

## pH-sensitive swelling and mechanical properties of glycol chitosan-based superporous hydrogels

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Glycol chitosan hydrogels were prepared, and their swelling behaviors in acidic solution were studied to investigate their application for gastric retention device. Glycol chitosan hydrogels with numerous pores were prepared with various concentration of glycol chitosan solution. Those hydrogels were characterized for swelling properties, morphology and mechanical strengths, and 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 universal testing machine (UTM).