

Abstract

In the theoretical part of this thesis are described various types of nanoparticles, such as polymeric particles, liposomes, micelles and solid lipid nanoparticles. There are presented basic informations concerning methods of particles preparation in the laboratory conditions such as solutions of polymers dispersion methods by intensively stirring, coacervation of the solutions of polymers, polymeration methods in dispersions, and the exploitation of methods of dispersion of polymeric solutions in the supercritical solvents. In the following part of this thesis are some concise informations about the methods of evaluation of basic parameters of the nanoparticulate systems. There are summarised the trivial informations concerning granulometry of particles, their zeta potential, encapsulation effectivity of drugs, and also about the particles shape factor. The focus of this thesis is in the experiment, the main deal were in minimisation of the particle size prepared by the method of emulsification of biodegradable aliphatic α -hydroxyacids polyesters solutions. The main process arrangement was the selection of the appropriate solvent of polymers in the inner emulsion phase and the founding for the mostly efficient emulsifier during the dispersion process of polymer solutions. In process of the preparation, there were founded several combinations of parameters leading towards the nanoparticles with the intensity diameter under the limit of 100 nm.