

Supplementary Information

Enantioselective synthesis of bronchodilating agent (*R*)-Salmeterol

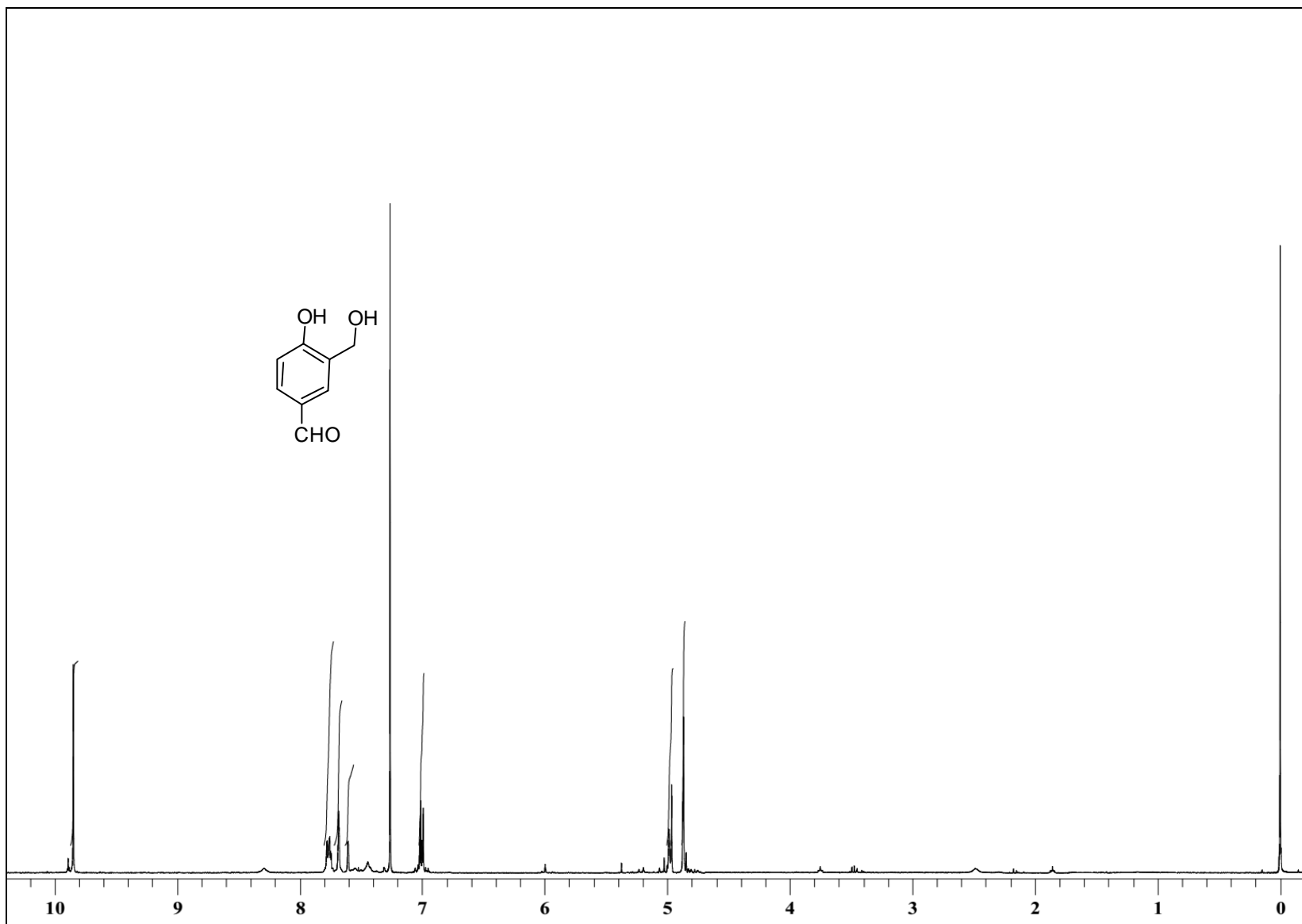
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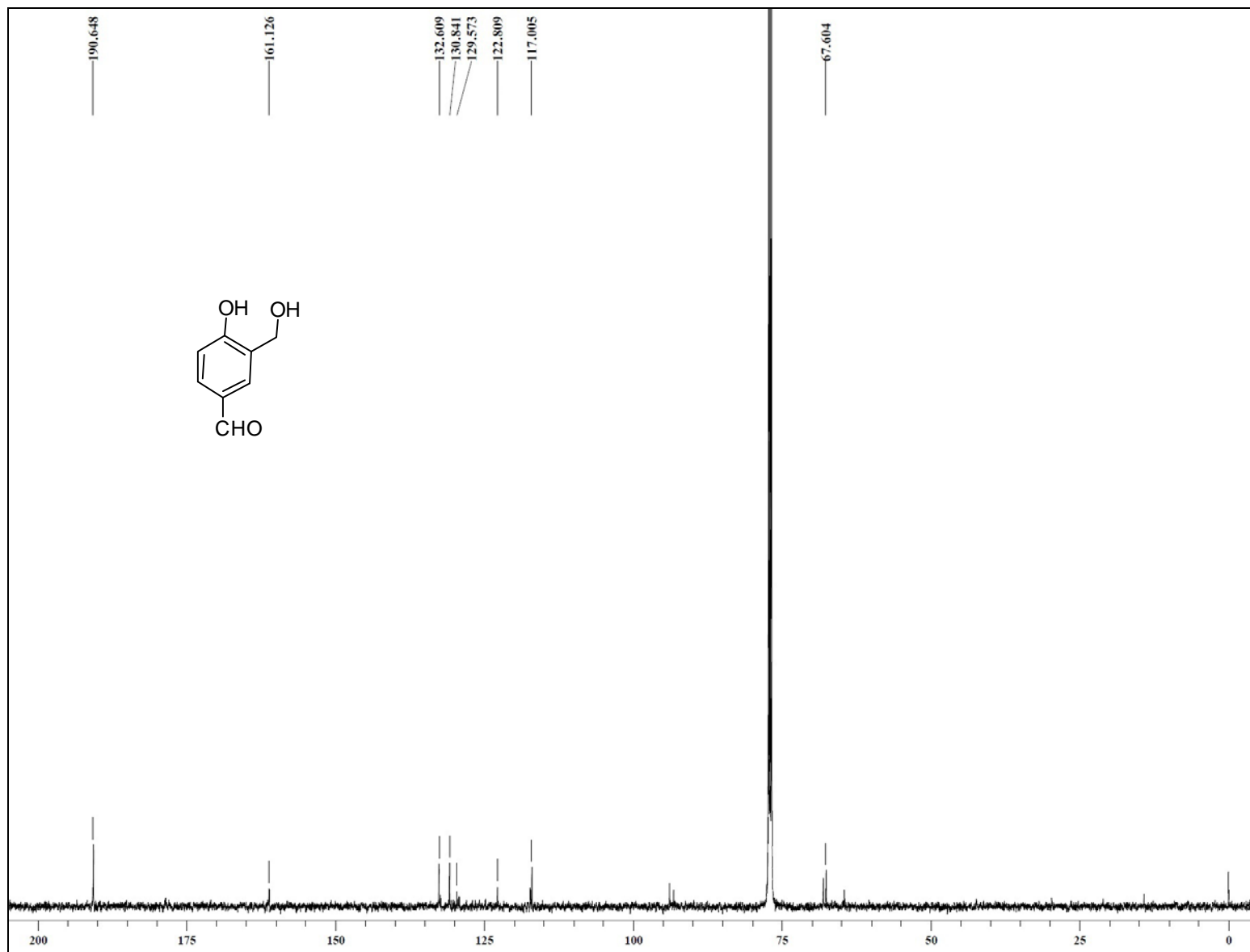
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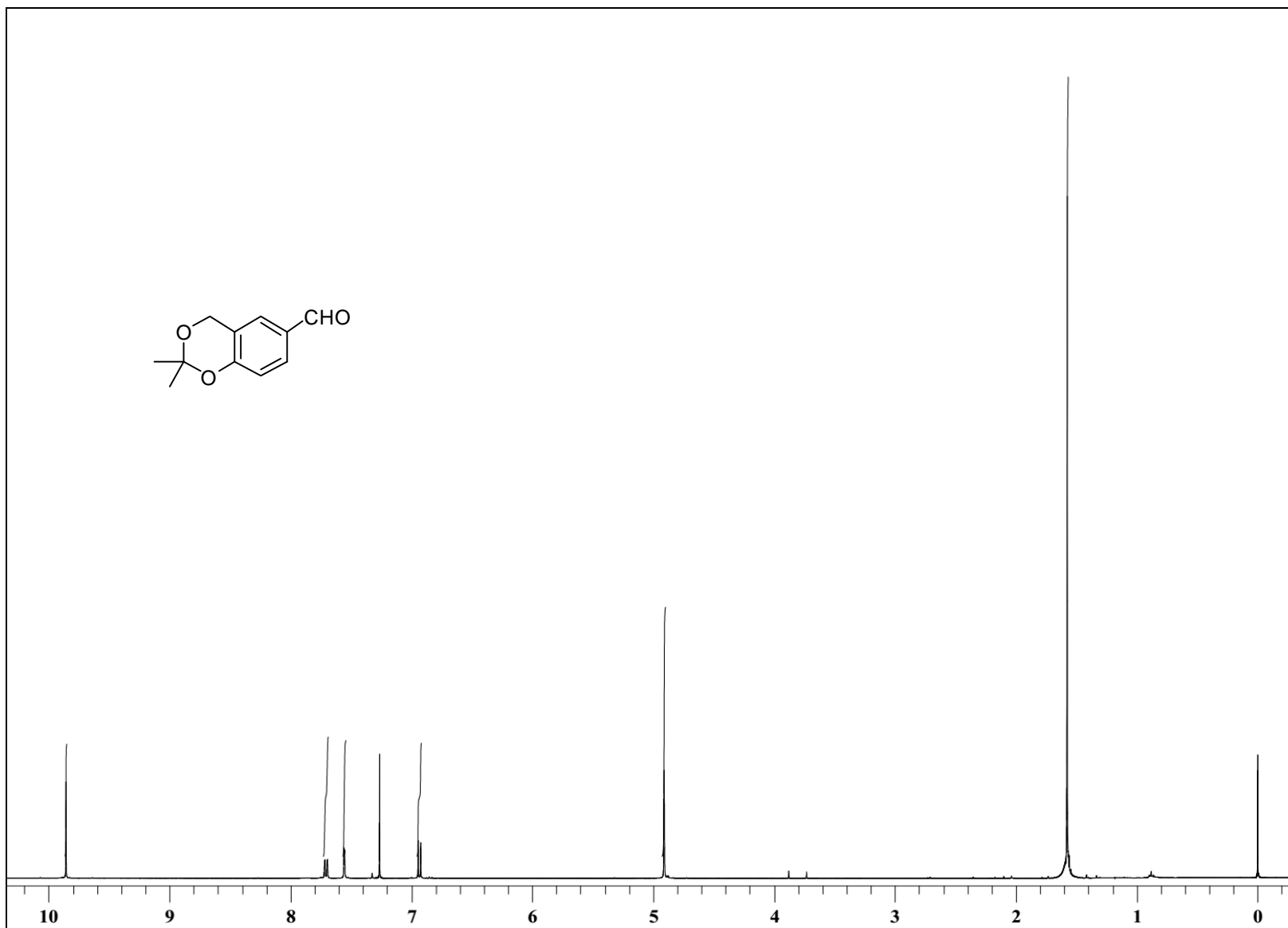
Received 2 March 2021; accepted (revised) 3 September 2021



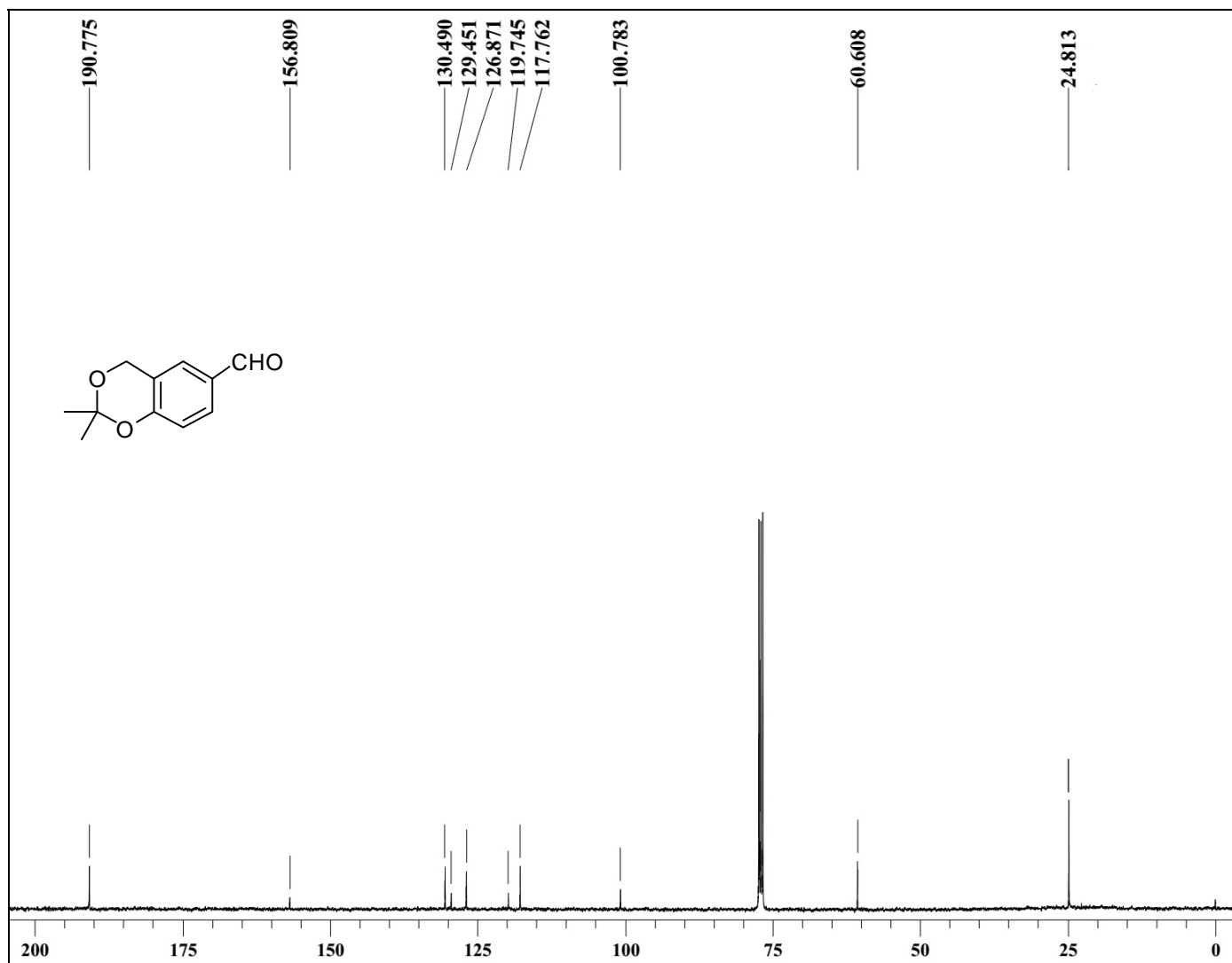
$^1\text{H-NMR}$ (400 MHz, CDCl_3) of 4-Hydroxy-3-(hydroxymethyl)benzaldehyde



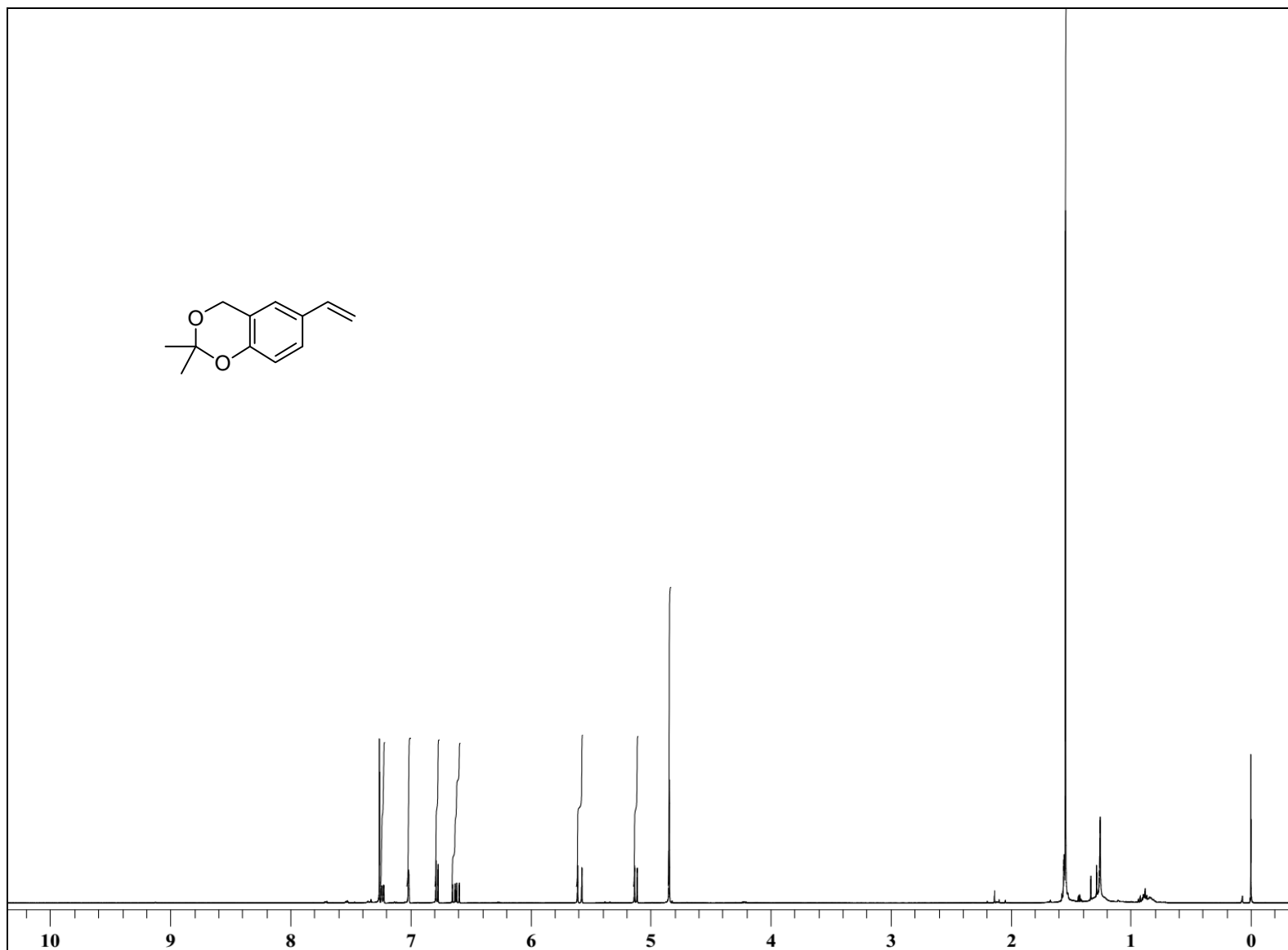
^{13}C -NMR (100 MHz, CDCl_3) of 4-Hydroxy-3-(hydroxymethyl)benzaldehyde



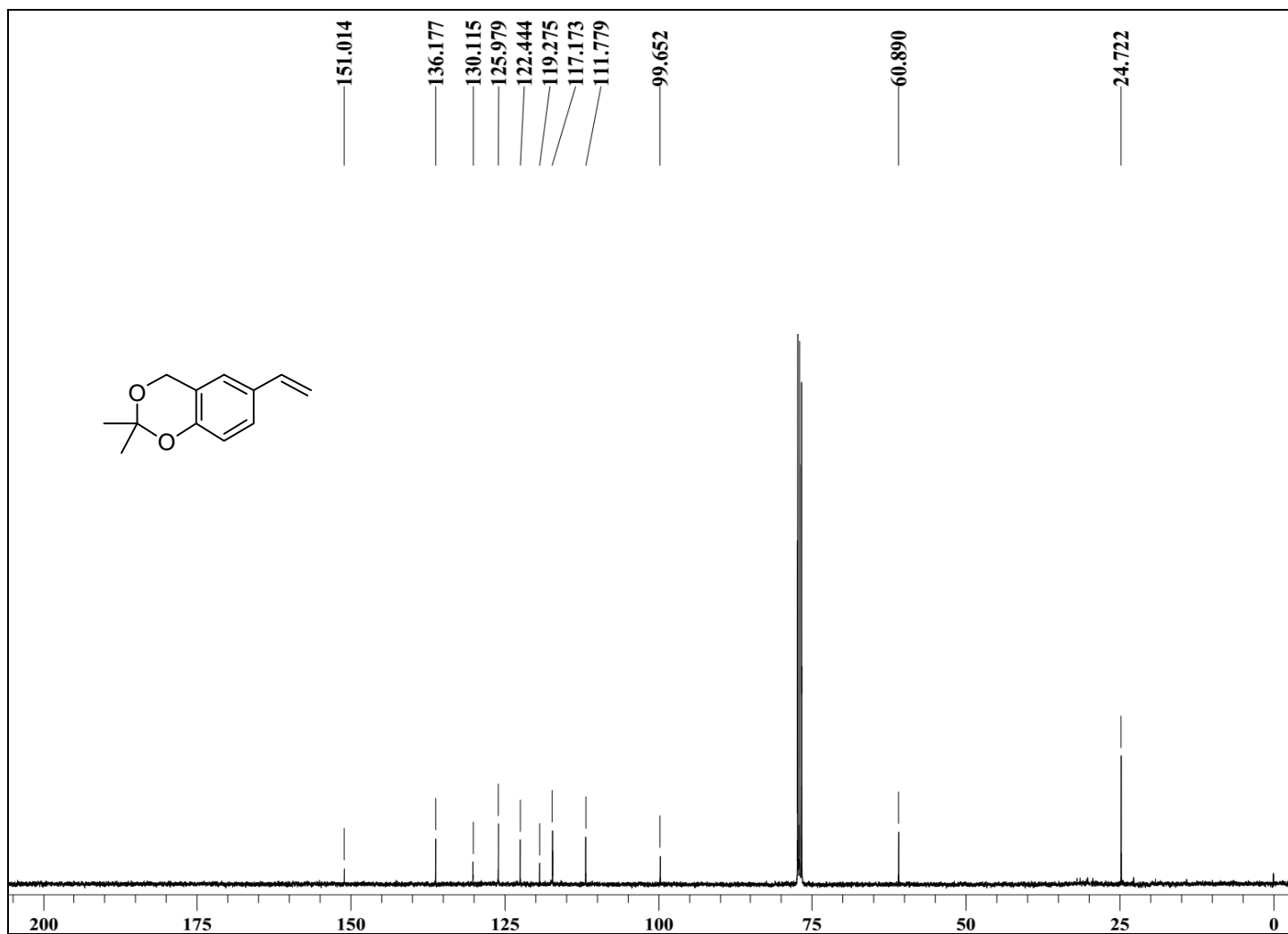
$^1\text{H-NMR}$ (400 MHz, CDCl_3) of 2,2-Dimethyl-4H-benzo[*d*][1,3]dioxine-6-carbaldehyde



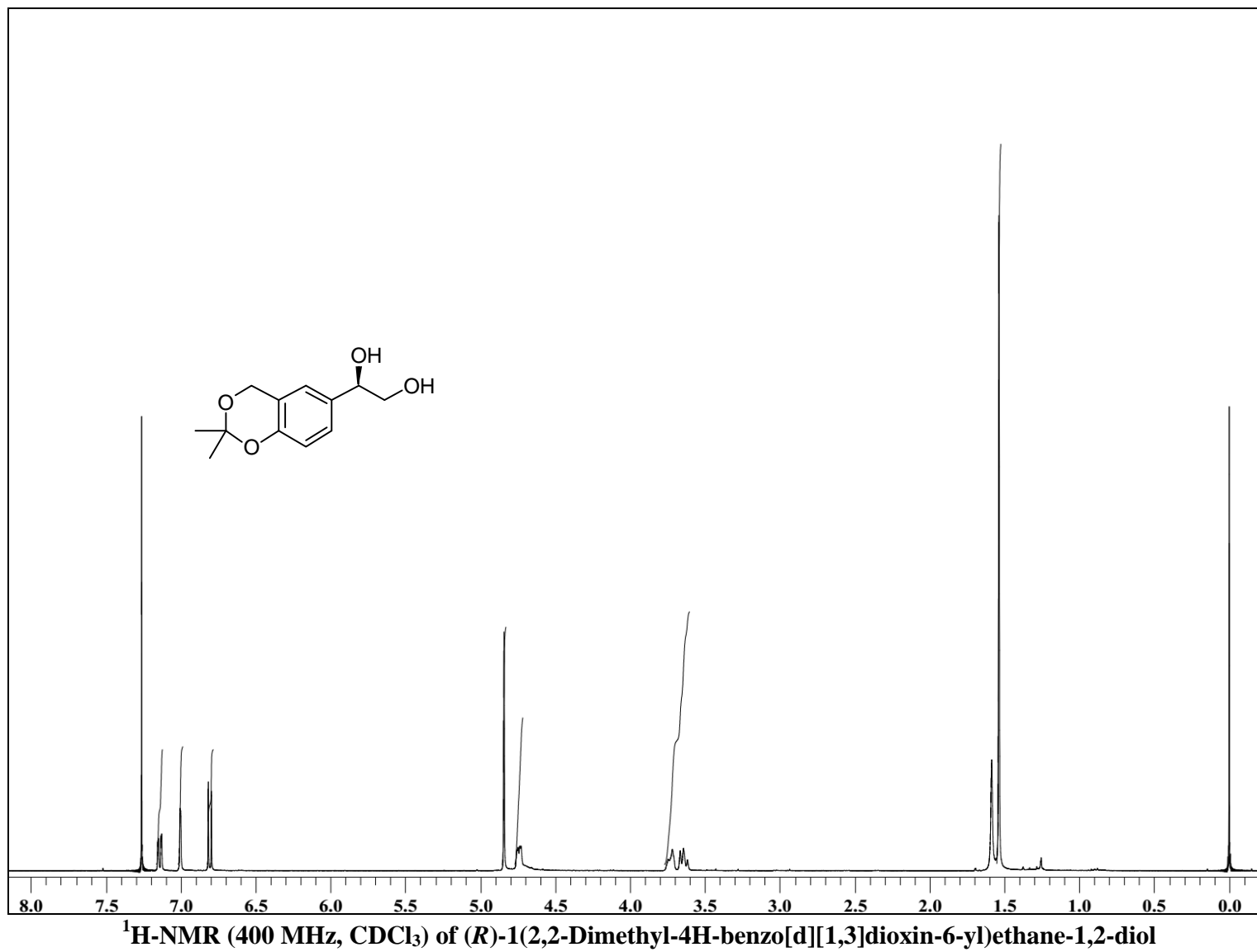
^{13}C -NMR (100 MHz, CDCl_3) of 2,2-Dimethyl-4H-benzo[d][1,3]dioxine-6-carbaldehyde

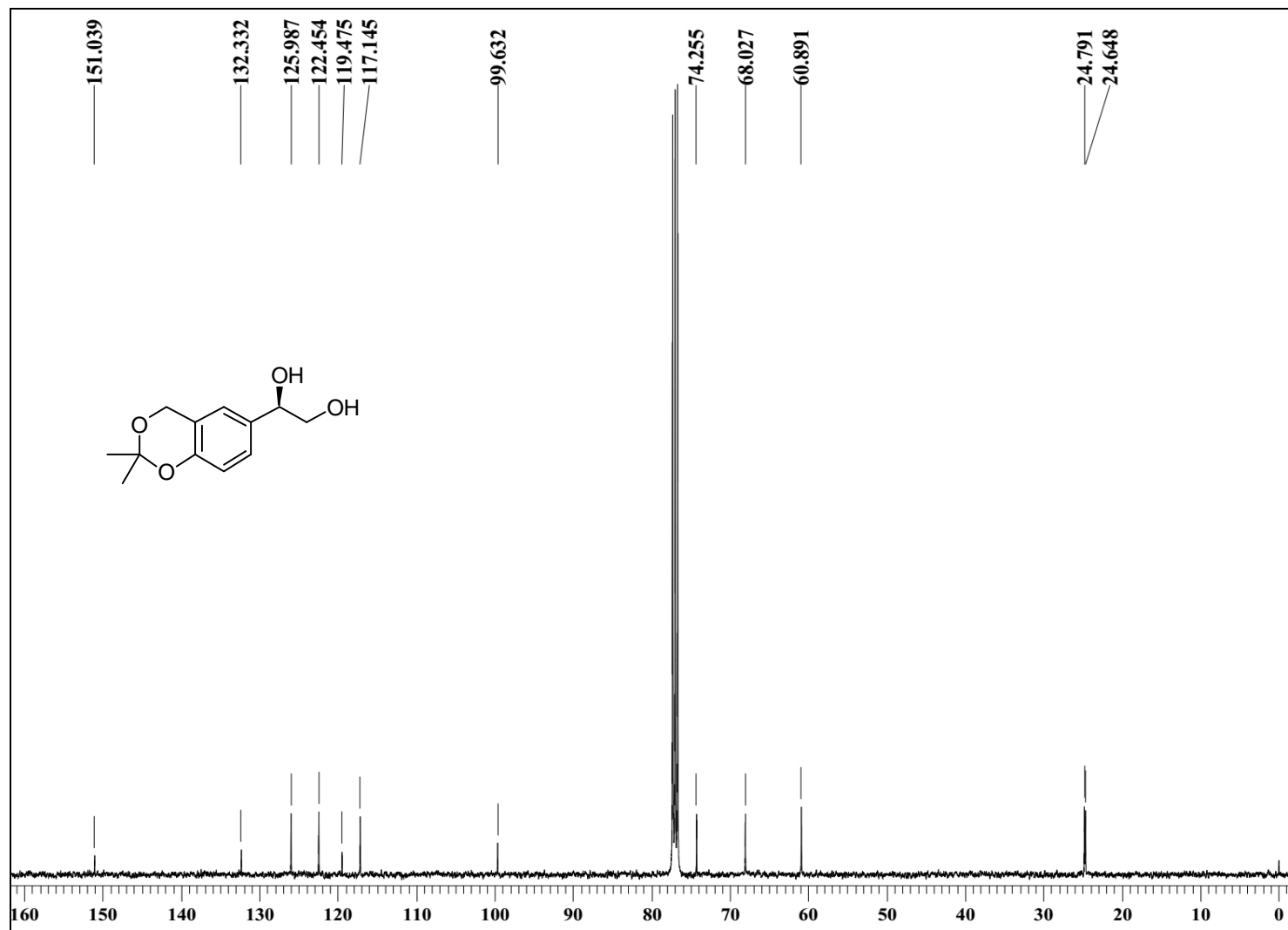


$^1\text{H-NMR}$ (400 MHz, CDCl_3) of 2,2-Dimethyl-6-vinyl-4H-benzo-[d][1,3]dioxine

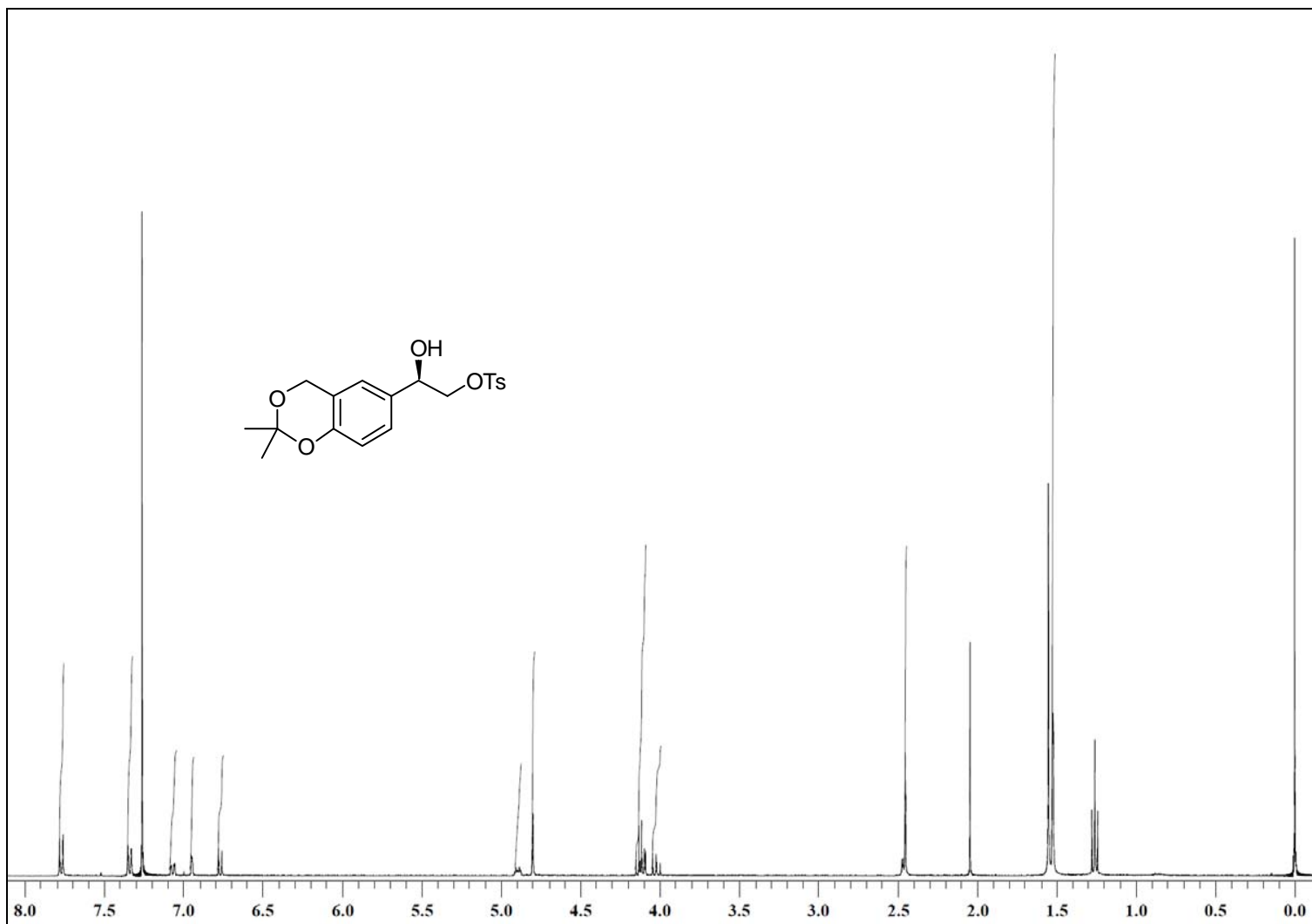


¹³C-NMR (100 MHz, CDCl₃) of 2,2-Dimethyl-6-vinyl-4H-benzo-[d][1,3]dioxine

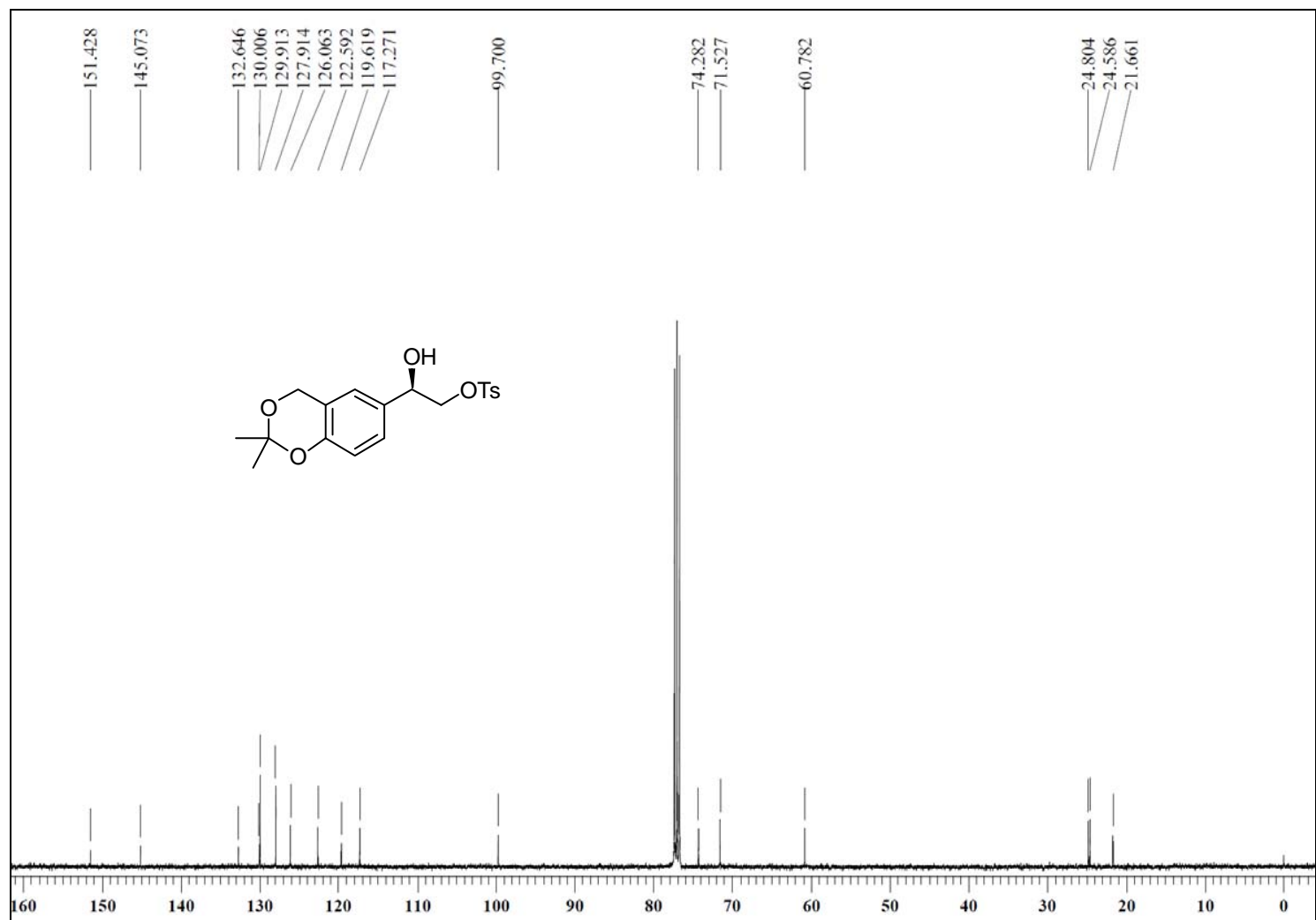


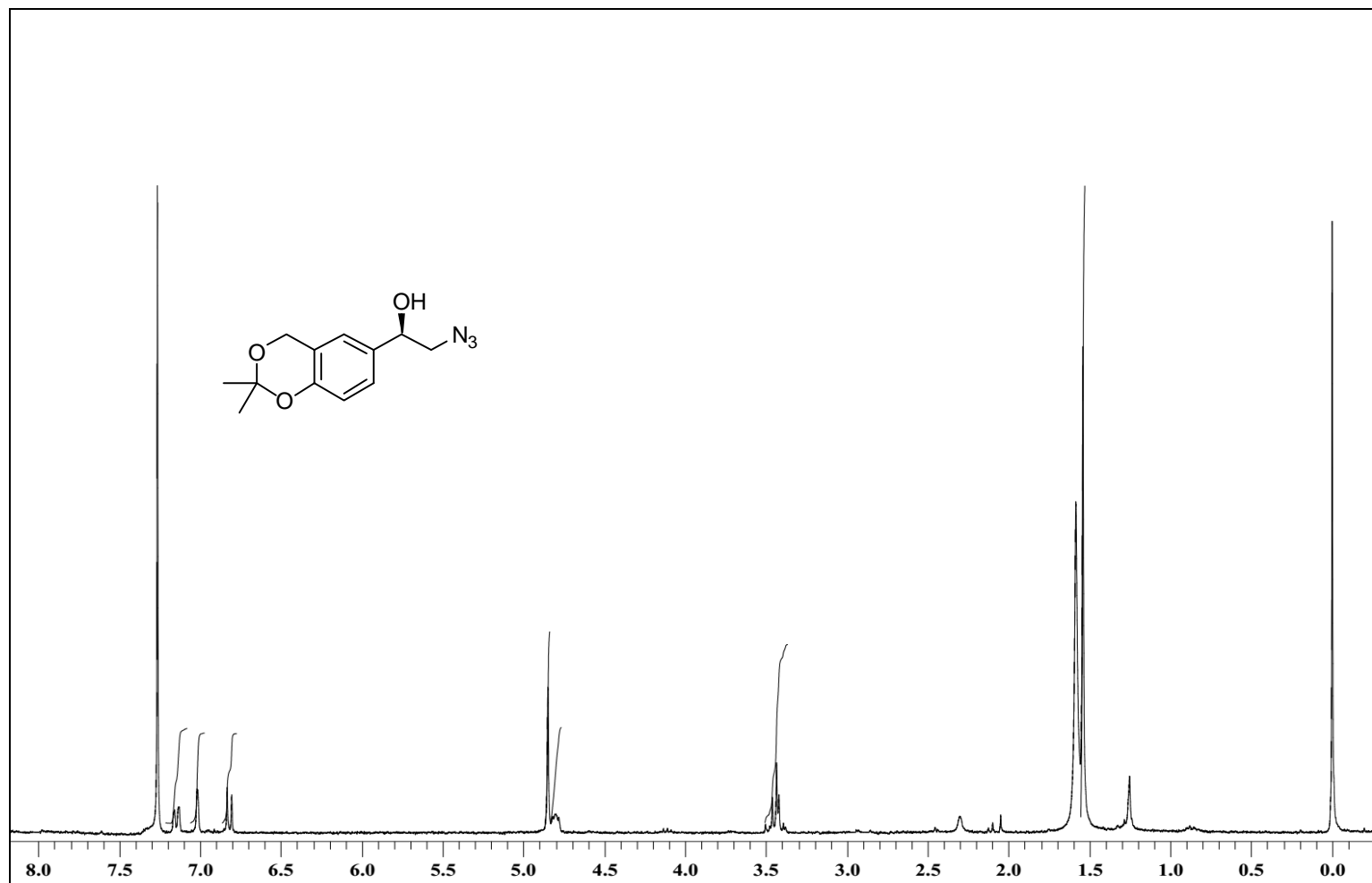


^{13}C -NMR (100 MHz, CDCl_3) of *(R)*-1-(2,2-Dimethyl-4H-benzo[d][1,3]dioxin-6-yl)ethane-1,2-diol

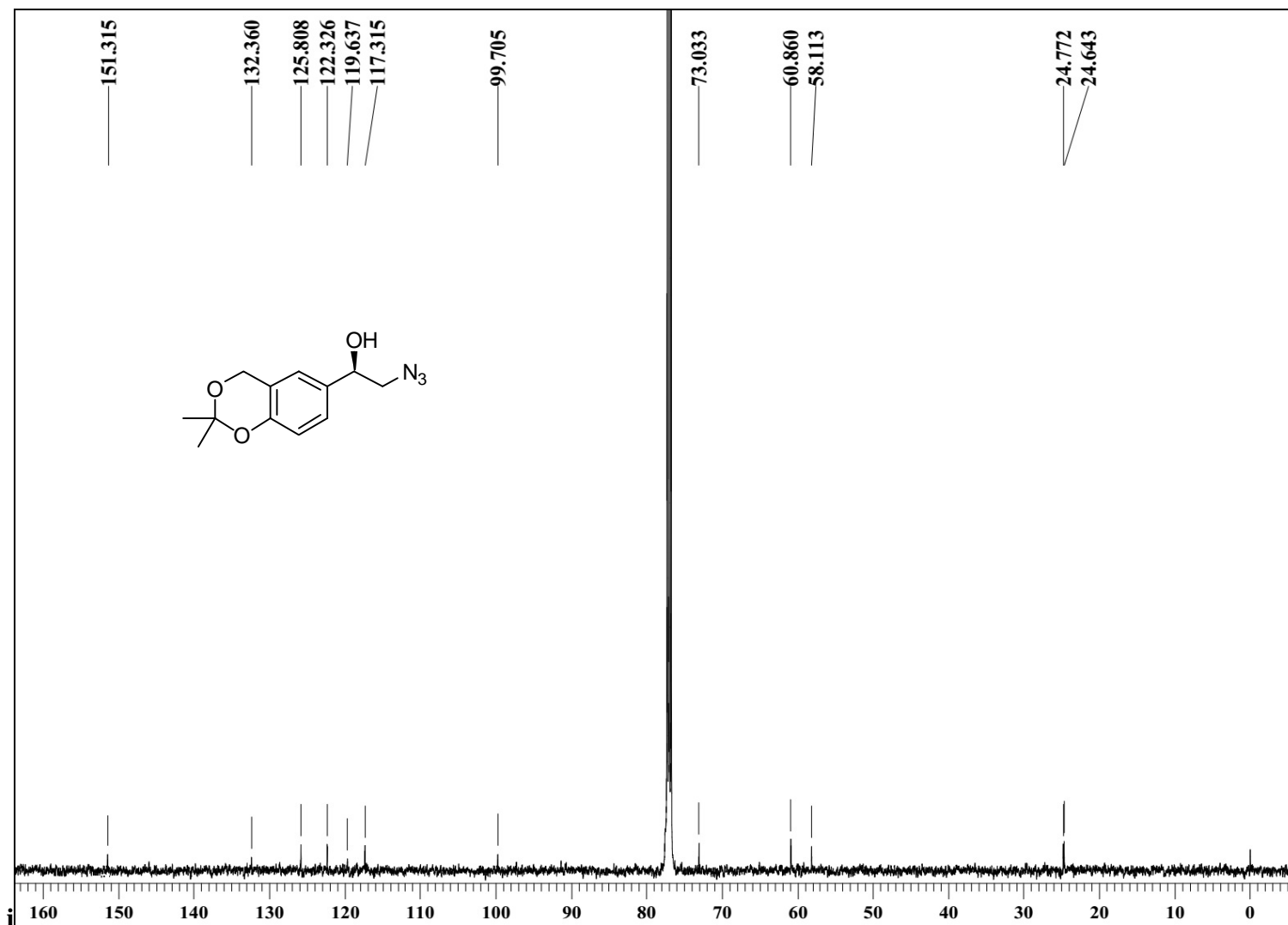


¹H-NMR (400 MHz, CDCl₃) of (R)-1(2,2-Dimethyl-4H-benzo[d][1,3]dioxin-6-yl)2-hydroxyethyl-4-methylbenzenesulfonate

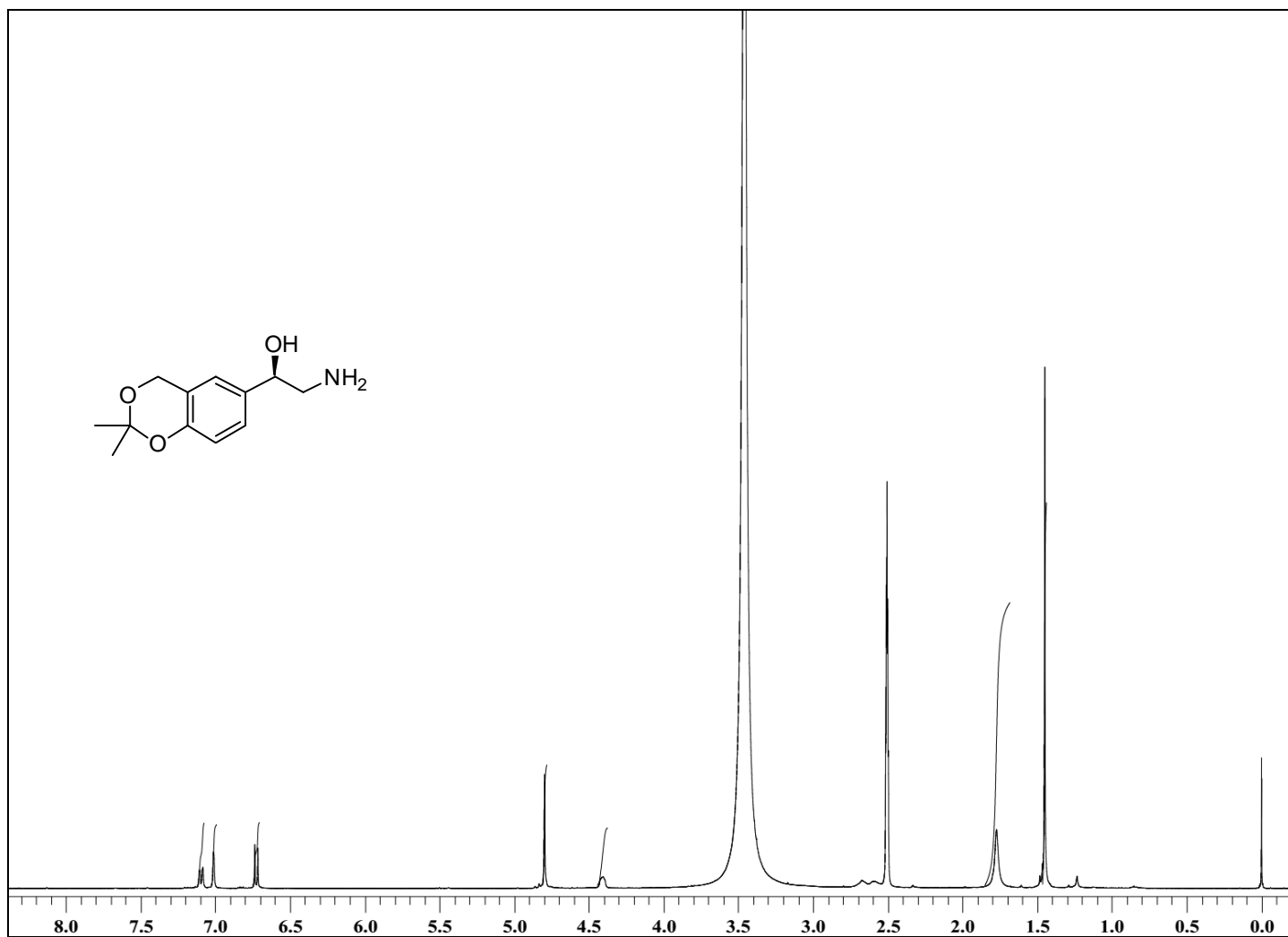




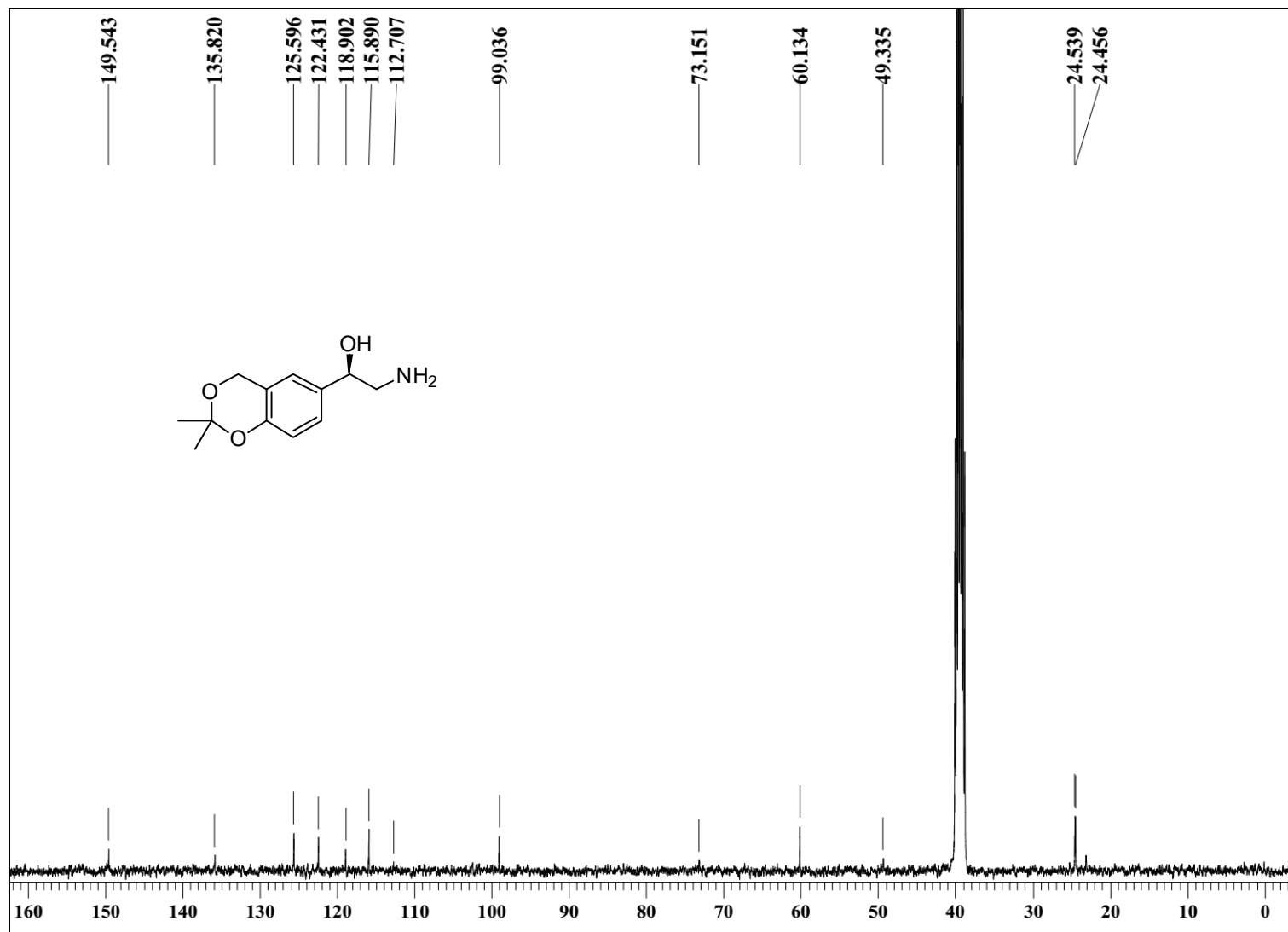
¹H NMR (400 MHz, CDCl₃) of (*R*)-2-Azido-1-(2,2-Dimethyl-4H-benzo[d][1,3]dioxin-6-yl) ethanol



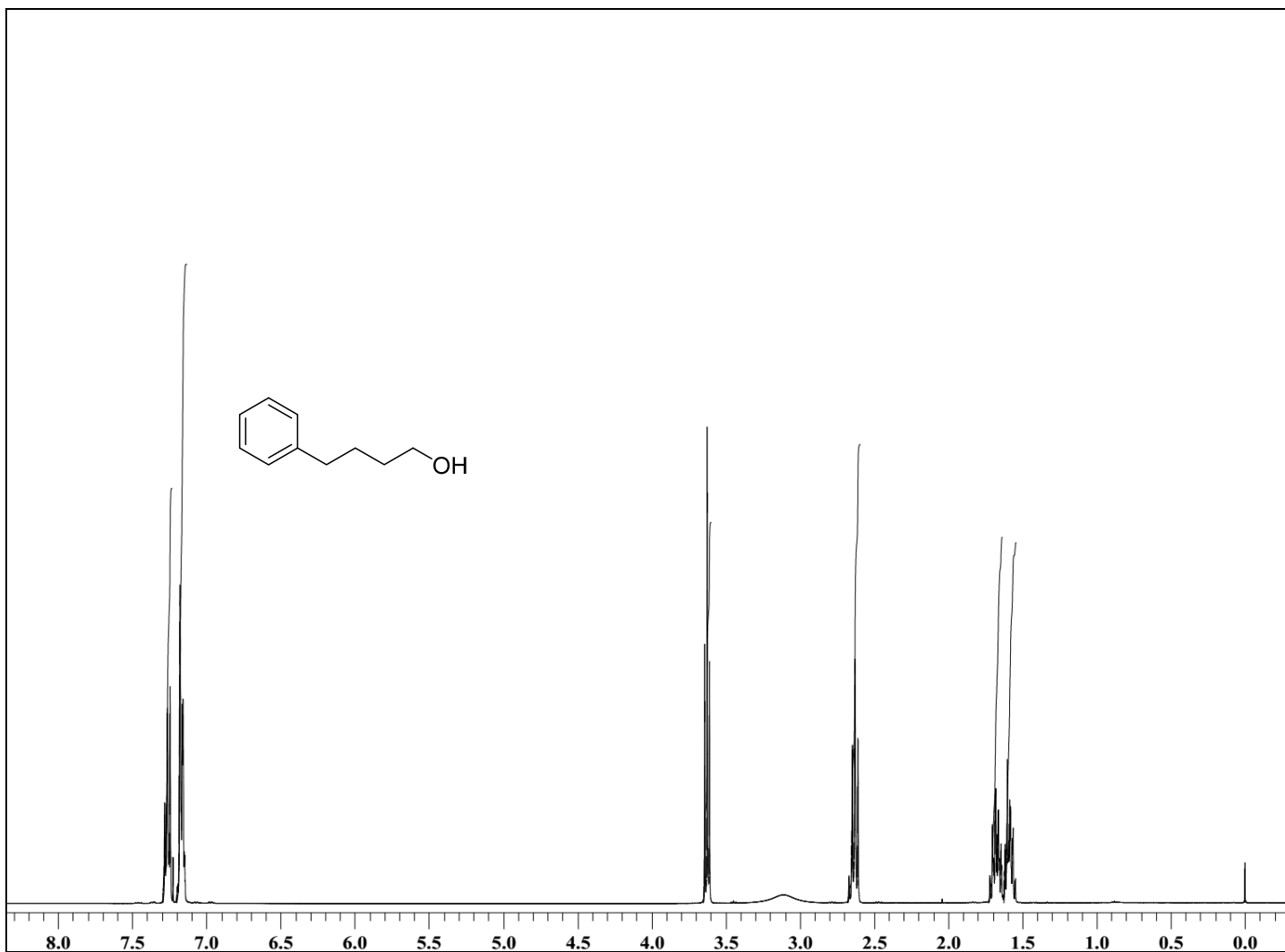
^{13}C -NMR (100 MHz, CDCl_3) of (*R*)-2-Azido-1-(2,2-Dimethyl-4H-benzo[d][1,3]dioxin-6-yl) ethanol



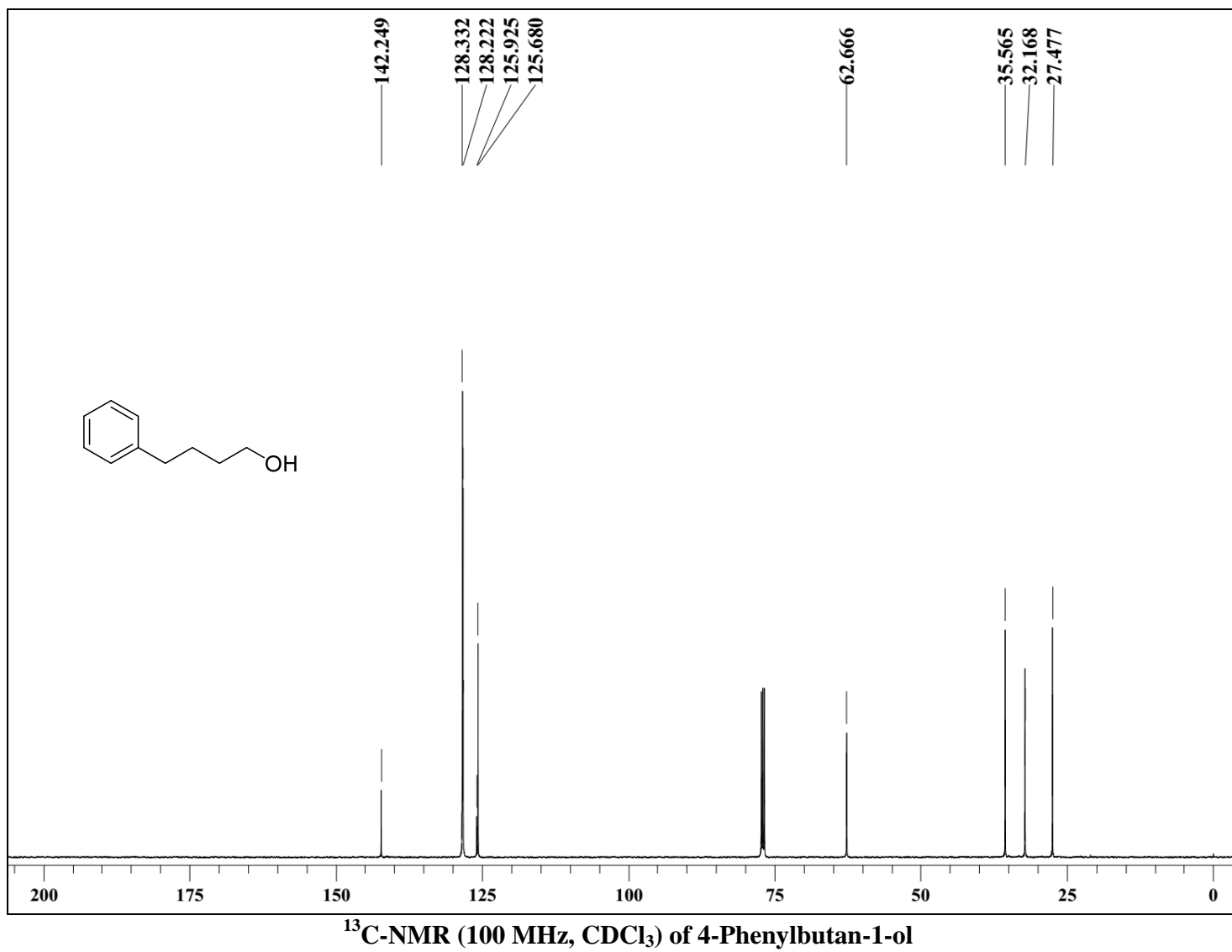
¹H-NMR (400 MHz, DMSO-d₆) of (*R*)-2-Amino-1-(2,2-Dimethyl-4*H*-benzo[*d*][1,3]dioxin-6-yl) ethanol

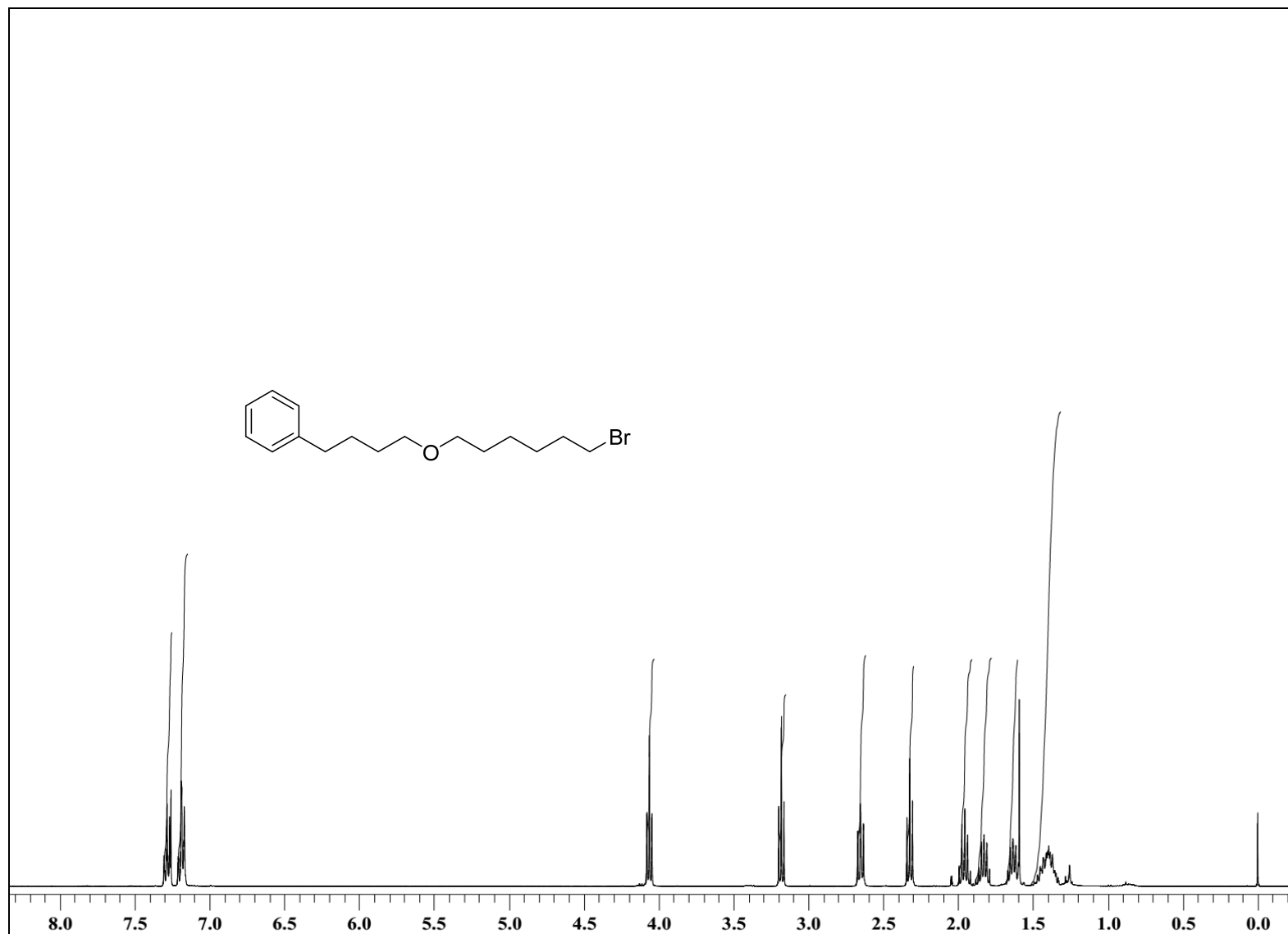


^{13}C -NMR (100 MHz, DMSO- d_6) of *(R)*-2-Amino-1-(2,2-Dimethyl-4H-benzo[*d*][1,3]dioxin-6-yl) ethanol

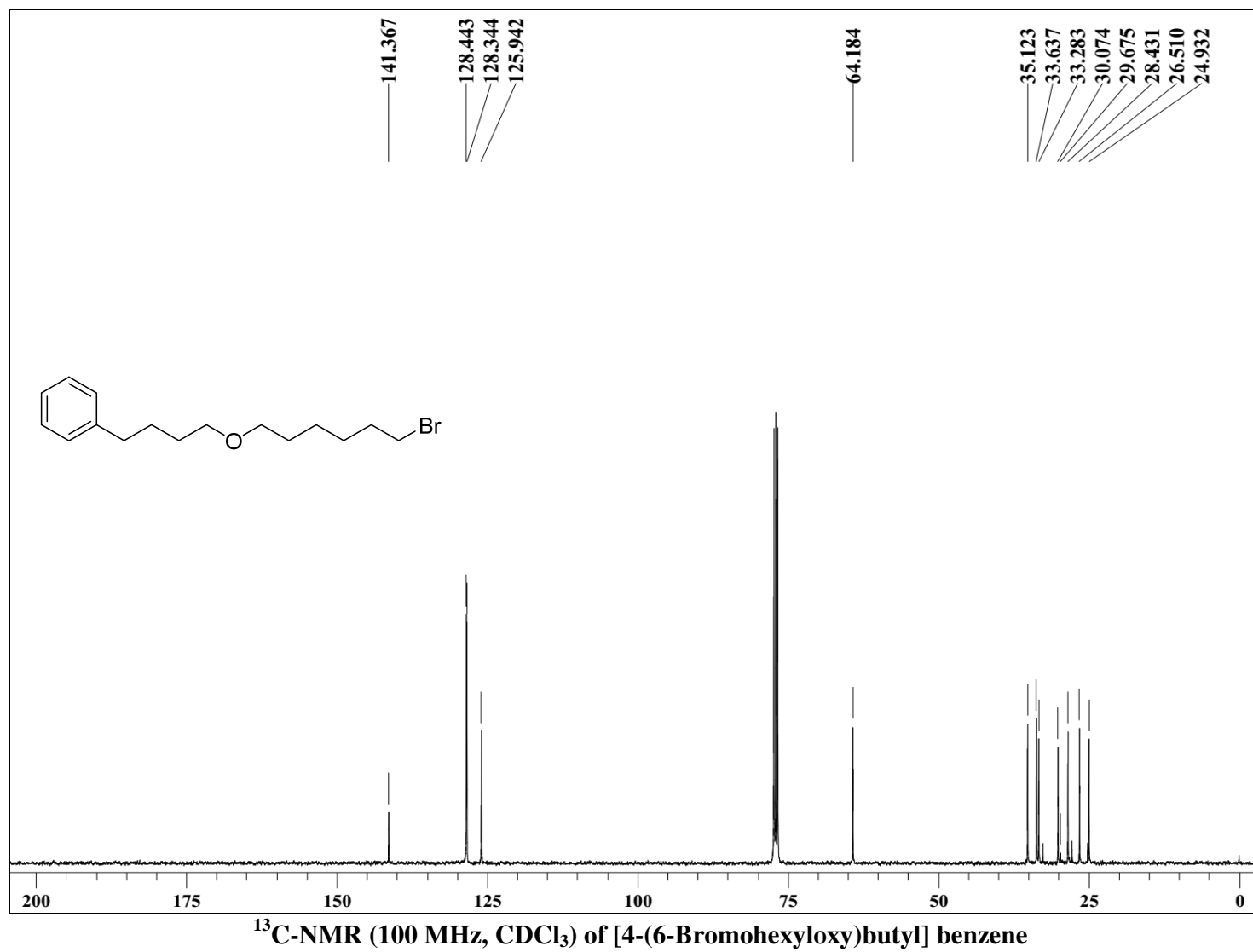


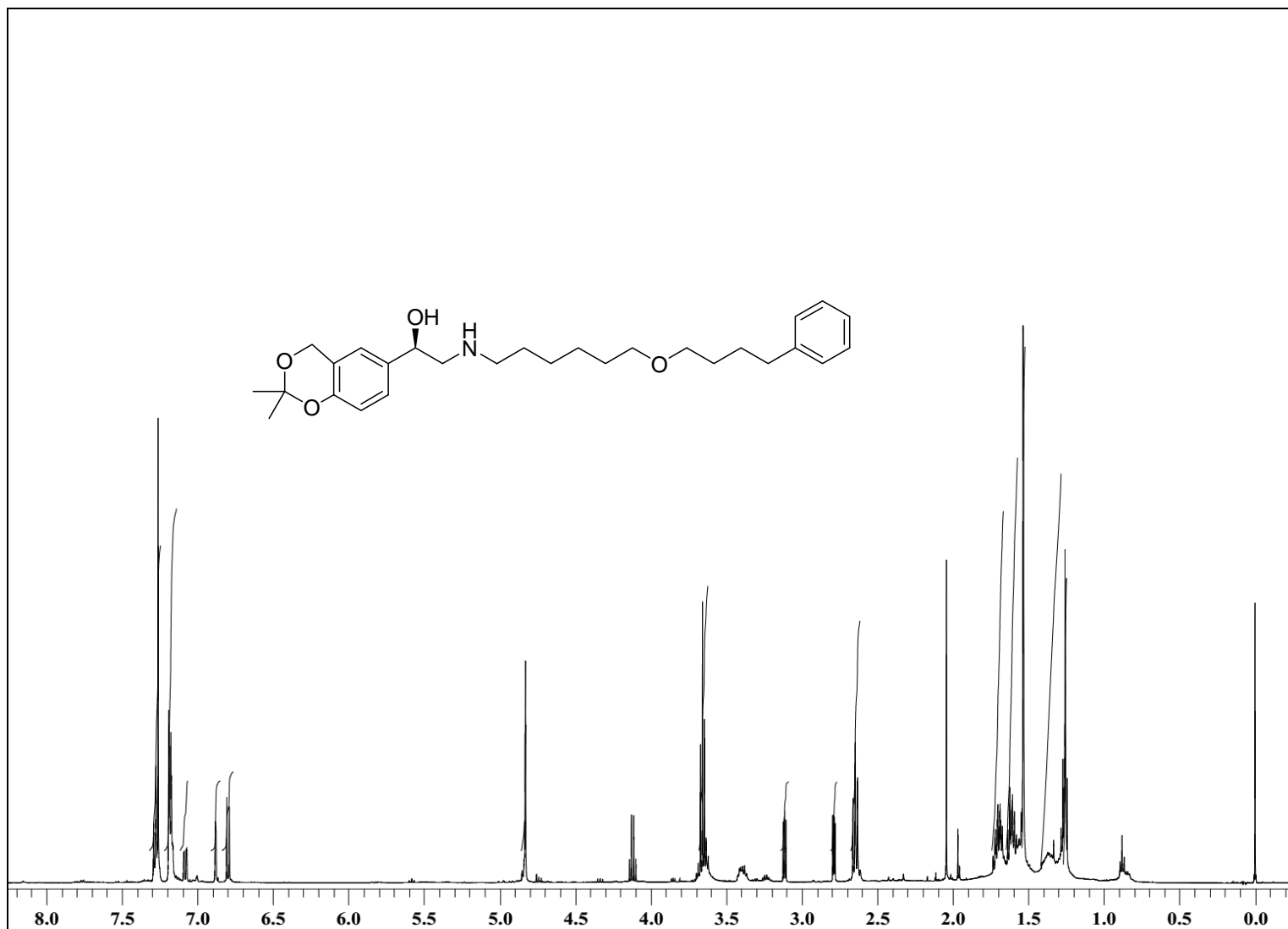
$^1\text{H-NMR}$ (400 MHz, CDCl_3) of 4-Phenylbutan-1-ol



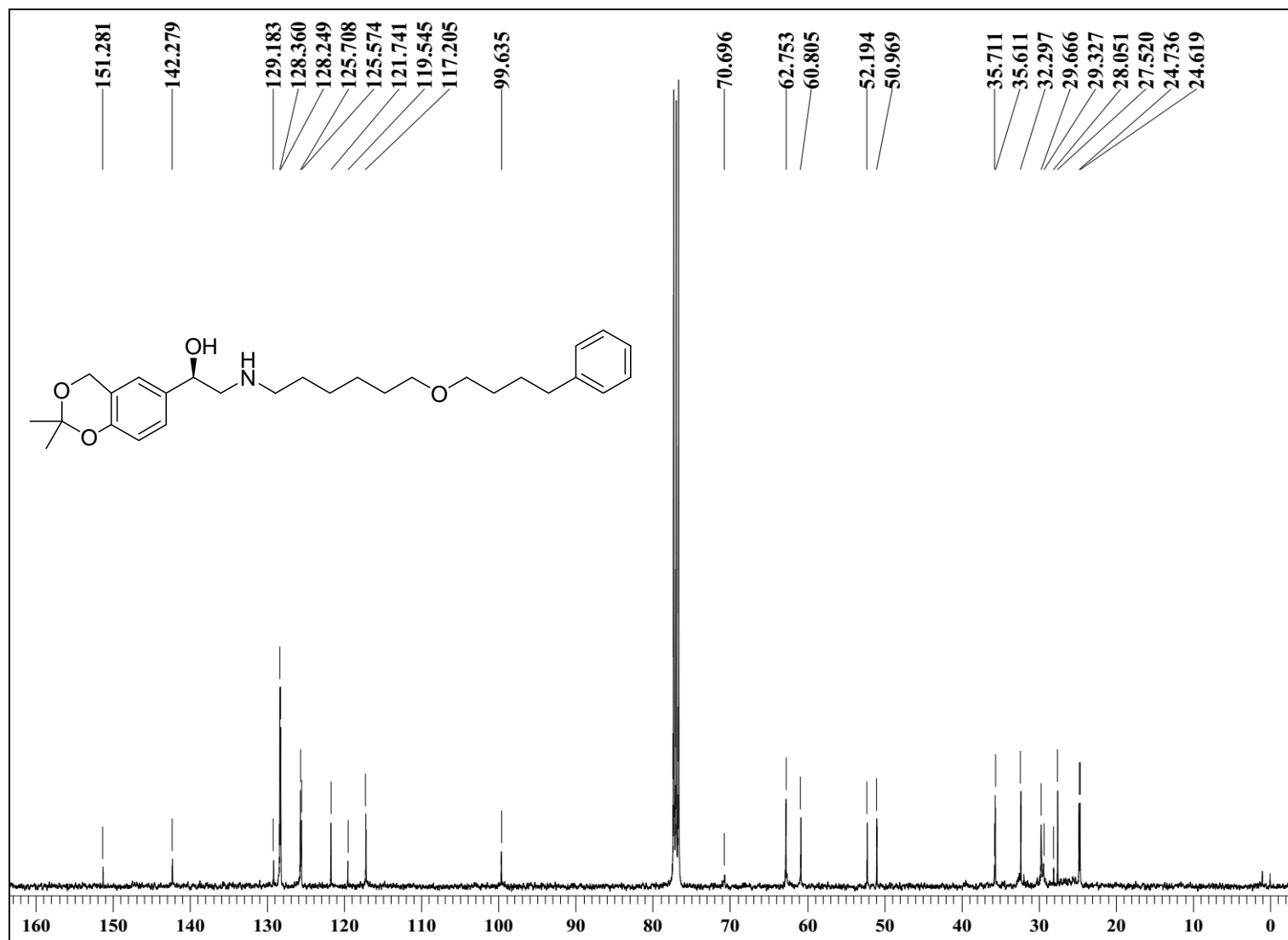


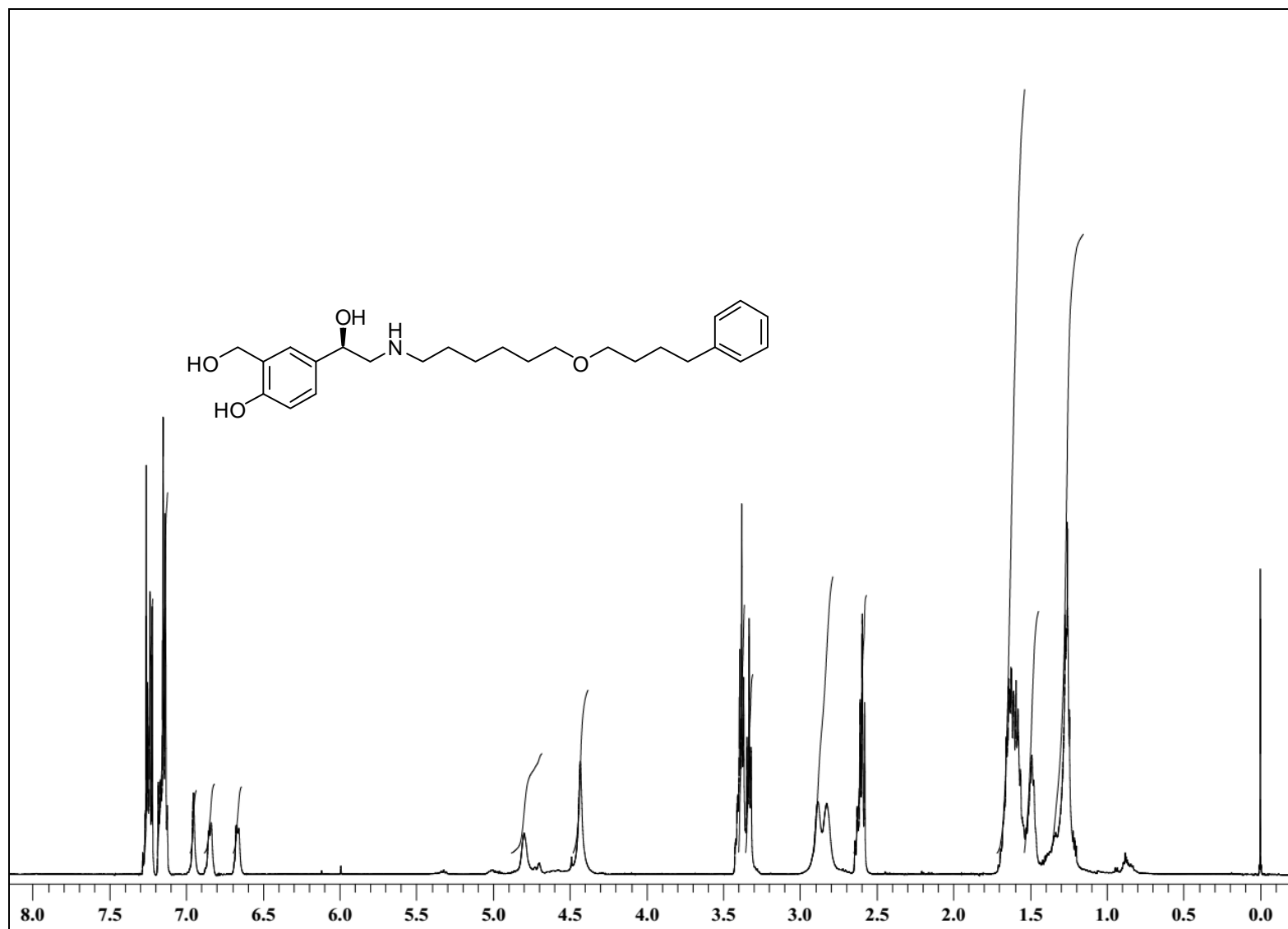
$^1\text{H-NMR}$ (400 MHz, CDCl_3) of [4-(6-bromohexyloxy)butyl] benzene



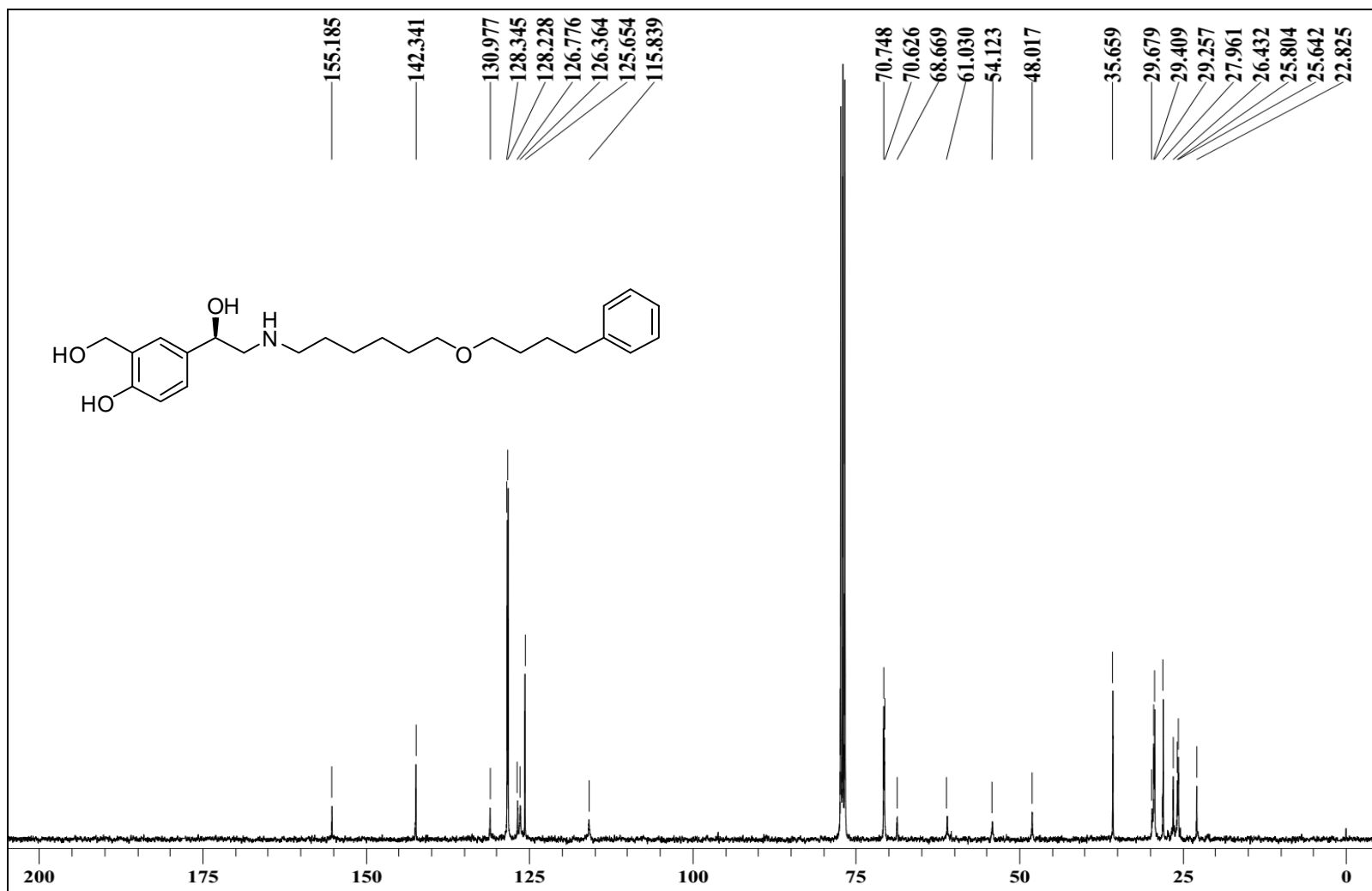


¹H-NMR (400 MHz, CDCl₃) of *(R)*-1-(2,2-dimethyl-4H-benzo[d][1,3]dioxin-6-yl)-2-(6(4-phenylbutoxy)hexylamino)ethanol





¹H-NMR (400 MHz, CDCl₃) of (R)-4(1-hydroxy-2-((6-(4-phenylbutoxy)hexyl)amino)ethyl)-2-(hydroxymethyl)phenol



¹³C-NMR (100 MHz, CDCl₃) of *(R)*-4-(1-hydroxy-2-((6-(4-phenylbutoxy)hexyl)amino)ethyl)-2-(hydroxymethyl)phenol