

Abstract:

Swelling and erosion of polyesteramides with linear constitution of chains as their two important features of degradation were studied. In theoretical part of the thesis is presented review of relevant aspects of biodegradation, biodegradable systems, mechanisms of drug release, biodegradable polyesters and polyesteramides usable in dosage forms formulation procedures. Experimental part of the thesis is directed on the monitoring of the volume and mass changes of pieces made from polyesteramides, their blends and blends of polyesteramides with typical branched polyesters of aliphatic hydroxyacids in buffer solutions of pH 6,0 and pH 7,0. It was concluded, that polyesteramides possessed low degree of swelling and very low rate of matrices erosion. These properties is possible to modify by the changes of molecule constitution leading to crystallinity lowering and also by the blending of polyesteramides with branched polyesters of aliphatic hydroxyacids. Polyesteramides of the original structures are very prospective materials potentially exploitable as carriers in the tissue engineering.