

DIOSGENIN FROM *Allium angulosum*

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We have isolated diosgenin from various organs of *Allium angulosum* L. (family Liliaceae) grown in the introduction section of VILR [All-Union Institute of Medicinal Plants] and collected in the stage of mass flowering.

The comminuted rhizomes with roots, the bulbs, and the inflorescences were separately defatted with chloroform in a Soxhlet apparatus and heated with 2 N hydrochloric acid in the boiling water bath for 2.5 h. After neutralization, the hydrolysis products were extracted with chloroform. The evaporated extract was chromatographed on a column of KSK silica gel.

Elution with cyclohexane-ethyl acetate (4:1) gave diosgenin with mp 208-210°C (acetone), $[\alpha]_D^{20} -124.7^\circ$ (c 0.55; chloroform). Literature data: mp 208°C, $[\alpha]_D^{20} -121^\circ$ (chloroform) [1]. On thin-layer chromatography in silica gel in the cyclohexane-ethyl acetate (4:1), hexane-ethyl acetate (5:1), and chloroform-ethanol (95:5) systems this substance did not differ in mobility from an authentic sample of diosgenin. A mixture of the diosgenin that we had isolated and the authentic sample did not give a depression of the melting point, and their IR spectra were identical.

The yield of diosgenin from the inflorescences was 0.18%, from the rhizomes with roots 0.04%, and from the bulbs 0.03% (on the weight of the absolutely dry raw material). According to chromatography in a thin layer of silica gel, a hydrolyzate of the leaves and stems of *Allium angulosum* L. contained traces of diosgenin.

LITERATURE CITED

1. L. Fieser and M. Fieser, *Steroids*, Reinhold (1959).

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