



## Comparative Study of Chemical Vs Biotechnological Approach for Deinking of Paper

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### Keywords

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*Aspergillus*,  
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Decolorization.

**ABSTRACT:** Effluent is liquid water discharged from sewage and industrial plants such as effluent discharged after treating paper for deinking. The impact of this discharge on the environment is very hazardous. In our study we have discussed about the various deinking methods (e.g- Chemical method) adopted by the industries to deink the paper and the toxic effect of this effluent. In chemical method, a high amount of TDS, High pH, EC have been found which if released in water bodies directly will lead to many lethal diseases to human beings and very harmful for the aquatic life. So as to reduce the toxic effect of the effluent Biotechnological methods come into picture. In biotechnological method, micro-organisms and fungus can be used. In our method, we used two specific fungus (*Aspergillus* and *Trichoderma*) producing extracellular enzyme. Our studies revealed that effluent released after biotechnological treatment has lower disposal norms (pH, EC). Hence our study supports the hypothesis that biotechnological method for deinking are safer to the environment as compared to chemical method. Although % Decolorization is higher in chemical method but still we prefer biotechnological method over chemical method considering their environmental feasibility. Biotechnological method can further be optimized to achieve better deinking of paper. Deinking has been carried out using different samples like different fungus, different colors of inks and different types of papers. © 2016 iGlobal Research and Publishing Foundation. All rights reserved.

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