

Supplementary information

Synthesis and Antiproliferative Activity of Novel A-Ring Cleaved Glycyrrhetic Acid Derivatives

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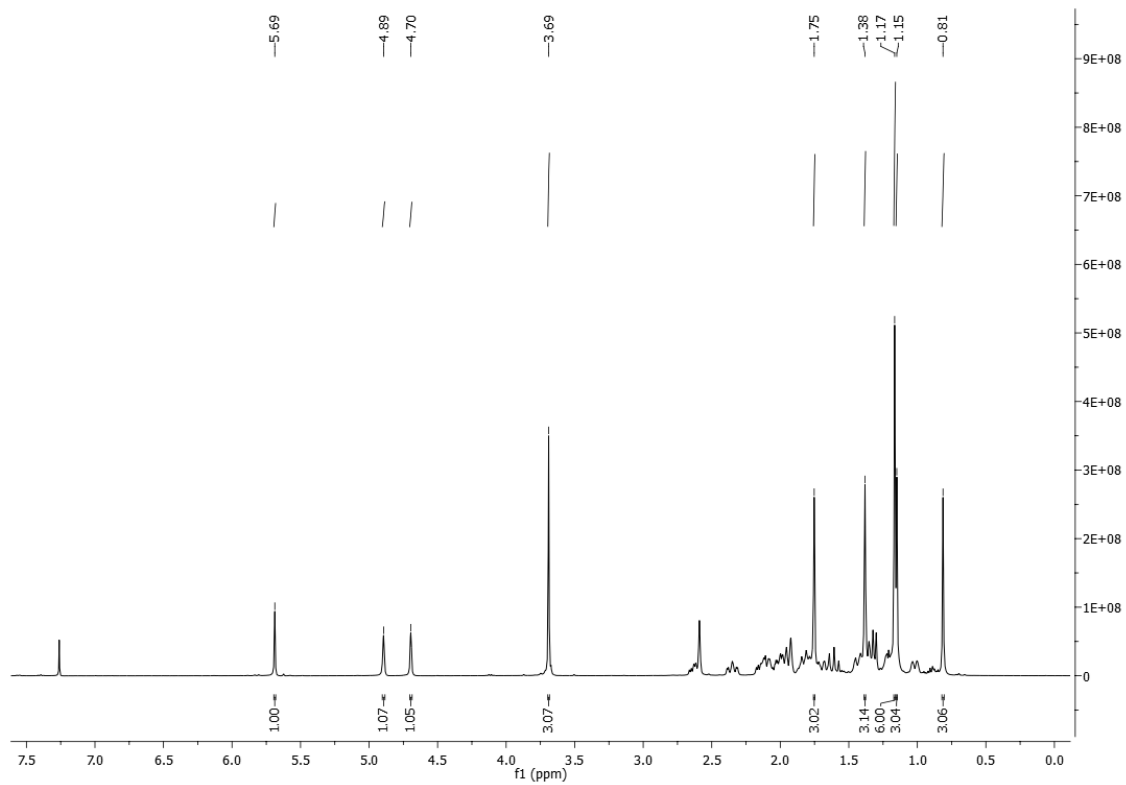
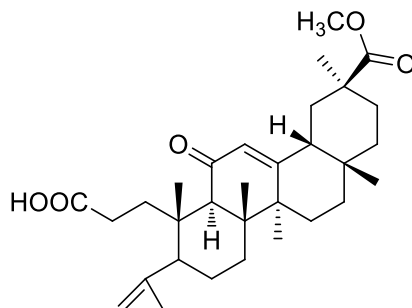
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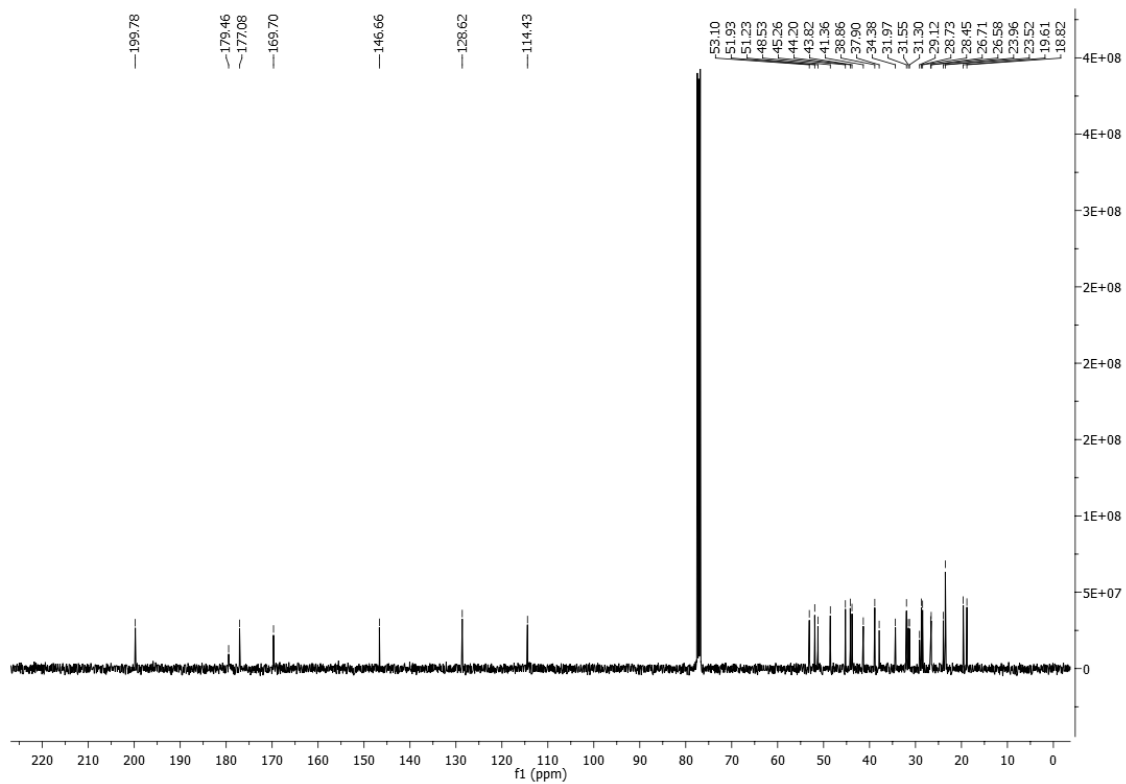
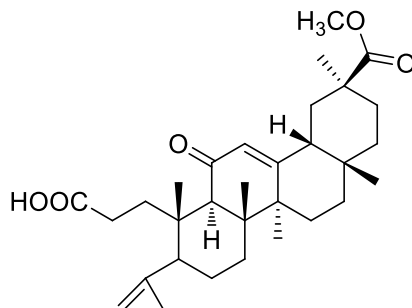
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1. NMR data for compound 5

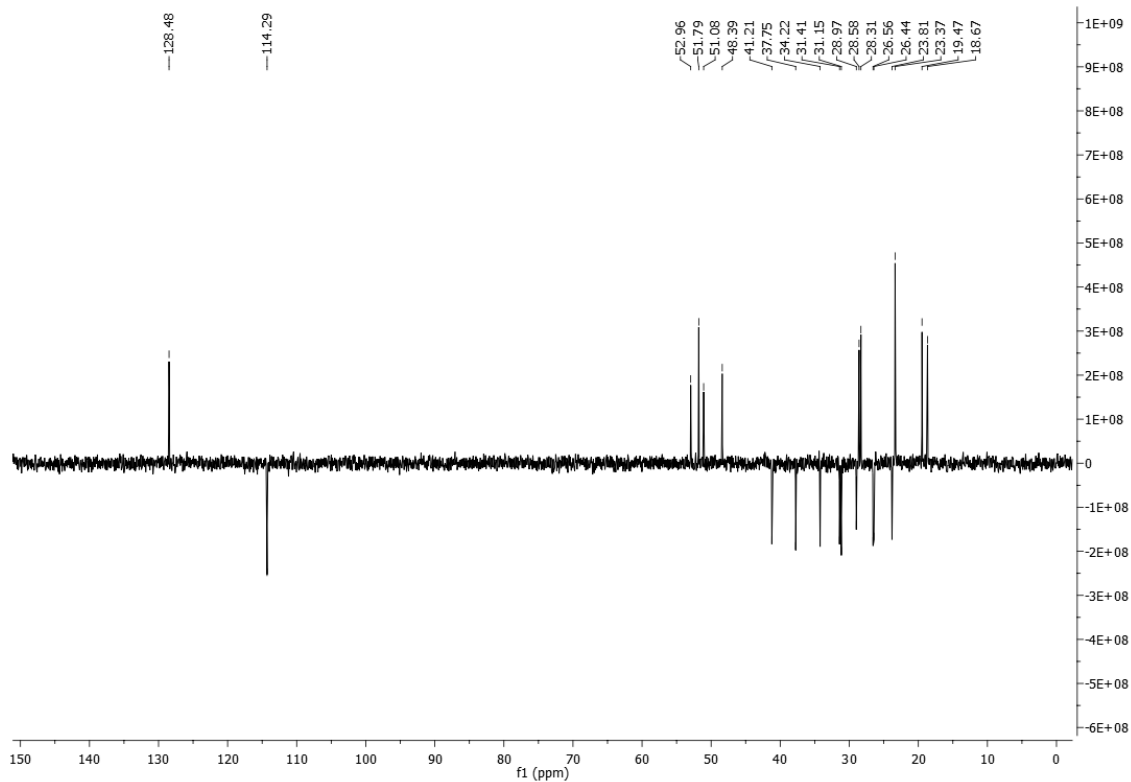
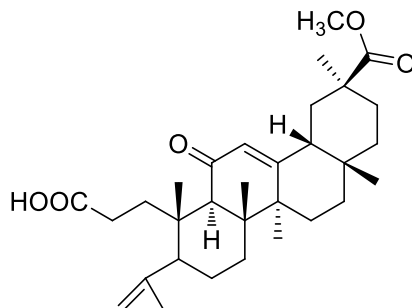
1.1. ^1H NMR spectrum for compound 5 recorded in CDCl_3



1.2. ^{13}C NMR spectrum for compound 5 recorded in CDCl_3

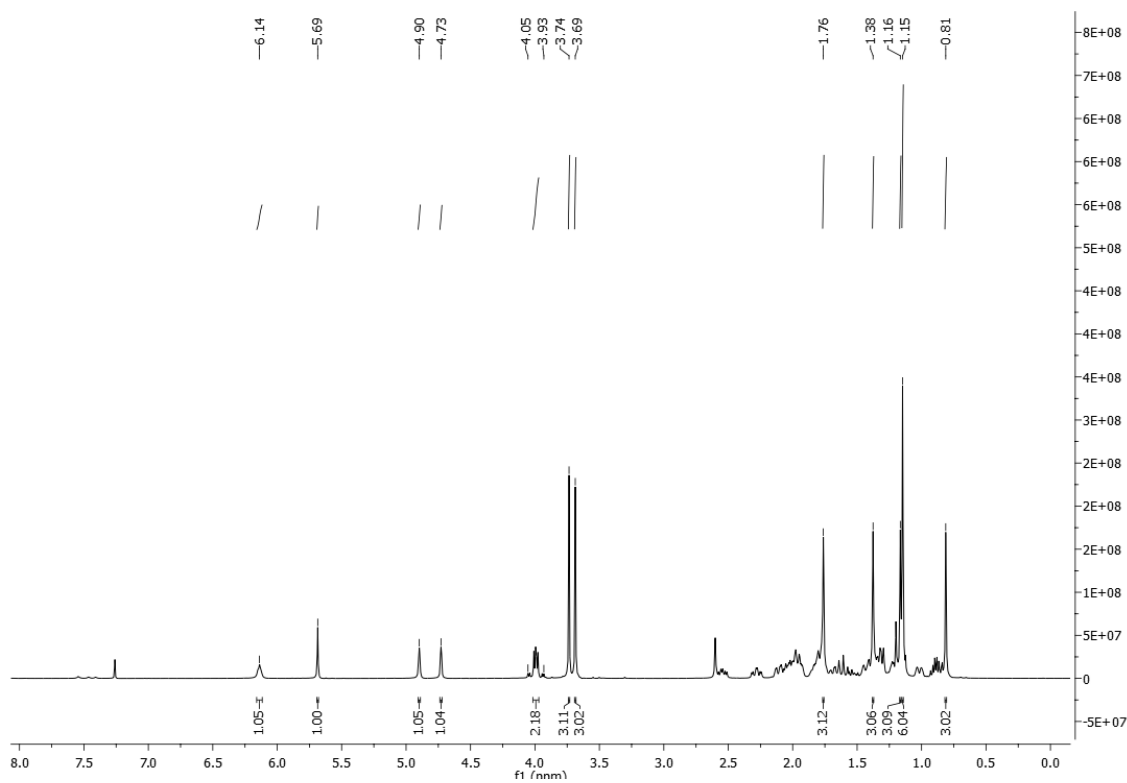
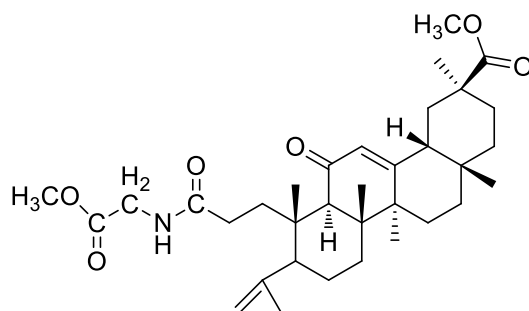


1.3. DEPT-135 spectrum for compound 5 recorded in CDCl₃

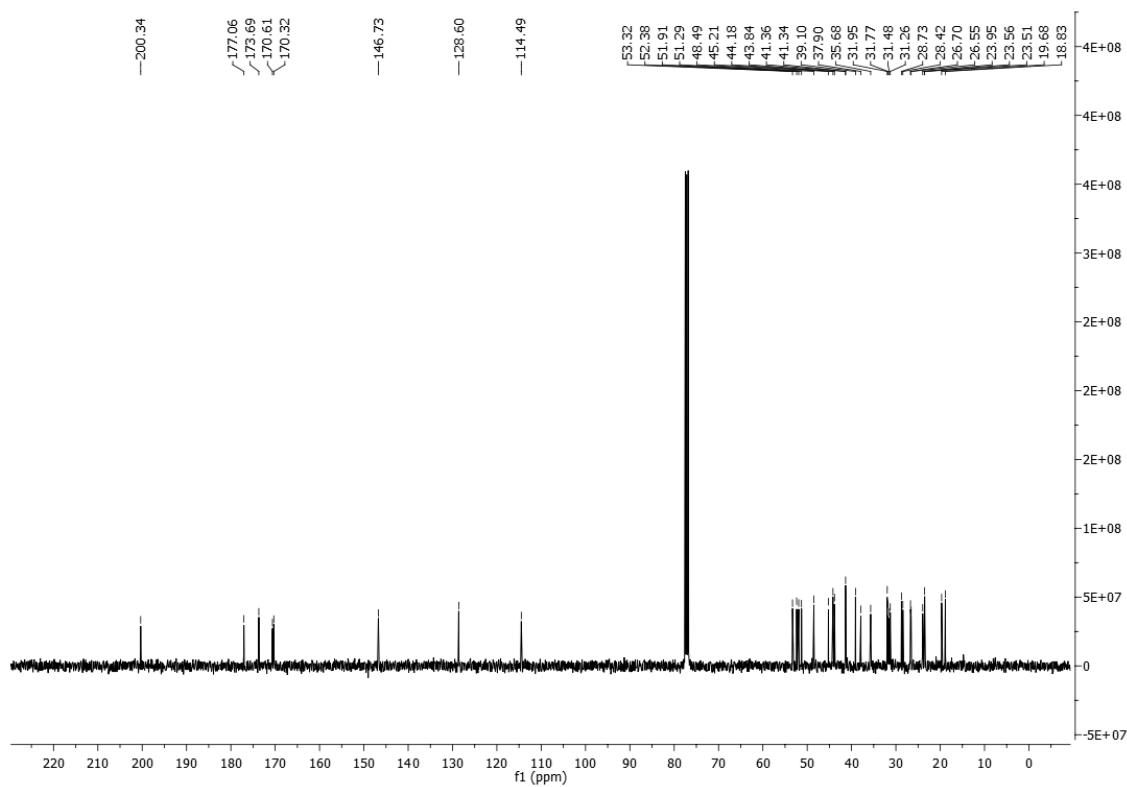
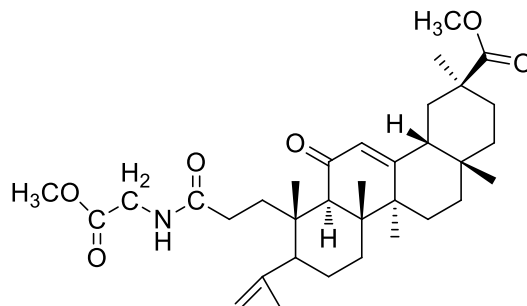


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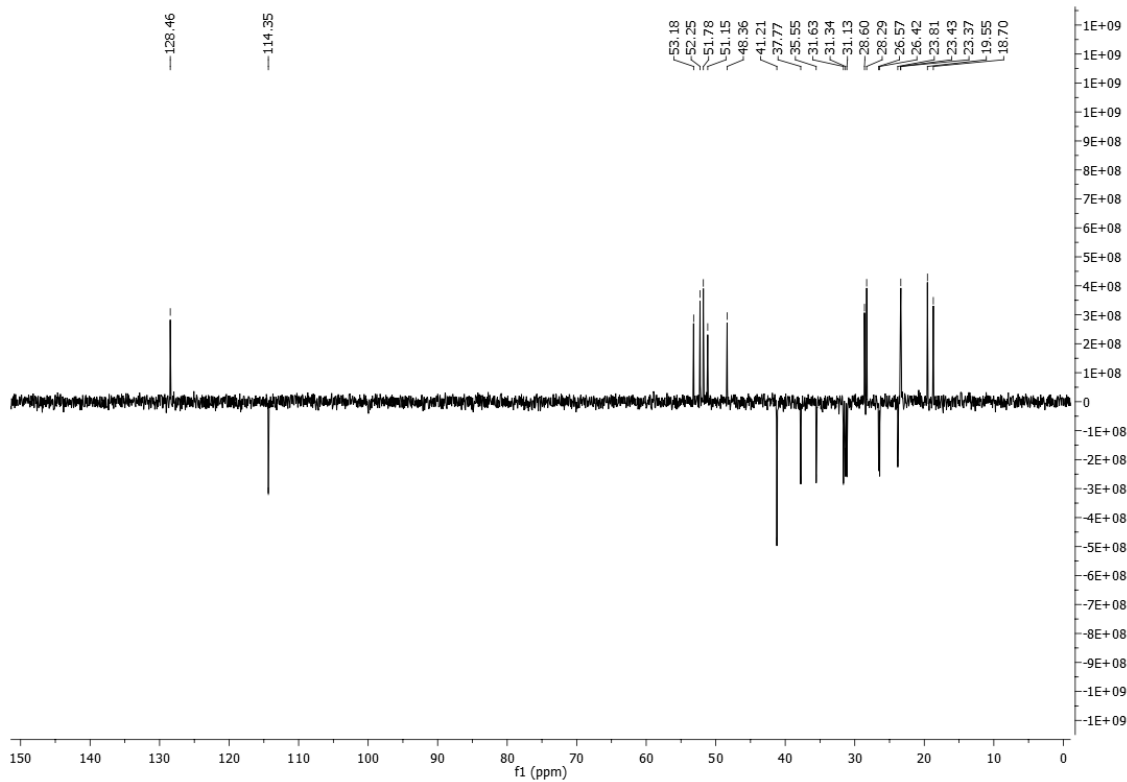
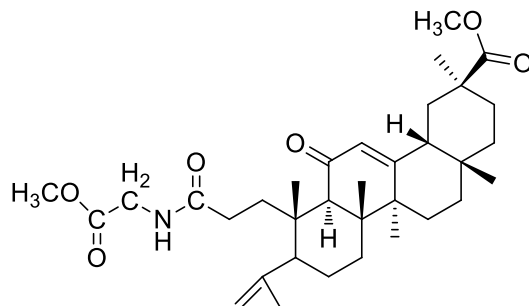
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2.2. ^{13}C NMR spectrum for compound 6 recorded in CDCl_3

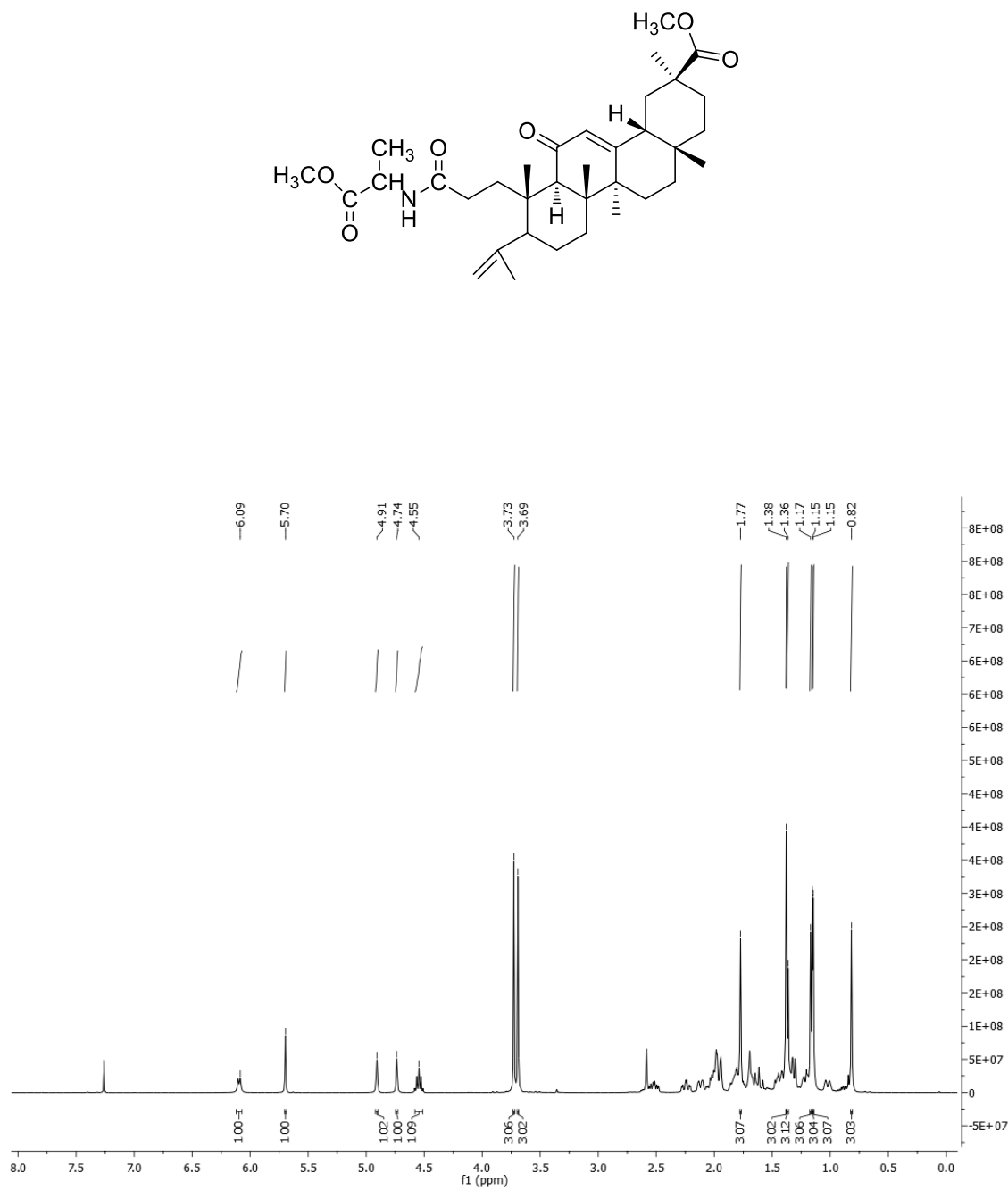


2.3. DEPT-135 spectrum for compound 6 recorded in CDCl₃

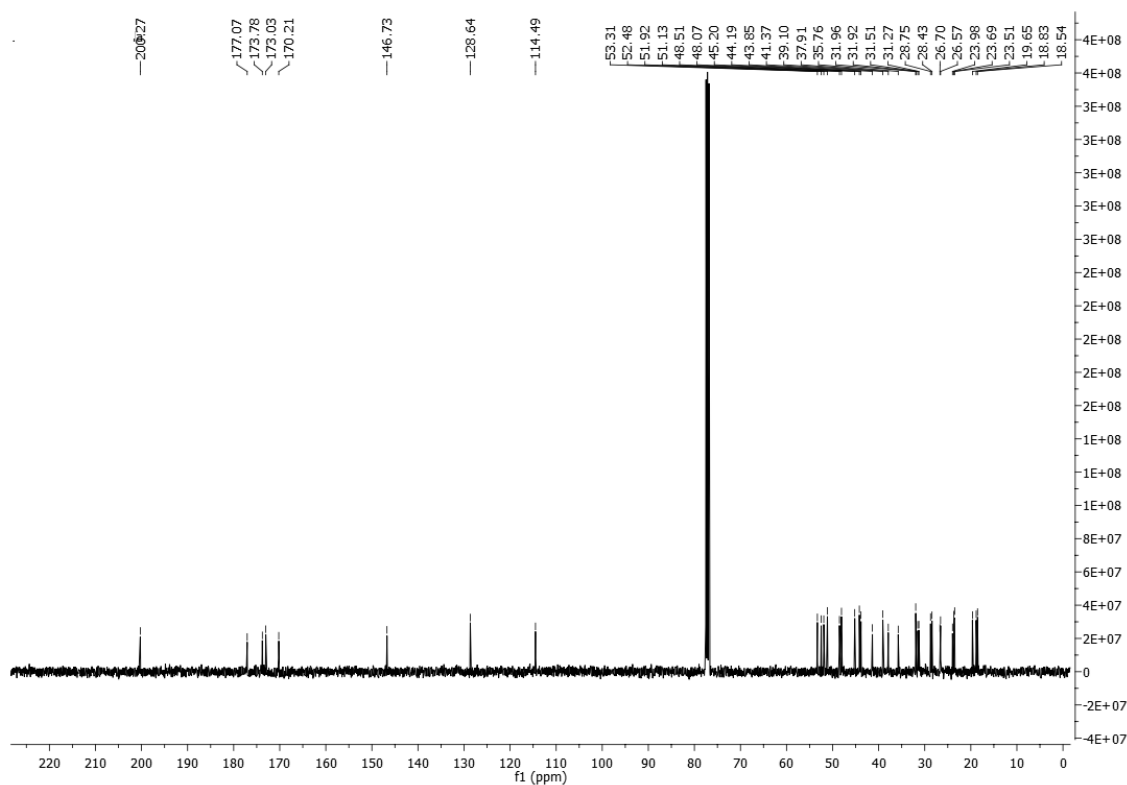
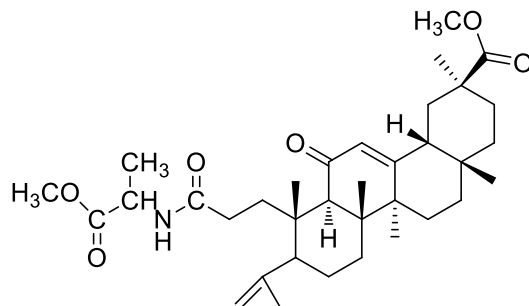


3. NMR data for compound 7

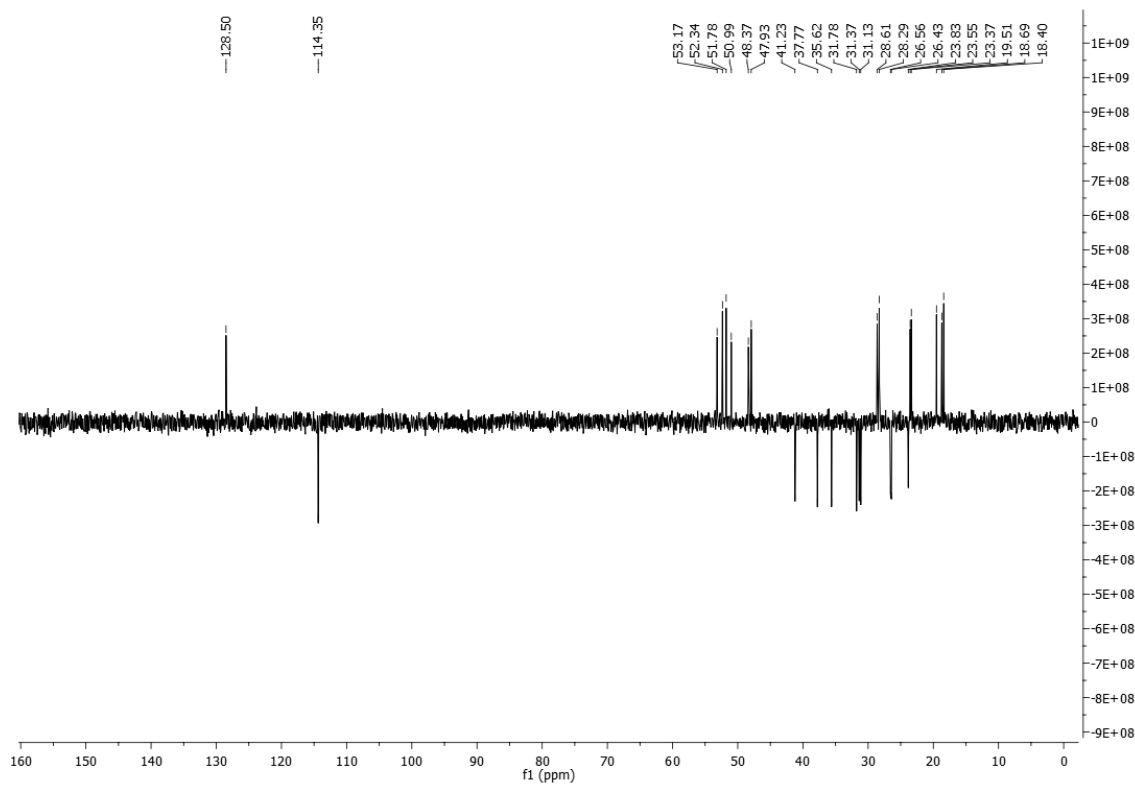
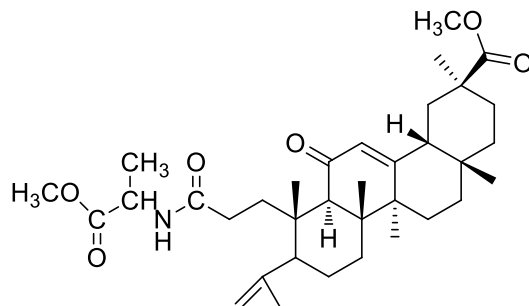
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3.2. ^{13}C NMR spectrum for compound 7 recorded in CDCl_3

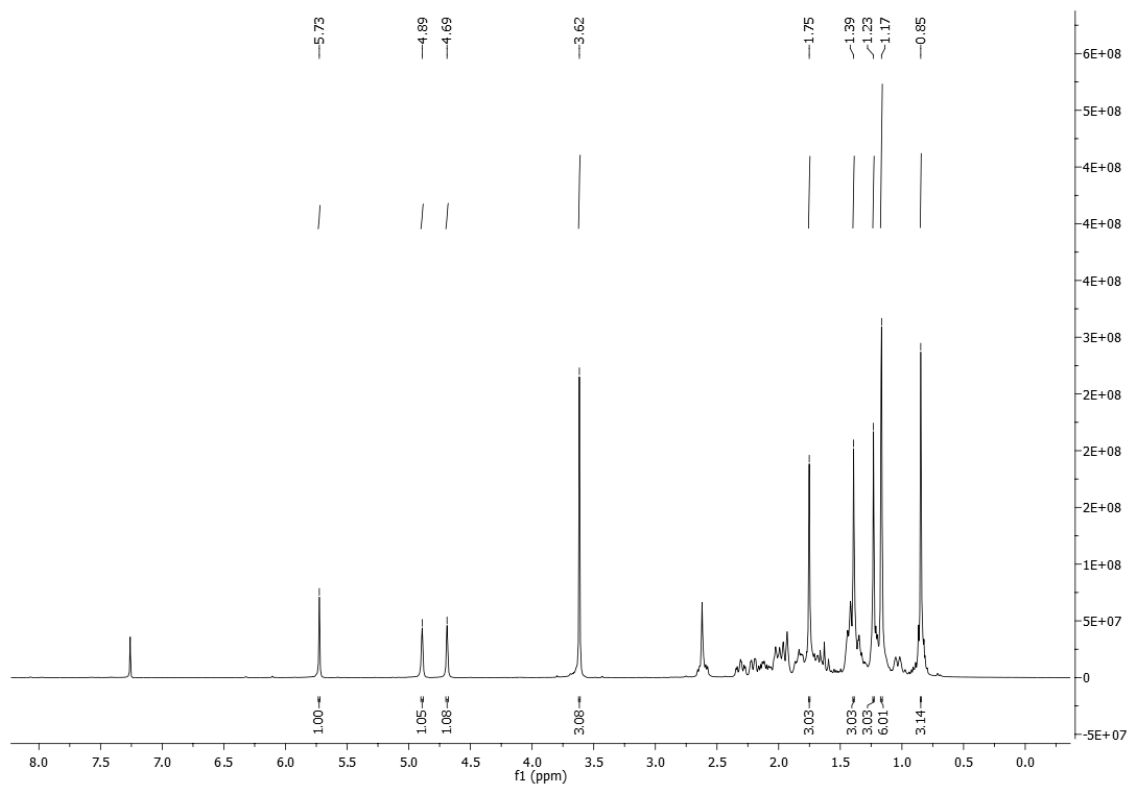
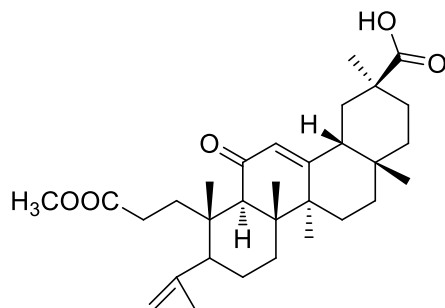


3.3. DEPT-135 spectrum for compound 7 recorded in CDCl₃

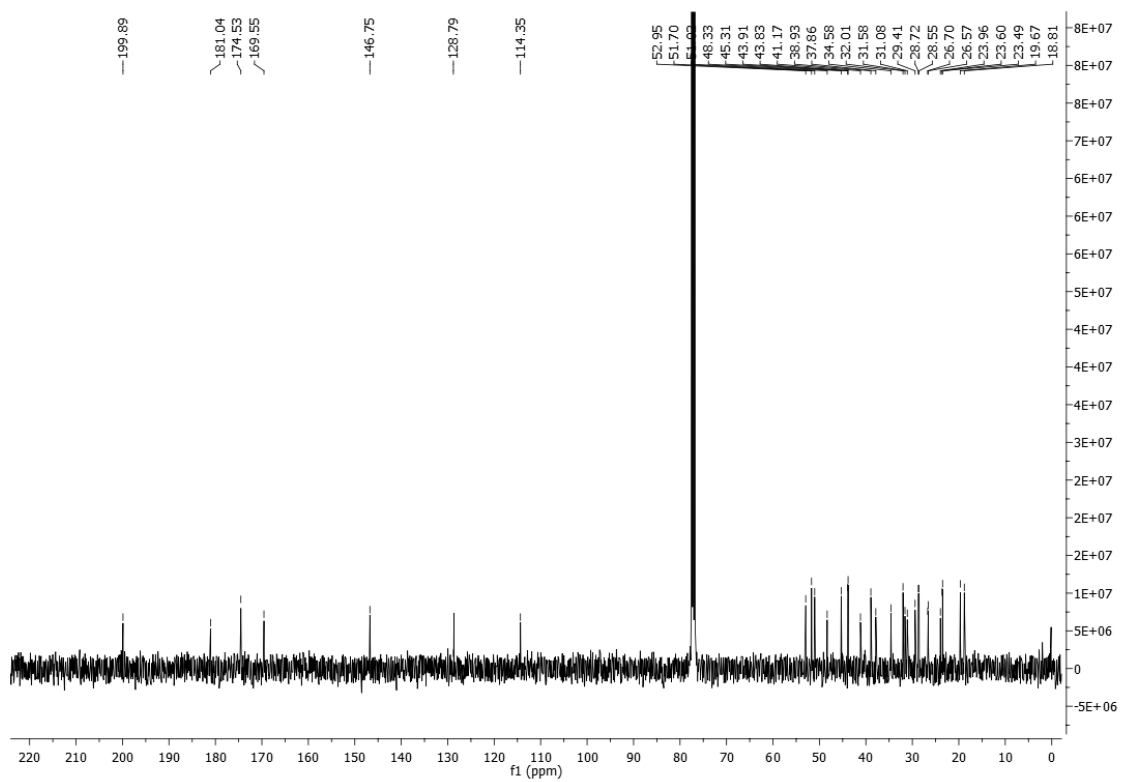
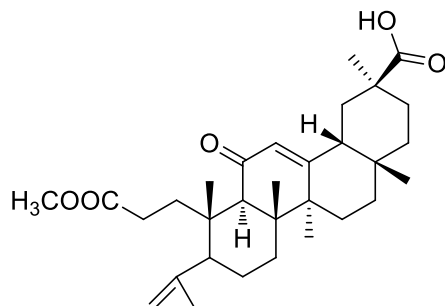


4. NMR data for compound 10

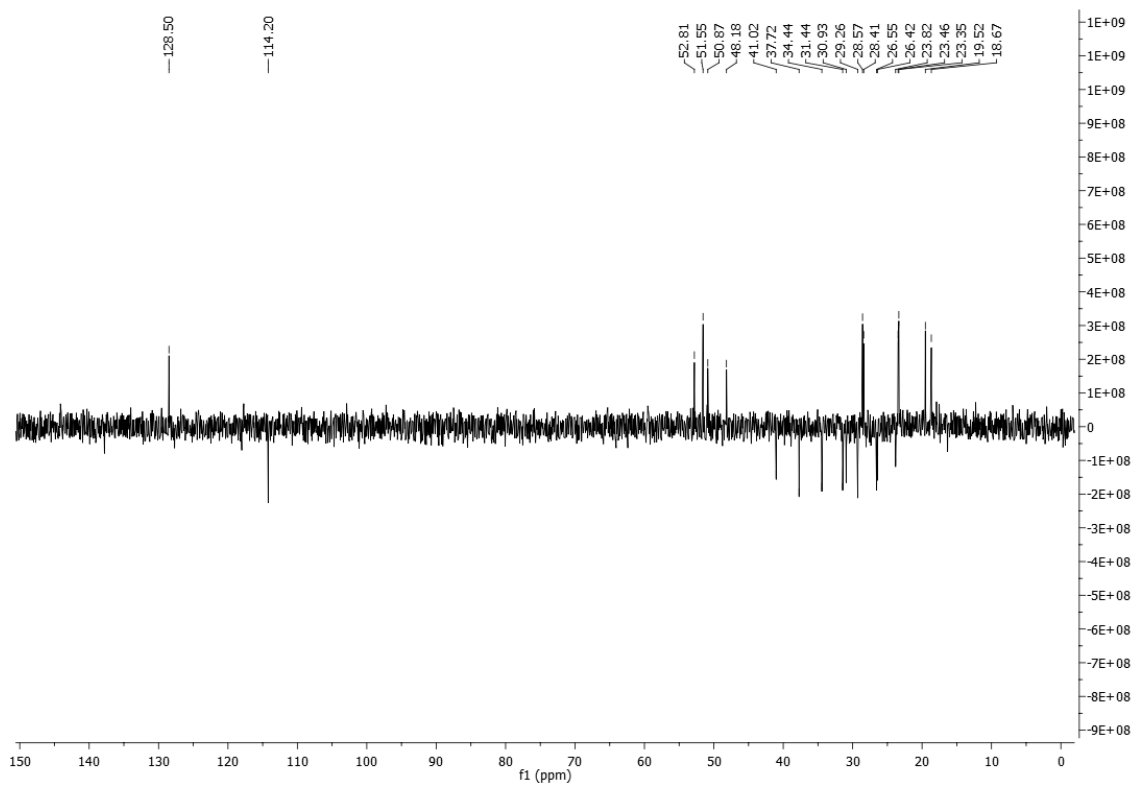
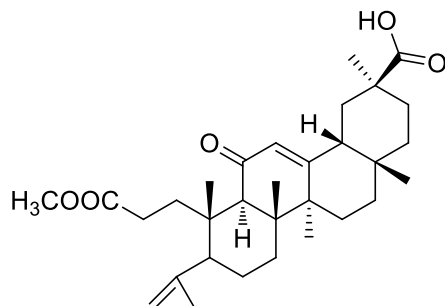
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4.2. ^{13}C NMR spectrum for compound 10 recorded in CDCl_3

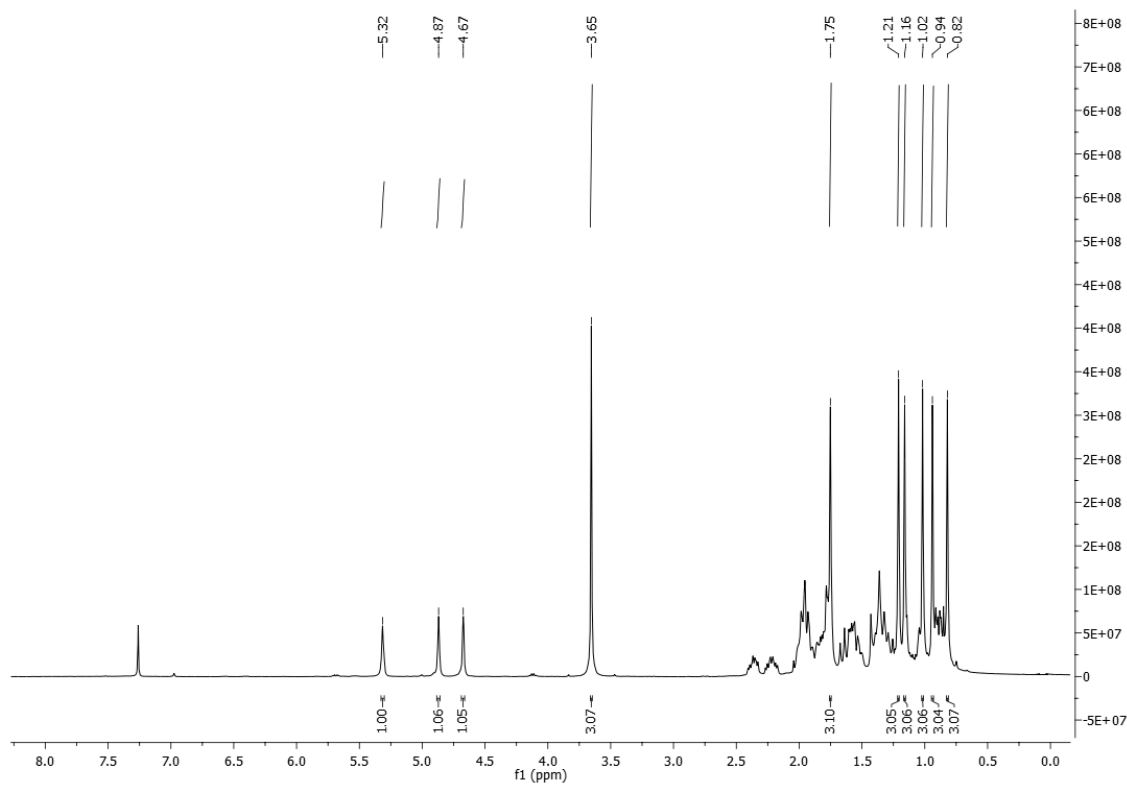
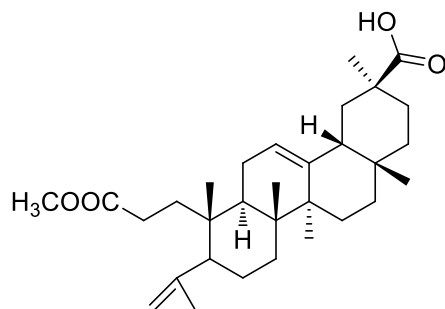


4.3. DEPT-135 spectrum for compound 10 recorded in CDCl₃

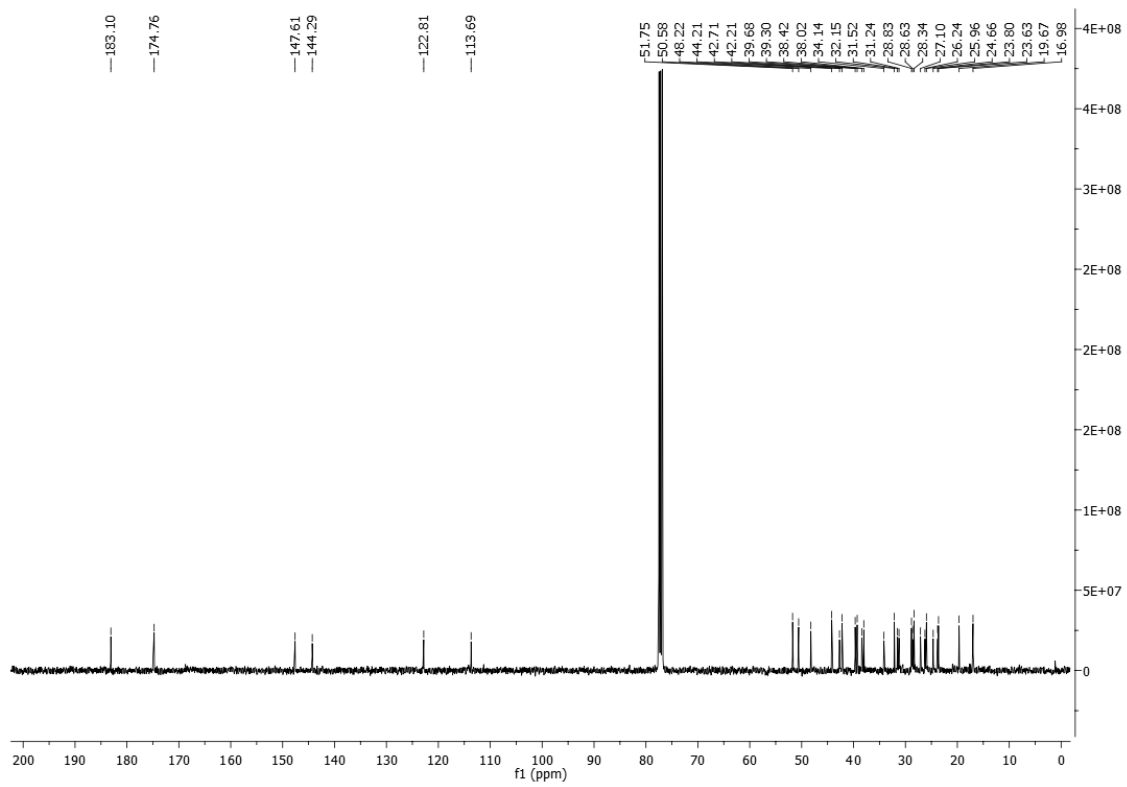
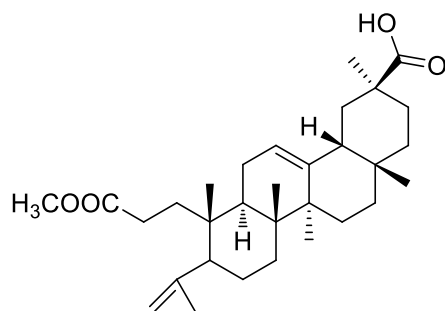


5. NMR data for compound 11

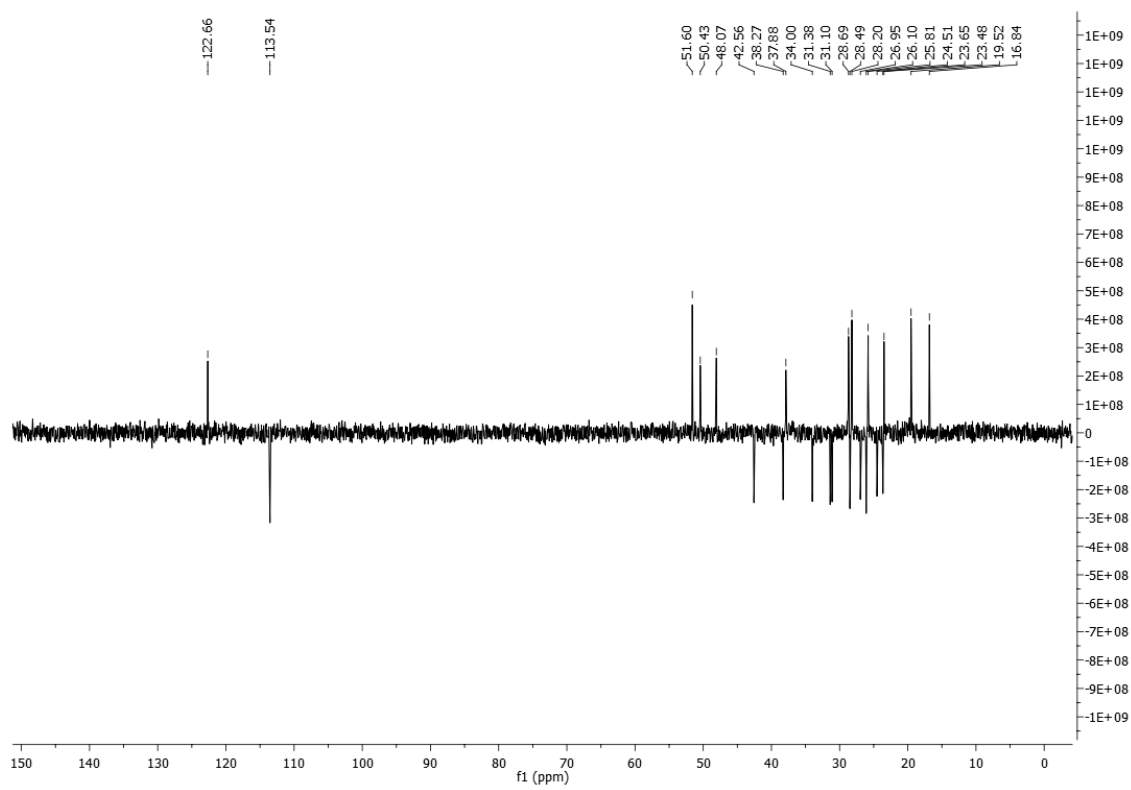
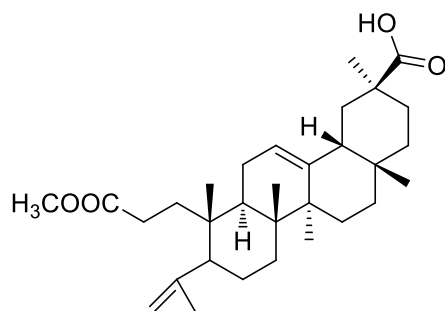
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5.2. ^{13}C NMR spectrum for compound 11 recorded in CDCl_3

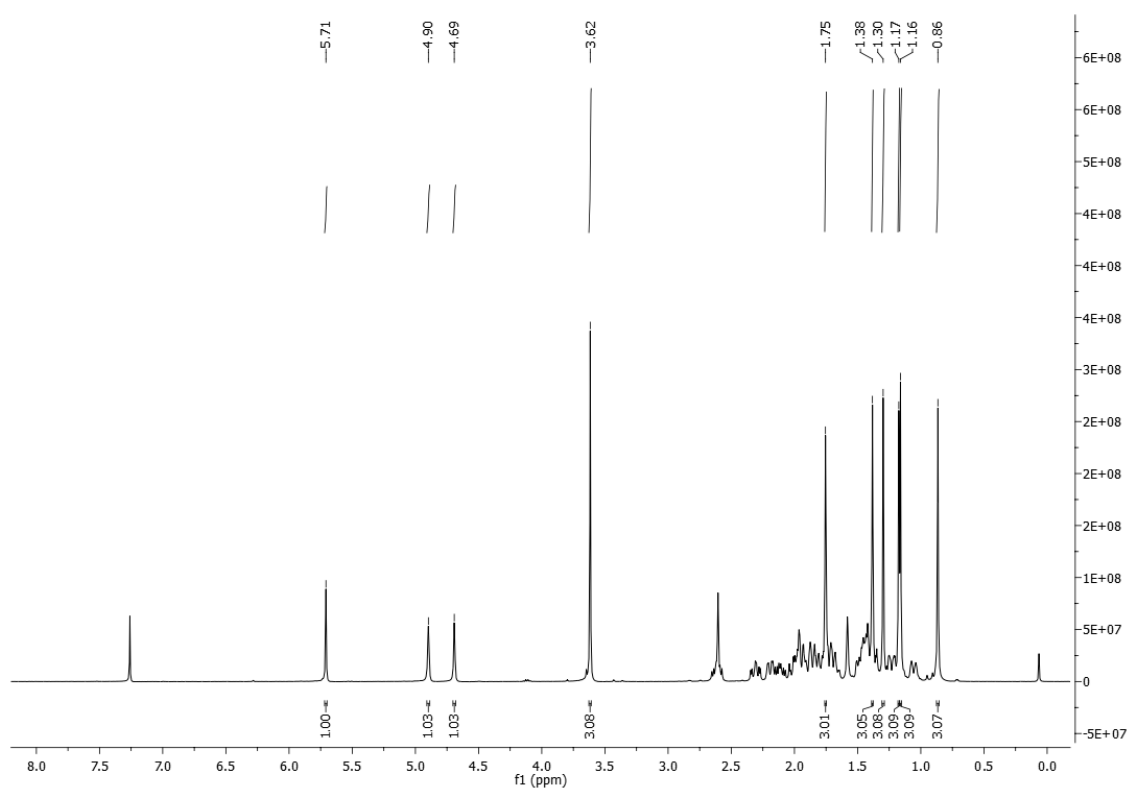
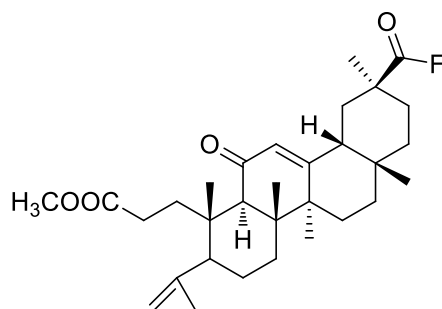


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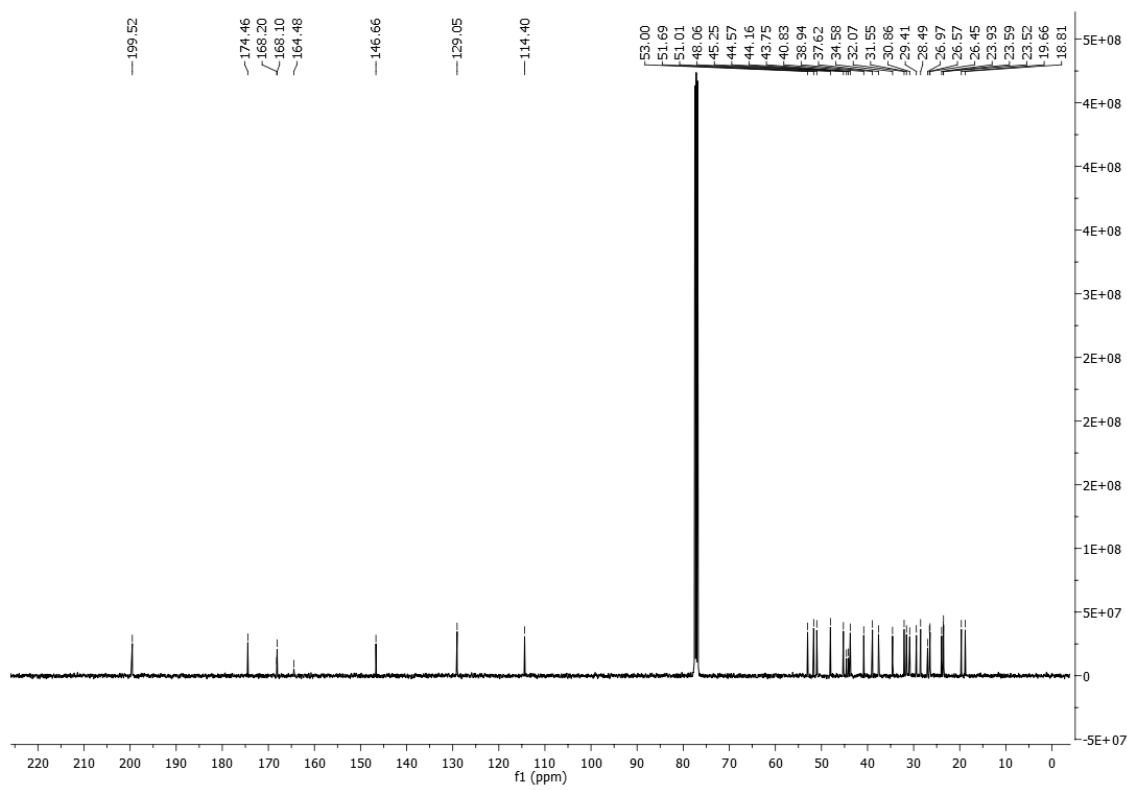
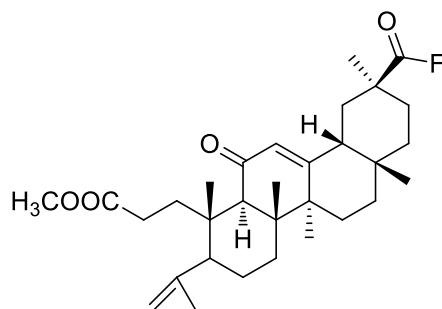


6. NMR data for compound 12

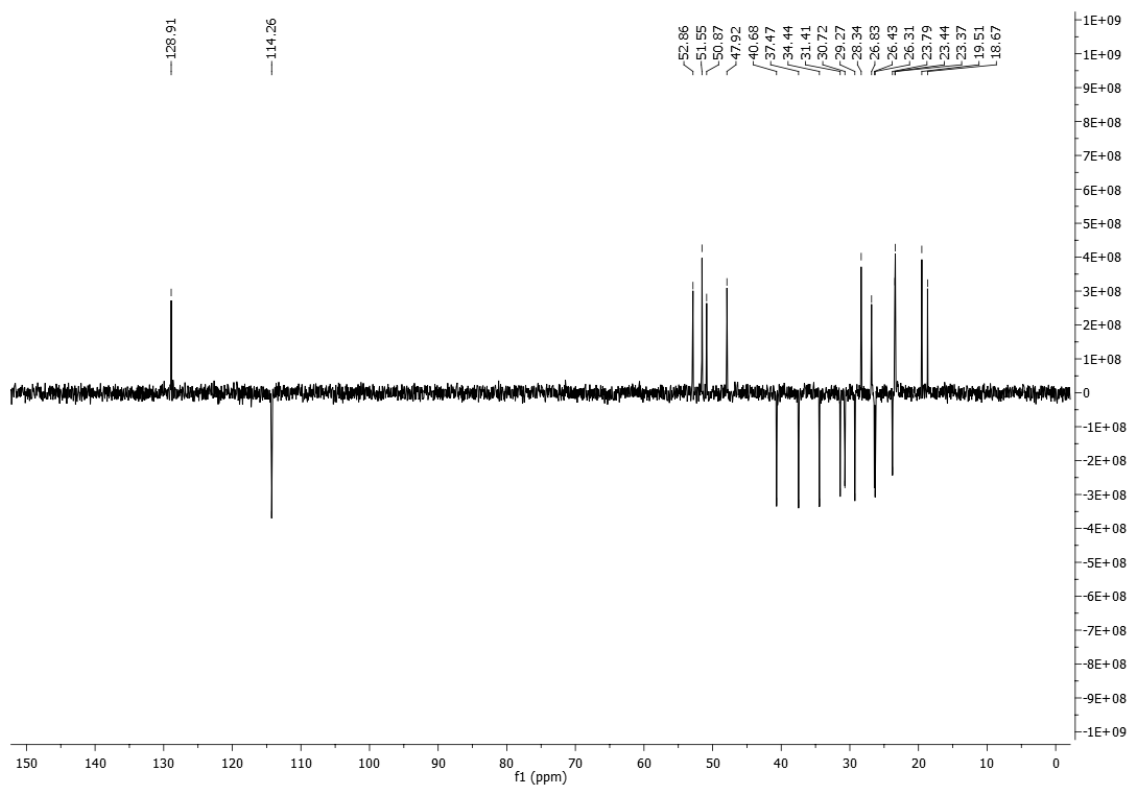
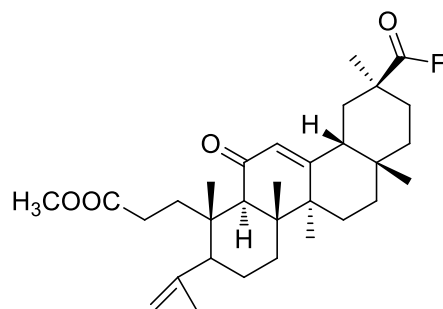
6.1. ^1H NMR spectrum for compound 12 recorded in CDCl_3



6.2. ^{13}C NMR spectrum for compound 12 recorded in CDCl_3

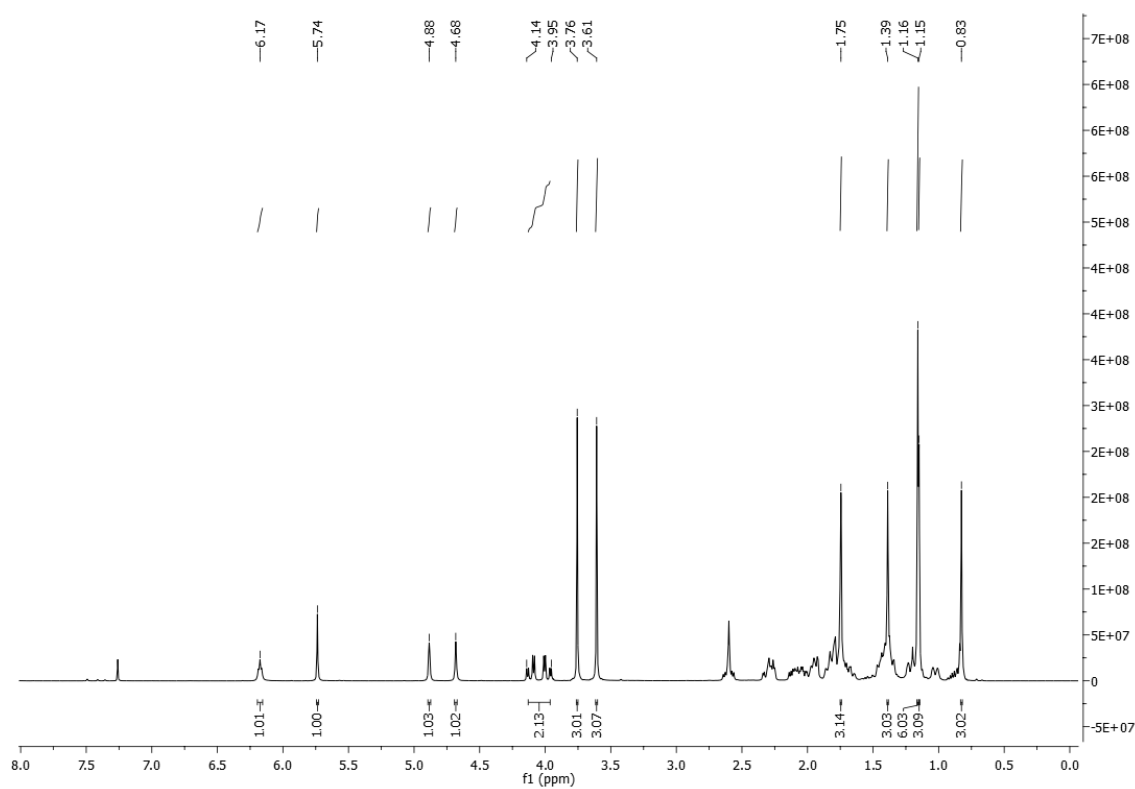
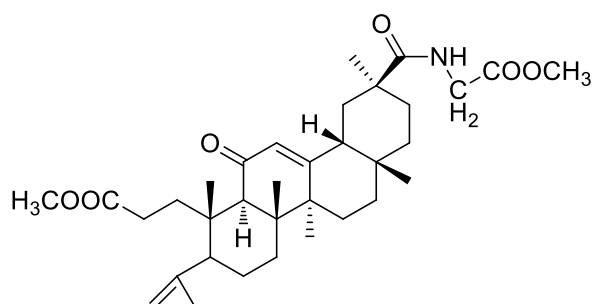


6.3. DEPT-135 spectrum for compound 12 recorded in CDCl₃

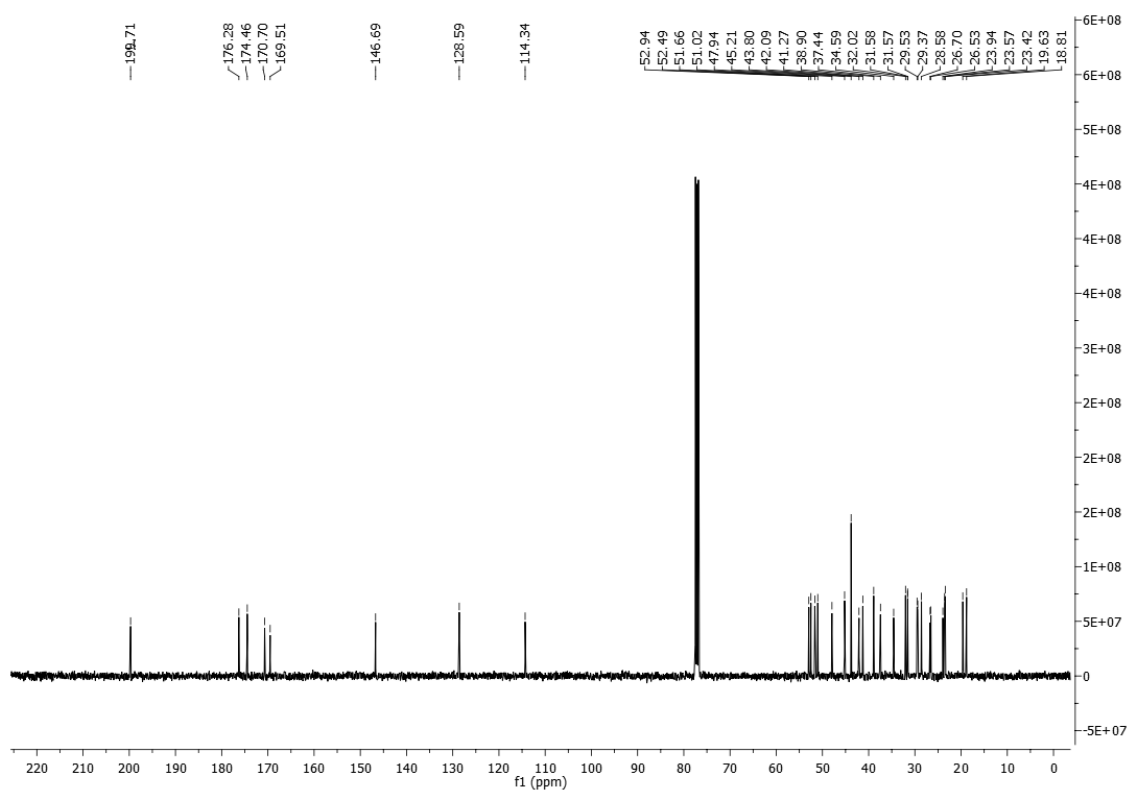
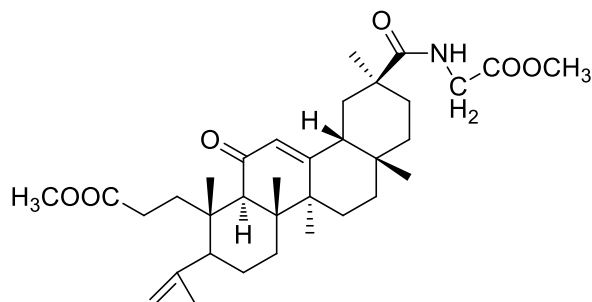


7. NMR data for compound 14

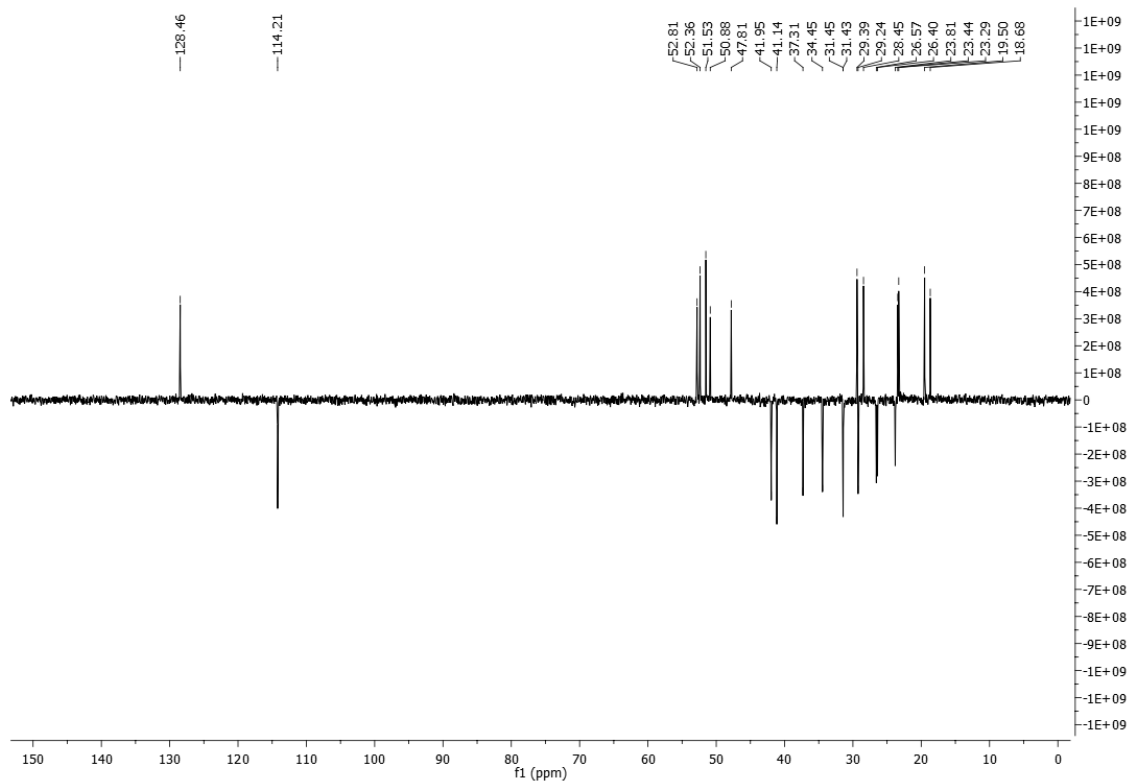
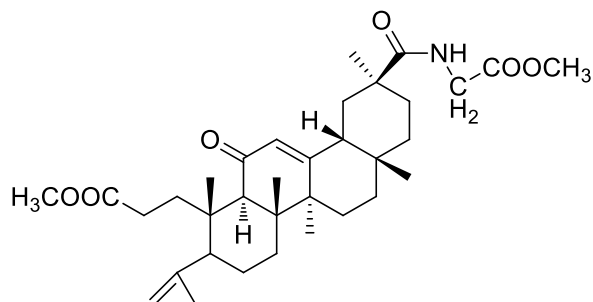
7.1. ^1H NMR spectrum for compound 14 recorded in CDCl_3



7.2. ^{13}C NMR spectrum for compound 14 recorded in CDCl_3

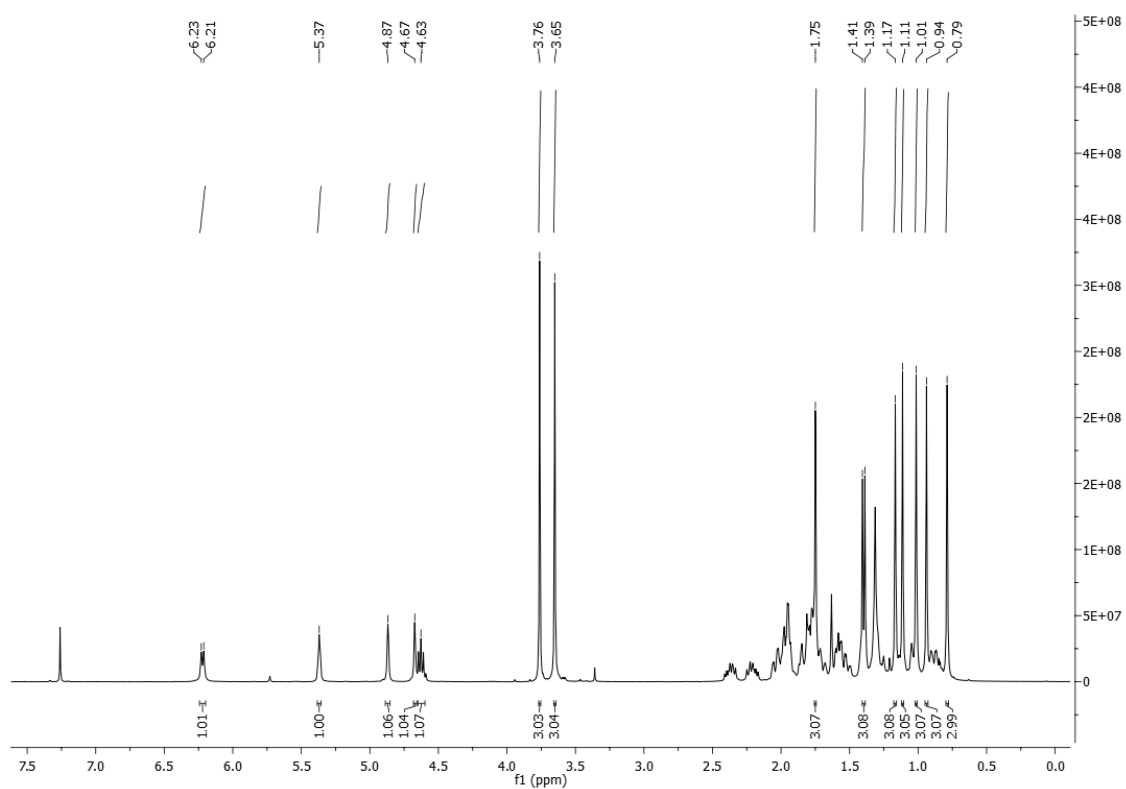
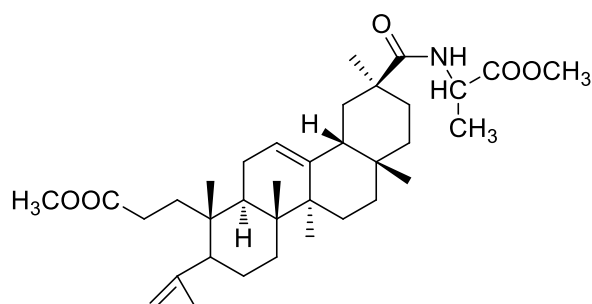


7.3. DEPT-135 spectrum for compound 14 recorded in CDCl₃

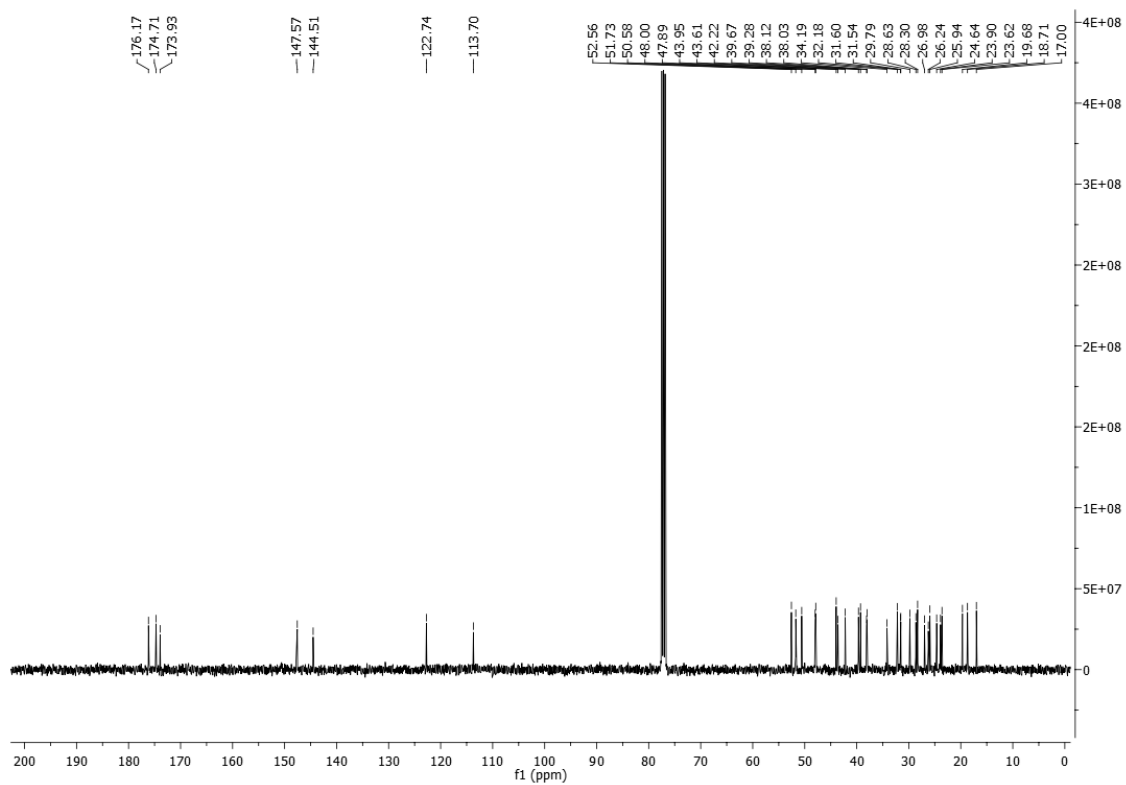
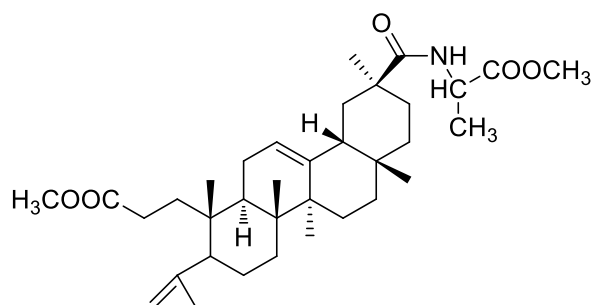


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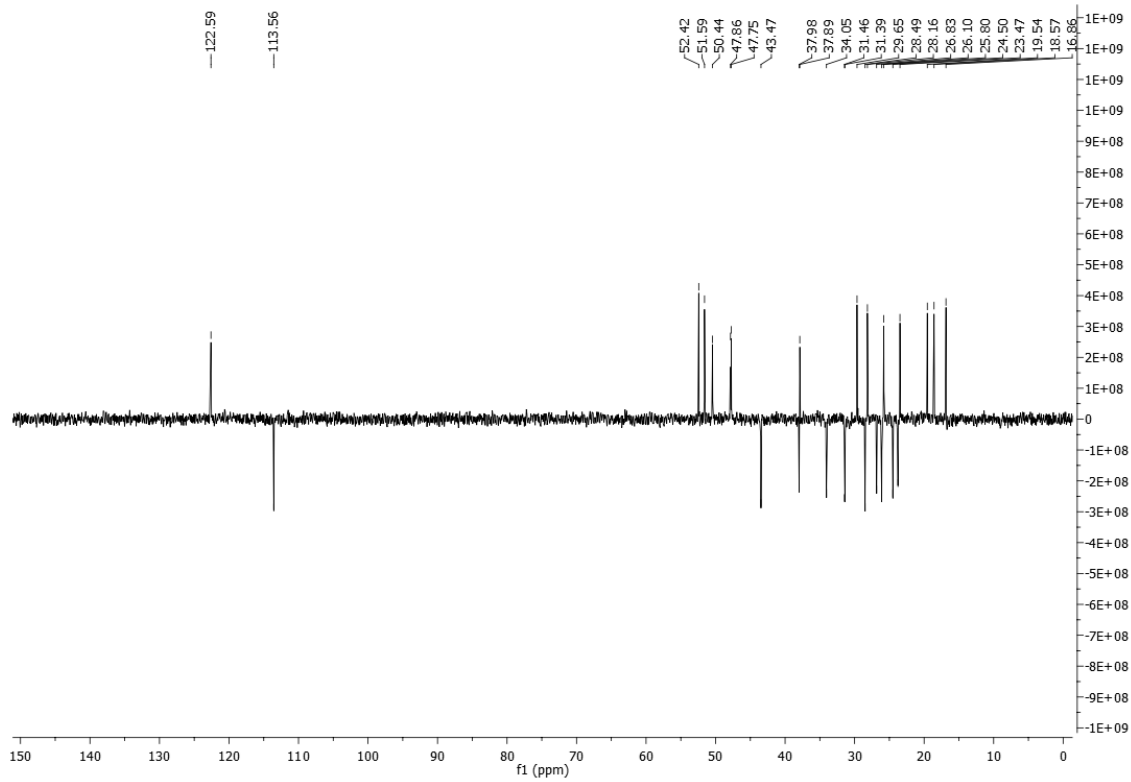
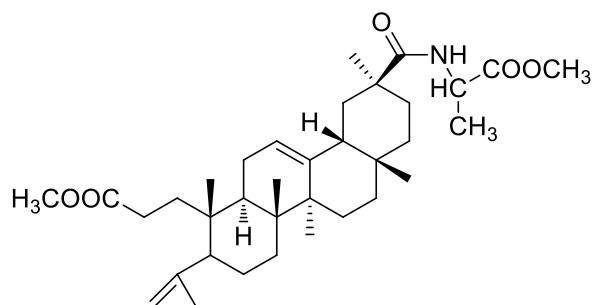
8.1. ^1H NMR spectrum for compound 17 recorded in CDCl_3



8.2. ^{13}C NMR spectrum for compound 17 recorded in CDCl_3

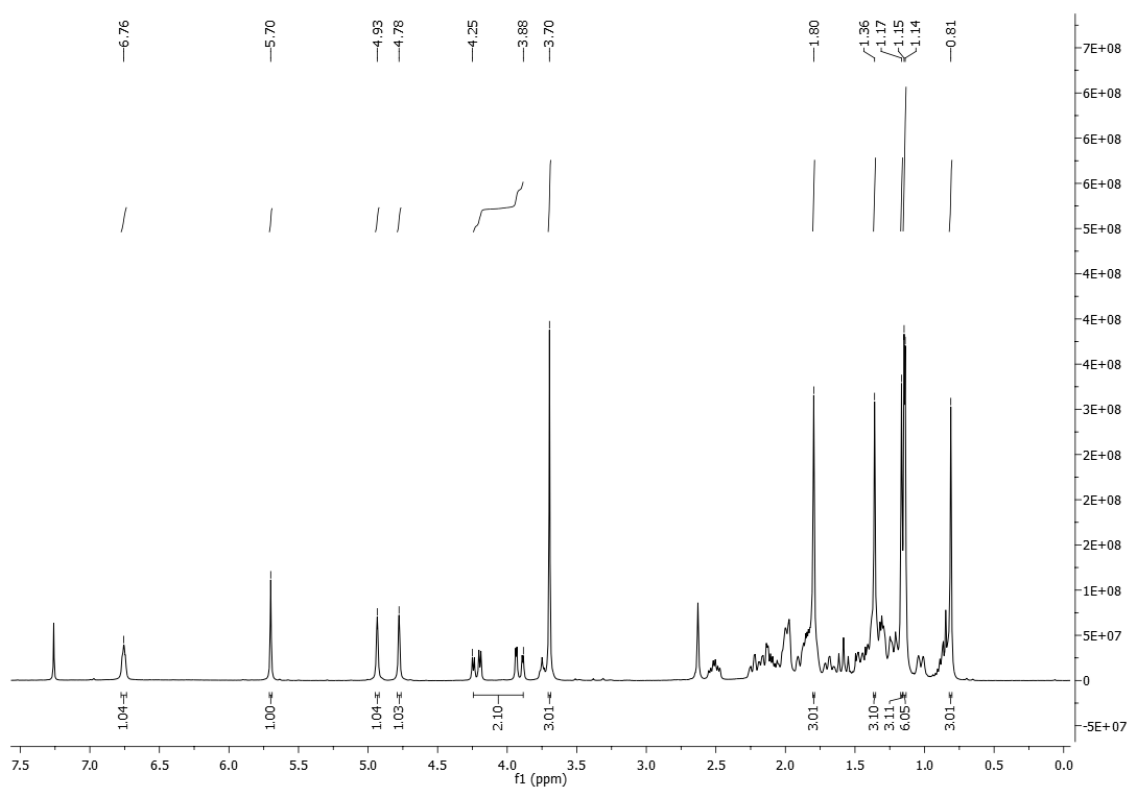
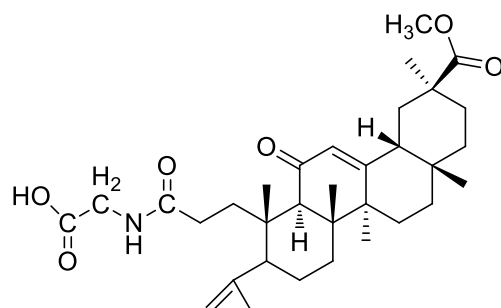


8.3. DEPT-135 spectrum for compound 17 recorded in CDCl₃

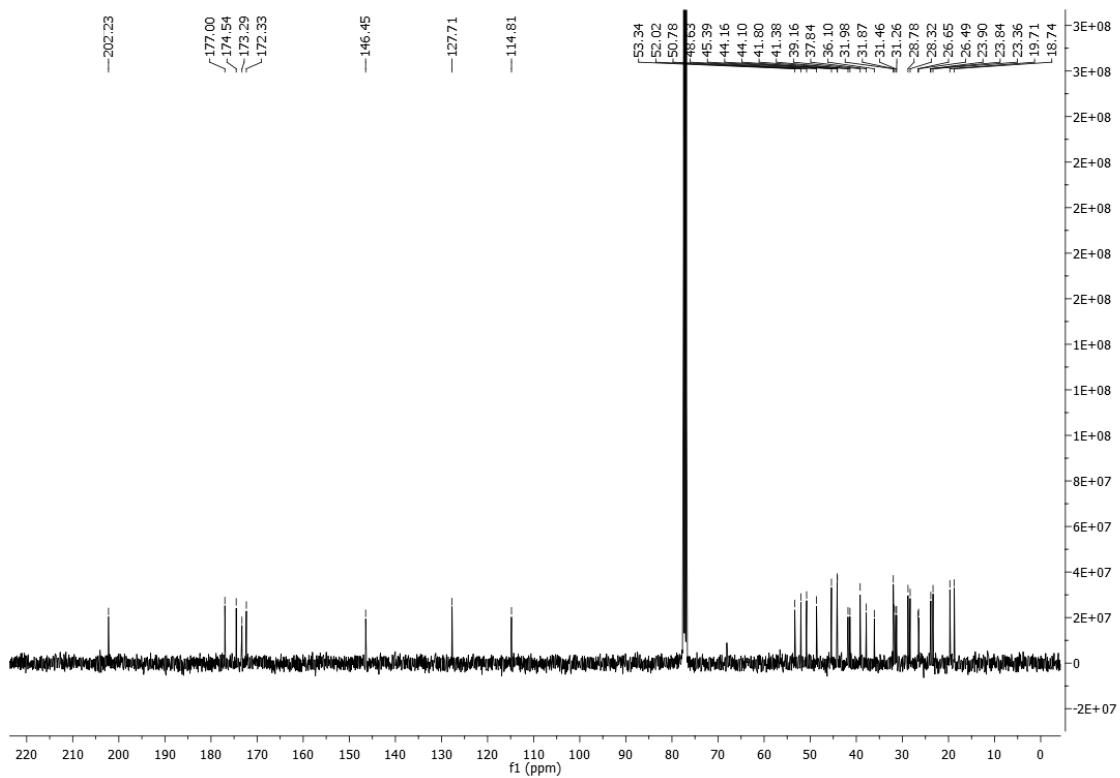
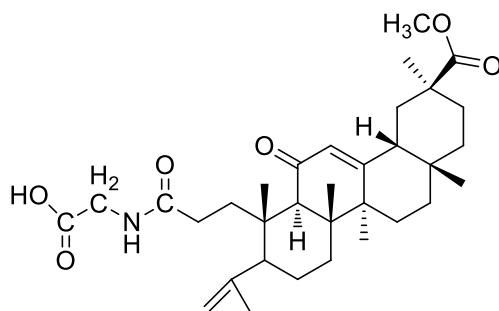


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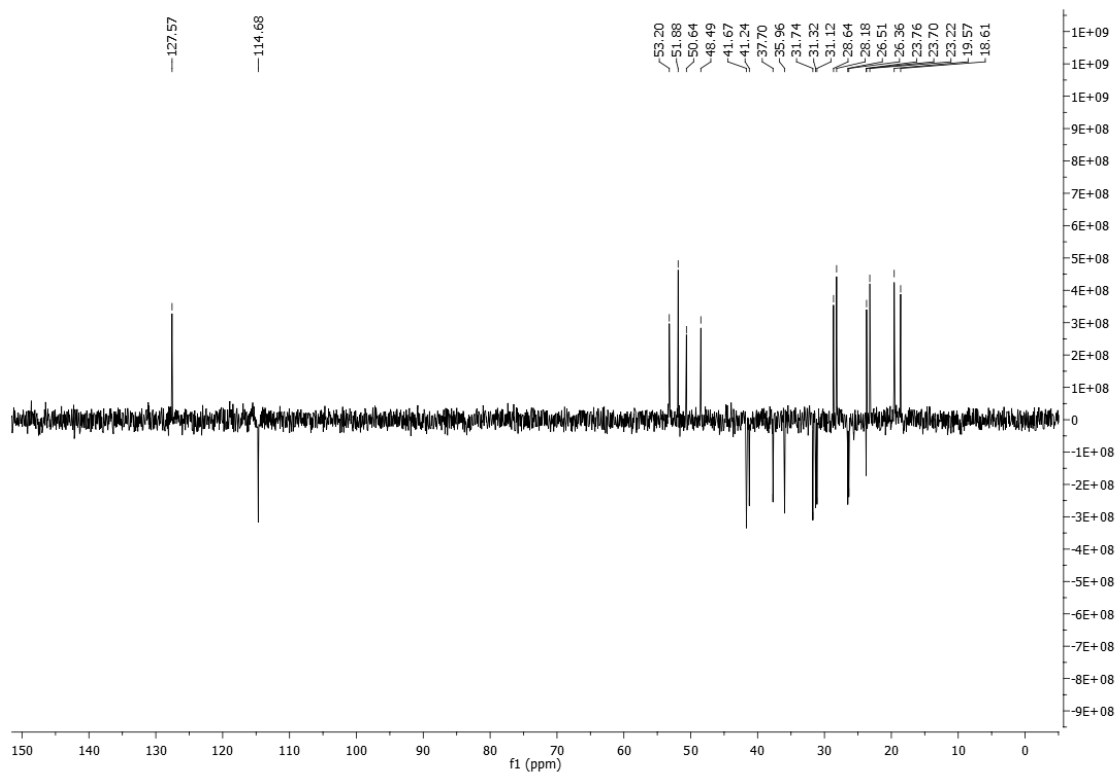
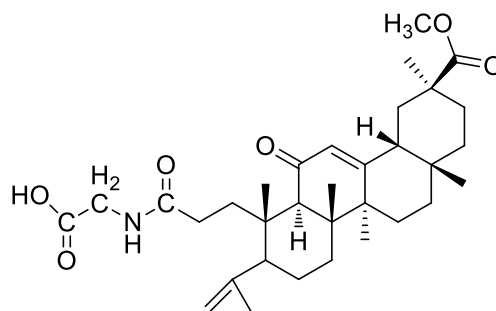
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9.2. ^{13}C NMR spectrum for compound 18 recorded in CDCl_3

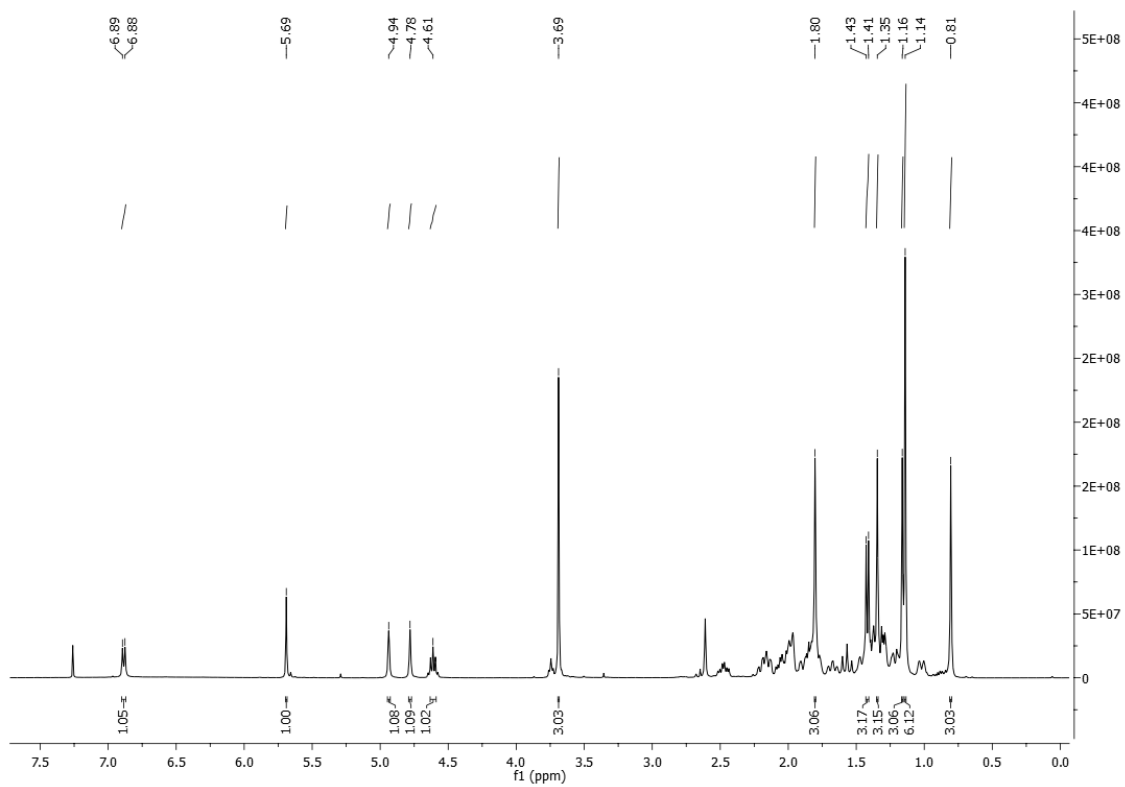
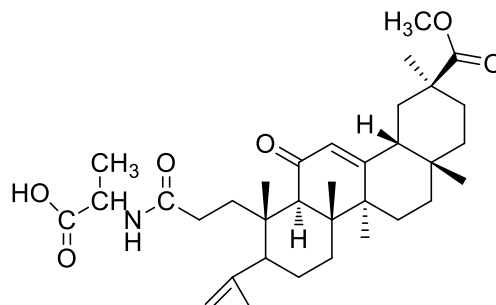


9.3. DEPT-135 spectrum for compound 18 recorded in CDCl₃

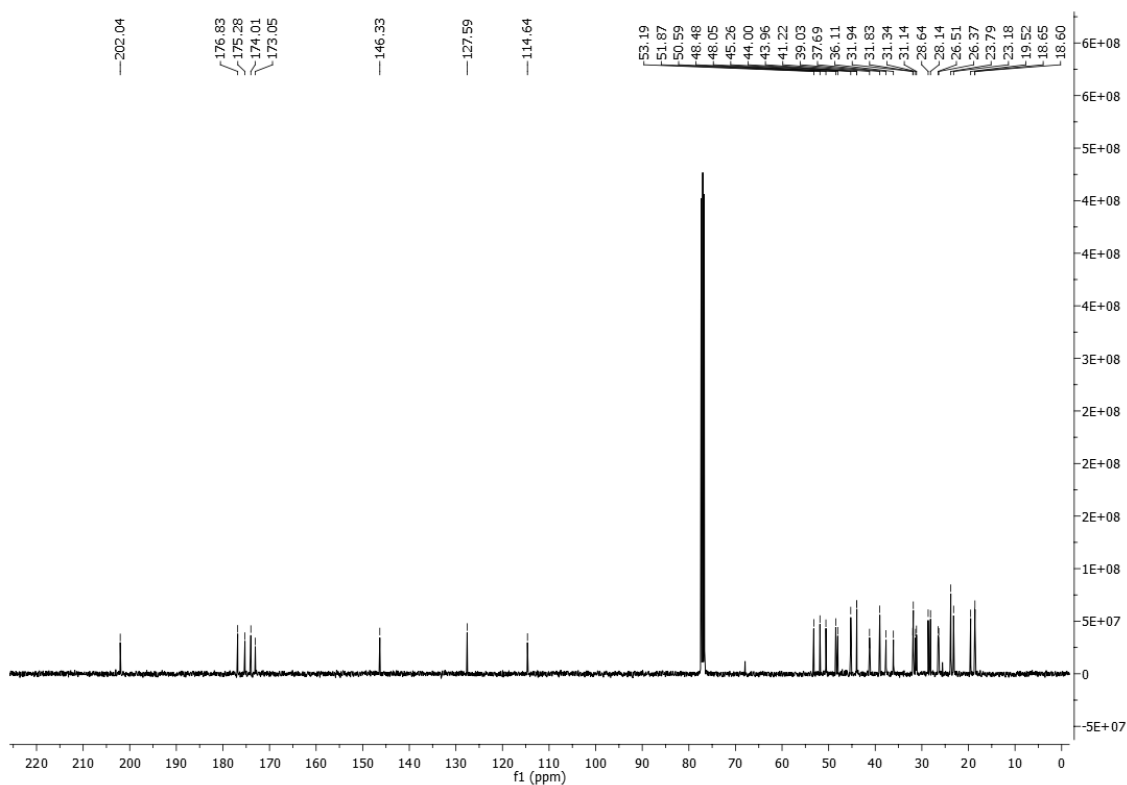
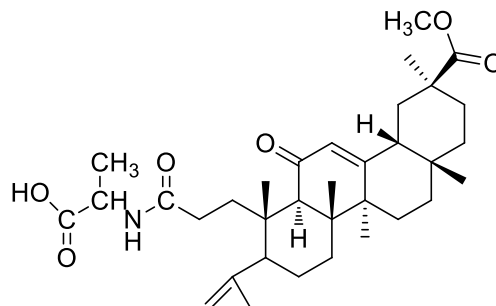


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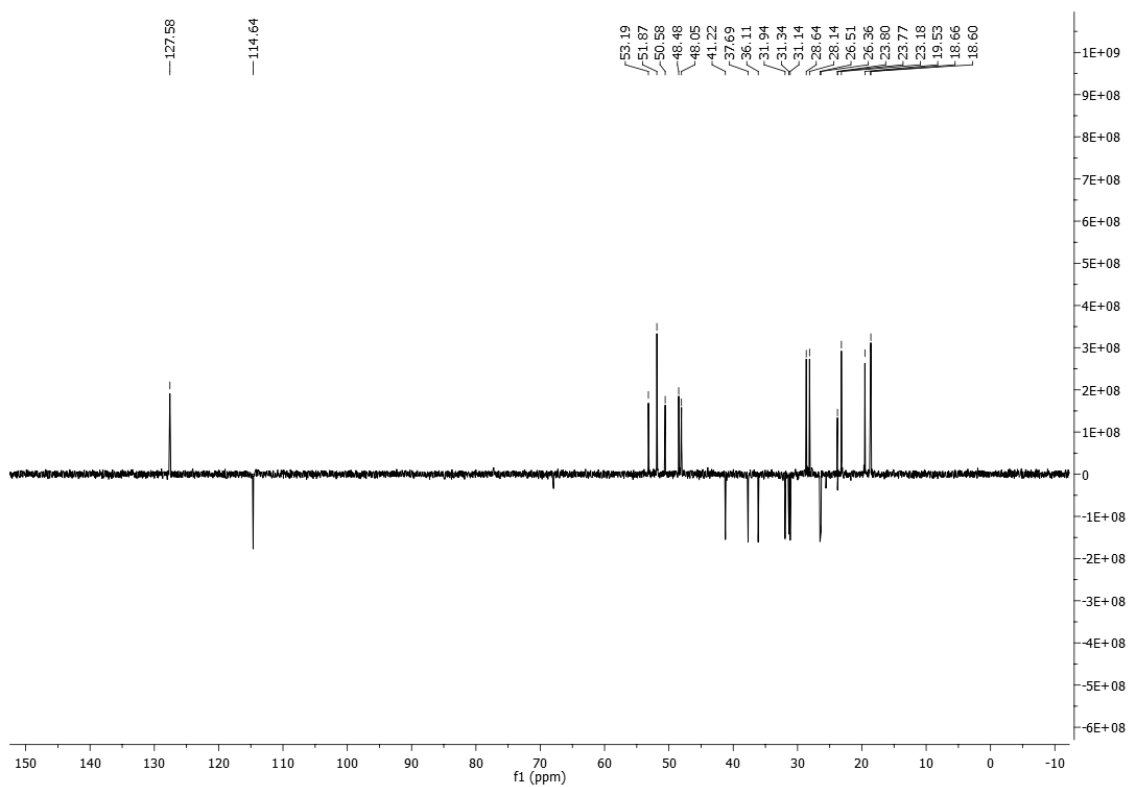
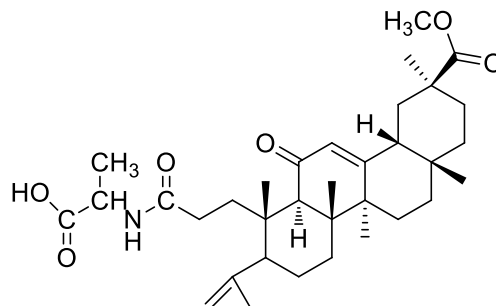
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10.2. ^{13}C NMR spectrum for compound 19 recorded in CDCl_3

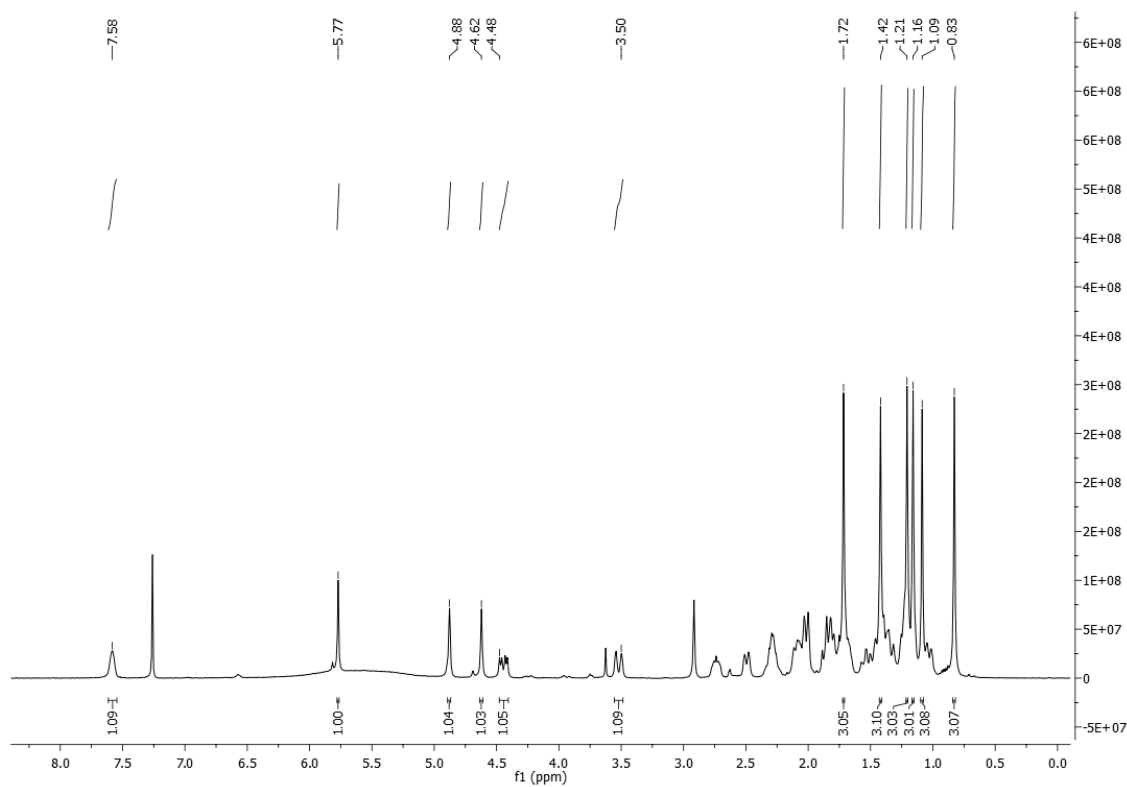
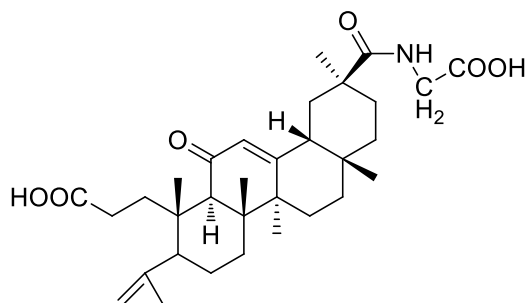


10.3. DEPT-135 spectrum for compound 19 recorded in CDCl₃

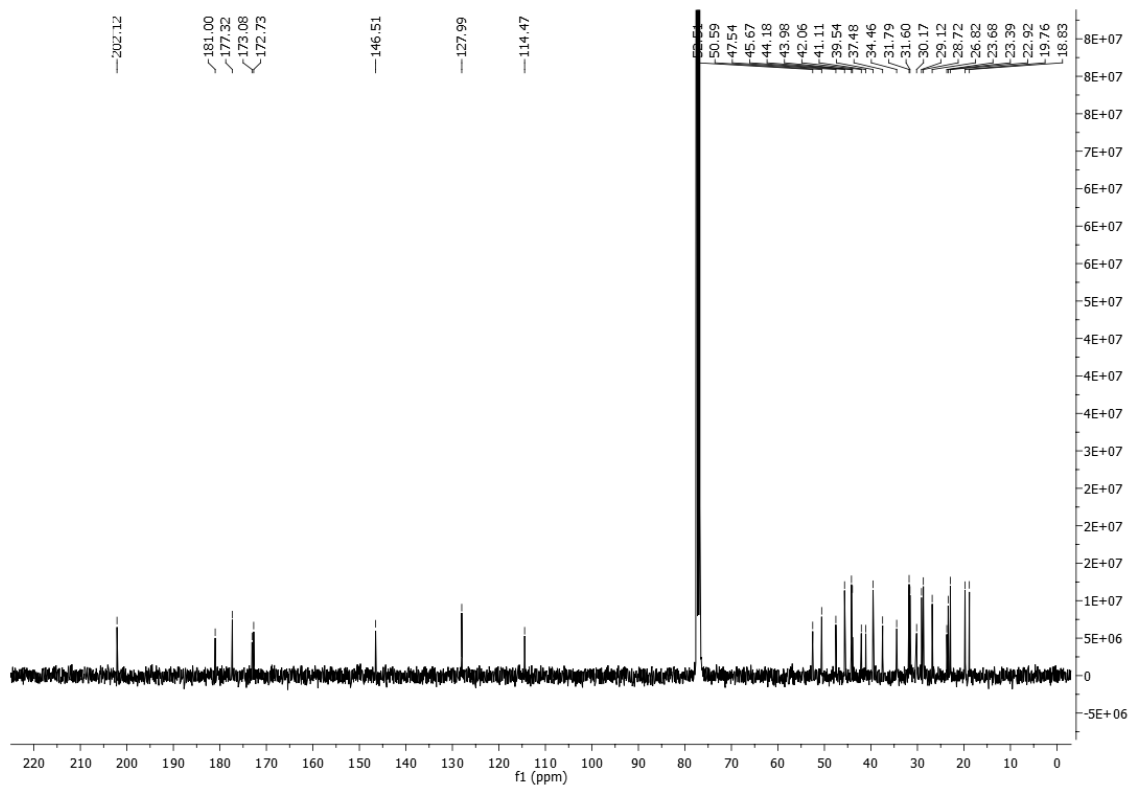
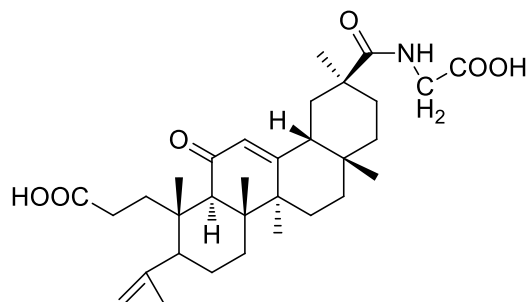


11. NMR data for compound 20

11.1. ^1H NMR spectrum for compound 20 recorded in CDCl_3



11.2. ^{13}C NMR spectrum for compound 20 recorded in CDCl_3



11.3. DEPT-135 spectrum for compound 20 recorded in CDCl₃

