

widespread prevalence (from 30-60% in the population) of allergic diseases has turned allergies into a global medical and social problem.

That is why the goal of the work was to create a new drug for the treatment of allergic pathologies, in particular, skin manifestations of allergies. Earlier, an analysis of the pharmaceutical market of Ukraine in relation to medicines with antihistamine activity has been conducted. As a result of this analysis, we concluded that today there is a need to create anti-allergic drugs for external use.

The next step in our work was the theoretical analysis of existing medicinal substances with anti-allergic activity and the search of rational substance. As the active substance, we decided to use a promising, anti-allergic substance - dimethindene maleate.

This substance has established itself as promising, especially in the treatment of skin manifestations of allergies. In addition, this substance is approved for use in Ukraine. For it, there are already standard methods for qualitative and quantitative determination, and the current optimum concentration for starting scientific research is also known.

Pharmacotherapy of allergic diseases includes not only the use of antihistamines, but also drugs of some other pharmacological groups. These include the following groups of medicines: glucocorticosteroids with anti-inflammatory activity (prednisone, methylprednisolone, dexamethasone, hydrocortisone); hyposensitizing medicines (medicines based on calcium, sodium thiosulfate, magnesium sulfate); it is also possible the introduction of anti-enzyme agents (for example, contrical, pantripine); it is also advisable to introduce medicines that increase general immunity (stimulants of immunity, antioxidants).

So, one of our next tasks is to experimentally substantiate the composition of the medicines in the form of an external medicinal form for the treatment of skin manifestations of allergies based on dimetindene maleate.

The choice of solubilizer for the water propolis extraction

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In the technological process of propolis tincture preparation water extract is a production waste, which has antimicrobial, anti-inflammatory properties. In appearance, the water propolis extract is a turbid brown liquid with a specific pleasant odor.

The main requirement of the action of medicinal substances is their release from the dosage form, absorption through biological membranes and transport to the site of exposure. It depends on: physical - chemical properties of active substances, technology, properties and quantity of excipients etc. In this regard, the physical-chemical characteristics of samples of the water propolis extraction (appearance, refractive index, pH, relative viscosity, surface tension, qualitative reactions of identification, quantitative analysis of the amount of phenolic compounds) have been studied and the choice of solubilizer has been conducted.

Water propolis extraction has pH value 4, a refractive index of 1.3340 and a large surface tension coefficient of 63.92×10^{-3} H/m.

Qualitative reactions were carried out for the identification of phenolic compounds (cyanidine sample, iron chloride, lead acetate, and alkali alcohol solution) and gave a positive result.

Taking into account the complex chemical content of the phenolic compounds of propolis, one-dimensional and two-dimensional chromatogram were also used for qualitative analysis. According to obtained results, phenolic compounds can be attributed to oxycoumarins, phenol carboxylic acids and flavones. The quantitative content of the sum of phenolic compounds was determined by UV-spectrophotometry at a wavelength of 290 ± 2 nm.

Solubilizers are a class of surfactants that contribute to the dissolution of poorly soluble ingredients in a liquid solution base.

Polysorbate-80, proxanol, polyethylene oxide-400, OS-20 was selected as the solubilizer. Solutions of these substances were added in various quantity (from 1 to 10%) to the water propolis extraction, mixed, filtered into glass bottle and corked. Physical-chemical quality researches of the obtained solutions were conducted immediately after preparation and during storage.

As can be seen from the results solutions were transparent only in the cases of samples with polysorbate-80 (4%) and OS-20 (5%). In less concentrations we have the true solution, the value of CCM corresponds to the true solubility of surfactants that are included in the aqueous solution of propolis, and at higher concentrations a micellar colloidal system is formed.