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COMPOSITAE

5-HYDROXY-6,7,4′-TRIMETHOXYFLAVONE FROM *AGERATINA GILBERTII*

W. HERZ and S. GIBAJA

Department of Chemistry, Florida State University, Tallahassee, FL 32306, U.S.A.

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Key Word Index—*Ageratina gilbertii*; Compositae; 5-hydroxy-6,7,4′-trimethoxyflavone.

Plant. Ageratina gilbertii (B. L. Robins). King and H. Robins.* *Source.* Collected by S. Gibaja and R. Ferreyra near Surco, Lima, Peru in July 1967 (Ferreyra voucher No. 16892, deposited in herbarium of Museo de Historia Natural Javier Prado, Lima, Peru). *Previous work.* None.

Isolation and identification. The above ground parts were extracted with $CHCl_3$ and worked up in the usual fashion.[1] The crude gum, wt 150 g from about 8 kg of plant material, was chromatographed over 1 kg of silicic acid (Mallinckrodt 100 mesh), 2 l. fractions being collected in the following order: Fr. 1–25 benzene, 26–40 benzene–$CHCl_3$ (1:1), 41–100 $CHCl_3$. The only solid material was obtained from Fr. 8–30. The yellow crystals were combined and recrystallized from EtOAc, yield 0·330 g, m.p. 188–189° (lit. 187–190°,[2] 187–188°,[3] 188°[4]), MW 328 (MS). Calc. for $C_{18}H_{16}O_6$: 328. It gave a green $FeCl_3$ test and was identified as 5-hydroxy-6,7,4′-trimethoxyflavone (salvigenin[4]) spectroscopically; UV λ_{max} 330 and 277 nm (unaltered after addition of NaOAc or NaOAc–H_3BO_4), 354, 302 and 290 nm after addition of $AlCl_3$, NMR signals ($CDCl_3$) at 7·84d and 7·02d (2 protons each, *AB* system, $J = 9$ Hz, H-2′, H-3′, H-5′ and H-6′), 6·57 and 6·54 (H-3 and H-8), 3·97, 3·94 and 3·90 ppm (three methoxyls). The monoacetate was recrystallized from acetone–light petroleum: m.p. 168–169°, MW (MS): 370. Calc. for $C_{20}H_{18}O_7$: 370.

Although 5-hydroxy-6,7,4′-trimethoxyflavone has been known for 25 yr, the present finding constitutes only the second report of its occurrence in nature. It has previously been prepared from scutellarein[2] and by total synthesis[3] and has been isolated from *Salvia triloba* L.f.[4,†]

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* The name of this taxon, previously known as *Eupatorium gilbertii* Robins, has been revised recently, R. M. KING and H. ROBINSON, *Phytologia* **19,** 208 (1970).

† After this munuscript was submitted, there appeared a report of the isolation of salvigenin from buds of *Alnus japonica*, F. WOLLENWEBER and M. WASSUM, *Tetrahedron Letters* 797 (1972).

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