

## Formal synthesis of *ent*-Cephalotaxine using a One-pot Parham–aldol sequence

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SUPPORTING INFORMATION

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# 1 Mosher amide S1

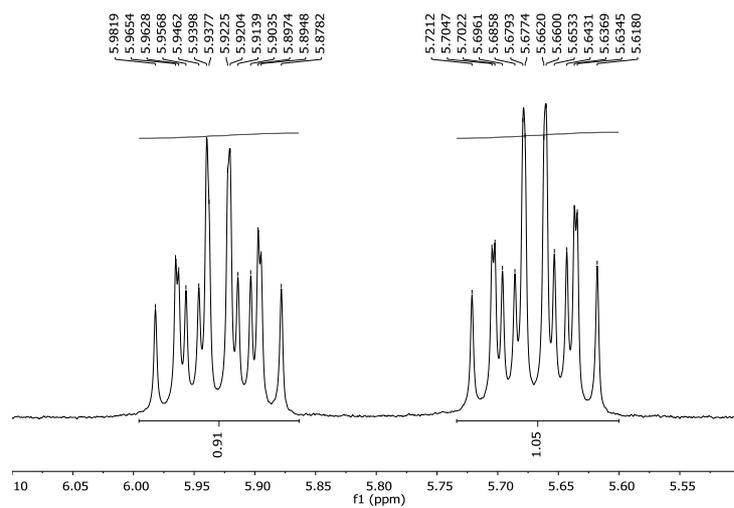
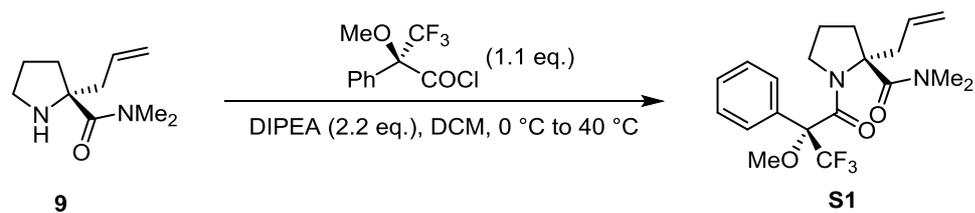


Figure S1. Diastereomeric signals from a racemic sample

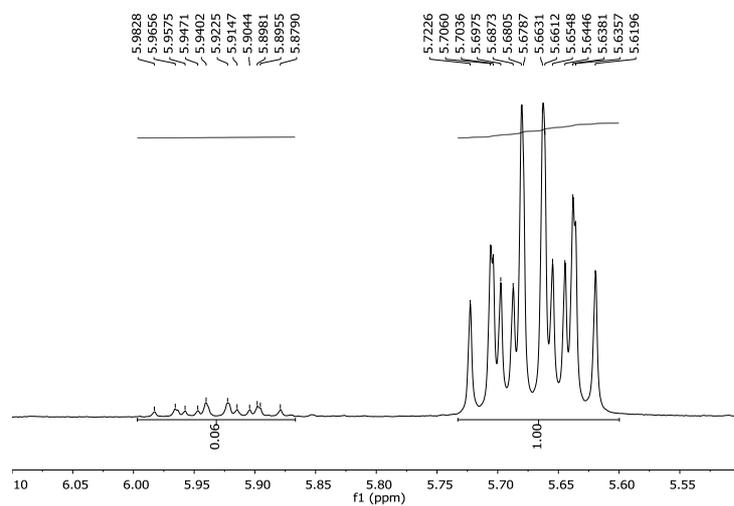
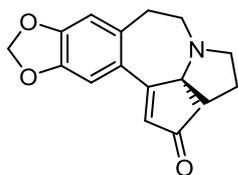


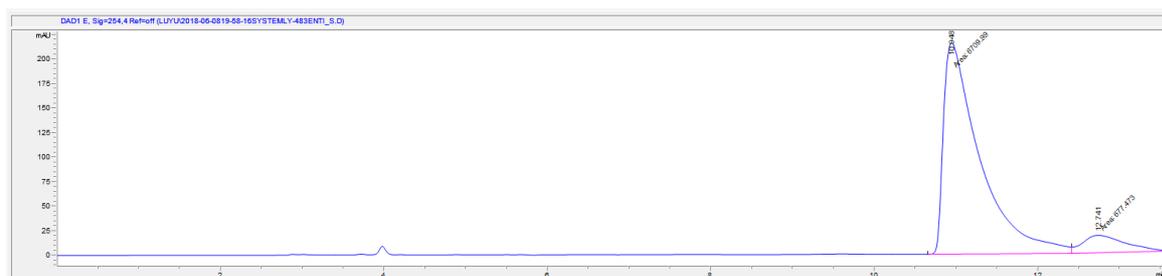
Figure S2. Diastereomeric signals from an enantioenriched sample

## 2 HPLC Chromatograms for 5

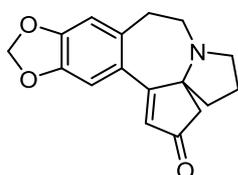


5

Chiralcel IA, 15% 2-propanol in hexanes, 1 mL/min,  $\lambda=254$  nm,  $t_R(R) = 10.9$  min,  $t_R(S) = 12.7$  min.

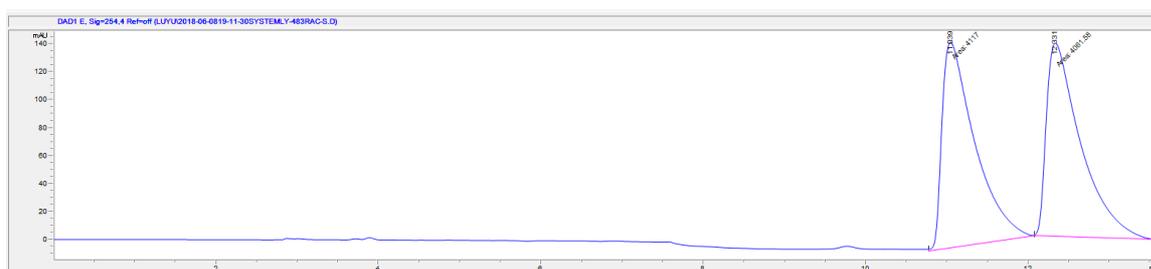


#	Time	Area	Height	Width	Area%	Symmetry
1	10.948	6710	216.1	0.5176	90.829	0.27
2	12.741	677.5	18.1	0.6223	9.171	0.544



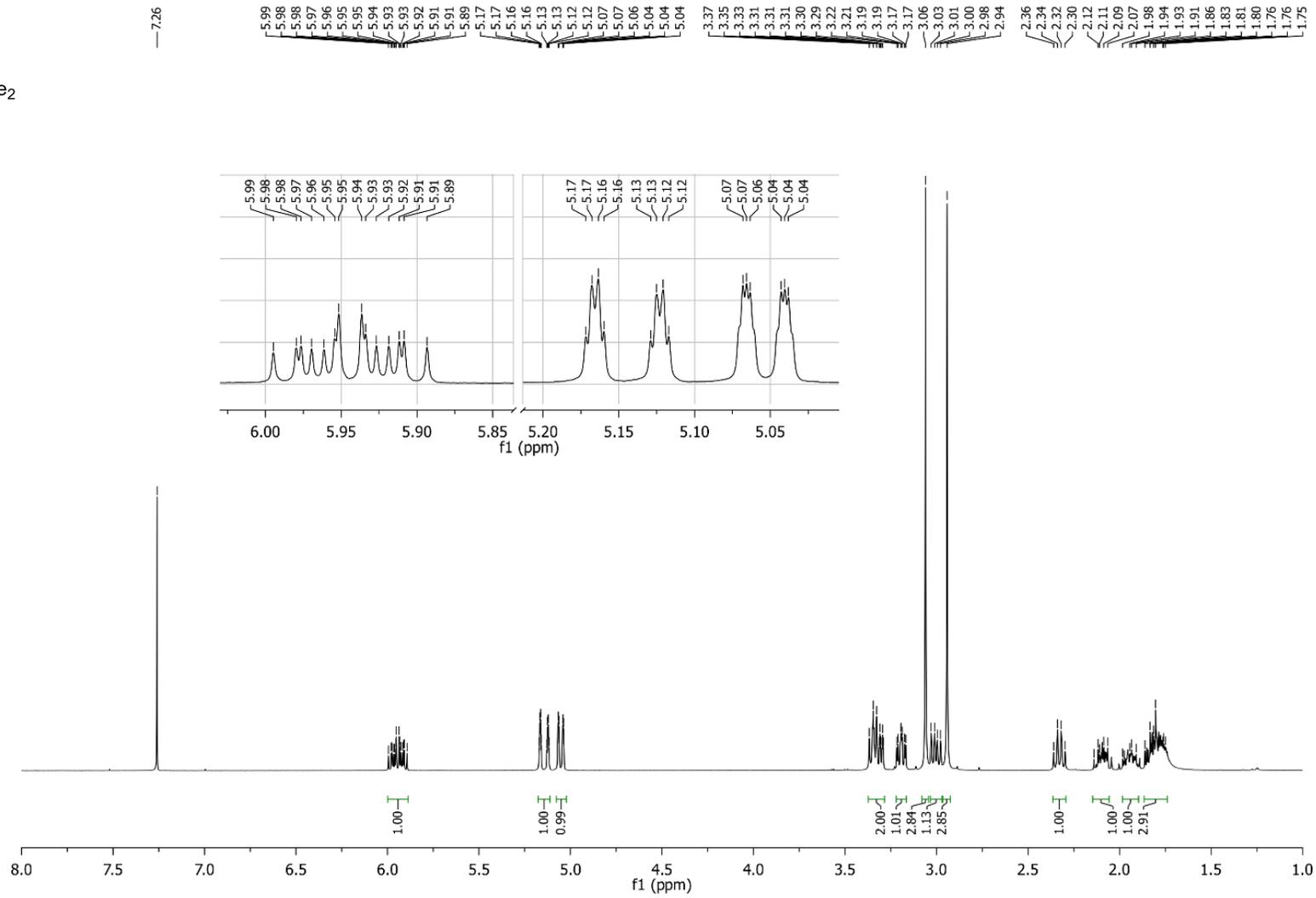
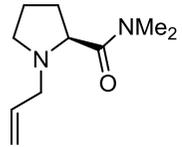
rac-5

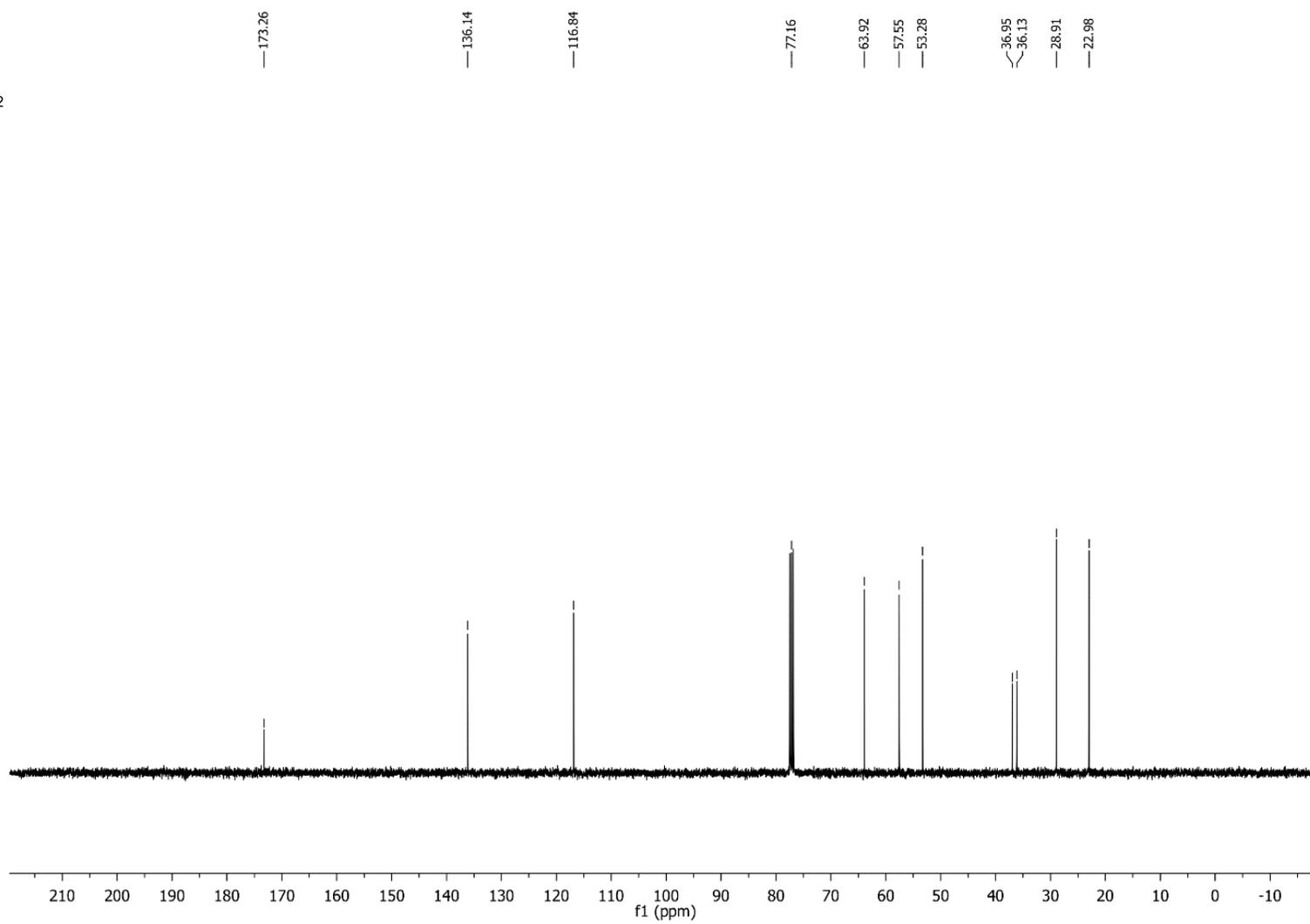
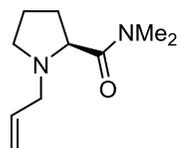
Chiralcel IA, 15% 2-propanol in hexanes, 1 mL/min,  $\lambda=254$  nm,  $t_R(R) = 11.0$  min,  $t_R(S) = 12.3$  min.

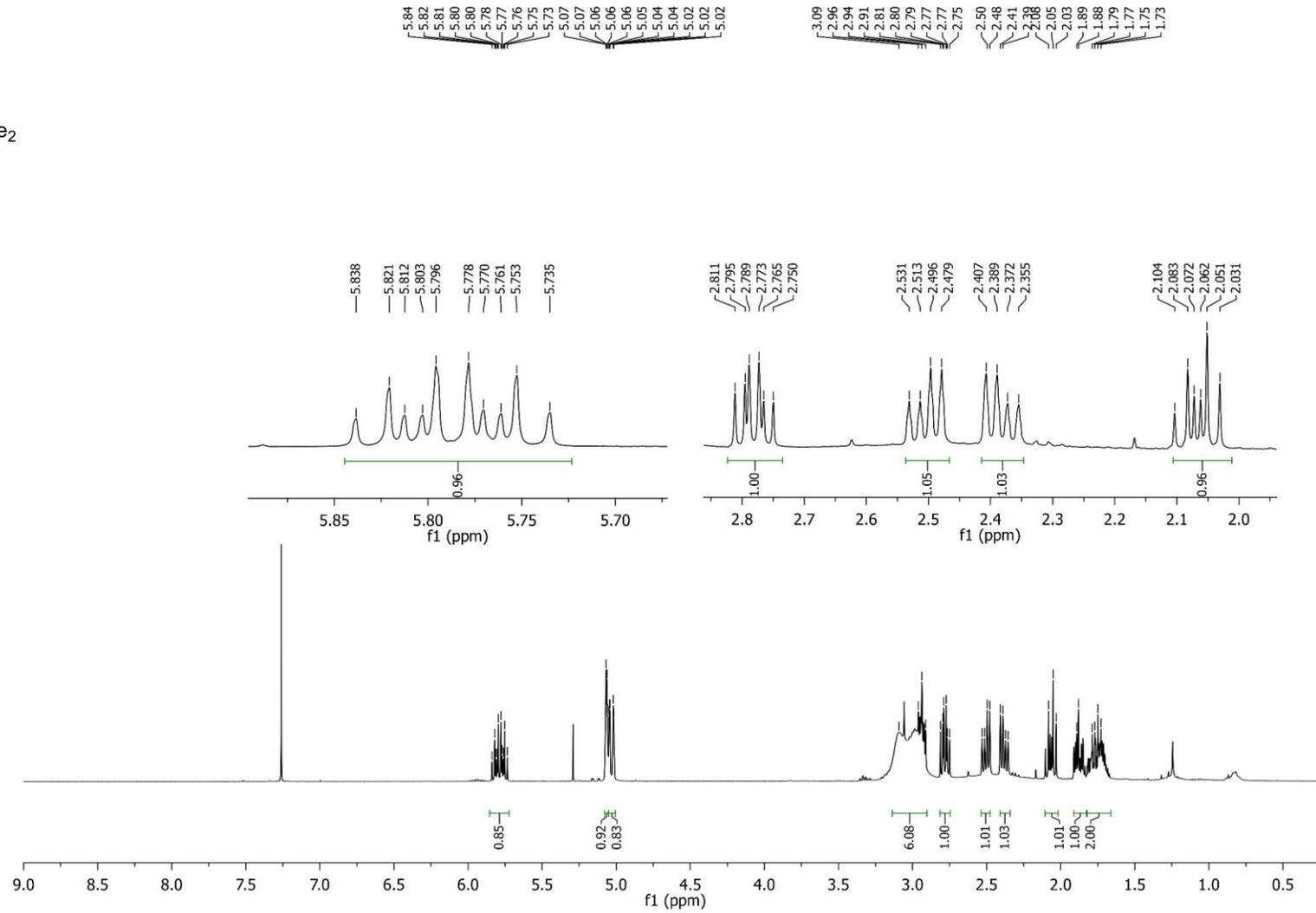
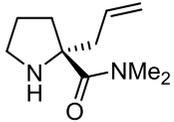


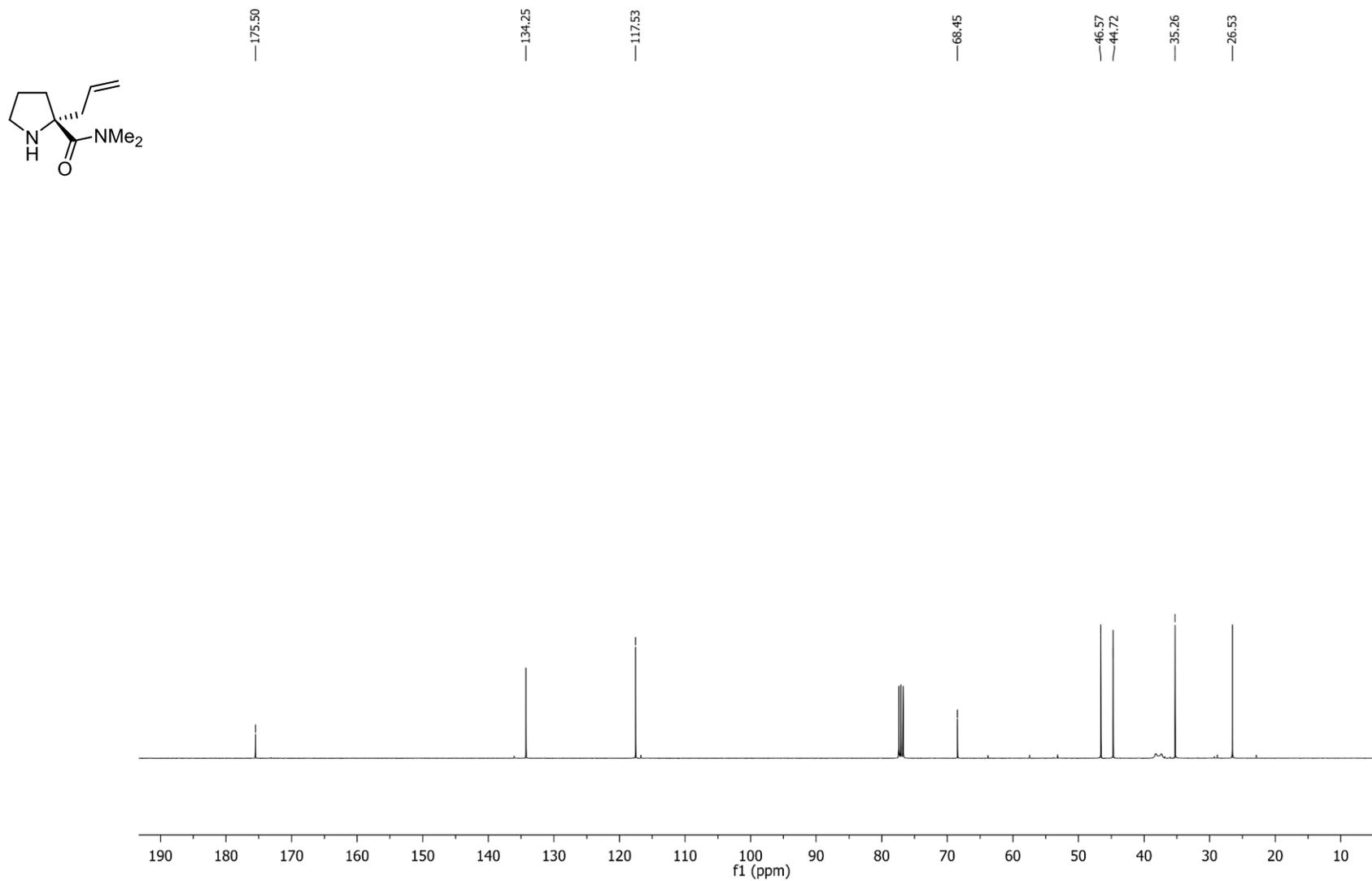
#	Time	Area	Height	Width	Area%	Symmetry
1	11.039	4117	147.5	0.4653	50.339	0.329
2	12.331	4061.6	138.5	0.4888	49.661	0.336

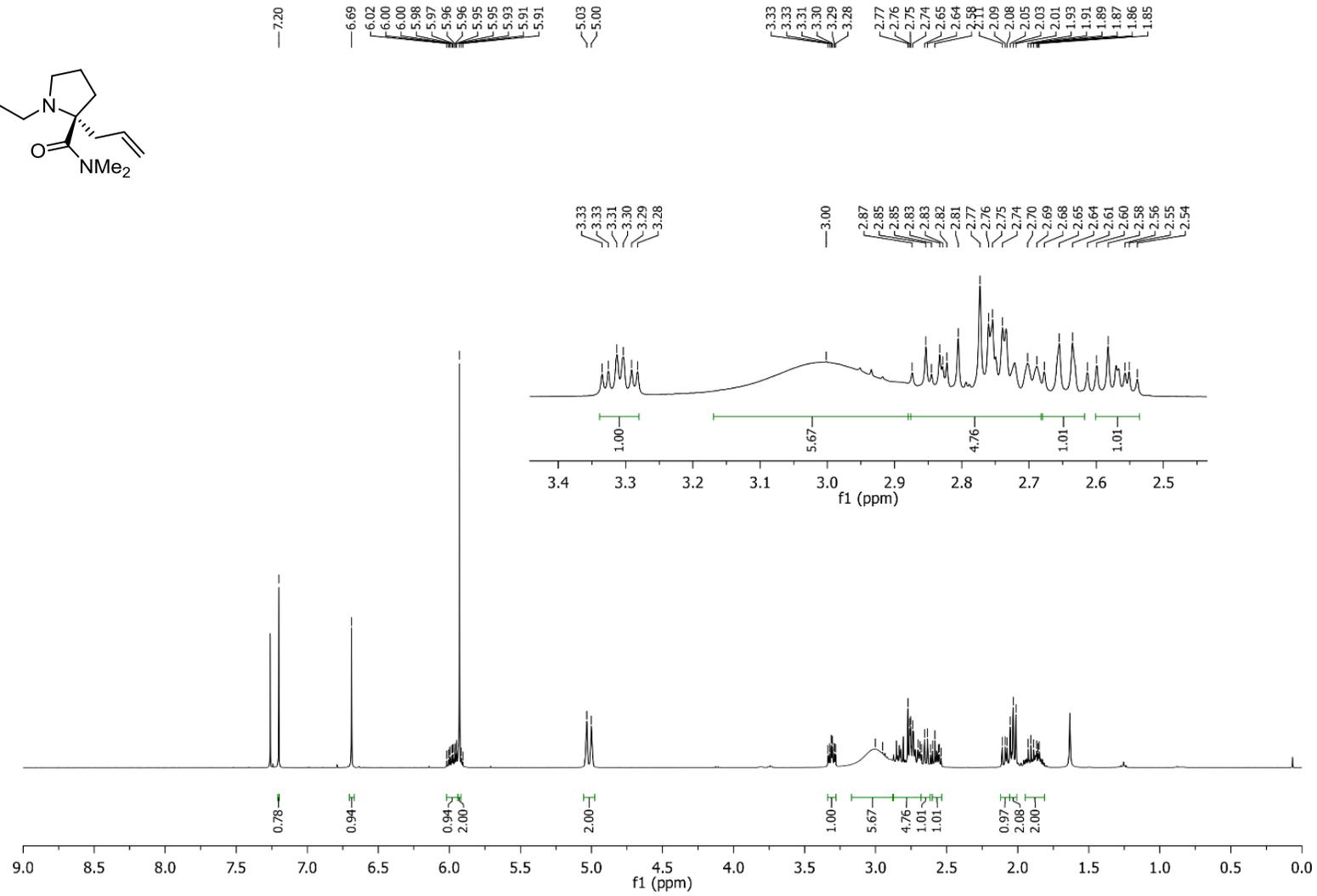
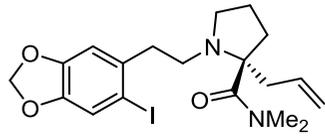
## 3 Spectral data

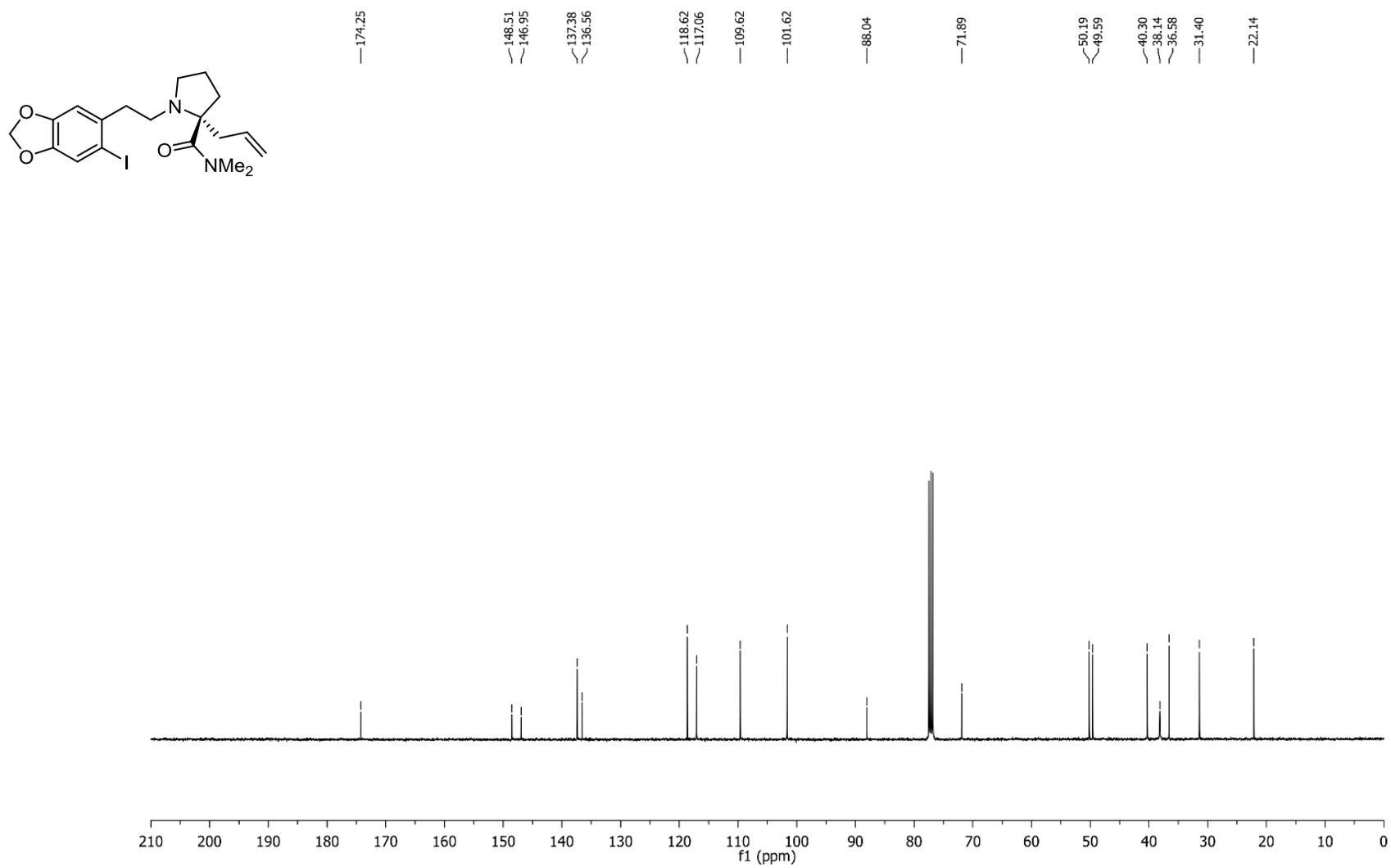
3.1  $^1\text{H}$  NMR 12 (400 MHz,  $\text{CDCl}_3$ )

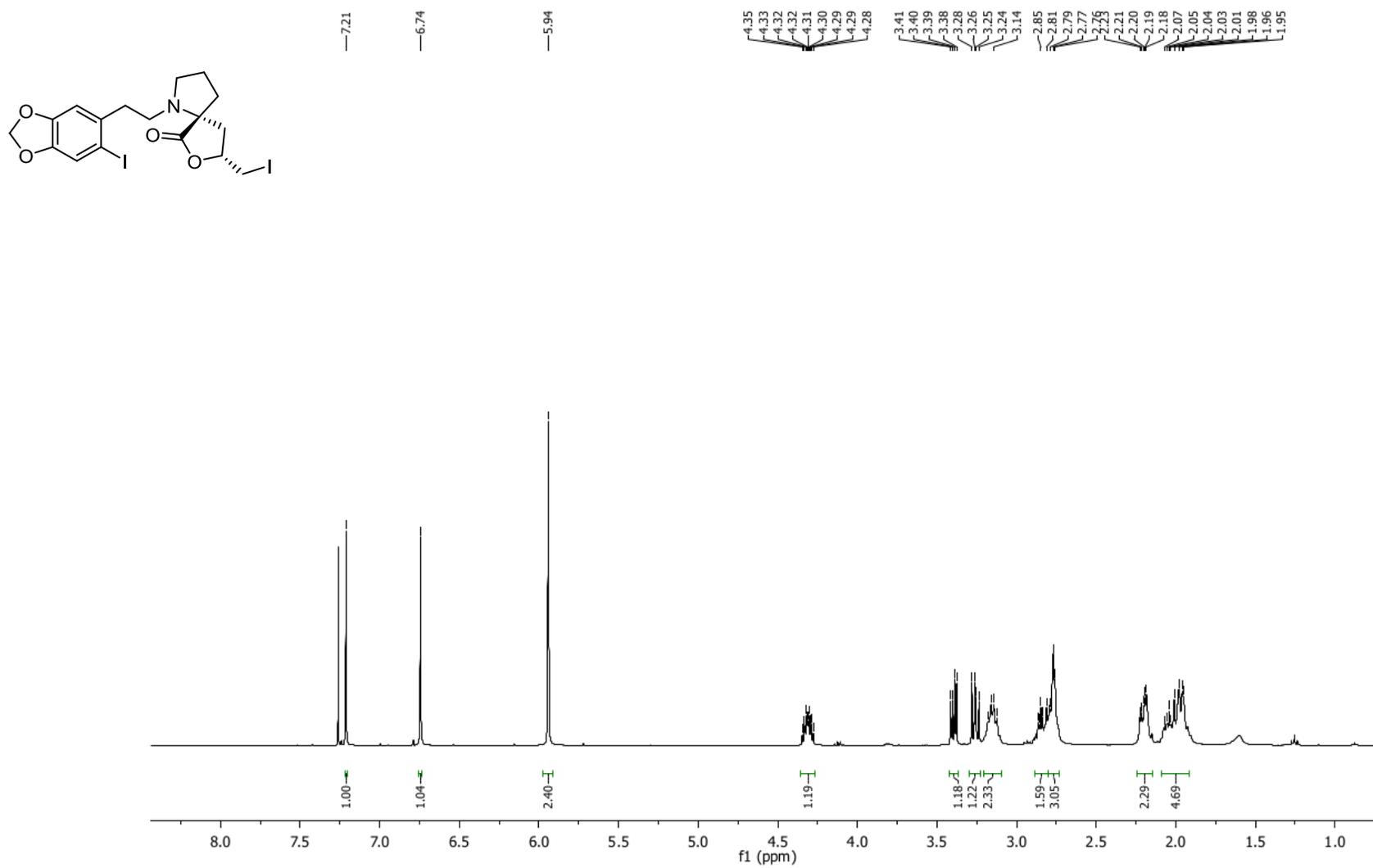
3.2  $^{13}\text{C}$  NMR 12 (100 MHz,  $\text{CDCl}_3$ )

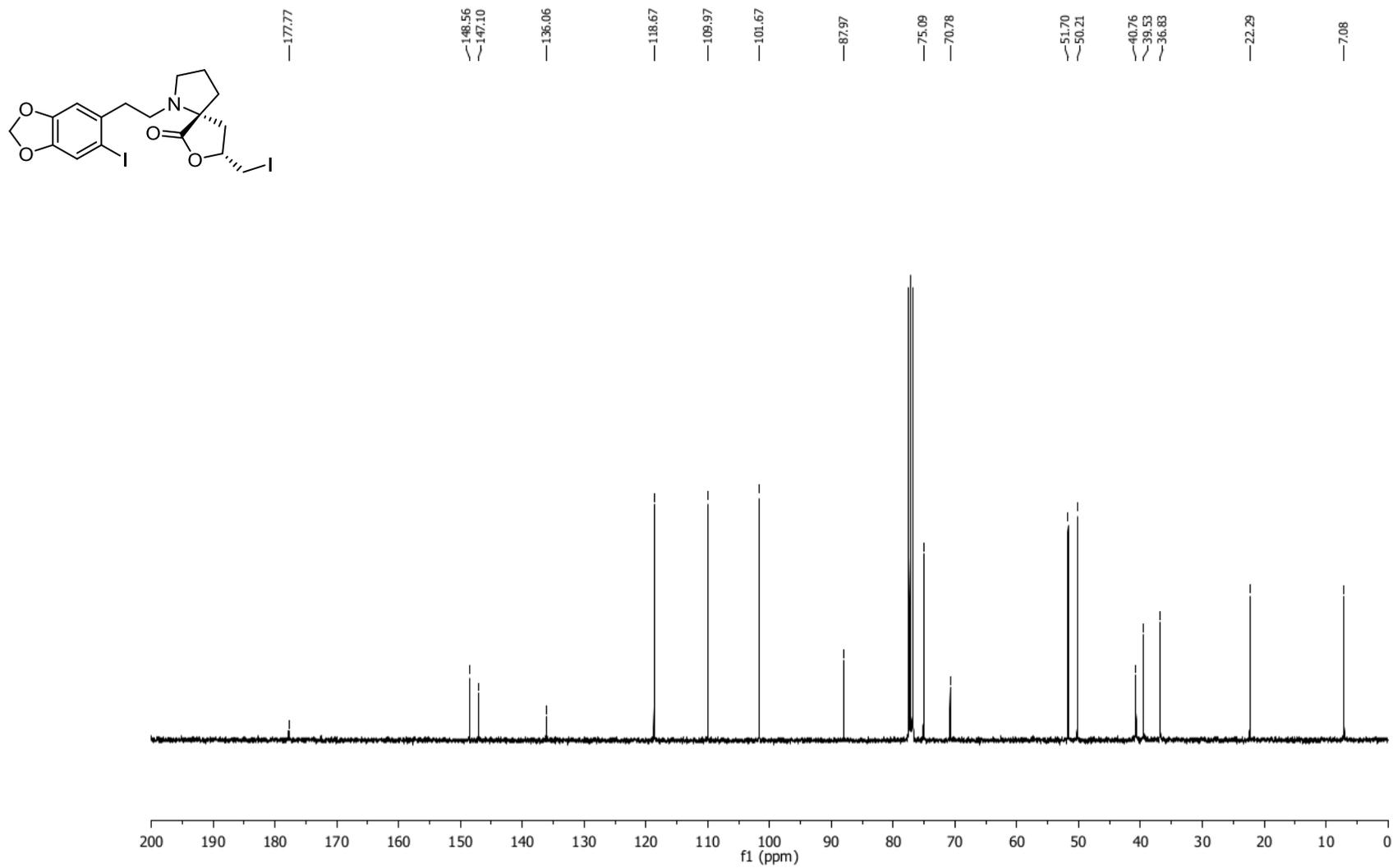
3.3  $^1\text{H}$  NMR 9 (400 MHz,  $\text{CDCl}_3$ )

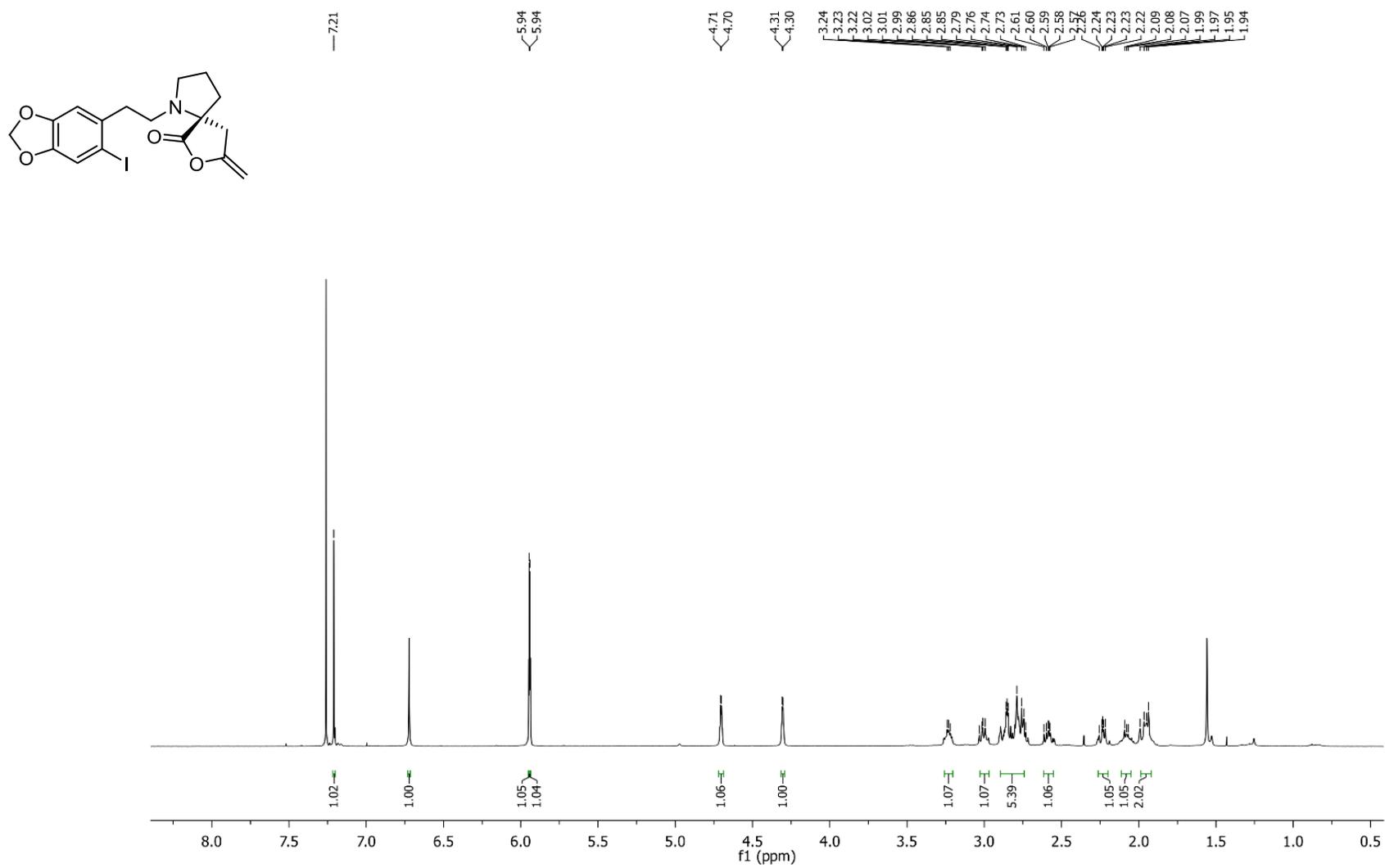
3.4  $^{13}\text{C}$  NMR 9 (100 MHz,  $\text{CDCl}_3$ )

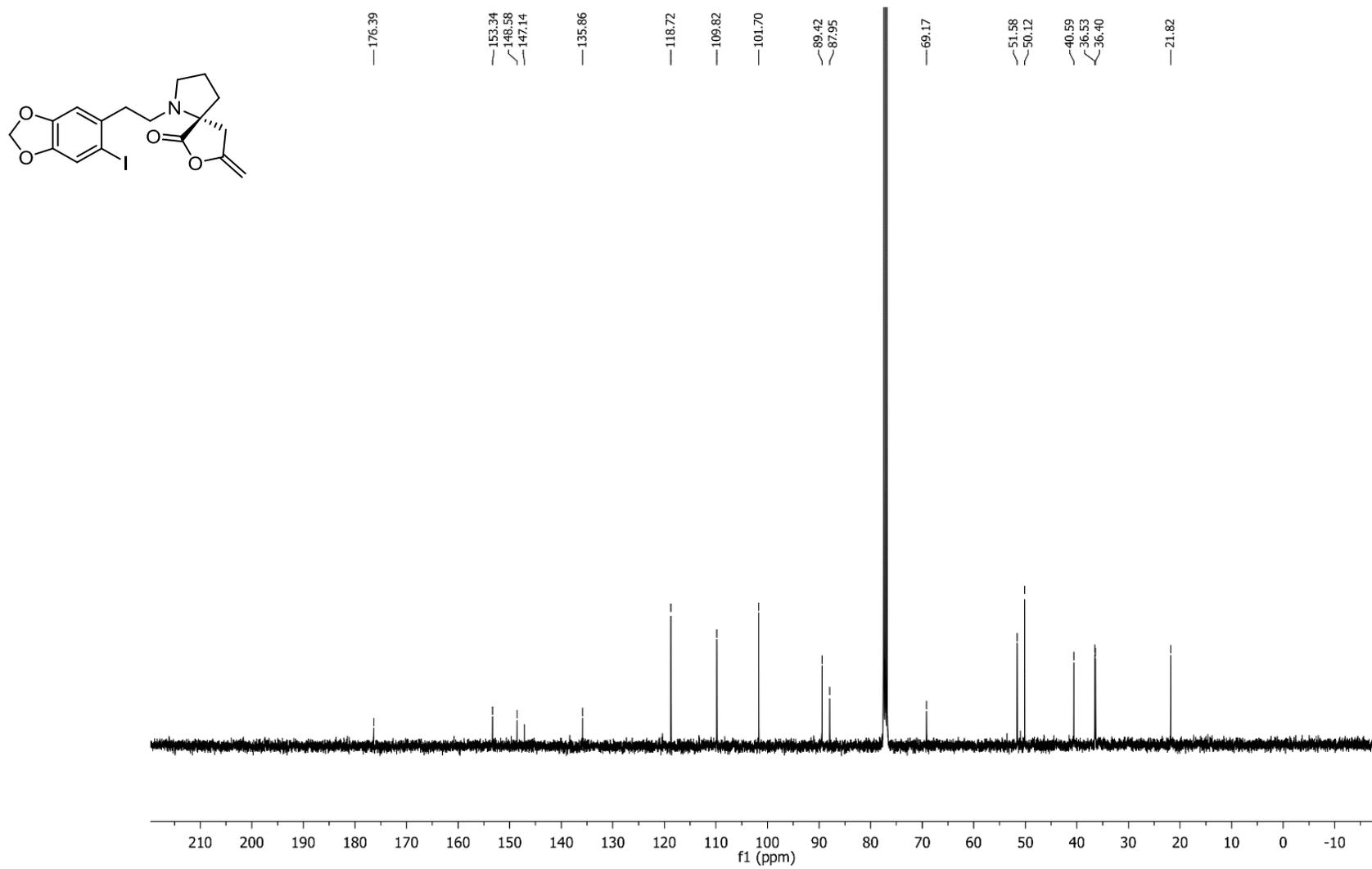
3.5  $^1\text{H}$  NMR 8 (400 MHz,  $\text{CDCl}_3$ )

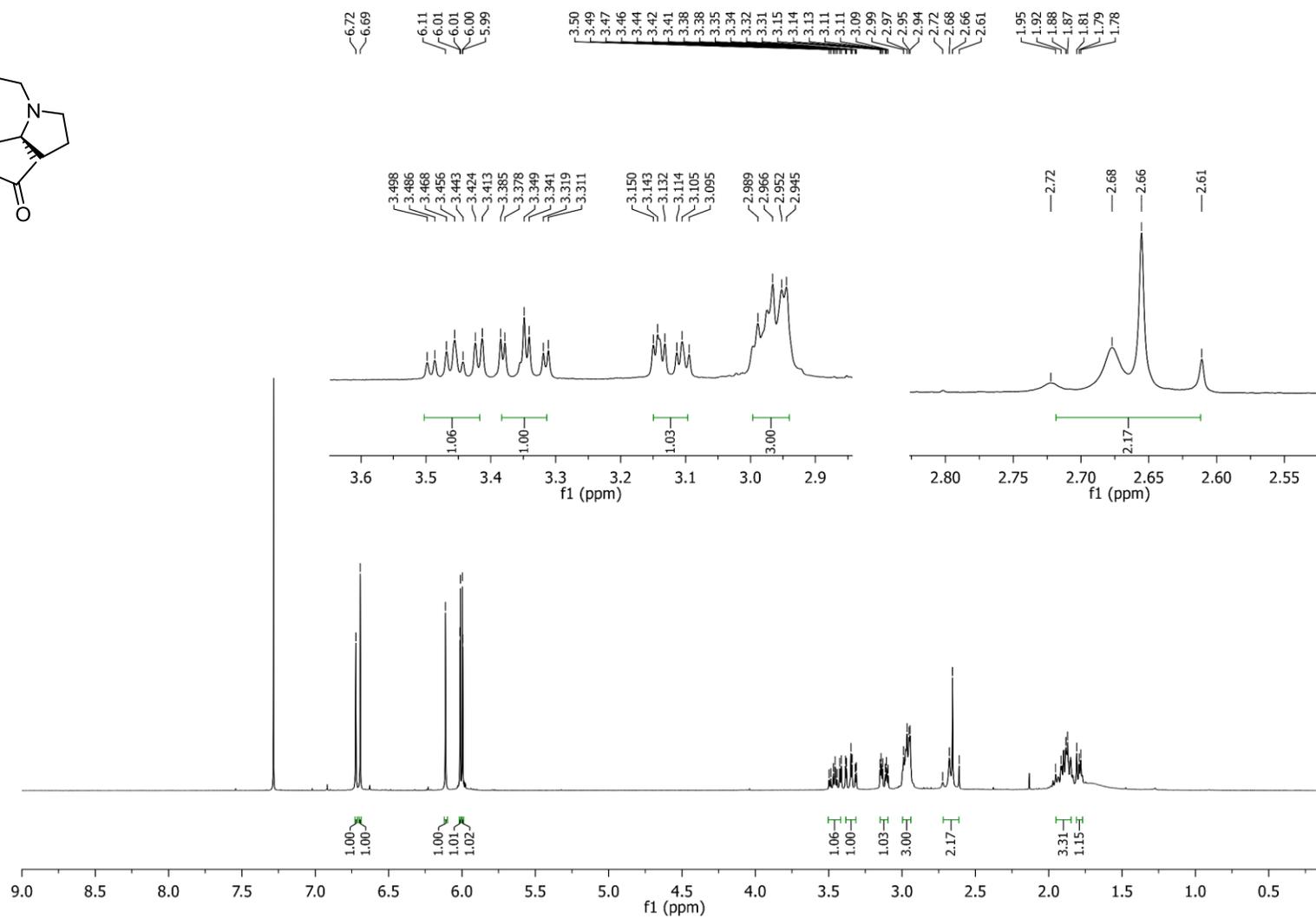
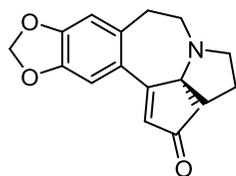
3.6  $^{13}\text{C}$  NMR 8 (100 MHz,  $\text{CDCl}_3$ )

3.7  $^1\text{H}$  NMR 17 (400 MHz,  $\text{CDCl}_3$ )

3.8  $^{13}\text{C}$  NMR 17 (100 MHz,  $\text{CDCl}_3$ )

3.9  $^1\text{H}$  NMR 7 (400 MHz,  $\text{CDCl}_3$ )

3.10  $^{13}\text{C}$  NMR 7 (100 MHz,  $\text{CDCl}_3$ )

3.11  $^1\text{H}$  NMR 5 (400 MHz,  $\text{CDCl}_3$ )

3.12  $^{13}\text{C}$  NMR 5 (100 MHz,  $\text{CDCl}_3$ )