Production of Xylitol from Xylose Fermentation

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ABSTRACT

Xylitol has multiple biological functions that render the sugar alcohol many potential applic-ations in the food industry. This research used the yeast, Candida subtropicalis C22 , isolated from sugar can bagasse to ferment xylose into xylitol. The strain produced mostly xylitol with very small amount of ethanol. Shaker flasks of working volume of 150ml were used for the study. The strain could produce 17.5% (w/v) xylitol with initial xylose concentration of 20% (w/v) within 9 days. The addition of surfactant (Triton X-100) was found to siguificantly speed up the fermentation,similar xylitol conc.(16% w/w) was achieved in 5 days. However, the yield was slightly decreased. The productivity was 0.0359g/hr/L/g dry cell. Key Words：Xylose、Xylitol 、surfactant、Candida subtropicalis

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