

#### **Секція 4. Пошук та вивчення нових перспективних лікарських рослин.**

##### **Fatty acids of *Artemisia nutans* Willd. Herb**

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Genus *Artemisia* L. of *Asteraceae* family has more than 500 flora species in the world flora, and in the flora of Ukraine - 27 species belonging to three subgenera - *Artemisia* Less., *Dracunculus* (Bess.) Rydberg and *Seriphidium* (Bess.) Rouy. Species of the genus and medicines containing raw materials from them are widely used in official and folk medicine in many countries of the world as stimulating the appetite, anthelmintic, antibacterial, antiprotozoal, choleretic drugs. At the same time, many members of the genus have been studied insufficiently, so it is reasonable to study biologically active substances of wormwoods and their physiological activity and obtaining of new pharmacological substances on its basis.

The aim of this study was to investigate the fatty acid composition of *Artemisia nutans* Willd. - endemic of the steppes of the Don basin. The object of study was the herb of *Artemisia nutans* Willd., harvested in the bud stage in Belovodsk district of Luhansk region in the summer of 2011.

Study of qualitative and quantitative composition of fatty acids was performed with mass spectrometric detection. By adding the solution of boron trichloride in methanol to the plant material methyl esters of fatty acid were obtained. Analysis of the methyl esters were carried out using the chromatograph Agilent Technology HP6890 GC with mass spectrometric detector 5973N. The identification of methyl esters of fatty acids were carried out using the data of the mass spectra library NIST 05 and Wiley 2007, calculation of the quantitative content of fatty acids performed by the method of the internal standard in mg/kg and percentage of their total content.

As a result, in the herb of *Artemisia nutans* Willd. 15 fatty acids were identified, including 12 saturated (caproic, myristic, palmitic, palmitoleic, heptadecanoic, stearic, arachidic, behenic, tricosanoic, lignoceric, pentacosanoic, and cerotic), one monounsaturated (oleic) and two polyunsaturated (linoleic and linolenic). The total fatty acid content in the *Artemisia nutans* Willd. herb amounted 11.450 mg/kg, including: saturated – 6154.6 мг/кг (53.75% от общего содержания), monounsaturated – 562.3 мг/кг (4.91%), polyunsaturated – 4733.1 mg/kg (41.34%). Dominant fatty acids are palmitic (3198.4 mg/kg, or 27.93%), linoleic (2722.4 mg/kg, or 23.78%) and linolenic (2010.7 mg/kg, or 17.56%).

Chromatography-mass spectrometric investigation of the fatty acid composition of *Artemisia nutans* Willd. herb of Ukrainian flora was carried out for the first time.