

In continuing investigations of the flavonoids of *Senecio subdentatus* we have isolated a flavonol glycoside sparingly soluble in water and ethanol and readily soluble in dimethyl formamide.

After repeated crystallization from DMFA-ethanol (3:1) a crystalline substance was obtained,  $C_{28}H_{32}O_{17}$ , mp 236-237°C,  $R_f$  0.28 (BAW (4:1:2)), 0.6 (15% acetic acid),  $[\alpha]_D^{20}$   $-27^\circ$  (c 1.0; DMFA),  $\lambda_{max}$  354, 255 nm. On hydrolysis with 5% sulfuric acid it split into isorhamnetin (yield 48%), galactose, and glucose. The diglycoside was selectively hydrolyzed in acid and alkaline solutions [1]. Investigations of it by UV, IR, and NMR spectroscopy gave results identical with those for an isorhamnetin 3,7-diglycoside but the melting point and angles of rotation were different [2].

We assumed that we were dealing with 3,4'-diglycoside. To prove this hypothesis we used the methods of differential spectroscopy [3]. We compared the ratio of the intensities of absorption of the flavonoids ionized by sodium acetate and alkali. For the isorhamnetin 3,7-diglycoside this ratio was 17%, and for the compound under investigation it was 41%, which agrees with literature information on 4'-substituted flavonoids.

In addition, the substance was methylated with diazomethane and subjected to alkaline fusion, which gave 4-hydroxy-3-methoxybenzoic acid. Thus, the flavonoid investigated is isorhamnetin 3-O-galactoside 4'-O-glucoside.

## LITERATURE CITED

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2. T. K. Chumbalov, O. V. Fadeeva, and T. K. Nikishchenko, *Khim. Prir. Soedin.*, 802 (1975).
3. V. I. Litvinenko, T. P. Popova, and A. S. Ammosov, Abstracts of the Third All-Union Symposium on Phenolic Compounds [in Russian], Tbilisi (1976), p. 99.