

CHARLES UNIVERSITY IN PRAGUE
Faculty of Pharmacy in Hradec Králové
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Title of rigorous thesis:

The study of the influence of terbinafine on glass transition temperature of polyester matrices

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ABSTRAKT

This rigorous thesis deals with the study of the influence of terbinafine concentration on the glass transition temperature of polyester matrices. In this thesis were used linear polyester of D,L-lactic and glycolic acid (PLGA) and the polyester branched with tripentaerythritol (3T), which were synthesized in the Department of Pharmaceutical Technology Faculty of Pharmacy in Hradec Králové. It was used drug of terbinafine base. For incorporation of the drug into the polyester carrier it was chosen the method of dissolving in a suitable solvent. The solvent was ethylmethylketone. The theoretical part is focused on the solubility of drugs, description and use of classes BCS classification system, Lipinski rules of three five and characteristics, effects and use of terbinafine. In the experimental part the glass transition temperature of the polyester matrices with different terbinafine concentrations prepared by dissolving of polymer and drug in ethylmethylketone and their drying in a vacuum drier for 1 and 3 days was measured. The results show that incorporation of terbinafine base into the polyester matrices cause the glass transition temperature decrease in dependence of drug concentration.

Keywords: polyesters, terbinafine, glass transition temperature, solubility of a drug, bioavailability.