

## SEARCH AUXILIARY SUBSTANCES FOR THE CREATION OF A SOLID DOSAGE FORM FOR DIABETES TREATMENT

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The choice of the excipients is an important task for the technologist who working at the modern pharmaceutical production. The correct solution of this task helps not only to create a safe and effective drug tool, but to increase economic efficiency of production, to reduce the cost of the equipment and personnel.

One excipient can have several functions, both positive and negative. For example, the positive effect of the magnesium stearate consists in its lubricating function, which reduces the friction of the punches, but at the same time its high hydrophobicity can make a negative impact on the profile of the release. Microcrystalline cellulose is one of the most widely used excipients. It helps to achieve the desired admixture and friability, but it can also adsorb moisture, as well as the other chemicals. These features should be considered during the process of the creation of a particular recipe.

The purpose of our work is the search for the new excipients for development of the mixture and technology of the solid drug forms for the treating the diabetes.

The modern chemical industry produces combined multi-functional excipients (which consist of several components), for example, the production on the basis of silicate microcrystalline cellulose, which perform multiple functions in the recipe. In some case, such excipients allow to switch from the damp process of the granulation to the direct pressing with those active substances, which traditionally cannot be used in the technology of the direct pressing.

One of the latest developments is the disintegrant and a binder based on microcrystalline cellulose mcc sanaq explosion. This is the example of the one-component of the excipient combining two magnesia for the tablet functions: binder (helps to compress into a recipe directly pill) and disintegrant (contributes to the disintegration of these pills when they ingest in the human's organism).

Formaxx ® CaCO<sub>3</sub> 70 is a «connected» calcium carbonate (70 %) and sorbitol (30 %), it is the first product of the series Formaxx. The «mated» product is the best for the direct pressing; it shows the excellent performance of the admixtures at low pressures.

Cyclodextrins cavamax have the unique ability to protrude as the molecular containers, due to the seizure of molecules in the inner cavity. The complexes which were made in the result of these actions are used in a number of applications in the pharmaceutical mixture. For example, cyclodextrins increase the water solubility medicines, which have the difficulties in the dilution in water, improving their bioavailability of them, they also stabilize the active substances of the drugs.

Thus, on the basis of the analysis of literature data we can conclude perspectivity of application of cyclodextrin, Formaxx ® CaCO<sub>3</sub> 70 and microcrystalline cellulose as auxiliary substances when creating a solid drug forms for treating diabetes.