

Supporting Information

for

Straightforward synthesis of a tetrasaccharide repeating unit corresponding to the O-antigen of *Escherichia coli* O16

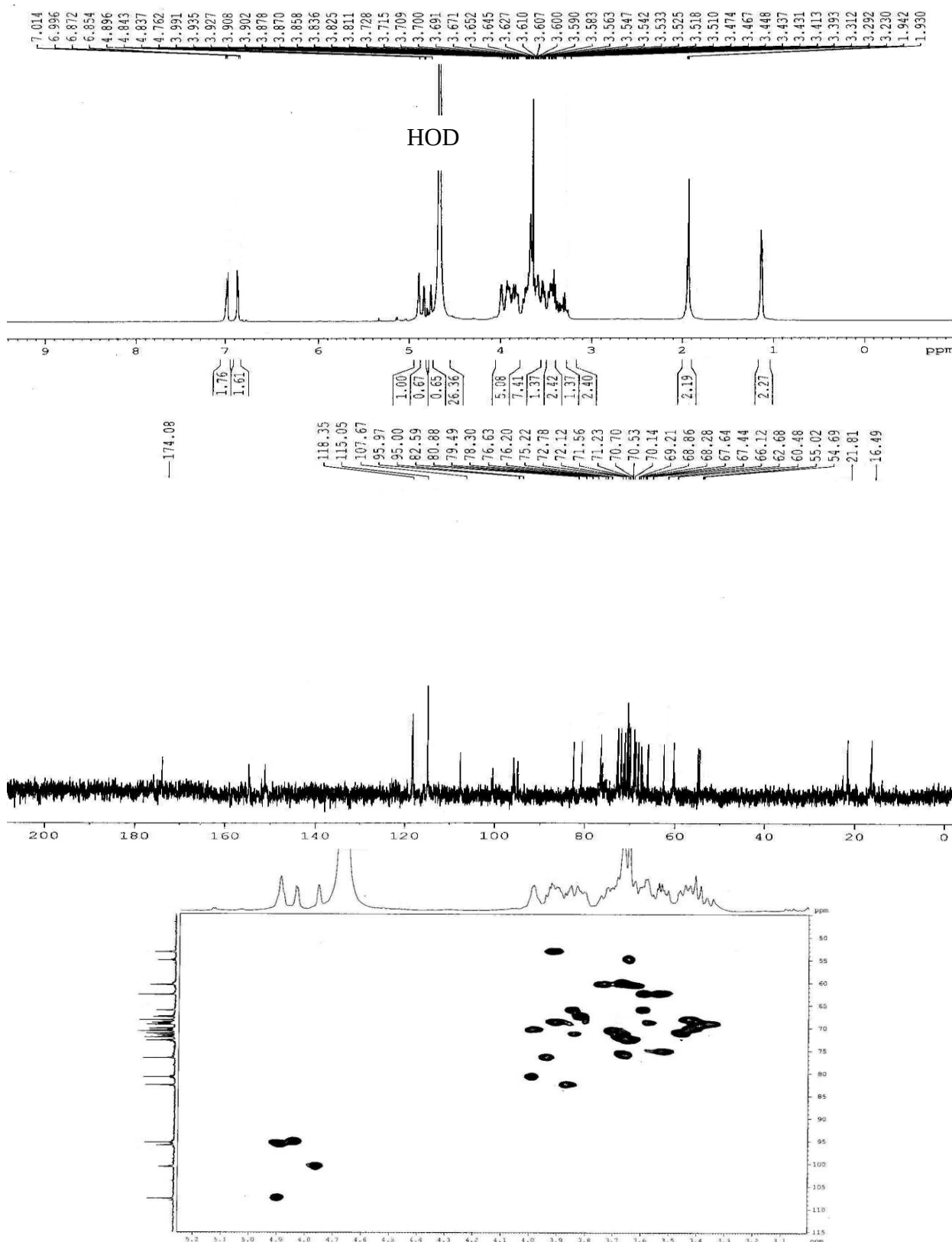
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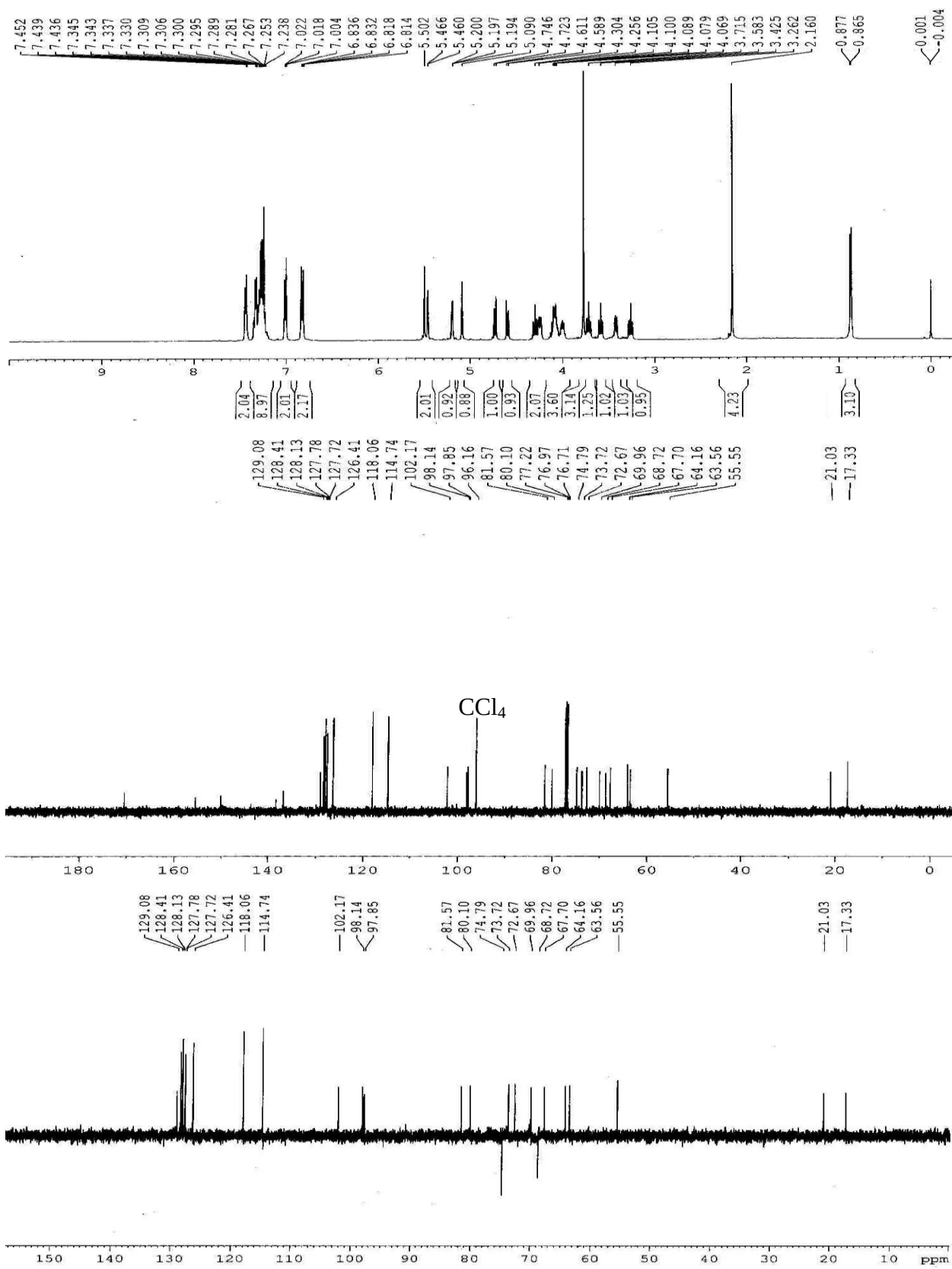
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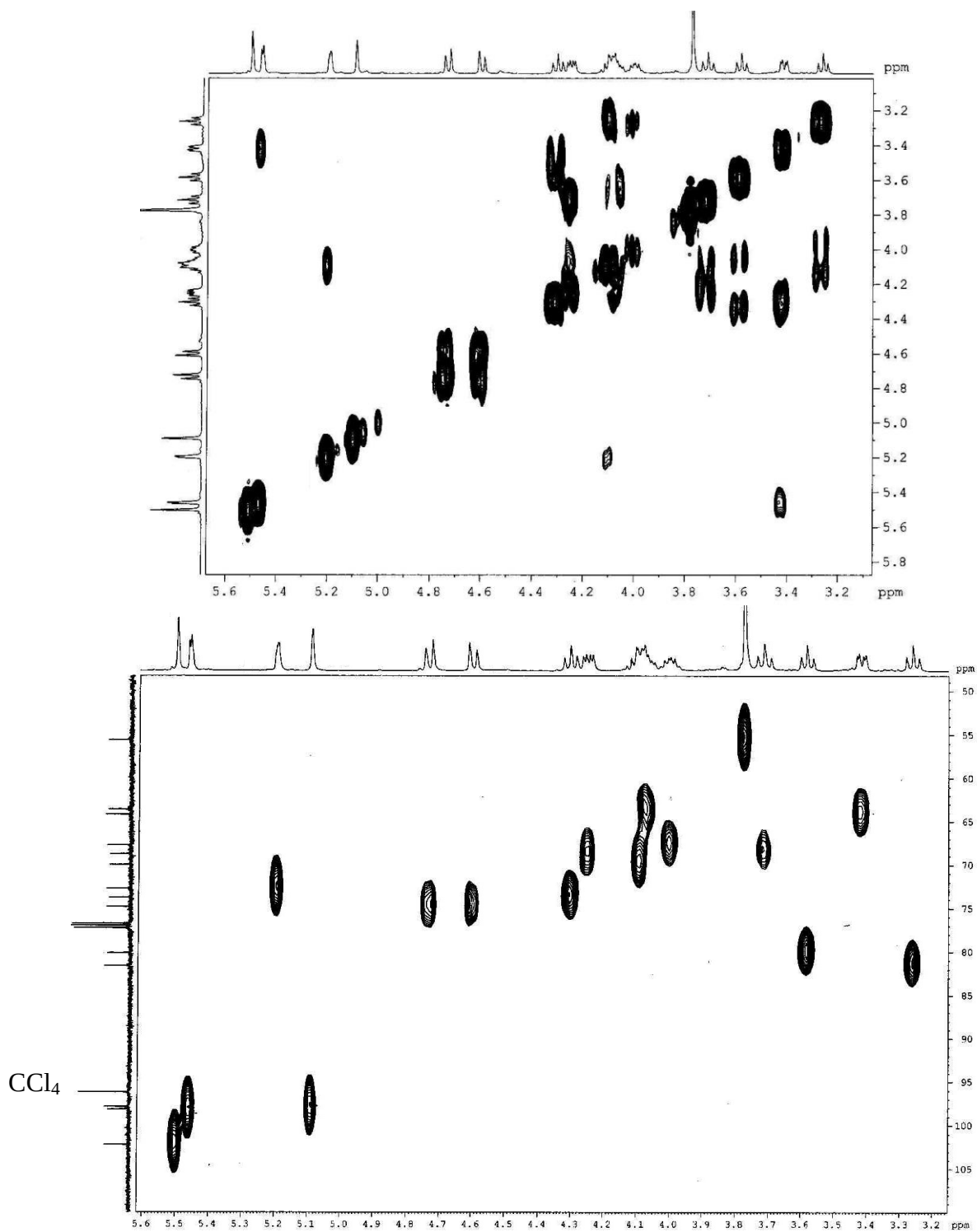
1D and 2D NMR spectra of compounds 1 and 6–9



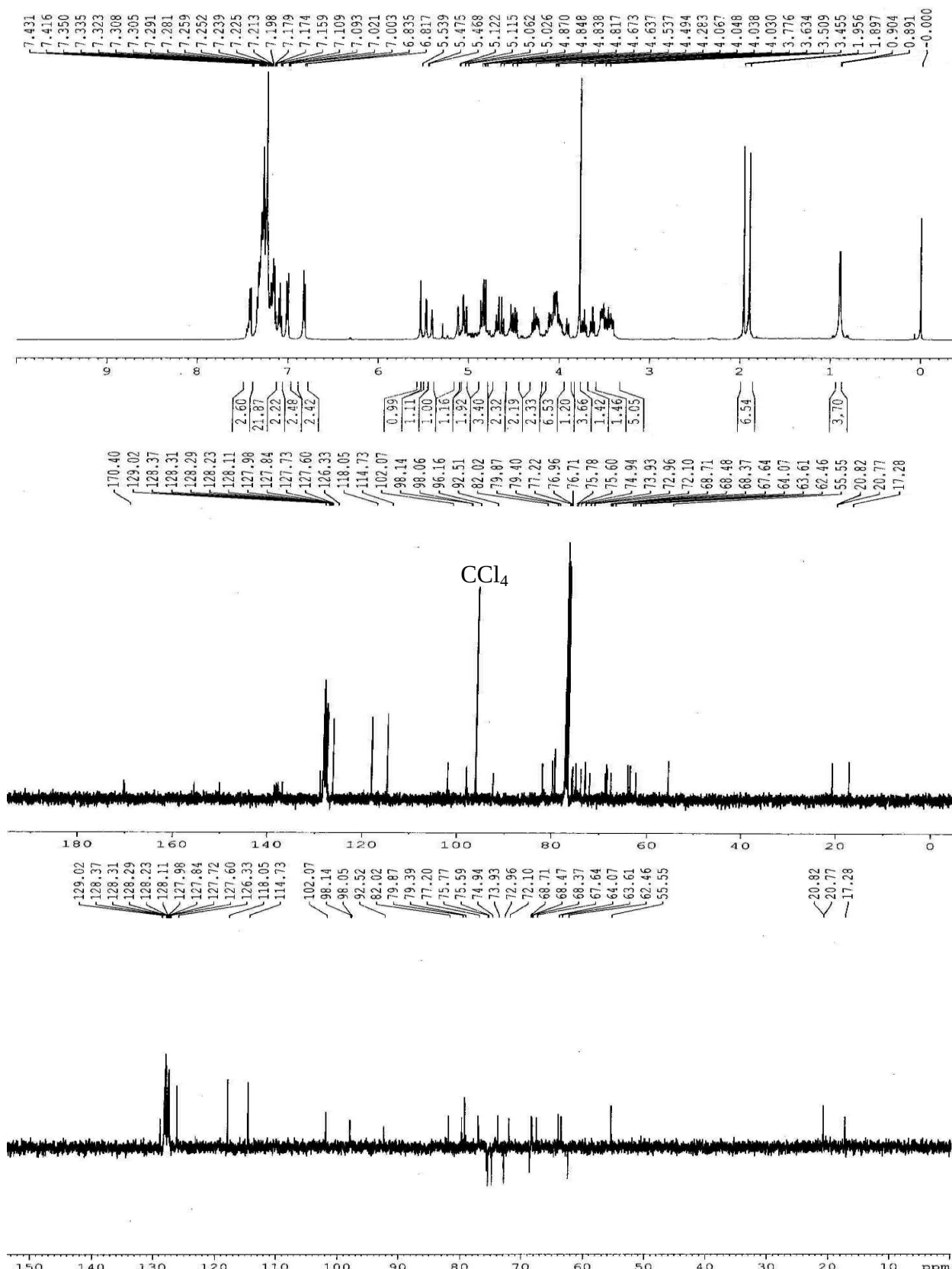
¹H, ¹³C and 2D HSQC (selected region) NMR spectra of *p*-methoxyphenyl (β-D-galactofuranosyl)-(1→6)-(α-D-glucopyranosyl)-(1→3)-(α-L-rhamnopyranosyl)-(1→3)-2-acetamido-2-deoxy-α-D-glucopyranoside (1) (D₂O).



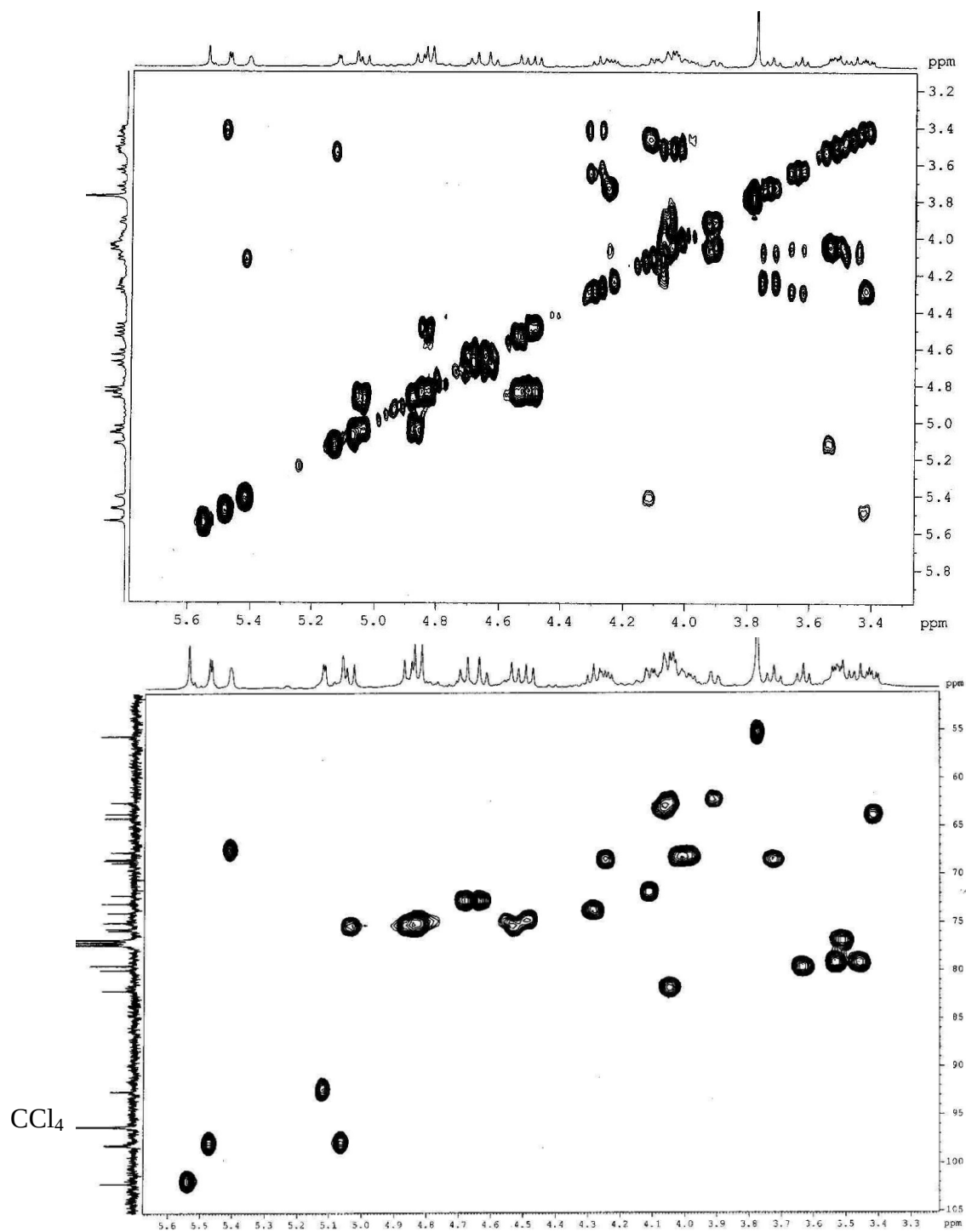
¹H, ¹³C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2-*O*-acetyl-4-*O*-benzyl- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 3)-2-azido-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranoside (**6**) (CDCl₃/CCl₄).



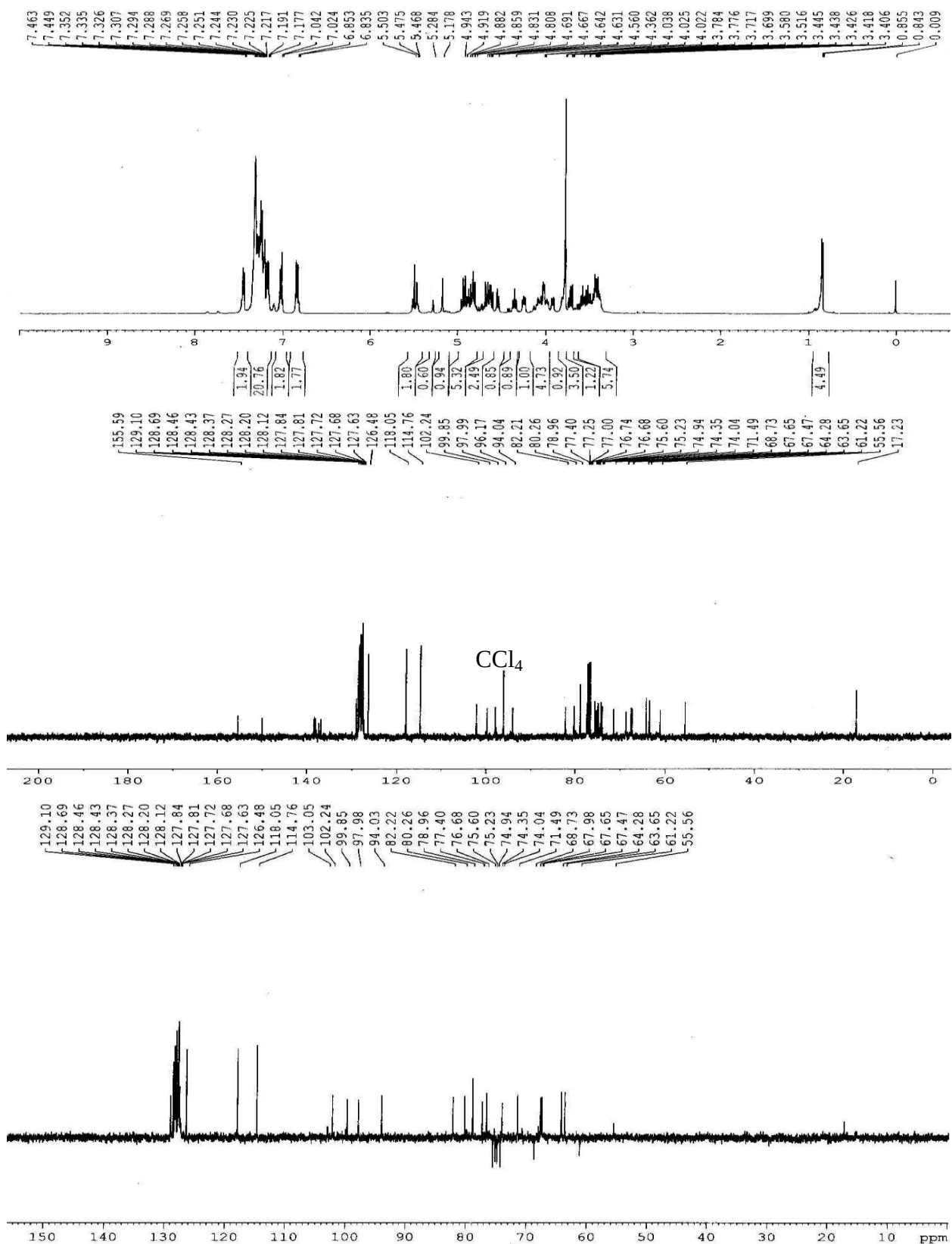
2D COSY and HSQC NMR spectra (selected region) of *p*-methoxyphenyl (2-*O*-acetyl-4-*O*-benzyl- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 3)-2-azido-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranoside (**6**) (CDCl₃/CCl₄).



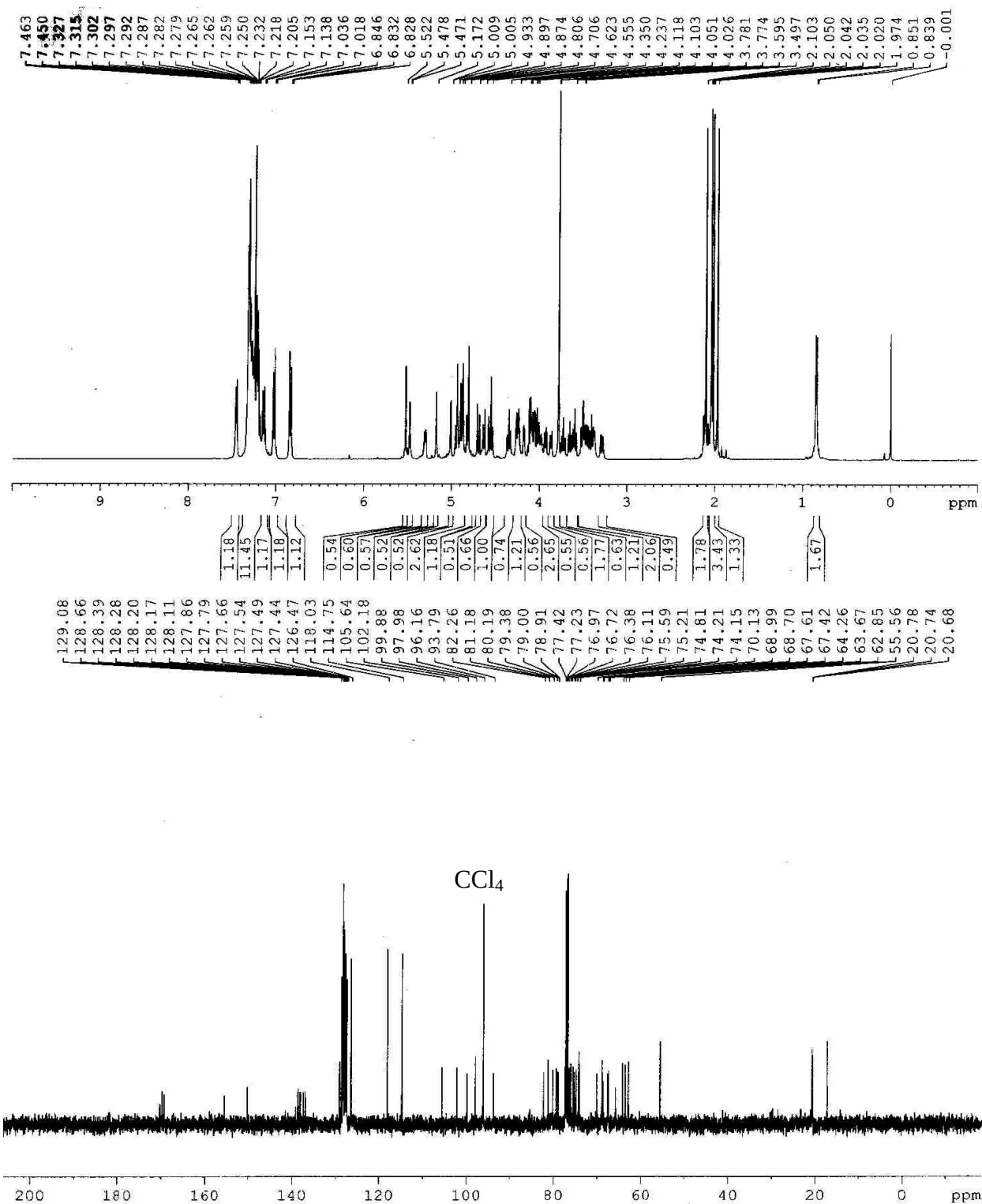
¹H, ¹³C and DEPT 135 NMR spectra of *p*-methoxyphenyl (6-*O*-acetyl-2,3,4-tri-*O*-benzyl- α -D-glucopyranosyl)-(1 $\rightarrow$ 3)-(2-*O*-acetyl-4-*O*-benzyl- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 3)-2-azido-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranoside (7) (CDCl₃/CCl₄).



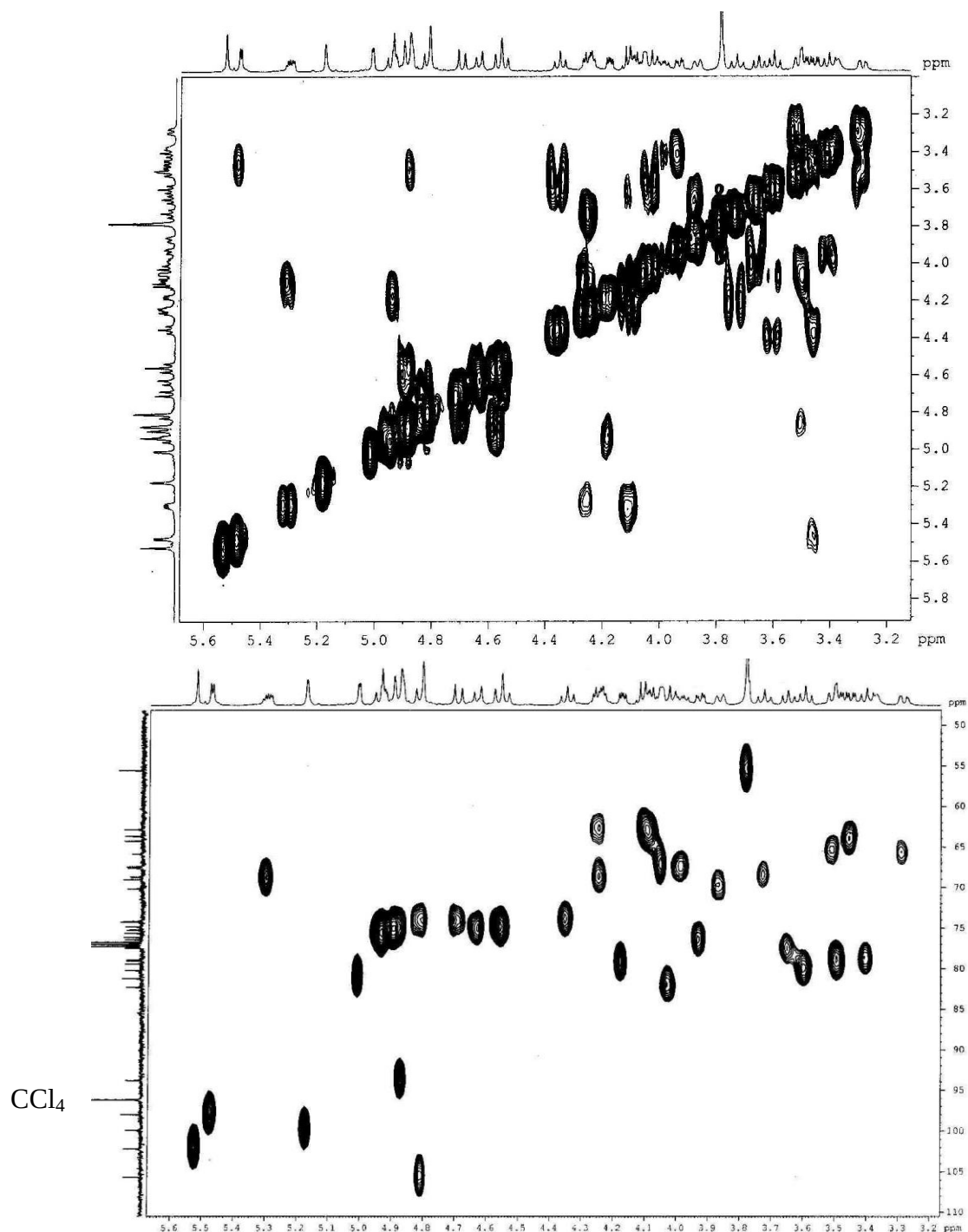
2D COSY and HSQC NMR spectra (selected region) of *p*-methoxyphenyl (6-*O*-acetyl-2,3,4-tri-*O*-benzyl- α -D-glucopyranosyl)-(1 $\rightarrow$ 3)-(2-*O*-acetyl-4-*O*-benzyl- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 3)-2-azido-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranoside (7) (CDCl₃/CCl₄).



¹H, ¹³C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3,4-tri-*O*-benzyl- α -D-glucopyranosyl)-(1 $\rightarrow$ 3)-(2-*O*-acetyl-4-*O*-benzyl- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 3)-2-azido-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranoside (**8**) (CDCl₃/CCl₄).



^1H , ^{13}C and DEPT 135 NMR spectra of *p*-methoxyphenyl (2,3,5,6-tetra-*O*-acetyl- β -D-galactofuranosyl)-(1 $\rightarrow$ 6)-(2,3,4-tri-*O*-benzyl- α -D-glucopyranosyl)-(1 $\rightarrow$ 3)-(2-*O*-acetyl-4-*O*-benzyl- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 3)-2-azido-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranoside (9) ($\text{CDCl}_3/\text{CCl}_4$).



2D COSY and HSQC NMR spectra (selected region) of *p*-methoxyphenyl (2,3,5,6-tetra-*O*-acetyl- β -D-galactofuranosyl)-(1 $\rightarrow$ 6)-(2,3,4-tri-*O*-benzyl- α -D-glucopyranosyl)-(1 $\rightarrow$ 3)-(2-*O*-acetyl-4-*O*-benzyl- α -L-rhamnopyranosyl)-(1 $\rightarrow$ 3)-2-azido-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranoside (**9**) (CDCl₃/CCl₄).