

The IR spectra of the substances isolated were identical with those of coronopilin in the region of skeletal vibrations. It is possible that their structures have a common basic skeleton.

On the basis of the results given above it may be assumed that the substances isolated are sesquiterpene lactones which have evidently not been studied previously.

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THE NEUTRAL SUBSTANCES OF THE OLEORESIN OF PINUS PALLASIANA

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We have separated the oleoresin collected in the middle of May in the Yalta Leshkoz [forestry farm] into an acidic and a neutral fraction. The latter (after removal of the monoterpene fraction by distillation) was saponified with an ethanolic solution of caustic potash and the unsaponifiable part, amounting to 6% of the initial oleoresin, was chromatographed on neutral alumina (activity III). Petroleum ether extracted a hydrocarbon fraction (23%) and a mixture of petroleum ether and benzene (95:5) an aldehyde fraction (30%). Benzene eluted a mixture of saturated aliphatic alcohols the main component of which was tetracosanol with mp 74-75° C (from acetone). A mixture of benzene and ether (95:5) eluted β -sitosterol (23%).

The aldehyde fraction was chromatographed on a column of silica gel impregnated with silver nitrate [1]. The process of separation was followed by thin-layer chromatography in the same adsorbent [2].

A mixture of petroleum ether and benzene (93:7) eluted a small fraction (0.15%) consisting of a mixture of dehydroabietinal and abietinal (identified by chromatographic comparison with authentic samples) and then pimarinal (72%), with mp 62.5-63.5° C (from methanol); $[\alpha]_D^{20} +103^\circ$ (c 2.5; chloroform). Semicarbazone, mp 214.5-216° C (decomp, from ethanol); 2,4-DNPH, mp 198-199° C (from ethanol). The latter gave no depression of the melting point with an authentic sample of pimarinal 2,4-DNPH. A 92:8 mixture of the same solvents eluted liquid isopimarinal (25%) $[\alpha]_D^{21} -12^\circ$ (c 5; chloroform). Semicarbazone, mp 223-224.5° C (decomp, from ethanol), 2,4-DNPH, mp 181.5-185.5° C (from ethanol). A mixture of the latter with an authentic sample of isopimarinal 2,4-DNPH melted without depression.

No diterpene alcohols corresponding to the resin acids were found.

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ALKALOIDS OF FUMARIA

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From Fumaria parviflora Lam. [1], collected on the 12th April 1966 in the vegetation period in the region of Shargun, Surkan-Dar'inskaya Oblast, by chloroform extraction we have obtained 0.49% of combined alkaloids. By