

Isolation and Screening of Potential Microbes for the Removal of Lead from Wastewater

Umar U. Z^{*1}, Anil K. Sharma² and Bilkisu A. Bello³

^{1,2}Department of Biotechnology, Maharishi Markandeshwar University, Mullana-Ambala

³Sa'adatu Rimi College of Education, Kumbotso, Kano, Nigeria

E-mail: *uumarzango@gmail

Abstract—Discharge of effluent by the industries causes a serious problem to the environment. Industrial effluent contains a lot of toxic chemicals such as heavy metals, dyes and others substances, which are very harmful to the ecosystem. These are released to the water bodies and pollute the water and soil in the environment. In the study, industrial effluents were collected at different industrial areas from Chandigarh, Karnal, Panipat, and Sonipat, all in Haryana State-India. 25 bacterial isolates were obtained and screened with different concentrations of Pb ions; BPb08 and BPb19 were found to grown in the high concentration of 500 mg/L. Also 21 fungal isolates were obtained and screened in which FPb05, FPb09 and FPp15 were found to grown in the Pb ion concentrations up to 700 mg/L. These isolates can further be used as potential microbes for the removal of Pb in the wastewater and this can reduce the burden to the ecosystem. It is less costly and environmentally friendly.

Keywords: Isolation, Screening, Heavy metal, Lead, Toxic, wastewater.