

## ABSTRACT

The thesis evaluated and compared the strength and disintegration time of tablets and the energy profile of compression in dependence on compression force in the co-processed dry binders LubriTose™ SD and LubriTose™ AN. These substances were further compared in these parameters with the physical mixtures of the pertinent lactoses with various lubricants in a concentration of 2 % and 4 %. The lubricants employed included glycerol monostearate, magnesium stearate, poloxamer 407, and sodium stearyl fumarate. LubriTose™ AN yielded stronger tablets with a longer disintegration time, lower values of total energy and lower plasticity than LubriTose™ SD. The tablets made of LubriTose™ SD possessed the same strength as the tablets made of a physical mixture of spray-dried lactose with 4 % of poloxamer 407, but a higher one than those made of a mixture of lactose with 4 % glycerol monostearate, and their disintegration time was longer, excepting the tablets made of a mixture with 4 % of magnesium stearate. The tablets made of LubriTose™ AN possessed the same strength and a longer disintegration time than the tablets made of a physical mixture of anhydrous lactose with 4 % of glycerol monostearate, and their disintegration time was identical with that of the tablets made of a physical mixture of the pertinent lactose with 4 % of magnesium stearate. The total energy and plasticity were higher in co-processed dry binders than in the physical mixtures of the pertinent lactoses and lubricants.