

87 Portuguese Groceries: A Potential Indoor Environment to Be Used as Public Health Sentinel for Fungal and Mycotoxins Contamination

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Carla Viegas, Renata Cervantes, Bianca Gomes, Silvia Moreira, Marta Dias, Pedro Pena, Elisabete Carolino, Magdalena Twaruzek, Robert Kosicki, Liliana Aranha Caetano, Susana Viegas

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Abstract

This study aimed to characterize microbial contamination in Portuguese grocery stores. The research was carried out in 15 grocery stores in Cascais, Portugal. Electrostatic dust cloths (EDC) and surface swabs were used on 3 sampling sites: checkout, fruits/vegetable, and warehouse/dispenser. Fungal contamination was characterized by culture-based methods, through the inoculation onto two different culture media: malt extract agar (MEA) supplemented with chloramphenicol (0.05 %) and dichloran-glycerol agar (DG18). Screening of azole resistance was performed by inoculation of EDC extracts in azole-supplemented Sabouraud dextrose agar (SDA) media, according to EUCAST guideline. A total of 39 samples were screened for mycotoxins contamination. The highest fungal contamination was obtained from fruits/vegetables in swabs (76 % MEA; 71 % DG18). The most prevalent genera in swabs was *Cladosporium* sp. (54 % MEA). Regarding EDC, besides *Penicillium* sp. (63 %) the most prevalent were *Aspergillus* sections *Circumdati* (25 %) and *Aspergilli* (35 %). *Penicillium* sp. was highly prevalent in the checkout (61 % SDA; 87 % voriconazole), and warehouse/dispenser sectors (73% voriconazole; 52% posaconazole). *Circumdati* and *Fumigati* were the most prevalent *Aspergillus* sections in fruits/vegetables (73 %

and 64 % in voriconazole, respectively). Four mycotoxins (fumonisin B1, B2, B3) were detected simultaneously in most of the 36 samples. Identifying the most critical workplaces in groceries concerning fungal and mycotoxins contamination is of utmost importance to human health (workers and consumers) when using a One Health approach.

Issue Section: [Poster presentations](#)

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