Synthesis and Characterization of Hydrogel Thin Film by Modified PVA for Drug Delivery

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Hydrogel is hydrophilic polymer, capable of containing large amount of water. Hydrogel materials consist of water-swollen polymer networks. Hydrophilic groups such as hydroxyl and carboxyl their back bonds absorb and store water, We made hydrogel film using Cupper-Azide-Alkyne cycloaddtion (CuAAc) by generating Cu(I) electrochemically which is required to complete between alkynes and azides at room temperature. We worked on optimizing the conditions to control the film thickness and weight with and without CNT and thickness of film measured using alpha-step and weight measured using Quartz Crystal Microbalance (QCM). The aim of this research is to get a thin hydrogel film which can be used in drug releasing system as a patch or inject inside the body.