

Fungal burden assessment in Healthcare facilities in Portugal: Is compliance with the legislation enough to ensure Public Health?

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In Portugal, the legislation focusing on Indoor Air Quality assessments, established limit values for microbiological contamination in indoor environments in general, without any specification for health care facilities. The Portuguese legal compliance recommends fungi indoor load lower than outdoor. When these situations are not satisfied, there is a second opportunity to meet the legal requirements through fungal identification (toxigenic species mainly). This study intends to assess the compliance with IAQ Portuguese legislation and to compare the results obtained with a multi-approach protocol using active sampling methods (air sampling by impaction) and passive ones (surface swabs, electrostatic dust collectors and air-conditioning filters) for fungal burden assessment.

Electrostatic dust collectors was the passive sampling method with higher fungal load on MEA, whereas on DG18 surface swabs presented higher counts. Toxigenic fungal species were identified on air samples although ratio I/O complied with Portuguese Legislation. Different fungal species were observed in all the sampling methods applied emphasizing the importance of a multi-approach on sampling methods to obtain not only the fungal load, but also the contamination.

The sampling protocol to be suggested will allow an enriched occupational exposure assessment considering both approaches Indoor Air Quality and Occupational Exposure.

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