

# **Abstract**

## **Determination of plasticity in tablets from microcrystalline cellulose**

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Microcrystalline cellulose is widely used as a filler for direct compression. Avicel PH 102 is very often used because of its size of particles (100  $\mu\text{m}$ ), appropriate, bulk volume, compressibility.

The aim of Diploma thesis was to determine plasticity, to describe influence of the compression force on the plasticity and influence of the type of microcrystalline cellulose and compression conditions on plasticity. The plasticity was determined from graphs showing the decreasing trend of force on the time. Three methods using „one–point“ evaluation put into rate value of maximal and minimal forces. The third method evaluate rate of area.

These three methods gave comparable result. Two sections of curve from graphs showing the dependence of the plasticity on the compression force can be distinguished. The first one characterized the phase of precompression second one characterized the plastic deformation of tablets. We can also confirmed the influence of different compression conditions on the second section of the curve. Type of microcrystalline cellulose on this section was minimal.