

APPENDIX 2

*Spectra Related to Chapter 2:
Development of (Trimethylsilyl)Ethyl Ester Protected Enolates and
Applications in Palladium–Catalyzed Enantioselective Allylic Alkylation:
Intermolecular Cross-Coupling of Functionalized Electrophiles*

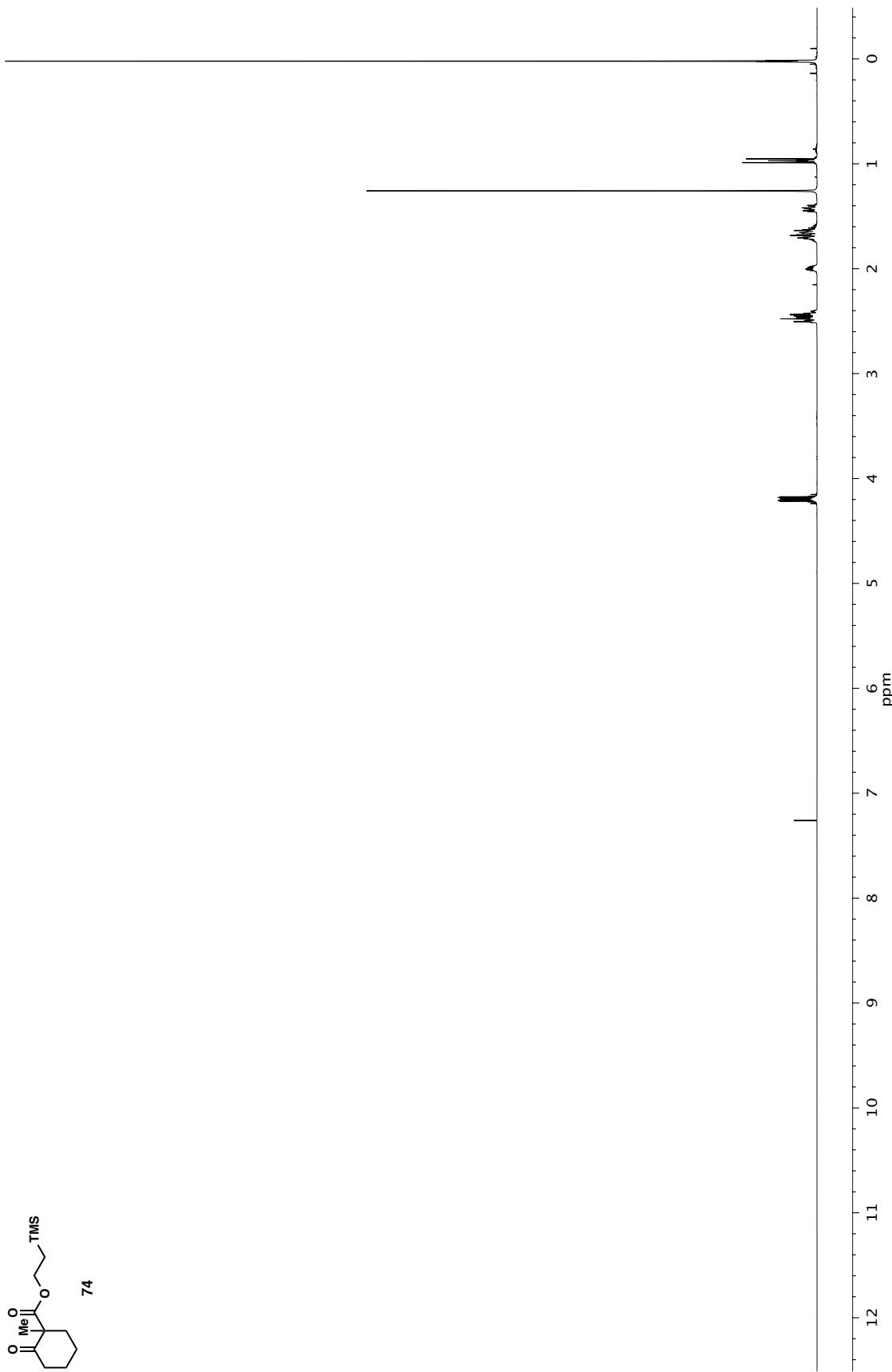


Figure A2.1 ^1H NMR (500 MHz, CDCl_3) of compound 74.

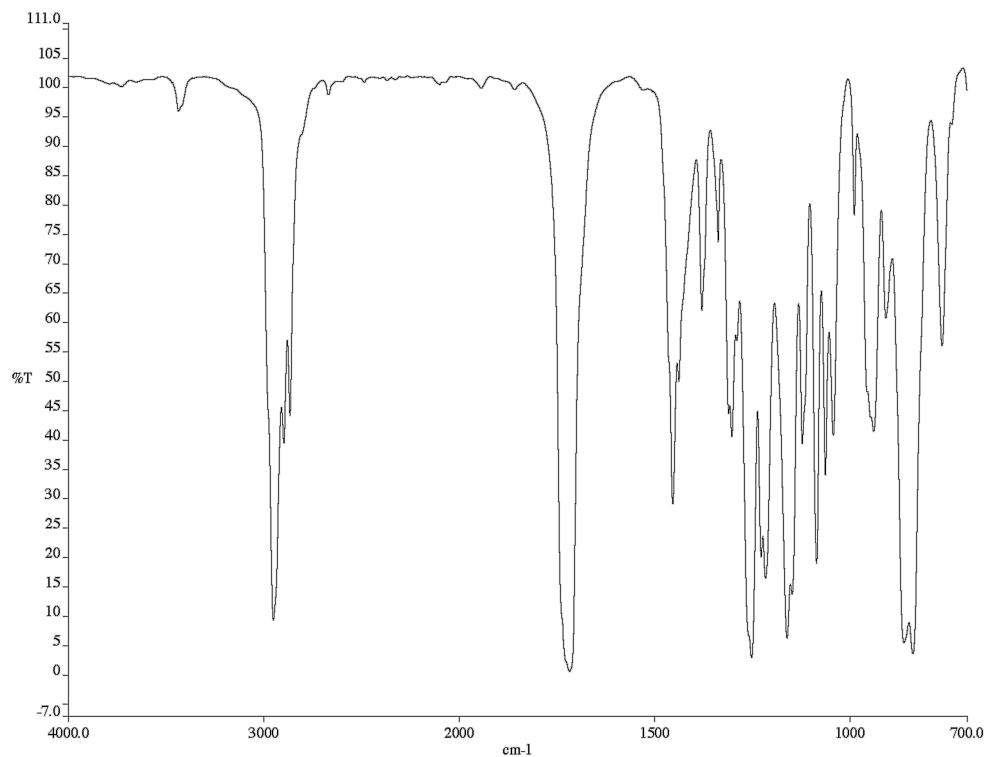


Figure A2.2 Infrared spectrum (thin film/NaCl) of compound 74.

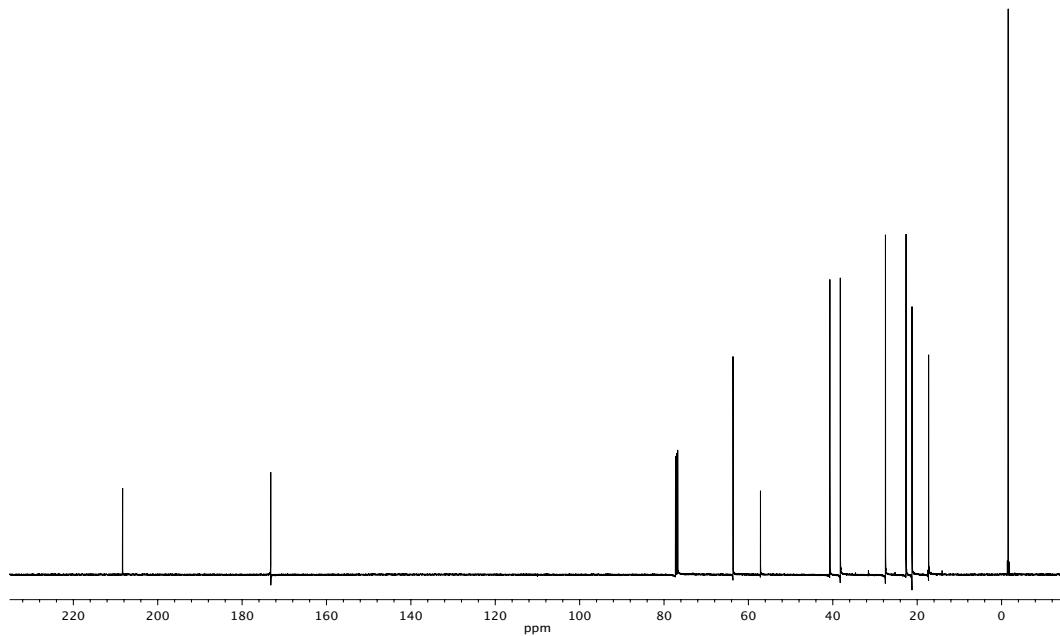


Figure A2.3 ^{13}C NMR (125 MHz, CDCl_3) of compound 74.

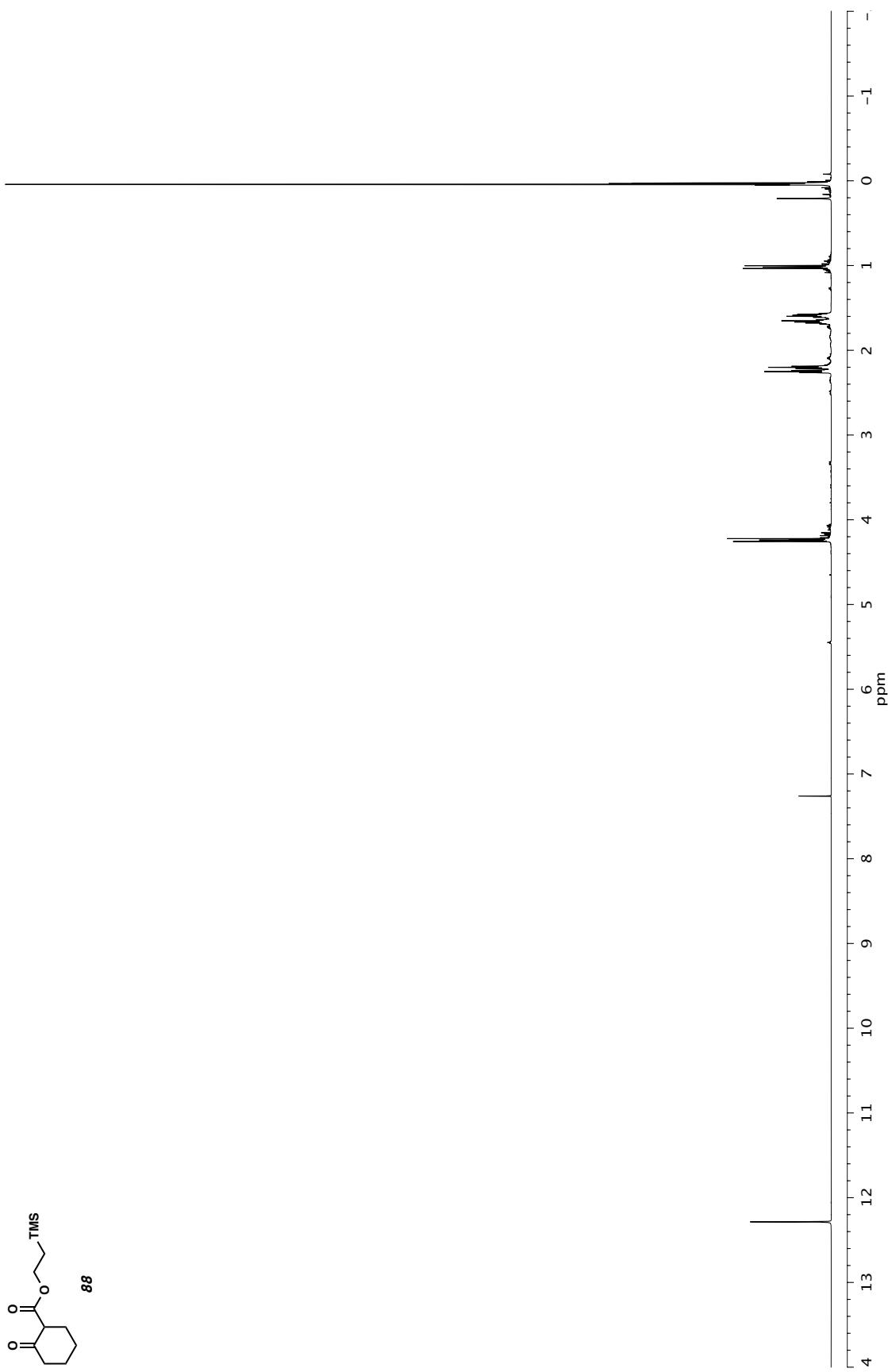


Figure A2.4 ^1H NMR (500 MHz, CDCl_3) of compound 88.

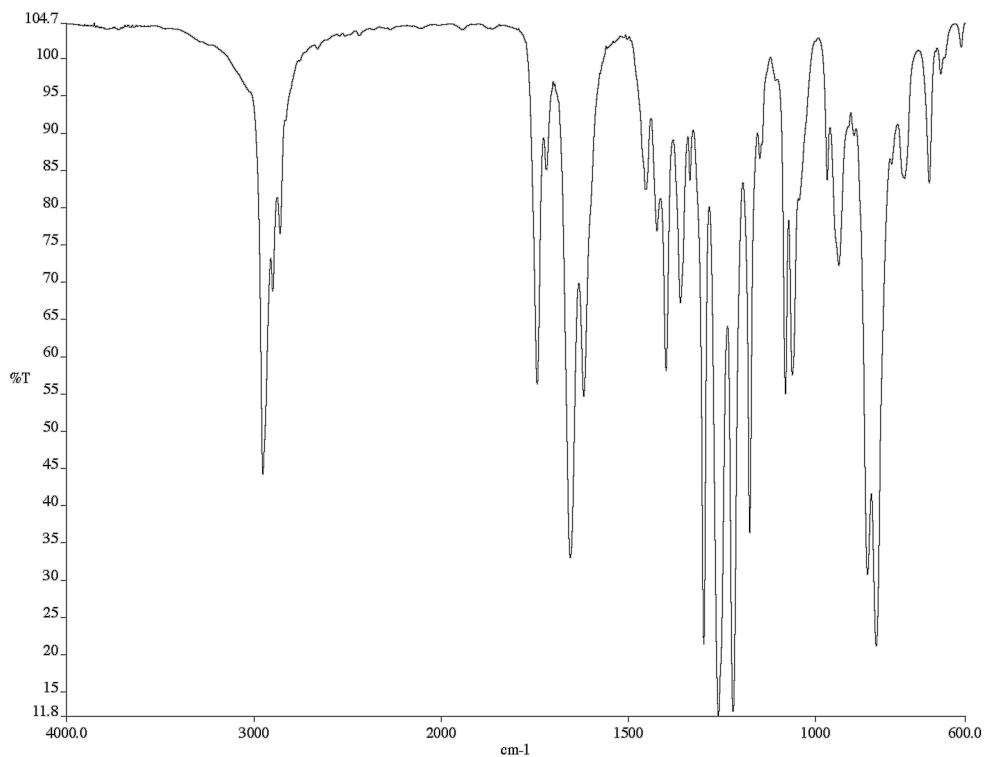


Figure A2.5 Infrared spectrum (thin film/NaCl) of compound **88**.

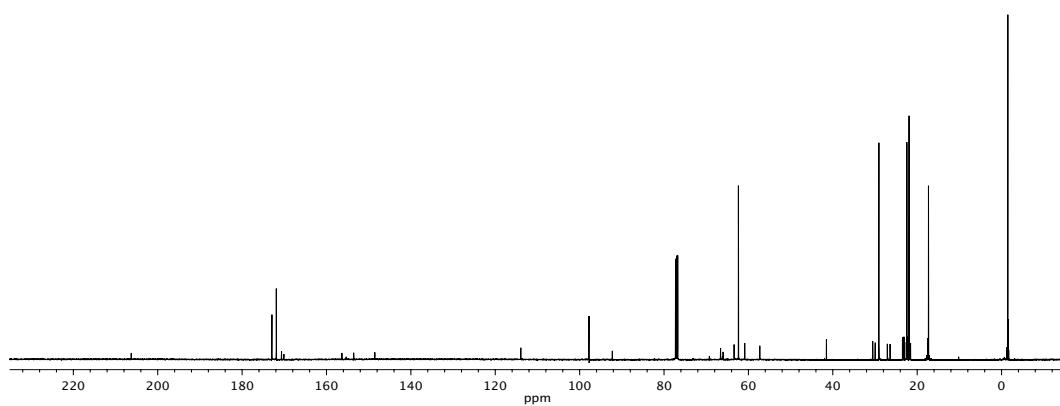


Figure A2.6 ¹³C NMR (125 MHz, CDCl₃) of compound **88**.

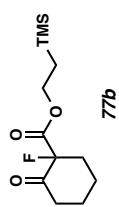
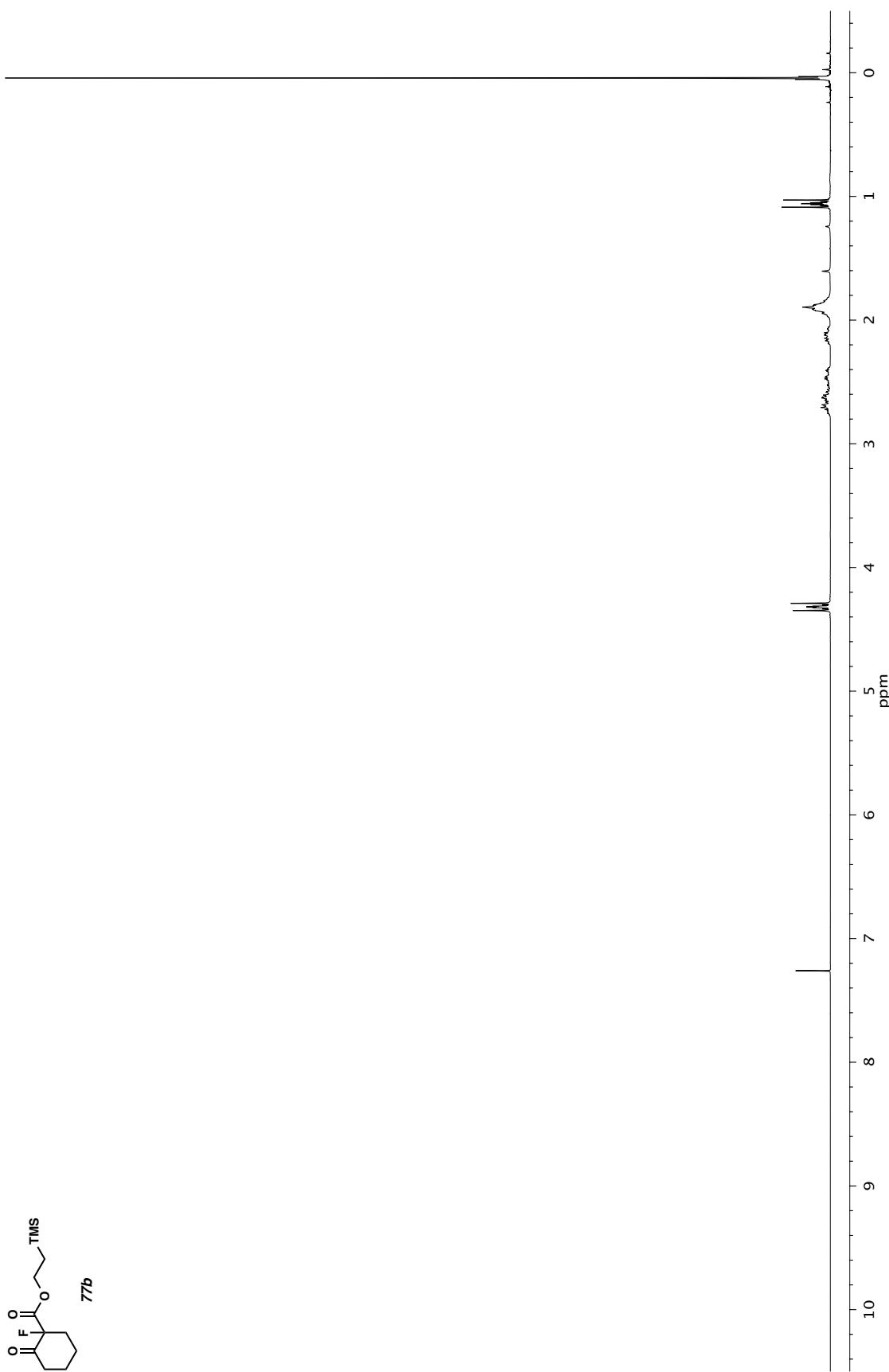


Figure A2.7 ^1H NMR (500 MHz, CDCl_3) of compound 77b.

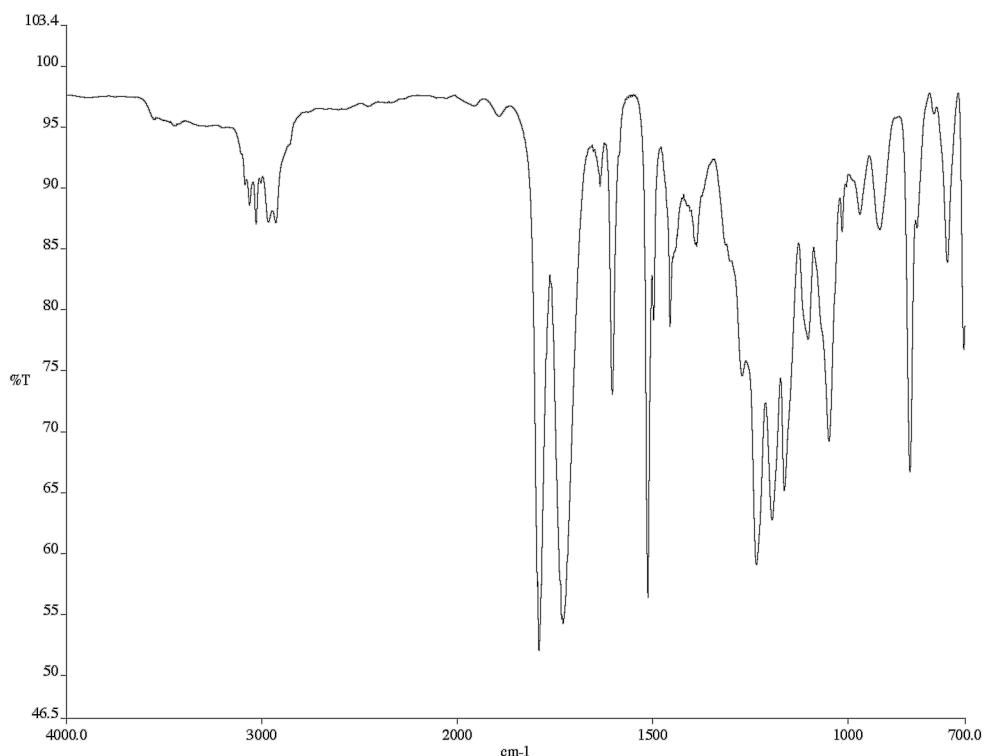


Figure A2.8 Infrared spectrum (thin film/NaCl) of compound 77b.

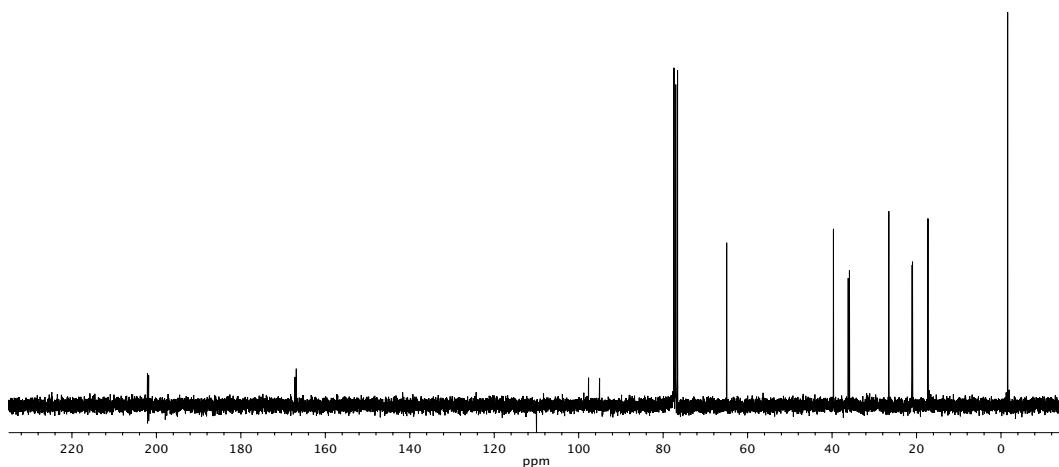
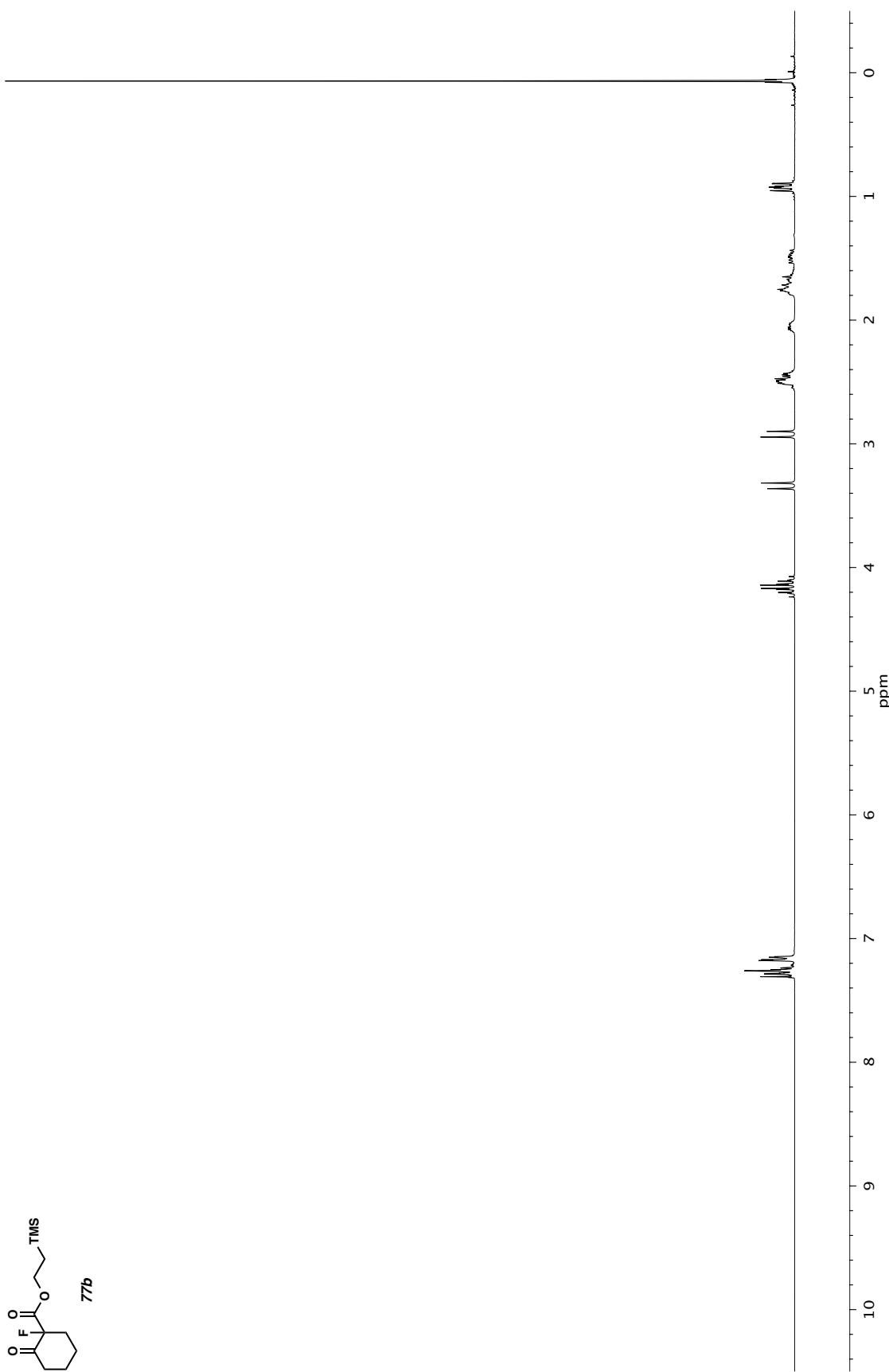


Figure A2.9 ^{13}C NMR (125 MHz, CDCl_3) of compound 77b.

Figure A2.10 ^1H NMR (500 MHz, CDCl_3) of compound 77a.

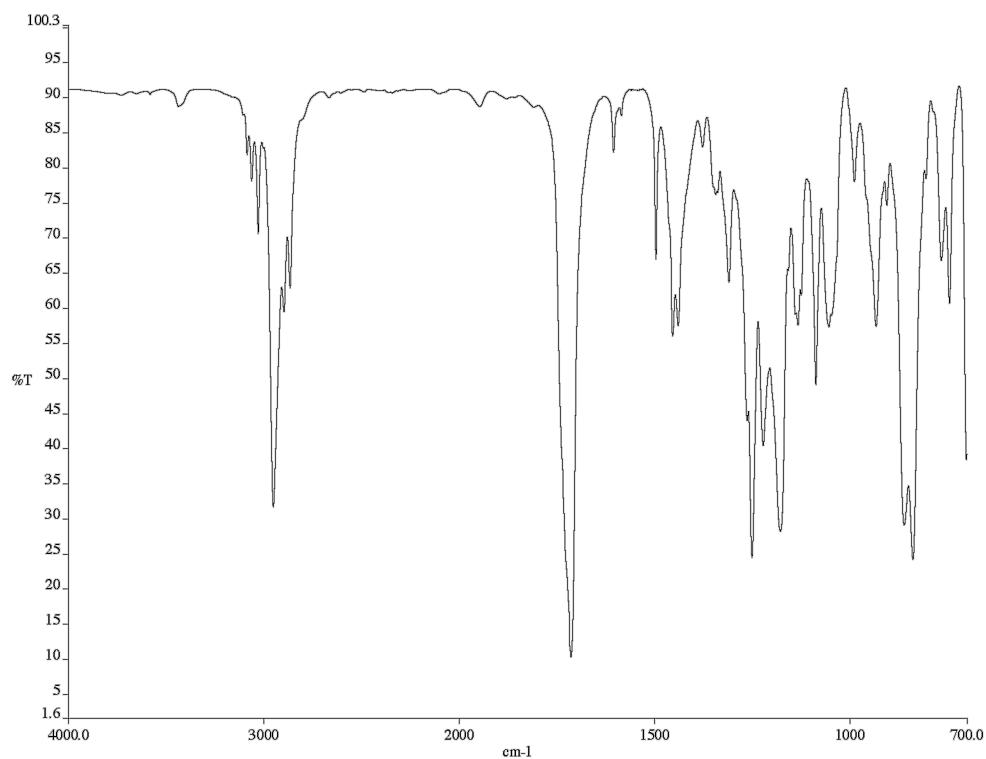


Figure A2.11 Infrared spectrum (thin film/NaCl) of compound 77a.

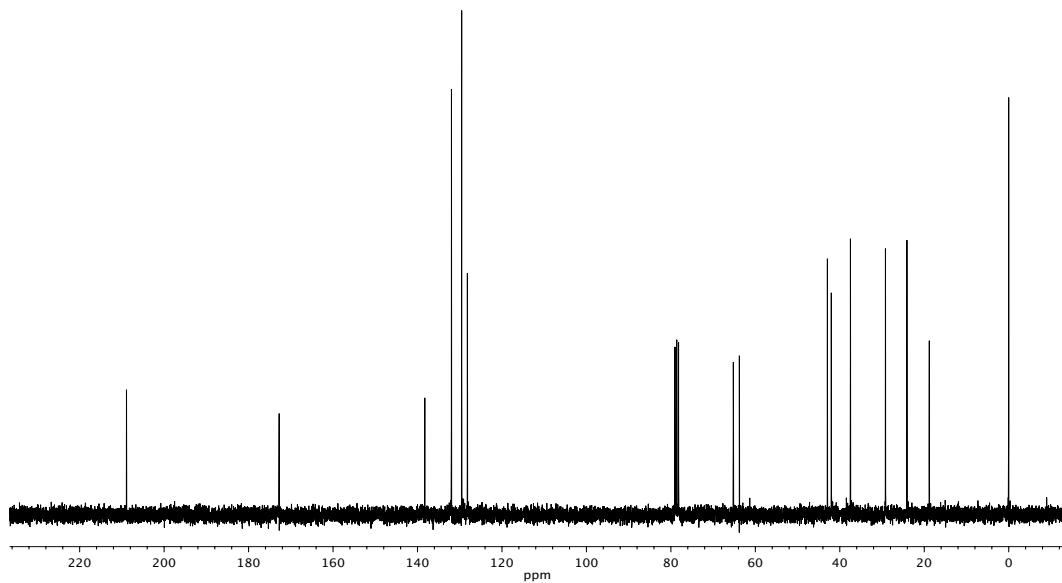


Figure A2.12 ^{13}C NMR (125 MHz, CDCl_3) of compound 77a.

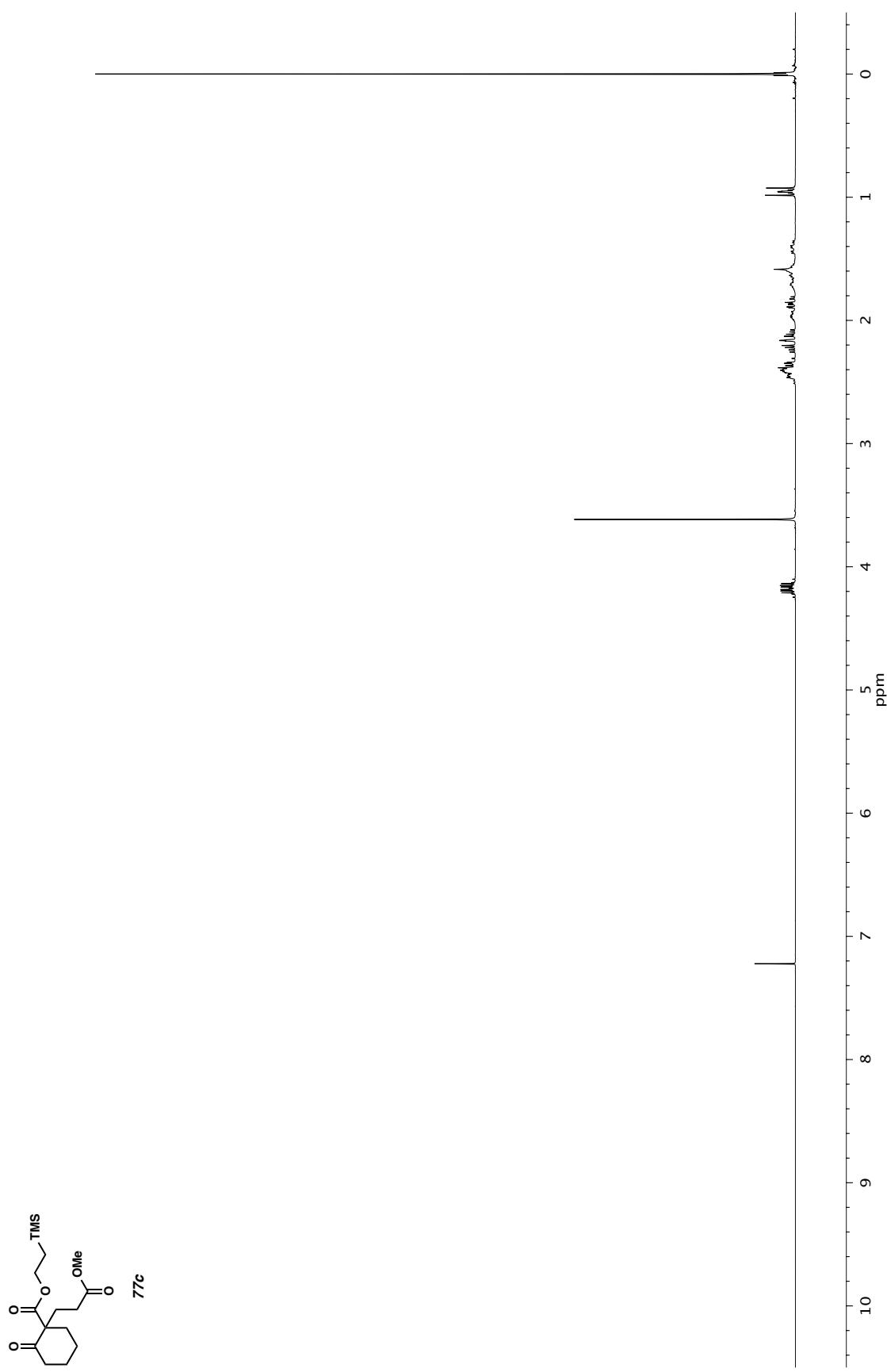


Figure A2.13 ^1H NMR (500 MHz, CDCl_3) of compound 77c.

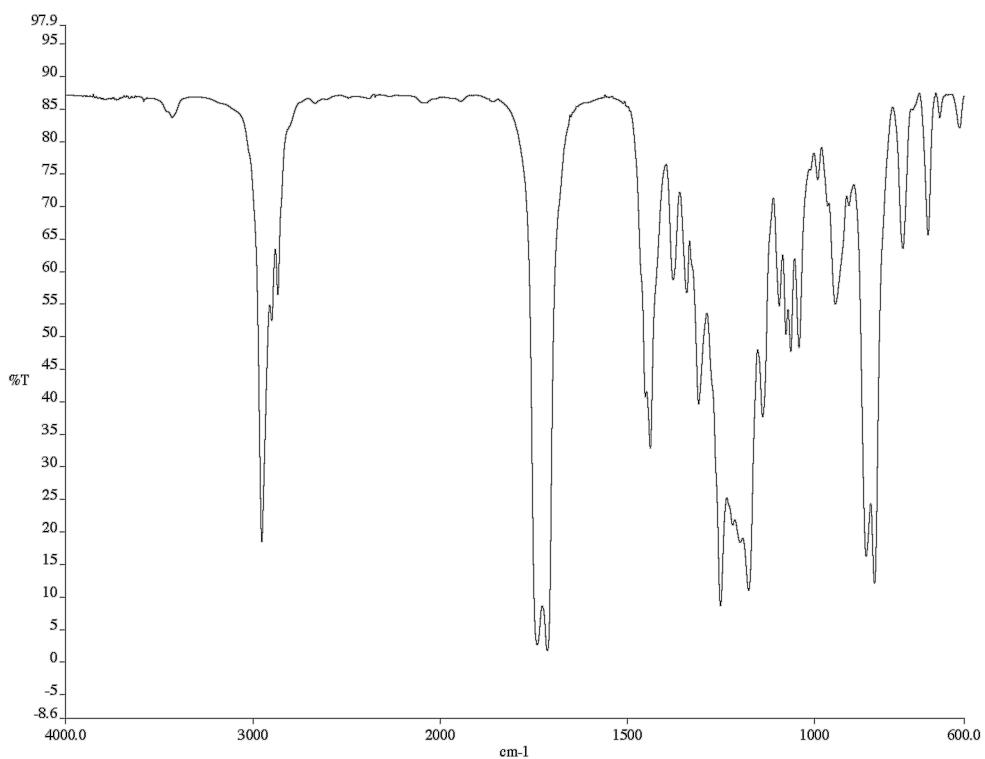


Figure A2.14 Infrared spectrum (thin film/NaCl) of compound 77c.

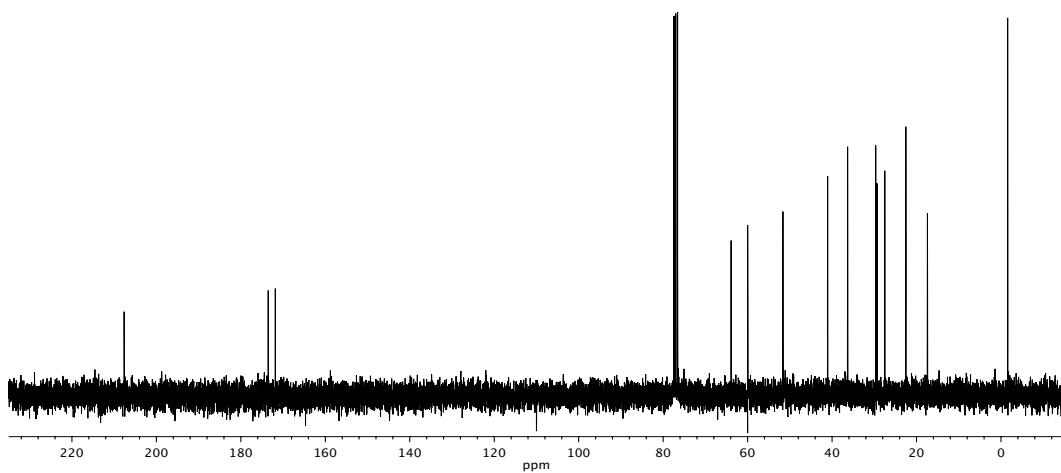


Figure A2.15 ^{13}C NMR (125 MHz, CDCl_3) of compound 77c.

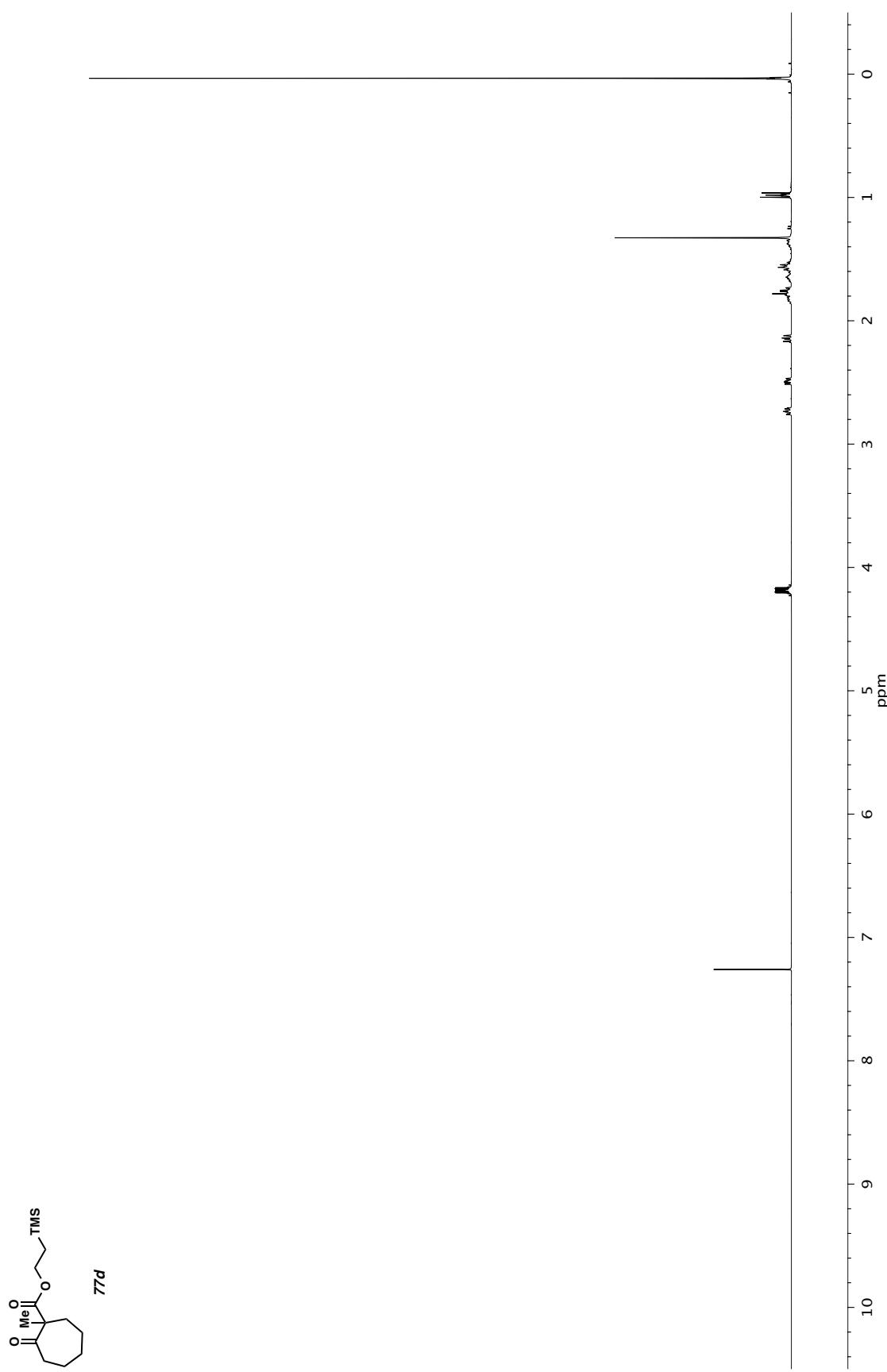


Figure A2.16 ^1H NMR (500 MHz, CDCl_3) of compound 77d.

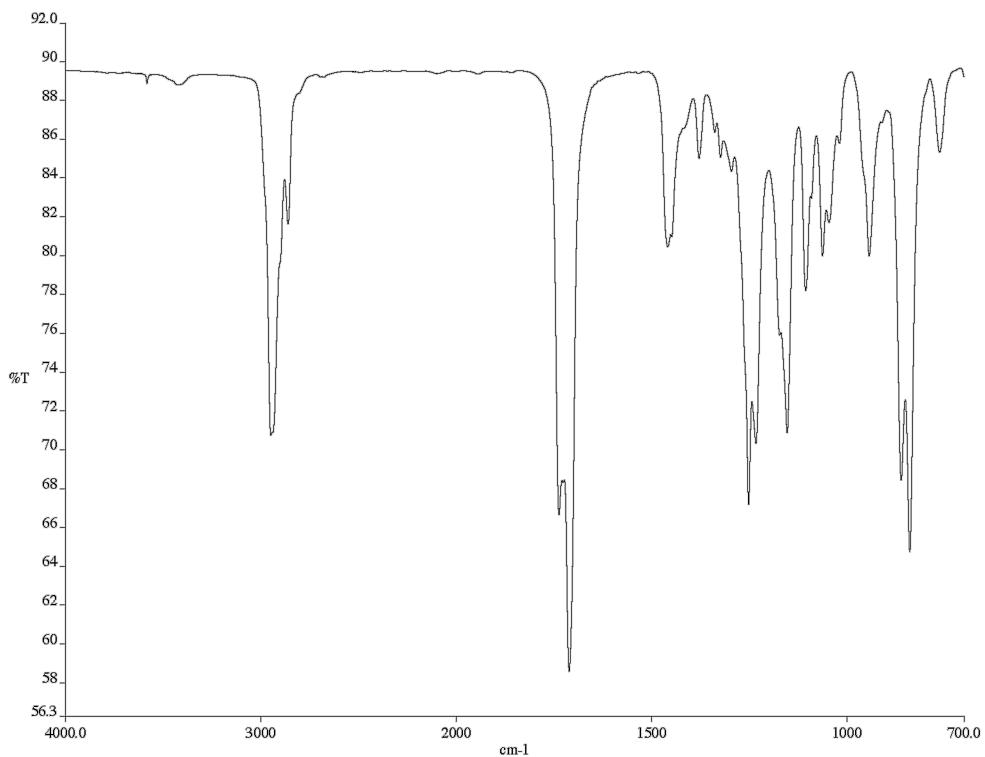


Figure A2.17 Infrared spectrum (thin film/NaCl) of compound 77d.

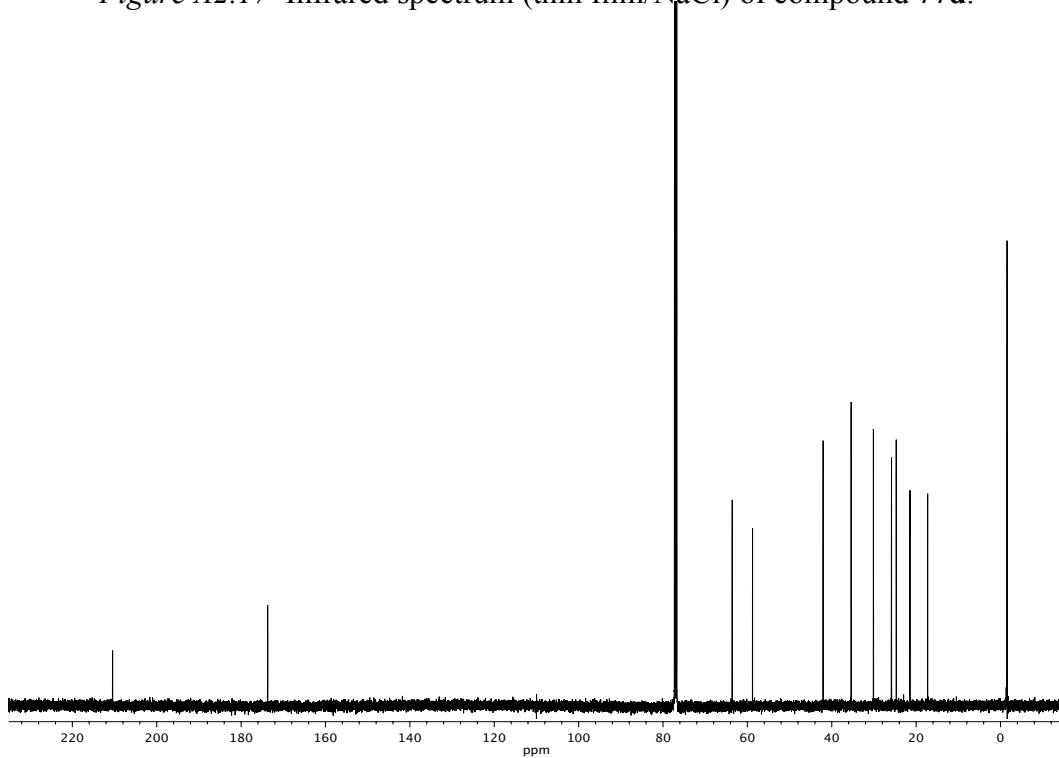
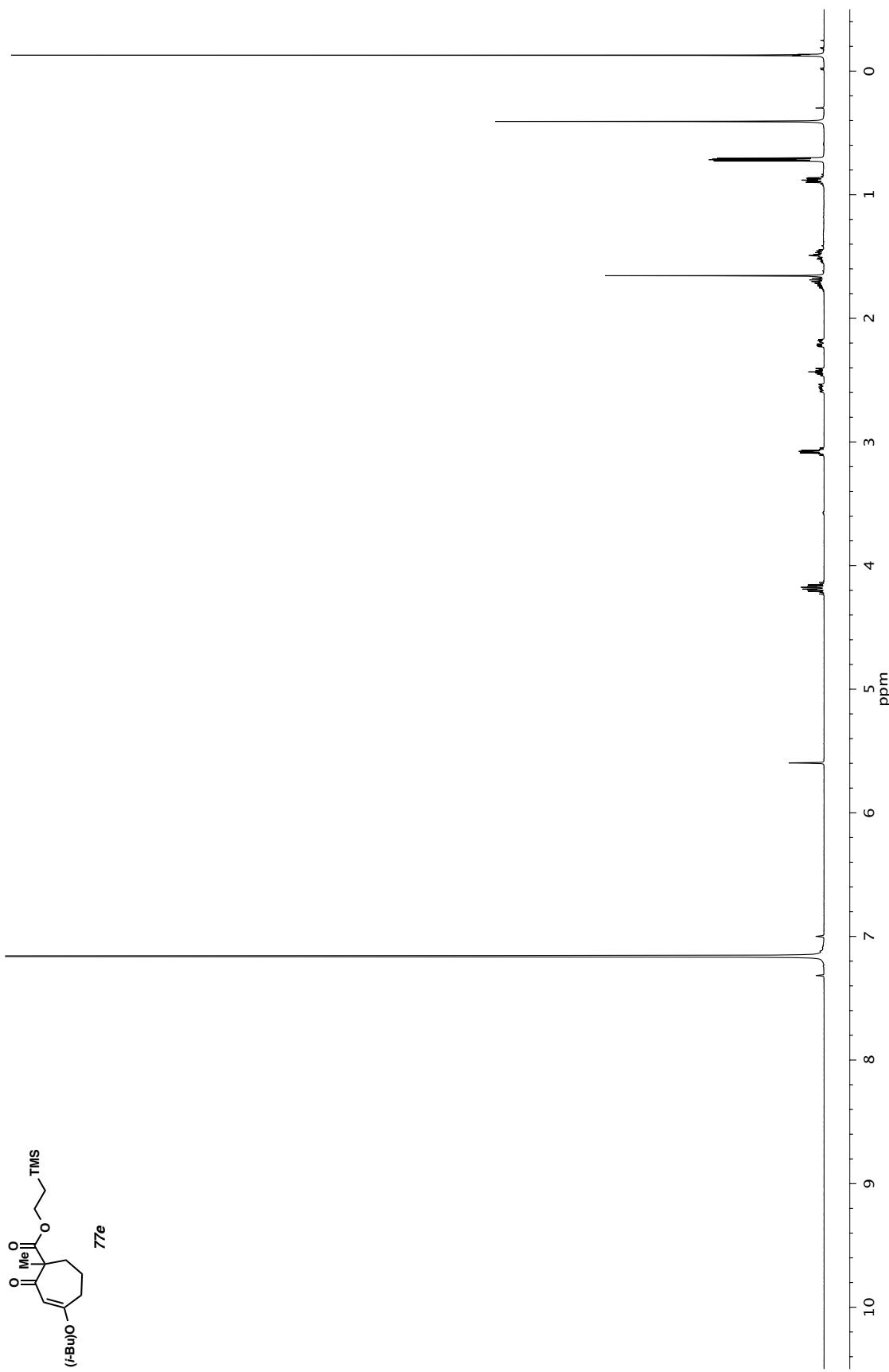


Figure A2.18 ¹³C NMR (125 MHz, CDCl₃) of compound 77d.

Figure A2.19 ^1H NMR (500 MHz, CDCl_3) of compound 77e.

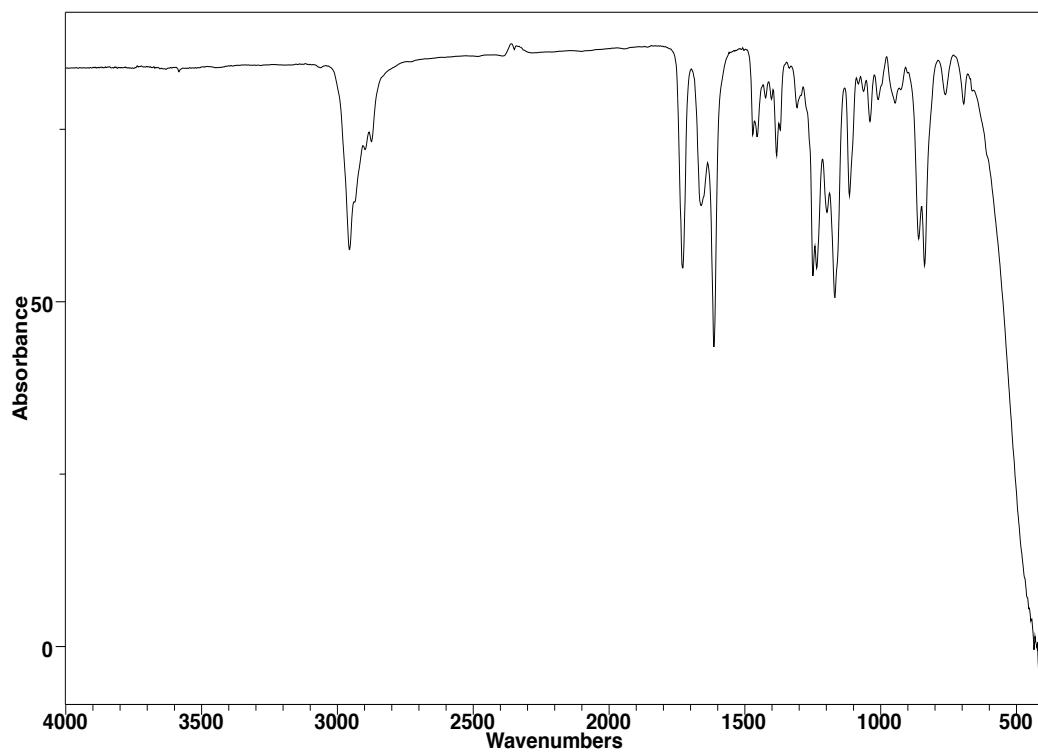


Figure A2.20 Infrared spectrum (thin film/NaCl) of compound 77e.

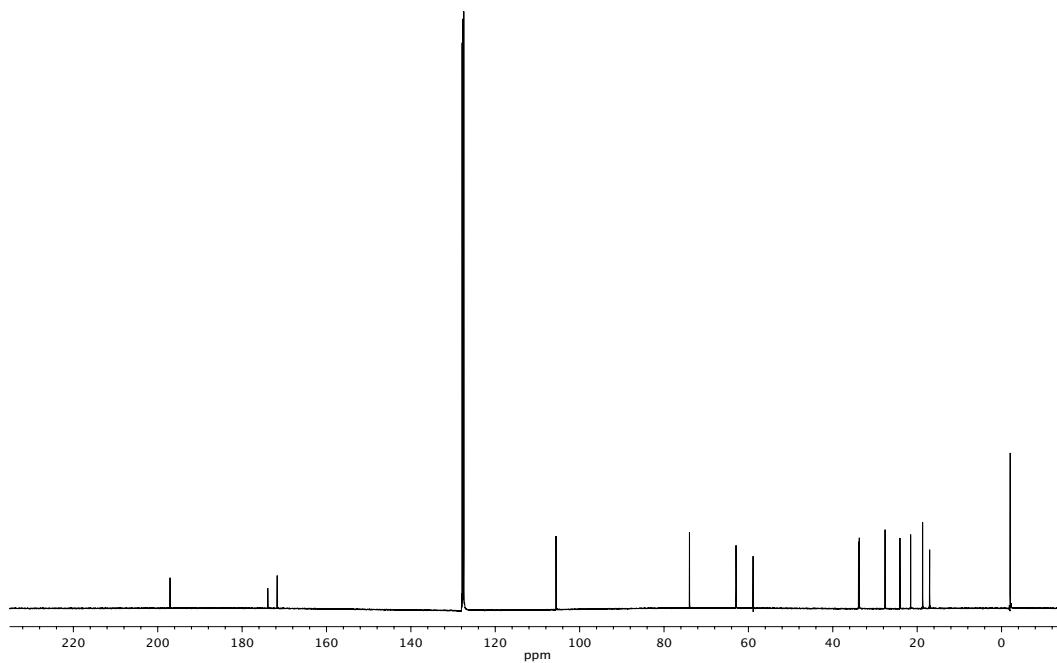


Figure A2.21 ¹³C NMR (125 MHz, CDCl₃) of compound 77e.

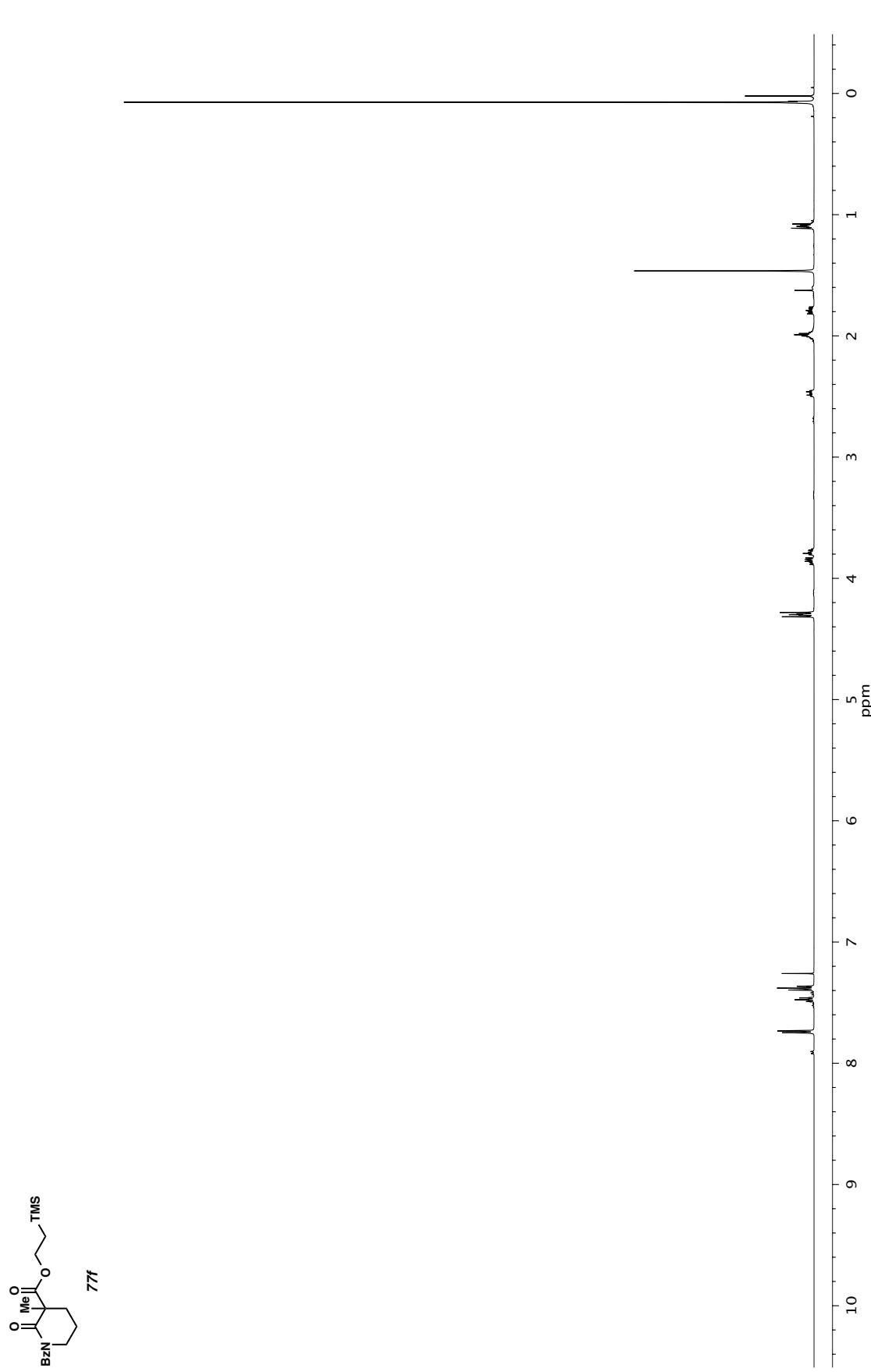


Figure A2.22 ^1H NMR (500 MHz, CDCl_3) of compound 77f.

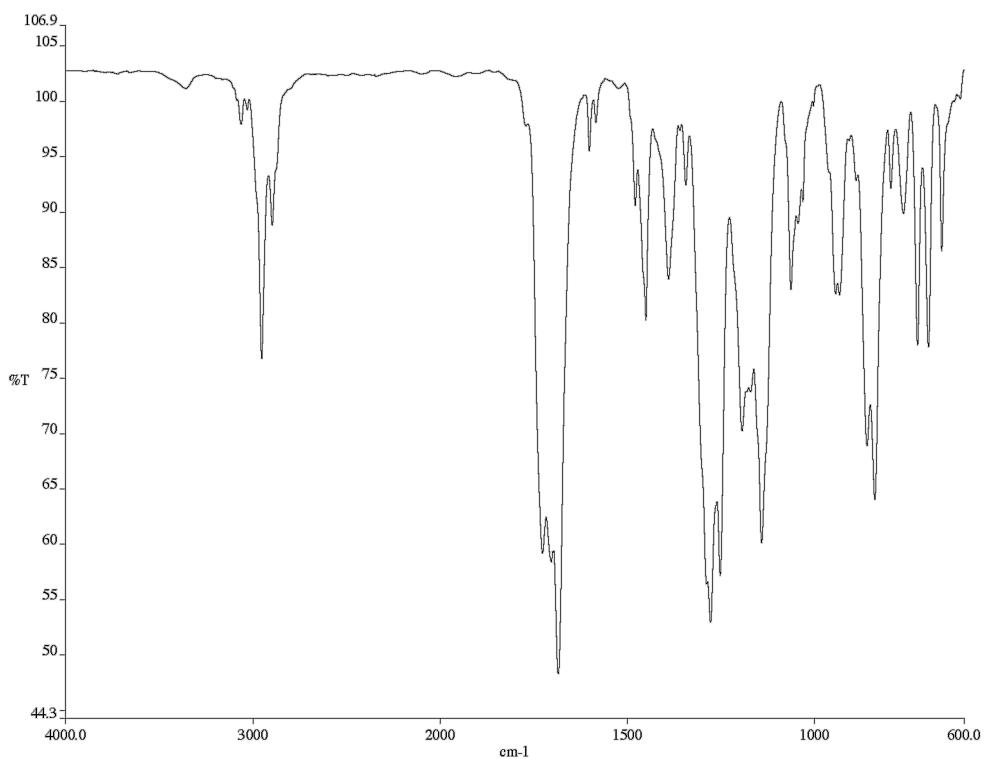


Figure A2.23 Infrared spectrum (thin film/NaCl) of compound 77f.

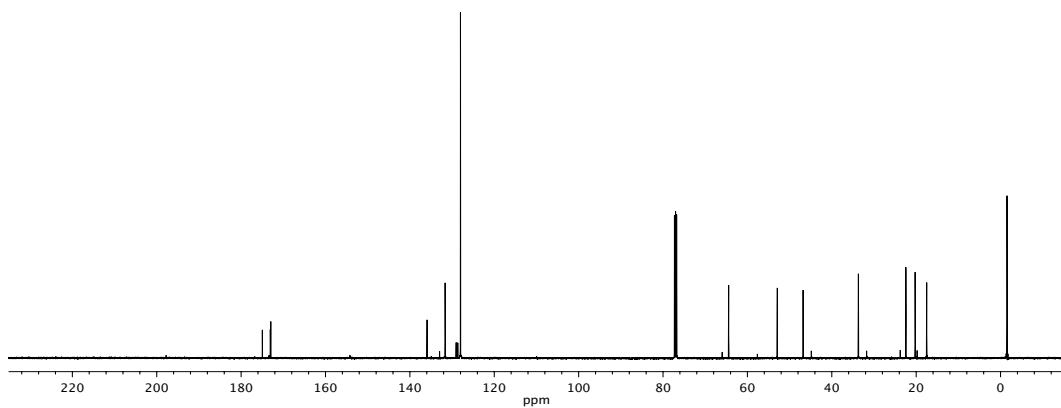


Figure A2.24 ¹³C NMR (125 MHz, CDCl₃) of compound 77f.

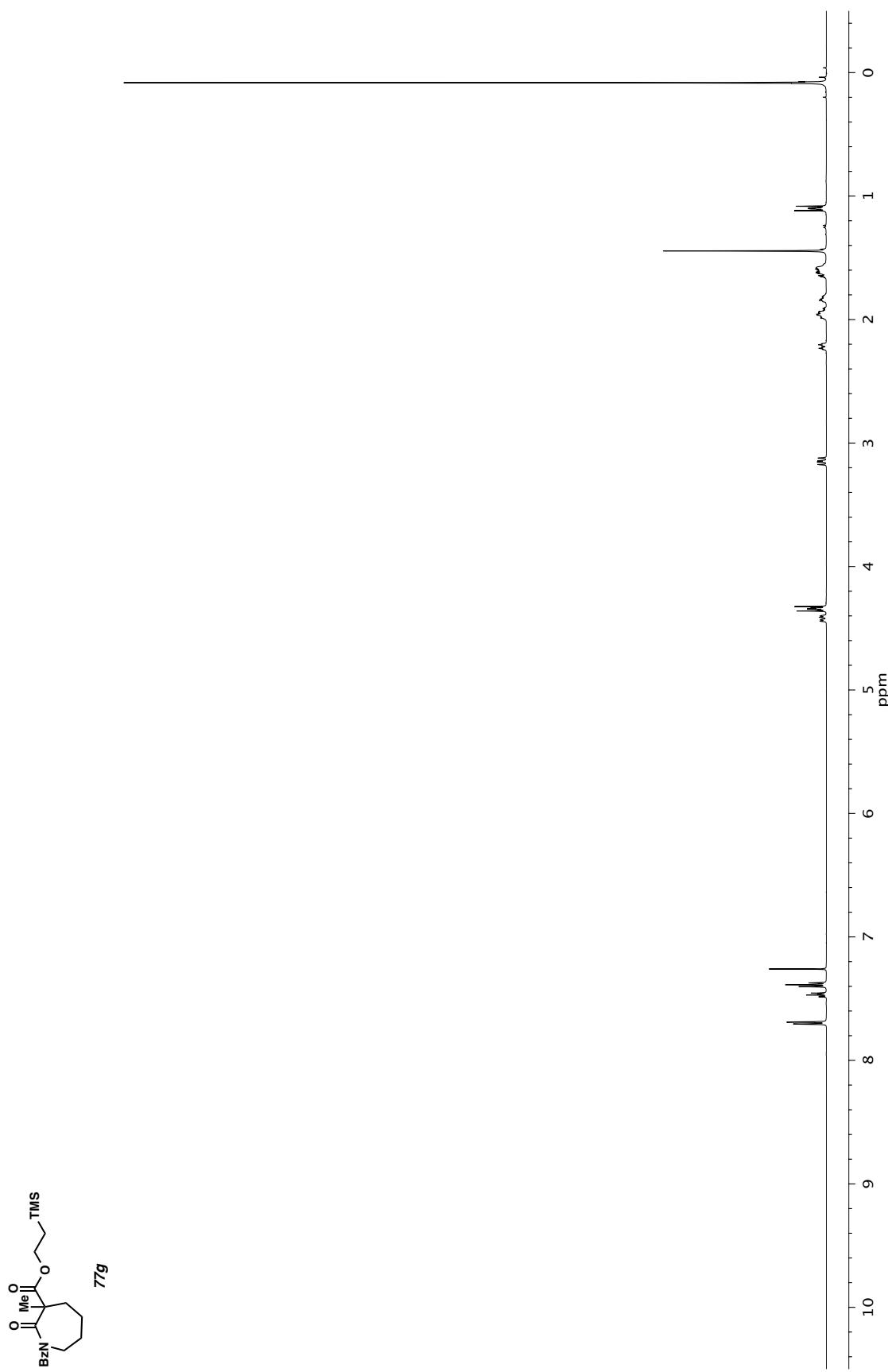


Figure A2.25 ^1H NMR (500 MHz, CDCl_3) of compound 77g.

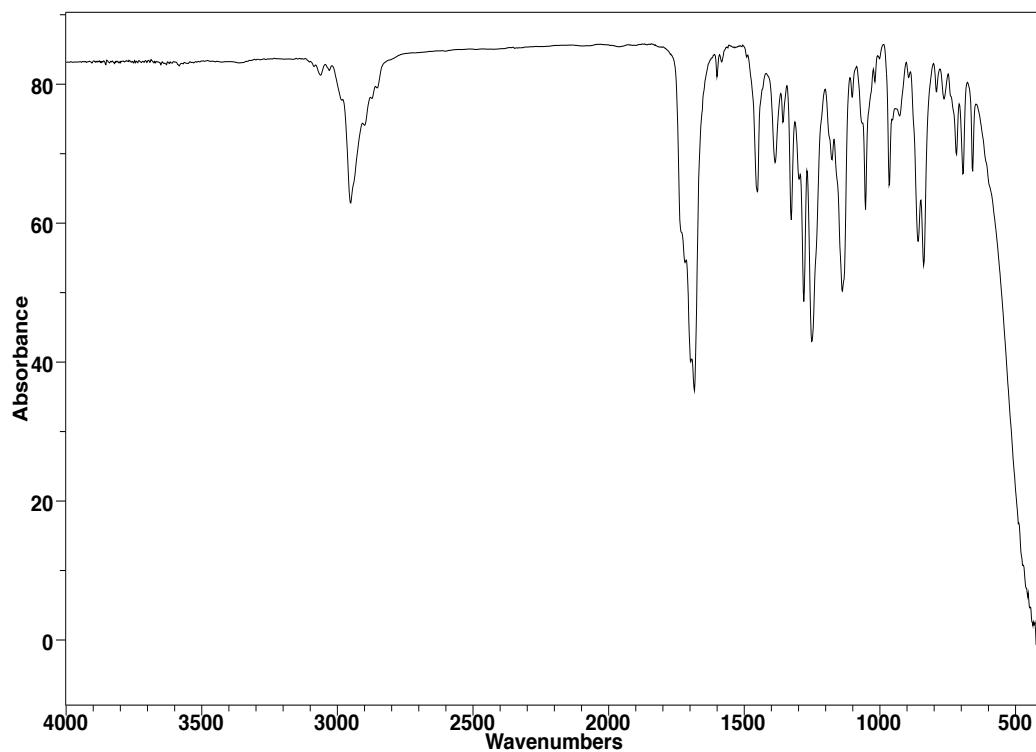


Figure A2.26 Infrared spectrum (thin film/NaCl) of compound 77g.

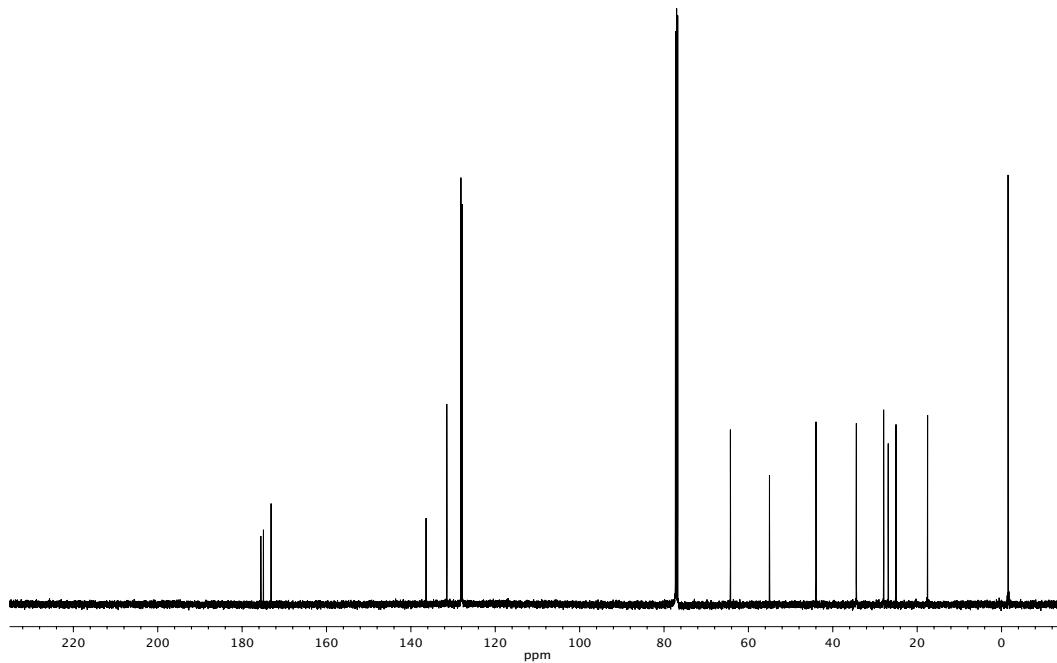


Figure A2.27 ¹³C NMR (125 MHz, CDCl₃) of compound 77g.

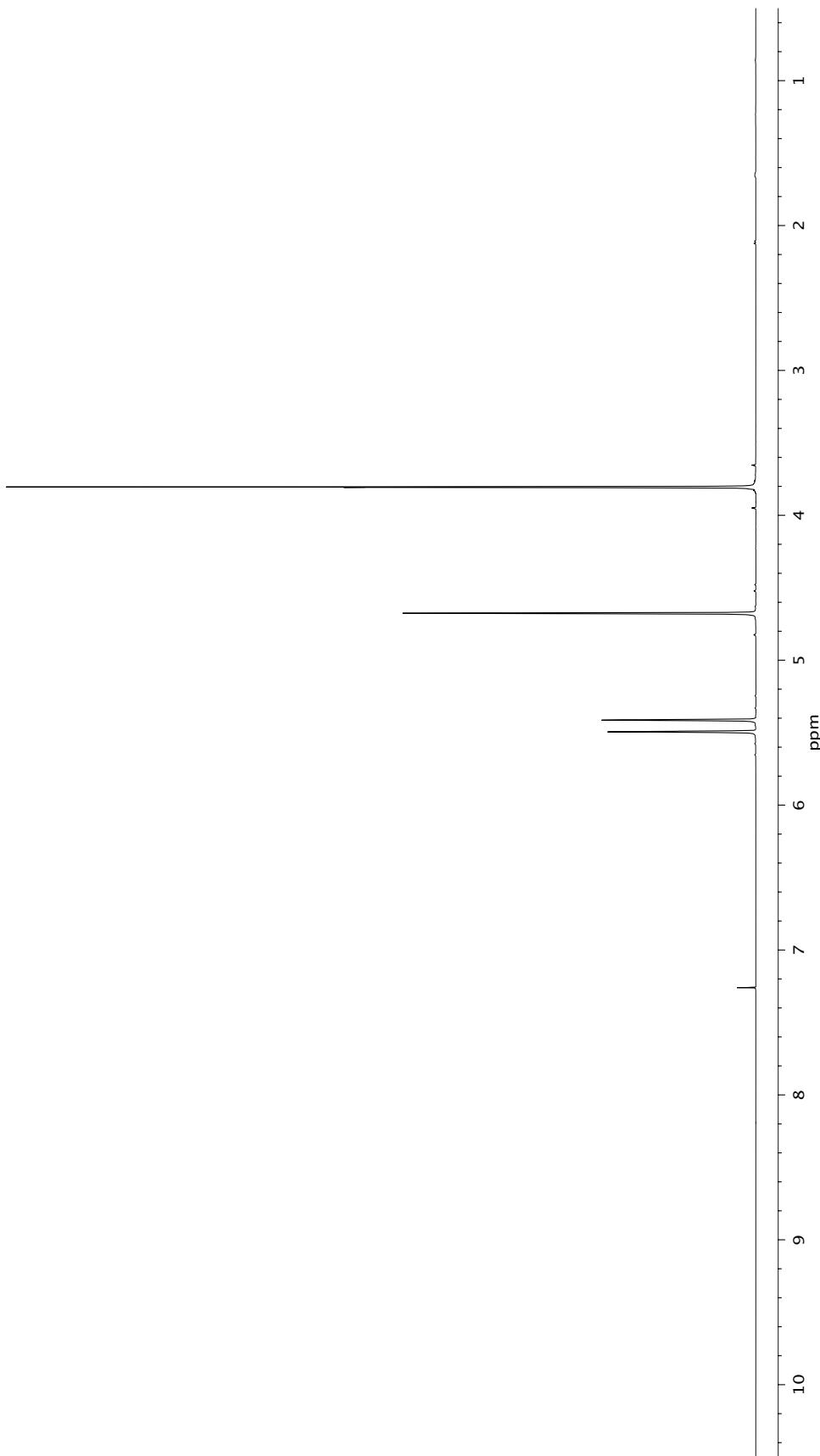
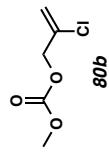


Figure A2.28 ^1H NMR (500 MHz, CDCl_3) of compound **80b**.

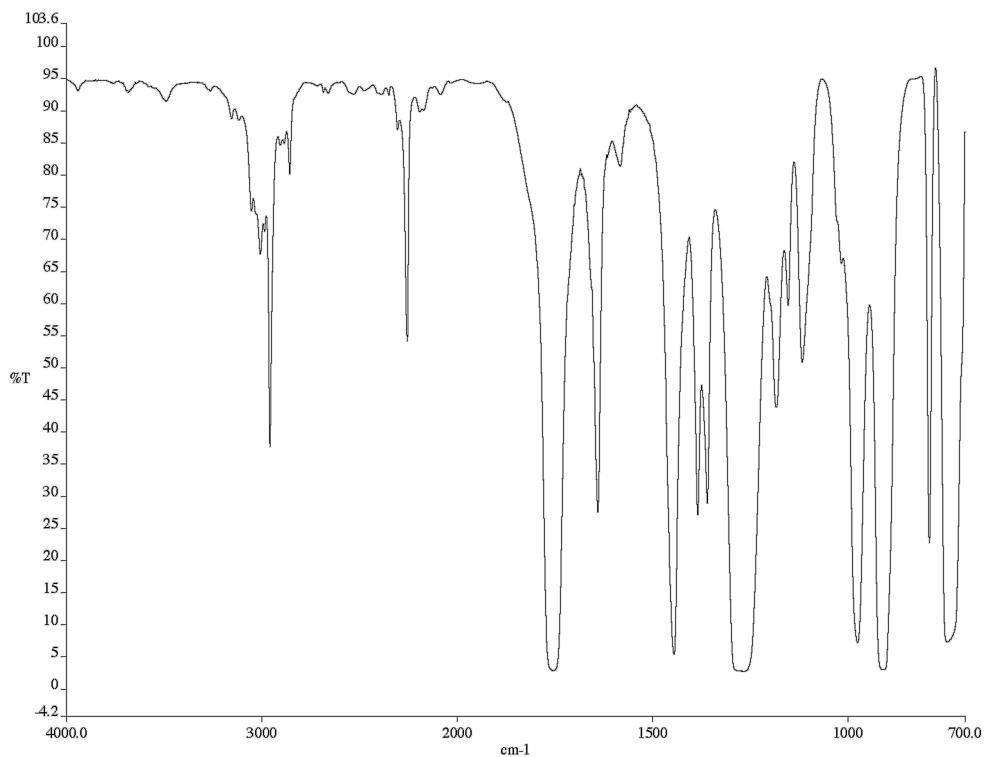


Figure A2.29 Infrared spectrum (thin film/NaCl) of compound **80b**.

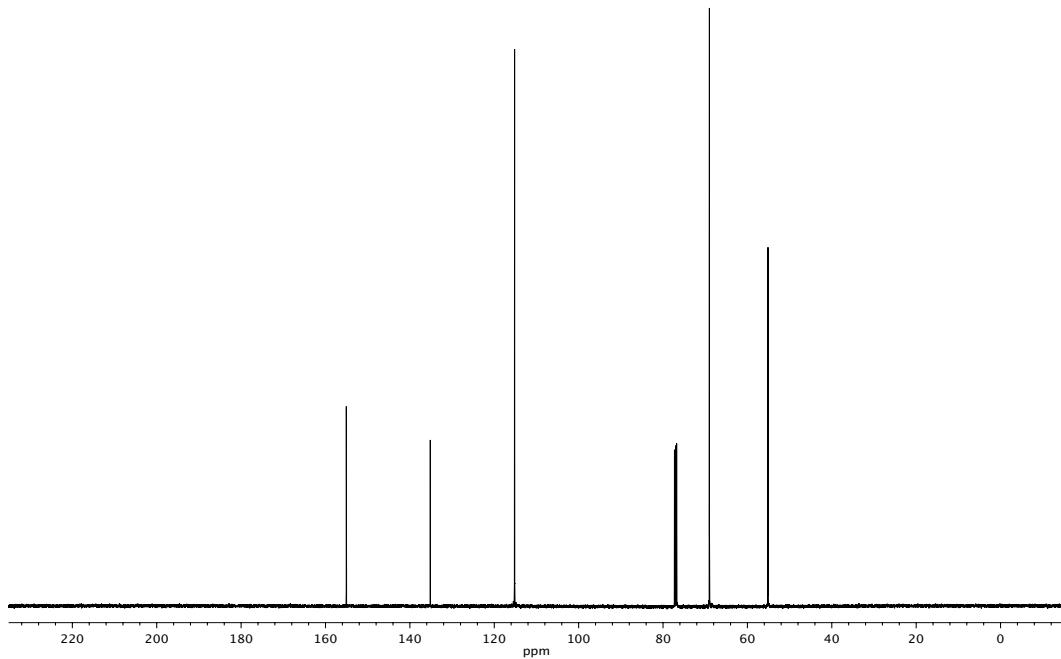


Figure A2.30 ^{13}C NMR (125 MHz, CDCl_3) of compound **80b**.

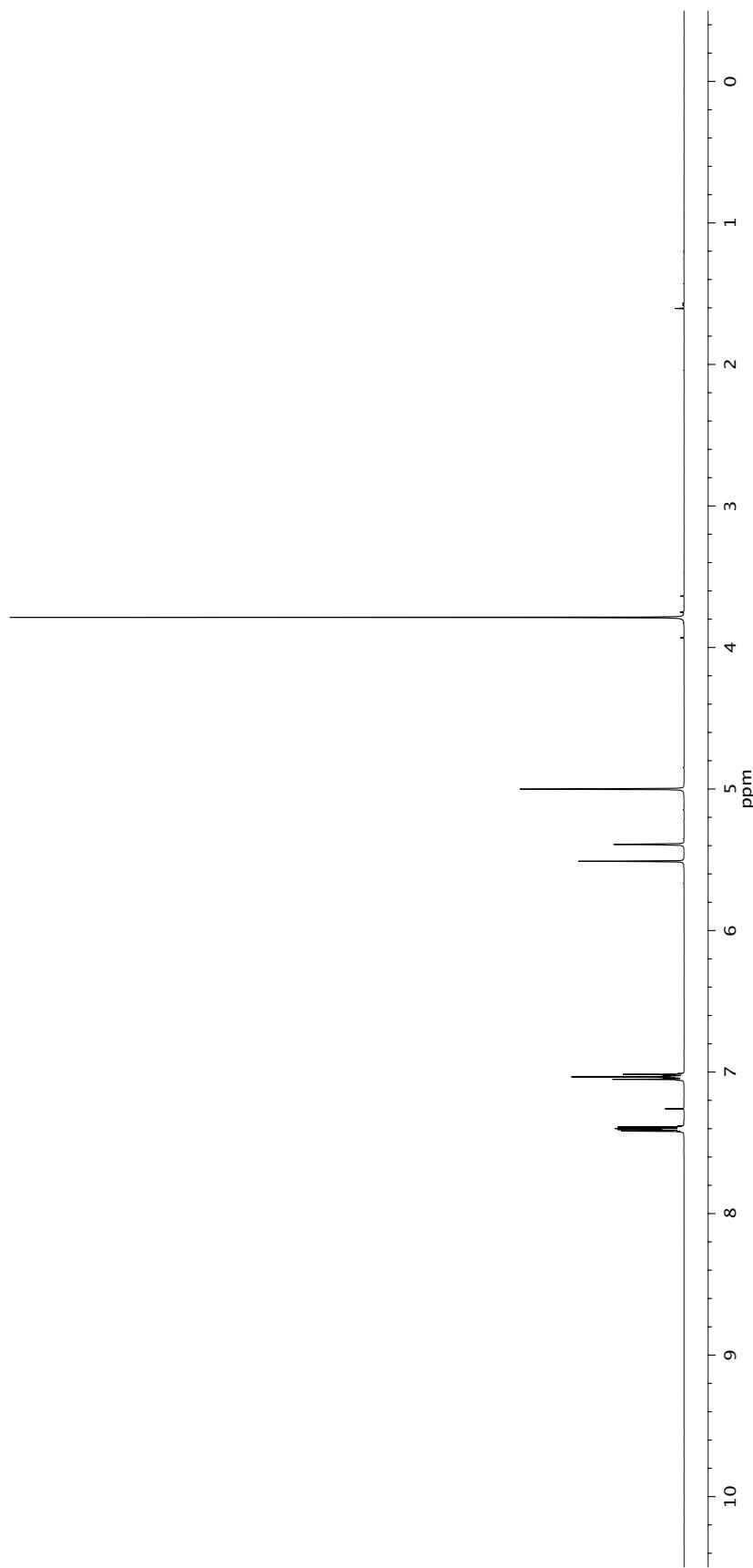
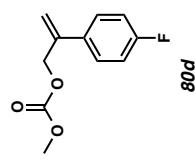


Figure A2.31 ^1H NMR (500 MHz, CDCl_3) of compound **80d**.

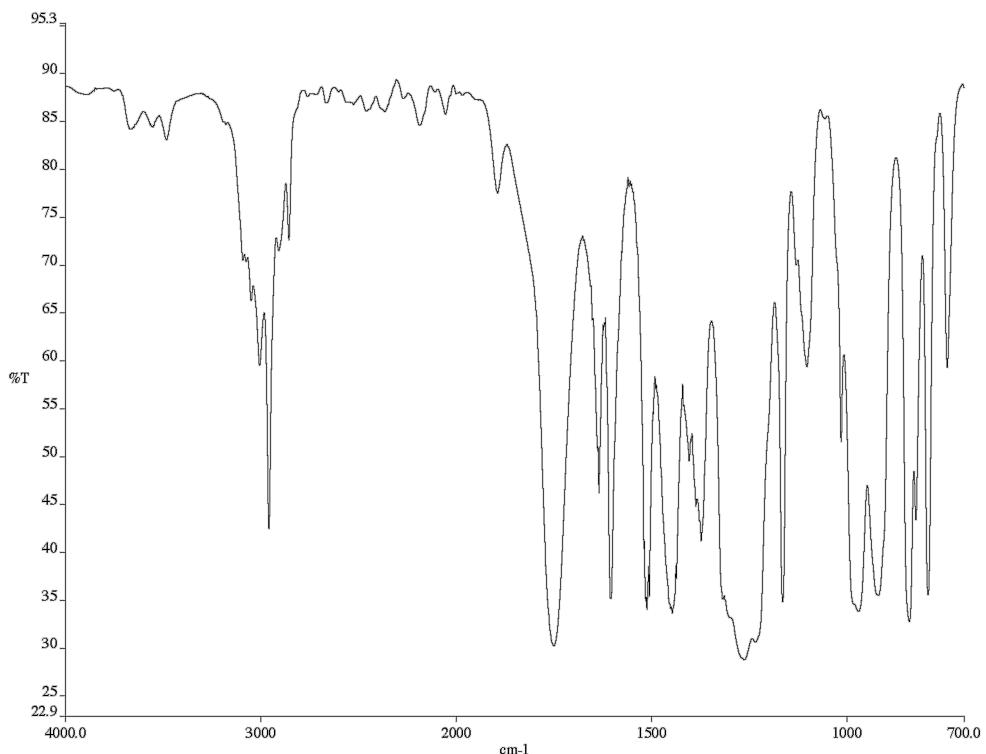


Figure A2.32 Infrared spectrum (thin film/NaCl) of compound **80d**.

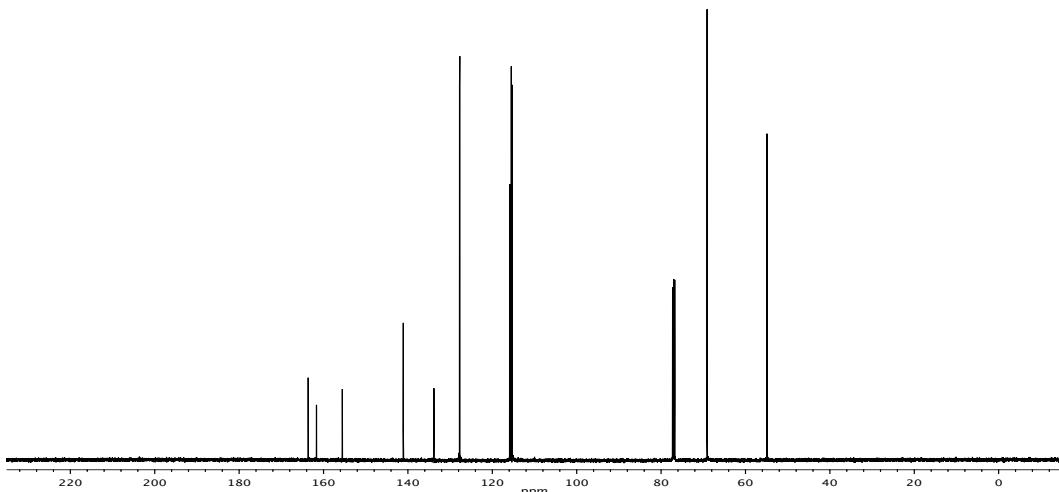


Figure A2.33 ^{13}C NMR (125 MHz, CDCl_3) of compound **80d**.

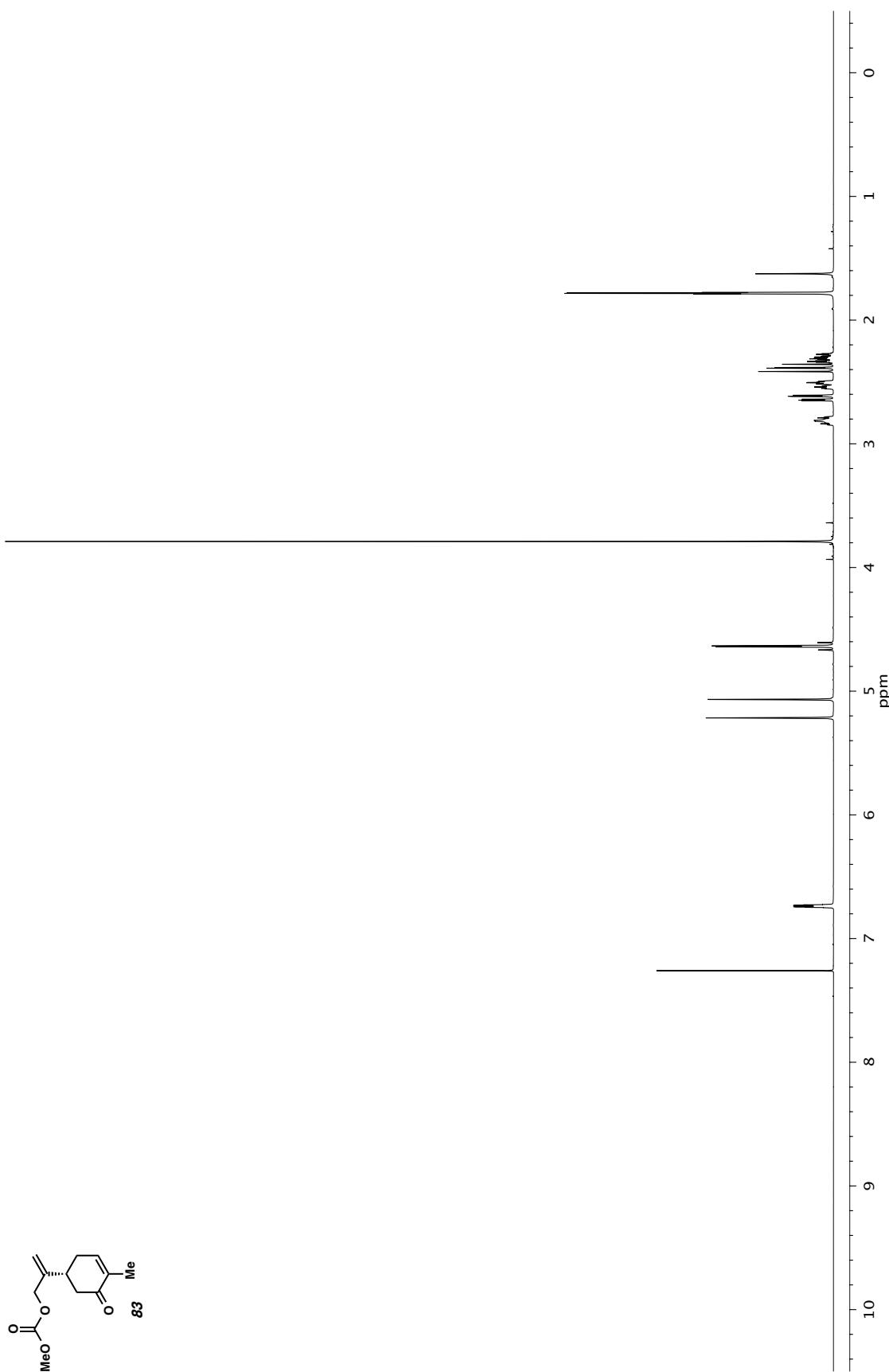


Figure A2.34 ^1H NMR (500 MHz, CDCl_3) of compound 83.

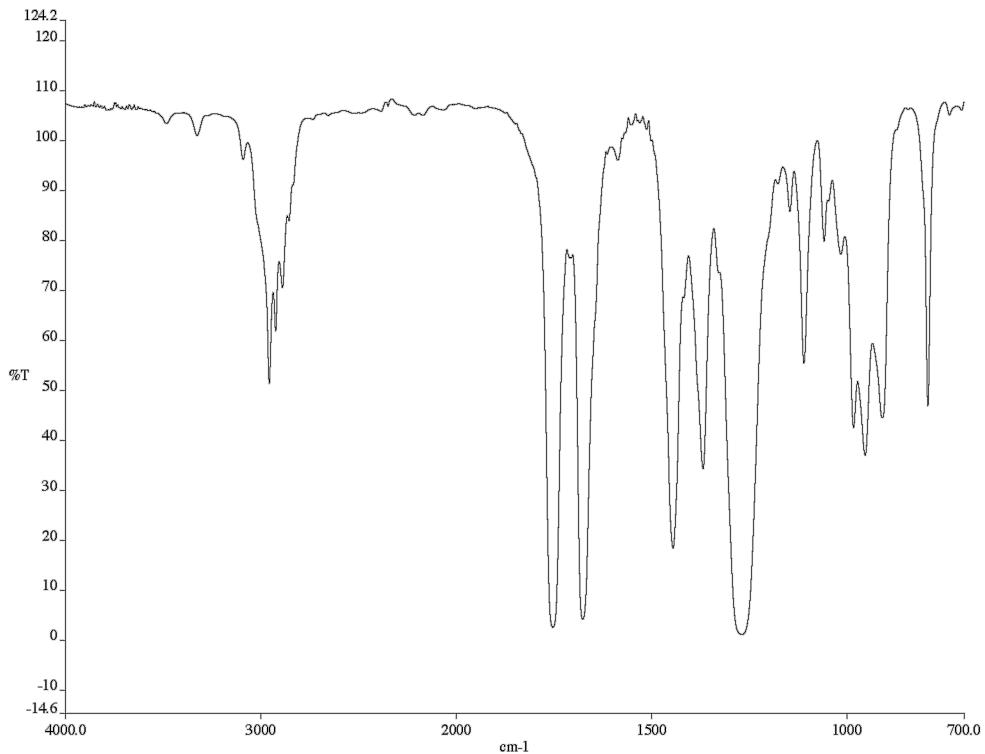


Figure A2.35 Infrared spectrum (thin film/NaCl) of compound 83.

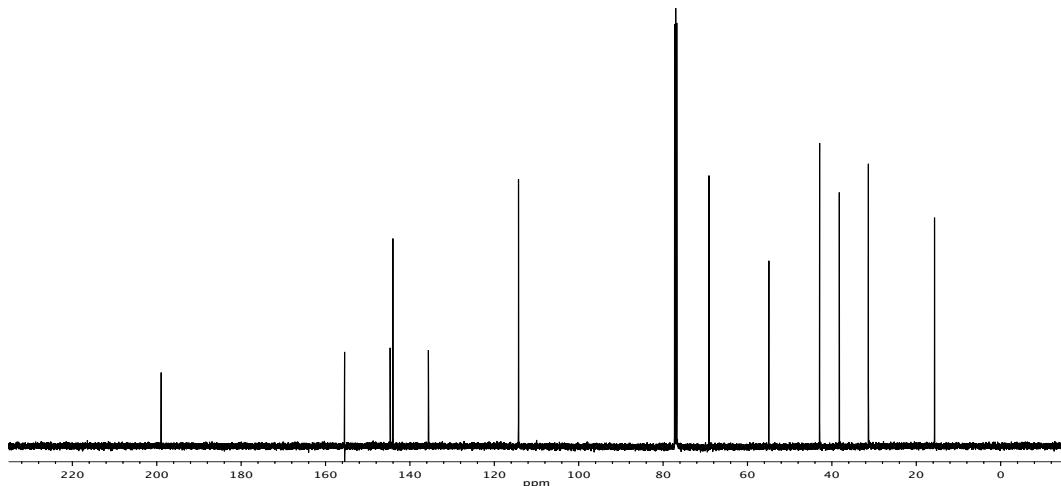


Figure A2.36 ¹³C NMR (125 MHz, CDCl₃) of compound 83.

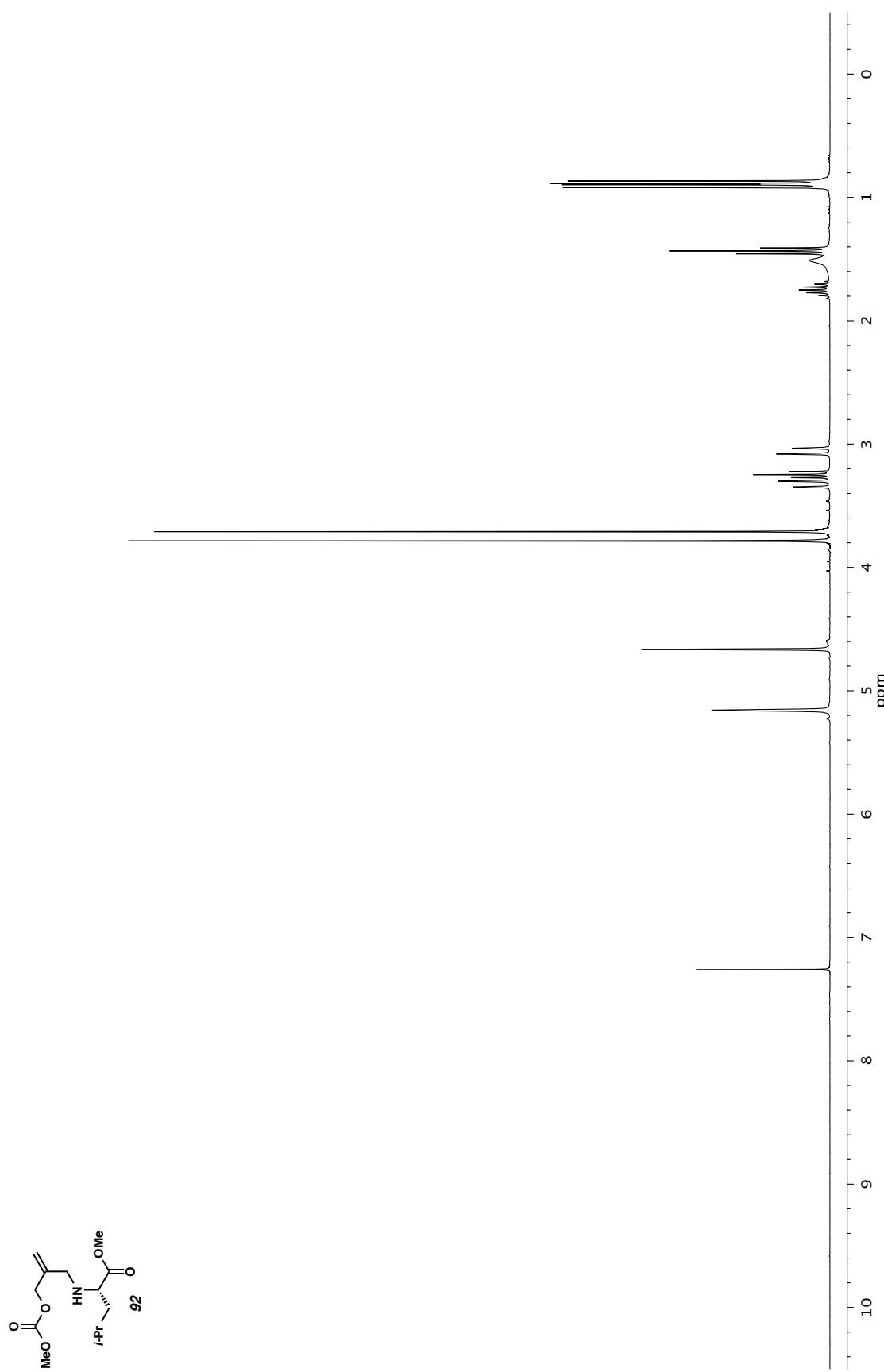


Figure A2.37 ^1H NMR (500 MHz, CDCl_3) of compound 92.

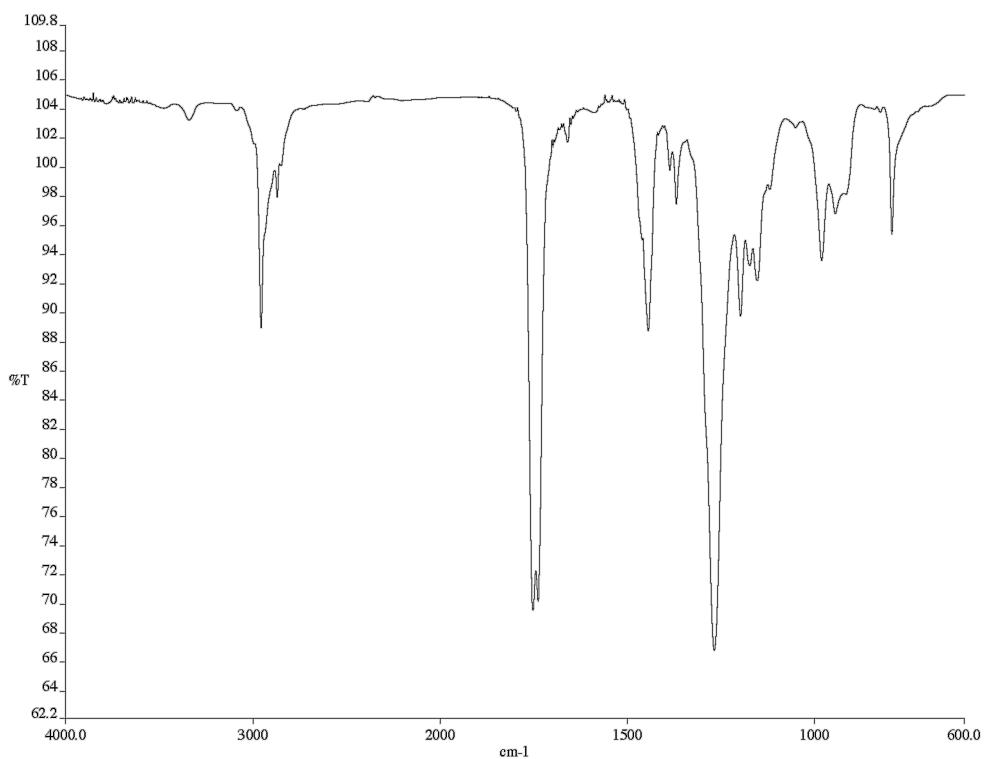


Figure A2.38 Infrared spectrum (thin film/NaCl) of compound 92.

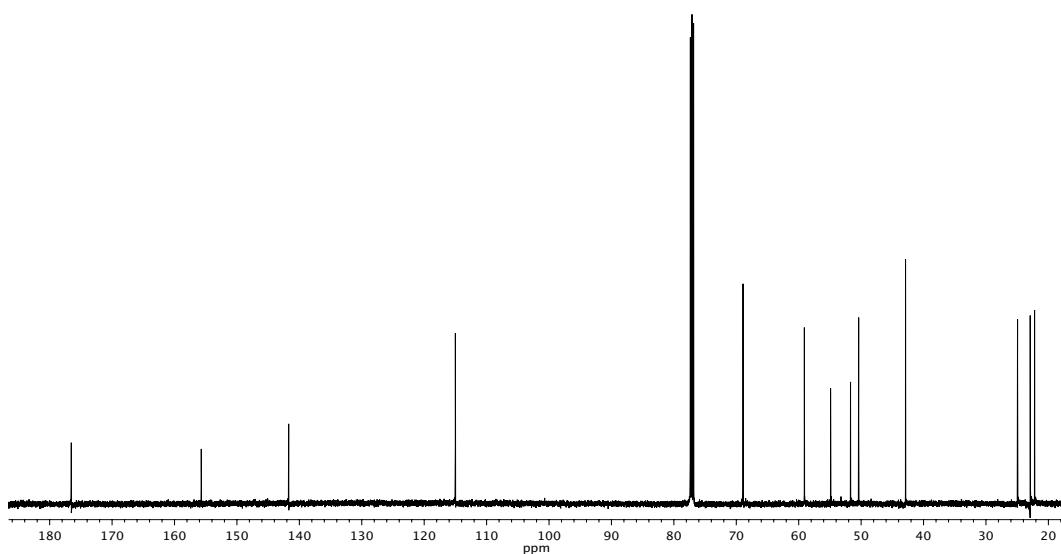


Figure A2.39 ¹³C NMR (125 MHz, CDCl₃) of compound 92.

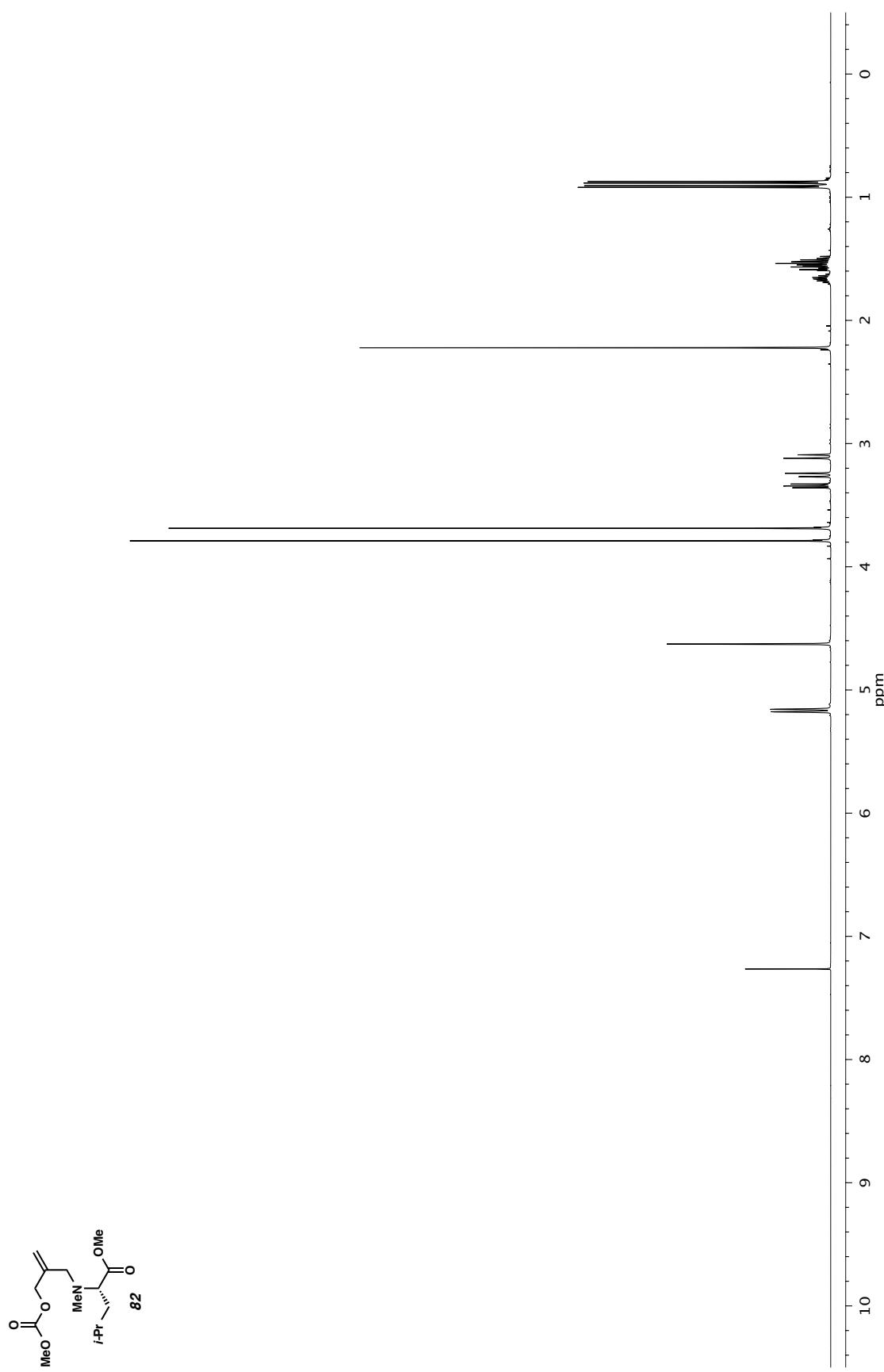


Figure A2.40 ^1H NMR (500 MHz, CDCl_3) of compound 82.

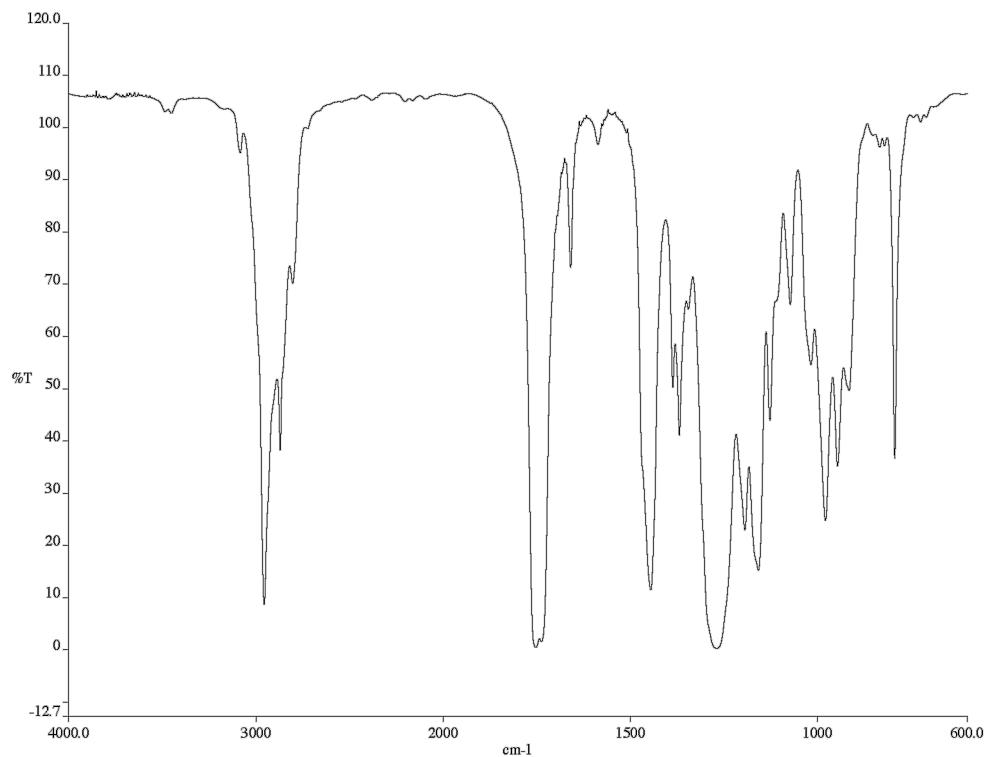


Figure A2.41 Infrared spectrum (thin film/NaCl) of compound **82**.

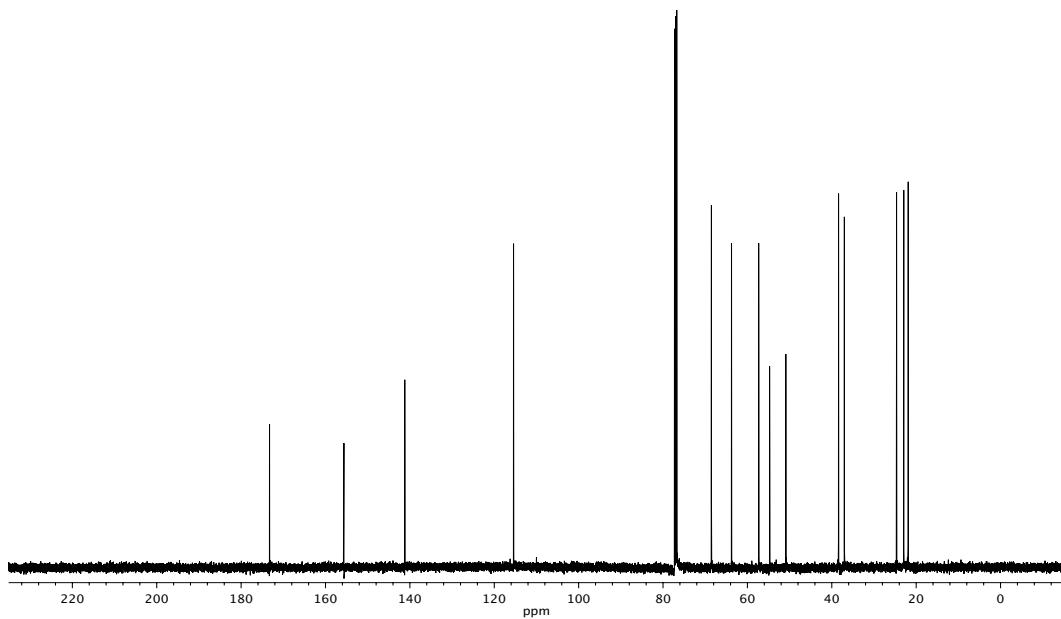


Figure A2.42 ¹³C NMR (125 MHz, CDCl₃) of compound **82**.

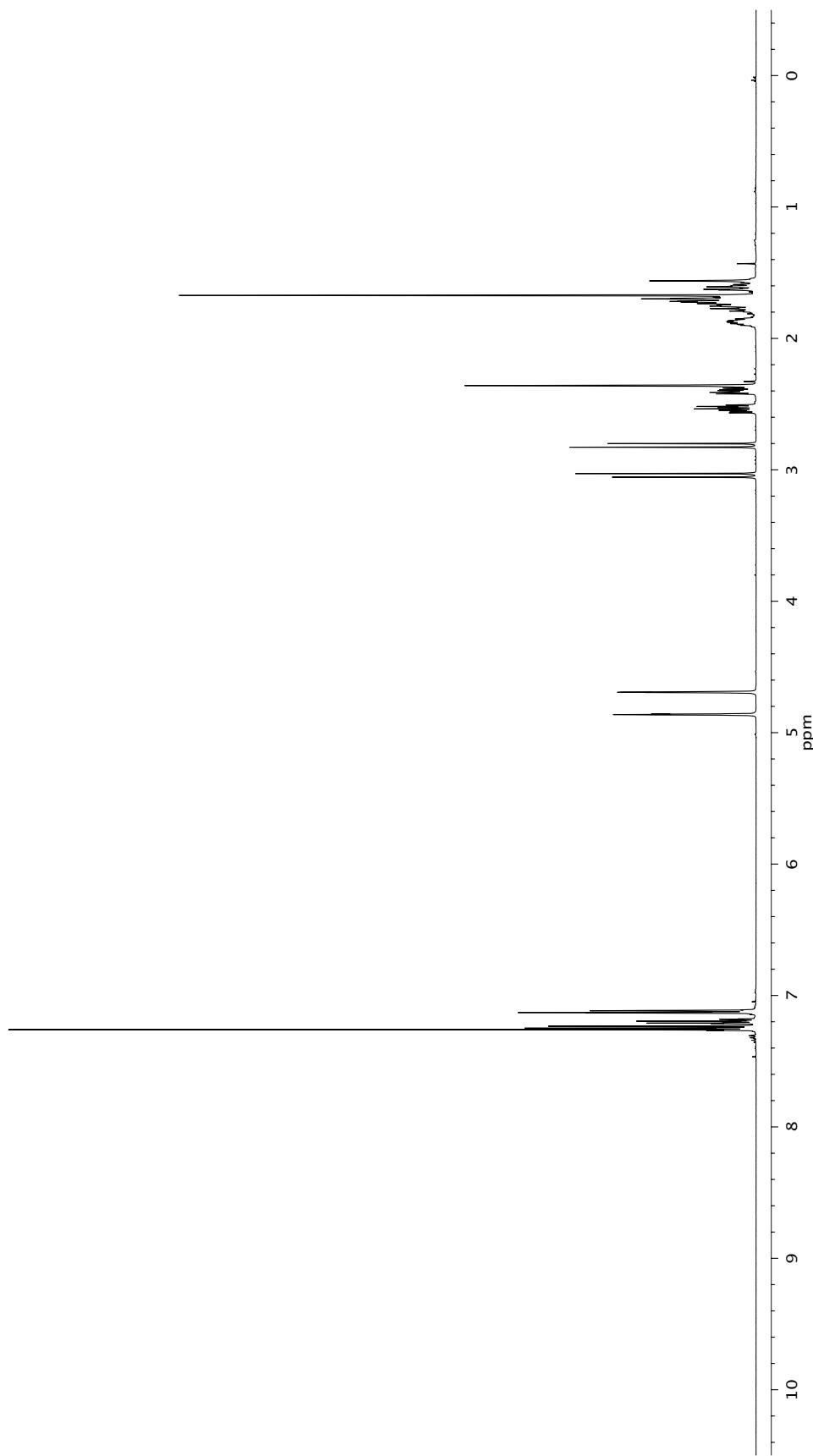
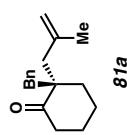


Figure A2.43 ^1H NMR (500 MHz, CDCl_3) of compound 81a.



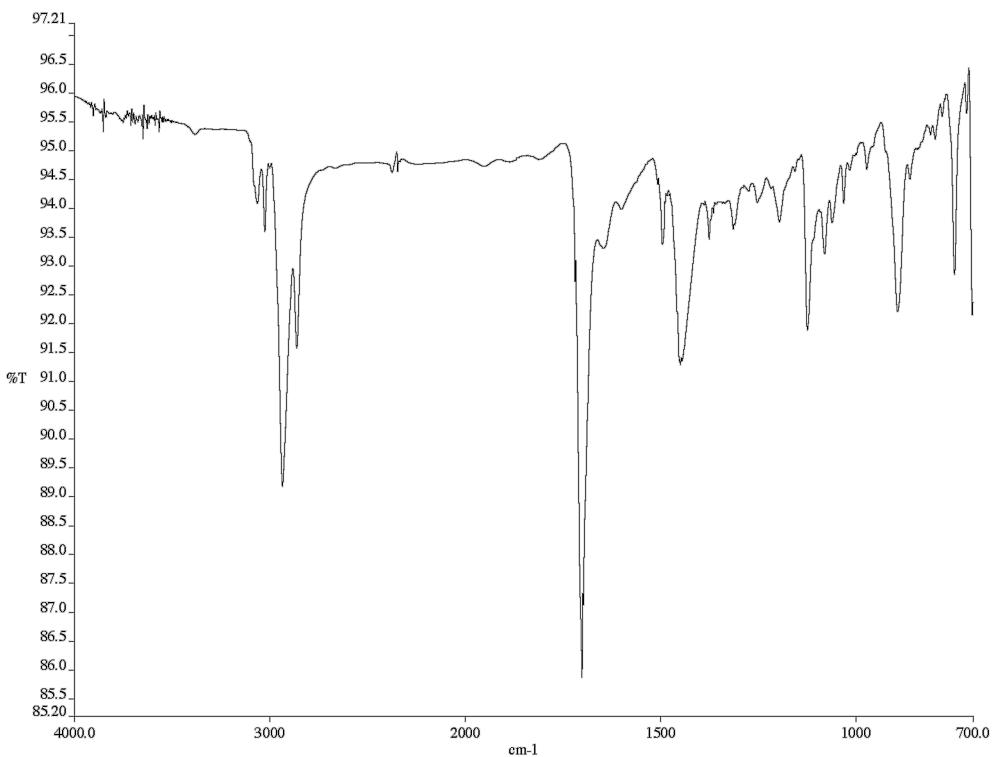


Figure A2.44 Infrared spectrum (thin film/NaCl) of compound **81a**.

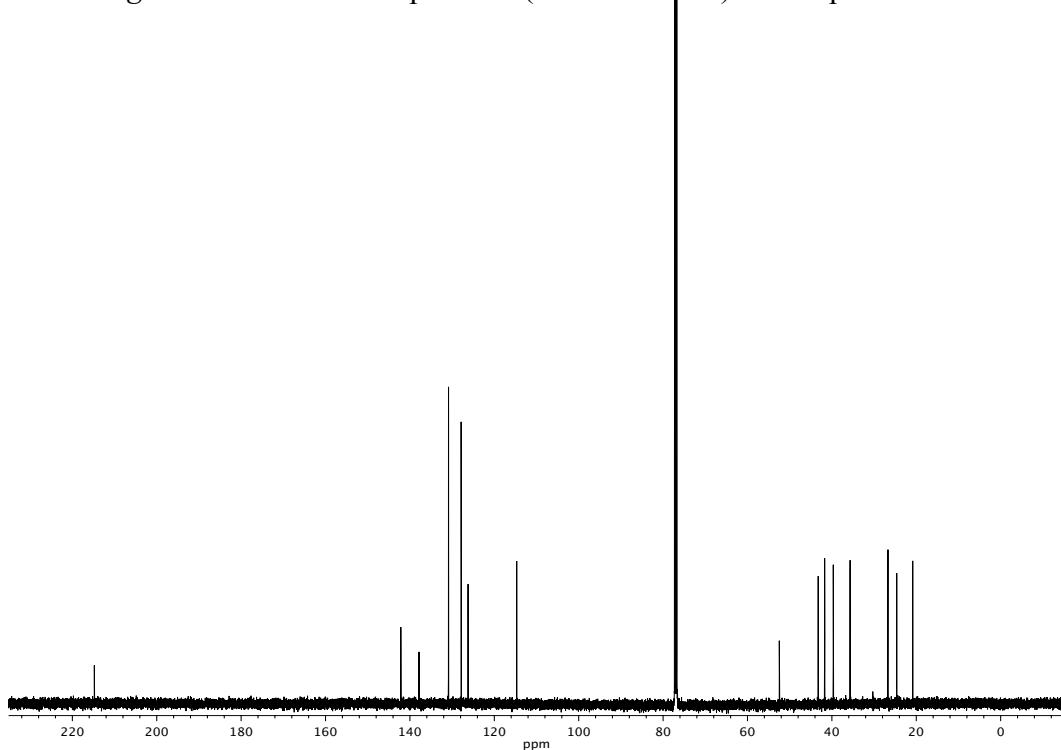


Figure A2.45 ^{13}C NMR (125 MHz, CDCl_3) of compound **81a**.

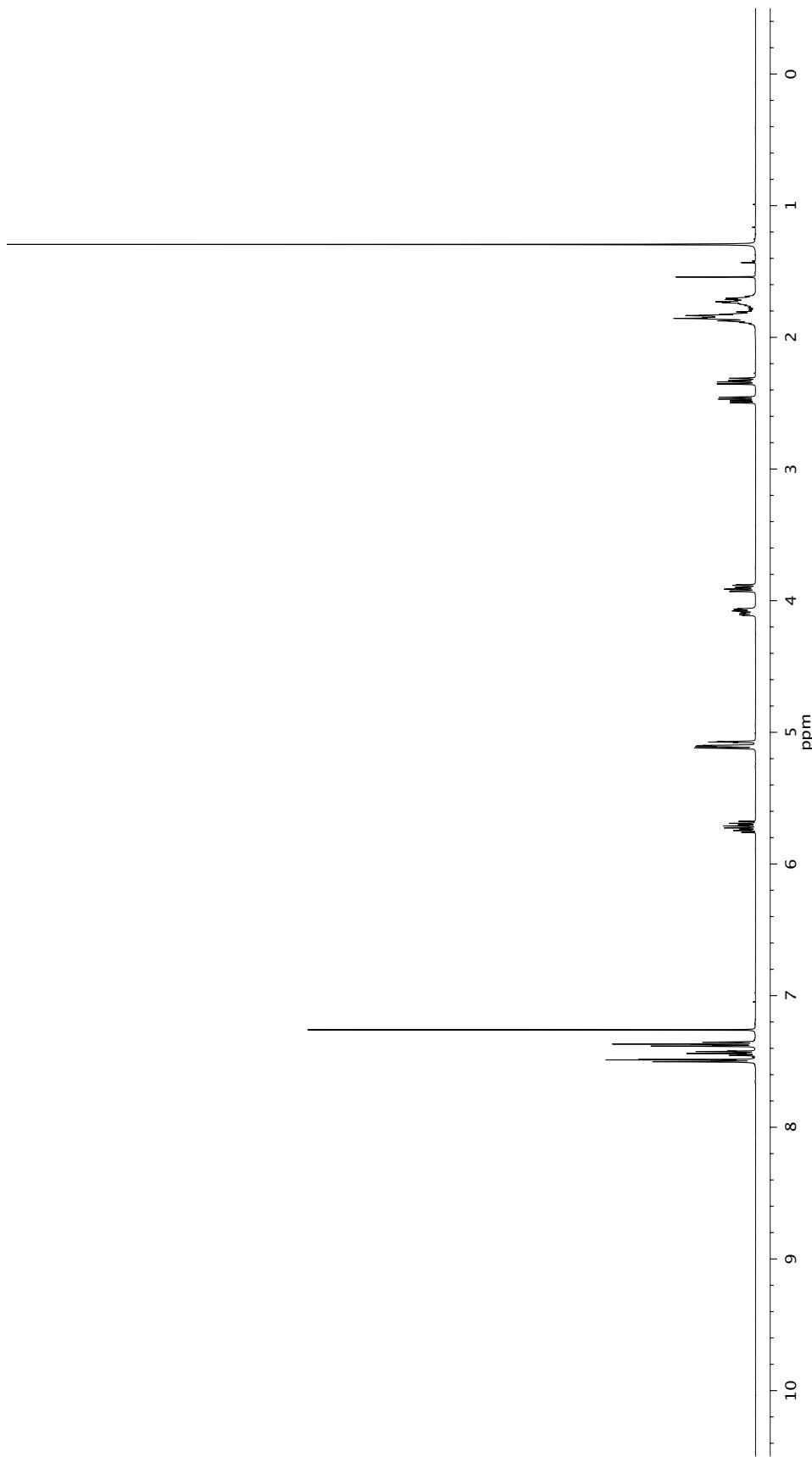
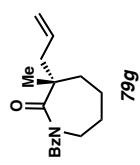


Figure A2.46 ¹H NMR (500 MHz, CDCl₃) of compound 79g.

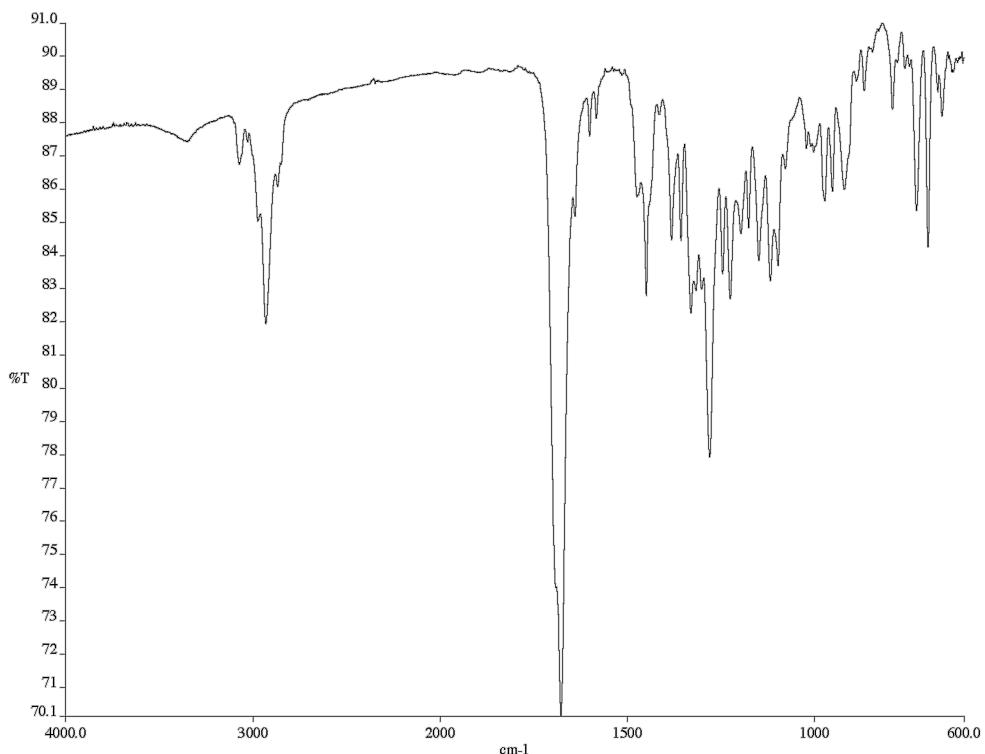


Figure A2.47 Infrared spectrum (thin film/NaCl) of compound 79g.

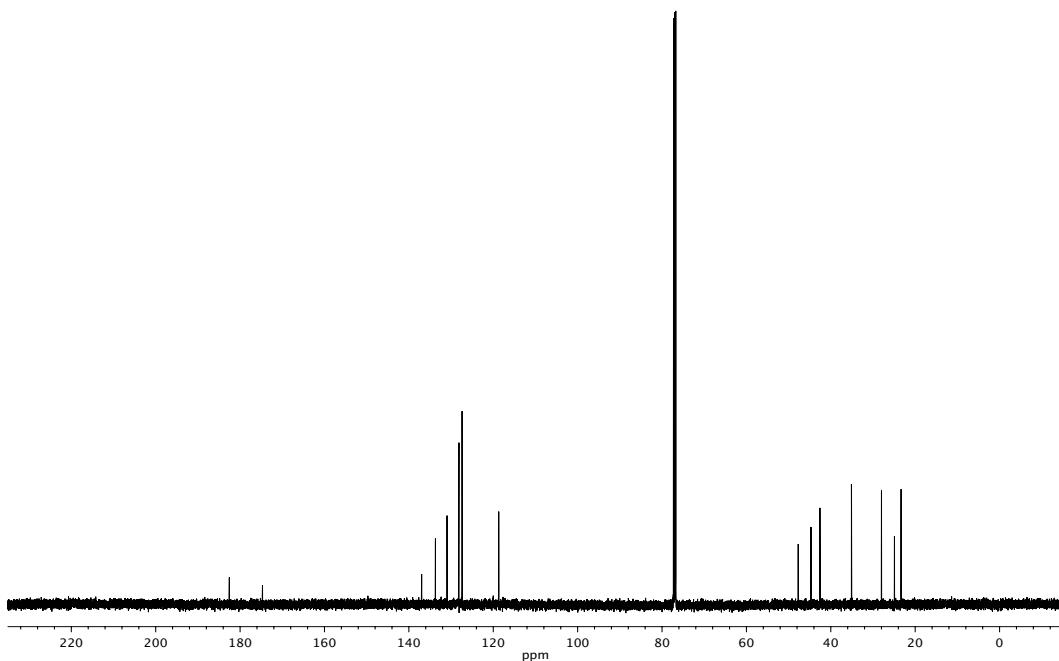


Figure A2.48 ¹³C NMR (125 MHz, CDCl₃) of compound 79g.

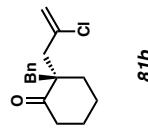
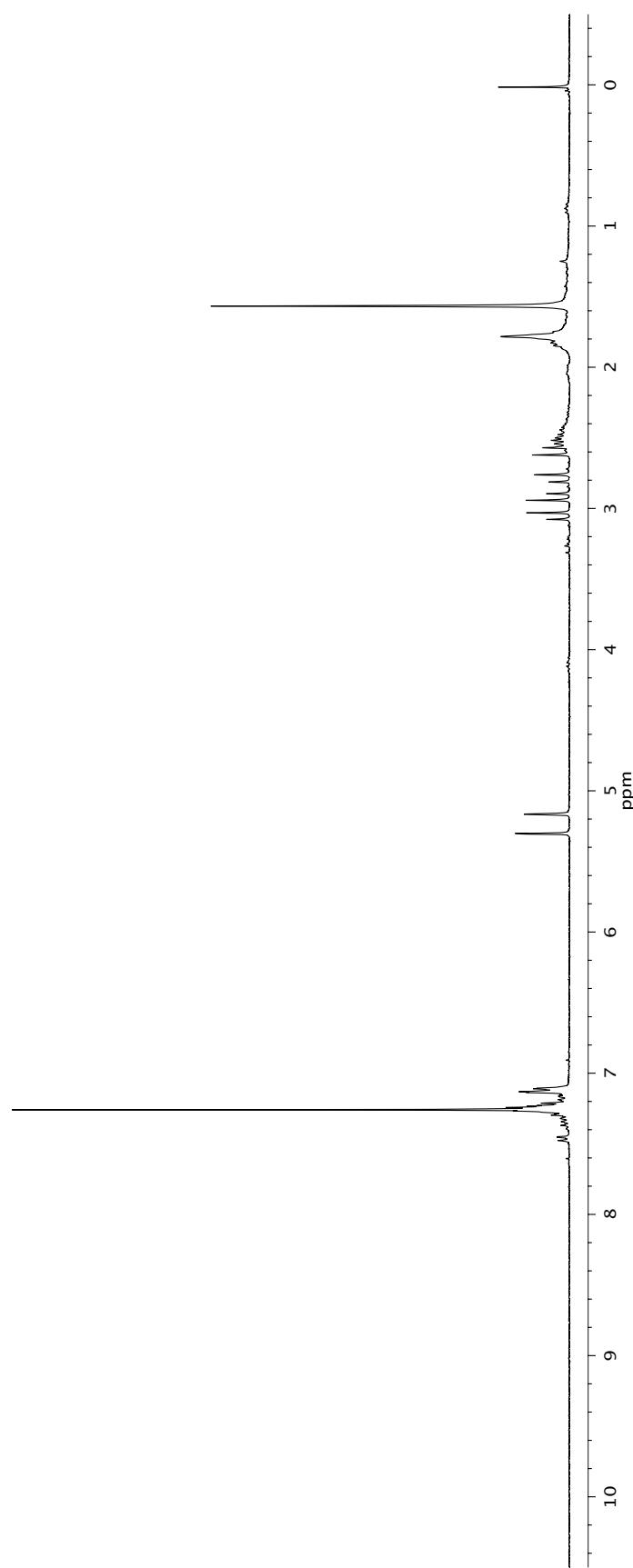
**81b**

Figure A2.49 ^1H NMR (500 MHz, CDCl_3) of compound 81b.

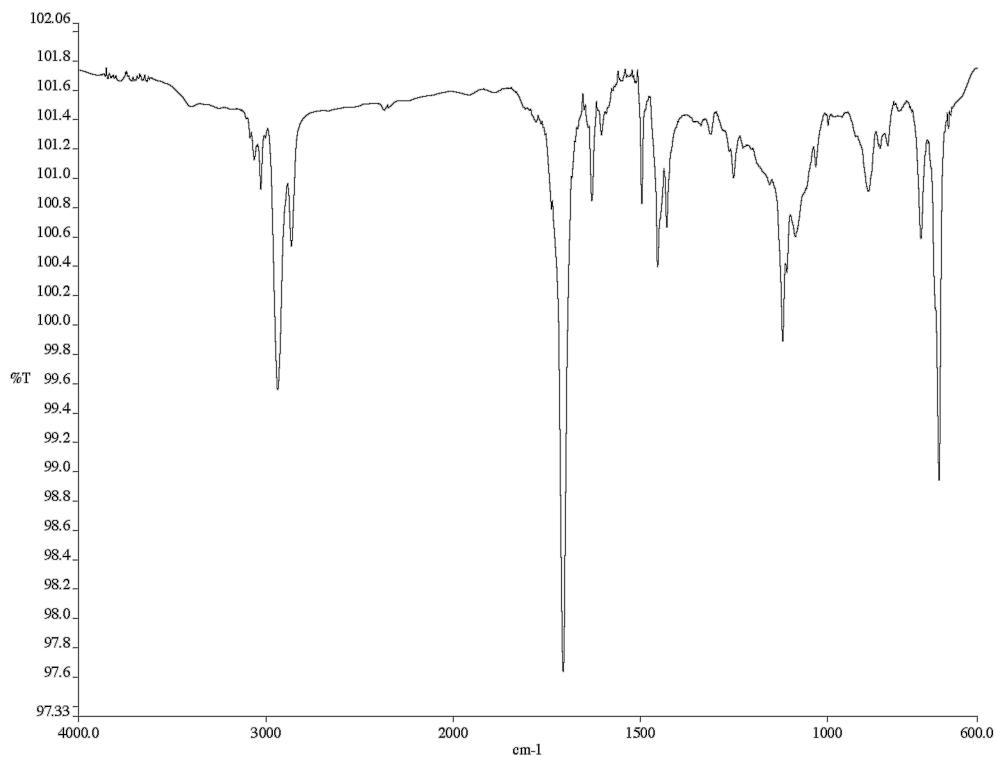


Figure A2.50 Infrared spectrum (thin film/NaCl) of compound **81b**.

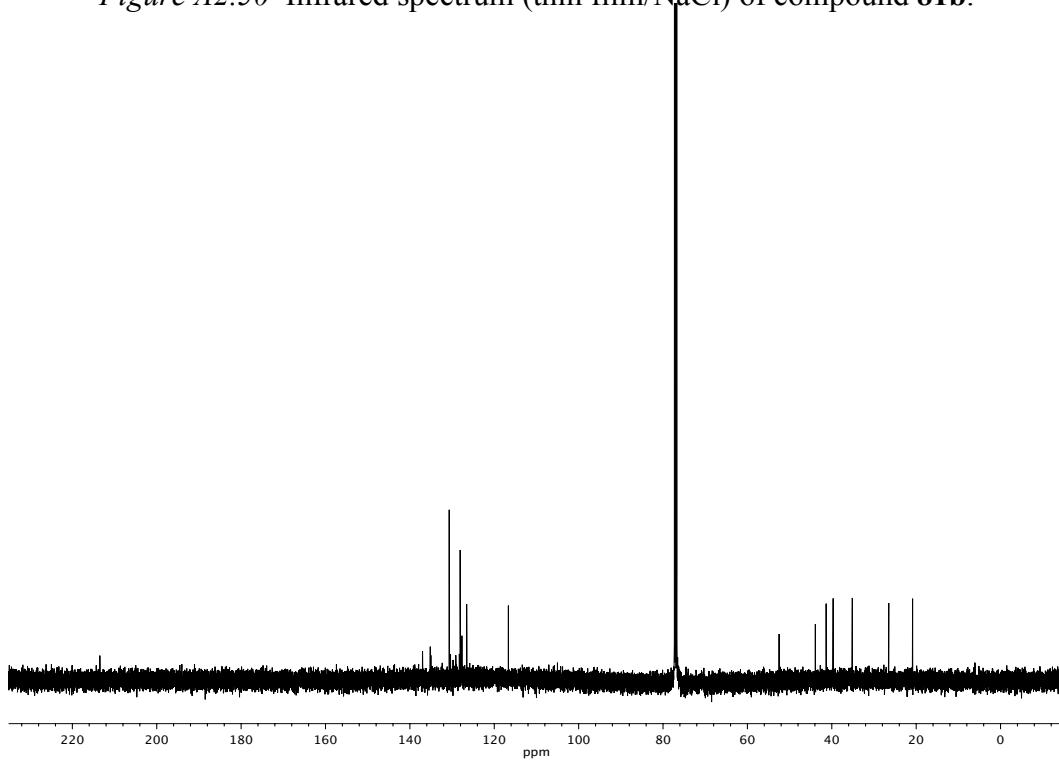


Figure A2.51 ¹³C NMR (125 MHz, CDCl₃) of compound **81b**.

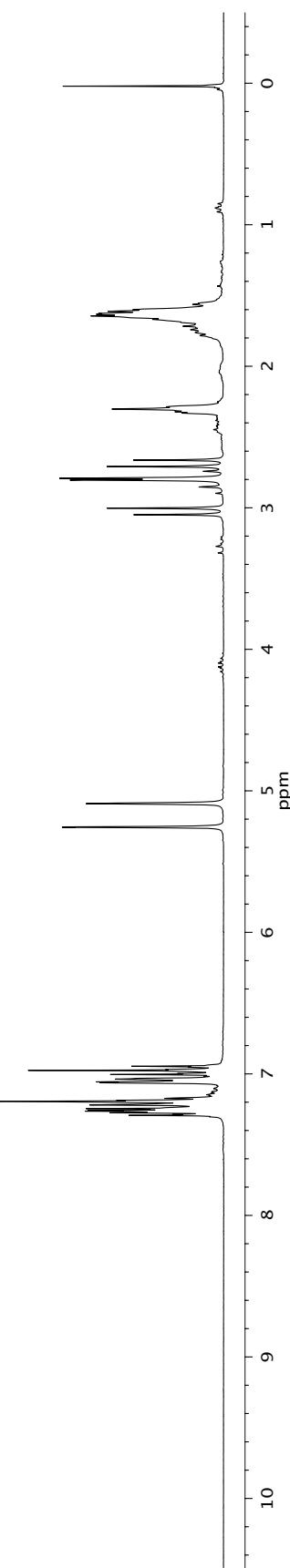
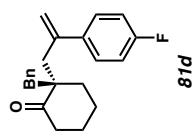


Figure A2.52 ^1H NMR (500 MHz, CDCl_3) of compound **81d**.

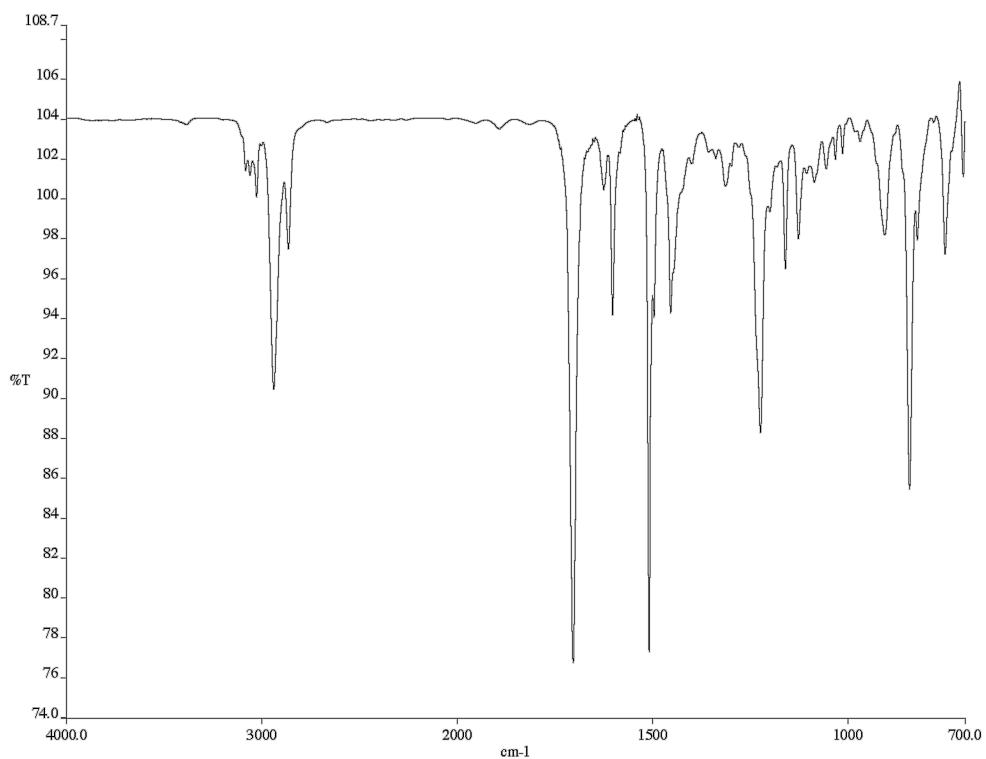


Figure A2.53 Infrared spectrum (thin film/NaCl) of compound **81d**.

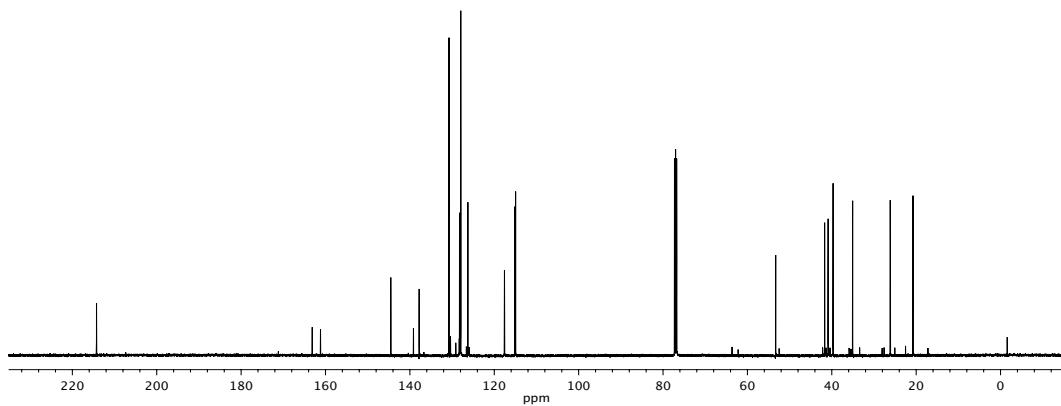


Figure A2.54 ^{13}C NMR (125 MHz, CDCl_3) of compound **81d**.

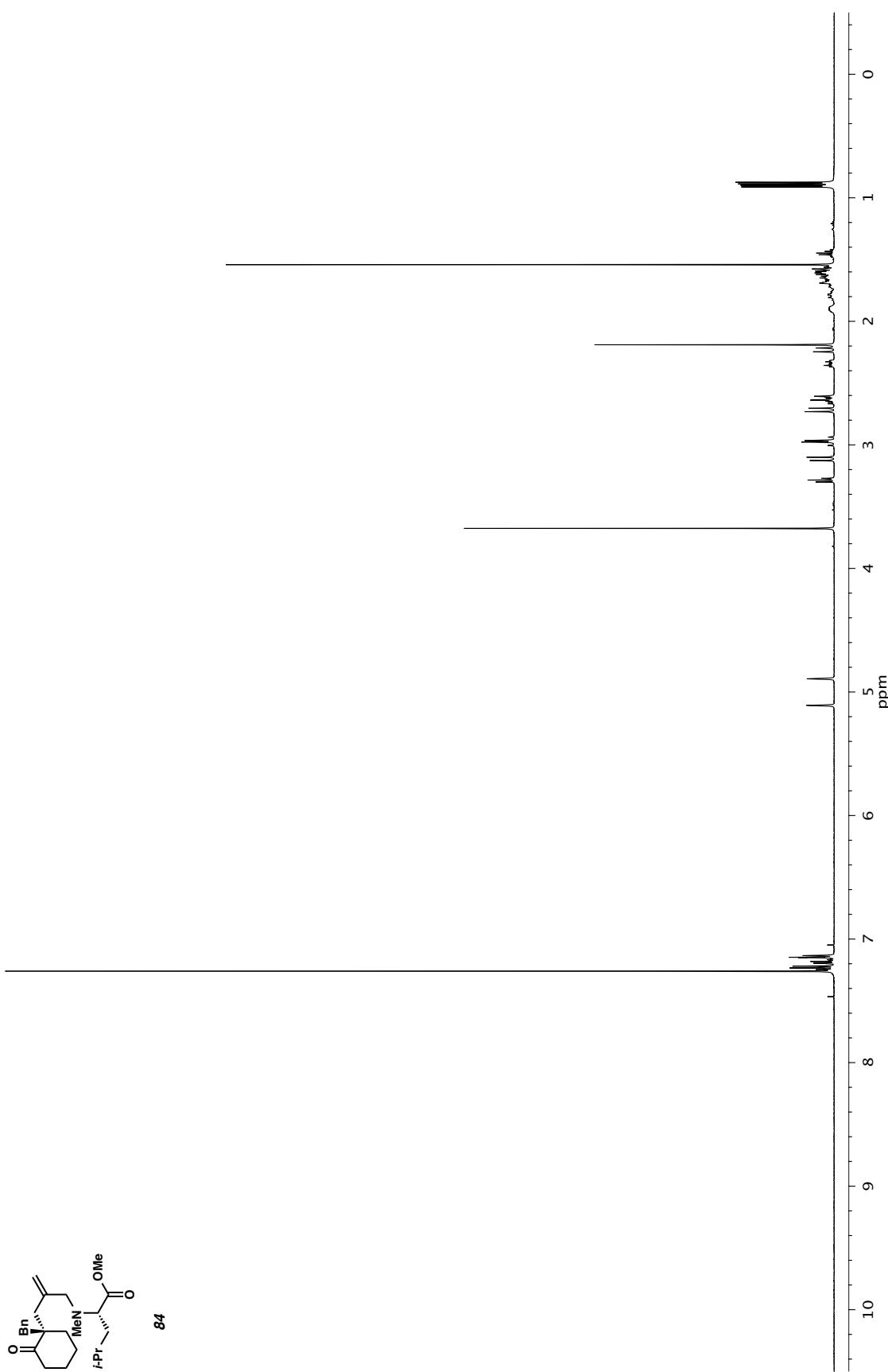


Figure A2.55 ^1H NMR (500 MHz, CDCl_3) of compound 84.

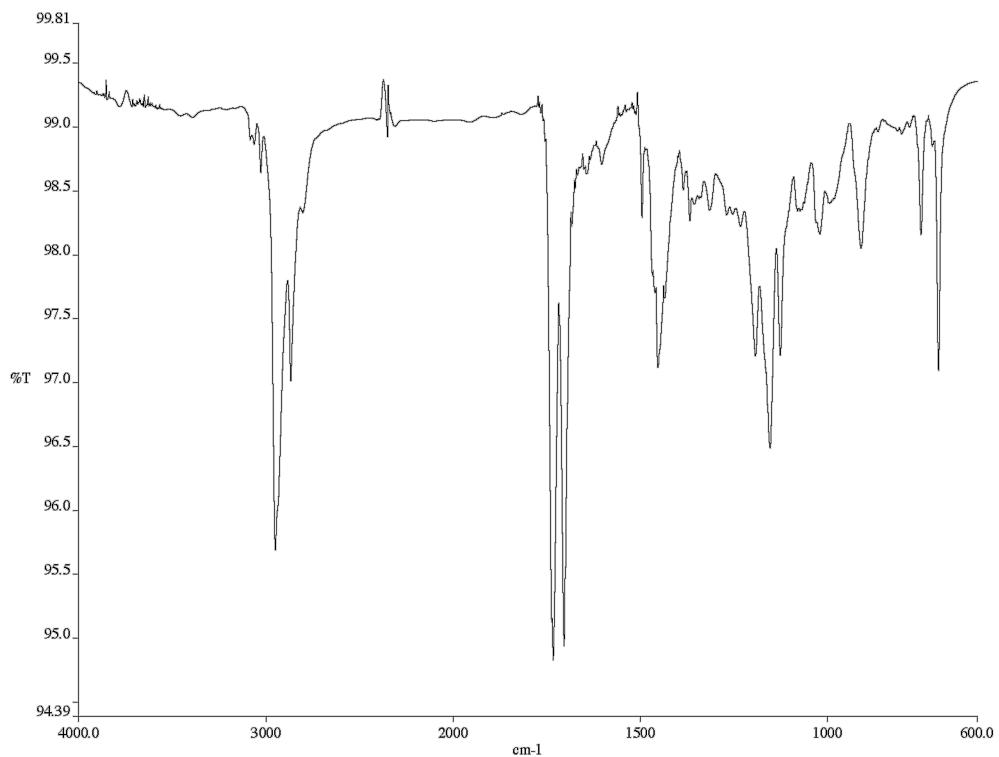


Figure A2.56 Infrared spectrum (thin film/NaCl) of compound **84**.

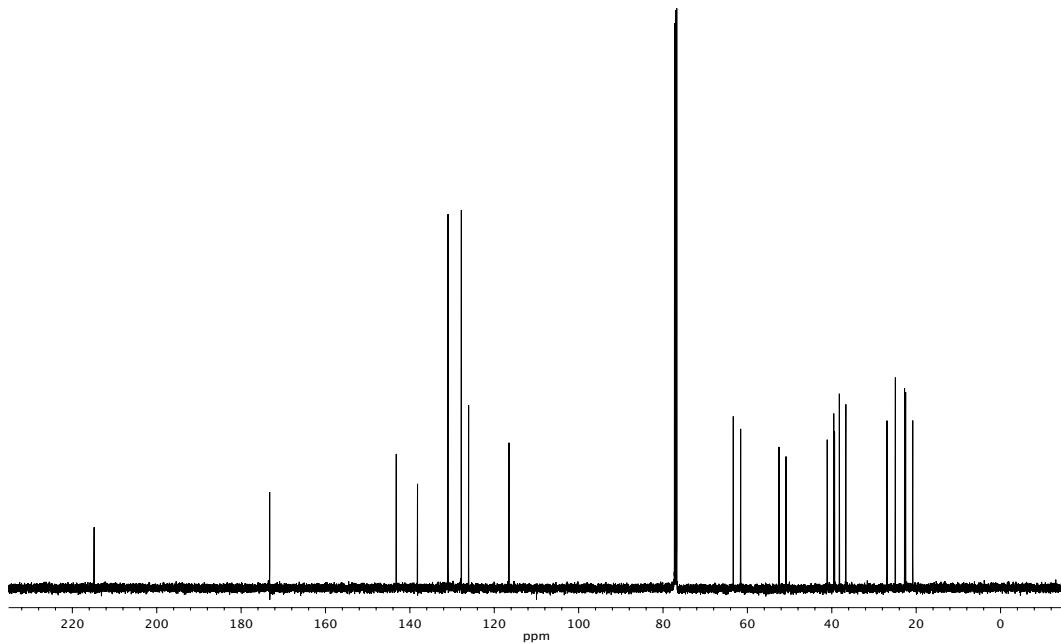


Figure A2.57 ^{13}C NMR (125 MHz, CDCl_3) of compound **84**.

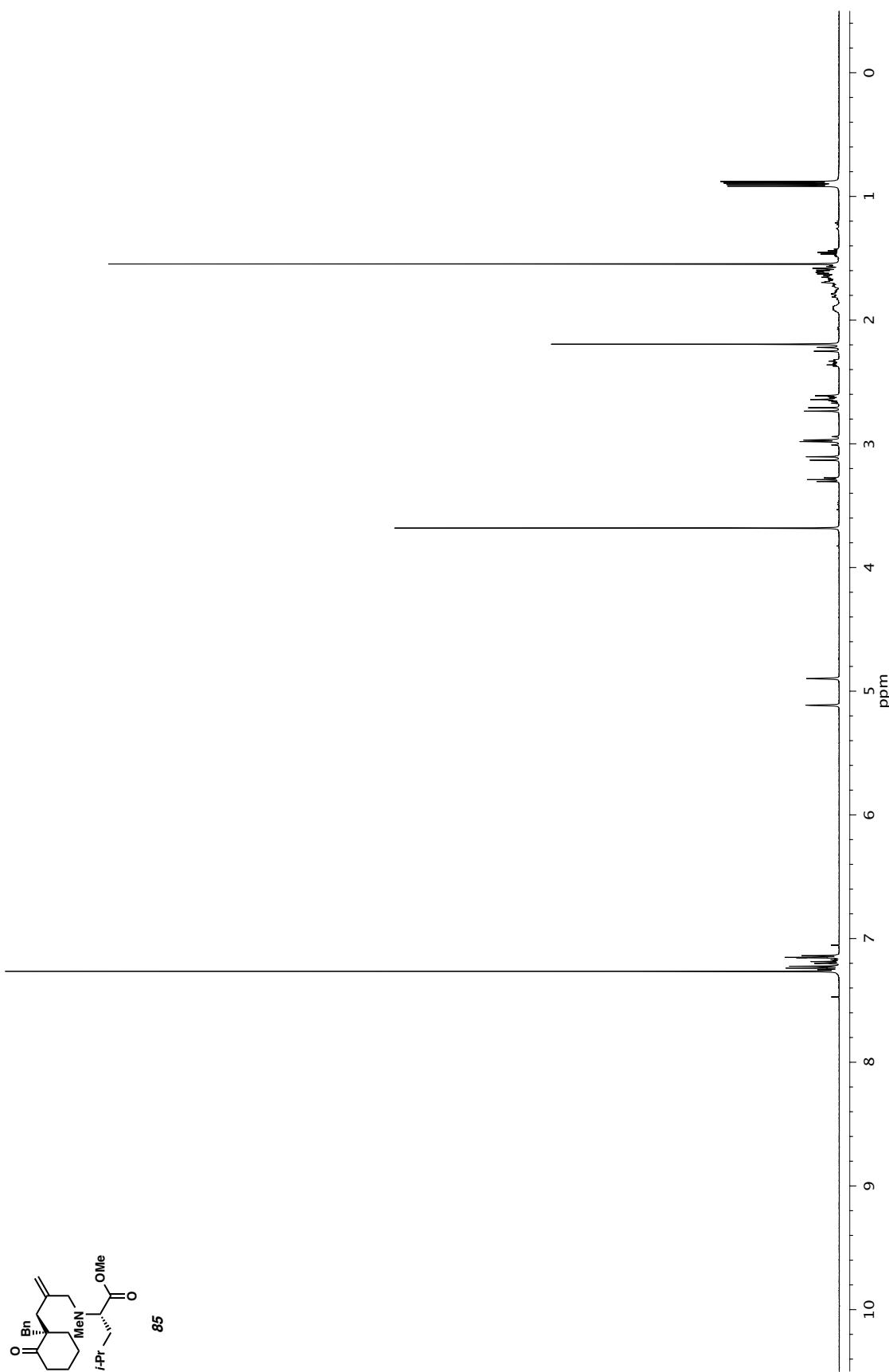


Figure A2.58 ^1H NMR (500 MHz, CDCl_3) of compound 85.

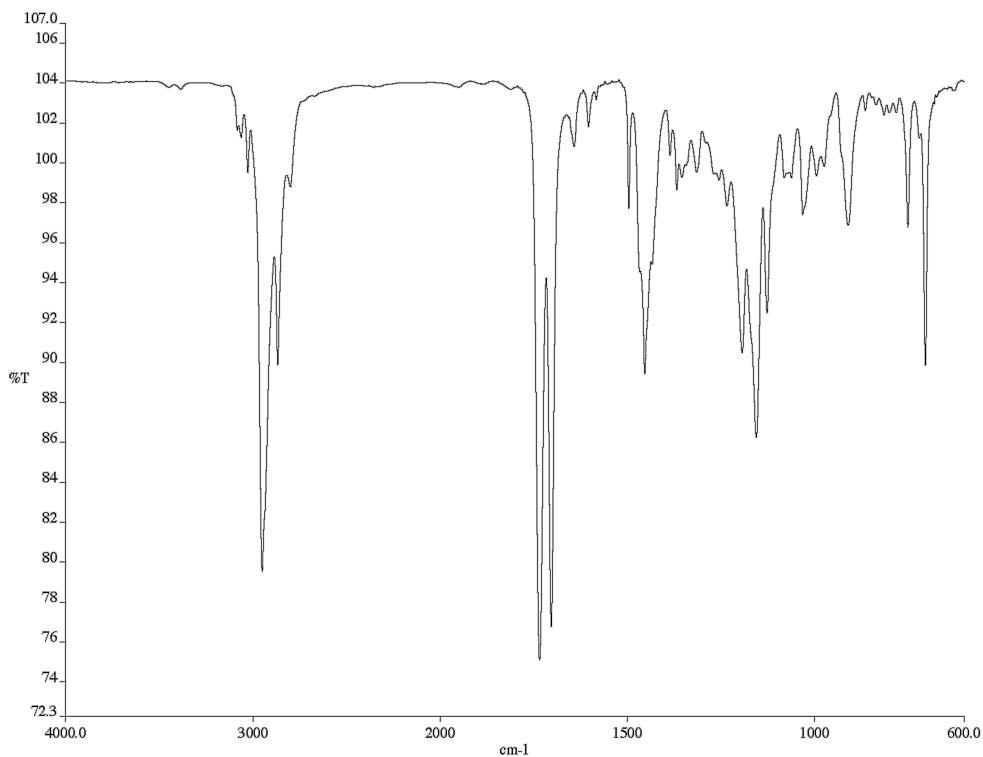


Figure A2.59 Infrared spectrum (thin film/NaCl) of compound **85**.

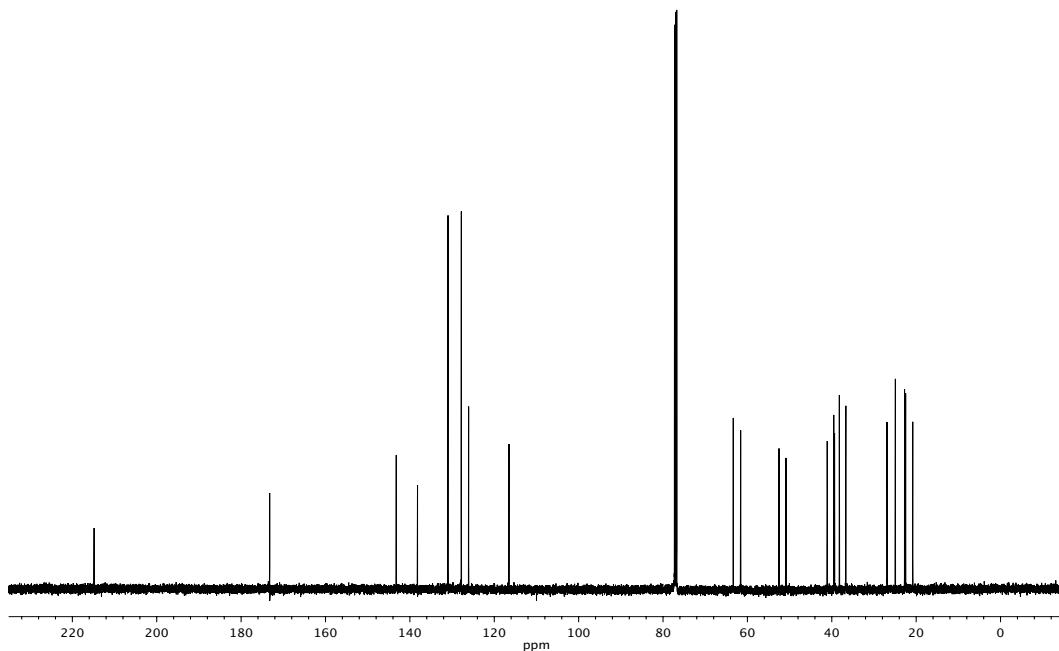


Figure A2.60 ^{13}C NMR (125 MHz, CDCl_3) of compound **85**.

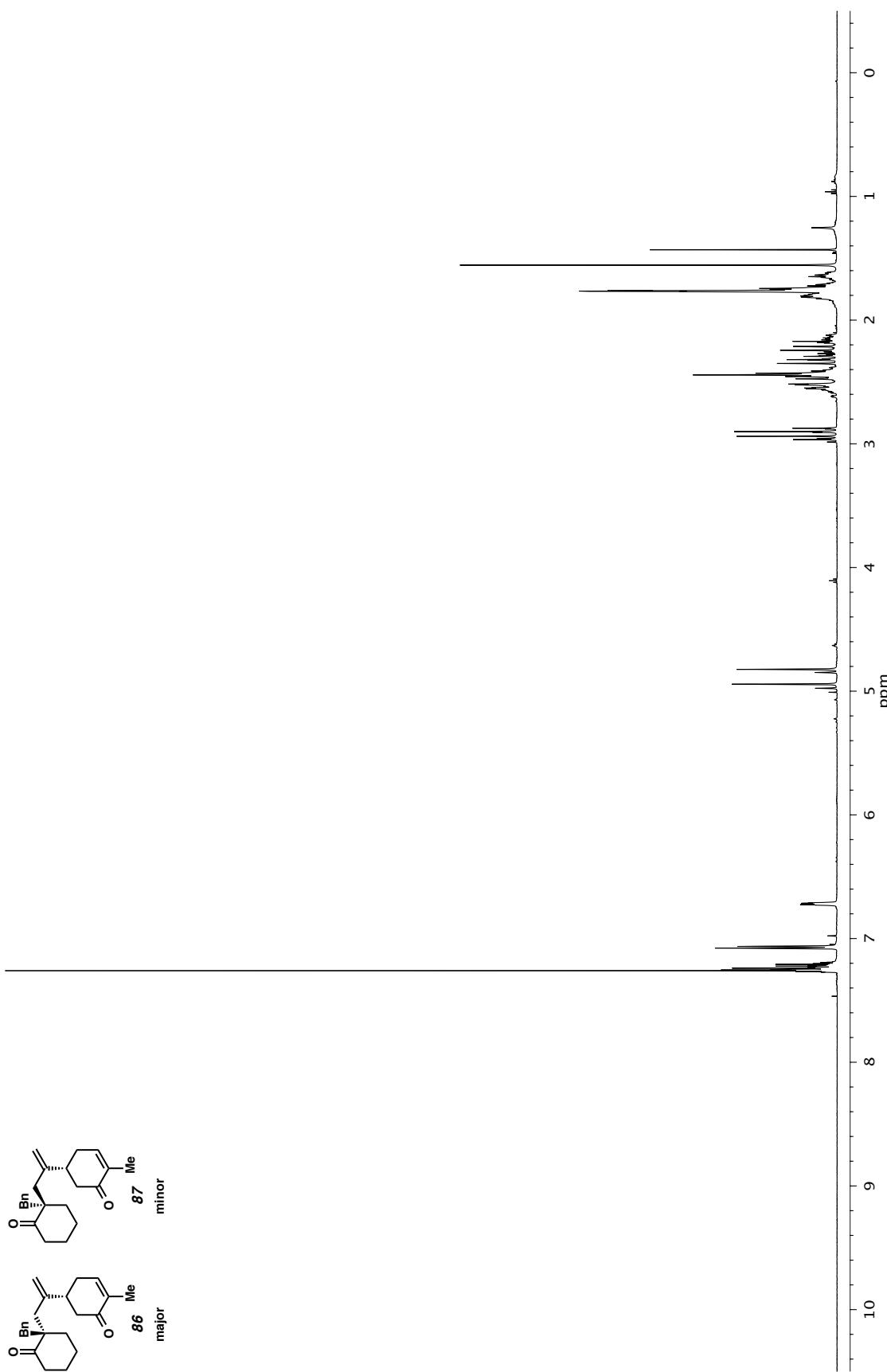


Figure A2.61 ¹H NMR (500 MHz, CDCl_3) of compounds **86** and **87**.

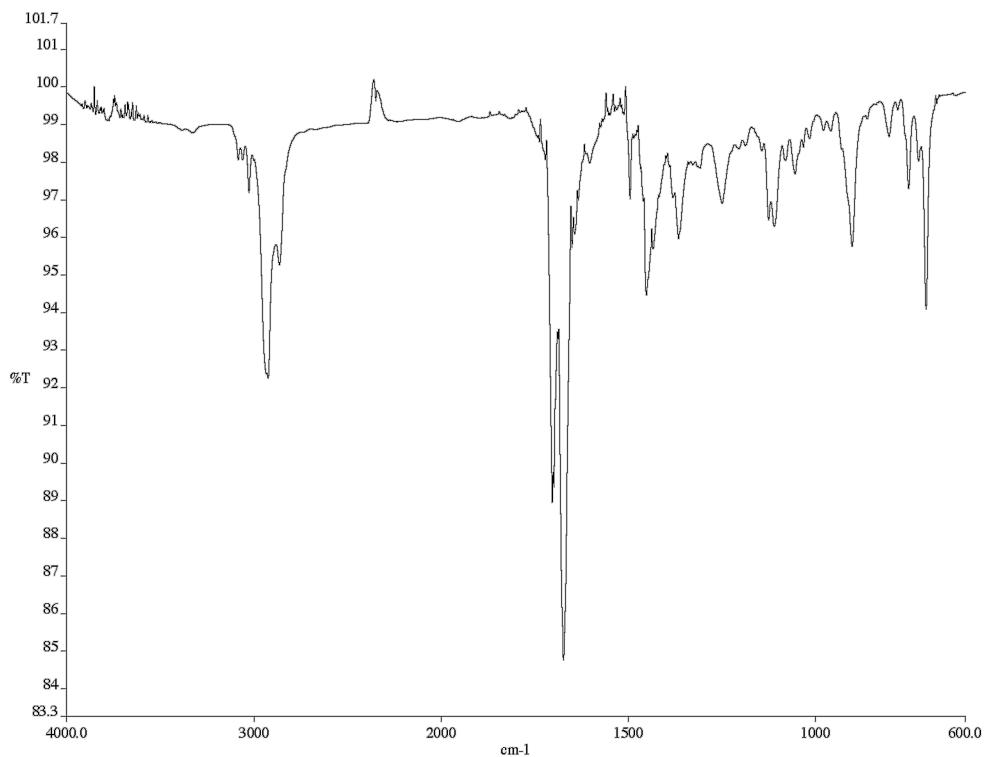


Figure A2.62 Infrared spectrum (thin film/NaCl) of compound **86** and **87**.

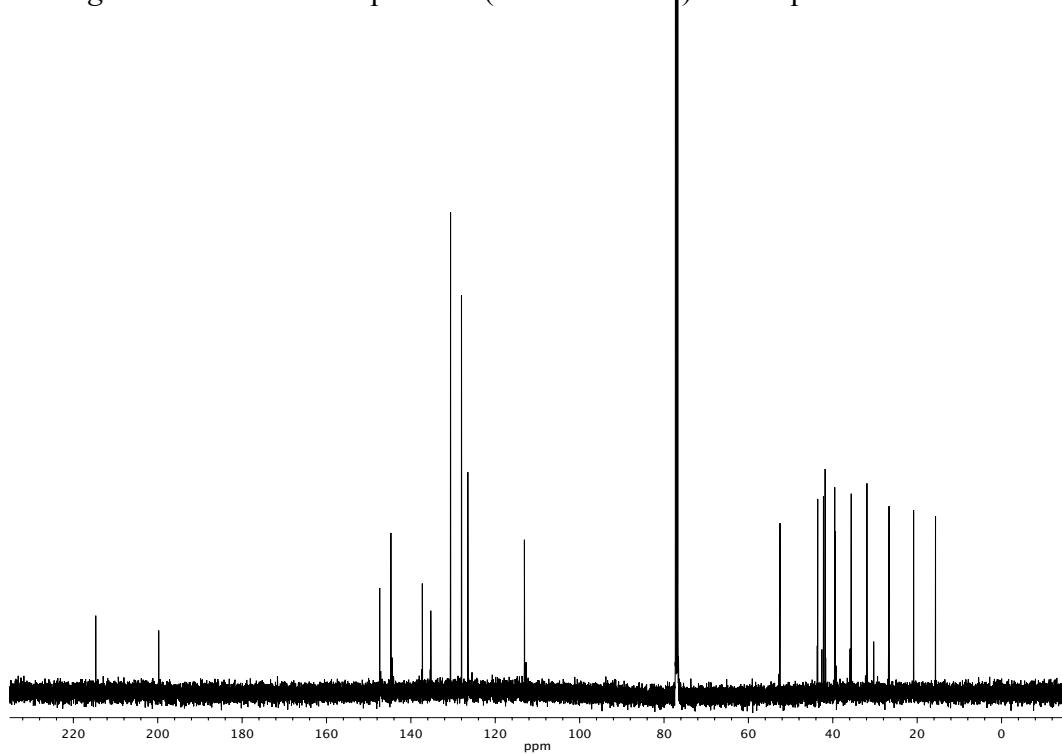


Figure A2.63 ¹³C NMR (125 MHz, CDCl₃) of compound **86** and **87**.