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A C-GLYCOSIDE FROM *Iris ensata*

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From the epigeal part of *Iris ensata* (Thunb.) (Russian iris) we have isolated the xanthones mangiferin and have detected flavone compounds [1]. To isolate the latter, after treatment with chloroform to free it from ballast substances the raw material was extracted with methanol until the reaction for flavonoids was negative (cyanidin reaction). The methanolic extract was evaporated under vacuum to small volume and was diluted with a fivefold volume of water and was then treated with petroleum ether and ethyl acetate. The purified aqueous extract was evaporated and chromatographed on a column of polyamide sorbent. On elution with 5% ethanol, a crystalline substance of flavonoid nature was isolated (0.5%), $C_{29}H_{33}O_{14}$, mp 183-185°C, $[\alpha]_D^{20}$ −40.1° (c 0.99; ethanol); λ_{max} 329, 274 nm, R_f 0.92 (15% acetic acid), 0.77 [butan-1-ol—acetic acid—water (4:1:5)]. When the substance was boiled with acid, L-rhamnose was split off and an equilibrium mixture of two substances was formed.

On acid hydrolysis by Kiliani's method, apigenin was obtained as the aglycone [2].

NMR spectrum of the silylated glycoside: doublet at 7.72 ppm (2H), J = 8 Hz, being the signal of the H-2',6' protons; doublet at 6.90 ppm (2H), J = 8 Hz — H-3',5'; singlet at 6.42 ppm (1H) — H-8; singlet at 6.30 ppm (1H) — H-3. A doublet at 4.9 ppm (1H), J = 4.9 Hz, was assigned to the proton of the anomeric center of L-rhamnose, and a doublet at 4.75 ppm (1H, J = 9 Hz) to the proton of the anomeric center of β-glucose. Singlets at 3.84 and 3.82 ppm correspond to the six protons of two methoxy groups. Signals in the 2.0-3.2 ppm region (10 H) are due to the protons of glucose and rhamnose.

When the substance was investigated in the UV region with the aid of ionizing and complex-forming additives, a free hydroxy group was found in position 5 [3, 4].

On the basis of the UV, IR, and NMR spectra of the demethylated products, the compound isolated was characterized at 4',7-di-O-methylapigenin 6-C-(O-β-D-glucopyranosyl-L-rhamnoside).

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