

Flow properties of Ficus deltoidea extract powder and the binders, Acdisol and Avicel

ABSTRACT

This work aimed to investigate the flowability properties of the basic powders used to make tablets by means of direct compression. The main product in this study is Ficus deltoidea extract powder, while the excipients operated as binder were croscarmellose sodium (NaCMC or Acdisol) and microcrystalline cellulose (MCC or Avicel). Such excipient powders are essentially water insoluble and can also act as a filler, disintegrator and dissolver in tablet form. In order to compare and optimize powders regarding flowability, a Jenike shear tester was used to measure the flow properties of the powder particle, such as the effective angle of internal friction, flow function and the angle of wall friction. The experimental results showed higher flow property values for binders compared with F. deltoidea extract powder. These results provide essential information for the processing and handling of these powders during storage, transportation and also for the next processing step of powder ó tableting.

Keyword: Flowability; Ficus deltoidea; Flow properties; Powders