

THE ISOLATION OF CNICIN FROM *Centaurea squarrosa*

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UDC 547.314

Centaurea squarrosa Willd, family Compositae, is widely distributed in Central Asia. Sesquiterpene lactones have been isolated from a number of plants of the genus *Centaurea*, but this species has not been studied previously, and we collected it in September in the environs of the village of Sidzhak, Tashkent oblast.

The lactones were extracted from the flower heads and small stems by ethanol, and the extract was evaporated and diluted with water (2:1). The aqueous ethanolic solution was treated with chloroform. The chloroform extracts were concentrated and chromatographed on alumina (activity grade IV) in a ratio of 1:10. The chloroform fractions deposited colorless crystals with the composition $C_{20}H_{26}O_7$, mp 143°C (decomp.; from ethanol). The individuality of the lactone was confirmed on "Silufol" plates in the chloroform-methanol (8:2) system, R_f 0.4. On treatment with a solution of vanillin in conc. sulfuric acid, the spot became blue.

IR spectrum (KBr), λ_{max} , cm^{-1} : 3355, 3270 (OH), 1755 (C=O of a γ -lactone conjugated with an exomethylene group), 1700, 1265 ($-C=C-COO-$), and 1660 and 1625 (C=C).

In its composition, melting point, and its IR and NMR spectra, the compound that we isolated was identical with cnicin — a sesquiterpene lactone of the germacrane type [1, 2].

This is the first time that cnicin has been isolated from *Centaurea squarrosa*.

LITERATURE CITED

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Institute of the Chemistry of Plant Substances, Academy of Sciences of the Uzbek SSR. Translated from *Khimiya Prirodnikh Soedinenii*, No. 3, p. 437, May-June, 1973. Original article submitted December 19, 1972.

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