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ABSTRACT

Phytoremediation is a method that uses living plants to remediate contaminated soil, sludges, sediments or ground water.

In this research, water hyacinth was chosen as targeted plant to remediate water contaminated with chlorophenol compounds. The experiment was carried out in 4 different fiber glass reactors at room temperature. All of 4 reactors were put under 15 watt TL light. This study was conducted with different kind of treatments. Firstly, reactor contained only with chlorophenol at 10 mg/L and reseach was run until more than 24 hours. The others, treatments were conducted with addition of nutrient, aeration and combination between nutrient and aeration.

Temporary result indicated that water hyacinth can reduced the concentration of 10 mg/L o-chlorophenol up to 46.67 % after 24 hours contact time for no treatment condition. At the same contact time and same initial concentration of sample, the reduction of o-chlorophenol reached to 51.51%, 63.6 % and 66.67 % with the addition of aeration, nutrient, and combination between aeration and nutrient, respectively.

Keywords: phytoremediation, water hyacinth, chlorophenol