

Effect of Temperature on the Production of Fructose and Bioethanol from Date's Syrup using *S. cerevisiae* ATCC 36859

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Abstract : The effect of temperature on the production of fructose and bioethanol from date syrup via selective fermentation by *S. cerevisiae* ATCC 36859 strain was studied. Various temperatures have been tested (27, 30 and 33 °C). The fermentation experiments were conducted in a water shaker bath at the three temperatures under testing and 120 rpm. The results showed that a high fructose yield can be achieved at all temperatures under testing while the optimal is 27 °C with 84% fructose yield. A high ethanol yield can be obtained for all temperatures under testing. However; the maximum biomass concentration and ethanol yield (86.22%) were obtained at 30 °C.

Keywords : dates, ethanol, fructose, fermentation, *S. cerevisiae*

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