

ABSTRACT

Heavy metal pollution is the greatest challenge of industrialization era. Many industries are using different heavy metals like arsenic, chromium, lead etc. This study was on Cr (VI) reduction by microbes into less toxic Cr (III), Because Cr (VI) is declared as carcinogen by International Agency for Research on Cancer (IARC). Two strains were isolated from tannery effluents from Kasur those have Cr reduction potential of 57mM. 94% Cr reduction was observed after 8Days. Antioxidant enzymes activity, GST and Non-Protein thiols were studied. Results shows increase in percentage enzyme activity and also GST values and non-protein thiol were also increased on exposure of chromium solution. Protein was also isolated and SDS-PAGE was run. The comparative larger bands was observed relative to control samples protein. DNA was isolated and gel was run. 16S rRNA gene was amplified through PCR for identification of organisms. Gene clean was done after that for sequencing these was sent to lab.

Keywords

Heavy metals, Cr toxicity, Reduction potential, Antioxidant enzymes, Protein estimation.