

Influence of pH variation for removal of heavy metal ions and microorganisms with a N, O-carboxymethyl chitosan

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This study was examined that the relation between the pH and adsorption capacity for treatment of wastewater containing heavy metal ions and E. coli. N, O - Carboxymethyl chitosan were prepared from N-acetylchitosan in NaOH. The influence of pH on the removal efficiency from solution was observed by measuring adsorption capacity of Cu metal ions, Zn metal ions and E. coli. Experiment results showed that the treated wastewater using carboxymethyl chitosan was adsorbed heavy metal ions as well as microorganisms over a wide pH range. High adsorption capability of heavy metal ions was observed at different pH values, and that of E. coli was found at all pH conditions.