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**Exposure assessment to mycotoxins in a Portuguese fresh bread dough company by analysis of dust and urine samples**

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Occupational exposure to mycotoxins can occur in many and different work environments. Critical workplaces for mycotoxins appearance have already been studied and nowadays it is possible to investigate that exposure to mycotoxins is likely through inhalation due to their presence in dust. This study aimed to assess occupational co-exposure to mycotoxins in a fresh bread dough company, a workplace not studied until now. Occupational exposure assessment to mycotoxins was done with a LC-MS/MS urinary multi-biomarker approach. Twenty-one workers and nineteen participants, which were used as controls, participated in the study. Additionally, a settled dust sample from the company was analyzed. As a result, workers showed quantifiable results for deoxynivalenol-glucoside (DON-GlcA) (43%) and Aflatoxin M1 (AFM1) (10%). For the control group, only CIT presented a quantifiable result. DON was the mycotoxin measured also in higher amounts in the settled dust sample (58.2 ng/g). Therefore, workers exposure is probably due to the raw materials contamination and their manual handling during the work routine in the company. We can conclude that workers and controls are exposed to several mycotoxins simultaneously and workers might have a higher exposure to airborne DON by flour dust. Risk management measures should be applied to prevent exposure and health surveillance programs should be defined.

Key-words: mycotoxins, occupational exposure, fresh bread dough company, multibiomarker approach

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