

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

CERTIFICATE OF MOLD ANALYSIS

PREPARED FOR:

TESTCLIENT

PHONE NUMBER: (888) 854-0478

EMAIL: DOCSHANE@INSPECTORLAB.COM

TEST LOCATION:

MICHAEL DAVIS

101 MAPLE

ANYWHERE, FL 15000

CHAIN OF CUSTODY #: 52135186

COLLECTED: MON NOVEMBER 20, 2017

RECEIVED: TUE NOVEMBER 21, 2017

REPORTED: TUE NOVEMBER 21, 2017



APPROVED BY: **JOHN D. SHANE PH.D.,**
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.

A version greater than 1.0 indicates that the lab report has been revised.

FOR MORE INFORMATION, PLEASE CONTACT INSPECTORLAB AT (888) 854-0477 OR EMAIL ASK@INSPECTORLAB.COM

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

Detailed Mold Report

(WATER-INDICATING FUNGI ARE SHOWN BELOW IN RED)

Analysis Method	Air Analysis	Air Analysis	Air Analysis	Surface Analysis
Lab Sample #	52135186-1	52135186-2	52135186-3	52135186-4
Sample Identification	123456	234567	345678	SWAB #1
Sample Location	EXTERNAL CONTROL	MASTER BEDROOM	LAUNDRY ROOM	GUEST BATHROOM
Sample Type / Metric	Air-O-Cell/150.0L	Air-O-Cell/150.0L	Air-O-Cell/150.0L	Swab
Analysis Date	Fri May 19, 2017	Fri May 19, 2017	Fri May 19, 2017	Fri May 19, 2017
Determination	CONTROL	NORMAL	PROBLEM	GROWTH

Fungal Types Identified	Raw Count	Spores / m ³	% of Total	Raw Count	Spores / m ³	% of Total	Raw Count	Spores / m ³	% of Total	Mold Present	
*INDOOR PROBLEM FUNGI											
Chaetomium	---	---	---	---	---	---	80	536	30	X	
Hyphae	---	---	---	---	---	---	---	---	---	X	
Stachybotrys	---	---	---	---	---	---	79	529	29	X	
**Non-Problem Fungi											
Alternaria	5	34	<1	1	7	1	---	---	---	---	
Ascospores	103	690	14	11	74	16	9	60	3	---	
Basidiospores	345	2,312	49	5	34	7	13	87	4	---	
Bipolaris/Drechslera	2	13	<1	---	---	---	---	---	---	---	
Cladosporium	197	1,320	27	31	208	46	24	161	9	---	
Curvularia	---	---	---	1	7	1	1	7	<1	---	
Epicoccum	7	47	<1	3	20	4	2	13	<1	---	
Penicillium/Aspergillus	9	60	1	9	60	13	51	342	19	---	
Pithomyces	3	20	<1	---	---	---	---	---	---	---	
Rusts	19	127	2	---	---	---	---	---	---	---	
Smut/Myxomycetes	9	60	1	5	34	7	7	47	2	---	
Torula	5	34	<1	---	---	---	---	---	---	---	
Total Spore Count	704	4,717	100	66	444	100	266	1,782	100	X	
Minimum Detection Limit	7			7			7			N/A	
Comments/Definitions	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. LIGHT DEBRIS: The debris present in the sample likely had no effect on the accuracy of the mold count.			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.			Mold concentrations in the air are ABNORMAL and based on the mold counts, you likely have a mold source from which spores are able to become airborne and are an exposure concern to the occupants. LIGHT DEBRIS: The debris present in the sample likely had no effect on the accuracy of the mold count.			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.

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

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.

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.

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

Basidiospores

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

Indoor Habitat: Mushrooms can grow on very wet wood products, especially on footer plates, basements, and crawlspaces. 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.

Bipolaris/Drechslera

Outdoor Habitat: Commonly observed spores in the outdoor air worldwide, normally in low numbers.

Indoor Habitat: Wetted wood and gypsum wallboard paper

Allergy Potential: Type I (hay fever, asthma)

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

Toxin Potential: None known

Comments: This category represents at least three genera, including *Bipolaris*, *Drechslera*, and *Exserohilum*. This group cannot be consistently separated by spore morphology alone.

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

Chaetomium

Outdoor Habitat: Commonly found on paper products, soil, decaying vegetation, wood and natural fiber textiles (such as jute-backed carpets, canvas, etc.) and similar materials. They are rarely identified in outdoor air. These spores can be disseminated by insects, wind and water splash, etc. It is also known as a soft-rot fungus for softwood and hardwood timber.

Indoor Habitat: Chaetomium is often found on a variety of substrates containing cellulose that are chronically wetted, including paper documents, wallpaper, textiles and construction materials like gypsum board (paper-coated sheet rock) and wood.

Chaetomium can develop quickly, covering a surface with substantial growth after two weeks.

Chaetomium globosum is the most commonly found species indoors. It is not that unusual to find the occasional Chaetomium spore in the air indoors.

Allergy Potential: Type I (hay fever, asthma) potential. However, no allergens have yet been characterized. However, at least two potential allergens have been isolated.

Disease Potential: Rarely reported as human pathogen.

Toxin Potential: Several known

Comments: Chaetomium spores are easily disseminated when it becomes dry. However, Chaetomium spores do not remain airborne for long unless disturbed.

High numbers of spores of this genus is not normal for indoor environments and indicate a current or former water problem. Furthermore, since the spores are held together by mucilage and trapped by hairs, few become airborne until the mold has completely dried out or is mechanically disturbed during renovations remediation. It is, therefore, not uncommon to find low Chaetomium spore counts in pre-remediation air samples and relatively higher counts in post-remediation samples.

Chaetomium species colonize surfaces under similar conditions as Stachybotrys, Alternaria, Fusarium and Ulocladium.

HIGH CONCENTRATIONS AND LONG EXPOSURES TO CHAETOMIUM SHOULD BE AVOIDED.

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

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 caskets 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

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

Epicoccum

Outdoor Habitat: Epicoccum is a widespread cosmopolitan that grows on dead or decaying organic matter, wood, textiles, paper, a variety of foods, insects and human skin. It is commonly found in the soil. Epicoccum spores are more prevalent on dry, windy days, with higher counts late in the day.

Indoor Habitat: Capable of growing on a wide variety of substrates and manufactured products found indoors when wetted such as gypsum board, floors, carpets, mattress dust, and house plants.

Allergy Potential: Type I (hay fever, asthma)

Disease Potential: None known

Toxin Potential: None known

Comments: Very common in outdoor air in the summer months, especially in the midwest USA during harvest times.

Hyphae

Outdoor Habitat: Soil and decaying vegetation

Indoor Habitat: Wetted wood and gypsum wallboard paper

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 may 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 place and remedial action is suggested. Sometimes hyphae grow and do not produce spores. A hyphal mass is indicative of mold growth.

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

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 amounts. This type of spore should not constitute an overwhelming percentage and be present in very high numbers.

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 the air. Can be a water indicator mold type indoors

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 persist indoors, especially from carpets and dirty HVAC systems

PREPARED FOR: TESTCLIENT

TEST ADDRESS: 101 MAPLE ANYWHERE, FL 15000

Smut/Myxomycetes

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

Indoor Habitat: Not known to grow indoors, sometimes found on firewood

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, brown" morphology. Smuts are especially common in the environment and can be seen in indoor air samples even during the winter in homes because the spores can get trapped in carpets

Stachybotrys

Outdoor Habitat: Soil and decaying vegetation, especially straw

Indoor Habitat: Wetted wood, gypsum wallboard paper, cardboard boxes and ceiling tiles. This type of mold needs significant water to grow and thrive

Allergy Potential: Type I (hay fever, asthma)

Disease Potential: None known

Toxin Potential: Several known (including macrocyclic trichothecenes, satratoxin F, G, H)

Comments: Spores can be dispersed into the air when old and dry, but are wet, slimy and heavy when actively growing and thus are not easily dispersed into the air. Significantly higher numbers of spores, as compared to outside background levels, of this genus are not normal for indoor environments and indicate a current or former water problem. It is not that unusual to find the occasional *Stachybotrys* spore in the air indoors. *Stachybotrys* has several mycotoxins and has been implicated as a causative agent in disease. HIGH CONCENTRATIONS AND LONG EXPOSURES TO STACHYBOTRYS SHOULD BE AVOIDED.

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.
