

## Preparation and application of cellulose-coated chitosan hydrogel

송명희, 임채령, 윤영상†

전북대학교

(ysyun@jbnu.ac.kr†)

Cellulose is one of the most abundant materials and is used in various fields. However, its application has been restricted due to its poor solubility. To address this issue, we applied ionic liquids (ILs), which is promising solvents for dissolving the cellulose due to its high material solvation ability. In this study, 1-Ethyl-3-methylimidazolium acetate has been applied to dissolve the cellulose. The chitosan (CS) hydrogel dropped into the dissolved cellulose was coated with the regenerated cellulose. The water molecules present in the CS hydrogel acted as anti-solvent. The cellulose-coated CS beads were applied as drug carriers in simulated gastric fluid (pH 1.2) and simulated intestinal fluid (pH 6.8) and exhibited sustained release patterns of drug (verapamil hydrochloride) in both simulated fluids.