



Biodecolorization of a persistent organic dye from model wastewater using *Curvularia spp*

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Received 14 October 2011; Accepted 23 February 2012

ABSTRACT

The textile industry produces a huge volume of wastewater, out of which 10–50% of these effluents are discharged into the aquatic environment without being treated. The discharge of these colored compounds in the environment causes considerable nonaesthetic pollution and serious health-risk factors. In this study an effort has been made to biodecolorize simulated dye wastewater containing Reactive Red 195 by isolated fungus *Curvularia spp*. The experiments have been performed by varying the influencing parameters, such as initial concentration, pH, and temperature. Maximum decolorization of 66% was obtained for 0.01 g/l of dye concentration and at pH 5. Maximum decolorization of 75.33% was obtained at a temperature of 40°C (in 48 h). The optimum condition for maximum dye uptake capacity is: initial dye concentration 0.02 g/l, temperature 40°C, pH 5, and an inoculum size of 5 ml (approximately 1.0×10^5 cells/ml).

Keywords: Biodecolorization; *Curvularia*; Dye bath; Fungi; Reactive Red 195

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