

Enviro-Safe Engineering

**203 Prospect Street
Brockton, MA 02301**

(617)623-6678

September 15, 2020

Carlisle Public Schools
83 School Street
Carlisle, MA 01741

RE: Air quality inspection, 83 School Street, Carlisle, MA

On September 10, 2020, Patricia E. Riley, certified mold inspector, inspected the above address. There was concern about indoor air quality, especially in three interior classrooms/offices. Air samples for mold were collected from the three rooms (Rooms B108, R121, S112). An air sample was collected outside for comparison. A swab sample was collected from the hallway handrail in the Spaulding Building for COVID 19.

The samples were submitted to EMSL Analytical, Woburn, MA for analysis. The analysis was conducted in accordance with American Industrial Hygiene Association guidelines for mold analysis and laboratory guidelines for COVID 19.

The air sample collected outside of the building had levels of 18,140 mold spores of spores/m³. The interior air samples were 1,200 spores/m³ in Room B108, 320 spores/m³ in Room R121, and 720 spores/m³ in Room S112. The levels inside the building were significantly lower than the levels outside of the building in all classrooms tested. All of the mold species on the interior and the exterior samples were similar.

Measurements of carbon dioxide, carbon monoxide, humidity, and temperature were taken throughout the building. Temperature and carbon dioxide levels were normal and consistent throughout the building. No carbon monoxide was detected. The relative humidity levels were high but consistent with the outdoor levels.

The levels of carbon dioxide in the three rooms of concern were slightly higher than in

larger adjacent classrooms but still well within normal levels. The recommended AHREA standard for adequate ventilation is that the interior level of carbon dioxide not be more than 700 PPM more than the outside level. Levels outside of the building were in the 1000 ppm range, the larger classrooms were in the 1100 ppm range, and the three interior rooms were in the 1200 ppm range.

Prior to setting up the instruments indoors, outside ambient temperatures, humidity, and carbon dioxide, readings were taken outdoors to ensure the instruments were functioning properly. The instruments were calibrated at the office prior to leaving for the job site according to the manufacturers' recommendations and specifications.

No issues were found in those rooms at this time. Because they are interior rooms, HVAC systems must be maintained in proper operating condition and the air vents must not be blocked or obstructed.

See enclosed laboratory results. If you should require more information on this matter, please do not hesitate to contact me at (617)623-6678.

Sincerely,

A handwritten signature in cursive script that reads "Patricia E. Riley".

Patricia E. Riley
President



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: 132006289
Customer ID: ENVO50
Customer PO:
Project ID:

Attention: Patricia Riley
Enviro-Safe Engineering
203 Prospect Street
Brockton, MA 02301

Phone: (617) 623-6678
Fax: (617) 623-9495
Collected Date: 09/10/2020
Received Date: 09/11/2020
Analyzed Date: 09/14/2020

Project:

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

Lab Sample Number:	132006289-0001			132006289-0002			132006289-0003		
Client Sample ID:	0910-2			0910-3			0910-4		
Volume (L):	80			80			80		
Sample Location:	Outside			Room B108			Room R121		
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)	3	100	0.6	-	-	-	-	-	-
Ascospores	5	200	1.1	-	-	-	-	-	-
Aspergillus/Penicillium	-	-	-	6	200	16.7	-	-	-
Basidiospores	379	15200	83.8	13	520	43.3	6	200	62.5
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	23	920	5.1	3	100	8.3	2	80	25
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	1	40	3.3	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	4	200	1.1	-	-	-	-	-	-
Myxomycetes++	3	100	0.6	7	300	25	-	-	-
Pithomyces++	6	200	1.1	1	40	3.3	1	40	12.5
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Oidium	1	40	0.2	-	-	-	-	-	-
Paecilomyces-like	28	1100	6.1	-	-	-	-	-	-
Polythrincium	2	80	0.4	-	-	-	-	-	-
Total Fungi	454	18140	100	31	1200	100	9	320	100
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	40	-	-	40	-	-	40	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	3	-	-	2	-
Fibrous Particulate (1-4)	-	1	-	-	2	-	-	2	-
Background (1-5)	-	2	-	-	3	-	-	2	-

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

Steve Grise, Laboratory Manager
or other Approved Signatory

No discernable field blank was submitted with this group of samples.

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. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. High levels of background particulate can obscure spores and other particulates, leading to underestimation. Background levels of 5 indicate an overloading of background particulates, prohibiting accurate detection and quantification. 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.

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

Initial report from: 09/14/2020 09:31 AM

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



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Project:

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

Lab Sample Number:	132006289-0004				
Client Sample ID:	0910-5				
Volume (L):	80				
Sample Location:	Room S112				
Spore Types	Raw Count	Count/m ³	% of Total		
Alternaria (Ulocladium)	-	-	-		
Ascospores	2	80	11.1		
Aspergillus/Penicillium	-	-	-		
Basidiospores	4	200	27.8		
Bipolaris++	-	-	-		
Chaetomium	-	-	-		
Cladosporium	1	40	5.6		
Curvularia	1	40	5.6		
Epicoccum	2	80	11.1		
Fusarium	-	-	-		
Ganoderma	-	-	-		
Myxomycetes++	2	80	11.1		
Pithomyces++	6	200	27.8		
Rust	-	-	-		
Scopulariopsis/Microascus	-	-	-		
Stachybotrys/Memnoniella	-	-	-		
Unidentifiable Spores	-	-	-		
Zygomycetes	-	-	-		
Oidium	-	-	-		
Paecilomyces-like	-	-	-		
Polythrincium	-	-	-		
Total Fungi	18	720	100		
Hyphal Fragment	-	-	-		
Insect Fragment	-	-	-		
Pollen	-	-	-		
Analyt. Sensitivity 600x	-	40	-		
Analyt. Sensitivity 300x	-	13*	-		
Skin Fragments (1-4)	-	2	-		
Fibrous Particulate (1-4)	-	2	-		
Background (1-5)	-	3	-		

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

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