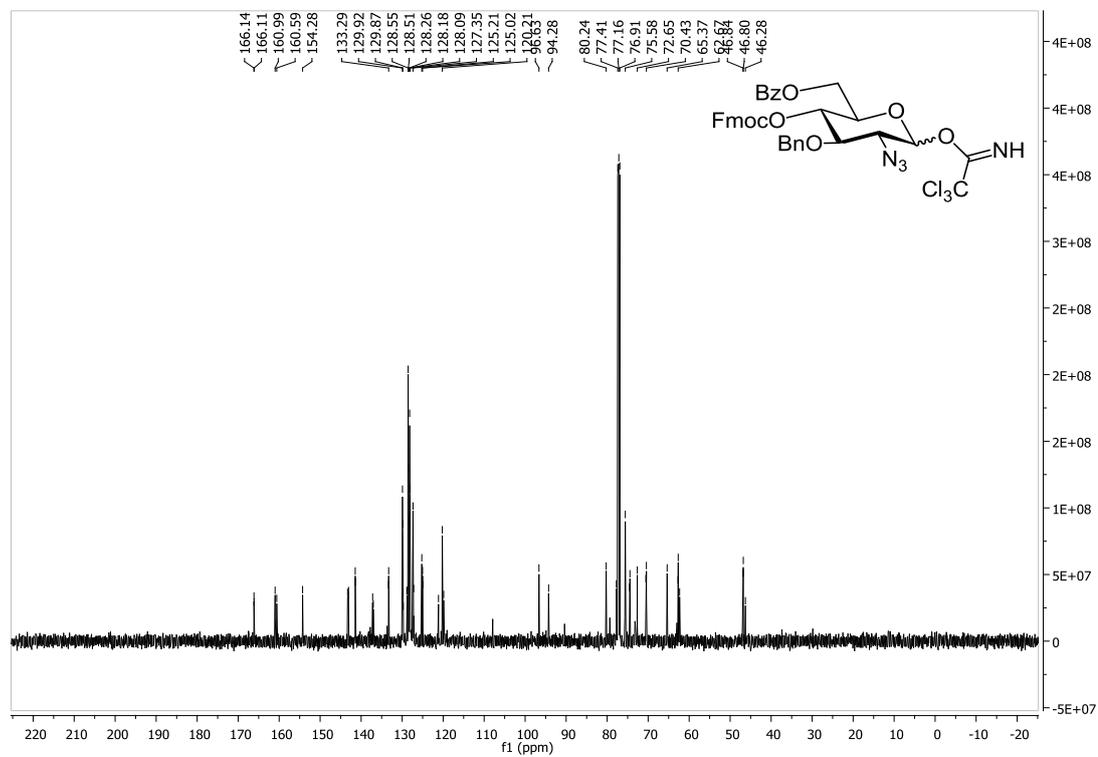
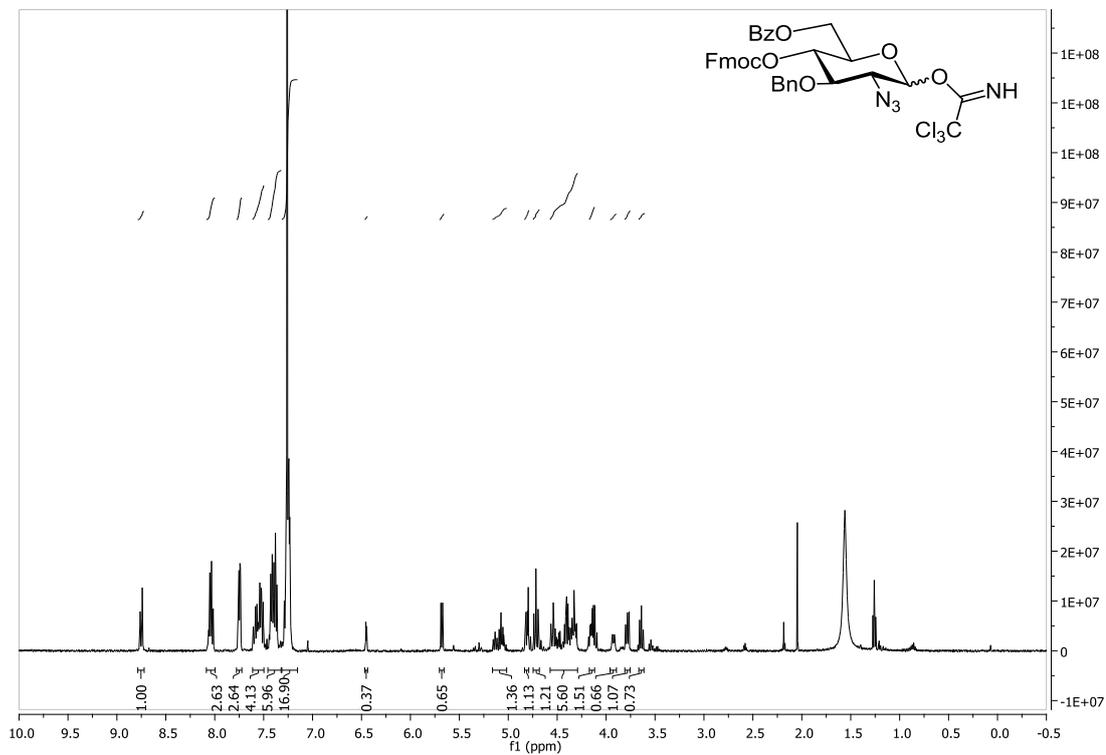
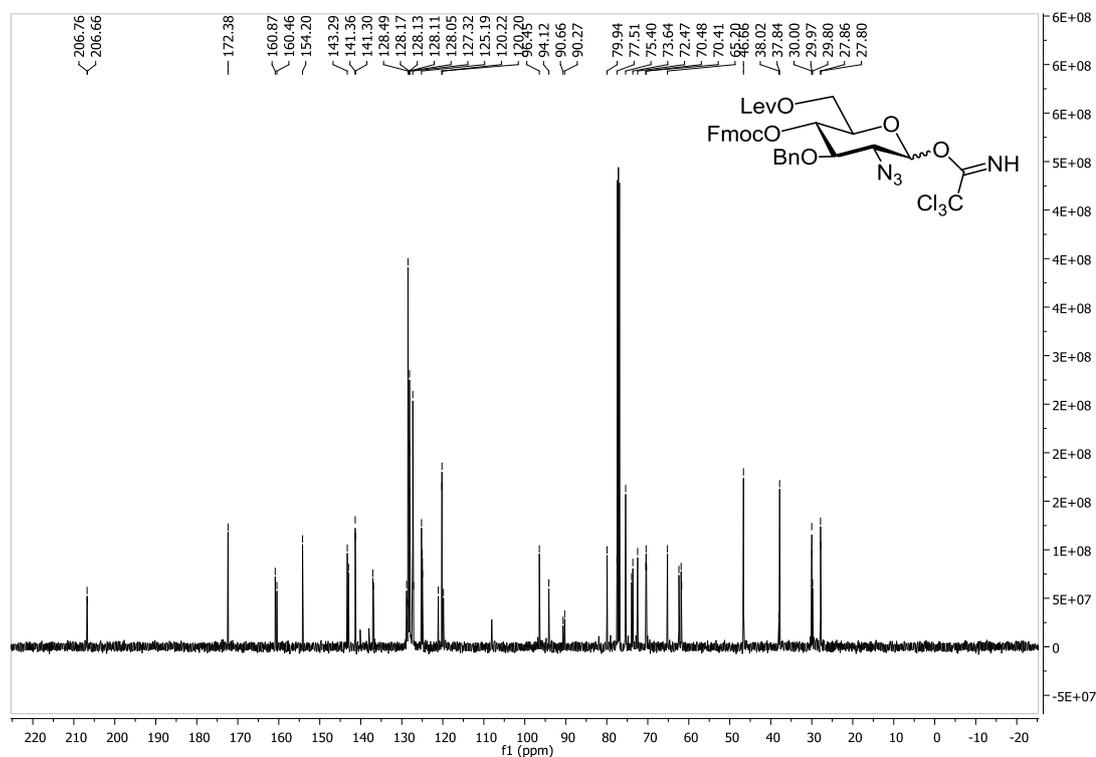
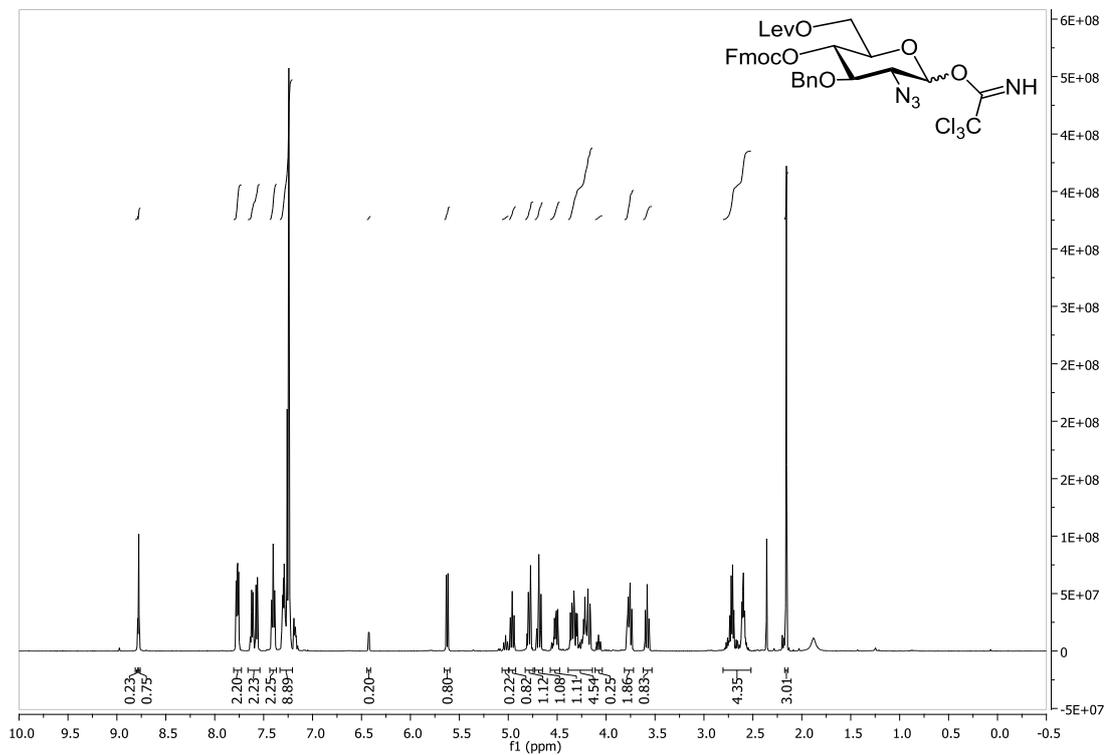


Appendix 1
Chapter 4
NMR spectra

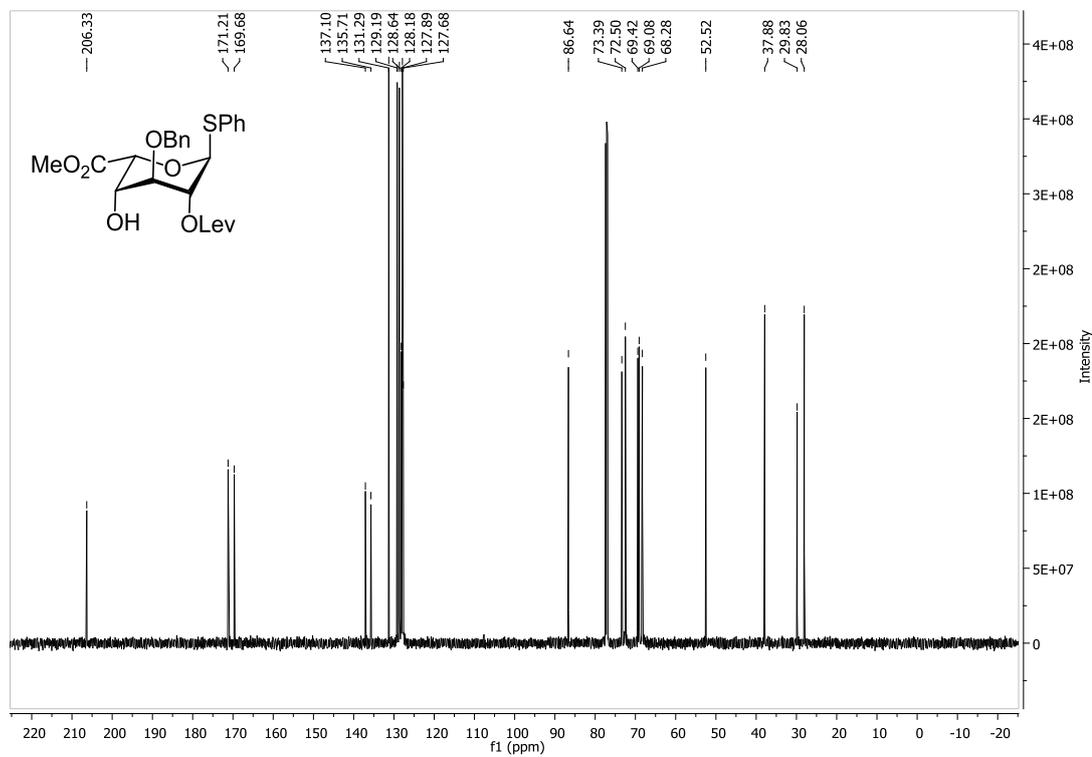
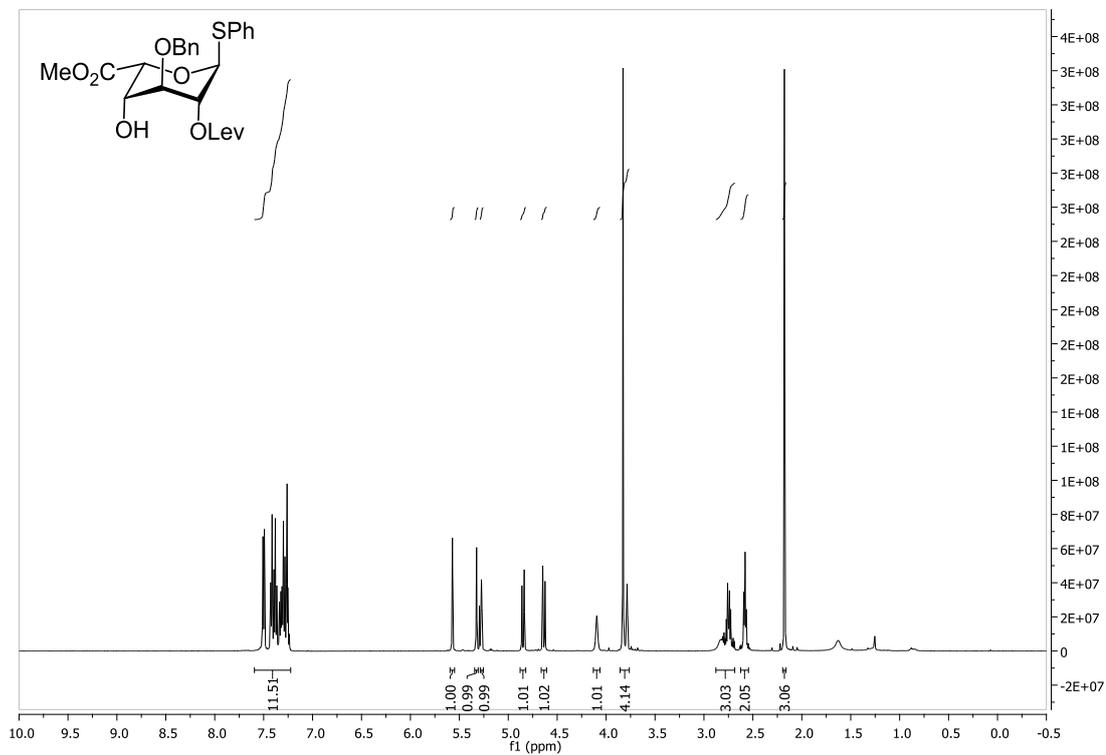
2-Azido-6-O-benzoyl-3-O-benzyl-2-deoxy-4-O-(9-fluorenylmethoxycarbonyl)- α/β -D-glucopyranosyl trichloroacetimidate (8)



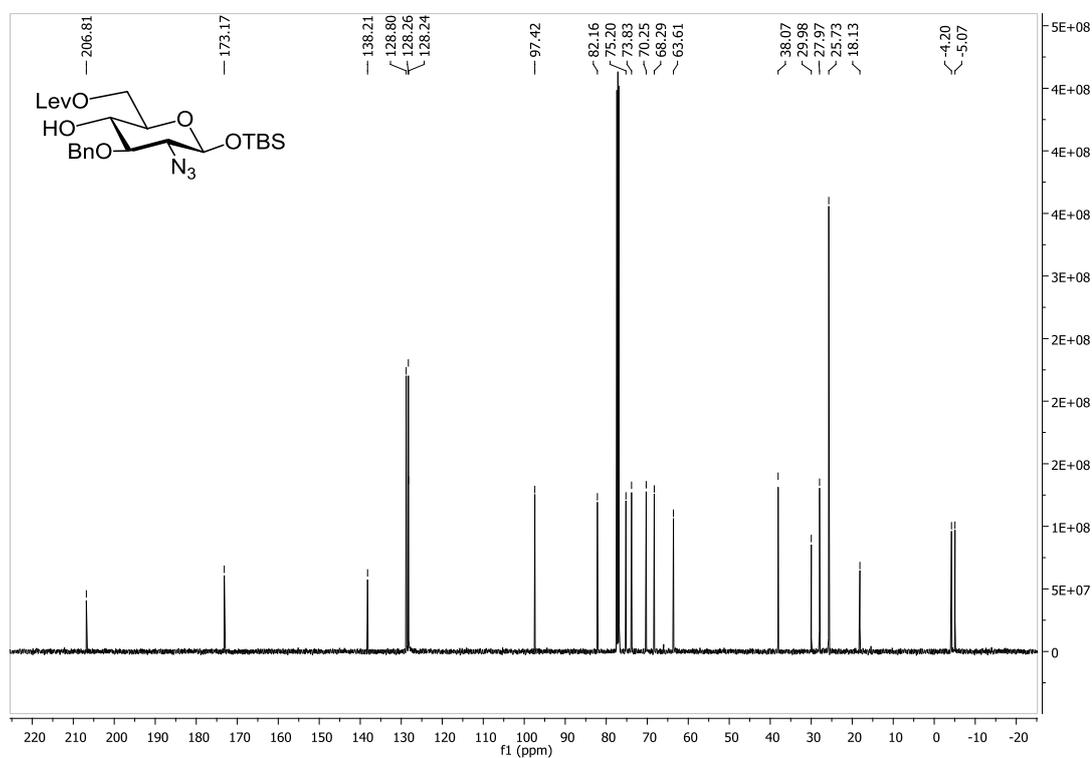
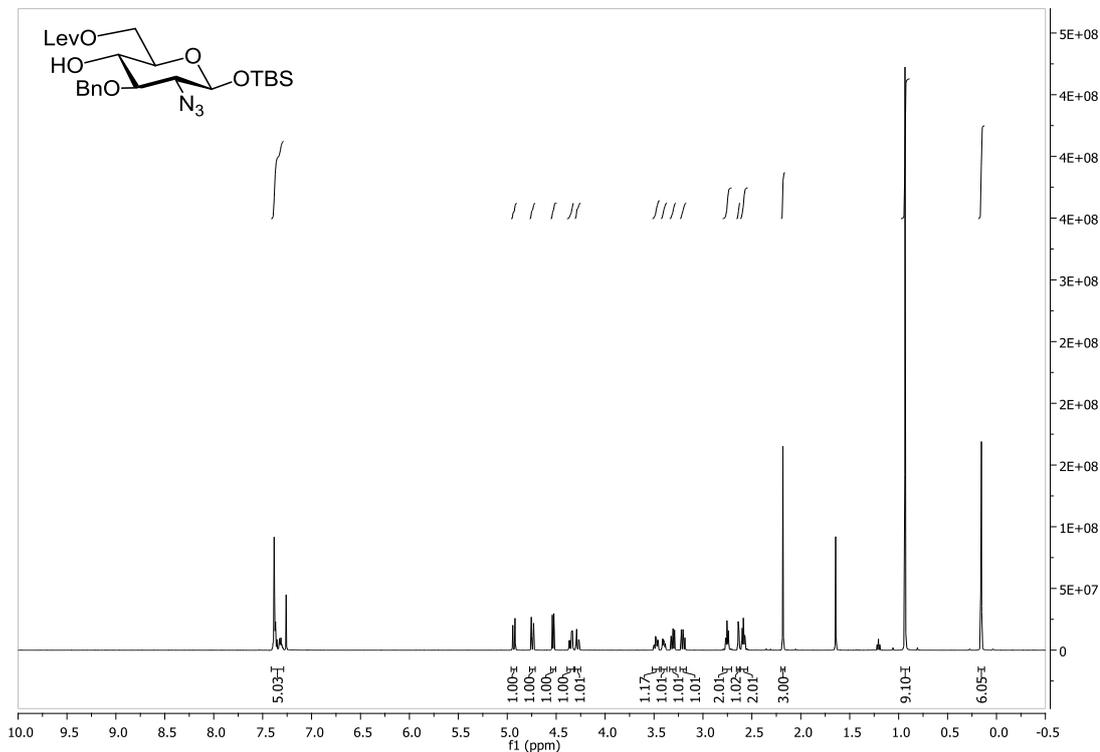
2-Azido-3-O-benzyl-2-deoxy-4-O-(9-fluorenylmethoxycarbonyl)-6-O-levulinoyl- α/β -D-glucopyranosyl trichloroacetimidate (9)



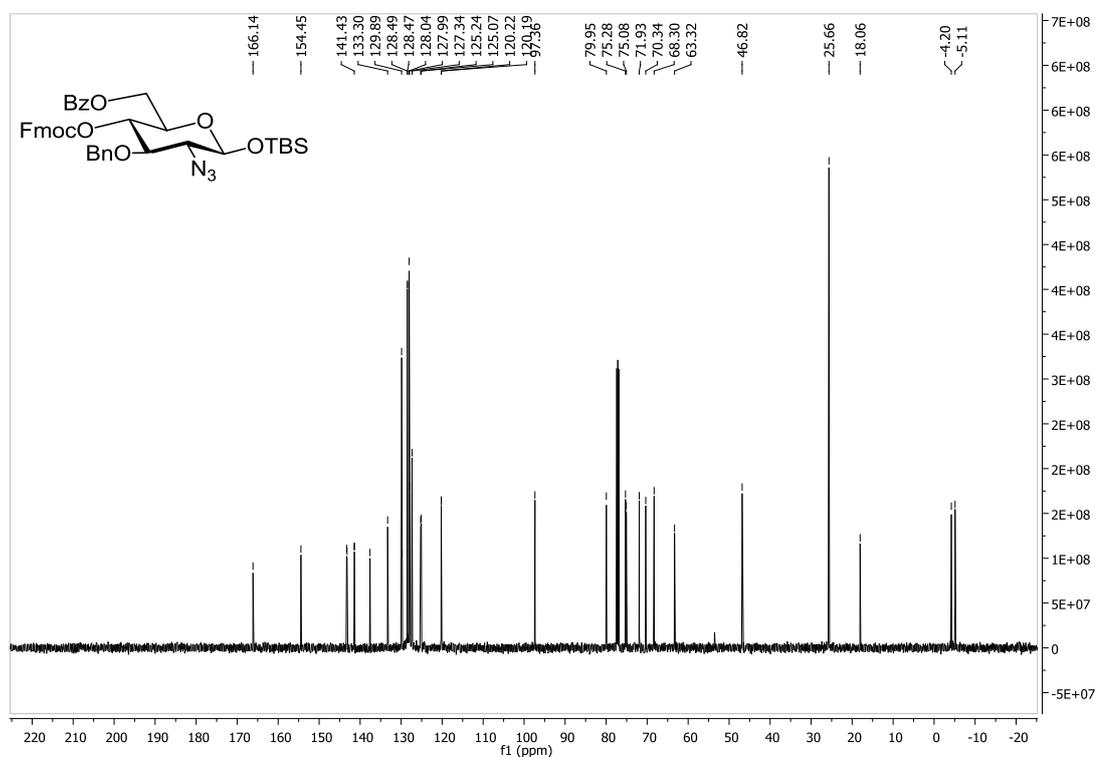
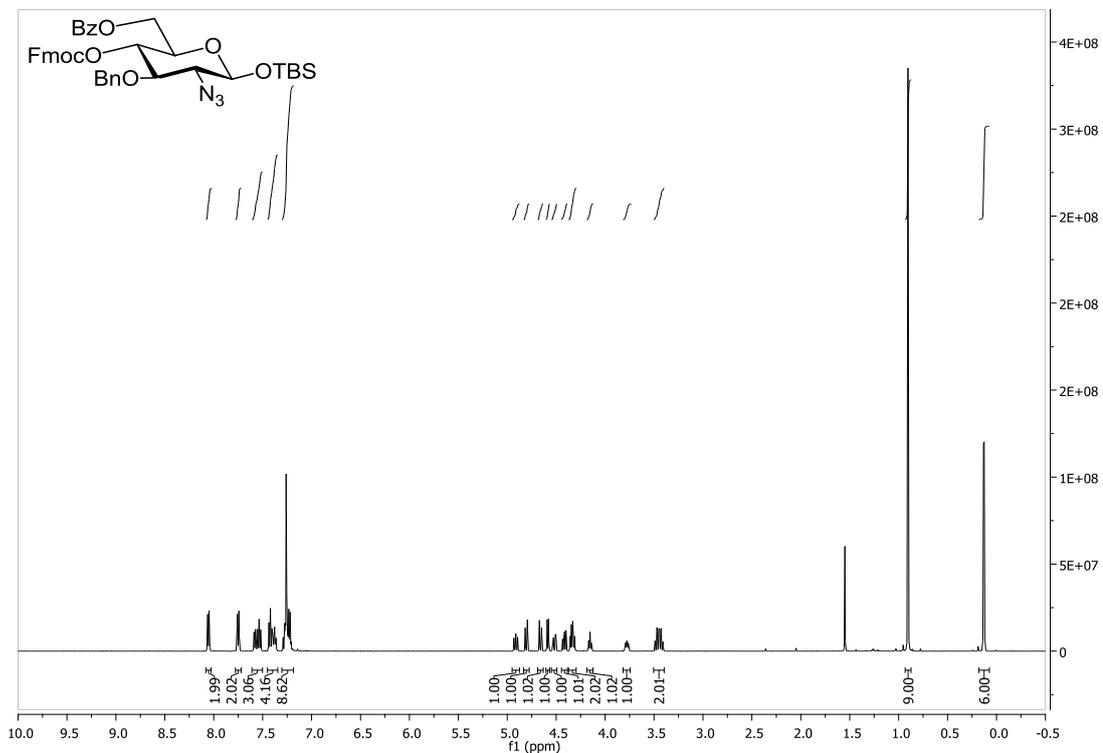
Methyl (Phenyl 3-O-benzyl-2-O-levulinoyl-1-thio- α -L-idopyranoside) uronate (11)



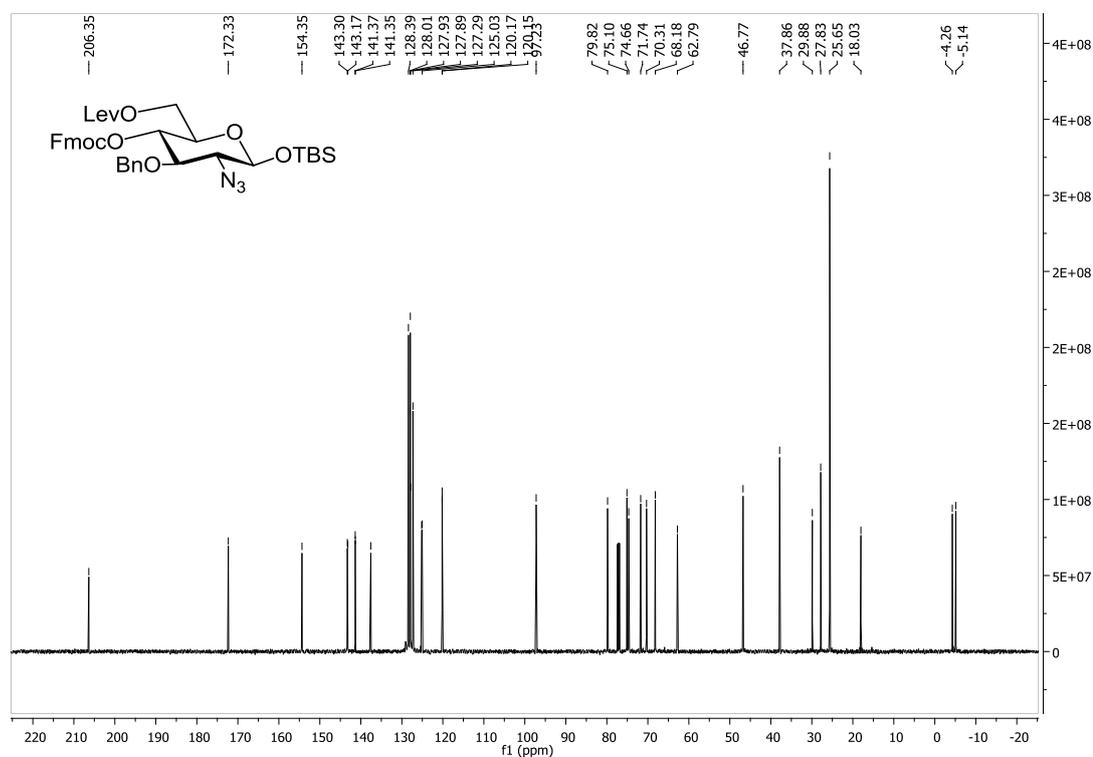
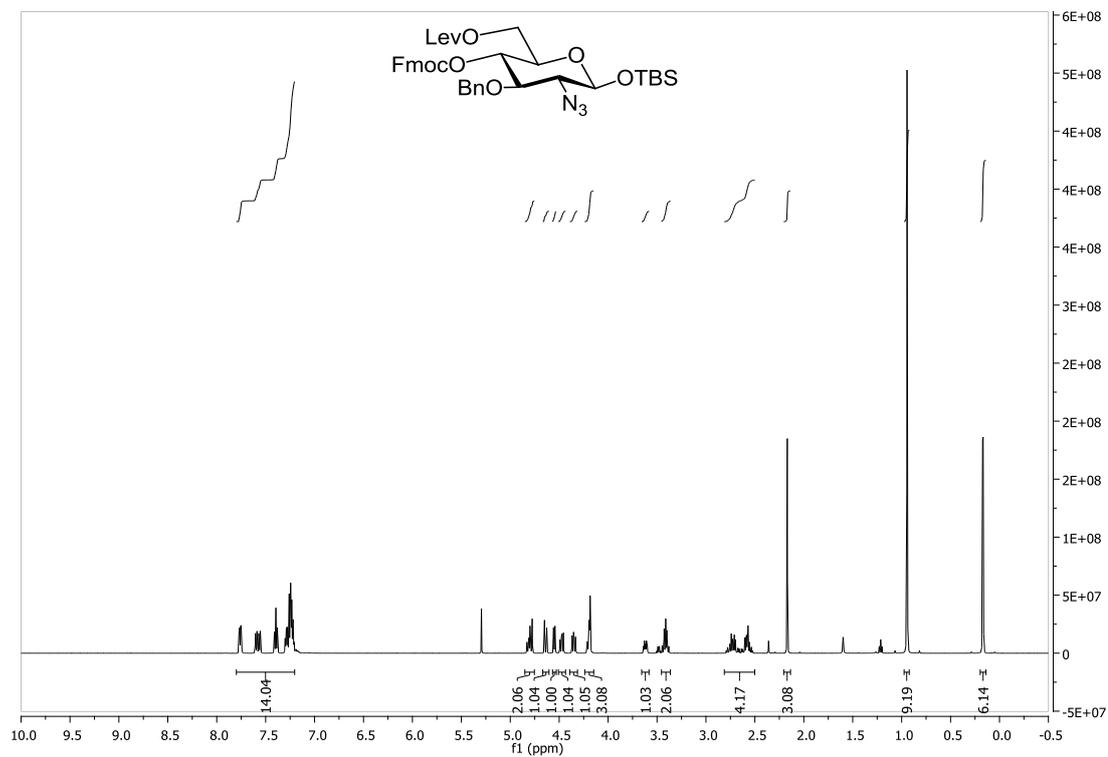
***tert*-Butyldimethylsilyl 2-Azido-3-*O*-benzyl-2-deoxy-6-*O*-levulinoyl- β -D-glucopyranoside (19)**



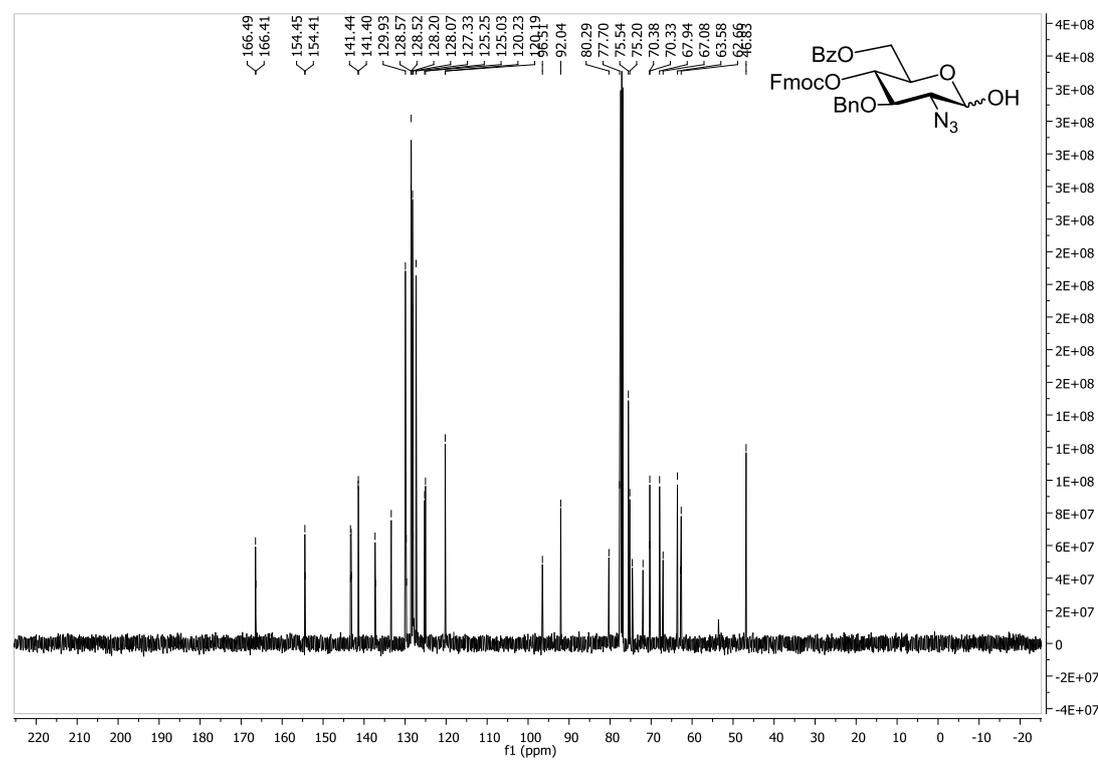
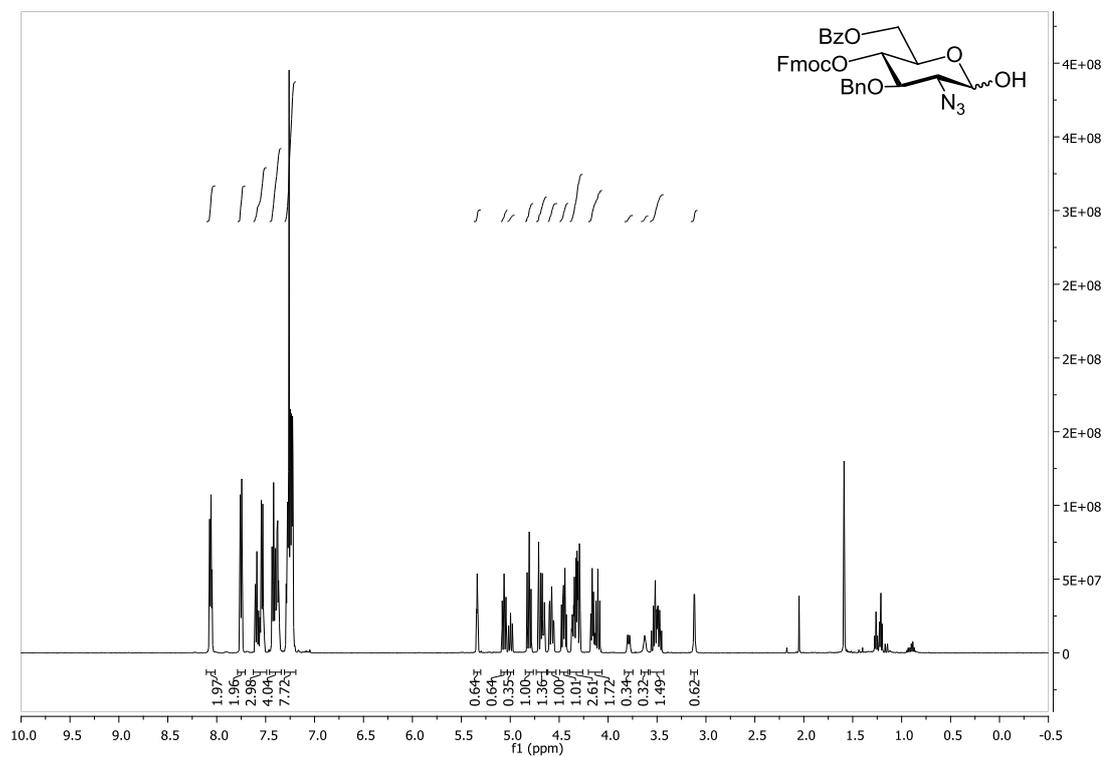
***tert*-Butyldimethylsilyl 2-Azido-6-*O*-benzoyl-3-*O*-benzyl-2-deoxy-4-*O*-(9-fluorenyl-methoxycarbonyl)- β -D-glucopyranoside (20)**



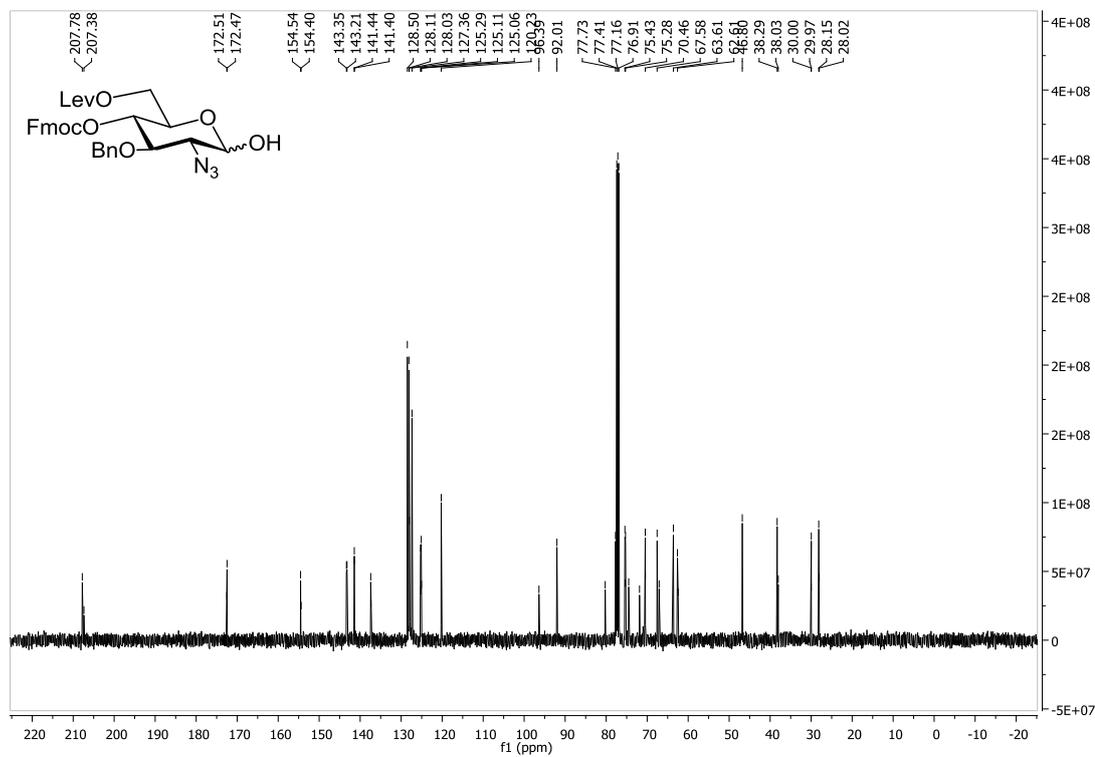
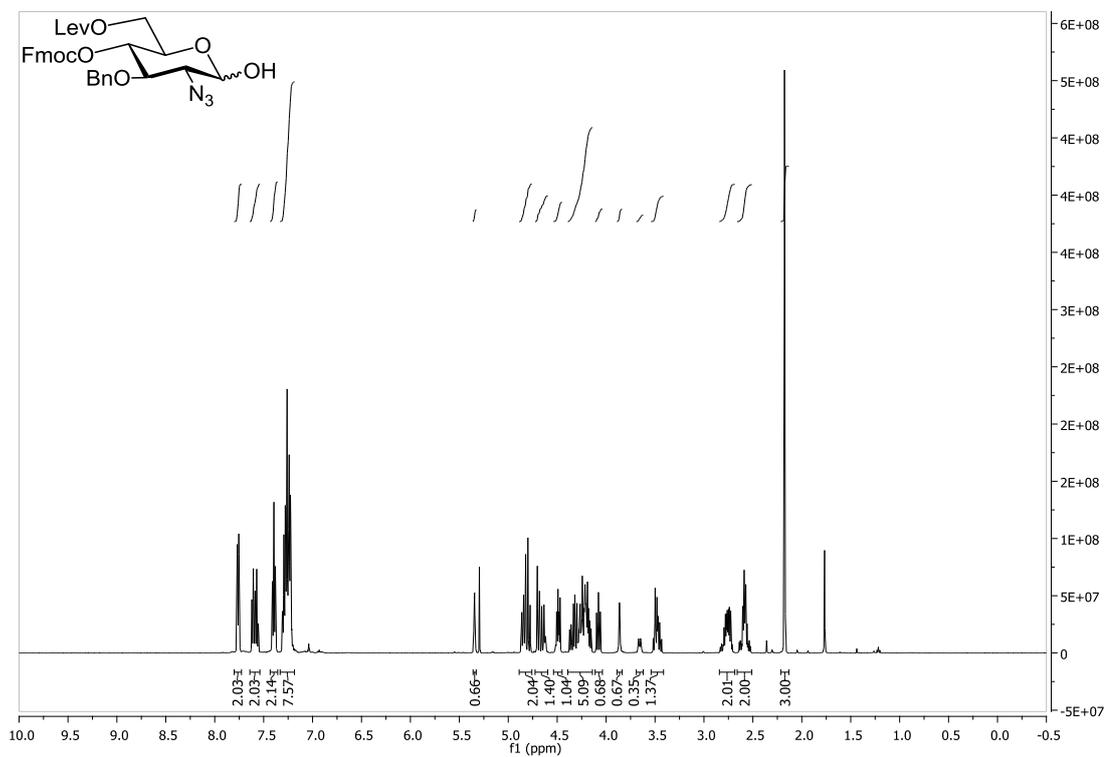
***tert*-Butyldimethylsilyl 2-Azido-3-*O*-benzyl-2-deoxy-4-*O*-(9-fluorenylmethoxy-carbonyl)-6-*O*-levulinoyl- β -D-glucopyranoside (21)**



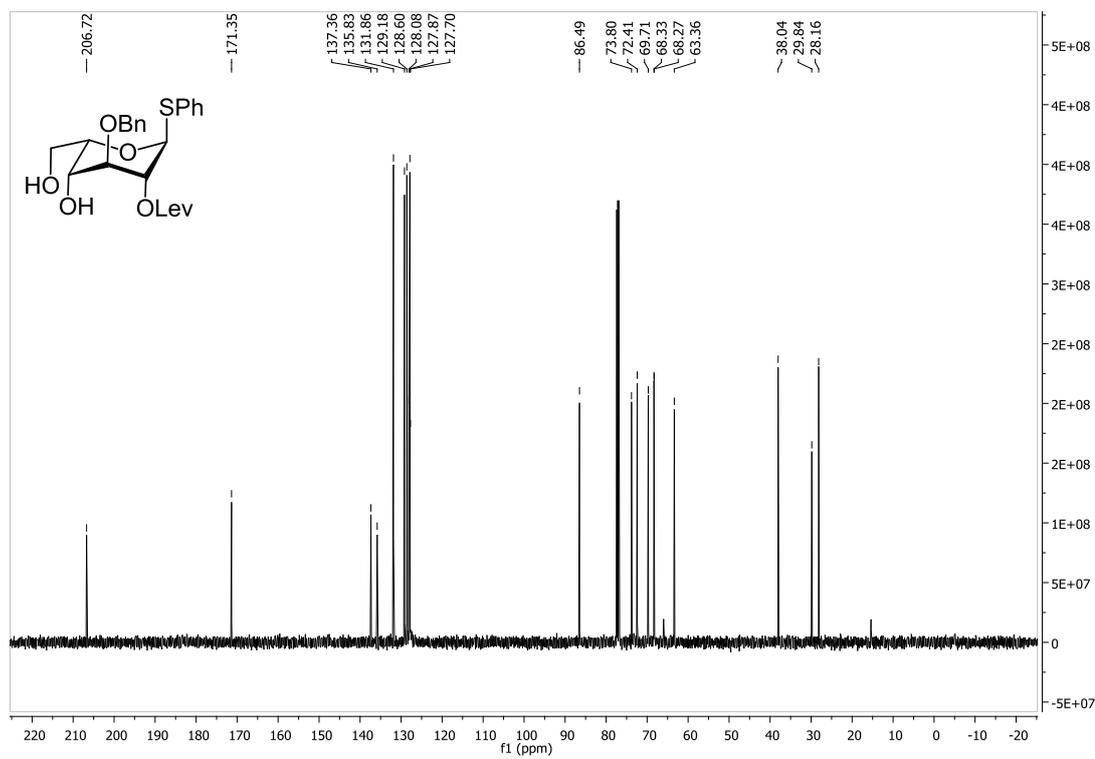
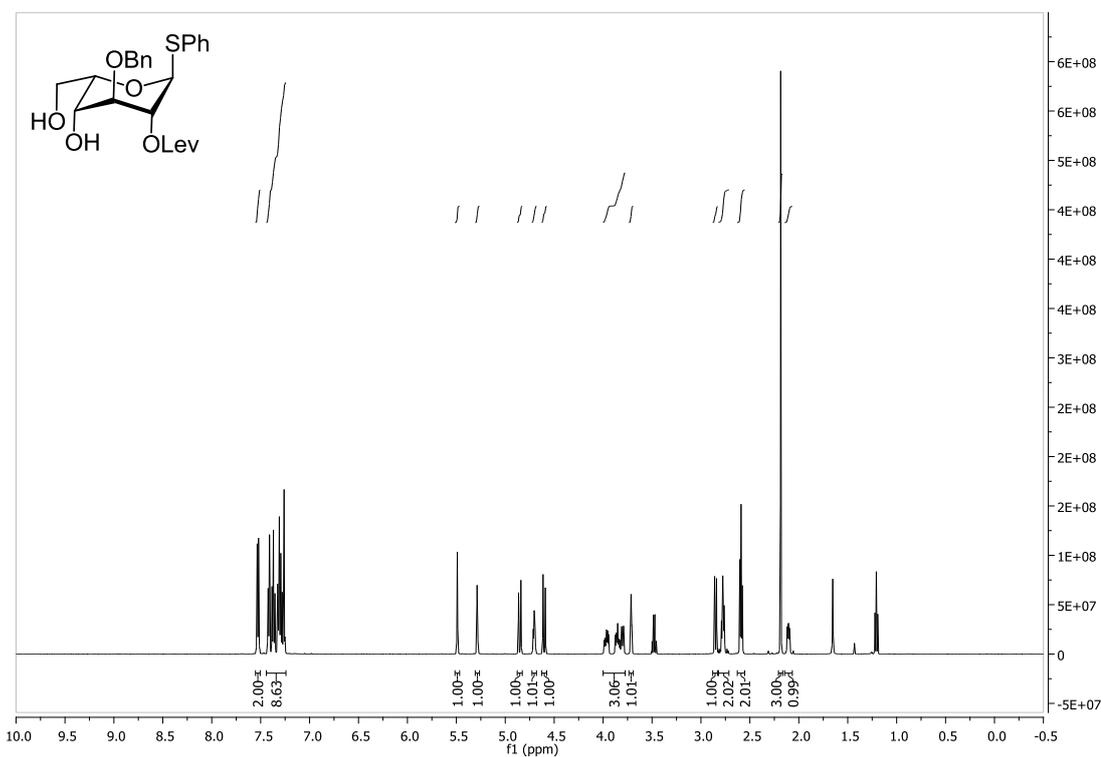
2-Azido-6-O-benzoyl-3-O-benzyl-2-deoxy-4-O-(9-fluorenylmethoxycarbonyl)- α/β -D-glucopyranose (22)



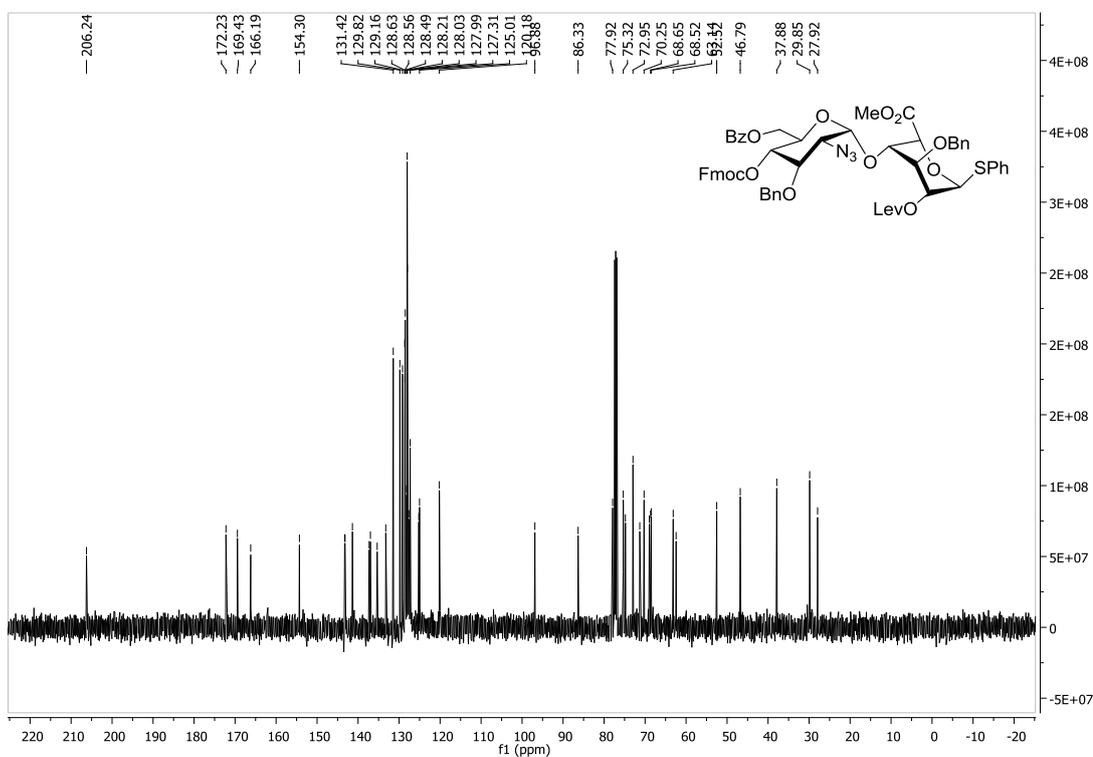
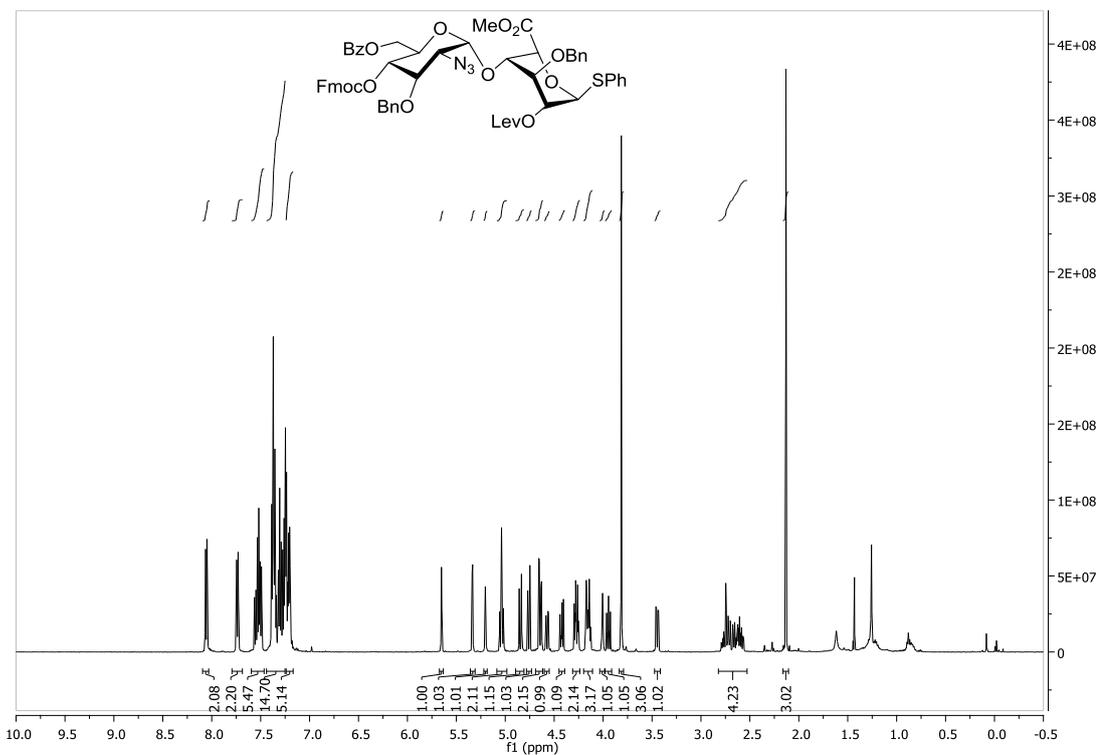
2-Azido-3-O-benzyl-2-deoxy-4-O-(9-fluorenylmethoxycarbonyl)-6-O-levulinoyl- α/β -D-glucopyranose (23)



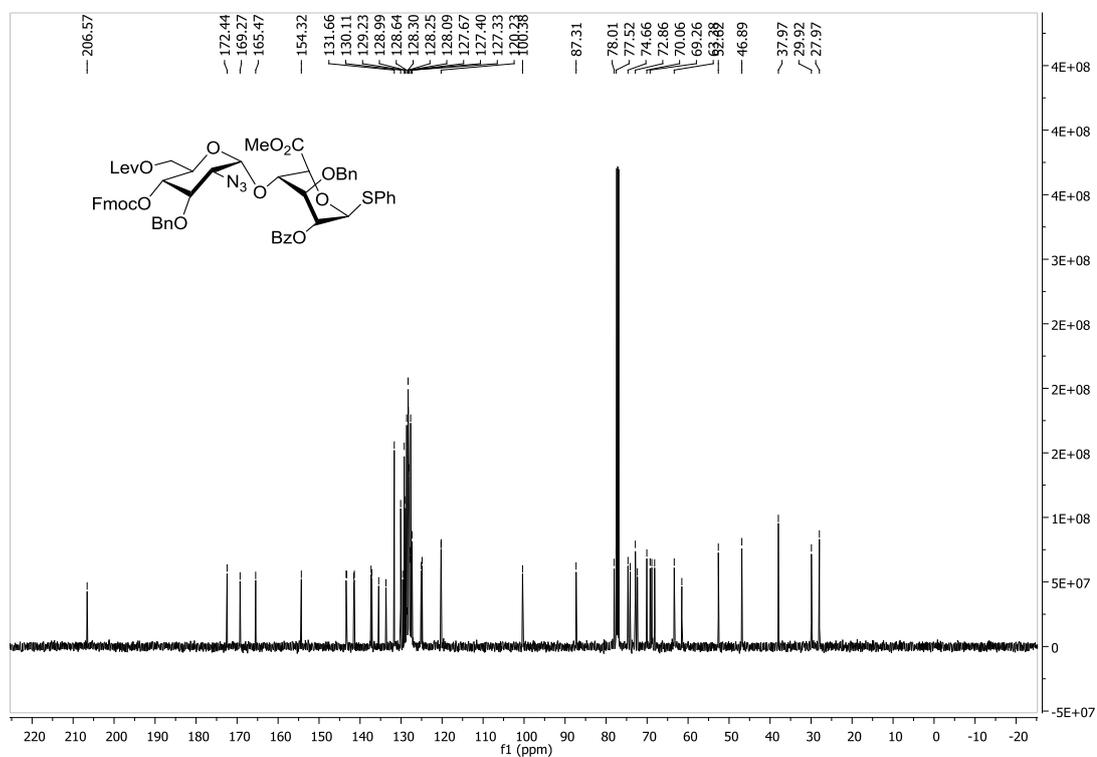
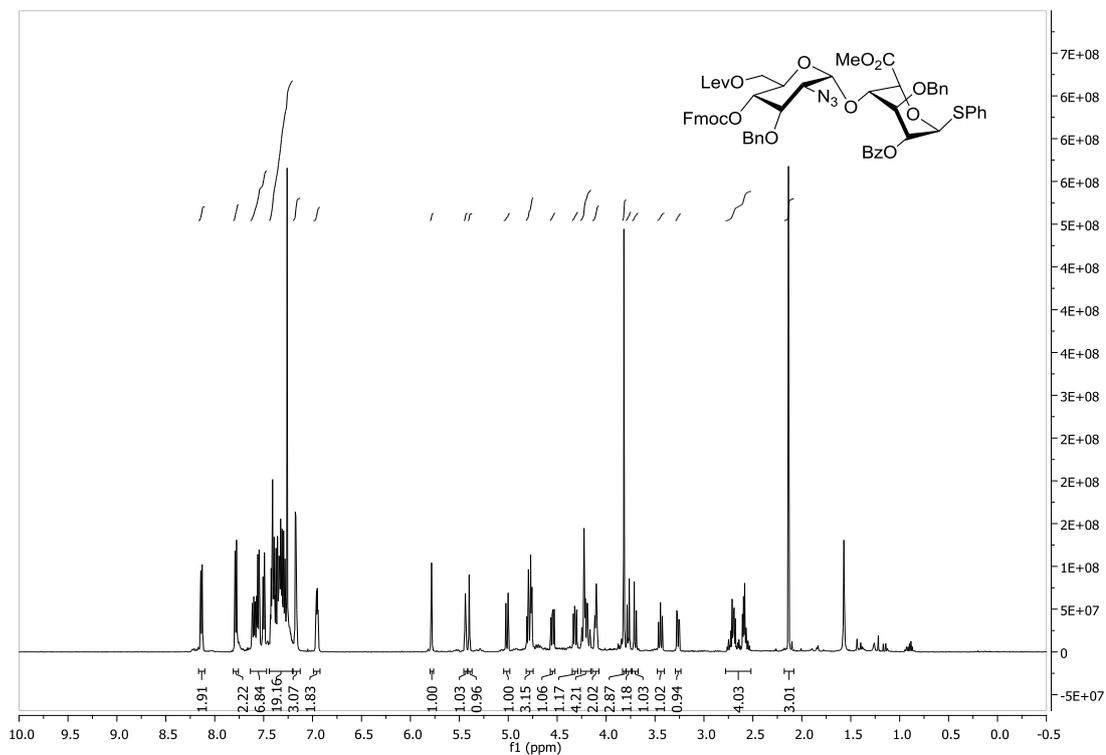
Phenyl 3-*O*-benzyl-2-*O*-levulinoyl-1-thio- α -L-idopyranoside (37)



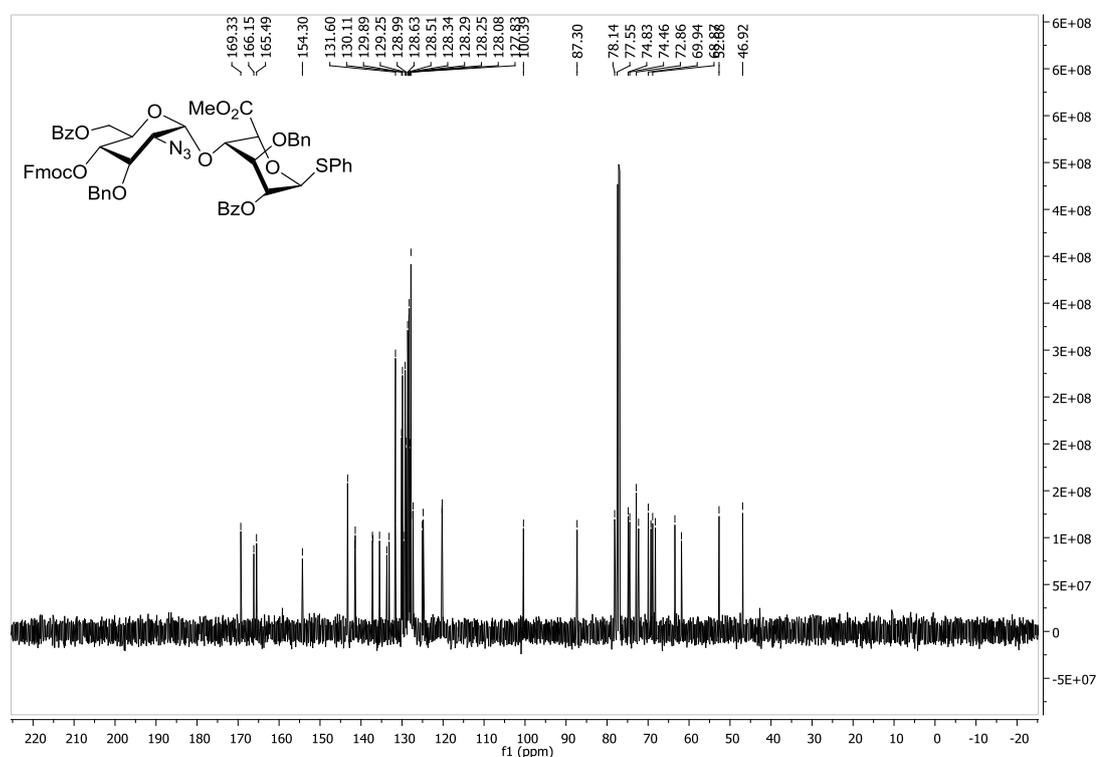
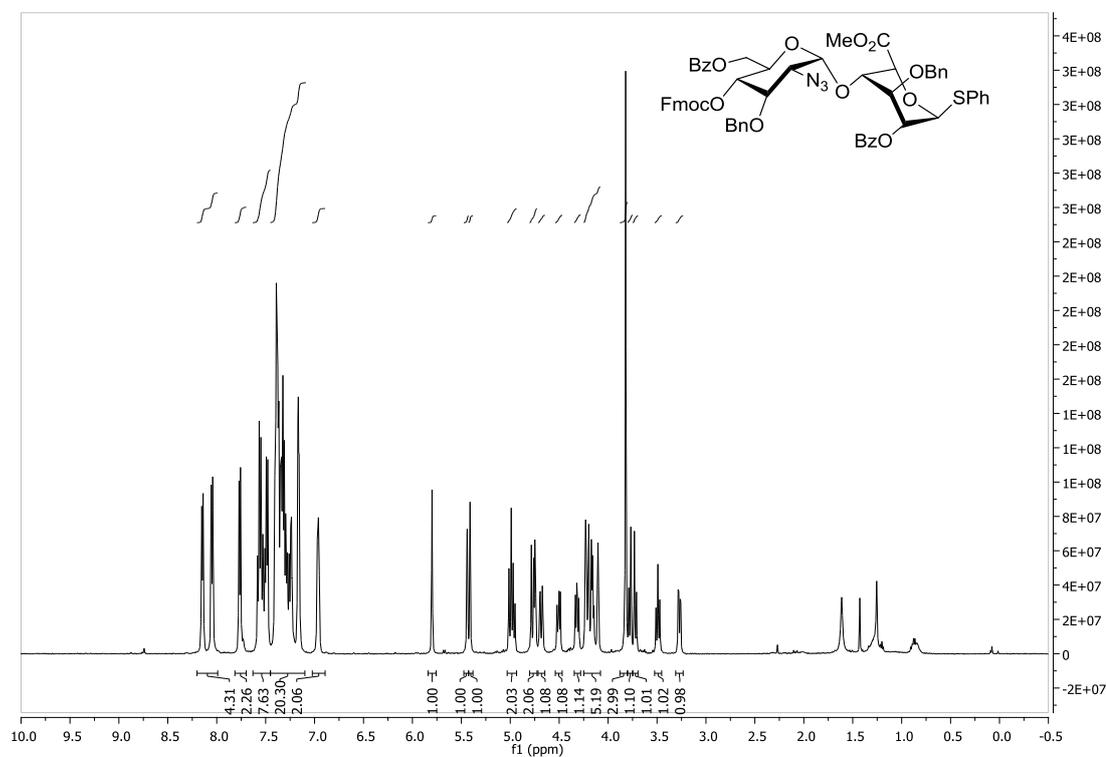
Methyl (Phenyl [2-azido-6-*O*-benzoyl-3-*O*-benzyl-2-deoxy-4-*O*-(9-fluorenyl-methoxycarbonyl)- α -D-glucopyranosyl]-3-*O*-benzyl-2-*O*-levulinoyl-1-thio- α -L-idopyranoside) uronate (38)



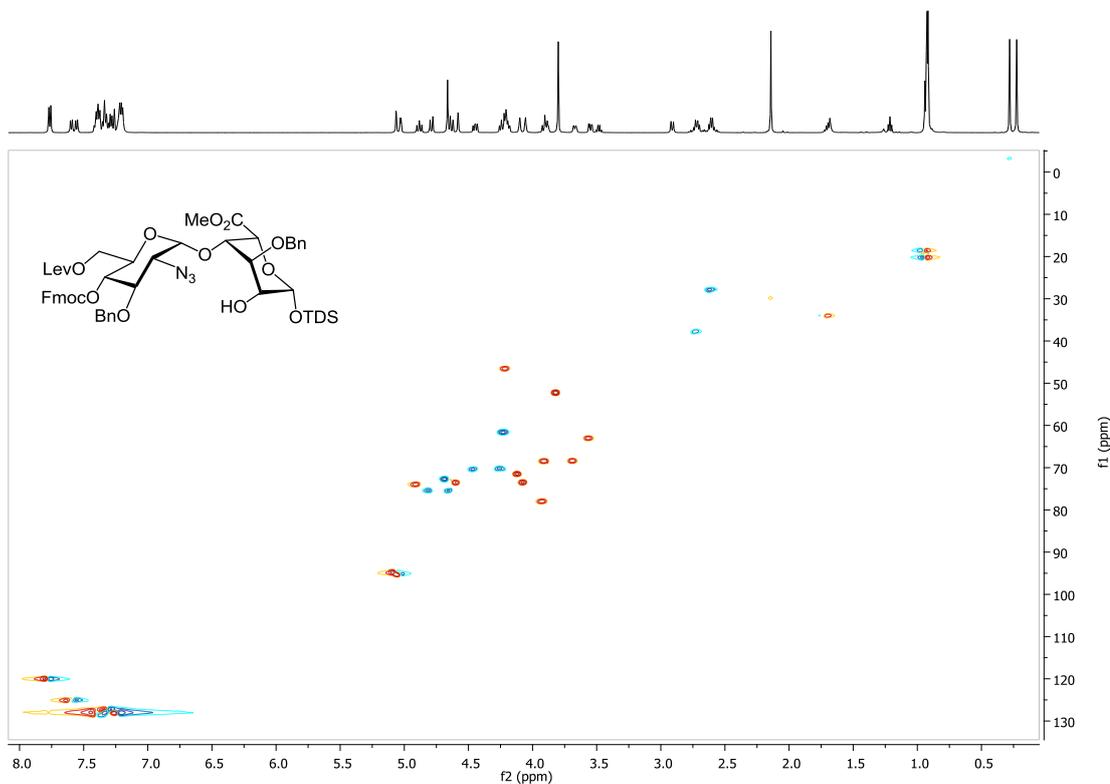
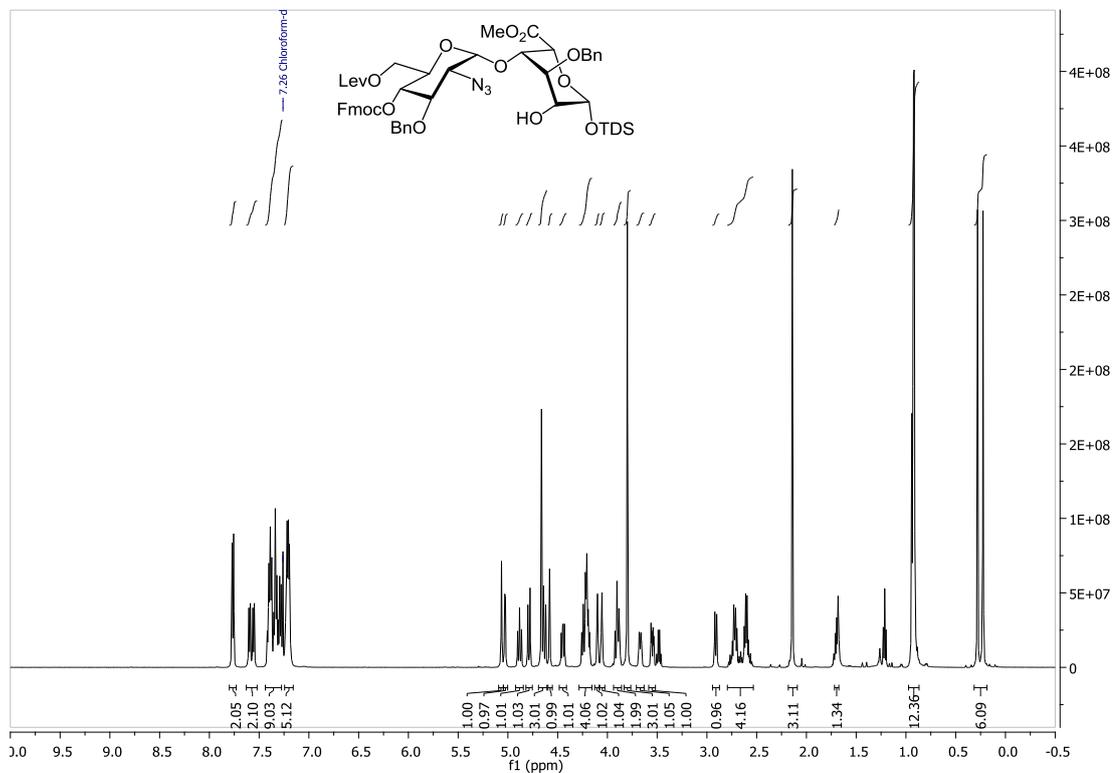
Methyl (Phenyl [2-azido-3-*O*-benzyl-2-deoxy-4-*O*-(9-fluorenylmethoxy-carbonyl)-6-*O*-levulinoyl - α -D-glucopyranosyl]-2-*O*-benzoyl-3-*O*-benzyl-1-thio- α -L-idopyranoside) uronate (39)



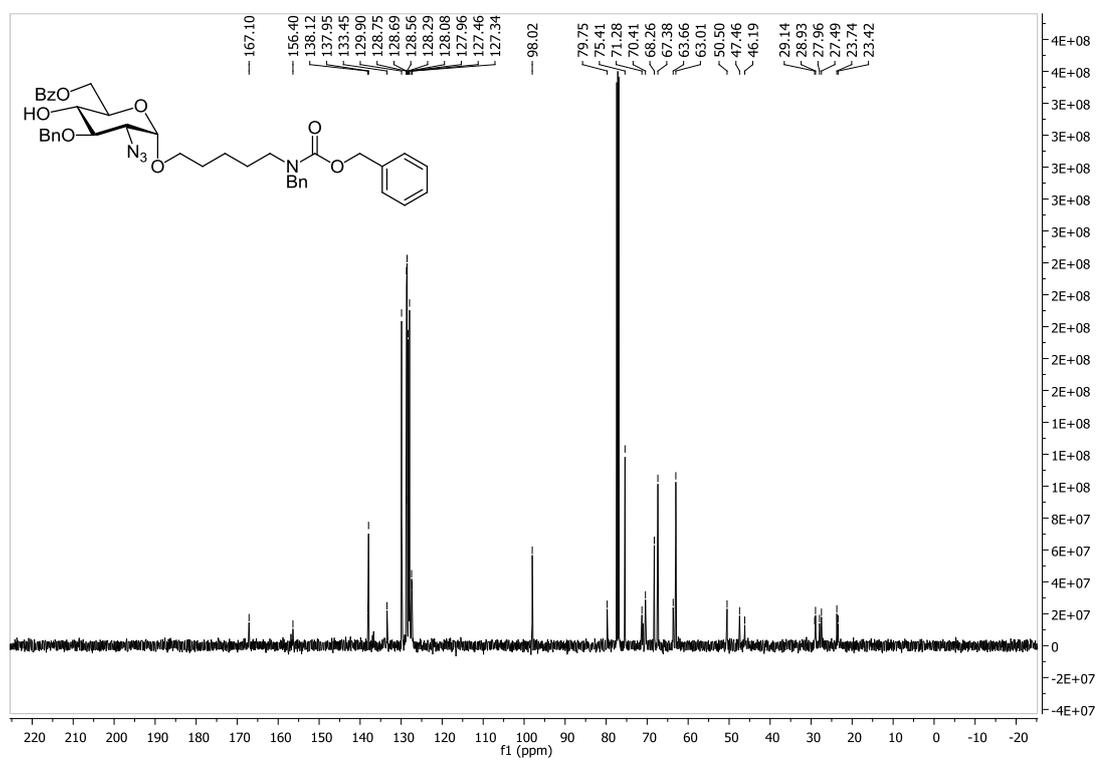
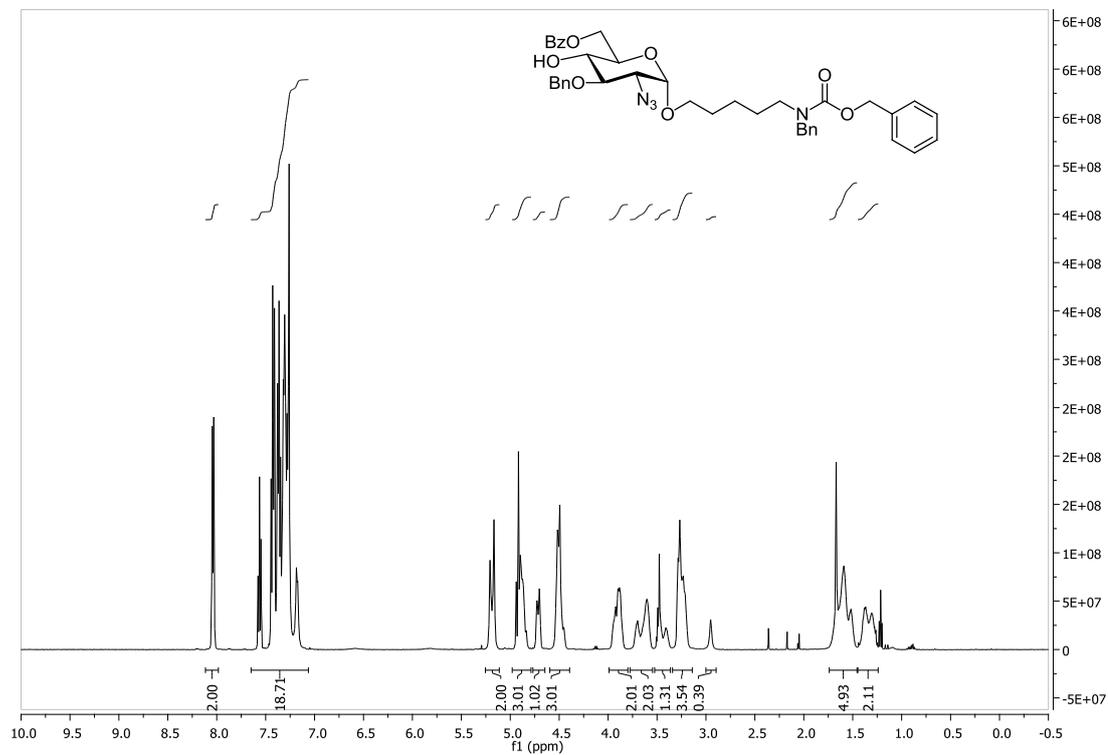
Methyl (Phenyl [2-azido-6-O-benzoyl-3-O-benzyl-2-deoxy-4-O-(9-fluorenyl-methoxycarbonyl)- α -D-glucopyranosyl]-2-O-benzoyl-3-O-benzyl-1-thio- α -L-idopyranoside) uronate (40)



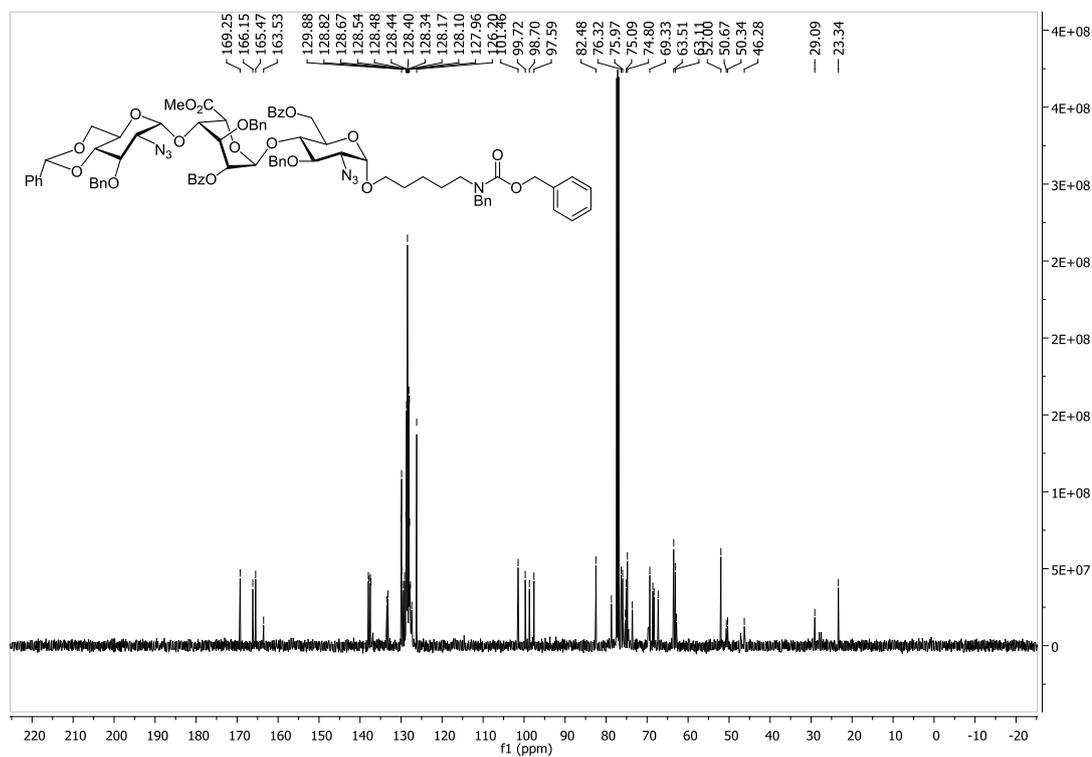
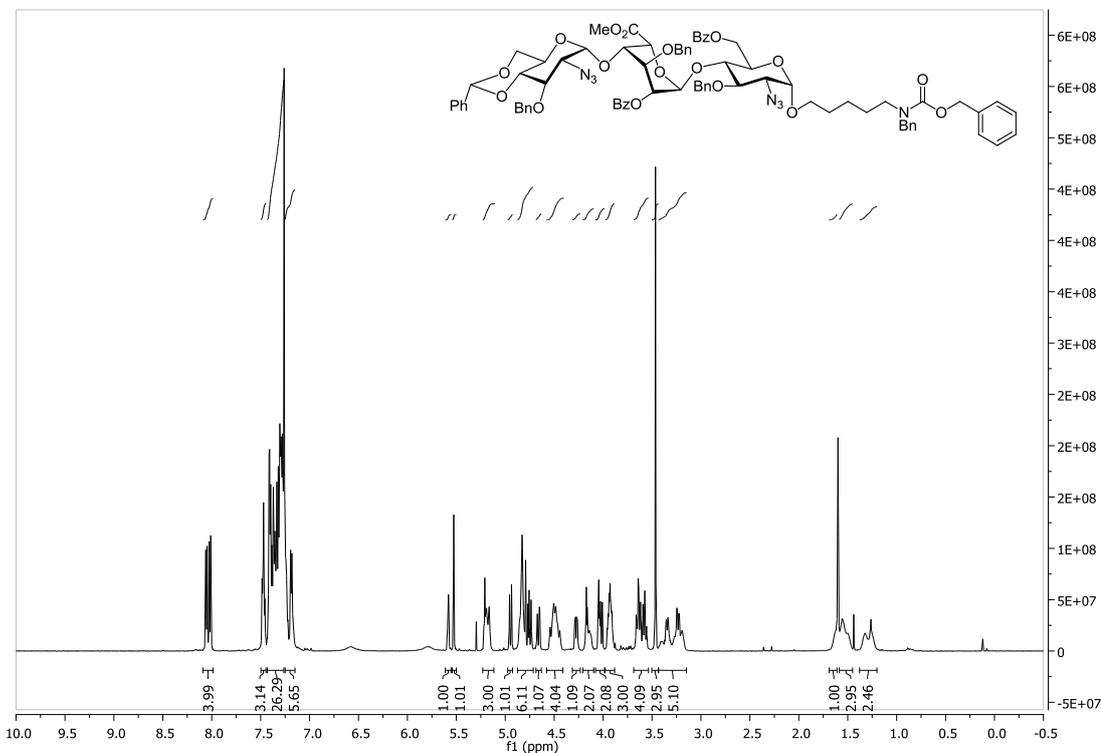
Methyl (Dimethylhexylsilyl 4-*O*-[2-Azido-3-*O*-benzyl-2-deoxy-4-*O*-(9-fluorenyl-methoxycarbonyl)-6-*O*-levulinoyl- α -D-glucopyranosyl]-3-*O*-benzyl- β -L-ido-pyranoside) uronate (48)



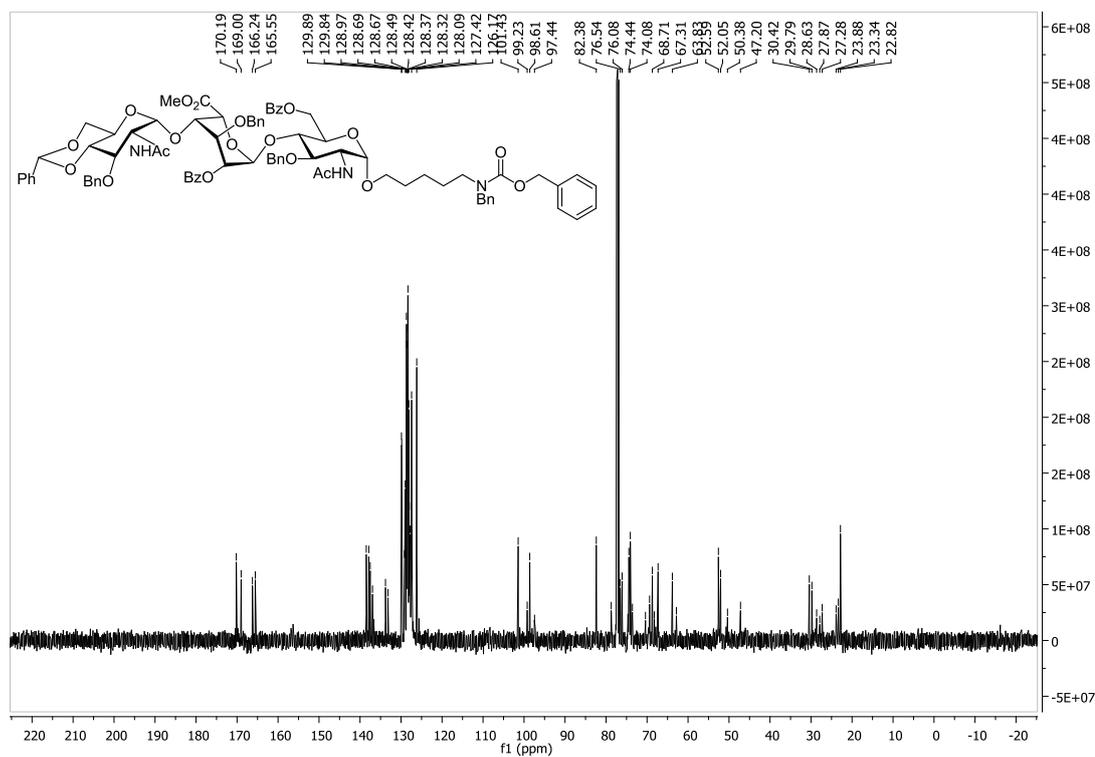
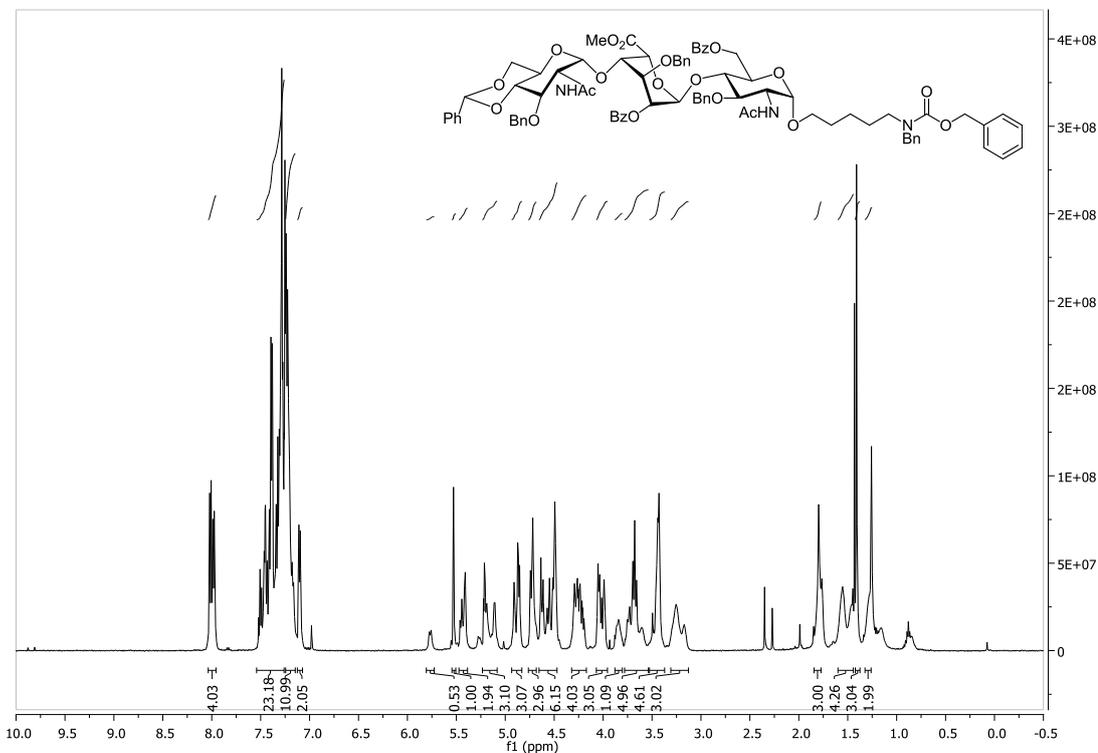
***N*-(Benzyl)-benzyloxycarbonyl-5-aminopentyl 2-Azido-6-*O*-benzoyl-3-*O*-benzyl-2-deoxy- α -D-glucopyranoside (58)**



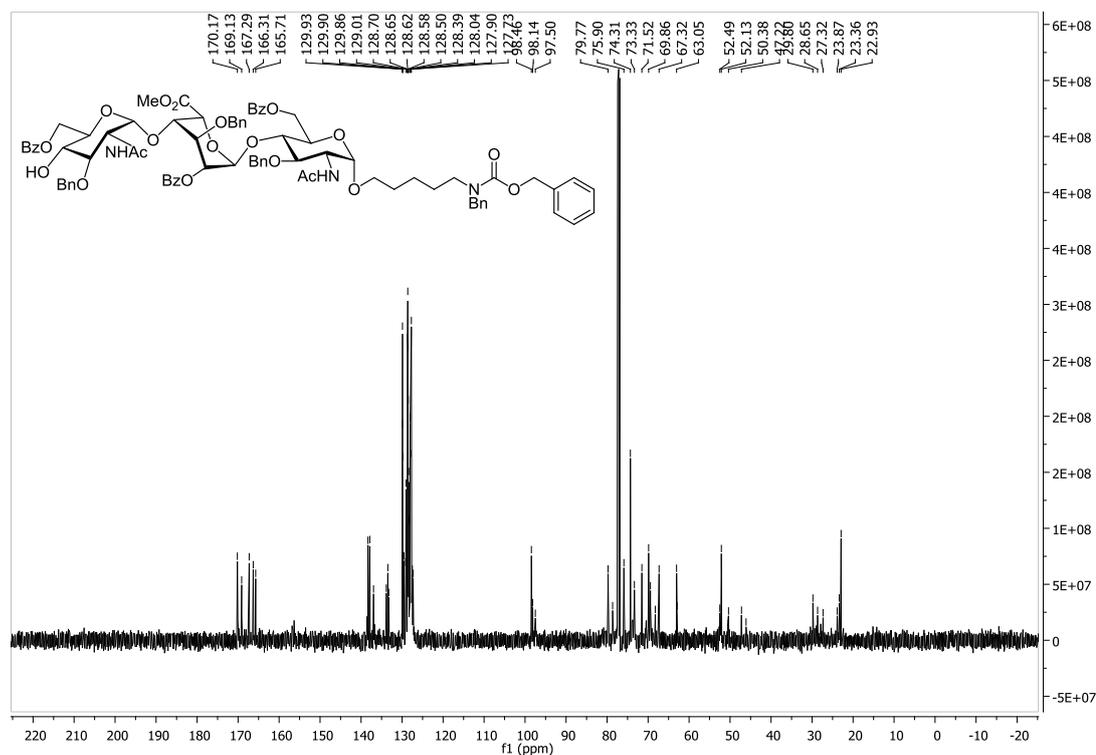
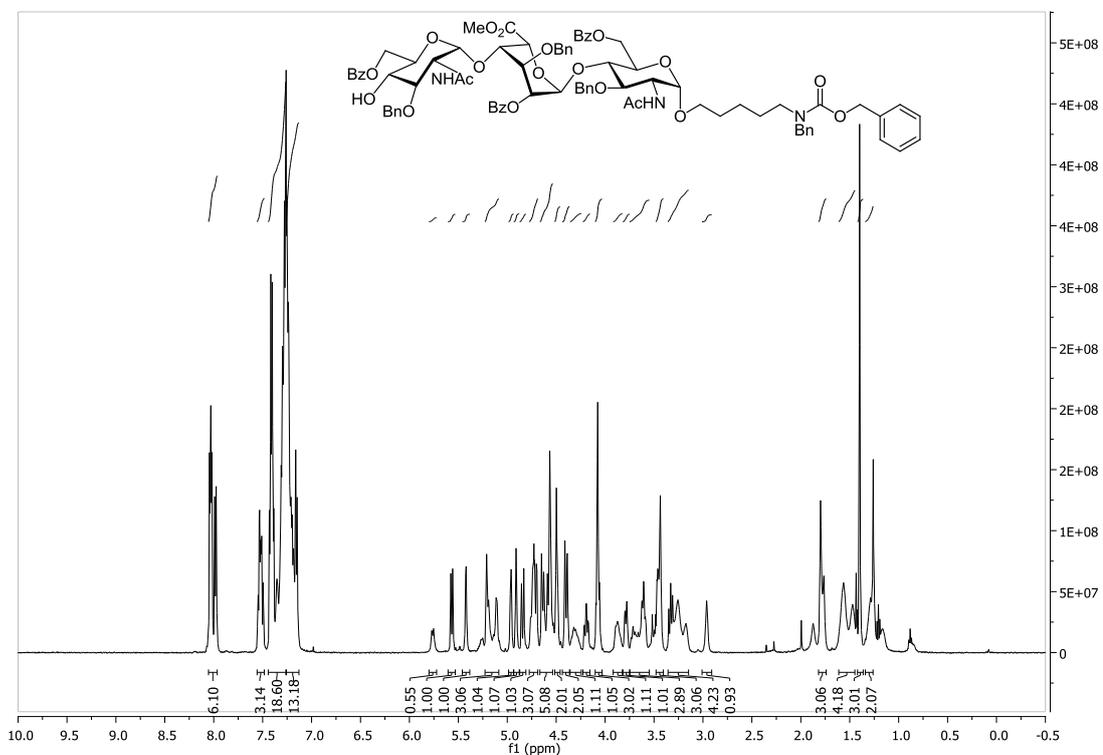
***N*-(Benzyl)-benzyloxycarbonyl-5-aminopentyl (2-azido-3-*O*-benzyl-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranosyl)-(1 \rightarrow 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- α -L-idopyranosyluronate)-(1 \rightarrow 4)-2-azido-3-*O*-benzyl-6-*O*-benzoyl-2-deoxy- α -D-glucopyranoside (59)**



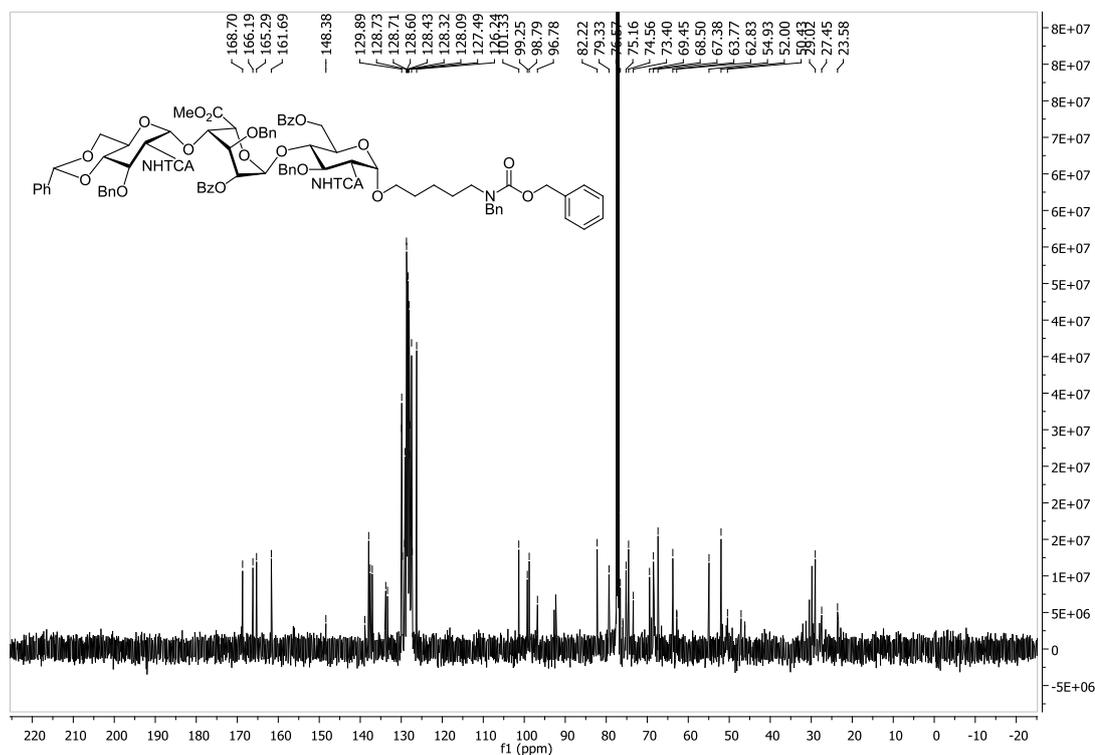
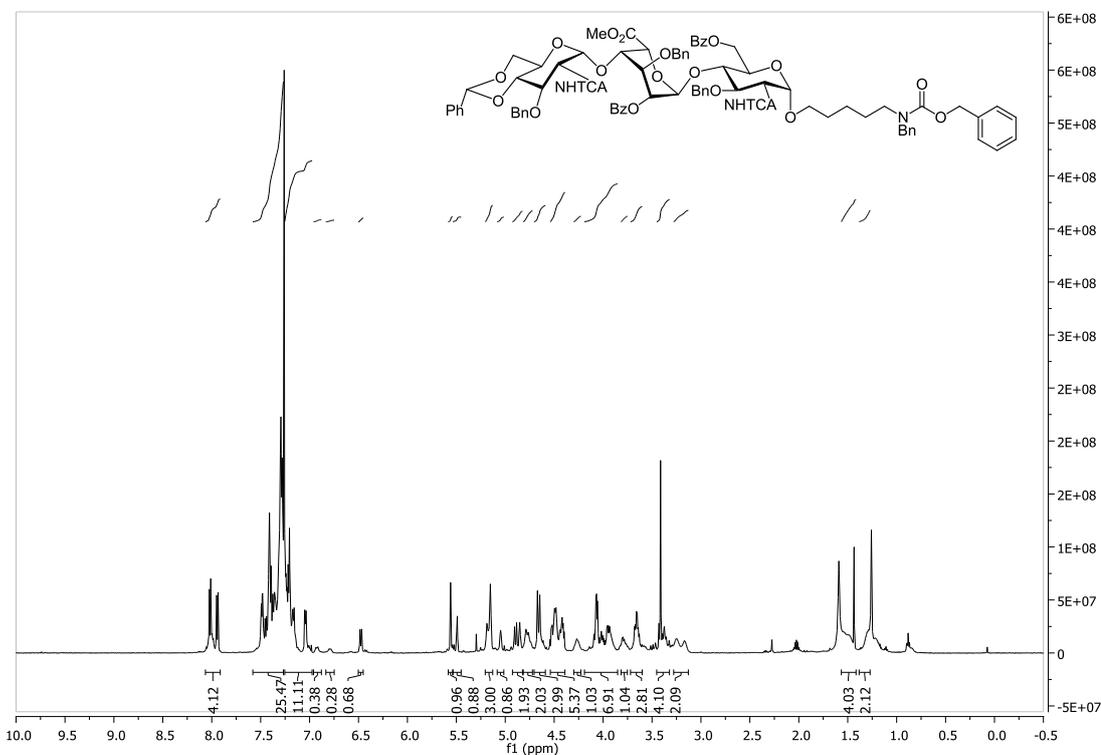
***N*-(Benzyl)-benzyloxycarbonyl-5-aminopentyl (2-acetamido-3-*O*-benzyl-4,6-*O*-benzylidene-2-deoxy- α -D-glucopyranosyl)-(1 \rightarrow 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- α -L-idopyranosyluronate)-(1 \rightarrow 4)-2-acetamido-3-*O*-benzyl-6-*O*-benzoyl-2-deoxy- α -D-glucopyranoside (60)**



***N*-(Benzyl)-benzyloxycarbonyl-5-aminopentyl (2-acetamido-6-*O*-benzoyl-3-*O*-benzyl-2-deoxy- α -D-glucopyranosyl)-(1 \rightarrow 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- α -L-idopyranosyluronate)-(1 \rightarrow 4)-2-acetamido-3-*O*-benzyl-6-*O*-benzoyl-2-deoxy- α -D-glucopyranoside (63)**



***N*-(Benzyl)-benzyloxycarbonyl-5-aminopentyl (3-*O*-benzyl-4,6-*O*-benzylidene-2-deoxy-2-trichloroacetamido- α -D-glucopyranosyl)-(1 \rightarrow 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- α -L-idopyranosyluronate)-(1 \rightarrow 4)-6-*O*-benzoyl-3-*O*-benzyl-2-deoxy-2-trichloroacetamido- α -D-glucopyranoside (65)**



***N*-(Benzyl)-benzyloxycarbonyl-5-aminopentyl (6-*O*-benzoyl-3-*O*-benzyl-2-deoxy-2-trichloroacetamido- α -D-glucopyranosyl)-(1 \rightarrow 4)-(methyl 2-*O*-benzoyl-3-*O*-benzyl- α -L-idopyranosyluronate)]-(1 \rightarrow 4)-6-*O*-benzoyl-3-*O*-benzyl-2-deoxy-2-trichloroacetamido- α -D-glucopyranoside (67)**

