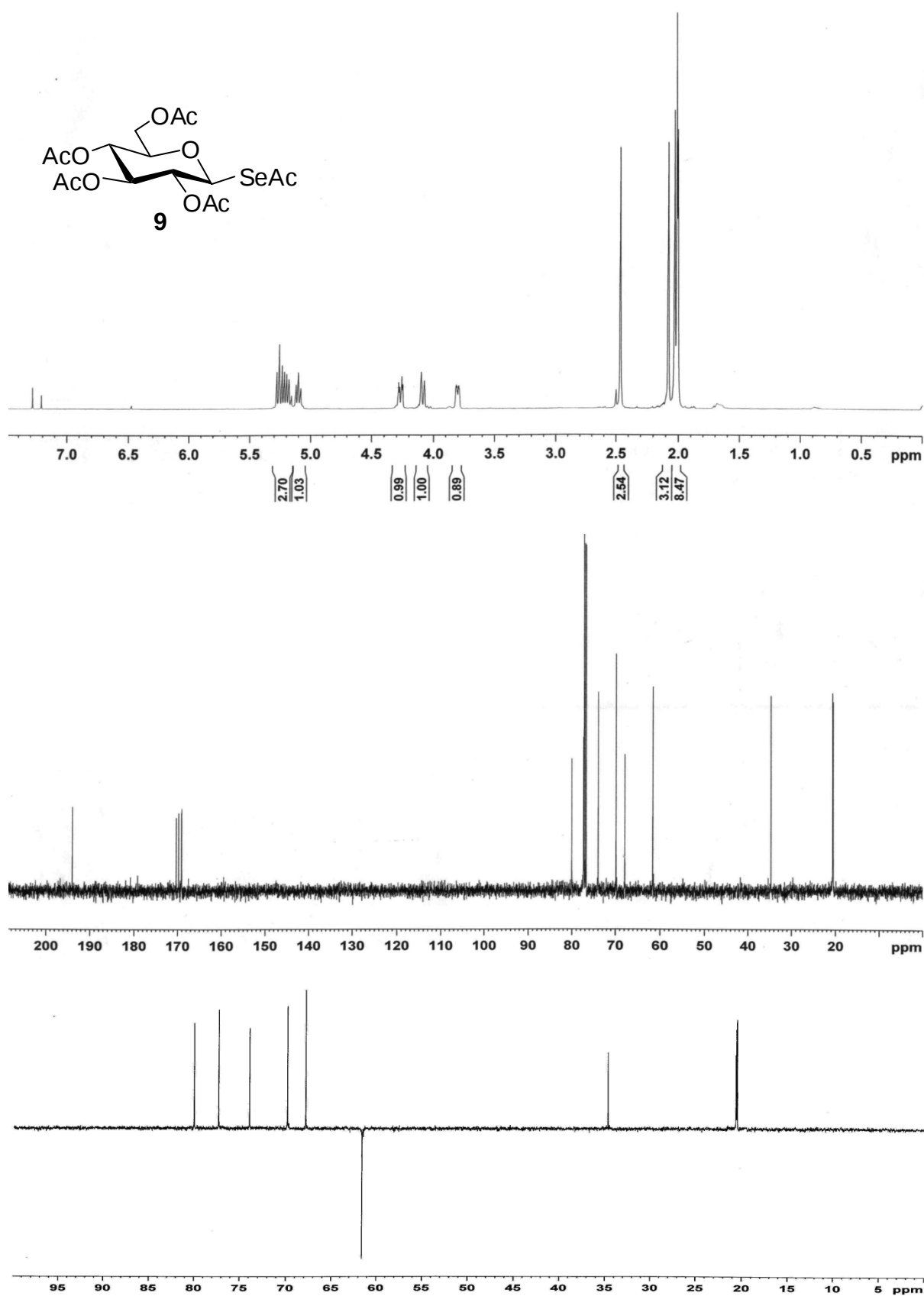
Supporting Information

Glycosyl selenoacetates: Versatile building blocks for the preparation of stereoselective selenoglycosides and selenium linked disaccharides

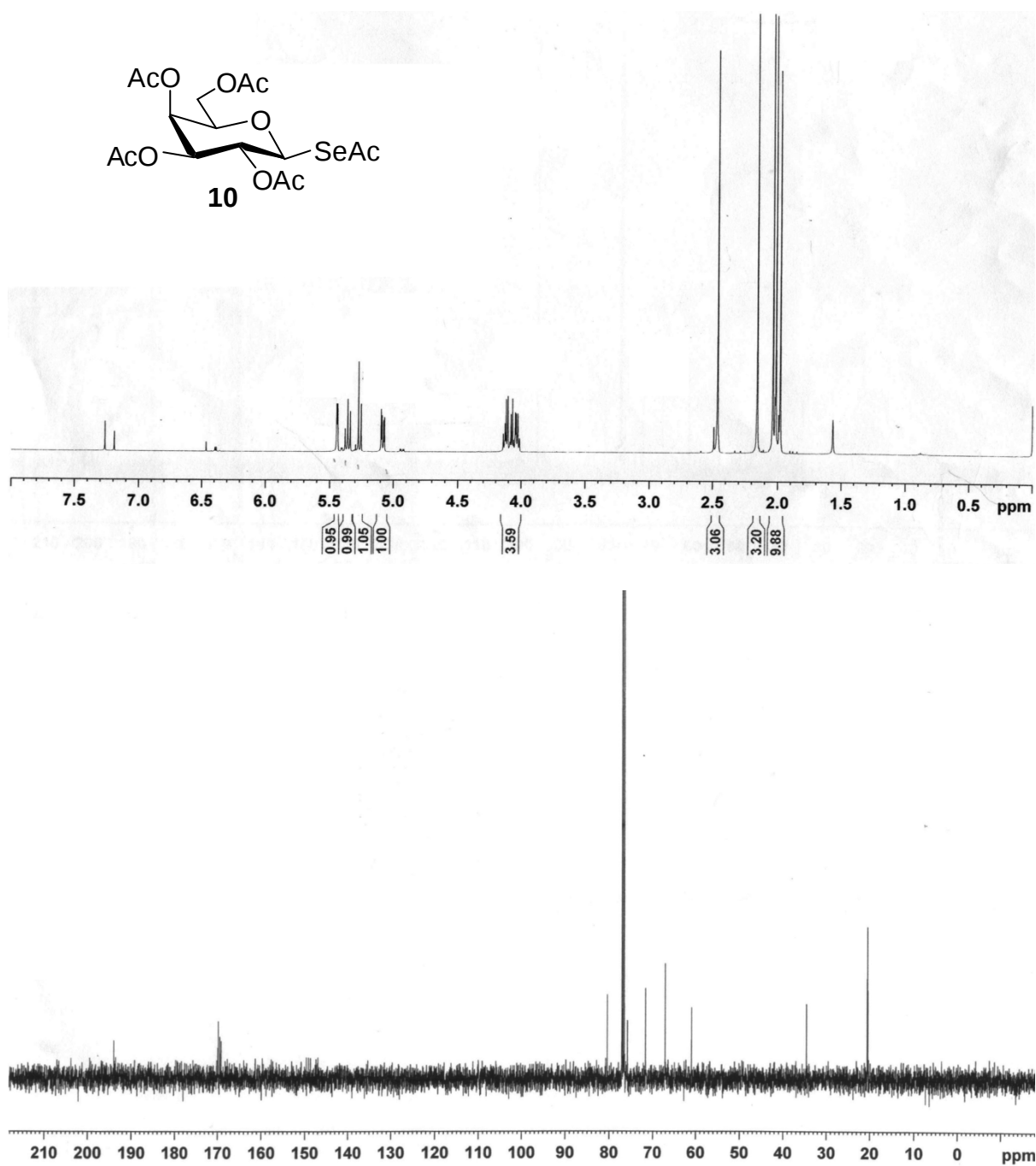
Tapasi Manna and Anup Kumar Misra*

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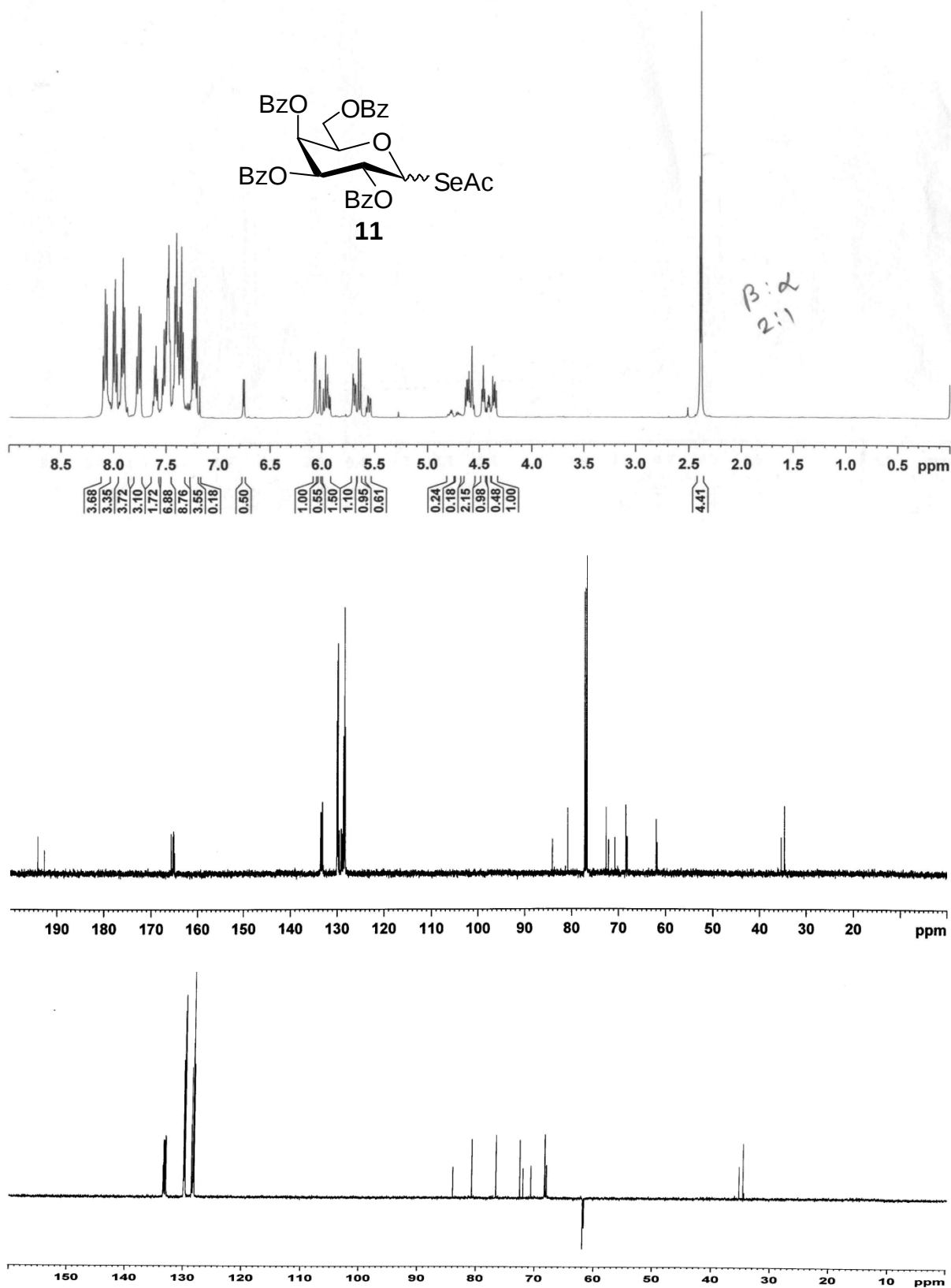
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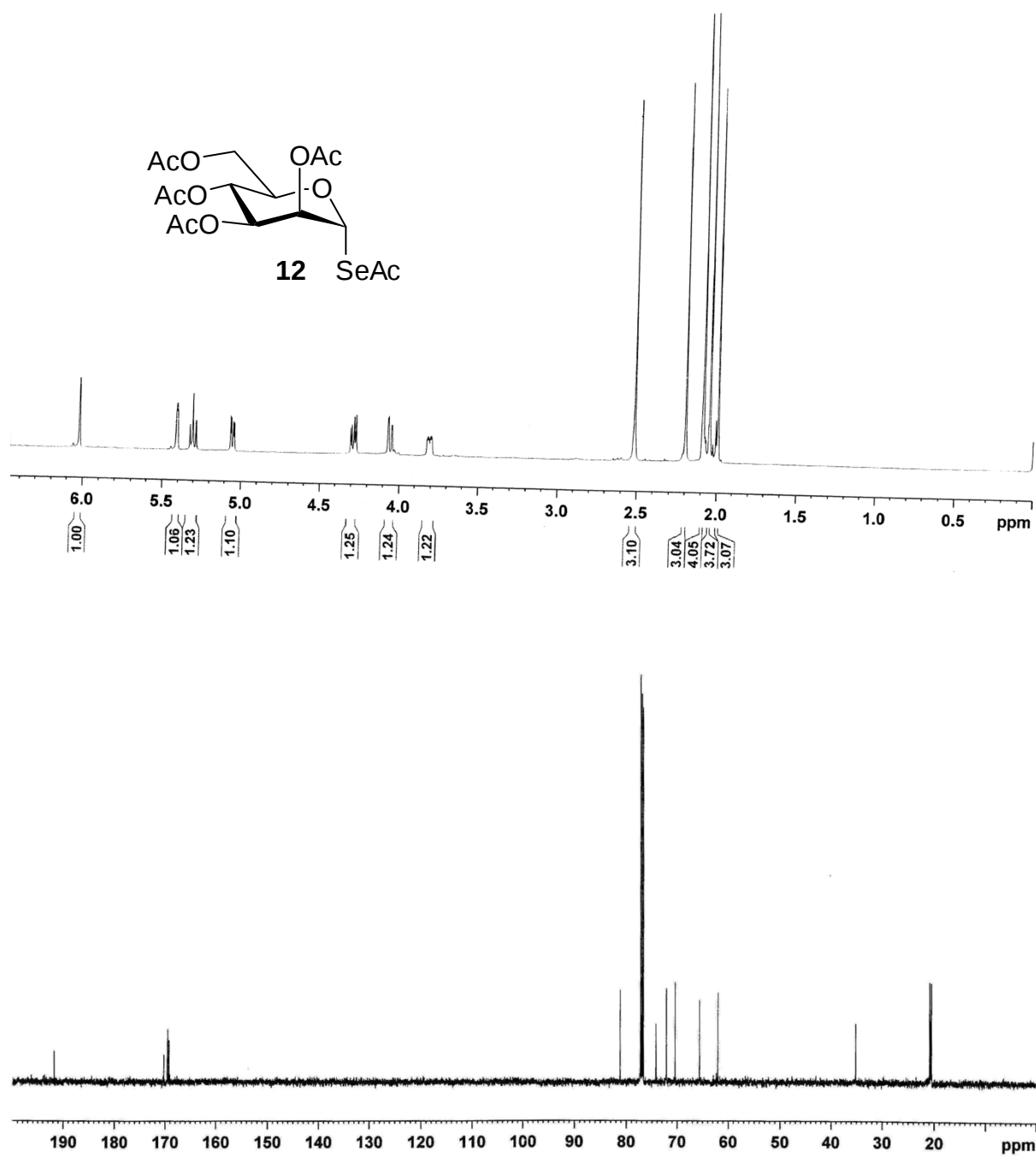
^1H , ^{13}C and DEPT 135 NMR spectra of 2,3,4,6-tetra-*O*-acetyl-1-selenoacetyl- β -D-glucopyranose (**9**) (500 MHz, CDCl_3).



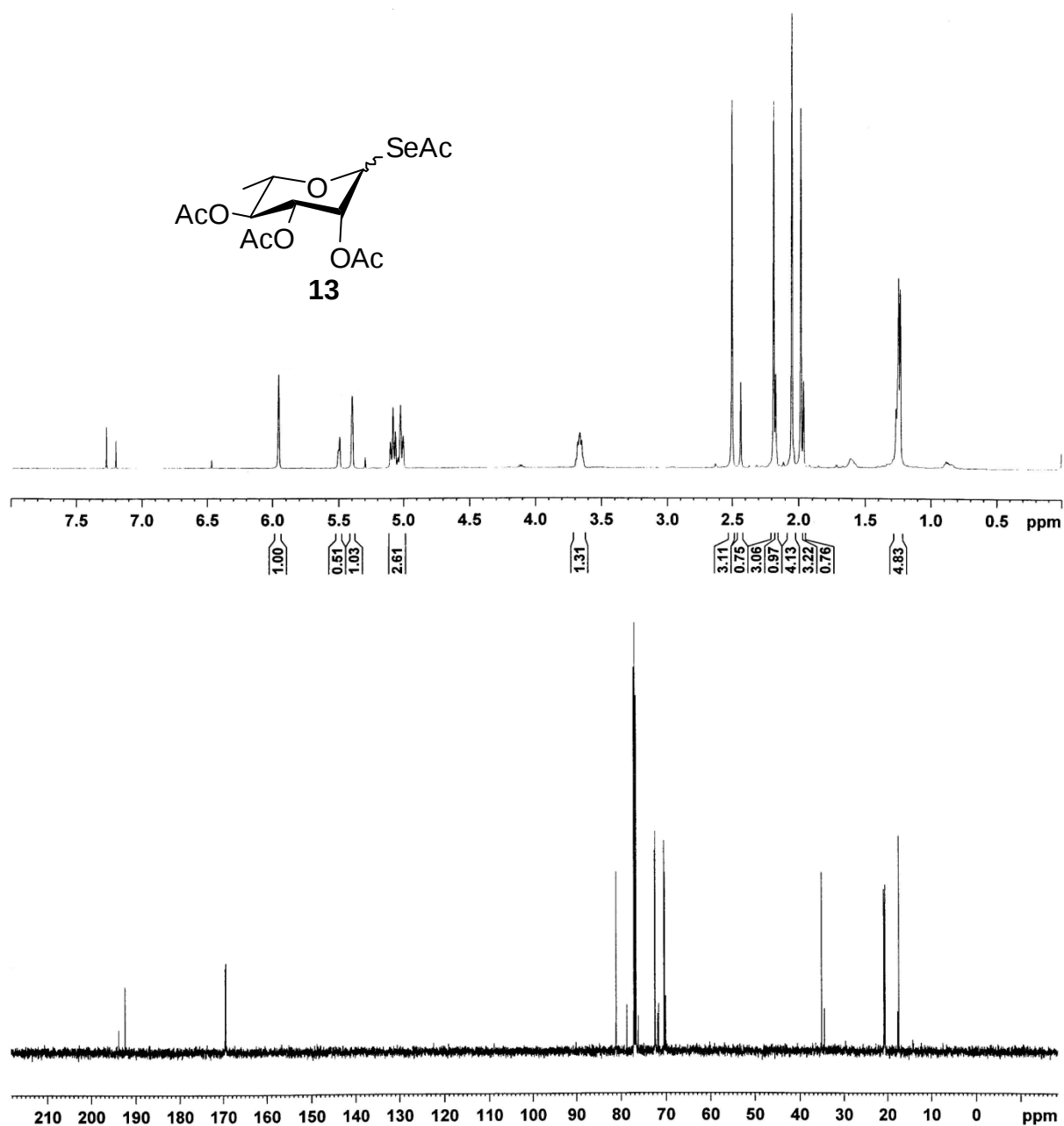
^1H and ^{13}C NMR spectra of 2,3,4,6-tetra-*O*-acetyl-1-selenoacetyl- β -D-galactopyranose (**10**) (500 MHz, CDCl_3).



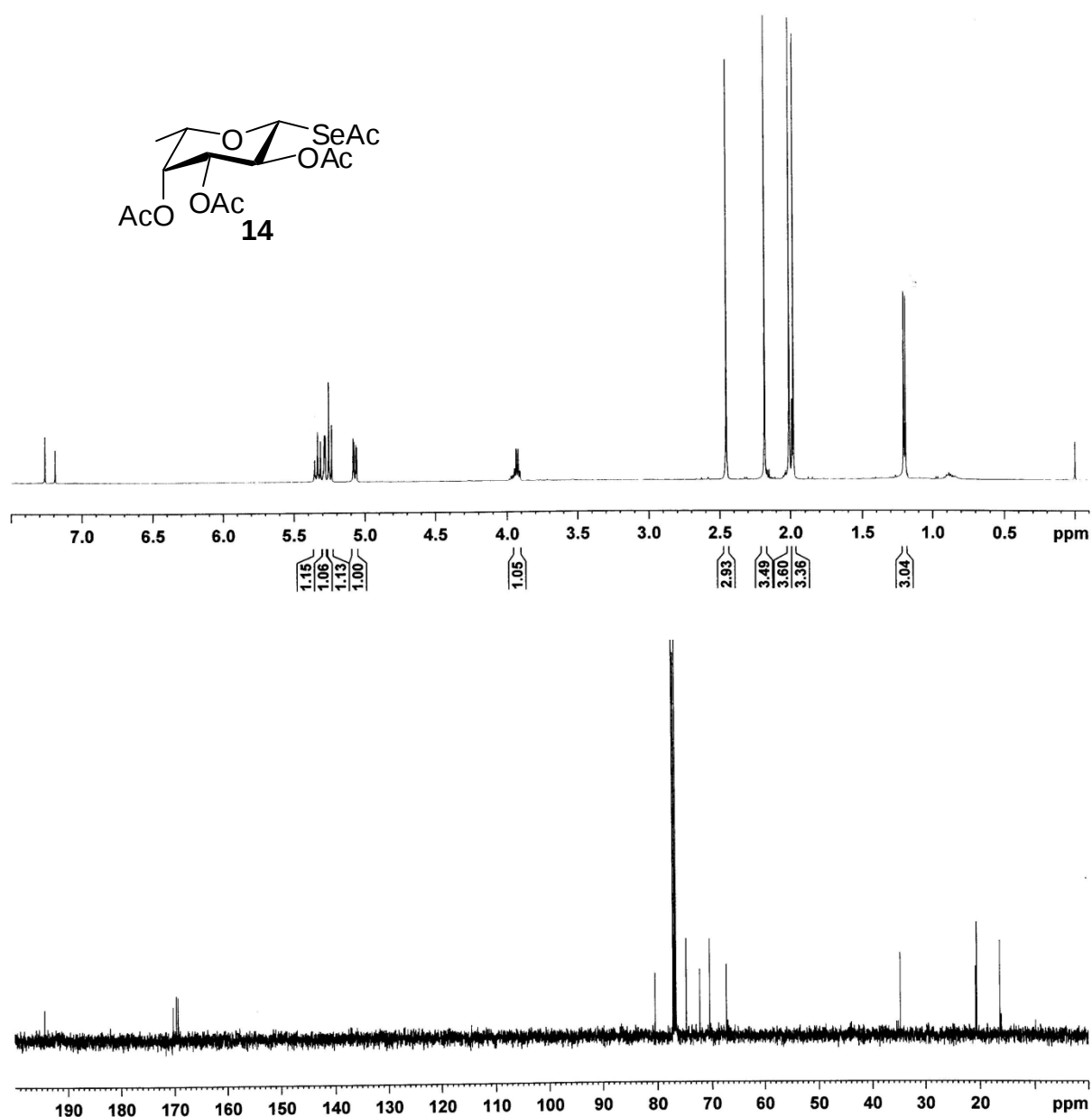
¹H, ¹³C and DEPT 135 NMR spectra of 2,3,4,6-tetra-O-benzoyl-1-selenoacetyl- α,β -D-galactopyranose (**11**) ($\alpha:\beta$ = 1:2) (500 MHz, CDCl₃).



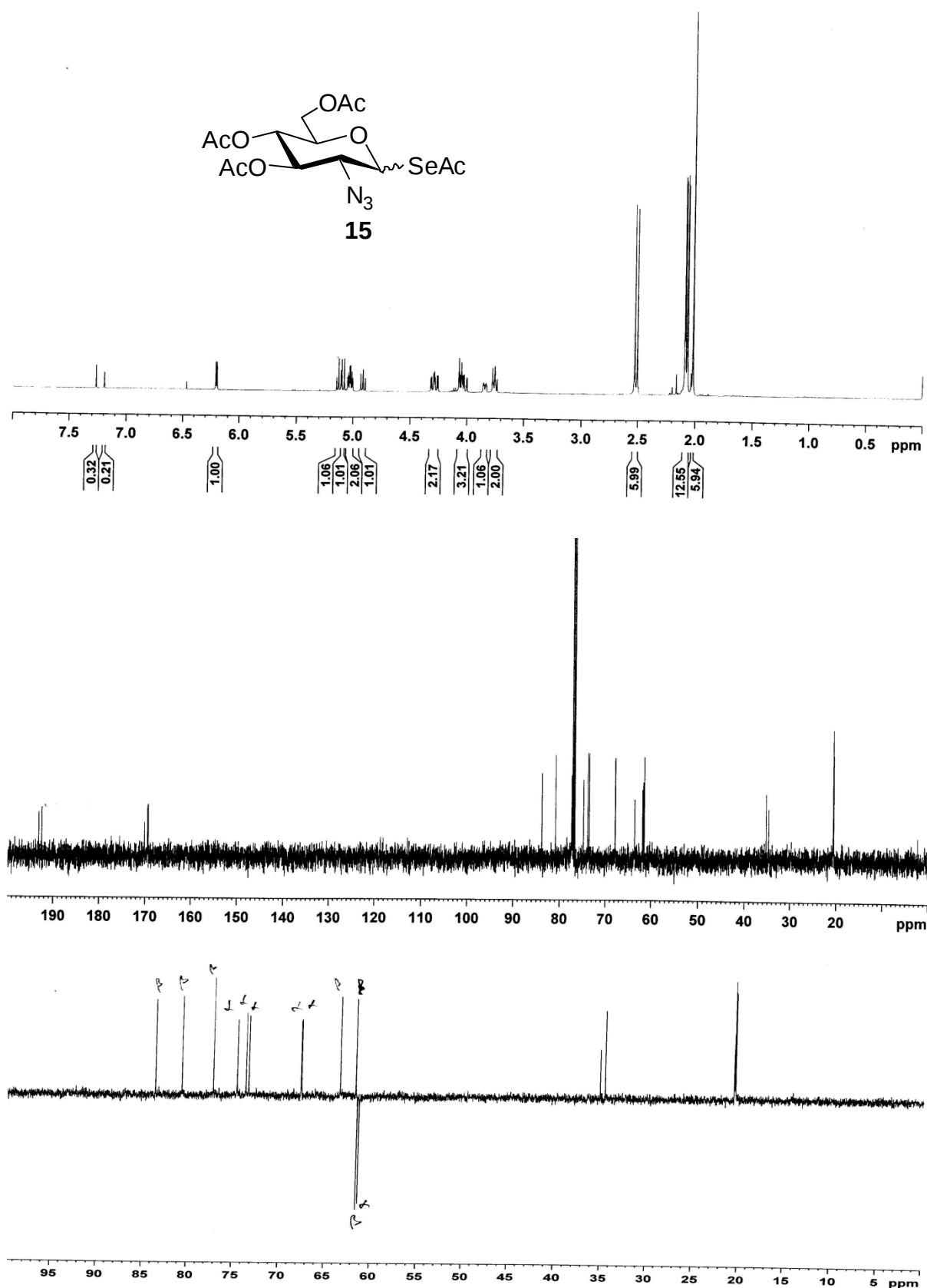
^1H and ^{13}C NMR spectra of 2,3,4,6-tetra-*O*-acetyl-1-selenoacetyl- α -D-mannopyranose (**12**) (500 MHz, CDCl_3).



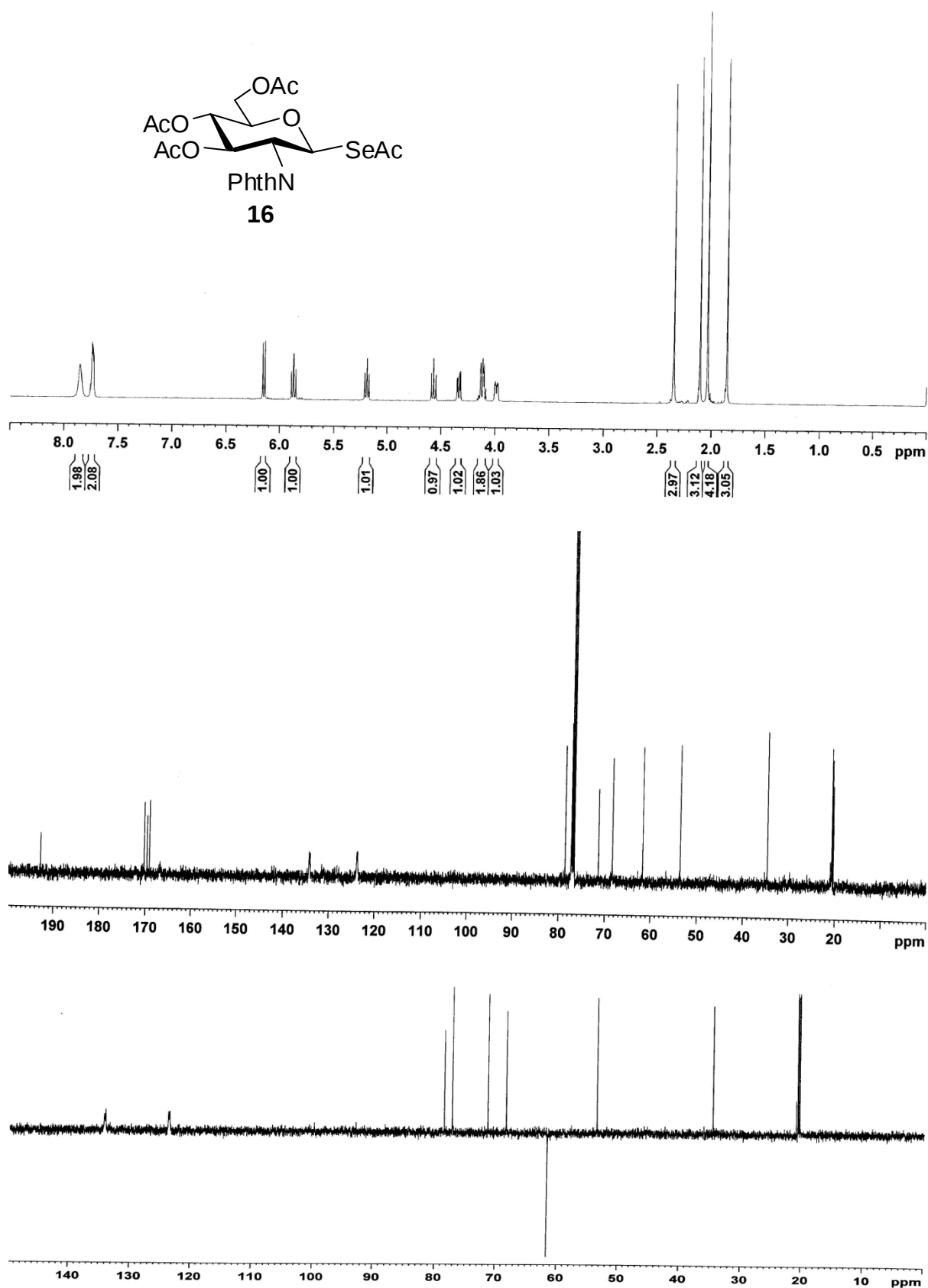
¹H and ¹³C NMR spectra of 2,3,4-tri-*O*-acetyl-1-selenoacetyl-6-deoxy- α,β -L-rhamnopyranose (**13**) (α : β = 1:03) (500 MHz, CDCl₃).



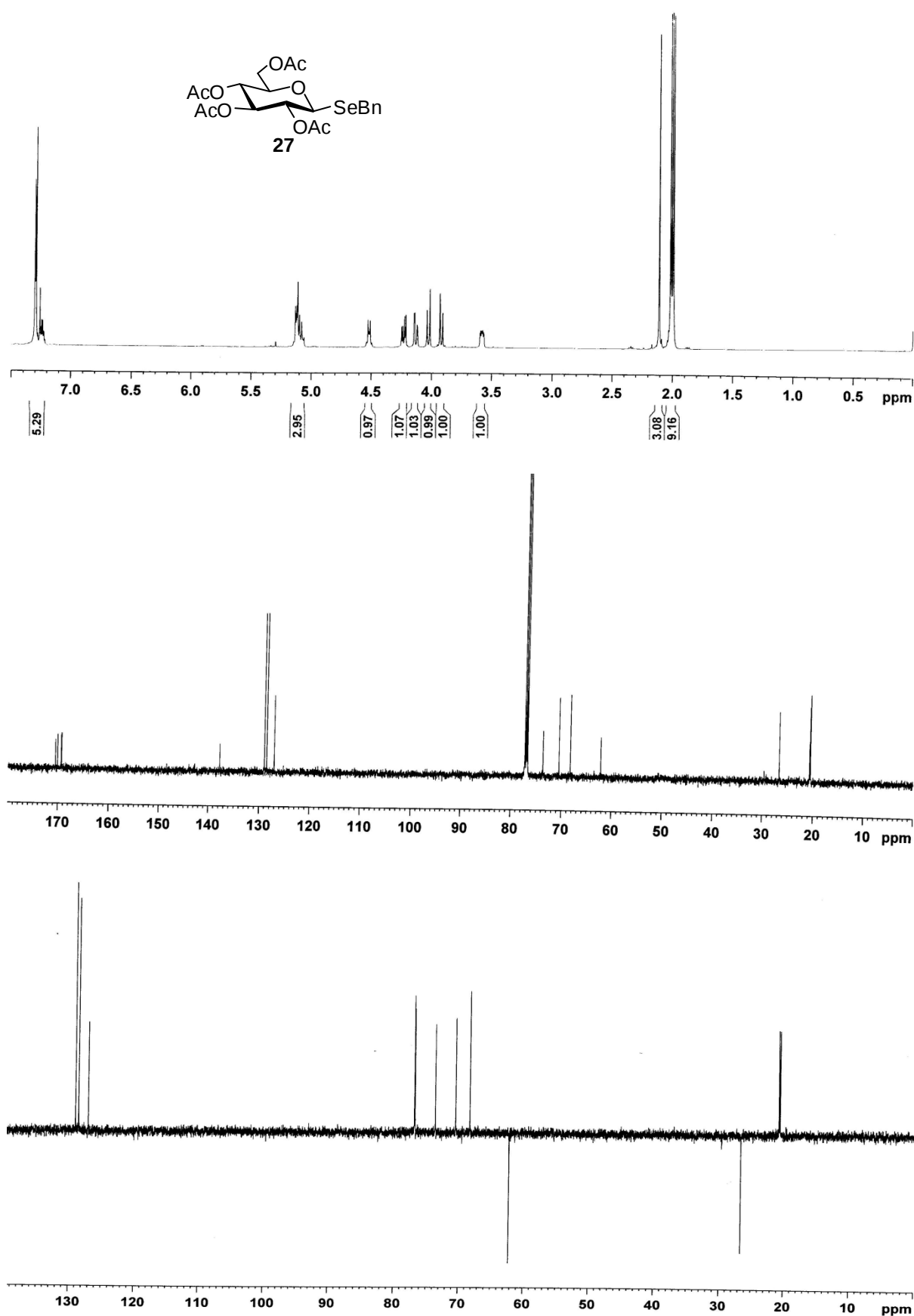
¹H and ¹³C NMR spectra of 2,3,4-tri-O-acetyl-1-selenoacetyl-6-deoxy-β-L-fucopyranose (**14**) (500 MHz, CDCl₃).



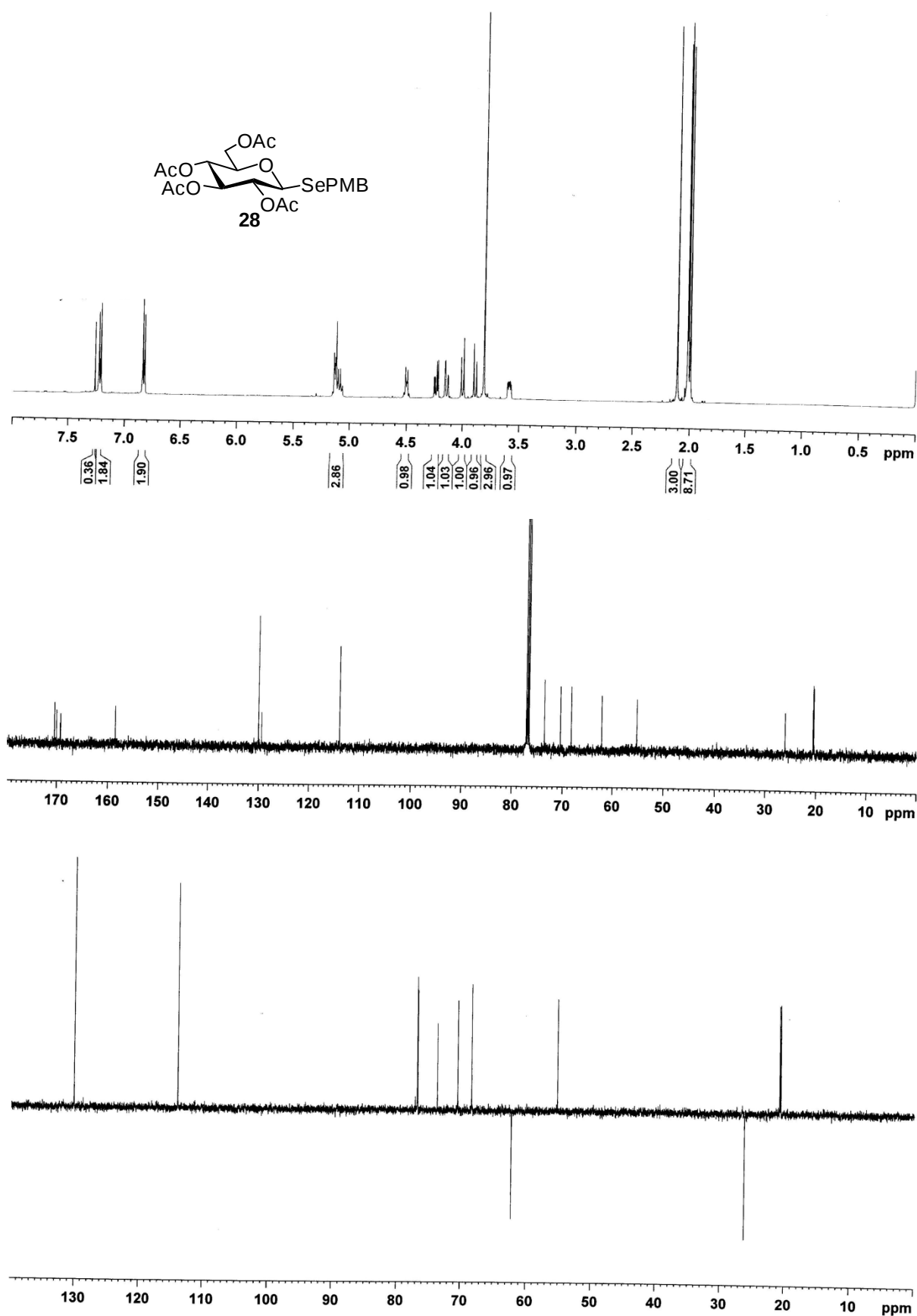
¹H, ¹³C and DEPT 135 NMR spectra of 3,4,6-tri-O-acetyl-2-azido-2-deoxy-1-selenoacetyl- α,β -D-glucopyranose (**15**) ($\alpha:\beta = 1:2$) (500 MHz, CDCl₃).



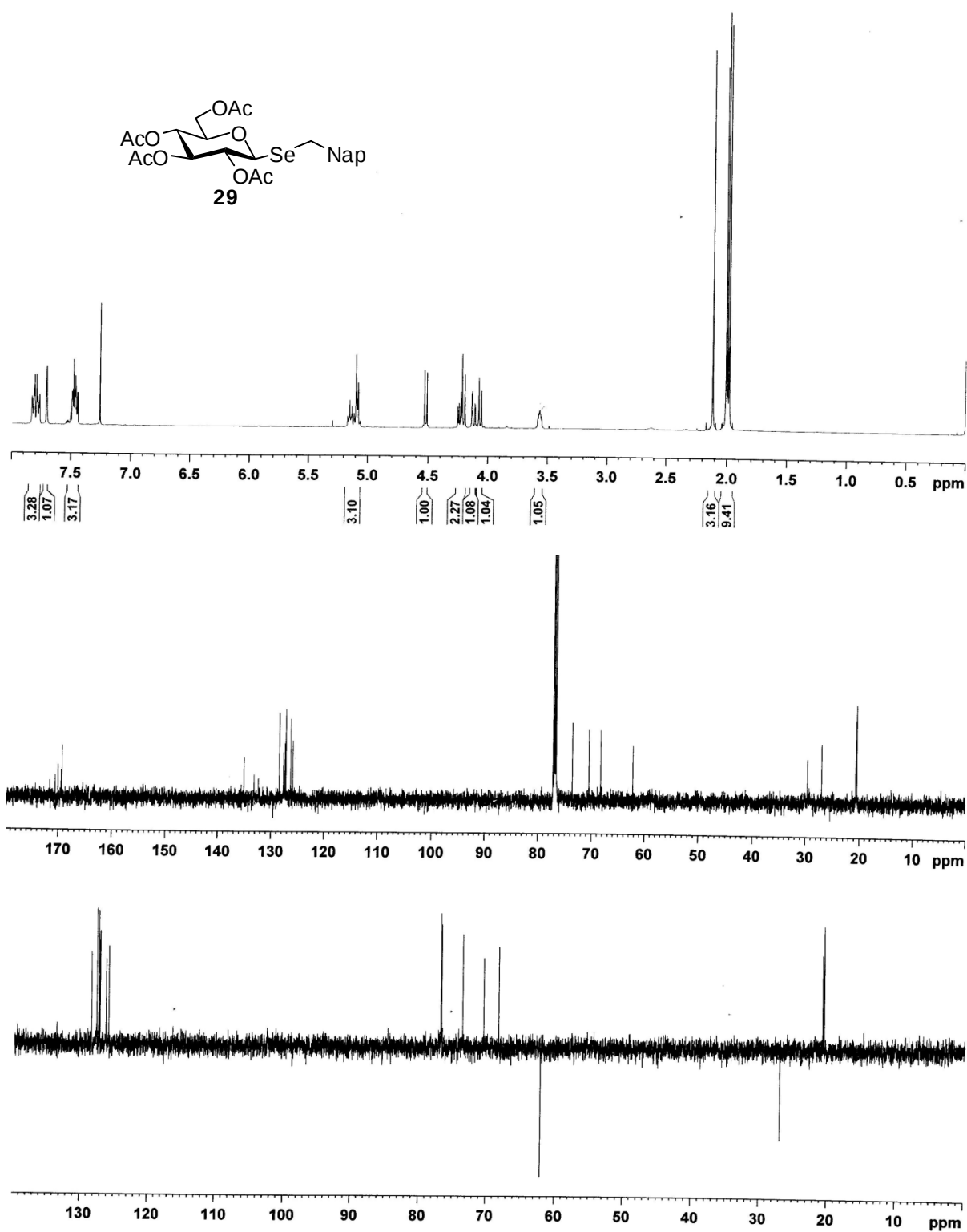
^1H , ^{13}C and DEPT 135 NMR spectra of 3,4,6-tri-*O*-acetyl-2-deoxy-1-selenoacetyl-2-phthalimido- β -D-glucopyranose (**16**) (500 MHz, CDCl_3).



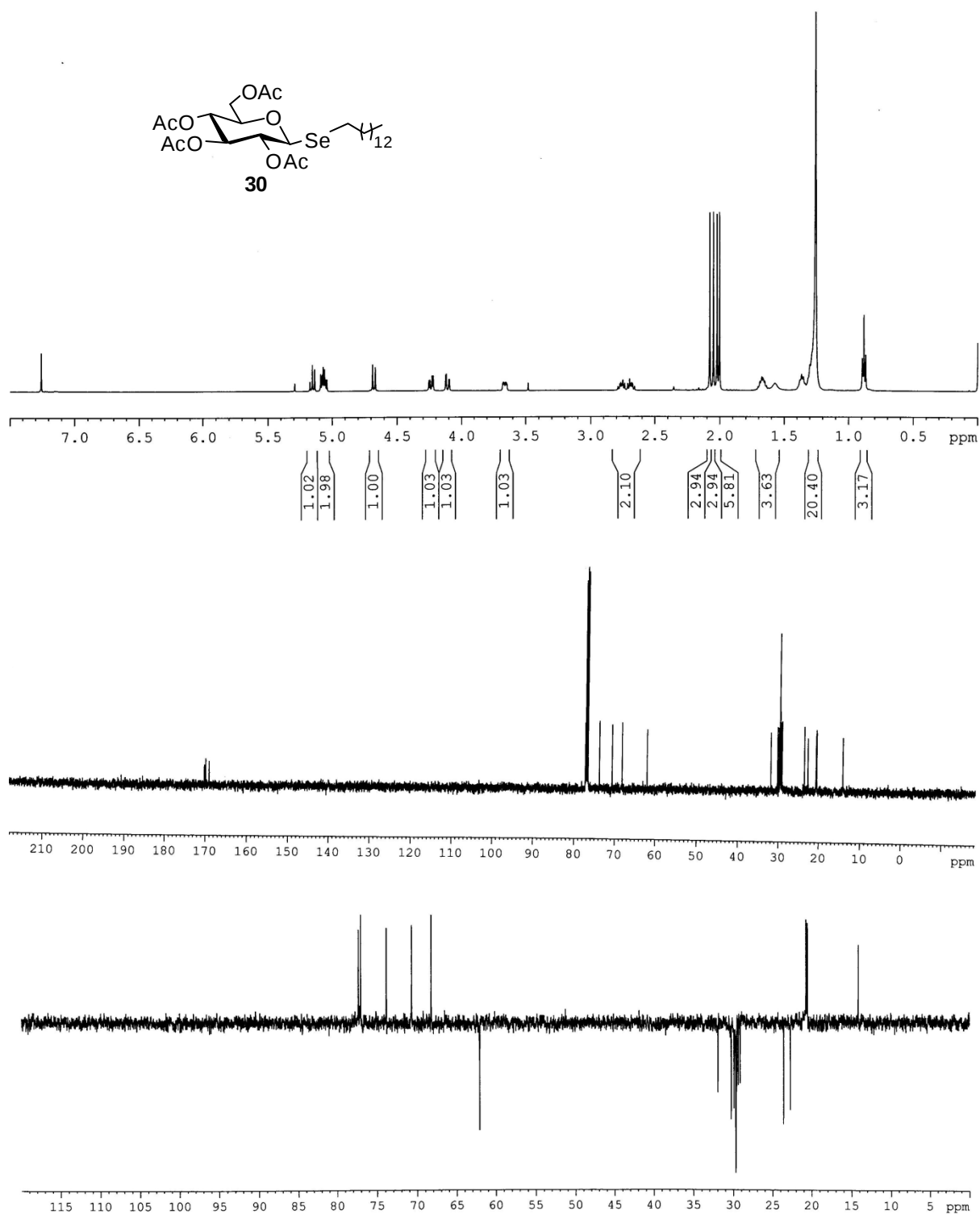
¹H, ¹³C and DEPT 135 NMR spectra of benzyl 2,3,4,6-tetra-O-acetyl-1-seleno-β-D-glucopyranoside (**27**) (500 MHz, CDCl₃).



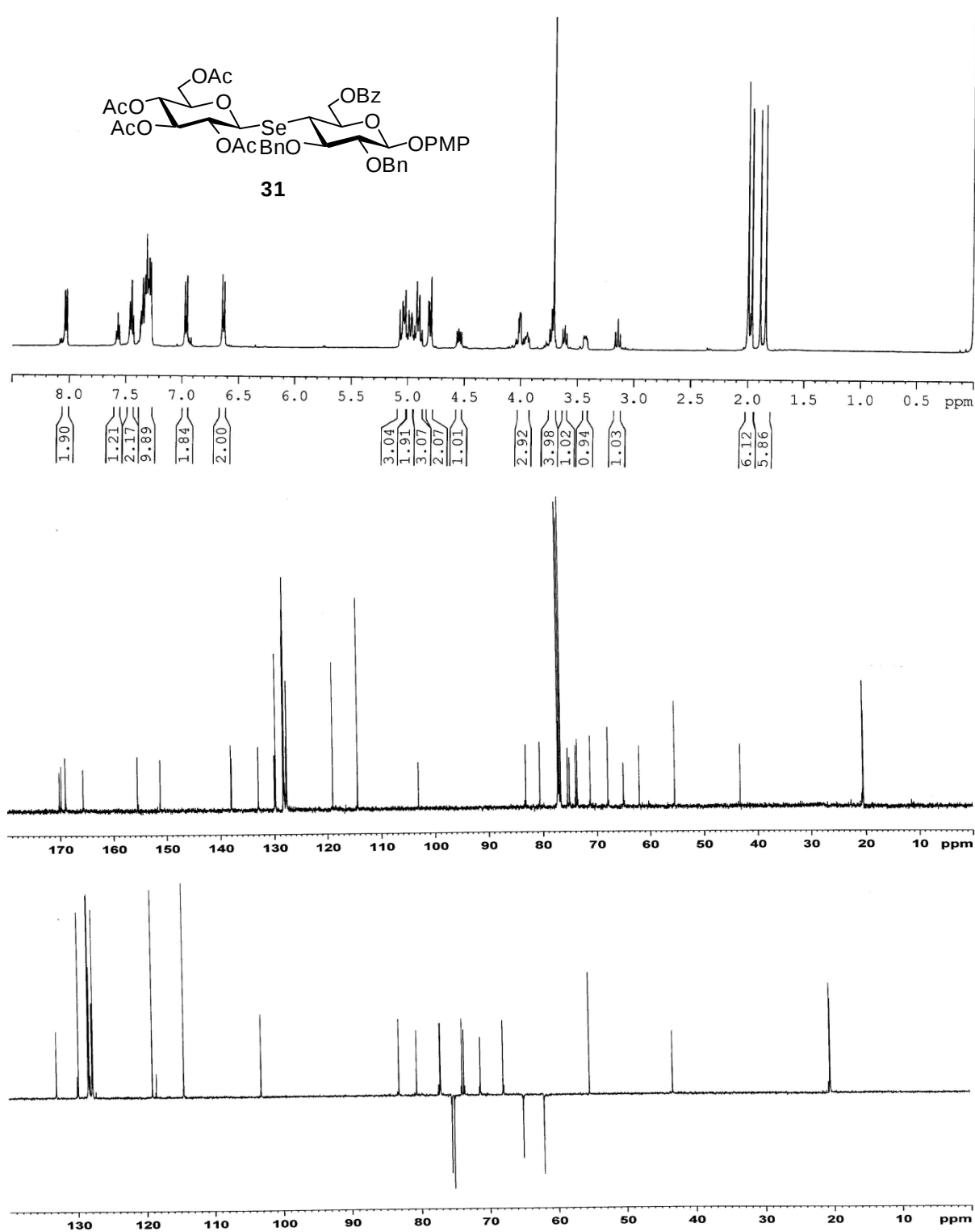
^1H , ^{13}C and DEPT 135 NMR spectra of *p*-methoxybenzyl 2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-glucopyranoside (**28**) (500 MHz, CDCl_3).



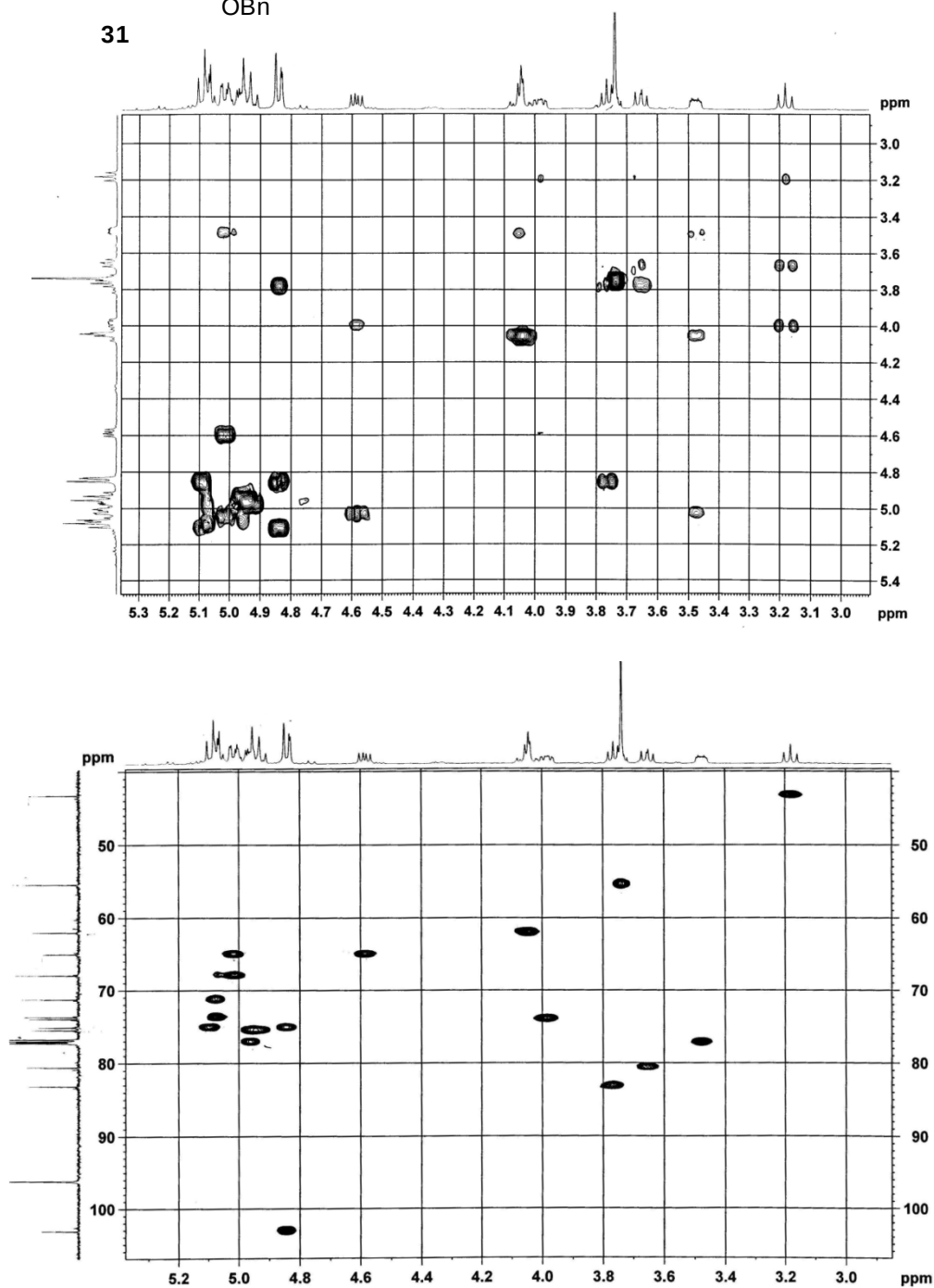
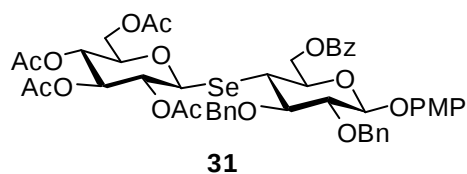
^1H , ^{13}C and DEPT 135 NMR spectra of 2-naphthylmethyl 2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-glucopyranoside (**29**) (500 MHz, CDCl₃)



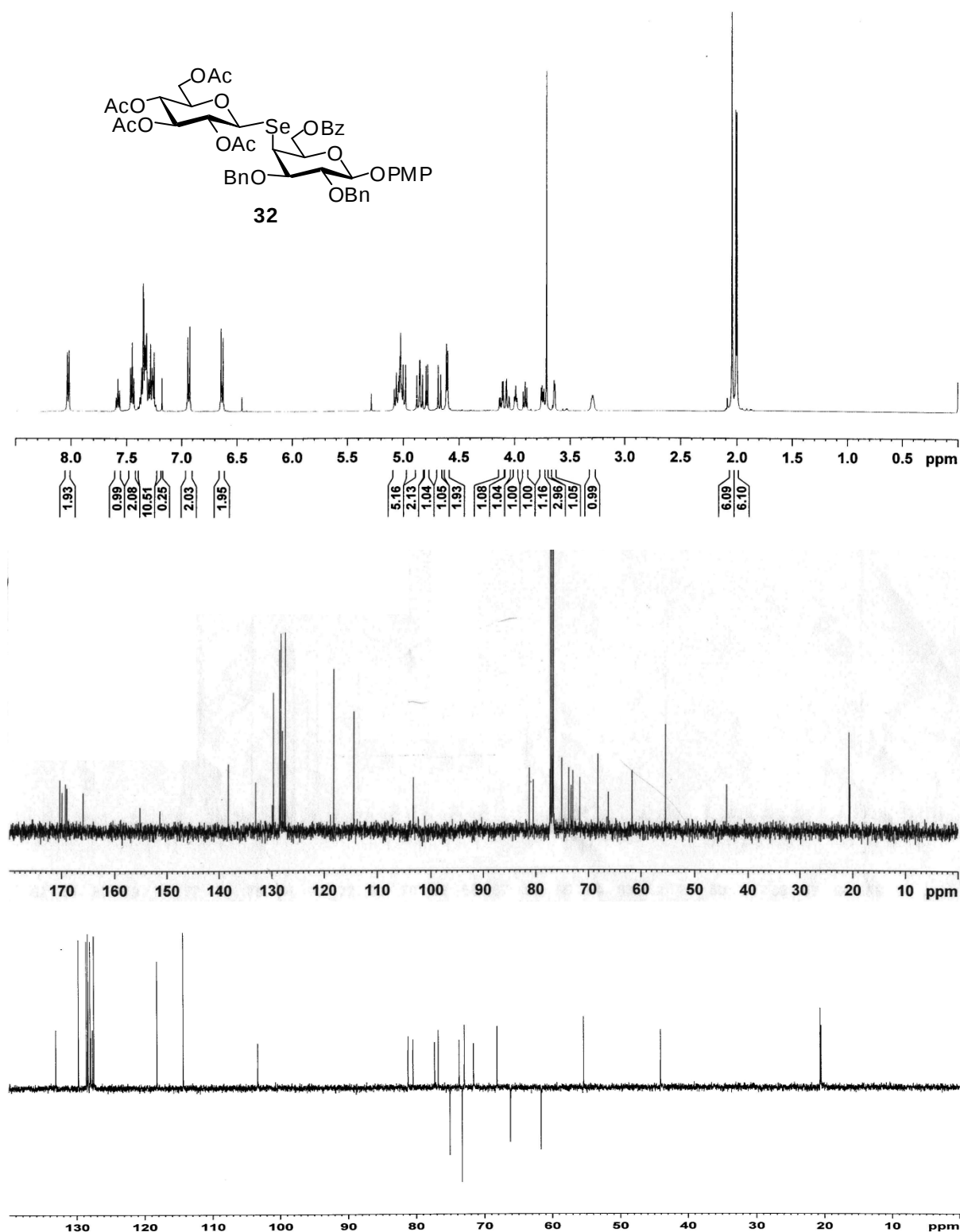
^1H , ^{13}C and DEPT 135 NMR spectra of dodecyl 2,3,4,6-tetra-*O*-acetyl-1-seleno-β-D-glucopyranoside (**30**) (500 MHz, CDCl_3)



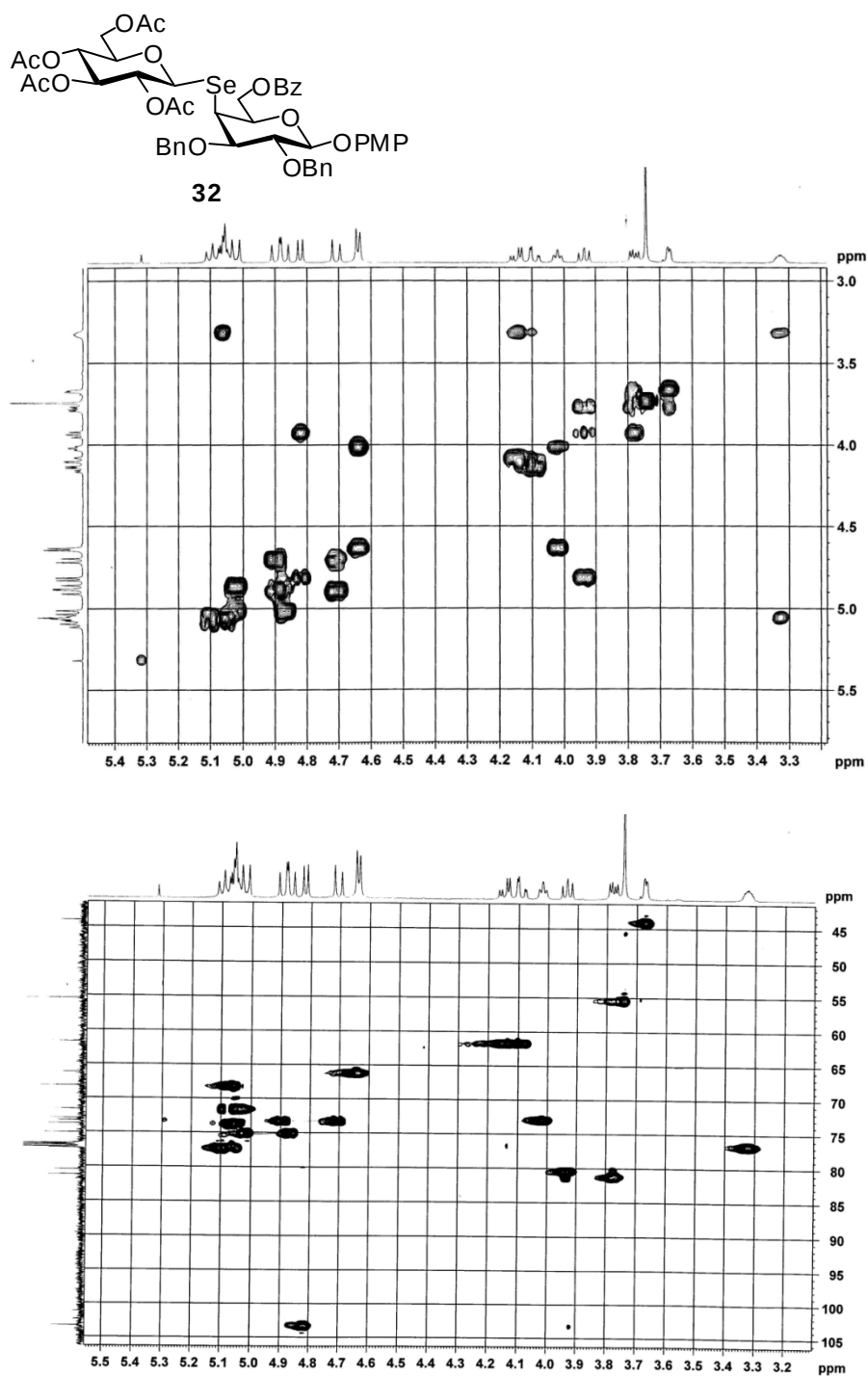
¹H, ¹³C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3,4,6-tetra-*O*-acetyl-1-seleno-β-D-glucopyranosyl)-(1→4)-6-*O*-benzoyl-2,3-di-*O*-benzyl-β-D-glucopyranoside (**31**) (500 MHz, CDCl₃).



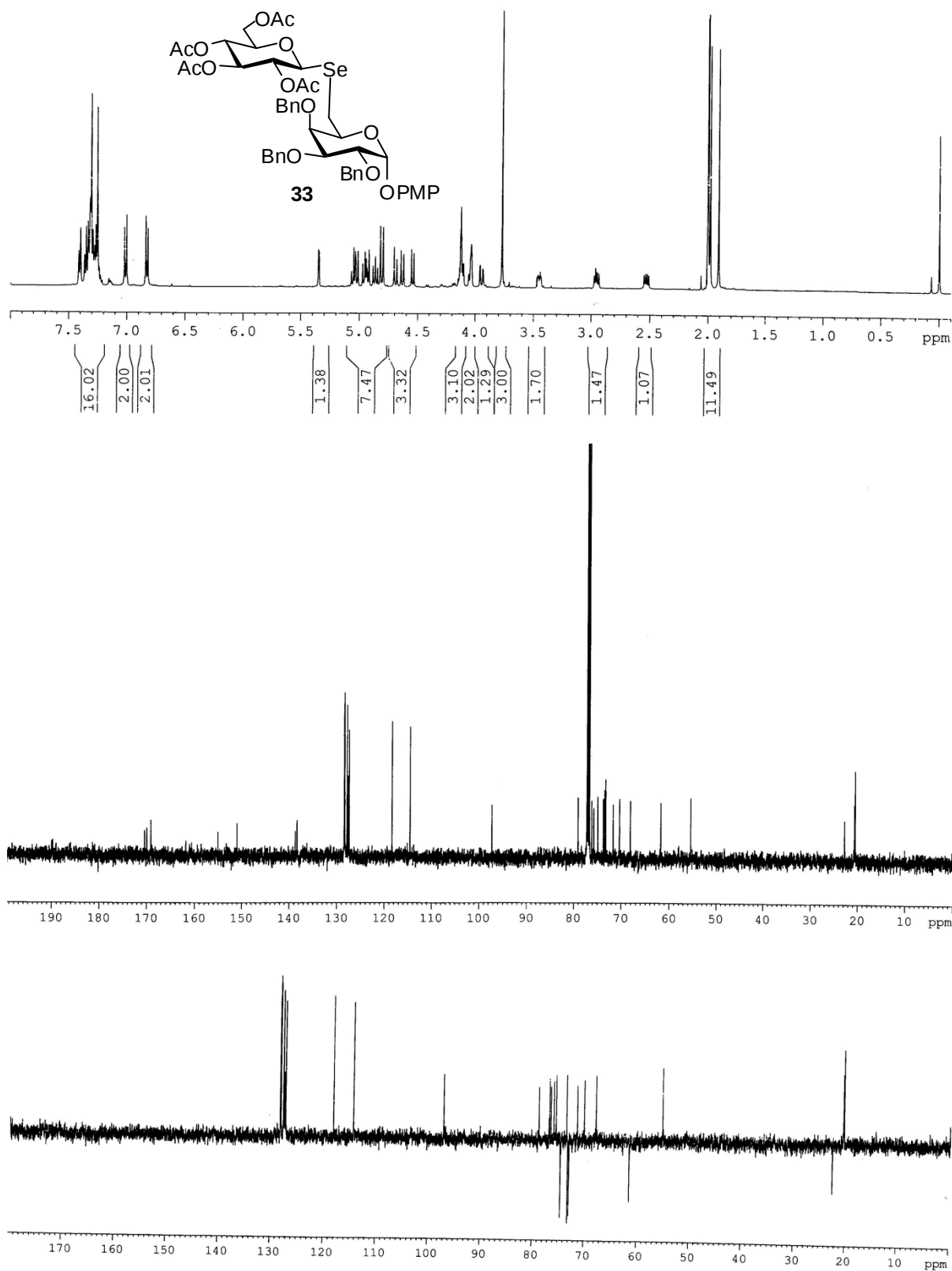
2D COSY and HSQC NMR spectra (expanded region) of *p*-methoxyphenyl (2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-glucopyranosyl)-(1 $\rightarrow$ 4)-6-*O*-benzoyl-2,3-di-*O*-benzyl- β -D-glucopyranoside (**31**) (500 MHz, CDCl₃).



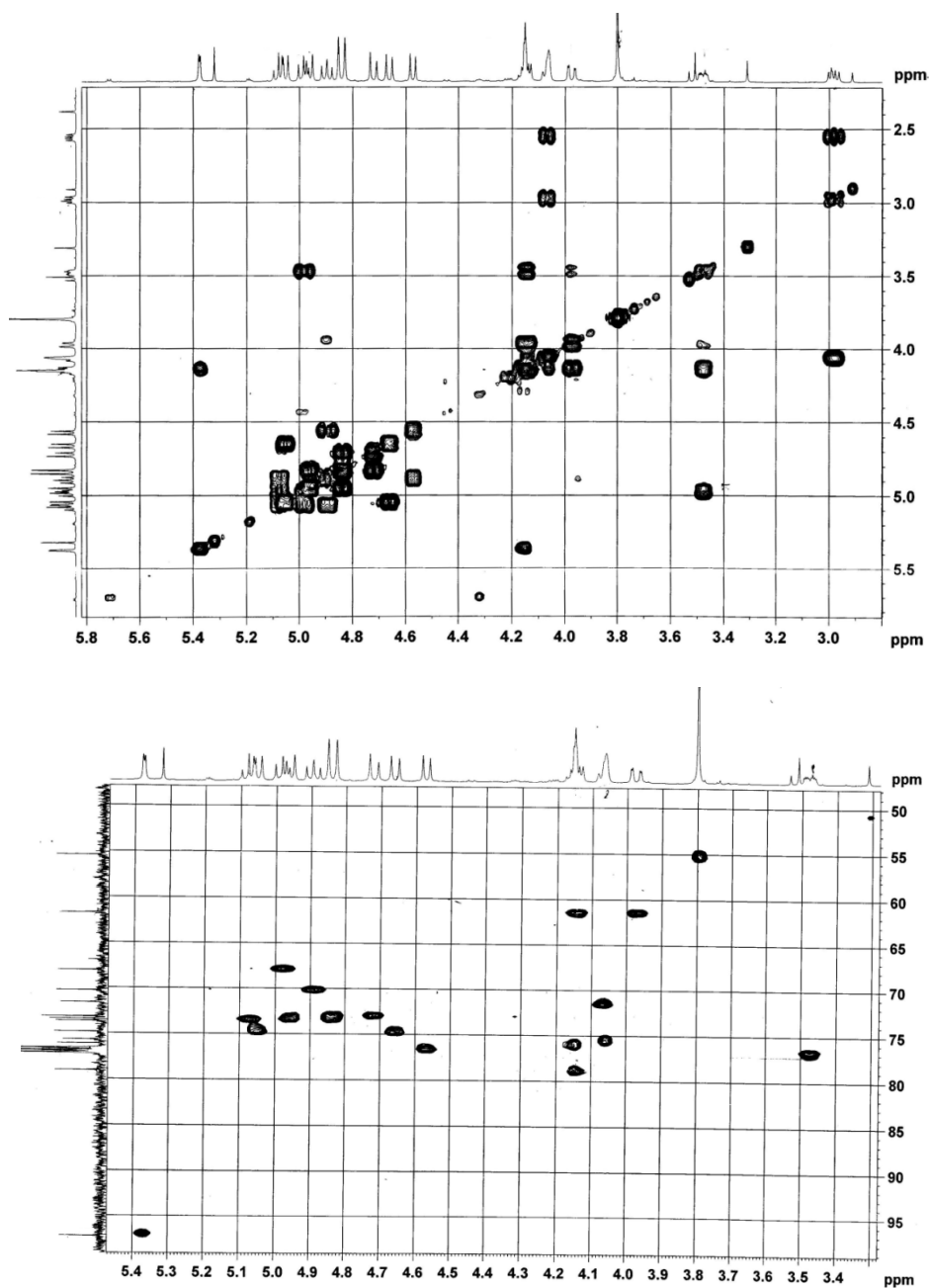
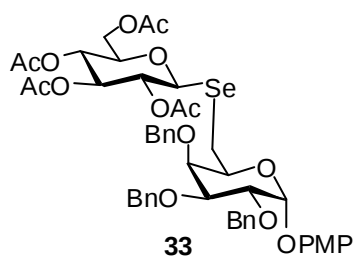
^1H , ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-glucopyranosyl)-(1 $\rightarrow$ 4)-6-*O*-benzoyl-2,3-di-*O*-benzyl- β -D-galactopyranoside (**32**) (500 MHz, CDCl_3).



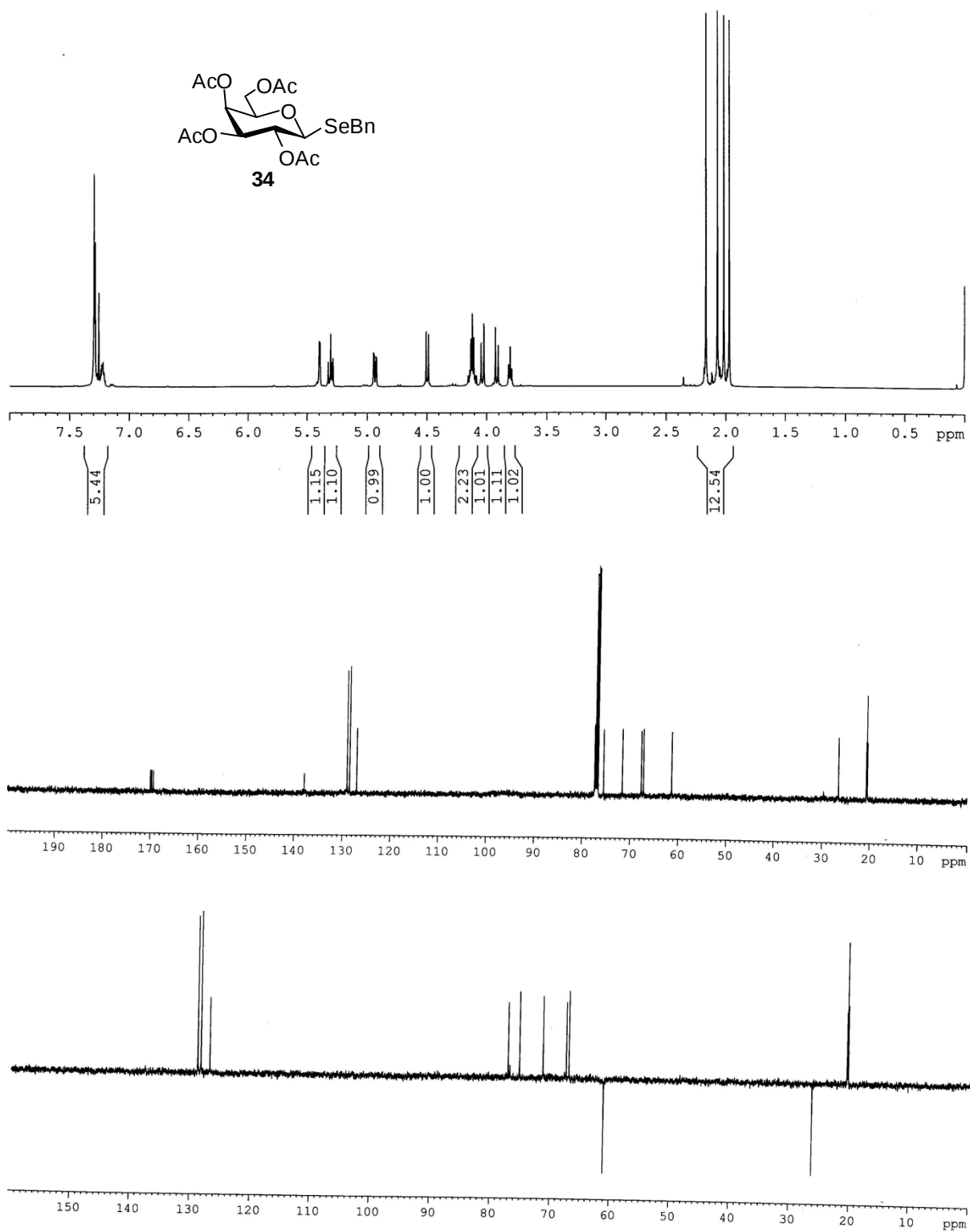
2D COSY and HSQC NMR spectra (expanded region) of *p*-methoxyphenyl (2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-glucopyranosyl)-(1 $\rightarrow$ 4)-6-*O*-benzoyl-2,3-di-*O*-benzyl- β -D-galactopyranoside (**32**) (500 MHz, CDCl_3).



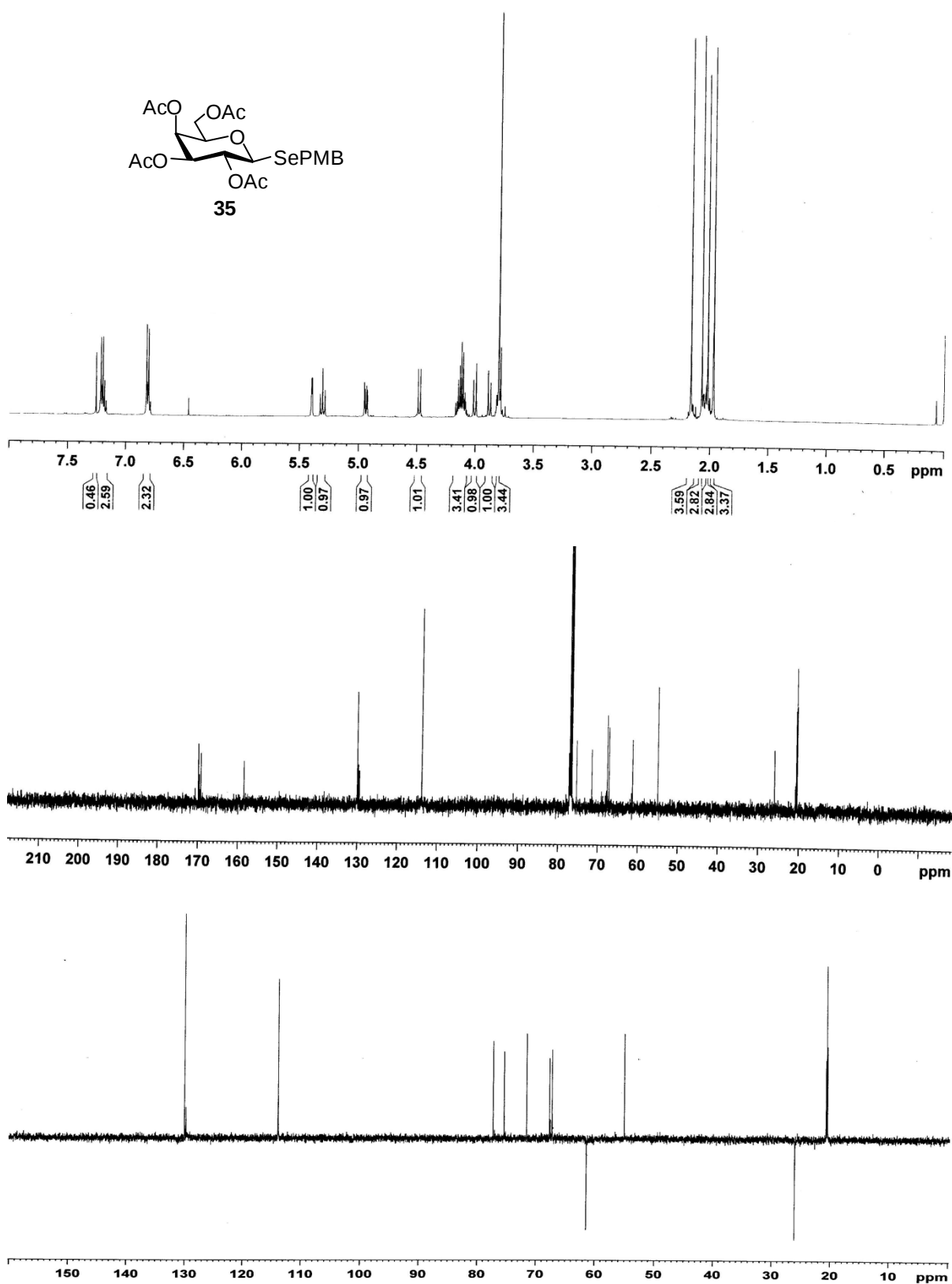
¹H, ¹³C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-glucopyranosyl)-(1 $\rightarrow$ 6)-2,3,6-tri-*O*-benzyl- α -D-galactopyranoside (**33**) (500 MHz, CDCl₃).



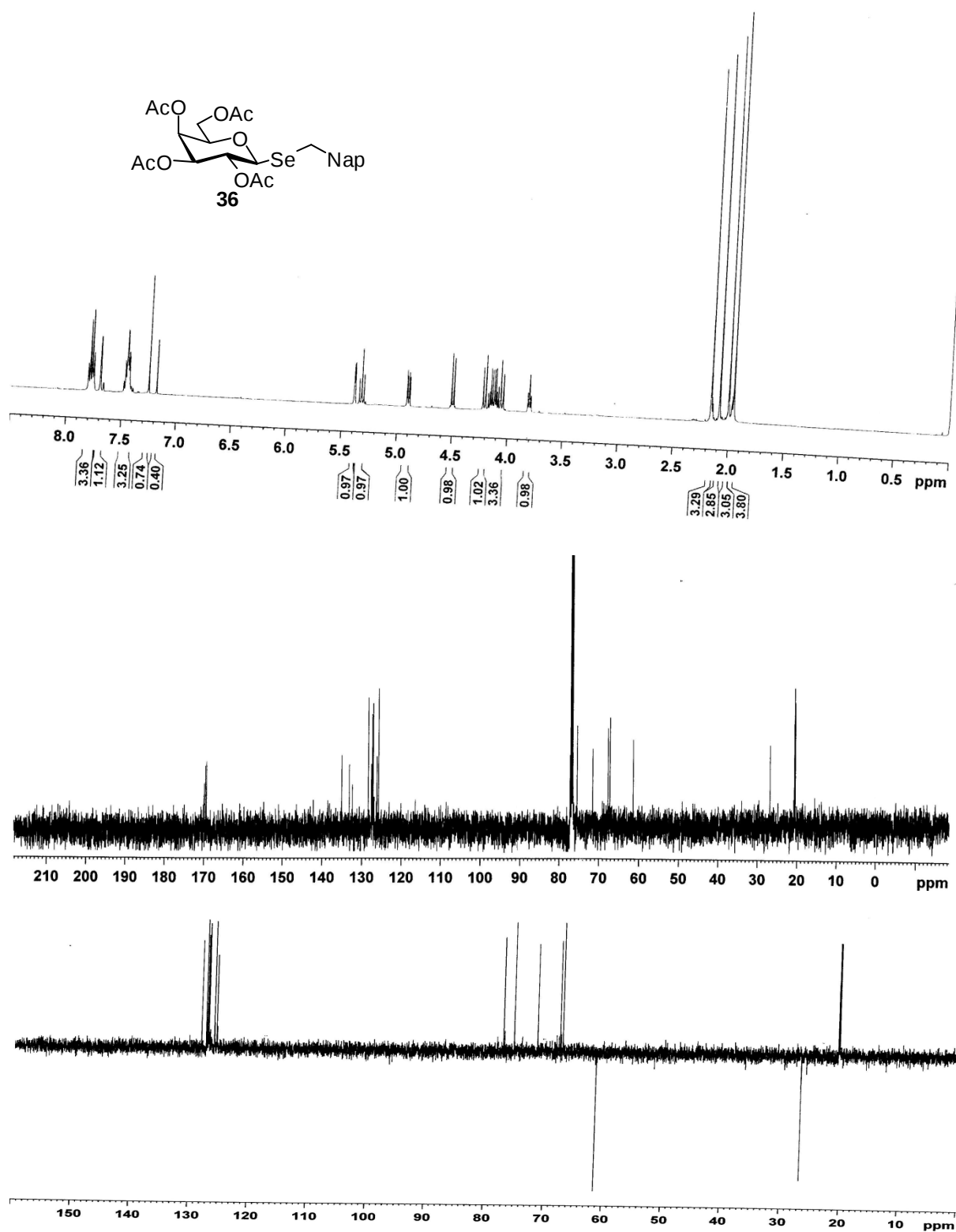
2D COSY and HSQC NMR spectra (expanded region) of *p*-methoxyphenyl (2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-glucopyranosyl)-(1 $\rightarrow$ 6)-2,3,6-tri-*O*-benzyl- α -D-galactopyranoside (**33**) (500 MHz, CDCl₃).



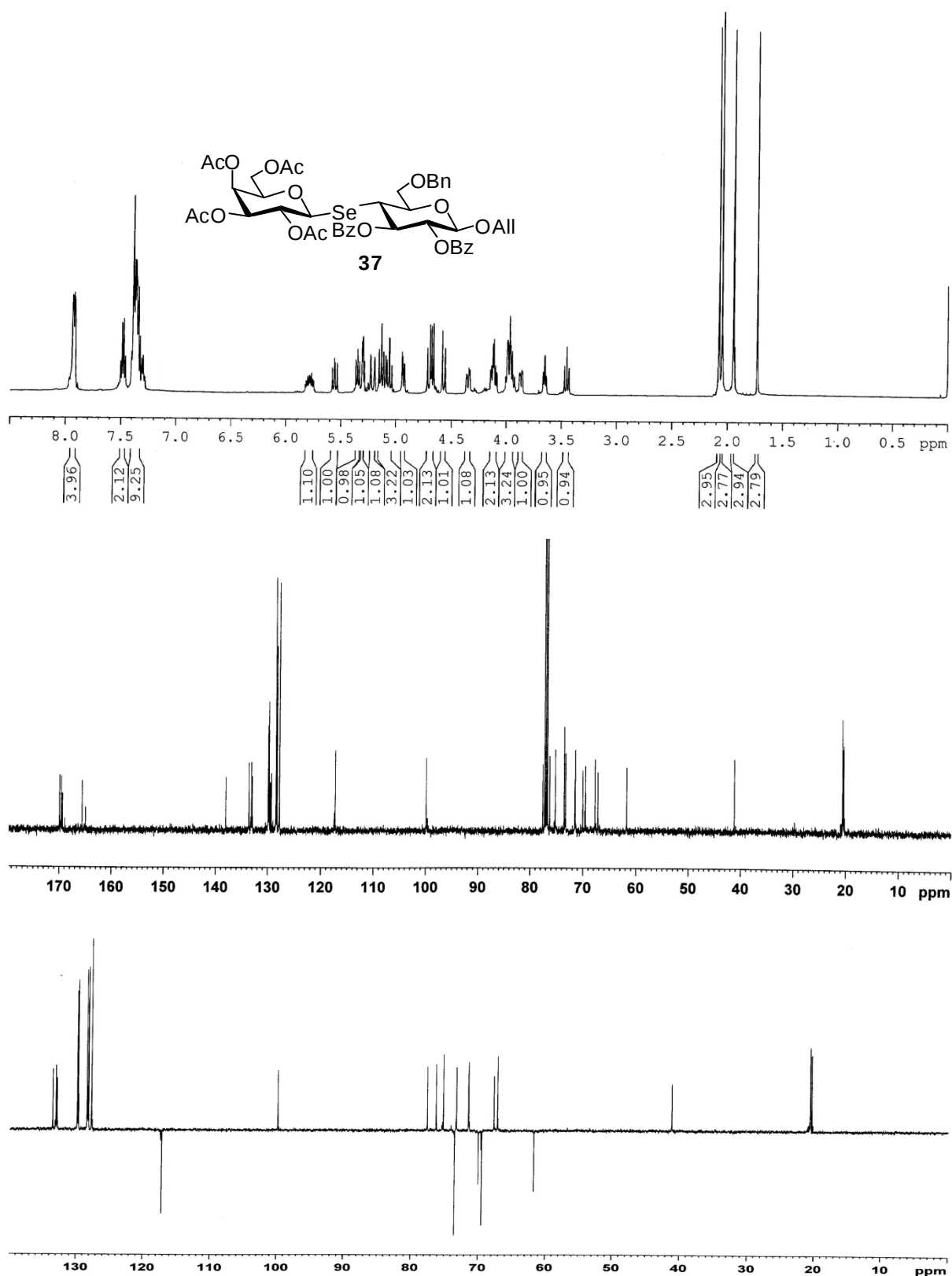
¹H, ¹³C and DEPT 135 NMR spectra of benzyl 2,3,4,6-tetra-*O*-acetyl-1-seleno-β-D-galactopyranoside (**34**) (500 MHz, CDCl₃)



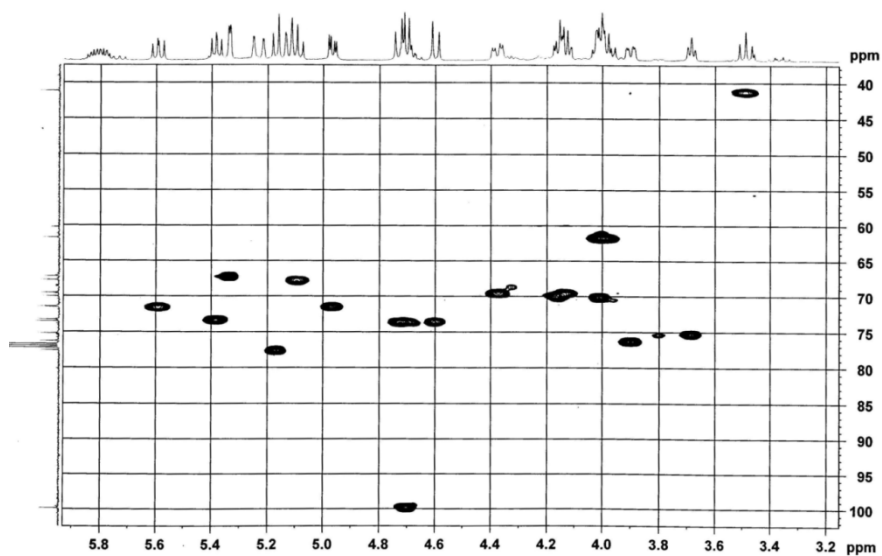
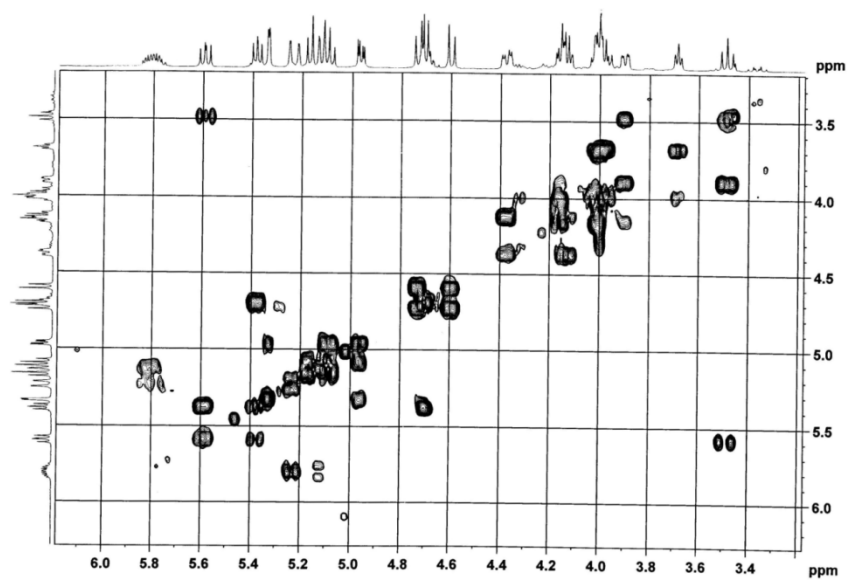
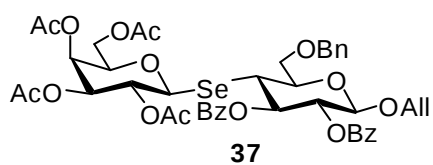
^1H , ^{13}C and DEPT 135 NMR spectra of *p*-methoxybenzyl 2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-galactopyranoside (**35**) (500 MHz, CDCl_3)



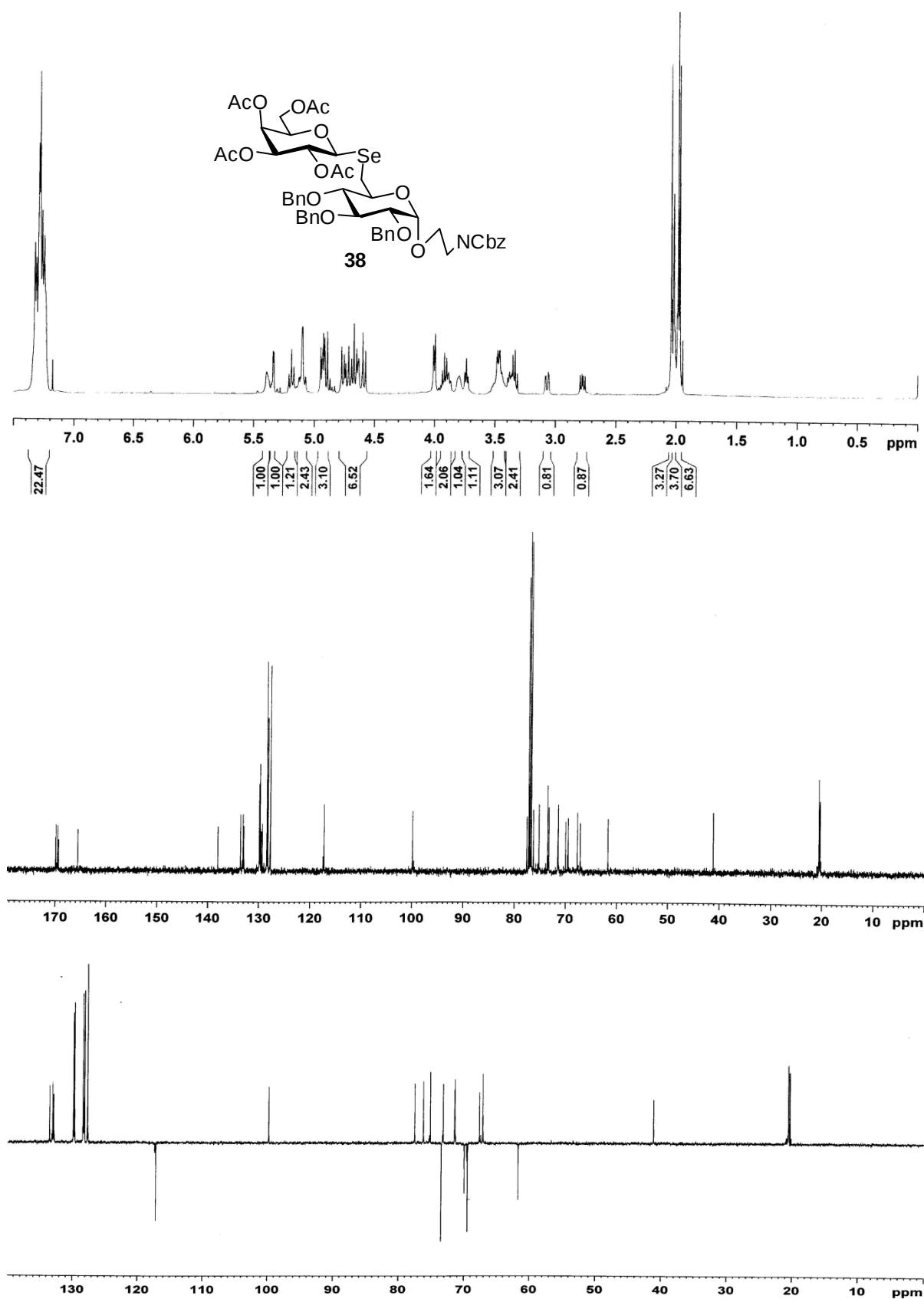
^1H , ^{13}C and DEPT 135 NMR spectra of 2-naphthylmethyl 2,3,4,6-tetra-*O*-acetyl-1-seleno- β -D-galactopyranoside (**36**) (500 MHz, CDCl₃)



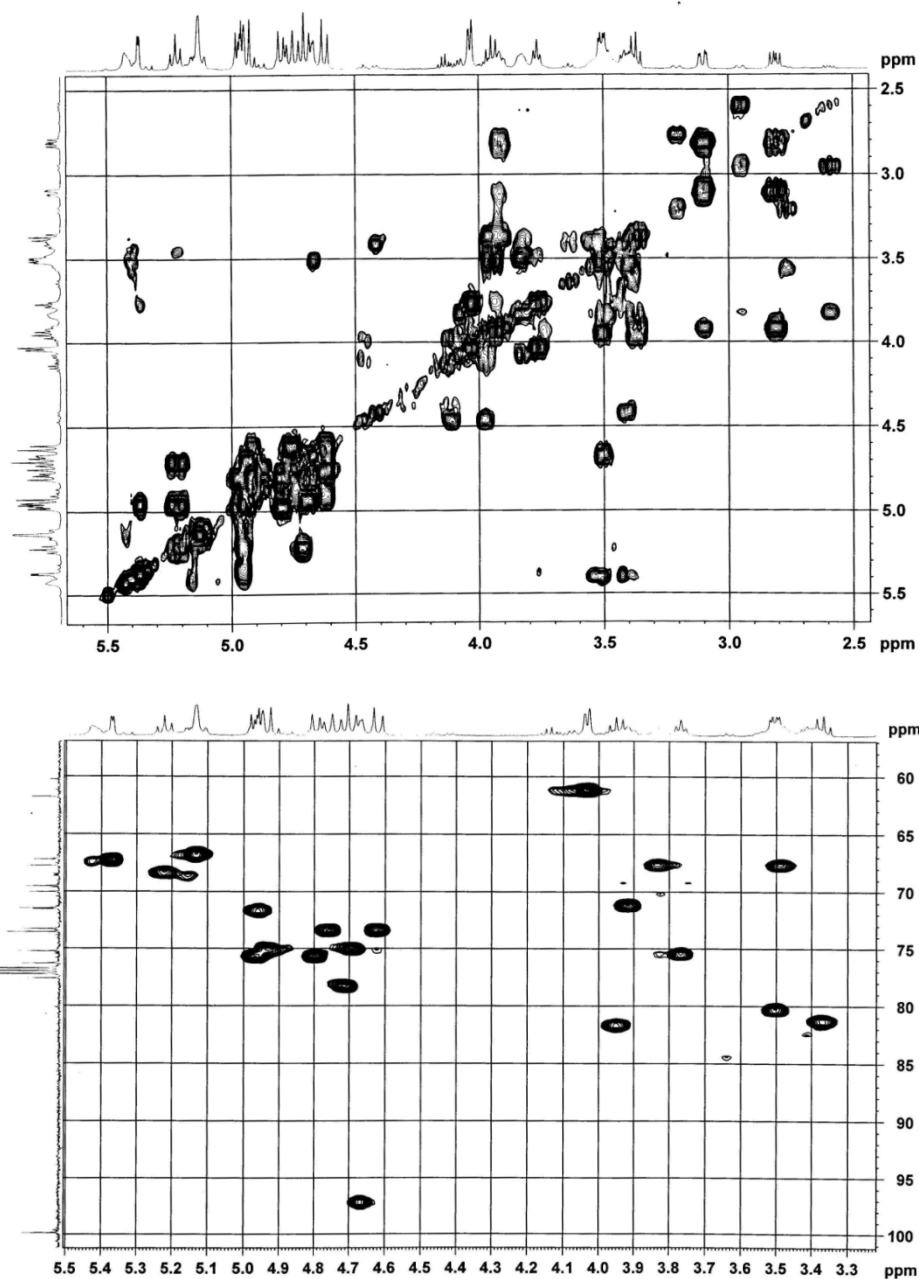
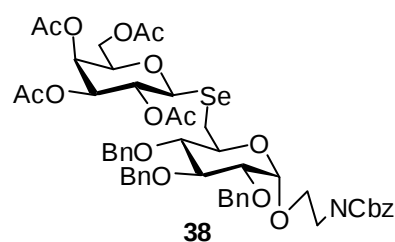
¹H, ¹³C and DEPT 135 NMR spectra of allyl (2,3,4,6-tetra-O-acetyl-1-seleno-β-D-galactopyranosyl)-(1→4)-2,3-di-O-benzoyl-6-O-benzyl-β-D-glucopyranoside (**37**) (500 MHz, CDCl₃).



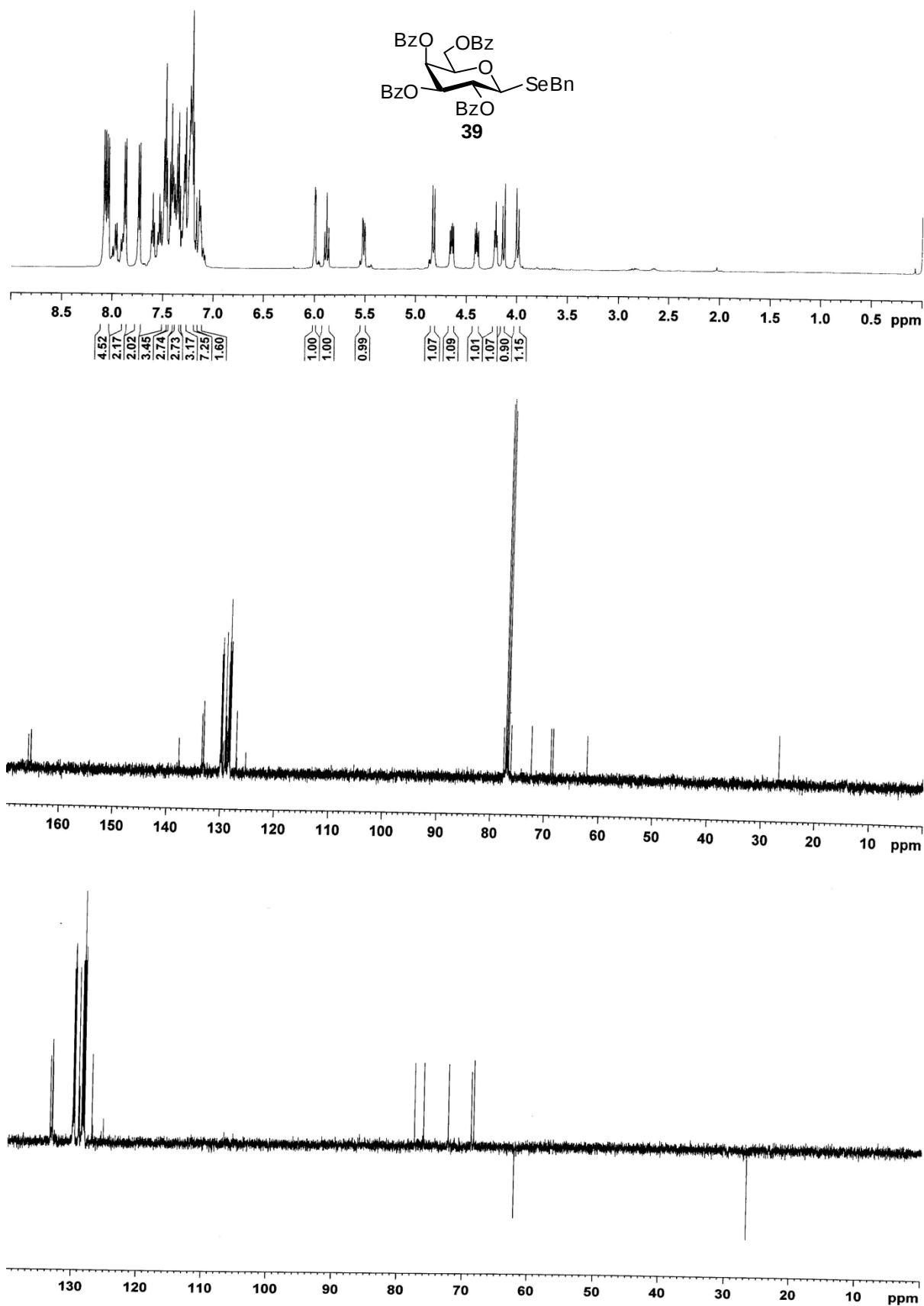
2D COSY and HSQC NMR spectra (expanded region) of allyl (2,3,4,6-tetra-O-acetyl-1-seleno- β -D-galactopyranosyl)-(1 $\rightarrow$ 4)-2,3-di-O-benzoyl-6-O-benzyl- β -D-glucopyranoside (**37**) (500 MHz, CDCl_3).



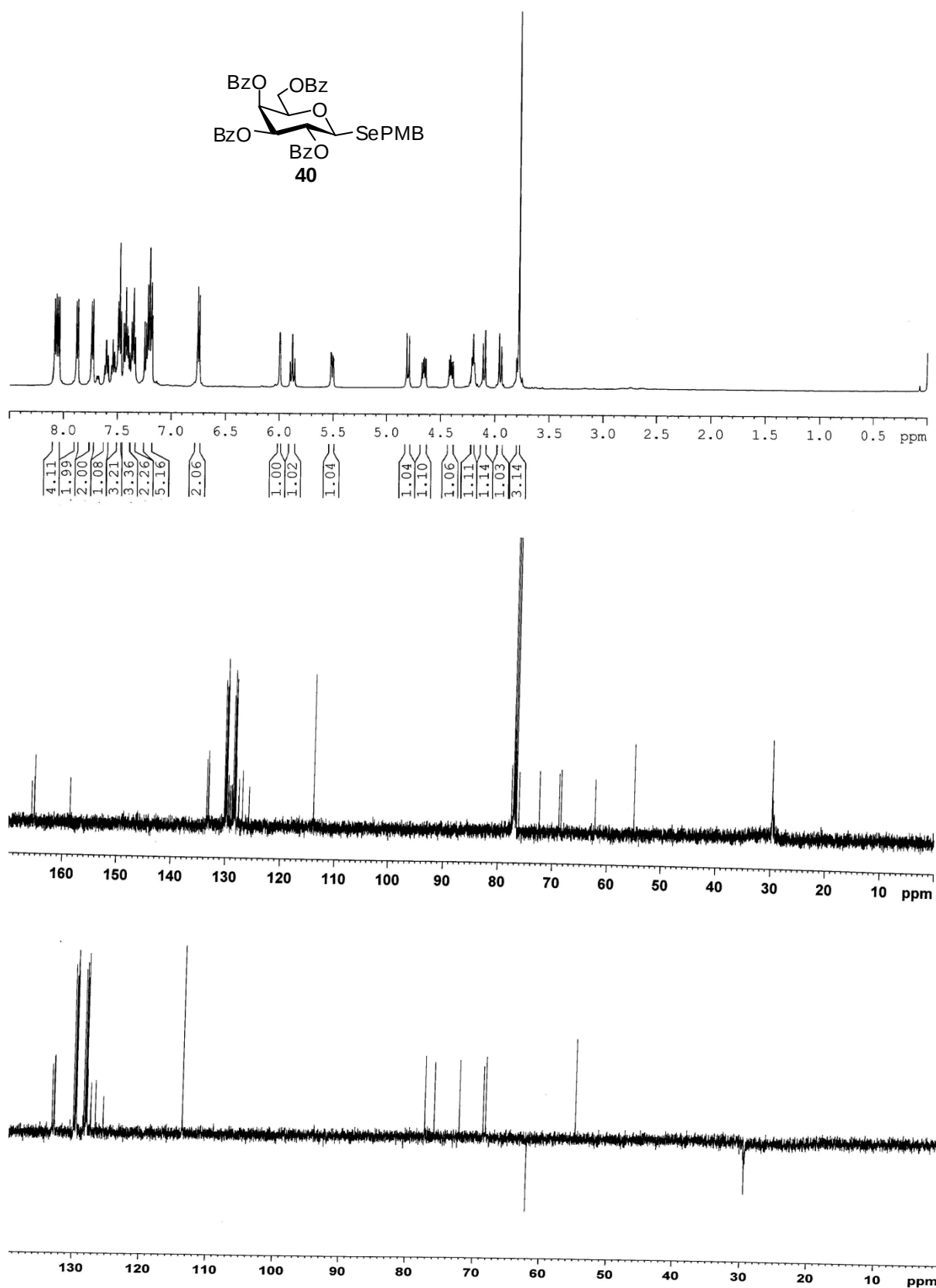
¹H, ¹³C and DEPT 135 NMR spectra of 2-benzoyloxycarbonylaminoethyl (2,3,4,6-tetra-O-acetyl-1-seleno-β-D-galactopyranosyl)-(1→6)-2,3,6-tri-O-benzyl-α-D-glucopyranoside (**38**) (500 MHz, CDCl₃).



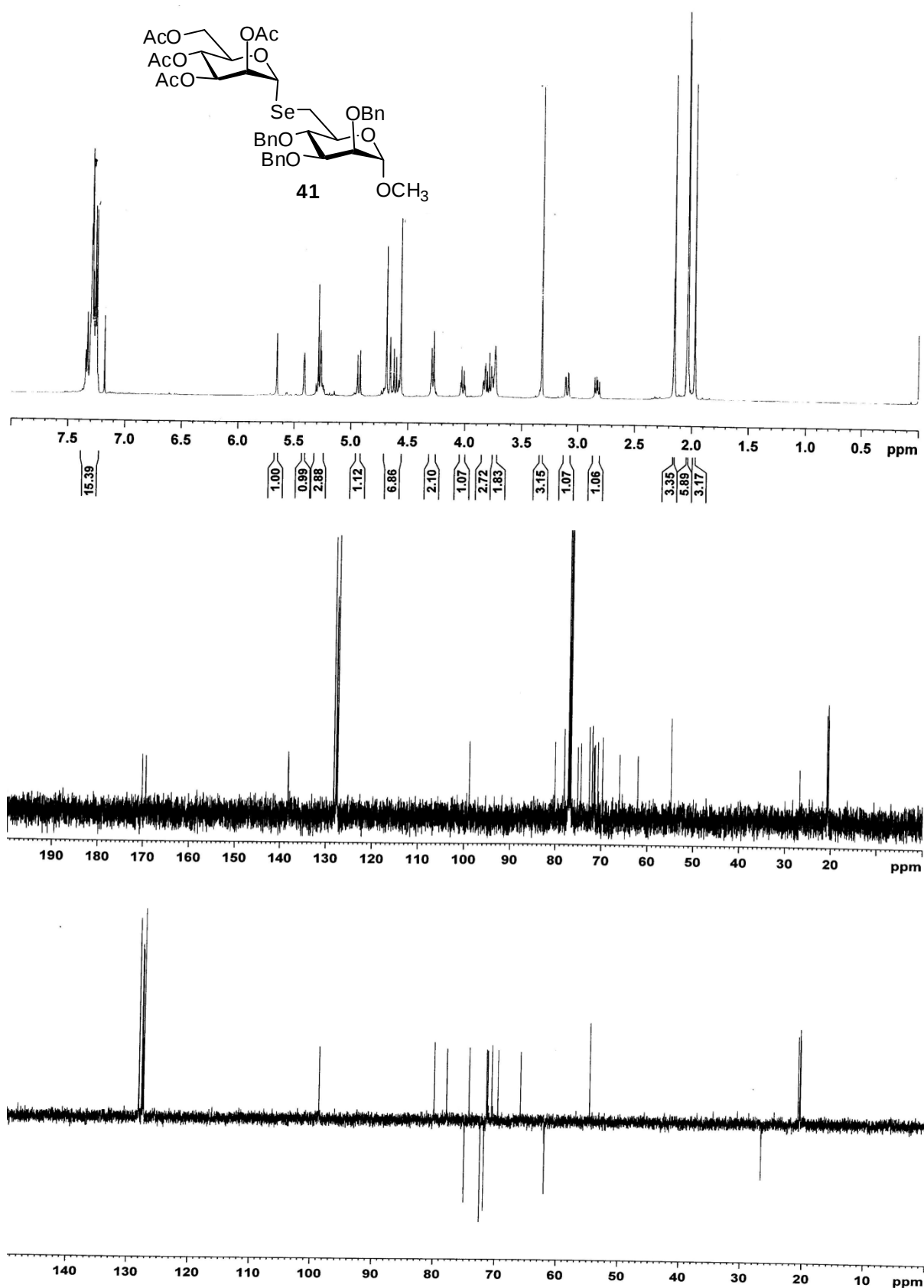
2D COSY and HSQC NMR spectra (expanded region) of 2-benzyloxycarbonylaminoethyl (2,3,4,6-tetra-O-acetyl-1-seleno- β -D-galactopyranosyl)-(1 $\rightarrow$ 6)-2,3,6-tri-O-benzyl- α -D-glucopyranoside (**38**) (500 MHz, CDCl_3).



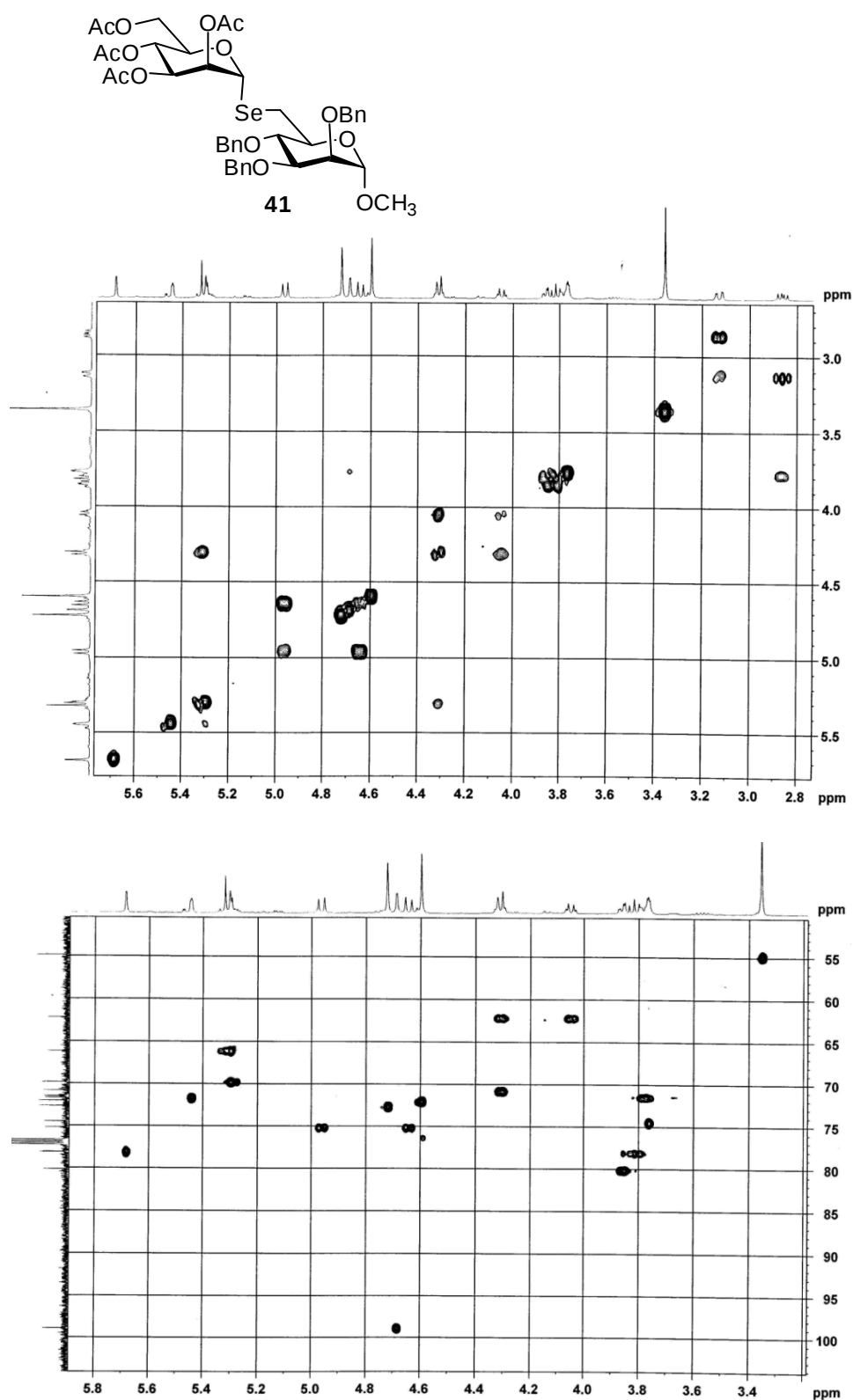
¹H, ¹³C and DEPT 135 NMR spectra of benzyl 2,3,4,6-tetra-O-benzoyl-1-seleno-β-D-galactopyranoside (**39**) (500 MHz, CDCl₃).



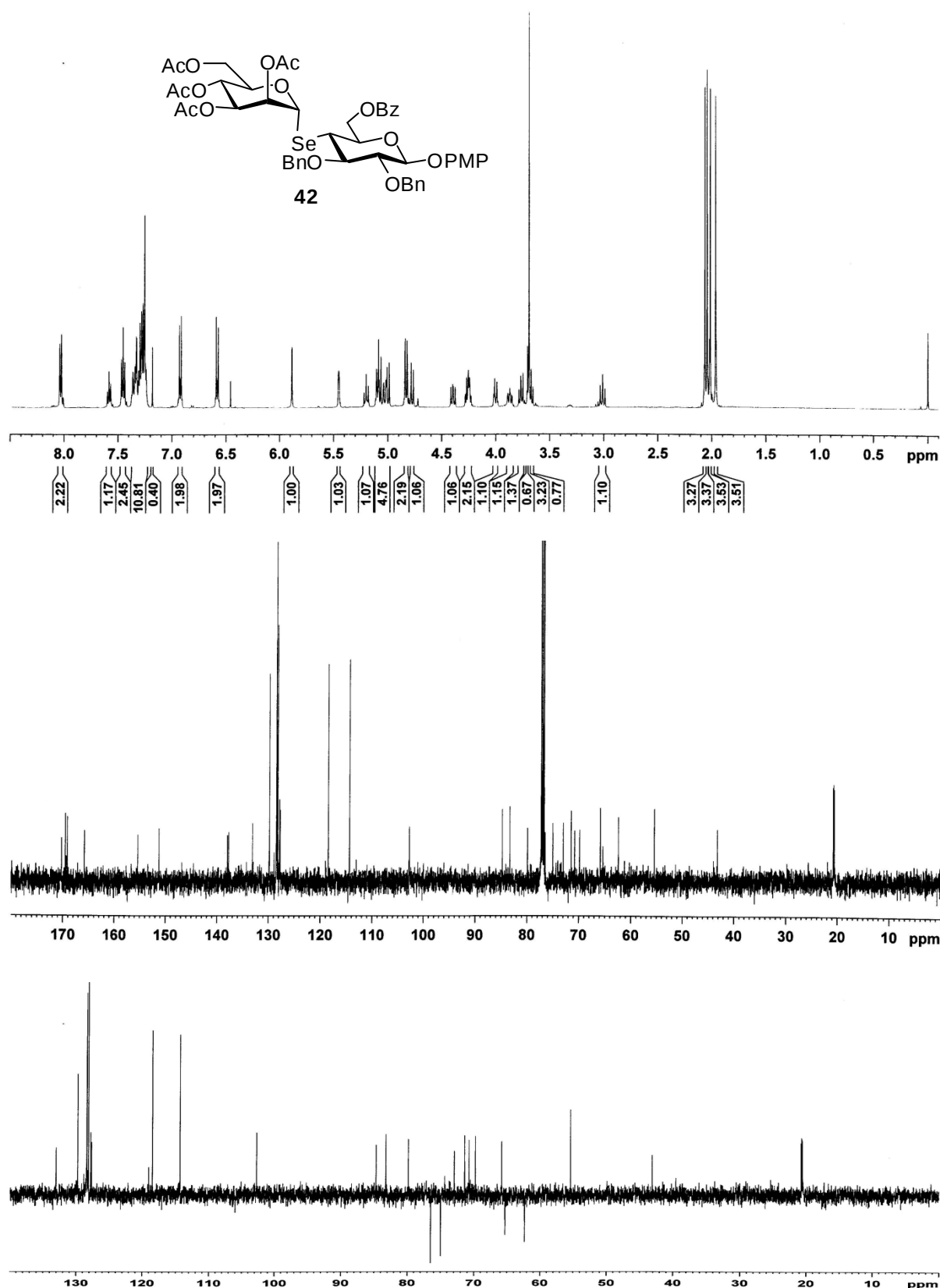
¹H, ¹³C and DEPT 135 NMR spectra of *p*-methoxybenzyl 2,3,4,6-tetra-*O*-benzoyl-1-seleno- β -D-galactopyranoside (**40**) (500 MHz, CDCl₃).



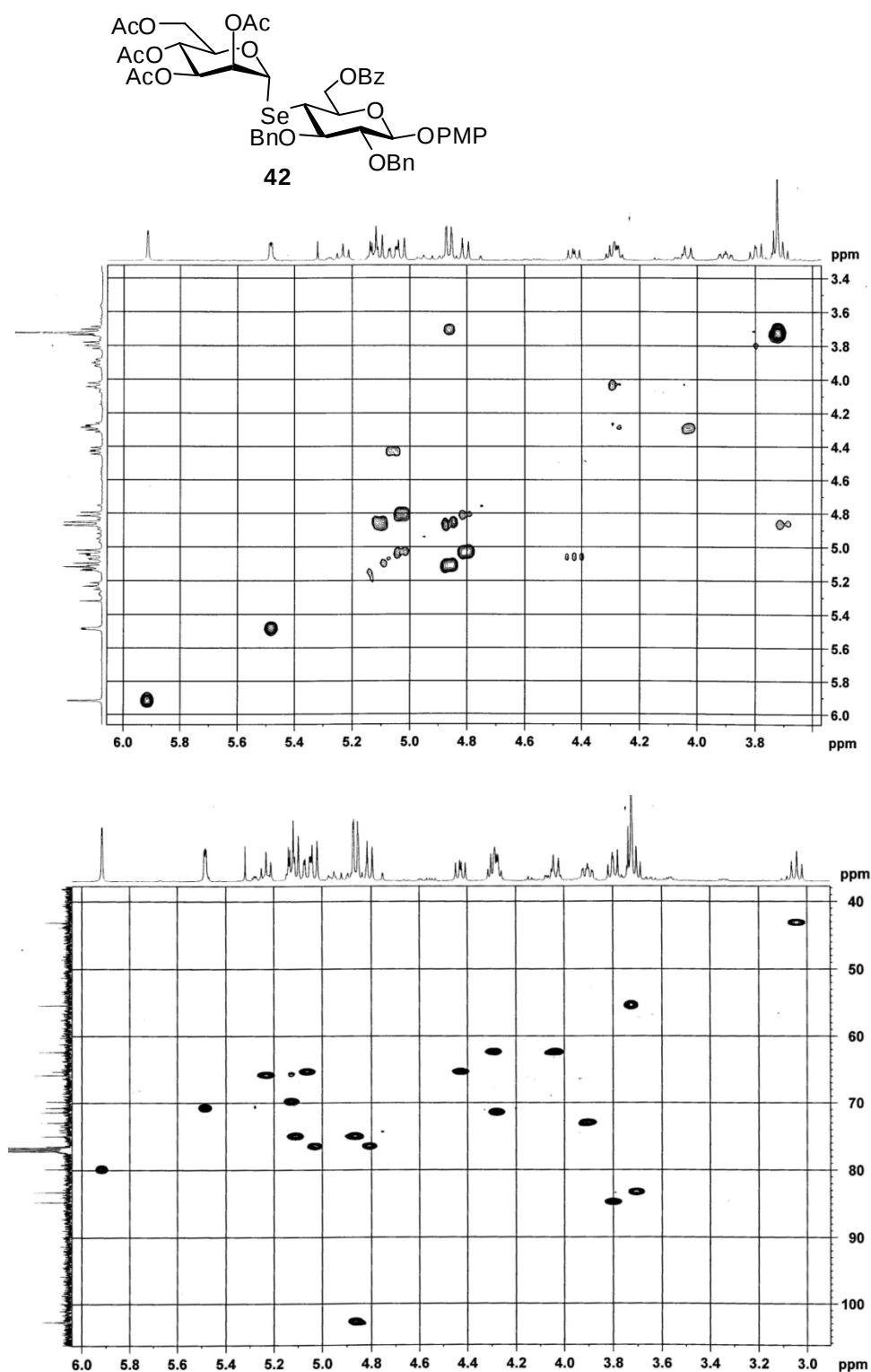
¹H, ¹³C and DEPT 135 NMR spectra of methyl (2,3,4,6-tetra-O-acetyl-1-seleno- α -D-mannopyranosyl)-(1 $\rightarrow$ 6)-2,3,6-tri-O-benzyl- α -D-mannopyranoside (**41**) (500 MHz, CDCl₃).



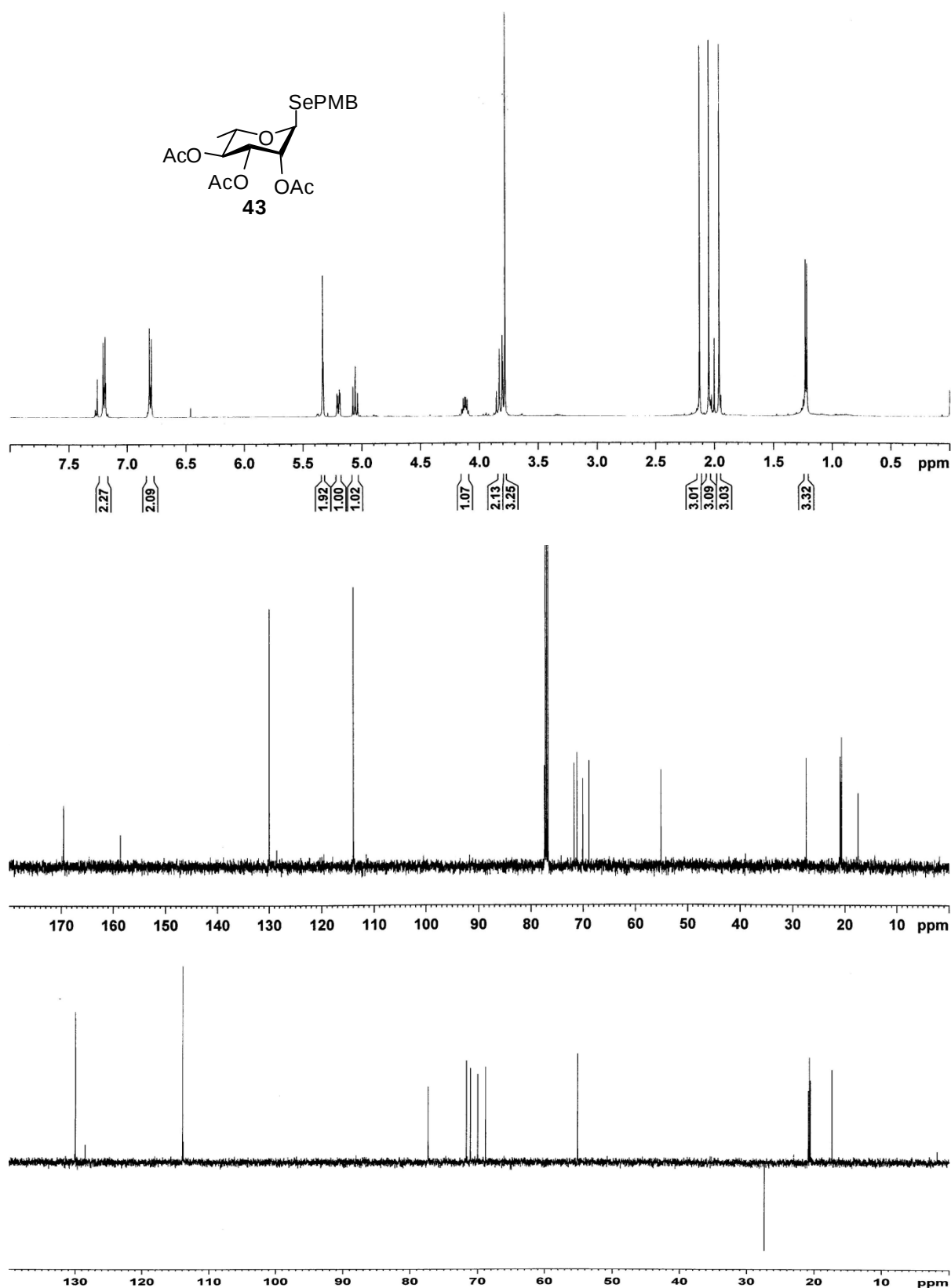
2D COSY and HSQC NMR spectra (expanded region) of methyl (2,3,4,6-tetra-O-acetyl-1-seleno- α -D-mannopyranosyl)-(1 $\rightarrow$ 6)-2,3,6-tri-O-benzyl- α -D-mannopyranoside (**41**) (500 MHz, CDCl₃).



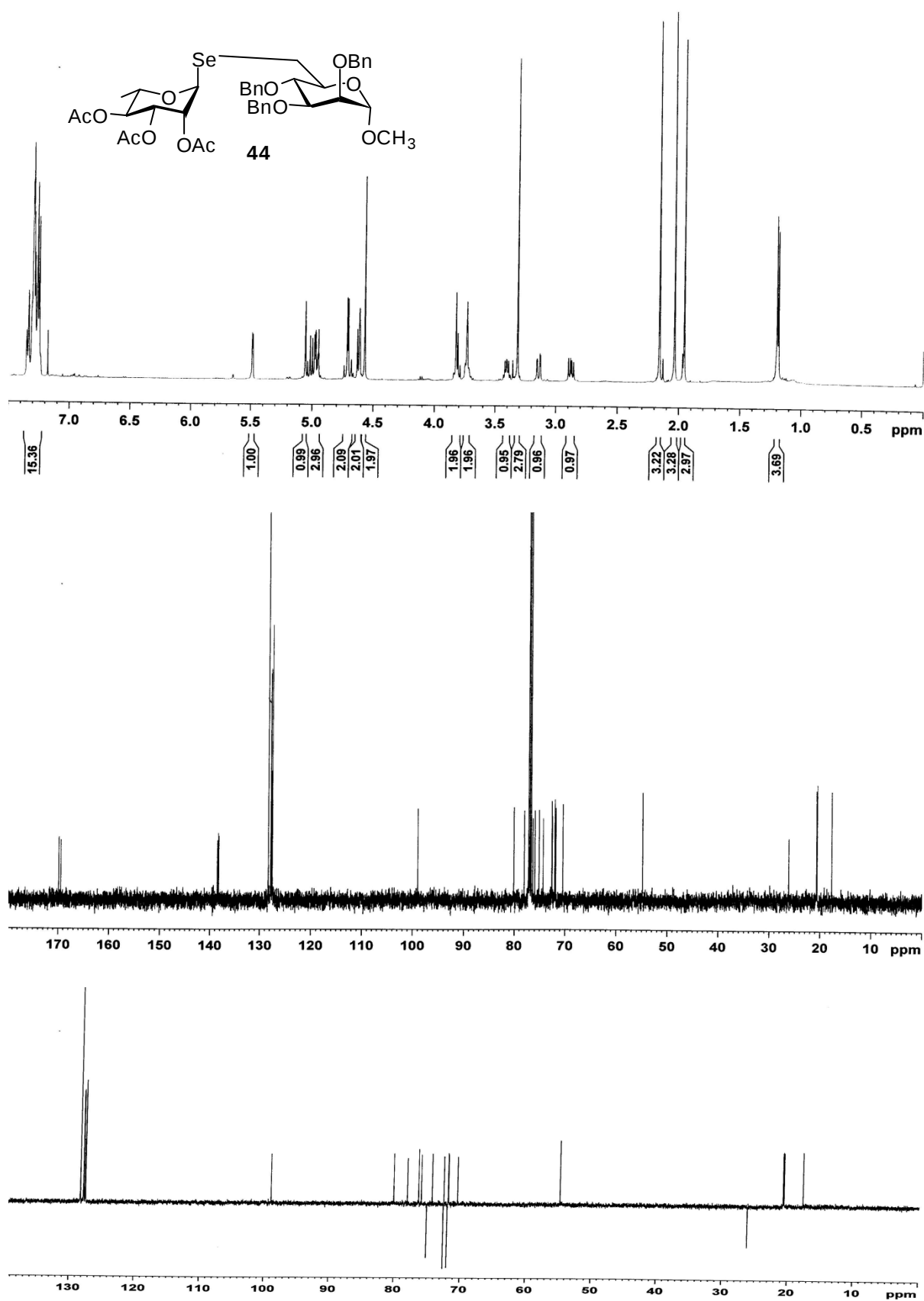
^1H , ^{13}C and DEPT 135 NMR spectra of p-methoxyphenyl (2,3,4,6-tetra-O-acetyl-1-seleno- α -D-mannopyranosyl)-(1 $\rightarrow$ 4)-6-O-benzoyl-2,3-di-O-benzyl- β -D-glucopyranoside (**42**) (500 MHz, CDCl_3).



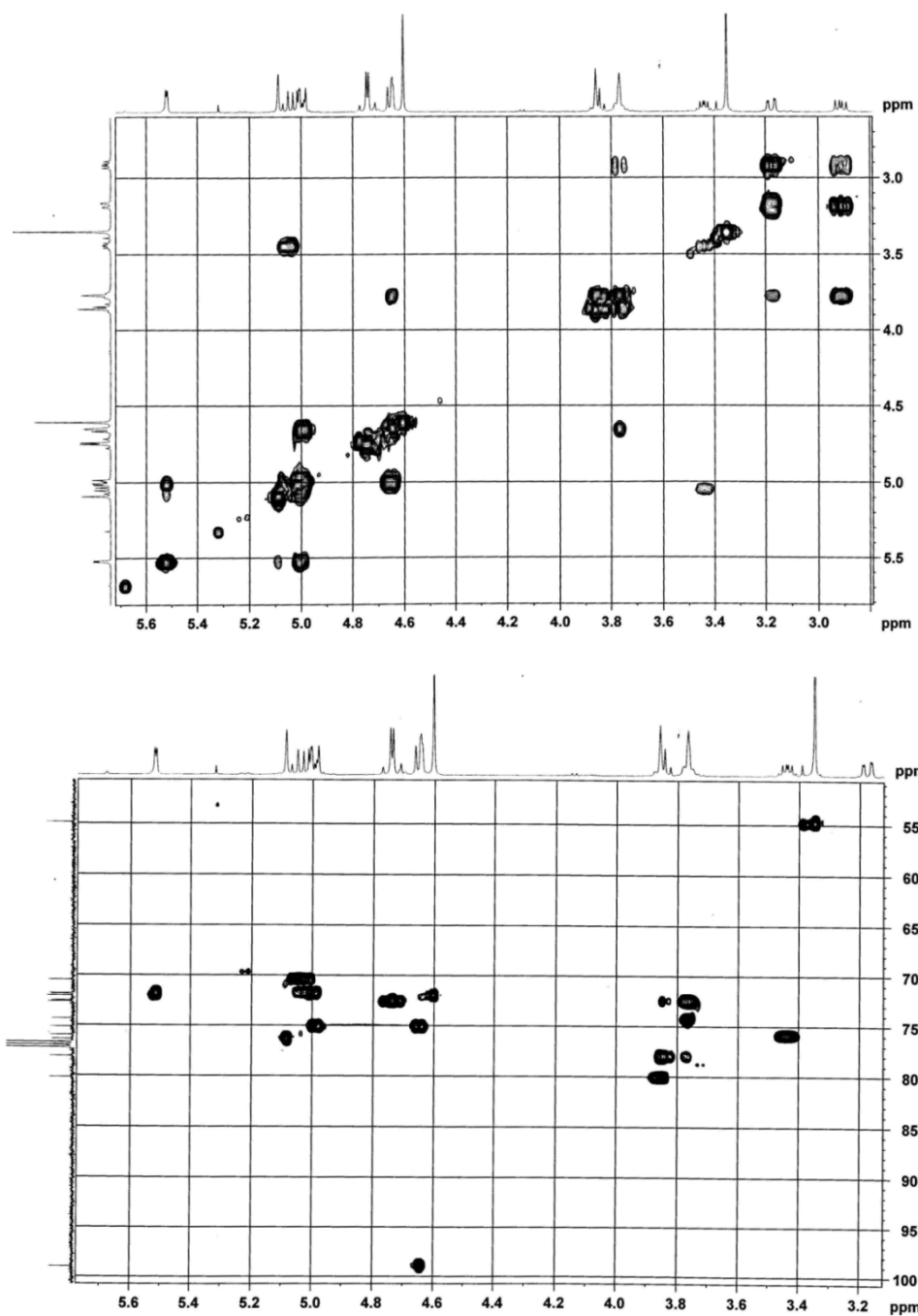
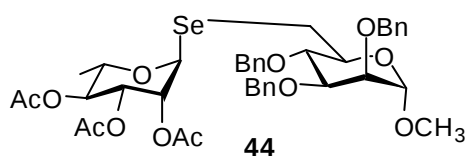
2D COSY and HSQC NMR spectra (expanded region) of p-methoxyphenyl (2,3,4,6-tetra-O-acetyl-1-seleno- α -D-mannopyranosyl)-(1 $\rightarrow$ 4)-6-O-benzoyl-2,3-di-O-benzyl- β -D-glucopyranoside (**42**) (500 MHz, CDCl₃).



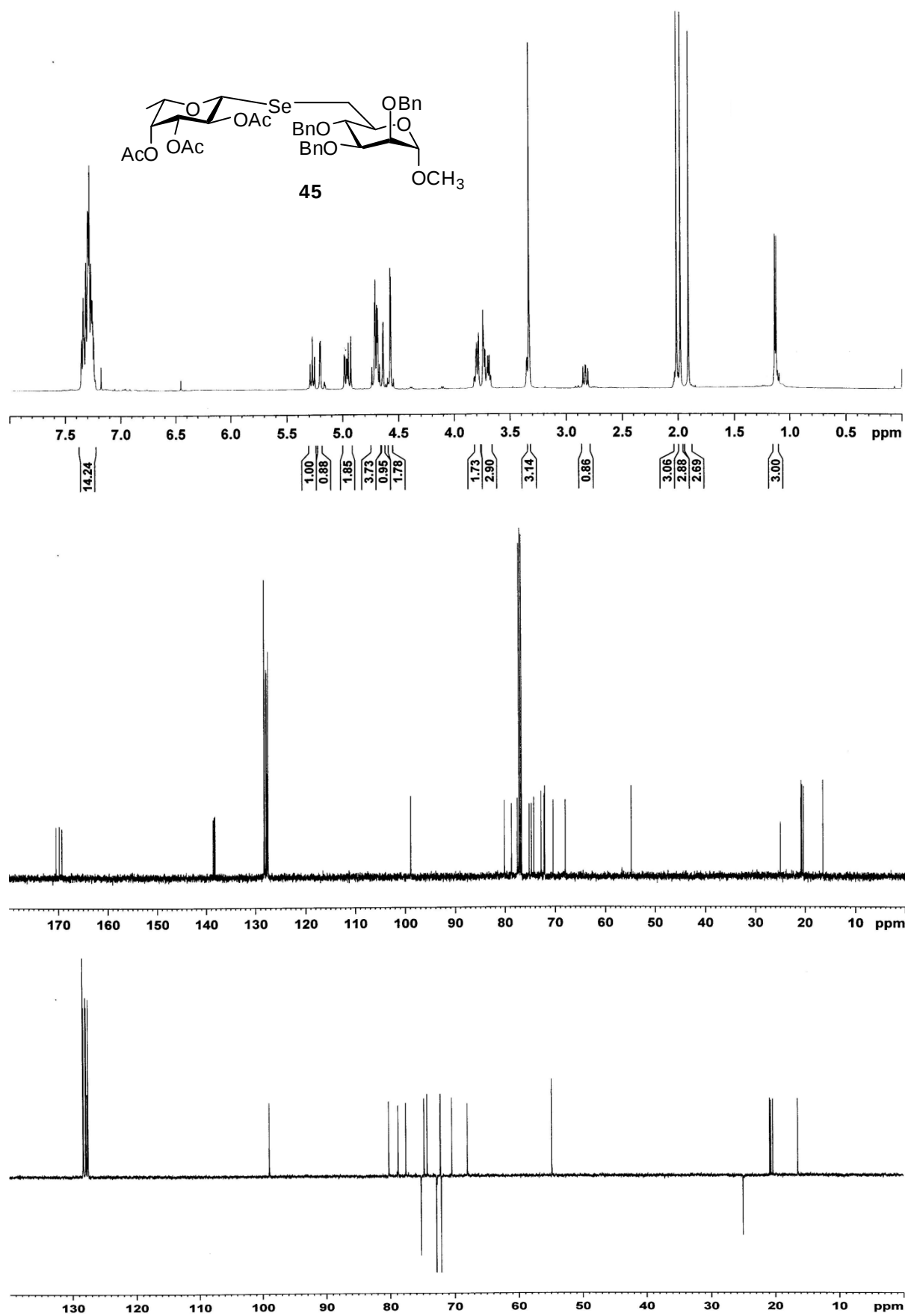
^1H , ^{13}C and DEPT 135 NMR spectra of *p*-methoxybenzyl 2,3,4-tri-*O*-acetyl-1-seleno- α -L-rhamnopyranoside (**43**) (500 MHz, CDCl_3).



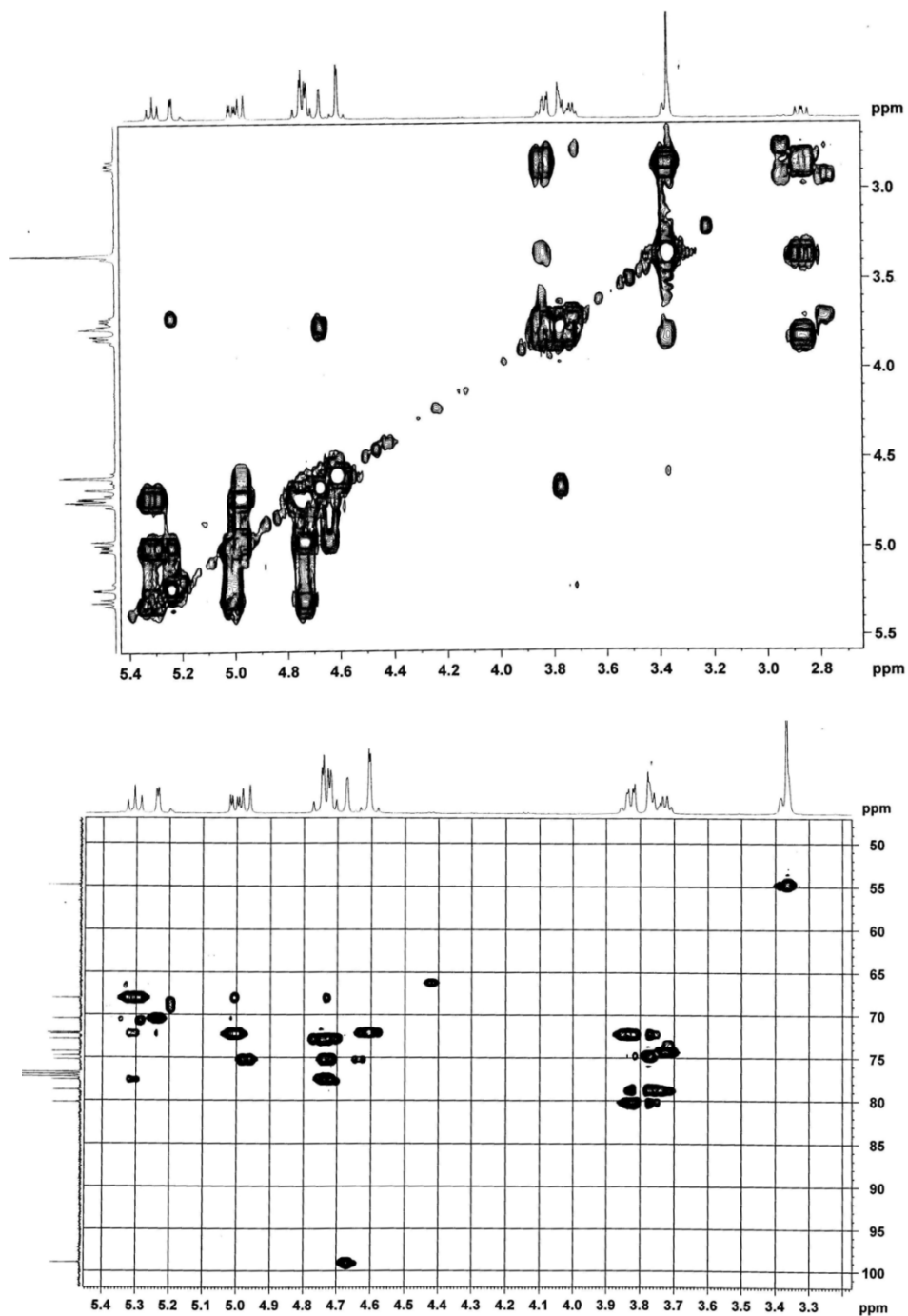
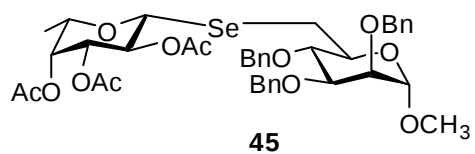
^1H , ^{13}C and DEPT 135 NMR spectra of methyl (2,3,4-tri-O-acetyl-1-seleno- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 6)-2,3,6-tri-O-benzyl- α -D-mannopyranoside (**44**) (500 MHz, CDCl_3).



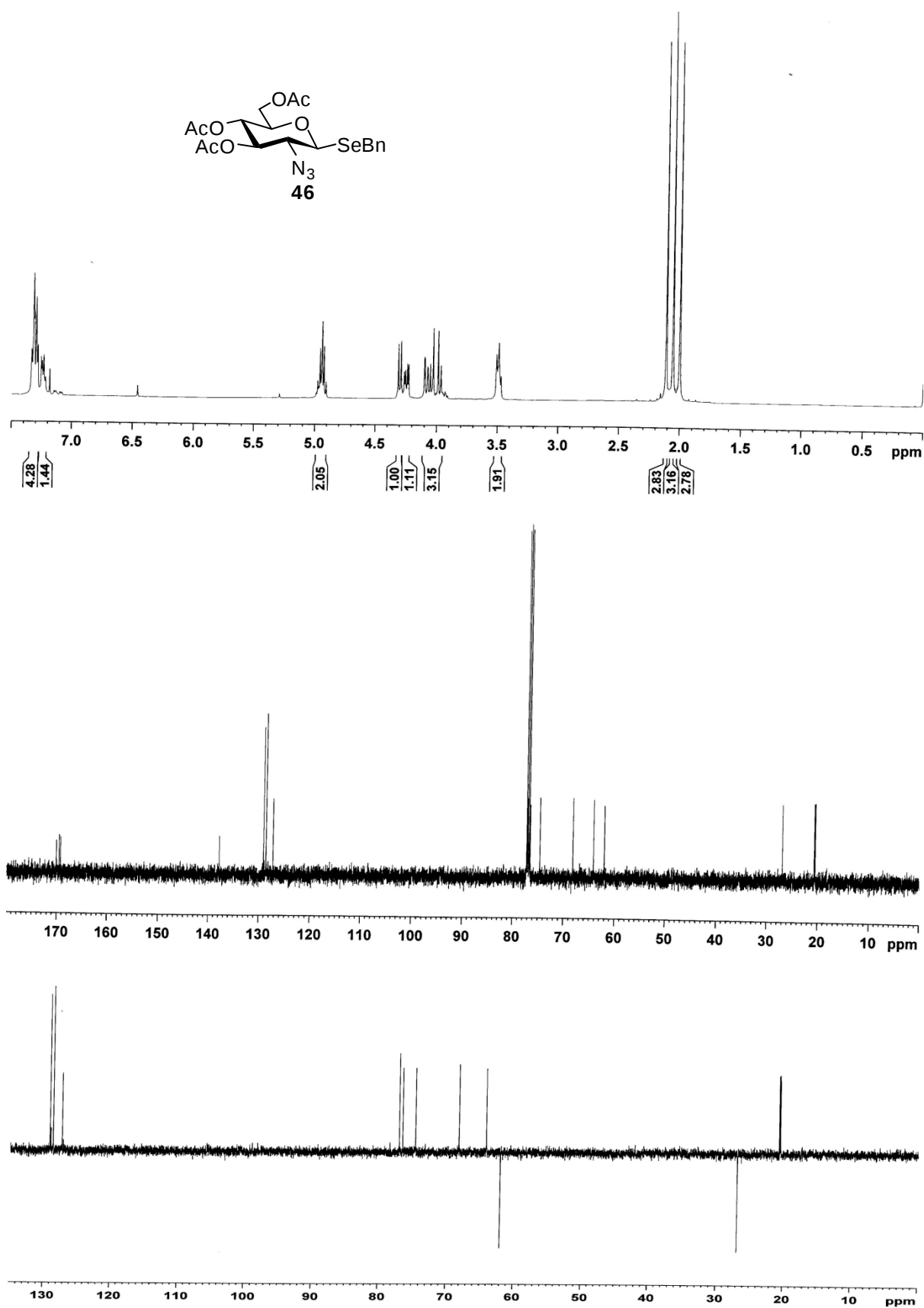
2D COSY and HSQC NMR spectra (expanded region) of methyl (2,3,4-tri-*O*-acetyl-1-seleno- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 6)-2,3,6-tri-*O*-benzyl- α -D-mannopyranoside (**44**) (500 MHz, CDCl₃).



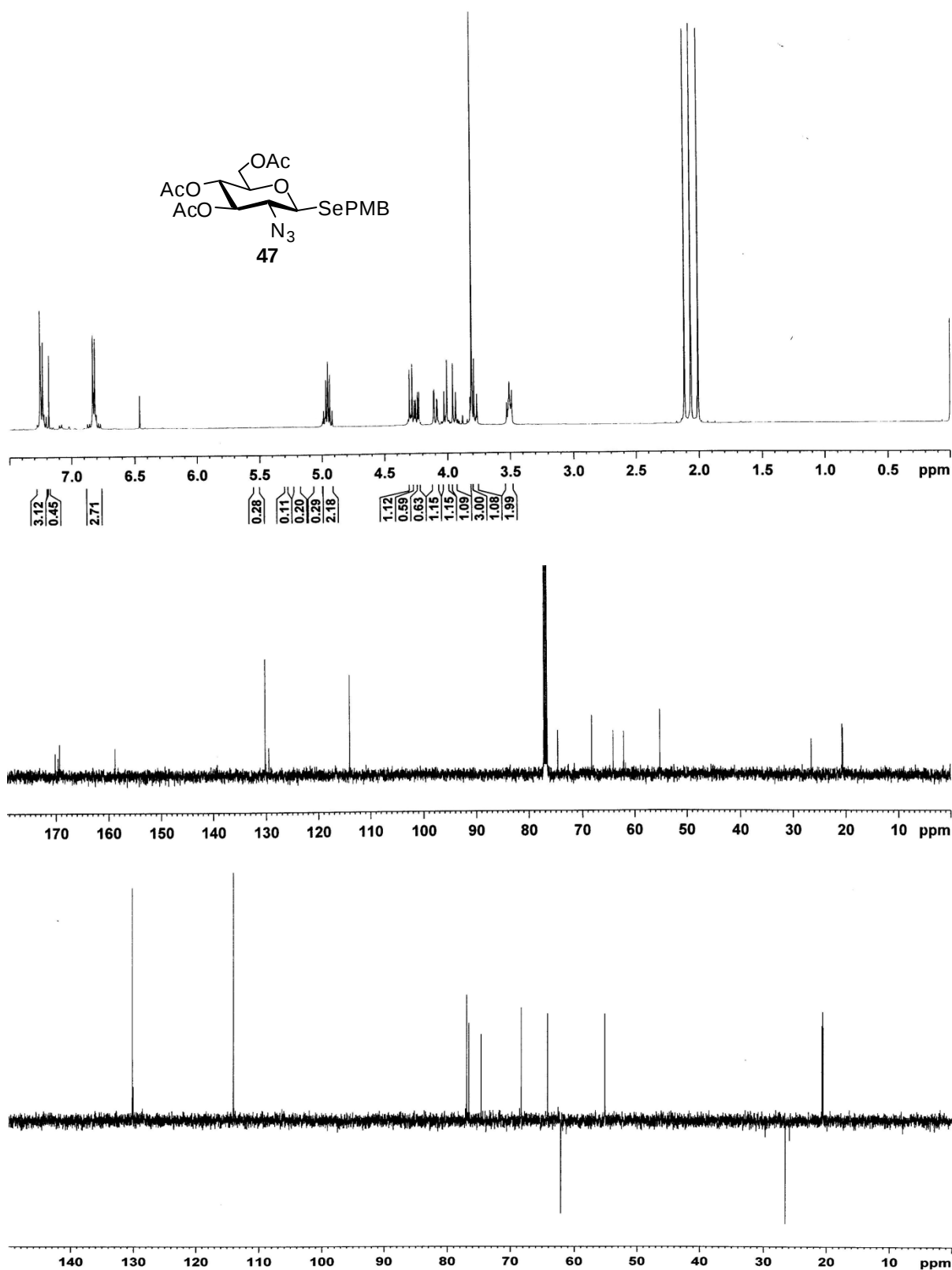
¹H, ¹³C and DEPT 135 NMR spectra of methyl (2,3,4-tri-O-acetyl-1-seleno-β-L-fucopyranosyl)-(1→6)-2,3,6-tri-O-benzyl-α-D-mannopyranoside (**45**) (500 MHz, CDCl₃).



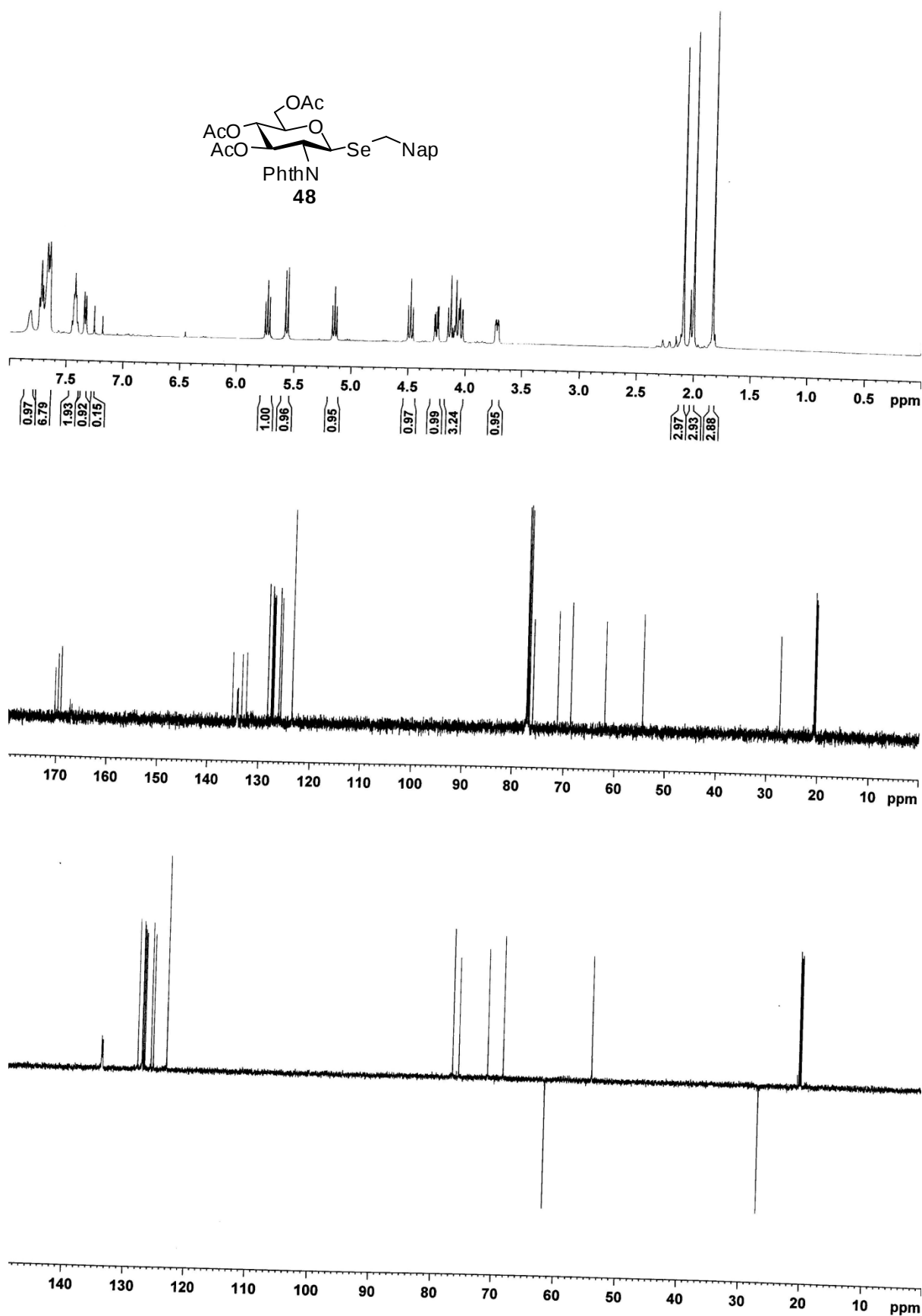
2D COSY and HSQC NMR spectra (expanded region) of methyl (2,3,4-tri-*O*-acetyl-1-seleno- β -L-fucopyranosyl)-(1 $\rightarrow$ 6)-2,3,6-tri-*O*-benzyl- α -D-mannopyranoside (**45**) (500 MHz, CDCl_3).



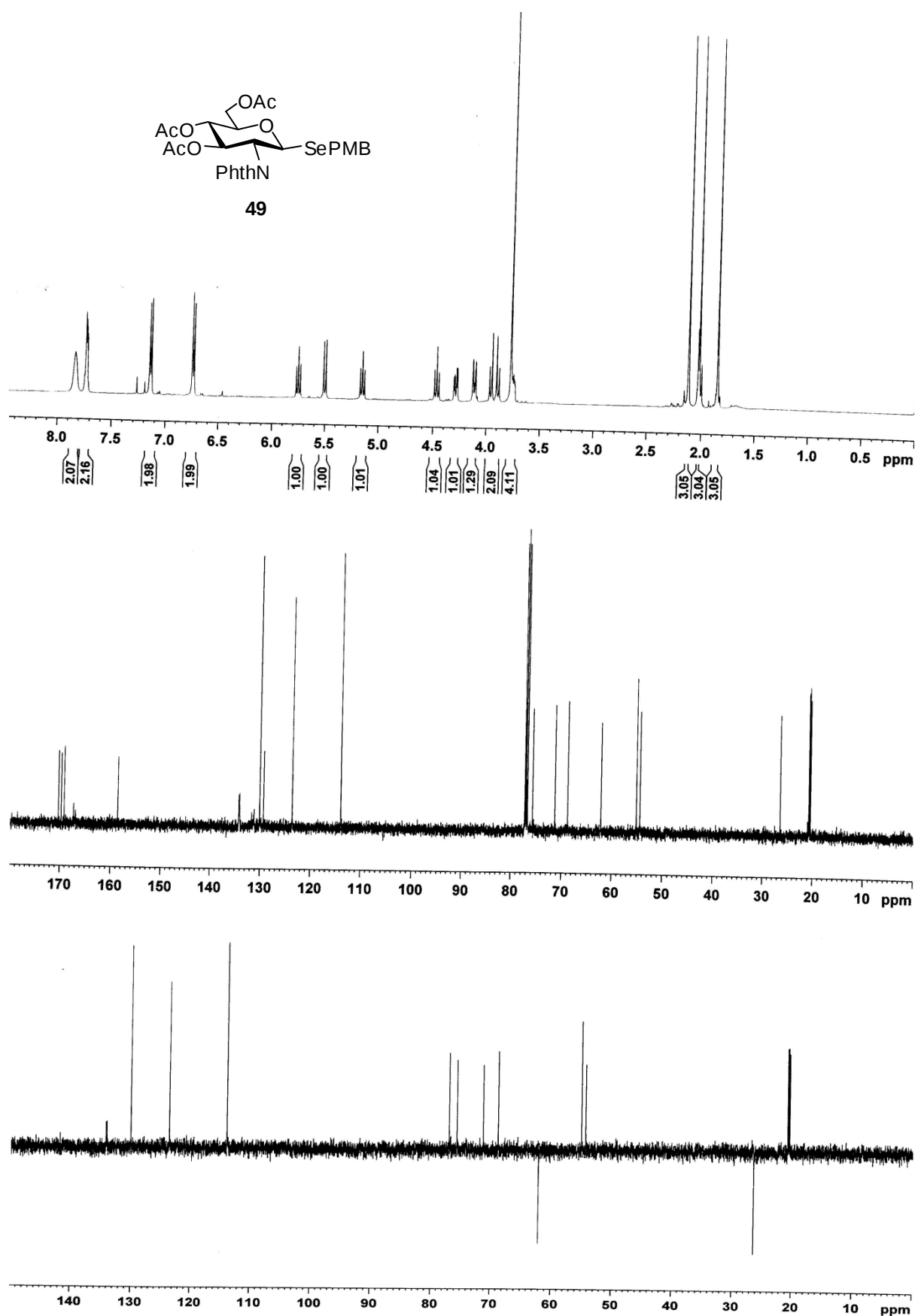
^1H , ^{13}C and DEPT 135 NMR spectra of benzyl 3,4,6-tri-*O*-acetyl-2-azido-2-deoxy-1-seleno- β -D-glucopyranoside (**46**) (500 MHz, CDCl_3).



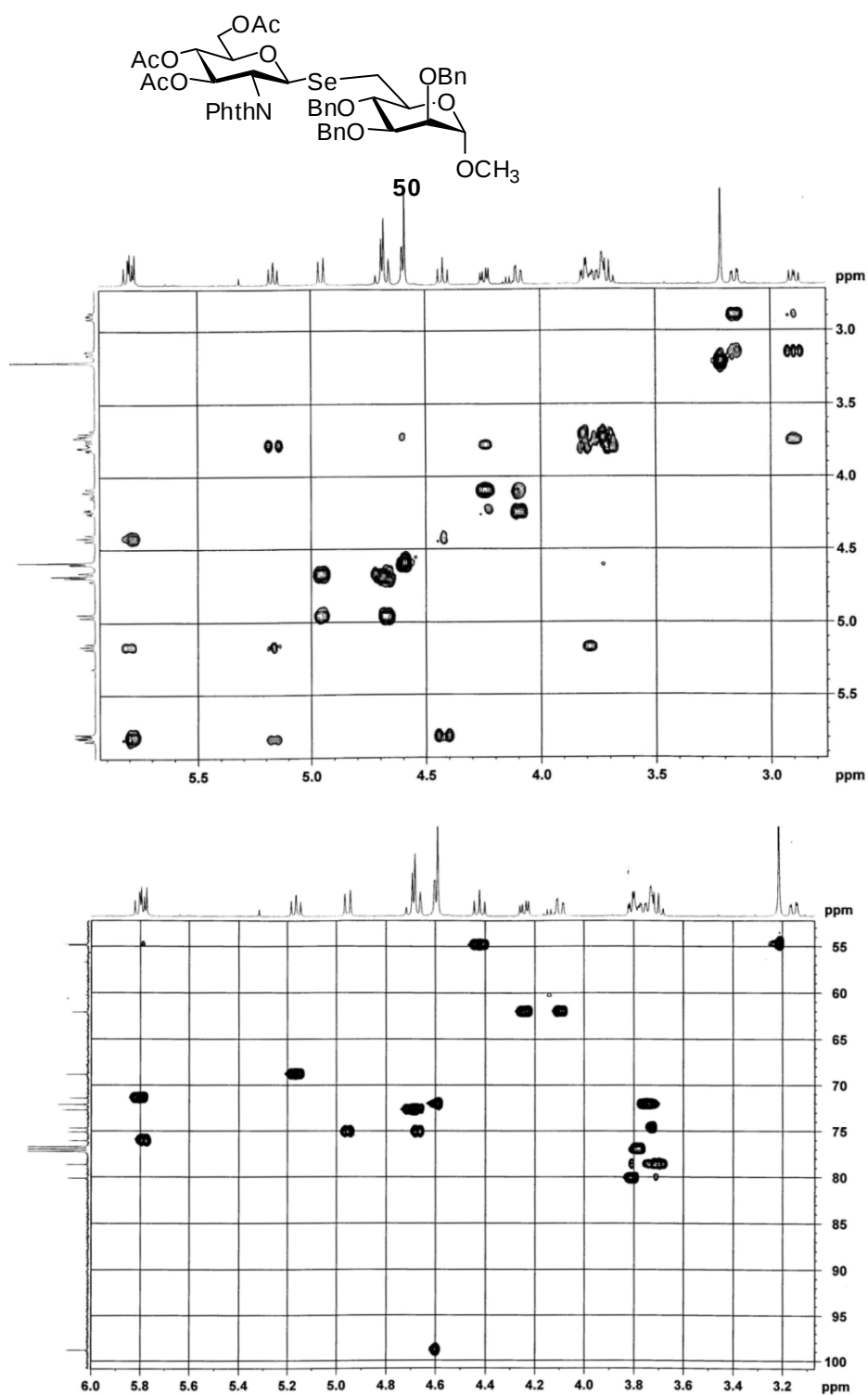
^1H , ^{13}C and DEPT 135 NMR spectra of *p*-methoxybenzyl 3,4,6-tri-*O*-acetyl-2-azido-2-deoxy-1-seleno- β -D-glucopyranoside (**47**) (500 MHz, CDCl_3).



¹H, ¹³C and DEPT 135 NMR spectra of 2-naphthylmethyl 3,4,6-tri-O-acetyl-2-deoxy-2-phthalimido-1-seleno-β-D-glucopyranoside (**48**) (500 MHz, CDCl₃).



¹H, ¹³C and DEPT 135 NMR spectra *p*-methoxybenzyl 3,4,6-tri-O-acetyl-2-deoxy-2-phthalimido-1-seleno-β-D-glucopyranoside (**49**) (500 MHz, CDCl₃).



2D COSY and HSQC NMR spectra (expanded region) of methyl (3,4,6-tri-O-acetyl-2-deoxy-2-phthalimido-1-seleno-β-D-glucopyranosyl)-(1→6)-2,3,6-tri-O-benzyl-α-D-mannopyranoside (**50**) (500 MHz, CDCl₃).