

Aerobiology Sample Report
43760 Trade Center Place
Sterling, Virginia 20166
Attn: Fifth Kingdom
Project: **IAQ Sample Report**
Condition of Sample(s) Upon Receipt: Acceptable

Date Collected: 05/04/2015
Date Received: 05/04/2015
Date Analyzed: 05/08/2015
Date Reported: 05/08/2015
Project ID: 15000000

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Client Sample #: 1
Sample Location: Counter Top
Test: 1005, Bacterial Count w/ Complete Genus ID: SOP 2.2
Positive Hole Corrected Result: **320 CFU/m³**

Lab Sample #: 15000000-001
Positive Hole: **219**
Air Volume: **150 (L)**
MRL: **7**

Organism(s) Isolated:	Raw Count	CFU/m ³	% Total	Reservoirs
Bacillus species	12	80	28	Environment
Enterobacter species	21	140	49	Environment/Moisture/Fecal
multiple fermentative gram-negative rods	3	20	7	Environment/Moisture/Fecal
Pseudomonas aeruginosa	7	47	16	Environment/Moisture
	43	287	~100%	

Client Sample #: 1
Sample Location: Counter Top
Test: 1008, Bulk / Dust Bacterial Count w/ Complete Genus ID: SOP 2.4
Results: **342100 CFU/g**

Lab Sample #: 15000000-001
Mass Analyzed: **0.5 (g)**

Organism Name:	Raw Count	CFU/g	% Total	Reservoirs
Actinomyces species	3	3000	1	Environment/Moisture
Coag-negative Staphylococcus species	1	100	<1	Human
Corynebacterium species	26	260000	76	
Micrococcus species	7	70000	20	Human
Pseudomonas aeruginosa	9	9000	3	Environment/Moisture
	46	342100	~100%	

Client Sample #: 1
Sample Location: Counter Top
Test: 1030, Fungal Count w/ Complete Genus ID: SOP 3.2
Positive Hole Corrected Result: **683 CFU/m³**

Lab Sample #: 15000000-001
Positive Hole: **219**
Air Volume: **150 (L)**

Organism(s) Isolated:	Raw Count	CFU/m ³	% Total	MRL
Alternaria species	9	60	11	7
Aspergillus fumigatus	4	27	5	7
Cladosporium species	31	207	38	7
Epicoccum species	2	13	2	7
Penicillium species	25	167	30	7
Stachybotrys chartarum	11	73	13	7
	82	547	~100%	

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Client Sample #: 1
Sample Location: Counter Top
Test: 1033, Bulk / Dust Fungal Count w/ Complete Genus ID: SOP 3.4
Results: **542400 CFU/g**

Lab Sample #: 15000000-001

Mass Analyzed: **0.5 (g)**

Organism(s) Isolated:	Raw Count	CFU/g	% Total	MRL
Aspergillus flavus	2	20000	4	1
Aspergillus niger	6	60000	11	1
Cladosporium species	4	400	<1	1
Fusarium species	2	2000	<1	1
Penicillium species	46	460000	85	1
	60	542400	~100%	

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Footnotes and Additional Report Information

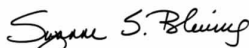
Debris Rating Table

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 Smut, Periconia, Myxomycete group is composed of three different groups whose spores have similar morphologies. Smuts are plant pathogens, Periconia is a relatively uncommon mold indoors, and Myxomycetes are not fungi but slime molds. Although these organisms do not typically proliferate indoors, their spores are potentially allergenic.
5. 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.
6. 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.
7. Dash (-) in this report, under raw count column means 'not detected (ND)'; otherwise 'not applicable' (NA).
8. 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.
9. Due to rounding totals may not equal 100%.
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. Analysis conducted on non-viable spore traps is completed using Indoor Environmental Standards Organization (IESO) Standard 2210.
13. The results in this report are related to this project and these samples only.
14. 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/m³ 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/m³.
15. 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