

SUMMARY

The theoretical part of this rigorous theses describes concept of bioadhesion in the drug administration and characterizes some of basal ways of the drug administration (oral, peroral, ophthalmic, nasal, vaginal). It also specifies the bioadhesive dosage forms in use.

The aim of the experiment was to study the adhesiveness of with dipentaerythritol branched D,L-lactic and glycolic acid oligoesters using Material testing machine Zwick/Roell T1-FR050TH.A1K. The maximum force (F_{max}) required to detaching the polymer systems from substrate was measured for determination of the adhesiveness of the oligoesters. Rheological properties were measured using Brookfield digital viscosimeter DV-E.

It was found that F_{max} of the branched oligoesters decreases with growing molecular weight and branch level. Adhesiveness of samples on the non-stick base: PLGA, 0,5D and 1D were approximately the same, 2D was of lower value. The numbers of on the pig ear base measurement were multiple lower.

There was a decrease of viscosity of the adhesive polymers in the order: PLGA, 0,5D, 1D, 2D.