

Screening and Characterization of the Isolates from the Contaminated Sites of Jodhpur

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Abstract—Industrialization is the backbone of economy in many developed as well as developing countries. From last two decades due to a rapid industrial development in our country, the disposal of industrial effluents has become a serious problem. These industries consume and generate large volume of wastewater which contains various organic, inorganic and toxic trace elements. This huge amount of effluent generated from the industries is being discharged on nearby land or into water courses. In India, Jodhpur being a large textile hub is going to face a large environmental crisis in future if this problem is not seriously taken today. The aim of this study was to utilize the native isolates to solve the present problem with cost effective method. The present study was conducted to investigate the bacteria isolated from effluent which being discharged into the sole outlet of wastewater i.e. Jojari river. Samples were collected from the bank of river near Jodhpur-Barmer state highway into a sterile bottle. Serial Dilution method and Pour plate technique were used for the isolation of dye decolorizing bacteria. Well grown bacterial colonies were picked and further purified by streaking. The isolated strains were maintained on Nutrient agar slants and stored at 4°C. Identification of the bacterial isolates were carried out by the routine bacteriological methods viz. colony morphology, preliminary tests such as gram staining, capsule staining, endospore staining, motility, catalase and oxidase, plating on selective medias and performing biochemical tests. Majority of the dominant bacterial strains isolates were gram positive *Serratia*, *Staphylococcus* and *Enterobacter*.

Keywords: Industrialization, Environment, Isolates, Effluent, Serial Dilution.