

# **Synthesis and characterization of new biodegradable polymers and study of some properties in phosphate buffers**

## **Abstract**

Copolymers between polylactic acid and polyethylene glycol, also algalic acid and polyethylene glycol were synthesized and diisocyanate (MDI) were prepared and characterized. Swelling behaviors and loss of weight of these polyurethanes were studied by immersion of the gels in various buffer solutions. Particularly the polyurethane foam showed the highest EWC (equilibrium water constant) in time-dependent and pH-dependent swelling