

In the present paper we discuss the flavonoid composition of the roots of *Scutellaria przewalskii* Juz.

The flavonoids were extracted with ethanol and water. It was found that the aqueous extract consisted mainly of a single substance, which precipitated when the extract was acidified with acetic acid. The precipitate was crystallized from acetic acid and purified by chromatography on a column of polyamide sorbent (eluent 70% ethanol). The flavonoid had the composition  $C_{21}H_{18}O_{11}$ , mp 220–222°C,  $[\alpha]_D^{20} - 87^\circ$  (c 0.1; dimethylformamide),  $R_f$  in 15% acetic acid 0.35 (1) and in the benzene–ethyl acetate–acetic acid (70:30:2) system 0.10 (2);  $\lambda_{max}$  in methanol 280 and 310 nm; with sodium acetate 280 and 310 nm; with sodium ethoxide 270 and 350 nm; with zirconyl nitrate 295 and 350 nm. The IR spectrum showed, in addition to the usual bands of flavonoids, absorption at 1738  $cm^{-1}$  (carboxy group). Hydrolysis (5% sulfuric acid in 50% acetic acid, 100°C, 3 h) led to the isolation of D-glucuronic acid (identified chromatographically) and an aglycone  $C_{15}H_{10}O_5$  mp 264–266°C,  $R_f$  0.20 (1) and 0.80 (2), identified as 5,6,7-trihydroxyflavone. The ratio of the absorption maxima in the UV spectra of the glycoside and the aglycone (60%) showed that the compound was monoglycosidic. The presence in the IR spectrum of three bands in the 1010–1100  $cm^{-1}$  region (1045, 1075, and 1095  $cm^{-1}$ ) and a low-intensity band at 910  $cm^{-1}$  showed the pyranose form and the  $\beta$  configuration of a carbohydrate constituent [1]. This was confirmed by a comparison of the molecular rotations of the glycoside concerned ( $[M]_D \cdot K_{Ph} = -233^\circ$ ) and of phenyl  $\beta$ -D-glucuronopyranoside ( $[M]_D - 228^\circ$ ) [2].

On the basis of a chemical and spectroscopic study, the flavonoid glycoside from the roots of *Scutellaria przewalskii* was characterized as the 7- $\beta$ -D-glucuronopyranoside of 5,6,7-trihydroxyflavone, or baicalein. In the native state, this glycoside is localized mainly in the cortical part of the subterranean organs and is present in the salt form, as is confirmed by the absence of the band of the carboxy group from the IR spectrum and by its appearance after demineralization.

## LITERATURE CITED

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Khar'kov Chemical and Pharmaceutical Scientific-Research Institute. Institute of Organic Chemistry of the Academy of Sciences of the Kirgiz SSR. Translated from *Khimiya Prirodnikh Soedinenii*, No. 3, pp. 375–376, May–June, 1971. Original article submitted February 24, 1971.

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