



**Customer Name:** Inspection Tech. **Sample Date:** October 2, 2018  
**Customer Address:** 20102 Center Ridge Rd. **Date Received:** October 3, 2018  
 Rocky River, OH 44116 **Date of Report:** October 4, 2018

**Customer Phone:** **Fax:**  
**PO Number:** **Attention:** Sarah Fanger  
**Project Name/Number:**

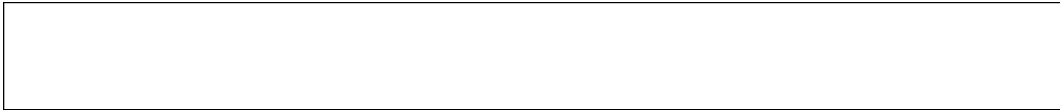
Customer sample numbers below are uniquely identified by prefixing Laboratory # 108992-18

Airborne Spore Trap Analysis - Air-O-Cell  
 Analytical Method: USMS-M008

Total Volume (L)		75				30							
Sample Number		26299706				26299713							
Location:		2nd Floor 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					1	33	33	0%					
Ascospores	4	13	52	15%	30	33	990	9%					
Aspergillus/Penicillium-like	5	13	65	19%	8	33	264	3%					
Basidiospores	10	13	130	37%	150	33	4,950	47%					
Bipolaris/Drechslera					1	33	33	0%					
Cercospora					8	33	264	3%					
Chaetomium													
Cladosporium	5	13	65	19%	93	33	3,069	29%					
Curvularia													
Epicoccum					9	33	297	3%					
Helicomyces													
Nigrospora					2	33	66	1%					
Oidium					1	33	33	0%					
Pithomyces/Ulocladium					1	33	33	0%					
Polythrincium					1	33	33	0%					
Rusts	1	13	13	4%	1	33	33	0%					
Smuts/ Myxomycetes	1	13	13	4%	10	33	330	3%					
Stachybotrys													
Torula	1	13	13	4%									
Trichoderma													
Unidentified dematiaceous conidia													
Unidentified hyaline conidia													
Total Mold (Spores/m <sup>3</sup> of air)	27		351		316		10,428						
Pollen	0	13	< 13		0	33	< 33						
Hyphal Fragments					2	33	66						
Insect Fragments													
Plant Fragments													
Skin Cell Fragments			1				0						
Debris			2				2						
Analyst Initials			KP				KP						
Date Analyzed			10/04/18				10/04/18						
Cassette Serial # / Exp Date:			26299706 07/2019				26299713 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

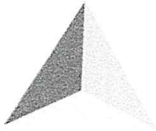
DEBRIS RATING for SPORE TRAP ANALYSIS (using 600X magnification) (Air-O-Cell, Micro 5, Allergenco D, Cyclex d, VersaTrap, etc.)		
DEBRIS RATING	CONDITIONS FOR REPORTING DEBRIS RATING	SIGNIFICANCE
0	A visible trace, including particulates and debris, is not observed.	Indicates the sample was a blank, 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.

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

SKIN CELL ANALYSIS	
SKIN CELL RATING	Relative Amounts of Observed Skin Cells per high power field (600X)
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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supplies@usmslab.com



## 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: **20548 Erie Rd, Rocky River**

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: **77° 73% RH Cloudy**

Sample #	Sample Date / Time	Sample Code	Analysis Code	Sample Location & Description	Sample Volume/Area
26299706	10/2 1:50p	ST	SPT	2nd Floor Hallway	75L
26299713	10/2 2:00p	ST	SPT	Outdoors	30L

Relinquished By (Customer MUST sign) *Sarah Fanger* Date & Time **10/2/18 2:30pm**

Received By - Lab Use Only *AS Man* Date & Time **10/3/18 14:15** Lab # **10 8992-18**

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>ABC</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.