

Abstract

The diploma thesis is focused on the study of influence on the composition of the system to the size of the nanoparticles from aliphatic polyesters with linear and branched molecules constitution. The emulsion method for distributing of solvent was chosen for preparation of nanoparticles. The theoretical part describes the nanoparticles, its origin and application. The following part is applying to biodegradable polymers, especially PLGA. There is also a mention of antifungal agent terbinafine. The nanoparticles are prepared of this substance. The process is described in the experimental part of thesis.

The experimental part is testing different composition of samples. A main emphasis is on the choice of polymer solvent and emulsifier. There are also applied mixtures of solvents and emulsifiers. The important aspect is the evaluation of incorporated terbinafine, which has been the model drug. Prepared dispersions were exposed to stress conditions in the form of several days-storage and centrifugation.