

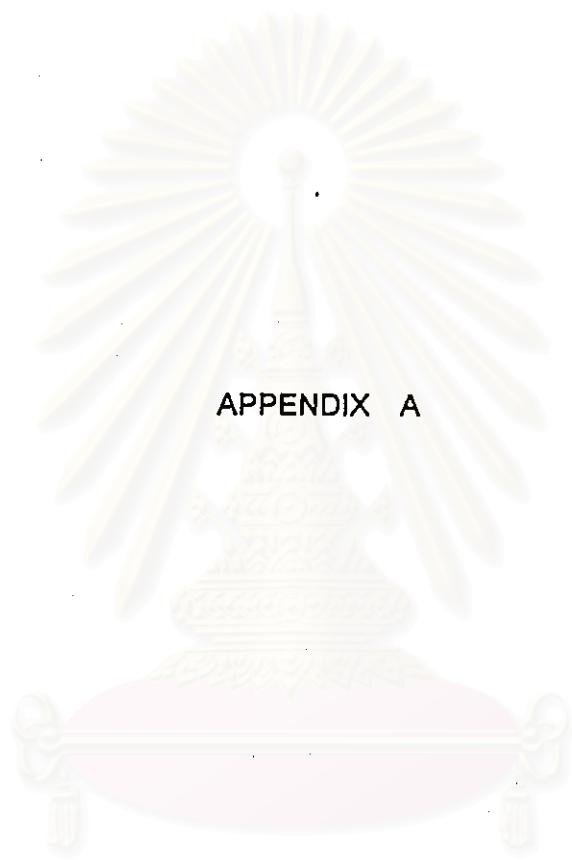
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APPENDIX A

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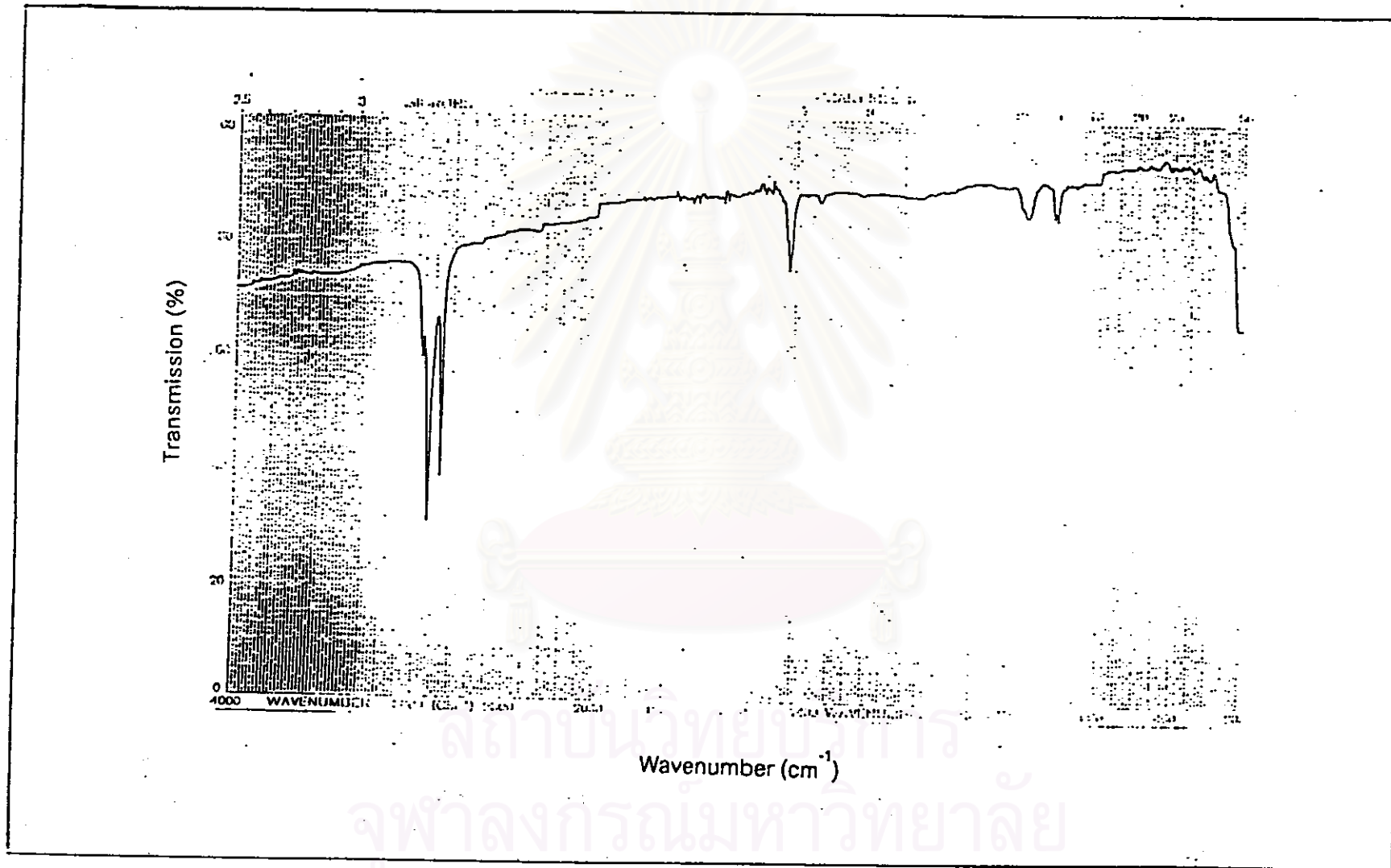


Figure 7 The IR spectrum of Mixture I

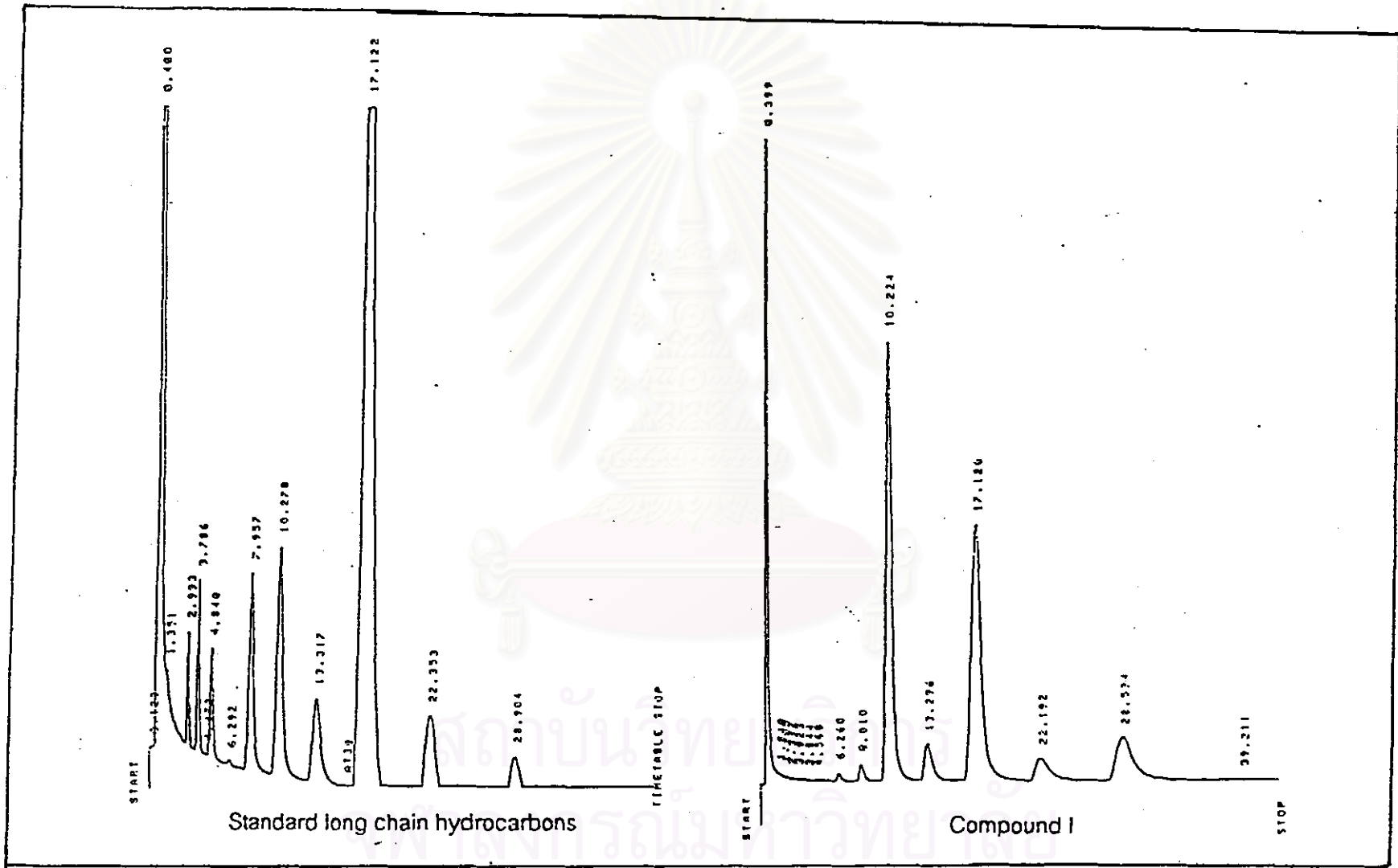


Figure 8 The Gas chromatograms of standard long chain hydrocarbons and Mixture I

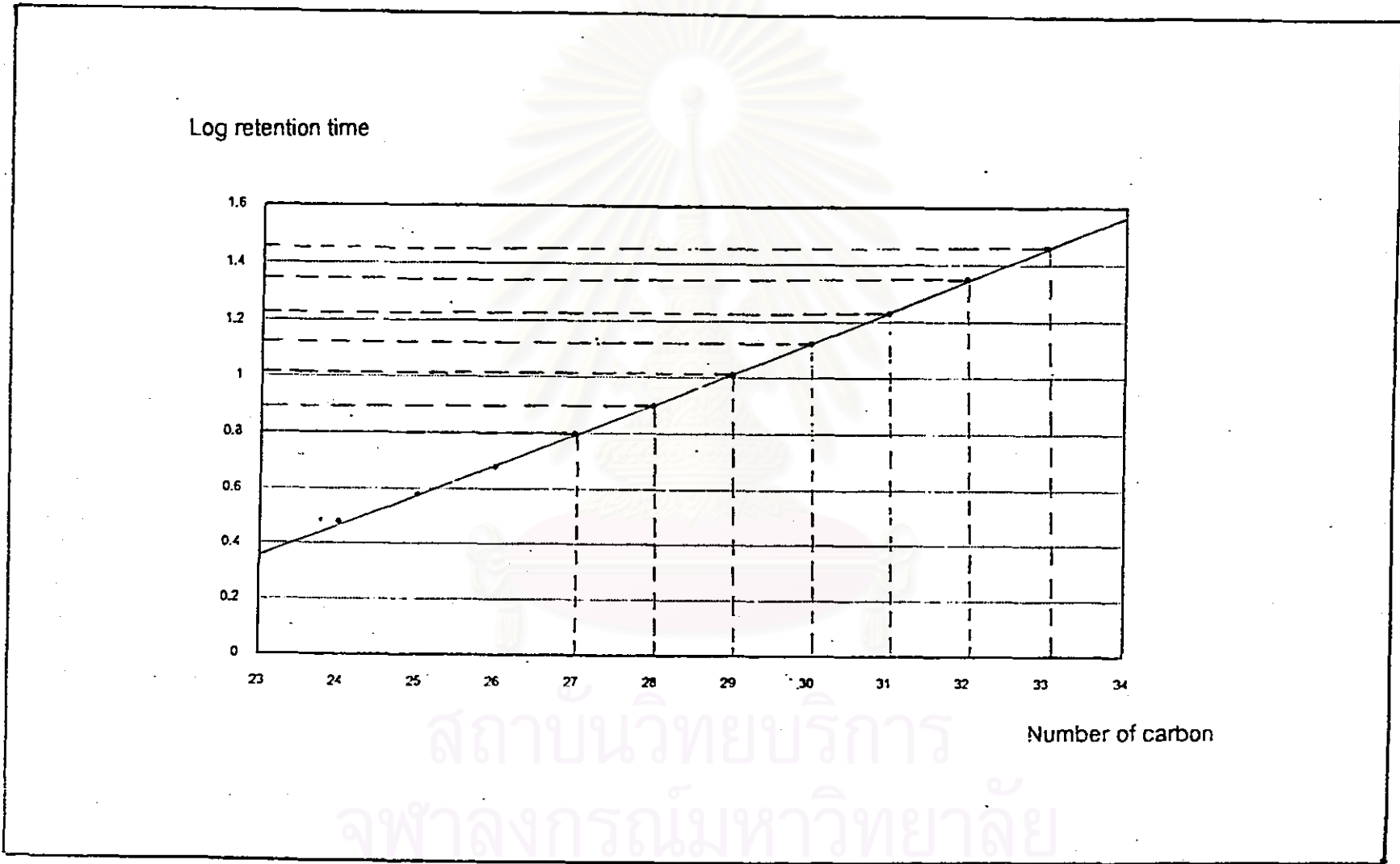


Figure 9 The Calibration curve of standard long chain hydrocarbons and Mixture I

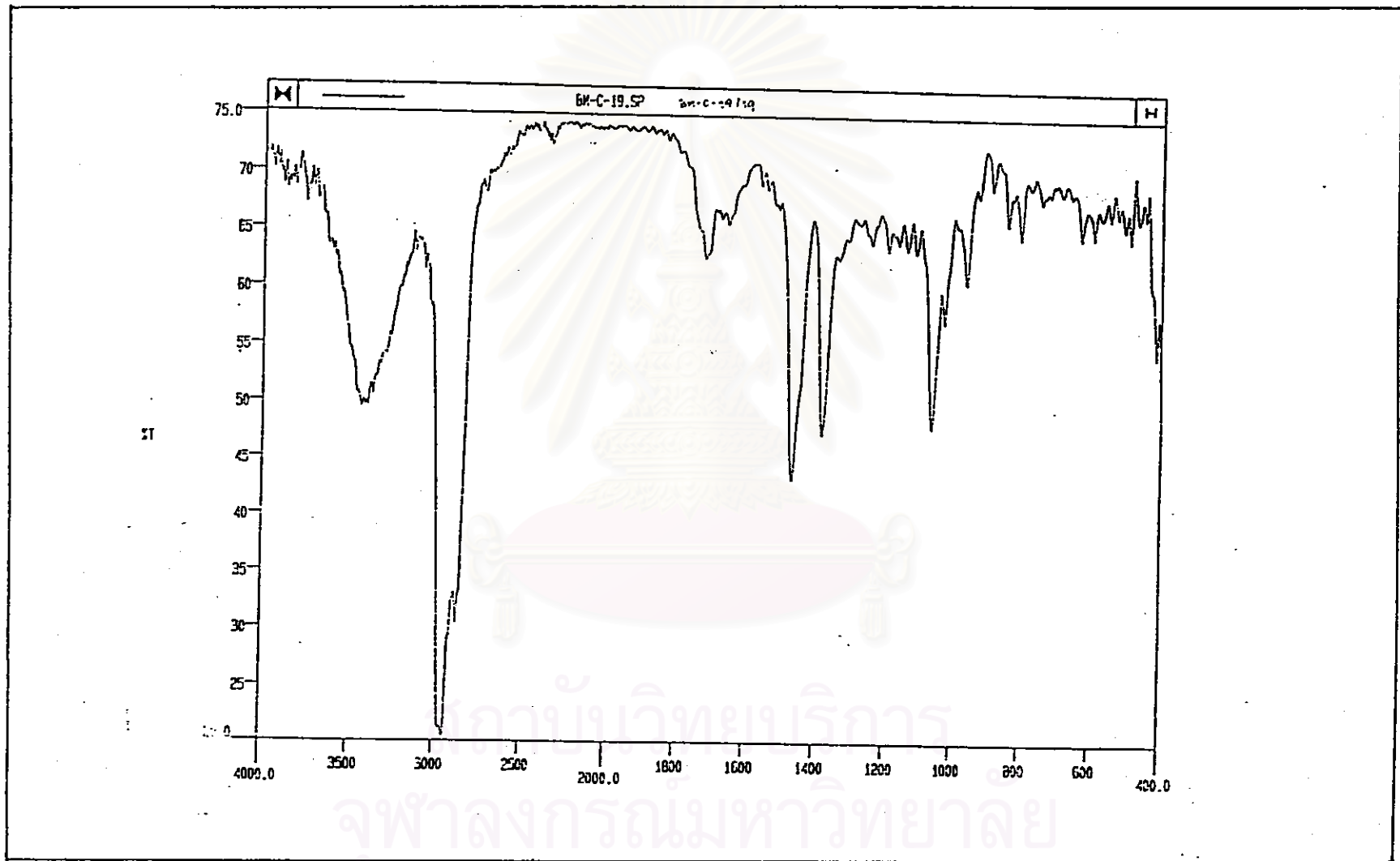


Figure 10 The IR spectrum of Compound II

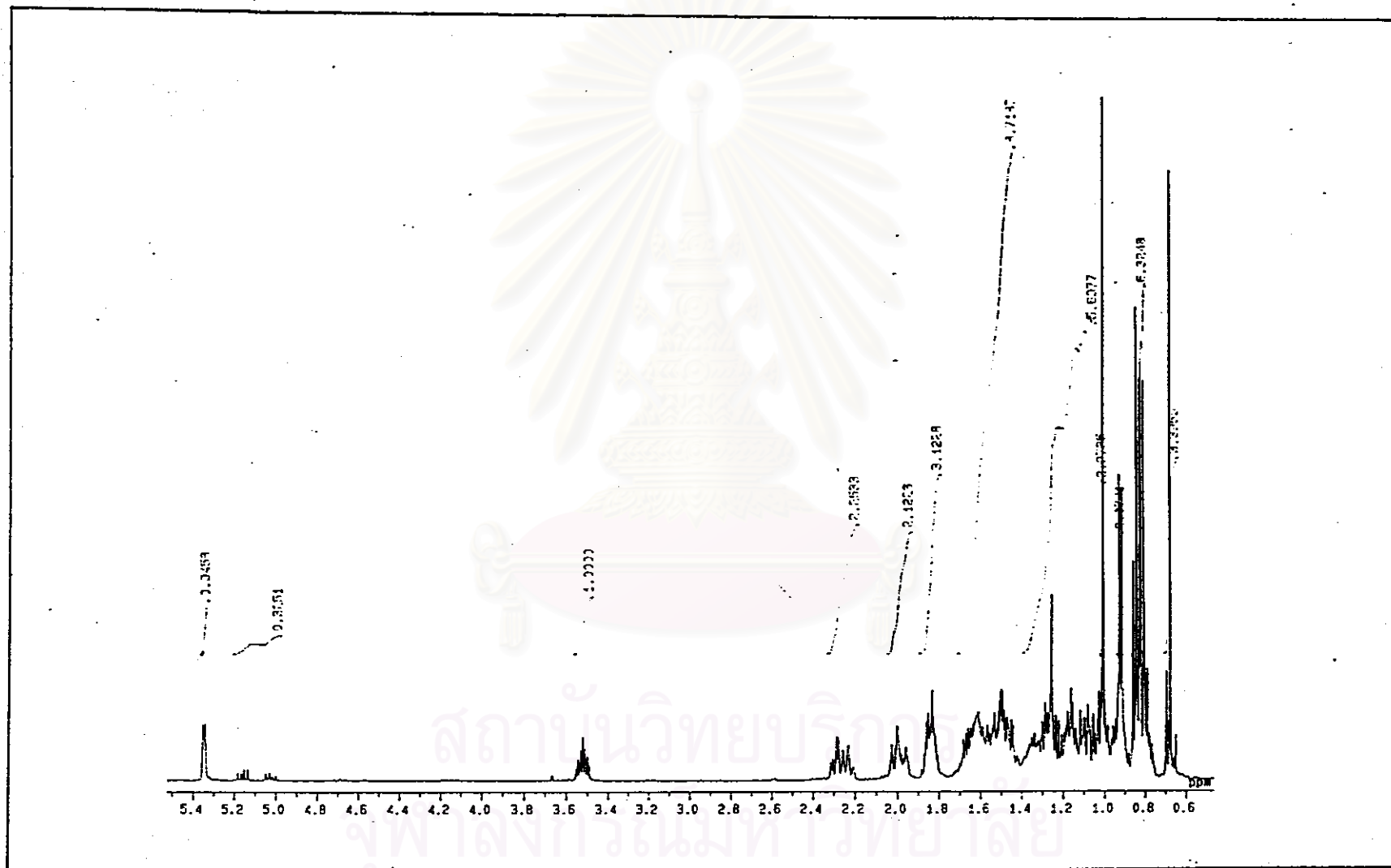


Figure 11 The $^1\text{H-NMR}$ spectrum of Compound II

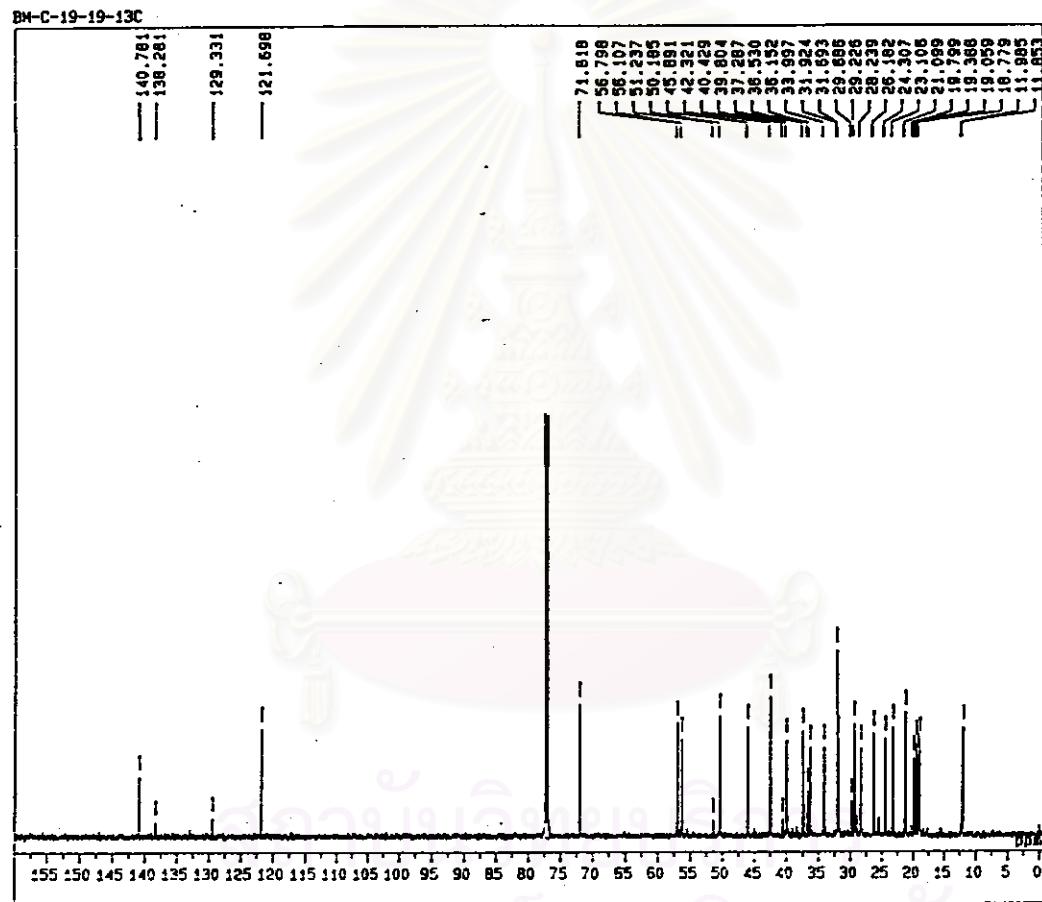


Figure 12 The ^{13}C -NMR spectrum of Compound II

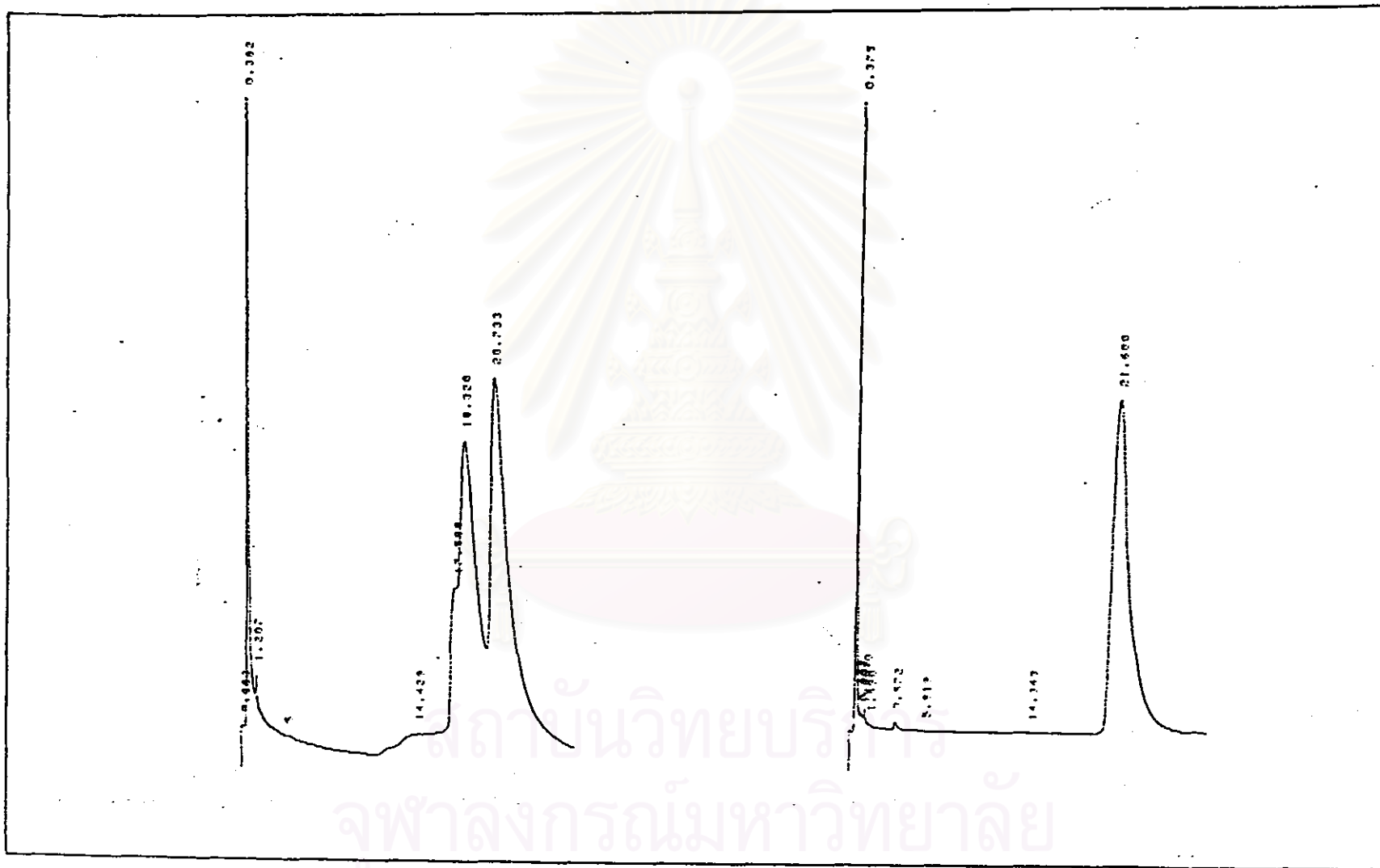
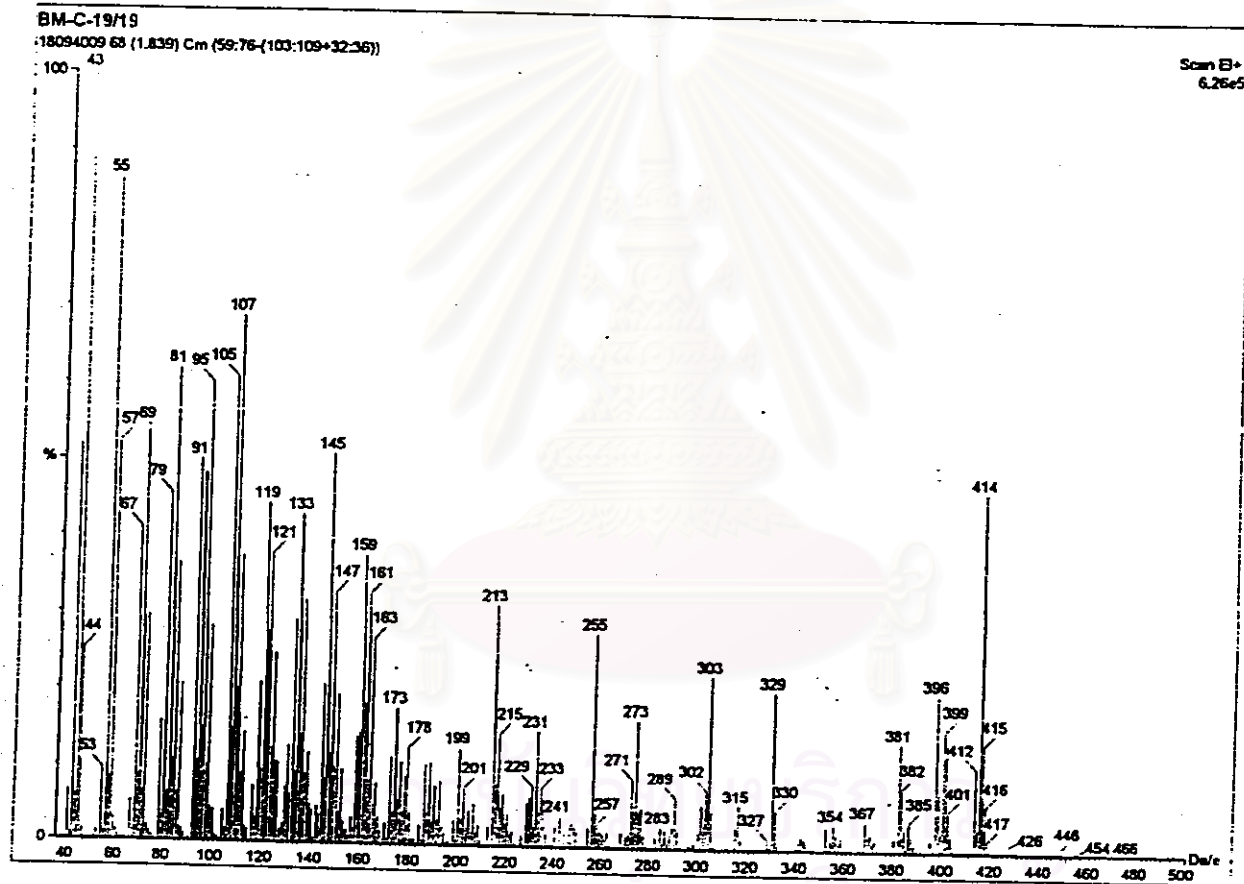


Figure 13 The Gas chromatograms of Standard steroids and Compound II



Figure, 14 The mass spectrum of Compound II

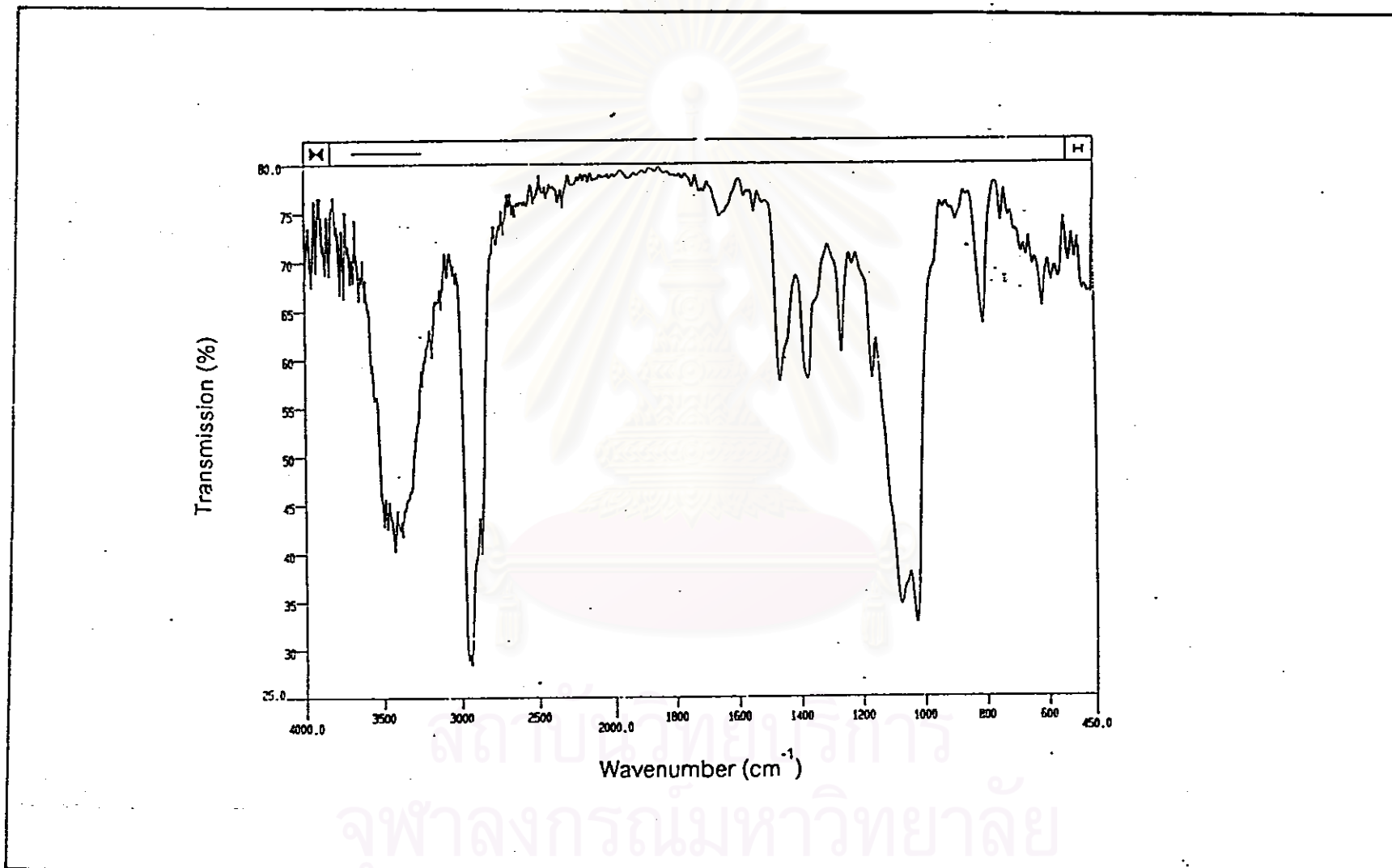


Figure 15 The IR Spectrum of Compound III

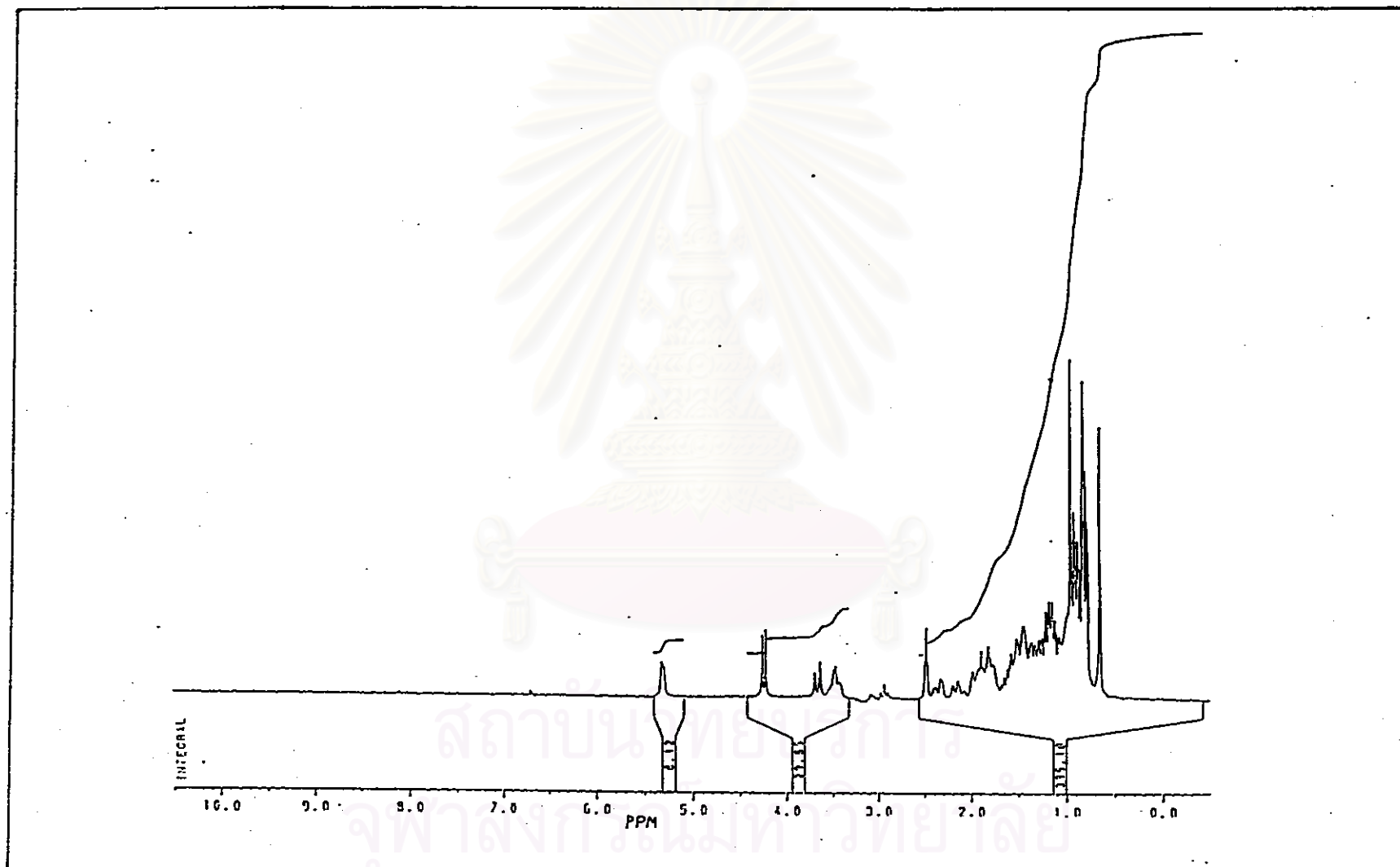


Figure 16 The $^1\text{H-NMR}$ Spectrum of Compound III

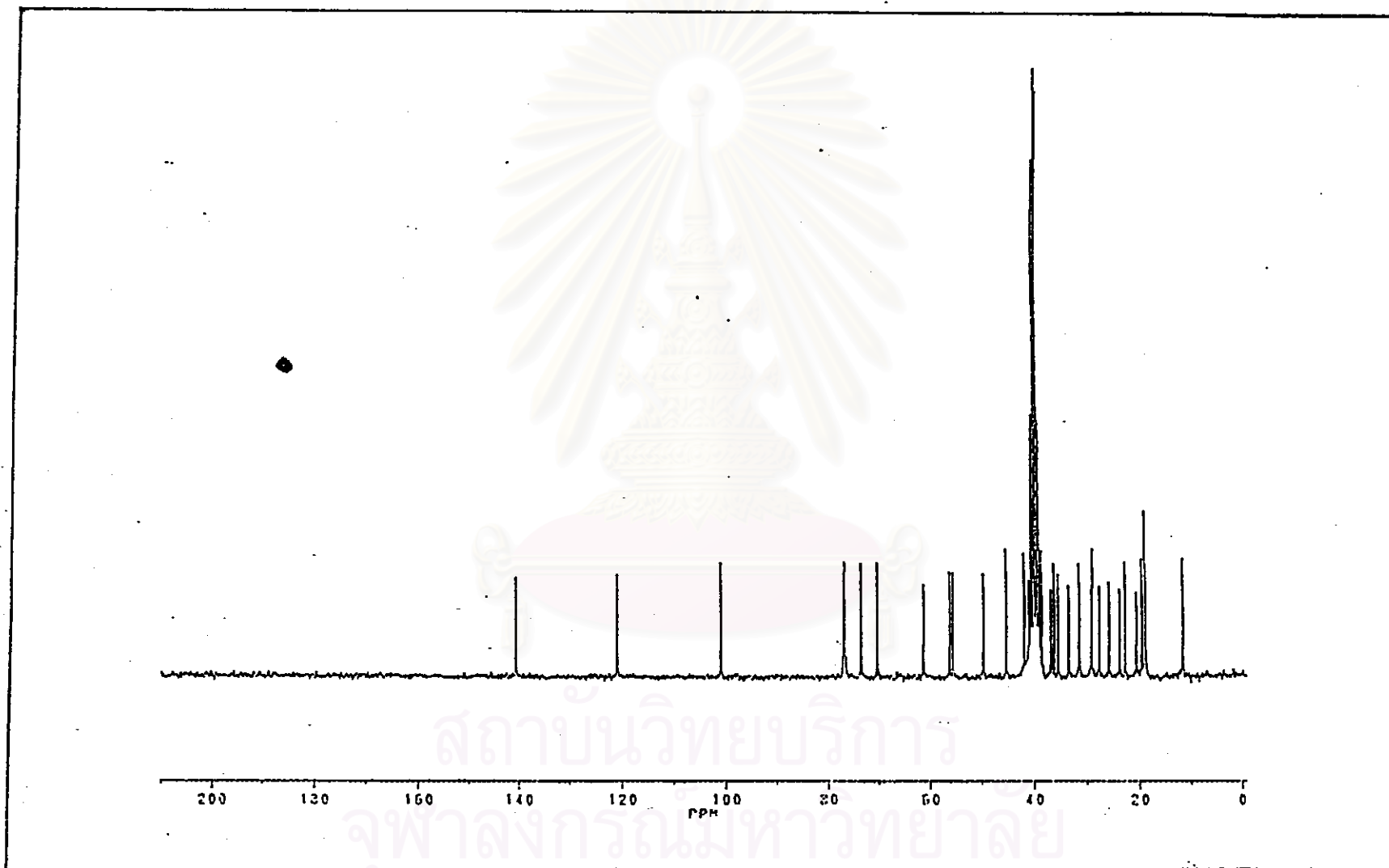


Figure 17 The ^{13}C -NMR Spectrum of Compound III

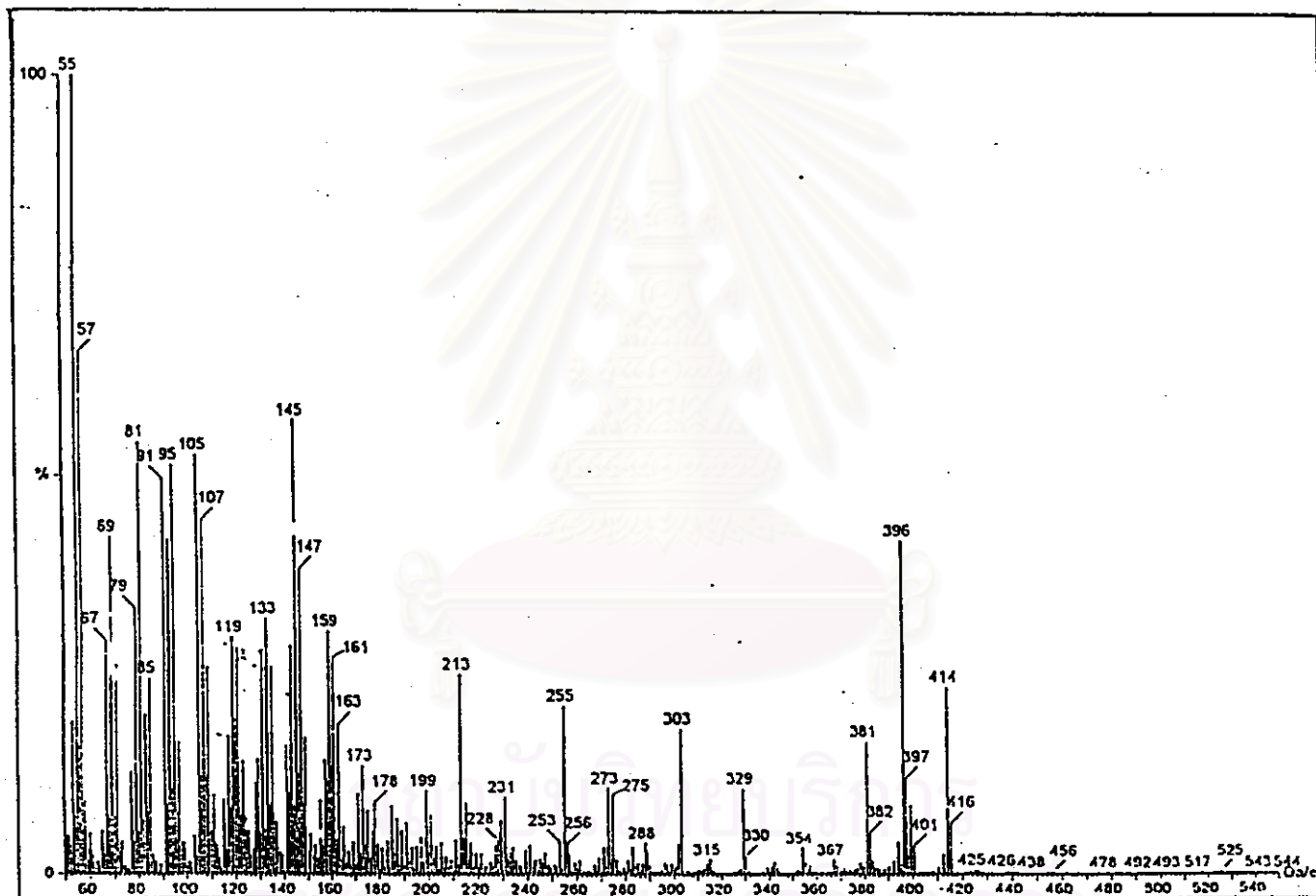


Figure 18: The mass spectrum of Compound III

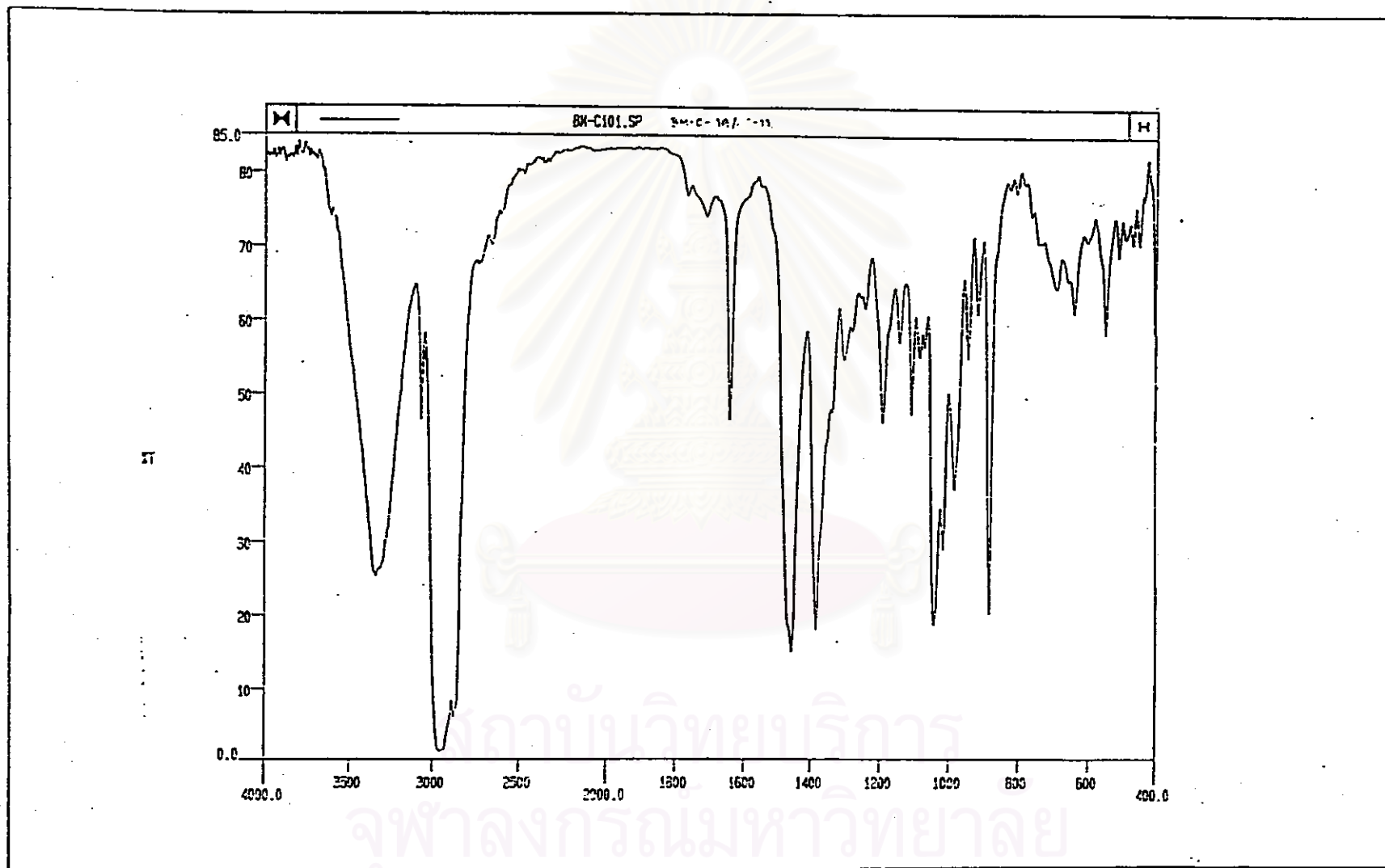


Figure 19 The IR spectrum of Compound IV

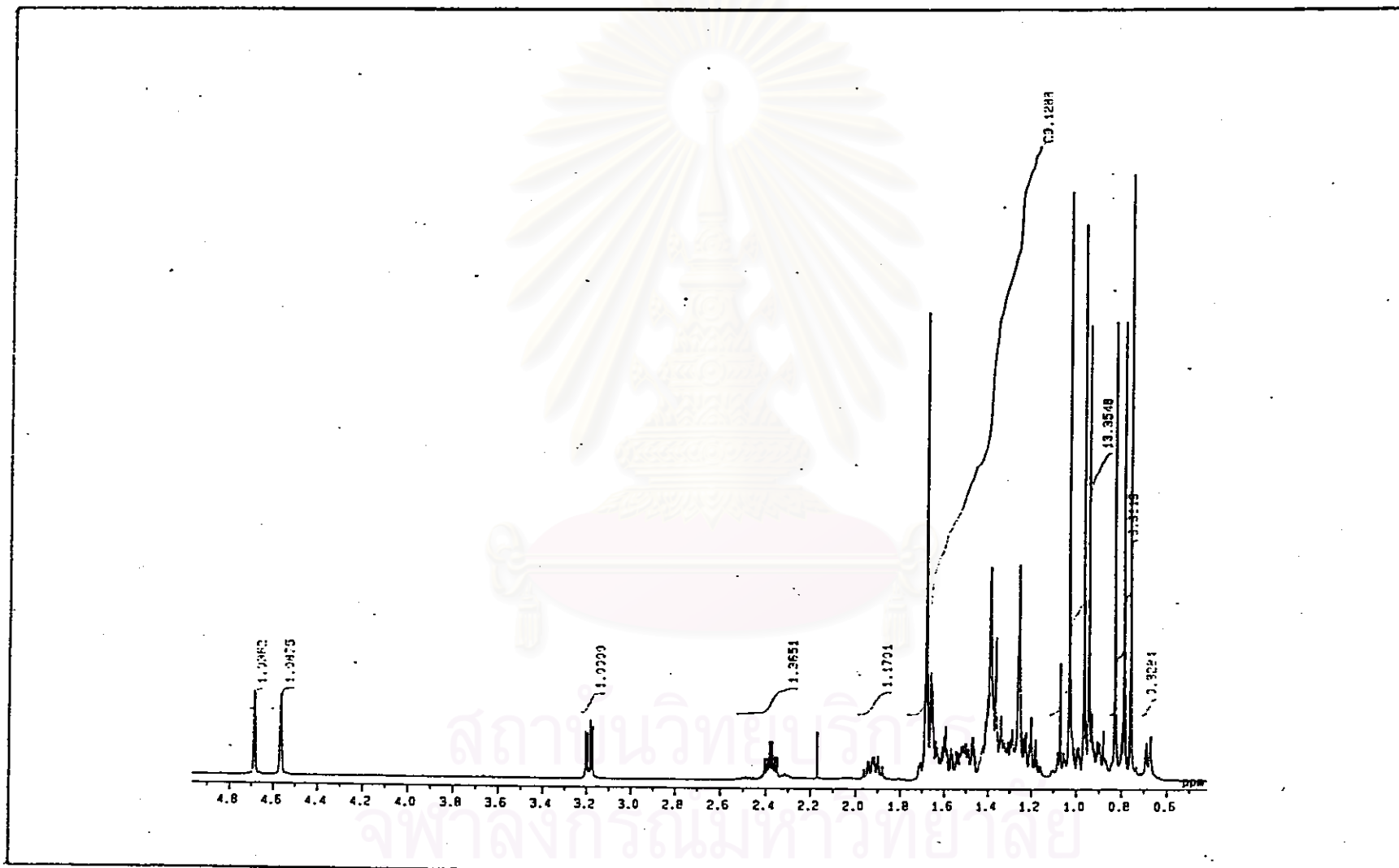


Figure 20 The $^1\text{H-NMR}$ Spectrum of Compound IV

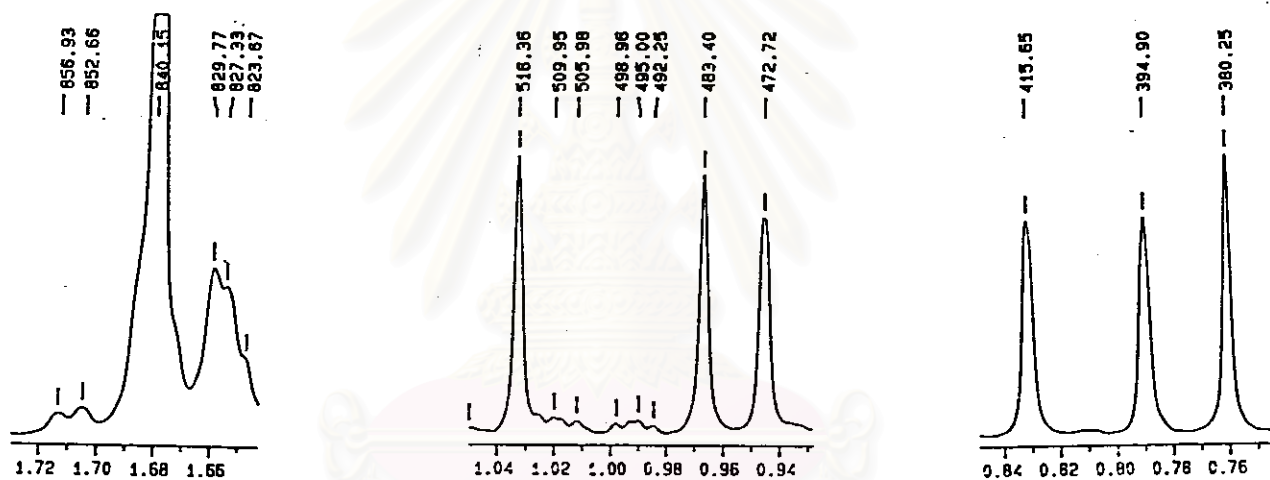


Figure 21 The $^1\text{H-NMR}$ spectrum of Compound IV

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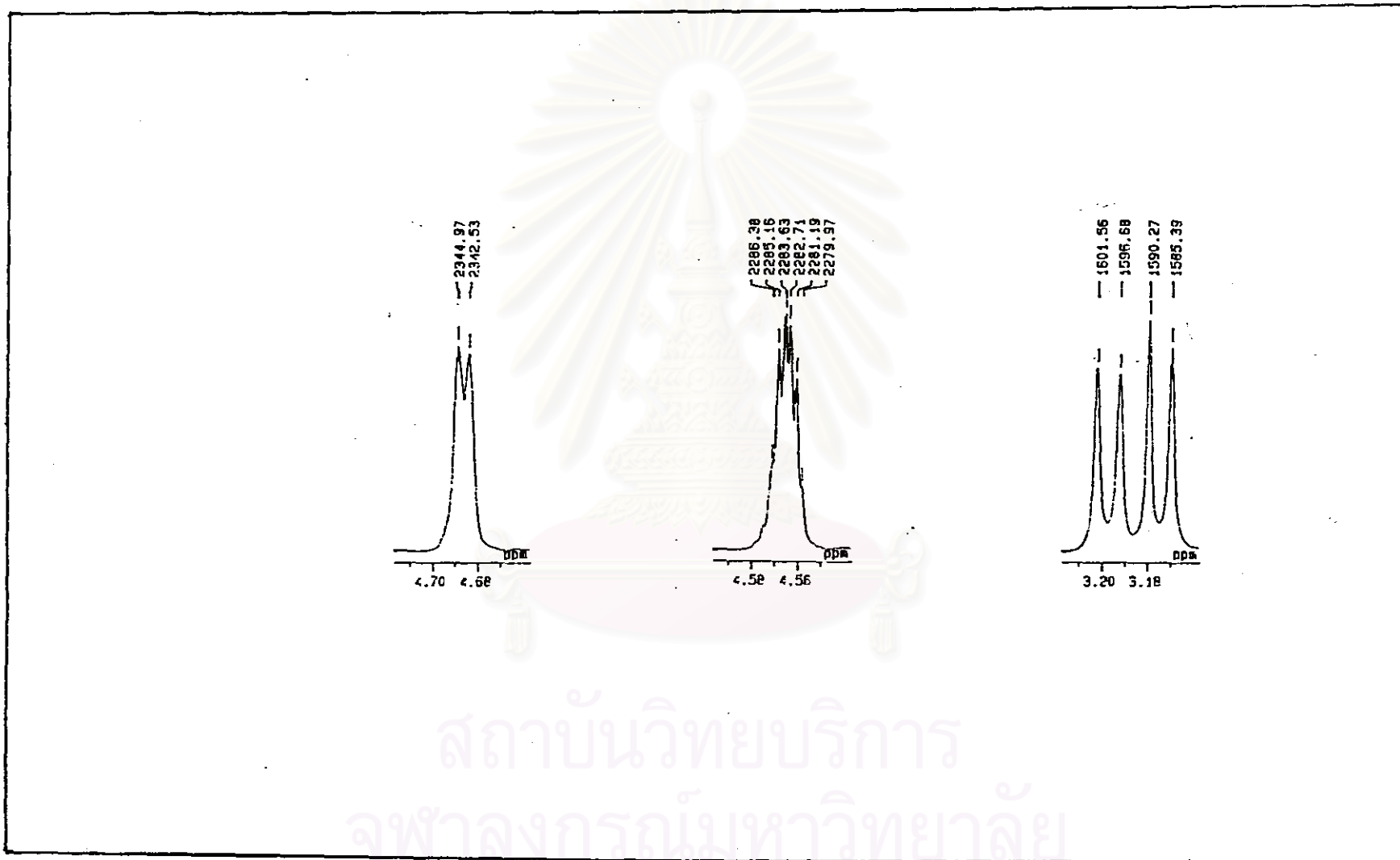


Figure 22 The $^1\text{H-NMR}$ spectrum of Compound IV

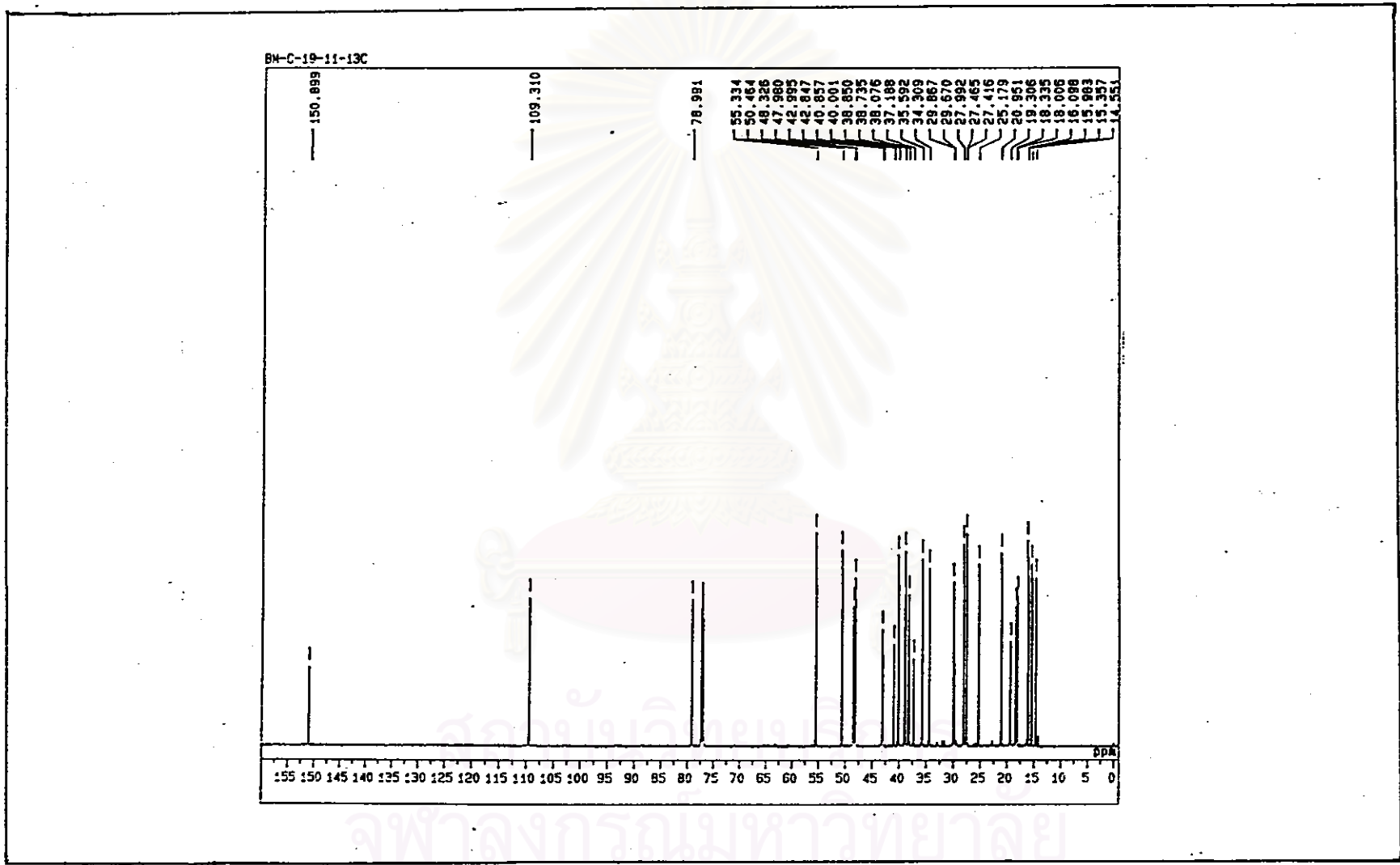


Figure 23 The ^{13}C -NMR Spectrum of Compound IV

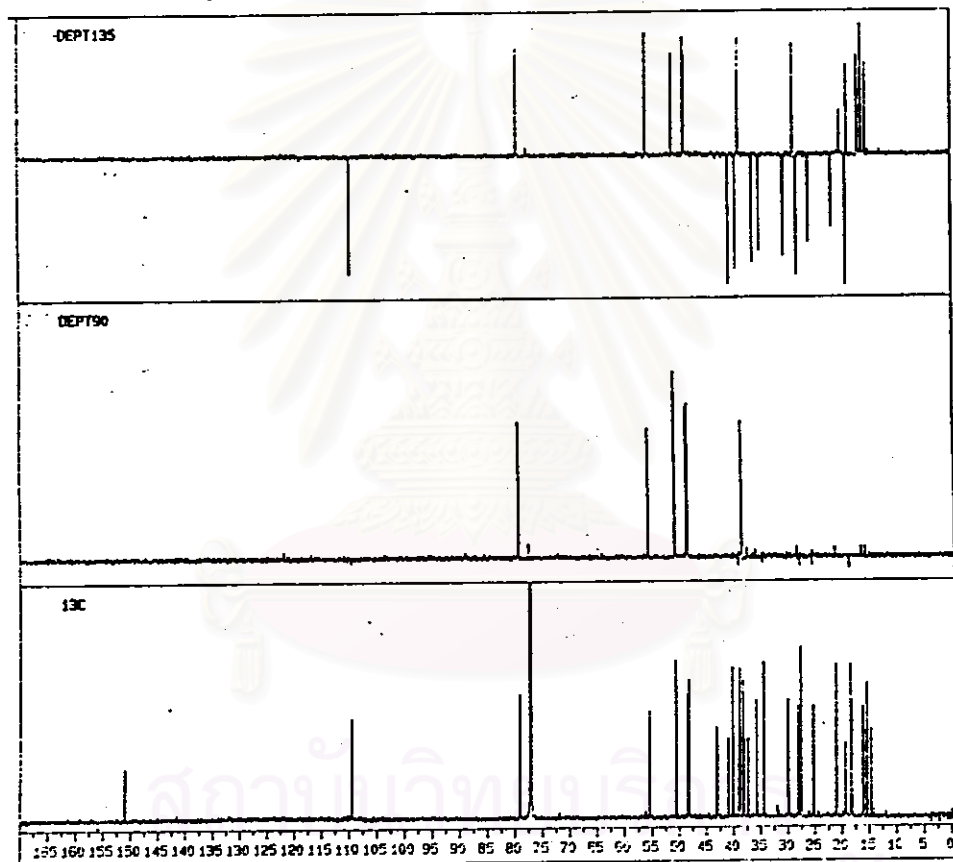


Figure 24 The DEPT 135 and DEPT 90 NMR spectrum of Compound IV

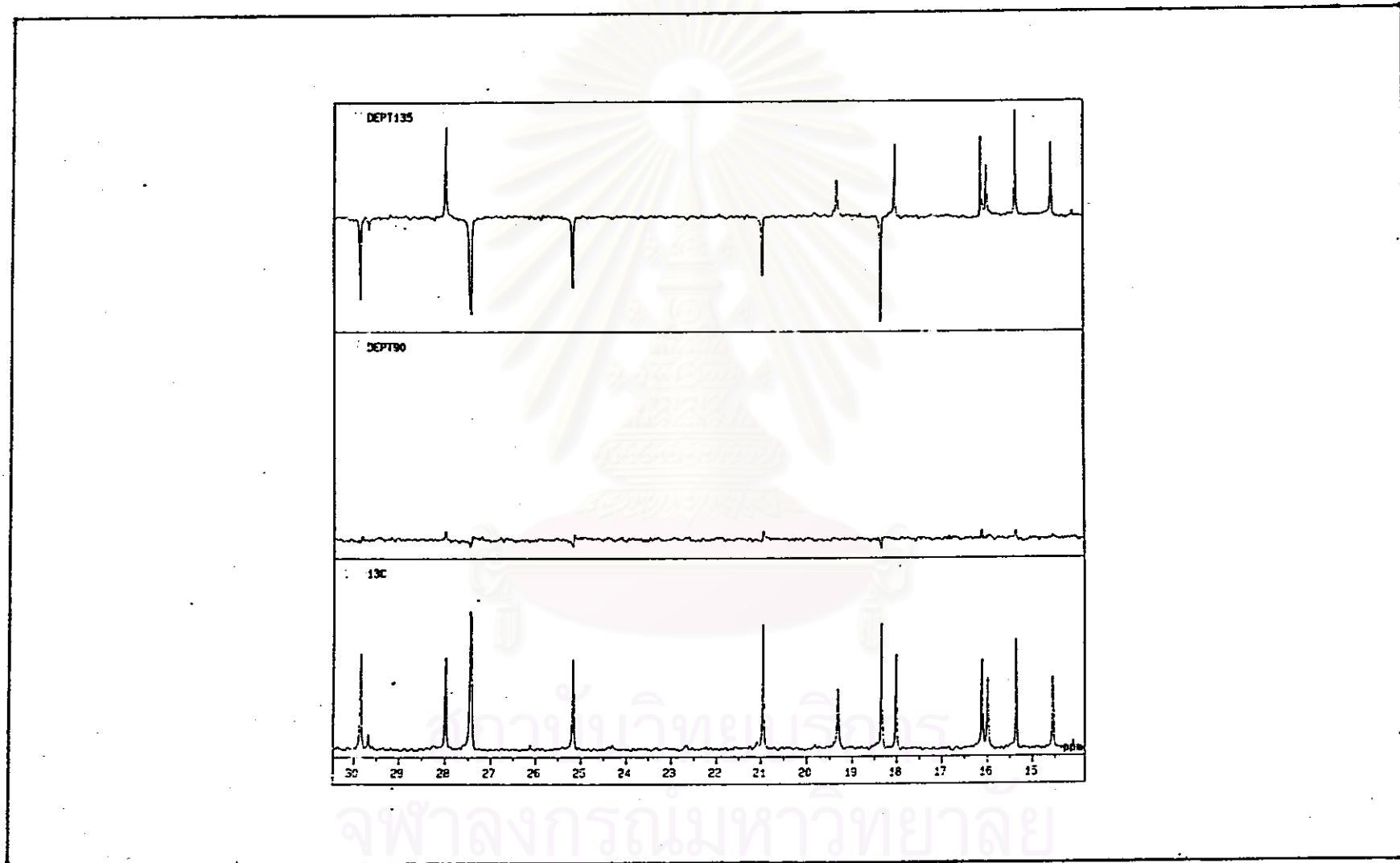


Figure 25 The DEPT 135 and DEPT 90 NMR spectrum of Compound IV

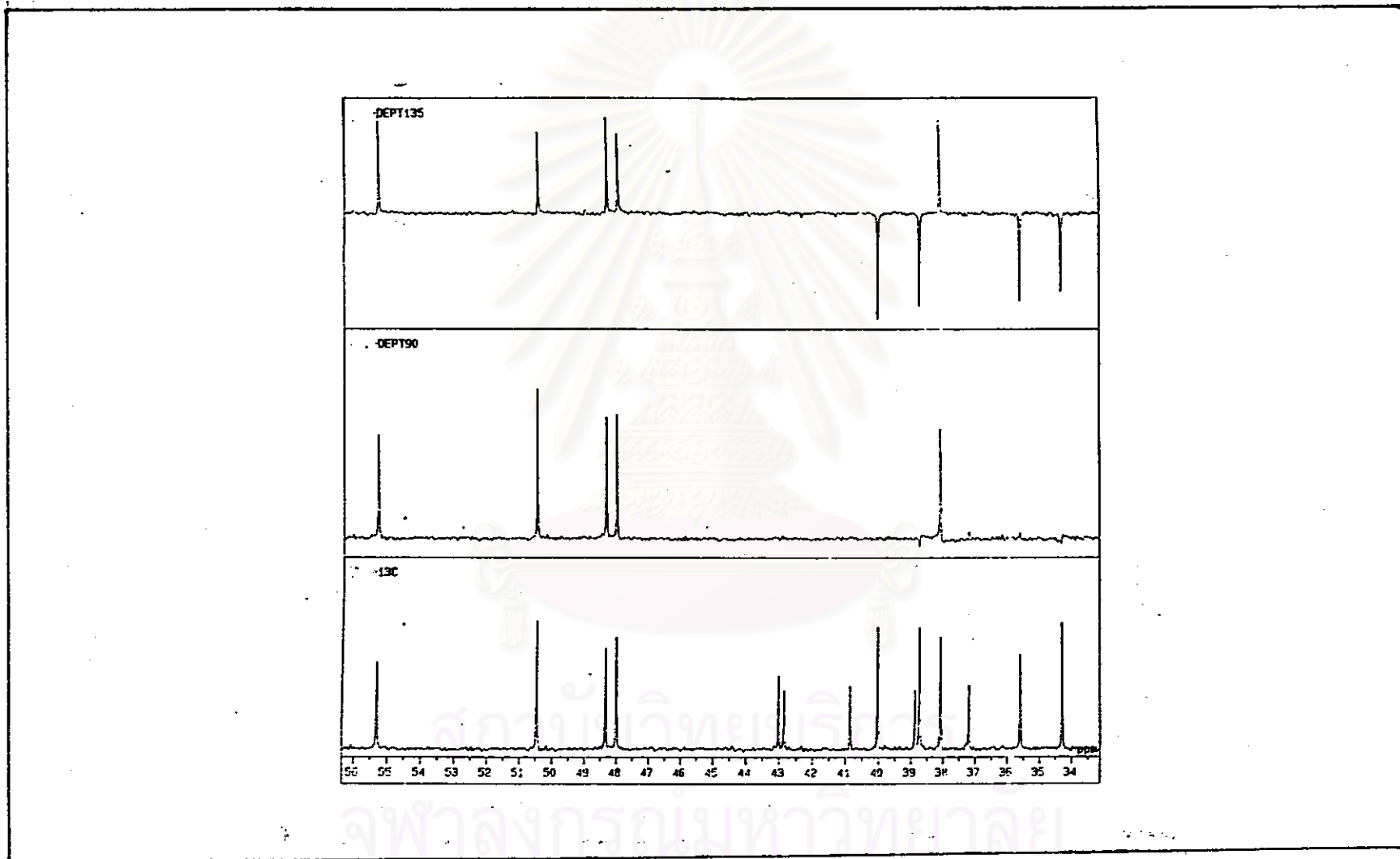


Figure 26 The DEPT 135 and DEPT 90 NMR spectrum of Compound IV

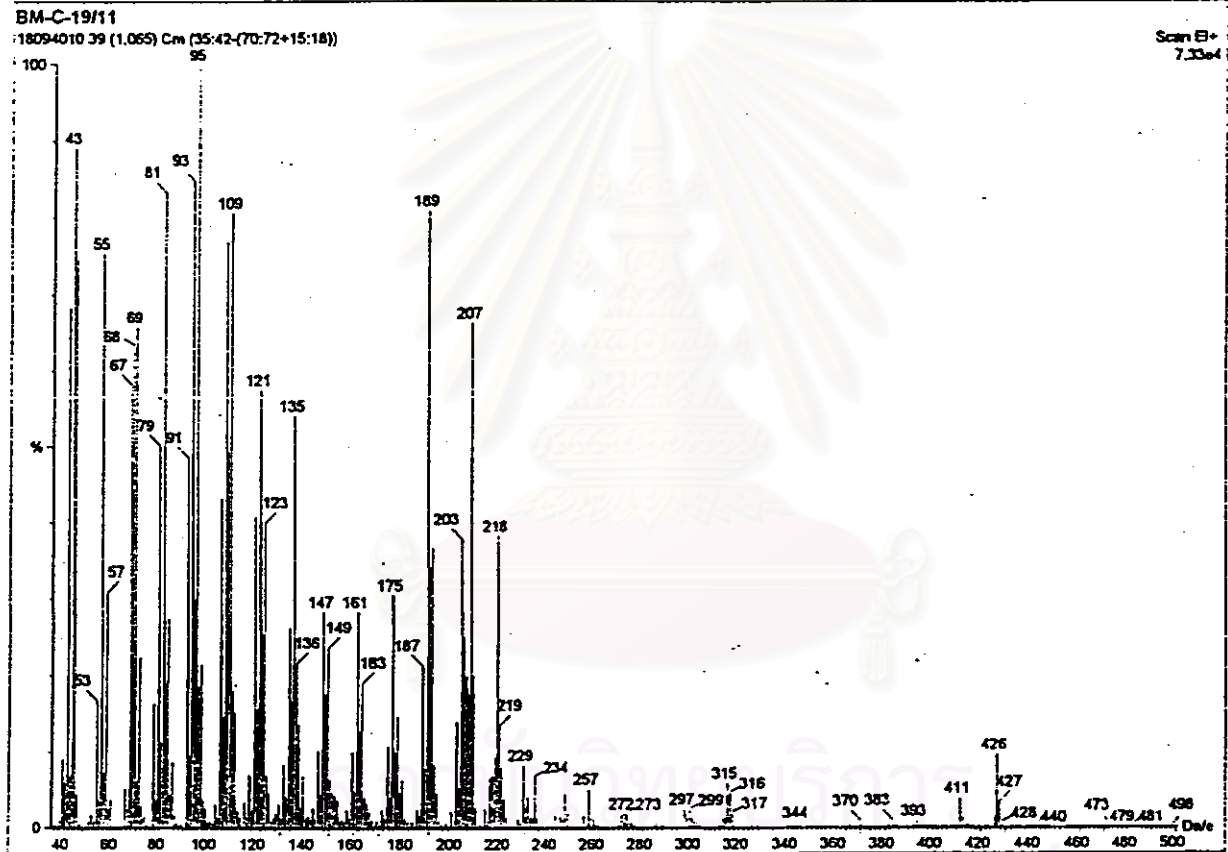


Figure 27 The mass spectrum of Compound IV

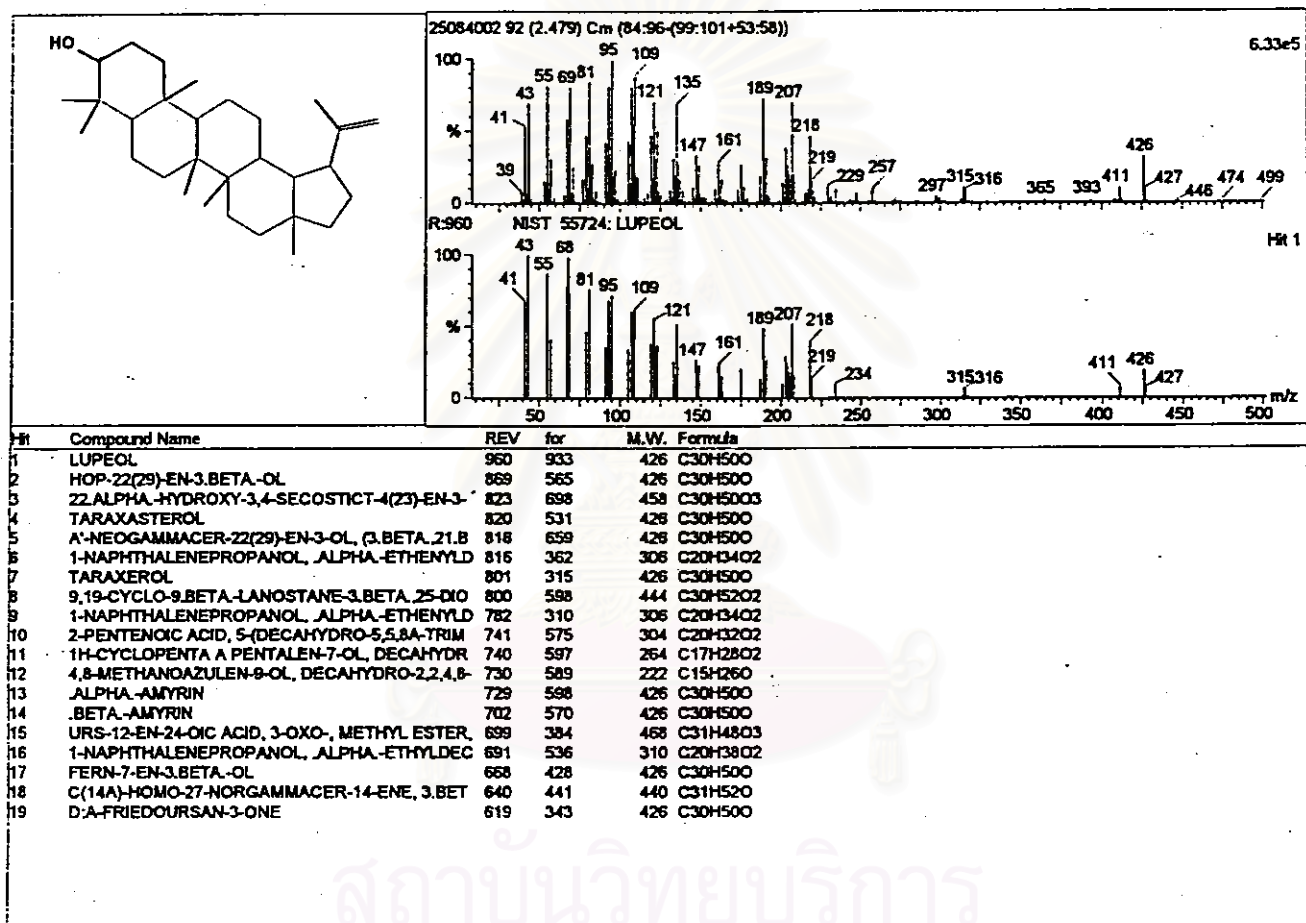


Figure 28 The Comparison of Mass spectrum of Compound IV to Lupeol

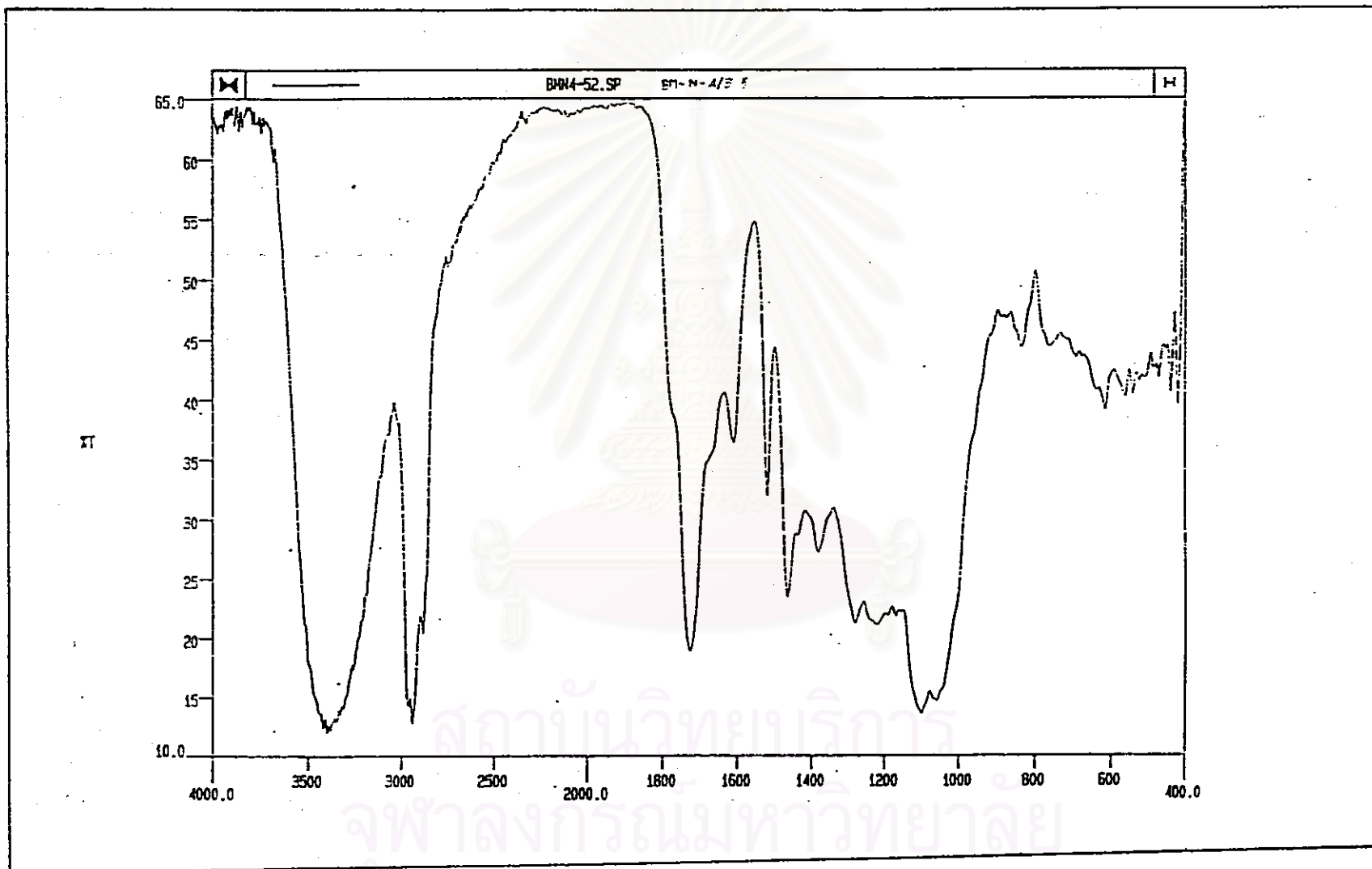


Figure 29 The IR spectrum of Compound V

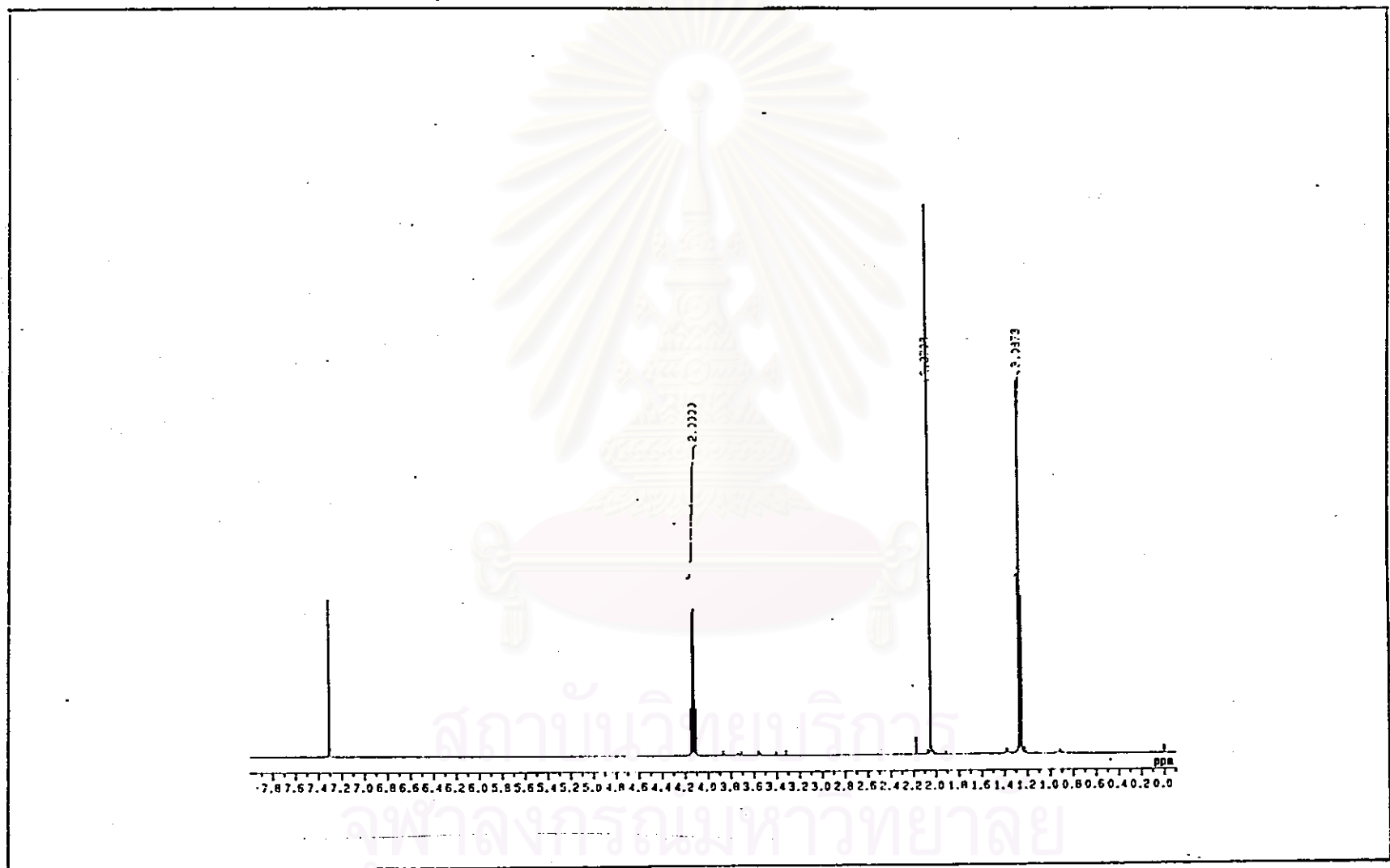


Figure 30 The $^1\text{H-NMR}$ spectrum of Compound V

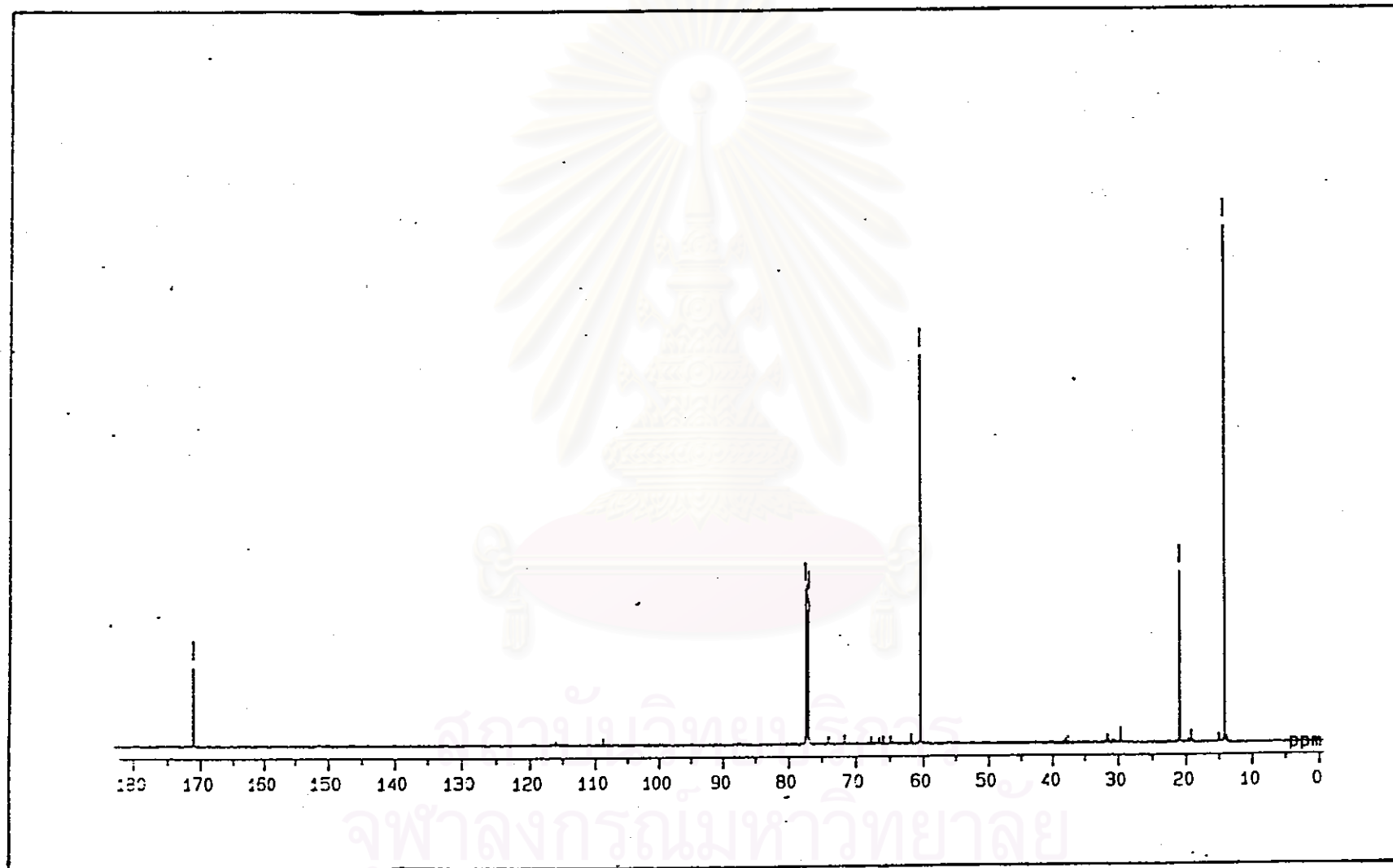


Figure 31. The ^{13}C -NMR spectrum of Compound V

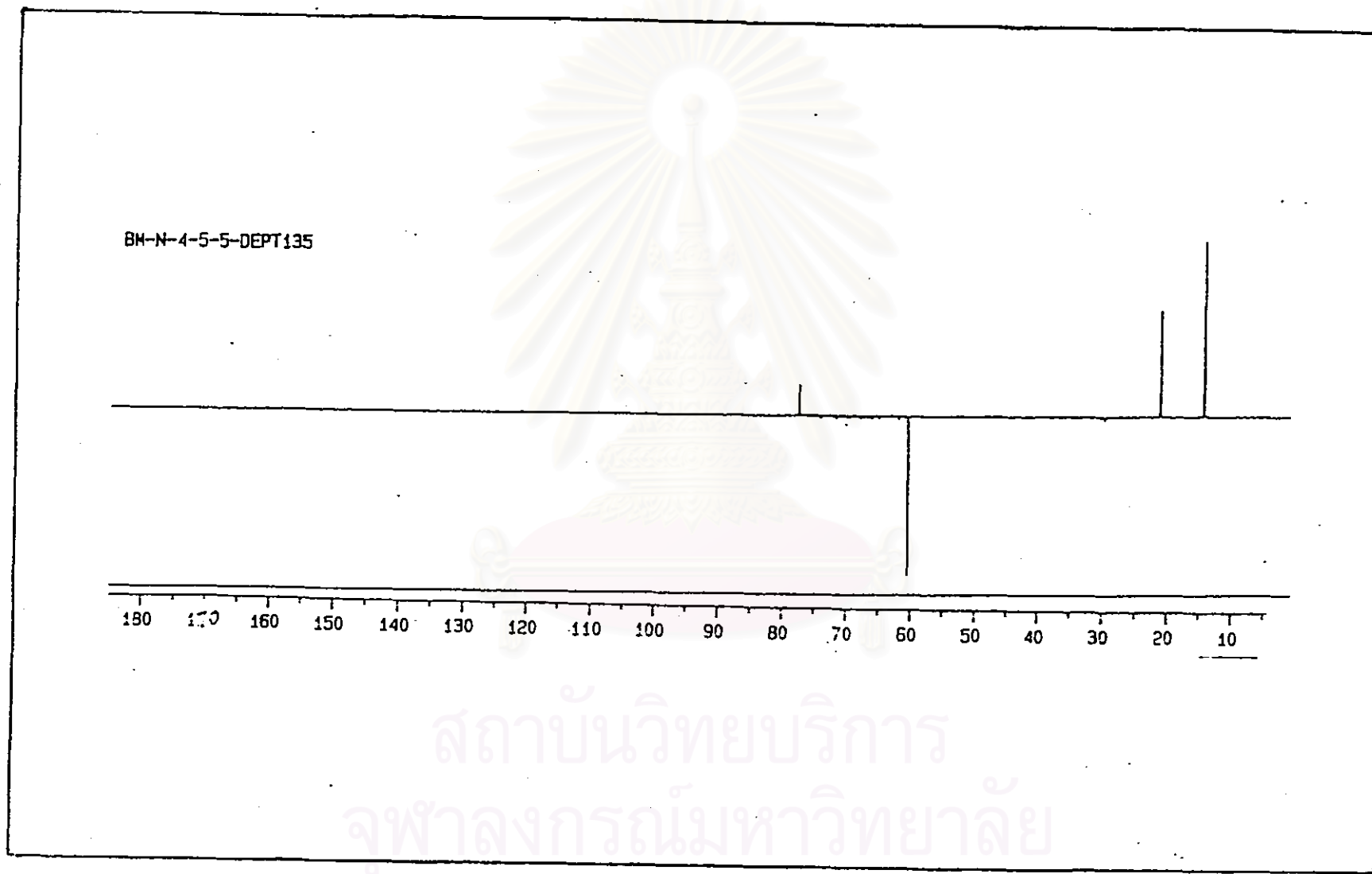


Figure 32 The DEPT 135 NMR spectrum of Compound V

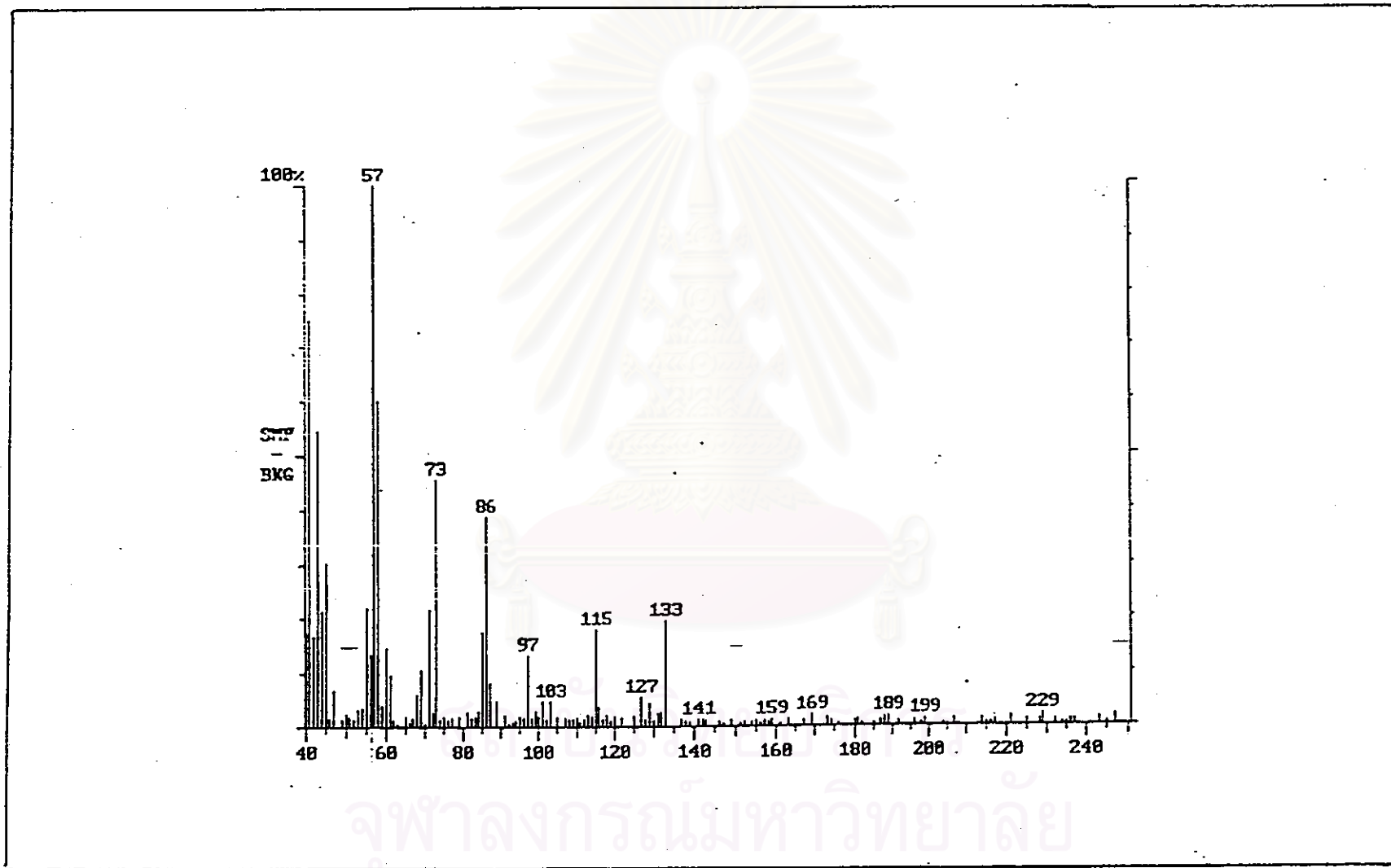


Figure 33 The mass spectrum of Compound V



APPENDIX B

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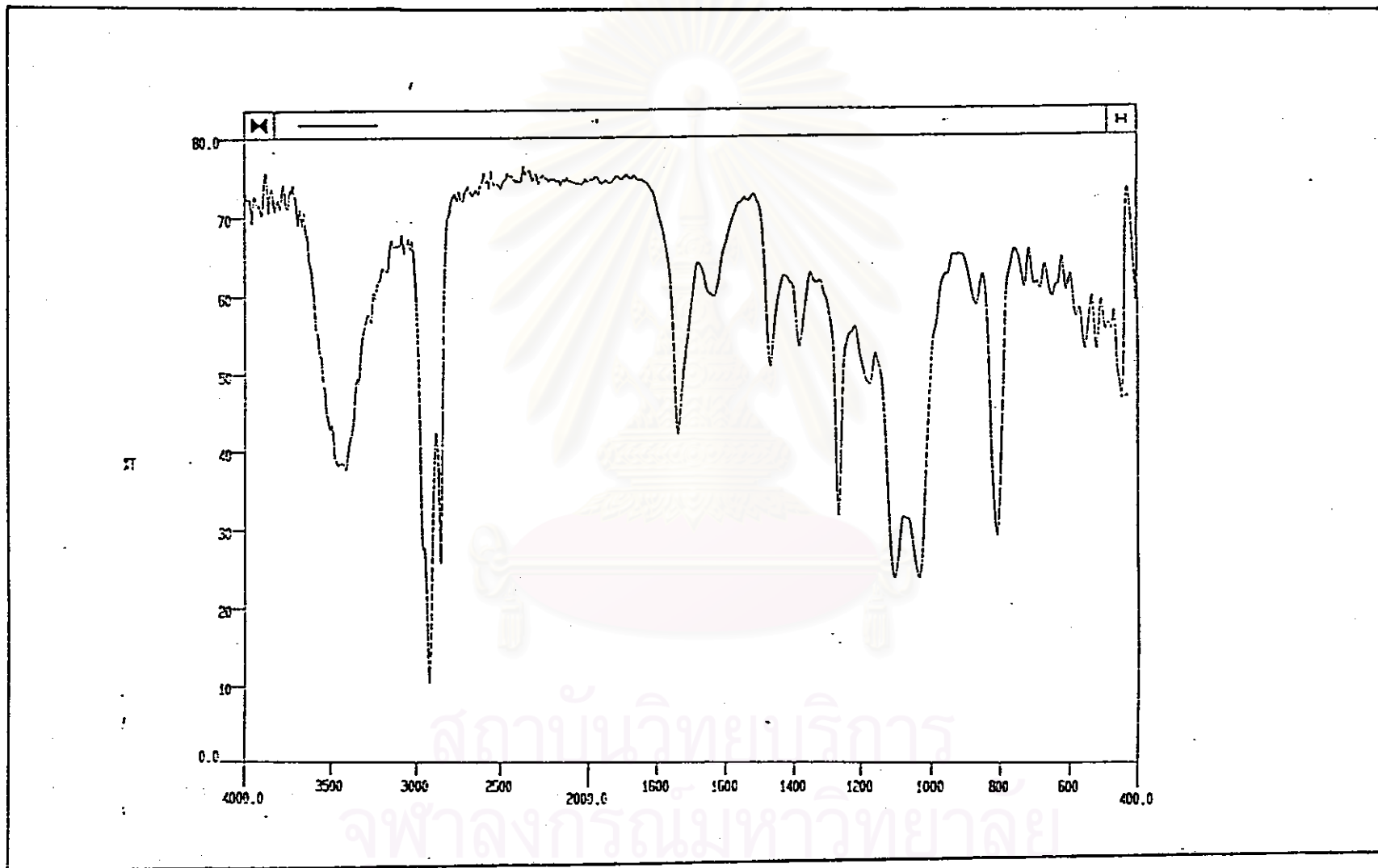


Figure 34 The IR spectrum of Compound VI

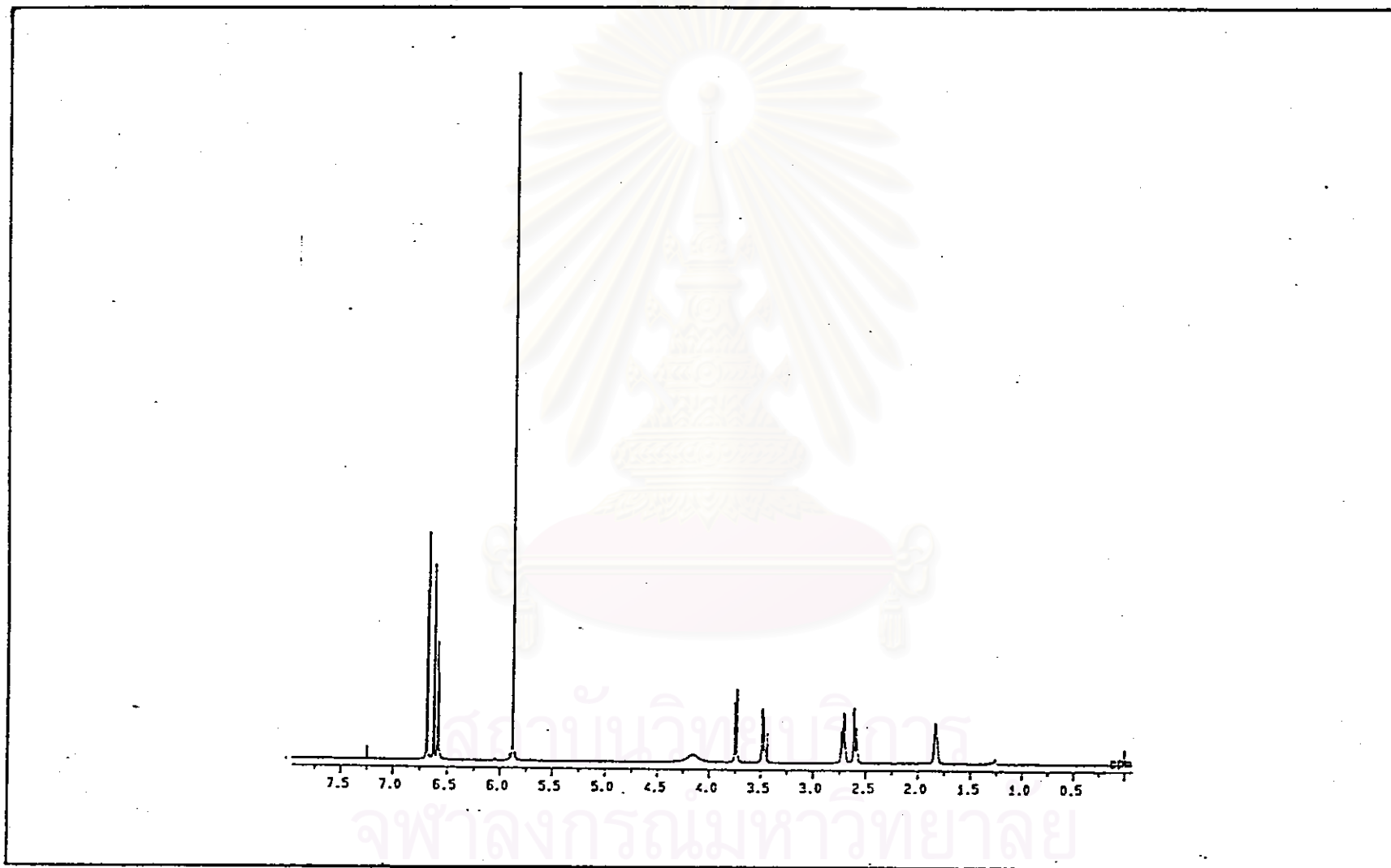


Figure 35 The $^1\text{H-NMR}$ spectrum of Compound VI

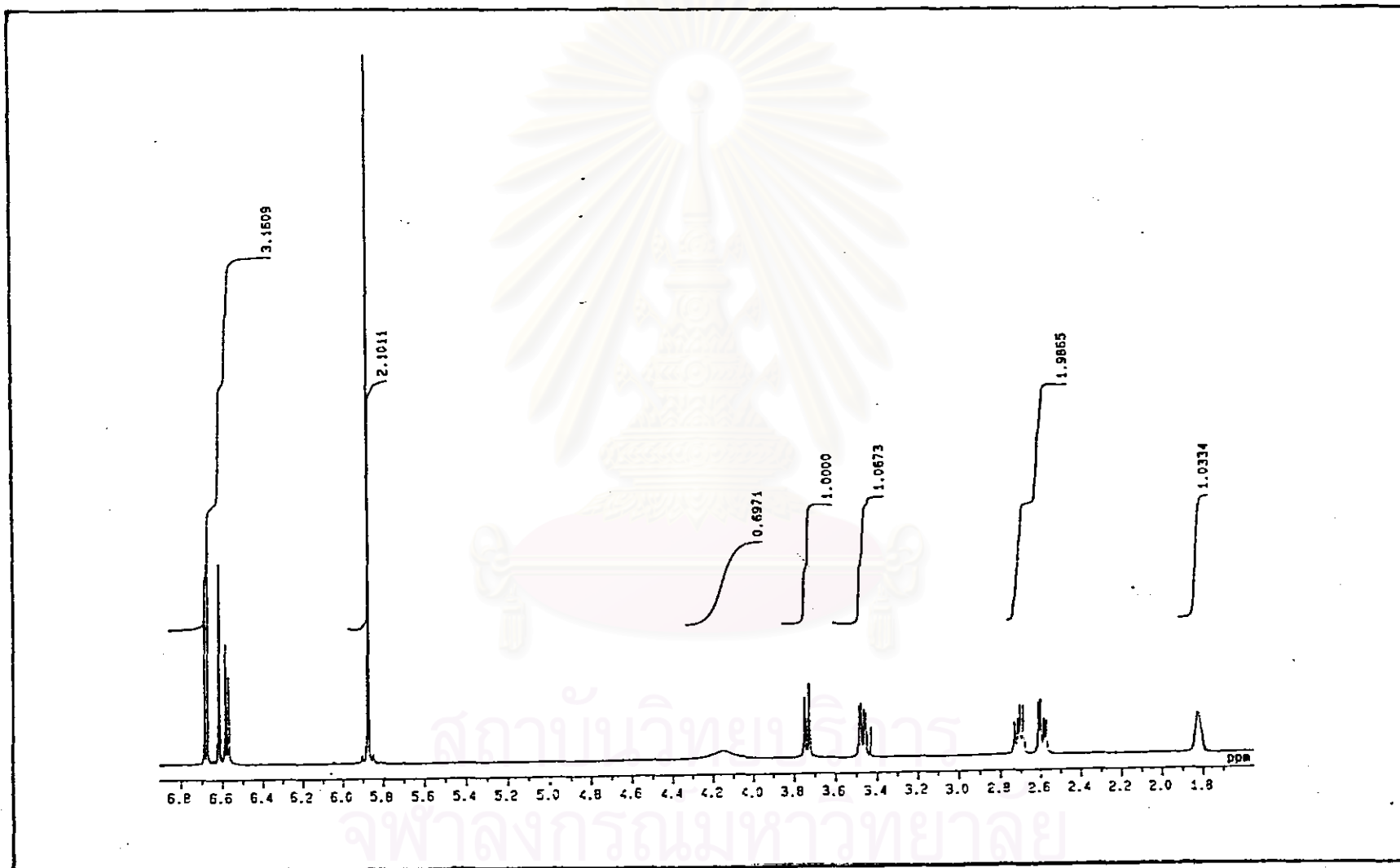


Figure 36 The ¹H-NMR spectrum of Compound VI

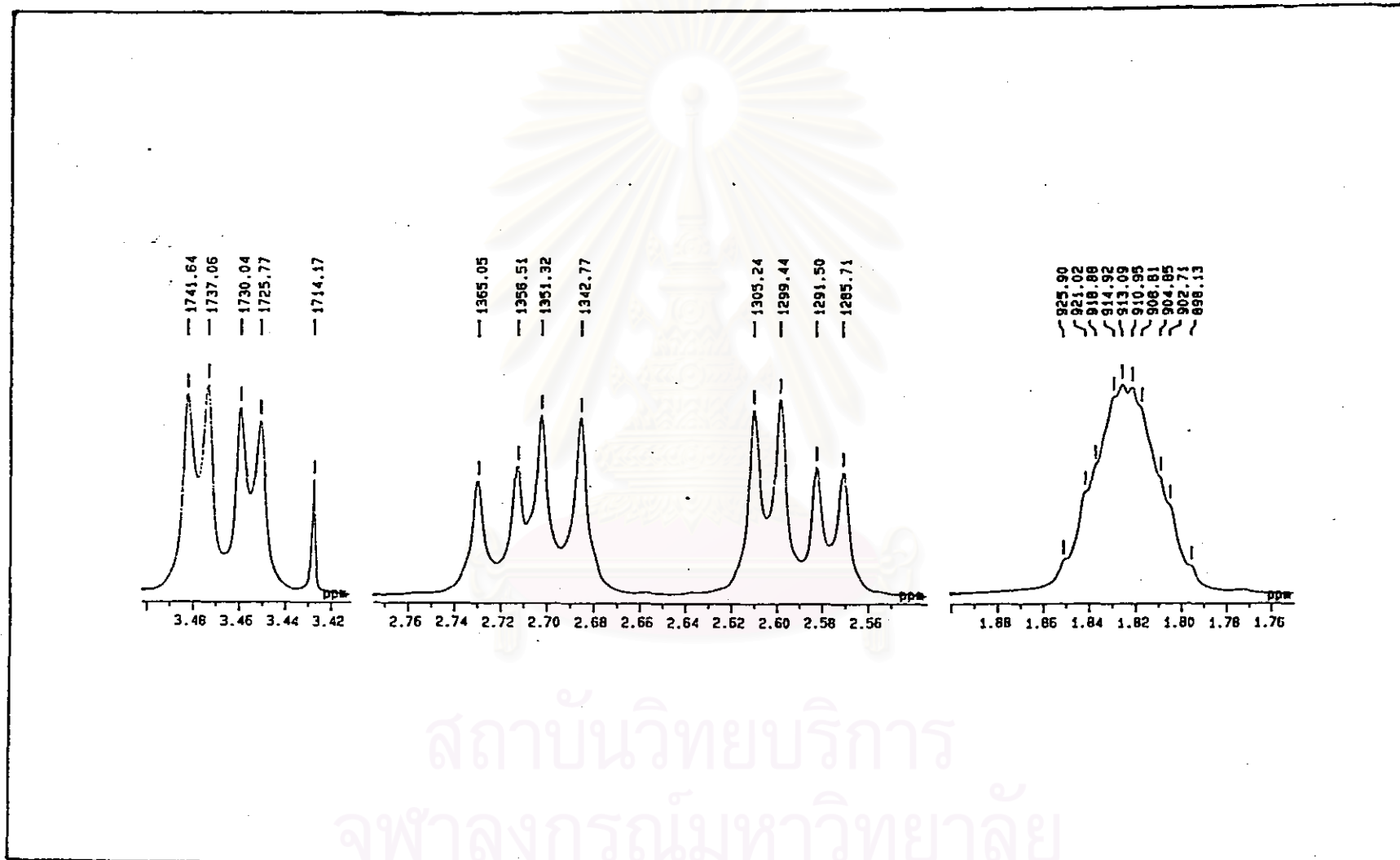


Figure 37 The $^1\text{H-NMR}$ spectrum of Compound VI

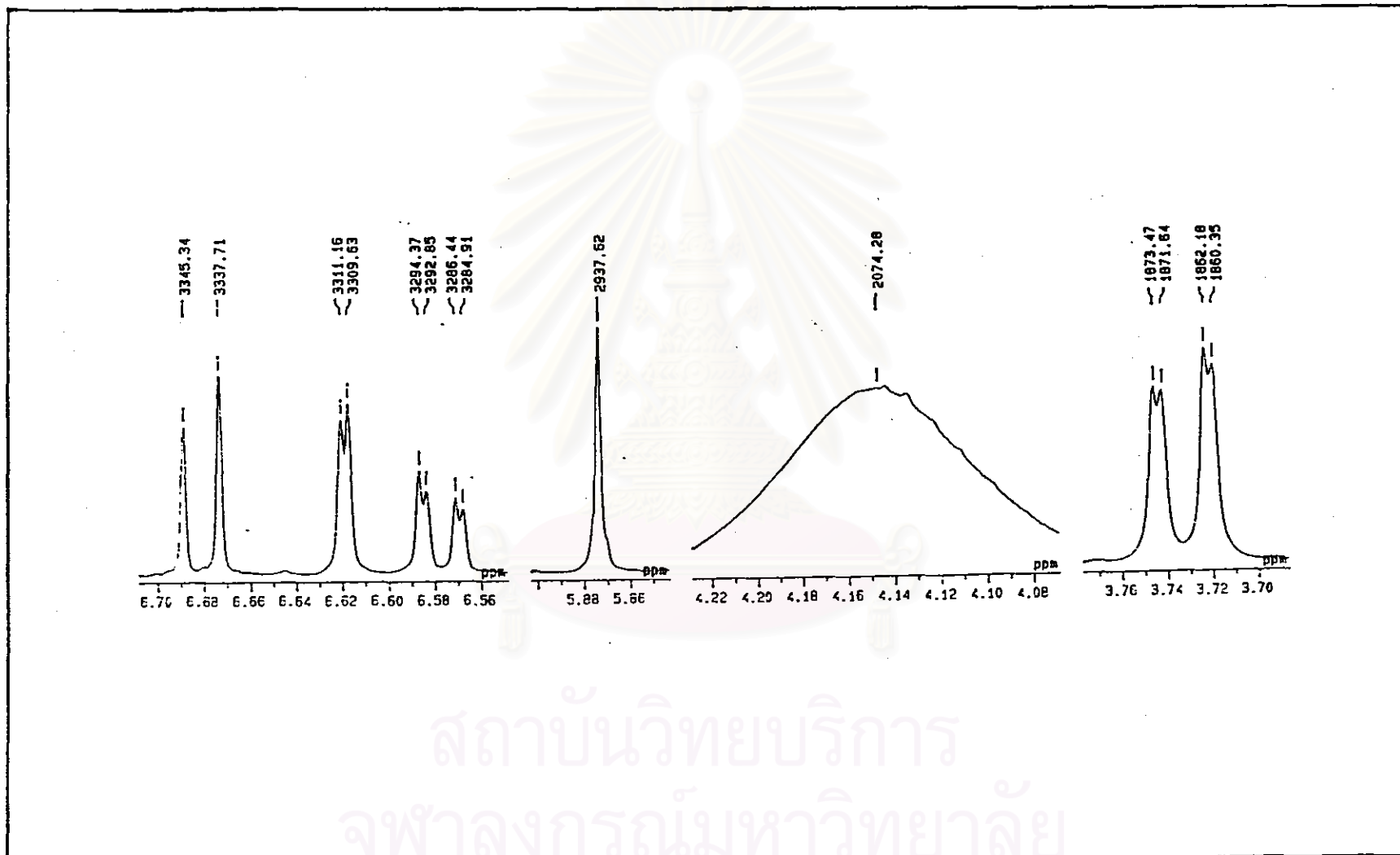


Figure 38 The $^1\text{H-NMR}$ spectrum of Compound VI

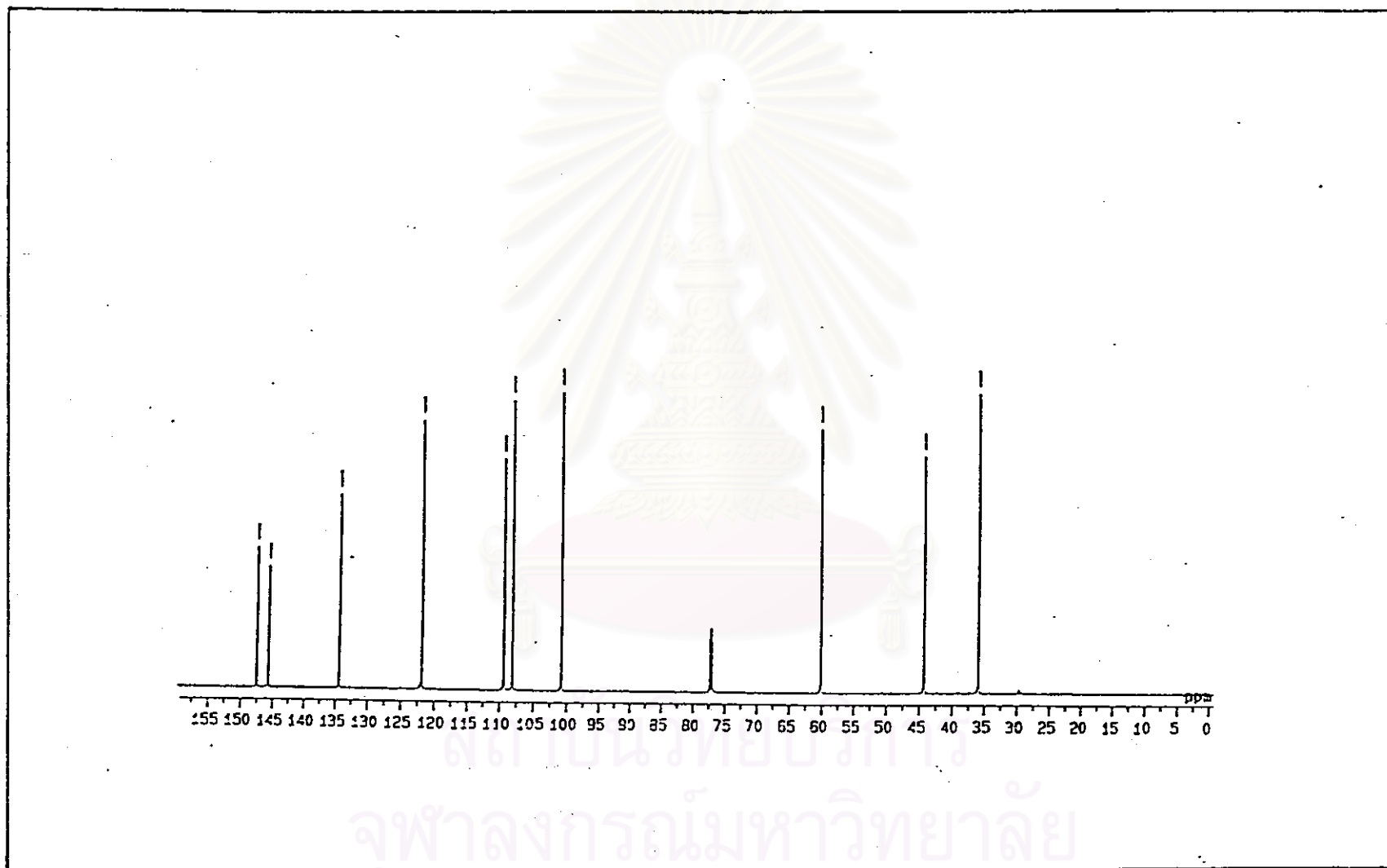


Figure 39 The ^{13}C -NMR spectrum of Compound VI

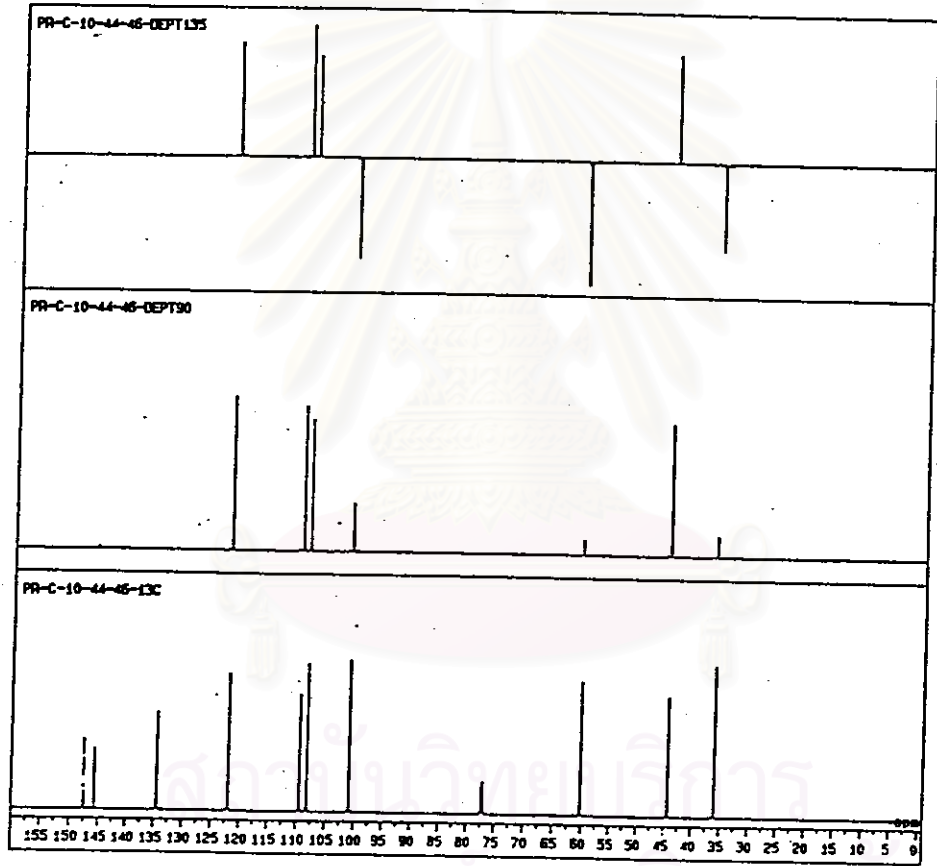


Figure 40 The DEPT 135 and DEPT 90 NMR spectrum of Compound VI

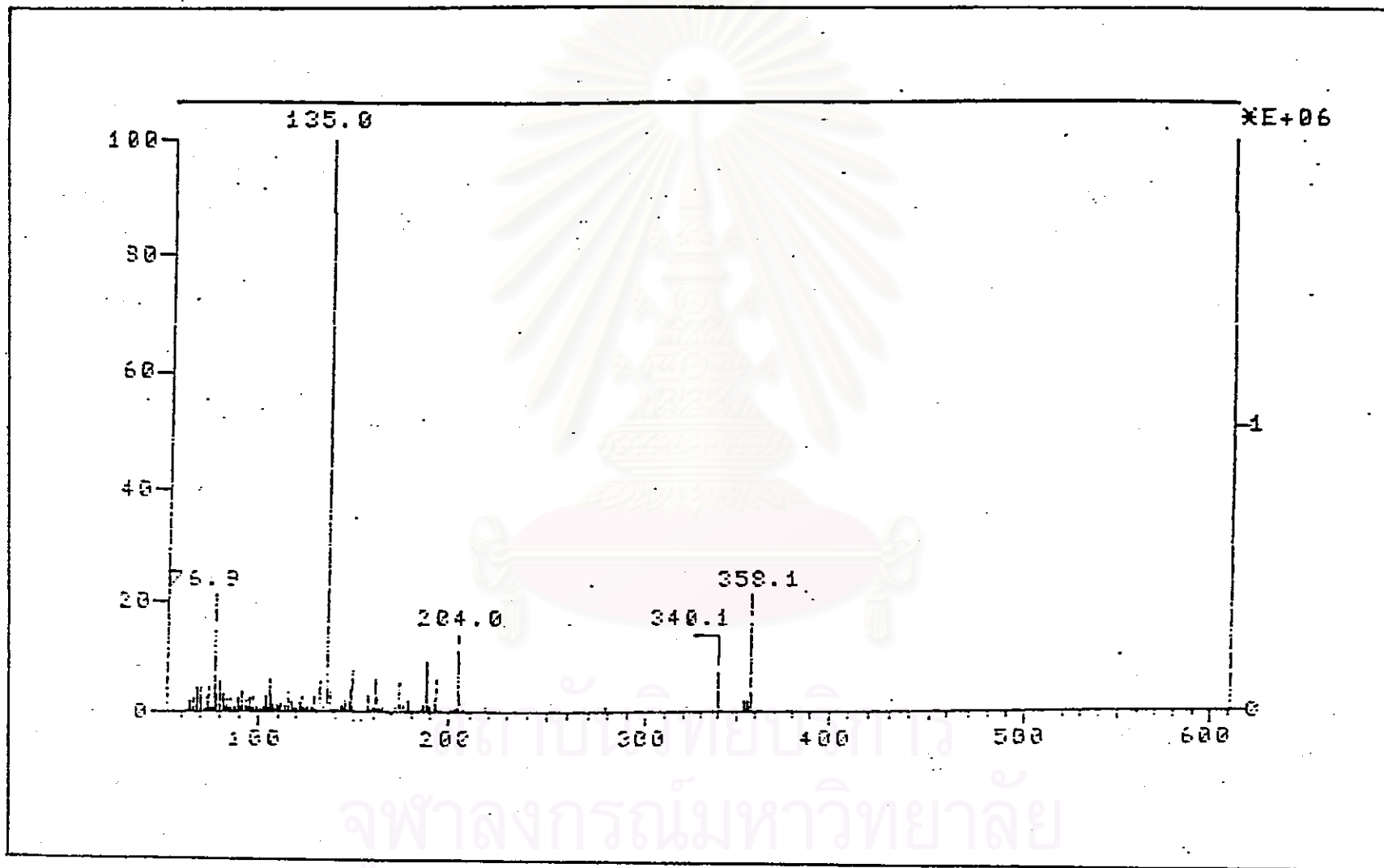


Figure 41 The Mass spectrum of Compound VI

VITA

Miss Sumana Pansamut was born on November 6, 1967 in Bangkok province, Thailand. She received the Bachelor Degree of Science in Chemistry at Ramkhumhaeng University in 1994. In the same year, she was admitted into a Master Degree Program in Organic Chemistry at Chulalongkorn University. Throughout her study towards the Master's degree, she received a financial support from Chulalongkorn University during 1997-1998.



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