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Rasulov K.I., student of group 5-F-33

Research supervisor: Kryshchuk O.V., associate professor of the Department of Pharmacy and Technology of Organic Substances

(Ukrainian State University of Chemical Technology, Dnipro, Ukraine)

DEVELOPMENT OF THE TECHNOLOGY FOR THE PRODUCTION OF A MEDICINAL PRODUCT BASED ON HOPS CONES

Diseases of the digestive system remain one of the most urgent health care problems in Ukraine and the world. The modern rhythm of life, improper and untimely nutrition, smoking, excessive consumption of alcoholic beverages, stress, adverse ecology often lead to the development of diseases of the gastrointestinal tract. According to statistical data, the number of patients with gastroenterological pathology increases annually. The most common diseases of the gastrointestinal tract today are gastritis and peptic ulcer disease.

In recent years, the special interest of scientists in the treatment of diseases of the gastrointestinal tract is caused by the use of phytopreparations, which have a multidirectional effect on the human body, high therapeutic efficiency and the absence of significant side reactions in comparison with synthesized chemopreparations [1].

Therefore, an important task of medicine and pharmacy is the search for effective substances of plant origin and the development of medicines based on them.

Hops is promising in this context, which is widely used in traditional medicine for diseases of the gastrointestinal tract, accompanied by inflammatory processes, pain syndrome, as well as as a means of stimulating appetite and strengthening digestion. This plant strengthens capillaries, has an anti-ulcer and hyposensitizing effect. In this regard, hops are a promising source of obtaining substances for the creation of phytopreparations with a wide spectrum of pharmacological action in diseases of the gastrointestinal tract [2].

The creation of preparations based on hops, in turn, will allow to expand the range of domestic medicines for the treatment of diseases of the gastrointestinal tract. The task of the work is to develop a technology for the production of a composition based on hop cones in capsules for the treatment of diseases of the gastrointestinal tract, which consists of a dry extract of hop cones and auxiliary substances: lactose monohydrate, aerosol, glycerol palmitostearate.

A technological scheme for the production of capsules of the composition for the treatment of diseases of the gastrointestinal tract has been developed. A mathematical model was created and based on it mathematical calculations of production were carried out. The necessary technological equipment for the production of capsules of the composition for the treatment of diseases of the gastrointestinal tract is selected.

According to the technical and economic calculations, the necessary amount of the main technological equipment and workshop capacity was determined, as well as the return on capital, labor productivity, average wages, cost of production and profitability of production were calculated. Dangerous and harmful production factors are taken into account. Developed measures to create safe working conditions for service personnel (electrical safety, ventilation, fire extinguishing equipment). Estimated amount of industrial emissions, liquid waste and wastewater; developed methods of their cleaning and disposal. The cost of production and the payback period confirm the economic benefit of the project.

References

1. Recent Trends of Treatment and Medication Peptic Ulcerative Disorder / D. Bhowmik, Chiranjib, K. K. Tripathi et al. // International Journal of PharmTech Research. – 2010. – Vol. 2, N 1. – P. 970–980.
2. Schubert, M. L. Control of gastric acid secretion in health and disease / M. L. Schubert, D. A. Peura // Gastroenterology. – 2008. – Vol. 134, N 7. – P. 1842–1860.