



## Isolation & Identification of *Saccharomyces Cereviseae* from Grape's Peel and Bioethanol Production Using Various Substrates

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**ABSTRACT:** Alcoholic fermentation has been extensively studied during the past few decades because of its technical and economical advantages. Yeast (*Saccharomyces Cereviseae*) was isolated from the peels of Grapes and slide culture technique was used for the enhanced visualization and culture of *Saccharomyces Cereviseae* on Czapek Dox agar media. Slide culture technique permits fungi to be studied virtually in situ with as little disturbance as possible. In slide cultures, we have grown the fungi directly on the slide on a thin film of Czapek Dox agar. Thus, there is no need to remove a portion of the fungus from a culture plate and can transfer it directly to the slide. So there is less chance for the features that is key to identification, notably the spore-bearing structures, to be damaged. Characterization and identification of *Saccharomyces Cereviseae* were done by on the basis of morphology and various biochemical tests. Lactophenol cotton blue was used to visualize yeast. Batch fermentation was used for the production of ethanol using various substrate like Sucrose, Molasses, Grapes' juice, Maize powder as well as combination of Molasses and Maize powder. The downstream processing involves the various techniques like filtration, centrifugation and distillation. Ethanol production was confirmed by reaction with  $H_2SO_4$  and  $K_2Cr_2O_7$ . Which shows appearance of dark green colour in the sample, which confirms the presence of ethanol. The maximum ethanol production was seen in the substrate combination of Maize powder with cane sugar molasses.

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