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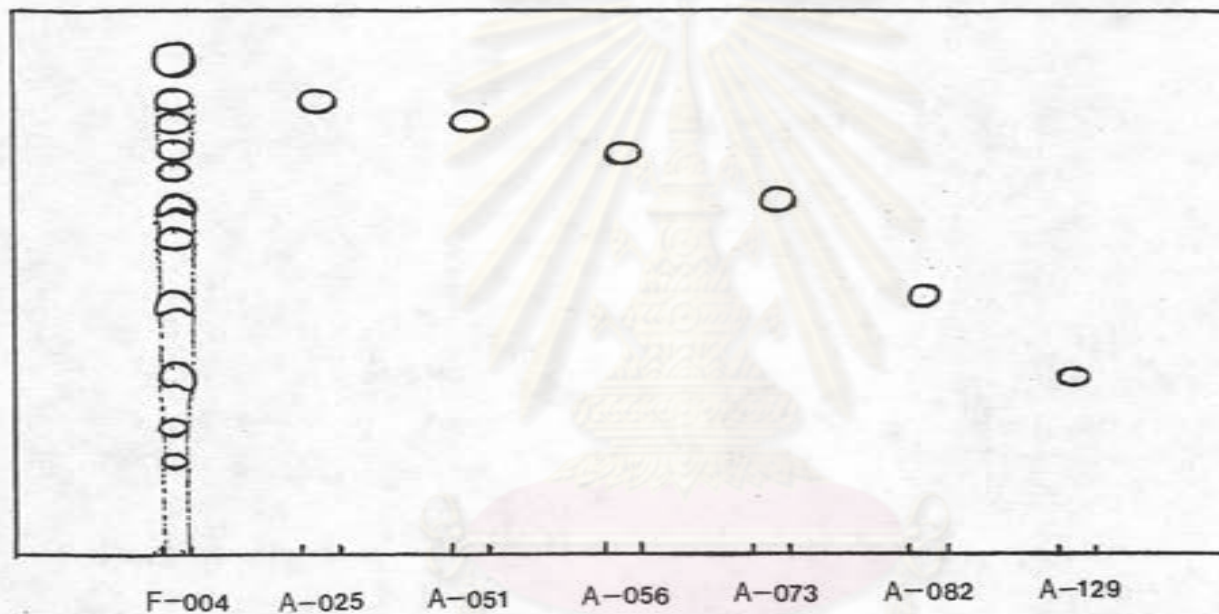


ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย



APPENDIX

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย



solvent system ; 5 % acetone in dichloromethane

Figure 15 TLC chromatogram of fraction F-004 and compounds A-025, A-051, A-056, A-073, A-082 and A-129

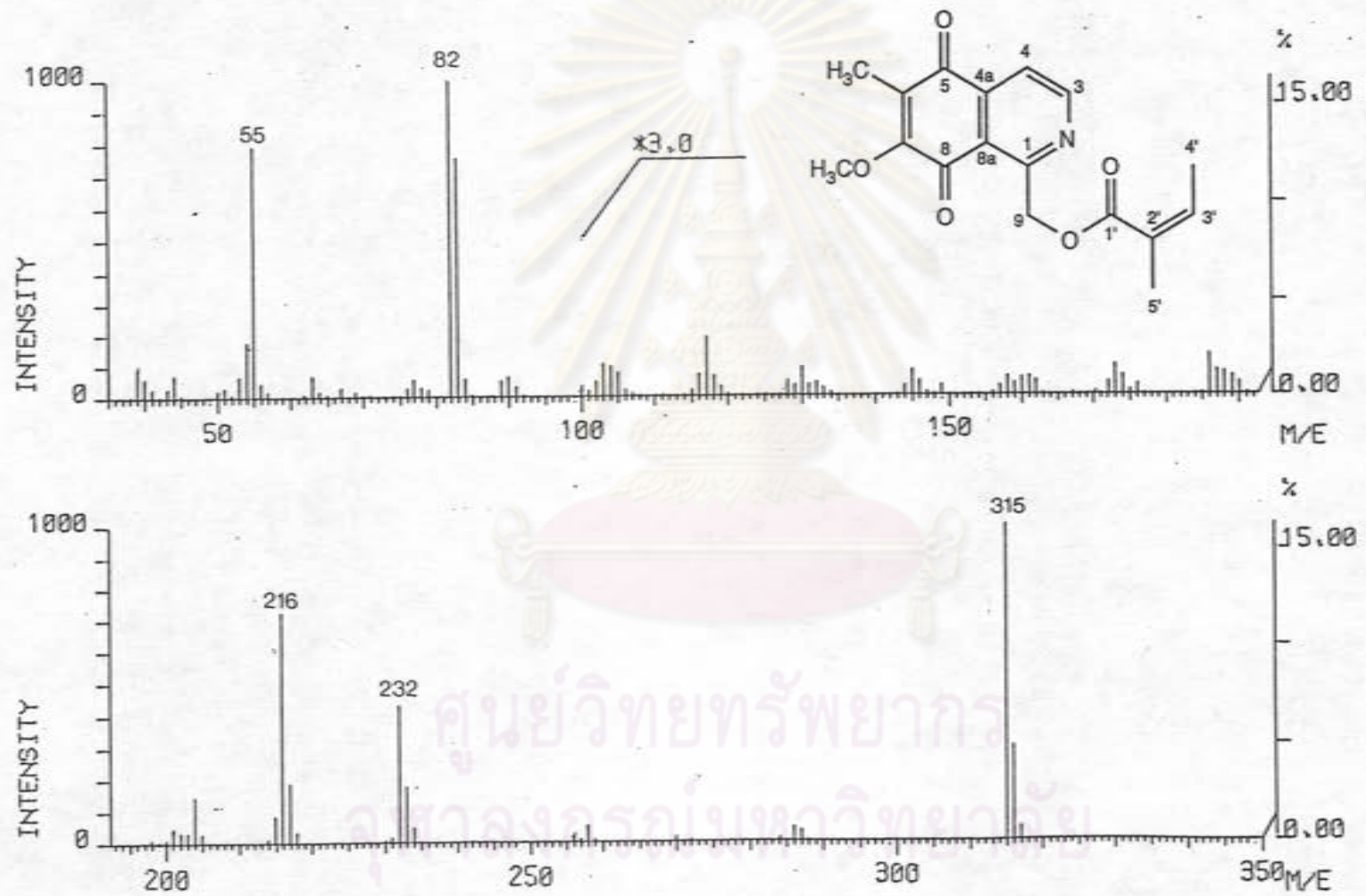


Figure 16 The eims spectrum of compound A-025

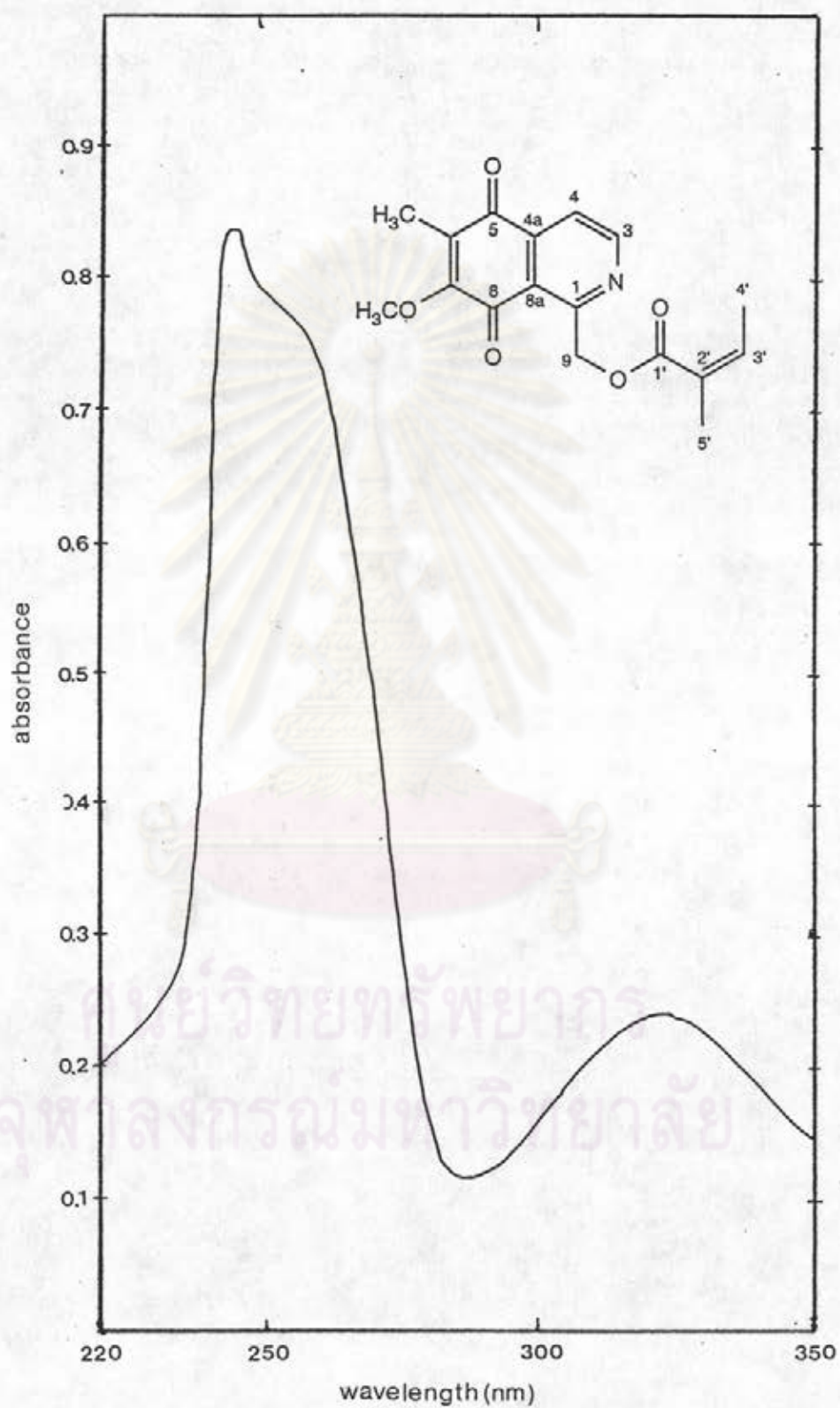


Figure 17 The uv spectrum of compound A-025 (in chloroform)

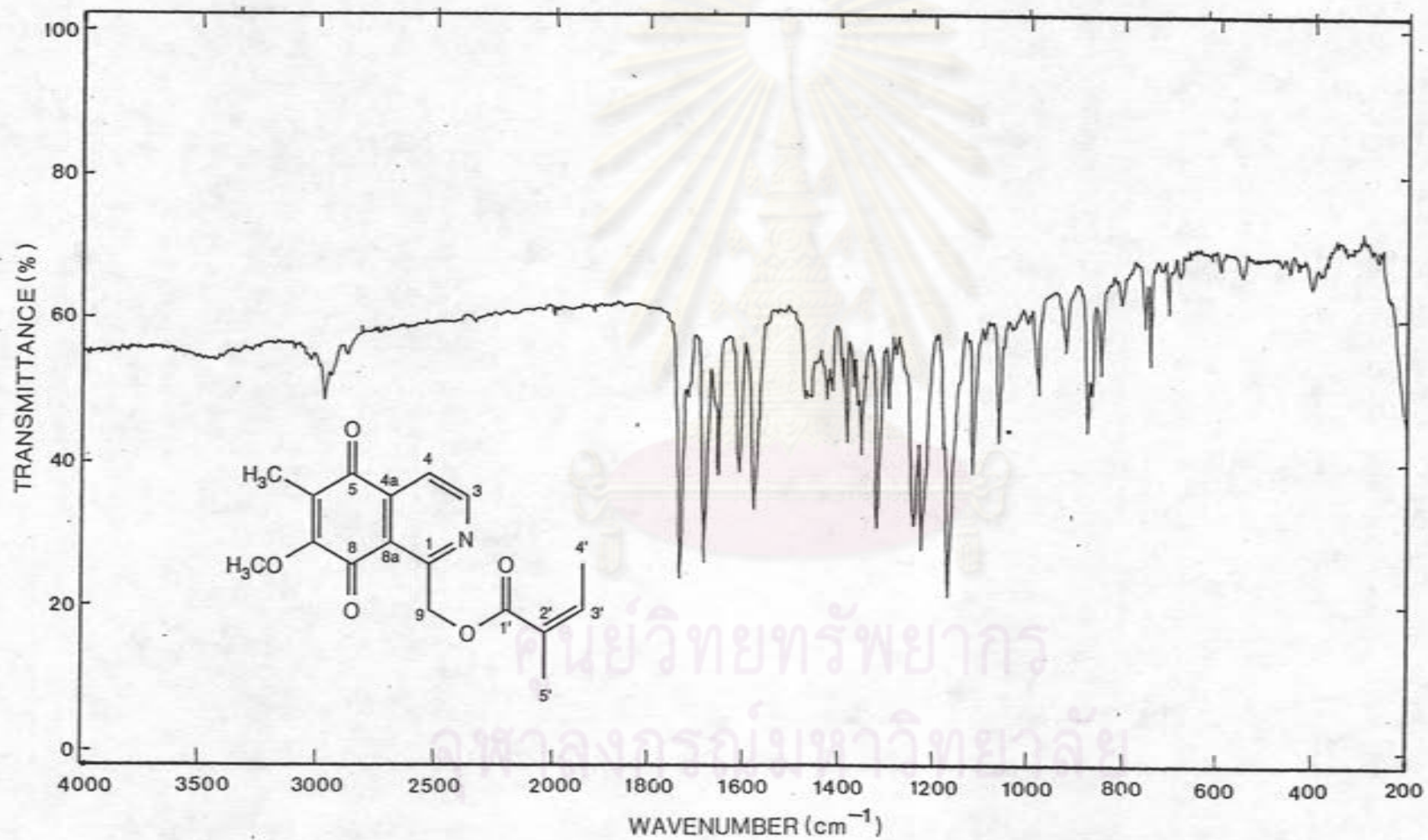


Figure 18 The ir spectrum of compound A-025 (KBr disc)

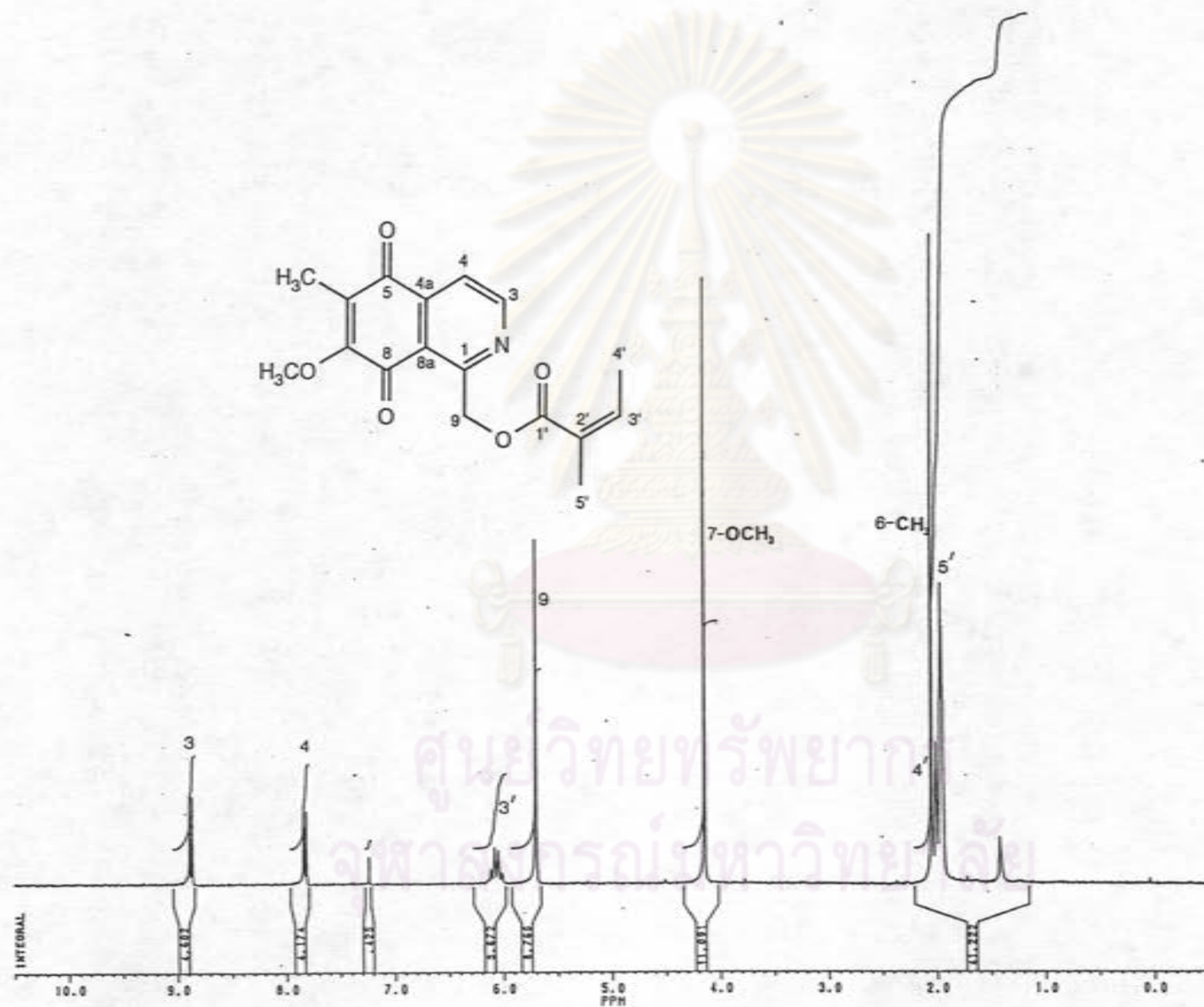


Figure 19 The 200 MHz ^1H nmr spectrum of compound A-025 (in CDCl_3)

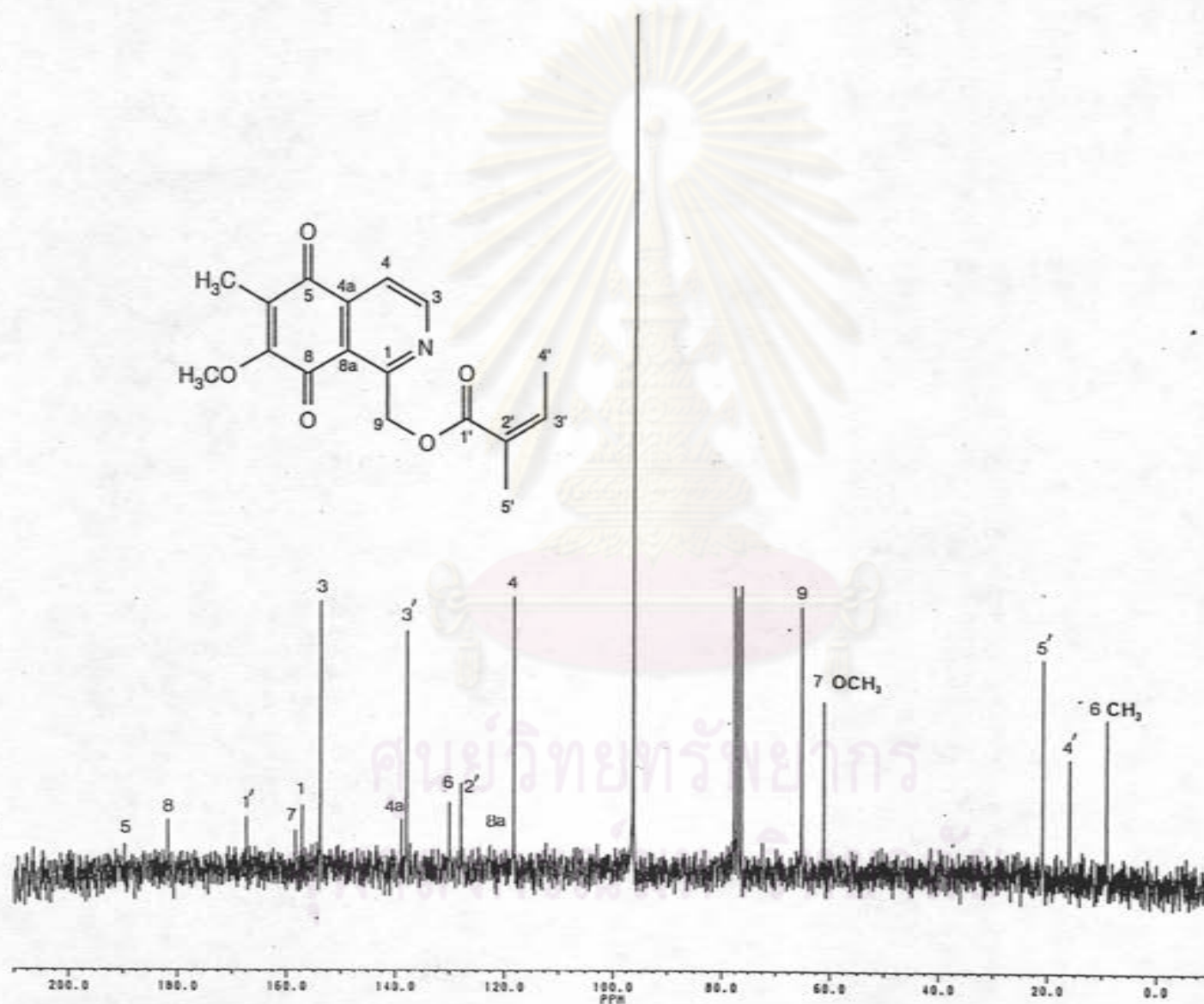


Figure 20 The 50 MHz ^{13}C nmr spectrum of compound A-025 (in CDCl_3)

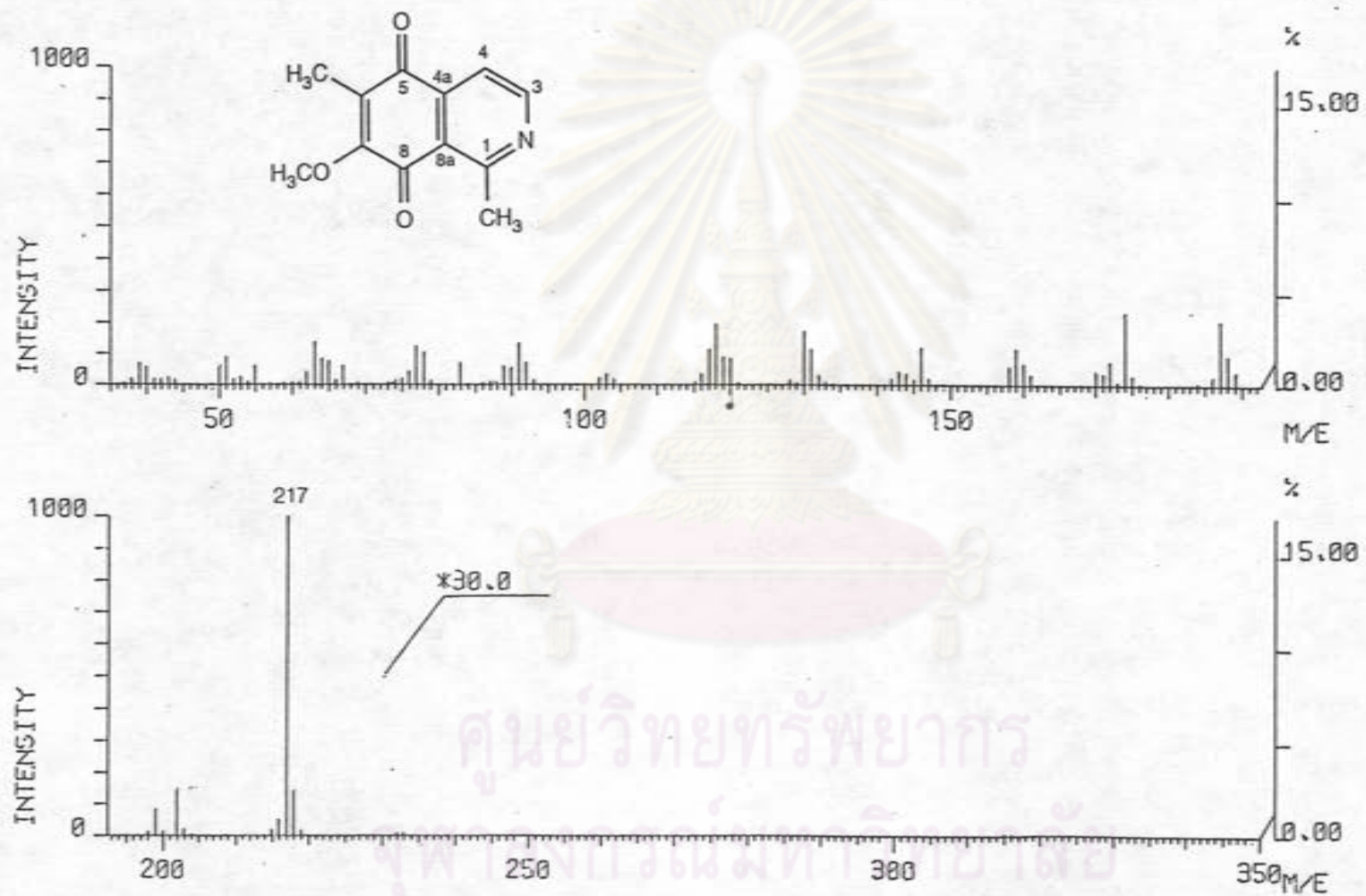


Figure 21 The eims spectrum of compound A-051

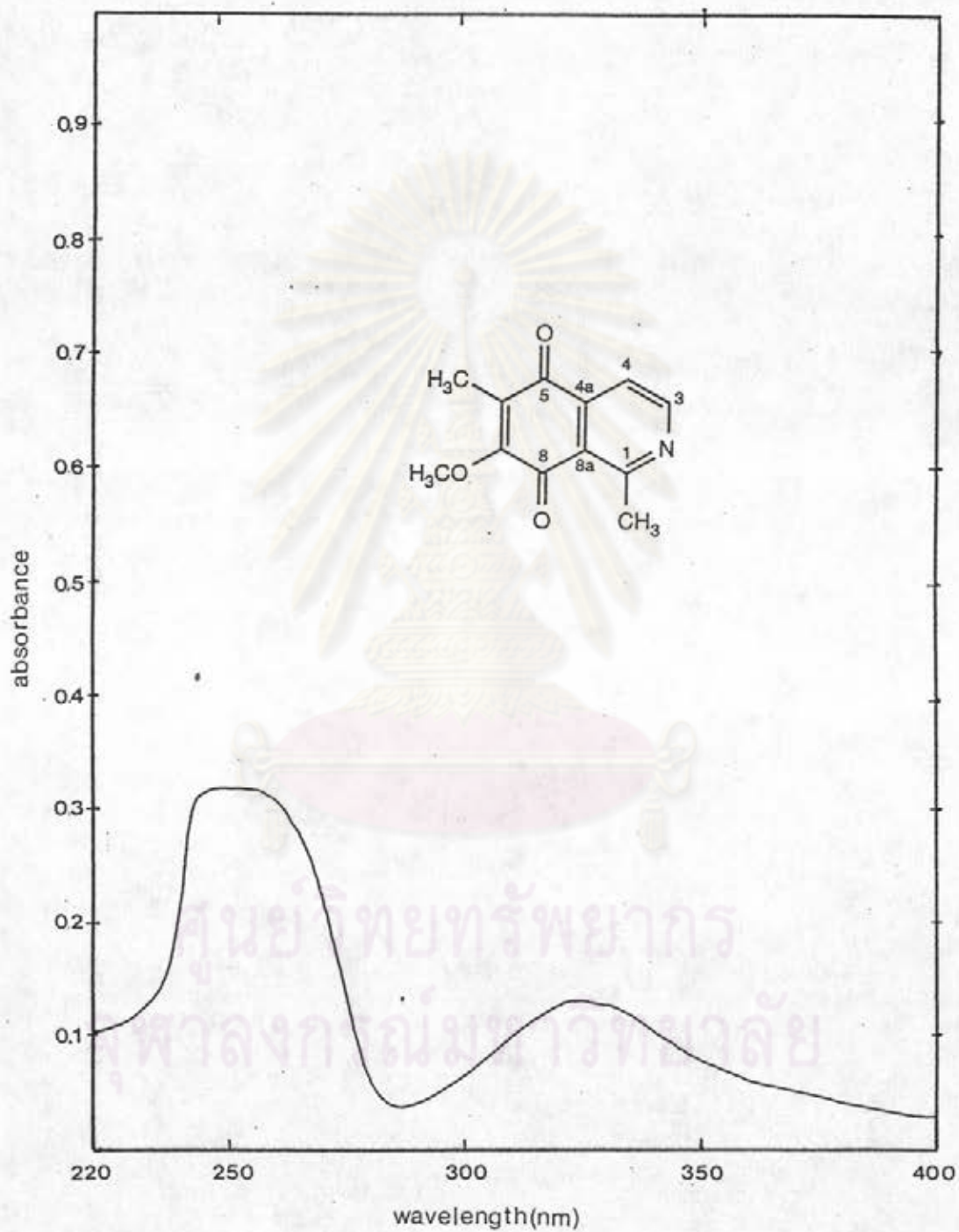


Figure 22 The uv spectrum of compound A-051 (in chloroform)

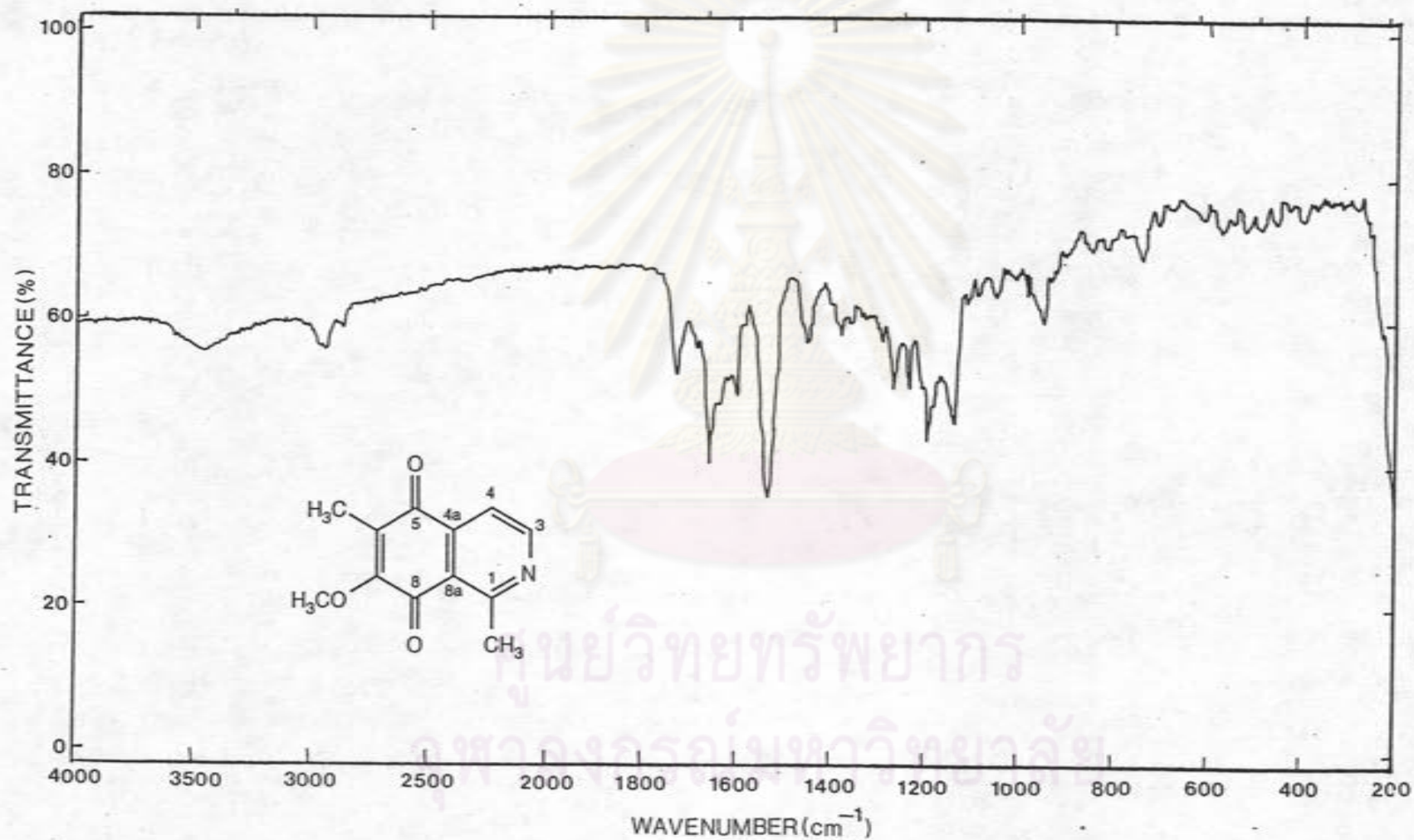


Figure 23 The ir spectrum of compound A-051 (KBr disc)

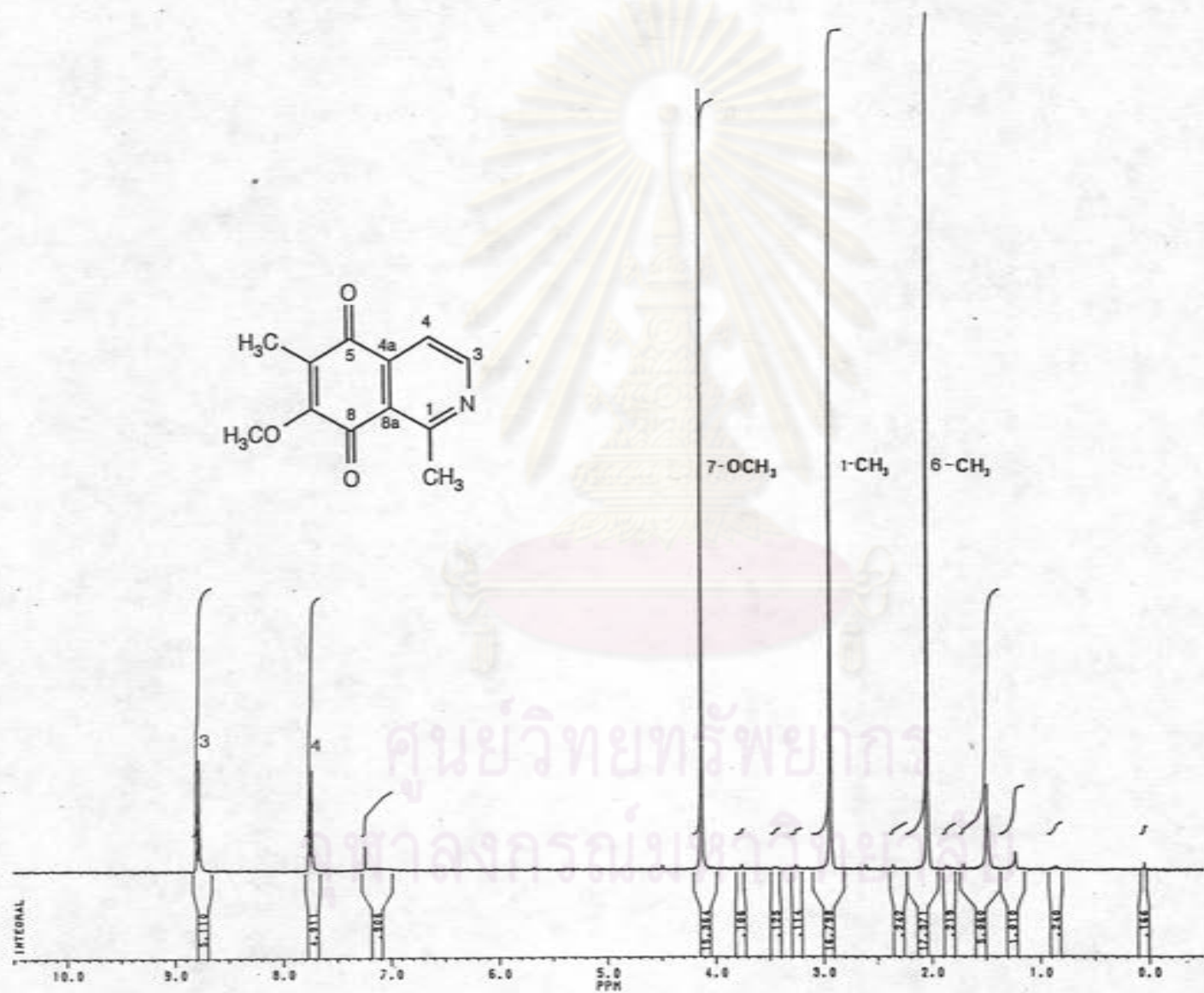


Figure 24 The 200 MHz ¹H nmr spectrum of compound A-051 (in CDCl₃).

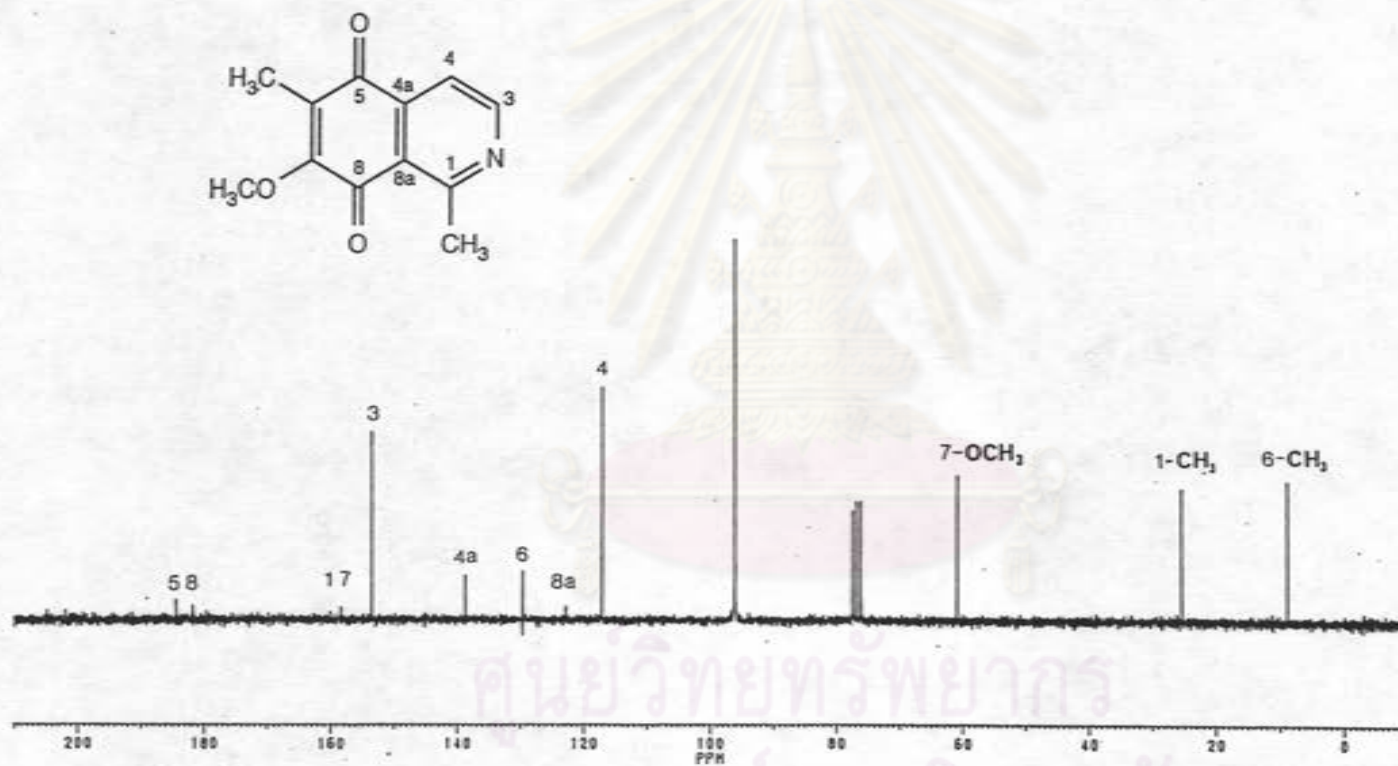


Figure 25 The 50 MHz ^{13}C nmr spectrum of compound A-051 (in CDCl_3)

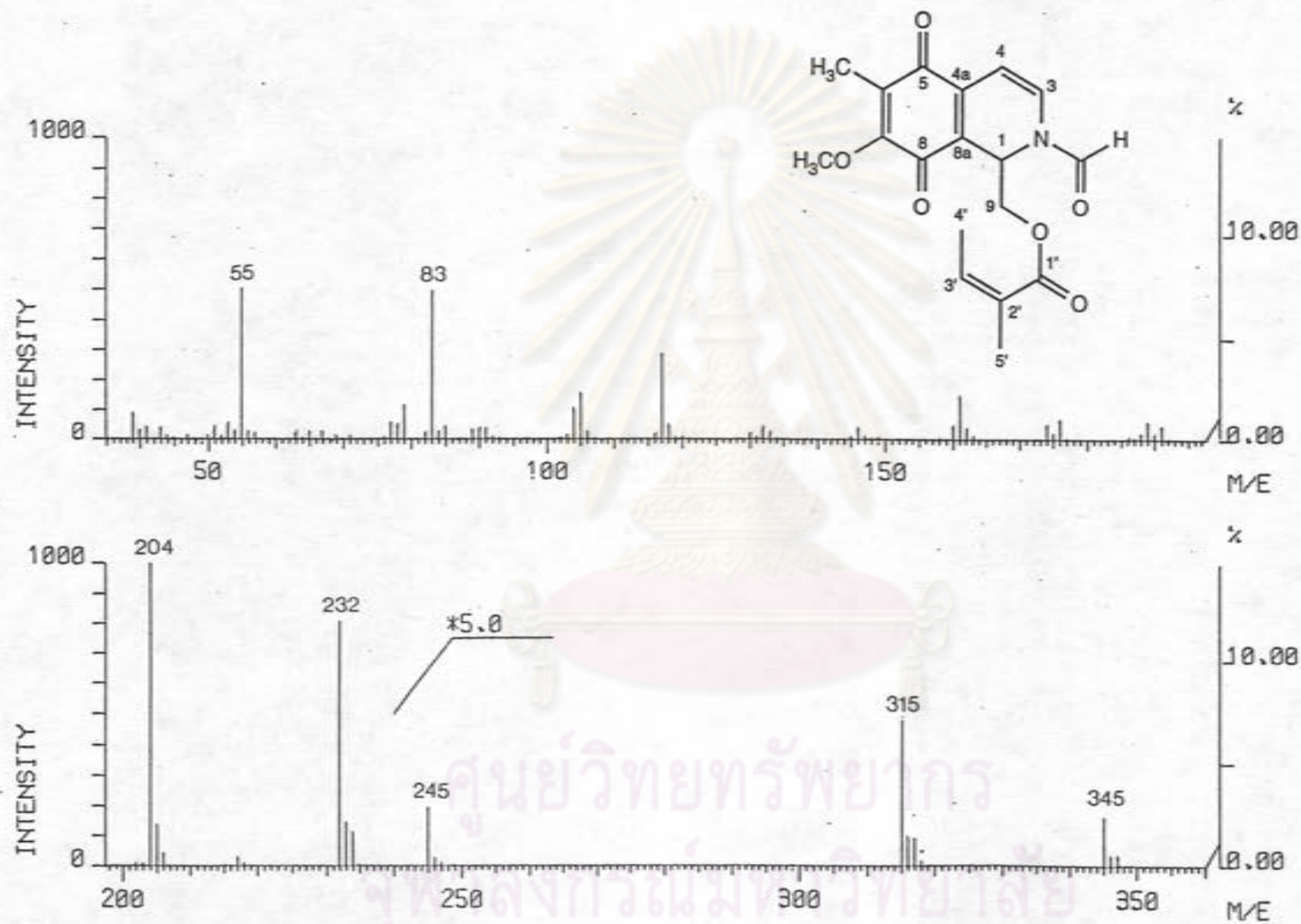


Figure 26 The eims spectrum of compound A-056

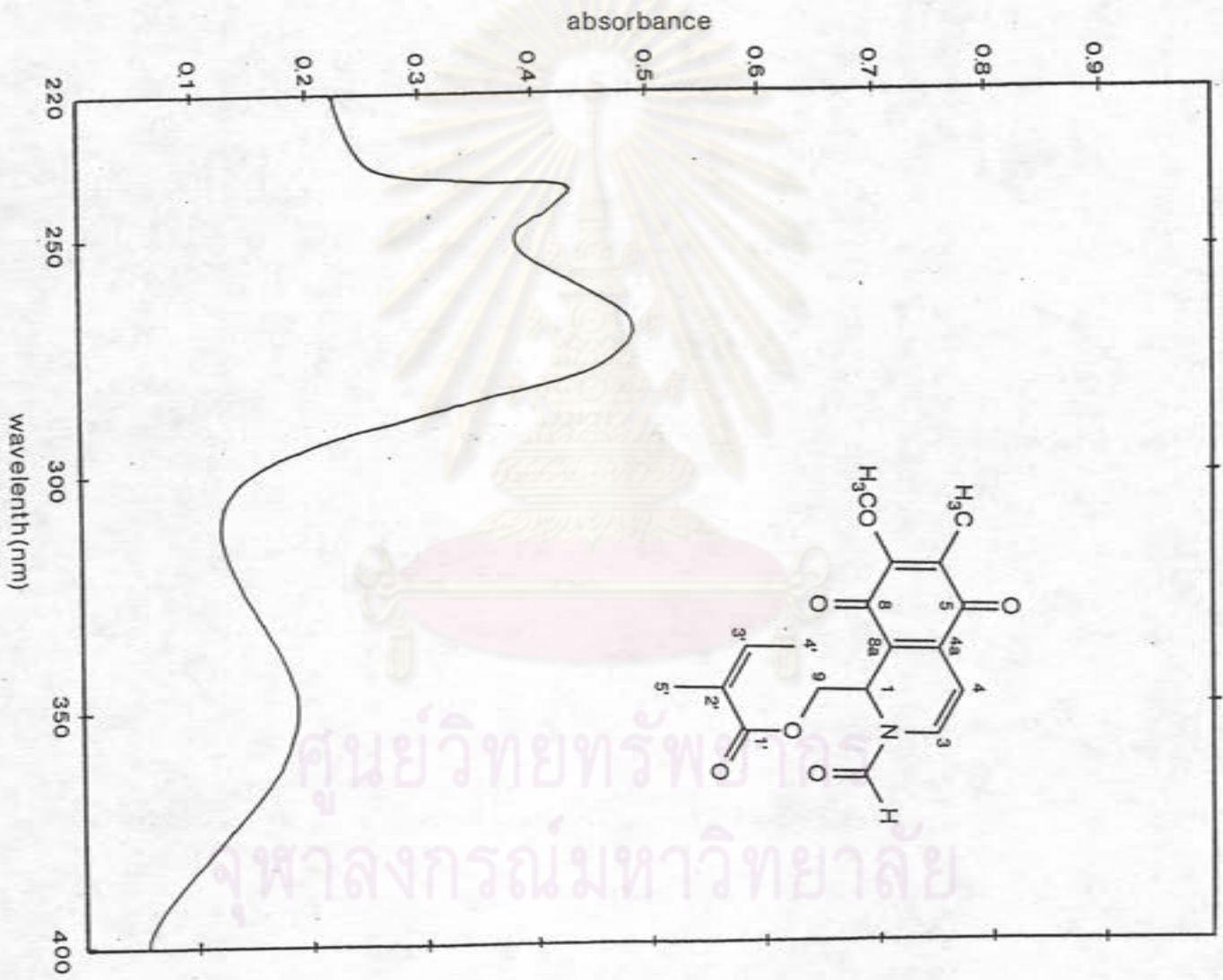


Figure 27 The uv spectrum of compound A-056 (in chloroform)

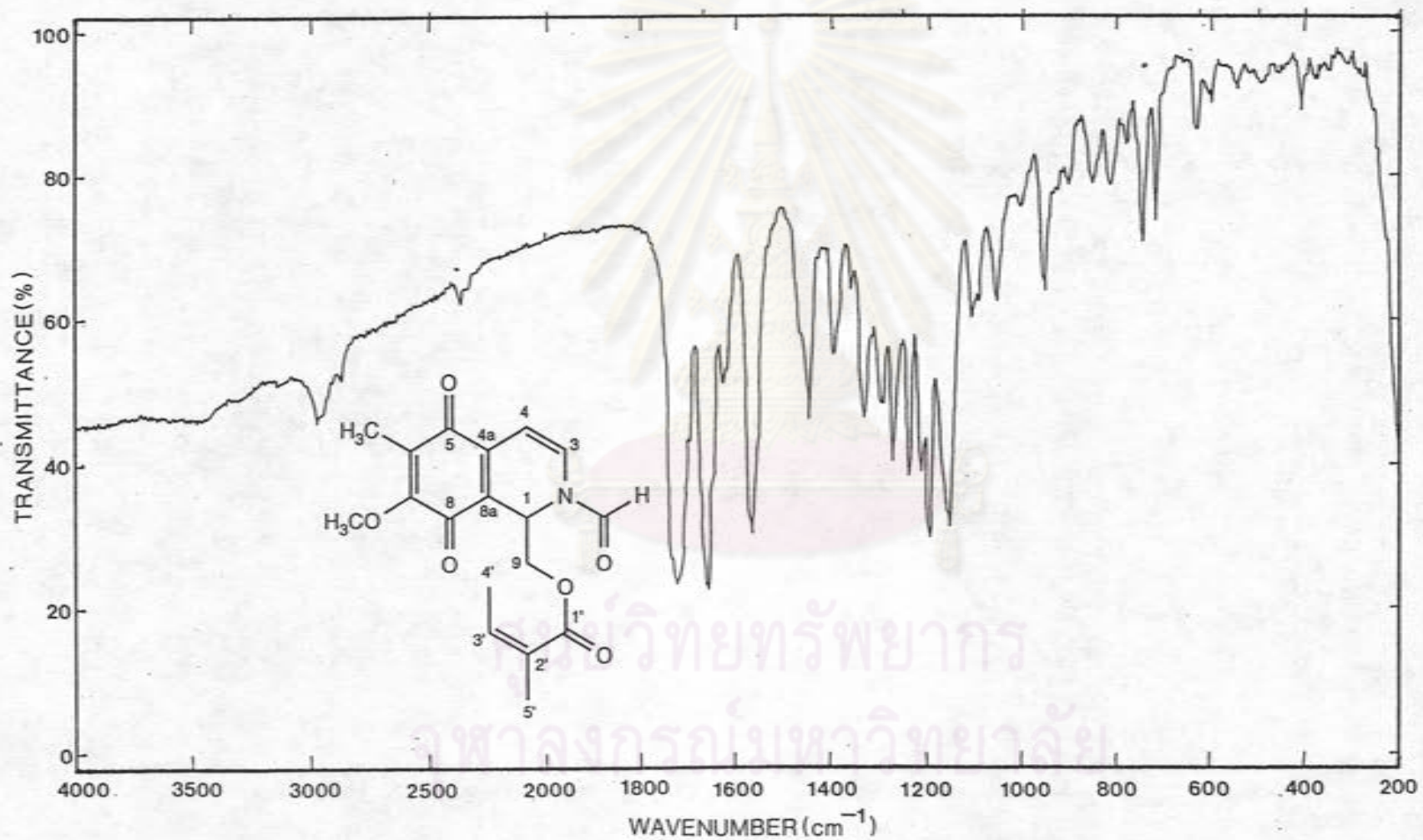


Figure 28 The ir spectrum of compound A-056 (KBr disc)

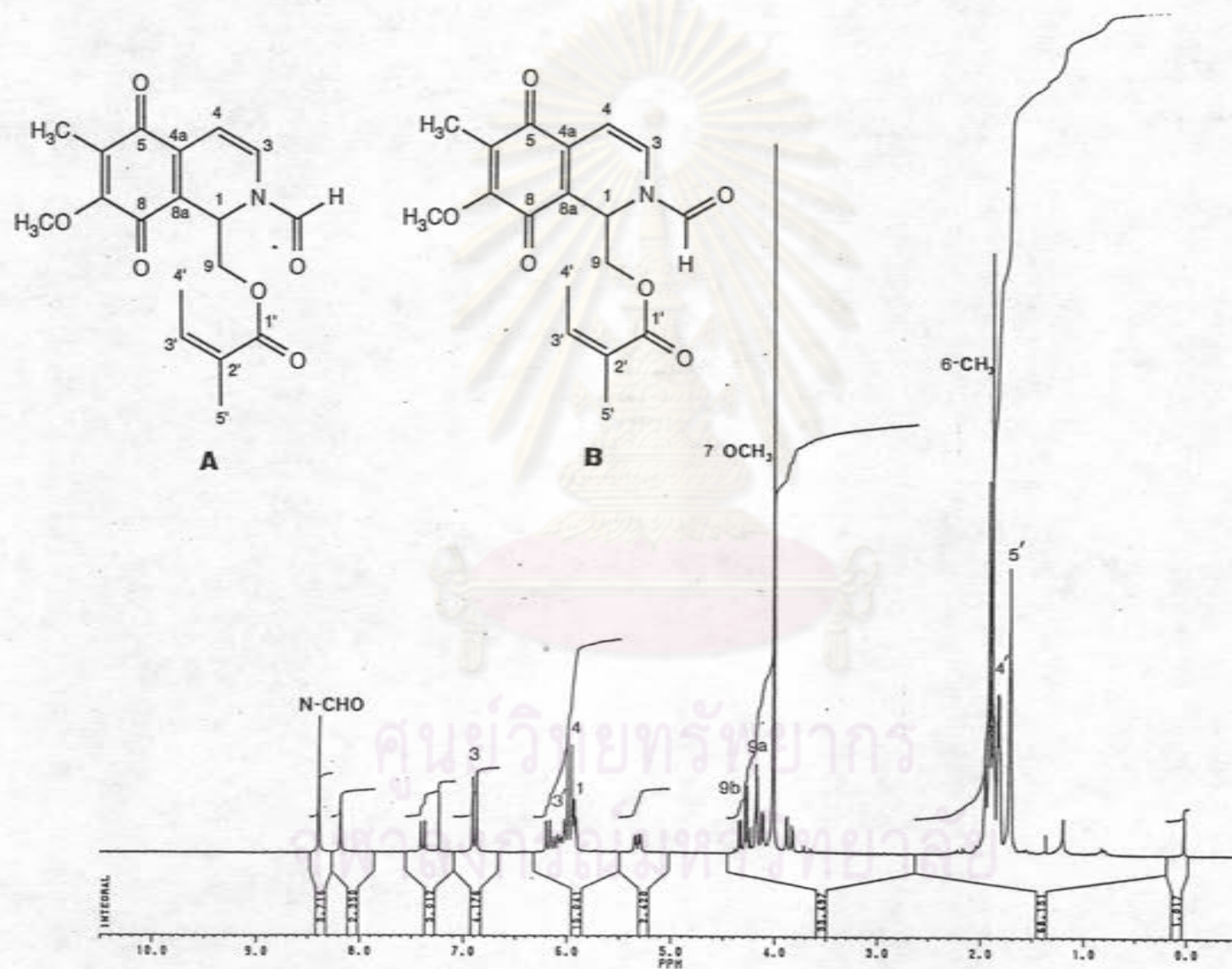


Figure 29 The 200 MHz ^1H nmr spectrum of compound A-056 (in CDCl_3)

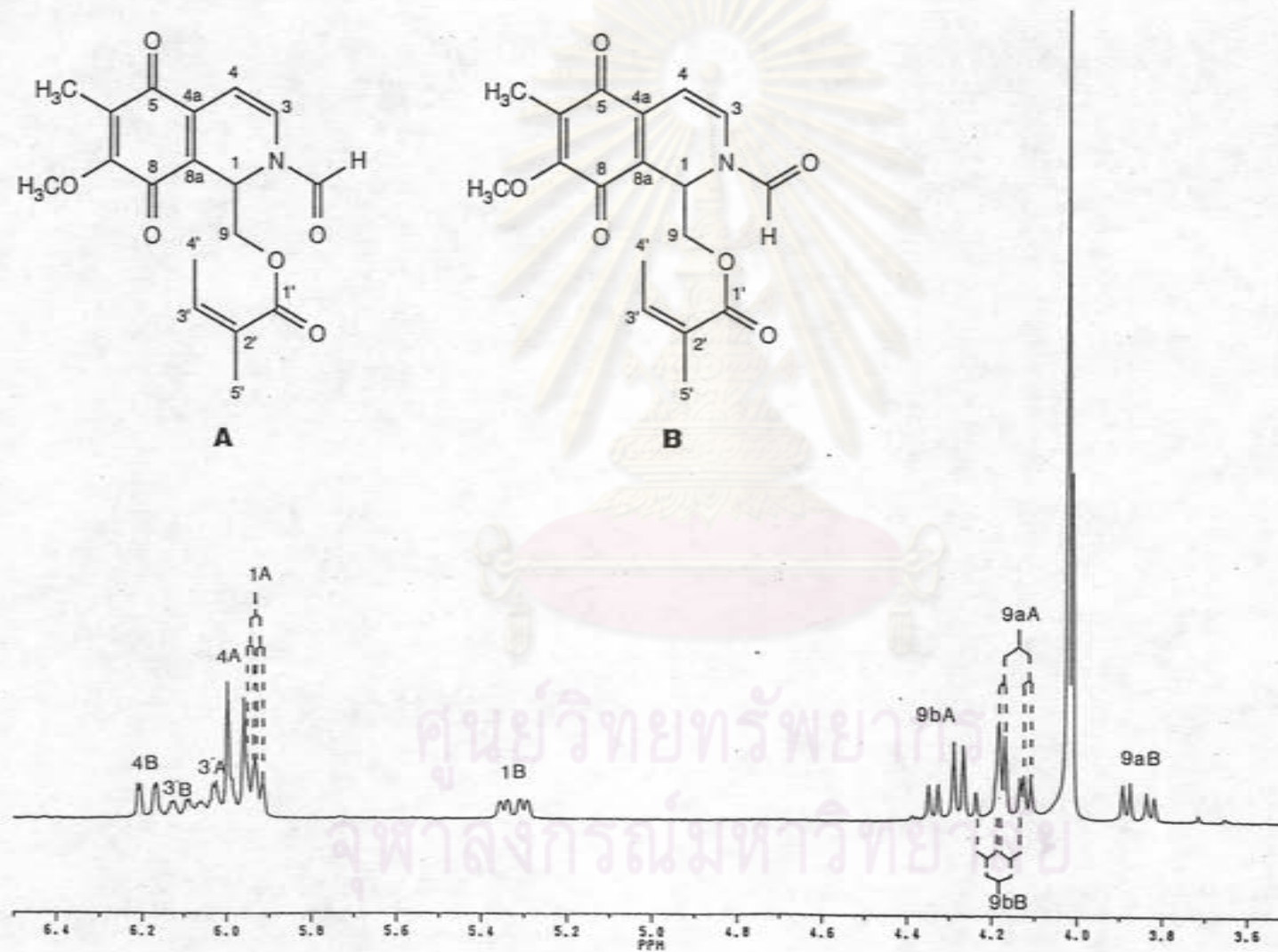
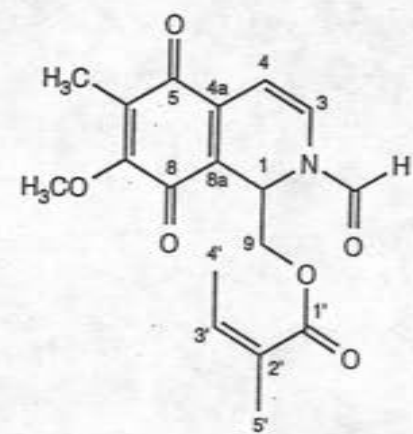
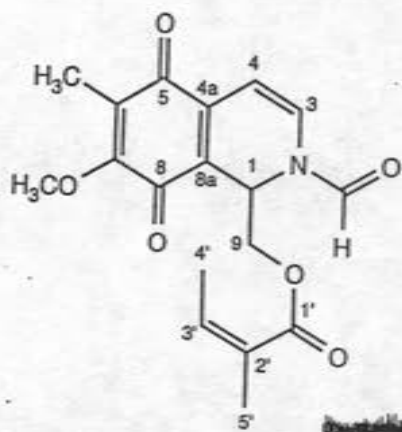


Figure 30 The 200 MHz ^1H nmr spectrum of compound A-056 (in CDCl_3) (expanded from 3.5 - 6.5 ppm)



A



B

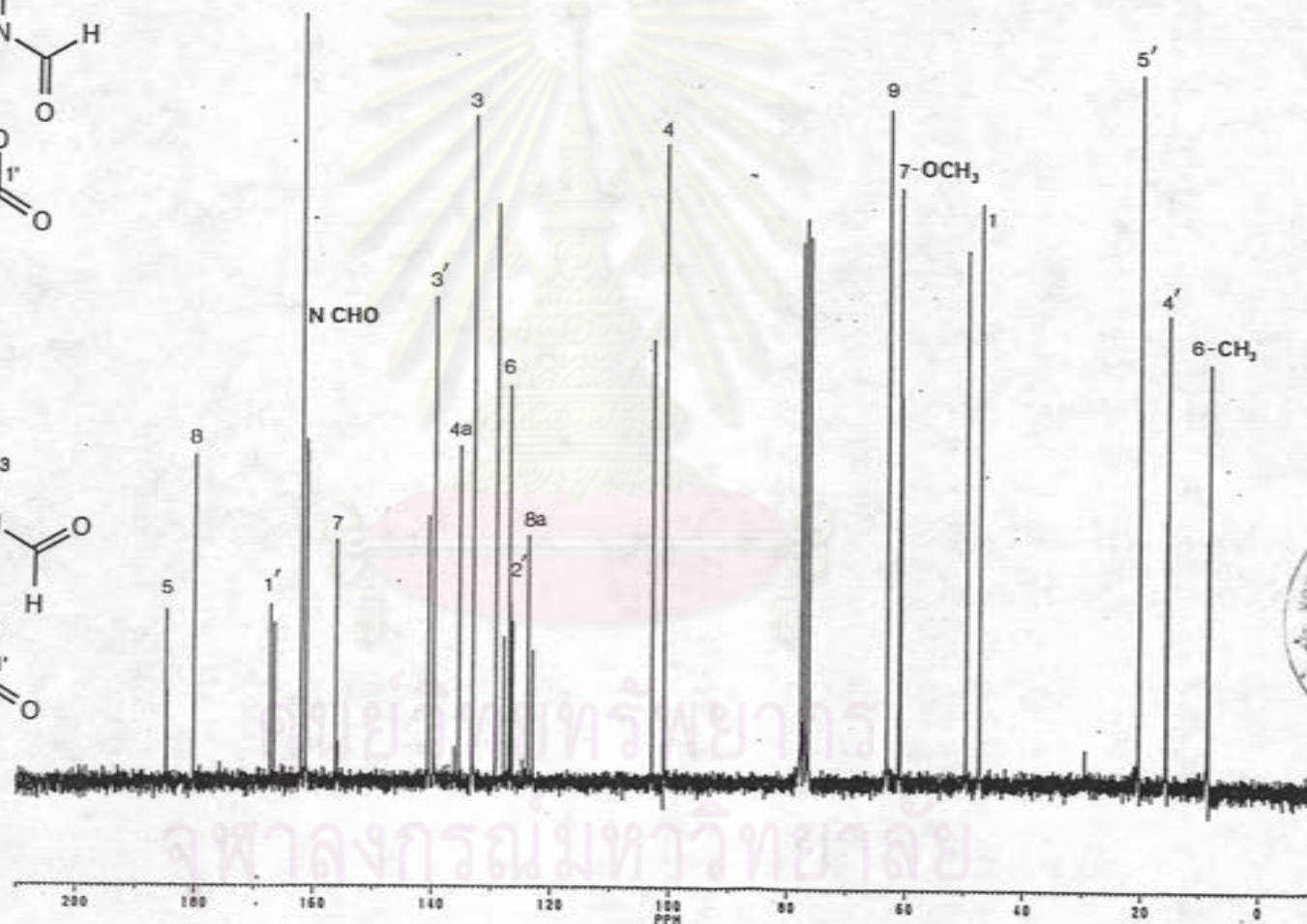


Figure 31 The 50 MHz ^{13}C nmr spectrum of compound A-056 (in CDCl_3)

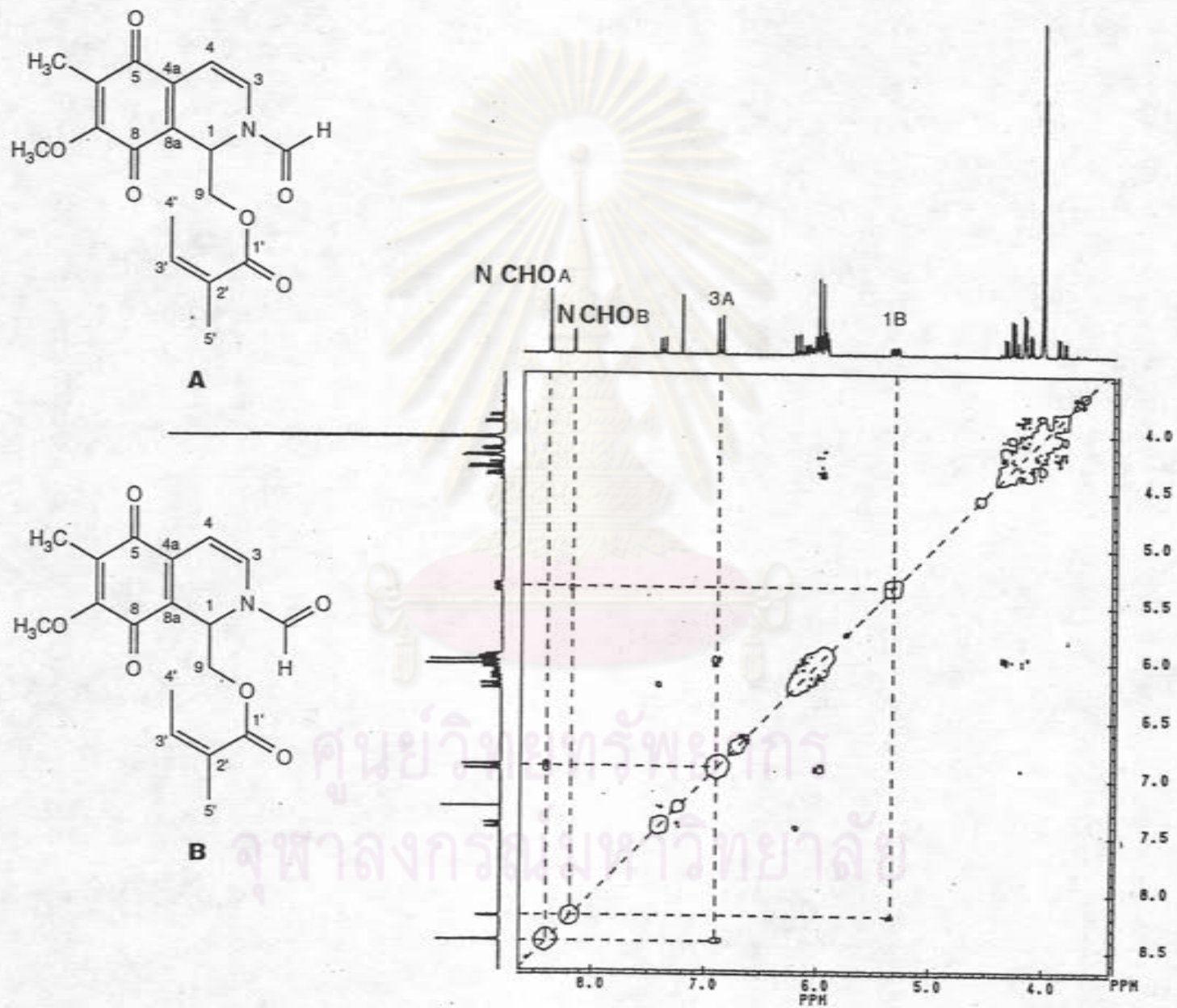


Figure 32 The 200 MHz NOESY spectrum of compound A-056 (in CDCl₃)

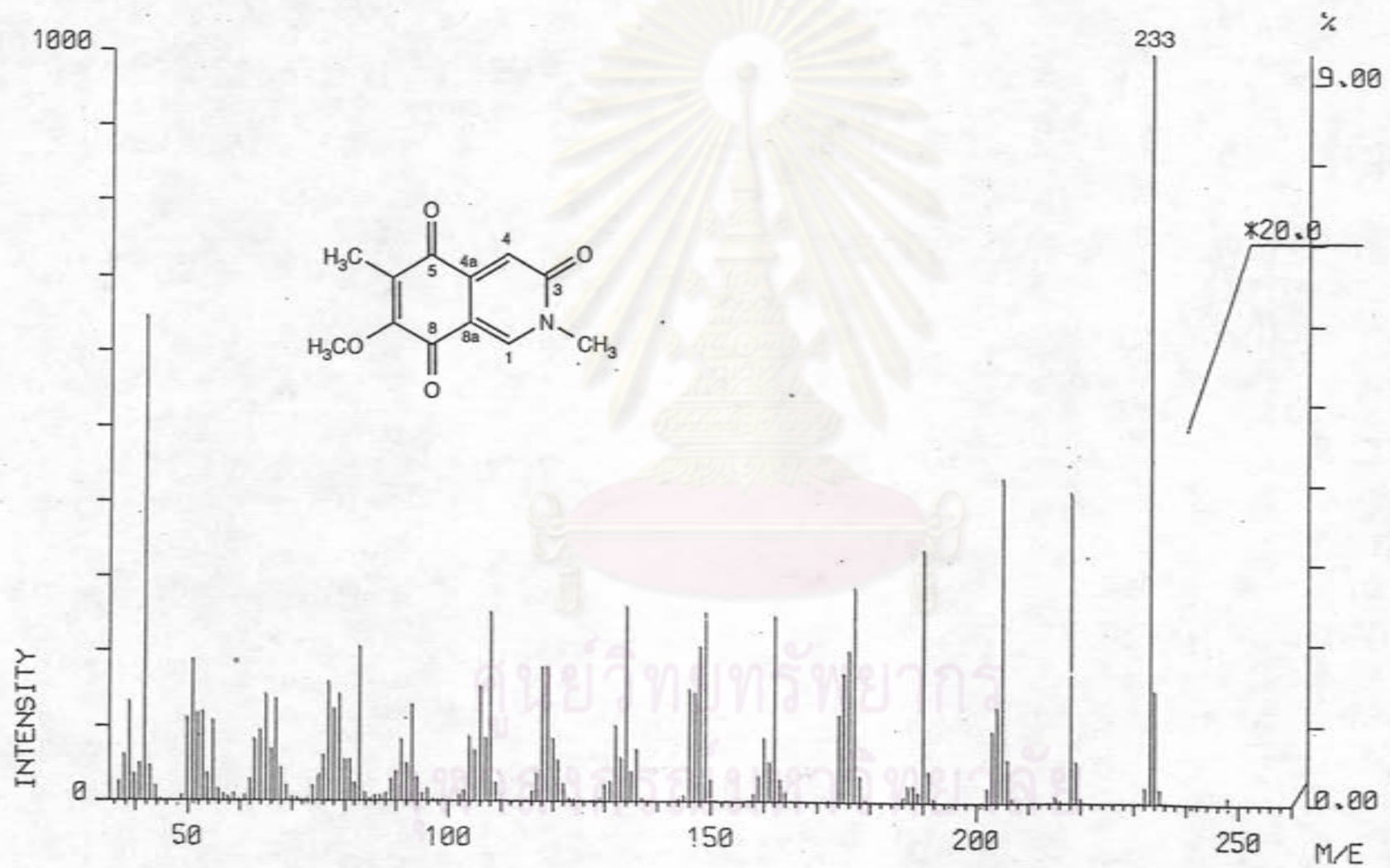


Figure 33 The eims spectrum of compound A-082

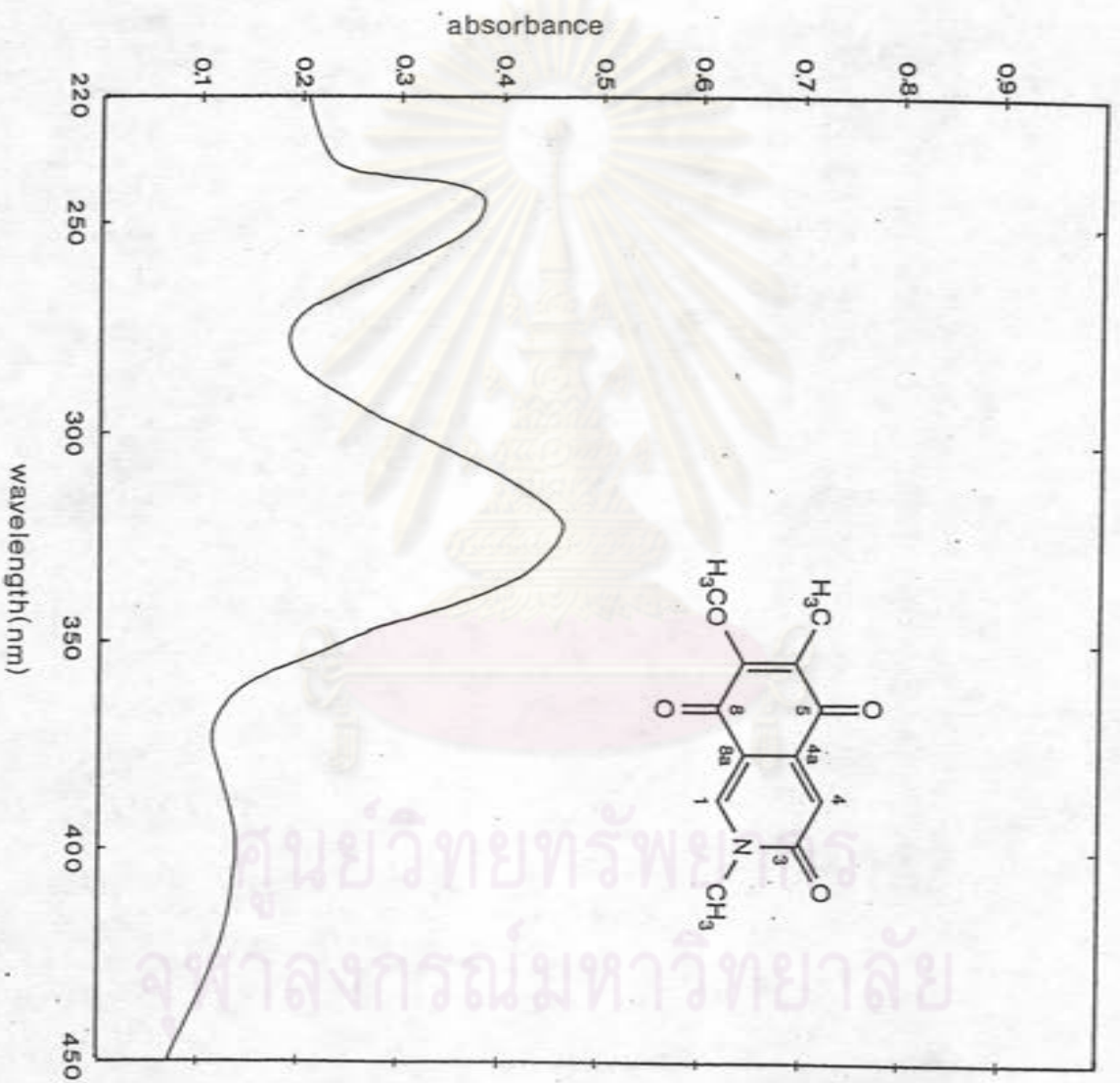


Figure 34 The uv spectrum of compound A-082 (in chloroform)

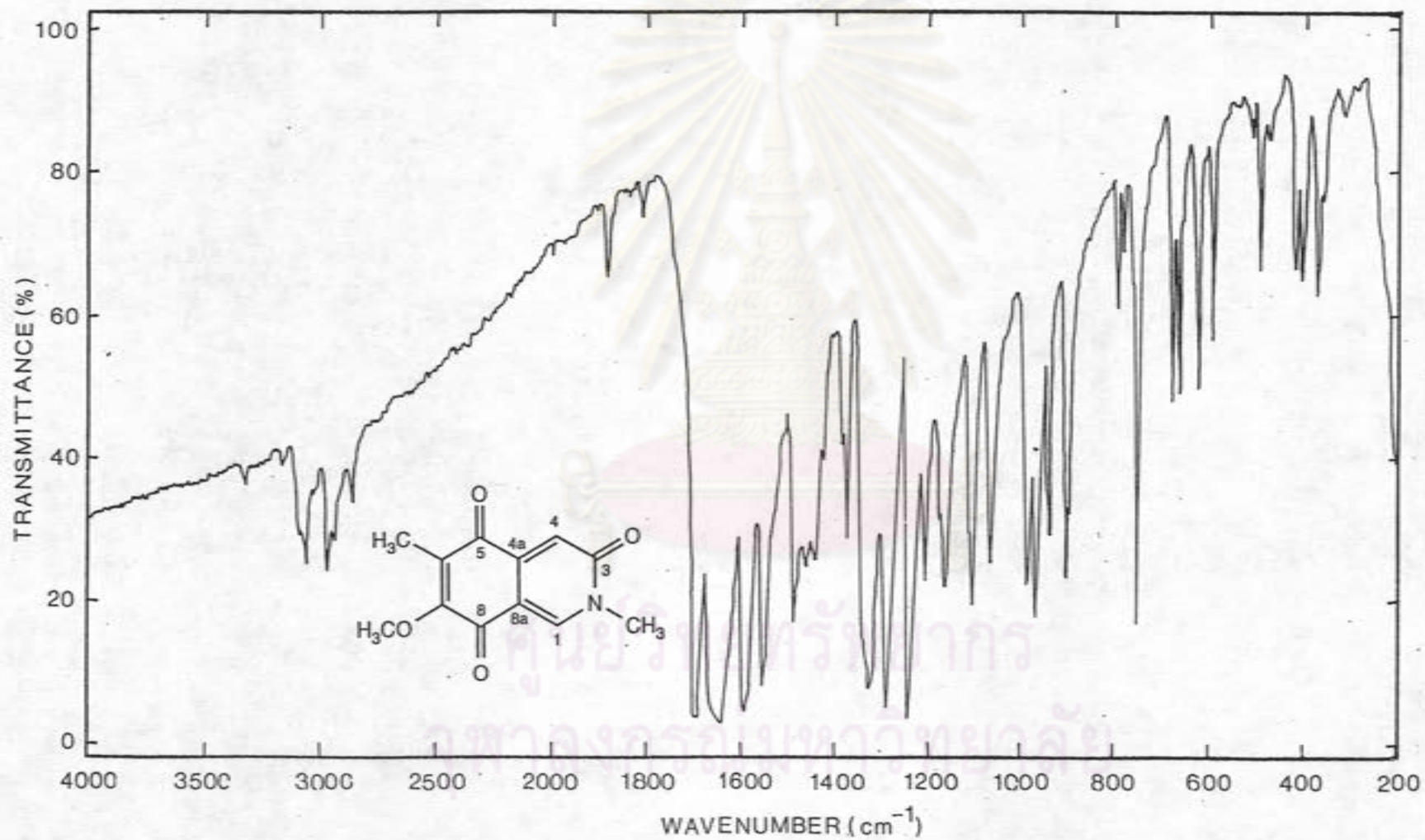


Figure 35 The ir spectrum of compound A-082 (KBr disc)

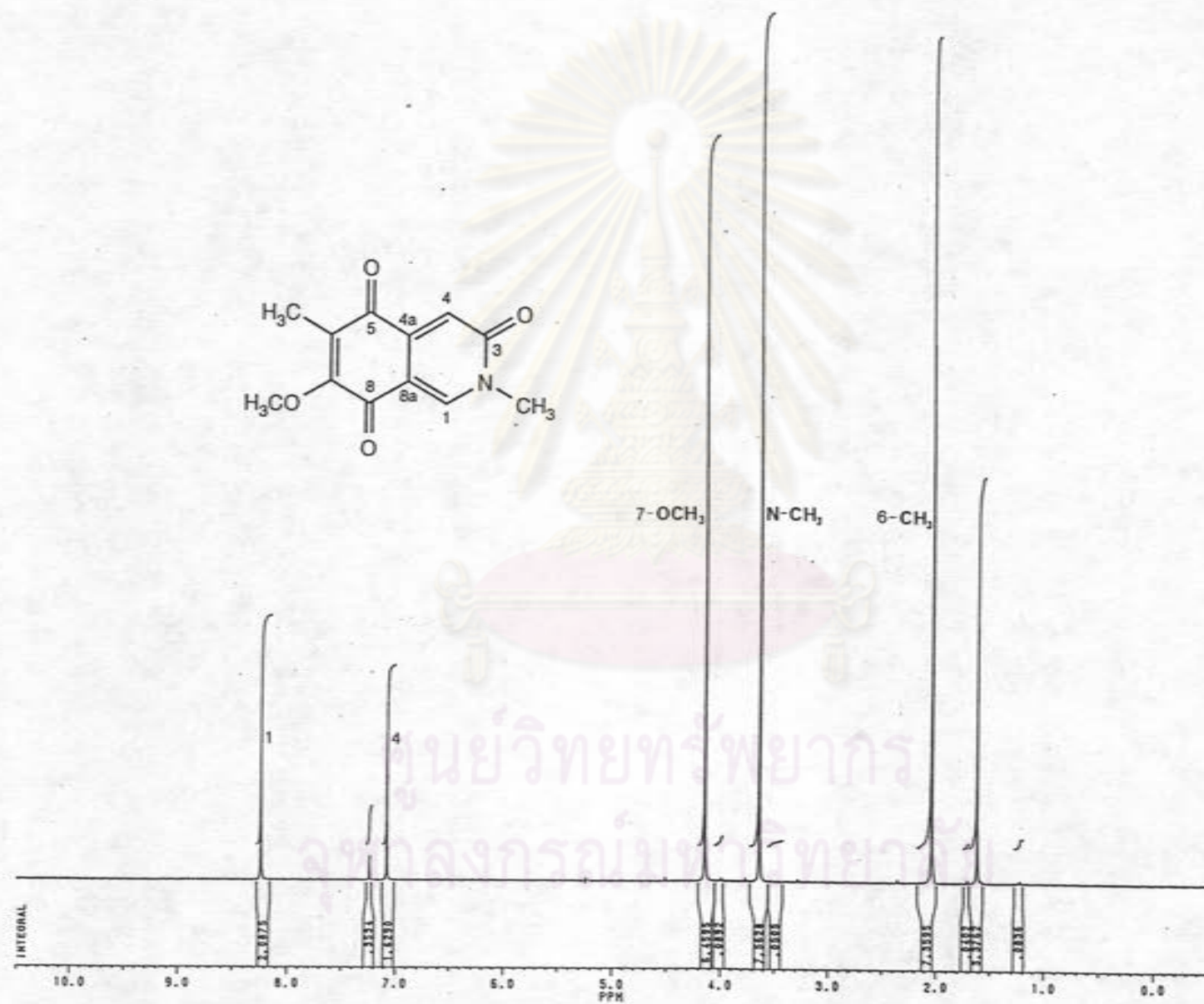


Figure 36 The 200 MHz ¹H nmr spectrum of compound A-082 (in CDCl₃)

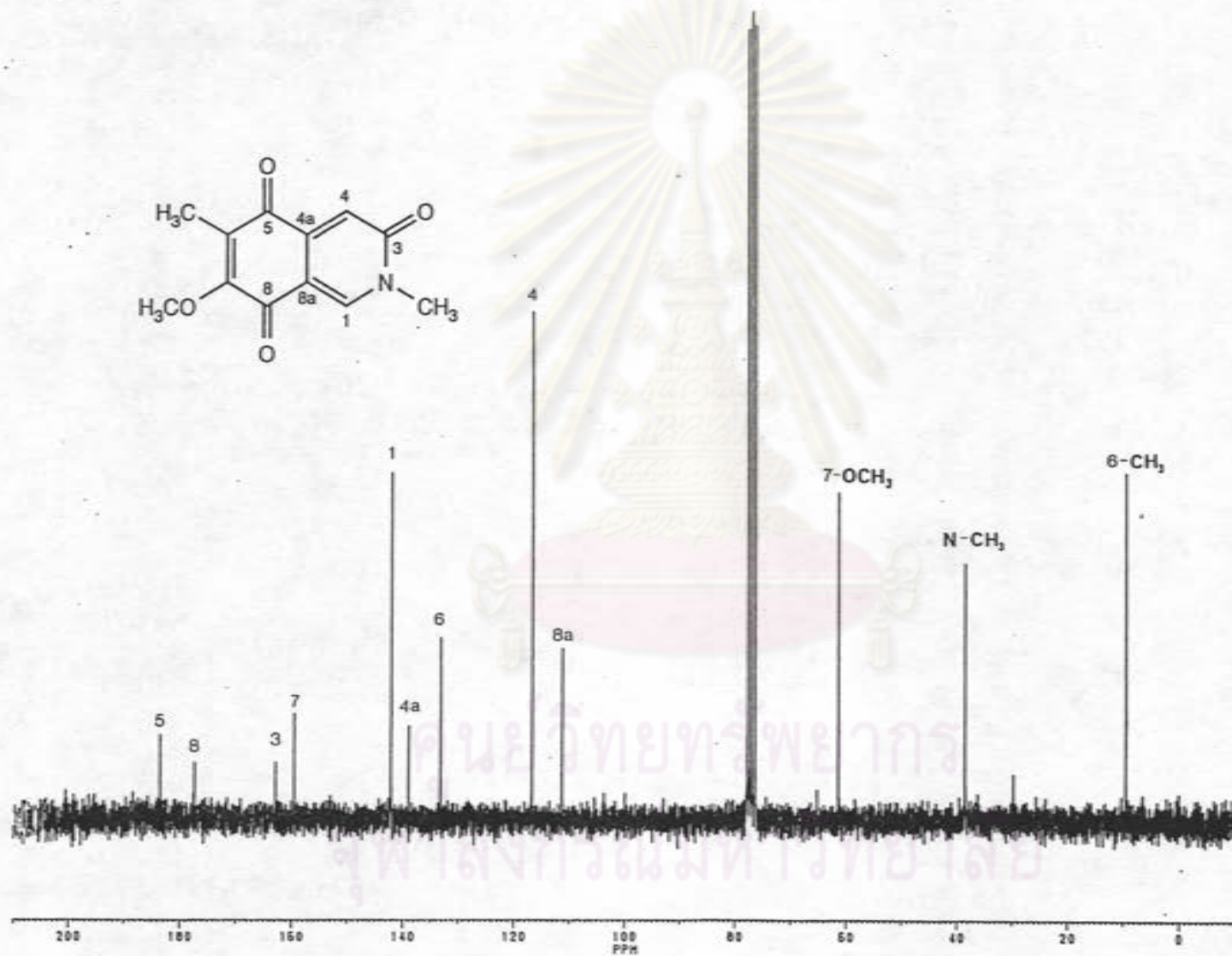


Figure 37 The 50 MHz ^{13}C nmr spectrum of compound A-082 (in CDCl_3)

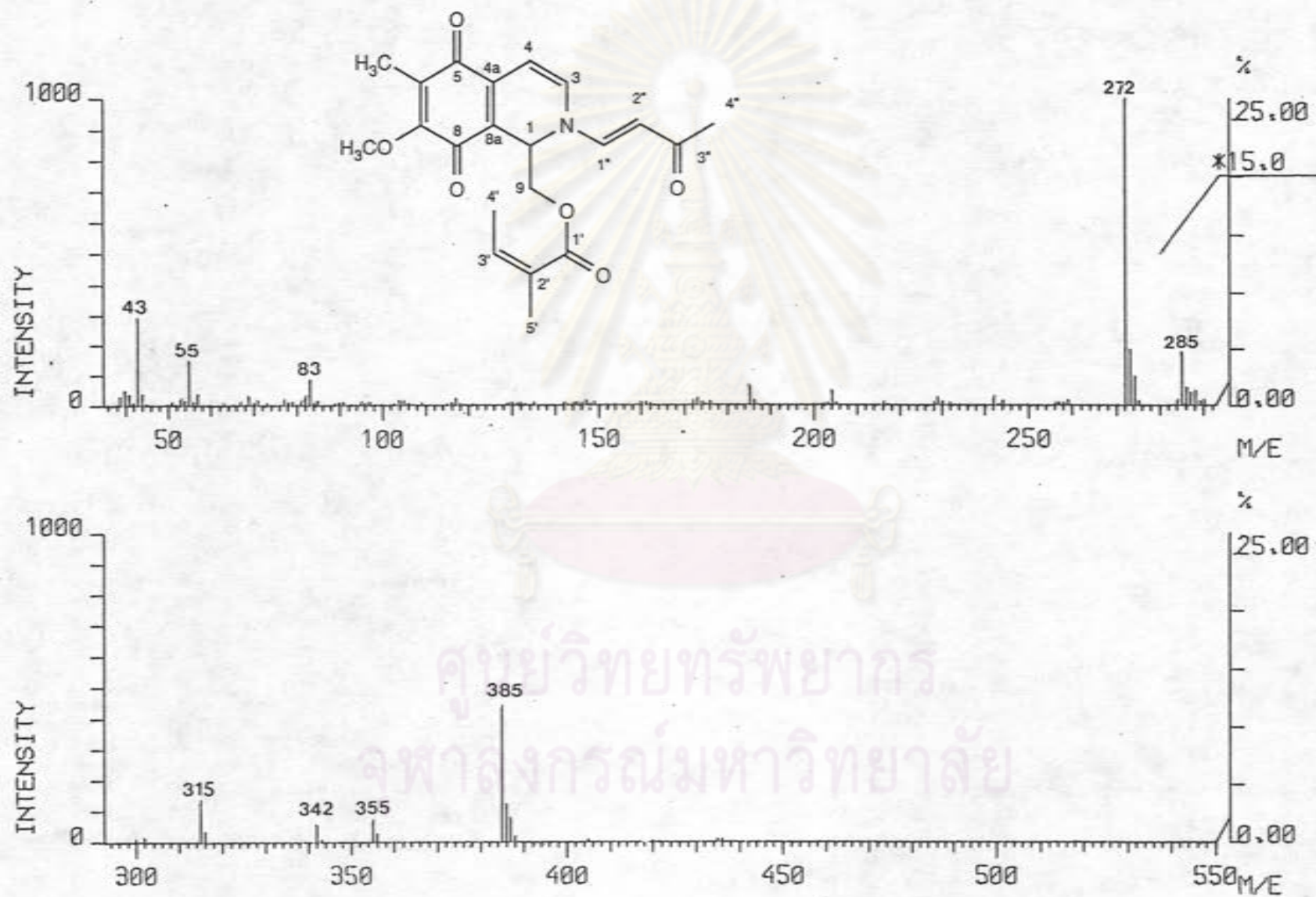


Figure 38 The eims spectrum of compound A-073

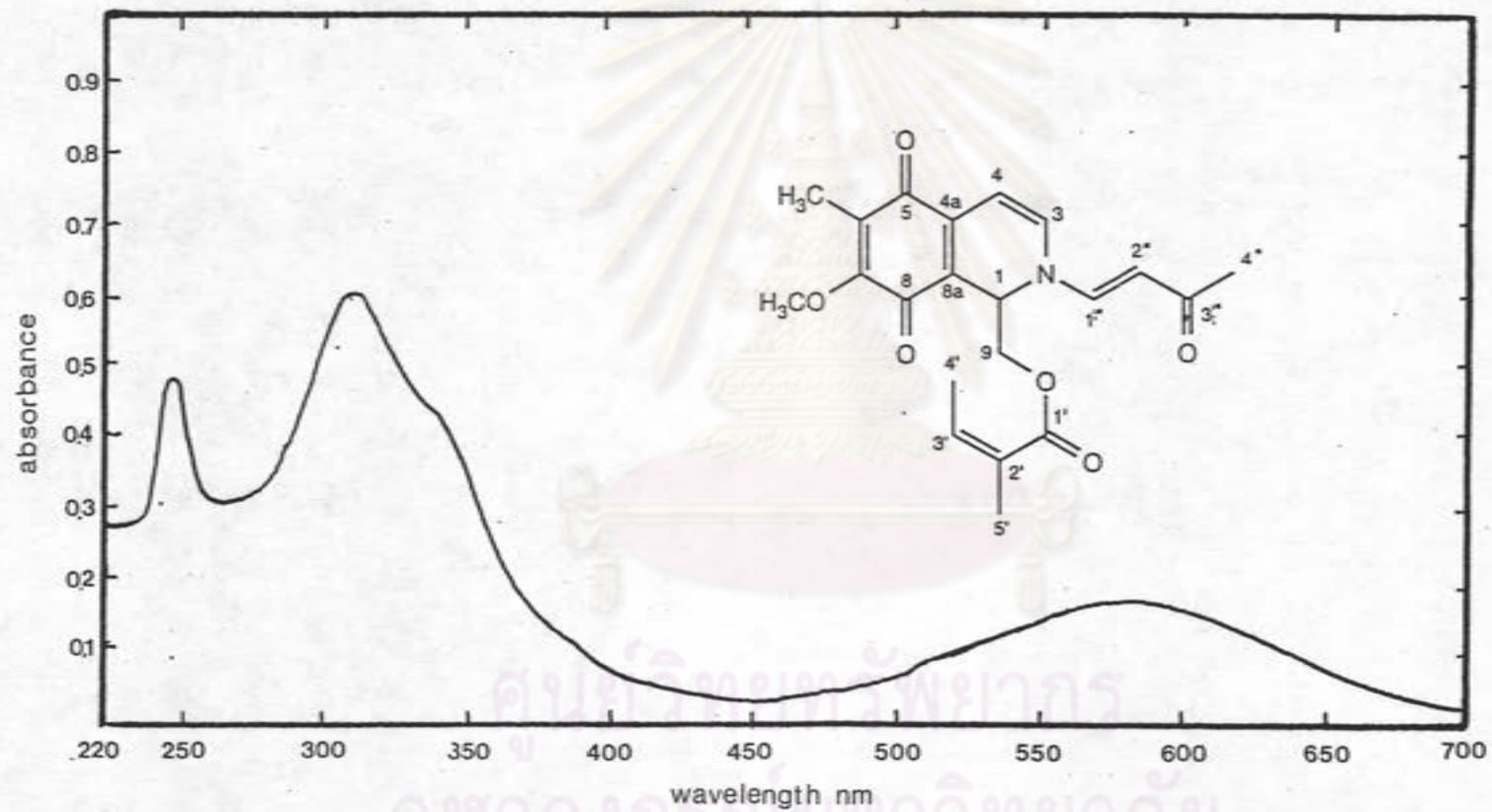


Figure 39 The uv spectrum of compound A-073 (in chloroform)

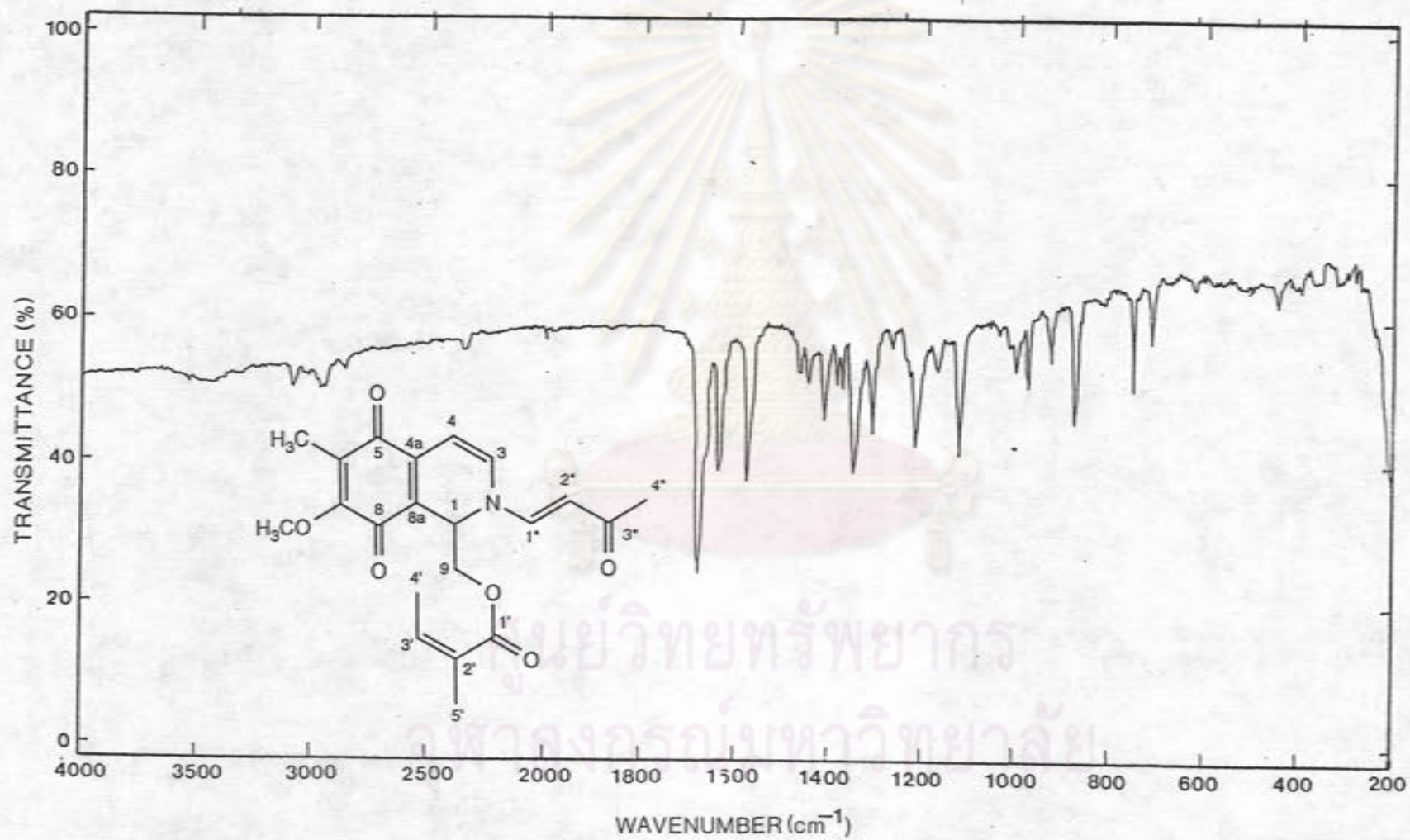


Figure 40 The ir spectrum of compound A-073 (KBr disc)

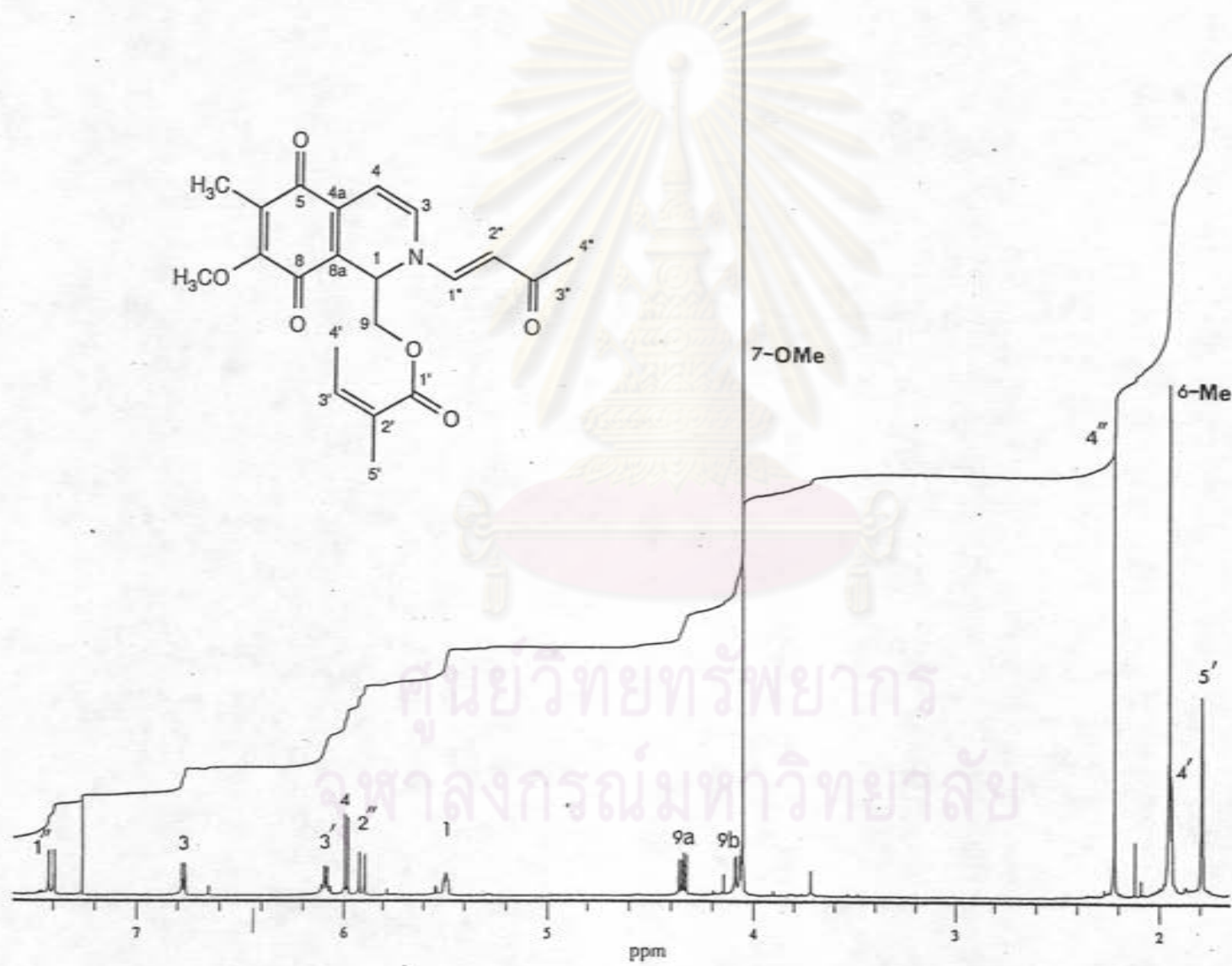


Figure 41 The 500 MHz ^1H nmr spectrum of compound A-073 (in CDCl_3)

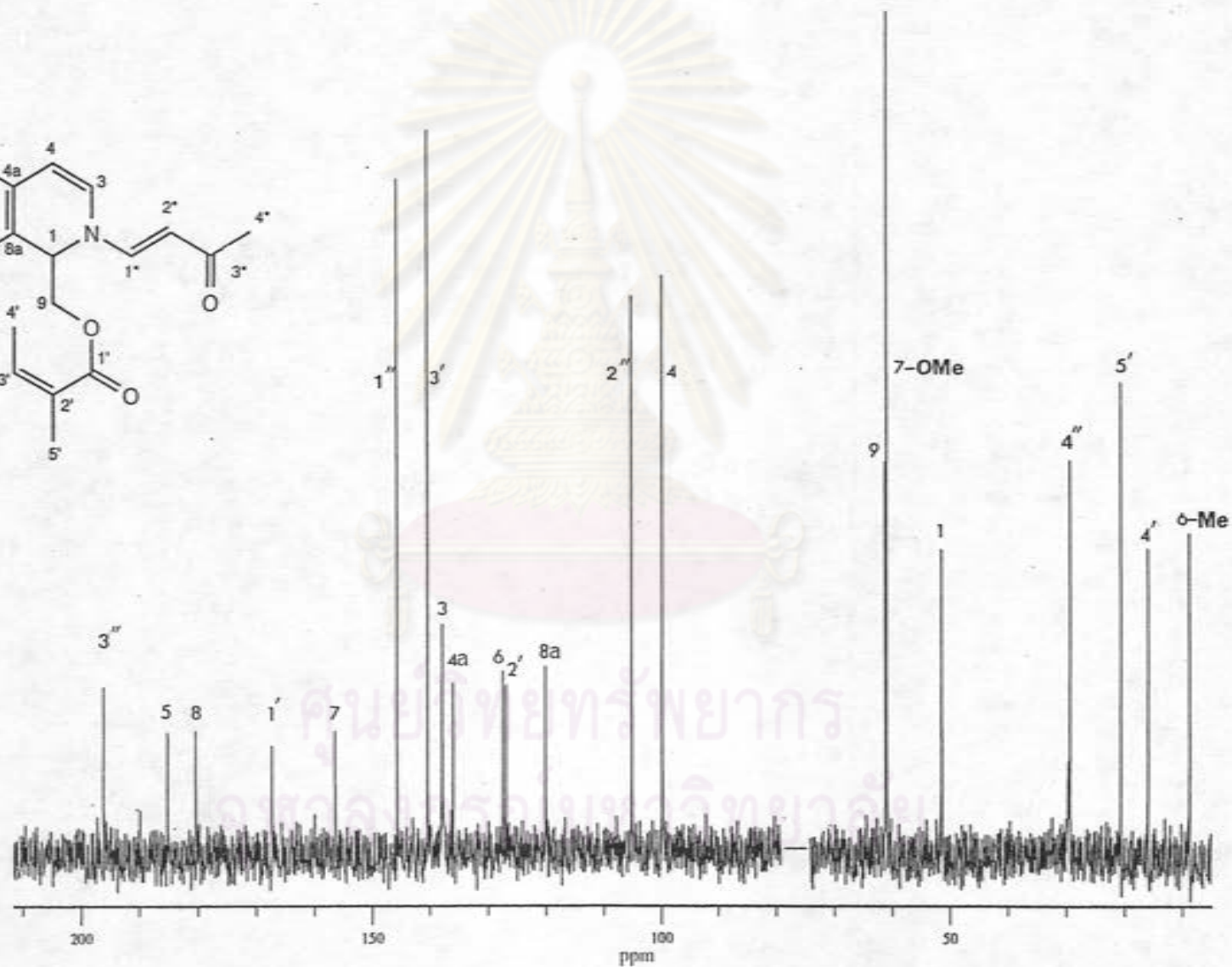
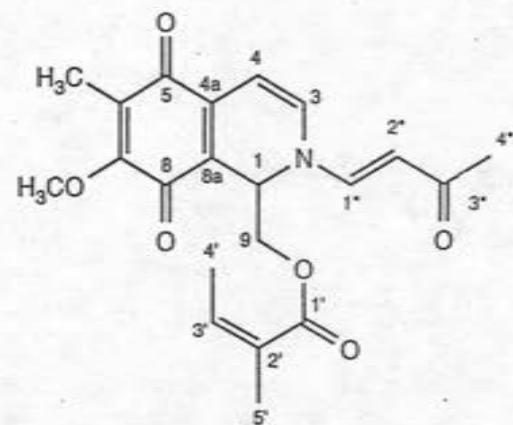


Figure 43 The 125 MHz ¹³C nmr spectrum of compound A-073 (in CDCl₃)

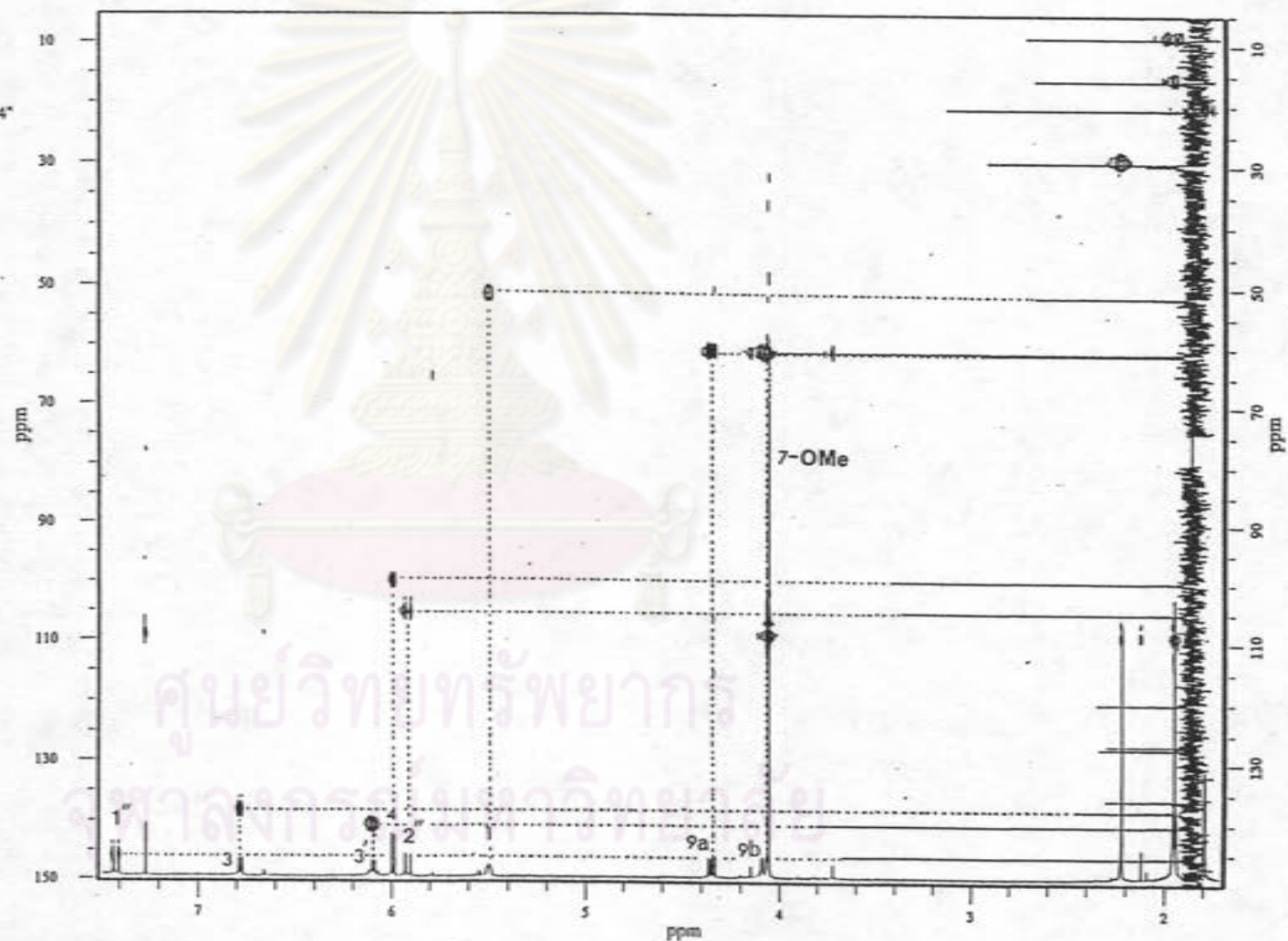
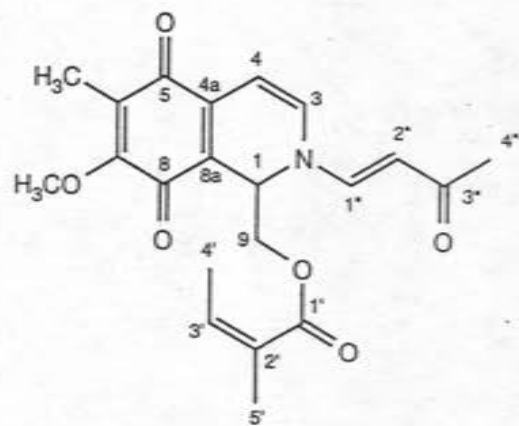


Figure 44 The 125 MHz HMQC spectrum of compound A-073 (in CDCl₃)

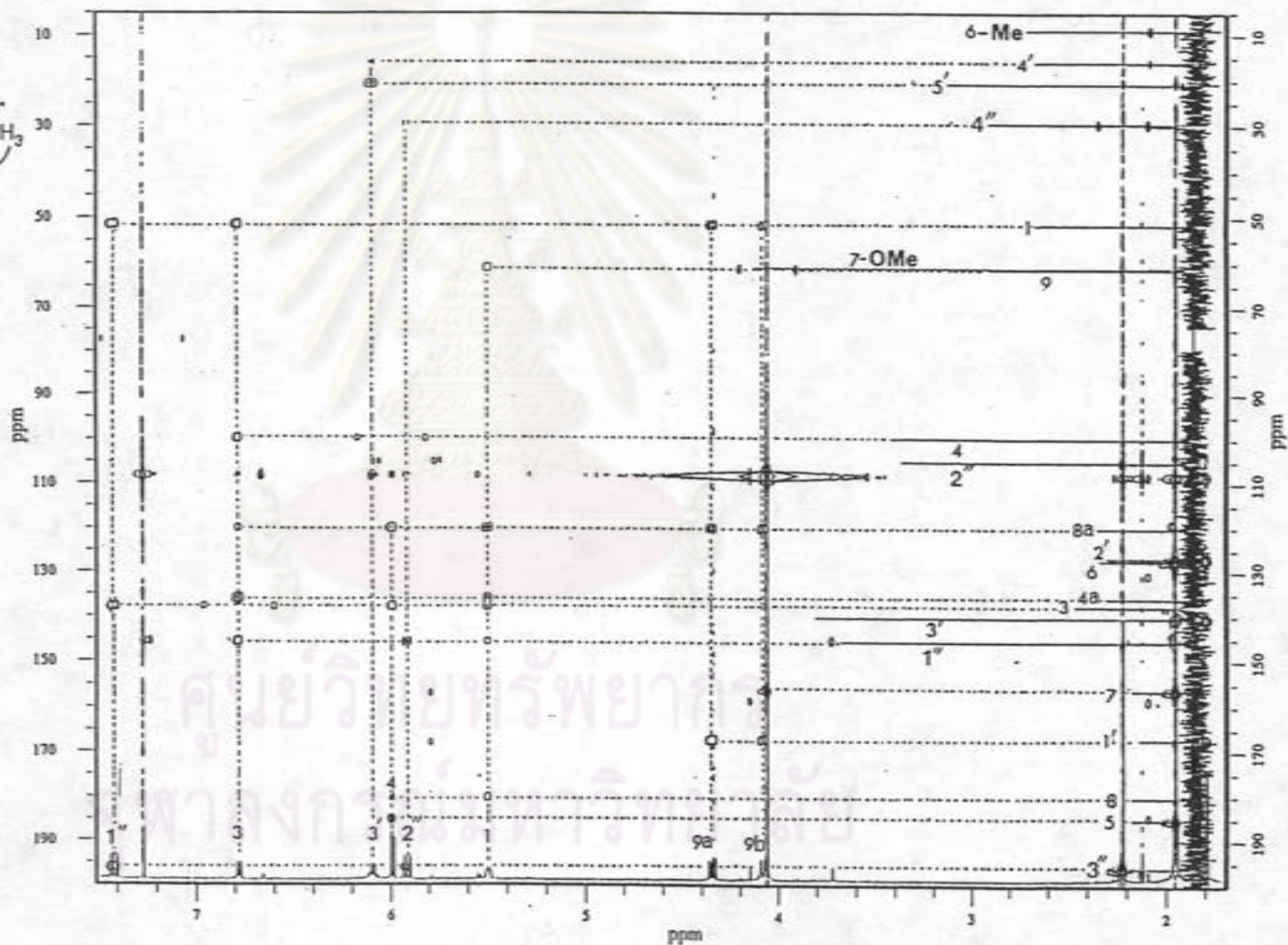
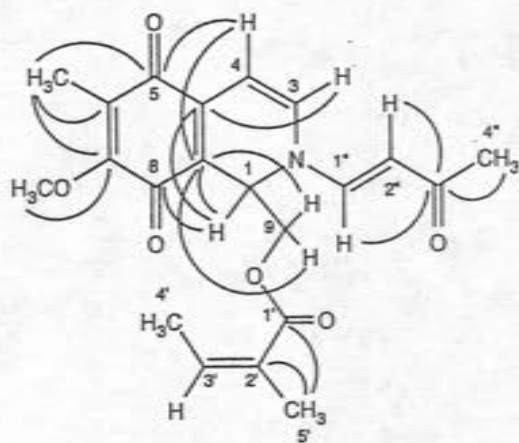


Figure 45 The 125 MHz HMBC spectrum of compound A-073 (in CDCl₃)

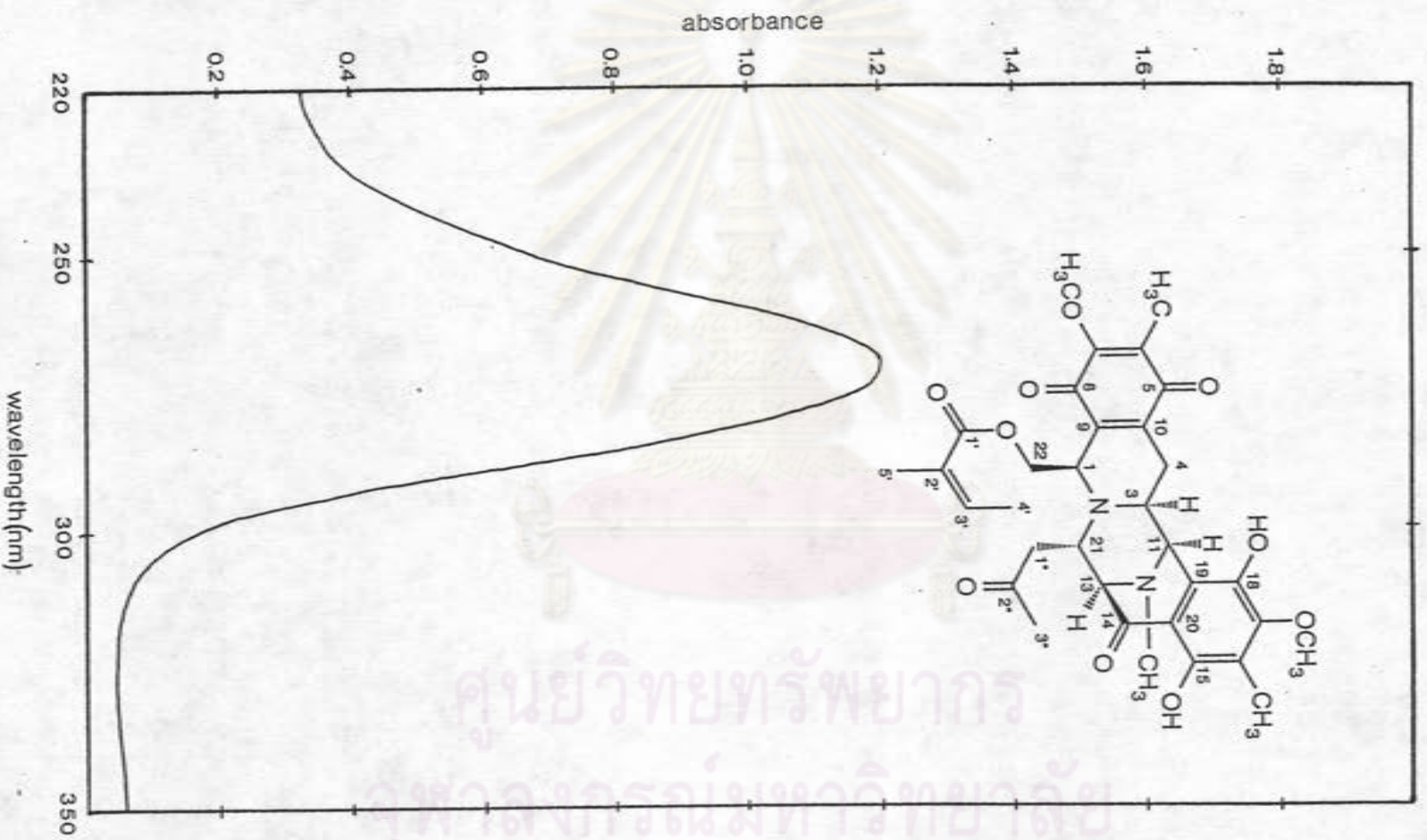


Figure 47 The uv spectrum of compound A-129 (in chloroform)

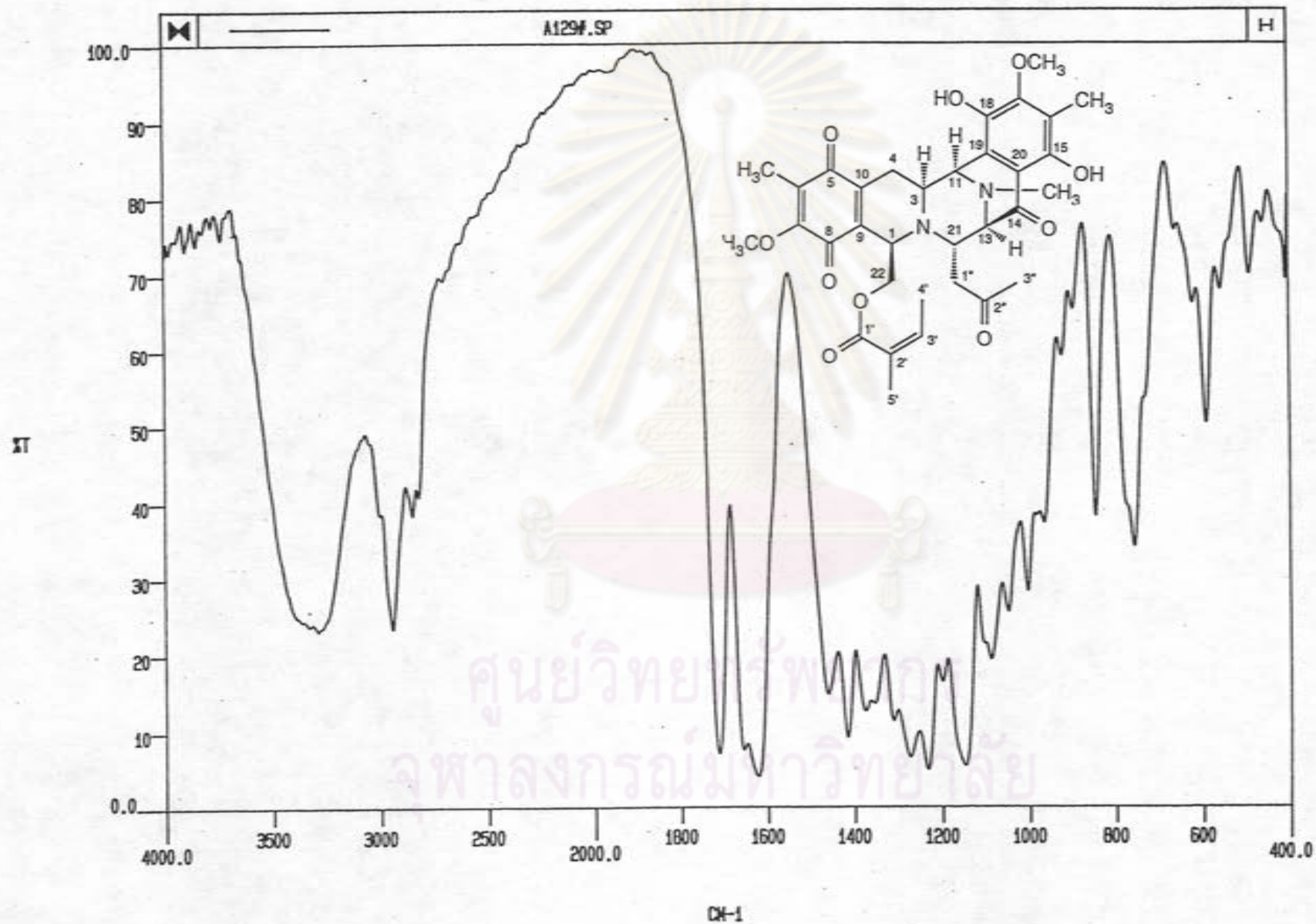


Figure 48 The ir spectrum of compound A-129 (KBr disc)

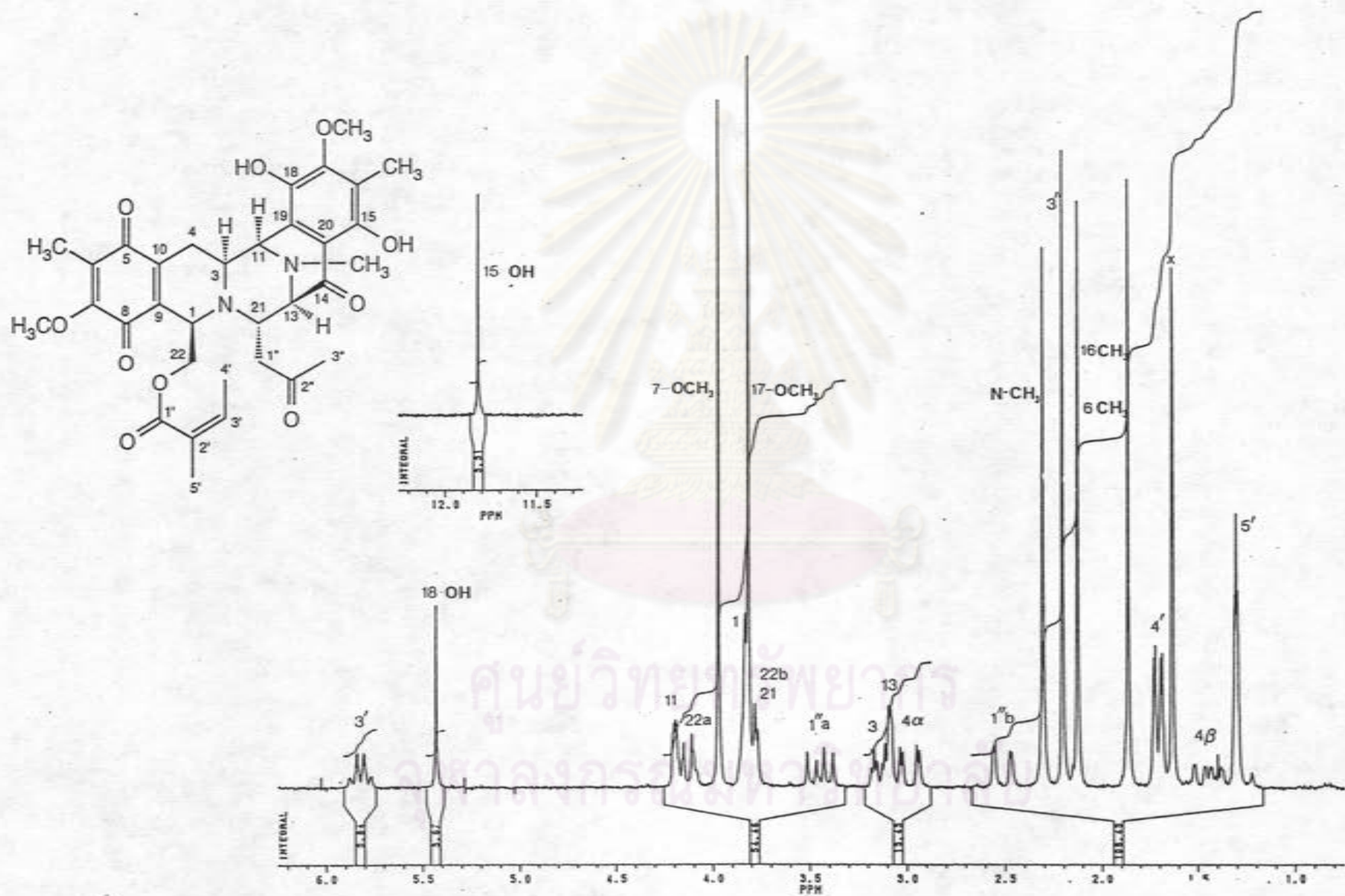


Figure 49 The 200 MHz ^1H nmr spectrum of compound A-129 (in CDCl_3)

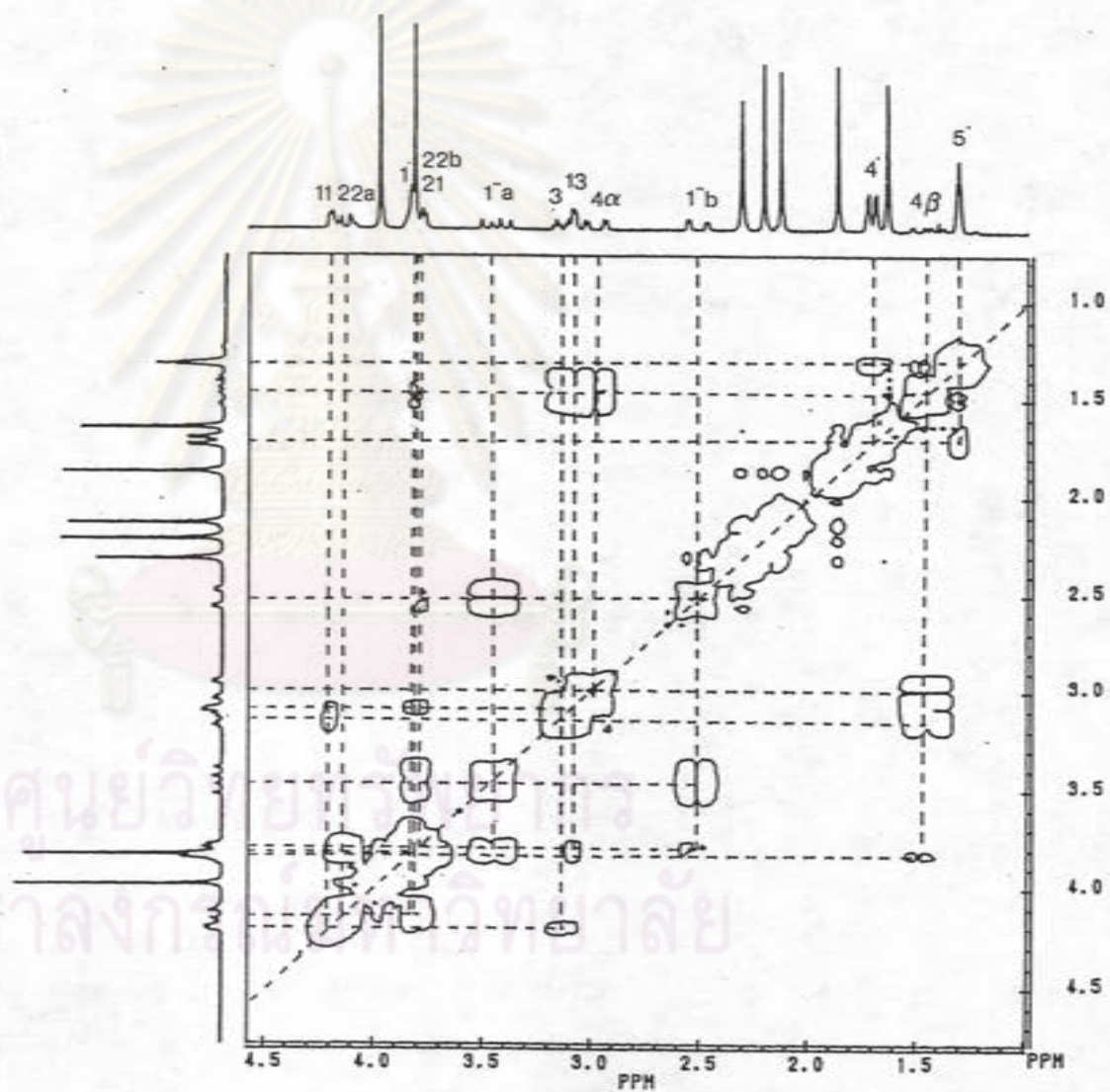
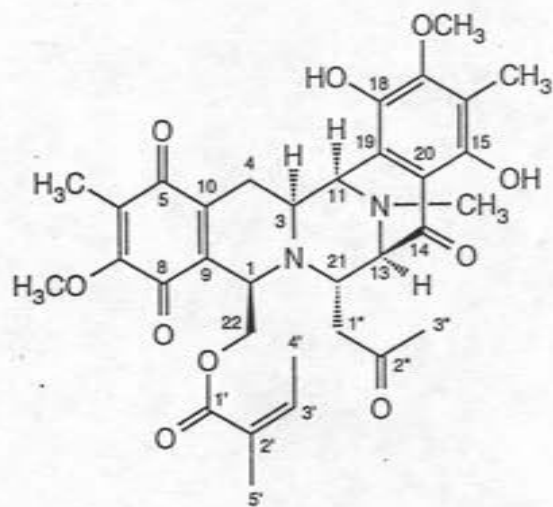


Figure 50 The 200 MHz ¹H, ¹H COSY spectrum of compound A-129 (in CDCl₃)

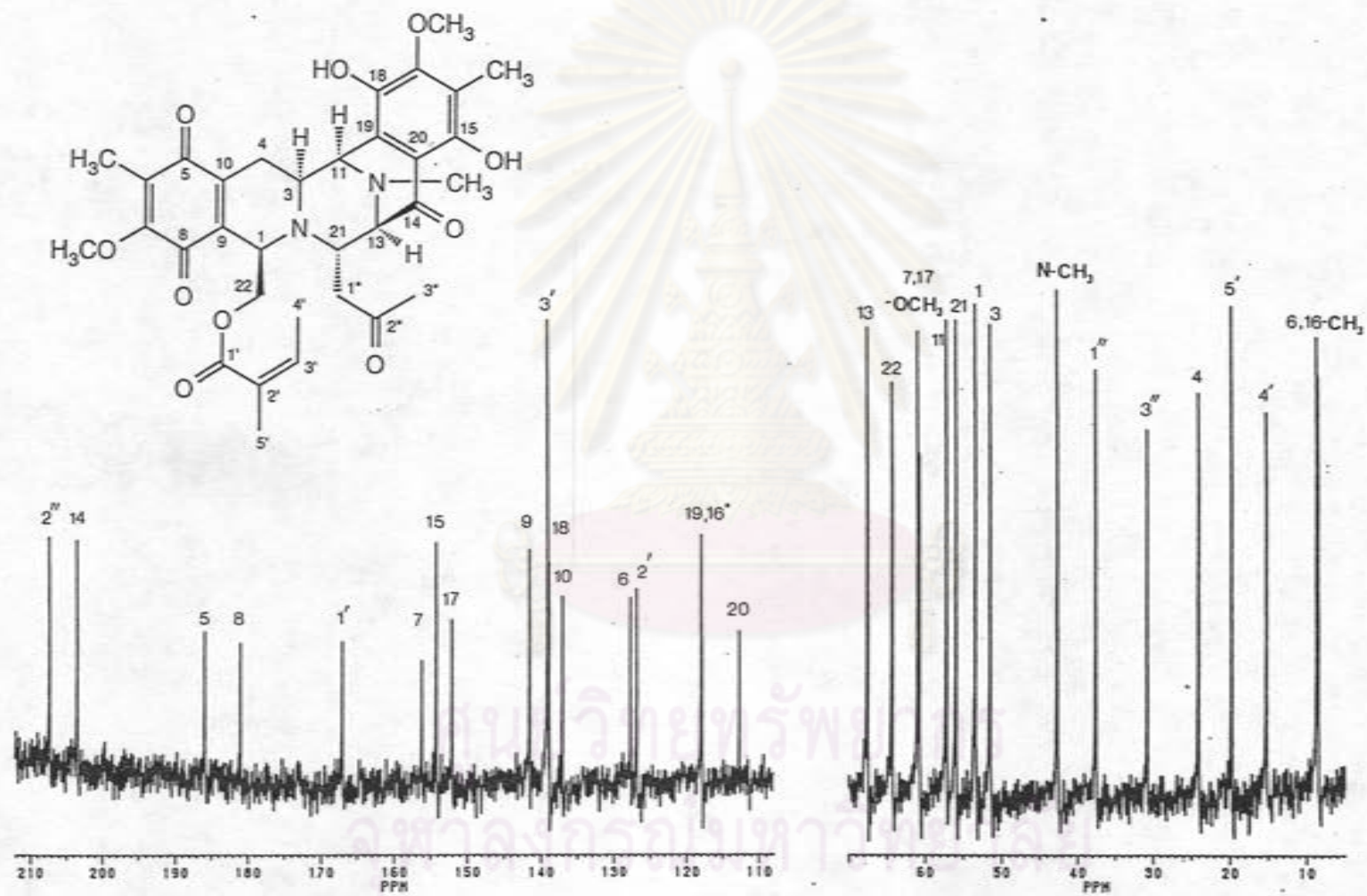


Figure 51 The 50 MHz ^{13}C nmr spectrum of compound A-129

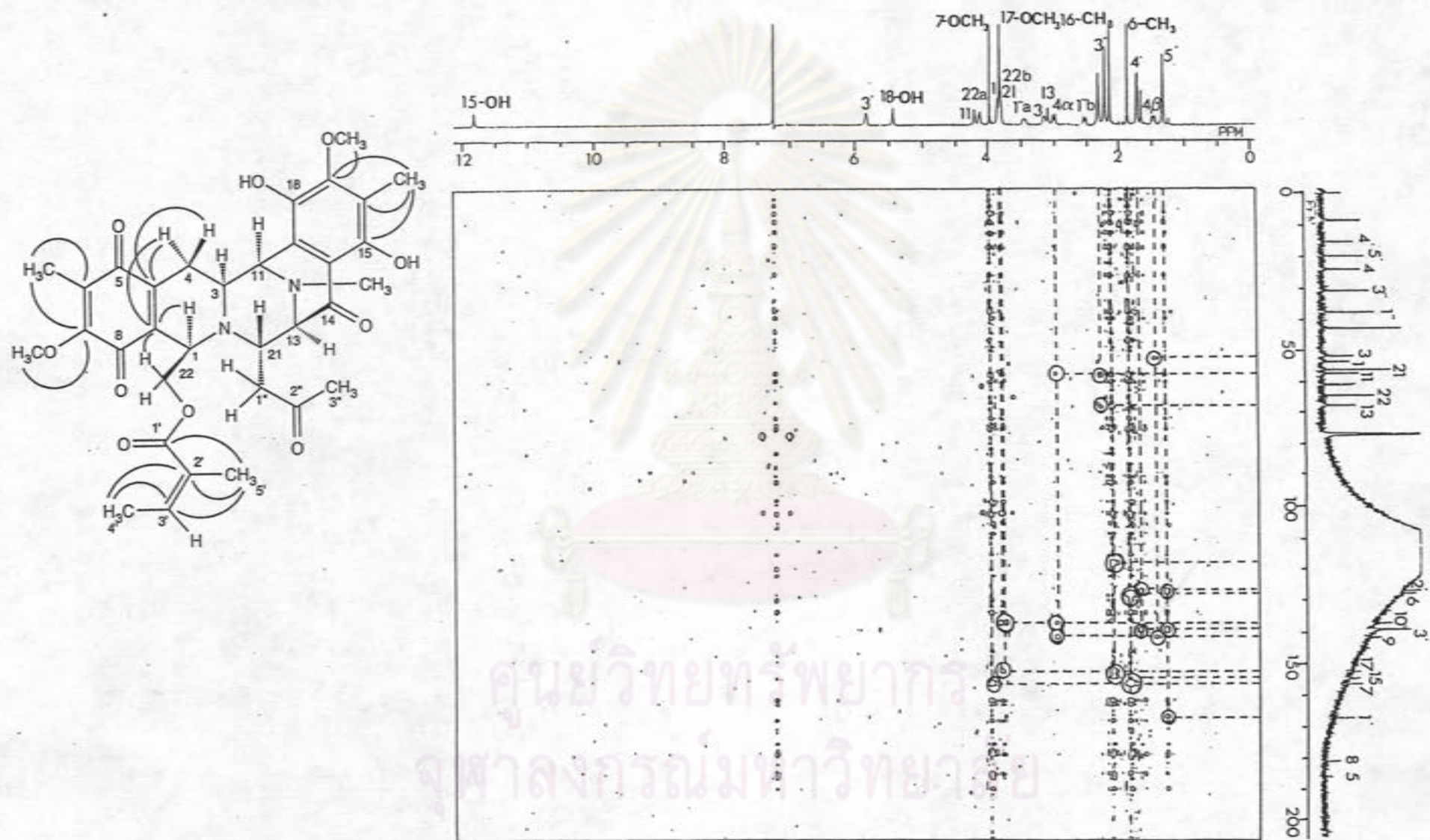


Figure 52 The 125 MHz HMBC spectrum of compound A-129 (in CDCl₃)

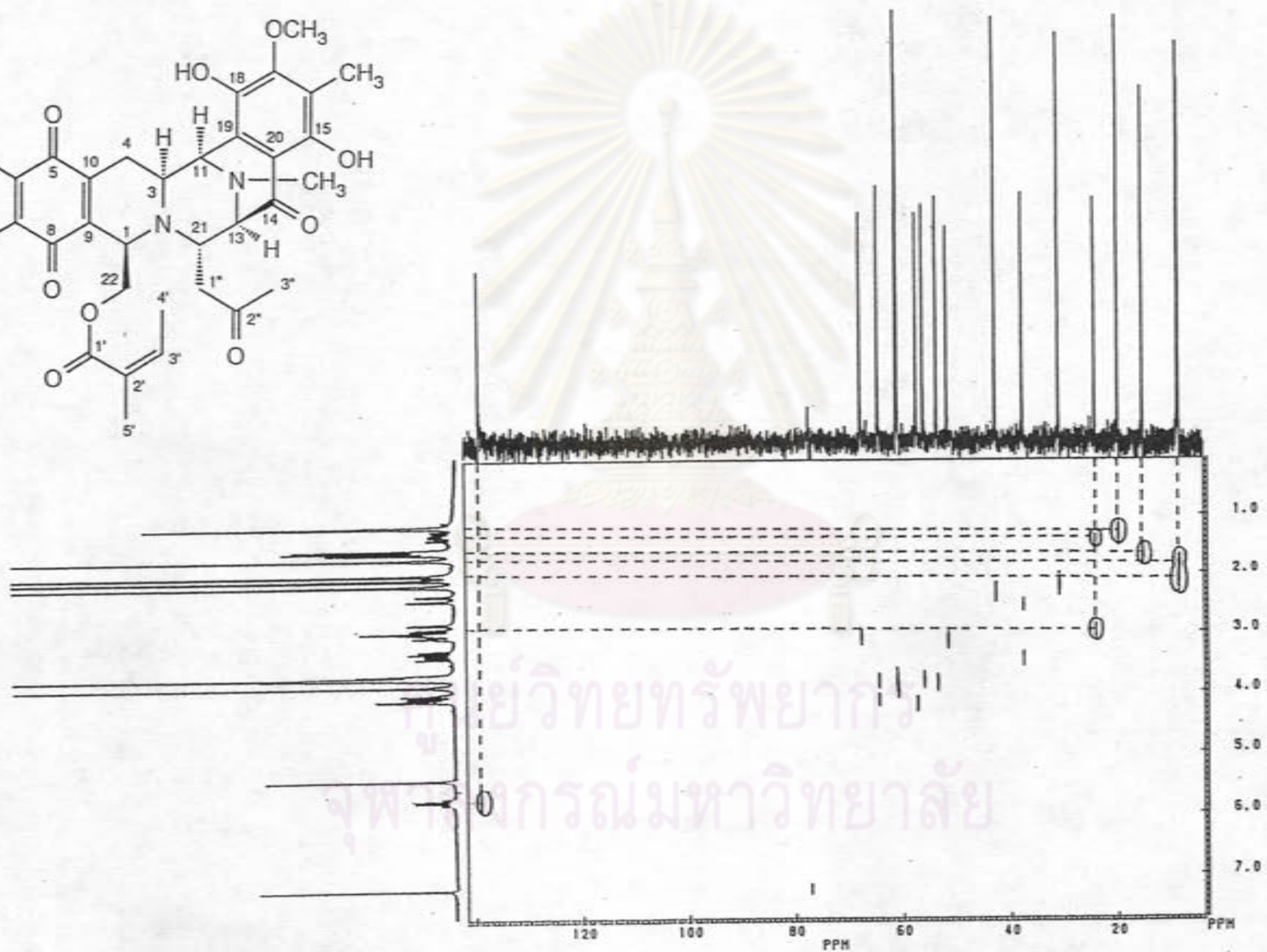
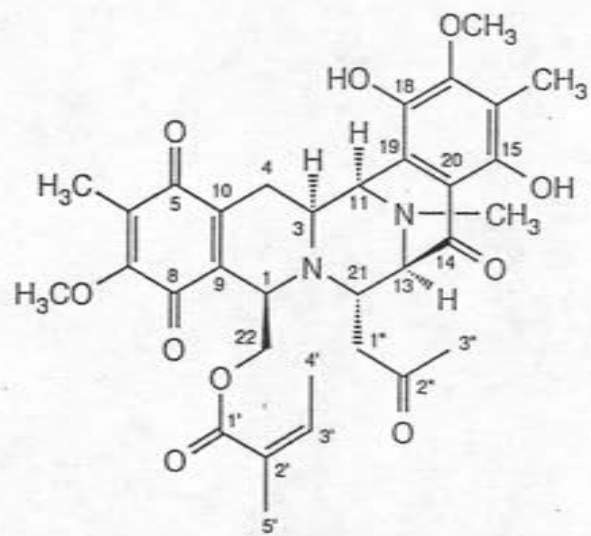


Figure 53 The 200 MHz $^1\text{H},^{13}\text{C}$ COSY spectrum of compound A-129 (in CDCl_3)

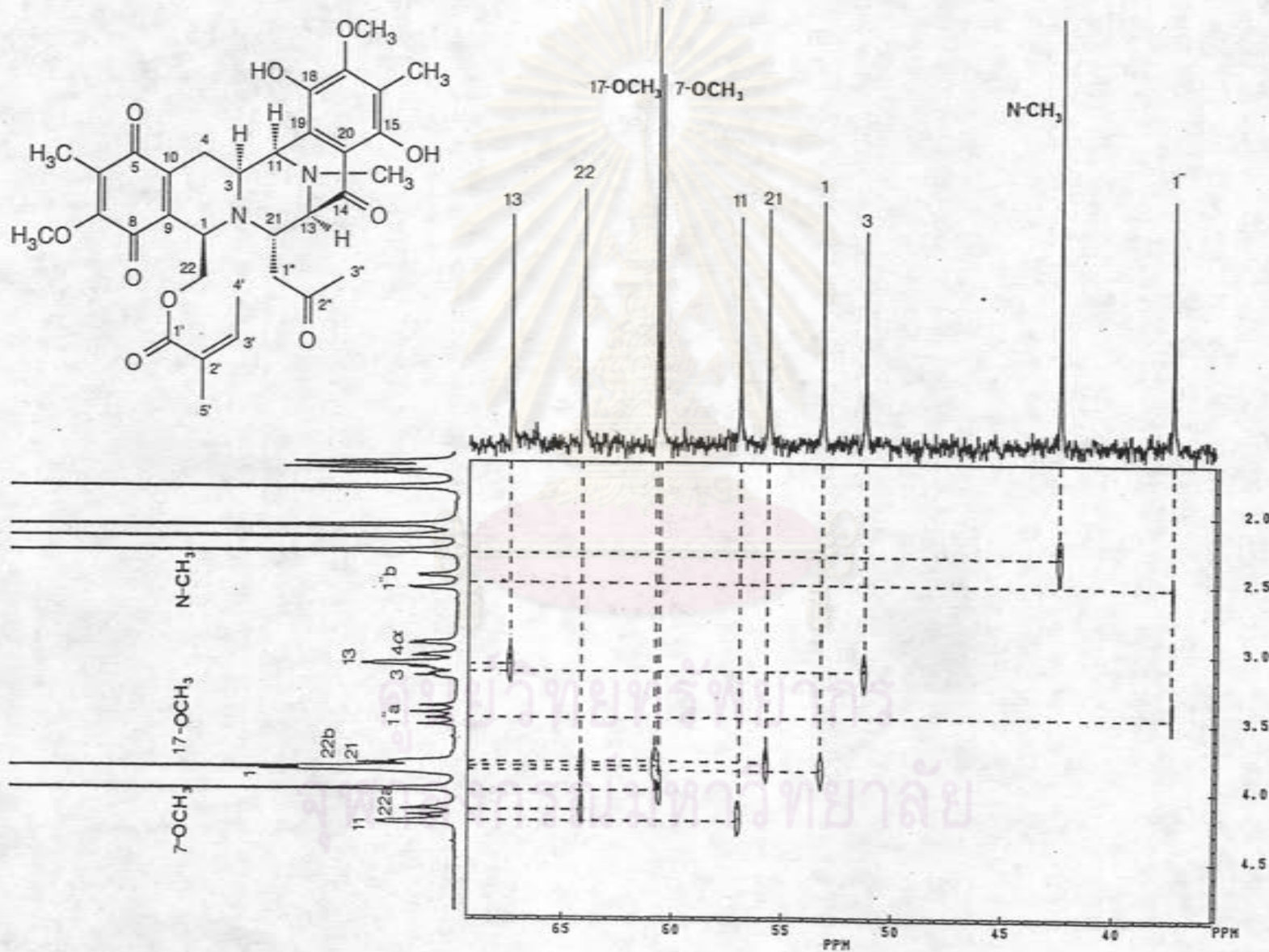


Figure 54 The 200 MHz ^1H , ^{13}C COSY spectrum of compound A-129 (in CDCl_3) (expanded from 1.5 - 5.0 ppm).

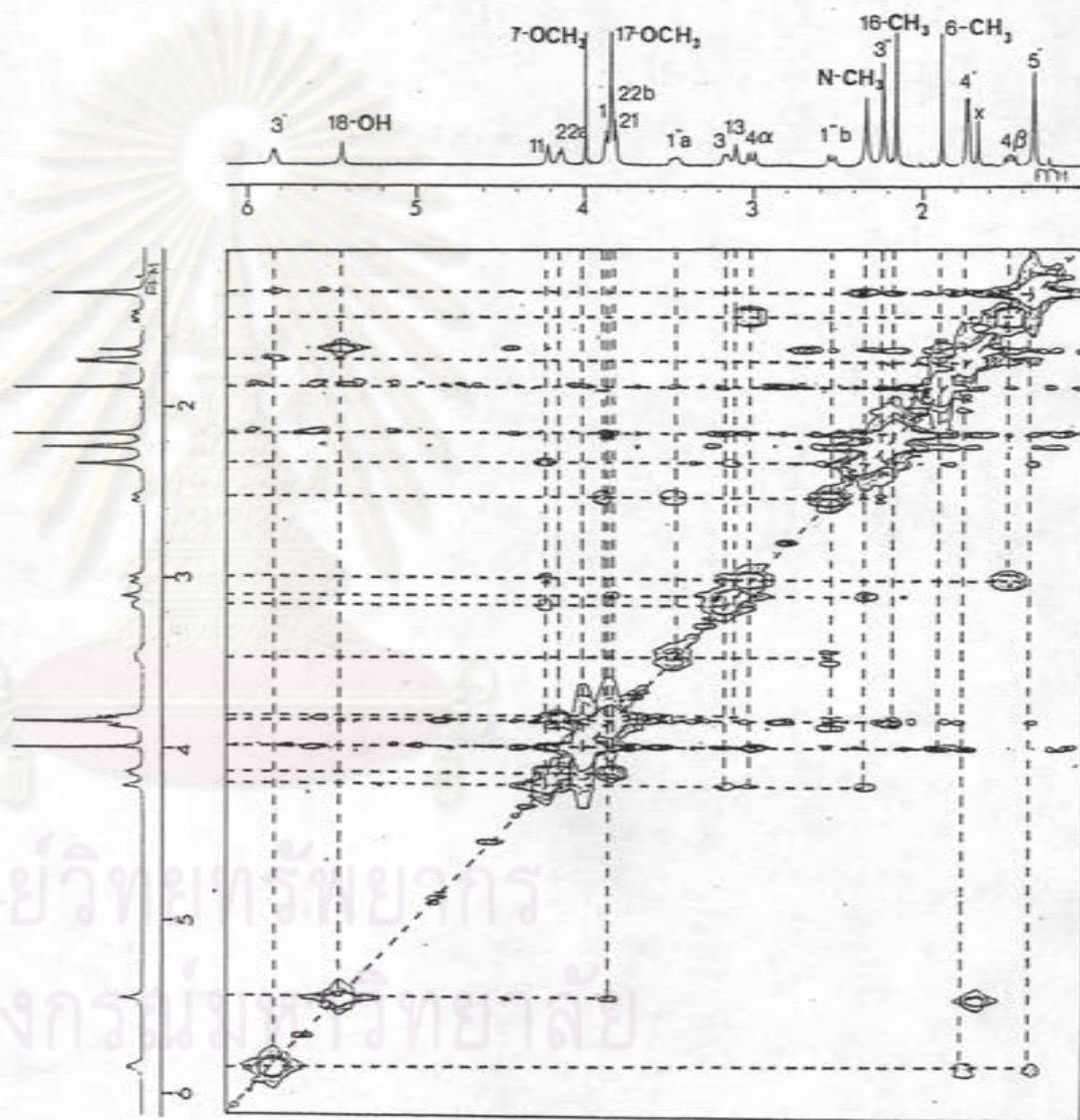
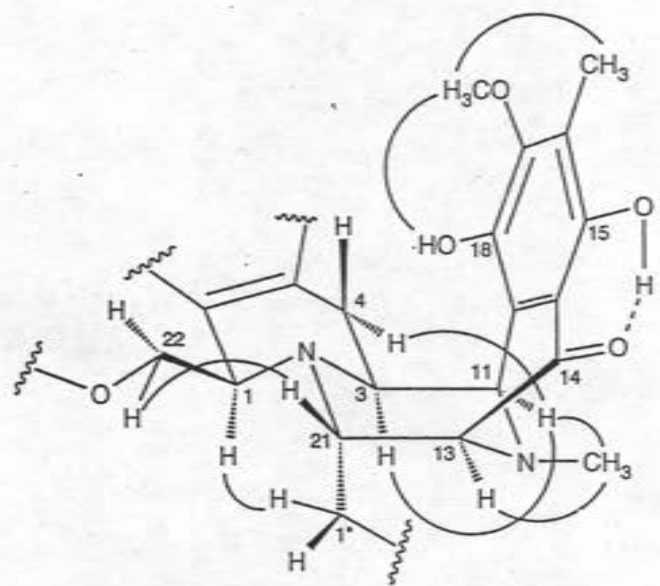


Figure 55 The 500 MHz NOESY spectrum of compound A-129 (in CDCl₃)



VITA

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