

SELECTION OF GELLING AGENTS FOR THE DEVELOPMENT OF THE COMPOSITION AND TECHNOLOGY OF THE SOFT MEDICINAL FORM OF GEL FOR NEURODERMATITIS TREATMENT

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Introduction. Among the dosage forms used for the treatment of neurodermatitis, the most interesting are the gel compositions that provide the necessary therapeutic effect of the drug. They have a number of advantages over ointments on lyophilic bases since when applied to the skin they form a very thin membrane that provides prolonged effect and uniform distribution, while not having a toxic and irritating effect. Selection of gelling agent is very important when creation gels, since the gel base determinate rheological properties and can serve as a stabilizer of the disperse system.

Objective. Selection of gelling agent for the development of the composition and technology of the soft medicinal form of gel for neurodermatitis treatment.

Materials. As objects of research of the composition of the soft dosage form for the neurodermatitis treatment, 2% soft dosage form samples were used with the following gelling agents: Aristoflex, Hydroxypropylmethylcellulose (HPMC), Carbopol of Ultrez 10, Sodium carboxymethyl cellulose (Na CMC). Dry plantain extract and liquid marigold extract were used as active substances.

Methods. A complex of physicochemical and technological methods of research was used in carrying out the work.

Results. At the first stage of the work, the thickening power of gell agents was investigated. All samples had a satisfactory consistence, were easily spread over the skin. The addition of a liquid extract of calendula sharply changed the pH to the acidic side (pH 4). As a result, there were a change in appearance and loss of consumer qualities. The most satisfactory characteristics were retained in the sample based on Aristoflex.

Conclusions. In the course of the study, a choice was made in favor of the gel formers Carbopol of Ultrez 10 and Aristoflex. These samples had the most satisfactory results for the spreadability and preservation of the organoleptic properties after the addition of the active ingredients. The use of carbopol as a gelling agent requires a higher concentration of Ultrez 1, the addition of a liquid extract of calendula leads to a sharp decrease in pH and a dilution of the structure of the gel.