

# Fungal Contamination in Lisbon's Primary Schools - Sampling Insights and Analytical Approaches

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## Introduction

Climate change is posing challenges for Portugal due to intense weather changes, affecting public health and causing pathogens to adapt and spread, increasing the global risk of infectious diseases [1,2].

Azole fungicides are less effective against resistant fungi, raising concerns for children [1,2].

Warm and humid conditions promote the growth of pathogenic fungi and the production of mycotoxins, impacting health by causing gastrointestinal problems, organ damage and chronic diseases. Even after fungi removal, mycotoxins continue to pose risks [3,4,5].

## Objectives

- Identifying fungal species present in indoor environments.
- Assessing spatial distribution and concentration levels within classrooms and other areas.
- Investigating factors influencing fungal proliferation, such as building characteristics and seasonal variations.
- Evaluating the effectiveness of existing cleaning protocols and providing insights into proactive management strategies to protect students' and staff members' health and well-being.

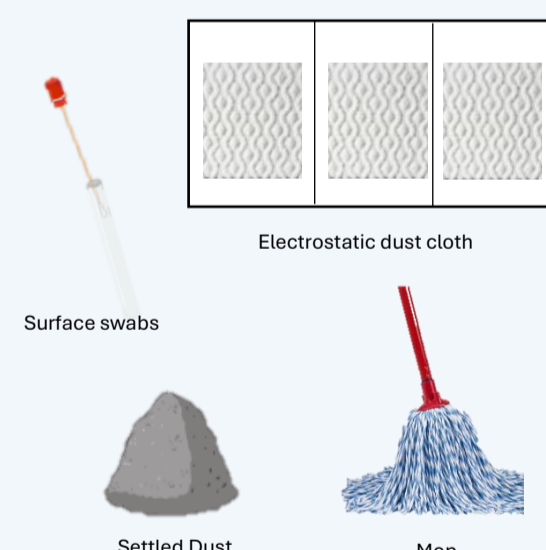
## Methodology

### Sampling Methods

#### Active



#### Passive



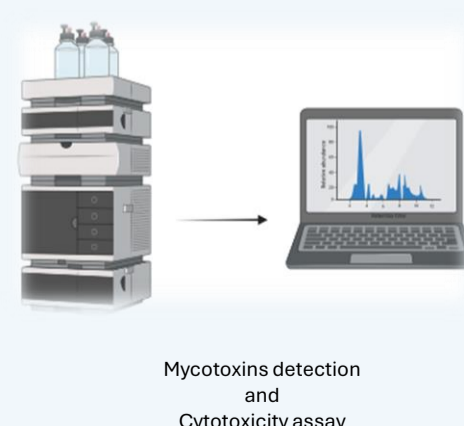
#### Particulate Matter



### Analytical Methods



### Metabolites Assessment



## Results and discussion

The expected results are that seasonal variations in fungal load show complex environmental interactions[1,2].

Examining fungal load distribution in DGI8 media at 27°C and 37°C helps assess growth preferences at different temperatures[6].

Methods used to assess azole resistance and mycotoxin provide essential insights into the resilience and potential harm of fungal species under varying environmental conditions[3,4,5].

Addressing fungal exposure risks requires a comprehensive approach for an accurate risk assessment and to target mitigation strategies on educational environments [6].

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## Conclusions

- **Standardized protocols** need to be defined and implemented for **effective risk assessment**.
- it is essential to consider **climate changes** and **seasonal influences** into **health policies** to mitigate the risks associated with fungal exposure.

## References

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