

Abstract

The aim of this work was to study dissolution and adhesive characteristics of branched lactic and glycolic acid oligoesters. The theoretical part describes biomaterials and bioadhesion. Dipentaerythritol branched oligoester carriers were plastified 20% triethylcitrate. Adhesive properties were measured by material testing machine Zwick/Roel T1-FR050TH.A1K. The maximum force (F_{\max}), required to detach the polymer carrier from substrate, was measured for studying this material. Solution of mucin was used as a substrate for adhesion. All studied oligoesters had sufficient adhesive properties. There was not any significant influence of incorporated drug. Acyclovir and fluconazole release from plastified carriers was tested. Liberation was tested at 37°C to the phosphate-citrate medium. Concentration of drug in medium was measured by spectrophotometer. There was an increase of drug liberation caused by decreasing of molar weight M_w . Oligoester 3D shown advantageous properties, it liberated acyclovir for 21 days with zeroth order kinetics