

We give the results of a study of the structure of another three flavone glycosides (V-VII) isolated by chromatography on polyamide and silica gel from the epigeal part of *Campanula persicifolia* L. [1].

Substance (V), composition $C_{28}H_{32}O_{15}$, white crystals with mp 259-261°C (from dimethyl sulfoxide-methanol), was almost insoluble in the usual solvents but dissolved in dimethyl sulfoxide, pyridine, etc. On being heated with 5% sulfuric acid on the water bath, (V) was cleaved into an aglycon and D-glucose and L-rhamnose. The aglycon was identified from its physicochemical properties and by comparison with an authentic sample as diosmetin (3,5,7-trihydroxy-4'-methoxyflavone). The results obtained for substance (V) agree with those for diosmin isolated previously from *Campanula patula* L. [2].

Substance (VI), composition $C_{21}H_{20}O_{11}$, formed pale yellow needles with mp 176-178°C (aqueous ethanol), $\lambda_{\text{max}}^{C_2H_5OH}$, 246, 270, and 337 nm. In UV light it appeared in the form of a dark spot changing little in ammonia vapors. In the presence of 5% sulfuric acid it hydrolyzed completely in 30 min to the aglycon luteolin and D-glucose. Emulsin did not cleave glycoside (VI) in 1 h. According to UV spectra and color reactions, the most probable position of attachment of the glucose residue to the aglycon was to the 4'-OH of the aglycon. Comparison with the authentic compound confirmed the identity of substance (VI) as luteolin 4'-O- β -D-glucoside or juncein [3].

Substance (VII), composition $C_{27}H_{30}O_{15}$, formed pale yellow spherocrystals with mp 254-256° (ethanol), $[\alpha]_D^{20} + 57.3^\circ$ (s 0.38; methanol-dimethylformamide (9:1) $\lambda_{\text{max}}^{C_2H_5OH}$, 273 and 335 nm. On being heated with 10-20% mineral acids the substance underwent no change, which suggested its C-glycosidic nature. It was also resistant to the action of enzyme preparations. Its mass spectra contained a main fragment with m/z 295, which is characteristic for compounds of the 6,8-di-C-glycoside type, while the absence of isomerization under the action of dilute acids has been observed for vicenin-2 [4]. To confirm its structure, the substance was subjected to oxidative cleavage with ferric chloride, as a result of which glucose contaminated with arabinose was obtained [5]. From UV spectra with additions, free hydroxyls were detected in the 4', 5, and 7 positions. On the basis of the results obtained, substance (VII) can be characterized as a 6,8-di-C-glucoside.

We also isolated the same compound from the epigeal part of *Campanula petula* L. This is the first time that the presence of a flavone C-glycoside has been reported in representatives of the family *Campanulaceae* Juss.

LITERATURE CITED

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