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POLYPHENOLS OF *Onobrychis bobrovii*

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UDC 547.814:582.73.9

Continuing a study of plant of the genus *Onobrychis* (sainfoin), family *Fabaceae* [1], we have investigated for the first time the polyphenol composition of *Onobrychis bobrovii* Grossh. (Bobrov's sainfoin) [2], collected in the flowering stage by S. F. Dzhumyrko in the gorge of the R. Chegem (Kabardino-Balkarskaya ASSR) in August.

To obtain the total polyphenolic compounds, 500 g of the air-dry herbage was extracted successively with chloroform and 70% ethanol. The ethanolic extract was evaporated in vacuum to an aqueous residue, from which the polyphenols were extracted with ethyl acetate; the extract was evaporated and the combined polyphenols were precipitated with dry chloroform.

The combined polyphenolic compounds were deposited on a column containing polyamide sorbent and were eluted successively with water and with aqueous ethanol of various concentrations.

Five polyphenols were isolated in the crystalline form from Bobrov's sainfoin and were identified.

Substance (I) was eluted from the column with hot water; $C_{12}H_{16}O_7$, mp 161-162°C [ethyl acetate-chloroform (1:1)], $[\alpha]_D^{20} -6^\circ$ (c 0.91, water); λ_{max} 285 nm; it was identified as hydroquinone O- β -D-glucopyranoside (arbutin).

Substance (II) was eluted with 10-15% ethanol; $C_{27}H_{30}O_{16} \cdot 2H_2O$, mp 187-189°C (ethanol) λ_{max} 365, 258 nm, $[\alpha]_D^{20} -12.5^\circ$ (c 0.7; methanol); it proved to be quercetin 3-rutinoside (rutin).

Substance (III) was eluted with 15-20% ethanol; $C_{21}H_{20}O_{12}$, mp 232-235°C (ethanol), λ_{max} 265, 259 nm, $[\alpha]_D^{20} -60^\circ$ (c 0.15; methanol); it was identified as quercetin 3- β -D-galactopyranoside (hyperoside).

Substance (IV) was eluted with 20-25% ethanol; $C_{24}H_{20}O_{11}$, mp 178-180°C (ethanol), $[\alpha]_D^{20} -69^\circ$ (c 0.49; ethanol); λ_{max} 350, 267 nm; this was kaempferol 3-O-glucoside (astragalin).

Substance V was eluted with 55-60% ethanol; $C_{15}H_{10}O_7$, mp 310-312°C; λ_{max} 370, 256 nm (ethanol); it was identified as quercetin.

The structure of the compounds isolated were confirmed by the results of elementary analysis, UV and IR spectroscopy, and the study of the products of acid and enzymatic hydrolysis, and also by comparison with authentic reference samples.

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