

CARDENOLIDES OF *Coronilla scorpioides*

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The isolation from fermented seeds of *Coronilla scorpioides* Koch. (scorpion coronilla) of scorpioside, frugoside, and corotoxigenin has been reported previously [1].

In the mother liquors after the crystallization of the corotoxigenin small amounts of a substance of cardenolide nature with less polar properties than corotoxigenin have been detected.

It was separated on a column of neutral alumina (activity grade III) which was eluted first with mixtures of benzene and chloroform with gradually increasing concentrations of the latter and then with chloroform. The fractions containing the pure cardenolide were combined, the solvent was evaporated off, and the residue was crystallized from methanol-ether. The substance obtained, $C_{23}H_{34}O_4$, mp 251-257°C, $[\alpha]_D^{20} +16^\circ$ (c 0.1, ethanol), forms a monoacetyl derivative, $C_{25}H_{36}O_5$, mp 265-267°C, $[\alpha]_D^{20} +8.5^\circ$ (c 0.5, chloroform). The optical rotatory dispersion of the compound under investigation has a smooth positive curve [λ 290 (+316°), 325 (+154°), 360 (+82°), 420 (+47°), 589 (+16°)], which shows the absence of carbonyl groups from it.

On the basis of the physicochemical properties both of the initial substance and of its acetyl derivative, the IR spectrum, the color reaction with 84% sulfuric acid, the melting point of a mixture, and R_f values in various systems in parallel chromatography with an authentic sample, the substance was identified as 3 β ,14 β -dihydroxy-5 α -card-20(22)-enolide (uzarigenin).

The optical rotatory dispersion spectrum and the IR spectrum were obtained by I. P. Kovalev.

LITERATURE CITED

1. N. F. Komissarenko, Yu. N. Beletskii, I. P. Kovalev, and D. G. Kolesnikov, KhPS [Chemistry of Natural Compounds], 381 (1969).

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