



STUDY OF CONTAMINATION LEVEL OF OCHRATOXIN (A) IN IMPORED GRAINS WHEAT AND ITS PRODUCTS AT SOME LIBYAN FACTORIES

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ABSTRACT

This study was conducted to determine the present of Ochratoxin (A) (OTA) to the number of 50 samples of wheat grain from varieties of soft wheat (*Triticum aestivum*) and hard (*T. durum*), and its products from some Libyan Mills (from the north-west and south-east and north) by using a technique (IAC) immunoaffinity columns cleaning and HPLC-FD to detect, with an overall average rate of recovery of the samples of wheat and grain products and fungal isolates $86.59 \pm 0.03\%$ and $89.19 \pm 0.01\%$, respectively. The results showed that 96% of the samples were positive for OTA, with the average concentration of OTA from different regions reached the highest concentration of $0.0928 \mu\text{g/kg}$ for soft wheat. The average concentration of the OTA in the different areas that have been grain assembly resulted the highest concentration of $0.0918 \mu\text{g kg}^{-1}$ for soft wheat for the Western Region, followed by 0.0783 and $0.020 < \mu\text{g kg}^{-1}$ for the eastern and southern region respectively, while the average concentration of the OTA for hard wheat 0.0307 and $0.3316 \mu\text{g kg}^{-1}$ of eastern and western region respectively. However all the samples contain levels of OTA are below

the limit recommended by Libyan Standards Specification and European Commission Regulation Standard. Results of statistical analysis also showed no significant differences of ($P \leq 0.01$) of the concentration of the for hard and soft types wheat between regions, and for soft wheat products between regions while there was significant differences between hard wheat products at level of ($P \leq 0.01$). The results showed that the overall average for the moisture content of the samples by region ranged between 10.6, 11.10% for soft wheat for the southern region and western region respectively, 9.54 and 10.08% for hard wheat to the western and eastern region respectively. Results also showed that the overall average for the moisture content of soft wheat products (flour) between different regions was (13.03, 11.78, 8.58%) to the north-east, north-west and south-west respectively. Hard wheat products did not exceed 13.33, 10.76% for the southern- west and north-east regions of semolina and pasta respectively, while was within the limit to the Codex Alimentarius Commission. the results of the statistical analysis and the presence of highly significant for moisture content between types of soft wheat and hard within regions and this also applies to soft wheat and hard products between the regions at the level of ($P \leq 0.01$).

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