COUMARINS AND FUROCOUMARINS FROM THE FRUIT OF Prangos uloptera

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Continuing a study of the coumarin compounds from plants of the genus Prangos (family Umbelliferae) growing in the Caucasus, we have investigated the fruit of Prangos uloptera D. C. (collected in the Bichenak mountains of the Nakhichevan ASSR).

The fruit (80 g) was extracted with chloroform (2 \times 1 liter). The resulting extract was concentrated under vacuum and transferred to a column of alumina (50 g, activity grade II). Elution was carried out with petroleum ether containing various amounts of chloroform and methanol. According to the chromatography of the fractions obtained in a thin layer of alumina [ethyl acetate—benzene (1:4) and (1:2) systems, Al_2O_3 , activity grade II], the fruit of the plant studied contains a number of substances with properties characteristic for lactones of the coumarin group. Five compounds were isolated in the individual state—I, $C_{15}H_{16}O_3$, mp 82.5°C; II, $C_{16}H_{14}O_4$, mp 108°C; III, $C_{16}H_{16}O_6$, mp 135°C; IV, $C_{19}H_{20}O_5$, mp 138–139°C; and V, $C_{15}H_{18}O_5$, mp 141.5–142.5°C.

In their chemical compositions, melting points, R_f values, and IR spectra, and by mixed melting points, the compounds isolated were shown to be identical with authentic samples of, respectively, osthole, isoimperatorin, oxypeucedanin hydrate, pranchimgin, and ulopterole, which we have isolated previously from the roots of Prangos uloptera D. C. [1].

In addition to the substances mentioned, oxypeucedanin, marmezin, pranferol, and umbelliferone were detected in the fruit.

LITERATURE CITED

1. A. Z. Abyshev and A. M. Kutnevich, KhPS [Chemistry of Natural Compounds], 4, 378, 1968.

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