

Magnesium citrate, citric acid and sodium bicarbonate, which are part of the preparation, are a citrate mixture and have a complex effect on the physico-chemical state of urine, causing an increase in the solubility of urates, calcinates, and especially oxalates and other salts, contributing to the inhibition of stone formation and dissolution of already formed concretions. The extract from the leaves of cowberry contains arbutin, which possesses antimicrobial and diuretic effects. The form of effervescent tablets is convenient to use, has a high bioavailability, reduces the irritant effect of tablets on the stomach.

**Methods of the study.** The following physical, chemical, pharmaco-technological methods, methods of logical, graphical and direct observation were used in the work at solving the set tasks:

- determination of bulk density, flowability, the angle of repose, compressibility of powders and the force of tablets pushing out to evaluate the technological properties of powders and granules;
- determination of disintegration, average weight and homogeneity of the weight of tablets.

**Results.** Separate granulation was used to prepare effervescent tablets. Moisturizers such as PVP solution from 5 to 15%, HPMC solution 5-10% and methylcellulose solution 1-2% were used to prepare granules. As a result of the research, 10% solution of PVP was chosen as a humidifier. Liquid cowberry extract was transferred to the dry state using a 244FP grade siloid, the amount of which was selected experimentally. Dextrates and sorbitol were used as formers. As lubricant sodium stearyl fumarate was used.

**Conclusions.** The obtained effervescent tablets in quality indicators meet all the criteria, shown to the dosage form by SPU.

## **DEVELOPMENT OF COMPOSITION AND TECHNOLOGIES OF DERMATOLOGICAL CREAM WITH JOJOBA OIL AND D-PANTENOL**

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**Introduction.** Every person, doesn't matter a women or a men, faces such problems as dry and dehydrated skin. There are many reasons and factors which cause dryness of skin: environmental impact, wrong care of skin, fatigue and stress. Dry face skin can be presenilation factor. Skin acts as an organism barrier, it means that it is exposed to both external, and internal influences. External factors cause dysfunction of skin as natural barrier that leads to increase in losses of moisture through skin. Therefore the relevance in creation of cream with the moisturizing and restoring ingredients is not exposed to doubts.

**Aim.** Analyze the causes of the withering skin, examine the influence of natural oils and vitamins on health of skin; to determine which components should be included in the moisturizing and restoring cream.

**Materials and methods.** As well as any other body, skin demands a number of important nutrients for normal functioning. Among them — unsaturated fatty acids, oils and vitamins. The lack of any of them can contribute to the development of dry skin.

**Results and discussions.** One of the most useful oils is jojoba oil. Jojoba oil has good similarity to skin lipids, possesses the softening and moistening action, protects epidermis, slows down processes of destruction and a senilism warns.

The medicinal properties of jojoba oil connected with high concentration of amino acids – 33%, on structure remind collagen and promote healing of skin and increase in its elasticity. Also in structure there is a vitamin E which renders antioxidant properties and promotes increase in elasticity.

Perfectly holds moisture on the surface of skin therefore this oil is used in the moistening and nutritious formulas.

Provitamin B5 – Pantenol – water-soluble stable low-molecular cosmeceutical medicine. The optical D-isomer of the patenol is called D-pantenol. It is known as effective remedy, which stimulates regeneration processes, saves from dryness and helps to remove puffiness.

The moistening effect of a pantenol is caused by its hygroscopicity, well humidifies a horn layer, and in combination with glycerin its action amplifies. Besides, medicine reduces dryness, roughness and peeling.

There are only 9% medicines in form of cream. It demonstrates prospects of development in this market.

Generally, medicines are monocomponent and simple in this group. There are no jojoba oil and provitamin B5 – D-pantenol.

We chose emulsifier Olivem 1000. It is the patented natural vegetable emulsifier from olive oil new generations, representing a complex combination of the fatty acids chemically similar to lipid structure of skin. It has the unique structure allocated with feature of restoration and maintenance of integrity of a skin barrier.

At this stage, concentration of emulsifier and the mode of emulsification are being chosen.

**Conclusions.** On the basis of the analysis it can be established that the pharmaceutical and cosmetic market presents a wide range of ready-made products on the basis of various oils and vitamins. Choosing components for cream, chose those which in certain concentration will moisturize and nourish the dry and dehydrated skin.

## PROSPECTS FOR THE USE OF PACKAGING MATERIALS

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**Introduction.** Packaging has been defined as an economic means of providing presentation, identification, protection, information, convenience and containment during storage of pharmaceutical products from the minute of manufacture until it is used or administered. According to FDA, Packaging is the science, art and technology of enclosing or protecting products for distribution, storage, sale, and use. The main objectives of packaging are to provide protection against physical damage and various barrier, containment, communicating information, safety, handiness and segment control.

Traditionally, the majority of medicines (51%) have been taken orally by tablets or capsules are packed in blister packs (most frequently in Europe and Asia) or fed into plastic pharmaceutical bottles (particularly in the USA). Powders, pastilles and liquids also composed of the oral medicine intake.

However, other methods for taking medicines are now becoming extensively used. This includes inhalation (17%), parenteral or intravenous (29%), and transdermal (3%) methods. Now oral tablets are also available in a wide range of different shapes and sizes.

These changes have made a big impact on the packaging industry and there is an increasing need to provide customized, individual packaging solutions, which assure the effectiveness of medicines. Due to degradation from environmental causes, such as light & humidity, there is always a direct link between packaging and a remedy's effectiveness.

**Aim.** To study modern types of packaging materials, problems in the field of modern packaging materials.

**Materials and methods.** theoretical analysis of literary sources.

**Results and discussion.** According to IMS Health (an American company providing information, services and technologies for the healthcare industry), the volume of the global pharmaceutical market is growing every year by about 5-7% per year, which is largely due to the emergence of new drugs for the treatment of cancer, diabetes, rheumatism, as well as the active use of vaccines (including HIV, avian influenza). Along with the increase in the production of medicines (drugs), the consumption of primary packaging, which includes ampoules, vials, syringes, plugs, cell packaging for solid dosage forms and other products directly in contact with drugs, is also increasing.

Primary packaging ensures the preservation of the quality and properties of the drug for a specified storage time, as well as ease of use. It is in these areas that innovative developments are carried out, the purpose of which is to improve the functional characteristics of the package.