

COUMARINS OF *Prangos alata* Grossh.-*Prangos*
biebersteinii Karjag.

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On studying the chemical composition of the roots of *Prangos alata* Grossh.-*Prangos biebersteinii* Karjag. collected in July, 1971 in the Shemakha region (in the environs of the village of Khil'milli), Azerbaidzhan SSR, by chromatography in a thin layer of alumina in the benzene, ethyl acetate-benzene (1:4 and 1:2), and ethyl acetate systems, we detected in them not less than eight substances of a coumarin nature. To isolate these compounds and study their structures, the air-dry roots (500 g) were extracted three times with chloroform (2 liters each time). The chloroform was evaporated off under vacuum and the residue (45.0 g) was chromatographed on a column of alumina (300.0 g, activity grade II) using as eluents benzene, benzene-chloroform (1:2 and 1:1), and chloroform. Six substances were obtained in the individual state: (I), $C_{15}H_{16}O_3$, with mp 82-83°C; (II), $C_{16}H_{14}O_4$, with mp 105-106°C; (III), $C_{16}H_{14}O_5$, with mp 142-143°C; (IV), $C_{16}H_{16}O_6$, with mp 129-131.5°C; (V), $C_{14}H_{14}O_4$ with mp 188-189°C; and (VI), $C_{17}H_{18}O_6$, with mp 125-127°C.

From their physicochemical properties, R_f values, IR spectra, and mixed melting points of the compounds isolated with authentic samples of known coumarins, compounds (I-V) were identified as osthole, isoimperatorin, oxypeucedanin, oxypeucedanin hydrate, and marmesin, respectively.

The properties of compound (VI) do not correspond to those of any of the known natural coumarins and it possesses a yellow fluorescence in UV light; it is readily soluble in organic solvents and insoluble in water and is, apparently, a new furocoumarin. We have called it alatole.

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