Abstract

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Title of Thesis:	A study of the influence of co-processed dry binder type on the properties of orally disintegrating tablets with the drugs ibuprofen and paracetamol.

This thesis deals with the study of orally disintegrating tablets containing co-processed dry binders Ludiflash®, Prosolv® ODT G2 and Parteck® ODT with analgesics ibuprofen and paracetamol. The tablets also include magnesium stearate as a lubricant and sucralose as a sweetener at a concentration of 1%. The energy profile of the compression process, tablet tensile strength, friability, porosity, wetting time, water absorption ratio and disintegration time of the tablets are evaluated.

Tableting material with Prosolv® ODT G2 shows the lowest value of pre-compression energy, drugs increase it. Furthermore, it shows the highest value of compression energy that drugs reduce. Prosolv® ODT G2 and Parteck® ODT placebo tablets have higher tensile strength than Ludiflash® placebo tablets. Drugs reduce tablet tensile strength, paracetamol more significantly. Placebo tablets meet the requirement for friability (up to 1 %), whereas in the case of tablets containing drugs, the friability is increased. In the case of all formulation containing paracetamol, the friability is unmeasurable. Ibuprofen reduces tablet porosity, prolongs wetting time and disintegration time, especially for Ludiflash® and Prosolv® ODT G2. Ludiflash® with ibuprofen appears to be the only suitable orally disintegrating tablets formulation.