All the substances mentioned have been isolated previously by Japanese workers from the roots of S. miltiorrhiza Bunge [4], but this is the first time they have been isolated from plants of the domestic flora.

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FLAVONOIDS OF Trifolium montanum

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In the epigeal part of Trifolium montanum L. (mountain clover), collected in the northern Caucasus in the region of Podkumok Station, we have detected nine substances of flavonoid nature by paper chromatography.

The combined flavonoids were obtained by extraction with ethyl acetate from a concentrated ethanol purified with chloroform. Chromatography on a column of polyamide sorbent followed by fractional crystallization and preparative chromatography on paper yielded four individual substances – A, B, C, and D.

Substance A, $C_{15}H_{10}O_7$, with mp 310-312°C (melting point of the acetate 199-200°C), λ_{max} 256, 264 sh., 372 nm, was identified as quercetin.

Substance B, $C_{21}H_{20}O_{11}$, mp 270-272OC, λ_{max} 265, 364 nm, was characterized as kaempferol 7-O-β-D-glucopyranoside (populnin).

Substance C, $C_{21}H_{20}O_{12}$, mp 232-234°C, λ_{max} 256, 361 nm, was identified as quercetin 3-O-β-D-galactopyranoside (hyperoside).

Substance D, $C_{22}H_{22}O_9$, mp 210-212°C, $[\alpha]_D^{20}$ 25.3° (c 0.4; methanol), λ_{max} 260 nm consisted of 7-β-D-glucopyranosyloxy-4'-methoxyisoflavone (ononin).

The substances obtained were identified on the basis of the physicochemical properties of the initial compounds and of their transformation products, and UV and IR spectra [1], and also by comparison with authentic samples.

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