

Abstract

The thesis compared two products of anhydrous β -lactose for the direct compression of tablets SuperTab[®] 21AN a SuperTab[®] 22AN. These substances were compared from the standpoint of the tensile strength, disintegration time of tablets and the energy profile of compression depending on the compression power, on the addition of the lubricant magnesium stearate (0.5 and 1%) and the addition of microcrystalline cellulose Avicel PH-112 (25%). The used compression power were 10, 11 and 12 kN, in the case of the mixtures with Avicel PH-112 10kN. The tablets were compressed using material test device T1 – FRO50 TH.S1K Zwick/Roell.

SuperTab 22AN provided stronger tablets with the longer disintegration time than SuperTab 21AN and it was more sensitive to an addition of magnesium stearate.. An addition of Avicel PH-112 increased the strenght of tablets from the both lactose and it shortened the disintegration time. The total energy of the compression was higher in the case of Supertab 22AN and it was primarily due to the values of energy for friction and the energy accumulated by the tablet after compression. The higher values of plasticity were found in the case of SuperTab 22AN.