

STUDY OF TERPENES COMPOSITION FROM EUCALYPTUS VIMINALIS BUDS

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Four supplements of the National Pharmacopoeia of Ukraine (NPhU) harmonized with the European Pharmacopoeia have been implemented in Ukraine. There are some monographs on medicinal plants in NPhU. In particular, according to the NPhU raw materials of eucalyptus are leaves of *E. globulus*, from which the essential oil of eucalyptus (*Eusalypti aetheroleum*) is obtained. However, national plants continue to use *E. viminalis* leaves in the production of drugs, including tinctures and Chlorophilipt thick extract. Imported eucalyptus leaves must comply with NPhU monograph "Eucalyptus leaves", which are normalized by the content of stems (less than 5%) and other impurities (less than 2%). Whereas during the procurement of raw materials buds can get, which affect its quality.

The purpose of our research was to study the terpenes composition of eucalyptus buds, harvested in Abkhazia, to determine the need for normalization of its quantity in raw of eucalyptus leaves.

For obtaining of essential oil from *E. viminalis* buds a method that can extract essential oil with a small amount in plant material was used. For distillation vial "Agilent" 22 ml (part number 5183-4536) with open lid and silicone seal was used. Sample of 2.0-3.0 g of raw material were placed in vial, filled with water to half volume. The vial was closed by the lid with air refrigerator and heated for one hour on a sand bath. To prevent the loss, micro quantities of essential oil adsorbed on the inner surface of the refrigerator, have been washed twice with 1-2 ml of petroleum ether and collected in vial. The yield of essential oil from *E. viminalis* bud was 0.12%

Research of the essential oil's terpenes composition was performed by chromatography-mass spectrometry in the gas chromatograph Agilent Technology 6890 with mass spectrometric detector 5973 by normalization method. Retention indices of components were calculated on the results of analyzes of substances with the addition of a mixture of normal alkanes (C₁₀-C₁₈). The identification of compounds was performed by comparison of mass spectra with the mass spectra of reference compounds with high probability recognition of identification program in the array of spectra databases.

51 Substances have been revealed, among which the major components were felandren (171.33 mg/kg), 1,8-cineole (200.06 mg/kg) terpinen-4-ol (70.18 mg/kg) piperityon (58.10 mg/kg), terpenyl acetate (159.17 mg/kg).

So the qualitative and quantitative analysis of terpenes in the *E. viminalis* bud were analyzed. The content of essential oil in buds was almost 10 times less than in eucalyptus leaves, so buds number must be normalized.