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#### COLONOSIDE B - THE MAIN TRITERPENE GLYCOSIDE

#### OF *Codonopsis lanceolata*

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We have investigated the roots of the plant *Codonopsis lanceolata* (Sieb. et Zucc.) Benth. et Hook., collected in 1979 in Maritime Territory.

The air-dry comminuted roots were extracted first with hexane and then, with heating, from methanol. The methanolic extract was evaporated to dryness (yield 9.8%). The total glycosidic fraction (TGF) was obtained by chromatographing the methanolic extract on Polikhrom-1. The substances were eluted with a water-ethanol system in which the ethanol concentration was gradually increased to 40% (yield 10.7%). According to TLC on KSK silica gel in the chloroform-ethanol-water (15:15:2) system, the TGF contained four compounds giving a crimson red coloration with sulfuric acid. The substances have been called codonosides A, B, and C [sic] in order of increasing polarity. Codonoside B (I) was present in predominating amount.

Substance (I) was obtained by partition chromatography of the TGF on silica gel, the compound being eluted with water-saturated n-butanol: mp 250-256°C (from aqueous n-butanol);  $[\alpha]_D^{20}$  -54.4° (c 0.57; aqueous pyridine). IR spectrum,  $\lambda_{\max}^{\text{KBr}}$ ,  $\text{cm}^{-1}$ : 1614 ( $\text{COO}^-$ ), 1730 ( $\text{C=O}$ ), 3420 (O-H).

The acid hydrolysis of (I) gave echinocystic acid (II) as the aglycone, its structure being established on the basis of chemical transformations and the physicochemical characteristics of the compounds obtained [1]. In its chromatographic behavior the acid (II) was identical with a sample of echinocystic acid kindly provided by I. A. Saltykova (Leningrad State University).

After the aglycon had been separated off, the hydrolysate was neutralized with barium carbonate, and glucuronic acid, glucose, xylose, arabinose, and rhamnose were detected in it by TLC on silica gel.

Silica gel impregnated with a 0.2 M solution of sodium dihydrogen phosphate was used for the TLC of all the compounds.

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