



THE STUDY OF NUMERICAL PARAMETERS OF WALNUT LEAVES (*JUGLANS REGIA L.*), GROWING IN THE NUT AND FRUIT FORESTS OF KYRGYZSTAN

Berdaliev A.A.¹**Rud N.K.²****Zhakypova D.K.¹****Muratalieva A.D.¹**¹I.K. Akhunbaev Kyrgyz State Medical Academy, Bishkek city, Republic of Kyrgyzstan²Saint Petersburg State University of Chemical Technology, Saint Petersburg city, Russian Federation

e-mail: anaraberdaliev23@gmail.com

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Relevance: of this topic lies in the growing public interest in the use of natural resources in medical practice. In the official medicine of the CIS countries, a large amount of medicinal plant raw materials is widely used, which is regulated by regulatory documentation on quality. The flora of Kyrgyzstan includes 4,100 species of higher plants, of which more than 200 species are medicinal plants. Walnut (*Juglans regia L.*), which grows in the unique natural conditions of the Arslanbob forest area of Kyrgyzstan, is a promising source of medicinal plant raw materials. Walnut leaves are widely used in folk medicine due to their antiseptic, anti-inflammatory and restorative properties. The relevance of studying walnut as a medicinal plant raw material is due to its wide application in folk medicine and its high potential for use in official pharmacotherapy. The unique natural growing conditions, rich chemical composition and pronounced medicinal properties make walnut leaves a promising object for scientific research. However, there is no pharmacopoeia article for this raw material. In this regard, an important area is the study of numerical indicators of raw materials, which will become the basis for the development of regulatory documentation.

The purpose of the study is to analyze the main numerical parameters of walnut leaves (*Juglans regia L.*), which grows in the nut and fruit forests of Kyrgyzstan.

Materials and methods. Objects of research: walnut leaves (*Juglans regia L.*), collected in September 2024 in the walnut and fruit forests of Arslanbob (Jalal-Abad region, Kyrgyzstan). Humidity was determined by direct thermogravimetric analysis using an EVLAS-2M instrument. A sample of pre-crushed and mixed sample weighing 2.0 g was placed in the measuring cell of the device. Drying was carried out at a temperature of 105 ± 2 °C until the mass stabilizes. The device automatically recorded the initial and final mass, calculated the mass fraction of moisture and displayed the result on the screen as a percentage.

The determination of ash content (total and insoluble in 10% HCl) and the swelling index was carried out in accordance with the methodology recommended in the General Pharmacopoeia Articles (OFS) of the State Pharmacopoeia of the Russian Federation of the XIV edition.

Results. The moisture content of the leaves is 13.58%, which is within the normal range for high-quality plant raw materials. The total ash content is 0.47%, and the ash content, insoluble in 10% hydrochloric acid solution, is 0.21%, indicating a low content of mineral and inorganic impurities. The swelling index is 15 ml/g, which indicates a good water retention capacity of the raw material.

Conclusions. The obtained data confirm the high quality of the studied plant raw materials and their suitability for further pharmacognostic standardization. Their consistently low levels of moisture and ash content will ensure long-term storage and stability of pharmacological properties. The established numerical indicators can serve as a basis for the development of regulatory documentation in the production of herbal preparations.