



Decontamination of Ochratoxin-A Producing *Aspergillus niger* and Ochratoxin A in Medicinal Plants by Gamma Irradiation and Essential Oils

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Abstract: In this study twenty two medicinal and herbal plants among the common plants used in Egypt were collected and evaluated for fungal and ochratoxin contamination. *Aspergillus*, *Penicillium*, *Fusarium*, *Botrytis* and *Cladosporium* species were the most common fungi with different levels in most medicinal and food herbs under study. Out of the tested plants and the isolated fungi, black pepper contaminated with the highest amount of ochratoxin A and *A. niger* produced the highest amounts of ochratoxin A. Irradiation with five kilograys (kGY) decontaminated the plant from fungi and 10 kGY minimized the ochratoxin level up to 261.24 µg/kg. Fungal cultures amended with 250 µl/l clove oil, adjusted at pH 4 and incubated at 50° C for 4 days minimized both fungal growth and ochratoxin production.

Key words: ochratoxin A, gamma radiation, herbal and medicinal plants

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