

X-ray photoelectron spectroscopy and atomic force microscopy studies on crosslinked chitosan thin film

ABSTRACT

Crosslinked chitosan solution was synthesized by homogeneous reaction of medium molecular weight chitosan in aqueous acetic acid solution with glutaraldehyde as crosslinking agent. The solution was then deposited on glass cover slip by spin coating to form thin film. The crosslinked chitosan thin film had been studied by X-ray photoelectron spectroscopy (XPS) and atomic force microscopy (AFM). The XPS data was obtained to evaluate the state of crosslinked chitosan in thin film. The AFM data shows a relatively smooth morphological characteristic.

Keyword: Crosslinked chitosan; X-ray photoelectron spectroscopy; Atomic force microscopy