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 domperidone and lisinopril

The study deals with the influence of the type of co-processed dry binder on the compressibility of directly compressible tableting materials and the properties of orodispersible tablets containing the drugs domperidone and lisinopril. The tested co-processed dry binders are Ludiflash®, Prosolv® ODT G2 and Parteck® ODT. The tablets further contain 1% sucralose as a sweetener and 1% magnesium stearate as a lubricant. The tablets are compressed by a compression force of 3 kN. The compressibility is evaluated by the energy profile of the compression process. Tensile strength, friability, wetting time, disintegration time, and porosity of tablets are tested.

In the group of placebo, Parteck® ODT showed the highest total energy of compression, whereas Prosolv® ODT G2 showed the lowest values. The values of this energy decreased with the addition of drugs in all formulations, with domperidone having more significant effect. Tablets containing Prosolv® ODT G2 and Parteck® ODT showed the higher tensile strength, while Ludiflash® tablets had the lowest tensile strength. Domperidone caused a decrease of tensile strength in all formulations. Values of friability correlated with tablet tensile strength values and met the pharmacopoeial limit below 1% (except for Ludiflash® + domperidone). Ludiflash® placebo tablets had the shortest disintegration and wetting times. Addition of drugs caused the increase of these parameters with a higher effect of lisinopril than domperidone. Tablets from all formulations met the pharmacopoeial disintegration time limit of 3 minutes. The disintegration and wetting time of the tablets were more influenced by the composition of the co-processed dry binder and the type of disintegrant than by the porosity of the tablets