МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ
КАФЕДРА ПРОМИСЛОВОЇ ТЕХНОЛОГІЇ ЛІКІВ ТА КОСМЕТИЧНИХ ЗАСОБІВ
КАФЕДРА АПТЕЧНОЇ ТЕХНОЛОГІЇ ЛІКІВ

MINISTRY OF HEALTH OF UKRAINE
NATIONAL UNIVERSITY OF PHARMACY
DEPARTMENT OF INDUSTRIAL TECHNOLOGY OF MEDICINES AND COSMETICS
DEPARTMENT OF DRUG TECHNOLOGY

Матеріали
V міжнародної науково-практичної конференції
Proceedings of the V International Scientific and Practical Conference

ФУНДАМЕНТАЛЬНІ ТА ПРИКЛАДНІ ДОСЛІДЖЕННЯ У ГАЛУЗІ ФАРМАЦЕВТИЧНОЇ ТЕХНОЛОГІЇ

FUNDAMENTAL AND APPLIED RESEARCH IN THE FIELD OF PHARMACEUTICAL TECHNOLOGY

23 жовтня 2025 р.
October 23, 2025
Харків, Україна
Kharkiv, Ukraine

DETERMINATION OF EXTRACTIVE SUBSTANCES OF LENTIL VARIETY LUHANCHANKA

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Introduction. Lentil (*Lens culinaris* Medik.) is mainly grown as a forage crop. Its flour is used to make soups, stews, purees, mixed with cereals to bake bread and cakes, and the lentil is also included in child nutrition, since it does not accumulate harmful substances from the environment (toxic elements, nitrates, radionuclides). In many countries, the lentil consumed in casseroles and as a meat substitute in vegetarian diets. Lentil seeds are a great source of protein, and they are also rich in important vitamins, minerals, soluble and insoluble dietary fiber. The lentil is also widely used in folk medicine: internally for treatment of bladder stones, neuroses, poisoning, constipation and externally – for burns and dermatitis. In addition, this plant is a valuable green manure. The husks, dried leaves and stems of lentil are utilized as livestock feed. All these factors contribute to the fact that in some countries the lentil is grown at the same economic level as cereals. Its cultivation is more environmentally friendly, since it increases soil fertility due to nitrogen-fixing nodules on the roots of the plant.

The aim of the study. The main stage in phytomedicines production is the extraction of a complex of compounds from plant raw materials, therefore the aim of the work was to determine extractive substances in the herb of the lentil variety Luganchanka.

Research methods. The content of extractive substances was determined by gravimetry according to the method described in The State Pharmacopoeia of Ukraine 2.0, monograph «Bitter Wormwood». Extraction was carried out with the following extractants: purified water and water- ethanol mixtures (30%, 50%, 70%, 96%). The obtained extracts were cooled, filtered, evaporated to dryness in porcelain cups, brought to a constant mass in a drying cabinet, the mass was controlled by weighing. The chemical composition of the extracts was controlled using two-dimensional chromatography on paper in the following solvent systems: n-butanol-acetic acid-water (4:1:2) – direction I and acetic acid 15% – direction II.

Results. As a result of the experiment, it was determined that the content of extractive substances, depending on the extractant, decreases in the following sequence: water (31,62%) > 30% ethanol (29,05%) > 50% ethanol (28,07%) > 70% ethanol (25,44%) > 96% ethanol (18,13%).

Conclusions. It was experimentally established that extraction by hot water provides the highest yield of extractive substances from the studied raw material. This solvent will be used in obtaining a complex of biologically active substances from the herb of the lentil variety Luganchanka.