DIOSMIN FROM *Campanula patula*

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The isolation from *Campanula patula* L. of a number of flavone glycosides the aglycone of which is luteolin has been recorded [1-4]. In addition to the compounds mentioned, when the combined flavonoids were separated on polyamide, from the concentrated eluates a white precipitate deposited which was almost insoluble in the usual solvents but was soluble in pyridine, dimethylformamide, and dimethyl sulfoxide. To purify it, the substance was acetylated and chromatographed on silica gel in the benzene—acetone (2:1) system. This gave an octaacetate with mp 167-170°C. After deacetylation in a current of nitrogen (2% KOH, 100°C, 20 min) and recrystallization from dimethyl sulfoxide—methanol, a pure substance was obtained with the composition $C_{28}H_{32}O_{15}$, mp 270-272°C, $[\alpha]_D^{20}$ −89.6° (0.22; DMFA); λ_{max}^{MeOH} 255, 267 sh., 345 nm. The native nature of the compound obtained was shown by its IR spectrum (absence of bands of ester groups in the initial and the purified compound) and by the identical chromatographic mobility. The products of acid hydrolysis were the aglycone (M^+ 300) and two sugars — glucose and rhamnose.

The signals of the aromatic protons in the PMR spectrum of the acetate showed that the aglycone had a luteolin skeleton with one methoxy group. The presence of two aromatic acetoxy groups (singlets at 2.45 and 2.37 ppm) and of six aliphatic acetoxy groups (1.8-2.1 ppm, 18H) shows that the sugars are attached to the aglycone in the form of a biose, and the integration of the signals in the 5.3-4.6 ppm region (8H) and the 4.2-3.6 ppm region (4H) characterizes it as rutinose [5]. The UV and mass spectra of the aglycone correspond to those of 3',5,7-trihydroxy-4'-methoxyflavone (diosmetin); the UV spectrum of the isomeric chrysoeriol differs [6]. The results of a comparison of the UV spectra of the glycoside and the aglycone show the substitution of the 7- and the 4'-OH groups in the glycoside and therefore the structure of diosmetin 7-rutinoside (diosmin) [5] for the glycoside.

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