

Supplementary Information

Synthesis of crop protection agent mandipropamid

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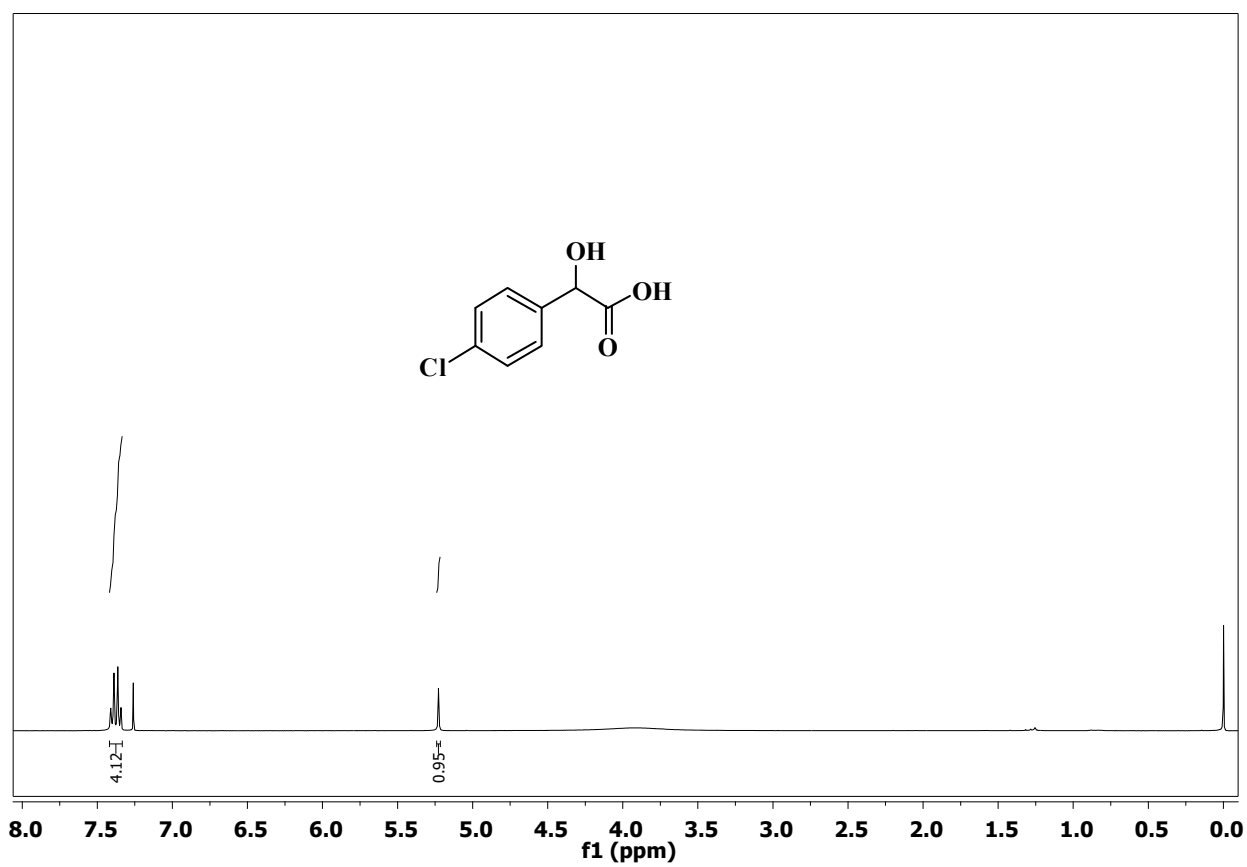
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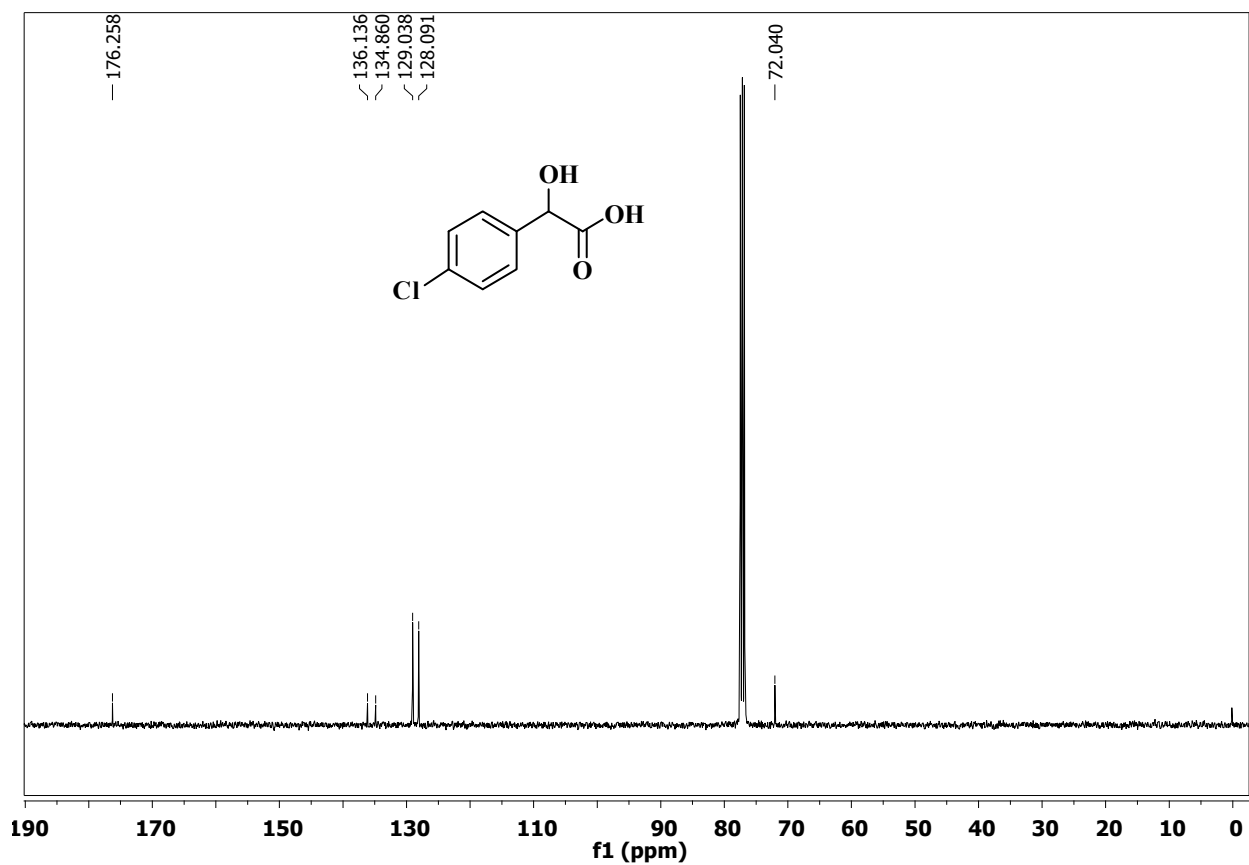
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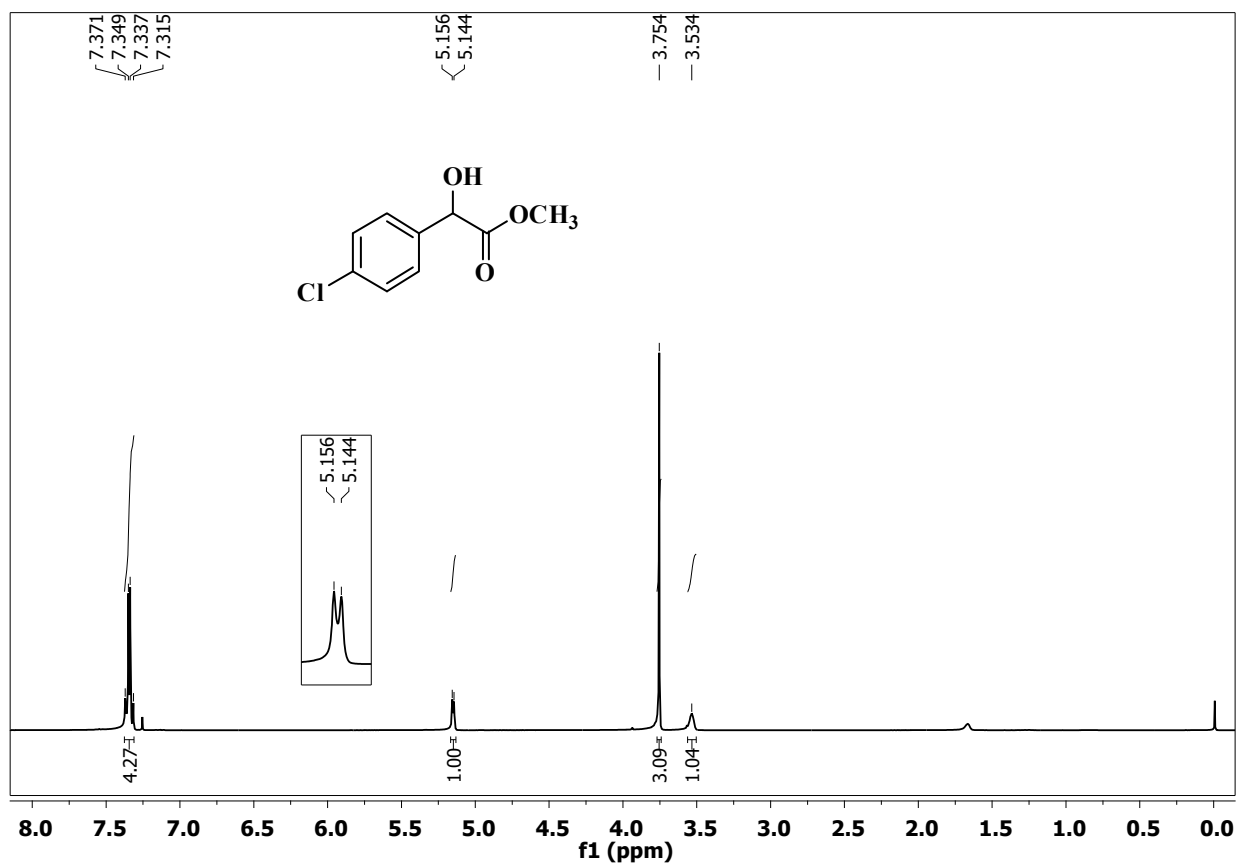
Received 22 June 2023; accepted (revised) 31 July 2023



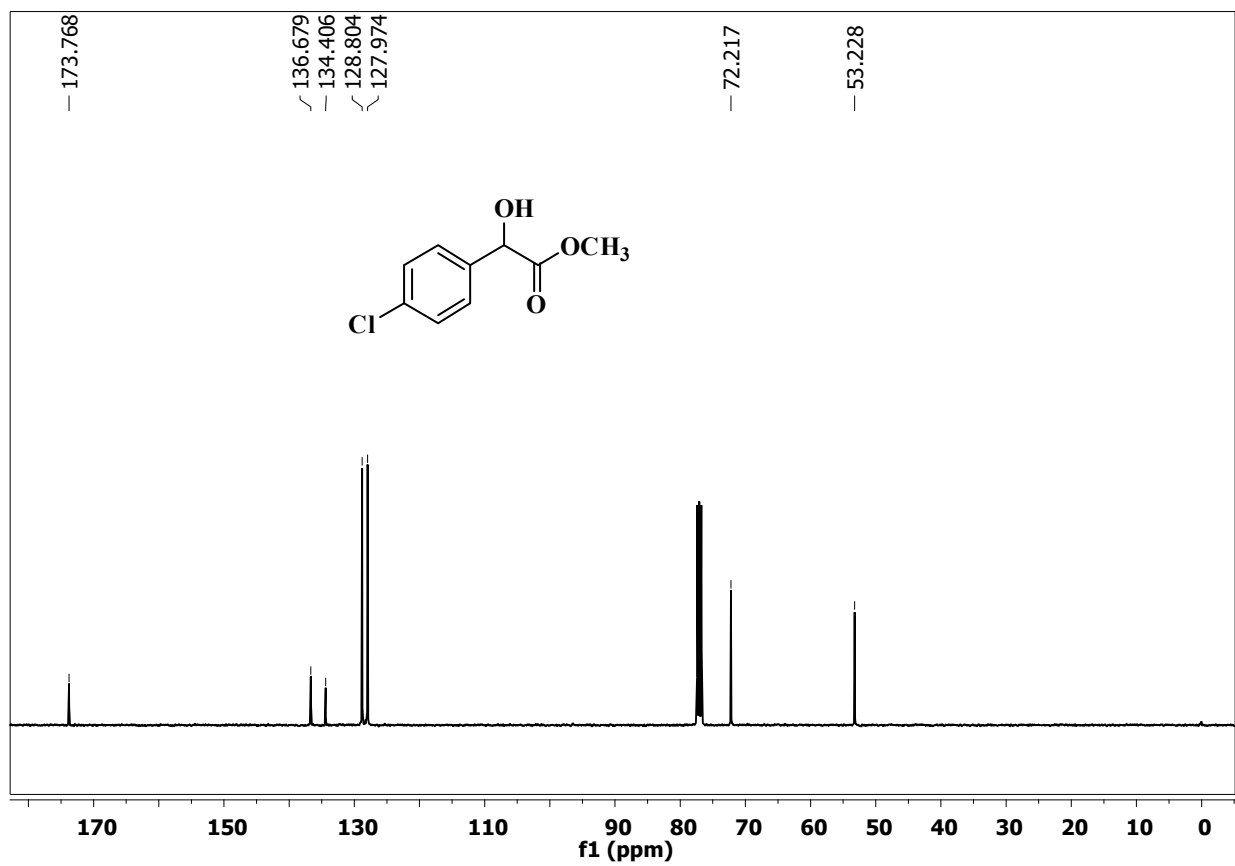
^1H NMR spectrum of compound **2** in CDCl_3 (400 MHz)



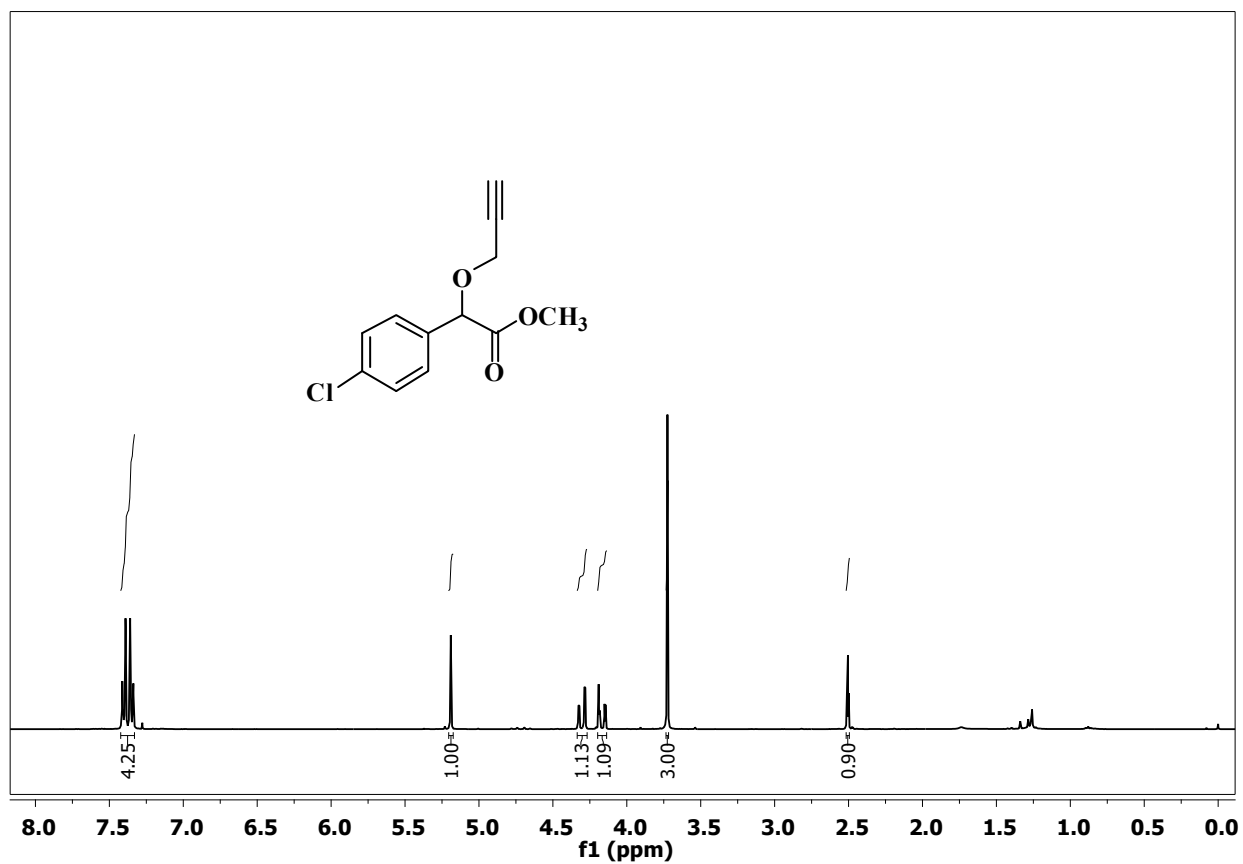
^{13}C NMR spectrum of compound **2** in CDCl_3 (101 MHz)



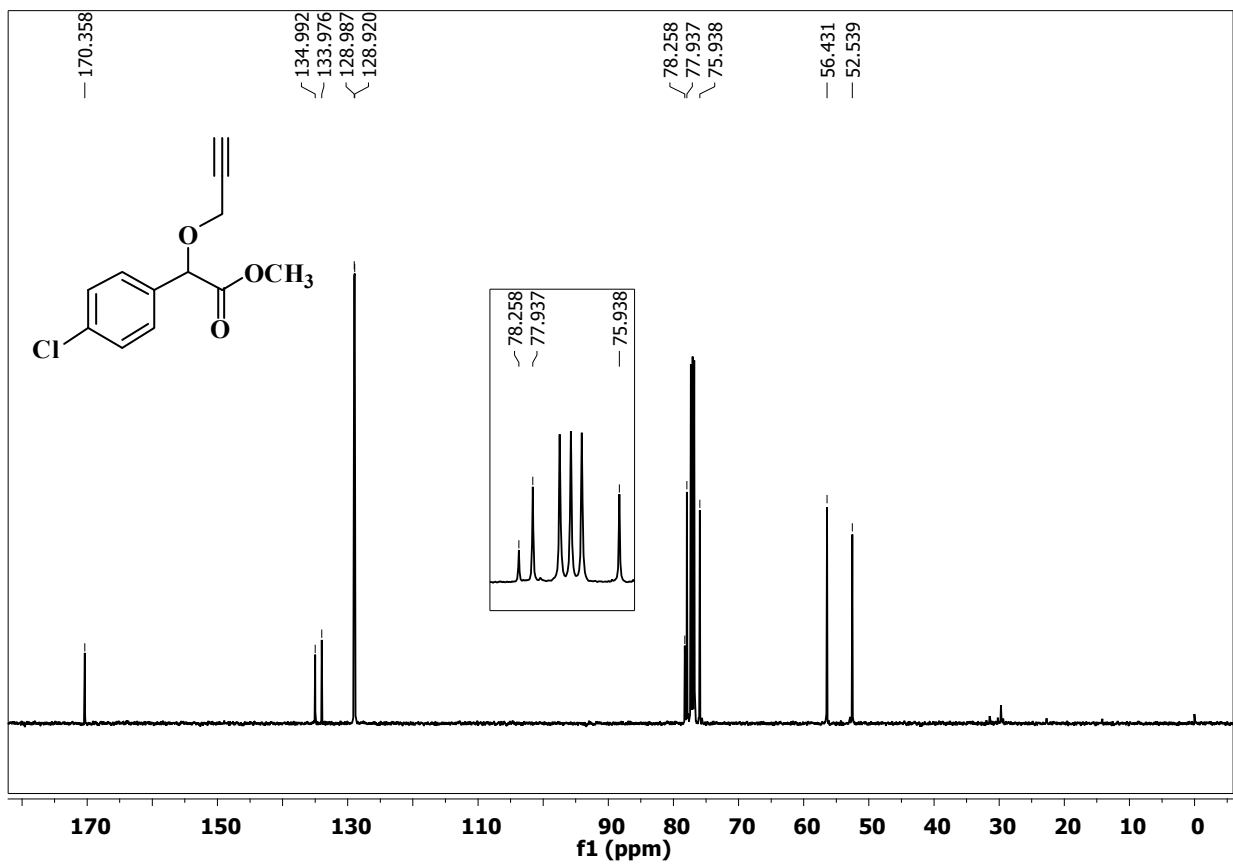
^1H NMR spectrum of compound **3** in CDCl_3 (400 MHz)



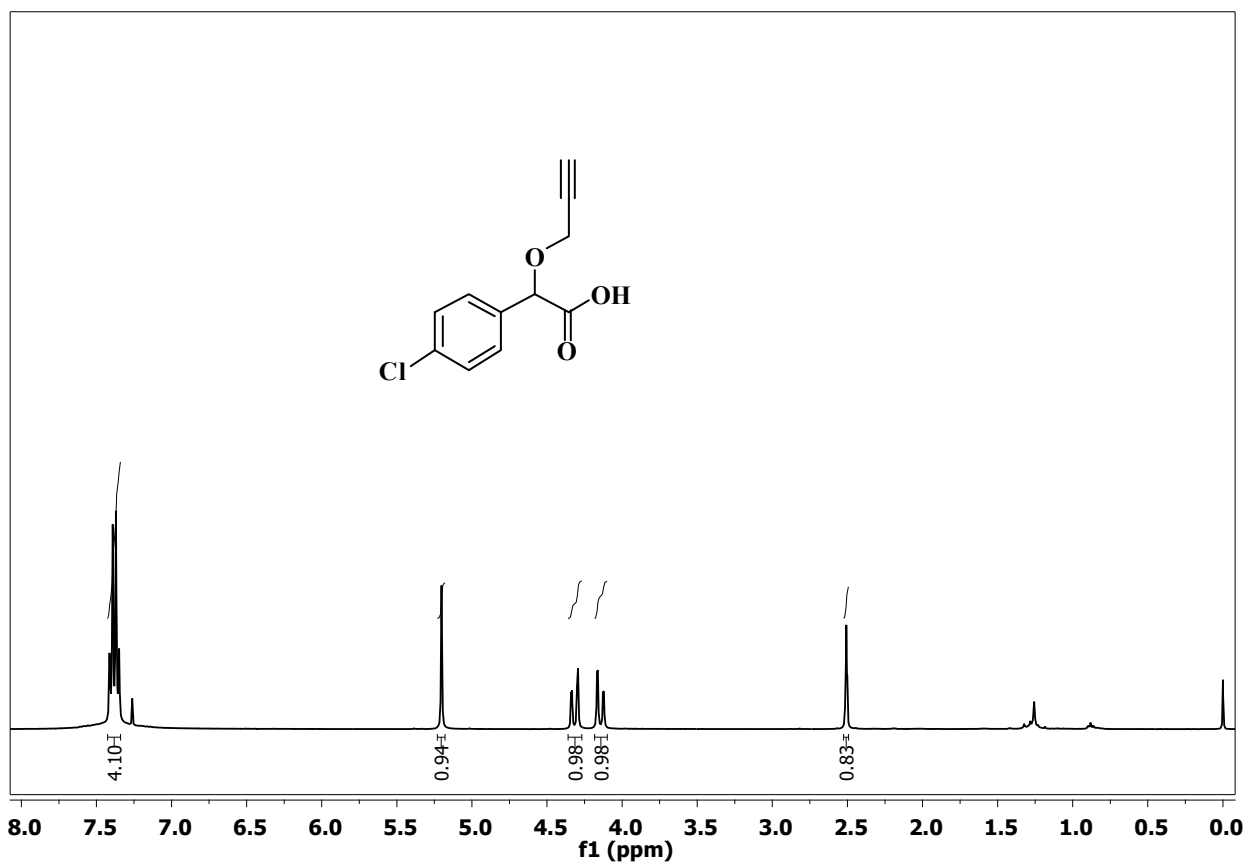
^{13}C NMR spectrum of compound **3** in CDCl_3 (101 MHz)



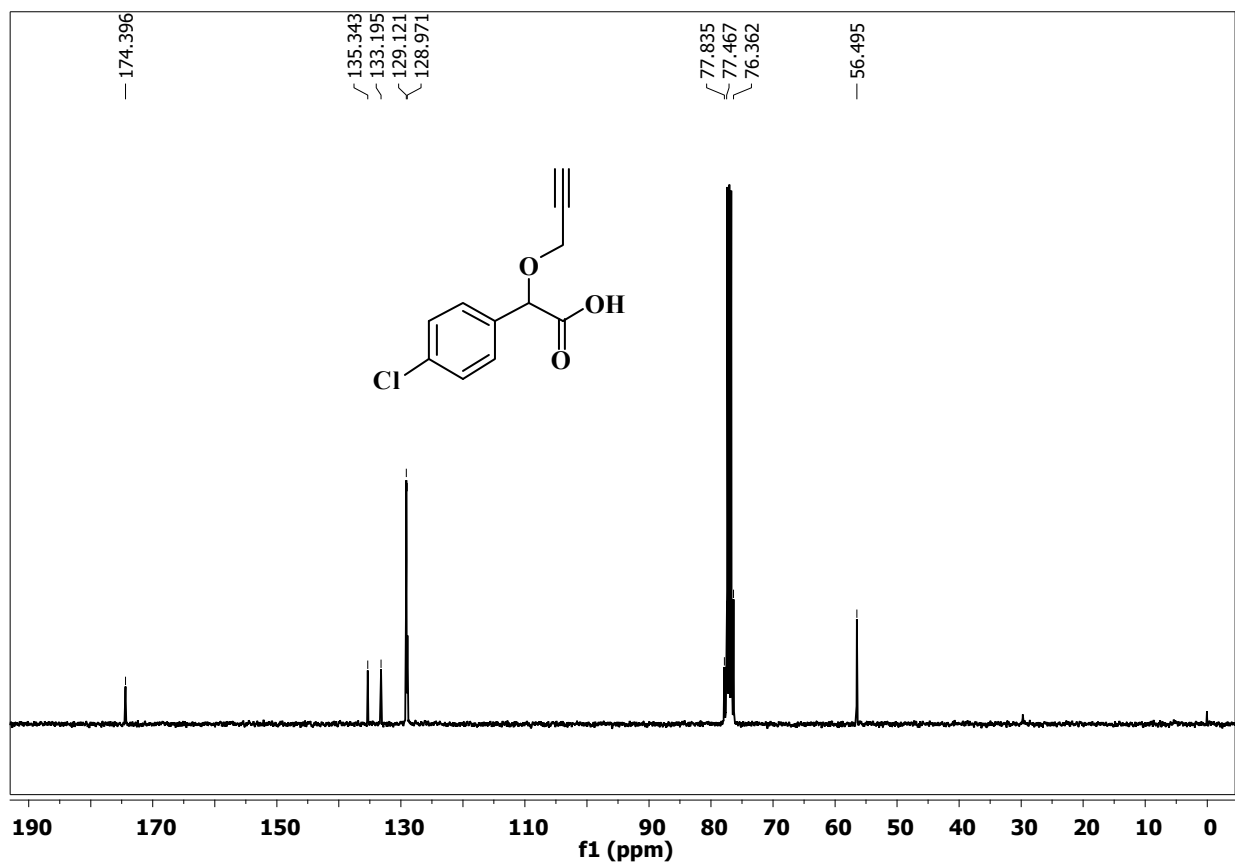
¹H NMR spectrum of compound 4 in CDCl₃ (400 MHz)



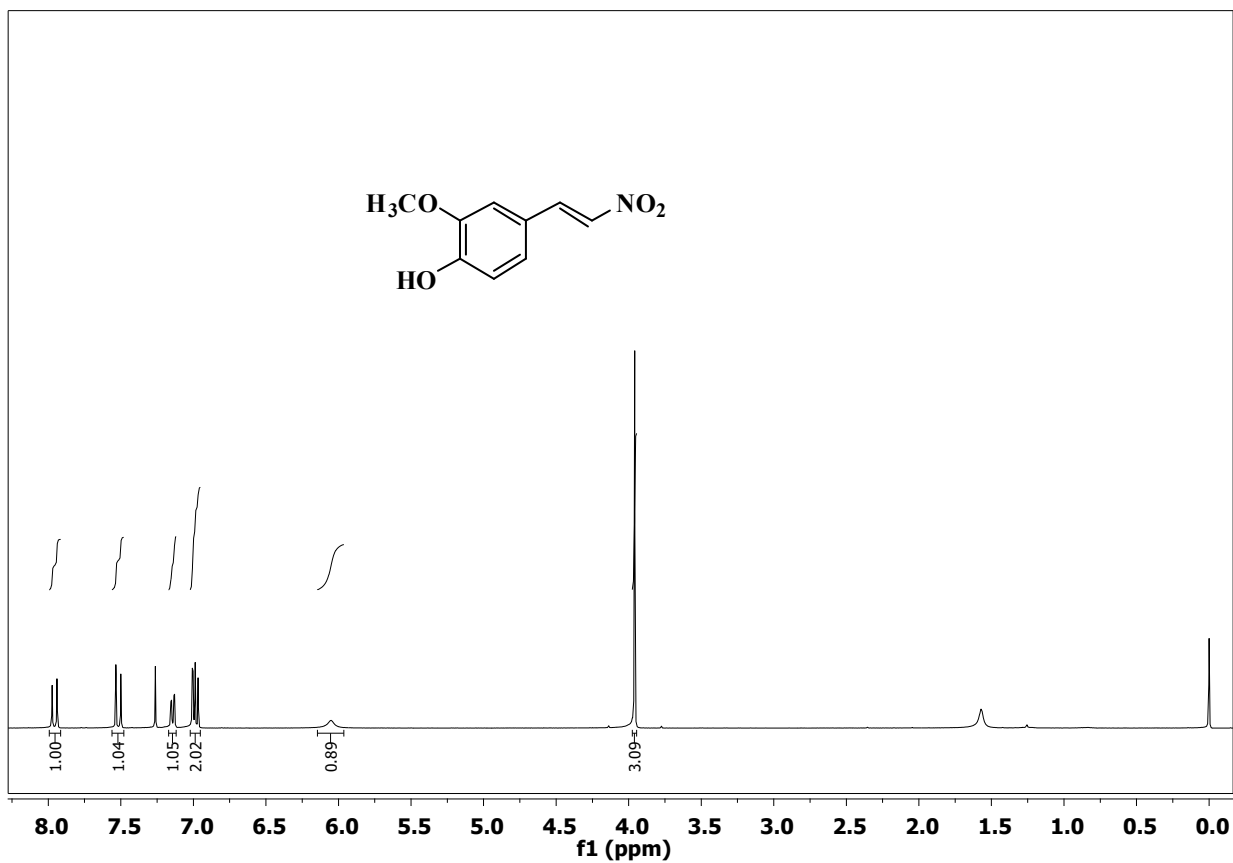
^{13}C NMR spectrum of compound **4** in CDCl_3 (126 MHz)



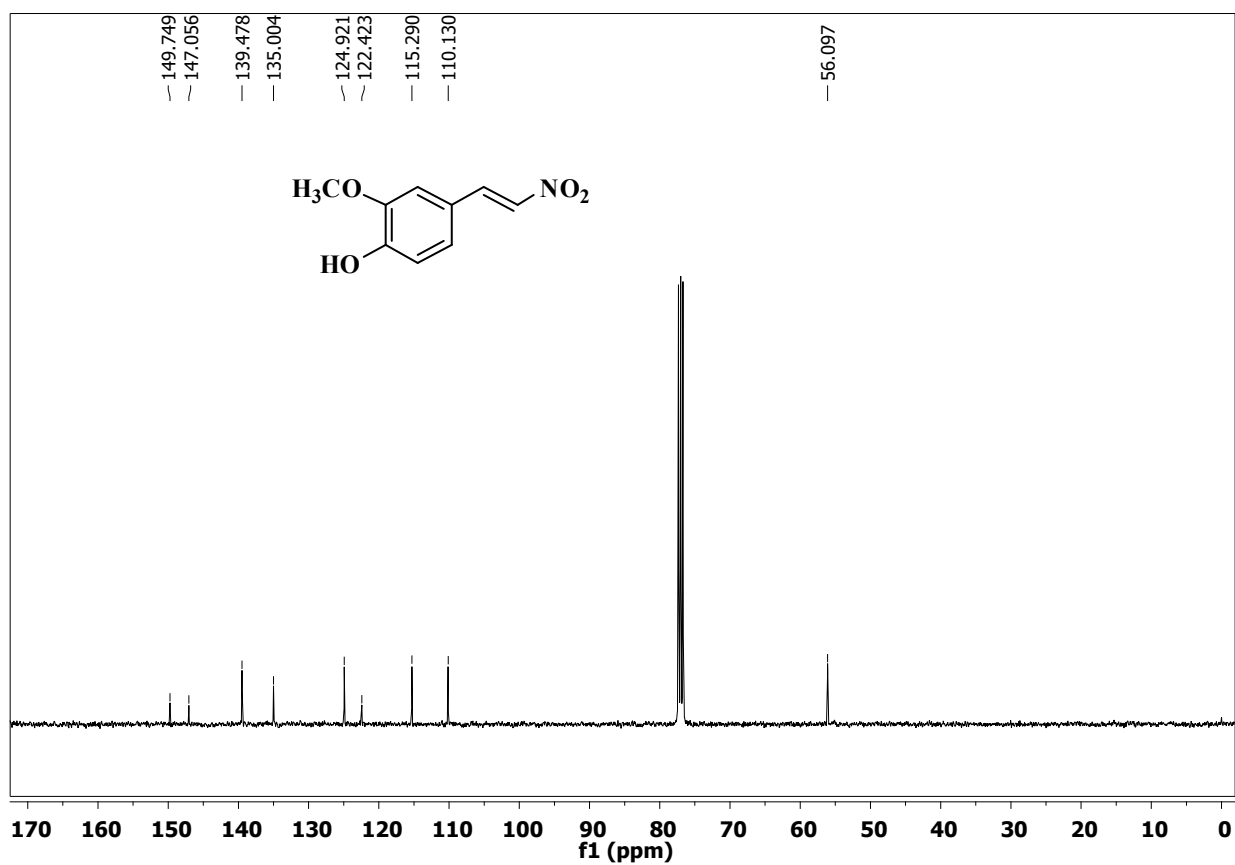
^1H NMR spectrum of compound **5** in CDCl_3 (400 MHz)



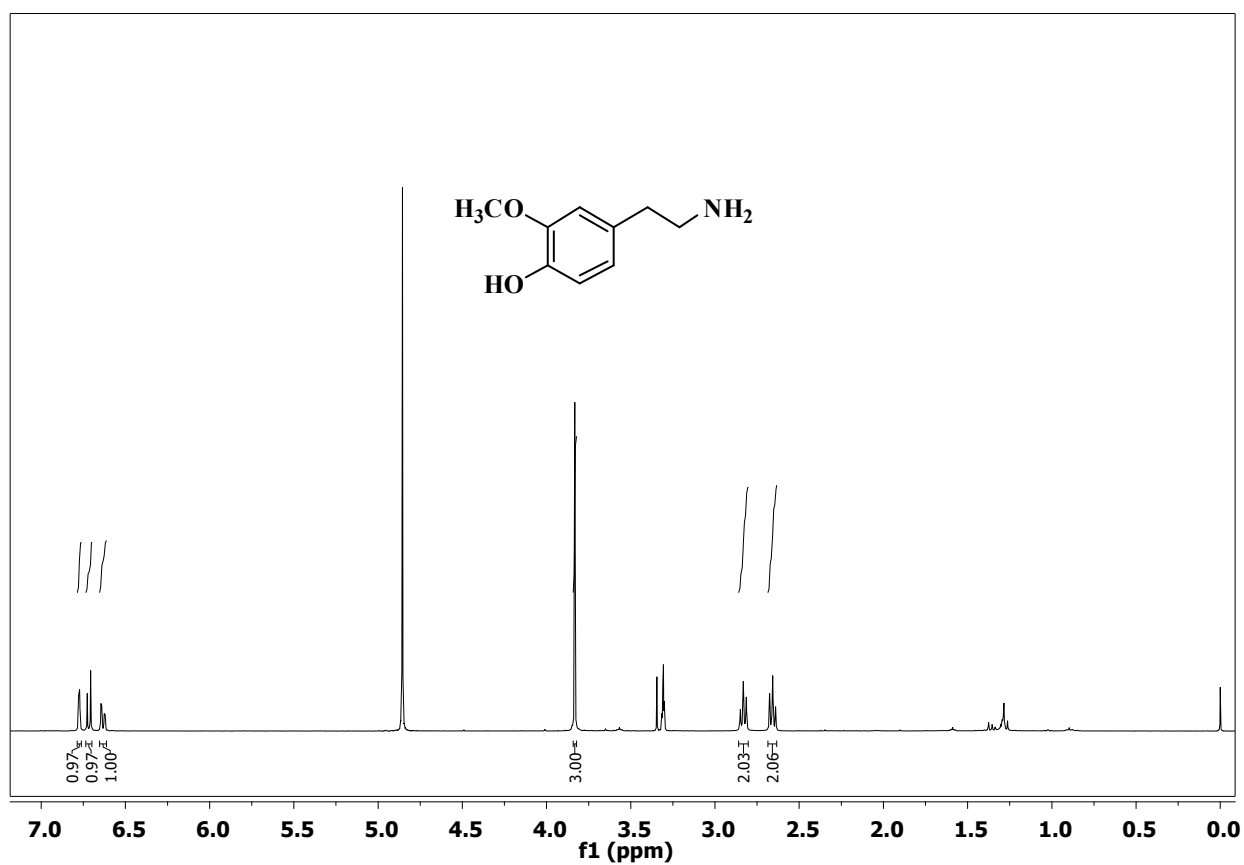
^{13}C NMR spectrum of compound 5 in CDCl_3 (101 MHz)



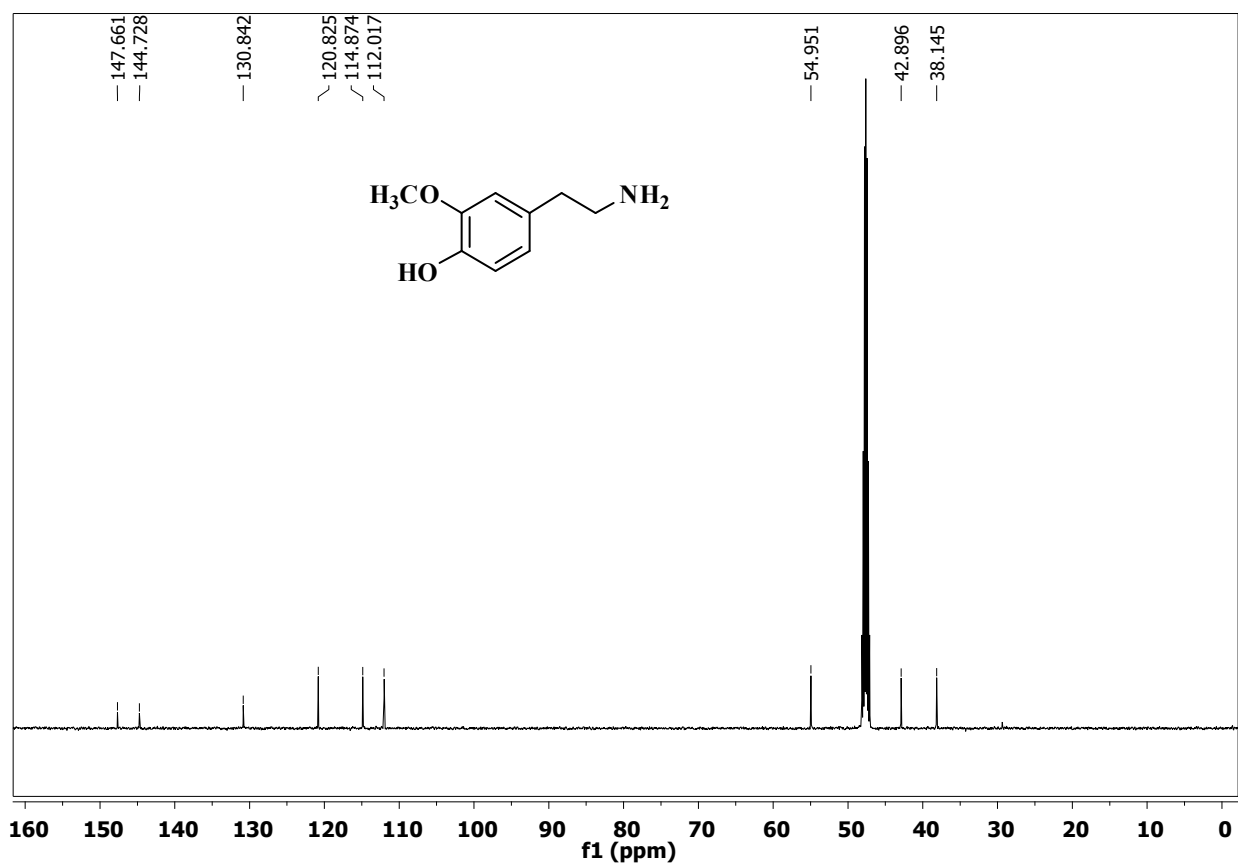
^1H NMR spectrum of compound 7 in CDCl_3 (400 MHz)



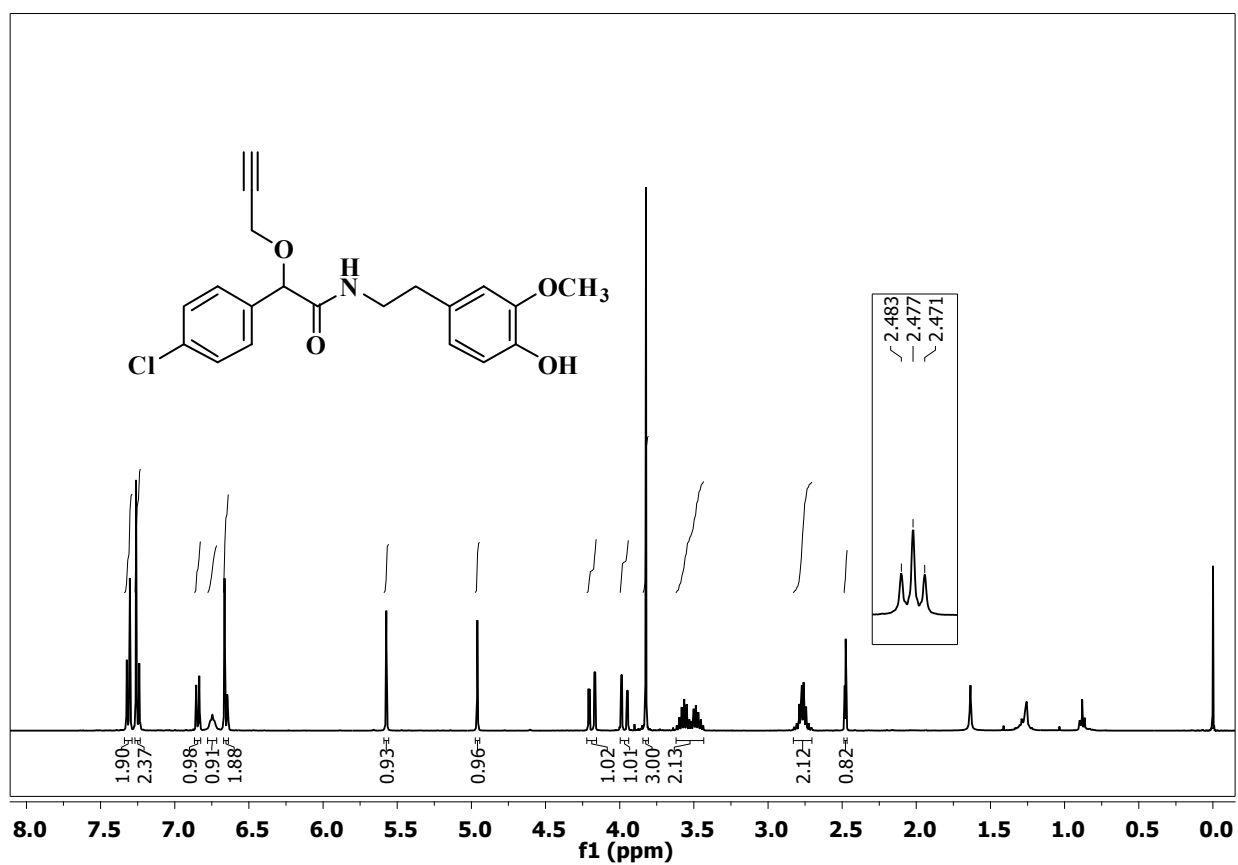
¹³C NMR spectrum of compound **7** in CDCl₃ (101 MHz)



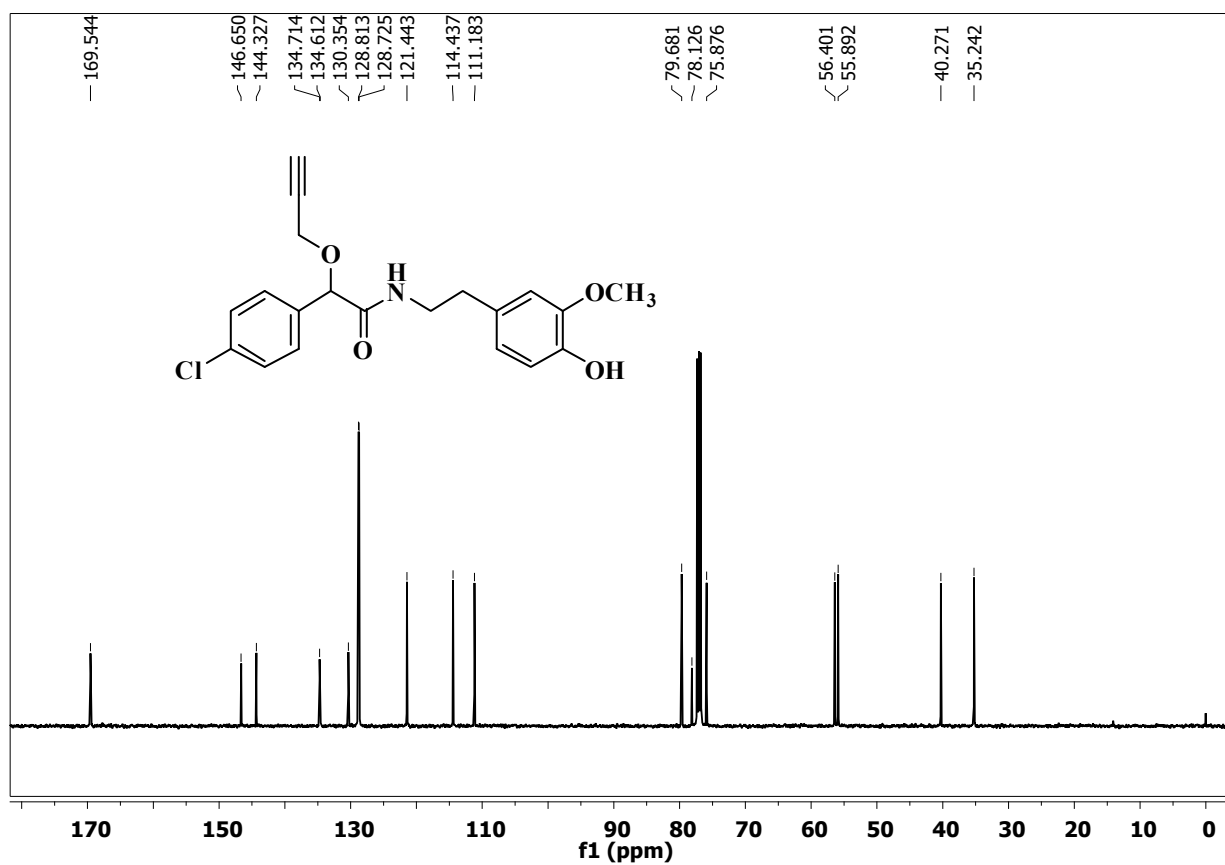
¹H NMR spectrum of compound **8** in CD₃OD (400 MHz)



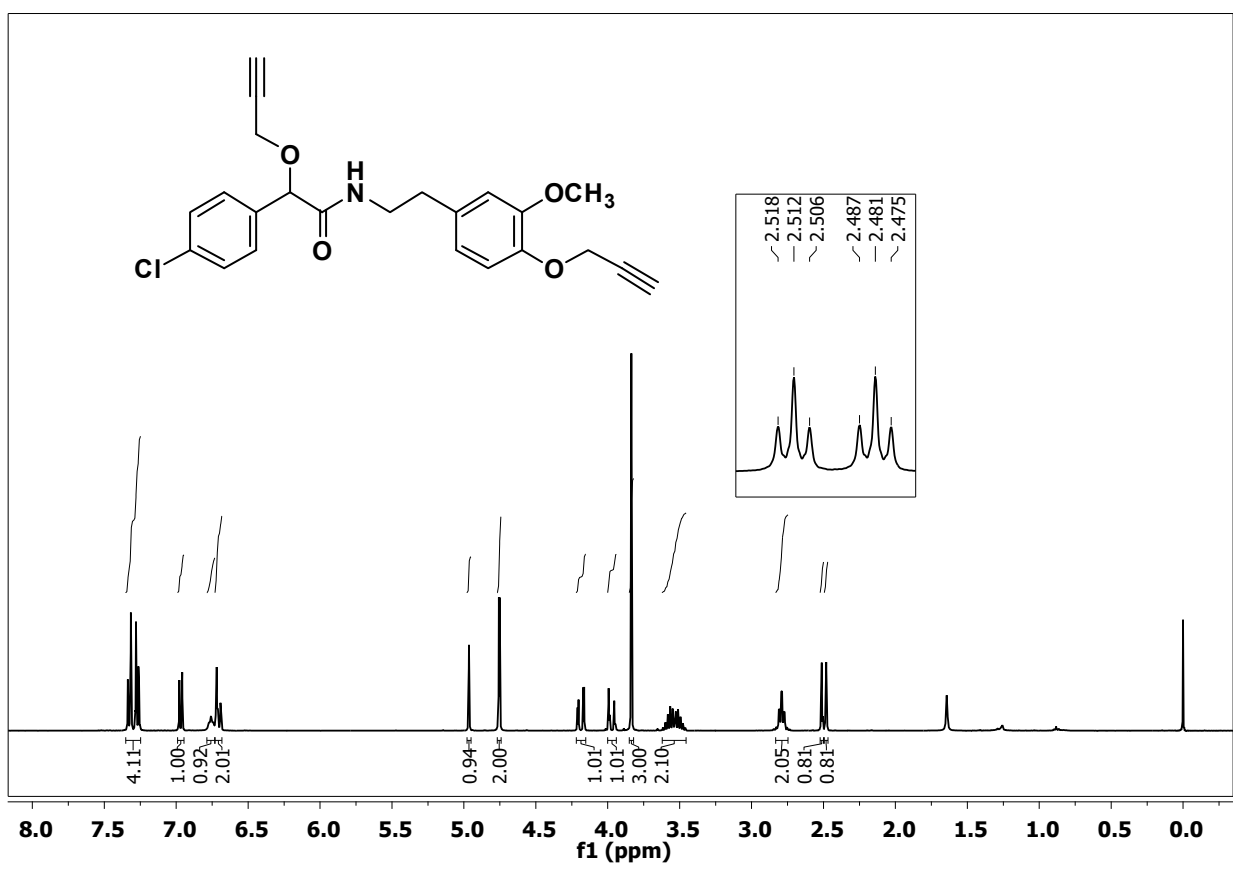
^{13}C NMR spectrum of compound **8** in CD_3OD (126 MHz)



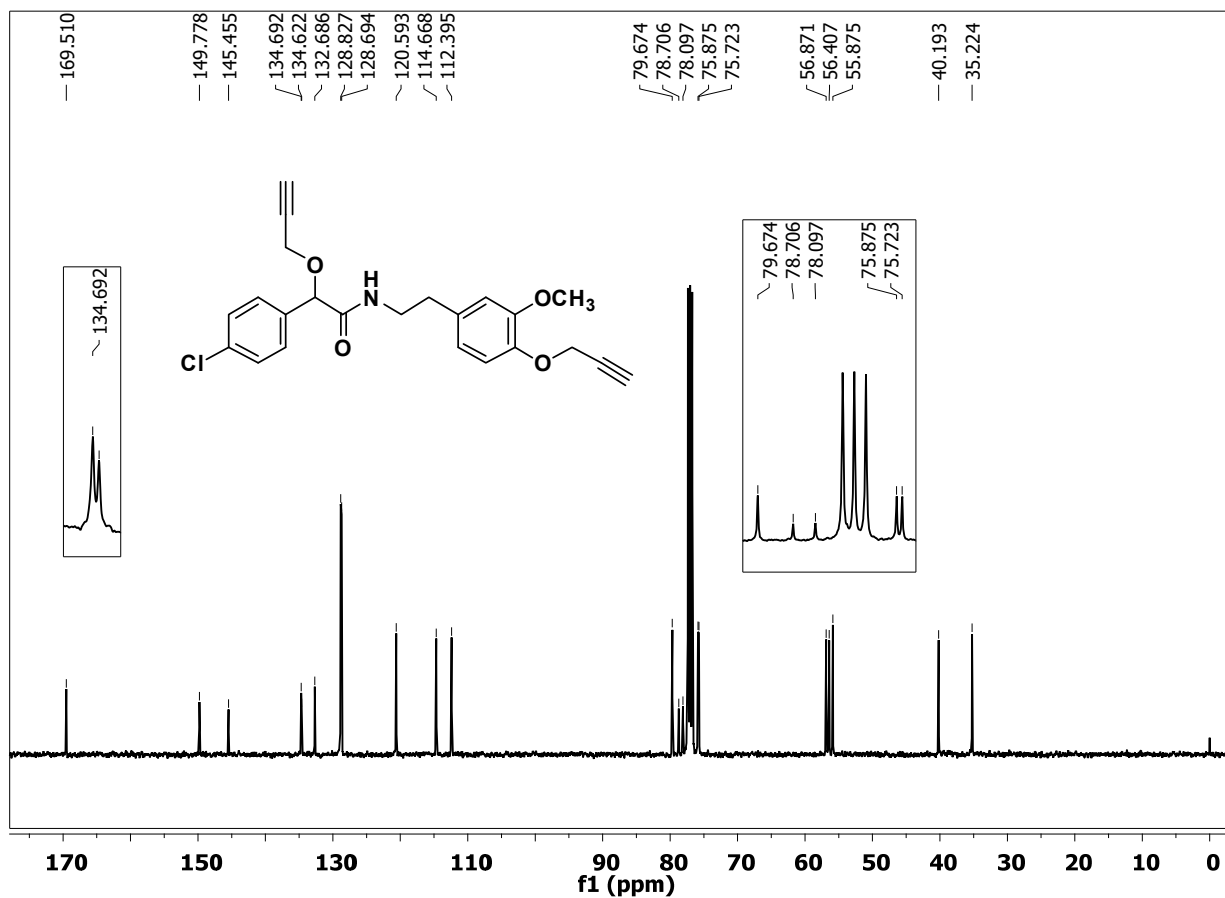
¹H NMR spectrum of compound **9** in CDCl₃ (400 MHz)



^{13}C NMR spectrum of compound **9** in CDCl_3 (126 MHz)



¹H NMR spectrum of Mandipropamid in CDCl₃ (400 MHz)



¹³C NMR spectrum of Mandipropamid in CDCl₃ (101 MHz)