VALEPOTRIATES OF SOME SPECIES OF THE GENUS *Valeriana* OF THE FLORA OF THE USSR

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Species of the genus *Valeriana* L. are arousing interest as sources of valepotriates, which are acylated iridoids possessing a sedative action [1]. The valepotriates from the epigeal organs of *V. alliariifolia* Adams [2] collected in July, 1982, in the Gomis-Mta region of the Adzhar ASSR were extracted with methylene chloride in a Soxhlet apparatus at a temperature not exceeding 30°C in vacuum for 1.5-2 h. The extracts were evaporated in vacuum, purified, and separated by a known method [1], and three substances (I-III) were isolated in the individual state. On the basis of physicochemical characteristics, substances with the compositions $C_{22}H_{30}O$ (I), $C_{27}H_{40}O_{10}$ (II) with mp 104-106°C, and $C_{24}H_{34}O_{10}$ (III) with mp 98-100°C were identified as valtrate, 10-isovaleroxyvaltrate hydrin, and 10-acetyoxyvaltrate hydrin, respectively. In addition to the species mentioned, for the qualitative estimation and quantitative determination of valepotriates we used the underground and epigeal organs of another 13 species of the genus *Valeriana* collected in the phase of mass flowering and incipient fruit bearing on the territory of the Ukraine, Belorussia, Georgia, and the Far East. Unidimensional TLC on silica gel or Silufol plates in the solvent systems toluene—ethyl acetate—methyl ethyl ketone (80:15:5) (system 1) and hexane—methyl ethyl ketone (7:3) (system 2), and also two-dimensional chromatography first in system 1 and then 2 revealed the presence in the underground organs of a diverse complex of valepotriates and then products of their decomposition, including not less than 10-15 substances after staining with, for example, the benzidine reagent [1]. A similar set of valepotriates among which valtrate predominates was first reported in the underground organs of species from a miscellaneous cycle of *V. officinalis* L. s. l [3]. A rich composition of valepotriates, among which valtrate hydrins predominate, is present in the underground organs of *V. alliariifolia* and *V. tiliifolia* Troitzky [2]. After separation by TLC on silica gel with the aid of an SF-26 spectrometer we determined the amounts of the valepotriates — predominantly derivatives of valtrate, so that in this process we used a calibration graph plotted for this substance. The highest amount of the group of compounds determined was found in the underground organs of *V. alliariifolia* (3.9% on the air-dry weight of the raw material) and *V. tiliifolia* (3%). Their amounts in the other samples were considerably smaller. Thus, there was about 1% in the underground organs of *V. palustris* Kreyer, 0.75% in *V. exaltata* Mikan, 0.60% in *V. capitata* Pall., 0.52% in *V. sambucifolia* Mikan, 0.50% in *V. tuberosa* L., 0.40% in *V. nitida* Kreyer, 0.32% in *V. grossheimii* Worosch., 0.30% in *V. stolonifera* Czern., 0.23% in *V. colchica* Utkin, 0.24% in *V. turczaninovii* Grub., 0.20% in *V. tripteris* L., and 0.13% in *V. alpestris* Stev. The figures given were confirmed in a quantitative determination of valepotriates by the method of Wagner et al. [4].

In the epigeal organs, the amount of valepotriates was considerably smaller than in the underground organs. Thus, there was only 0.10-0.35% in the leaves of *V. alliariifolia* and *V. tiliifolia*.

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