

## **Abstract**

The aim of the work is focused on preparation method of nanoparticles by emulsion distribution and evaporation method. The objective was to obtain the smallest nanoparticles with the sufficiently high surface charge represented by zeta potential. Theoretical part of the presented thesis concerns biodegradable carriers, properties of nanoparticulate systems and their characteristics, preparation methods, methods of evaluation of preparation procedures, and prospective views of usage of nanoparticles in therapy. The substantial part of the thesis concerns experimental methods, results of experiments and its discussion. Nanoparticles were prepared from polyesters and polyesteramides dissolved in various biocompatible solvents. Appropriate concentrations of these carriers were founded. Solutions of carriers were dispersed in external aqueous phase containing various emulsifiers and model electrolyte by the use of various regimens of stirring. It was approved that the size of nanoparticles is possible to control by the agitating method and by the formulation of the inner and outer phase of emulsion system. During nanoparticles storage for few days in the aqueous dispersion medium nanoparticles were sufficiently stable.