

In vitro demonstration of textile dye bioremediation by fungi

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Abstract : Current study has evaluated the decolorization of textile dye Red 3BN by *Penicilium chrysogenum*, *Cladosporium* sp. and *Aspergillus niger*, isolated from textile industry effluent at Bangalore. The organisms were maintained in the laboratory in Potato Dextrose Agar medium. Production of the enzyme laccase by all the 3 strains of fungi has been confirmed through guaiacol bioassay followed by decolorization of an aqueous solution of the dye by crude extract of laccase prepared from individual fungi maintained in enrichment medium. Validation of fungal decolorization of the dye in real effluent sample supplemented with glucose and peptone under simulated condition has recorded nearly 100% decolorization of the effluent in 16 days by *P. chrysogenum*, and *Cladosporium* sp., whereas *A. niger* exhibited decolorization upto 98.6%. The study has confirmed the potential of these fungi for bioremediation of textile effluent.

Keywords- Fungi, Bioremediation, *Penicilium chrysogenum*,

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