

ABSTRACT

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Title of the Diploma Thesis: A study of compressibility and properties of tablets from coprocessed dry binder with mannitol and croscarmellose sodium for orodispersible tablets.

This thesis deals with the study of directly compressible tableting materials and tablets with Parateck[®] ODT, which is designed for orodispersible tablets. The effect of three lubricants on the properties of tableting materials and tablets is evaluated. Tested lubricants are magnesium stearate, calcium stearate and sodium stearyl fumarate in concentrations of 0,5 and 1 %. Flow properties, compressibility, ejection force, tensile strength and disintegration time of tablets are tested. The compressibility is evaluated by the energy profile of compression process.

Lubricants did not improve the flowability of Parateck[®] ODT. The total energy of compression increased with compression force and highest values were at the tableting material with 0,5 % magnesium stearate. The values of plasticity decreased with compression force, highest values were at the tableting material with 0,5 % sodium stearyl fumarate. The ejection force increased with compression force, the addition of calcium stearate had the most effective influence. The tensile strength of tablets increased with the compression force, the lowest values were at the tableting material with 1 % calcium stearate. It was not proven that disintegration time of the tablets increases with the compression force and with higher concentration of hydrophobic lubricants. The values of disintegration time met the requirements of the pharmacopoeial limit for orodispersible tablets.