

Amylase production with corn waste using solid state fermentation by *Aspergillus niger*

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Abstract Introduction: Amylases are the most important industrial enzyme. they degrade starch to sugar units. Amylases have extensive application in food, textile, paper, pharmaceutical and bioconversion of solid waste. they produce different sources but Microbial ones are the most important for industrial application. The solid state fermentation hold tremendous potentials for the production of enzymes. **Materials and Methods:** In this study, amylase produced with solid state fermentation on corn and corn waste using *A.niger* Ptcc(5010) and cultural conditions were optimized by taguchi methodology. Effect of incubation time, PH, buffer volume and inoculum size in enzyme production were assayed. **Results:** The results confirmed high performance of enzyme production with corn waste as substrate by indigenous *A.niger*. The maximum enzyme activities with corn and corn waste. In buffer volumes 25%, 20%, PH=7,6, inoculum sizes of 25%, 30% and 48, 72h incubation times were 16.73u/g and 4.97u/g respectively. This shows high yield amylase production. compare with other solid substrate. **Conclusion:** The corn waste could be suitable substrate for an amylase production.

Keywords : - (α -Amylase) 2- (β -Amylase) 3- (γ -Amylase) 1- Biomass low air pressure - *Aspergillus*

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