

International Conference on

FOOD MICROBIOLOGY

August 08-10, 2016 Birmingham, UK

Impact of some essential oils on inhibition of aflatoxin production by *Aspergillus flavus*

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The present study aimed to investigate the effects of some essential oils on inhibiting fungal growth of *A. flavus* and aflatoxin production. Clove oil was found as the best among six different oils tested against the radial growth at the concentration of 0.05 mL/100 mL. However, other oils were also significantly better than the control except the pumpkin oil. Although pumpkin oil was slightly effective than the control at its higher concentration (0.05 mL per 100 mL), but it was not effective at its lower concentrations (0.00, 0.01 and 0.03 mL/100 mL). All tested oils were significantly better than the control in suppression of mycelia growth and highest suppression was accomplished by clove oil at 0.05 mL/100 mL concentration, while, pumpkin oil was not effective. Although pumpkin oil was slightly better than the control at its higher concentration (0.05 mL/100 mL), it was not effective at its lower concentration (0.00, 0.01 and 0.03 mL/100 mL). Spore germination was also affected by the oils tested. Clove oil gave complete inhibition at its higher concentration followed by Cummin, Rehan, Garlic and Desert date, while Pumpkin oil was the least one. Aflatoxin production was highly affected by the essential oils tested. Clove and Cummin exhibited a complete inhibition followed by Rehan, Garlic and Desert date while Pumpkin oil was not effective.

Biography

Abdel Moneim has been awarded his PhD in 2001 and pursued a postdoctoral fellowship at University of Kobe, Japan. He is expert in "Food Science and Technology, his main concern is food microbiology. He has authored a large number of articles in reputed journals and has been invited to different international conferences. He published many books in the area of food science and technology. He is a member of many national and international academic associations.

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