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Prevalence, Level and Health Risk Assessment of Mycotoxins in the Fried Poultry Eggs from Jordan

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Abstract : In the current study, level and prevalence of deoxynivalenol (DON), aflatoxin B1 AFB1), zearalenone (ZEN), and ochratoxin A (OTA) in fried poultry eggs in Jordan was investigated. Poultry egg samples (n = 250) were collected. The level of DON, AFB1, ZEN and OTA in the white and yolk of poultry eggs was measured using LC-MS-MS. The health risk assessment was calculated using Margin of Exposures (MOEs) for AFB1 and OTA and hazard index (HI) for ZEN and DON. The highest prevalence in yolk and white of eggs was related to ZEN (96.56%) and OTA (97.44%), respectively. Also, the highest level in white and yolk was related to DON (1.07µg/kg) and DON (1.65 µg/kg), respectively. Level of DON in the yolk of eggs was significantly higher than white of eggs (P-value < 0.05). Risk assessment indicated that exposed population are at high risk of AFB1 (MOEs < 10,000) in fried poultry eggs.

Keywords : mycotoxins 2, aflatoxin b1, risk assessment, poultry egg
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