COMPONENTS OF THE EPIGEAL PART OF Thymus bashkiriensis

V. A. Kurkin, V. B. Braslavskii,
P. E. Krivenchuk, and T. I. Plaksina

UDC 547.972:547.918

The epigeal part of Thymus bashkiriensis Klok. et Schost. (Bashkirian thyme) growing in Zavolzh'e has been investigated. The air-dried raw material of this plant collected in the region of Lake Asli-Kul', Bashkir ASSR on June 14,1983, was extracted with aqueous ethanol, and the extracts obtained were evaporated in vacuum to a viscous residue, from which compound (I) was obtained without chromatographic purification. When the evaporated extract was chromatographed on polyamide (aqueous ethanolic eluent mixtues) and silica gel (chloroform–ethanol eluent mixtures), four substances of polyphenolic nature (compounds (II-V)) were isolated.

The substances isolated were identified from their UV and PMR spectra, and also by direct comparison with authentic samples in relation to chromatographic mobility and other physicochemical constants.

Compound (I) was oleanolic acid (yield 0.2%). White acicular crystals with the composition $C_{30}H_{48}O_3$, mp 305-308.5°C (ethanol).

Compound (II) was apigenin (yield 0.005%). Light yellow crystals with the composition $C_{15}H_{10}O_5$, mp 341-343°C (aqueous ethanol); triacetate with mp 180-182°C.

Compound (III) was luteolin (yield 0.01%). Yellow acicular crystals with the composition $C_{15}H_{10}O_6$, mp 325-328°C (chloroform–ethanol (6:1)); tetraacetate with mp 228-230°C.

Compound (IV) was caffeic acid (yield 0.01%). Light yellow crystals with the composition $C_9H_8O_4$, mp 218-222°C (aqueous acetone); λ_{max} (MeOH) 217, 235 sh, 242, 299 sh, 326.

Compound (V) was rosmarinic acid (yield 0.3%). Light yellow crystals with the composition $C_{18}H_{16}O_8$, mp 201-204°C (water); λ_{max} (MeOH) 217, 235 sh, 242, 299 sh, 326.

This is the first time that compounds (I-V) have been isolated from Bashkirian thyme, although they have been described for other species of the genus Thymus [1-4].

It must be mentioned that Bashkirian thyme is close in its chemical composition to the Thymus zheguliensis that we have investigated previously [5].

LITERATURE CITED

1. A. V. Simonyan and V. I. Litvinenko, Khim. Prir. Soedin., 797 (1972).
2. A. V. Simonyan, É. T. Oganesyan, and R. A. Azaryan, Khim. Prir. Soedin., 123 (1973).
3. F. A. T. Barberan, Fitoterapia, 57, No. 2, 67 (1986).
4. W. Karrer, Konstitution und Vorkommen der Organischen Pflanzenstoffen, Birkhäuser Verlag, Basel and Stuttgart (1958).
5. V. A. Kurkin, G. G. Zapesochnaya, P. E. Krivenchuk, and T. I. Plaksina, Khim. Prir. Soedin., 594 (1988).

D. I. Ul'yanov Kuibyshev Medical Institute. Translated from Khimiya Prirodnykh Soedinenii, No. 5, p. 758, September-October, 1988. Original article submitted February 19, 1988.

0009-3130/88/2405-0649$12.50