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Biodegradation of Waste Papers: A Sustainable Technology for a Clean Environment

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Abstract

Solid wastes have posed problems of pollution in both developed and developing countries where they are found in large quantities due to domestic and industrial utilization of such materials, the inability to recycle all wastes has provided the nudging to delve into alternative method of waste management. This project aims at analyzing the effect of fungi metabolites (Enzyme); (*Rhizopus*) in the bioconversion of waste papers (Foolscap, Newspaper and Brown envelop) into fermentable or reducing sugars. Proximate analysis, alkaline pretreatment with sodium hydroxide

and process of deinking for the removal of inks for higher susceptibility of the substrate were carried out on paper samples. Hydrolysis using enzyme was carried out for 7 days. Concentration of reducing sugar present in the samples was done using the Dinitrosalicylic acid test method. Effects of Temperature on the waste sample were analyzed at 37, 40 and 45°C.

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