

عنوان مقاله:

Effect of *Saccharomyces cerevisiae* yeast in reducing of the amount of Citrinin fungal toxin in wheat flour

محل انتشار:

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خلاصه مقاله:

Background & Objective: Citrinin mycotoxin is produced by filamentous toxin producing fungi. *Saccharomyces cerevisiae* yeast has the ability to bind mycotoxins to its cell wall and thus reduce its toxicity. The aim of this study was to determine the amount of Citrinin mycotoxin and its reduction in wheat flour by *Saccharomyces cerevisiae*. **Method:** In this study, 15 samples of wheat flour were randomly collected from the bakeries in the city of Babol. The amount of Citrinin contamination in samples was assessed by direct competitive ELISA measurement and then *Saccharomyces cerevisiae* was added to wheat flour. The amount of Citrinin contamination in the samples was measured by direct competitive ELISA for a second time. SPSS software (version 18), Kolmogrov-Smirnov test and paired t-test was used for statistical analysis of data. The significance level for all tests was considered less than 0.05. **Results:** The highest and lowest concentration of this toxin in the studied samples were 35.5 and 1.1 ppb respectively, and after the effect of *Saccharomyces cerevisiae* on wheat flour, 0.8 and 30 ppb respectively. The statistical results showed that the addition of *Saccharomyces cerevisiae* decreased the amount of Citrinin in flour samples ($P < 0.05$). **Conclusion:** Bread is among the most important and necessary food. To reduce its contaminating materials such as mycotoxins, less expensive and safe biological methods can be used.

کلمات کلیدی:

سرویزیه، سیتربین، آرد گندم، *Yeast, Saccharomyces Cerevisiae, Citrinin, Wheat Flour*, مخمر، ساکارومایسس

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