RESEARCH OF THE VOLATILE COMPOUNDS CONTAINED IN LIPOPHILIC EXTRACT FROM ARTEMISIA MARSCHALLIANA SPRENG. HERB

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Artemisia marschalliana Spreng. - perennial semishrub belonging to the subgenus Dracunculus Bess. of the genus Artemisia L. of the family Asteraceae (Compositae). Flowering shoots are straight, strong, 40-100 cm in height, ribbed, brownish or reddish color, lignified at the bottom. Leaves are twice pinnatisected, with narrow linear segments. The whole plant is more or less densely pubescent. Baskets are about 2-3 mm in length, almost sessile, ovate, collected in one-sided inflorescences. Spread in the steppe and forest-steppe zones from Western Europe to Western Siberia, and in North America. In Ukraine - everywhere except the Carpathians. Grows in dry open places prefers sandy soils.

According literature, the A. marschalliana Spreng. herb contain essential oil, flavonoids, hydroxycinnamic acids. We have carried out the phytochemical study of the herb and extracts from it. The aim of this work was chromatography-mass -spectrometry study of the volatile compounds contained in the lipophilic extract of the A. marschalliana Spreng. herb.

The object of research was the chloroform extract, obtained by circulation extraction method in Soxhlet extractor. The herb was harvested in the Kharkiv oblast in summer 2011.

For investigation we used chromatography-mass-spectroscopy method. Conditions of research: chromatograph Agilent Technology 6890N, equipped with mass-spectrometric detector 5973N, capillary chromatographic column INNOWAX with inner diameter 0.25 mm and in length of 30 m. In order to identify the individual components the data of mass spectra libraries NIST 05 and WILEY 2007 had been used.

According to the results of the research the quantitative content of 40 compounds has been established. Among them are monocyclic monoterpenoids (1,8-cineole, β-thujone), bicyclic sesquiterpenoids (β-eudesmol), aromatic compounds (eugenol, methyl chavicol, benzaldehyde, benzyl alcohol), triterpene sapogenins (α-and β-amyrins) steroids (β-sitosterol, β-stigmasterol acetate), fatty acids and their esters, hydrocarbons.