

The herb *Adonis leiosepala* A. Butk. possesses a fairly high biological activity [1, 2]. The presence of cymarín, k-strophanthín- $\beta$ , and adonivernítol in the herb has been established chromatographically [3]. We have studied the cardenolide composition and some other classes of natural compounds in the epigeal part of the plant.

Paper chromatography in the benzene-chloroform (3:2)-formamide and benzene-methyl ethyl ketone (1:3)-formamide systems showed the presence of not less than eight substances of cardenolide nature. When identical amounts of extracts from the herbs *A. vernalis* and *A. leiosepala* were deposited with the aid of a microsyringe on the chromatograms, it was seen that the cardenolide compositions of the plants differed insignificantly. Such differences as there were bore mainly a quantitative nature. To isolate the substances in the individual state the raw material was comminuted and extracted with methanol. The extracts were diluted with water, filtered, and frozen, and after thawing, they were filtered again.

The filtrate was treated successively with a mixture of benzene and chloroform (2:1), chloroform, and a mixture of chloroform and ethanol (4:1). The extracts obtained, after evaporation, were dissolved in a mixture of ethanol and chloroform (1:6) and were deposited with chloroform containing 3-15% of ethanol. The benzene-chloroform fraction yielded a crystalline substance with mp 136-139°C,  $[\alpha]_D^{20} +37.1^\circ$  (c 1.0: ethanol) - cymarín - and the chloroform-ethanol fraction a substance with mp 188-195°C,  $[\alpha]_D^{20} +32.2$  - k-strophanthín- $\beta$ . From the aqueous residue after the extraction of the cardenolides were isolated flavonoid glycosides - adonivernítol with mp 200-205°C and orientín with mp 263-267°C - and the pentahydric alcohol adonítol with mp 101-102°C.

The compounds were identified from their physicochemical properties, colorations with 84% sulfuric acid,  $R_f$  values in various systems, the absence of a depression of the melting point of mixtures with authentic samples, and the temperatures of eutectic fusion with pyramídón and antipyrín [4].

In addition to the substances mentioned, substances fluorescing bright blue in UV light were detected in the chloroform and the benzene-chloroform extracts. Individual compounds proved to be hydroxycoumaríns. One substance had mp 231-233°C and gave no depression of the melting point with umbelliferón. Another substance, judging from its  $R_f$  values in thin layers of sorbent in petroleum ether-ethyl acetate (2:1), benzene-ethyl acetate (2:1), and cyclohexane-ethyl acetate (3:1) systems, was scopoletín [5].

## LITERATURE CITED

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