4. L. Horhammer and R. Hansel, Arch. Pharm., 286, 425 (1953).
5. A. G. Shalashvili and I. L. Targamadze, in: Methods of Biochemical Investigations of Plants [in Russian], Tbilisi (1983), p. 82.

C-GLYCOSIDES OF Stellaria holostea

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Continuing a search for biologically active substances from plants of the genus Stellaria L. [1, 2], we have studied the flavonoid composition of the epigeal part of Stellaria holostea L. (easterbell starwort) collected in the environs of Khar'kov in the flowering period.

Qualitative reactions and one- and two-dimensional chromatogrphy showed the presence in the herbage of the plant under investigation of about six flavonoids. Column chromatography on polyamide sorbent led to the isolation of substance A with mp 237-241°C, $[\alpha]_D^{20}$ +28° (c 0.1; ethanol), $E_{1cm}^{1\%}$ = 530, R_f (15% acetic acid, asc.) 0.42; λ_{max} (in ethanol): 350, 258, 270 nm.

The IR specrum showed absorption bands characteristic for C-glycosides (1010-1040 cm^{-1}) [3].

For exhaustive hydrolysis we used a mixture of 30% solutions of sulfuric and acetic acids [3]. Hydrolysis for 10 h gave the aglycone, D-glucose, and D-arabinose. From the results of UV spectroscopy, alkaline degradation, and a mixed melting point with an authentic sample, the aglycone was identified as luteolin. Hydrolysis in 10% ethanolic hydrochloric acid permitted the following isomerization to be observed. On acid hydrolysis, substance A gave two compounds (A → A + B) with R_f 0.42 and 0.16 (15% acetic acid). Substance B with mp 263-265°C, $[\alpha]_D^{20}$ +20° (c 0.1; ethanol) gave the same products. This enabled us to state that they were luteolin C-glycosides. Spectral investigations in the UV regions of substances B revealed free 3',4',5,7-hydroxy groups.

It chromatographic mobility on paper, the absence of a depression of the melting point of mixtures with authentic samples, and the identity of the IR spectra of these compounds permitted substances A to be identified as homoorientin and substance B as orientin [4]. This is the first time that flavonoids from Stellaria holostea have been investigated.

LITERATURE CITED

1. V. A. Bandyukova and V. A. Yugin, Khim. Prir. Soedin., 13 (1981).
2. A. I. Shreter, The Medicinal Flora of the Soviet Far East [in Russian], Moscow (1975), p. 93.
3. G. N. Zemtsova and V. A. Bandyukova, Khim. Prir. Soedin., 107 (1974).
4. G. A. Drozd, K. E. Koreshchuk, and V. I. Litvinenko, Farm. Zh., No. 1, 56 (1969).

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