TECHNOLOGY DEVELOPMENT OF OBTAINING OIL EXTRACT WITH COMMON PLANTAIN

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Introduction. Undoubtedly, to date, the expansion of the assortment of safe and effective domestic medicines is an urgent task of pharmaceutical practice. That is why it is advisable to create drugs based on natural raw materials.

One of the representatives of medicinal raw material is common plantain (Plantago major), which is distributed practically throughout the territory of Ukraine. Due to the presence of a large number of biologically active compounds, common plantain has a wide range of pharmacological activity. Therefore, the development of drugs on its basis is an actual problem in the pharmaceutical industry.

In recent decades there is a tendency to reduce the number of production pharmacies and to increase the number of small pharmacies that only release ready-made medicines.

Pharmacy manufacture of medicinal forms and today remains relevant, especially for hospitals. The existing assortment of medicines of industrial production can not fill all that is necessary for an individual approach to the treatment of patients.

One of the most common medicinal forms produced by pharmacies is a soft medicinal form – ointments.

Aim. To develop a technology for obtaining an oil extract with common plantain for its further use in creating an extemporal ointment with reparative action.

Materials and methods. When creating a new extemporal ointment, next following active medicinal substances were used: herb of common plantain, oil extract of common plantain.

Results and discussions. Oil extracts are quite widespread in the nomenclature of medicines of past centuries. And although in most cases it is rational to use such polar extractants as alcohol, however, if necessary, to conduct an extraction of lipophilic substances, such as chlorophyll or carotenoids, vegetable oils are using.

Medicinal plant raw materials contain both hydrophilic and lipophilic substances. Due to the selection of the extractant, it is possible to vary the content of various substances in the extract. In cases where it is necessary to obtain from the raw materials the whole range of substances, it is possible to moisten the raw material with alcohol before the extraction begins.

The choice of extraction oil also depends on its physical properties. It is advisable to give the value of the densities, since they depend on such hydrodynamic characteristics as the Reynolds number characterizing the nature of the flow, and the extraction time depends on the currents. To obtain oil extracts and further research, we chose peach oil, which proved to be an emollient with a sufficiently high extractive capacity.

For further research, we made samples by maceration using peach oil in an amount of 1: 2 and 1: 5. By preparing the following two samples, before starting the extraction, the medicinal raw material was wetted with an appropriate amount of ethanol with a concentration of 95% and 70% for 2 hours. In order to intensify the extraction process, the infusion was carried out at a temperature of 40 ° C for 4 hours and continued to be macerated at room temperature for 7 days while stirring regularly. After completion of the maceration process, the extracts obtained were subjected to filtration.

After an organoleptic analysis of the oil extracts obtained, it was determined that all the samples were homogeneous oilseeds with a specific odor, green. However, the samples that had been previously wetted with ethanol had a more saturated green color, indicating a more complete extraction of chlorophylls.

The qualitative composition was determined by thin layer chromatography (TLC) using Silicagel plates. As a result of TLC, the presence of rutin, aucubin and chlorophylls in the extract was proved.

Conclusions. In further studies of the samples obtained, a quantitative analysis must be carried out in order to select a rational technology for obtaining oily extracts with the most complete release of biologically active substances.