عنوان مقاله:

Crude and Pure Bioflocculants Produced from Bacillus subtillis for Low Concentration of Copper (Cu2+) Removal

محل انتشار:

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خلاصه مقاله:

Heavy metals can be found abundantly in earth and being utilized as sources for human being usage. One of the most frequently utilized metals use was copper. Copper was used as a conductor for electrical and electronically product, battery productions, utensils and ornamental purposes due to their conductivity and malleability. Even though copper was very important for human being, excessive exposure of copper to the environment would lead to environmental problems. Since copper possessed an ability to be accumulated into the environment and enter the food chain, efficient techniques to remove copper from wastewater are vital. This paper was focused on biological approaches to remove copper from wastewater using bio flocculants produced by Bacillus subtillis. Important factor such as pH, concentrations of inorganic salt, bio flocculants dosage and initial concentrations of copper were also being studied since copper removal was very dependable on stated variables. Best pH operated for pure bio flocculants was recorded at pH of 6, with 2 mL CaCl2 and 5 g/L dosage of pure bio flocculants for 2, 3, 4 and 5 mg/L initial concentrations of copper. While the best pH operated for crude bio flocculants was recorded at pH 4, with 2mL .CaCl2 and 2 and 5 mg/L initial concentrations of copper

کلمات کلیدی:

Copper, Bacillus subtillis, Crude bio flocculants, Pure bio flocculants