



October 9, 2020

Mr. Andrew Weber  
Superintendent  
Mullica Township School District  
500 Elwood Road  
Elwood, New Jersey 08217

**RE: Comprehensive Microbial Clearance Report**  
Mullica Township School  
500 Elwood Road  
Elwood, New Jersey 08037  
Hillmann Project No.: PH-1328

Dear Mr. Weber:

Thank you for retaining Hillmann Consulting, LLC (Hillmann) to address your environmental concerns. Hillmann conducted Microbial Clearance Inspections at the above-referenced property following the completion of microbial remediation activities. The parameters for the investigation included a visual inspection and collection of airborne fungal spore samples for areas remediated by Synatech, Inc. (Synatech) and visual inspection for areas cleaned by District staff.

Hillmann selected the sampling parameters based on consultations with the client (Mullica Township School District), the laboratory performing the analysis, and our in-house experts. The inspection was performed to assess if the remediation activities were sufficient to address microbial contamination previously identified in the subject spaces.

Airborne fungal spores were collected by drawing air through an Air-O-Cell® cassette utilizing a Zefon BioPump. Samples were collected for a time period of five (5) minutes at a calibrated flow rate of 15 L/min yielding a total sample volume of 75 liters. These cassettes were then sent to an AIHA EMLAP accredited laboratory where fungal spores were identified by genera and concentration. Fungal spores are present in normal indoor settings. If found in excess amounts, these spores can produce allergy-like symptoms as well as asthmatic reactions in those who are sensitive to them. If the indoor samples are found to have a greater diversity of genera, and/or higher amounts of fungal spores than outdoor samples, it can be determined that the subject space may be facilitating microbial growth.

### **OBSERVATIONS AND FINDINGS**

September 25, 2020

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by Synatech. These areas include:

- Gym Storage Room, Room 8, Room 9, Room 11

Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation. The work areas were observed to be under containment at the time of the clearance investigation.

One (1) airborne fungal spore sample was collected from each work area. Laboratory analysis indicated total indoor fungal spore concentrations and individual fungal genera were comparable and/or lower to the outdoor reference levels for Room 8 and Room 11. Fungal Spore concentrations for the Gym Storage and Room 9 were elevated when compared to the outside reference levels. Synatech was contacted with the results and instructed to reclean the Gym Storage and Room 9.

September 28, 2020

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by Synatech. These areas include:

- Room 26, Room 41, Room 59, Room 61A

One (1) airborne fungal spore sample was collected from each work area. Laboratory analysis indicated total indoor fungal spore concentrations and individual fungal genera were comparable and/or lower to the outdoor reference levels for Room 26, Room 41, and Room 59. Fungal Spore concentrations for Room 61A were elevated when compared to the outside reference levels. Synatech was contacted with the results and instructed to reclean Room 61A.

September 30, 2020

Hillmann inspected the areas of the building that were identified to be cleaned by District staff. These areas, as indicated by Mr. Rich Giovinazzi in an email dated September 29, 2020, included:

- Rooms 1 through 4, Rooms 6 and 7, Room 10, Rooms 12 and 13, Room 17, Room 24, Rooms 27 and 28, Room 32, Rooms 34 through 37, and Room 39

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by District staff. Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation.

October 1, 2020

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by Synatech. These areas include:

- Gym Storage Room, Room 9, Room 14, Room 19

Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation. The work areas were observed to be under containment at the time of the clearance investigation.

One (1) airborne fungal spore sample was collected from each work area. Laboratory analysis indicated total indoor fungal spore concentrations and individual fungal genera were comparable and/or lower to the outdoor reference levels for Room 14. Fungal spore concentrations for the Gym Storage, Room 9, and Room 19 were elevated when compared to the outside reference levels. Synatech was contacted with the results and instructed to reclean the Gym Storage, Room 9, and Room 19.

Hillmann also inspected the areas of the building that were identified to be cleaned by District staff. These areas, as indicated by Mr. Rich Giovinazzi on the date of inspection, included:

- Rooms 91 through 99, Rooms 61B and 62

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by District staff. Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation.

October 2, 2020

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by Synatech. These areas include:

- Cafeteria, Gym Storage Room, Room 19, Room 54, Room 57, Room 61A, Room 94, Room 11

Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation. The work areas were observed to be under containment at the time of the clearance investigation.

One (1) airborne fungal spore sample was collected from each work area. Laboratory analysis indicated total indoor fungal spore concentrations and individual fungal genera were comparable and/or lower to the outdoor reference levels for the Gym Storage, Room 54, and Room 57. Fungal Spore concentrations for Room 19, Room 61A, and Room 94 were elevated when compared to the outside reference levels. Synatech was contacted with the results and instructed to reclean Room 19, Room 61A, and Room 94.

October 5, 2020

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by Synatech. These areas include:

- Cafeteria, Room 9, Room 19, Room 61A, Room 94

Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation. The work areas were observed to be under containment at the time of the clearance investigation.

One (1) airborne fungal spore sample was collected from each work area. Laboratory analysis indicated total indoor fungal spore concentrations and individual fungal genera were comparable and/or lower to the outdoor reference levels for the Cafeteria and Room 19. Fungal spore concentrations for Room 9, Room 61A, and Room 94 were elevated when compared to the outside reference levels. Synatech was contacted with the results and instructed to reclean Room 9, Room 61A, and Room 94.

Hillmann also inspected the areas of the building that were identified to be cleaned by District staff. These areas, as indicated by Mr. Rich Giovinazzi on the date of inspection, included:

- District Administrative Offices and Conference Offices, Elementary School Office, Middle School Office, Middle School Guidance Office, Rooms 15 and 16, Room 40, Room 42, Room 44, Room 46, Room 51, Rooms 55 and 56, Room 60, Room 71, Room 73, Rooms 77 through 86, Rooms 91 through 93, Rooms 95 through 99

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by District staff. Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation.

October 7, 2020

Hillmann inspected the areas of the building that were identified to be cleaned by District staff. These areas, as indicated by Mr. Rich Giovinazzi on the date of inspection, included:

- Media Center (Rooms 20 through 22)

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by District staff. Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation.

October 8, 2020

At the time of the inspection, no visible microbial growth was observed within the remediated work areas completed by Synatech. These areas include:

- Room 9, Room 61A, and Room 94

Hillmann did not observe any musty/mold type odors in the work areas at the time of the investigation. The work areas were observed to be under containment at the time of the clearance investigation.

One (1) airborne fungal spore sample was collected from each work area. Laboratory analysis indicated total indoor fungal spore concentrations and individual fungal genera were comparable and/or lower to the outdoor reference levels for Room 9 and Room 94. Fungal Spore concentrations for Room 61A were elevated when compared to the outside reference levels. Synatech was contacted with the results and instructed to reclean Room 61A.

## CONCLUSIONS

Based on the visual inspections and air sampling, where applicable, all instructional areas subject to the work have been successfully remediated and ready for re-occupancy.

Hillmann will provide an addendum to this report following the successful remediation of Room 61A.

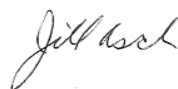
If you have any questions, or need additional information, please feel free to contact our office at (856) 581-9055.

Regards,

**HILLMANN CONSULTING, LLC**



Rafael L. Torres, III  
Director of Operations  
Philadelphia Area Regional Office



Jill Asch, MPH, CIH, CSP  
Corporate Health and Safety Officer

cc: PH-1328  
Enclosures: Laboratory Results

**APPENDIX A**

**LABORATORY ANALYTICAL REPORT – 9/25/2020**



# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077  
Tel/Fax: (800) 220-3675 / (856) 786-0262  
<http://www.EMSL.com> / [cinmicrolab@emsl.com](mailto:cinmicrolab@emsl.com)

**EMSL Order:** 372015866  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
Hillmann Consulting, LLC  
1600 Route 22 East  
Union, NJ 07083

**Phone:** (908) 688-7800  
**Fax:**  
**Collected Date:** 09/25/2020  
**Received Date:** 09/25/2020 03:30 PM  
**Analyzed Date:** 09/27/2020

**Project:** PH1328 /Synatech

### 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:	372015866-0001 3082 9737 75 Gym Storage Room			372015866-0002 30829742 75 Hallway Servicing Gym Interior Reference			372015866-0003 30829762 75 Hallway Servicing Classrooms Interior Reference			
	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	1.8	2	90	2.1	1*	10*	0.4	
Aspergillus/Penicillium	95	4100	75.6	48	2100	50.1	41	1800	63.6	
Basidiospores	19	830	15.3	29	1300	31	16	700	24.7	
Bipolaris++	-	-	-	-	-	-	-	-	-	
Chaetomium	-	-	-	-	-	-	-	-	-	
Cladosporium	7	300	5.5	13	570	13.6	4	200	7.1	
Curvularia	-	-	-	1	40	1	-	-	-	
Epicoccum	-	-	-	-	-	-	-	-	-	
Fusarium	-	-	-	-	-	-	-	-	-	
Ganoderma	-	-	-	-	-	-	2	90	3.2	
Myxomycetes++	-	-	-	1	40	1	2*	30*	1.1	
Pithomyces++	-	-	-	-	-	-	-	-	-	
Rust	2	90	1.7	1*	10*	0.2	-	-	-	
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	
Blakeslea/Choanephora	-	-	-	-	-	-	-	-	-	
Cercospora++	-	-	-	1	40	1	-	-	-	
Nigrospora	-	-	-	-	-	-	-	-	-	
Paecilomyces-like	-	-	-	-	-	-	-	-	-	
Spegazzinia	-	-	-	-	-	-	-	-	-	
<b>Total Fungi</b>	<b>126</b>	<b>5420</b>	<b>100</b>	<b>96</b>	<b>4190</b>	<b>100</b>	<b>66</b>	<b>2830</b>	<b>100</b>	
Hyphal Fragment	1	40	-	-	-	-	1	40	-	
Insect Fragment	-	-	-	-	-	-	-	-	-	
Pollen	-	-	-	-	-	-	-	-	-	
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-	
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	
Skin Fragments (1-4)	-	2	-	-	1	-	-	2	-	
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.

**Preliminary Report**

Vincent Iuzzolino, M.S., 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. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/27/2020 10:35 AM

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



# EMSL Analytical, Inc.

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**EMSL Order:** 372015866  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
Hillmann Consulting, LLC  
1600 Route 22 East  
Union, NJ 07083

**Phone:** (908) 688-7800  
**Fax:**  
**Collected Date:** 09/25/2020  
**Received Date:** 09/25/2020 03:30 PM  
**Analyzed Date:** 09/27/2020

**Project:** PH1328 /Synatech

### 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:	372015866-0004 30829761 75 Room 8			372015866-0005 30829747 75 Room 9			372015866-0006 30829736 75 Room 11			
	Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	21	920	67.6	627	27400	99.6	12	520	86.7	
Basidiospores	2	90	6.6	1	40	0.1	1	40	6.7	
Bipolaris++	-	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-	-
Cladosporium	4	200	14.7	2*	30*	0.1	-	-	-	-
Curvularia	-	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-	-
Myxomycetes++	1*	10*	0.7	1	40	0.1	1	40	6.7	
Pithomyces++	1	40	2.9	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	-
Blakeslea/Choanephora	3	100	7.4	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-	-
Spegazzinia	-	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>32</b>	<b>1360</b>	<b>100</b>	<b>631</b>	<b>27510</b>	<b>100</b>	<b>14</b>	<b>600</b>	<b>100</b>	
Hyphal Fragment	1	40	-	1	40	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	-
Skin Fragments (1-4)	-	2	-	-	1	-	-	2	-	-
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.



Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/27/2020 10:35 AM

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**EMSL Order:** 372015866  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
Hillmann Consulting, LLC  
1600 Route 22 East  
Union, NJ 07083

**Phone:** (908) 688-7800  
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**Project:** PH1328 /Synatech

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

Lab Sample Number:	372015866-0007			372015866-0008		
Client Sample ID:	30829739			30829746		
Volume (L):	75			75		
Sample Location:	Outside			Outside		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	2	90	0.2	-	-	-
Ascospores	16	700	1.6	9	400	1.2
Aspergillus/Penicillium	19	830	1.8	2	90	0.3
Basidiospores	113	4930	11	133	5800	17.9
Bipolaris++	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-
Cladosporium	825	36000	80.1	539	23500	72.4
Curvularia	6	300	0.7	3	100	0.3
Epicoccum	9	400	0.9	1	40	0.1
Fusarium	-	-	-	-	-	-
Ganoderma	2	90	0.2	1	40	0.1
Myxomycetes++	30	1300	2.9	55	2400	7.4
Pithomyces++	-	-	-	-	-	-
Rust	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-
Blakeslea/Choanephora	-	-	-	-	-	-
Cercospora++	2	90	0.2	2	90	0.3
Nigrospora	1*	10*	0	-	-	-
Paecilomyces-like	4	200	0.4	-	-	-
Spegazzinia	-	-	-	1*	10*	0
<b>Total Fungi</b>	<b>1029</b>	<b>44940</b>	<b>100</b>	<b>746</b>	<b>32470</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-
Insect Fragment	-	-	-	1	40	-
Pollen	2	90	-	1	40	-
Analyt. Sensitivity 600x	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-
Background (1-5)	-	2	-	-	1	-

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



Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/27/2020 10:35 AM

For information on the fungi listed in this report, please visit the Resources section at [www.emsl.com](http://www.emsl.com)



**APPENDIX B**

**LABORATORY ANALYTICAL REPORT – 9/28/2020**



# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077  
Tel/Fax: (800) 220-3675 / (856) 786-0262  
<http://www.EMSL.com / cinmicrolab@emsl.com>

**EMSL Order:** 372015963  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
Hillmann Consulting, LLC  
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Union, NJ 07083

**Phone:** (908) 688-7800  
**Fax:**  
**Collected Date:**  
**Received Date:** 09/28/2020 05:05 PM  
**Analyzed Date:** 09/29/2020

**Project:** PH1328 / 500 Elwood Road, Elwood, NJ

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

Lab Sample Number:	372015963-0001			372015963-0002			372015963-0003		
Client Sample ID:	3082 9766			3082 9765			3082 9743		
Volume (L):	75			75			75		
Sample Location:	Room 41			Room 26			Room 61		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	6	300	7.2	2	90	1.4
Aspergillus/Penicillium	3	100	71.4	8	400	9.6	44	1900	29.6
Basidiospores	-	-	-	68	3000	72.3	86	3800	59.2
Bipolaris++	-	-	-	-	-	-	1*	10*	0.2
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	10	440	10.6	8	400	6.2
Curvularia	-	-	-	-	-	-	1*	10*	0.2
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	1	40	0.6
Ganoderma	-	-	-	1*	10*	0.2	-	-	-
Myxomycetes++	1	40	28.6	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	1	40	0.6
Botrytis	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	2	90	1.4
Nigrospora	-	-	-	-	-	-	-	-	-
Oidium	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Pyricularia	-	-	-	-	-	-	1	40	0.6
Spegazzinia	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>4</b>	<b>140</b>	<b>100</b>	<b>93</b>	<b>4150</b>	<b>100</b>	<b>147</b>	<b>6420</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-

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

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/29/2020 01:55 PM

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# EMSL Analytical, Inc.

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**EMSL Order:** 372015963  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
Hillmann Consulting, LLC  
1600 Route 22 East  
Union, NJ 07083

**Phone:** (908) 688-7800  
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**Collected Date:**  
**Received Date:** 09/28/2020 05:05 PM  
**Analyzed Date:** 09/29/2020

**Project:** PH1328 / 500 Elwood Road, Elwood, NJ

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

Lab Sample Number:	372015963-0001			372015963-0002			372015963-0003		
Client Sample ID:	3082 9766			3082 9765			3082 9743		
Volume (L):	75			75			75		
Sample Location:	Room 41			Room 26			Room 61		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	2	-
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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/29/2020 01:55 PM

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**EMSL Order:** 372015963  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
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**Collected Date:**  
**Received Date:** 09/28/2020 05:05 PM  
**Analyzed Date:** 09/29/2020

**Project:** PH1328 / 500 Elwood Road, Elwood, NJ

### 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:	372015963-0004 3082 9757 75 Room 59			372015963-0005 3082 9767 75 Outside			372015963-0006 3082 9741 75 Outside		
	Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³
Alternaria (Ulocladium)	-	-	-	-	-	-	3	100	0.2
Ascospores	-	-	-	13	570	0.9	7	300	0.5
Aspergillus/Penicillium	1	40	8.2	23	1000	1.6	30	1300	2.1
Basidiospores	9	400	81.6	271	12000	18.9	721	31900	50.8
Bipolaris++	-	-	-	1*	10*	0	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	8.2	737	32600	51.3	517	22800	36.3
Curvularia	-	-	-	34	1500	2.4	20	880	1.4
Epicoccum	-	-	-	1	40	0.1	4	200	0.3
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	1	40	0.1
Myxomycetes++	-	-	-	347	15300	24.1	96	4200	6.7
Pithomyces++	-	-	-	4	200	0.3	2	90	0.1
Rust	-	-	-	1	40	0.1	1	40	0.1
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	1	40	0.1	1	40	0.1
Botrytis	-	-	-	3	100	0.2	-	-	-
Cercospora++	1*	10*	2	3	100	0.2	12	530	0.8
Nigrospora	-	-	-	1	40	0.1	-	-	-
Oidium	-	-	-	3*	40*	0.1	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	2	90	0.1
Pyricularia	-	-	-	-	-	-	-	-	-
Spegazzinia	-	-	-	-	-	-	4	200	0.3
Torula-like	-	-	-	-	-	-	2	90	0.1
<b>Total Fungi</b>	<b>12</b>	<b>490</b>	<b>100</b>	<b>1443</b>	<b>63580</b>	<b>100</b>	<b>1423</b>	<b>62800</b>	<b>100</b>
Hyphal Fragment	-	-	-	1	40	-	3*	40*	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-

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

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/29/2020 01:55 PM

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**EMSL Order:** 372015963  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
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**Phone:** (908) 688-7800  
**Fax:**  
**Collected Date:**  
**Received Date:** 09/28/2020 05:05 PM  
**Analyzed Date:** 09/29/2020

**Project:** PH1328 / 500 Elwood Road, Elwood, NJ

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

Lab Sample Number:	372015963-0004			372015963-0005			372015963-0006		
Client Sample ID:	3082 9757			3082 9767			3082 9741		
Volume (L):	75			75			75		
Sample Location:	Room 59			Outside			Outside		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 09/29/2020 01:55 PM

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**APPENDIX C**

**LABORATORY ANALYTICAL REPORT – 10/1/2020**



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**EMSL Order:** 372016209  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
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**Phone:** (908) 688-7800  
**Fax:**  
**Collected Date:** 10/01/2020  
**Received Date:** 10/01/2020 11:30 AM  
**Analyzed Date:** 10/01/2020

**Project:** Client: McBrearty / Job #: PH1328

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

Lab Sample Number:	372016209-0001			372016209-0002			372016209-0003		
Client Sample ID:	3082 9784			3082 9552			3082 9776		
Volume (L):	75			75			75		
Sample Location:	Room 9			Room 19			Room 14		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	234	9550	99.1	63	2600	100	9	400	44.4
Basidiospores	1	40	0.4	-	-	-	7	300	33.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	-	-	-	6	200	22.2
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	1*	10*	0.1	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	1	40	0.4	-	-	-	-	-	-
Arthrospores	-	-	-	-	-	-	-	-	-
Mycoenterolobium	-	-	-	-	-	-	-	-	-
Nigrospora	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>237</b>	<b>9640</b>	<b>100</b>	<b>63</b>	<b>2600</b>	<b>100</b>	<b>22</b>	<b>900</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	41	-	-	41	-	-	41	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	2	-	-	1	-
Fibrous Particulate (1-4)	-	1	-	-	1	-	-	1	-
Background (1-5)	-	1	-	-	1	-	-	1	-

372016209-0002 - Aspergillus conidiophores present in sample.

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

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 10/01/2020 01:33 PM

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**EMSL Order:** 372016209  
**Customer ID:** HILL50  
**Customer PO:** PH1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
Hillmann Consulting, LLC  
1600 Route 22 East  
Union, NJ 07083

**Phone:** (908) 688-7800  
**Fax:**  
**Collected Date:** 10/01/2020  
**Received Date:** 10/01/2020 11:30 AM  
**Analyzed Date:** 10/01/2020

**Project:** Client: McBrearty / Job #: PH1328

### 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:	372016209-0004 3082 9775 75 Gym Storage			372016209-0005 3082 9771 75 Outside			372016209-0006 3082 9751 75 Outside		
	Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³
Alternaria (Ulocladium)	-	-	-	-	-	-	1	40	0.1
Ascospores	-	-	-	31	1300	2.5	38	1600	4.5
Aspergillus/Penicillium	46	1900	100	-	-	-	-	-	-
Basidiospores	-	-	-	1210	49400	94.4	792	32300	91.7
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	-	-	-	28	1100	2.1	23	940	2.7
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	1	40	0.1	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	1	40	0.1	-	-	-
Myxomycetes++	-	-	-	3	100	0.2	5	200	0.6
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	1	40	0.1
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	2	80	0.2	-	-	-
Arthrospores	-	-	-	5	200	0.4	-	-	-
Mycoenterolobium	-	-	-	-	-	-	1*	10*	0
Nigrospora	-	-	-	1	40	0.1	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	1	40	0.1
Torula-like	-	-	-	1	40	0.1	1	40	0.1
<b>Total Fungi</b>	<b>46</b>	<b>1900</b>	<b>100</b>	<b>1283</b>	<b>52340</b>	<b>100</b>	<b>863</b>	<b>35210</b>	<b>100</b>
Hyphal Fragment	-	-	-	3	100	-	1	40	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	3	100	-
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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 10/01/2020 01:33 PM

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**APPENDIX D**  
**LABORATORY ANALYTICAL REPORT – 10/2/2020**



# EMSL Analytical, Inc.

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**EMSL Order:** 372016310  
**Customer ID:** HILL50E  
**Customer PO:** PH-1328  
**Project ID:**

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304 Harper Drive  
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**Phone:** (908) 721-2302  
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**Collected Date:** 10/02/2020  
**Received Date:** 10/02/2020 01:50 PM  
**Analyzed Date:** 10/02/2020

**Project:** 500 Elwood Rd., Elwood, NJ / PH-1328

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

Lab Sample Number:	372016310-0001			372016310-0002			372016310-0003		
Client Sample ID:	3082-9792			3082-9777			3082-9778		
Volume (L):	75			75			75		
Sample Location:	Gym Storage			Room 94			Tech Room		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	6	300	25	1280	56600	76.6	64	2800	70.9
Basidiospores	8	400	33.3	2	90	0.1	16	710	18
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	7	300	25	385	17000	23	10	440	11.1
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	4	200	16.7	5	200	0.3	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>25</b>	<b>1200</b>	<b>100</b>	<b>1672</b>	<b>73890</b>	<b>100</b>	<b>90</b>	<b>3950</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	1	-	-	2	-
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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 10/02/2020 04:42 PM

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**EMSL Order:** 372016310  
**Customer ID:** HILL50E  
**Customer PO:** PH-1328  
**Project ID:**

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**Collected Date:** 10/02/2020  
**Received Date:** 10/02/2020 01:50 PM  
**Analyzed Date:** 10/02/2020

**Project:** 500 Elwood Rd., Elwood, NJ / PH-1328

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

Lab Sample Number:	372016310-0004			372016310-0005			372016310-0006		
Client Sample ID:	3082-9758			3082-9780			3082-9750		
Volume (L):	75			75			75		
Sample Location:	Room 57			Room 54			Room 43 Café		
Spore Types	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total	Raw Count	Count/M³	% of Total
Alternaria (Ulocladium)	1*	10*	0.5	-	-	-	-	-	-
Ascospores	1	40	2.2	-	-	-	-	-	-
Aspergillus/Penicillium	12	530	28.5	1	40	30.8	122	5390	82.5
Basidiospores	14	620	33.3	2	90	69.2	23	1000	15.3
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	14	620	33.3	-	-	-	3	100	1.5
Curvularia	1	40	2.2	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	1	40	0.6
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>43</b>	<b>1860</b>	<b>100</b>	<b>3</b>	<b>130</b>	<b>100</b>	<b>149</b>	<b>6530</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	2	-
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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

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**EMSL Order:** 372016310  
**Customer ID:** HILL50E  
**Customer PO:** PH-1328  
**Project ID:**

**Attention:** Ian Hinterleiter  
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**Phone:** (908) 721-2302  
**Fax:**  
**Collected Date:** 10/02/2020  
**Received Date:** 10/02/2020 01:50 PM  
**Analyzed Date:** 10/02/2020  
**Project:** 500 Elwood Rd., Elwood, NJ / PH-1328

### 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:	372016310-0007 3082-9756 75 Room 19			372016310-0008 3138-3617 75 Outside			372016310-0009 3138-1728 75 Outside		
	Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>
Alternaria (Ulocladium)	-	-	-	2	90	0.9	1*	10*	0.1
Ascospores	1	40	0.2	6	300	2.8	9	400	5.4
Aspergillus/Penicillium	403	17800	97.4	4	200	1.9	4	200	2.7
Basidiospores	6	300	1.6	170	7510	71	110	4860	66.2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	1*	10*	0.1	-	-	-	-	-	-
Cladosporium	2	90	0.5	46	2000	18.9	27	1200	16.3
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	2	90	0.9	4	200	2.7
Myxomycetes++	2*	30*	0.2	4	200	1.9	9	400	5.4
Pithomyces++	-	-	-	3	100	0.9	-	-	-
Rust	-	-	-	2	90	0.9	2*	30*	0.4
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	1	40	0.5
Zygomycetes	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>415</b>	<b>18270</b>	<b>100</b>	<b>239</b>	<b>10580</b>	<b>100</b>	<b>167</b>	<b>7340</b>	<b>100</b>
Hyphal Fragment	-	-	-	2	90	-	1	40	-
Insect Fragment	-	-	-	1*	10*	-	-	-	-
Pollen	-	-	-	1	40	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	2	-	-	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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

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**APPENDIX E**

**LABORATORY ANALYTICAL REPORT – 10/5/2020**



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**EMSL Order:** 372016424  
**Customer ID:** HILL50E  
**Customer PO:** PH-1328  
**Project ID:**

**Attention:** Rafael Torres  
Hillmann Consulting, LLC  
304 Harper Drive  
Moorestown, NJ 08057

**Phone:** (267) 418-7524  
**Fax:**  
**Collected Date:** 10/05/2020  
**Received Date:** 10/05/2020 02:00 PM  
**Analyzed Date:** 10/05/2020

**Project:** PH1328

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

Lab Sample Number:	372016424-0001			372016424-0002			372016424-0003		
Client Sample ID:	30339586			30339592			30328996		
Volume (L):	75			75			75		
Sample Location:	Room 9			Room 19			Café		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	2	90	1.9	-	-	-	-	-	-
Aspergillus/Penicillium	15	660	13.6	10	440	22.8	18	800	76.2
Basidiospores	81	3600	74.4	30	1300	67.4	4	200	19
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	9	400	8.3	3	100	5.2	1	40	3.8
Curvularia	1*	10*	0.2	-	-	-	-	-	-
Epicoccum	1	40	0.8	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	2	90	4.7	-	-	-
Myxomycetes++	1	40	0.8	-	-	-	1*	10*	1
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Arthrinium	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Paecilomyces-like	-	-	-	-	-	-	-	-	-
Polythrincium	-	-	-	-	-	-	-	-	-
Torula-like	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>110</b>	<b>4840</b>	<b>100</b>	<b>45</b>	<b>1930</b>	<b>100</b>	<b>24</b>	<b>1050</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	-	-	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	-	-	-	-	-	-	-	-	-
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-
Skin Fragments (1-4)	-	1	-	-	2	-	-	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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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**EMSL Order:** 372016424  
**Customer ID:** HILL50E  
**Customer PO:** PH-1328  
**Project ID:**

**Attention:** Rafael Torres  
Hillmann Consulting, LLC  
304 Harper Drive  
Moorestown, NJ 08057  
**Phone:** (267) 418-7524  
**Fax:**  
**Collected Date:** 10/05/2020  
**Received Date:** 10/05/2020 02:00 PM  
**Analyzed Date:** 10/05/2020  
**Project:** PH1328

### 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:	372016424-0004 30328979 75 Room 61A			372016424-0005 30328972 75 Room 94			372016424-0006 30329272 75 Outdoors- ES Entrance			
	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	1	3	100	1.1	
Aspergillus/Penicillium	23	1000	31.4	7	300	3.4	12	530	5.7	
Basidiospores	39	1700	53.5	144	6360	72.4	162	7160	77.1	
Bipolaris++	-	-	-	-	-	-	1*	10*	0.1	
Chaetomium	-	-	-	-	-	-	-	-	-	
Cladosporium	4	200	6.3	35	1500	17.1	30	1300	14	
Curvularia	-	-	-	1	40	0.5	1*	10*	0.1	
Epicoccum	-	-	-	-	-	-	-	-	-	
Fusarium	-	-	-	-	-	-	-	-	-	
Ganoderma	1	40	1.3	1	40	0.5	1	40	0.4	
Myxomycetes++	-	-	-	8	400	4.6	1	40	0.4	
Pithomyces++	-	-	-	-	-	-	-	-	-	
Rust	-	-	-	-	-	-	-	-	-	
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-	
Unidentifiable Spores	1	40	1.3	-	-	-	1	40	0.4	
Arthrinium	-	-	-	-	-	-	1*	10*	0.1	
Cercospora++	-	-	-	-	-	-	1	40	0.4	
Paecilomyces-like	5	200	6.3	-	-	-	-	-	-	
Polythrincium	-	-	-	1*	10*	0.1	1*	10*	0.1	
Torula-like	-	-	-	4*	50*	0.6	-	-	-	
<b>Total Fungi</b>	<b>73</b>	<b>3180</b>	<b>100</b>	<b>203</b>	<b>8790</b>	<b>100</b>	<b>215</b>	<b>9290</b>	<b>100</b>	
Hyphal Fragment	-	-	-	-	-	-	-	-	-	
Insect Fragment	-	-	-	-	-	-	-	-	-	
Pollen	-	-	-	6	300	-	-	-	-	
Analyt. Sensitivity 600x	-	44	-	-	44	-	-	44	-	
Analyt. Sensitivity 300x	-	13*	-	-	13*	-	-	13*	-	
Skin Fragments (1-4)	-	2	-	-	2	-	-	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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

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**Attention:** Rafael Torres  
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**Phone:** (267) 418-7524  
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**Collected Date:** 10/05/2020  
**Received Date:** 10/05/2020 02:00 PM  
**Analyzed Date:** 10/05/2020

**Project:** PH1328

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

<b>Lab Sample Number:</b>	372016424-0007		
<b>Client Sample ID:</b>	30328982		
<b>Volume (L):</b>	75		
<b>Sample Location:</b>	Outdoors- Parking Lot		
<b>Spore Types</b>	<b>Raw Count</b>	<b>Count/M³</b>	<b>% of Total</b>
Alternaria (Ulocladium)	1	40	0.6
Ascospores	5	200	3.2
Aspergillus/Penicillium	5	200	3.2
Basidiospores	117	5170	83.1
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	11	490	7.9
Curvularia	-	-	-
Epicoccum	-	-	-
Fusarium	-	-	-
Ganoderma	1	40	0.6
Myxomycetes++	1	40	0.6
Pithomyces++	-	-	-
Rust	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	1	40	0.6
Arthrinium	-	-	-
Cercospora++	-	-	-
Paecilomyces-like	-	-	-
Polythrincium	-	-	-
Torula-like	-	-	-
<b>Total Fungi</b>	<b>142</b>	<b>6220</b>	<b>100</b>
Hyphal Fragment	-	-	-
Insect Fragment	-	-	-
Pollen	-	-	-
Analyt. Sensitivity 600x	-	44	-
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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 10/05/2020 04:36 PM

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**APPENDIX F**  
**LABORATORY ANALYTICAL REPORT – 10/8/2020**



# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077  
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<http://www.EMSL.com> / [cinmicrolab@emsl.com](mailto:cinmicrolab@emsl.com)

**EMSL Order:** 372016665  
**Customer ID:** HILL50E  
**Customer PO:** PH - 1328  
**Project ID:**

**Attention:** Rafael Torres  
Hillmann Consulting, LLC  
304 Harper Drive  
Moorestown, NJ 08057  
**Project:** PH - 1328

**Phone:** (267) 418-7524  
**Fax:**  
**Collected Date:** 10/08/2020  
**Received Date:** 10/08/2020 09:05 AM  
**Analyzed Date:** 10/08/2020

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

Lab Sample Number:	372016665-0001			372016665-0002			372016665-0003		
Client Sample ID:	3032-8978			3032-8980			3033-9595		
Volume (L):	75			75			75		
Sample Location:	Room 9			Room 61A			Room 94		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total	Raw Count	Count/M <sup>3</sup>	% of Total
Alternaria (Ulocladium)	-	-	-	-	-	-	-	-	-
Ascospores	-	-	-	-	-	-	-	-	-
Aspergillus/Penicillium	9	400	62.5	248	10100	90.2	31	1300	64
Basidiospores	4	200	31.3	-	-	-	1	40	2
Bipolaris++	-	-	-	-	-	-	-	-	-
Chaetomium	-	-	-	-	-	-	-	-	-
Cladosporium	1	40	6.3	26	1100	9.8	17	690	34
Curvularia	-	-	-	-	-	-	-	-	-
Epicoccum	-	-	-	-	-	-	-	-	-
Fusarium	-	-	-	-	-	-	-	-	-
Ganoderma	-	-	-	-	-	-	-	-	-
Myxomycetes++	-	-	-	-	-	-	-	-	-
Pithomyces++	-	-	-	-	-	-	-	-	-
Rust	-	-	-	-	-	-	-	-	-
Scopulariopsis/Microascus	-	-	-	-	-	-	-	-	-
Stachybotrys/Memnoniella	-	-	-	-	-	-	-	-	-
Unidentifiable Spores	-	-	-	-	-	-	-	-	-
Zygomycetes	-	-	-	-	-	-	-	-	-
Cercospora++	-	-	-	-	-	-	-	-	-
Pestalotia/Pestalotiopsis	-	-	-	-	-	-	-	-	-
<b>Total Fungi</b>	<b>14</b>	<b>640</b>	<b>100</b>	<b>274</b>	<b>11200</b>	<b>100</b>	<b>49</b>	<b>2030</b>	<b>100</b>
Hyphal Fragment	-	-	-	-	-	-	1	40	-
Insect Fragment	-	-	-	-	-	-	-	-	-
Pollen	1*	10*	-	-	-	-	1*	10*	-
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.

Vincent Iuzzolino, M.S., Laboratory Manager  
or other Approved Signatory

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

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ AIHA-LAP, LLC--EMLAP Lab 100194

Initial report from: 10/08/2020 12:04 PM

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# EMSL Analytical, Inc.

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**Phone:** (267) 418-7524

**Fax:**

**Collected Date:** 10/08/2020

**Received Date:** 10/08/2020 09:05 AM

**Analyzed Date:** 10/08/2020

**Project:** PH - 1328

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

Lab Sample Number:	372016665-0004		
Client Sample ID:	3033-9010		
Volume (L):	75		
Sample Location:	Outdoors - ES Entrance		
Spore Types	Raw Count	Count/M <sup>3</sup>	% of Total
Alternaria (Ulocladium)	-	-	-
Ascospores	13	530	2.9
Aspergillus/Penicillium	-	-	-
Basidiospores	396	16200	90.1
Bipolaris++	-	-	-
Chaetomium	-	-	-
Cladosporium	24	980	5.4
Curvularia	-	-	-
Epicoccum	1	40	0.2
Fusarium	-	-	-
Ganoderma	3	100	0.6
Myxomycetes++	2	80	0.4
Pithomyces++	-	-	-
Rust	1*	10*	0.1
Scopulariopsis/Microascus	-	-	-
Stachybotrys/Memnoniella	-	-	-
Unidentifiable Spores	-	-	-
Zygomycetes	-	-	-
Cercospora++	1*	10*	0.1
Pestalotia/Pestalotiopsis	1	40	0.2
<b>Total Fungi</b>	<b>442</b>	<b>17990</b>	<b>100</b>
Hyphal Fragment	1	40	-
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.

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