STUDY OF THE STABILITY OF ORAL SUSPENSION BASED ON SILICON DIOXIDE

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Introduction. The possibility of the use of medicines by doctors and patients should be based on the conviction of the complete preservation of their specific pharmacological activity. This principle is guaranteed by the appropriate tests, which allow to fix the immutability of the properties of medicines during storage. All changes in medicines, like a different kind of transformation of the active or auxiliary substances, will certainly affect their pharmacotherapeutic action. It has long been known that during the storage of medicines, slower or more rapid changes in their properties occur, having a different character and severity. These changes may include reducing the content of active ingredients, pharmacological activity or changing the technological properties of the dosage forms. All these characteristics determine the shelf-life, which for some medicines may be only a few days, for others – a few years. As is known, in the process of obtaining and storage of medicines some decreasing or changes in their therapeutic activity are occur, due mainly to various chemical transformations of medicinal substances. These changes in medicinal substances, which are based on the principles of chemical kinetics, flow rate, order of reactions, fully determine the shelf-life of medicine, their stability. Thus, the development of medicines requires a thorough study of their stability, which gives conviction that the specific pharmacological activity and the physicochemical properties of medicine are completely preserved.

Aim. The aim of our work was to study the stability of the developed oral suspension with silicon dioxide at the two temperatures in dark glass bottles.

Materials and methods. The quality of the suspension samples was assessed by the following parameters: appearance, resuspendability, aggregate stability, qualitative reactions of identification of silicon dioxide and stabilizer, pH value, mass of the bottle content, quantitative contents of silicone dioxide (gravimetric analysis) and preserving agent (high-performance liquid chromatography), microbiological purity.

Results and discussion. Based on the results of the research conducted, the stability of the developed suspension during 1 year was established under two temperature regimes + (8÷15) °C and + (15÷25) °C.

Conclusions. The types of instability of liquid dosage forms and possible ways to avoid them are reviewed and summarized. The physical, chemical, microbiological and technological properties of the suspension have been experimentally investigated and shelf life of medicine is established.

DEVELOPMENT OF CREAM FOR THE TREATMENT OF CRACKS ON THE HEELS

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Introduction. Treatment of cracks on the heels is a long and difficult process that requires competent approach and patience. Cracks on the heels deliver physical and aesthetic discomfort, pain during the walk. The problem begins with thin notches on the heels, which eventually go into deep and painful cracks.

Heels should have a healthy and well-groomed appearance. If the treatment of cracks is not timely and effective the problem may escalate and substantially affects the quality of life.

Aim. The purpose of this work it is an experimental development of the cream for the treatment cracks on the heels and proving its effectiveness in the treatment and prevention of this problem.

Materials and methods. Analysis of existing and effective drugs for the treatment of cracks on the heels in Ukraine. Search for an optimal emulsifier for water-in-oil emulsion. Search for the concentrations of the emulsifier, oils, active substances and preservative using the experimental method.