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EFFECT OF SOME ESSENTIAL OILS FOR INHIBIT OF OCHRATOXIN PRODUCTION BY *PENICILLIUM VERRUCOSUM*

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Ochratoxin A (OTA) is a ubiquitous mycotoxin produced mainly by several fungal species including *Aspergillus ochraceus, A. carbonarius, A. niger* and *Penicillium verrucosum* of improperly stored food products. It exhibits potent several pathologies such as fertility inhibition, cancer, mutagenic and nephrotoxic effects and it is linked to the Balkan Endemic Nephropathy. It has classified OTA as a possible human carcinogen (group 2B) by International Agency for Research on Cancer (IARC). It has been found a wide variety of agricultural commodities worldwide, ranging from cereal grains to dried fruits to wine and coffee. It has also been determined in meat, pork and poultry. There are some chemical and physical approaches proposed to prevent toxin production. EOs and their main constituents are becoming increasingly important in the food because of their wide spectrum of biological activity. In vitro antifungal activities of four essential oils (EOs) from sage (*Salvia officinalis* L.), mint (*Mentha piperita* L.), garlic (*Allium sativum* L.) and wild oregano (*Origanum onites* L.) were evaluated for their potential to control ochratoxin A (OTA) produced by *P. verrucosum*. OTA production could be significantly reduced by sage and mint oils and completely prevented by garlic and wild oregano oils at the concentrations of 0.5 and 0.25%. The results of this study revealed that the mentioned EOs can be potantial food preservative against the fungal contamination and its toxin production.

Keywords: Essential oils, Ochratoxin toxin prevention, *Penicillium verrucosum*

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