

# Optimization of Asparaginase Production by *Pseudomonas aeruginosa* Using Experimental Methods

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### Abstract :

Abstract: Evaluation of fermentation process parameter interactions for the production of L-asparaginase by *Pseudomonas aeruginosa*. Box-Behnken design of experimentation was adopted to optimize nutritional sources, physiological (incubation period) and microbial (inoculum level). The experimental results and software predicted enzyme production values were comparable. Incubation period, inoculum level and nutritional source (soybean) were major influential parameters at their individual level. Interaction data of the selected fermentation parameters could be classified as least and most significant at individual and interactive levels. All selected factors showed impact on L-asparaginase enzyme production by this isolated microbial strain either at the individual or interactive level. Incubation temperature, inoculum concentration, and nutritional source (soybean) had impact at individual level. Significant improvement in enzyme production by this microbial isolate was noted under optimized environment. [Nature and Science. 2010;8(2):1-6]. (ISSN: 1545-0740).

### Key Word :

box-Behnken; *pseudomonas aeruginosa*; L- asparaginase; response surface

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