Phytochemical communication

Constituents of *Haplopappus sonorensis*

R. Encarnación Dimayuga, J.I. Murillo, G. Malmström, C. Christophersen

*a* Departamento de Agronomía, Universidad Autónoma de Baja California Sur, A. P. 19-B, La Paz, B.C.S. 23080, Mexico

*b* Marine Chemistry Section, The H. C. Ørsted Institute, University of Copenhagen, Universitetsparken 5, DK-2100 Copenhagen, Denmark

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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 Pasmo’, 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].

* Corresponding author. Tel.: +45-35-32-01-57, fax: +45-35-32-02-12.
  E-mail address: carsten@kiku.dk (C. Christophersen)
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-3α-ol [5] (0.0011). The yields are based on dry plant weight.

5,7-Dihydroxy-3,4′-dimethoxyflavone (1). $^1$H-NMR (400 MHz, DMSO-$d_6$): $\delta$ 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);

$^{13}$C-NMR (100.6 MHz, 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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References