larch but the main acid for the oleoresins of both species was isopimaric.

The facts given above show that the oleoresin of Japanese larch differs qualitatively from the oleoresin of the Kamchatkan larch, although these species are botanically close. In its diterpenoid composition, the oleoresin of the Japanese larch is close to the oleoresin of the Dahurian larch growing on Kamchatka [3].

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CHEMICAL COMPOSITION OF THE ESSENTIAL OILS OF *Thymus pastoralis* AND *Th. dagestanicus*

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The genus *Thymus* L. – one of the largest genera of the family of Labiatae – is widely distributed in the flora of the Caucasus. It includes 38 species which are promising for chemical study and use in the national economy.

The raw material and essential oil of wild thyme and common thyme are used in the food and perfumery-cum-cosmetics industry and also in medicine [1-4]. The compositions of the essential oils of individual species of thyme have been studied inadequately or have not been investigated at all. The compositions of the essential oils of some species of thyme have been reported previously [5, 6].

We have studied the chemical compositions of the essential oils of the thymes *Th. dagestanicus* Klok. et Schost and *Th. pastoralis* Iljin. For the analysis we used material collected in various vegetation phases in the Baksan region of the Kabardino-Balkarsk ASSR, in the environs of the Tyrnauz on the glassy slopes of the south western exposure of the Baksal gorge, at a height of 1000-2300 m above sea level. These species are distributed in the foothills and low and medium mountain zones there are considerable natural reserves of them. The amounts of essential oils in the epigeal parts of *Th. dagestanicus* and *Th. pastoralis* in the phase of mass flowering range between 0.33 and 0.90% and between 0.28 and 0.87%, respectively, on the absolutely dry weight.

To determine the best period for collecting the raw material we studied the dynamics of the accumulation of the essential oils in these species. It was found that the largest amount of essential oils in the epigeal parts of both species accumulated in the phase of budding and mass vegetation: 9.27-0.35, 0.93-1.0, 0.38-0.46, and 0.55-0.86%, respectively on the air-dry weight of the plant.

The essential oil of *Th. dagestanicus* consisted of a mobile pale yellow liquid with a sharp thyme odor, caustic properties, and a sharp taste. Physicochemical constants of the oil: d_{20}^{20} 0.8587; n_D^{20} 1.4955; acid No. 3.27; ester No. 23.14; ester number after acetylation 126.15.

The essential oil of *Th. pastoralis* was a yellow liquid with a thyme odor and caustic properties which crystallized at −7°C. The physicochemical constants of the oil were: d_{20}^{20} 0.9094; n_D^{20} 1.5020; acid No. 3.31; ester No. 37.20; ester number after acetylation 137.20.

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The chemical compositions of the essential oils were studied by gas-liquid chromatography (Chrom-5). In the essential oils of Th. dagestanicus and Th. pastoralis we found 13 and 8 components, respectively. They were identified by the addition of makers. In the essential oil of Th. dagestanicus in the phase of mass flowering, seven components were identified and their percentage constants were determined: γ-pinene 0.24; 1,8-cinnole – 12.63; γ-terpinene – 2.63; p-cymene – 8.19; α-terpinyl acetate – 4.92; thymol – 32.69; and carvacrol – 4.92. Likewise, seven components were identified in the essential oil of Th. pastoralis in the phase of mass flowering: α-pinene – 0.23; 1,8-cineole – 6.45; γ-terpinene – 8.72; p-cymene – 8.72; terpinen-4-yl acetate – 19.48; thymol – 32.63; and carvacrol – 21.14; and six components in the budding phase: myrcene – 9.60; γ-terpinene – 26.02; p-cymene – 23.81; terpinen-4-yl acetate – 23.81; thymol – 9.60; and carvacrol – 4.17.

The thyme oils isolated from the two species of thyme contained a considerable amount of phenols consisting mainly of thymol and carvacrol.

The comparative analysis of the chemical compositions of the essential oils of Th. dagestanicus in two phases shown that they have many common components but the amount of phenols (thymol and carvacrol) in the essential oil increases three- to five-fold in the phase of mass flowering.

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