

***In vitro* effect of specific culture medium containing potato and banana extracts as prebiotics on the growth of yeast (*Saccharomyces cerevisiae*)**

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Abstract

The aim of this study was to determine the effect of prebiotic properties of potato and banana on the growth of *Saccharomyces cerevisia* yeast. To perform this experiment, *S. cerevisia* was prepared as lyophilized and after culturing in Sabouraud dextrose broth medium, it was cultured on agar culture medium; the obtained colonies inoculated to the free-glucose media containing concentrations of 2, 6.25, 12.5, 25, 50, 75 and 100 percent of banana and potato extractions; then, the growth rate of *S. cerevisia* was measured according to the growth curve and optical density was read by spectrophotometer at a wavelength of 600 nm. The results showed that the growth of *S. cerevisia* in both media containing banana and potato extracts at a concentration of 100% had a significant increase compared to other treatments; Also, the highest growth rate of treatments containing banana and potato extract with 100% concentration were significantly different from each other. According to the results of this study, banana and potato extract can be used as a prebiotic substance for the growth of *Saccharomyces cerevisiae*.

Keywords: Bananas, Potatoes, Prebiotic, *Saccharomyces cerevisiae*, Yeast

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