

**Aim.** The aim of the research is the development and substantiation of the composition of the therapeutic cosmetic agent on an emulsion basis with amaranth oil, studying its organoleptic, sensory and pharmaco-technological properties.

**Materials and methods.** In order to solve the set tasks the experimental samples of an emulsion cream with different oil contents were made. The cream was introduced into two types of oil – amaranth and corn (Table).

Table

Composition of experimental samples of emulsions with amaranth oil

Name and concentration of ingredients	Sample number					
	1	2	3	4	5	6
Amaranth oil	10	5	15	7,5	20	10
Corn oil	-	5	-	7,5	-	10
Olivem-1000	5	5	5	5	5	5
Water	85	85	80	80	75	75

Corn oil reveals nutritious, protective properties, is dermatologically neutral, does not cause skin irritation, therefore it was used as an additional component of the oil phase of emulsions.

The production of model samples of the cream was carried out according to the following technology: emulsifier Olivem 1000 was melted in a water bath, amaranth oil or a mixture of corn and amaranth oils were added. Then it was emulsified with hot water to form a homogeneous emulsion.

The test for colloidal stability of the samples was performed using a laboratory centrifuge for 5 minutes with a speed of 100 c<sup>-1</sup>; the thermal stability of the samples was checked by the distribution of emulsions on the fat and oil phase at a temperature 42 °C in the thermostat by GOST 29188.3-91.

Investigation of the sensory properties of samples, such as skin absorption, distribution, adhesiveness, smoothness, residual film after absorption, was carried out on respondents.

**Results and discussion.** The obtained experimental samples of emulsion creams were colloidally stable and thermostable. This indicates that the amaranth oil can be used as a mono-component, or in combination with other vegetable (corn) oils. According to the sensory properties, the creams with the smallest content of oil (sample No. 1 and No. 2) resembled milk, were well absorbed by the skin, distributed no stickiness and film, but did not provide sufficient smoothness. Creams with 20% oil (samples No.5 and No.6) left a sticky film. Samples No. 3 and No. 4 showed the best results, good absorption, distribution, lack of sticky. The highest score was given to sample No.4.

**Conclusion.**

1. The composition of emulsion cream with amaranth oil and corn oil by 7.5% was developed and substantiated, using Olivem 1000 emulsifier.
2. The organoleptic, pharmaco-technological and sensory properties of emulsion cream based on amaranth oil were studied.

**DEVELOPMENT OF RATIONAL TECHNOLOGY OF OINTMENT WITH ICHTHYOL**

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**Introduction.** Providing the population of Ukraine with medicines is the main problem of modern pharmacy. However, for today, medicines cannot adequately meet the needs of all segments of the population.

**Aim.** The aim of our work is conduct analysis of the extemporaneous prescription of different pharmacies.

**Results and discussion.** The statistics show that in recent years, the world has seen a tendency to increase dermatological diseases, and ointments are known to be one of the most effective dosage forms used in the therapy of these pathologies.

To this end, the recipes of Kharkiv pharmacies were studied and analyzed, namely, about 50 formulations of soft medicinal forms, causing difficulties in preparation. Ichthyol is widely used in medical practice, especially in dermatology in the treatment of various skin diseases.

We selected three difficult prescription ointments for the treatment of dermatological diseases containing ichthyol, which, due to its physico-chemical properties, creates problems in the technology for the extemporal preparation of many dosage forms.

The purpose of this study was to eliminate the difficulties that arise in the preparation and storage of ointments in order to increase their stability and extend shelf life.

Combined ointments were prepared taking into account generally accepted rules. For stabilization, the same auxiliary substances were used as in the preparation of emulsion ointments or various technological methods, which often play no less important role than the use of various auxiliary substances as a stabilizer.

**Conclusions.** The technology of multicomponent ointments for difficult formulations is experimentally substantiated, taking into account the physico-chemical properties of the ingredients that make up their composition. The stability of the prepared preparations during storage is determined.

### **BIOLOGICALLY ACTIVE SUBSTANCES OF WILLOW BARK IN TREATMENT OF INFLAMMATORY PROCESSES IN JOINTS**

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**Introduction.** Latin name of white willow – *Salix alba*. For medicinal purposes, usually used bark, which are harvested from trees, not younger 2-3 years old, in the spring, before the emergence of the first leaves, during the fecundity. The removed bark is cut and poured in airy places, laid out in a thin layer, then it is dried in dryers at 50-60 ° C. Dried willow bark is kept no longer than 4 years.

The **aim** of the work was to determine the possibility of using the willow bark extract when developing the drug for the treatment of inflammatory diseases of the joints.

**Results and discussion.** Willow bark contains a large number of biologically active substances: glucose, flavonoids, glycosides, tannins, saligenin, and the main active ingredient is salicin, a compound similar in quality to aspirin. However, salicin does not adversely affect the digestive system.

A number of studies have shown that concentrated willow extract is effective in reducing pain and inflammation in joints.

The tea from the willow bark is considered "natural herbal aspirin," it should be noted that salicin containing the white willow bark gives less side effects than the aspirin itself. Acetylsalicylic acid (aspirin) was first obtained from the willow extract. In this case, aspirin may be more beneficial because willow bark has got desirable substances. Aspirin should be used only on prescription because long used can cause internal bleeding. Once in the body, salicin is cleaved in the liver to salicylic acid, which relieves pain, inflammation, and temperature.

Folk medicine also uses young leaves of willow, on the basis of which also make broths, infusions and puddings.

When rheumatism is cooked with a decoction: pour boiled bark on boiling water, allow it to stand for about an hour. It is recommended to take broth no more than three times a day.

**Conclusions.** The development of new medicinal products with bark willow extract, which would possess, in particular, anti-inflammatory properties, at the present stage is actual.