

Synthesis of Polimeric Hydrogels of Poly(vinyl alcohol) and Polyethylene glycol

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The current study of the polymeric science considers the biomedical science as one of the most important areas of application of modified polymeric structures as new materials. An example, is the poly(vinyl alcohol) (PVAL), a polymer of great interest due to its specific characteristics for biomedical applications. The synthesis of modified polymeric hydrogel of PVAL with Polyethylene glycol (PEG) 600 was processed using Freezing-thawing sequence of thermal cycles. The characterization of the hydrogels was conduct by differential scanning calorimetry analysis (DSC), thermogravimetric analysis (TGA), infrared spectroscopic analysis (FTIR) and fraction gel. The results obtained of hydrogels as strength, flexibility, low toxicity and sol-gel content are satisfactory. The fraction gel achieved is still small and new extended thermal cycles are being tested to improve it.

The work presents our interest in the establishment of new research in hydrogels close to already the very established nucleus of technology of polymeric in the Center of Chemistry and environment of IPEN.

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