

## **APPENDIX SEVEN**

**Spectra Relevant to Chapter Four:**

**Total Synthesis of Amurensinine**

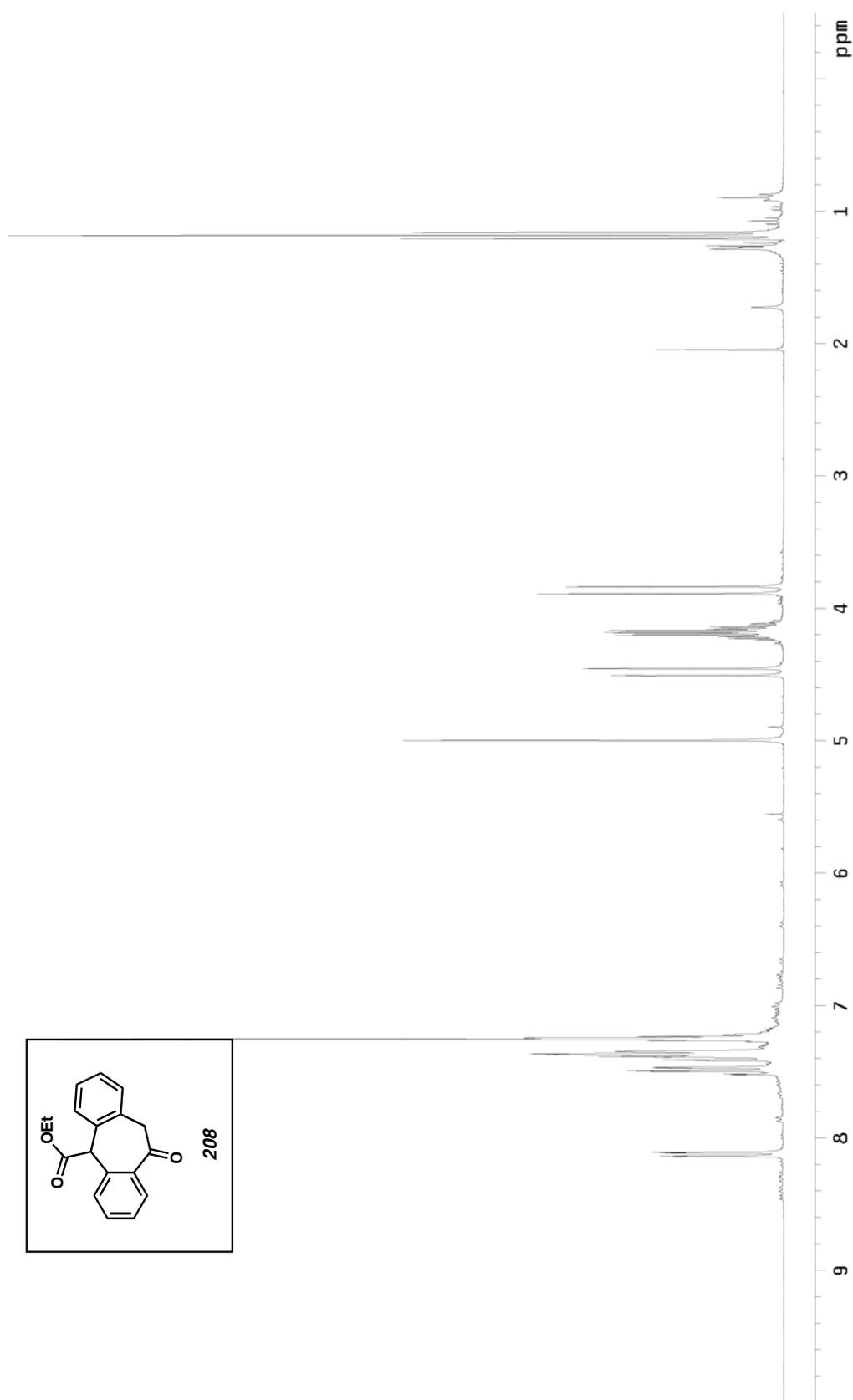


Figure A7.1 <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) of compound 208.

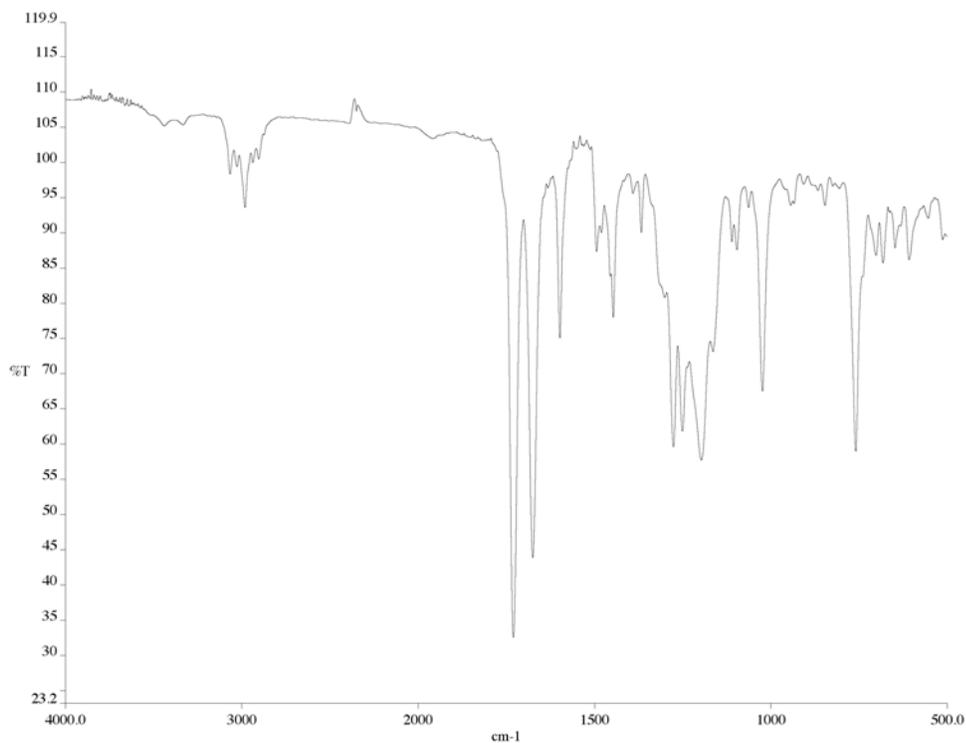


Figure A7.2 Infrared spectrum (thin film/NaCl) of compound **208**.

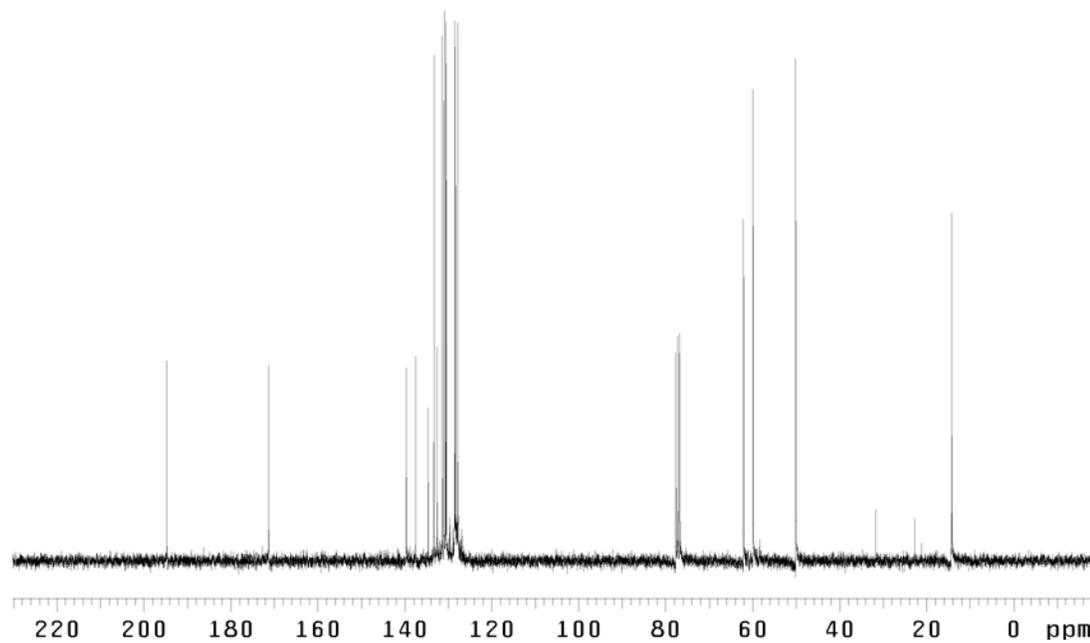


Figure A7.3 <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) of compound **208**.

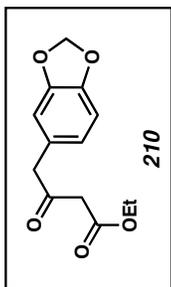
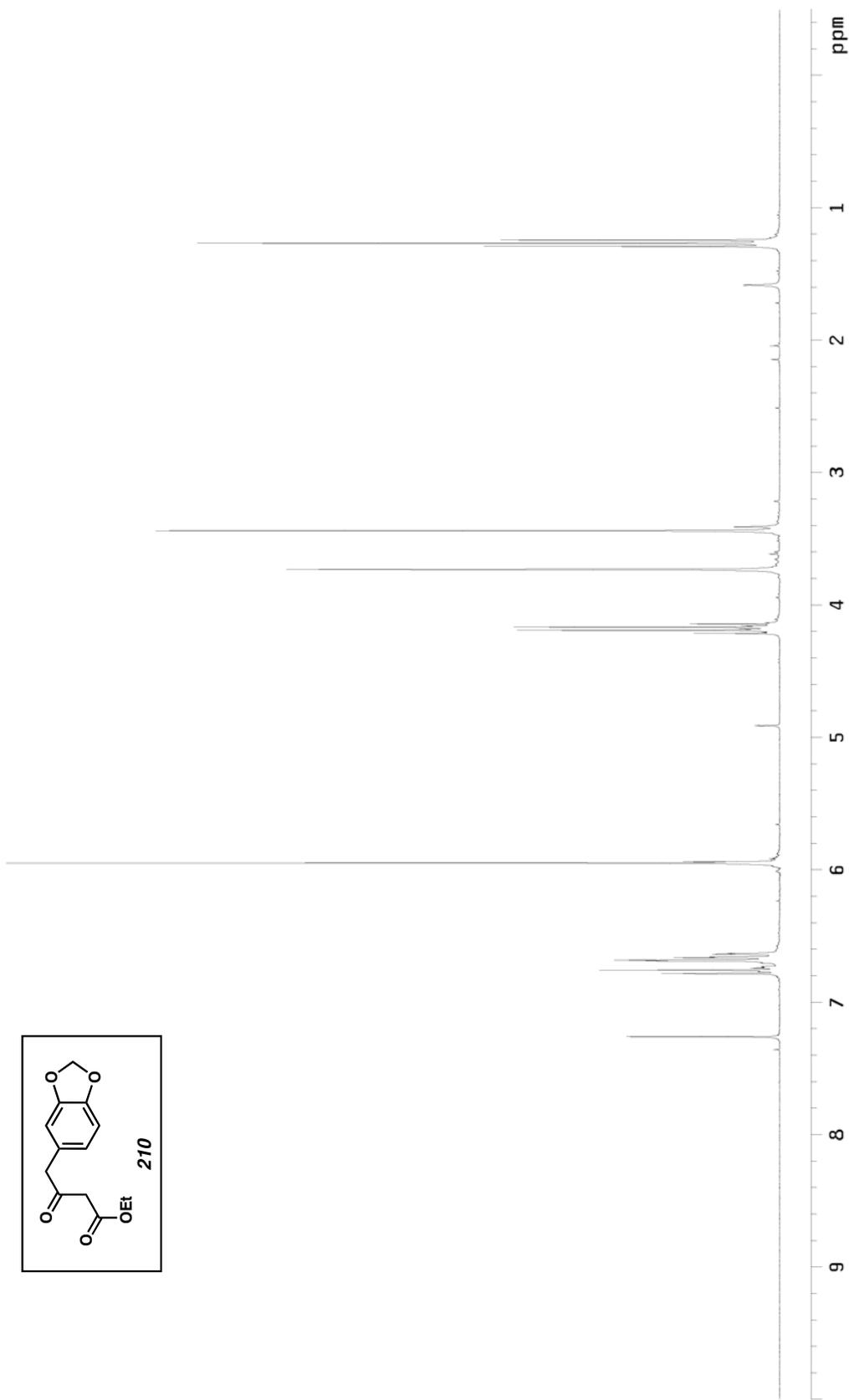


Figure A7.4 <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) of compound **210**.

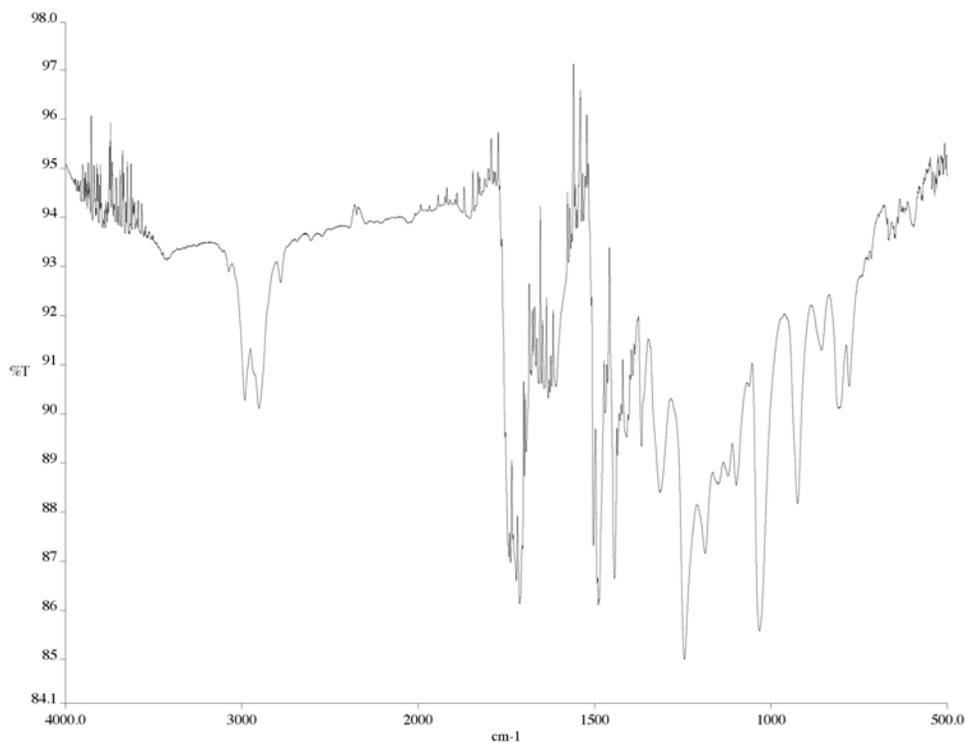


Figure A7.5 Infrared spectrum (thin film/NaCl) of compound **210**.

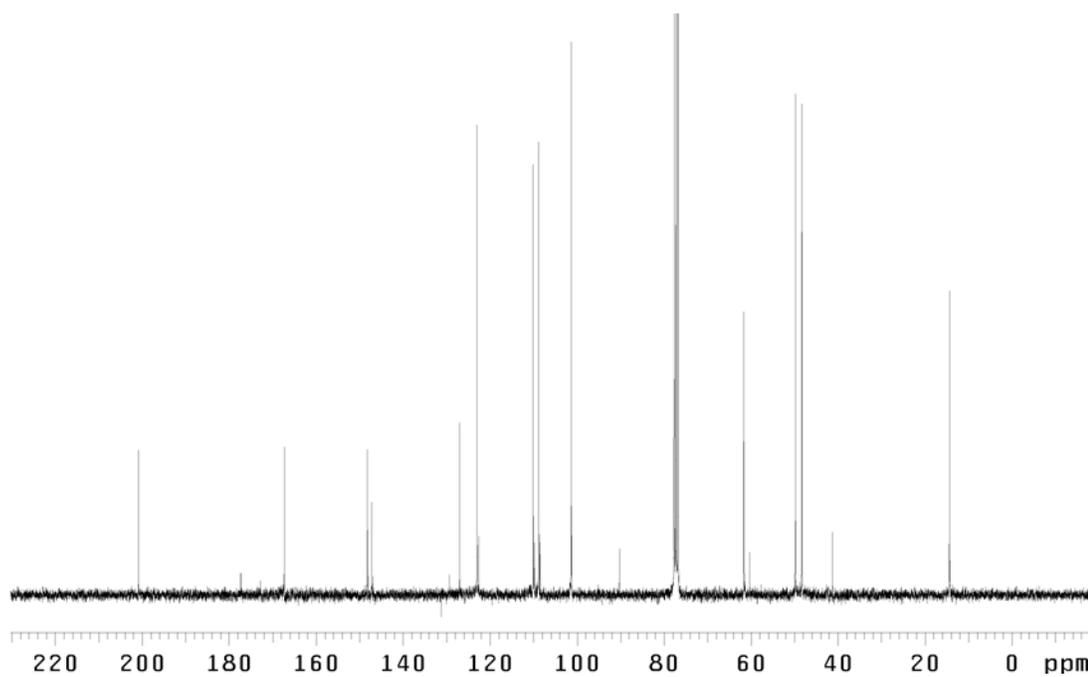


Figure A7.6 <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) of compound **210**.

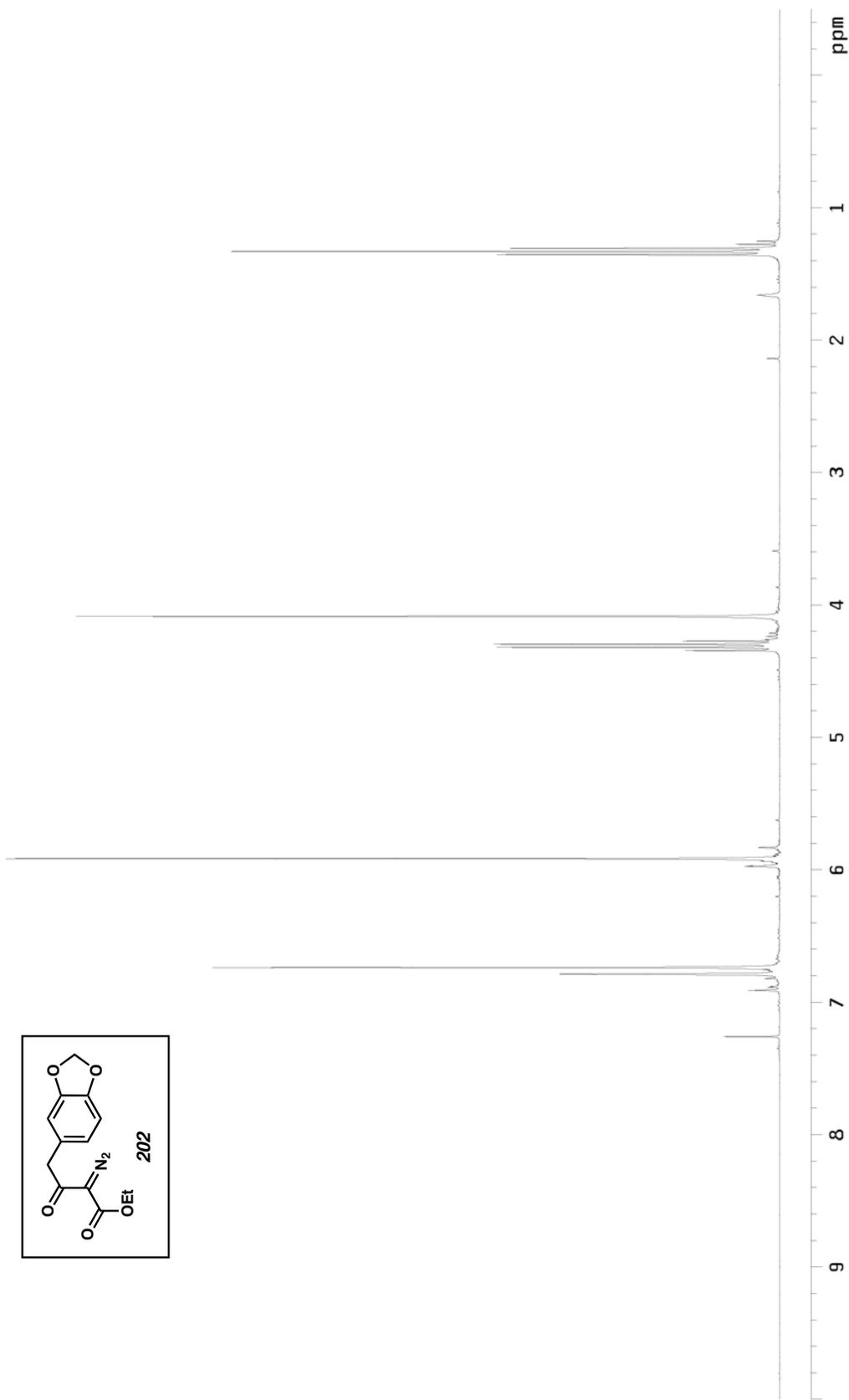


Figure A7.7 <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) of compound 202.

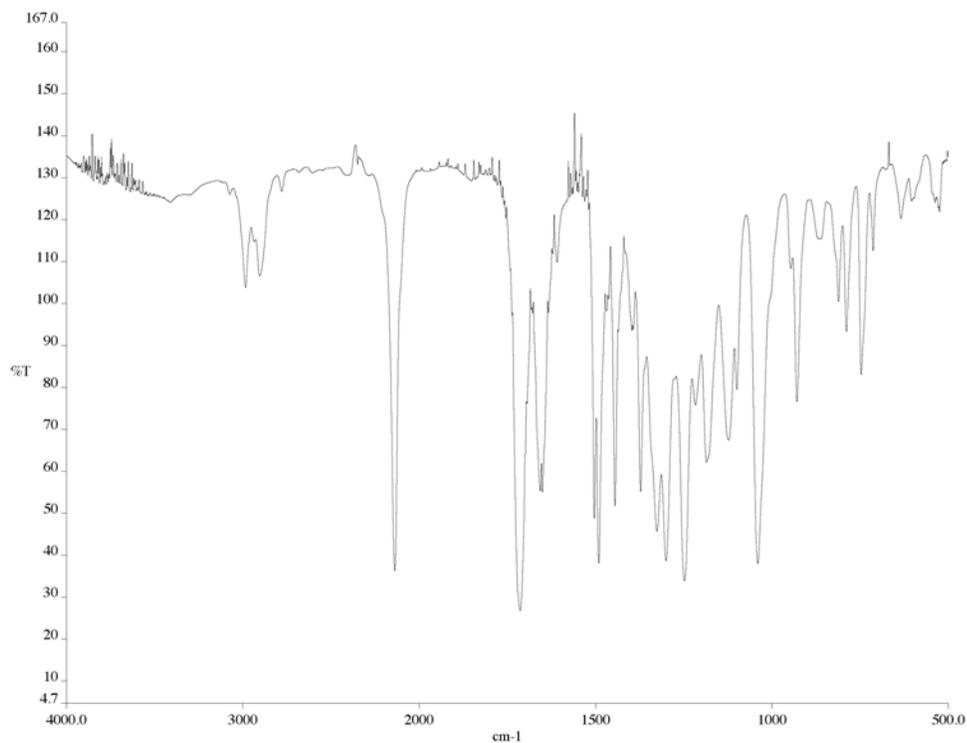


Figure A7.8 Infrared spectrum (thin film/NaCl) of compound **202**.

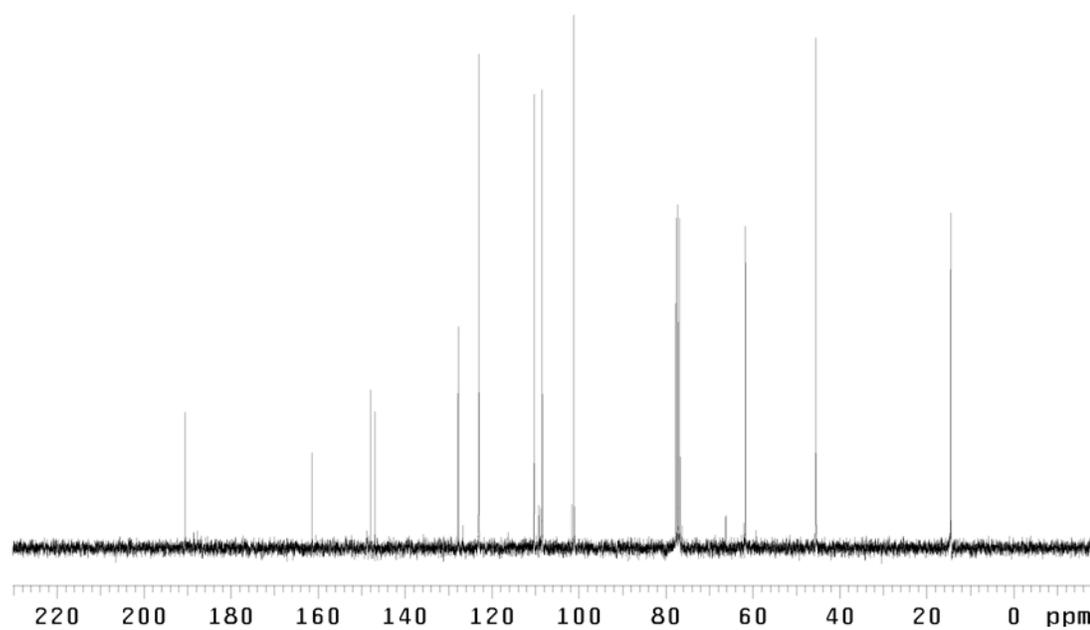


Figure A7.9 <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) of compound **202**.

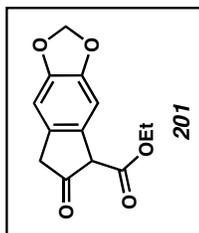


Figure A7.10  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ) of compound **201**.

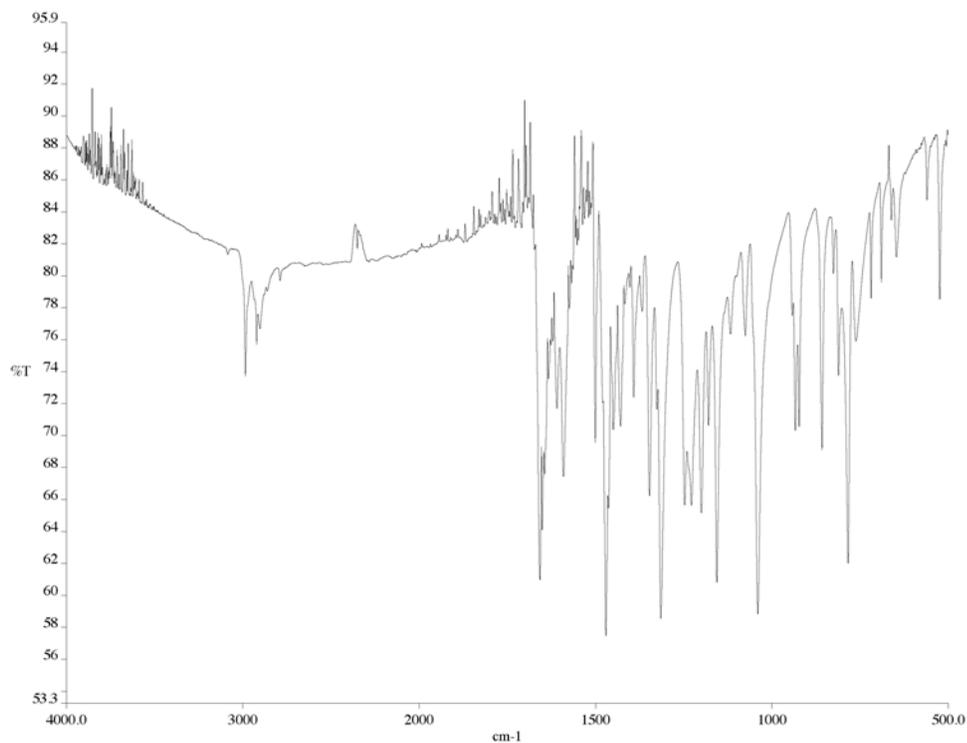


Figure A7.11 Infrared spectrum (thin film/NaCl) of compound **201**.

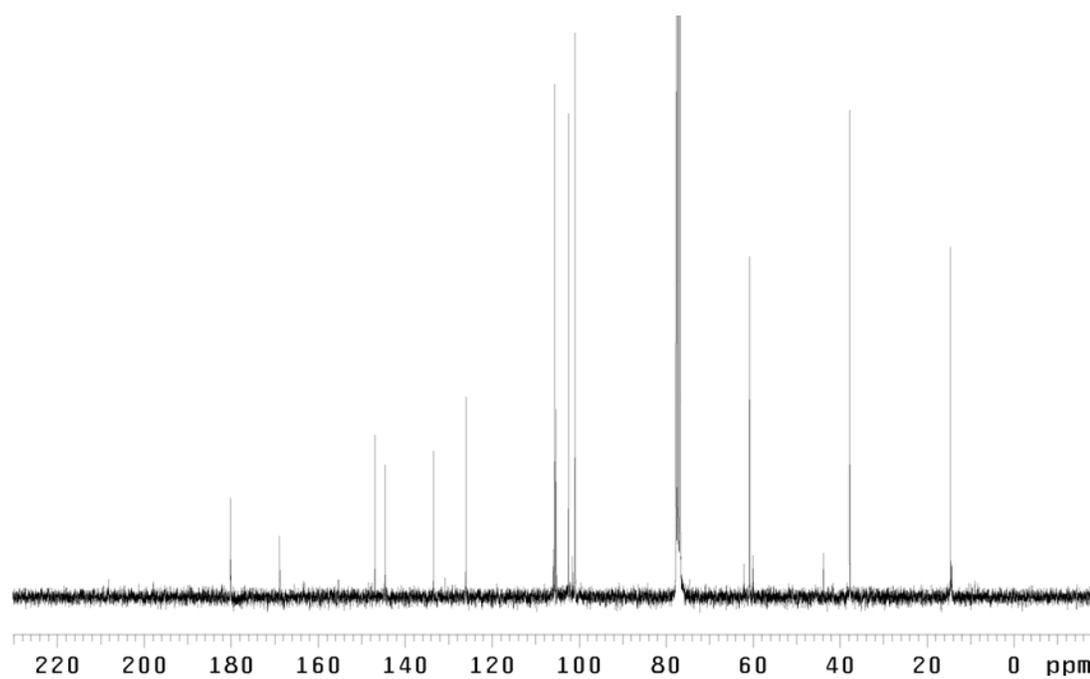


Figure A7.12 <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) of compound **201**.

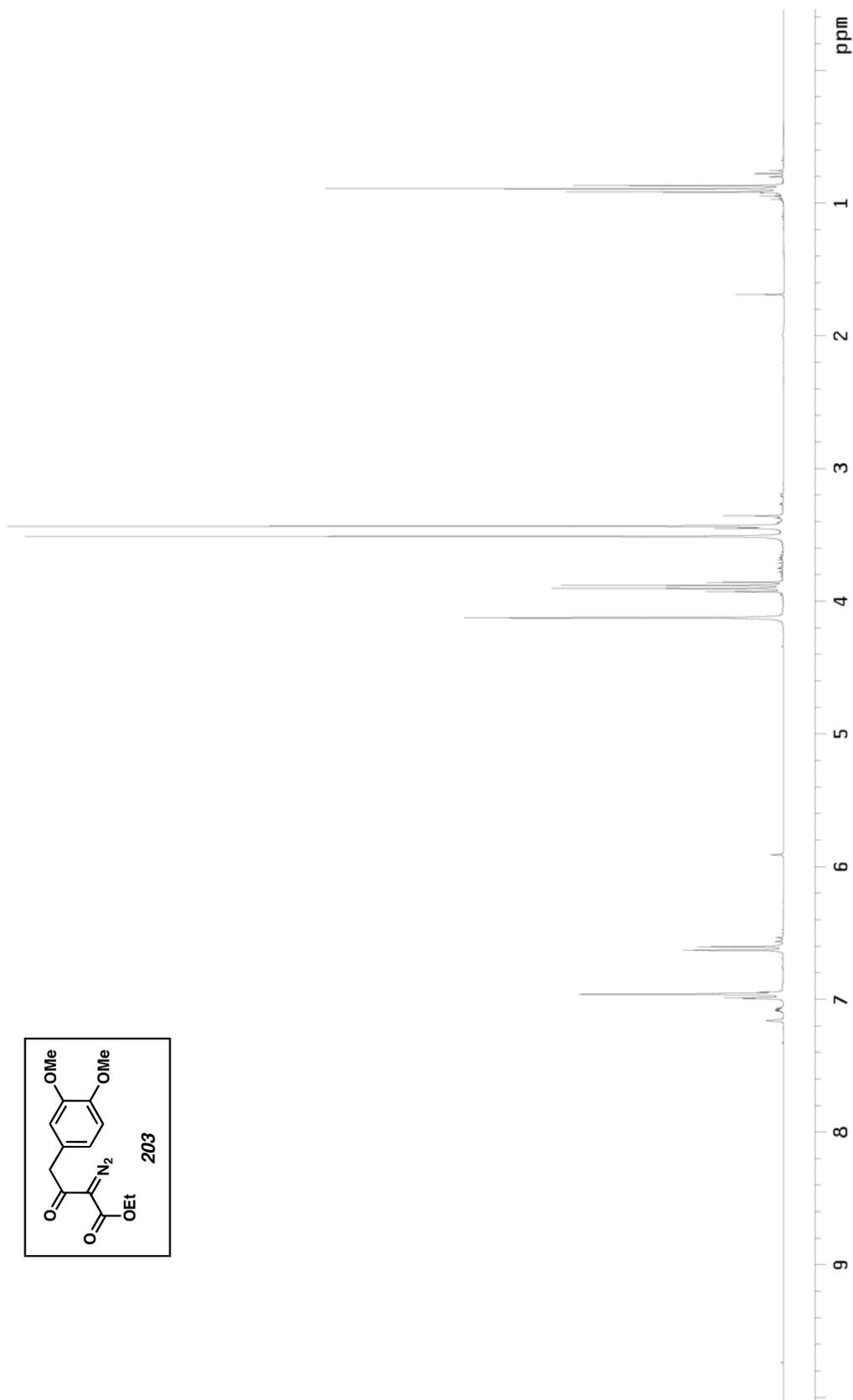
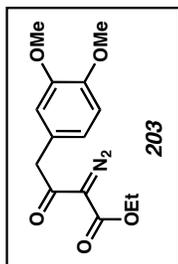


Figure A7.13 <sup>1</sup>H NMR (300 MHz, C<sub>6</sub>D<sub>6</sub>) of compound 203.

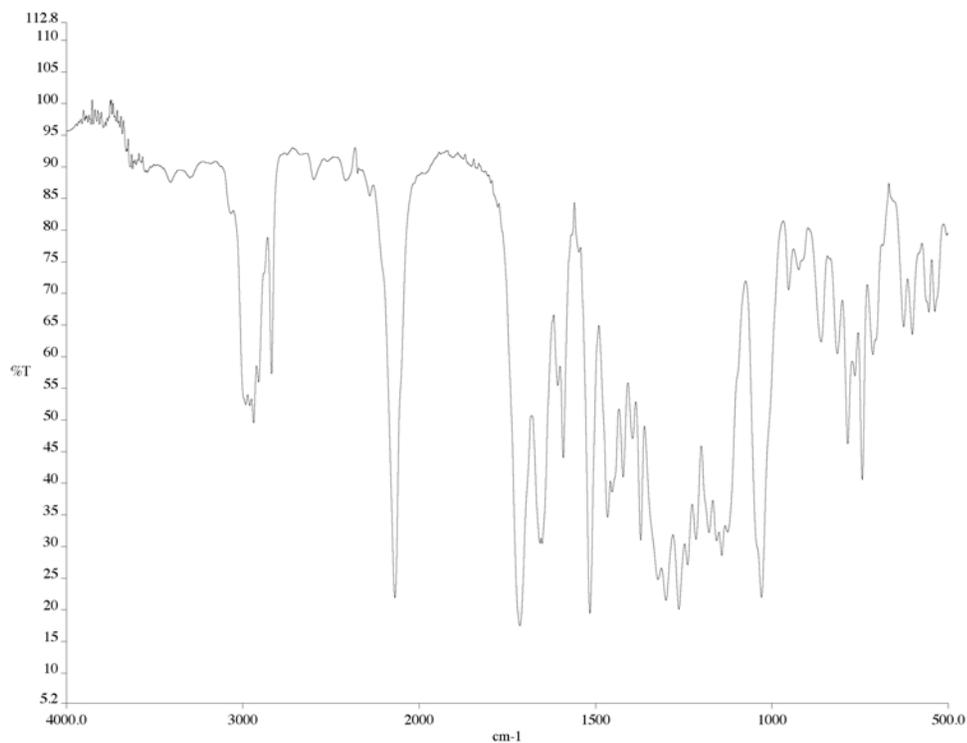


Figure A7.14 Infrared spectrum (thin film/NaCl) of compound **203**.

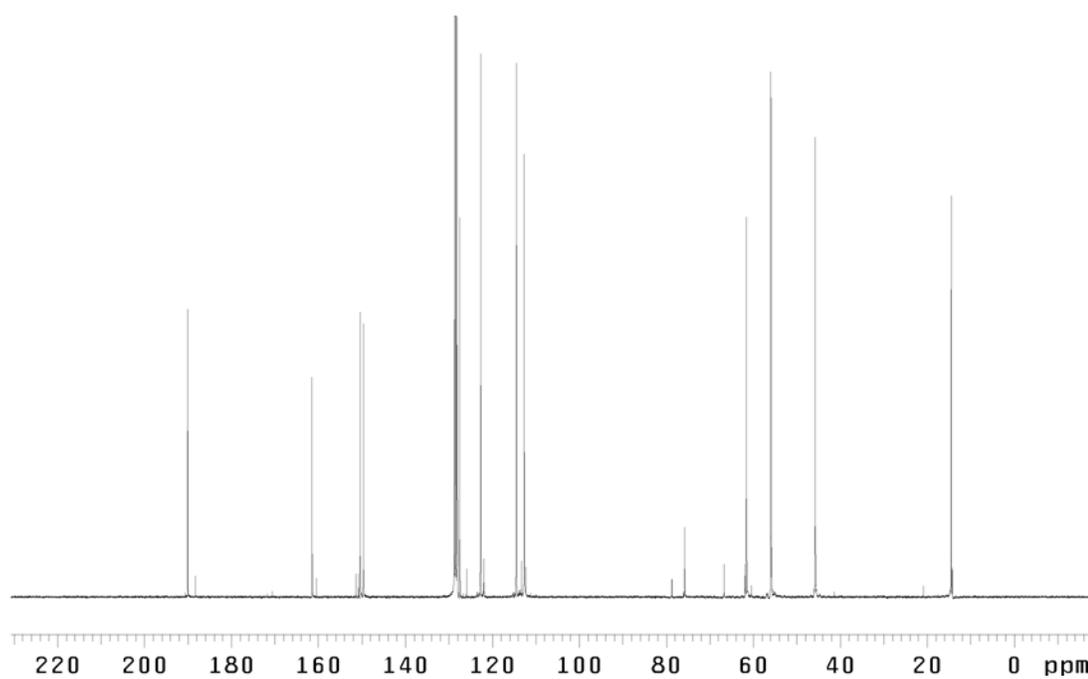


Figure A7.15  $^{13}\text{C}$  NMR (75 MHz,  $\text{C}_6\text{D}_6$ ) of compound **203**.

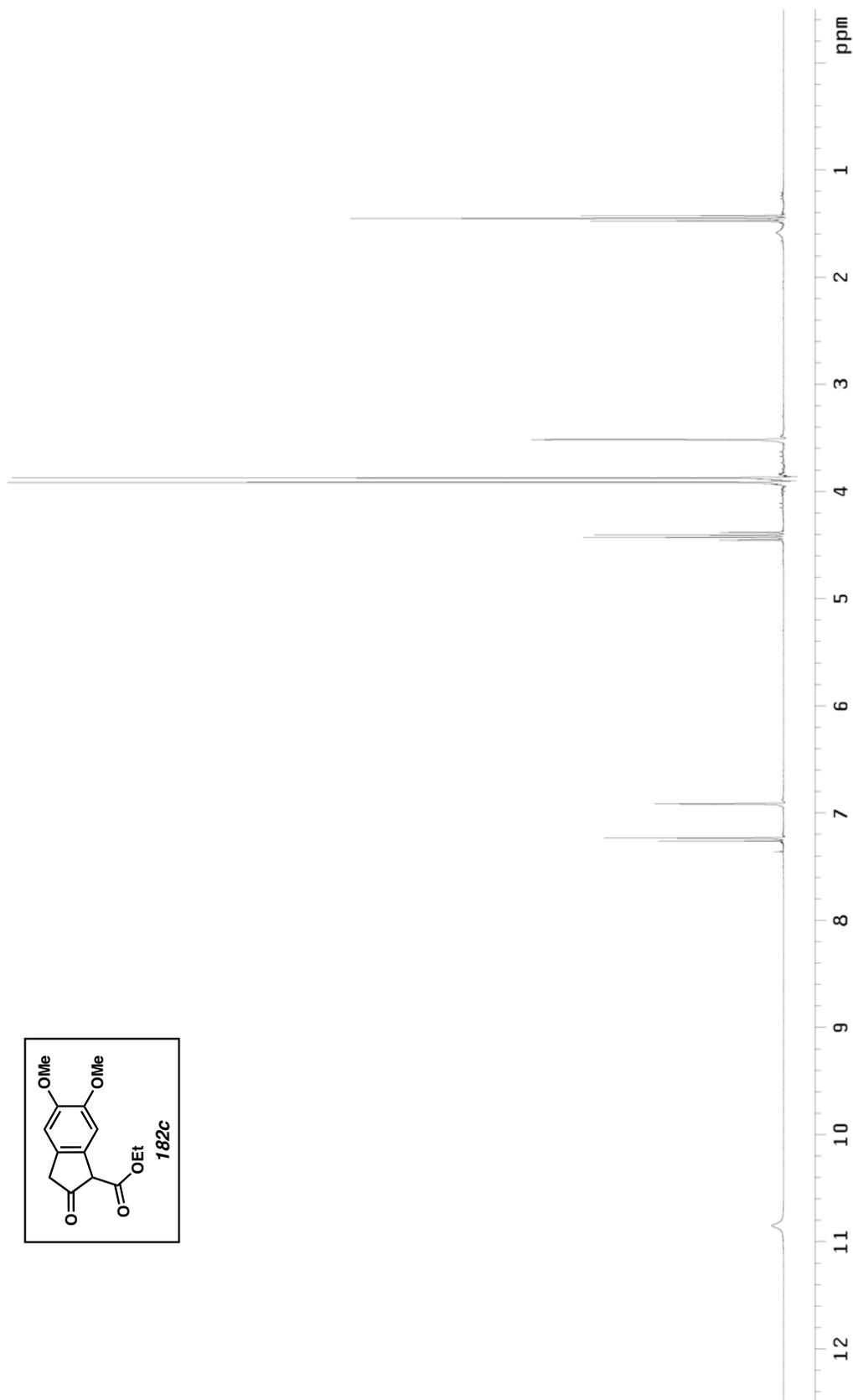
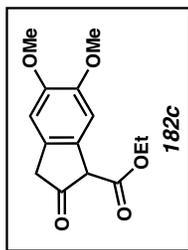


Figure A7.16 <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) of compound **182c**.

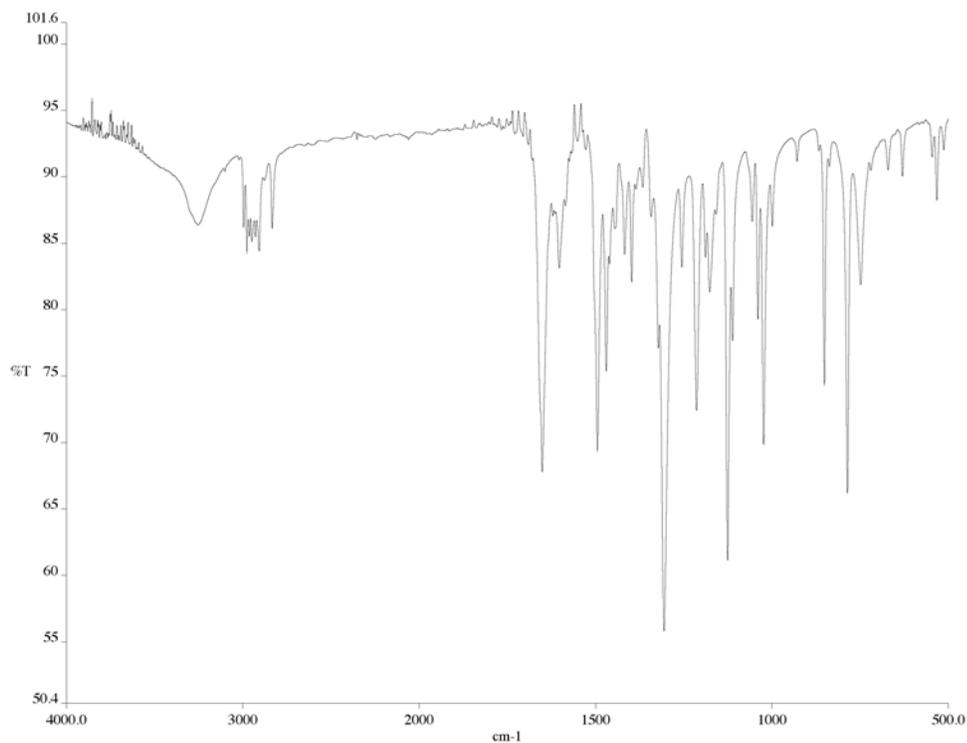


Figure A7.17 Infrared spectrum (thin film/NaCl) of compound **182c**.

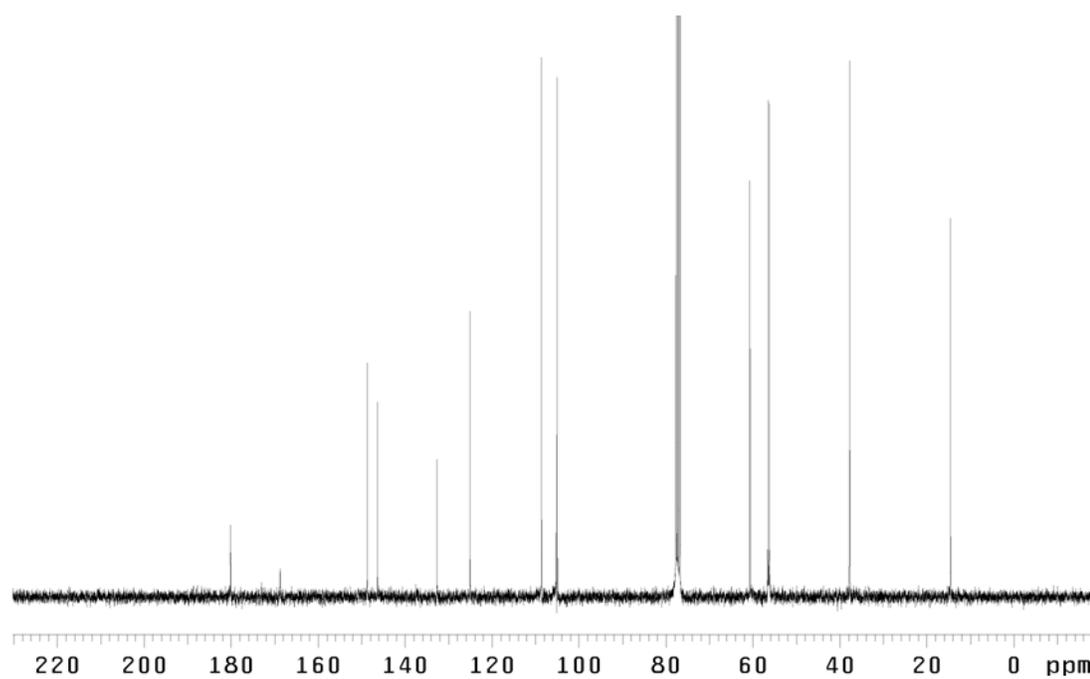


Figure A7.18  $^{13}\text{C}$  NMR (75 MHz,  $\text{CDCl}_3$ ) of compound **182c**.

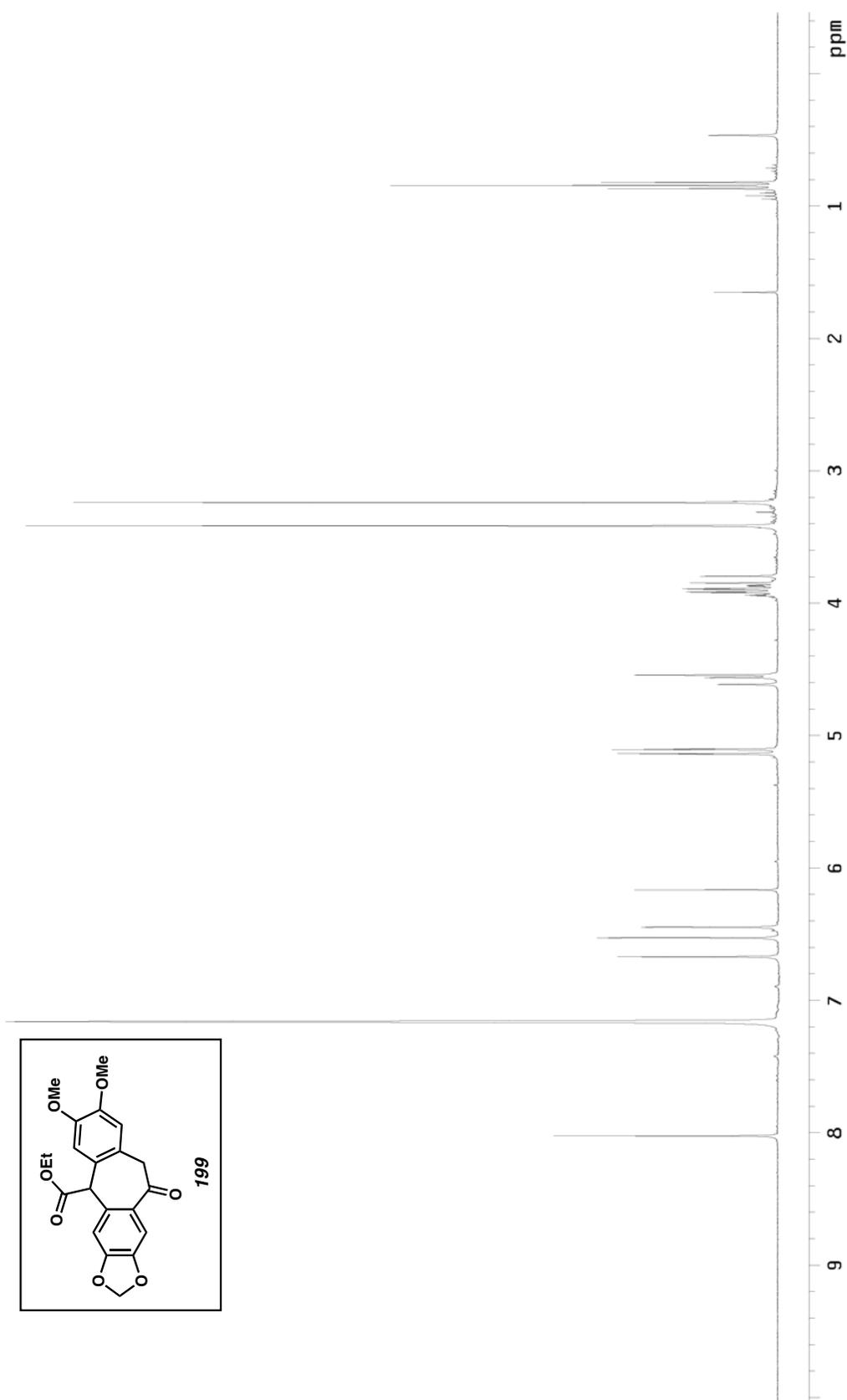


Figure A7.19 <sup>1</sup>H NMR (300 MHz, C<sub>6</sub>D<sub>6</sub>) of compound 199.

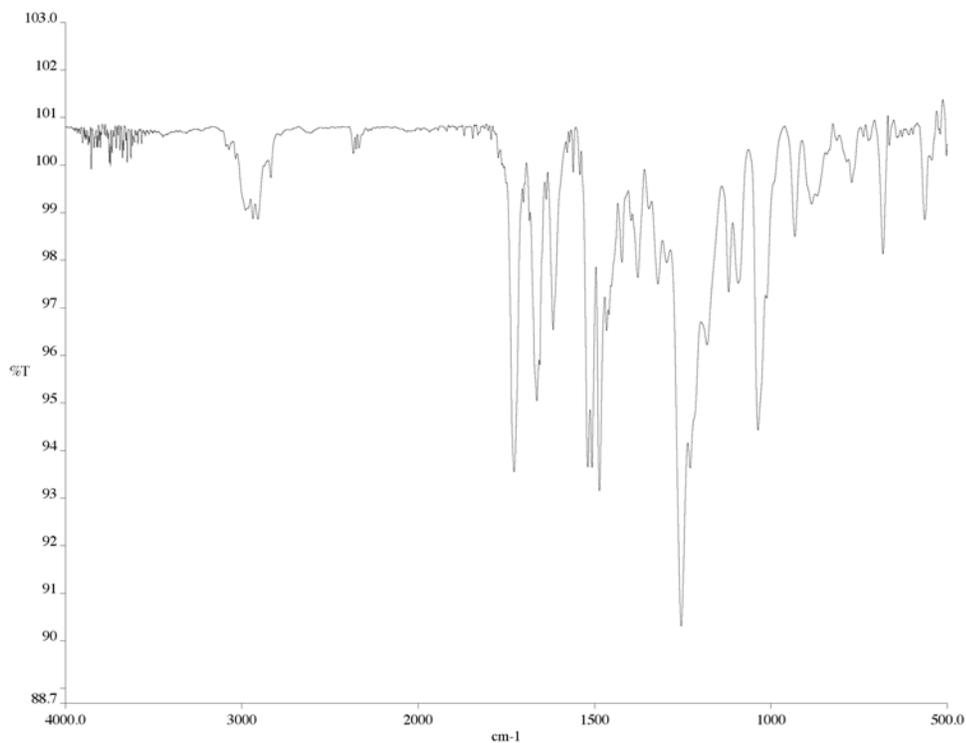


Figure A7.20 Infrared spectrum (thin film/NaCl) of compound **199**.

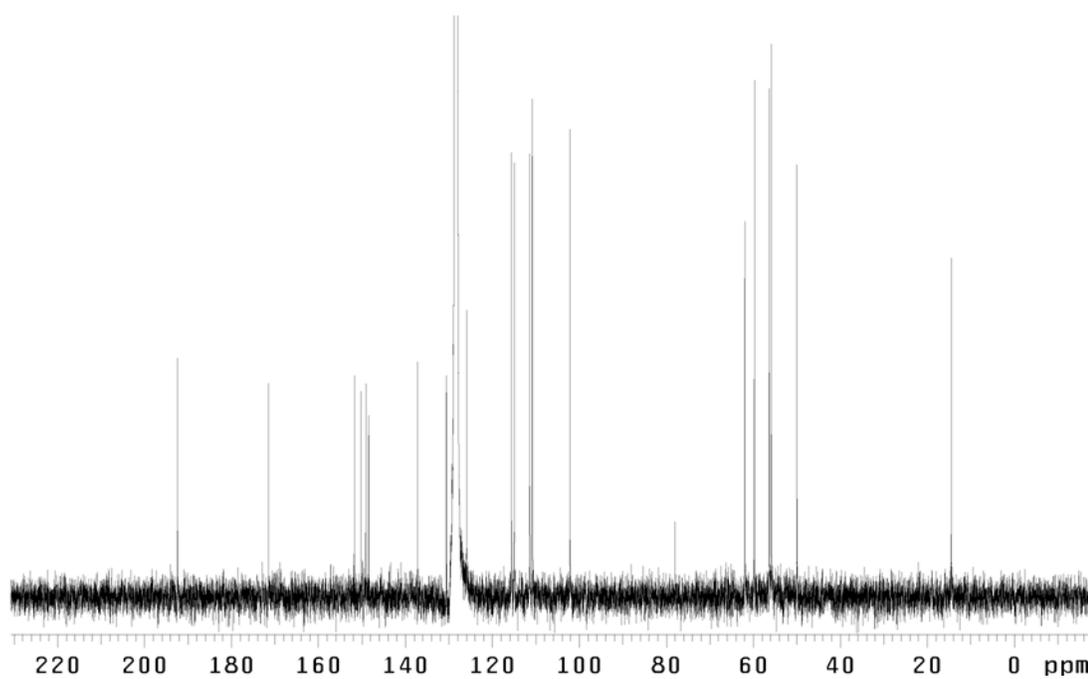


Figure A7.21  $^{13}\text{C}$  NMR (75 MHz,  $\text{C}_6\text{D}_6$ ) of compound **199**.

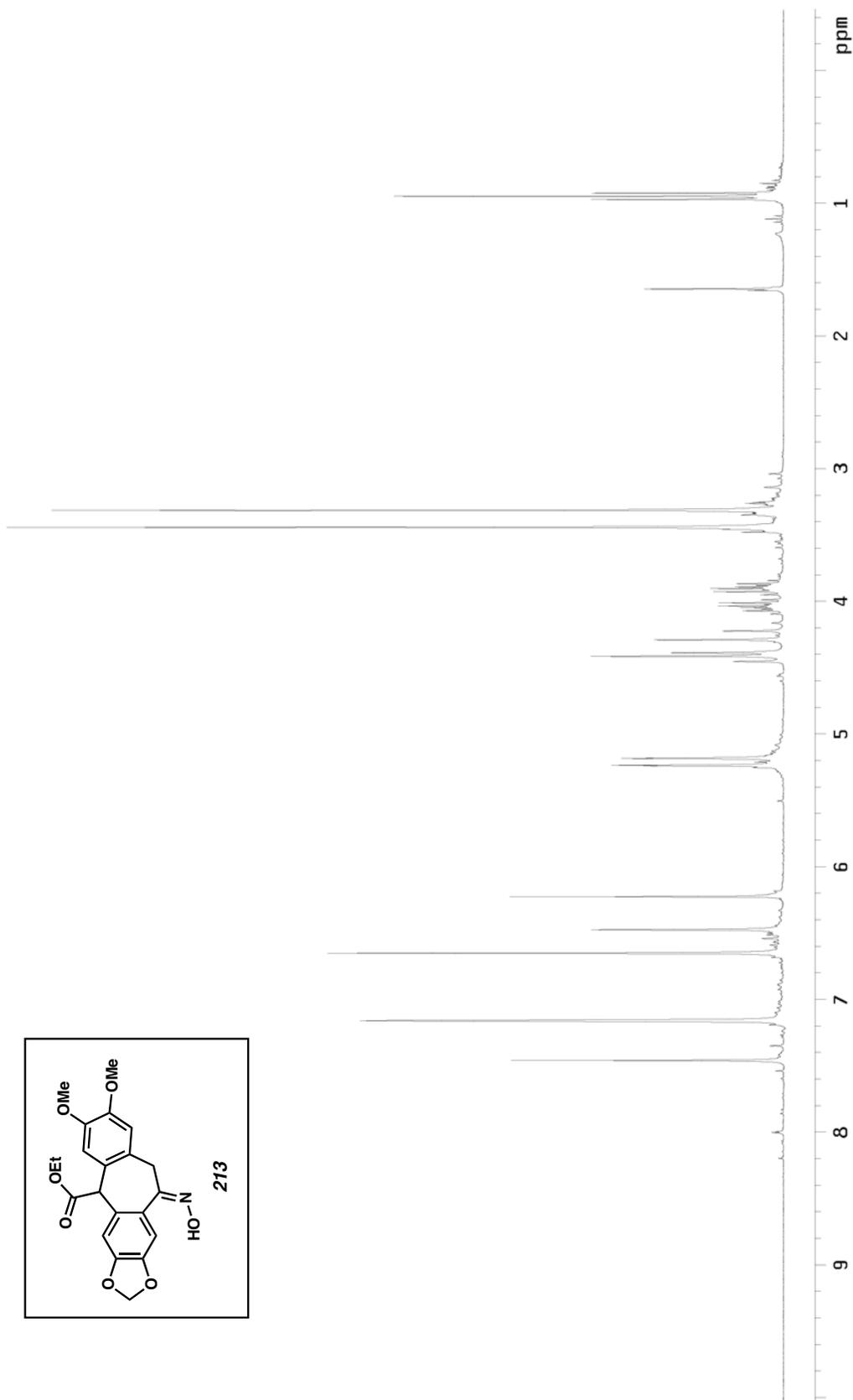
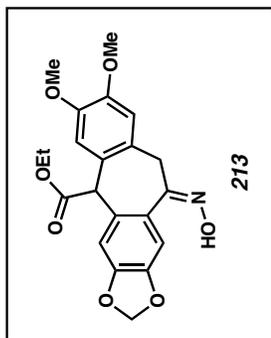


Figure A7.22 <sup>1</sup>H NMR (300 MHz, C<sub>6</sub>D<sub>6</sub>) of compound 213.

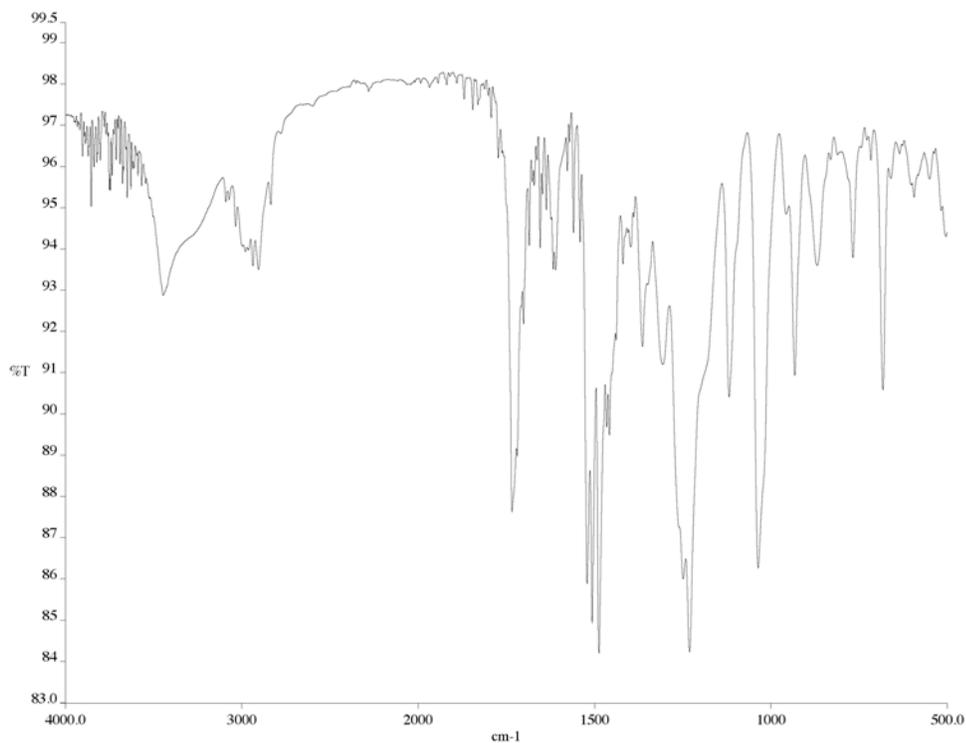


Figure A7.23 Infrared spectrum (thin film/NaCl) of compound **213**.

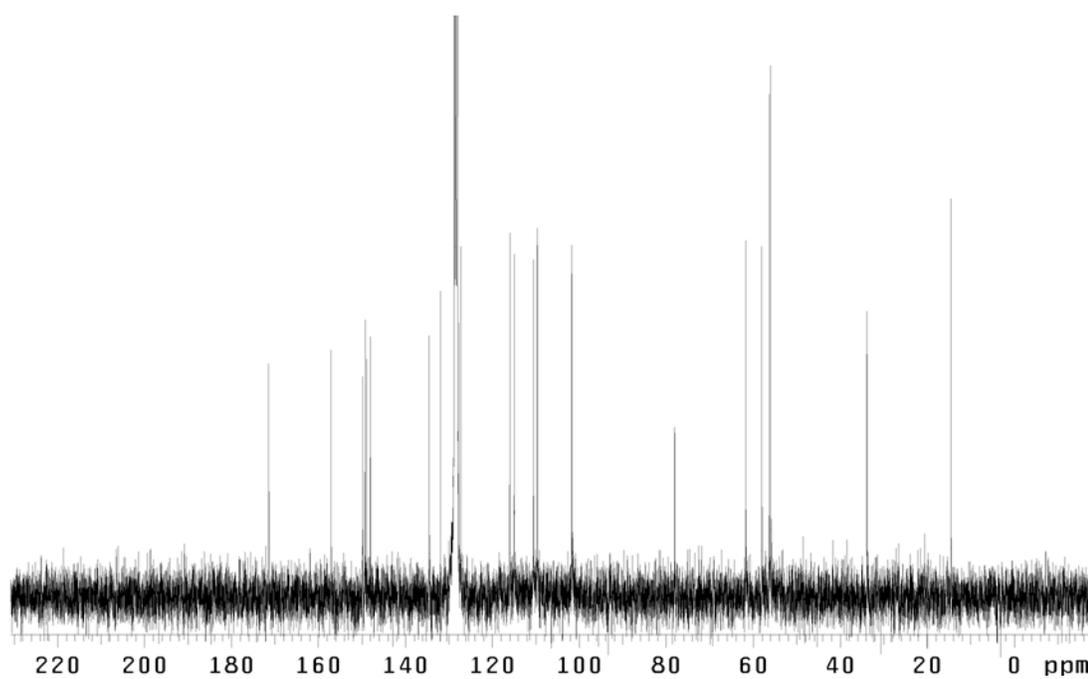


Figure A7.24 <sup>13</sup>C NMR (75 MHz, C<sub>6</sub>D<sub>6</sub>) of compound **213**.

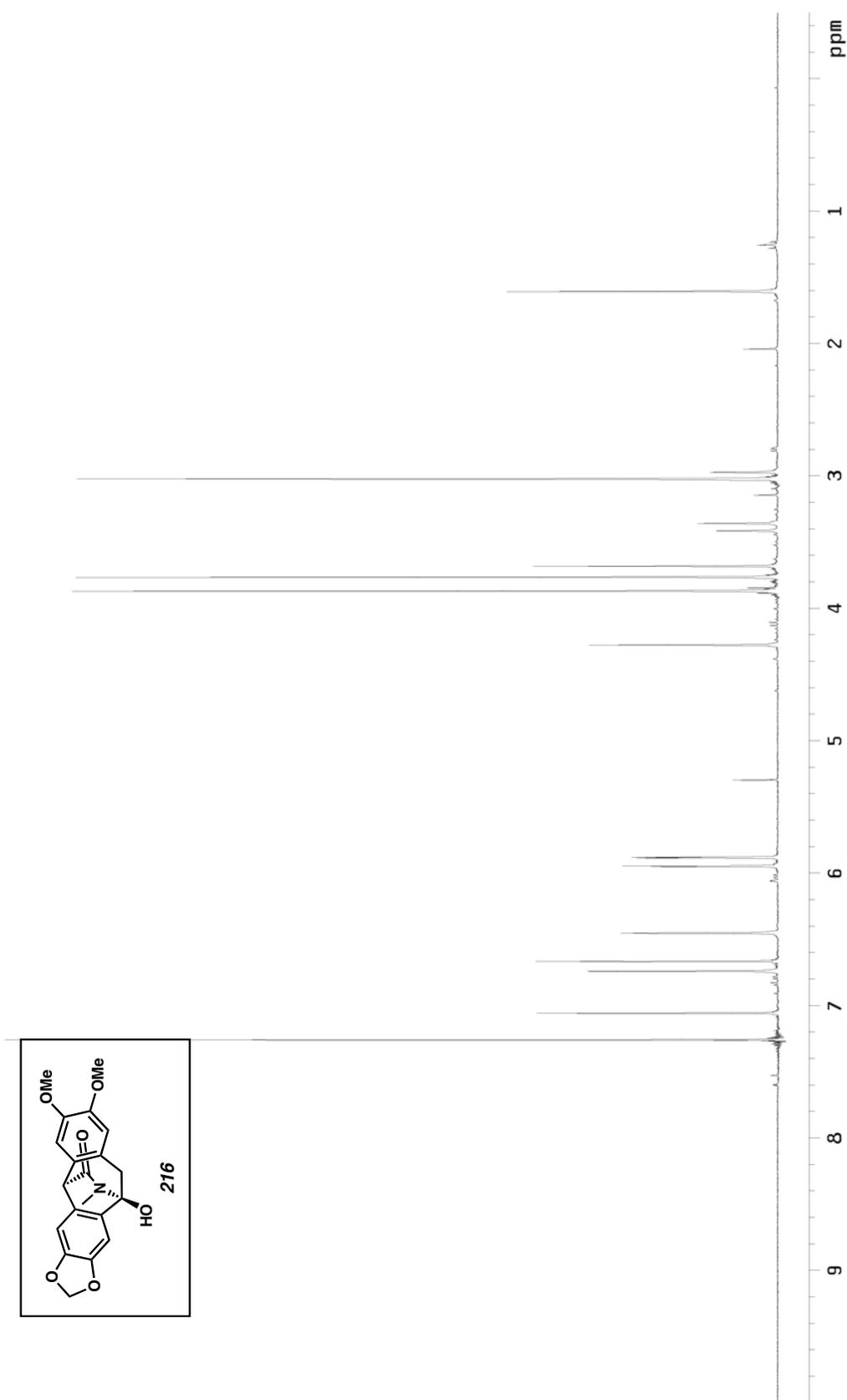


Figure A7.25  $^1\text{H}$  NMR (300 MHz,  $\text{CDCl}_3$ ) of compound **216**.

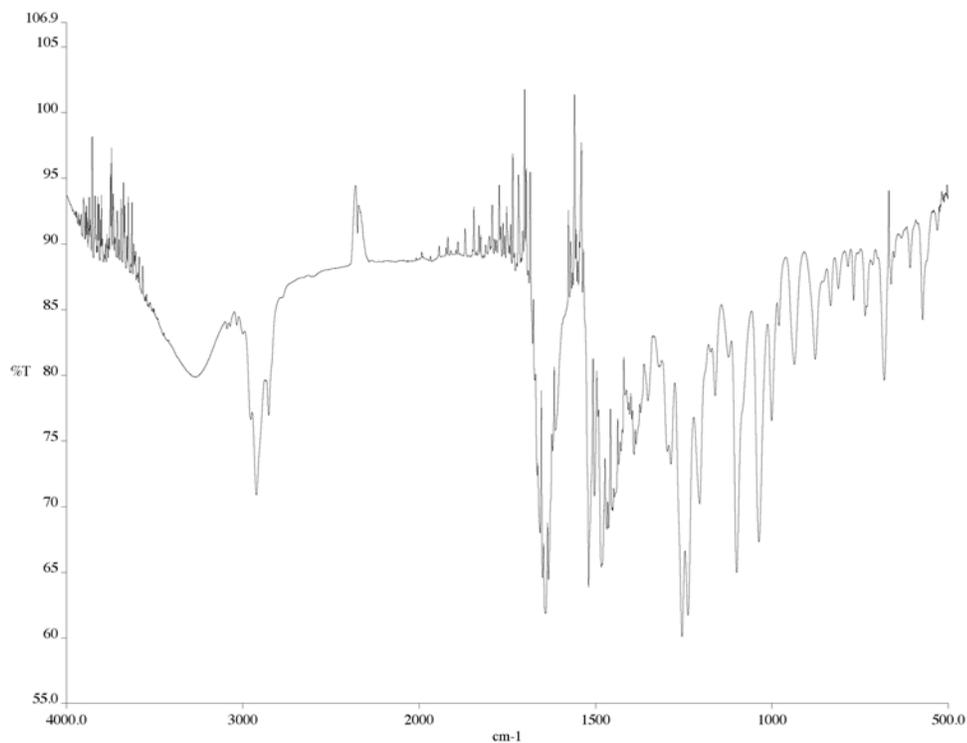


Figure A7.26 Infrared spectrum (thin film/NaCl) of compound **216**.

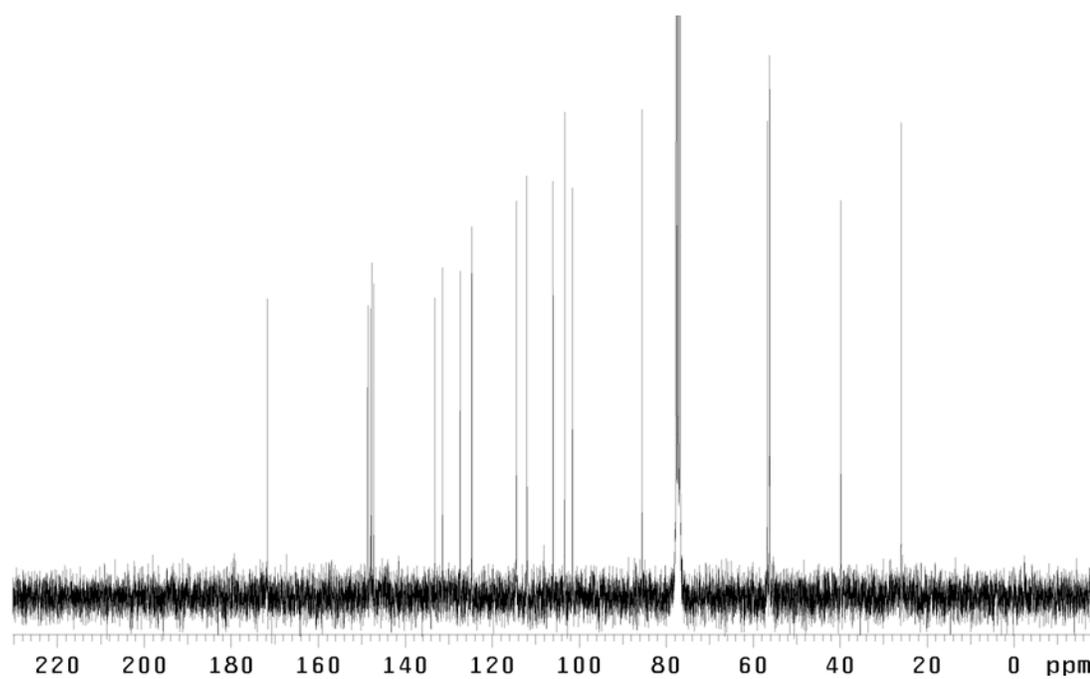


Figure A7.27 <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) of compound **216**.

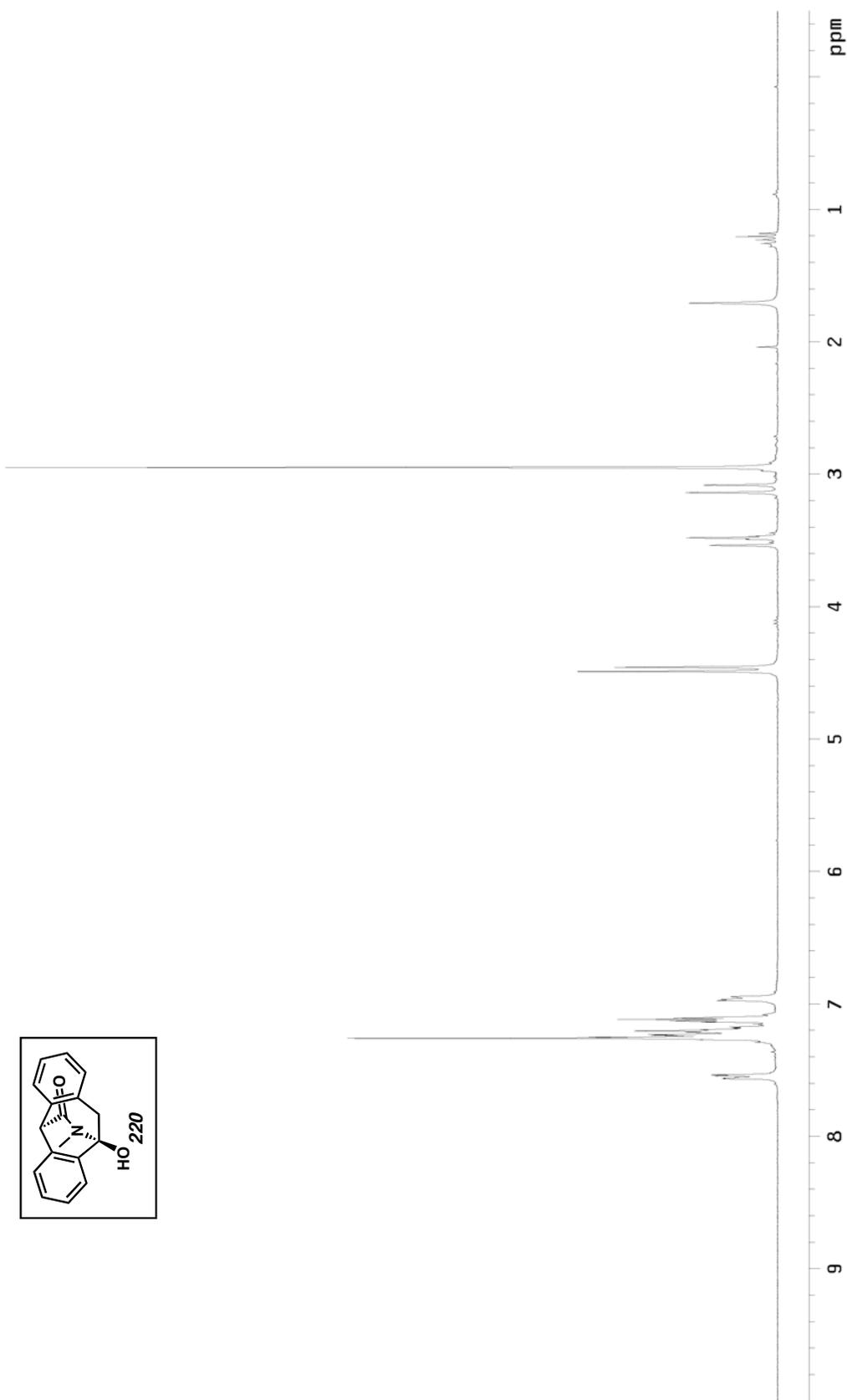


Figure A7.28 <sup>1</sup>H NMR (300 MHz, CDCl<sub>3</sub>) of compound 220.

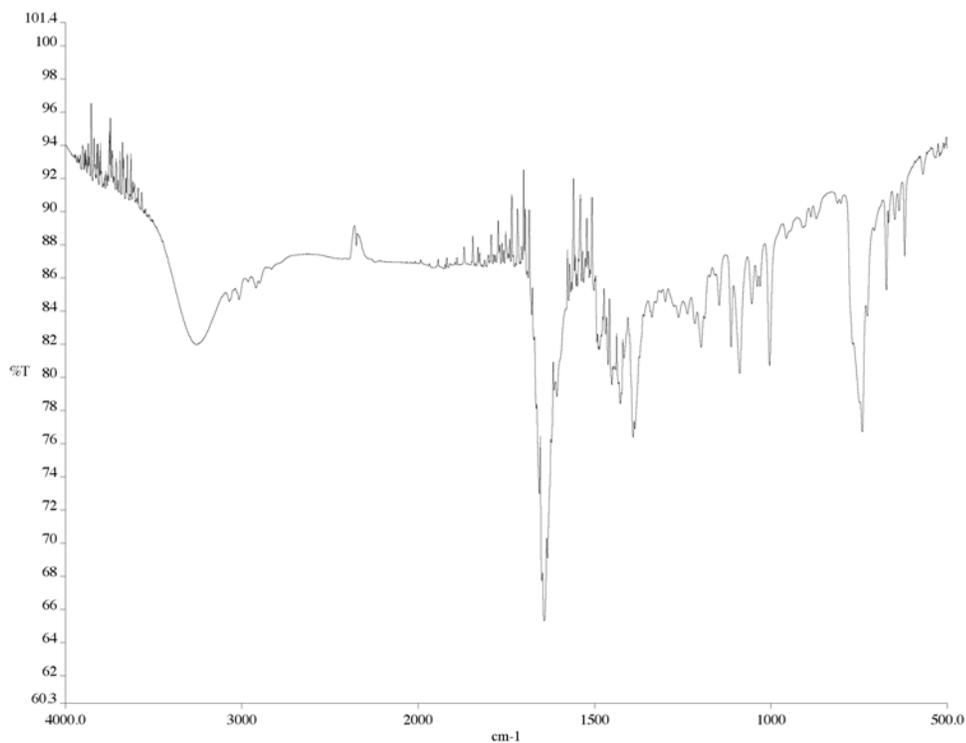


Figure A7.29 Infrared spectrum (thin film/NaCl) of compound **220**.

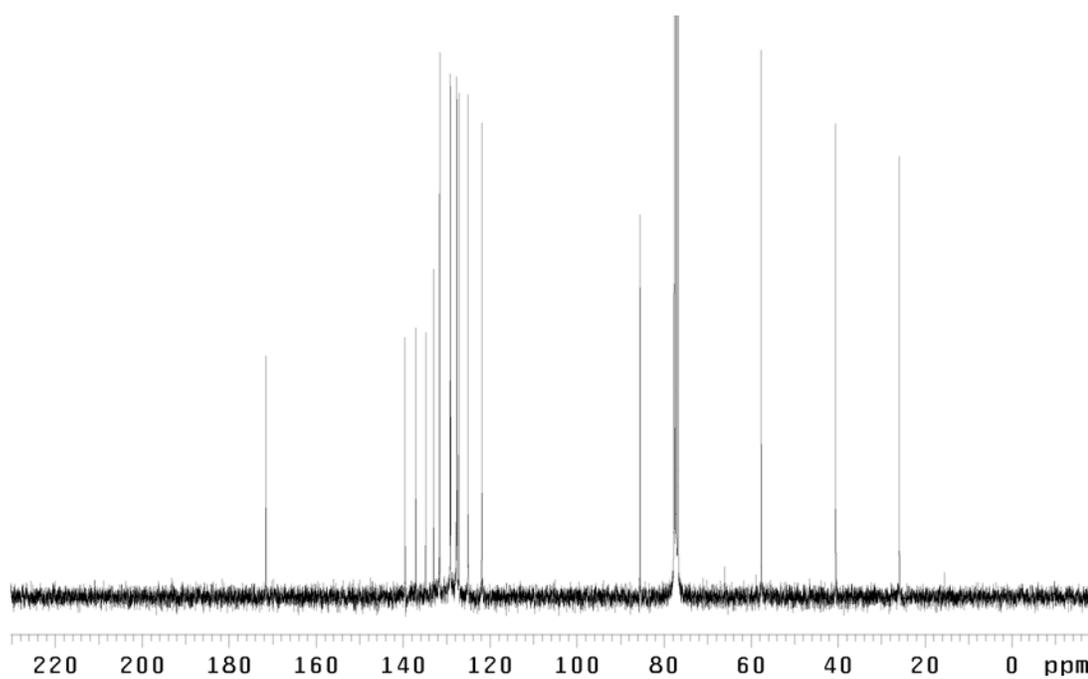


Figure A7.30 <sup>13</sup>C NMR (75 MHz, CDCl<sub>3</sub>) of compound **220**.

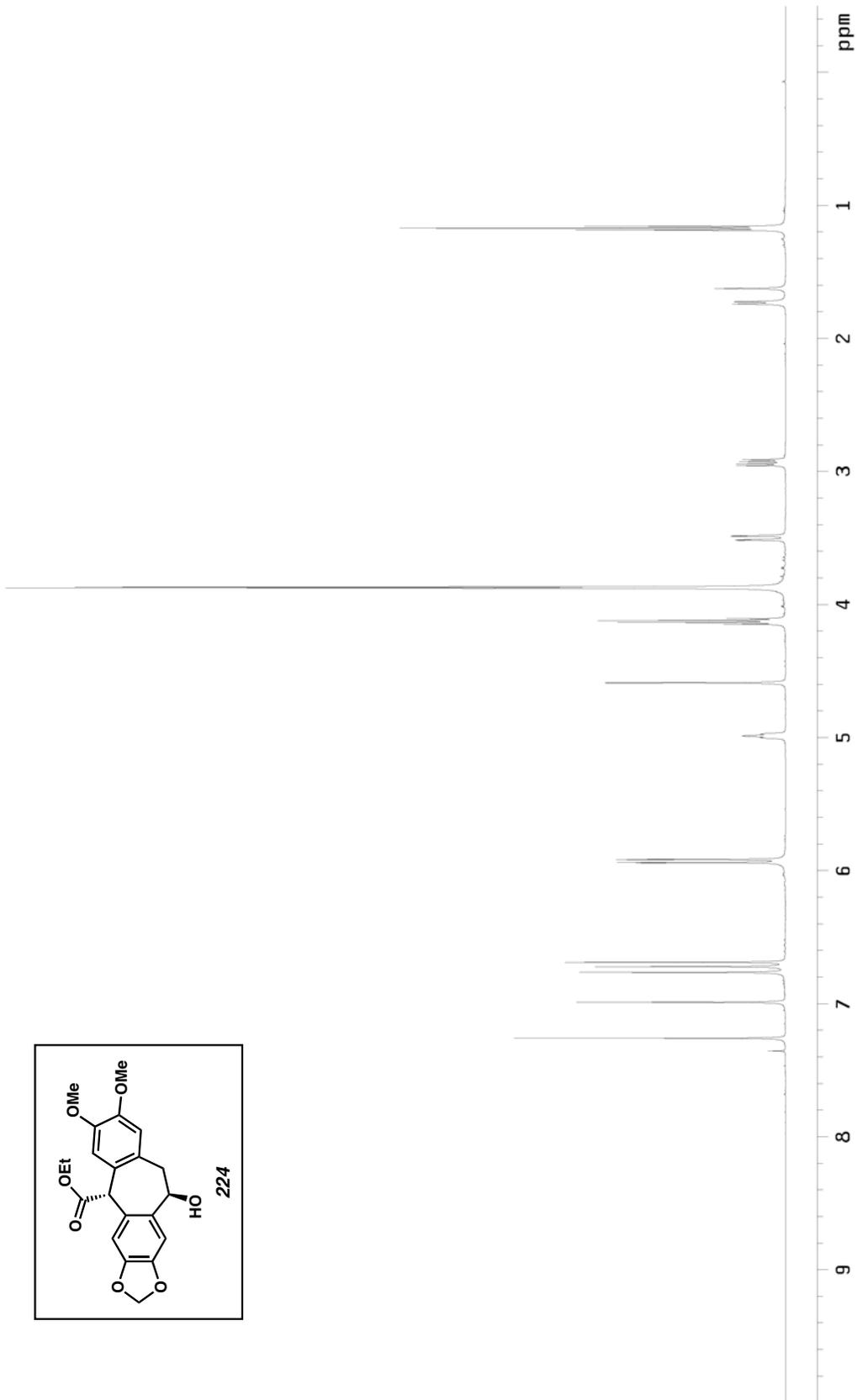


Figure A7.31  $^1\text{H NMR}$  (500 MHz,  $\text{CDCl}_3$ ) of compound **224**.

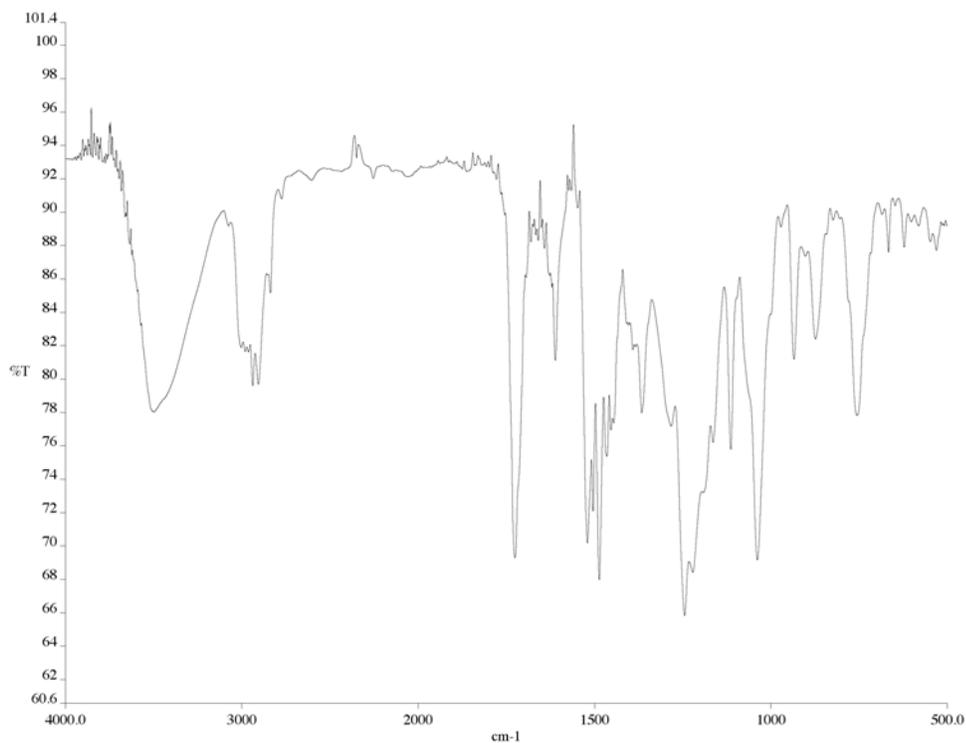


Figure A7.32 Infrared spectrum (thin film/NaCl) of compound **224**.

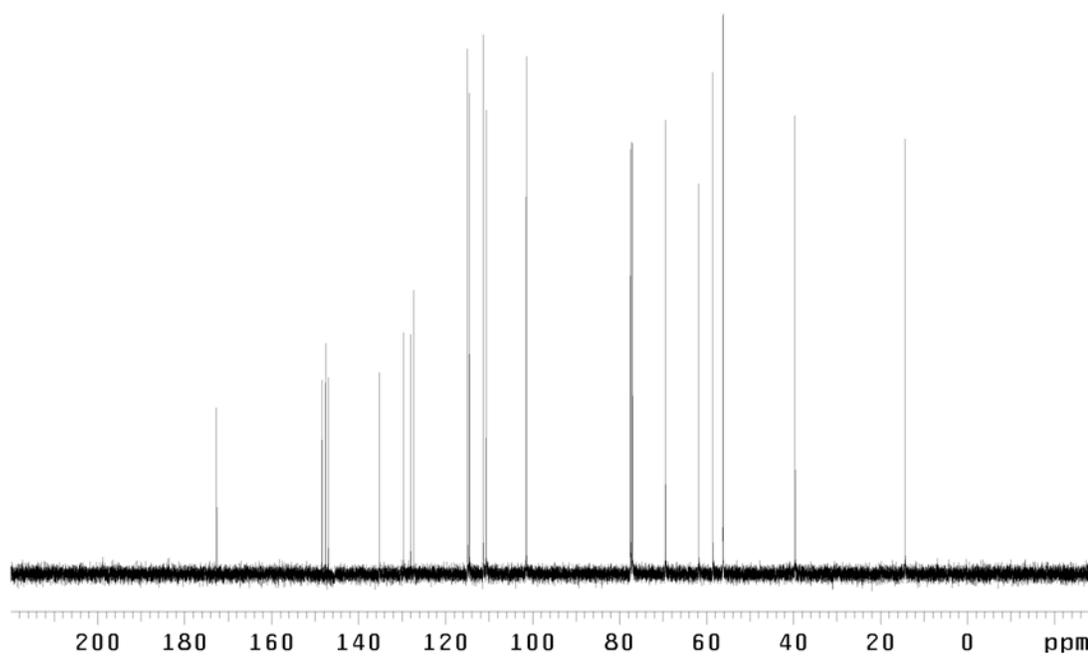


Figure A7.33 <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) of compound **224**.

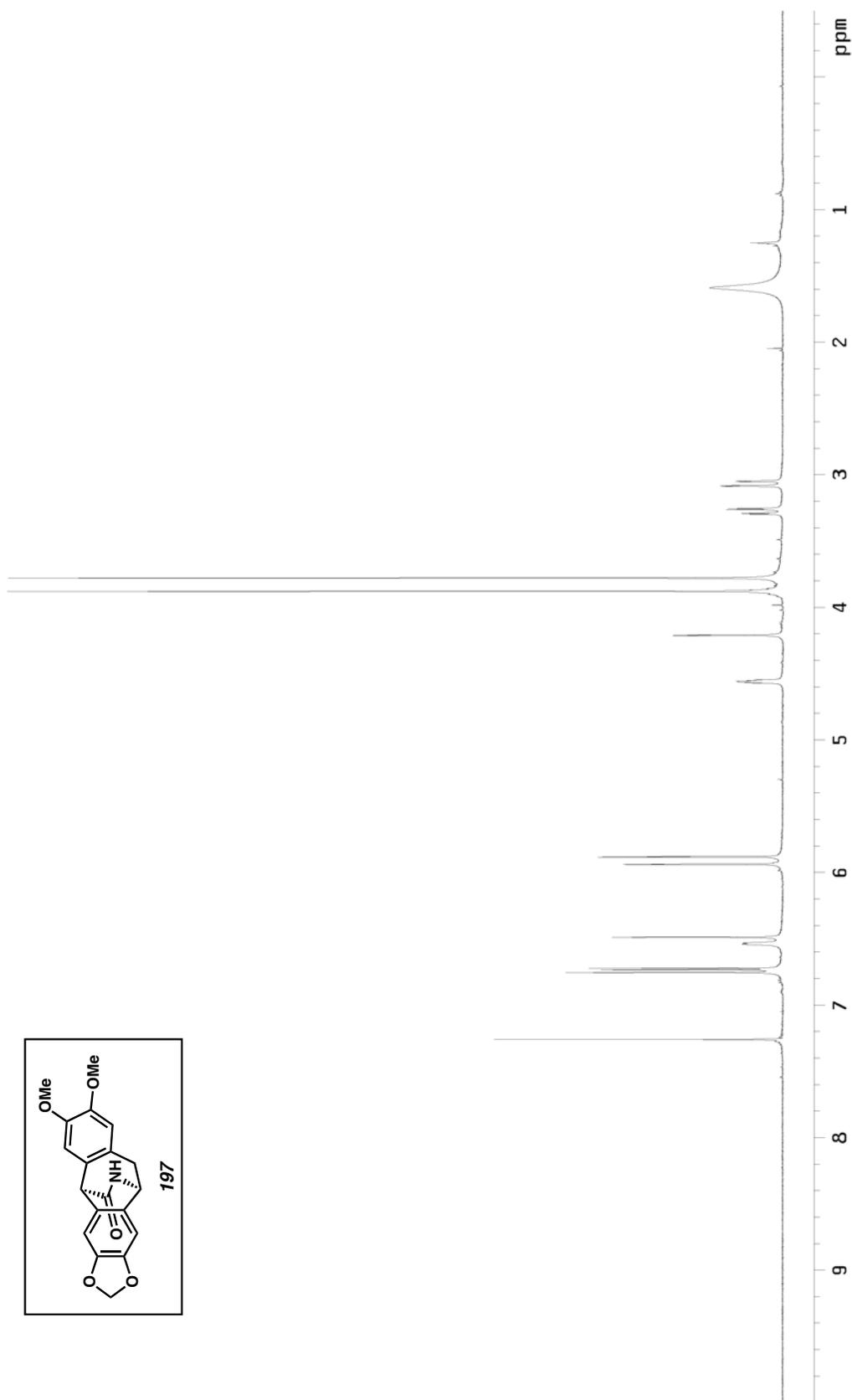
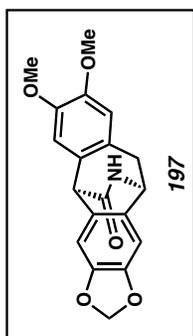


Figure A7.34  $^1\text{H}$  NMR (500 MHz,  $\text{CDCl}_3$ ) of compound **197**.

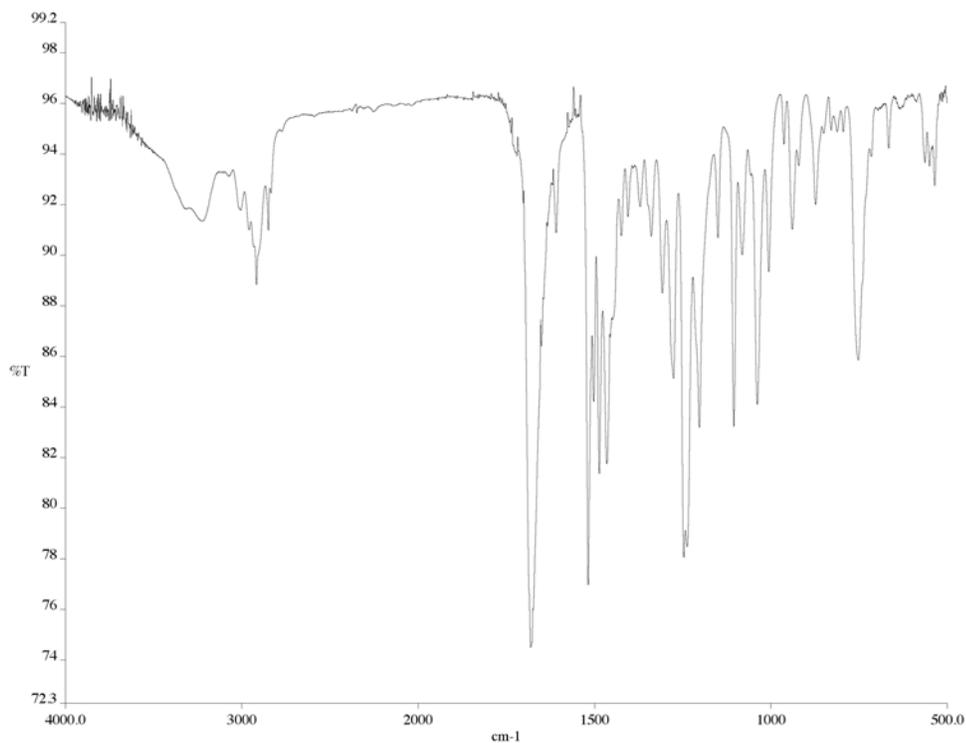


Figure A7.35 Infrared spectrum (thin film/NaCl) of compound **197**.

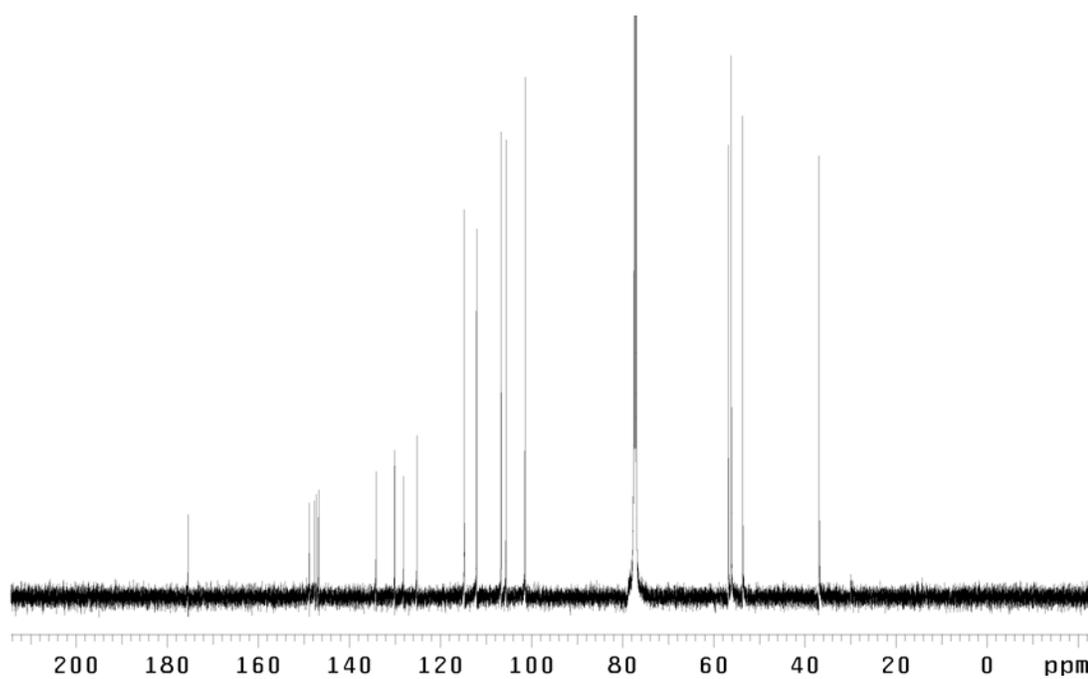


Figure A7.36 <sup>13</sup>C NMR (125 MHz, CDCl<sub>3</sub>) of compound **197**.

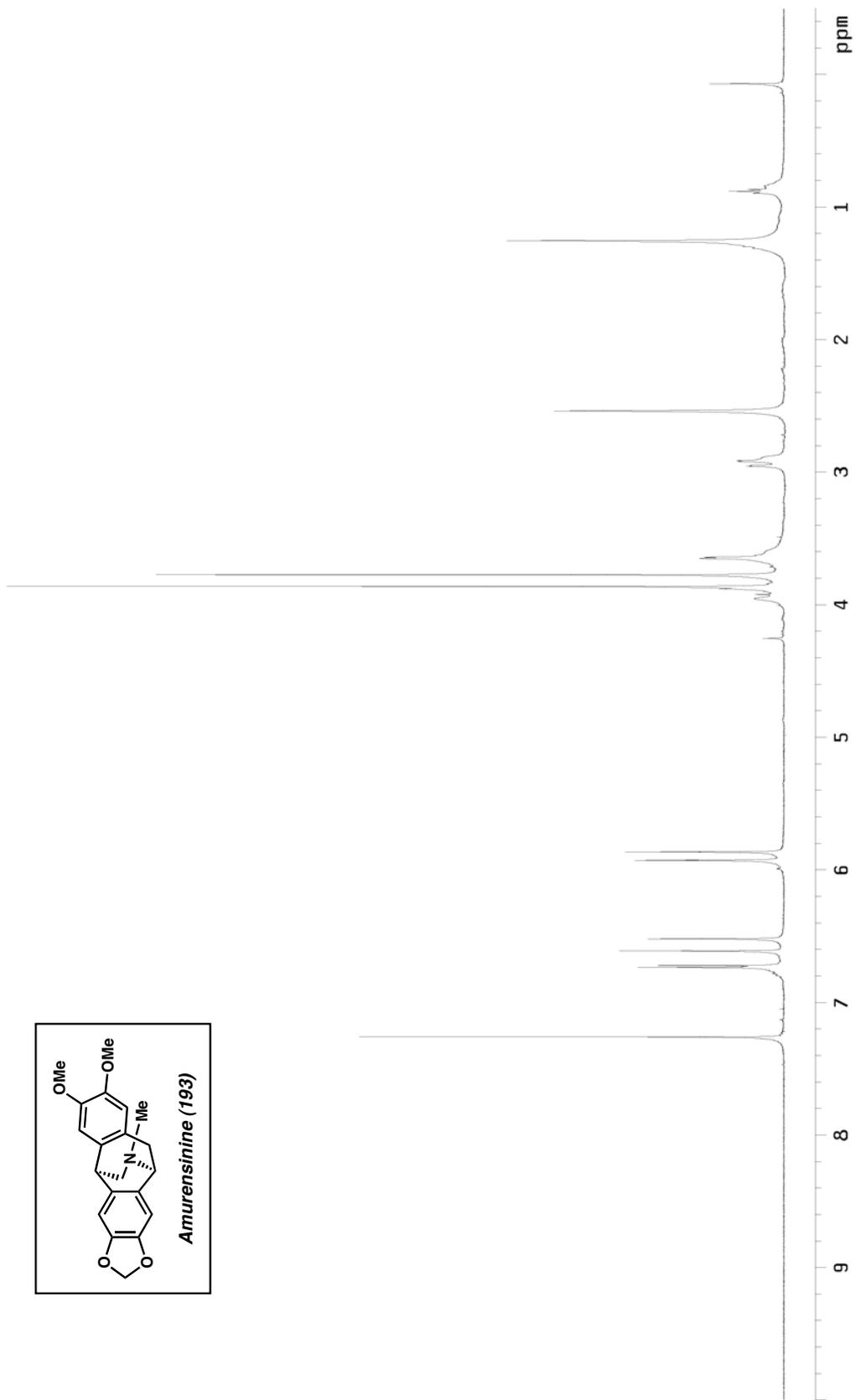
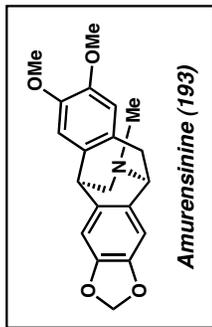


Figure A7.37 <sup>1</sup>H NMR (500 MHz, CDCl<sub>3</sub>) of compound **193**.

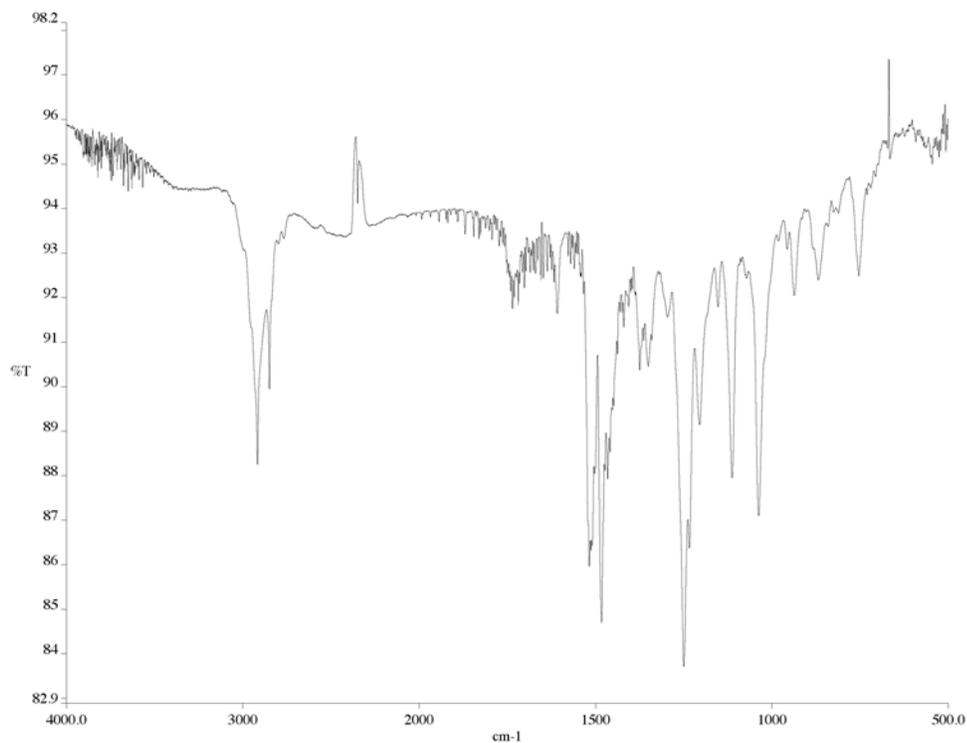


Figure A7.38 Infrared spectrum (thin film/NaCl) of compound **193**.

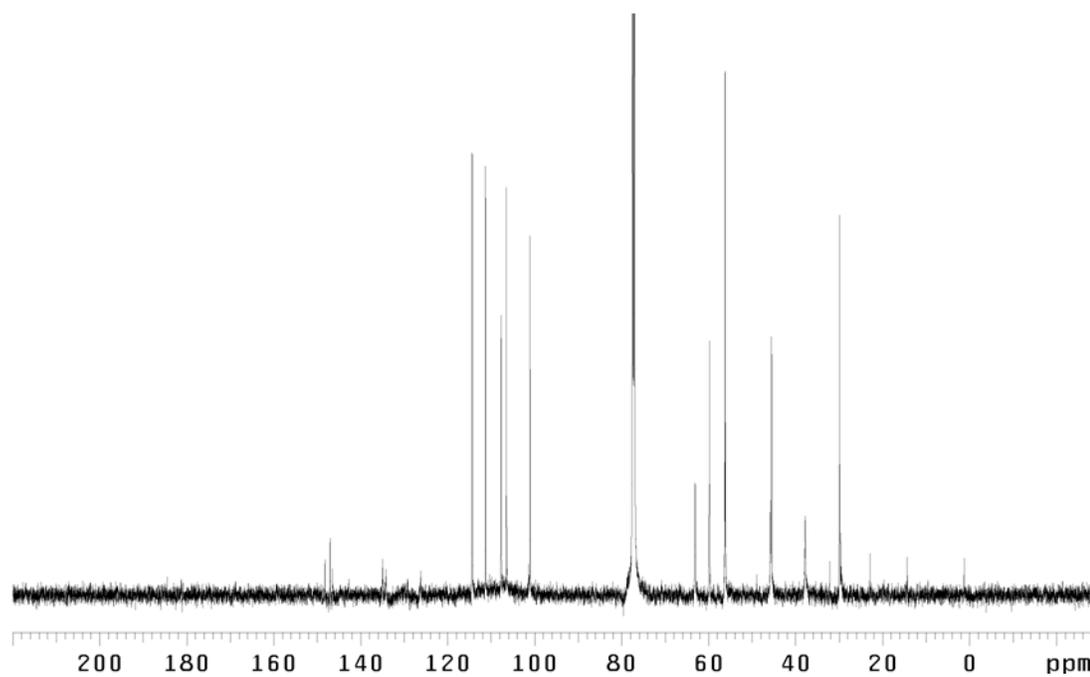


Figure A7.39  $^{13}\text{C}$  NMR (125 MHz,  $\text{CDCl}_3$ ) of compound **193**.