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Constituents of *Haplopappus sonorensis*

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Abstract

The isolation and NMR spectra of 5,7-dihydroxy-3,4'-dimethoxyflavone from *Haplopappus sonorensis* are reported. © 1999 Elsevier Science B.V. All rights reserved.

Keywords: *Haplopappus sonorensis*; 5,7-Dihydroxy-3,4'-dimethoxyflavone; Flavonoids; Triterpenoids

Plant. *Haplopappus sonorensis* (A. Gray) S. F. Blake (Asteraceae), known locally as 'Hierba del Pasma', was collected in Cabo Pulmo, B.C.S. México, in August 1988 and identified by Ing. Jorge Agúndez Espinoza from the Botany Laboratory, Universidad Autónoma de Baja California Sur, México. A duplicate voucher specimen is deposited in the Botanical Department of the Biology Institute of Universidad Nacional Autónoma de México.

Uses in traditional medicine. Used against skin ulcer, cold, general infections, heart troubles, headache, toothache, cough, tetanus, wounds, stings of poisonous animals and badly smelling feet [1,2].

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Previously isolated compounds. 5-Hydroxy-3,7,4'-trimethoxyflavone [3].

New-isolated constituents. 5,7-Dihydroxy-3,4'-dimethoxyflavone [4] (**1**) (yield: 0.035%), friedelin [5] (0.0015) and friedelan-3 α -ol [5] (0.0011). The yields are based on dry plant weight.

5,7-Dihydroxy-3,4'-dimethoxyflavone (**1**). $^1\text{H-NMR}$ (400 MHz, $\text{DMSO-}d_6$): δ 12.6 (1H, s, -OH), 10.8 (1H, s, -OH), 8.02 (2H, dd, J 9.0/3.0), 7.13 (2H, dd, J 8.8/3.0), 6.45 (1H, d, J 2.0), 6.21 (1H, d, J 2.0), 3.86 (3H, s, -OMe), 3.78 (3H, s, -OMe); $^{13}\text{C-NMR}$ (100.6 MHz, $\text{DMSO-}d_6$): 178.0 (C-4), 164.3 (C-7), 161.4 (C-9), 161.3 (C-4'), 156.5 (C-5), 155.2 (C-2), 138.0 (C-3), 130.0 (C-6'), 122.2 (C-1'), 114.3 (C-3'), 104.3 (C-10), 98.7 (C-6), 93.8 (C-8), 59.8 (C-3-OMe), 55.5 (C-4'-OMe); EIMS m/z : 314 (M^+ , 100), 285(24), 271(82).

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