Phytochemistry, 1980, Vol. 19, p. 2794 © Pergamon Press Ltd. Printed in England. 0031-9422/80/1201-2794 $02.00/0

4′-HYDROXY-3,5,6,7,3′,5′-HEXAMETHOXYFLAVONE FROM *MURRAYA PANICULATA*

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(*Received* 6 *February* 1980)

Key Word Index—*Murraya paniculata*; Rutaceae; 4′-hydroxy-3,5,6,7,3′,5′-hexamethoxyflavone.

Abstract—4′-Hydroxy-3,5,6,7,3′,5′-hexamethoxyflavone has been isolated from the leaves of Sri Lankan *Murraya paniculata*.

Murraya paniculata (L.) Jack has been the subject of several previous chemical investigations [1–5]. The residue obtained from the methanolic extract of the leaves was extracted with HCl and the acidic extract was basified and extracted with chloroform. The residue from the chloroform extract was chromatographed on alumina. The fraction that was eluted with methanol–chloroform (1:25) gave the flavone (**1**) as a crystalline solid. The UV spectrum and shifts indicated it to be a flavonoid with a free 4′-hydroxyl group, while the high resolution mass and ^{1}H NMR spectrum showed that it had the molecular formula $C_{21}H_{22}O_9$ and could be formulated as 4′-hydroxy-3,5,6,7,3′,5′-hexamethoxyflavone. This was confirmed by methylation to the known 3,5,6,7,3′,4′,5′-heptamethoxyflavone.

EXPERIMENTAL

^{1}H NMR spectra were determined on a Jeol PS 100 spectrometer. MS were determined with a Varian CH5 instrument. Plant material was identified by Prof. B. A. Abeywickrema, University of Colombo, Sri Lanka and a herbarium specimen is deposited in the Botany Department.

Powdered air-dried leaves (1 kg), collected in Colombo, were defatted with petrol (bp 62–82°) and then extracted exhaustively with MeOH. This extract was evapd to dryness and the residue was extracted repeatedly with 10% HCl. The combined extracts were basified with NH_3 and extracted with $CHCl_3$. This extract was dried, evapd to dryness and the residue was dissolved in C_6H_6 and chromatographed on alumina. The fractions that were eluted with MeOH–$CHCl_3$ (1:25) were combined, the solvent removed and the residue was crystallized from MeOH–$CHCl_3$ to give the flavone (**1**); (30 mg), mp 245°; UV λ_{max}^{MeOH} nm: 345 (*sh*), 323, 262, 268 (*sh*), ε 15 300; 18 600; 11 600; 10 700; respectively, λ_{max}^{NaOMe} nm: 360, 380 (*sh*), 300, 268. λ_{max}^{NaOAc} nm: 358, 380 (*sh*), 300, 268. MS, *m/e* 418 and 400; high resolution MS. *m/e* 418.1234 ($C_{21}H_{22}O_9$ requires 418.1261); ^{1}H NMR ($CDCl_3$): δ 7.30 (*s*, 2H) H-2′ and H-6′; 6.80 (*s*, 1H) H-8; 4.04 (*s*, 3 H); 4.00 (*s*, 3 H); 3.92 (*s*, 9H); 3.84 (*s*, 3H) six methoxy groups.

Acknowledgement—The authors thank Prof. D. L. Dreyer for the authentic specimen of 3,5,6,7,3′,4′,5′-heptamethoxyflavone.

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