needs to take into account such issues as the safety of children, compliance of the patient, traceability of patients, falsifying and leakage of pharmaceutical products. Significant steps should be taken to ensure traceability of the packaging. Some manufacturers have attached the use of barcodes to pharmaceutical products. Advanced integrated robotic systems are becoming more common in packaging lines for a wide range of applications, and at the same time it reduces costs, reduces risks and reduces time.

DEVELOPMENT OF COMPOSITION AND TECHNOLOGY OF EFFERVESCENT TABLETS WITH ACETYLSALICYLIC ACID, PARACETAMOL AND CAFFEINE

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Introduction. One of the most important tasks of modern pharmaceutical technology is the creation of dosage forms that enhance the biological availability of medicines. This is achieved by various means, among which one can distinguish the use of special auxiliary substances and technological methods that increase solubility or dispersion of medicinal components. Among the group of fast-dissolving dosage forms, a special place belongs to effervescent drugs, in which the effect of rapid disintegration is achieved through the introduction of gas-forming components. The advantages of fast-dissolving dosage forms include high biological availability, the ability to reduce adverse reactions, the combination of components that react with each other, and adjusting the unpleasant organoleptic properties of medicinal substances.

Purpose of the study. The purpose of this study is creation of new fast-dissolving dosage forms in combination with acetylsalicylic acid, paracetamol and caffeine, which provide optimum conditions for gas formation, dissolution, stability of medicinal products with different physical and chemical properties.

Materials and methods. The effervescent tablets are non-enveloped tablets, most of which are citric acid and sodium bicarbonate, which react quickly in the presence of water with the release of carbon dioxide. As active pharmaceutical ingredients in the tablets include: acetylsalicylic acid, paracetamol and caffeine. As a moving substance, we used fumaric acid.

In order to theoretical substantiation of the composition and technology of effervescent tablets, we studied the physical, chemical and technological properties of substances according to the pharmacopoeial requirements (form, size, particle surface, fractional composition, fluidity, bulk density after shrinkage, and humidity).

To determine the optimal composition of effervescent tablets, 5 mixtures were developed that differ in the number of active and auxiliary substances, mass and manufacturing techniques.

For ready-made tablets, research was carried out in accordance with pharmacopeia requirements for tablet erosion, resistance to crushing, control of decomposition of tablets.

Results and discussion. We conducted a study of substances: acetylsalicylic acid, paracetamol, caffeine, citric acid and sodium bicarbonate. Microscopy has shown that crystals of substances of various forms, namely acetylsalicylic acid and citric acid, have rather large crystals. We chopped them and selected the fraction 0.18-0.25 mm. The results of the studies showed good flow and bulk density after shrinkage of substances, as well as their moisture content within the normal range.

To determine the optimal composition of effervescent tablets, mixtures have been developed that differ in the number of active and auxiliary substances, mass and manufacturing techniques.

Composition F1 was made by direct pressing method.

Composition F2 was made by the method of wet granulation. Humidifier was 96% ethyl alcohol. 2.20 g of ethanol 96% was used for granulation.

Composition F3 was made by the method of wet granulation. 2.5% solution of polyvinylpyrrolidone (PVP) in ethyl alcohol was used as humidifier. 2.75 g of this humidifier was used.

Composition F4 was made by the method of wet granulation. 1% solution of polyvinylpyrrolidone (PVP) in ethyl alcohol was used as humidifier. 3.8 g of this humidifier was used for granulation.

For these compositions, determination of bulk density and fluidity, tablet erosion, resistance to crushing and decomposition of tablets were performed. The results of the research showed that the best

indicators are F2. Taking into account the research indicators, we have perfected and developed the final composition of effervescent tablets (F5). Based on previous studies, we determined the weight of one tablet and changed the amount of substance that is included in the pills.

The composition is (substances mass of one tablet, g):

Paracetamol 0.18

Acetylsalicylic acid 0.24

Caffeine 0.03

Citric acid is 0.748

Sodium hydrogen carbonate 0.98

Fumaric acid 0,067

Total: 2.245

The composition of the substances has good indicators of fluidity and bulk density after shrinkage, these are important indicators for the technology of tablet production.

After studying of technological parameters of F5, we form the tablets by the method of wet granulation. The humidifier is 1% ethyl alcohol. The formed tablets were tested for friability and strength. In the friability study, effervescent tablets lost only 0.59% of the weight of tablets, which is a good indicator because the tablets will suffer minimal loss when they would be packaged and transported.

After examining the resistance to crushing of tablets, they showed a good result, an indicator of 125 N, which means that the tablets are strong enough.

We also conducted research into disintegration, effervescent tablets dissolved in 1 min 25 sec. This indicator corresponds to the standards of the state control system.

Conclusions. Thus, based on our research, we have selected and substantiated the optimal composition of auxiliary substances, developed the technology of effervescent tablets in combination with acetylsalicylic acid, paracetamol and caffeine by wet granulation method.

THE PROSPECTS OF THE USE OF HOMEOPATHIC MEDICINES SACTUS WITH MENTAL DISORDERS

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Entry. Due to the increased number of various chronic diseases, including mental disorders who need long-term therapy, in the last decade around the world there is a constant growth in public demand for effective and safe drugs of natural origin, including homeopathic medicines.

Use Cactus velikokvìtkovogo (Sactus grandifloris) as the active component when creating a new ekstemporalnogo homeopathic medication for prevention and treatment of mental disorders, depressive and emotionally fragile States topical issues of modern pharmaceutical science.

The aim of the this work is the development of technology of homeopathic medicines based on Cactus velikokvìtkovogo (Sactus grandifloris) in conditions of pharmacies and study the possibilities of their use in the above mentioned properties.

Materials and methods. Detailed analysis of contemporary literary sources, the results of their research to determine the prevalence of the use of the homeopathic medicinal preparations based on Cactus velikokvìtkovogo in the global pharmaceutical market.

Results and their discussion. Cactus grandiflorum (Sactus grandifloris) are popularly referred to as "the Queen of the night", as the LILACS bloom only once a year for a few hours. The flowers of plants differ from the original colors.

For the first time the plant as a therapeutic agent used an Italian doctor of Roubini. The famous doctor in France that can been cured thus hypertension and atherosclerosis.