

FATTY ACIDS OF LAMIUM ALBUM L. HERB EXTRACT

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White dead-nettle (*Lanium album* L.) is a herbaceous perennial herb of the family Lamiaceae. White dead-nettle herb has been used in folk medicine of many countries for a long time as an expectorant, anti-inflammatory, antispasmodic, diuretic, hemostatic and sedative remedy.

The aim of this study was to investigate the fatty acid composition of *Lanium album* L. herb dry extract, obtained by extraction with 70% ethanol.

Materials and methods.

The herb of *Lanium album* L. was harvested in the flowering stage in Kharkiv region in the July 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. Identification of methyl esters of fatty acids were carried out using the data of the mass spectra library NIST 05 and Wiley 2007 with a total of more than 470000 spectra in conjunction with programs for identification AMDIS and NIST. Calculation of the quantitative content of fatty acids were performed by the method of the internal standard in mg/kg and percentage of their total content.

Obtained results. As a result, in the white nettle herb dry extract 15 fatty acids were identified, including 10 saturated (caproic, myristic, palmitic, margaric, stearic, arachidic, heneicosylic, behenic, lignoceric and cerotic), three monounsaturated (palmitoleic, oleic, eicos-11-enic) and two polyunsaturated (linolenic and linolenic).

The total fatty acid content in the *Lanium album* L. herb dry extract amounted 14621.92 mg/kg, including: saturated – 6537.97 mg/kg (44.71% of the total fatty acids content), monounsaturated – 1958.83 mg/kg (13.40%), polyunsaturated – 6125.12 mg/kg (41.89%). Dominant fatty acids are palmitic (4442.01mg/kg), linolenic (3425,11 mg/kg), linoleic (2700,01mg/kg) and oleic (1367,59 mg/kg).

Conclusions. In the white nettle herb dry extract 15 fatty acids were identified by chromatography-mass spectrometry method. Investigation of the fatty acid composition of *Lanium album* L. herb of Ukrainian flora was carried out for the first time.