

September 20, 2023

Mr. Richard Underwood
Director of Operations and Maintenance
155 Merrimack Street, 4th Floor
Lowell, Massachusetts 01852

RE: **Post-Remediation Assessments**
Pawtucketville Memorial Elementary School
425 West Meadow Road, Lowell, Massachusetts
EFI Project No.: 014.06880

Dear Mr. Underwood:

On August 29th, 30th, and September 4th, 2023, EFI Global, Inc. (EFI) performed post-remediation assessments following completion of microbial remediation activities at the Pawtucketville Memorial Elementary School (Pawtucketville School) located at 425 West Meadow Road in Lowell, Massachusetts. The assessments consisted of a visual inspections and collection of bioaerosol samples for airborne total fungal spores (air samples for mold).

SUMMARY OF MICROBIAL REMEDIATION ACTIVITIES

Mold remediation activities were conducted in classrooms, corridors and in the cafeteria at the Pawtucketville School following the discovery of suspect fungal growth on building surfaces. Remediation work was conducted between August 25th and September 4th by remediation contractor SERVPRO of Lowell along with assistance from Lowell Public Schools maintenance personnel. Remediation work primarily included the wet wiping of impacted hard surfaces (*e.g.*, ceilings, walls) with a detergent disinfectant solution. Microbial remediation activities were conducted in conjunction with the operation of high-capacity high-efficiency particulate air (HEPA) filtration units and high-capacity dehumidification units.

ASSESSMENT METHODS

The post-remediation assessments were conducted by EFI representatives, Mr. Peter von Au, Mr. Derrick Calvario, and Mrs. Kayla Smith-Carnes, and included a visual inspection for any remaining evidence of visible suspect fungal growth. A total of eighty-five (85) bioaerosol samples were collected at indoor locations over the course of the three site visits (August 29th, August 30th, and September 4th, 2023). Two outdoor samples were collected, and one field blank sample was prepared, during each individual site visit day for purposes of comparison and quality control, respectively. All samples were submitted to EMSL Analytical, Inc. (EMSL) of Woburn, Massachusetts for analysis.

All bioaerosol samples were collected on Zefon Air-O-Cell spore trap cassettes using a Zefon Bio-Pump Plus sampling pump with a calibrated flow rate of 15 liters per minute (lpm). Each sample was collected over a period of five minutes resulting in a total of 75 liters of air being drawn through the spore trap cassettes. These cassettes are a unique sampling device designed for the rapid collection and analysis of a wide range of airborne particles, including fungal spores. Samples were analyzed via light microscopy at the standardized magnification of 600 times. Spore trap sampling measures the viable spores that are capable of growing and reproducing given the proper conditions, the non-viable (dead, but still allergenic) spores, and the fragments of fungal colonies that are released as the fungi grow. These are the primary bio aerosols that can cause allergic reactions in sensitive individuals and contribute lowering the indoor air quality. Unfortunately, this technique does not allow for the differentiation between *Aspergillus* and *Penicillium* spores because they are morphologically identical. Additionally, the technique does not allow for cultivation, or the identification of spores to the species level, barring a few cases.

RESULTS and RECOMMENDATIONS

Microbial Guidelines

There are no government regulations currently in effect for microbiological contaminants; however, there exist several non-regulatory guidelines, which are based on extensive field experience. It must be emphasized that fungal and bacterial contamination are dynamic phenomena and that species within an area can change due to environmental conditions. Allergic reaction is a common health effect of exposure to mold. Additionally, individual health may be affected by the presence of high levels of non-toxic or non-pathogenic microbes that may emit volatile compounds (musty odors) from the mycelia (fungal plant) or vapors from substrate breakdown.

In general, airborne concentrations indoors should be less than or comparable to that found in the outdoors, with similar species composition. Indoor spore counts significantly greater than those outdoors, or the presence of large numbers of different types of spores indoors that are not found outdoors, may indicate contamination and potential indoor air quality problems.

In most cases, EFI uses a combination of published laboratory information as well as our own experience to establish the following recommended guidelines for air samples:

- Total concentrations obtained inside the building/residence that are below ambient levels or below 2,000 spores per cubic meter (spores/m³), whichever is greater, and;
- Less than 650 spores/m³ for individual mold organisms, are considered normal for the screening method utilized.

Visual Inspection

On August 29th and 30th and September 4th, 2023, EFI did not observe any remaining instances of visible suspect fungal growth in the areas within the Pawtucketville School that were inspected.

Bioaerosol Samples for Airborne Fungal Spores

The following table summarizes the results of air samples for mold collected on August 29th and 30th and September 4th, 2023. The analytical laboratory reports for the samples are included with this report, collectively, as an attachment.

SUMMARY OF RESULTS – AIR SAMPLING FOR MOLD		
Pawtucketville Memorial Elementary School		
425 West Meadow Road, Lowell, Massachusetts		
August 29th, 30th and September 4th, 2023		
Location	Time	Result (spores/m³)
August 29th, 2023		
Outdoors-1	10:20 a.m.	4,210
Classroom 1066	10:29 a.m.	270
Classroom 1068	10:35 a.m.	680
Classroom 1071	10:42 a.m.	320
Classroom 1073	10:47 a.m.	740
Classroom 1075	10:54 a.m.	1,180
Classroom 1076	11:00 a.m.	680
Classroom 1077	11:05 a.m.	2,090
Classroom 1078	11:11 a.m.	340
Classroom 1079	11:17 a.m.	1,360
Classroom 1081	11:22 a.m.	470
Back Hallway 1066-1081 at 1085	11:29 a.m.	1,330
Back Hallway 1066-1081 at 1075	11:35 a.m.	600
Back Hallway 1066-1081 at 1068	11:40 a.m.	560
South Hallway at 1074	11:46 a.m.	710
South Hallway at 1004	11:52 a.m.	830
Front Hallway at Main Office	11:58 a.m.	550
Front Hallway at 1013 entrance	12:03 p.m.	650
Front Hallway at 1065	12:09 p.m.	2,620
North Hallway at 1038	12:15 p.m.	1,900
North Hallway at 1043	12:21 p.m.	1,180
Outdoors-2	12:28 p.m.	2,280
August 30th, 2023		
Outdoors-1	9:50 a.m.	1,480
Cafeteria	9:57 a.m.	330
Main Office, 1008	10:01 a.m.	230
Gymnasium	10:04 a.m.	ND (<13)
Classroom 1038	10:12 a.m.	1,690
Classroom 1041	10:13 a.m.	8,650
Classroom 1043	10:18 a.m.	2,090
Classroom 1045	10:20 a.m.	1,070
Classroom 1063	10:24 a.m.	510

SUMMARY OF RESULTS – AIR SAMPLING FOR MOLD		
Pawtucketville Memorial Elementary School		
425 West Meadow Road, Lowell, Massachusetts		
August 29th, 30th and September 4th, 2023		
Location	Time	Result (spores/m³)
Classroom 1061	10:27 a.m.	1,730
Classroom 1066	10:32 a.m.	700
Classroom 1067	10:38 a.m.	530
Classroom 1069	10:40 a.m.	490
Classroom 1072	10:44 a.m.	190
Classroom 1074	10:49 a.m.	2,070
Classroom 1068	10:51 a.m.	380
Classroom 1071	10:55 a.m.	5,020
Classroom 1073	11:01 a.m.	1,140
Classroom 1075	11:05 a.m.	1,110
Classroom 1076	11:07 a.m.	1,240
Classroom 1077	11:13 a.m.	580
Classroom 1078	11:15 a.m.	1,940
Classroom 1079	11:23 a.m.	910
Classroom 1081	11:26 a.m.	2,500
Classroom 1082	11:32 a.m.	200
Classroom 1083	11:34 a.m.	690
Music room, 1097	11:40 a.m.	1,080
Art room, 1093	11:47 a.m.	500
Kitchen	11:53 a.m.	1,780
Classroom 2001	12:05 p.m.	1,040
Classroom 2002	12:08 p.m.	1,930
Classroom 2003	12:12 p.m.	1,600
Classroom 2004	12:16 p.m.	2,580
Classroom 2005	12:20 p.m.	1,400
Library, 2018	12:23 p.m.	1,310
Room 2012	12:28 p.m.	930
Room 2019, Teachers Room	12:30 p.m.	2,140
Room 2027	12:39 p.m.	4,600
Outdoors-2	12:40 p.m.	7,000
September 4th, 2023		
Outdoors-1	8:43 p.m.	4,870
Classroom 1041	8:46 p.m.	770
Classroom 1038	9:02 p.m.	180
Classroom 1043	9:04 p.m.	240
Classroom 1045	9:14 p.m.	90
Classroom 1063	9:11 p.m.	130
Classroom 1061	9:24 p.m.	140
Classroom 1067	9:26 p.m.	170

SUMMARY OF RESULTS – AIR SAMPLING FOR MOLD
Pawtucketville Memorial Elementary School
425 West Meadow Road, Lowell, Massachusetts
August 29th, 30th and September 4th, 2023

Location	Time	Result (spores/m³)
Classroom 1066	9:38 p.m.	90
Classroom 1069	9:39 p.m.	240
Classroom 1072	9:46 p.m.	750
Classroom 1074	9:48 p.m.	190
Classroom 1068	9:54 p.m.	340
Classroom 1071	9:56 p.m.	130
Classroom 1073	10:02 p.m.	180
Classroom 1075	10:03 p.m.	230
Classroom 1076	10:12 p.m.	400
Classroom 1077	10:13 p.m.	530
Classroom 1078	10:21 p.m.	1,930
Classroom 1079	10:23 p.m.	1,400
Classroom 1081	10:29 p.m.	100
Classroom 1083	10:29 p.m.	950
Art Room, 1093	10:35 p.m.	90
Kitchen	10:37 p.m.	1,260
Main Office, 1008	10:44 p.m.	710
Classroom 2002	11:02 p.m.	ND (<13)
Classroom 2004	11:03 p.m.	130
Room 2019, Teachers' Room	11:08 p.m.	330
Room 2027	11:10 p.m.	40
Outdoors	11:15 p.m.	7,630

Notes:

1. No spores were detected on the field blank samples.
2. ND (<13) = None detected.
3. In general, the presence or absence of small numbers (1 - 3) of individual spore taxa in the analytical results of each sample should not be considered significant.

Mainly, the bioaerosol sampling results indicate that the significant majority of concentrations of total fungal spores measured at indoor locations, throughout the remediation period, were lower than the corresponding (by site visit date) concurrent average outdoor concentration and were comprised of spore taxa (types) detected outdoors, or commonly detected outdoors. The results also indicate that mainly low concentrations of the *Aspergillus/Penicillium* spore taxon (type) were present in a number of indoor locations but not outdoors. While this type of spore is commonly detected outdoors, it was not detected outdoors on any of the site visit/sampling days. The *Aspergillus/Penicillium* spores likely represent residual spores associated with the fungal growth previously present in the remediation work area locations (e.g., individual classrooms and corridors) and their presence, in mainly low concentrations, would not be unexpected following completion of remediation activities, which are typically disruptive. These mainly low concentrations would generally be expected to decline (and did decline as indicated by the sampling results) with continued operation of the HEPA filtration units.

A couple of additional points are worth noting:

In relation to classroom 1041, it should be noted that the need for remediation was initially identified by the comprehensive building-wide sampling that occurred on August 30. Prior to that sampling, the presence of light fungal growth had not been observed by means of visual inspection and had therefore not been added to the initial remediation scope work that had been defined for SERVPRO of Lowell.

In relation to the relatively high concentrations of total fungal spores identified in 2nd floor locations by the comprehensive building-wide sampling that occurred on August 30, it should be noted that the concentrations were predominantly comprised of Basidiospores and Ascospores. These spore types originate outdoors, and their concentrations tend to be amplified by rain events. The elevated concentrations of total fungal spores identified in 2nd floor locations, along with the concentration of the second of the two outdoor samples, correspond to samples collected following a significant rain event that occurred on August 30.

LIMITATIONS

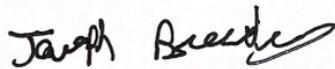
This report has been prepared to assist the client in evaluating indoor air quality concerns at the above referenced site. EFI provided these services consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions. This statement is in lieu of other statements either expressed or implied. This report is intended for the sole use of the client. This report is not intended to serve as a bidding document nor as a project specification document and actual site conditions and quantities should be field verified. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document, the findings, conclusions, or recommendations is at the risk of said user. Although a reasonable attempt has been made to identify indoor air quality issues in the areas inspected, the inspection was limited by the techniques used and areas inspected. Additionally, other possible building material hazards such as asbestos, lead-based paint and microbial issues were not included as part of this evaluation and may require proper sampling for identification prior to disturbance.

Additionally, the passage of time may result in a change in the environmental characteristics at this site. This report does not warrant against future operations or conditions that could affect the recommendations made. The results, findings, conclusions, and recommendations expressed in this report are based only on conditions that were observed during the inspection of the site.

EFI appreciates this opportunity to provide indoor air quality services to Lowell Public Schools. If you require additional information or have questions regarding the contents of this report, please contact either of the undersigned at (978) 688-3736.

Sincerely,
EFI Global, Inc.

Reviewed by:



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Senior Industrial Hygiene Project Manager
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Attachment: EMSL Analytical Laboratory Reports, August 29 and 30, September 4, 2023

ATTACHMENT

EMSL ANALYTICAL LABORATORY REPORTS

August 29 and 30, September 4, 2023



EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com> / bostonlab@emsl.com

EMSL Order: 132305524

Customer ID: EAFI66

Customer PO:

Project ID:

Attention: Peter VonAu
EFI Global, Inc.
155 West Street
Suite 6
Wilmington, MA 01887

Phone: (978) 688-3736

Fax: (978) 688-5494

Collected Date: 08/29/2023

Received Date: 08/29/2023 01:20 PM

Analyzed Date: 08/29/2023

Project: Pawtucketville School 014.6880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	132305524-0001			132305524-0002			132305524-0003		
Client Sample ID:	A01			A02			A03		
Volume (L):				75			75		
Sample Location:	Field Blank			Outdoors - 1			1066		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	1	40	1	-	-	-
Ascospores	-	-	-	7	300	7.1	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	-	-	-	82	3500	83.1	3	100	37
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	3	100	2.4	2	90	33.3
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	1	40	1	-	-	-
Ganoderma	-	-	-	3	100	2.4	1	40	14.8
Myxomycetes++	-	-	-	2	90	2.1	1	40	14.8
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	1	40	1	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Total Fungi	-	No Trace	-	100	4210	100	7	270	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	4	200	-	-	-	-
Analyt. Sensitivity 600x	-	0	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	0*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	-	-	-	-	-	-	1	-
Fibrous Particulate (1-4)	-	-	-	-	1	-	-	1	-
Background (1-5)	-	-	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded, prohibiting accurate detection and quantification). High levels of background will obscure spores and other particulates, leading to underestimation. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/29/2023 03:07 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



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Collected Date: 08/29/2023

Received Date: 08/29/2023 01:20 PM

Analyzed Date: 08/29/2023

Project: Pawtucketville School 014.6880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305524-0004			132305524-0005			132305524-0006		
	A04	A05	A06	A04	A05	A06	A04	A05	A06
	75	75	75	75	75	75	75	75	75
	1068	1071	1073	1068	1071	1073	1068	1071	1073
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ullocladium)	1	40	5.9	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	1	40	5.4
Aspergillus/Penicillium	8	300	44.1	1	40	12.5	4	200	27
Basidiospores	5	200	29.4	4	200	62.5	9	400	54.1
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	12.5	-	-	-
Myxomycetes++	3	100	14.7	1	40	12.5	3	100	13.5
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	1	40	5.9	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Total Fungi	18	680	100	7	320	100	17	740	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded, prohibiting accurate detection and quantification). High levels of background will obscure spores and other particulates, leading to underestimation. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

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Initial report from: 08/29/2023 03:07 PM

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Project: Pawtucketville School 014.6880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305524-0007			132305524-0008			132305524-0009		
	A07	A08	A09	A07	A08	A09	A07	A08	A09
	75	75	75	75	75	75	75	75	75
	1075	1076	1077	1076	1076	1077	1077	1077	1077
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	3.4	1	40	5.9	-	-	-
Aspergillus/Penicillium	12	510	43.2	12	510	75	40	1700	81.3
Basidiospores	10	430	36.4	2	90	13.2	2	90	4.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	5	200	9.6
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	4	200	16.9	1	40	5.9	3	100	4.8
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Total Fungi	27	1180	100	16	680	100	50	2090	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/29/2023 03:07 PM

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EMSL Analytical, Inc.

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EMSL Order: 132305524

Customer ID: EAFI66

Customer PO:

Project ID:

Attention: Peter VonAu
EFI Global, Inc.
155 West Street
Suite 6
Wilmington, MA 01887

Phone: (978) 688-3736

Fax: (978) 688-5494

Collected Date: 08/29/2023

Received Date: 08/29/2023 01:20 PM

Analyzed Date: 08/29/2023

Project: Pawtucketville School 014.6880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305524-0010			132305524-0011			132305524-0012		
	A10	A11	A12	A10	A11	A12	A10	A11	A12
	75	75	75	75	75	75	75	75	75
	1078	1079	1081	1078	1079	1081	1078	1079	1081
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	11.8	2	90	6.6	1	40	8.5
Aspergillus/Penicillium	-	-	-	4	200	14.7	-	-	-
Basidiospores	5	200	58.8	11	470	34.6	7	300	63.8
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	6	300	22.1	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	1	40	8.5
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	3	100	29.4	6	300	22.1	2	90	19.1
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Total Fungi	9	340	100	29	1360	100	11	470	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/29/2023 03:07 PM

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Collected Date: 08/29/2023

Received Date: 08/29/2023 01:20 PM

Analyzed Date: 08/29/2023

Project: Pawtucketville School 014.6880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305524-0013			132305524-0014			132305524-0015		
	A13	A14	A15	A13	A14	A15	A13	A14	A15
	75	75	75	75	75	75	75	75	75
	Back Hallway 1066-1081 @ 1085			Back Hallway 1066-1081 @ 1075			Back Hallway 1066-1081 @ 1068		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	1	40	3	1	40	6.7	-	-	-
Aspergillus/Penicillium	2	90	6.8	2	90	15	2	90	16.1
Basidiospores	21	900	67.7	7	300	50	10	430	76.8
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	5	200	15	1	40	6.7	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	3	100	7.5	-	-	-	1	40	7.1
Myxomycetes++	-	-	-	2	90	15	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	1	40	6.7	-	-	-
Total Fungi	32	1330	100	14	600	100	13	560	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	1	40	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Initial report from: 08/29/2023 03:07 PM

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Phone: (978) 688-3736

Fax: (978) 688-5494

Collected Date: 08/29/2023

Received Date: 08/29/2023 01:20 PM

Analyzed Date: 08/29/2023

Project: Pawtucketville School 014.6880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305524-0016 A16 75 South Hallway @ 1074			132305524-0017 A17 75 South Hallway @ 1004			132305524-0018 A18 75 Front Hallway @ Main Office			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	3	100	12	-	-	-	-
Aspergillus/Penicillium	4	200	28.2	3	100	12	1	40	7.3	-
Basidiospores	10	430	60.6	10	430	51.8	10	430	78.2	-
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	5	200	24.1	1	40	7.3	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	1	40	5.6	-	-	-	-	-	-	-
Myxomycetes++	1	40	5.6	-	-	-	1	40	7.3	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-	-
Total Fungi	16	710	100	21	830	100	13	550	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

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Fax: (978) 688-5494

Collected Date: 08/29/2023

Received Date: 08/29/2023 01:20 PM

Analyzed Date: 08/29/2023

Project: Pawtucketville School 014.6880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305524-0019 A19 75 Front Hallway @ 1013 Entrance			132305524-0020 A20 75 Front Hallway @ 1065			132305524-0021 A21 75 North Hallway @ 1038		
	Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³
Alternaria (Ulocladium)	-	-	-	1	40	1.5	-	-	-
Ascospores	1	40	6.2	-	-	-	3	100	5.3
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-
Basidiospores	11	470	72.3	9	400	15.3	4	200	10.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	3	100	15.4	50	2100	80.2	34	1500	78.9
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	1.5	-	-	-
Myxomycetes++	1	40	6.2	1	40	1.5	3	100	5.3
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Total Fungi	16	650	100	62	2620	100	44	1900	100
Hyphal Fragment	-	-	-	1	40	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Customer ID: EAFI66
Customer PO:
Project ID:

Attention: Peter VonAu EFI Global, Inc. 155 West Street Suite 6 Wilmington, MA 01887	Phone: (978) 688-3736 Fax: (978) 688-5494 Collected Date: 08/29/2023 Received Date: 08/29/2023 01:20 PM Analyzed Date: 08/29/2023
Project: Pawtucketville School 014.6880	

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305524-0022 A22 75 North Hallway @ 1043			132305524-0023 A23 75 Outdoors - 2						
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total			
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	1	40	1.8	-	-	-
Aspergillus/Penicillium	1	40	3.4	-	-	-	-	-	-	-
Basidiospores	9	400	33.9	38	1600	70.2	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	15	640	54.2	12	510	22.4	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	3	100	8.5	1	40	1.8	-	-	-	-
Pithomyces++	-	-	-	2	90	3.9	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-	-
Total Fungi	28	1180	100	54	2280	100	-	-	-	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	-	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	-	-	-
Skin Fragments (1-4)	-	1	-	-	-	-	-	-	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	-	-	-
Background (1-5)	-	1	-	-	1	-	-	-	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


Steve Grise, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/29/2023 03:07 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

132305524

EMSL ANALYTICAL, INC.
5 CONSTITUTION WAY, UNIT A
WOBURN, MA 01801
PHONE: (781) 933-8411
FAX: (781) 933-8412

Company Name: EFI Global EMSL-Bill to: Same Different
If Bill to is Different note instructions in Comments**

Street: 155 West Street Third Party Billing requires written authorization from third party.

City: Wilmington State/Province: MA Zip/Postal Code: 01887 Country: USA

Report To (Name): Peter von Av Telephone #: 978.863.8401

Email Address: peter.vonav@efiglobal.com Fax #: _____ Purchase Order: _____

Project Name/Number: Pawtucketville School - 014-06880 Please Provide Results: Fax Email

U.S. State Samples Taken: MA Project Zip Code: _____ Connecticut Samples: Commercial Residential

Sterile, Sodium Thiosulfate Preserved Bottle Used: Biocide Used in Source (specify):

Public Water Supply Samples: Note: All results may automatically be reported to DOH if required by state.

Turnaround Time (TAT) Options * - Please Check

3 Hour 6 Hour 24 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

Microbiology Test Codes			
M001 Air-O-Cell	M174 MoldSnap	M012 Pseudomonas aeruginosa (P/A***)	M115 Sewage Screen - Water (P/A***)
M030 Micro 5	M032 Allergenco-D	M024 Pseudomonas aeruginosa (MFT*)	M116 Sewage Screen - Water (MPN**)
M041 Fungal Direct Examination		M015 Heterotrophic Plate Count	M117 Sewage Screen - Swab (P/A***)
M169 Pollen ID & Enumeration		M017 Total Coliform & E. coli (Colilert P/A***)	M013 Sewage Screen - Swab (MFT*)
M280 Dust Characterization Level-1		M018 Total Coliform & E. coli (MFT*)	M133 Methicillin-resistant Staph. aureus (MRSA)
M281 Dust Characterization Level-2		M114 Total Coliform & E. coli Enumeration (Colilert MPN**)	M031 Rapid-growing non-TB Mycobacteria Detection & Enumeration
M005 Viable Fungi- Air Samples (Genus ID & Count)		M019 Fecal Coliform (MFT*)	M014 Endotoxin Analysis
M006 Viable Fungi- Air Samples (Includes Penicillium, Aspergillus, Cladosporium, Stachybotrys Species ID & Count)		M020 Fecal Streptococcus (MFT*)	M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite)
M007 Culturable fungi - Surface Samples (Genus ID & Count)		M029 Enterococci (MFT*)	Other See Analytical Price Guide
M008 Culturable fungi - Surface Samples (Includes Penicillium, Aspergillus, Cladosporium, Stachybotrys Species ID & Count)		M129 Enterococci (Enterolert P/A***)	Legionella Analysis Please use EMSL Legionella COC
M009 Bacteria Culture Gram Stain & Count		M180 Real Time qPCR-ERMI 36 Panel	
M010 Bacteria Count & ID - 3 Most Prominent		M025 Sewage Screen -Water (MFT*)	
M011 Bacteria Count & ID - 5 Most Prominent			

*MFT= Membrane Filtration Technique
**MPN= Most Probable Number
***P/A= Presence/Absence

Name of Sampler: Kayla Smith-Carnes Signature of Sampler: _____

Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
Example A1	Kitchen Sink/Tap	Water	<input checked="" type="checkbox"/> P <input type="checkbox"/> NP	M017	100 mL	9/1/13 4:00 PM	
A01	Field Blank	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	—	8-29-23	
A02	Outdoors-1	↓	<input type="checkbox"/> P <input type="checkbox"/> NP	↓	75L	1020	
A03	1066	↓	<input type="checkbox"/> P <input type="checkbox"/> NP	↓	↓	1029	
A04	1068	↓	<input type="checkbox"/> P <input type="checkbox"/> NP	↓	↓	1035	
A05	1071	↓	<input type="checkbox"/> P <input type="checkbox"/> NP	↓	↓	1042	

Client Sample # (s): A01 - A23 Total # of Samples: 23 Samples Received Chilled? Yes / No (Lab Use Only)

Relinquished (Client): _____ Date: 8-29-23 Time: _____

Received (Lab): _____ Date: _____ Time: _____

Comments/Special Instructions: Please email results also to: Kayla.Carnes@efiglobal.com

REC'D 1:20 pm
EMSL-BOSTON **AUG 29 2023**

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.
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Microbiology Chain of Custody
EMSL Order Number (Lab Use Only):

132305524

EMSL ANALYTICAL, INC.
5 CONSTITUTION WAY, UNIT A
WOBURN, MA 01886
PHONE: (781) 933-8411
FAX: (781) 933-8412

Additional pages of the chain of custody are only necessary if needed for additional sample information.

Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
A06	1073	Air MOOT	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	8:29:23 1047	
A07	1075		<input type="checkbox"/> P <input type="checkbox"/> NP			1054	
A08	1076		<input type="checkbox"/> P <input type="checkbox"/> NP			1100	
A09	1077		<input type="checkbox"/> P <input type="checkbox"/> NP			1105	
A10	1078		<input type="checkbox"/> P <input type="checkbox"/> NP			1111	
A11	1079		<input type="checkbox"/> P <input type="checkbox"/> NP			1117	
A12	1081		<input type="checkbox"/> P <input type="checkbox"/> NP			1122	
A13	Back Hallway-1066-1081 @ 1085		<input type="checkbox"/> P <input type="checkbox"/> NP			1129	
A14	Back Hallway-1066-1081 @ 1075		<input type="checkbox"/> P <input type="checkbox"/> NP			1135	
A15	Back Hallway-1066-1081 @ 1068		<input type="checkbox"/> P <input type="checkbox"/> NP			1140	
A16	South Hallway @ 1074		<input type="checkbox"/> P <input type="checkbox"/> NP			1146	
A17	South Hallway @ 1004		<input type="checkbox"/> P <input type="checkbox"/> NP			1152	
A18	Front Hallway @ Main Office		<input type="checkbox"/> P <input type="checkbox"/> NP			1158	
A19	Front Hallway @ 1013 entrance		<input type="checkbox"/> P <input type="checkbox"/> NP			1203	
A20	Front Hallway @ 1065		<input type="checkbox"/> P <input type="checkbox"/> NP			1209	
A21	North Hallway @ 1038		<input type="checkbox"/> P <input type="checkbox"/> NP			1215	
A22	North Hallway @ 1043		<input type="checkbox"/> P <input type="checkbox"/> NP			1221	
A23	outdoors - 2		<input type="checkbox"/> P <input type="checkbox"/> NP			1228	
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				
			<input type="checkbox"/> P <input type="checkbox"/> NP				

Comments/Special Instructions:

REC'D *jk*
EMSL BOSTON AUG 29 2023

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EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com> / bostonlab@emsl.com

EMSL Order: 132305565
Customer ID: EAFI66
Customer PO:
Project ID:

Attention: Peter VonAu EFI Global, Inc. 155 West Street Suite 6 Wilmington, MA 01887	Phone: (978) 688-3736 Fax: (978) 688-5494 Collected Date: 08/30/2023 Received Date: 08/30/2023 01:20 PM Analyzed Date: 08/30/2023
Project: 014.06880 - Pawtucketville Memorial	

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0001 A01			132305565-0002 A02			132305565-0003 A03		
	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Field Blank	Field Blank			Outdoors			Cafeteria		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	5	200	13.5	2	90	27.3
Aspergillus/Penicillium	-	-	-	-	-	-	1	40	12.1
Basidiospores	-	-	-	16	680	45.9	4	200	60.6
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	14	600	40.5	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	-	No Trace	-	35	1480	100	7	330	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	0	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	0*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	-	-	-	-	-	-	1	-
Fibrous Particulate (1-4)	-	-	-	-	1	-	-	1	-
Background (1-5)	-	-	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


 Steve Grise, Laboratory Manager
 or other Approved Signatory

Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded, prohibiting accurate detection and quantification). High levels of background will obscure spores and other particulates, leading to underestimation. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/30/2023 04:22 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com> / bostonlab@emsl.com

EMSL Order: 132305565

Customer ID: EAFI66

Customer PO:

Project ID:

Attention: Peter VonAu
EFI Global, Inc.
155 West Street
Suite 6
Wilmington, MA 01887

Phone: (978) 688-3736

Fax: (978) 688-5494

Collected Date: 08/30/2023

Received Date: 08/30/2023 01:20 PM

Analyzed Date: 08/30/2023

Project: 014.06880 - Pawtucketville Memorial

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0004 A04 75 Main Office, 1008			132305565-0005 A05 75 Gymnasium			132305565-0006 A06 75 Classroom 1038			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	2	90	5.3	-
Aspergillus/Penicillium	1	40	17.4	-	-	-	27	1200	71	-
Basidiospores	3	100	43.5	-	-	-	6	300	17.8	-
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	2	90	39.1	-	-	-	3	100	5.9	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	6	230	100	-	None Detect	-	38	1690	100	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/30/2023 04:22 PM

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5 Constitution Way, Unit A Woburn, MA 01801

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155 West Street
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Phone: (978) 688-3736

Fax: (978) 688-5494

Collected Date: 08/30/2023

Received Date: 08/30/2023 01:20 PM

Analyzed Date: 08/30/2023

Project: 014.06880 - Pawtucketville Memorial

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0007 A07 75 Classroom 1041			132305565-0008 A08 75 Classroom 1043			132305565-0009 A09 75 Classroom 1045			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	2	90	8.4	-
Aspergillus/Penicillium	195	8320	96.2	48	2000	95.7	22	940	87.9	-
Basidiospores	2	90	1	2	90	4.3	1	40	3.7	-
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	4	200	2.3	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	1	40	0.5	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	202	8650	100	50	2090	100	25	1070	100	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Initial report from: 08/30/2023 04:22 PM

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Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0010 A10 75 Classroom 1063			132305565-0011 A11 75 Classroom 1061			132305565-0012 A12 75 Classroom 1066			
	Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	1	40	2.3	-	-	-	-
Aspergillus/Penicillium	12	510	100	37	1600	92.5	8	300	42.9	-
Basidiospores	-	-	-	2	90	5.2	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	9	400	57.1	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	12	510	100	40	1730	100	17	700	100	100
Hyphal Fragment	-	-	-	1	40	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded, prohibiting accurate detection and quantification). High levels of background will obscure spores and other particulates, leading to underestimation. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/30/2023 04:22 PM

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EMSL Order: 132305565
Customer ID: EAFI66
Customer PO:
Project ID:

Attention: Peter VonAu EFI Global, Inc. 155 West Street Suite 6 Wilmington, MA 01887	Phone: (978) 688-3736 Fax: (978) 688-5494 Collected Date: 08/30/2023 Received Date: 08/30/2023 01:20 PM Analyzed Date: 08/30/2023
Project: 014.06880 - Pawtucketville Memorial	

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0013 A13 75 Classroom 1067			132305565-0014 A14 75 Classroom 1069			132305565-0015 A15 75 Classroom 1072			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	2	90	17	-	-	-	-	-	-	-
Aspergillus/Penicillium	3	100	18.9	2	90	18.4	3	100	52.6	
Basidiospores	1	40	7.5	3	100	20.4	-	-	-	
Bipolaris++	-	-	-	-	-	-	-	-	-	
Chaetomium++	-	-	-	-	-	-	-	-	-	
Cladosporium	8	300	56.6	7	300	61.2	2	90	47.4	
Curvularia	-	-	-	-	-	-	-	-	-	
Epicoccum	-	-	-	-	-	-	-	-	-	
Fusarium++	-	-	-	-	-	-	-	-	-	
Ganoderma	-	-	-	-	-	-	-	-	-	
Myxomycetes++	-	-	-	-	-	-	-	-	-	
Pithomyces++	-	-	-	-	-	-	-	-	-	
Rust	-	-	-	-	-	-	-	-	-	
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	
Zygomycetes	-	-	-	-	-	-	-	-	-	
Total Fungi	14	530	100	12	490	100	5	190	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	
Insect Fragment	-	-	-	-	-	-	-	-	-	
Pollen	-	-	-	-	-	-	-	-	-	
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	
Background (1-5)	-	1	-	-	1	-	-	1	-	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


Steve Grise, Laboratory Manager
or other Approved Signatory

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Collected Date: 08/30/2023

Received Date: 08/30/2023 01:20 PM

Analyzed Date: 08/30/2023

Project: 014.06880 - Pawtucketville Memorial

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0016 A16 75 Classroom 1074			132305565-0017 A17 75 Classroom 1068			132305565-0018 A18 75 Classroom 1071			
	Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	9	400	19.3	1	40	10.5	6	300	6	6
Aspergillus/Penicillium	32	1400	67.6	8	300	78.9	94	4000	79.7	79.7
Basidiospores	1	40	1.9	1	40	10.5	1	40	0.8	0.8
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	4.3	-	-	-	16	680	13.5	13.5
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	3	100	4.8	-	-	-	-	-	-	-
Pithomyces++	1	40	1.9	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	48	2070	100	10	380	100	117	5020	100	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	2	-	-	2	-	-	3	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Project: 014.06880 - Pawtucketville Memorial	

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0019 A19 75 Classroom 1073			132305565-0020 A20 75 Classroom 1075			132305565-0021 A21 75 Classroom 1076			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	1	40	3.5	-	-	-	8	300	24.2	
Aspergillus/Penicillium	25	1100	96.5	15	640	57.7	23	940	75.8	
Basidiospores	-	-	-	-	-	-	-	-	-	
Bipolaris++	-	-	-	-	-	-	-	-	-	
Chaetomium++	-	-	-	-	-	-	-	-	-	
Cladosporium	-	-	-	7	300	27	-	-	-	
Curvularia	-	-	-	-	-	-	-	-	-	
Epicoccum	-	-	-	-	-	-	-	-	-	
Fusarium++	-	-	-	1	40	3.6	-	-	-	
Ganoderma	-	-	-	-	-	-	-	-	-	
Myxomycetes++	-	-	-	2	90	8.1	-	-	-	
Pithomyces++	-	-	-	1	40	3.6	-	-	-	
Rust	-	-	-	-	-	-	-	-	-	
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	
Zygomycetes	-	-	-	-	-	-	-	-	-	
Total Fungi	26	1140	100	26	1110	100	31	1240	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	
Insect Fragment	-	-	-	-	-	-	-	-	-	
Pollen	-	-	-	-	-	-	-	-	-	
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	41	-	
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	
Background (1-5)	-	2	-	-	2	-	-	1	-	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


Steve Grise, Laboratory Manager
or other Approved Signatory

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Project: 014.06880 - Pawtucketville Memorial

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0022 A22 75 Classroom 1077			132305565-0023 A23 75 Classroom 1078			132305565-0024 A24 75 Classroom 1079			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	2	80	13.8	2	80	4.1	-	-	-	-
Aspergillus/Penicillium	3	100	17.2	16	660	34	14	570	62.6	
Basidiospores	4	200	34.5	5	200	10.3	8	300	33	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	6	200	34.5	25	1000	51.5	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	1	40	4.4	
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	15	580	100	48	1940	100	23	910	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0025 A25 75 Classroom 1081			132305565-0026 A26 75 Classroom 1082			132305565-0027 A27 75 Classroom 1083			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	3	100	4	-	-	-	-	-	-	-
Aspergillus/Penicillium	52	2100	84	-	-	-	-	-	-	-
Basidiospores	7	300	12	3	100	50	4	200	29	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	3	100	50	12	490	71	
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	62	2500	100	6	200	100	16	690	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
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EMSL Order: 132305565
Customer ID: EAFI66
Customer PO:
Project ID:

Attention: Peter VonAu
 EFI Global, Inc.
 155 West Street
 Suite 6
 Wilmington, MA 01887
Project: 014.06880 - Pawtucketville Memorial

Phone: (978) 688-3736
Fax: (978) 688-5494
Collected Date: 08/30/2023
Received Date: 08/30/2023 01:20 PM
Analyzed Date: 08/30/2023

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0028 A28 75 Music Room, 1097			132305565-0029 A29 75 Art Room, 1093			132305565-0030 A30 75 Kitchen			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	17	700	64.8	-	-	-	19	780	43.8	
Aspergillus/Penicillium	-	-	-	8	300	60	17	700	39.3	
Basidiospores	8	300	27.8	-	-	-	3	100	5.6	
Bipolaris++	-	-	-	-	-	-	-	-	-	
Chaetomium++	-	-	-	-	-	-	-	-	-	
Cladosporium	-	-	-	5	200	40	4	200	11.2	
Curvularia	-	-	-	-	-	-	-	-	-	
Epicoccum	-	-	-	-	-	-	-	-	-	
Fusarium++	-	-	-	-	-	-	-	-	-	
Ganoderma	-	-	-	-	-	-	-	-	-	
Myxomycetes++	-	-	-	-	-	-	-	-	-	
Pithomyces++	2	80	7.4	-	-	-	-	-	-	
Rust	-	-	-	-	-	-	-	-	-	
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	
Zygomycetes	-	-	-	-	-	-	-	-	-	
Total Fungi	27	1080	100	13	500	100	43	1780	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	
Insect Fragment	-	-	-	-	-	-	-	-	-	
Pollen	-	-	-	-	-	-	-	-	-	
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-	
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	
Background (1-5)	-	1	-	-	1	-	-	1	-	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


 Steve Grise, Laboratory Manager
 or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/30/2023 04:22 PM

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EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com> / bostonlab@emsl.com

EMSL Order: 132305565
Customer ID: EAFI66
Customer PO:
Project ID:

Attention: Peter VonAu EFI Global, Inc. 155 West Street Suite 6 Wilmington, MA 01887	Phone: (978) 688-3736 Fax: (978) 688-5494 Collected Date: 08/30/2023 Received Date: 08/30/2023 01:20 PM Analyzed Date: 08/30/2023
Project: 014.06880 - Pawtucketville Memorial	

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0031 A31 75 Classroom 2001			132305565-0032 A32 75 Classroom 2002			132305565-0033 A33 75 Classroom 2003			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	18	740	71.2	11	450	23.3	28	1100	68.8	
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-	-
Basidiospores	6	200	19.2	35	1400	72.5	9	400	25	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	3	100	9.6	-	-	-	3	100	6.3	
Curvularia	-	-	-	1	40	2.1	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	1	40	2.1	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	27	1040	100	48	1930	100	40	1600	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	2	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


Steve Grise, Laboratory Manager
or other Approved Signatory

Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded, prohibiting accurate detection and quantification). High levels of background will obscure spores and other particulates, leading to underestimation. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/30/2023 04:22 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



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EMSL Order: 132305565
Customer ID: EAFI66
Customer PO:
Project ID:

Attention: Peter VonAu EFI Global, Inc. 155 West Street Suite 6 Wilmington, MA 01887	Phone: (978) 688-3736 Fax: (978) 688-5494 Collected Date: 08/30/2023 Received Date: 08/30/2023 01:20 PM Analyzed Date: 08/30/2023
Project: 014.06880 - Pawtucketville Memorial	

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0034 A34 75 Classroom 2004			132305565-0035 A35 75 Classroom 2005			132305565-0036 A36 75 Library, 2018			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	40	1600	62	24	990	70.7	17	700	53.4	
Aspergillus/Penicillium	-	-	-	-	-	-	-	-	-	-
Basidiospores	19	780	30.2	10	410	29.3	14	570	43.5	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	5	200	7.8	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	1	40	3.1	
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	64	2580	100	34	1400	100	32	1310	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


Steve Grise, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 08/30/2023 04:22 PM

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EMSL Order: 132305565

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Phone: (978) 688-3736

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Collected Date: 08/30/2023

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Analyzed Date: 08/30/2023

Project: 014.06880 - Pawtucketville Memorial

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305565-0037			132305565-0038			132305565-0039		
	A37	A38	A39	A37	A38	A39	A37	A38	A39
	75	75	75	75	75	75	75	75	75
	Room 2012			Room 2019, Teachers Room			Room 2027		
Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	5	200	21.5	34	1400	65.4	38	1600	34.8
Aspergillus/Penicillium	13	530	57	-	-	-	-	-	-
Basidiospores	3	100	10.8	18	740	34.6	74	3000	65.2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	3	100	10.8	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	24	930	100	52	2140	100	112	4600	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Project: 014.06880 - Pawtucketville Memorial

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	132305565-0040		
Client Sample ID:	A40		
Volume (L):	75		
Sample Location:	Outdoors		
Spore Types	Raw Count	Count/m ³	% of Total
Alternaria (Ullocladium)	-	-	-
Ascospores	92	3800	54.3
Aspergillus/Penicillium	-	-	-
Basidiospores	79	3200	45.7
Bipolaris++	-	-	-
Chaetomium++	-	-	-
Cladosporium	-	-	-
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium++	-	-	-
Ganoderma	-	-	-
Myxomycetes++	-	-	-
Pithomyces++	-	-	-
Rust	-	-	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Total Fungi	171	7000	100
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	41	-
Analyt. Sensitivity 300x	-	13*	-
Skin Fragments (1-4)	-	1	-
Fibrous Particulate (1-4)	-	1	-
Background (1-5)	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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LABORATORY-PRODUCTS-TRAINING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

132305565

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PHONE: (781) 933-8411
FAX: (781) 933-8412

Company Name: EFI Global		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**					
Street: 155 West Street		Third Party Billing requires written authorization from third party.					
City: Wilmington	State/Province: MA	Zip/Postal Code: 01887	Country: USA				
Report To (Name): Peter von Au		Telephone #: 978.863.8401					
Email Address: peter.vona@efiglobal.com		Fax #:	Purchase Order:				
Project Name/Number: Zimbabwe Memorial, 01406680		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email					
U.S. State Samples Taken: MA		Project Zip Code: 01854	Connecticut Samples: <input type="checkbox"/> Commercial <input type="checkbox"/> Residential				
Sterile, Sodium Thiosulfate Preserved Bottle Used: <input type="checkbox"/> Biocide Used in Source (specify): <input type="checkbox"/>							
Public Water Supply Samples: <input type="checkbox"/> Note: All results may automatically be reported to DOH if required by state.							
Turnaround Time (TAT) Options * - Please Check							
<input checked="" type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week				
Microbiology Test Codes							
M001 Air-O-Cell	M174 MoldSnap	M012 <i>Pseudomonas aeruginosa</i> (P/A***)	M115 Sewage Screen - Water (P/A***)				
M030 Micro 5	M032 Allergenco-D	M024 <i>Pseudomonas aeruginosa</i> (MFT*)	M116 Sewage Screen - Water (MPN**)				
M041 Fungal Direct Examination		M015 Heterotrophic Plate Count	M117 Sewage Screen - Swab (P/A***)				
M169 Pollen ID & Enumeration		M017 Total Coliform & <i>E. coli</i> (Colilert P/A***)	M013 Sewage Screen - Swab (MFT*)				
M280 Dust Characterization Level-1		M018 Total Coliform & <i>E. coli</i> (MFT*)	M133 Methicillin-resistant <i>Staph. aureus</i> (MRSA)				
M281 Dust Characterization Level-2		M114 Total Coliform & <i>E. coli</i> Enumeration (Colilert MPN**)	M031 Rapid-growing non-TB <i>Mycobacteria</i> Detection & Enumeration				
M005 Viable Fungi- Air Samples (Genus ID & Count)		M019 Fecal Coliform (MFT*)	M014 Endotoxin Analysis				
M006 Viable Fungi- Air Samples (Includes <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> Species ID & Count)		M020 Fecal <i>Streptococcus</i> (MFT*)	M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite)				
M007 Culturable fungi - Surface Samples (Genus ID & Count)		M029 <i>Enterococci</i> (MFT*)	Other See Analytical Price Guide				
M008 Culturable fungi - Surface Samples (Includes <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> Species ID & Count)		M129 <i>Enterococci</i> (Enterolert P/A***)	Legionella Analysis Please use EMSL <i>Legionella</i> COC				
M009 Bacteria Culture Gram Stain & Count		M180 Real Time qPCR-ERMI 36 Panel					
M010 Bacteria Count & ID - 3 Most Prominent		M025 Sewage Screen -Water (MFT*)					
M011 Bacteria Count & ID - 5 Most Prominent		*MFT= Membrane Filtration Technique **MPN= Most Probable Number ***P/A= Presence/Absence					
Name of Sampler: Peter von Au		Signature of Sampler:					
Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
Example A1	Kitchen Sink/Tap	Water	<input checked="" type="checkbox"/> P <input type="checkbox"/> NP	M017	100 mL	9/1/13 4:00 PM	
A01	Field Bank	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	—	8/30/23	
A02	Outdoors	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	9:30A	
A03	Cafeteria	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	9:30A	
A04	Main Office, 1008	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	9:30A	
A05	Gymnasium	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	9:30A	
Client Sample # (s): A01 - A40		Total # of Samples: 40		Samples Received Chilled? Yes / No (Lab Use Only)			
Relinquished (Client):		Date: 8/30/23	Time: 1320				
Received (Lab):		Date:	Time:				
Comments/Special Instructions:							

REC'D
EMSL-BOSTON
AUG 30 2023
WAIN IN

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LABORATORY PRODUCTS TRAINING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

132305565

EMSL ANALYTICAL, INC.
5 CONSTITUTION WAY, UNIT A
WOBURN, MA 01886
PHONE: (781) 933-8411
FAX: (781) 933-8412

Additional pages of the chain of custody are only necessary if needed for additional sample information.

Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
A06	Classroom 1038	AN	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	8/30/23 9:30A	
A07	" 1041	↓	<input type="checkbox"/> P <input type="checkbox"/> NP	↓	↓	↓	
A08	" 1043		<input type="checkbox"/> P <input type="checkbox"/> NP				
A09	" 1045		<input type="checkbox"/> P <input type="checkbox"/> NP				
A10	" 1063		<input type="checkbox"/> P <input type="checkbox"/> NP				
A11	" 1061		<input type="checkbox"/> P <input type="checkbox"/> NP				
A12	" 1066		<input type="checkbox"/> P <input type="checkbox"/> NP				
A13	" 1067		<input type="checkbox"/> P <input type="checkbox"/> NP				
A14	" 1069		<input type="checkbox"/> P <input type="checkbox"/> NP				
A15	" 1072		<input type="checkbox"/> P <input type="checkbox"/> NP				
A16	" 1074		<input type="checkbox"/> P <input type="checkbox"/> NP				
A17	" 1068		<input type="checkbox"/> P <input type="checkbox"/> NP				
A18	" 1071		<input type="checkbox"/> P <input type="checkbox"/> NP				
A19	" 1073		<input type="checkbox"/> P <input type="checkbox"/> NP				
A20	" 1075		<input type="checkbox"/> P <input type="checkbox"/> NP				
A21	" 1076		<input type="checkbox"/> P <input type="checkbox"/> NP				
A22	" 1077		<input type="checkbox"/> P <input type="checkbox"/> NP				
A23	" 1078		<input type="checkbox"/> P <input type="checkbox"/> NP				
A24	" 1079		<input type="checkbox"/> P <input type="checkbox"/> NP				
A25	" 1081		<input type="checkbox"/> P <input type="checkbox"/> NP				
A26	" 1082		<input type="checkbox"/> P <input type="checkbox"/> NP				
A27	" 1083		<input type="checkbox"/> P <input type="checkbox"/> NP				
A28	Music rm., 1097		<input type="checkbox"/> P <input type="checkbox"/> NP				

Comments/Special Instructions:

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AUG 30 2023

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Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
A29	Art rm., 1043	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	MOO	75L	8/30/23 9:30A	
A30	Kitchen		<input type="checkbox"/> P <input type="checkbox"/> NP				
A31	Classroom, 2001		<input type="checkbox"/> P <input type="checkbox"/> NP				
A32	" 2002		<input type="checkbox"/> P <input type="checkbox"/> NP				
A33	" 2003		<input type="checkbox"/> P <input type="checkbox"/> NP				
A34	" 2004		<input type="checkbox"/> P <input type="checkbox"/> NP				
A35	" 2005		<input type="checkbox"/> P <input type="checkbox"/> NP				
A36	Library, 2015		<input type="checkbox"/> P <input type="checkbox"/> NP				
A37	RM. 2012		<input type="checkbox"/> P <input type="checkbox"/> NP				
A38	RM. 2019, teachers' rm.		<input type="checkbox"/> P <input type="checkbox"/> NP				
A39	RM. 2027	<input type="checkbox"/> P <input type="checkbox"/> NP					
A40	Outdoors	<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
		<input type="checkbox"/> P <input type="checkbox"/> NP					
Comments/Special Instructions: <div style="text-align: right; margin-top: 20px;"> REC'D EMSL-BOSTON AUG 30 2023 </div>							

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EMSL Order: 132305649

Customer ID: EAFI66

Customer PO:

Project ID:

Attention: Peter VonAu
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155 West Street
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Phone: (978) 688-3736

Fax: (978) 688-5494

Collected Date: 09/04/2023

Received Date: 09/05/2023 09:45 AM

Analyzed Date: 09/05/2023

Project: Pawtucketville Memorial / 014.06880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305649-0001 A01			132305649-0002 A02			132305649-0003 A03		
	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Field Blank				Outdoors			Classroom 1041		
Spore Types									
Alternaria (Ulocladium)	-	-	-	3	100	2.1	-	-	-
Ascospores	-	-	-	1	40	0.8	-	-	-
Aspergillus/Penicillium	-	-	-	-	-	-	10	430	55.8
Basidiospores	-	-	-	96	4100	84.2	3	100	13
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	7	300	6.2	5	200	26
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	5	200	4.1	-	-	-
Myxomycetes++	-	-	-	2	90	1.8	1	40	5.2
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	1	40	0.8	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	-	No Trace	-	115	4870	100	19	770	100
Hyphal Fragment	-	-	-	1	40	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	0	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	0*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	-	-	-	-	-	-	1	-
Fibrous Particulate (1-4)	-	-	-	-	1	-	-	1	-
Background (1-5)	-	-	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 09/05/2023 01:58 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



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EMSL Order: 132305649

Customer ID: EAFI66

Customer PO:

Project ID:

Attention: Peter VonAu
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Phone: (978) 688-3736

Fax: (978) 688-5494

Collected Date: 09/04/2023

Received Date: 09/05/2023 09:45 AM

Analyzed Date: 09/05/2023

Project: Pawtucketville Memorial / 014.06880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	132305649-0004			132305649-0005			132305649-0006		
Client Sample ID:	A04			A05			A06		
Volume (L):	75			75			75		
Sample Location:	Classroom 1038			Classroom 1043			Classroom 1045		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	3	100	55.6	4	200	83.3	2	90	100
Basidiospores	1	40	22.2	1	40	16.7	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	1	40	22.2	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	5	180	100	5	240	100	2	90	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded, prohibiting accurate detection and quantification). High levels of background will obscure spores and other particulates, leading to underestimation. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 09/05/2023 01:58 PM

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Fax: (978) 688-5494

Collected Date: 09/04/2023

Received Date: 09/05/2023 09:45 AM

Analyzed Date: 09/05/2023

Project: Pawtucketville Memorial / 014.06880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	132305649-0007			132305649-0008			132305649-0009		
Client Sample ID:	A07			A08			A09		
Volume (L):	75			75			75		
Sample Location:	Classroom 1063			Classroom 1061			Classroom 1067		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	2	90	69.2	1	40	28.6	1	40	23.5
Basidiospores	-	-	-	3	100	71.4	2	90	52.9
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	1	40	23.5
Myxomycetes++	1	40	30.8	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	3	130	100	4	140	100	4	170	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Initial report from: 09/05/2023 01:58 PM

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Analyzed Date: 09/05/2023

Project: Pawtucketville Memorial / 014.06880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305649-0010 A10 75 Classroom 1066			132305649-0011 A11 75 Classroom 1069			132305649-0012 A12 75 Classroom 1072			
	Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	2	90	100	5	200	83.3	1	40	5.3	
Basidiospores	-	-	-	1	40	16.7	11	470	62.7	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	4	200	26.7	
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	1	40	5.3	
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	2	90	100	6	240	100	17	750	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 09/05/2023 01:58 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



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EMSL Order: 132305649
Customer ID: EAFI66
Customer PO:
Project ID:

Attention: Peter VonAu
 EFI Global, Inc.
 155 West Street
 Suite 6
 Wilmington, MA 01887
Project: Pawtucketville Memorial / 014.06880

Phone: (978) 688-3736
Fax: (978) 688-5494
Collected Date: 09/04/2023
Received Date: 09/05/2023 09:45 AM
Analyzed Date: 09/05/2023

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305649-0013 A13 75 Classroom 1074			132305649-0014 A14 75 Classroom 1068			132305649-0015 A15 75 Classroom 1071			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	1	40	11.8	-	-	-	-
Aspergillus/Penicillium	2	90	47.4	4	200	58.8	2	90	69.2	
Basidiospores	3	100	52.6	3	100	29.4	1	40	30.8	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	5	190	100	8	340	100	3	130	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	
Background (1-5)	-	1	-	-	1	-	-	1	-	

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


 Steve Grise, Laboratory Manager
 or other Approved Signatory

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Collected Date: 09/04/2023

Received Date: 09/05/2023 09:45 AM

Analyzed Date: 09/05/2023

Project: Pawtucketville Memorial / 014.06880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305649-0016 A16 75 Classroom 1073			132305649-0017 A17 75 Classroom 1075			132305649-0018 A18 75 Classroom 1076			
	Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	2	90	50	2	90	39.1	3	100	25	
Basidiospores	-	-	-	3	100	43.5	6	300	75	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	2	90	50	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	17.4	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	4	180	100	6	230	100	9	400	100	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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EMSL Order: 132305649
Customer ID: EAFI66
Customer PO:
Project ID:

Attention: Peter VonAu EFI Global, Inc. 155 West Street Suite 6 Wilmington, MA 01887	Phone: (978) 688-3736 Fax: (978) 688-5494 Collected Date: 09/04/2023 Received Date: 09/05/2023 09:45 AM Analyzed Date: 09/05/2023
Project: Pawtucketville Memorial / 014.06880	

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305649-0019 A19 75 Classroom 1077			132305649-0020 A20 75 Classroom 1078			132305649-0021 A21 75 Classroom 1079			
	Spore Types	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	3	100	5.2	-	-	-	-
Aspergillus/Penicillium	3	100	18.9	6	300	15.5	-	-	-	-
Basidiospores	10	430	81.1	15	640	33.2	5	200	14.3	-
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	20	850	44	27	1200	85.7	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	1	40	2.1	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	13	530	100	45	1930	100	32	1400	100	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.


Steve Grise, Laboratory Manager
or other Approved Signatory

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Analyzed Date: 09/05/2023

Project: Pawtucketville Memorial / 014.06880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305649-0022			132305649-0023			132305649-0024		
	A22	A23	A24	A22	A23	A24	A22	A23	A24
	75	75	75	75	75	75	75	75	75
	Classroom 1081			Classroom 1083			Art Room, 1093		
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	1	40	4.2	-	-	-
Aspergillus/Penicillium	-	-	-	3	100	10.5	-	-	-
Basidiospores	3	100	100	18	770	81.1	2	90	100
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	1	40	4.2	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Total Fungi	3	100	100	23	950	100	2	90	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Project: Pawtucketville Memorial / 014.06880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305649-0025			132305649-0026			132305649-0027				
	A25	A26	A27	Kitchen			Main Office, 1008			Classroom 2002	
Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total		
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-		
Ascospores	1	40	3.2	1	40	5.6	-	-	-		
Aspergillus/Penicillium	4	200	15.9	4	200	28.2	-	-	-		
Basidiospores	20	850	67.5	7	300	42.3	-	-	-		
Bipolaris++	-	-	-	-	-	-	-	-	-		
Chaetomium++	-	-	-	-	-	-	-	-	-		
Cladosporium	1	40	3.2	1	40	5.6	-	-	-		
Curvularia	-	-	-	-	-	-	-	-	-		
Epicoccum	-	-	-	-	-	-	-	-	-		
Fusarium++	-	-	-	-	-	-	-	-	-		
Ganoderma	2	90	7.1	1	40	5.6	-	-	-		
Myxomycetes++	1	40	3.2	2	90	12.7	-	-	-		
Pithomyces++	-	-	-	-	-	-	-	-	-		
Rust	-	-	-	-	-	-	-	-	-		
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-		
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-		
Unidentifiable Spores	-	-	-	-	-	-	-	-	-		
Zygomycetes	-	-	-	-	-	-	-	-	-		
Total Fungi	29	1260	100	16	710	100	-	None Detect	-		
Hyphal Fragment	-	-	-	-	-	-	-	-	-		
Insect Fragment	-	-	-	-	-	-	-	-	-		
Pollen	-	-	-	-	-	-	-	-	-		
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-		
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-		
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-		
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-		
Background (1-5)	-	1	-	-	1	-	-	1	-		

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

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Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number: Client Sample ID: Volume (L): Sample Location:	132305649-0028 A28 75 Classroom 2004			132305649-0029 A29 75 Room 2019, Teachers' Room			132305649-0030 A30 75 Room 2027			
	Spore Types	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total	Raw Count	Count/m ³	% of Total
Alternaria (Ullocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	1	40	30.8	2	90	27.3	-	-	-	-
Basidiospores	2	90	69.2	5	200	60.6	-	-	-	-
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium++	-	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium++	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	12.1	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	1	40	100	-
Pithomyces++	-	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-	-
Total Fungi	3	130	100	8	330	100	1	40	100	-
Hyphal Fragment	-	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	43	-	-	43	-	-	43	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	1	-	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-	-
Background (1-5)	-	1	-	-	1	-	-	1	-	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded, prohibiting accurate detection and quantification). High levels of background will obscure spores and other particulates, leading to underestimation. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 09/05/2023 01:58 PM

For information on the fungi listed in this report, please visit the Resources section at www.emsl.com



EMSL Analytical, Inc.

5 Constitution Way, Unit A Woburn, MA 01801

Tel/Fax: (781) 933-8411 / (781) 933-8412

<http://www.EMSL.com> / bostonlab@emsl.com

EMSL Order: 132305649

Customer ID: EAFI66

Customer PO:

Project ID:

Attention: Peter VonAu
EFI Global, Inc.
155 West Street
Suite 6
Wilmington, MA 01887

Phone: (978) 688-3736

Fax: (978) 688-5494

Collected Date: 09/04/2023

Received Date: 09/05/2023 09:45 AM

Analyzed Date: 09/05/2023

Project: Pawtucketville Memorial / 014.06880

Test Report: Air-O-Cell™ Analysis of Fungal Spores & Particulates by Optical Microscopy (Methods MICRO-SOP-201, ASTM D7391)

Lab Sample Number:	132305649-0031		
Client Sample ID:	A31		
Volume (L):	75		
Sample Location:	Outdoors		
Spore Types	Raw Count	Count/m³	% of Total
Alternaria (Ulocladium)	1	40	0.5
Ascospores	7	300	3.9
Aspergillus/Penicillium	-	-	-
Basidiospores	143	6100	79.9
Bipolaris++	-	-	-
Chaetomium++	-	-	-
Cladosporium	19	810	10.6
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium++	1	40	0.5
Ganoderma	6	300	3.9
Myxomycetes++	1	40	0.5
Pithomyces++	-	-	-
Rust	-	-	-
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Total Fungi	178	7630	100
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	43	-
Analyt. Sensitivity 300x	-	13*	-
Skin Fragments (1-4)	-	-	-
Fibrous Particulate (1-4)	-	1	-
Background (1-5)	-	1	-

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Steve Grise, Laboratory Manager
or other Approved Signatory

Skin Fragment and Fibrous Particulate ratings are based on the percent of non-fungal material they represent: 1 (1-25%), 2 (26-50%), 3 (51-75%), or 4 (76-100%). Background ratings are based on the total area covered by non-fungal particles: 1 (1-25%), 2 (26-50%), 3 (51-75%), 4 (76-99%), or 5 (100%; overloaded, prohibiting accurate detection and quantification). High levels of background will obscure spores and other particulates, leading to underestimation. Present = Spores detected on overloaded samples. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. *** Denotes particles found at 300X. *- Denotes not detected. Due to method stopping rules, raw counts in excess of 100 are extrapolated based on the percentage analyzed. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result, it will be noted on the report.

Samples analyzed by EMSL Analytical, Inc. Woburn, MA AIHA LAP, LLC-EMLAP Accredited #180179

Initial report from: 09/05/2023 01:58 PM

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EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

132305649

EMSL ANALYTICAL, INC.
5 CONSTITUTION WAY, UNIT A
WOBURN, MA 01801
PHONE: (781) 933-8411
FAX: (781) 933-8412

Company Name: EFI Global		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>					
Street: 155 West Street		<i>Third Party Billing requires written authorization from third party.</i>					
City: Wilmington	State/Province: MA	Zip/Postal Code: 01887	Country: USA				
Report To (Name): Peter von Au		Telephone #: 978.863.8401					
Email Address: peter.vonau@efiglobal.com		Fax #:	Purchase Order:				
Project Name/Number: Pawtucketville Memorial, 04.06850		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email					
U.S. State Samples Taken: MA		Project Zip Code: 01854	Connecticut Samples: <input type="checkbox"/> Commercial <input type="checkbox"/> Residential				
Sterile, Sodium Thiosulfate Preserved Bottle Used: <input type="checkbox"/> Biocide Used in Source (specify): <input type="checkbox"/>							
Public Water Supply Samples: <input type="checkbox"/> Note: All results may automatically be reported to DOH if required by state.							
Turnaround Time (TAT) Options * - Please Check							
<input checked="" type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week				
Microbiology Test Codes							
M001 Air-O-Cell M030 Micro 5 M041 Fungal Direct Examination M169 Pollen ID & Enumeration M280 Dust Characterization Level-1 M281 Dust Characterization Level-2 M005 Viable Fungi- Air Samples (Genus ID & Count) M006 Viable Fungi- Air Samples (Includes <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> Species ID & Count) M007 Culturable fungi - Surface Samples (Genus ID & Count) M008 Culturable fungi - Surface Samples (Includes <i>Penicillium</i> , <i>Aspergillus</i> , <i>Cladosporium</i> , <i>Stachybotrys</i> Species ID & Count) M009 Bacteria Culture Gram Stain & Count M010 Bacteria Count & ID - 3 Most Prominent M011 Bacteria Count & ID - 5 Most Prominent	M174 MoldSnap M032 Allergenco-D M012 <i>Pseudomonas aeruginosa</i> (P/A***) M024 <i>Pseudomonas aeruginosa</i> (MFT*) M015 Heterotrophic Plate Count M017 Total Coliform & <i>E. coli</i> (Colilert P/A***) M018 Total Coliform & <i>E. coli</i> (MFT*) M114 Total Coliform & <i>E. coli</i> Enumeration (Colilert MPN**) M019 Fecal Coliform (MFT*) M020 Fecal <i>Streptococcus</i> (MFT*) M029 <i>Enterococci</i> (MFT*) M129 <i>Enterococci</i> (Enterolert P/A***) M180 Real Time qPCR-ERMI 36 Panel M025 Sewage Screen -Water (MFT*)	M115 Sewage Screen - Water (P/A***) M116 Sewage Screen - Water (MPN**) M117 Sewage Screen - Swab (P/A***) M013 Sewage Screen - Swab (MFT*) M133 Methicillin-resistant <i>Staph. aureus</i> (MRSA) M031 Rapid-growing non-TB <i>Mycobacteria</i> Detection & Enumeration M014 Endotoxin Analysis M044 Group Allergen (Cat, Dog, Cockroach, Dust Mite) Other See Analytical Price Guide Legionella Analysis Please use EMSL Legionella COC					
Name of Sampler: Peter von Au		Signature of Sampler: <i>[Signature]</i>					
Sample #	Sample Location/Description	Sample Type	Potable/ NonPotable (Only for Waters)	Test Code	Volume/ Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
Example A1	Kitchen Sink/Tap	Water	<input checked="" type="checkbox"/> P <input type="checkbox"/> NP	M017	100 mL	9/1/13 4:00 PM	
A01	Field blank	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M021	—	9/4/23	
A02	Outdoors		<input type="checkbox"/> P <input type="checkbox"/> NP		75L	8:32pm	
A03	Classroom 1041 (*)		<input type="checkbox"/> P <input type="checkbox"/> NP				
A04	1038		<input type="checkbox"/> P <input type="checkbox"/> NP				
A05	1043		<input type="checkbox"/> P <input type="checkbox"/> NP				
Client Sample # (s): A01, A03, A04, A05		Total # of Samples: 31		Samples Received Chilled? Yes / No (Lab Use Only) 7.0			
Relinquished (Client): <i>[Signature]</i>		Date: 9/8/23		Time: 11:59pm			
Received (Lab):		Date: 9.8.23		Time:			
Comments/Special Instructions:							
REC'D EMSL-BOSTON SEP 8 5 2023 <i>[Handwritten: SM 945 wait in]</i>							

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



EMSL ANALYTICAL, INC.
LABORATORY-PRODUCTS-TRAINING

Microbiology Chain of Custody

EMSL Order Number (Lab Use Only):

132305649

EMSL ANALYTICAL, INC.
5 CONSTITUTION WAY, UNIT A
WOBURN, MA 01886
PHONE: (781) 933-8411
FAX: (781) 933-8412

Additional pages of the chain of custody are only necessary if needed for additional sample information.

Sample #	Sample Location/Description	Sample Type	Potable/NonPotable (Only for Waters)	Test Code	Volume/Area	Date/Time Collected	Temperature (°C) (Lab Use Only)
A06	Classroom 1045	Air	<input type="checkbox"/> P <input type="checkbox"/> NP	M001	75L	9/4/23, 8:30 P.M.	
A07	P.V. 1045 1063	↓	<input type="checkbox"/> P <input type="checkbox"/> NP	↓	↓	↓	↓
A08	P.V. 1063 1061		<input type="checkbox"/> P <input type="checkbox"/> NP				
A09	P.V. 1061 1067		<input type="checkbox"/> P <input type="checkbox"/> NP				
A10	1066		<input type="checkbox"/> P <input type="checkbox"/> NP				
A11	1069		<input type="checkbox"/> P <input type="checkbox"/> NP				
A12	1072		<input type="checkbox"/> P <input type="checkbox"/> NP				
A13	1074		<input type="checkbox"/> P <input type="checkbox"/> NP				
A14	1068		<input type="checkbox"/> P <input type="checkbox"/> NP				
A15	1071		<input type="checkbox"/> P <input type="checkbox"/> NP				
A16	1073		<input type="checkbox"/> P <input type="checkbox"/> NP				
A17	1075		<input type="checkbox"/> P <input type="checkbox"/> NP				
A18	1076		<input type="checkbox"/> P <input type="checkbox"/> NP				
A19	1077		<input type="checkbox"/> P <input type="checkbox"/> NP				
A20	1078		<input type="checkbox"/> P <input type="checkbox"/> NP				
A21	1079		<input type="checkbox"/> P <input type="checkbox"/> NP				
A22	1081		<input type="checkbox"/> P <input type="checkbox"/> NP				
A23	1083		<input type="checkbox"/> P <input type="checkbox"/> NP				
A24	Art room, 1093		<input type="checkbox"/> P <input type="checkbox"/> NP				
A25	Kitchen		<input type="checkbox"/> P <input type="checkbox"/> NP				
A26	Main office, 1008		<input type="checkbox"/> P <input type="checkbox"/> NP				
A27	Classroom 2002		<input type="checkbox"/> P <input type="checkbox"/> NP				
A28	2001		<input type="checkbox"/> P <input type="checkbox"/> NP				

Comments/Special Instructions:

REC'D EMSL-BOSTON SEP 05 2023

