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Effect of yeast *Saccharomyces cerevisiae* on production of bioethanol by batch fermentation of cereals

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ABSTRACT: India is the world's second largest producer of ethanol next to China and has the potential of being the biggest, backed by its beverage and agricultural sector. Batch fermentation of cereals waste using yeast, *Saccharomyces cerevisiae* converts carbohydrates into carbon dioxide and alcohols. The present work was planned and carried out in Distilleries and Breweries Ltd., Bhopal (M.P.) in 2014. The enzymes of the malts break down starch in to sugar, which is ultimately converted into alcohol by yeast, the hybrid yeast improved ethanol tolerance, its glucose fermentation rate and yield more ethanol than those of its parent strain. The increased pH 5.0 to 6.5 and temperature 50 to 72°C break down β-glucanase, α-amylase and natural protease in to malt sugar, and ultimately these enzymes convert malt sugar into glucose.

Key Words : Barley, glucose, rice, wort, distillation, beverage.