

## Abstract

Charles University, Faculty of Pharmacy in Hradci Králové

Department of:                    Pharmaceutical technology  
Supervisor:                        doc. PharmDr. Zdeňka Šklubalová, Ph.D.  
Consultant:                        Mgr. Žofie Trpělková  
Student:                            Aneta Mrázková  
Title of Thesis:                    The study of influence of the measurement method  
    on static angle of repose of free-flowable  
    excipients.

Good flow and consolidation properties of powders represent significant characteristics of pharmaceutical excipients. They are important for manufacturing of powders into solid dosage forms. Flow behavior of 6 free flowing excipients was evaluated in this diploma thesis. The main target was a study of the influence of the measurement method and the orifice size of a conical hopper on static angle of repose (AOR). The automatic tester and the prototype for measuring AOR having orifice sizes in a range of 6-15 mm were used for the measurement. A significant difference between the results of these two methods ( $P < 0.01$ ) was observed. The decrease in AOR was detected when increased the orifice diameter, the effect was significant ( $P < 0.01$ ) only in automatic tester for two out of six measured powders. Surprisingly, the significant influence of the orifice size on AOR was registered for a sweetener Palatinose with prototype equipment.