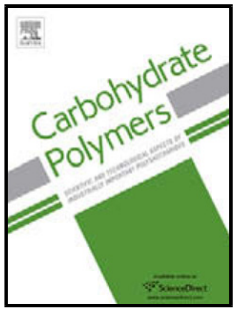

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"Biodegradable Chitosan Nanogels Crosslinked with Genipin"

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Keywords

Genipin, nanogels, chitosan.

ABSTRACT

Chitosan nanoparticles crosslinked with genipin were prepared by reverse microemulsion that allowed to obtain highly monodisperse (3-20 nm by TEM) nanogels. The incorporation of genipin into chitosan was confirmed and quantitatively evaluated by UV-Vis and ^{1}H NMR. Loosely crosslinked chitosan networks showed higher water solubility at neutral pHs than pure chitosan. The hydrodynamic diameter of the genipin-chitosan nanogels ranged from 270 to 390 nm and no remarkable differences were found when the crosslinking degree was varied. The hydrodynamic diameters of the nanoparticles increased slightly at acidic pH and the protonation of ionizable amino groups with the pH was