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Extracellular Laccase Production by Co-culture between Galactomyces reesii IFO 10823 and Filamentous Fungal Strains Isolated from Fungus Comb Using Natural Inducer

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Abstract : Extracellular laccases are copper-containing microbial enzymes with many industrial biotechnological applications. This study evaluated the ability of nutrients in coconut coir to enhance the yield of extracellular laccase of Galactomyces reesii IFO 10823 and develop a co-culture between this yeast and other filamentous fungi isolated from the fungus comb of Macrotermes sp. The co-culture between G. reesii IFO 10823 and M. indicus FJ-M-5 (G3) gave the highest activity at 580.20 U/mL. When grown in fermentation media prepared from coconut coir and distilled water at 70% of initial moisture without supplement addition, G3 produced extracellular laccase of 113.99 U/mL.

Keywords : extracellular laccase, production, yeast, natural inducer
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