ABSTRACT

Isolated chitin from shrimp with size 100 mesh made by Hong K. No method. It's contents of deproteination and demineralization process. Chitin can be changed to chitosan by deacetylation process using 50% sodium hydroxide solution based on varied reflux time 1, 3, 5 and 7 hour. The value of deacetylation degree was determined by base line method from FTIR spectra, it gave various value (70,13, 76,37, 79,21 and 81,43%). Molecular weight is measured by viscometry. Average molecular weight decrease by increasing deacetylation degree (DD). The amount of glutaraldehyde that crosslinked with chitosan is equivalent with the amount of chitosan that available in main chain. Increasing deacetylation degree (DD) of chitosan will increase the need of glutaraldehyde as crosslinking agent. Then, the chitosan that crosslinked by glutaraldehyde will be made as membranes. As result, the membranes was very fragile so the tensile strength can't be determined. The morphologies show that the fibrous of chitosan is destroyed by crosslinking reaction in homogeneous system. Fragility of membranes suspect has connection with crosslinking reaction in homogeneous system in a main chain of chitosan.