THE INVESTIGATION OF THE GLIDANTS INFLUENCE ON THE TECHNOLOGICAL PROPERTIES OF TABLET MASS

Sinitsyna E.V., Kovalevskaya I. V.

The National University of Pharmacy, Kharkiv, Ukraine

The manufacture of the tablets is associated with the use of the excipients regardless of the method of producing tablets. Depending on their destination, all adjuvants can be divided into the several distinct groups: the fillers (diluents), the binders (gliding), the disintegrating (disintegrates), the anti-friction (sliding and lubricants).

The modern researches for the development of the new and improved technologies used for the tablets are multifaceted. The problem of friction during the producing of the tablets, its impact on the manufacturability of the process, the quality of the tablets and ways to leveling the friction with the help of auxiliary substances, is only in the fragmentary studies. This is actualized understanding and systematization of the knowledge regarding the use of the explosives in the manufacture of anti-friction tablets.

During the dosing, the strength of coupling, including sliding friction, between the particles of the components are generally superior to the gravitational force, which leads to the production of stable concentrations impeding the flowability of the material, and as a result, disturbance of uniformity of tablet weight. During extrusion, the internal addition progresses external friction surface of the compressible material to the channel matrix. Part of the compaction pressure is spent to overcome it, is a redistribution of the density adjustment tablets.

Recent years the using of Aerosil as a glidant has increased. It is associated with the variability of the drugs and their properties.

Other adjuvant that effects on increasing the technological properties of the mixtures for the producing of the tablets and encapsulation – Neusilin (magnesium aluminate metasilicate). Despite the fact that Neusilin chemically similar to conventional similar products, it differs from them both structurally and functionally.

The adsorption capacity, the glidants impact on the slope angle and the swing weight tablets were determined during the study. As a result of these studies we can conclude that Neusilin has improved properties compared with Aerosil. Neusilin improves the substances flowability, prevents the agglomeration of the hygroscopic powders, adsorbs oil and the poorly soluble substance perfectly, and stabilizes hygroscopic drugs.