

## **Isolation of Yeast and Screening for Amylolytic Activities for the Saccharification of Locally Available Starchy Produce for the Production of Bioethanol**

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Amylolytic activity of yeast can be exploited for the biological conversion of complex carbohydrates into fermentable sugars. Hence, the amylolytic yeast has vast industrial potential and the enzymatic conversion of complex carbohydrates with fermentable sugars is economical and environmental friendly. Therefore, a study was planned to isolate autochthonous yeast and screen them for amylolytic properties. In the study, over the 80 contaminated sugary and starchy materials were collected and isolation and purification of the yeast was carried out and their morphological and the cultural characteristics were also recorded. Purified yeast strains were checked for the hydrolyzation and the fermentation of powdered samples of starchy sources such as Cassava (*Manihot esculenta*), *Wei lunu* (*Pancreaticum zeylanicum*), *Wal habarala* (*Alocasia macrorhiza*), *Kiri ala* (*Xanthosoma sagittifolium*) etc. Fermentative properties of the isolated yeasts were also studied using 10% sucrose solutions. Results revealed that most of the yeast isolates were with fermentative properties and the yeasts, isolated from Jackfruit, Coconut Toddy, Honey, Water melon, Tomato, Apple, Pumpkin, Coconut, *Ugurassa*, Snake gourd and Orange were showed amylolytic properties. However, yeasts which were isolated from contaminated Jackfruit, Apple, Snake gourd, Orange and Honey showed both amylolytic and the fermentative properties. Further, yeasts which were having ethanol producibility did not show amylolytic activities except the yeast isolated from the Snake gourd, indicating that there are amylolytic fermentable yeasts.

Key words: Amylolytic yeast, Alcohol fermentation, Hydroxylation, Starchy materials