

COUMARINS OF THE ROOTS OF *Cryptodiscus didymus*

N. S. Ignat'eva, V. V. Vandyshev,
and M. G. Pimenov

UDC 577.15/17 : 582.89

Cryptodiscus didymus (Regel) is a perennial monocarpic plant of the family Umbelliferae, growing in the clayey wastelands of central Asia and southern Kazakhstan [1], which has been investigated earlier for the presence of coumarins [2, 3]. Ten coumarins have been detected by chromatography in the fruit, and among these prangenin, isoimperatorin, oxypeucedanin, bergapten, imperatorin, and osthole have been identified. Later, umbelliprenin, bergapten, xanthotoxol, prangenin hydrate, and isoimperatorin were preparatively isolated from the fruit [4].

The roots of *C. didymus* have not been studied previously. We have investigated the coumarin composition of the roots of the plant collected in the Alma-Ata oblast in June, 1971. The raw material was treated with methanol, and the extract was evaporated to small volume. A substance was obtained which identified on the basis of its physicochemical properties and IR spectra as sucrose. Then the extract was diluted with water, the coumarin substances were extracted with diethyl ether, and the extract was dried over anhydrous sodium sulfate and concentrated until the solvent had been eliminated. The residue contained no less than five coumarins, with R_f 0.65, 0.55, 0.40, 0.11, and 0.0 [petroleum ether (bp 40-70°C) on FN-2 paper impregnated with formamide-acetone (1:3)].

By column chromatography on acidic alumina [5] with elution by benzene and benzene-ethyl acetate, four individual coumarins were isolated from the extract. On the basis of their physicochemical constants, IR spectra, and melting points with authentic samples, they were identified as isoimperatorin (R_f 0.65; yield 0.65%), pranchimgin (R_f 0.55; yield 0.40%), imperatorin (R_f 0.40; 0.20%), and oxypeucedanin (R_f 0.11; yield 0.50%). This is the first time that an acyloxydihydrofurocoumarin - pranchimgin - has been isolated from plants of the genus *Cryptodiscus*.

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