MYRICITRIN FROM Sedum selskianum

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The epigeal part of Sedum selskianum Rgl. et Maak, family Crassulaceae, collected in the flowering phase in Maritime Territory, was extracted with ethanol, the solvent was evaporated, and the residue was diluted with water and treated successively with ether and ethyl acetate. The ethyl acetate extracts were chromatographed on polyamide. The column was washed with chloroform and with methanol–chloroform (1:9). Substance (I) was eluted with the composition $C_{21}H_{20}O_{12} \cdot 3/2H_2O$, mp 205-207°C, $[\alpha]_D^{20} -120°$ (c 0.5; methanol), R_f 0.45 (15% AcOH, FN-11 paper), 0.7 (60% AcOH), λ_{max}^{MeOH} 257, 305, 355 nm (log ε 4.31, 3.97, 4.23).

The acid hydrolysis of (I) gave rhamnose and the aglycone myricetin, $C_{15}H_{10}O_8$, mp 342-344°C (no depression of the melting point with an authentic sample, and their R_f values coincided).

The NMR spectrum of the silylated glycoside (100 MHz, CCl_4, TMS) had the following signals: a 2H singlet at δ 6.90 ppm (H-2',6'); two doublets with J = 2.5 Hz at 6.35 ppm (H-8) and 6.09 ppm (H-6); the doublet of the anomeric proton of α-L-rhamnose at 5.02 ppm (J = 2 Hz); and the signals of four rhamnose protons at 2.9-4.0 ppm. The position and shape of the signal of the CH_3 group (sharp doublet at 0.77 ppm, J 6 Hz) indicates that the rhamnose residue is attached to the 3-OH group of the aglycone [1], which was also confirmed by UV spectroscopy.

Thus, substance (I) has the structure of 3,3',4',5,5',7-hexahydroxyflavone 3-O-α-L-rhamnoside (myricitrin).

LITERATURE CITED

1. T. J. Marby, R. K. Markham, and M. B. Thomas, The Systematic Identification of Flavonoids, Springer-Verlag, New York (1970), p. 269.

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