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Characterization of Poly(Hydroxyethyl Methacrylate-Glycidyl Methacrylate)-Imino Diacetic Acid Membrane to Adsorbing Leather Dye

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Abstract : Different chemical substances and too much water are used during leather production. Therefore, the waste water load of the leather industry is harmful to the environment. One of the pollution sources is the production of leather coloring process is a further need to focus on the removal of dye waste waters subject. These water-soluble dyes have a small organic molecular size. Besides the environmental hazards, these dyes cannot be underestimated, they also have harmful effects on human health. In this study, poly(hydroxyethyl methacrylate-glycidyl methacrylate) p(HEMA-GMA) hydrogel membranes were synthesized by UV polymerization method. The hydrogel synthesized is modified with imino diacetic acid (IDA) and then chelated with Cr (III) ions. The chelating capacity of the membranes was determined according to the time, pH and concentration parameters. Dynamic swelling test, elemental analysis, ninhydrin analysis and adsorption, desorption and reusability performances of membranes were also determined.

Keywords : adsorption, dye, leather, p(HEMA-GMA)-IDA
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