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Synthesis and spectral characterization of a decavanadate/chitosan complex

of

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Abstract: A decavanadate/chitosan complex was synthesized by crosslinking chitosan with decavanadate anions at a pH of 3. The materials were characterized by Fourier transformed infrared spectroscopy (FT-IR), X-ray diffraction (XRD), X-ray photoelectron spectroscopy (XPS), absorption spectroscopy (UV-Vis), and transmission electron microscopy (TEM). The spectroscopic results indicated that the decavanadate/chitosan complex was successfully obtained as result of an ionic crosslinking of the chitosan with decavanadate anions.



Key Words: Chitosan, biomaterials, vanadium compounds, crosslinking

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