



## The Study of Lactose Effect on Citric Acid Production by *Aspergillus niger* PLA30 in Cheese whey

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**Abstract:** Citric acid is considered one of the most important organic acid, which is used in various aspects. Fermentation is considered one of the best methods for citric acid production using microorganisms such as *Aspergillus niger*. Cheese whey could be used as a good substrate for the production of citric acid. In this study four levels of lactose 40, 90, 150 and 180 g/l were tested for their effect on the activity of *Aspergillus niger* PLA30 in citric acid production. Results indicated that the optimum lactose concentration to be added to the fermentation medium, which resulted in the production of 25.53ml of acidity and 72.11% real yield. Indicating that modification of raw cheese whey by the addition of lactose can serve as a potential carbon and energy source for the production of citric acid and increase its production.

**Key words:** Citric acid, *Aspergillus niger*, Cheese whey, Lactose.

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