

ABSTRACT

The aim of the present thesis was the development of biodegradable nanoporous polymeric coatings by spin coating in the form of a single layer and multi layers. Morphological, structural and optical characterization has been done by Atomic Force Microscopy and Spectroscopic Ellipsometry. Also was determined the mechanism of degradation of the polymeric materials by Real-time spectroscopy. The kinetics of drug release from multilayered films was made by using spectroscopy UV-VIS. The results proved that the binary polymer thin film revealed the mechanism of nanoporous formation. Furthermore, it was found that the morphology of multilayered films, the biodegradable rate and the drug release rate were dependent on the kind of drug, the load position as well as the concentration of each drug.