

Figure S 123:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl)oxy]-2-hexanone (133).

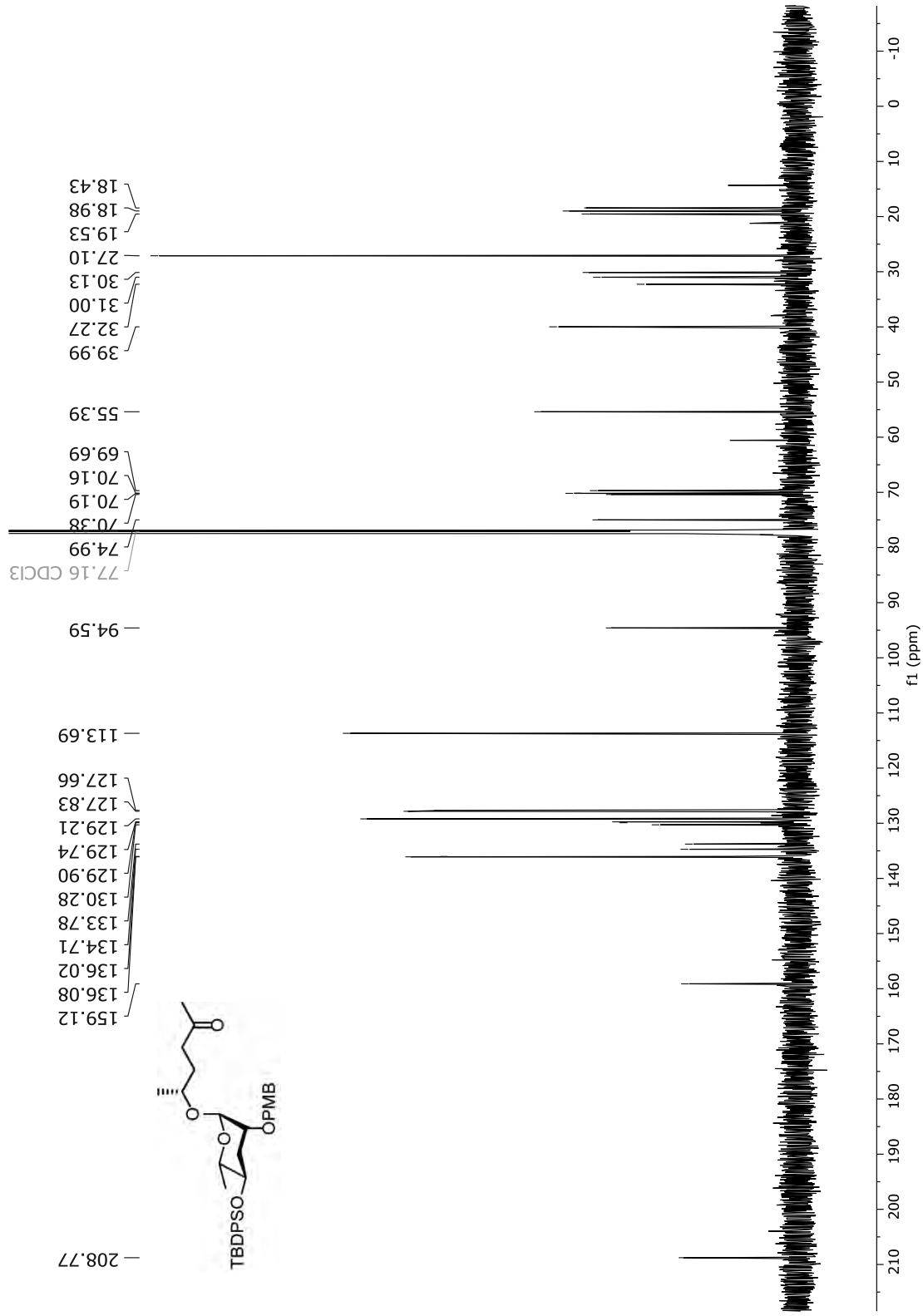


Figure S 124: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl)oxy]-2-hexanone (133).

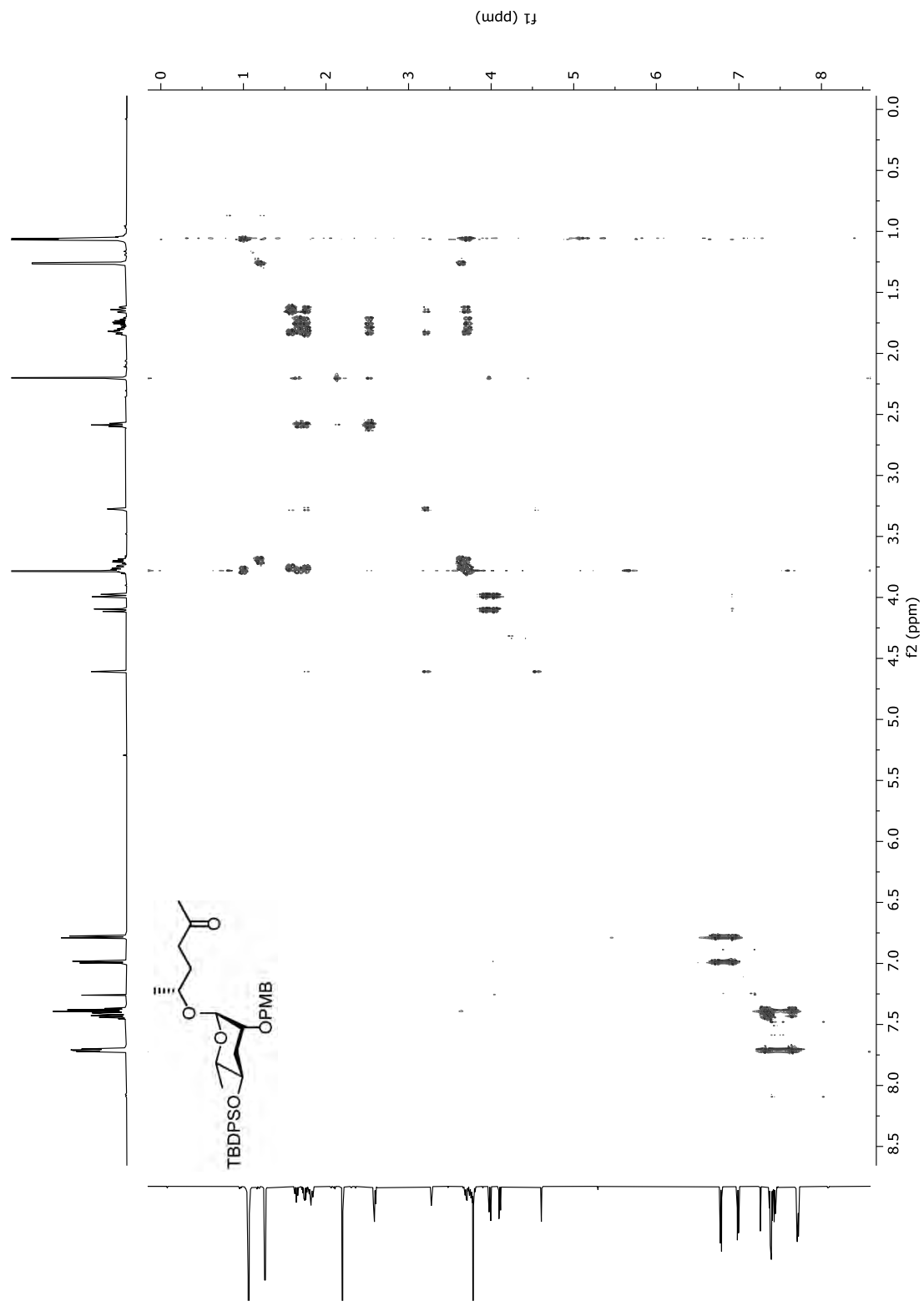


Figure S 125: HSQC (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-hexanone (133).

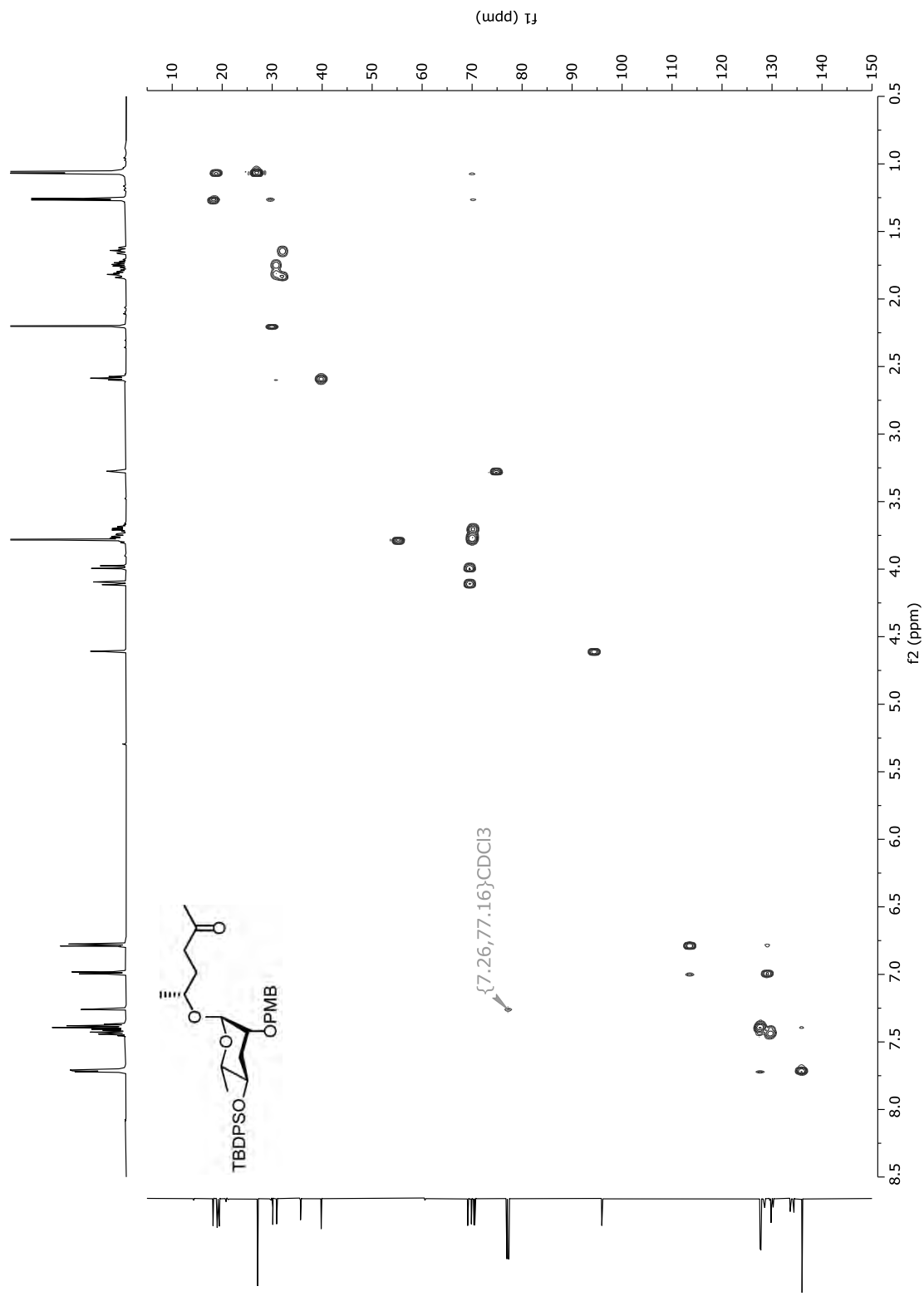


Figure S 126:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-hexanone (134).

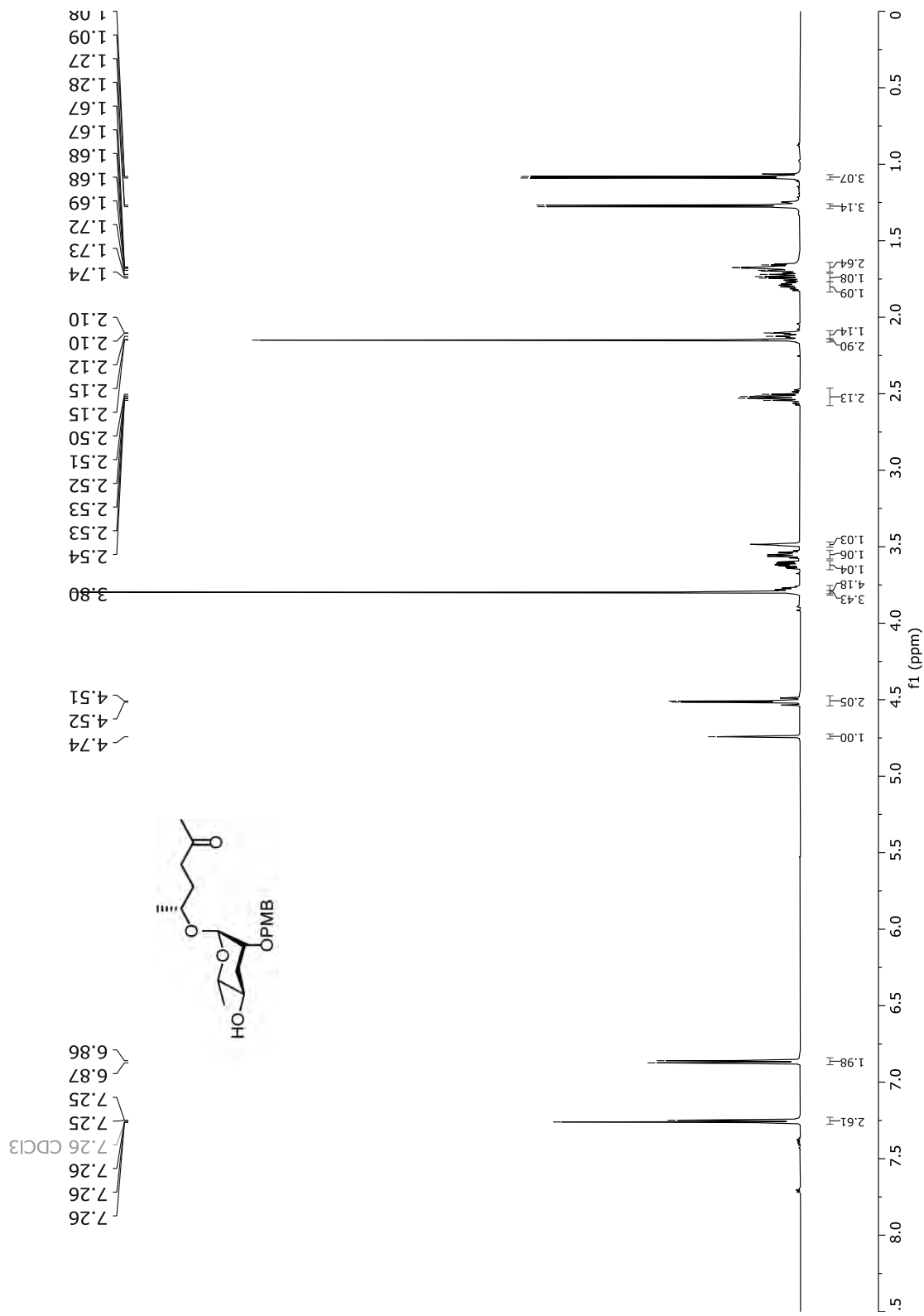


Figure S 127:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-hexanone (134).

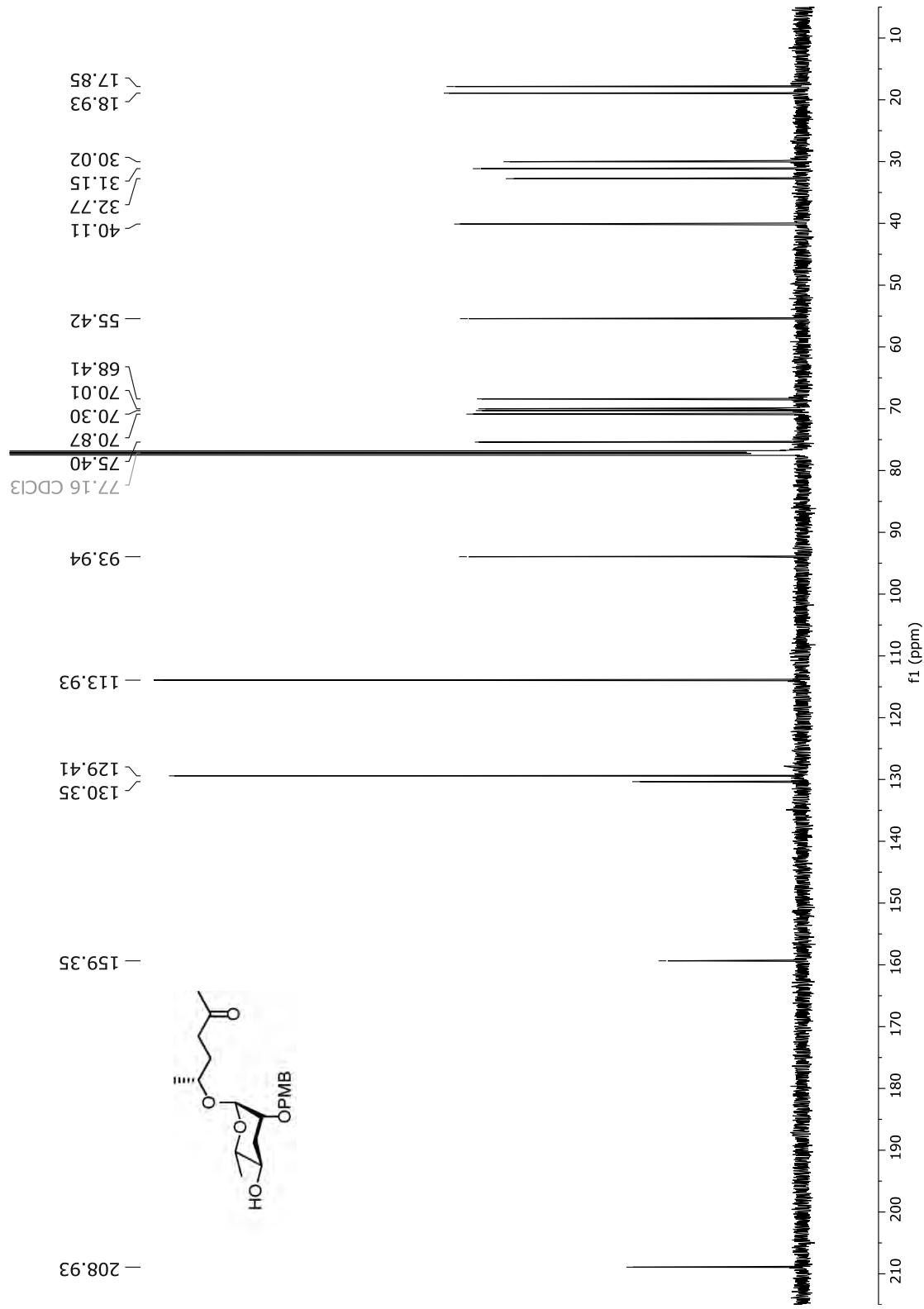


Figure S 128: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl)oxy]-2-hexanone (134).

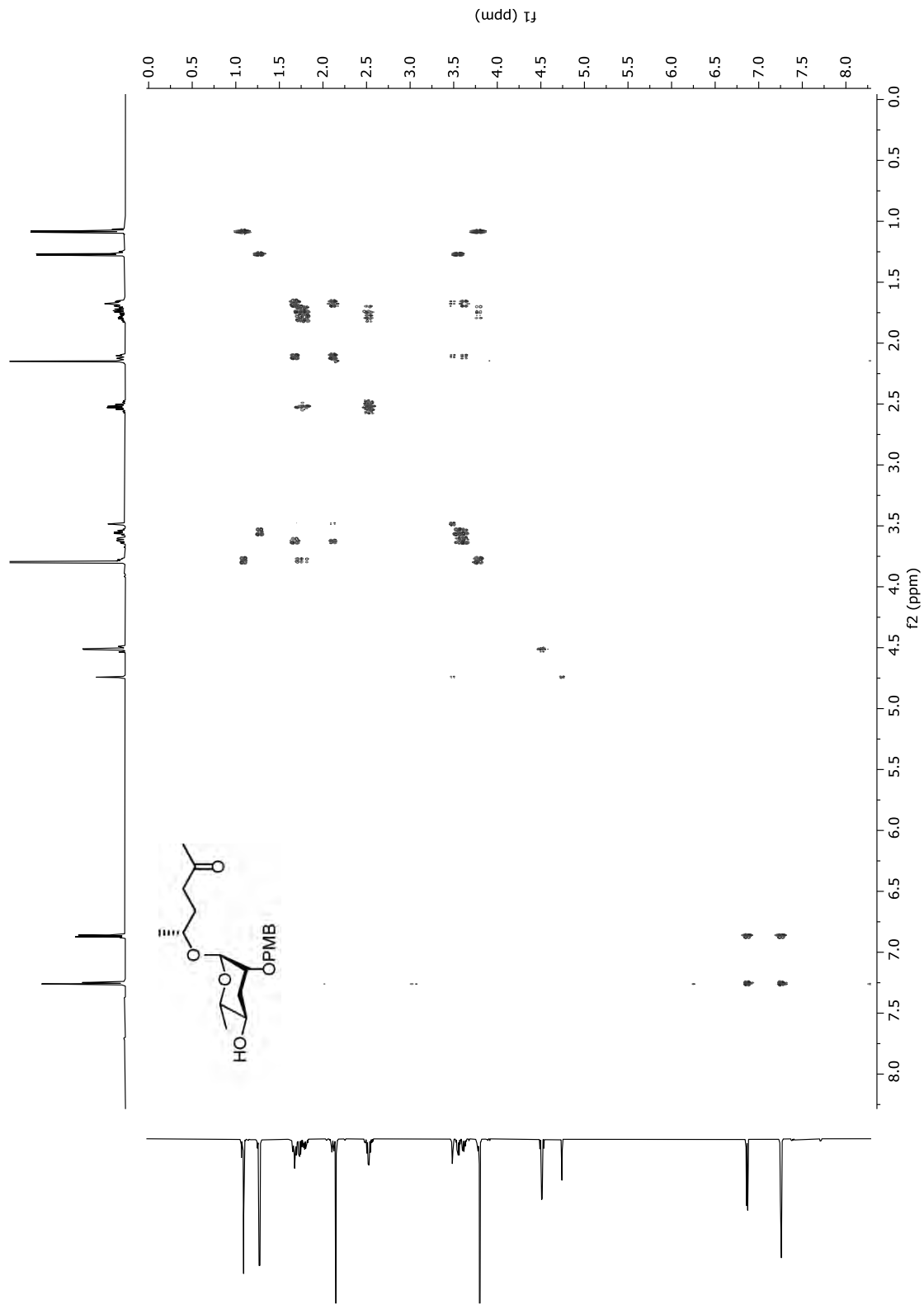


Figure S 129: HSQC (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl)oxy]-2-hexanone (134).

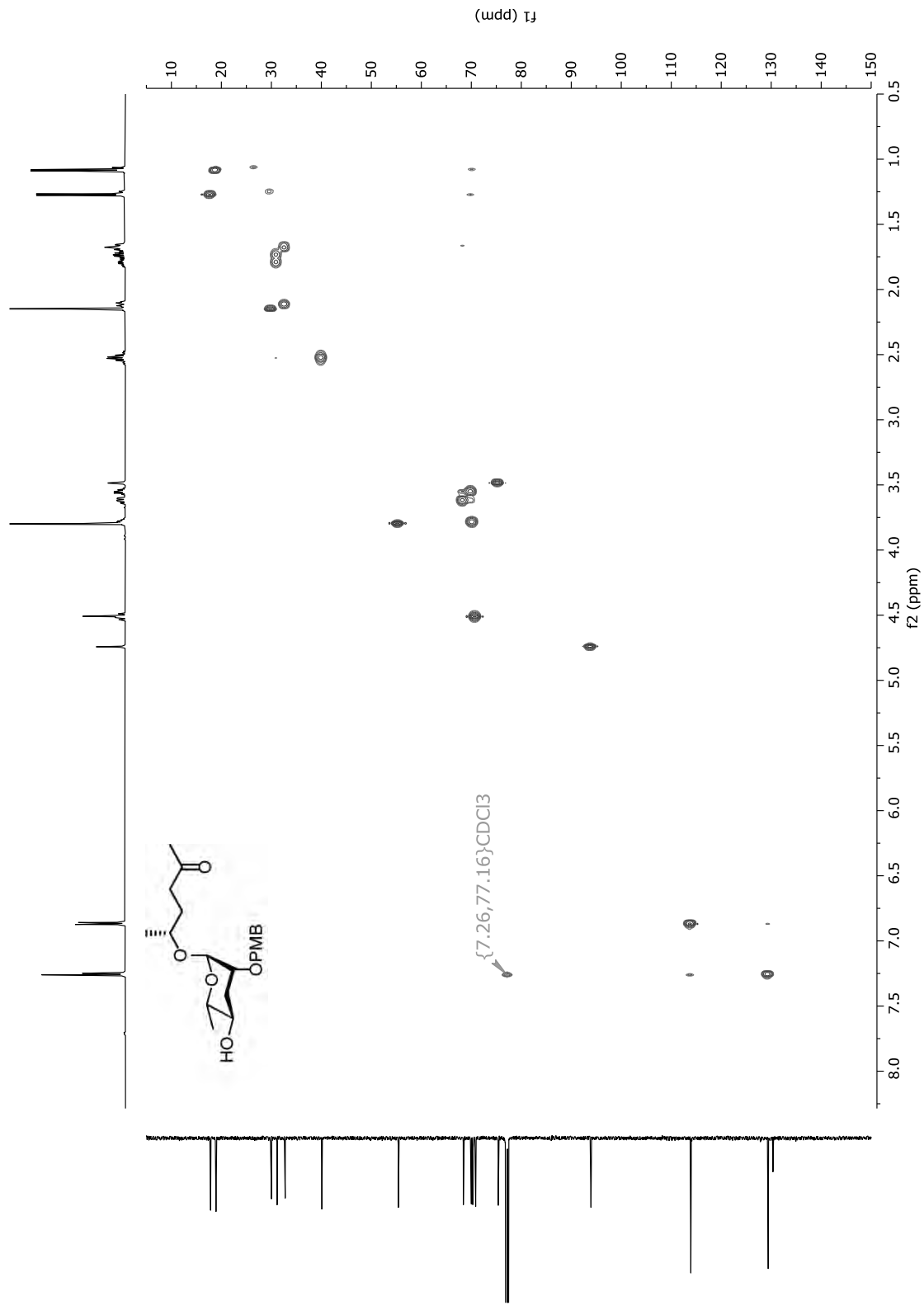


Figure S 130:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-4-*O*-((*E*)-3-(1-(*tert*-butoxycarbonyl)-1*H*-imidazol-4-yl)-propenoate)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-hexanone (135).

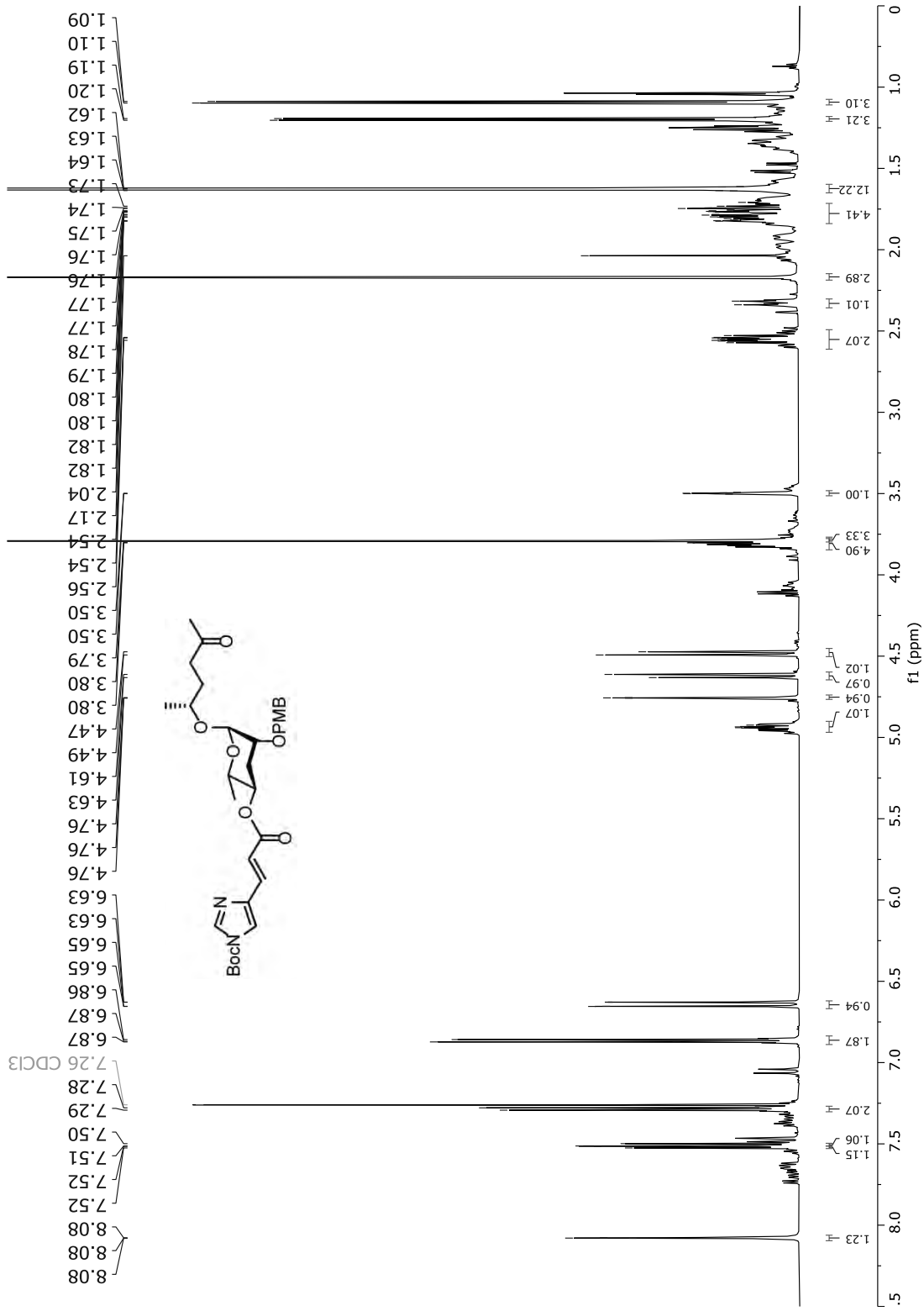


Figure S 131:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-4-*O*-((*E*)-3-(1-(*tert*-butoxycarbonyl)-1*H*-imidazol-4-yl)-propenoate)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-hexanone (135).

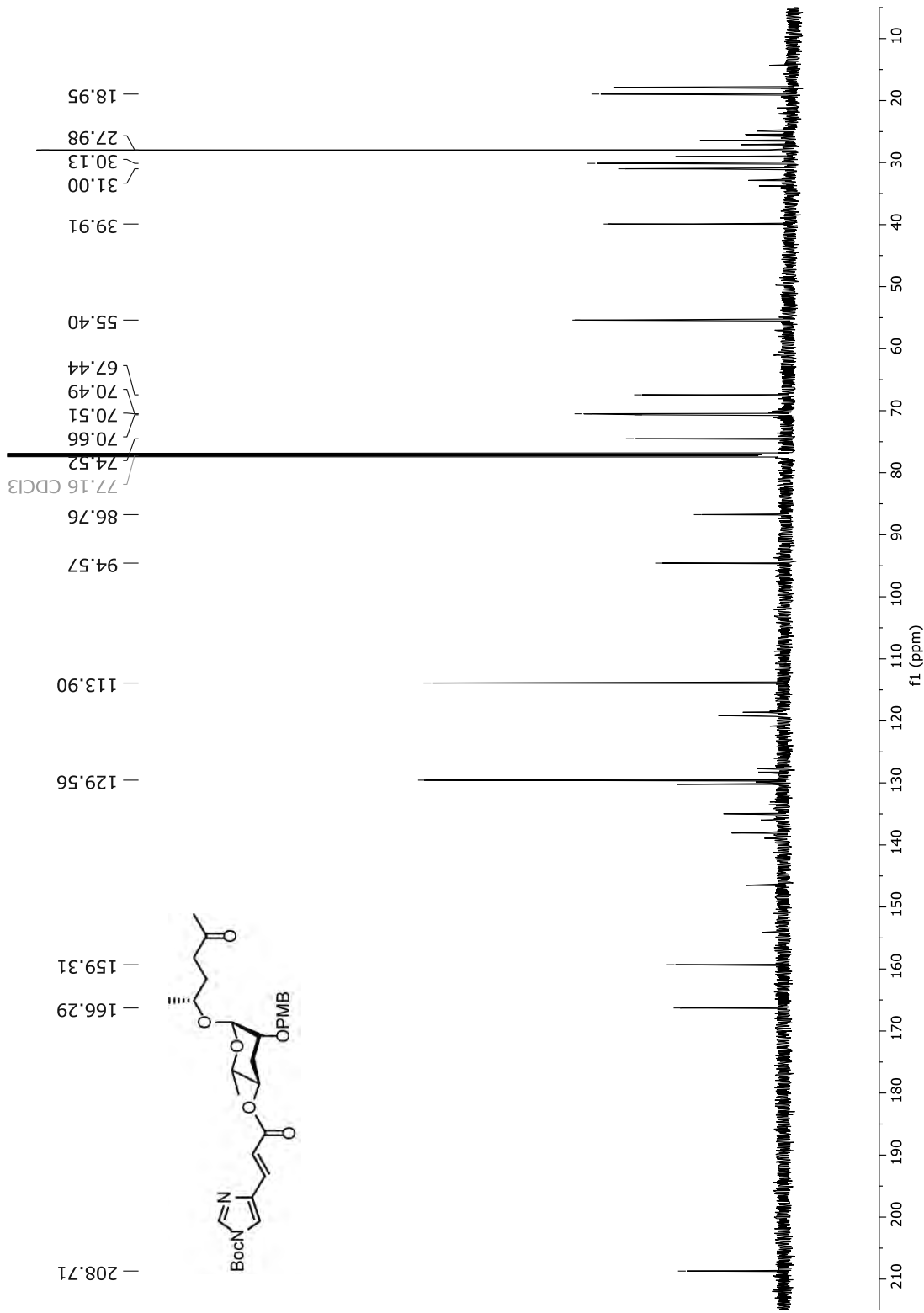


Figure S 132: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-4-*O*-((*E*)-3-(1-(*tert*-butoxycarbonyl)-1*H*-imidazol-4-yl)-propenoate)-3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl)oxy]-2-hexanone (135).

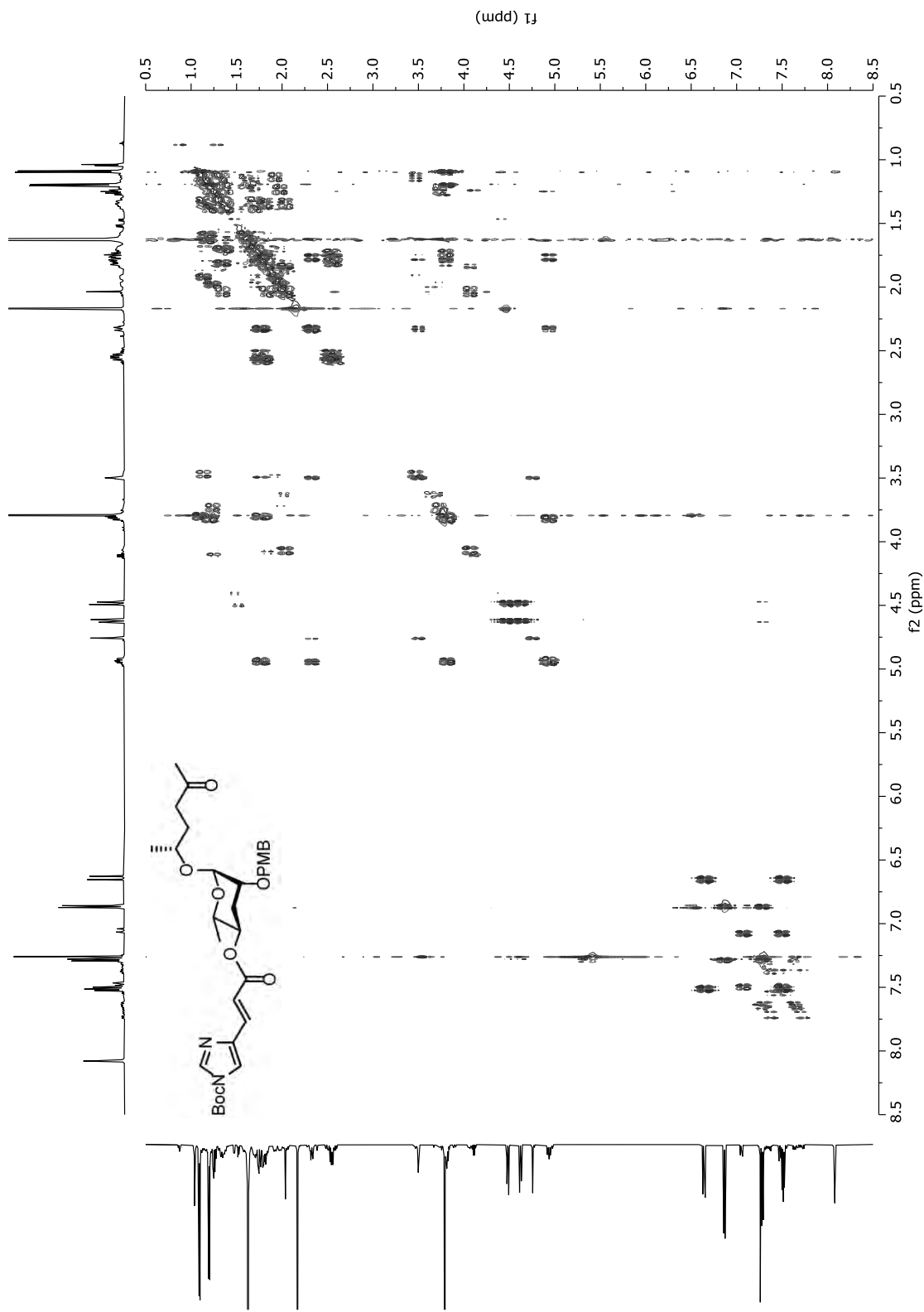


Figure S 133: HSQC (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(2-*O*-(4-methoxybenzyloxy)-4-*O*-((*E*)-3-(1-(*tert*-butoxycarbonyl)-1*H*-imidazol-4-yl)-propenoate)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-hexanone (135).

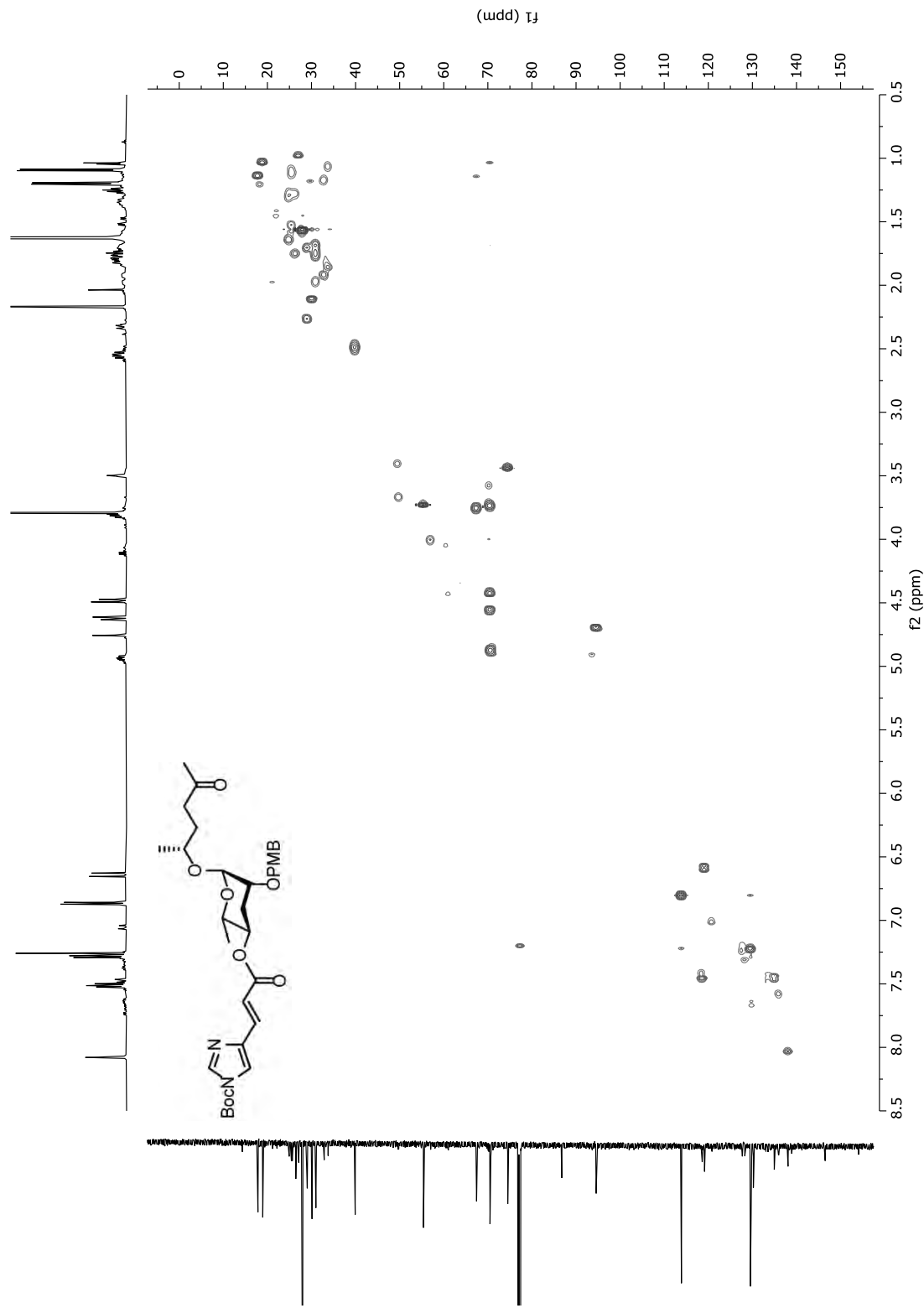


Figure S 134:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[4-*O*-((*E*)-3-(1*H*-imidazol-4-yl)-propenoate)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-hexanone (35).

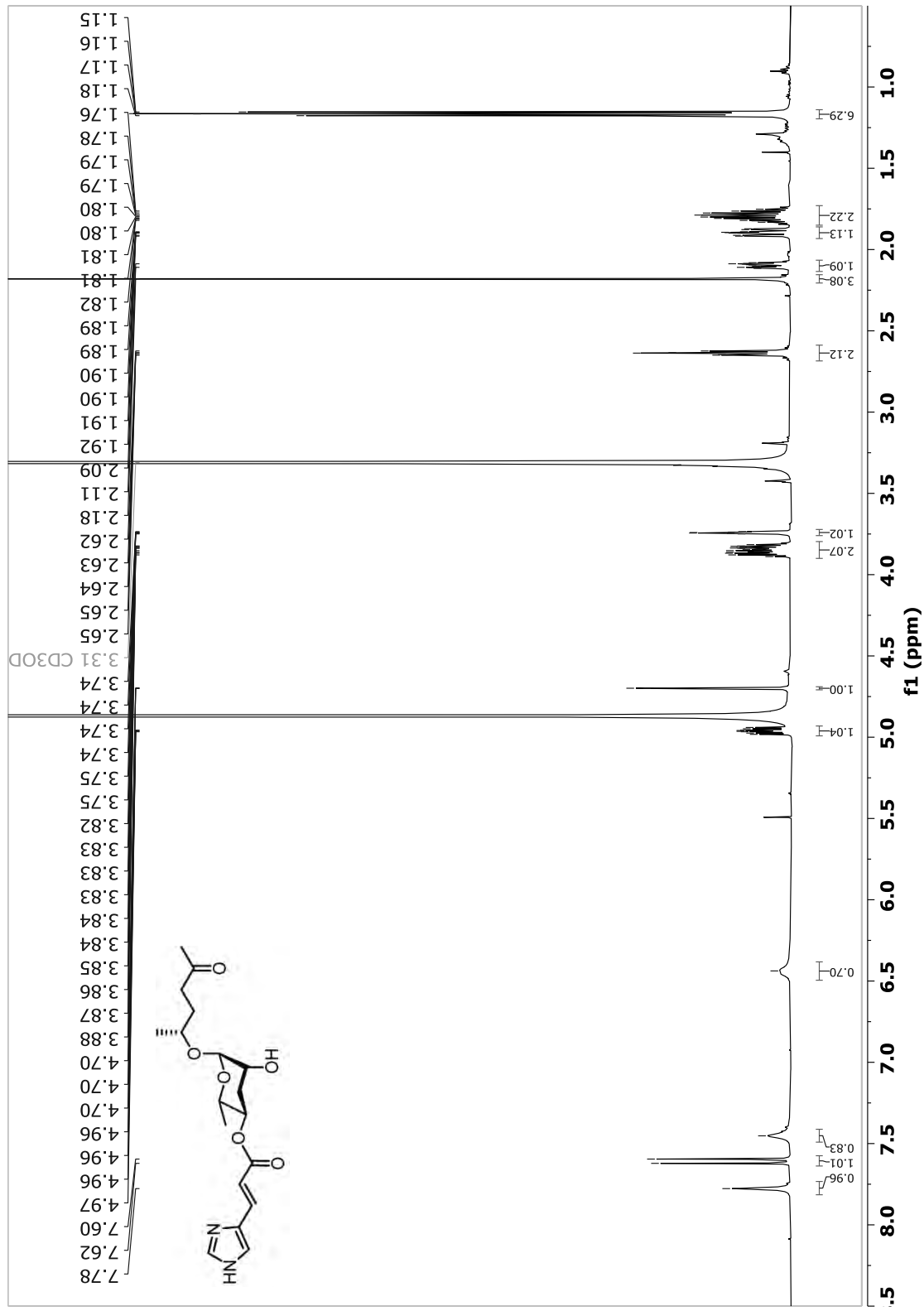


Figure S 135: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[4-*O*-((*E*)-3-(1*H*-imidazol-4-yl)-propenoate)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-hexanone (35).

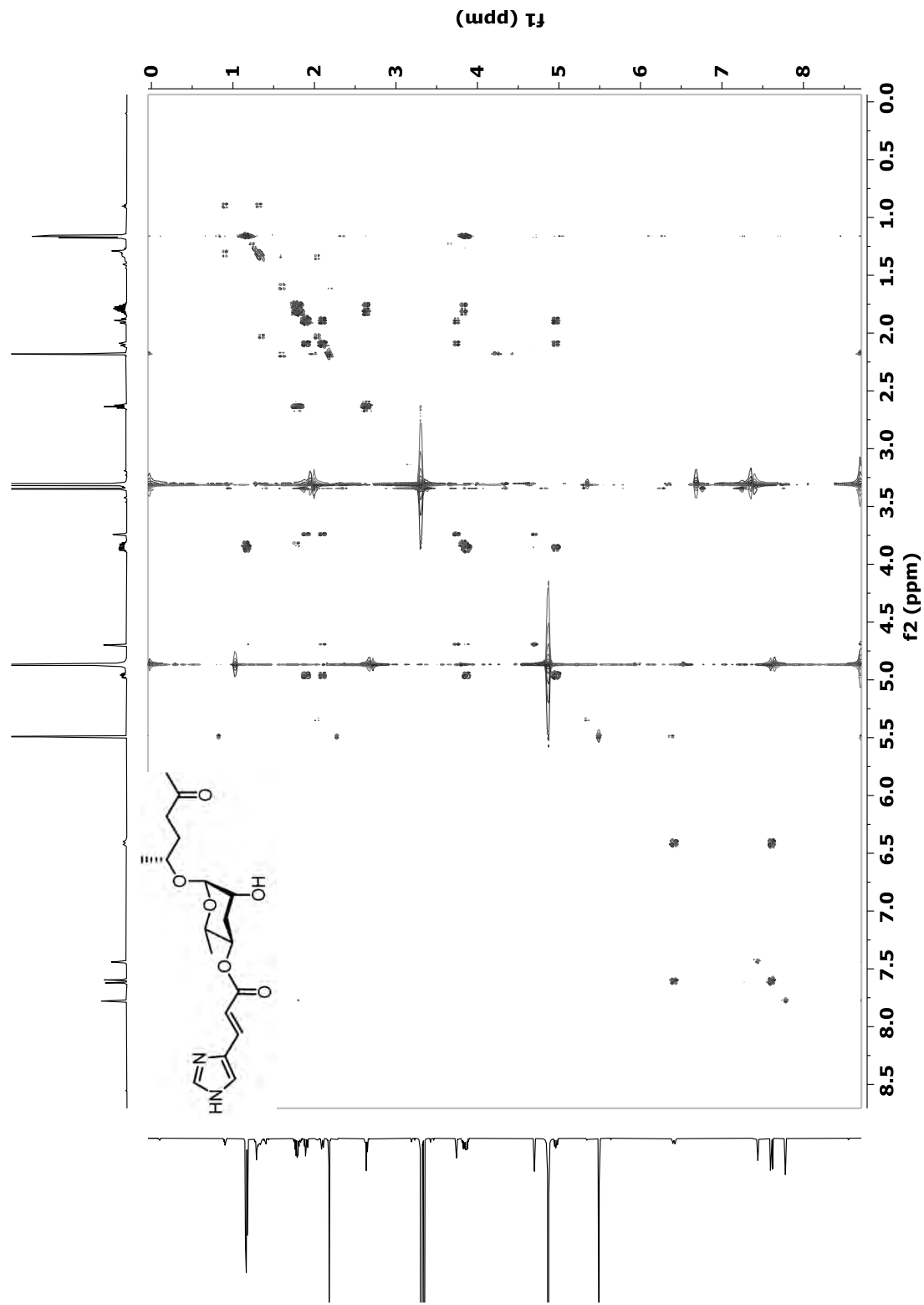


Figure S 136: HSQC (600 MHz, CDCl<sub>3</sub>) of (5R)-5-[4-O-((E)-3-(1H-imidazol-4-yl)-propenoate)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-hexanone (35).

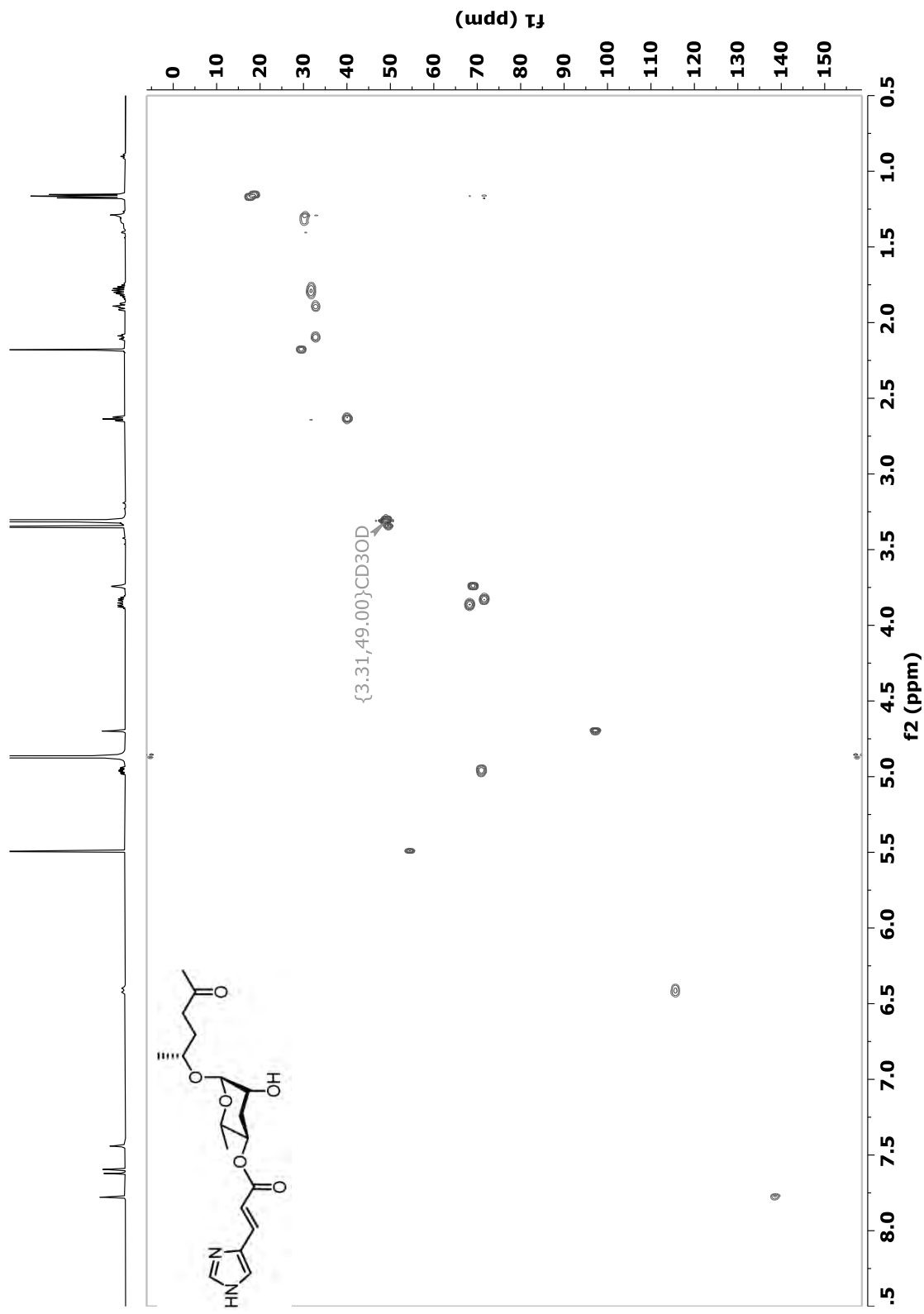


Figure S 137: HMBC (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[4-*O*-((*E*)-3-(1*H*-imidazol-4-yl)-propenoate)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]-2-hexanone (35).

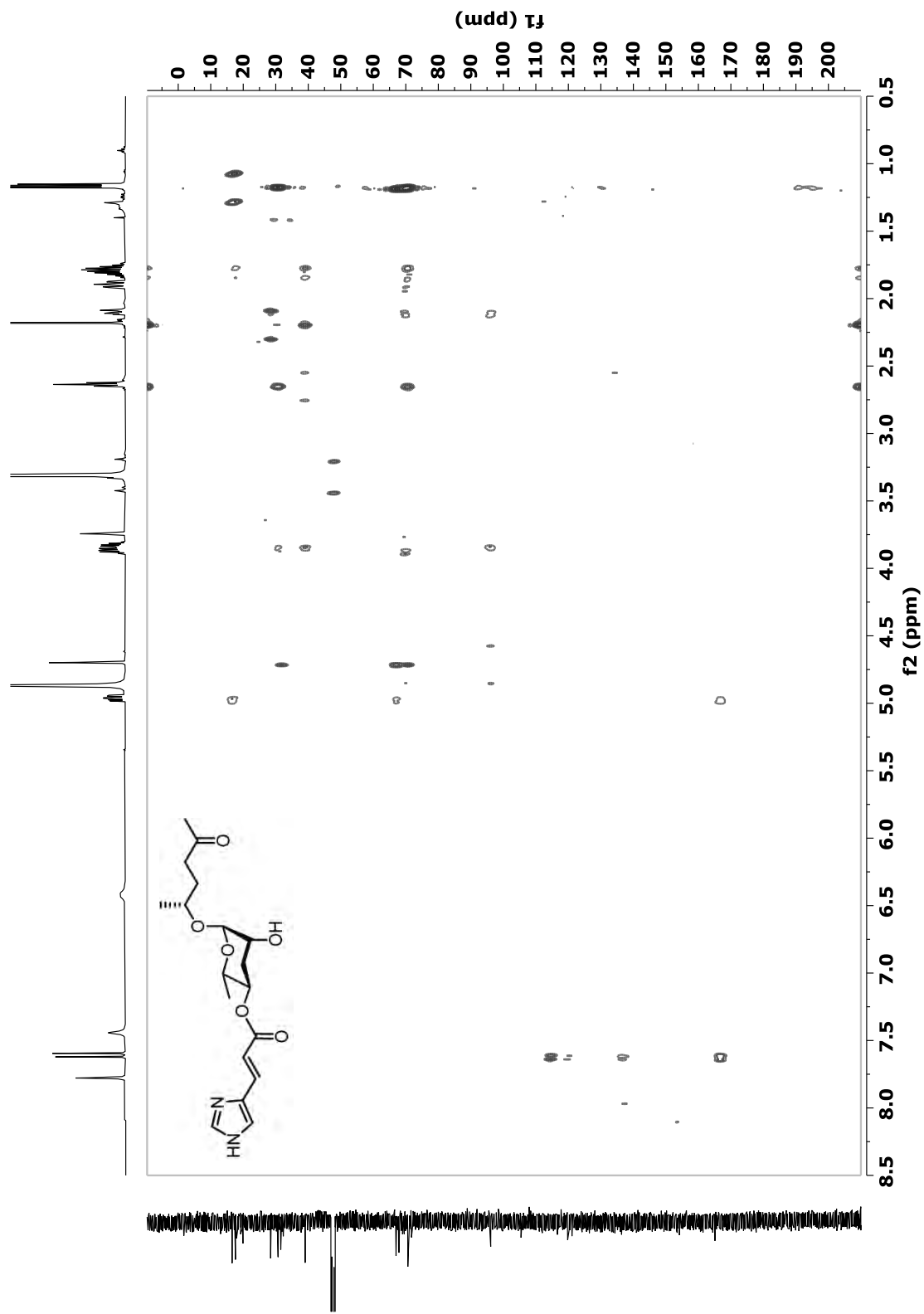


Figure S 138:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[4-*O*-((*Z*)-3-(1*H*-imidazol-4-yl)-propenoate)3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-hexanone (36).

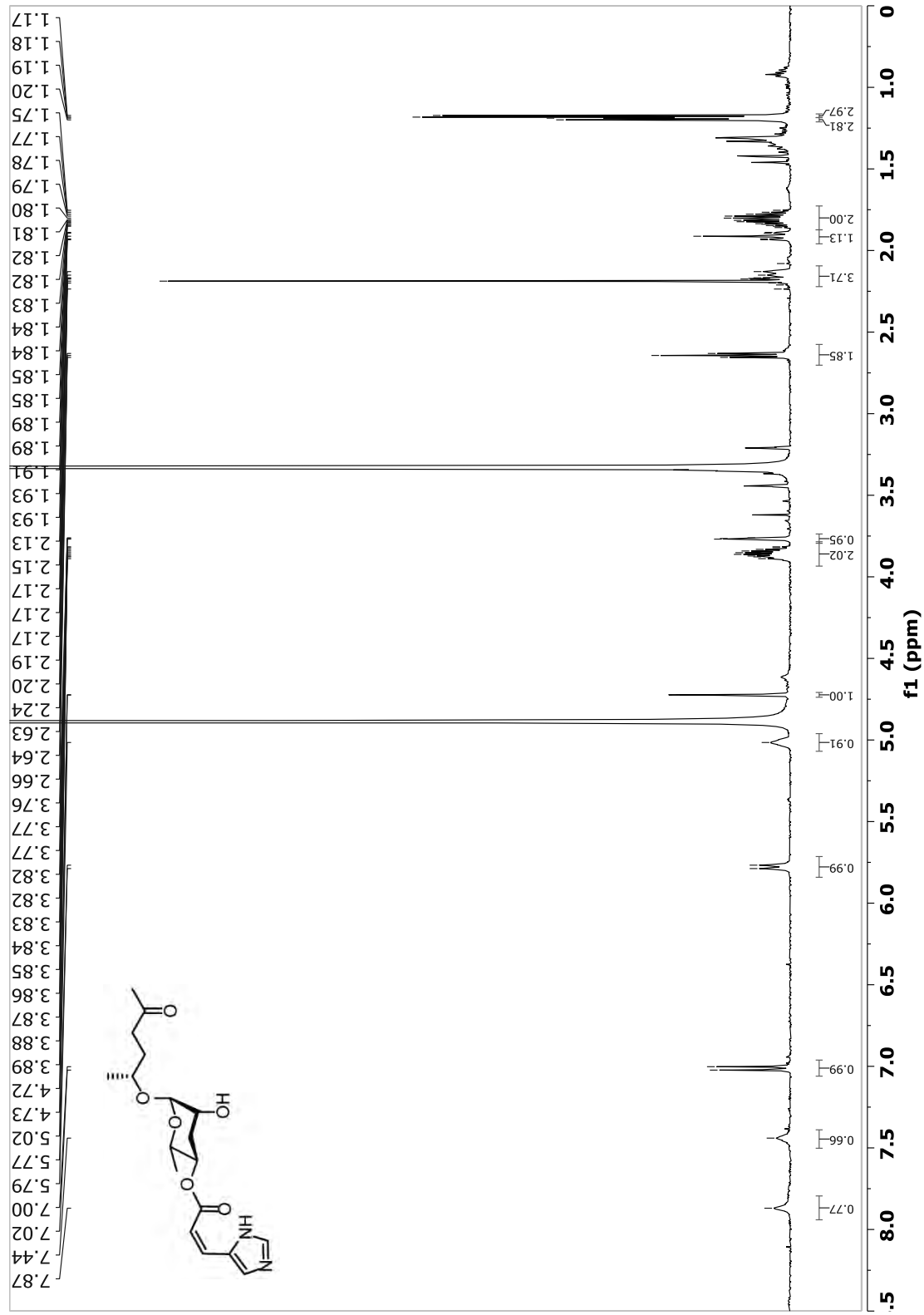


Figure S 139: *daf*-COSY (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[4-*O*-((*Z*)-3-(1*H*-imidazol-4-yl)-propenoate)]3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl]oxy]-2-hexanone (36).

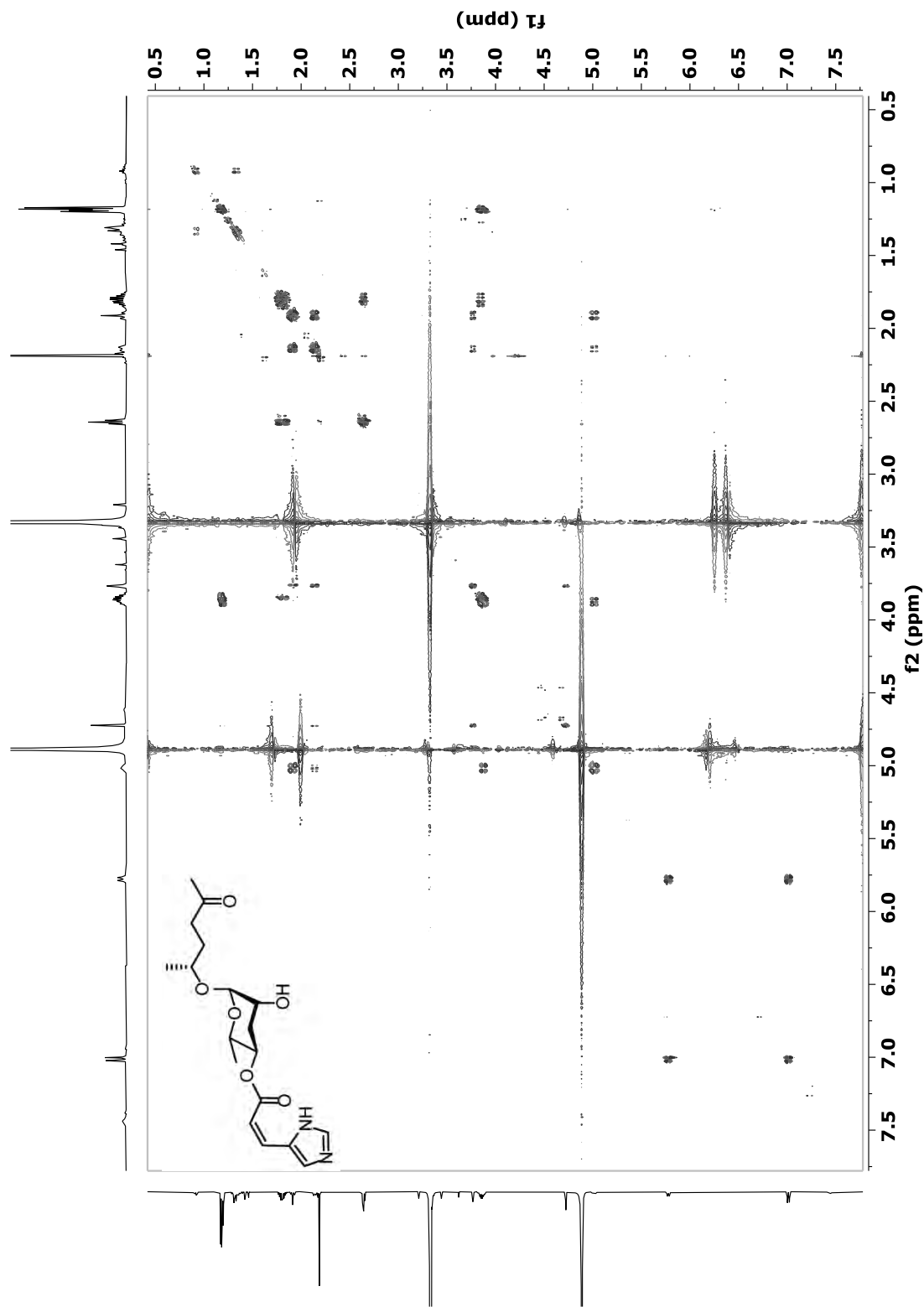


Figure S 140: HSQC (600 MHz, CDCl<sub>3</sub>) of (5R)-5-[4-O-((Z)-3-(1H-imidazol-4-yl)-propenoate)3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-hexanone (36).

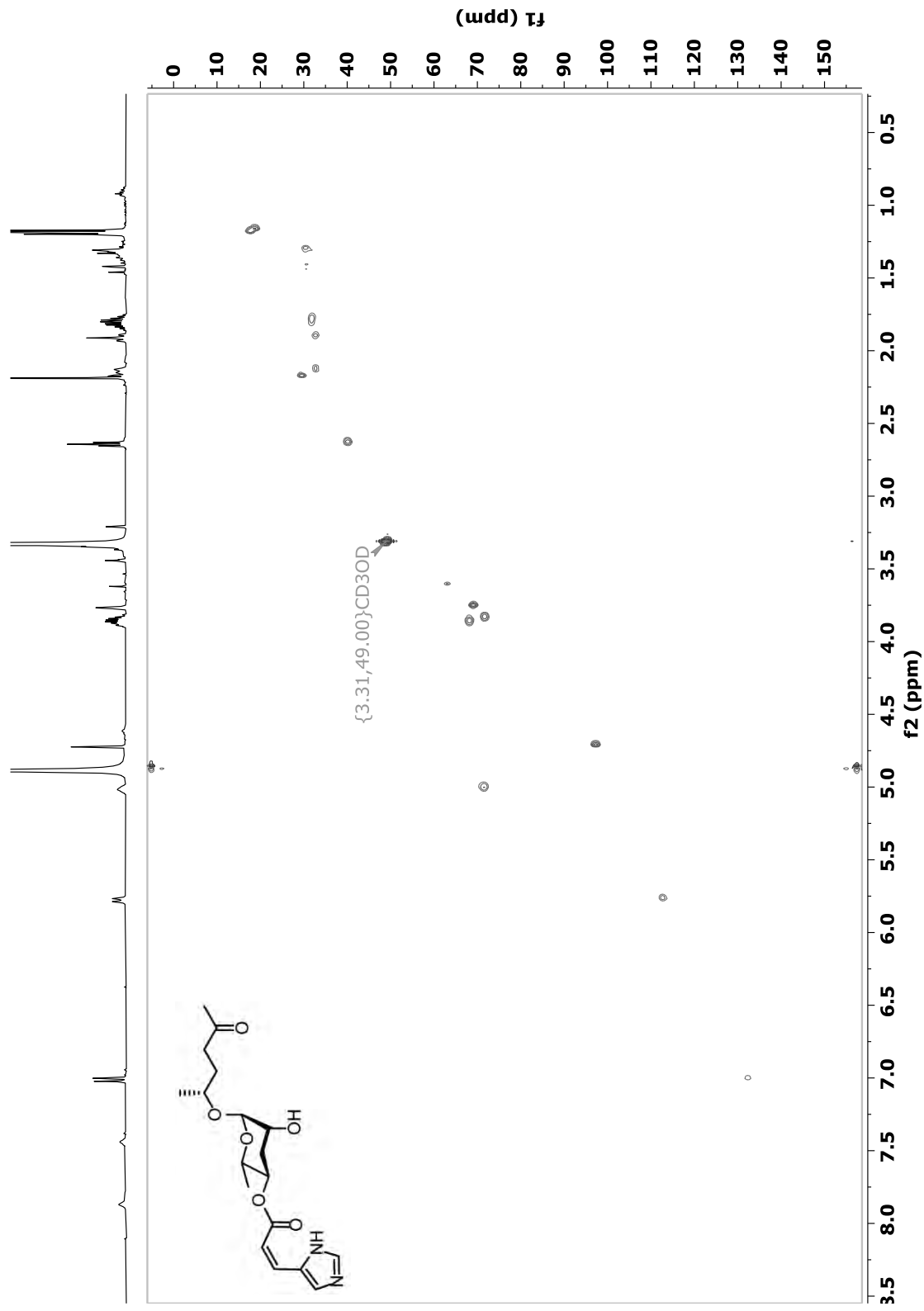


Figure S 141: HMBC (600 MHz, CDCl<sub>3</sub>) of 5R) of 5R)-5-[4-O-((Z)-3-(1H-imidazol-4-yl)-propenoate)3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-hexanone (36).

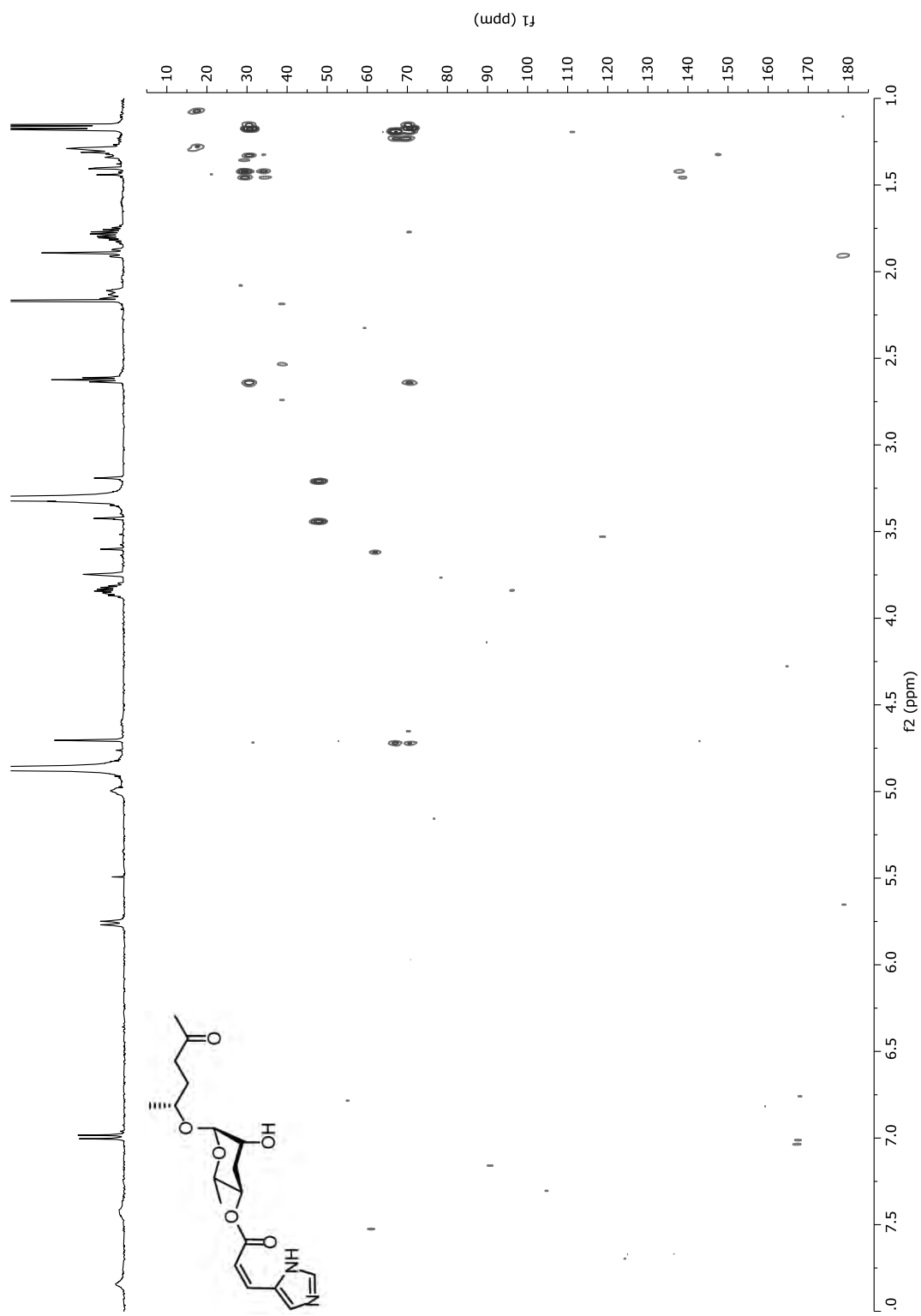


Figure S 142:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of (4*R*)-4-[(2-*O*-benzyl-4-*O*-*tert*-butyldiphenylsilyl]-3,6-dideoxy-L-arabino-hexopyranosyl]oxy]-pentanoic acid (142).

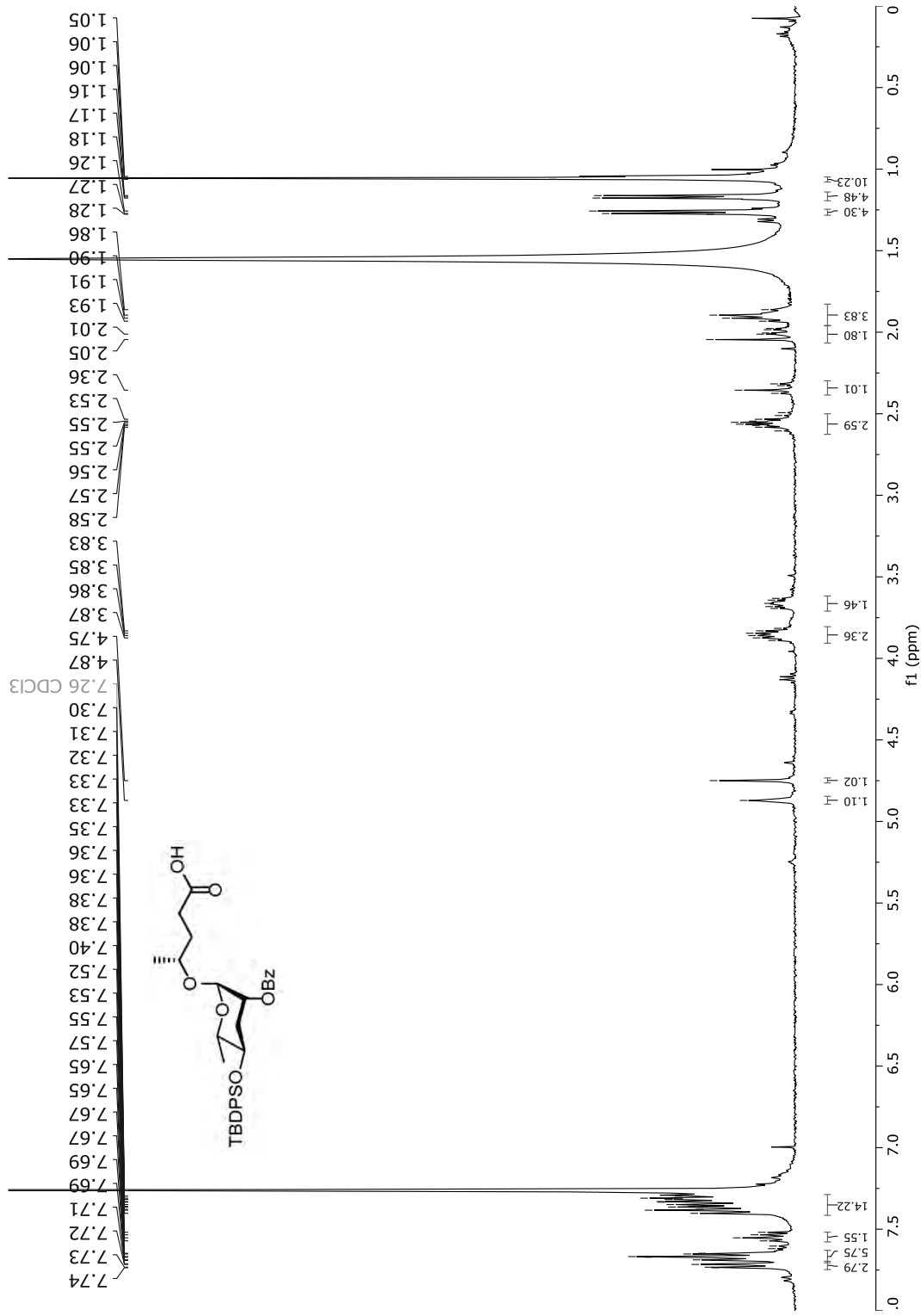


Figure S 143:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of (4R)-4-[(2-O-benzyl-4-O-tert-butylidiphenylsilyloxy]-pentanoic acid (142).

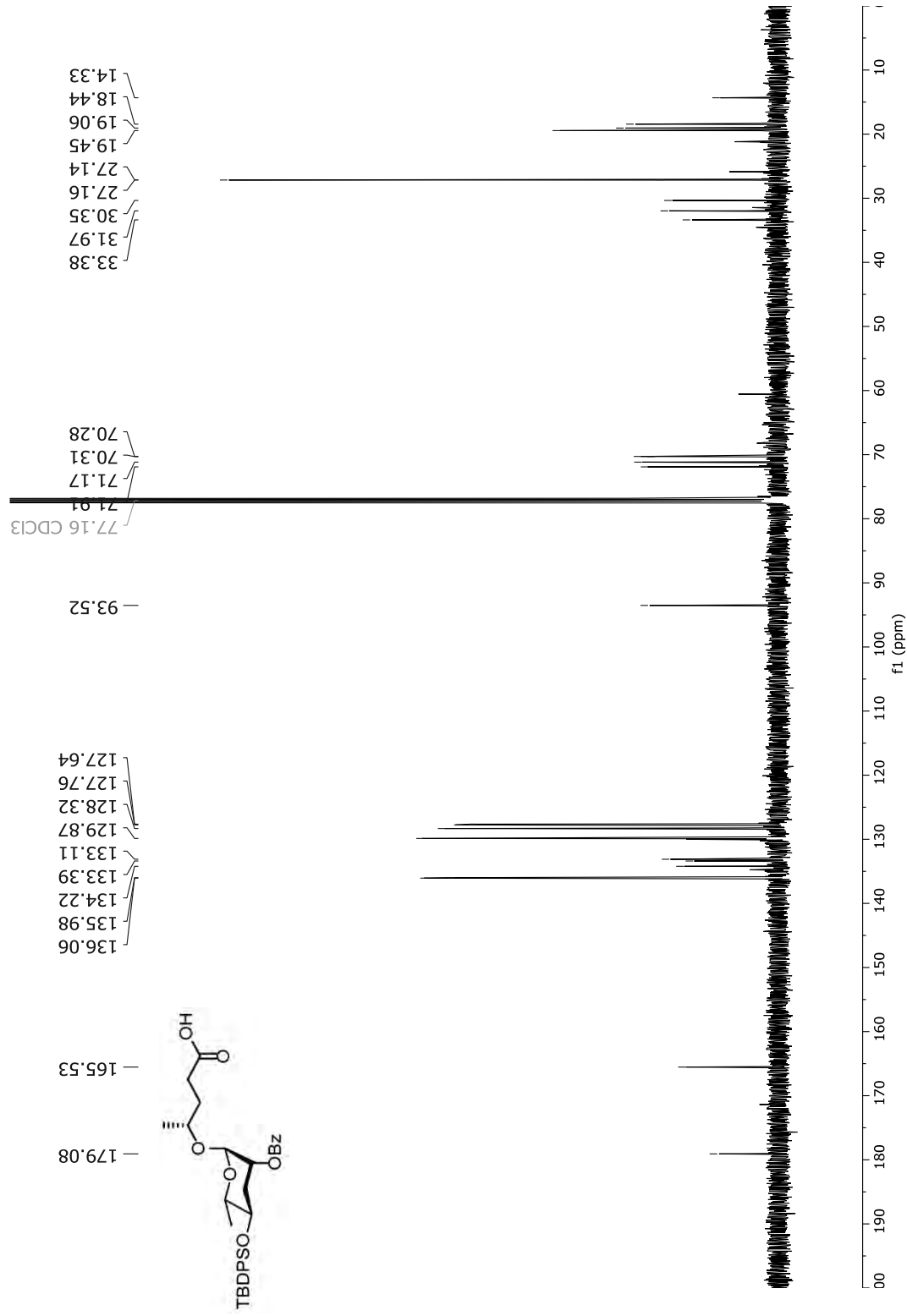


Figure S 144:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of (4R)-4-[(4-O-*tert*-butyldiphenylsilyl]-3,6-dideoxy-L-*arabino*-hexopyranosyl)oxy]-pentanoic acid (143).

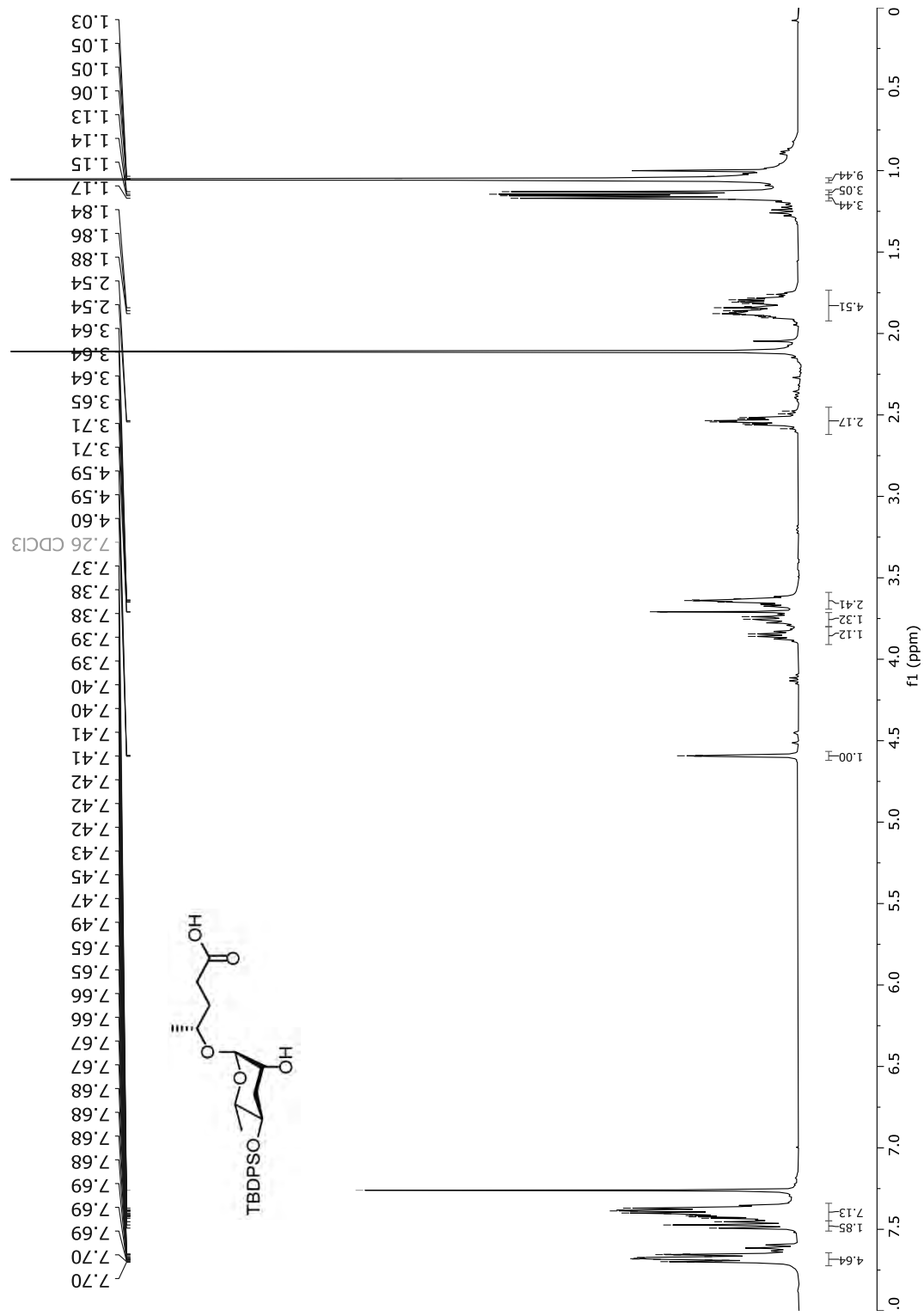


Figure S 145:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of Benzyl-(4R)-4-[(2-O-benzyl-4-O-tert-butylidiphenylsilyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-pentanoate (144).

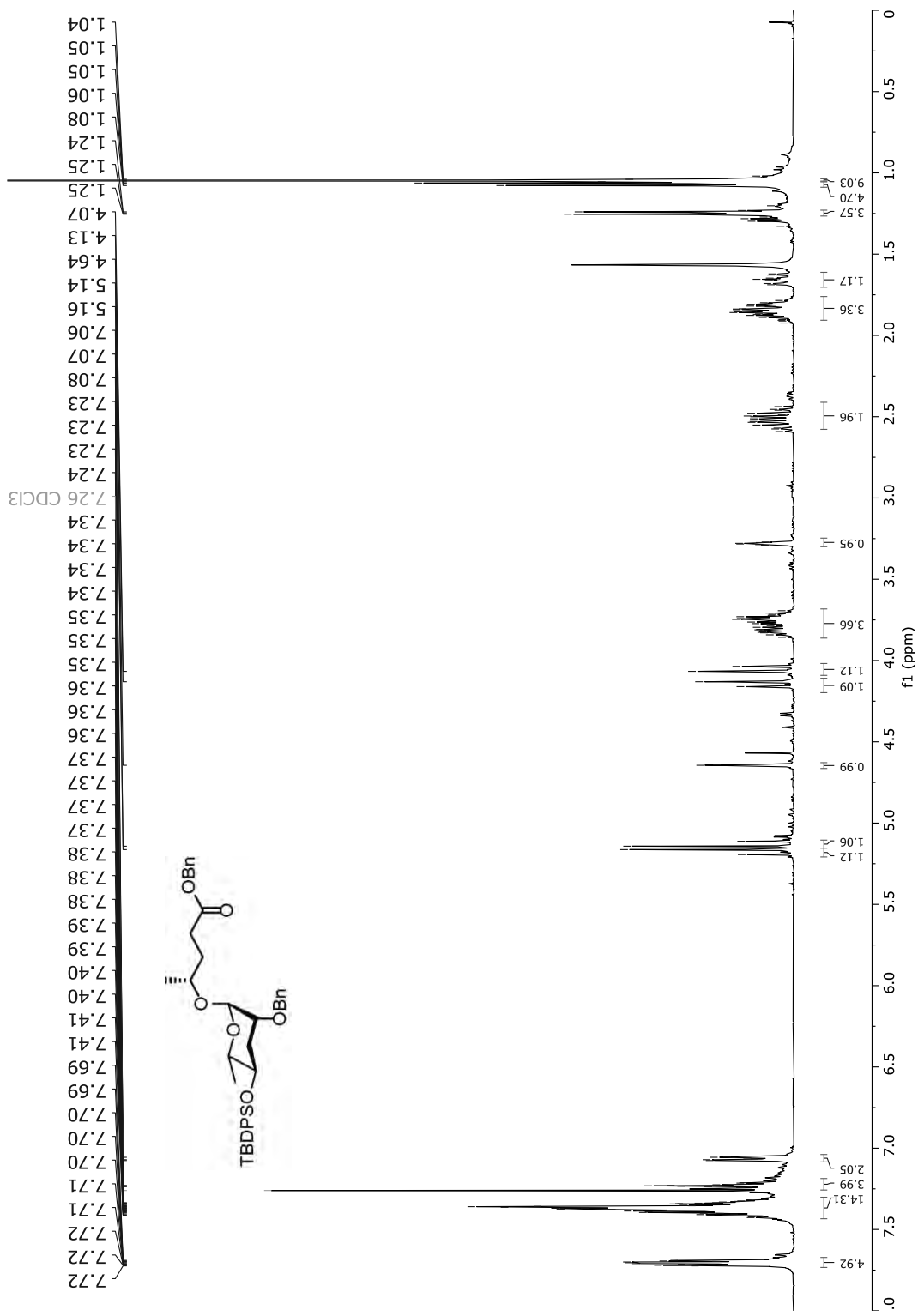


Figure S 146:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of Benzyl-(4*R*)-4-[(2-*O*-benzyl-4-*O*-*tert*-butyldiphenylsilyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-pentanoate(144).

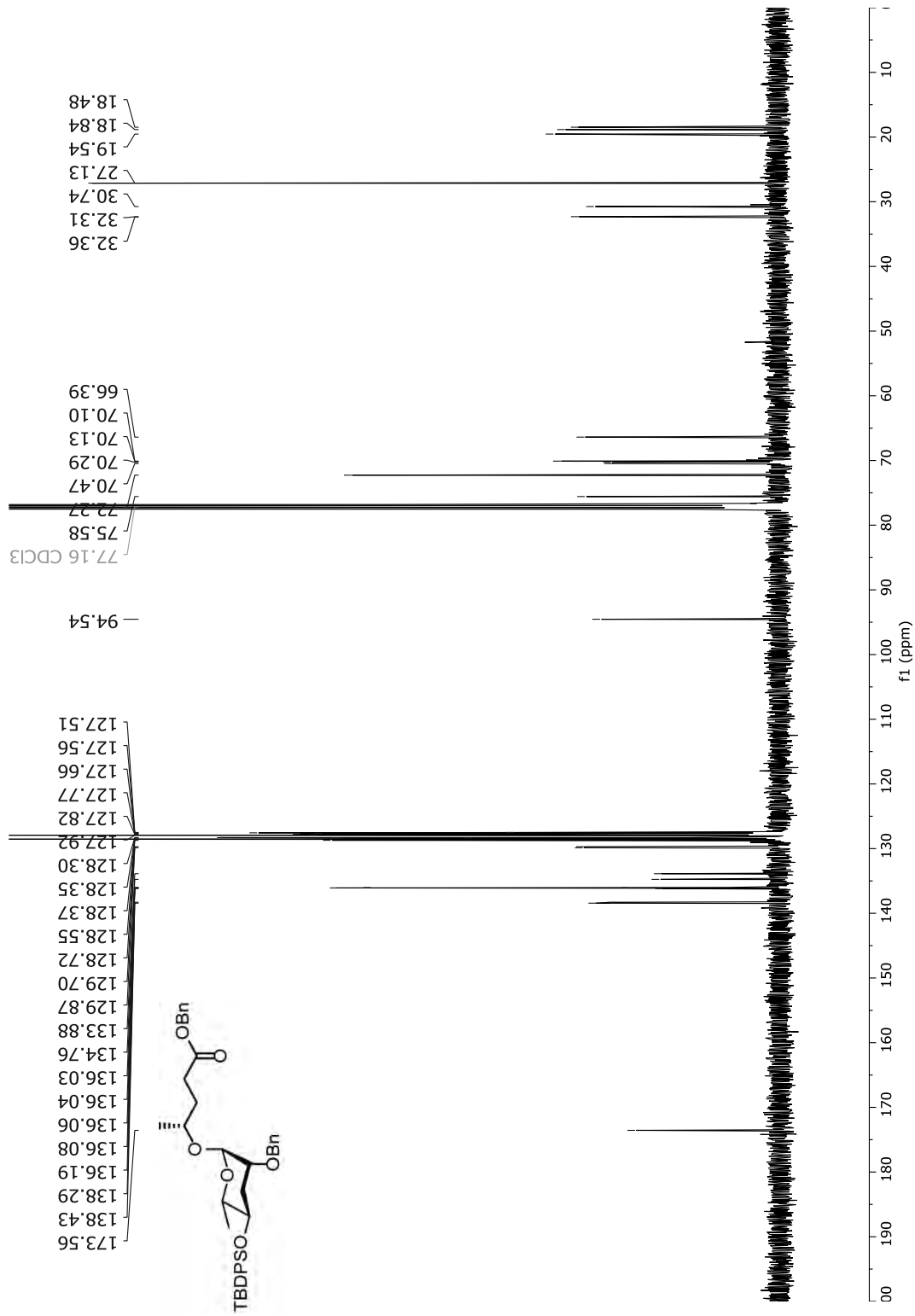






Figure S 149: <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) of Benzyl-(4R)-4-[(2-O-benzyl-4-[(2-O-benzyl-4-((benzyloxy)carbonyl)amino)benzoyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-pentanoate (146).

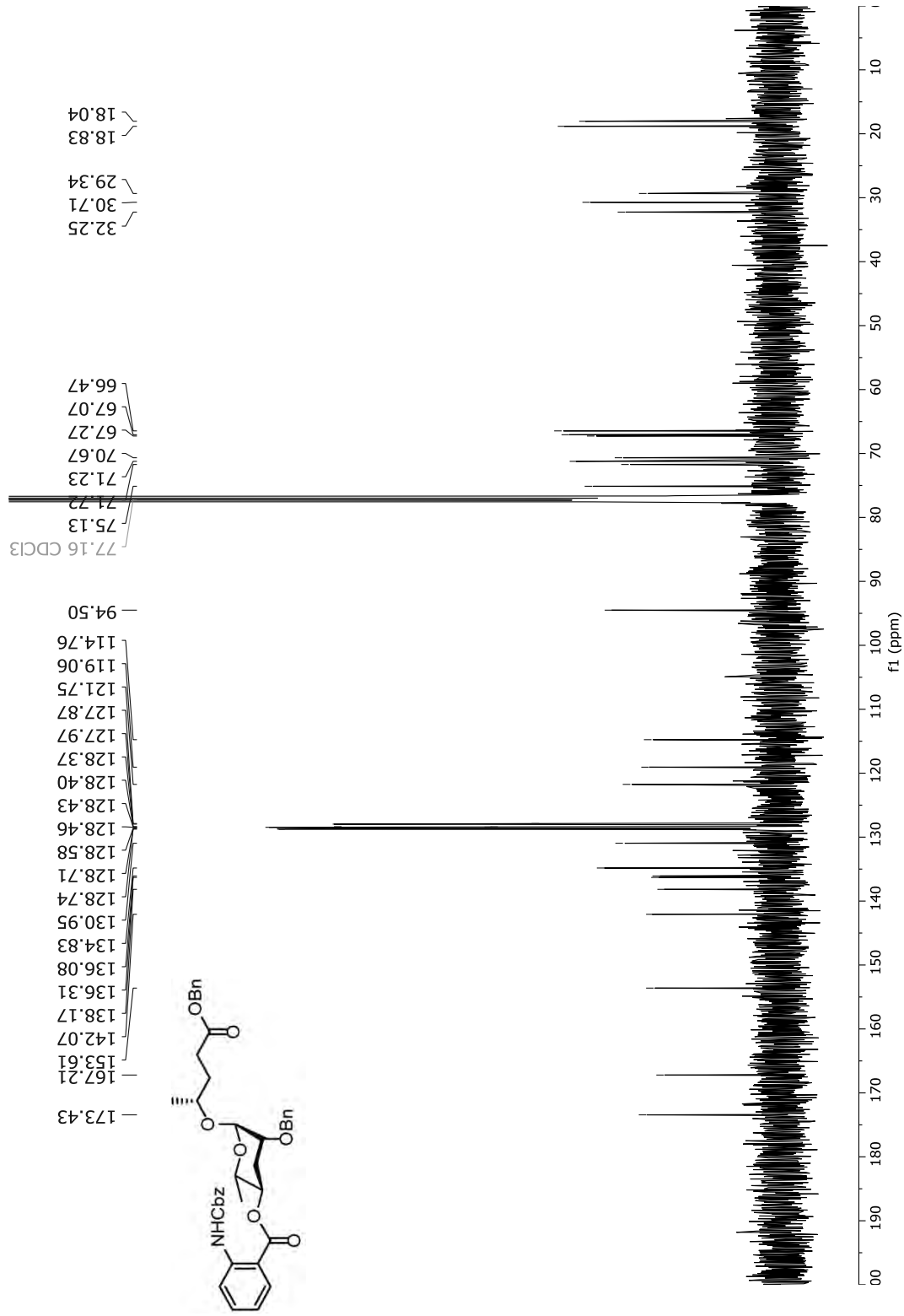


Figure S 150: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of Benzyl-(4*R*)-4-[(2-*O*-benzyl-4-[(2-*O*-benzyl-4-((benzyloxy)carbonyl)amino)benzoyl-3,6-dideoxy- $\alpha$ -L-arabinohexopyranosyl)oxy]-2-pentanoate (146).

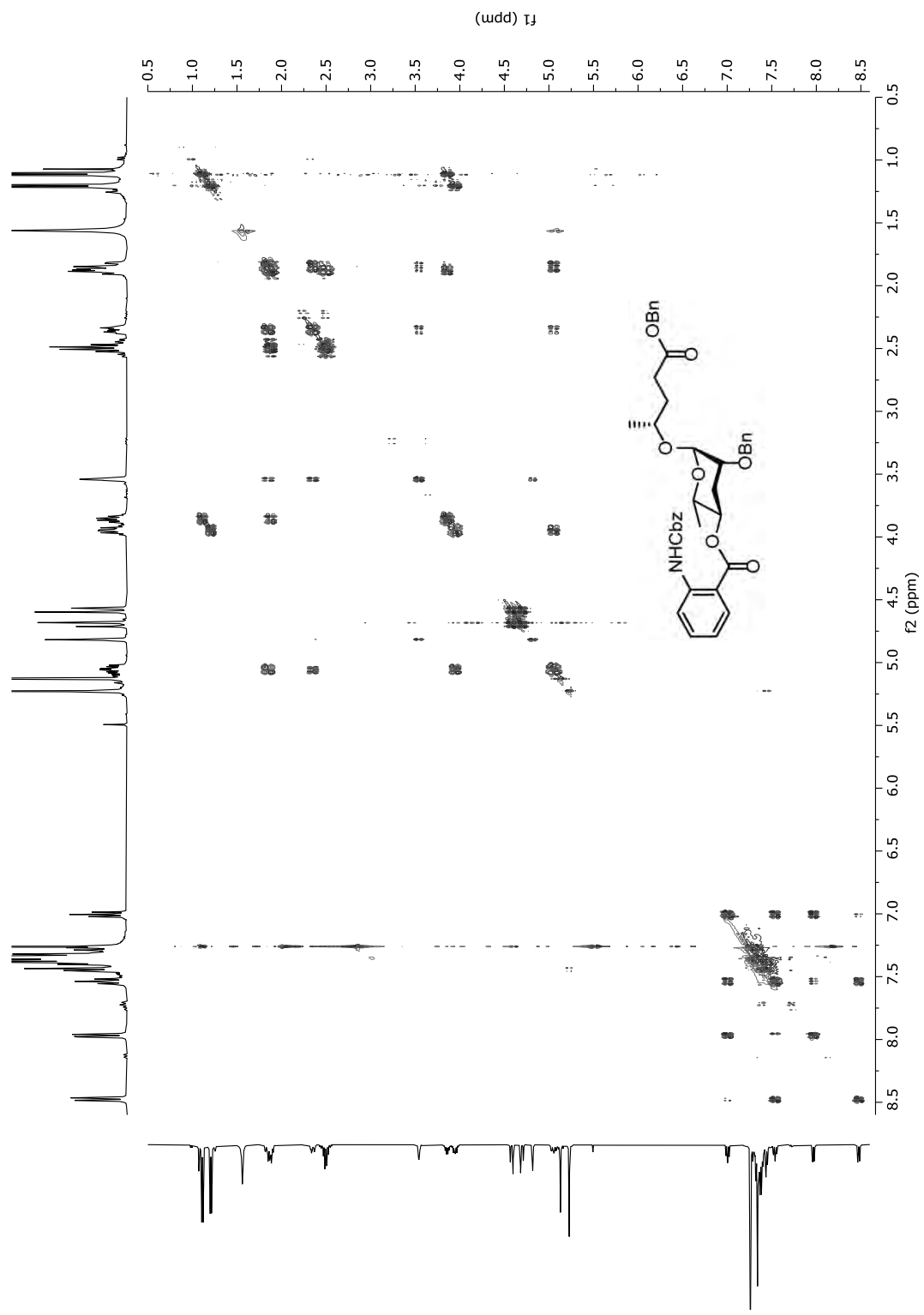


Figure S 151: HSQC (400 MHz, CDCl<sub>3</sub>) of Benzyl-(4R)-4-[(2-O-benzyl-4-((benzyloxy)carbonyl)amino)benzoyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-pentanoate (146).

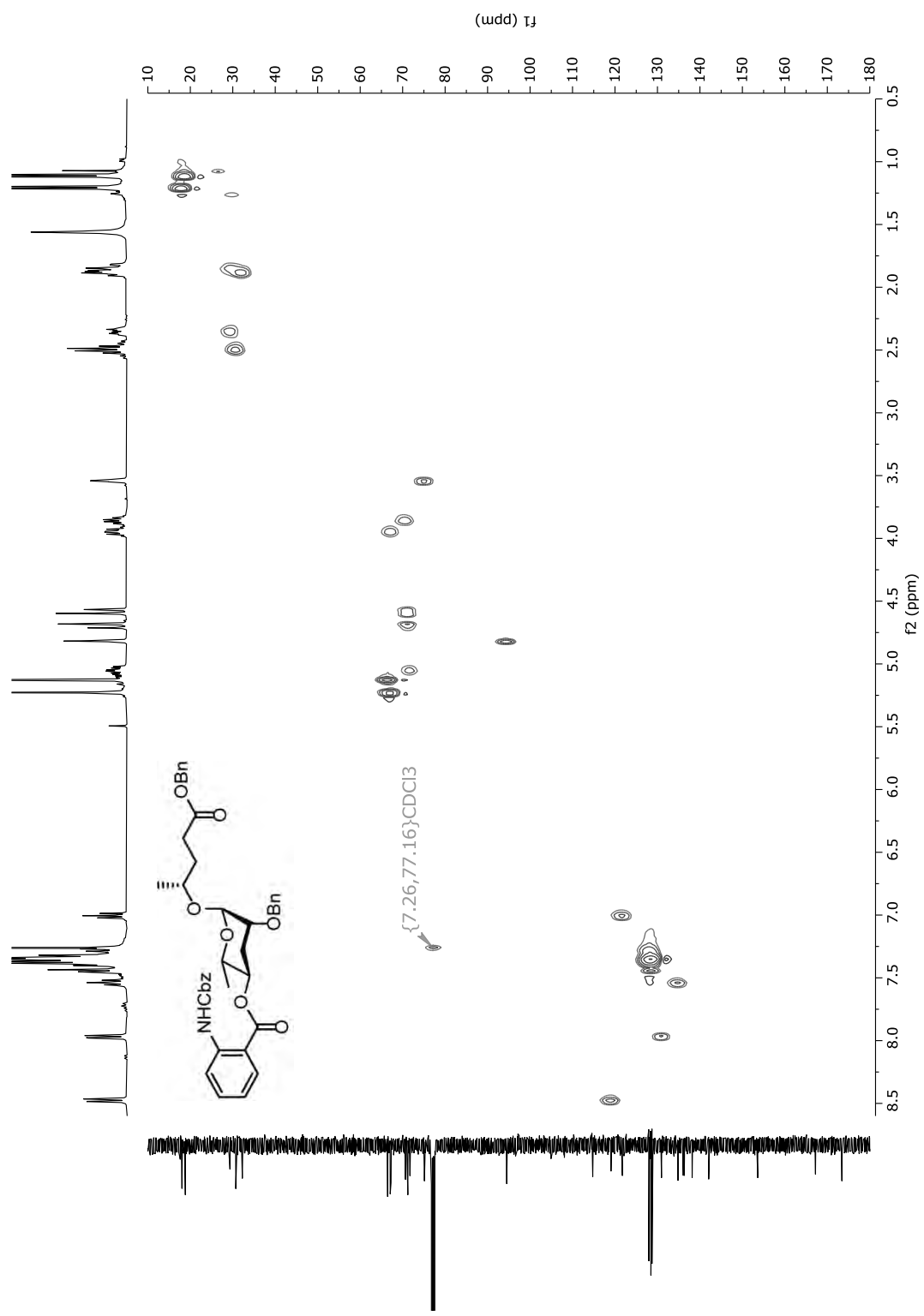




Figure S 153:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(2-O-benzoyl-4-O-tert-butylidiphenylsilyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-butyne (151).

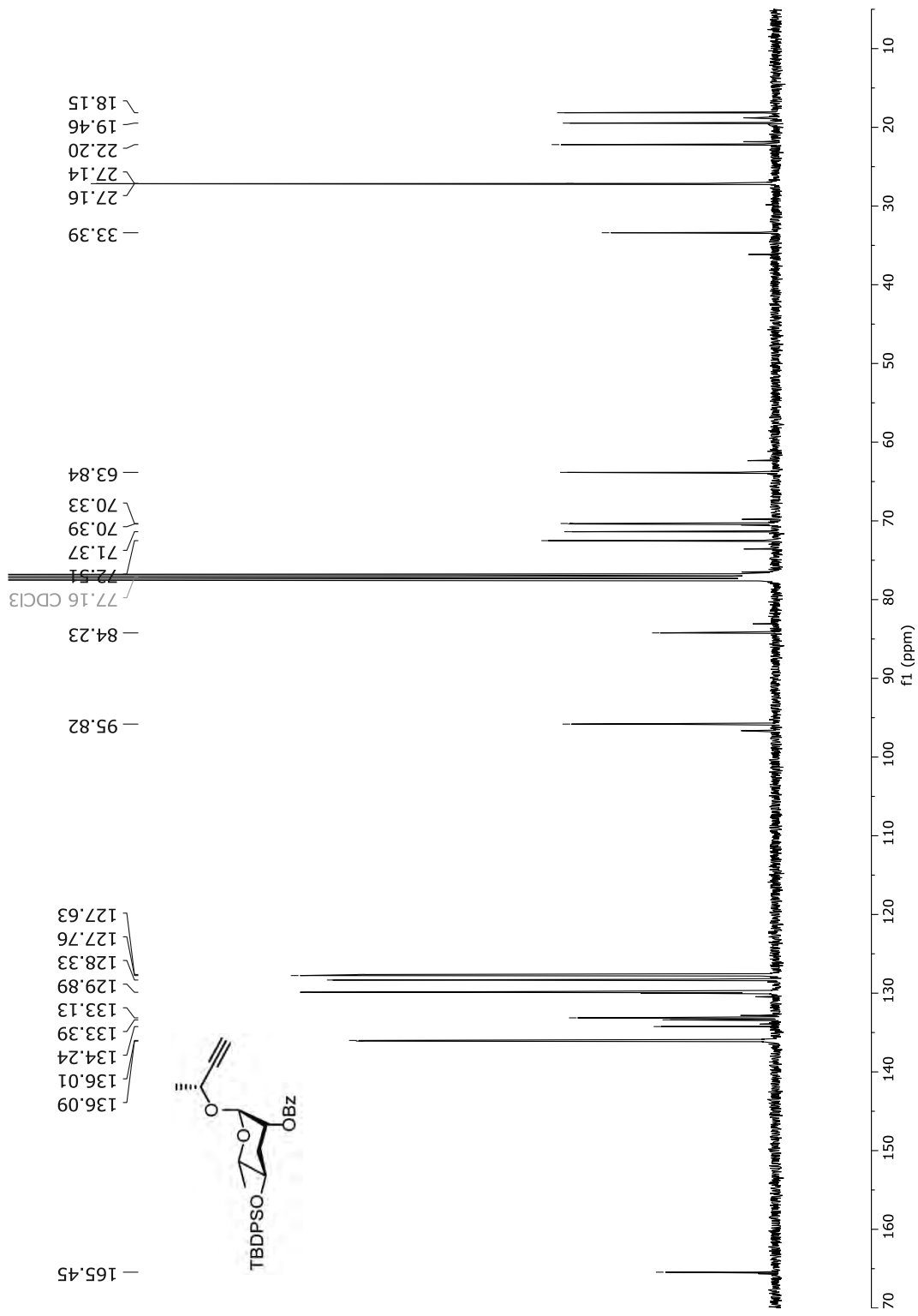


Figure S 154: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzoyl-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-1-butyne (151).

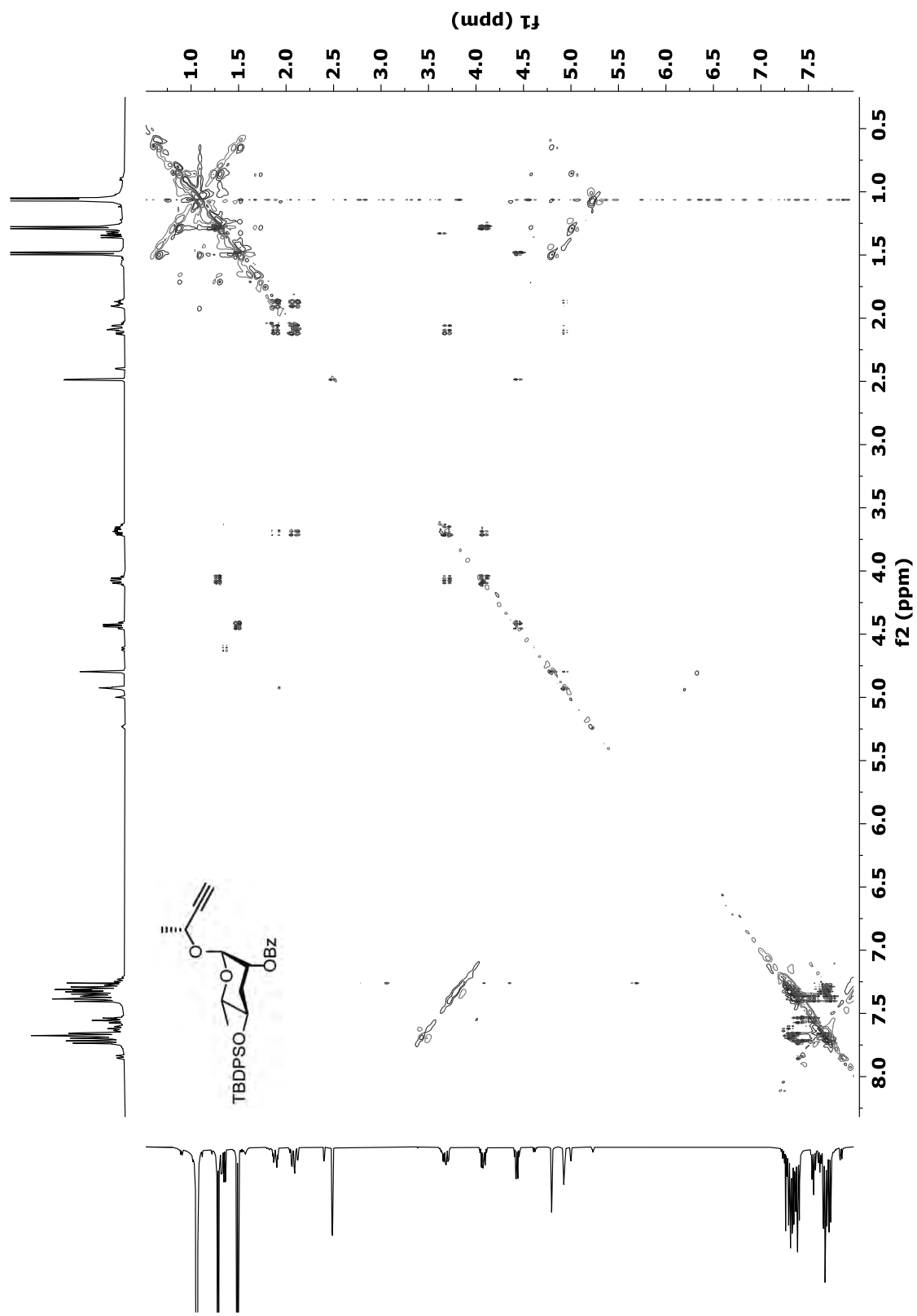


Figure S 155: HSQC (400 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzoyl-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl]oxy]-1-butyne (151).

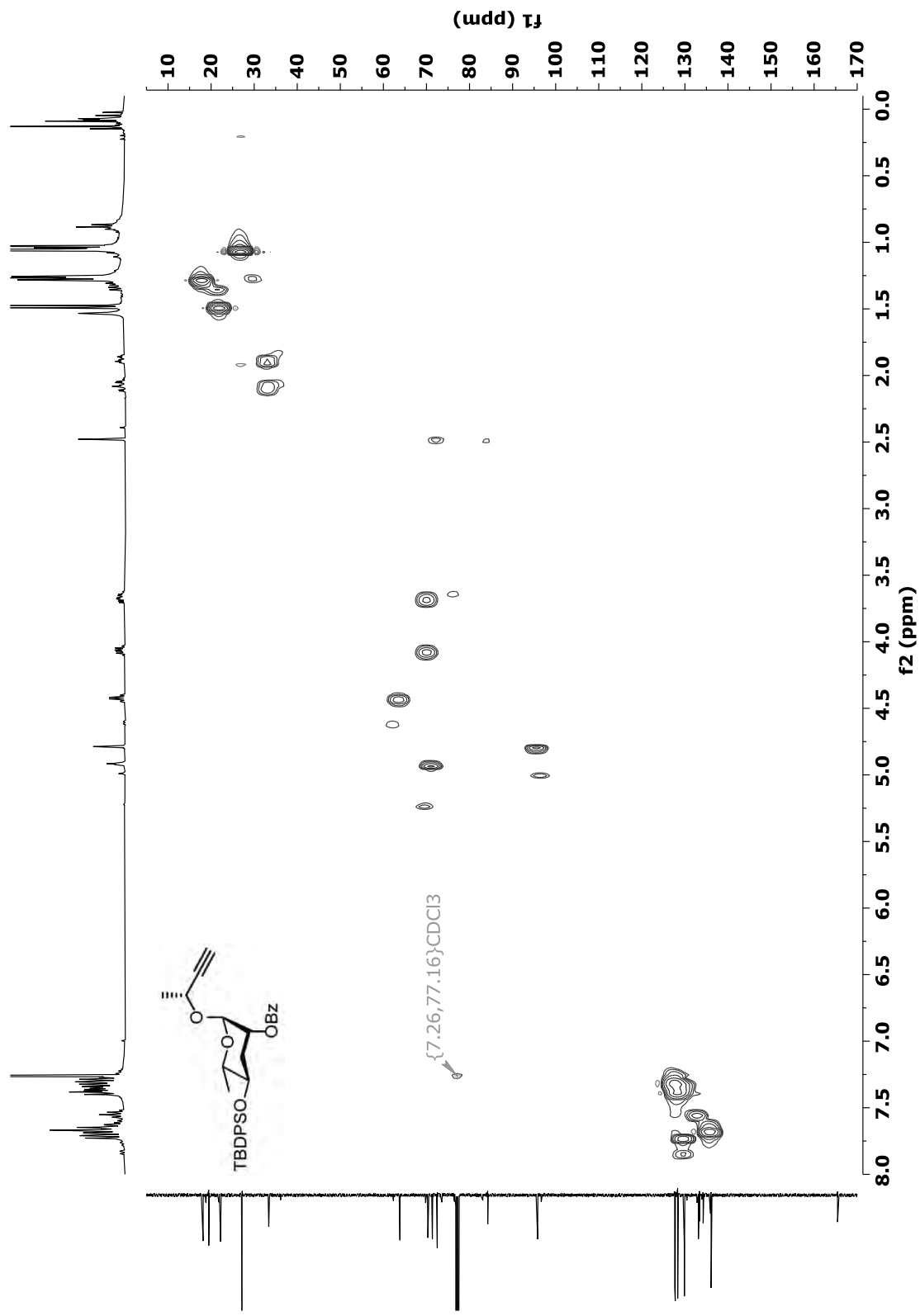


Figure S 156:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of (3*R*)-3-[(2-*O*-benzoyl-4-*O*-*tert*-butyldiphenylsilyloxy]-1-butene]-1-butene (148).

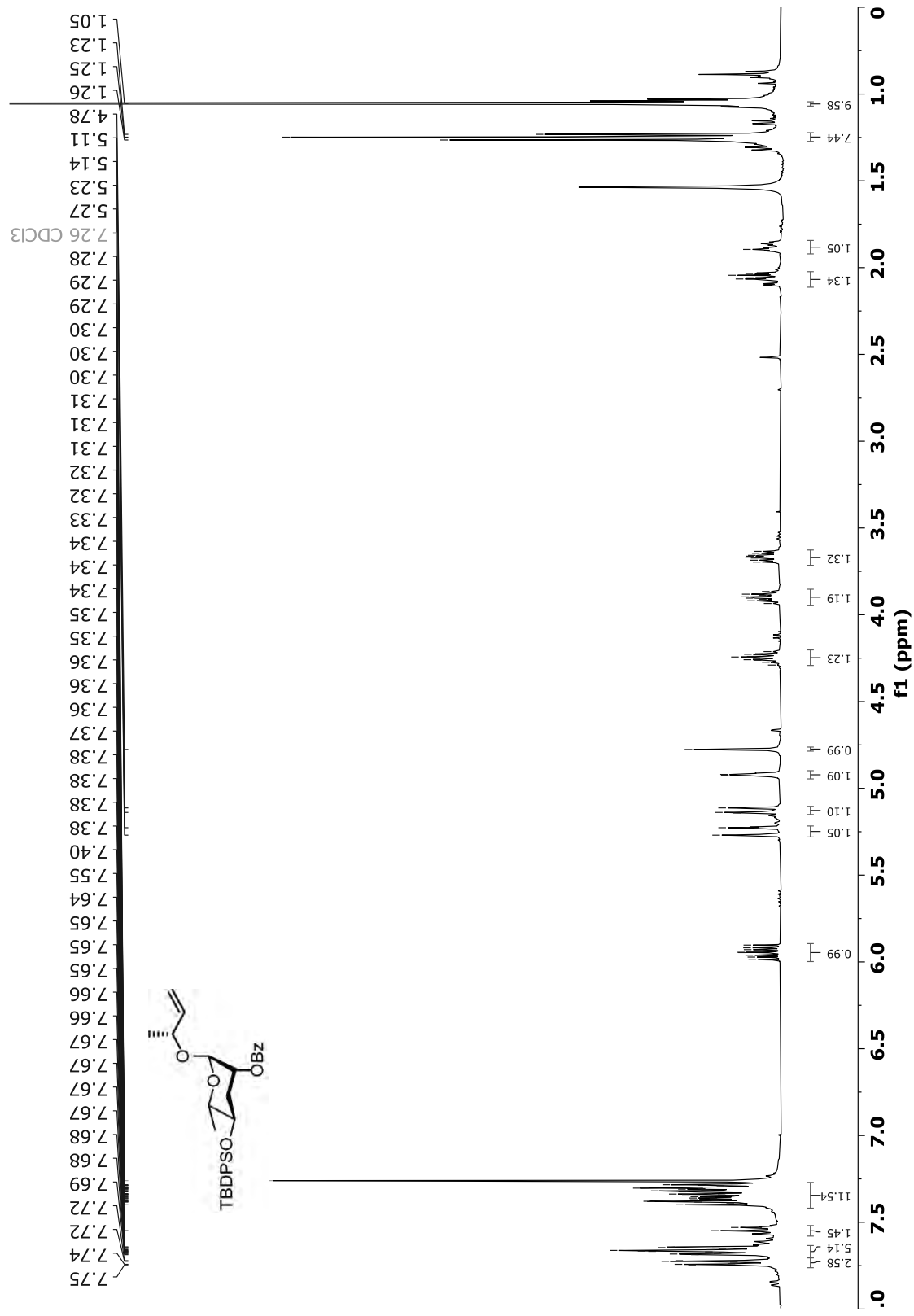


Figure S 157: <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) of (3R)-3-[(2-O-benzoyl-4-O-tert-butylidiphenylsilyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (148).

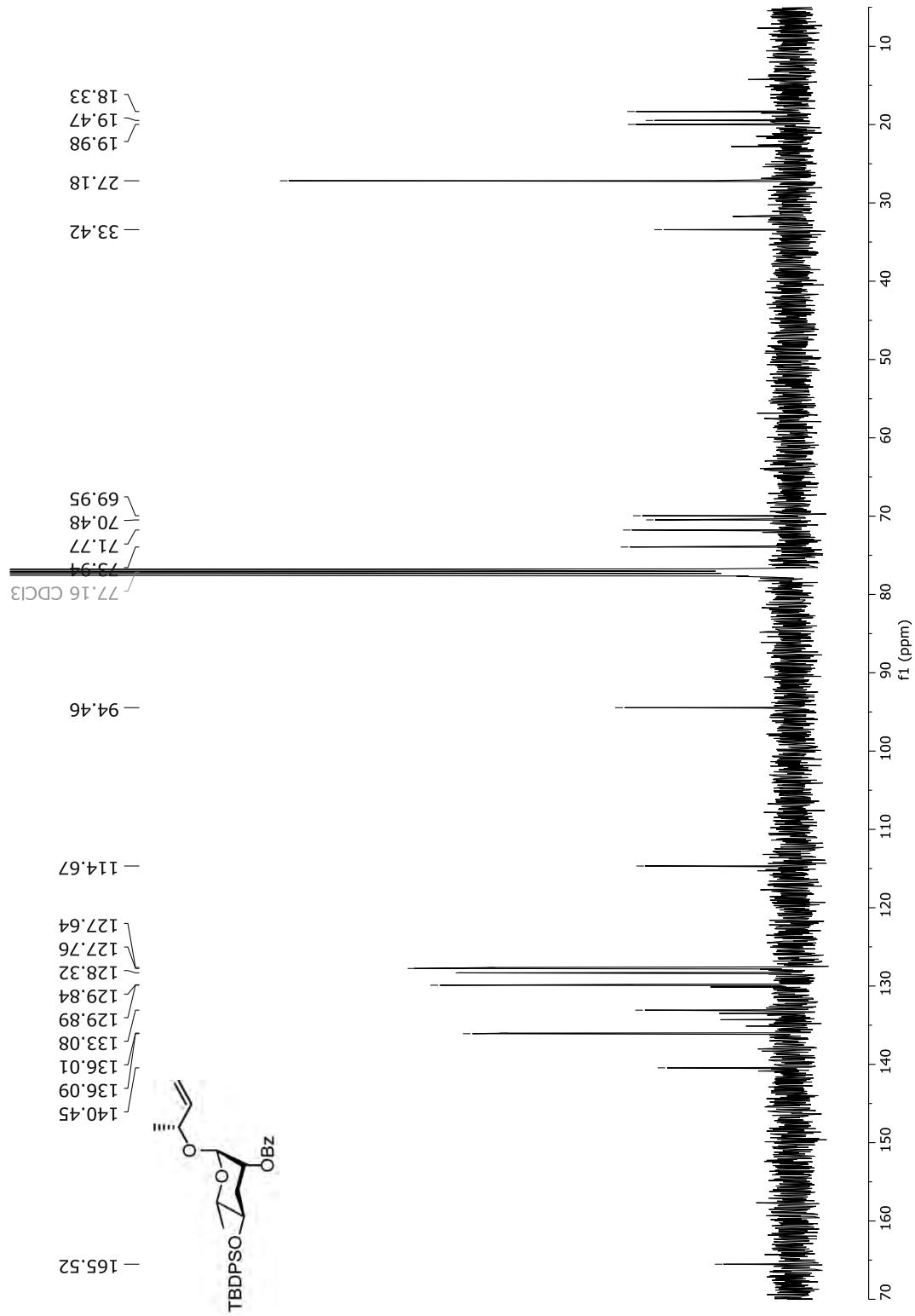


Figure S 158: *dqf*-COSY (100 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzoyl-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy-L-arabino-hexopyranosyl]oxy]-1-butene (148).

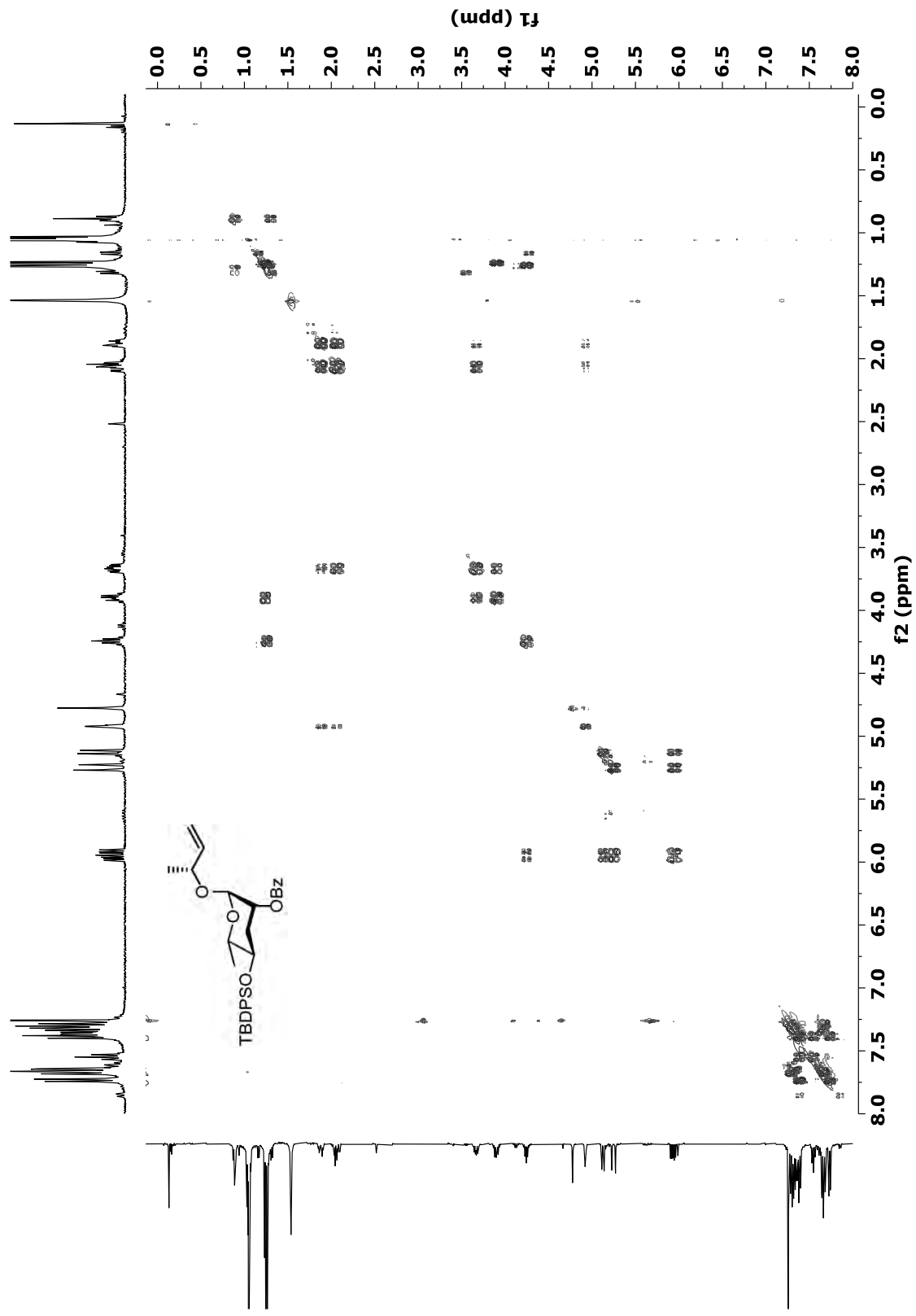


Figure S 159: HSQC (400 MHz, CDCl<sub>3</sub>) of (3R)-3-[(2-O-benzoyl-4-O-tert-butylidiphenylsilyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (148).

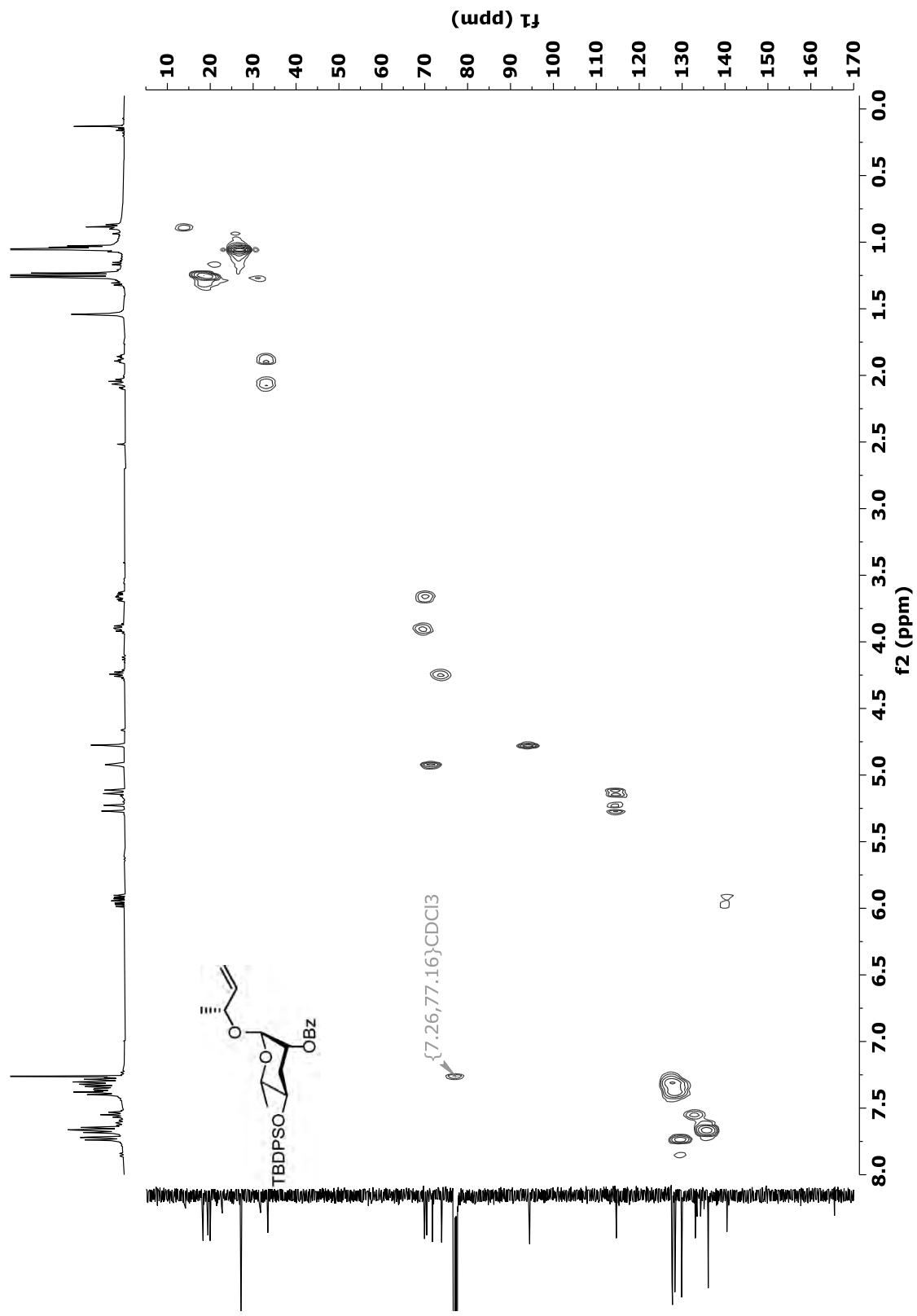


Figure S 160: <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of (3R)-3-[(4-O-tert-butylidiphenylsilyl)-3,6-dideoxy-L-arabino-hexopyranosyl]oxy]-1-butene (150).

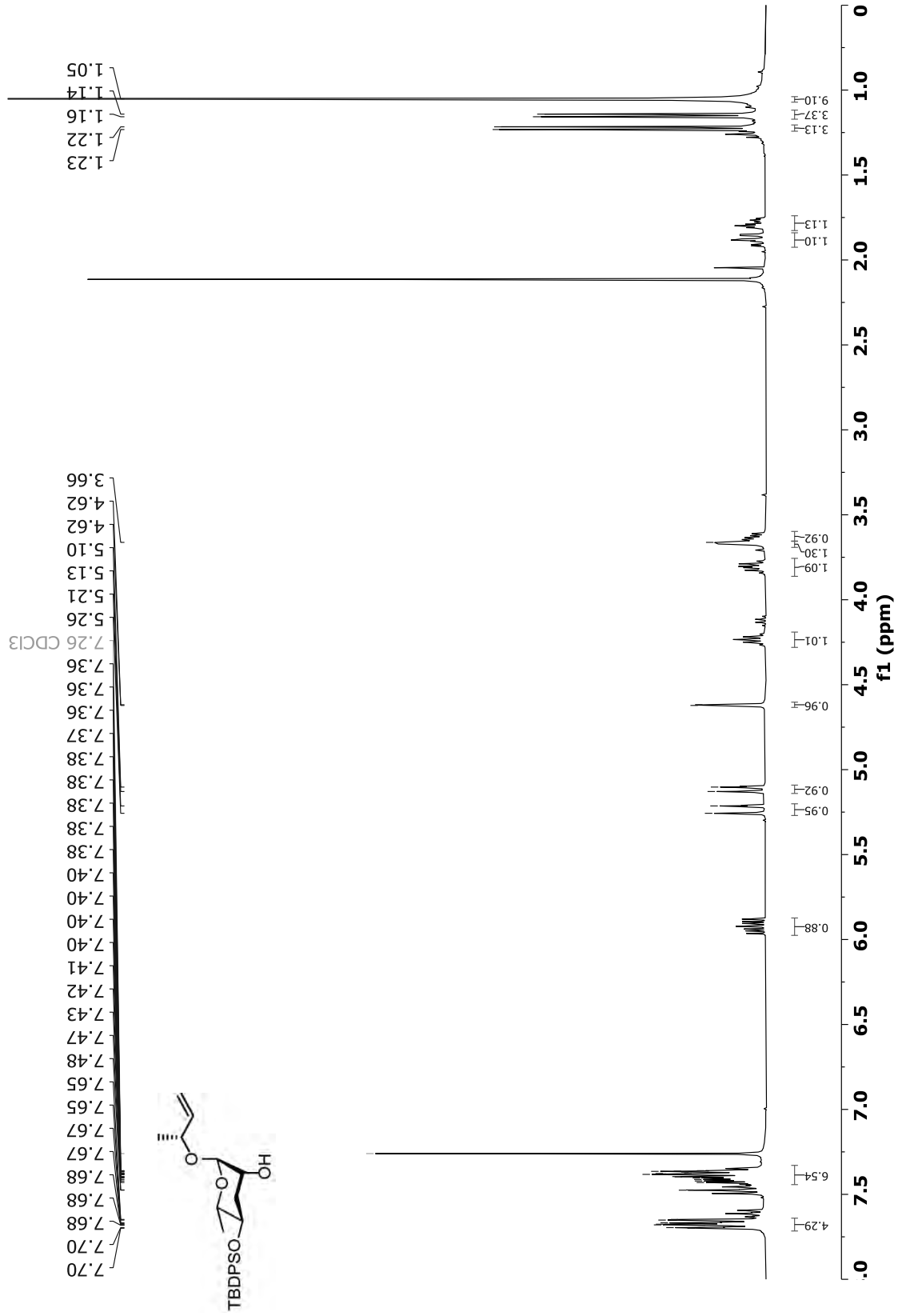


Figure S 161:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(4-O-tert-butylidiphenylsilyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (150).

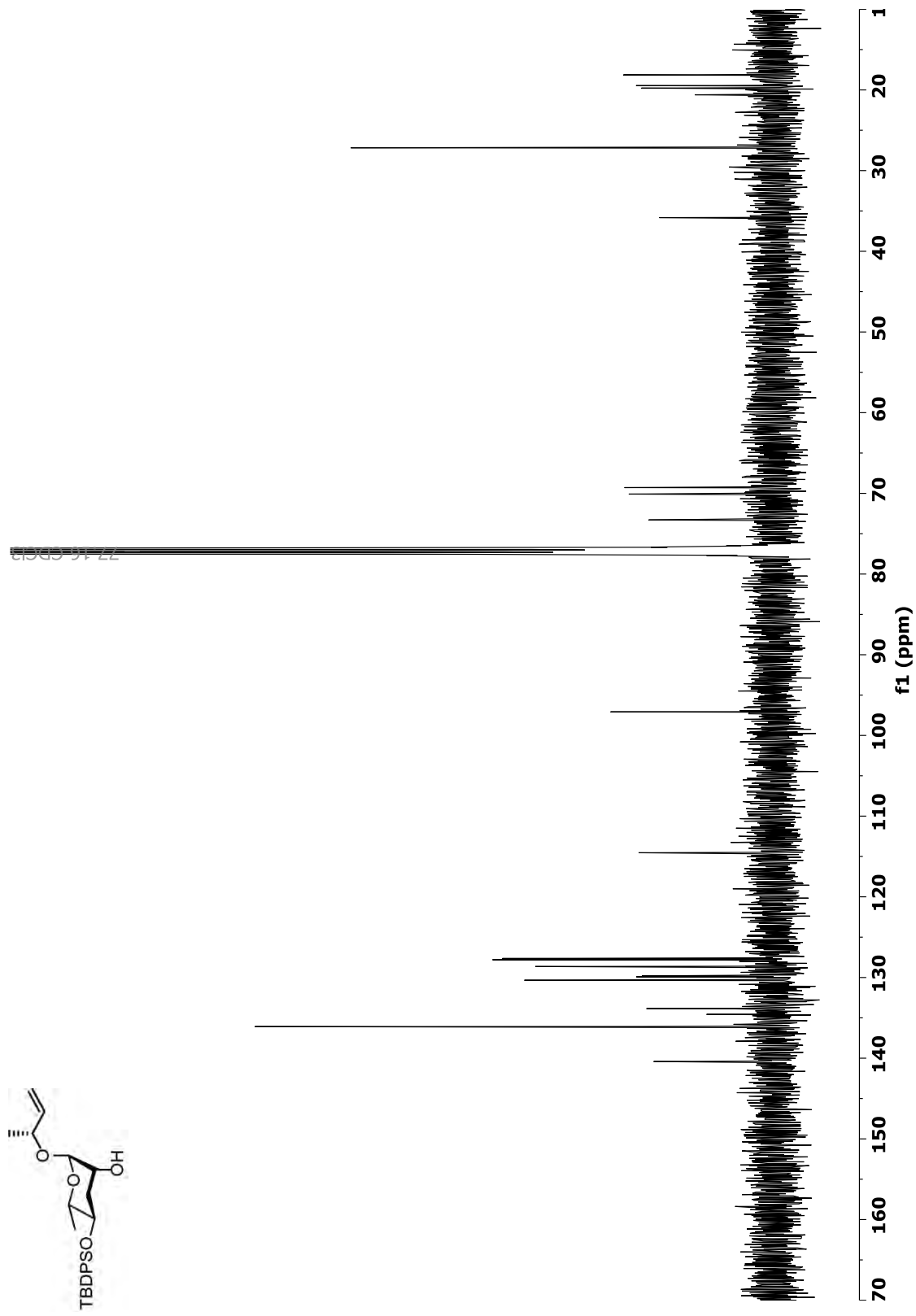


Figure S 162: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy-L-*arabino*-hexopyranosyl]oxy]-1-butene (150).

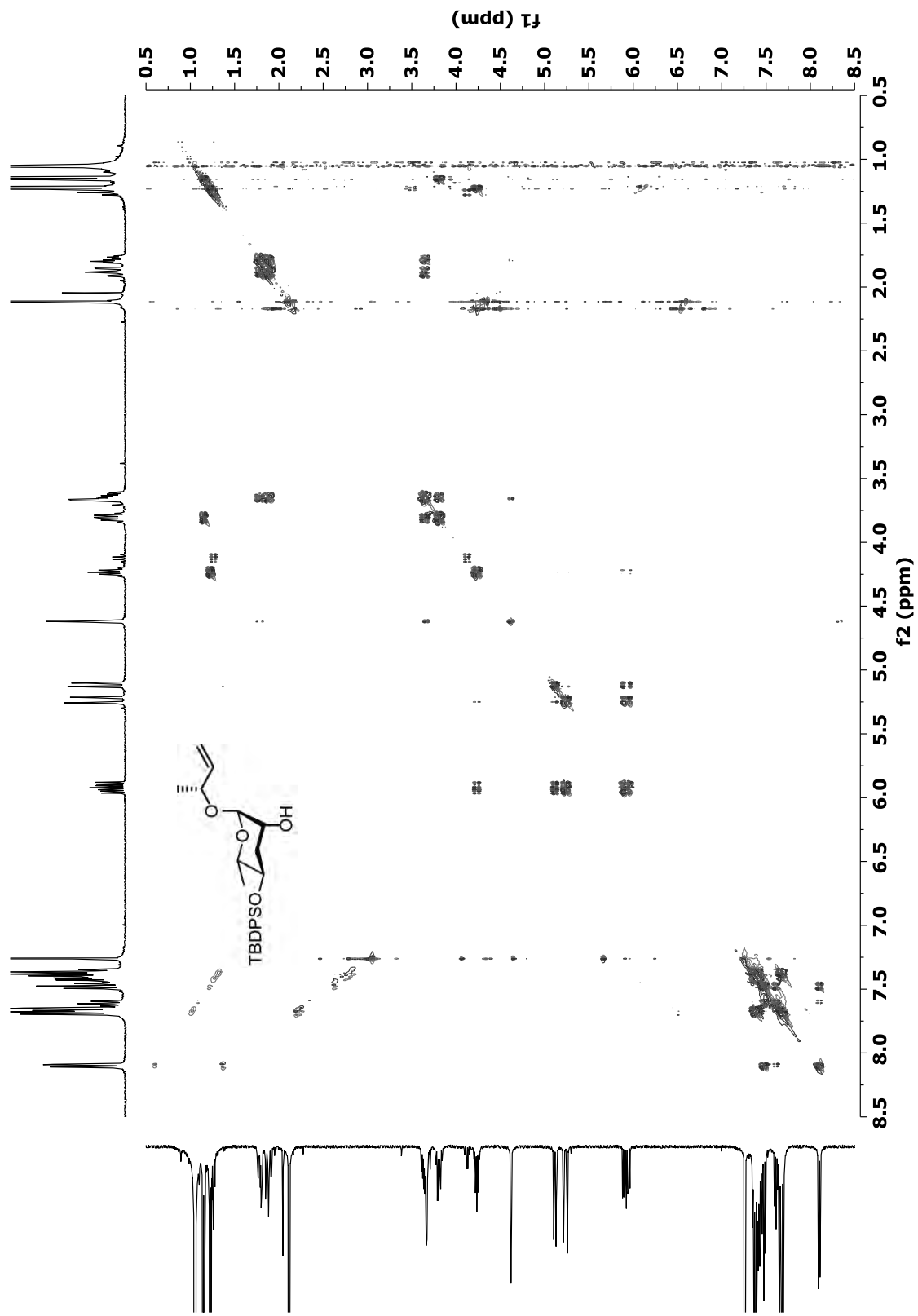


Figure S 163: HSQC (400 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy-L-arabino-hexopyranosyl]oxy]-1-butene (150).

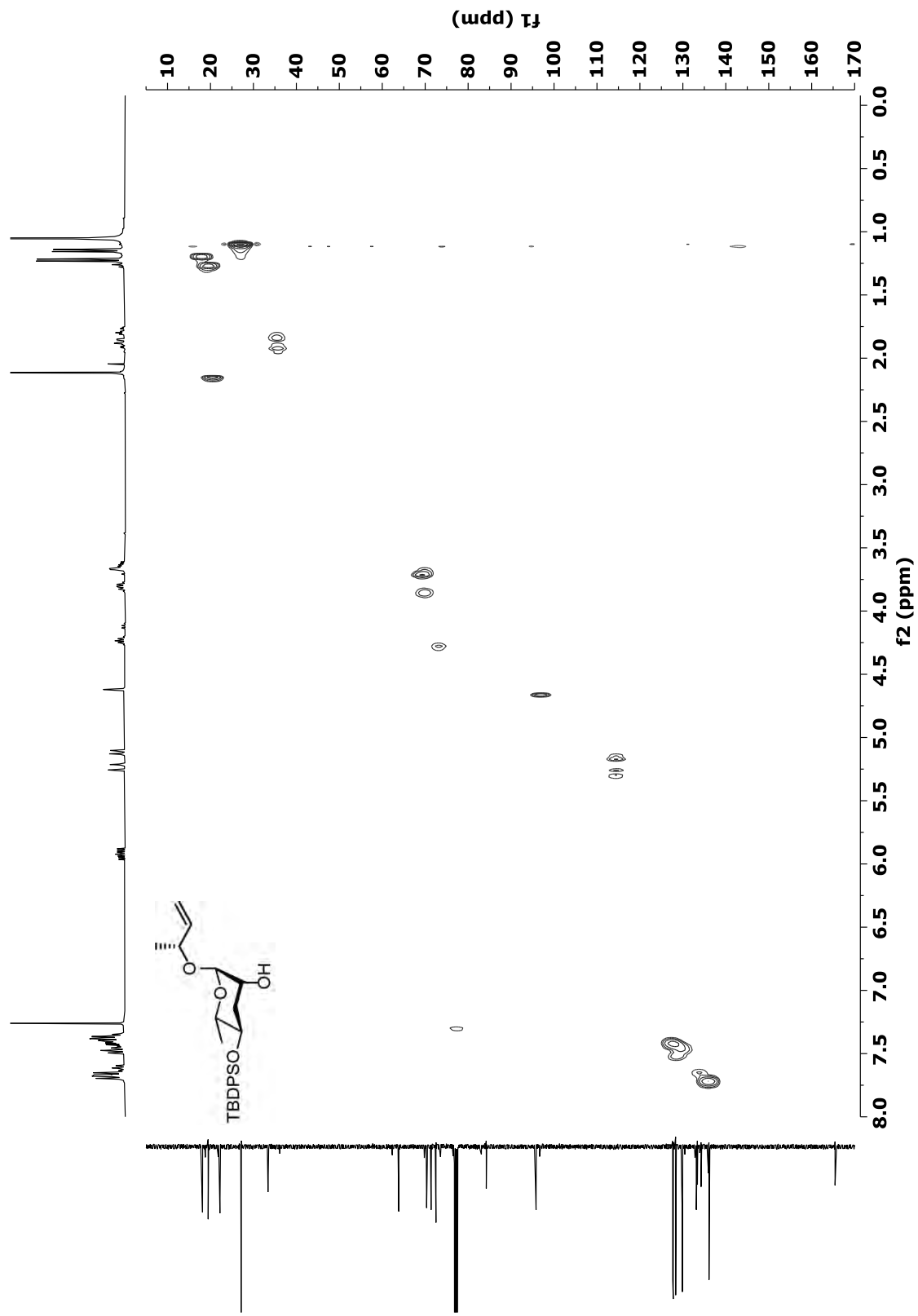


Figure S 164: <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzyl-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy-L-arabino-hexopyranosyl]oxy]-1-butene (152).

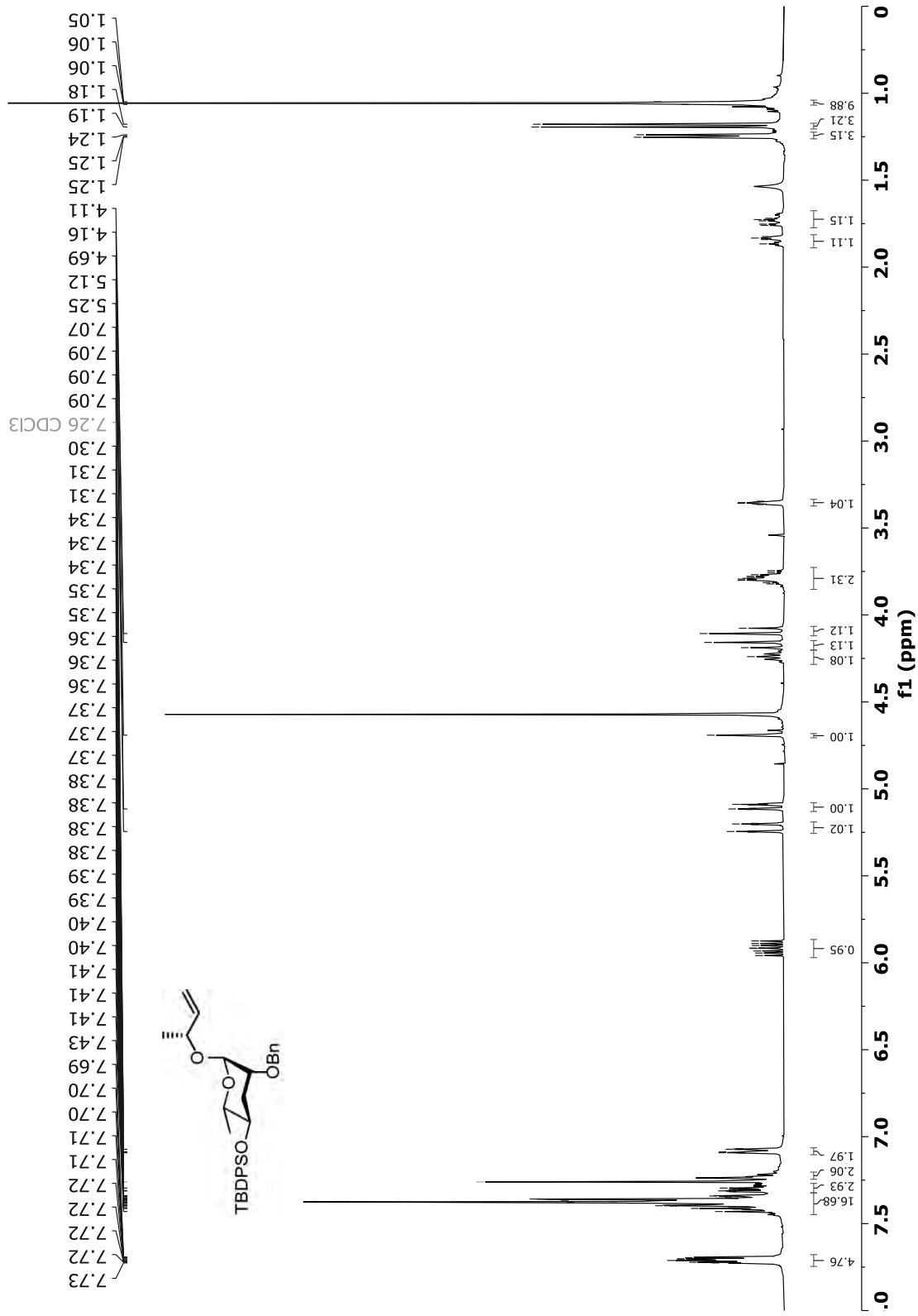


Figure S 165:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of (3*R*)-3-[(2-*O*-benzyl-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy-L-arabino-hexopyranosyl]oxy]-1-butene (152).

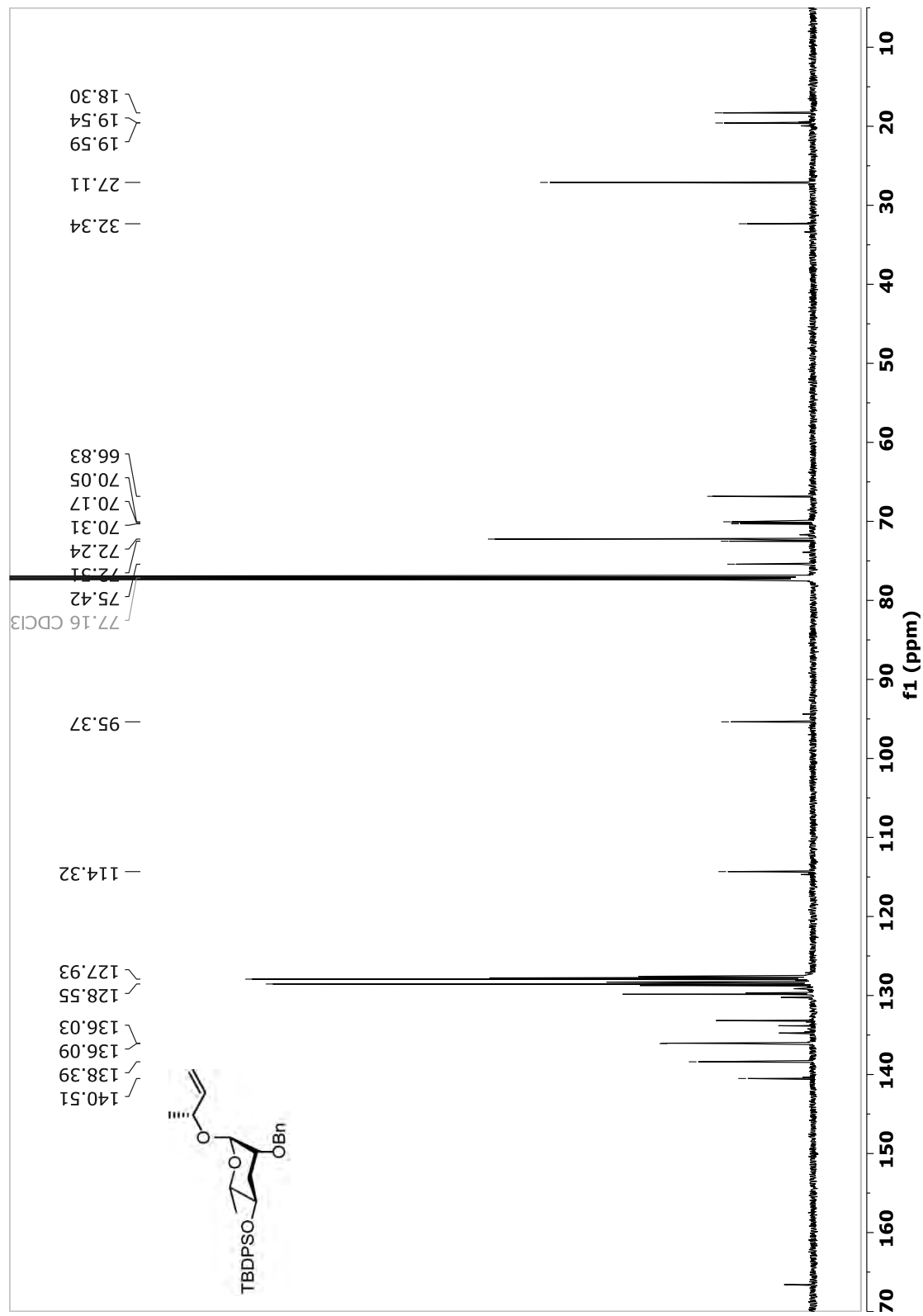


Figure S 166: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzyl-4-*O*-*tert*-butyldiphenylsilyl)-3,6-dideoxy-L-*arabino*-hexopyranosyl]oxy]-1-butene (152).

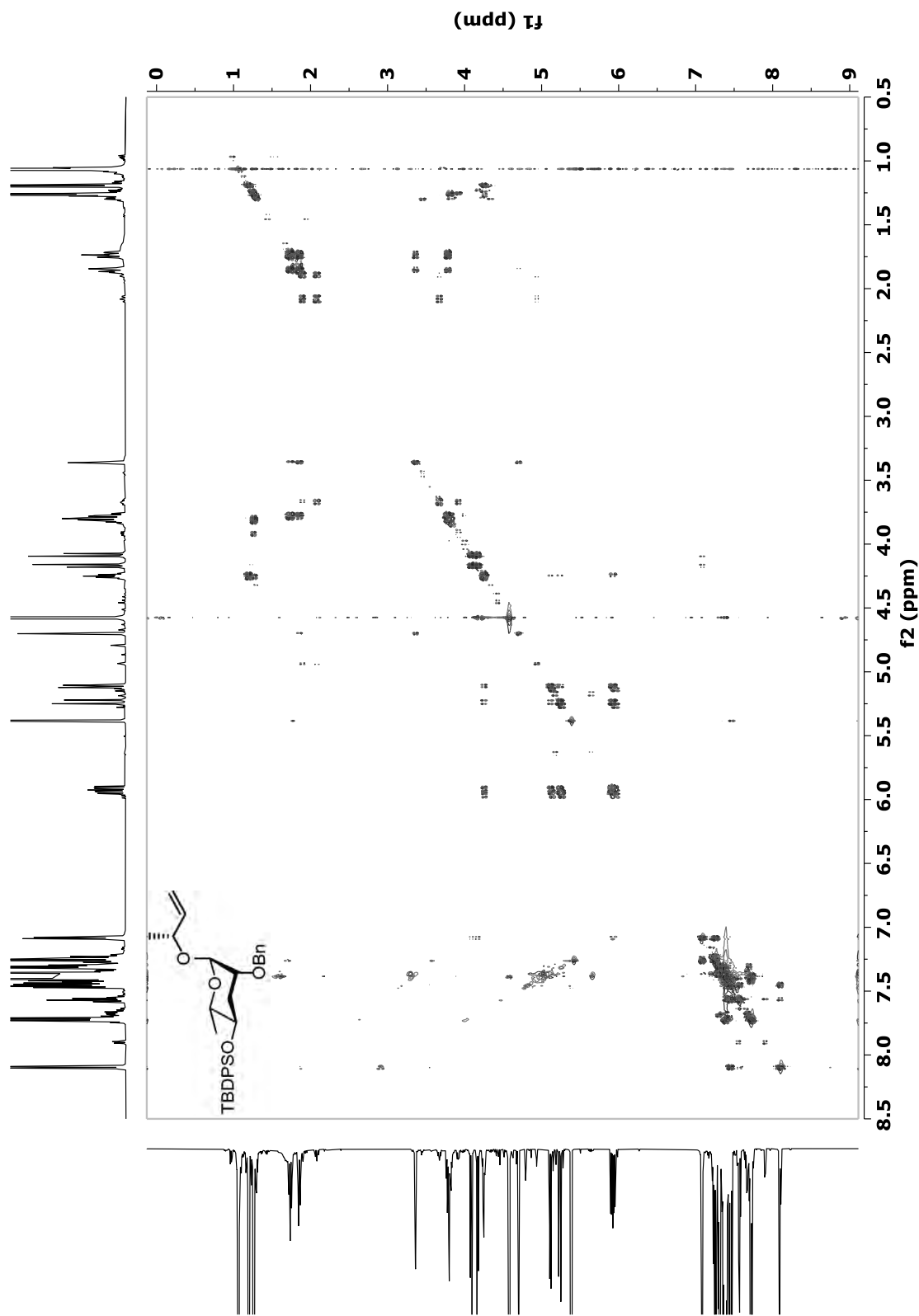


Figure S 167: HSQC (400 MHz, CDCl<sub>3</sub>) of (3R)-3-[(2-O-benzyl-4-O-tert-butyl-diphenylsilyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (152).

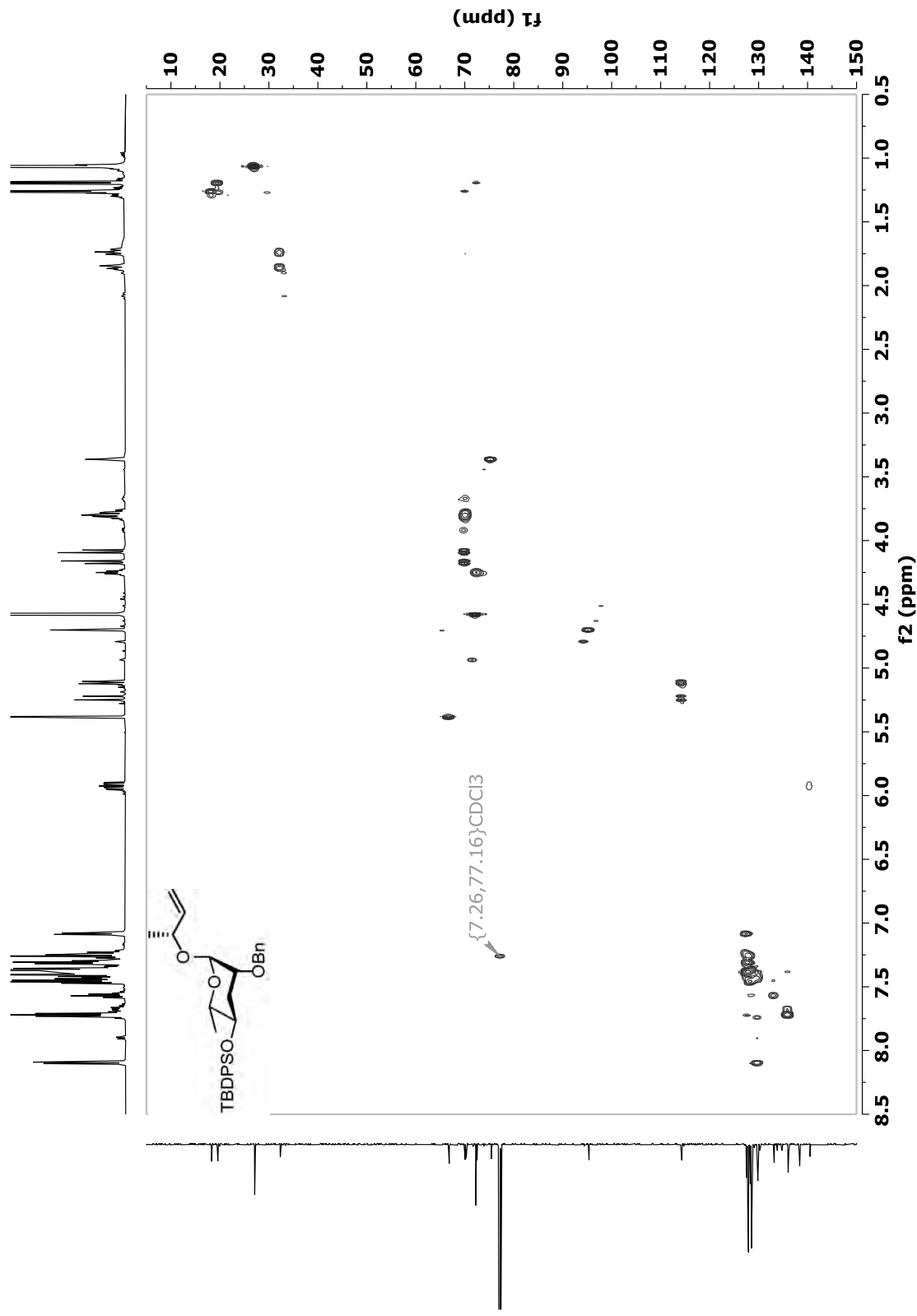


Figure S 168:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of (3*R*)-3-[(2-*O*-benzoyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (149).

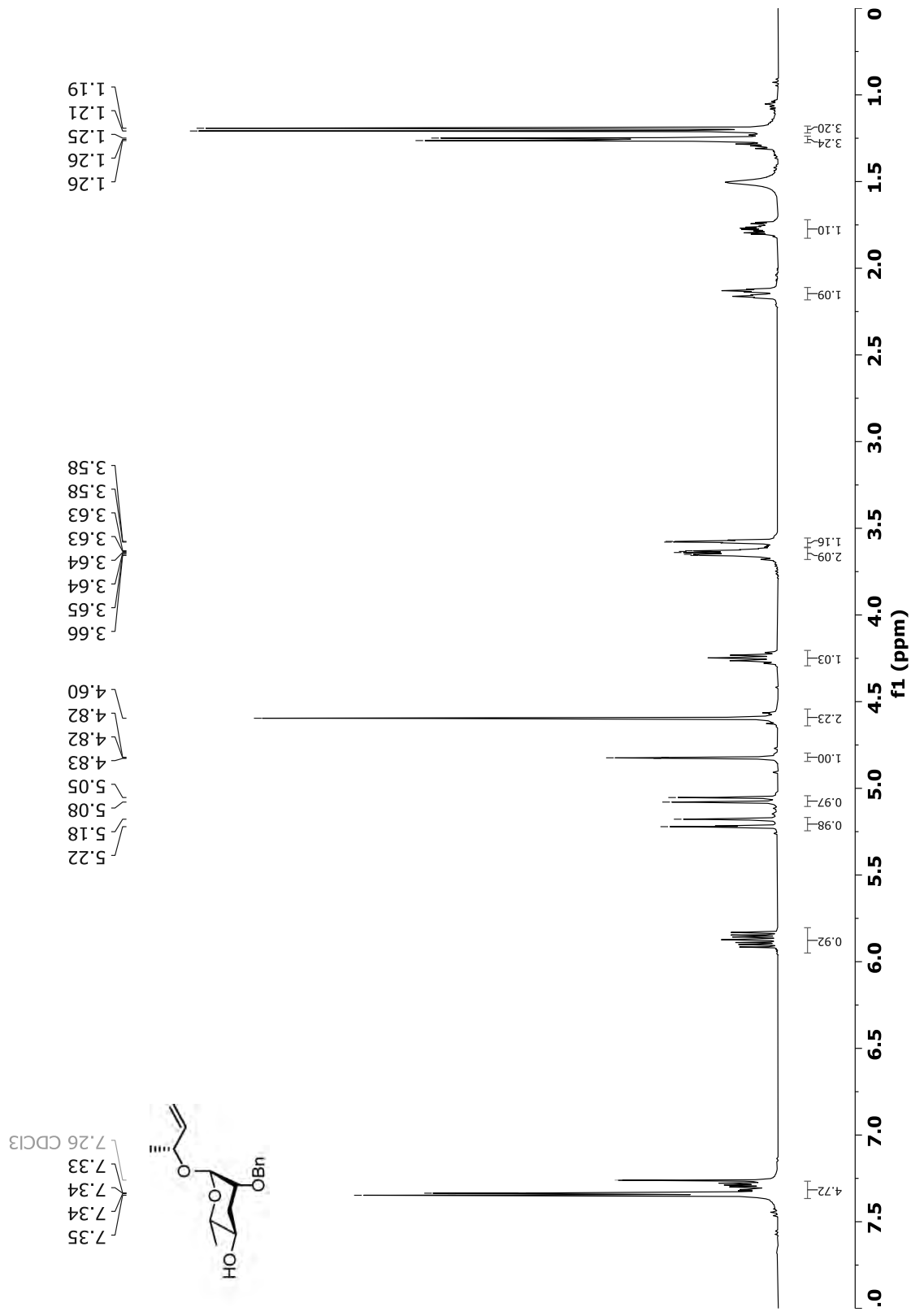


Figure S 169:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(2-O-benzoyl-L-arabino-hexopyranosyl)oxy]-1-butene (149).

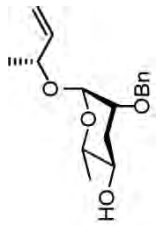
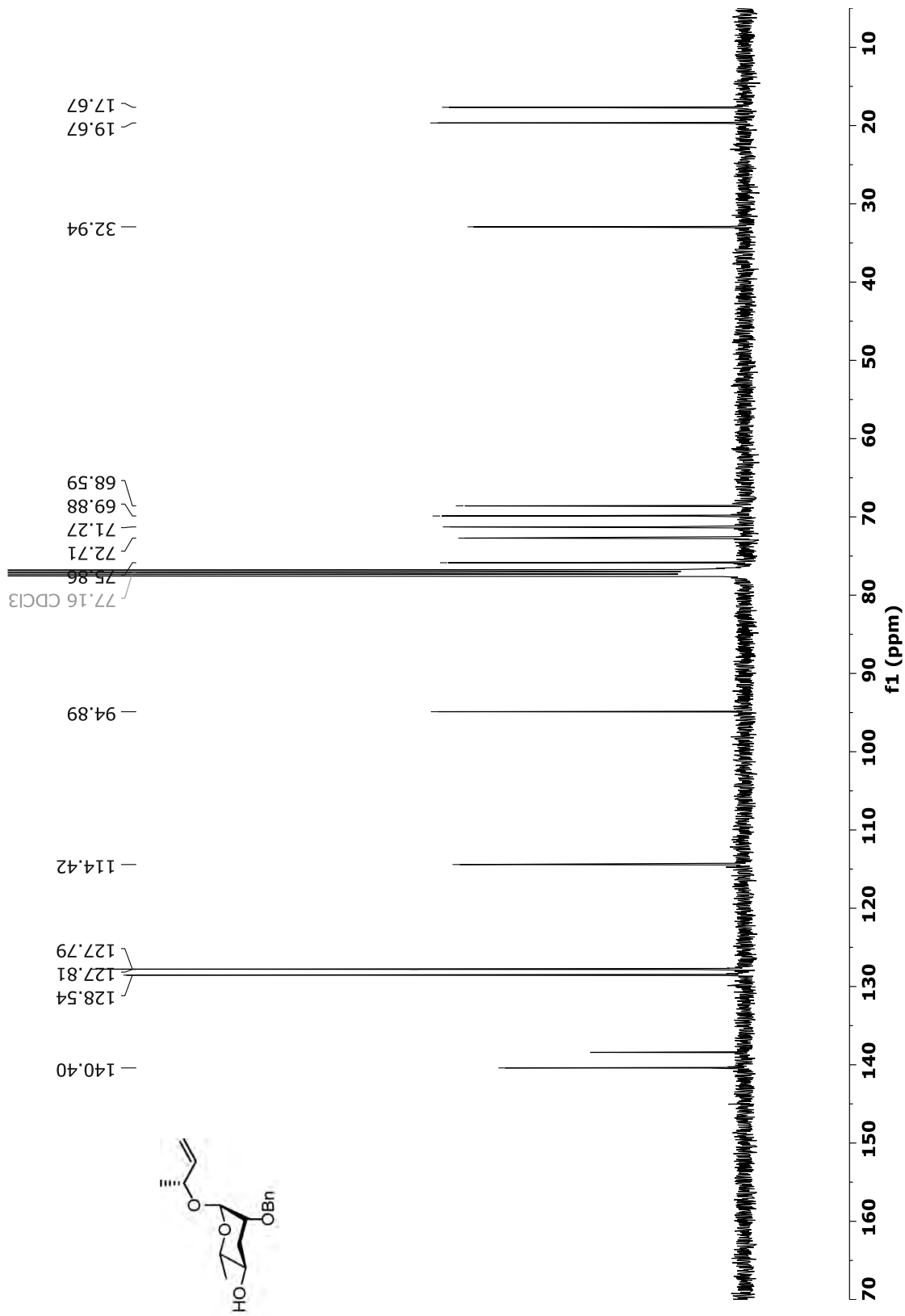


Figure S 170: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzoyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (149).

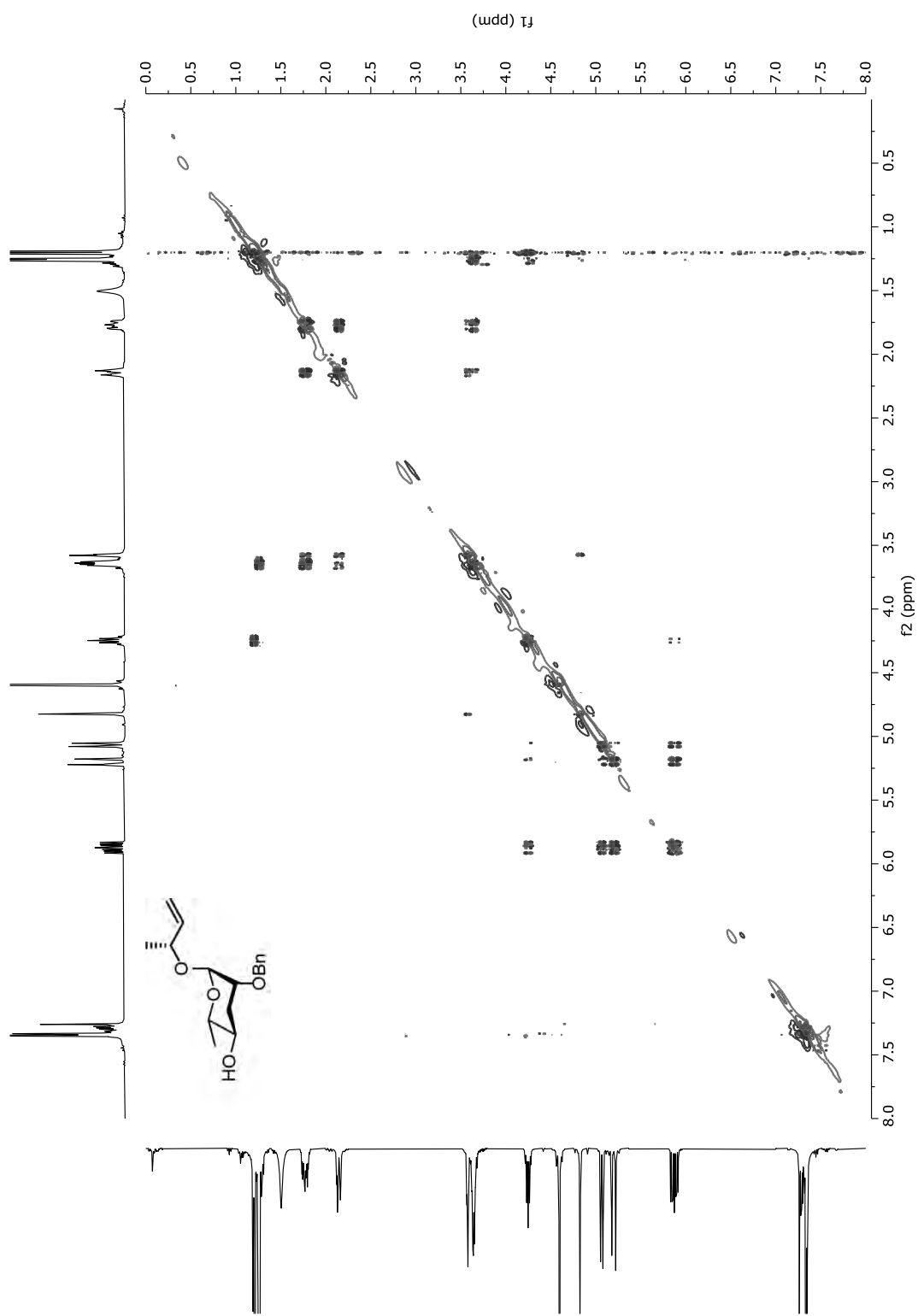


Figure S 171: HSQC (400 MHz, CDCl<sub>3</sub>) of (3R)-3-[(2-O-benzoyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (149).

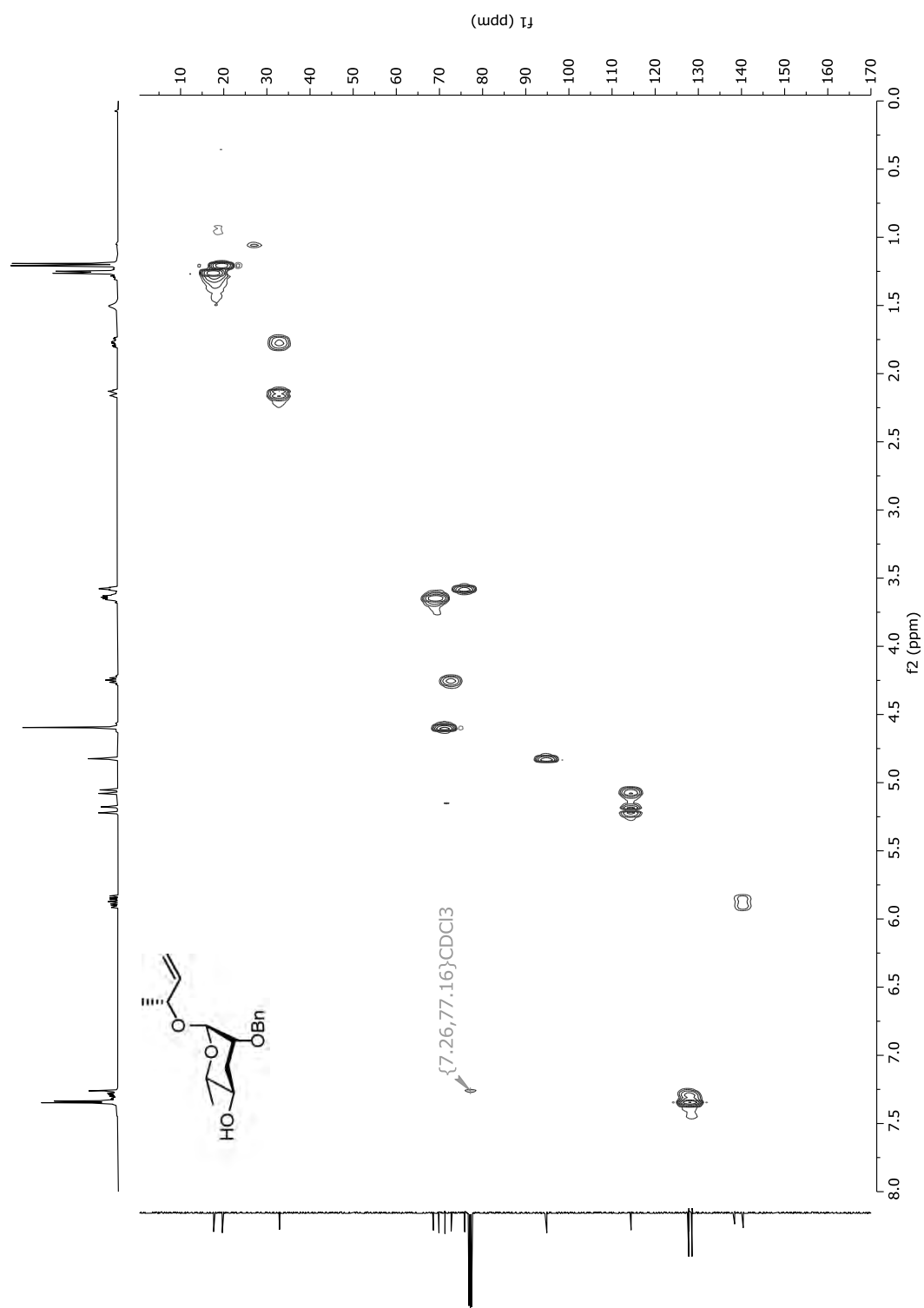


Figure S 172: <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of Benzyl-(4R)-4-[(2-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-2-pentenoate (153).

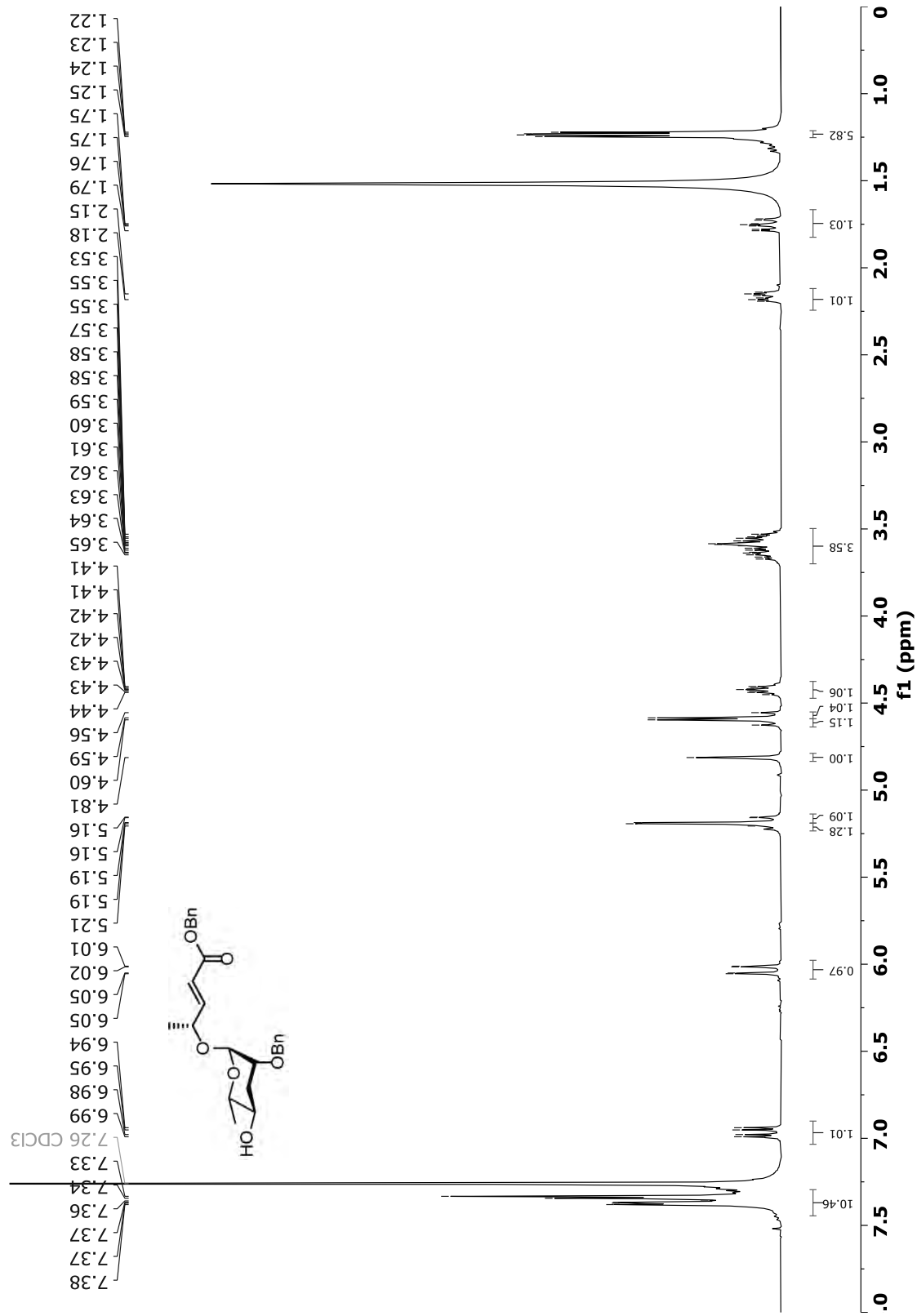


Figure S 173: <sup>13</sup>C NMR (100 MHz, CDCl<sub>3</sub>) of Benzyl-(4R)-4-[(2-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-2-pentenoate (153).

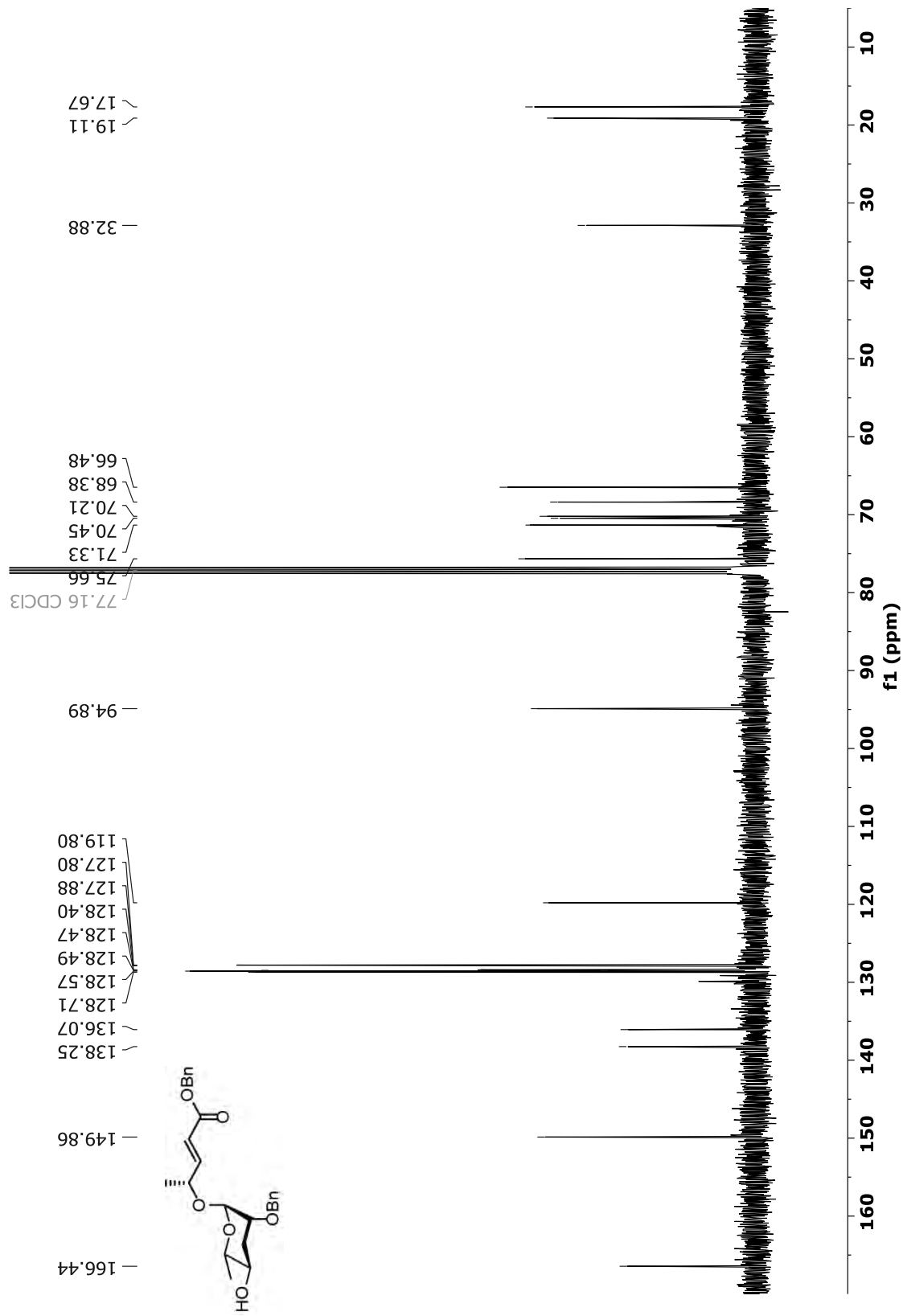


Figure S 174: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of Benzyl-(4*R*)-4-[(2-*O*-benzyl-3,6-dideoxy-L-*arabino*-hexopyranosyl)oxy]-2-pentenoate (153).

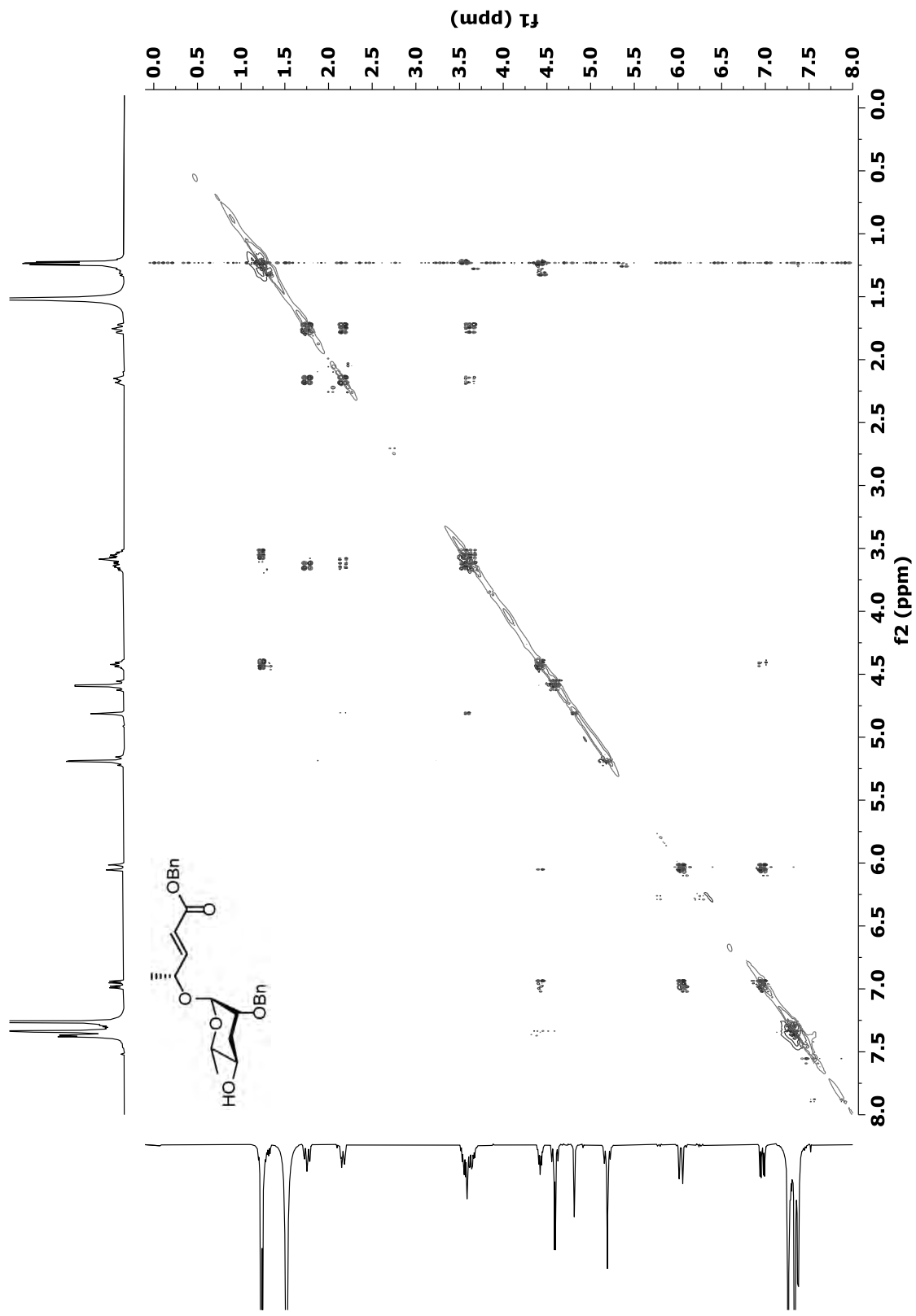


Figure S 175: HSQC (400 MHz, CDCl<sub>3</sub>) of Benzyl-(4R)-4-[(2-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-2-pentenoate (153).

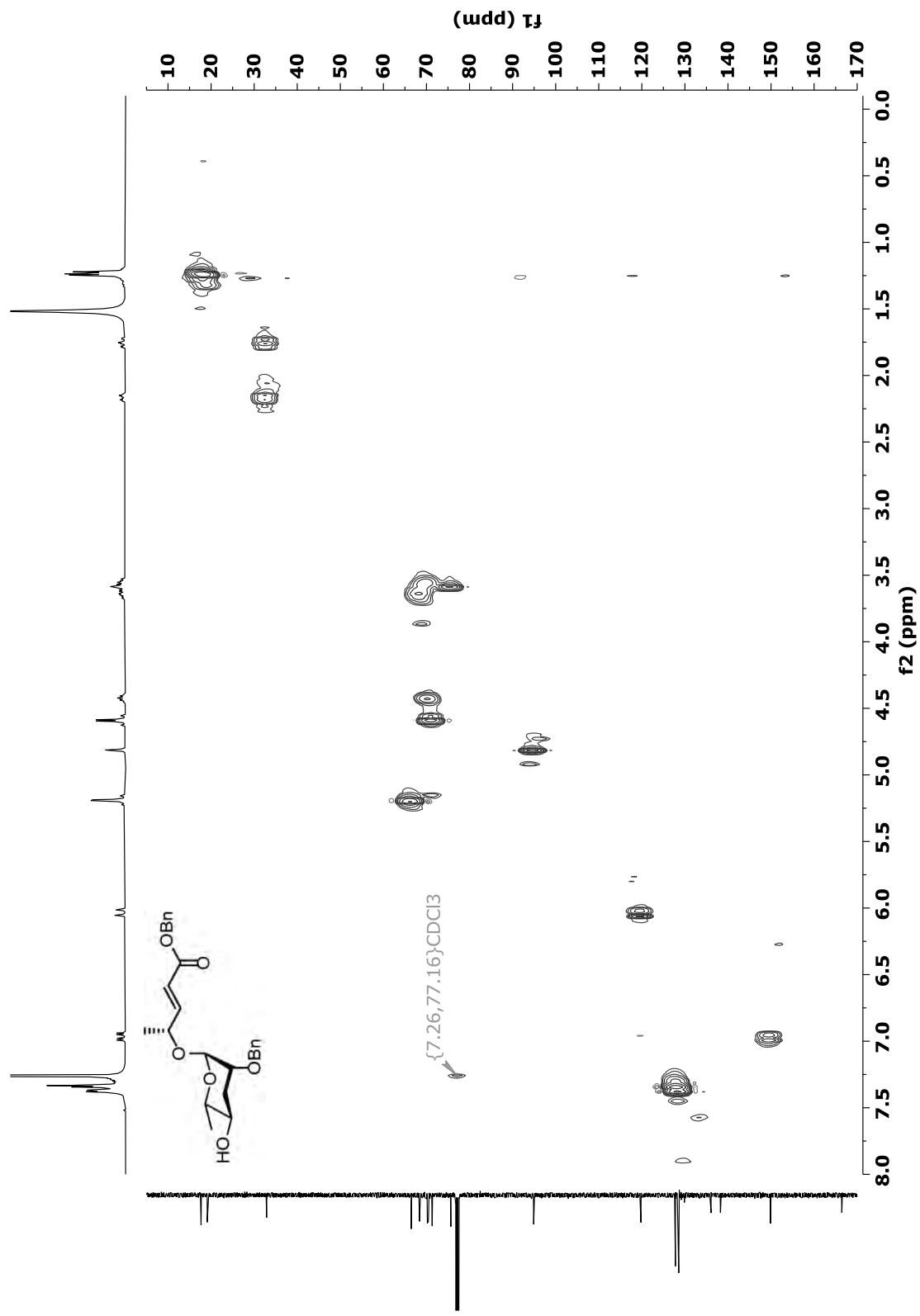




Figure S 177:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of Benzyl-(2*E*, 4*R*)-4-[(2-*O*-benzyl-4-((benzyloxy)carbonyl)amino)benzoyl-3,6-dideoxy- $\alpha$ -L-arabinohexopyranosyl)oxy]-2-pentenoate (154).

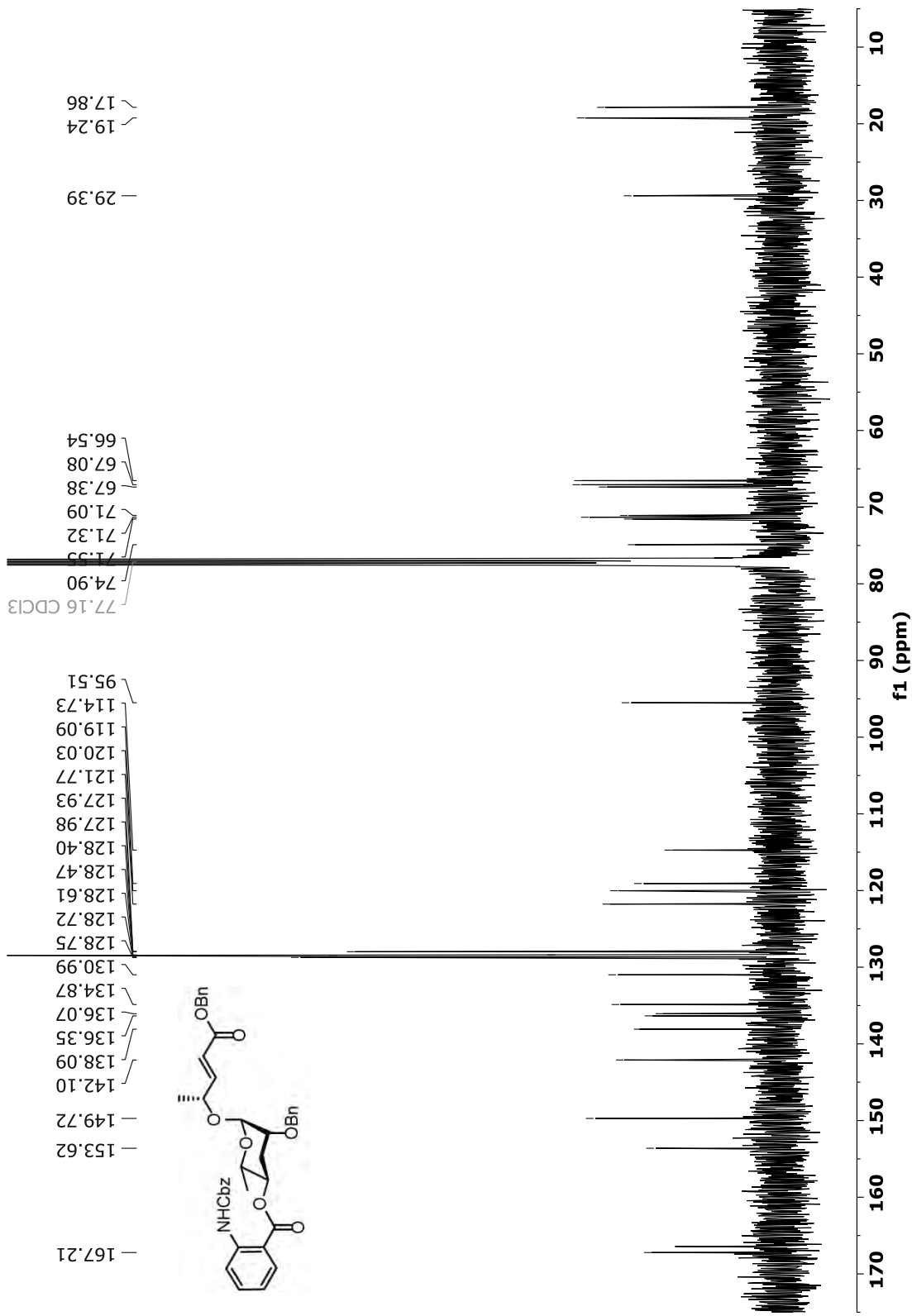


Figure S 178: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of Benzyl-(2*E*, 4*R*)-4-[(2-*O*-benzyl-4-((benzyloxy)carbonyl)amino)benzoyl-3,6-dideoxy- $\alpha$ -L-arabinohexopyranosyl)oxy]-2-pentenoate (154).

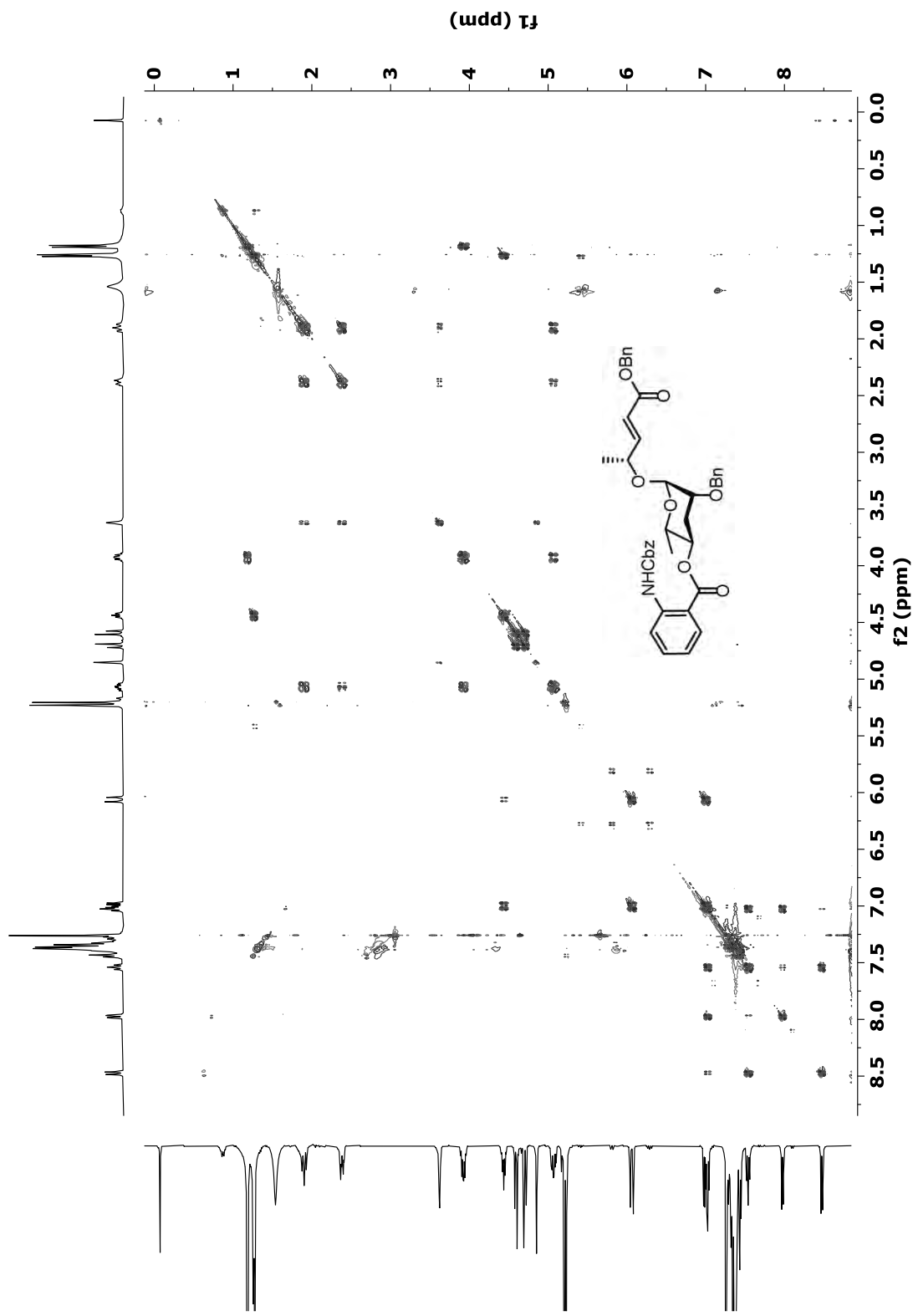


Figure S 179:  $^{13}\text{C}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of Benzyl-(2E, 4R)-4-[(2-O-benzyl-4-((benzyloxy)carbonyl)amino)benzoyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-pentenoate (154).

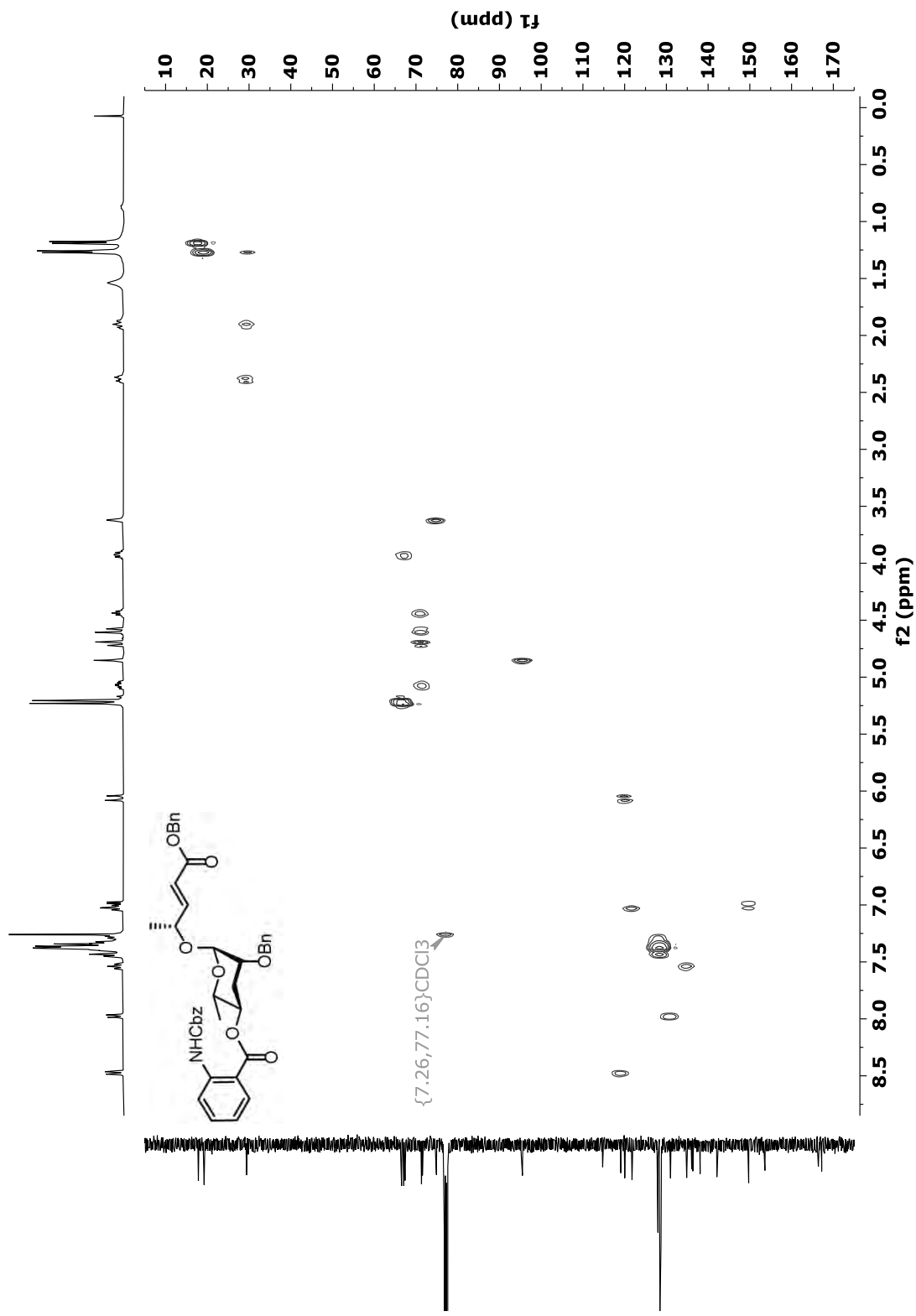


Figure S 180: <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of (4R)-4-[(4-O-(2-amino-benzoyl)-3,6-dideoxy-α-L-arabino-hexopyranosyl)oxy]-2-pentanoic acid (34).

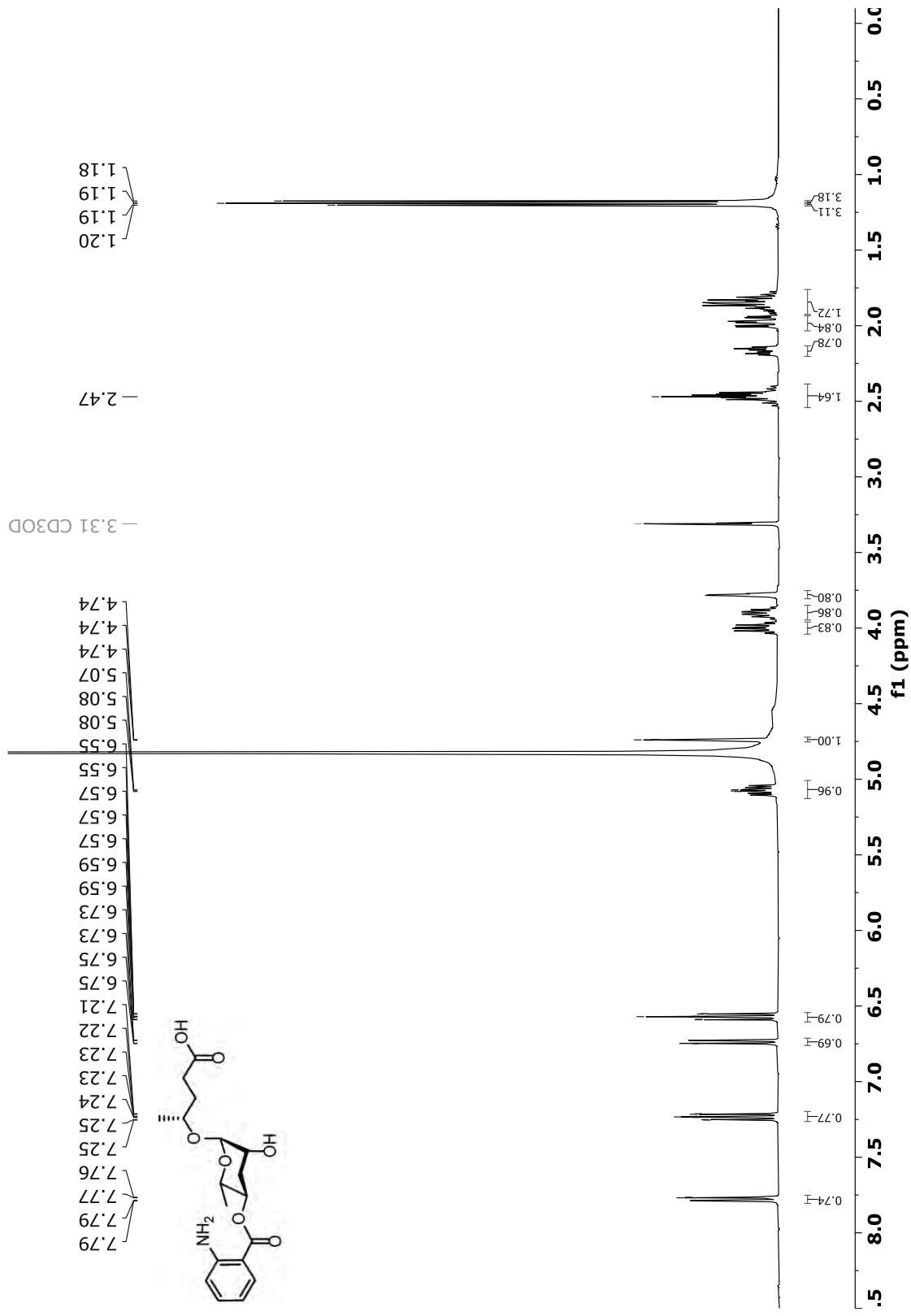


Figure S 181:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of (4R)-4-[(4-O-(2-amino-benzoyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-pentanoic acid (34).

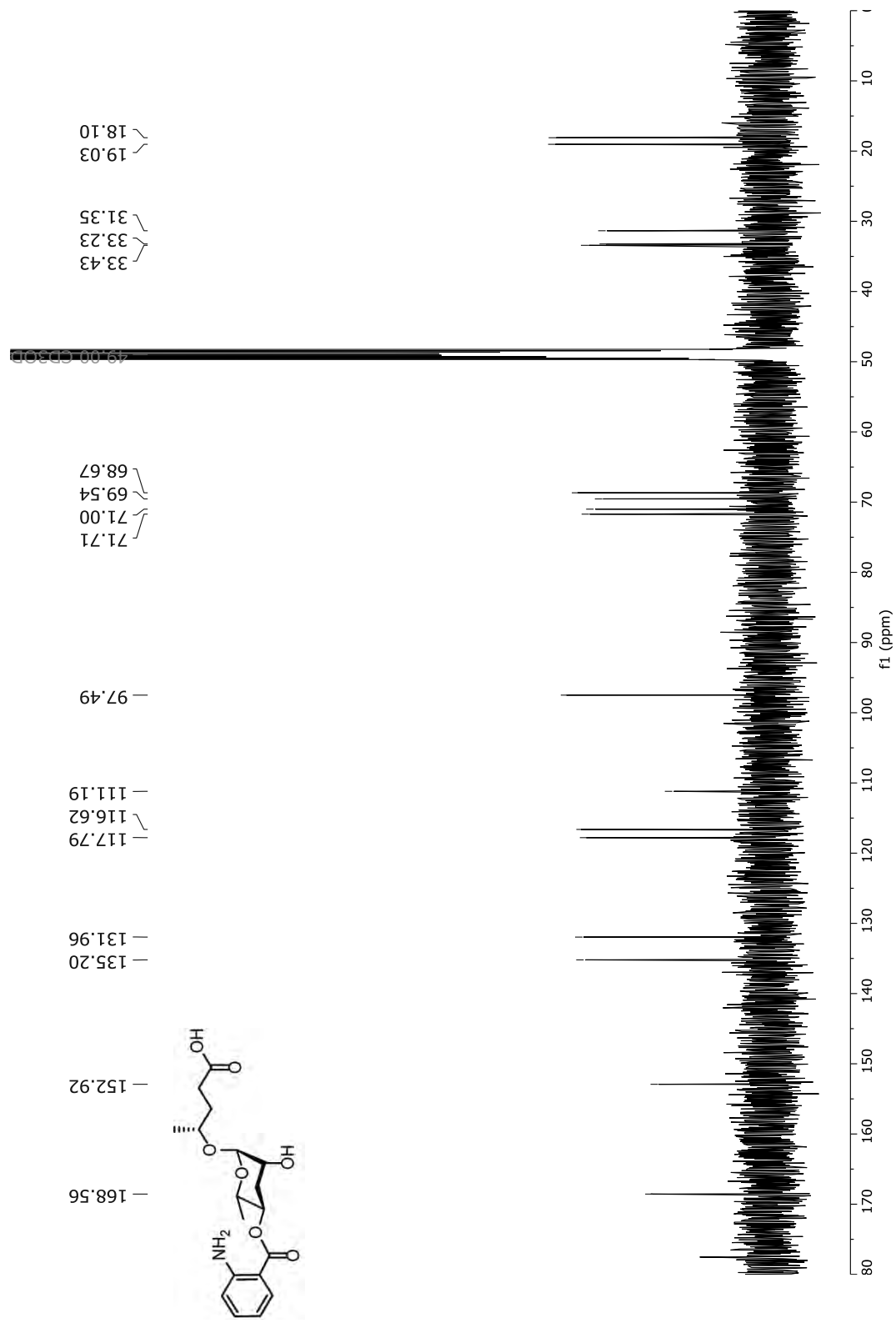


Figure S 182: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of (4*R*)-4-[(4-*O*-(2-amino-benzoyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-pentanoic acid (34).

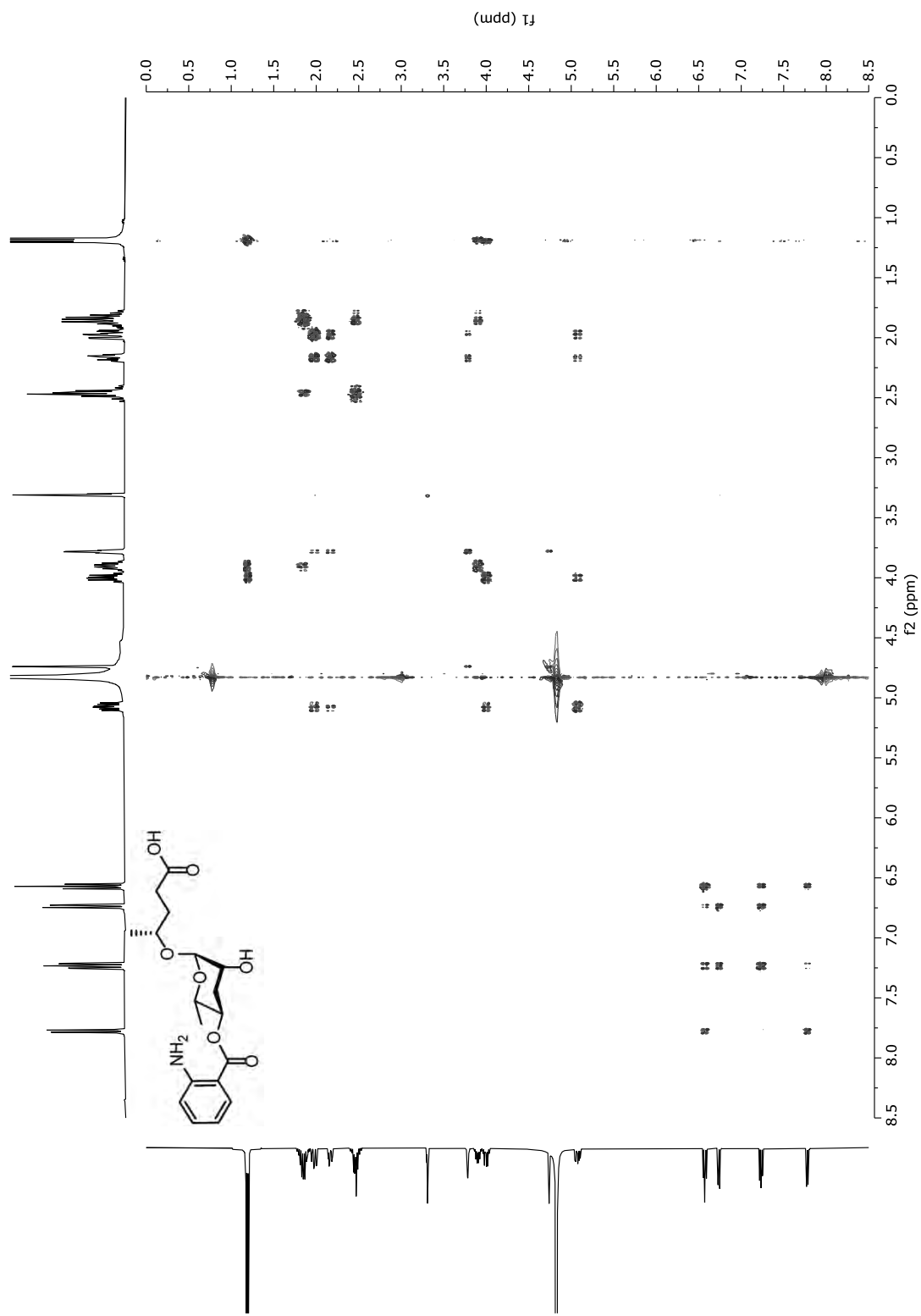


Figure S 183: HSQC (400 MHz, CDCl<sub>3</sub>) of (4*R*)-4-[(4-*O*-(2-amino-benzoyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-pentanoic acid (34).

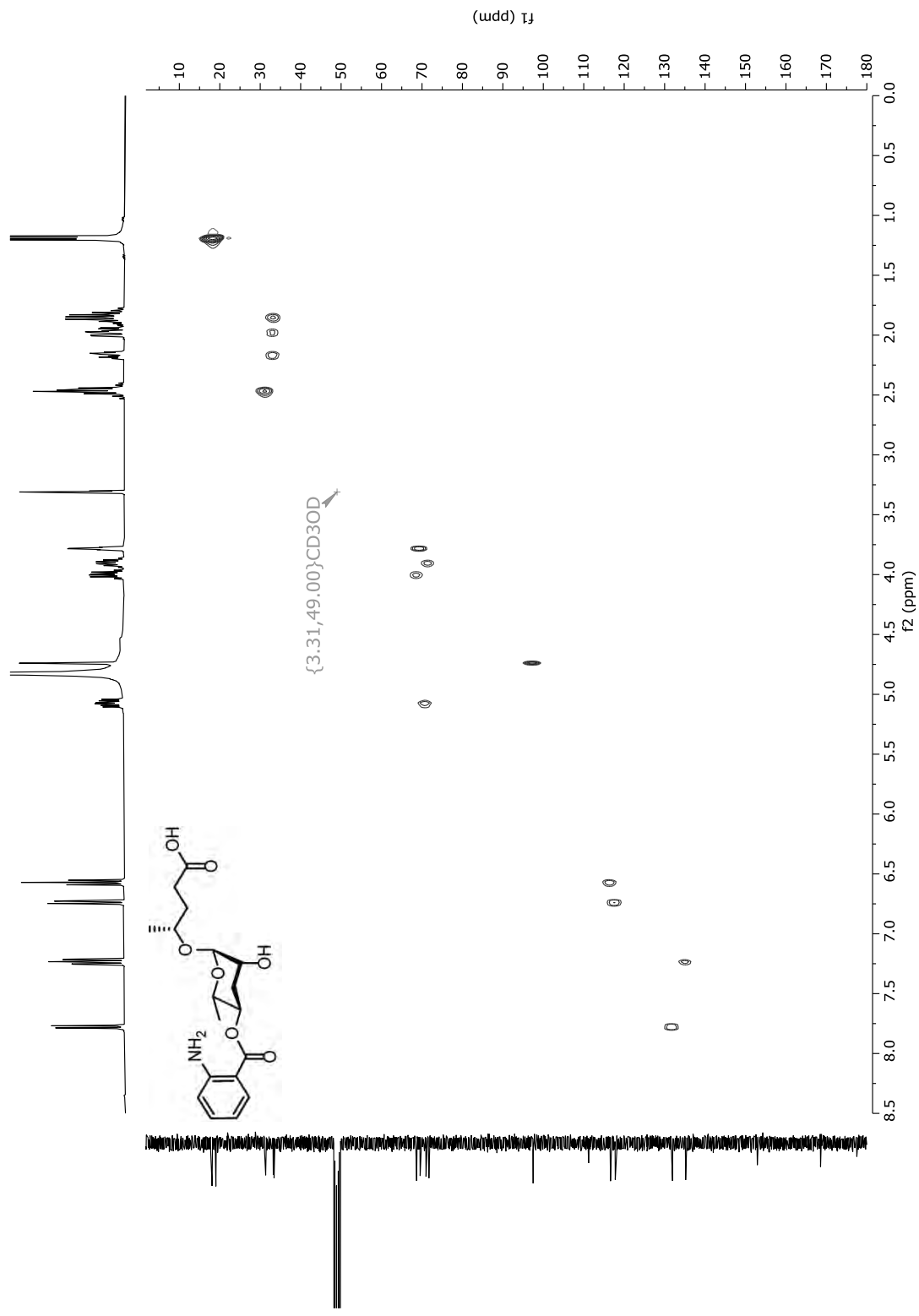


Figure S 184: <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of (4R)-4-[(4-O-(2-methylamino-benzoyl)-3,6-dideoxy-α-L-arabino-hexopyranosyl)oxy]-2-pentanoic acid (147).

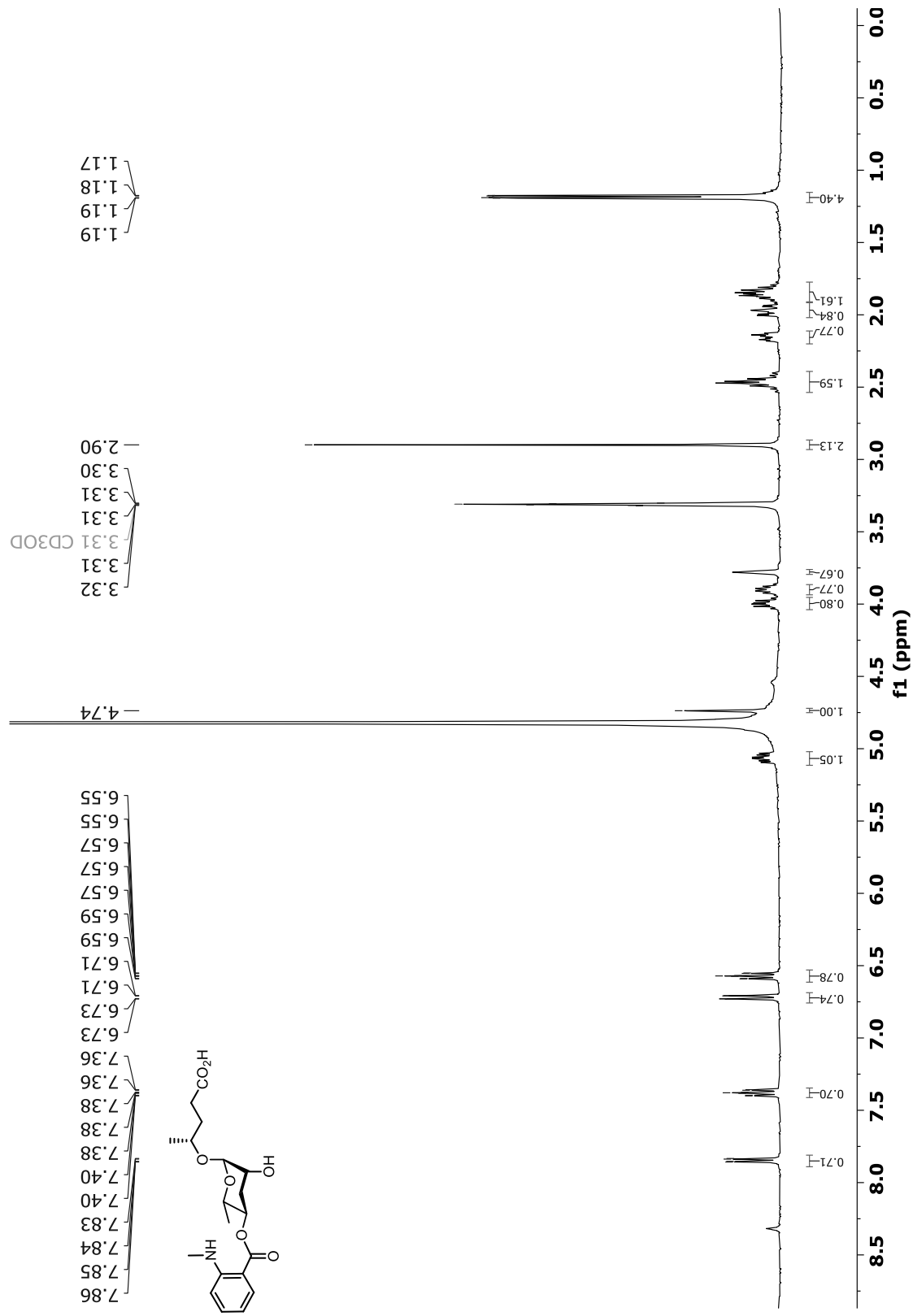


Figure S 185: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of (4*R*)-4-[(4-*O*-(2-methylamino-benzoyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-pentanoic acid (147).

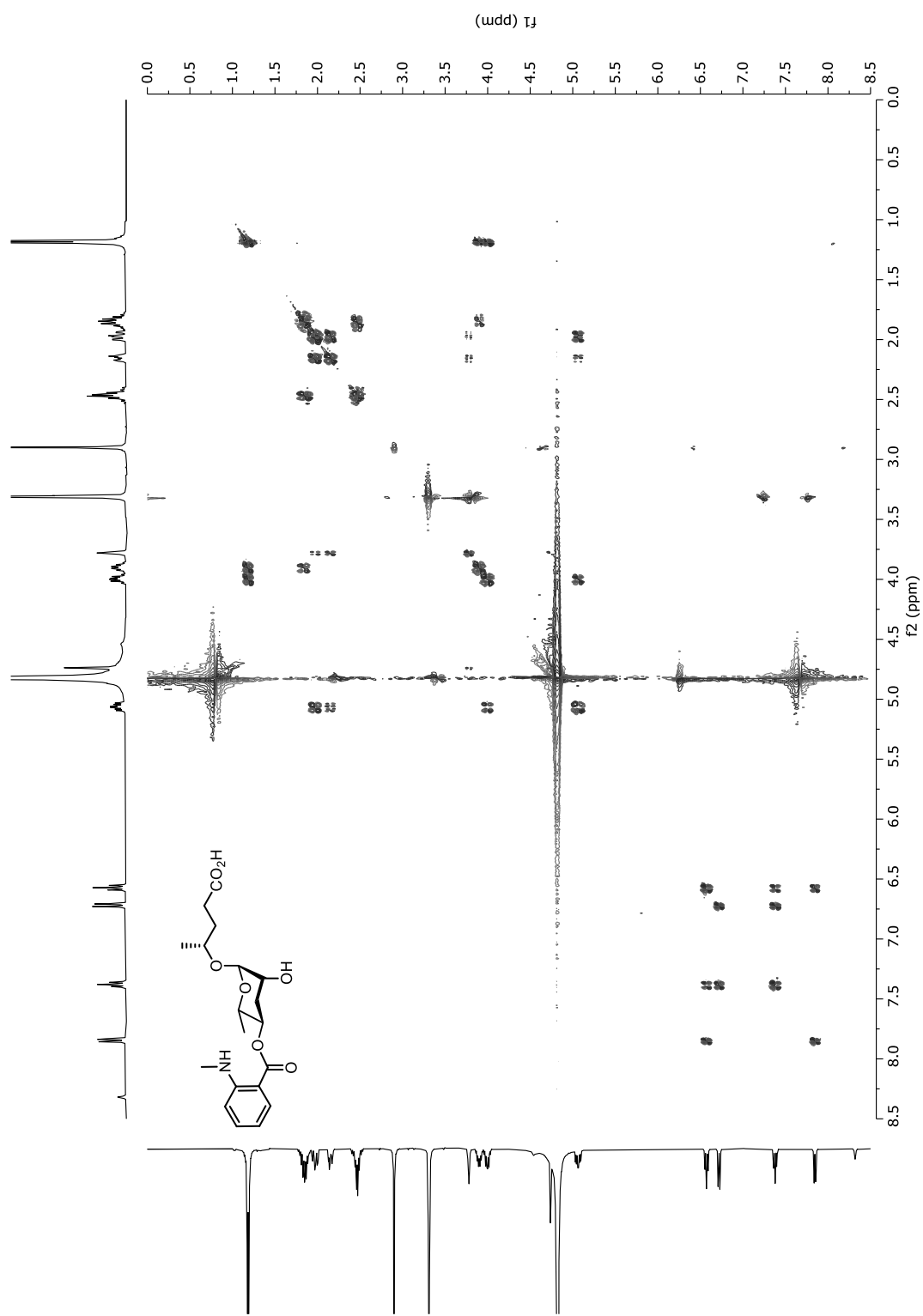


Figure S 186: HSQC (400 MHz, CDCl<sub>3</sub>) of (4R)-4-[(4-O-(2-methylamino-benzoyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-2-pentanoic acid (147).

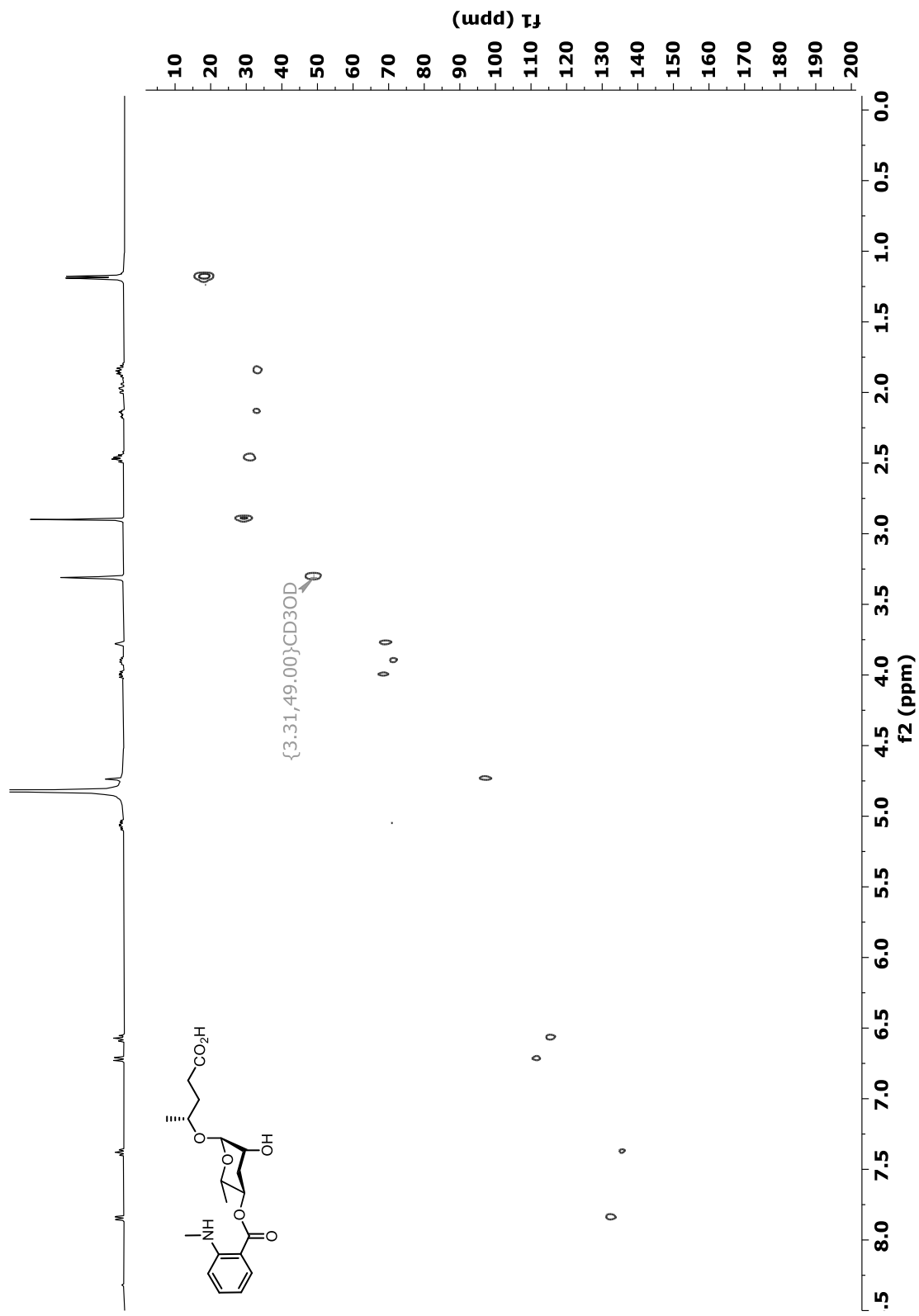


Figure S 187: <sup>1</sup>H NMR (400 MHz, CD<sub>3</sub>OD) of 1-O-benzyl-6-deoxy- $\alpha$ -L-arabino-hexopyranoside (163).

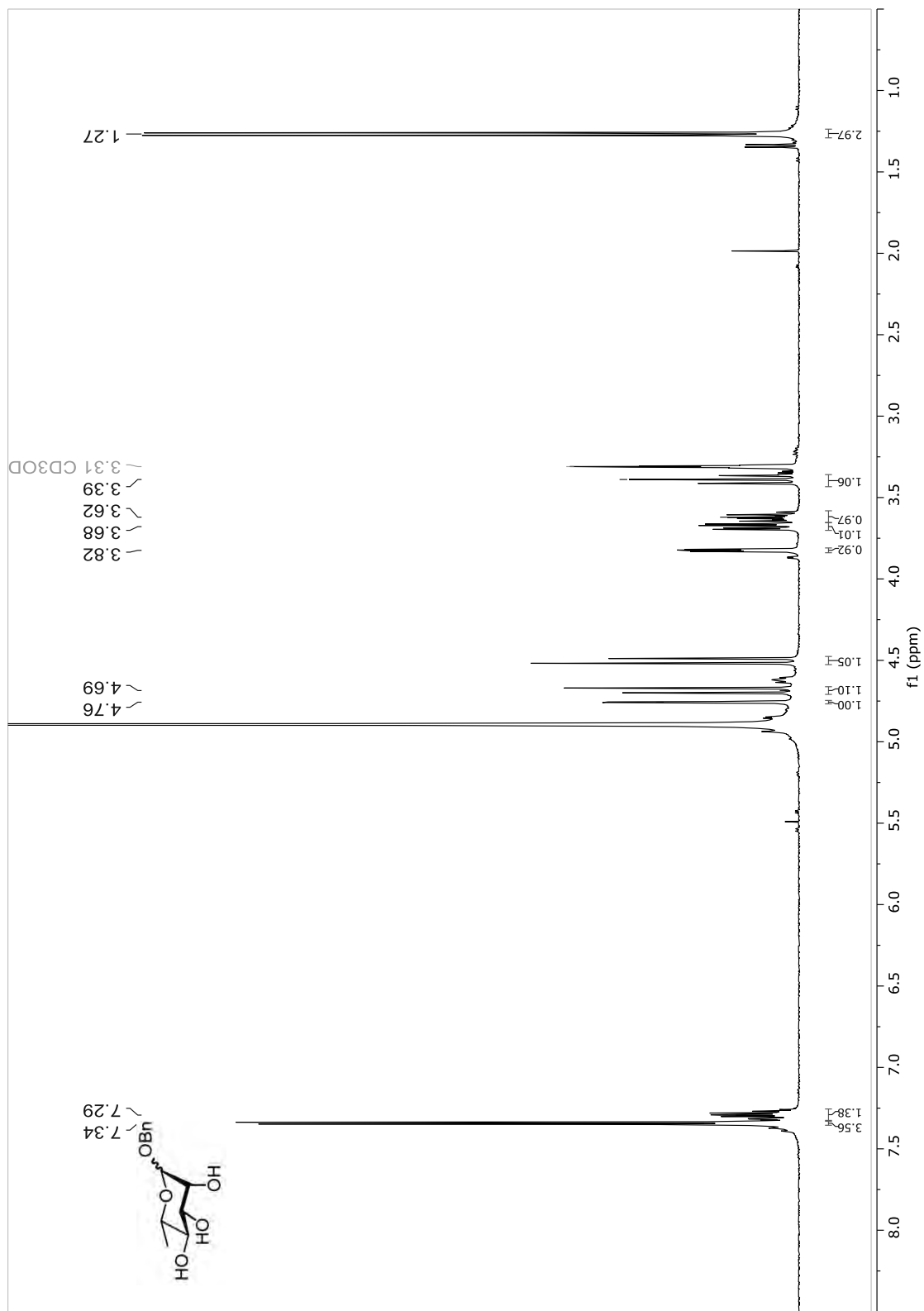


Figure S 188:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CD}_3\text{OD}$ ) of 1-O-benzyl-6-deoxy- $\alpha$ -L-arabino-hexopyranoside (163)

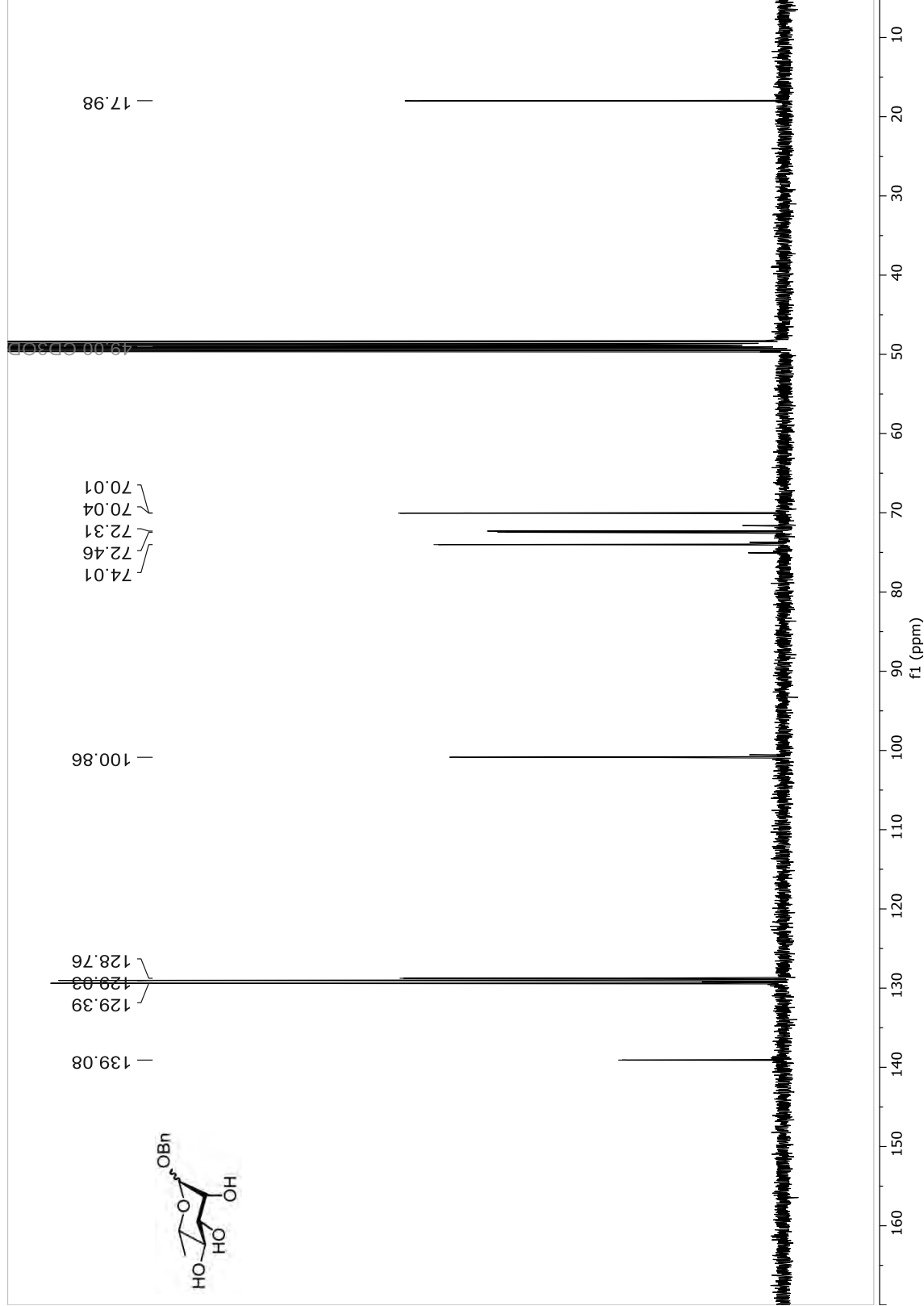


Figure S 189: <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of 1-O-benzyl-6-deoxy-2,3-(O-isopropylidene)-α-L-arabino-hexopyranoside (164).

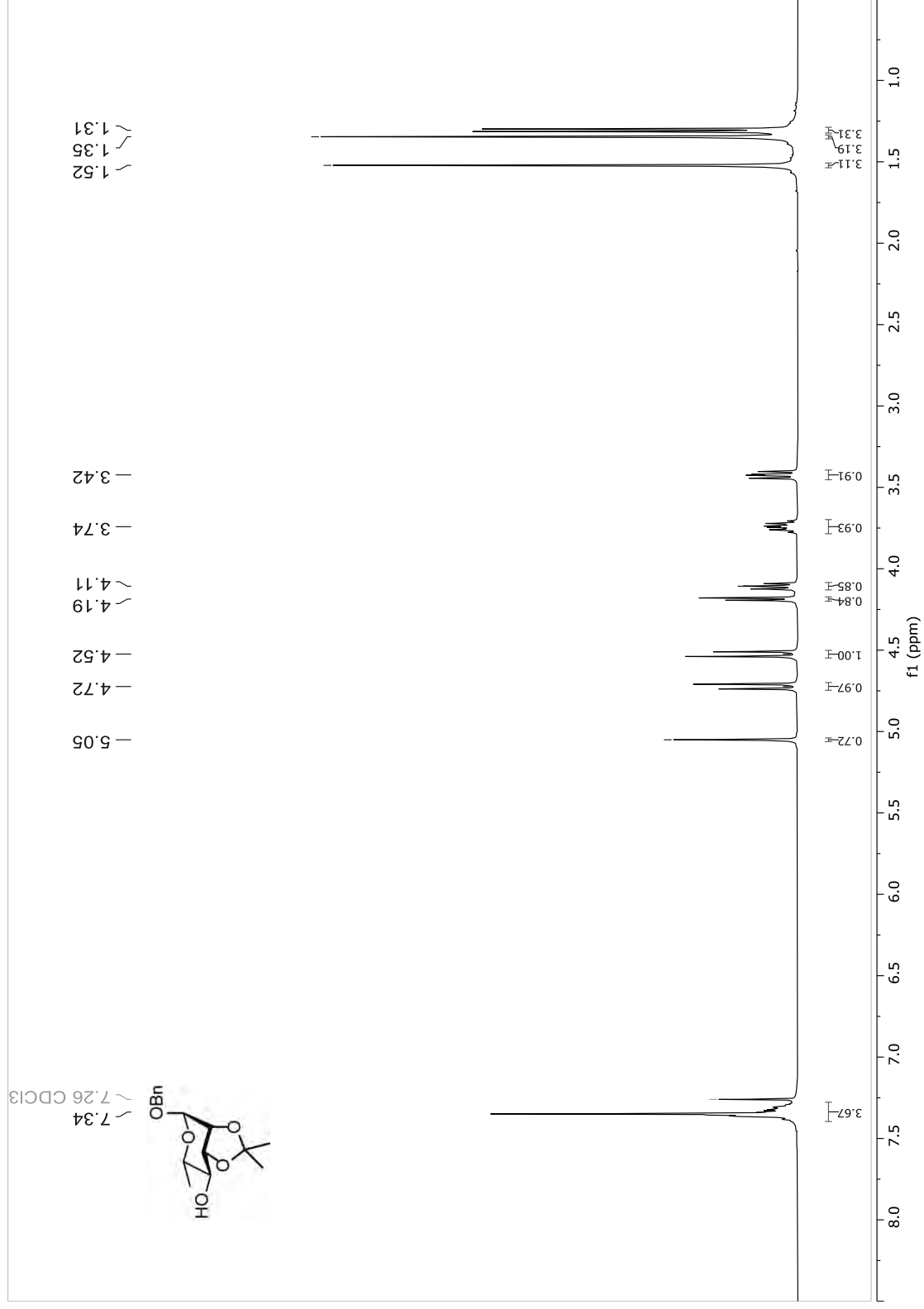


Figure S 190:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of 1-O-benzyl-6-deoxy-2,3-(O-isopropylidene)- $\alpha$ -L-arabino-hexopyranoside (164).

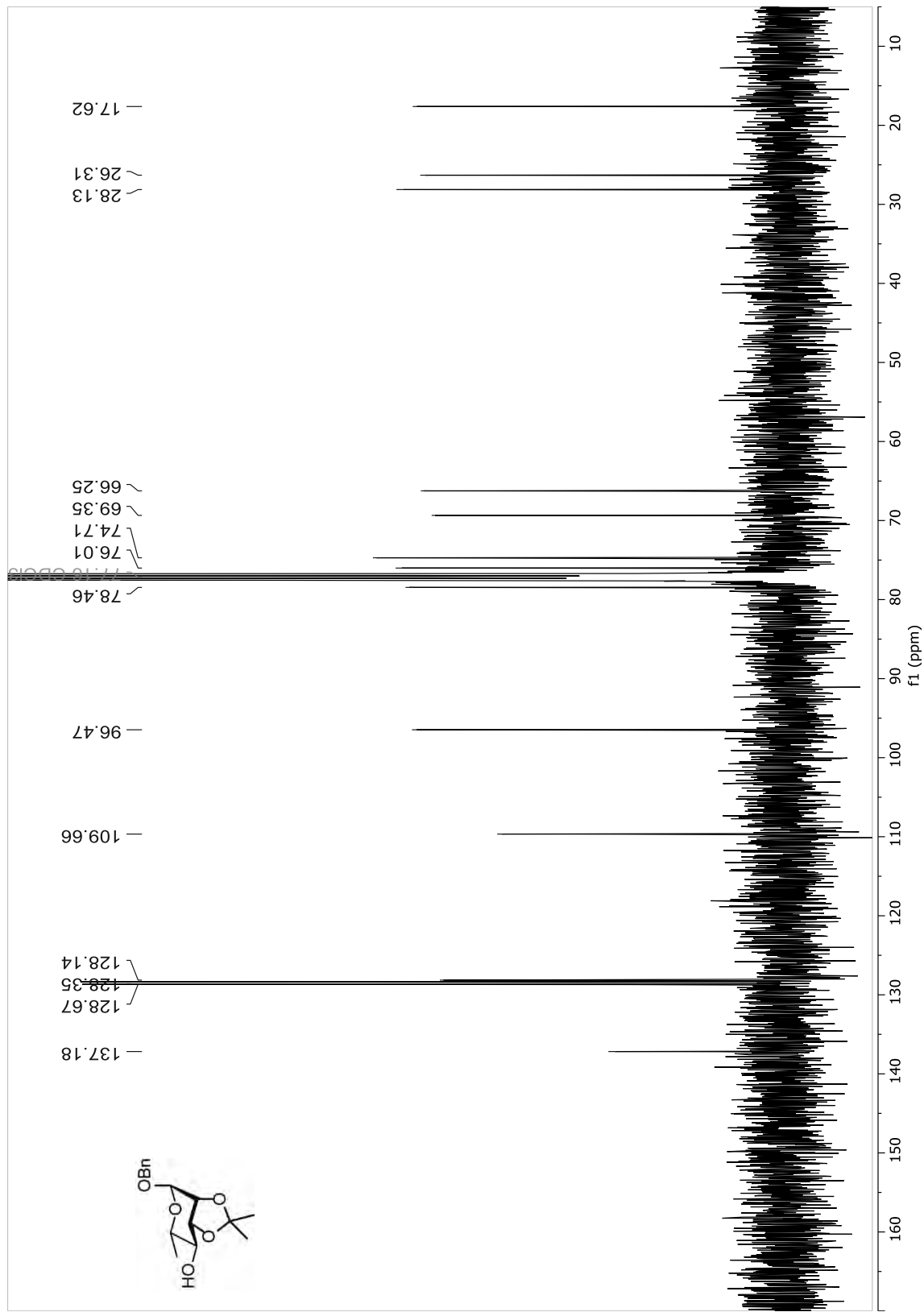


Figure S 191: <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of 1-O-benzyl-6-deoxy-2,3-O-(isopropylidene)-4-trifluoromethanesulfonate- $\alpha$ -L-arabino-hexopyranoside (165).

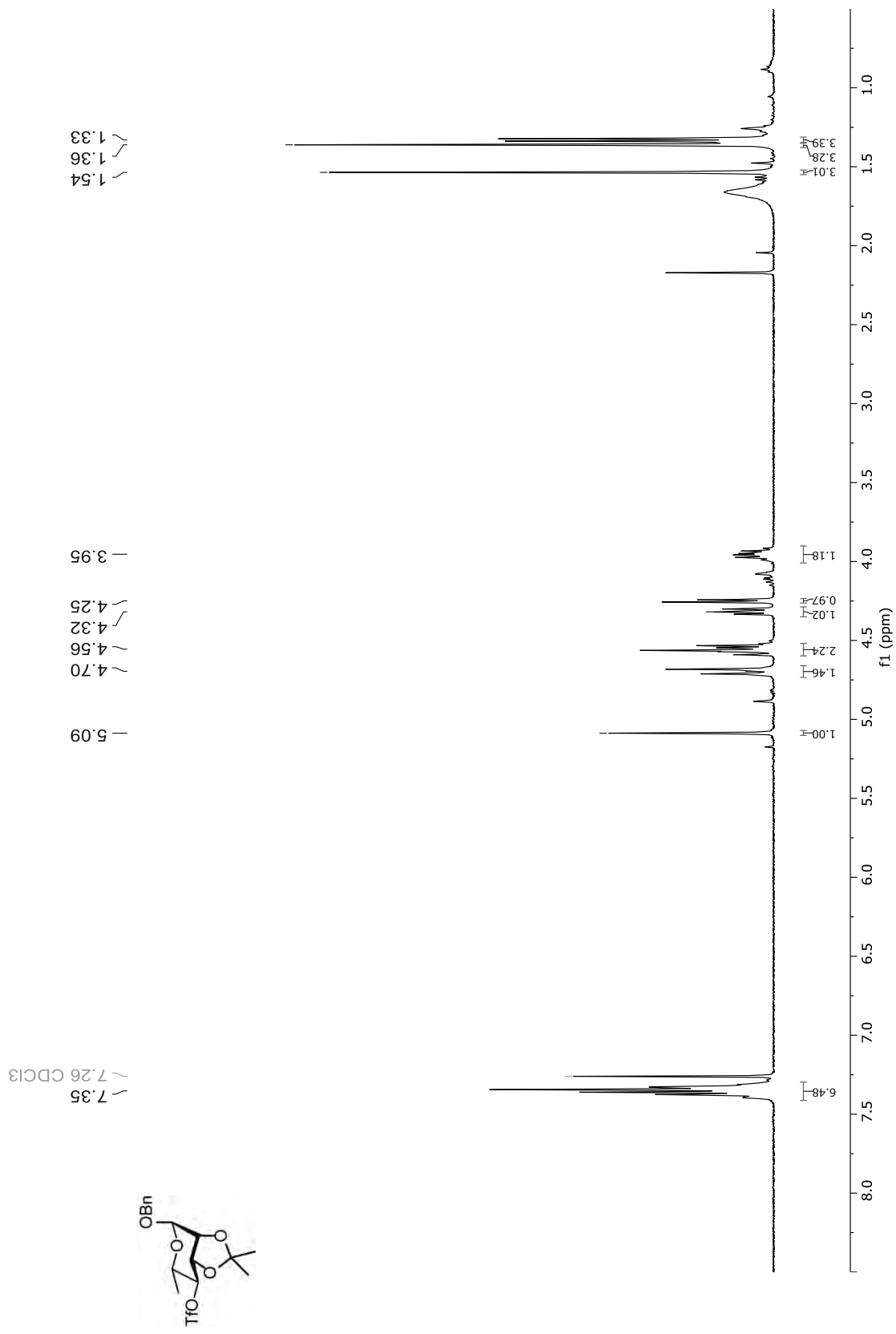


Figure S 192:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of 1-O-benzyl-6-deoxy-2,3-O-(isopropylidene)-4-trifluoromethanesulfonate- $\alpha$ -L-arabino-hexopyranoside (165).

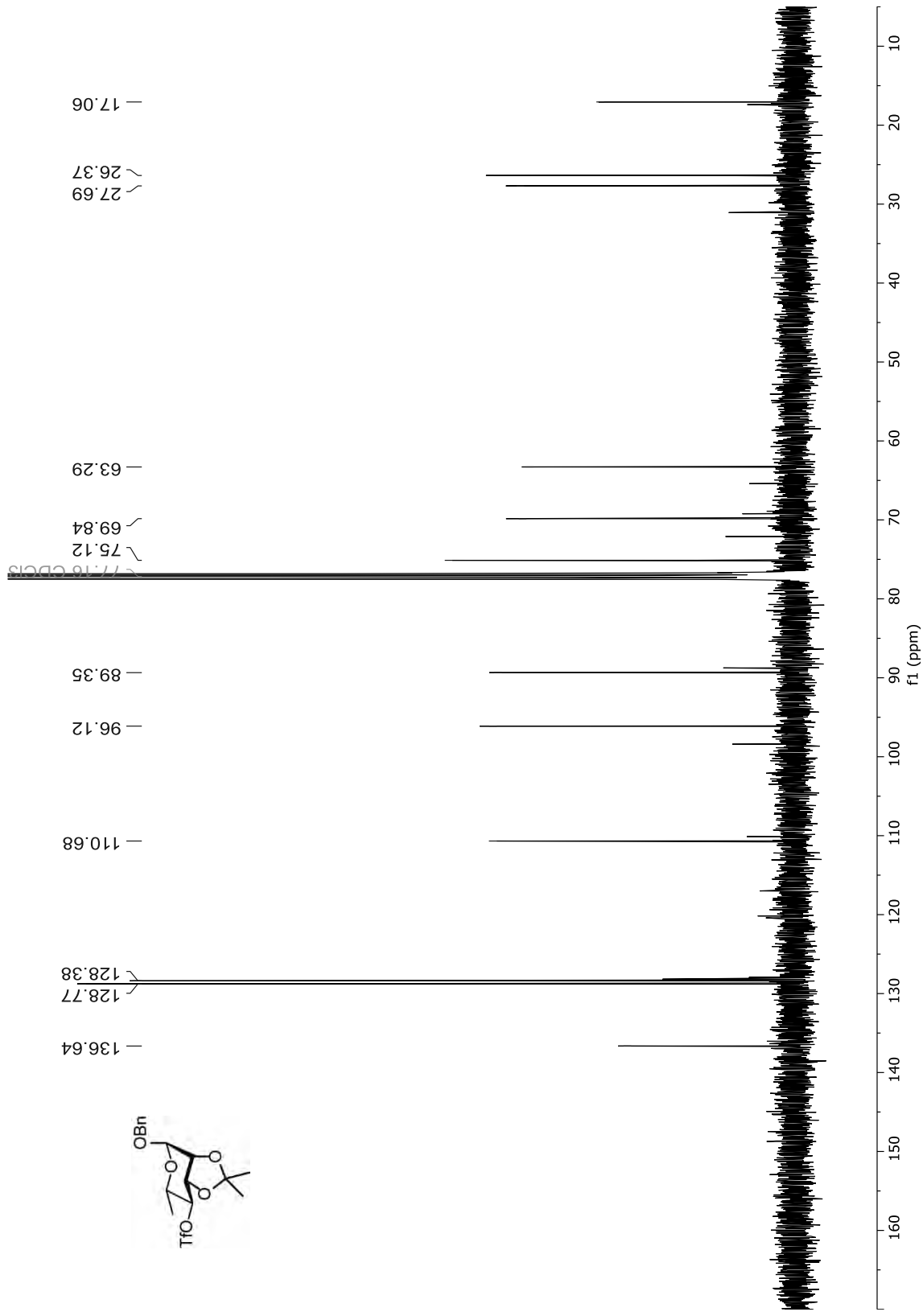


Figure S 193:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of 1-*O*-benzyl-6-deoxy-4-trifluoromethanesulfonate- $\alpha$ -L-arabino-hexopyranoside (166).

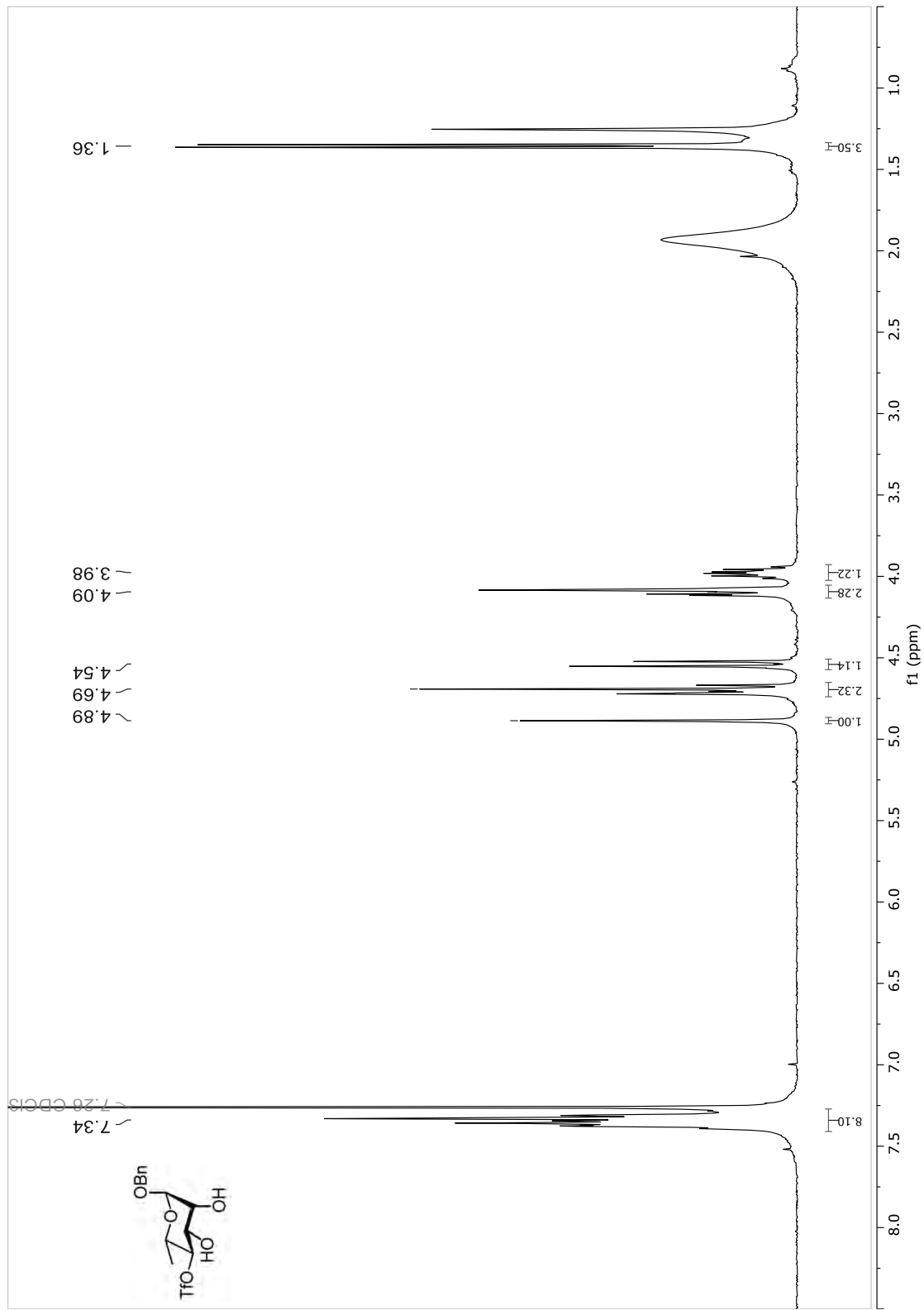


Figure S 194:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of 1-O-benzyl-6-deoxy-4-trifluoromethanesulfonate- $\alpha$ -L-arabino-hexopyranoside (166).

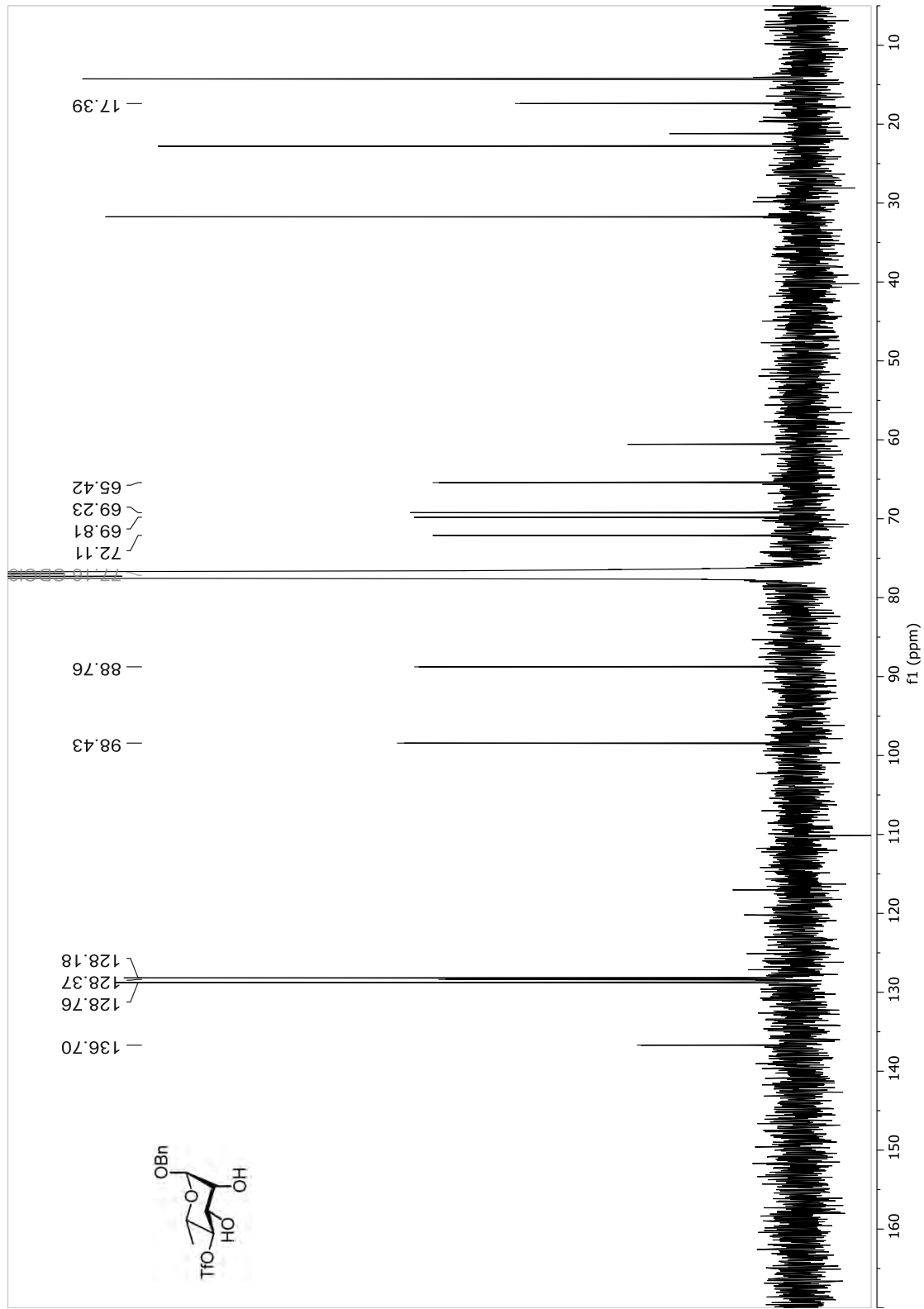


Figure S 195:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of 1-*O*-benzyl-3,4-anhydro-6-dideoxy- $\alpha$ -L-lyxo-hexopyranoside (167).

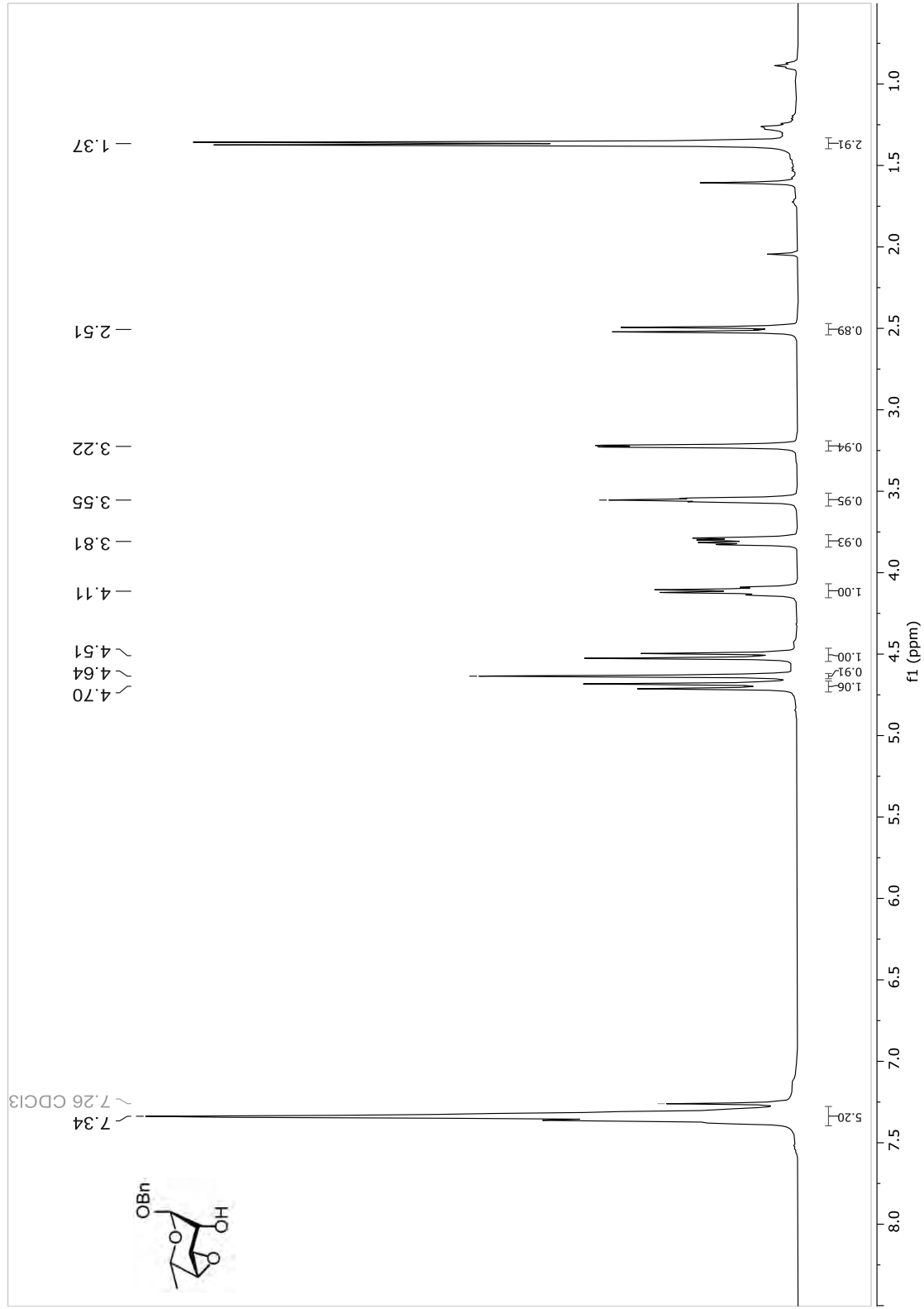


Figure S 196:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of 1-O-benzyl-3,4-anhydro-6-dideoxy- $\alpha$ -L-lyxo-hexopyranoside (167).

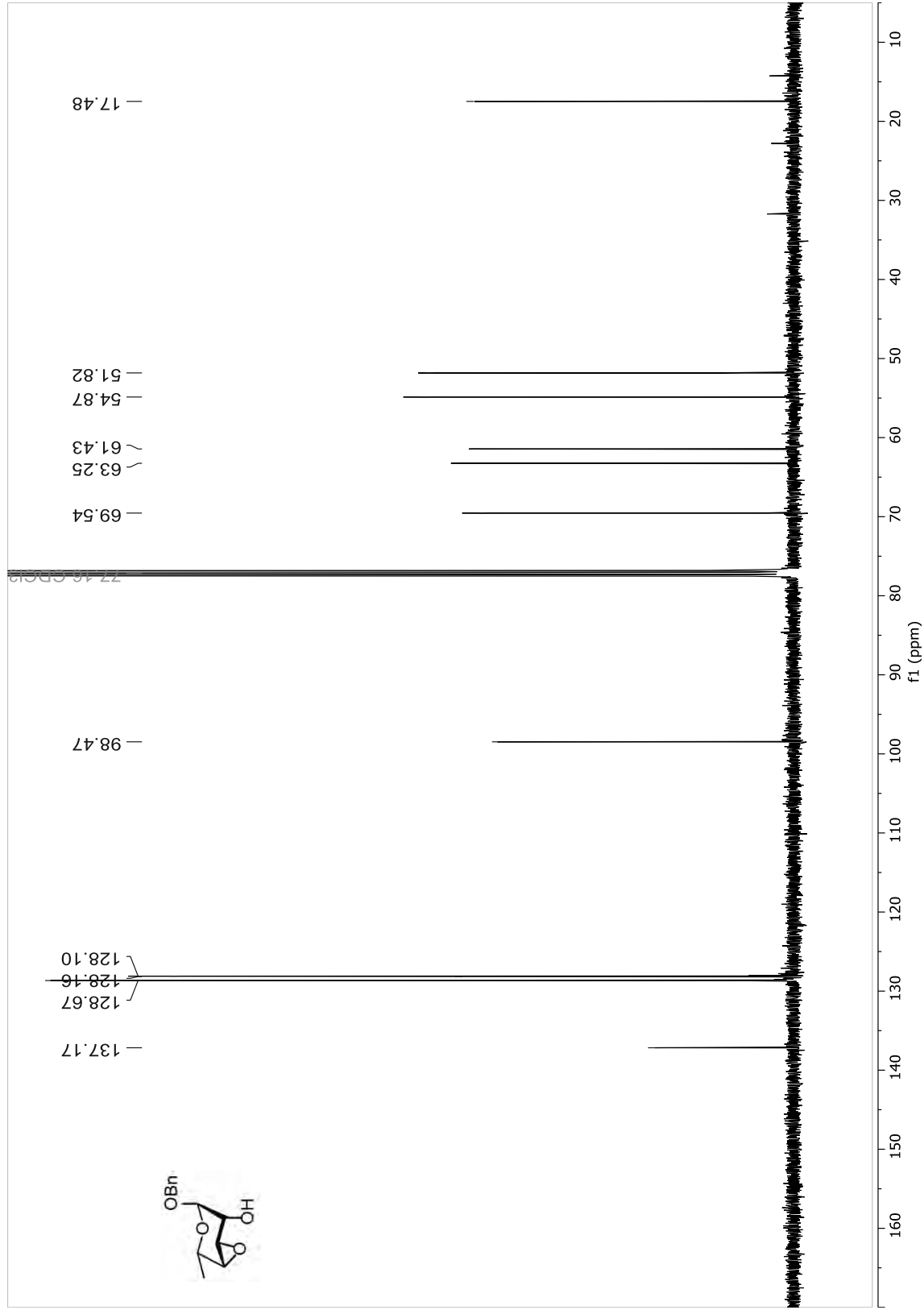


Figure S 197:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of 1-*O*-benzyl- $\alpha$ -L-xylo-hexopyranoside (168).

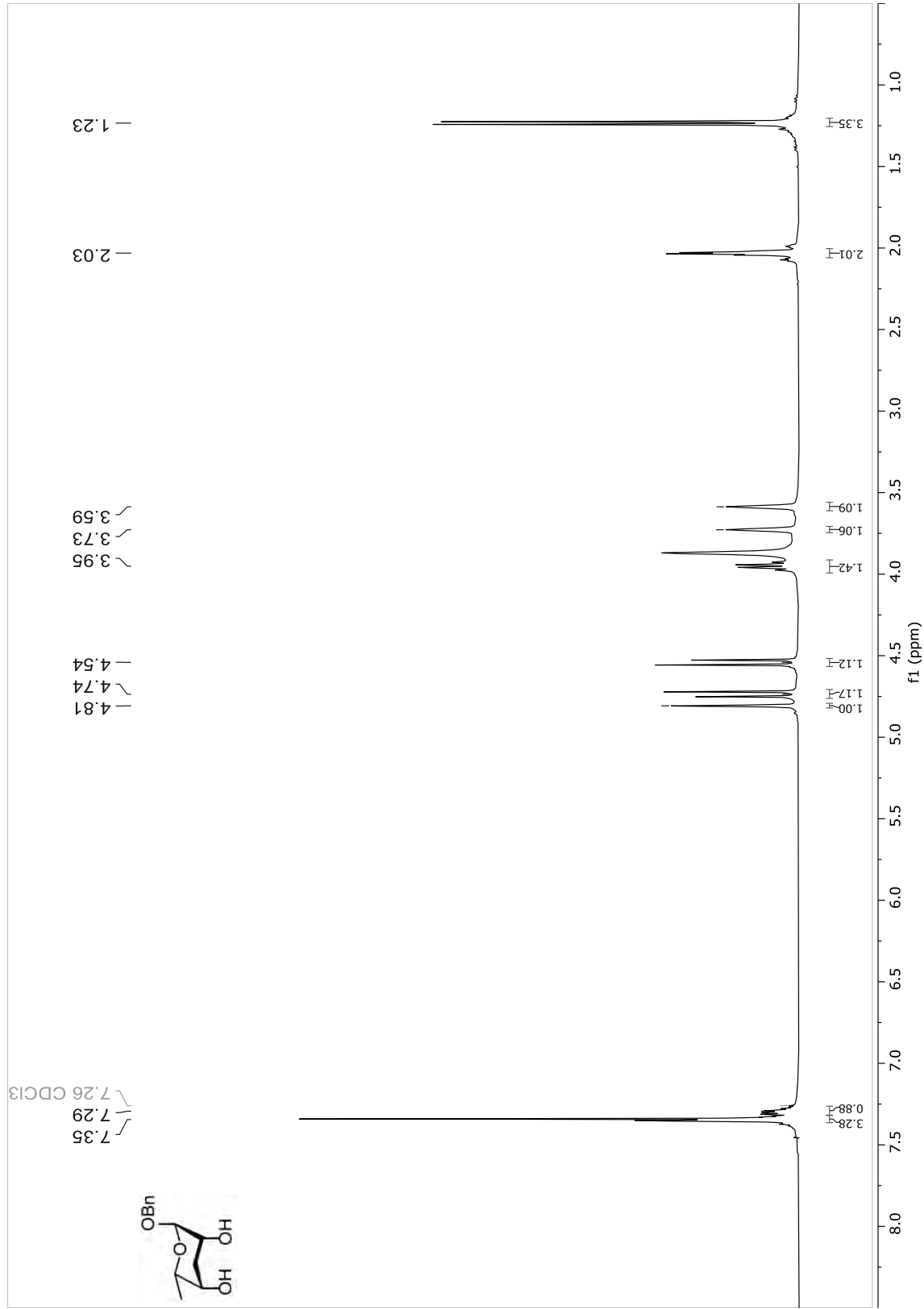


Figure S 198:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of 1-O-benzyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranoside (168).

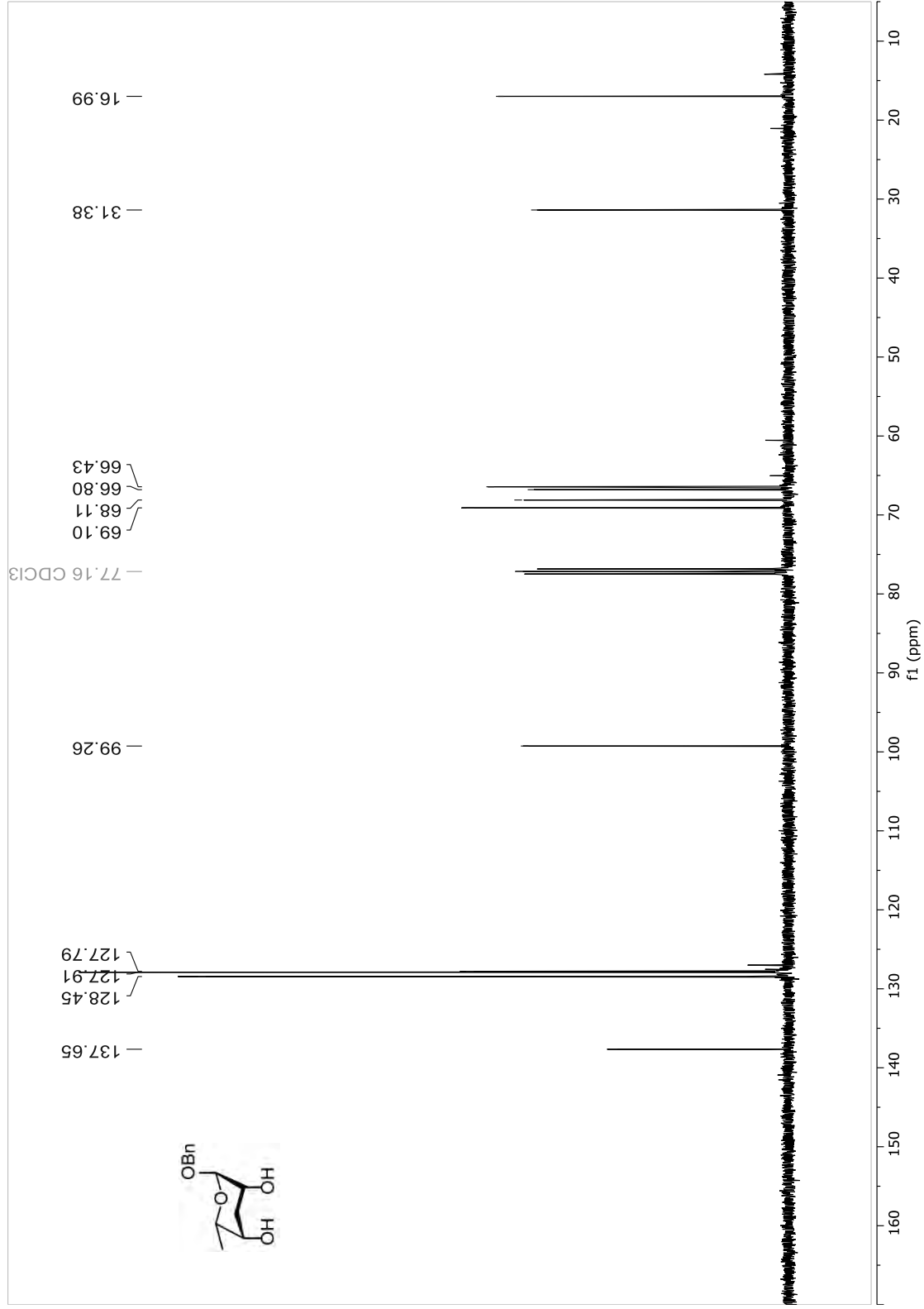


Figure S 199: <sup>1</sup>H NMR (400 MHz, CDCl<sub>3</sub>) of 1-*O*-benzyl-2,4-di-*O*-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranoside (169).

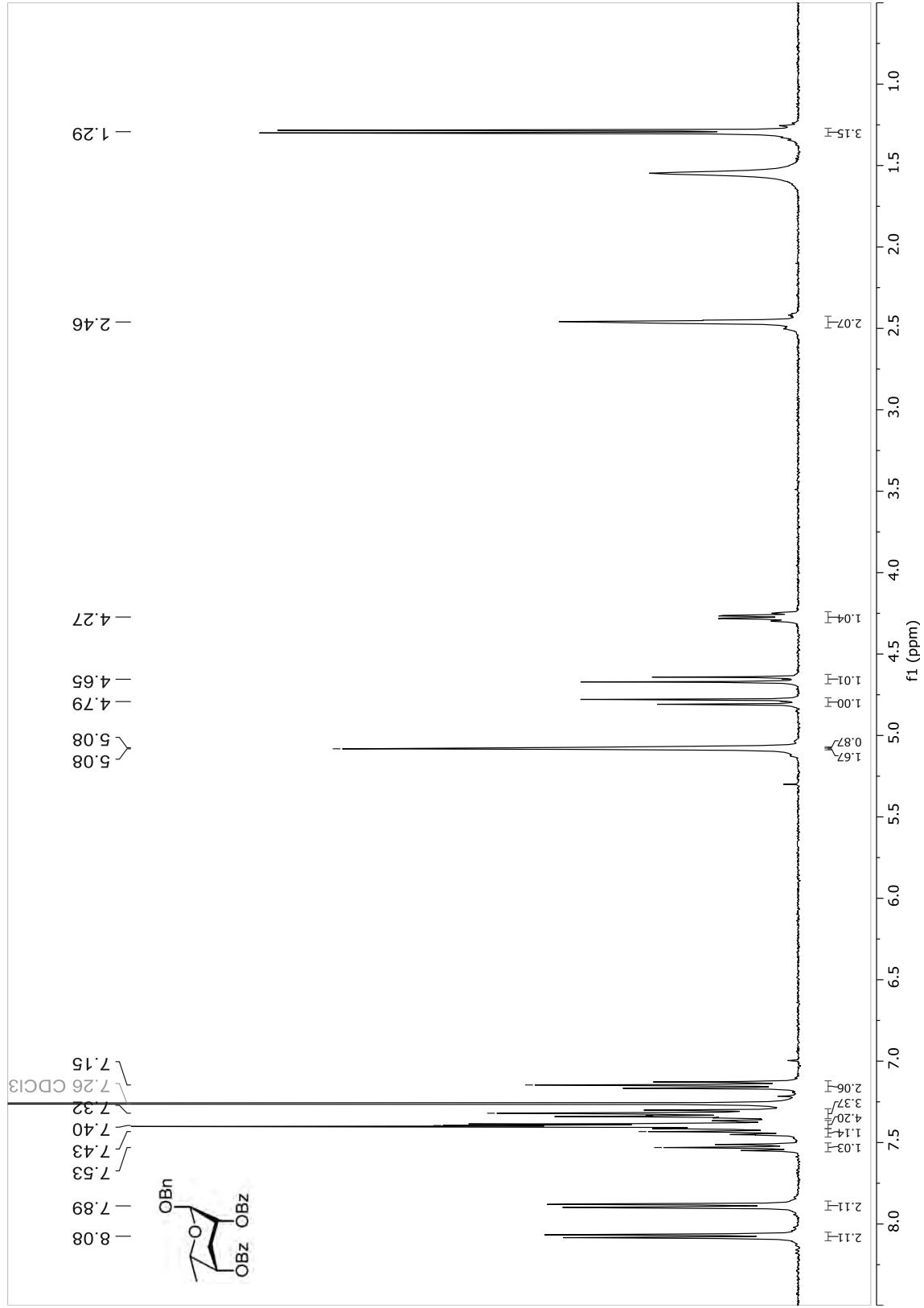


Figure S 200:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of 1-O-benzyl-2,4-di-O-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranoside (169).

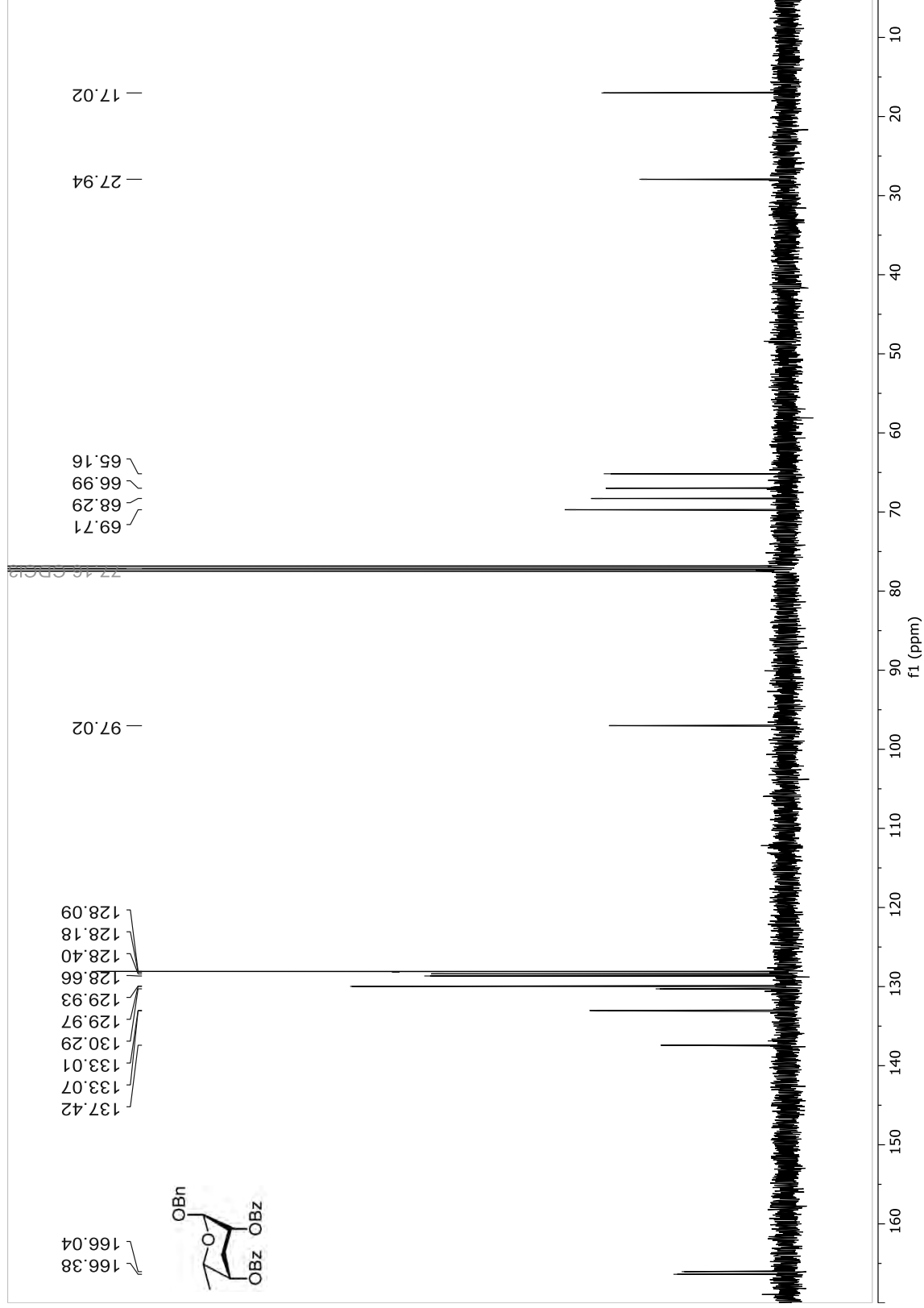


Figure S 201: HSQC (400 MHz, CDCl<sub>3</sub>) of 1-O-benzyl-2,4-di-O-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranoside (169).

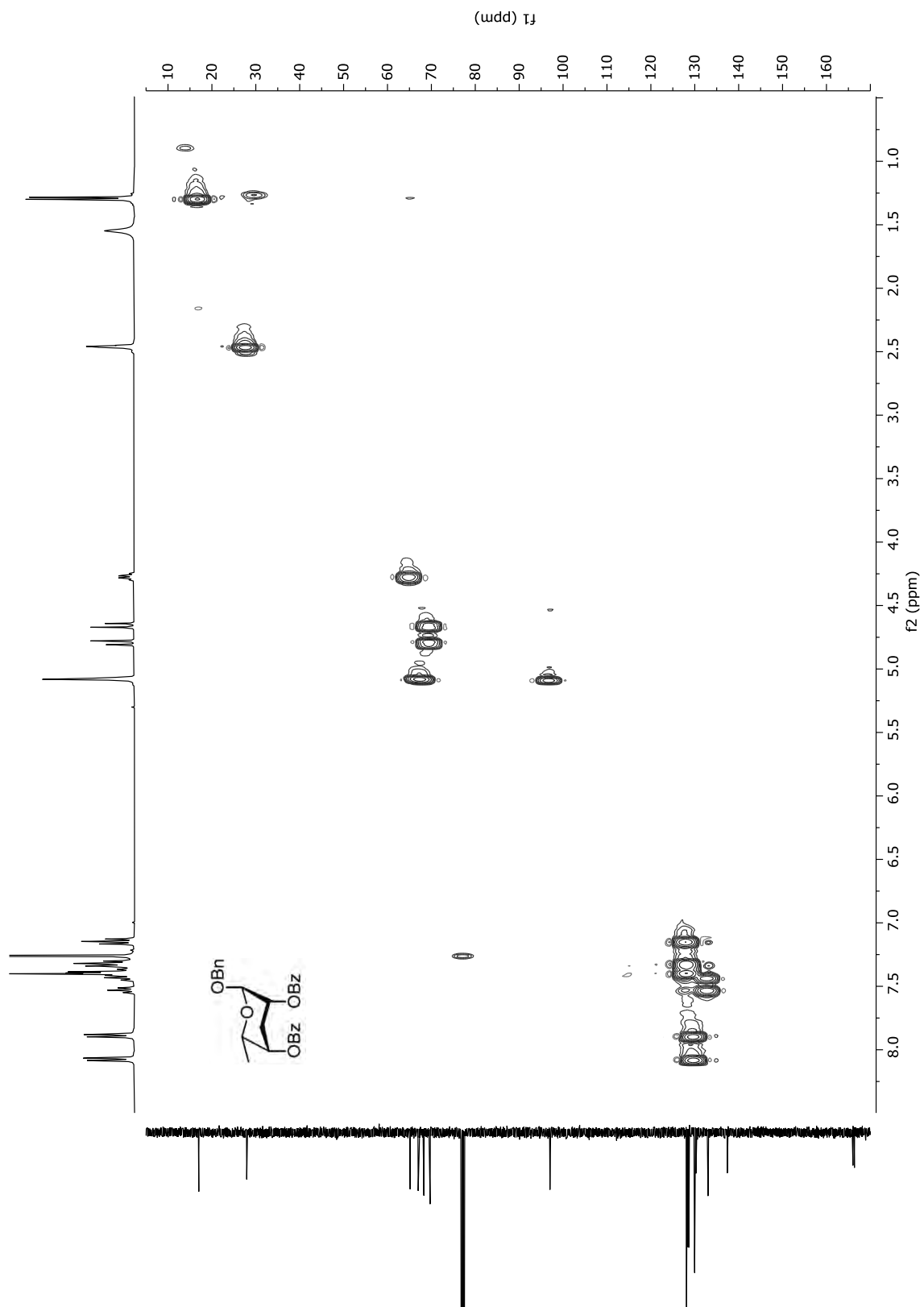


Figure S 202:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of 2,4-di-O-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranose (170).

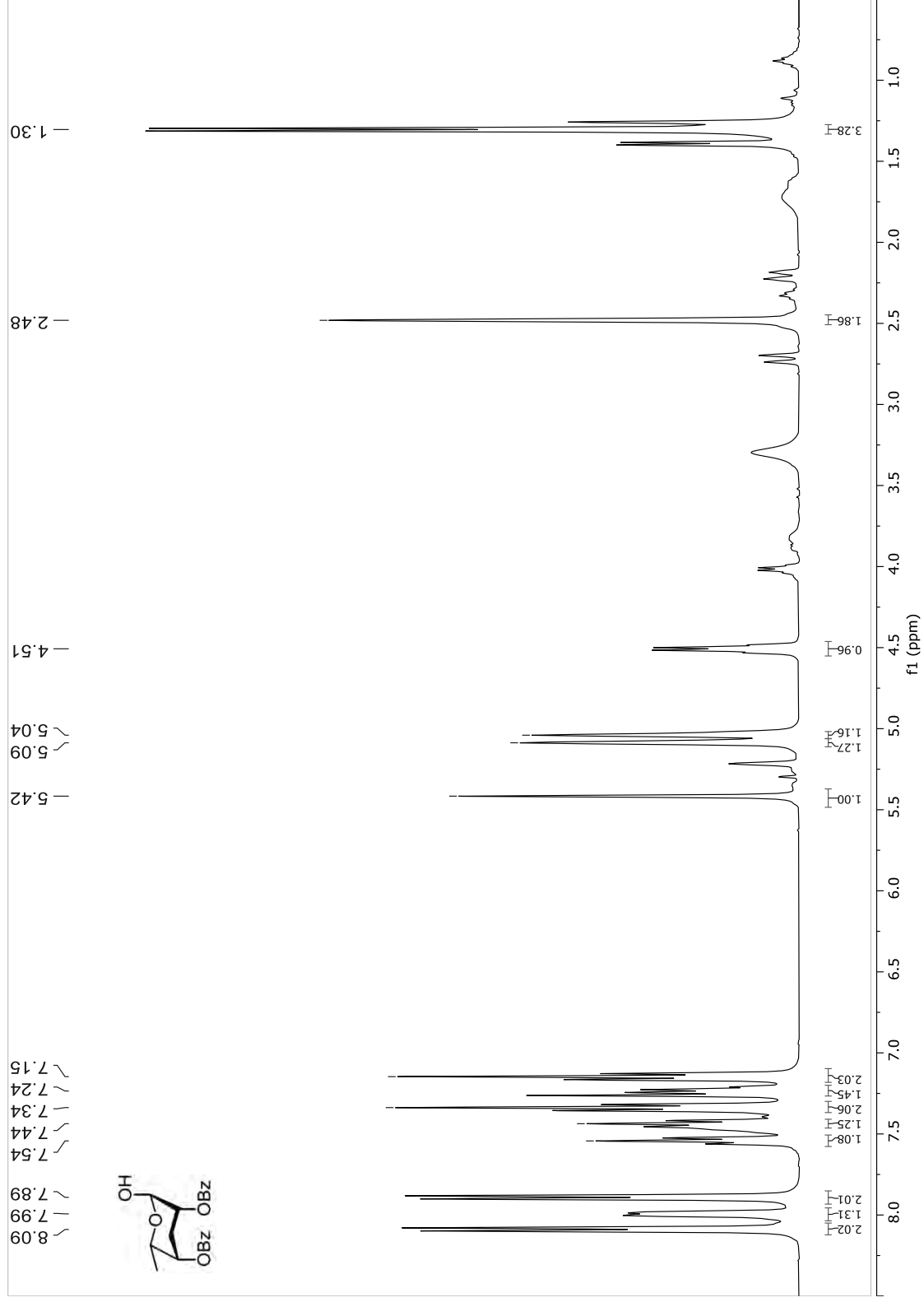


Figure S 203:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of 2,4-di-*O*-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranose (170).

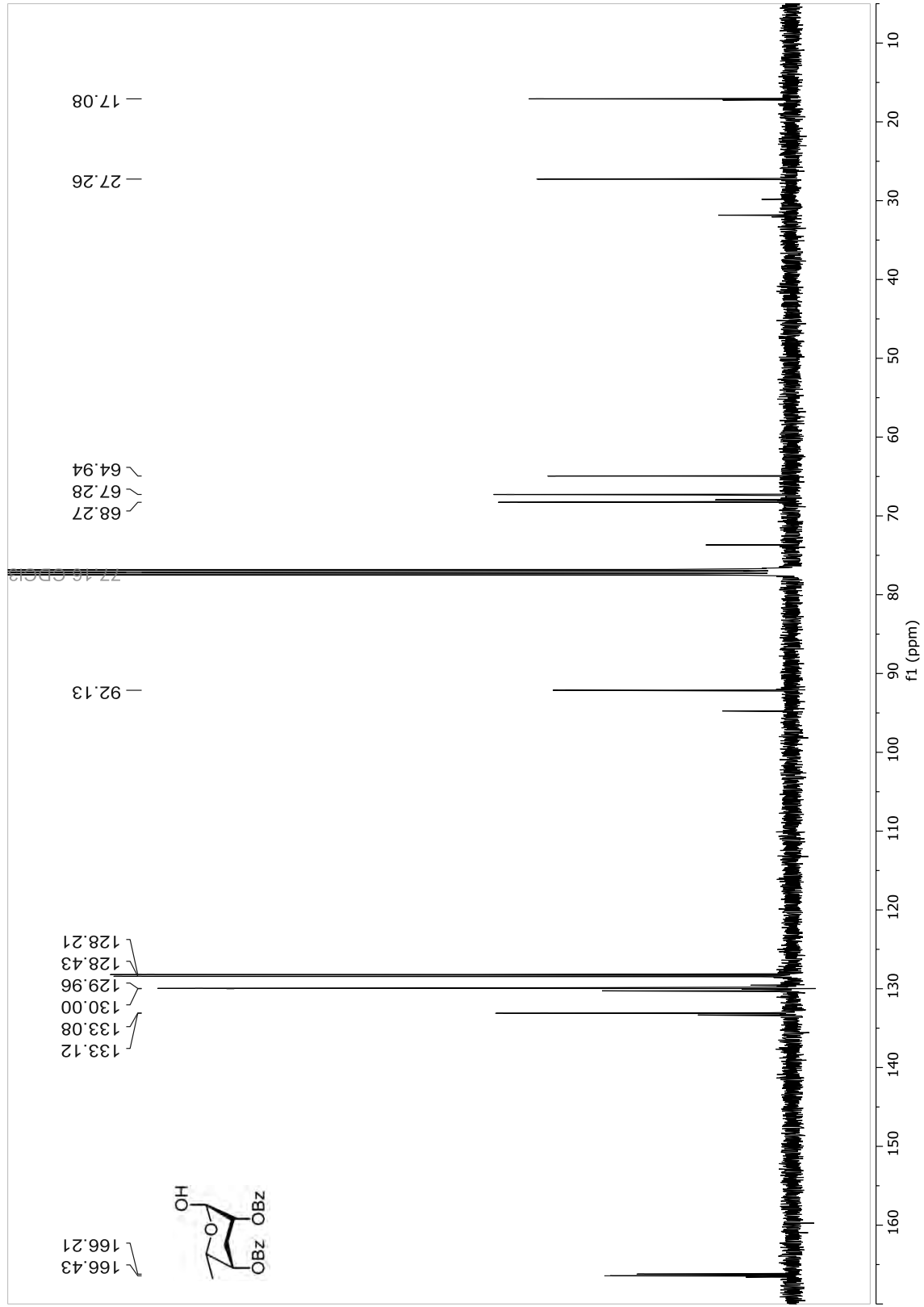


Figure S 204: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of 2,4-di-O-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranose (170).

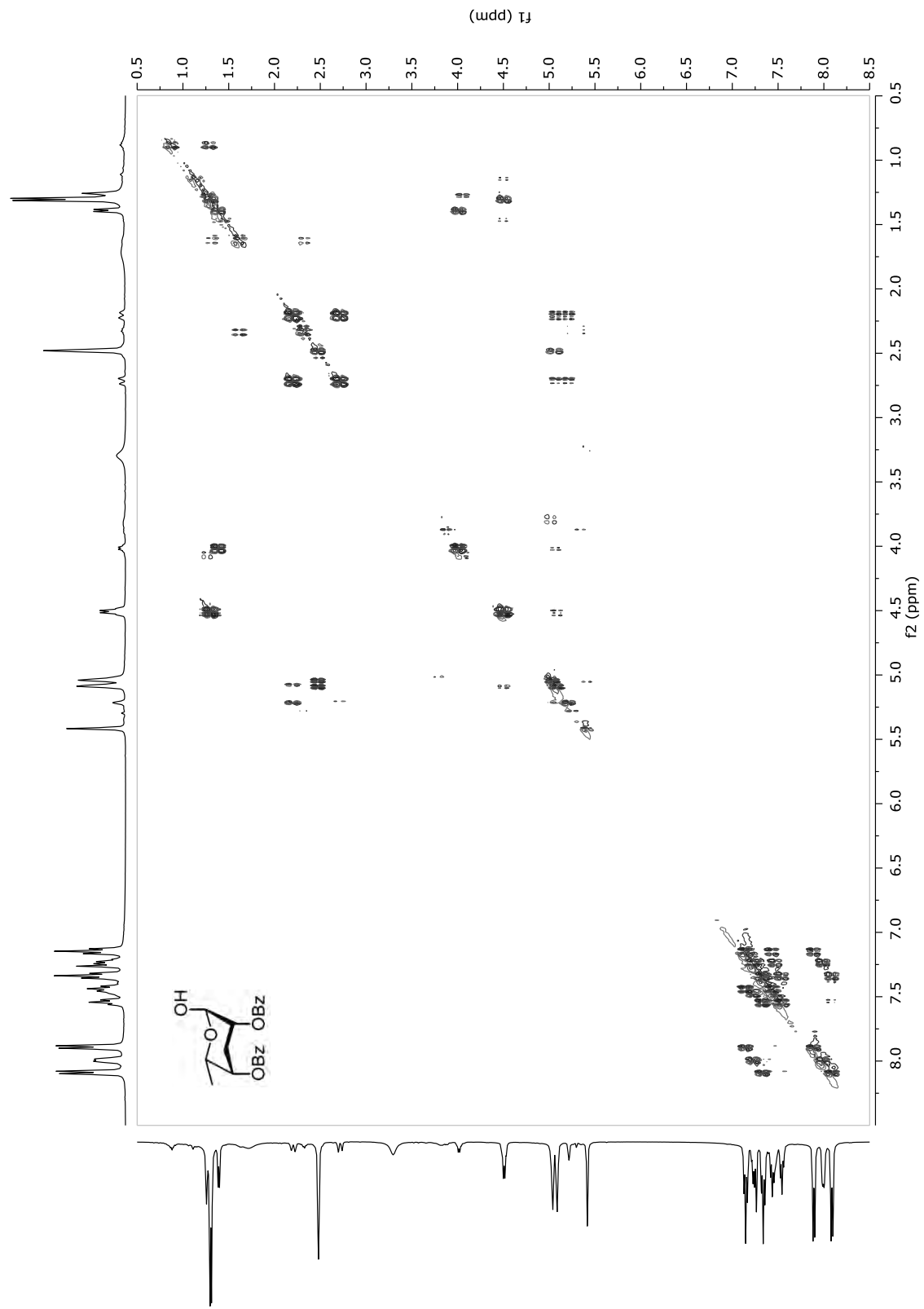


Figure S 205: HSQC (400 MHz, CDCl<sub>3</sub>) of 2,4-di-O-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranose (170).

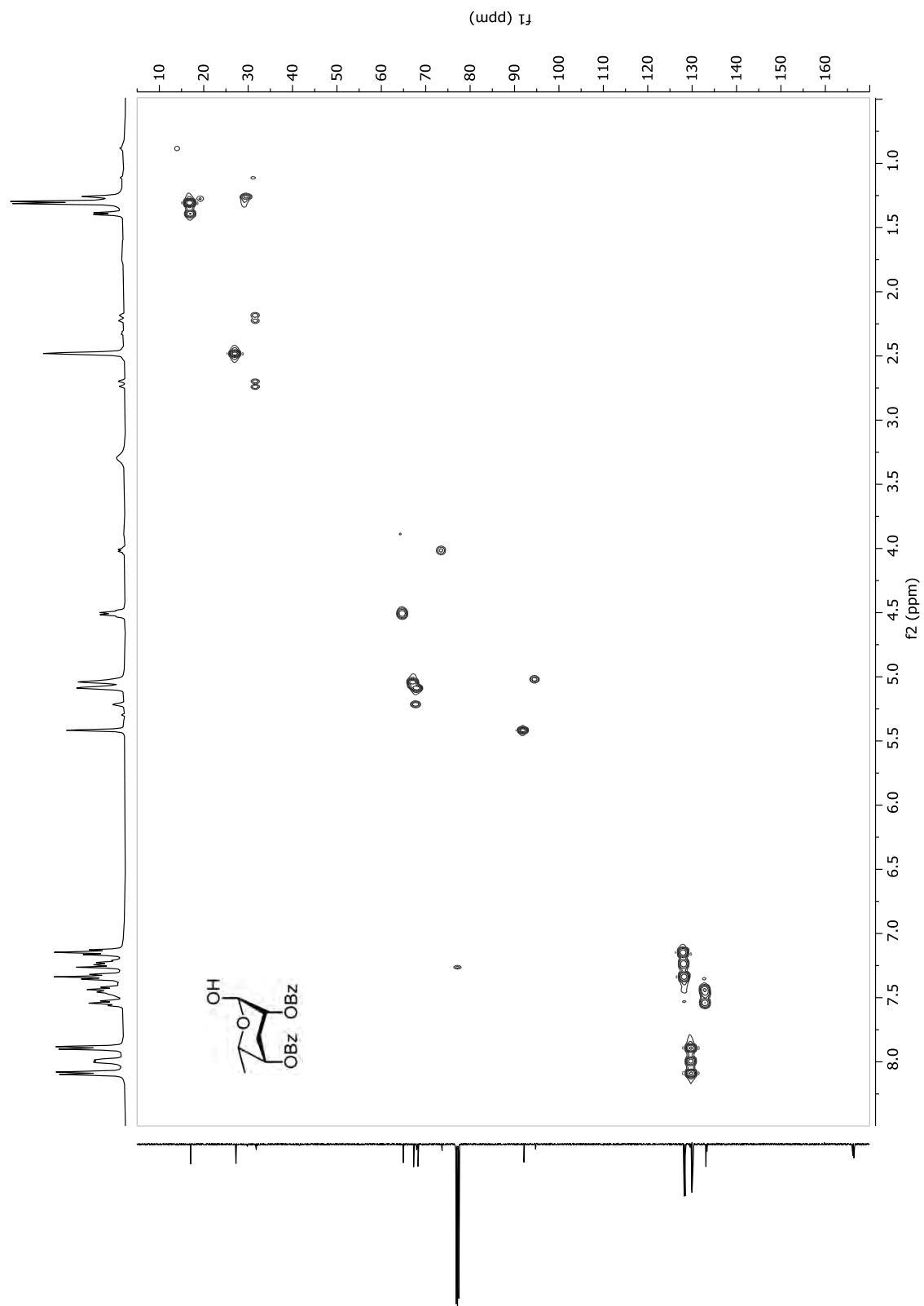


Figure S 206:  $^1\text{H}$  NMR (400 MHz,  $\text{CDCl}_3$ ) of (7*R*,8*R*,2*E*)-*threo*-ethyl 7-benzoyloxy-8-[(2,4-di-*O*-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-2-nonenolate (181).

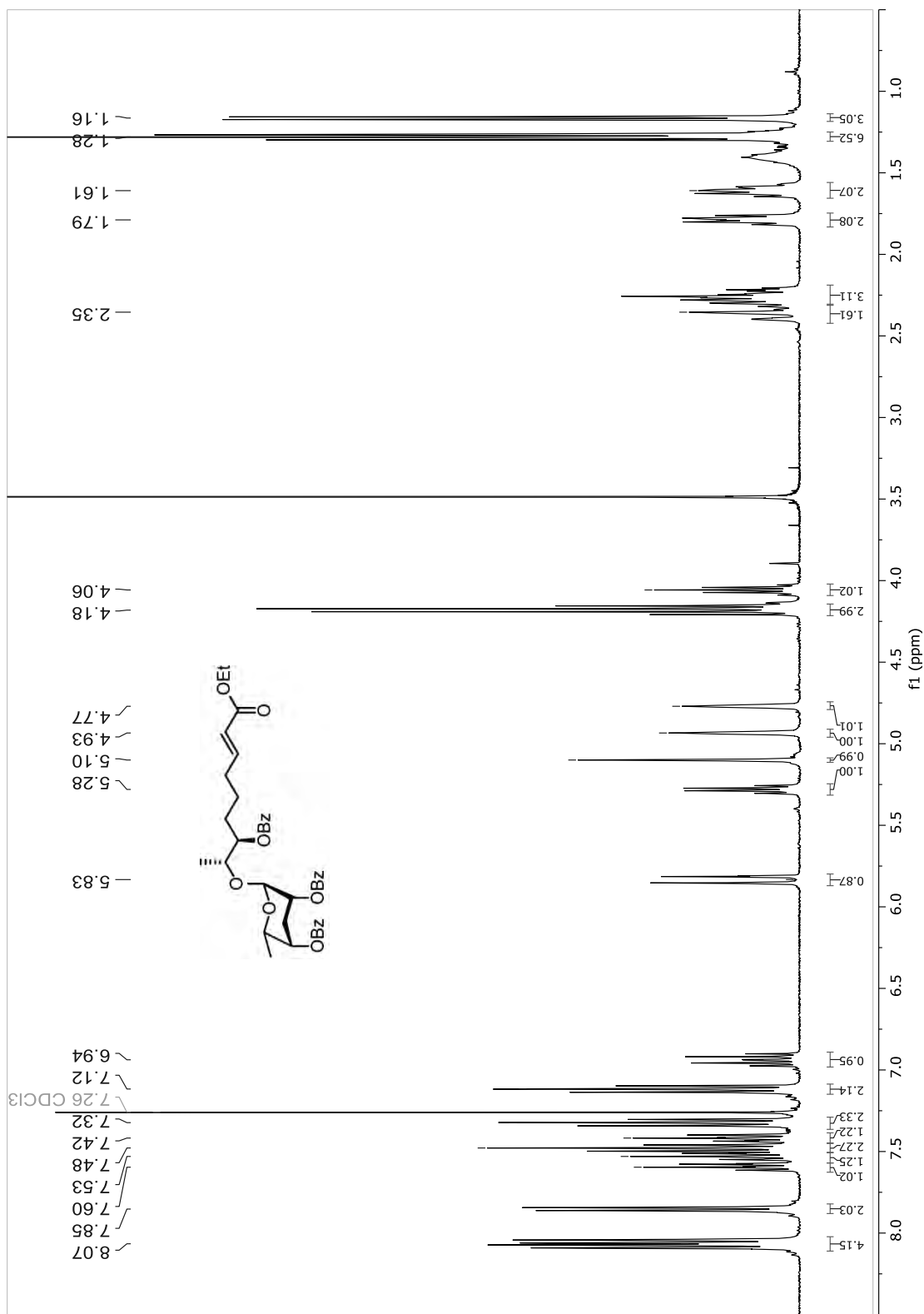


Figure S 207:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CDCl}_3$ ) of (7*R*,8*R*,2*E*)-threo-ethyl 7-benzoyloxy-8-[(2,4-di-*O*-benzoyl- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-2-nonenolate (181).

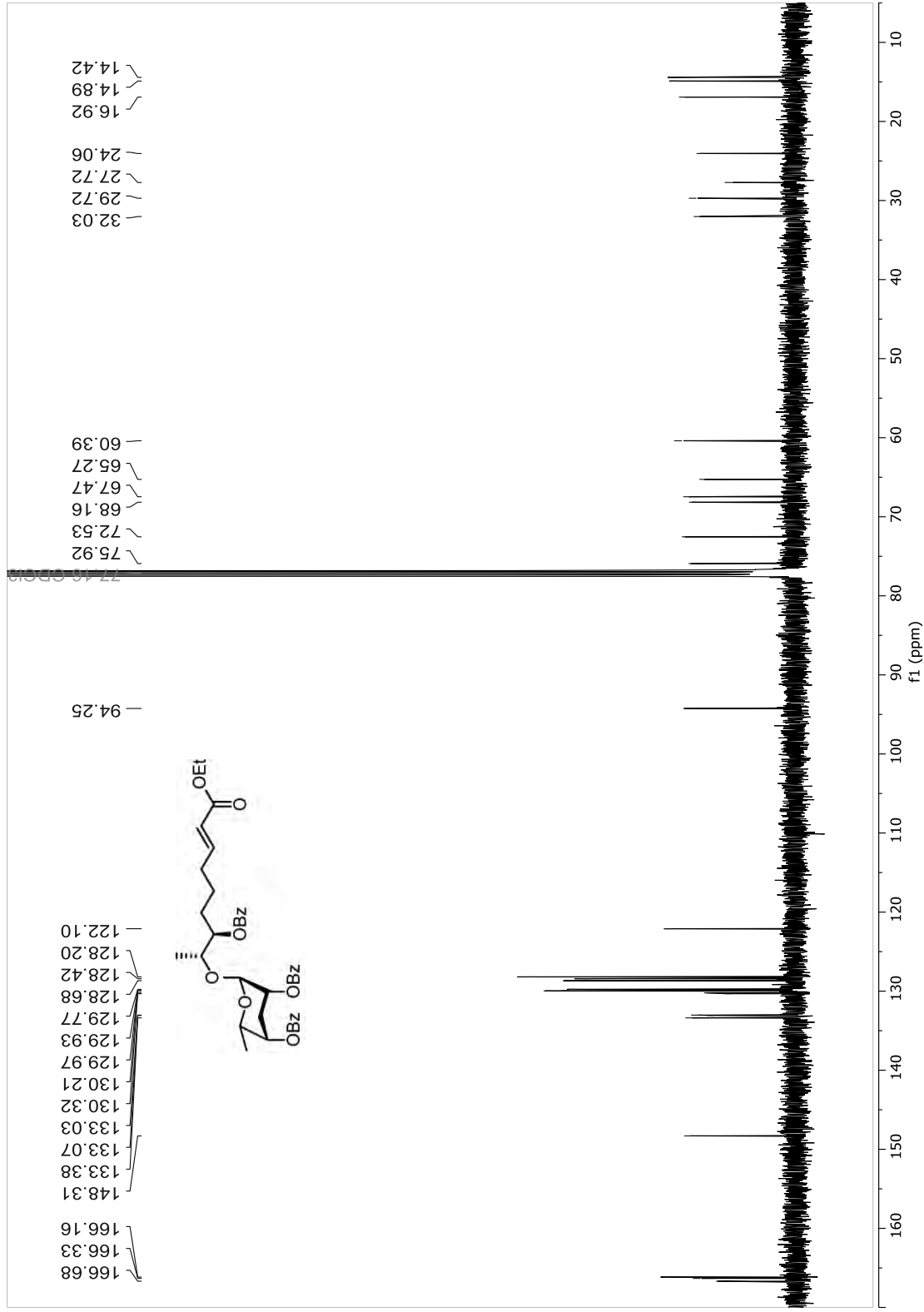


Figure S 208: *dqf*-COSY (400 MHz, CDCl<sub>3</sub>) of (7*R*,8*R*,2*E*)-*threo*-ethyl 7-benzoyloxy-8-[(2,4-di-*O*-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-2-nonenolate (181).

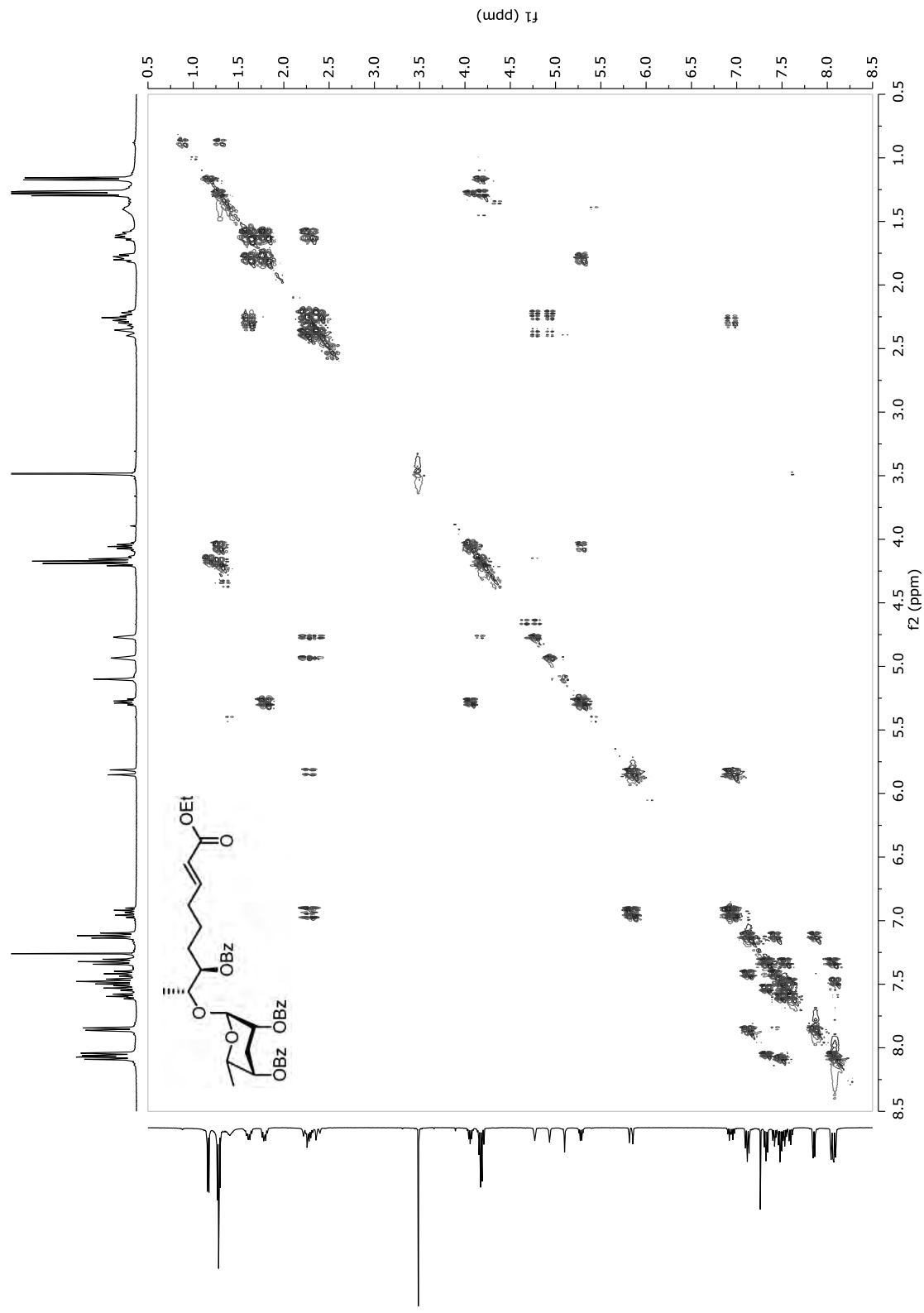


Figure S 209 : HSQC (400 MHz, CDCl<sub>3</sub>) of (7*R*,8*R*,2*E*)-*threo*-ethyl 7-benzoyloxy-8-[(2,4-di-*O*-benzoyl-3,6-dideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-2-nonenolate (181).

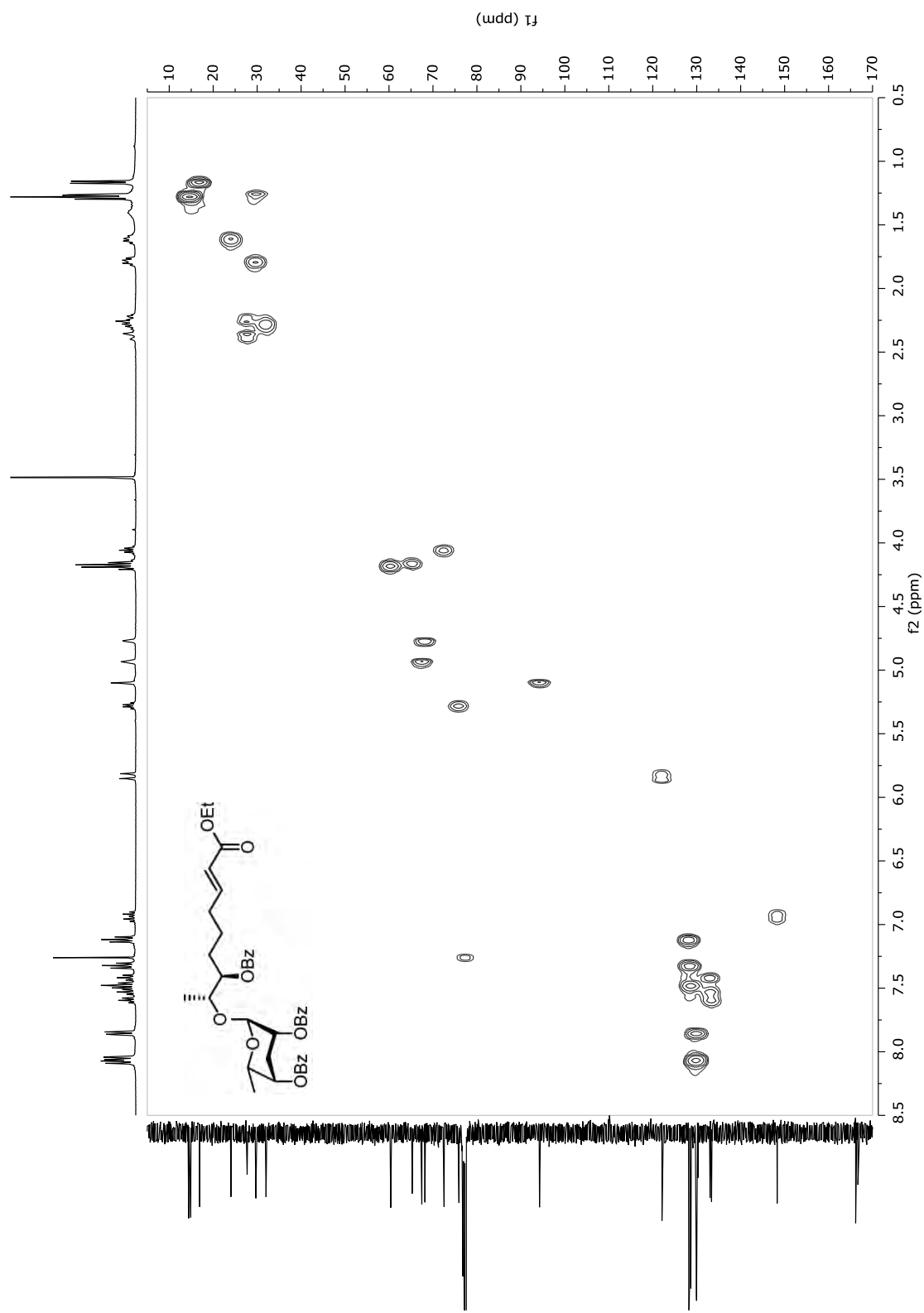


Figure S 210:  $^1\text{H}$  NMR (400 MHz,  $\text{CD}_3\text{OD}$ ) of (7*R*,8*R*,2*E*)-threo-8-[(3',6'-dideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-7-hydroxy-2-nonenic acid (ca. 70H- $\Delta$ C9, 39).

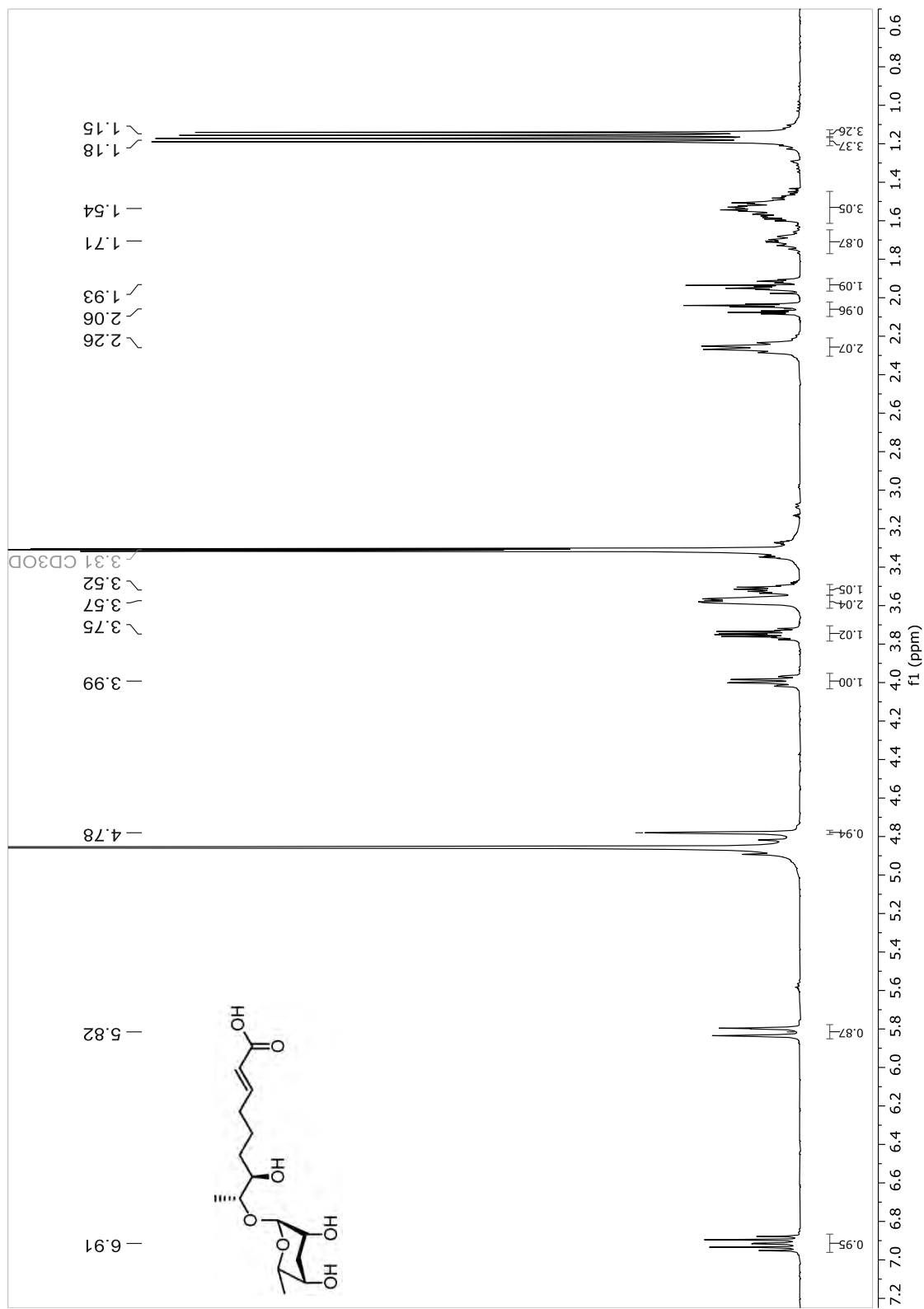


Figure S 211:  $^{13}\text{C}$  NMR (100 MHz,  $\text{CD}_3\text{OD}$ ) of (7*R*,8*R*,2*E*)-threo-8-[[3',6'-dideoxy- $\alpha$ -L-lyxo-hexopyranosyl]oxy]-7-hydroxy-2-nonenic acid (cae-7OH- $\Delta$ C9, 39).

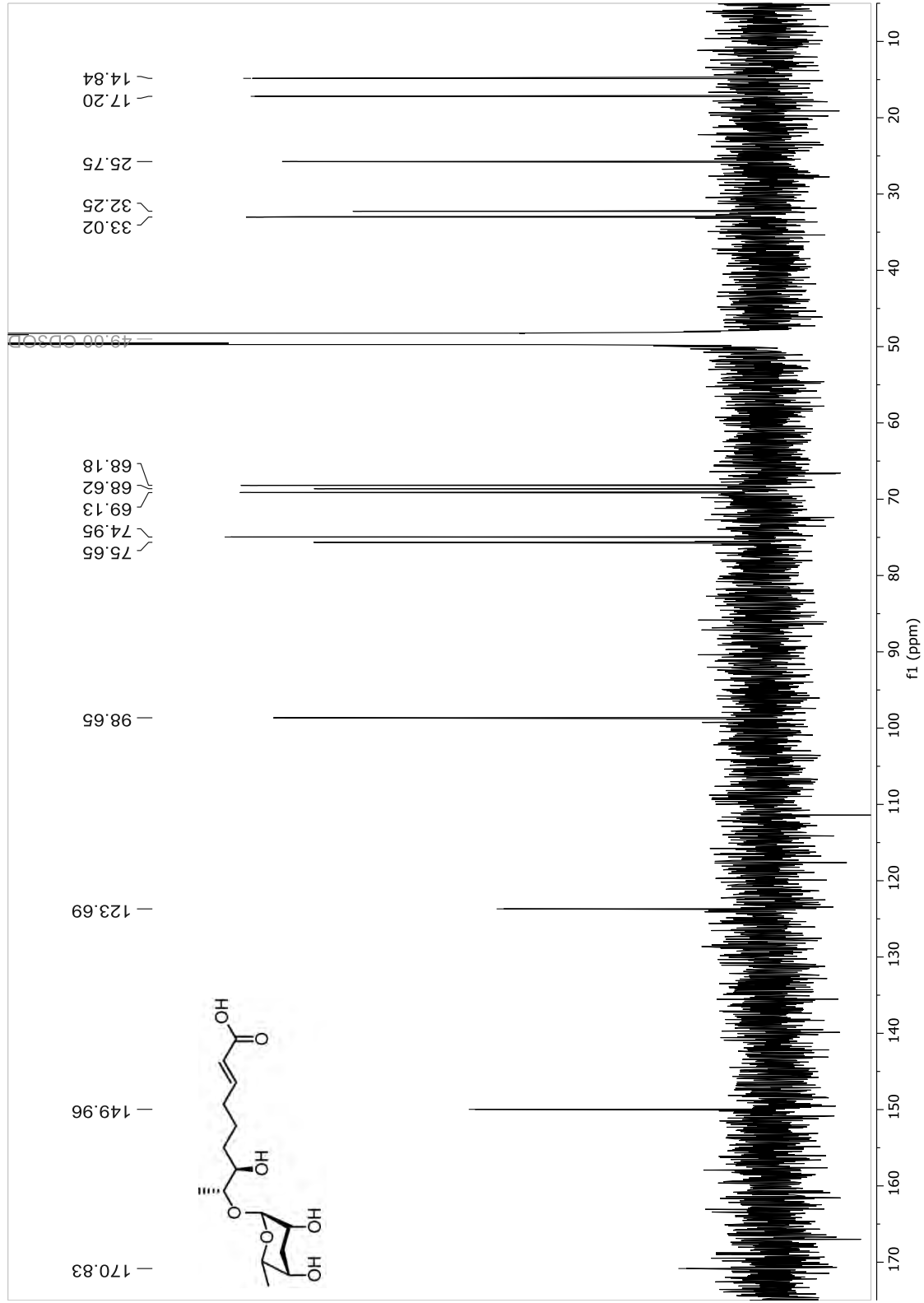


Figure S 212: *dqf*-COSY (400 MHz, CD<sub>3</sub>OD) of (7*R*,8*R*,2*E*)-threo-8-[(3',6'-dideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-7-hydroxy-2-nonenic acid (cae-7OH- $\Delta$ C9, 39).

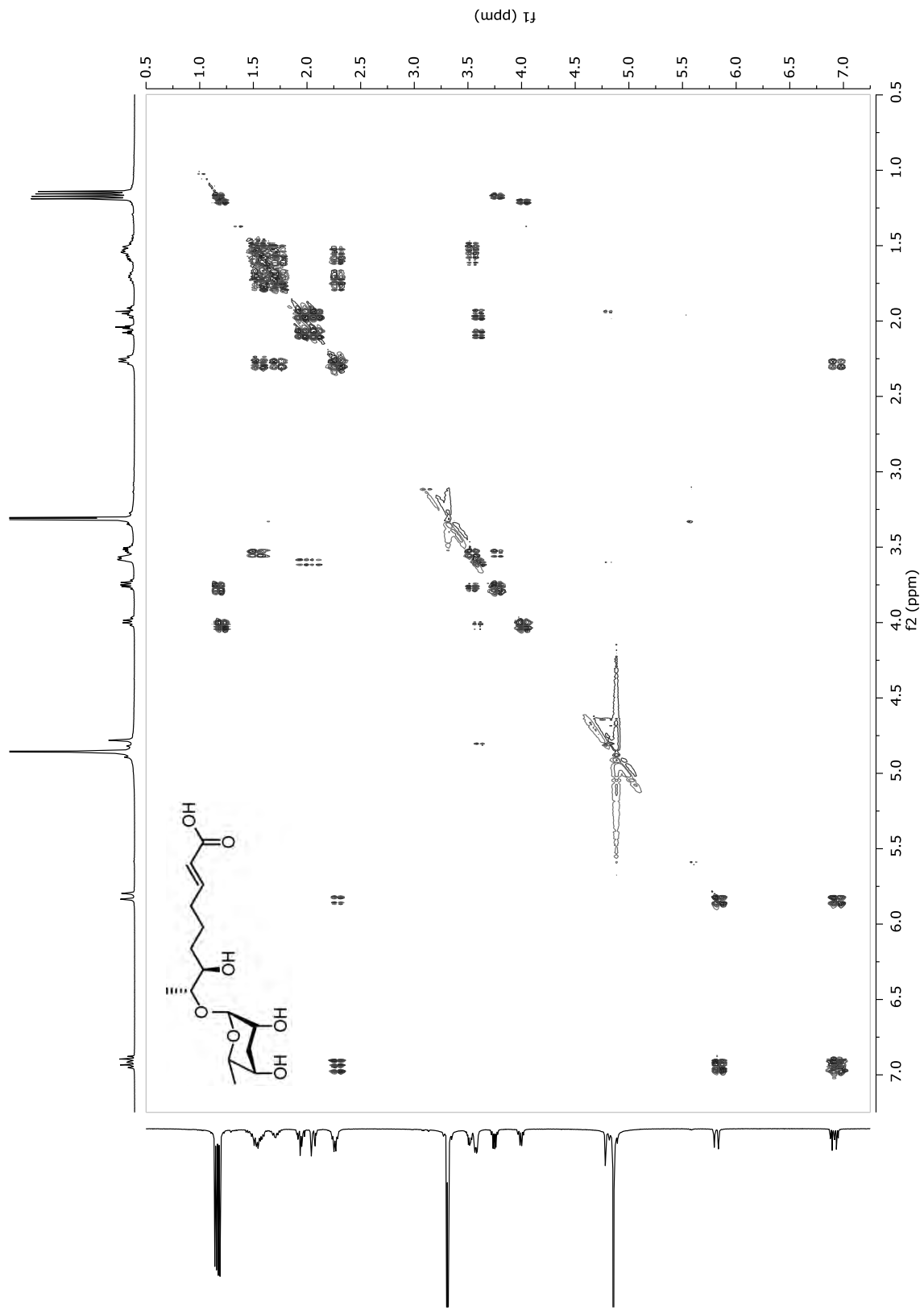


Figure S 213: HSQC (400 MHz, CD<sub>3</sub>OD) of (7*R*,8*R*,2*E*)-threo-8-[(3',6'-dideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-7-hydroxy-2-nonenic acid (cae-7OH- $\Delta$ C9, 39).

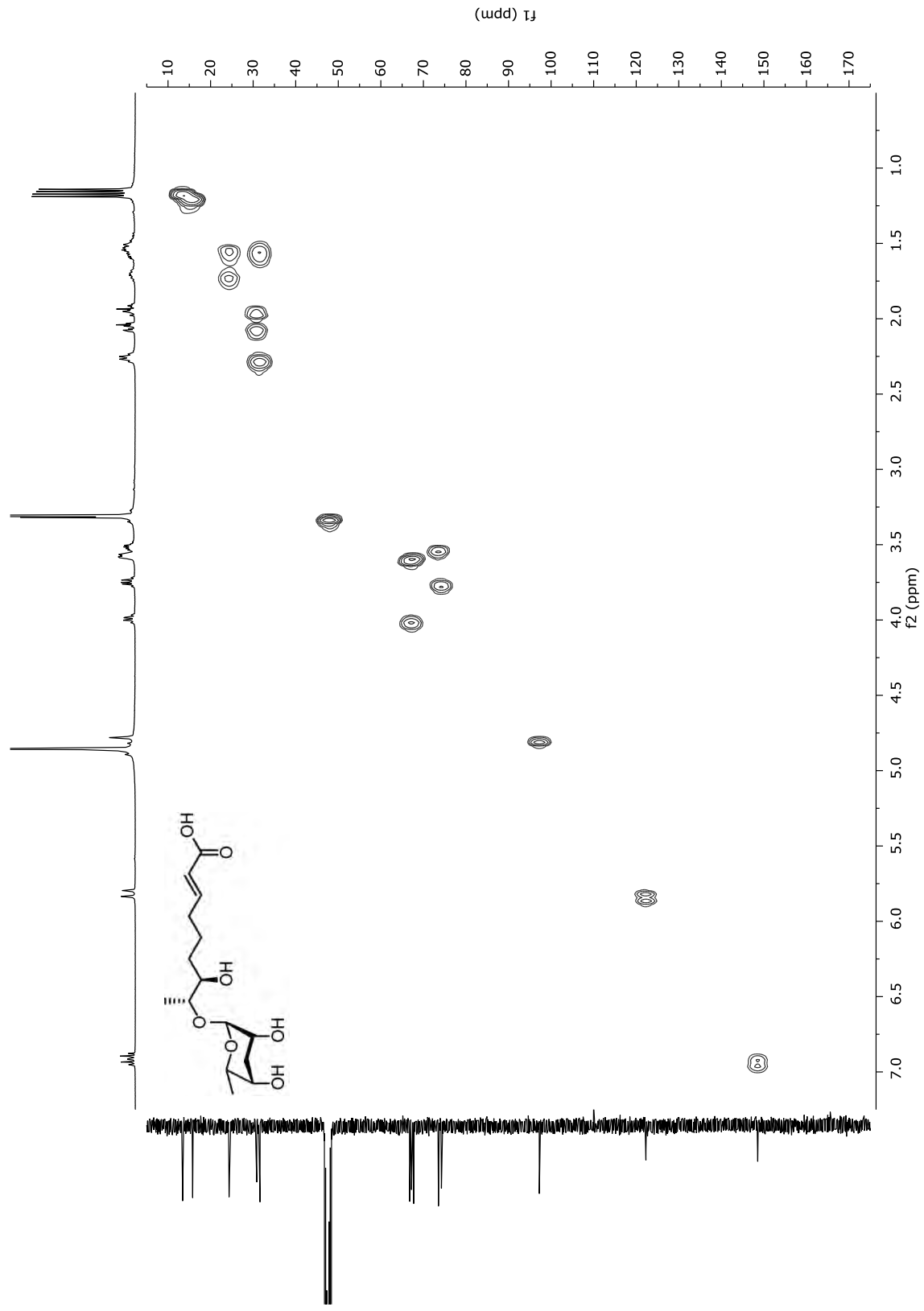


Figure S 214: HMBC (400 MHz, CD<sub>3</sub>OD) of (7*R*,8*R*,2*E*)-threo-8-[(3',6'-dideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-7-hydroxy-2-nonenic acid (cae-7OH- $\Delta$ C9, 39)

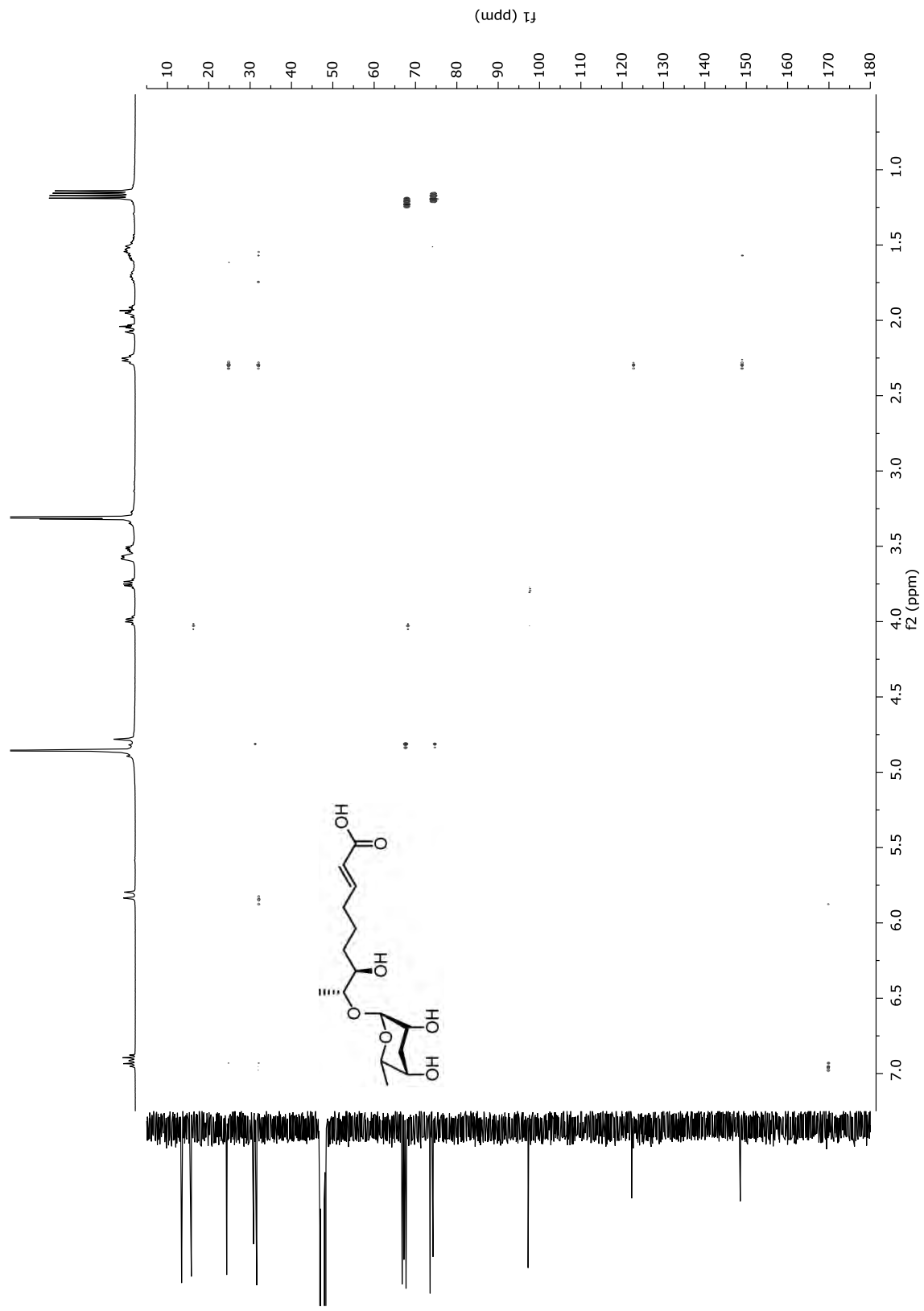


Figure S 215:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2,4-di-*O*-benzoyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-hexene (200).

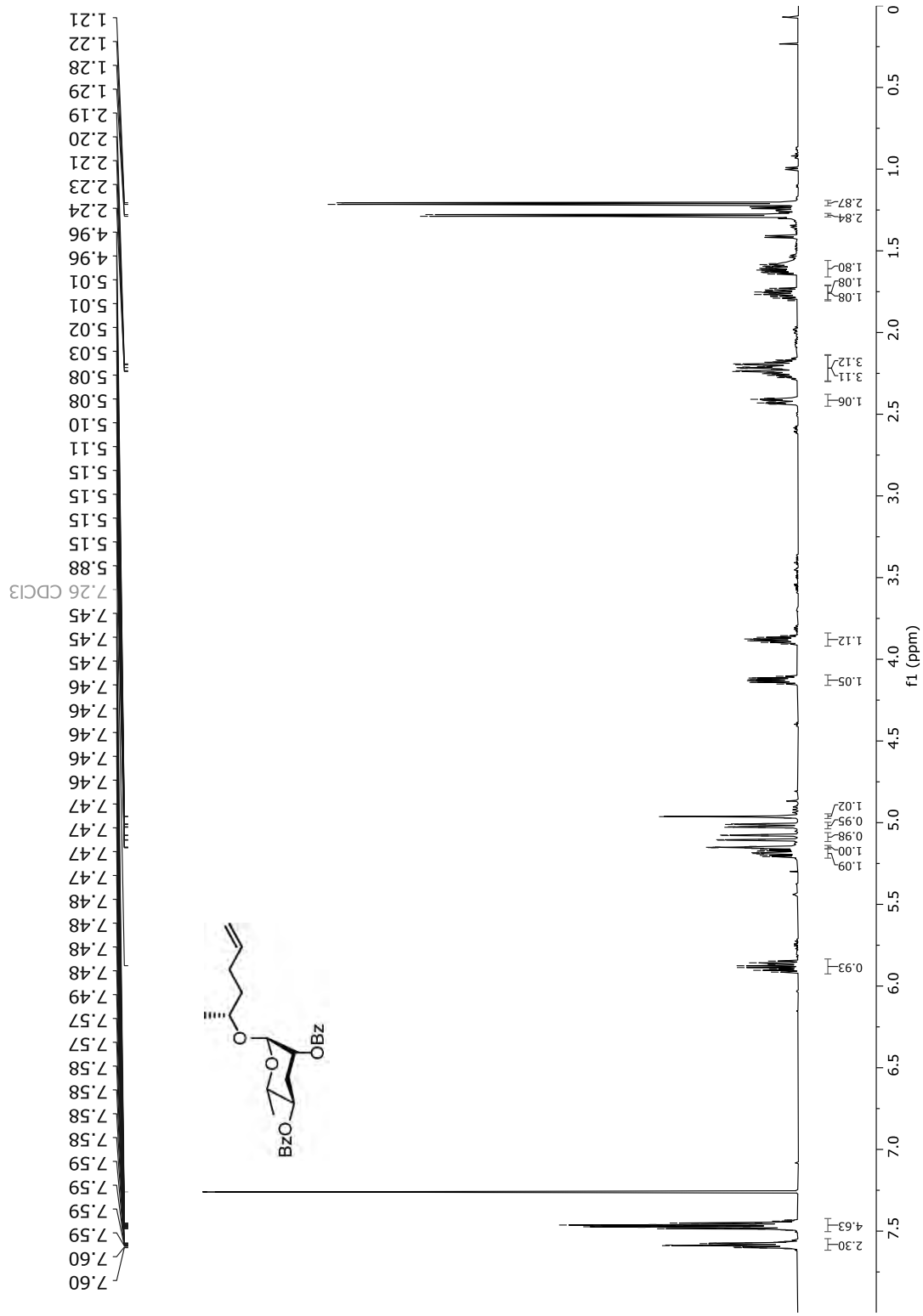


Figure S 216:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2,4-*O*-benzoyl-3,6-dideoxy-*L*-arabino-hexopyranosyl)oxy]-1-hexene (200).

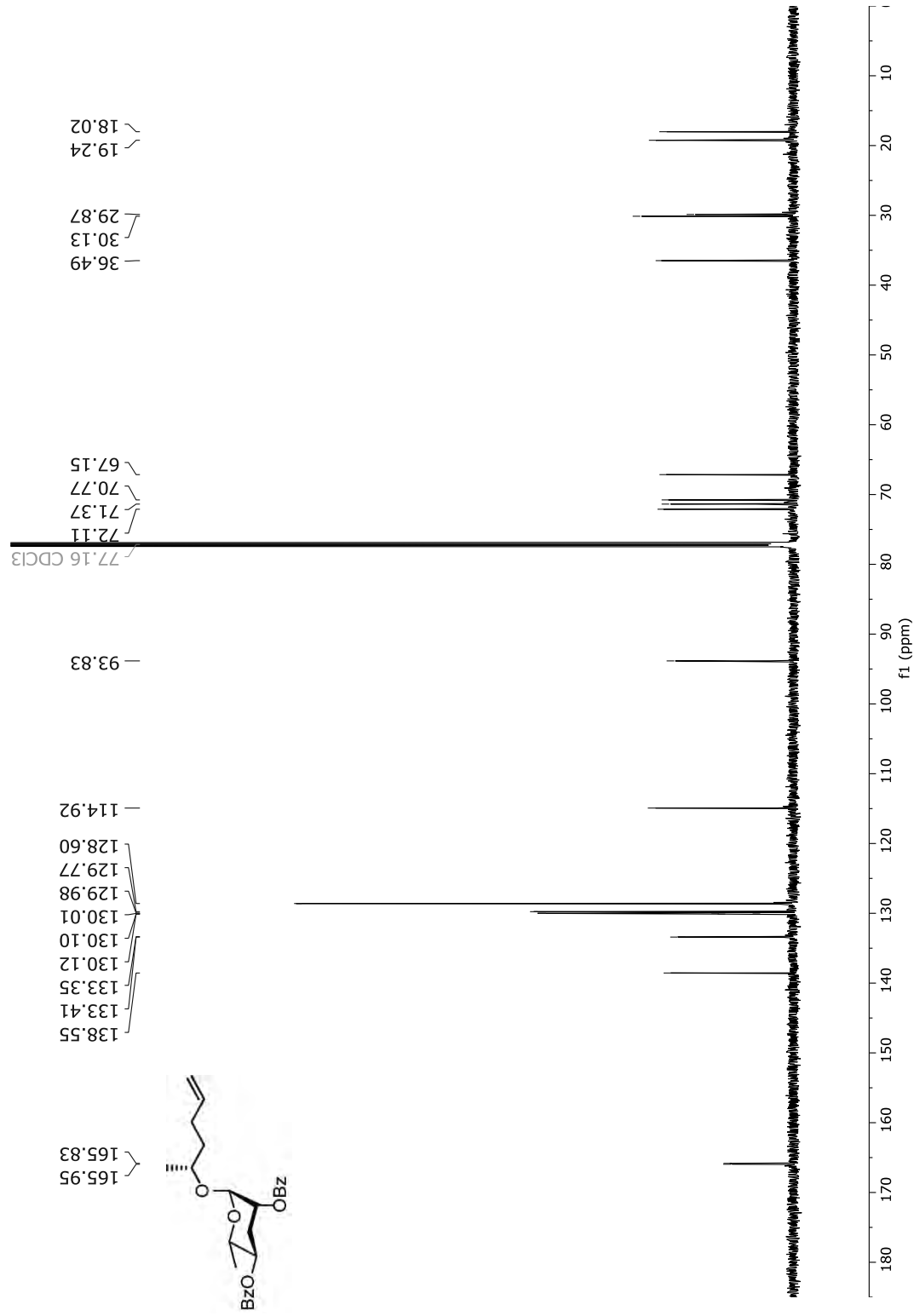


Figure S 217:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-hexene (201).

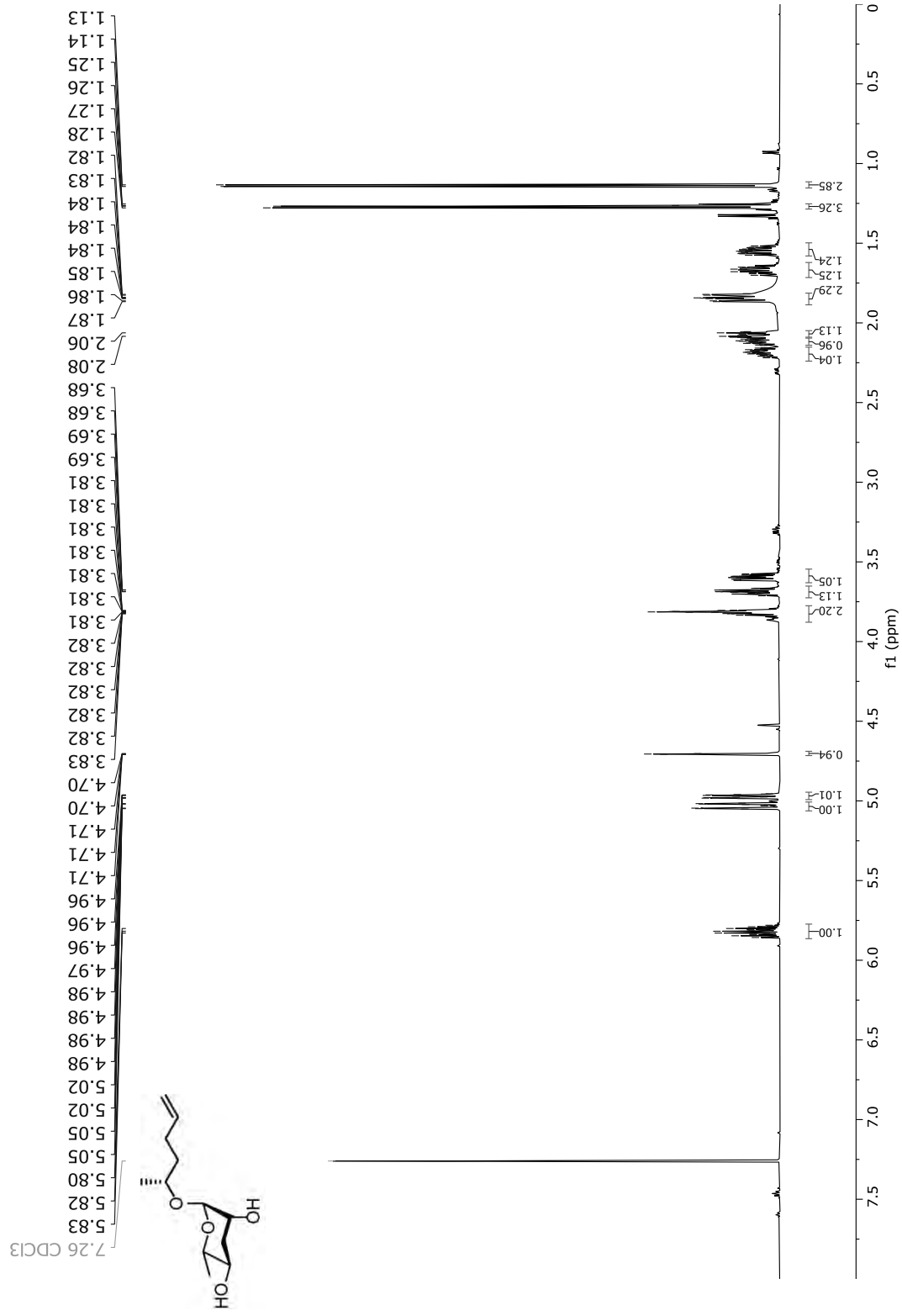


Figure S 218:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-hexene (201).

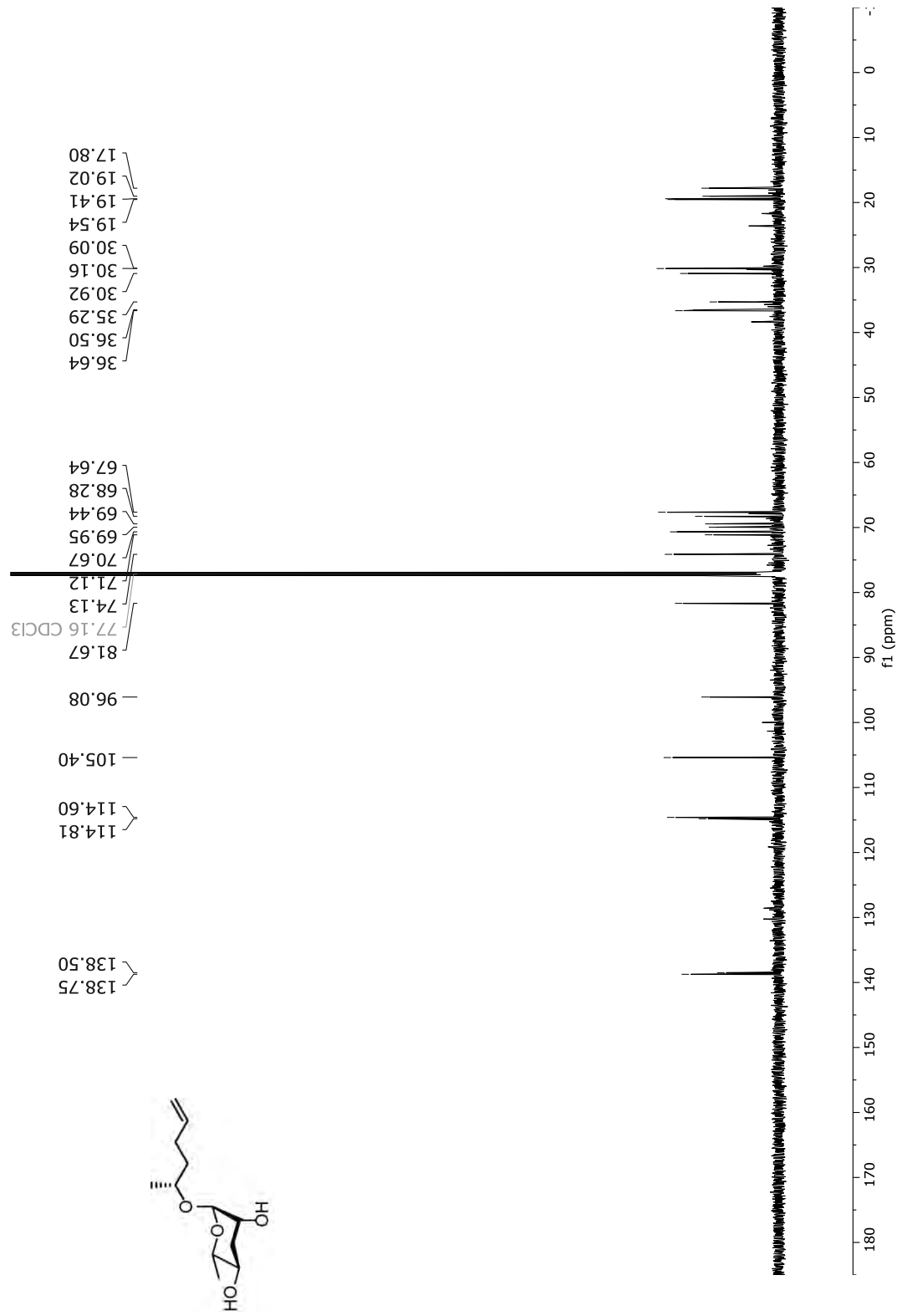


Figure S 219: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-hexene (201).

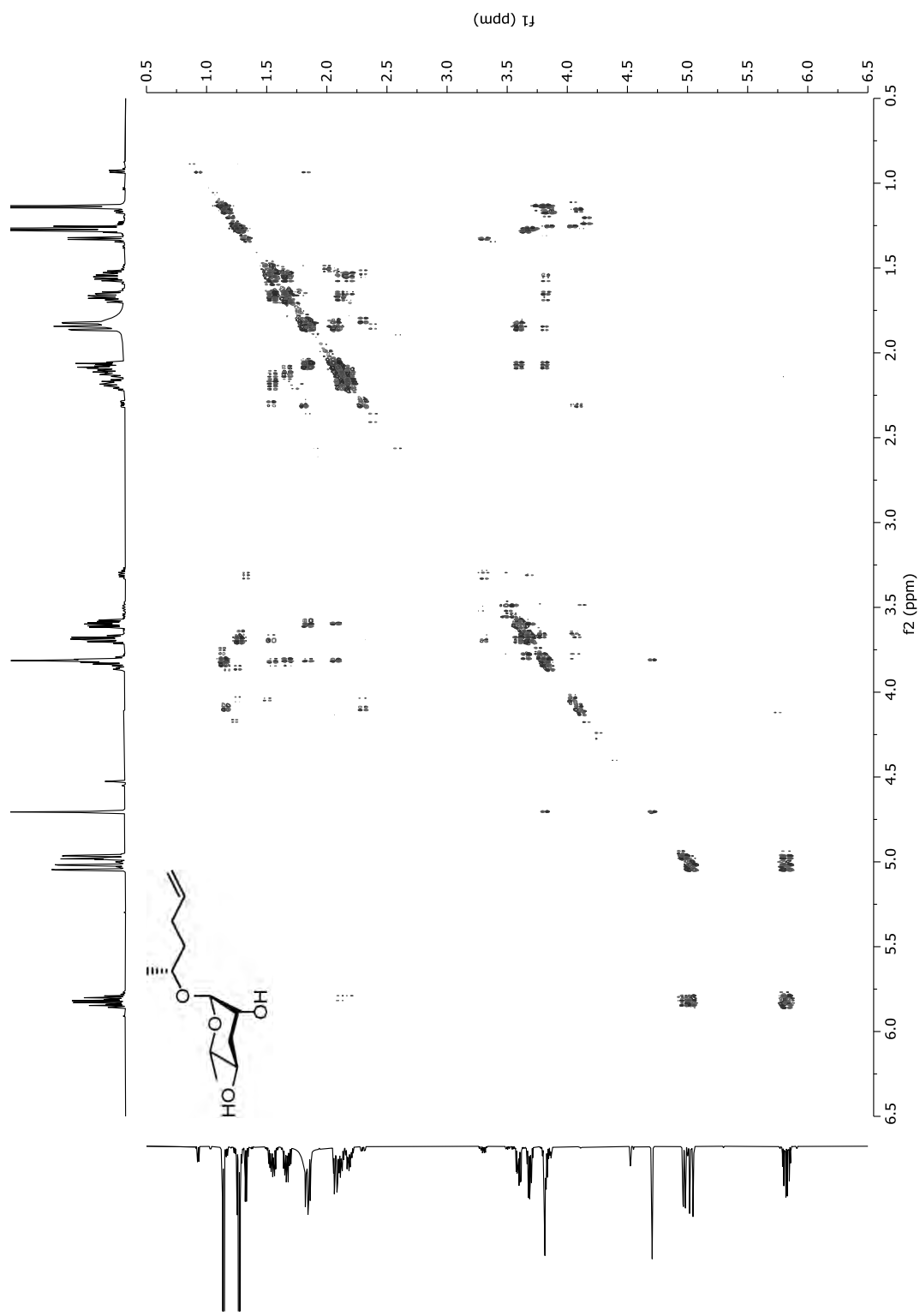


Figure S 220: HSQC (600 MHz, CDCl<sub>3</sub>) of [5*R*]-5-[(3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-hexene (201).

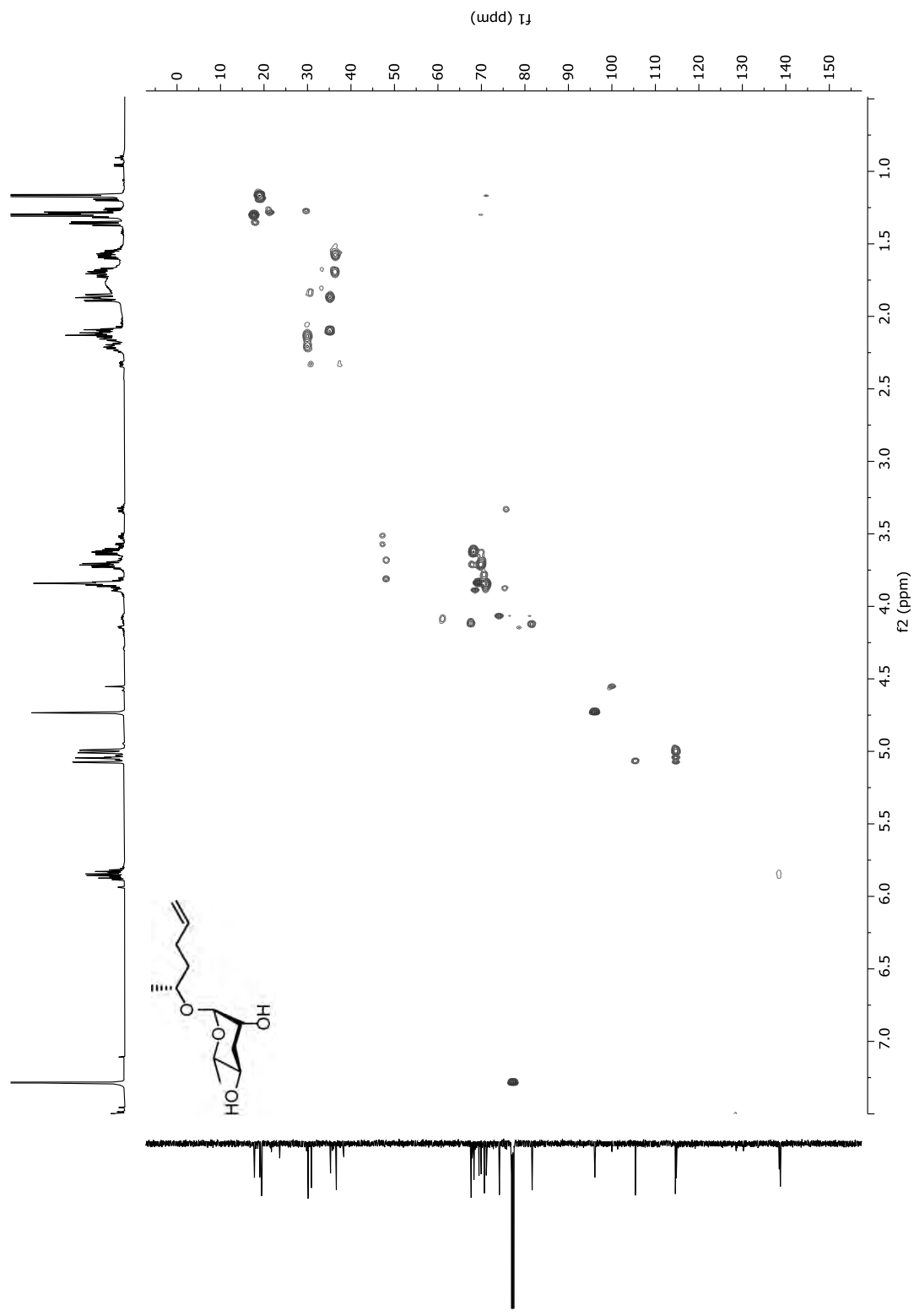


Figure S 221:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2,4-di-*O*-*tert*-butyldimethylsilyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-hexene (202).

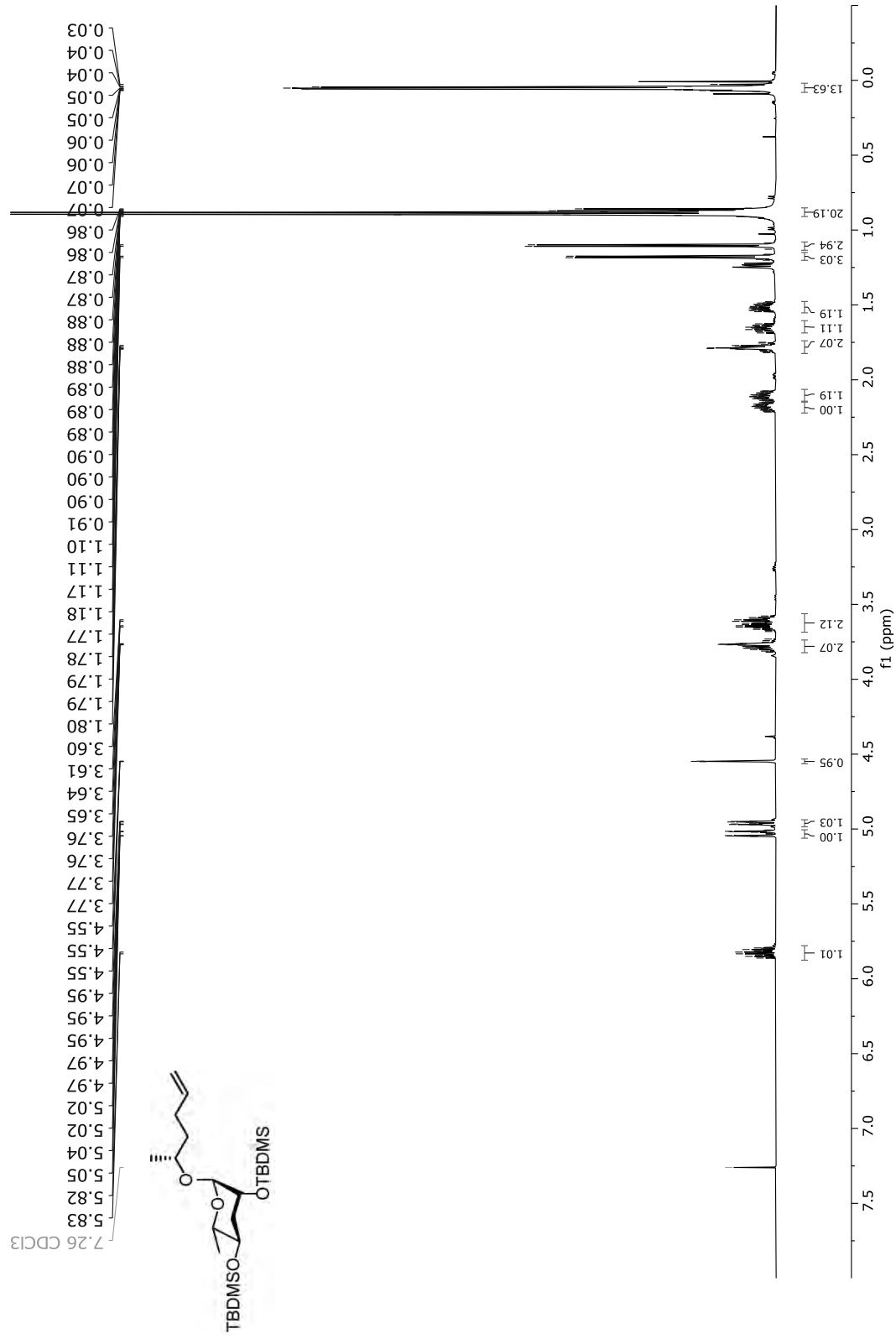


Figure S 222:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (5*R*)-5-[(2,4-di-*O*-*tert*-butyldimethylsilyl)-3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl]oxy]-1-hexene (202).

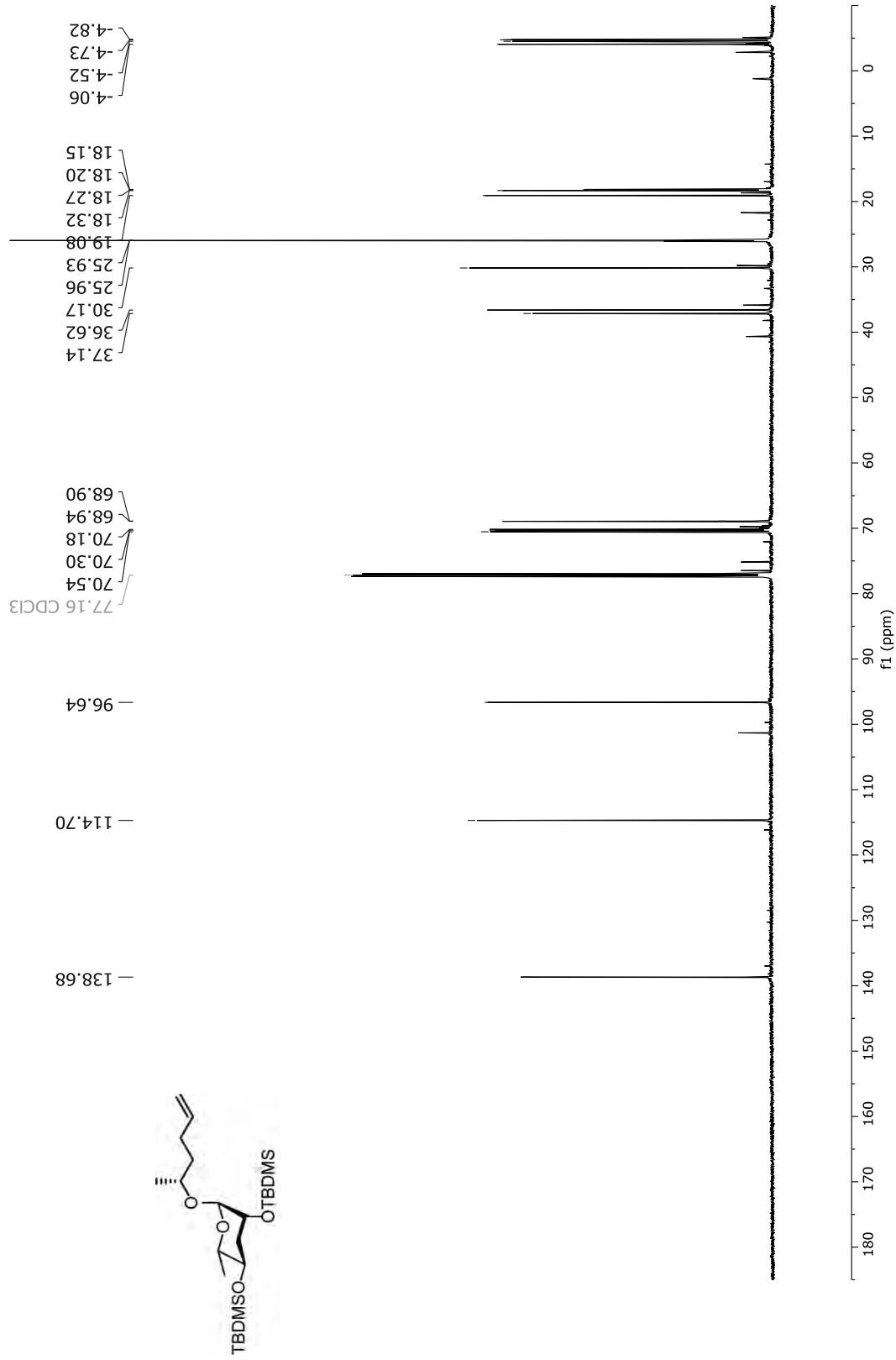


Figure S 223: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(2,4-di-*O*-*tert*-butyldimethylsilyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-hexene (202).

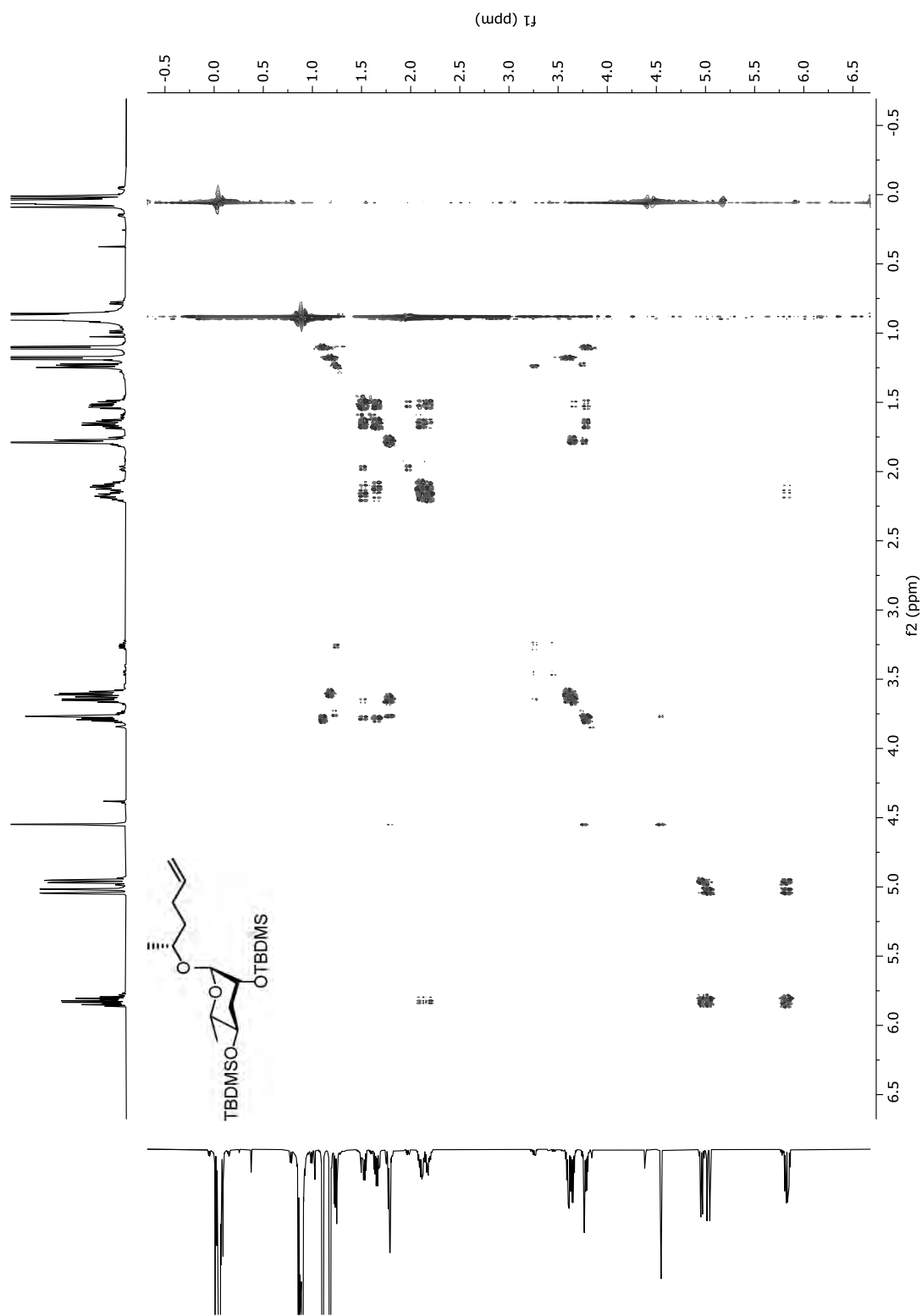


Figure S 224: HSQC (600 MHz, CDCl<sub>3</sub>) of (5*R*)-5-[(2,4-di-*O*-*tert*-butyldimethylsilyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-1-hexene (202).

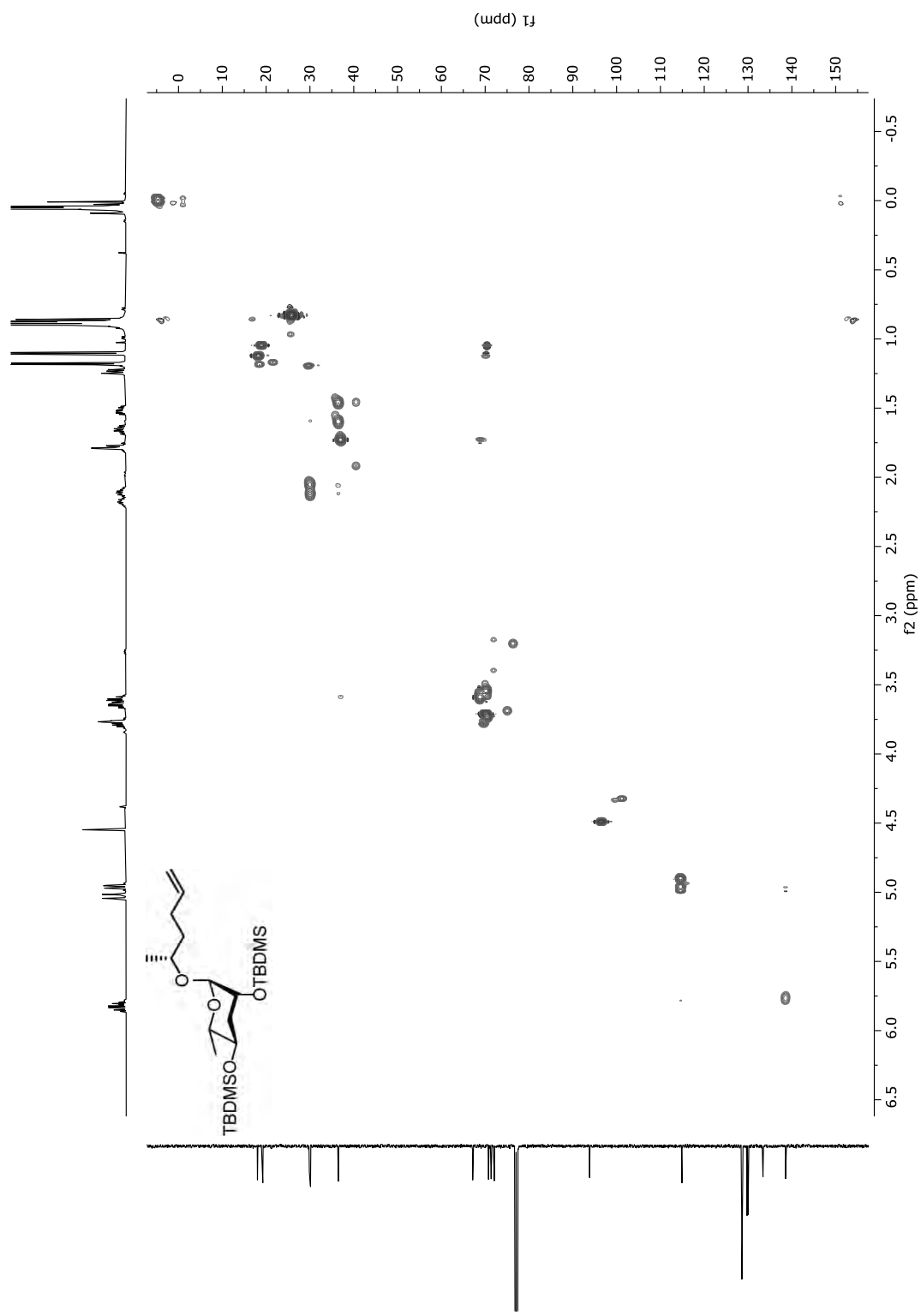


Figure S 225:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (4R)-4-[(2,4-di-O-tert-butylidimethylsilyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-pentanoic acid (203).

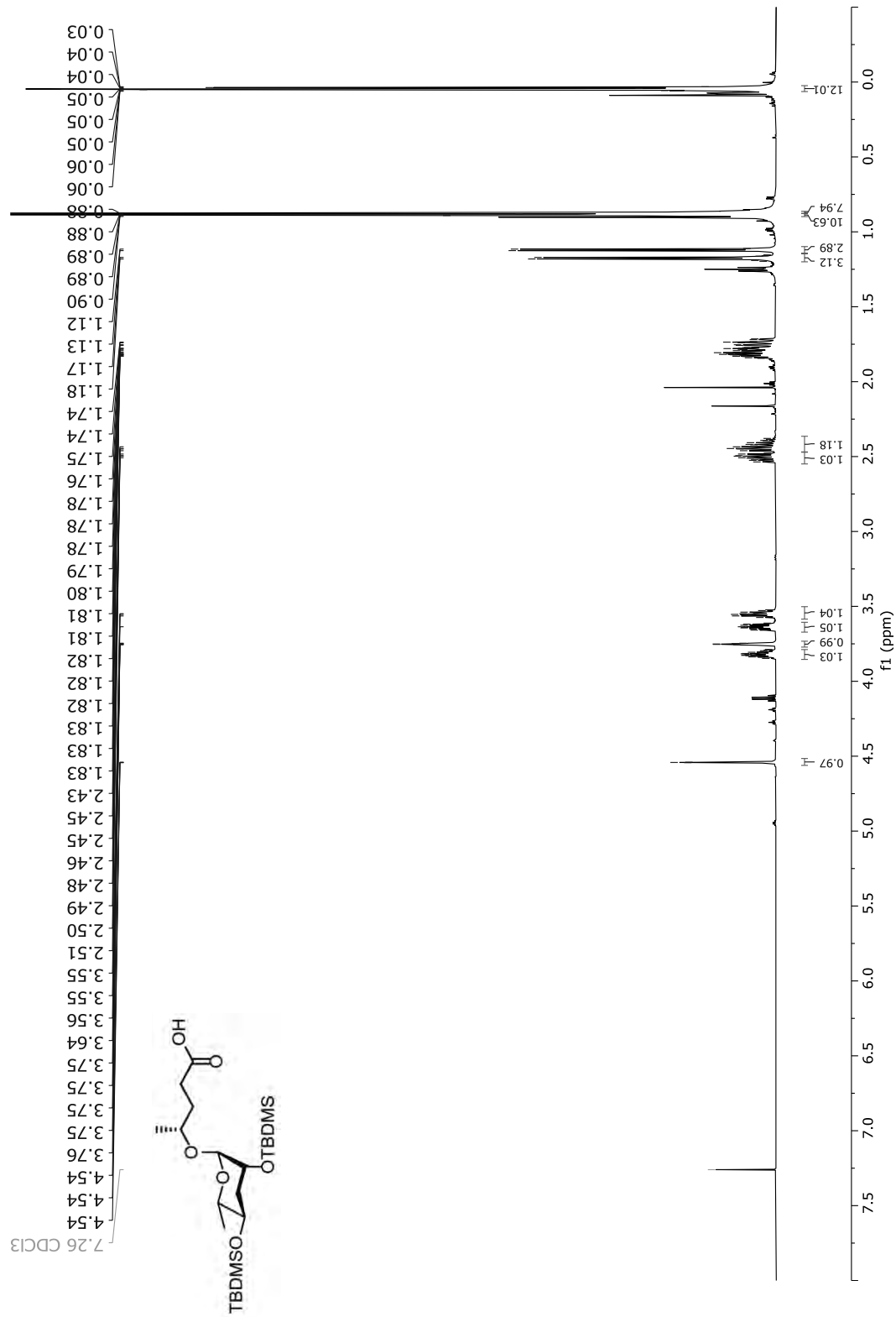


Figure S 226:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (4R)-4-[(2,4-di-O-tert-butyl dimethylsilyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-1-pentanoic acid (203).

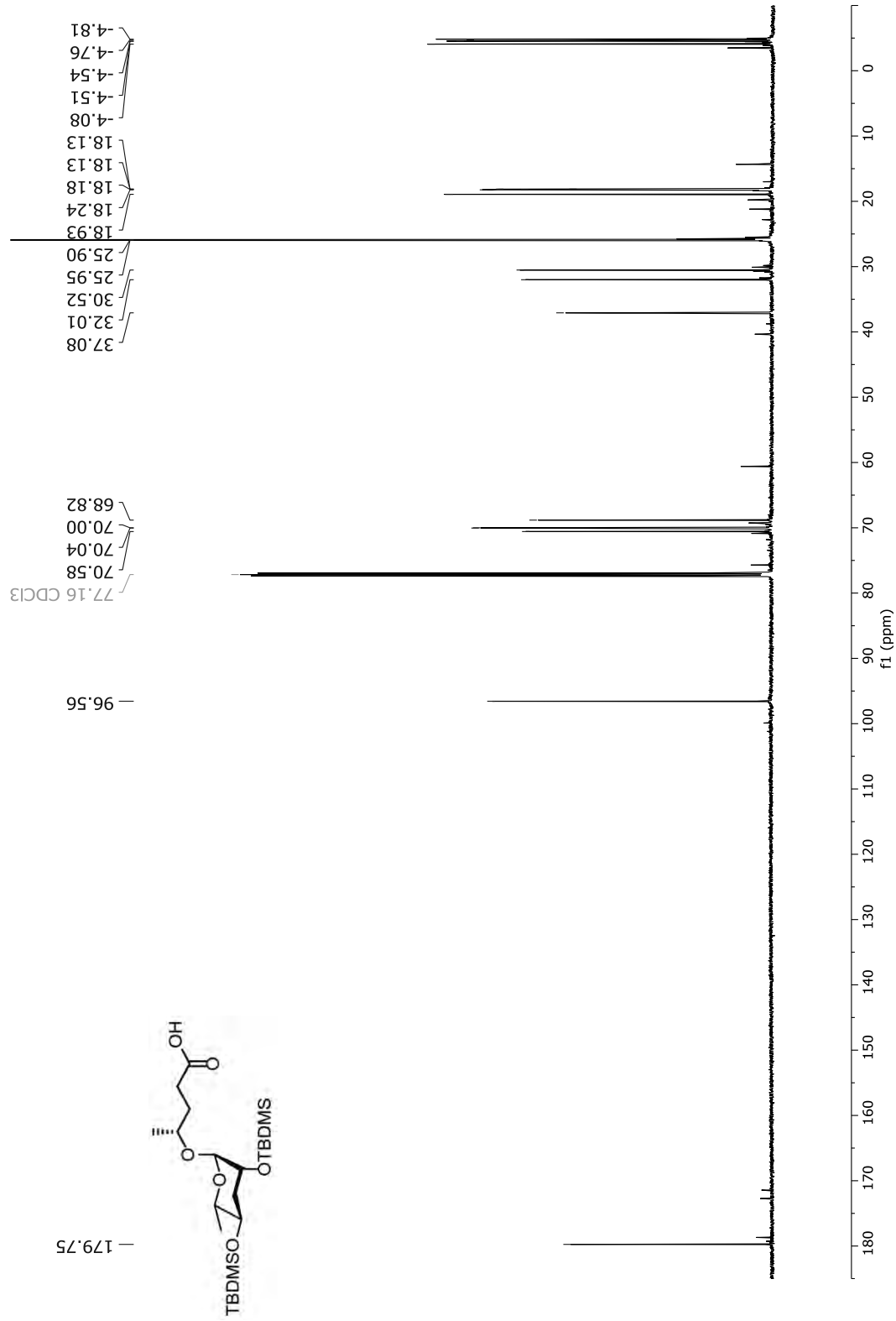


Figure S 227:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of Benzyl-(4R)-4-[4-O-tert-butyl-diphenylsilyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (204).

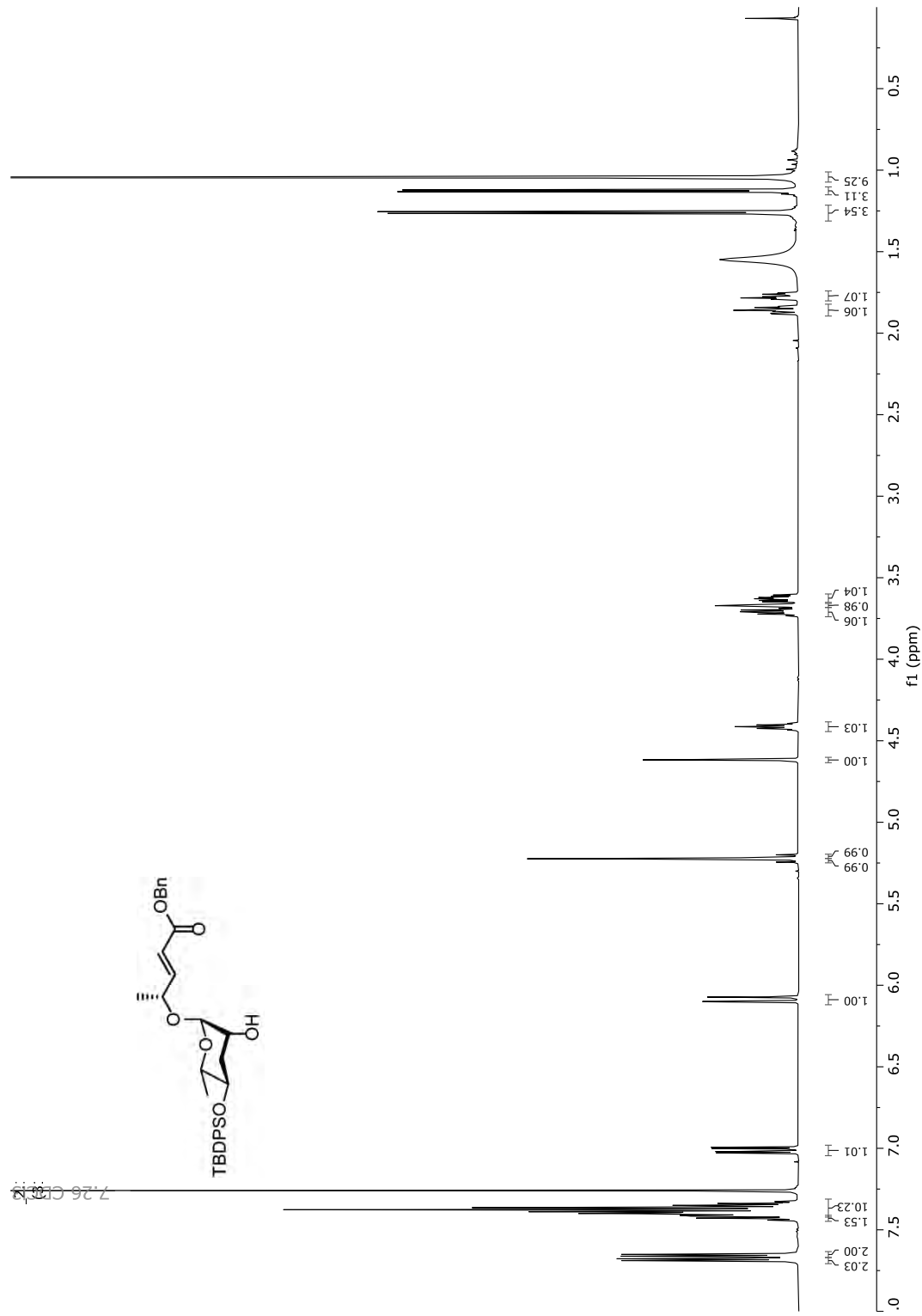


Figure S 228:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of Benzyl-(4R)-4-[4-O-tert-butylidiphenylsilyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (204).

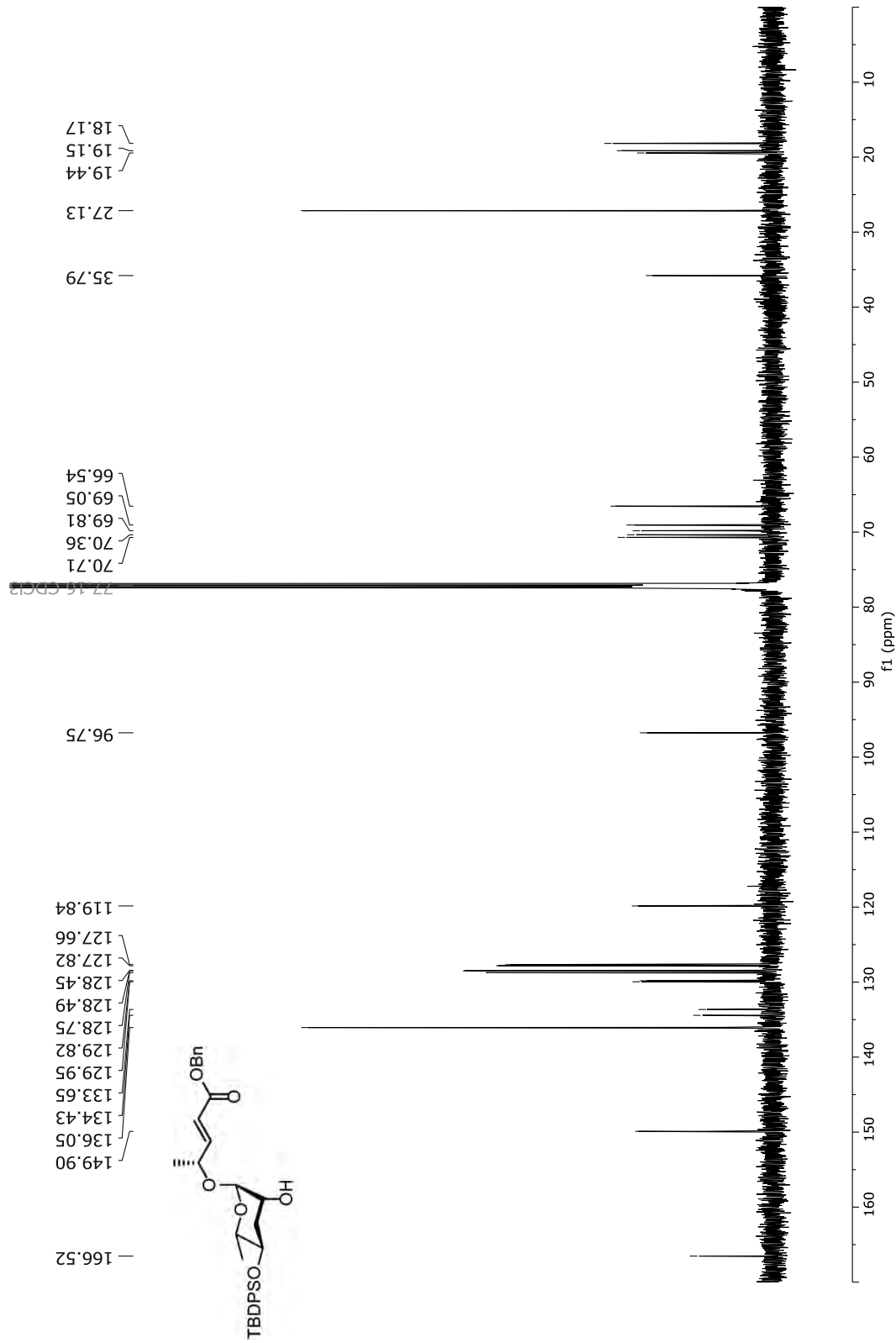


Figure S 229: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of Benzyl-(4*R*)-4-[4-*O*-*tert*-butyldiphenylsilyl]-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (204).

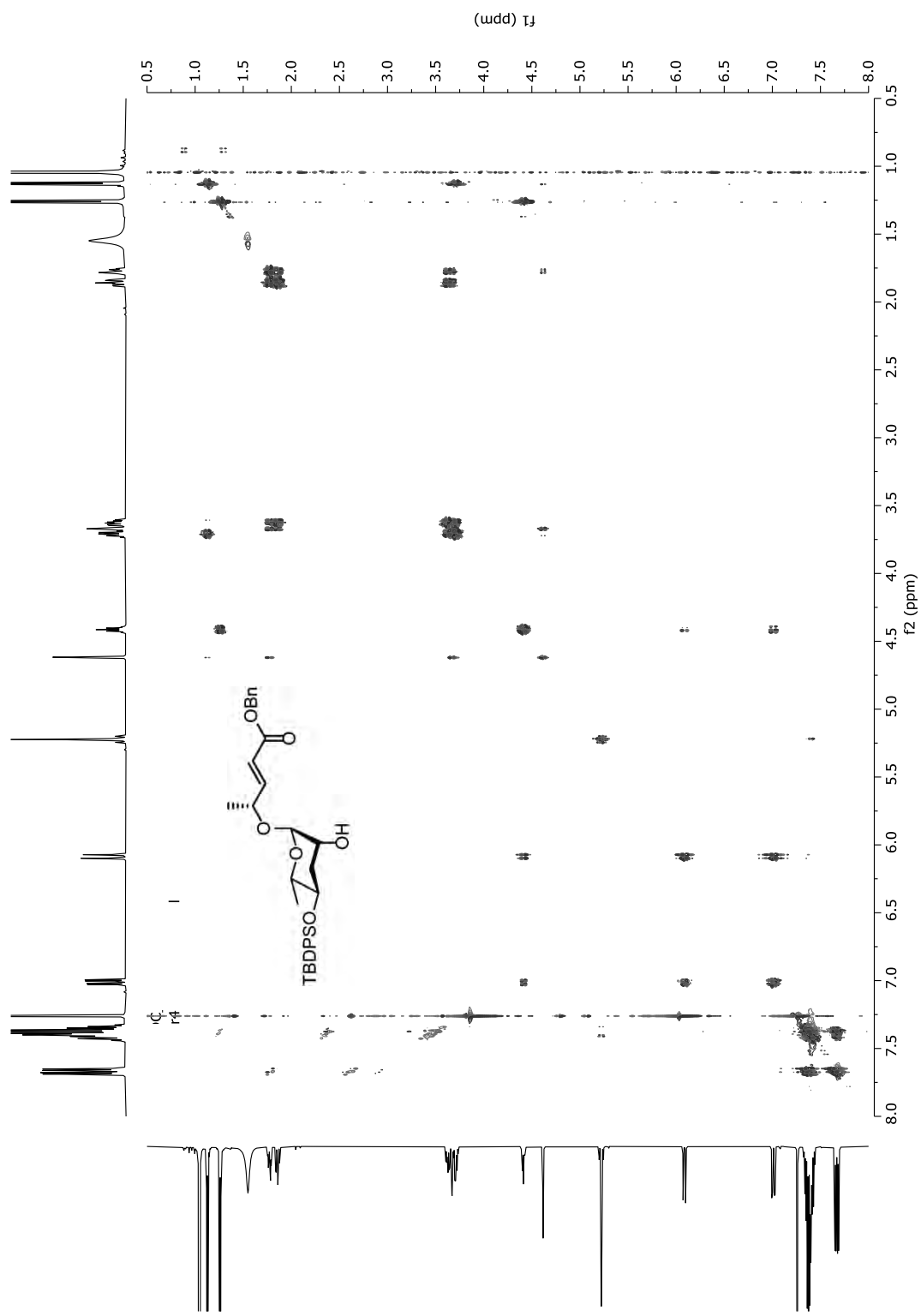


Figure S 230: HSQC (600 MHz, CDCl<sub>3</sub>) of Benzyl-(4R)-4-[4-O-tert-butyl(diphenylsilyl)-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (204).

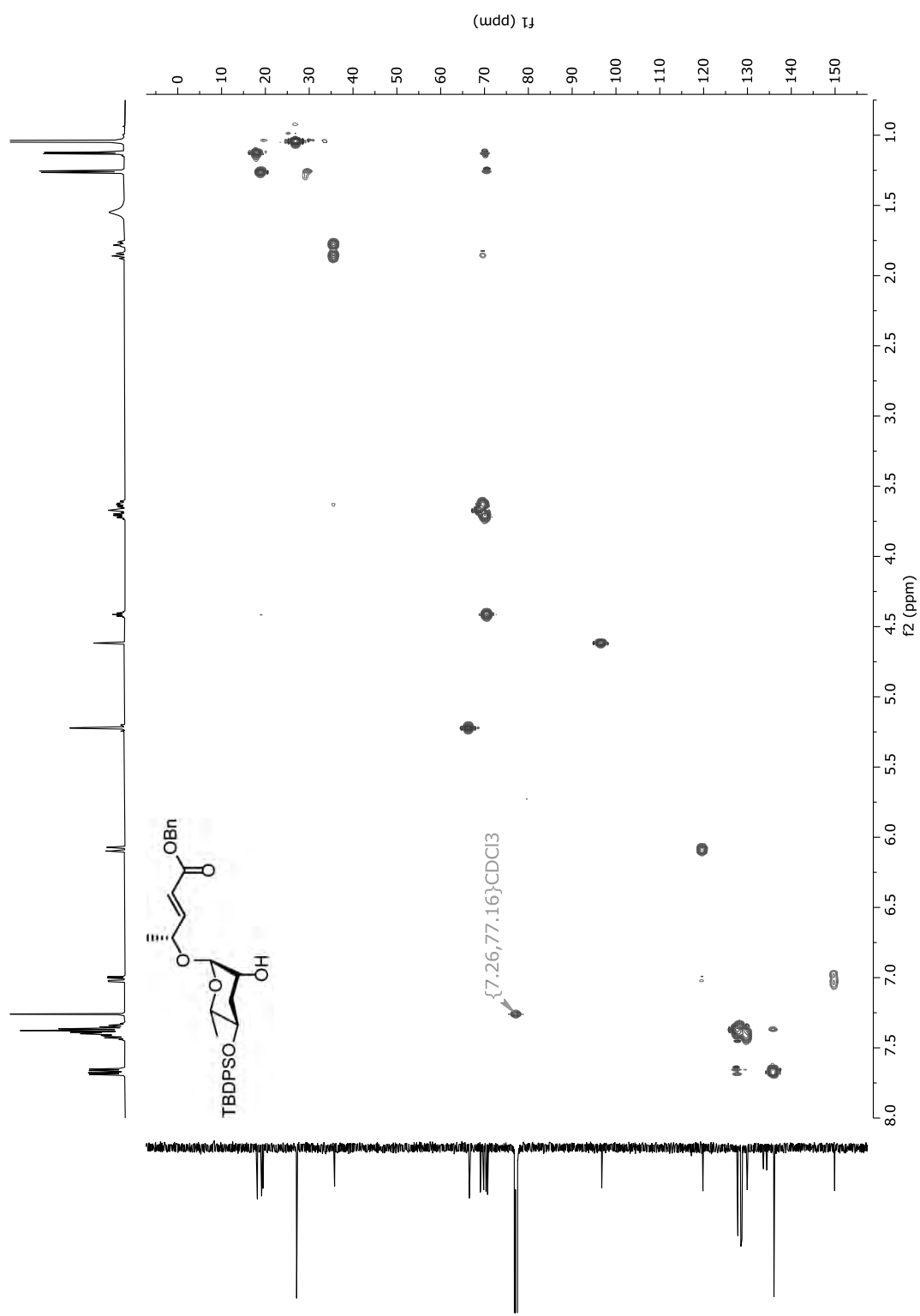


Figure S 231:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 205.

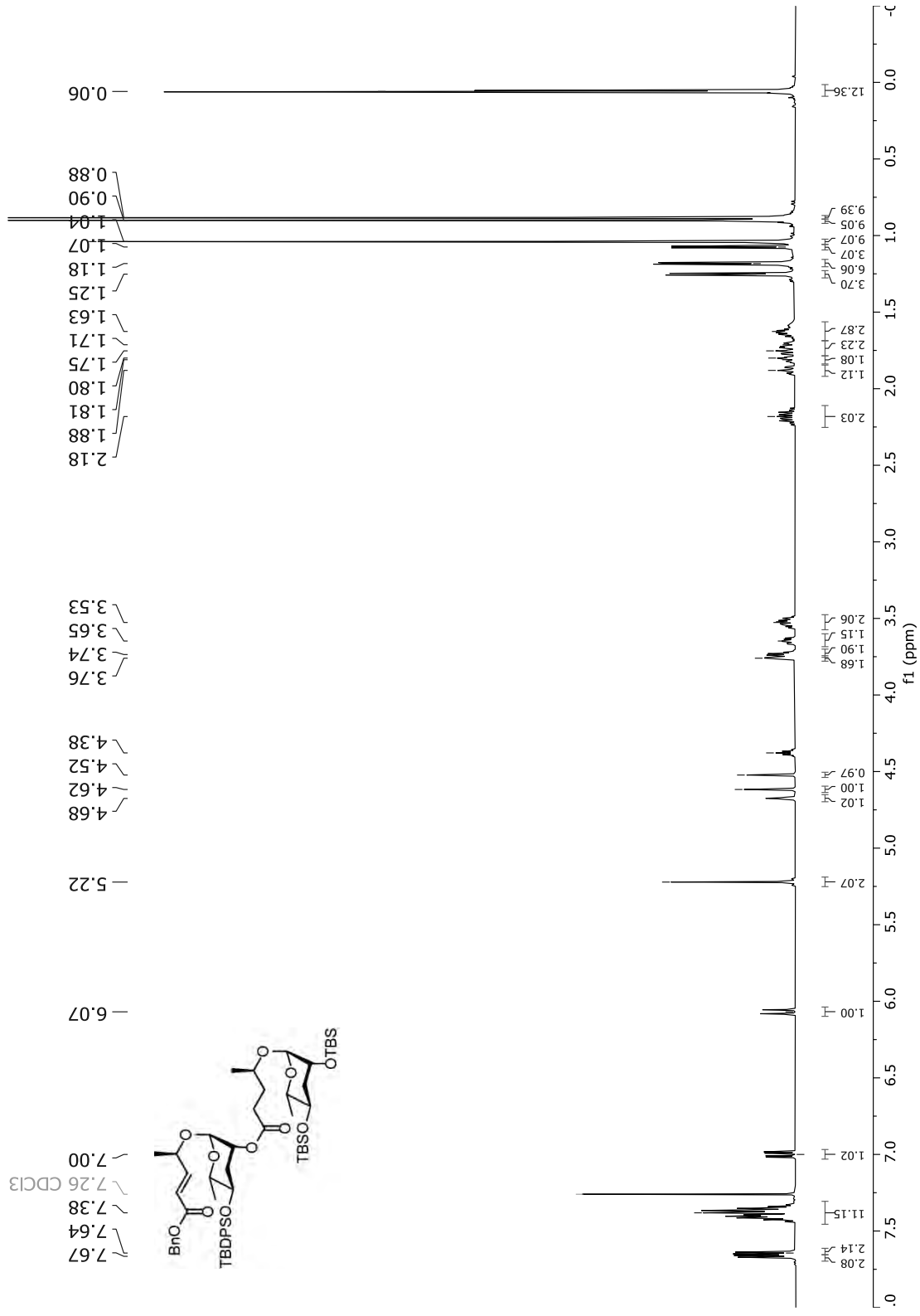


Figure S 232:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 205.

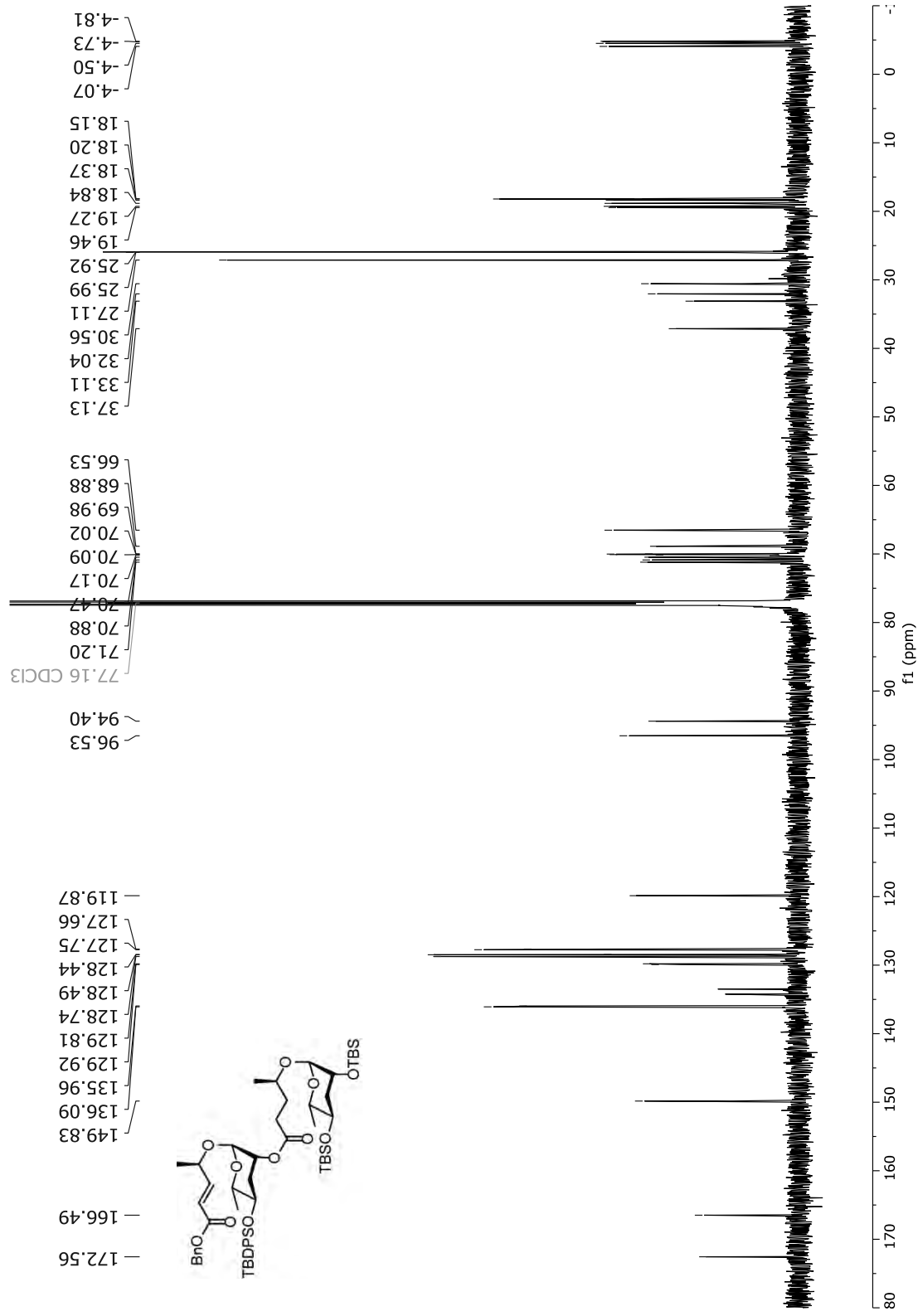


Figure S 233: *dqf*-COSY (150 MHz, CDCl<sub>3</sub>) of 205.

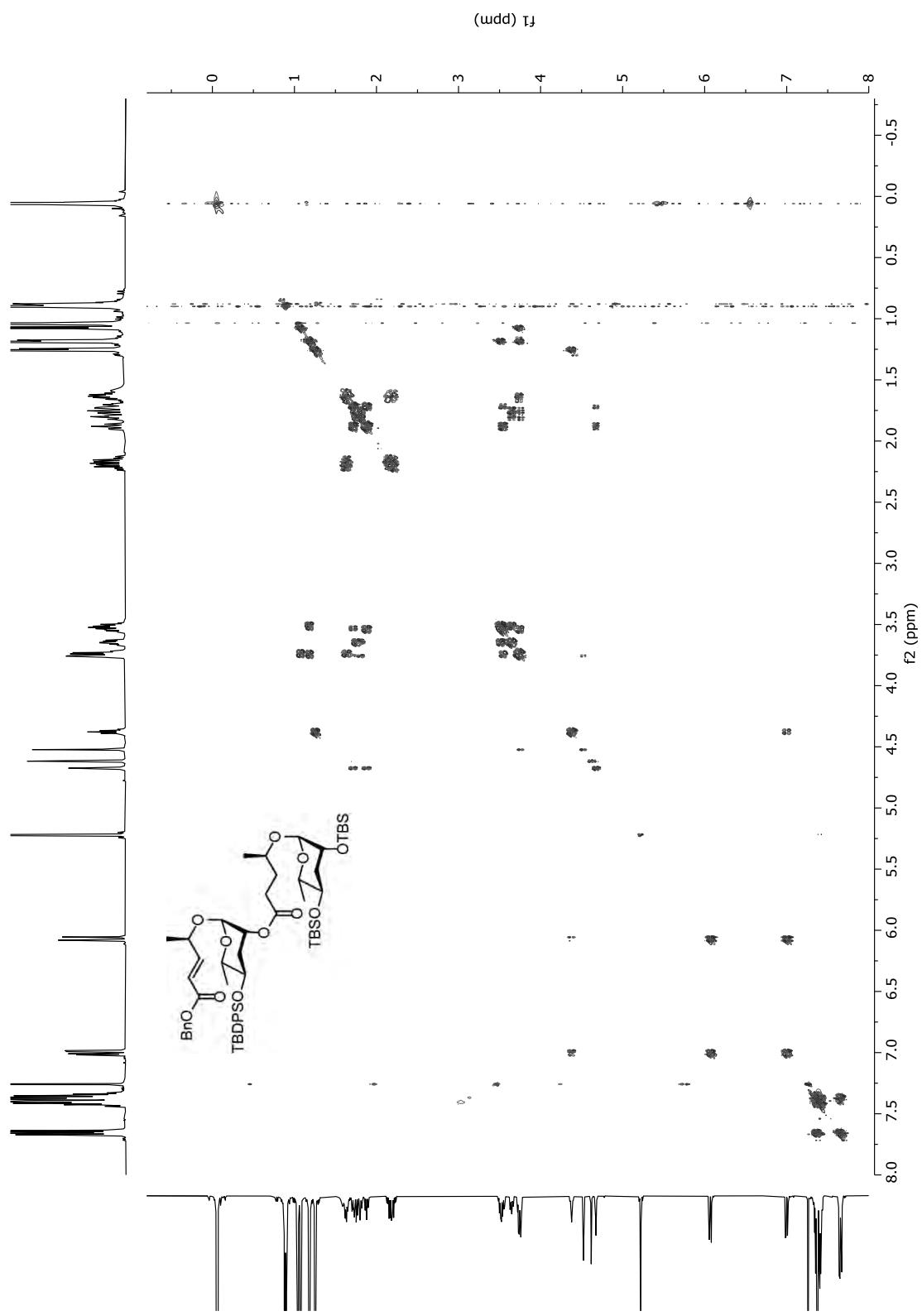


Figure S 234: HSQC (150 MHz, CDCl<sub>3</sub>) of 205.

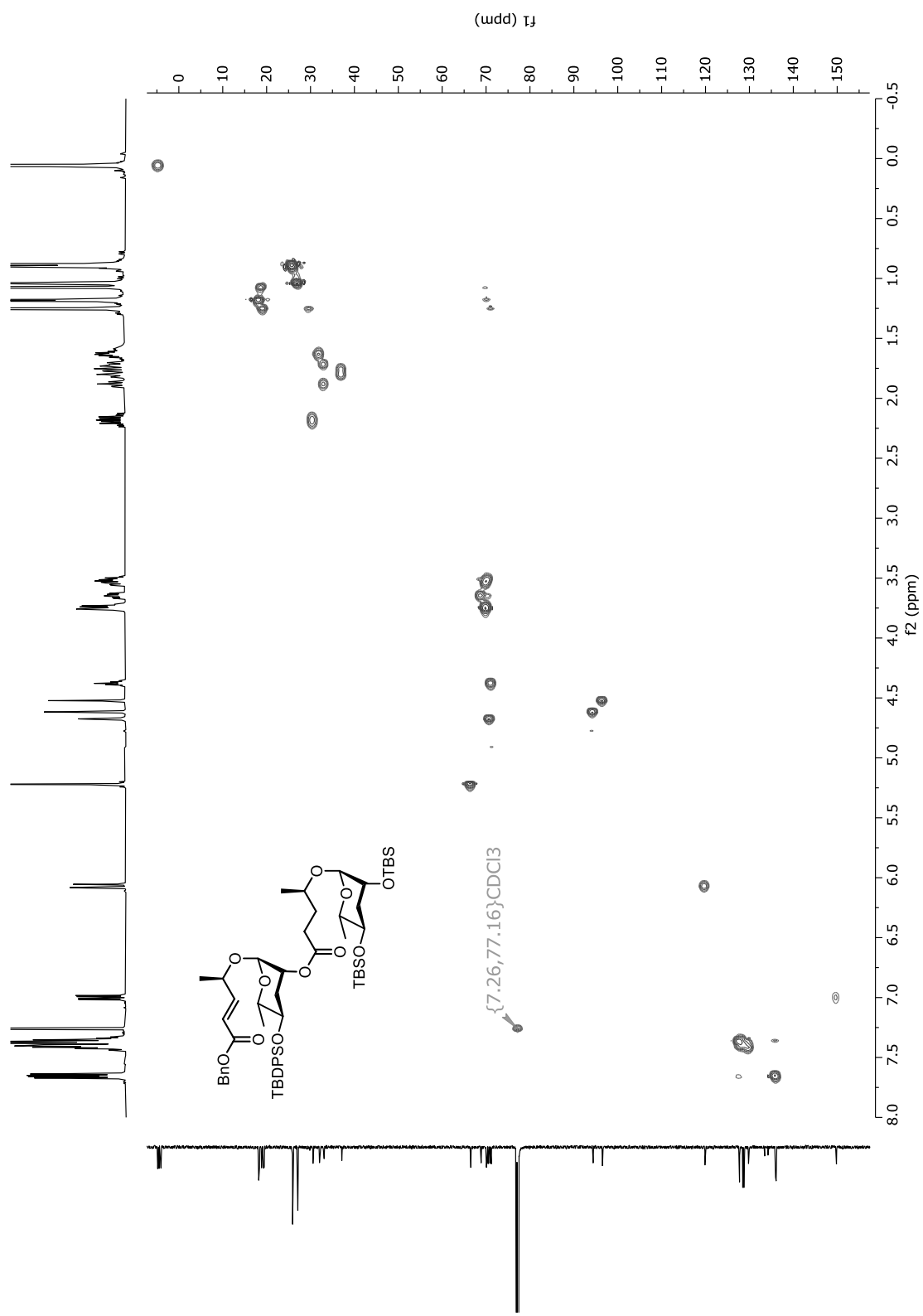


Figure S 235:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 228.

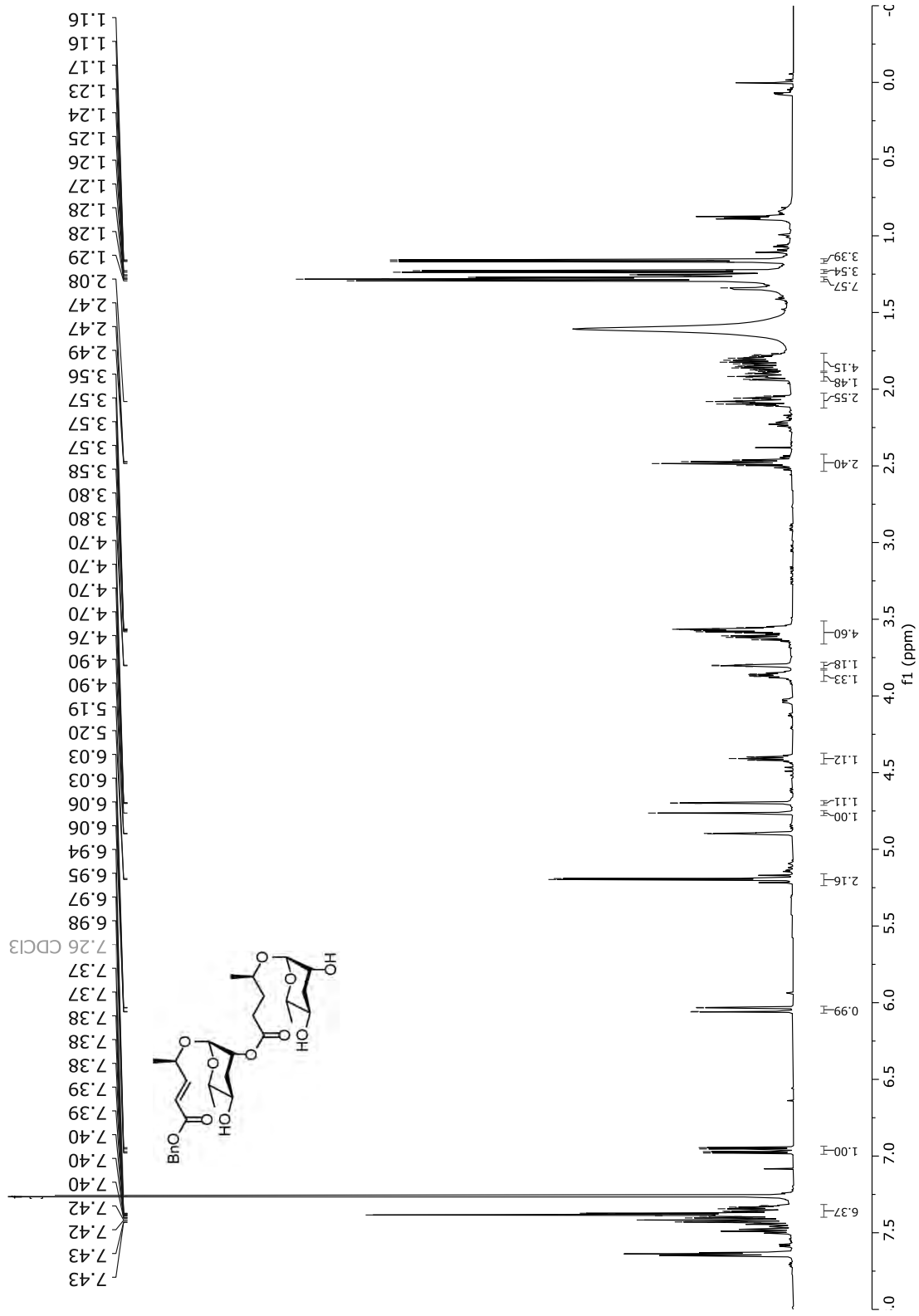


Figure S 236:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 228.

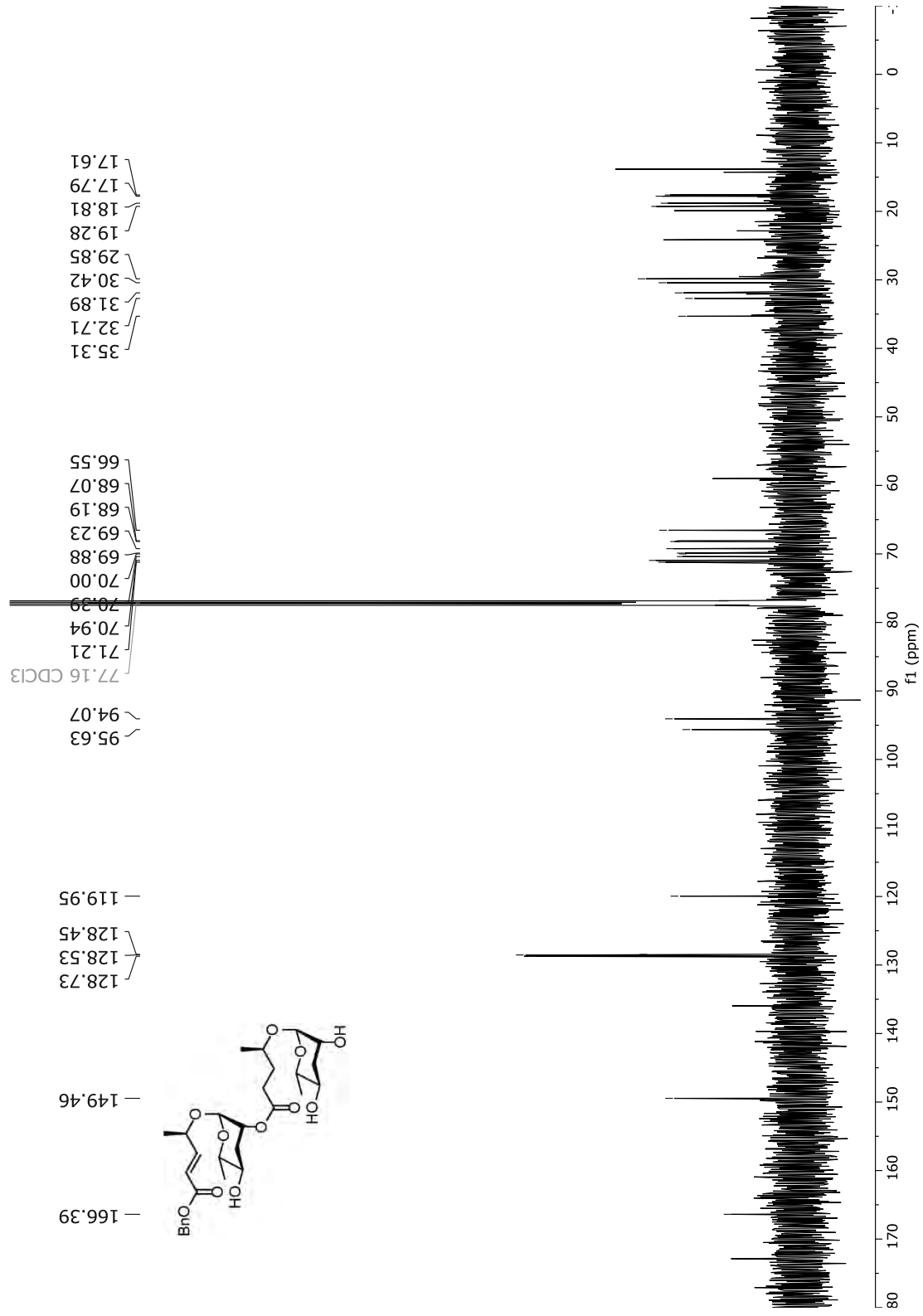


Figure S 237: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 228.

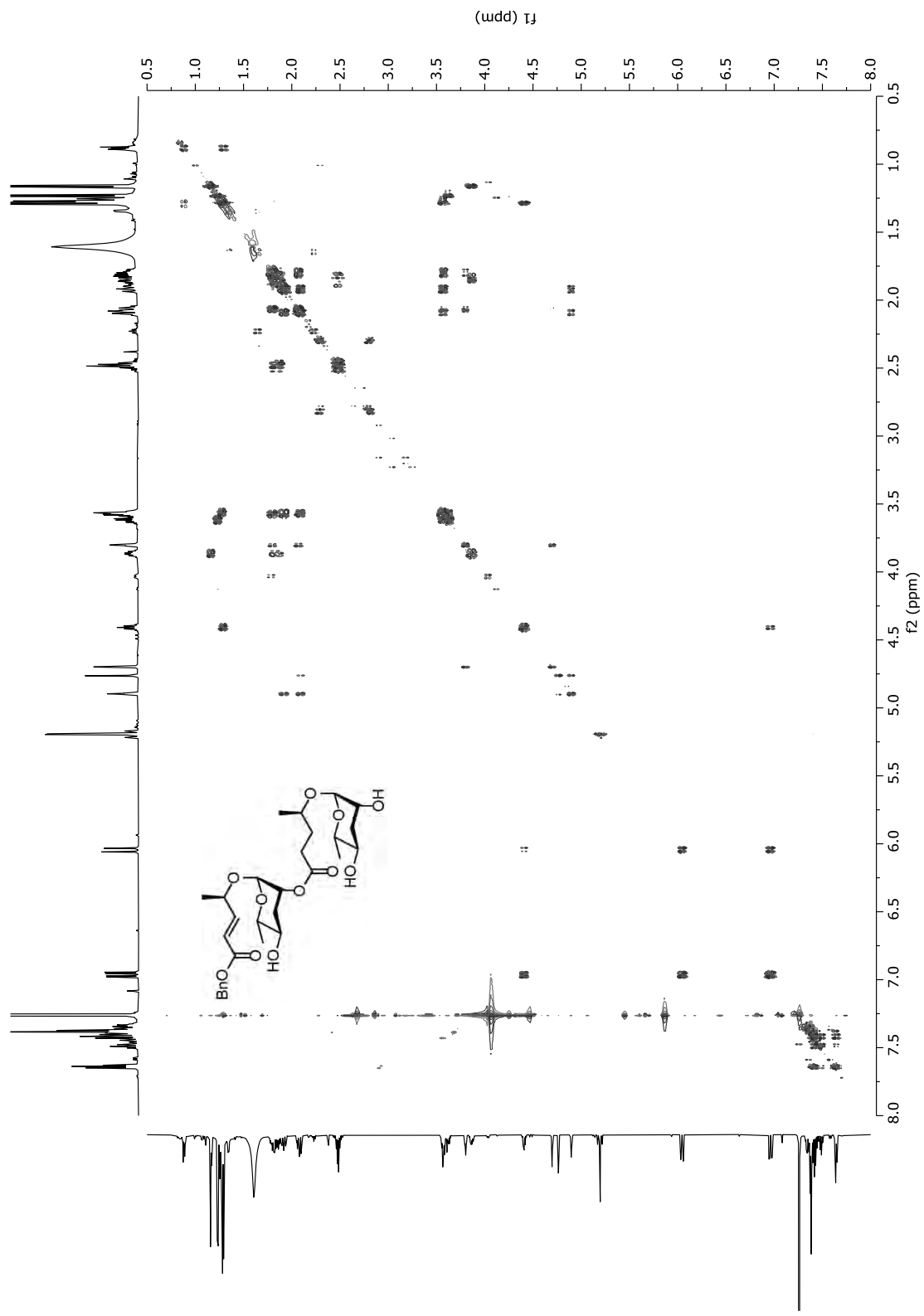


Figure S 238: HSQC (600 MHz, CDCl<sub>3</sub>) of 228.

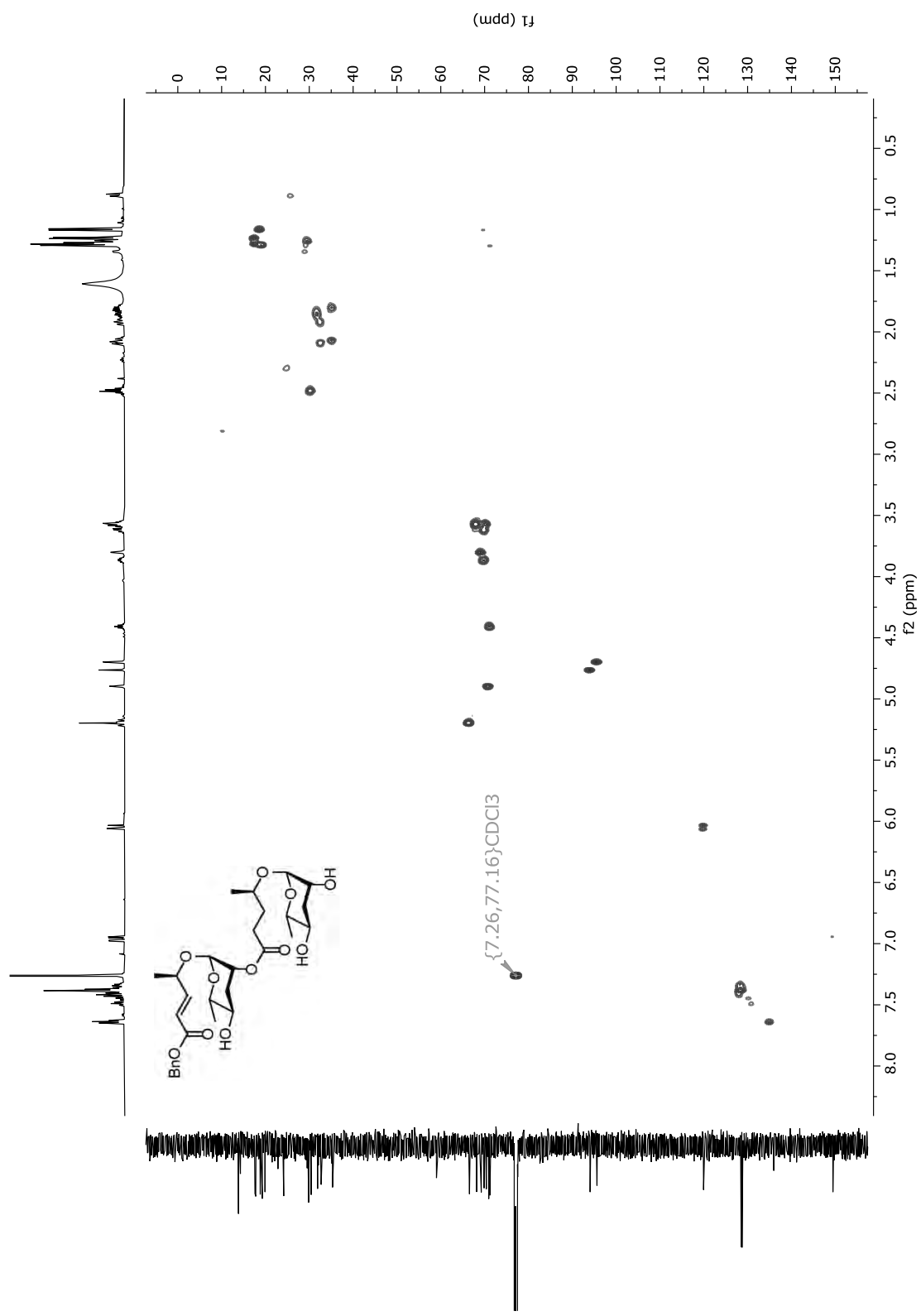


Figure S 239: HMBC (600 MHz, CDCl<sub>3</sub>) of 228.

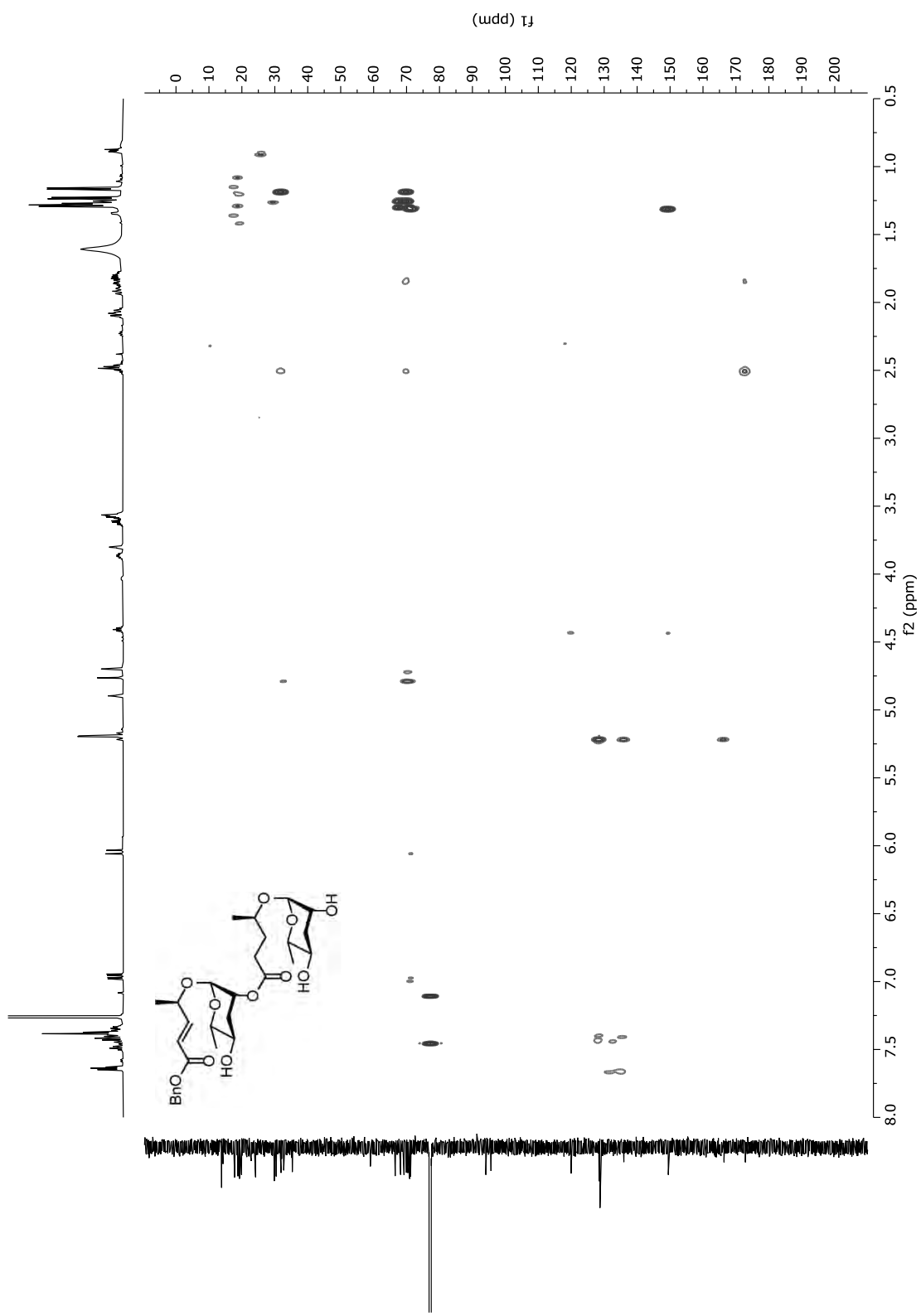


Figure S 240:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 40.

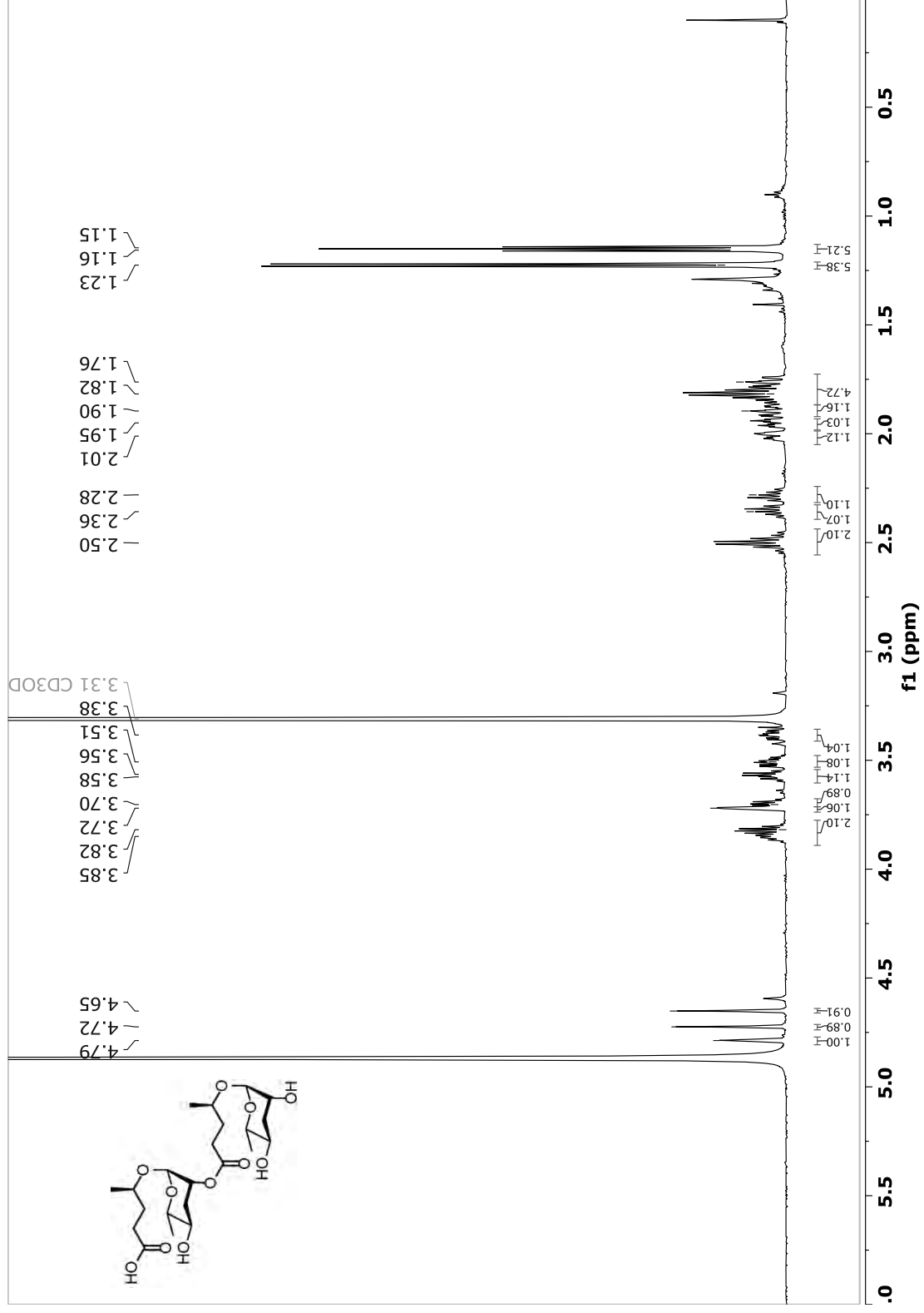


Figure S 241: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 40.

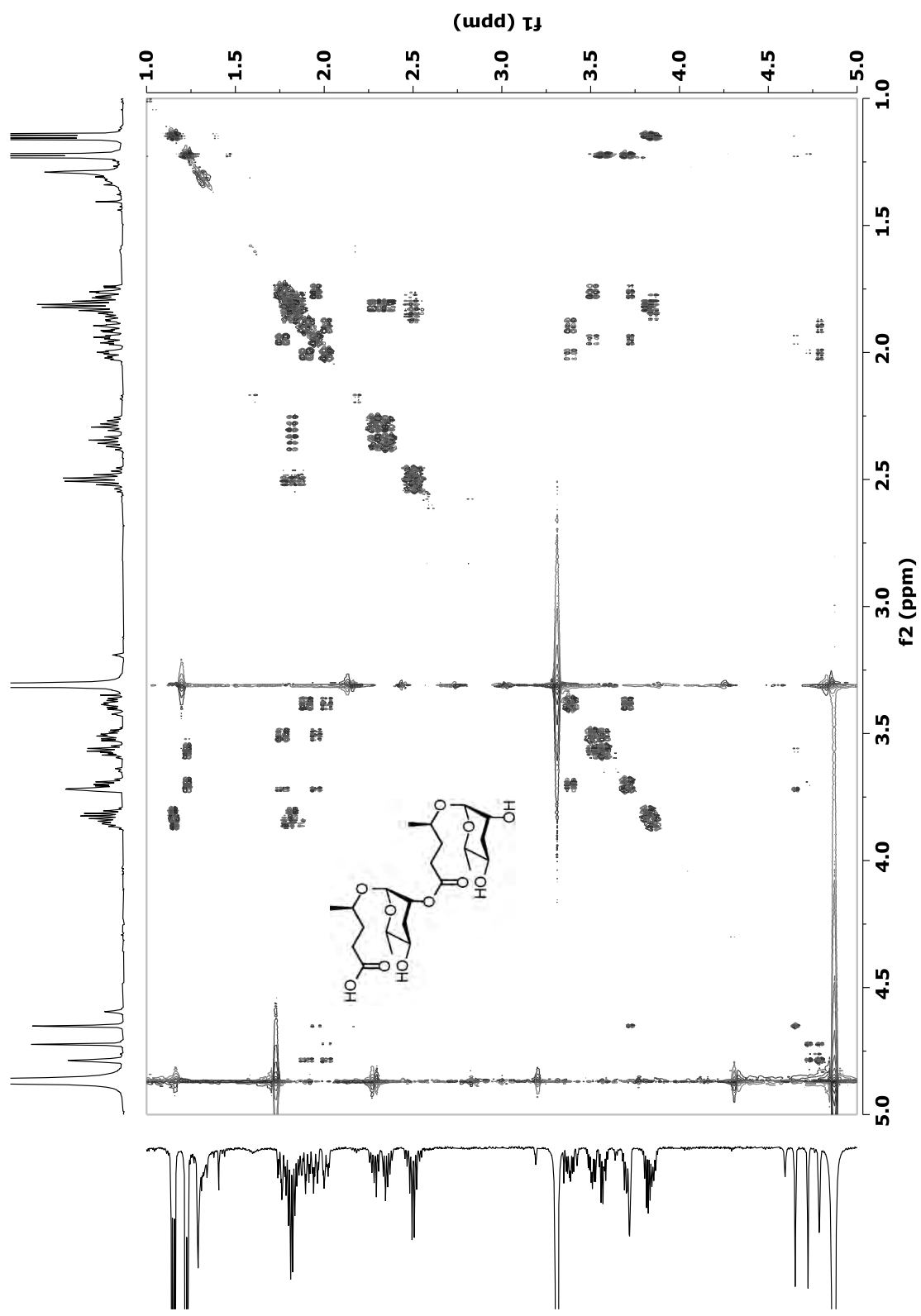


Figure S 242: HSQC (600 MHz, CDCl<sub>3</sub>) of 40.

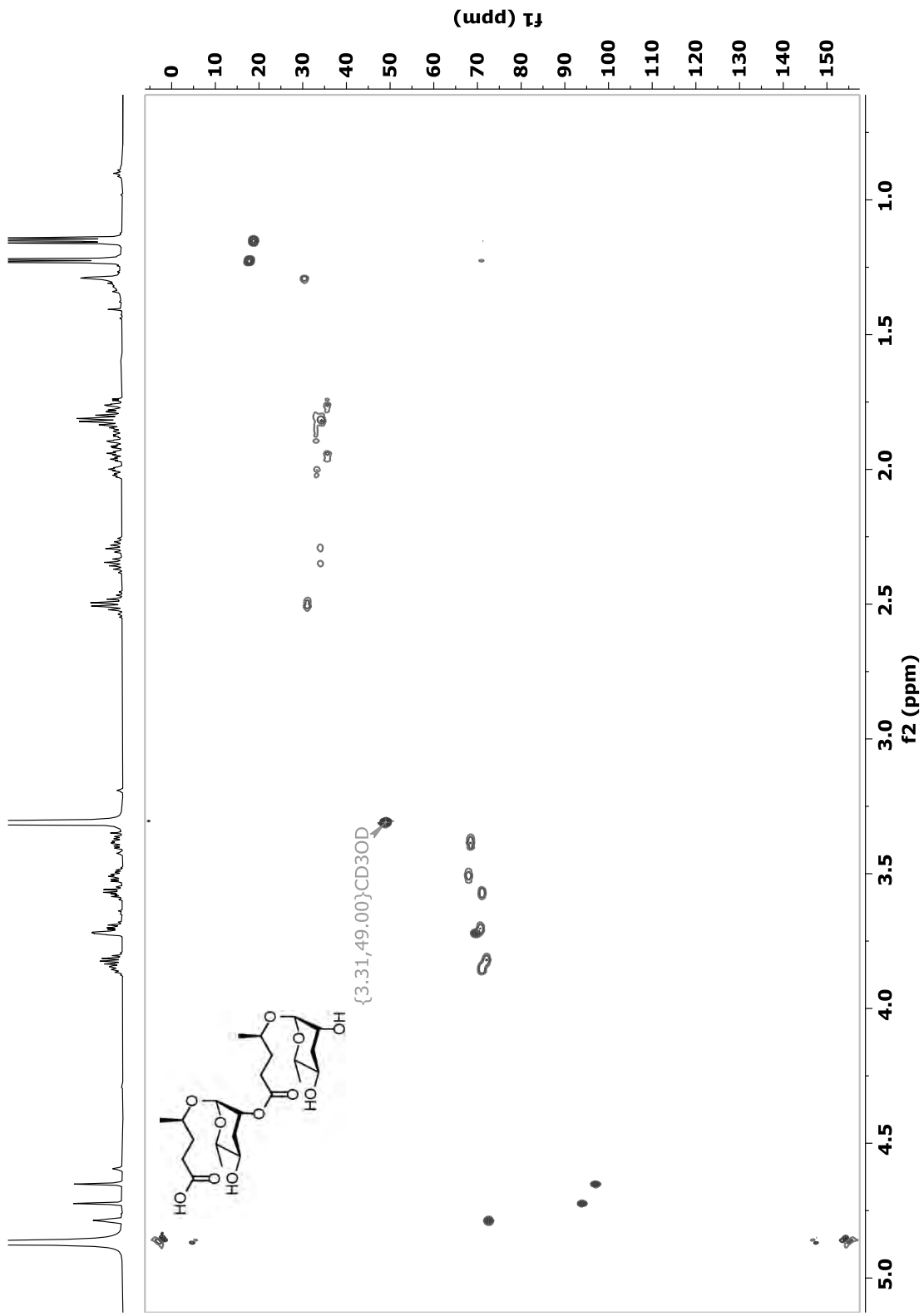


Figure S 243: HMBC (600 MHz, CDCl<sub>3</sub>) of 40.

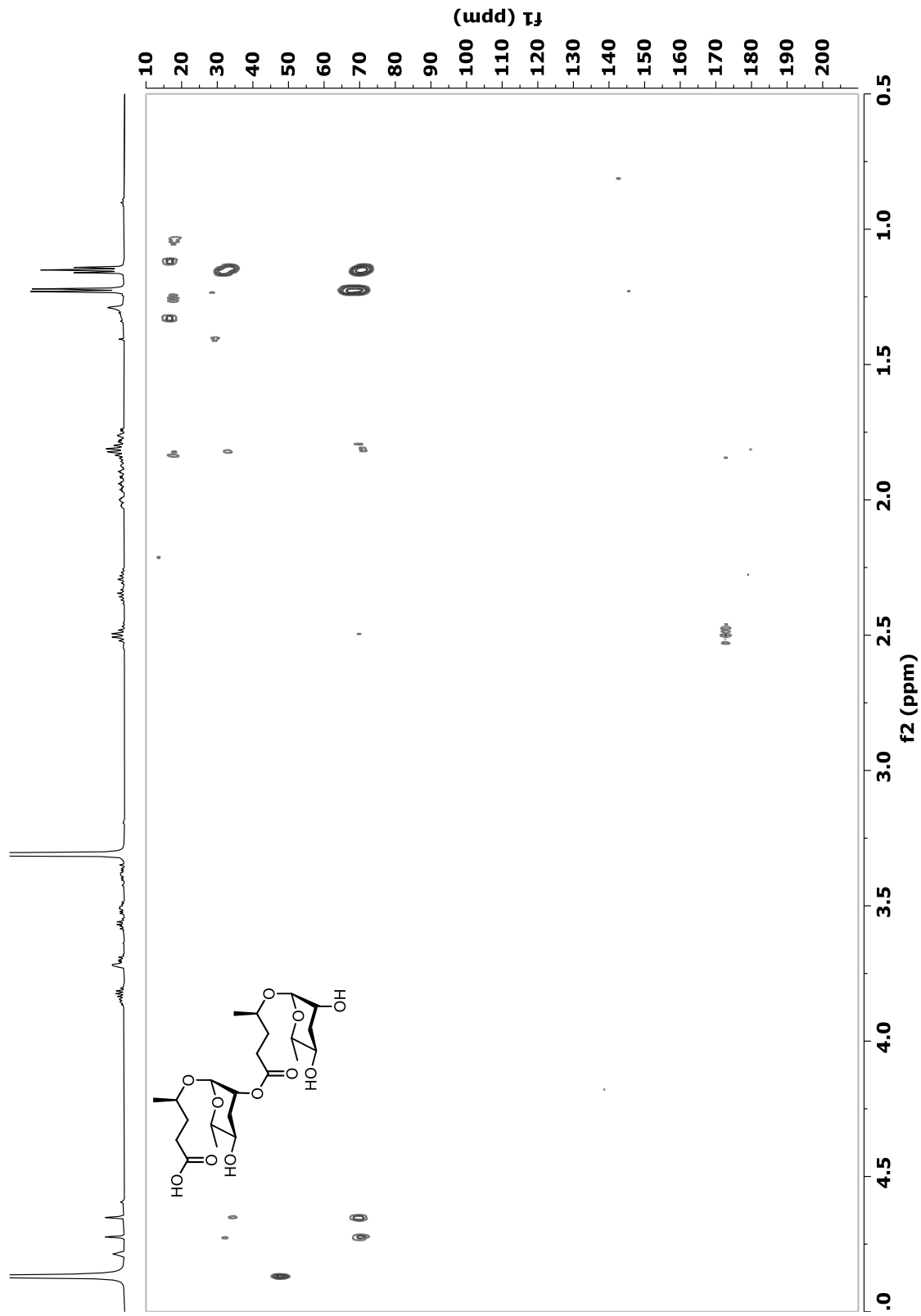


Figure S 244:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 224.

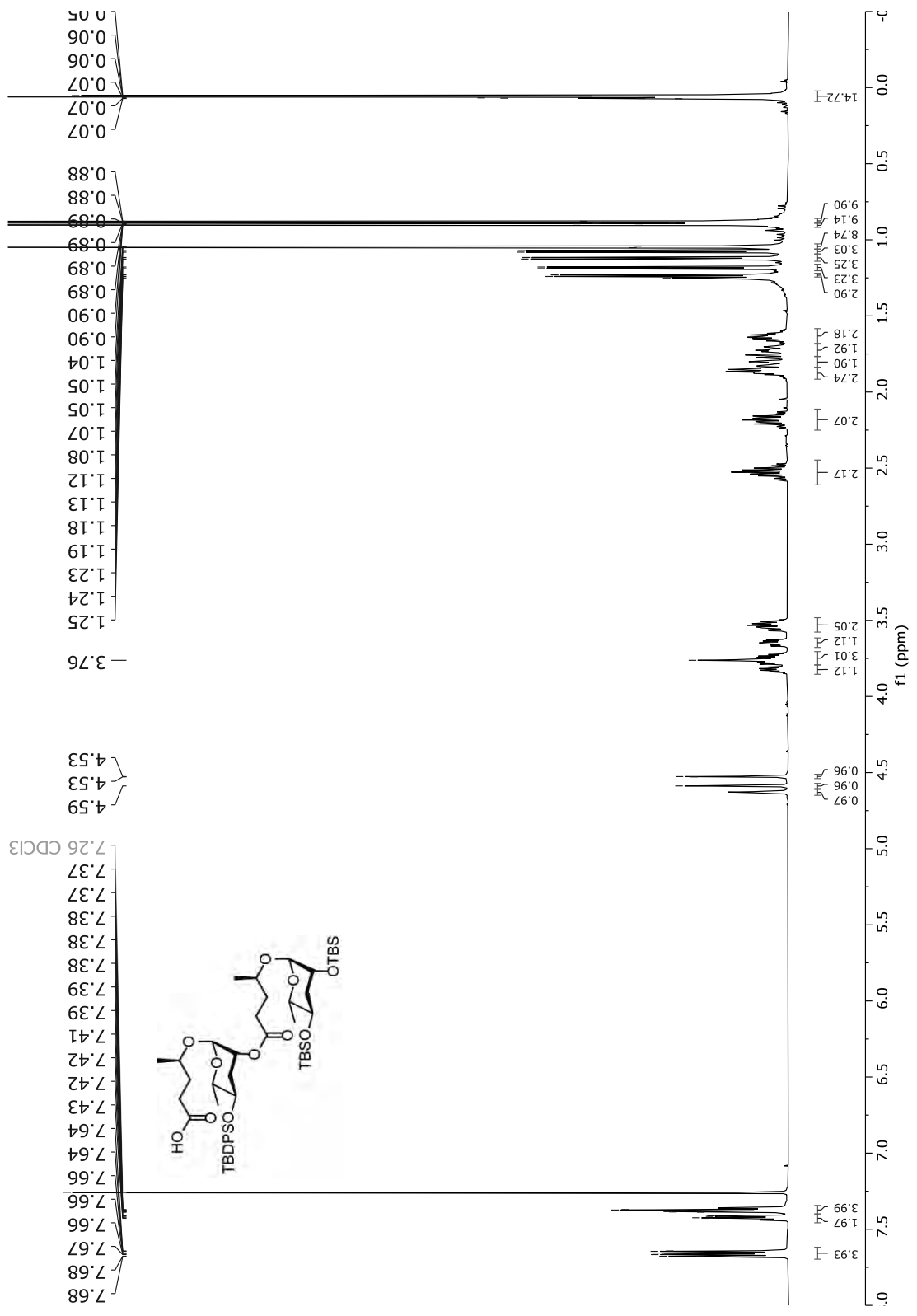


Figure S 245:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 224.

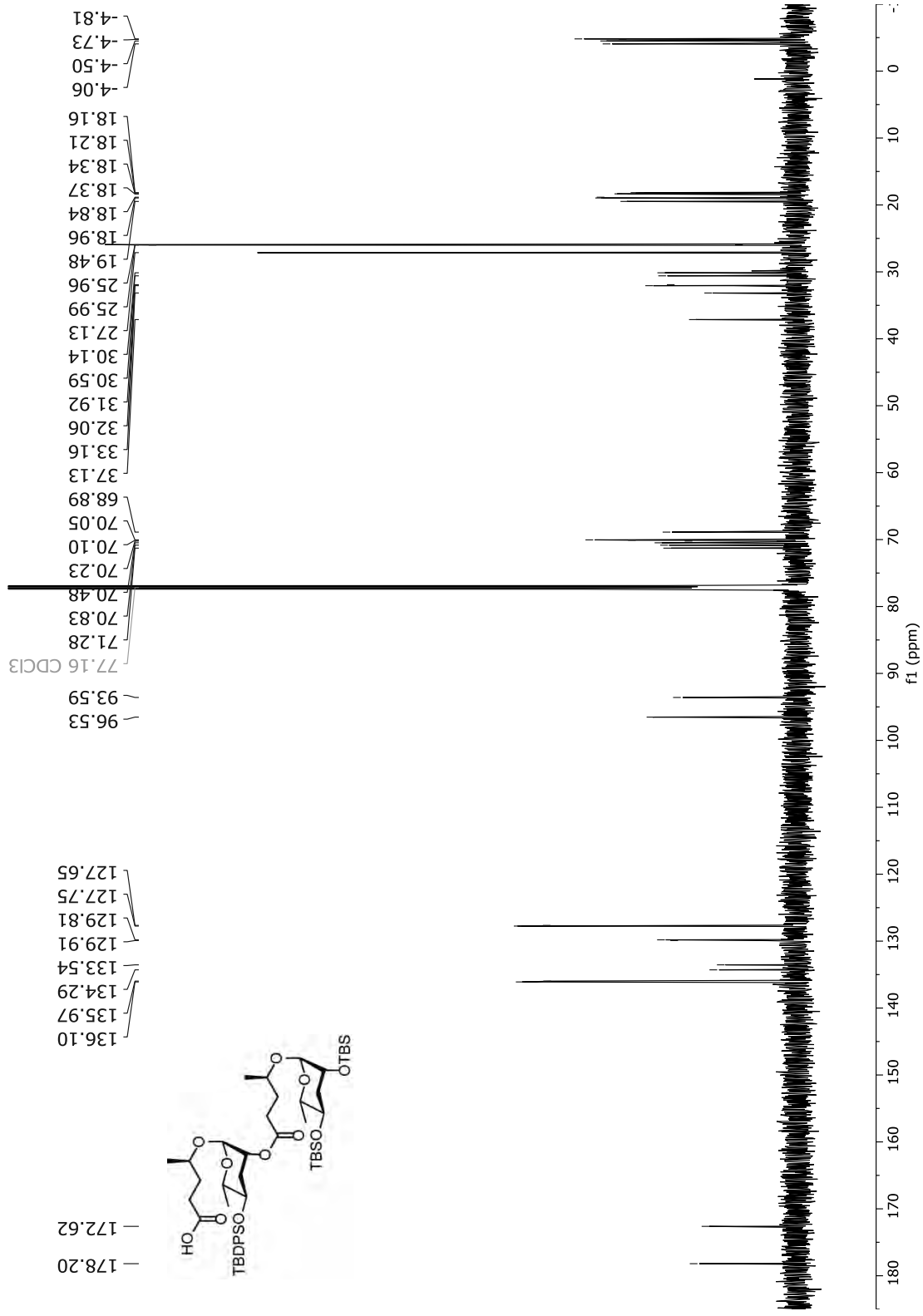


Figure S 246: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 224.

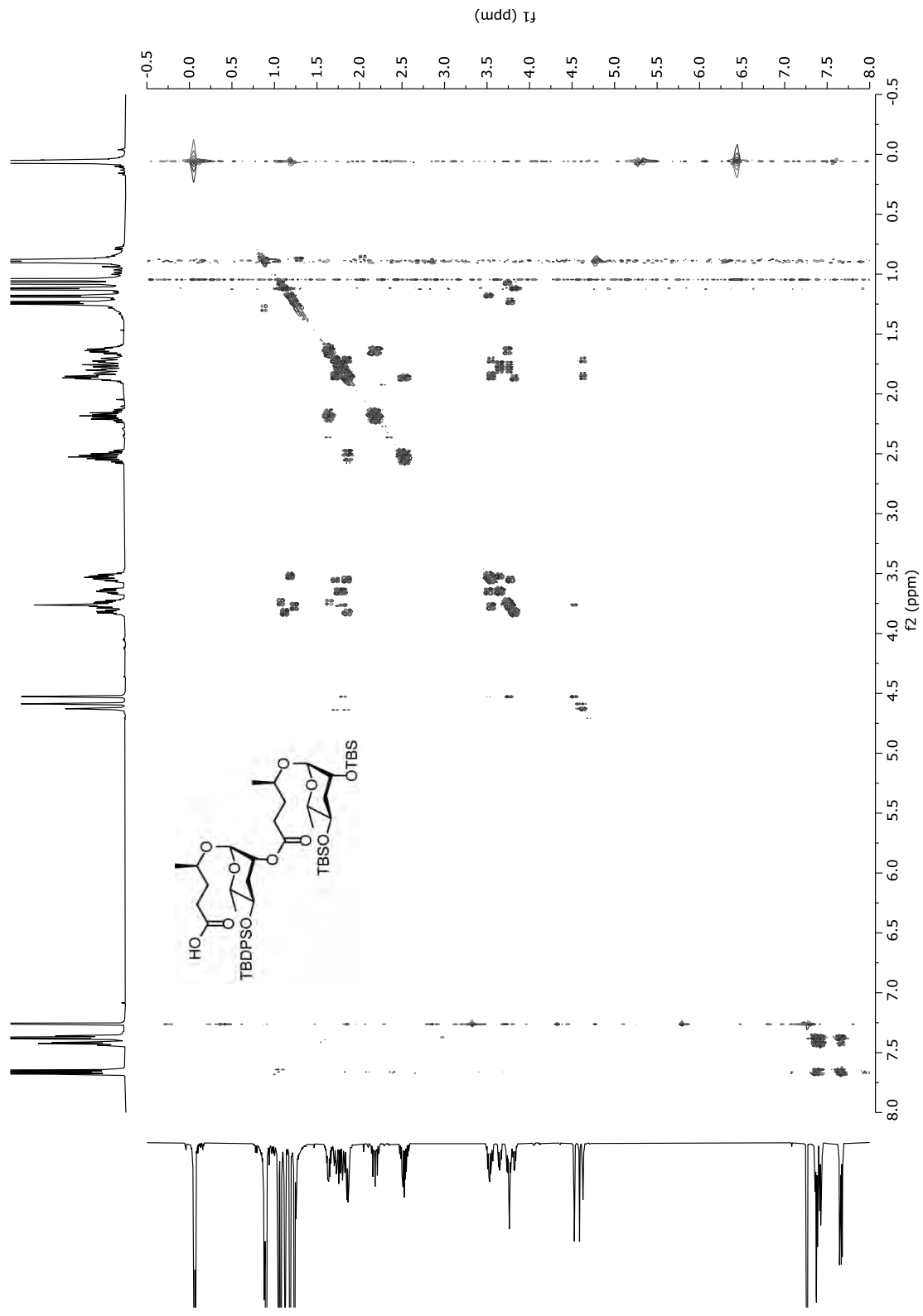


Figure S 247: HSQC (600 MHz, CDCl<sub>3</sub>) of 224.

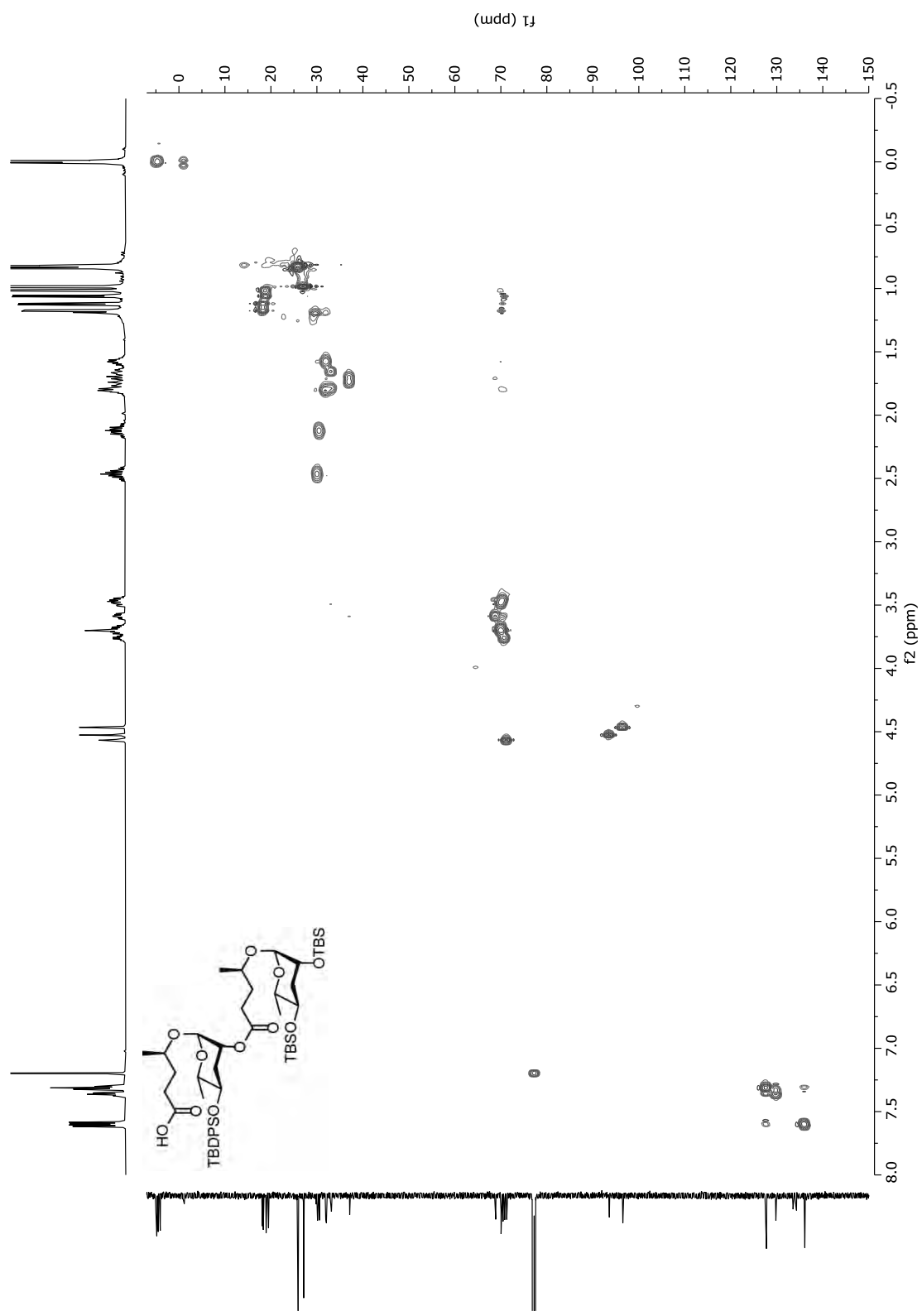




Figure S 249:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 206.

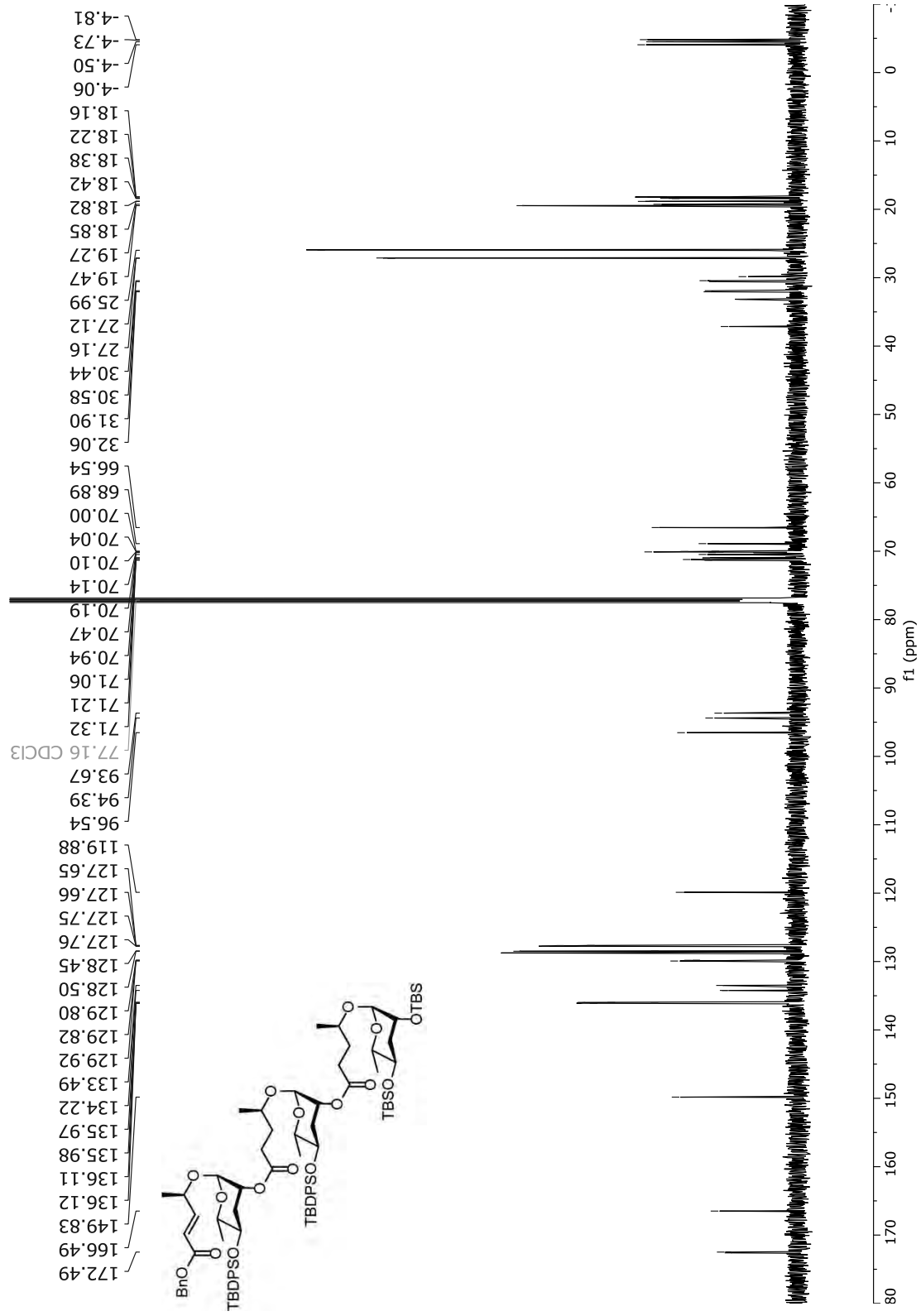


Figure S 250: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 206.

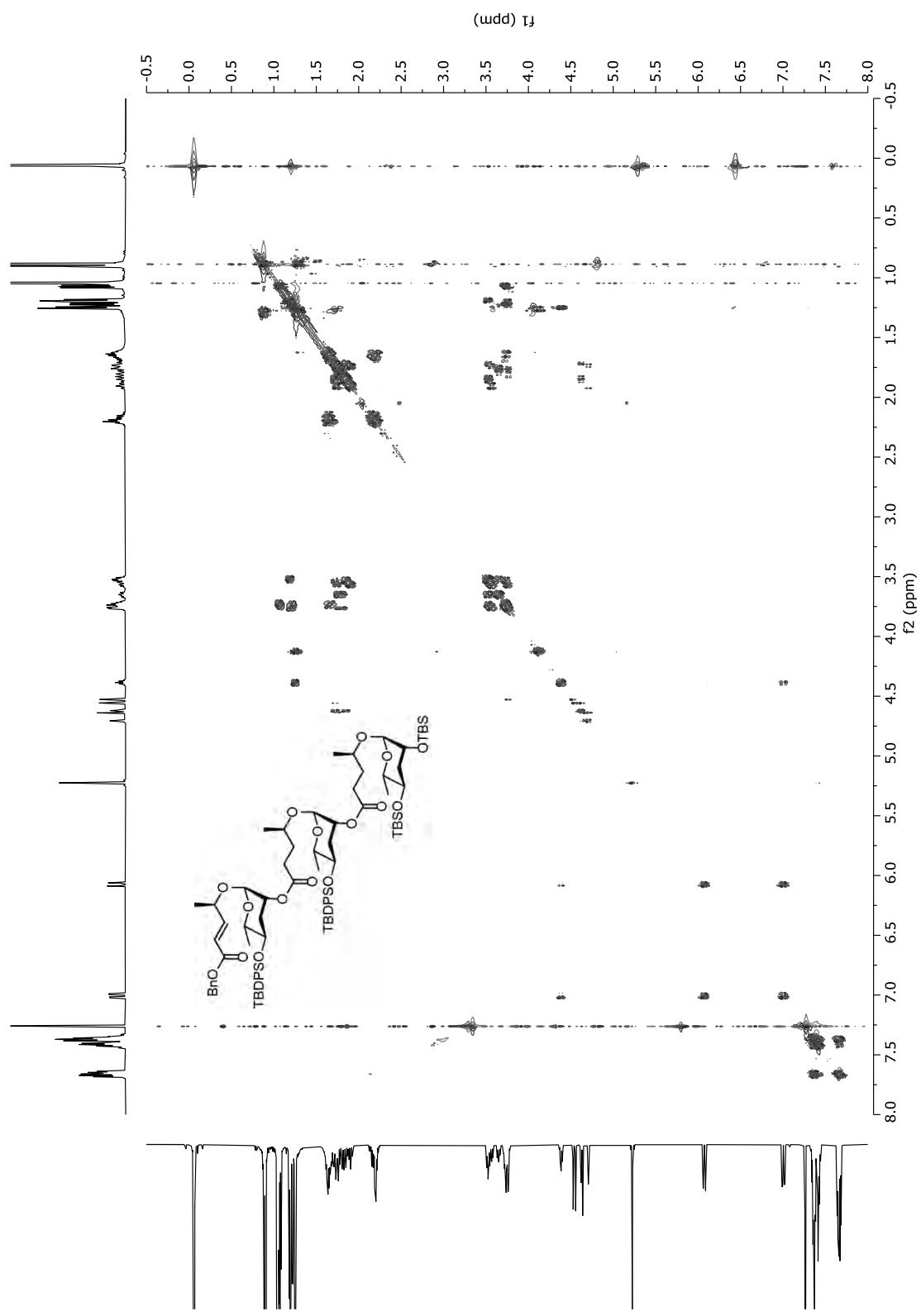


Figure S 251: HSQC (600 MHz, CDCl<sub>3</sub>) of 206.

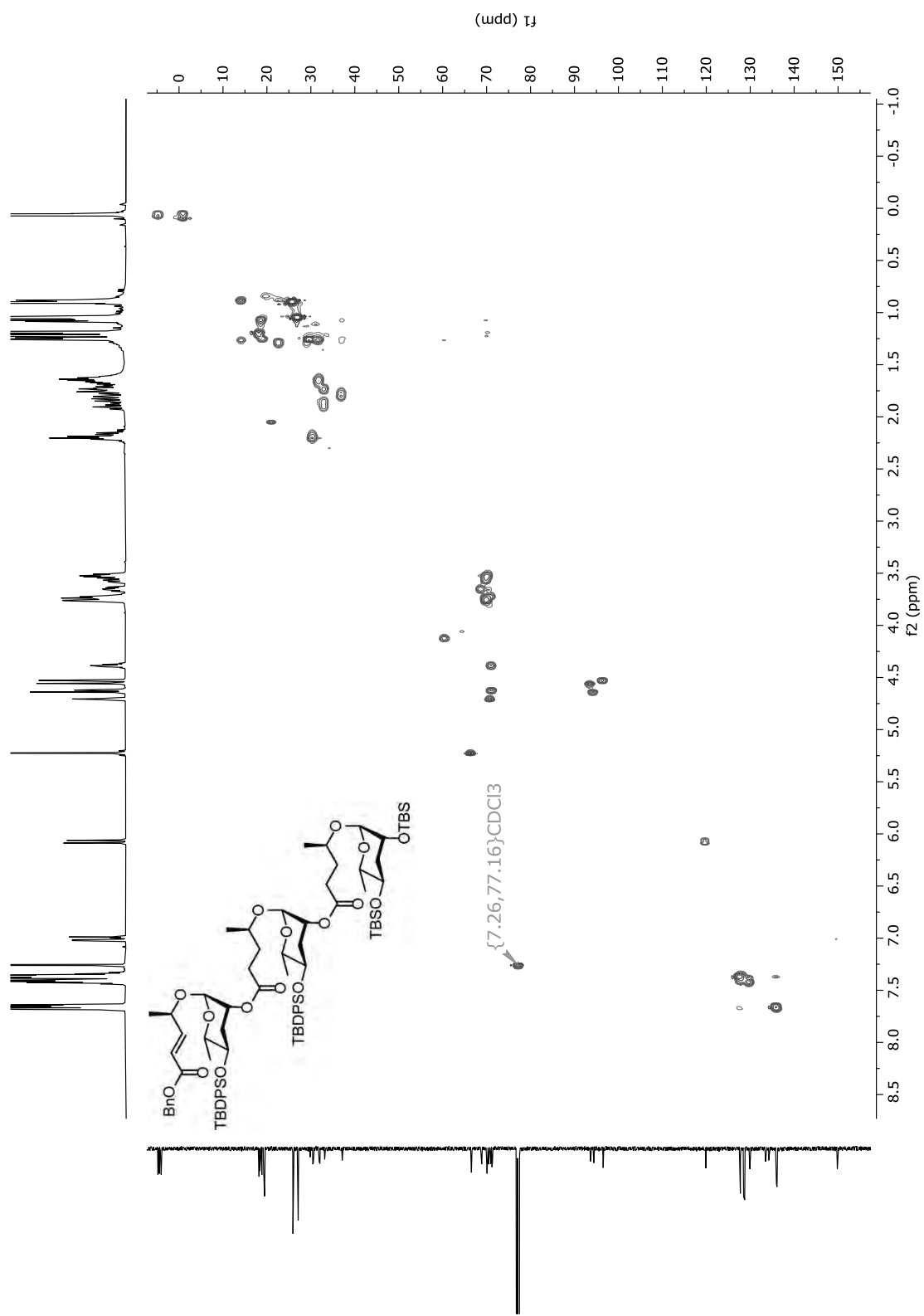


Figure S 252: <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of 229.

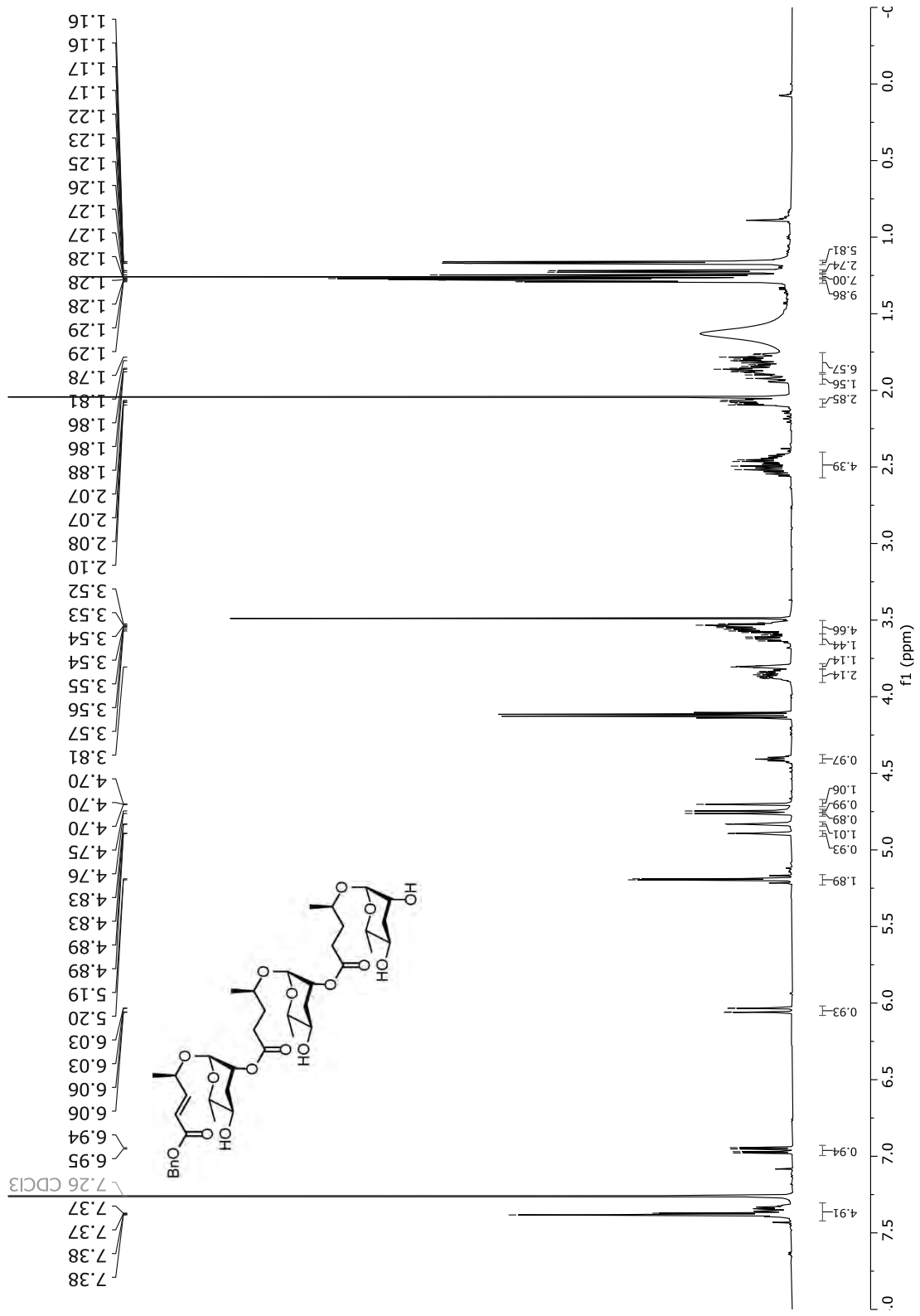


Figure S 253:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 229.

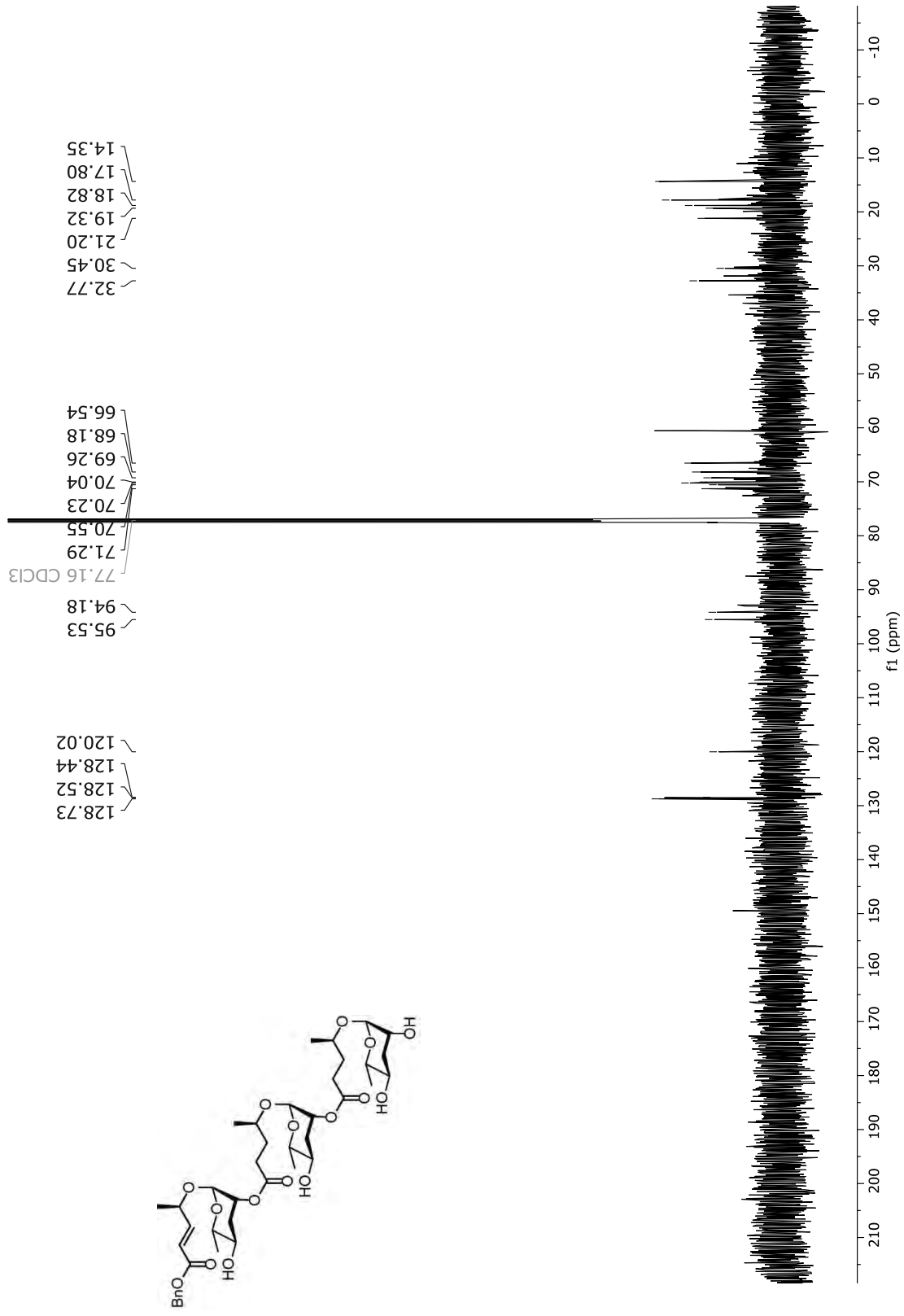


Figure S 254: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 229.

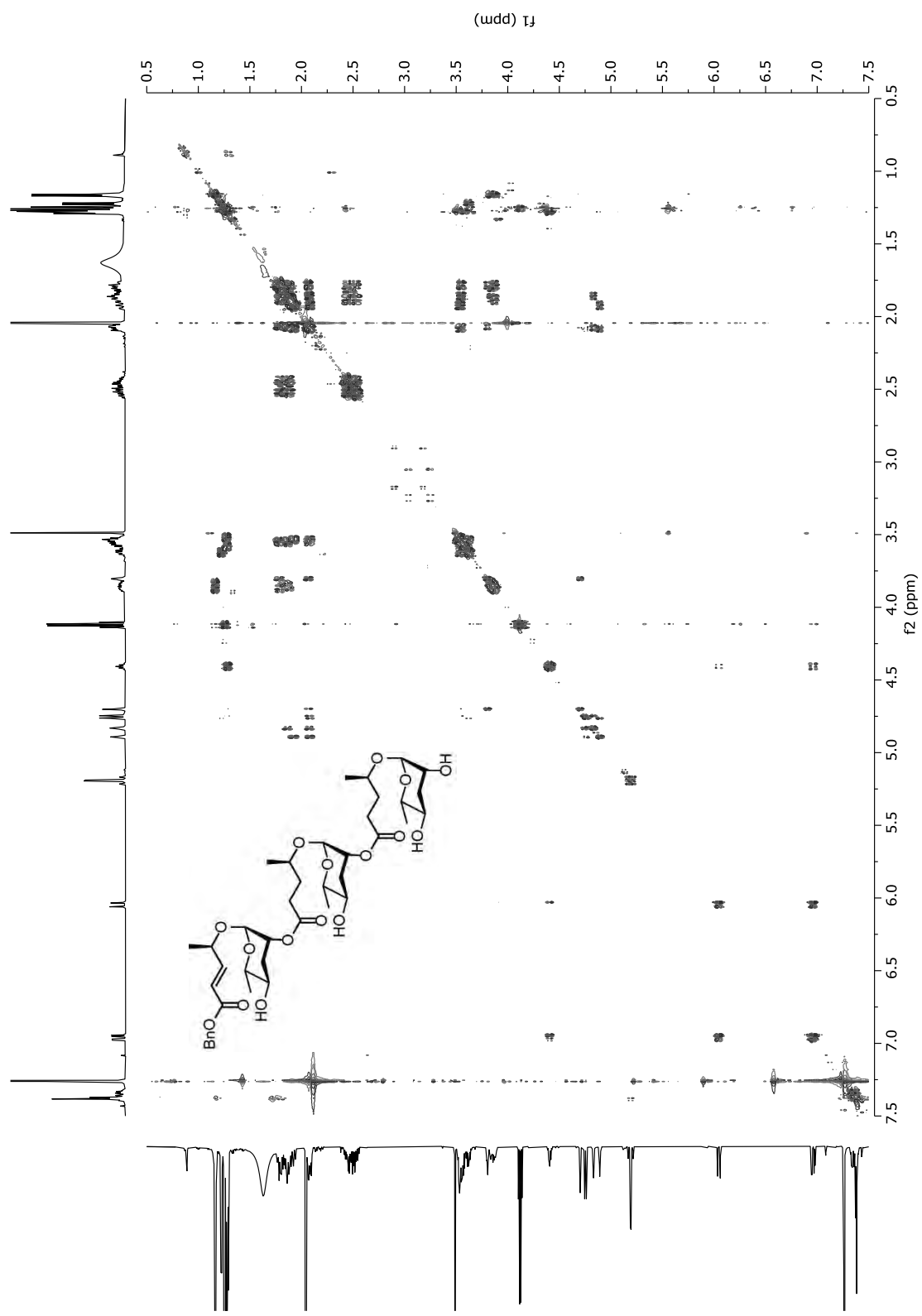


Figure S 255: HSQC (600 MHz, CDCl<sub>3</sub>) of 229.

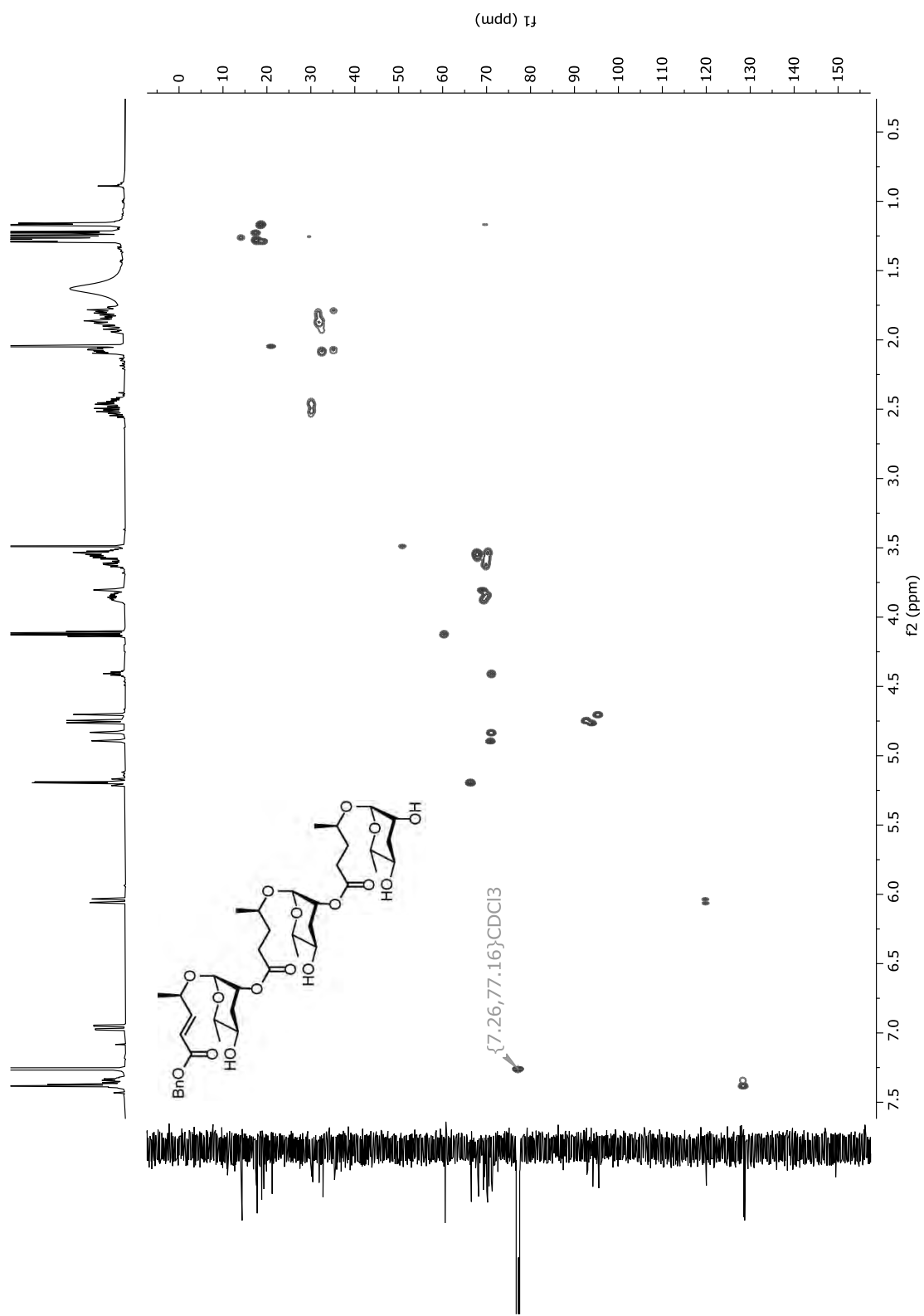


Figure S 256: HSQC (600 MHz, CDCl<sub>3</sub>) of 229.

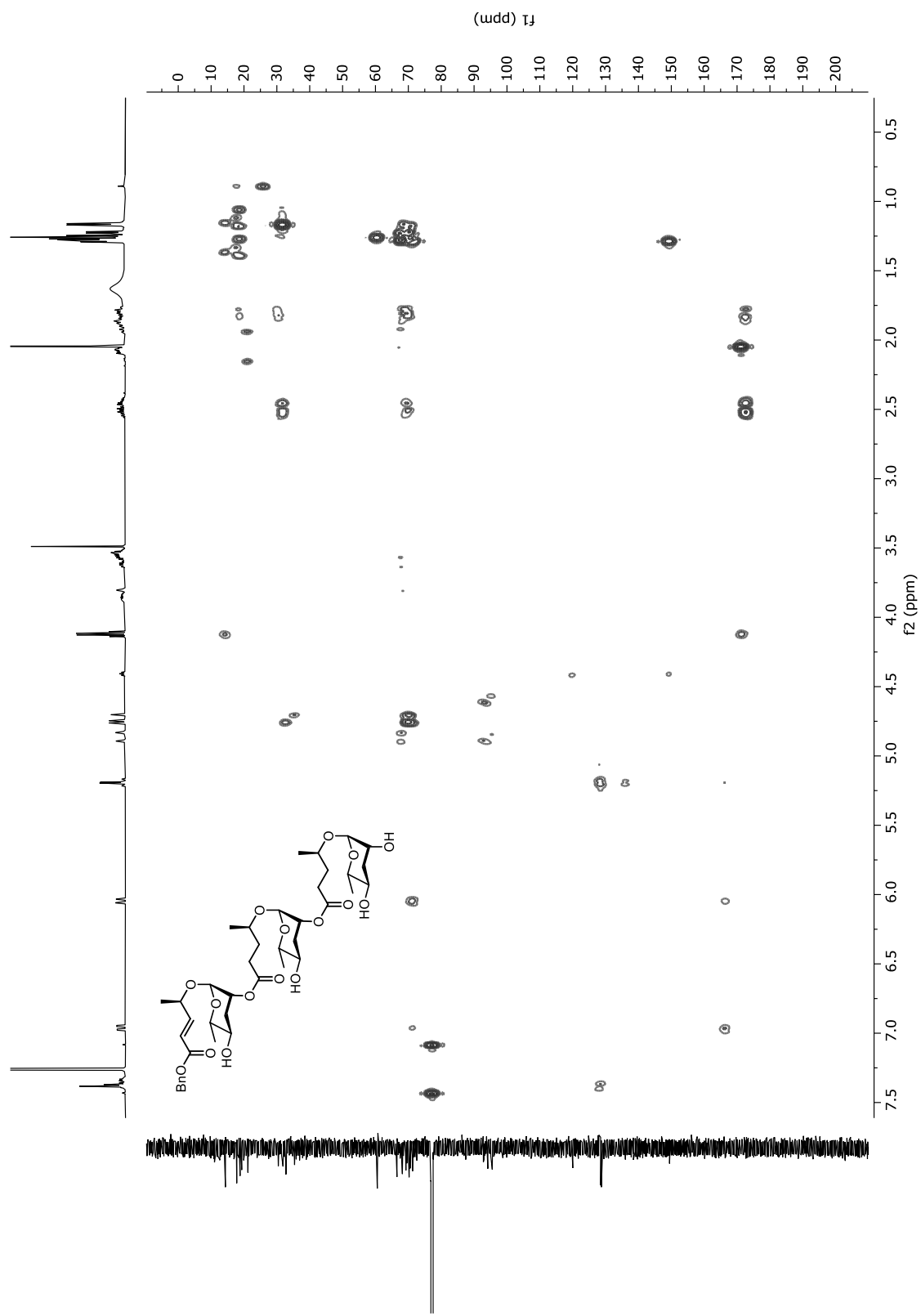


Figure S 257:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 41.

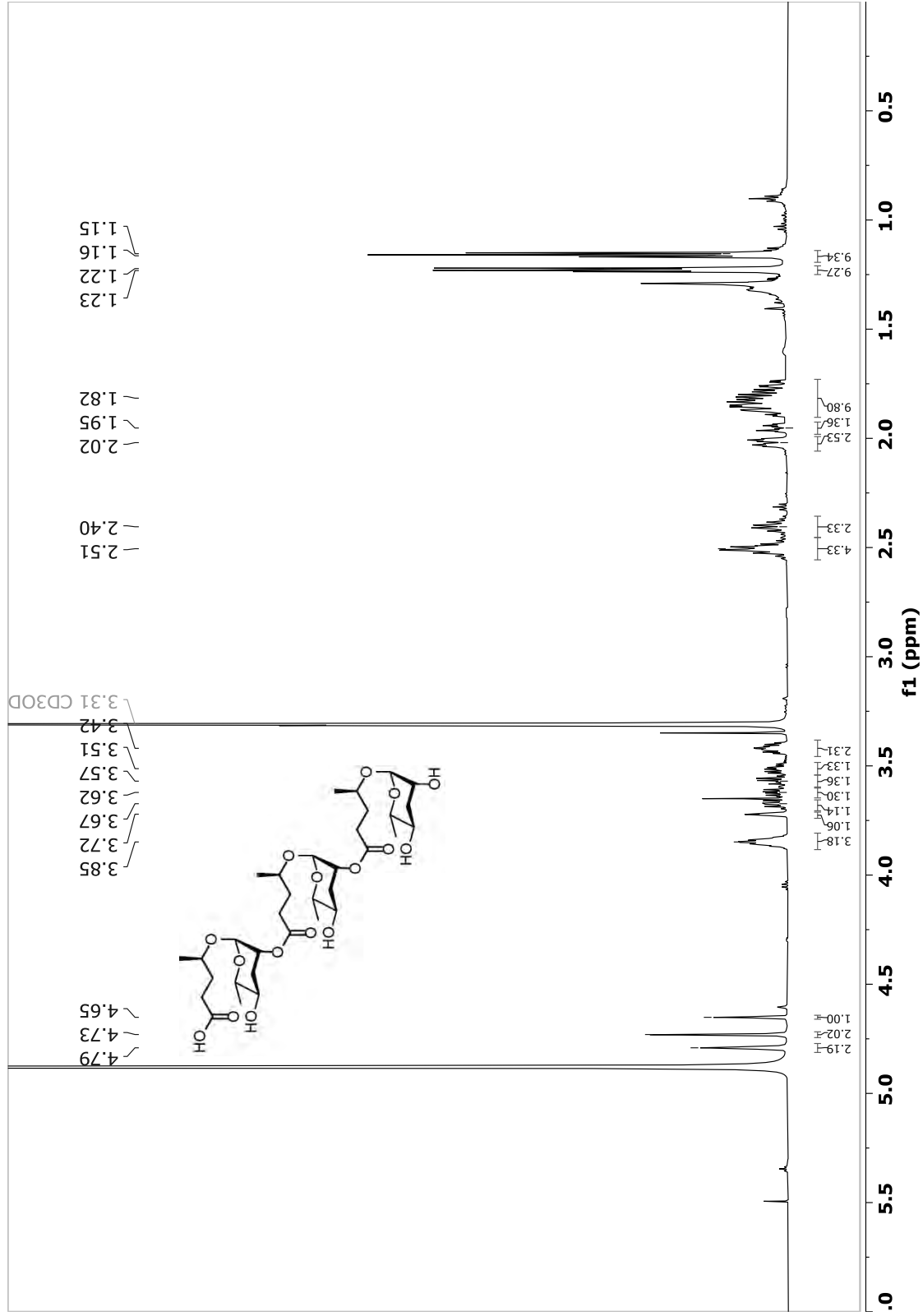


Figure S 258:  $^{13}\text{C}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 41.

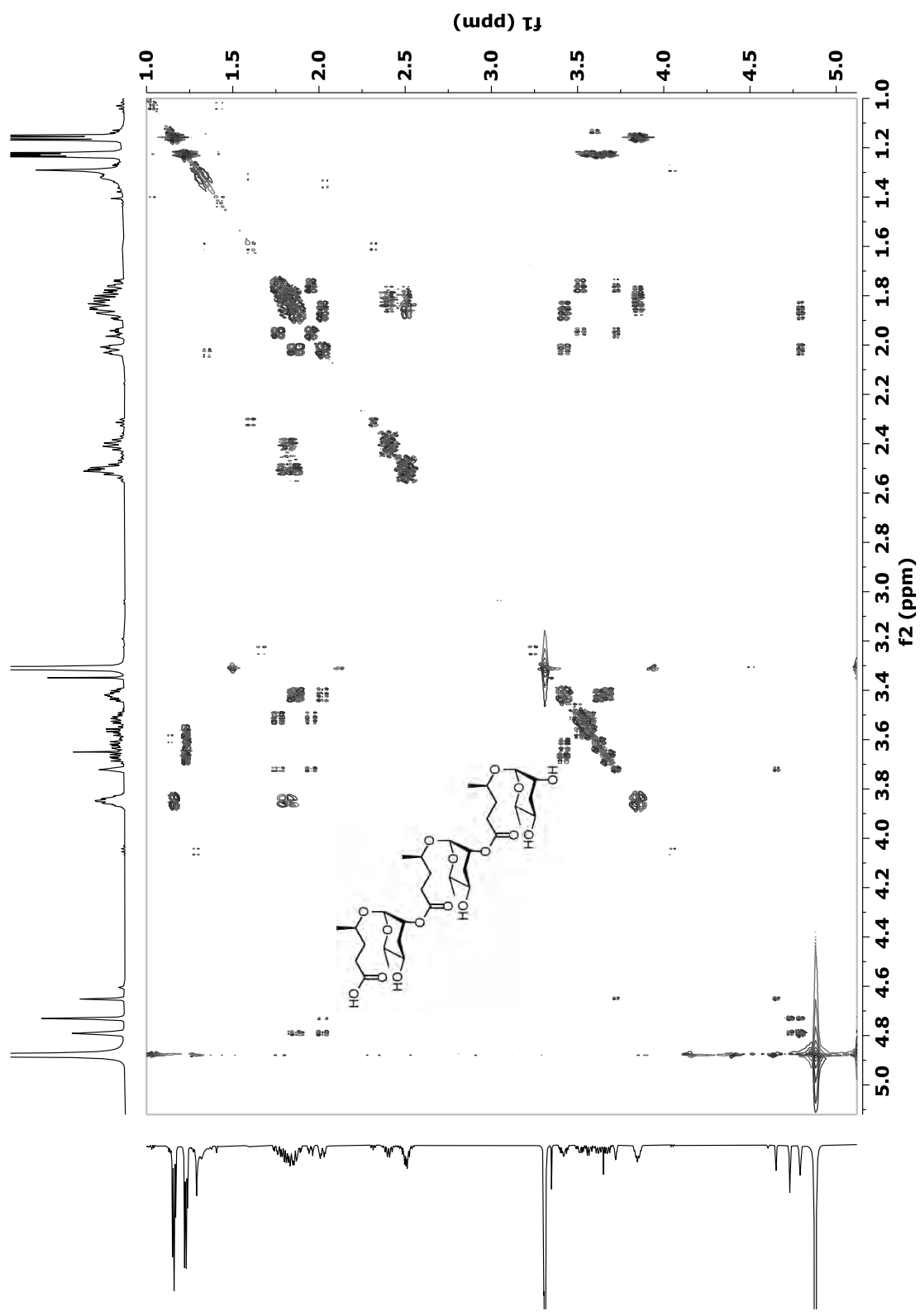


Figure S 259: HSQC (600 MHz, CDCl<sub>3</sub>) of 41.

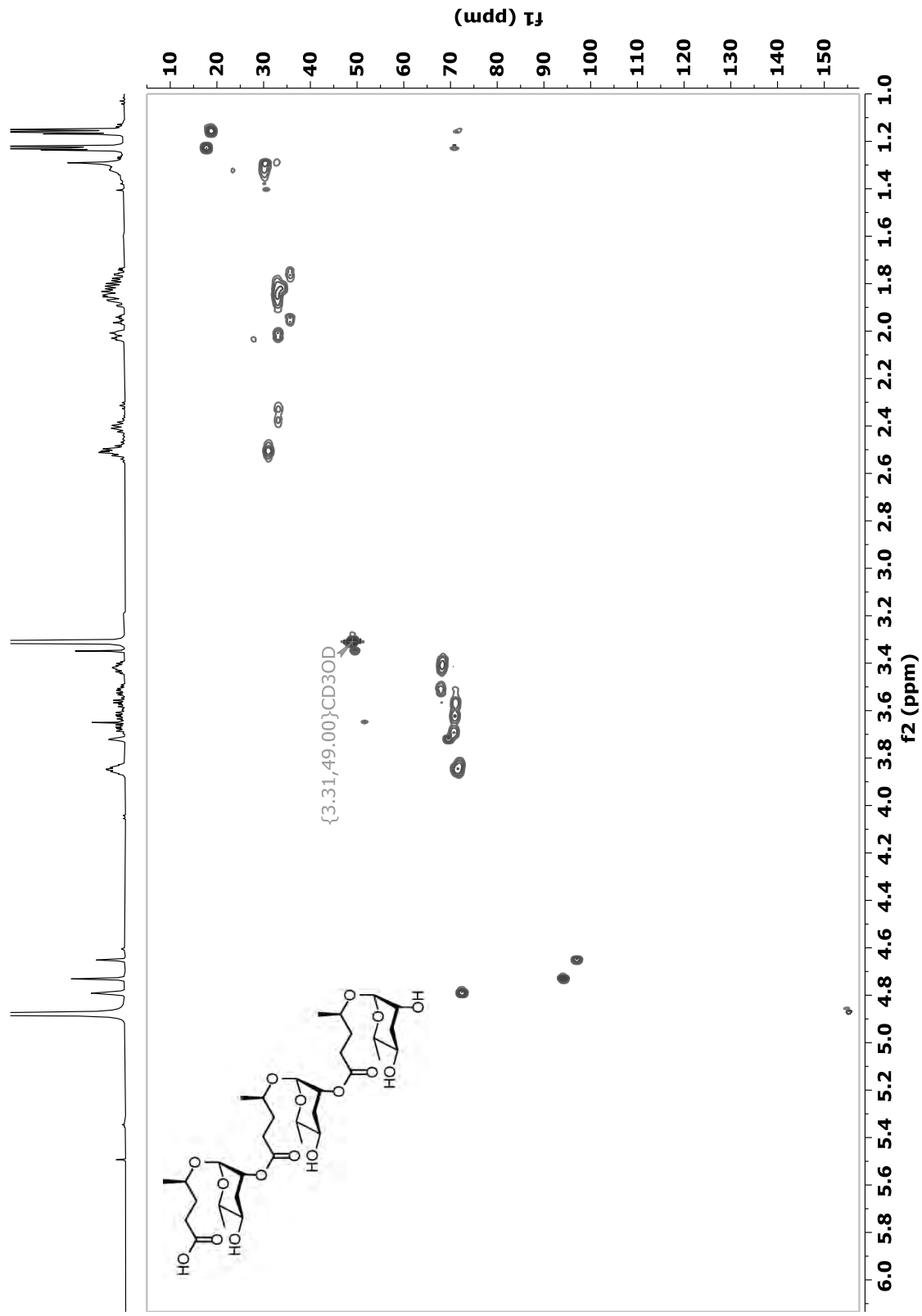


Figure S 260: HMBC (600 MHz, CDCl<sub>3</sub>) of 41.

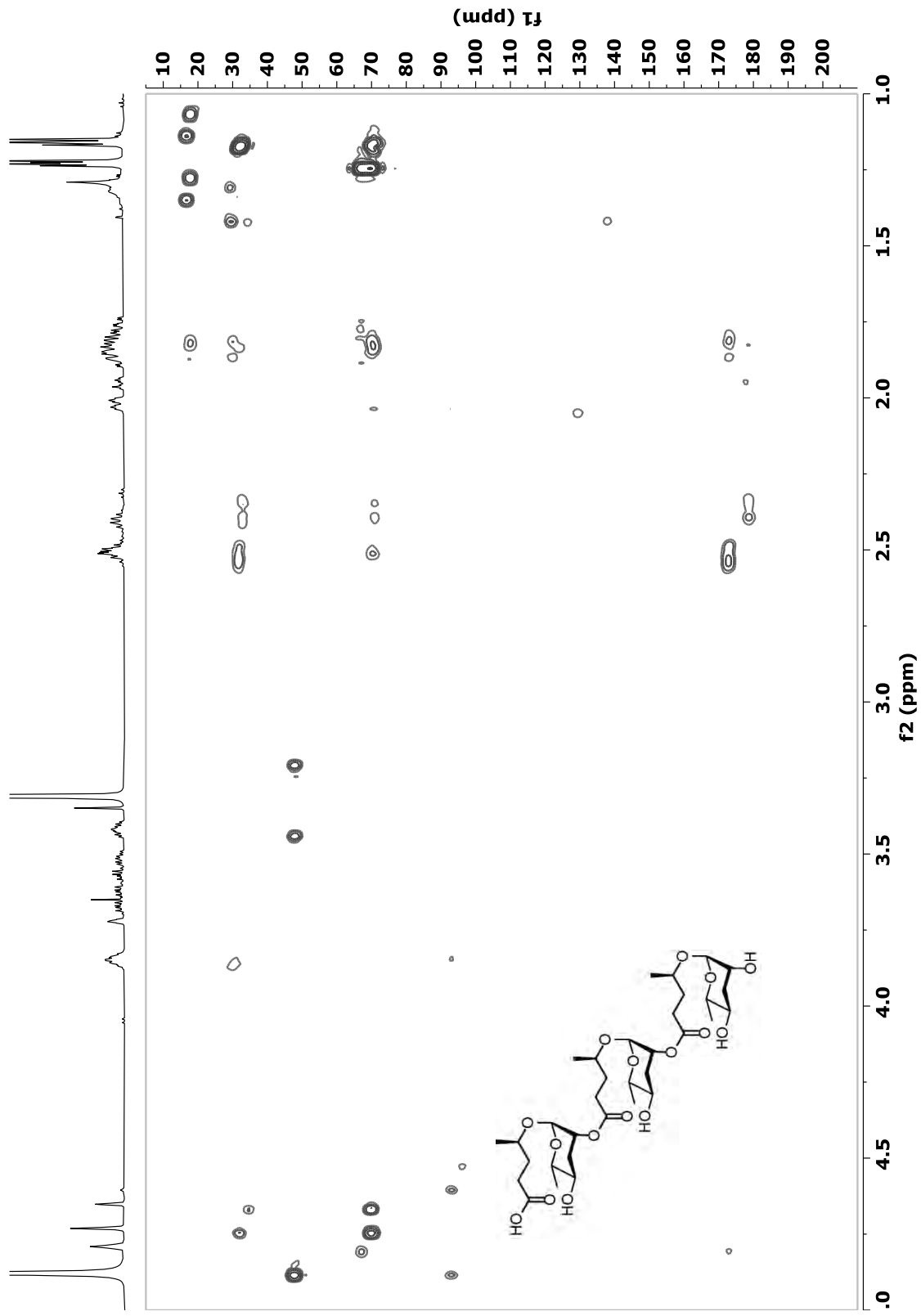




Figure S 262:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 225.

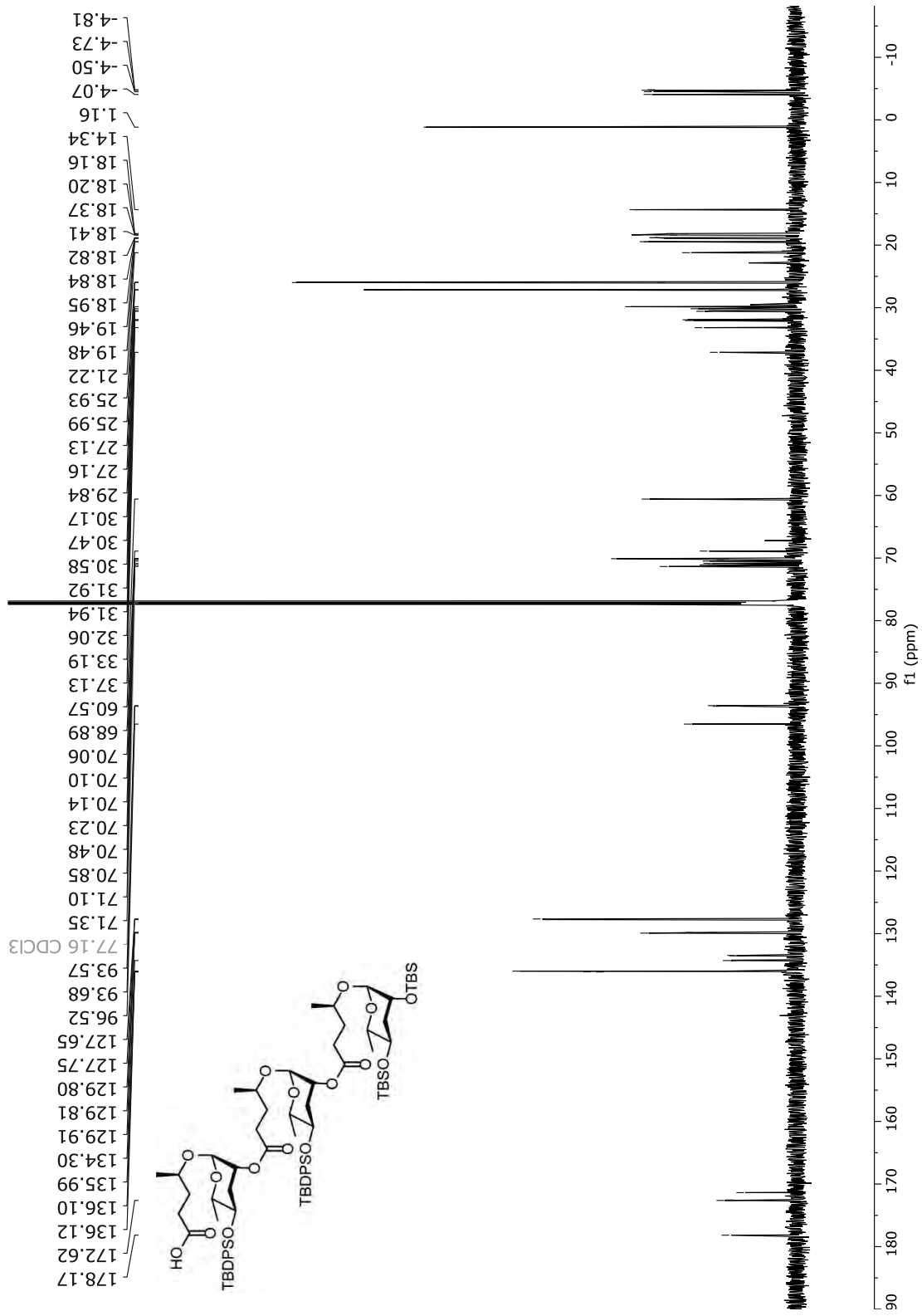


Figure S 263: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 225.

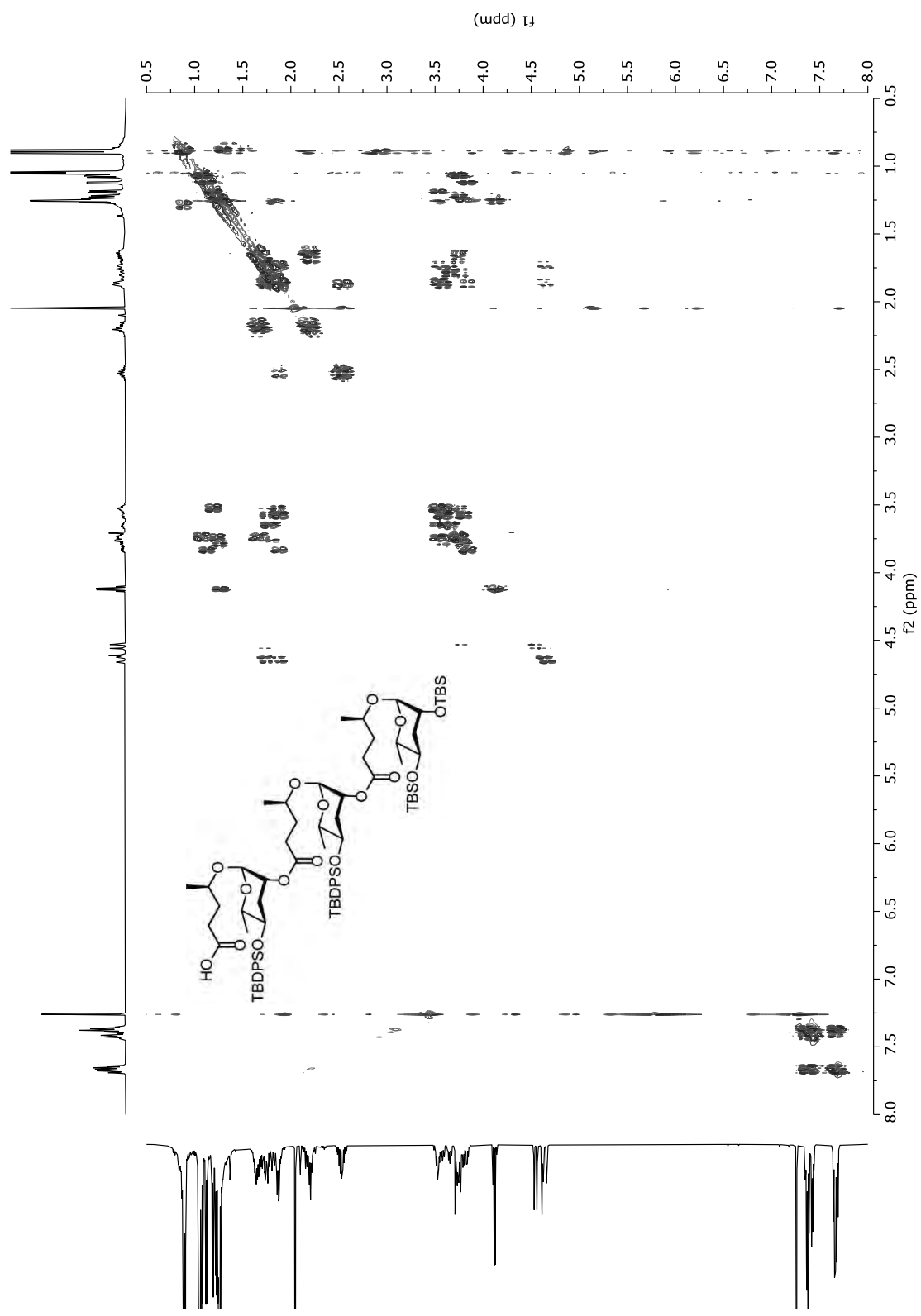


Figure S 264: HSQC (600 MHz, CDCl<sub>3</sub>) of 225.

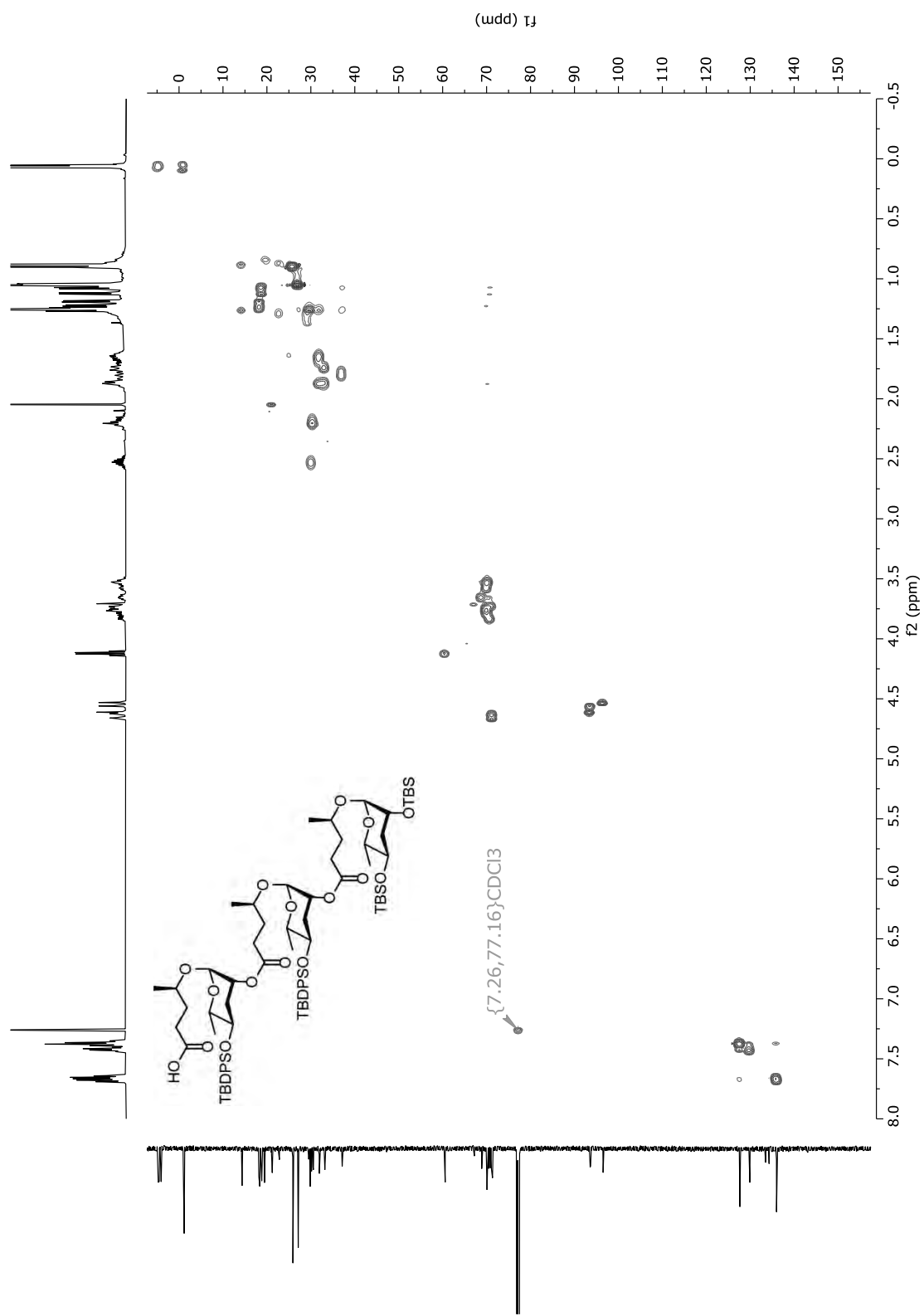


Figure S 265:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 207.

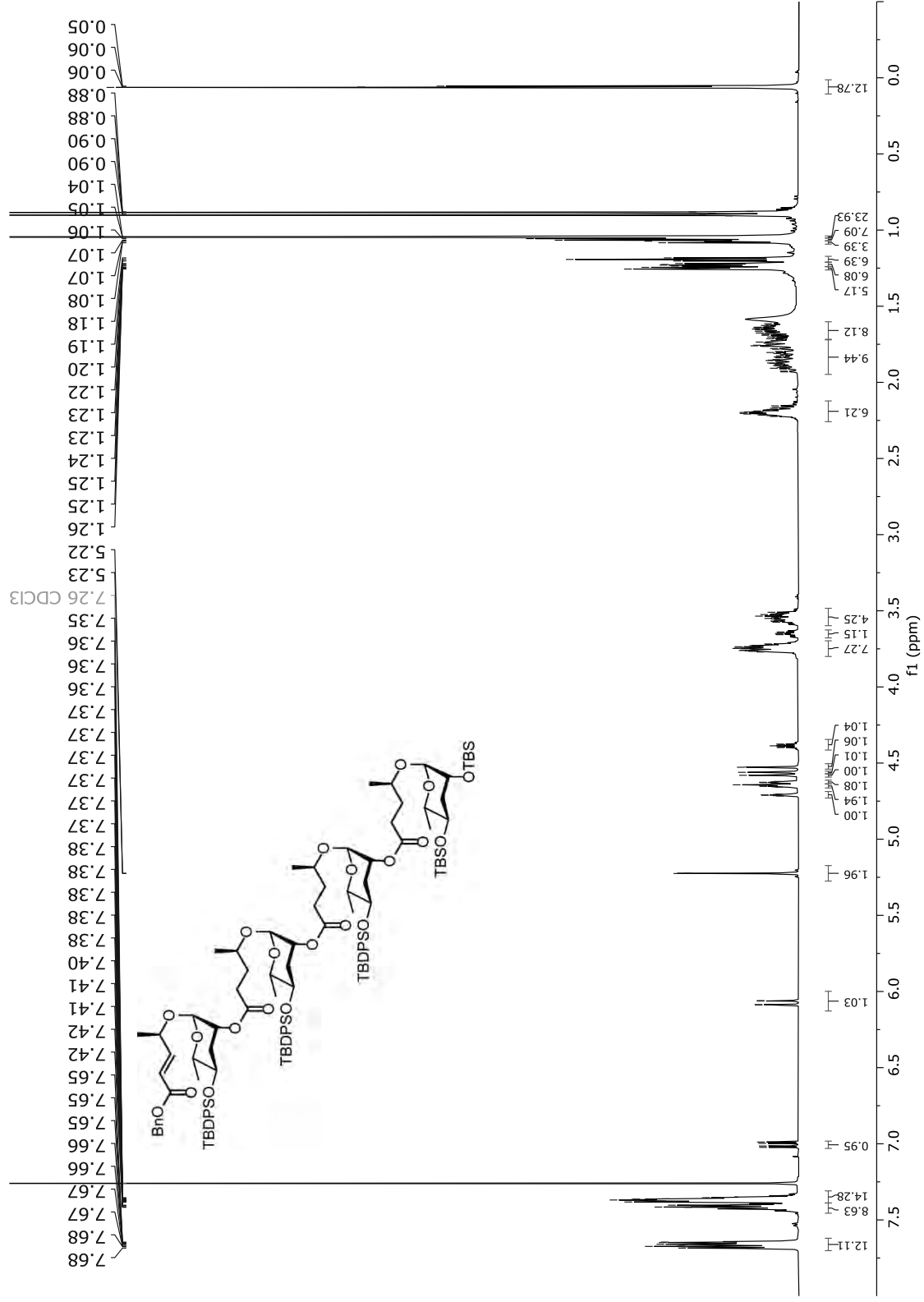


Figure S 266:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 207.

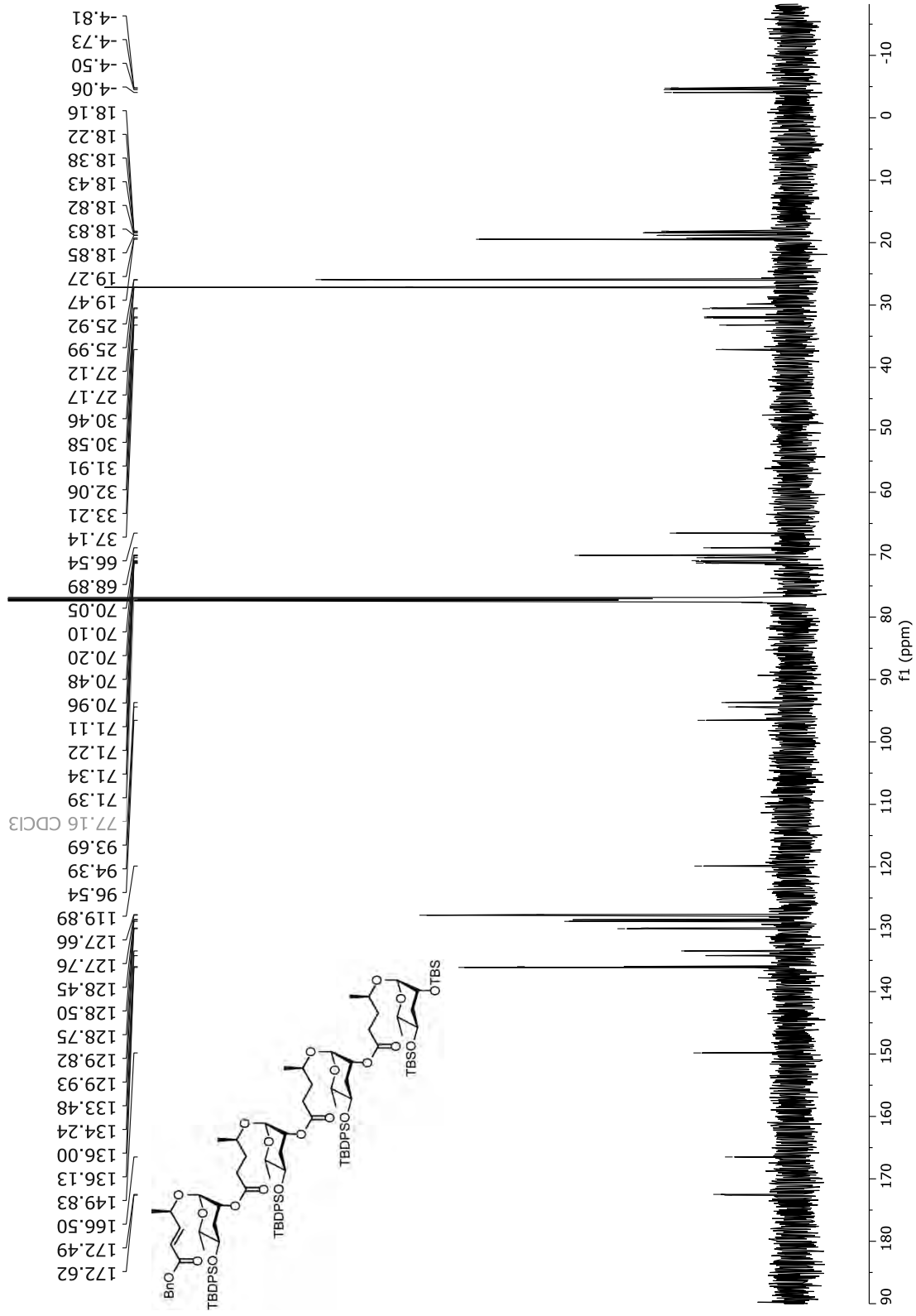


Figure S 267: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 207.

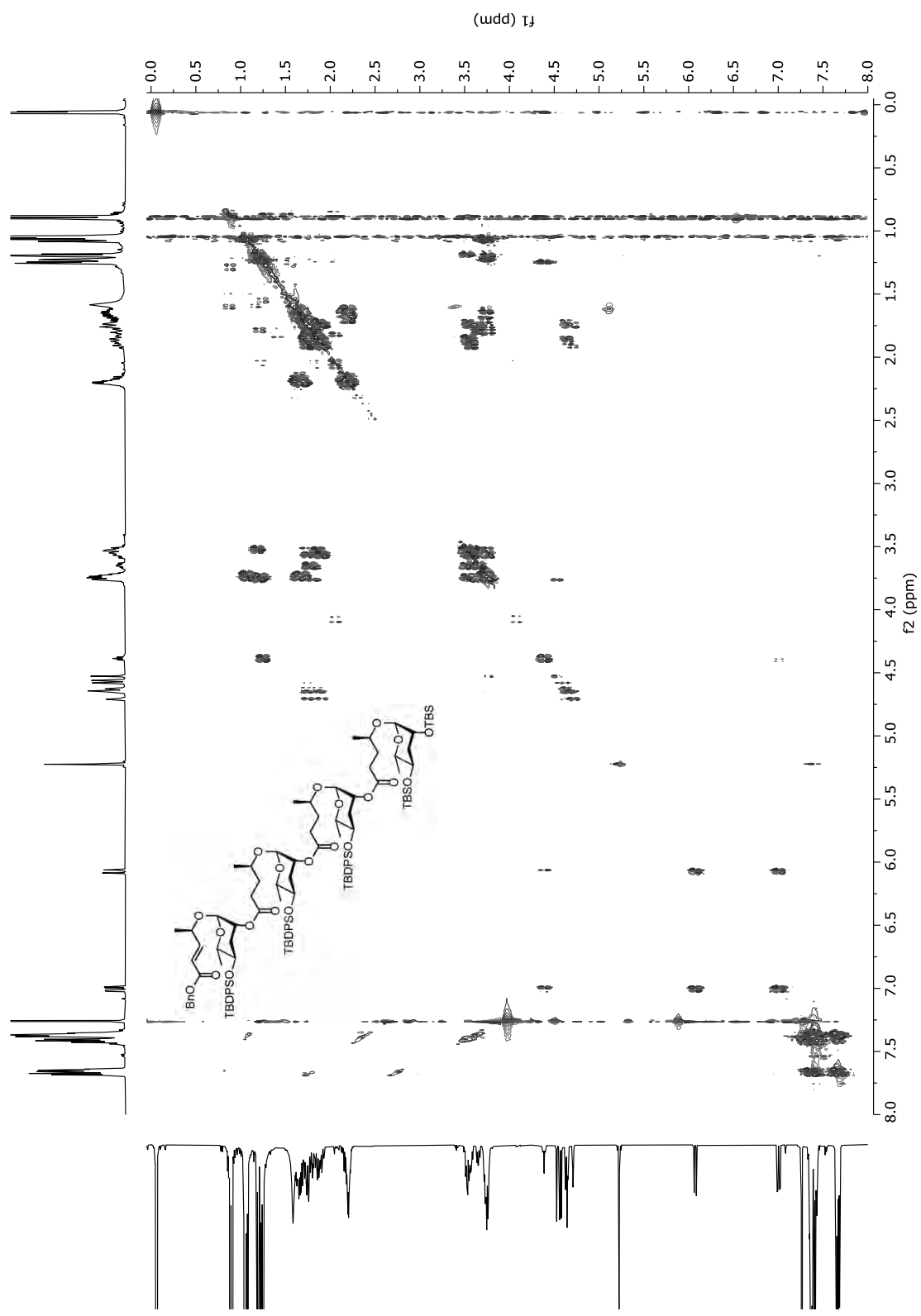


Figure S 268: HSQC (600 MHz, CDCl<sub>3</sub>) of 207.

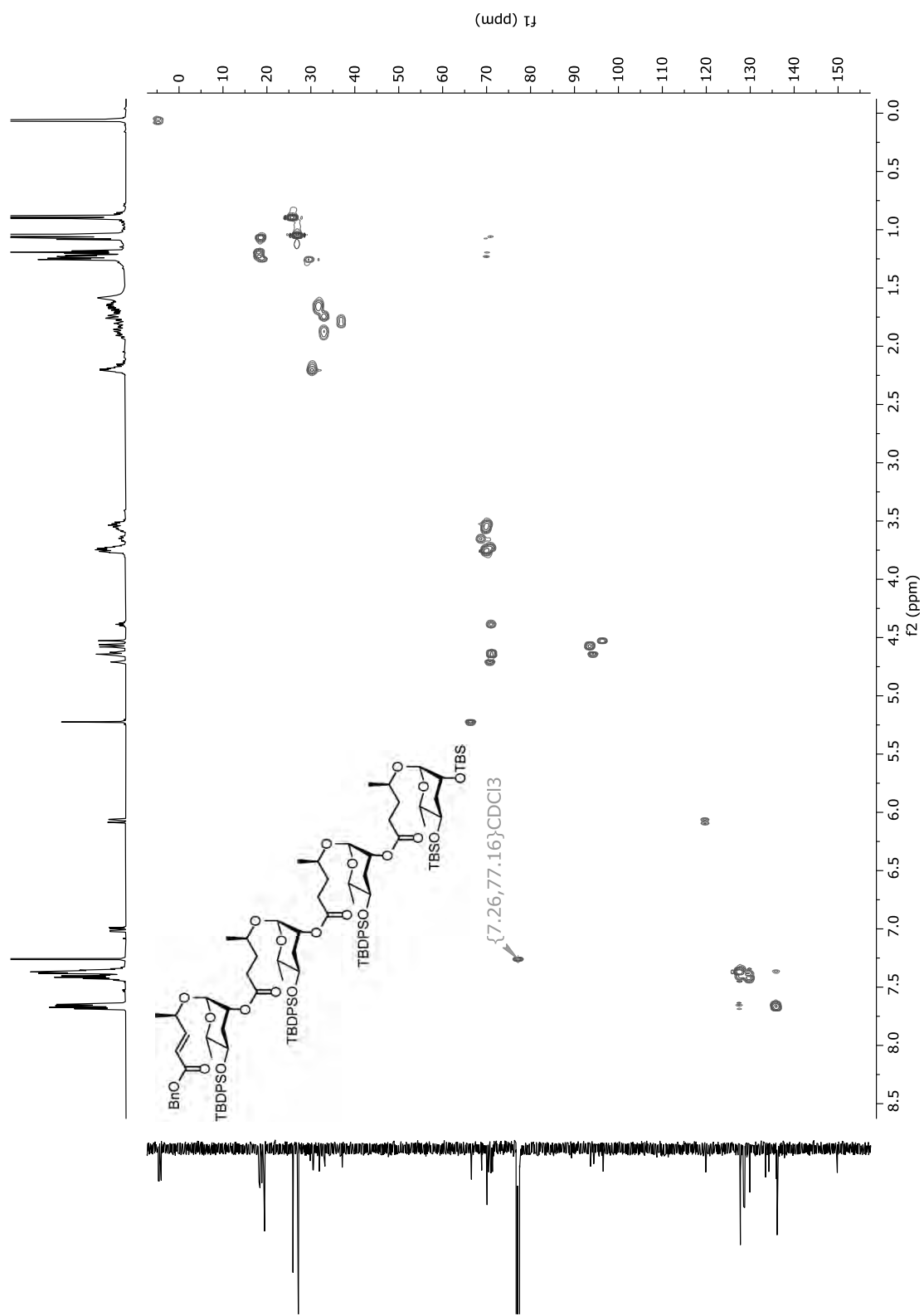




Figure S 270: *dqf*-COSY NMR (600 MHz, CDCl<sub>3</sub>) of 230.

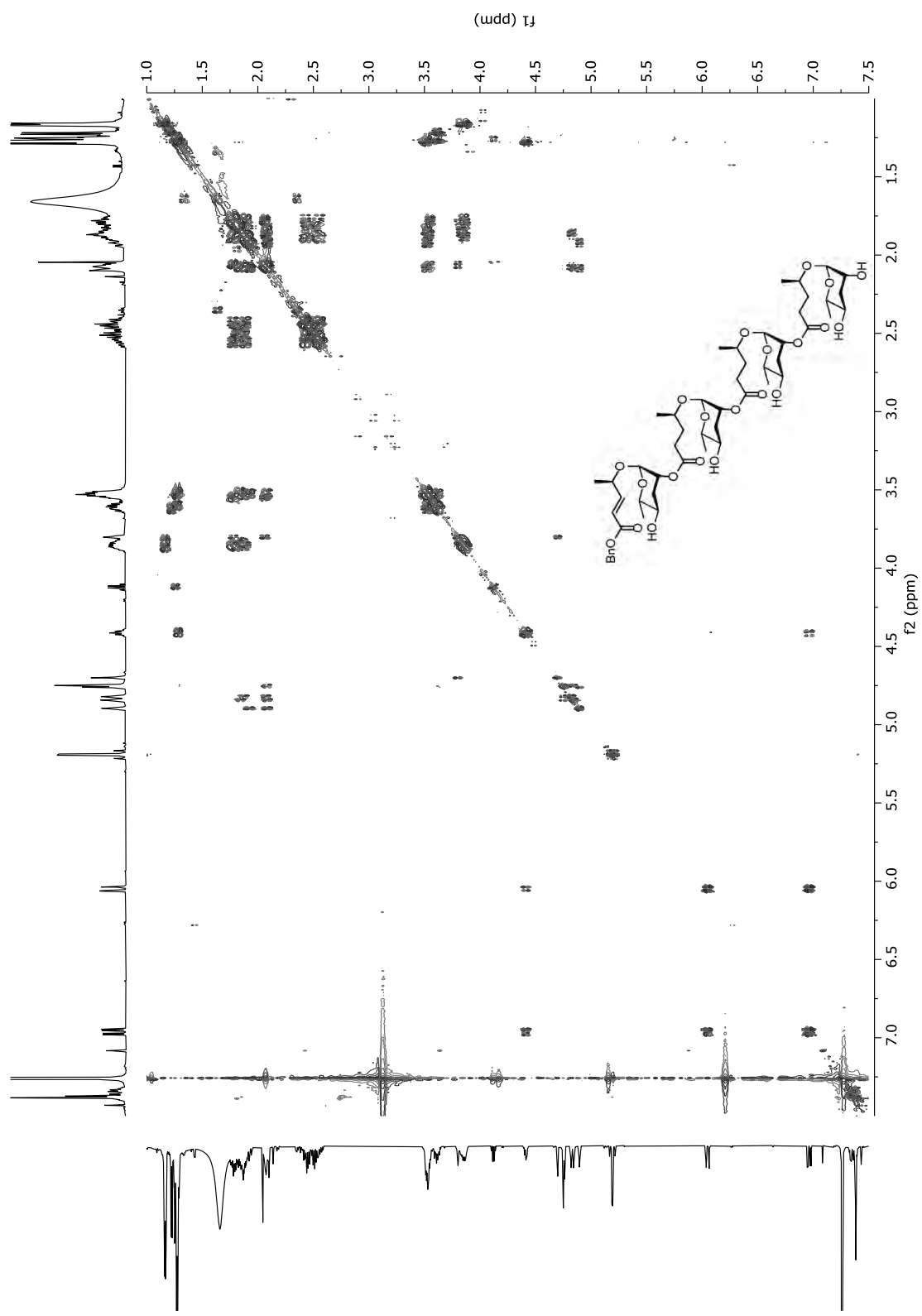


Figure S 271: HSQC (600 MHz, CDCl<sub>3</sub>) of 230.

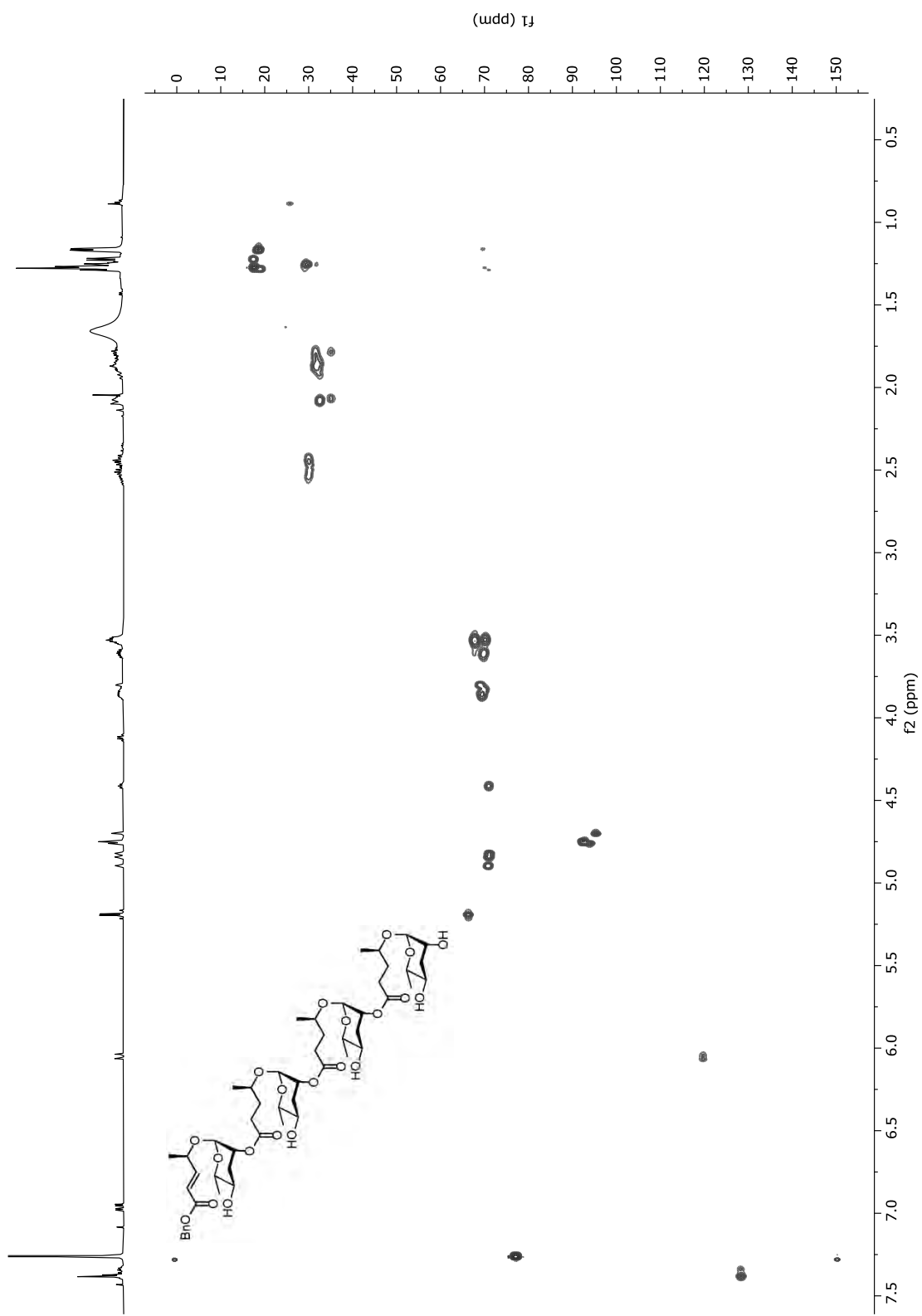


Figure S 272: HMBC (600 MHz, CDCl<sub>3</sub>) of 230.

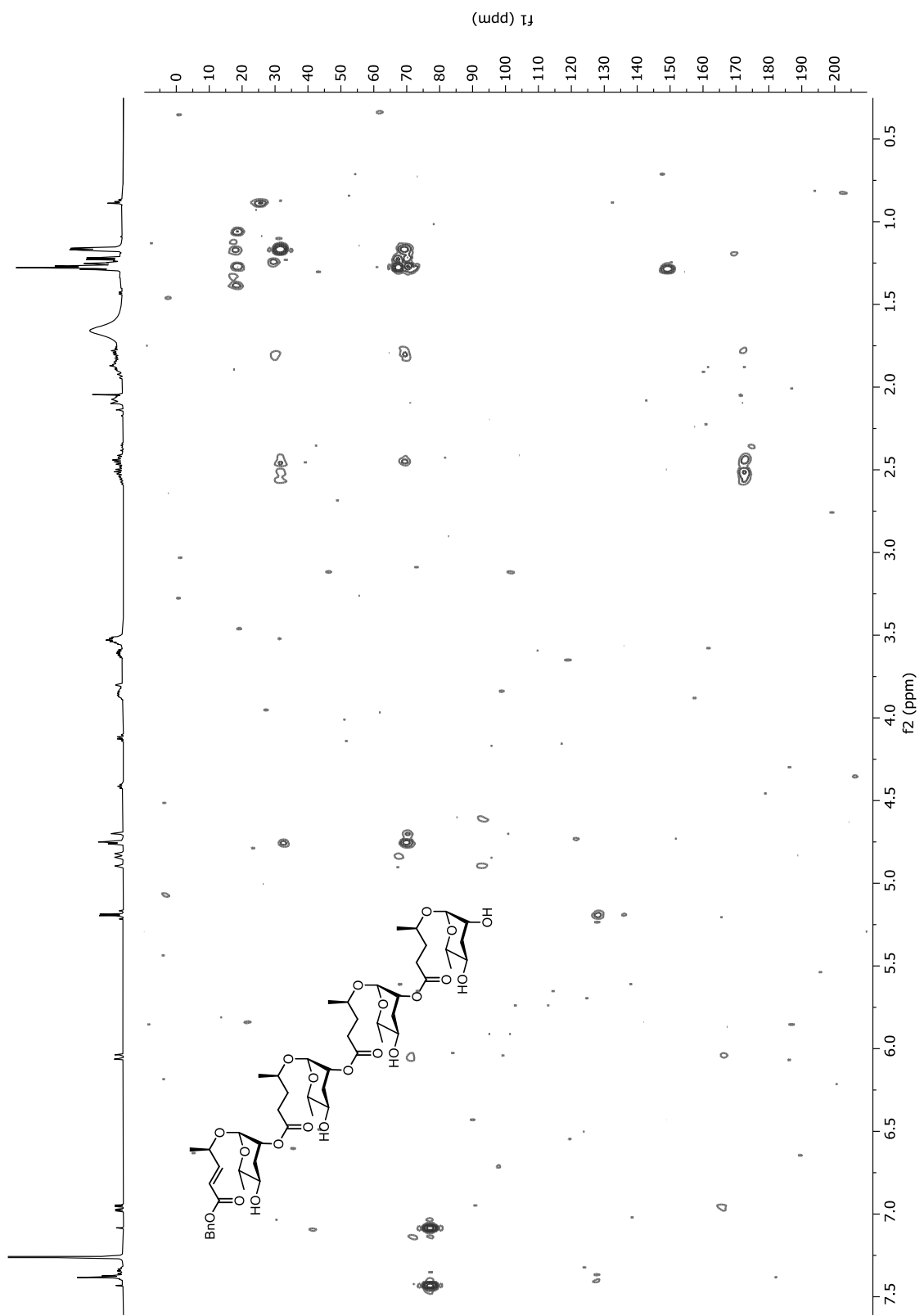


Figure S 273:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 42.

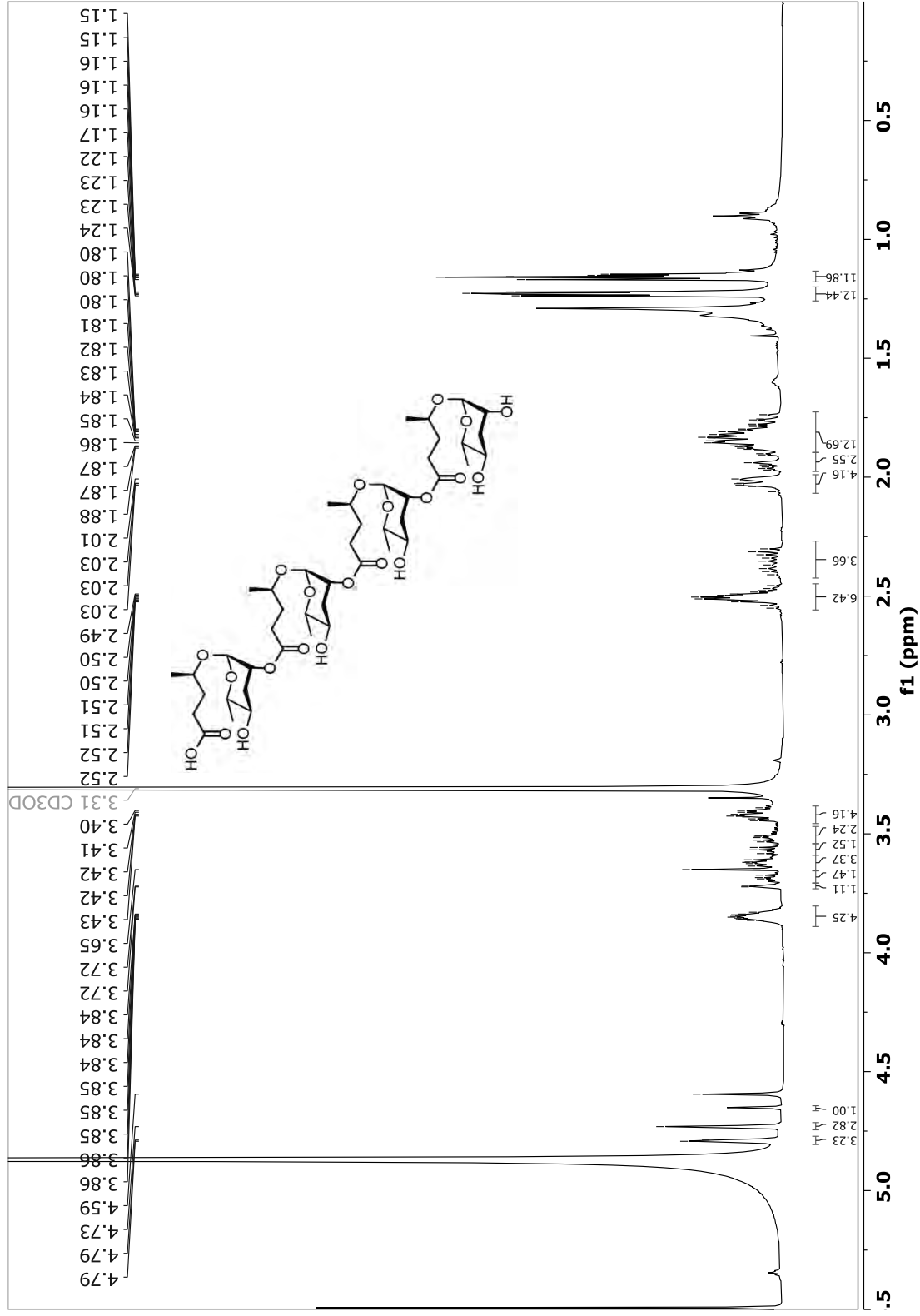




Figure S 275: HSQC (600 MHz, CDCl<sub>3</sub>) of 42.

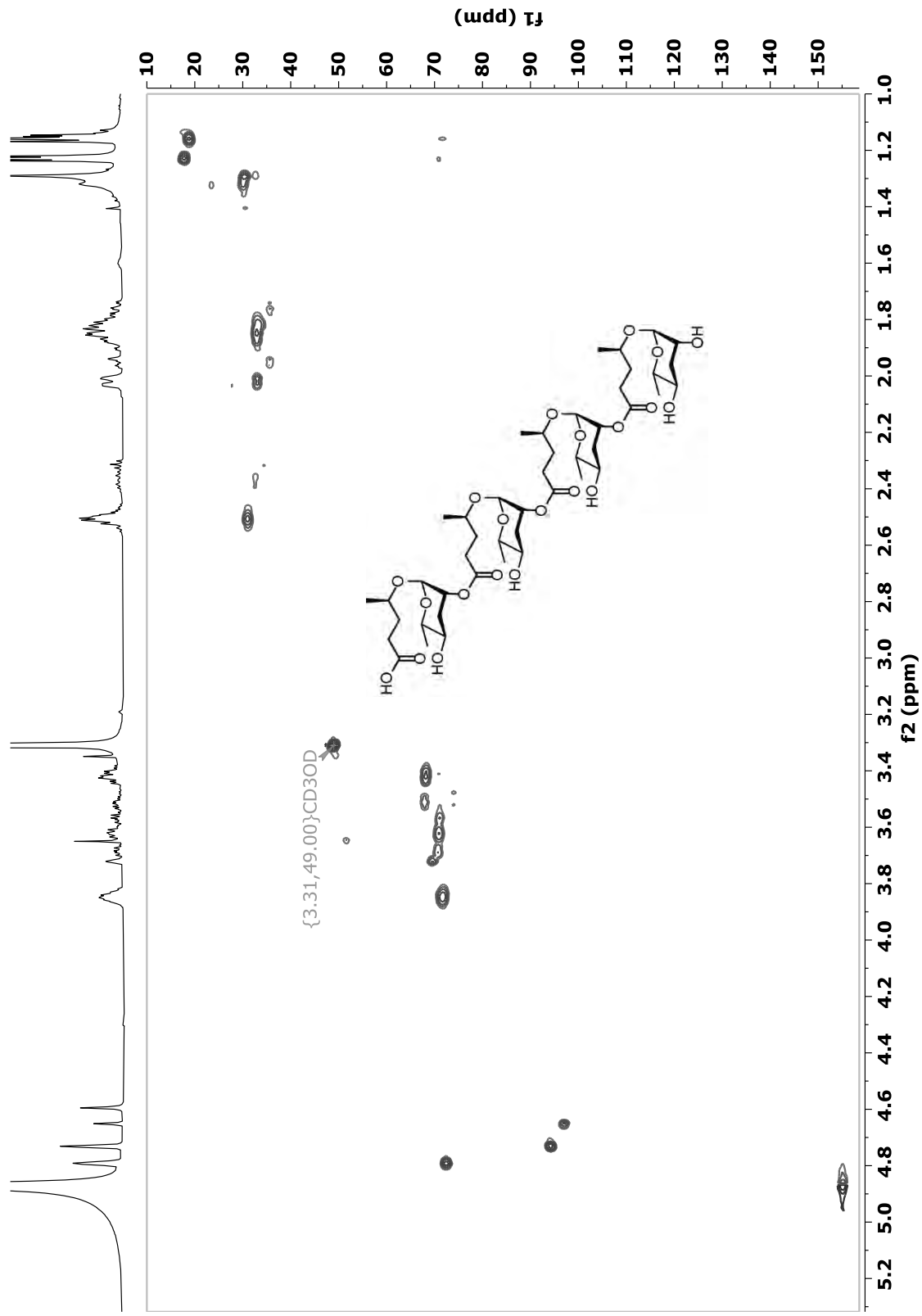


Figure S 276: HMBC (600 MHz, CDCl<sub>3</sub>) of 42.

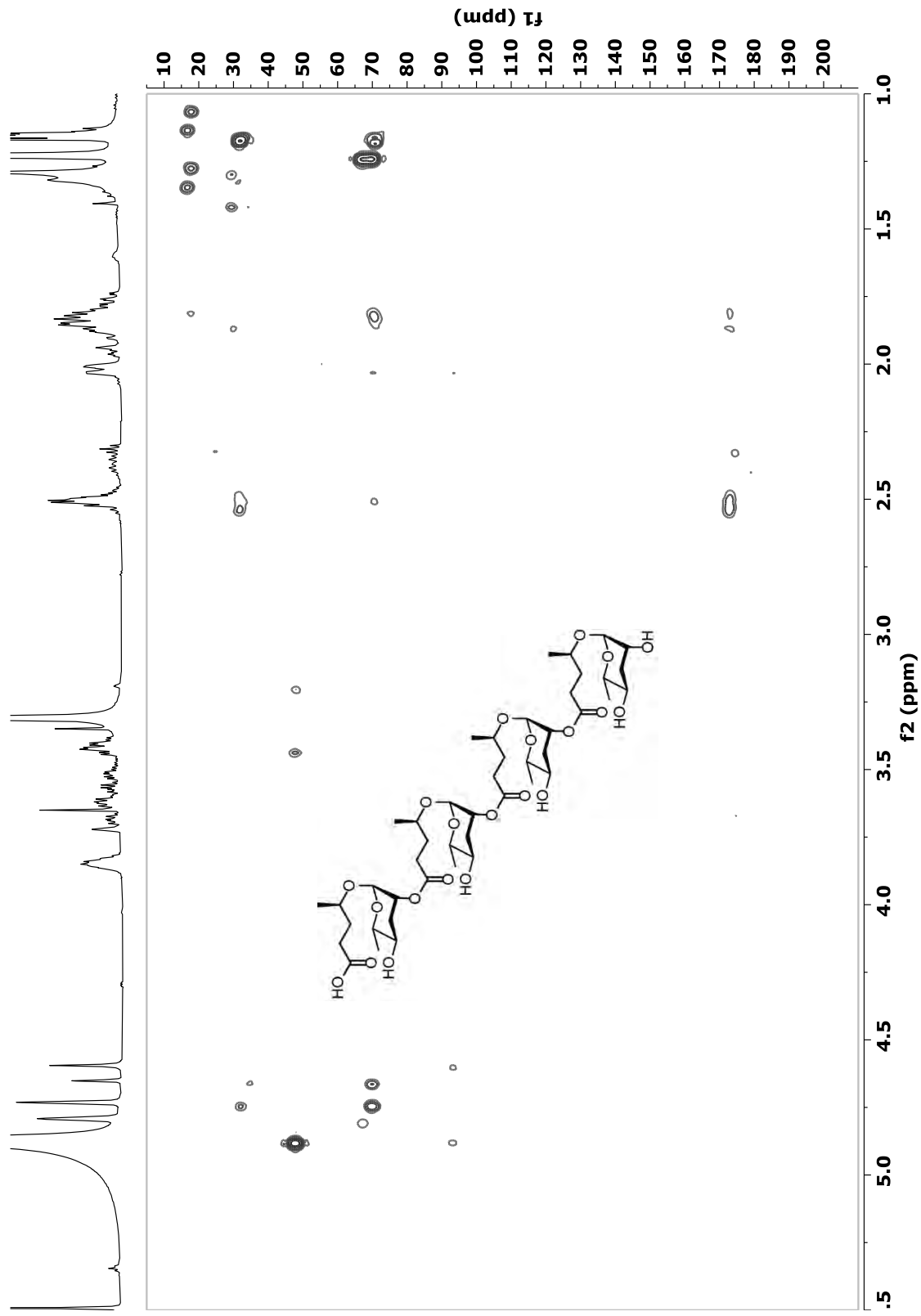


Figure S 277:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 226).

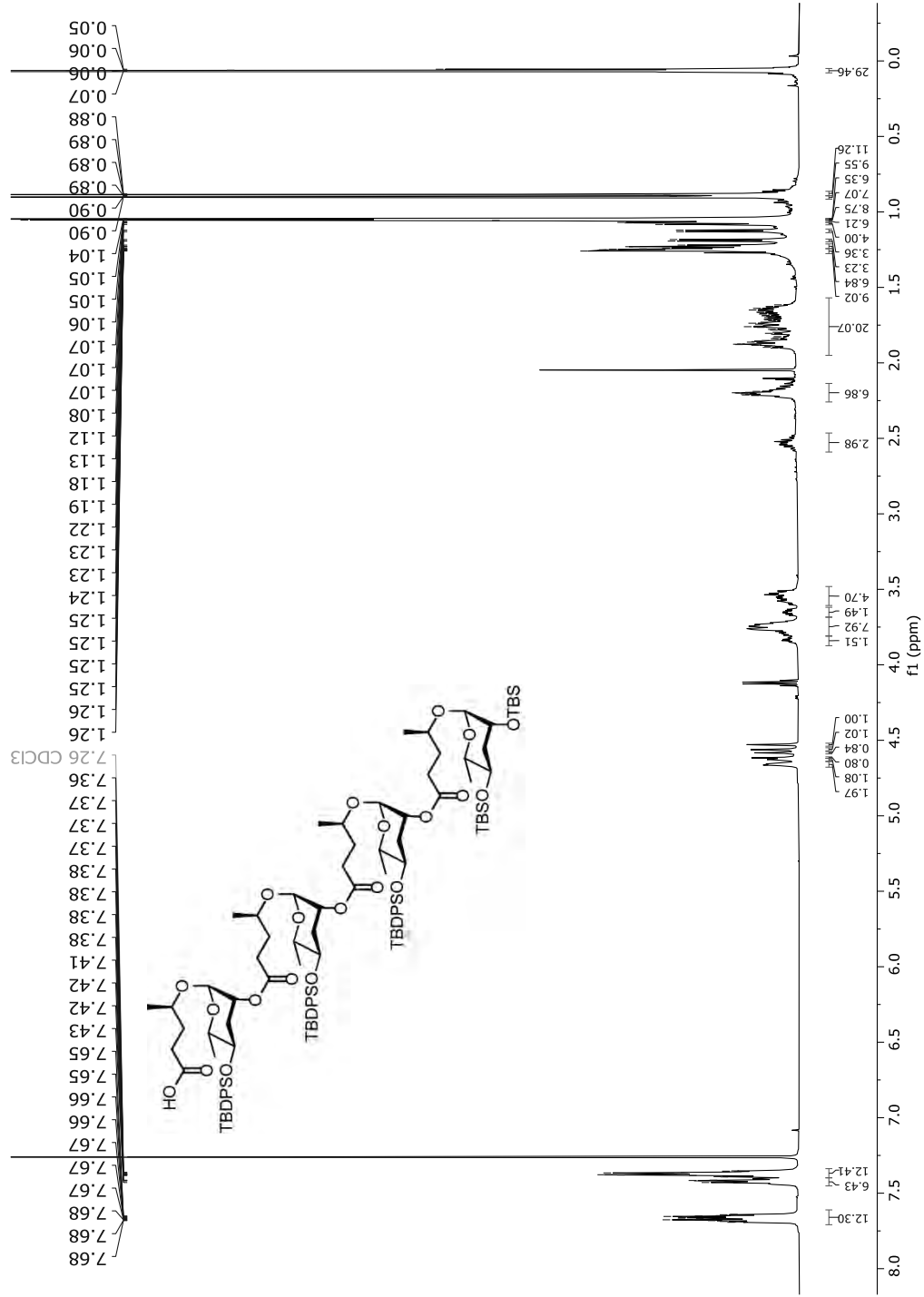


Figure S 278:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 226.

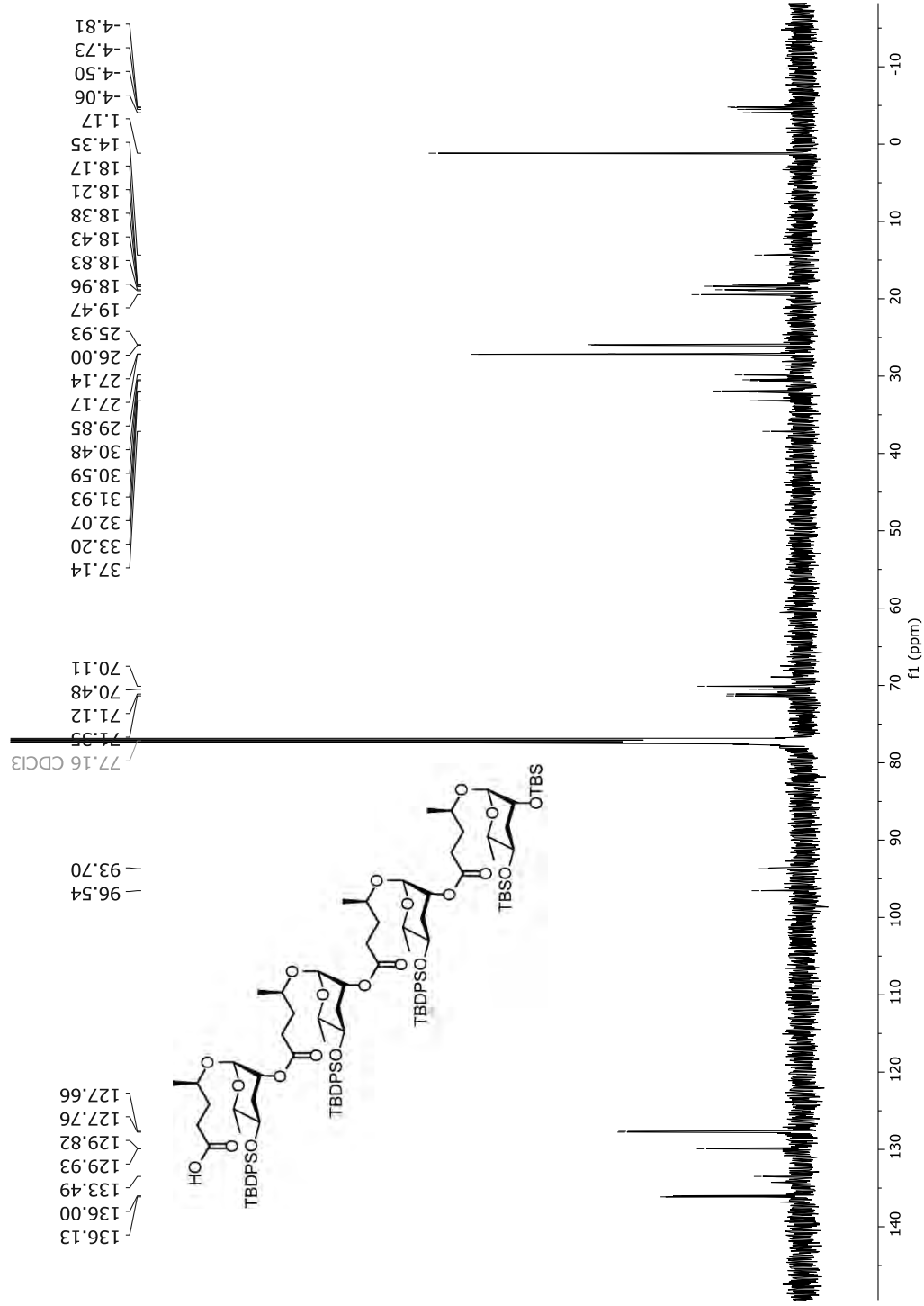


Figure S 279: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 226.

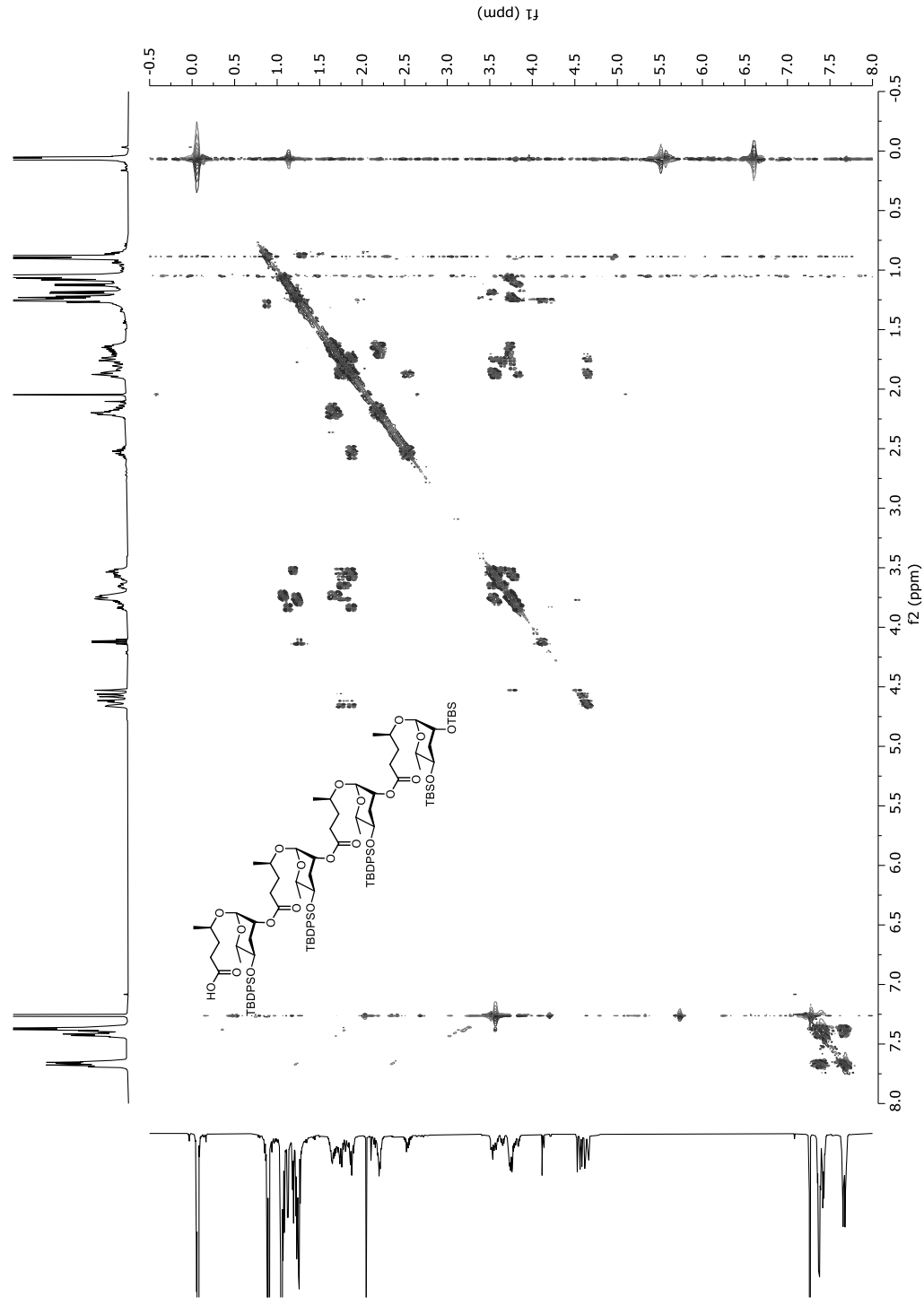


Figure S 280: HSQC (600 MHz, CDCl<sub>3</sub>) of 226.

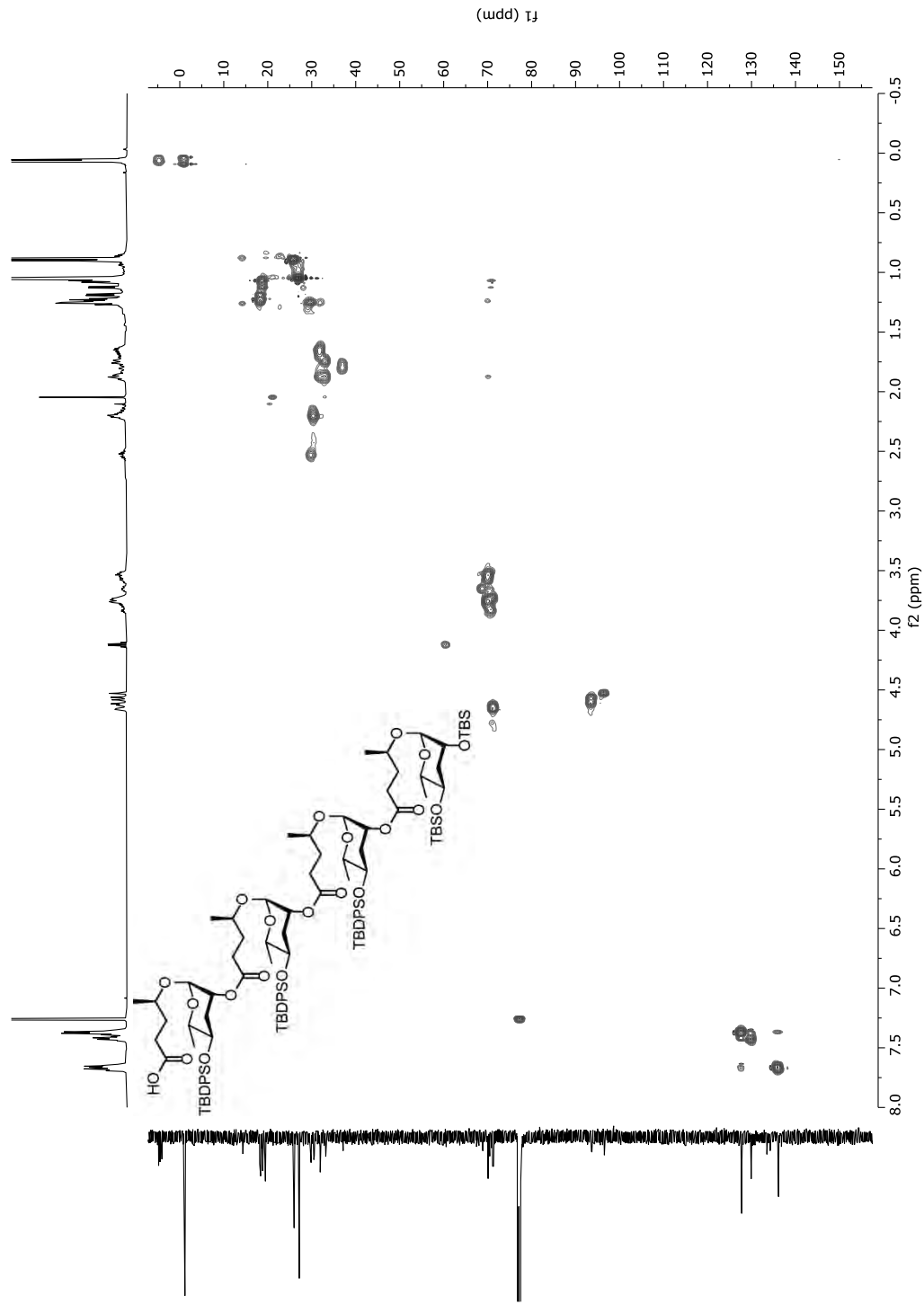


Figure S 281: HMBC (600 MHz, CDCl<sub>3</sub>) of 226.

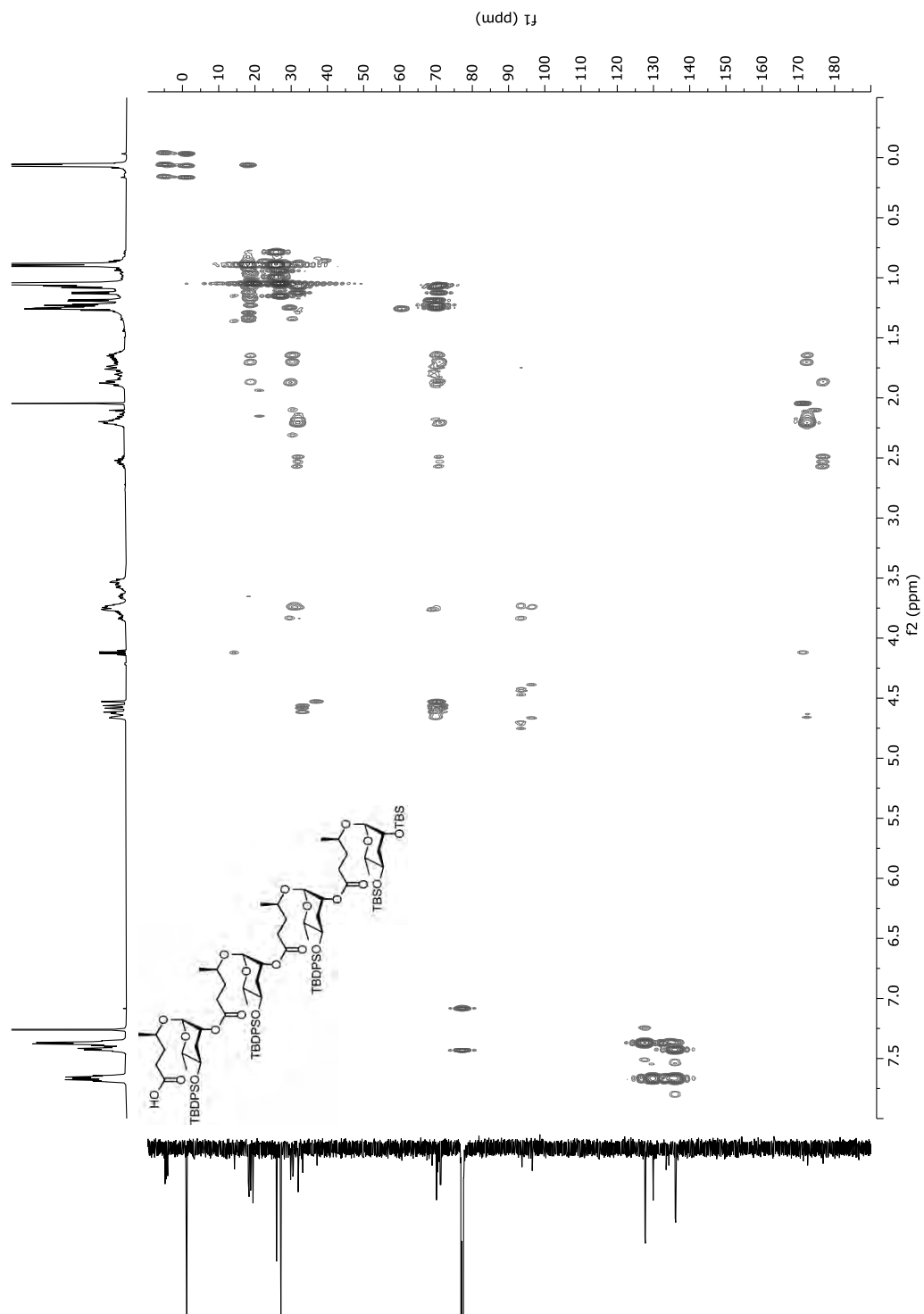






Figure S 284: HSQC (600 MHz, CDCl<sub>3</sub>) of 222.

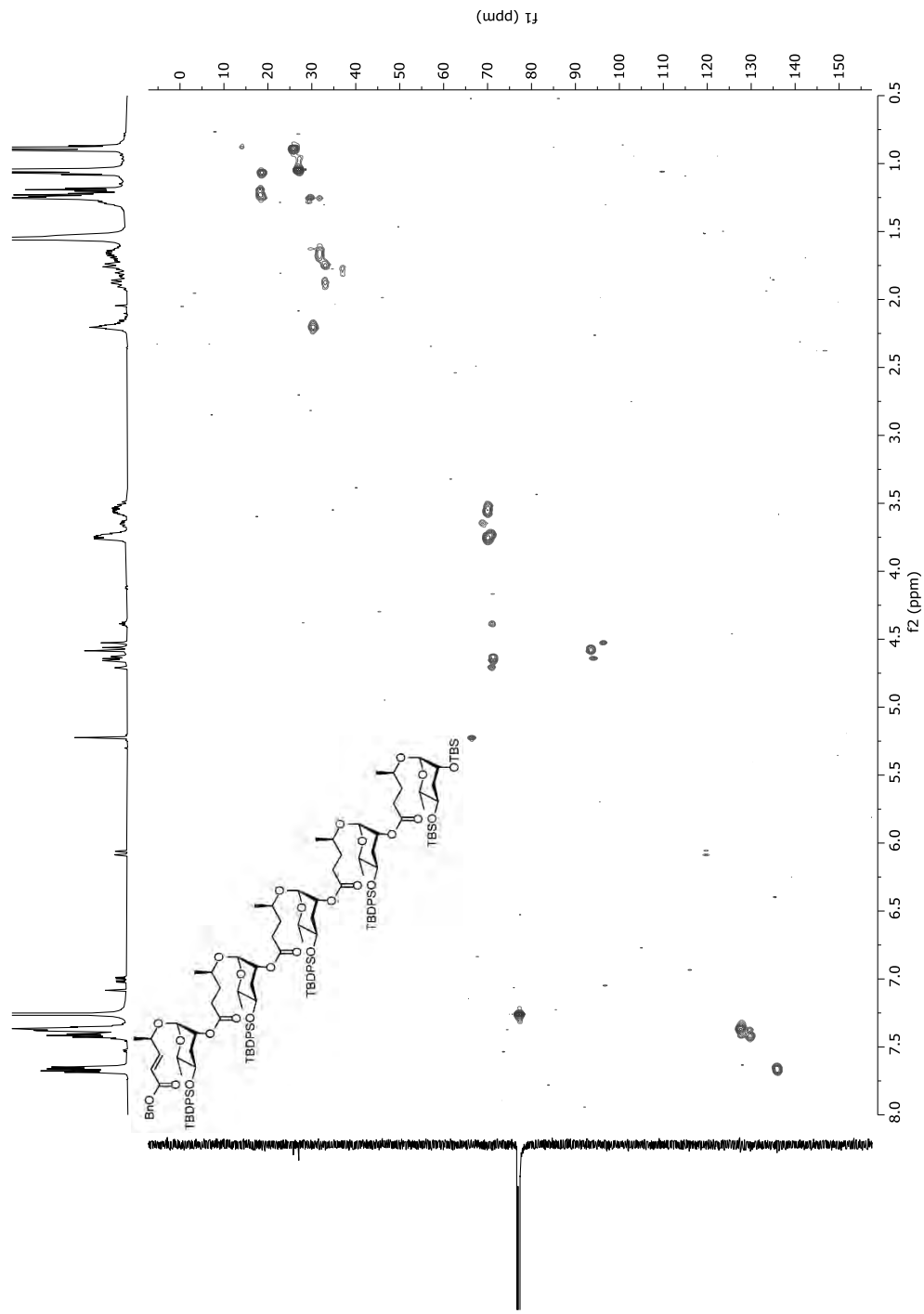


Figure S 285: HMBC (600 MHz, CDCl<sub>3</sub>) of 222.

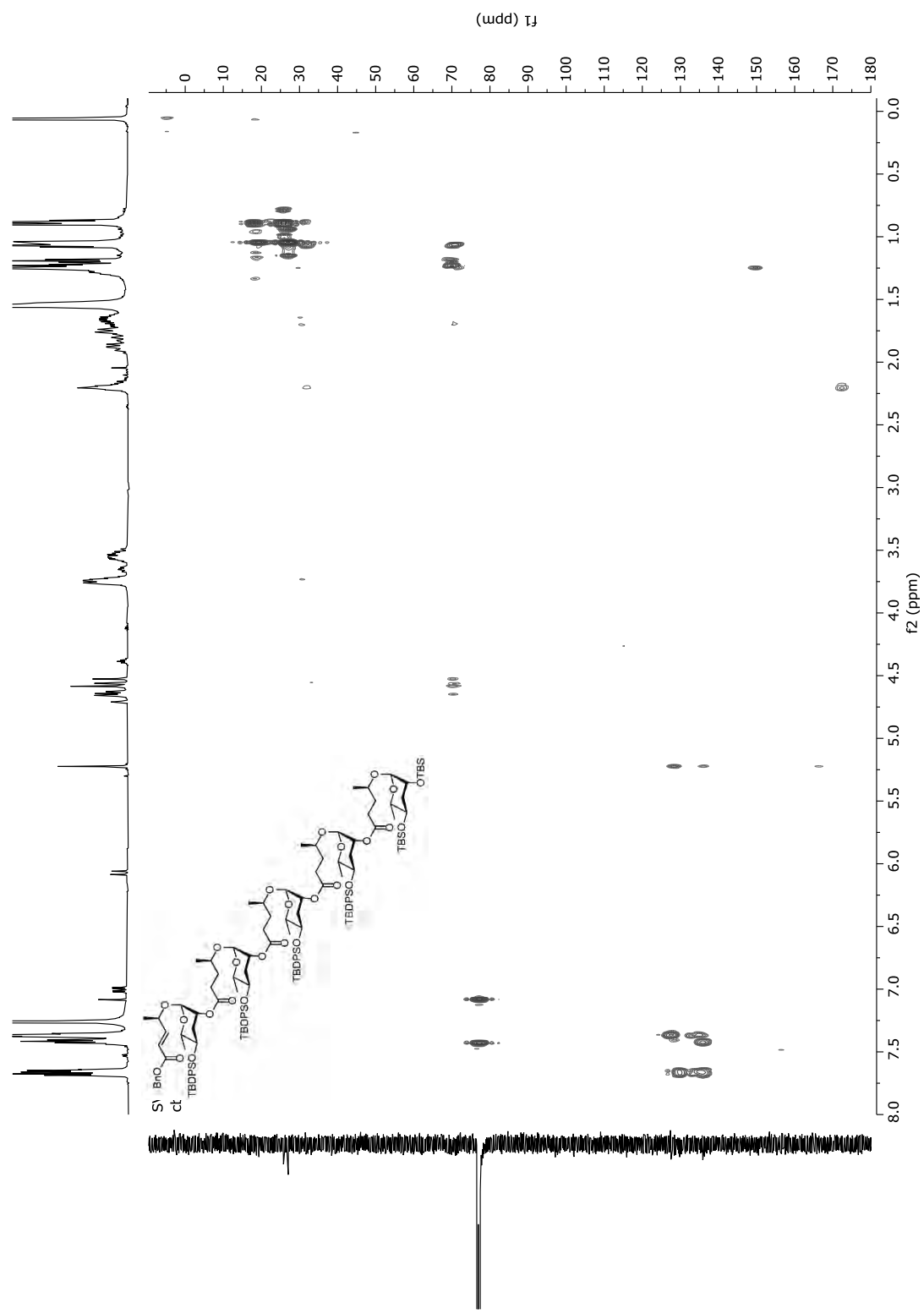


Figure S 286:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 231.

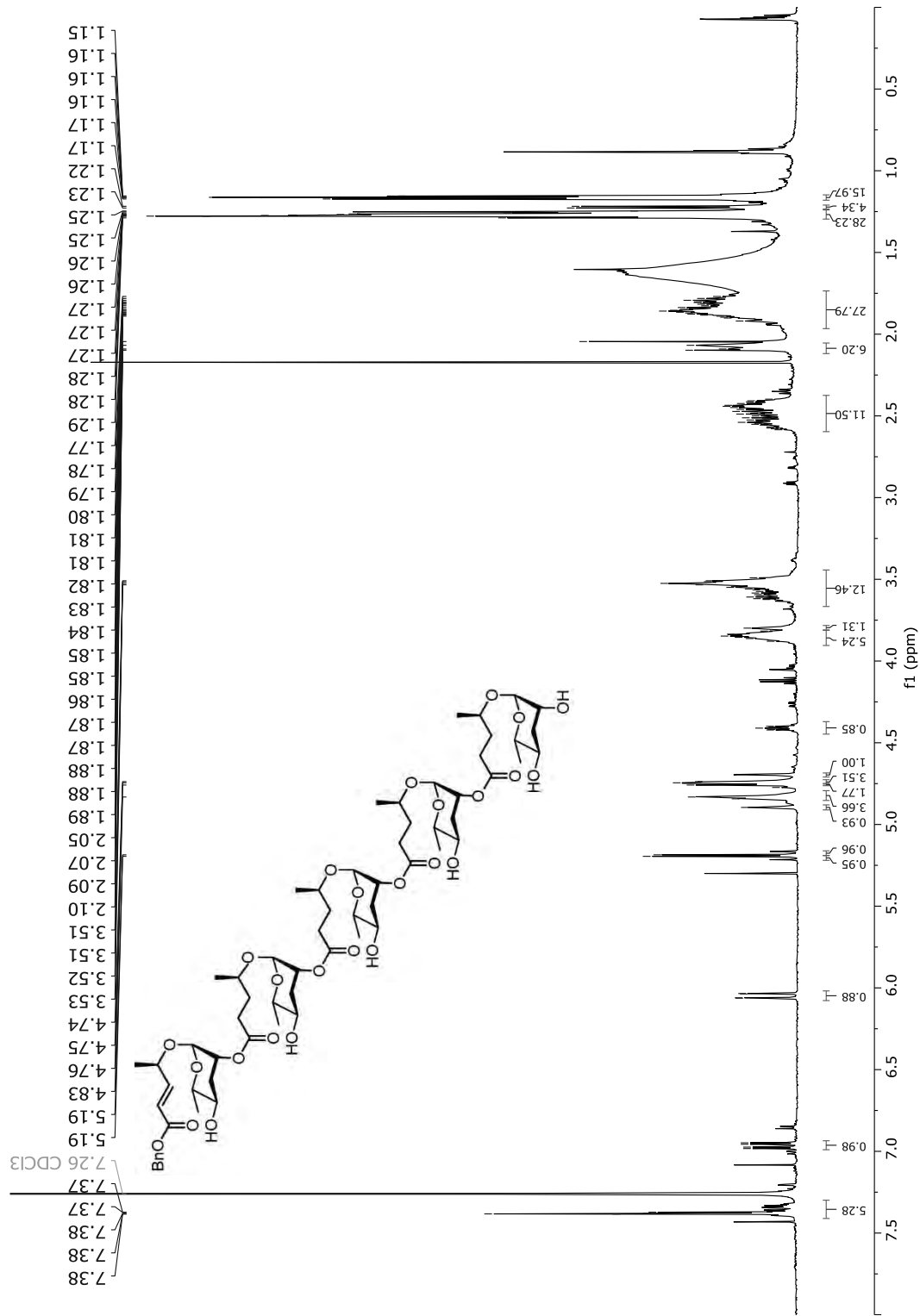


Figure S 287: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 231.

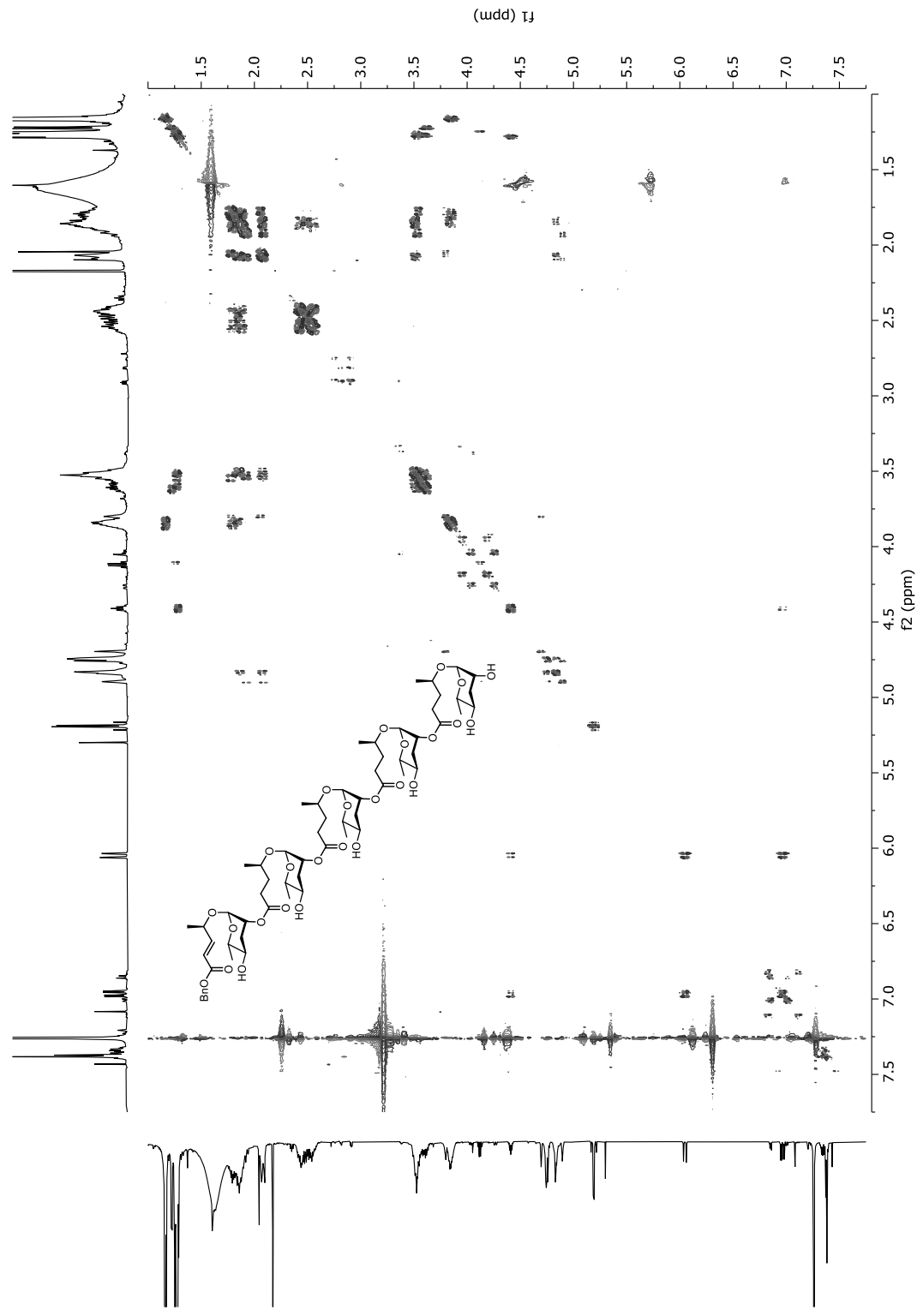


Figure S 288: HSQC (600 MHz, CDCl<sub>3</sub>) of 231.

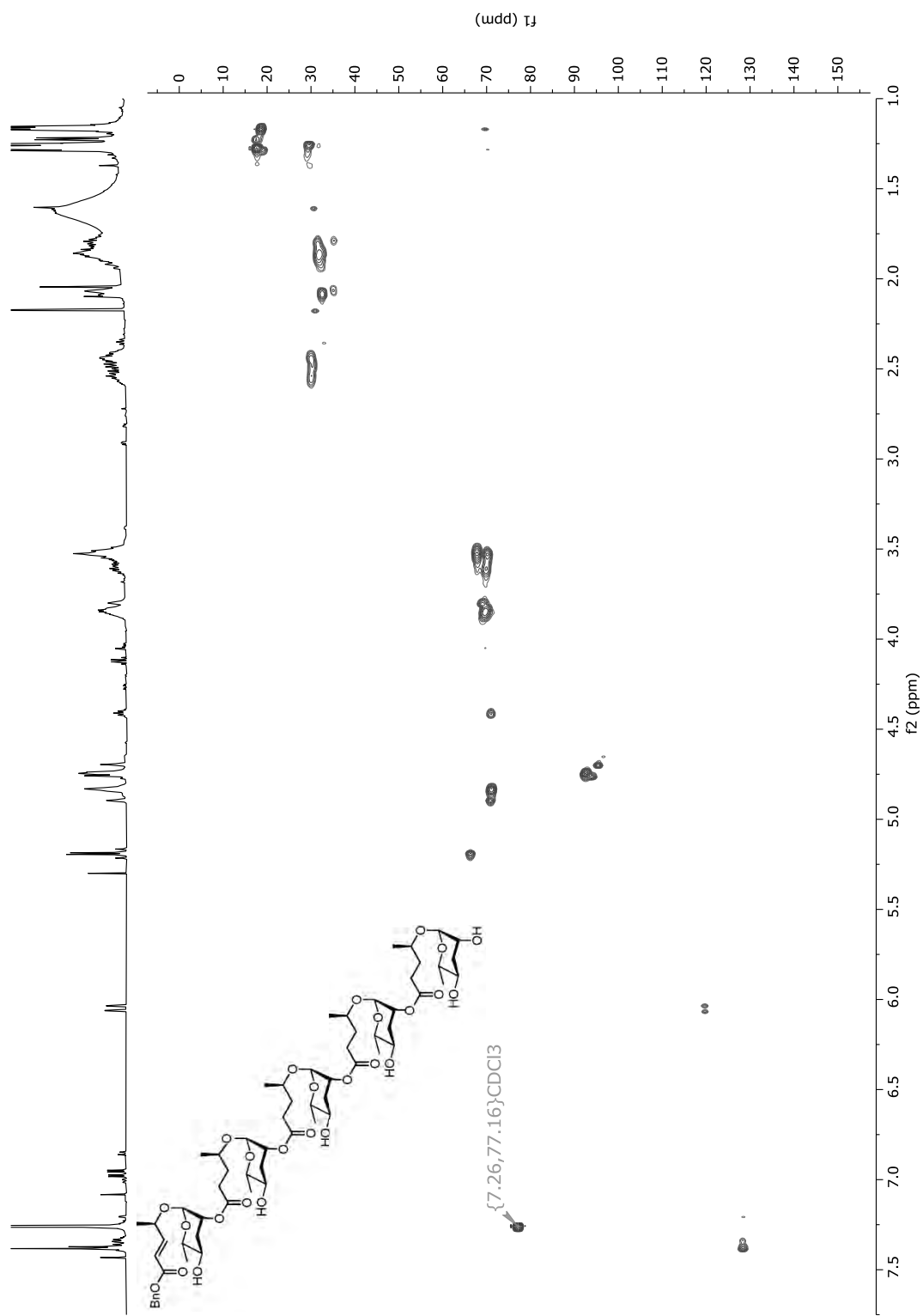


Figure S 289: HMBC (600 MHz, CDCl<sub>3</sub>) of 231.

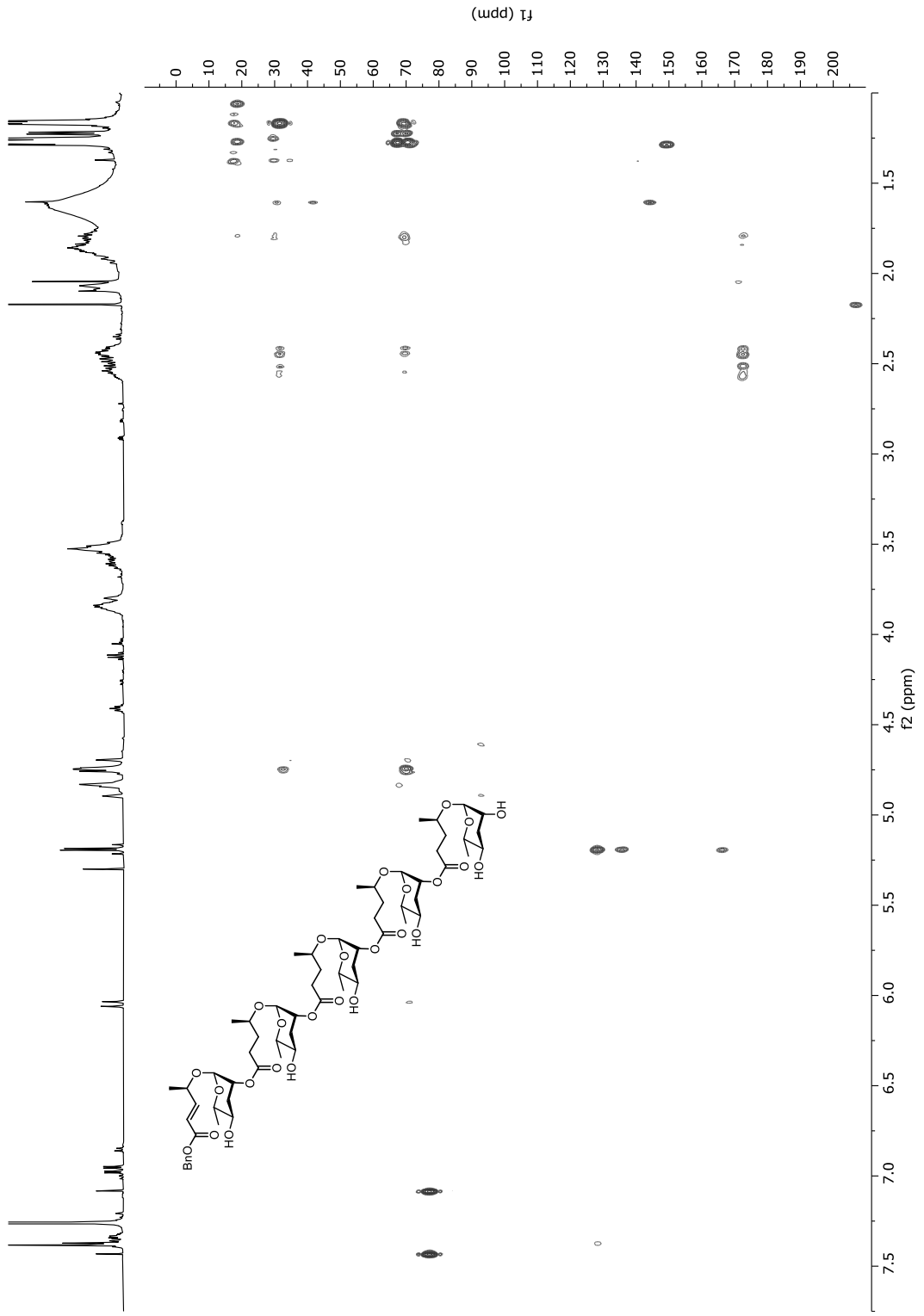


Figure S 290: <sup>1</sup>H NMR (600 MHz, CDCl<sub>3</sub>) of 43.

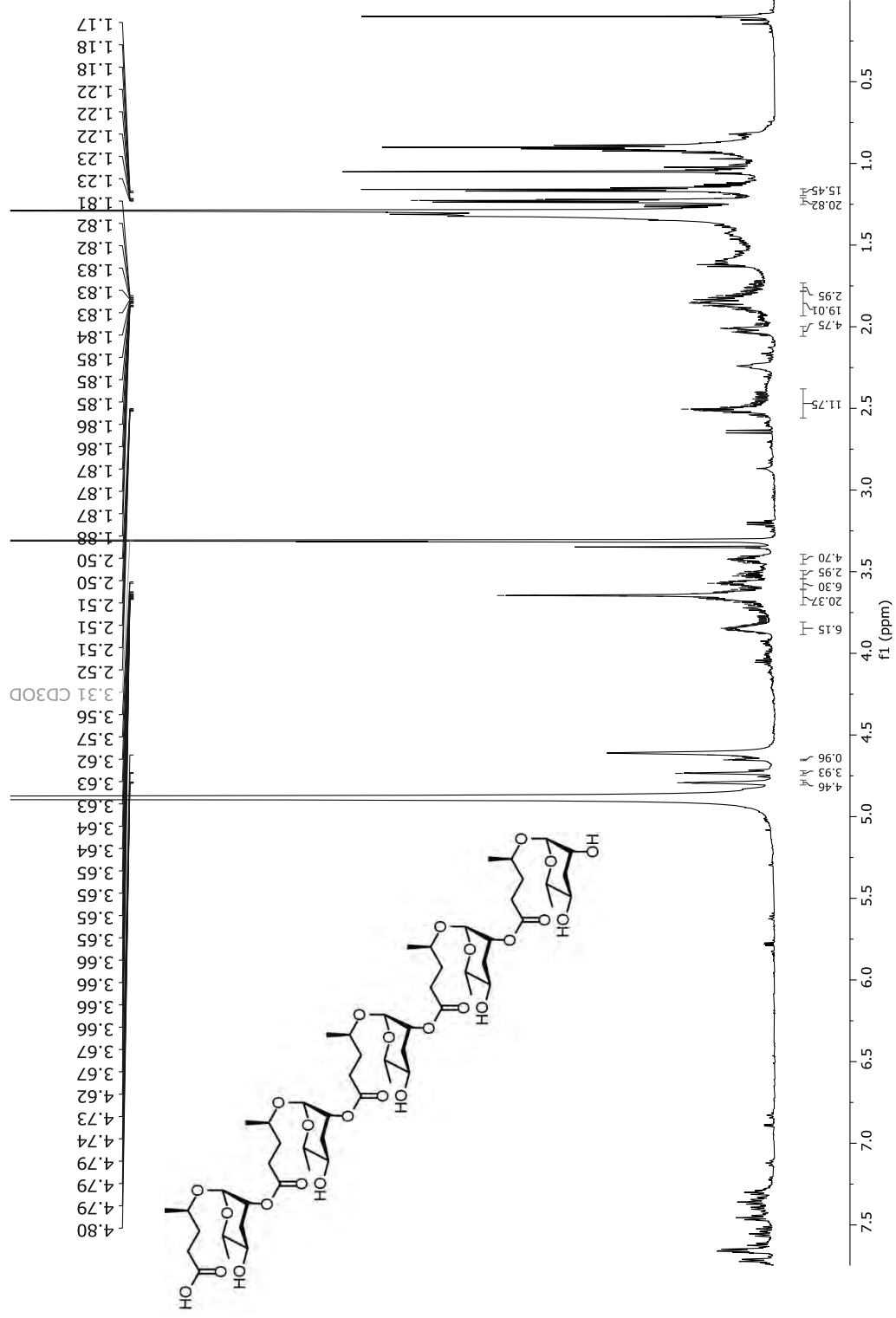




Figure S 292:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(4-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (213).

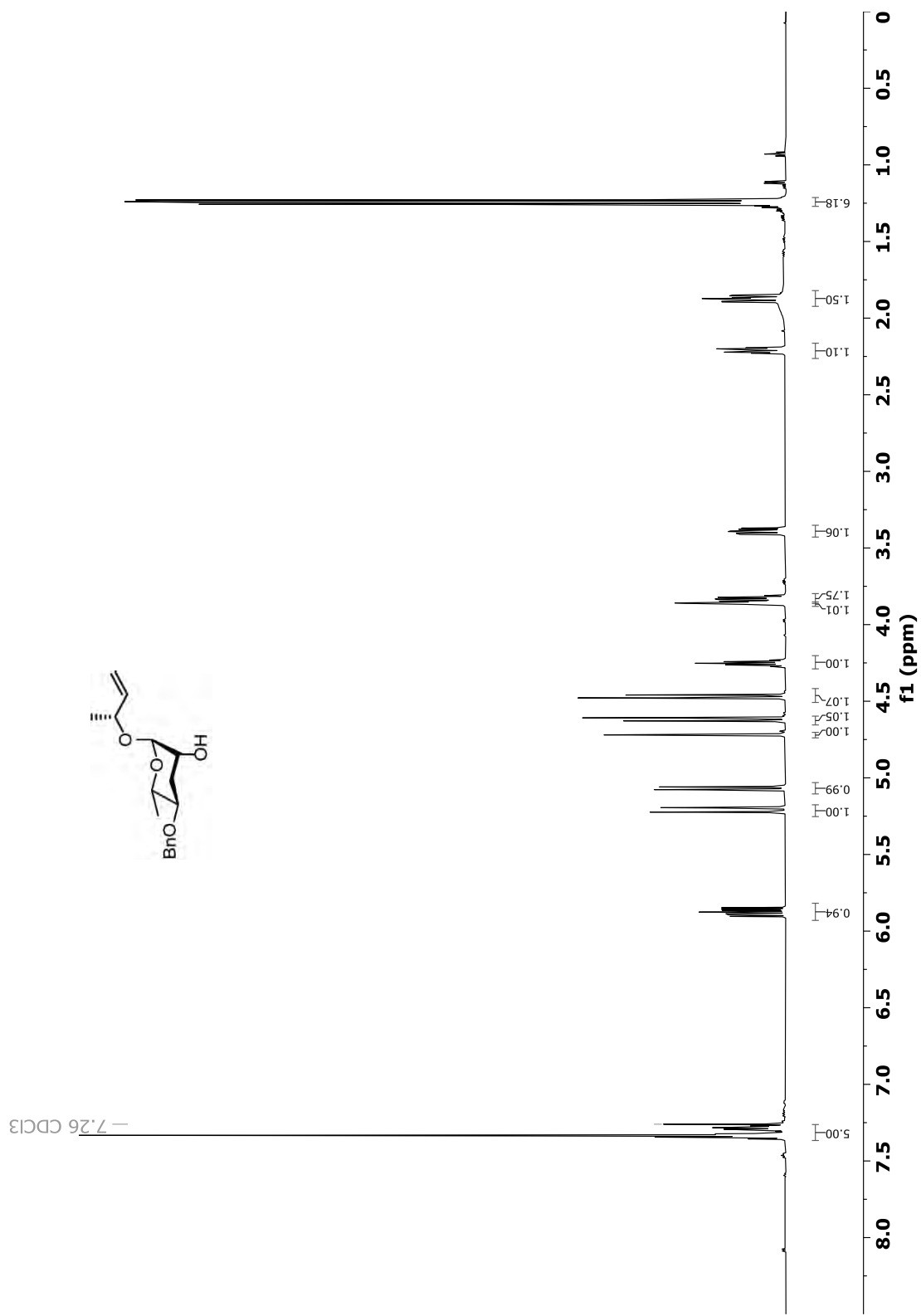


Figure S 293:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(4-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (213).

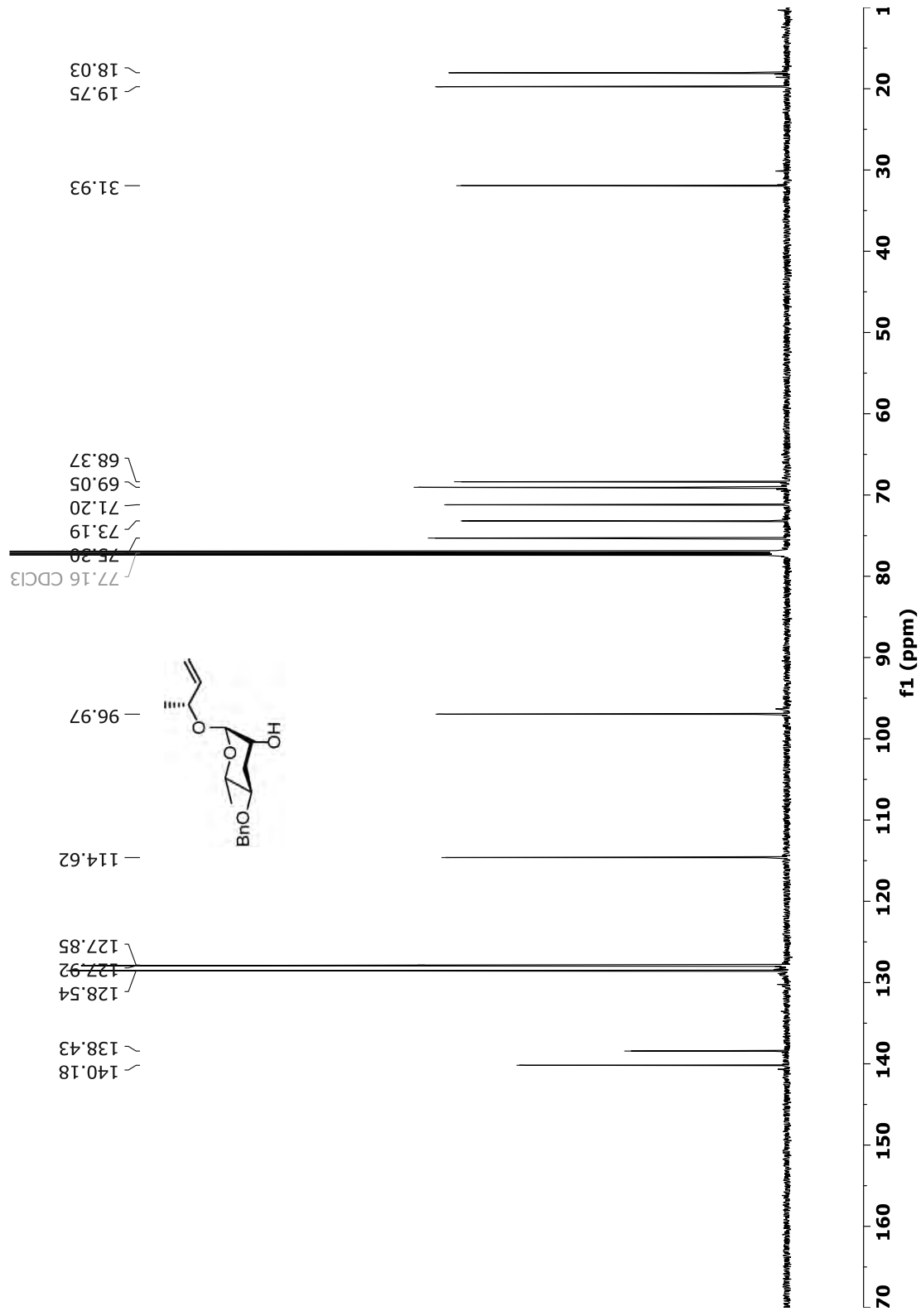


Figure S 294: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(4-*O*-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (213).

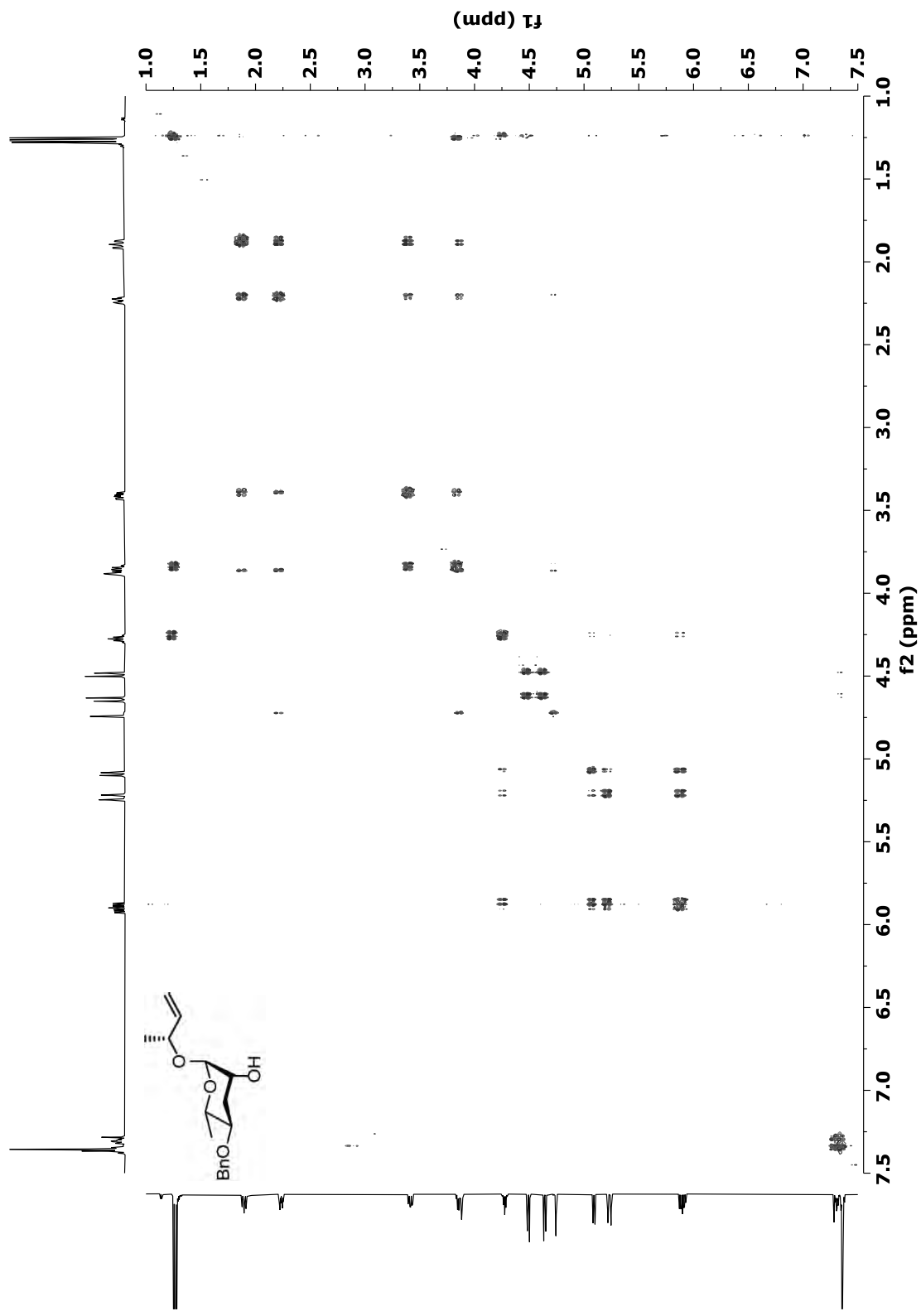


Figure S 295: HSQC (600 MHz, CDCl<sub>3</sub>) of (3R)-3-[(4-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (213).

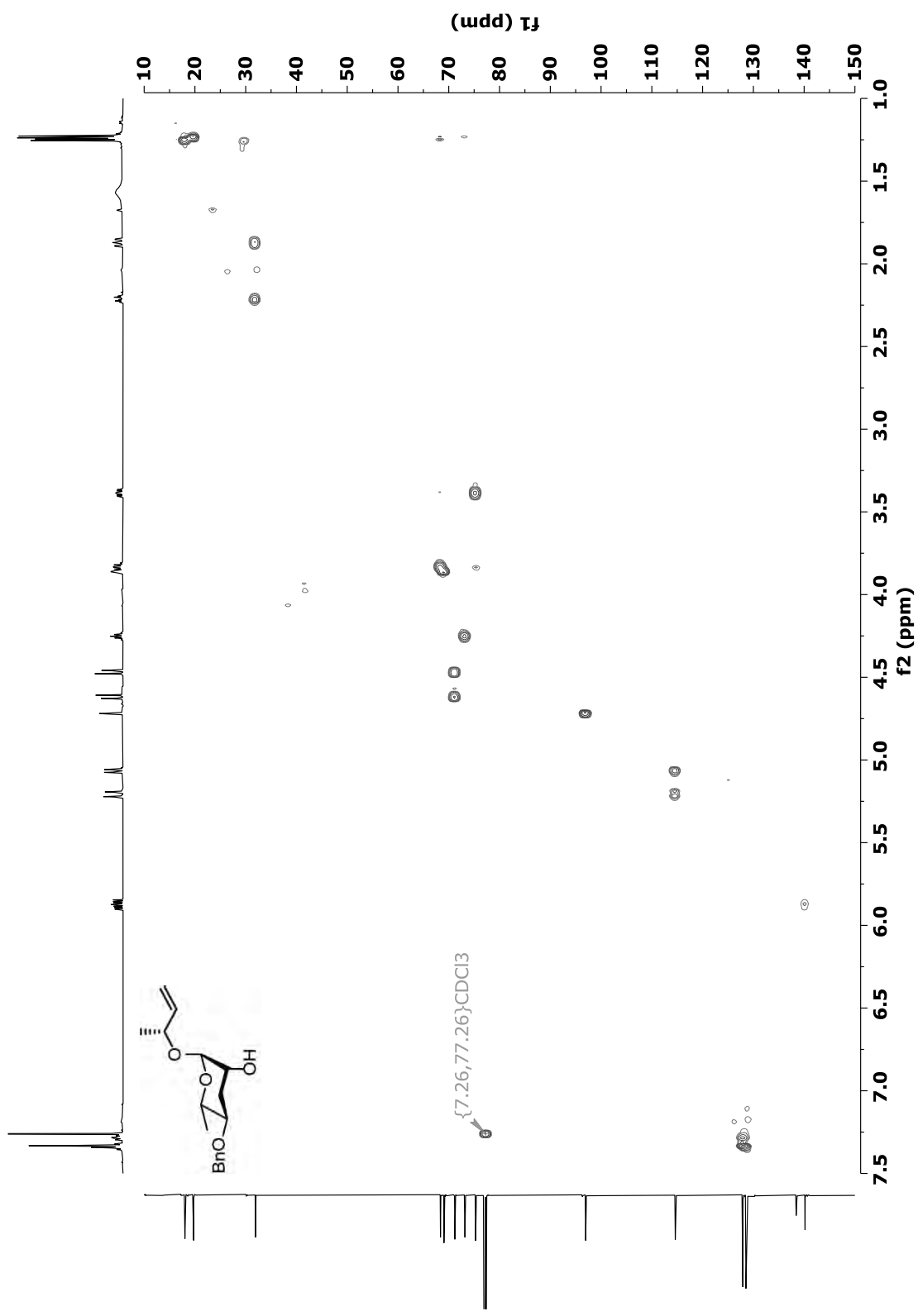


Figure S 296:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of Benzyloxy-(4R)-4-[4-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (214).

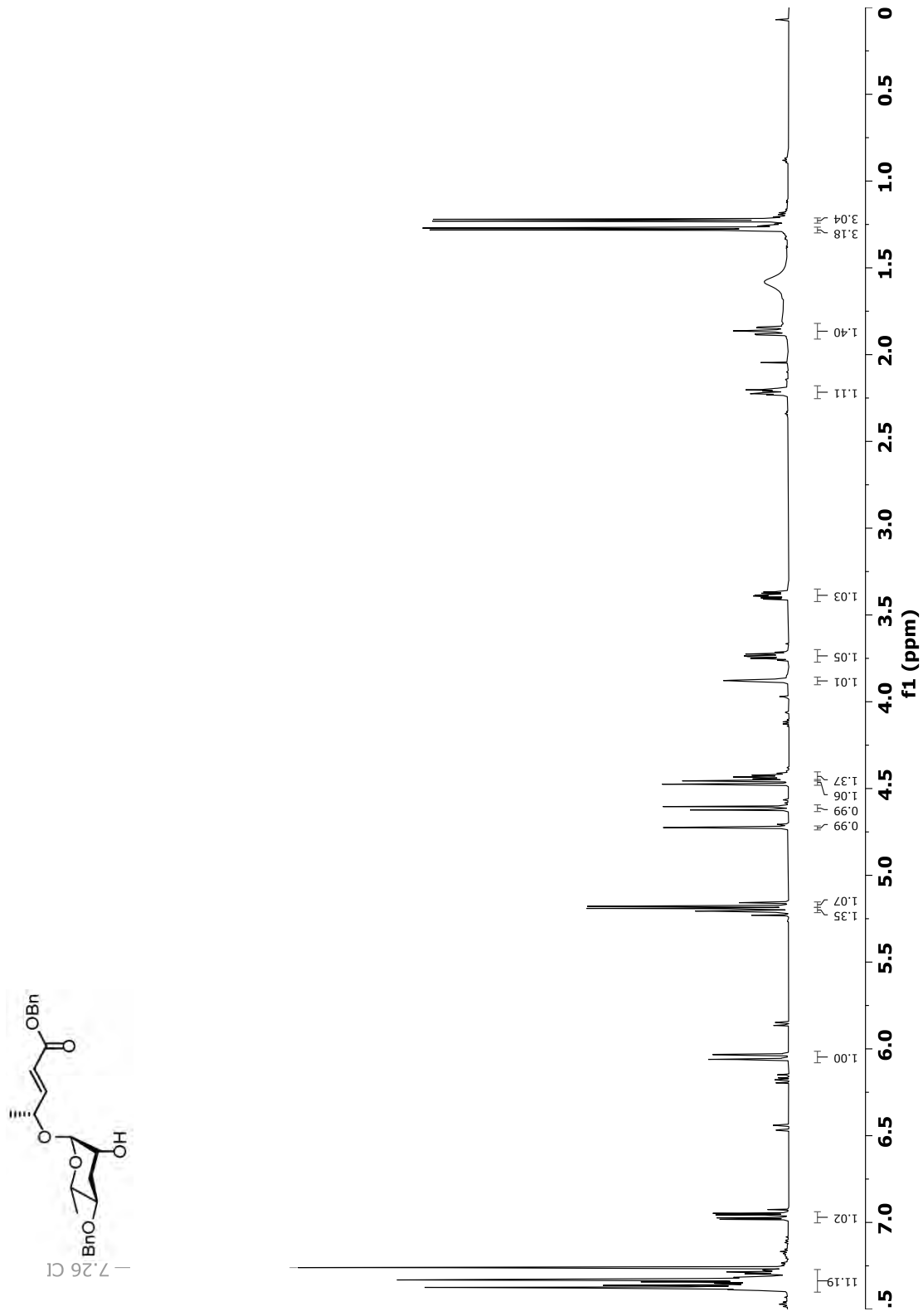


Figure S 297:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of Benzyloxy-(4R)-4-[4-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (214).

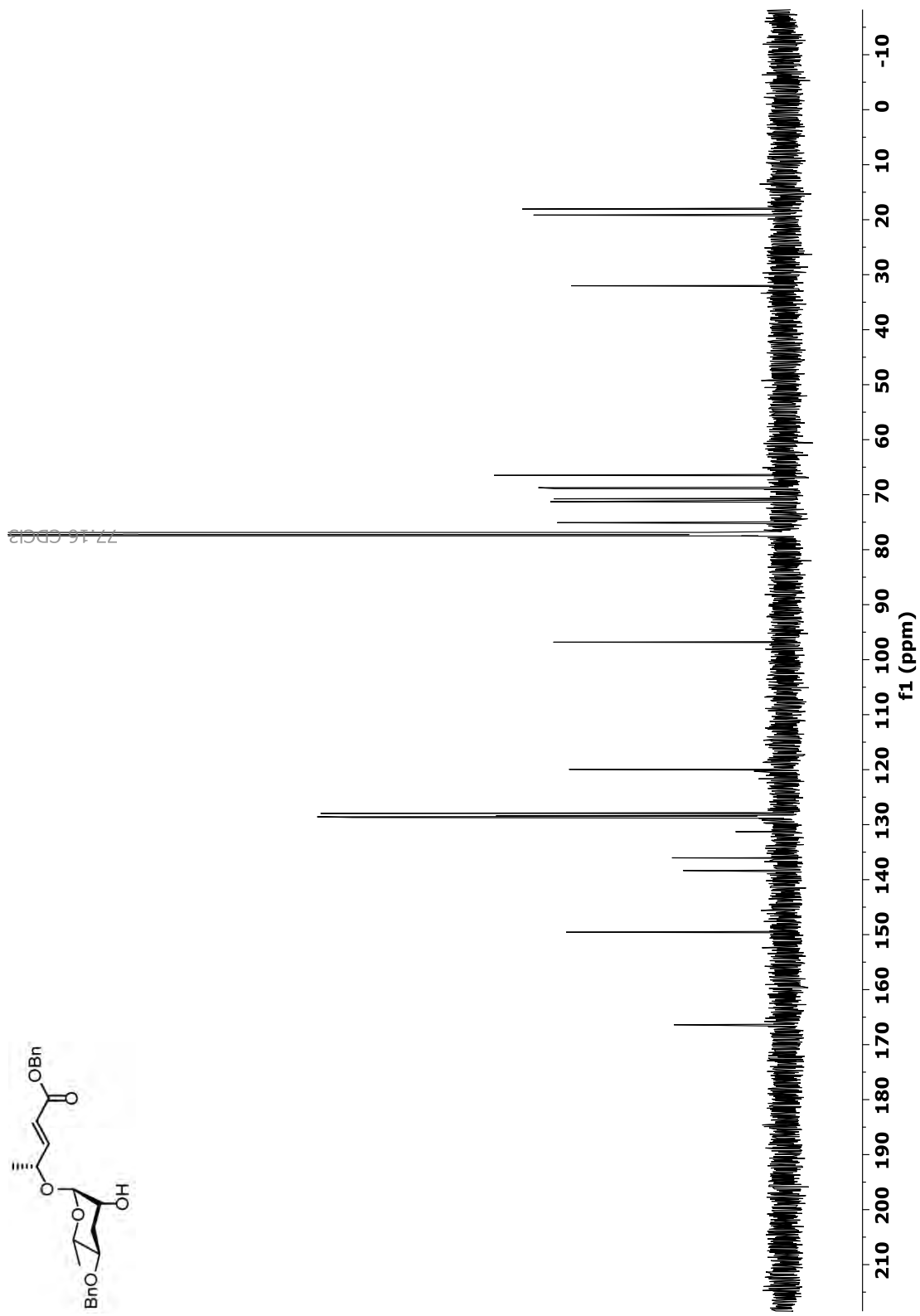


Figure S 298: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of Benzyloxy-(4R)-4-[4-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (214).

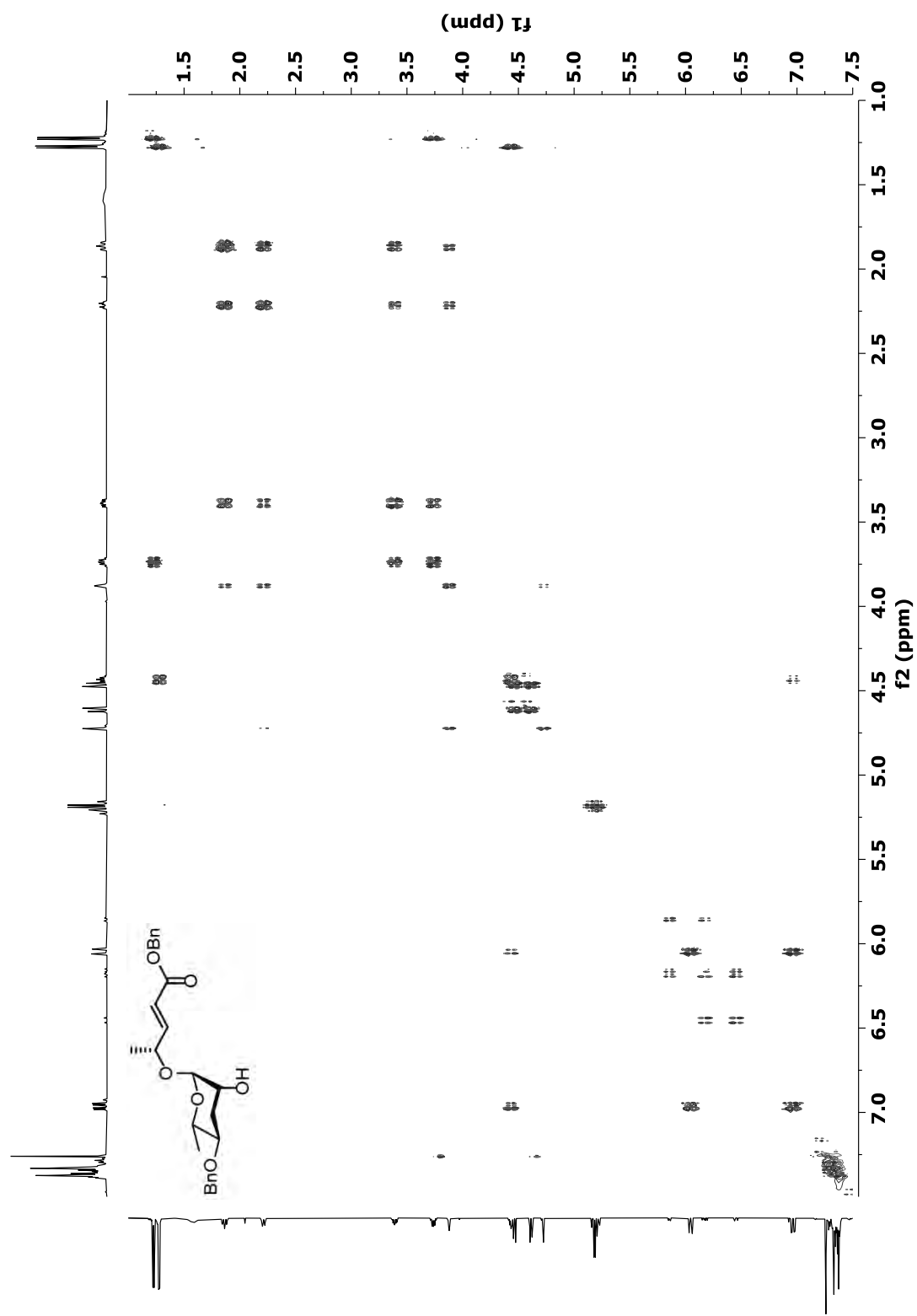


Figure S 299: HSQC (600 MHz, CDCl<sub>3</sub>) of Benzyloxy-(4R)-4-[4-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (214).

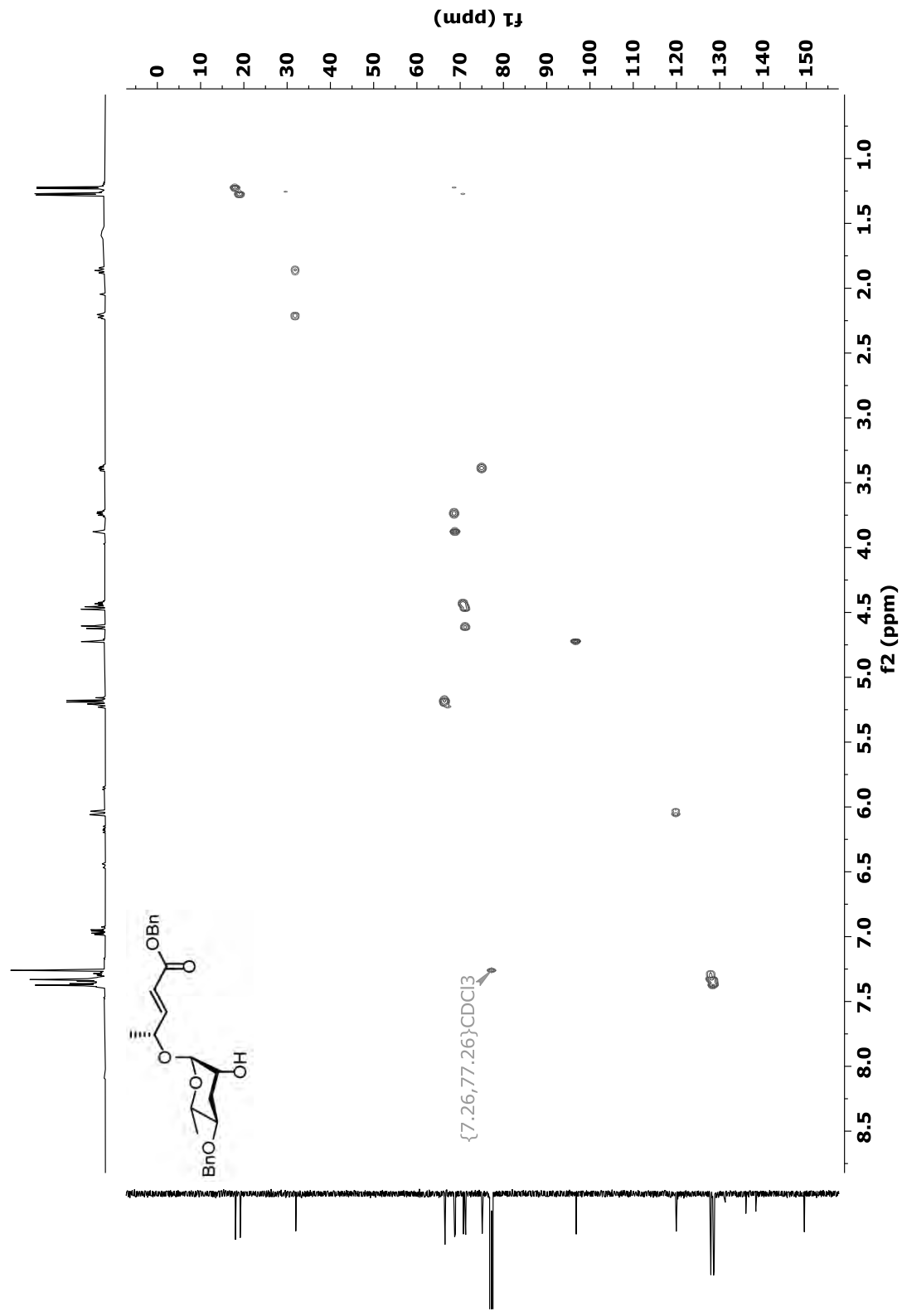


Figure S 300:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(2-O-benzoyl-4-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-butyne (210).

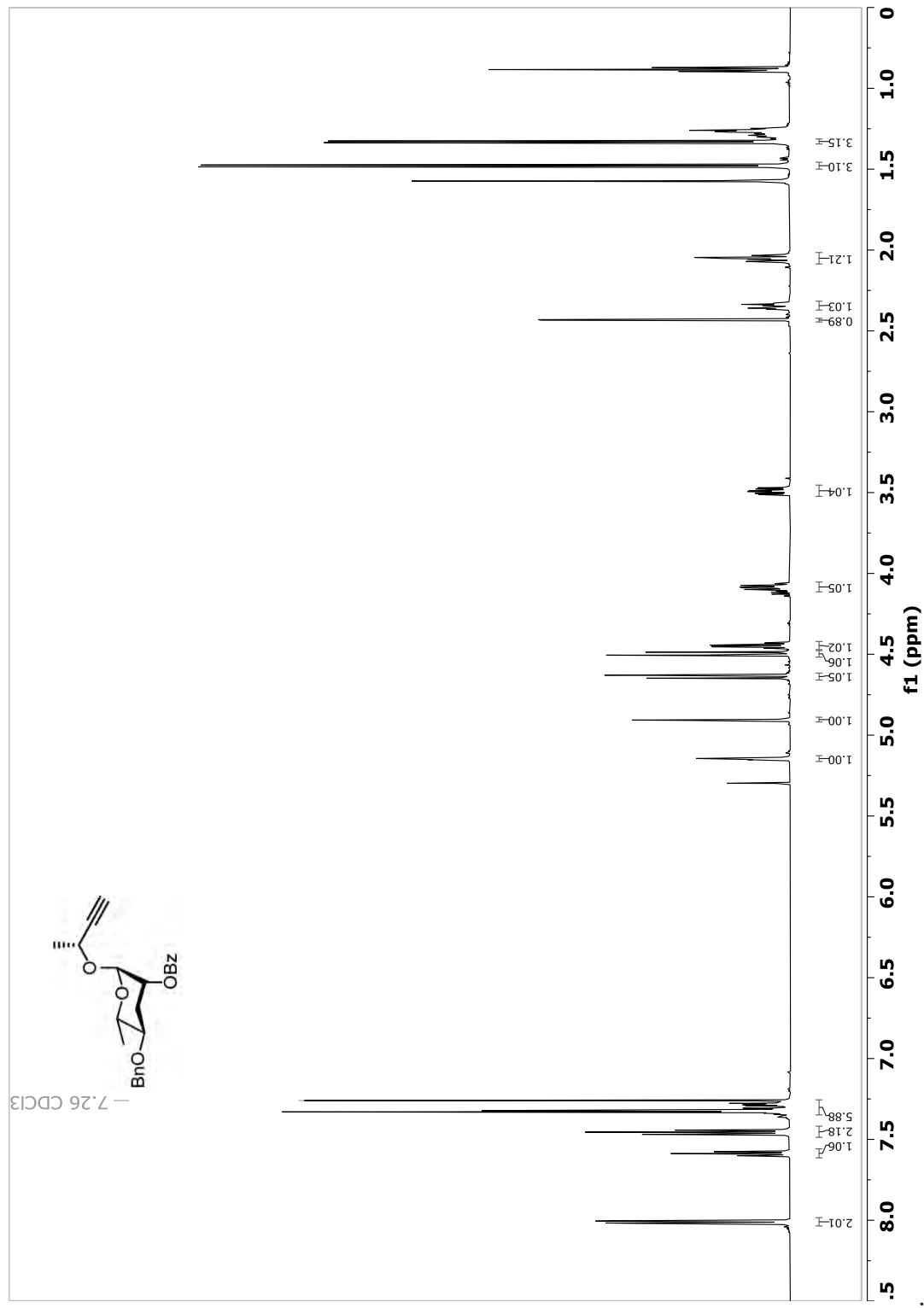


Figure S 301: <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzoyl-4-*O*-benzyl-3,6-dideoxy- $\alpha$ -L-*arabino*-hexopyranosyl)oxy]-1-butyne (210).

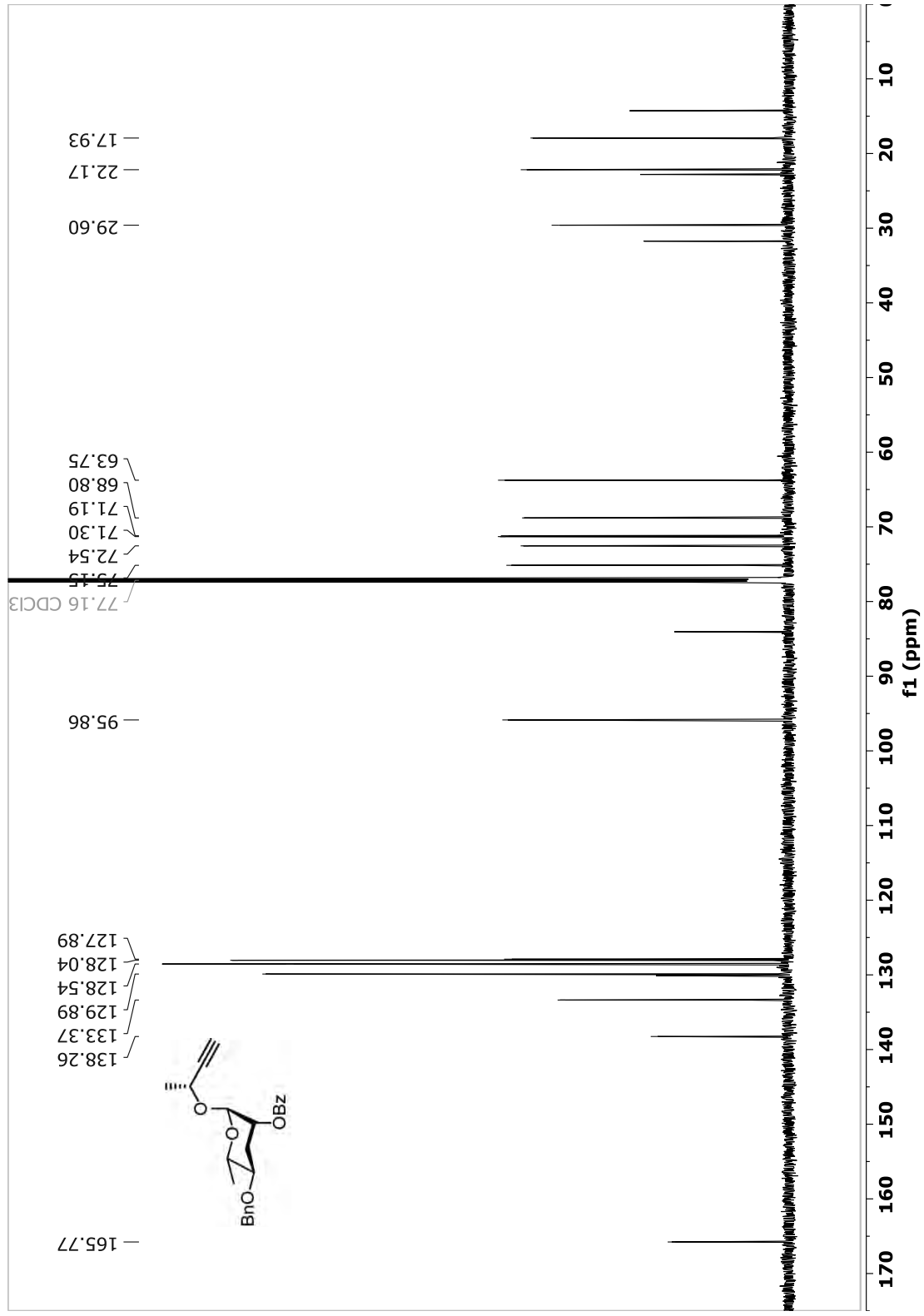


Figure S 302: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzoyl-4-*O*-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-butyne (210).

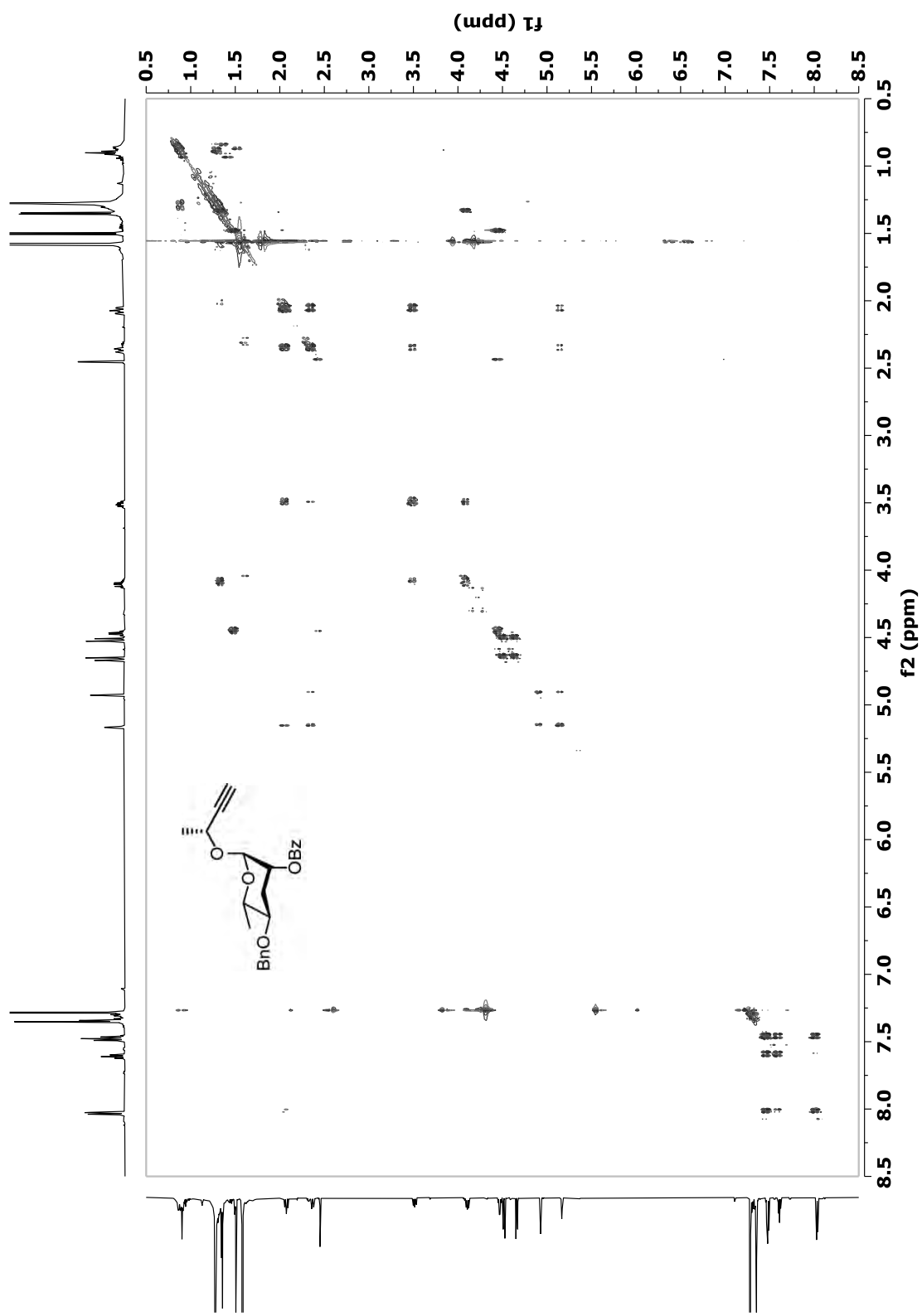


Figure S 303: HSQC (600 MHz, CDCl<sub>3</sub>) of (3R)-3-[(2-O-benzoyl-4-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl)oxy]-1-butyne (210).

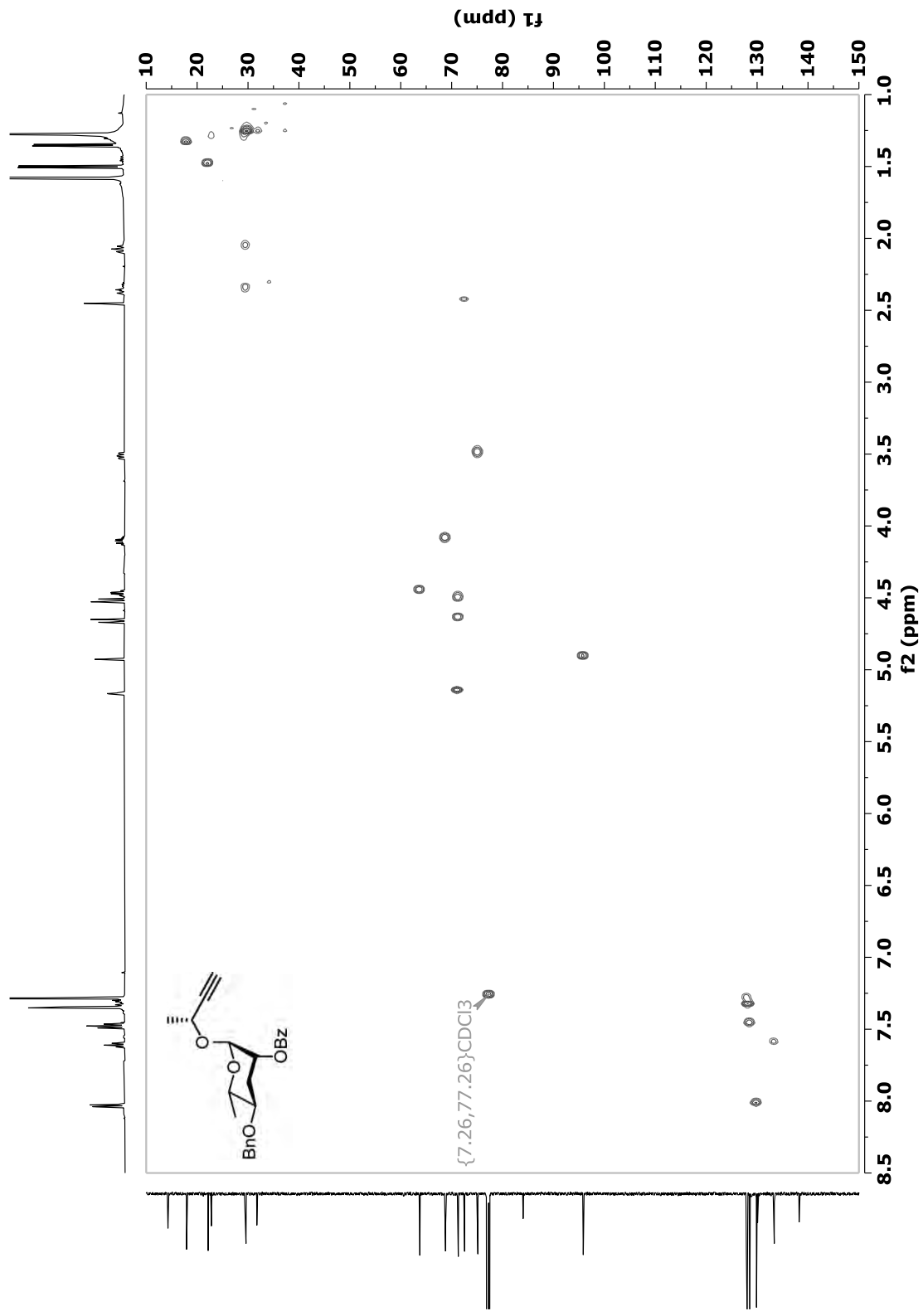


Figure S 304:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(2-O-benzoyl-4-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (212).

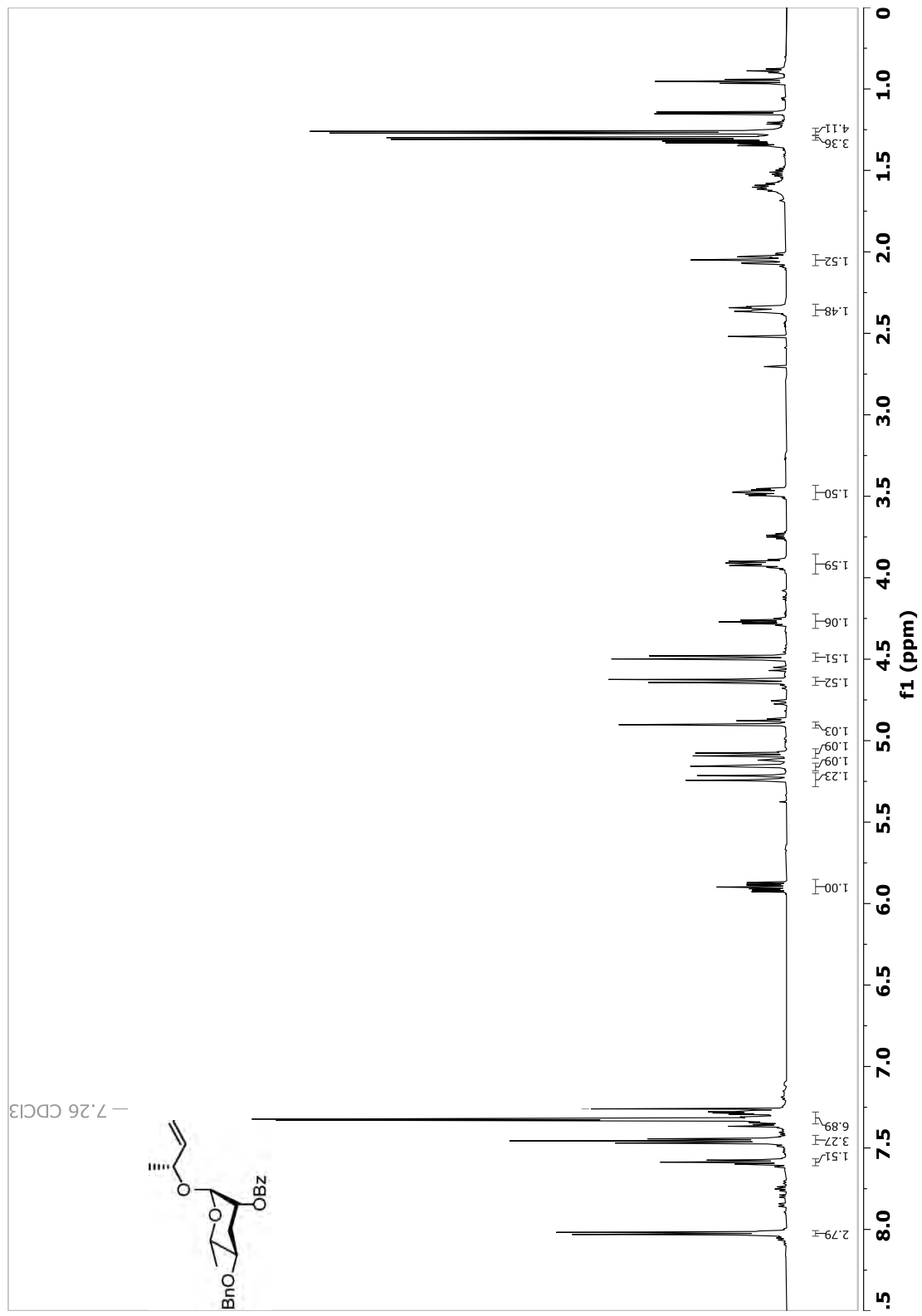


Figure S 305:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(2-O-benzyl-4-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (212).

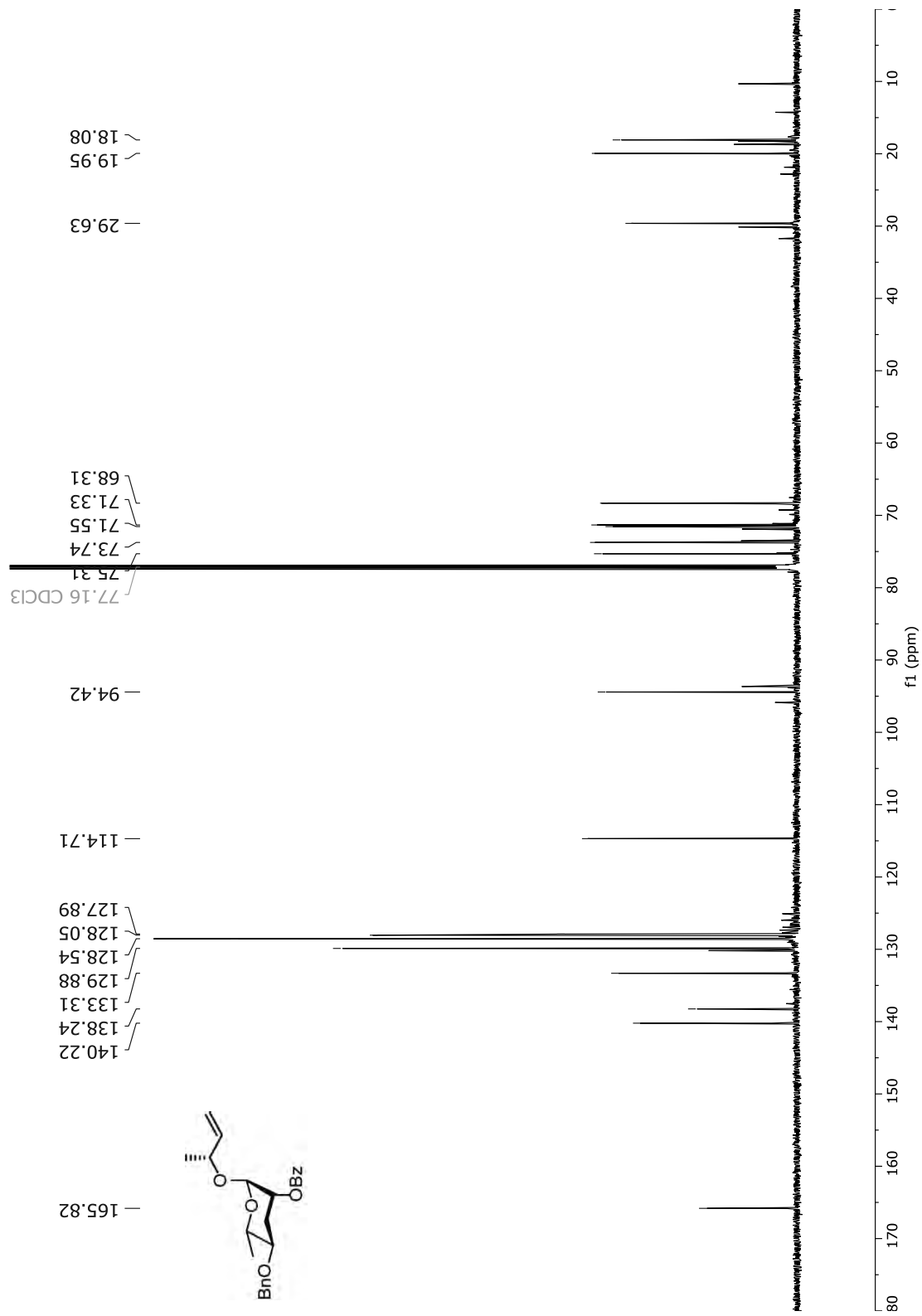


Figure S 306: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2-*O*-benzoyl-4-*O*-benzyl-3,6-dideoxy-L-*arabino*-hexopyranosyl)oxy]-1-butene (212).

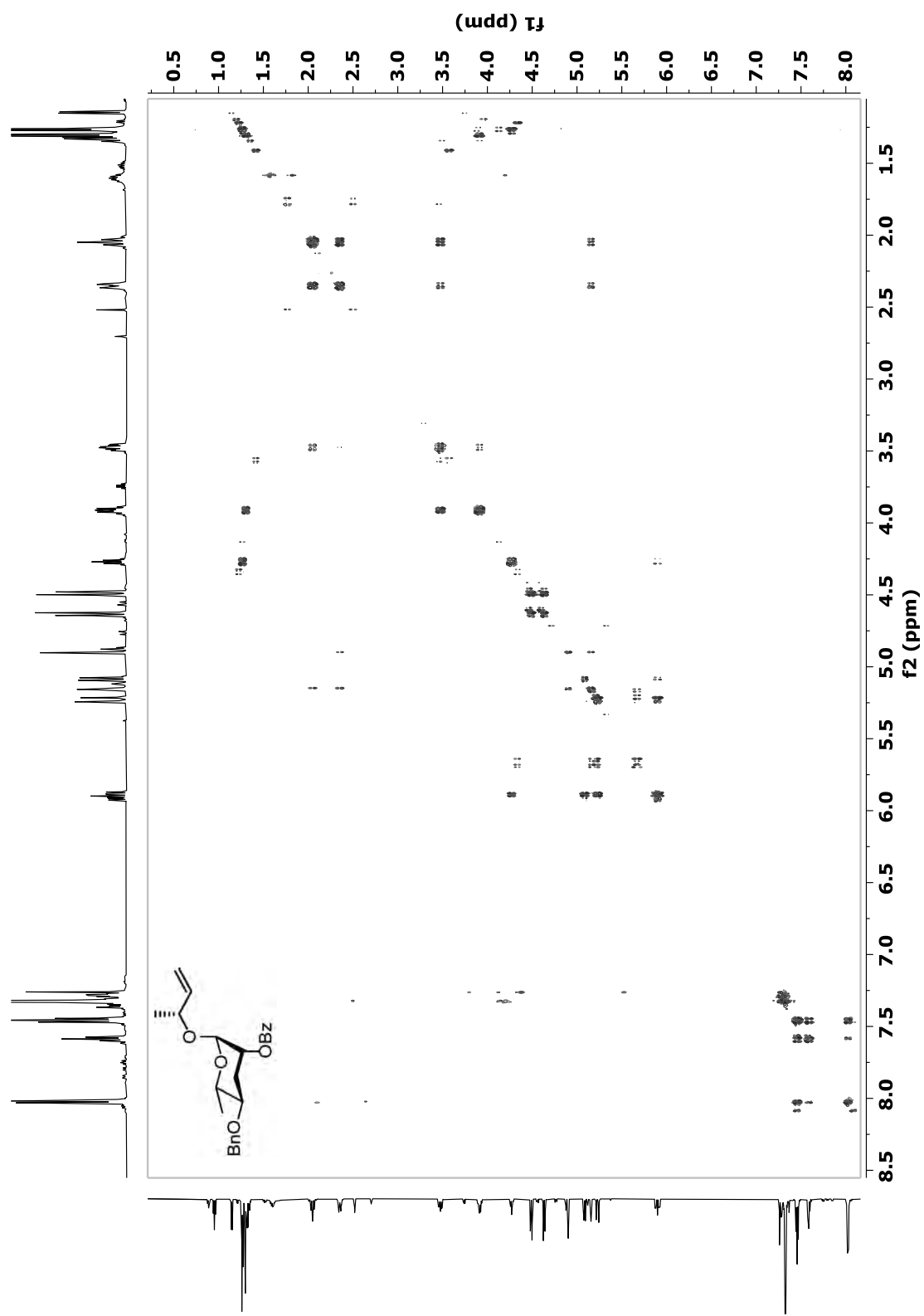


Figure S 307: HSQC (600 MHz, CDCl<sub>3</sub>) of (3R)-3-[(2-O-benzoyl-4-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (212).

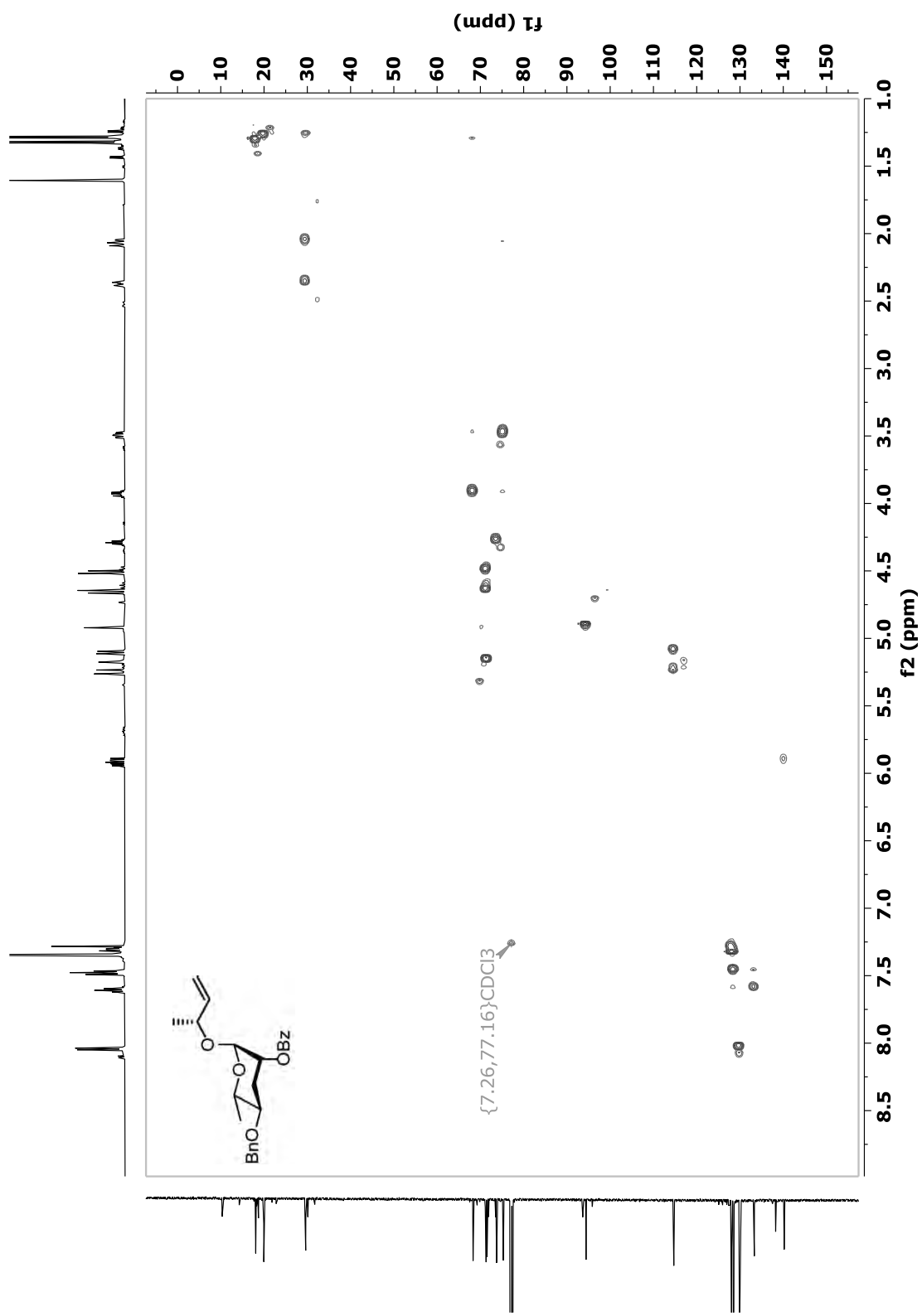


Figure S 308:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of (3*R*)-3-[(2,4-di-*O*-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (215).

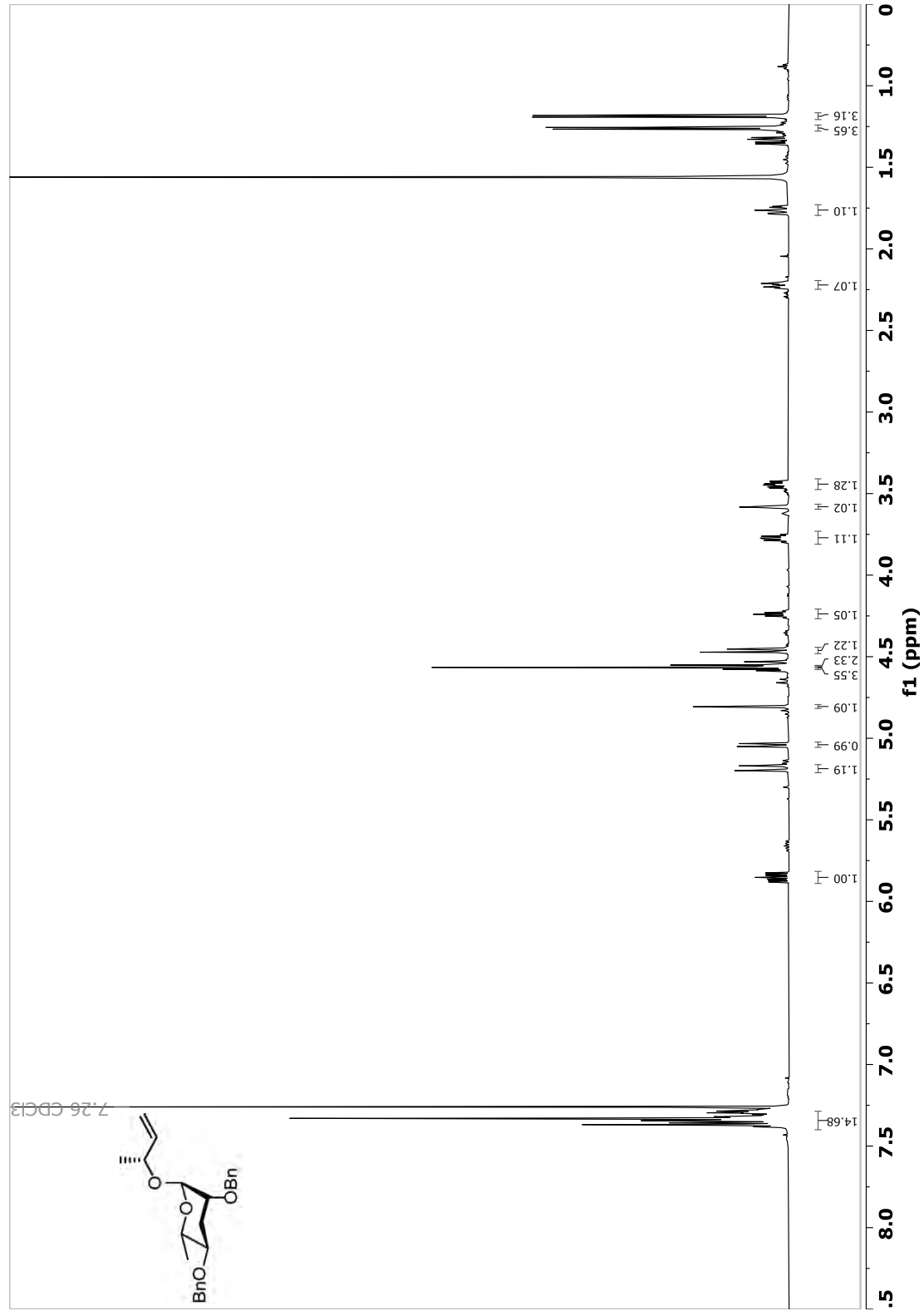


Figure S 309:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of (3R)-3-[(2,4-di-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (215).

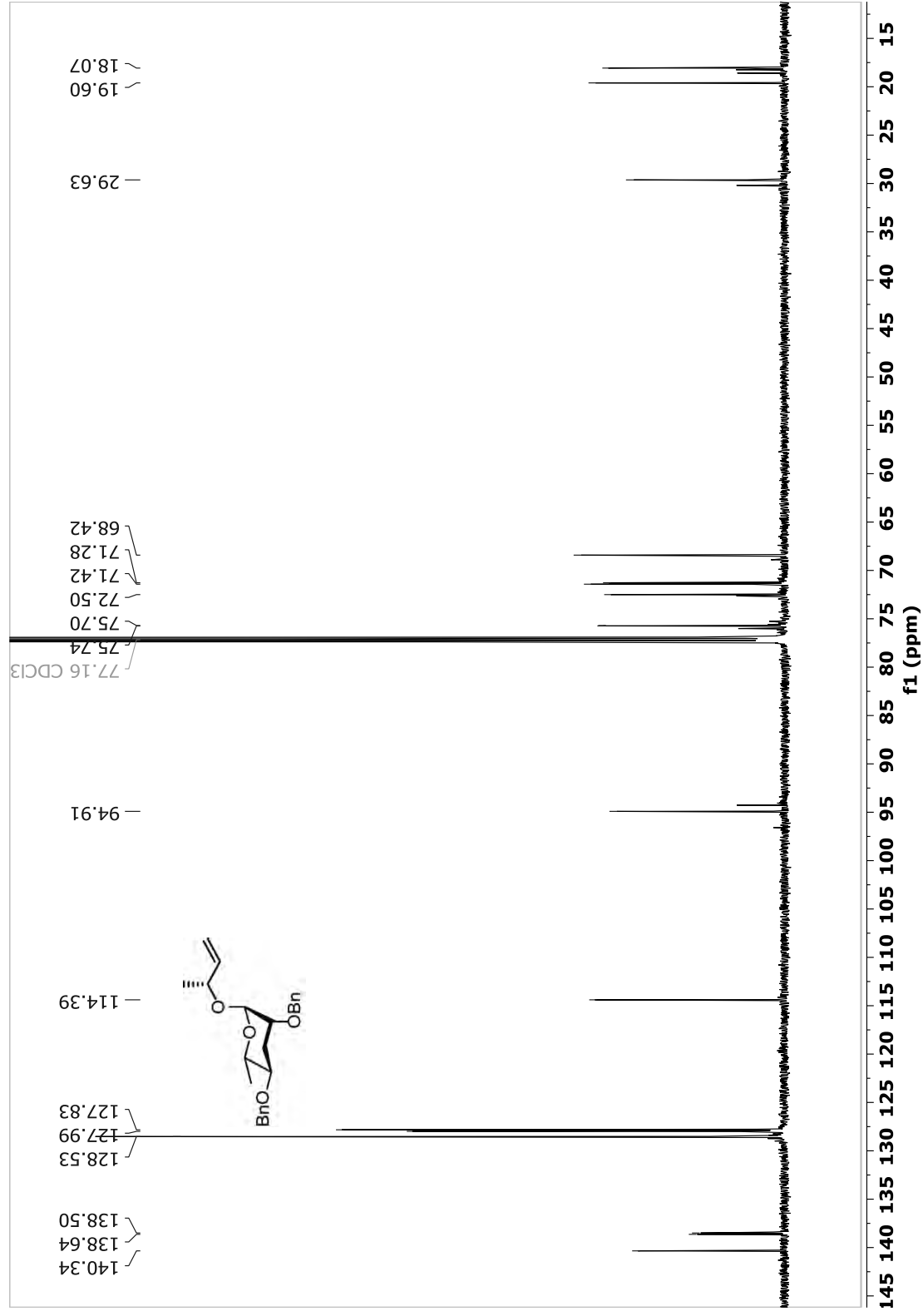


Figure S 310: *dqf*-COSY (150 MHz, CDCl<sub>3</sub>) of (3*R*)-3-[(2,4-di-*O*-benzyl-3,6-dideoxy-L-*arabino*-hexopyranosyl)oxy]-1-butene (215).

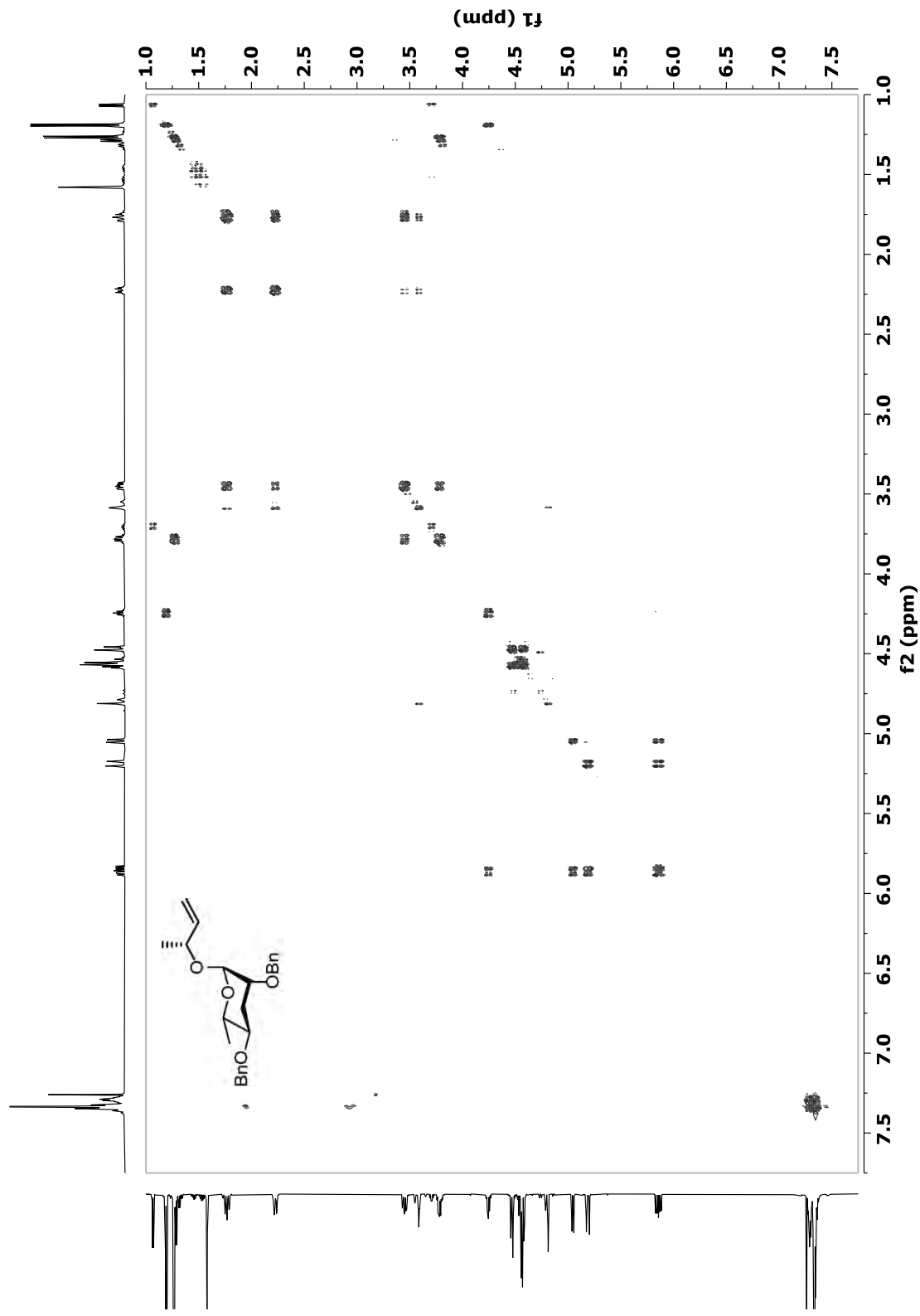


Figure S 311: HSQC (150 MHz, CDCl<sub>3</sub>) of (3R)-3-[(2,4-di-O-benzyl-3,6-dideoxy-L-arabino-hexopyranosyl)oxy]-1-butene (215).

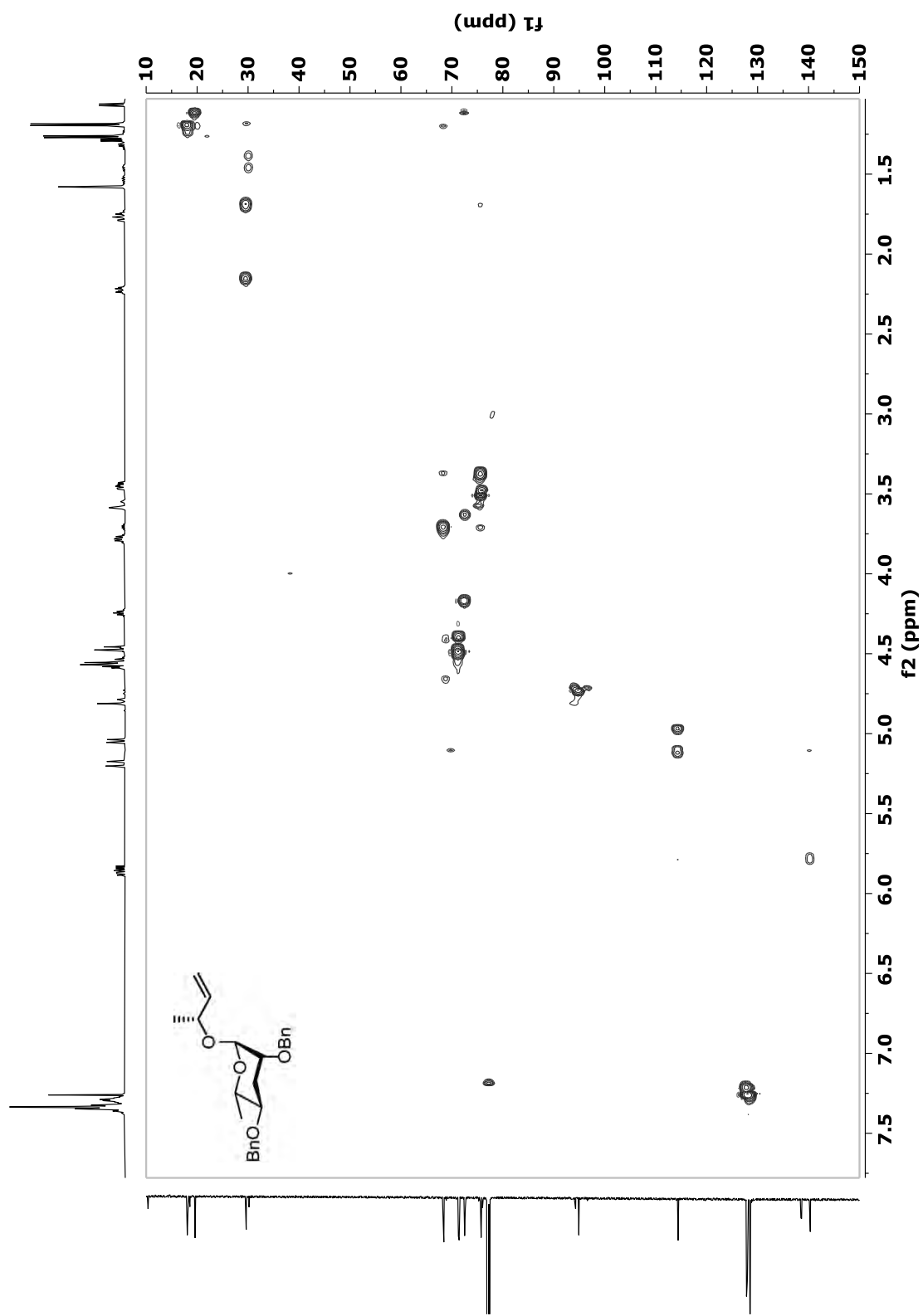


Figure S 312:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of Benzylloxy-(4R)-4-[2,4-di-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (216).

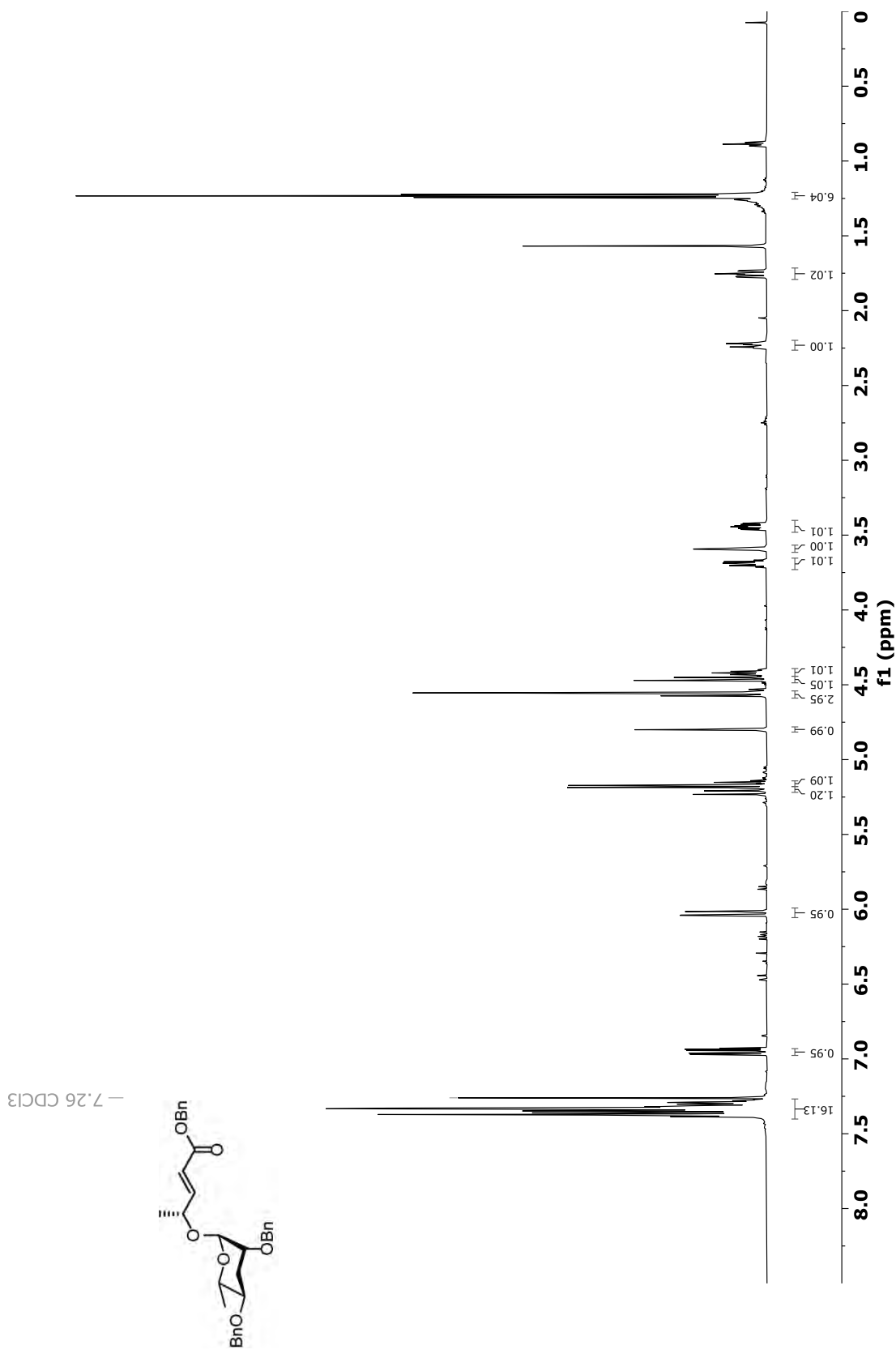


Figure S 313:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of Benzyloxy-(4R)-4-[2,4-di-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (216).

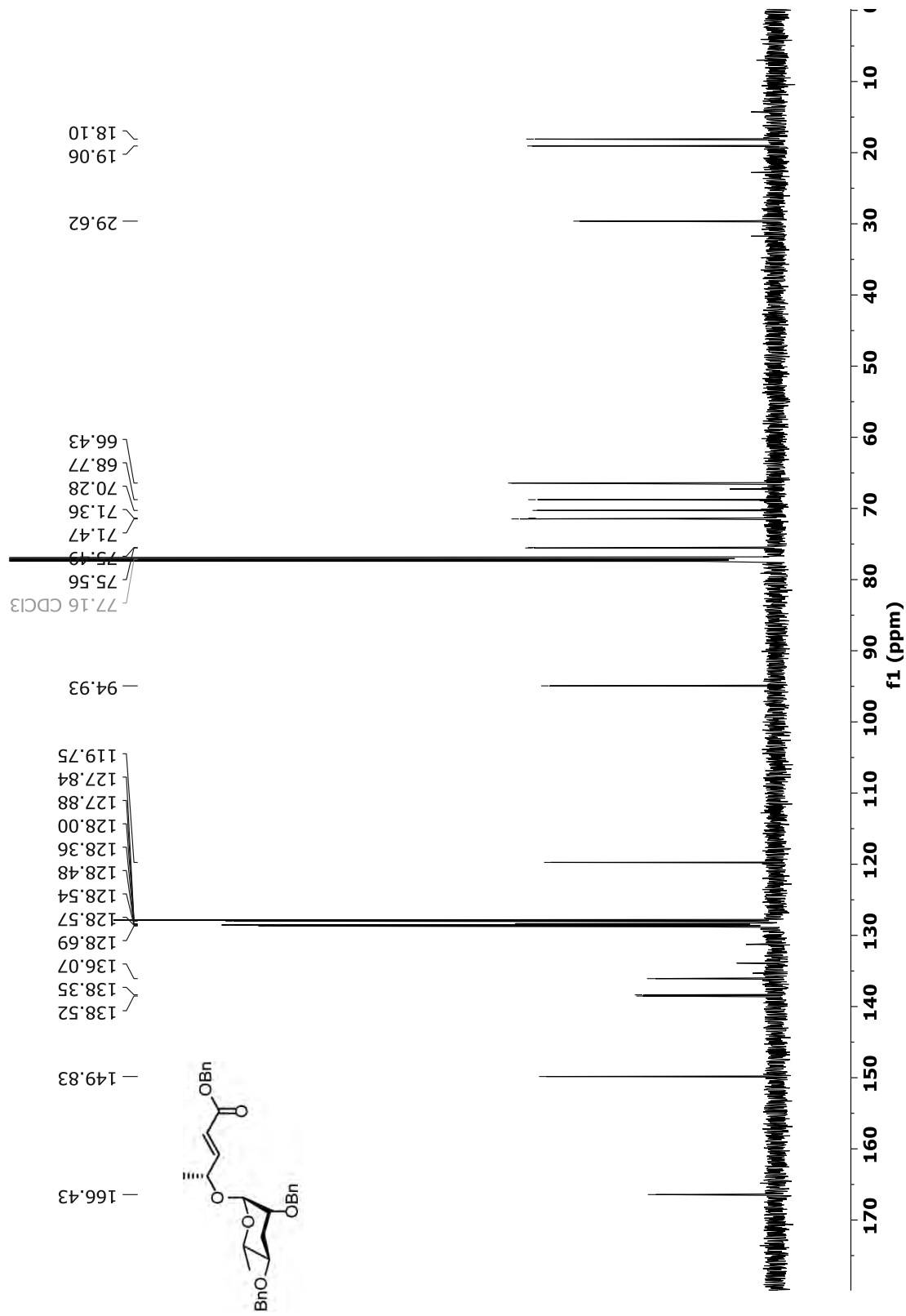


Figure S 314: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of Benzyloxy-(4*R*)-4-[2,4-di-*O*-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (216).

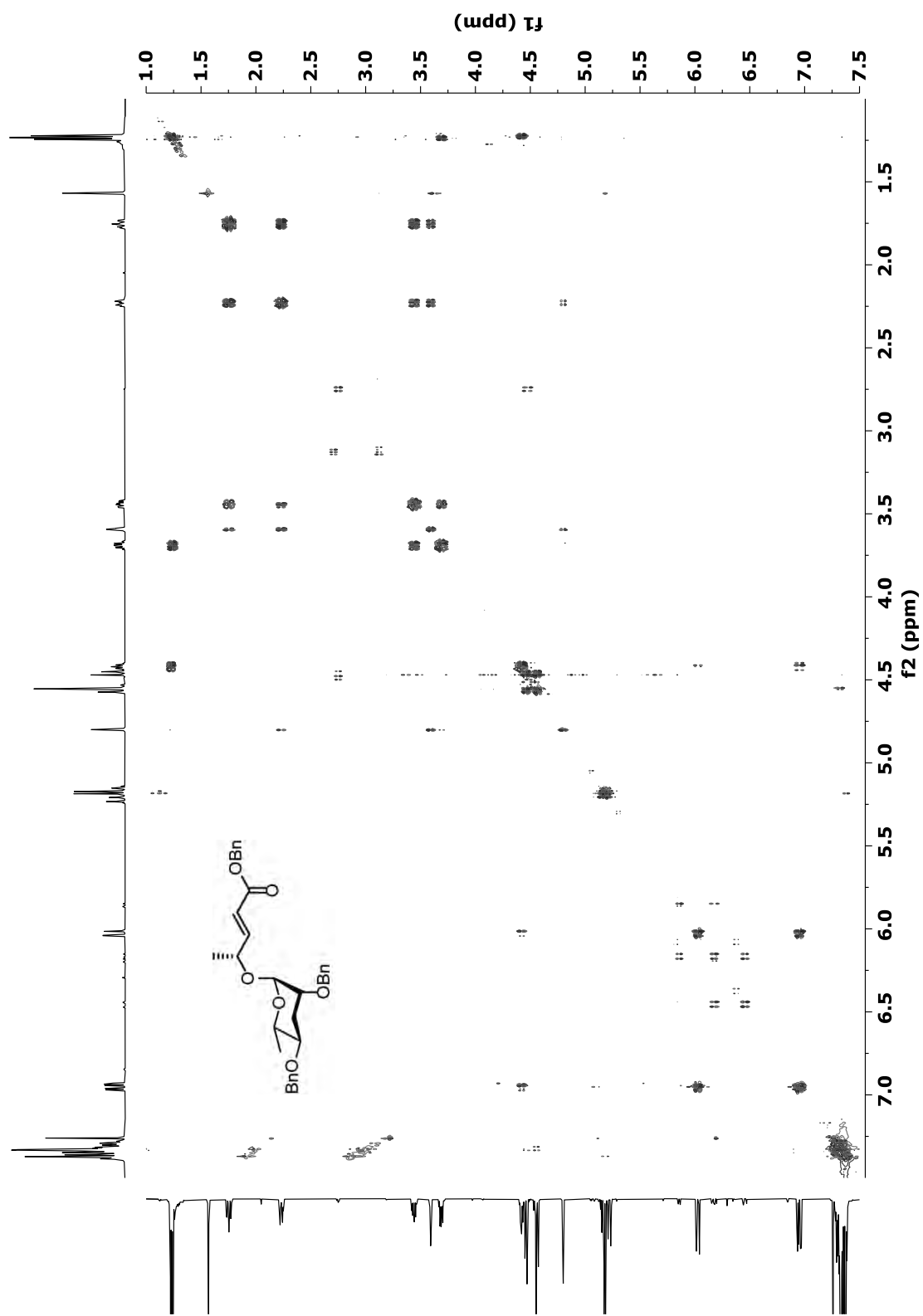


Figure S 315: HSQC (600 MHz, CDCl<sub>3</sub>) of Benzyloxy-(4R)-4-[2,4-di-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentenoate (216).

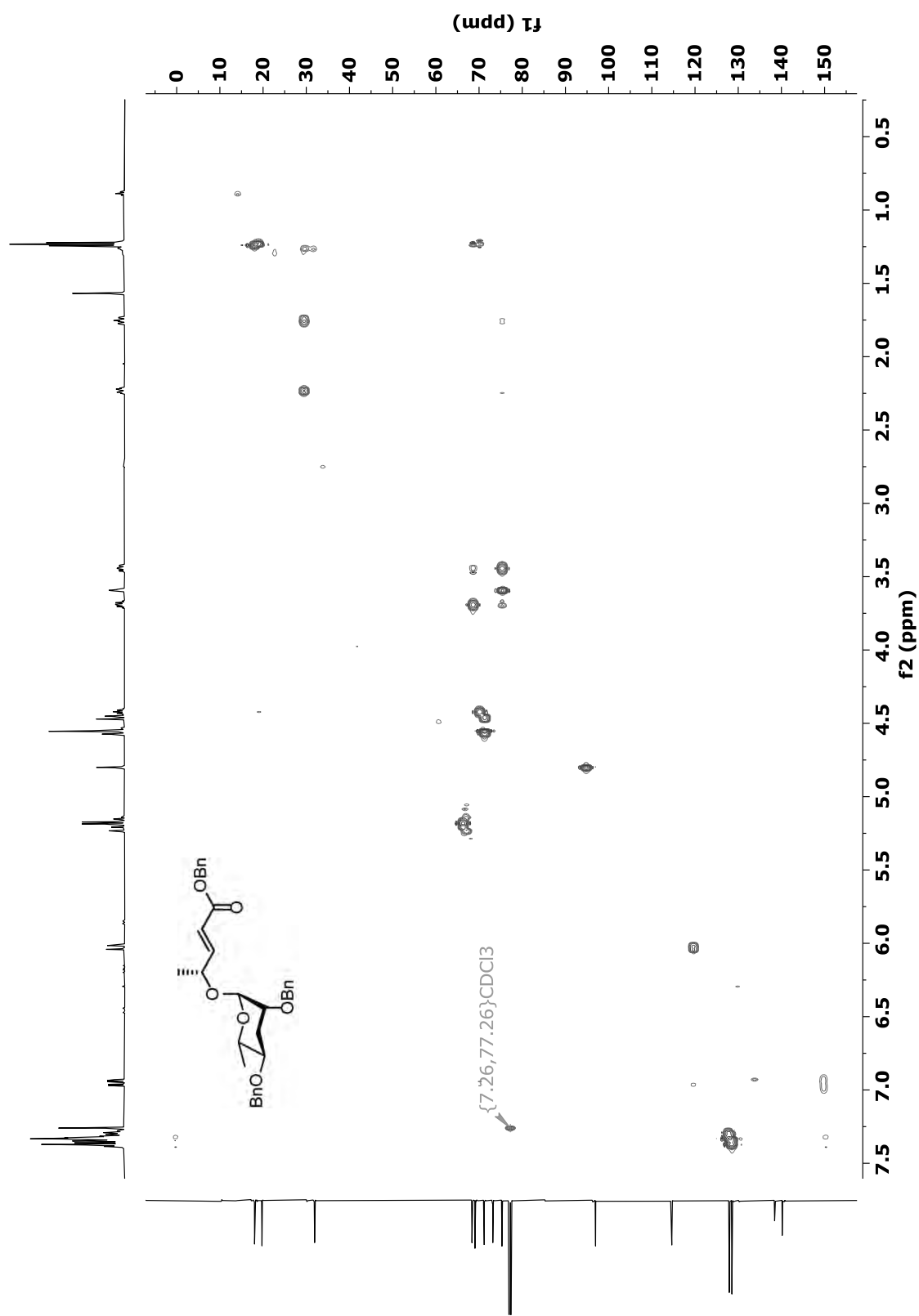


Figure S 316:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 4-[2,4-di-*O*-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentanoic acid (217).

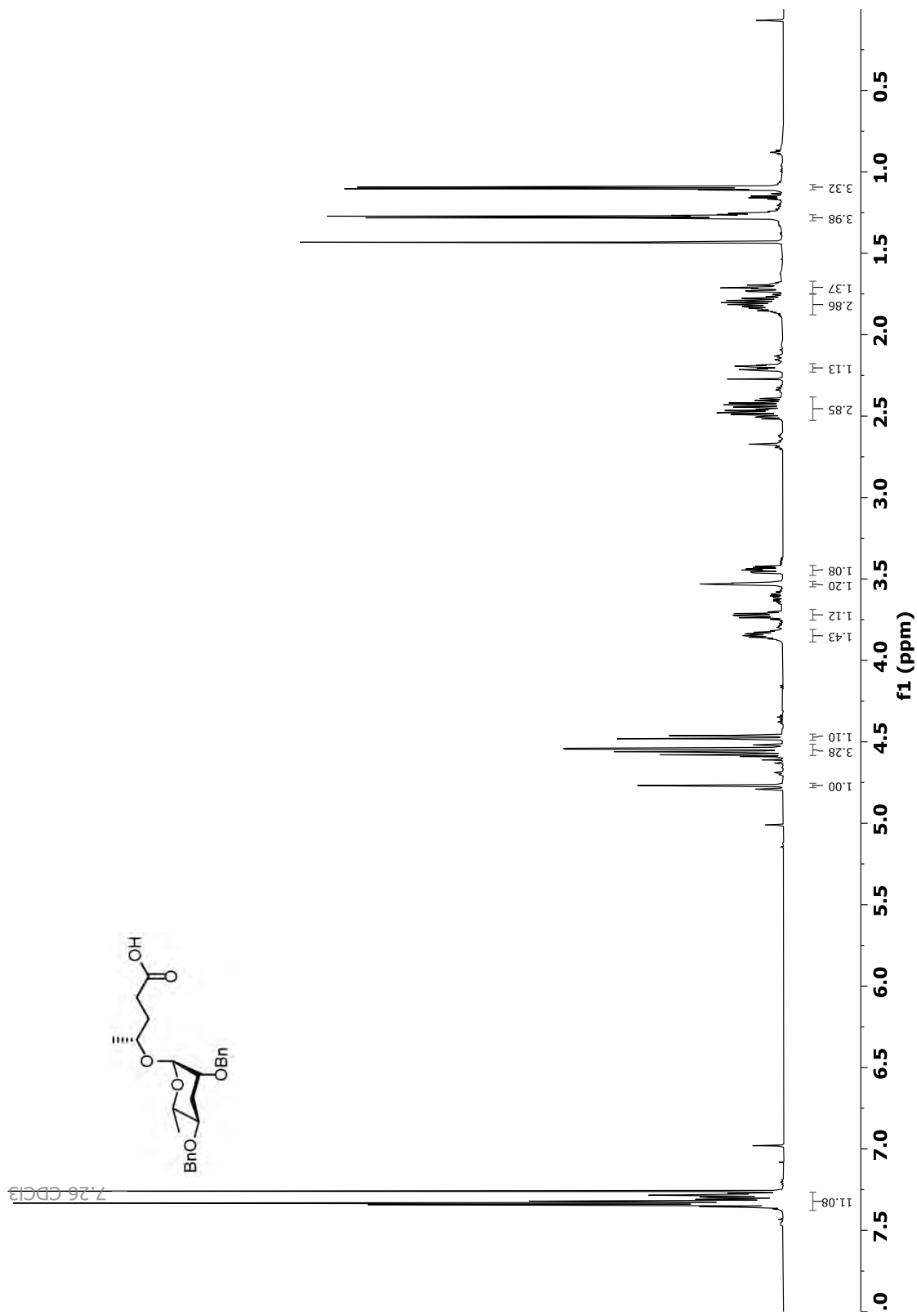


Figure S 317:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 4-[2,4-di-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentanoic acid (217).

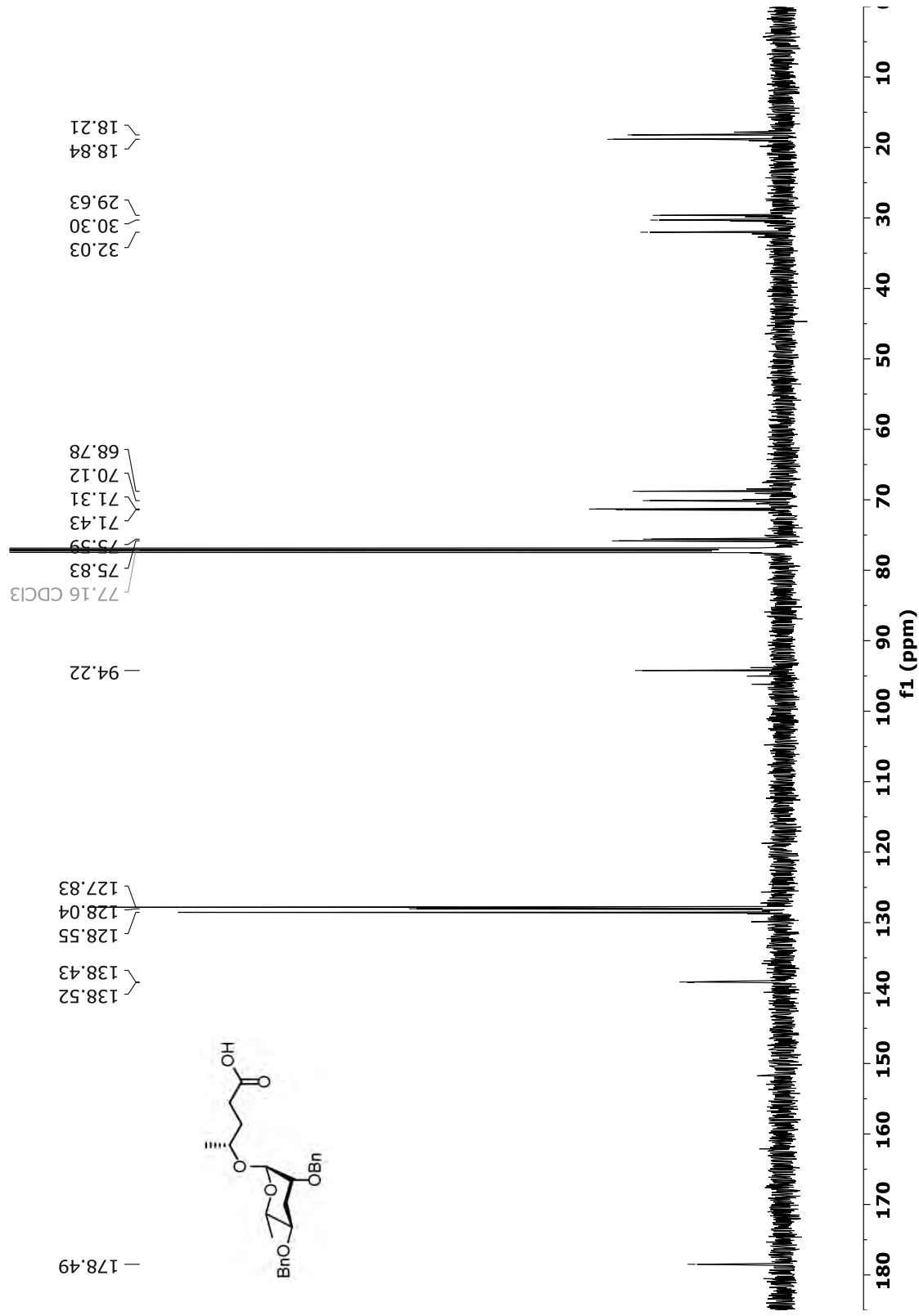


Figure S 318: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 4-[2,4-di-*O*-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentanoic acid (217).

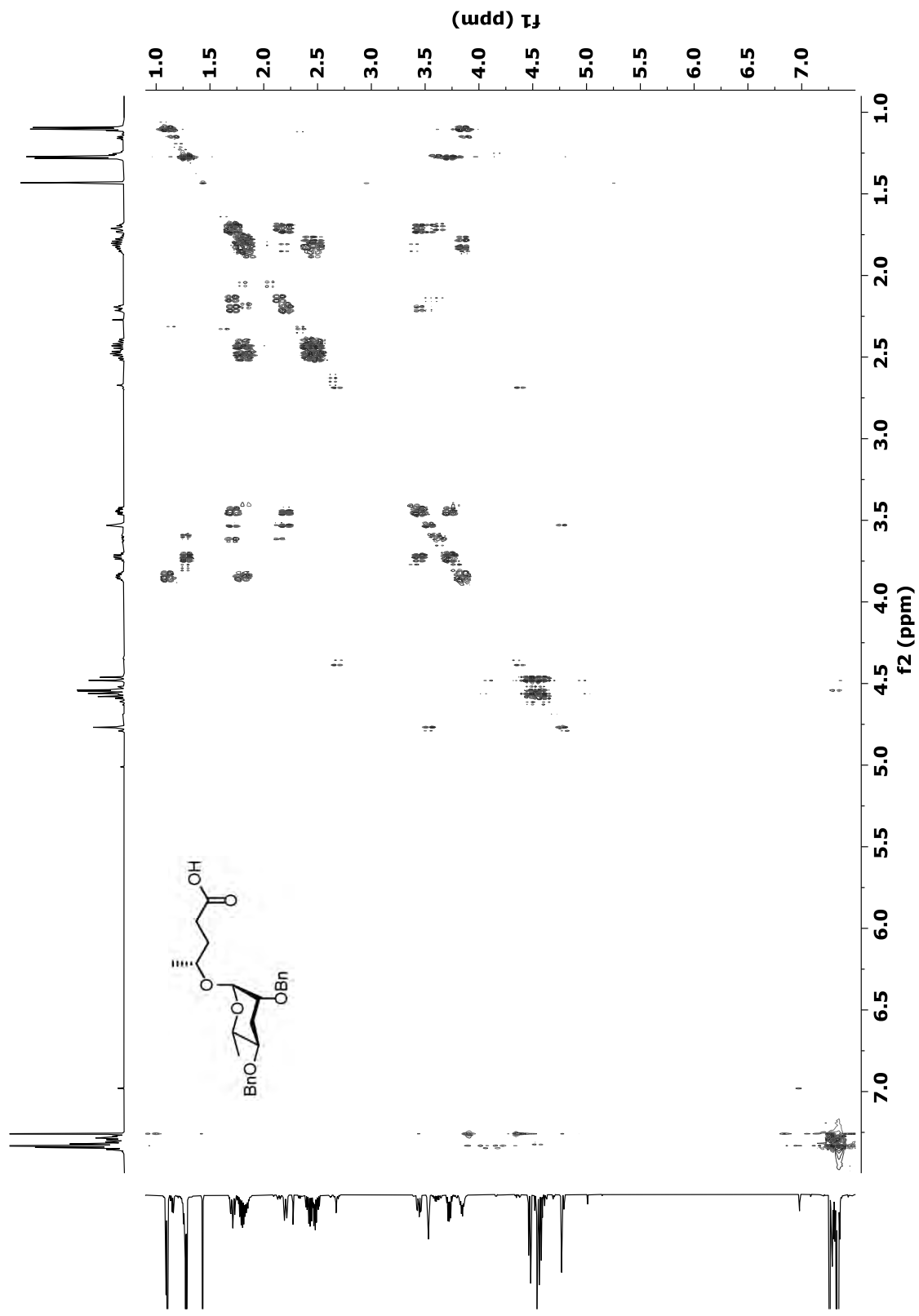


Figure S 319: HSQC (600 MHz, CDCl<sub>3</sub>) of 4-[2,4-di-O-benzyl-3,6-dideoxy- $\alpha$ -L-arabino-hexopyranosyl]oxy]-2-pentanoic acid (217).

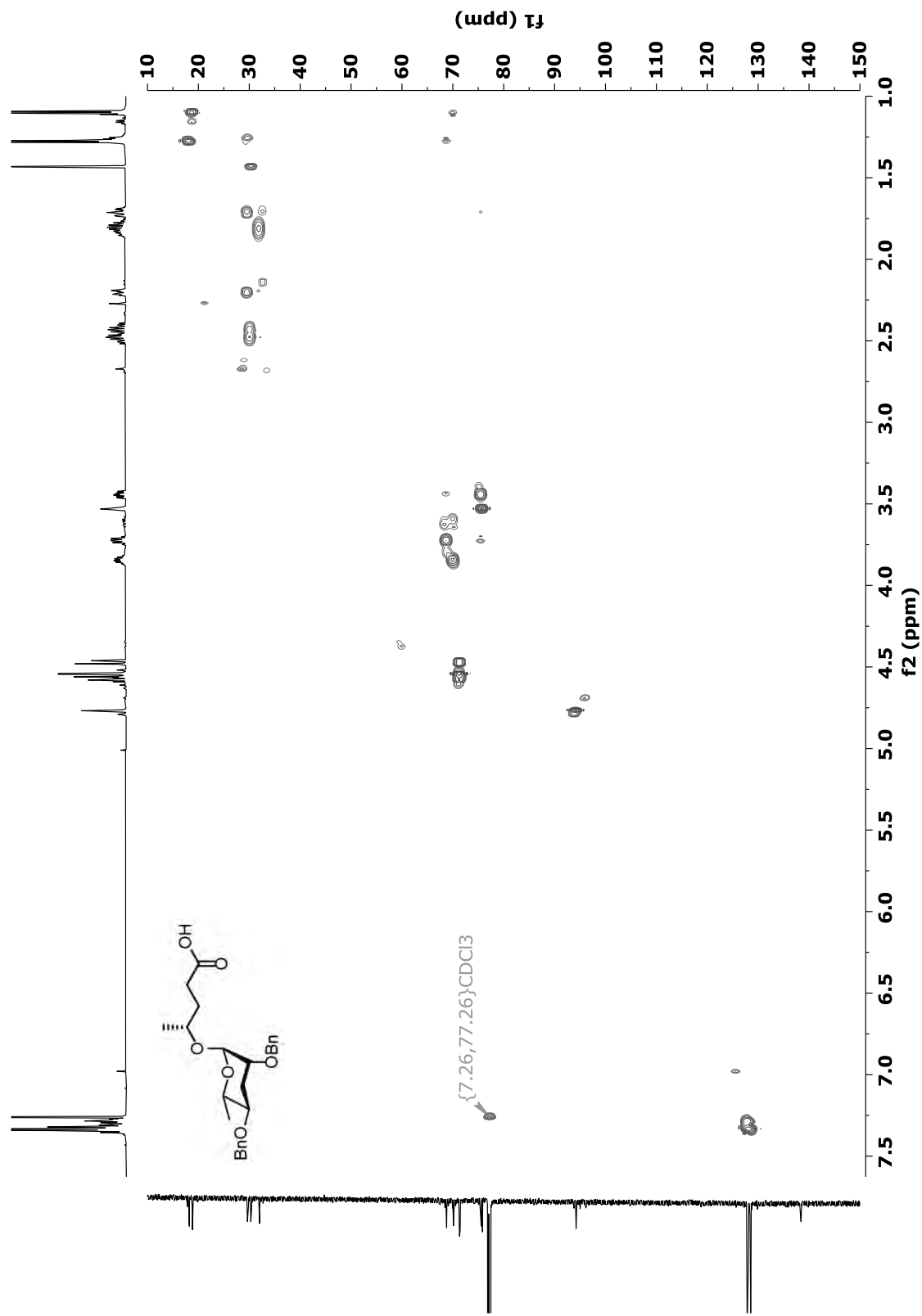


Figure S 320:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 220.

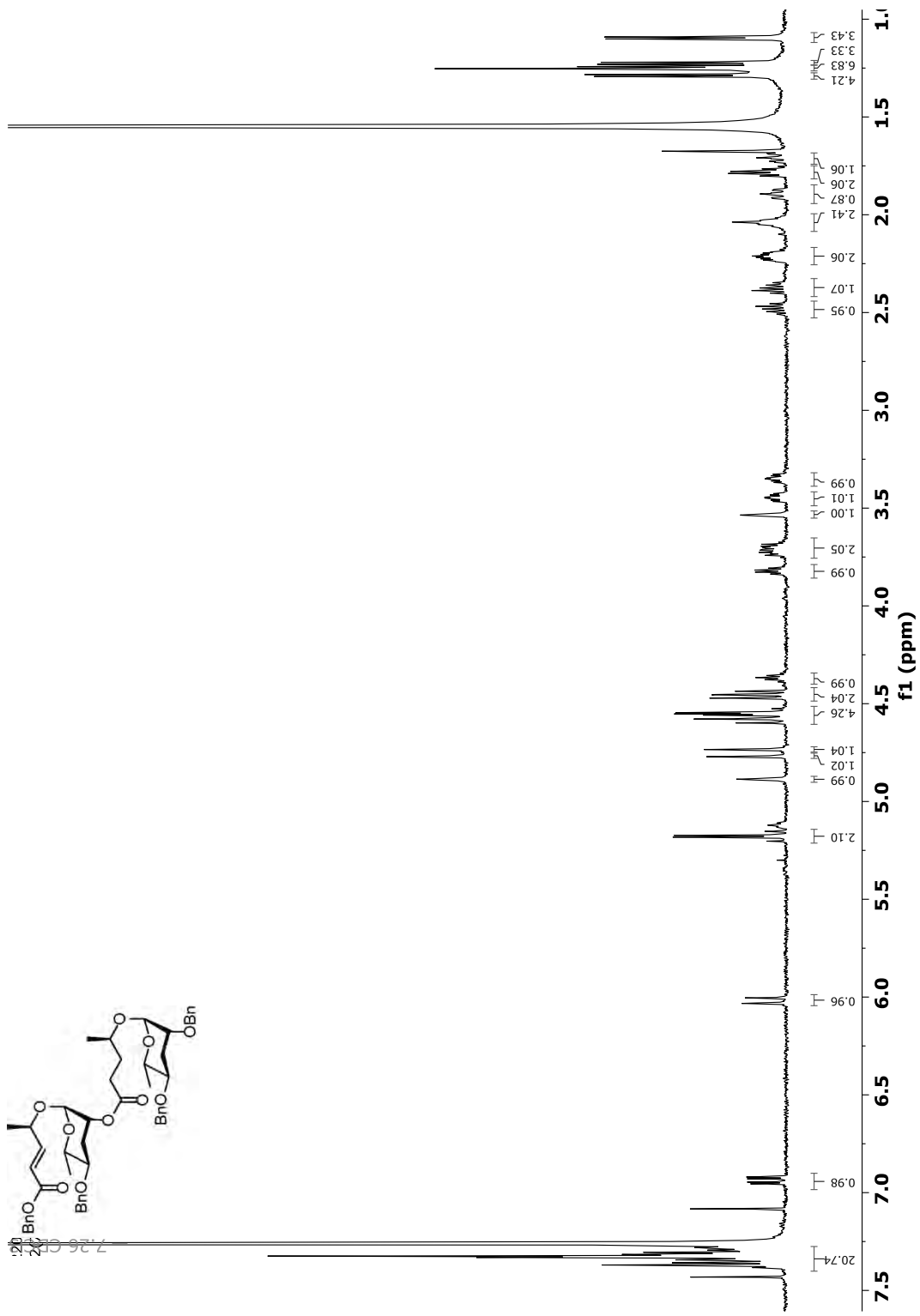


Figure S 321: <sup>13</sup>C NMR (150 MHz, CDCl<sub>3</sub>) of 220.

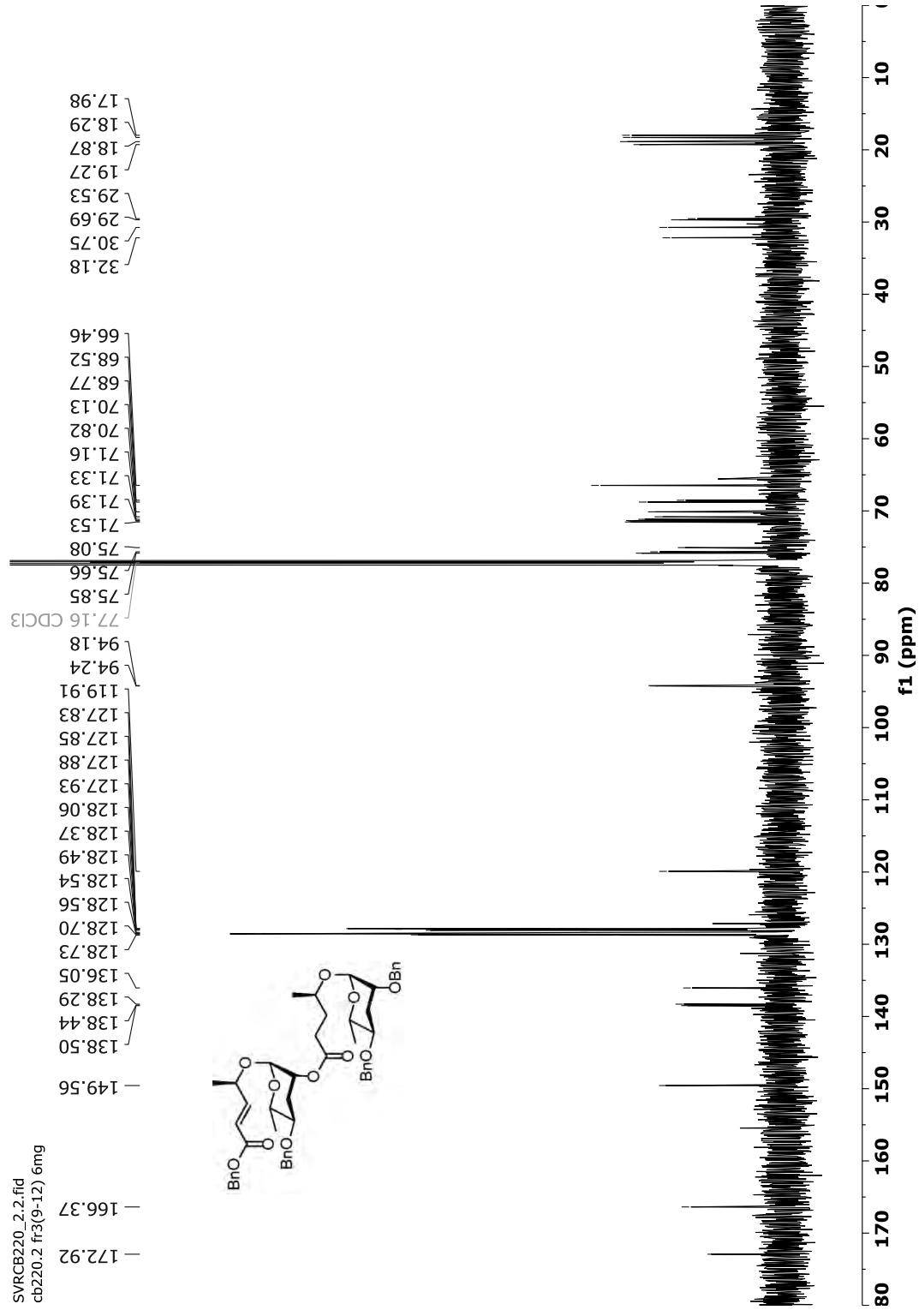


Figure S 322: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 220.

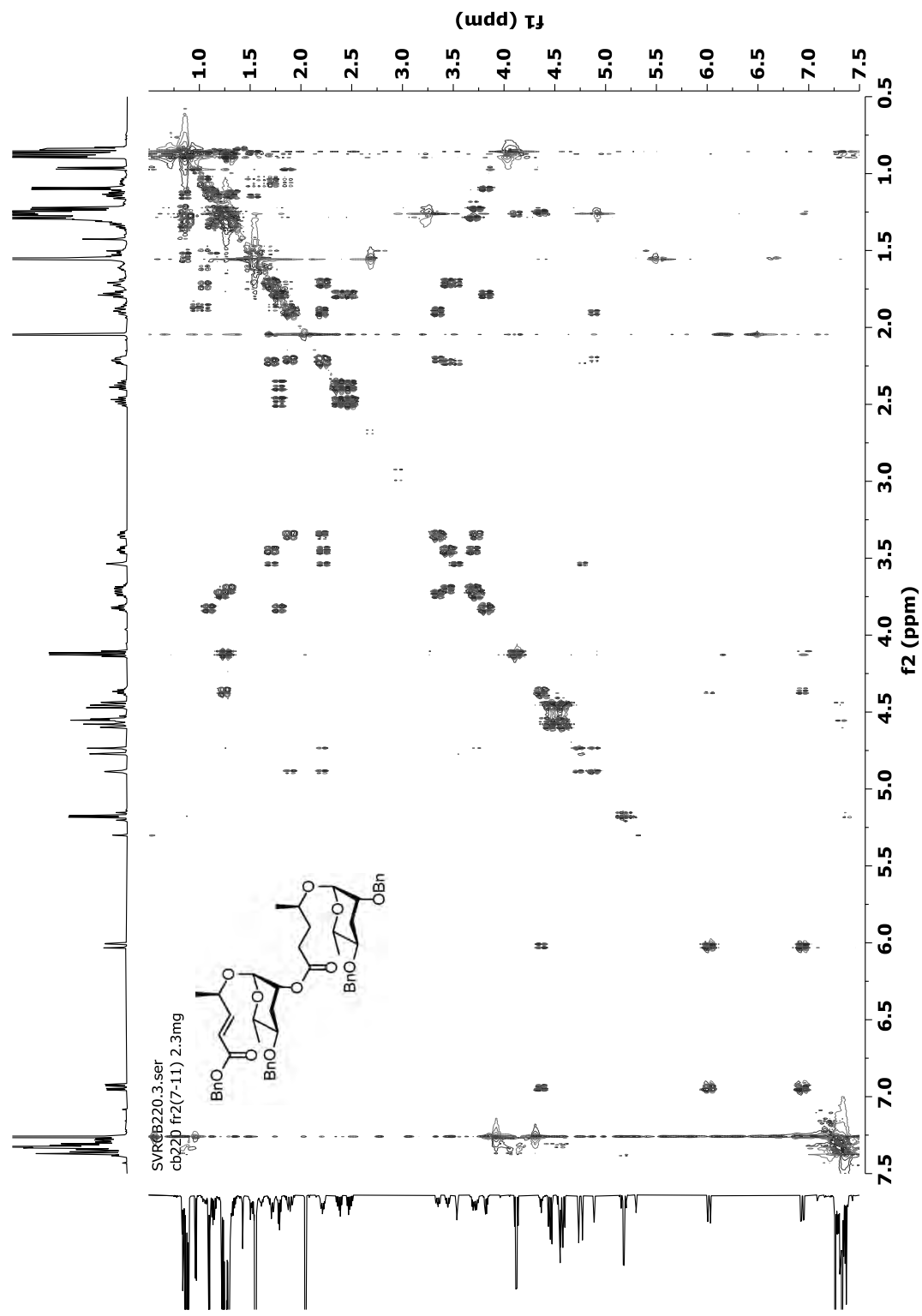


Figure S 323: HSQC (600 MHz, CDCl<sub>3</sub>) of 220.

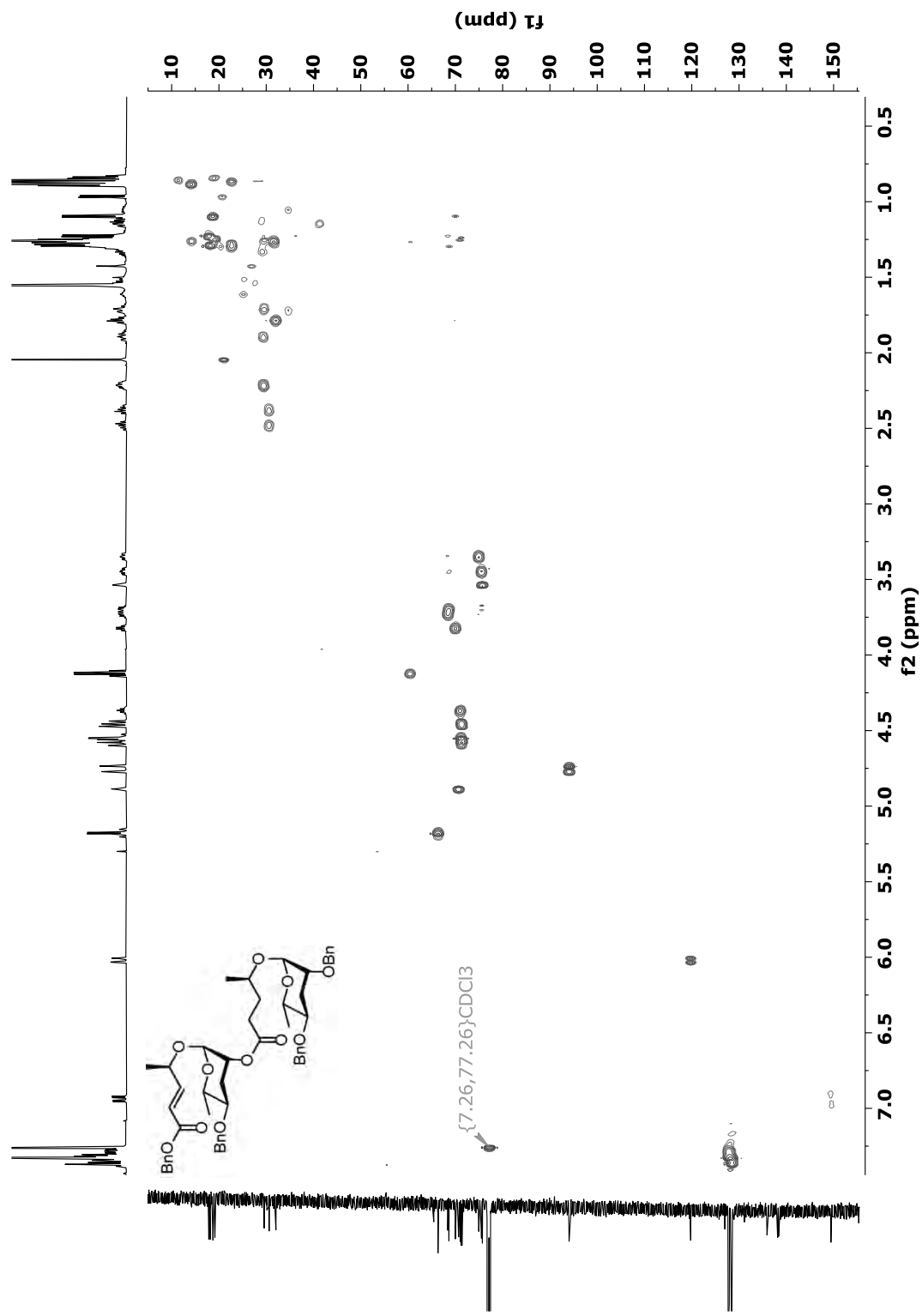


Figure S 324: HMBC (600 MHz, CDCl<sub>3</sub>) of 220.

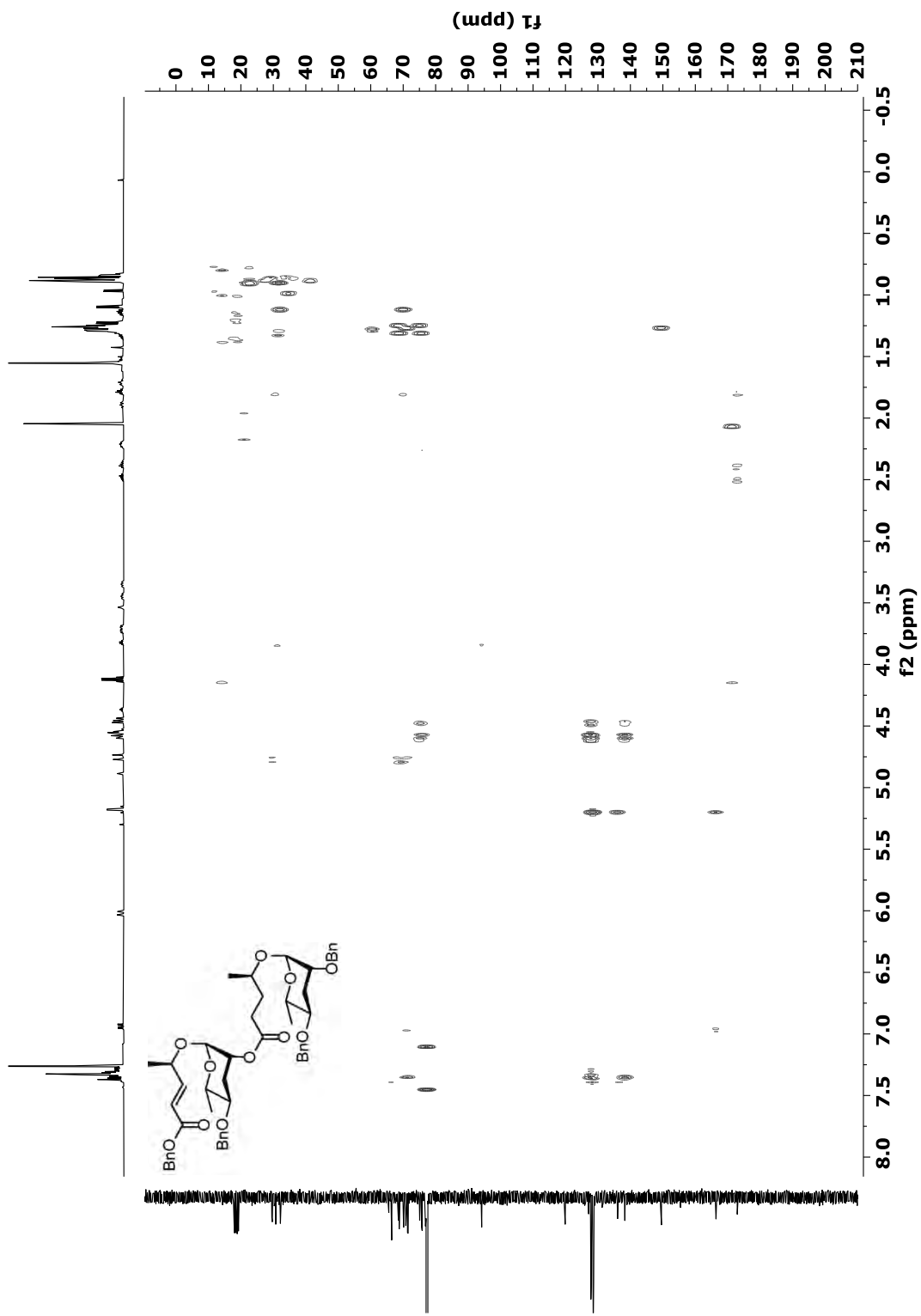


Figure S 325:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 227.

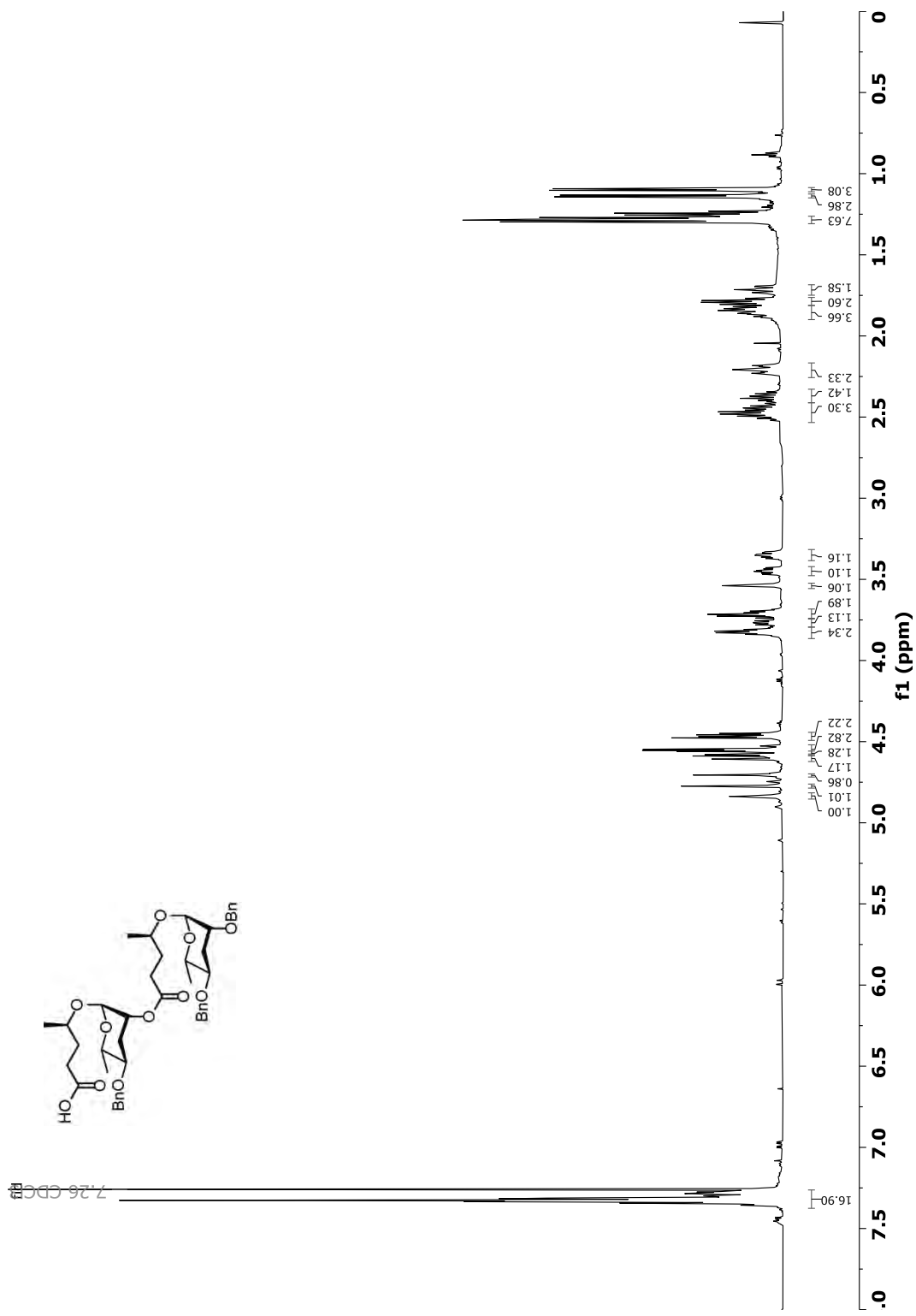


Figure S 326:  $^{13}\text{C}$  NMR (150 MHz,  $\text{CDCl}_3$ ) of 227.

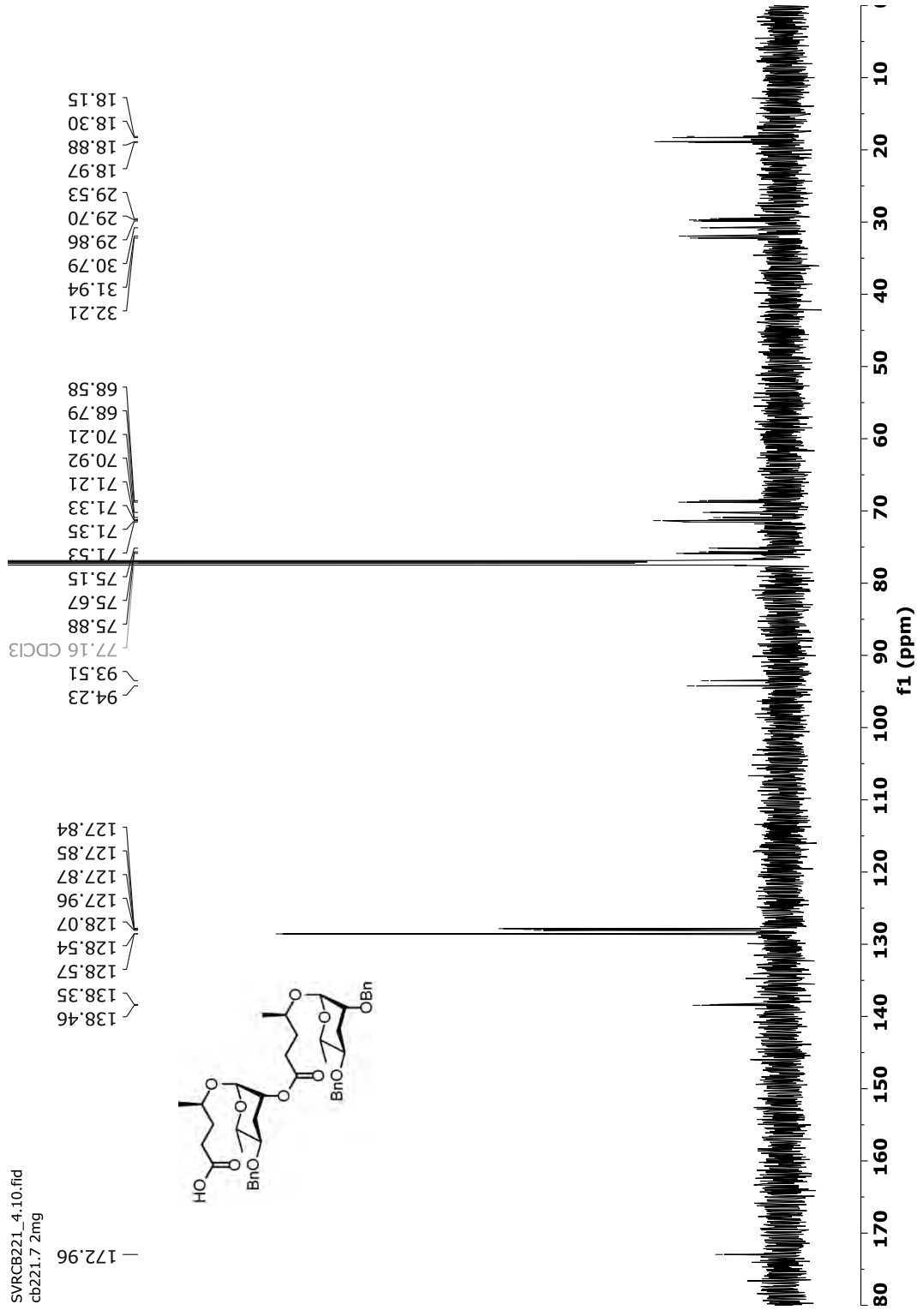


Figure S 327: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 227.

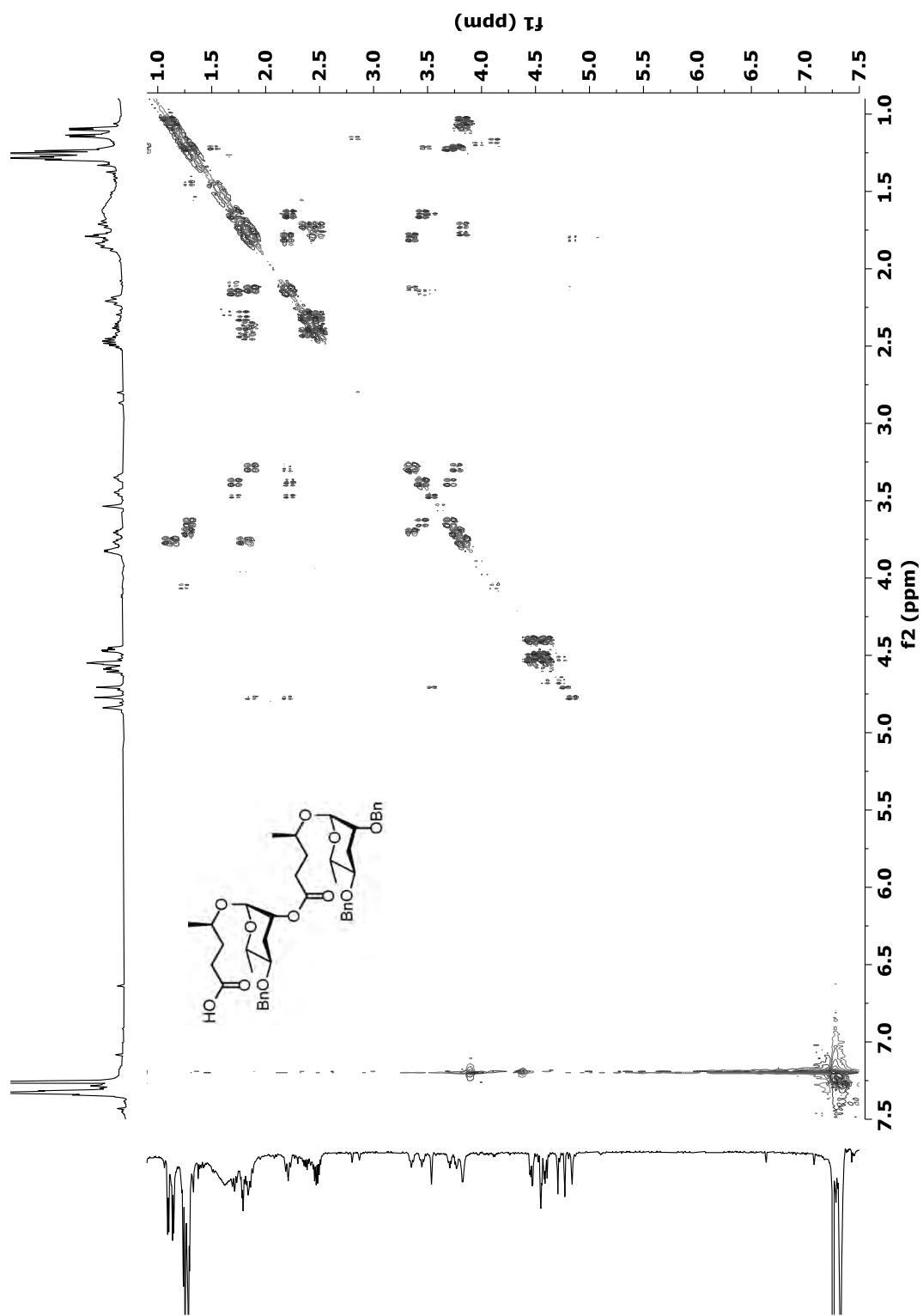


Figure S 328: HSQC (600 MHz, CDCl<sub>3</sub>) of 227.

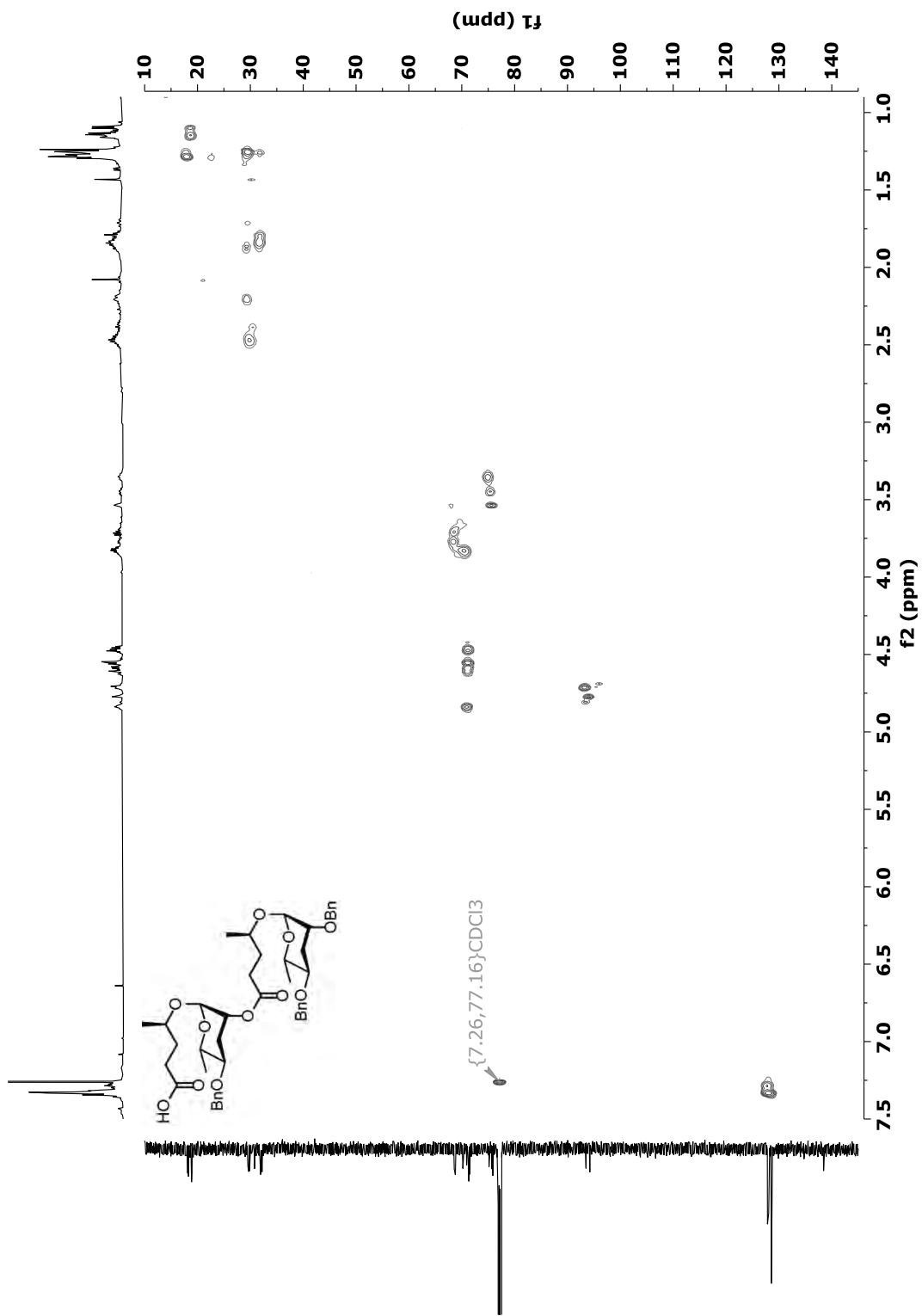


Figure S 329: HMBBC (600 MHz, CDCl<sub>3</sub>) of 227.

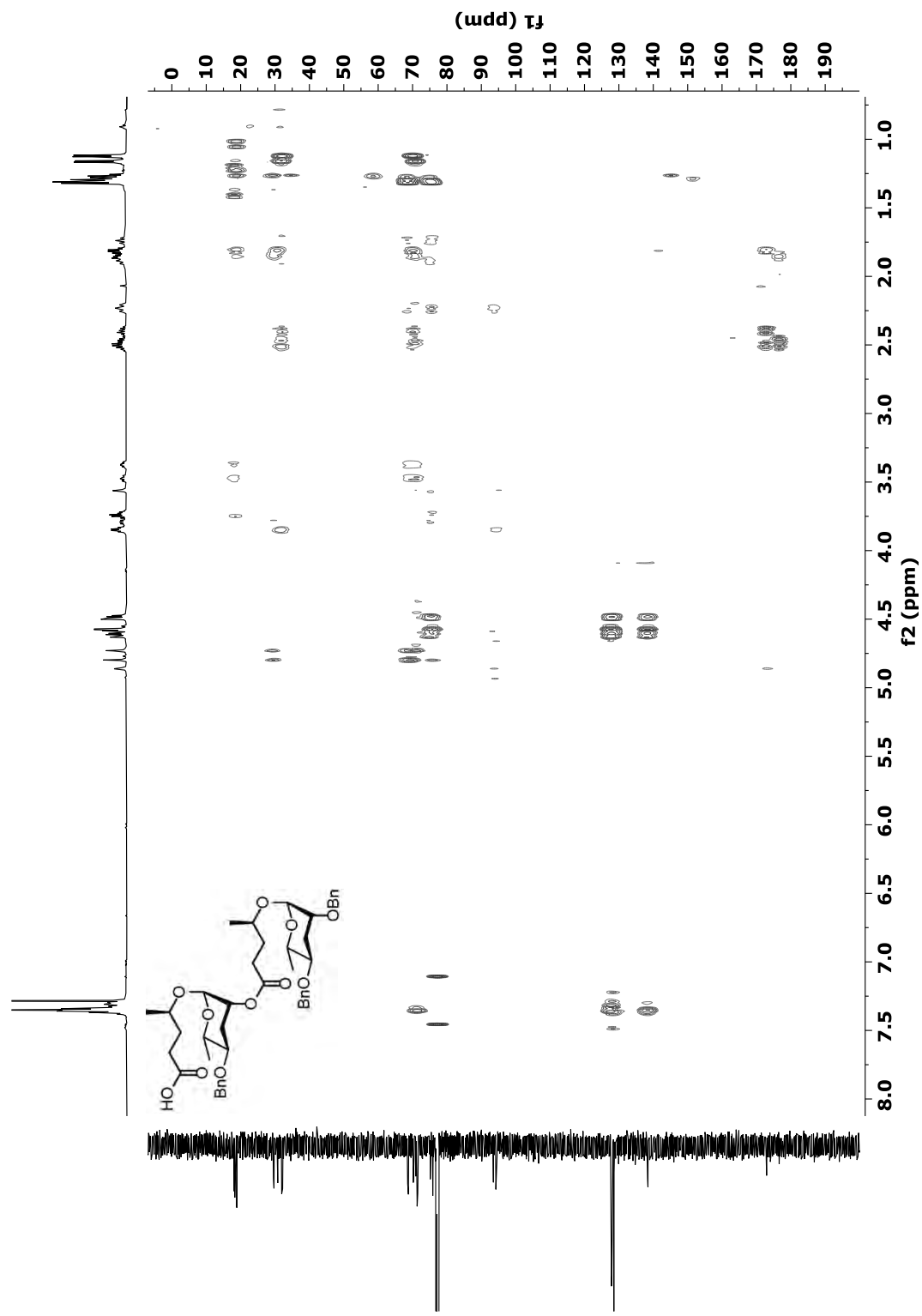


Figure S 330:  $^1\text{H}$  NMR (600 MHz,  $\text{CDCl}_3$ ) of 223.

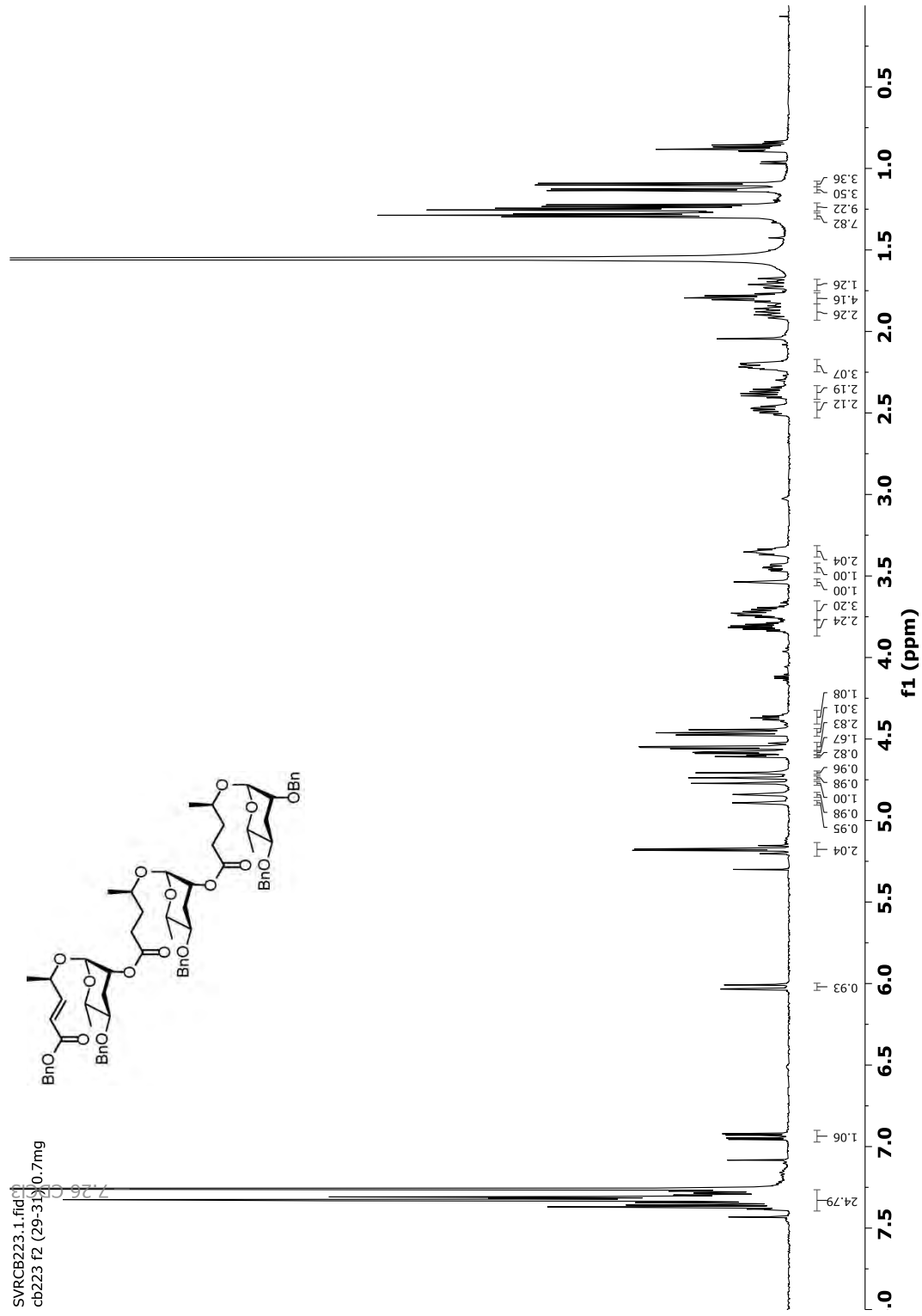


Figure S 331: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 223.

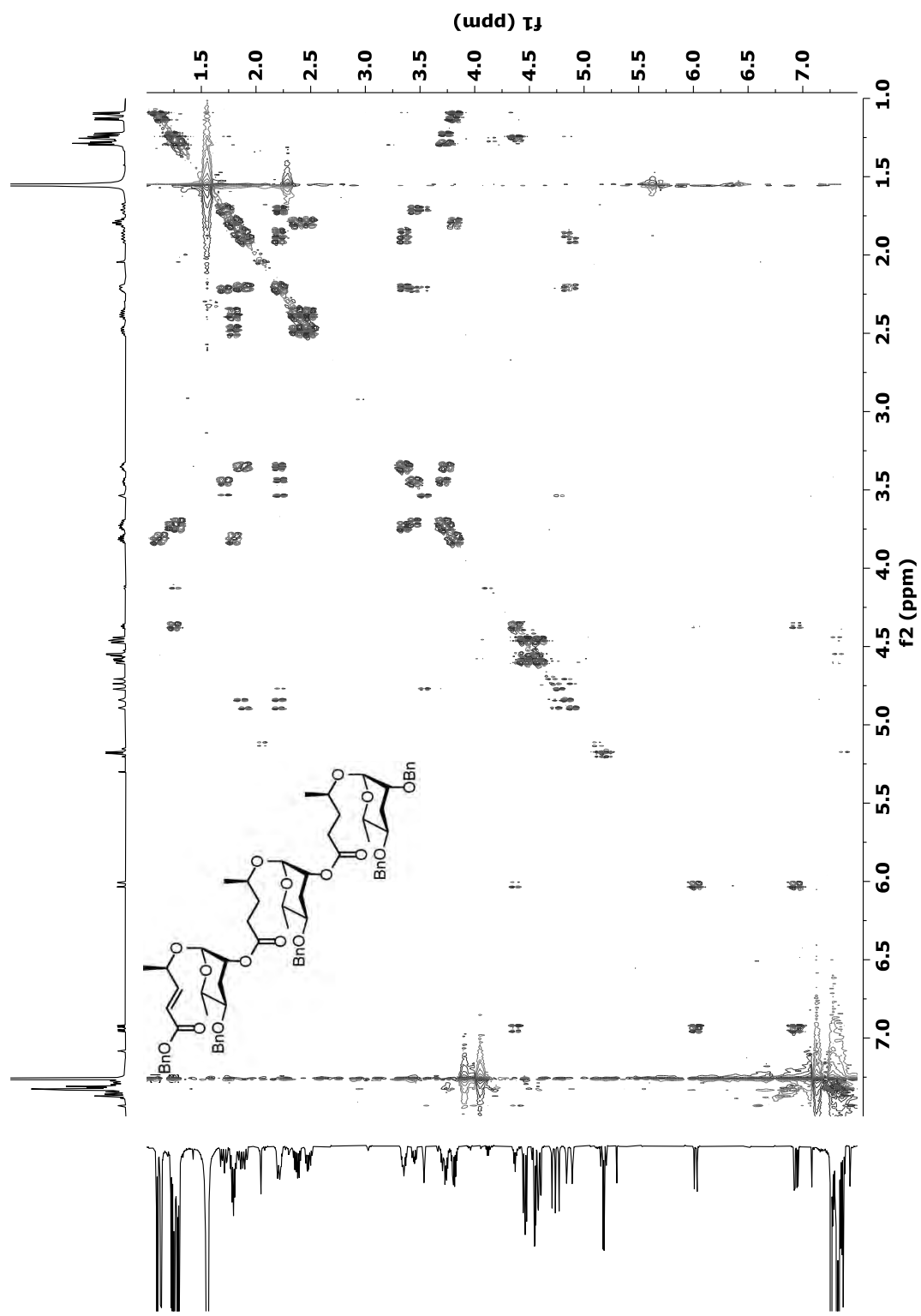


Figure S 332: HSQC (600 MHz, CDCl<sub>3</sub>) of 223.

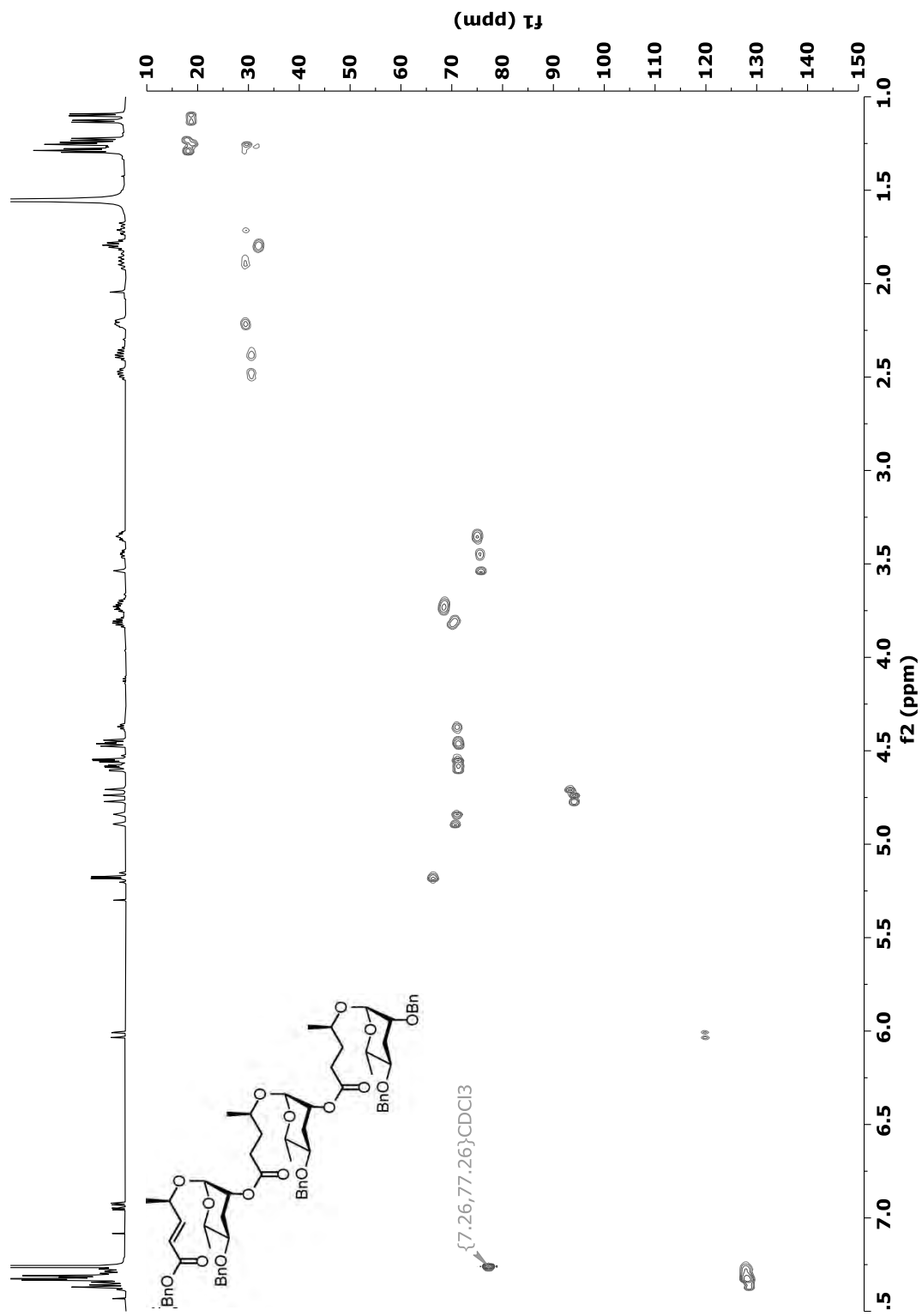


Figure S 333: HMBC (600 MHz, CDCl<sub>3</sub>) of 223.

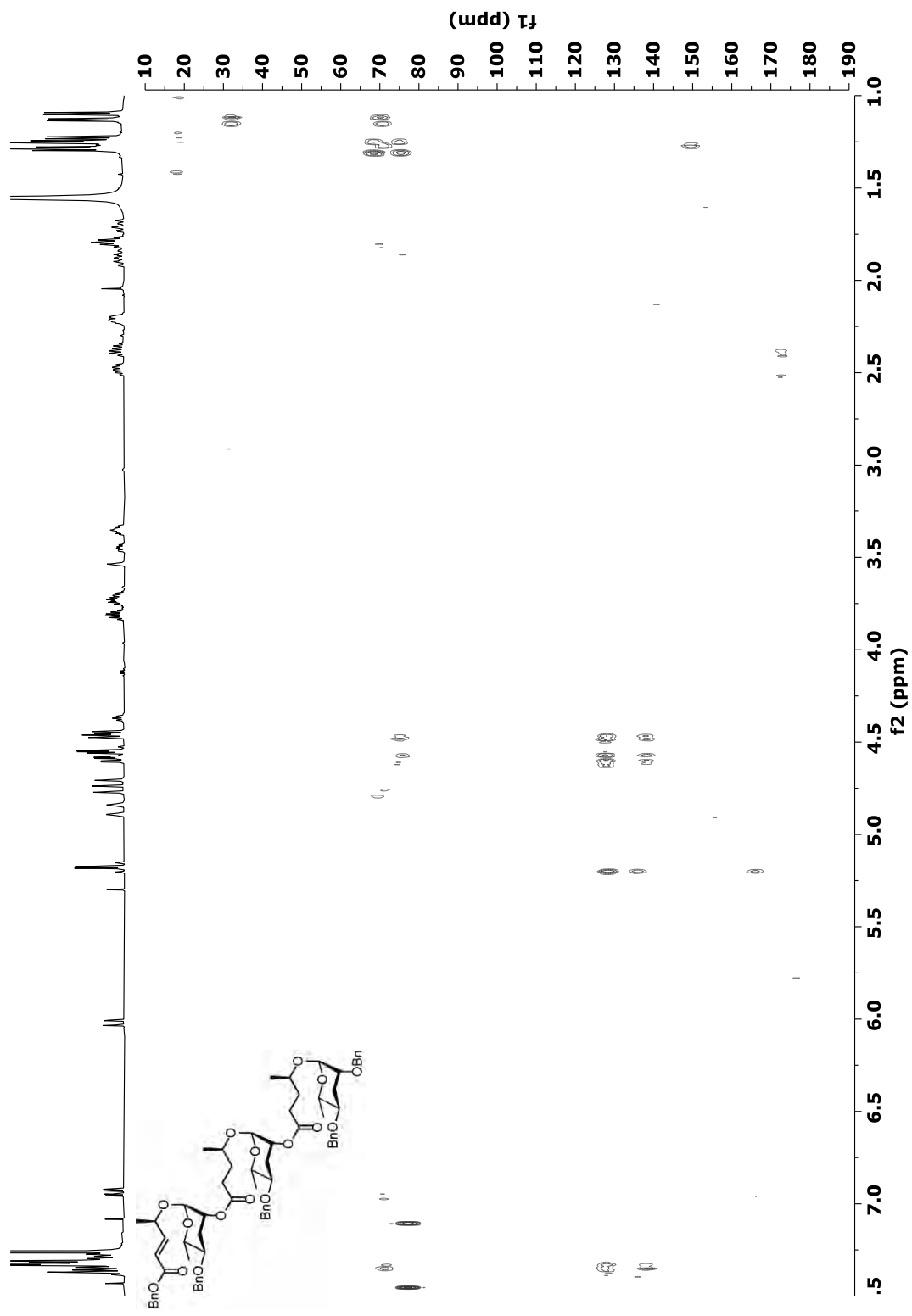




Figure S 335: *dqf*-COSY (600 MHz, CDCl<sub>3</sub>) of 221.

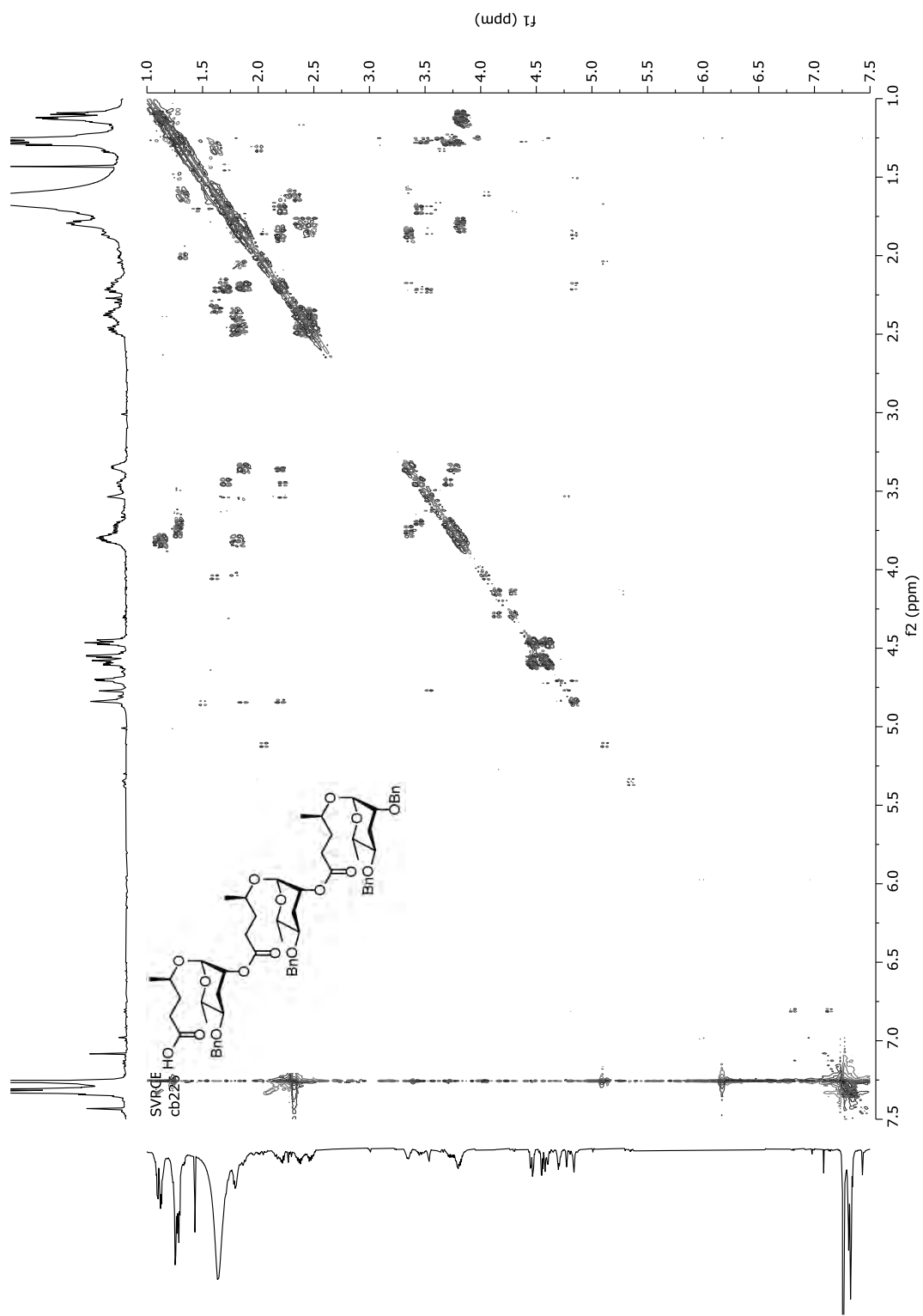


Figure S 336: HSQC (600 MHz, CDCl<sub>3</sub>) of 221.

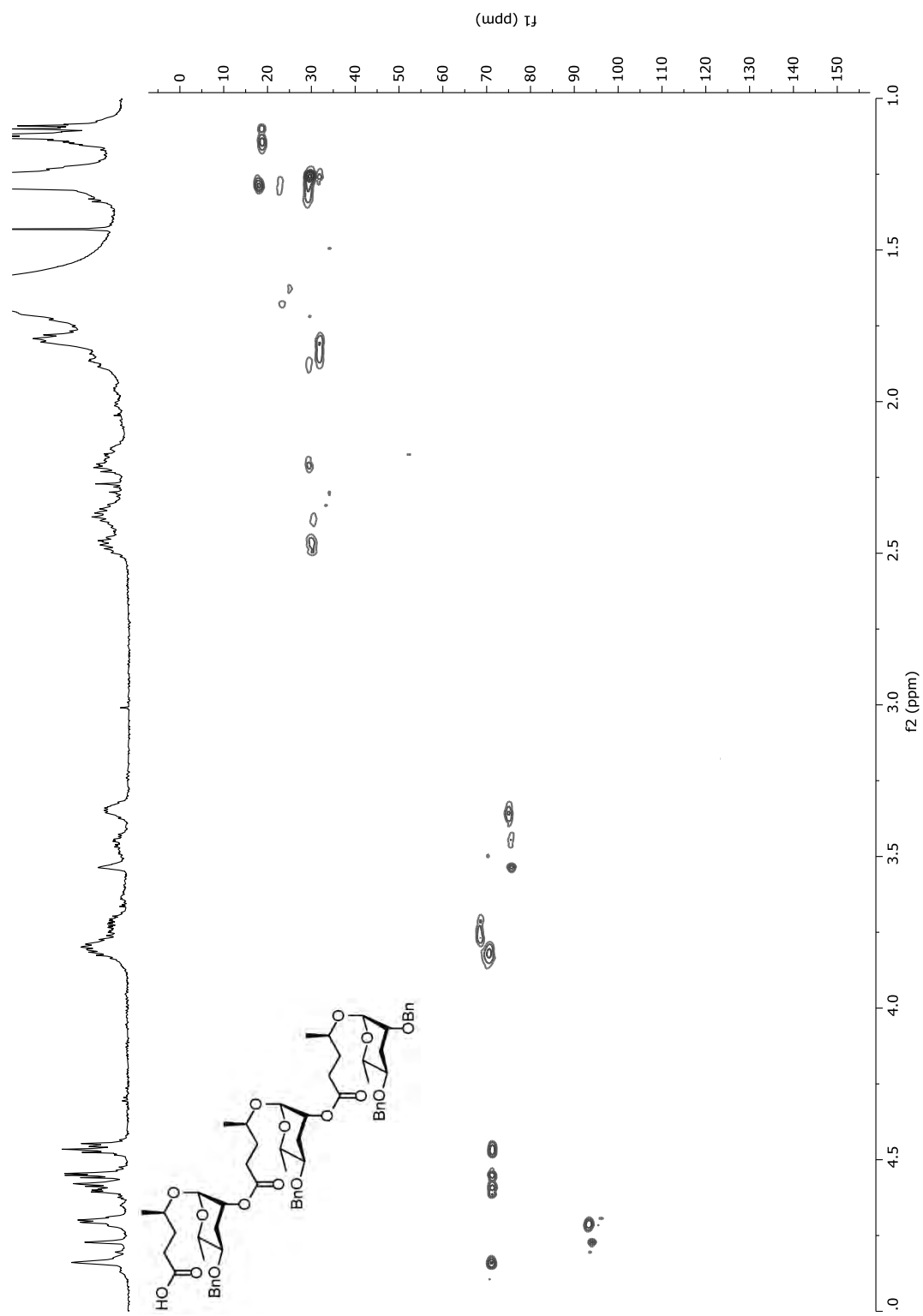
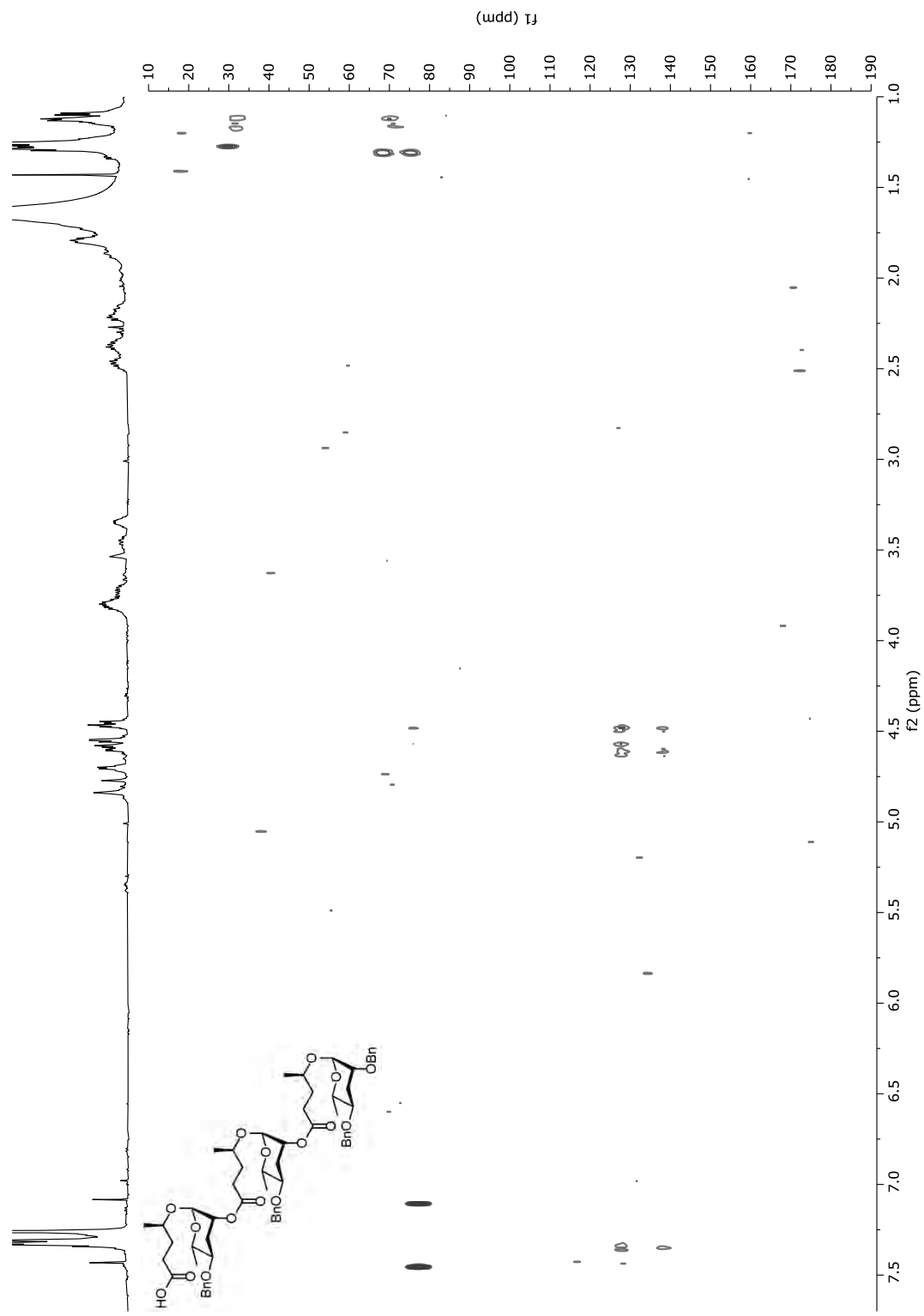


Figure S 337: HMBC (600 MHz, CDCl<sub>3</sub>) of 221.





## 10. References

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