

MONO-AND SESQUITERPENOIDS FROM THE OLEORESIN OF
Picea koraiensis

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The oleoresin of *Picea koraiensis* Nakai that we have investigated was collected in the Chuguevka region of Maritime Territory in 1973. The turpentine obtained by distillation of the oleoresin with steam according to GOST 10271-62 (9.6%) had the following physicochemical constants: n_D^{21} 1.4931, $[\alpha]_D^{20}$ -3.52°. The chemical compositions of the turpentine and of the fraction of sesquiterpene hydrocarbons (1.3%) isolated after preliminary treatment [1] were studied by means of various chromatographic and spectroscopic methods.

The qualitative and quantitative compositions of the monoterpene hydrocarbons of the turpentine were determined by the GLC method (TCEP, 2.5 m × 3 mm, 74°C). We found 11 hydrocarbons in the turpentine of *P. koraiensis*: α -pinene (47.8%), fenchene (traces), camphene (0.8%), β -pinene (29.1%), Δ^3 -carene (9.8%), myrcene (0.6%), limonene (3.4%), β -phellandrene (5.4%), γ -terpinene (0.7%), terpinolene (1.7%), and p-cymene (traces).

From the sesquiterpene hydrocarbon fraction by column chromatography on SiO₂ and SiO₂ + AgNO₃, and also by micropreparative GLC (Tween-60, Apiezon L, 5 m × 6 mm) we isolated and identified by their IR and PMR spectra longifolene, longicyclene, cyclosativene, β - and γ -elemenes, caryophyllene, α -humulene, α -amorphene, γ - and δ -cadinenes, ϵ -murolene, α -selinene, β -bisabolene, ar-curcumene, sibirene, β -copaene, calamenene, and α -calacorene. From the same fraction we isolated bornyl acetate and the methyl ether of thymol.

From the results of analytical GLC on two capillary columns (Tween-60, Apiezon L, 50 m × 0.2 mm) we found a total of 26 compounds in the sesquiterpene fraction of the oleoresin of *P. koraiensis*. In addition to those mentioned we identified another four hydrocarbons from their relative retention times; α -longipinene, α - and γ -murolenes, and α -cadinene. Thus, in the sesquiterpene hydrocarbon of the oleoresin of *P. koraiensis* we identified 24 compounds, the main ones being longifolene (25%) and sibirene (20%).

LITERATURE CITED

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