

Gels were prepared according to general rules. As a result of the study, it was found that the model samples with the base content of carbopol 2% have a fairly thick consistency and high stability. Therefore, a gel base with a gelling agent content of 1.5% was chosen. Glycerin and propylene glycol were used as non-aqueous solvents. Also as a result of the conducted researches introduction of 5% of glycerin into gel structure is proved. This concentration itself provides optimal osmotic properties.

**Conclusions.** Studies have shown that the resulting gel is homogeneous in consistency, transparent with a specific odor, the pH of the test samples is within acceptable limits. The new drug has anti-inflammatory effects and minimal side effects.

## **INVESTIGATION OF THE OINTMENT FOR BURNS TREATMENT ANTIMICROBIAL PROPERTIES**

Tarasenko A.O.<sup>1</sup>, Kovalev V.M.<sup>2</sup>

Scientific supervisor: Kovalev V.V.

<sup>1</sup>National University of Pharmacy, Kharkiv, Ukraine

<sup>2</sup>Kharkiv National Medical University, Kharkiv, Ukraine

volodyakw@gmail.com

**Introduction.** Burns is one of the important problems of modern medicine and pharmacy. For their treatment often use soft dosage forms containing antibiotics and antiseptics synthetic origin. However, quite often these drugs exhibit undesirable properties. The above points to the urgency of finding effective and safe drugs on the base of natural vegetable matter that would, along with moderate antimicrobial activity and ensure the best living conditions of the affected tissues, and showed no toxic effects on the body as a whole. Development and introduction of this drug will improve treatment of infectious complications of burns and expand the range of national preparations for use in dermatology and surgery.

**Aim.** The purpose of the work was to investigate ointment with hop cones extract antimicrobial properties.

**Materials and methods.** Database of scientific articles and Internet resources were used for search materials. During the work, the following research methods were used: search, analytical, synthetic and descriptive.

For the investigation of the ointment antimicrobial activity agar diffusion method was used.

**Results and discussion.** Dry hop cones extract was used as API. Hop cones dry extract is prepared from natural raw materials that are processed. The plant is harvested in late summer, cones and fruits can be used. All these parts are carefully sorted and dried in a special apparatus, where, under the influence of temperature, the plant loses moisture, but retains all its useful properties. The main properties of the extract are anti-inflammatory, anti-bacterial and analgesic effect. It is used for the preparation of decoctions and tinctures, which can be of a preventive nature or relieve severe acute inflammation syndromes. Determined the antimicrobial activity of ointments with dry extract of hop cones in concentrations of 1%, 3%, 5% and 7% on a hydrophilic ointment base. The most effective were ointment samples with a concentration of 5% and 7%, which showed a growth retardation of the *Staphylococcus aureus* ATCC 25923 strain  $17.2 \pm 0.93$  and  $17.8 \pm 0.59$ , respectively. For further research, it is rational to choose a concentration of 5%.

**Conclusions.** According to the analysis results of antimicrobial activity, ointment with 5% hop cones extract shows a moderate antibacterial activity on *S. Aureus*.