

## Abstract

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Title of Thesis: Study of the influence of tablet mixture composition on the flow and consolidation properties

Good flow properties of a tableting mixture play an important role in the manufacturing of tablets. Flow behaviour of the commercial (original) tableting mixture with poor flowability was evaluated in this thesis. The main aim was to find alternative fillers that may improve its flow. The granulometric characteristics and flowability of eight types of lactose and microcrystalline cellulose and their binary mixtures were studied. In comparison to the original tableting mixture, the proposed modified one with both original fillers were replaced with new ones showed significantly better flow properties with steady state flow through the hopper orifice having a diameter of 10 mm. The results were confirmed using powder rheometer. The lower shear stress necessary to achieve flow under different normal loads as well as approximately 72 times lower cohesion value were detected for the modified tableting mixture.