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## Selecting Bases for Suppositories of Coglumet Immunomodulatory and Anti-Virus Action

**Key words:** suppositories "Coglumet", local lipophilic bases, Supporin-M, "Enzifob", "Enzifob 1", technological characteristics of suppository masses.

**Annotation:** based on the study of the technological properties of the substance of coglumet, as well as the study of various lipophilic characters on the quality indicators of suppositories, a scientifically based technology of suppositories was selected. The optimal parameters of the technological process of obtaining suppository mass. The technology for producing suppositories of Coglumet of 0.21 g was tested in Biocom LLC.

**Introduction.** The search for new bioactive substances, the creation of drugs on their basis and their introduction into medical practice in order to more fully meet the needs of the population of Uzbekistan for medicines is an important task of pharmacy.

One of the most important tasks facing medicine is the search for drugs, which enhance human immunity.

The virus of acquired human immunodeficiency is a terrible disease, rightly considered the plague of the 21st century, which affects all vital organs and leads to premature death of man. For the treatment of this disease there is a need to search for new immunostimulating drugs not only in Uzbekistan, but throughout the world.

One of the most effective dosage forms are rectal suppositories. Candles act quickly and when introduced into the body contribute to the elimination of pain and other unpleasant sensations in a delicate place. Candles can be prescribed for various diseases. Just like any other dosage form, the use of suppositories can be prescribed by the attending physician and only if indicated.

The purpose of the research: The purpose of the work was the development of technology and the assessment of the quality of dosage forms in the form of suppositories of coglumet with antiviral and immunomodulatory effects.

**Research methods:** The objects of research were the substance “Koglumet” (FS 42 Uz 1304-2011) with immunomodulatory and antiviral properties, as well as a number of lipophilic bases permitted for medical use. Koglumet was first synthesized at AV-Biocom LLC, which is an amorphous brownish brown powder with a specific smell, sour-salty taste, slightly hygroscopic, soluble in water, practically insoluble in chloroform and ether.

The drug has officially passed clinical trials at the Research Institute of Dermatology and Venereology of the Ministry of Health of the Republic of Uzbekistan and the City Center for the Rehabilitation of Chronic and Infectious-Somatic Pathologies (protocol No. 1 of December 31, 2006), (1,3,4).

**Main results:** When developing suppositories on the basis of the substance Koglumet based on the recommendations of pharmacologists and toxicologists adhered to an optimal concentration of 5%. The determining factor in determining the effective action of the suppository medicinal substance is the choice of the base. In order to select the optimal suppository formulations that provide the maximum speed and completeness of the release of the active substances, suppositories were prepared as models on lipophilic and hydrophobic bases. Supporin-M (Supporinum-M) VFS 42-173-98, which consists of 95% of hydrogenated cottonseed oil (GOST 28414-89) and 5% T-2 emulsifier, was used as the lipophilic base. Supporin-M is a mass of light yellow color with a slight specific smell, uniform color, solid at room temperature. The base is easily melted and completely releases the medicinal substance, mixes well with medicinal substances with different physicochemical properties, is easily formed and does not irritate the rectal mucosa. Melting point 34-36.80 C, freezing point -23.20 ° C, full deformation time 6-8 minutes.

Also, the basis obtained by Professor Hn.M. Kamilov from fat of cattle and sunflower oil, fermented by lipase. This local lipophilic base for the preparation of suppositories was conventionally called “Enzifob” and “Enzifob 1”. The basis of a light yellow color, thick and with a specific odor mass. Melting point 36.5 C.

To obtain the lipophilic base “Enzifob”, the base is melted in a water bath (temperature 55-60 C), emulsifier T-2 is added and carefully transferred. The finished mass is used for the preparation of suppositories by the method of pouring.

To obtain Enzifob 1, the required amount of Enzifob and is melted in a water bath at a temperature of 55-60 C, add T-1 emulsifier and carefully move. The finished mass is used for the preparation of suppositories by the method of pouring. Subsequent research for the preparation of suppository masses of coglumet, we have chosen the above listed bases. Table 1 shows the compositions of the above bases.

Based on the fact that the active substance in the suppository mass is not more than 5%, we did not take into account the replacement rate. To obtain suppositories, the pouring method was used, which is used in the preparation of suppositories from bases with insufficient plasticity.

**Table 1**

**The compositions of the studied suppository bases**

Ingredients Name	Supporin M	Enzifob	Enzifob 1
Hydrogenated cottonseed oil	95,0	-	-
T-2 emulsifier	5,0	5,0	-
Solid fat	-	47,5	46,5
Sunflower oil	-	47,5	46,5
Paraffin			2,0
T-1 emulsifier			5,0
Gelatine			-

The technology of suppositories is as follows: a weighed amount of a lipophilic supporin-M base is placed in a porcelain cup and melted in a water bath. Since coglumet is well soluble in water, it is dissolved in a few drops of purified water and added to the molten base, mixed. Next, the mixture is slightly cooled in order to avoid delimitation, poured into suppository forms, pre-lubricated with soap-glycerin alcohol solution in a ratio of 1: 3: 5, and leave to solidify. Suppositories with the basics of Enzifob and Enzifob 1 were obtained using the same method. The obtained suppositories were evaluated by ND.

Suppositories and those obtained using the Enzifob 1 base did not meet the hardness criterion, and paraffin was added during the experiment. Despite this time, the total deformation and suppositories did not meet the requirement and were eliminated during the experiment. It was established that the obtained suppositories with Supporin-M and Enzifob bases met all the criteria for suppositories such as: appearance, uniformity of mixing - on the cut, the suppository mass should be homogeneous, without impregnations; total deformation which should not exceed 3-15 minutes, the weight of the candles should be in the range, deviations in the mass should not exceed  $\pm 5\%$ , the melting point should not exceed 37 °C. Ready suppository dosage forms should have certain hardness.

**Conclusions:** Based on the above, it can be concluded that to create suppositories based on the drug substance Koglumet, which has an immunomodulatory and antiviral effect, we used lipophilic bases for suppositories of local origin called Supporin-M and “Enzifob”.

Suppositories were obtained by pouring. Ready suppositories were evaluated by ND. During the experiment, it was found that both lipophilic bases can be used to obtain suppositories of coglumet.

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