



## Abstract

Chromium resistant fungi and bacteria were isolated from different soil samples. The fungal isolate *Rhizopus* sp. CRF2 removed 90% of the Cr from an initial concentration of 2mg/ml Cr present in the medium. 80% Cr removal from an initial concentration of 40µg/ml Cr was obtained by the bacterial isolate CRB9. *Rhizopus* sp. CRF2 removed maximum Cr present in the medium after 120 hrs of incubation while bacterial strain removed 80% of the Cr present in the medium after 24 hrs. Optimum pH for Cr removal by both isolates was 5 whereas the optimum temperatures of fungi and bacteria for Cr removal were 30°C and 37°C, respectively. When maize plant was grown in the Cr contaminated soil augmented with *Rhizopus* sp. CRF2 and CRB9, there was a considerable decrease in the Cr content in soil. In another experiment, *Echornia crassipes* and isolated microbes removed greater amounts of Cr synergistically from water as compared to that where *Echornia crassipes* was grown alone in the water contaminated with same amount of Cr. It can be concluded that bacteria, fungi and plants could be successfully applied together for Cr reduction in soil and water.