

## SUMMARY

The rigorous work connects on the thesis from years 2007-2008. It deals with interaction of hydrophilic medium with three aliphatic oligoesters and polyesters synthesized at the pharmaceutical faculty from lactic acid and glycolic acid, which were branched either with dipentaerythritol in 2 % concentration or with tripentaerythritol in 3 % or 5 % concentrations. Samples with three various weights were prepared from polyesters branched with 3 % tripentaerythritol (150 mg, 500 mg, 1250 mg). The polyesters in the weight of 1250 mg was plasticized with triethylcitrate. There was observed a process of erosion kinetics and swelling of defined matrices from above mentioned oligoesters in aqueous medium at 37 °C in period of time 1 day, 3 days, 7 days, 14 days, 21 days and someone of them 28 days again. There was determined the concentration of carboxylic groups generated by hydrolysis of matrices in the water soluble fraction (carboxylic number) using alkalimetric method. The novel aspect of this work consists in the study of the matrices size and its plasticization on these characteristics. The time of erosion process beginning and the time of swelling degree peak achievement delays with the increasing of size of matrices. The time of peak of carboxylic number values as well as hysteresis manifests more intensively prolonged against osmotic activity of low molecular fraction of oligoesters and the degree of swelling of matrices. Plasticization of oligoester also amplifies the hysteresis between time-profile of the concentration of osmotic active molecules in matrices and its swelling degree.