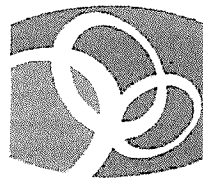


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MMTSTM
ENVIRONMENTAL

Stan Yeakel
Director of Facilities
Washington College

November 10, 2022

RE: Mold Inspection
Armory
509 Cross St
Chestertown MD

Report

Introduction

Thank you for obtaining the service of MMTS to conduct mold sampling. MMTS performed testing to survey any points of interest from a moisture standpoint and collect microbial samplings for lab analysis. Testing was conducted on November 8, 2022. The cause for concern from my client was due to interior water damage and mold growth caused by long-term water intrusion throughout the building. Inspection found visible mold growth throughout the building. The only ingredient missing in any home or structure in order for mold to flourish is moisture. The time frame for mold growth is generally 24-48 hrs from the time water is introduced to a substrate.

The purpose of our visit was to determine the type of molds present and the airborne concentrations compared with the outside air which is where all molds naturally occur. The goal of microbial sampling is to help determine whether the spores present in a particular environment are affecting or causing irritation in certain individuals. Sampling is also used to locate the sources of indoor microorganisms and help facilitate remediation as necessary. While we are typically surrounded by a wide variety of different microorganisms everyday, sampling provides us with a method to establish in a scientific way whether the environment in question contains more organisms than would normally be present.

The **spore trap** (air-o-cell) is a unique sampling device specifically designed for the rapid collection and analysis of a wide range of airborne aerosols including mold spores, pollen, insect fragments and skin cell fragments. It is especially useful if fungal growth is not visible.

We collected a total of:

- (28) non-cultured air samples
- (6) non-cultured surface samples

Method

Any swab samples taken are obtained by using a 1 inch square template. Any air samples taken are obtained by using calibrated pumps. Any bulk samples taken are stored and shipped in individual bags.

The reliability of test results depends on many factors such as the environmental conditions, selection and validation of test methods, equipment functioning, measurement traceability, as well as the analyzing, storage and handling of test items, all of which are a reflection of the laboratories overall quality system.

Data Interpretation

According to ACGIH, "... differences that can be detected with manageable sample sizes are likely to be in 10-fold multiplicative steps (e.g., 100 versus 1000...)".¹ Following this logic, if total fungal spores or hyphal fragments are ten (10) times greater in the sample from a suspect area than in the negative control sample collected from a non-suspect area, then that sample area may be a fungal amplification site providing evidence of microbial growth.

According to IESO, "A significant difference is a factor of 10 as used to compare total counts of fungal spores and structures."²

Conclusion

Upon review of the lab results and visual observations, the building needs to be addressed by a Certified Mold Remediation company. This conclusion is based on the following:

- Outside vs. inside air sample

- The laboratory results for the indoor air samples detected extremely high levels of airborne mold and surface mold growth present throughout the building..
 - Specifically the mold genera's, *Aspergillus*, *Penicillium* and *Stachybotrys* were detected on the air/surface samples taken. These molds often flourish under any type of water activity.
 - **Presence of *Stachybotrys* both airborne and colonizing on surfaces. This is a toxigenic mold capable of producing mycotoxins, extreme caution is advised when dealing with it.**
 - Areas with elevations include all areas tested.
 - **Building is not safe for occupancy due to extremely high concentrations of mold found on laboratory results. Anyone entering the building should wear proper respiratory protection.**

The conclusion developed for this report were based on the information at the site and analysis of samples collected on 11/8/22. The qualitative and quantitative data developed for this report were valid on the date of the site visit and not intended to be predictive of future conditions and may be subject to differing professional interpretation.

Should there be any questions or clarification required, please feel free to contact me at (443) 309-2128.

Respectfully,

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¹ *Bioaerosols Assessment and Control, 1999*. By ACGIH. ACGIH Press, 2005. 14-6 & 14-7.

² *Standards of Practice for the Assessment of Indoor Environmental Quality, Vol.1*. 2002. By IESO. IESO Press, 2005. 19

³ FLIR MR176 Thermal Imaging Moisture Meter

References

1. Bioaerosols: Assessment and control, Janet Macher, Ed., American Conference of Governmental Industrial Hygienists, Cincinnati, OH (1999)
2. Fungal spores in the Air: What do results of spore counting mean?, Chin S. Yang, Ph.D. & Dewei Li, Ph.D., P&K Microbiology, Cherry Hill, NJ (2004)
3. Standards of Practice for the Assessment of Indoor Environmental Quality, Volume 1: Mold Sampling; Assessment of Mold Contamination, Indoor Environmental Standards Organization (2002).