FLAVONOIDS OF *Artemisia rutifolia*

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We have investigated the flavonoid composition of leafy fruits of *Artemisia rutifolia* Steph., collected in 1976 on the southern slopes of Urtak-Tay range (Kirghiz SSR) in the flowering period.

The whole material was processed in the following way: extraction with 96% ethanol, treatment of the evaporated extract with hot water, and then successive treatment of the aqueous extract with chloroform, diethyl ether, and ethyl acetate. The chloroform, ether, and ethyl acetate fraction obtained were chromatographed on columns with various sorbents. Chromatography on the chloroform on a column of silica gel (activity grade II, L 100/160 μ) with elution by chloroform led to the isolation of substances (I) and (II). Substances (III) and (IV) were isolated from the ethyl acetate fraction by chromatography on polyamide with chloroform.

Substance (I) — $C_{19}O_8H_{18}$, mp 181°C, M^+ 374. $\lambda_{max}^{CH_3OH}$ 258, 271, 354 nm.

Substance (II) — $C_{18}O_7H_{16}$, mp 204°C, $\lambda_{max}^{CH_3OH}$ 243 (sh.), 257 (sh), 274, 348 nm. The acetate of (II) (acetic anhydride, t = 140°C, 20 h) had mp 177°C. PMR spectrum of the acetate ($CDCl_3$, δ, ppm): 2.28 and 2.42 (2 s, 3 H each, 2 × CH_3COO); 3.8, 3.84, and 3.9 (3 s, 3 H each, 3 × CH_3O—); 6.5 (s, H-3); 6.86 (s, H-8); 7.12 (d, J = 10 Hz, H-5'); 7.39 (m, 2 H, H-2' and H-6').

Substance (III) — $C_{17}O_7H_{14}$, mp 286°C, $\lambda_{max}^{CH_3OH}$ 270, 353 nm.

Substance (IV) — $C_{16}O_5H_{12}$, mp 325°C (ethanol—ethyl acetate), M^+ 300. $\lambda_{max}^{CH_3OH}$ 240, 267, 350 nm. The product of the demethylation of substance (IV) (pyridine hydrochloride, t = 170°C, 2 h) was identical with an authentic sample of luteolin (TLC, PC).

On analyzing the physical constants and the IR, UV, and PMR spectra and comparing them with literature information, and also on the basis of the absence of depression of the melting points of mixtures with authentic samples, we made the following identifications: substance (I) — chrysosplenetin [1]; (II) — cirsilineol [2]; (III) — tricin [3]; and (IV) — chrysoeriol [4].

LITERATURE CITED

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