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
XII Міжнародної науково-практичної конференції
Proceedings of the XII International Scientific and Practical Conference

СУЧАСНІ ДОСЯГНЕННЯ ФАРМАЦЕВТИЧНОЇ ТЕХНОЛОГІЇ

MODERN ACHIEVEMENTS OF PHARMACEUTICAL TECHNOLOGY

9 квітня 2026 р.
April 9, 2026
Харків, Україна
Kharkiv, Ukraine

The aim. To develop the composition and technology of a gel based on the dry extract of three-part beggarticks.

Methods. The solubility of the dry extract was determined in 96% ethyl alcohol, purified water and propyleneglycol. The compatibility of the extract with different gelling agents was evaluated by organoleptic parameters, microscopy, osmotic activity and moisture loss was determined, and rheological properties were investigated.

Main results. The dry extract of three-part beggarticks is practically insoluble in water and propylene glycol, but dissolves well in 96% ethyl alcohol. Therefore, ethyl alcohol was chosen as the solvent for the extract and as a preservative.

The best organoleptic and structural-mechanical properties were shown by the gel based on Carbopol Noveon 974 PNF 1%. Samples with CMC and HPMC were less homogeneous. The osmotic activity of the carbopol-based gel was high, which promotes reduction of edema. The introduction of 10% glycerin significantly reduced gel drying: 36.2% compared to 43.7% without glycerin after 30 days.

Conclusions. A hydrophilic gel based on the dry extract of three-part beggarticks with Carbopol 974 PNF and glycerin has been developed. The choice of components was substantiated based on compatibility, osmotic activity and rheological properties. A rational production technology was proposed. The gel is suitable for further studies in the treatment of inflammatory skin diseases.

DEVELOPMENT OF THE COMPOSITION OF A SOFT DOSAGE FORM FOR THE TREATMENT OF PHLEBITIS

Puliaiev D.S., Kurtmalaieva V.O.

Department of Industrial Technology of Drugs and Cosmetic Products

National Pharmaceutical University, Kharkiv, Ukraine

d.s.puliaiev@nuph.edu.ua

Introduction Phlebitis is one of the common vascular diseases characterized by inflammation of the veins, accompanied by edema, pain, and redness. Soft dosage forms, particularly creams, are effective for topical treatment. In this study, the dry

extract of Hamamelis virginiana and the dry extract of Arnica montana were chosen as active ingredients.

Aim of the study To develop the composition of a cream based on the dry extracts.

Methods The physicochemical properties of the dry extracts were studied, including microscopic and dispersion analysis of particles. The solubility of the extracts in various solvents was determined. Rheological properties were investigated using a rotational viscometer MYR VR3000.

Main results Microscopic studies showed that the particles of the dry extracts have different shapes and sizes, which affects the homogeneity of the cream. Solubility studies revealed that the systems glycerin : purified water (1:3) and purified water are advisable for the rational incorporation of the extracts.

When selecting the cream base, the best indicators of appearance, homogeneity, spreadability, and absence of phase separation were demonstrated by the sample on an emulsion base containing emulsifying wax, medical vaseline oil, and Tween-80 as an emulsifier.

Conclusions As a result of the conducted research, the composition of a cream based on the dry extracts of Hamamelis virginiana and Arnica montana for the treatment of phlebitis has been developed. The choice of excipients was substantiated based on indicators of homogeneity, rheological properties, and drying capacity.

ПЕРСПЕКТИВИ БІОСИНТЕЗУ РИБОФЛАВІНУ В УКРАЇНІ

Абдураїмов Д. А.
Київський національний університет технологій та дизайну
м. Київ, Україна
danepsilon86@gmail.com

Вступ. Рибофлавін (вітамін В2) є ключовим елементом метаболічних процесів, будучи складовою частиною флавінових коферментів. Світовий ринок цього вітаміну демонструє стабільне зростання, однак в Україні залишається високий рівень залежності від імпорту. Розробка вітчизняних біотехнологічних потужностей є актуальним питанням біоекономіки та національної безпеки.