

Poster Presentation

Sorption of Myoglobin by Polymer Bound Tris-amine Complexed with Transition Metal Ions

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Abstract

Myoglobin plays a crucial role in disease diagnosis. Upon muscle injury, it is released and it accumulates in serum and urine of patients. Myoglobin contains histidine residues at the protein surface and can chelate with transition metal ions. It shows an absorption peak at 410 nm. In this study, polystyrene modified with Tris -(2-aminoethyl) amine was used for consecutive sorption of heavy metal ions (Cu^{2+} , Ni^{2+} , Fe^{2+}) and Myoglobin (Mb). The effect of initial concentration of heavy metal ions on the Mb sorption was investigated. The initial and final concentration of Mb was analyzed by UV spectrophotometry to confirm the removal of Mb. The results indicated significant uptake of Mb by the heavy metal loaded polymer. The uptake increased with increasing concentration of heavy metal ions.