

## UPDATED COMPOSITION SELECTION FOR NYSTATINE 500,000 EFFECTION UNIT PILLS

**Khaydarov V. R.**

**Khasanov U. R.**

Tashkent Pharmaceutical Institute, Tashkent, Republic of Uzbekistan

e-mail: umarbek.xasanov@nobel.uz, tel. +998905660094

### **Annotation.**

Today, the attention paid by our government to local pharmaceutical production has shown how high it is. In addition, the role of antifungal drugs in the domestic market of nystotin-based drugs is very high, which indicates the importance of applying drugs based on local manufacturers.

Tablets have a number of advantages over other types of drugs in terms of production, reception, transportation and storage, which is the basis for increasing the range of tablets.

Scientific research on the technology of production of tablets, excipients used in their production, assessment of their quality, study of bioavailability, determination of stability and shelf life and their results were analyzed in detail.

### **Keywords.**

Tablet-Tabulettae, from the Latin word "tabula" - board, "tabela" - board). A tablet is a type of drug that is divided into doses, obtained by pressing a drug or an adjuvant with a drug substance. They are cylindrical, triangular, rectangular, and so on. They are used for drinking, for external use, sublingual, implantation or injection.

Fungi (Fungi or Mycetes) are a group of eukaryotic organisms. It lives on ready-made organic matter, which is a heterotrophic organism.

Fungal diseases, mycophthoses (in plants) are infectious diseases caused by parasitic and semi-parasitic fungi. Under the influence of fungi, plants develop a disease (pathology) process that disrupts the structure and physiological function of the whole organism or a part of it.

### **Relevance.**

Today, the Government of the Republic of Uzbekistan is taking a number of measures to develop the production of local medicines in the pharmaceutical industry. [2]

In recent years, the country has taken comprehensive measures to improve the system of providing the population with medicines, medical supplies and medical equipment (hereinafter - pharmaceuticals), created favorable conditions for the development of the local pharmaceutical industry. [2]

According to the WHO, 1/3 of the world's population suffers from fungal diseases In some countries, fungal infections affect up to 40% of the population. [1]

Therefore, the development of the specified composition and technology of Nystotin tablet for use in fungal diseases, ensuring its stability, quality assessment and its application in the production practice of a local pharmaceutical company is of particular importance.

### **Aim.**

Development of a specific composition and technology of nystotin tablet for use in skin and mucous membrane candidiasis, candidiasis of internal organs, candidiasis (especially in malnourished and debilitated patients) during long-term antimicrobial therapy. The main goal is to assess the quality and apply it to local pharmaceutical production practices.

The following tasks are solved to achieve the aim:

to study the literature and Internet resources in order to get acquainted with the drugs used against fungal diseases and drugs used against them, in particular, candidiasis of the skin and mucous membranes, candidiasis of internal organs, candidiasis during long-term antimicrobial therapy;

to study the physicochemical and technological properties of the substance nystotin;

selection of the specific composition and technology of the recommended nystotin tablet;

study the quality of the proposed tablet;

to study the storage conditions and shelf life of the proposed nystotin tablet;

preparation and registration of a set of regulatory documents required for the introduction of nystotin tablets in production.

**Methods and techniques.**

Modern methods and techniques have been used to improve the composition and technology of antifungal Nystatin 500,000 TB tablets.

It is known that the development of the composition and technology of tablet drugs is based on the physicochemical and technological properties of the active substances. The physicochemical properties of the active substances obtained by us for research are taken from the normative technical documents determining the quality of these substances, which were determined using the methods described in the articles of the General Pharmacopoeia. In the development of technology of tablets, it is important to study not only its physicochemical properties, but also the technological properties of the active substances.

The study of the technological properties of the pressed mass, the choice of the type and amount of excipients on a scientific basis, is important in determining the process of pressing.

To develop the composition and technology of tablets, parameters such as shape and size of particles of active substance, density, fractional composition, scattering, scattering density, residual moisture, natural angle of inclination, compressibility, compaction coefficient, residual moisture and the force of pushing the tablet out of the mold Relevant technological properties and generally accepted quality indicators of tablet formulations, such as appearance, diameter, average weight and deviation, strength to fracture and friction, disintegration, melting time, uniformity of dosage, etc. measured.

**Results.**

**Results of determination of technological properties of nystatin substance**

t/r	Indicators studied	Units of measurement	The results obtained
1.	Description.	Light yellow powder with a characteristic odor. * Hygroscopic. Not resistant to light, oxygen and heat.	Suitable
2.	Fractional composition:	Not less than 90% <10 mkn	5.5 µm
3.	Solubility	Easily soluble or soluble in dimethylformamide, soluble in dimethyl sulfoxide, very sparingly soluble in 96% alcohol, almost insoluble in water and chloroform.	Suitable
4.	Scattered density	kg / m <sup>3</sup>	432.2
5.	Compressibility	N	10
6.	Density index	K	3.29

The results of the determination of the technological properties of the substance nystatin have unsatisfactory technological properties, ie the basis of its fractions (90%) are 5.5 µm particles with a dispersion of 2.44 kg / s 10<sup>-3</sup>, a scattering density of 432.2 kg / m<sup>3</sup>. compressive strength was 10 N, density was 3.29 K, and finally the residual moisture was 1.42%.

The results of determining the technological properties of the substance nystotin showed that the substance has unsatisfactory technological properties. The impossibility of obtaining a tablet directly from the substance,

which exhibits such negative technological properties, requires the choice of the type and amount of excipients suitable for its composition, as well as moderate technology.

**Conclusion.**

In summary, the preparation of tablets from the pharmaceutical active ingredient nystatin will require a positive push on the technological properties of the substance and the choice of the type and amount of excipients appropriate to the composition, as well as moderate technology.

**List of used literature:**

1. Кемайкин В.М. (руководитель отдела) \*, 1 Табынбаев Н.Б. (председатель правления), 1 Худайбергенова М.С. (главный эксперт по клинической фармакологии), 1 Олифинович А.А. (старший ординатор- гематолог), 1 Абдрахманова Л.М. (начальник отдела медицинского планирования и управления движением пациентов), 2 Климко Н.Н. (зав. кафедрой) «РАСПРОСТРАНЕННОСТЬ ТЯЖЕЛЫХ И ХРОНИЧЕСКИХ МИКОТИЧЕСКИХ ЗАБОЛЕВАНИЙ» 19 с.
2. Алимова М.Н. Аҳолини сифатли дори воситалари билан таъминлашнинг аҳволи: муаммолар ва ечимлар // Farmatsevtika jurnali. – Тошкент, - 2011. - №4. - С. 9-12.