

ABSTRACT:

In this dissertation the viscoelasticity of the most common excipient microcrystalline cellulose was evaluated and viscoelastic parameters were compared to three substances. Viscoelasticity was evaluated by two methods. The first method is Creep test. In this analyze the compression force is constant and hold for 180s. During this time height of the tablet was lowered. The differences of tablet height was noted and used for calculation in Creep test. Parameters of elasticity got by this method are FCT1, FCT2 and parameters of plasticity are PCT1, FP.

When the parameters of elasticity increase the elasticity decrease. When the parameter FP increases the plasticity increases too. The higher the value of PCT1 is the lower is the plasticity.

Stress relaxation is the second method. In this analyze height of tablet is constant and decline compression force is recorded. In this analyze we noted the decline for 180 sec. In this way we get parameters of elasticity ESR1, ESR2, ESR3 and parameters of plasticity PSR1, PSR2, PSR3.

The plasticity increases when parameter P increases. Comparing three substances the elasticity increases in-line Emcompress, Avicel, Flowlac and the elasticity decreases in-line Emcompress, Avicel, Flowlac.