



U.S. Micro-Solutions, Inc. \* 302 Unity Plaza \* Latrobe, PA 15650  
 Phone: (724) 853-4047 Fax: (724) 853-4049 AIHA-LAP, LLC EMLAP # 103009  
[www.usmslab.com](http://www.usmslab.com)



Customer Name: AGX Inc. Sample Date: August 20, 2020  
 Customer Address: 207 Pine Creek Road Date Received: August 21, 2020  
 Wexford, PA 15090 Date of Report: August 26, 2020

Customer Phone: (724) 934-4249 Fax: (724) 934-5677  
 PO Number: Attention: Amber Brancolini  
 Project Name/Number: McQuiston Elementary School

Customer sample numbers below are uniquely identified by prefixing Laboratory # 86866-20

Airborne Spore Trap Analysis - AllergencoD  
 Analytical Method: MIC 01

Total Volume (L)		75				75				75			
Sample Number		MES-01				MES-02				MES-03			
Location:		Room 1				Room 10				Room K-1			
Particle ID		Raw ct.	AS	Spores/m³	%	Raw ct.	AS	Spores/m³	%	Raw ct.	AS	Spores/m³	%
Alternaria													
Ascospores		1	13	13	10%								
Aspergillus/Penicillium-like		1	13	13	10%								
Basidiospores						14	13	182	93%	17	13	221	94%
Bipolaris/Drechslera		1	13	13	10%								
Cercospora													
Chaetomium													
Cladosporium		2	13	26	20%	1	13	13	7%	1	13	13	6%
Curvularia		1	13	13	10%								
Epicoccum		1	13	13	10%								
Helicomyces													
Nigrospora													
Oidium													
Pithomyces/Ulocladium													
Polythrincium													
Rusts													
Smuts/ Myxomycetes		3	13	39	30%								
Stachybotrys													
Torula													
Trichoderma													
Unidentified dematiaceous conidia													
Unidentified hyaline conidia													
Total Mold (Spores/m³ of air)		10		130		15		195		18		234	
Pollen		0	13	< 13		0	13	< 13		0	13	< 13	
Hyphal Fragments		2	13	26									
Insect Fragments													
Plant Fragments													
Skin Cell Fragments				1				1				1	
Debris				2				2				2	
Analyst Initials				LS				LS				LS	
Date Analyzed				08/25/20				08/25/20				08/25/20	
Cassette Serial # / Exp Date:				3220315 10/2020				3220288 10/2020				3220299 10/2020	

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 (spores/m<sup>3</sup>); Blank Lines = None Detected

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Technical Manager:

*Sharon Danko*

Sharon Danko, AS, MLT (ASCP)



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Airborne Spore Trap Analysis - AllergencoD  
 Analytical Method: MIC 01

Total Volume (L)	75				75				75			
Sample Number	MES-04				MES-05				MES-06			
Location:	Room 28				Room 24				Room 21			
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					9	13	117	18%				
Aspergillus/Penicillium-like												
Basidiospores	4	13	52	100%	28	13	364	55%	14	13	182	93%
Bipolaris/Drechslera												
Cercospora												
Chaetomium												
Cladosporium					13	13	169	25%	1	13	13	7%
Curvularia					1	13	13	2%				
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)	4		52		51		663		15		195	
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			08/25/20				08/25/20				08/25/20	
Cassette Serial # / Exp Date:			3220294 10/2020				3220316 10/2020				3220310 10/2020	

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 (spores/m<sup>3</sup>); Blank Lines = None Detected

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**PO Number:** **Attention:** Amber Brancolini  
**Project Name/Number:** McQuiston Elementary School

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Airborne Spore Trap Analysis - AllergencoD													
Analytical Method: MIC 01													
Total Volume (L)	75				75				75				
Sample Number	MES-07				MES-08				MES-09				
Location:	Room 17				Cafeteria				Outside				
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	13	13	6%	3	13	39	0%	
Ascospores									9	13	117	1%	
Aspergillus/Penicillium-like													
Basidiospores	3	13	39	100%	8	13	104	47%	100	133	13,300	88%	
Bipolaris/Drechslera													
Cercospora													
Chaetomium													
Cladosporium					7	13	91	41%	111	13	1,443	10%	
Curvularia													
Epicoccum													
Helicomyces									1	13	13	0%	
Nigrospora													
Oidium													
Pithomyces/Ulocladium									3	13	39	0%	
Polythrincium									1	13	13	0%	
Rusts													
Smuts/ Myxomycetes					1	13	13	6%	5	13	65	0%	
Stachybotrys													
Torula													
Trichoderma													
Unidentified dematiaceous conidia													
Unidentified hyaline conidia													
Total Mold (Spores/m <sup>3</sup> of air)	3		39		17		221		233		15,029		
Pollen	0	13	< 13		0	13	< 13		12	13	156		
Hyphal Fragments									2	13	26		
Insect Fragments													
Plant Fragments													
Skin Cell Fragments			1				1				1		
Debris			2				2				1		
Analyst Initials			LS				LS				LS		
Date Analyzed			08/25/20				08/25/20				08/25/20		
Cassette Serial # / Exp Date:			3220311 10/2020				3220283 10/2020				3220292 10/2020		

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## SPORE TRAP INTERPRETATION TIPS

Contains opinions and interpretations

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 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 indoor 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 is 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 (600 X)</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 (600 X)</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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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: Amber Brancolini	E-Mail: abrancolini@agxinc.com	
Sample Obtained By: Amber Brancolini	Results: <input type="checkbox"/> FAX <input checked="" type="checkbox"/> E-Mail	PO# Proposal #
Project Name/Number: <u>McQuiston Elementary School</u>		
Turn-Around-Time: (Spore Trap & DME Only)*	Standard (48-72 hr) <input checked="" 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 type="checkbox"/>

Comments:

Sample #	Sample Date / Time	Sample Code	Analysis Code	Sample Location & Description	Sample Volume/Area
MES-01	8/20/20	ST	SPT	Room 1	75L
MES-02				Room 10	
MES-03				Room K-1	
MES-04				Room 28	
MES-05				Room 24	
MES-06				Room 21	
MES-07				Room 17	
MES-08				Cafeteria	
MES-09				Outside	

Relinquished By (Customer MUST sign)

Amber Brancolini

Date & Time

8-20-20 / 2:05 PM

Received By – Lab Use Only

[Signature]

Date & Time

08/20/20 1030

Lab #

80620

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.