

Abstract

A series of superabsorbents based on acrylic acid (AA), sodium acrylate, 2-acrylamido-2-methylpropane sulfonic acid, N,N'-methylene bis-acrylamide (MBA) were prepd. by inverse suspension polymn. These hydrogels were further crosslinked on the surface with polyethylene glycol-600 (PEG-600). The water absorbency or swelling behaviors for these xerogels in water and 0.9% saline solns., both under free condition and under load were investigated. Absorption characteristics of these hydrogels were found to depend on nature and concn. of crosslinker in the system. It was also found that the saline absorption was significantly improved as the incorporation of AMPS in the polymer was increased. The surface crosslinking introduced in the polymers was found to improve the absorption under load characteristics without lowering the free water absorption capacities of the polymer to a considerable extent