

Screening of Potential Fungi from the Polluted Soil for Copper Bioremediation

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ABSTRACT

Microorganisms play a major role in copper remediation from the polluted soil. To control metal pollution, the bioremediation method by utilizing fungi can be applied. The objective of this study was to screen out the fungi potential for bioremediation of copper. The soil sample was collected from a steel factory called Amsteel mill in Klang. The fungus was screened out on Rose Bengal agar and cultured on potato dextrose agar to obtain pure culture for toxicity test. Fungi were subjected to toxicity test using copper sulphate concentration up to 300 ppm. Fungi were identified macroscopically by using pictures and microscopically by means of slide culture technique alongside relevant websites. The result showed that up to a total of 4 potential fungi species based on its growth rate, which were *Trichophyton verrucosum* being the best followed by *Aspergillus niger*, *Candida spp.* and *Aspergillus nidulans* were able to tolerate and grow best in copper and hence making them potential candidates as bioremediation agents. A total of 6 non potential fungi were discovered which were *Microsporum cookei*, *Chrysosporium spp.*, *Trichosporon asteroides*, *Beauveria spp.*, *Paecilomyces spp.* and *Wangiella dermatidis*.