

**Biologically Active Tetranorditerpenoids from the Fungus *Sclerotinia homoeocarpa*, Causal Agent of Dollar Spot in Turfgrass**

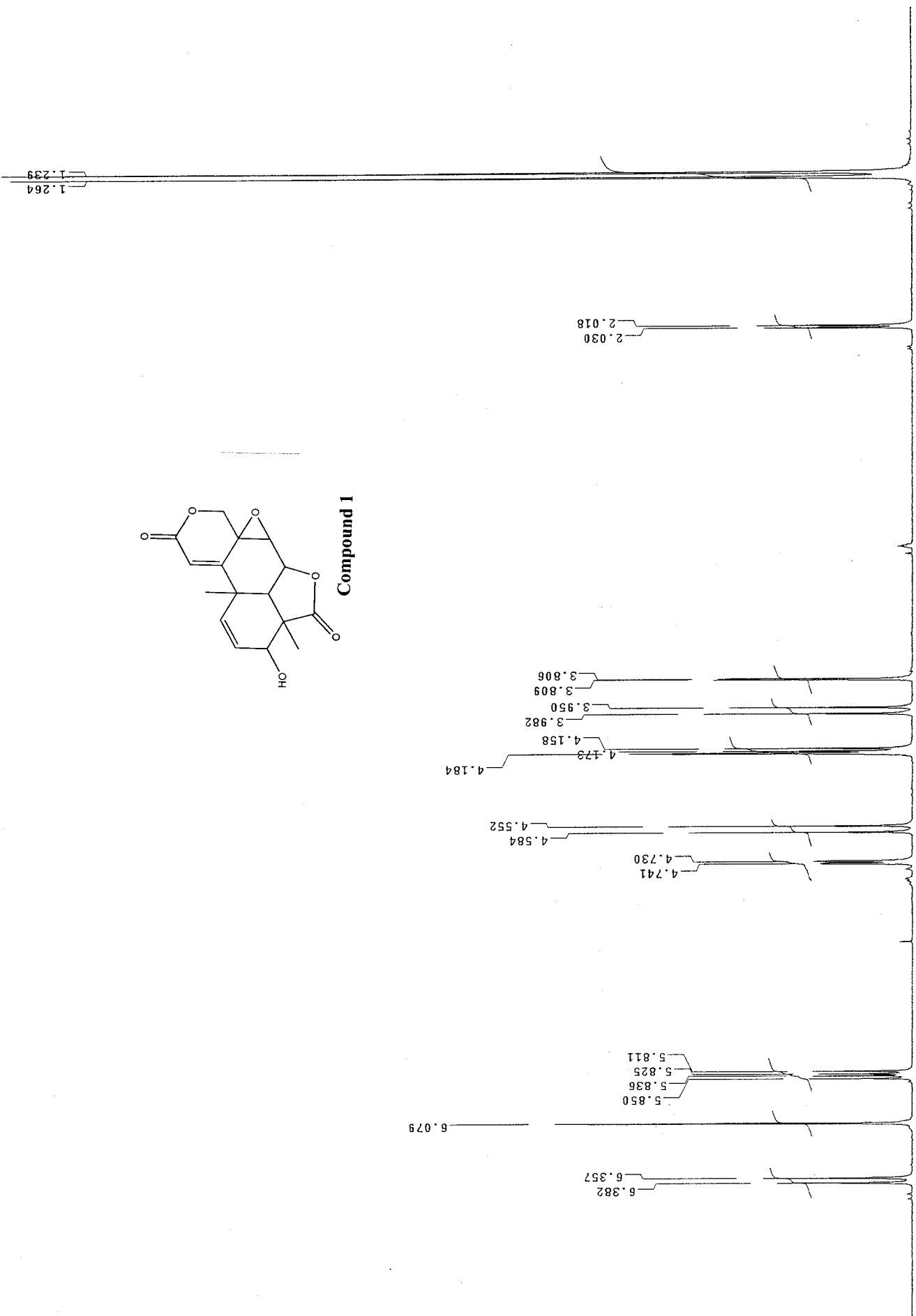
H. M. T. Bandara Herath, Wimal H. M. W. Herath, Paulo Carvalho, Shabana I. Khan, Babu L.

Tekwani, Stephen O. Duke, Maria Tomaso-Peterson, and N. P. Dhammika Nanayakkara

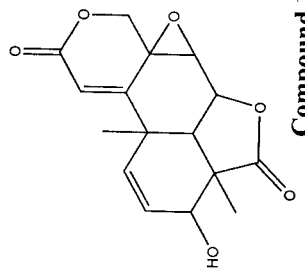
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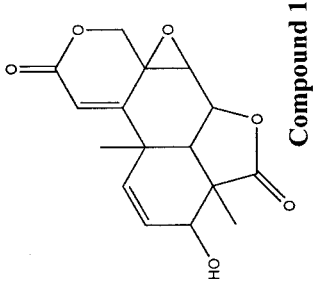
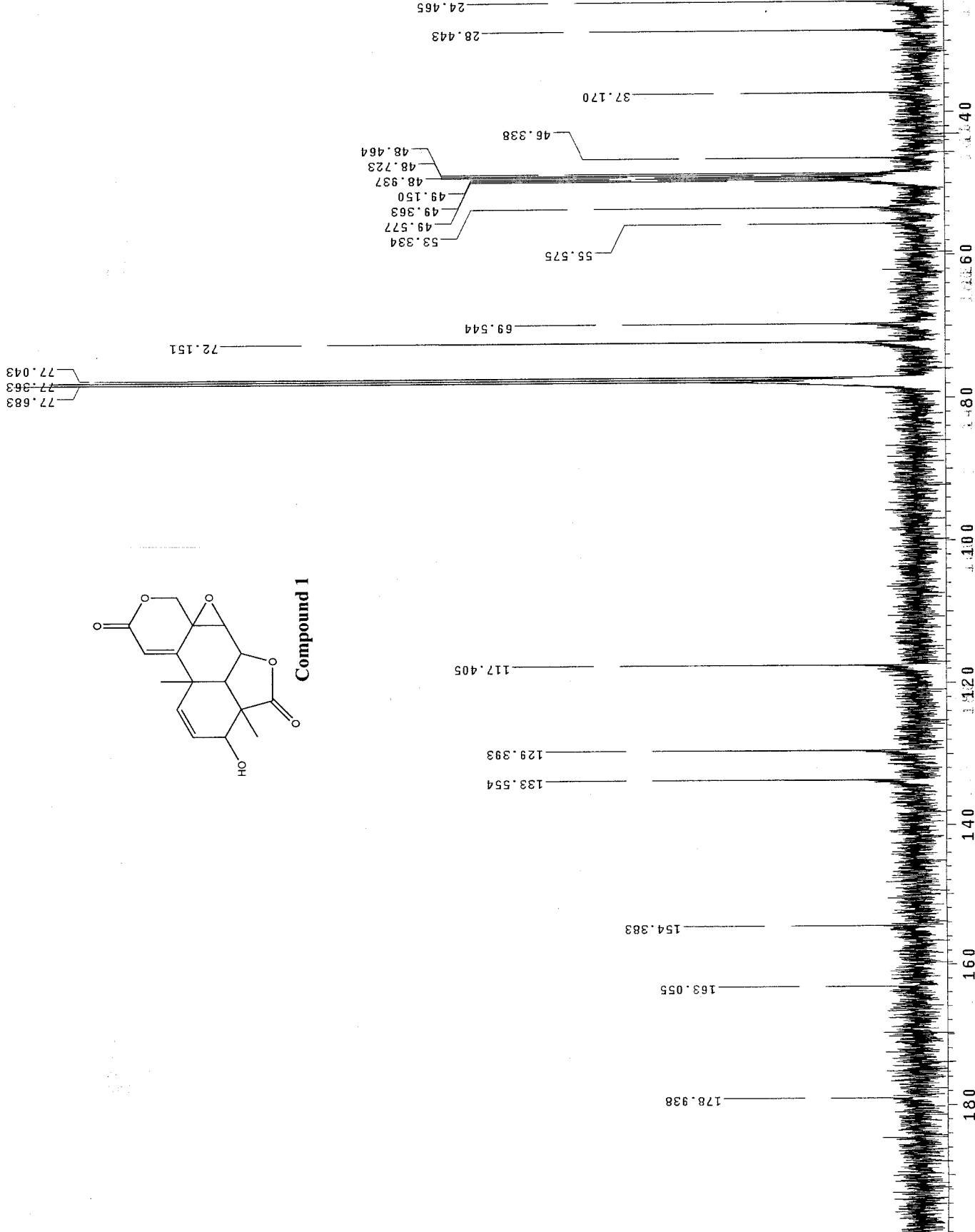
7 6 5 4 3 2 1 ppm

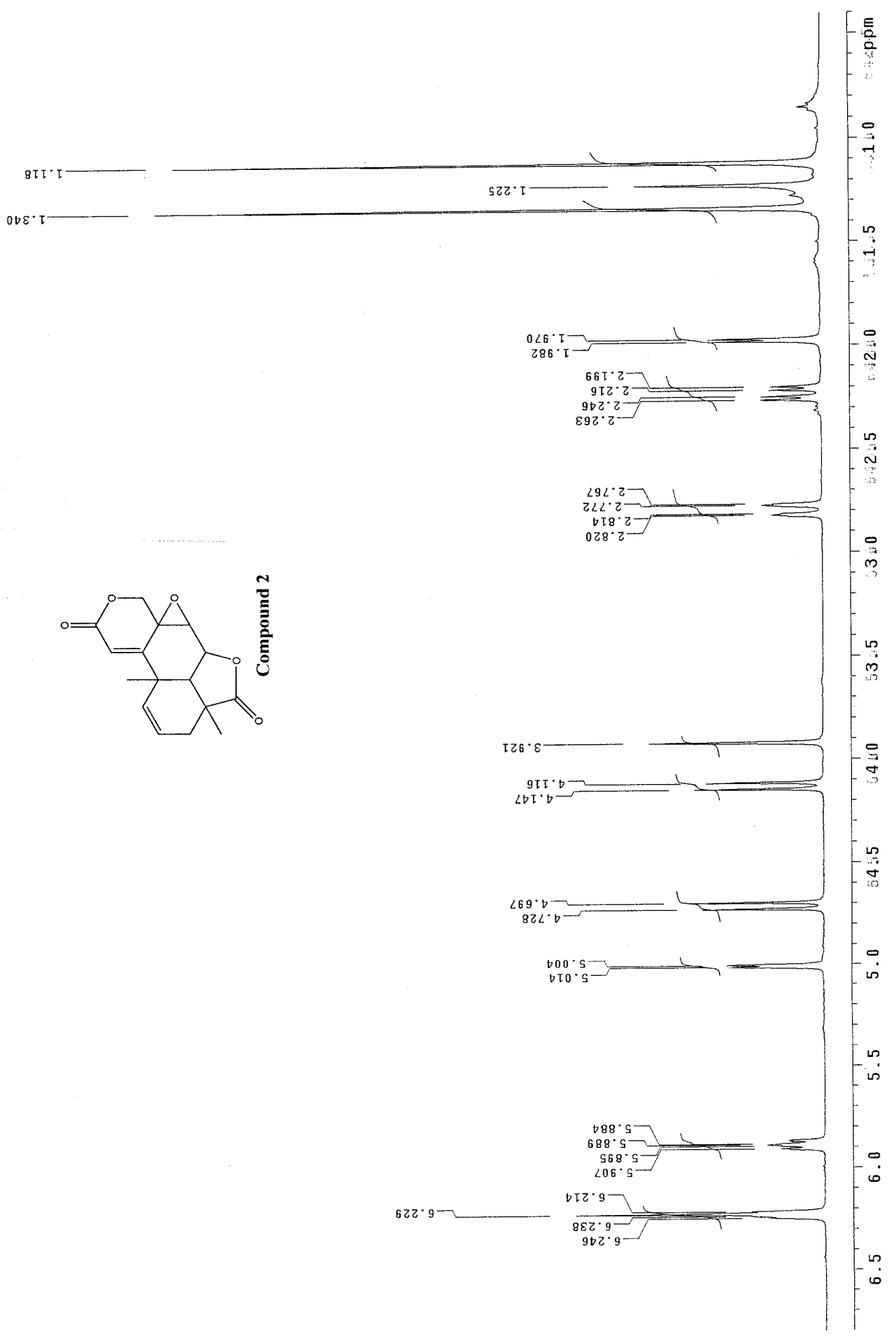
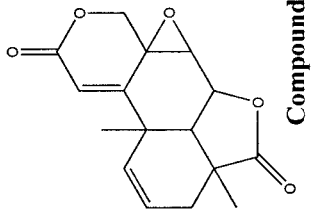


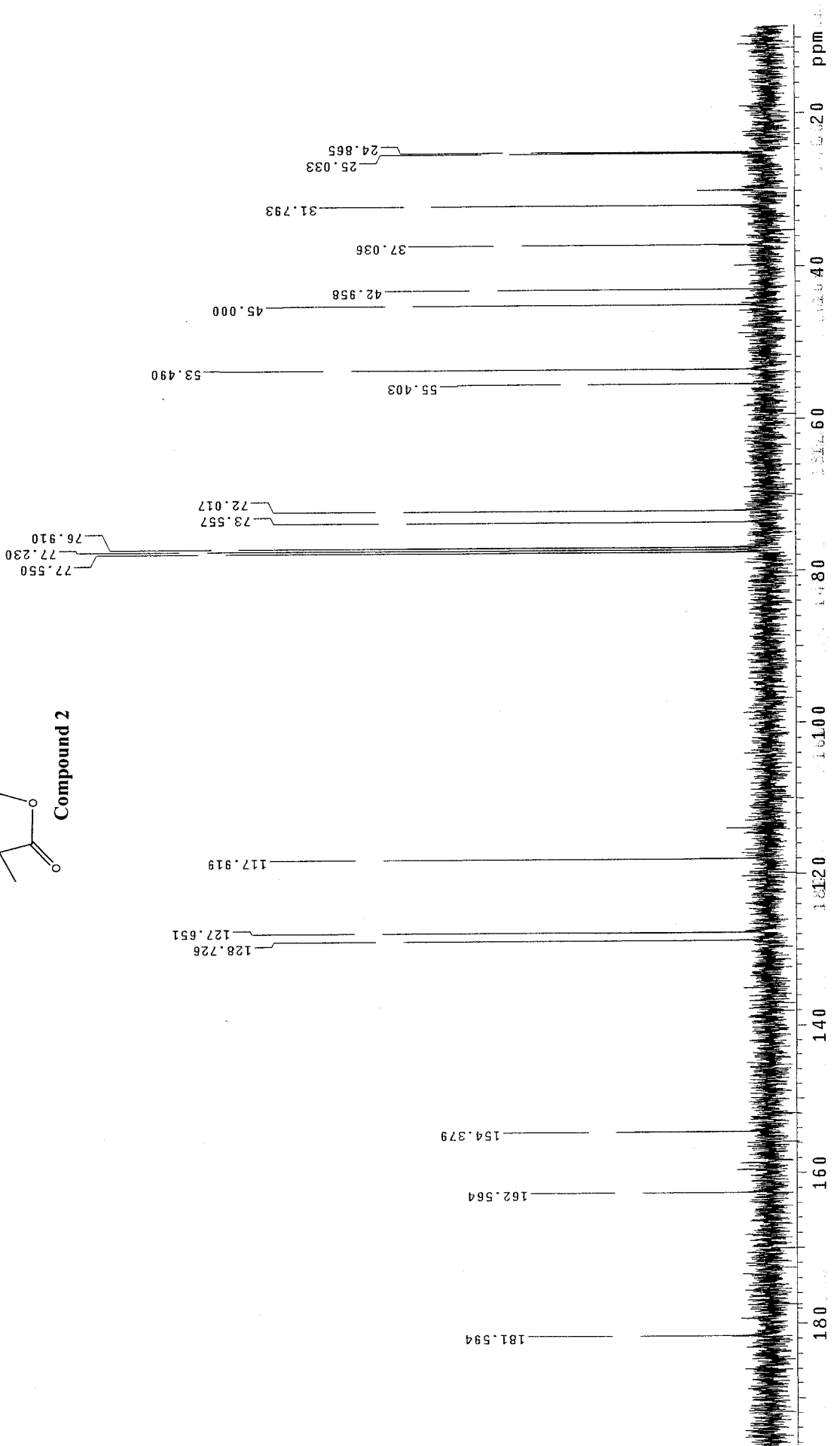
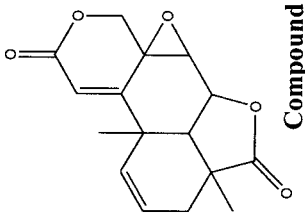
Compound 1



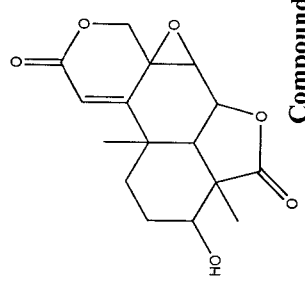
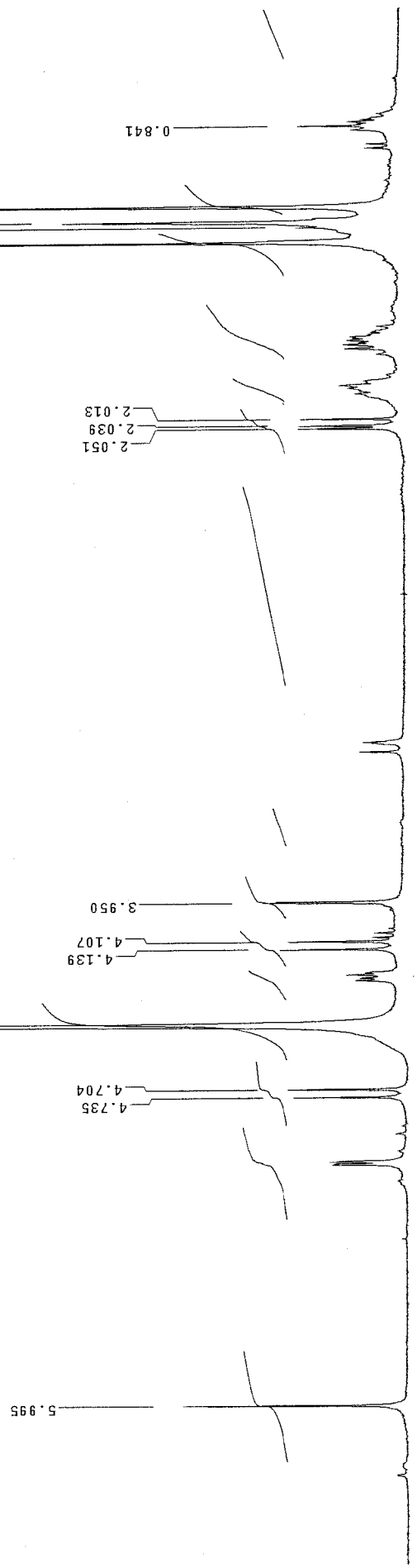
77.683  
77.013







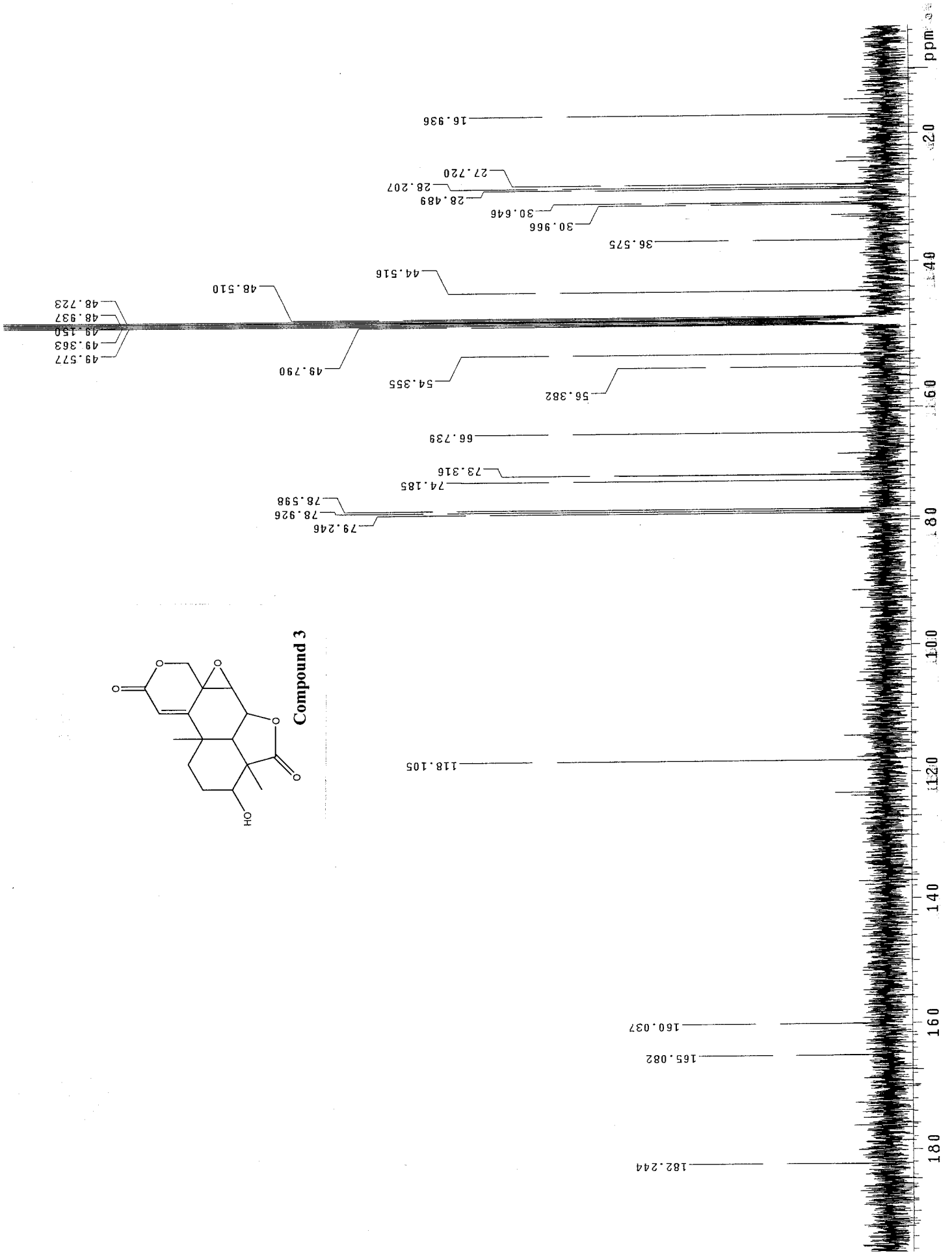
6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 ppm

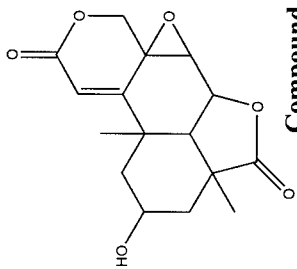


Compound 3

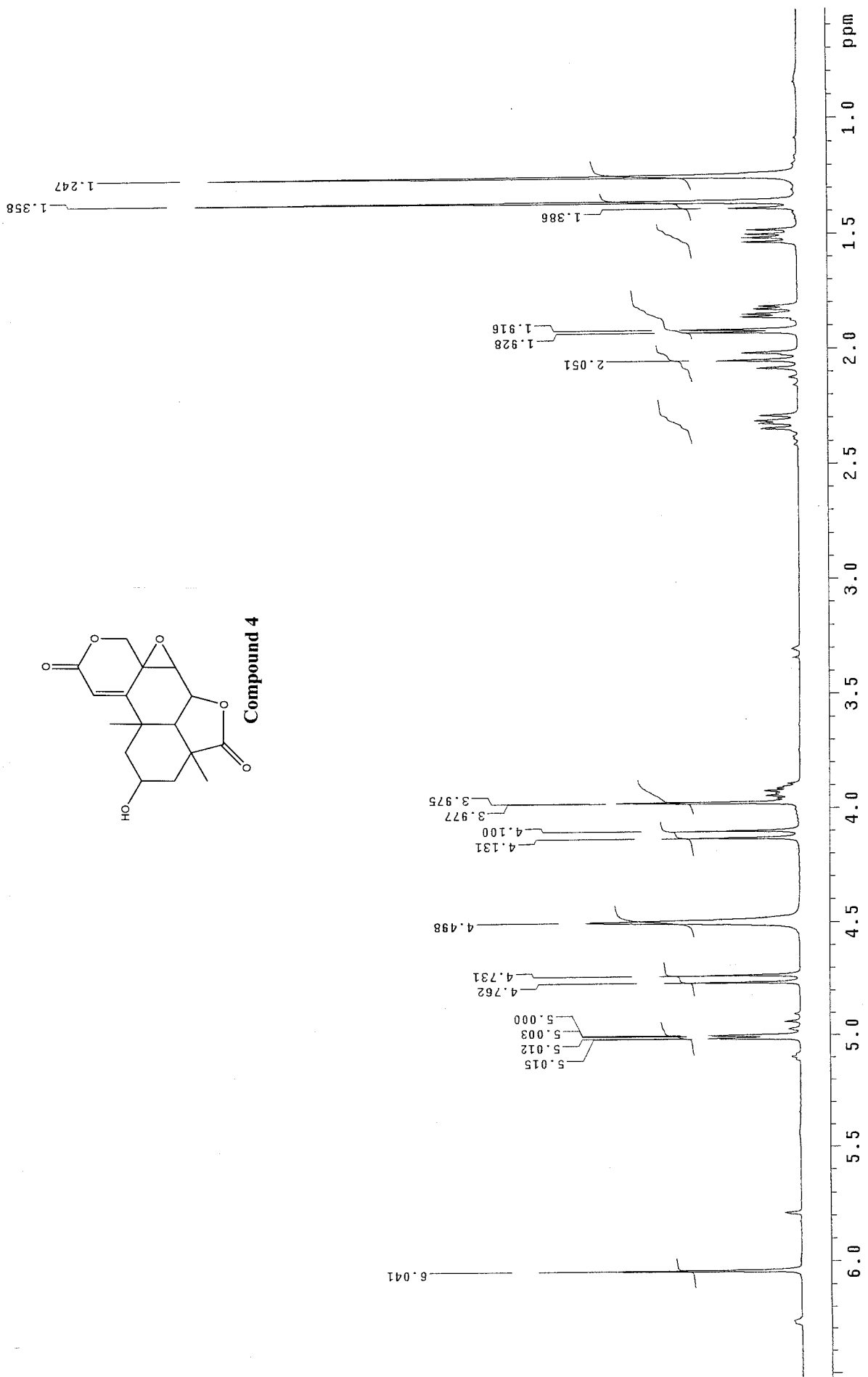
4.443

4.443

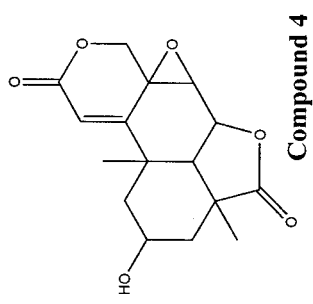
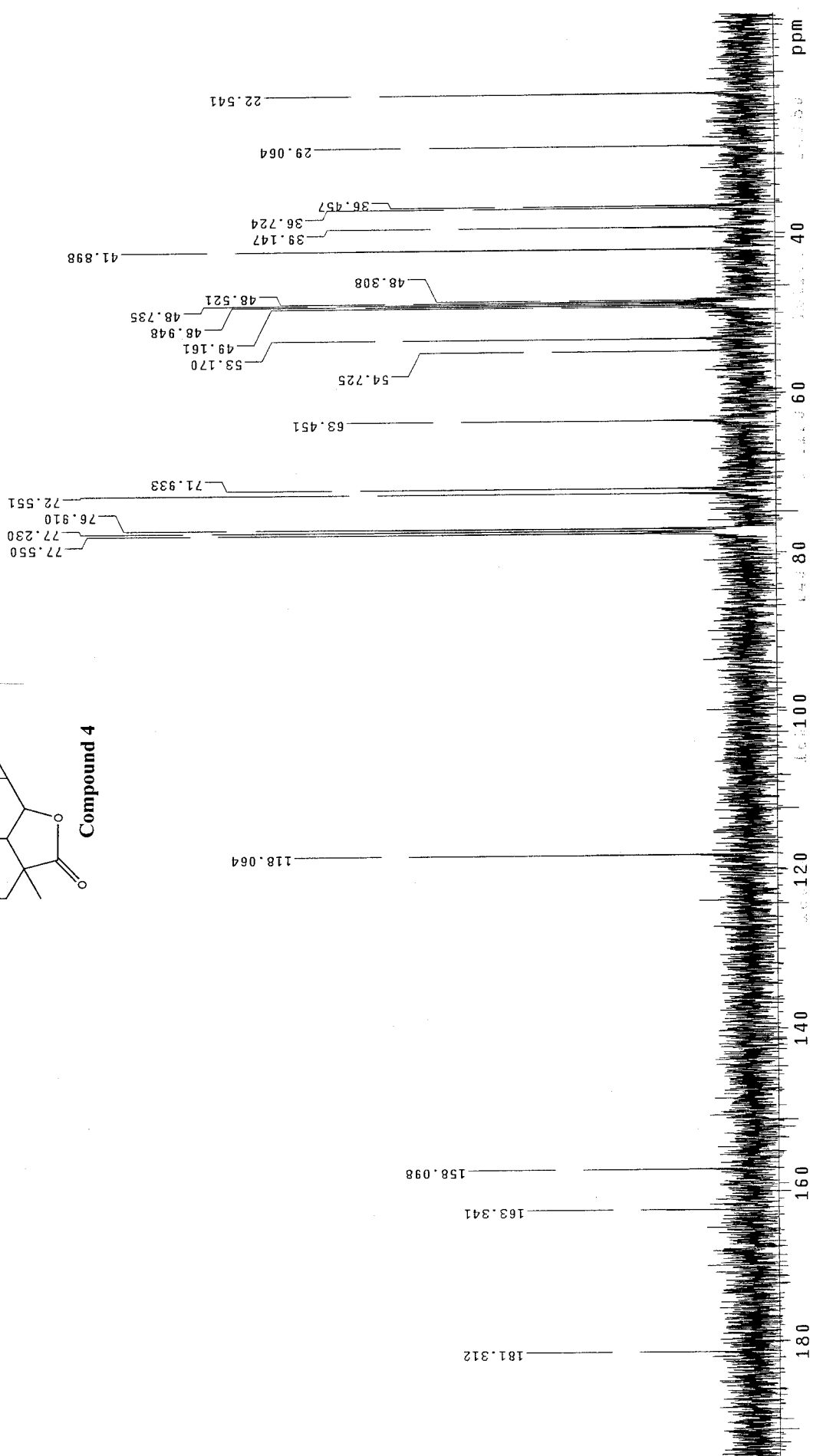


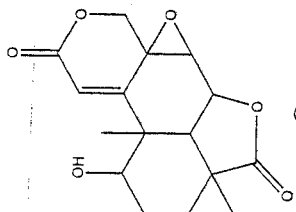


**Compound 4**









Compound 5

1.283  
1.137

1.815  
1.803

3.887  
3.902  
3.919  
4.047  
4.078

4.673  
4.703

4.951  
4.953  
4.962

6.562

H<sub>2</sub>O

ppm

1

2

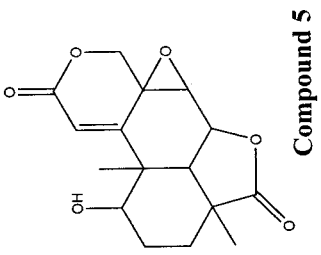
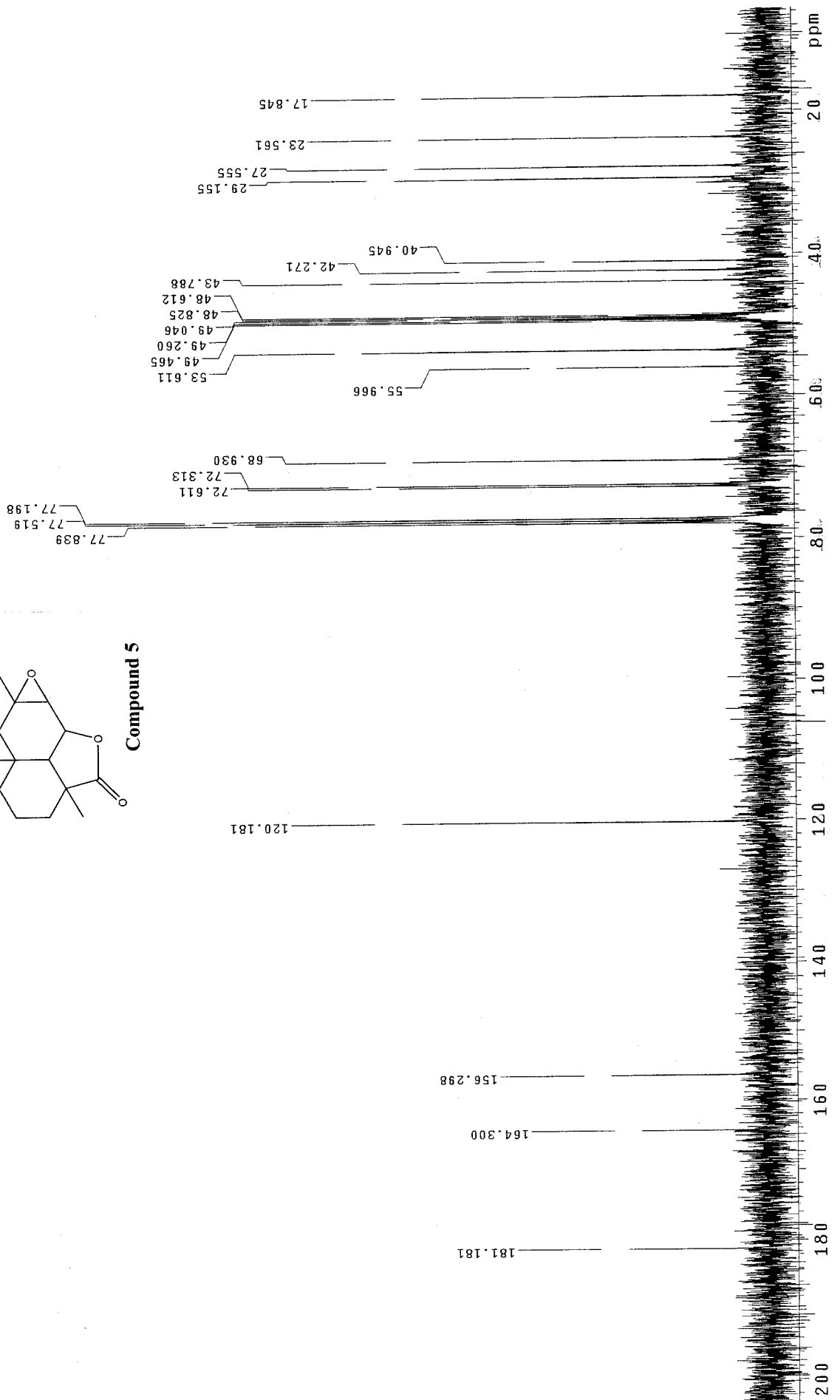
3

4

5

6

7



7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 0.0 ppm

1.487  
1.473

1.588

2.301  
2.288

4.022  
4.019

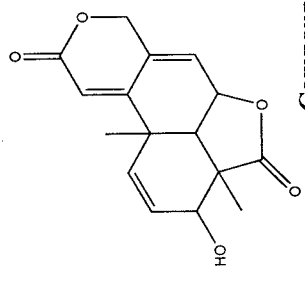
4.429  
4.426  
4.415

4.996  
4.990  
4.923  
4.890  
5.025  
5.020  
5.012

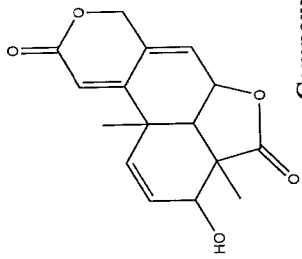
6.068  
6.054  
6.007  
6.003

6.245  
6.239  
6.233  
6.093  
6.079

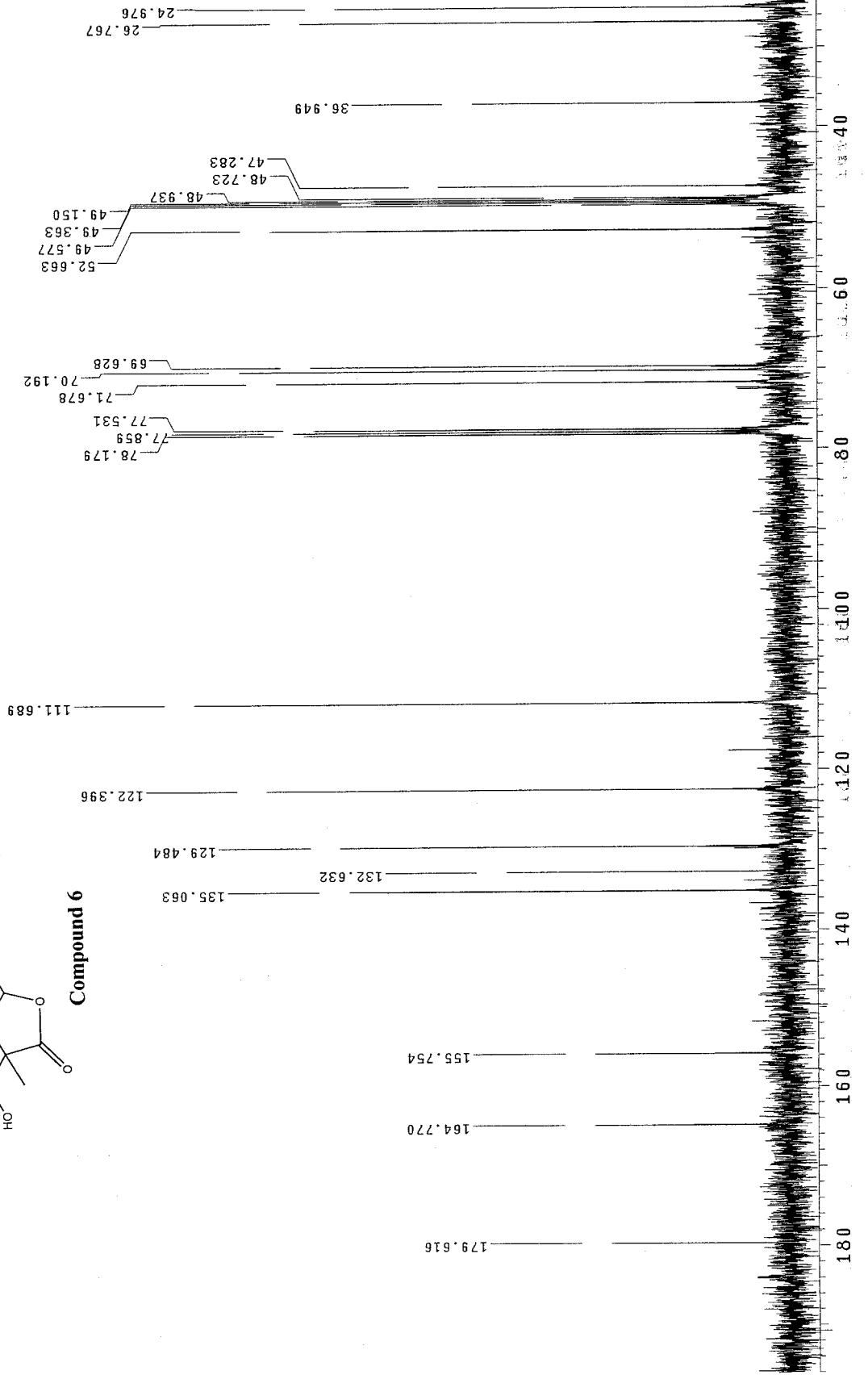
6.627  
6.603

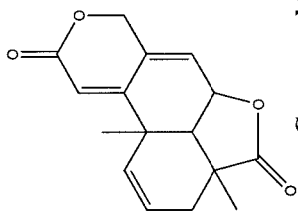


Compound 6

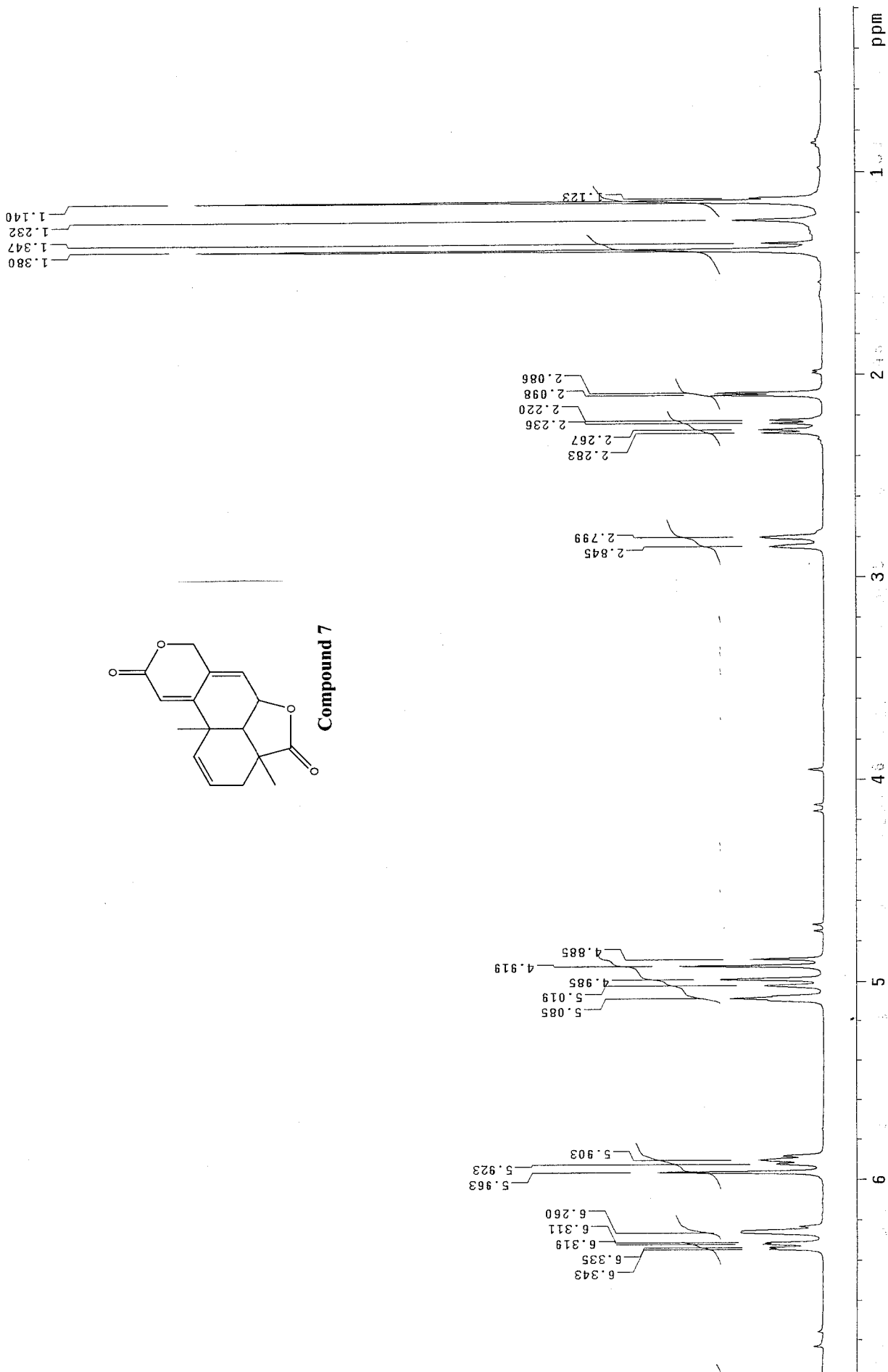


Compound 9





Compound 7



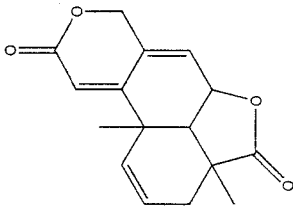
13C OBSERVE

Archive directory: /export/home/herath/vnmr/sys/data  
Sample directory: TH5-45-2A  
File: CARBON

Pulse Sequence: s2pul

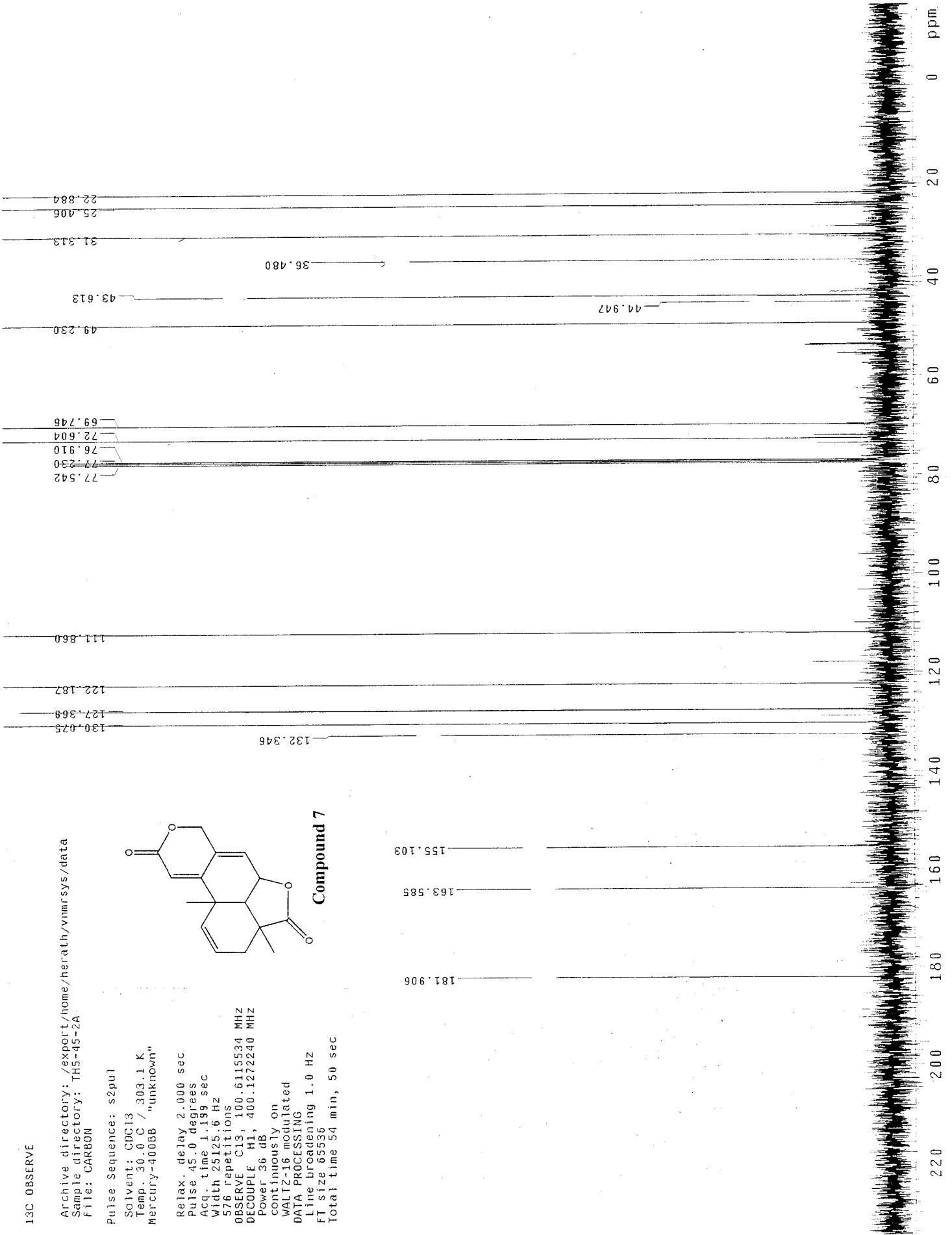
Solvent: CDCl3  
Temp. 30.0 C / 303.1 K  
Mercury-400BB "unknown"

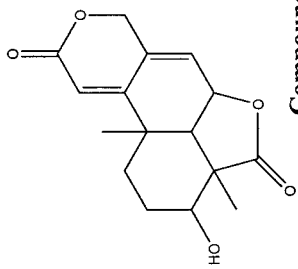
Relax. delay 2.000 sec  
Pulse 45.0 degrees  
Acq. time 1.199 sec  
Width 25125.6 Hz  
576 repetitions  
OBSERVE C13, 100.6115534 MHZ  
DECUPLE H1, 400.1272240 MHZ  
Power 36 dB  
continuously on  
WALTZ-16 modulated  
DATA PROCESSING  
Line broadening 1.0 Hz  
FT size 65536  
Total time 54 min, 50 sec



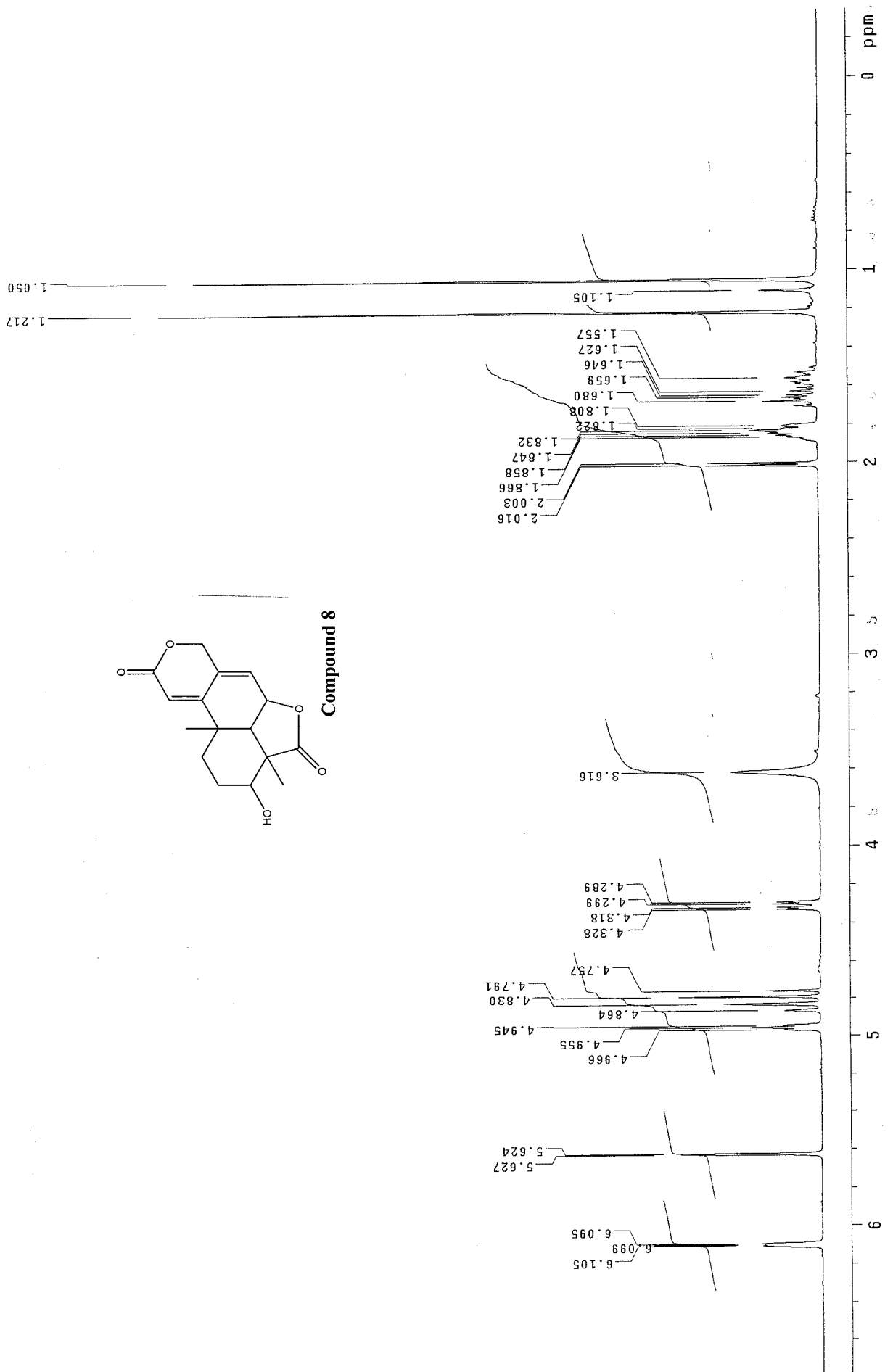
Compound 7

181.906  
163.585  
155.103

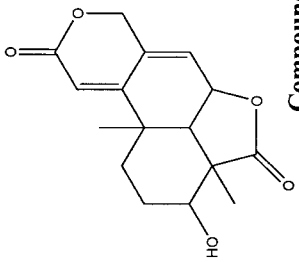




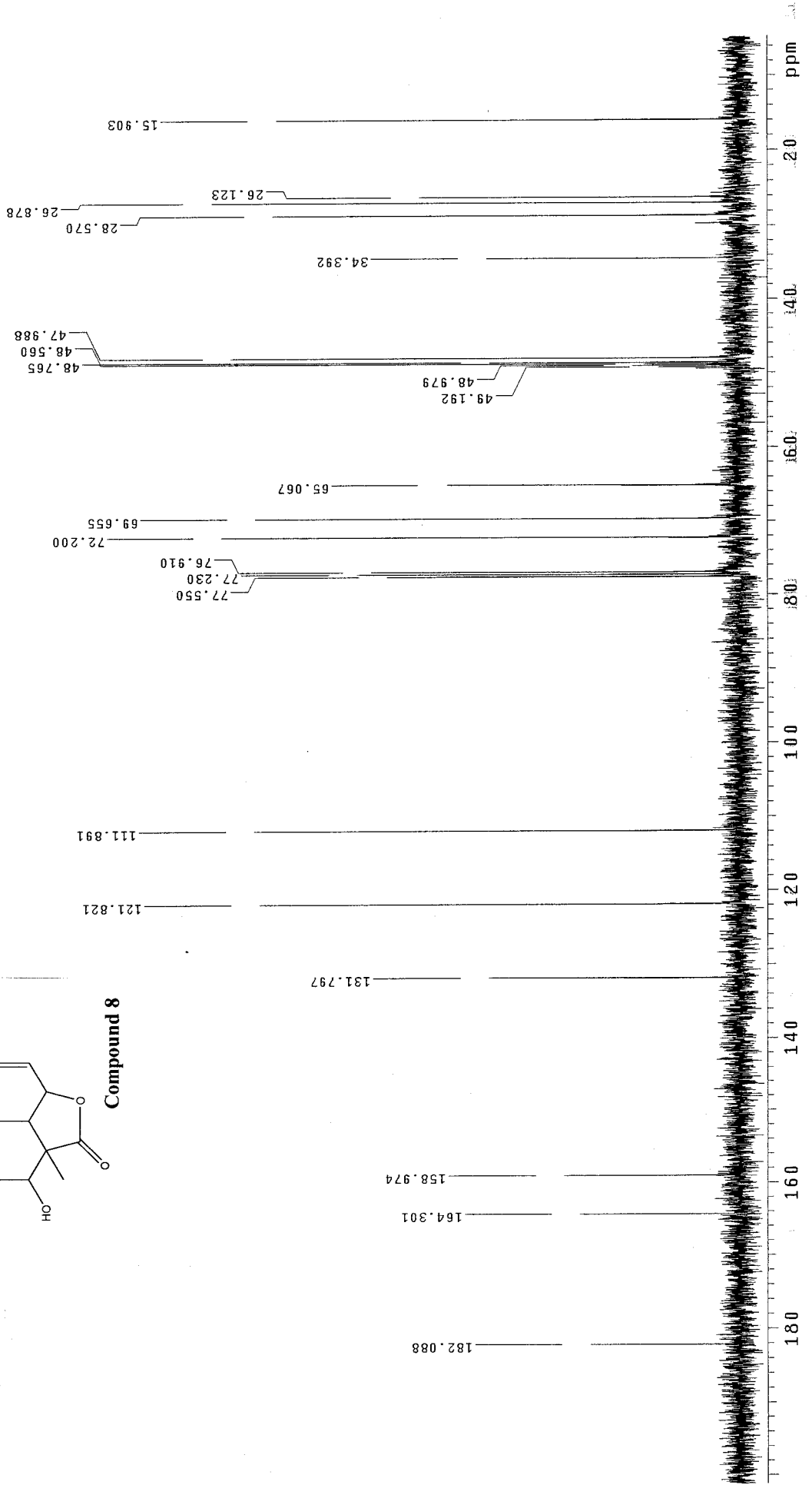
Compound 8

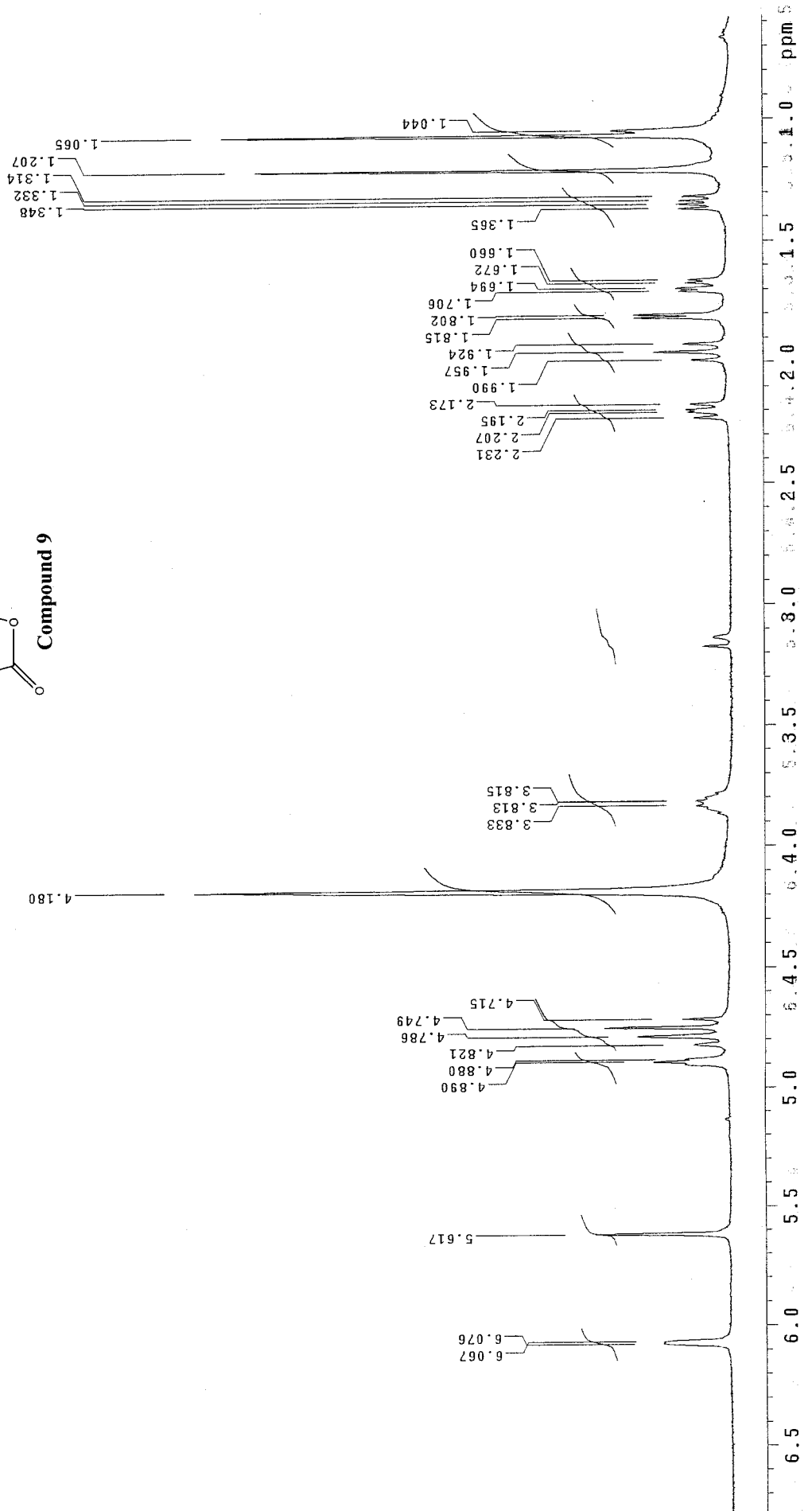
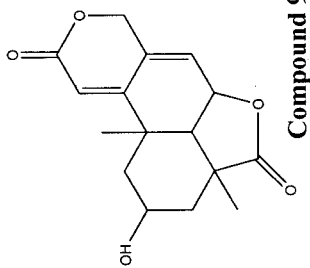


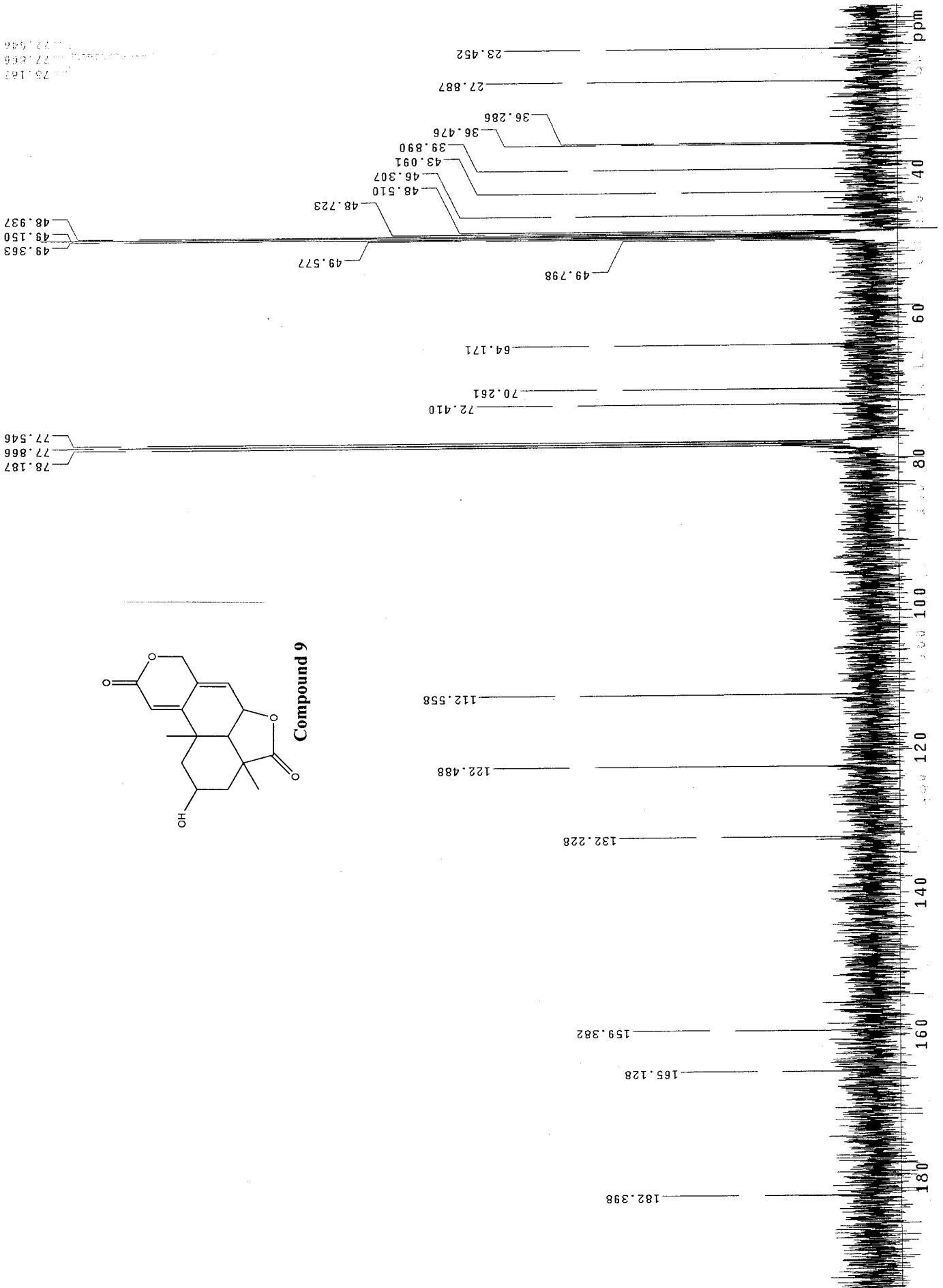


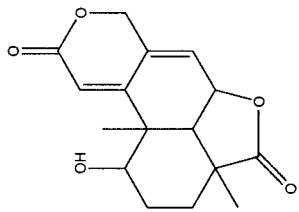


Compound 8









**Compound 10**

