ABSTRACT

The thesis compares two coprocessed dry binders with identical content MicroceLac® 100 and Disintequik™ MCC 25. The substances content α-lactose monohydrate and microcrystalline cellulose in the same ratio 3:1. They were evaluated from the aspect of powder's properties, compressibility and mechanical properties of compressed tablets (tensile strength and disintegration time). The influence factors were the compression force and the addition of the lubricants magnesium stearate and sodium stearyl fumarate in 1 % concentration.

Disintequik™ MCC 25 showed higher flowability and higher bulk and tapped density than MicroceLac® 100. The value of all evaluated energies increased with compression force, but the plasticity decreased. MicroceLac® 100 indicated higher values of total energy of compression and energy of friction. Disintequick™ MCC 25 showed higher values of plasticity energy, energy of compression and plasticity. The elasticity energy was comparable in both substances. The addition of lubricants didn't affect the tested energies or plasticity. The tensile strength and the disintegration time increased with compression force. The tensile strength of tablets from both coprocessed dry binders was almost identical and was reduced by lubricants. The disintegration time was significantly longer for tablets containing Disintequik™ MCC 25 and the lubricants extended the disintegration time.