

INHIBITION KINETICS OF OCHRATOXIGENIC *PENICILLIUM VERRUCOSUM* USING *ORIGANUM ONITES*, *SALVIA OFFICINALIS* AND *MENTHA PIPERITA* ESSENTIAL OILS

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The study deals with the efficacy of *Origanum onites*, *Salvia officinalis* and *Mentha piperita* essential oils (EOs) rich in phenolic compounds against ochratoxigenic *P. verrucosum* D-99756. *O. onites*, *S. officinalis* and *M. piperita* EOs were used at their minimal lethal concentration levels at 7.75, 125, and 250 µL/mL, respectively. These EOs killed more than 50-60% of the fungi sporulation in 48 h. At the end of the 168th hours, 78.50-81.41% lethality was observed at stated concentrations for all of the tested EOs. Statistically, the most effectiveness time for lethal effect was 84th h for *O. onites* and *S. officinalis* EOs treatments (P<0.05). *M. piperita* did not provide significant inhibition (P>0.05) after 48th h. The data obtained the study suggest that there are potential of using plant and spice EOs for their fungistatic and fungicidal effects in food products and also indicated that mycotoxin production can be prevented if the strain is treated with *O. onites*, *S. officinalis* and *M. piperita* and their specified concentrations.

Keywords: Fungicidal kinetic, *Penicillium verrucosum*, *Origanum onites*, *Salvia officinalis*, *Mentha piperita*.

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