

## TRITERPENOIDS AND STEROLS OF *Karelinia caspica*

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UDC 547.914.4

*Karelinia caspica*, fam. Asteraceae, is a perennial herb growing on the territories of Uzbekistan, the southeastern part of European Russia, Iran, Afghanistan, and Mongolia [1].

We have investigated the epigeal part of *Karelinia caspica* gathered in the environs of Ura-Tyube (Tadzhikistan) in the flowering period. According to the literature, this plant had not been subjected to chemical study. The comminuted epigeal part was extracted five times with hexane-ethyl acetate (1:1). The total extractive substances so obtained were chromatographed on a column with neutral alumina (activity grade IV) as sorbent and the hexane-ethyl acetate system with gradually increasing concentrations of the latter as eluent, leading to the isolation of two crystalline substances; (1)  $C_{30}H_{50}O$  ( $M^+$  426), mp 172-173°C, and (2)  $C_{32}H_{52}O_2$  ( $M^+$  468), mp 154-156°C.

The alkaline hydrolysis of substance (2) gave substance (1), differing by one acetyl group [2]. From their physico-chemical and spectral characteristics, substance (2) was identical with  $\alpha$ -amyrin acetate and substance (1) with  $\alpha$ -amyrin [3].

In addition to these substances we isolated a crystalline mixture of sterols in which mass-spectrometric fragmentation showed the presence of sitosterol ( $M^+$  414) and stigmasterol ( $M^+$  400).

This is the first time that these substances have been isolated from *Karelinia caspica*.

## REFERENCES

1. Flora of the USSR [in Russian], Vol. 25 (1959), p. 296.
2. P. de Mayo, The Higher Terpenoids, Interscience, New York (1959).
3. S. A. Lugovskaya and N. V. Plekhanova, Khim. Prirod. Soedin., 730 (1989).