

From the epigeal part of *Cephalaria gigantea* (Ldb.) Bobr. (giant cephalaria), family Dipsacaceae, by extraction with chloroform, ethanol, and water, we have isolated triterpenoids, flavonoids, and phenolic acids.

Substance I - pale-yellow crystals of the composition $C_{26}H_{28}O_{16}$, mp 214-216°C (from methanol), $[\alpha]_D^{20} -250^\circ$ - was obtained from an aqueous extract by gel filtration through Sephadex G-25. The UV spectrum had bands, $\lambda_{max}^{CH_3OH}$ 360, 255 nm, characteristic for the flavone nucleus [1]. According to UV spectroscopy, the substance contains free hydroxyls at C_5 , C_3' , and C_4' . Under the action of emulsin, cleavage took place with the formation of quercetin, D-glucose, and L-arabinose. On hydrolysis with 15% formic acid, after 3 min, L-arabinose had been split off with the formation of quercimeritrin. The IR spectra of I and of quercetin 3-O- β -L-arabofuranoside-7-O- β -D-glucopyranoside, which we have isolated previously from *Scabiosa ochroleuca* L. [2] were identical.

Substance II, $C_{21}H_{20}O_{12}$, mp 245-248°C (from acetone), $[\alpha]_D^{20} -62.5^\circ$, $\lambda_{max}^{CH_3OH}$ 372, 257 nm was identical with quercetin 7-O- β -D-glucopyranoside. This has been isolated previously from other representatives of the family Dipsacaceae [3].

Substance III, $C_{21}H_{20}O_{11}$, mp 255-258°C (from methanol), $[\alpha]_D^{20} -53^\circ$, $\lambda_{max}^{CH_3OH}$ 350, 264, 255 nm, contains free hydroxy groups at C_5 , C_3' , and C_4' . On acid hydrolysis it formed luteolin and D-glucose. Its IR spectrum is similar to that of luteolin 7-O- β -D-glucopyranoside, and the identity of the substances was confirmed by the absence of a depression of the melting point in a mixture.

Two phenolic acids (IV and V) were isolated from an aqueous extract by chromatography on Kapron.

The first of them, with mp 195-198°C, λ_{max} 325, 299, 235 nm, with a free ortho-dihydroxy grouping, was identified as 3,4-dihydroxycinnamic acid, and the second, with mp 204-206°C, $[\alpha]_D^{20} -33^\circ$, λ_{max} 325, 240 nm, as chlorogenic acid [4].

By chromatography on alumina, a chloroformic extract yielded a substance VI with the composition $C_{30}H_{48}O_3$, mp 305-308°C, $[\alpha]_D^{20} +79.4^\circ$. The physicochemical properties of VI and its esters agree with literature data for oleanolic acid [5].

LITERATURE CITED

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