

## **RHEOLOGICAL STUDIES OF THE FIRST KIND EMULSION FOR CREATION OF COMPLEX ACTION CREAM**

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The effectiveness of any drug is primarily dependent on the rationally chosen carrier of drug substance taking into account all symptoms of the disease. From literary studies it is known that the basis of a soft drug for the treatment of dermatoses should have a soft effect on the skin cover, moisturize and soften it well. Creams, due to the high water content (70%) replenish the lost skin moisture, easily applied to the surface, quickly absorbed without leaving the skin greasy. In addition, the base of the cream should have some structural and mechanical or rheological properties that characterize its spreadability and extrusion of tubes, possess certain osmotic properties and promote the complete release of the active ingredient.

The aim of the work is creation of a cream base, study of its rheological and osmotic properties. The type of basis which suited the task best is oil / water emulsion system. As the oil phase was decided to use mineral oils as they are more stable during storage and do not require additional system stabilizer (antioxidants). For research a range of emulsions was produced, which at the same quantitative value of the oil phase and the same total concentration of emulsifiers of 1 and 2 kinds had their ratio varied expressed through the total value of the HLB of the mixture. Rheological studies of samples have been conducted on viscometer «Rheolab QC» (Anton Paar, Austria) with coaxial cylinders C-CC27/SS. As a result of the studies the influence of the concentration and composition of the emulsifiers mixture on the fluidity of samples and the structural viscosity have been analyzed, the type of flow and the presence of thixotropic properties have been defined.

Structural and mechanical properties are important characteristic that determines the stability of visco-dispersed systems. The study of these parameters is important in drug development, determination of temperature conditions of the process of production and standardization of the finished product.