

Optimization of Process Variables for High Cell Concentration of *Saccharomyces cerevisiae* JUL3 in Fed-Batch Cultures

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The β -glucan is one of the most abundant polysaccharides in the yeast cell wall. It shows a variety of biological activities (immunoadjuvants, antitumor, radioprotective agents, etc.). The primary use of β -glucan isolated from the cell wall of yeast is to enhance the immune system. *Saccharomyces cerevisiae* JUL3 producing highly branched β -glucan was developed through UV mutagenesis and laminarinase resistance. Optimization of molasses and corn steep liquor was performed by using response surface methodology (RSM) for the production of β -glucan by *S. cerevisiae* JUL3. In this study, we tested process variables such as aeration and agitation, feeding rate in a 2.5L stirred tank reactor (STR) for the production of high cell concentration of yeast.

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