COUMARINS FROM THE ROOTS OF Platytaenia dasicarpa

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We have reported previously [1] that ethanolic extracts of the roots of Platytaenia dasicarpa (Regl. et Schmalh.) contain not less than eight coumarin derivatives. Some of the compounds isolated were identified as bergapten, zosimin, umbelliferone, and scopoletin. In the present paper we give the results of a study of a substance with the composition $C_{15}H_{16}O_3$, mp 85°C, R_f 0.68 in the cyclohexane–formamide system.

IR spectrum, cm^{-1}: 1720 (C=O of a lactone), 1620, 1500, 1560 (C=C of an aromatic ring), 1370 and 1355 (gem-dimethyl groups of a side chain). The NMR spectrum contained: a singlet with δ 3.89 ppm ($Ar-OCH_3$), signals at δ 1.70 and 1.76 ppm (gem-dimethyl group), a doublet at δ 3.30 ppm, J = 7.5 Hz (methylene group), a multiplet with δ 5.15 ppm (proton of a CH group), a doublet with δ 6.19 ppm, J = 9 Hz (H_3 proton), a doublet with δ 7.59 ppm, J = 9 Hz (H_4 proton), a singlet with δ 6.76 ppm (H_8 proton), and a singlet with δ 7.14 ppm (H_5 proton).

Analysis of the results obtained showed that the compound was suberosin (6-isopentenyl-7-methoxycoumarin), isolated previously from the bark of Xanthoxylum suberosum C. White [2], the wood of Ragera flava (Vahl.) Krug. et Urb. [3], and also from Peucedanum litorale Worosh et Gorovoi [4].

This is the first time that suberosin has been isolated from the roots of Platytaenia dasicarpa.

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COUMARINS FROM THE FRUIT OF Prangos bucharica

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The furocoumarins (+)-prangenin, imperatorin, isoimperatorin, oxypeucedanin, oxypeucedanin hydrate, and pranchimgin have been detected previously [1, 2] in the fruit and roots of Prangos bucharica B. Fedtsch. collected in the Tadzhik SSR on the southern slopes of the Hissar range in the gorge of the R. Kondary.

The present paper give the results of an investigation of the coumarin composition of the fruit of P. bucharica collected in the Uzbek SSR on the road to Baisun 10 km from the Tashkent–Termez highway.

An ethanolic extract of the fruit was chromatographed on a column of neutral alumina (Brockman activity grade III). Elution was carried out successively with petroleum ether–chloroform (1:1), chloroform, and ethanol. In this way we isolated and identified by melting points, mixed melting points with authentic samples, and IR spectra the coumarins scopoletin and osthole and the furocoumarin prangenin, pranchimgin, and (+)-oxypeucedanin, mp 105-106°C, $[\alpha]_D^{20}$ +16.7° (c 1.2; ethanol).

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