

Abstract

This work focuses on the development and characterization of new biodegradable material based on corn starch. This material is obtained by acid hydrolysis of starch followed by a grafting of acrylamide in the presence of bis-acrylamide. The results of Fourier transform infrared showed the successful hydrolysis of starch and grafting. The viscometer rheological study showed that a grafted starch pseudoplastic behaviour. X-ray diffraction showed a decrease in crystallinity and graft analysis by scanning electron microscope confirmed the structure of this modification. Thermogravimetry analysis shows an improvement in thermal stability