

CONSTITUENTS OF THE ROOTS OF *CISSUS RHEIFOLIA*

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A previous study of *Cissus rheifolia* Planch. (Vitidaceae) has been conducted on the leaf materials (1), and the presence of two alkaloids (cryptopleurine and kayawongine), one flavonoid (vitexin), and two terpenoids (vomifoliol and romalea-allene) were reported. We report herein the isolation and identification of the chemical constituents of the roots of this plant. MeOH extraction of the roots yielded a mixture of sterols (β -sitosterol, stigmasterol, and campesterol) together with a known dihydroflavonol named aromadendrin.

EXPERIMENTAL

PLANT MATERIAL.—*C. rheifolia* was collected from the district of Pakdongchai, Nakorn Ratchasima Province, in the northeastern part of Thailand. The plant was identified by Drs. P.F. Stevens and N.G. Miller at the Arnold Arboretum Herbarium, Cambridge, Massachusetts, where voucher specimens (Ekarin Saifah s.n. 19VII. 1978 and Yongyuth Saifah s.n. 29V. 1979) have been deposited.

EXTRACTION AND ISOLATION.—Dried, powdered root of *C. rheifolia* (10 kg) was exhaustively extracted by percolation with MeOH. The MeOH extract was concentrated to 700 ml; after dilution with H₂O (700 ml), it was exhaustively extracted with CHCl₃. The 47.2 g of CHCl₃ solubles yielded on chromatography [Si gel, EtOAc-(CH₂Cl)₂ (8:2)], a mixture of three sterols (β -sitosterol, stigmasterol, and campesterol). Their identities were deduced by mass spectral studies. The confirmation of their structures was done by comparison of their mass spectral data with those of the published values (2). Further purification of this mixture was not attempted.

The remaining aqueous MeOH extract was partitioned with EtOAc to give 131 g of EtOAc-soluble residue. The residue was dissolved in distilled H₂O and filtered. The filtrate was exhaustively extracted with EtOAc to give on evaporation 12 g of residue containing a crude flavonoid. Column chromatography of the residue (Si gel, CHCl₃-Me₂CO, 9:1), yielded the known dihydroflavonol, aromadendrin. The identity of aromadendrin was deduced by ir, ¹H-nmr, and mass spectral studies. Further proof of its identity was obtained by comparison of its ¹H-nmr spectrum with that of authentic aromadendrin (3).

Full details of the isolation and identification of the compounds are available on request to the senior author.

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