FLAVONOIDS OF Astragalus kabadianus

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The epigeal part of <u>Astragalus</u> <u>kabadianus</u> Lipsky, family Fabaceae (Leguminosae) collected in the flowering period in the environs of Dushanbe in 1986 has been investigated for the presence of falvonoids.

To obtain the total flavonoids, 1.0 kg of the dried and comminuted herb was extracted successively with 96% and 70% ethanols. The ethanolic extracts were evaporated in vacuum to an aqueous residue, which was treated with chloroform to eliminate ballast substances. The flavonoids were extracted from the aqueous phase with ethyl acetate, the extract was concentrated in vacuum, and the resulting residue was deposited on a column of polyamide sorbent. The flavonoids were then eluted successively with water and with ethanol in various concentrations.

Seven individual substances were isolated from Astragalus kabadianus.

Substance (I) - $C_{15}H_{10}O_6$, mp 276-277°C. By comparison with an authentic sample, (I) was identified as kaempferol [1].

Substance (II) - $C_{15}H_{10}O_7$, mp 310-312°C, was identified as quercetin [2].

Substance (III) - $C_{27}H_{30}O_{16}$, mp 192-194°C [α]²⁰_D-35.5° (c 0.4; ethanol); λ_{max} 260, 365 nm [2], was identified as rutin (quercetin 3-O-rutinoside).

Substance (IV) - $C_{15}H_{10}O_6$, mp 329-330°C, was identified as luteolin [3].

Substance (V) was isorhamnetin 3-O- β -D-glucoside, C₂₂H₁₂O₁₂, mp 170-172°C, [α]²⁰_D-26.3° (c 0.5; ethanol); λ_{max} 358, 255 nm [4].

Substance (VI) was isorhamnetin 3-O- β -D-galactoside, mp 270-272°C (aqueous ethanol), $[\alpha]_{D}^{20}$ -44.2° (c 0.45; methanol); λ_{max} 358, 255 nm [5].

Substance (VII) was isorhamnetin (eluted with 70% ethanol); mp 303-304°C (decomp.) (methanol); λ_{max} 375, 255 nm [5].

The structures of all the compounds isolated were confirmed by the results of elementary analysis, UV and IR spectroscopy, and a study of the products of acid and alkaline hydrolysis, and also by comparison with authentic samples.

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