

Continuing an investigation of the flavonoids of *Astragalus dasyanthus*, we have isolated another substance of flavonoid nature, a glycoside, from it [1].

The substance has the composition $C_{28}H_{32}O_{16}$, mp 181–183°C, λ_{\max} 254, 265, 356 nm, $[\alpha]_D -38.7^\circ$ (c 0.6; formamide). Its hydrolysis with sulfuric acid gave an aglycone with the composition $C_{16}H_{12}O_7$, mp 303–306°C, λ_{\max} 253, 267, 370 nm, identified as isorhamnetin. D-Glucose and L-rhamnose were found in the mother liquor.

The NMR spectrum of the silylated glycoside had the following signals: doublet at 7.46 ppm with an intensity of 1 H, $J = 2.5$ Hz and multiplet at 7.30 ppm, 1 H, relating to the signals of the 2' and 6' protons; doublet at 6.80 ppm with an intensity of 1 H, $J = 8$ Hz, representing the signal of the proton at C-5'; two doublets at 6.40 ppm and 6.09 ppm each with an intensity of 1 H, $J = 2.5$ Hz, representing the signals of the H-8 and H-6 protons, respectively; singlet in the 3.82 ppm region, 3 H (the signal of the methoxy group of isorhamnetin); doublet at 5.88 ppm, 1 H, $J = 7$ Hz, signal of the proton of the anomeric center of β -glucose. The magnitude of the chemical shift of this signal shows that the glucose is attached directly to the aglycone in position 3 of the isorhamnetin. A broadened singlet at 4.80 ppm, 1 H, is the signal of the proton of the anomeric center of α -rhamnose and the value of its chemical shift shows a 1-6 link between the glucose and the rhamnose. Signals of protons with an intensity of 10 H in the 3.2–3.6 ppm region are characteristic for the protons of glucose and rhamnose.

The characteristics of the UV and NMR spectra permit the conclusion that the carbohydrate moiety of the glycoside is rutinose, which is present in position 3; consequently, the glycoside isolated is isorhamnetin 3- $[\alpha$ -rhamnopyranosyl-(1 \rightarrow 6)- β -D-glucopyranoside], i.e., narcissin.

LITERATURE CITED

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