FLAVONOIDS OF Senecio subdentatus. I

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We collected <u>Senecio</u> <u>subdentatus</u> Ldb. in the full-flowering stage in the environs of Alma-Ata. To isolate the flavonoids, the raw material was first treated with chloroform and was then extracted with ethanol. The concentrated aqueous ethanolic extract was treated with ether. Paper chromatography showed that the ethereal extract contained six substances of flavonoid nature. Three of them (present in considerable amount) were isolated by column chromatography on polyamide.

Substance (I), mp 308-310°C, was identified as quercetin on the basis of qualitative reactions and R_f values.

Substance (II), mp 303-305°C, λ_{max} 375, 255 nm, was cleaved on alkaline hydrolysis into phloroglucinol and vanillic acid. Spectral studies in the UV region with the addition of additives showed the presence of free hydroxyls at C₃, C₅, C₇, and C₄'. Its dealkylation with HI [1] gave quercetin. These results enable the substance to be identified as isorhamnetin.

Substance (III), mp 198-200°C, $[\alpha]_D^{30}-80^\circ$ (c 0.5; methanol), λ_{max} 355, 256 nm, is a glycoside. Its acid hydrolysis gave isorhamnetin and galactose. The yield of aglycone was 67%, which showed a mono-glycosidic nature of substance (III). The absence of a bathochromic shift of band I of the glycoside on the addition of zirconyl chloride and citric acid shows that the hydroxy group at C₃ is glycosidated. The glycoside was subjected to enzymatic hydrolysis with emulsin. The results of a comparison of $[M]_D$ for the glycoside with $[M]_D$ for phenyl galactoside showed that the glycoside is isorhamnetin $3-\beta-D$ -galactopy-ranoside [2].

LITERATURE CITED

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