



CERTIFICATE OF MOLD ANALYSIS

PREPARED FOR

BLACKWOLF PROFESSIONAL PROPERTY SERVICES LLC

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TEST LOCATION:

PAMELA COFIELD

272 BERRY PATCH ROAD

MURPHY, NC 28906

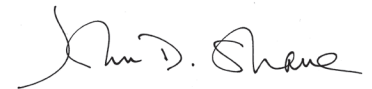
CHAIN OF CUSTODY # 52886364

COLLECTED: TUE OCTOBER 22, 2024

RECEIVED: THU OCTOBER 24, 2024

REPORTED: THU OCTOBER 24, 2024

APPROVED BY:



John D. Shane PhD
Laboratory Manager

VERSION: 1.0 (A VERSION NUMBER GREATER THAN ONE (1) INDICATES THAT THE DATA IN THIS REPORT HAS BEEN AMENDED)

EPA regulations or standards for airborne or surface mold concentrations have not been established. There are also no EPA regulations or standards for evaluating health effects due to mold exposure. Information about mold can be found at www.epa.gov/mold.

All samples were received in an acceptable condition for analysis unless noted specifically in the Comments section under a particular sample. All results relate only to the samples submitted for analysis and apply to the samples as received by the laboratory. Volumes, flowrates, areas or other information are supplied by the customer. This information can affect the validity of the results. Results have not been adjusted for field or laboratory unless otherwise noted. PriorityLab bears no responsibility for sample collection activities or analytical method limitations. No warranty is either express or implied and PriorityLab assumes no responsibility or liability for errors in public information utilized, statements from sources other than PriorityLab, or developments resulting from situations outside the scope of this analysis, nor for the purpose for which the client uses the analysis. The determinations in this report are outside the scope of the AIHA LAP, LLC scope of accreditation. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. PriorityLab liability is limited to the cost of the sample analysis and may not exceed the amount of the fee paid by the client.

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Detailed Mold Analysis (WATER-INDICATING FUNGI, IF PRESENT, ARE SHOWN BELOW IN RED)

Analysis Method	Air Analysis	Air Analysis	Surface Analysis	Surface Analysis
Lab Sample #	52886364-1	52886364-2	52886364-3	52886364-4
Sample Identification	38062603	38062703	445288	SWAB 1
Sample Location	KITCHEN	OUTSIDE	KITCHEN	BEDROOM 1
Sample Type / Metric	Air-O-Cell/150L	Air-O-Cell/150L	Bio-Tape	Swab
Analysis Date	Thu October 24, 2024	Thu October 24, 2024	Thu October 24, 2024	Thu October 24, 2024
Determination	NORMAL	CONTROL	NO GROWTH	GROWTH

Fungal Types Identified	Raw Count	Spores / m ³	% of Total	Raw Count	Spores / m ³	% of Total	Mold Present	Mold Present
*INDOOR PROBLEM FUNGI								
Aspergillus	---	---	---	---	---	---	---	Present
Hyphae	---	---	---	---	---	---	---	Present
**Non-Problem Fungi								
Alternaria	---	---	---	1	7	<1	---	---
Ascospores	8	54	8	107	717	2	---	---
Basidiospores	52	348	54	3,363	22,532	92	---	---
Cladosporium	6	40	6	42	281	1	---	---
Curvularia	7	47	7	---	---	---	---	---
Nigrospora	3	20	3	1	7	<1	---	---
Penicillium/Aspergillus	4	27	4	102	683	2	---	---
Pithomyces	8	54	8	1	7	<1	---	---
Polythrincium	---	---	---	1	7	<1	---	---
Rusts	1	7	1	---	---	---	---	---
Smut/Myxomycetes	2	13	2	14	94	<1	---	---
Spegazzinia	1	7	1	---	---	---	---	---
Torula	1	7	1	---	---	---	---	---
Unclassified Pigmented Spores	3	20	3	2	13	<1	---	---
Total Spore Count*	96	640	100	3,600	24,000	100	NA	NA
Minimum Detection Limit	7			7			1	
Comments/Definitions Raw Count: Actual number of spores observed and counted. Spores/m³: Spores per cubic meter. % of Total: Percentage of a particular spore in relation to total number of spores. Present = growth observed. ---: Spore type was not observed. * : Indicates to look above at the names in red under "indoor problem fungi".	Mold counts are within a NORMAL RANGE and there is no indication, based on the mold counts, that there is any exposure concern to the occupants. The LIGHT DEBRIS present in the sample likely had no effect on the accuracy of the mold count.		CONTROL samples are normally taken outside a building to provide a baseline from which samples on the interior of the building are compared. Outside air is considered normal whatever the mold counts may be. The LIGHT DEBRIS present in the sample likely had no effect on the accuracy of the mold count.		NO GROWTH or former mold growth observed. There may be some settled spores in the sample. Some settled spores on surfaces are normal. Settled spores are below the reporting limit for the laboratory. This means that the presence of settled spores do not affect the determination. Surfaces will not grow mold as long as they do not get wet for longer than 24 to 48 hours.		Presence of current or former MOLD GROWTH observed. EXPOSURE TO SPORES LIKELY and will continue if the growth is not removed. An active or intermittent water source will cause the mold to continue to grow if the water source is not eliminated.	

* Indoor Problem Fungi are generally capable of growing on wetted building materials.

** Non-Problem Fungi are less capable or do not grow on wetted building materials. They are commonly found in the air outside and infiltrate into indoor air naturally. High numbers of any one of these spore types as compared to the Control sample may indicate that they are growing on wetted building materials indoors.

Spore types not listed in this report were not observed.

Background debris estimates the amount of non-spore particles. Increasing amount of debris will affect the accuracy of the spore counts. Total percent may not equal 100% due to rounding.

*Total Spore Counts are reported to 2 significant figures.

Introduction

All spores found in indoor air are also normally found in outdoor air because most originate or live in the soil and on dead or decaying plants. Therefore, it is not unusual to find mold spores in indoor air. This Mold Glossary is only intended to provide general information about the mold found in the samples that were provided to the laboratory.

Alternaria

- Outdoor Habitat:** One of the most commonly observed spores in the outdoor air worldwide, normally in low numbers.
- Indoor Habitat:** Capable of growing on a wide variety of substrates and manufactured products found indoors when wetted.
- Allergy Potential:** Type I (hay fever, asthma), Type III (hypersensitivity pneumonitis), Common cause of extrinsic asthma
- Disease Potential:** Not normally considered a pathogen, but can become so in immunocompromised persons.
- Toxin Potential:** Several known
- Comments:** One of the most common and potent allergens in the indoor and outdoor air. Seen in indoor air in low concentrations, probably as a result of outdoor air infiltration and/or recycling of settled dust. However, it is frequently found growing on indoor substrates.
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Ascospores

- Outdoor Habitat:** Soil and decaying vegetation, dead and dying insects. These spores constitute a large part of the spores in the air and can be found in the air in very large numbers in the spring and summer, especially during and up to three (3) days after a rain.
- Indoor Habitat:** Very few of fungi that produce ascospores grow indoors. Some fungi that produce ascospores are recognizable by their spores and when observed are listed under their own categories. Wetted wood and gypsum wallboard paper
- Allergy Potential:** Depends on the type of fungus producing the ascospores.
- Disease Potential:** Not normally pathogenic as a group
- Toxin Potential:** None known
- Comments:** Ascospores are produced from a very large group of fungi. Notable ascospores that are considered problematic for indoor environments are Chaetomium, Peziza, and Ascotracha. If these types of ascspores are observed they will be listed in the report under their own names.
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Aspergillus

Outdoor Habitat: Soil and decaying vegetation, various other kinds of substrates

Indoor Habitat: Capable of growing on a wide variety of substrates and manufactured products found indoors when wetted, including dusts, leather, paint, paper, rubber, textiles

Allergy Potential: Type I (hay fever, asthma), Type III (hypersensitivity pneumonitis), can cause allergic sinusitis, and ABPA (allergic bronchopulmonary aspergillosis)

Disease Potential: Second most common pathogen for humans next to Candida, but not normally considered a pathogen, but can become so in immunocompromised persons.

Toxin Potential: Several species of *Aspergillus* produce toxins, including aflatoxin B1 & B2, cyclopiazonic acid, kojic acid, ergot alkaloids, fumigaclavines, gliotoxin, fumigatoxin, fumigillin, fumitremorgens, helvolic acid, tryptoquivaline tremorgens, verruculogen, malformin C, oxalic acid, austocystins, aspercolorin, averufin, cyclopiazonic acid, sterigmatocystin, versicolorin.

Comments: *Aspergillus niger*-like spores are the most common group identified in the indoor air.

Aspergillus identified in air samples indicates that the fruiting bodies were observed. This usually suggests that the source of the mold is nearby and / or a growth was disturbed. The fruiting bodies are not easily sent airborne, nor do they stay in the air long.

Basidiospores

Outdoor Habitat: These are mushroom spores and are common everywhere outside, especially in the late summer and fall.

Indoor Habitat: Sometimes mushrooms can be observed growing in potted plants indoors.

Allergy Potential: Rarely reported, but some Type I (hay fever, asthma) and Type III (hypersensitivity pneumonitis) has been reported.

Disease Potential: None known

Toxin Potential: None known

Comments: Mushroom spores are commonly found indoors, especially when the outdoor spore count is high. When spores of this group are derived from wood rotting fungi, including dry rot (*Serpula* and *Poria*), they can be especially destructive to buildings. When spores from destructive types of mushrooms (dry and wet rot group) are observed in the sample they are listed under their own names on the report.

Cladosporium

Outdoor Habitat: Cladosporium is one of the most common environmental fungi observed worldwide and is widely reported from soil and decaying vegetation.

Cladosporium herbarum and C. cladosporioides are among the most frequently encountered species, both in outdoor and indoor environments.

Indoor Habitat: Wetted wood and gypsum wallboard paper, paper products, textiles, rubber, window sills. Cladosporium has the ability to grow at low temperatures and can thus, grow on rubber gaskets and food in refrigerators.

Allergy Potential: Type I (hay fever, asthma) - an important and common outdoor allergen

Disease Potential: Opportunistic pathogen in immunocompromised persons, not normally a pathogen in healthy individuals. Cladosporium are some of the most common species reported as indoor contaminants, occasionally linked to health problems.

Toxin Potential: Cladosporium has two known toxins (cladosporin and emodin). These toxins are not known to be highly toxic. There is no evidence in the literature of toxic effects associated to inhalation of Cladosporium conidia (spores) indoors.

Comments: The most commonly reported spore in the outdoor air worldwide. This makes Cladosporium one of the most commonly reported and abundant spore types both indoors and outdoors. The prevalence of this spore can vary throughout the year, but is especially high in late summer and autumn, especially where cereal crops are commonly planted.

An important and common allergen source.

Curvularia

Outdoor Habitat: Soil and decaying vegetation

Indoor Habitat: Wetted wood and gypsum wallboard paper, many cellulytic substrates

Allergy Potential: Type I (hay fever, asthma), common cause of allergenic rhinitis

Disease Potential: Potential human pathogen in immunocompromised people

Toxin Potential: None known

Comments: None

Hyphae

Outdoor Habitat: Any cellulose-based substance that fungi can inhabit.

Indoor Habitat: Wetted wood and gypsum wallboard paper, etc.

Allergy Potential: Known to be allergenic.

Disease Potential: None known

Toxin Potential: None known

Comments: "Root-like" structures of fungal growth that can become airborne and can possibly be allergenic.

When hyphae are found growing on a surface and associated with fruiting bodies and/or fungal spores, they indicate that growth has taken. Sometimes hyphae grow and do not produce spores. Hyphae are generally not specific to any particular type of fungus or mold type.

A mass of hyphae on a surface is indicative of mold growth.

Nigrospora

Outdoor Habitat: Soil and decaying vegetation

Indoor Habitat: Can grow on wetted wood and gypsum wallboard paper

Allergy Potential: Type I (hay fever, asthma)

Disease Potential: None known

Toxin Potential: None known

Comments: Rarely observed growing indoors, but is often found in the indoor air in small amounts because this spore type is frequently found in outdoor air.

Penicillium/Aspergillus

Outdoor Habitat: Soil and decaying vegetation, textiles, fruits. These spores are commonly observed and are a normal part of outside air.

Indoor Habitat: Wetted wood and gypsum wallboard paper, textiles, leather, able to grow on many types of substrates.

Allergy Potential: Type I (hay fever, asthma), Type III (hypersensitivity pneumonitis)

Disease Potential: Opportunistic pathogen in immunocompromised persons, not normally a pathogen in healthy individuals.

Toxin Potential: Several known

Comments: Extremely common in indoor air in low to moderate amounts as compared to the outside air. This type of spore should not be present in very high numbers as compared to the outside (control) nor constitute an overwhelming percentage (e.g., 90% or greater) of the total spores in that room(s). However, this type of mold spore is not always detected in outside air and when diversity of mold types are low in the indoor sample(s), their percentage can be 90% or more. Therefore, when the raw numbers are low the determination would be NORMAL even if the percentage is high.

There is a wide range of what is a NORMAL amount of this type of mold spores in indoor air and 200 - 700 spores per cubic meter are commonly seen in homes.

These two genera are grouped together because they cannot be reliably differentiated into their respective genera based solely on spore morphology.

Pithomyces

Outdoor Habitat: Soil and decaying vegetation and their spores are easily dispersed into the air by wind

Indoor Habitat: Wetted wood and gypsum wallboard paper

Allergy Potential: None known

Disease Potential: None known

Toxin Potential: One known (sporidesmin)

Comments: A very common spore type in outdoor air. Can be a water indicator mold type when growing on surfaces indoors.

Polythrincium

Outdoor Habitat: Leaves, especially on alfalfa

Indoor Habitat: Not known to grow indoors

Allergy Potential: None known

Disease Potential: None known

Toxin Potential: None known

Comments: Spores easily dispersed into the air by wind

Rusts

Outdoor Habitat: Parasitic on living plants

Indoor Habitat: Not known to grow indoors, unless on and infected living house plant

Allergy Potential: Type I (hay fever, asthma)

Disease Potential: None known

Toxin Potential: None known

Comments: Common and abundant plant pathogen and are normally robust spores that can persistent indoors, especially from carpets and dirty HVAC systems

Smut/Myxomycetes

Outdoor Habitat: Soil and decaying vegetation and wood, especially dead stumps and bark

Indoor Habitat: Not normally known to grow indoors. However the Myxomycetes can sometimes be found on firewood inside the home and especially on wood paneling. Sometimes known to grow on wood framing inside walls, ceilings and woodwork in closets.

Allergy Potential: Type I (hay fever, asthma), rare

Disease Potential: None known

Toxin Potential: None known

Comments: These two groups are difficult to distinguish due to their "round and brown" morphology. Smuts are especially common in the outside environment and can be seen in indoor air samples even during the winter in homes because the spores enter homes. These spores can be recycled through the indoor environment all year in small amounts.

A large number of these types of spores indoors can mean that there are fruiting bodies inside the home due to excessive water, usually on a wood surface(s).

Spegazzinia

Outdoor Habitat: Soil and decaying vegetation, especially in St. Augustine grass

Indoor Habitat: Not known to grow indoors

Allergy Potential: None known

Disease Potential: None known

Toxin Potential: None known

Comments: A common mold found in St. Augustine grass and other decaying vegetation

Torula

Outdoor Habitat: Soil and decaying vegetation

Indoor Habitat: Wetted wood and gypsum wallboard paper

Allergy Potential: Type I (hay fever, asthma)

Disease Potential: None known

Toxin Potential: None known

Comments: Grows on wood and wicker, and sometimes on wallboard indoors.

Unclassified Pigmented Spores

Outdoor Habitat: None specified

Indoor Habitat: None specified

Allergy Potential: Although no specific allergic potential can be given, ALL spores have the potential to be allergenic.

Disease Potential: None known

Toxin Potential: Unknown

Comments: This category is for unknown spores that have at least some color and do not have enough distinctive characteristics to be identified as any particular type of spore that the laboratory recognizes.

There are a great many spore types that cannot be identified either because they are undescribed in the literature or new to science. Therefore, these types of spores are classified as "unclassified". There should not be an over abundance of this type of spore (or any spore) indoors. An large amount of this type of spore indoors would make this spore type as "water-indicating", but the origin and growth is not known.