

Adsorption Characteristics of Copper Ions and 2-Methyl-4-Chlorophenoxyacetic Acid onto CAC Beads

김태영^{1,2,*}, 김영애³, 송세희³, 조성용^{3,2}, 김승재³, 김진환⁴
¹전남대학교 공업기술연구소; ²바이오하우징연구사업단;
³전남대학교 환경공학과; ⁴전남대학교 응용화학공학부
(tykim001@chonnam.ac.kr*)

Adsorption characteristics of copper ions and 2-methyl-4-chlorophenoxyacetic acid onto CAC beads were investigated. The average molecular weight and the degree of deacetylation of the chitosan used in this study were found to be 8.2×10^5 and 85%, respectively. The chitosan solution was prepared by dissolving chitosan powder into 2wt% aqueous acetic acid solution. And then CAC beads (combined chitosan and activated carbon) were made by mixing the chitosan solution and different amounts of powdered activated carbon. Sodium hydroxide solution was used as a gelation agent. Single component isotherms of copper ions and 2-methyl-4-chlorophenoxyacetic acid onto CAC beads could be represented by Sips isotherm. Adsorption capacity of 2-methyl-4-chlorophenoxyacetic acid increased with increasing amount of activated carbon in the CAC beads. But that of copper ions increased with decreasing amount of activated carbon in the CAC beads.