

Supplementary Information

Discovery of novel bioactive tanshinones and carnosol analogues against breast cancer

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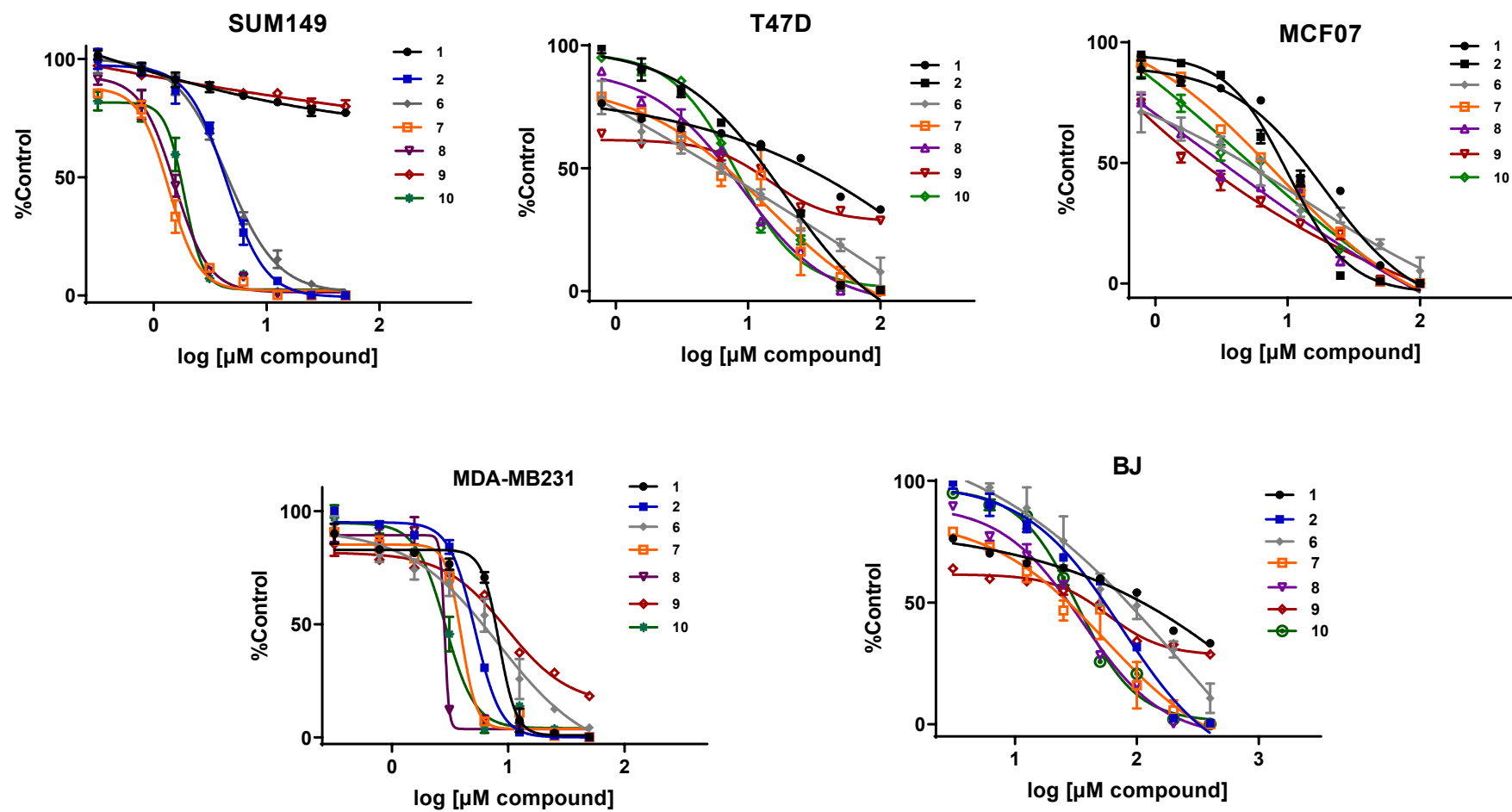
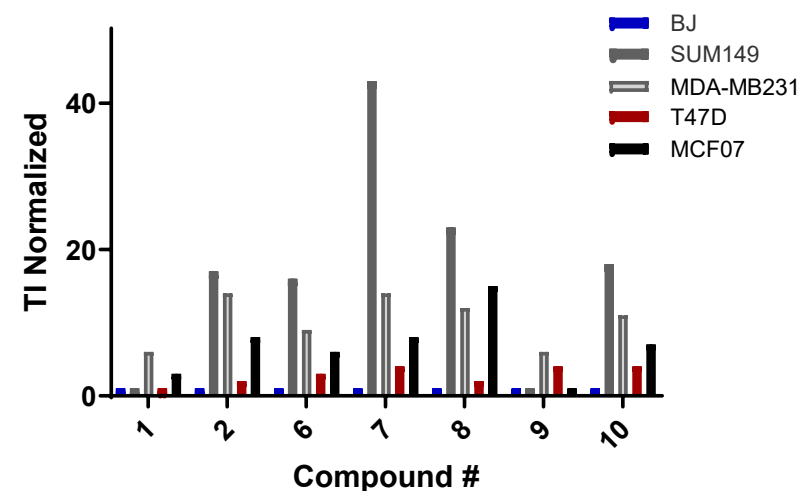


Figure S1. Diagrams of cell viability versus concentration.

SUM149	MDA-MB231	T47D	MCF07	BJ	#
>50	8.3± 1.4	>100	19.02± 1.5	>50	1
4.4± 0.27	5.1± 0.62	>50	10± 1.50	75± 6.2	2
4.45± 0.2	8.22± 0.47	29.21±1.5	13.04± 0.61	74.77± 5.3	6
1.3± 0.64	3.95± 0.8	14.1±0.51	8.29± 0.93	56.48± 6.1	7
1.5± 0.38	2.8± 0.43	18.69±0.3	2.3± 1.1	35.42± 5.0	8
>50	9.4± 0.45	14.4±0.62	>50	57.64± 3.0	9
1.8± 0.2	2.8± 0.16	8.17± 0.44	4.6± 0.64	32.49± 5.0	10

SUM149	MDA-MB231	T47D	MCF07	#
1	6	0.5	2.6	1
17	14	1.5	7.5	2
16	9	2.5	5.7	6
43	14	4	6.7	7
23	12	1.9	15	8
1.1	6	3.9	1.1	9
18	11	3.9	7	10

Normalized Therapeutic index = (EC50 non-neoplastic cell line BJ)/(EC50 cancer cell line).



Column B SUM149
vs. vs.
Column A BJ
Paired t test
P value 0.0252
P value summary *
Significantly different (P < 0.05)? Yes
One- or two-tailed P value? Two-tailed
t, df t=2.961, df=6
Number of pairs 7

Column D T47D
vs. vs.
Column A BJ
Paired t test
P value 0.0068
P value summary **
Significantly different (P < 0.05)? Yes
One- or two-tailed P value? Two-tailed
t, df t=4.044, df=6
Number of pairs 7

Column C MDA-MB231
vs. vs.
Column A BJ
Paired t test
P value 0.0004
P value summary ***
Significantly different (P < 0.05)? Yes
One- or two-tailed P value? Two-tailed
t, df t=7.222, df=6
Number of pairs 7

Column E MCF07
vs. vs.
Column A BJ
Paired t test
P value 0.0131
P value summary *
Significantly different (P < 0.05)? Yes
One- or two-tailed P value? Two-tailed
t, df t=3.482, df=6
Number of pairs 7

Figure S2. Normalized Therapeutic index and graphic corresponding to the statistical significance.

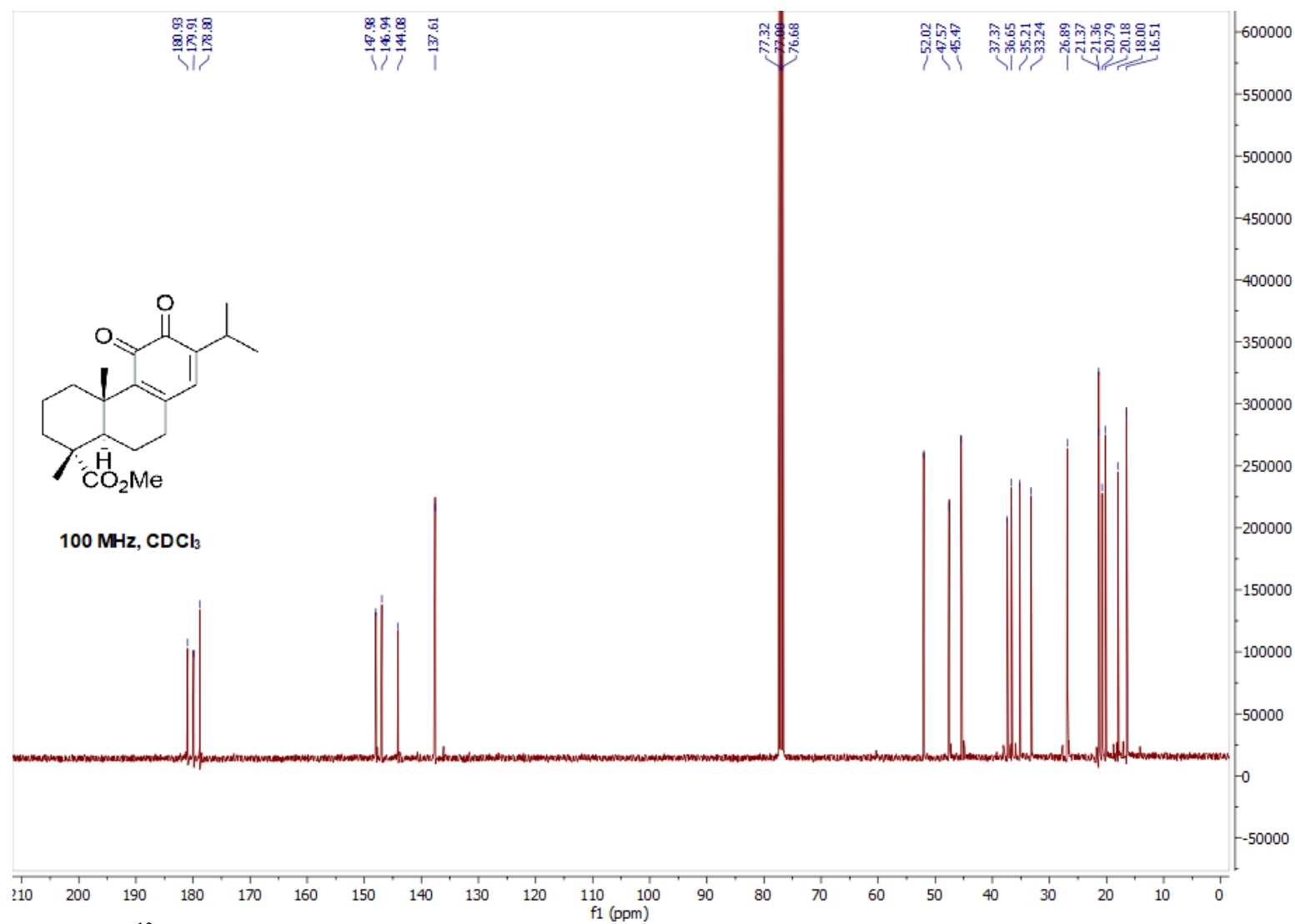


Figure S4. ¹³C NMR spectrum of 7.

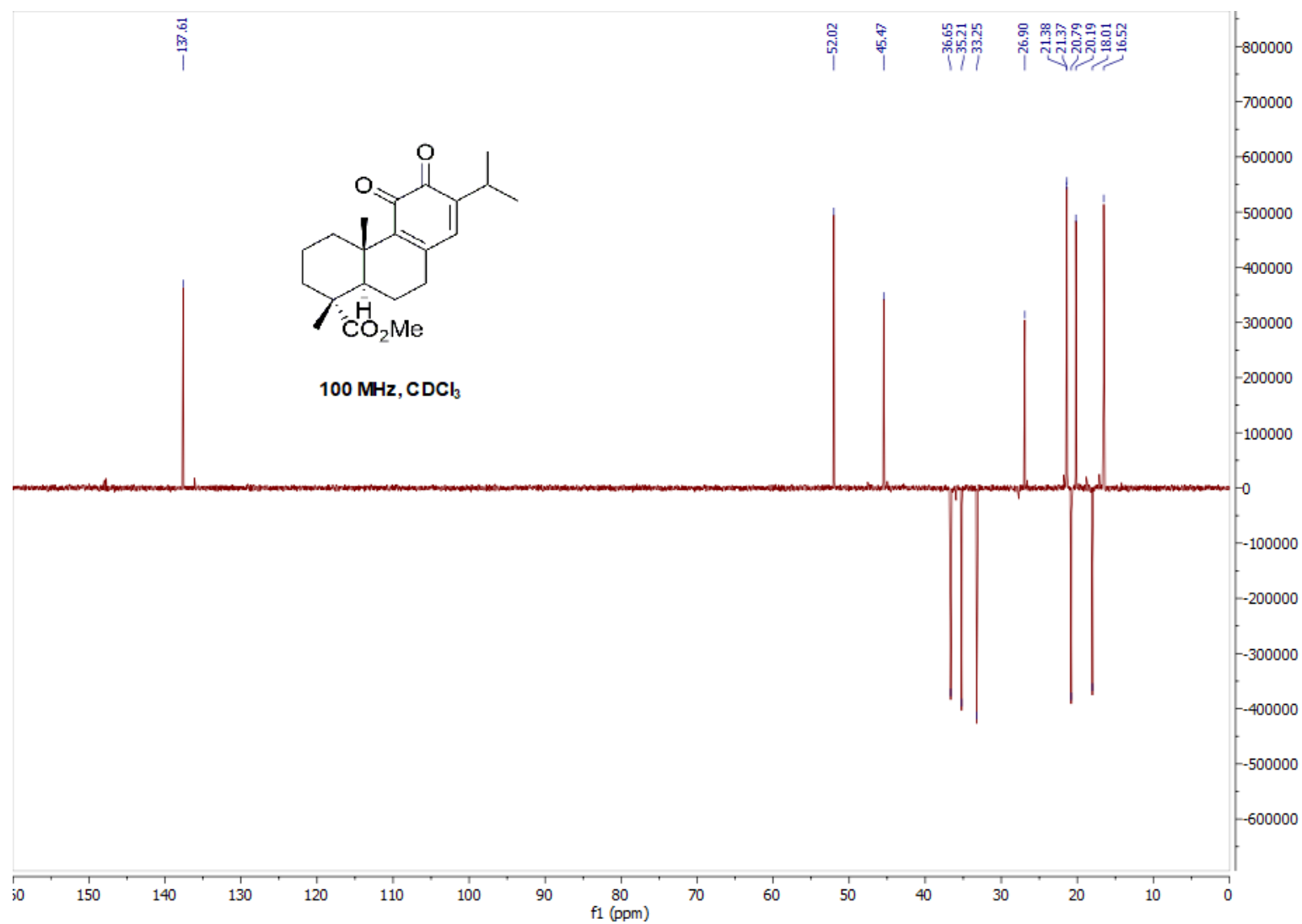


Figure S5. DEPT135 spectrum of 7.

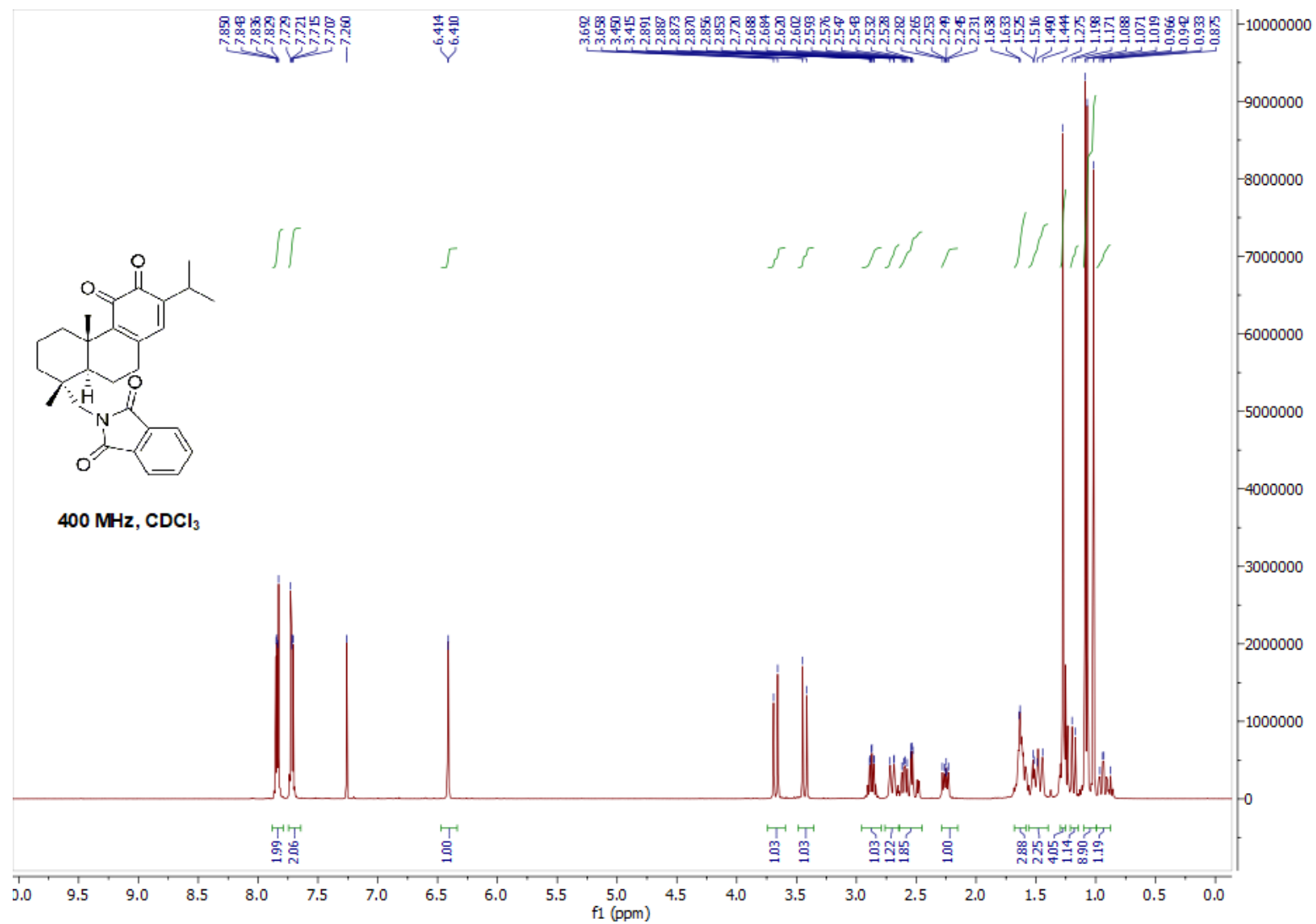


Figure S6. ¹H NMR spectrum of **8**.

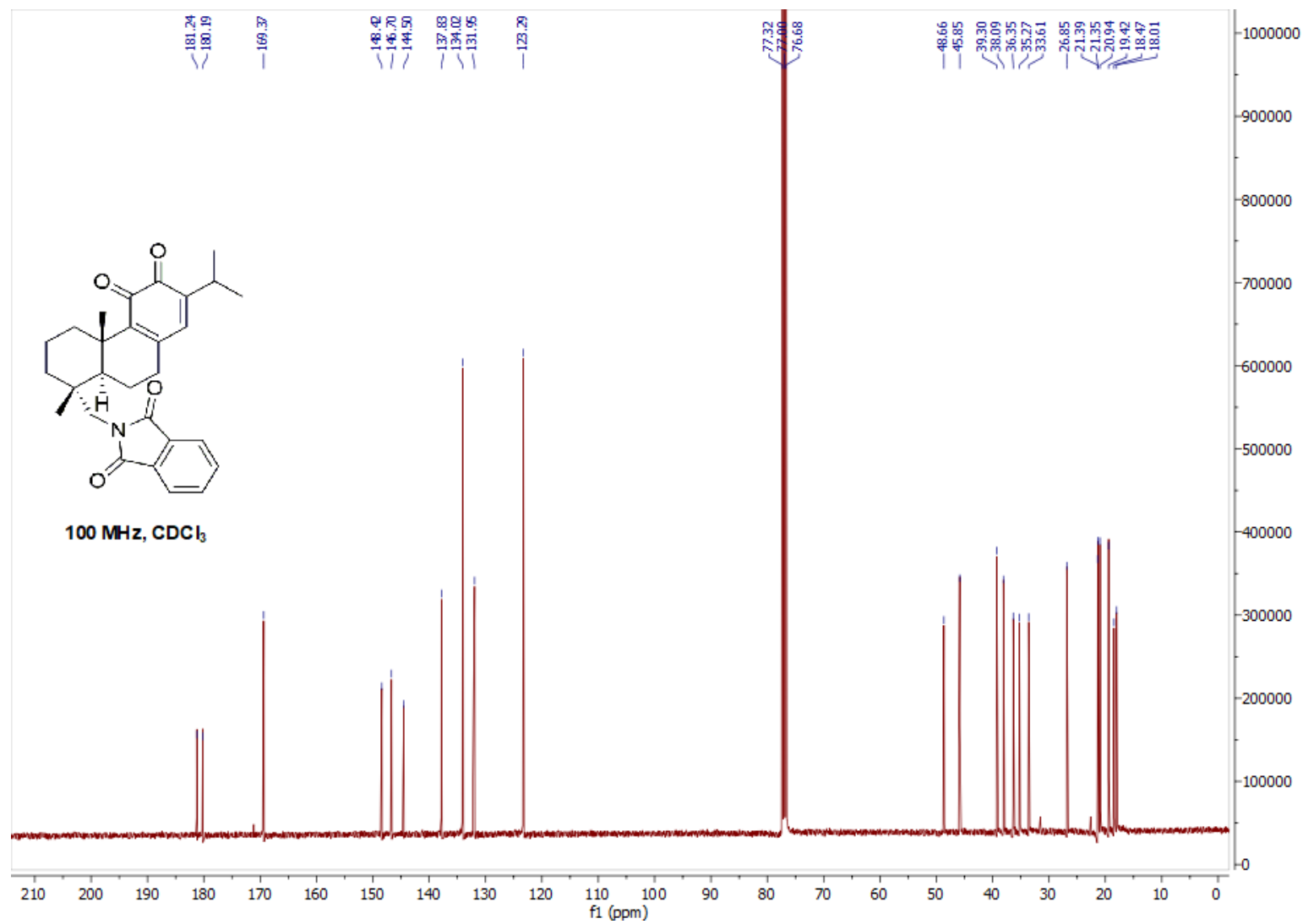


Figure S7. ^{13}C NMR spectrum of **8**.

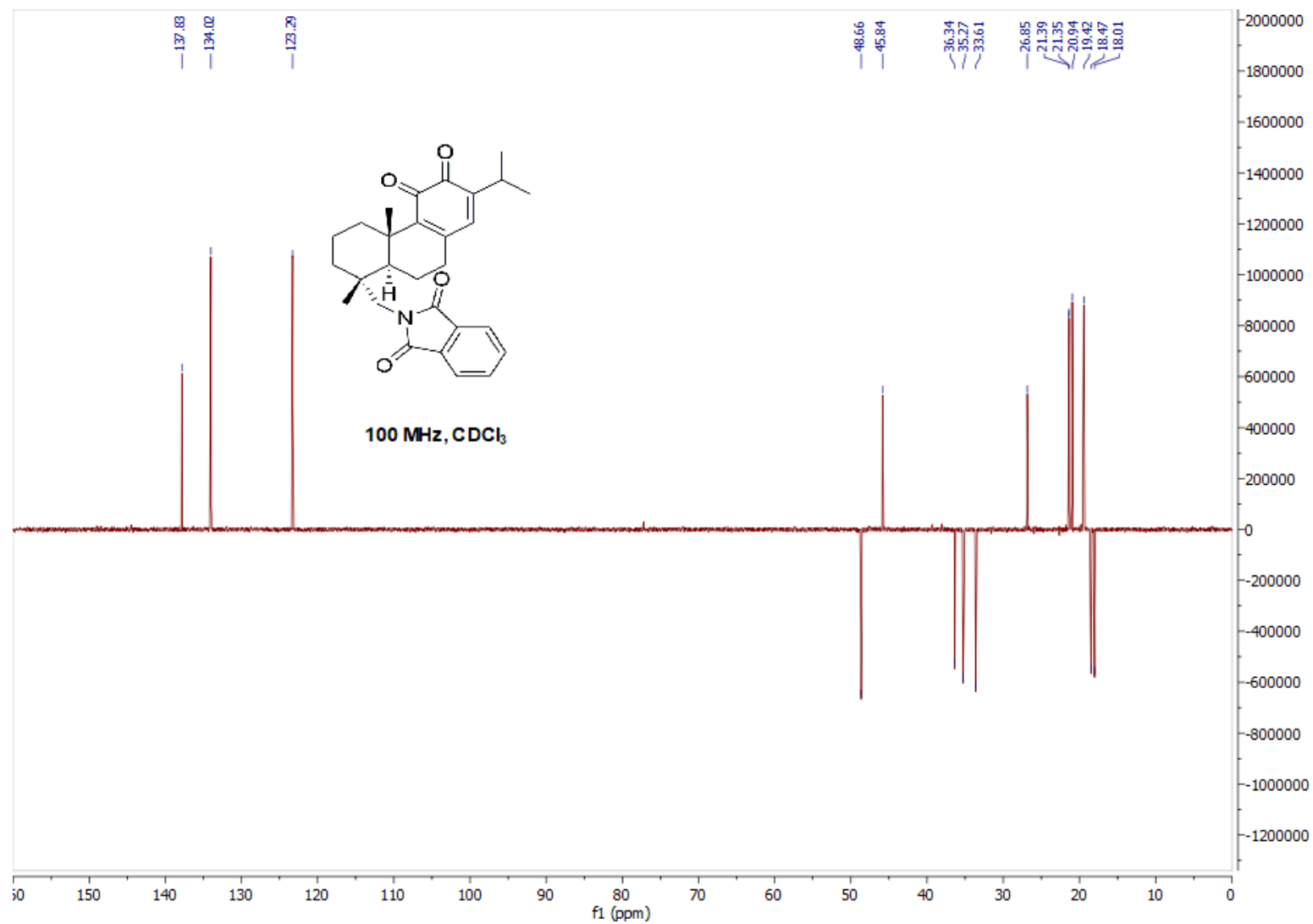


Figure S8. DEPT135 spectrum of **8**.

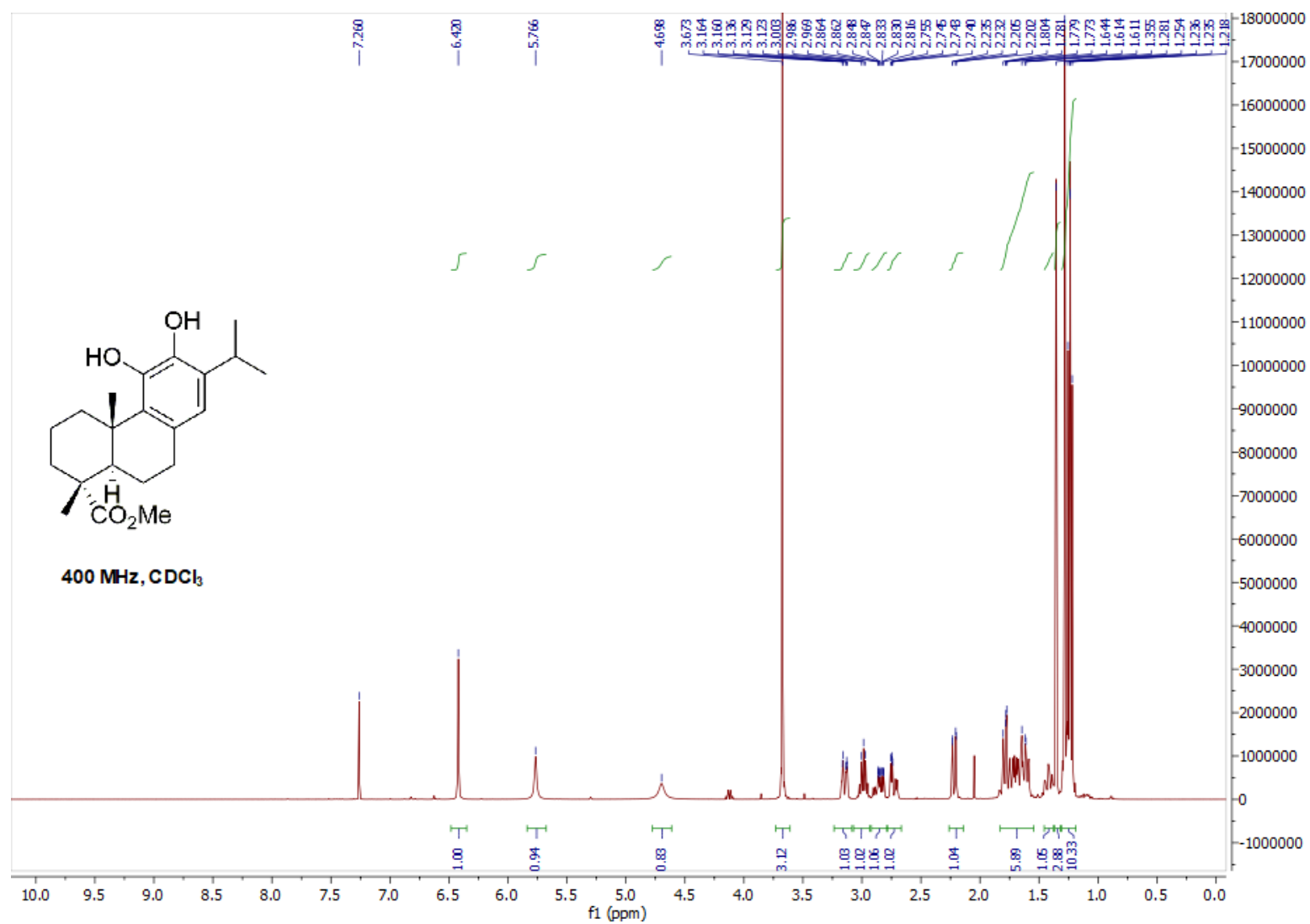


Figure S9. ¹H NMR spectrum of **9**.

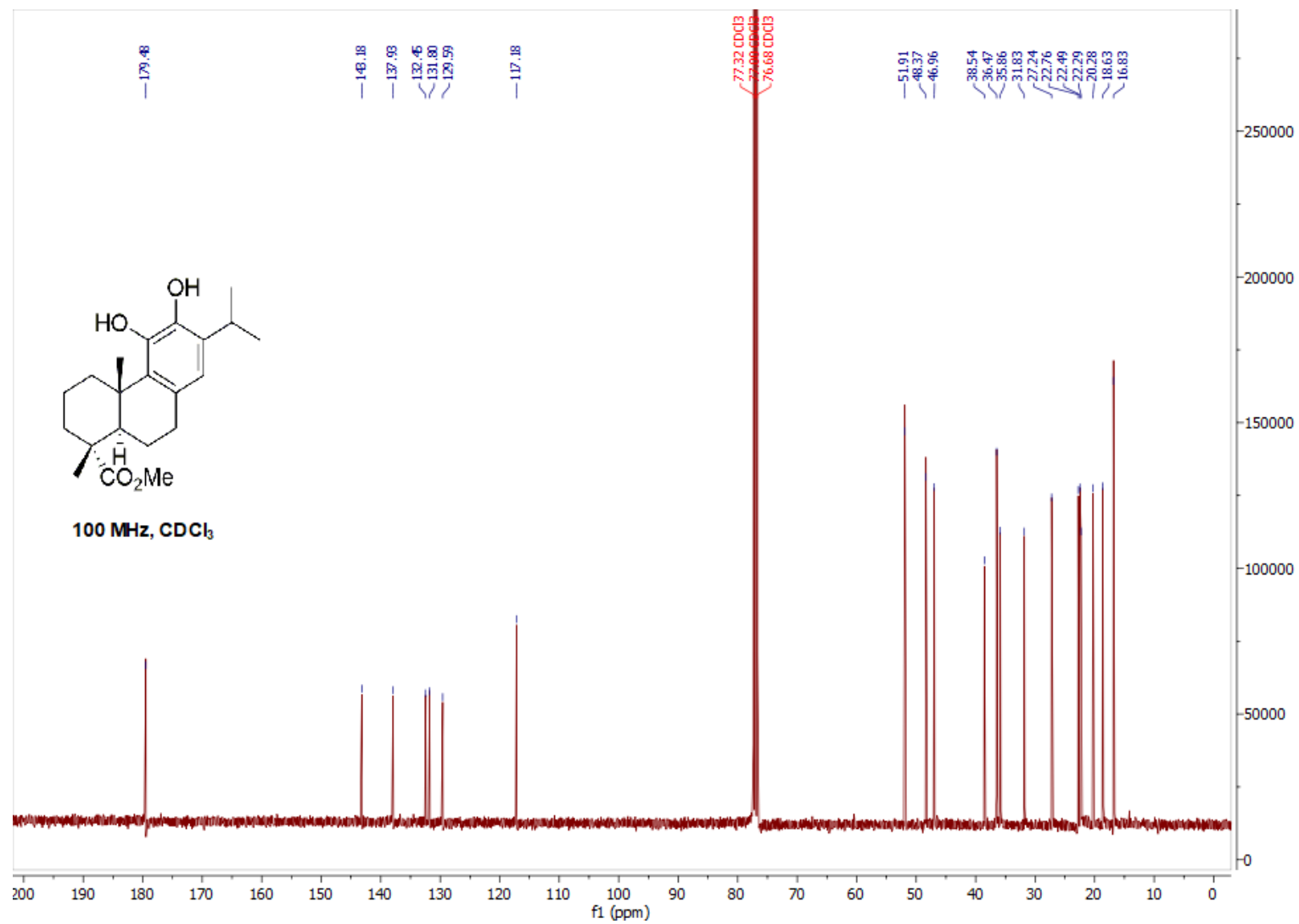


Figure S10. ^{13}C NMR spectrum of **9**.

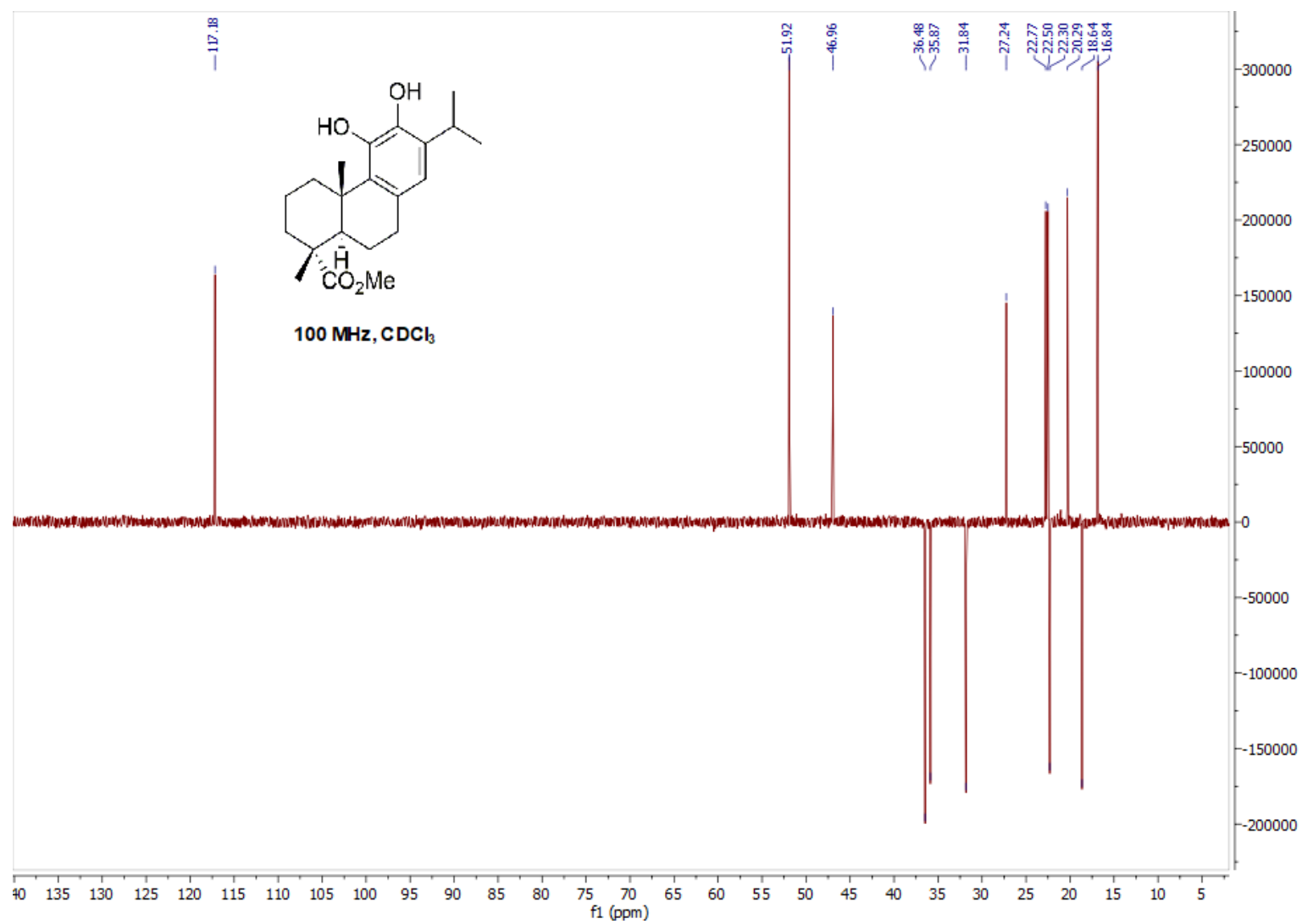


Figure S11. DEPT135 spectrum of **9**.

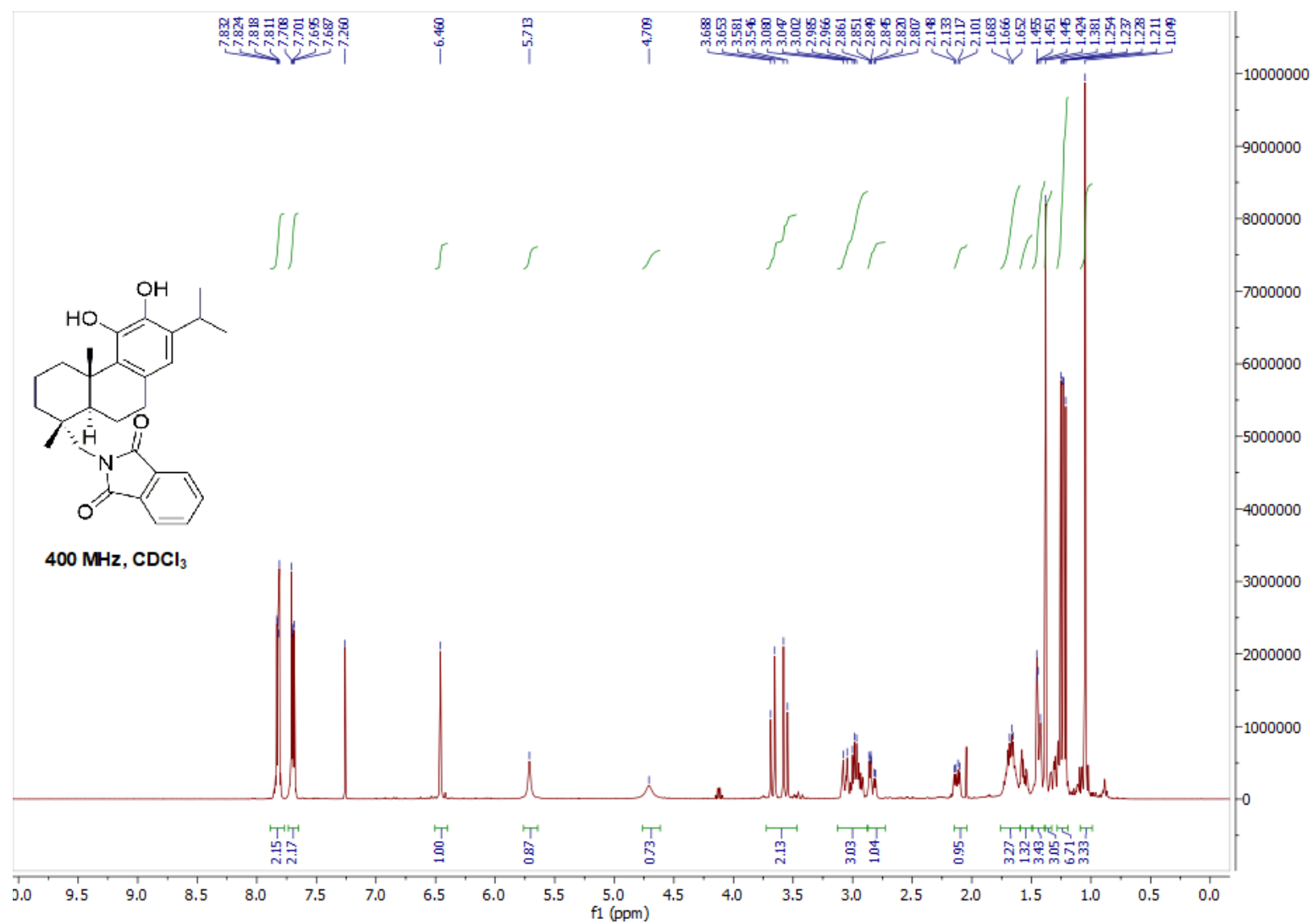


Figure S12. ¹H NMR spectrum of **10**.

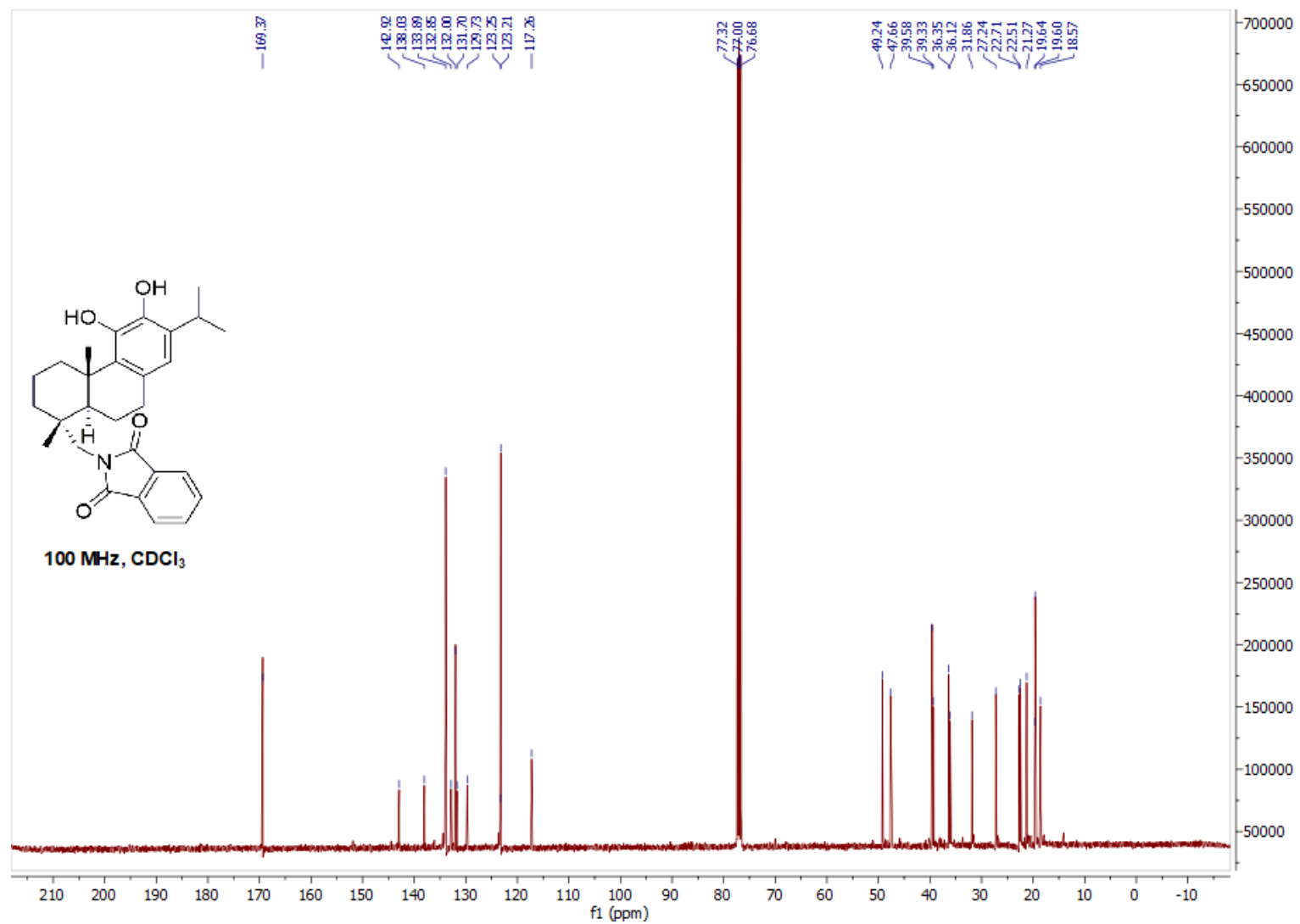


Figure S13. ^{13}C NMR spectrum of **10**.

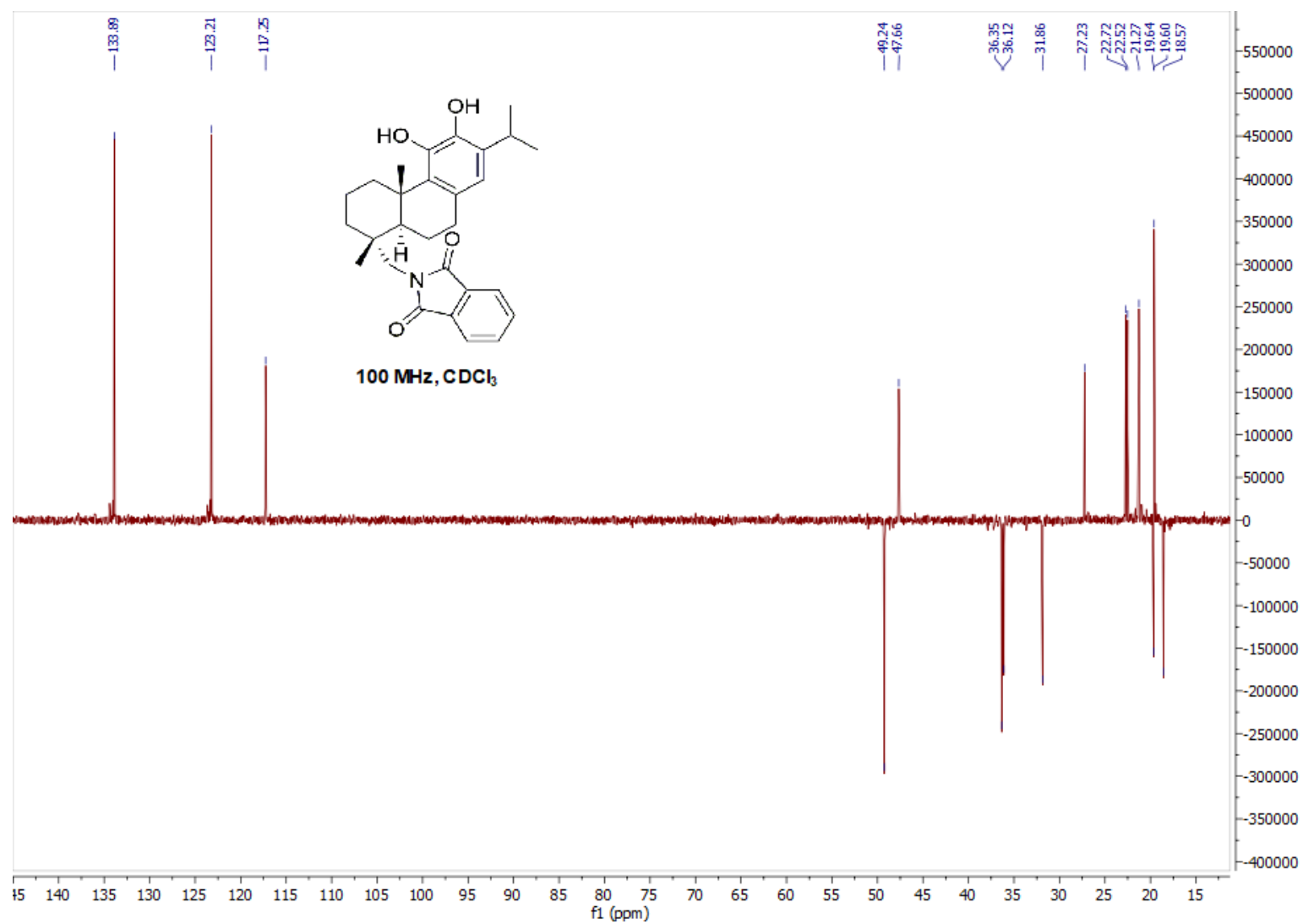


Figure S14. DEPT135 spectrum of 10.