

Continuing investigations of plants of the genus *Astragalus* [1], we have studied the polyphenol content of the epigeal part of *Astragalus eximius* Bge, family *Fabaceae*, gathered in the flowering period in the environs of Tashkent.

The total polyphenolic compounds were obtained and purified by a known method [2]. To isolate the hydroxycinnamic acids and flavonoids, the total material from the ethyl acetate fraction was deposited on a column of polyamide sorbent, and this was washed first with water and then with mixtures of water and ethanol containing increasing concentrations of the latter. Monitoring was carried out by paper chromatography in the 15% CH<sub>3</sub>COOH and BAW (4:1:5) systems. Similar fractions were evaporated and combined. As a result, the following hydroxycinnamic acids were obtained and identified: 4-hydroxycinnamic (p-coumaric) acid, C<sub>9</sub>H<sub>8</sub>O<sub>3</sub>, mp 213-214°C; 3,4-dihydroxycinnamic (caffeic) acid, C<sub>9</sub>H<sub>8</sub>O<sub>4</sub>, mp 194-196°C; 4-hydroxy-3-methoxycinnamic (ferulic) acid; and 5-caffeoyl-D-quinic (chlorogenic) acid [3, 4].

The following flavonoids were isolated and identified: 3,3',4',5,7-pentahydroxyflavone (quercetin), C<sub>15</sub>H<sub>10</sub>O<sub>7</sub>, mp 312-313°C; 3,4',5,7-tetrahydroxyflavone (kaempferol), C<sub>15</sub>H<sub>10</sub>O<sub>6</sub>, mp 274-275°C; quercetin 3-O-galactoside (hyperside) C<sub>21</sub>H<sub>20</sub>O<sub>12</sub>, mp 232-234°C; and kaempferol 3-O-glucoside (astragalin), mp 176-178°C [5, 6]. The substances were identified by their physicochemical properties, mixed melting points with authentic specimens, the products of acid hydrolysis and alkaline cleavage, and their UV and IR spectra. This is the first time that any of these substances has been isolated from *A. eximius*.

## LITERATURE CITED

1. N. N. Guzhba, L. Sarkisov, and S. F. Dzhumyrko, *Khim. Prir. Soedin.*, 406 (1990).
2. N. N. Guzhba, M. S. Luk'yanchikov, and L. I. Dranik, *Khim. Prir. Soedin.*, 455 (1987).
3. I. V. Sergeev, G. N. Zemtsova, V. A. Bandyukova, and A. L. Shinkarenko, *Isv. Ser.-Kavk. Nauchn. Tsentra Serv. Esestv. Nauk*, No. 3, p. 72 (1973).
4. V. A. Bandyukova, *Khim. Prir. Soedin.*, 263 (1983).
5. V. A. Bandyukova, *Rast. Res.*, 1, 596 (1965).
6. A. L. Kazakov, M. S. Luk'yanchikov, S. F. Dzhurmyrko, and V. A. Kompantsev, *Khim. Prir. Soedin.*, 388 (1981).