



Customer Name: US Micro Solutions, Inc. **Sample Date:** September 29, 2017
Customer Address: 1075 South Main Street, Suite 104 Greensburg, PA 15601 **Date Received:** October 2, 2017
Date of Report: October 2, 2017

Customer Phone: (877) 876-4276 **Fax:** (724) 853-4049
PO Number: **Attention:**

Project Name/Number: Sample Report

Customer sample numbers below are uniquely identified by prefixing Laboratory # 12345-17

Airborne Spore Trap Analysis - AllergencoD
 Analytical Method: USMS-M008

Total Volume (L)	75				75				75			
Sample Number	2141742				2141732				2141724			
Location:	Living Room				Closet: under Stairwell				Outdoor			
Particle ID	Raw ct.	AS	Spores/m ³	%	Raw ct.	AS	Spores/m ³	%	Raw ct.	AS	Spores/m ³	%
Alternaria												
Ascospores	1	13	13	5%					141	13	1,833	6%
Aspergillus/Penicillium-like									27	13	351	1%
Basidiospores	16	13	208	73%					110	178	19,580	68%
Bipolaris/Drechslera												
Cercospora												
Chaetomium												
Cladosporium	5	13	65	23%					104	67	6,968	24%
Curvularia												
Epicoccum												
Helicomycetes												
Nigrospora												
Oidium												
Pithomyces/Ulocladium												
Polythrincium												
Rusts												
Smuts/ Myxomycetes									3	13	39	0%
Stachybotrys												
Torula												
Unidentified dematiaceous conidia												
Unidentified hyaline conidia												
Total Mould (Spores/m ³ of air)	22		286		0	13	< 13		385		28,771	
Pollen	0	13	< 13		0	13	< 13		0	13	< 13	
Hyphal Fragments									3	13	39	
Insect Fragments												
Plant Fragments												
Skin Cell Fragments			1				1				0	
Debris			1				1				2	
Analyst Initials			KP				KP				KP	
Date Analyzed			10/02/17				10/02/17				10/02/17	

Sample Report

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/m³); 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.



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 Herbert Layman, BS, SM, CIEC

SPORE TRAP INTERPRETATION TIPS

Currently there are no numeric standards for airborne or surface microbial contamination indoors. Suggested guidelines are constantly being reviewed and edited as more information surrounding microbial IAQ issues surface.

Some common denominators should be considered when interpreting results:

1. Comparison of indoor/outdoor concentration ratios.
 - a. Generally indoor fungal counts should be lower than outdoor counts and the types of fungi found indoors should be similar to outdoors. During inclement weather, remember to note time, temperature, and season.
 - b. However, 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 moulds.
 - c. 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 or clearance levels.
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/m³ of air) of the fungi.
 - a. If the total indoor spore count is >2000 spore/m³ of air, an indoor air quality issue may be present.
 - b. Spore counts >100 spores/m³ of indoor air of ***Stachybotrys*** or ***Chaetomium*** for post-remedial verification is generally not acceptable.
5. The investigator should look for various patterns among the types of moulds detected indoors:
 - a. Are there water indicator microorganisms present such, as but not limited to, ***Chaetomium***, ***Stachybotrys***, ***Rhodotorula***, ***Trichoderma***, and ***Scopulariopsis***?
 - b. ***Aspergillus/Penicillium*** and/or ***Cladosporium*** are usually primary (1st) colonizers in damp or moisture intrusion areas of homes or commercial buildings.
 - c. ***Chaetomium*** or ***Stachybotrys*** are tertiary (3rd) colonizers of indoor materials and are usually associated with chronic long standing water/moisture issues in a building.
 - d. The presence of ***hyphal fragments*** or ***fruiting structures*** usually indicate amplification (growth) of fungi on building substrates.
 - e. ***Ascospores*** and ***basidiospores*** most often represent the entrance of inadequately filtered outdoor air. Most indoor materials will not support the growth of these fungi.
6. 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.

SPORE TRAP RESULT INTERPRETATION

DEBRIS RATING (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 or that 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 ¹	Debris is present and 40% to 75% of the average viewing field is obscured.	Moderate amount of debris is observed, relative amounts of conidia/hyphal fragments may be underestimated.
4 ¹	Debris is present and >75% of the average viewing field is obscured.	High amount of debris is observed, counts are estimated.
5 ^{1,2}	Debris is present and the entire viewing field is obscured.	Periphery of trace is the area analyzed. Presence of conidia/hyphal fragments noted. Suggest recollect.
6 ¹	Unable to analyze due to heavy debris	Unable to analyze due to heavy debris. Suggest recollect.

¹A rating of 3 or greater indicates that the accuracy of the analysis is likely affected.

² A rating of 5 indicates that only the presence of conidia/hyphal fragments was noted. Recollection of the sample is suggested.

SKIN CELL ANALYSIS

SKIN CELL RATING	RELATIVE AMOUNTS OF OBSERVED SKIN CELLS per high power field (600X)
0	No skin cells present
1	No skin cells present
2	2 to 5
3	6 to 10
4	11 to 15
5	≥16

End of Report