

Preparation and characterization of chitosan-based superporous semi-IPN hydrogels

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The purpose of this study was to develop chitosan-based porous semi-interpenetrating polymer network(semi-IPN) for gastric retention device. Chitosan and glycol chitosan hydrogels with numerous pores were prepared, and their swelling behaviors in acidic solution were studied. And, to improve mechanical strength of hydrogels, PEO and PVA were used in IPN synthesis with glycol chitosan. Swelling studies were performed in different pH solution at 37°C. Morphology and pore size of hydrogels were confirmed by scanning electron microscopy(SEM). Mechanical strengths were determined by UTM.