

## SUMMERY

Theoretical part of this work is focused on explanation of such terms like nanoparticles and nanoemulsions and their usage within peroral and topical administration. Next part explains the merit of zeta potential and DLVO theory, which influence the stability of the elements. Of course, also the principle of the measuring of viscosity is mentioned, because viscosity is taken into consideration in case of measuring of the element dispersion.

The experimental part is focused on determination of the partije size by photon correlation spectroscopy by temperature of 25°C and 37°C. The measurement was taken in chronological succession to estimate the stability of dispersion system. It was also measured electrokinetic parameter - zeta potential, which plays a fundamental role by keeping the stability of nanoemulsions.

It was proved, that the size of the elements gets settled after approx. 1 week, further changes are not so striking anymore, not even by the increase of temperature to 37°C. Since creating the emulsion (approx. 1 week), the major share of the size of particles (about 60-95%) was ranging between 120-175 nm. As well zeta potencial remains in stable range (+2 mV - -0,6 mV) by the increase of temperature to 37°C and adding of three pH highs of buffers.

From the gained results we can draw conclusion, that after further modifications, the nanoemulsion type 12 is proper for peroral or topical administration.