

REFERENCES

1. Jirawongse, V., Ramstad, E., and Wolinsky, J. "Isolation of Polyporic Acid from *Lopharia papyracea*" J. Pharm. Sci. 51(1962): 1108-1109.
2. Yupraphat, T., Pachaly, P. and Zymalkowski, F. "Alkaloide aus der Thailändischen Menispermaceen-Droge Krung Kha Mao" Planta Med. 25(1974): 315-324.
3. Kitazawa, E., Sato, A., Takahashi, S., Kuwano, H. and Okiso, A. "Novel Diterpenelactones with Anti-peptic Ulcer Activity from *Croton sublyratus*" Chem. Pharm. Bull. 28(1), (1980): 227-234.
4. Tantivatana, P., Ruangrunsi, N., Vaisiriroj, V., Lankin D.C., Bhacca, N.S., Borris, R.P., Cordell, G.A. and Johnson, L.F. "Microminutin, a Novel Cytotoxic Coumarin from *Micromelum minutum* (Rutaceae)" J. Org. Chem. 48(2), (1983): 268-270.
5. Core, E.L. Plant Taxonomy p. 344, Englewood Cliffs, Prentice-Hall, 1955.
6. Willis, J.C. A Dictionary of the Flowering Plants and Ferns, 7th ed., p. 32, Cambridge University Press, 1966.
7. Craib, W.G. Florae Siamensis Enumeratio. Vol. 1, pp. 254-259, Bangkok : The Siam Society, 1931.

8. Smitinand, T. Thai Plant Names (Botanical Names- Vernacular Names). 2nd ed., pp. 11-12, Funny Publishing, 1980.
9. Volkonsky, M. "Insect-repellent Action of Extracts of the Leaves of *Melia azedarach*." Arch. Inst. Pasteur Alger. (1937): 427-432. (Through C.A. 35: 7104⁹)
10. Carratala, R.E. "Fatal Intoxication by Fruit from *Melia azedarach* L." Rev. Asoc. Med. Argent. 53(1939): 338-340. (Through C.A. 33: 6951⁶)
11. Guevara, R. "Pharmacodynamic Study of Lansones Resin, Tangan-tangan Oil and Palo Santo Seeds" Rev. Filip. Med. Farm. 31(1940): 143-154. (Through C.A. 34: 7007⁹)
12. Sinha, N.P. and Gulati, K.C. "Neem (*Azadirachta indica*) Seed Cake as a Source of Pest Control Chemicals" Bull. Reg. Res. Lab., Jammu, India 1, (1963): 176-177. (Through C.A. 60: 8348^e)
13. Berndt, G. "The Use of Margosa Oil and Margosa Extract in Indian Pharmacy" Seifen-Oele-Fette-Wachse 59 (1963): 894. (Through C.A. 63: 5449^b)
14. Dhar, M.L., Dhar, M.M., Dhawan, B.N., Mehrotra, B.N. and Ray, C. "Screening of Indian Plants for Biological Activity: Part I" Indian J. Exp. Biol. 6(1968): 232-247.

15. Bhakuni, D.S., Dhar, M.L., Dhar, M.M., Dhawan, B.N. and Mehrotra, B.N. "Screening of Indian Plants for Biological Activity: Part II" ibid. 7(1969): 250-262.
16. Dhar, M.L., Dhar, M.M., Dhawan, B.N., Mehrotra, B.N., Srimal, R.C. and Tandon, J.S. "Screening of Indian Plants for Biological Activity: Part IV" ibid. 2(1973): 43-54.
17. Martinez Nadal, N.G., Santa de la Torre, A.E.M. and Vega, G. "Toxicological Effects of Active Principles of West Indian Coaba, *Swietenia mahagoni*" Caribb. J. Sci. 13(1-2), (1973): 131-134.
(Through C.A. 80: 44671a)
18. Qadri, S.S.H. and Rao, B.B. "Effect of Combining some Indigenous Plant Seed Extracts Against Household Insects" Pesticides 11(12), (1977): 21-23.
(Through C.A. 89: 54697p)
19. Guha-Sircar, S.S. and Chakravarty, T. "The Chemical Investigation of the Seeds of *Swietenia macrophylla*. I. The Nonbitter Principle" J. Indian Chem. Soc. 28(1951): 207-210. (Through C.A. 47: 2173ⁱ)
20. Connolly, J.D., Henderson, R., McCrindle, R., Overton, K.H., and Bhacca, N.S. "Tetranortriterpenoids. Part I. (Bicyclonanolides. Part I.) The Constitution of Swietenine." J. Chem. Soc. (1965): 6935-6948.

21. Connolly, J.D., McCrindle, R., Overton, K.H. and Warnock, W.D.C. "Swietenolide" Tetrahedron Lett. 33(1965): 2937-2940.
22. Amorós-Marín, L., Torres, W.I. and Asenjo, C.F. "Isolation of Cycloeucaleanol from West Indian Mahogany Wood" J. Org. Chem. 24(1959): 411-413.
23. Akisanya, A., Bevan, C.W.L., Hirst, J., Halsall, T.G. and Taylor, D.A.H. "West African Timbers. Part III. Petroleum Extracts from the Genus *Entandrophragma*." J. Chem. Soc. (1960): 3827-3829.
24. Akisanya, A., Bevan, C.W.L., Halsall, T.G., Powell, J.W. and Taylor, D.A.H. "West African Timbers. Part IV. Some Reaction of Gedunin." ibid. (1961): 3705-3708.
25. Taylor, D.A.H. and Wragg, K. "The Structure of Entandrophragmin" Chem. Commun. (1967): 81-83.
26. Taylor, D.A.H. "Extractives from East African Timbers. Part I." J. Chem. Soc. (1965): 3495-3496.
27. Chan, W.R., Magnus, K.E. and Mootoo, B.S. "Extractives from *Cedrela odorata* L. The Structure of Methyl-Angolensate" J. Chem. Soc. C (1967): 171-177.
28. Taylor, D.A.H. "Extractives from *Swietenia mahoganii* (L.) Jacq." Chem. Commun. (1969): 58.

29. Bevan, C.W.L., Halsall, T.G., Nwaji, M.N. and Taylor, D.A.H. "West African Timbers. Part V. The Structure of Khivorin, a Constituent of *Khaya ivorensis*." J. Chem. Soc. (1962): 768-771.
30. Gough, J.H. and Sutherland, M.D. "Terpenoid Chemistry VIII. The Structure of δ -elemene." Aust. J. Chem. 17(1964): 1270-1281.
31. Gough, J., Powell, V. and Sutherland, M.D. "Constitution and Biogenesis of Two New Sesquiterpenes" Tetrahedron Lett. 21(1961): 763-767.
32. Henderson, R., McCrindle, R. and Overton, K.H. "Salannin" ibid. 52(1964): 3969-3974.
33. Silva, L.B., Stöcklin, W. and Geissman, T.A. "The Isolation of Salannin from *Melia dubia*" Phytochemistry 8(1969): 1817-1819.
34. Connolly, J.D., McCrindle, R. and Overton, K.H. "The Constitution of Mexicanolide. A Novel Cleavage Reaction in a Naturally Occurring Bicyclo(3,3,1)nonane Derivative" Chem. Commun. 8(1965): 162-163.
35. Bevan, C.W.L. and Ekong, D.E.U. "Occurrence of 8-Methoxy 4-methylcoumarin in *Ekebergia senegalensis* A. Juss" Chem. Ind. (1965): 383-384.

36. Shiengthong, D., Verasarn, A., NaNonggai-Suwanrath, P. and Warnhoff, E.W. "Constituents of Thai Medicinal Plants-I. Aglaiol" Tetrahedron 21(1965): 917-924.
37. Boar, R.B. and Damps, K. "Configuration of Aglaiol, a (24S)-24,25-Epoxy-triterpene" J. Chem. Soc., Chem. Commun. (1973): 115-116.
38. _____ "Triterpenoids of *Aglaia odorata*. Configuration of Trisubstituted Epoxides" J. Chem. Soc., Perkin Trans. I (1977): 510-512.
39. Shiengthong, D., Kokpol, U., Karntiang, P. and Massy-Westropp, R.A. "Triterpenoid Constituents of Thai Medicinal Plants-II. Isomeric Aglatriols and Aglaiondiol" Tetrahedron 30(1974): 2211-2215.
40. Chatterjee, A., and Kundu, A.B. "Isolation, Structure and Stereochemistry of Aphanamixin - A New Triterpene from *Aphanamixis polystachya* Wall and Parker" Tetrahedron Lett. 16(1967): 1471-1476.
41. Lavie, D., Jain, M.K. and Shpan-Gabrielith, S.R. "A Locust Phagorepellent from Two *Melia* species" Chem. Commun. (1967): 910-911.
42. Chang, F.C. and Chiang, C.K. "Kulinone, a Euphane-type Triterpenoid from *Melia azedarach*, L." ibid. (1968): 1156-1158.

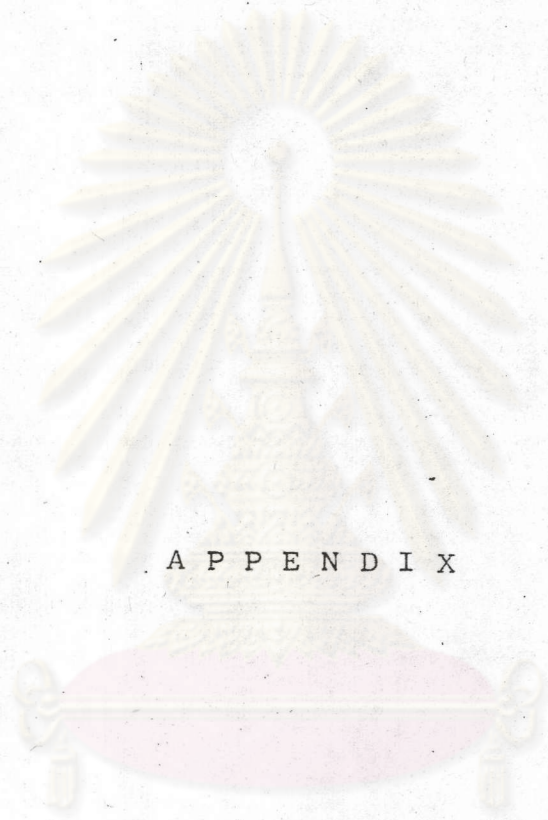
43. Nagasampagi, B.A., Yankov, L. and Dev, S. "Isolation and Characterisation of Geranylgeraniol" Tetrahedron Lett. 2(1967): 189-192.
44. Connolly, J.D., Handa, K.L., McCrindle, R. and Overton K.H. "Mexicanol" ibid. 36(1967): 3449-3452.
45. McCabe, P.H., McCrindle, R. and Murray, R.D.H. "Constituents of Sneezewood, *Ptaeroxylon obliquum* (Thunb.) Radlk. Part I. Chromones" J. Chem. Soc. C, (1967): 145-151.
46. Murray, R.D.H. and Ballantyne, M.M. "Nieshoutol, A Sternutatory Hydroxycoumarin from Sneezewood" Tetrahedron Lett. 46(1969): 4031-4034.
47. Kiang, A.K., Tan, E.L., Lim, F.Y., Habaguchi, K., Nakanishi, K., Fachan, L. and Ourisson, G. "Lansic Acid, a Bicyclic Triterpene" ibid. 37(1967): 3571-3574.
48. Okorie, D.A. and Taylor, D.A.H. "Extractives from the Seed of *Cedrela odorata* L." Phytochemistry 7 (1968): 1683-1686.
49. Taylor, D.A.H. "11 β -Acetoxymkhivorin, a New Limonoid" Chem. Commun. (1968): 1172.
50. Connolly, J.D., Handa, K.L., McCrindle, R. and Overton, K.H. "Tetranortriterpenoids. Part X. Grandifolione" J. Chem. Soc. C, (1968): 2227-2234.

51. Connolly, J.D. and McCrindle, R. "Tetranortriterpenoids and Related Substances. Part XIII. The Constitution of Grandifoliolenone, an apo-Tirucallol Derivative from *Khaya grandifoliola* (Meliaceae)" ibid. (1971): 1715-1718.
52. Johns, S.R. and Lamberton, J.A. "Isolation of Simple Acid Amides from *Allophylus cobbe* (Sapindaceae) *Homalium foetidum* (Flacourtiaceae) and from an *Aglaiia* species (Meliaceae)" Aust. J. Chem. 22 (1969): 1315-1316.
53. Burke, B.A., Chan, W.R., Magnus, K.E. and Taylor, D.R. "Extractives of *Cedrela odorata* L. - III The Structure of Photogedunin" Tetrahedron 25(1969): 5007-5011.
54. Arndt, R.R. and Baarschers, W.H. "The Structure of Phragmalin A Meliacin with a Norbornane Part Skeleton" ibid. 28(1972): 2333-2340.
55. Chakraborty, D.P. and Basak, S.P. "Cyclomahogenol, A New Tetracyclic Triterpene from *Swietenia mahagoni*" Phytochemistry 10(1971): 1367-1372.
56. Chan, W.R. and Taylor, D.R. "Extracts of *Cedrela odorata* L. - IV The Structure of Odoratin, an Undecanortriterpene" Tetrahedron 28(1972): 431-437.
57. Chatterjee, A., Chakraborty, T. and Chandrasekharan, S. "Chemical Investigation of *Cedrela toona*" Phytochemistry 10(1971): 2533-2535.

58. Smolenski, S.J., Silinis, H. and Farnsworth, N.R. "Alkaloid Screening. I" Lloydia 35(1), (1972): 22.
59. Fong, H.H.S., Trojankova, M., Trojanek, J. and Farnsworth, N.R. "Alkaloid Screening. II" ibid. 35(2), (1972): 138.
60. Smolenski, S.J., Silinis, H. and Farnsworth, N.R. "Alkaloid Screening. IV" ibid. 37(1), (1974): 38.
61. _____ "Alkaloid Screening VI" ibid. 38(3), (1975): 245.
62. _____ "Alkaloid Screening. VIII" ibid. 38(6), (1975): 522.
63. Connolly, J.D. "Structure of Dregeanin and Rohitukin, Limonoids from the Subfamily Melioideae of the Family Meliaceae. An Unusually High Absorption Frequency for a Six-Membered Lactone Ring" J. Chem. Soc., Chem. Commun. (1976): 909-910.
64. Singh, S., Garg, H.S. and Khanna, N.M. "Dysobinin, a New Tetranortriterpene from *Dysoxylum binectariferum*" Phytochemistry 15(1976): 2001-2002.
65. Shiengthong, D., Ungphakorn, A., Lewis, D.E. and Massy-Westropp, R.A. "Constituents of Thai Medicinal Plants IV New Nitrogen Compounds - Odorine and Odorinol" Tetrahedron 24(1979): 2247-2250.

66. Purushothaman, K.K., Sarada, A., Connolly, J.D. and Akinniyi, J.A. "The Structure of Roxburghilin, a Bis-amide of 2-Aminopyrrolidine from the Leaves of *Aglaia roxburghiana* (Meliaceae)" J. Chem. Soc., Perkin Trans. I (1979): 3171-3174.
67. Techasauvapak, P. "A Study of Some Compounds from the Flowers of *Aglaia odorata* Lour." Master's Thesis, Department of Chemistry, Graduate School, Chulalongkorn University, 1981.
68. Pillai, N.R. and Santhakumari, G. "Anti-Arthritic and Anti-Inflammatory Actions of Nimbidin" Planta Med. 43(1981): 59-63.
69. King, M.L., Chiang, C.C., Ling, H.C., Fujita, E., Ochiai, M. and McPhail, A.T. "X-Ray Crystal Structure of Rocaglamide, a Novel Antileukemic 1H-Cyclopenta(b)benzofuran from *Aglaia elliptifolia*" J. Chem. Soc., Chem. Commun. (1982): 1150-1151.
70. Aladesanmi, A.J., Kelly, C.J. and Leary, J.D. "The Constituents of *Dysoxylum lenticellare*. I. Phenylethylisoquinoline, Homoerythrina, and Dibenzazecine Alkaloids" Lloydia 46(1), (1983): 127-131.
71. Lecomte, M.H. and Premier, T. Flore Generale de L-Indo-Chine pp. 763-764, Paris, Masson et C^{ie}, Editeurs 120, Boulevard Saint-Germain (VI^e), Mars 1911.

72. Stahl, E. Thin Layer Chromatography, 2nd Ed., pp. 873-874, Springer-Verlag, New York, 1969.
73. Still, C.W., Kahn, M. and Mitra, A. "Rapid Chromatographic Technique for Preparative Separation with Moderate Resolution" J. Org. Chem. 43(1978): 2923-2925.
74. Silverstein, R.M., Bassler, G.C. and Morrill, T.C. Spectrometric Identification of Organic Compounds, 3rd Ed., pp. 19-39, John Wiley & Sons, New York, 1974.
75. Hayashi, N., Lee, K.H., Hall, I.H., McPhail, A.T. and Huang, H.C. "Structure and Stereochemistry of (-)-Odorinol, an Antileukemic Diamide from *Aglaia odorata*" Phytochemistry 21(9), (1982): 2371-2373.
76. Ungphakorn, A. "The Isolation and Structural determination of Nitrogen Compounds from Leaves of *Aglaia odorata* Lour." Master's Thesis Department of Chemistry, Graduate School, Chulalongkorn University, 1974.
77. Babidge, P.J., Massy-Westropp, R.A., Pyne, S.G., Shiangthong, D., Ungphakorn, A. and Veerachat, G. "The Synthesis and Stereochemistry of Odorine" Aust. J. Chem. 33(1980): 1841-1845.



A P P E N D I X

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

silica gel G/diethyl ether : acetone (9:1)



Fig. 5. Thin layer chromatogram of alkaloid Ag.

silica gel G/chloroform : ethyl acetate (4:6)



Fig. 6. Thin layer chromatogram of alkaloid Ag.

alumina/chloroform



Fig. 7. Thin layer chromatogram of alkaloid Ag.

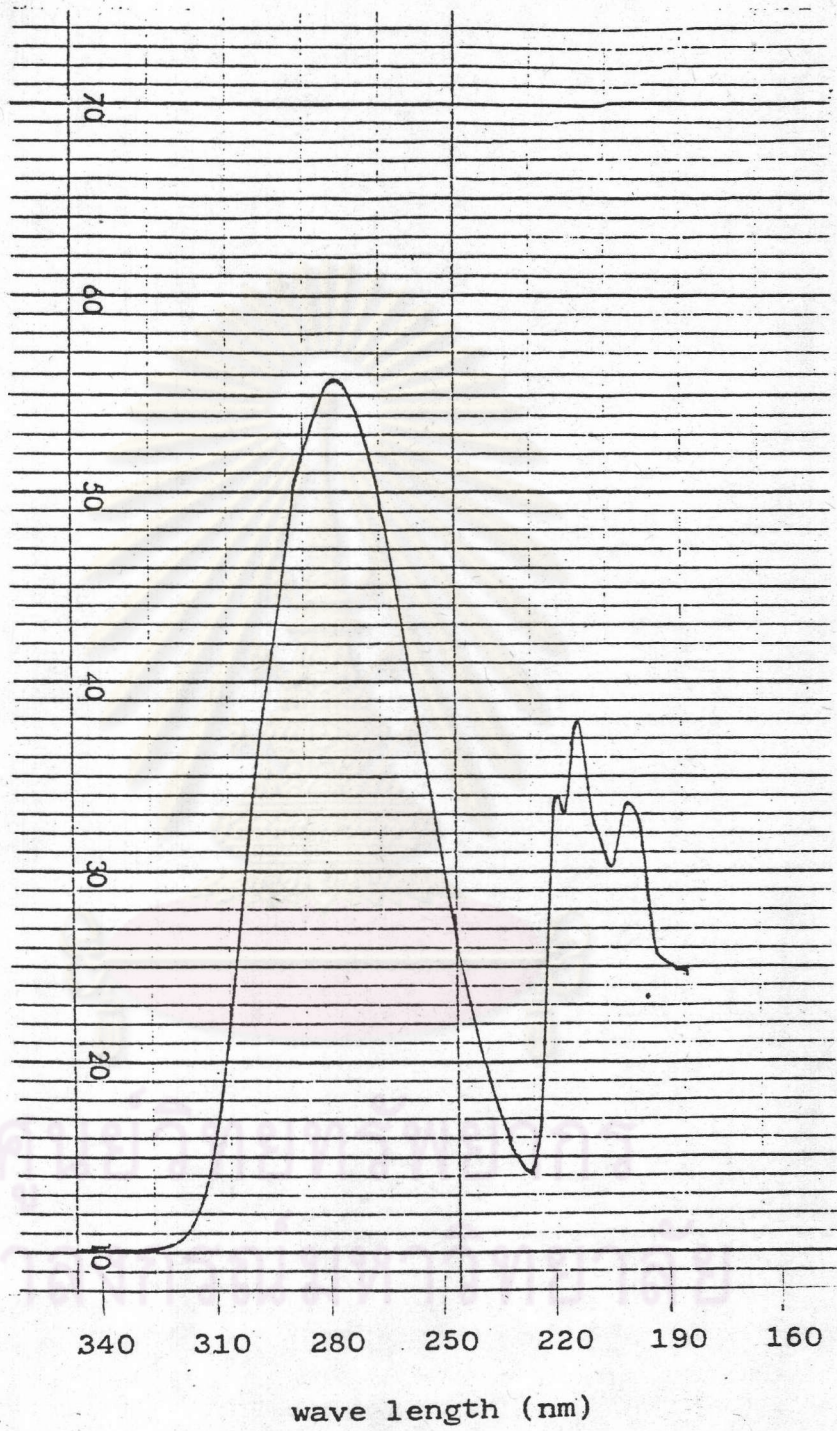


Fig. 8. Ultraviolet absorption spectrum of alkaloid Ag.

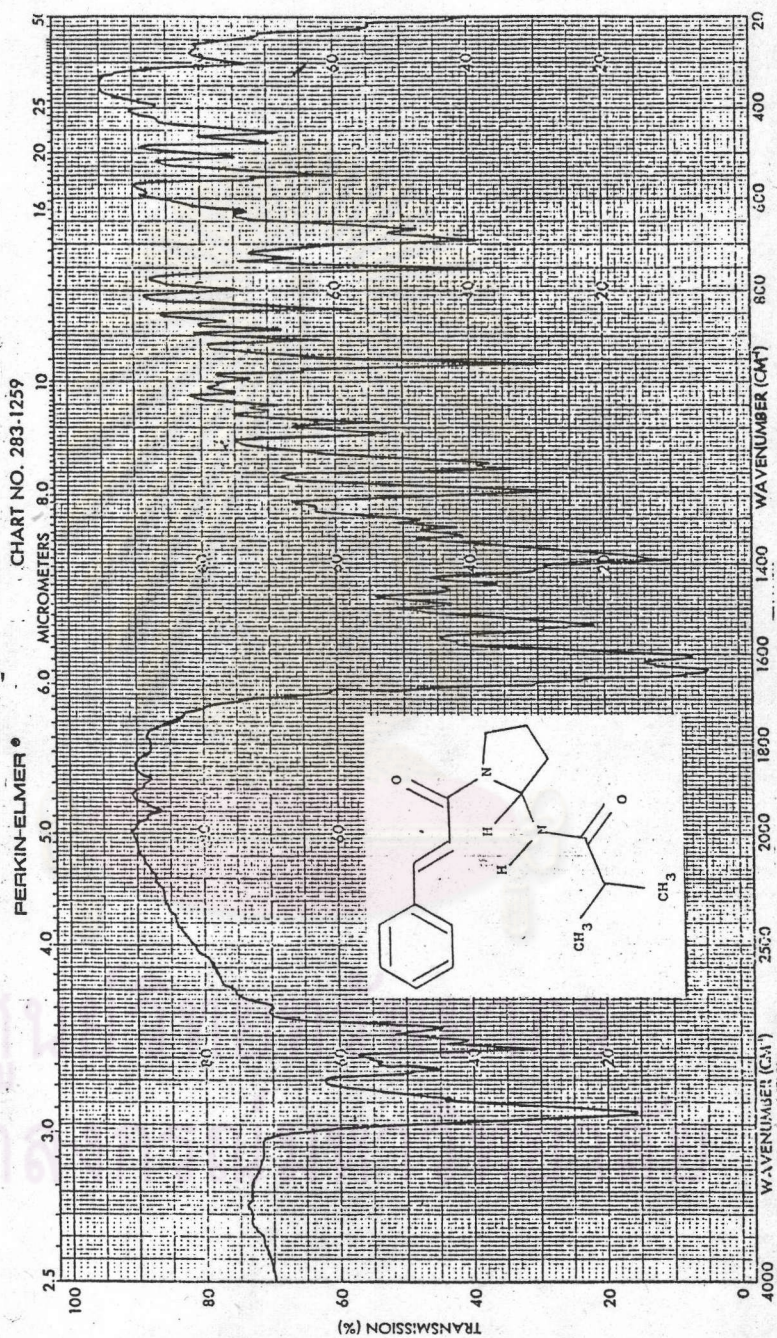


Fig. 9. Infrared absorption spectrum of alkaloid Ag.

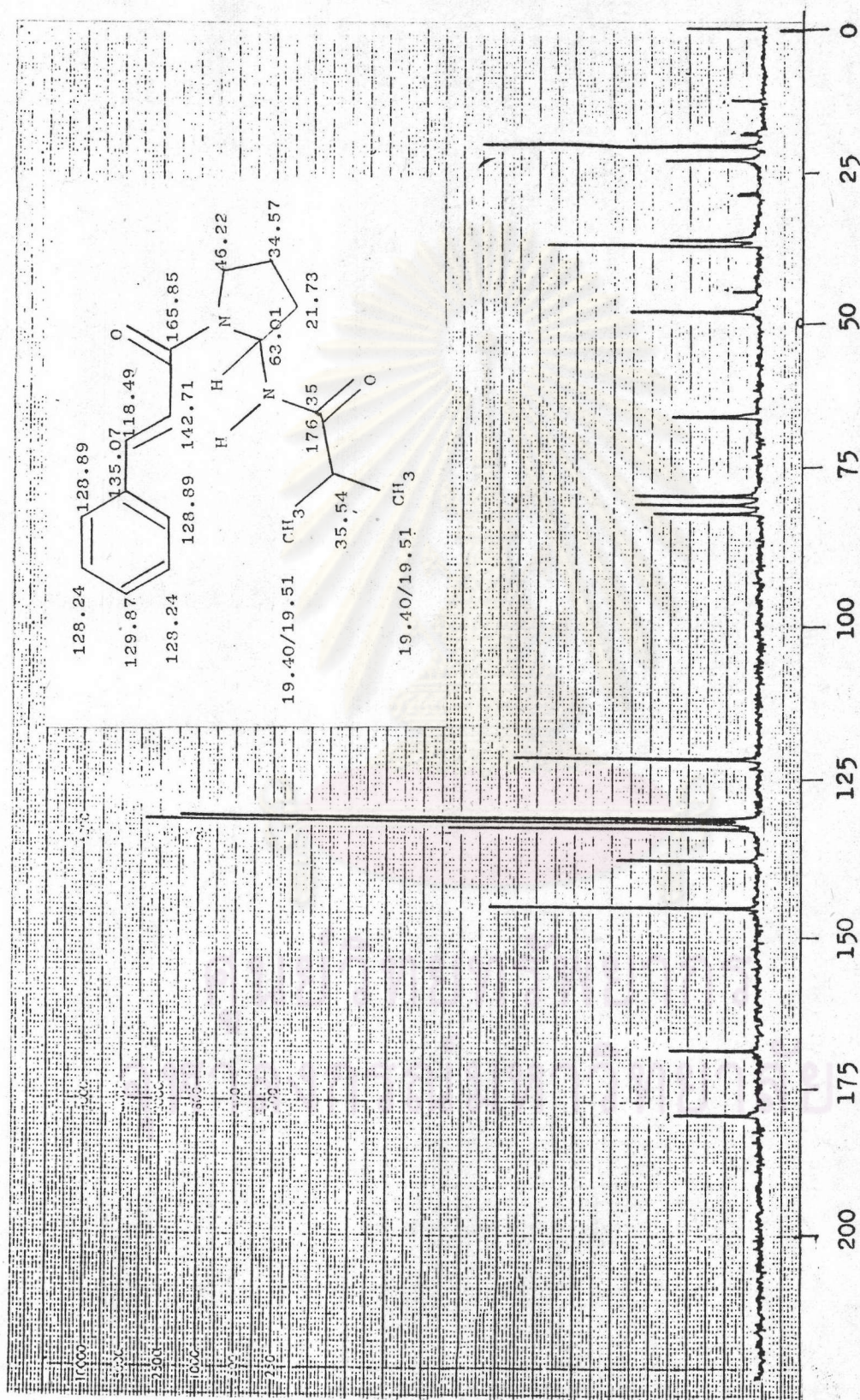


Fig. 11. ^{13}C nuclear magnetic resonance spectrum of alkaloid Ag.

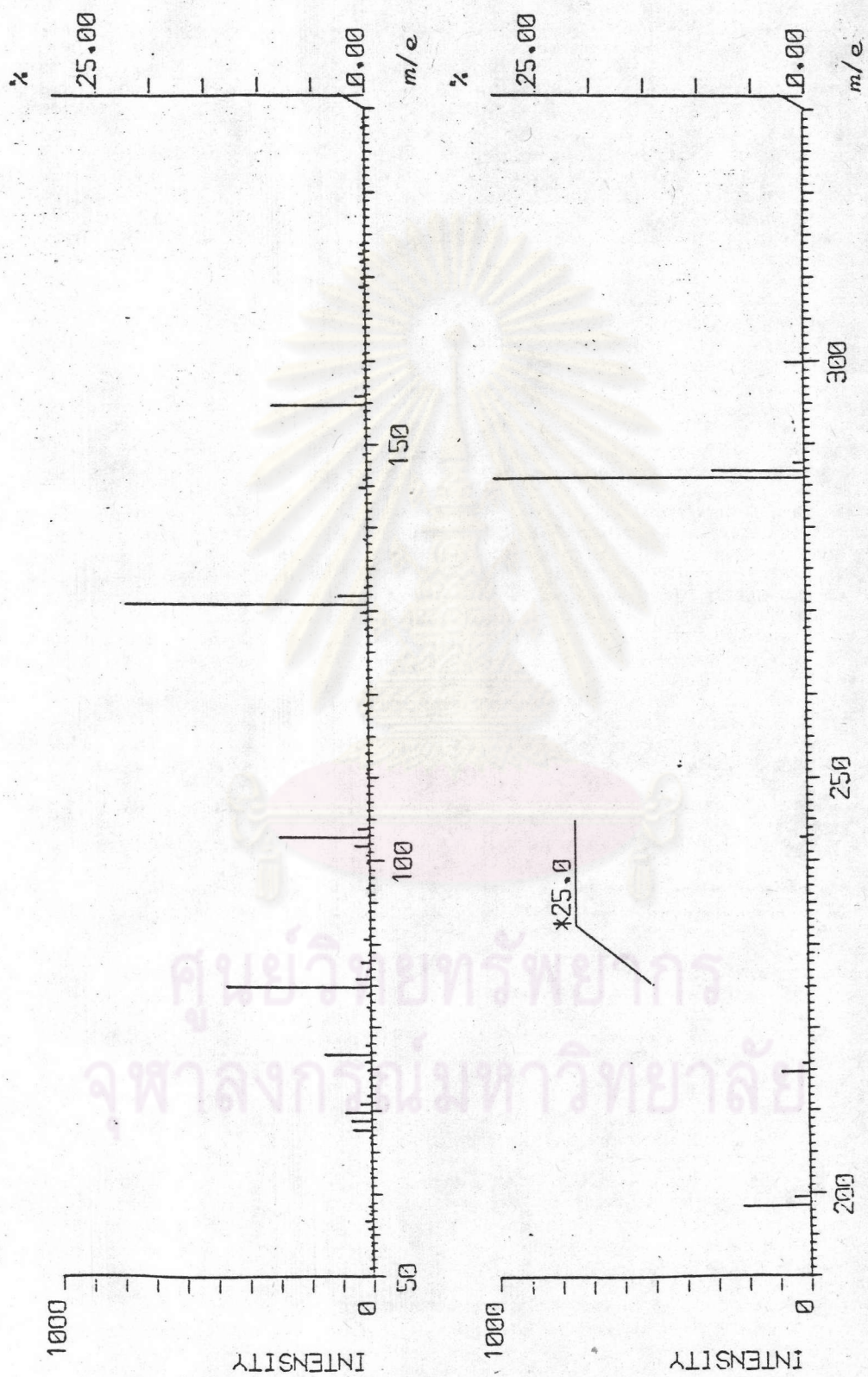


Fig. 12. Mass spectrum of alkaloid Ag.

ศูนย์วิจัยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย



Aglaia piriifera Hance in late flowering stage.

Photographed by Assistant Professor Ekarin Saifah, Ph.D.



Aglaia piriifera Hance in late fruiting stage.

Photographed by Mr. Sinthop Chomya.

VITA

Mr. Vichien Jongbunprasert was born on May 8, 1958 in Bangkok, Thailand. He received his Bachelor of Science in Pharmacy in 1981 from the Faculty of Pharmaceutical Sciences, Chulalongkorn University. Since graduation, he has been appointed as an instructor in the Department of Pharmaceutical Botany, Faculty of Pharmaceutical Sciences, Chulalongkorn University, Bangkok, Thailand.



ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย