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MINISTRY OF HEALTH OF THE REPUBLIC OF UZBEKISTAN

TASHKENT PHARMACEUTICAL INSTITUTE

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THE ABSTRACT BOOK OF THE VI INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE "MODERN PHARMACEUTICS: ACTUAL PROBLEMS AND PROSPECTS"

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МИНИСТЕРСТВО ЗДРАВООХРАНЕНИЯ РЕСПУБЛИКИ УЗБЕКИСТАН
ТАШКЕНТСКИЙ ФАРМАЦЕВТИЧЕСКИЙ ИНСТИТУТ

"FARMATSEVTIKA SOHASINING BUGUNGI HOLATI: MUAMMOLAR VA ISTIQBOLLAR"

MAVZUSIDAGI VI XALQARO ILMIY-AMALIY ANJUMANI MATERIALLAR TO'PLAMI

ABSTRACT BOOK OF THE 6TH INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE

"MODERN PHARMACEUTICS: ACTUAL PROBLEMS AND PROSPECTS"

МАТЕРИАЛЫ VI МЕЖДУНАРОДНОЙ НАУЧНО-ПРАКТИЧЕСКОЙ КОНФЕРЕНЦИИ

«СОВРЕМЕННОЕ СОСТОЯНИЕ ФАРМАЦЕВТИЧЕСКОЙ ОТРАСЛИ: ПРОБЛЕМЫ И ПЕРСПЕКТИВЫ»

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SELECTION OF THE PRESCRIPTION OF A MEDICAL AND COSMETIC CREAM WITH ANTI-INFLAMMATORY EFFECT

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Relevance: Currently, the Uzbek market is dominated by imported medical and cosmetic products, which outweigh domestic medicines. Given this fact, a number of plant extracts were studied by the Department of Drug Formulation Technology at the Tashkent Pharmaceutical Institute. Among them, the dry extract "Fitoinflam" was of particular interest, as it was originally developed for use in dental practice. Given that a regulatory document has been approved for this dry extract, which can be used as a substance for medicines and dietary supplements, we decided to conduct research on the development of a therapeutic and cosmetic anti-acne cream in order to further introduce it into domestic production.

Research objective. Initial studies were aimed at selecting the formulation of a new therapeutic and cosmetic anti-inflammatory cream.

Materials and methods: The present research was based on a review and comparative analysis of scientific literature, including articles by Russian and foreign scientists.

We used the following substances as the active principle of the cream being developed: Phytoinflam dry extract (VFS 42 Uz-5712-2024), salicylic acid (GF RUz 12/2021:0366); camphor (GF RUz 12/2022:1400); niacinamide (nicotinamide) (GF RUz 12/2021:0047).

The auxiliary ingredients were selected to perform the following functions: base and structure formation, odor correction (fragrance), dissolution, emulsification, stabilization, emulsification, and pH correction.

The doses of the active ingredients were agreed upon with pharmacologists, and the auxiliary substances were selected based on scientific literature.

Results: The selection of active ingredients was based on their therapeutic effect. For example, "Phytoinflam" is a dry extract obtained by the method of circulation extraction from a herbal collection of chamomile flowers, oak bark, and Stachys annua, which has anti-inflammatory and wound-healing properties. Niacinamide is effective due to its anti-inflammatory and regenerative properties, strengthening the skin barrier and reducing inflammation. Camphor has a mild skin-irritating effect, which improves local blood circulation and increases blood flow. Salicylic acid reduces sebum due to its seboregulatory properties, and it is also used as a brightening agent and keratolytic.

Given the multi-component composition, we decided to use the mathematical planning of the experiment to develop the formulation. The release of the active ingredient in biopharmaceutical experiments was used as a response.

Using the method of mathematical planning, we selected the optimal auxiliary substances for the composition of the therapeutic and cosmetic cream: aerosil and castor oil were chosen as the base and structure-forming agents, glycerin was chosen as the emollient, and sodium tetraborate was chosen as the emulsifier. In addition to these ingredients, we proposed purified water as the solvent, tea tree essential oil (which also has anti-inflammatory properties) as the odor corrector, and citric acid as the pH corrector.

Conclusions: Thus, we have developed a formulation of a medical and cosmetic cream with anti-inflammatory properties.