



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



Customer Name: AGX Inc. Sample Date: August 18, 2020
 Customer Address: 207 Pine Creek Road Date Received: August 19, 2020
 Wexford, PA 15090 Date of Report: August 24, 2020

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

Customer sample numbers below are uniquely identified by prefixing Laboratory # 86769-20

Airborne Spore Trap Analysis - AllergencoD
 Analytical Method: MIC 01

Total Volume (L)	75				75				75			
Sample Number	CONNO-01				CONNO-02				CONNO-03			
Location:	Room 20				Room 1				Room 6			
Particle ID	Raw ct.	AS	Spores/m ³	%	Raw ct.	AS	Spores/m ³	%	Raw ct.	AS	Spores/m ³	%
Alternaria												
Ascospores	2	13	26	5%					2	13	26	4%
Aspergillus/Penicillium-like	2	13	26	5%								
Basidiospores	31	13	403	84%	45	13	585	90%	46	13	598	96%
Bipolaris/Drechslera												
Cercospora												
Chaetomium												
Cladosporium	2	13	26	5%	2	13	26	4%				
Curvularia												
Epicoccum												
Helicomyces												
Nigrospora												
Oidium												
Pithomyces/Ulocladium					1	13	13	2%				
Polythrincium												
Rusts												
Smuts/ Myxomycetes												
Stachybotrys												
Torula												
Trichoderma												
Unidentified dematiaceous conidia					2	13	26	4%				
Unidentified hyaline conidia												
Total Mold (Spores/m ³ of air)	37		481		50		650		48		624	
Pollen	0	13	< 13		0	13	< 13		0	13	< 13	
Hyphal Fragments												
Insect Fragments												
Plant Fragments												
Skin Cell Fragments			1				1				1	
Debris			1				1				1	
Analyst Initials			JM				JM				JM	
Date Analyzed			08/21/20				08/21/20				08/21/20	
Cassette Serial # / Exp Date:			3220371 10/2020				3220375 10/2020				3220359 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/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.

Technical Manager:

Sharon Danko

Sharon Danko, AS, MLT (ASCP)



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



Customer Name: AGX Inc. Sample Date: August 18, 2020
 Customer Address: 207 Pine Creek Road Date Received: August 19, 2020
 Wexford, PA 15090 Date of Report: August 24, 2020

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

Customer sample numbers below are uniquely identified by prefixing Laboratory # 86769-20

Airborne Spore Trap Analysis - AllergencoD
 Analytical Method: MIC 01

Total Volume (L)	75				75				75			
Sample Number	CONNO-04				CONNO-05				CONNO-06			
Location:	Faculty Lounge				Room 17				Room 14			
Particle ID	Raw ct.	AS	Spores/m ³	%	Raw ct.	AS	Spores/m ³	%	Raw ct.	AS	Spores/m ³	%
Alternaria												
Ascospores					5	13	65	20%	4	13	52	12%
Aspergillus/Penicillium-like												
Basidiospores	83	13	1,079	97%	12	13	156	48%	25	13	325	74%
Bipolaris/Drechslera												
Cercospora												
Chaetomium												
Cladosporium	3	13	39	3%	4	13	52	16%	5	13	65	15%
Curvularia												
Epicoccum					1	13	13	4%				
Helicomyces												
Nigrospora												
Oidium												
Pithomyces/Ulocladium												
Polythrincium												
Rusts												
Smuts/ Myxomycetes					2	13	26	8%				
Stachybotrys												
Torula												
Trichoderma												
Unidentified dematiaceous conidia					1	13	13	4%				
Unidentified hyaline conidia												
Total Mold (Spores/m ³ of air)	86		1,118		25		325		34		442	
Pollen	0	13	< 13		0	13	< 13		0	13	< 13	
Hyphal Fragments												
Insect Fragments												
Plant Fragments												
Skin Cell Fragments			1				1				1	
Debris			1				3***				2	
Analyst Initials			JM				JM				JM	
Date Analyzed			08/21/20				08/21/20				08/21/20	
Cassette Serial # / Exp Date:			3220366 10/2020				3220369 10/2020				3220374 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/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.

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

Technical Manager:

Sharon Danko

Sharon Danko, AS, MLT (ASCP)



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



Customer Name: AGX Inc. **Sample Date:** August 18, 2020
Customer Address: 207 Pine Creek Road **Date Received:** August 19, 2020
 Wexford, PA 15090 **Date of Report:** August 24, 2020
Customer Phone: (724) 934-4249 **Fax:** (724) 934-5677
PO Number: **Attention:** Amber Brancolini
Project Name/Number: Connoquenessing Elementary School

Customer sample numbers below are uniquely identified by prefixing Laboratory # 86769-20

Airborne Spore Trap Analysis - AllergencoD
 Analytical Method: MIC 01

Total Volume (L)	75				75							
Sample Number	CONNO-07				CONNO-08							
Location:	Library				Outside							
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	7%	120	13	1,560	5%				
Aspergillus/Penicillium-like					12	13	156	0%				
Basidiospores	7	13	91	47%	105	266	27,930	88%				
Bipolaris/Drechslera												
Cercospora					1	13	13	0%				
Chaetomium												
Cladosporium	6	13	78	40%	171	13	2,223	7%				
Curvularia												
Epicoccum												
Helicomyces												
Nigrospora												
Oidium												
Pithomyces/Ulocladium												
Polythrincium												
Rusts					1	13	13	0%				
Smuts/ Myxomycetes												
Stachybotrys												
Torula												
Trichoderma												
Unidentified dematiaceous conidia	1	13	13	7%								
Unidentified hyaline conidia												
Total Mold (Spores/m ³ of air)	15		195		410		31,895					
Pollen	0	13	< 13		3	13	39					
Hyphal Fragments												
Insect Fragments												
Plant Fragments												
Skin Cell Fragments			1				0					
Debris			1				1					
Analyst Initials			JM				JM					
Date Analyzed			08/21/20				08/21/20					
Cassette Serial # / Exp Date:			3220364 10/2020				3219485 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/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.

Technical Manager:

Sharon Danko

Sharon Danko, AS, MLT (ASCP)

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/m³ 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

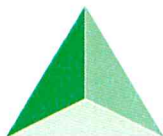
DEBRIS RATING for SPORE TRAP ANALYSIS (using 600X magnification) (Air-O-Cell, Micro 5, Allergenco D, Cyclex d, VersaTrap, etc.)		
DEBRIS RATING	CONDITIONS FOR REPORTING DEBRIS RATING	SIGNIFICANCE
0	A visible trace, including particulates and debris, is not observed.	Indicates the sample is a blank, the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

RELATIVE ABUNDANCE of OBSERVED CONIDIA & HYPHAL FRAGMENTS	
RATING	Relative Amounts of Observed Fungal Structures per high power field (600 X)
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 (600 X)
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: 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>Connoquenessing 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
Conno-01	8-18-20	ST	SPT	Room 20	75 L
Conno-02	↓	↓	↓	Room 1	↓
Conno-03	↓	↓	↓	Room 6	↓
Conno-04	↓	↓	↓	Faculty Room Lounge	↓
Conno-05	↓	↓	↓	Room 17	↓
Conno-06	↓	↓	↓	Room 14	↓
Conno-07	↓	↓	↓	Library	↓
Conno-08	↓	↓	↓	outside	↓

Relinquished By (Customer MUST sign)	Date & Time
<u>Amber Brancolini</u>	8-18-20 / 4:35 PM
Received By – Lab Use Only	Lab #
<u>[Signature]</u>	8/19/2020 1030

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, & 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.