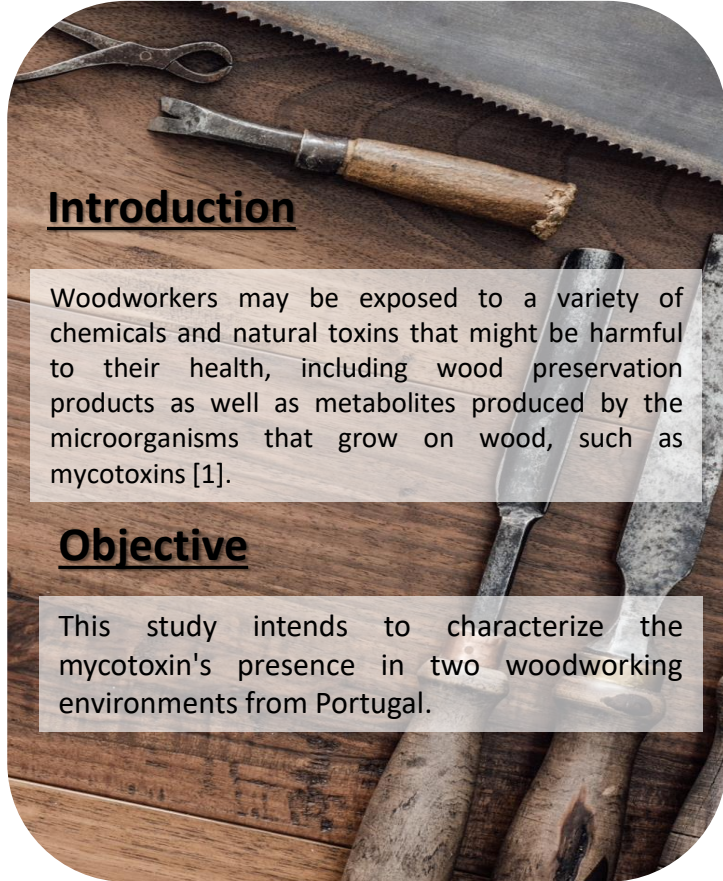


Mycotoxins presence in woodworking environments from Portugal

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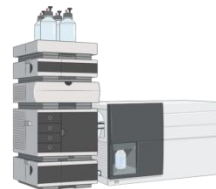
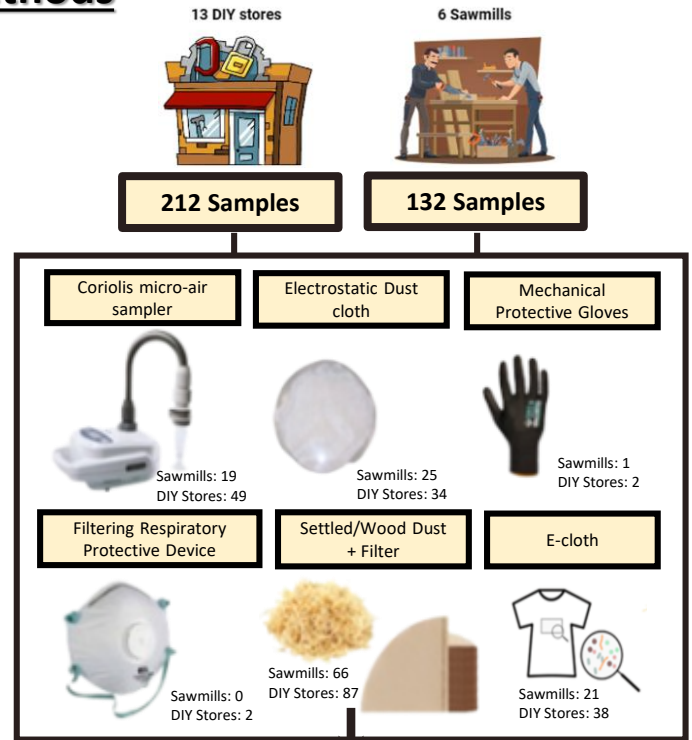
Introduction

Woodworkers may be exposed to a variety of chemicals and natural toxins that might be harmful to their health, including wood preservation products as well as metabolites produced by the microorganisms that grow on wood, such as mycotoxins [1].

Objective

This study intends to characterize the mycotoxin's presence in two woodworking environments from Portugal.

Methods



Mycotoxins were analyzed by an LC-MS/MS system. Separation and detection was carried out using high performance liquid chromatograph (HPLC) Nexera (Shimadzu) with a mass spectrometry detector API 4000 (Sciex).

Results and Discussion

DIY stores:

- Mycotoxins detected in 11 settled dust samples and in one filter from the vacuum cleaner (5.58%).
- Mycophenolic acid was the mycotoxin most detected in settled dust samples, (17.95%), followed by griseofulvin (12.82%) and aflatoxin G1 (2.56%).
- in one of the settled dust samples both aflatoxin G1 and griseofulvin were found. On the filter from the vacuum cleaner, the only mycotoxin found was aflatoxin G1.

Sawmills:

- Mycotoxins detected in 2 EDCP and 8 settled dust samples (7.58%).
- Fumonisin B1 and fumonisin B2 were the mycotoxins detected in EDCP, (4.76%).
- In settled dust samples, griseofulvin was the mycotoxin most detected (8.33%), followed by fumonisin B2 and fumonisin B3 (5.5%).

Both work environments must be protected against mycotoxin contamination using the same preventative measures that are used to avoid the presence of fungi, which include routinely and correctly cleaning surfaces [2, 3].

Conclusions

The findings from these two woodworking environments draw attention to the need to consider **mycotoxins as a hazard present in these environments and to be considered in the risk assessment process developed for workers and customers.**

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