

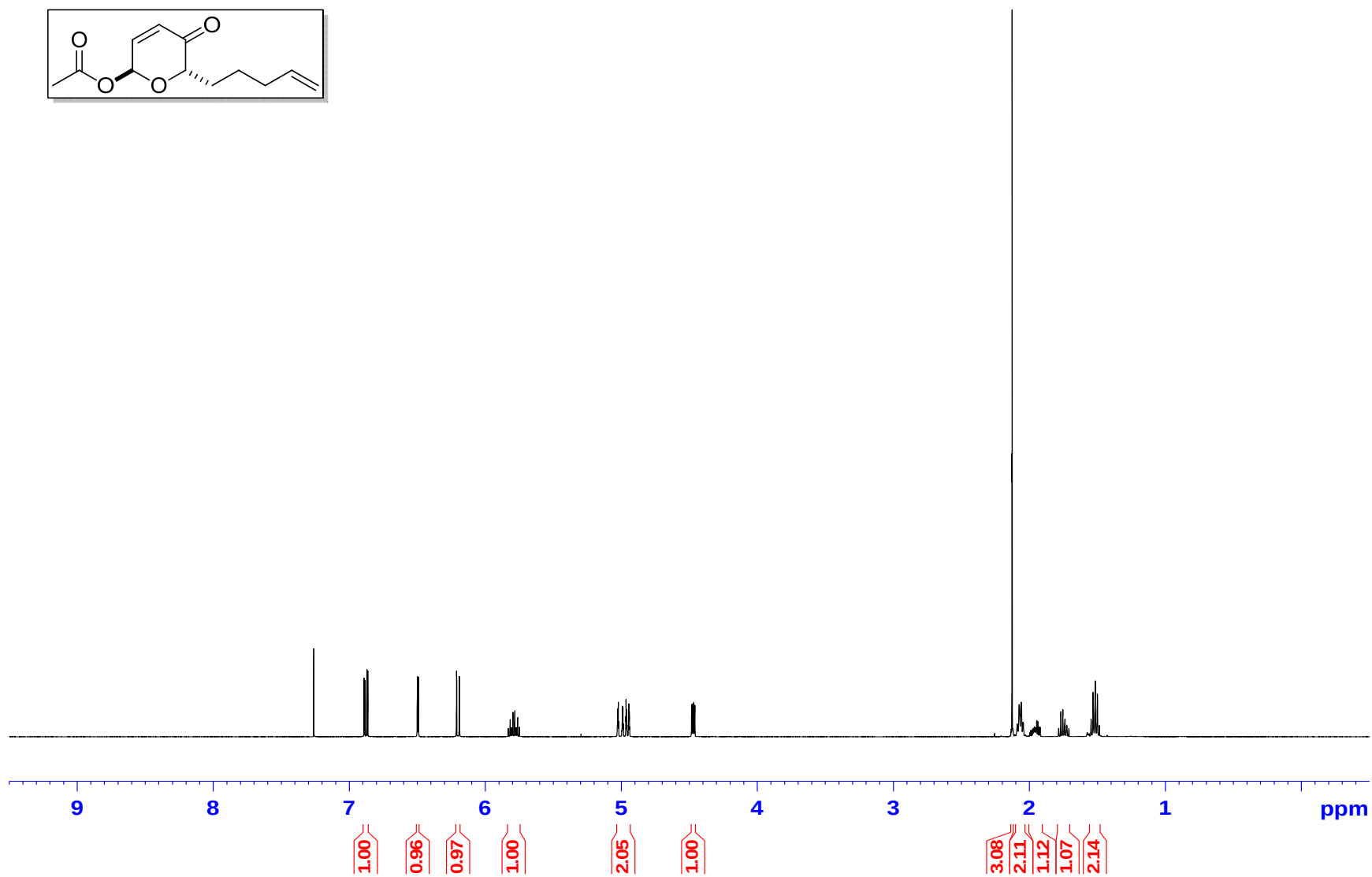
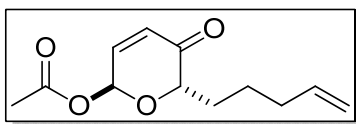
Investigation of Oxidopyrylium-Alkene [5+2] Cycloaddition Conjugate Addition Cascade (C³) Sequences

*Justin A. Simanis, C. Marshall Law, Erica L. Woodall, Christopher G. Hamaker, John R. Goodell, T. Andrew Mitchell**

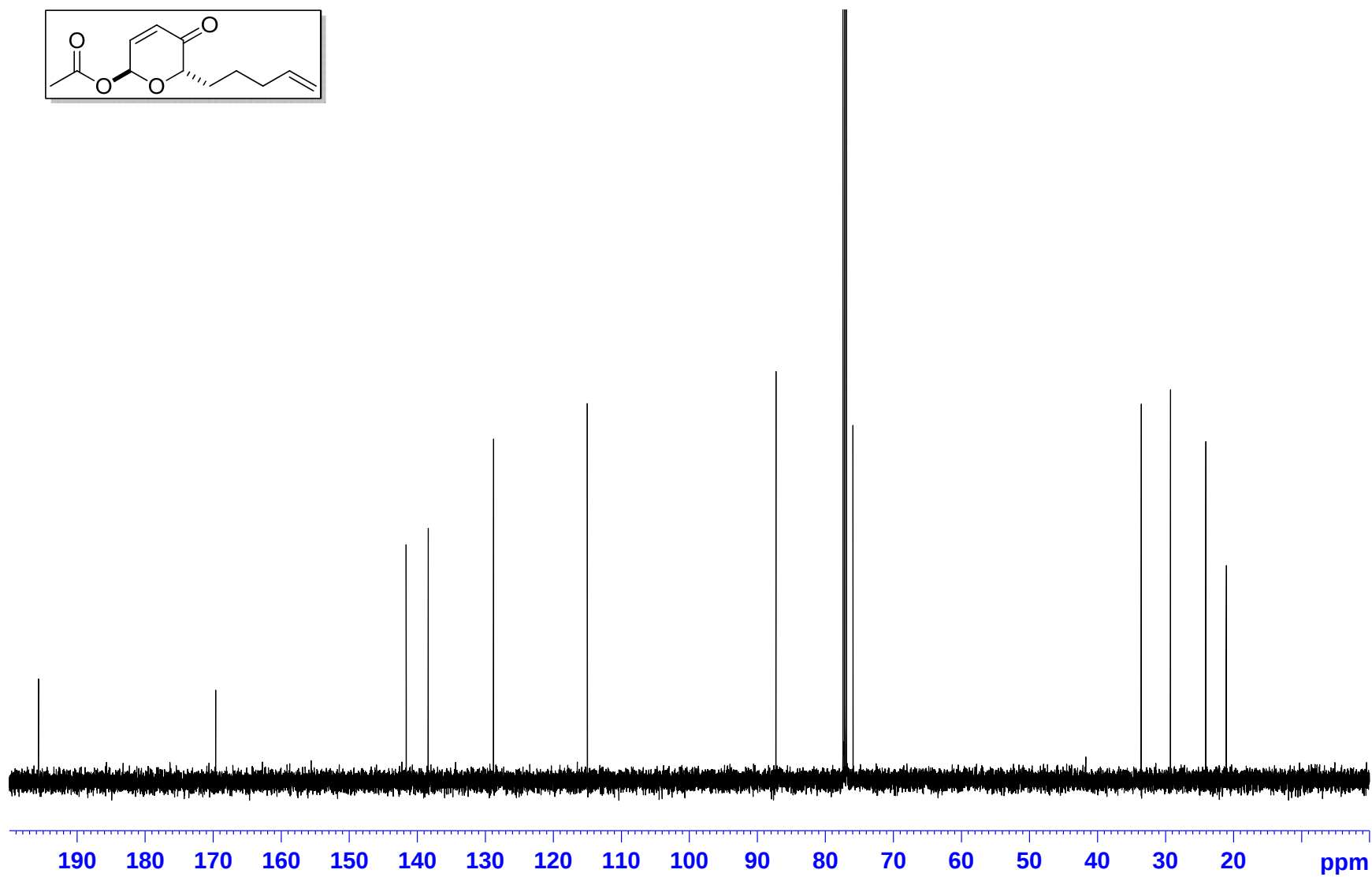
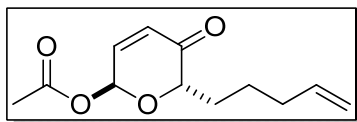
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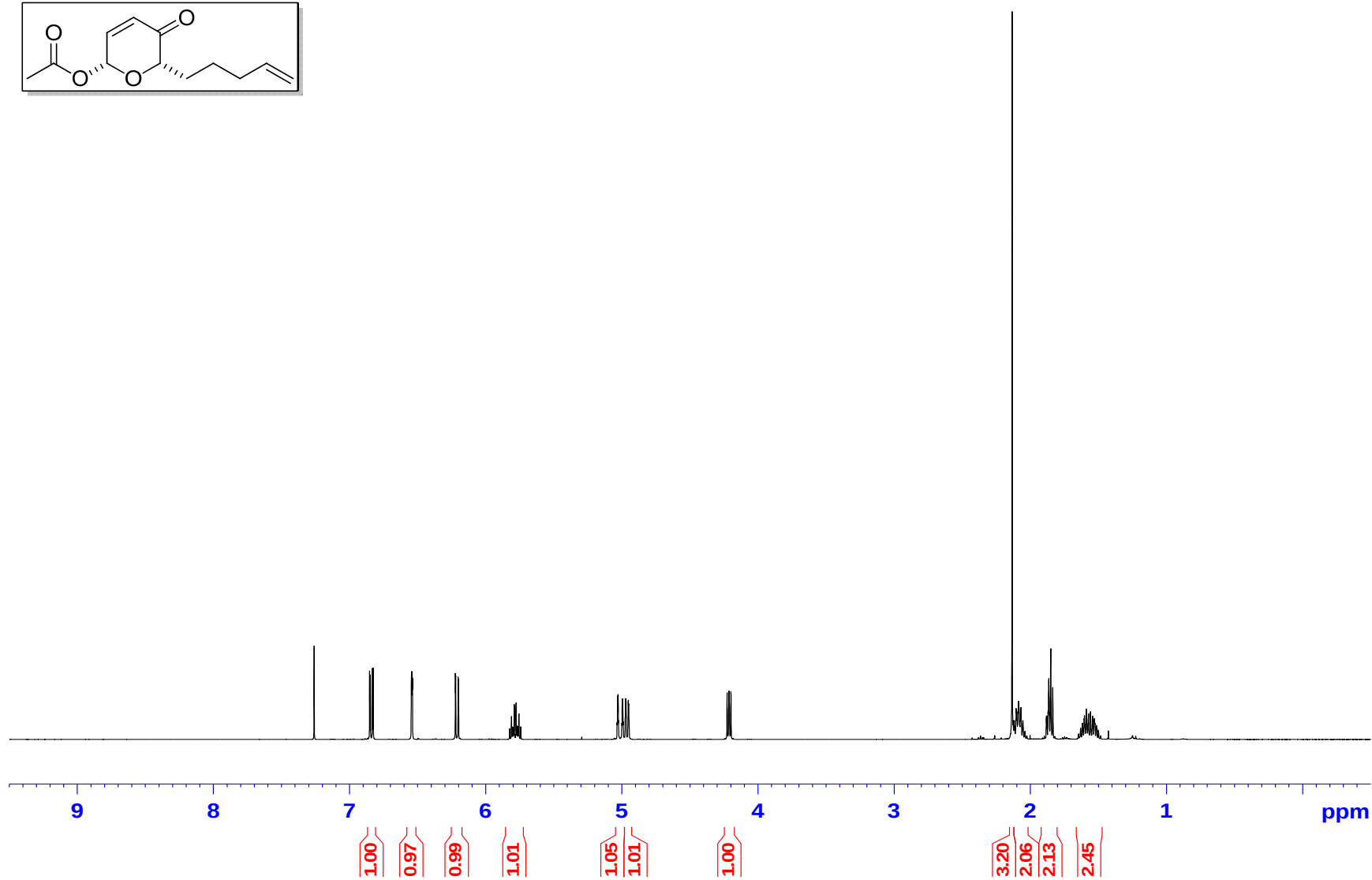
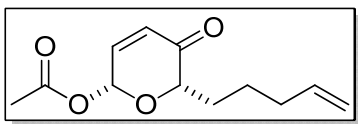
Supporting Information – Spectra



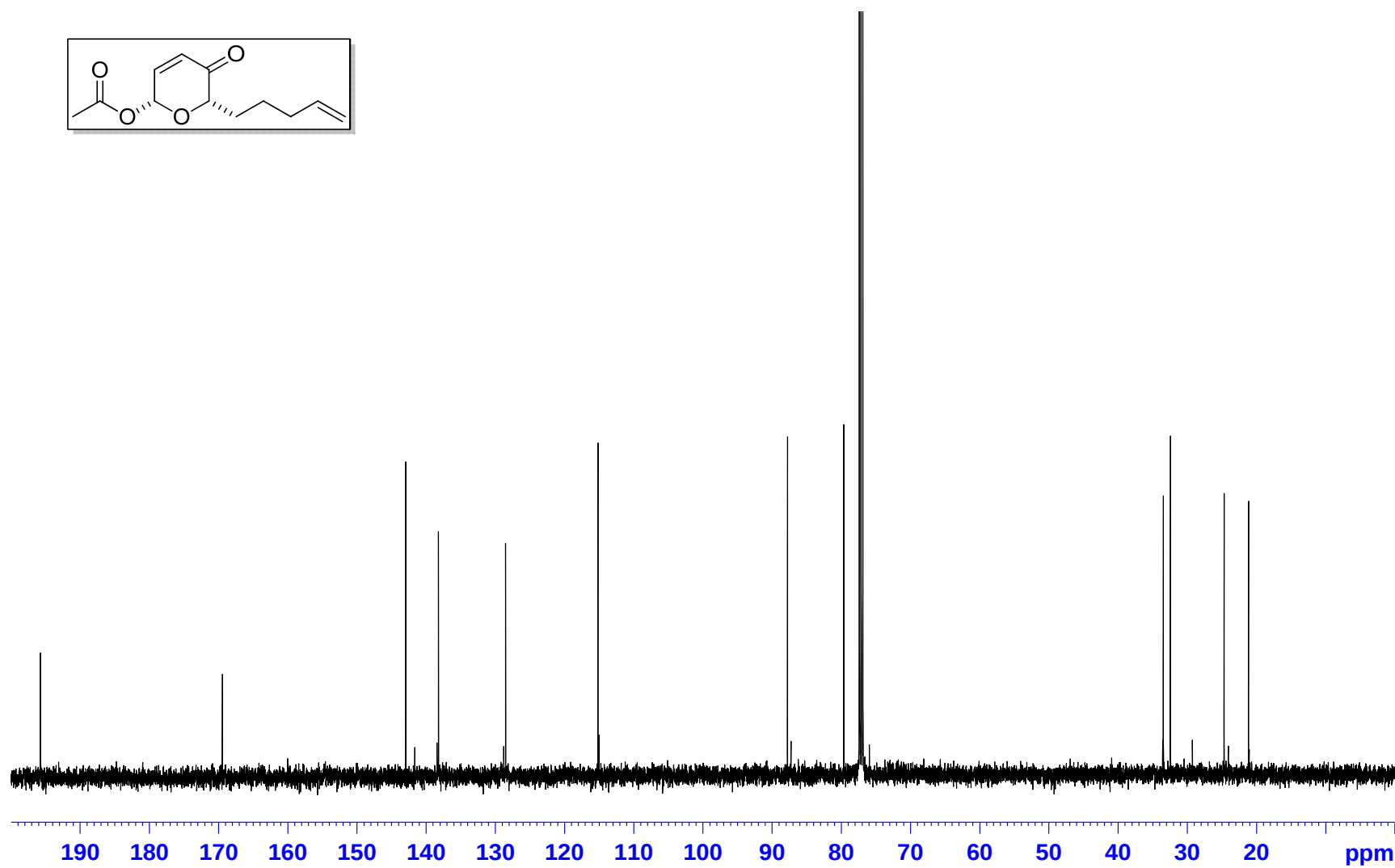
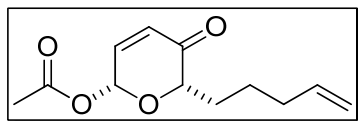
^1H NMR (500 MHz) of *anti*-Acetoxypyranone 1 in CDCl_3



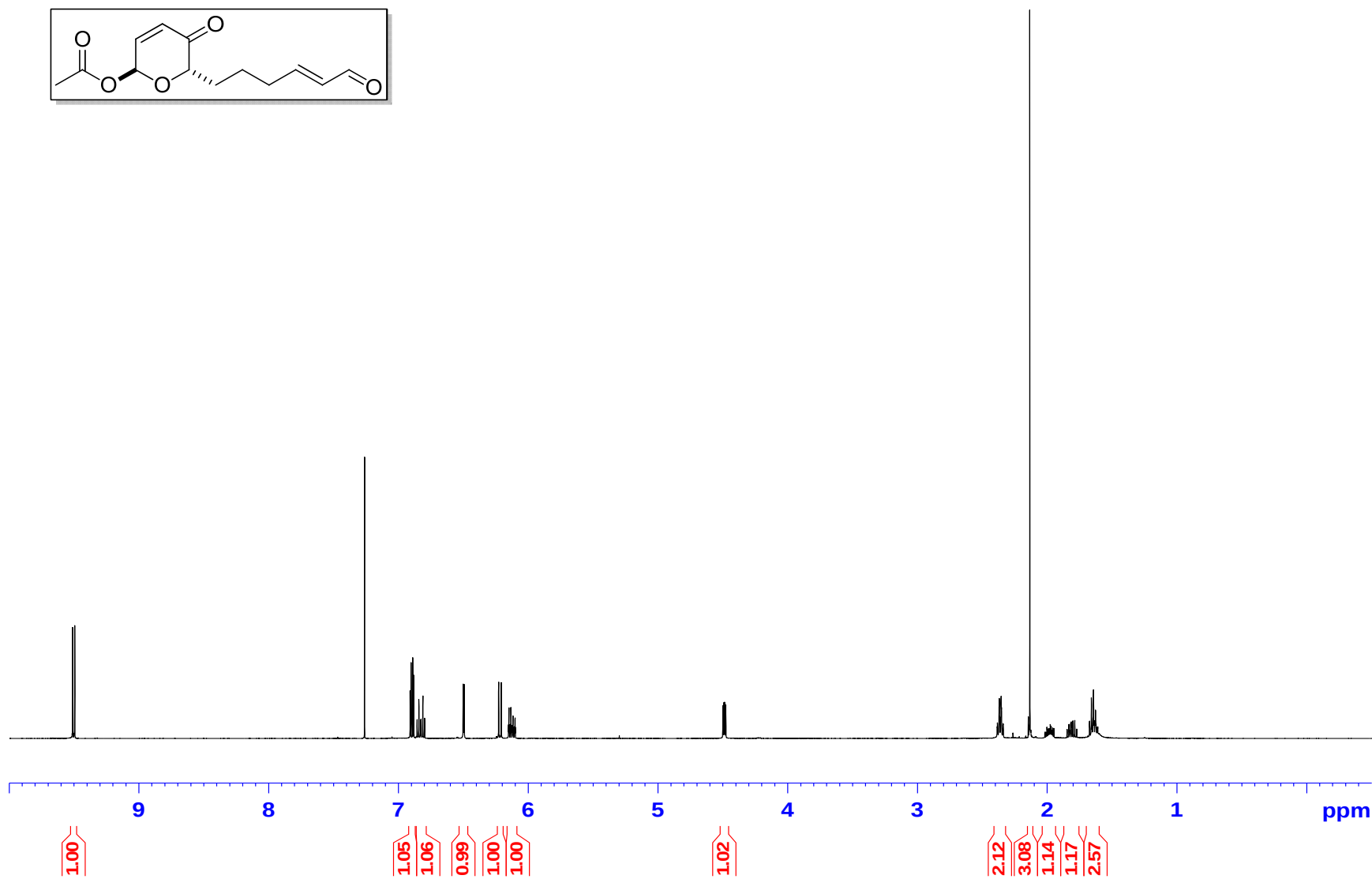
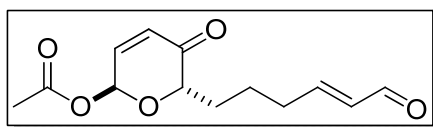
^{13}C NMR (125 MHz) of *anti*-Acetoxytetracycline 1 in CDCl_3



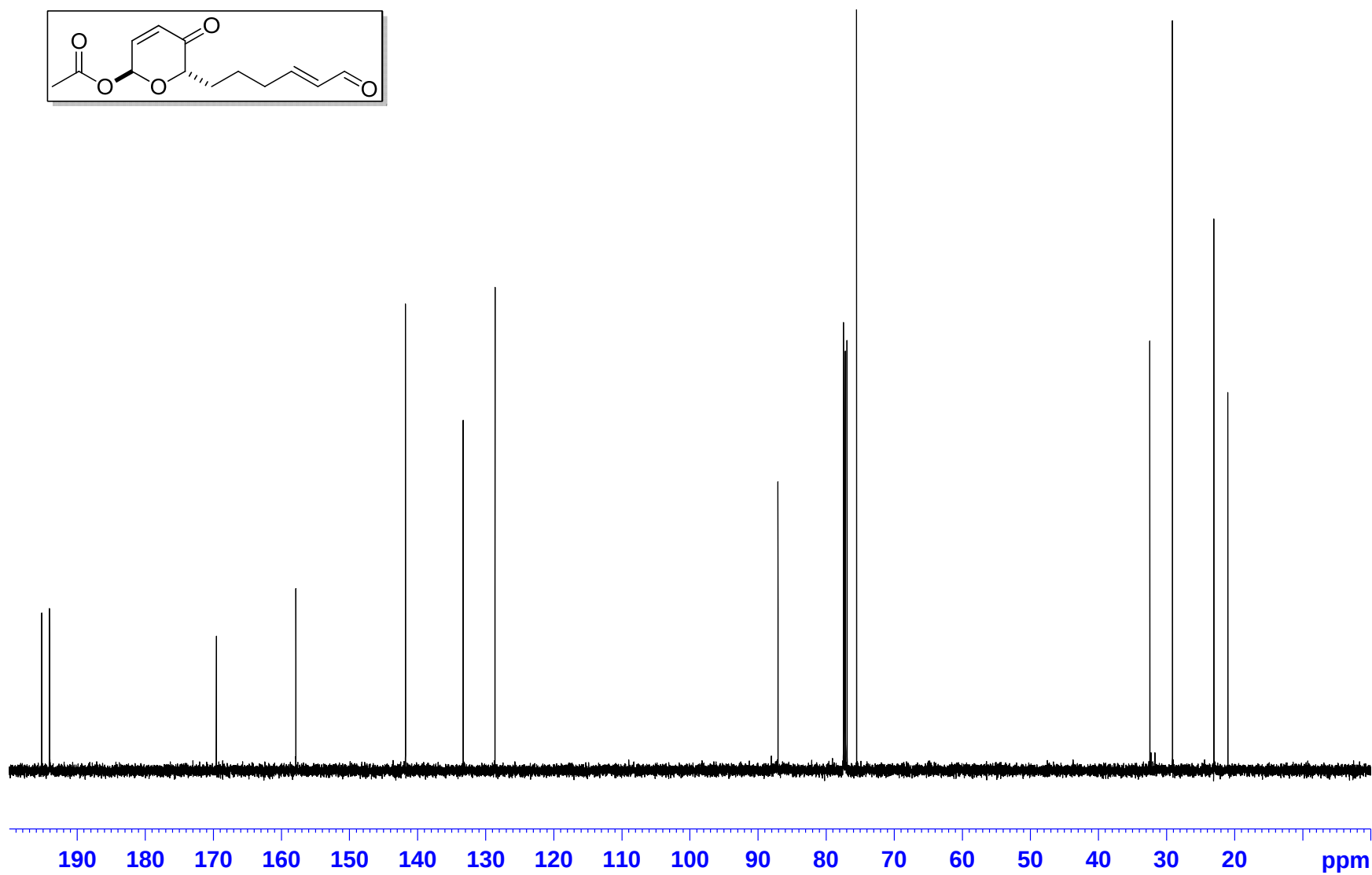
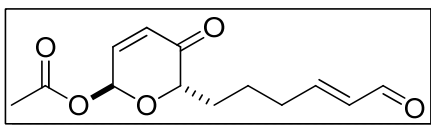
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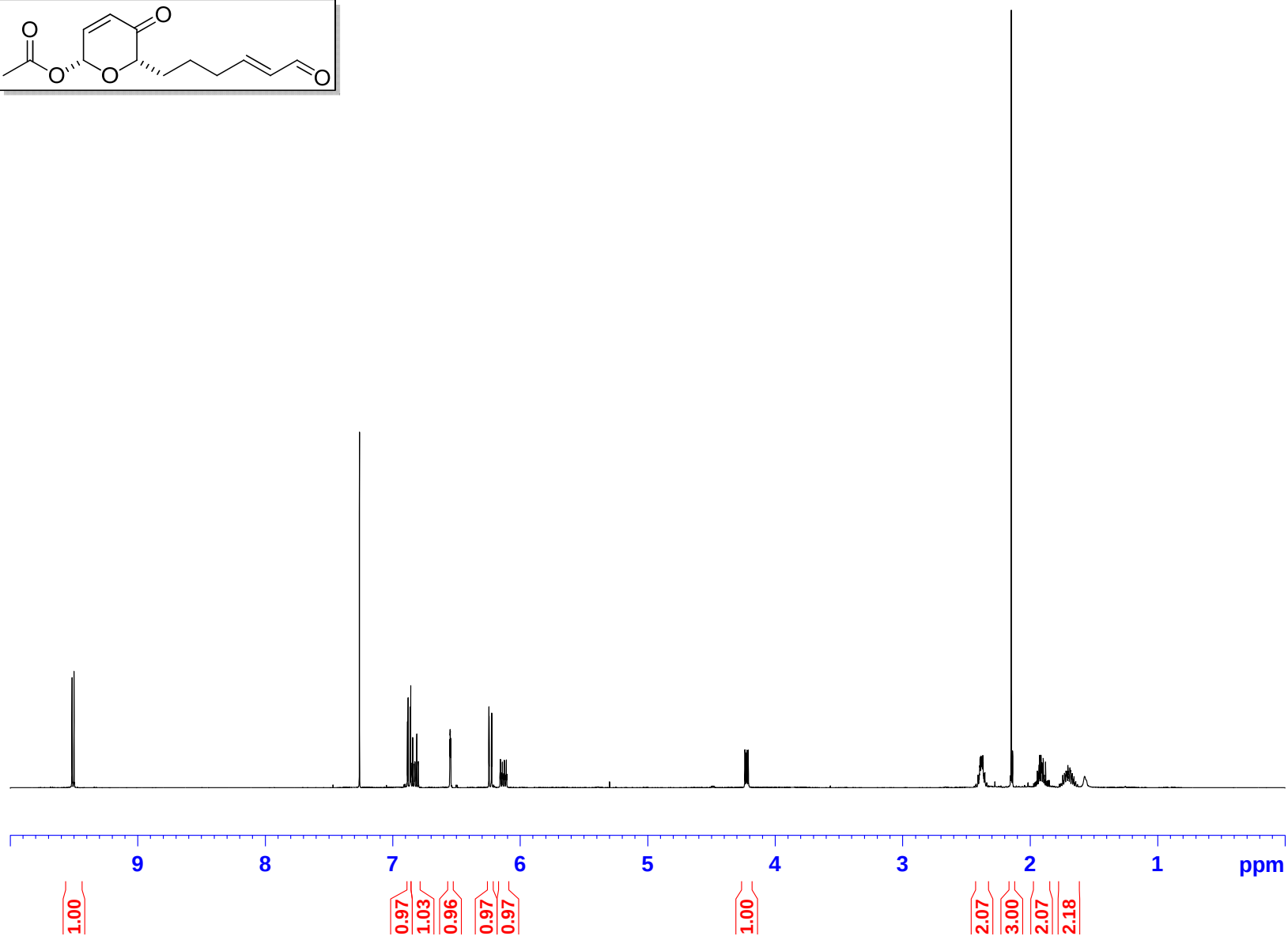
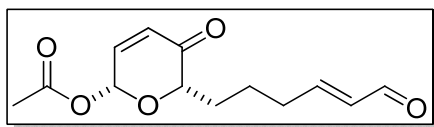
^{13}C NMR (125 MHz) of *syn*-Acetoxypyranone 1 in CDCl_3



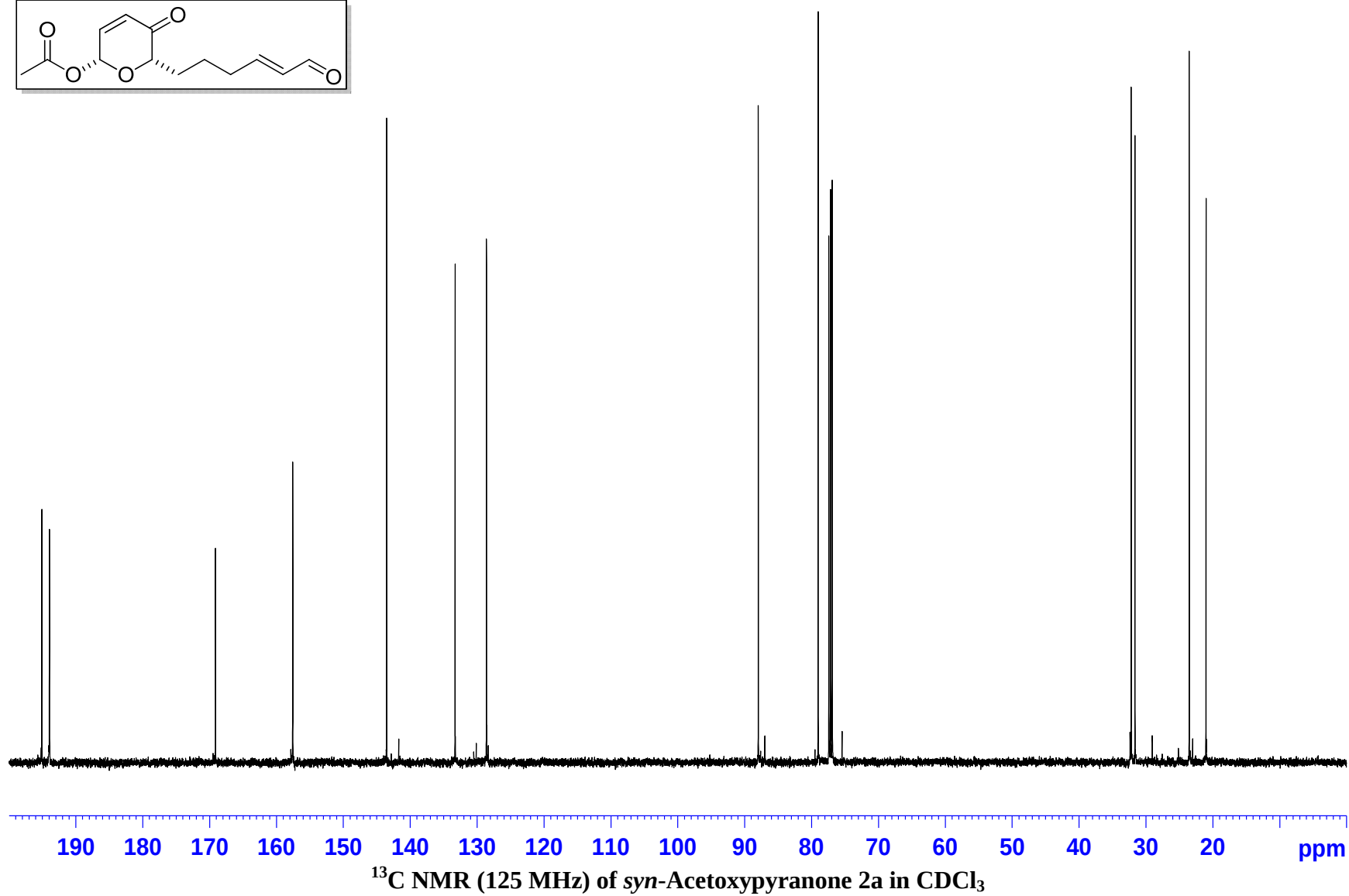
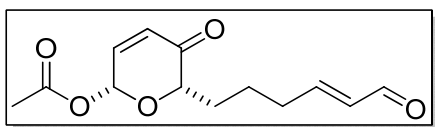
¹H NMR (500 MHz) of *anti*-Acetoxypyranone 2a in CDCl₃

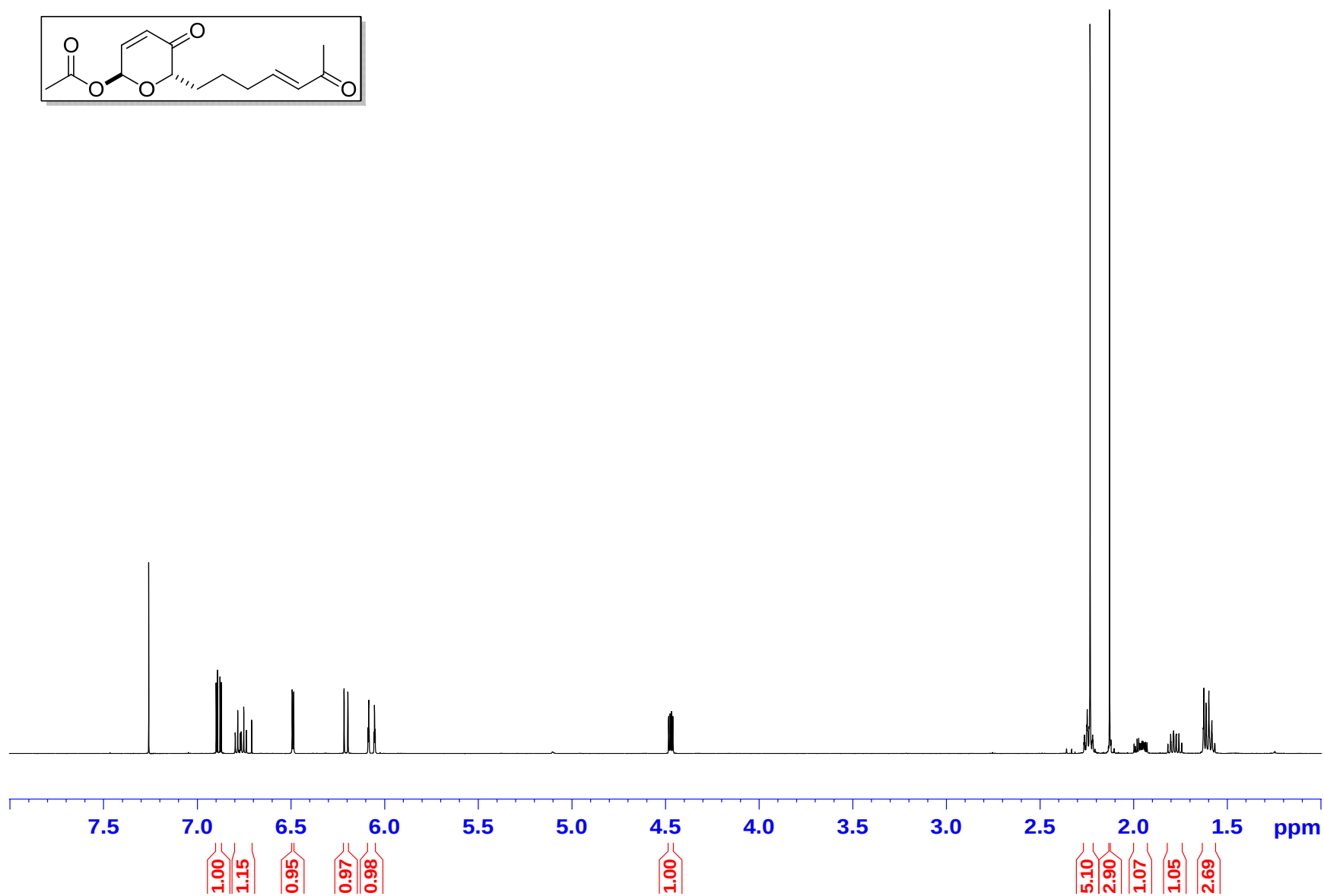
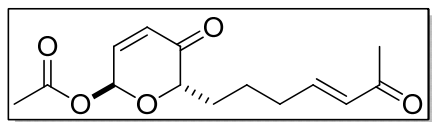


^{13}C NMR (125 MHz) of *anti*-Acetoxypyranone 2a in CDCl_3

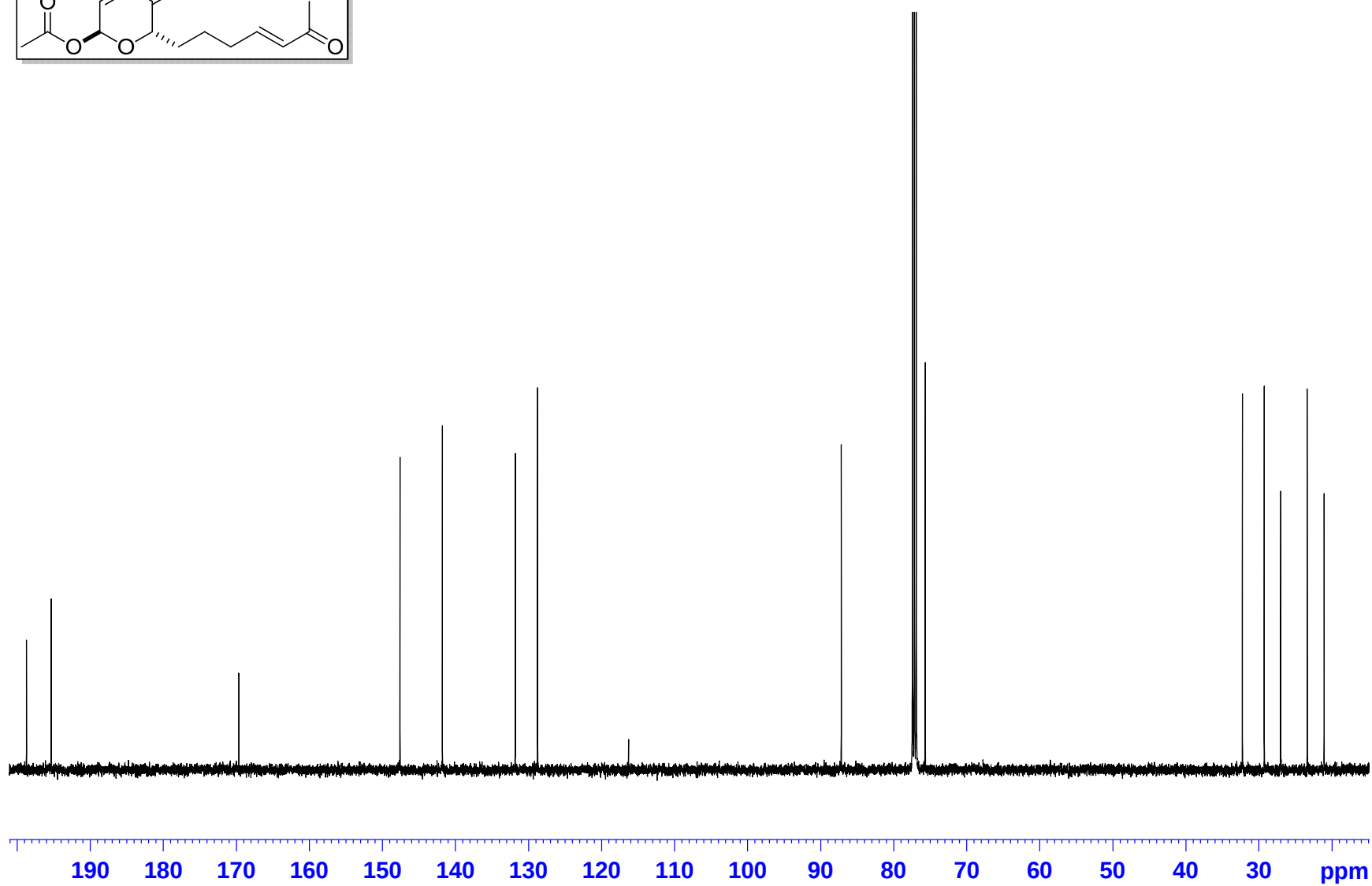
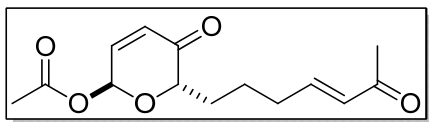


^1H NMR (500 MHz) of *syn*-Acetoxypyranone 2a in CDCl_3

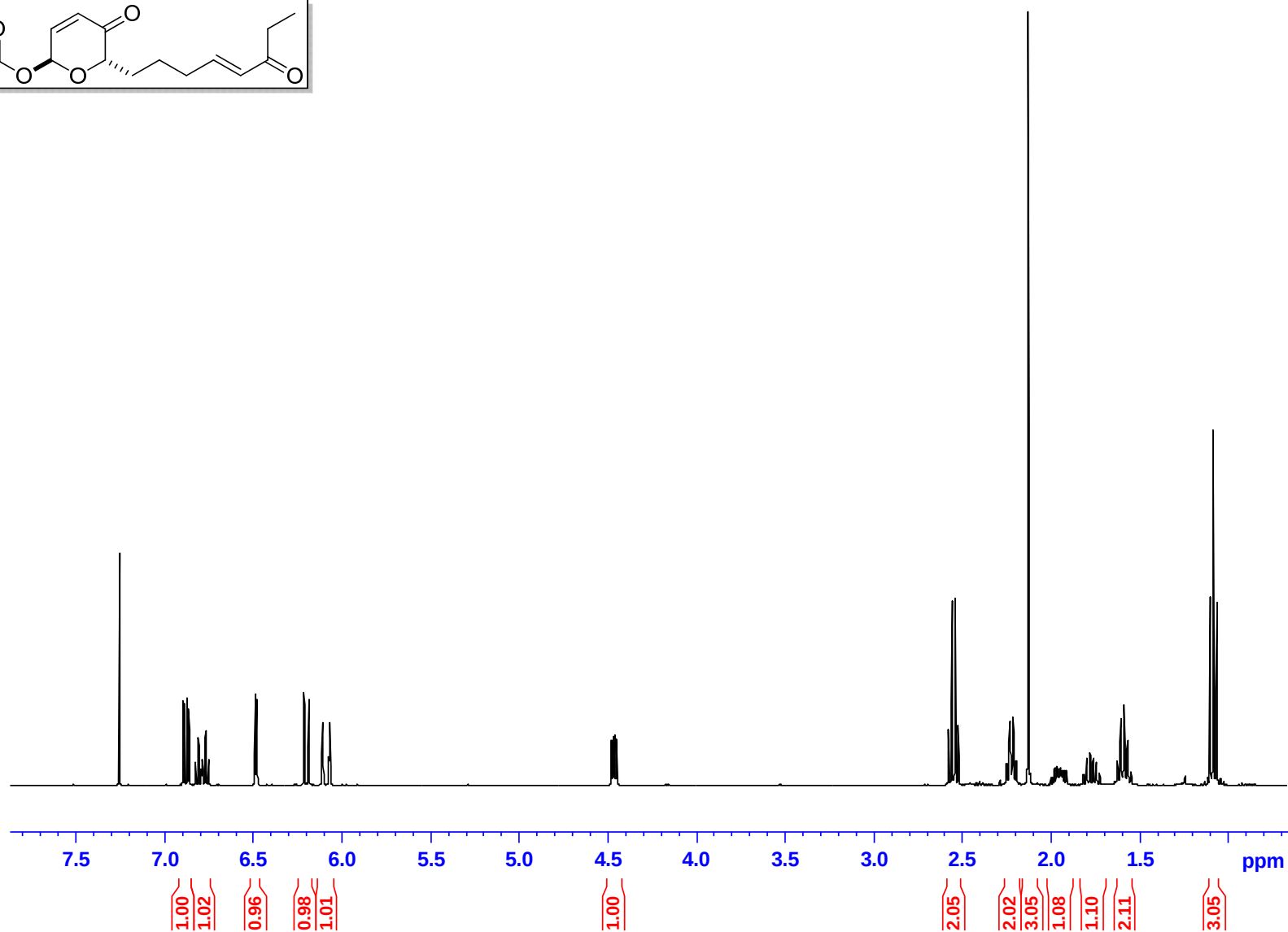
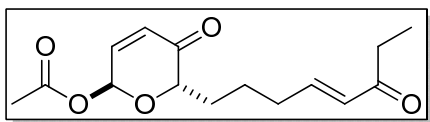




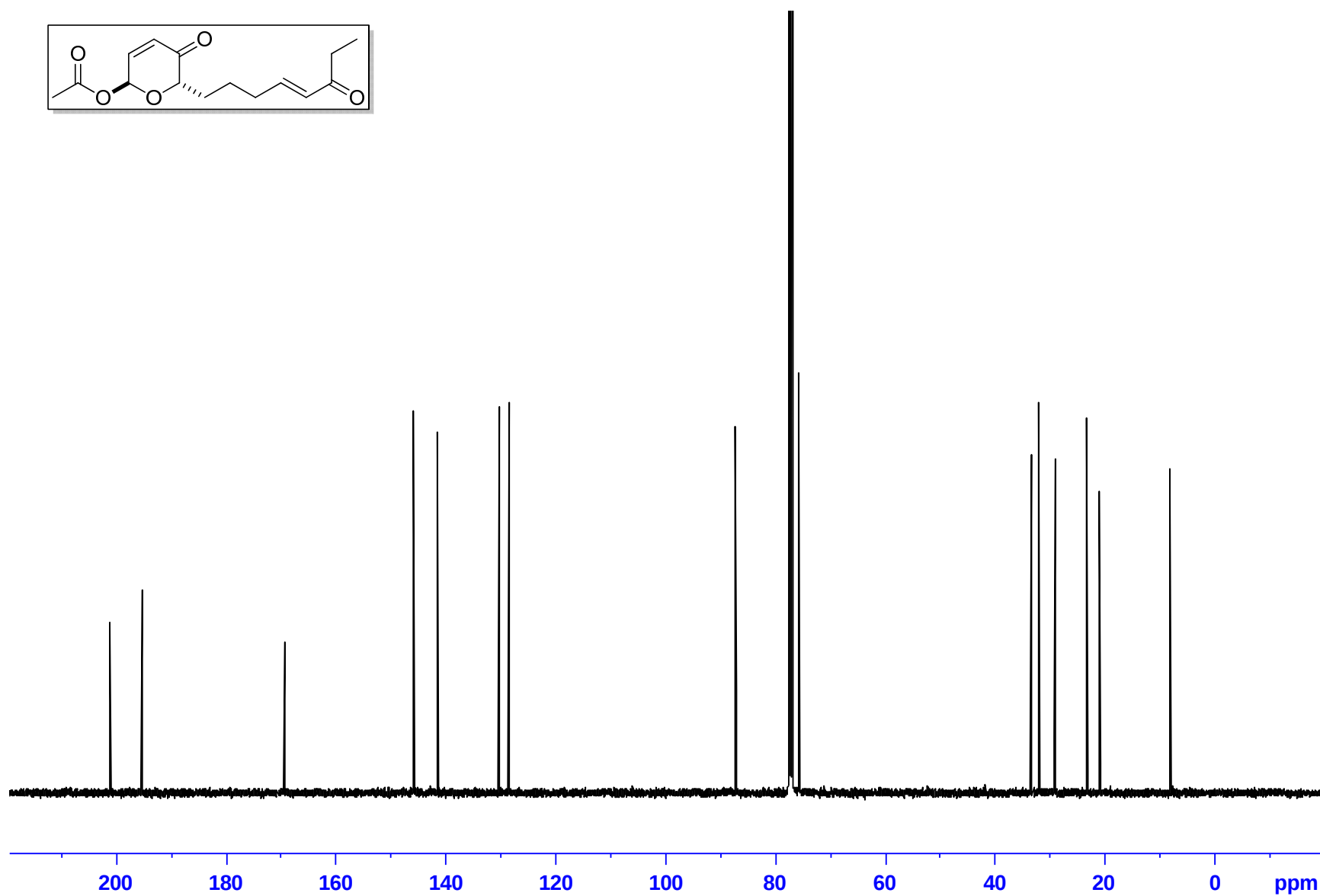
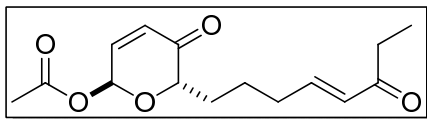
¹H NMR (500 MHz) of *anti*-Acetoxypyranone 2b in CDCl₃



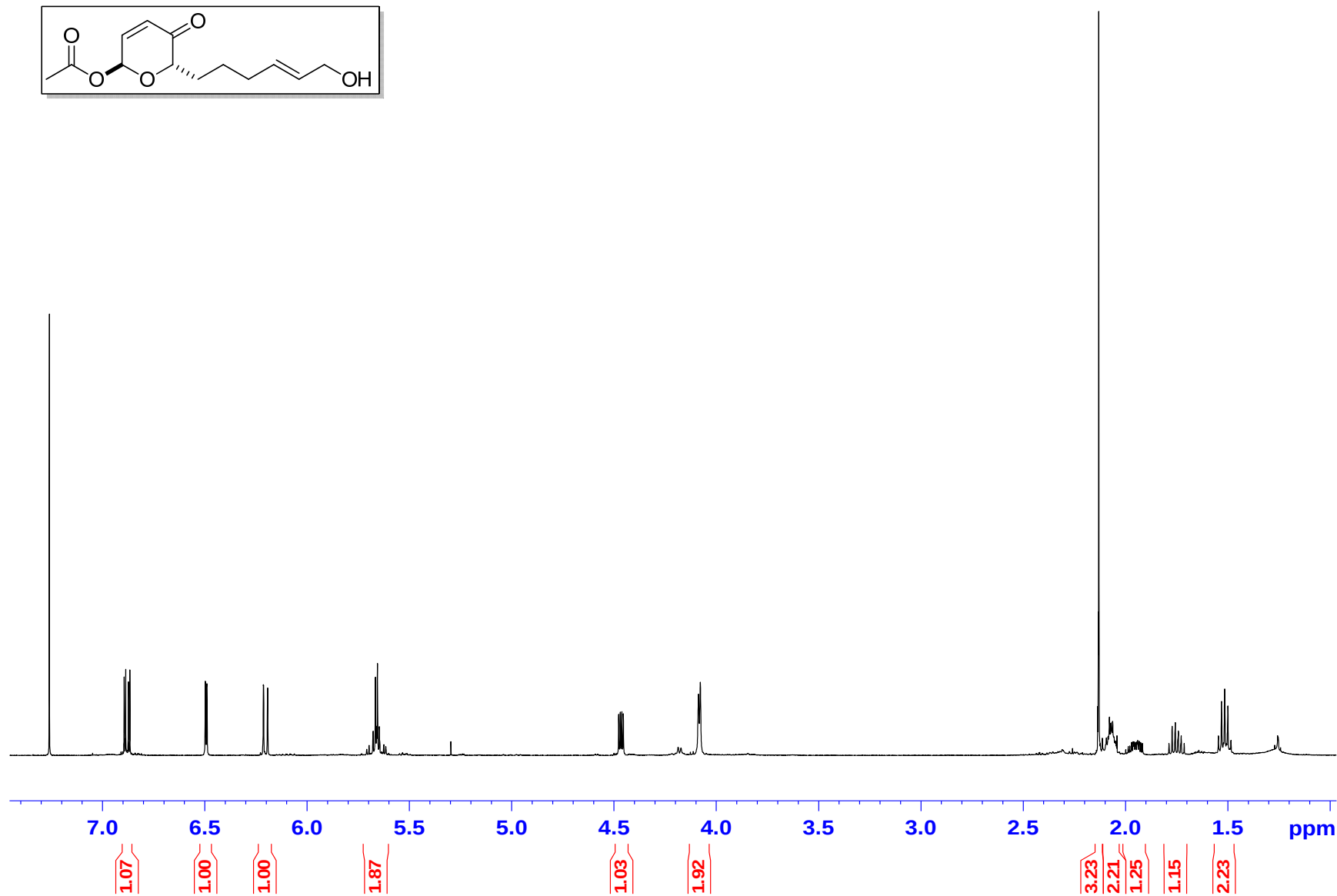
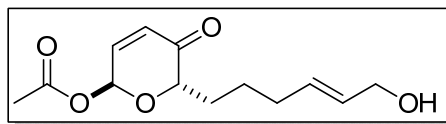
¹³C NMR (125 MHz) of *anti*-Acetoxypyranone 2b in CDCl₃



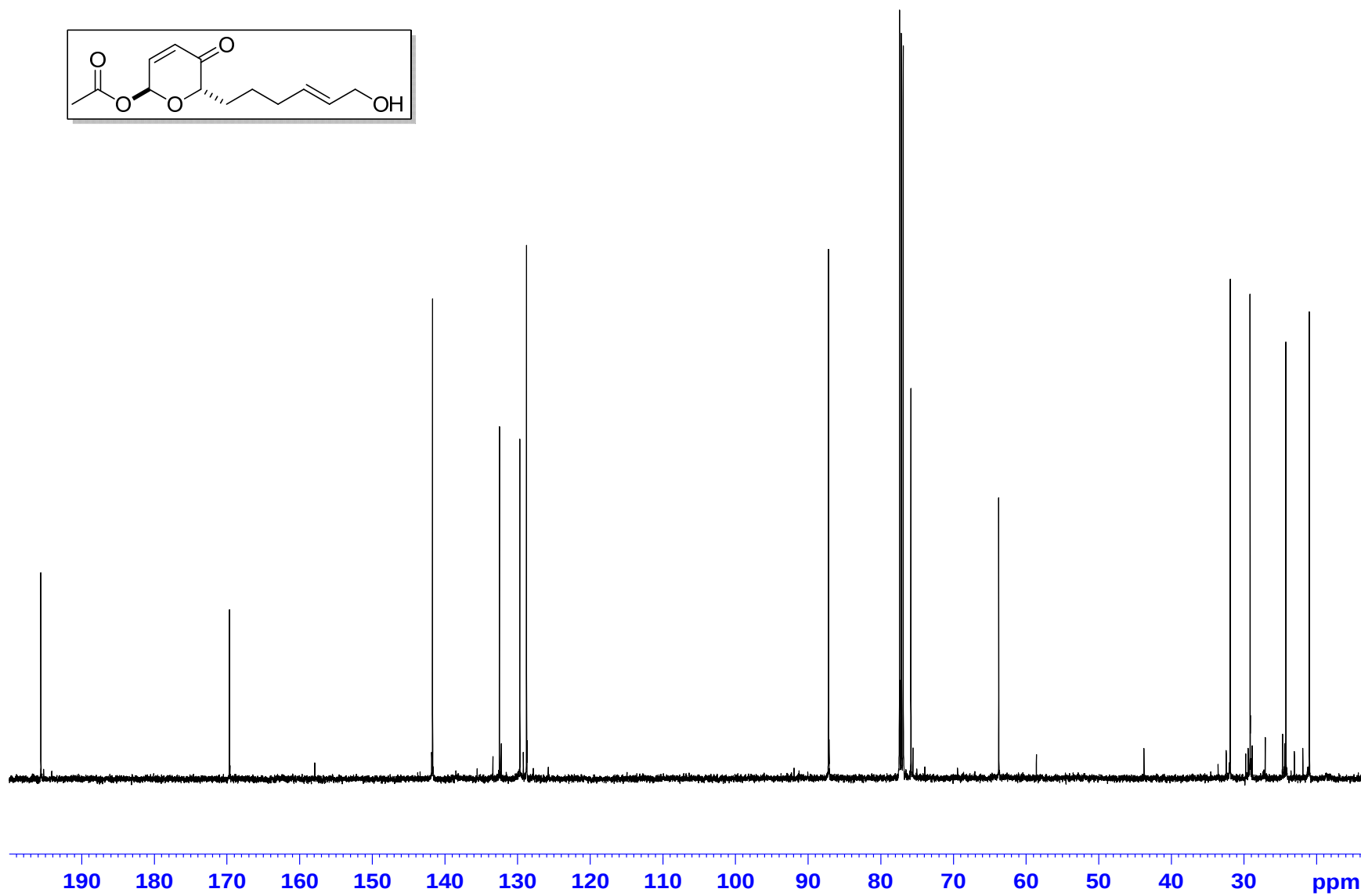
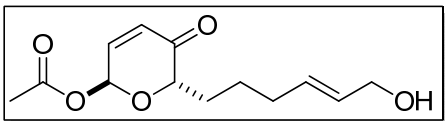
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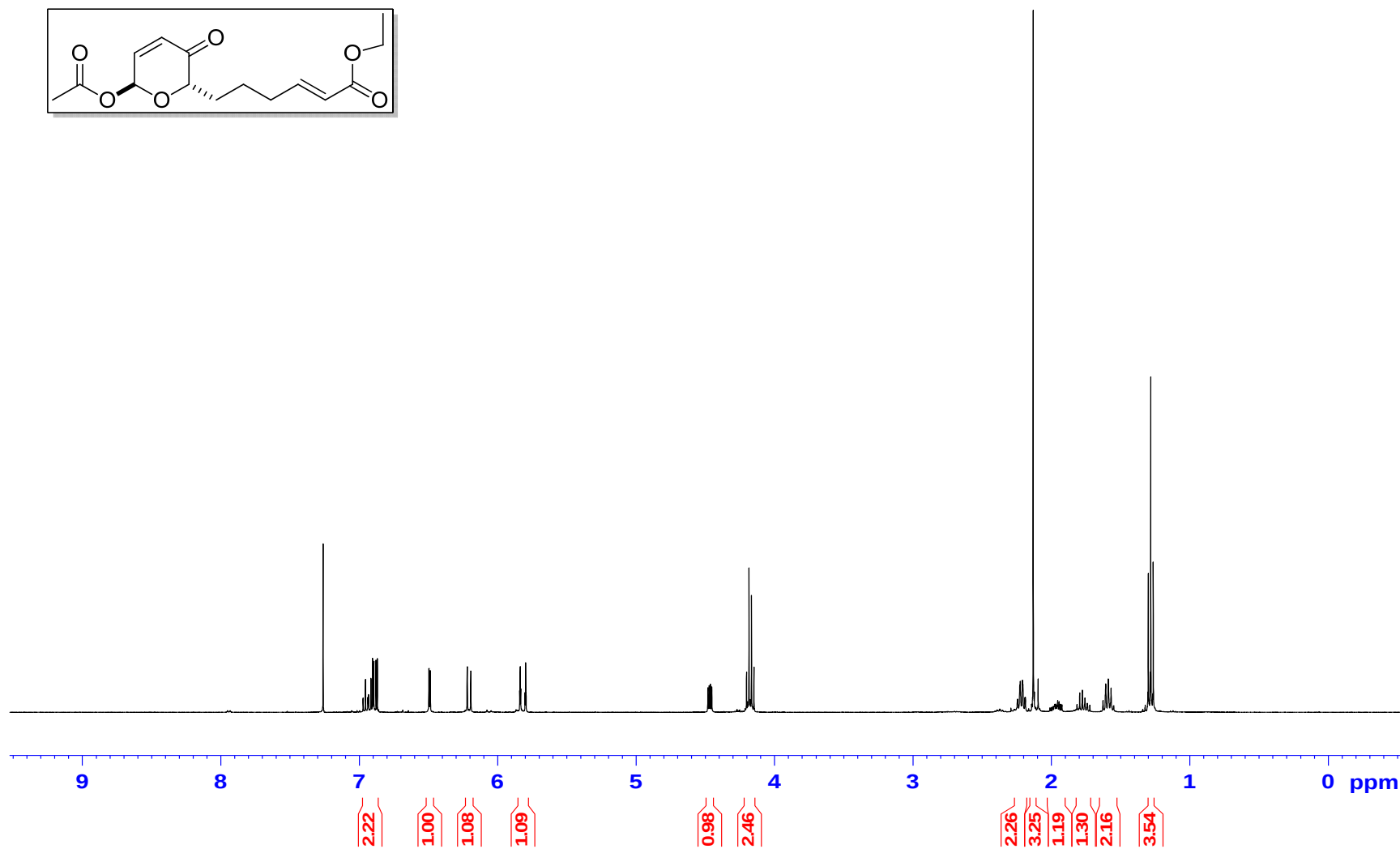
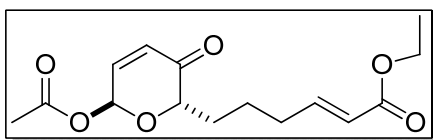
^{13}C NMR (100 MHz) of *anti*-Acetoxypyranone 2c in CDCl_3



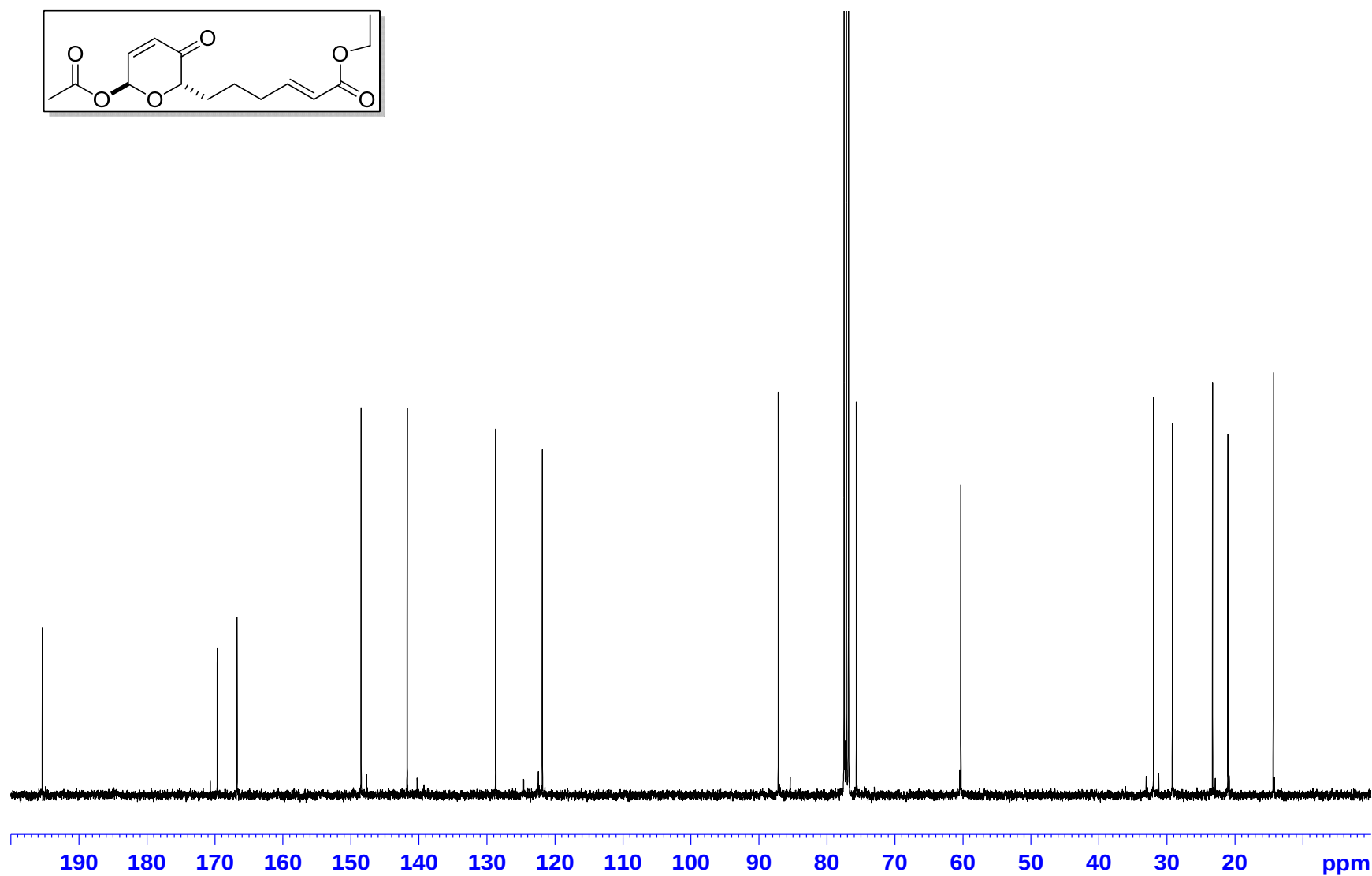
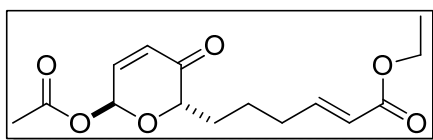
^1H NMR (500 MHz) of *anti*-Acetoxypyranone 2d in CDCl_3



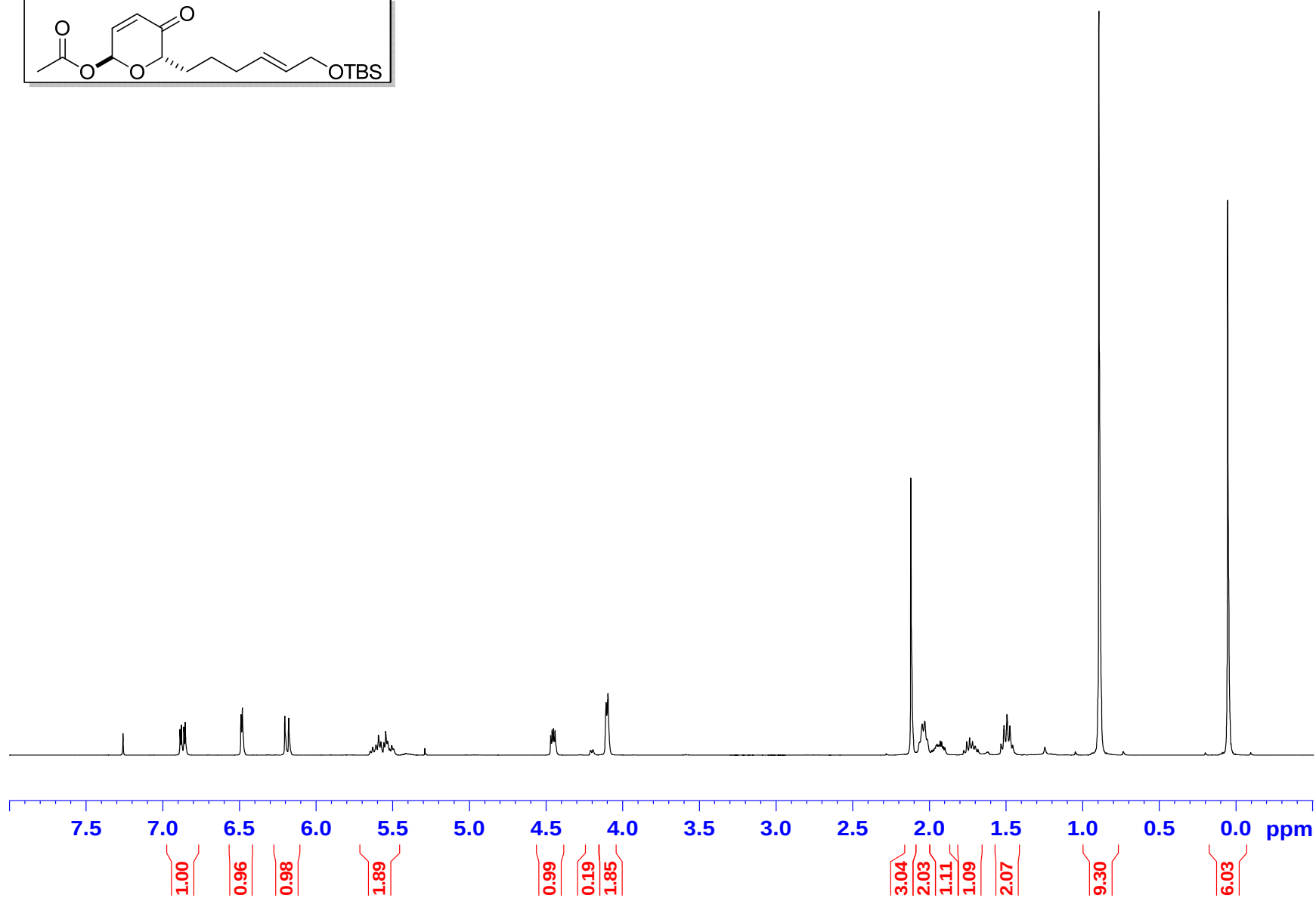
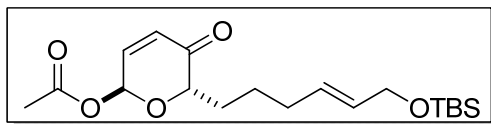
^{13}C NMR (125 MHz) of *anti*-Acetoxypyranone 2d in CDCl_3



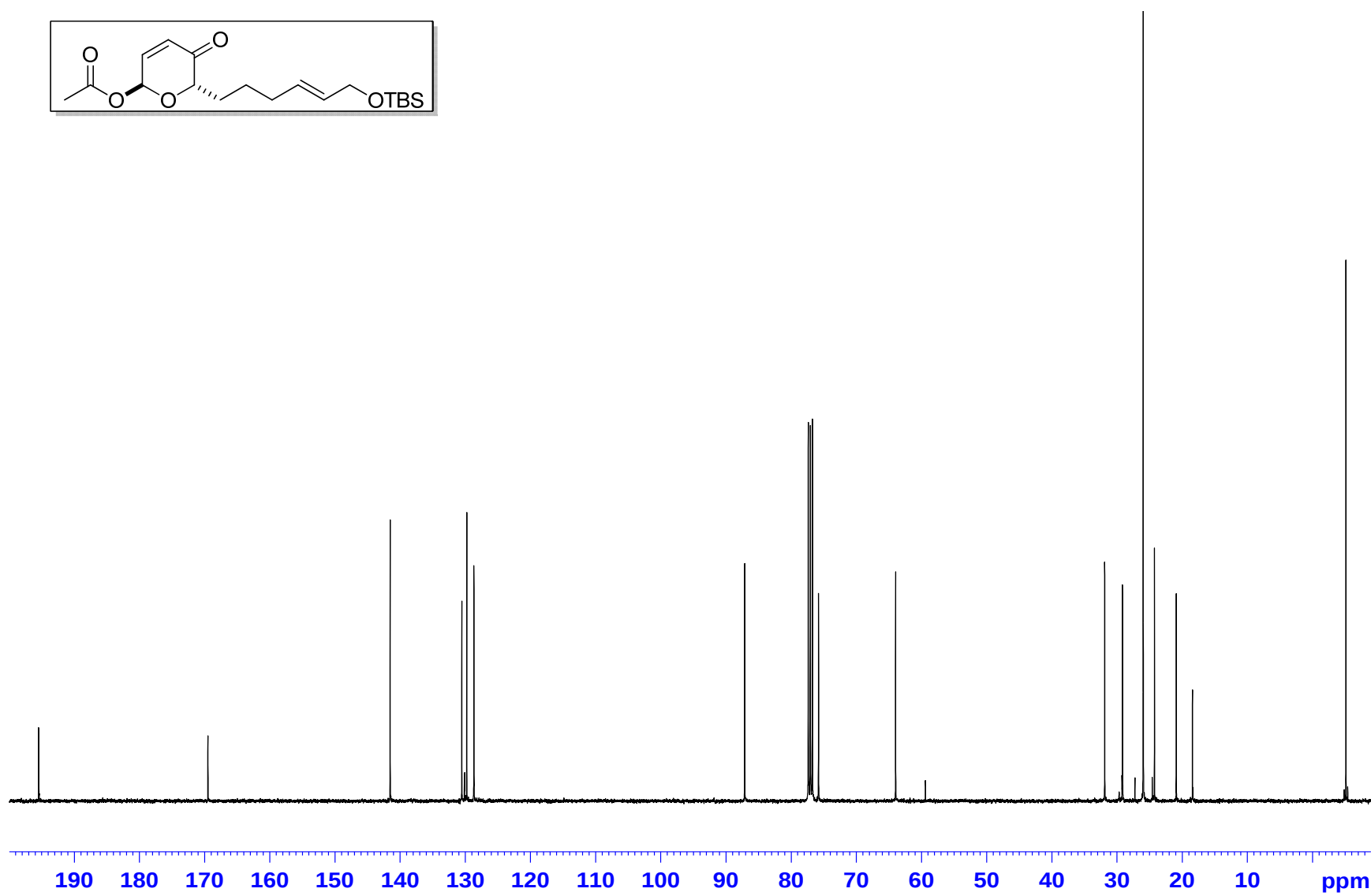
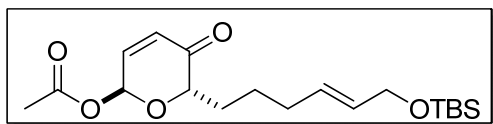
¹H NMR (400 MHz) of *anti*-Acetoxypyranone 2e in CDCl₃



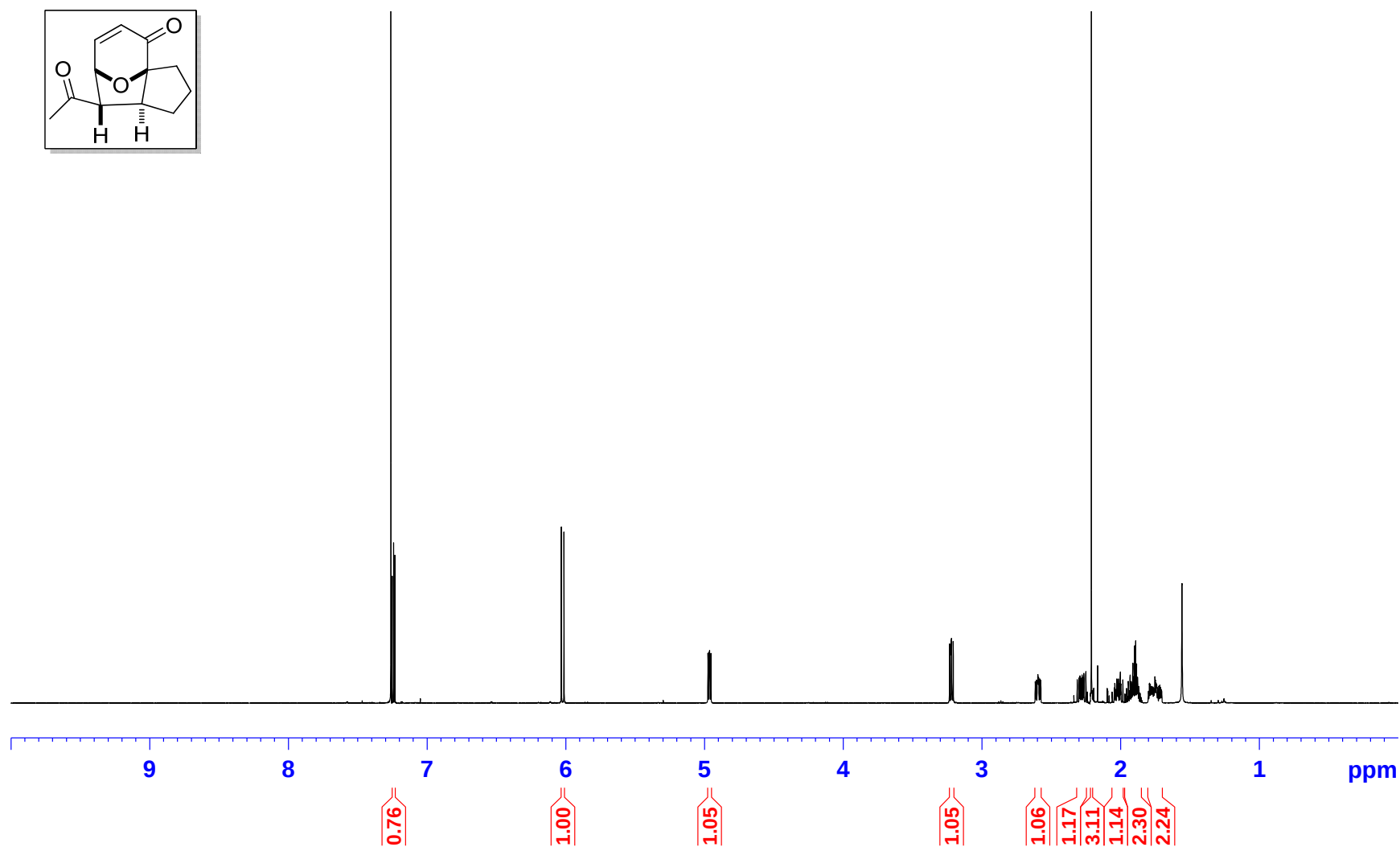
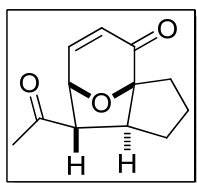
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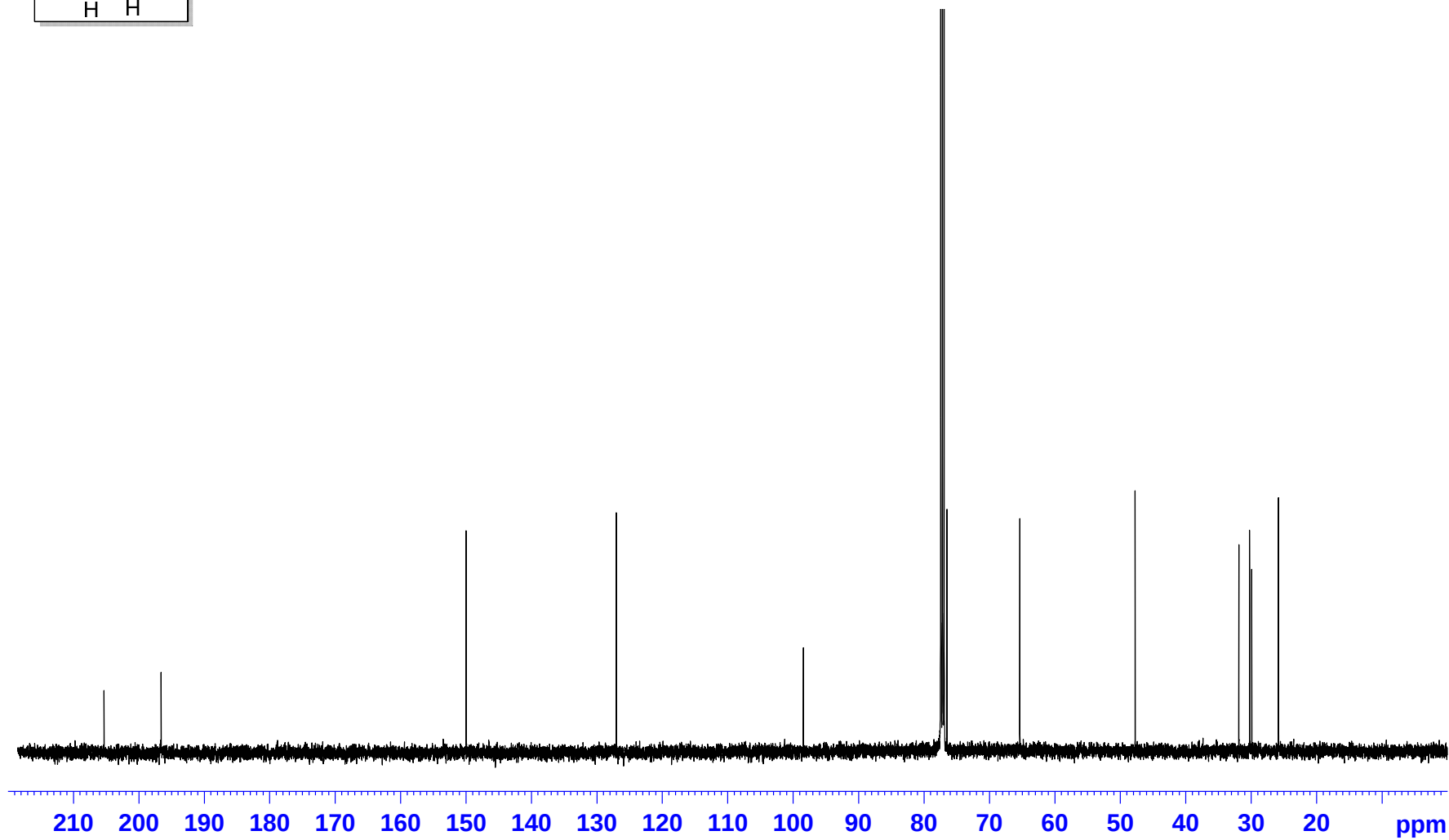
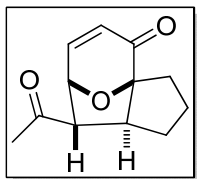
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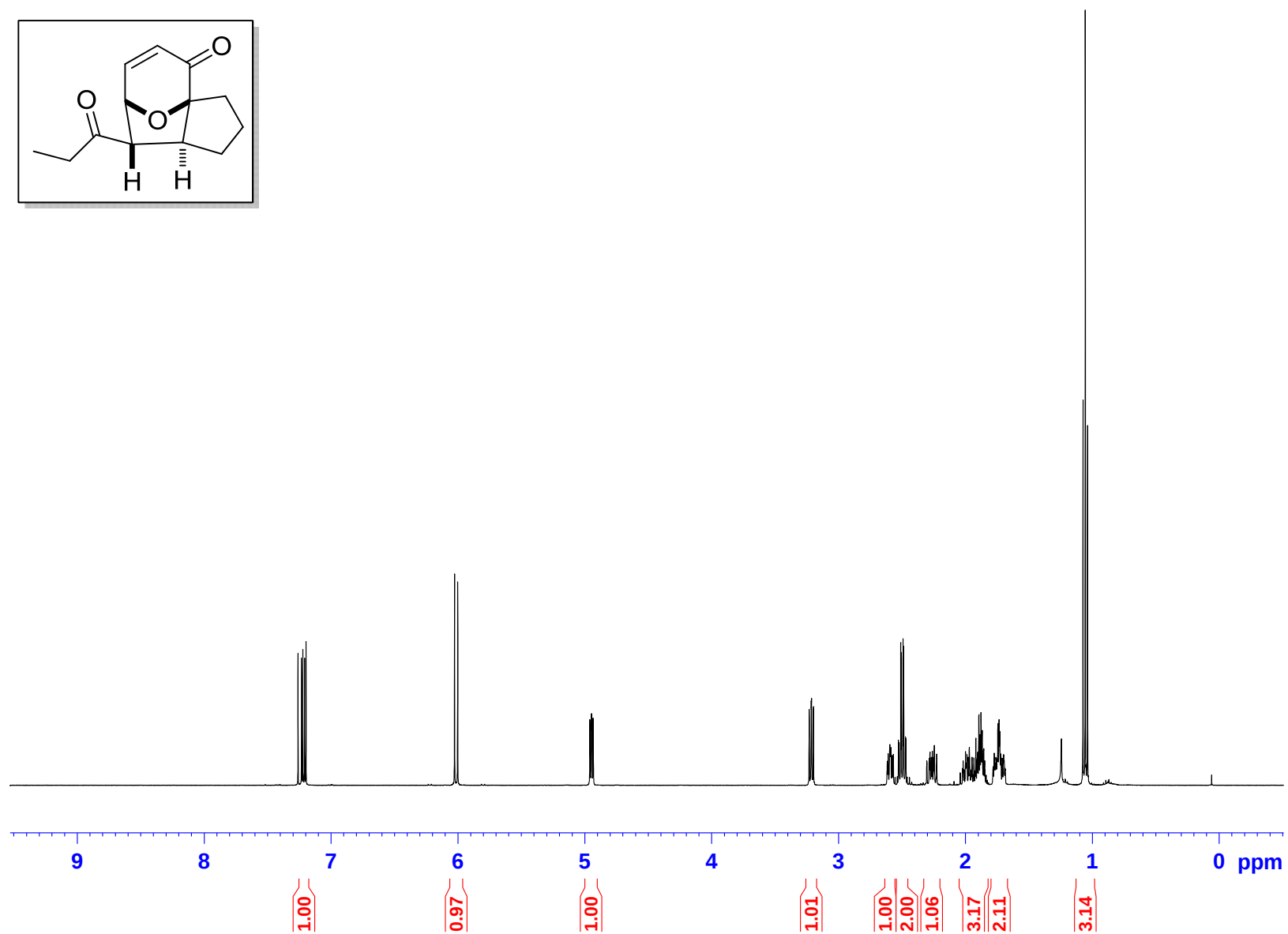
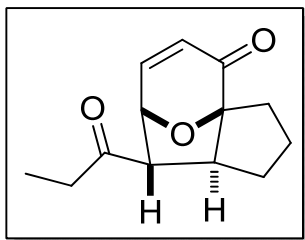
¹³C NMR (100 MHz) of *anti*-Acetoxypyranone 2f in CDCl₃



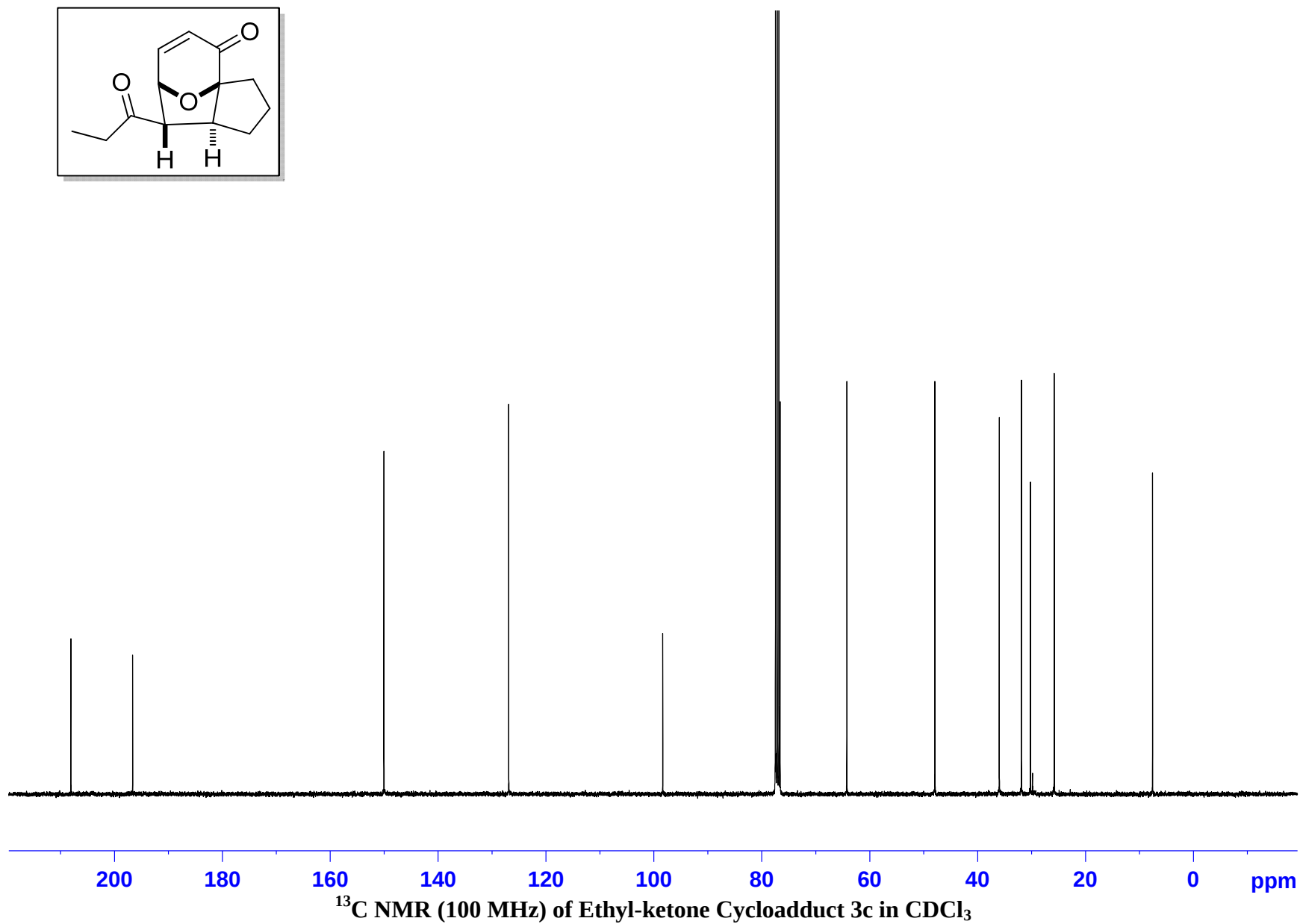
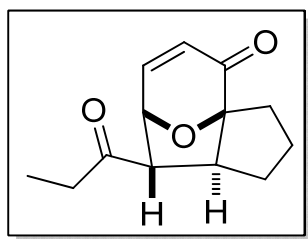
¹H NMR (500 MHz) of Methyl-ketone Cycloadduct 3b in CDCl₃

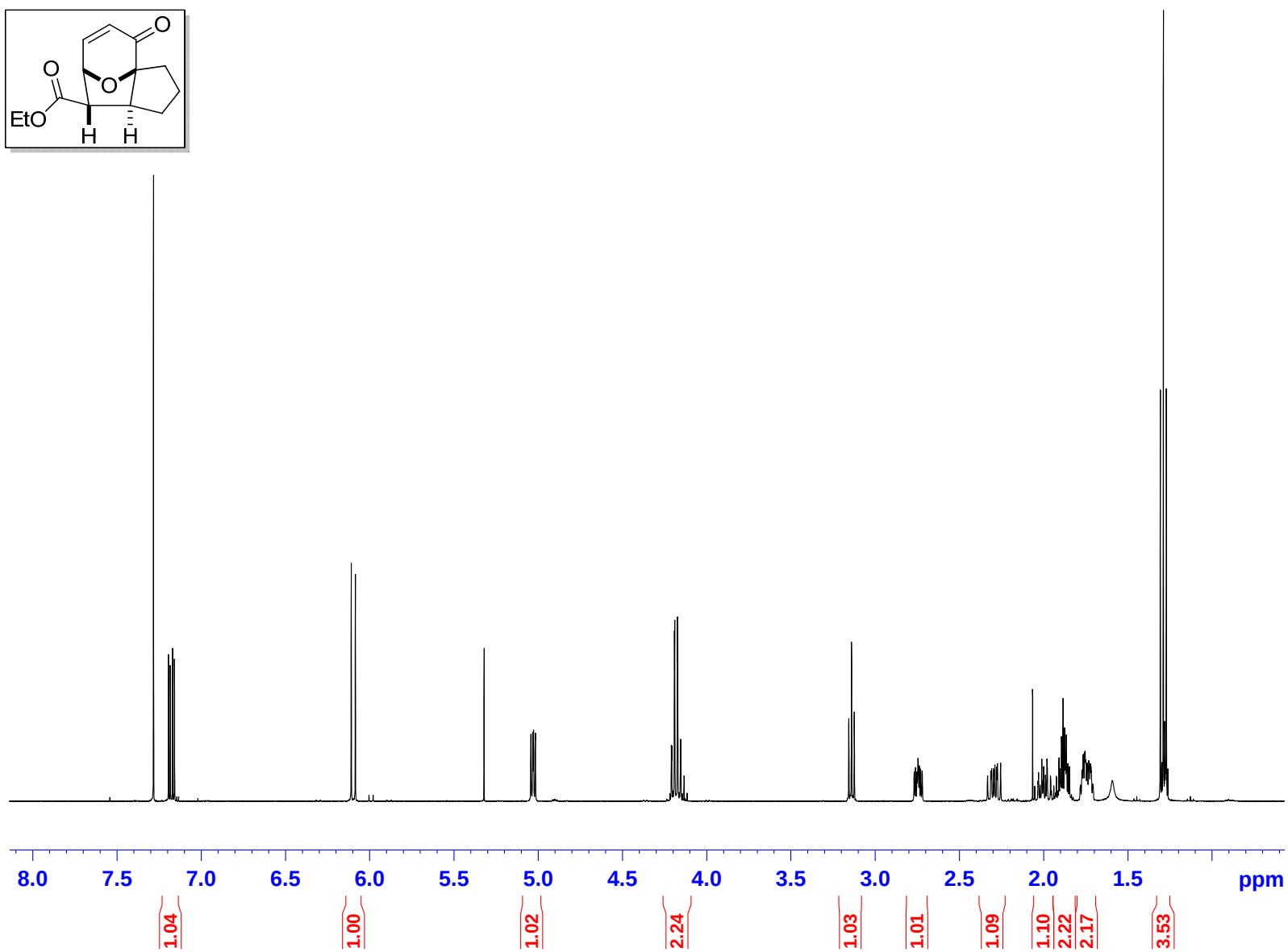
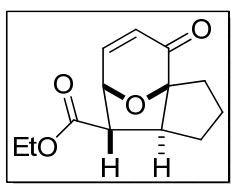


^{13}C NMR (125 MHz) of Methyl-ketone Cycloadduct 3b in CDCl_3

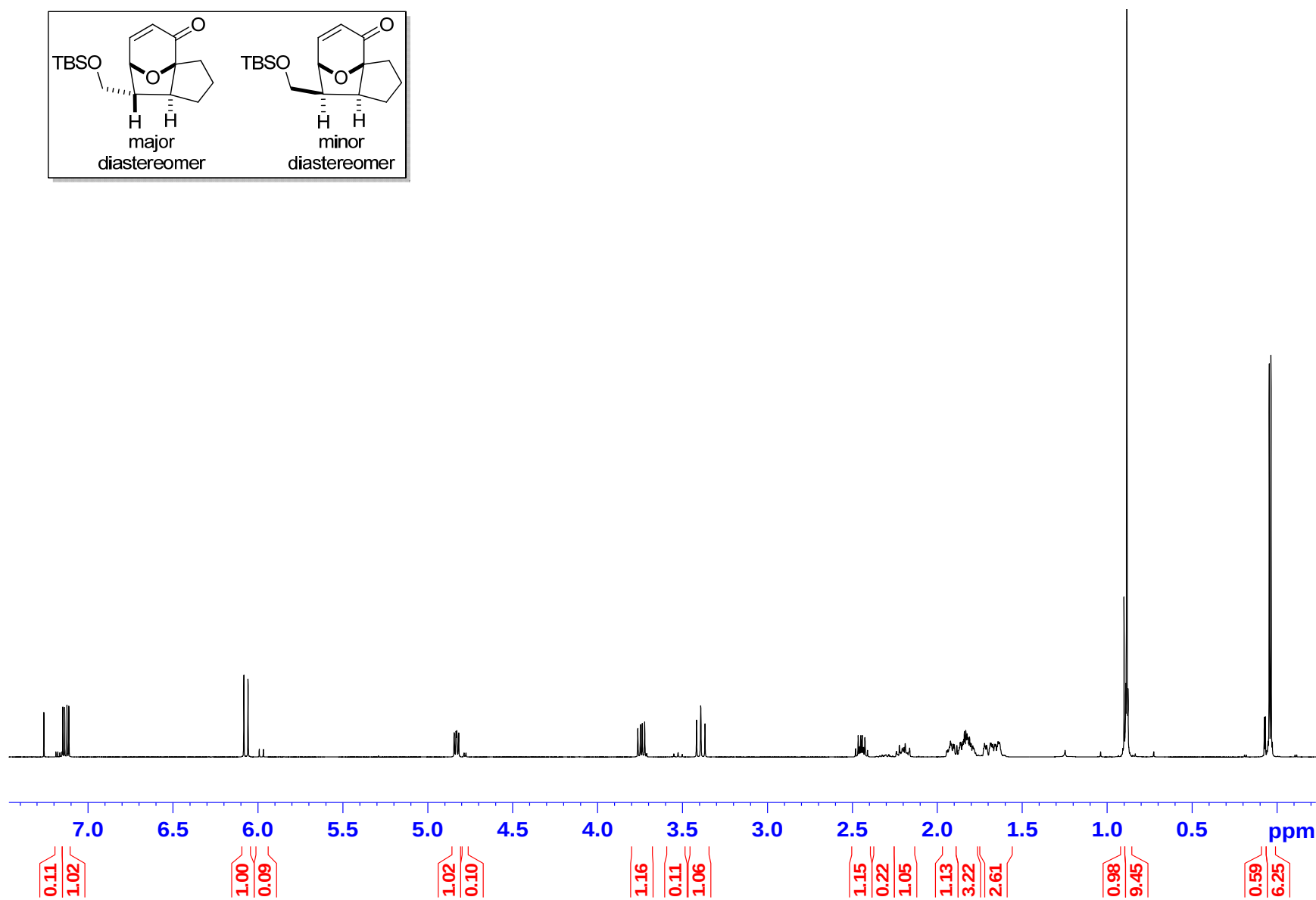
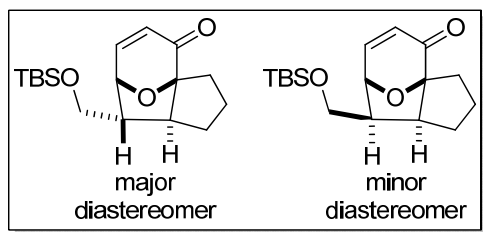


¹H NMR (400 MHz) of Ethyl-ketone Cycloadduct 3c in CDCl₃

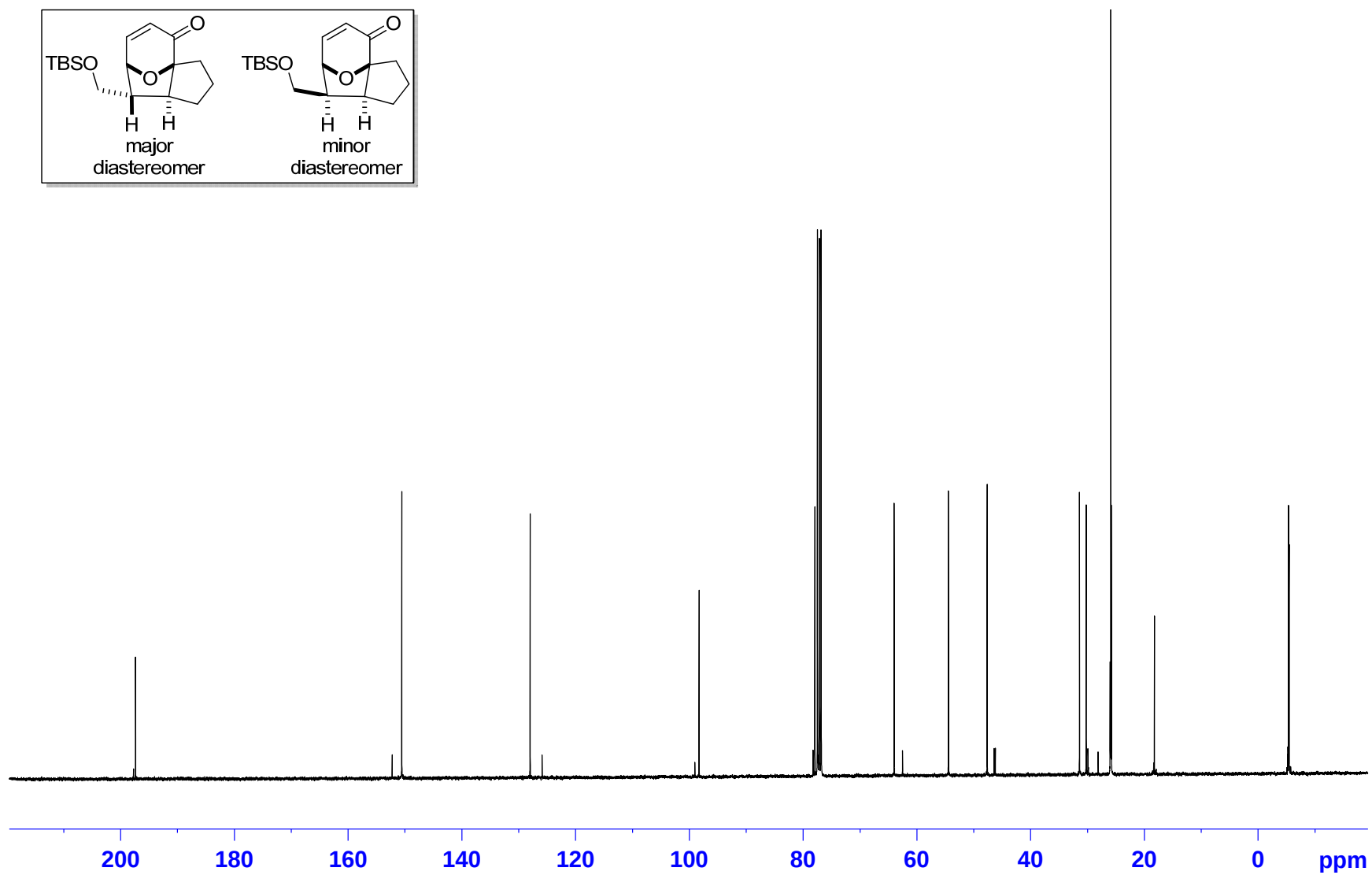
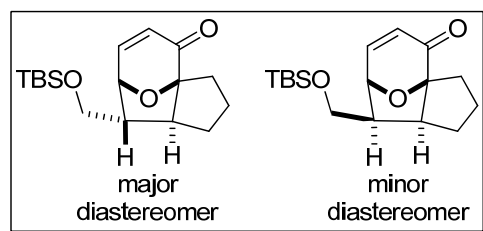




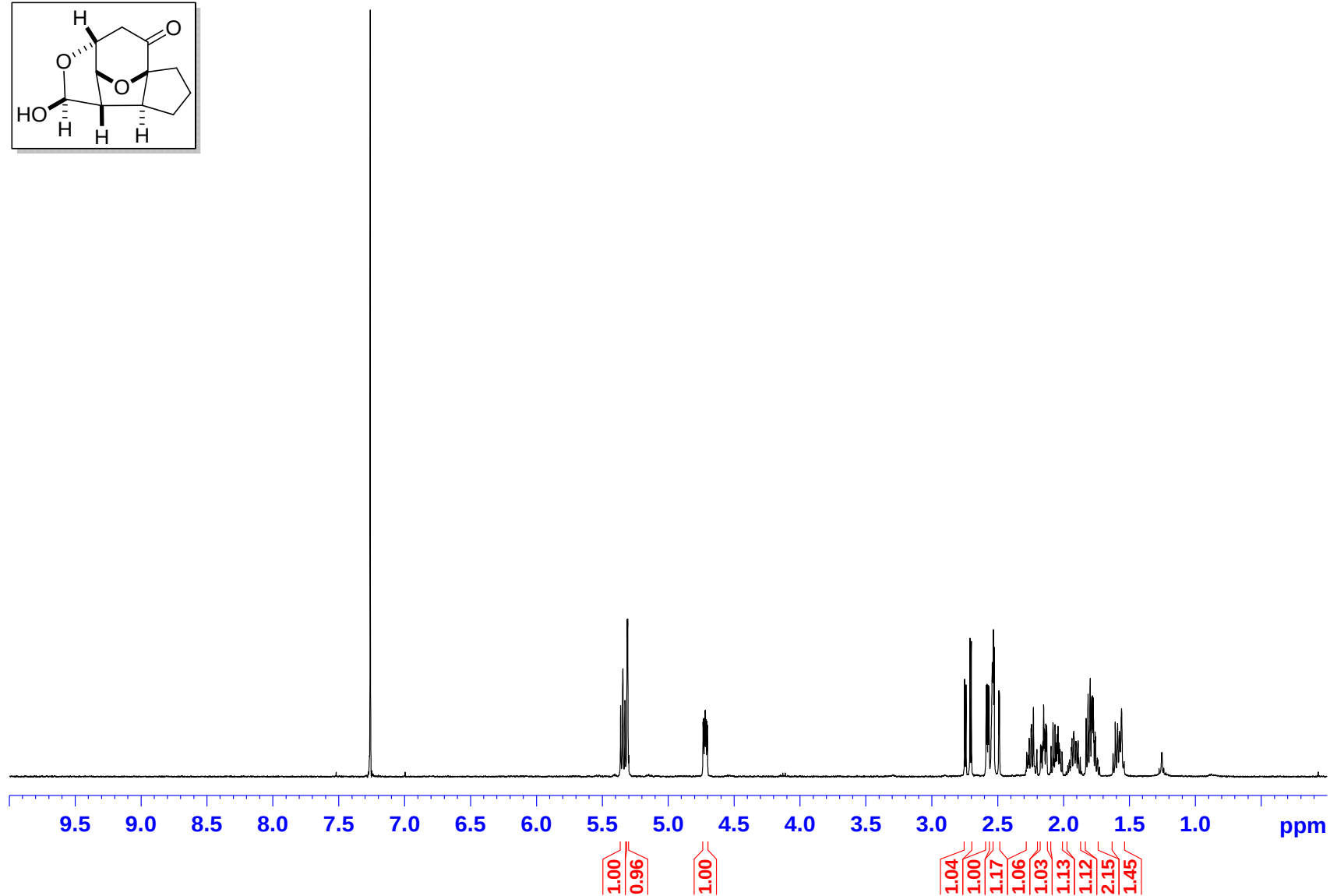
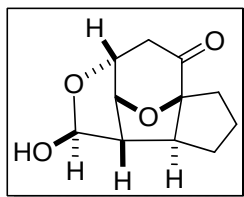
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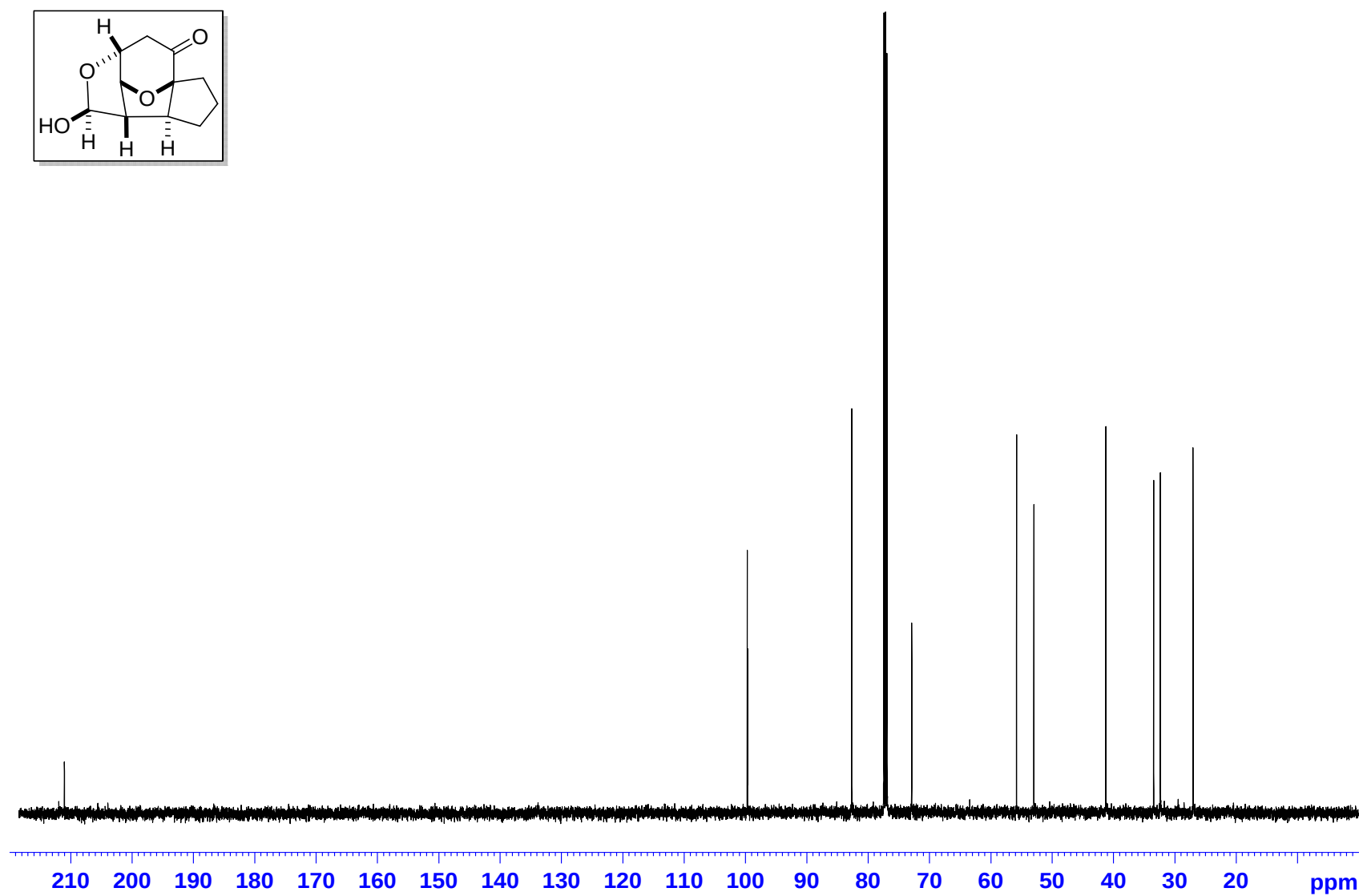
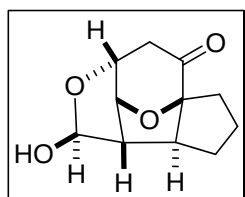
^1H NMR (400 MHz) of Silyl-Ether Cycloadduct 3f in CDCl_3



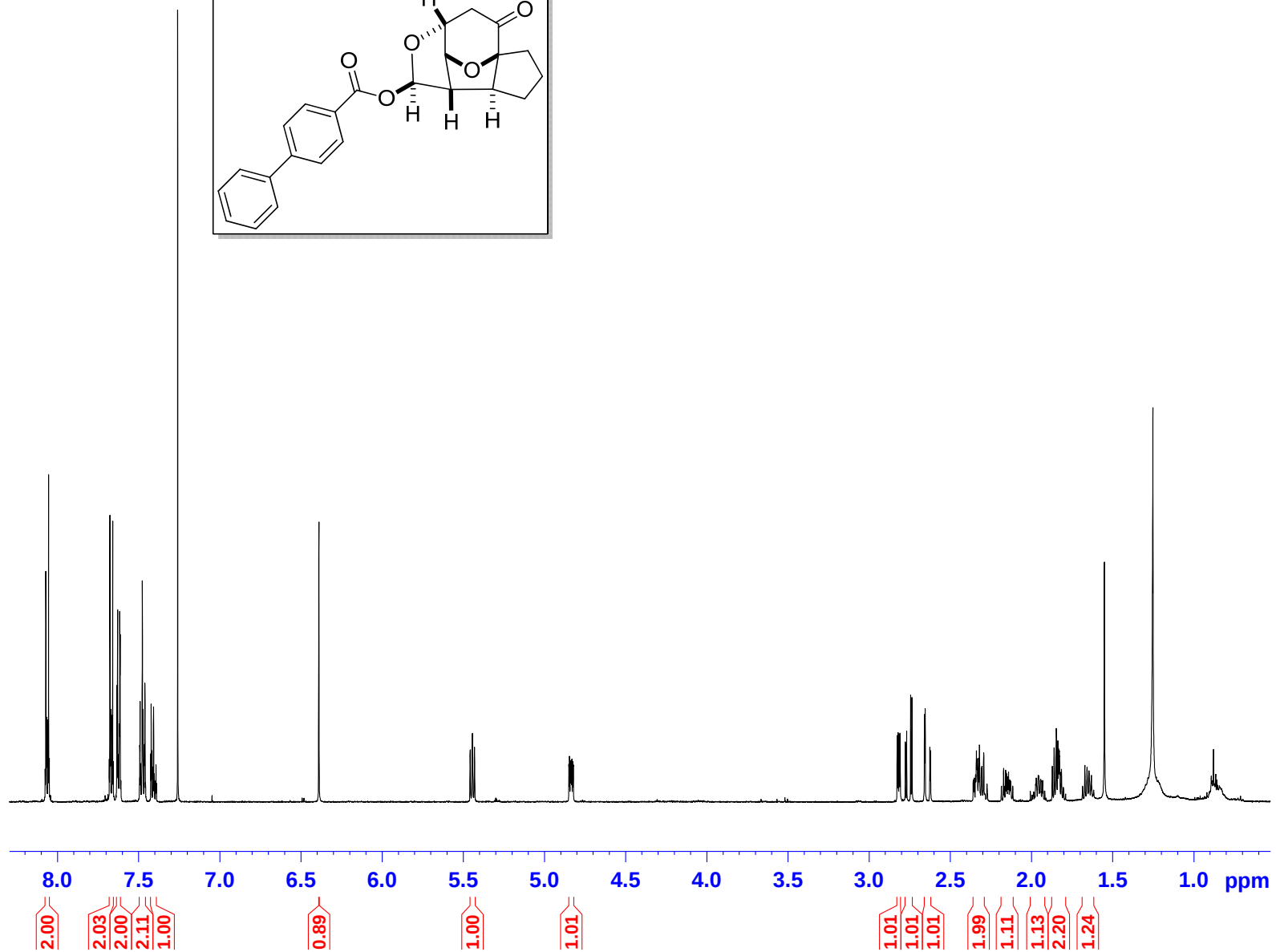
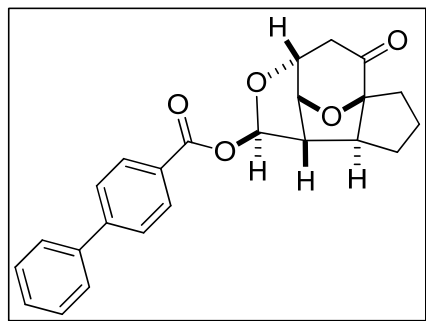
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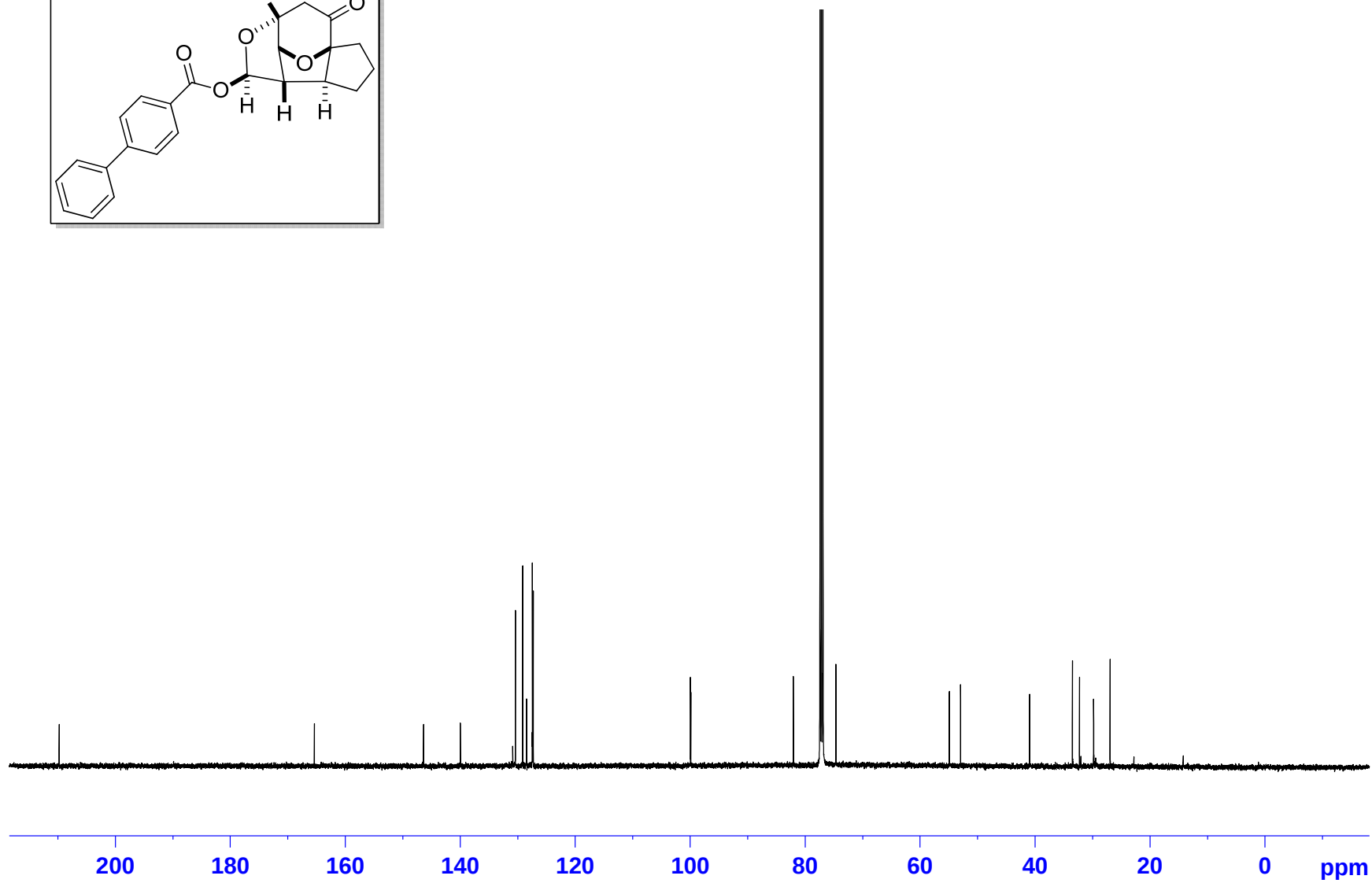
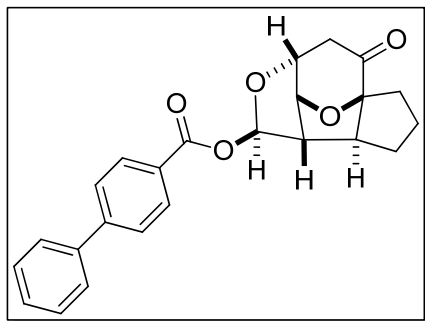
¹H NMR (400 MHz) of Lactol 4a in CDCl₃



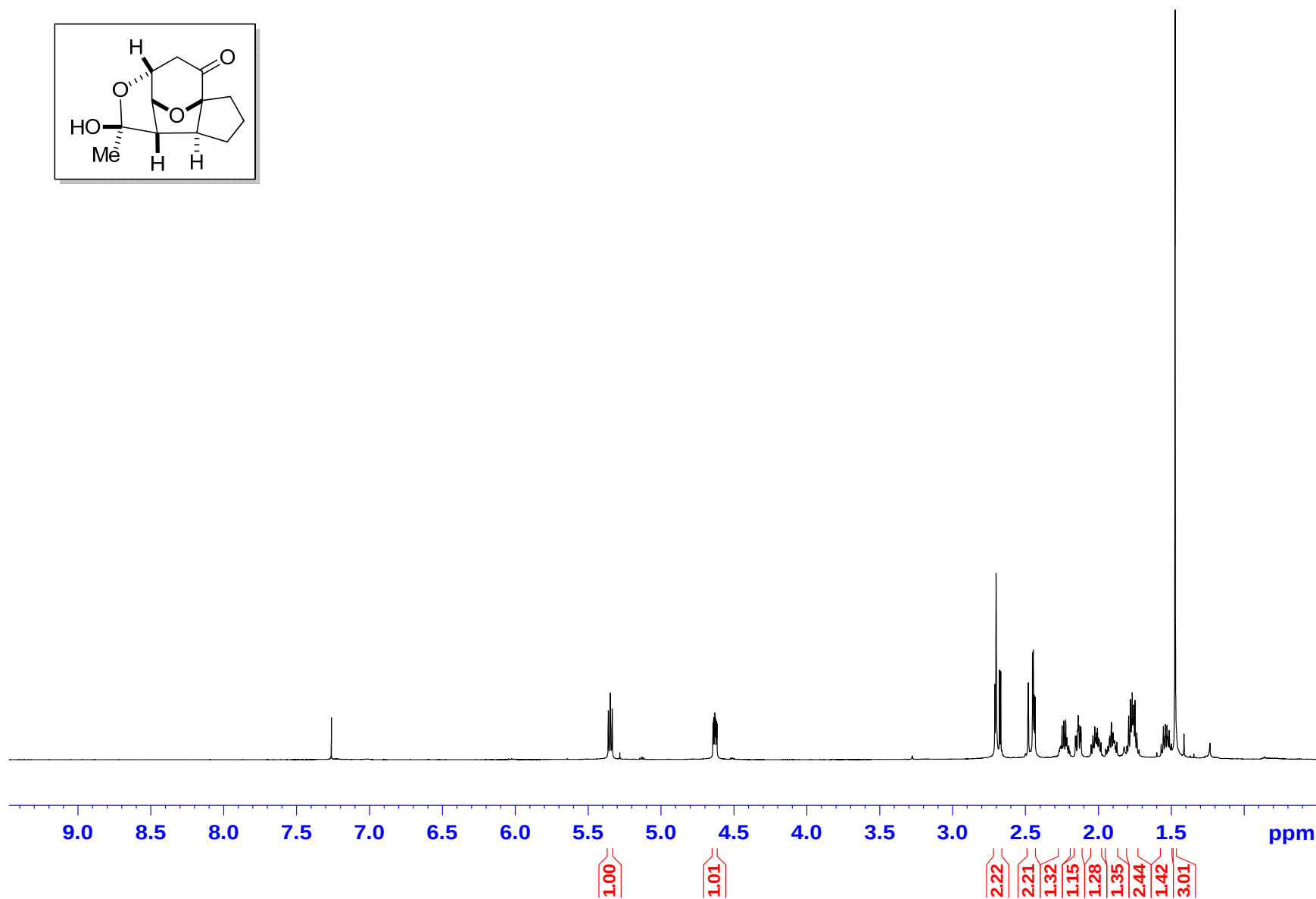
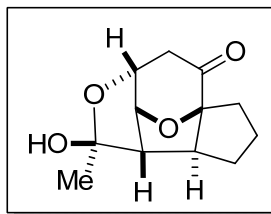
^{13}C NMR (125 MHz) of Lactol 4a in CDCl_3



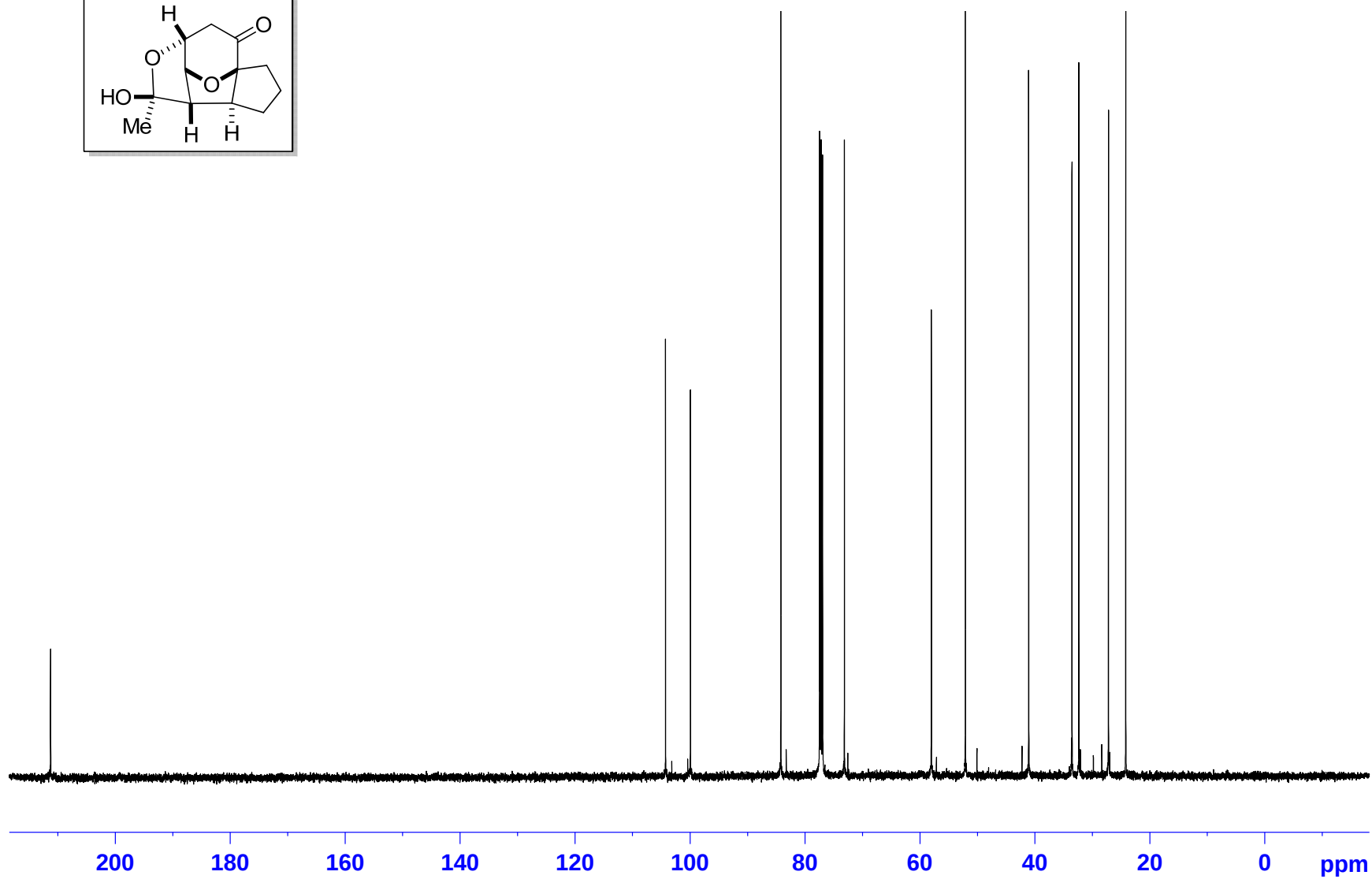
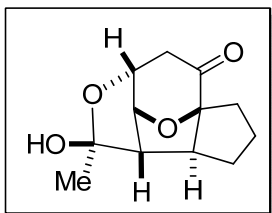
^1H NMR (500 MHz) of Lactol Ester S4 in CDCl_3



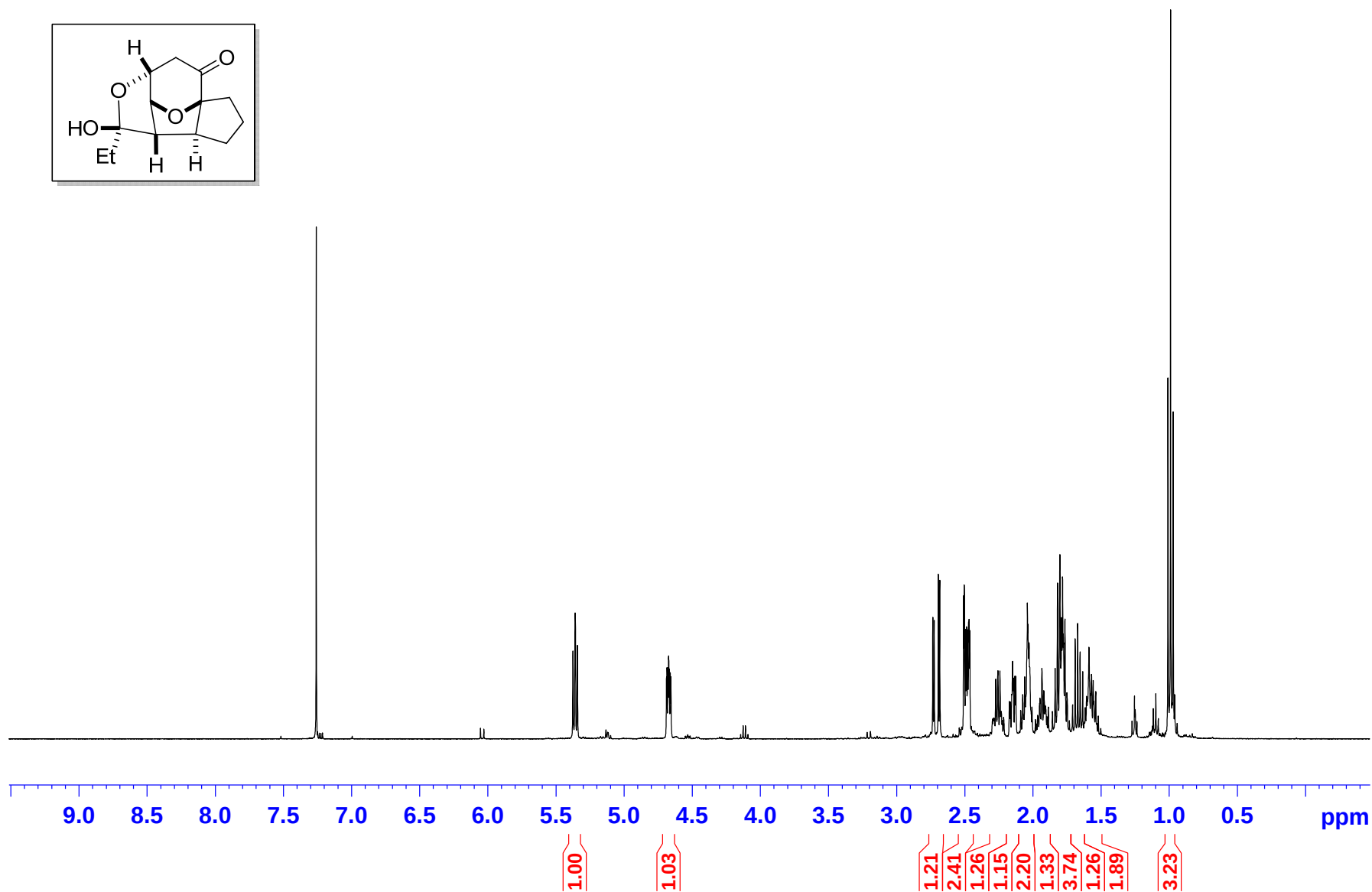
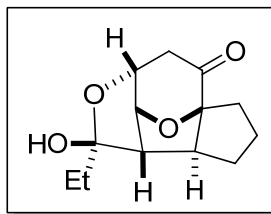
^{13}C NMR (125 MHz) of Lactol Ester S4 in CDCl_3



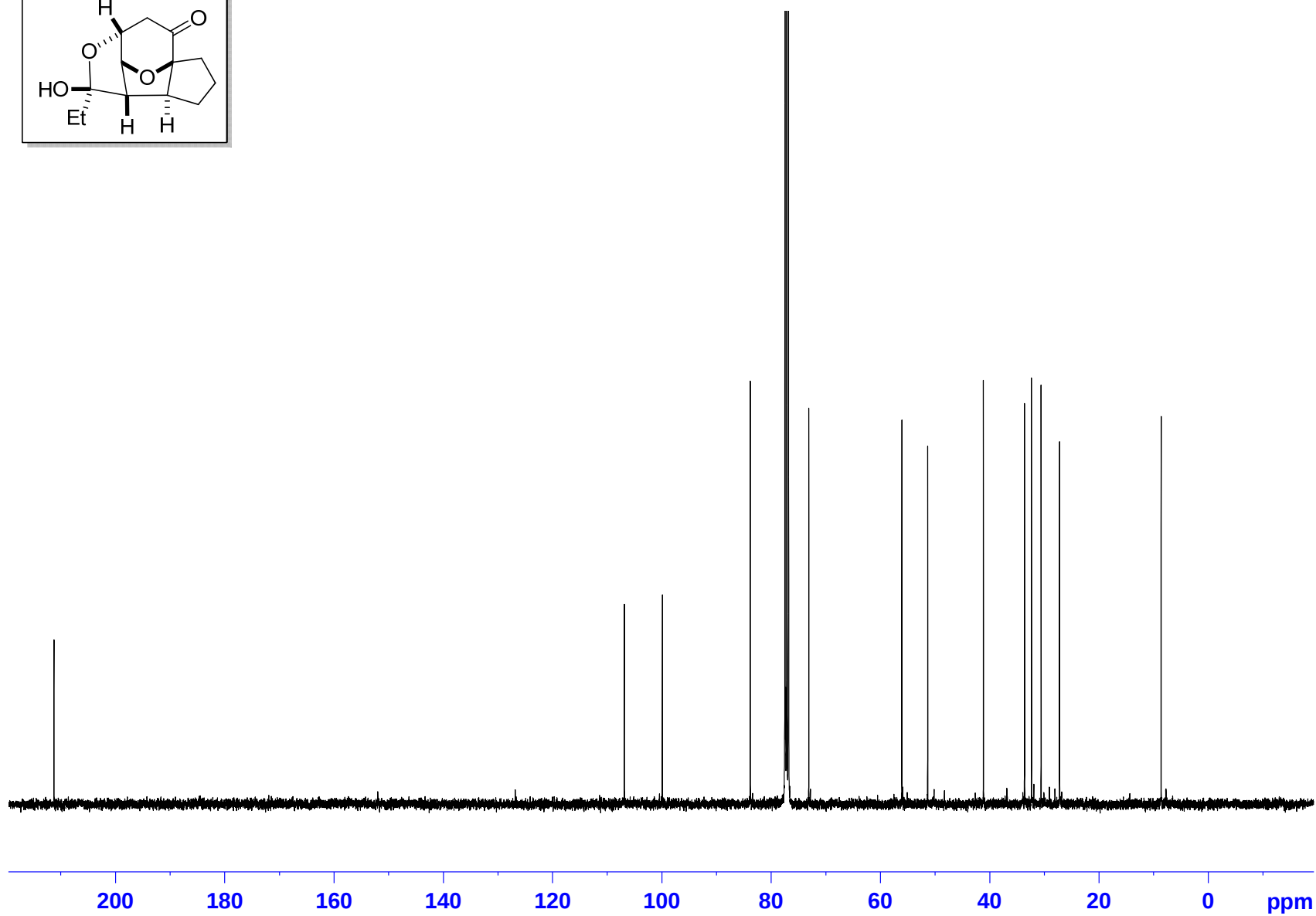
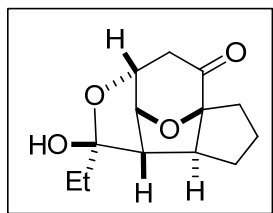
^1H NMR (500 MHz) of Methyl Lactol 4b in CDCl_3



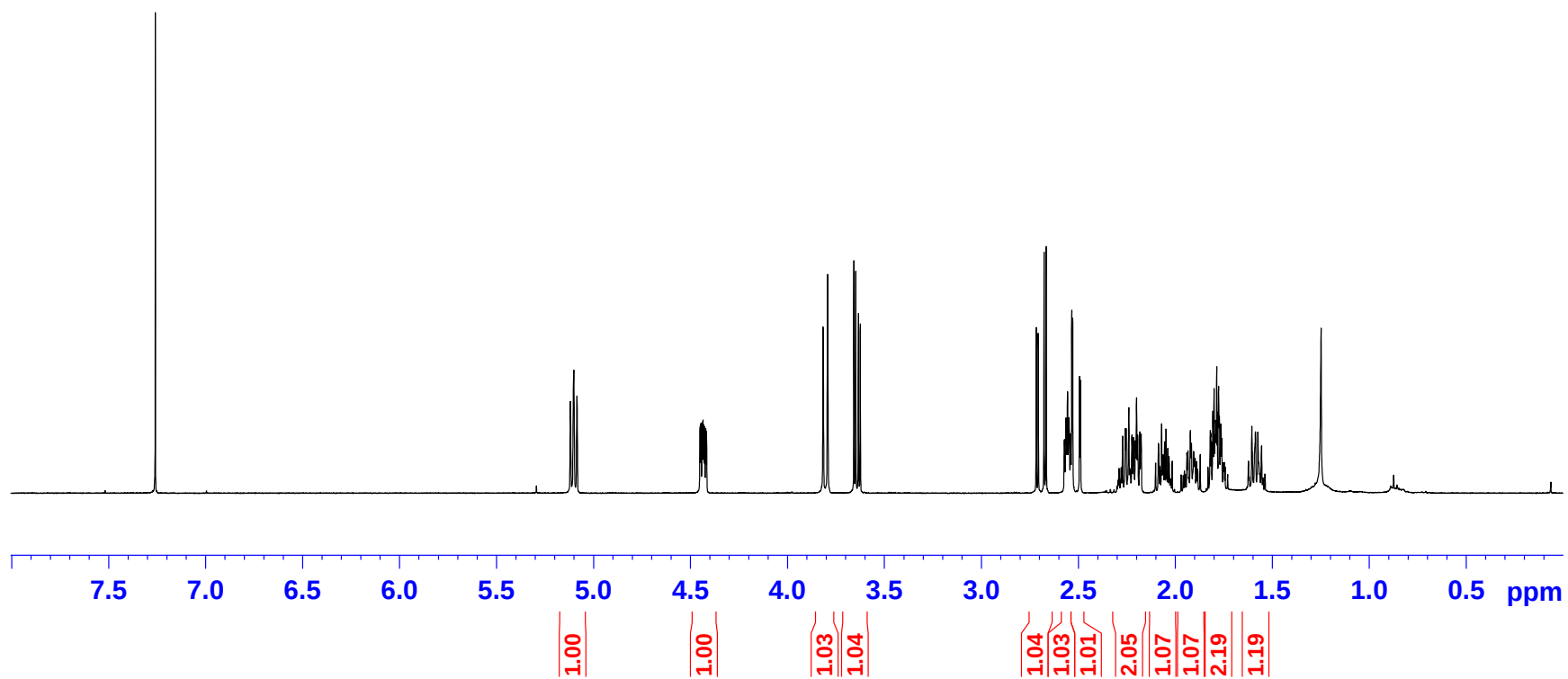
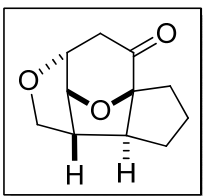
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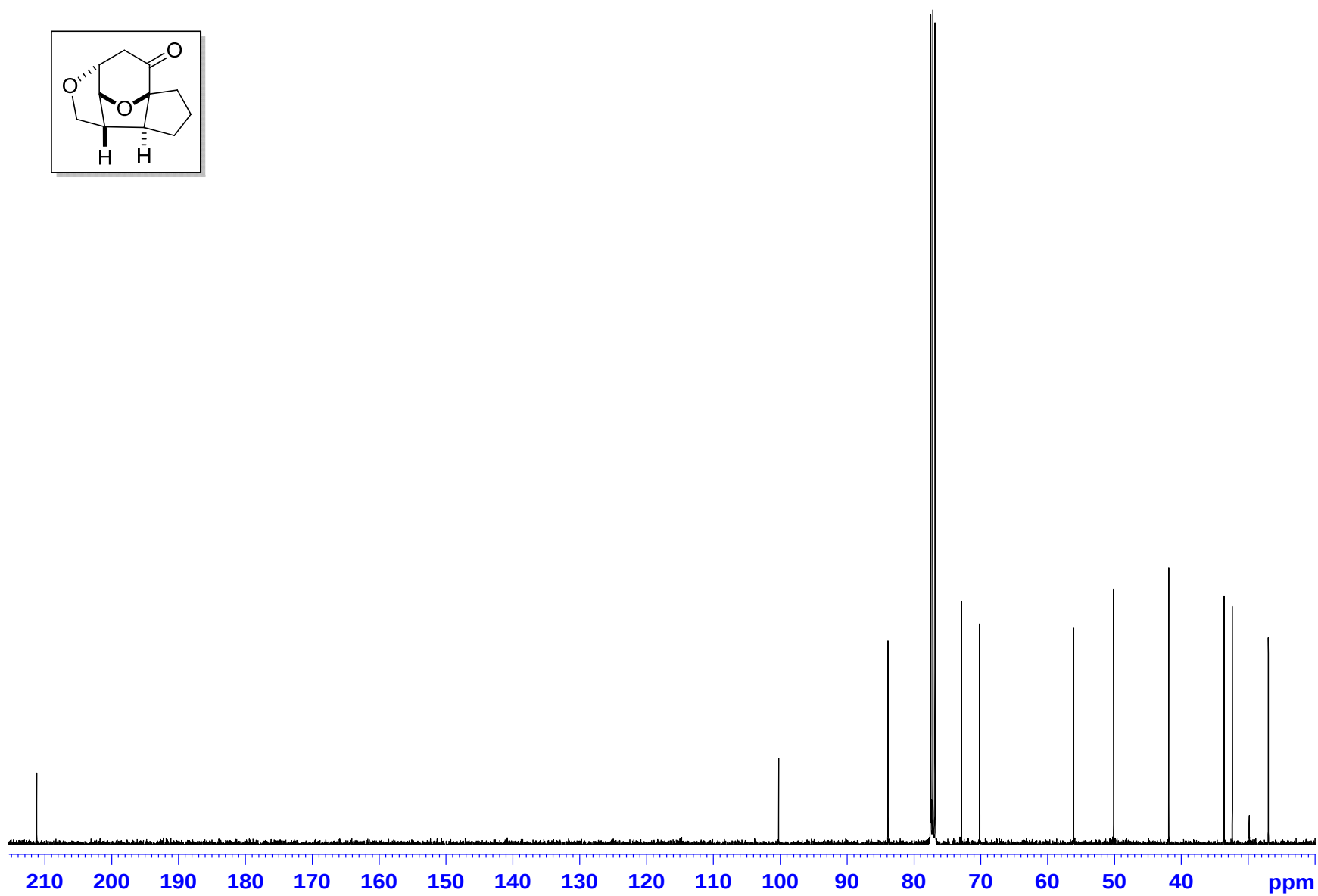
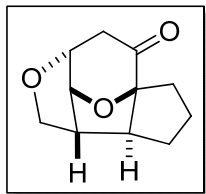
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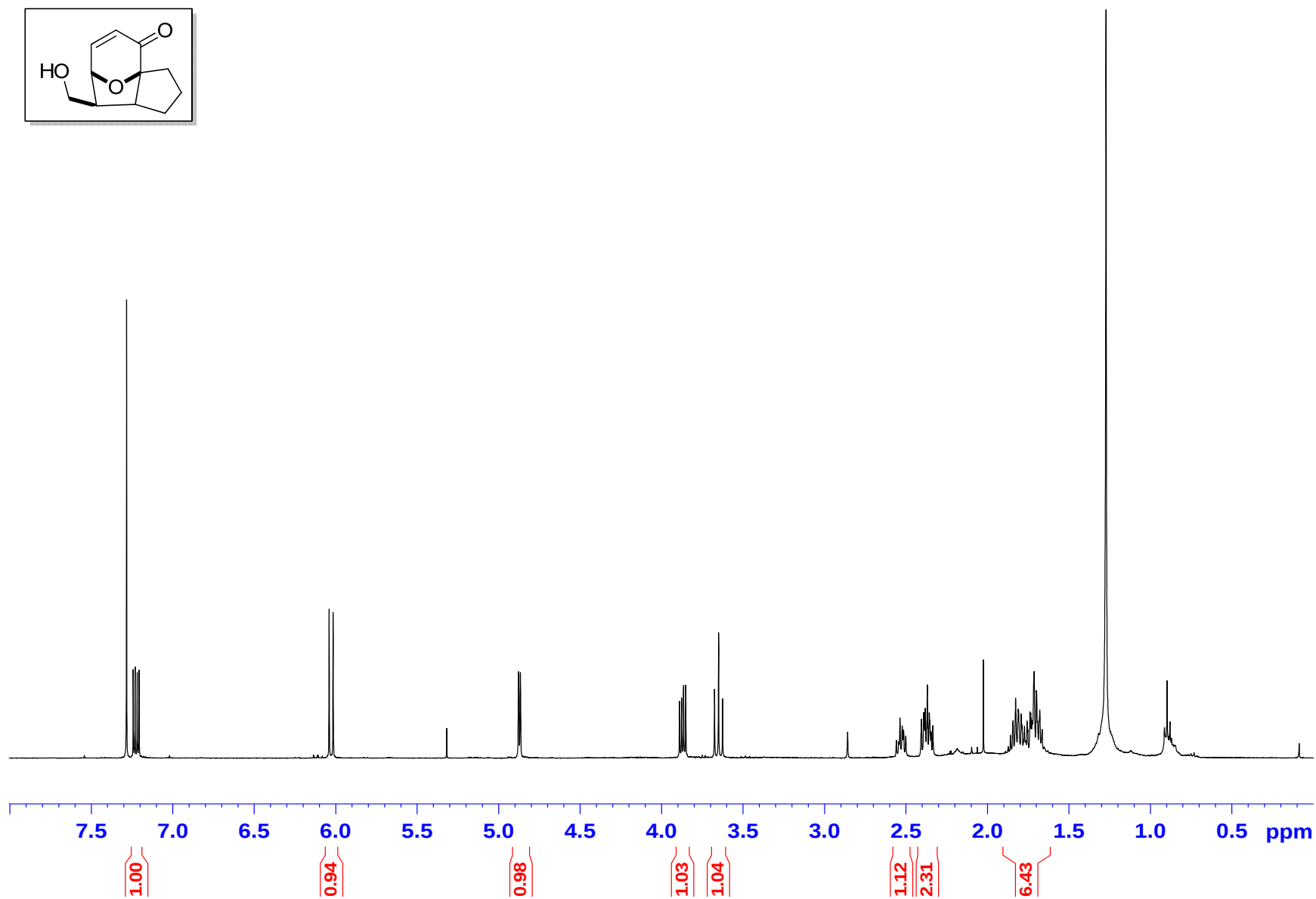
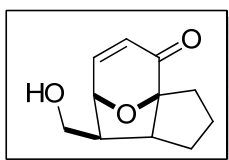
^{13}C NMR (100 MHz) of Ethyl Lactol 4c in CDCl_3



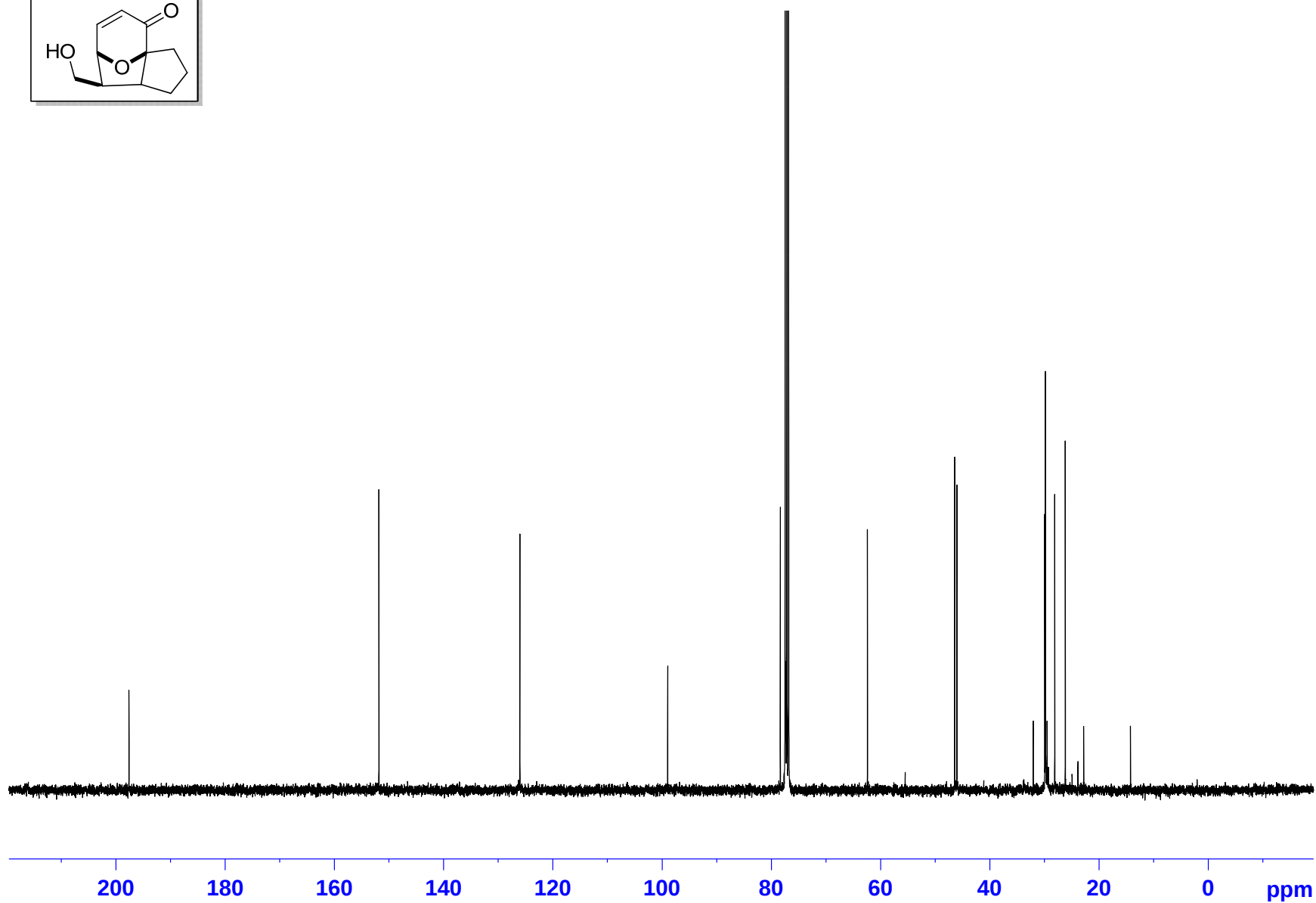
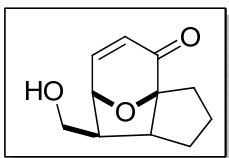
^1H NMR (400 MHz) of Bis-Ether Cycloadduct 4d in CDCl_3



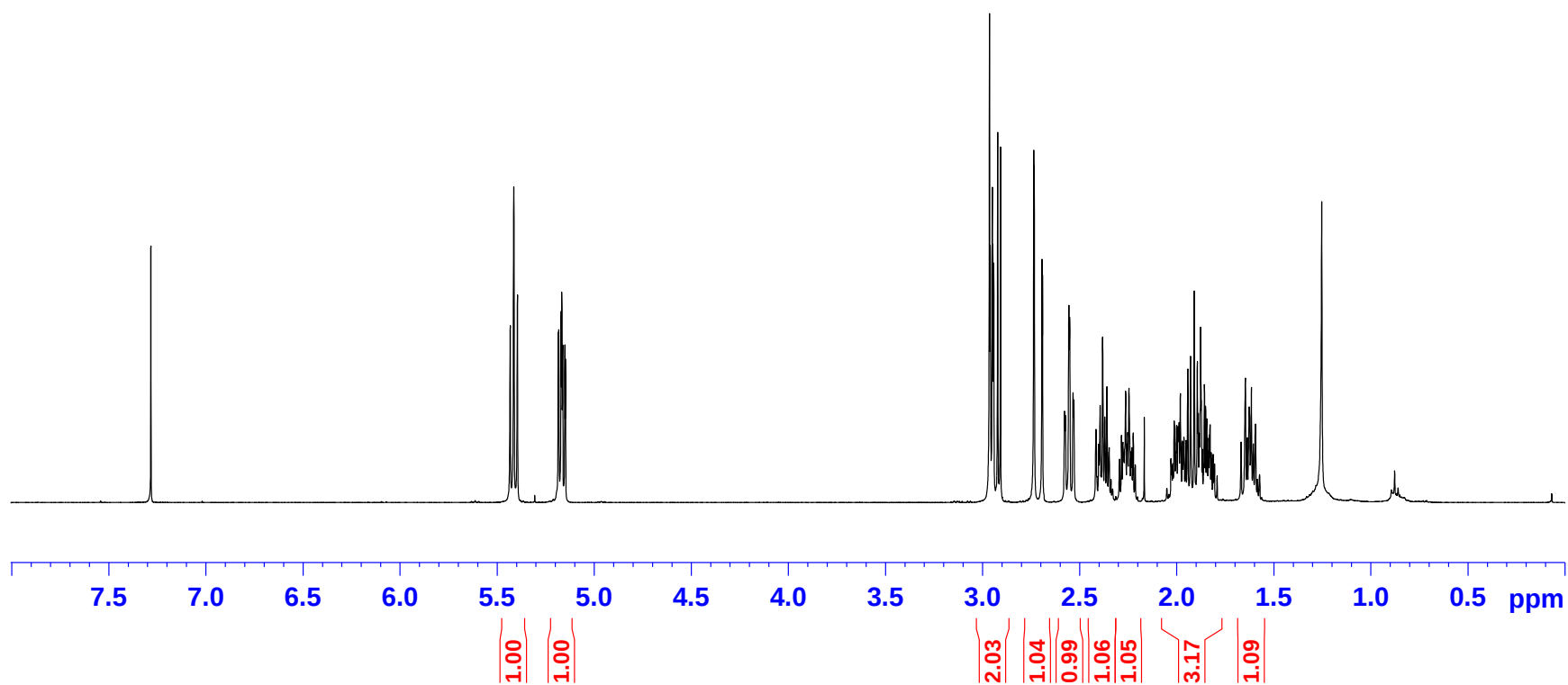
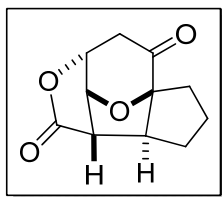
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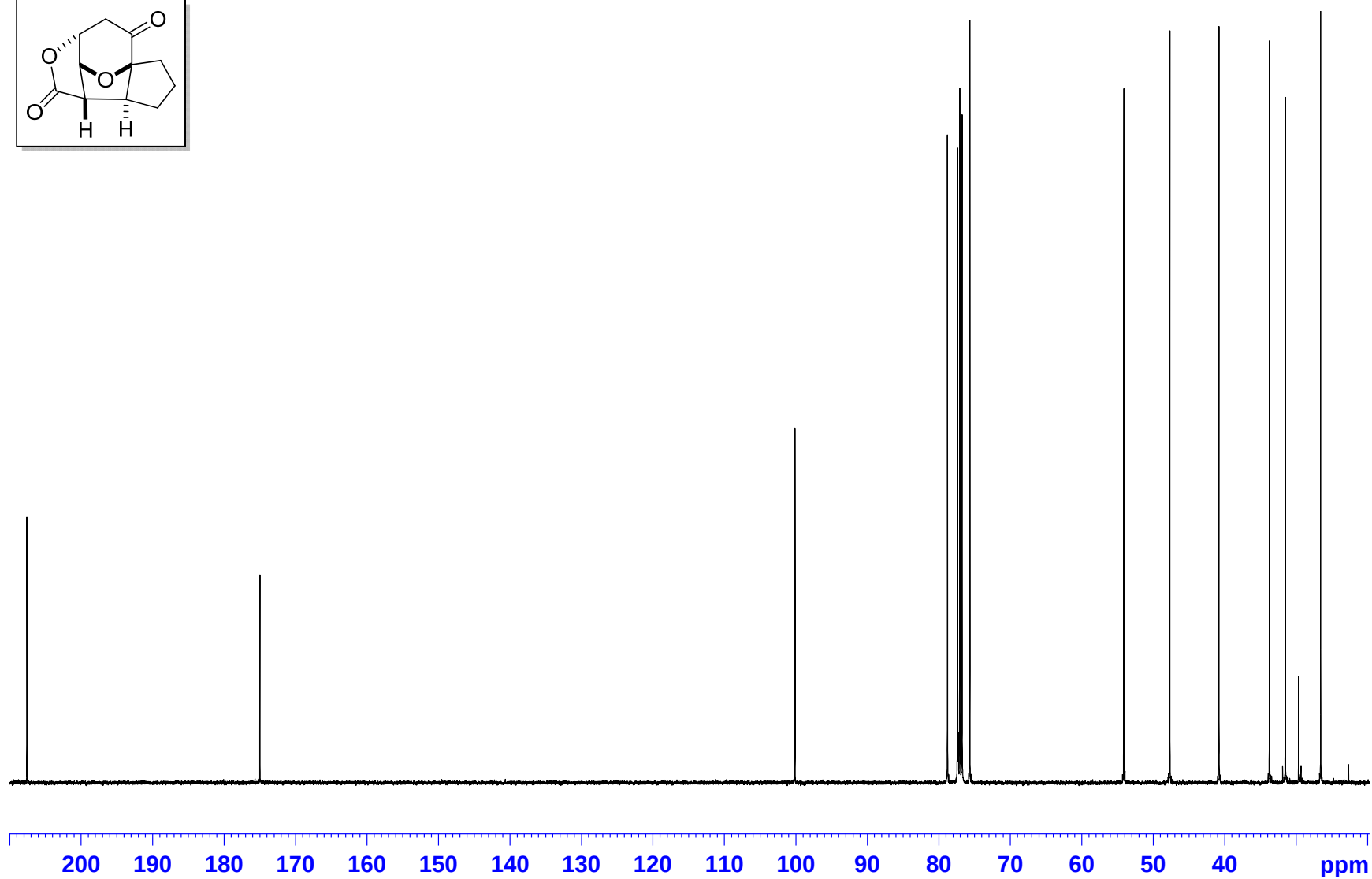
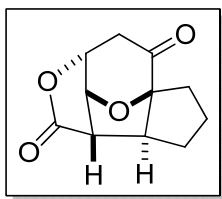
¹H NMR (400 MHz) of Enone Cycloadduct *exo*-3d in CDCl₃



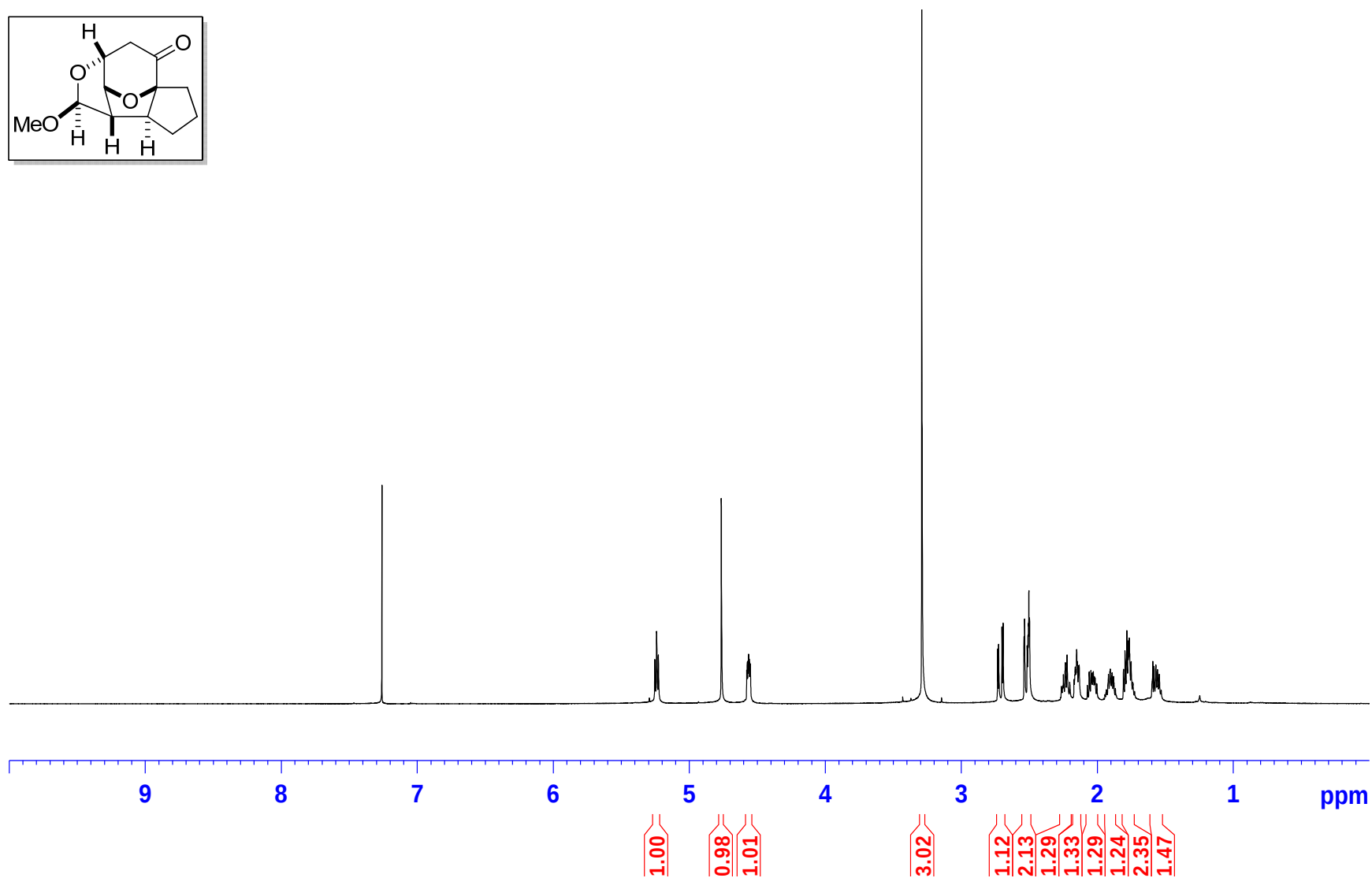
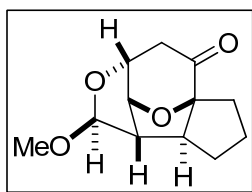
^{13}C NMR (100 MHz) of Enone Cycloadduct *exo*-3d in CDCl_3



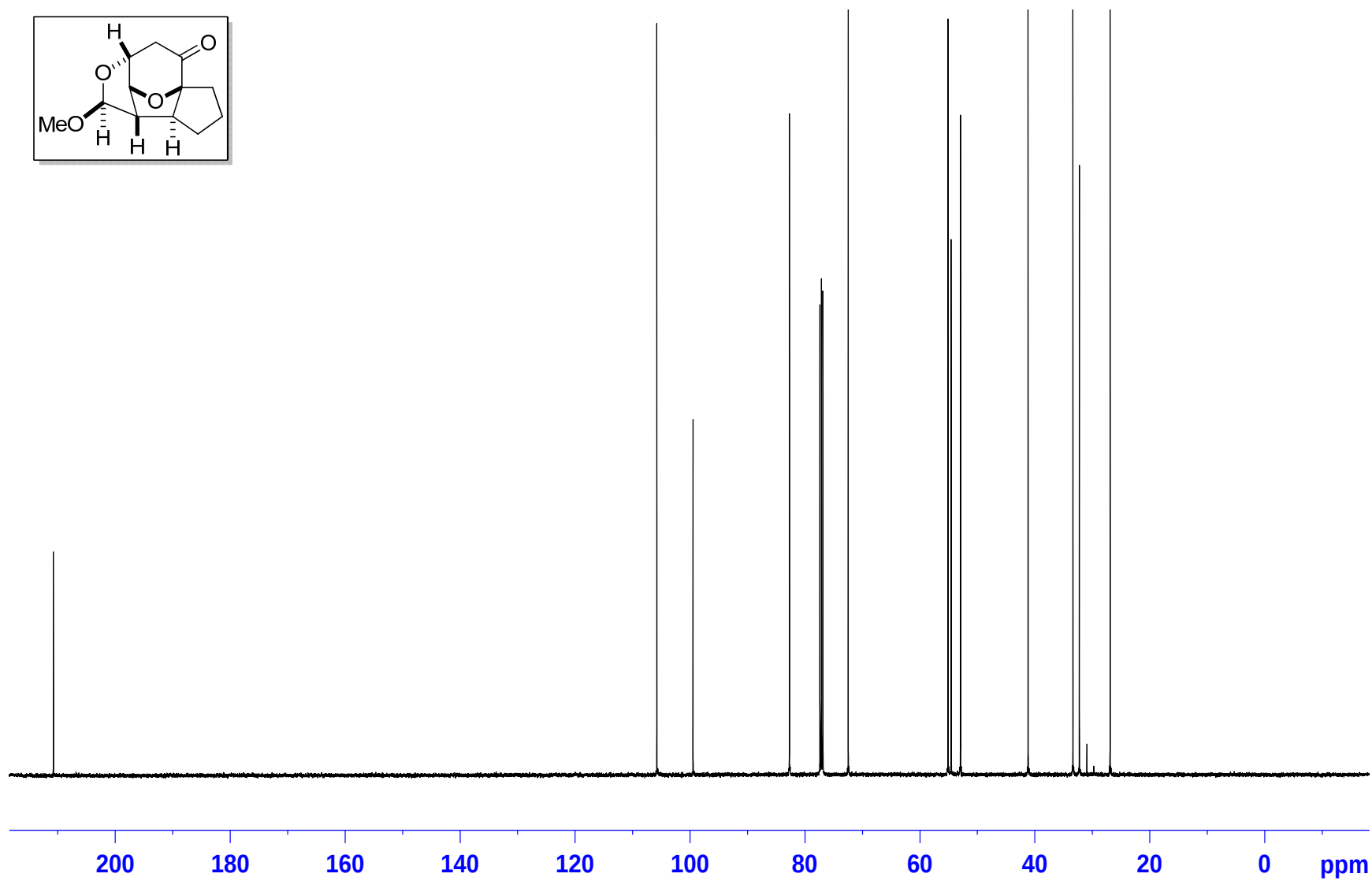
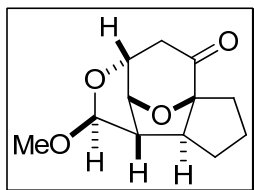
^1H NMR (400 MHz) of Lactone Cycloadduct 4e in CDCl_3



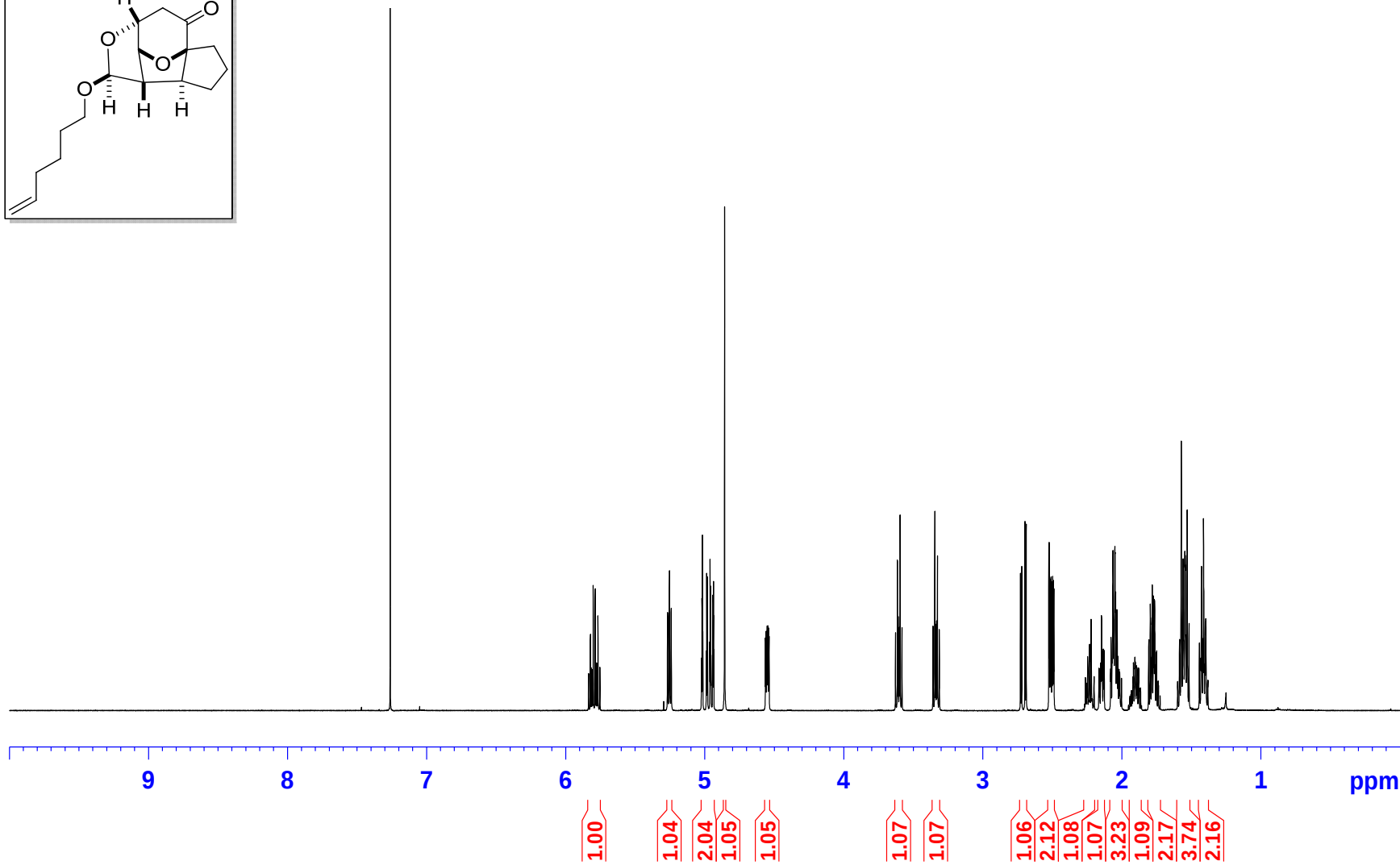
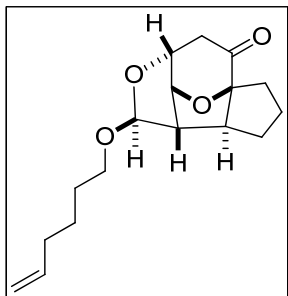
^{13}C NMR (100 MHz) of Lactone Cycloadduct 4e in CDCl_3



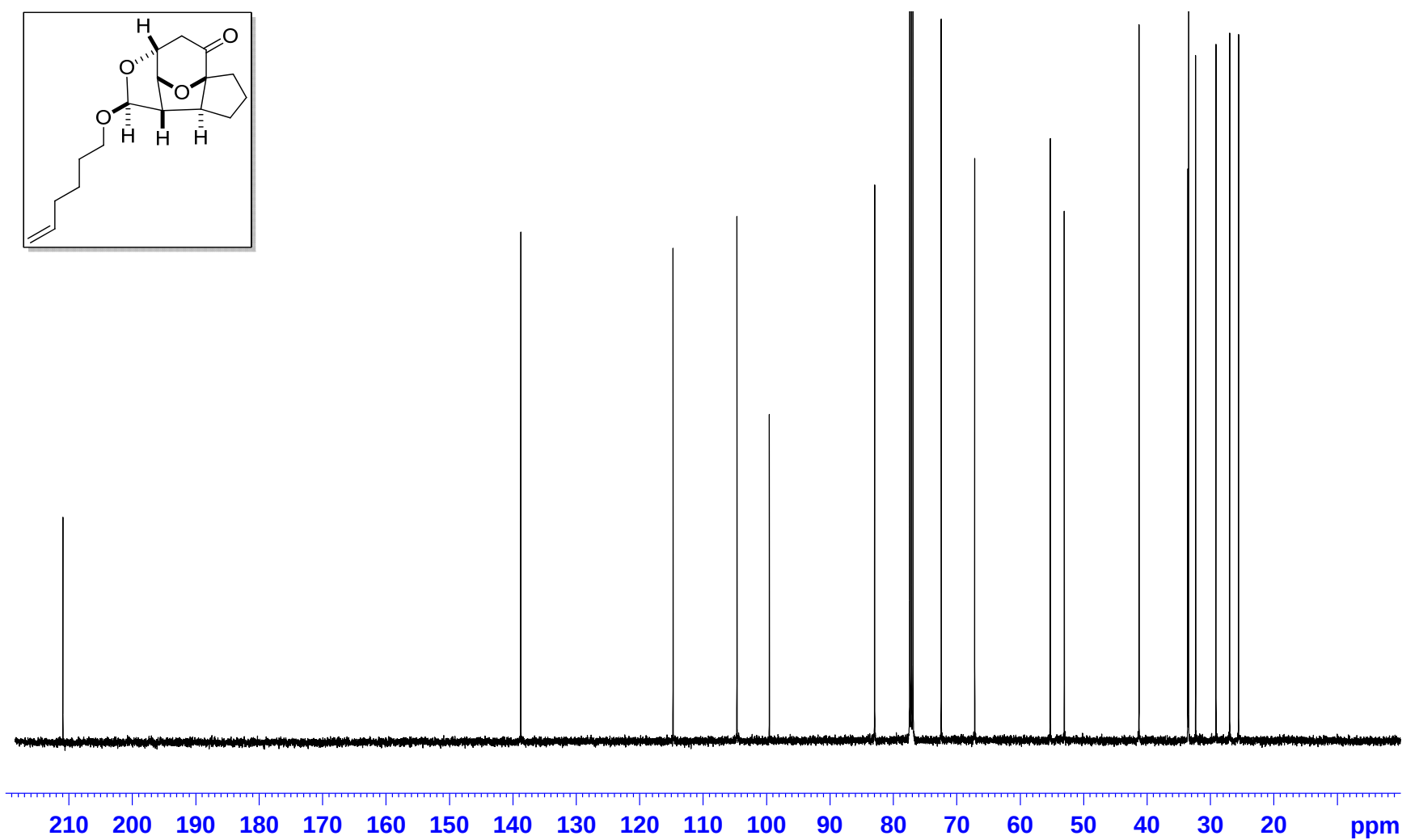
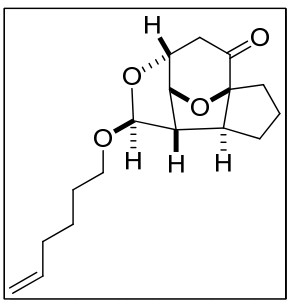
¹H NMR (500 MHz) of Lactol 4f in CDCl₃



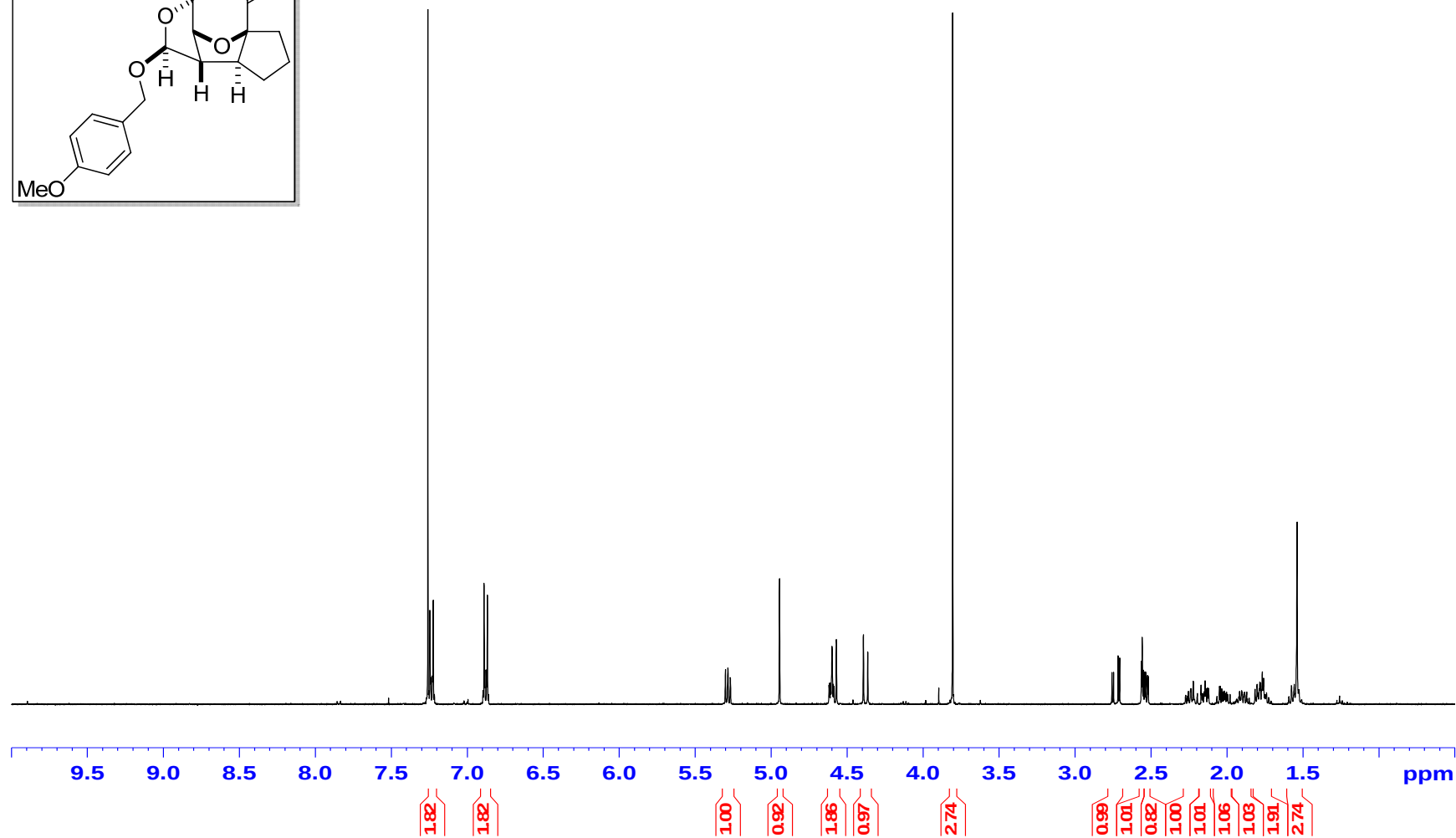
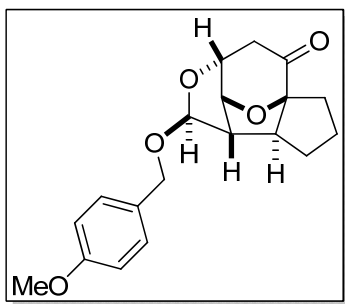
^{13}C NMR (125 MHz) of Lactol 4f in CDCl_3



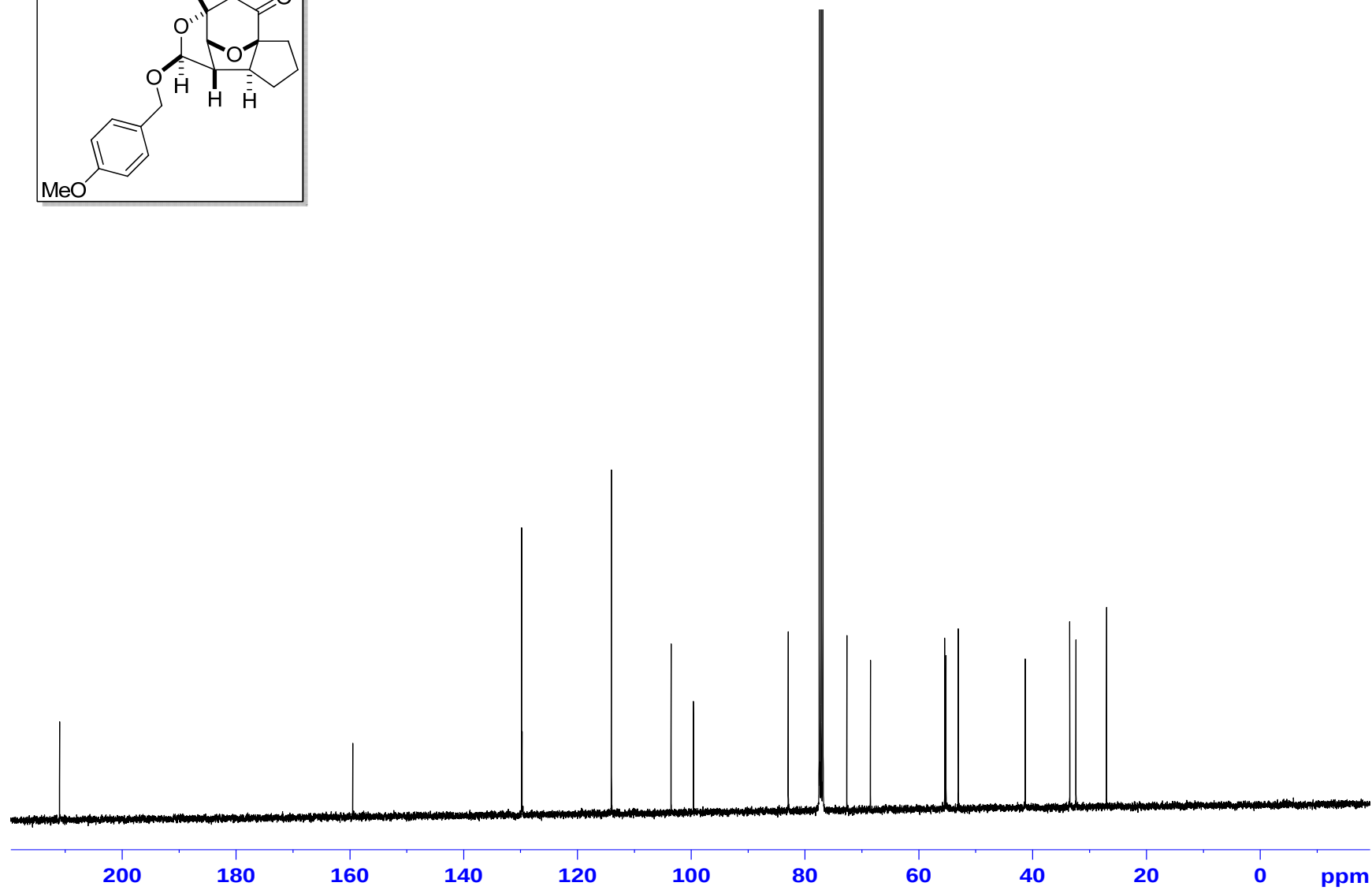
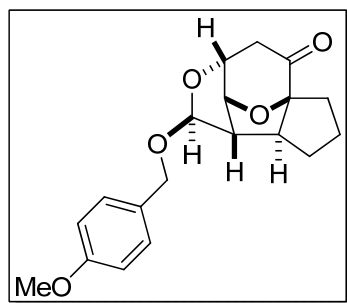
^1H NMR (500 MHz) of Lactol 4g in CDCl_3



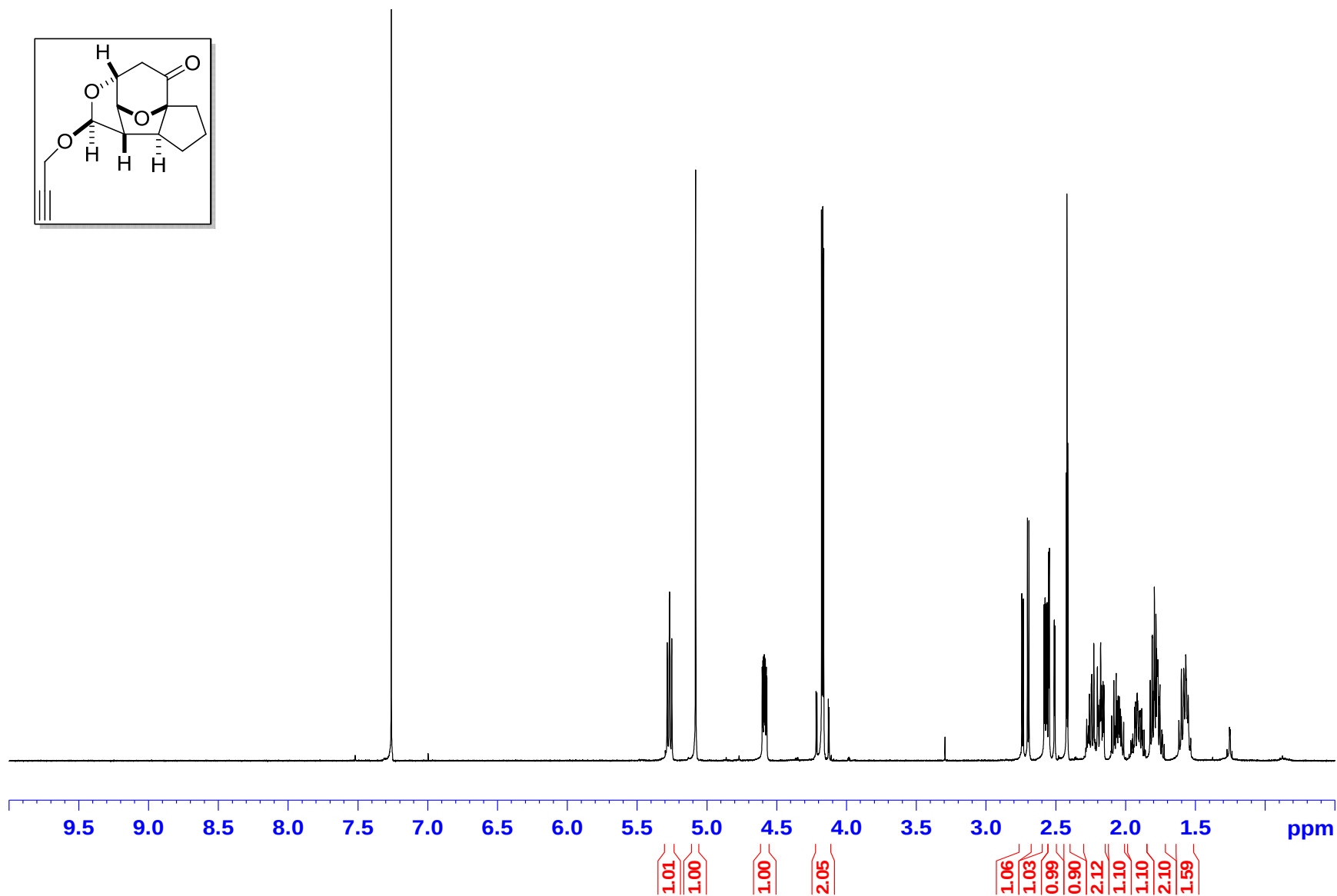
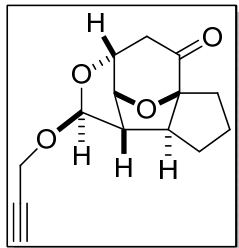
^{13}C NMR (125 MHz) of Lactol 4g in CDCl_3



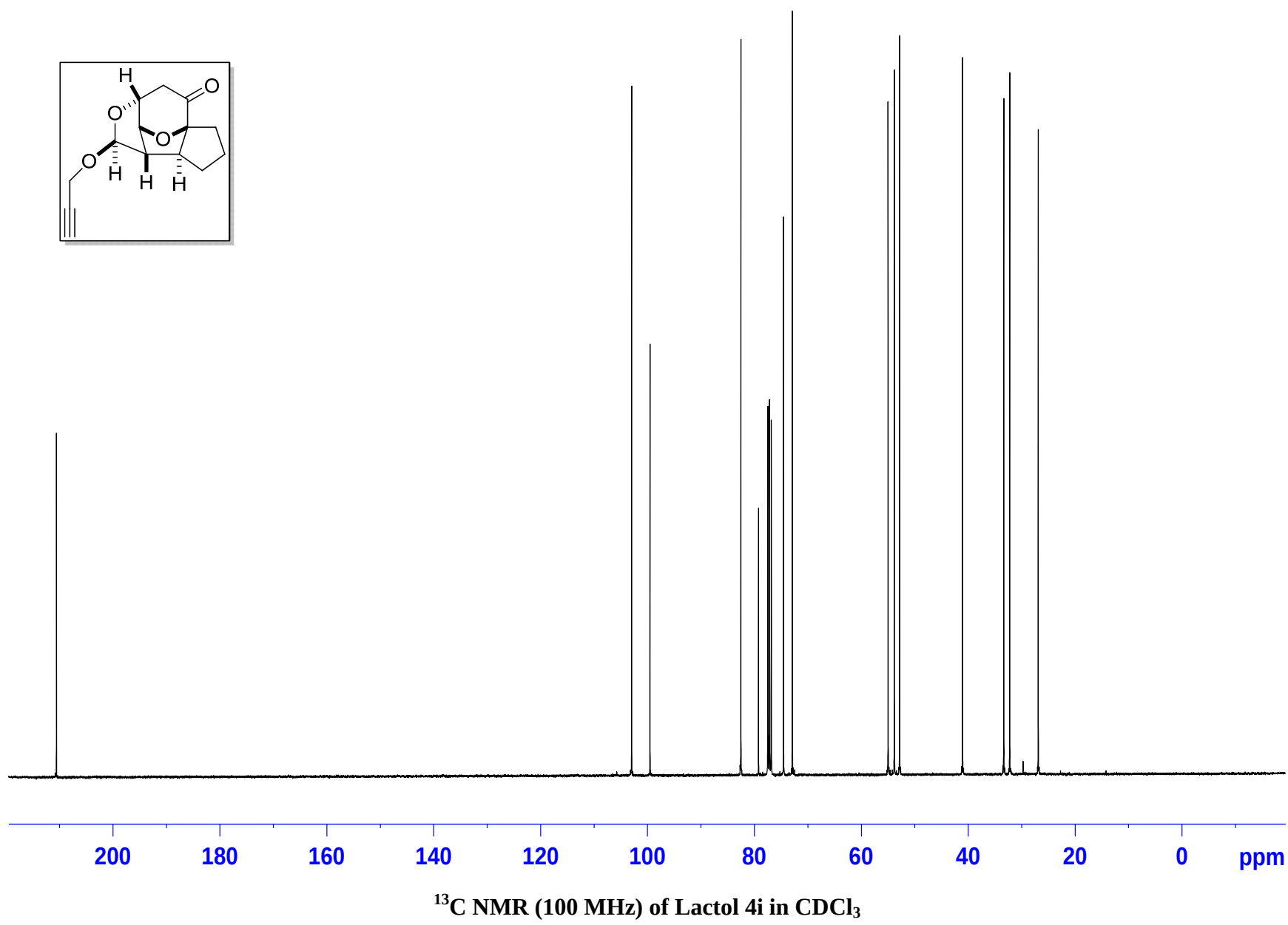
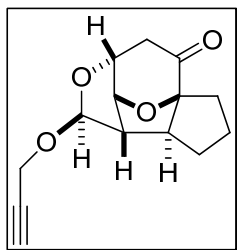
¹H NMR (400 MHz) of Lactol 4h in CDCl₃

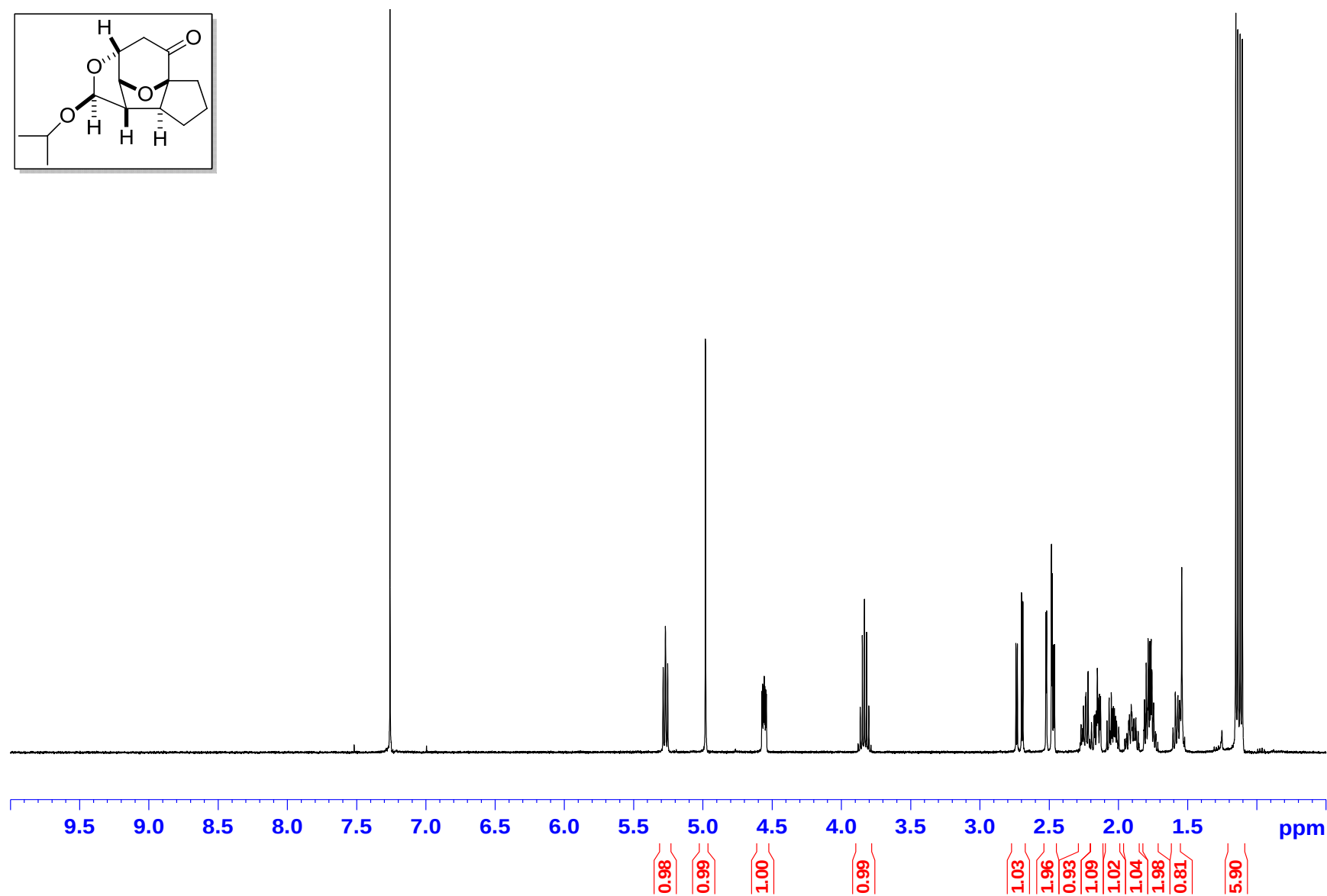
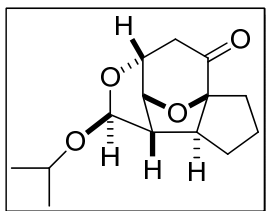


^{13}C NMR (100 MHz) of Lactol 4h in CDCl_3

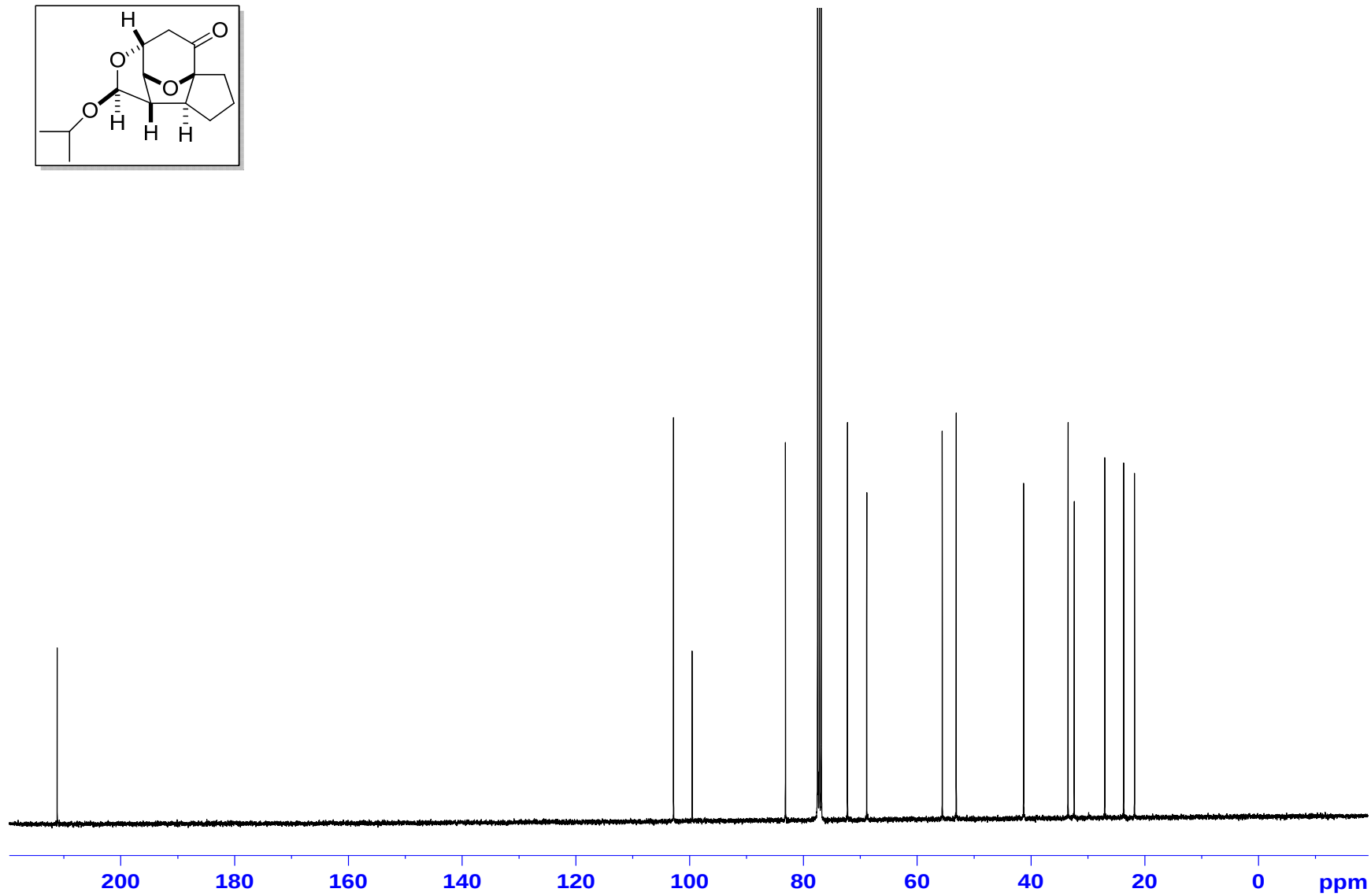
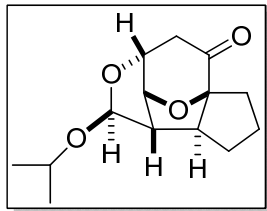


¹H NMR (400 MHz) of Lactol 4i in CDCl₃

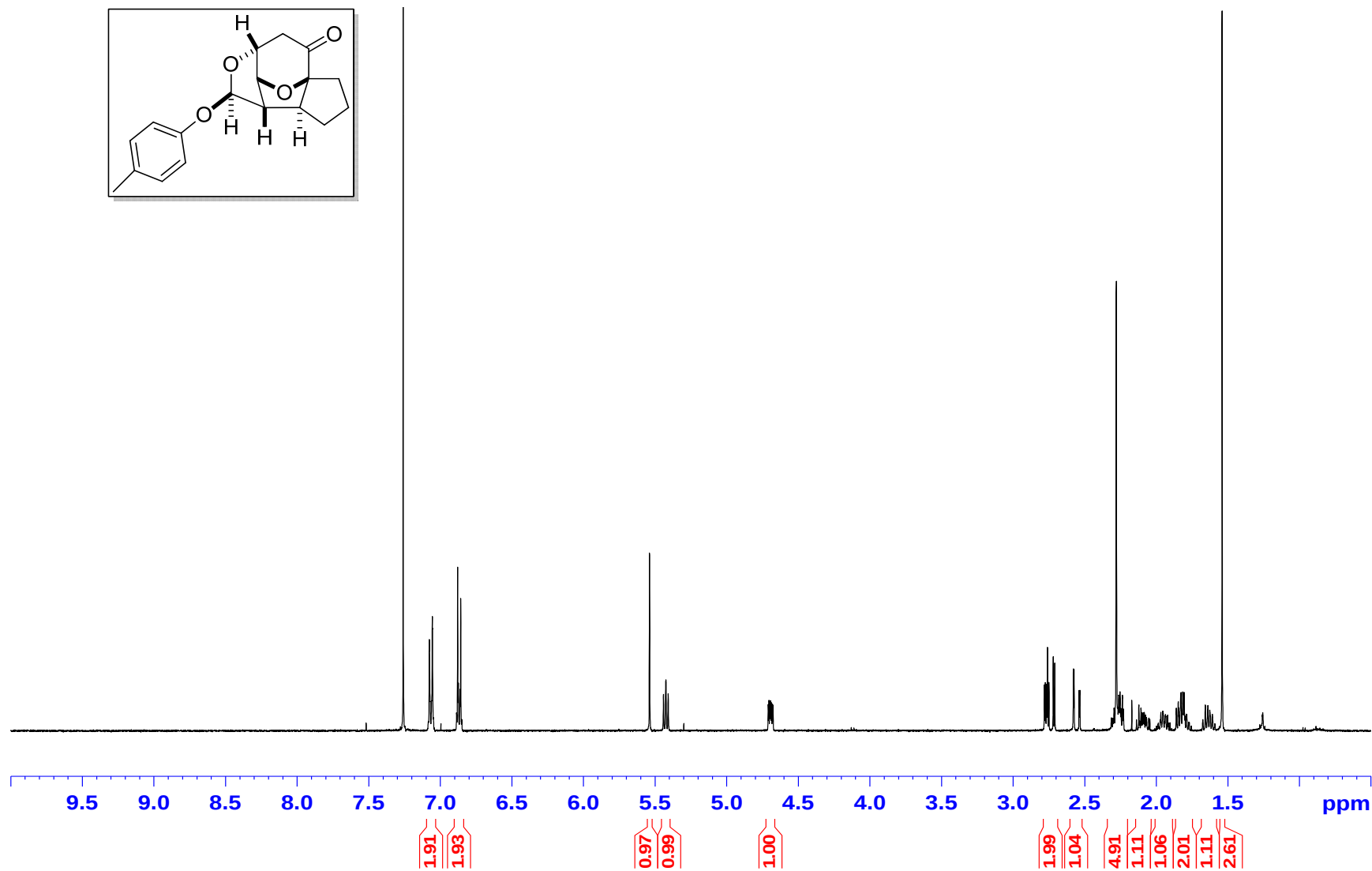
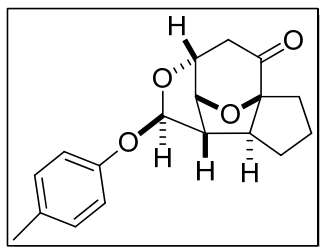




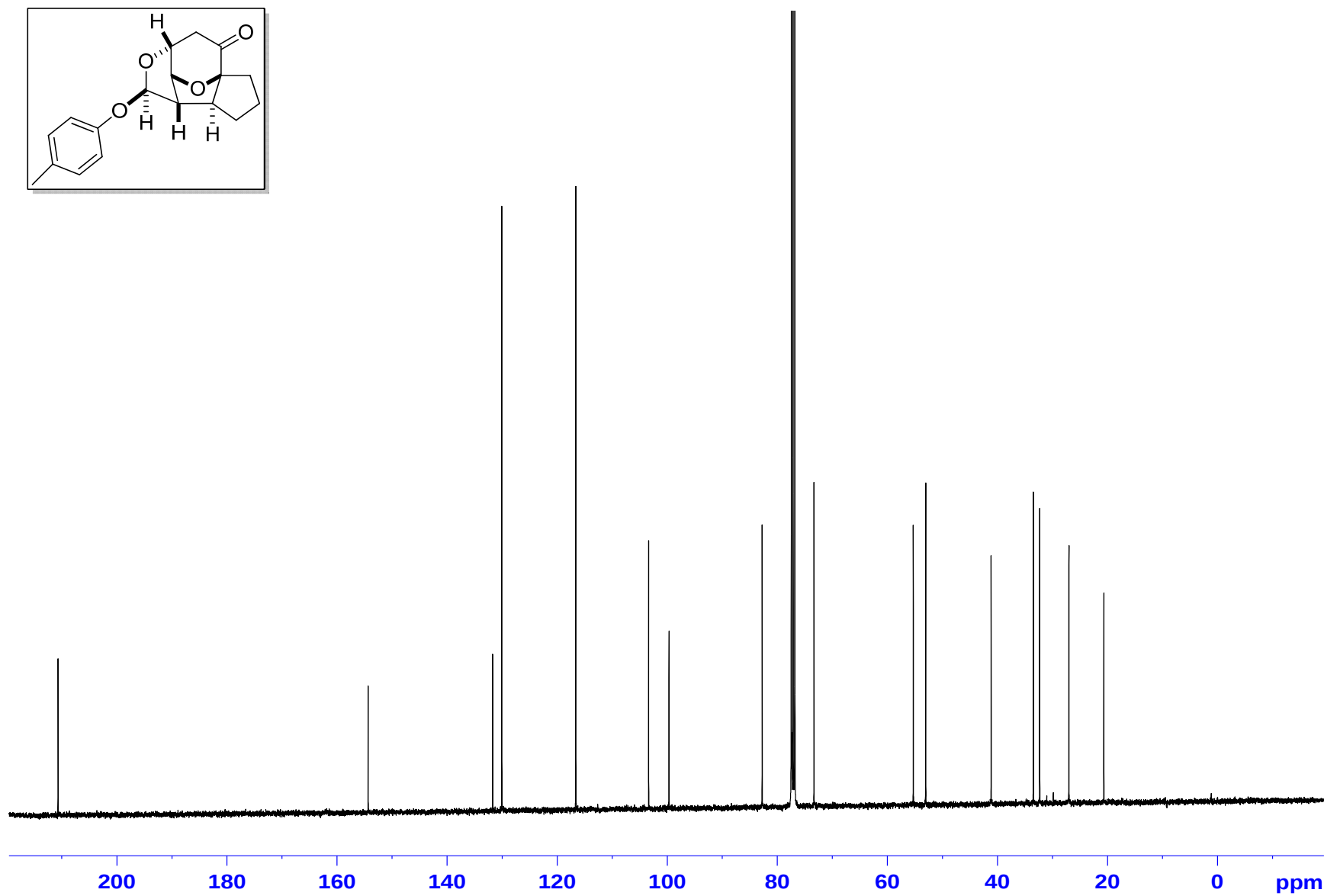
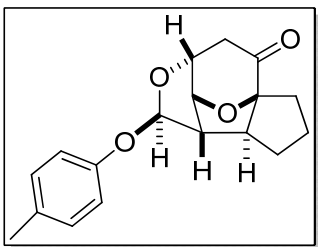
^1H NMR (400 MHz) of Lactol 4j in CDCl_3



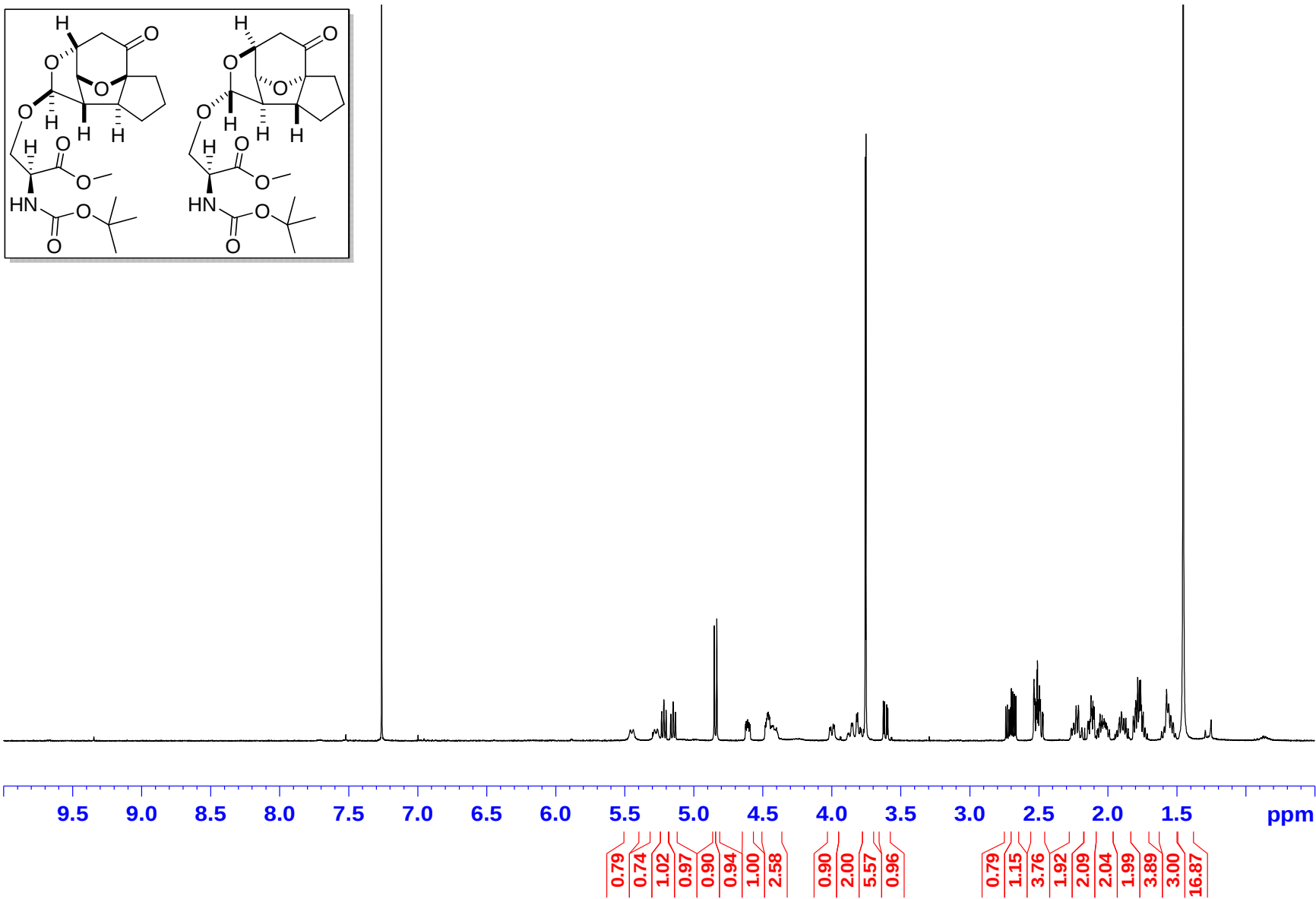
^{13}C NMR (100 MHz) of Lactol 4j in CDCl_3



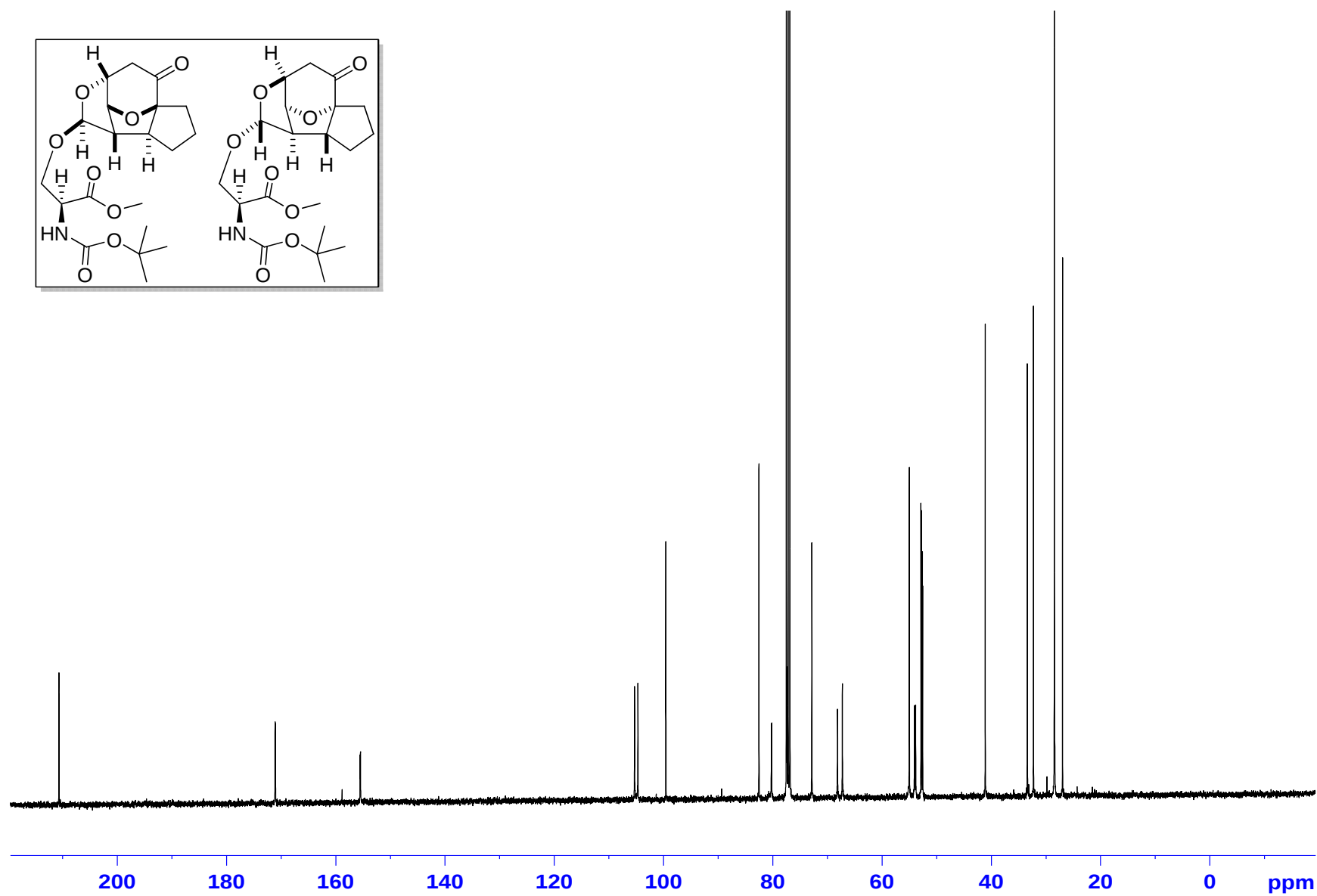
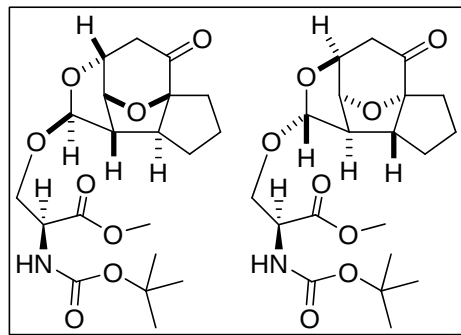
¹H NMR (400 MHz) of Lactol 4l in CDCl₃



^{13}C NMR (100 MHz) of Lactol 4l in CDCl_3



^1H NMR (400 MHz) of Lactol 4m in CDCl_3



^{13}C NMR (100 MHz) of Lactol 4m in CDCl_3