

1 Abstract

Charles University in Prague, Faculty of Pharmacy in Hradci Králové

Department of: Pharmaceutical Technology

Consultant: Doc. PharmDr. Zdeňka Šklubalová, Ph.D.

Student: Barbora Jonášová

Title of Thesis: Flow equation. Sorbitol and magnesium stearate.

This thesis describes influence of the addition of magnesium stearate on bulk properties to size fractions of sorbitol for direct compression in the range 0,100 – 0,346 mm. I studied influence of particle size and the size of the opening hopper to the gravitational speed of flow. The dependence of the flow rate (g/s) on the size of the opening conical hopper was modeled by the squares equation Jones-Pilpel. No significant effect of addition of magnesium stearate 0,5% and 1,0% for the exponent equation was found. This model allows the re-estimation of the flow rate with an accuracy about 11% for the size fraction regardless of the amount of added magnesium stearate; for polydisperse MS200 is the deviation of the experimentally determined values of the flow rate of approximately 19%.