



Occupational Health & Safety • Environmental Consultants

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April 8, 2021

South Kingstown School Department
ATTN: Mr. Brian Mahoney
307 Curtis Corner Road
Wakefield, RI 02879

RE: Indoor Air Quality and Airborne Mold Assessment
Curtis Corner Middle School
301 Curtis Corner Road
Wakefield, RI

emailed to: Bmahoney@sksd-ri.net

Dear Mr. Mahoney:

OccuHealth, Inc. (OHI) is submitting the enclosed report on the indoor air quality and airborne mold assessments conducted on April 5, 2021 in the Curtis Corner Middle School located at 301 Curtis Corner Road in Wakefield, Rhode Island.

Please call either of the undersigned at (508) 339-9119 with any questions. Thank you for the opportunity to be of service.

Regards,
OCCUHEALTH, INC.

Jay McNeff, Sr. Project Manager

Thomas E. Hamilton, CIH

JTM/mew

Enclosures



OccuHealth

**INDOOR AIR QUALITY AND AIRBORNE MOLD ASSESSMENT
CURTIS CORNER MIDDLE SCHOOL
301 CURTIS CORNER ROAD
WAKEFIELD, RHODE ISLAND**

Prepared for:

**MR. BRIAN MAHONEY
SOUTH KINGSTON SCHOOL DEPARTMENT
301 CURTIS CORNER ROAD
WAKEFIELD, RI 02879**

Conducted by:

**OCCUHEALTH, INC.
44 WOOD AVENUE
MANSFIELD, MA 02048
(508) 339-9119
OHI JOB 21-10730**

Report Date:

APRIL 8, 2021

**INDOOR AIR QUALITY AND AIRBORNE MOLD ASSESSMENT
CURTIS CORNER MIDDLE SCHOOL
301 CURTIS CORNER ROAD
WAKEFIELD, RHODE ISLAND**

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Attachments

Environmental Airborne Aerosol Analysis Laboratory Report
EAA Chain-of-Custody Form

Report Synopsis: On April 5, 2021, OccuHealth, Inc. (OHI) conducted an indoor air quality and airborne mold assessment in the Curtis Corner Middle School located at 301 Curtis Corner Road in Wakefield, Rhode Island. Twelve air samples were collected for airborne mold spore analysis. OHI also recorded readings for temperature, relative humidity, carbon monoxide and carbon dioxide in each classroom that was sampled.

Based on observed conditions and the results of the air samples collected on April 5, OHI concludes that airborne mold levels in the evaluated classroom areas are within normal ranges. The readings for temperature, relative humidity, carbon monoxide and carbon dioxide obtained in each classroom were also within normal ranges.

1.0 INTRODUCTION

OccuHealth, Inc. (OHI) was requested to conduct an IAQ and airborne mold assessment in a representative number of classrooms in the Curtis Corner Middle School located at 301 Curtis Corner Road in Wakefield, Rhode Island. OHI also obtained measurements for temperature, relative humidity, carbon monoxide and carbon dioxide in each classroom as a reference.

The assessment was conducted on April 5, 2021 by Mr. Jay McNeff, Senior Project Manager, under the supervision of Mr. Thomas E. Hamilton, Certified Industrial Hygienist (CIH), both of OHI. Mr. McNeff's was escorted by Mr. Brian Mahoney of the South Kingston School Department, who requested and authorized this assessment.

2.0 INSPECTION

OHI did not observe any visible mold growth or odors in any of the classroom areas sampled. OHI did not note any significant dust accumulations in the classrooms and surfaces were very clean. OccuHealth did observe some historic water staining on ceiling tiles in some classrooms. Each classroom was equipped with recirculating HEPA filter units which Mr. Mahoney estimated to be operating at about 650 cfm(cubic feet per minute) continuously.

Mr. Mahoney also reported that the purpose of this assessment was to determine if the building had any current mold issues that would need to be addressed. This building is being considered for a major re-construction project and the facilities department is requesting this information to factor into the decision making process.

3.0 AIRBORNE MOLD SPORE TESTING

Sampling and Analytical Methodology

OHI collected 12 air samples for mold spore analysis in representative classrooms throughout the school building. An outdoor sample was collected for comparison. The air samples were collected using a high volume pump with Zefon Air-O-Cell cassettes. An Air-O-

Cell cassette is a spore and dust trap which allows for rapid detection and identification of mold spores using bright light microscopy. Culturable and non-viable mold spores are collected and counted. The analytical results can be compared to data from available studies and to levels seen outdoors.

The sample pump was calibrated to a flow rate of 15 liters per minute and the samples were collected for five minutes. The sample pump utilized for the air sampling was calibrated before the sampling event using a precision rotameter. This rotameter was in turn calibrated using a primary standard.

The samples were submitted under chain-of-custody for quantitative analysis to Environmental Analysis Associates, Inc. (EAA) in Bay City, Michigan. Copies of the laboratory report and chain-of-custody form are attached.

Analytical Results

The analytical results are summarized in Table 1 below. To interpret the results, an airborne mold spore concentration of less than 2,000 counts per cubic meter of air (cts/m³) as a total spore count, and less than 1,000 cts/m³ for any one mold genus is considered low or clean for an indoor environment. Total counts above 2,000 cts/m³ in indoor air samples are considered elevated if they are different genera from those detected outdoors.

These results indicate that airborne mold spore levels are at normal levels.

Table 1: Airborne Mold Spore Testing Results

Location	Sample Number	Total Mold Spores (cts/m ³)	Predominant Mold Genera (cts/m ³)
Classroom 418	32476527	46	Drechslera/Bipolaris (46)
Classroom 412	32476542	Not Detected	None Detected
Classroom 501	32476525	91	Pigmented Asco & Basidiospores (46) Cladosporium (46)
Classroom 506	32476530	Not Detected	None Detected
Classroom 518	32476539	46	Cladosporium (46)
Classroom 511	32476524	46	Mixed tiny, hyal Asco & Basidiospores (46)
Classroom 206	32476528	Not Detected	None Detected
Classroom 203	32476535	Not Detected	None Detected

Classroom 303	32476551	183	Cladosporium (137) Mixed tiny, hyal Asco & Basidiospores (46)
Classroom 302	32476536	183	Aspergillus/Penicillium (91) Mixed tiny, hyal Asco & Basidiospores (46)
Classroom 113	32476537	Not Detected	None Detected
Classroom 109	32476533	Not Detected	None Detected
Outdoors	32476522	46	Mixed tiny, hyal Asco & Basidiospores (46)

cts/m³ = counts per cubic meter of air

4.0 INDOOR AIR QUALITY (IAQ) ASSESSMENT

This section includes a detailed review of the data collected for carbon monoxide (CO), carbon dioxide (CO₂), temperature and relative humidity.

Air Monitoring Techniques

Measurements of routine indoor air quality parameters were taken using real-time direct-reading instrumentation. Measurements were collected for carbon dioxide, carbon monoxide, temperature and relative humidity in the office areas. The data is presented in Table 2 below.

Table 2: Air Quality Measurements

Location	CO Level ppm (parts per million)	CO ₂ Level ppm (parts per million)	Temp degrees F	Relative Humidity %	Comments
Classroom 418	0	560	70.7	23.7	0 occupants, Acceptable
Classroom 412	0	524	72.5	23.3	
Classroom 501	0	528	71.6	25.1	
Classroom 506	0	630	71.6	27.0	
Classroom 518	0	503	73.4	23.7	
Classroom 511	0	500	73.4	25.7	
Classroom 206	0	470	74.3	23.0	
Classroom 203	0	475	70.7	25.0	
Classroom 303	0	441	69.8	24.1	
Classroom 302	0	465	71.6	22.8	
Classroom 113 (Band)	0	444	70.7	21.8	

Classroom 109 (Teacher's Lounge)	0	442	71.6	22.6	
Outdoors	0	390	62.6	25.8	

Levels of carbon dioxide and carbon monoxide were measured using a Fluke Model 975 AirMeter, which expresses the concentration of each gas in parts per million (ppm). Temperature and relative humidity were measured using specialized probes on this instrument as well. Temperature was recorded in degrees Fahrenheit (°F) and relative humidity was recorded as a percent (%) of saturation.

4.1 Fresh Air and Carbon Dioxide Levels

Carbon dioxide (CO₂) in indoor environments is a by-product of human respiration and by itself does not pose an acute health hazard. Elevated levels of CO₂ may serve as an indicator of an insufficient intake of fresh air to the HVAC system or insufficient number of air changes in the environment, and so it is used as a surrogate measurement. The normal ambient (outdoor) level of CO₂ ranges between 325-375 parts per million by volume (ppm). CO₂ concentrations typically fluctuate according to the population density, with maximum concentrations occurring at times of high population.

The American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) currently recommends that CO₂ levels for occupant comfort, be maintained below a maximum of 700 ppm above outdoor levels (ASHRAE 62-2001, Ventilation for Acceptable Indoor Air Quality). The outdoor carbon dioxide concentration on April 5, 2021 was 390 ppm; consequently, the ASHRAE-recommended maximum indoor carbon dioxide level for the assessment is 1,090 ppm.

Symptoms of an inadequate supply of fresh air include headaches, dizziness, lightheadedness, and drowsiness often accompanied by a sensation of stuffiness. These effects vary widely from person to person. However, most individuals do not have measurable effects until CO₂ levels exceed 800 ppm.

The measured carbon dioxide levels in the facility did not exceed the ASHRAE-recommended maximum of 1,090 ppm.

4.2 Carbon Monoxide Levels

Carbon monoxide is a by-product of (incomplete) combustion, and is often associated with improperly vented space heaters, boilers, and hot water heaters. Carbon monoxide may also occur from combustion of tobacco products. The current Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL) for carbon monoxide is 50 ppm, expressed as an eight-hour, time-weighted average exposure. The EPA standard for CO is 9 ppm based on a 24-hour period. Outdoor levels of 0-4 ppm are frequently measured in the outdoor ambient urban environments.

During the assessment, the outdoor carbon monoxide level was 0.0 ppm. The measured carbon monoxide level in the office was recorded below detection limit and was 0.0 ppm. In our opinion, elevated carbon monoxide levels are not an indoor air quality concern in the offices.

4.3 Temperature and Relative Humidity

Background

As stated in ASHRAE Standard 55-2004, there are no established lower humidity limits for thermal comfort; consequently, this standard does not specify a minimum relative humidity level. Non-thermal comfort factors, such as skin drying, irritation of mucus membranes, dryness of the eyes, and static electricity generation, may place limits on the acceptability of very low humidity environments. OHI recommends that relative humidity levels be maintained above 30% in order to avoid these problems.

Monitoring Results

During the assessment, the measured temperature in the office ranged from 69.8 to 74.3 °F. The recorded relative humidity level was 21.8% to 27.0%. The combined temperature and relative humidity readings meet the ASHRAE-defined “acceptable range of operative temperature and humidity.” The recorded temperature and relative humidity ranges are considered acceptable.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on observed conditions and the results of the air samples collected on April 5, OHI concludes that the airborne mold levels in the evaluated classroom areas are within normal ranges. The readings for temperature, relative humidity, carbon monoxide and carbon dioxide obtained in each classroom were also within normal ranges.

It is OccuHealth’s understanding that this building is under consideration for re-construction and that the scope would include renovations of the air handling systems. OccuHealth would recommend using HEPA filtration in the main air handling systems to replace the current service (driven by Covid) for the portable HEPA filter units to maintain the same air quality. OccuHealth has no other recommendations to offer at this time.

6.0 LIMITATIONS

The contents of this report are based on OccuHealth, Inc.’s best professional judgement, comparison of collected data with established industry guidelines, and information obtained from representatives of our client.

ATTACHMENTS

Environmental Airborne Aerosol Analysis Laboratory Report

EAA Chain-of-Custody Form

Chain-of-Custody and Analytical Request Form

21 - 0480

EAA

306 5th Street, Suite 400
 Bay City, MI 48708
 (989) 895-4447

Email results to:
 results@occuhealth.com

Client: OccuHealth, Inc.

Date Sampled: 4/5/2021


Project ID: South Kingstown School Dept -
 Curtis Corner Middle School

44 Wood Avenue
 Mansfield, MA 02048


508-339-9119 voice
 508-339-2893 fax

P.O.#: 12725
 Date Submitted: 4/5/2021

Sample #	Sample Type: air, wipe, bulk, dust	Sample Volume Liters	Sample Location	Analysis Requested	Special Instructions & Comments
1 32476527	Air	75	Classroom 418	Fungi	
2 32476542	Air	75	Classroom 412	Fungi	
3 32476525	Air	75	Classroom 501	Fungi	
4 32476530	Air	75	Classroom 506	Fungi	
5 32476539	Air	75	Classroom 518	Fungi	
6 32476524	Air	75	Classroom 511	Fungi	

Submitted By: (Sign) 

Contact Person: Jay McNeff

Received by: (Sign)  (print) Samantha Richards Date & Time Received: 4/10/21 @ 10:20am

(For lab use only) Samples processed by:  Date: 4/10/21

Chain-of-Custody and Analytical Request Form

21 - 0480

EAA

306 5th Street, Suite 400
 Bay City, MI 48708
 (989) 895-4447

Email results to:
 results@occuhealth.com

Client: OccuHealth, Inc.

Date Sampled: 4/5/2021

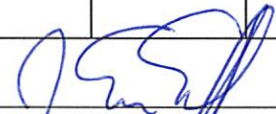
Project ID: South Kingstown School Dept –
 Curtis Corner Middle School

44 Wood Avenue
 Mansfield, MA 02048


508-339-9119 voice
 508-339-2893 fax

P.O.#: 12725
 Date Submitted: 4/5/2021

Sample #	Sample Type: air, wipe, bulk, dust	Sample Volume Liters	Sample Location	Analysis Requested	Special Instructions & Comments
7 32476528	Air	75	Classroom 206	Fungi	
8 32476535	Air	75	Classroom 203	Fungi	
9 32476551	Air	75	Classroom 303	Fungi	
10 32476536	Air	75	Classroom 302	Fungi	
11 32476537	Air	75	Classroom 113 (Band Room)	Fungi	
12 32476533	Air	75	Room 109 Teacher's Lounge	Fungi	
13 32476522	Air	75	Outdoors	Fungi	

Submitted By: (Sign) 

Contact Person: Jay McNeff

Received by: (Sign)  (print) Samantha Richards Date & Time Received: 4/10/21 @ 10:20am

(For lab use only) Samples processed by:  Date: 4/10/21

ENVIRONMENTAL ANALYSIS ASSOCIATES, INC.

306 5th Street, Suite 2A - Bay City, MI 48708



LABORATORY REPORT

AIRBORNE MOLD SPORE ANALYSIS

Report prepared for : OccuHealth, Inc.

Client Project # : 12725

Project Description : South Kingstown School Dept-Curtis Corner Middle School

EAA Project # : 21-0480

Samples Collected : 4/5/21

Samples received : 4/6/21

Date of Analysis : 4/6/21

Authorized / data reviewed by : Joseph R. Heintskill

Joseph R. Heintskill
Laboratory Manager

AIHA-LAP, LLC Accredited, Lab ID#: 220804

The EAA sample results are only applicable to the items tested and locations as received. Sample descriptions and volumetric data are provided by the client. All particle concentrations are rounded to 3 significant figures. In order for chart clarity, cells where the particle category was not detected are intentionally left blank.

Environmental Analysis Associates, Inc. (EAA) shall not be liable to the client or the client's customer with respect to interpretation, recommendations made or actions implemented by either the client or the client's customer as a result of or based upon the test results.

All samples were received in acceptable condition unless noted in the General Comments section of the data report.



AIRBORNE MOLD SPORE ANALYSIS

EAA Method #: MOLD-A01

Client Name : OccuHealth, Inc.

Page 2 of 9

Client Project # : 12725

Project description : South Kingstown School Dept-CCMS

Requested by : Jay McNeff

Date collected : 4/5/21

Sample condition : Acceptable as received

EAA Project# : 21-0480

Sample received : 4/6/21

Client Sample#	Sample Description / Location	Background dust Loading - General Comments
32476527	Classroom 418	Typical dust
32476542	Classroom 412	Typical dust
32476525	Classroom 501	Typical dust
32476530	Classroom 506	Typical dust
32476539	Classroom 518	Typical dust

AIRBORNE MOLD SPORE CONCENTRATIONS (Cts./m ³) -- Spore Trap Sample Analysis High mag. used 500X						
Category	Sample # -->	32476527	32476542	32476525	32476530	32476539
Total Mold Spores (Cts/m³)		46	not detected	91	not detected	46

Alternaria						
Aspergillus/Penicillium						
Pigmented Asco & Basidio				46		
Mix tiny, hyal Asco & Basidio						
Botrytis						
Chaetomium						
Cladosporium				46		46
Curvularia						
Drechslera/Bipolaris		46				
Epicoccum						
Fusicladium-like						
Nigrospora						
Oidium/Peronospora						
Pithomyces						
Rusts						
Smuts / Myxomycetes / Periconia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Other Hyaline Fungi						
Other Fungi						
Unidentified Fungi						

Hyphae fragments				46		
Algal / fern spores						
Insect parts						

POLLEN (Total cts/m ³)	not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
------------------------------------	--------------	--------------	--------------	--------------	--------------

Not specified					
Pinus / other					

COMMON AEROSOLS (cts/m ³)	not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
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Skin cell fragments					
Fiberglass fibers					
Cellulosic / synthetic fibers					
Unidentified opaque					
Mineral / clay soil dust					

OTHER AEROSOLS (cts/m ³)	not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
--------------------------------------	--------------	--------------	--------------	--------------	--------------

Statistical Parameters

Vol. analyzed (m ³)-high mag - 500x :	0.022	0.022	0.022	0.022	0.022
Detect limit(Cts/m ³)-high magnification:	45.7	45.7	45.7	45.7	45.7
% sample analyzed-high magnification:	29%	29%	29%	29%	29%
Vol. analyzed(m ³)/entire sple 150-300x:	0.075	0.075	0.075	0.075	0.075
* Detection limit (Cts/m ³)/entire sple:	13.3	13.3	13.3	13.3	13.3

* Note: The "entire sample" detection limit applies to the "large" particle categories analyzed during the low magnification examination of the entire sample

Sample flow rate (lpm):	15.0	15.0	15.0	15.0	15.0
Sample trace length (mm):	14.40	14.40	14.40	14.40	14.40
Microscope field diameter (mm):	0.420	0.420	0.420	0.420	0.420

Note: Sample results are only applicable to the items tested and locations as received. Sample descriptions and volumetric data are provided by the client.

rev.2021-All Clients-1/4/21

Background dust loading criteria (Estimated area%): Typical-low <5%, Typical 5-20%, Atypical, 20-40%, Elevated 40-80%, Overloaded >80%

Authorized / data reviewed by: Joseph R. Heintskill

Report date: 4/7/21

Analyst: err

Date analyzed: 4/6/21



AIRBORNE MOLD SPORE ANALYSIS

EAA Method #: MOLD-A01

Page 3 of 9

Client Name : OccuHealth, Inc.

Client Project # : 12725

Project description : South Kingstown School Dept-CCMS

Requested by : Jay McNeff

Date collected : 4/5/21

Sample condition : Acceptable as received

EAA Project# : 21-0480

Sample received : 4/6/21

Client Sample#	Sample Description / Location	Background Dust Loading - General Comments				
32476524	Classroom 511	Typical dust				
32476528	Classroom 206	Typical dust				
32476535	Classroom 203	Typical dust				
32476551	Classroom 303	Typical dust				
32476536	Classroom 302	Typical dust				
AIRBORNE MOLD SPORE CONCENTRATIONS (Cts./m ³) -- Spore Trap Sample Analysis High mag. used 500X						
Category	Sample # -->	32476524	32476528	32476535	32476551	32476536
Total Mold Spores (Cts/m³)		46	not detected	not detected	183	183
Alternaria						
Aspergillus/Penicillium						91
Pigmented Asco & Basidio						
Mix tiny, hyal Asco & Basidio	46				46	46
Botrytis						
Chaetomium						
Cladosporium					137	
Curvularia						
Drechslera/Bipolaris						
Epicoccum						
Fusicladium-like						
Nigrospora						
Oidium/Peronospora						
Pithomyces						
Rusts						
Smuts / Myxomycetes / Periconia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Other Hyaline Fungi						
Other Fungi						46
Unidentified Fungi						
Hyphae fragments						
Algal / fern spores						
Insect parts						
POLLEN (Total cts/m³)		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Not specified						
Pinus / other						
COMMON AEROSOLS (cts/m³)		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Skin cell fragments						
Fiberglass fibers						
Cellulosic / synthetic fibers						
Unidentified opaque						
Mineral / clay soil dust						
OTHER AEROSOLS (cts/m³)		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Statistical Parameters						
Vol. analyzed (m ³)-high mag - 500x :		0.022	0.022	0.022	0.022	0.022
Detect limit(Cts/m ³)-high magnification:		45.7	45.7	45.7	45.7	45.7
% sample analyzed-high magnification:		29%	29%	29%	29%	29%
Vol. analyzed(m ³)/entire sple 150-300x:		0.075	0.075	0.075	0.075	0.075
* Detection limit (Cts/m ³)/entire sple:		13.3	13.3	13.3	13.3	13.3
* Note: The "entire sample" detection limit applies to the "large" particle categories analyzed during the low magnification examination of the entire sample						
Sample flow rate (lpm):		15.0	15.0	15.0	15.0	15.0
Sample trace length (mm):		14.40	14.40	14.40	14.40	14.40
Microscope field diameter (mm):		0.420	0.420	0.420	0.420	0.420

Note: Sample results are only applicable to the items tested and locations as received. Sample descriptions and volumetric data are provided by the client.

rev.2021-All Clients-1/4/21

Background dust loading criteria (Estimated area%): Typical-low <5%, Typical 5-20%, Atypical, 20-40%, Elevated 40-80%, Overloaded >80%

Authorized / data reviewed by: Joseph R. Heintskill

Report date: 4/7/21

Analyst: err

Date analyzed: 4/6/21



AIRBORNE MOLD SPORE ANALYSIS

EAA Method #: MOLD-A01

Page 4 of 9

Client Name : OccuHealth, Inc.

Client Project # : 12725

Requested by : Jay McNeff

EAA Project# : 21-0480

Project description : South Kingstown School Dept-CCMS

Date collected : 4/5/21

Sample received : 4/6/21

Sample condition : Acceptable as received

Client Sample#	Sample Description / Location	Background Dust Loading - General Comments
32476537	Classroom 113 (Band Room)	Typical dust
32476533	Room 109 Teacher's Lounge	Typical dust
32476522	Outdoors	Typical dust

AIRBORNE MOLD SPORE CONCENTRATIONS (Cts./m³) -- Spore Trap Sample Analysis

High mag. used 500X

Category	Sample # -->	32476537	32476533	32476522
Total Mold Spores (Cts/m³)		not detected	not detected	46

Alternaria				
Aspergillus/Penicillium				
Pigmented Asco & Basidio				
Mix tiny, hyal Asco & Basidio				46
Botrytis				
Chaetomium				
Cladosporium				
Curvularia				
Drechslera/Bipolaris				
Epicoccum				
Fusicladium-like				
Nigrospora				
Oidium/Peronospora				
Pithomyces				
Rusts				
Smuts / Myxomycetes / Periconia				
Stachybotrys				
Stemphylium				
Torula				
Ulocladium				
Other Hyaline Fungi				
Other Fungi				
Unidentified Fungi				

Hyphae fragments				
Algal / fern spores				
Insect parts				

POLLEN (Total cts/m ³)	not analyzed	not analyzed	not analyzed
------------------------------------	--------------	--------------	--------------

Not specified			
Pinus / other			

COMMON AEROSOLS (cts/m ³)	not analyzed	not analyzed	not analyzed
---------------------------------------	--------------	--------------	--------------

Skin cell fragments			
Fiberglass fibers			
Cellulosic / synthetic fibers			
Unidentified opaque			
Mineral / clay soil dust			

OTHER AEROSOLS (cts/m ³)	not analyzed	not analyzed	not analyzed
--------------------------------------	--------------	--------------	--------------

Statistical Parameters

Vol. analyzed (m ³)-high mag - 500x :	0.022	0.022	0.022
Detect limit(Cts/m ³)-high magnification:	45.7	45.7	45.7
% sample analyzed-high magnification:	29%	29%	29%
Vol. analyzed(m ³)/entire sple 150-300x:	0.075	0.075	0.075
* Detection limit (Cts/m ³)/entire sple:	13.3	13.3	13.3
* Note: The "entire sample" detection limit applies to the "large" particle categories analyzed during the low magnification examination of the entire sample			
Sample flow rate (lpm):	15.0	15.0	15.0
Sample trace length (mm):	14.40	14.40	14.40
Microscope field diameter (mm):	0.420	0.420	0.420

Note: Sample results are only applicable to the items tested and locations as received. Sample descriptions and volumetric data are provided by the client.

rev.2021-All Clients-1/4/21

Background dust loading criteria (Estimated area%): Typical-low <5%, Typical 5-20%, Atypical, 20-40%, Elevated 40-80%, Overloaded >80%

Authorized / data reviewed by: Joseph R. Heintskill

Report date: 4/7/21

Analyst: err

Date analyzed: 4/6/21



AIRBORNE MOLD SPORE ANALYSIS
(Mold and Dust Comparison Summary - Cts/m³)

EAA Method #: MOLD-A01

Page 5 of 9

Client Name : OccuHealth, Inc.

Client Project # : 12725

Requested by : Jay McNeff

Project description : South Kingstown School Dept-CCMS

EAA Project# : 21-0480

Sample # Description	Mold Spores		Chronic		Outdoor Spores	Hyphae Fragments	Pollen	Skin cell Fragments	Fibrous Dust		Non-Fibrous dust		Other Particles
	* Total	Aspergillus / Penicillium	W.I. Fungi						Min. wool / Fiberglass	Cellulose/ Synthetic	Unident. Opaque	Crystalline Minerals	
32476527 Classroom 418	46				46								
32476542 Classroom 412	not detected												
32476525 Classroom 501	91				91								
32476530 Classroom 506	not detected												
32476539 Classroom 518	46				46								
32476524 Classroom 511	46				46								
32476528 Classroom 206	not detected												
32476535 Classroom 203	not detected												
32476551 Classroom 303	183				183								
32476536 Classroom 302	183	91			91								

Note: Sample results are only applicable to the items tested and locations as received. Sample descriptions and volumetric data are provided by the client. All individual particle category values are rounded to 3 significant figures. In order to provide chart clarity, measurements where the particle category was not detected are intentionally left blank. This test report shall not be reproduced except in full, without the written approval of the laboratory.

For additional information regarding interpretation of the results, refer to the document "Air Profile Summary Report" which is available at: <https://ealab.com/news-publications/>. This reference document is only intended as a preliminary comparison of data collected on your project with historical measurements from other buildings. Final conclusions and interpretation regarding how the tested items apply to site-specific conditions on your project are not provided within this EAA laboratory report, and can only be provided by the IEP or client that conducted the original inspection and sample collection.



AIRBORNE MOLD SPORE ANALYSIS
(Mold and Dust Comparison Summary - Cts/m³)

EAA Method #: MOLD-A01

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Client Name : OccuHealth, Inc.
 Client Project # : 12725
 Requested by : Jay McNeff

Project description : South Kingstown School Dept-CCMS
 EAA Project# : 21-0480

Sample # Description	Mold Spore	Aspergillus / Penicillium	Chronic W.I. Fungi	Outdoor Spores	Hyphae Fragments	Pollen	Skin cell Fragments	Fibrous Dust		Non-Fibrous dust		Other Particles
	* Total							Min. wool/ Fiberglass	Cellulose/ Synthetic	Unident. Opaque	Crystalline Minerals	
32476537 Classroom 113 (Band Room)	not detected											
32476533 Room 109 Teacher's Lounge	not detected											
32476522 Outdoors	46			46								

Note: Sample results are only applicable to the items tested and locations as received. Sample descriptions and volumetric data are provided by the client. All individual particle category values are rounded to 3 significant figures. In order to provide chart clarity, measurements where the particle category was not detected are intentionally left blank. This test report shall not be reproduced except in full, without the written approval of the laboratory.

For additional information regarding interpretation of the results, refer to the document "Air Profile Summary Report" which is available at: <https://eaalab.com/news-publications/>. This reference document is only intended as a preliminary comparison of data collected on your project with historical measurements from other buildings. Final conclusions and interpretation regarding how the tested items apply to site-specific conditions on your project are not provided within this EAA laboratory report, and can only be provided by the IEP or client that conducted the original inspection and sample collection.



AIRBORNE MOLD SPORE ANALYSIS

EAA Method #: MOLD-A01

RAW COUNT DATA ONLY - Do not use for volumetric concentration comparisons

Page 7 of 9

Client Name : OccuHealth, Inc.
 Client Project # : 12725
 EAA Project# : 21-0480

Description : South Kingstown School Dept-CCMS
 Date collected : 4/5/21
 Sample received : 4/6/21

Analysis magnification : 500x

Client Sample#	Sample Description / Location	Raw / Extrapolated Count Comments
32476527	Classroom 418	Note: When a <u>fractional</u> raw particle count is present, (e.g. 0.3), the count is based on counting the "entire sample" at low magnification. The results are then "back-calculated" to the high magnification detection limit for that specific particle category. This "raw" count page is required to be reported to the client as directed by the AIHA-LAP accreditation program.
32476542	Classroom 412	
32476525	Classroom 501	
32476530	Classroom 506	
32476539	Classroom 518	

AIRBORNE MOLD / DUST (Raw / Extrapolated Spore Counts Only) - Spore Trap Sample Analysis

Category	Sample # -->	32476527	32476542	32476525	32476530	32476539
Total Mold Spores - Total Cts.		1	not detected	2	not detected	1
Alternaria						
Aspergillus/Penicillium						
Pigmented Asco & Basidio				1		
Mix tiny, hyal Asco & Basidio						
Botrytis						
Chaetomium						
Cladosporium				1		1
Curvularia						
Drechslera/Bipolaris		1				
Epicoccum						
Fusicladium-like						
Nigrospora						
Oidium/Peronospora						
Pithomyces						
Rusts						
Smuts / Myxomycetes / Periconia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Other Hyaline Fungi						
Other Fungi						
Unidentified Fungi						
Hyphae fragments				1		
Algal / fern spores						
Insect parts						
POLLEN (Total cts)		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Not specified						
Pinus / other						
COMMON AEROSOLS		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Skin cell fragments						
Fiberglass fibers						
Cellulosic / synthetic fibers						
Unidentified opaque						
Mineral / clay soil dust						
OTHER PARTICLES		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Statistical Parameters						
Vol. analyzed (m ³)-high mag - 500x :		0.022	0.022	0.022	0.022	0.022
Detect limit(Cts/m ³)-high magnification:		45.7	45.7	45.7	45.7	45.7
% sample analyzed-high magnification:		29%	29%	29%	29%	29%
Vol. analyzed(m ³)/entire sple 150-300x:		0.075	0.075	0.075	0.075	0.075
* Detection limit (Cts/m ³)/entire sple:		13.3	13.3	13.3	13.3	13.3
* Note: The "entire sample" detection limit applies to the "large" particle categories analyzed during the low magnification examination of the entire sample						
Sample flow rate (lpm):		15.0	15.0	15.0	15.0	15.0
Sample trace length (mm):		14.40	14.40	14.40	14.40	14.40
Microscope field diameter (mm):		0.420	0.420	0.420	0.420	0.420

RAW / EXTRAPOLATED COUNT DATA ONLY
(DO NOT USE FOR CONCENTRATION COMPARISONS)

NOTE: The raw particle count data cannot be used as a measure of the actual airborne concentration and only represents the number of "raw" or extrapolated particles counted. Where a fractional value is present (e.g. 0.3 or 1.3) for any mold or dust category, the entire trace for this category was analyzed and the "entire sample detection limit" applies.



AIRBORNE MOLD SPORE ANALYSIS

EAA Method #: MOLD-A01

RAW COUNT DATA ONLY - Do not use for volumetric concentration comparisons

Page 8 of 9

Client Name : OccuHealth, Inc.
 Client Project # : 12725
 EAA Project# : 21-0480

Description : South Kingstown School Dept-CCMS
 Date collected : 4/5/21
 Sample received : 4/6/21

Analysis magnification : 500x

Client Sample#	Sample Description / Location	Raw / Extrapolated Count Comments
32476524	Classroom 511	Note: When a fractional raw particle count is present, (e.g. 0.3), the count is based on counting the "entire sample" at low magnification. The results are then "back-calculated" to the high magnification detection limit for that specific particle category. This "raw" count page is required to be reported to the client as directed by the AIHA-LAP accreditation program.
32476528	Classroom 206	
32476535	Classroom 203	
32476551	Classroom 303	
32476536	Classroom 302	

AIRBORNE MOLD / DUST (Raw / Extrapolated Spore Counts Only) - Spore Trap Sample Analysis

Category	Sample # -->	32476524	32476528	32476535	32476551	32476536
Total Mold Spores - Total Cts.		1	not detected	not detected	4	4
Alternaria						
Aspergillus/Penicillium						2
Pigmented Asco & Basidio						
Mix tiny, hyal Asco & Basidio		1			1	1
Botrytis						
Chaetomium						
Cladosporium					3	
Curvularia						
Drechslera/Bipolaris						
Epicoccum						
Fusicladium-like						
Nigrospora						
Oidium/Peronospora						
Pithomyces						
Rusts						
Smuts / Myxomycetes / Periconia						
Stachybotrys						
Stemphylium						
Torula						
Ulocladium						
Other Hyaline Fungi						
Other Fungi						1
Unidentified Fungi						
Hyphae fragments						
Algal / fern spores						
Insect parts						
POLLEN (Total cts)		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Not specified						
Pinus / other						
COMMON AEROSOLS		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Skin cell fragments						
Fiberglass fibers						
Cellulosic / synthetic fibers						
Unidentified opaque						
Mineral / clay soil dust						
OTHER PARTICLES		not analyzed	not analyzed	not analyzed	not analyzed	not analyzed
Statistical Parameters						
Vol. analyzed (m ³)-high mag - 500x :		0.022	0.022	0.022	0.022	0.022
Detect limit(Cts/m ³)-high magnification:		45.7	45.7	45.7	45.7	45.7
% sample analyzed-high magnification:		29%	29%	29%	29%	29%
Vol. analyzed(m ³)/entire sple 150-300x:		0.075	0.075	0.075	0.075	0.075
* Detection limit (Cts/m ³)/entire sple:		13.3	13.3	13.3	13.3	13.3
* Note: The "entire sample" detection limit applies to the "large" particle categories analyzed during the low magnification examination of the entire sample						
Sample flow rate (lpm):		15.0	15.0	15.0	15.0	15.0
Sample trace length (mm):		14.40	14.40	14.40	14.40	14.40
Microscope field diameter (mm):		0.420	0.420	0.420	0.420	0.420

NOTE: The raw particle count data cannot be used as a measure of the actual airborne concentration and only represents the number of "raw" or extrapolated particles counted. Where a fractional value is present (e.g. 0.3 or 1.3) for any mold or dust category, the entire trace for this category was analyzed and the "entire sample detection limit" applies.



AIRBORNE MOLD SPORE ANALYSIS

EAA Method #: MOLD-A01

RAW COUNT DATA ONLY - Do not use for volumetric concentration comparisons

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Client Name : OccuHealth, Inc.

Description : South Kingstown School Dept-CC

end of report

Client Project # : 12725

Date collected : 4/5/21

EAA Project# : 21-0480

Sample received : 4/6/21

Analysis magnification : 500x

Client Sample#	Sample Description / Location	Raw / Extrapolated Count Comments
32476537	Classroom 113 (Band Room)	Note: When a fractional raw particle count is present, (e.g. 0.3), the count is based on counting the "entire sample" at low magnification. The results are then "back-calculated" to the high magnification detection limit for that specific particle category. This "raw" count page is required to be reported to the client as directed by the AIHA-LAP accreditation program.
32476533	Room 109 Teacher's Lounge	
32476522	Outdoors	

AIRBORNE MOLD / DUST (Raw / Extrapolated Spore Counts Only) - Spore Trap Sample Analysis

Category	Sample # -->	32476537	32476533	32476522
Total Mold Spores - Total Cts.		not detected	not detected	1

Alternaria
Aspergillus/Penicillium
Pigmented Asco & Basidio
Mix tiny, hyal Asco & Basidio
Botrytis
Chaetomium
Cladosporium
Curvularia
Drechslera/Bipolaris
Epicoccum
Fusicladium-like
Nigrospora
Oidium/Peronospora
Pithomyces
Rusts
Smuts / Myxomycetes / Periconia
Stachybotrys
Stemphylium
Torula
Ulocladium
Other Hyaline Fungi
Other Fungi
Unidentified Fungi

RAW / EXTRAPOLATED COUNT DATA ONLY
(DO NOT USE FOR CONCENTRATION COMPARISONS)

Hyphae fragments
Algal / fern spores
Insect parts

POLLEN (Total cts)	not analyzed	not analyzed	not analyzed
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Not specified
Pinus / other

COMMON AEROSOLS	not analyzed	not analyzed	not analyzed
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Skin cell fragments
Fiberglass fibers
Cellulosic / synthetic fibers
Unidentified opaque
Mineral / clay soil dust

OTHER PARTICLES	not analyzed	not analyzed	not analyzed
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Statistical Parameters

Vol. analyzed (m ³)-high mag - 500x :	0.022	0.022	0.022
Detect limit(Cts/m ³)-high magnification:	45.7	45.7	45.7
% sample analyzed-high magnification:	29%	29%	29%
Vol. analyzed(m ³)/entire sple 150-300x:	0.075	0.075	0.075
* Detection limit (Cts/m ³)/entire sple:	13.3	13.3	13.3

* Note: The "entire sample" detection limit applies to the "large" particle categories analyzed during the low magnification examination of the entire sample

Sample flow rate (lpm):	15.0	15.0	15.0
Sample trace length (mm):	14.40	14.40	14.40
Microscope field diameter (mm):	0.420	0.420	0.420

NOTE: The raw particle count data cannot be used as a measure of the actual airborne concentration and only represents the number of "raw" or extrapolated particles counted. Where a fractional value is present (e.g. 0.3 or 1.3) for any mold or dust category, the entire trace for this category was analyzed and the "entire sample detection limit" applies.