

## **Abstract**

The thesis deals with the study of the compressibility and properties of tablets from Prosolv<sup>®</sup> ODT G2. This substance was tested in combination with two lubricants – magnesium stearate and sodium stearyl fumarate, for this purpose two concentrations were used 0.5 % and 1 %. Combination with model drugs was also included. Prosolv<sup>®</sup> ODT G2 was also compared with Prosolv<sup>®</sup> SMCC 50 in the studied properties. The compressibility was evaluated by energy profile of compression process. Tensile strength and disintegration time were tested properties of tablets.

The total energy values of tableting materials with Prosolv<sup>®</sup> ODT G2 were not enough affected by lubricants, though acetylsalicylic acid increased total energy. In the case of Prosolv<sup>®</sup> SMCC 50 the values of total energy were increased. Plasticity decreased in the case of Prosolv<sup>®</sup> ODT G2 under the influence of lubricants and drugs. Plasticity values for Prosolv<sup>®</sup> SMCC 50 were higher and more balanced. Lubricants in the mixtures with Prosolv<sup>®</sup> ODT G2 caused higher strength, however ascorbic acid decreased tensile strength of tablets. Tablets from the Prosolv<sup>®</sup> SMCC 50 mixture were significantly stronger, but lubricants decreased tensile strength of tablets. The disintegration time of tablets with Prosolv<sup>®</sup> ODT G2 was very short. It was proved that lubricants and acetylsalicylic acid prolonged disintegration time in contrast to ascorbic acid that caused the decrease of disintegration time. Tablets from Prosolv<sup>®</sup> SMCC 50 mixtures caused higher disintegration time.