FLAVONOL MONOOSIDES OF Oxytropis lanata

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Continuing investigations begun previously [1] of the flavonoid compounds of the epigeal part of Oxytropis lanata (Pall) DC, family Fabaceae, we have isolated three flavonoid glycosides in the individual state. A methanolic extract of the herb purified by successive treatment with petroleum ether, chloroform, and ethyl acetate was separated chromatographically on a column of polyamide. Mixtures of water and ethanol and of chloroform and ethanol were used as the eluting solvents. The acid hydrolysis (5% H_2SO_4, 3 h at 100°C) of substances (I)-(III) gave the same aglycone (65%) and sugar components identified as D-glucose, D-galactose, and L-rhamnose, respectively.

The aglycone (mp 309-311°C; $\lambda_{max}^{methanol}$ 372, 255 nm) was identified as 3,4',5,7-tetrahydroxy-3'-methoxyflavone (isorhamnetin). The dark fluorescence in UV light and the results of IR spectroscopy give grounds for assuming that the sugar components in the glycosides studied are present at C_3 of the flavonoid aglycone [2].

On the basis of bathochromy, the products of hydrolysis, and IR spectroscopy, it has been established that substance (I) with the composition $C_{22}H_{22}O_{12}$, mp 168-170°C is isorhamnetin 3-α-D-glucopyranoside, substance (II) with the composition $C_{22}H_{22}O_{12}$, mp 198-200°C is isorhamnetin 3-α-D-galactopyranoside, and substance (III) with the composition $C_{22}H_{22}O_{11}$, mp 156-158°C is isorhamnetin 3-α-L-rhamnopyranoside.

LITERATURE CITED

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