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Biodegradation of anaerobically treated distillery spent wash by *Aspergillus* species from a distillery effluent contaminated site

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ABSTRACT

This paper elucidated bioremediation process and its implementation to minimize the environmental load. Optimum chemical oxygen demand (COD) and decolorization have been achieved in the presence of glucose and peptone. Fungi are identified and isolated from a distillery effluent contaminated site. Identification has been carried out on the basis of morphology. Response surface methodology (RSM) based on central composite design (CCD) is employed to optimize operating parameters of the bioremediation process for the treatment of distillery spent wash. The effects of four independent parameters such as pH (X_1), carbon (fructose) concentration (X_2), nitrogen (peptone) concentration (X_3), and inoculum concentration (X_4) on the percentage decolorization and COD removal are investigated. A quadratic model is implemented to predict the decolorization and COD removal. Full factorial CCD of RSM is executed by using Minitab 18. The implication of independent variables and their

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