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## APPENDIX

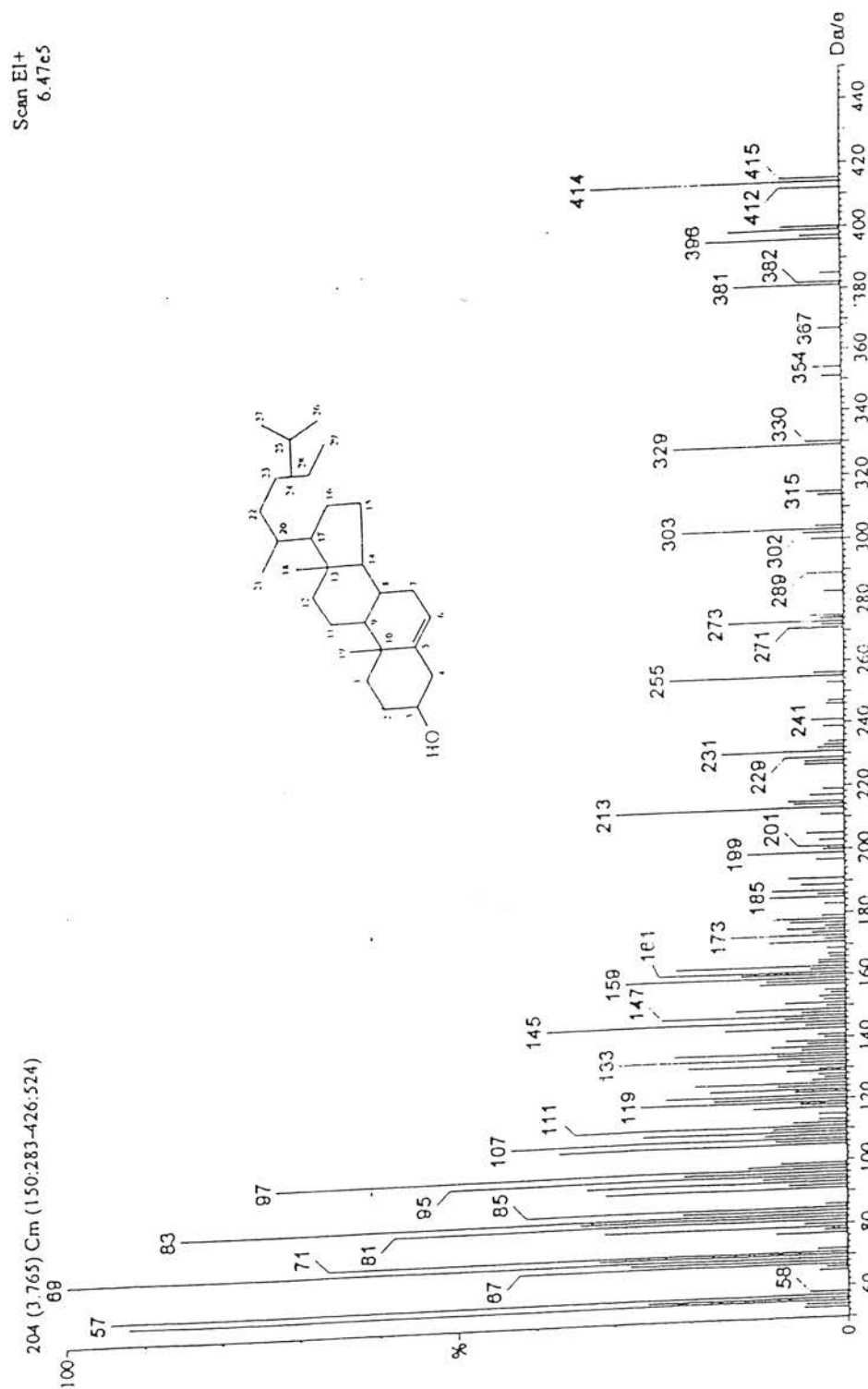


Figure 1 The EIMS spectrum of GA-1

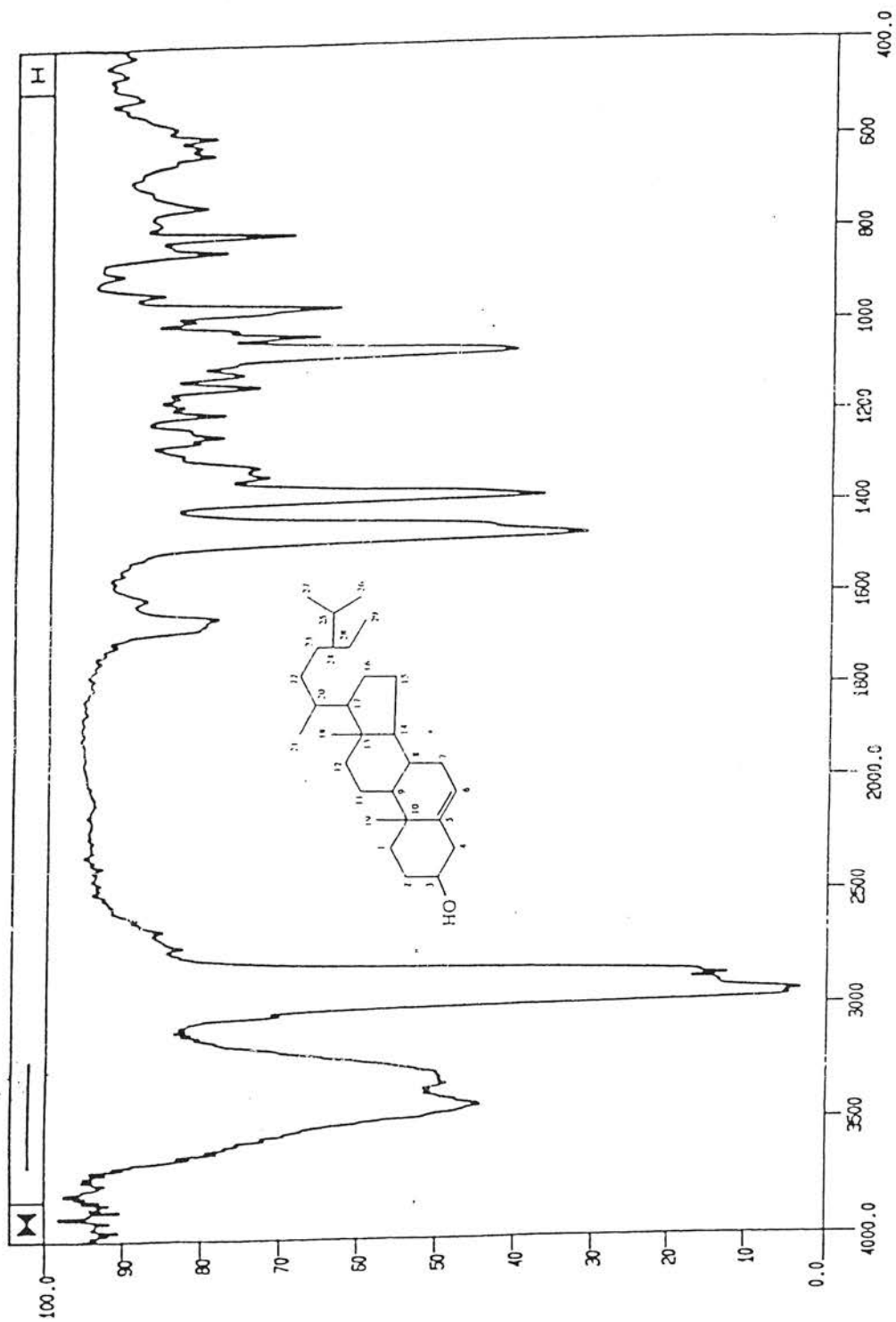


Figure 2 The IR spectrum of GA-1 (KBr disc)

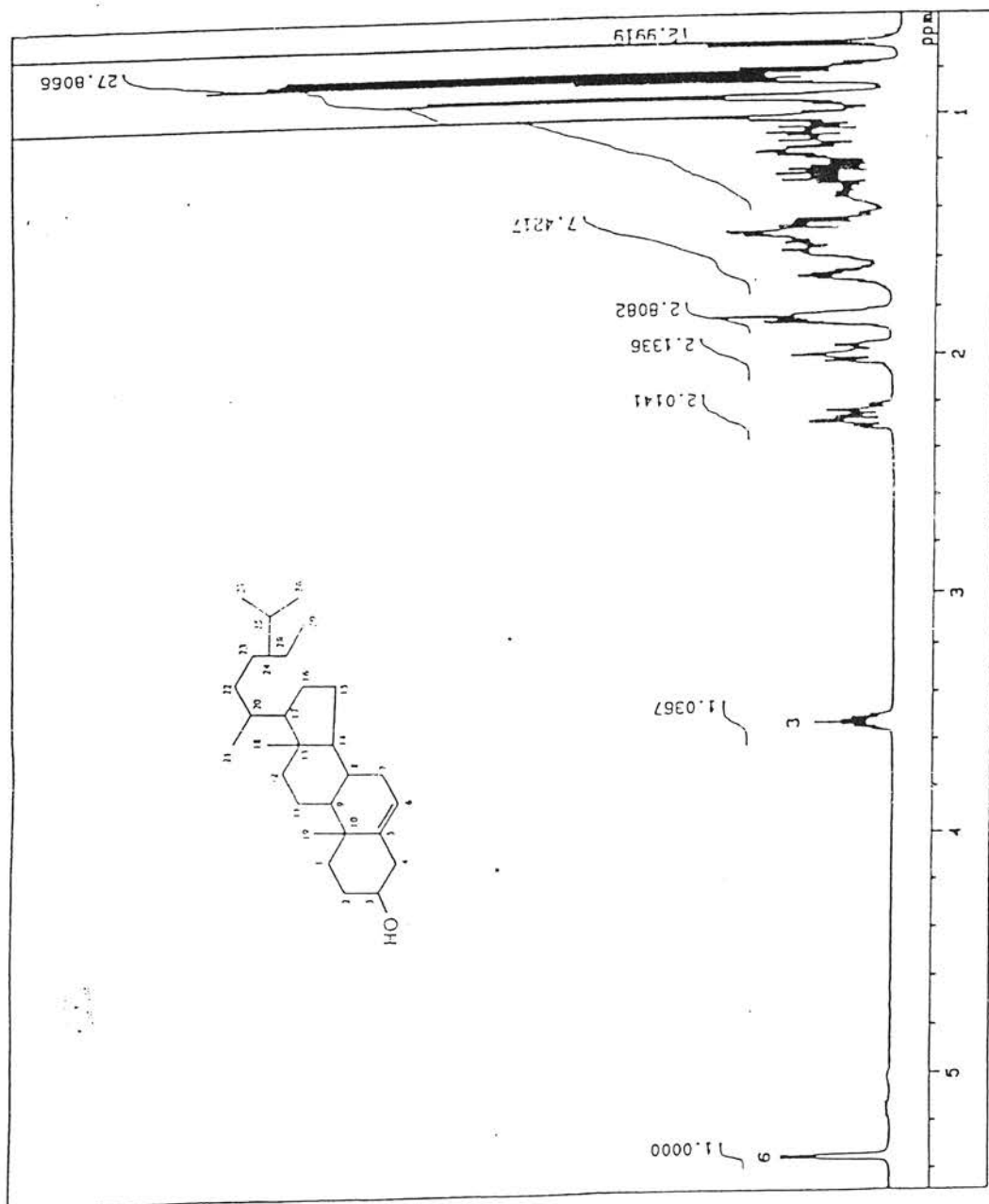


Figure 3 The 500 MHz  $^1\text{H-NMR}$  spectrum of GA-1 (in  $\text{CDCl}_3$ )

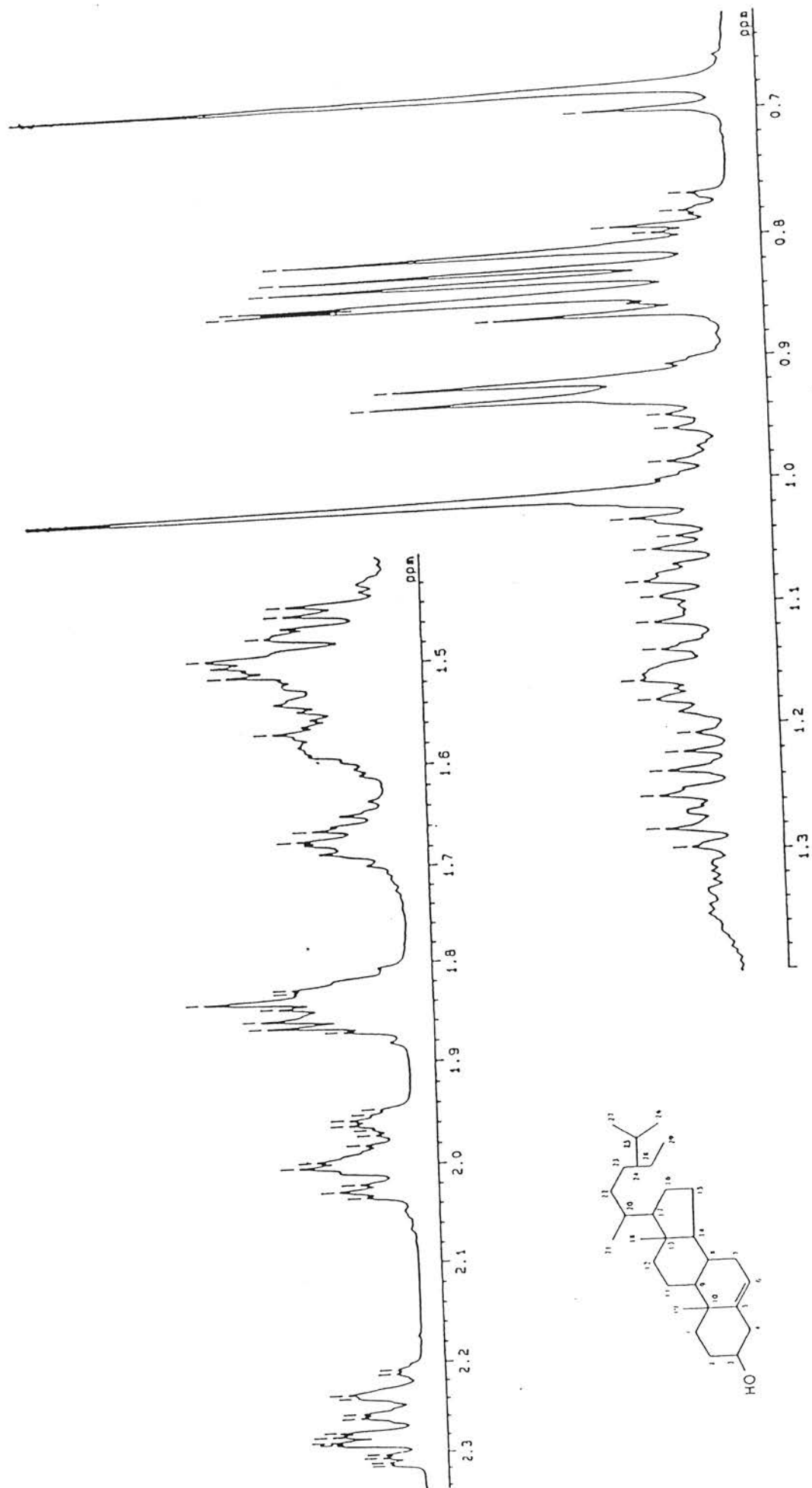


Figure 4 The expansion of  $^1\text{H-NMR}$  spectrum of GA-1 (in  $\text{CDCl}_3$ )

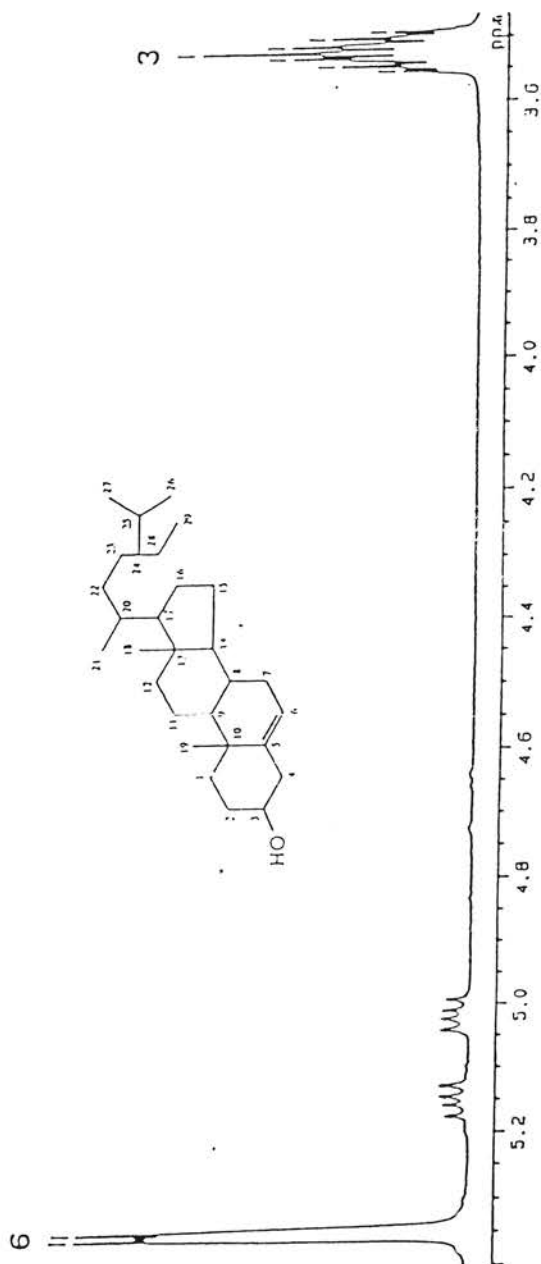


Figure 5 The expansion of  $^1\text{H-NMR}$  spectrum of GA-1 (in  $\text{CDCl}_3$ )

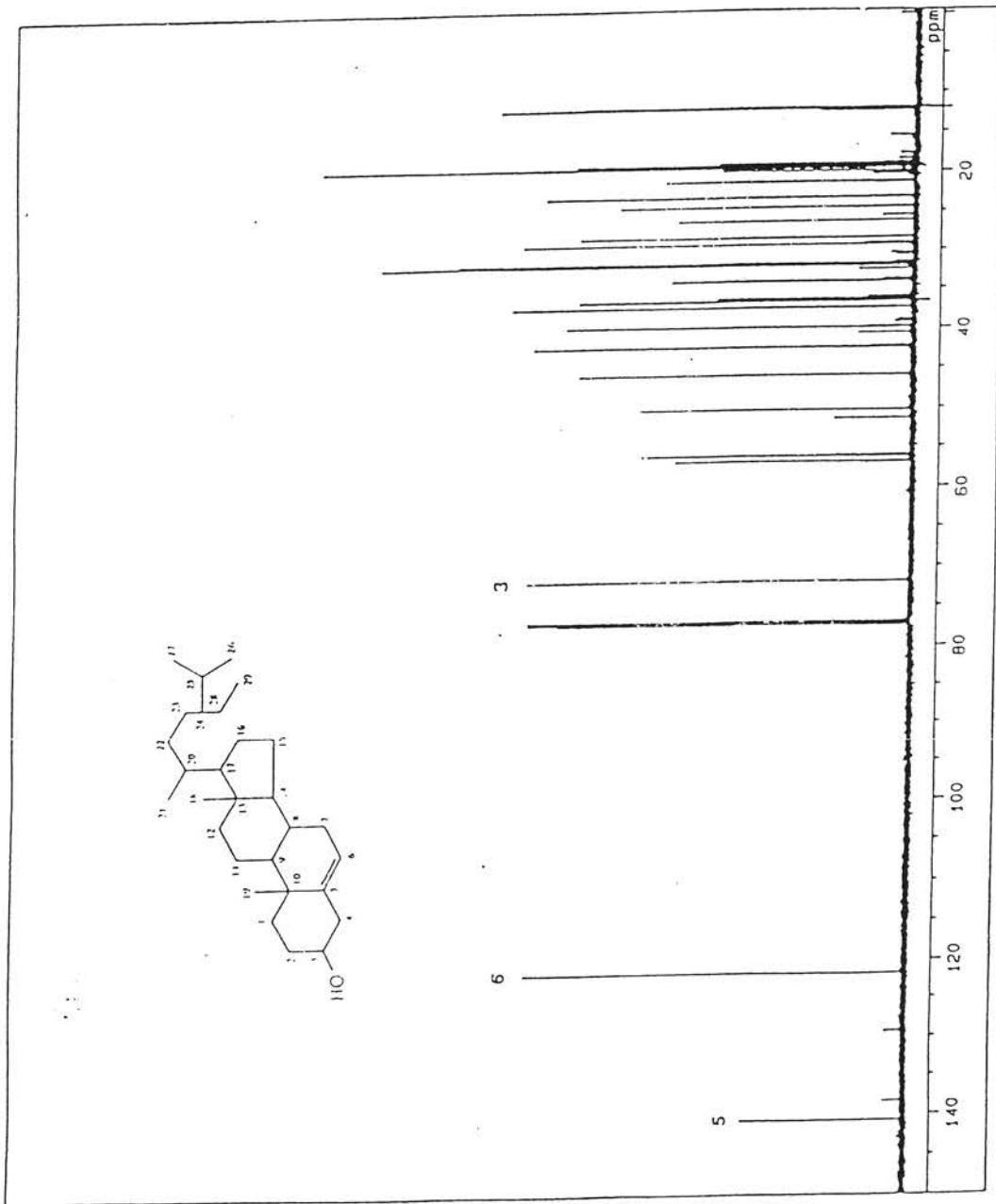


Figure 6 The 125 MHz <sup>13</sup>C-NMR spectrum of GA-1 (in CDCl<sub>3</sub>)

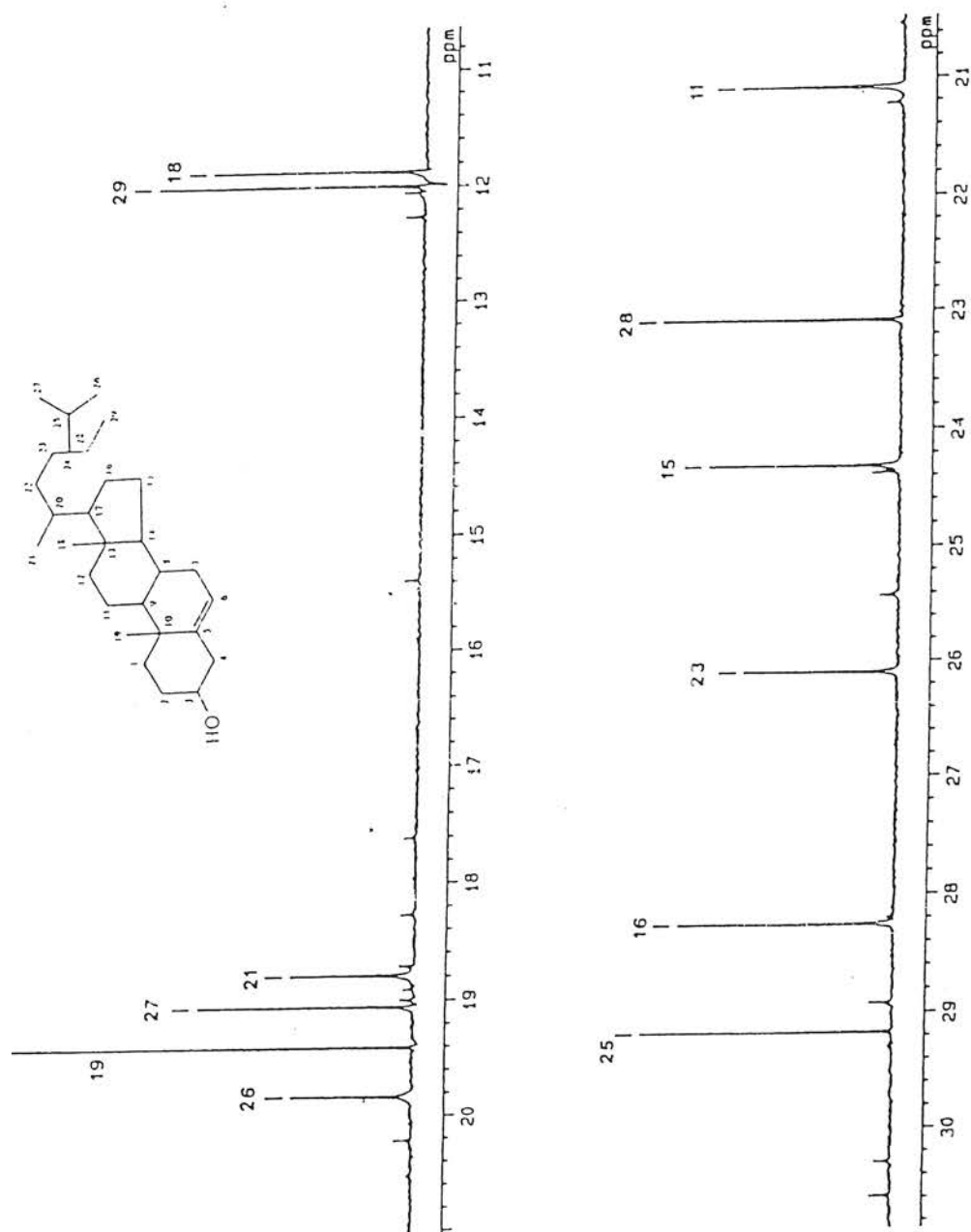


Figure 7 The expansion of  $^{13}\text{C}$ -NMR spectrum of GA-I (in  $\text{CDCl}_3$ )



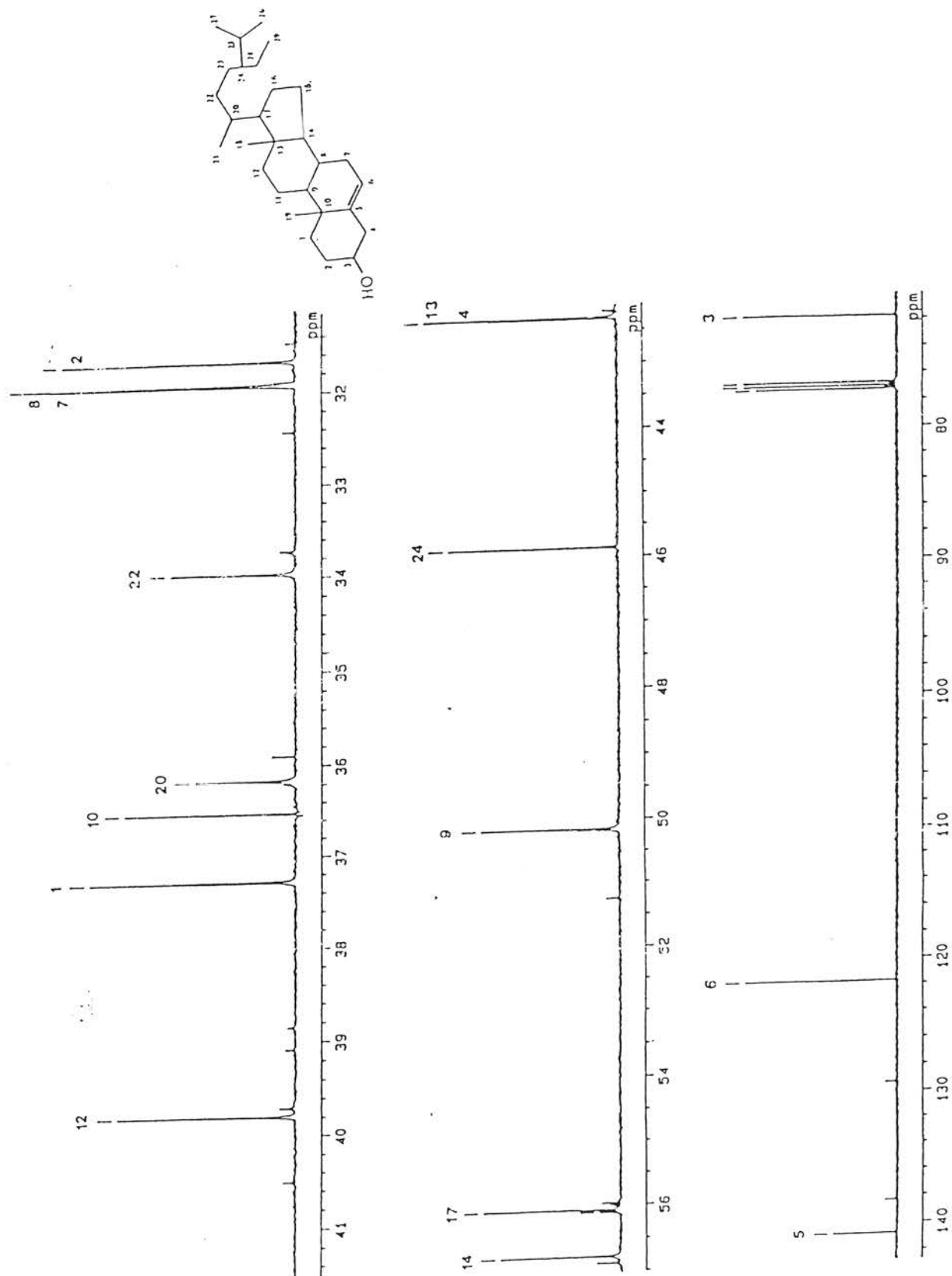


Figure 8 The expansion of  $^{13}\text{C-NMR}$  spectrum of GA-1 (in  $\text{CDCl}_3$ )

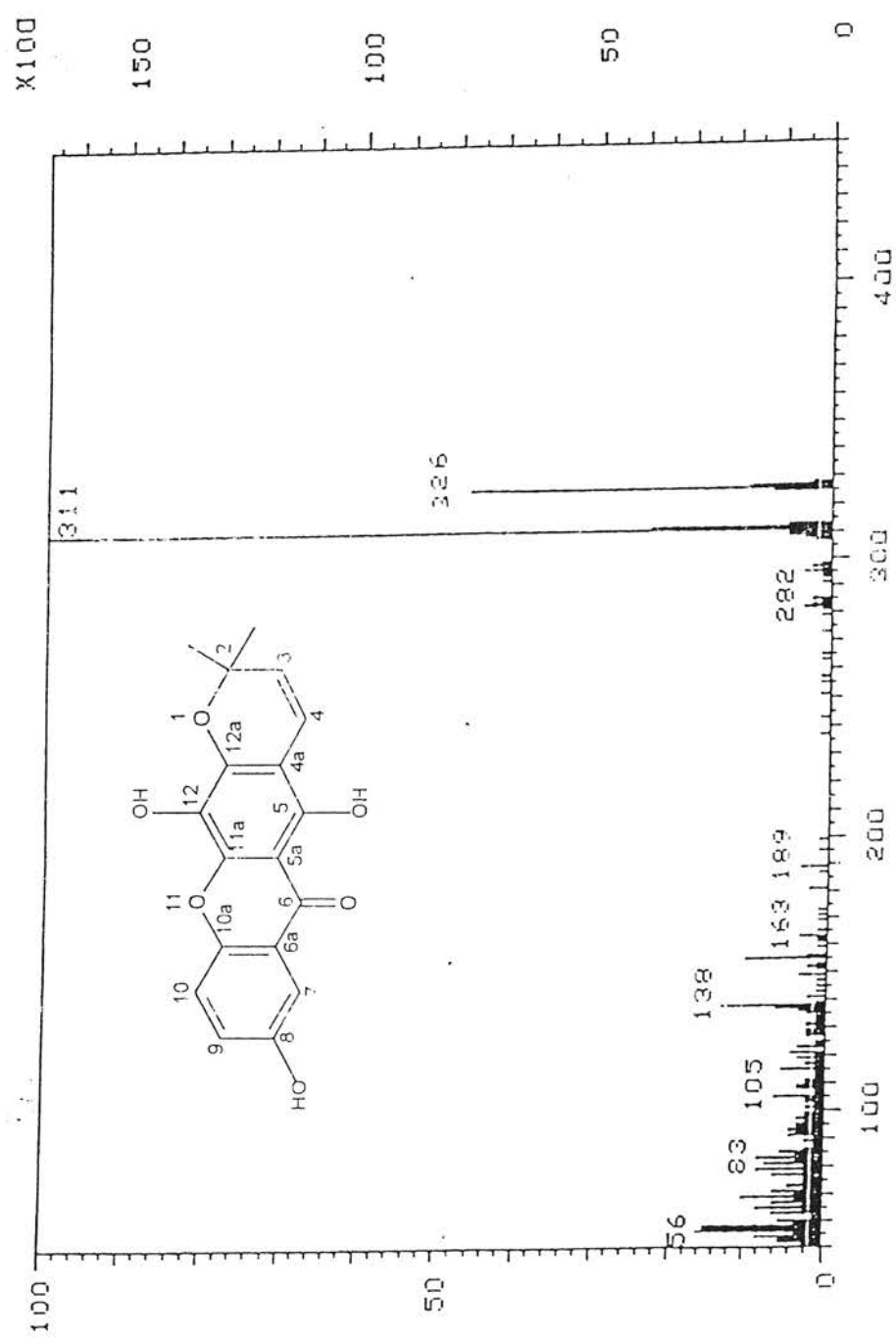


Figure 9 The EIMS spectrum of GA-2

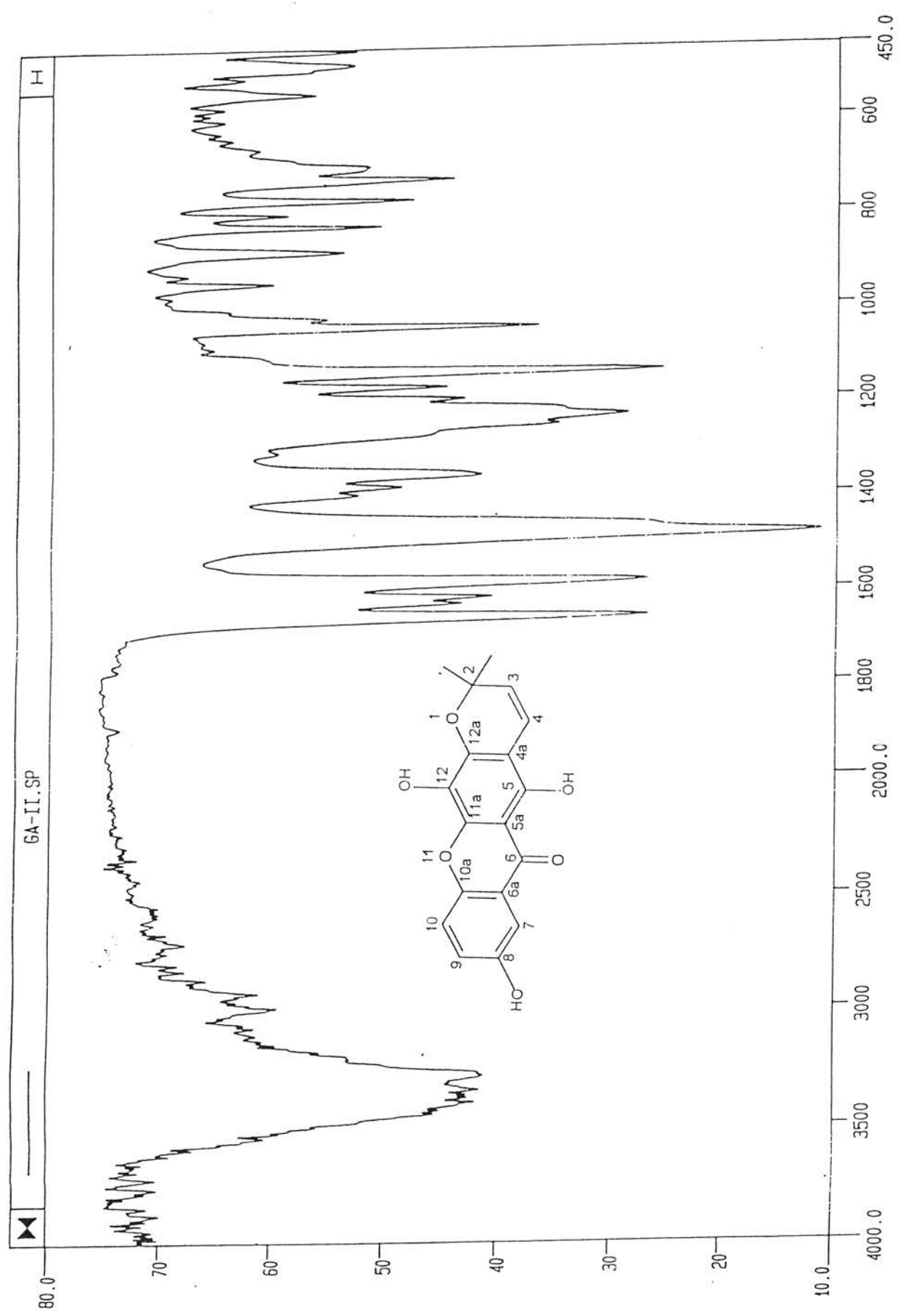


Figure 10 The IR spectrum of GA-2 (KBr disc)

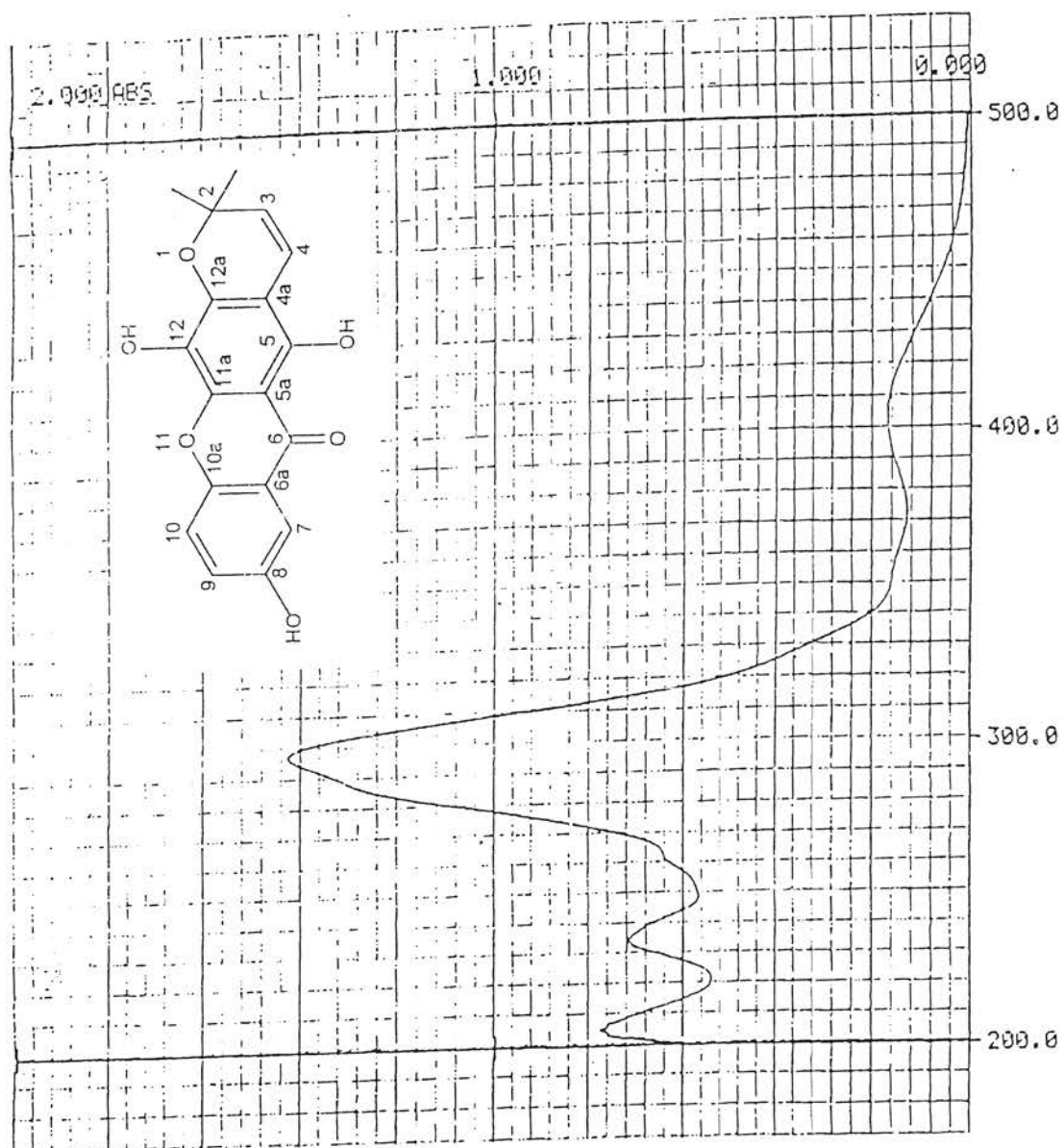


Figure 11 The UV spectrum of GA-2 (in methanol)

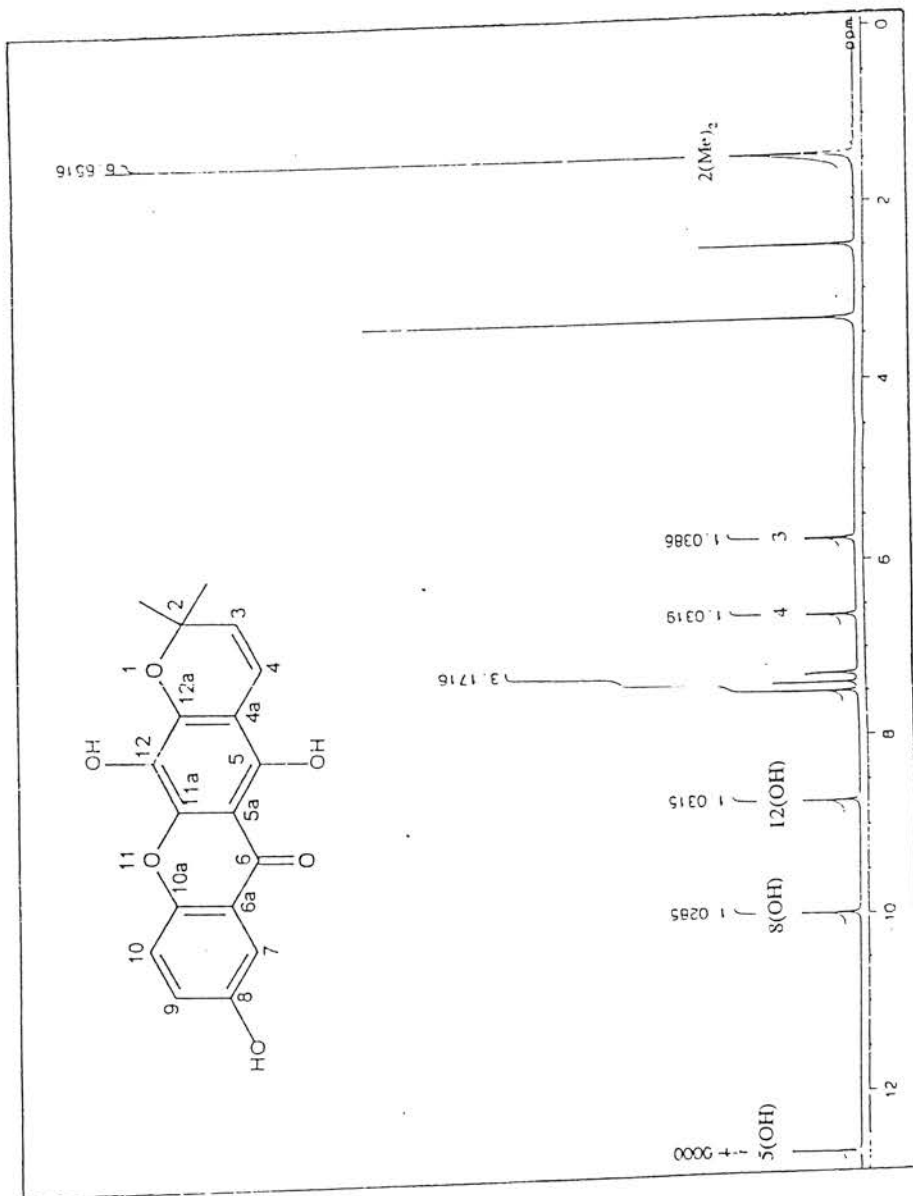


Figure 12 The 600 MHz  $^1\text{H-NMR}$  spectrum of GA-2 (in  $\text{DMSO-}d_6$ )

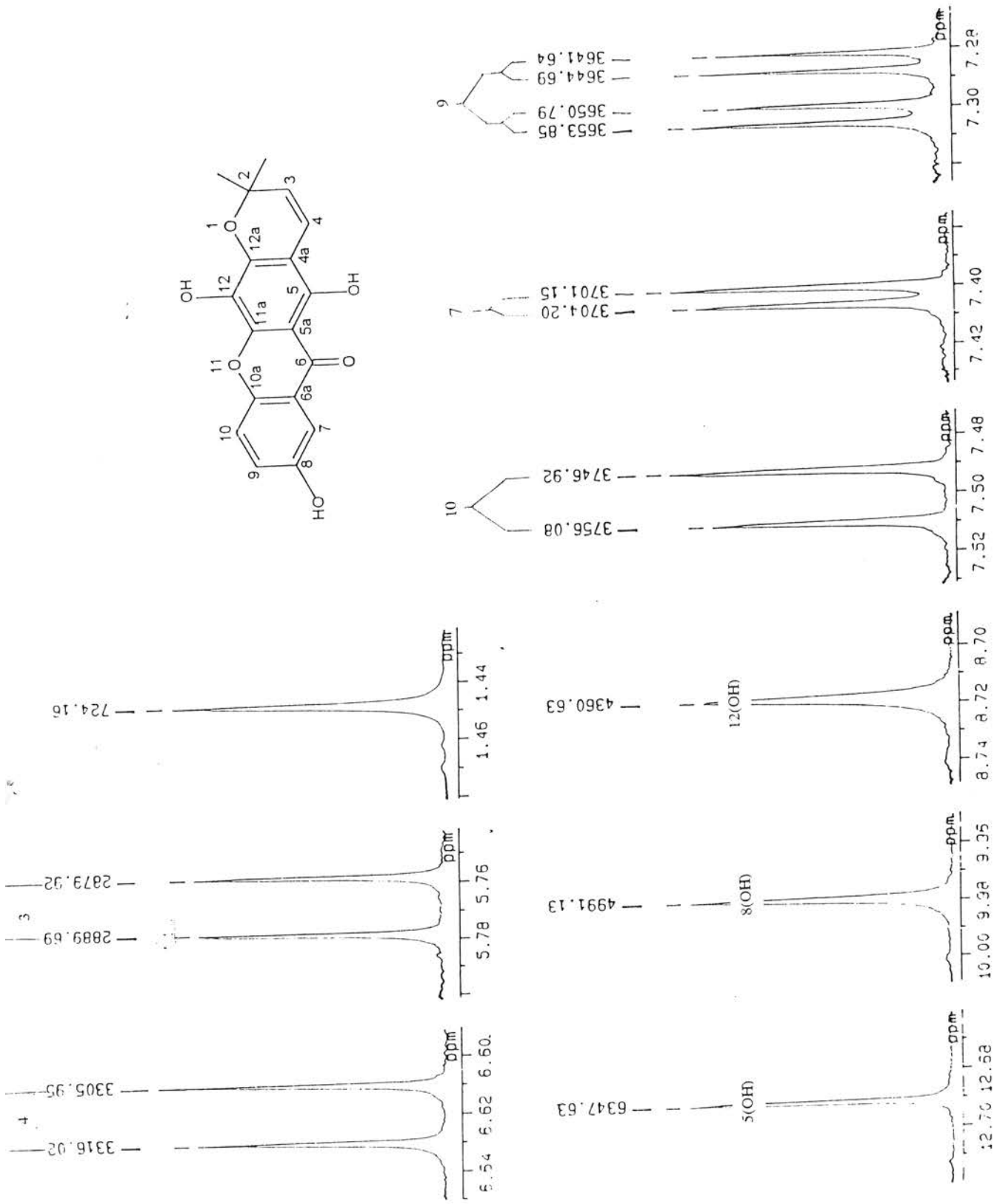


Figure 13 The expansion of <sup>1</sup>H NMR spectrum of GA-2 (in DMSO-d<sub>6</sub>)

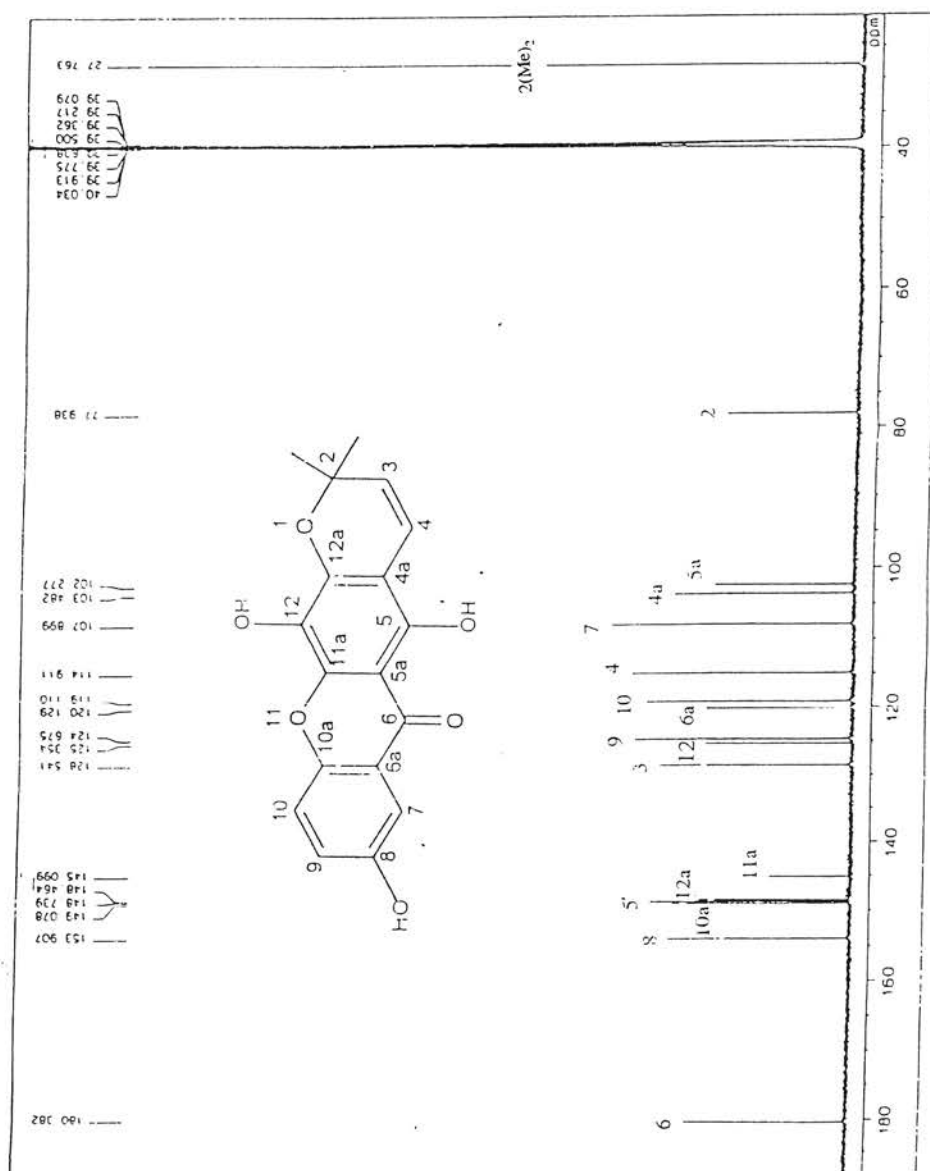
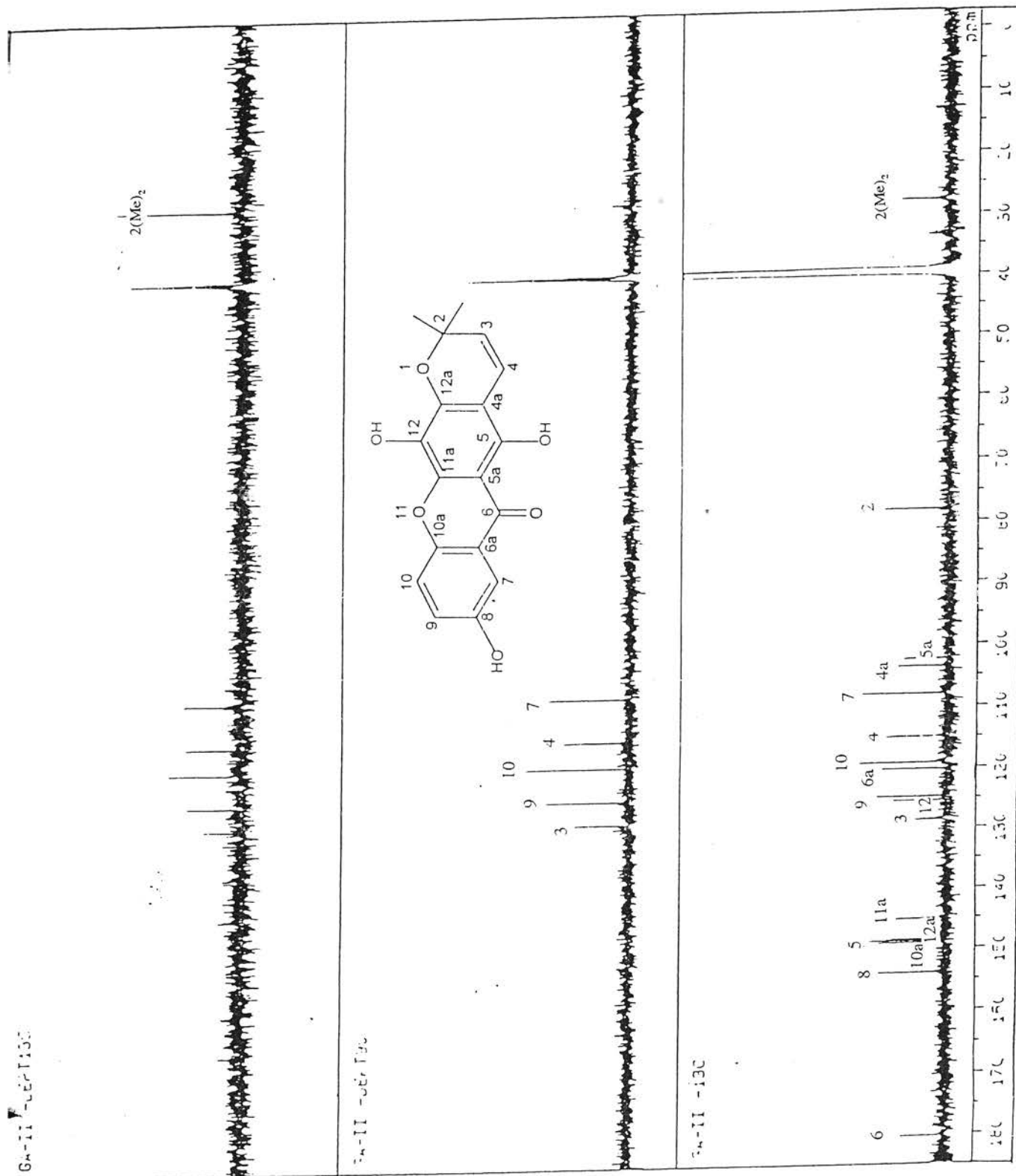
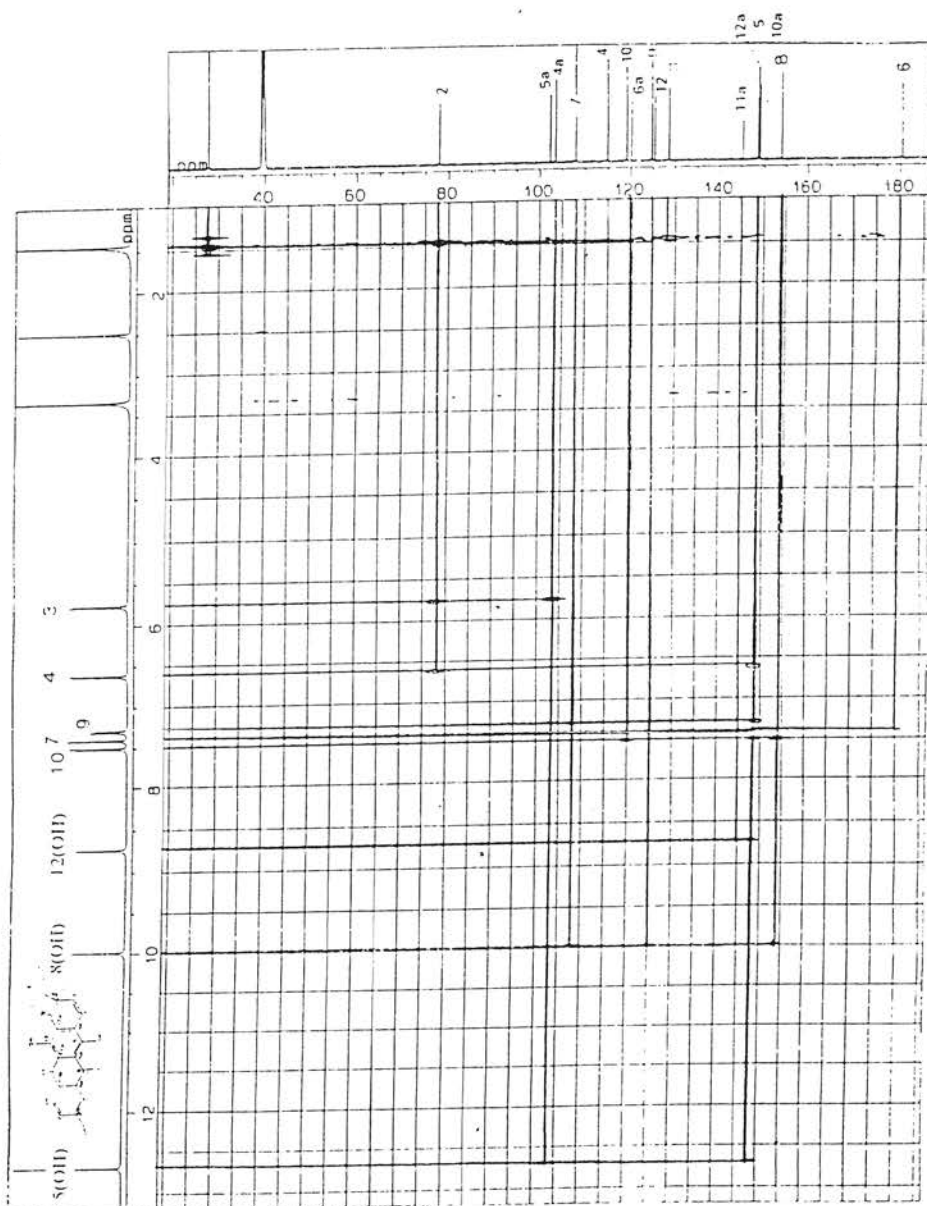


Figure 14 The  $^{13}\text{C-NMR}$  spectrum of GA-2 (in  $\text{DMSO-}d_6$ )

Figure 15 The DEPT spectrum of GA-2 (in DMSO-d<sub>6</sub>)



Figure 16 The HMBC spectrum of GA-2 (in DMSO-d<sub>6</sub>)

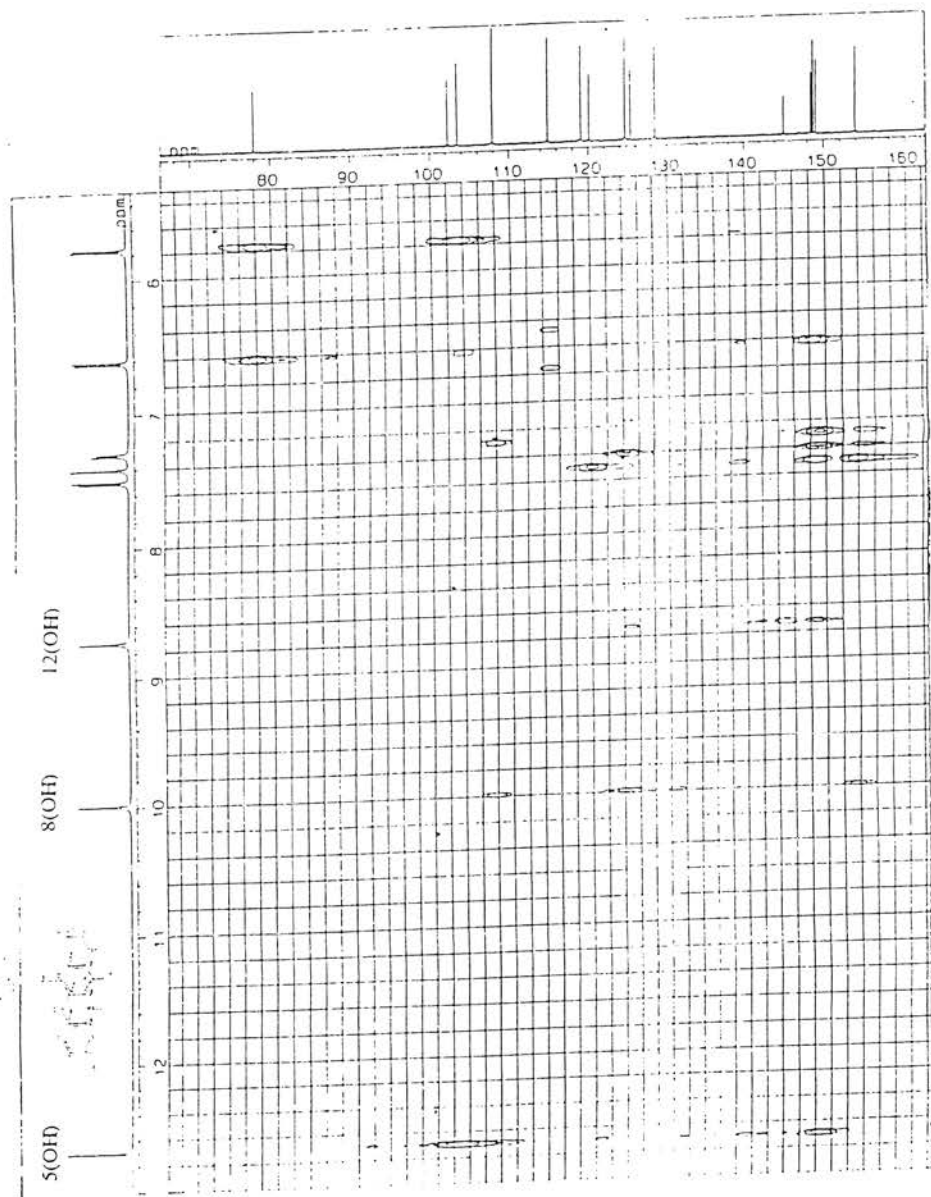
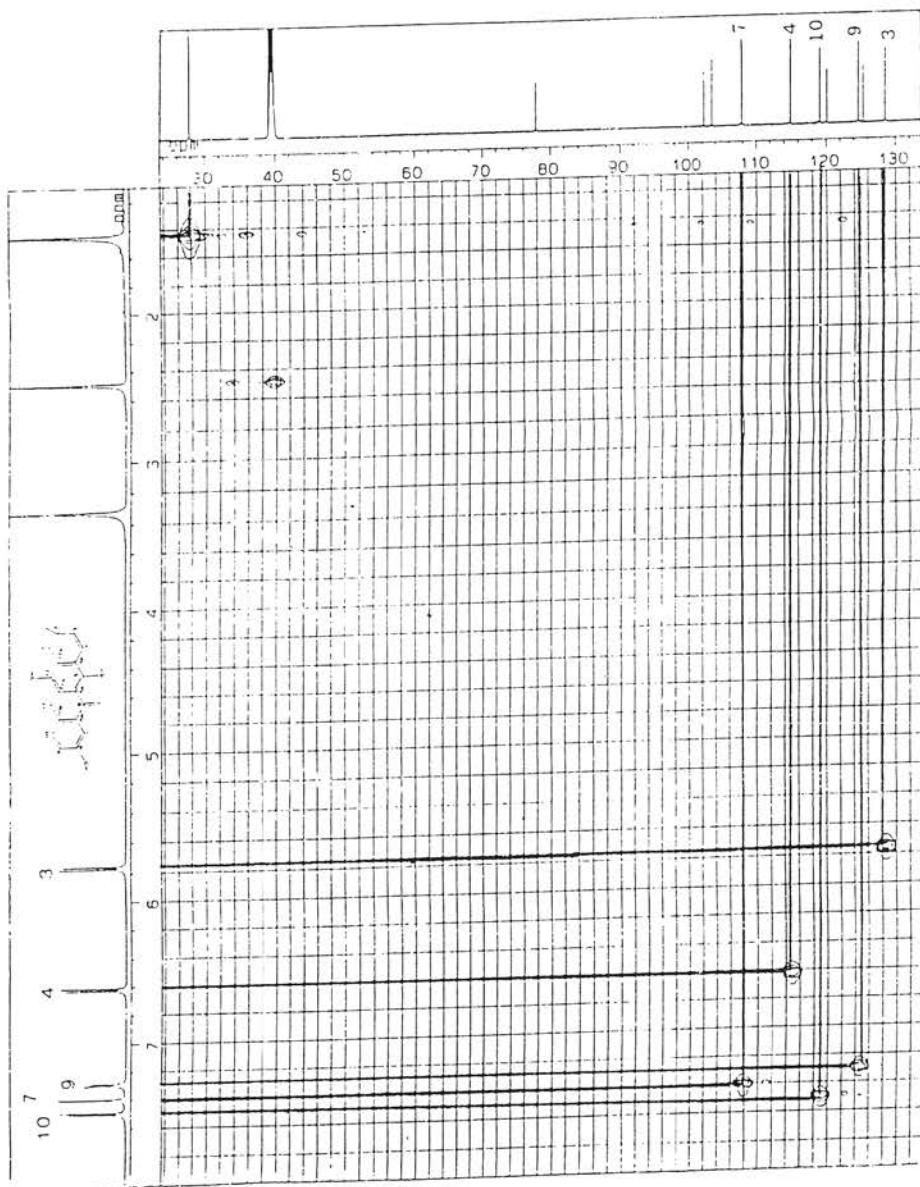


Figure 17 The expansion of HMBC spectrum of GA-2 (in DMSO-d<sub>6</sub>)

Figure 18 The HMQC spectrum of GA-2 (in DMSO-d<sub>6</sub>)

### VITA

Miss Jongdee Kosin was born on January, 9, 1968 in Prachinburi, Thailand. She received her Bachelor of Science (in Pharmacy) in 1993 from the Faculty of Pharmaceutical Sciences, Khon Kaen University, Thailand. At present, she is appointed as a hospital pharmacist at Samutprakan Hospital.