









1590 EFFECT OF STORAGE CONDITIONS ON THE LEVEL OF AFLATOXIN B1 AND OCHRATOXIN A IN RED PEPPER SPICE

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Many spices are raw material for the growth of mold, and are one of the major food groups vulnerable to contamination with mycotoxins particularly aflatoxin and ochratoxin (the strongest and most dangerous mycotoxins). Commercial Spices are increasingly used in a wide variety of meals prepared by consumers to enhance the flavor and taste in the kitchen which can be a source of Mycotoxin infection to humans Because they are usually eaten raw or added to ready to eat foods. The purpose of this research is to study the effects of environmental conditions such as humidity and temperature maintenance, and their interactions on the level of aflatoxin B1 and ochratoxin A in dried red pepper spice to provide the best storage conditions. Results showed that although fungal growth increase by increasing the temperature to 30-35 $^{\circ C}$ but the toxin production decreases in this temperature . On the other hand, the results showed that at low temperatures, toxin is not produse unless the ambient relative humidity and storage time increased. In other words, ochratoxin A and aflatoxin B1 production depends on relative humidity because if the relative humidity is high, toxins will also produce at the low temperature $(15 \degree ^{C})$. The results also showed that, storage time at the 80% humidity and lower has no significant effect in the production of aflatoxin B1 and ochratoxin A. Overall, the results showed that the dried red peppers can be contaminated with aflatoxin B1 and ochratoxin A in storage time. Effect of temperature and humidity in during storage time showed that $25^{\circ C}$ and relative humidity of 95% is the best condition for the production of aflatoxin B1 and ochratoxin A. Whit reduction of relative humidity and the temperature to below 75% and $10^{\circ C}$, it is possible to prevent the production of toxins and contamination of product.