PHARMACEUTICAL INVESTIGATIONS OF *PHALLUS IMPUDICUS* MUSHROOM LIQUID EXTRACTIONS

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Introduction. Today, the efforts of many scientists from different countries are aimed at finding medicines effective in oncological diseases. Despite the huge investments that are being made to address this problem, the number of cancer patients is steadily increasing.

The last 50 years in the studies of mycologists, biotechnologists, physicians, more and more attention is paid to macromycetes as potential producers of biologically active substances. Mushrooms are most widely used for medical purposes in the countries of East Asia, where today 272 types of fungi are used, and another 200 species are studied as promising for the treatment of various diseases – viral, infectious, oncological, cardiovascular. Among the domestic fungi the most attention is paid to the antitumor action of basidial mushrooms – Pleurotus ostreatus Fr. Kumm. (oyster mushroom), Phallus impudicus (L.) Pers. (common stinkhorn), Flammulina velutipes (Fr.) Sing. (winter mushroom) that occur in the forests of Ukraine.

Aim of the work was to study the phyto-chemical composition of the liquid extracts of the fungus *Phallus impudicus.*

Materials and methods. The fresh raw Phallus impudicus fungus collected in the Polissya region of Ukraine in the summer of 2018 was used in the work. As extragens, ethanol of different concentrations of 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80% and 90% was used. The amount of extractives was determined according to the generally accepted methodology described in the scientific literature.

Results. According to a literature study, Phallus impudicus fungus contains such biologically active substances as: proteins, polysaccharides, flavonoids, carotenoids and triterpenes. In determining the amount of extractives extracted from the fresh raw material of the fungus Phallus impudicus, it was found that the maximum yield of biologically active substances provides the use of 10%, 20% and 30% ethanol. This can be explained by the removal of predominantly water-soluble biologically active substances such as polysaccharides. In samples with ethanol, concentrations of 80% and 90% of the extractives were not observed at all.

Conclusions. The study of phytochemical composition of Phallus impudicus fungus requires detailed investigation and is a promising area of scientific research.

THE DETERMINATION OF CRITICAL PARAMETERS OF NASAL GEL'S MANUFACTURE FOR THE TREATMENT OF VIRAL RHINITIS

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Introduction. It is known that the process of obtaining drugs is a complex activity associated with raw materials, finished products, production processes, equipment, etc. When scaling technology it is important to determine the correct technological strategy and establish the critical parameters of the production process, finished product and intermediates. Critical parameters of the half-finished product and the developed nasal gel can be all the quality indicators given in the draft of quality control methods. All active, auxiliary and primary packaging materials must comply with the requirements of regulatory documents. Inconsistency with these requirements leads to the receipt of poor-quality finished product. Critical operations and process parameters are operations in case of violation of which corrections are impossible, because of which the quality of products will not meet the requirements of quality control methods. Failure to observe the established parameters may affect the physical-chemical and pharmacological properties of the medicine. The **aim** of this work is the determination of critical parameters of nasal gel's manufacture for the treatment of viral rhinitis.

Materials and Methods. Critical parameters of the half-finished product and the developed anti-viral gel (in relation to the adenovirus) can be all the quality indicators presented in the draft of quality control methods. The critical parameters of the process were determined – the technological parameters that have a direct influence on the characteristics of the gel during production and subject to regulation and identification. The critical parameters of the weighing operation are the accuracy and correctness of the weighing of components, cross-polluted chemical contamination, microbial contamination, the quality of the labeling system, the risk of substitution of materials. Critical parameters of gel preparation are time of homogenization, the rotation speed of the mixer, homogeneity, vacuum depth, intermediate product control. The critical parameters of the packaging operation are the quality of the primary packaging materials and the possible mechanical contamination of the drug from the equipment. These include the correctness of the marking, the control of tightness of the package; when packed in a secondary packaging – the marking of packages and the correctness of the printed information.

Results and Discussion. These technological parameters were given attention during the testing and scaling of the developed gel technology. The critical technological parameters of the production of nasal gel for the treatment of viral rhinitis are shown in Table.

Table

Critical parameters of the nasal gel's production

The name of the stage of the technological process	The name of the technological parameter	The value of the technological parameter
Preparation of solution of licorice root extract	completeness of dissolution	according to the product. recipes (visually)
Preparation of solution of essential oils	completeness of dissolution	according to the product. recipes (visually)
Preparation of solution of propylene glycol	completeness of dissolution	according to the product. recipes (visually)
Obtaining of gel base	time of homogenization the rotation speed of the mixer pH of the base	20 min. 42 rpm 6.40±0.05
Obtaining of gel, its homogenization	time of homogenization the rotation speed of the mixer homogeneity vacuum depth intermediate product control	20 min. 42 rpm according to the product. recipes (visually) 0.6-0.7 bar according to the product. recipes
Packing of gel in tubes	precision of dosing the performance of the machine correctness of stamping	according to the product. recipes (visually)

Conclusions. Thus, observance of all the specified technological parameters and their documentary confirmation can ensure that the processes that will be carried out in accordance with the technological regulations will be implemented effectively with reproducible results and obtaining a medicinal product that will meet the requirements of the draft of quality control methods.

THERMAL STABILITY STUDY OF ANTIALLERGIC EMULSION

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Introduction. The prevalence of allergic diseases is increasing worldwide, particularly in low and middle income countries. Moreover, the complexity and severity of allergic diseases continue to increase