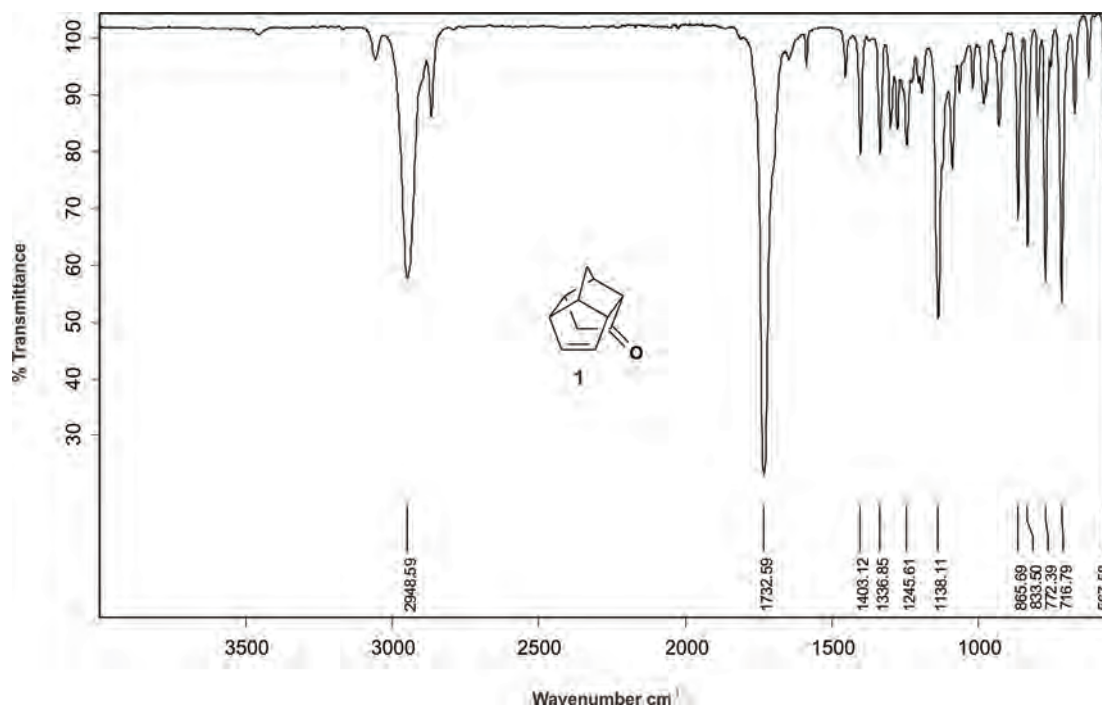


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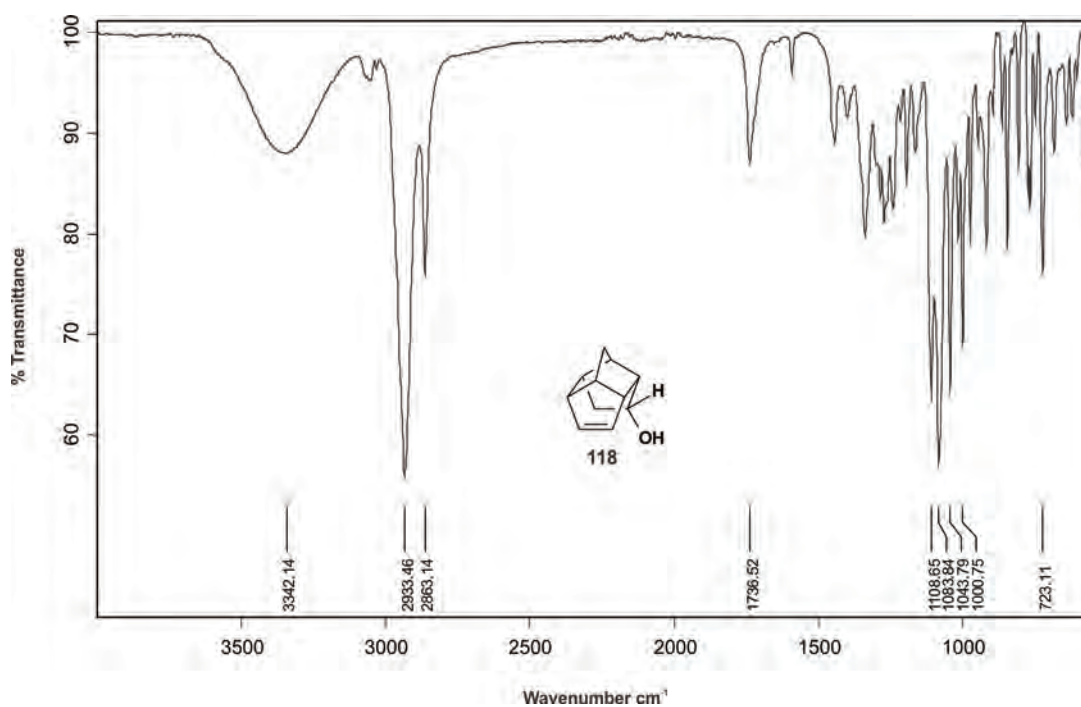
Spectral data

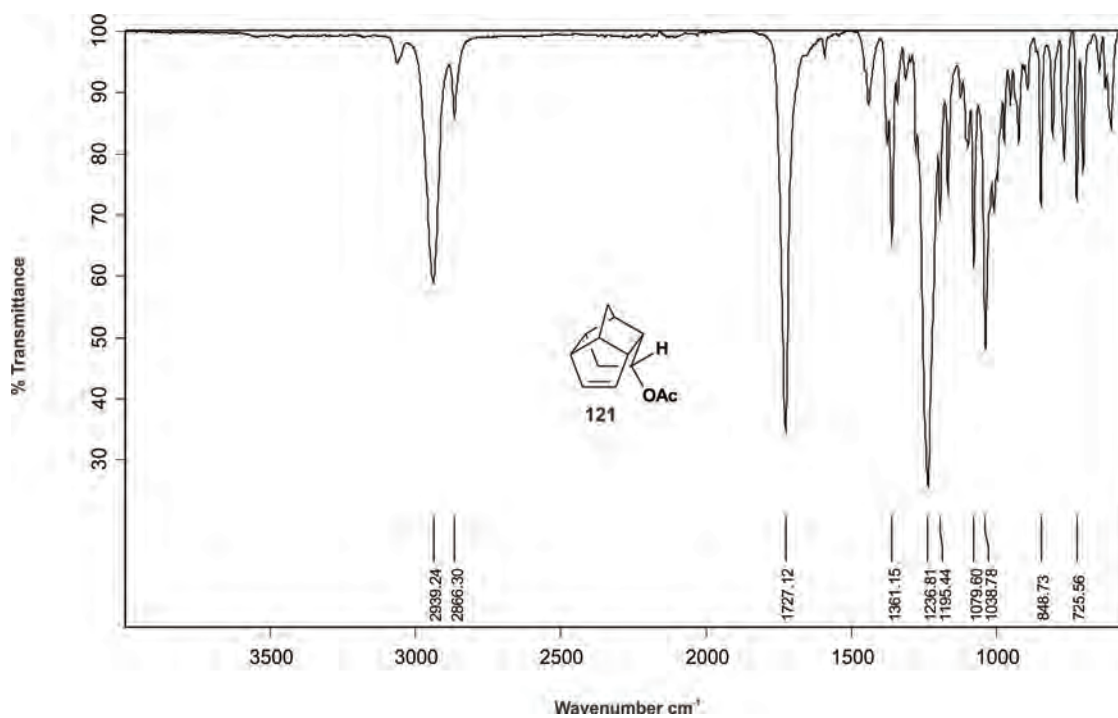
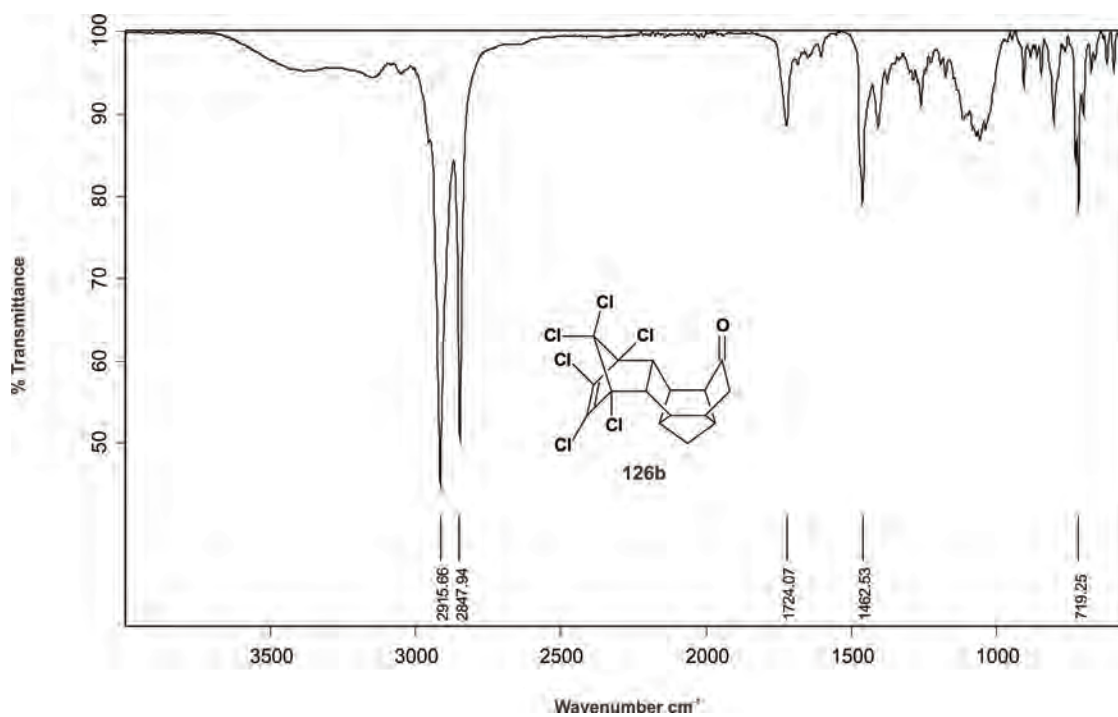
5.1. IR spectra

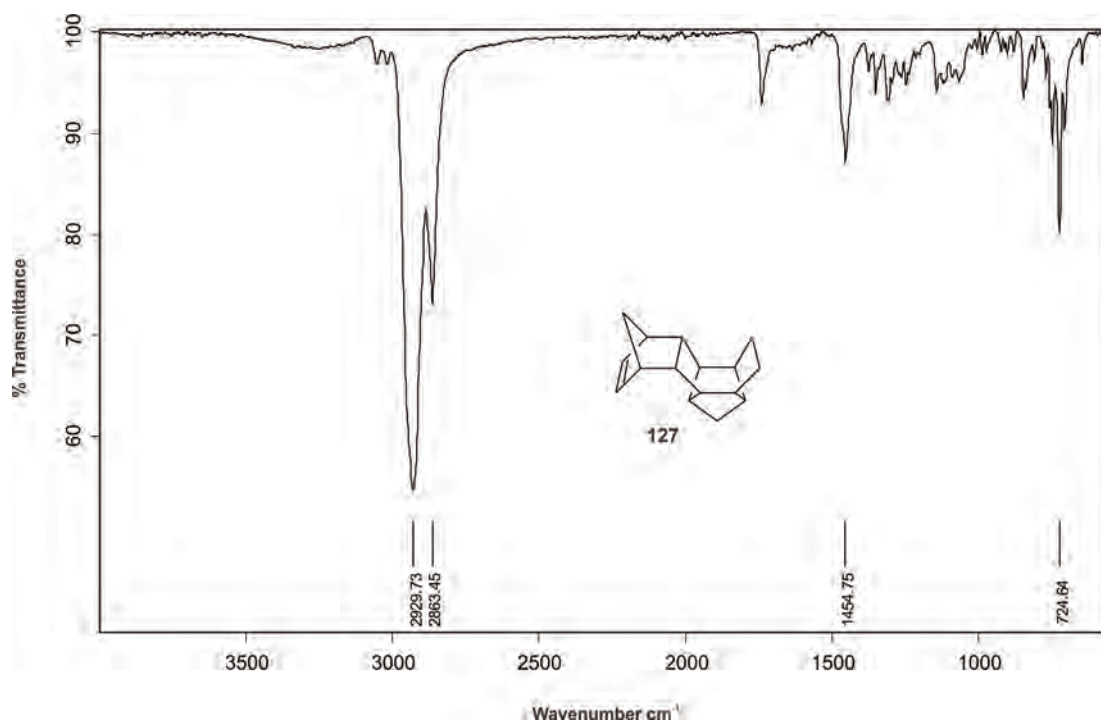
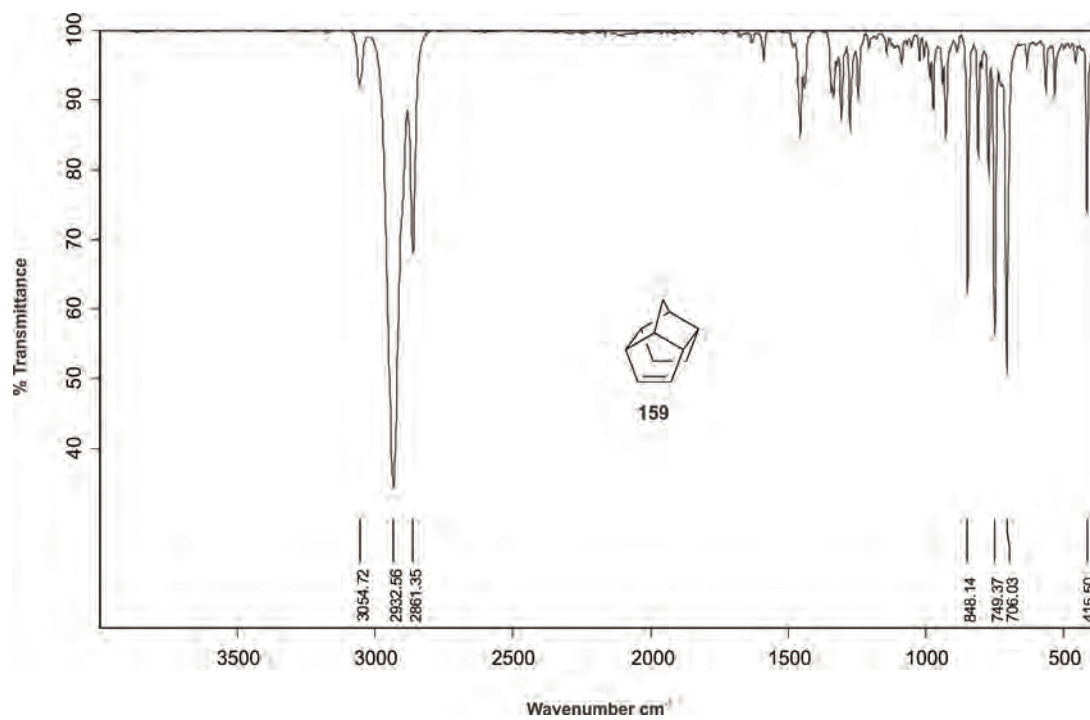
5.1.1. Infrared spectrum of **1**

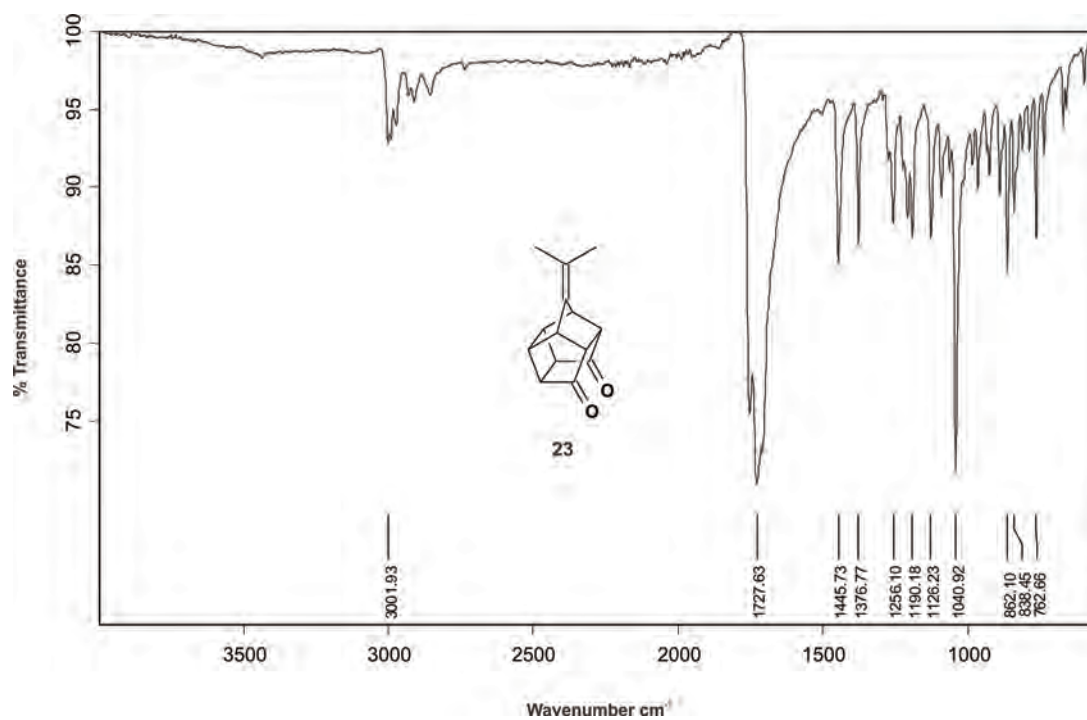
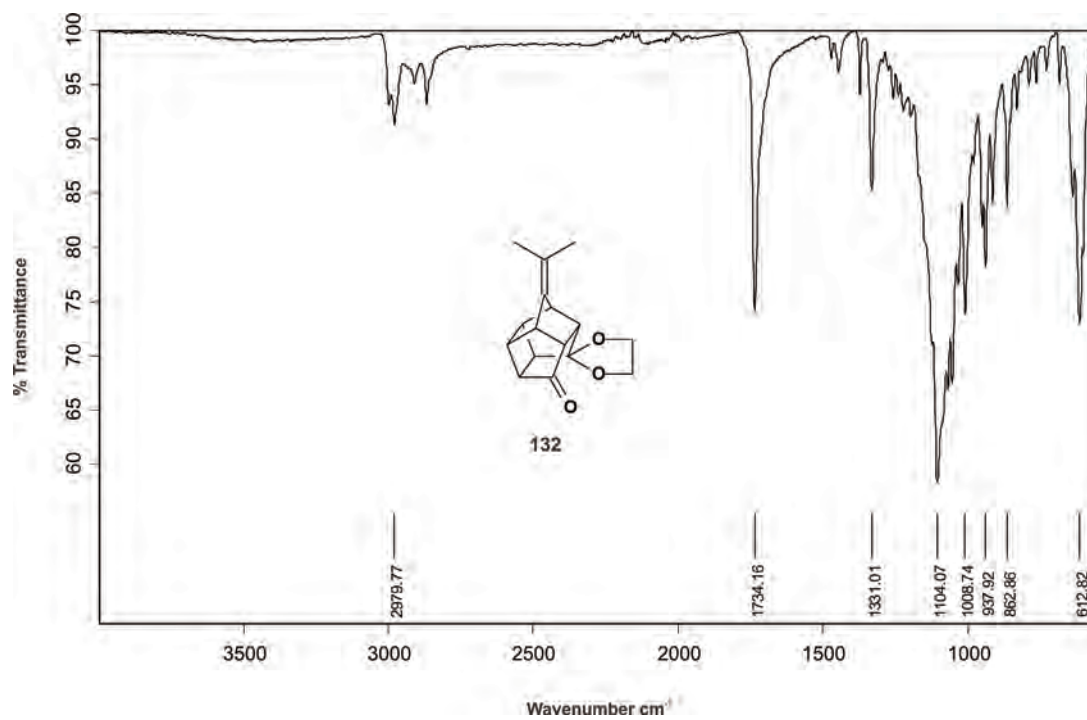


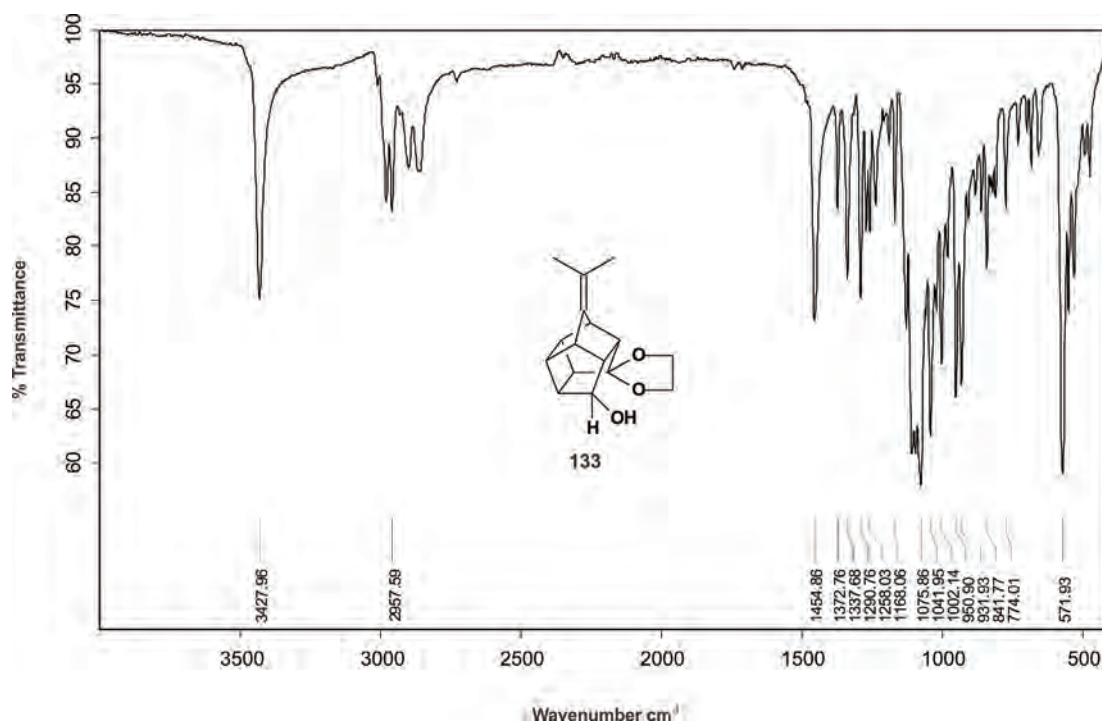
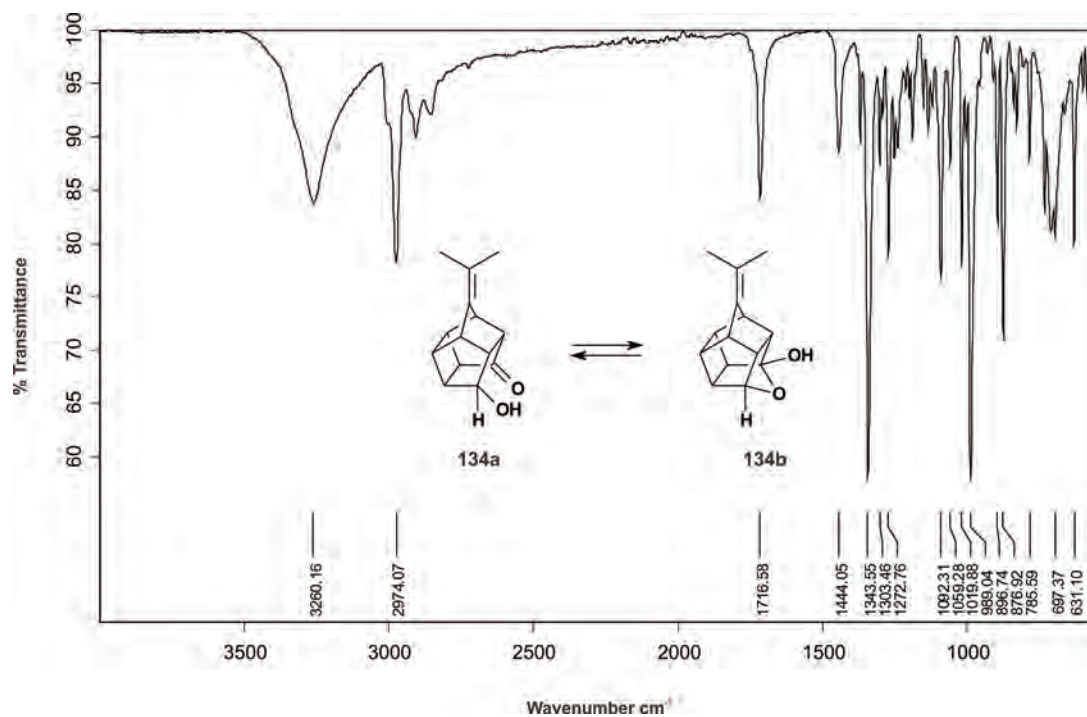
5.1.2. Infrared spectrum of **118**

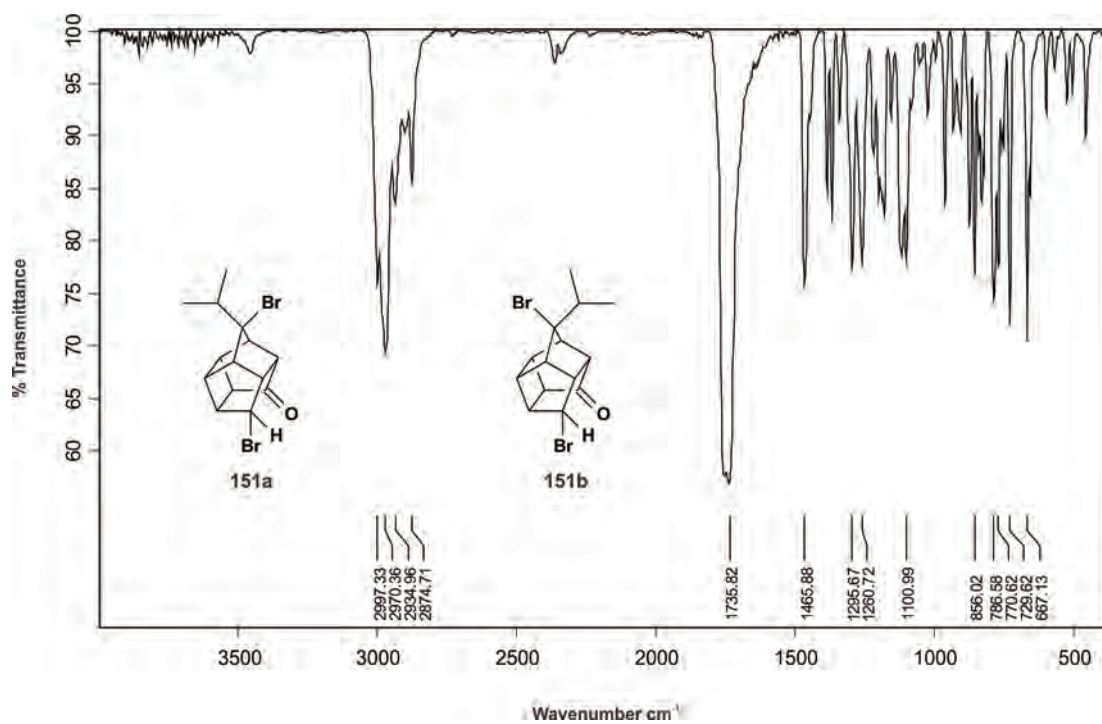
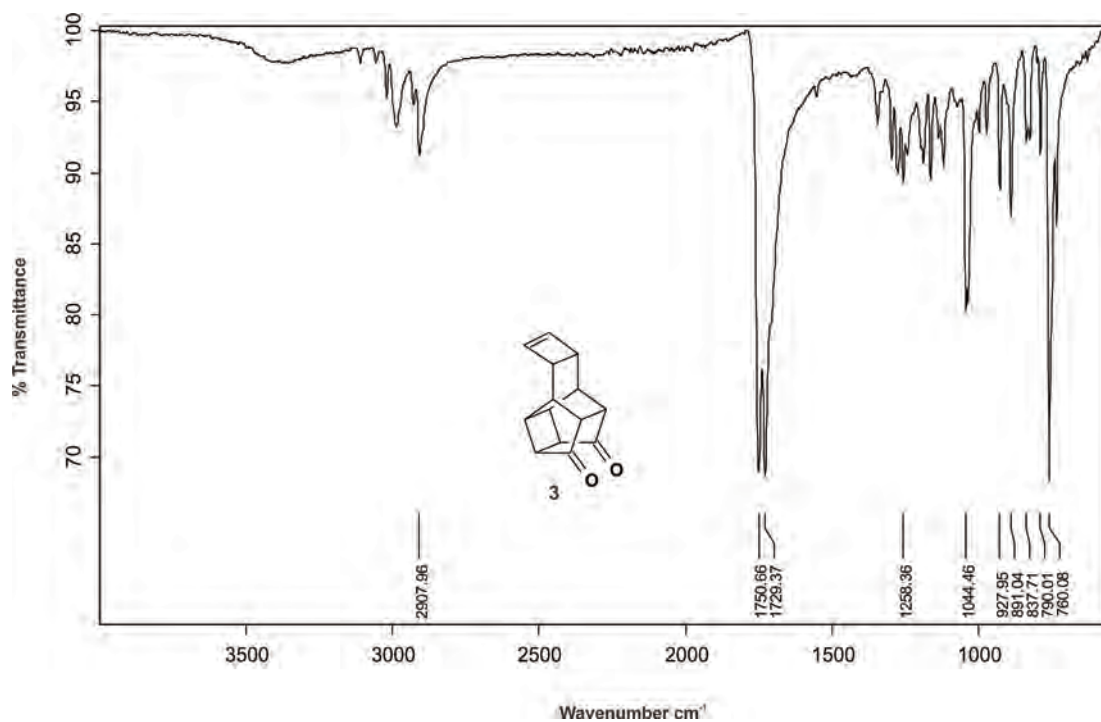


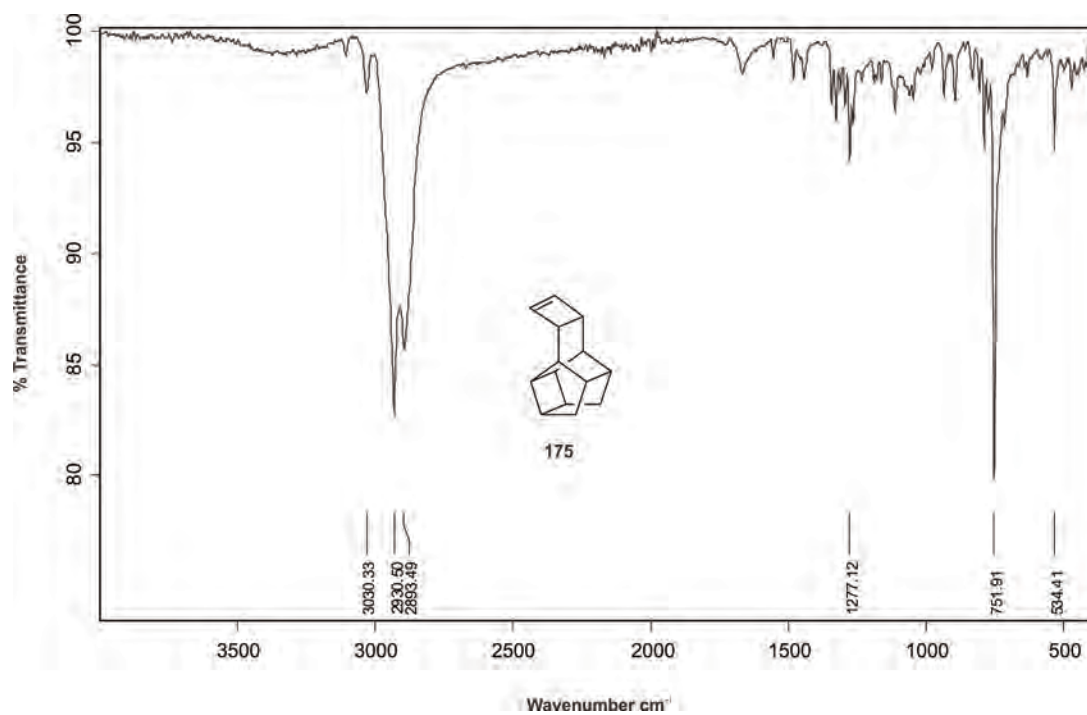
5.1.3. Infrared spectrum of **121**5.1.4. Infrared spectrum of **126b**

5.1.5. Infrared spectrum of **127**5.1.6. Infrared spectrum of **159**

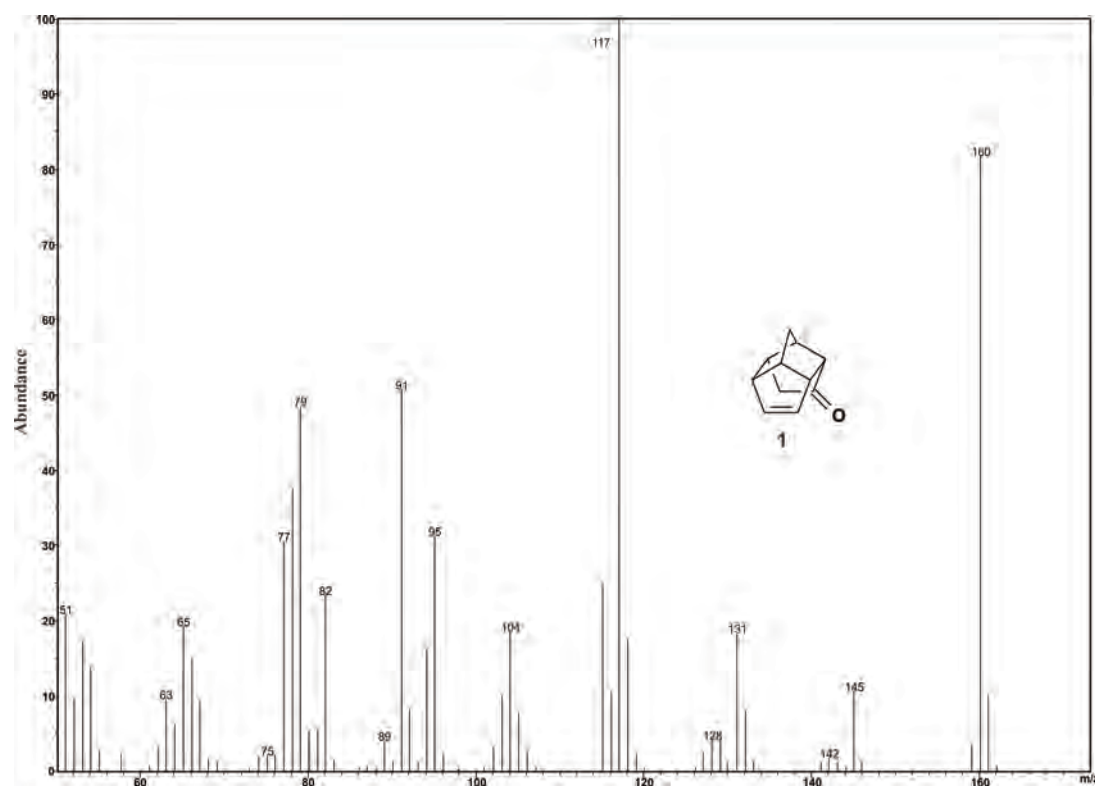
5.1.7. Infrared spectrum of **23**5.1.8. Infrared spectrum of **132**

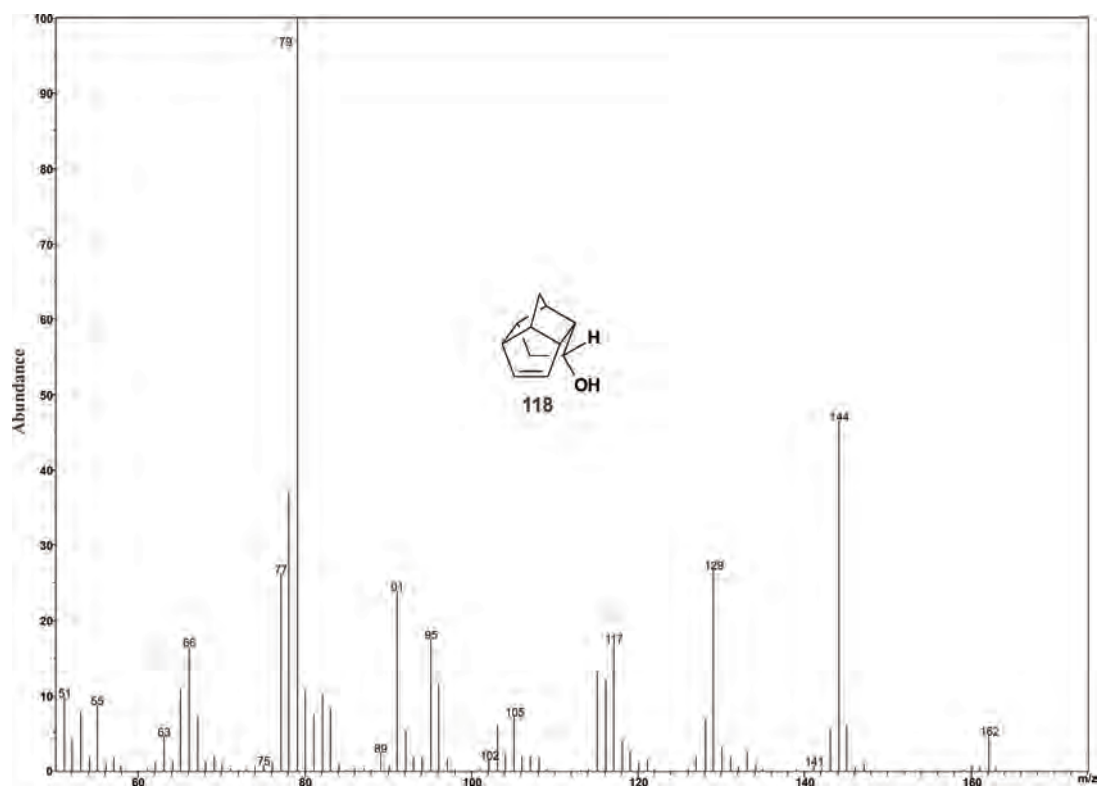
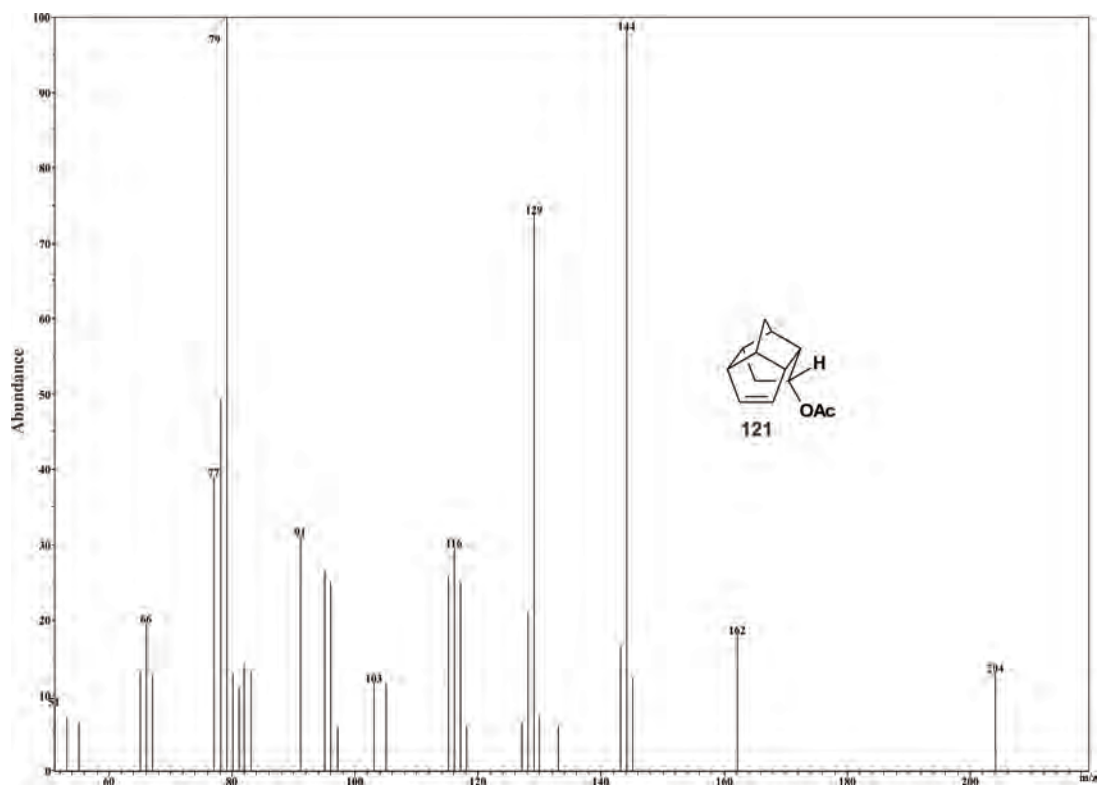
5.1.9. Infrared spectrum of **133**5.1.10. Infrared spectrum of **134**

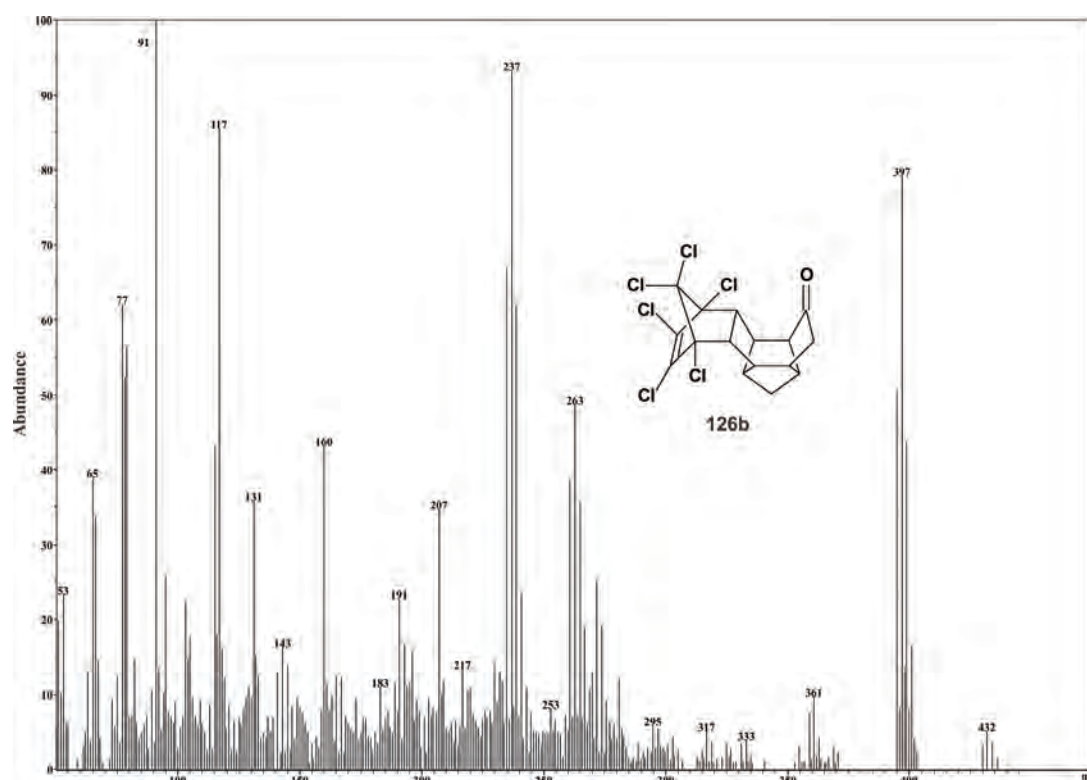
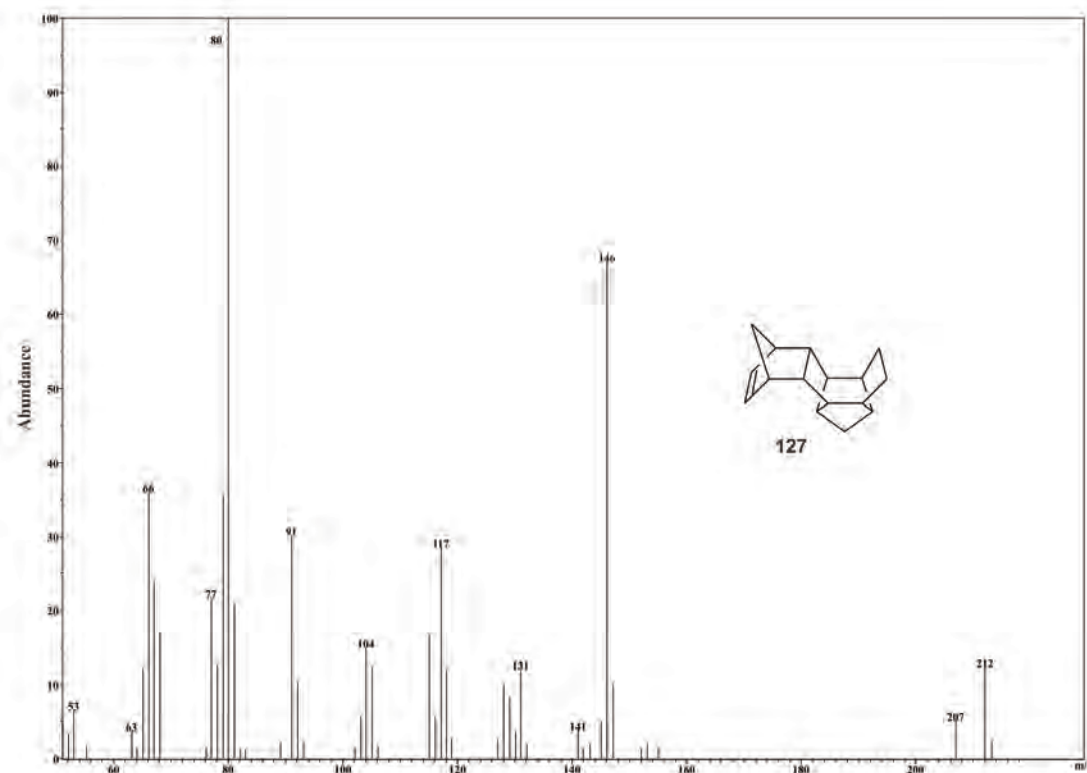
5.1.11. Infrared spectrum of **151**5.1.12. Infrared spectrum of **3**

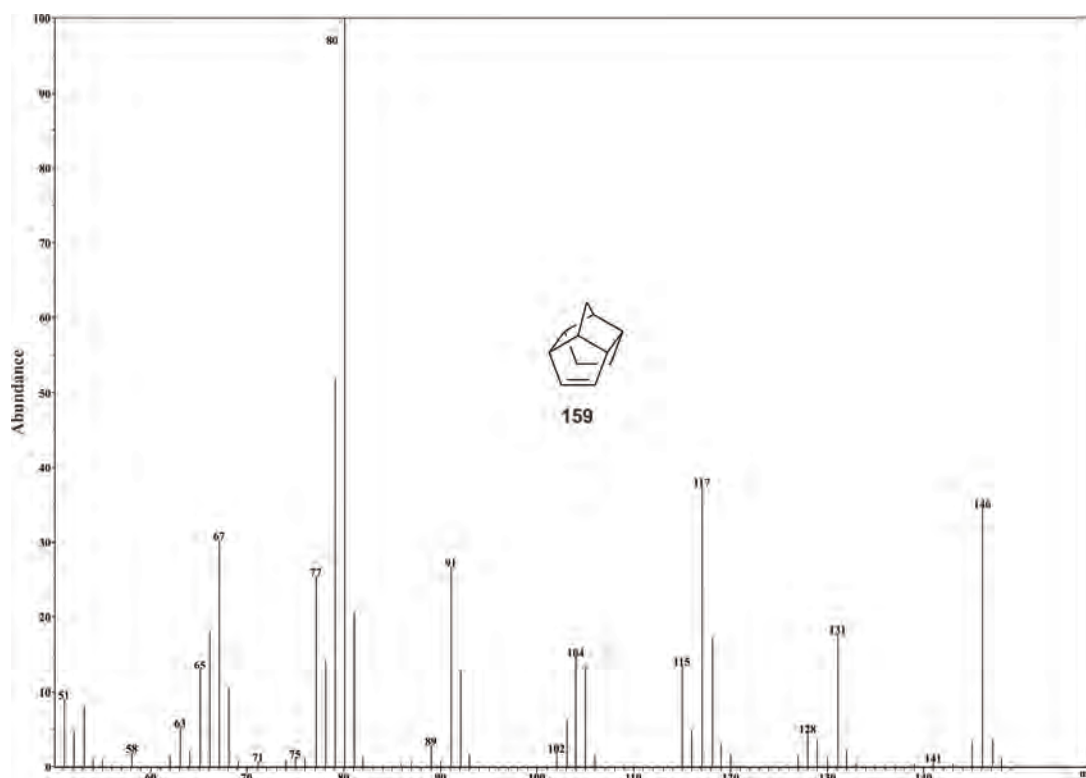
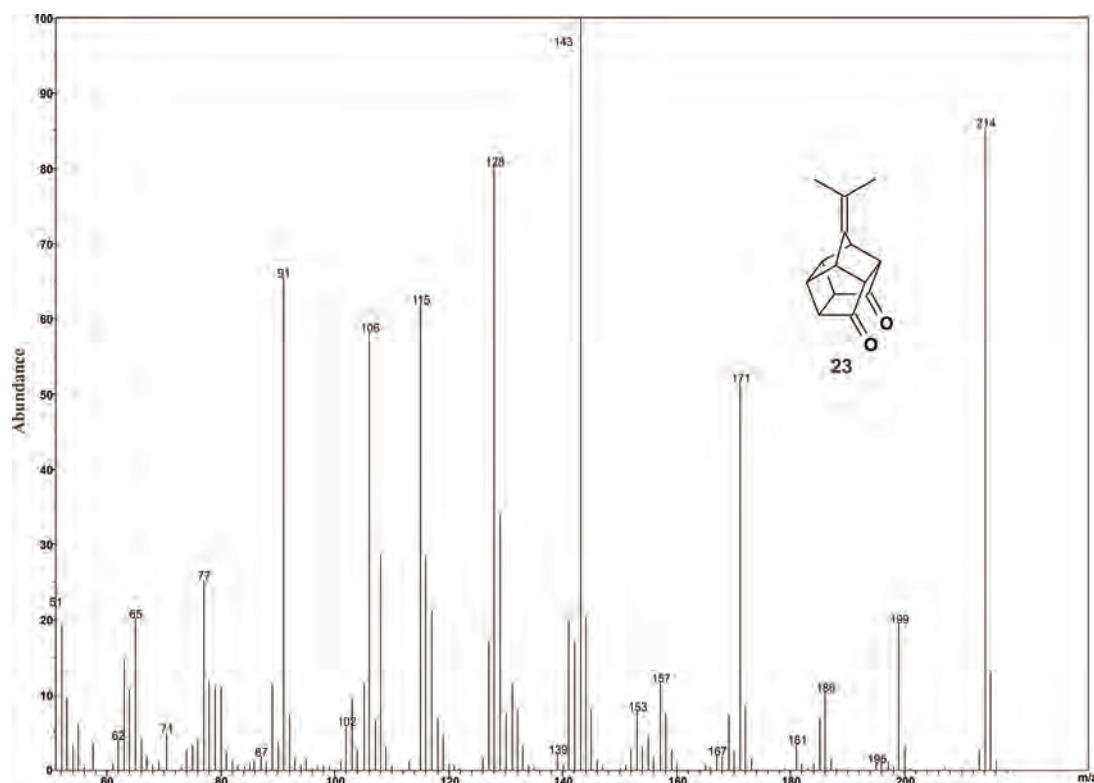
5.1.13. Infrared spectrum of **175**

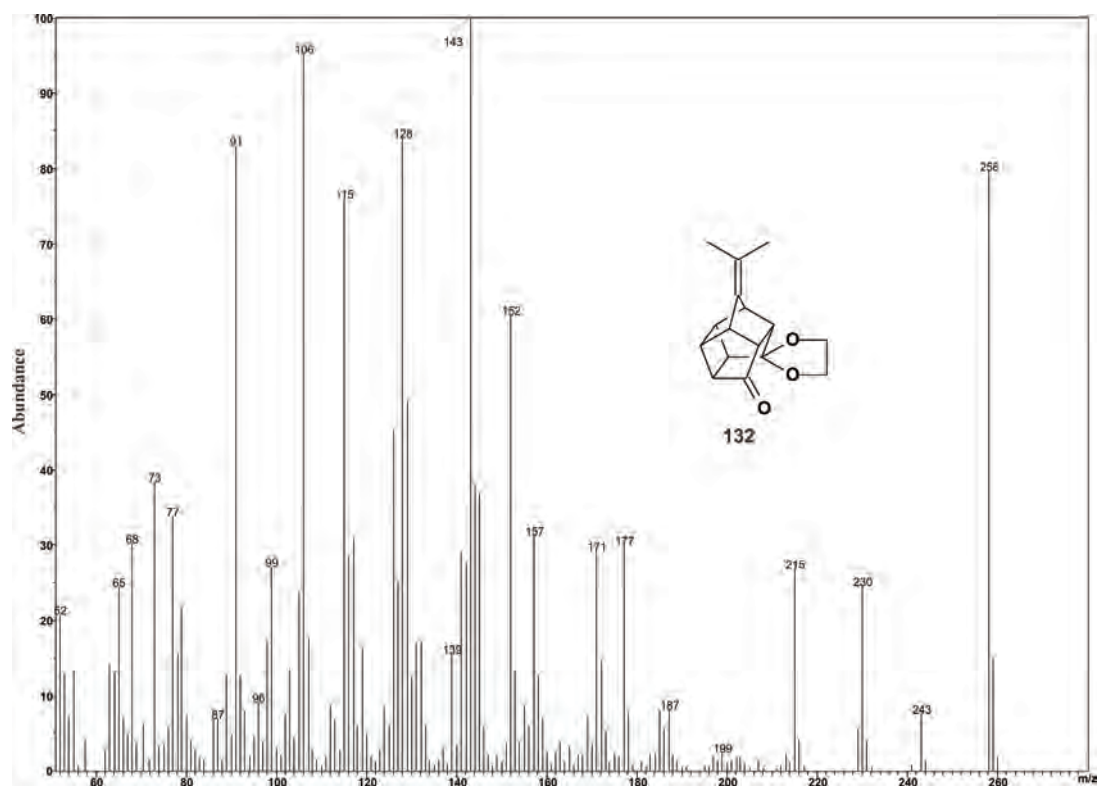
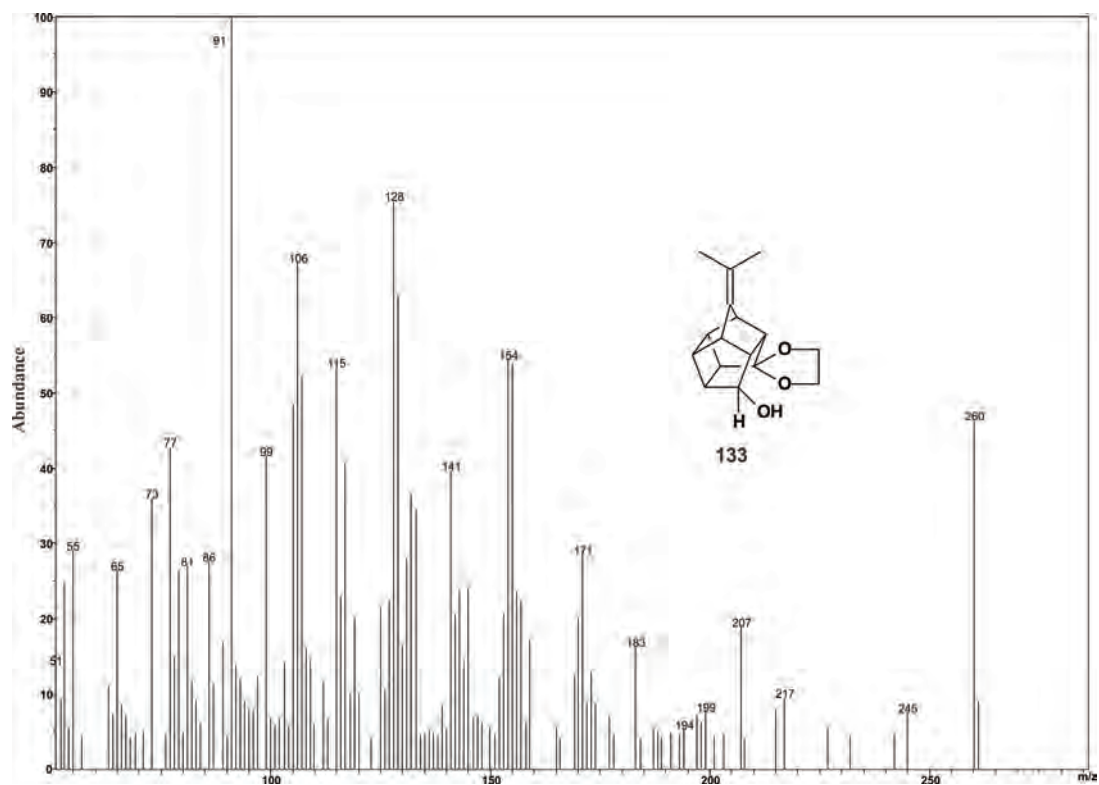
5.2. MS spectra

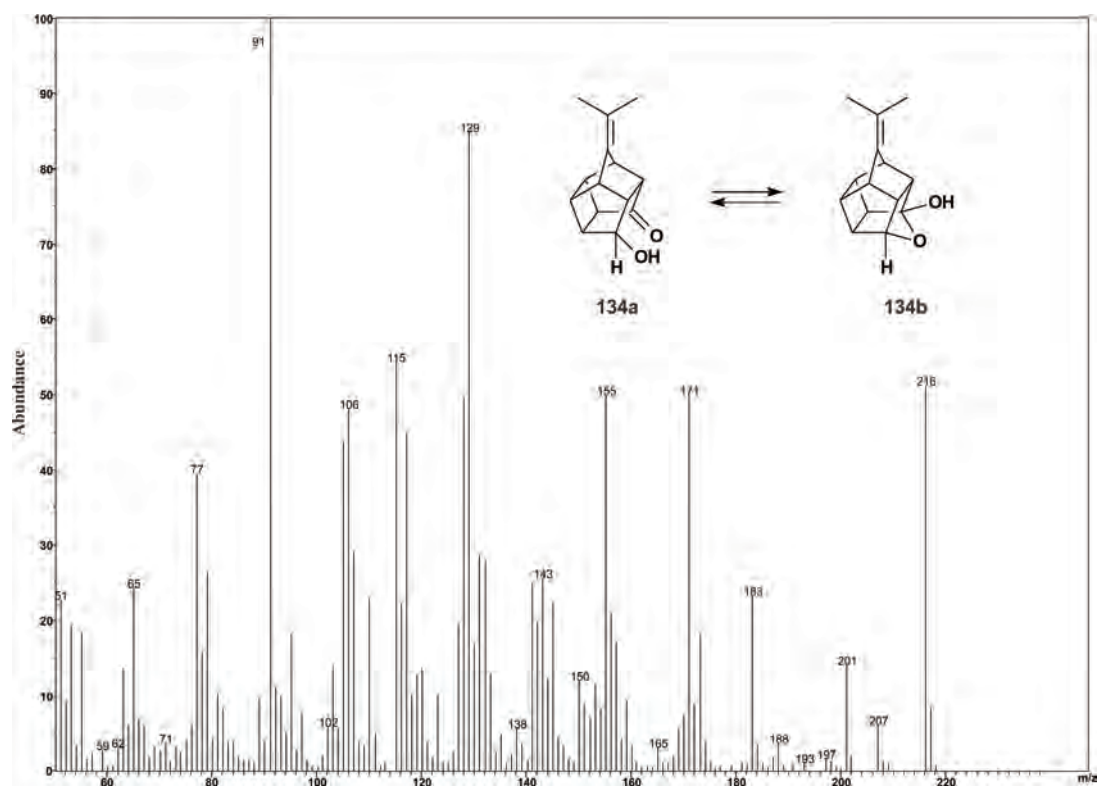
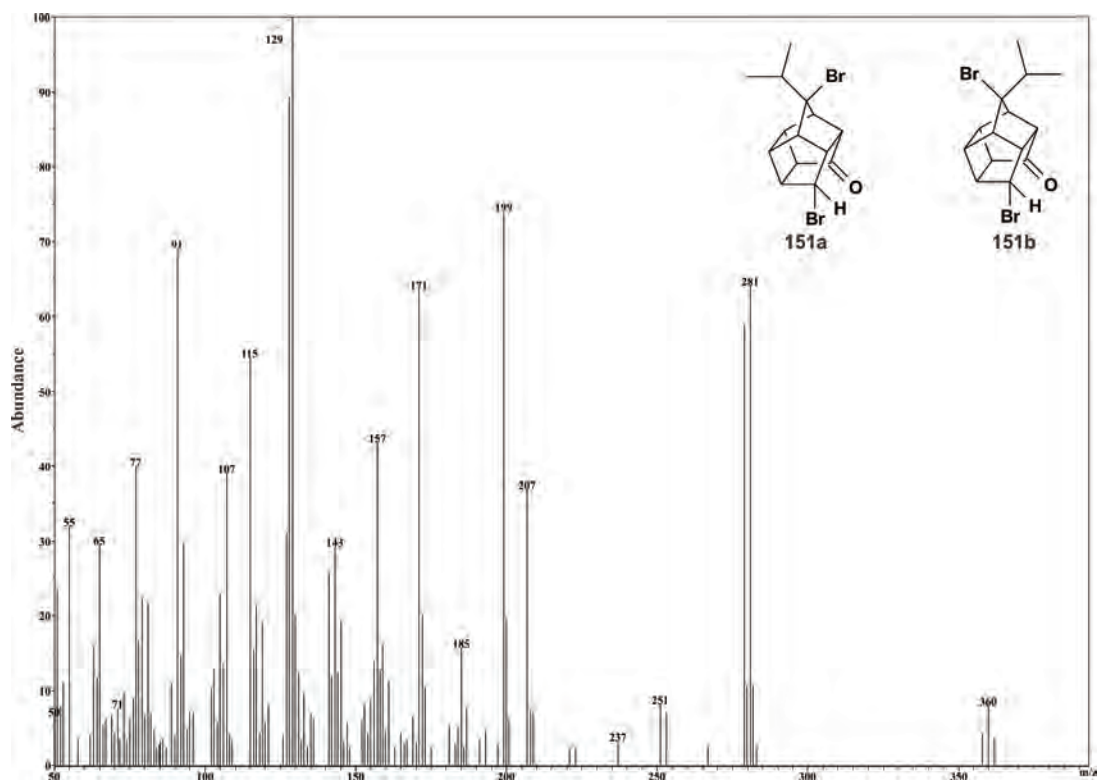
5.2.1. Mass spectrum of **1**

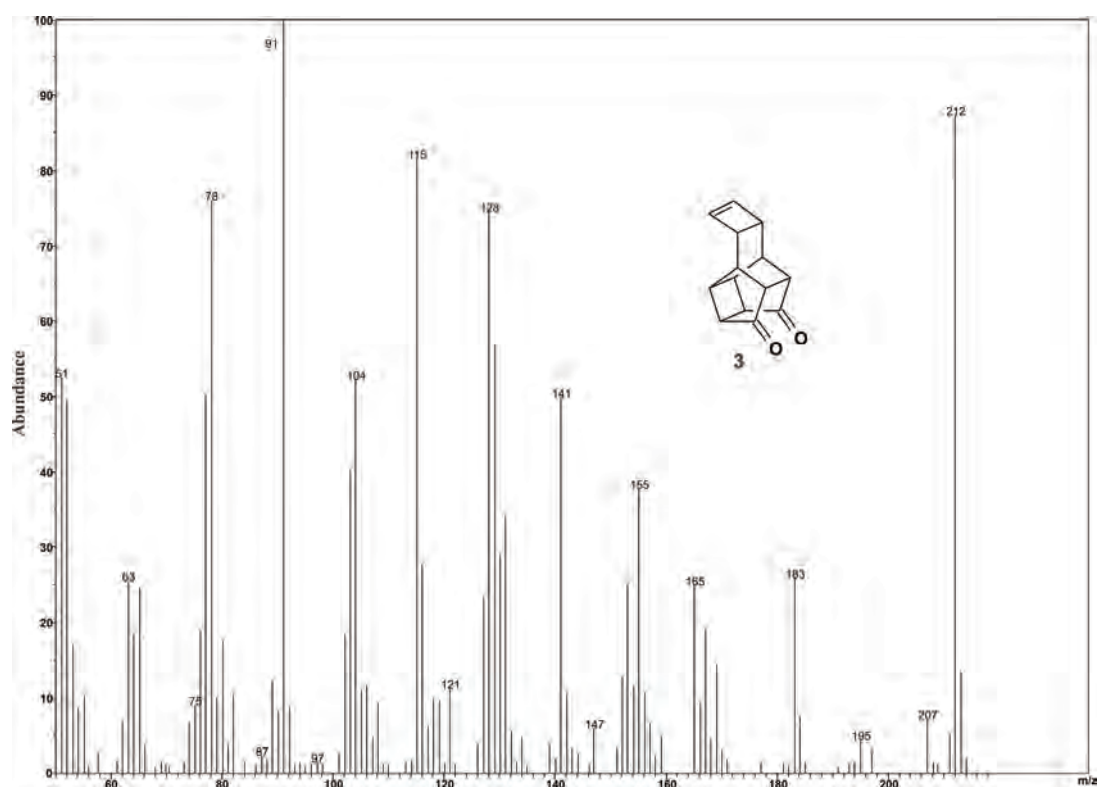
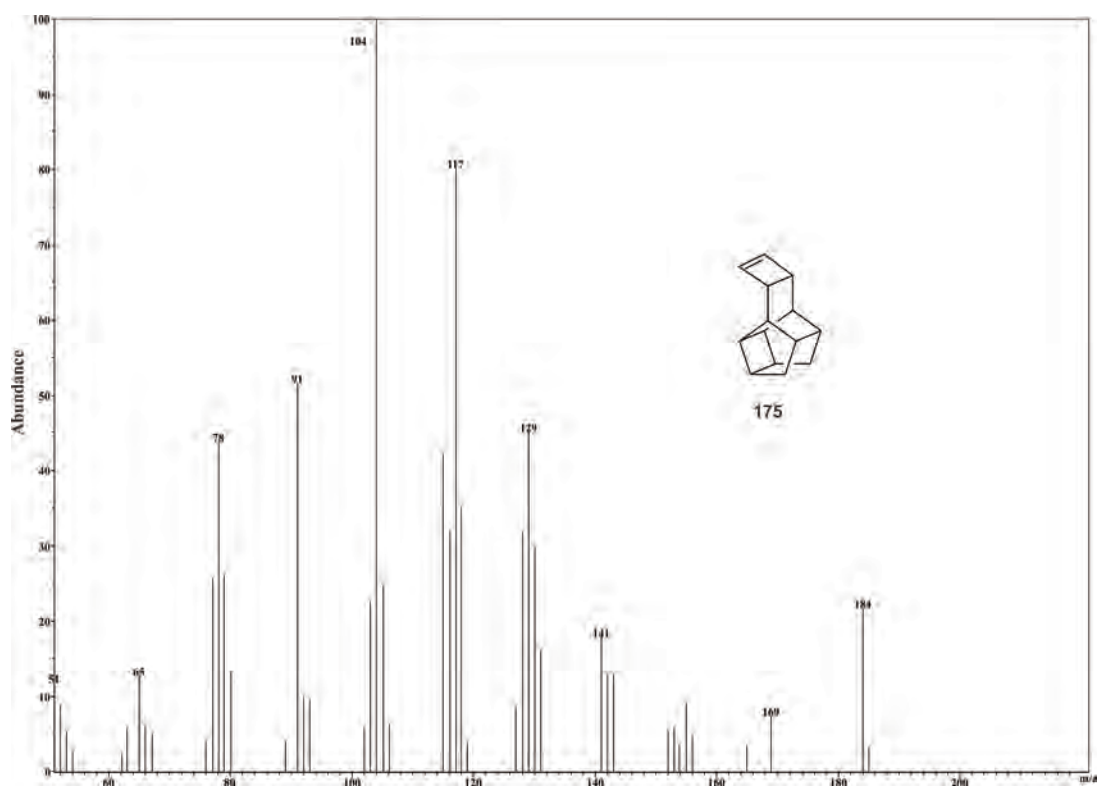
5.2.2. Mass spectrum of **118**5.2.3. Mass spectrum of **121**

5.2.4. Mass spectrum of **126b**5.2.5. Mass spectrum of **127**

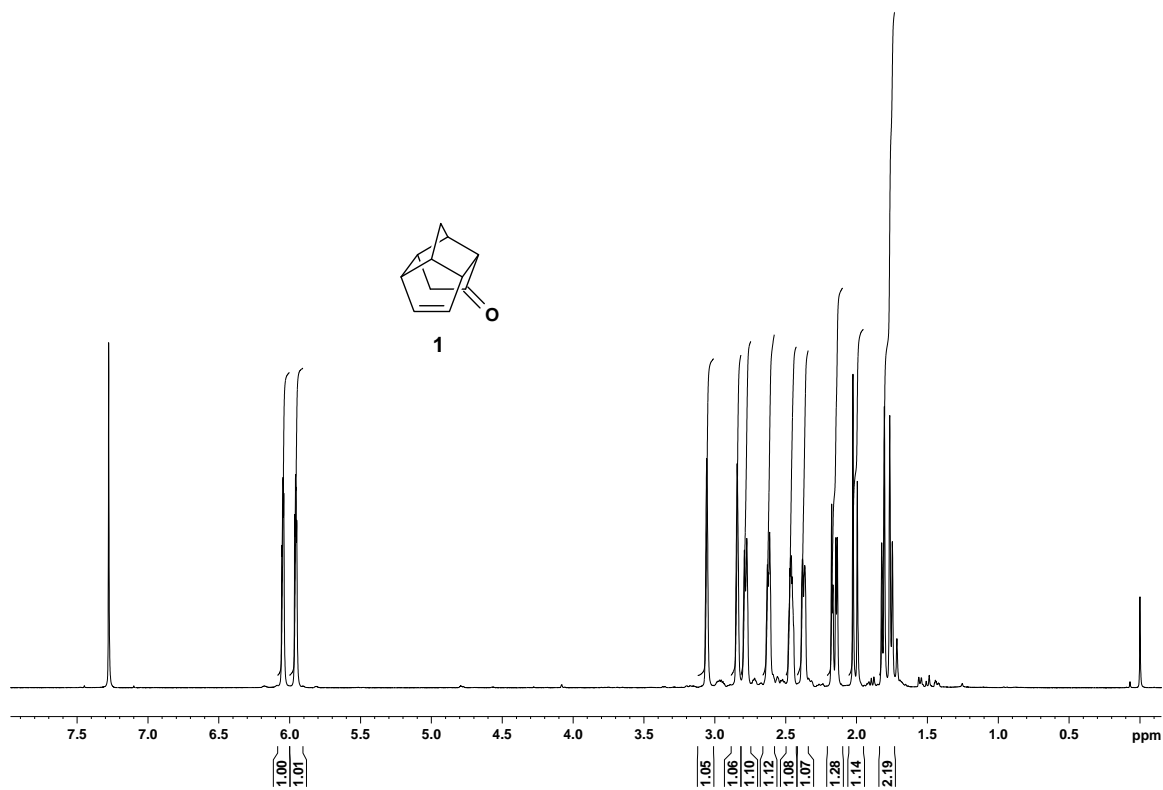
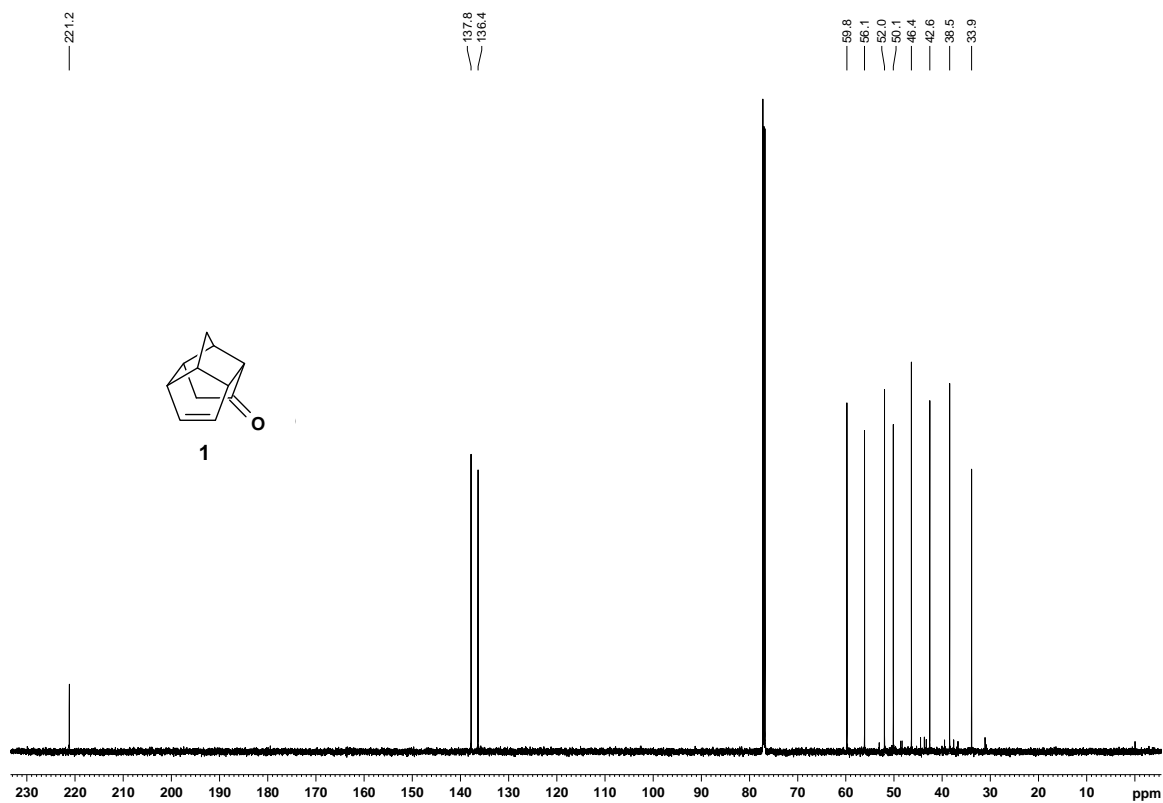
5.2.6. Mass spectrum of **159**5.2.7. Mass spectrum of **23**

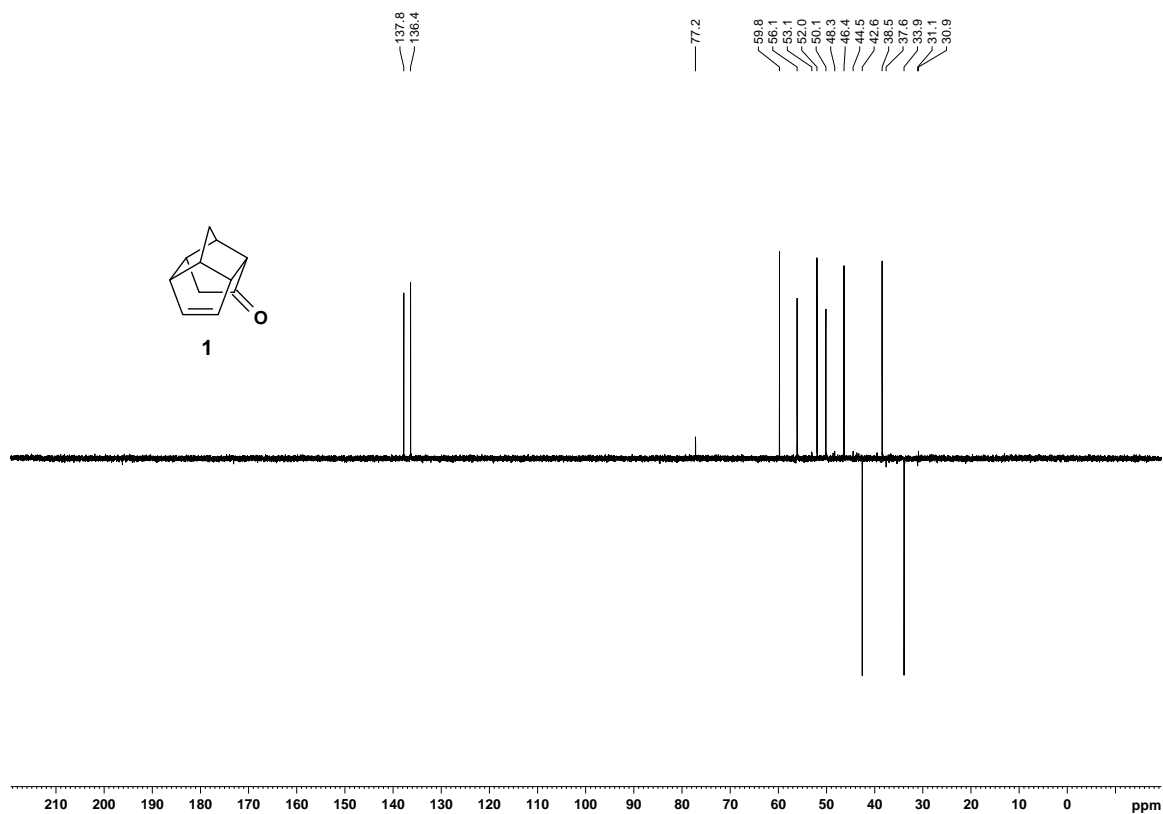
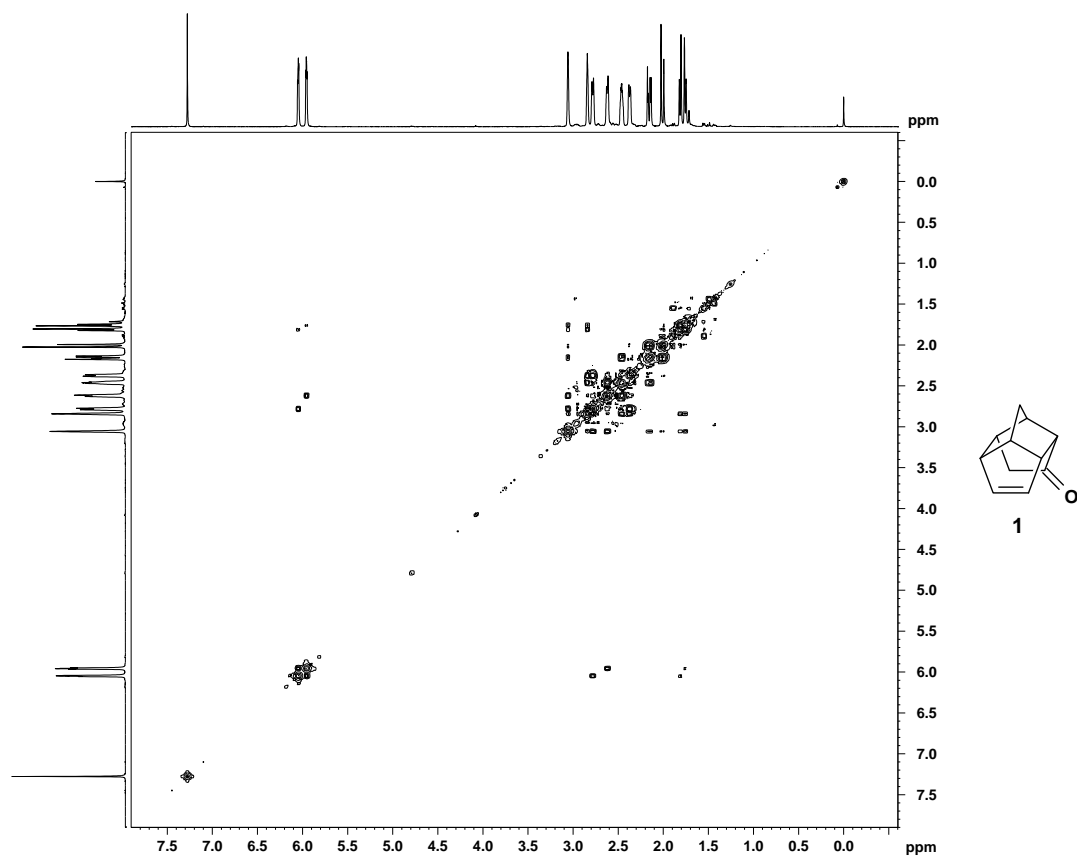
5.2.8. Mass spectrum of **132**5.2.9. Mass spectrum of **133**

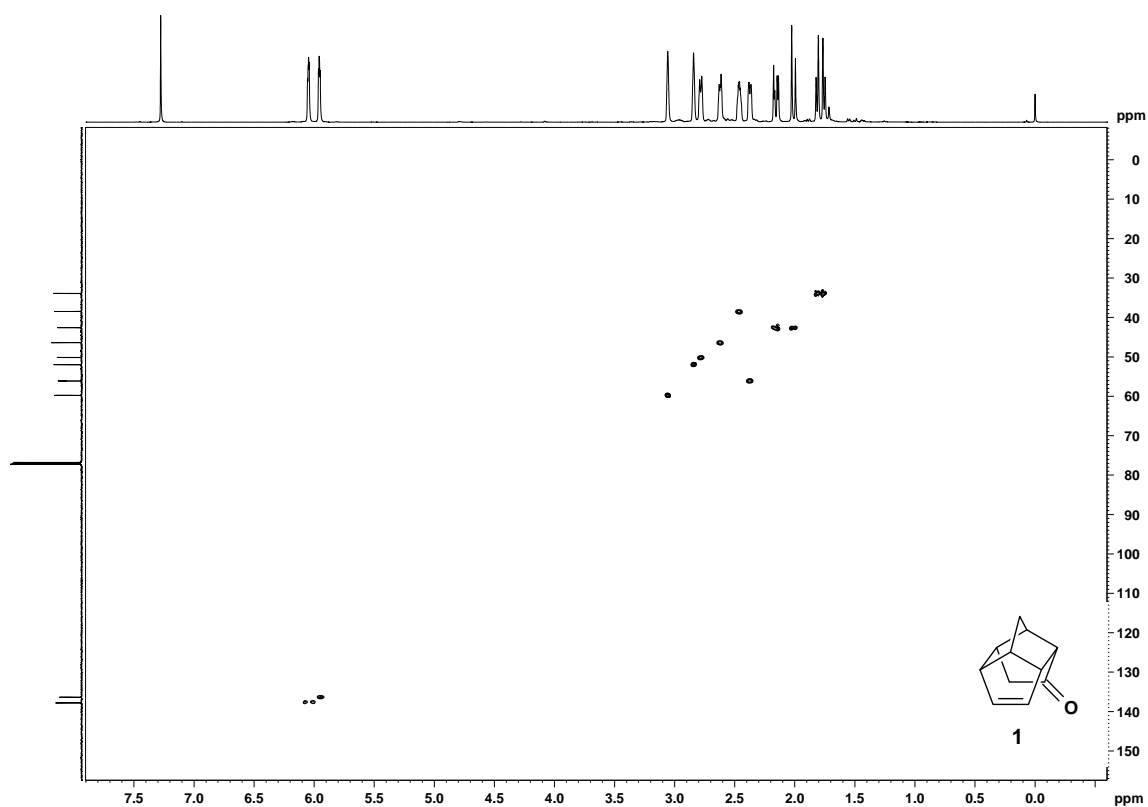
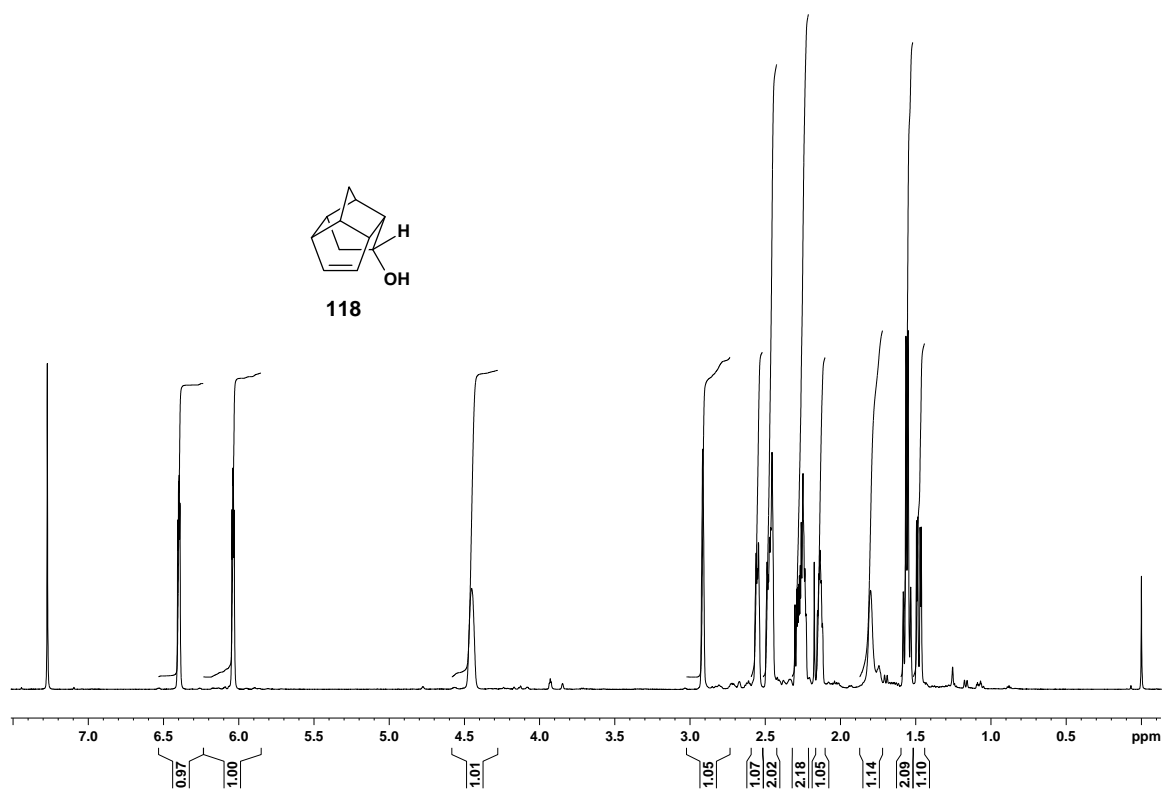
5.2.10. Mass spectrum of **134**5.2.11. Mass spectrum of **151**

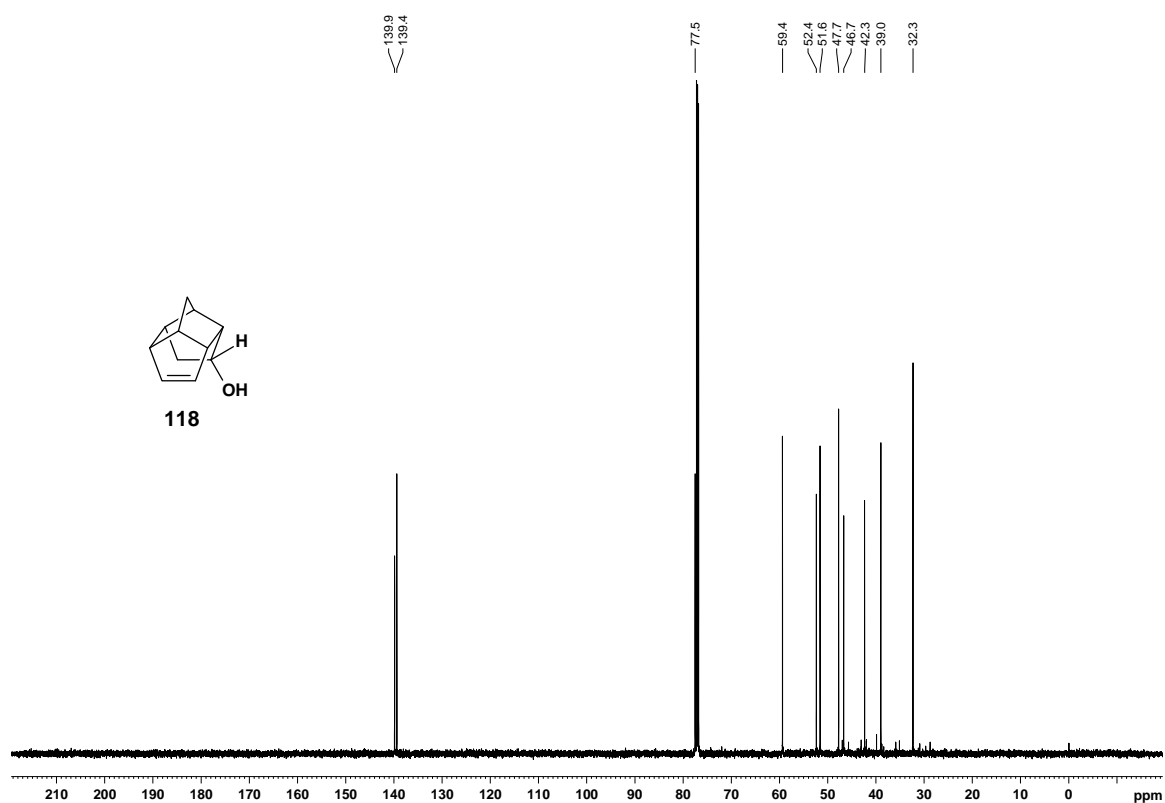
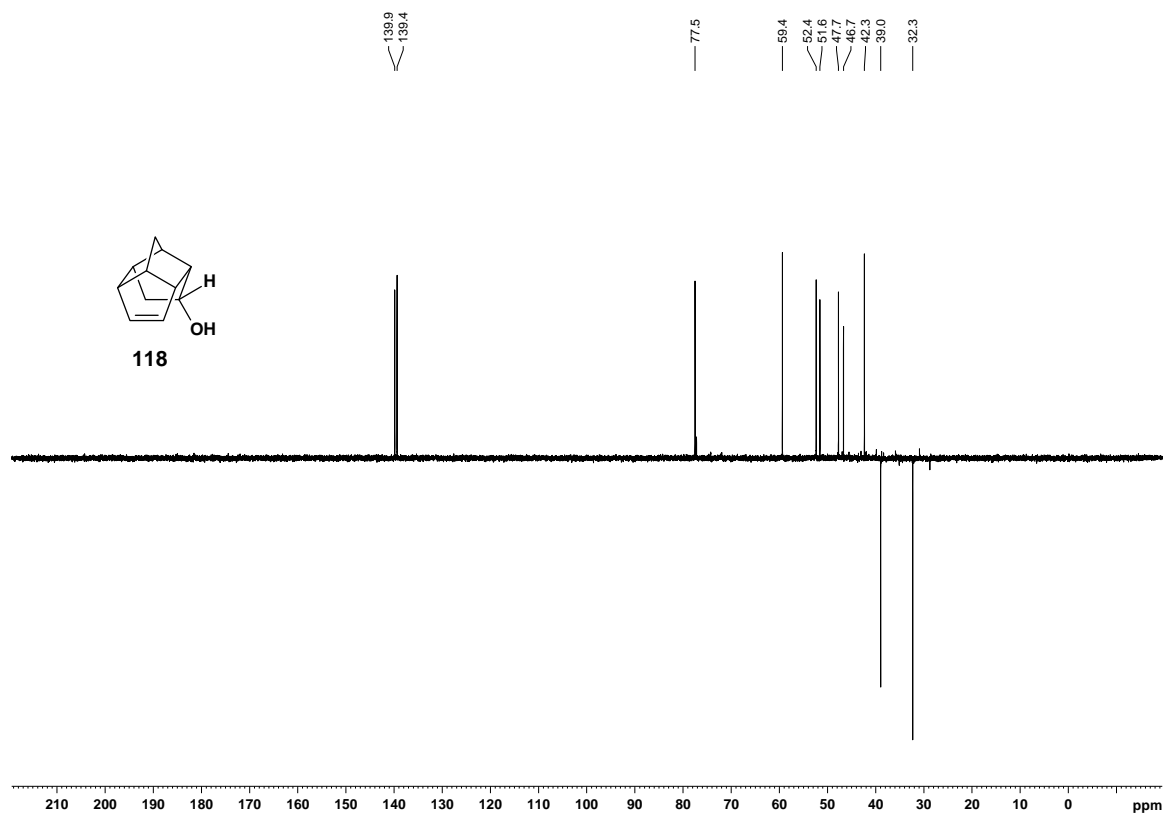
5.2.12. Mass spectrum of **3**5.2.13. Mass spectrum of **175**

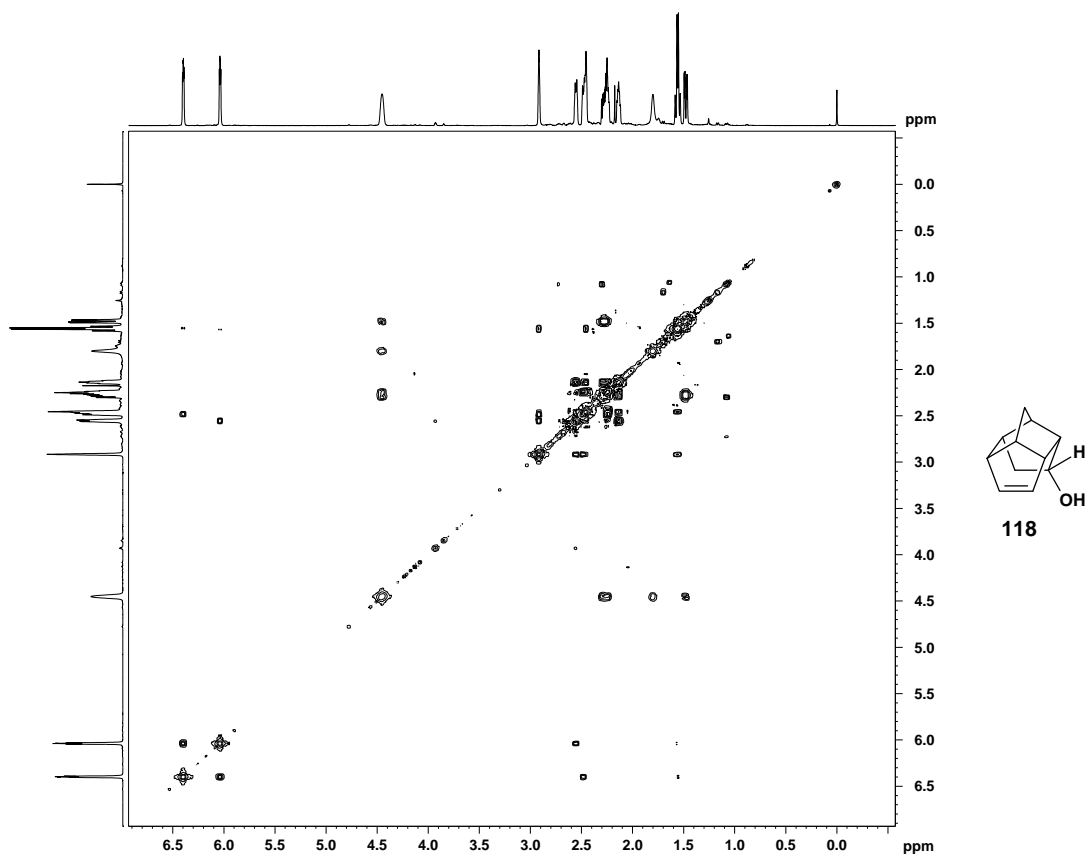
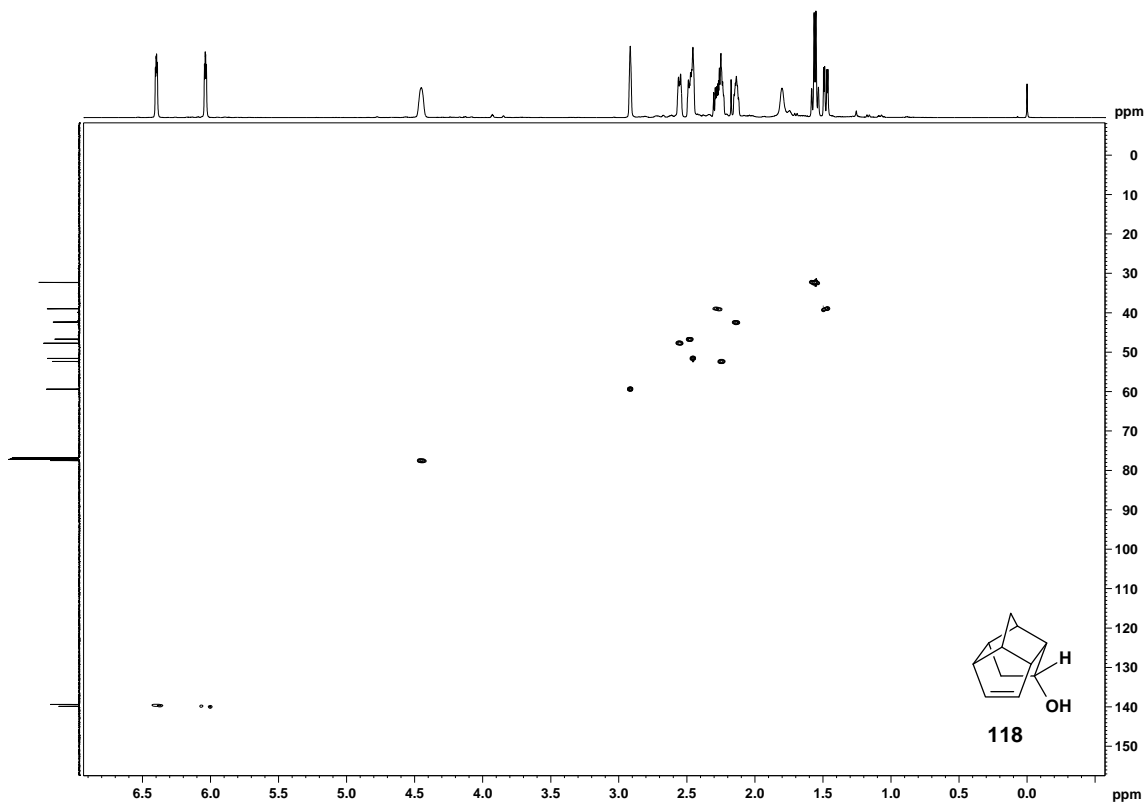
5.3. NMR spectra

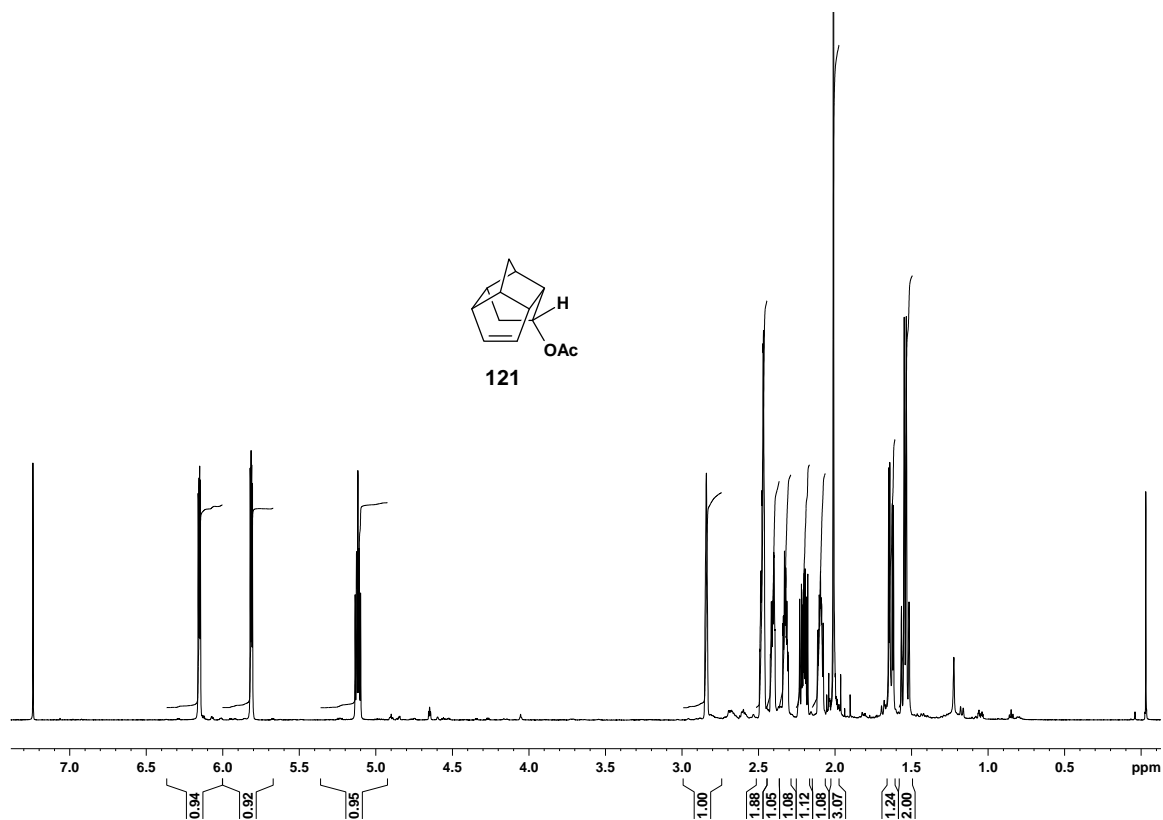
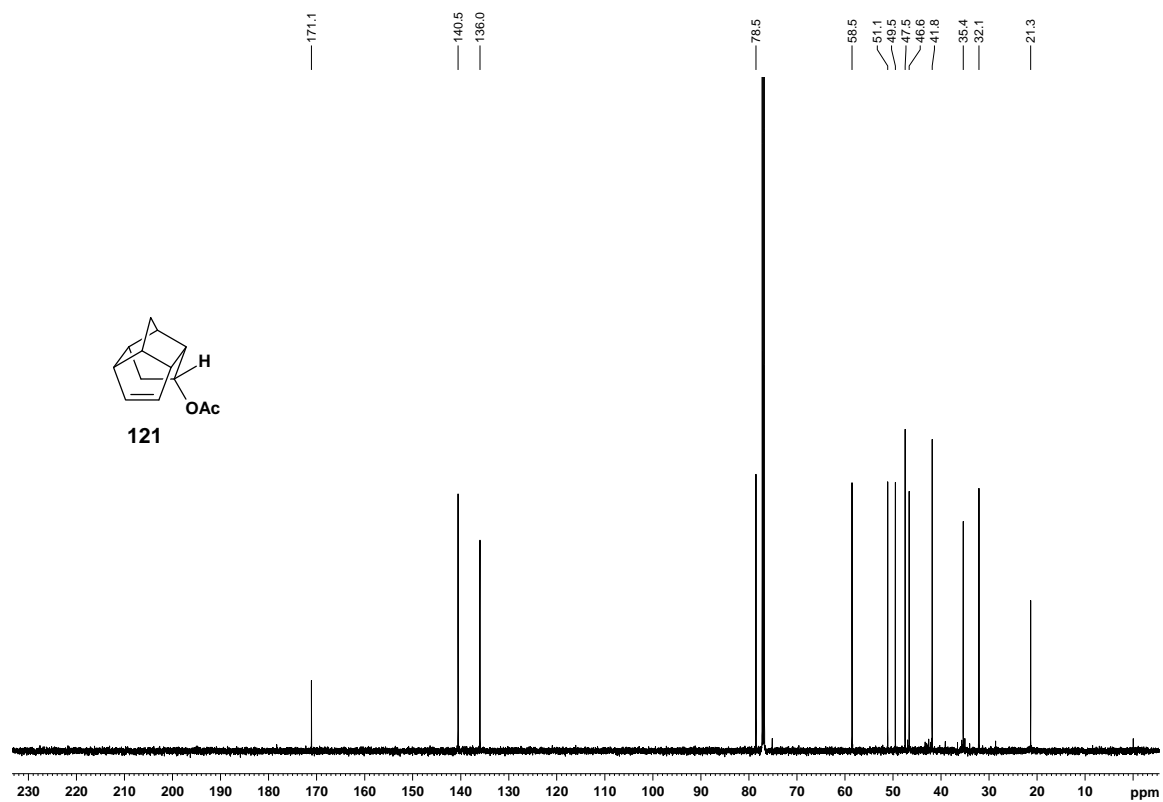
5.3.1.1. ^1H NMR spectrum of **1** (CDCl_3 , 600 MHz)5.3.1.2. ^{13}C NMR spectrum of **1** (CDCl_3 , 150 MHz)

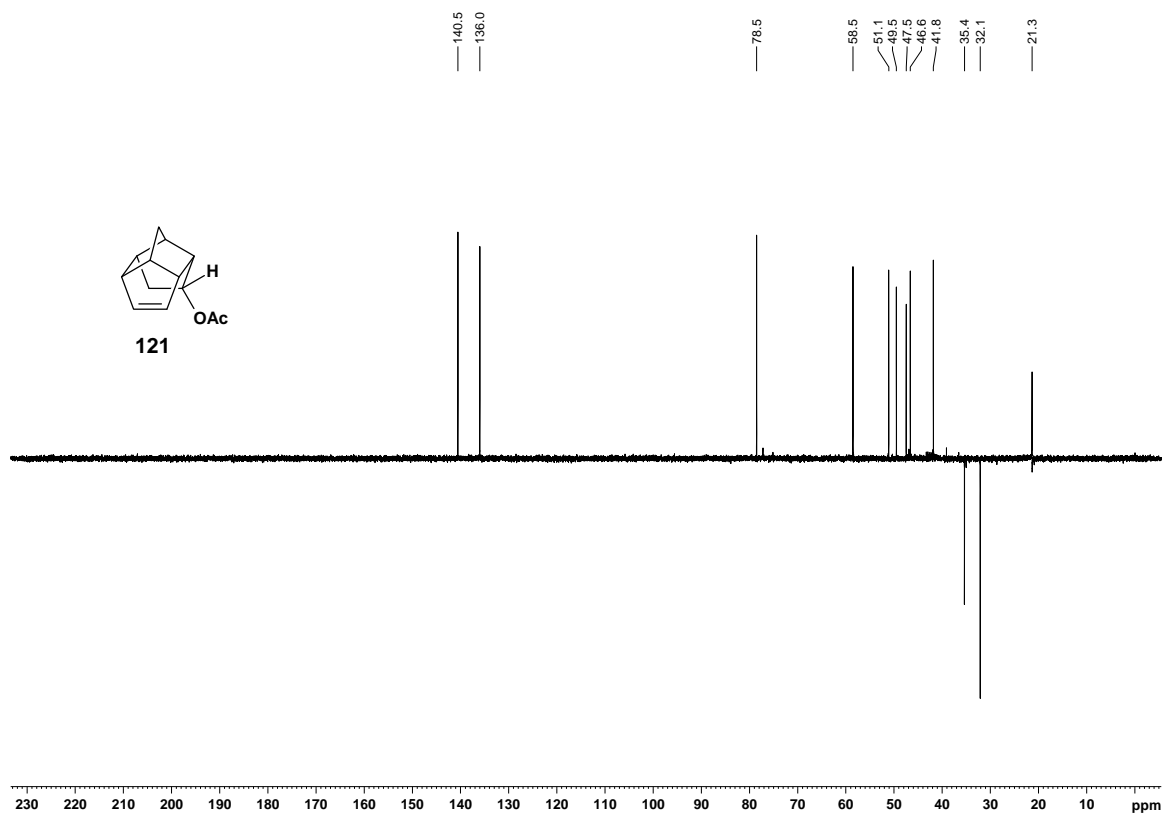
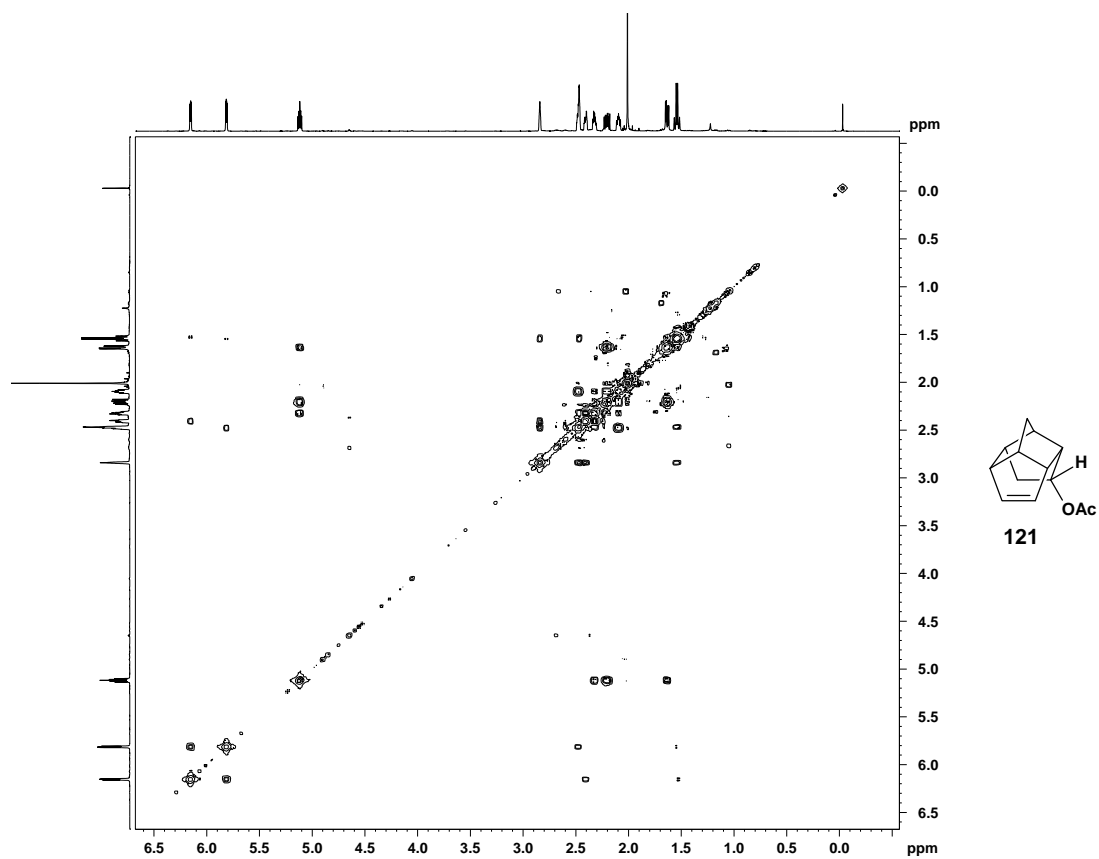
5.3.1.3. DEPT spectrum of **1** (CDCl₃)5.3.1.4. COSY spectrum of **1** (CDCl₃)

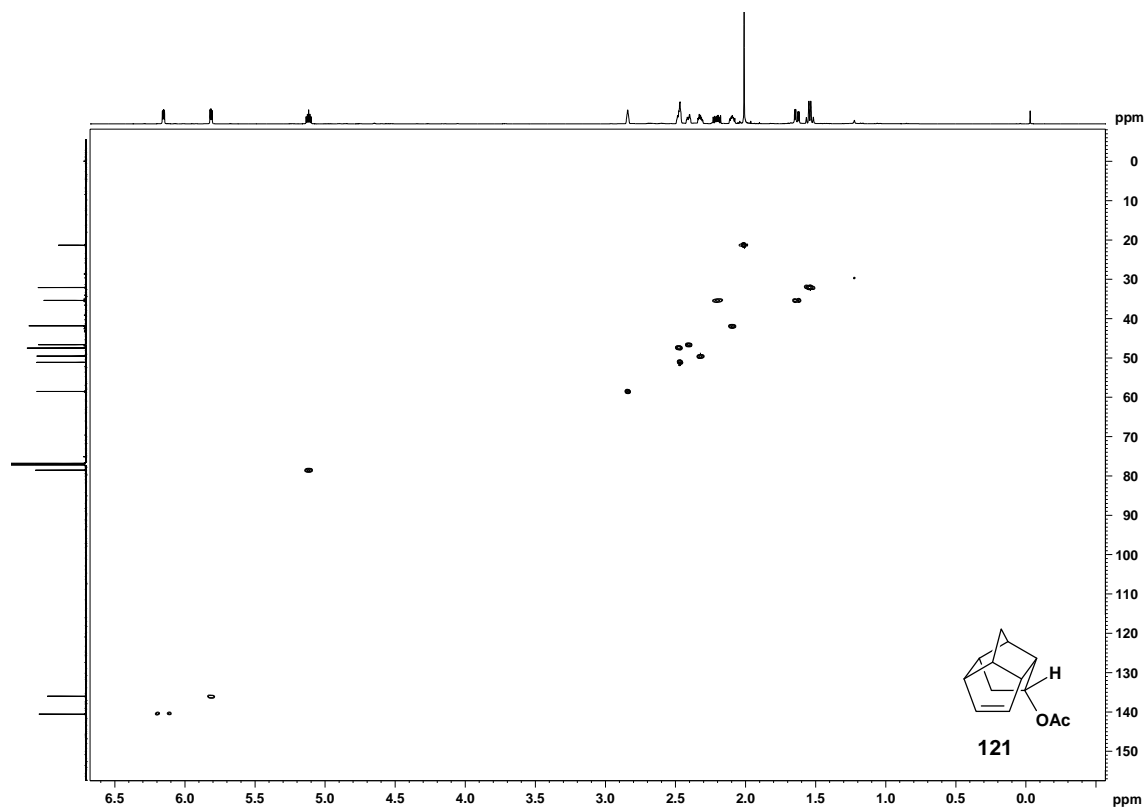
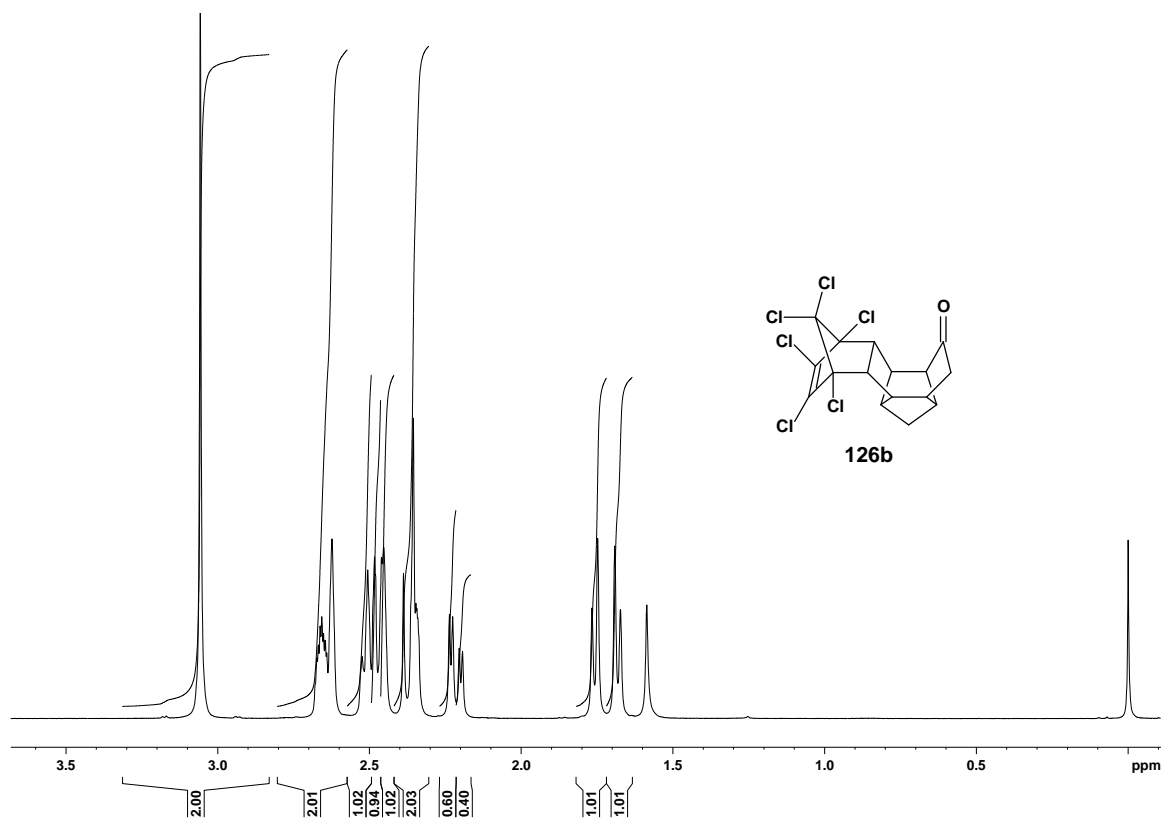
5.3.1.5. HSQC spectrum of **1** (CDCl₃)5.3.2.1. ¹H NMR spectrum of **118** (CDCl₃, 600 MHz)

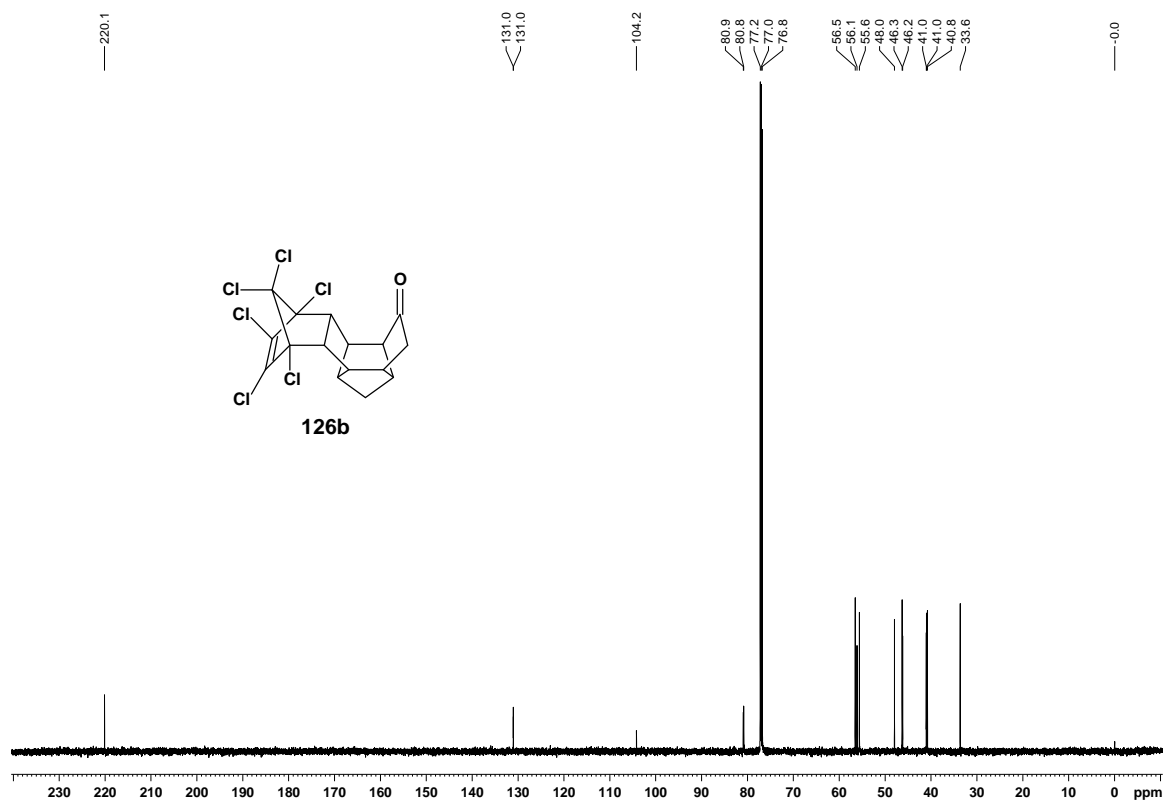
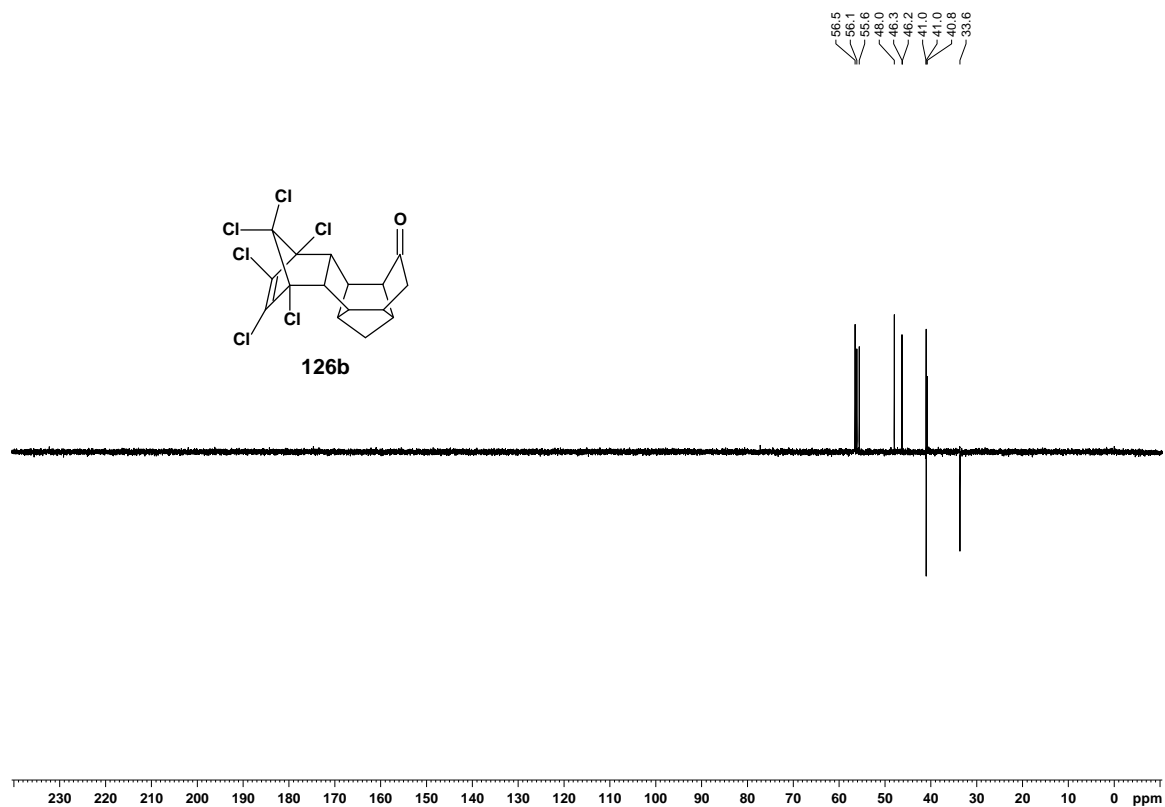
5.3.2.2. ^{13}C NMR spectrum of **118** (CDCl_3 , 150 MHz)5.3.2.3. DEPT spectrum of **118** (CDCl_3)

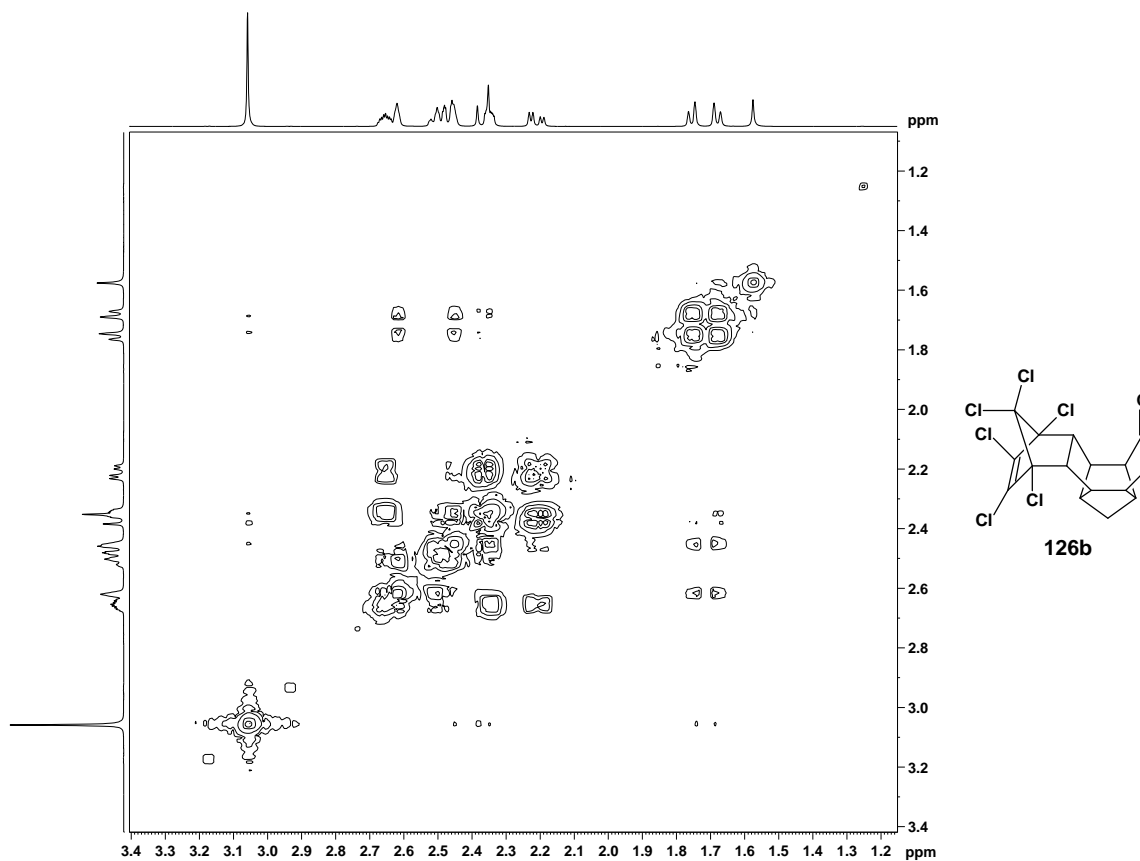
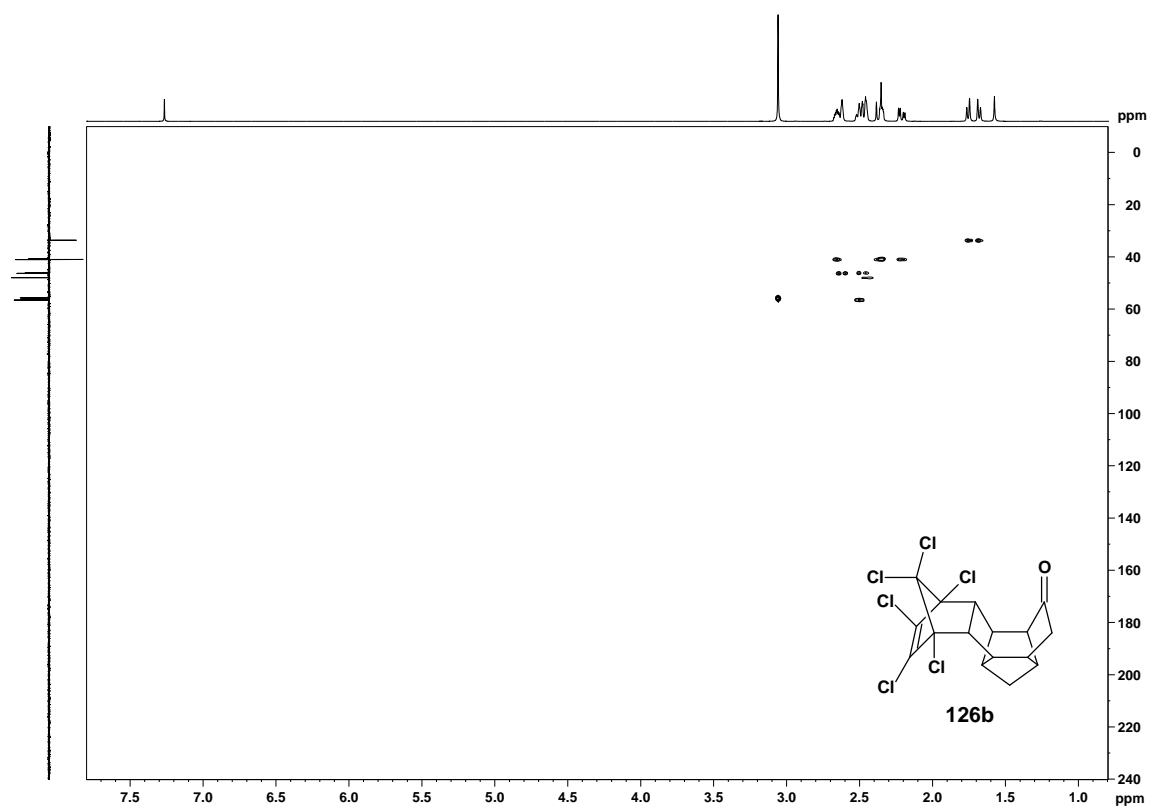
5.3.2.4. COSY spectrum of **118** (CDCl₃)5.3.2.5. HSQC spectrum of **118** (CDCl₃)

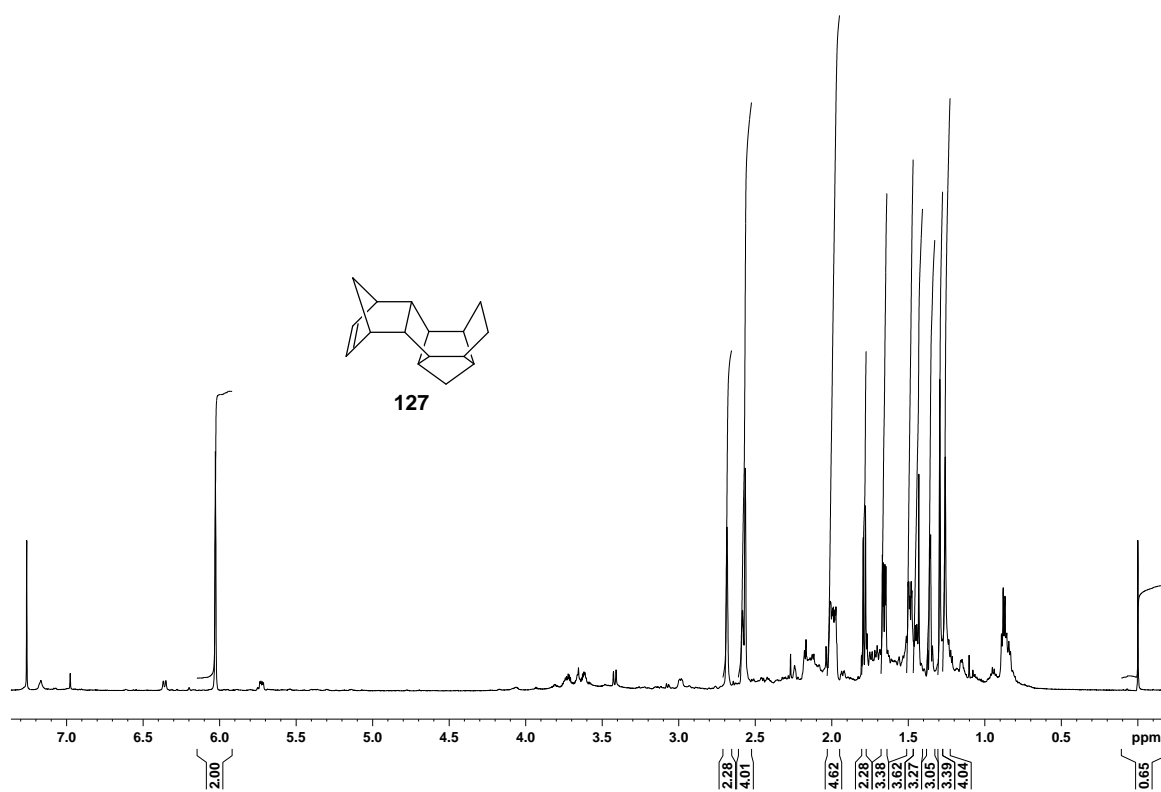
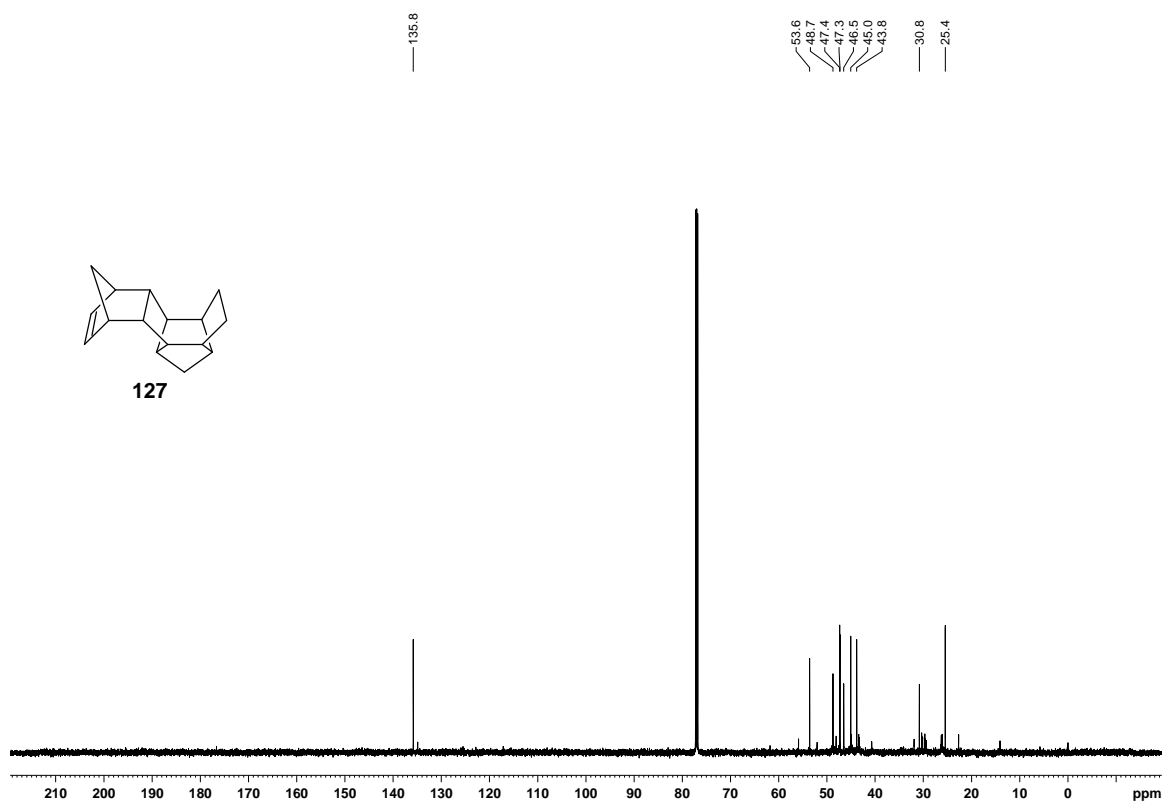
5.3.3.1. ^1H NMR spectrum of **121** (CDCl_3 , 600 MHz)5.3.3.2. ^{13}C NMR spectrum of **121** (CDCl_3 , 150 MHz)

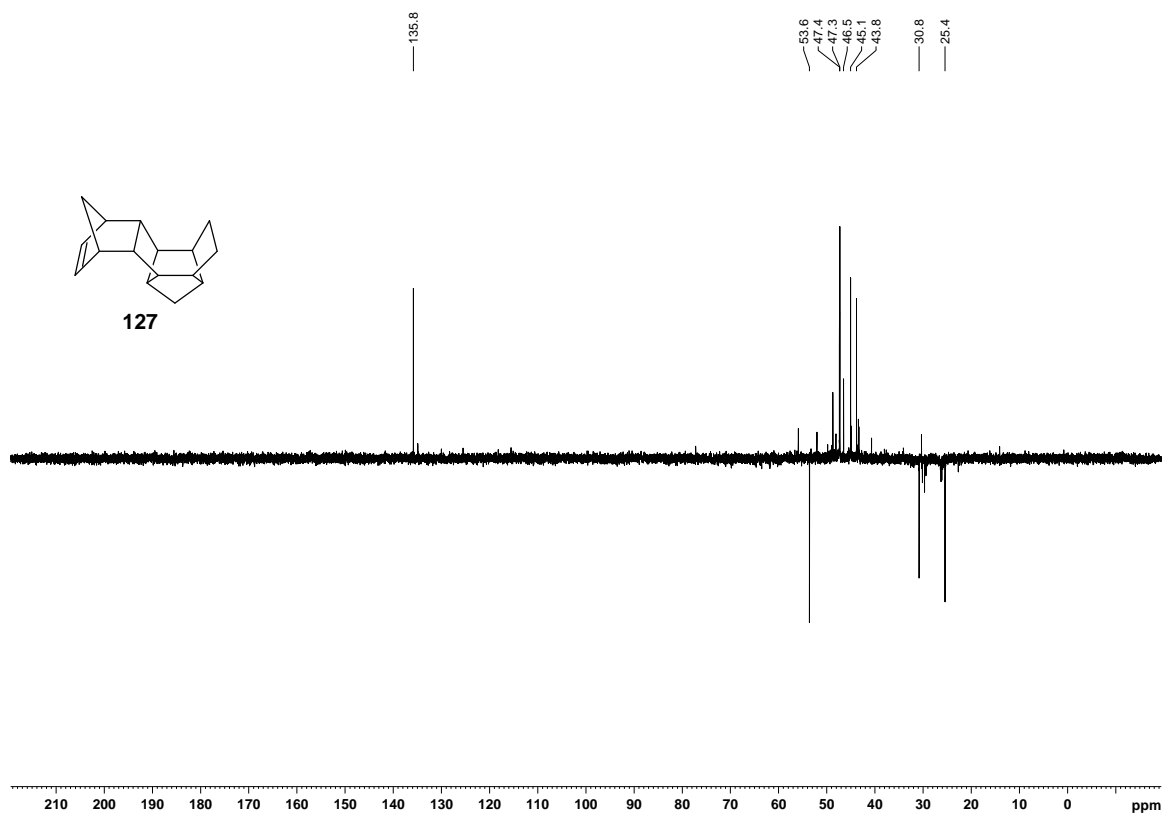
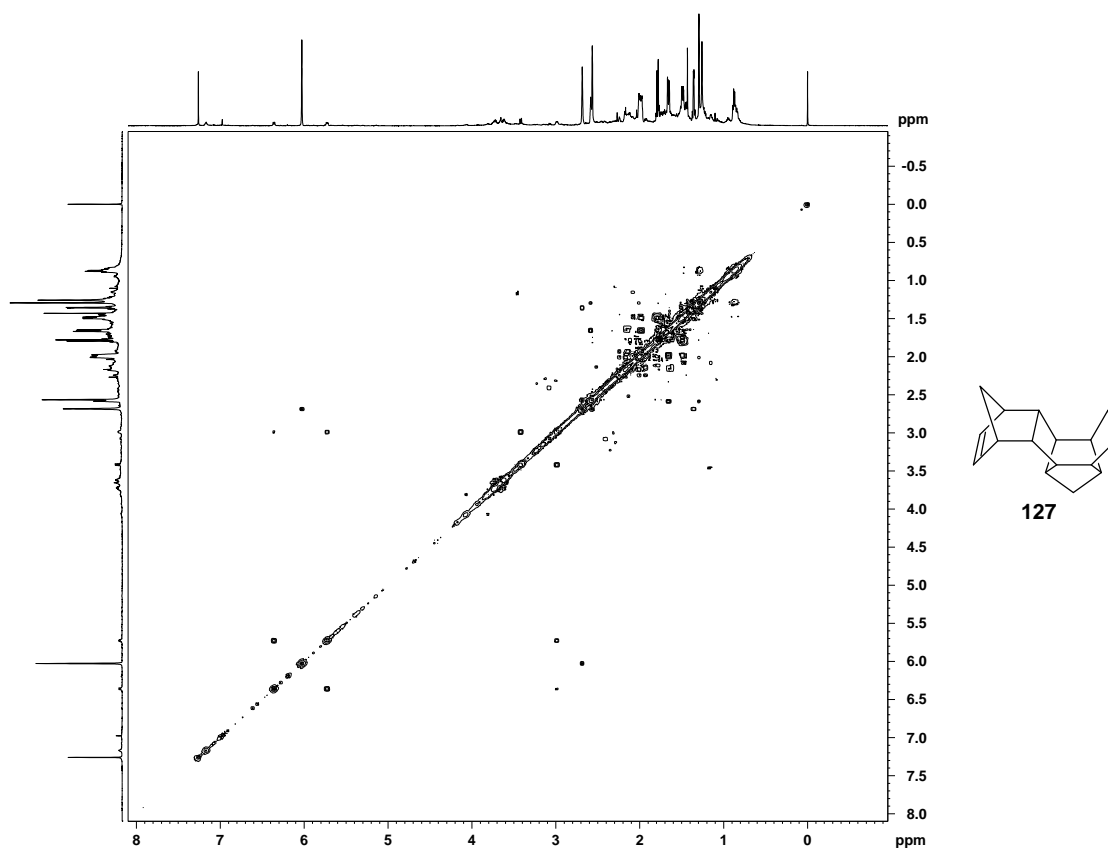
5.3.3.3. DEPT spectrum of **121** (CDCl_3)5.3.3.4. COSY spectrum of **121** (CDCl_3)

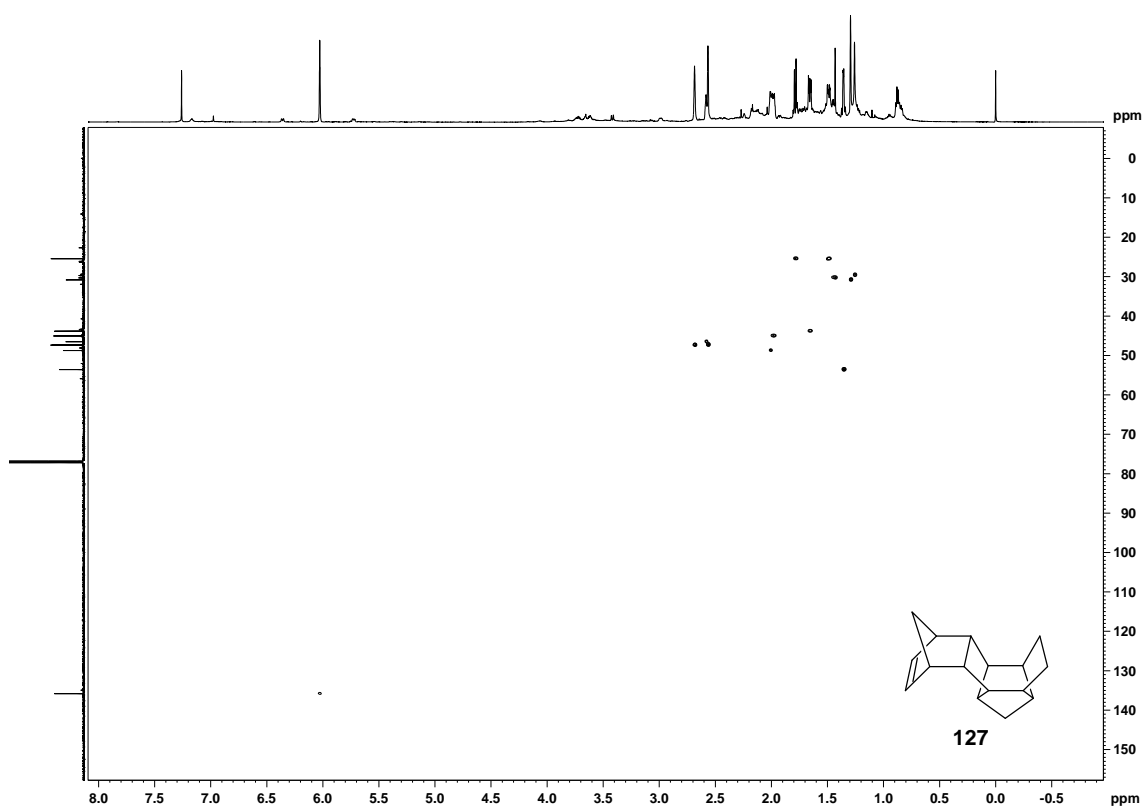
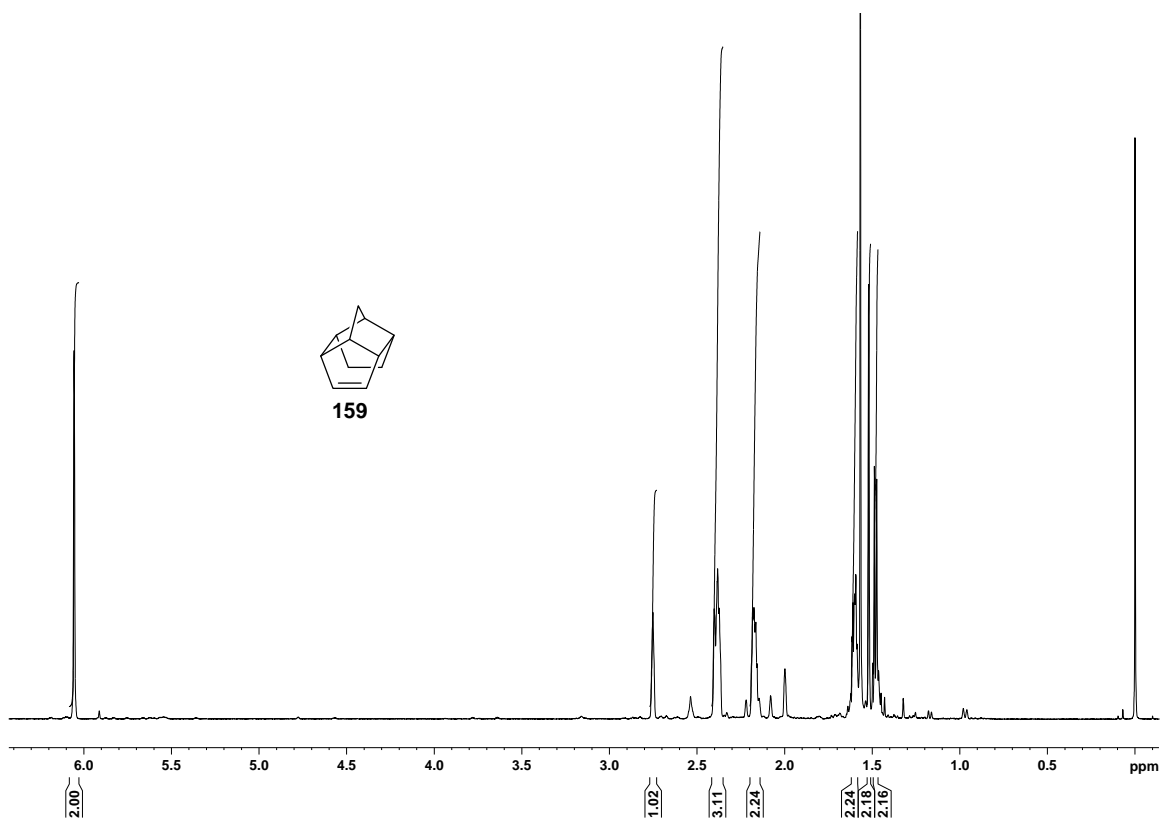
5.3.3.5. HSQC spectrum of **121** (CDCl₃)5.3.4.1. ¹H NMR spectrum of **126b** (CDCl₃, 600 MHz)

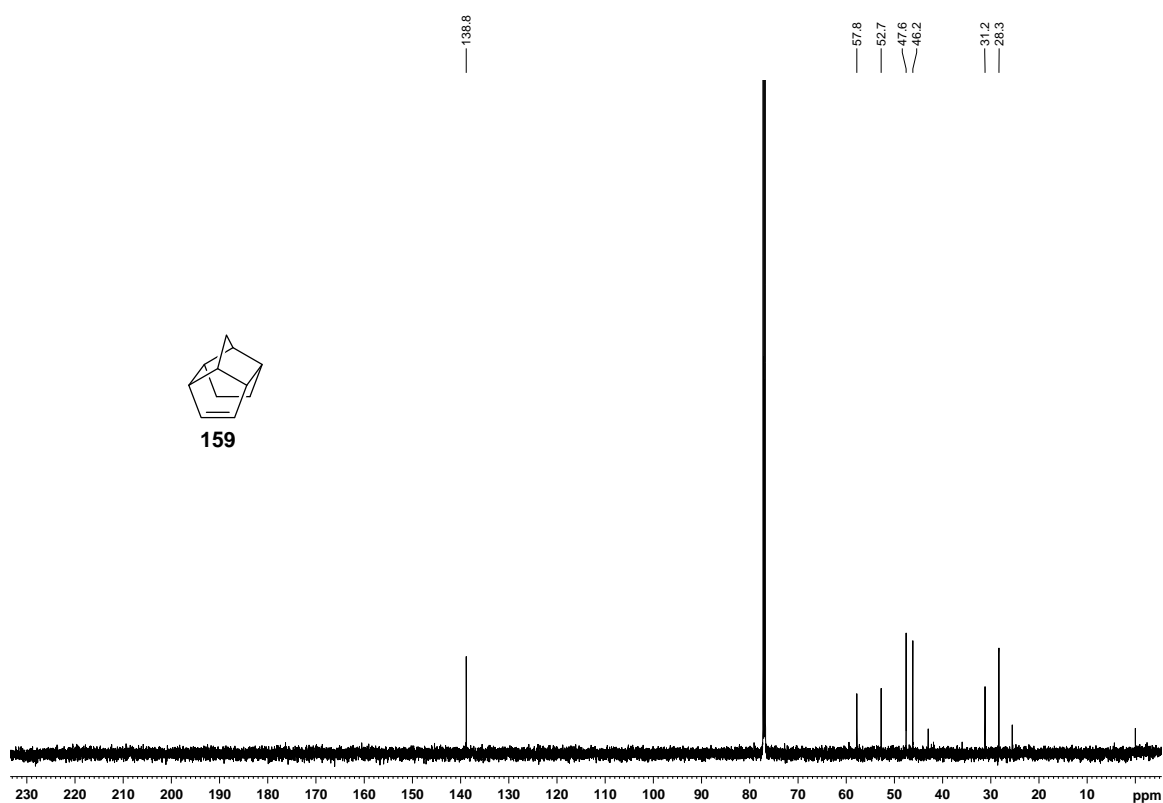
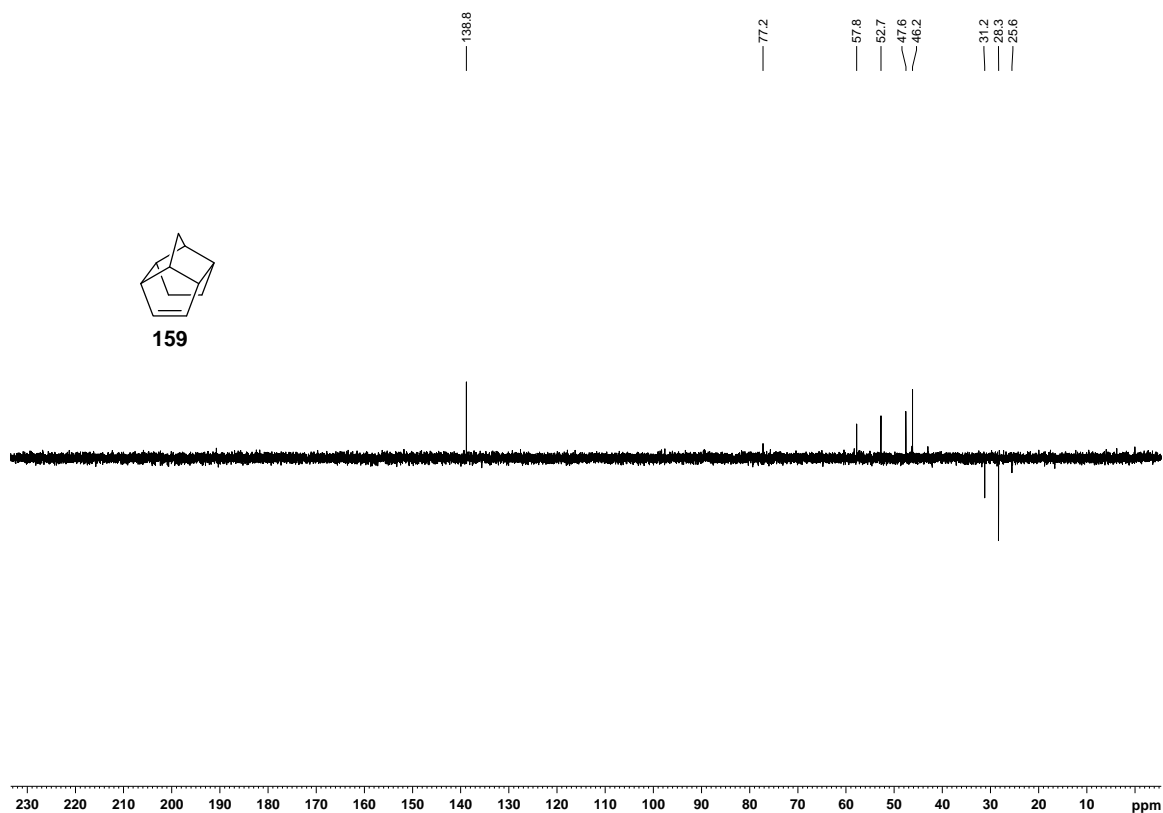
5.3.4.2. ^{13}C NMR spectrum of **126b** (CDCl_3 , 150 MHz)5.3.4.3. DEPT spectrum of **126b** (CDCl_3)

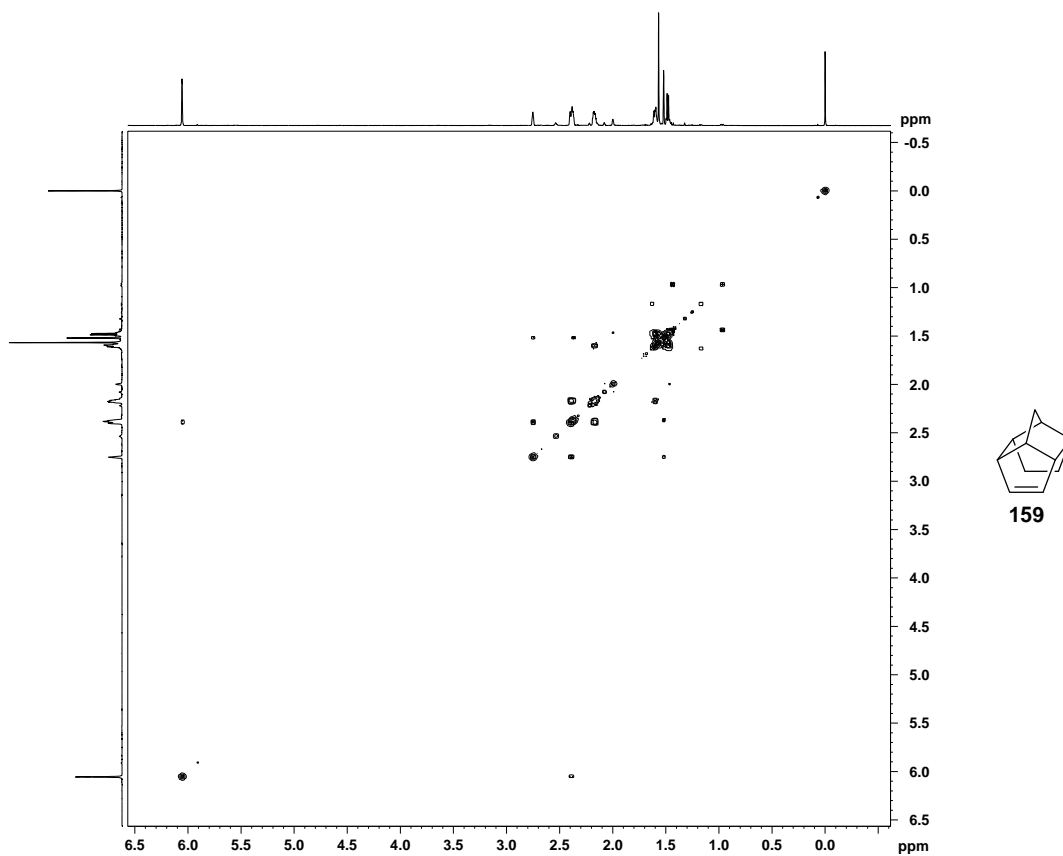
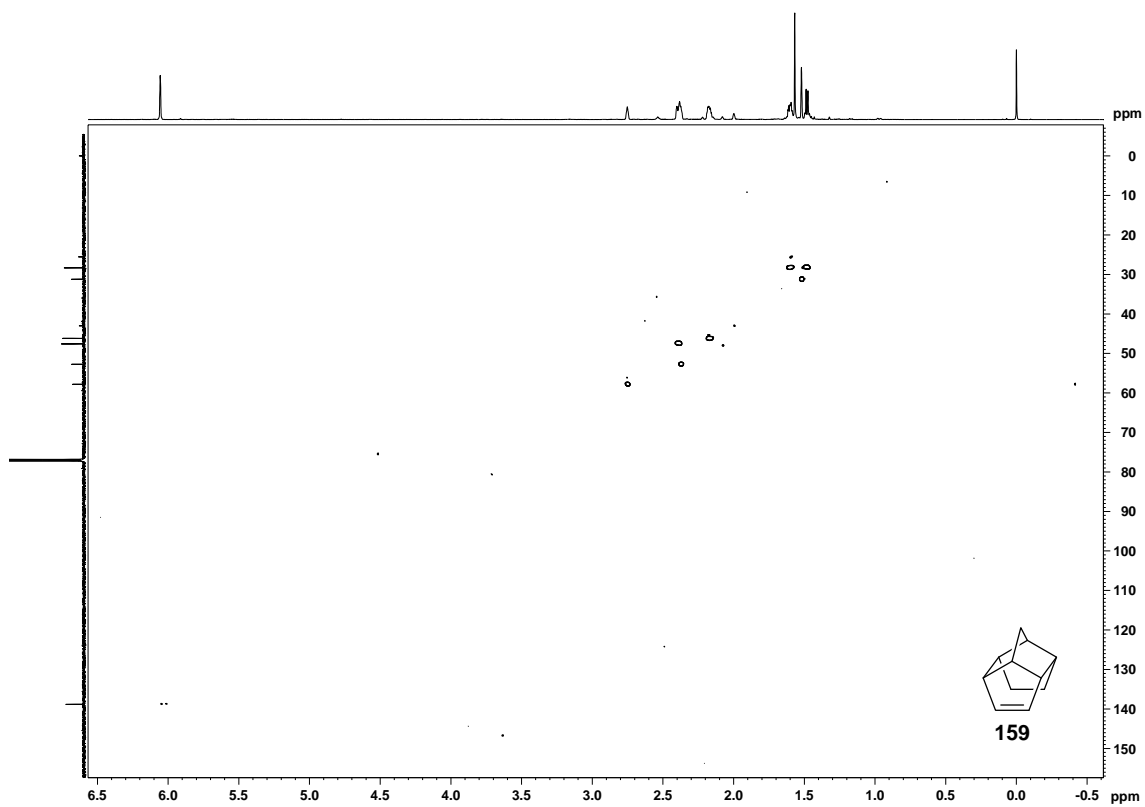
5.3.4.4. COSY spectrum of **126b** (CDCl₃)5.3.4.5. HSQC spectrum of **126b** (CDCl₃)

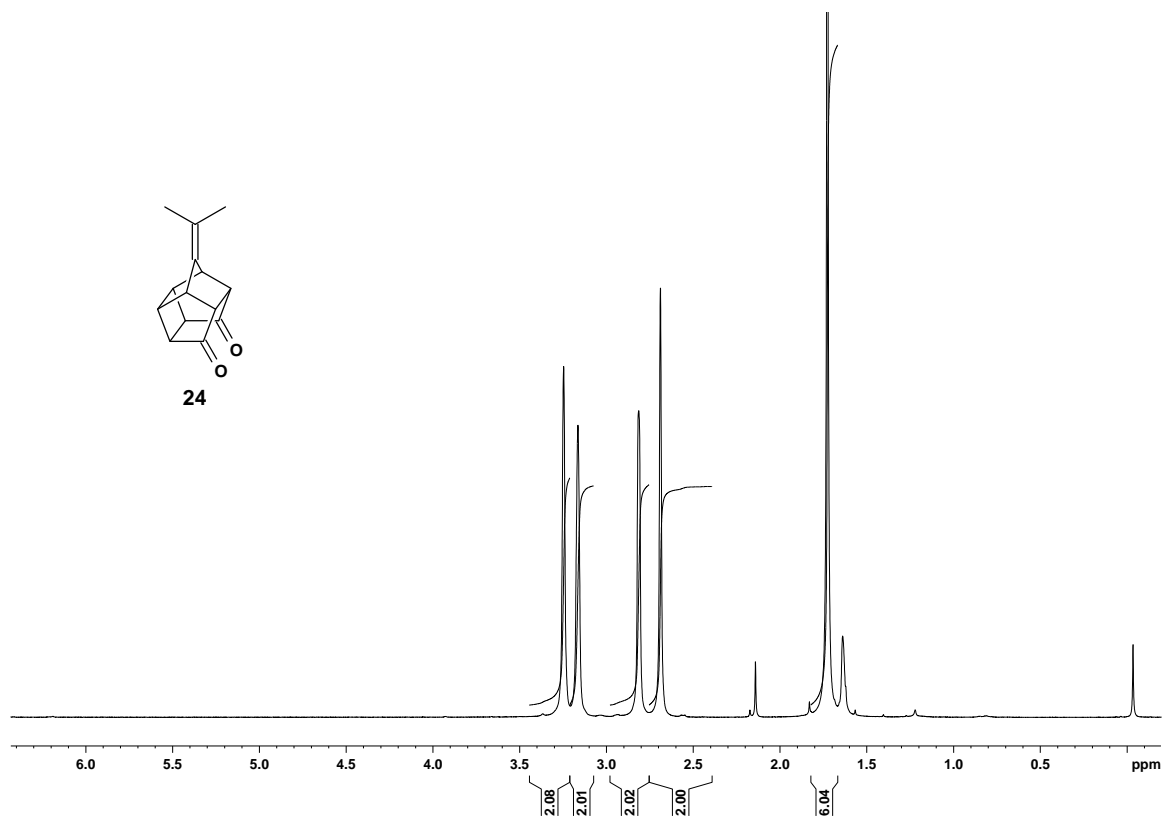
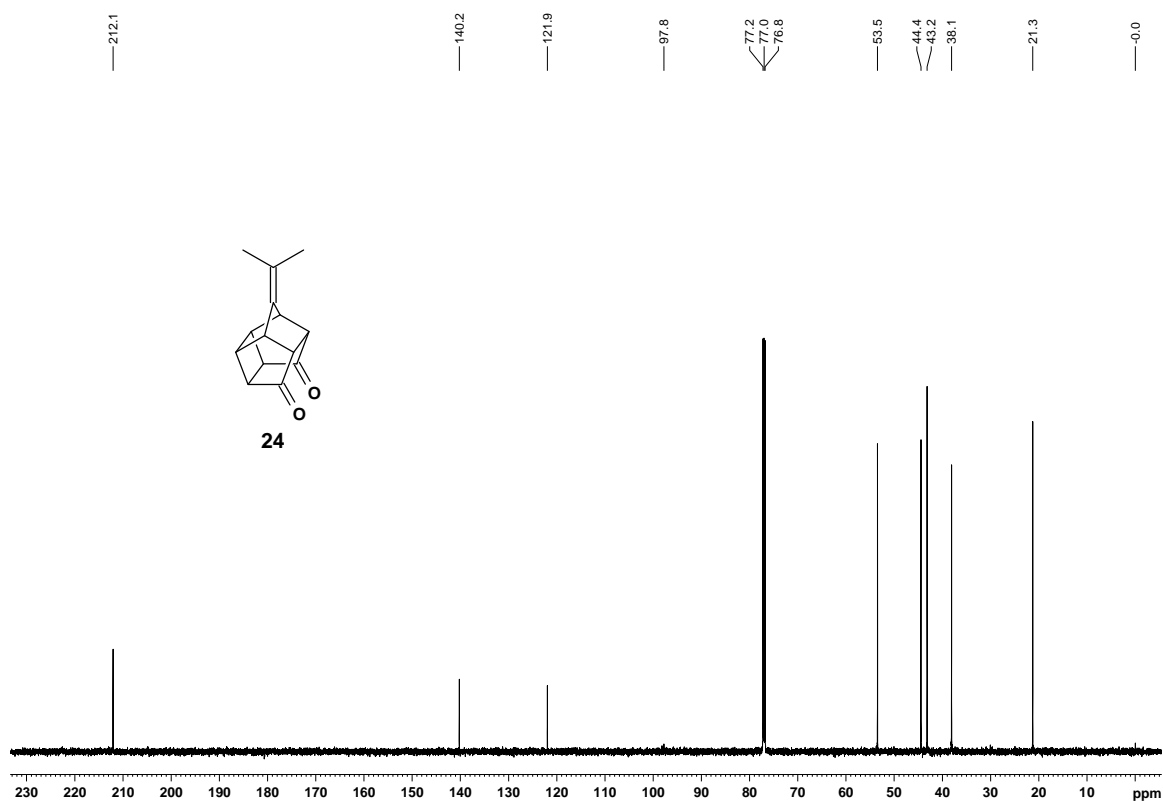
5.3.5.1. ^1H NMR spectrum of **127** (CDCl_3 , 600 MHz)5.3.5.2. ^{13}C NMR spectrum of **127** (CDCl_3 , 150 MHz)

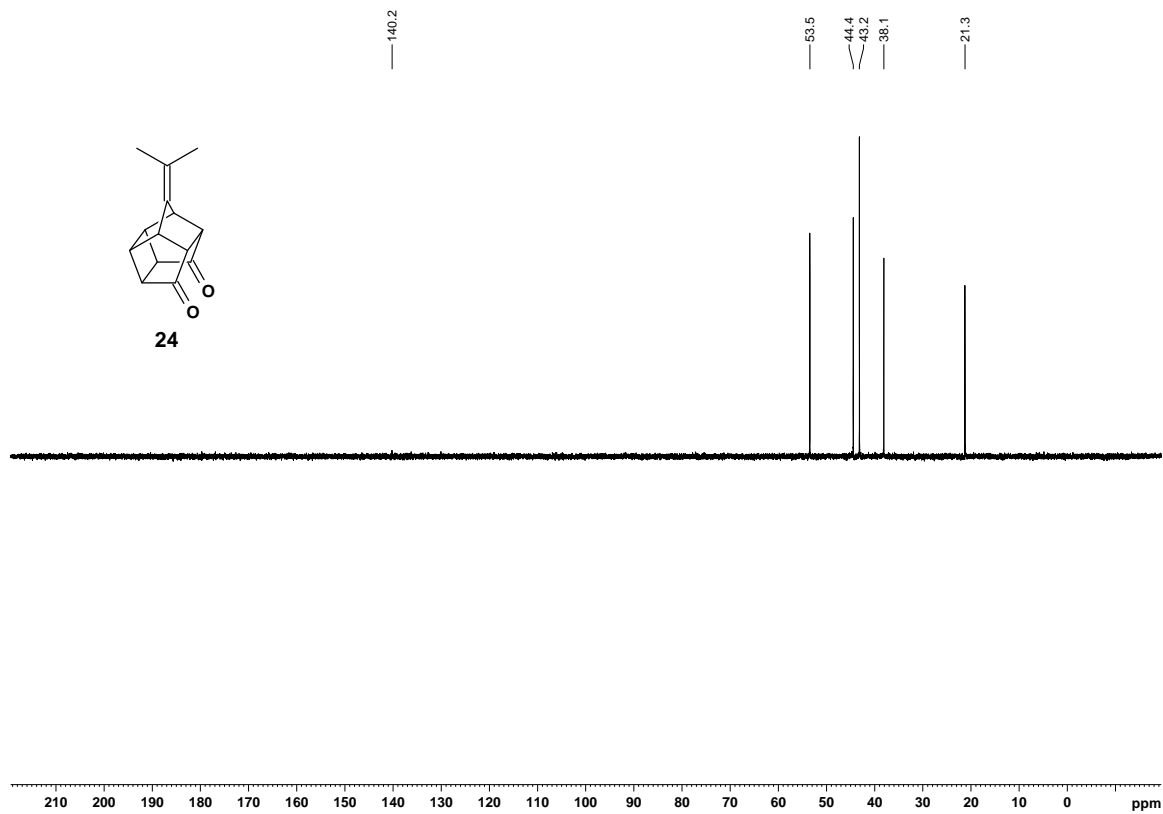
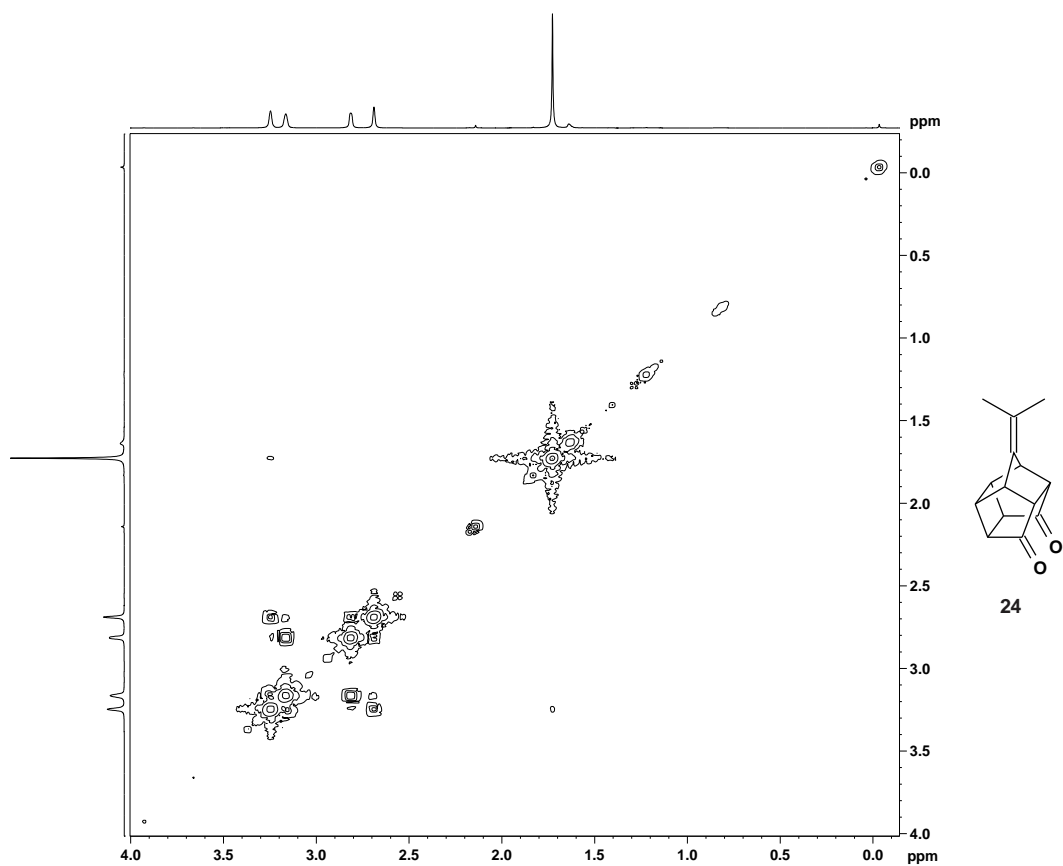
5.3.5.3. DEPT spectrum of **127** (CDCl_3)5.3.5.4. COSY spectrum of **127** (CDCl_3)

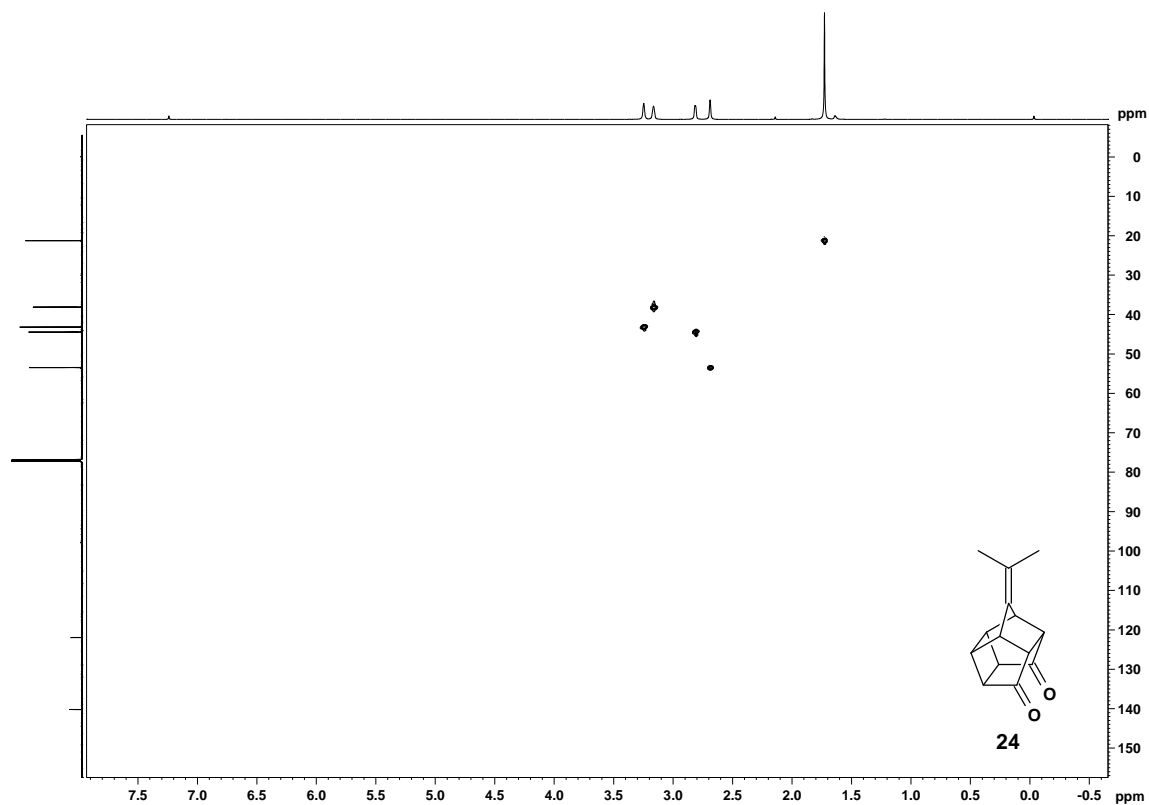
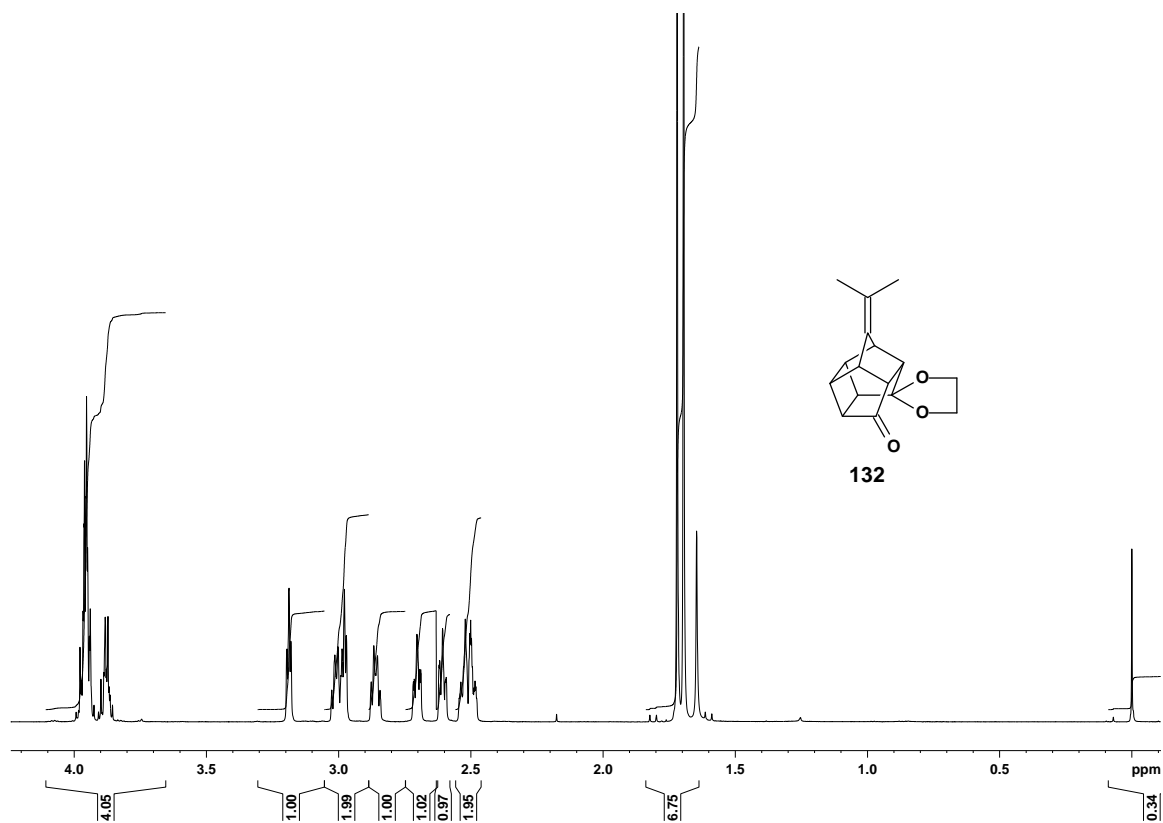
5.3.5.5. HSQC spectrum of **127** (CDCl₃)5.3.6.1. ¹H NMR spectrum of **159** (CDCl₃, 600 MHz)

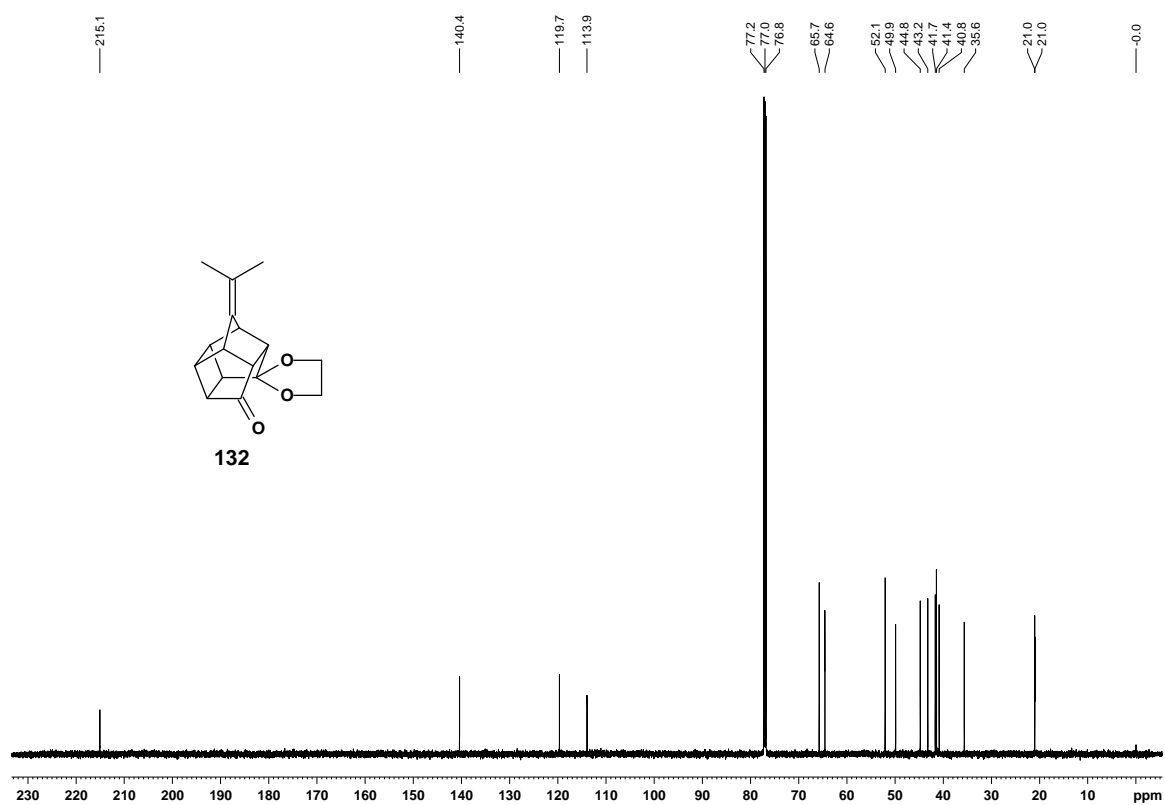
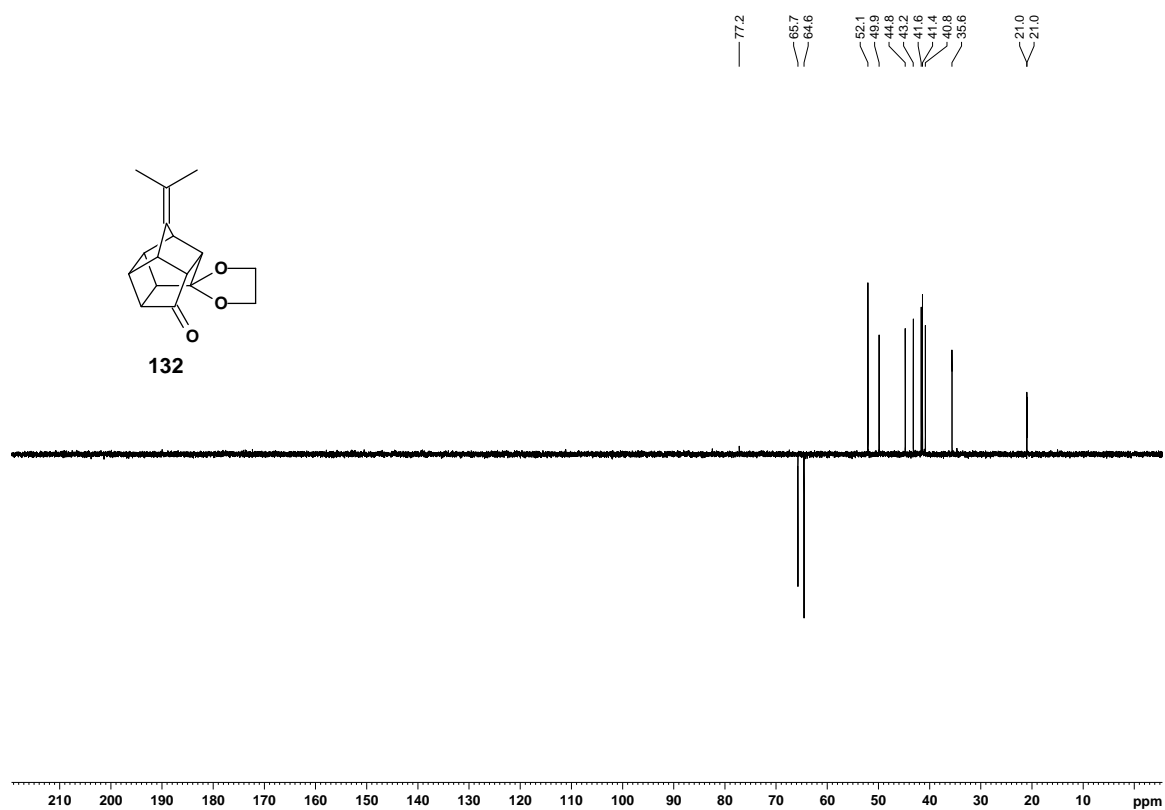
5.3.6.2. ^{13}C NMR spectrum of **159** (CDCl_3 , 150 MHz)5.3.6.3. DEPT spectrum of **159** (CDCl_3)

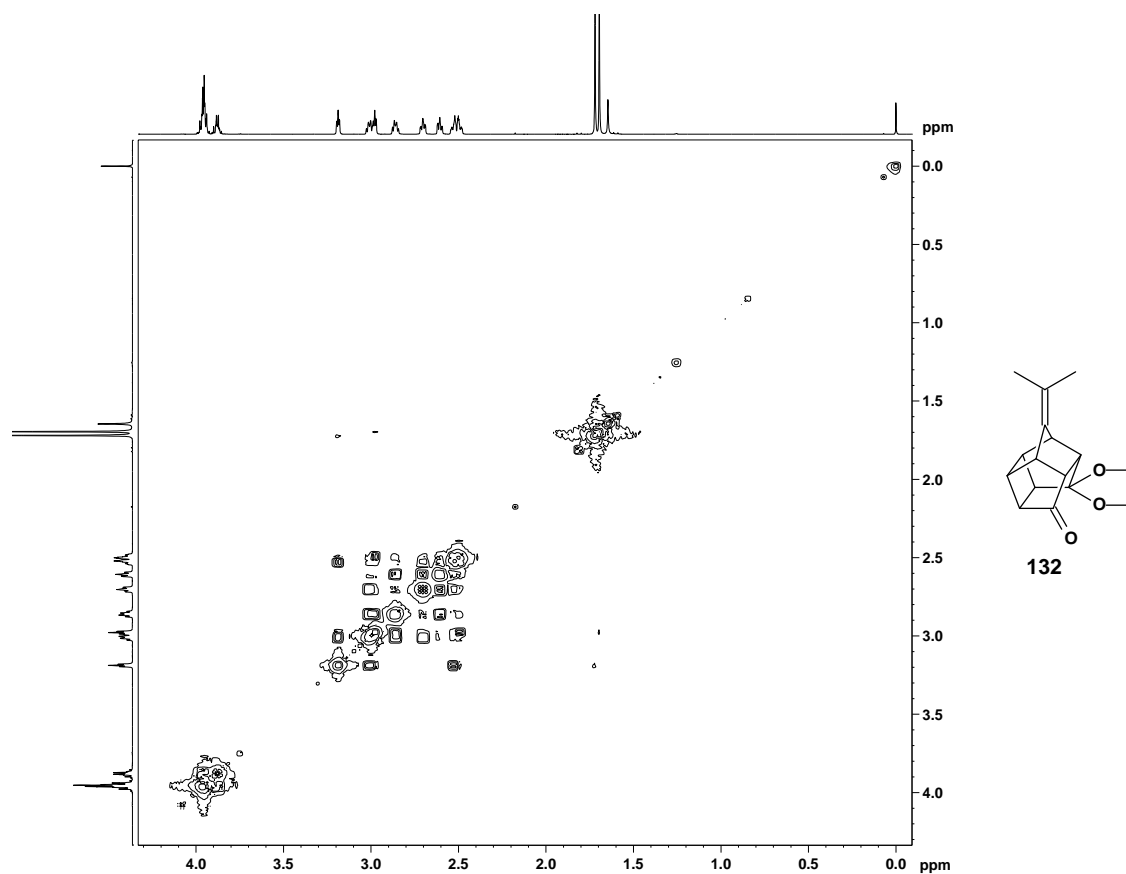
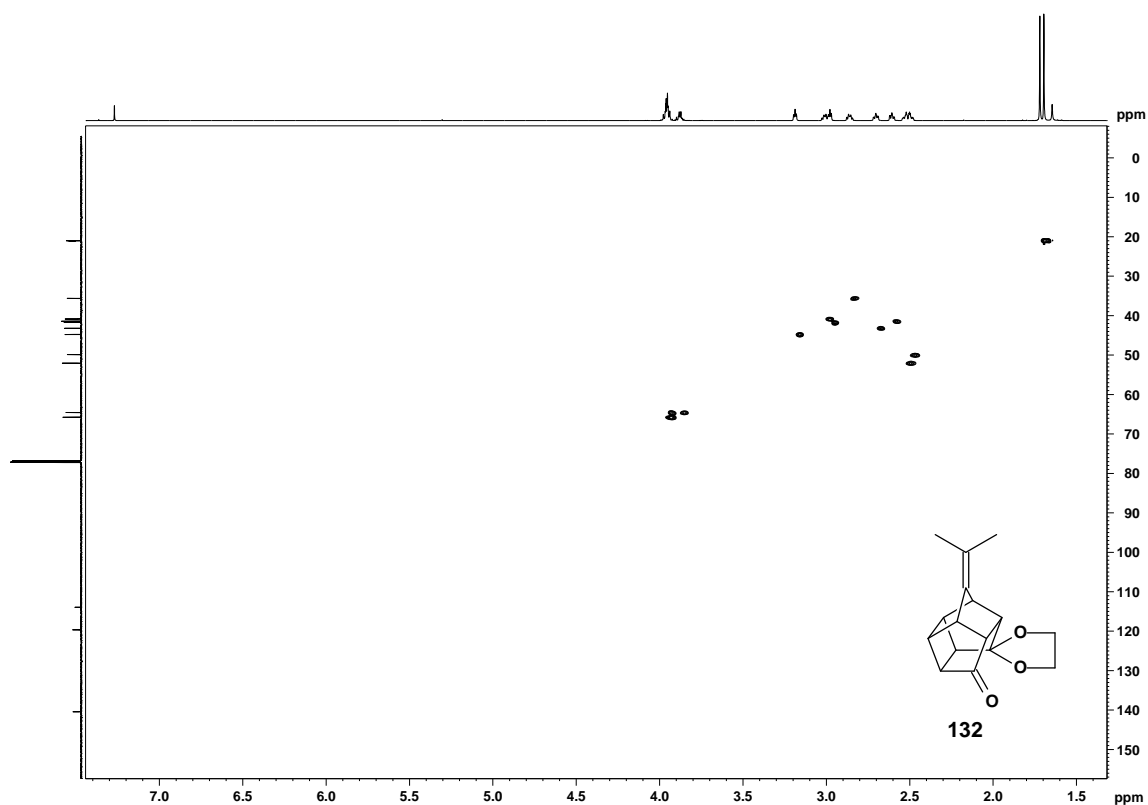
5.3.6.4. COSY spectrum of **159** (CDCl_3)5.3.6.5. HSQC spectrum of **159** (CDCl_3)

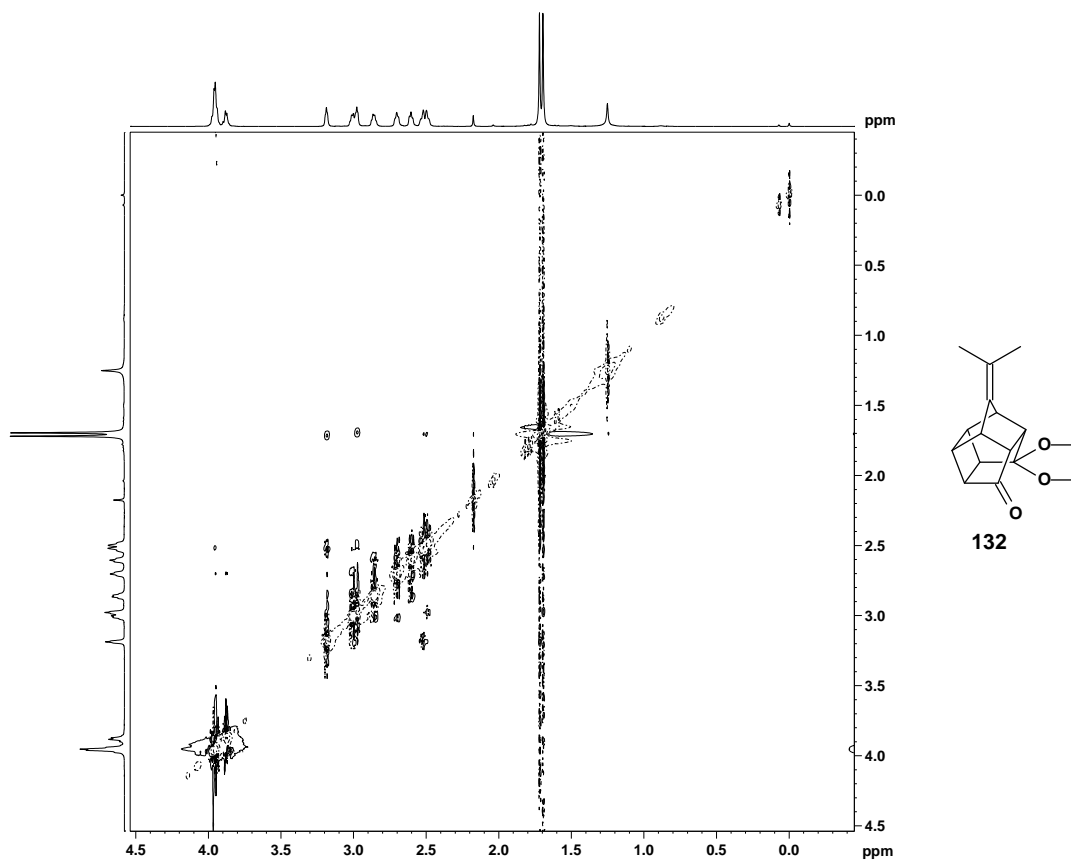
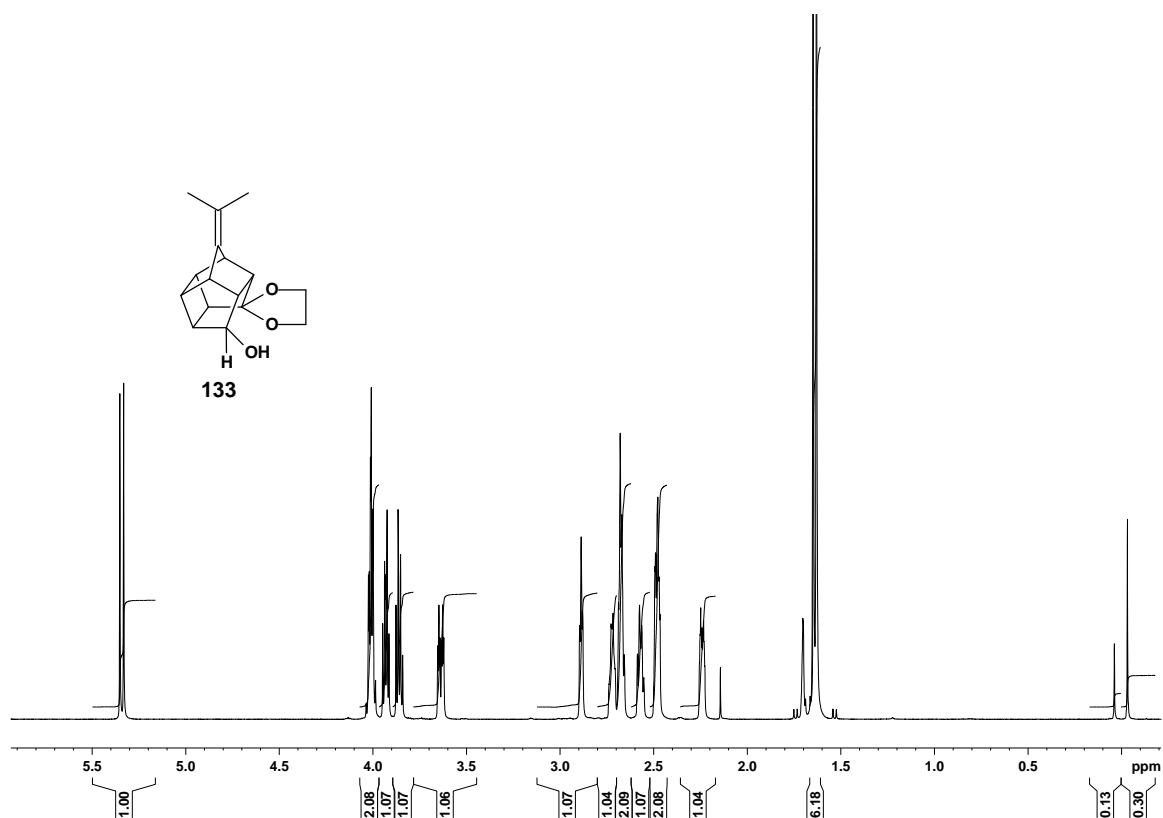
5.3.7.1. ^1H NMR spectrum of **23** (CDCl_3 , 600 MHz)5.3.7.2. ^{13}C NMR spectrum of **23** (CDCl_3 , 150 MHz)

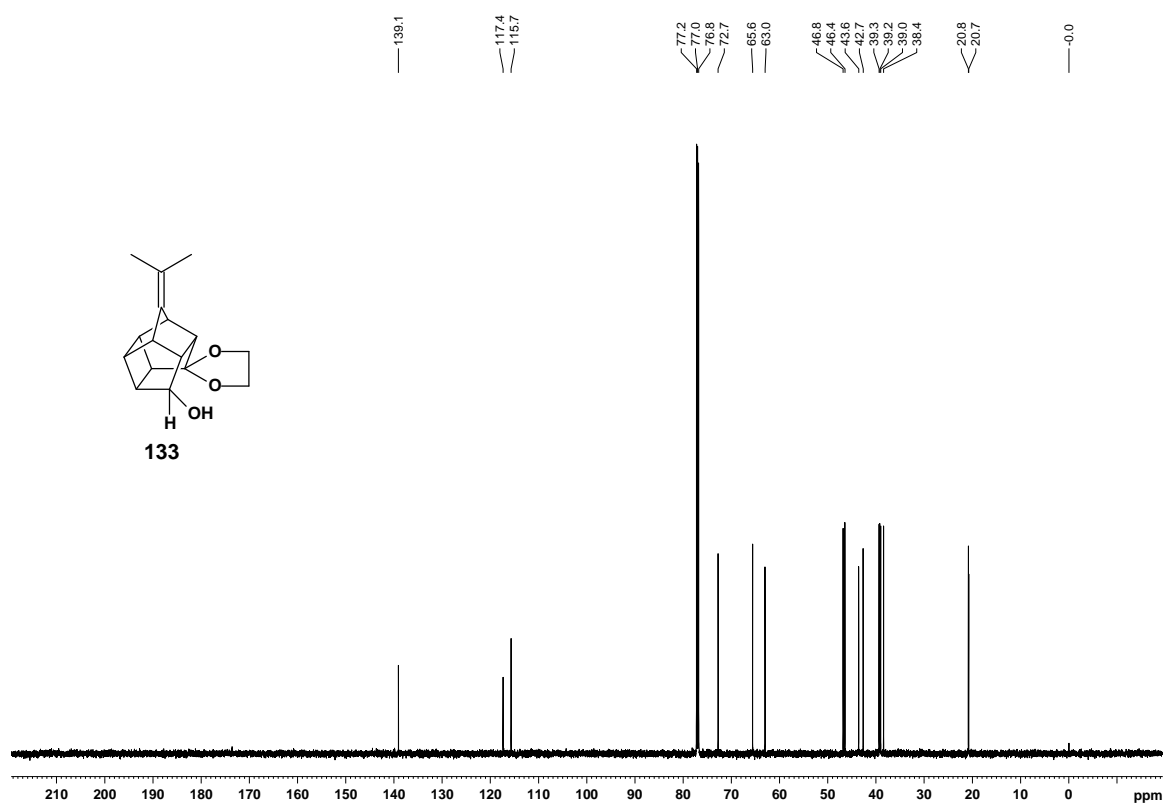
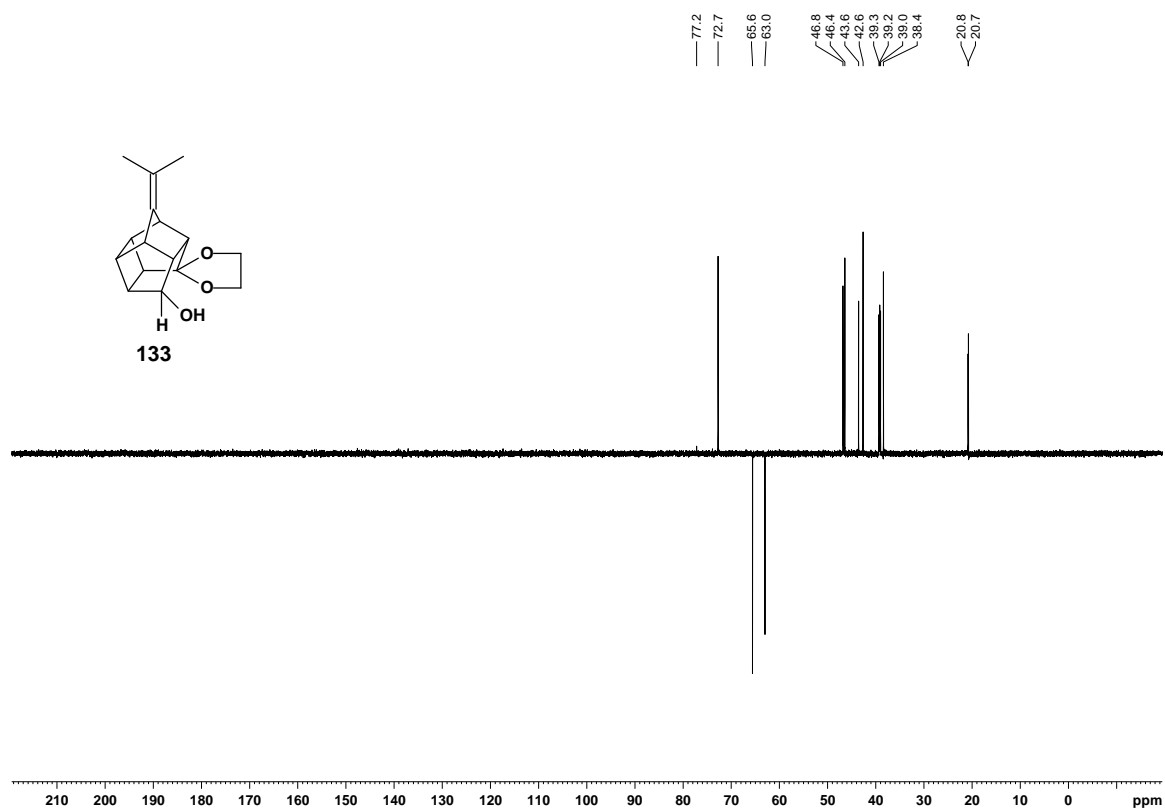
5.3.7.3. DEPT spectrum of **23** (CDCl_3)5.3.7.4. COSY spectrum of **23** (CDCl_3)

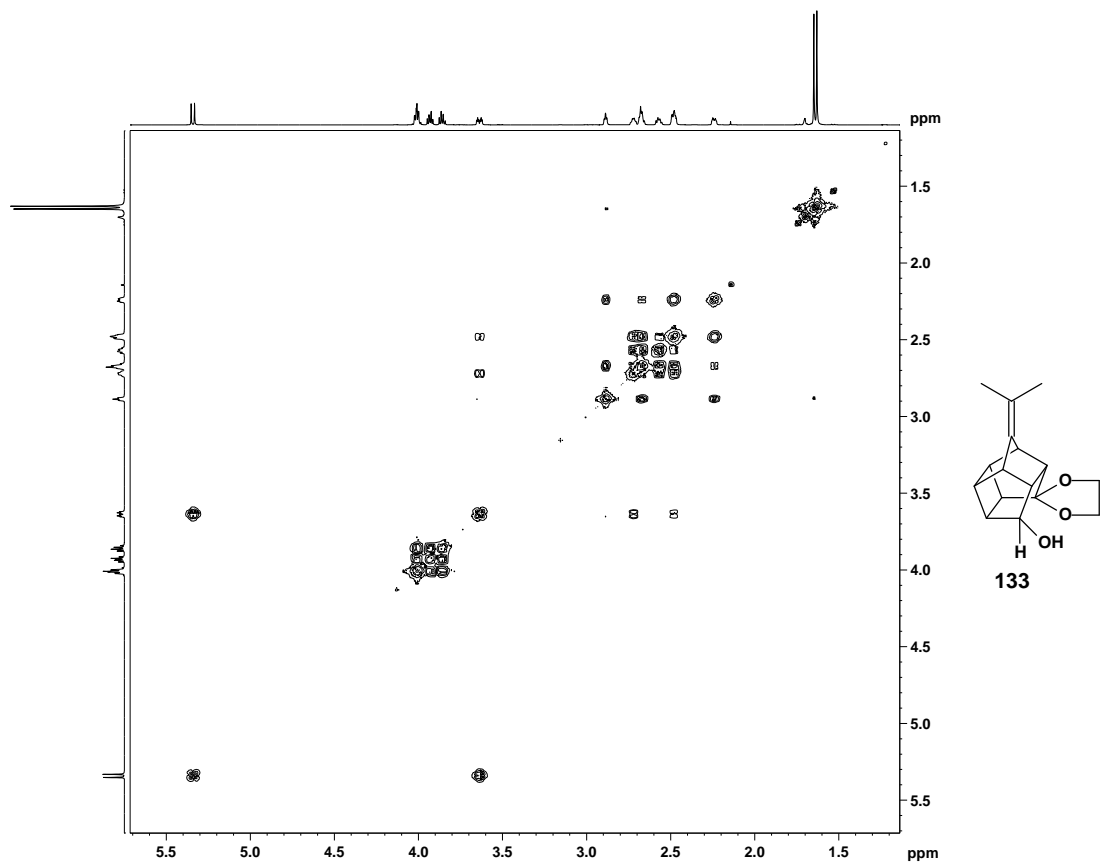
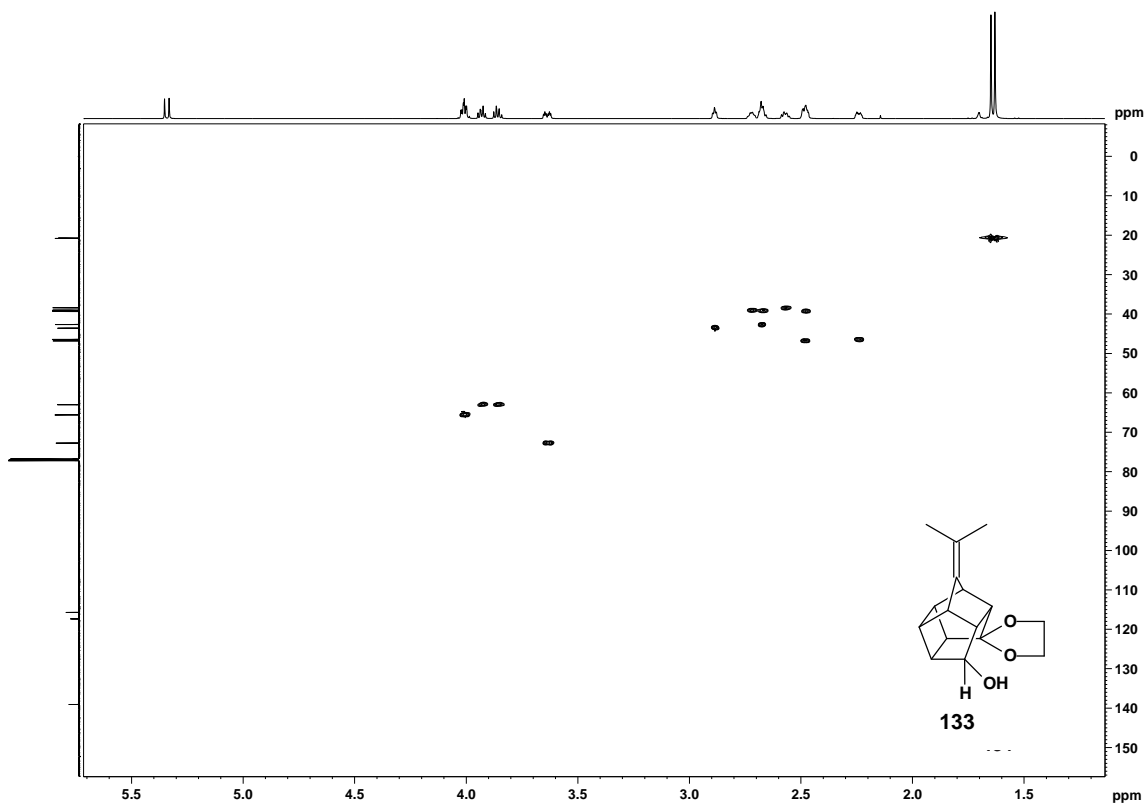
5.3.7.5. HSQC spectrum of **23** (CDCl₃)5.3.8.1. ¹H NMR spectrum of **132** (CDCl₃, 600 MHz)

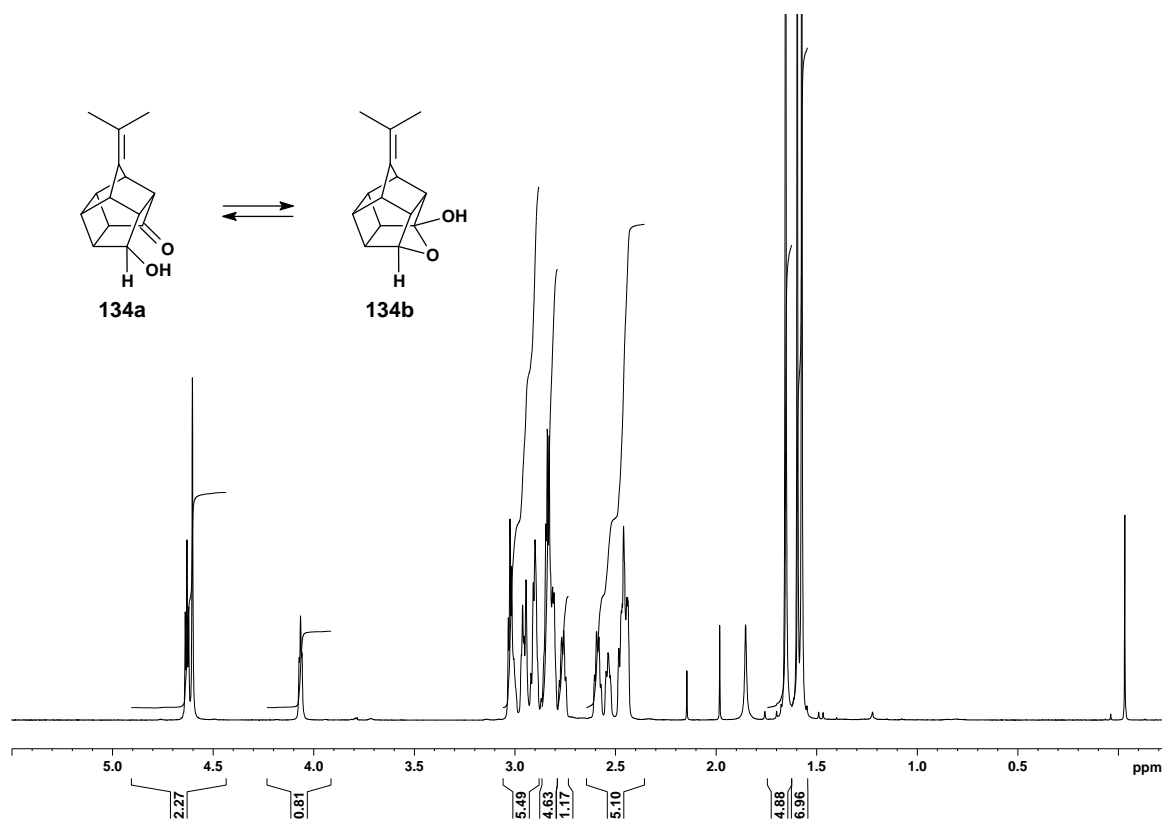
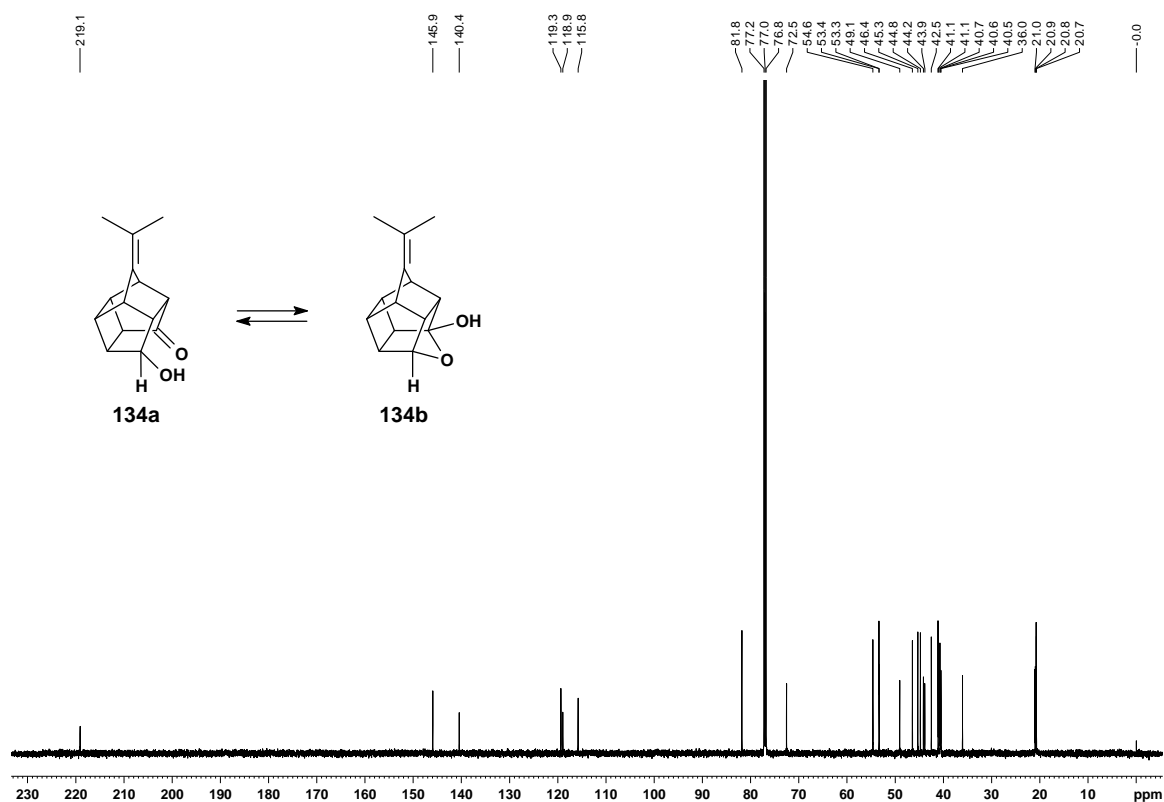
5.3.8.2. ^{13}C NMR spectrum of **132** (CDCl_3 , 150 MHz)5.3.8.3. DEPT spectrum of **132** (CDCl_3)

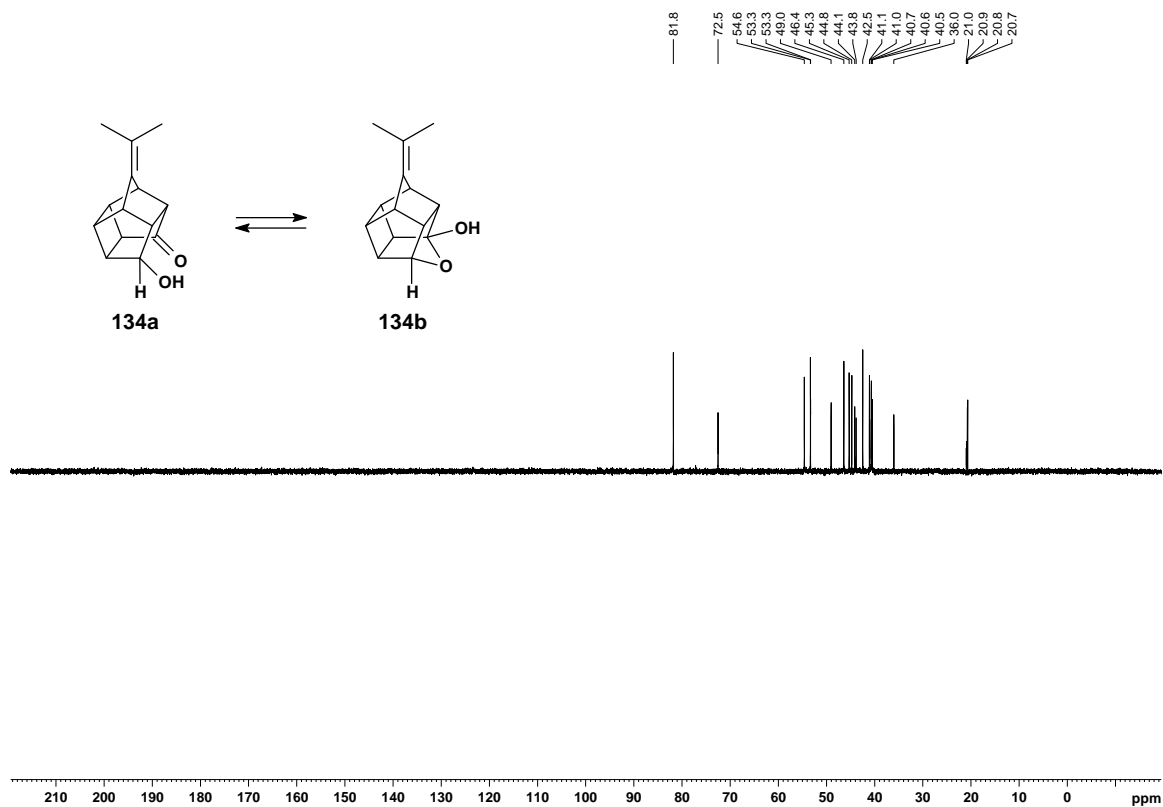
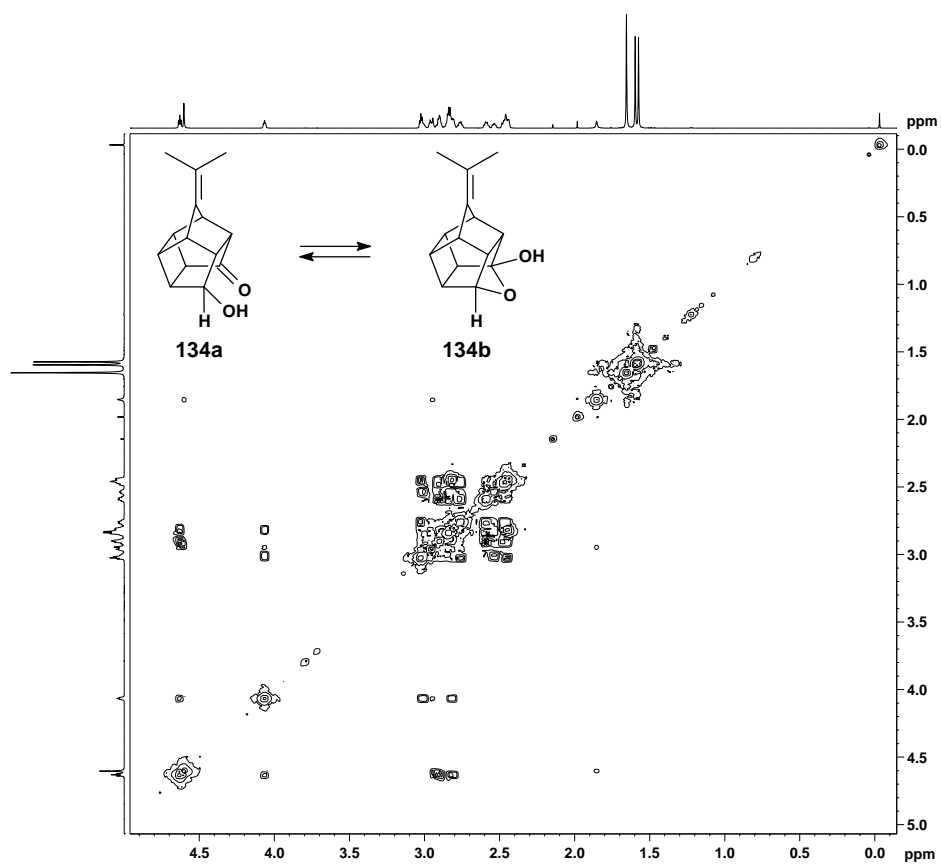
5.3.8.4. COSY spectrum of **132** (CDCl₃)5.3.8.5. HSQC spectrum of **132** (CDCl₃)

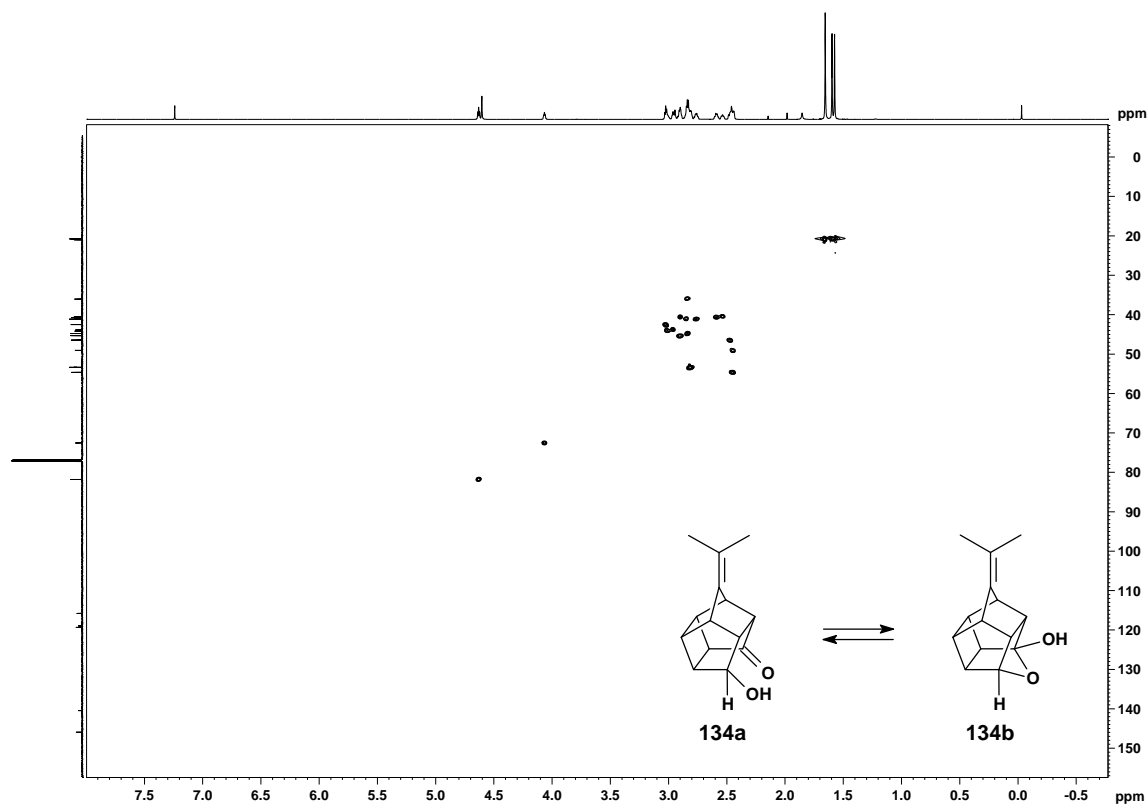
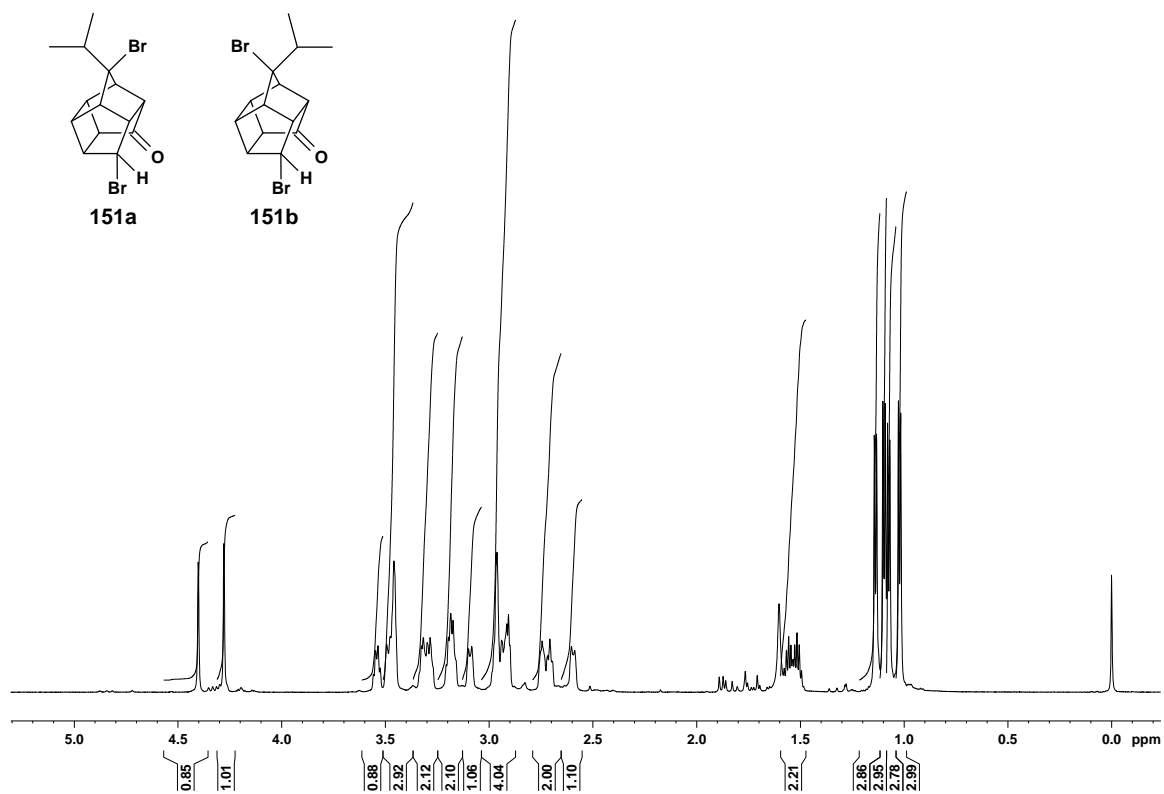
5.3.8.6. NOESY spectrum of **132** (CDCl₃, 600 MHz)5.3.9.1. ¹H NMR spectrum of **133** (CDCl₃, 600 MHz)

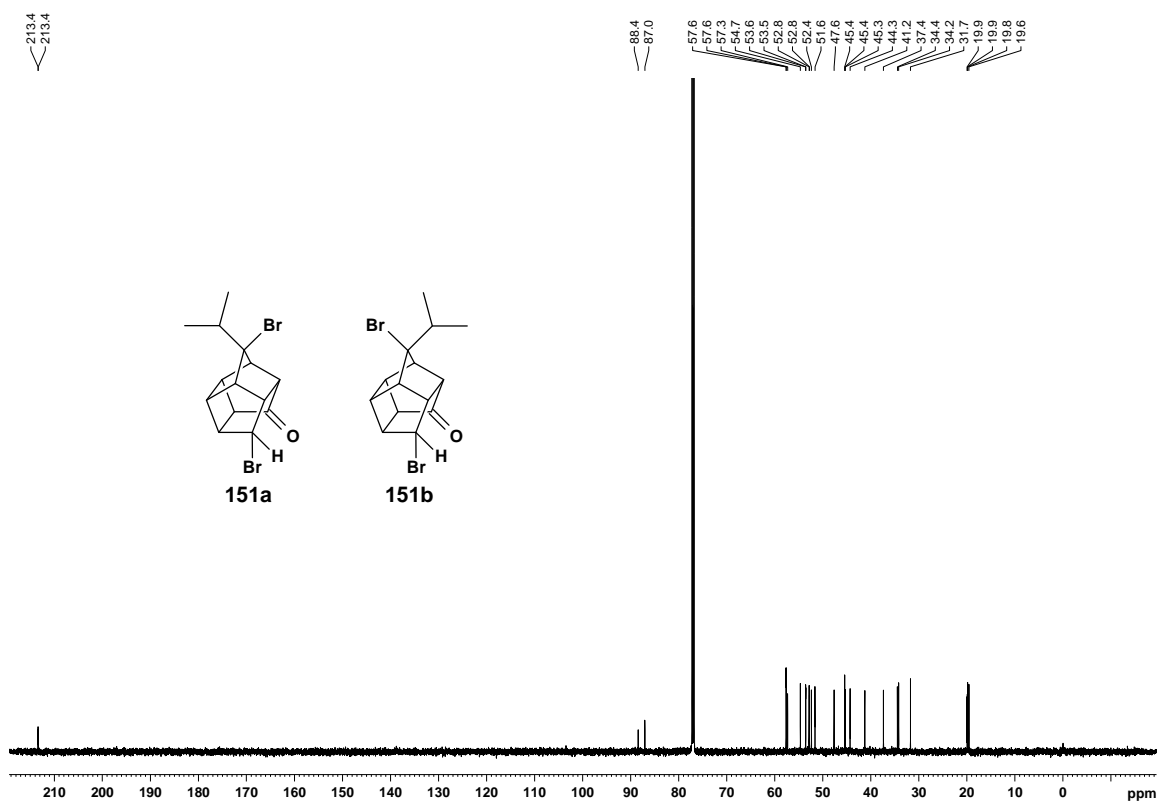
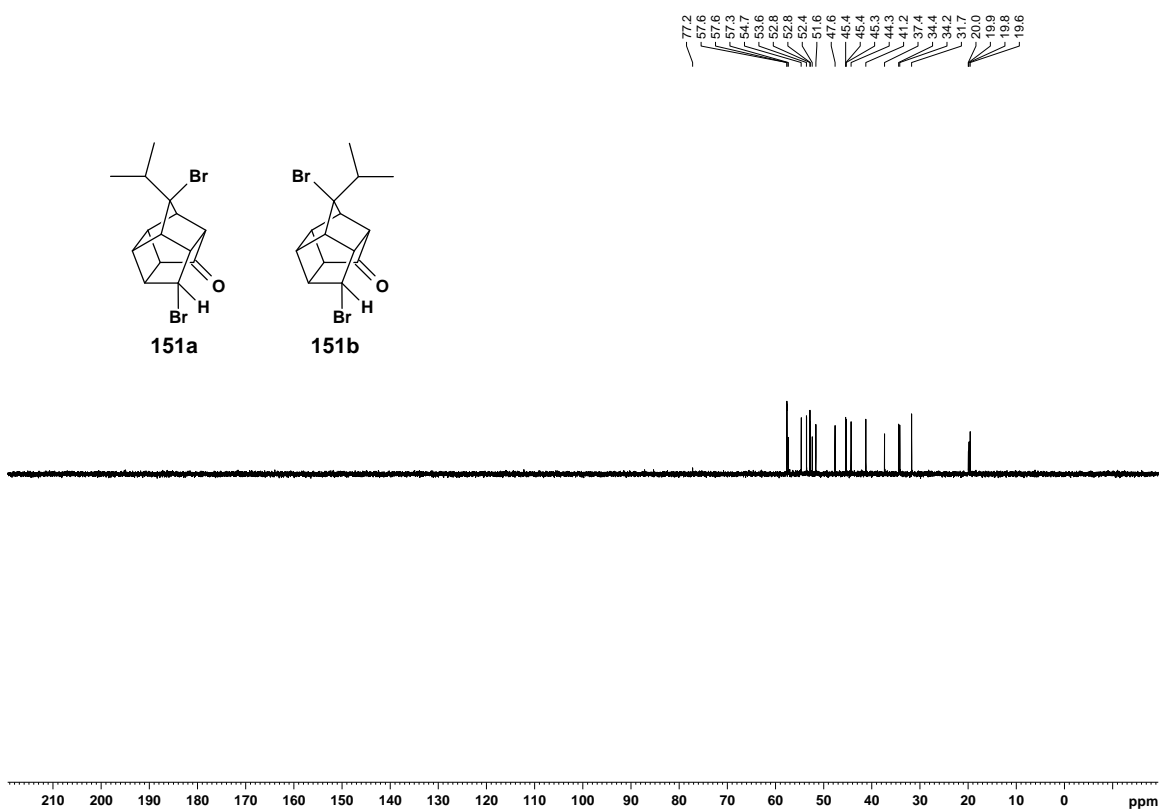
5.3.9.2. ^{13}C NMR spectrum of **133** (CDCl_3 , 150 MHz)5.3.9.3. DEPT spectrum of **133** (CDCl_3)

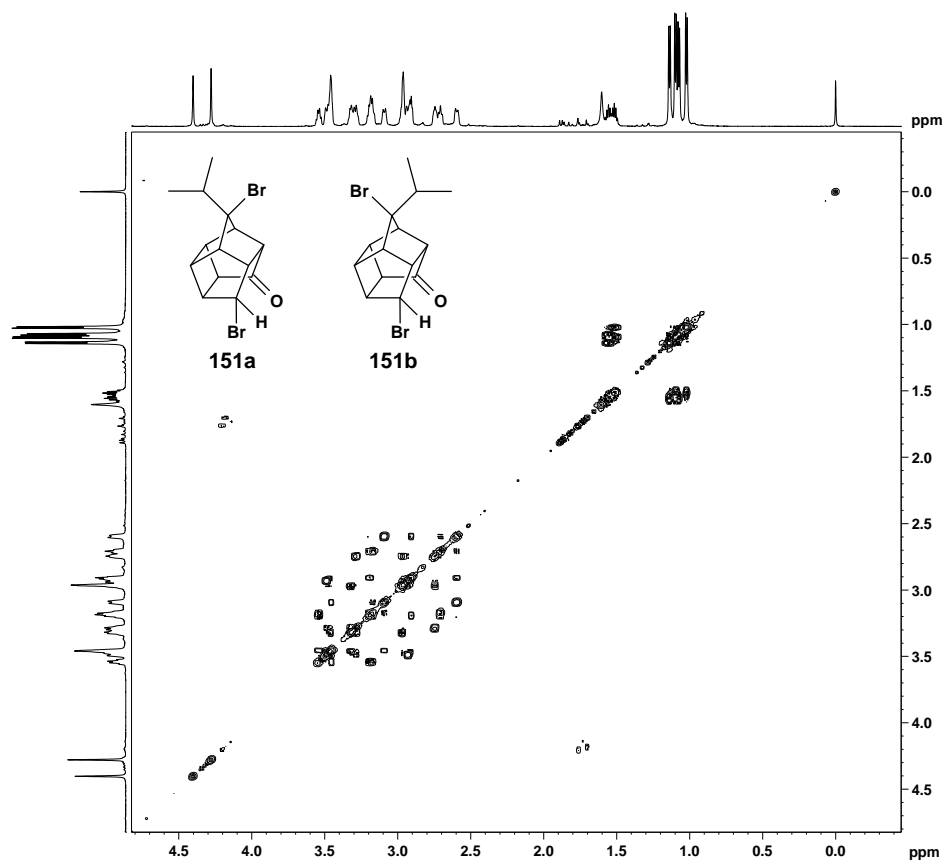
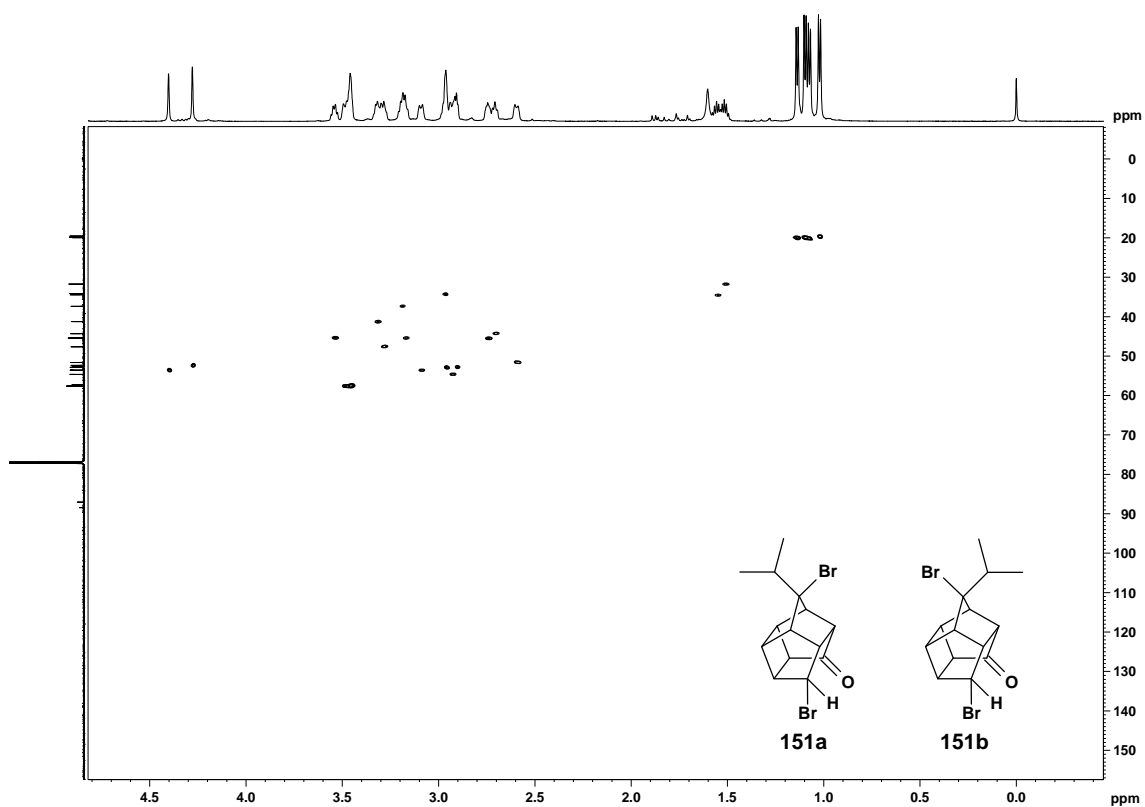
5.3.9.4. COSY spectrum of **133** (CDCl₃)5.3.9.5. HSQC spectrum of **133** (CDCl₃)

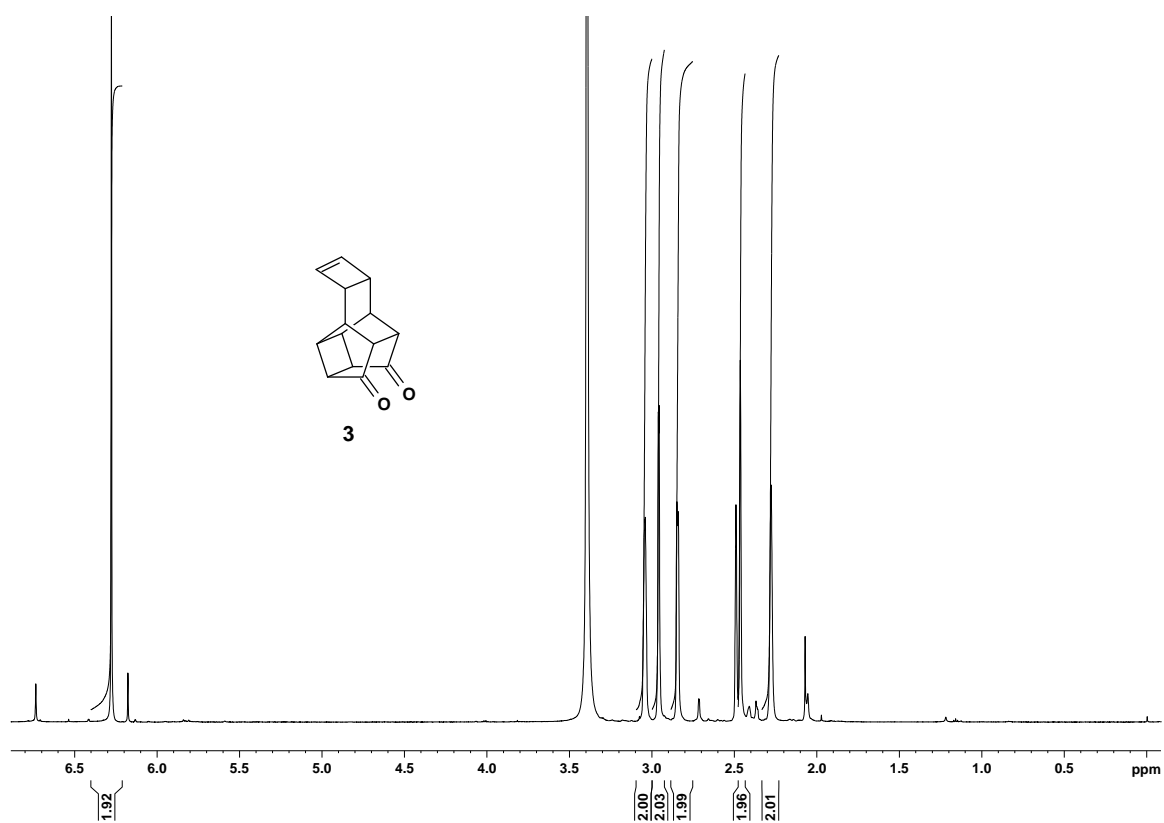
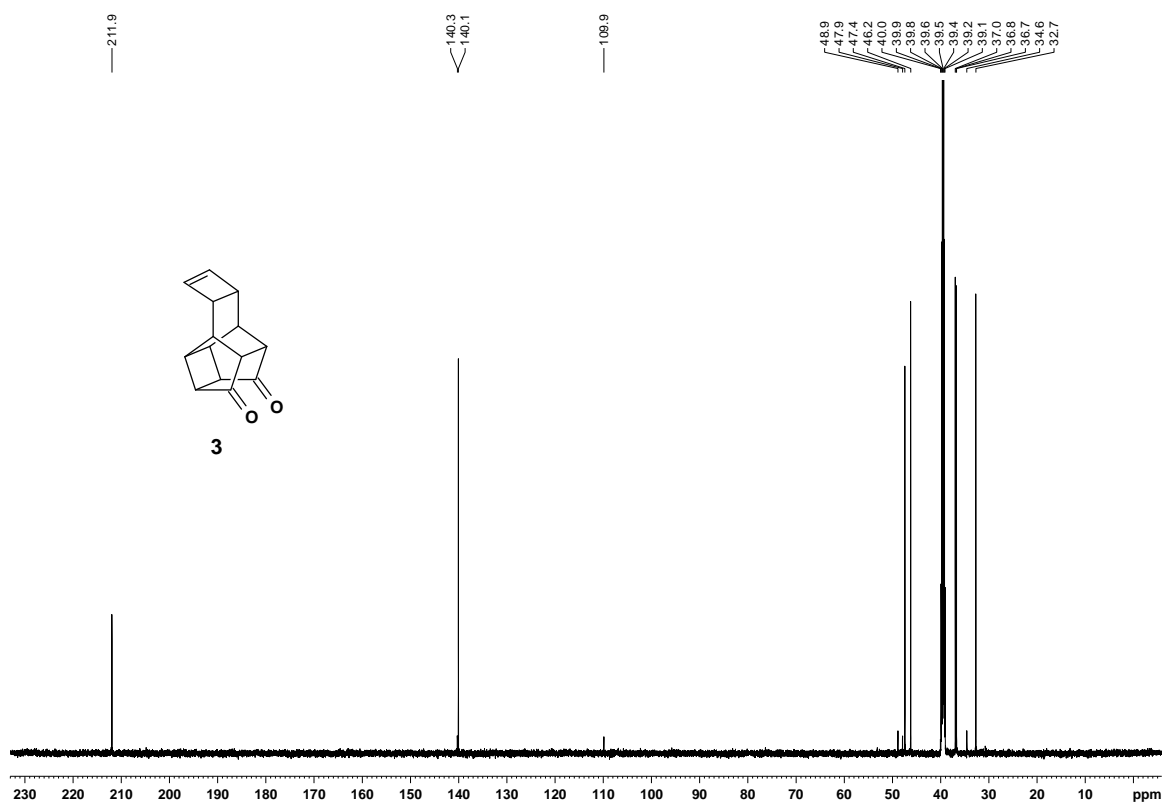
5.3.10.1. ^1H NMR spectrum of **134a/134b** (CDCl_3 , 600 MHz)5.3.10.2. ^{13}C NMR spectrum of **134a/134b** (CDCl_3 , 150 MHz)

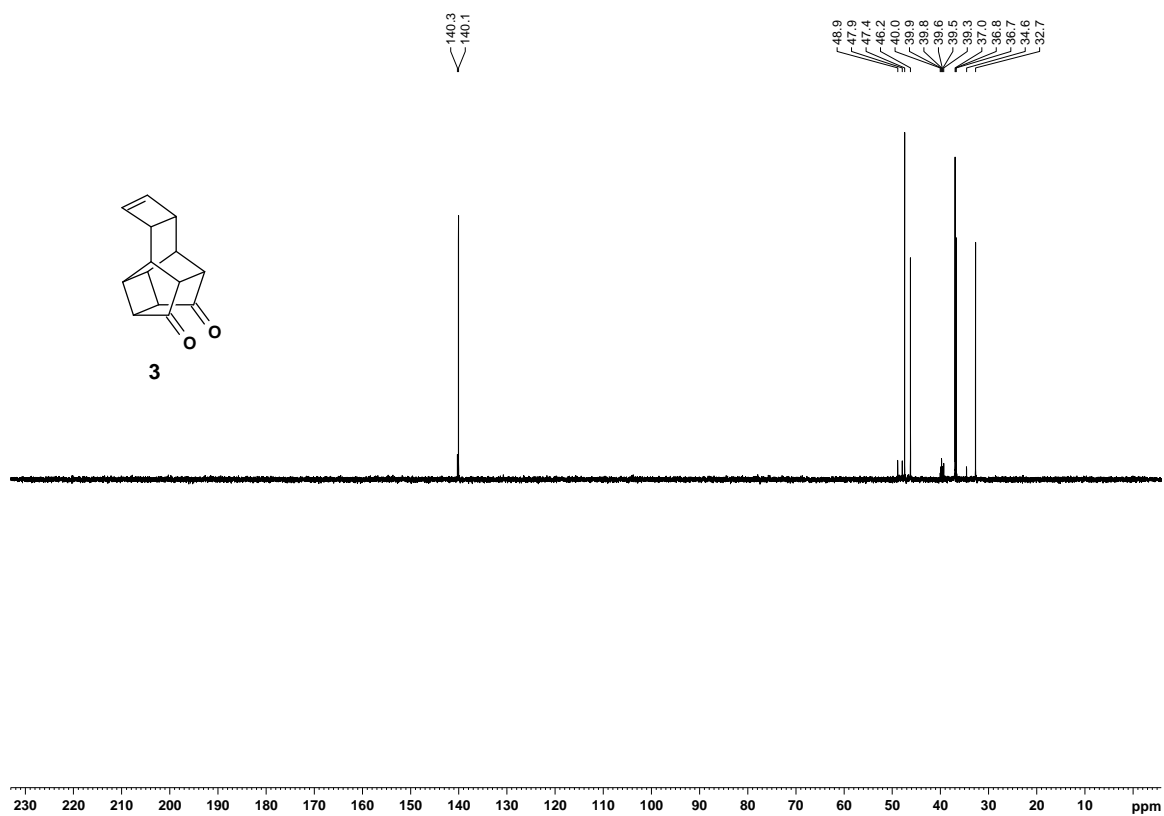
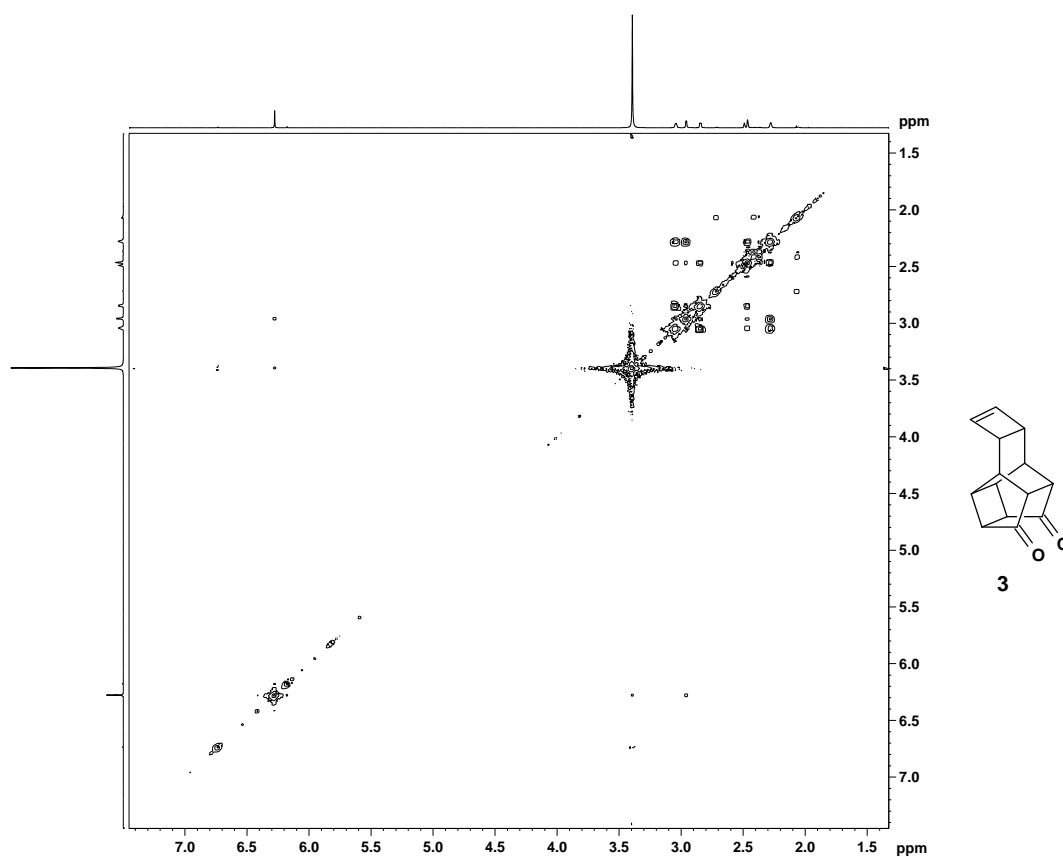
5.3.10.3. DEPT spectrum of **134a/134b** (CDCl_3)5.3.10.4. COSY spectrum of **134a/134b** (CDCl_3)

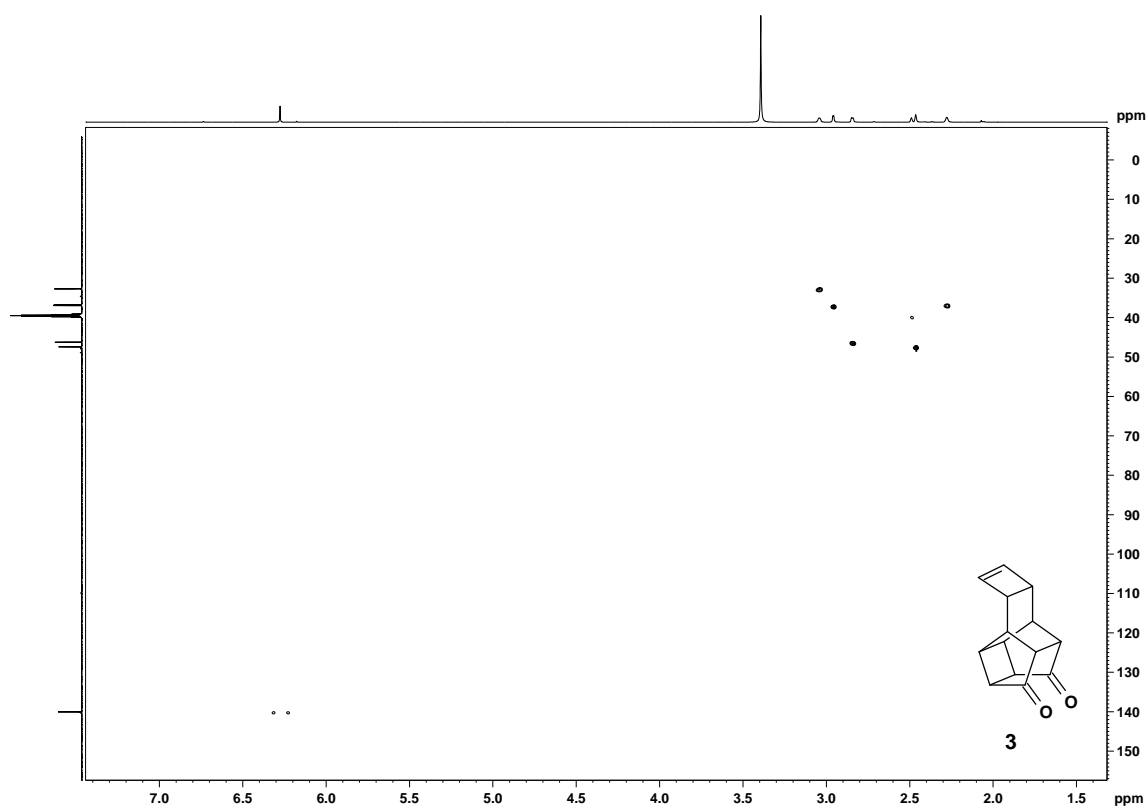
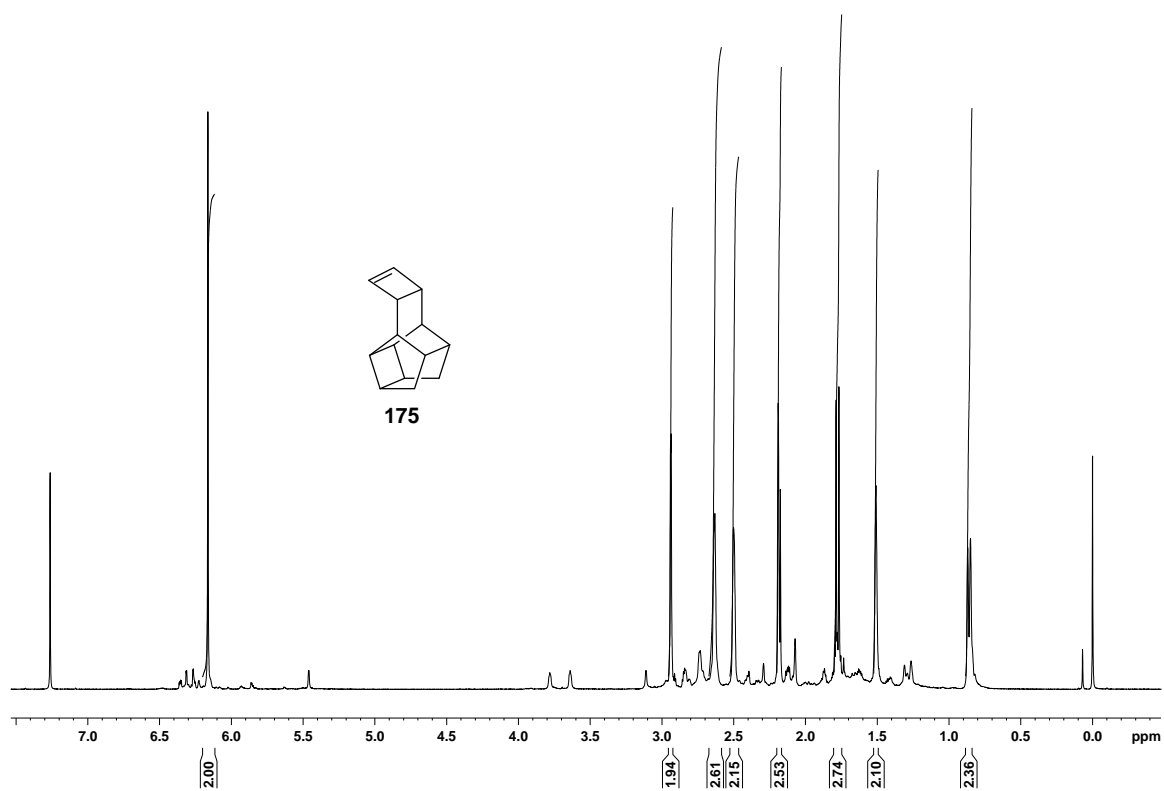
5.3.10.5. HSQC spectrum of **134a/134b** (CDCl₃)5.3.11.1. ¹H NMR spectrum of **151** (CDCl₃, 600 MHz)

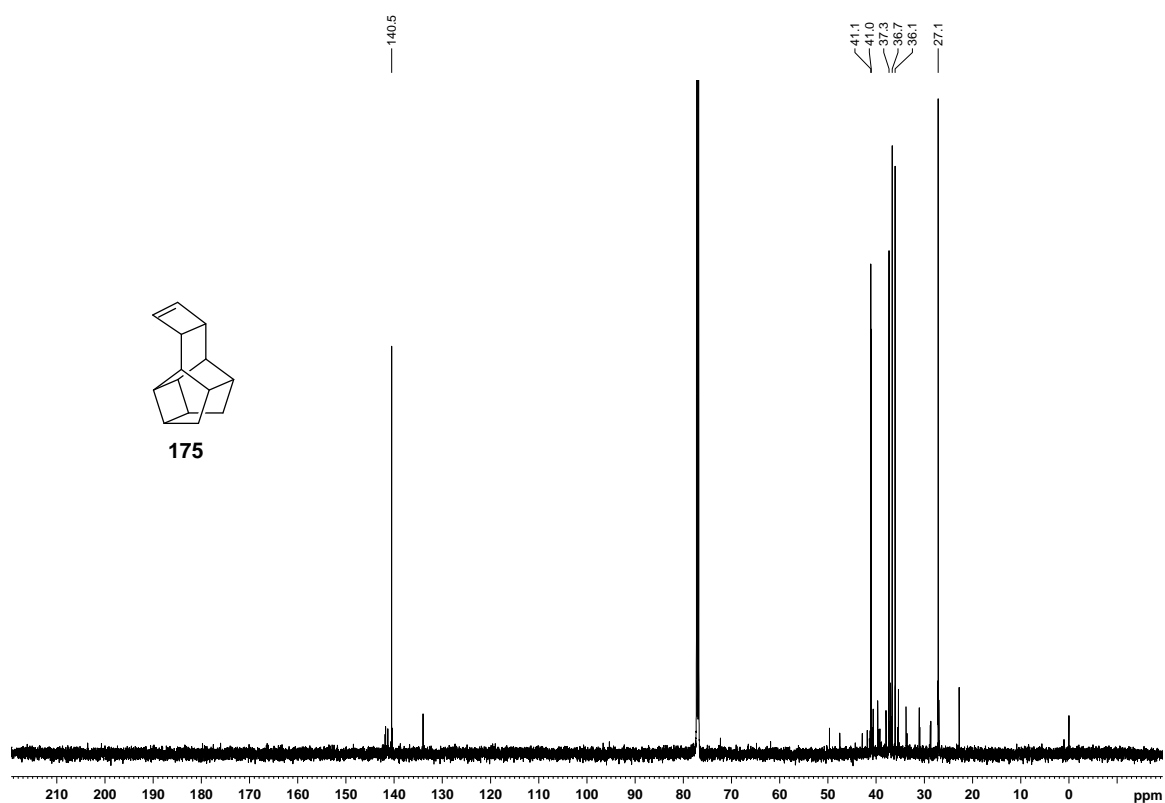
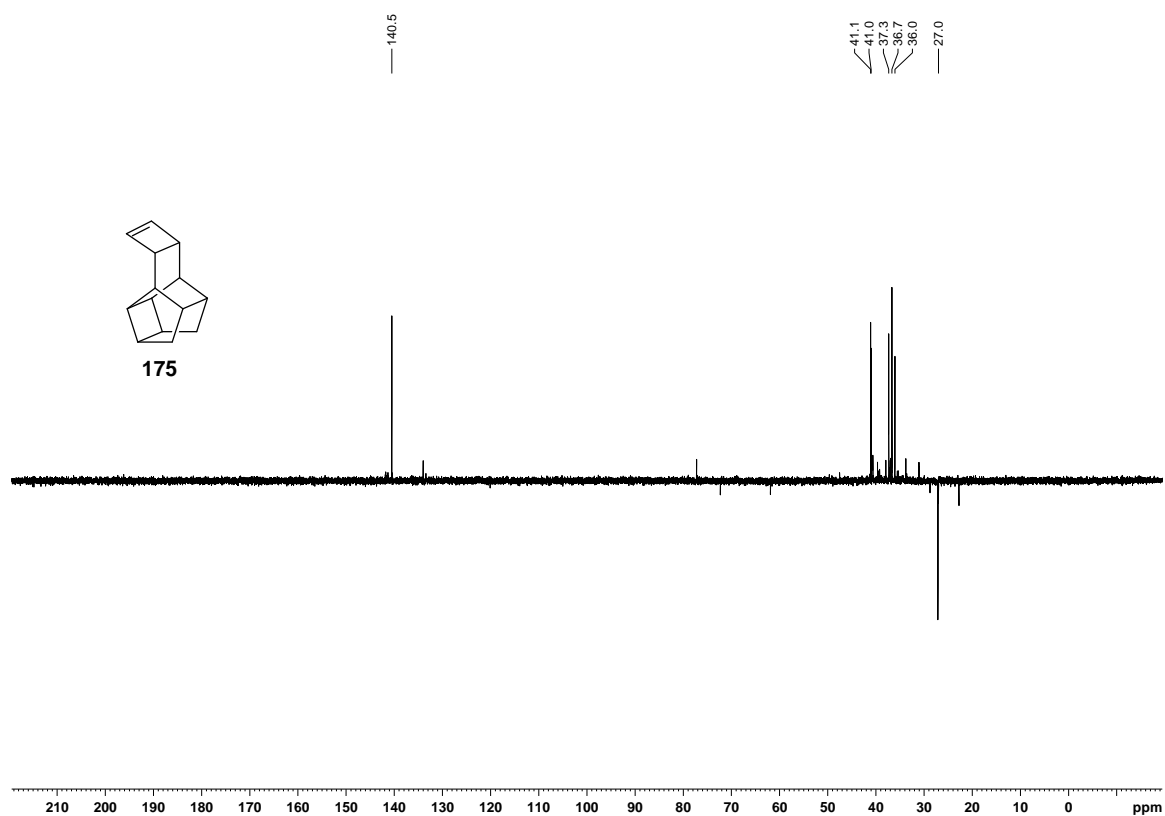
5.3.11.2. ^{13}C NMR spectrum of **151** (CDCl_3 , 150 MHz)5.3.11.3. DEPT spectrum of **151** (CDCl_3)

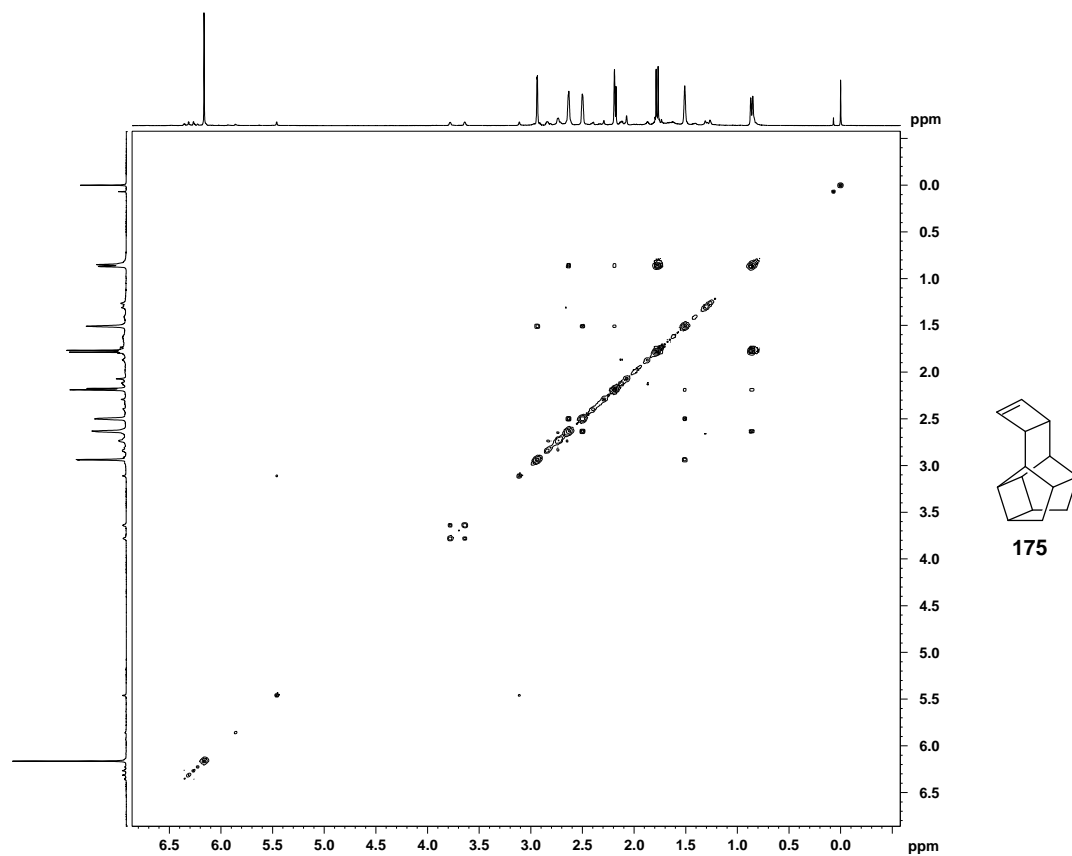
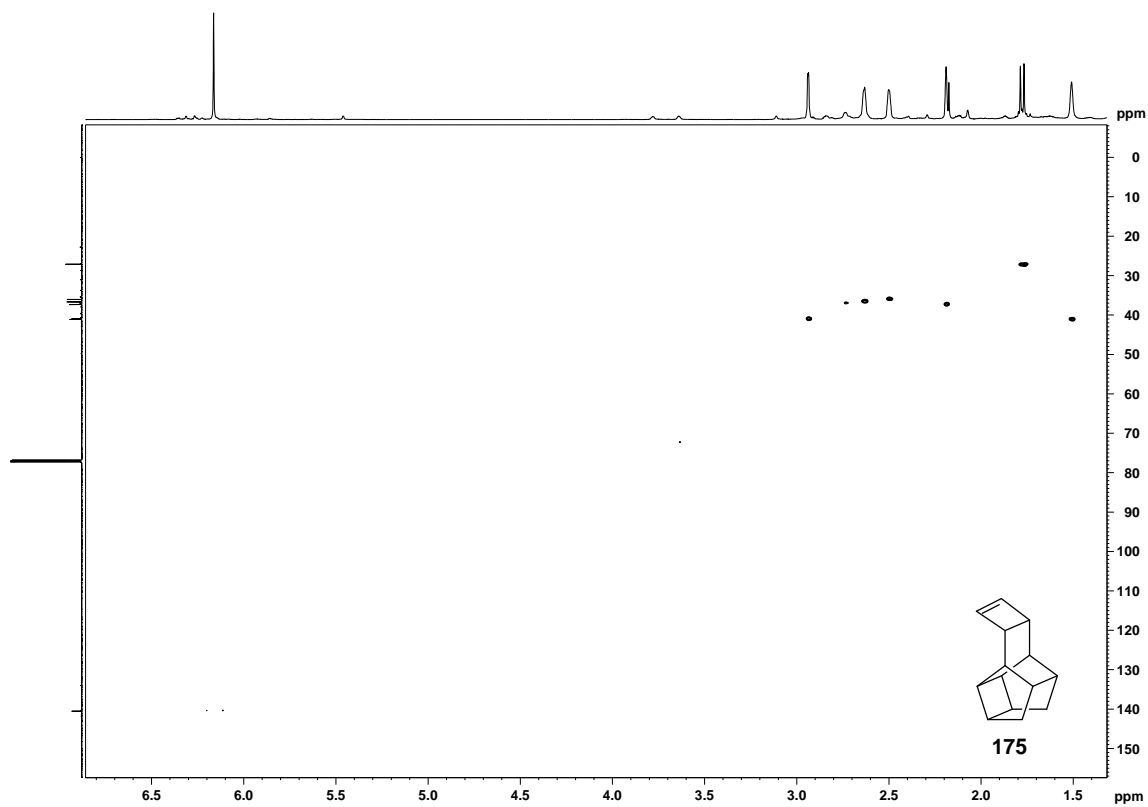
5.3.11.4. COSY spectrum of **151** (CDCl₃)5.3.11.5. HSQC spectrum of **151** (CDCl₃)

5.3.12.1. ^1H NMR spectrum of **3** (CDCl_3 , 600 MHz)5.3.12.2. ^{13}C NMR spectrum of **3** (CDCl_3 , 150 MHz)

5.3.12.3. DEPT spectrum of **3** (CDCl₃)5.3.12.4. COSY spectrum of **3** (CDCl₃)

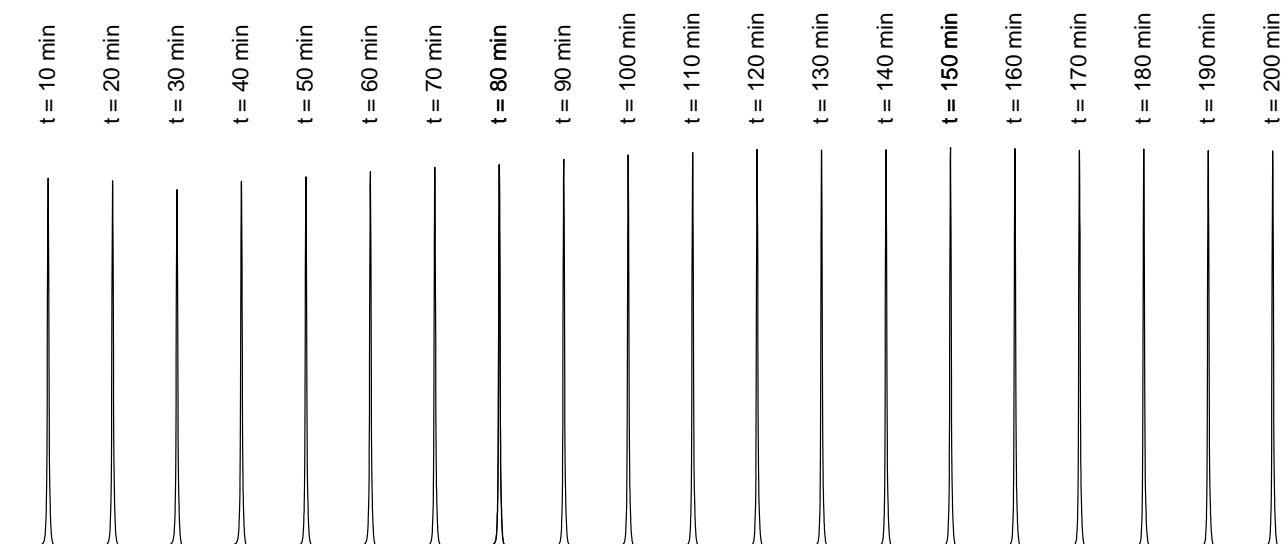
5.3.12.5. HSQC spectrum of **3** (CDCl₃)5.3.13.1. ¹H NMR spectrum of **175** (CDCl₃, 600 MHz)

5.3.13.2. ^{13}C NMR spectrum of **175** (CDCl_3 , 150 MHz)5.3.13.3. DEPT spectrum of **175** (CDCl_3)

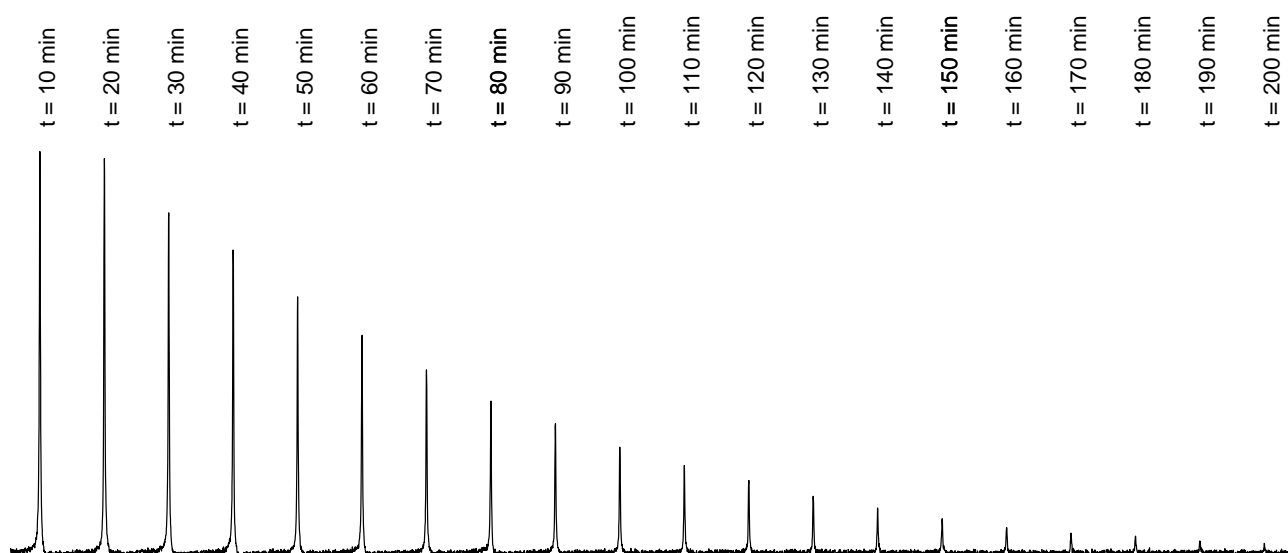
5.3.13.4. COSY spectrum of **175** (CDCl₃)5.3.13.5. HSQC spectrum of **175** (CDCl₃)

5.3.15. Selected ^1H NMR signals of the **159**/Grubbs-II reaction mixture at different time intervals at 40°C (CDCl_3 , 600 MHz)

(a) Olefinic proton of **159** at $\delta_{\text{H}} = 6.06$ ppm

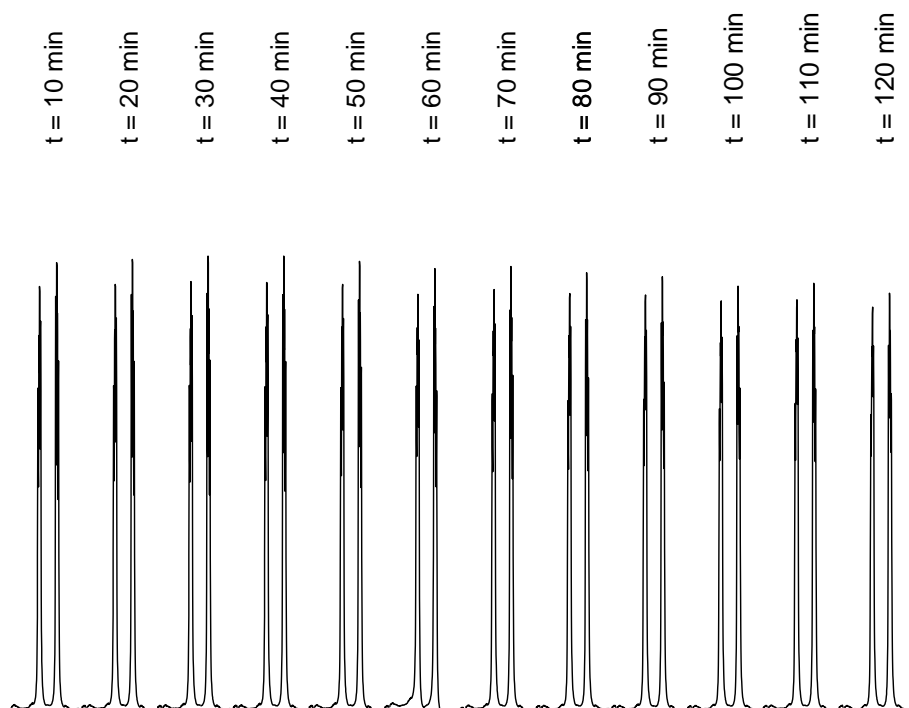


(b) Carbene proton of Grubbs-II at $\delta_{\text{H}} = 19.18$ ppm



5.3.16. Selected ^1H NMR signals of the **1**/Grubbs-II reaction mixture at different time intervals at 40°C (CDCl_3 , 600 MHz)

(a) Olefinic proton of **1** at $\delta_{\text{H}} = 6.00$ ppm



(b) Carbene proton of Grubbs-II at $\delta_{\text{H}} = 19.19$ ppm

