A FLAVONOL GLYCOSIDE FROM *Astragalus testiculatus*

V. I. Sidel'nikova

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By two-dimensional paper chromatography, in an ethanolic extract of the epigeal part of *Astragalus testiculatus* Pall. collected in the flowering period in the region of Ishima (Tumen oblast) we have detected three substances of flavonoid nature, one of which predominated quantitatively. To obtain the total flavonoids, a chloroform-purified concentrate of the ethanolic extract was treated with ethyl acetate, the combined extracts were evaporated in vacuum, and the residue was diluted with a small amount of water. Column chromatography of the total flavonoids on polyamide sorbent and fractional crystallization yielded an individual substance, $C_{21}H_{20}O_{11}$, with mp 176-178°C, λ_{max} (ethanol) 350, 265 nm. Acid hydrolysis (5% sulfuric acid, 2 h) gave 63% of an aglycone, $C_{15}H_{10}O_6$, with mp 273-275°C (mp of the acetate 178-180°C). The results of physicochemical and spectral investigations permitted the aglycone to be identified as kaempferol [1]. TLC on cellulose in the ethyl acetate—pyridine—water (2:1:2) system showed the presence of D-glucose in the acid hydrolyzate. Enzymatic hydrolysis and IR spectroscopy showed the pyranose form of the sugar and the presence of a β-glycosidic bond [2].

The features of the UV spectra of the glycoside with ionizing and complex-forming reagents showed that the sugar component in the glycoside under investigation was present at C_3 of the flavonoid aglycone, and the glycoside isolated can be identified as kaempferol 3-O-β-D-glycopyranoside (astragalin) [3, 4].

LITERATURE CITED

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