

# Supplementary Materials: Cytotoxic and Pro-apoptotic Effects of Cassane Diterpenoids from the Seeds of *Caesalpinia sappan* in Cancer Cells

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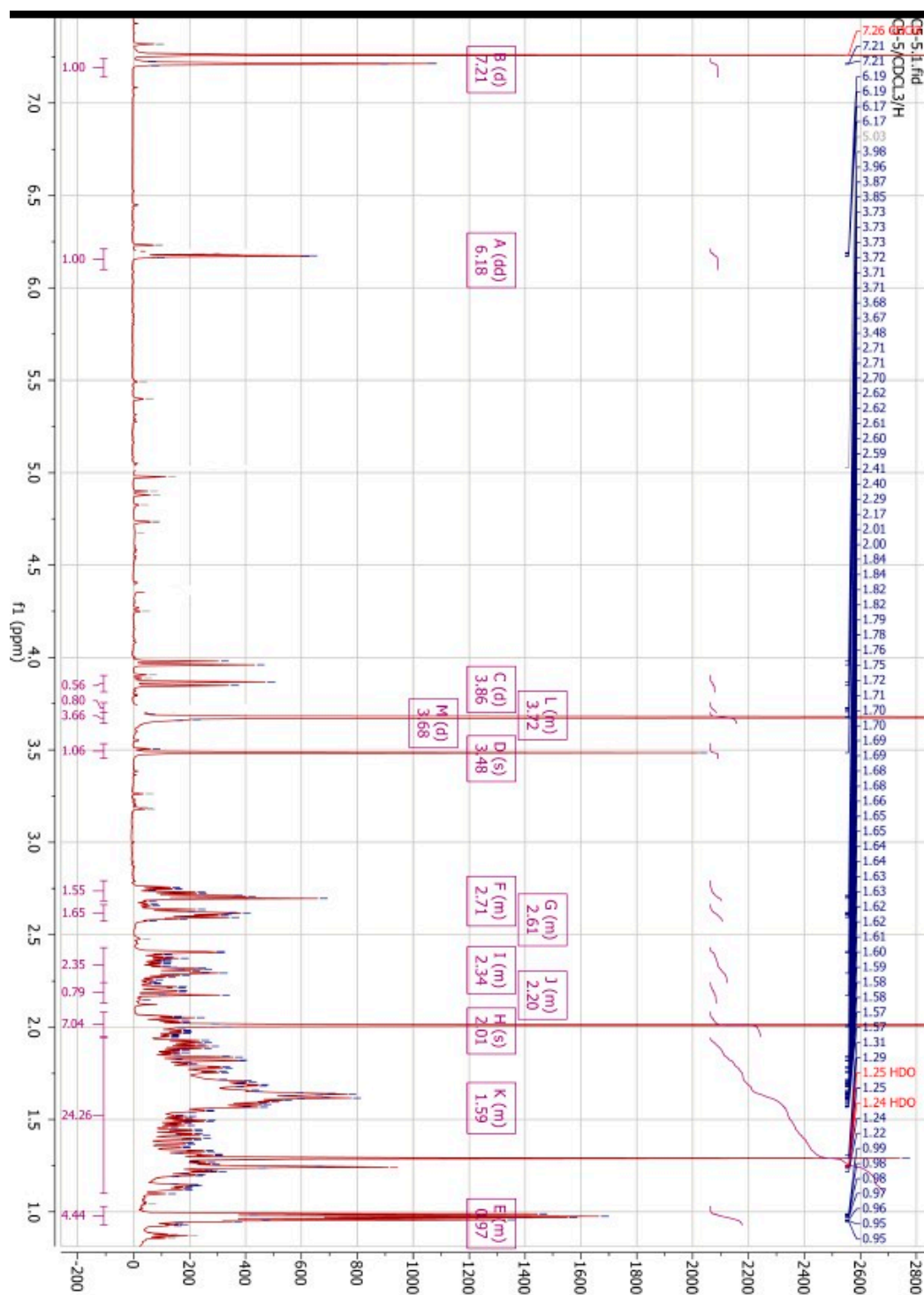


Figure S1. <sup>1</sup>H-NMR spectrum (600 MHz, CDCl<sub>3</sub>) of phanginin R (1).

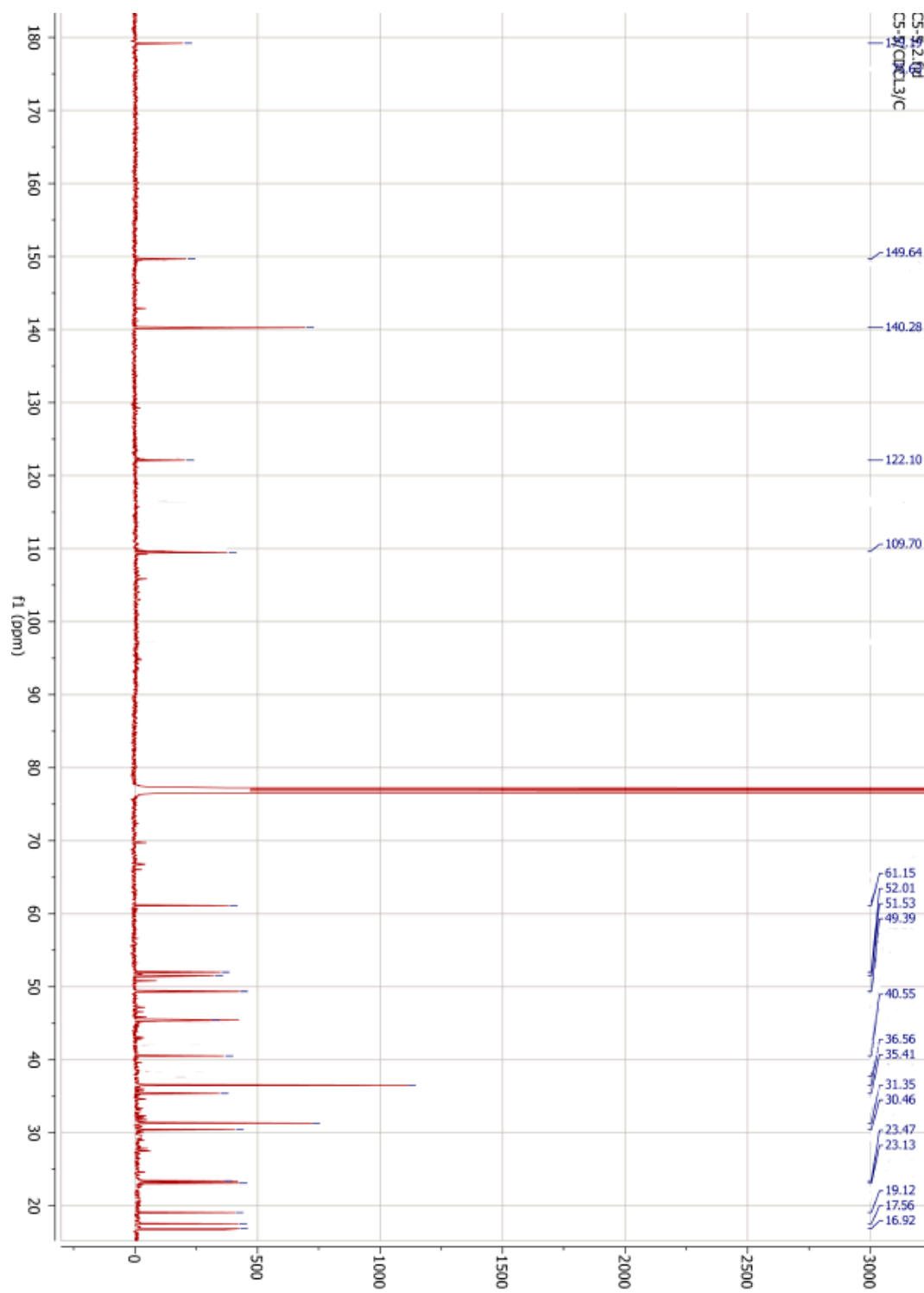


Figure S2. <sup>13</sup>C-NMR spectrum (125 MHz, CDCl<sub>3</sub>) of phanginin R (1).

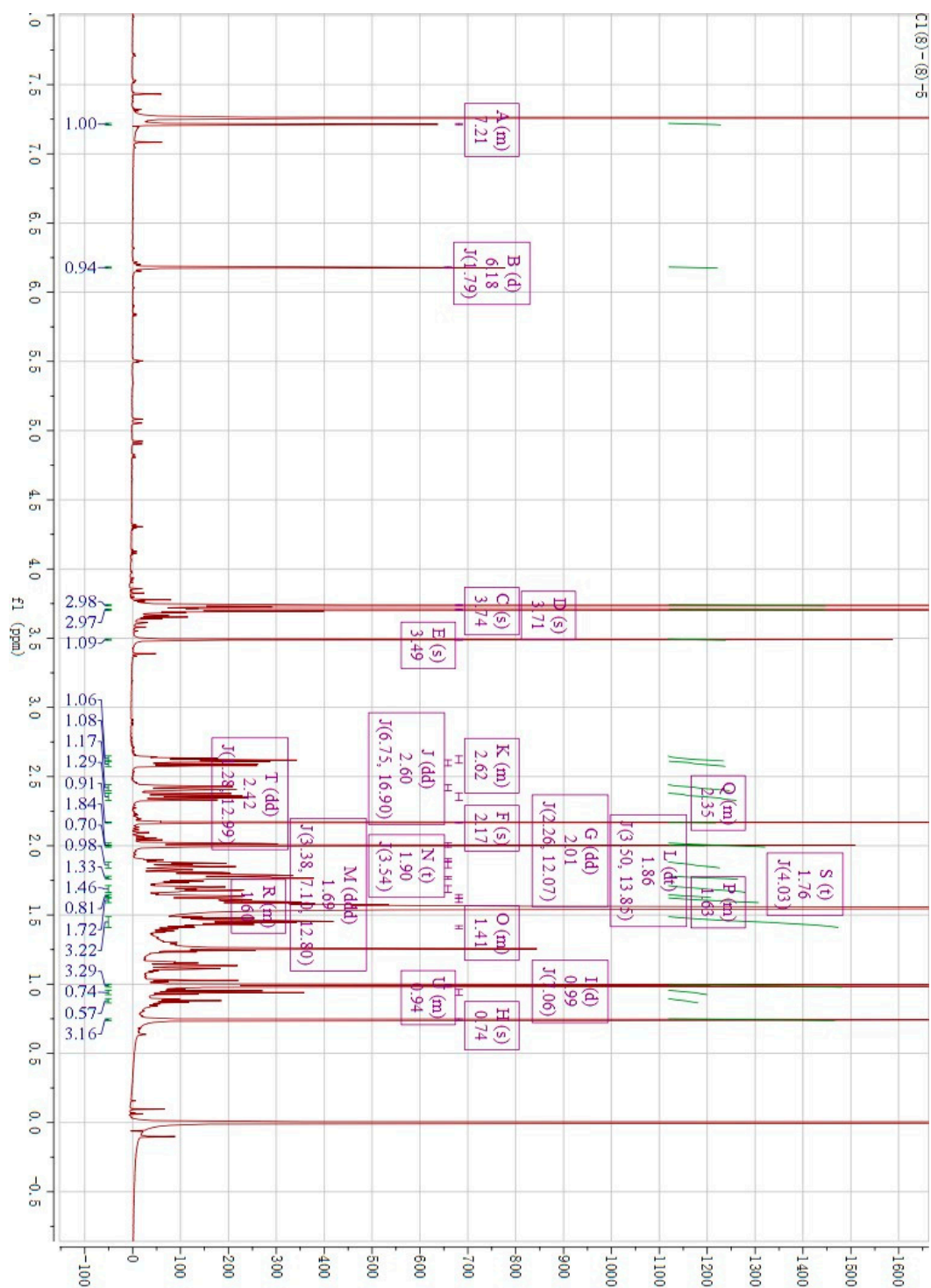


Figure S3. <sup>1</sup>H-NMR spectrum (600 MHz, CDCl<sub>3</sub>) of phanginin S (2).

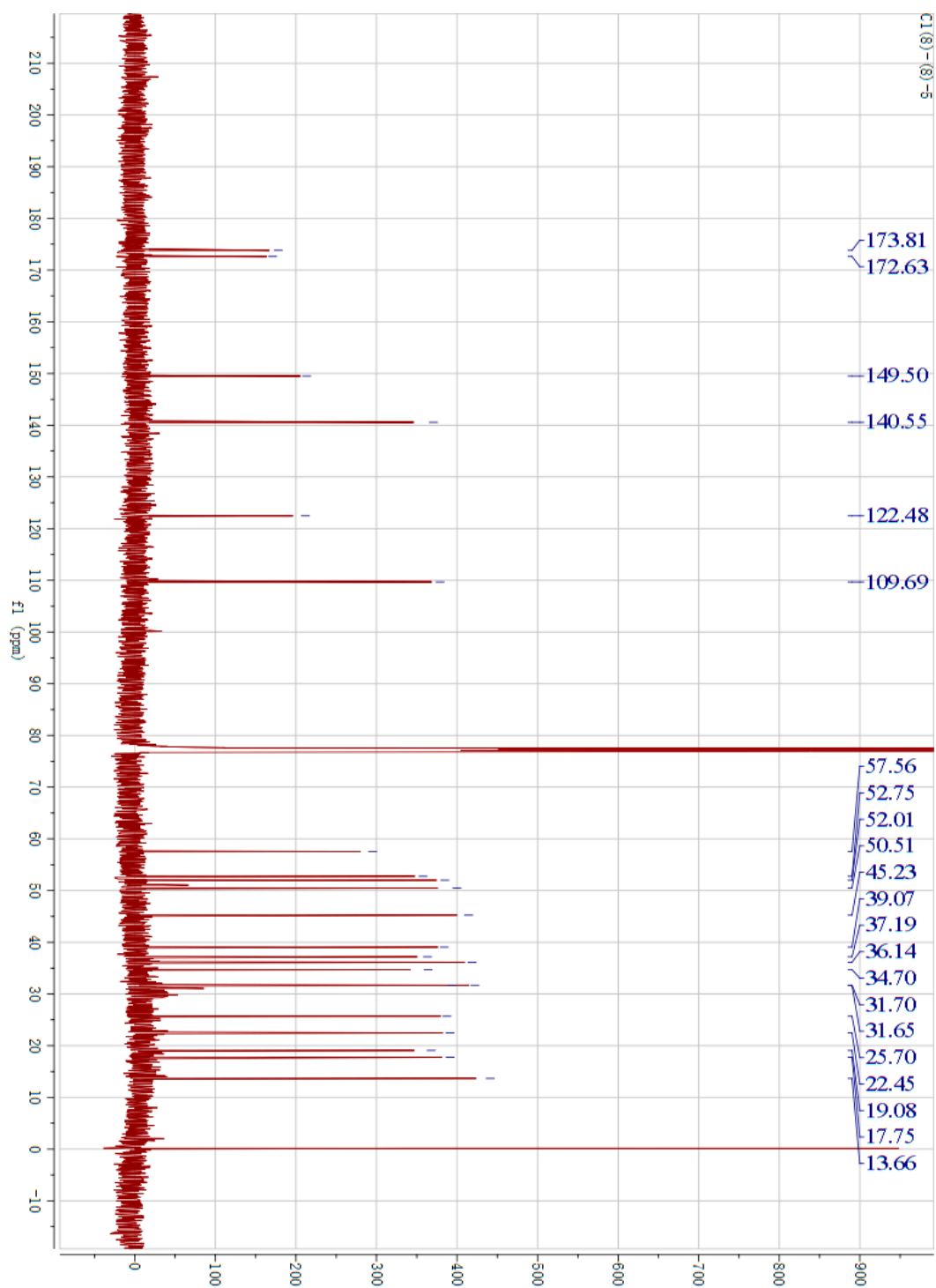


Figure S4.  $^{13}\text{C}$ -NMR spectrum (125 MHz,  $\text{CDCl}_3$ ) of phanginin S (2).

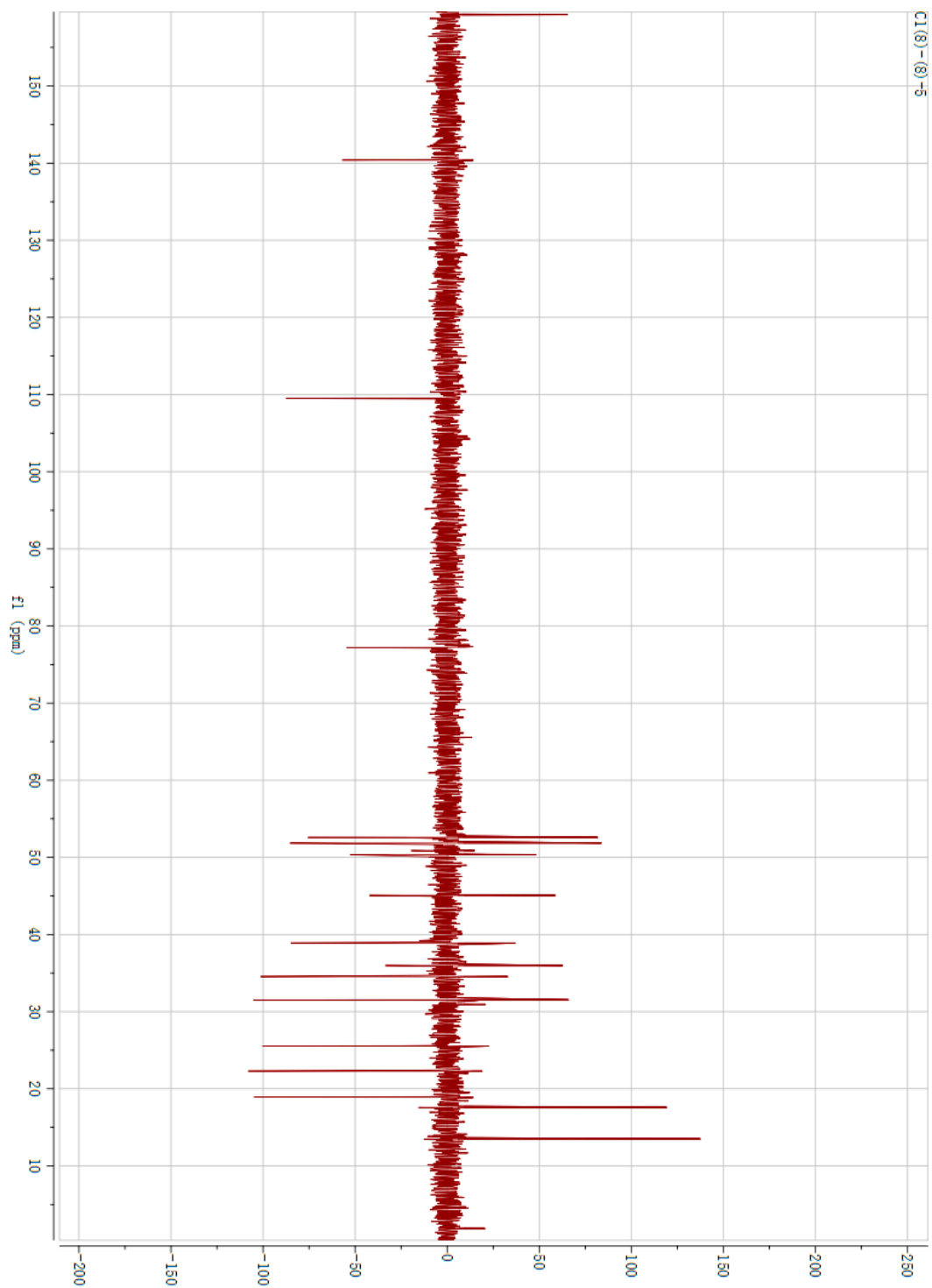


Figure S5. DEPT-135 spectrum (125 MHz, CDCl<sub>3</sub>) of phanginin S (2).

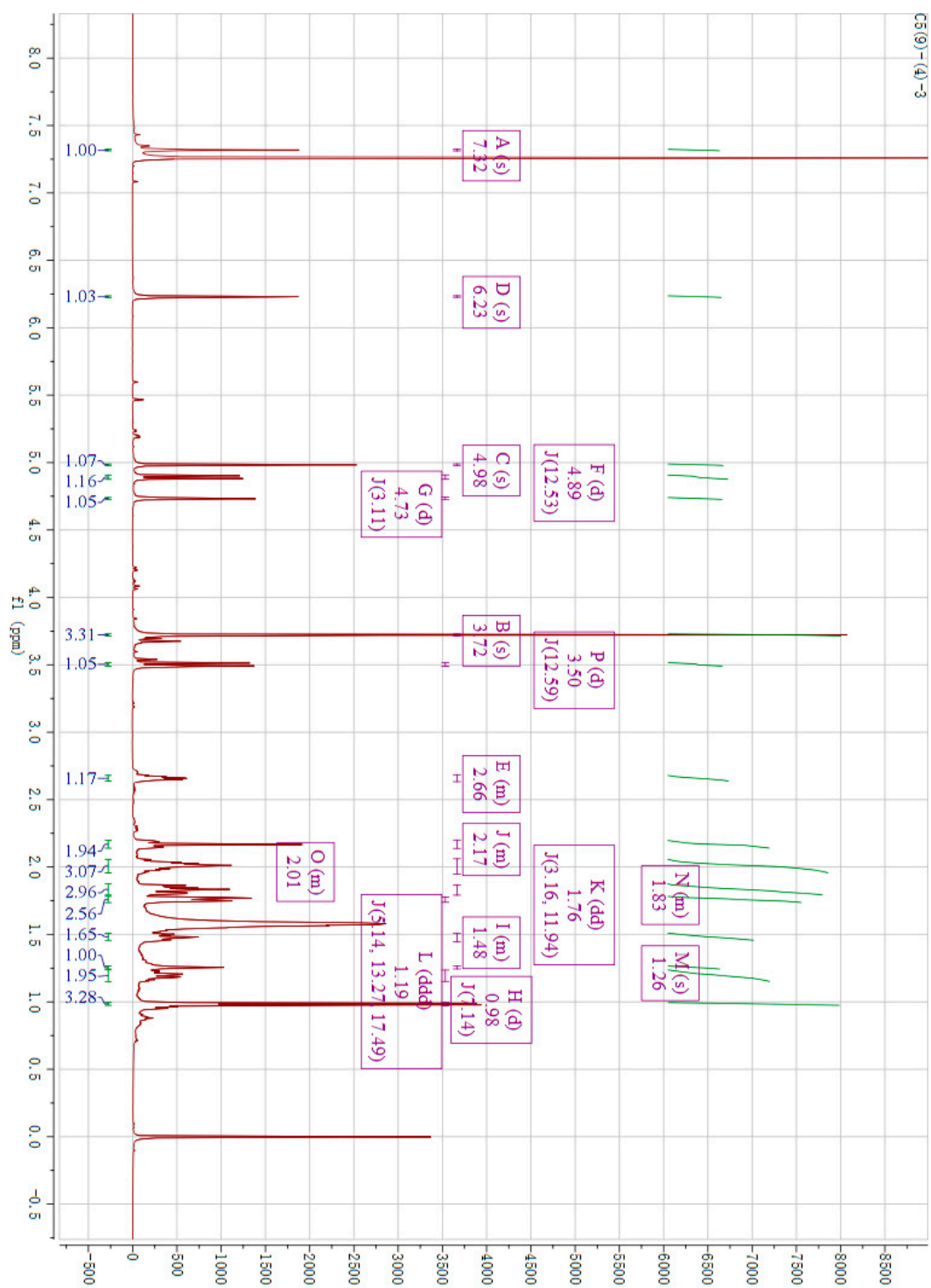


Figure S6.  $^1\text{H-NMR}$  spectrum (600 MHz,  $\text{CDCl}_3$ ) of phanginin T (3).

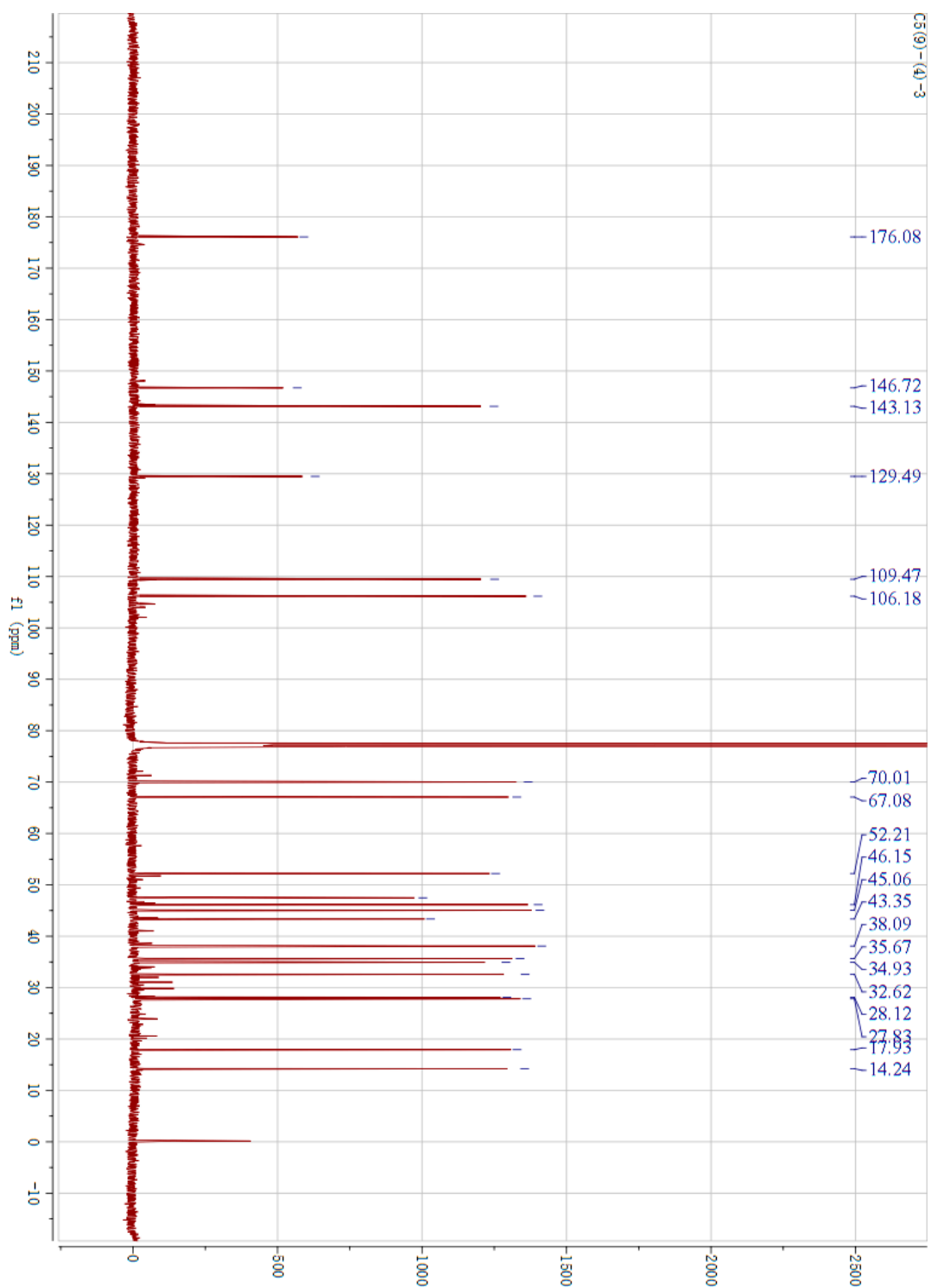


Figure S7. <sup>13</sup>C-NMR spectrum (125 MHz, CDCl<sub>3</sub>) of phanginin T (3).

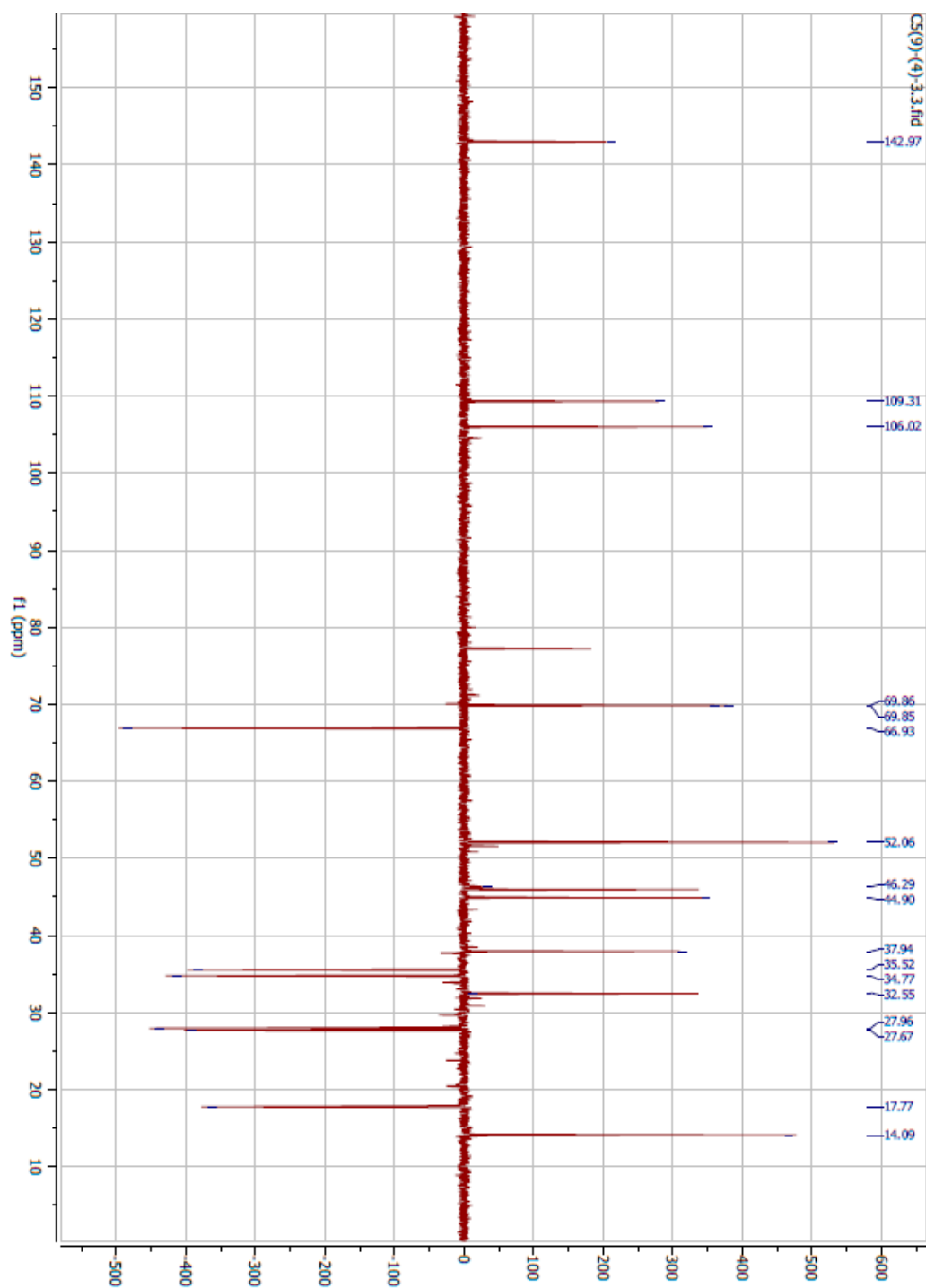


Figure S8. DEPT-135 spectrum (125 MHz, CDCl<sub>3</sub>) of phanginin T (3).



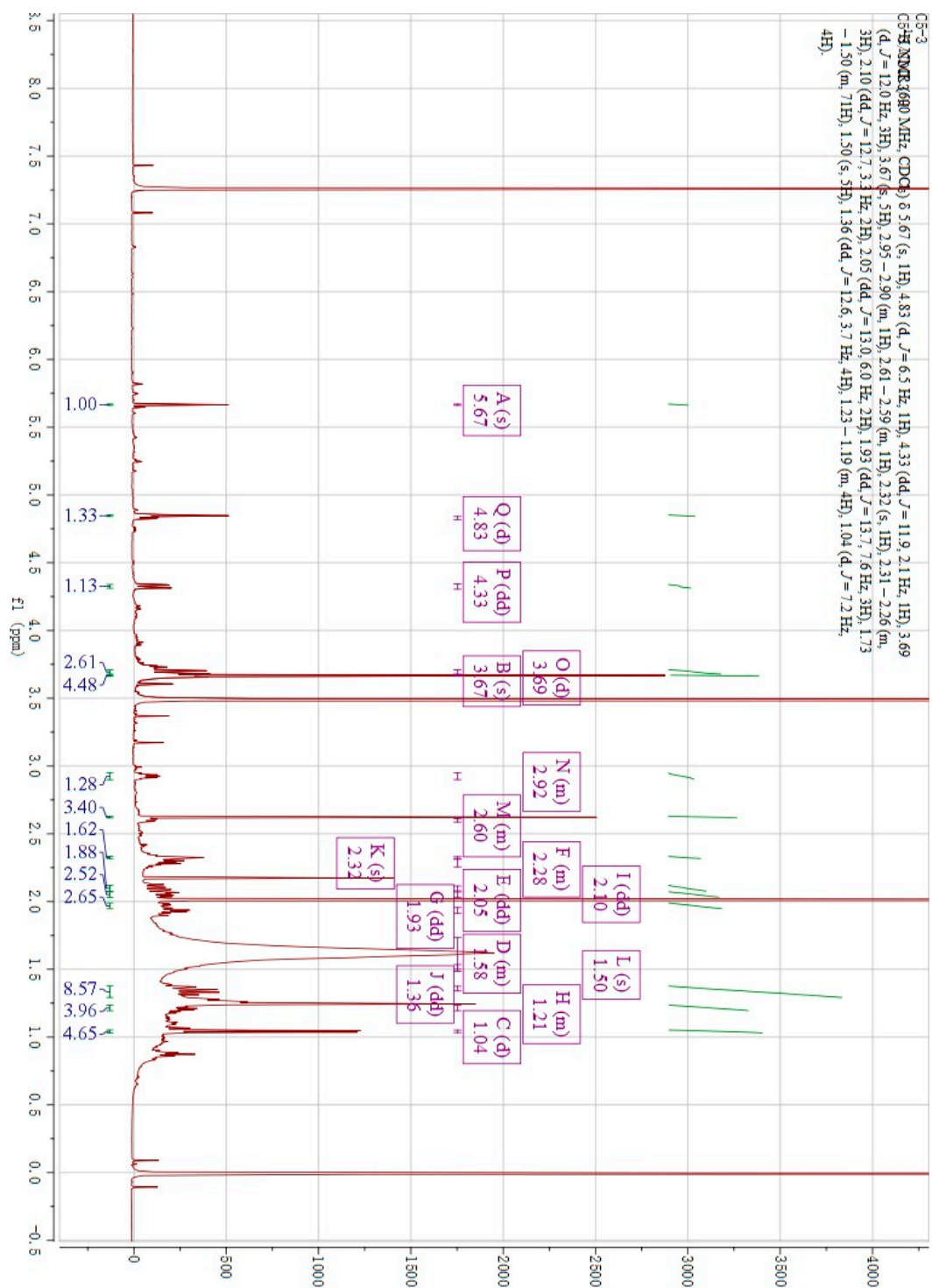


Figure S9. <sup>1</sup>H-NMR spectrum (600 MHz, CDCl<sub>3</sub>) of caesalsappanin M (4).

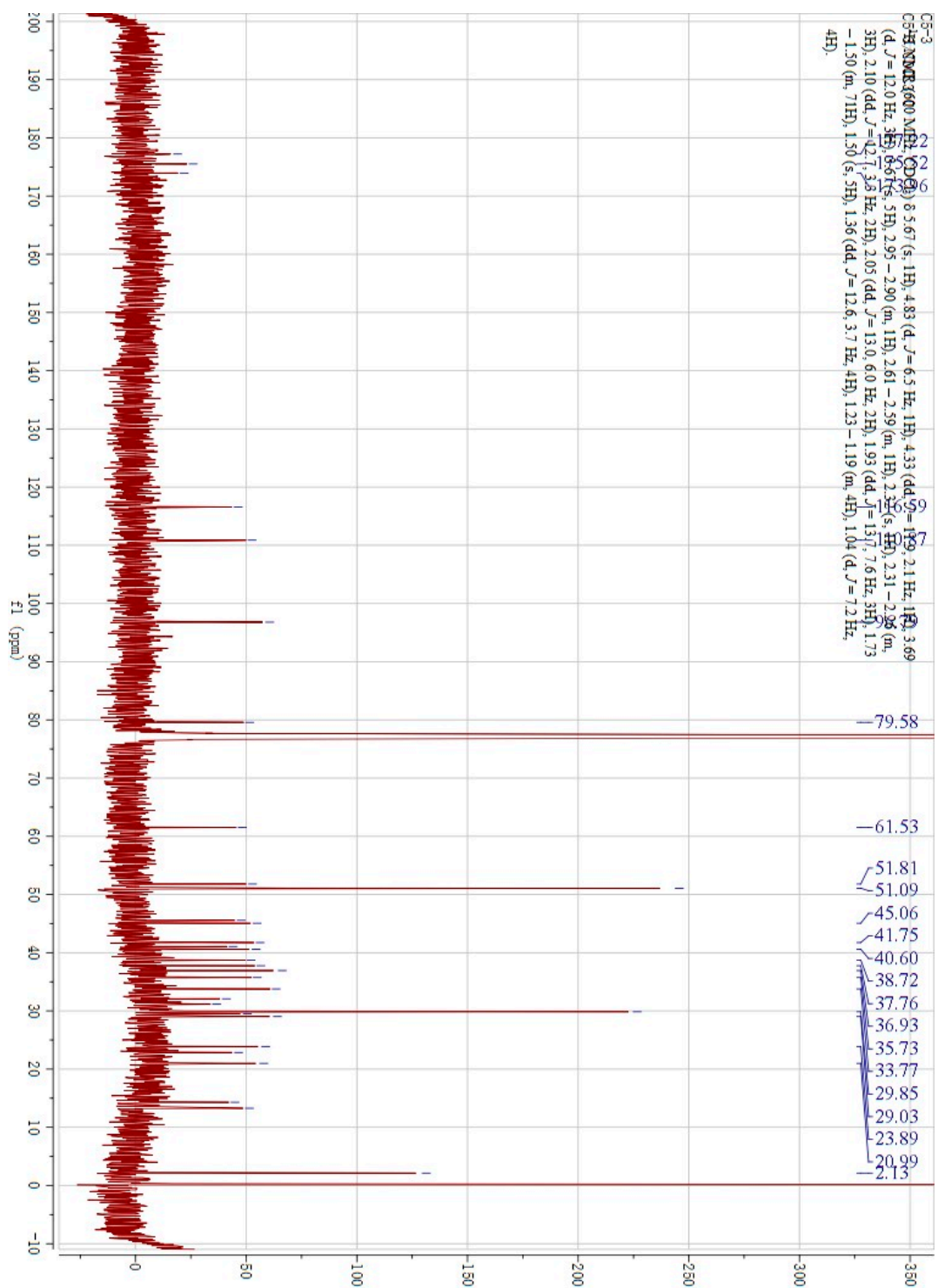


Figure S10.  $^{13}\text{C-NMR}$  spectrum (125 MHz,  $\text{CDCl}_3$ ) of caesalsappanin M (4).

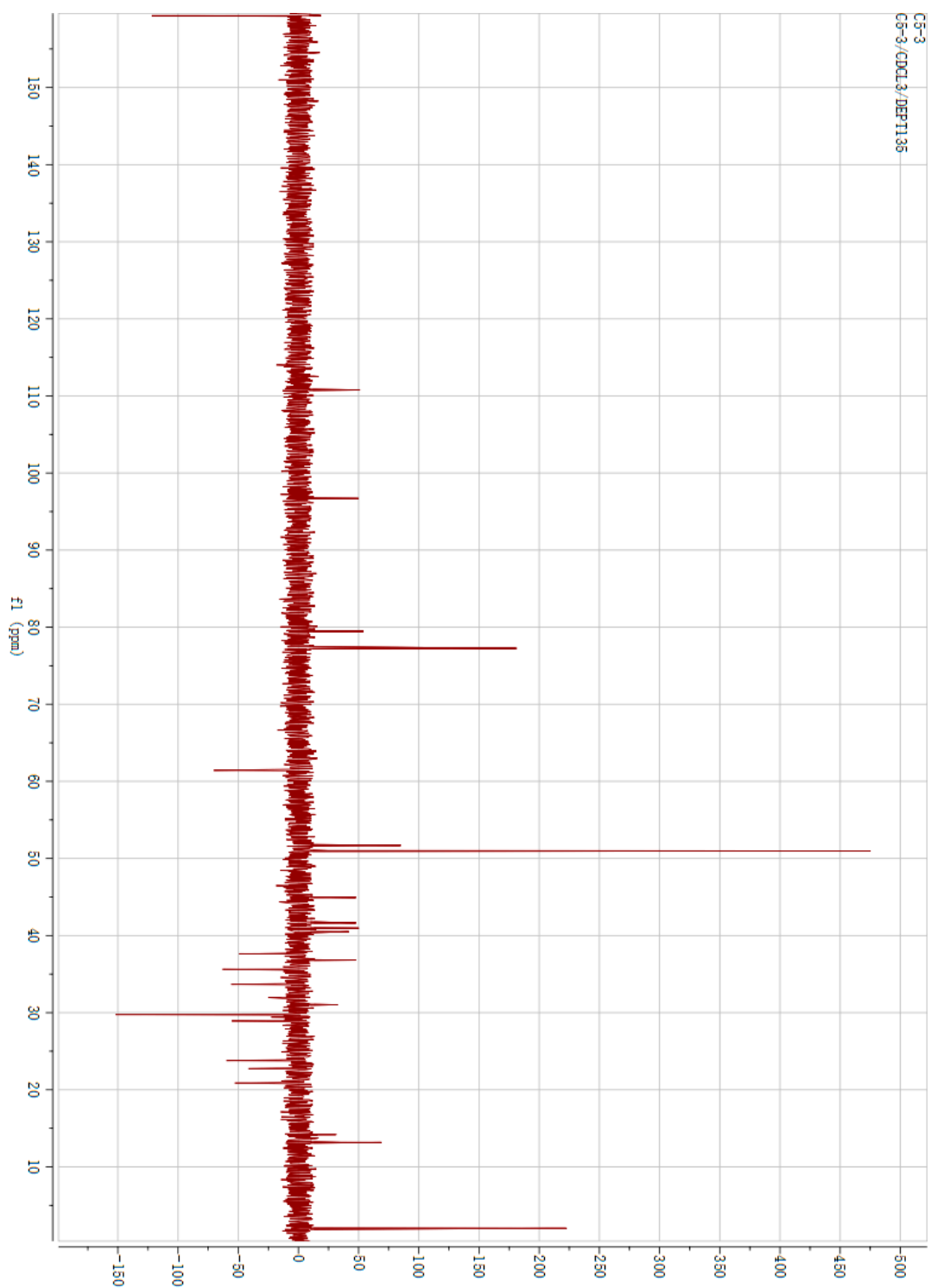


Figure S11. DEPT-135 spectrum (125 MHz, CDCl<sub>3</sub>) of caesalsappanin M (4).

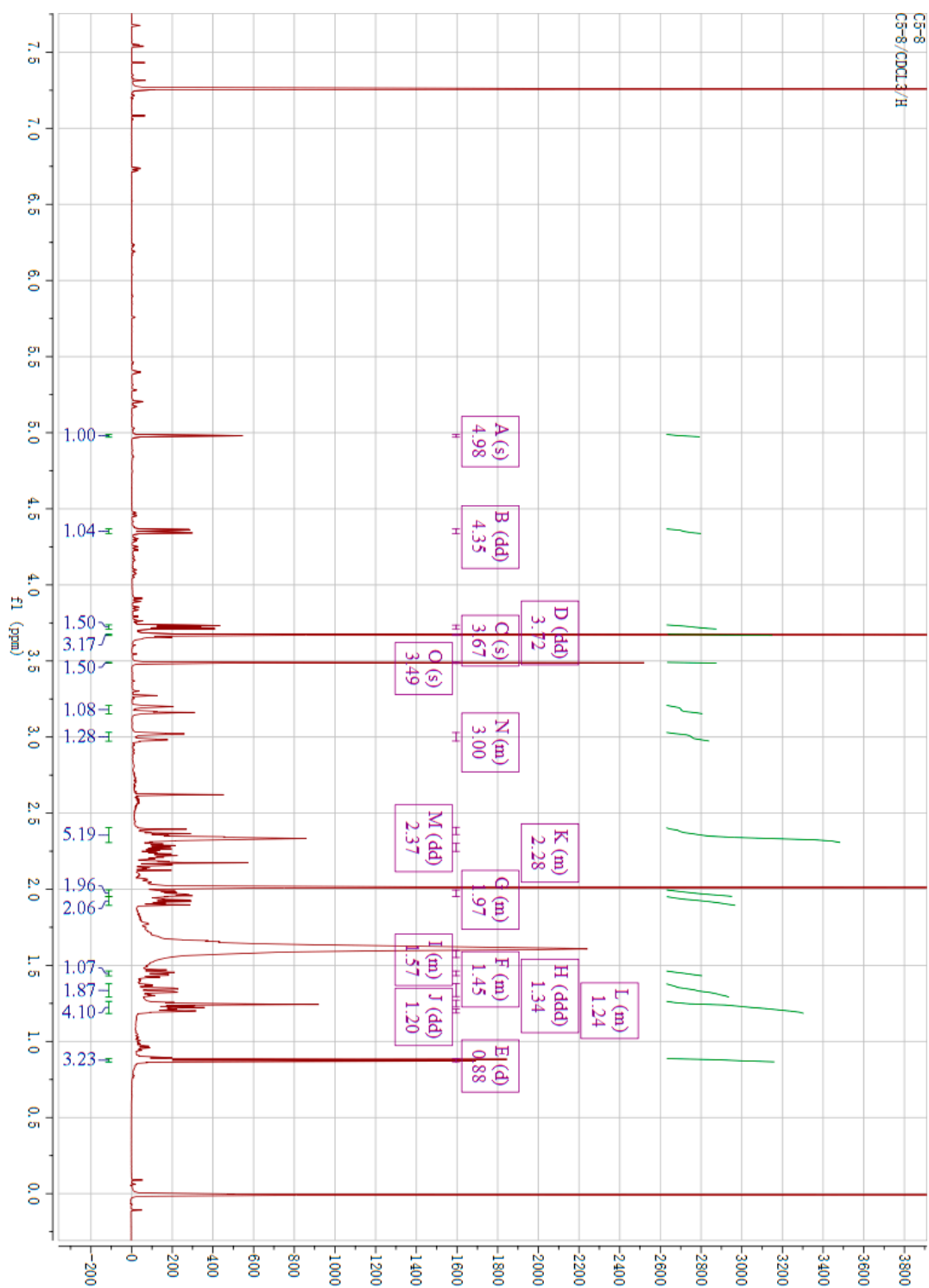


Figure S12.  $^1\text{H-NMR}$  spectrum (600 MHz,  $\text{CDCl}_3$ ) of caesalsappanin N (5).

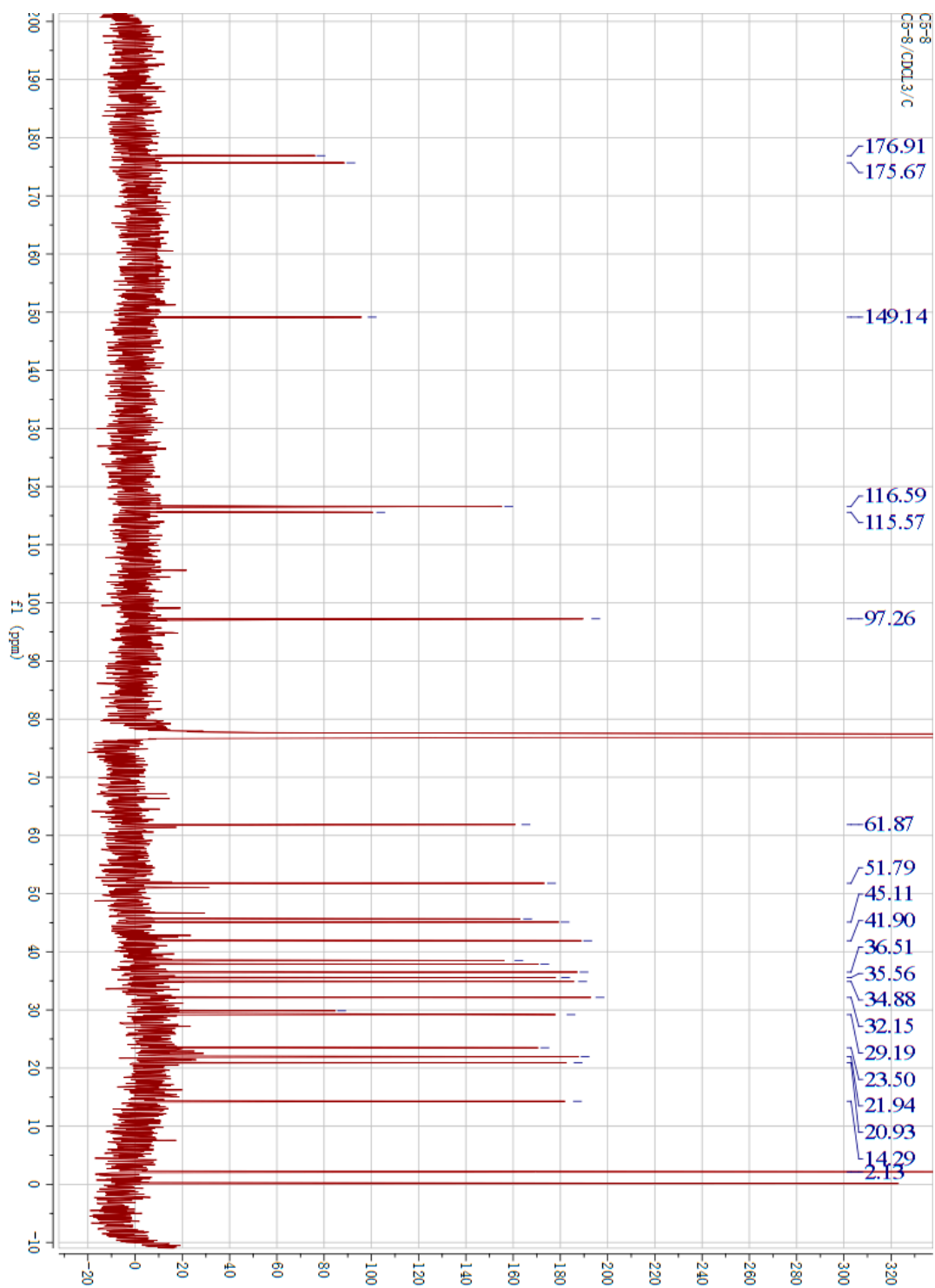


Figure S13. <sup>13</sup>C-NMR spectrum (125 MHz, CDCl<sub>3</sub>) of caesalsappanin N (5).

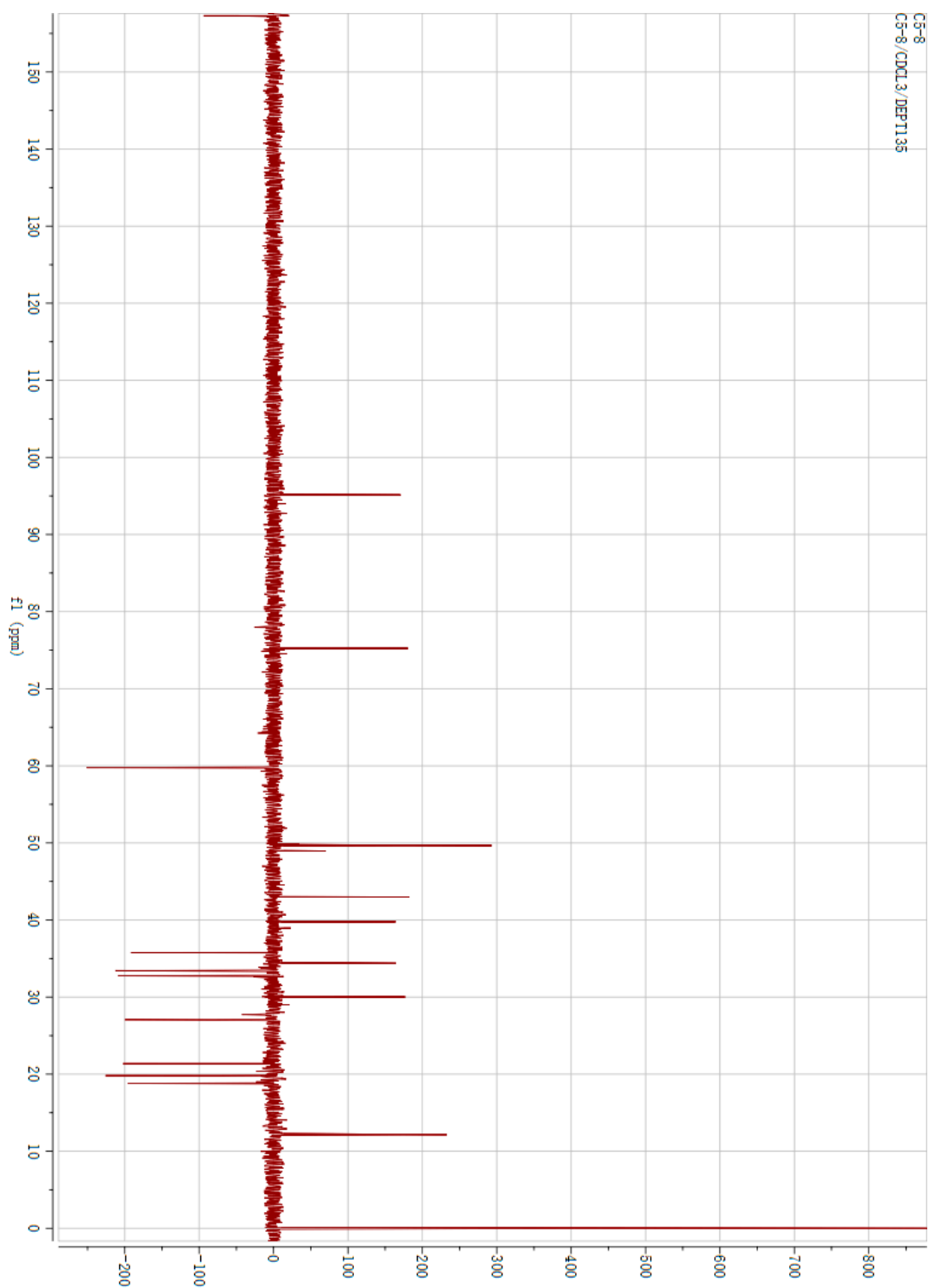
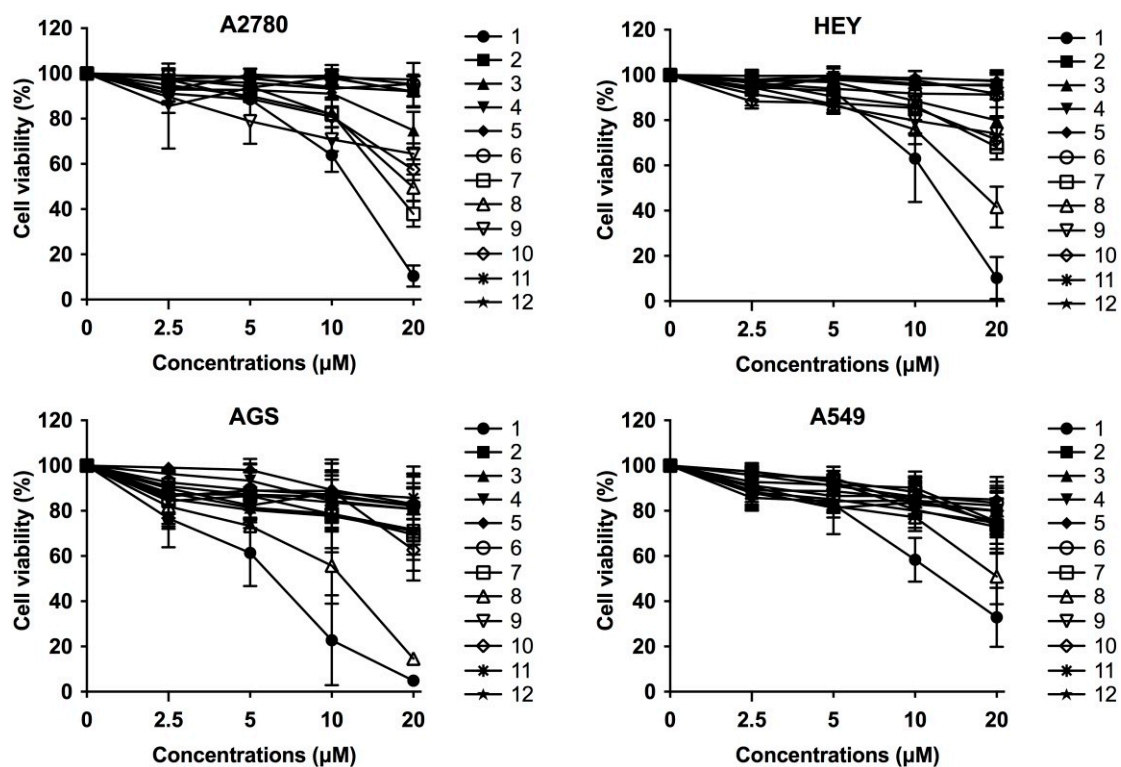


Figure S14. DEPT-135 spectrum (125 MHz, CDCl<sub>3</sub>) of caesalsappanin N (5).



**Figure S15.** Concentration-response curve of A2780, HEY, AGS and A549 cells incubated with twelve compounds. Cells were treated with indicated concentrations of the compounds for 48 h and the cell viability was detected by MTT assay.