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## ANALYSIS AND EVALUATION OF OCHRATOXIN A IN COCOA POWDER

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Ochratoxin A (OTA) is a mycotoxin produced by different mold species of *Aspergillus* and *Penicillium*. Due to its toxicity, OTA can produce nephrotoxic, hepatotoxic, and immunotoxic effects. In addition, the International Agency for Research on Cancer (IARC) has classified OTA as possibly carcinogenic to humans (Group 2B). Contamination with OTA generally occurs during the cultivation and storage of raw materials and foodstuffs under favourable conditions of humidity and temperature.

Cocoa is a type of product susceptible to contamination with OTA, as are its main derived products such as cocoa powder and chocolate. Currently, European legislation sets a maximum limit for OTA in cocoa powder at 3 µg/kg. This study aimed to evaluate the contamination level in 50 branded samples of cocoa powder. The samples were analysed using an extraction stage with methanol/water (80:20) and a cleanup step using immunoaffinity columns. The determination of OTA was performed using High-Performance Liquid Chromatography (HPLC) coupled with a fluorescence detector (FLD). Thirty percent of the samples (n=15) were contaminated with OTA at concentrations above the limit of detection (0.20 µg/kg), ranging from 0.22 to 1.36 µg/kg. The incidence and concentration of OTA are in agreement with the findings of other authors in the available scientific literature, indicating the stability of this mycotoxin during cocoa processing to obtain cocoa powder.

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**keywords:** ochratoxin A; cocoa powder; HPLC; mycotoxins.