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## DETERMINATION OF THE SORPTION EFFICIENCY OF POLY(VINYL ALCOHOL)/SCLEROGLUCAN CRYOGELS, AGAINST $\text{Cu}^{2+}$ IONS

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### Abstract

The purpose of this research was to investigate the efficiency of the sorption of copper (II) ions on biopolymeric materials. Blends between poly (vinyl alcohol) [PVA] (DH=98%, DP=900) as a synthetic polymer and scleroglucan (Sclg) as a natural biopolymer have been prepared by repeated freezing-thawing cycles. The sorption capacity of the cryogel against  $\text{Cu}^{2+}$  ions has been determined by VIS Spectroscopy. The alteration of the PVA cryogel properties by Sclg addition and by  $\text{Cu}^{2+}$  ions sorption has been investigated by FTIR Spectroscopy. The highest efficiency in  $\text{Cu}^{2+}$  ions sorption has been obtained for cryogels containing scleroglucan (Sclg) and poly(vinyl alcohol) (PVA) in 1:9 weight ratio by comparing to pure PVA cryogels.

*Key words:* cryogel, FTIR, poly (vinyl alcohol), scleroglucan, VIS spectroscopy

*Received: September, 2010; Revised final: February, 2011; Accepted: February, 2011*

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