A CHEMICAL STUDY OF THE ROOTS OF Seseli unicaula

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We have studied the chemical composition of the roots of Seseli unicaula (Korov) M. Pimen. (Libanotis unicaula Korov.) [1], family Umbelliferae, collected in Kirghizia in the environs of the settlement of Toktogul. The comminuted raw material was treated with chloroform, and the concentrated extract was separated by chromatography on a column of silica gel using as eluting solvents petroleum ether and a mixtures of it with ethyl acetate.

Two substances were isolated from the roots of S. unicaula. One of them, $C_{17}H_{18}O_6$, mp 125-127°C, was identified by its IR and NMR spectra and the absence of a depression of the melting point in admixture with an authentic sample as the chromone hamaudol 3'-acetate [2, 3]. The second compound, $C_{21}H_{24}O_7$, mp 140°C, was assigned to the acylcoumarin series. From its IR and NMR spectra it was identified as 3'-acetoxy-4'-isovaleroxy-3',4'-dihydroseselin (suksdorfin) [4]. This pyranocoumarin has been isolated previously only from Lomatium suksdorfii (Wats.) Coult. et Rose [4] and Libanotis montana Crantz (Seseli libanotis L.) Koch. [5]. The roots of this plant also contain a diacyldihydropyranocoumarin forming with the suksdorfin a mixture which is difficult to separate. According to the NMR spectrum of the mixture, it is a khellactone derivative.

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