



**Customer Name:** AGX, Inc. **Sample Date:** August 31, 2019  
**Customer Address:** 207 Pine Creek Road **Date Received:** August 31, 2019  
 Wexford, PA 15090 **Date of Report:** August 31, 2019  
**Customer Phone:** (724) 934-4249 **Fax:** (724) 934-5677  
**PO Number:** **Attention:** Scott May  
**Project Name/Number:** Summit Elementary (Butler School District)

Customer sample numbers below are uniquely identified by prefixing Laboratory # 88647-19

Airborne Spore Trap Analysis - AllergencoD												
Analytical Method: USMS-M008												
Total Volume (L)	75				75				75			
Sample Number	2936905				2936925				2936910			
Location:	Room 10				Guidence Office				Room 17			
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												
Ascospores	1	13	13	7%					4	13	52	8%
Aspergillus/Penicillium-like	7	13	91	47%					2	13	26	4%
Basidiospores	7	13	91	47%	2	13	26	100%	43	13	559	86%
Bipolaris/Drechslera												
Cercospora												
Chaetomium												
Cladosporium									1	13	13	2%
Curvularia												
Epicoccum												
Helicomyces												
Nigrospora												
Oidium												
Pithomyces/Ulocladium												
Polythrincium												
Rusts												
Smuts/ Myxomycetes												
Stachybotrys												
Torula												
Trichoderma												
Unidentified dematiaceous conidia												
Unidentified hyaline conidia												
Total Mold (Spores/m <sup>3</sup> of air)	15		195		2		26		50		650	
Pollen	0	13	< 13		0	13	< 13		0	13	< 13	
Hyphal Fragments												
Insect Fragments												
Plant Fragments												
Skin Cell Fragments			1				1				1	
Debris			2				2				1	
Analyst Initials			LS				LS				LS	
Date Analyzed			08/31/19				08/31/19				08/31/19	
Cassette Serial # / Exp Date:			2936905 03/2020				2936925 03/2020				2936910 03/2020	

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

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Technical Manager: *Sharon Fanchalsky*  
 Sharon Fanchalsky, AS, MLT (ASCP)



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

Total Volume (L)	75				75				75			
	Sample Number				Sample Number				Sample Number			
Location:	Conference Room				Room 4				Room 3			
	Raw ct.	AS	Spores/m <sup>3</sup>	%	Raw ct.	AS	Spores/m <sup>3</sup>	%	Raw ct.	AS	Spores/m <sup>3</sup>	%
Particle ID												
Alternaria												
Ascospores	1	13	13	0%								
Aspergillus/Penicillium-like	250	13	3,250	94%	37	13	481	95%	48	13	624	92%
Basidiospores	13	13	169	5%	2	13	26	5%	3	13	39	6%
Bipolaris/Drechslera												
Cercospora												
Chaetomium												
Cladosporium	1	13	13	0%								
Curvularia												
Epicoccum												
Helicomyces												
Nigrospora												
Oidium												
Pithomyces/Ulocladium												
Polythrincium												
Rusts												
Smuts/ Myxomycetes									1	13	13	2%
Stachybotrys												
Torula												
Trichoderma												
Unidentified dematiaceous conidia												
Unidentified hyaline conidia												
Total Mold (Spores/m <sup>3</sup> of air)	265		3,445		39		507		52		676	
Pollen	0	13	< 13		0	13	< 13		0	13	< 13	
Hyphal Fragments												
Insect Fragments												
Plant Fragments												
Skin Cell Fragments			1				1				1	
Debris			2				2				2	
Analyst Initials			LS				LS				LS	
Date Analyzed			08/31/19				08/31/19				08/31/19	
Cassette Serial # / Exp Date:			2936906 03/2020				2936926 03/2020				2936901 03/2020	

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

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Technical Manager:

*Sharon Fanchalsky*

Sharon Fanchalsky, AS, MLT (ASCP)



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**PO Number:** **Attention:** Scott May  
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Customer sample numbers below are uniquely identified by prefixing Laboratory # 88647-19

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

Total Volume (L)		75											
Sample Number		2936911											
Location:		Exterior of Structure											
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	13	52	0%									
Ascospores	46	13	598	2%									
Aspergillus/Penicillium-like													
Basidiospores	100	267	26,700	95%									
Bipolaris/Drechslera													
Cercospora													
Chaetomium													
Cladosporium	51	13	663	2%									
Curvularia													
Epicoccum													
Helicomyces													
Nigrospora													
Oidium													
Pithomyces/Ulocladium													
Polythrincium													
Rusts													
Smuts/ Myxomycetes													
Stachybotrys													
Torula													
Trichoderma													
Unidentified dematiaceous conidia													
Unidentified hyaline conidia													
Total Mold (Spores/m <sup>3</sup> of air)	201		28,013										
Pollen	3	13	39										
Hyphal Fragments													
Insect Fragments													
Plant Fragments													
Skin Cell Fragments			1										
Debris			1										
Analyst Initials			LS										
Date Analyzed			08/31/19										
Cassette Serial # / Exp Date:			2936911 03/2020										

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.  
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## 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

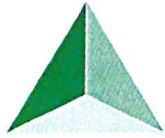
DEBRIS RATING for SPORE TRAP ANALYSIS (using 600X magnification) (Air-O-Cell, Micro 5, Allergenco D, Cyclex d, VersaTrap, etc.)		
DEBRIS RATING	CONDITIONS FOR REPORTING DEBRIS RATING	SIGNIFICANCE
0	A visible trace, including particulates and debris, is not observed.	Indicates the sample was a blank,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



# U.S. Micro-Solutions, Inc.

302 Unity Plaza  
Latrobe, PA 15650  
PH: 724-853-4047 FAX: 724-853-4049

supplies@usmslab.com



## LABORATORY TEST REQUEST - CHAIN OF CUSTODY

Customer Name: AGX Inc.	Phone #: 724-934-4249	FAX #: 724-934-5677
Address: 207 Pine Creek Road	City: Wexford	State: PA Zip: 15090
Attention To: Scott May	E-Mail: <a href="mailto:abrancolini@agxinc.com">abrancolini@agxinc.com</a> , <a href="mailto:mmelvin@agxinc.com">mmelvin@agxinc.com</a>	
Sample Obtained By: Scott May	Results: <input type="checkbox"/> FAX <input checked="" type="checkbox"/> E-Mail	PO# Proposal #
Project Name/Number: <u>SUMMIT ELEMENTARY (BUTLER SCHOOL DISTRICT)</u>		
Turn-Around-Time: (Spore Trap & DME Only)*	Standard (48-72 hr) <input type="checkbox"/>	Next Day (24 hr, M-F) <input type="checkbox"/>
	Same Day (6 hr, M-F) <input type="checkbox"/>	3-Hour (M-F) <input type="checkbox"/>
		Saturday <input checked="" type="checkbox"/>

Comments:

Sample #	Sample Date / Time	Sample Code	Analysis Code	Sample Location & Description	Sample Volume/Area
FE-10-47	2936905 <sup>8</sup> 6:30 AM	ST	SPT	ROOM 10	15L 5M
FE-6D-48	2936925 <sup>6</sup> 6:40 AM	ST	SPT	GUARDIAN OFFICE	15L 5M
FE-17-49	2936910 <sup>6</sup> 6:47 AM	ST	SPT	ROOM 17	15L 5M
FE-CON-50	2936906 <sup>6</sup> 6:57 AM	ST	SPT	CONFERENCE ROOM	15L 5M
FE-4-51	2936926 <sup>7</sup> 7:05 AM	ST	SPT	ROOM 4	15L 5M
FE-3-52	2936901 <sup>8</sup> 8:12 AM	ST	SPT	ROOM 3	15L 5M
FE-OUT-53	2936911 <sup>7</sup> 7:15 AM	ST	SPT	EXTERIOR OF STRUCTURE	15L 5M

Relinquished By (Customer MUST sign) <u>SCOTT MAY</u>	Date & Time 8-31-19/8:55AM
Received By - Lab Use Only <u>[Signature]</u>	Date & Time 08/31/19 0902
	Lab # 081047-19

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 <u>AD</u>	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.