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# PHENOLIC COMPOUNDS OF THE EPIGEAL PART OF VALERIAN.

## II. COMPOSITION OF THE PHENOLIC COMPOUNDS OF *Valeriana amurensis*

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According to two-dimensional chromatography on paper F No. 7, the epigeal part of *Valeriana amurensis* P. Smirn. (Amur valerian), collected in the flowering phase in the Maritime Territory in 1974 contains not less than ten flavonoid glycosides and ten phenolic carboxylic acids. The purified aqueous extract obtained by extracting the air-dry raw material with 80% ethanol was investigated in the manner described previously [1]. As a result, ten compounds (I-X) were isolated in the individual state. For substances (I) and (II) the color reactions and absorption in the UV region of hydroxycinnamic acids were characteristic. Substance (I) was identified as caffeic acid, (II) as chlorgenic acid, and (III) as p-hydroxybenzoic acid.

Substances (IV-VII) were flavone aglycones and (VIII) and (IX) were flavonol aglycones, and these were identified from their physicochemical constants and chromatographic behavior in comparison with markers as the following known compounds: apigenin (IV), luteolin (V), diosmetin (VI), acacetin (VII), kaempferol (VIII), and quercetin (IX). In a comparison with samples of *Valeriana officinalis* L. growing in the territory of the Ukrainian SSR [1], it was found that the sample of the *Valeriana amurensis* studied contained acacetin glycosides in predominating amount.

Substance (X) had the composition $C_{21}H_{20}O_{10}$, mp 227-229°C (from isopropanol), $R_f$ 0.14 (15% acetic acid), 0.62 (isobutanol—acetic acid—water (4:1:2)). Its quantitative acid hydrolysis formed equimolar amounts of D-glucose and apigenin. The results of qualitative reactions, spectral investigations in the UV region with the use of diagnostic reagents ($E_i^{1\%}{}_{cm}$ = 421), and enzymolysis with the β-hydrolase from the fungus *Aspergillus oryzae* enabled the substance under investigation to be characterized as apigenin 7-O-β-D-glucoside.

This is the first time that information has been given on the qualitative composition of the phenolic compounds of *Valeriana amurensis*. In addition to these compounds, valepotriates were detected in the epigeal and hypogeal parts of the plant.

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