the system of storage representing accumulative capacity with system of a thermostatic. Capacity is exposed to thermal sanitation at least 1 time a year or at discrepancy of water of standard documentation on an indicator "Microbiological purity" (Bioburden) and "Bacterial endotoxin`s". Tests of PW and of WFI are selected in system before giving in an accumulative tank. The full chemical analysis is carried out 1 time to change, microbiological purity and bacterial endotoxin`s is defined once a month.

One of indicators of quality of WFI is conductivity. Since 2004 this indicator entered the British pharmacopeia, since 2005 – pharmacopeias of the EU and the USA. Determination of conductivity of WFI received on a distiller of PD 450 and a complex «Steripor» was carried out on laboratory conductometer`s «Anion»; WFI received on a complex «Stilmas» was carried out on conductometer`s «Endress Hauser». Results are given in table 1.

Table 1

Specific conductivity of WFI received on different installations

ND	Value according to ND	Results		
		PD 450 distiller	Complex «Steripor»	«Stilmas» complex
FA.2.2.0019.15	≤1.3 μS·cm^{-1} (25˚C)	to 10 μS·cm^{-1}	the exit for value ≥5.1 μS·cm^{-1} is possible	0.5 μS·cm^{-1}

As can be seen from the provided data in case of use of a complex «Steripor» it is possible that value of conductivity is exits out of limits of admissible norms during at the end of the filtration cycle of ion-exchange resins. In case of receiving water on a complex «Stilmas» an indicator remained stable within norm (less than 1 μS·cm^{-1}) during all working of installation.

Conclusions. Use of a complex «Stilmas» with constant determination of conductivity in a stream at the exit allows exercising continuously control and also gives the chance an automatic stop of process of receiving water at values, above the set level. The conducted researches testify to prospects of use of a complex «Stilmas» in production at the pharmaceutical enterprises.

DEVELOPMENT OF THE COMPOSITION OF OINTMENT FOR WOUND HEALING

Makhdy Mokhammad
Scientific supervisor: prof. Khokhlenkova N. V.
National University of Pharmacy, Kharkiv, Ukraine
tl@nuph.edu.ua

Introduction. The growing demands of modern therapy of purulent-inflammatory processes of soft tissues led to purposeful search and creation of new effective drugs, namely, based on natural raw materials. The analysis of the range of soft medicines in the modern pharmaceutical market has shown that the composition of ointments for the treatment of wounds includes active substances that belong to various pharmacotherapeutic groups. However, the overwhelming majority are preparations of synthetic origin, which have certain disadvantages that limit their use. The main disadvantage of these drugs, as drugs for local treatment of wounds and burns, is associated with the emergence in the process of treatment of microbial resistance to antibiotics and the emergence of a large number of hospital strains of bacteria. In this regard, many patients suffer from drug allergies.

Given the shortcomings of antibiotic therapy for wounds, it is important to search and create a new drug based on a substance of natural origin that has sufficient antimicrobial and anti-inflammatory action with minimal side effects.

Aim. With the purpose of development of the rational composition and technology the

ointment it was necessary to choose the base, excipients, to substantiate the concentrations of dense oak bark extract (DOBE) and the essential oil of coriander, to determine the sequence of the technological process and critical points..

Materials and methods. Taking into account medical and biological requirements to the ointments for treating wounds at the second phase of the wound process it is not expedient to use hydrophobic bases because of the absence of the osmotic activity and creation of the "greenhouse effect". Besides, such carriers minimize dynamic processes of diffusion, and it sharply worsens the release and penetration of medicinal substances.

The emulsion system of "oil-water" type corresponds to the task set to the fullest extent. Thanks to their physical and chemical properties these carriers provide a high efficiency and stability of the medicinal substances introduced. Besides, they replenish the moisture loss by the skin, are easily applied on the skin surface, rapidly absorbed without any oily sheen on the skin.

Results and discussion. The hydrophobic phase of the emulsion system is one of the most important components of the ointment, and it stipulates the basic consumer and technological characteristics. Thus, when selecting the hydrophobic phase, first of all, the properties of oil (spreading, the rate of drying, etc.) should be considered.

With the purpose of prevention of wound drying and prolongation of the therapeutical action of the ointment castor oil was chosen as a hydrophobic phase; it is also widely used in treating wounds and burns as a wound-healing component.

The nonionogenic emulsifier of the first generation – hydrogenated polyethoxylated castor oil (Eumulgin HRE 40) and the classical combined ionogenic emulsifier No.1 were used as emulsifiers.

Emulsions were prepared by classical methods: water and oil phases were heated separately to the temperature of 65 - 70 °C. The emulsifier was introduced before the oil phase. The water phase was added while mixing before the oil phase, then homogenization was carried out up to the complete cooling of the emulsion base. The rheological properties of the model samples of bases were examined.

The rheograms obtained testify that it is necessary to apply a significant shift tension for structure destruction. The uniform increase of the deformation speed with increase of shift tension is characteristic for the curves, then the rheogram goes into the straight line and it indicates the complete structure destruction. In the period of tension decrease the system's viscosity is restored. It confirms the presence of plastically viscous and thixotropic properties of the bases. Formation of the "hysteresis loop" on the rheogram also testifies to thixotropy of the bases under study.

The composition of the emulsion base for creating the ointment with DOBE containing castor oil, glycerol, Eumulgin HRE 40, PEO-400, PEO-1500, PEO-4000 has been theoretically and experimentally substantiated for the treatment of the second phase of the wound process. The structural and mechanic properties of the carrier developed have been studied.

Conclusions. The rheological properties of the ointment models bases have been studied. On the basis of the rheological developed optimum composition of ointment's basis has been choose. The character of influence of active substances by the rheological properties of ointment has been determined. The dependence of a ointment's rheological properties on a temperature has been studied.

DEVELOPMENT OF THE COMPOSITION OF THE ECOSTICAL PURPOSE PROTECTIVE AGENT

Moskalenko Yu. S., El Asmay Mohammed Amin
Superviser: assoc. prof. Zubchenko T. N.
National University of Pharmacy, Kharkiv, Ukraine
atl@nuph.edu.ua, zubchenko-tn@i.ua

Introduction. Too dry air, hot season and scorching sun, the constant detrimental impact of bad ecology causes irreparable harm to our skin, it lacks moisture in a catastrophic way. How to ensure a guaranteed deep hydration and skin protection for the whole day. In order to prevent skin from damage, both there shou'd used both normal weather-protective (winter and sun-protective) and protective hydrophilic products.