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CONTAMINATION BY AFLATOXINS IN DIFFERENT FOOD MATRICES PRODUCED AND CONSUMED IN MOZAMBIQUE

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Mycotoxins are toxic metabolites produced by various moulds that frequently contaminate food worldwide, being significant contributors to food losses in developing countries. In Mozambique, there is no comprehensive knowledge of the risk of mycotoxins in the country, nor structured actions to reduce the impacts of mycotoxins and promote health and food security in disadvantaged populations. This research aimed to analyse the level of contamination by aflatoxins in different food matrices produced and consumed in southern Mozambique. Ten samples were collected from each matrix (maize, rice, and peanut) in each of the 3 districts (Chongoene, Manjacaze and Chókwe) of Gaza province, and 10 peanut samples in each of the 3 districts (Massinga, Inhambane and Inharrime) of Inhambane province, in a total of 120 samples. Samples were collected between January and June 2023 from local markets and producers. Samples were analysed for total aflatoxins using the lateral flow strip, AgraStrip® Pro WATEX® (Romer Labs) method. Results showed that, from all matrices, the highest levels of aflatoxins were found in maize, with averages ranging from 369.2 (in Manjacaze) to 1,972.6 µg/kg (in Chokwe). Average aflatoxin levels in rice ranged between 1.2 (Chongoene) and 63.08 µg/kg (Manjacaze). Peanuts from the province of Inhambane were more contaminated than those from Gaza, with averages ranging from 5.6 (Manjacaze, Gaza) to 95 µg/kg (Inhambane). Considering that the maximum admissible levels for total aflatoxins recommended by the Codex Alimentarius Commission for cereals and pulses is 15 µg/kg, the level of aflatoxin contamination in food produced and consumed in southern Mozambique is high and constitutes a public health risk for the population. Therefore, risk mitigation strategies are urgently needed. **Acknowledgements.** The authors are grateful to the Foundation for Science and Technology (FCT, Portugal) and to the Aga Khan Development Network for the financial support to the project Ref. FCT AGA-KHAN / 541590696 / 2019 ‘MYCOTOX-PALOP – Multi-actor partnership for the risk assessment of mycotoxins along the food chain in African Portuguese-speaking countries (PALOP)’, and to FCT for financial support through national funds FCT/MCTES (PIDDAC) to CIMO (UIDB/00690/2020 and UIDP/00690/2020), SusTEC (LA/P/0007/2020), CITAB (UID/AGR/04033/2020), CEB (UIDB/04469/2020), LABBELS (LA/P/0029/2020), and Inov4Agro (LA/P/0126/2020). Cláudio Matusse thanks FCT for the PhD grant PRT/BD/15483/2022.

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ADDENDUM

P143 AFLATOXINS AND OCHRATOXIN A OCCURRENCE IN DARK CHOCOLATE BARS MARKETED IN SOUTHERN ITALY

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P144 OPTIMIZATION OF A SIMPLE METHOD FOR DEOXYNIVALENOL ANALYSIS IN ITALIAN GRAIN SAMPLES

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