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UDC 547.972

Continuing a study of plants of the genus Astragalus (milk vetch), family Fabaceae, we have investigated the epigeal part of Astragalus bornmüllerianus B. Fedtsch. (Bornmüller's milk vetch) collected in the flowering period, July, 1985, in the region of the Anzob Pass.

On one- and two-dimensional paper chromatography of an ethanolic extract in the solvent system butan-1-ol- CH_3 (COOH- H_2O (4:1:5) and 15% acetic acidwe detected more than nine substances of flavonoid nature, seven of which were isolated in the individual form.

The air-dry raw material (1.0 kg) was extracted exhaustively in succession with 96% and 70% ethanol. The extract was concentrated, the ethanol being distilled off, and it was treated with chloroform to eliminate ballast substances. The combined flavonoids were extracted with ethyl acetate and the extract was dried in vacuum and deposited on a column of polyamide solvent. The column was then eluted successively with water and with ethanols of different concentrations.

Seven flavonoid compounds were obtained in the individual state: rutin (quercetin 3-0-rutinoside) [1], astragalin (kaempferol 3-glucoside) [2], isoquercitrin (quercetin 3-glucoside) and quercitrin (quercetin 3-rhamnoside) [3], quercetin, kaempferol [4], and isorhamnetin [5]. The structures of all the compounds isolated were confirmed by the results of elementary analysis and of UV and IR spectroscopy, and by a study of the products of acid and alkaline hydrolysis, and also by comparison with authentic samples.

LITERATURE CITED

- M. D. Alaniya, N. F. Komissarenko, and É. P. Kemertelidze Khim. Prir. Soedin., 529 (1971).
- 2. M. D. Alaniya, Khim. Prir. Soedin., 813 (1976).
- 3. V. N. Spiridonov, Dokl. Akad. Nauk SSSR, 169, No. 1, 126 (1966).
- 4. V. A. Bandyukova, Rast. Res., 1, No. 4, 596 (1965).
- 5. L. K. Klyshev, V. A. Bandyukova, and L. S. Alyukina, Plant Flavonoids [in Russian], Alma-Ata (1978), p. 31.

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