Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Expedient synthesis of a pentasaccharide related to the *O*-specific polysaccharide of *Escherichia coli* O117:K98:H4 strain

Ishani Bhaumik and Anup Kumar Misra*

Bose Institute, Division of Molecular Medicine, P-1/12, C.I.T. Scheme VII-M, Kolkata-700054, India; Fax: 91-33-2355 3886; Tel: 91 33-2569 3240; E-mail: akmisra69@gmail.com

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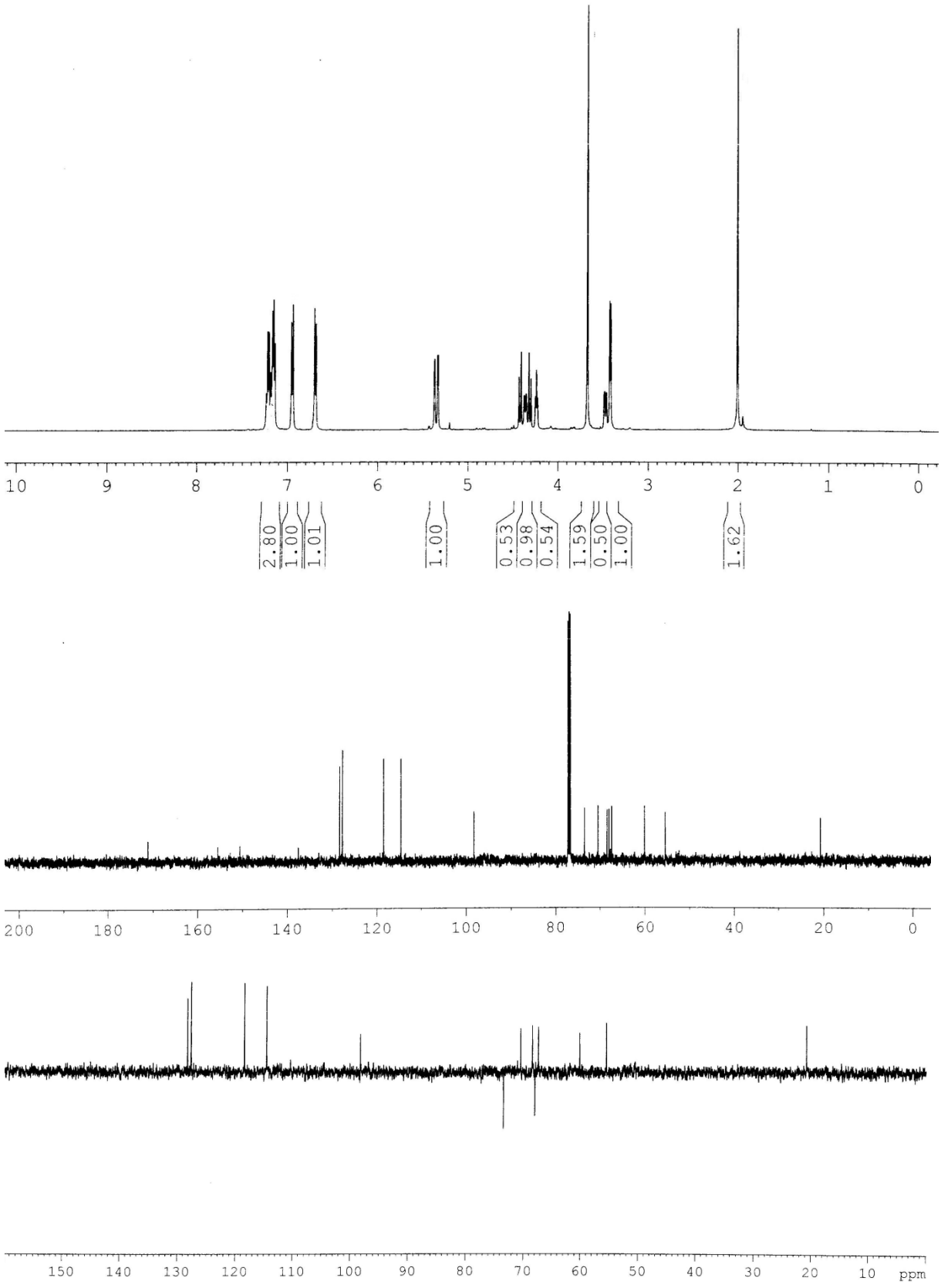
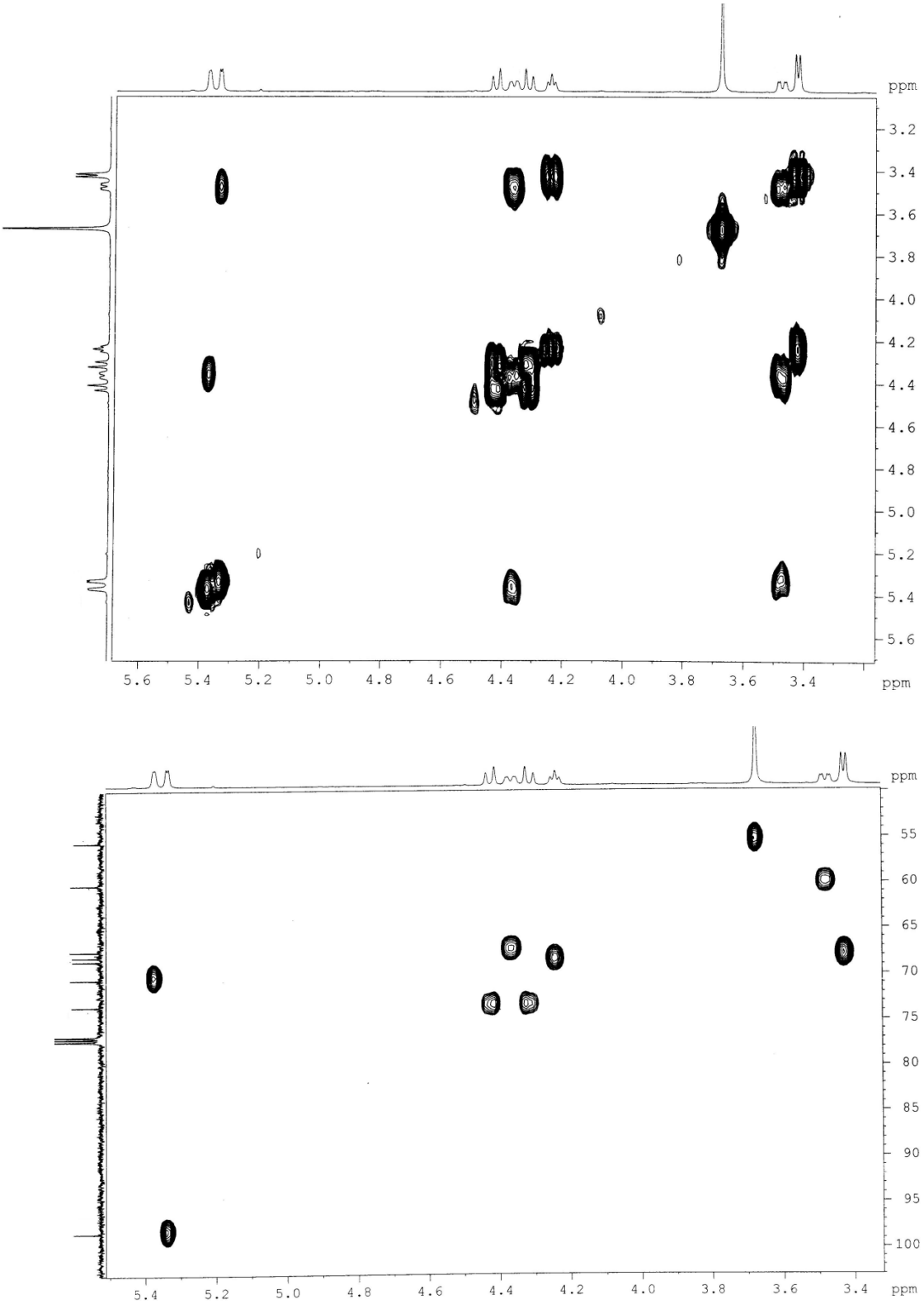
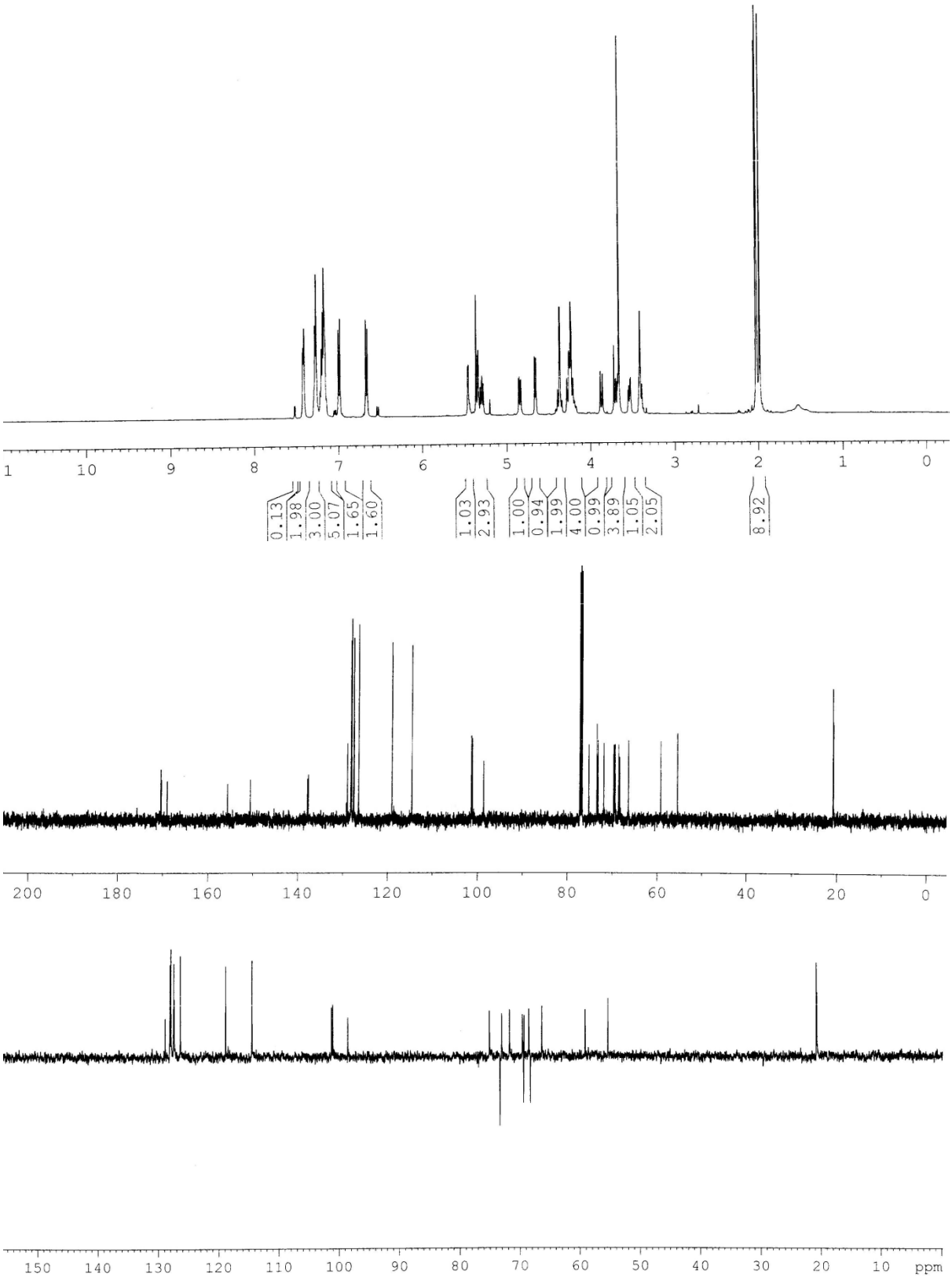


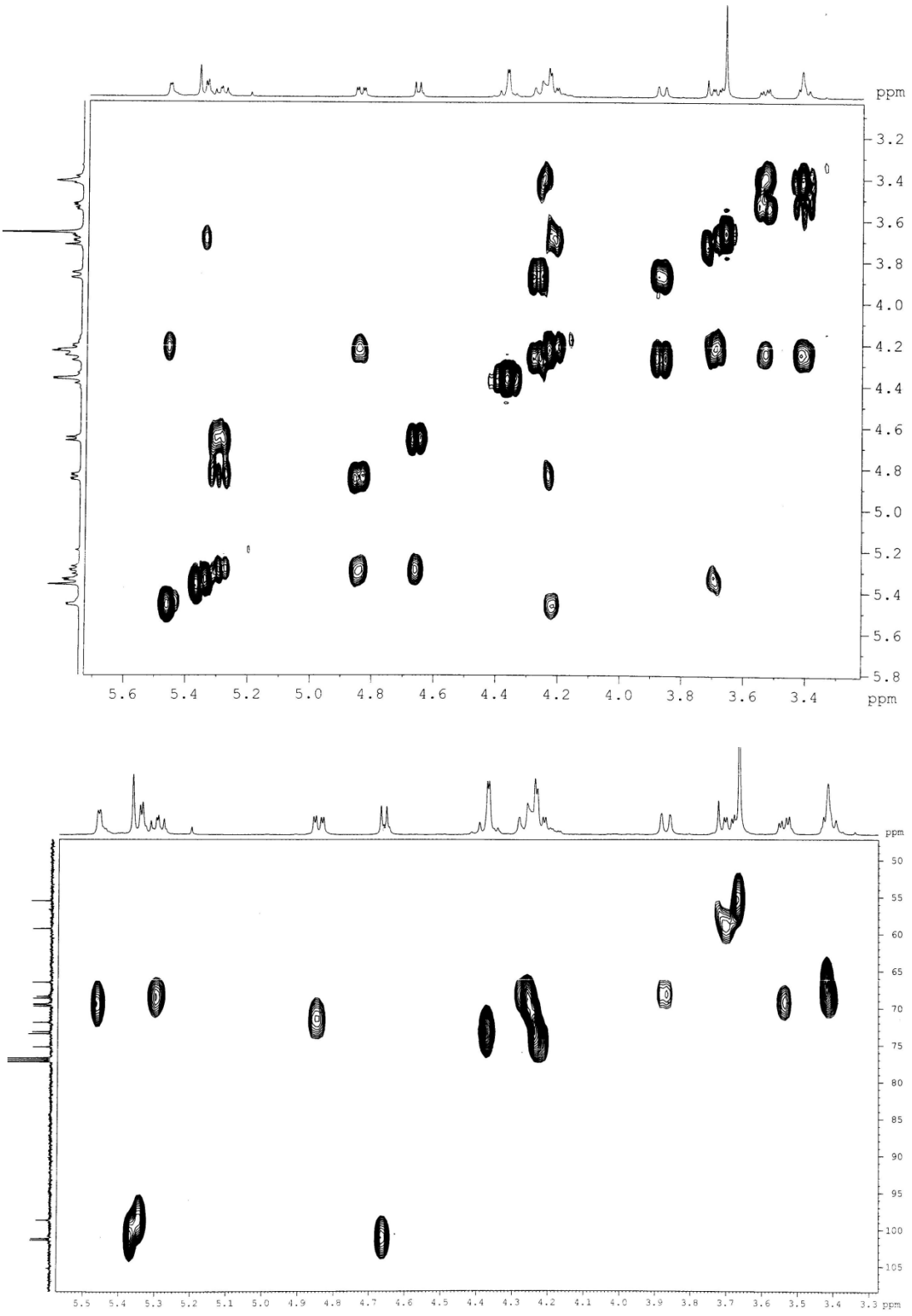
^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl 4-*O*-acetyl-2-azido-6-*O*-benzyl-2-deoxy-α-D-galactopyranoside (**2**) ($CDCl_3$).



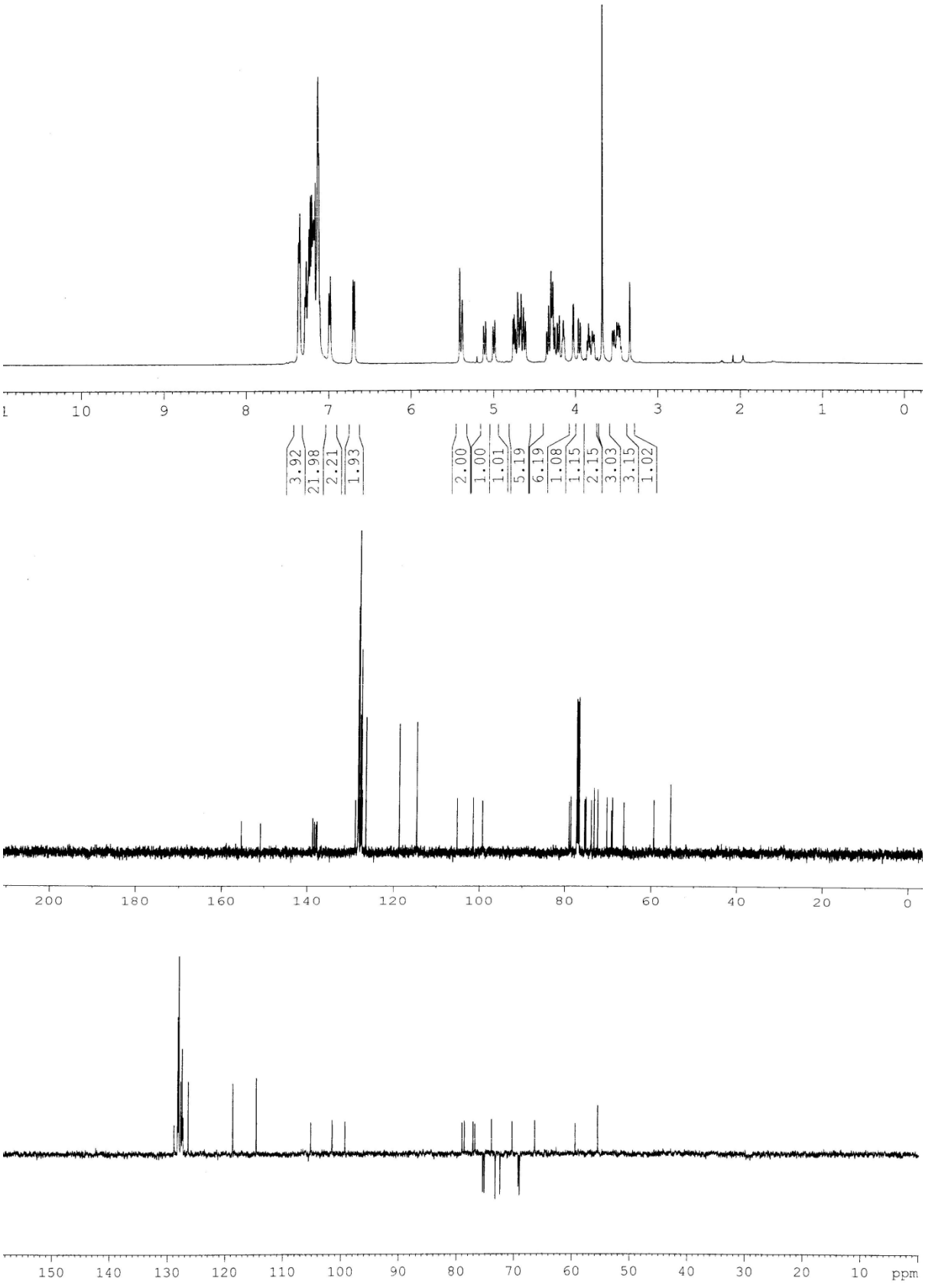
2D COSY and HSQC spectra of *p*-methoxyphenyl 4-*O*-acetyl-2-azido-6-*O*-benzyl-2-deoxy-α-D-galactopyranoside (**2**) ($CDCl_3$) (selected regions).



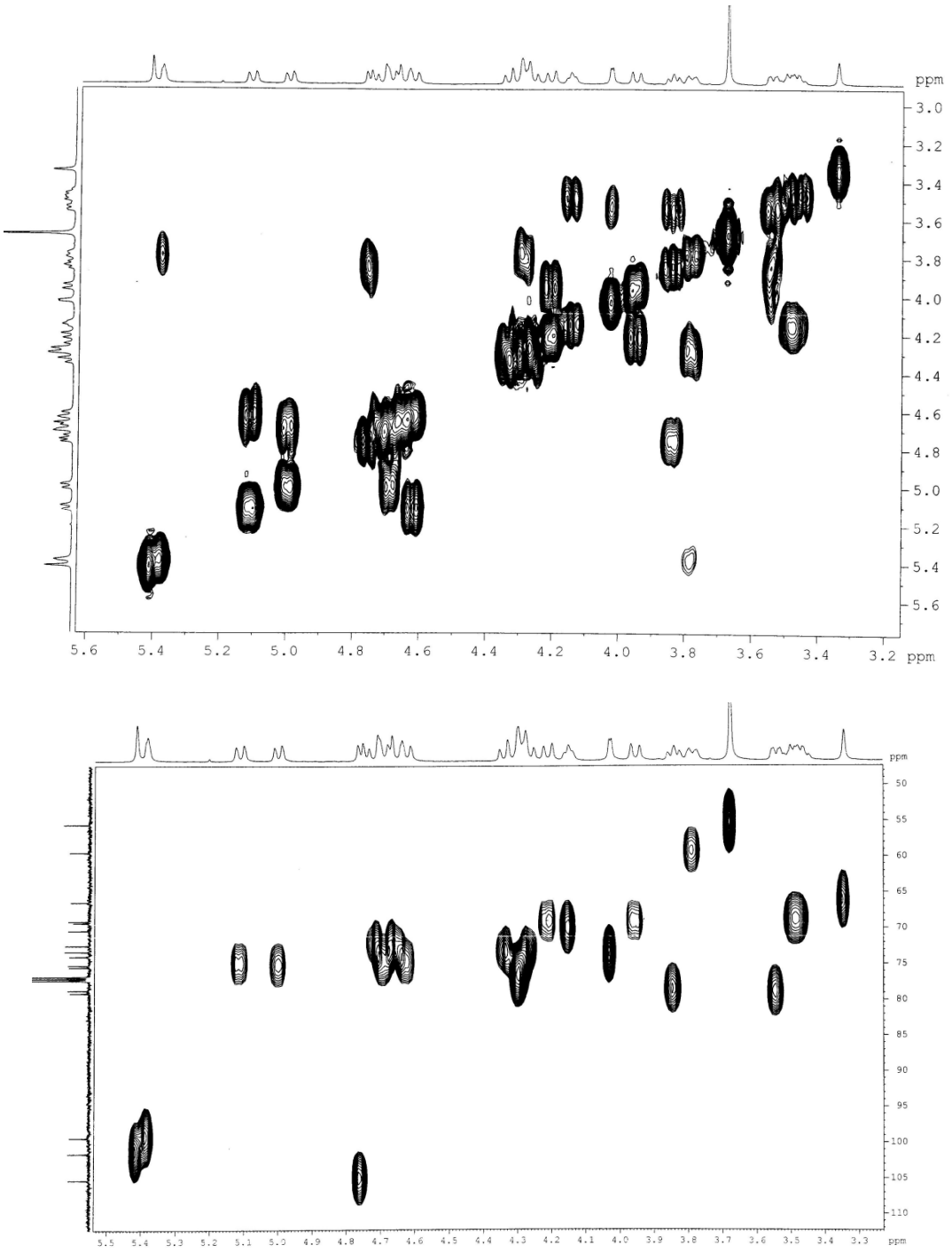
^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3-di-*O*-acetyl-4,6-*O*-benzylidene-β-D-galactopyranosyl)-(1→3)-4-*O*-acetyl-2-azido-6-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(8)** ($CDCl_3$).



2D COSY and HSQC spectra of *p*-methoxyphenyl (2,3-di-*O*-acetyl-4,6-*O*-benzylidene-β-D-galactopyranosyl)-(1→3)-4-*O*-acetyl-2-azido-6-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(8)** ($CDCl_3$) (selected regions).



^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3-di-*O*-benzyl-4,6-*O*-benzylidene-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(9)** ($CDCl_3$).



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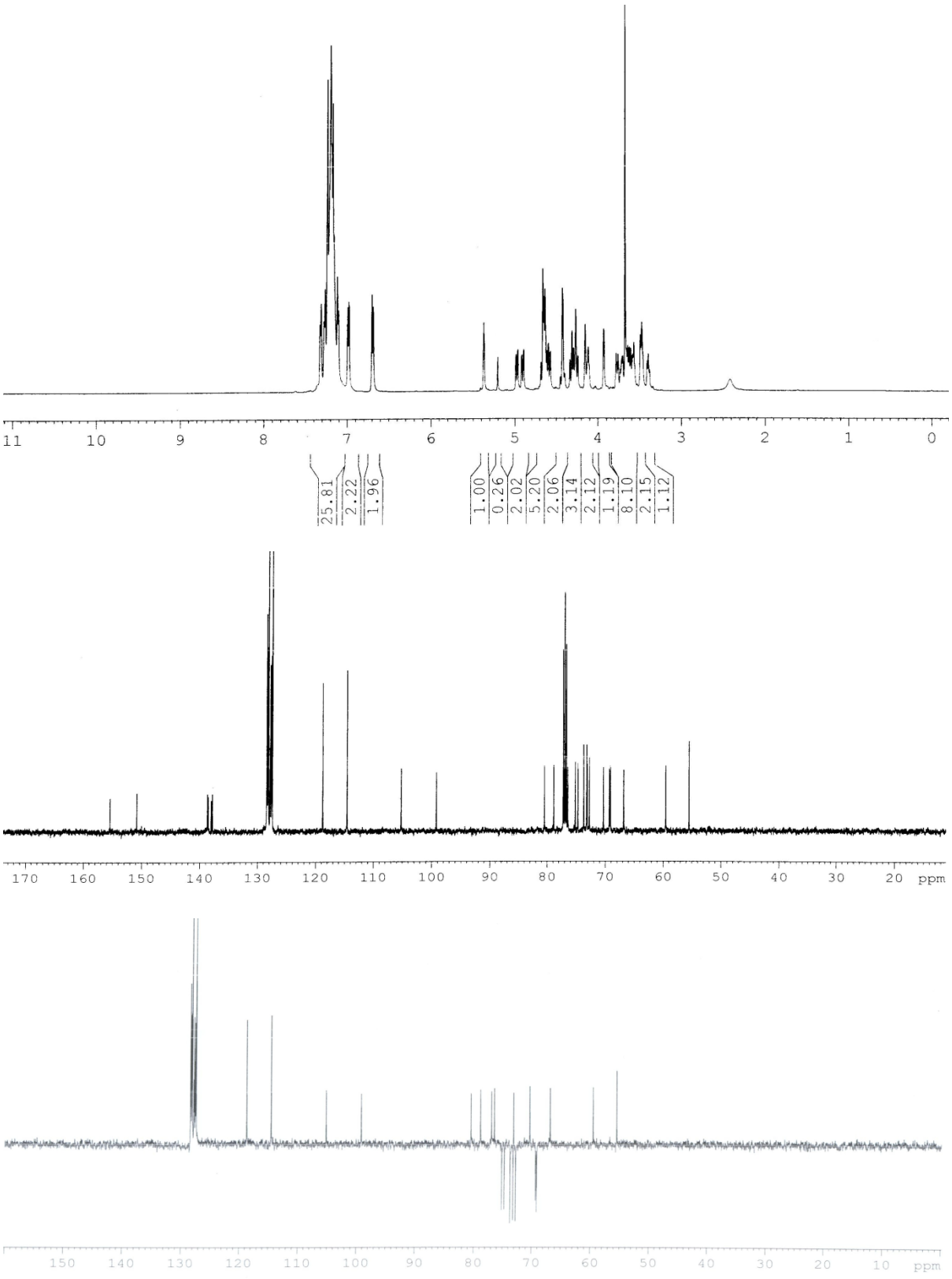
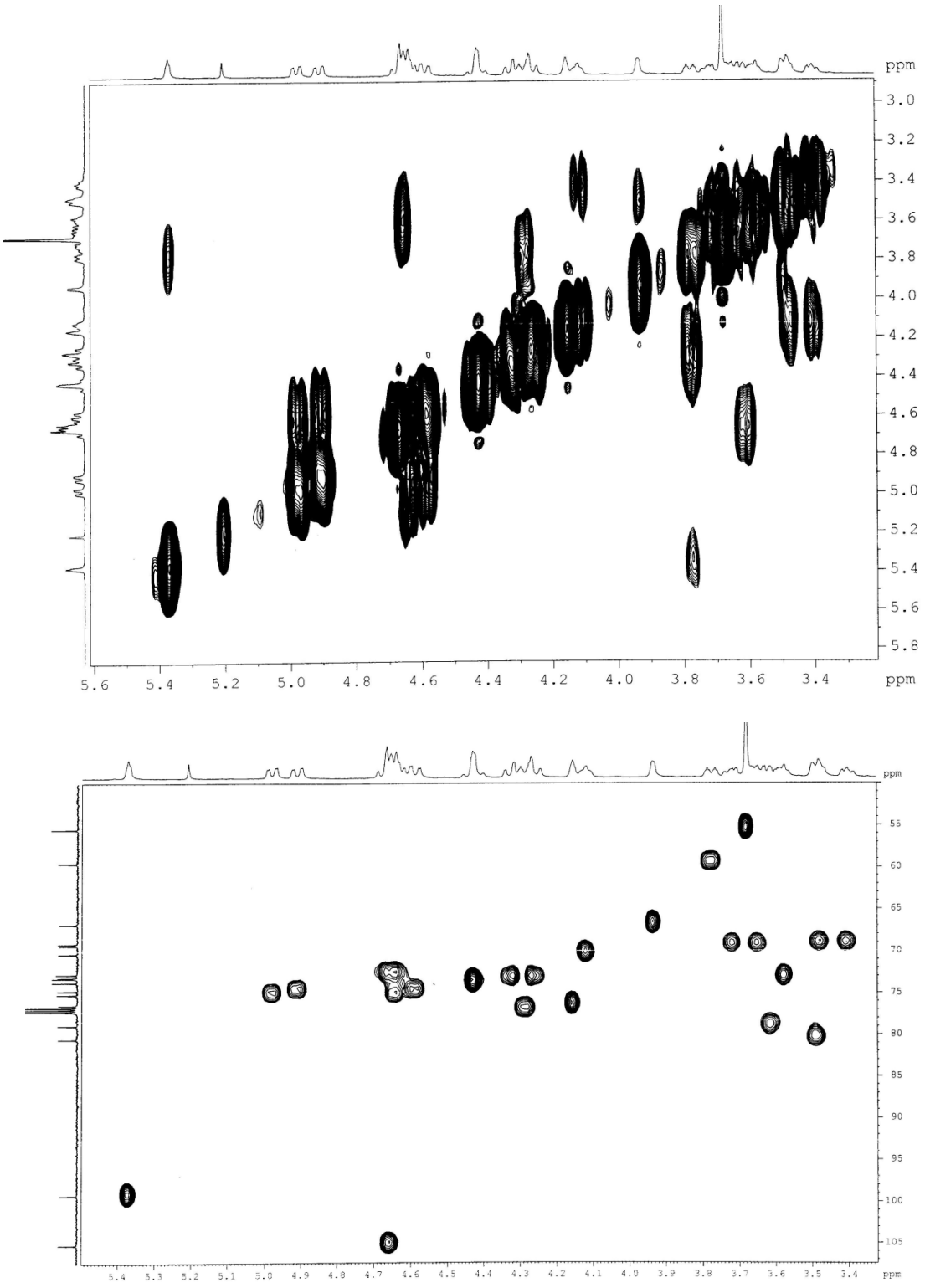


^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3,6-tri-*O*-benzyl-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(10)** ($CDCl_3$).



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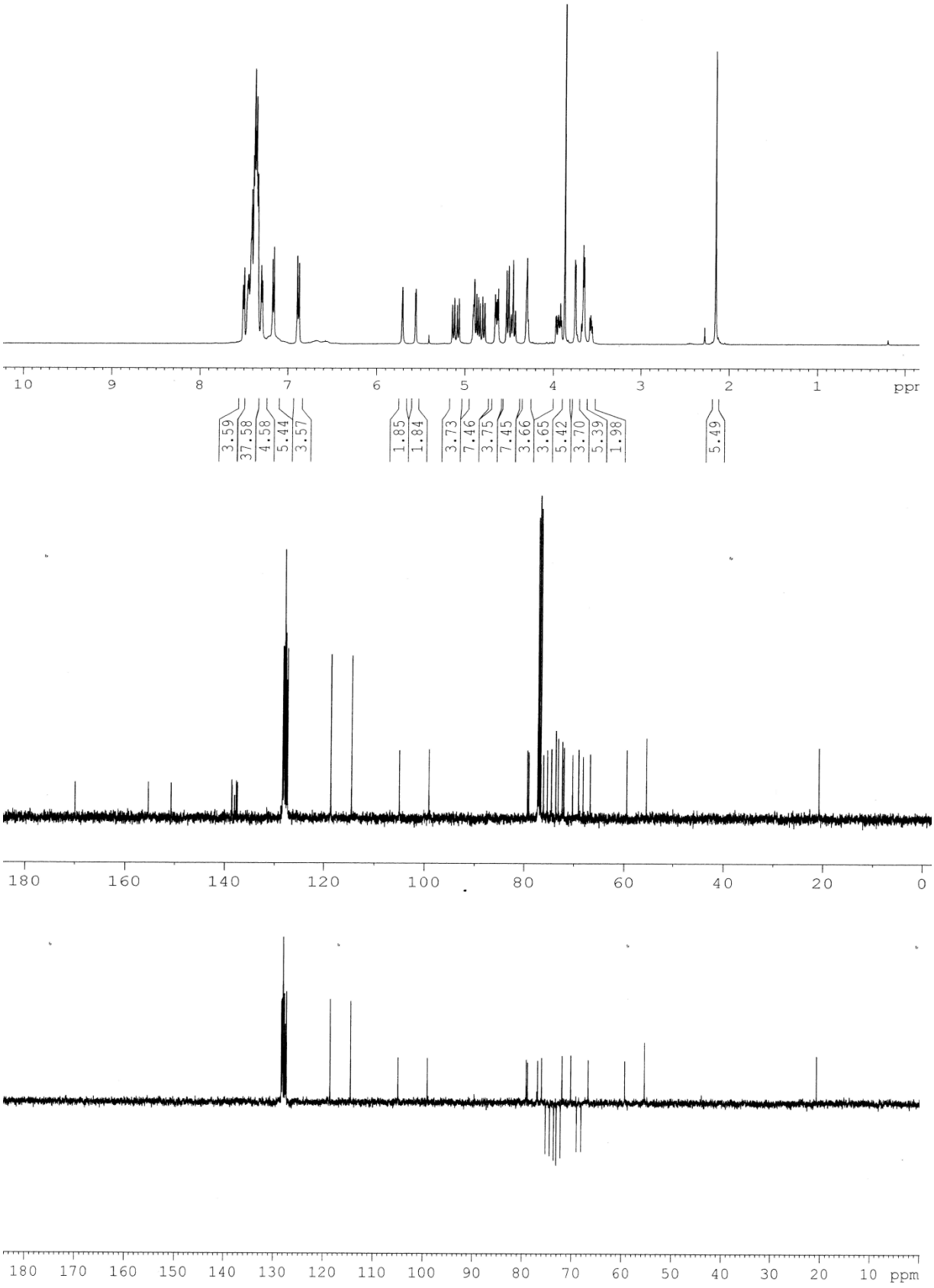
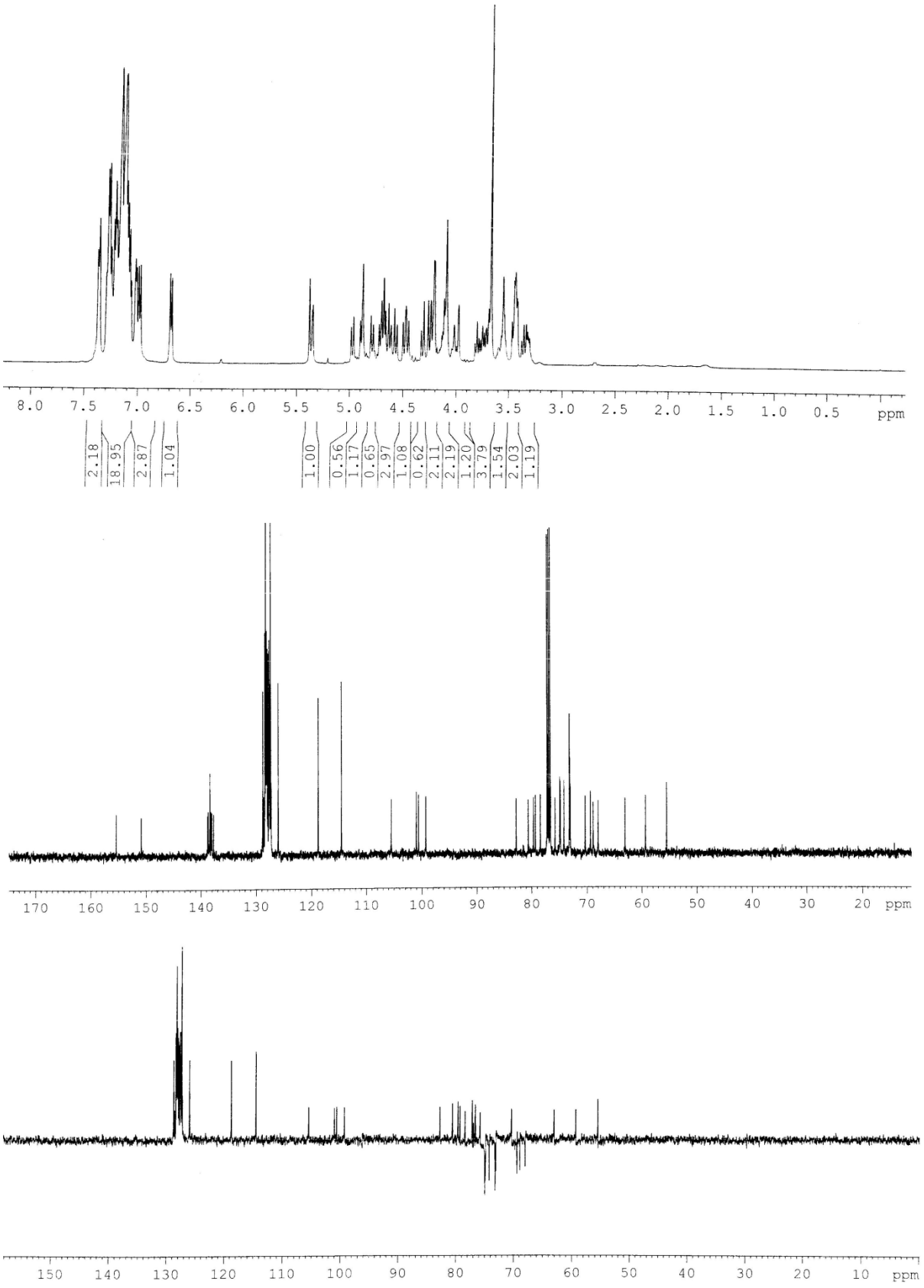
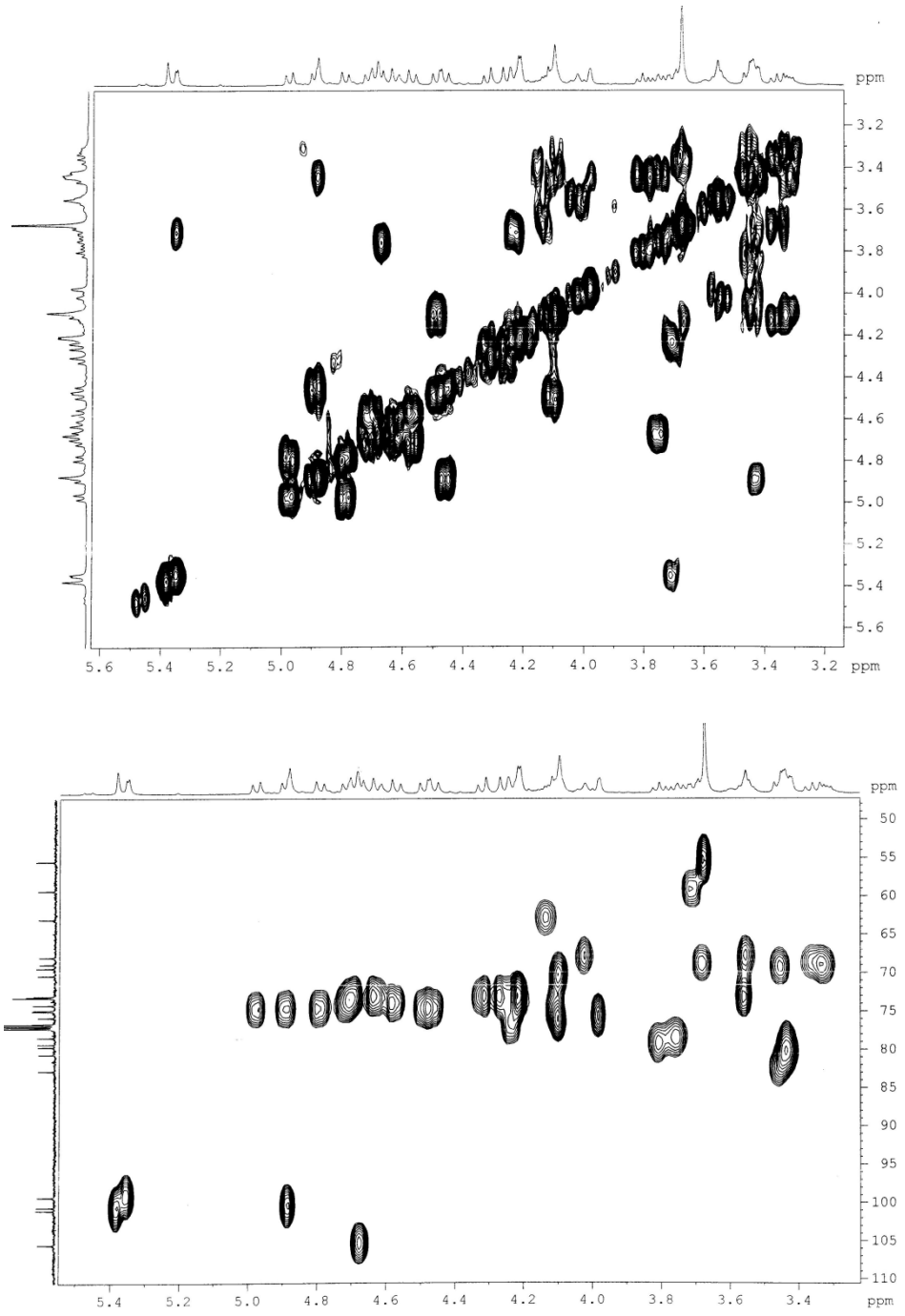


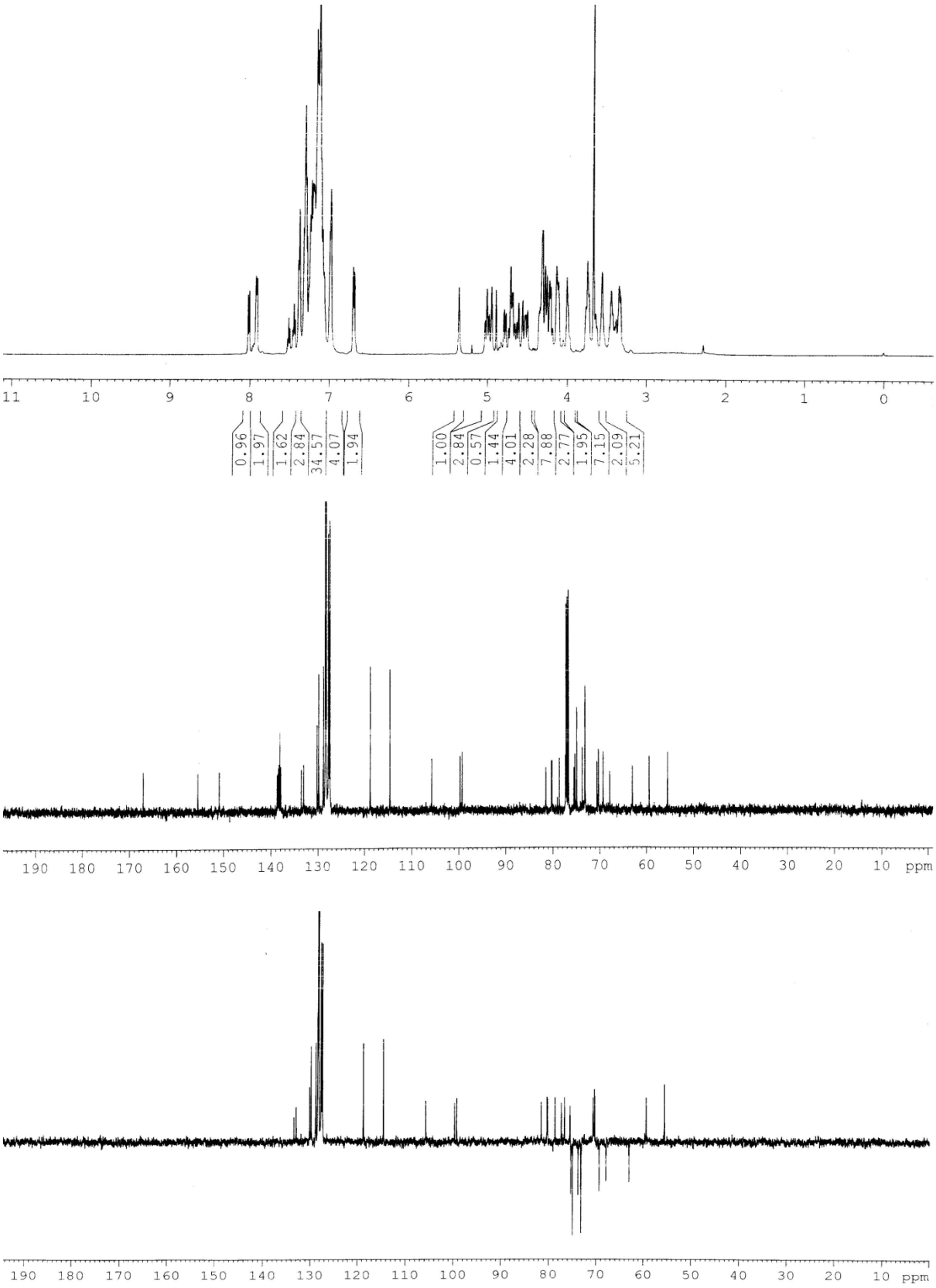
^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (4-*O*-acetyl-2,3,6-tri-*O*-benzyl-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(10)** ($CDCl_3$) (acetylated compound **10**).



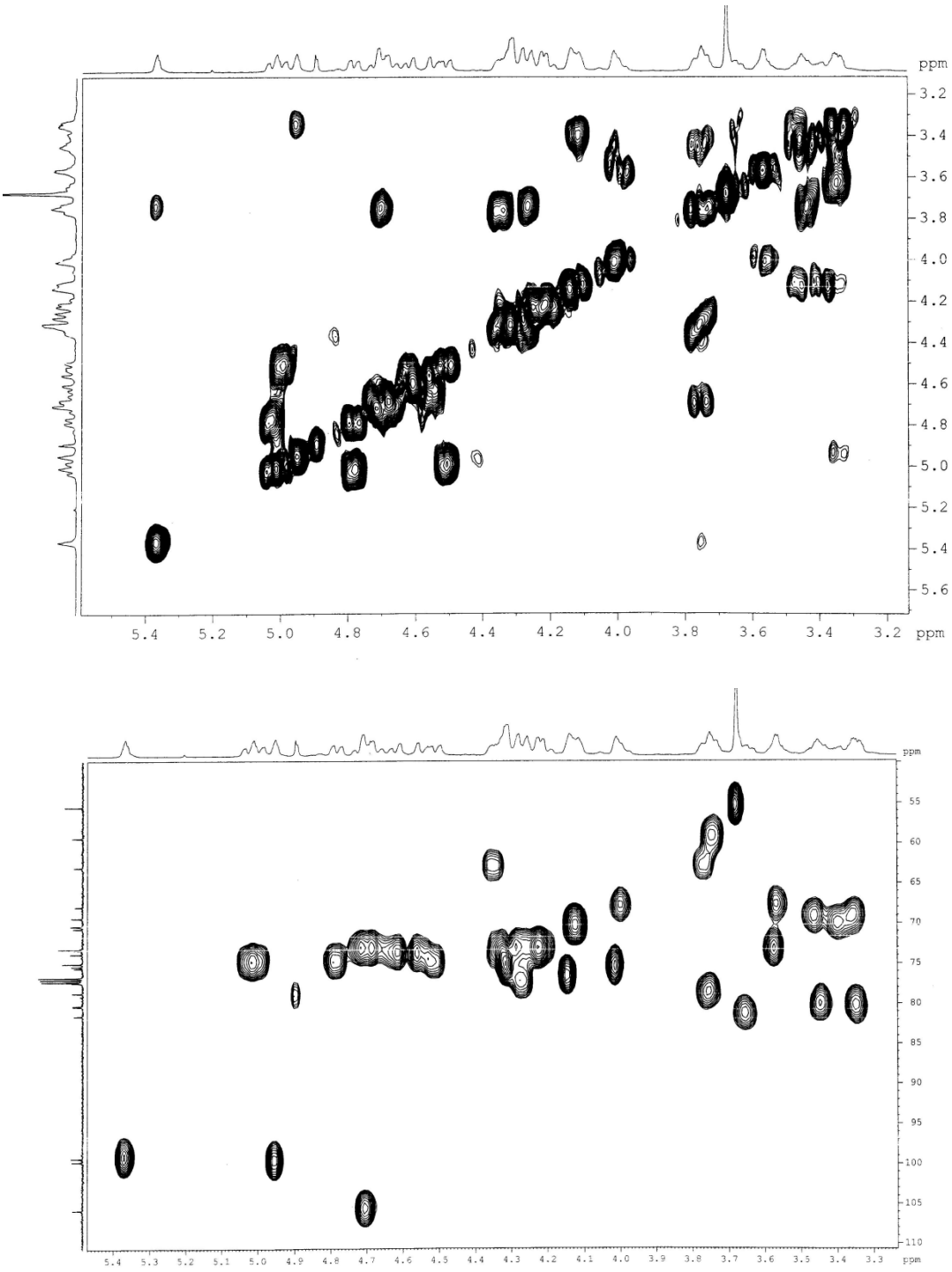
^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3-di-O-benzyl-4,6-O-benzylidene-α-D-glucopyranosyl)-(1→4)-(2,3,6-tri-*O*-benzyl-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(11)** ($CDCl_3$).



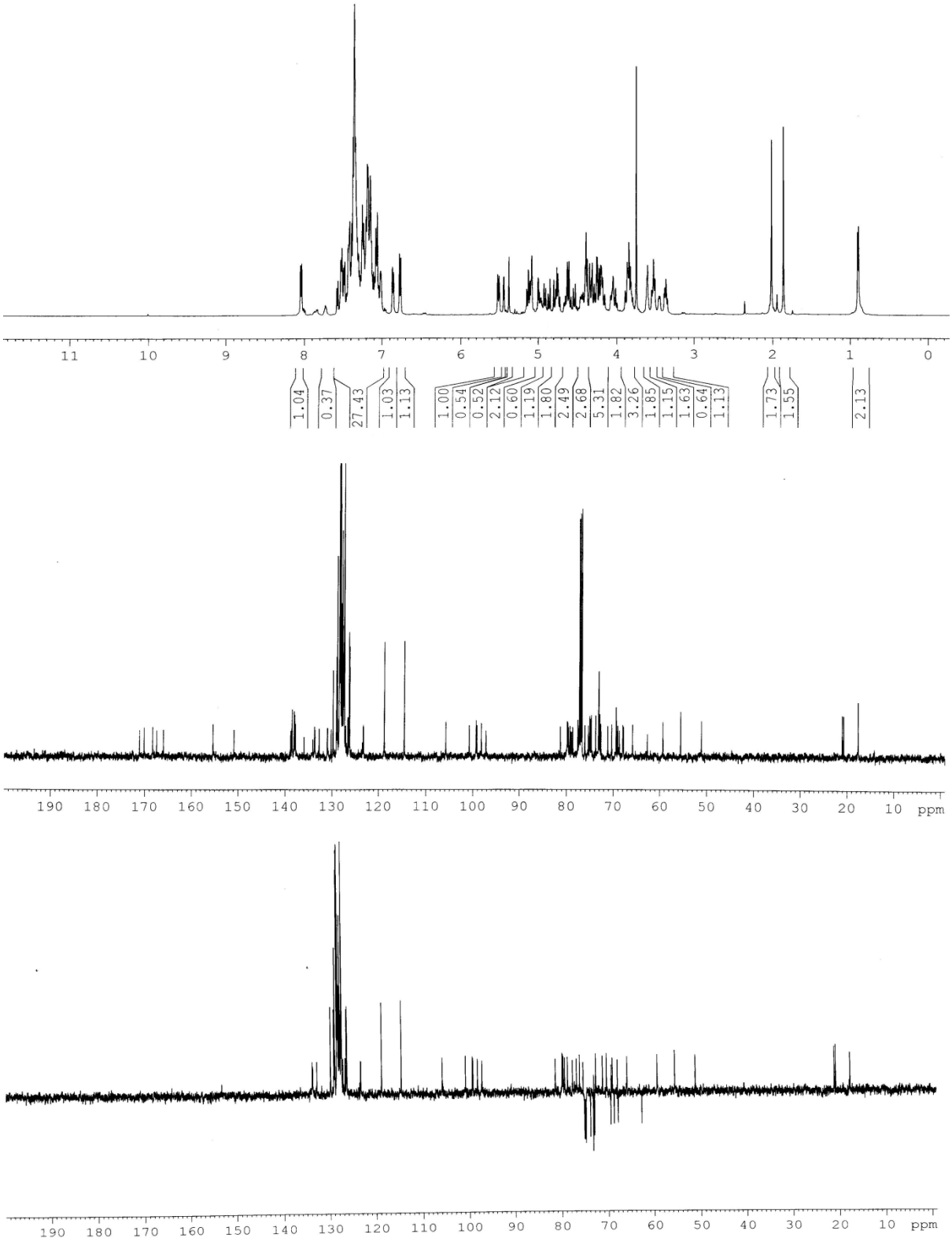
2D COSY and HSQC spectra of *p*-methoxyphenyl (2,3-di-O-benzyl-4,6-O-benzylidene-α-D-glucopyranosyl)-(1→4)-(2,3,6-tri-*O*-benzyl-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(11)** ($CDCl_3$) (selected regions).



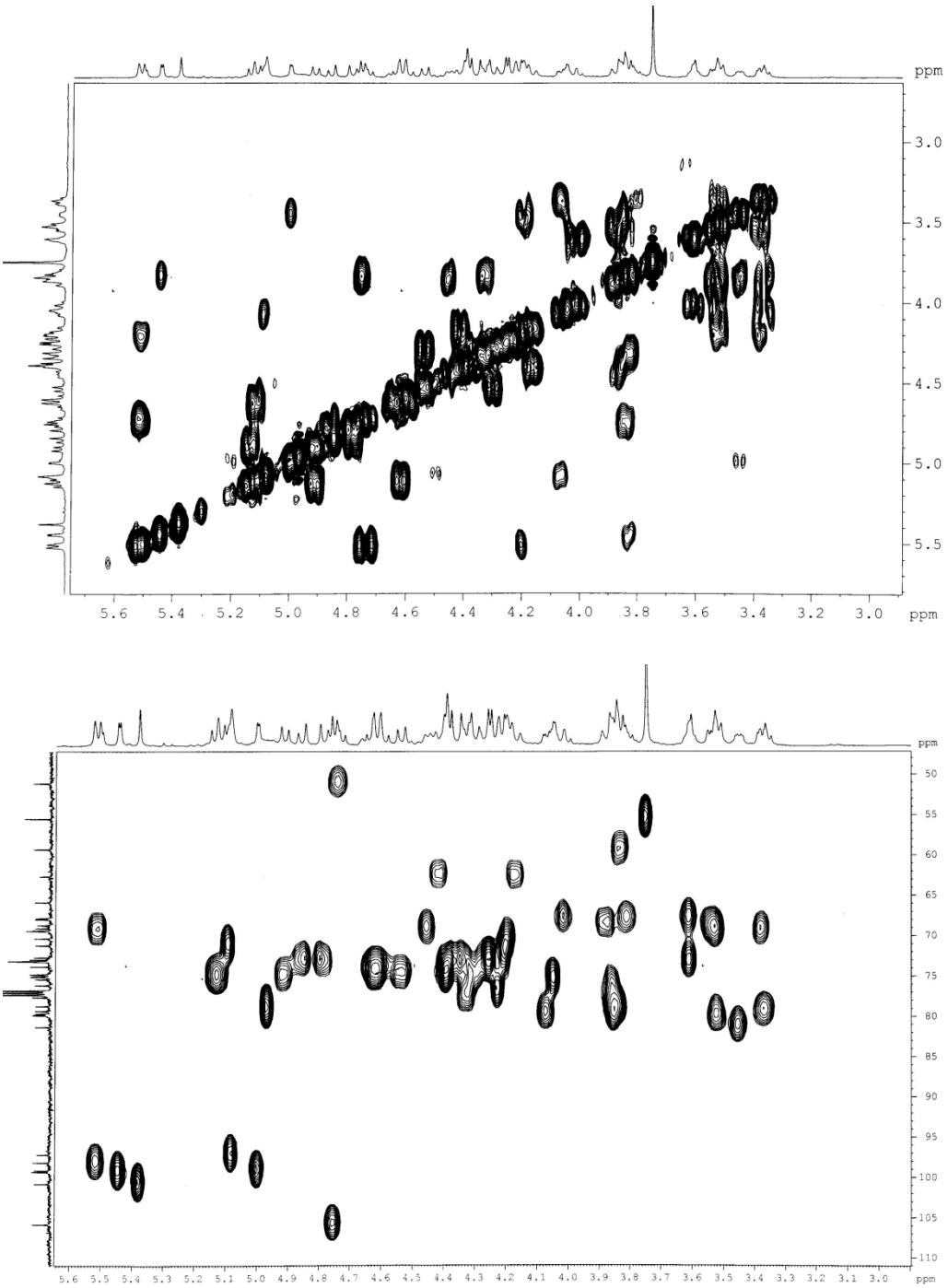
^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (6-*O*-benzoyl-2,3-di-*O*-benzyl-α-D-glucopyranosyl)-(1→4)-(2,3,6-tri-*O*-benzyl-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(12)** ($CDCl_3$).



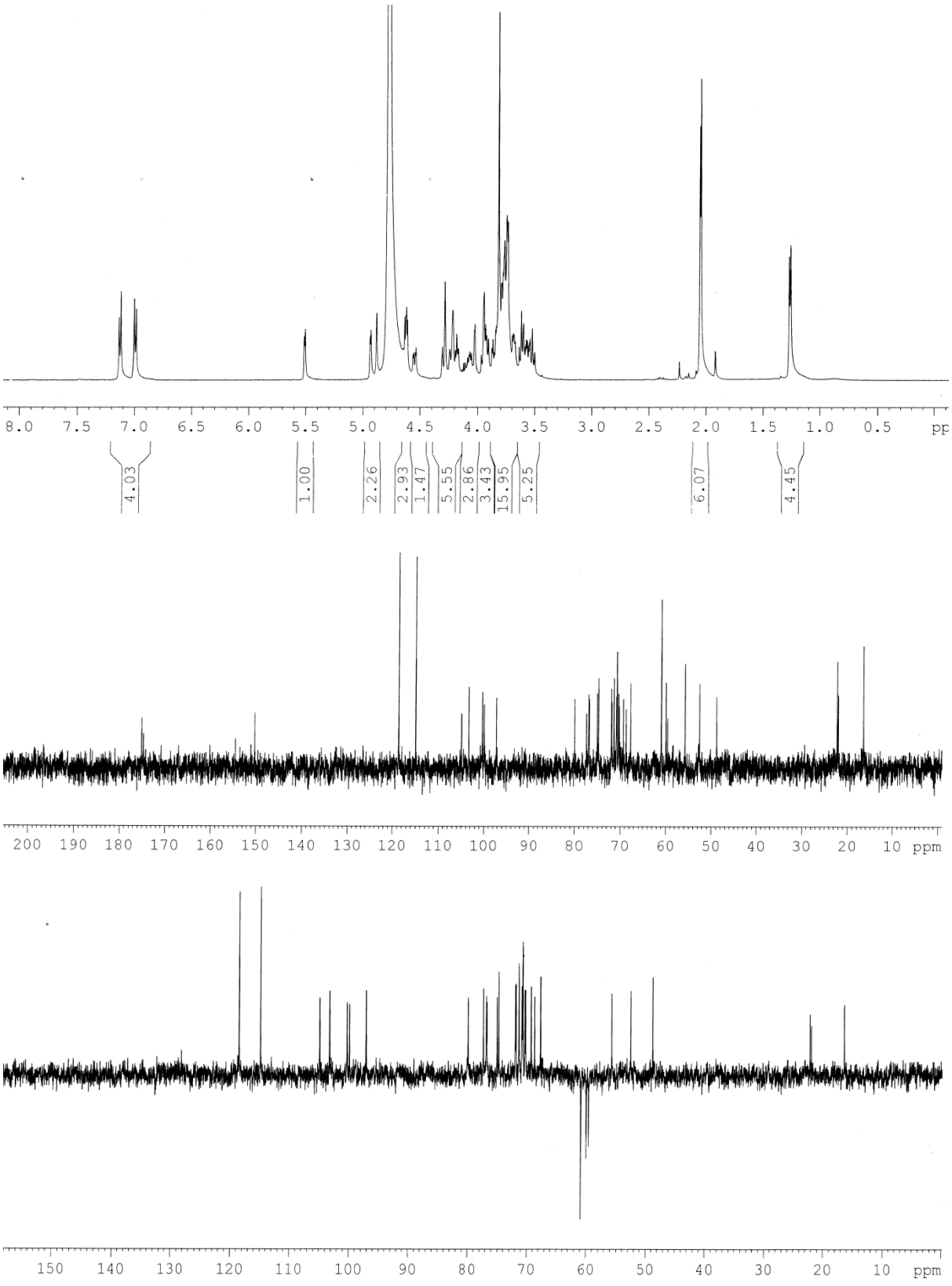
2D COSY and HSQC spectra of *p*-methoxyphenyl (6-*O*-benzoyl-2,3-di-*O*-benzyl-α-D-glucopyranosyl)-(1→4)-(2,3,6-tri-*O*-benzyl-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(12)** ($CDCl_3$) (selected regions).



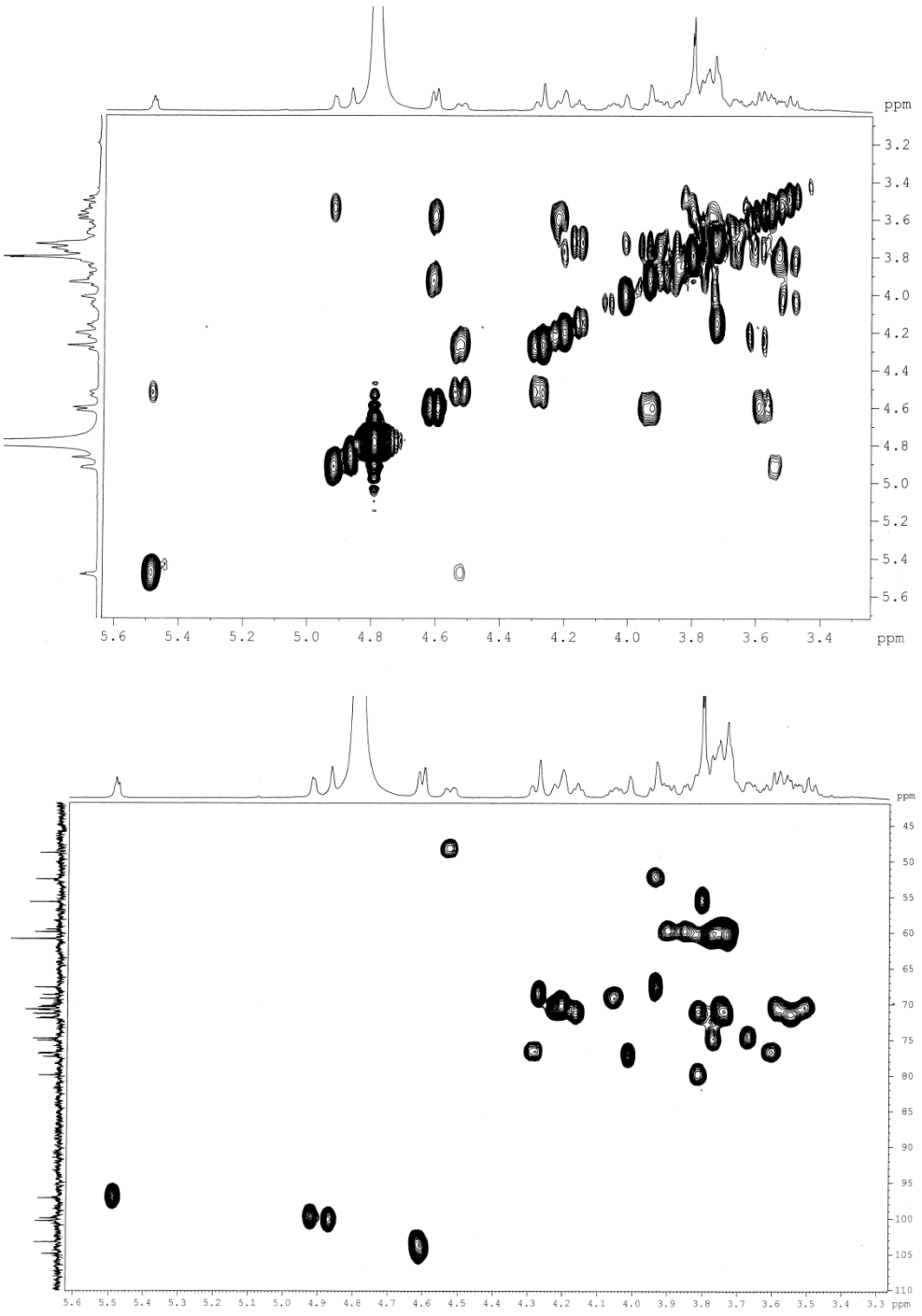
^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (3-*O*-acetyl-4,6-*O*-benzylidene-2-deoxy-2-phthalimido-β-D-galactopyranosyl)-(1→3)-(2-*O*-acetyl-4-*O*-benzyl-α-L-rhamnopyranosyl)-(1→4)-(6-*O*-benzoyl-2,3-di-*O*-benzyl-α-D-glucopyranosyl)-(1→4)-(2,3,6-tri-*O*-benzyl-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(13)** ($CDCl_3$).



2D COSY and HSQC spectra of *p*-methoxyphenyl (3-*O*-acetyl-4,6-*O*-benzylidene-2-deoxy-2-phthalimido-β-D-galactopyranosyl)-(1→3)-(2-*O*-acetyl-4-*O*-benzyl-α-L-rhamnopyranosyl)-(1→4)-(6-*O*-benzoyl-2,3-di-*O*-benzyl-α-D-glucopyranosyl)-(1→4)-(2,3,6-tri-*O*-benzyl-β-D-galactopyranosyl)-(1→3)-2-azido-4,6-di-*O*-benzyl-2-deoxy-α-D-galactopyranoside **(13)** ($CDCl_3$) (selected regions).



^{1}H, ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2-acetamido-2-deoxy-β-D-galactopyranosyl)-(1→3)-(α-L-rhamnopyranosyl)-(1→4)-(α-D-glucopyranosyl)-(1→4)-(β-D-galactopyranosyl)-(1→3)-2-acetamido-2-deoxy-α-D-galactopyranoside **(1)** (D_2O).



2D COSY and HSQC spectra of *p*-methoxyphenyl (2-acetamido-2-deoxy-β-D-galactopyranosyl)-(1→3)-(α-L-rhamnopyranosyl)-(1→4)-(α-D-glucopyranosyl)-(1→4)-(β-D-galactopyranosyl)-(1→3)-2-acetamido-2-deoxy-α-D-galactopyranoside **(1)** (D_2O) (selected regions).