Bioremediation perspective of navy blue rx-containing textile effluent by bacterial isolate -
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**Bioremediation perspective of navy blue rx-containing textile effluent by bacterial isolate**

The aim of the present study was to investigate the textile effluent degrading potential of an isolated bacterium, Proteus sp. SUK7. The strain had the capacity to decolorize Navy Blue Rx-containing textile effluent up to 83% within 96 h. The maximum decolorization was observed under static conditions at pH 7.0 and 30°C. Reduction in the chemical oxygen demand (COD) and biological oxygen demand (BOD) of textile effluent was observed after treatment with Proteus sp. SUK7. Induction in the activities of laccase and aminopyrine N-demethylase was observed after decolorization, which indicates involvement of these enzymes in the decolorization process. The presence of various inducers was also found to have a modulatory effect on enzyme activities and the decolorization process. Biodegradation was confirmed using various analytical techniques, such as ultraviolet-visible (UV-Vis) spectroscopy, Fourier transform infrared (FTIR), gas chromatography-mass spectrometry (GC-MS), and high-performance liquid chromatography (HPLC). A phytotoxicity study was performed to confirm the nontoxic nature of the degradation metabolites. © 2012 Taylor and Francis Group, LLC.

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