



NETTLE DIOECIOUSLY (*URTICA DIOICA* L.) AND LICORICE (*GLYCYRRHIZA GLABRA* L.) STANDARDIZATION OF CAPSULES BASED ON DRY EXTRACTS

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Annotation: A comprehensive study of the aboveground part of plants of the genus *Urtica* (dioeciously nettle, hemp nettle, stinging nettle) growing on the territory of the Uzbekistan and Altai Territory is carried out. Dry extracts were obtained from the herb of nettle dioeciously, the herb of nettle hemp, the herb of nettle burning. When studying the technological properties of dry hemp nettle grass extract, high dampness was established, so it became necessary to develop the composition of the encapsulated form with the addition of auxiliary substances.

Keywords: standards, dissolution medium, licorice extract.

Standardization and evaluation of pharmaceutical availability of capsules with dry nettle herb extract has been carried out. The quality indicators of capsules were determined: description, authenticity (identified: chromogenic acid, shaftoside, rutin, robinia, quercitrin, flavonoid of apigenin structure). The quantitative content of flavonoids in terms of quercetin was $2.05 \pm 0.04\%$. The pharmaceutical availability of capsules has been established: the disintegration of capsules is less than 20 minutes, the dissolution is more than 70%.

The State Pharmacopoeia of the XIII edition (2015) and OFS "Capsules" and OST 91500.05.001-00 "Quality standards of medicines. The main provisions" regulate the following quality indicators: description, authenticity, average capsule weight, deviation of the mass of each capsule, deviation of the mass of the contents of each capsule, disintegration, dissolution, quantitative determination of the content of biologically active substances [1].

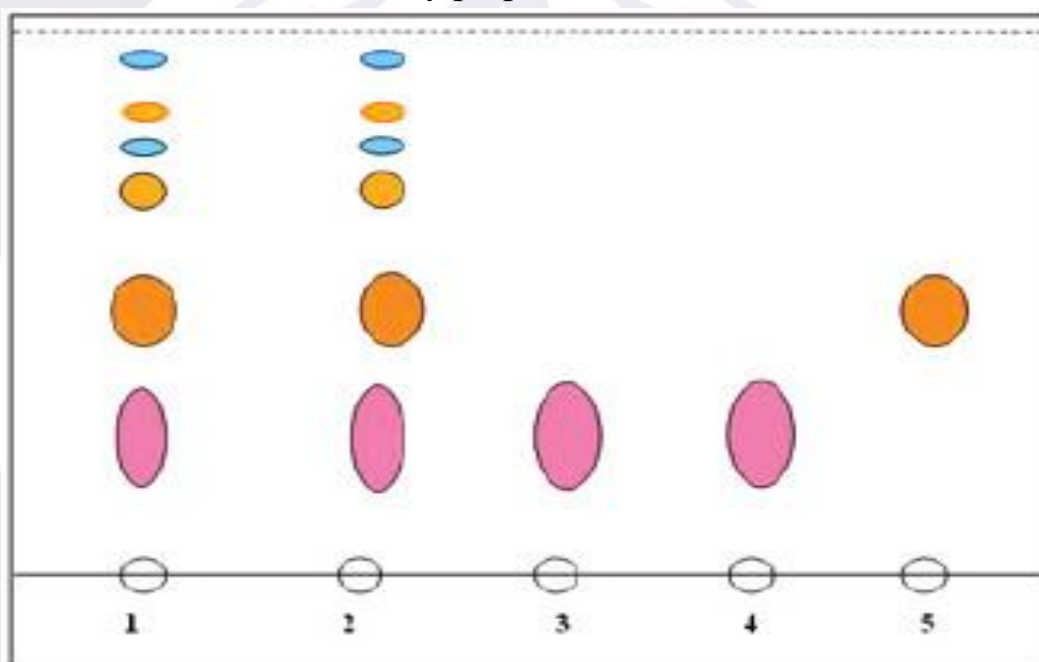
In the course of research and standardization of hemp nettle herb extract, a complex of biologically active compounds consisting of flavonoids, phenolcarboxylic acids (shaftoside, robinin, quercitrin, flavonoid of apigenin structure, chlorogenic acid, gallic acid) was determined [2]. Therefore, the basis for determining the authenticity and quantitative content of phenolic compounds in *Urtica* capsules was used to standardize the extract of hemp nettle grass dry.

Disintegration was determined on a laboratory device "Swinging basket". For testing, six capsules with dry extract were selected from each series, one was placed in each tube of the device, which, in turn, was lowered into a vessel with water heated to a temperature of 37 ± 2 °C. Sampling was carried out for 20 minutes.

Evaluation of the quality of capsules according to the "Dissolution" indicator was carried out using a device of the "Rotating basket" type. During the test, the basket rotated in the dissolution medium - hydrochloric acid solution 0.1 M (volume of the

dissolution medium 900 ml) at a speed of 100 revolutions per minute. During the determination process, a temperature of 37 ± 2 °C was maintained using a thermostat. The test sample (one capsule) was placed in a dry basket, which was lowered into the dissolution medium so that the distance to the bottom of the vessel was 20 ± 2 mm.

Dry extract of nettle root (*Urtica dioica radix*) contains flavonoids, chlorophyll, carotenoids, tannin. The action of nettle root extract is associated with the blockade of the aromatase enzyme, which catalyzes the metabolism of testosterone into 17β -estradiol. Reduces the growth of prostate tissue, eliminates urination disorders. Due to the presence of sterols, coumarins, nettle root extract has anti-inflammatory, antiproliferative and immunomodulatory properties.



Chromatographic profile of the substances of the roots and extract of licorice naked. Designations: 1 – water-alcohol extraction of licorice roots naked; 2 – licorice extract liquid; 3 – glycyram; 4 – glycyrrhizic acid; 5 – liquorazide

Based on the study of physico-chemical and spectral properties of saponins and flavonoids of licorice roots, new approaches to standardization of raw materials and preparations of this plant using standard samples of lycurazide and glycyram are proposed.

Unified methods of qualitative and quantitative analysis of licorice roots and liquid extract using TLC and spectrophotometry have been developed.

Metrological characteristics of the method of quantitative determination of glycyrrhizic acid and the amount of flavonoids in licorice extract liquid indicate that the error of a single determination is $\pm 4.78\%$ and $\pm 3.95\%$, respectively.



Literatures:

1. Promising sources of phytonutrients for specialized foods with a modified carbohydrate profile: the experience of traditional medicine / V. A. Tutelyan, T. L. Kiseleva, A. A. Kochetkova, etc.// Nutrition issues. - 2016. - Vol. 85, No. 4. - pp. 46-60.
2. Novikov, V. S. Functional human nutrition under extreme influences / V. S. Novikov, V. N. Karkishchenko, E. B. Shustov. - St. Petersburg, : Polytechnic-print, 2017. - 346 p.
3. Essays on sports pharmacology. Volume 3. Vectors of pharmacoregulation / N. N. Karkishchenko, V. V. Nest,

