COMPONENT CONTENT OF VOLATILE COMPOUNDS OF *MENTHA AQUATICA* L.

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Introduction. Considering the wide disseminating and variety of chemical content of plants of family *Lamiaceae*, the actual is research of unpharmacopoeia plants, members of this family. Such plant is *Mentha aquatica* L. This plant is widespread on all territory of Ukraine. Grows along the banks of ponds and rivers. Since it is known that preparations of peppermint are widely used in medicine as an anti-inflammatory, antimicrobial, antioxidant and neuroprotective, the actual is pharmacognostic study *Mentha aquatica* L. in order to use this material as a complementary source of biologically active substances (BAS).

Aim. The aim of our study was to investigate the component content of volatile compounds of *Mentha aquatica* L. leaves.

Materials and methods. The object of study was the leaves of *Mentha aquatica* L. collected in July 2016. For experiment used dry raw material. For the investigation the qualitative composition and quantitative content of volatile compounds was used Gas Chromatographic-Mass Spectrometric method in chromatograph 5973N/6890N MSD/DS Agilent Technologies with a mass spectrometer detector 5973N. As an internal standard used the tridecane. In the process of distillation volatile compounds are adsorbed on the internal surface of the reflux condenser. Adsorbed substances is washed off after cooling the slow addition of 3 ml of pentane in a dry vial for 10 ml. Washout was concentrated by blowing (100 ml/min), high-purity nitrogen till the residual volume of extract 10 ml, it completely taken by chromatographic syringe. Conditions of analysis: chromatographic capillary column diameter 0,25 mm; carrier gas – helium; the temperature of thermostat 50 ^{0}C with programming 4^o/min. to 320 ^{0}C. The sample injection rate was 1.2 ml/min for 0.2 min; the capillary chromatographic column INNOWAX with the external diameter of 0.25 mm and the length of 30 m; carrier gas (helium) was 1.2 ml/min; the heater temperature was 250°C. For quantitative calculations used the method of internal standard.

Results and discussion. In leaves of *Mentha aquatica* L. were identified 20 volatile compounds of different chemical nature: terpenoids (α-pinene, limonene, caryophyllene, caryophyllene oxide), higher alcohols and hydrocarbons.

Conclusions. Since it is known that the identified substances have antimicrobial activity, the study shows the prospect of obtaining a lipophilic complex of leaves of *Mentha aquatica* L. and determining its antimicrobial activity.