



**Customer Name:** Inspection Tech. **Sample Date:** September 19, 2018  
**Customer Address:** 20102 Center Ridge Rd. **Date Received:** September 20, 2018  
 Rocky River, Oh 44116 **Date of Report:** September 21, 2018

**Customer Phone:** (440) 477-7794 **Fax:**  
**PO Number:** **Attention:** Sarah Fanger  
**Project Name/Number:** 2119 Vincent Dr, Brunswick

Customer sample numbers below are uniquely identified by prefixing Laboratory # 98369-18

Airborne Spore Trap Analysis - Air-O-Cell												
Analytical Method: USMS-M008												
Total Volume (L)	75				30							
Sample Number	26299737				26299811							
Location:	Hallway				Outdoors							
Particle ID	Raw ct.	AS	Spores/m <sup>3</sup>	%	Raw ct.	AS	Spores/m <sup>3</sup>	%	Raw ct.	AS	Spores/m <sup>3</sup>	%
Alternaria					4	33	132	3%				
Ascospores	1	13	13	1%	7	33	231	5%				
Aspergillus/Penicillium-like	46	13	598	59%								
Basidiospores	11	13	143	14%	117	33	3,861	77%				
Bipolaris/Drechslera												
Cercospora												
Chaetomium												
Cladosporium	5	13	65	6%								
Curvularia					10	33	330	7%				
Epicoccum												
Helicomyces												
Nigrospora	1	13	13	1%								
Oidium												
Pithomyces/Ulocladium	2	13	26	3%	10	33	330	7%				
Polythrincium												
Rusts	12	13	156	15%	4	33	132	3%				
Smuts/ Myxomycetes												
Stachybotrys												
Torula												
Trichoderma												
Unidentified dematiaceous conidia												
Unidentified hyaline conidia												
Total Mold (Spores/m <sup>3</sup> of air)	78		1,014		152		5,016					
Pollen	0	13	< 13		0	33	< 33					
Hyphal Fragments	1	13	13									
Insect Fragments												
Plant Fragments												
Skin Cell Fragments			1				1					
Debris			2				1					
Analyst Initials			LS				LS					
Date Analyzed			09/20/18				09/20/18					
Cassette Serial # / Exp Date:			26299737 07/2019				26299811 07/2019					

Entire trace analyzed. Results relate only to the samples tested. Results are reported as calculated. For biological data, the first and/or second digit should be considered significant. Total percentage may not equal 100% due to rounding. Percentages reported as 0% are greater than 0 and less than 0.5%. The *Aspergillus/Penicillium*-like category cannot be differentiated by non-viable sampling methods.  
 AS=Analytical Sensitivity (spore/m<sup>3</sup>); Blank Lines = None Detected

When providing duplicates of this report, the document should be provided in total and not in section in accordance with AIHA-LAP, LLC. Any unauthorized or improper disclosure, copying, distribution, use, or falsification of these results is prohibited. USMS shall have no liability to the Customer or the Customer's customer for opinions stated, recommendations made, actions taken, or conduct implemented based on the test results reported.



Technical Manager: Herbert Layman  
 Herbert Layman, BS, SM, CIEC

## SPORE TRAP INTERPRETATION TIPS

Currently there are no numeric standards for indoor airborne or surface microbial contamination. Suggested guidelines are constantly being reviewed and updated as more information is collected.

Some common denominators should be considered when interpreting results:

1. Comparison of indoor/outdoor concentration ratios.
2. Complaint vs. non-complaint areas or affected vs. non-affected areas.
3. Consider air exchange rates and activity levels in a building structure, weather, and season of the year.
4. Rank order assessment and concentration (e.g. Spores/m<sup>3</sup> of air) of the fungi.
5. Predominant fungal genera: Are there water indicator microorganisms present, such as but not limited to: *Chaetomium*, *Stachybotrys*, *Rhodotorula*, *Trichoderma*, and *Scopulariopsis*.
6. Generally the fungal counts indoors should be lower than outdoor counts and the types of fungi found indoors should be similar to outdoors.
7. There is always a potential bias from infiltration of outdoor air, poor housekeeping, excessive indoor relative humidity, or potential contamination sources (e.g. water intrusion through a basement wall) that may negatively influence post remedial verification (PRV) or clearance levels.
8. The investigator should look for various patterns among the indoor types of molds detected:
  - a. Increased levels of primary (1st) colonizers in damp or moisture intrusion areas of homes or commercial buildings: ***Aspergillus/Penicillium*** or ***Cladosporium*** are usually noted.
  - b. ***Chaetomium*** or ***Stachybotrys*** are tertiary (3rd) colonizers of indoor materials and are usually associated with chronic long standing water/moisture issues in a building.
  - c. The presence of ***hyphal fragments*** or ***fruiting structures*** noted on spore trap samples usually indicates amplification (growth) of fungi on building substrates.
  - d. ***Ascospores*** and ***basidiospores*** noted on indoors spore trap samples most often represent the entrance of inadequately filtered outdoor air. During inclement weather, remember to note time, temperature, and season. Most indoor materials will not support the growth of these fungi.
9. When unidentified hyaline (clear) or dematiaceous (dark-pigmented) conidia are noted on a spore trap sample, it indicates that no particular fungus can be identified. These fungal conidia may represent such yeast-like fungi as *Aureobasidium*, *Sporidiobolus*, unidentifiable *Acremonium* species, Basidiomycetes (basidiospores), and Ascomycetes (ascospores).
10. Keep in mind when interpreting spore trap sample reports, that indoor levels may be higher than corresponding outdoor levels (winter time in the Northern U.S.) with a predominance of *Aspergillus/Penicillium* or *Cladosporium* conidia with no significant amplification of any molds.

## SPORE TRAP GUIDELINES FOR INDOOR MICROBIAL CONTAMINATION

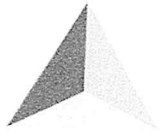
<b>DEBRIS RATING for SPORE TRAP ANALYSIS (using 600X magnification)</b> (Air-O-Cell, Micro 5, Allergenco D, Cyclex d, VersaTrap, etc.)		
<b>DEBRIS RATING</b>	<b>CONDITIONS FOR REPORTING DEBRIS RATING</b>	<b>SIGNIFICANCE</b>
0	A visible trace, including particulates and debris, is not observed.	Indicates the sample was a blank, the area is exceptionally clean, or improper sampling occurred.
1	Debris is present and <10% of the average viewing field is obscured.	Minimal amount of debris is observed.
2	Debris is present and 10% to <40% of the average viewing field is obscured.	Low amount of debris is observed, counts may be affected.
3*	Debris is present and 40% to 75% of the average viewing field is obscured.	Moderate amount of debris is observed, counts of conidia/hyphal fragments may be underestimated.
4*	Debris is present and >75% of the average viewing field is obscured.	High amount of debris is observed, counts are estimated.
5* See Relative Abundance chart below	Excessive debris is present	Periphery of trace analyzed. Relative amounts of conidia/hyphal fragments noted. Suggest recollection.
6	Slide completely obscured by excessive debris.	Unable to analyze. Recollect sample.

\* A rating of 3 or greater indicates that the accuracy of the analysis is likely affected.

<b>RELATIVE ABUNDANCE of OBSERVED CONIDIA &amp; HYPHAL FRAGMENTS</b>	
<b>RATING</b>	<b>Relative Amounts of Observed Fungal Structures per high power field (600X)</b>
Rare	0-1
Few	2 to 5
Moderate	6 to 10
Many	11 to 100
Numerous	>100

<b>SKIN CELL ANALYSIS</b>	
<b>SKIN CELL RATING</b>	<b>Relative Amounts of Observed Skin Cells per high power field (600X)</b>
0	No skin cells present
1	0-1
2	2 to 5
3	6 to 10
4	11 to 15
5	≥16

**\*End of Report\***



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## LABORATORY TEST REQUEST - CHAIN OF CUSTODY

Customer Name: **Inspection Tech.** Phone #: **440-477-7794** FAX #:

Address: **20102 Center Ridge Rd.** City: **Rocky River** State: **OH** Zip: **44116**

Attention To: **Sarah Fanger** E-Mail: **S\_fanger@inspectiontech.us**

Sample Obtained By: **Sarah Fanger** Results:  FAX  E-Mail PO# Proposal #

Project Name/Number: **2119 Vincent Dr, Brunswick**

Turn-Around-Time: (Spore Trap & DME Only)\*  
 Standard (48-72 hr)  Next Day (24 hr, M-F)  Same Day (6 hr, M-F)  3-Hour (M-F)  Saturday

Comments: **78° 56%RH Sunny**

Sample #	Sample Date / Time	Sample Code	Analysis Code	Sample Location & Description	Sample Volume/Area
26299737	9/19 2:05pm	ST	SPT	Hallway	75L
26299811	9/19 2:15pm	ST	SPT	Outdoors	30L

Relinquished By (Customer MUST sign) *[Signature]* Date & Time **9/19/18 5:30pm**

Received By - Lab Use Only *[Signature]* Date & Time **9-20-18 0945** Lab # **98369-18**

Rev. 12-14-17

Sample Code	
A	Air Plate
B	Bulk
ST	Spore Trap
S	Swab
W	Water
T	Tape
O	Other

Analysis Code			
DME	Direct Microscopic Exam	HPC	Heterotrophic Plate Count
SPT	Spore Trap <b>AOC</b>	MYC	Mycobacteria Culture
FUNG	Fungal Culture - Counts w/ ID of top 3 organisms	STA	Staphylococcus / MRSA Culture
BACT	Bacterial Culture - Counts w/ ID of top 3 organisms	DUO	Duodenoscope Culture
SSQT	Sewage Screen (quant) - Counts w/ Identification <i>E. coli, coliforms, enterococci (fecal streptococci)</i>	HCU	Heater/Cooler Water Culture <i>includes mycobacteria, HPC, coliforms, &amp; P. aeruginosa</i>
SSQL	Sewage Screen (qualitative) - Identification of <i>E. coli, coliforms, enterococci (fecal streptococci)</i>	PSA	Pseudomonas aeruginosa Culture
COL	Colilert - Presence/absence of <i>E. coli, coliforms</i>	IDS	Species Identification by MALDI-TOF

\*All samples received after 1:00 p.m. Monday-Friday will be considered received the NEXT business day.  
 Same Day and Next Day samples received on Saturday will be reported on Monday and Tuesday, respectively.