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## **APPENDIX**

ศูนย์วิทยบริการ  
อุปกรณ์มหावิทยาลัย

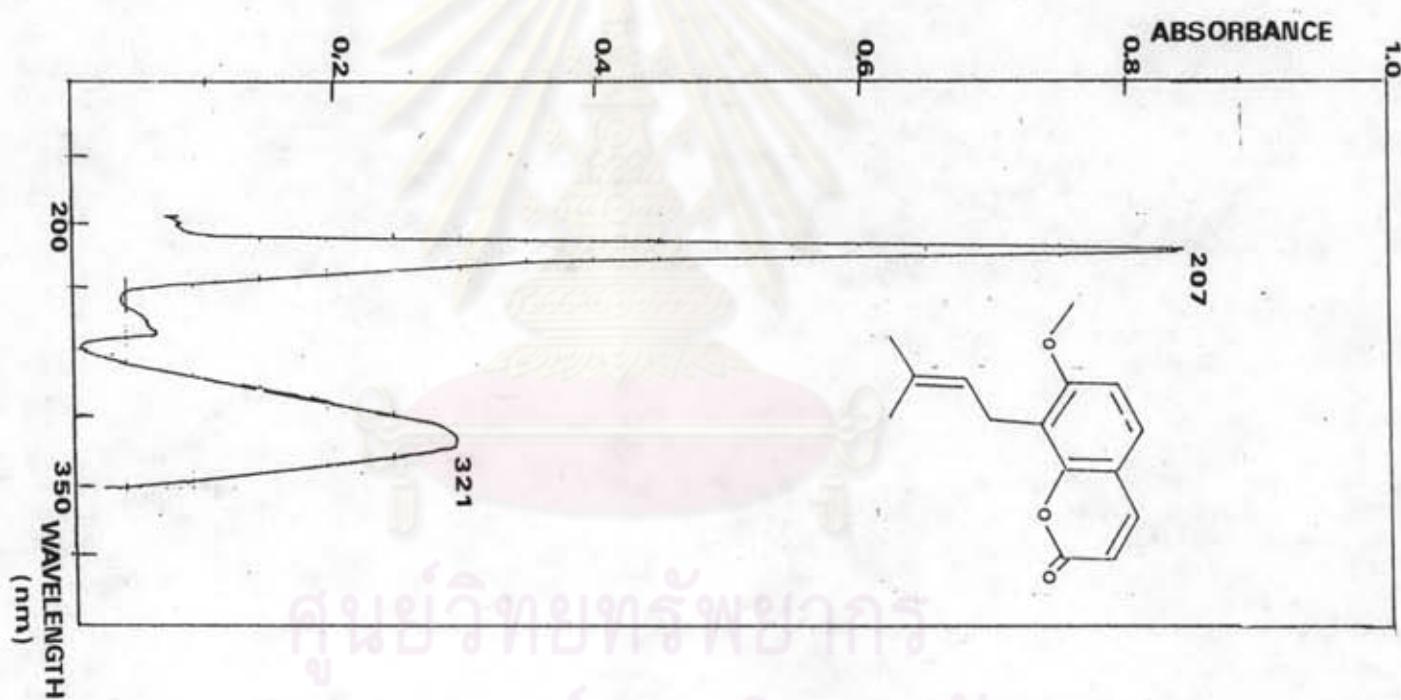


Figure 38 Ultraviolet absorption spectrum of Ostho

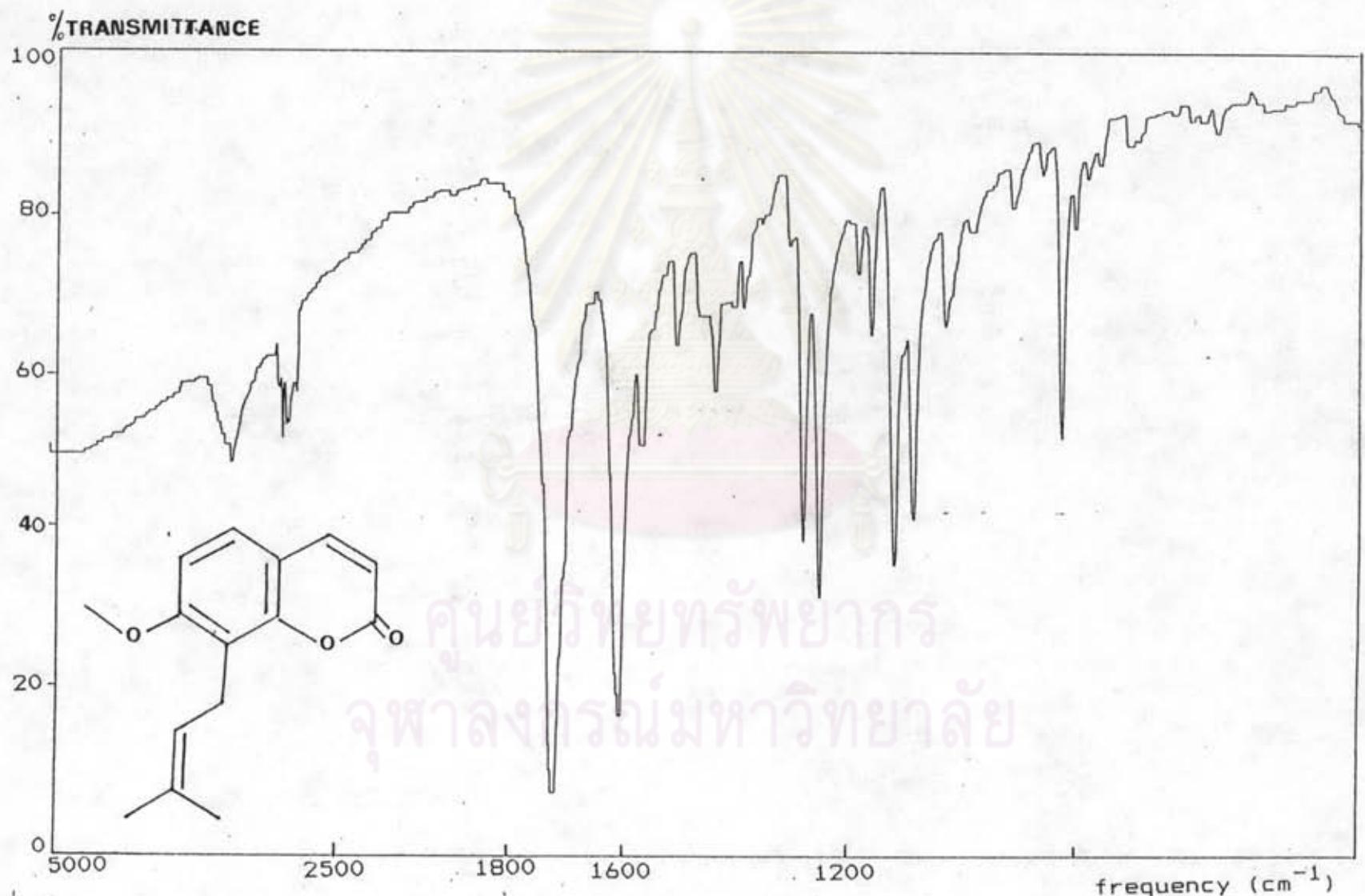


Figure 39 Infrared spectrum of Osthol (compound-I).

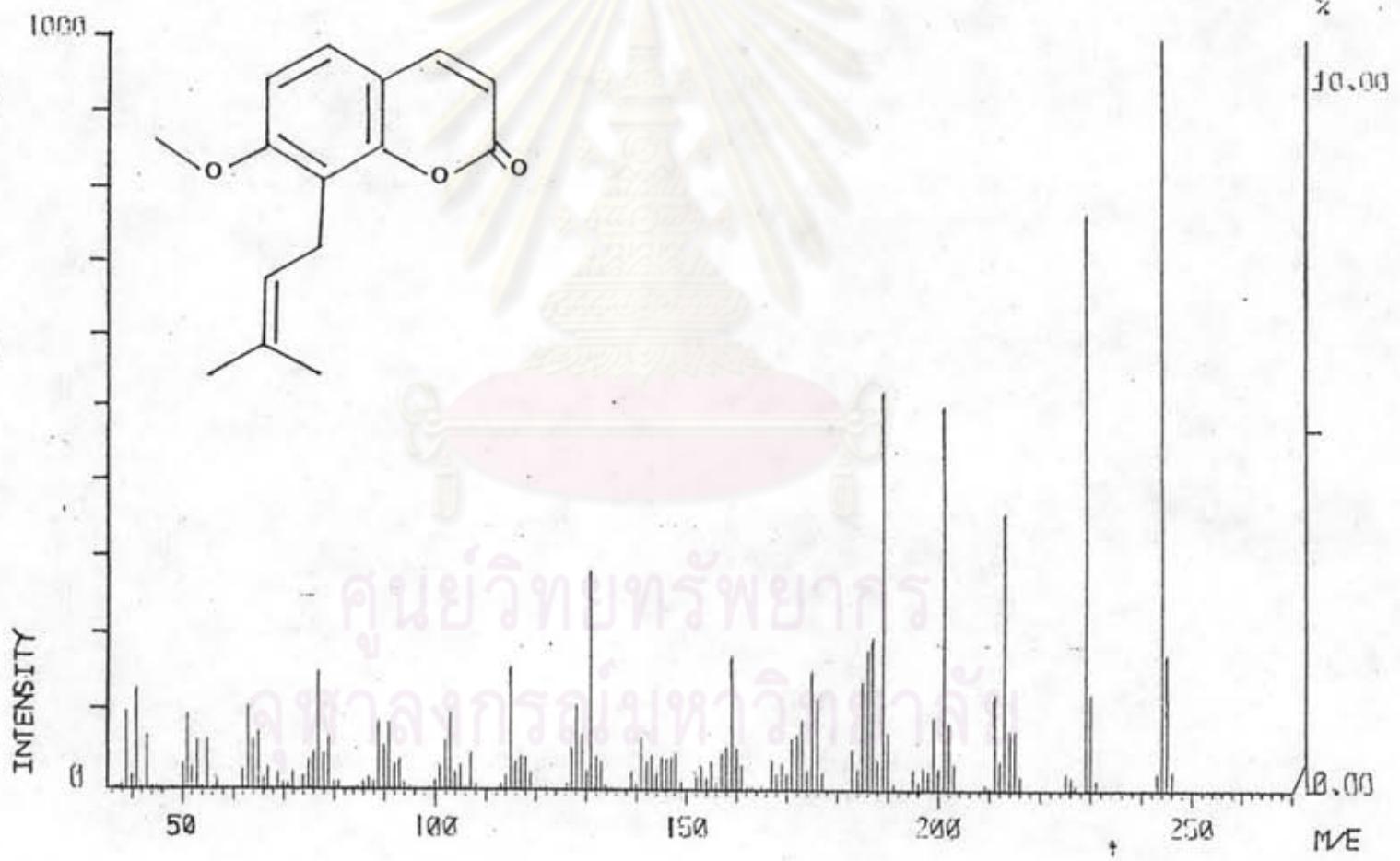


Figure 40 Mass spectrum of Osthol (compound-I).

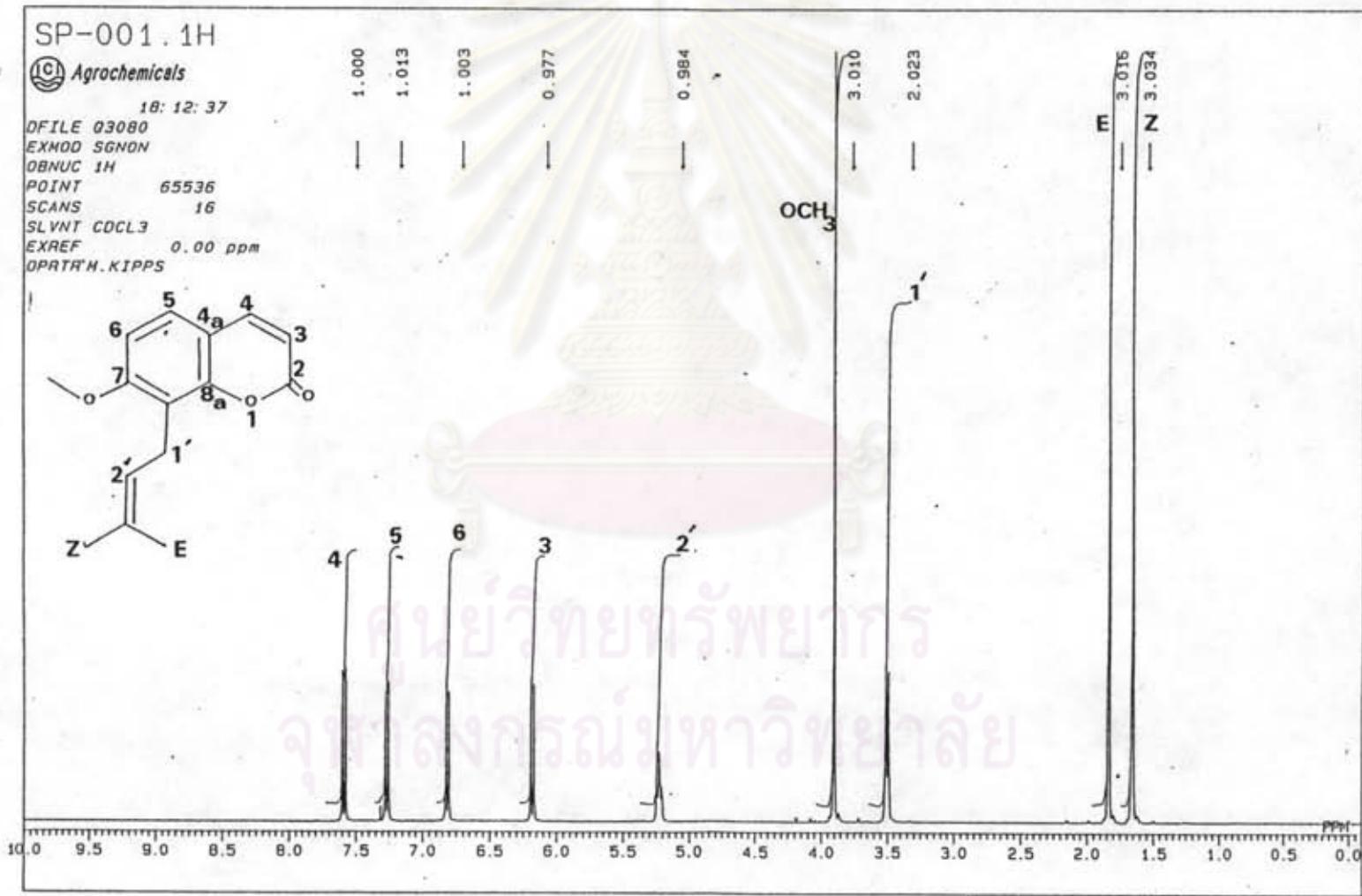


Figure 41 <sup>1</sup>H NMR spectrum of Osthol (compound-I).

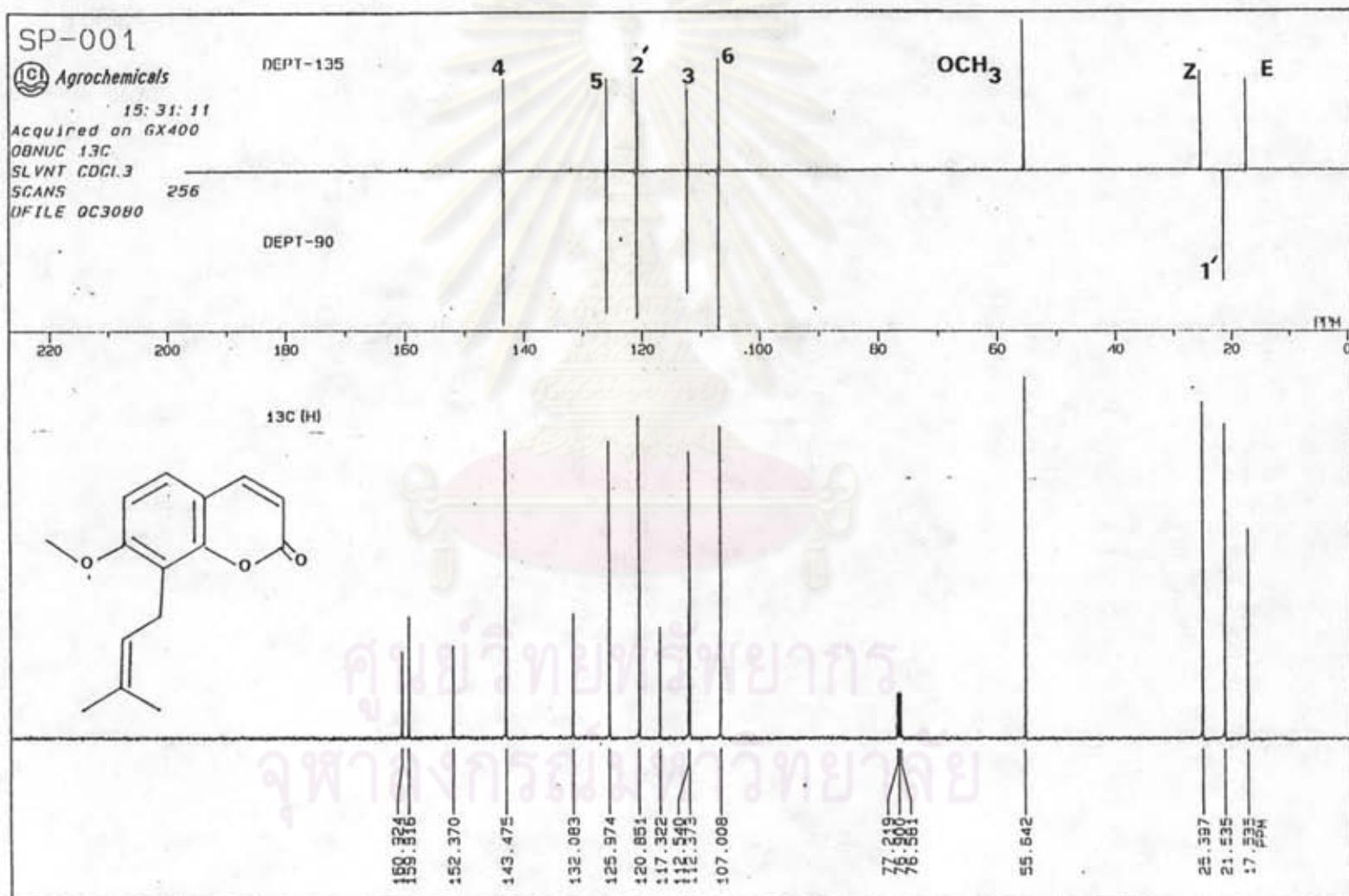


Figure 42 DEPT-90, DEPT-135 and  $^{13}\text{C}$  NMR spectra of Osthol (compound-I).

SP-001-DQF-COSY

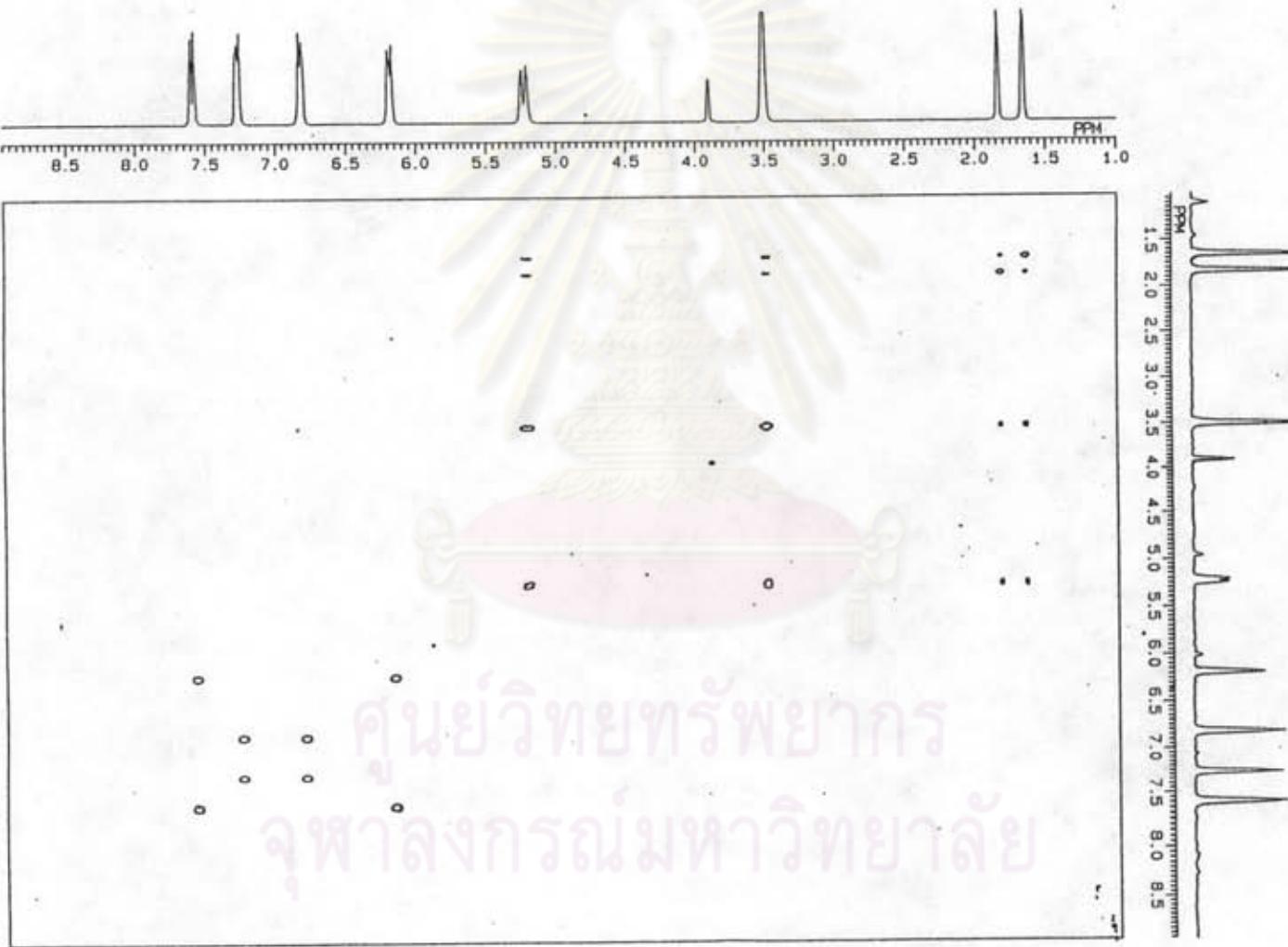


Figure 43  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of Osthol (compound-I).

SP-001-Noesy

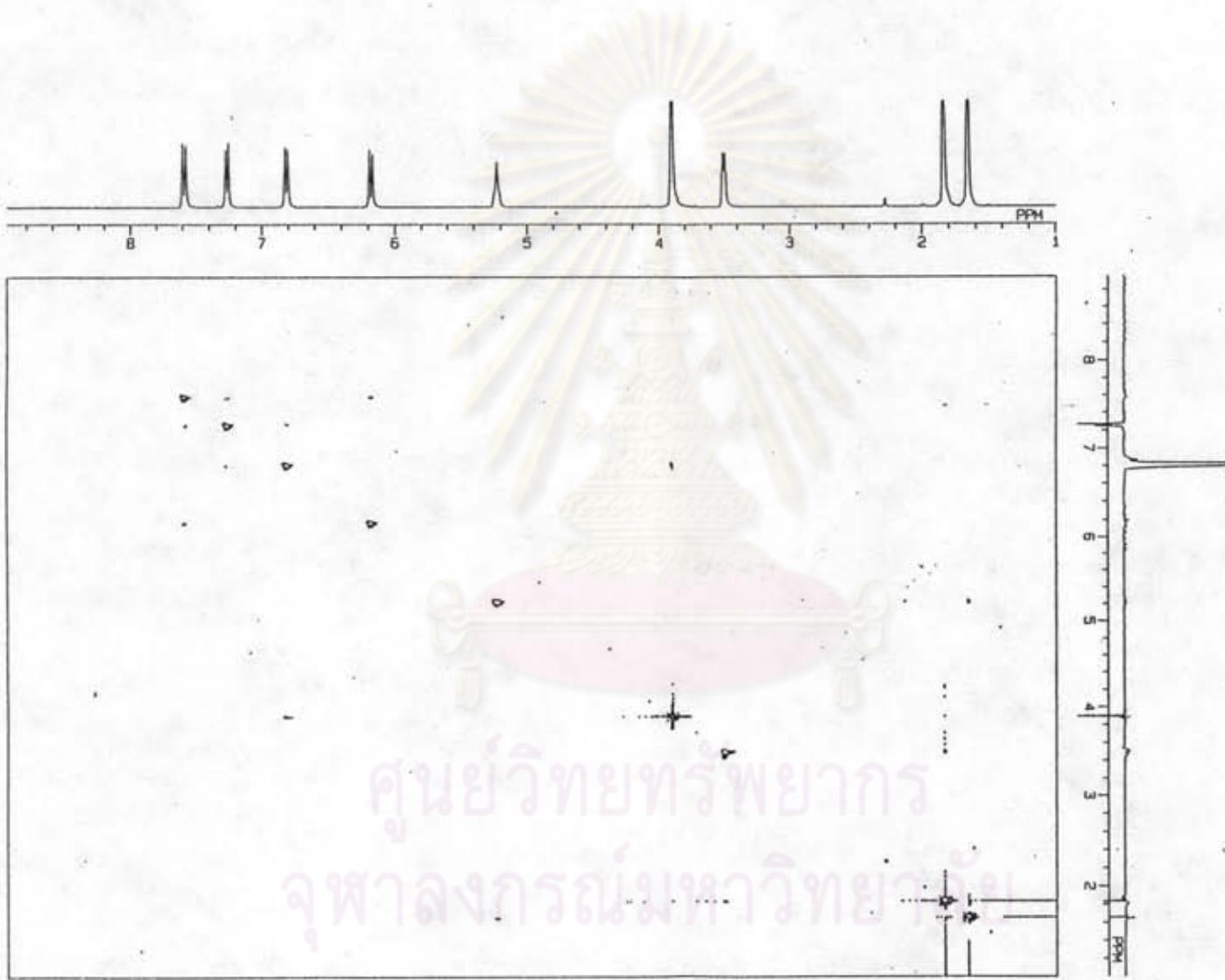


Figure 44 NOESY spectrum of Osthol (compound-1).

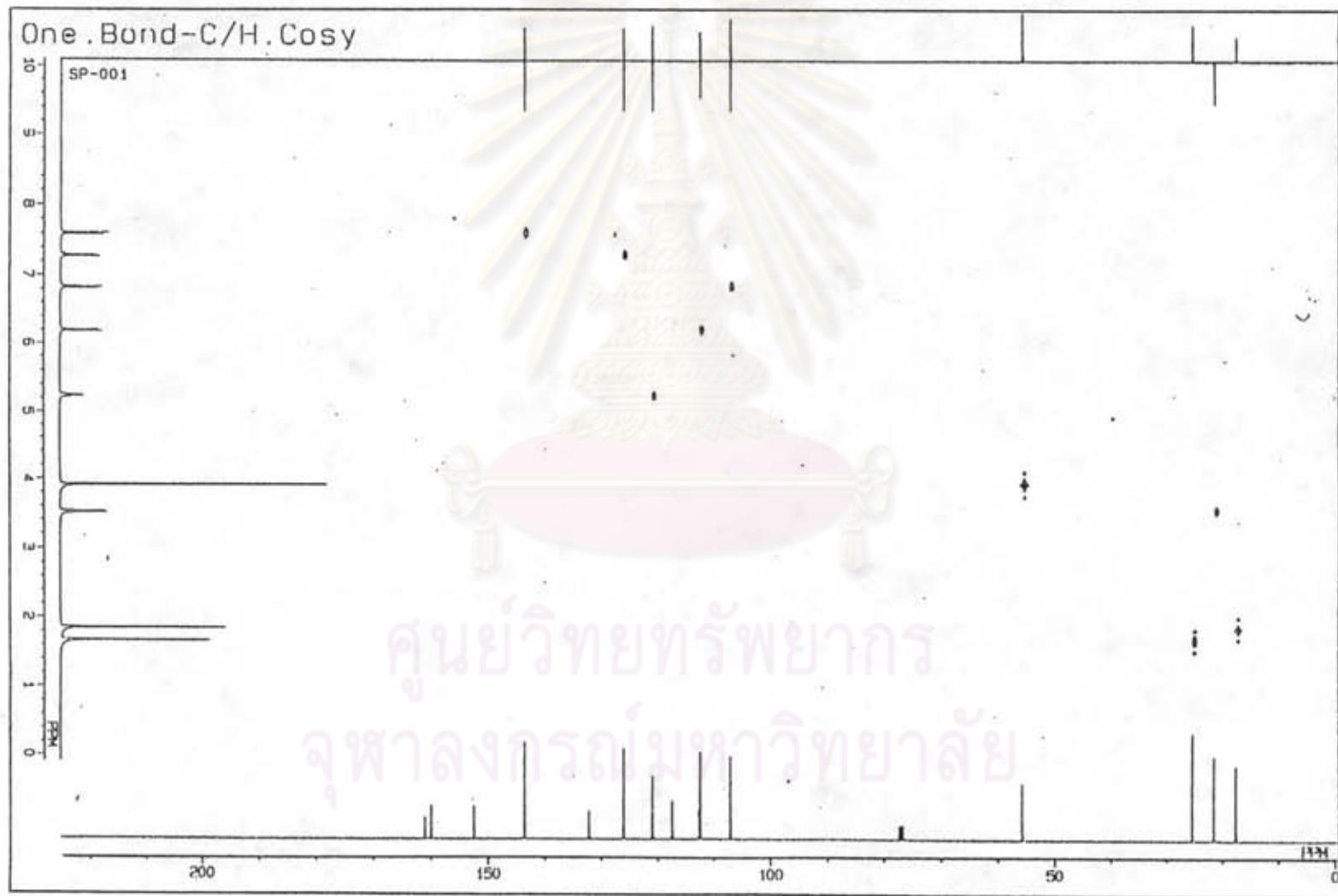


Figure 45 C-H COSY sprectrum of Osthol (compound-I).

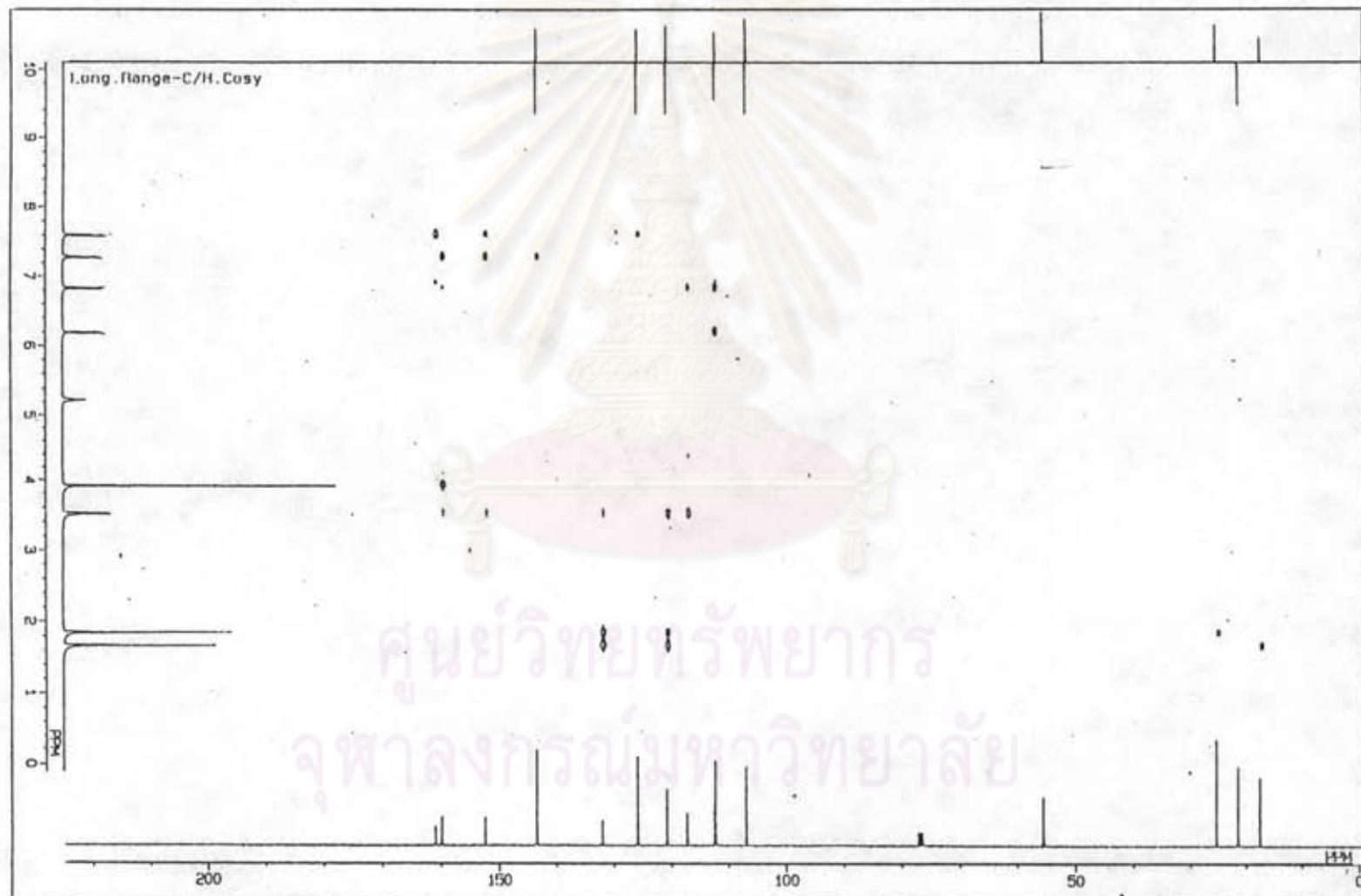


Figure 46 Long range C-H COSY spectrum of Osthol (compound-I).

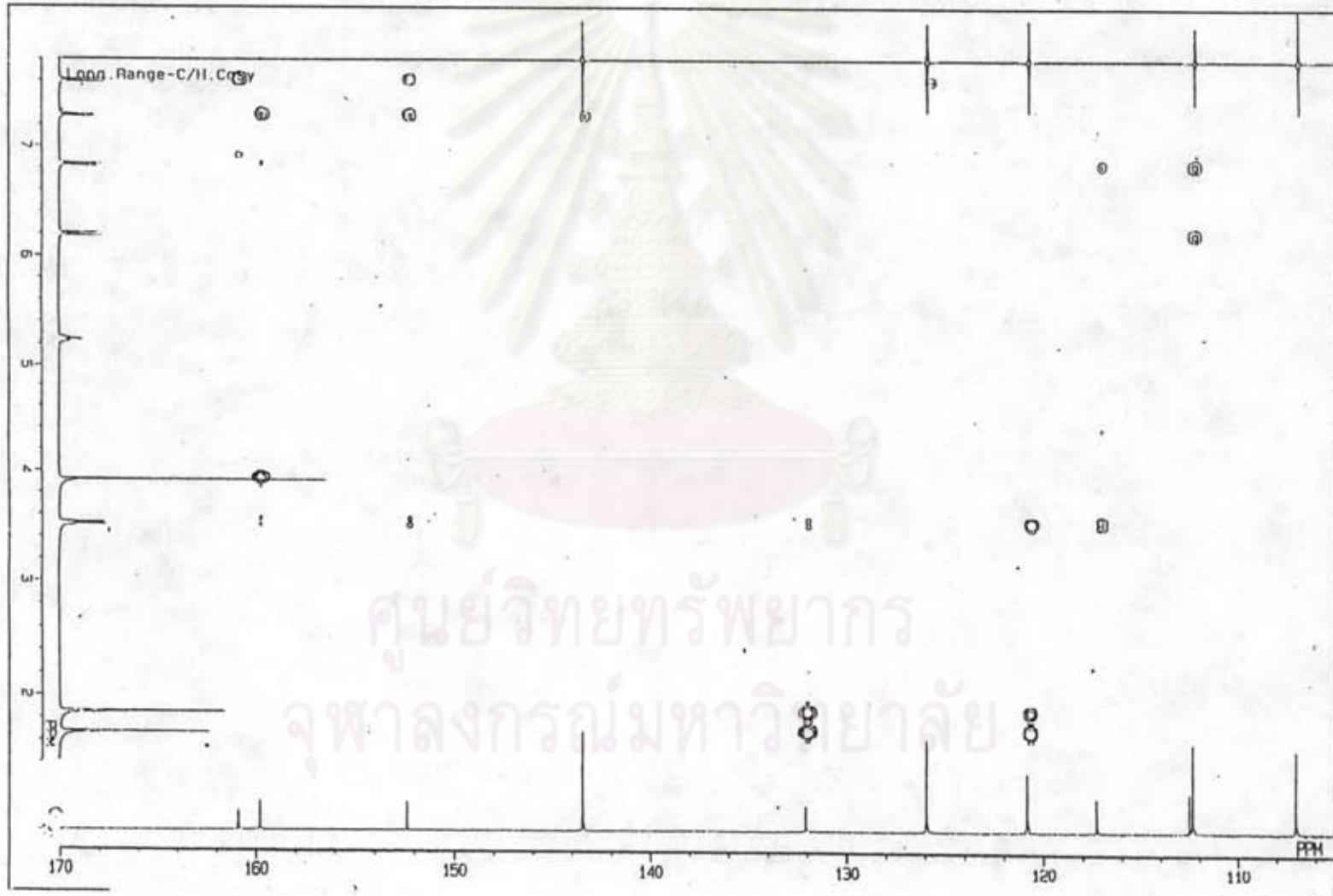


Figure 47 Long range C-H COSY spectrum of Osthol (compound-I).

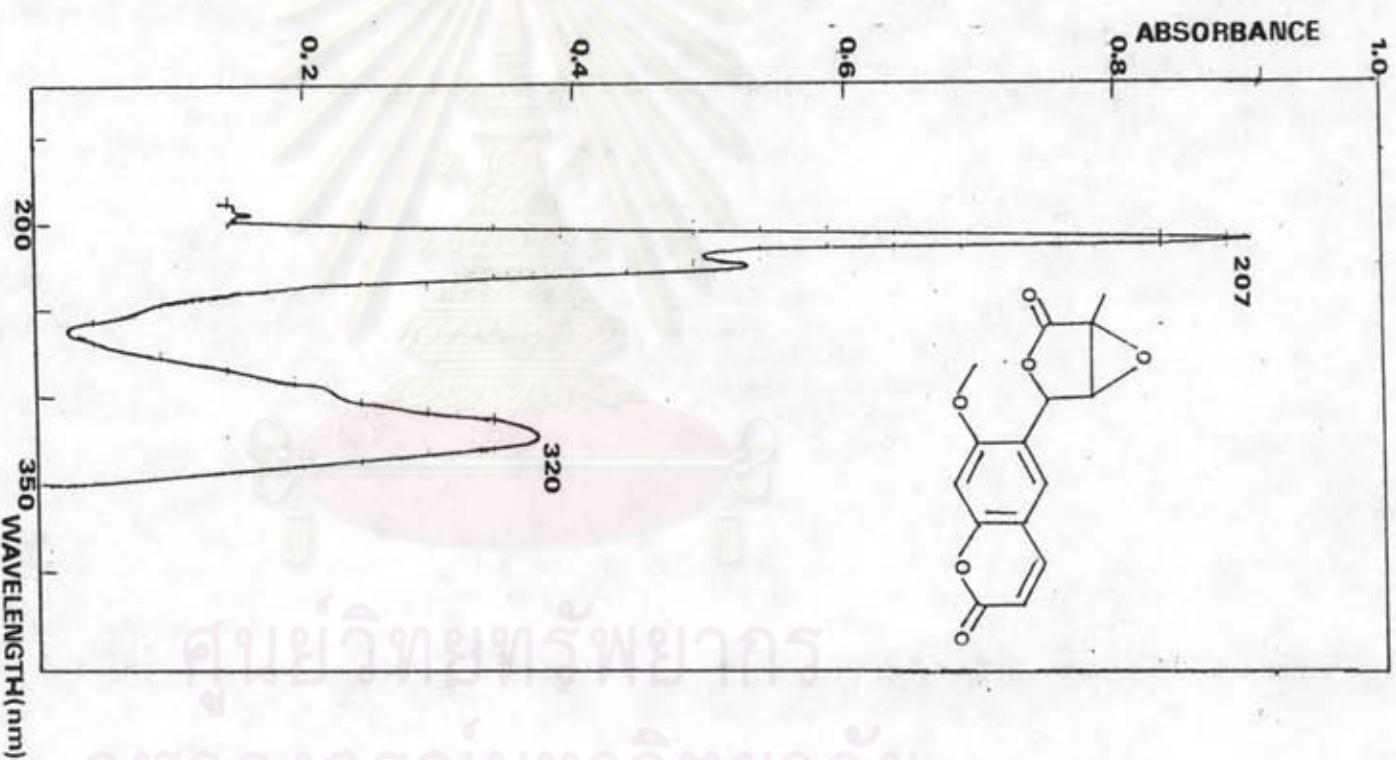


Figure 50  
Ultraviolet absorption spectrum of Micromelina (compound-II).

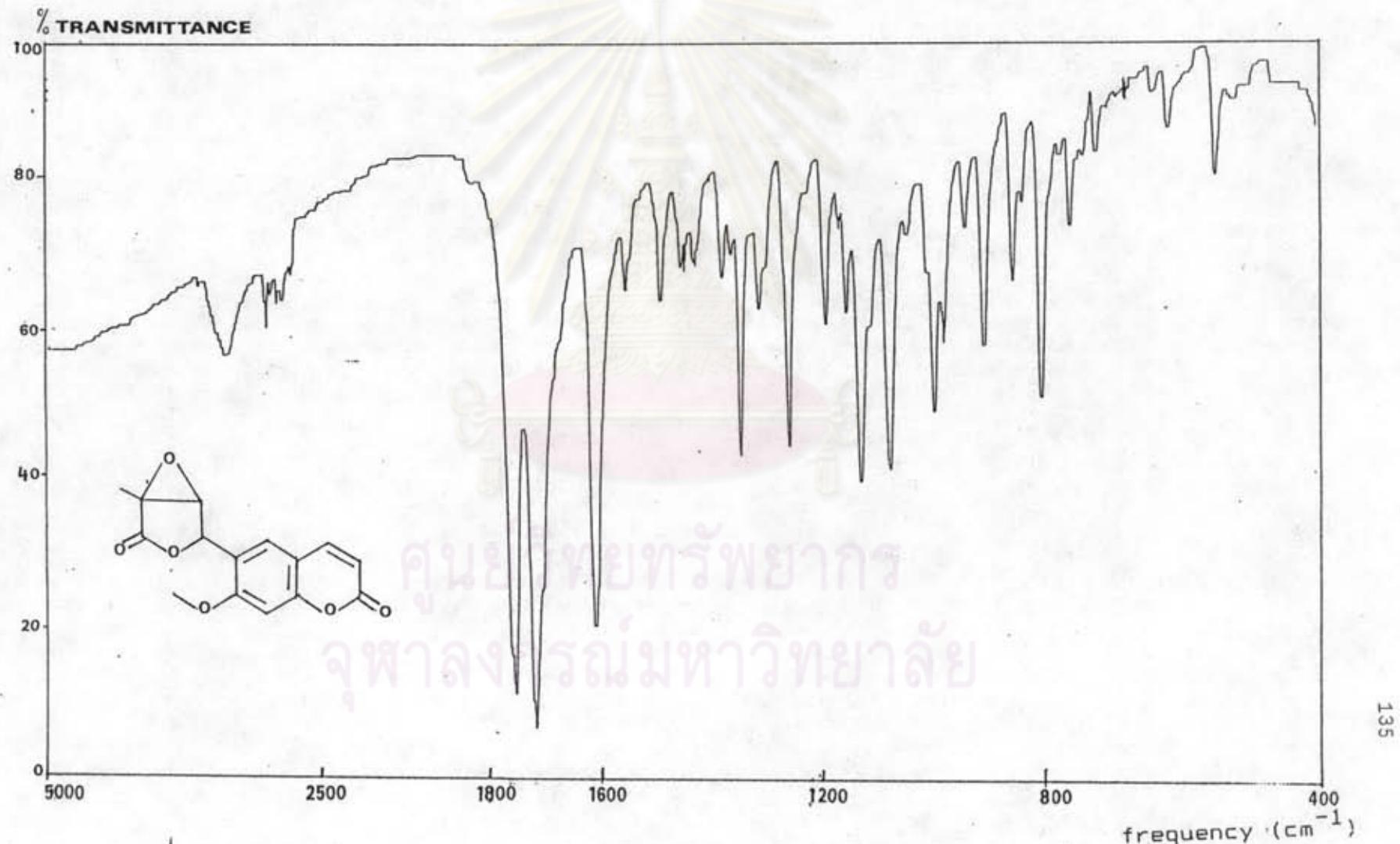


Figure 51 Infrared spectrum of Micromelin (compound-II).

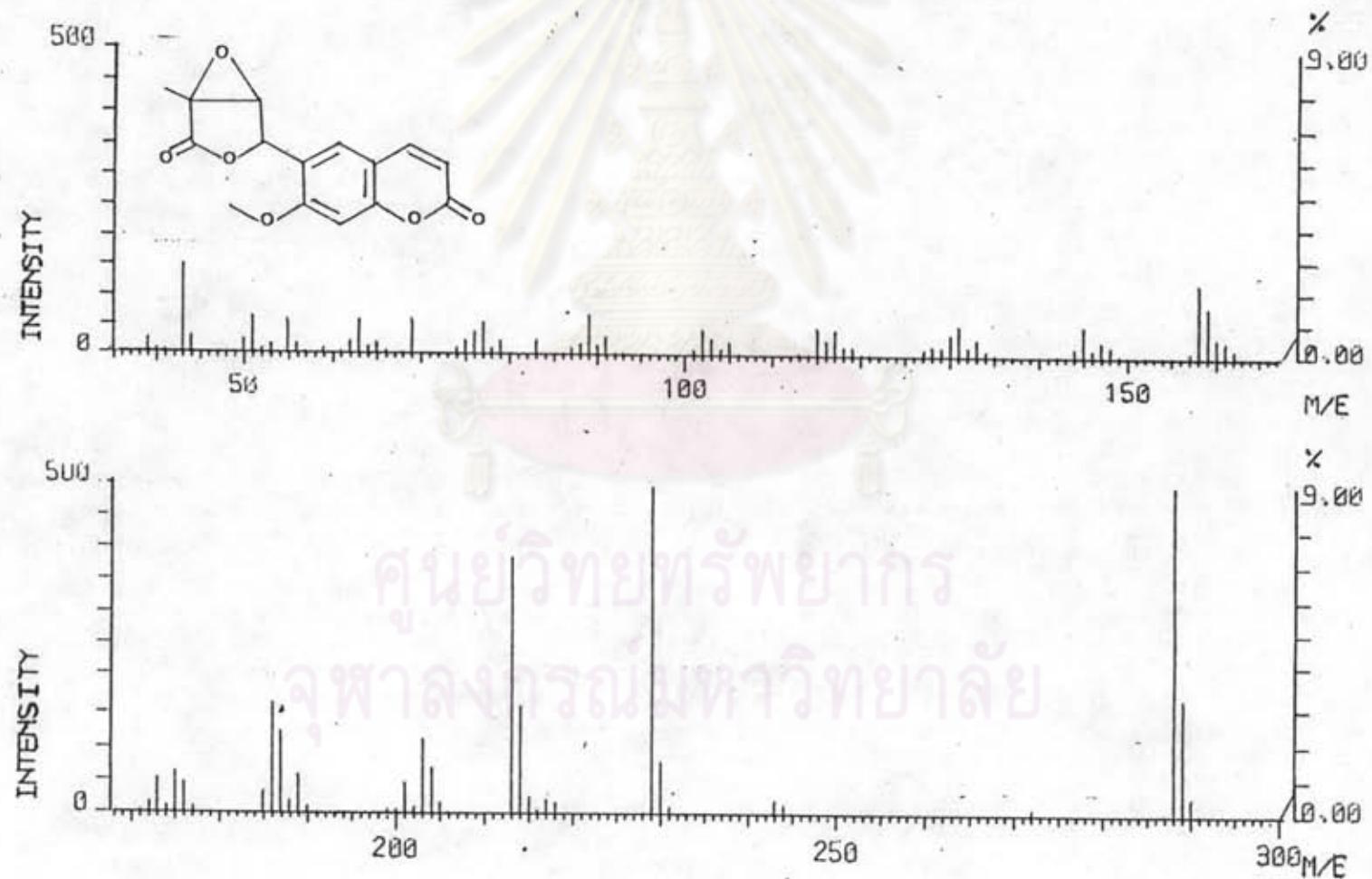


Figure 52 Mass spectrum of Micromelin (compound-II).

S.P.-M.MINUTUM

ACI Agrochemicals

14: 08: 37  
DFILE [100, 120] 06004  
COMPT S.P.-M.MINUTUM  
MENUF H5H20  
EXMOD SGNON  
OBNUC 1H  
POINT 65536  
XE 4037.8000 Hz  
SCANS 16  
RGAIN 18  
SLVNT CDCL3  
EXREF 0.00 ppm  
OPRTR H.KIPPS

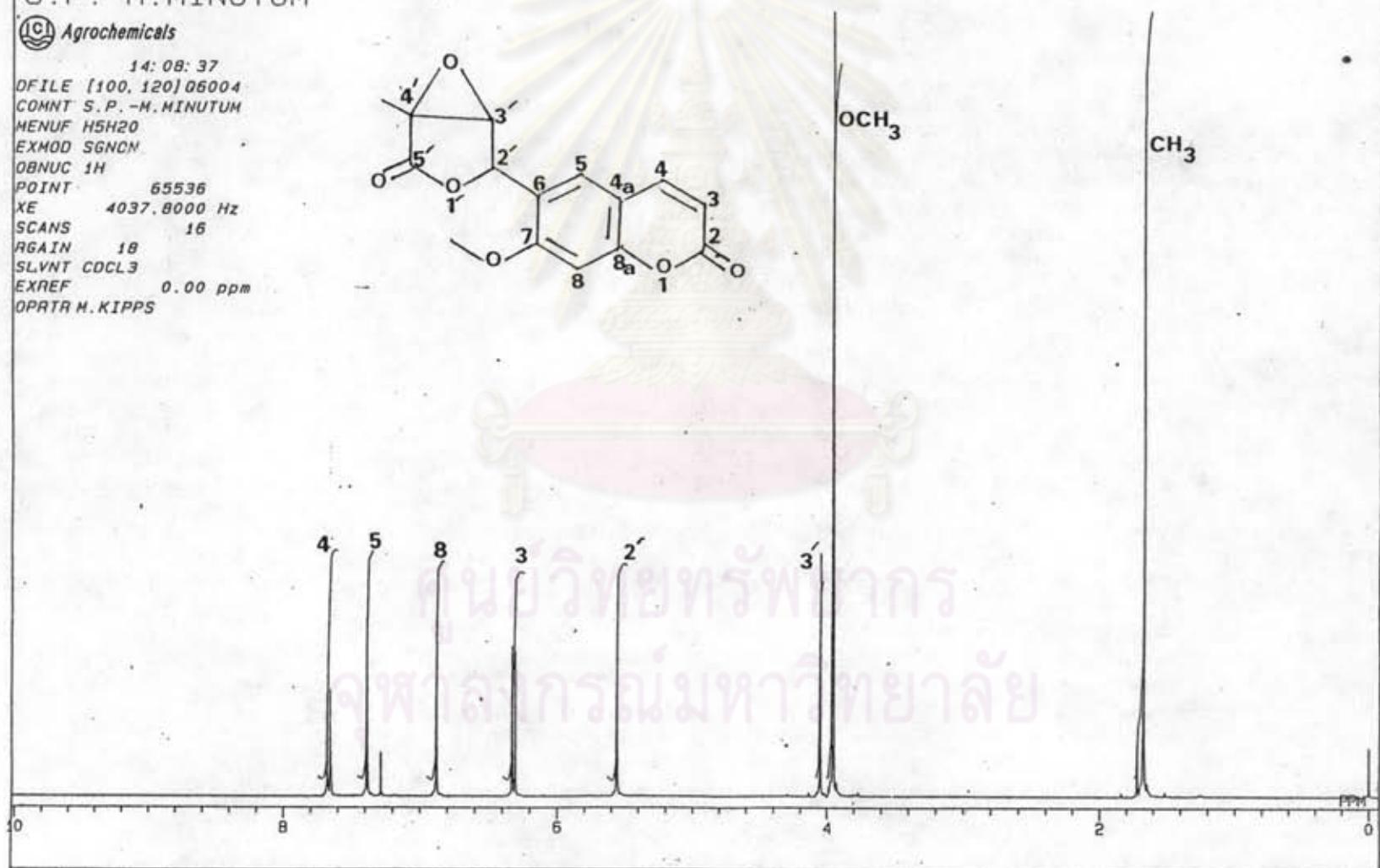
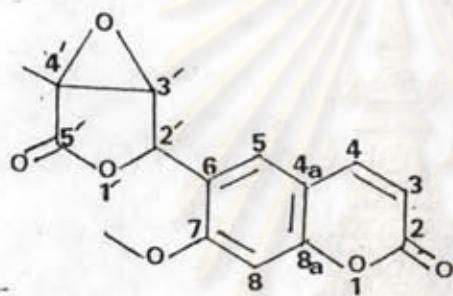


Figure 53.  $^1\text{H}$  NMR spectrum of Micromolin (compound-II).

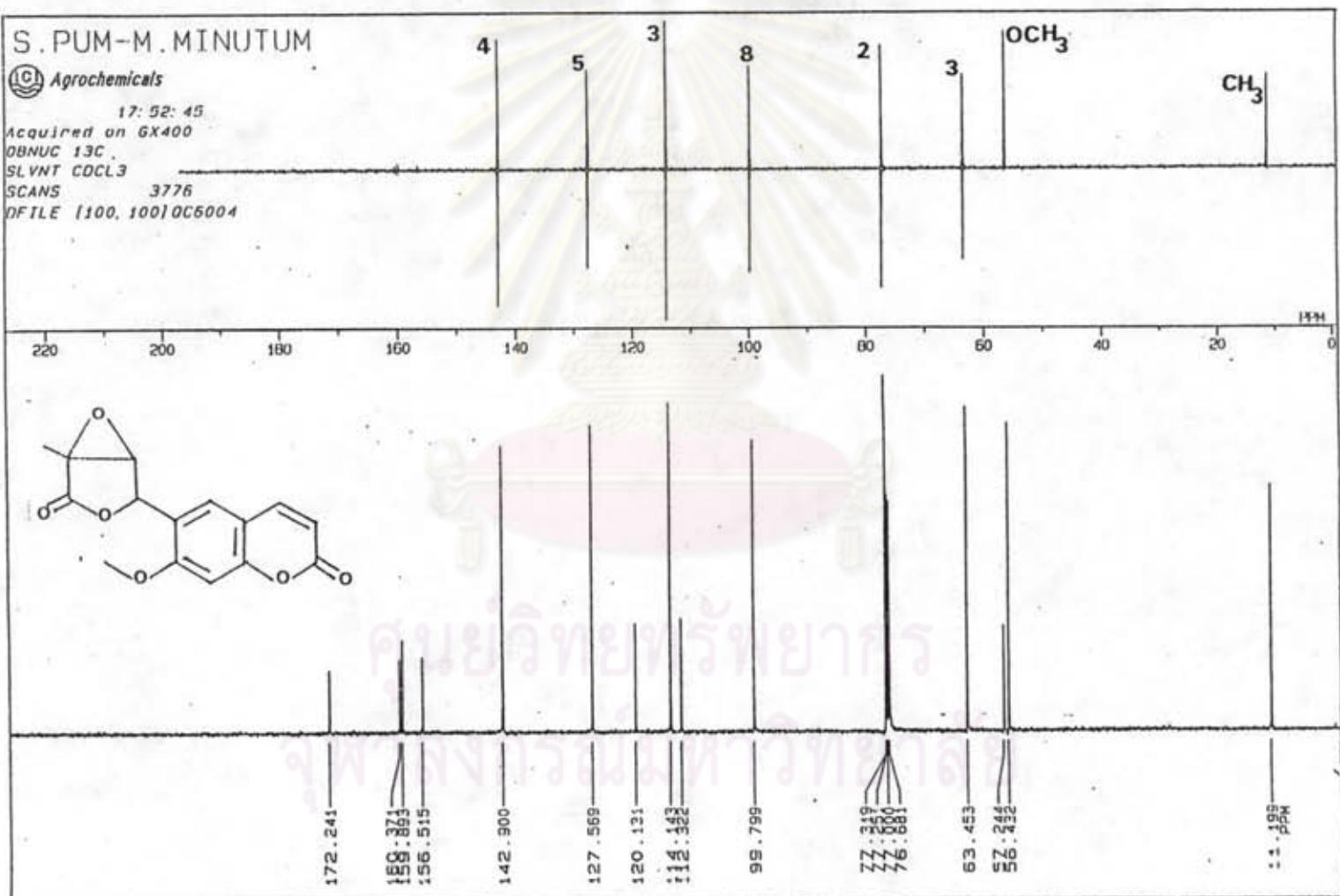


Figure 54 DEPT-90, DEPT-135 and  $^{13}\text{C}$  NMR spectra of Micromelin (compound-III).

S.P.-M. MINUTUM 1H-1H. COSY

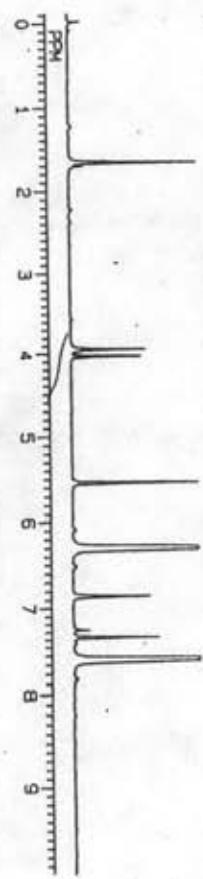


Figure 55 H-H COSY spectrum of Micromelin (Compound-II).

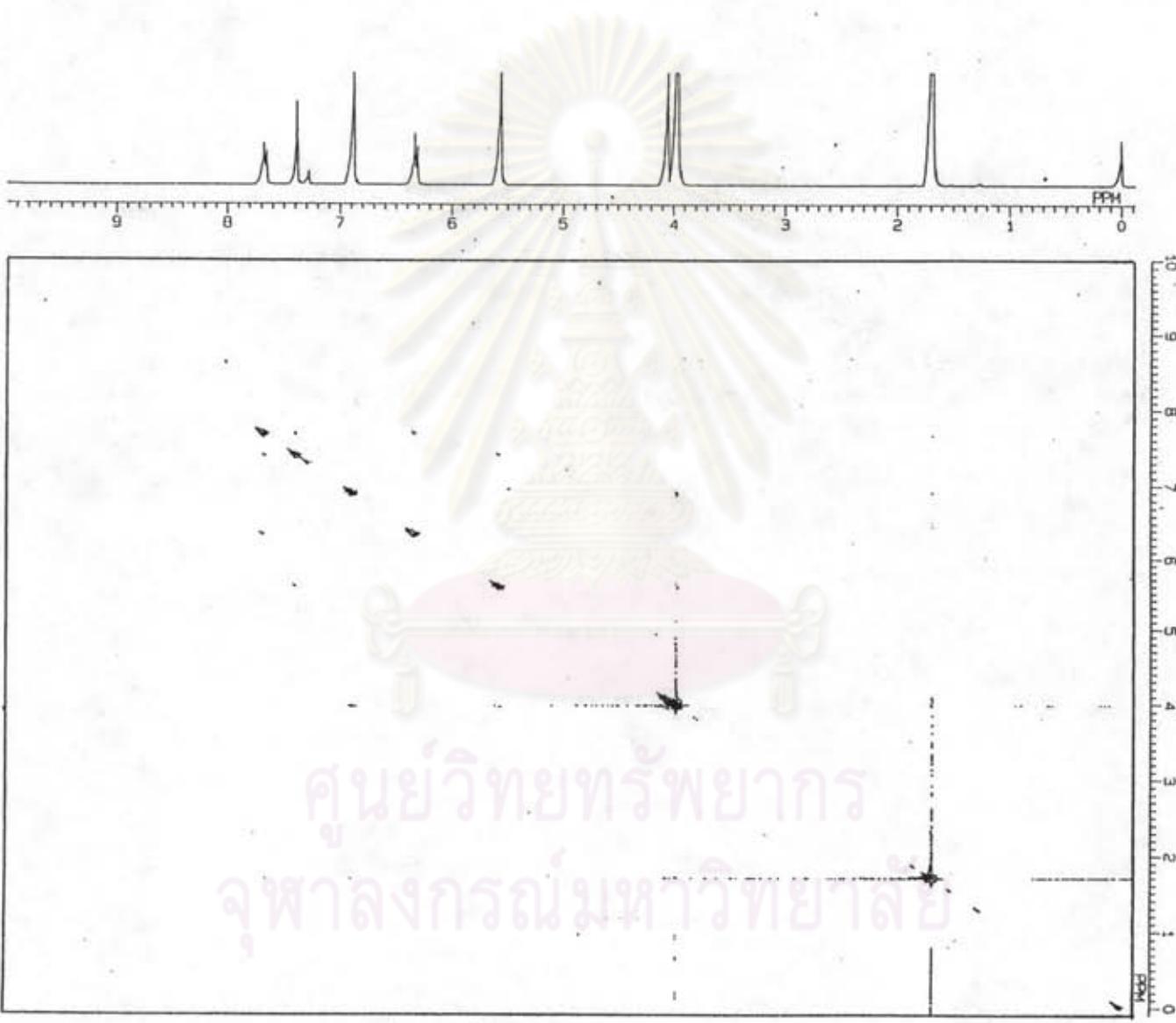


Figure 56  
NOESY spectrum of Micromelin (compound-II).

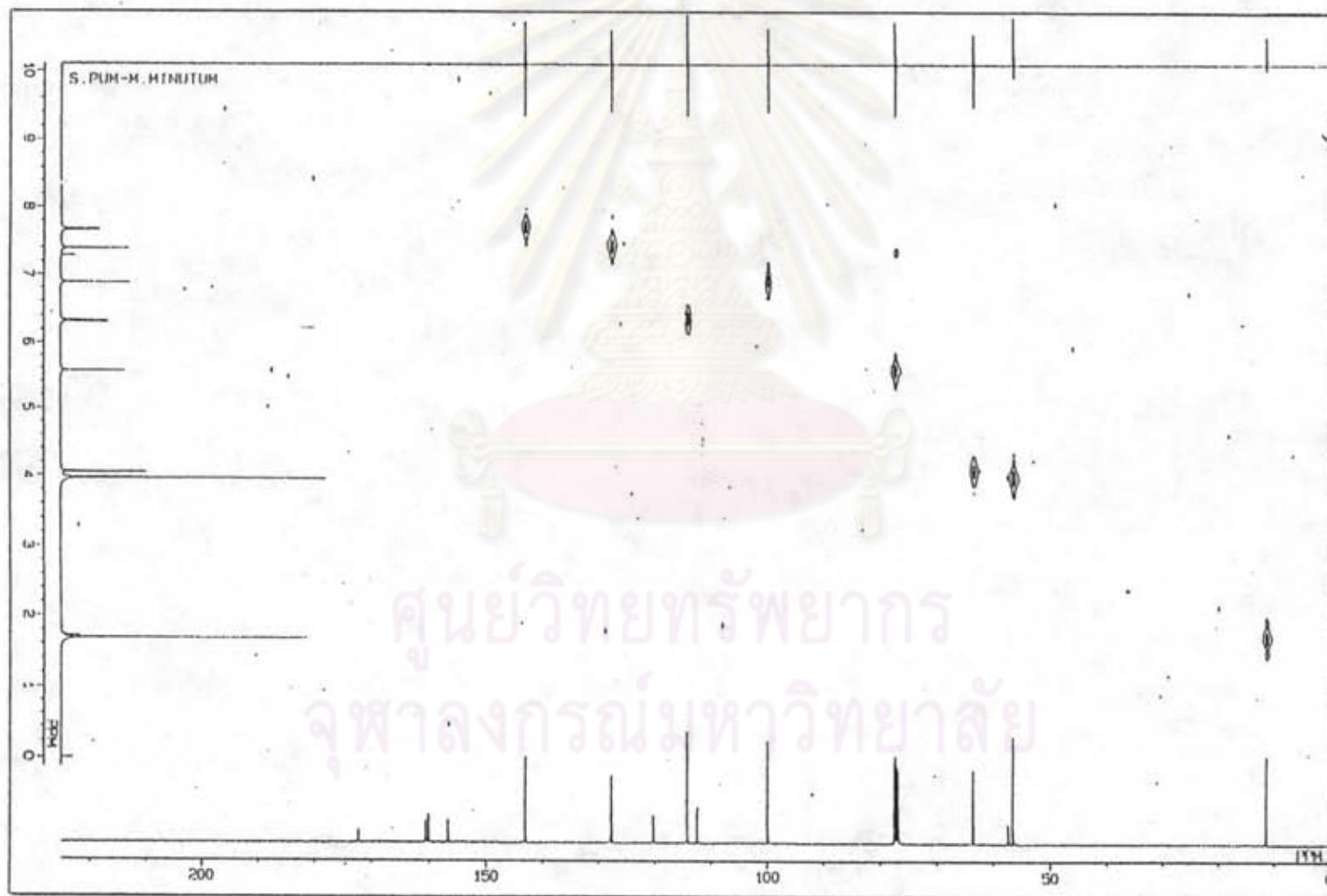


Figure 57 C-H COSY spectrum of Micromelin (compound-II).

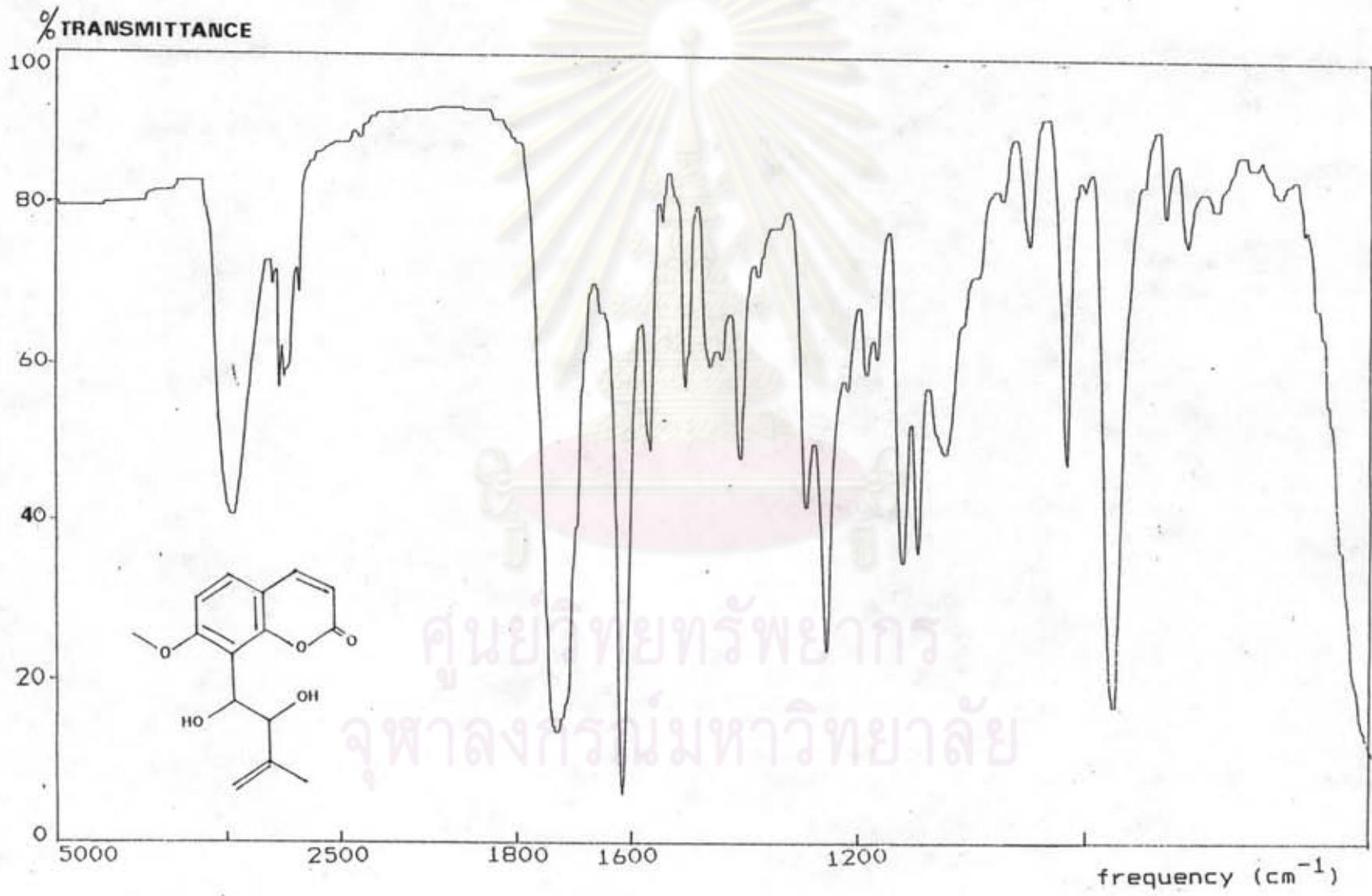


Figure 58 Infrared spectrum of compound-III.

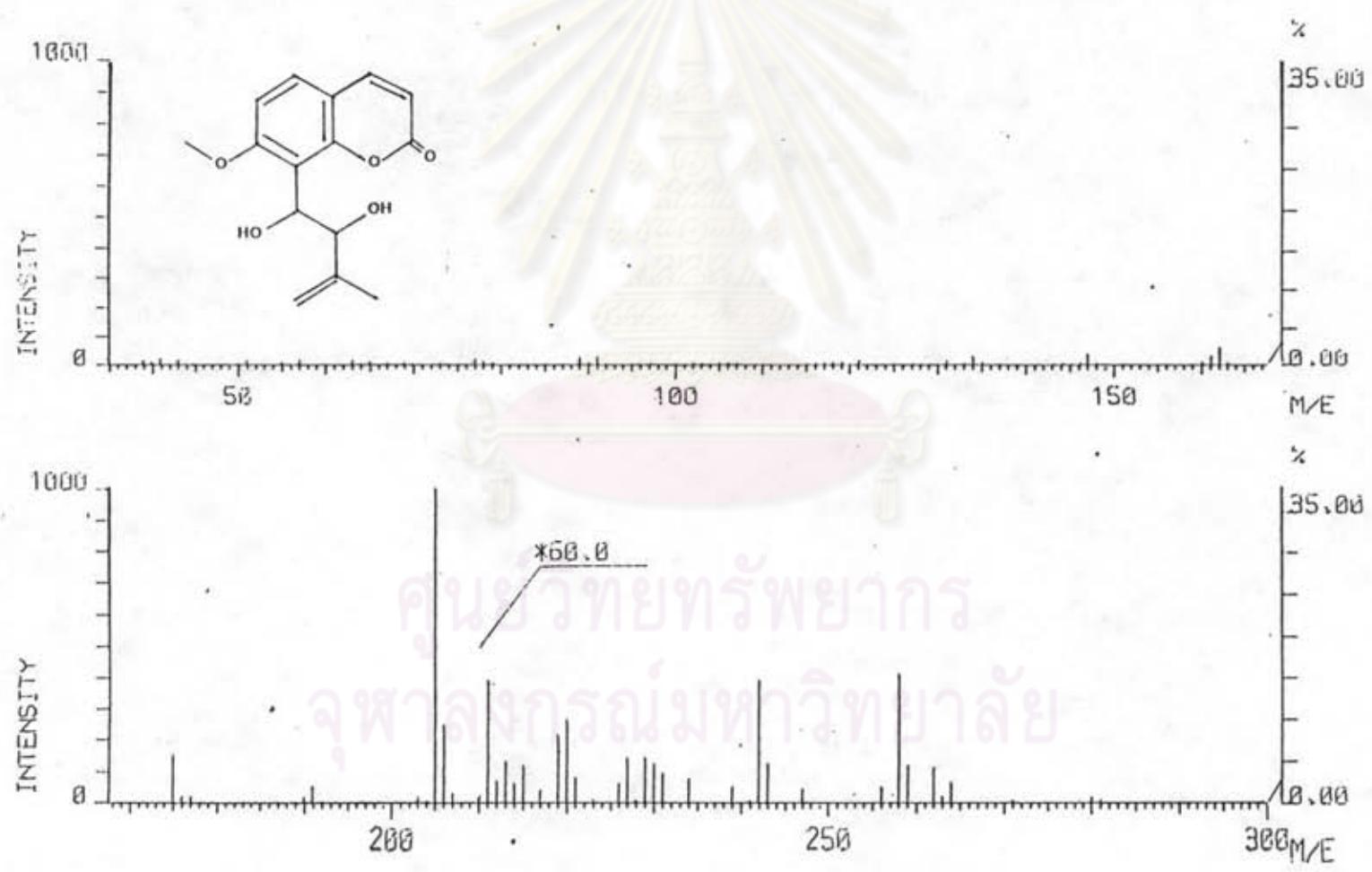
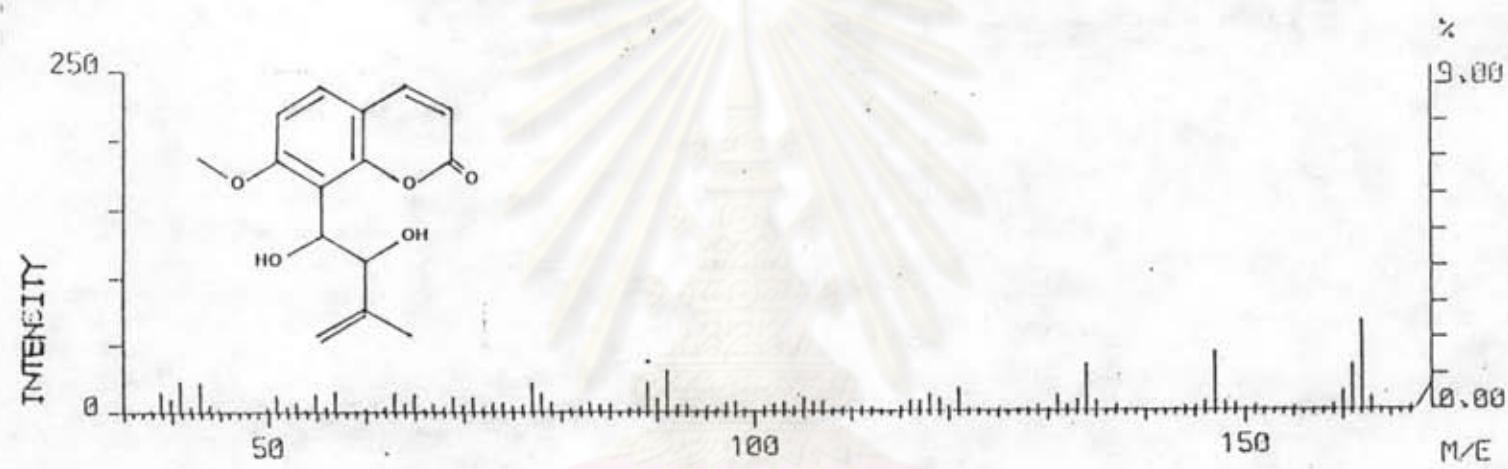


Figure 59 Mass spectrum of compound-III.



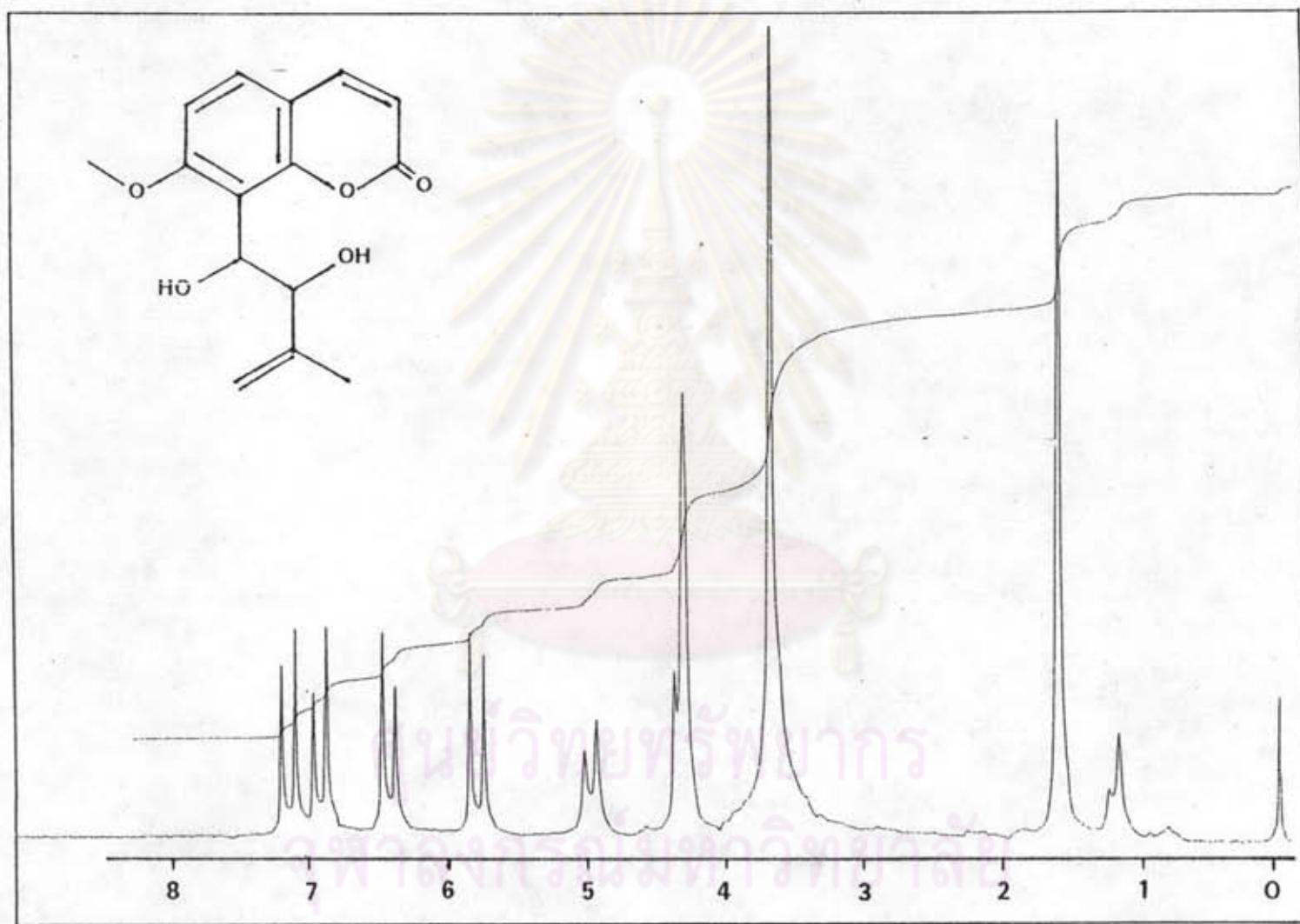


Figure 60  $^1\text{H}$  NMR spectrum of compound-III.

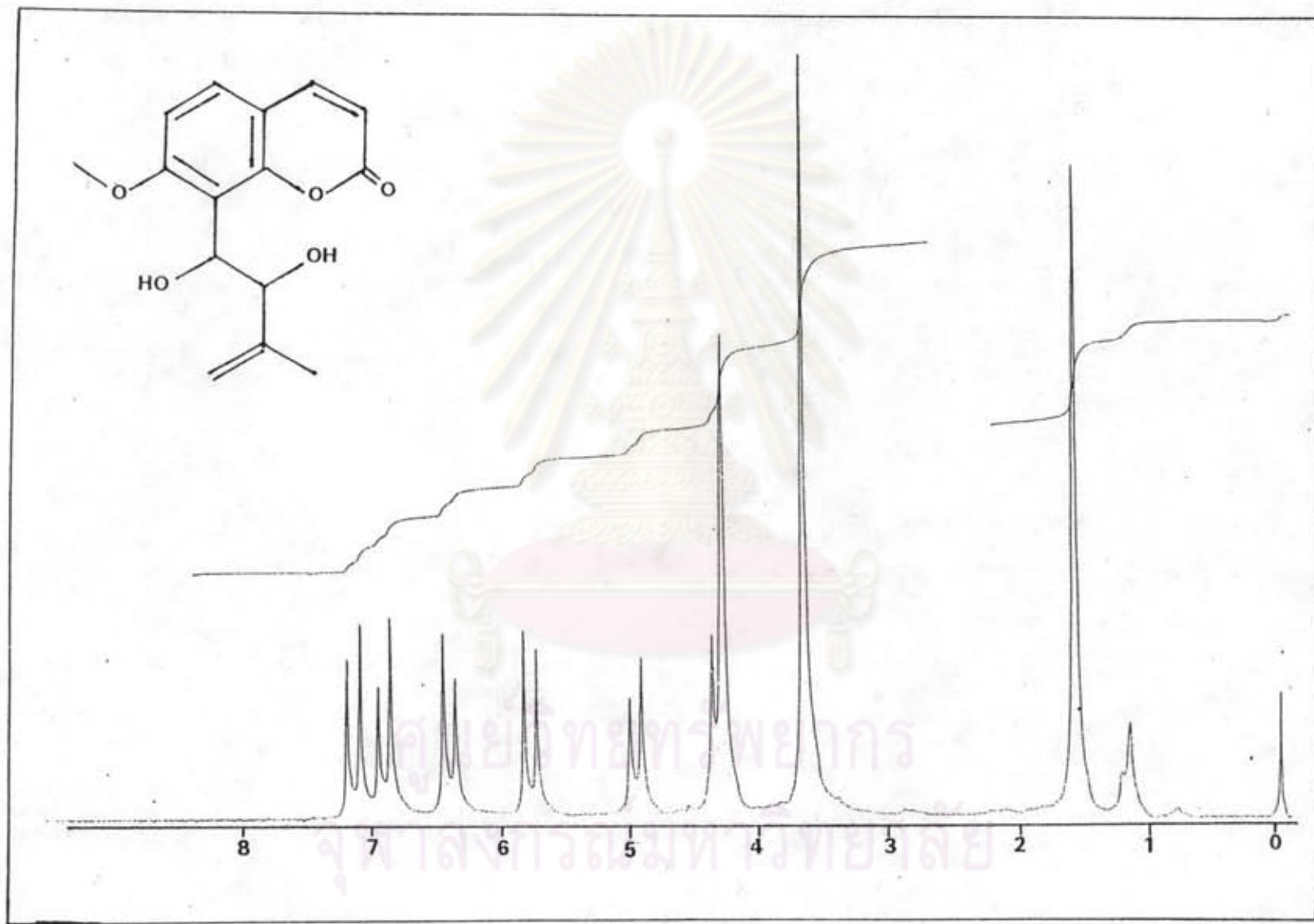
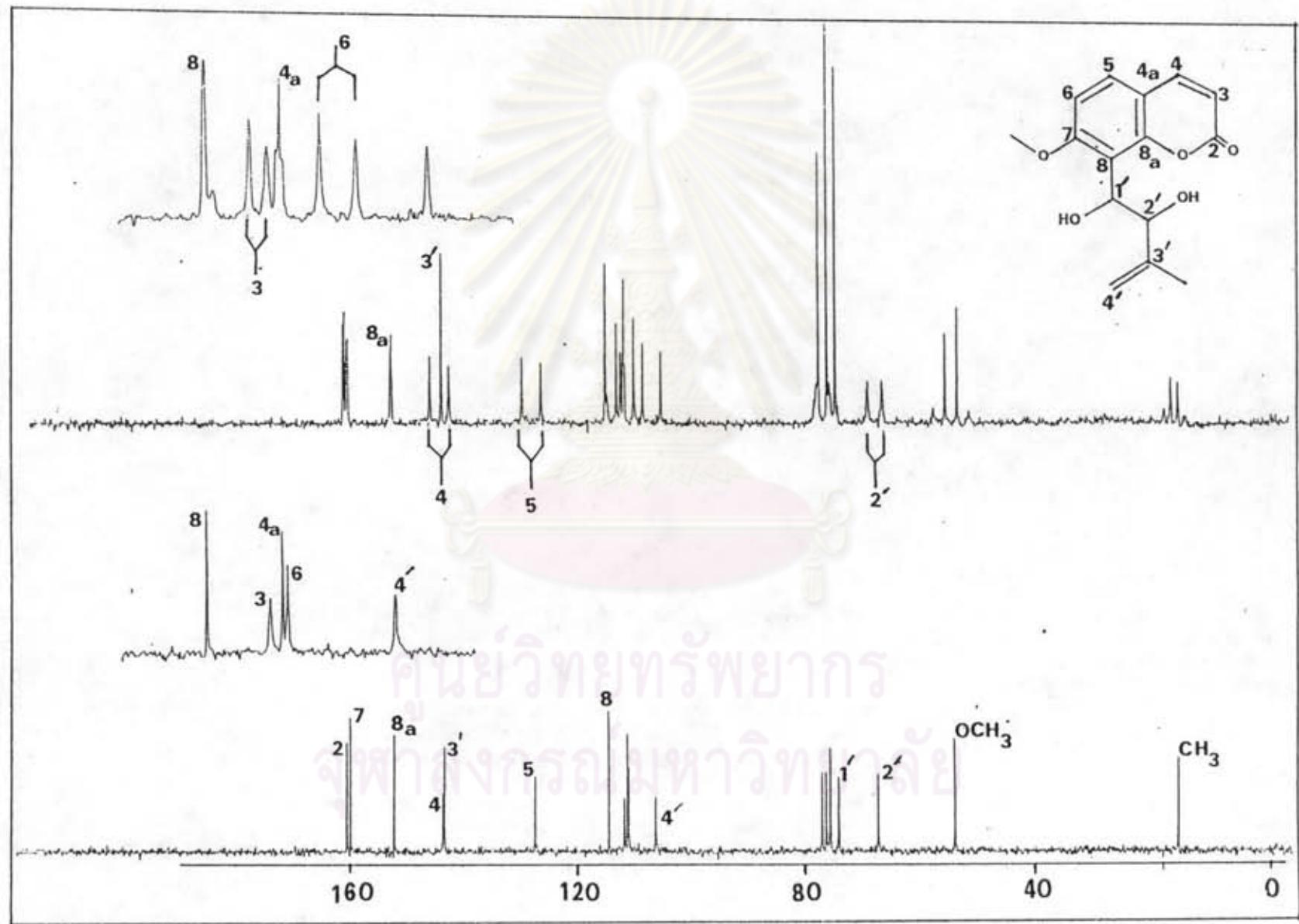


Figure 61  $^1\text{H}$  NMR deuterated spectrum of compound-III.



VITA

Miss Kanawan Pochanakom was born on December 24, 1964 in Bangkok. She graduated with Bachelor Degree of Science in Pharmacy with the second class honors in 1987 from Faculty of Pharmacy, Chiang Mai University.



ศูนย์วิทยาการ  
จุฬาลงกรณ์มหาวิทยาลัย