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*Dedicated to the 100th anniversary
of independent Lithuania's pharmacy*

BOOK OF ABSTRACTS



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Kaunas, Lithuania

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ABSTRACT BOOK

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The 9th international conference of Pharmacy Science and practice is organized by Lithuanian University of Health Sciences (LUHS) Faculty of Pharmacy and Lithuanian University of Health Sciences Faculty of Pharmacy Alumni in collaboration with Lietuvos Farmacijos sąjunga, Lietuvos vaistinininkų sąjunga ir Studentų farmacininkų draugija

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Analysis of hydroxycinnamic acids content of the feverfew herb depending on the place of cultivation

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Background. Recently, scientific interest in under-studied plants with a view to searching of new biological active substances (BAS) and following creation of medicines on their basis increases more and more often. According to the literature sources one of these plants, the feverfew (*Tanacetum parthenium* (L.) Schultz Bip.), is a member of *Asteraceae* family. The chemical composition of the feverfew includes phenolic components, among them hydroxycinnamic acids and flavonoids prevail, sesquiterpene lactones, essential oil, coumarins etc. These BAS stipulates using of the feverfew in a folk medicine for treatment and prevention of inflammatory diseases of connective tissue, dermatological diseases, gynaecological abnormalities and migraine [1, 2].

Phenolic components of the feverfew herb stipulates a wide range of the pharmacological activity so this analysis of the hydroxycinnamic acids' content depending on the place of cultivation and environmental conditions is actual.

Materials and methods. The object of the research was samples of feverfew herb which were cultivated and collected in Kharkiv, Zhytomyr, Cherkasy, Sumy, Dnipropetrovsk, Poltava and Kiev regions and were registered in the Ukrainian Scientific Pharmacopoeial Center for Quality of Medicines.

The identification and quantitative determination of the hydroxycinnamic acids in a raw material were carried out by harmonized methodology of the State Pharmacopoeia of Ukraine (TLC-method and spectrophotometry) [3].

Results. As a result of the analysis of the raw material samples chlorogenic acid ($R_f = 0.47$) and caffeic acid ($R_f = 0.89$) in comparison with their zones of reference standards were identified. The intensity of colour of the identified zones of related compounds was almost equal in all the samples. As a result of quantitative determination it was identified that the content of hydroxycinnamic acids in the samples from Kharkiv region was 4.54 ± 0.009 %, Kiev – 4.46 ± 0.02 %, Poltava – 6.47 ± 0.04 %, Sumy – 5.10 ± 0.09 %, Dnipropetrovsk – 4.64 ± 0.03 %, Zhytomyr – 3.34 ± 0.02 %, Cherkasy – 3.56 ± 0.02 %.

Therefore, the content of total hydroxycinnamic acids ranged slightly depending on place of collection, only in one of the samples (from Poltava region) significantly high content was determined in comparison with the other samples.

Conclusions. The obtained results attest to the quite enough content of hydroxycinnamic acids in the feverfew's raw material and their low variability depending on the place of cultivation. These conclusions give rise to the recommendations on the raw material's growing and exploring of possibility of feverfew herb's standardizing on the content of this class of compounds.

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