L. R. Shcherbanovskii

Onosma tauricum Pall. (longtube golddrop onosma), family Boraginaceae, was collected in June, 1970 and 1971, in the Crimea at Karadag (together with V. M. Kosykh) and in the environs of the village of Tankovogo, Bakhchisarai region (together with T. P. Khort).

Extracts from the comminuted roots obtained by steeping in diethyl and petroleum ethers, ethanol, and other organic solvents had an intense red color. A chromatographic analysis of these extracts on paper impregnated with a 5% solution of silicone oil in cyclohexane in the ethanol—water—acetic acid (75: 22.5:2.5) system showed that the extracts contained a substance agreeing in color and R_f value with shikonin, isolated from Echium rubrum Jacq. [1, 2].

A red substance was extracted from the comminuted air-dry roots of this onosma with petroleum ether (fraction with bp $45-65^{\circ}$ C). This substance was isolated from the extract by a modification of Brockmann's method [3, 4]. The resulting dark brown crystalline precipitate was purified on a column of polyamide resin (copolymer of caprolactam and adipic hexamethylenediamide, 60:40). Elution was performed with petroleum ether (bp $45-65^{\circ}$ C). After concentration to saturation, the eluate deposited a crystalline precipitate, $C_{16}H_{16}O_5$, mp $144-145^{\circ}$ C. A mixture with an authentic sample of shikonin gave no depression of the melting point.

The IR spectrum of the substance obtained coincided completely with that of shikonin. Solutions in benzene (0.005-0.01%) possessed dextrorotation.

The substance with the composition $C_{16}H_{16}O_5$ from the roots of Onosma tauricum Pall. is (+)-shikonin [5,8-dihydroxy-2-(1-hydroxy-4-methylpent-3-enyl)-1,4-naphthoquinone]. Yield 0.08-0.12% of the dry weight of the roots.

Shikonin was not detected in the epigeal organs of this onosma.

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