



ChemTech

International Journal of ChemTech Research

CODEN (USA): IJCRGG ISSN: 0974-4290

Vol.9, No.03 pp 290-295, 2016

Biosorption of Copper (II) from Aqueous Solution using *Oscillatoria.Splendida*

G.BabuRao¹, M. Krishna Prasad¹, K. Kishore Kumar²,

¹Department of Chemical Engineering, GMR Institute of Technology, Rajam, 532 127 Srikakulam District, Andhra Pradesh, India.

²Department of Biotechnology, Mallareddy College of Pharmacy, Dhullapally, Hyderabad 500 014, India.

Abstract: Water is an essential for sustaining life and environment that we have always thought to be available in abundance and free gift of nature. Excessive Copper concentration has been reported in ground waters of more than 20 developed countries including India where 19 states are facing acute diarrhea, Stomach Cramping, Vomiting problems.

This thesis presents results pertaining to the adsorptive studies carried out on Copper removal onto algae bio sorbent (*Oscillatoria Splendida*). Batch sorption studies were performed and the results revealed that bio sorbent demonstrated able to absorb the Copper. Influence of varying the conditions for removal of Copper, such as the Copper concentration, the dosage of varying the conditions for removal of Copper, such as the Copper concentration, the dosage of adsorbent, the size of adsorbent ,the concentration of metal solution studies were investigated. Experimental data showed good fit with the Langmuir's adsorption isotherm model. Maximum Copper sorption was observed at Operating.

It was observed that the metal uptake increase and percentage adsorption of the metals decrease with increase in the initial metal ion concentration. It reveals that the effect of different adsorption particle on the adsorption of copper is significant. The adsorption of the metal is decreased with increase in particle size for *Oscillatoria Splendida*. The amount of copper adsorbed increases marginally in adsorbent dosage of *Oscillatoria Splendida*.

Key Words: Adsorbent, Adsorption Isotherms, Biosorption, Copper, *Oscillatoria Splendid a*.

G.BabuRao *et al* /International Journal of ChemTech Research, 2016,9(3),pp 290-295.
