

Urea well moisturizes the skin and has a mild keratolytic action. A small molecular mass promotes its penetration into the deep layers of the epidermis, which not only helps maintain moisture, but also helps to produce other active substances.

D-panthenol in the form of medicinal preparations has a healing effect, relieves irritation, accelerates regeneration.

Retinol is involved in the process of differentiation of the epithelial cells, the development of secretory glands, the processes of keratinization, regeneration of mucous membranes and skin. The industry produces an oil solution of retinol acetate.

Menthol has an anti-dandruff, distracting, calming effect, reduces the activity of the sebaceous glands and gives the drug a pleasant smell.

Corn oil restores barrier skin functions. It has antioxidant effect, softens and nourishes. Regulates the permeability of the skin barrier and its moisture-retaining properties.

Prepare this medicinal product, based on the physical and chemical properties of the components and the intended action, most appropriate in the form of an emulsion. Emulsion allows simultaneously quick penetration of active substances into the deep layers of the skin, to provide therapeutic effect, to neutralize the irritating effect of the acids that are part of the preparation, and to form a protective film on the surface of the skin, thereby protecting it from stimuli and retaining moisture.

To stabilize the emulsion, polysorbates were chosen as emulsifiers, which are well suited for an O/W type emulsion. They soften the skin, improve lubrication, provide a soothing and astringent action, are well suited for sensitive skin. Mixing with water forms light emulsions that do not violate the hydro-lipid and pH of the balance.

To prepare the experimental samples of the emulsion, a device for small mechanization a homogenizer SilentCrusher M was used.

The technology of the drug was developed taking into account the physical and chemical properties of the substances in its composition.

Experimental samples of emulsions were prepared by two methods: through oleosol and hydrosol.

Samples of emulsions were studied on the following indicators: appearance, homogeneity, signs of physical instability.

According to the results of the research, polysorbate-20 concentrations indicated in the literature are not sufficient to stabilize the emulsion. Application of the device of small mechanization did not significantly affect the stability of emulsions. The use of polysorbate-80 at concentrations of 20%, 30% and 40% was also not successful. Emulsions split over the course of the day. An effective concentration of 50% of the mass of the oil phase was found to be effective. This emulsion remained stable for 10 days, maintaining its homogeneity.

Conclusions. The composition and technology of a liquid medicinal product in the form of an O/W emulsion for the treatment of hyperkeratosis was theoretically and experimentally substantiated. Based on technological studies, an optimal emulsifier and its concentration were selected. The technology of the new extemporaneous medicinal product for the treatment of hyperkeratosis is proposed.

APPROBATION OF INDUSTRIAL TECHNOLOGY OF PESSARIES WITH ACYCLOVIR AND ESSENTIAL OILS OF TEA TREE AND THYME

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Introduction. On the basis of pharmaceutical development study, physical-chemical, microbiological and pharmacological researches the composition of medicine has been developed as a form of pessaries with acyclovir and essential oils (Tea tree and Thyme) for treatment and prophylaxis of genital form of herpes virus infection. The originality of researches has been protected by a useful model patent (№ 107464) and patent of invention (№ 115476). According to result of experimental laboratory of chemotherapy of viral infections of SE «Institute of the epidemiology and infectious diseases named after

L.V. Gromashevskiy» of the National academy of medical sciences of Ukraine the created medicine is an active inhibitor of reproduction of HSV-2 (herpes simplex virus 2) and an effective prophylactic and curative drug on the experimental model of herpetic infection of genital organs of guinea pig.

Conducted researches allowed to developed a rational technology of medicine preparation as pessaries with acyclovir and essential oils in pharmacy and industrial conditions.

Aim. Aim of our researches is to conduct the approbation of industrial technology of pessaries with acyclovir and essential oils on the area of plant Joint Stock Company "Lekhim" and to define a critical parameters in the production process.

Materials and methods. At the decision of tasks such methods of researches were used: physical and physical-chemical.

Results and discussion. Parameters of technological process are processing stages and troubles of which caused to medicine nonconformity of normative documentation. Therefore, it is necessary to define the critical parameters of pessaries production. To such critical parameters the following stages take: weighing (entrance control), melting of base (time, temperature and rate of stirring), preparation of emulsifier solution (time, temperature and rate of magnetic mixer), preparation of suppository mass (temperature, time and rate of stirring of turbo-mixer), introduction of essential oils in basy (time, temperature and rate of stirring), packing of suppository mass in polyvinyl chloride pack, carton packs and group container.

Conclusions. On the basis of conducted researches the critical parameters of the industrial technology of pessaries with acyclovir and essential oils are defined. The obtained results will be fixed in the basis of Pharmaceutical development for pessaries with acyclovir and essential oils.

RECEIVING WATER FOR INJECTIONS ON A COMPLEX «STILMAS»

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Introduction. The saved-up practical experience of producers of medicines in Russia and abroad shows that used water of unsatisfactory quality is the reason of a seizure of production and a source of its pollution in most cases. Water is widely used as an auxiliary substance as a part of medicines, the medical substances, and also at various technological needs, for example a sink of bottles, ampoules, cleaning of rooms and preparation of disinfecting solutions, etc. Therefore water systems are the main components of any pharmaceutical production. Problems with quality or number of preparation of water can lead to decrease in a product yield or discrepancy of this product to norms and it will inevitably entail losses on sales or even shares of the market.

Aim. The purpose of work is the opportunity assessment receiving water for injections (WFI) on a water-purifying complex «Stilmas».

Materials and methods. Objects of research are WFI and complex «Stilmas». The specific conductivity was chosen as the main indicator of quality of WFI.

Results and discussion. Water from water supply system moves on the filter for a rough filtration, sodium hypochlorite is dosed in parallel in the pipeline. Then via the lamellar heat exchanger water goes for operation of preliminary cleaning in the deferrization block. Further it arrives on the duplex block of softening. When passing drinking water through system of preliminary cleaning it is exempted from impurity of iron, salts of rigidity, the weighed particles and organic substances. Softened water arrives on the following operation – demineralization on installation of the return osmosis. From accumulative capacity water is pumped by the pump of a high pressure on the filter, then the pump of low pressure pumps it on the membrane`s block of installation of return osmosis. There are 2 streams after this membrane`s block: concentrate and permeate. Permeate comes further to the block of an electro-deionization (EDI) for finishing tertiary treatment. Permeate comes to system of storage.

Permeate is used for receiving the water for injections (WFI). Purified water (PW) from system of distribution moves on a three-stage steam distiller which principle of work consists in repeated instant evaporation of small amount of initial water and the subsequent condensation. The received WFI comes to