



Recyclation of Peeled & Unpeeled Sugarcane Pressmud for Production of Itaconic Acid by Solid State Fermentation Using *Aspergillus Terreus* RC4

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ABSTRACT: Itaconic acid was discovered by Baup (1837) as a thermal decomposition product of citric acid. In 1931, Itaconic acid was first shown to be a metabolic product of *Aspergillus itaconicus* and soon after, it was discovered that some strains of *A. terreus* also excrete this type of organic acid. Itaconic acid produce by the solid state fermentation and for this purpose we used Agro-waste material sugarcane pressmud. The micro organism is used for this purpose is mutant strain of fungi *Aspergillus terreus* RC4 strain which is especially responsible for production of Itaconic acid. The Itaconic acid produced by solid state fermentation (SSF) was 8.1 gm/L and 10.7gm/L using peeled and unpeeled sugarcane pressmud respectively. Itaconic acid is also produced by submerged liquid state fermentation (SLF) but the yield of Itaconic acid observed is less in this method. The Itaconic acid produced by liquid state fermentation is 4.9 gm per liter or 4.9% yield of IA per gm of initial glucose content. The Itaconic acid yield in terms of gm of IA per gm of glucose (initial sugar content of the medium; 10%) was 8.1% (w/w) and 10.7% (w/w) for unpeeled and peeled sugarcane pressmud respectively. © 2014 iGlobal Research and Publishing Foundation. All rights reserved.

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