

FORMULATION OF GEL BASED ON HERBAL EXTRACT FOR WOUND HEALING TREATMENT

Kolisnyk T.Ye., Slipchenko G.D.

The National University of Pharmacy, Kharkiv, Ukraine

philka1312@yandex.ua

Development of new effective drugs for wound healing treatment does not lose its relevance. One of the directions in solving this problem – development of soft medicinal forms based on antimicrobials representing an alternative to antibiotics, in particular, on the basis of medicinal herbs. As promising antibacterial and anti-inflammatory agent of plant origin the extract from *Datura innoxia* leaves is considered.

In the development and preparation of the dosage form it is important to ensure optimal conditions for the release and subsequent absorption of the active ingredients. Topical drugs should provide a local and uniform release of the active pharmaceutical ingredient from the dosage form, making its high therapeutic concentrations at the application sites without significantly increasing medicinal substance level in the systemic circulation. So, the major place in technology of soft medicinal forms belongs to selection of foundation and study of the rheological parameters of the formulation, the definition of which may serve as an objective quality control during production and storage.

The aim of our research is to study the rheological properties of herbal gels with *Datura innoxia* leaf extract on the basis of various gelling agents.

To select the optimal composition of the carrier we have conducted comparative studies of indicators of gel foundation based on hydroxyethyl cellulose, sodium alginate, Aristoflex AVC of the company Clariant, Switzerland, Reolab 200 ST and Reolab 100 XT, Poland.

Due to the varying nature and physico-chemical properties of the above mentioned gelatinizers, as well as mechanisms of gel systems formation, studied foundations were prepared using different technologies. Gelatinizers were injected at concentrations ranging from 1% to 5% and compared by gel rheological properties. Rheological studies of experimental samples were carried out on the rotational Brookfield viscometer, model HB DV-II PRO (USA), spindle SC4-21.