

Hygienix, Inc
49 Woodside St.
Stamford, Connecticut 06902
Project: **NORTHEAST SCHOOL**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 10/18/2018
Date Received: 10/22/2018
Date Analyzed: 10/23/2018
Date Reported: 10/23/2018
Project ID: 18040257
Page 1 of 3

1054 Spore Trap Analysis: SOP 3.8

Client Sample Number	P2				R0			
Sample Location	ROOM P2				OUTSIDE			
Sample Volume (L)	75				75			
Lab Sample Number	18040257-002				18040257-001			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
ascospores	2	107	1	1/3	5	267	22	-
basidiospores	1	53	<1	1/10	10	533	43	-
Cladosporium	2	107	1	1/2	3	160	13	-
hyphal elements	4	213	2	-	-	-	-	-
Penicillium/Aspergillus group	198	10560	95	99/1	2	107	9	-
Smuts, Periconia, Myxomycetes	2	107	1	1/2	3	160	13	-
	Debris Rating 3				Debris Rating 3			
Analytical Sensitivity	Analytical Sensitivity: 13 spr/m ³				Analytical Sensitivity: 13 spr/m ³			
Comments								
Total *See Footnotes	209	11147	~100%	9/1	23	1227	~100%	-

Client Sample Number	OT/PT				R0			
Sample Location	OT/PT				OUTSIDE			
Sample Volume (L)	75				75			
Lab Sample Number	18040257-003				18040257-001			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
ascospores	2	107	4	1/3	5	267	22	-
basidiospores	3	160	7	1/3	10	533	43	-
Cladosporium	4	213	9	1/1	3	160	13	-
Epicoccum	1	53	2	-	-	-	-	-
Penicillium/Aspergillus group	27	1440	59	14/1	2	107	9	-
Pithomyces	1	53	2	-	-	-	-	-
Smuts, Periconia, Myxomycetes	7	373	15	2/1	3	160	13	-
Torula	1	53	2	-	-	-	-	-
	Debris Rating 3				Debris Rating 3			
Analytical Sensitivity	Analytical Sensitivity: 13 spr/m ³				Analytical Sensitivity: 13 spr/m ³			
Comments								
Total *See Footnotes	46	2453	~100%	2/1	23	1227	~100%	-

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Client Sample Number	230				R0			
Sample Location	ROOM 230				OUTSIDE			
Sample Volume (L)	75				75			
Lab Sample Number	18040257-004				18040257-001			
Spore Identification	Raw Ct	spr/m ³	% Ttl	In/Out	Raw Ct	spr/m ³	% Ttl	In/Out
ascospores	3	160	16	1/2	5	267	22	-
basidiospores	2	107	11	1/5	10	533	43	-
Cladosporium	2	107	11	1/2	3	160	13	-
hyphal elements	1	53	5	-	-	-	-	-
Penicillium/Aspergillus group	9	480	47	5/1	2	107	9	-
Smuts,Periconia,Myxomycetes	2	107	11	1/2	3	160	13	-
	Debris Rating 3				Debris Rating 3			
Analytical Sensitivity	Analytical Sensitivity: 13 spr/m ³				Analytical Sensitivity: 13 spr/m ³			
Comments								
Total *See Footnotes	19	1013	~100%	1/1	23	1227	~100%	-

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Footnotes and Additional Report Information

Debris Rating Table

1	Minimal (<5%) particulate present	Reported values are minimally affected by particulate load.
2	5% to 25% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
3	26% to 75% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
4	75% to 90% of the trace occluded with particulate	Negative bias is expected. The degree of bias increases directly with the percent of the trace that is occluded.
5	Greater than 90% of the trace occluded with particulate	Quantification not possible due to large negative bias. A new sample should be collected at a shorter time interval or other measures taken to reduce particulate load.

1. Penicillium/Aspergillus group spores are characterized by their small size, round to ovoid shape, being unicellular, and usually colorless to lightly pigmented. There are numerous genera of fungi whose spore morphology is similar to that of the Penicillium/Aspergillus type. Two common examples would be Paecilomyces and Acremonium. Although the majority of spores placed in this group are Penicillium, Aspergillus, or a combination of both. Keep in mind that these are not the only two possibilities.

2. Ascospores are sexually produced fungal spores formed within an ascus. An ascus is a sac-like structure designed to discharge the ascospores into the environment, e.g. Ascobolus.

3. Basidiospores are typically blown indoors from outdoors and rarely have an indoor source. However, in certain situations a high basidiospore count indoors may be indicative of a wood decay problem or wet soil.

4. The colorless group contains colorless spores which were unidentifiable to a specific genus. Examples of this group include Acremonium, Aphanocladium, Beauveria, Chrysosporium, Engyodontium microconidia, yeast, some arthrospores, as well as many others.

5. Hyphae are the vegetative mode of fungi. Hyphal elements are fragments of individual Hyphae. They can break apart and become airborne much like spores and are potentially allergenic. A mass of hyphal elements is termed the mycelium. Hyphae in high concentration may be indicative of colonization.

6. Dash (-) in this report, under raw count column means 'not detected (ND)'; otherwise 'not applicable' (NA).

7. The positive-hole correction factor is a statistical tool which calculates a probable count from the raw count, taking into consideration that multiple particles can impact on the same hole; for this reason the sum of the calculated counts may be less than the positive hole corrected total.

8. Due to rounding totals may not equal 100%.

9. Analytical Sensitivity for each spores is different for Non-viable sample when the spores are read at different percentage. Analytical Sensitivity is calculated as spr/m^3 divided by raw count. $\text{spr}/\text{m}^3 = \text{raw counts} \times (100/\% \text{ read}) \times (1000/\text{Sample volume})$. If Analytical Sensitivity is 13 spr/m^3 at 100% read, Analytical Sensitivity at 50% read would be 27 spr/m^3 , which is 2 times higher. Analytical Sensitivity provided on the report is based on an assumed 100% of the trace being analyzed.

10. Minimum Reporting Limits (MRL) for BULKS, DUSTS, SWABS, and WATER samples are a calculation based on the sample size and the dilution plate on which the organism was counted. Results are a compilation of counts taken from multiple dilutions and multiple medias. This means that every genus of fungi or bacteria recovered can be counted on the plate on which it is best represented.

11. If the final quantitative result is corrected for contamination based on the blank, the blank correction is stated in the sample comments section of the report.

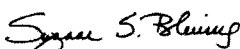
12. The results in this report are related to this project and these samples only.

13. For samples with an air volume of < 100L, the number of significant figures in the result should be considered (2) two. For samples with air volumes between 100-999L, the number of significant figures in the result should be considered (3) three. For example, a sample with a result of 55,443 spr/m^3 from a 75L sample using significant figures should be considered 55,000. The same result of 55,443 from a 150L sample using significant figures should be considered 55,400 spr/m^3 .

14. If the In/Out ratio is greater than 100 times it is indicated >100/1, rather than showing the real value.

Terminology Used in Direct Exam Reporting

Conidiophores are a type of modified hyphae from which spores are born. When seen on a surface sample in moderate to numerous concentrations they may be indicative of fungal growth.



Suzanne S. Blevins, B.S., SM (ASCP)
Laboratory Director

Lab Use:
18040257

ELITE

NVLAP

AZ, CO, GA, VA, NJ

NVLAP Lab Code 200860-0 (CO)
NVLAP Lab Code 200829-0 (VA)
NVLAP Lab Code 500097-0 (AZ)

LAB #152683 (CO)
LAB #102977 (GA)
LAB #163063 (VA)
LAB #210228 (AZ)

Aerobiology Client		Hygenix	
Field Contact	Ebenhack		
Reporting Address	HYGENIX, INC.		
Billing Address	49 Woodside Street		
Phone/Fax	203 324 2222		
Reporting Email(s)	rebenhack@hygenix.com		
Routine	<input checked="" type="radio"/> 24 Hour	<input type="radio"/> Same Day	<input type="radio"/> 4 Hour
2 Hour	<input type="radio"/> 5 Day	Notes:	
SAMPLING LOCATION ZIP CODE		06903	
CC Info:			

Sample No.	Test Code	Sample Location	Total Volume/Area
1 P2	1054	outside	15x5
2 P2	1054	Room P2	15x5
3 OT/PT	1054	OT / PT	15x5
4 230	1054	Room 230	15x5
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

1054	Direct, Non-viable Spore Trap	1015	Culture - WATER Legionella
1051	Direct, Qualitative - Swab/Tape	1017	Culture - SWAB Legionella
1050	Direct, Qualitative - Bulk	1010	WATER - Potable - E. coli/total coliforms
1005	AIR Culture - Bacterial Count w/ ID's	1012	SWAB - E. coli/total coliforms
1030	AIR Culture - Fungal Count w/ ID's	1028	Sewage Screen (E. coli/Enterococcus/fecal coliforms)
1008	SWAB Culture - Bacterial Count w/ ID's	2056	Heterotrophic Plate Count
1031	SWAB Culture - Fungal Count w/ ID's	3001	ASBESTOS - Point count
1008	BULK Culture - Bacterial Count w/ ID's	3002	ASBESTOS - PLM Analysis
1033	BULK Culture - Fungal Count w/ ID's	3003	ASBESTOS - Particle characterization
1007	WATER Culture - Bacterial Count w/ID's	3004	ASBESTOS - PCM Analysis