

March 24, 2023

Kildeer Community Consolidated School District #96
1050 Ivy Hall Lane
Buffalo Grove, IL 60089

Attn: Mr. Sam Miranda
Buildings & Grounds

RE: Limited Mold IAQ Sampling Survey;
Ivy Hall School
1072 Ivy Hall Lane
Buffalo Grove, IL 60047



Environmental Associates, Ltd.
816 Burr Oak Drive Westmont, Illinois
60559
Phone: (630) 655-8500 Fax: (630) 655-8724
jmsenviro.com

JMS Project: J-25323

Dear Mr. Miranda:

Enclosed is the Limited Mold Sampling Survey Report that JMS Environmental Associates, Ltd. (JMS) has performed for Kildeer Countryside School District 96 at Ivy Hall Elementary School, Room 104, 1072 Ivy Hall Lane, Buffalo Grove, IL. The Environmental Mold Sampling tests were performed on March 23rd, 2023. JMS performed specific mold tests including spore trap sampling.

Sampling

Spore Trap sampling was performed in room 104 adjacent hallway, room 105 and outside near doors 1.

Note, this report does not constitute any conclusions regarding any medical effects from environmental molds. A trained and experienced medical physician should be consulted regarding the physiological effects of environmental molds. No opinions or recommendations are being stated about possible health effects of mold species. The client should consult a medical doctor/toxologist for the human effects of mold species.

Visual Inspection:

A visual inspection was performed focusing on Room 104 in the school. JMS was requested to come out to the facility to perform IAQ testing based on a strange odor coming from the area. Upon visual inspection of the room, no visible mold was found. The area above the drop ceiling was inspected as well as the perimeter area. Minor staining was noted on the ceiling tiles was found from condensation on a valve.

There is an odor in the area, almost a dusty type smell. The smell is not found in any of the surrounding area's.

JMS Environmental Associates, Ltd

Kildeer Countryside School District: Ivy Hall School Room 104

JMS Project: J-25323

March 3, 2023

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Table 1. Summary of Results of Microscopic Analysis of Air Samples
at Ivy Hall Elementary School, Buffalo Grove

Room/Area Description	Sample Number	Results	
		Spore Density or Concentration	Predominant Genus
Outside Door 1 Pre Sample	25384-03-2301	850 per/m ³	Ascospores (110), Basidiospores(370), Cladosporium (370)
Room 104	25384-03-2302	N/A	N/A
Adjacent Hallway	25384-03-2303	N/A	N/A
Room 105	25384-03-2304	N/A	N/A
Outside Door I Post Sampling	25384-03-2305	1000 per/m ³	Ascospores (210), Basidiospores(640), Cladosporium (160)

JMS Environmental Associates, Ltd

Kildeer Countryside School District: Ivy Hall School Room 104

JMS Project: J-25323

March 3, 2023

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Conclusion:

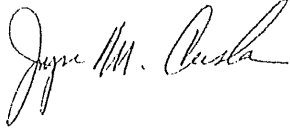
JMS noted no visual issues. The mold and air monitoring noted normal air quality levels for mold. The temperature and humidity were within a normal range.

Refer to Appendix 'A' : Laboratory Analytical Results / Chain of Custody

If you have any questions regarding this project survey report, please do not hesitate to contact us at JMS.

Respectfully submitted,

JMS ENVIRONMENTAL ASSOCIATES, LTD.

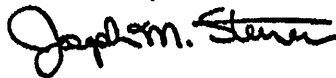


Joyce M. Ciesla

Senior Project Manager

JMS ENVIRONMENTAL ASSOCIATES, LTD.

Reviewed by,



Joseph M. Sterner, MS

Environmental Director/President

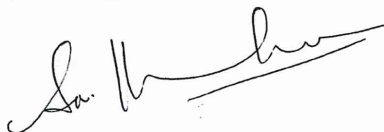
Appendix 'A' : Laboratory Analytical Results / Chain of Custody

Report for:

Ms. Joyce Ciesla
JMS Environmental Associates, Ltd.
816 Burr Oak Drive
Westmont, IL 60559

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: J25384; IVY Hall
EML ID: 3205150

Approved by:



Cluster Leader
Dr. Kamash Pillai

Dates of Analysis:
Spore trap analysis: 03-24-2023

Service SOPs: Spore trap analysis (EM-MY-S-1038)
AIHA-LAP, LLC accredited service, Lab ID #176641

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank correction of results is not applied. The results relate only to the samples as received and tested. Information supplied by the client which can affect the validity of results: sample air volume.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EPK Built Environment Testing, LLC's LabServe® reporting system includes automated fail-safes to ensure that all AIHA-LAP, LLC quality requirements are met and notifications are added to reports when any quality steps remain pending.

Client: JMS Environmental Associates, Ltd.
C/O: Ms. Joyce Ciesla
Re: J25384; IVY Hall

Date of Sampling: 03-23-2023
Date of Receipt: 03-23-2023
Date of Report: 03-24-2023

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY

Location:	25384-03-2301: Pre-Outside		25384-03-2302: Room 104		25384-03-2303: Adjacent Hallway		25384-03-2304: Room 105		25384-03-2305: Post Outside	
Comments (see below)	None		None		None		None		None	
Lab ID-Version†:	15519964-1		15519965-1		15519966-1		15519967-1		15519968-1	
Analysis Date:	03/24/2023		03/24/2023		03/24/2023		03/24/2023		03/24/2023	
	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3	raw ct.	spores/m3
Ascospores	2	110							4	210
Basidiospores	7	370							12	640
Botrytis										
Chaetomium										
Cladosporium	7	370							3	160
Curvularia										
Epicoccum										
Fusarium										
Myrothecium										
Nigrospora										
Other colorless										
Penicillium/Aspergillus types†										
Pithomyces										
Rusts										
Smuts, Periconia, Myxomycetes										
Stachybotrys										
Stemphylium										
Torula										
Ulocladium										
Zygomycetes										
Background debris (1-4+)††	2+		2+		1+		< 1+		2+	
Hyphal fragments/m3	< 13		< 13		< 13		< 13		< 13	
Pollen/m3	< 13		< 13		< 13		< 13		< 13	
Skin cells (1-4+)	< 1+		< 1+		< 1+		< 1+		< 1+	
Sample volume (liters)	75		75		75		75		75	
§ TOTAL SPORES/m3		850		< 13		< 13		< 13		1,000

Comments:

Spore types listed without a count or data entry were not detected during the course of the analysis for the respective sample, indicating a raw count of <1 spore.

† The spores of *Aspergillus* and *Penicillium* (and others such as *Acremonium*, *Paecilomyces*) are small and round with very few distinguishing characteristics. They cannot be differentiated by non-viable sampling methods. Also, some species with very small spores are easily missed, and may be undercounted.

†† Background debris indicates the amount of non-biological particulate matter present on the trace (dust in the air) and the resulting visibility for the analyst. It is rated from 1+ (low) to 4+ (high). Counts from areas with 4+ background debris should be regarded as minimal counts and may be higher than reported. It is important to account for samples volumes when evaluating dust levels.

The analytical sensitivity is the spores/m³ divided by the raw count, expressed in spores/m³, per spore and per sample.

For more information regarding analytical sensitivity, please contact QA by calling the laboratory.

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: JMS Environmental Associates, Ltd.
C/O: Ms. Joyce Ciesla
Re: J25384; IVY Hall

Date of Sampling: 03-23-2023
Date of Receipt: 03-23-2023
Date of Report: 03-24-2023

MoldRANGE™, Local Climate; Extended Outdoor Comparison

Outdoor Location: 25384-03-2301, Pre-Outside

Fungi Identified	Outdoor data	Typical Outdoor Data for: March in Central† EMLab Regional Climate code¹ B Annual Temp, A Elev., B Rain, A Temp. Range (n‡=287)						Typical Outdoor Data for: The entire year in Central† EMLab Regional Climate code¹ B Annual Temp, A Elev., B Rain, A Temp. Range (n‡=3625)					
		very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Project zip code 60089	spores/m3												
Generally able to grow indoors*													
Alternaria	-	7	7	13	27	39	13	13	20	53	190	310	52
Bipolaris/Drechslera group	-	-	-	-	-	-	< 1	7	7	13	27	48	6
Chaetomium	-	-	-	-	-	-	2	7	7	13	33	59	4
Cladosporium	370	27	53	110	290	640	66	53	120	690	2,900	5,500	86
Curvularia	-	-	-	-	-	-	< 1	7	13	13	40	53	8
Nigrospora	-	-	-	-	-	-	2	7	13	20	53	110	18
Penicillium/Aspergillus types	-	27	53	110	160	360	31	40	53	110	350	670	40
Stachybotrys	-	-	-	-	-	-	2	7	13	27	67	110	1
Torula	-	-	-	-	-	-	< 1	7	13	20	53	80	6
Seldom found growing indoors**													
Ascospores	110	27	27	53	240	370	47	53	110	530	1,800	3,300	77
Basidiospores	370	53	53	160	800	1,400	64	53	190	1,000	4,100	7,800	87
Rusts	-	-	-	-	-	-	1	13	13	27	110	180	26
Smuts, Periconia, Myxomycetes	-	7	7	13	27	40	19	13	13	40	120	210	50
§ TOTAL SPORES/m3	850												

¹EMLab Regional Climate codes are a climate classification scheme for regional geographic areas containing multiple states. The MoldRANGE™ Local Climate report uses the sampling location zip code to identify the EMLab Regional Climate code in that area. Using information available from the NOAA weather database, the EMLab Regional Climate code sharpens the precision of the MoldRANGE™ reporting system, providing more reliable estimates of the range and average concentrations of the different airborne fungal spore types for each region. Additional information on the EMLab Regional Climate code system can be found on the last page of this report.

†The Typical Outdoor Data represents the typical outdoor spore levels across the region's group of states for the time period and EMLab Regional Climate code indicated. The last column represents the frequency of occurrence. The very low, low, med, high, and very high values represent the 10, 20, 50, 80, and 90 percentile values of the spore type when it is detected. For example, if the frequency of occurrence is 63% and the low value is 53, it would mean that the given spore type is detected 63% of the time and, when detected, 20% of the time it is present in levels above the detection limit and below 53 spores/m3. These values are updated periodically and if not enough data is available to make a statistically meaningful assessment, it is indicated with a dash.

‡ n is the sample size used to calculate the MoldRANGE™ Local Climate data summarized in the table.

* The spores in this category are generally capable of growing on wet building materials in addition to growing outdoors. Building related growth is dependent upon the fungal type, moisture level, type of material, and other factors. *Cladosporium* is one of the predominant spore types worldwide and is frequently present in high numbers. *Penicillium/Aspergillus* species colonize both outdoor and indoor wet surfaces rapidly and are very easily dispersed. Other genera are usually present in lesser numbers.

** These fungi are generally not found growing on wet building materials. For example, the rusts and smuts are obligate plant pathogens. However, in each group there are notable exceptions. For example, agents of wood decay are members of the basidiomycetes and high counts of a single morphological type of basidiospore on an inside sample should be considered significant.

§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: JMS Environmental Associates, Ltd.
C/O: Ms. Joyce Ciesla
Re: J25384; IVY Hall

Date of Sampling: 03-23-2023
Date of Receipt: 03-23-2023
Date of Report: 03-24-2023

MoldRANGE™, Local Climate; Extended Outdoor Comparison

Outdoor Location: 25384-03-2305, Post Outside

Fungi Identified	Outdoor data	Typical Outdoor Data for: March in Central† EMLab Regional Climate code¹ B Annual Temp, A Elev., B Rain, A Temp. Range (n‡=287)						Typical Outdoor Data for: The entire year in Central† EMLab Regional Climate code¹ B Annual Temp, A Elev., B Rain, A Temp. Range (n‡=3625)					
		very low	low	med	high	very high	freq %	very low	low	med	high	very high	freq %
Project zip code 60089	spores/m3												
Generally able to grow indoors*													
Alternaria	-	7	7	13	27	39	13	13	20	53	190	310	52
Bipolaris/Drechslera group	-	-	-	-	-	-	< 1	7	7	13	27	48	6
Chaetomium	-	-	-	-	-	-	2	7	7	13	33	59	4
Cladosporium	160	27	53	110	290	640	66	53	120	690	2,900	5,500	86
Curvularia	-	-	-	-	-	-	< 1	7	13	13	40	53	8
Nigrospora	-	-	-	-	-	-	2	7	13	20	53	110	18
Penicillium/Aspergillus types	-	27	53	110	160	360	31	40	53	110	350	670	40
Stachybotrys	-	-	-	-	-	-	2	7	13	27	67	110	1
Torula	-	-	-	-	-	-	< 1	7	13	20	53	80	6
Seldom found growing indoors**													
Ascospores	210	27	27	53	240	370	47	53	110	530	1,800	3,300	77
Basidiospores	640	53	53	160	800	1,400	64	53	190	1,000	4,100	7,800	87
Rusts	-	-	-	-	-	-	1	13	13	27	110	180	26
Smuts, Periconia, Myxomycetes	-	7	7	13	27	40	19	13	13	40	120	210	50
§ TOTAL SPORES/m3	1,000												

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§ Total Spores/m3 has been rounded to two significant figures to reflect analytical precision.

Client: JMS Environmental Associates, Ltd.
C/O: Ms. Joyce Ciesla
Re: J25384; IVY Hall

Date of Sampling: 03-23-2023
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Understanding EMLab Regional Climate Codes

Outdoor airborne spore concentrations are strongly influenced by climate and weather patterns, often resulting in pronounced seasonal and diurnal cycles (Burge 1995). The seasonal climatic changes directly affect the growth cycle of plants, thereby influencing fungal growth, spore maturation, and release cycles. By evaluating outdoor spore concentrations across similar climatic zones rather than for the state as a whole, it is possible to provide a more representative estimate of typical outdoor spore levels and frequency of occurrence for different airborne fungal spore types in a given area.

The EMLab Regional Climate code system is a novel classification system that uses data from the NOAA - National Oceanic and Atmospheric Administration database to define unique climate zones. The following climate variables, for each regional zip code, are obtained from NOAA and assigned a letter code of A (above the regional average for that variable) or B (below the regional average for that variable):

1. Annual High Temperature
2. Elevation
3. Rainfall/Precipitation
4. Monthly Temperature Range

The result is a 4-character code assigned to each statewide zip code, referred to as the Regional Climate Code. Below are some examples of decoded Regional Climate Codes:

AAAA = Above avg. Annual High Temperature, Above avg. Elevation, Above avg. Rainfall/Precipitation, Above avg. Monthly Temperature Range

AABB = Above avg. Annual High Temperature, Above avg. Elevation, Below avg. Rainfall/Precipitation, Below avg. Monthly Temperature Range

BBAA = Below avg. Annual High Temperature, Below avg. Elevation, Above avg. Rainfall/Precipitation, Above avg. Monthly Temperature Range

The actual outdoor air sample data from matching regional climate codes in each group of states are then compiled in a manner relating typical spore concentrations and frequency of occurrence.

The data presented in this report is from the Central Region which includes the states of: IL, IN, KY, MO, OH, TN, and WV

The NOAA regional climate variables were selected by mapping data points from a subset of approximately 145,000 weather and geographic database entries to over 80,000 outdoor spore trap samples with known zip codes and assessing them using orthogonal array experimental design techniques. The results were then compared to the typical ranges of spore types found when grouping zip codes using the Koppen-Geiger climatic classification system; a commonly used climatic system that provides an objective numerical definition in terms of climatic elements such as temperature, rainfall, and other seasonal characteristics. The EMLab Regional Climate codes showed improved granularity and refinement of the zip code groupings, implying a better representation of the expected range of spore types to be found within an individual zip code.

The values on this report were calculated by obtaining the four variables listed above from the over 585 million data points of weather and geographic information available in the NOAA database, and determining the frequencies and percentile values of spore types by utilizing over 180,000 Eurofins EMLab P&K outdoor spore trap samples with known zip codes.

This report groups regional zip codes in relation to these EMLab Regional Climate codes and summarizes MoldRANGE™ data by month and year within each EMLab Regional Climate code.

References:

Burge, Harriet, A. Bioaerosols: Boca Raton: Lewis Publishers, pp. 163-171, 1995.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor data" are based on the results of the analysis of samples delivered to and analyzed by Eurofins EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. In addition, Eurofins EMLab P&K may not have received and tested a representative number of samples for every region or time period. Eurofins EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the use or interpretation of the data contained in, or any actions taken or omitted in reliance upon, this report.

Client: JMS Environmental Associates, Ltd.
C/O: Ms. Joyce Ciesla
Re: J25384; IVY Hall

Date of Sampling: 03-23-2023
Date of Receipt: 03-23-2023
Date of Report: 03-24-2023

MoldSTAT™: Supplementary Statistical Spore Trap Report

Outdoor Summary: 25384-03-2301: Pre-Outside

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Ascospores					13 - 210 - 6,000	74
Basidiospores					13 - 430 - 25,000	89
Cladosporium					27 - 440 - 7,500	88
Penicillium/Aspergillus types					17 - 200 - 2,700	62
Smuts, Periconia, Myxomycetes					7 - 53 - 850	64
Total						

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

Indoor Samples

Location: 25384-03-2302: Room 104

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: N/A Result: N/A Critical value: N/A Inside Similar: N/A	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species Detected		Spores/m3		
		<100	1K	10K
None Detected				

Location: 25384-03-2303: Adjacent Hallway

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: N/A Result: N/A Critical value: N/A Inside Similar: N/A	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species Detected		Spores/m3		
		<100	1K	10K
None Detected				

Client: JMS Environmental Associates, Ltd.
C/O: Ms. Joyce Ciesla
Re: J25384; IVY Hall

Date of Sampling: 03-23-2023
Date of Receipt: 03-23-2023
Date of Report: 03-24-2023

MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 25384-03-2304: Room 105

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: N/A Result: N/A Critical value: N/A Inside Similar: N/A	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species Detected		Spores/m3		
None Detected		<100	1K	10K
				>100K
				< 13

* The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

** An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

*** The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

**** MoldSCORE™ is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. Eurofins EMLab P&K reserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by Eurofins EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. Eurofins EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

Client: JMS Environmental Associates, Ltd.
 C/O: Ms. Joyce Ciesla
 Re: J25384; IVY Hall

Date of Sampling: 03-23-2023
 Date of Receipt: 03-23-2023
 Date of Report: 03-24-2023

MoldSTAT™: Supplementary Statistical Spore Trap Report

Outdoor Summary: 25384-03-2305: Post Outside

Species detected	Outdoor sample spores/m3				Typical outdoor ranges (North America)	Freq. %
	<100	1K	10K	>100K		
Ascospores					13 - 210 - 6,000	74
Basidiospores					13 - 430 - 25,000	89
Cladosporium					27 - 440 - 7,500	88
Penicillium/Aspergillus types					17 - 200 - 2,700	62
Smuts, Periconia, Myxomycetes					7 - 53 - 850	64
Total						

The "Typical outdoor ranges" and "Freq. %" columns show the typical low, medium, and high spore counts per cubic meter and the frequency of occurrence for the given spore type. The low, medium, and high values represent the 2.5, 50, and 97.5 percentile values when the spore type is detected. For example, if the low value is 53 and the frequency of occurrence is 63%, it would mean that we typically detect the given spore type on 63 percent of all outdoor samples and, when detected, 2.5% of the time it is present in levels below 53 spores/m3.

Indoor Samples

Location: 25384-03-2302: Room 104

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: N/A Result: N/A Critical value: N/A Inside Similar: N/A	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species Detected		Spores/m3		
		<100	1K	10K
None Detected				

Location: 25384-03-2303: Adjacent Hallway

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: N/A Result: N/A Critical value: N/A Inside Similar: N/A	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species Detected		Spores/m3		
		<100	1K	10K
None Detected				

Client: JMS Environmental Associates, Ltd.
C/O: Ms. Joyce Ciesla
Re: J25384; IVY Hall

Date of Sampling: 03-23-2023
Date of Receipt: 03-23-2023
Date of Report: 03-24-2023

MoldSTAT™: Supplementary Statistical Spore Trap Report

Location: 25384-03-2304; Room 105

% of outdoor total spores/m3	Friedman chi-square* (indoor variation)	Agreement ratio** (indoor/outdoor)	Spearman rank correlation*** (indoor/outdoor)	MoldSCORE**** (indoor/outdoor)
Result: < 1%	dF: N/A Result: N/A Critical value: N/A Inside Similar: N/A	Result: 0.0000	dF: N/A Result: N/A Critical value: N/A Outside Similar: N/A	Score: 100 Result: Low
Species Detected		Spores/m3		
None Detected		<100	1K	10K
				>100K
				< 13

* The Friedman chi-square statistic is a non-parametric test that examines variation in a set of data (in this case, all indoor spore counts). The null hypothesis (H0) being tested is that there is no meaningful difference in the data for all indoor locations. The alternative hypothesis (used if the test disproves the null hypothesis) is that there is a difference between the indoor locations. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

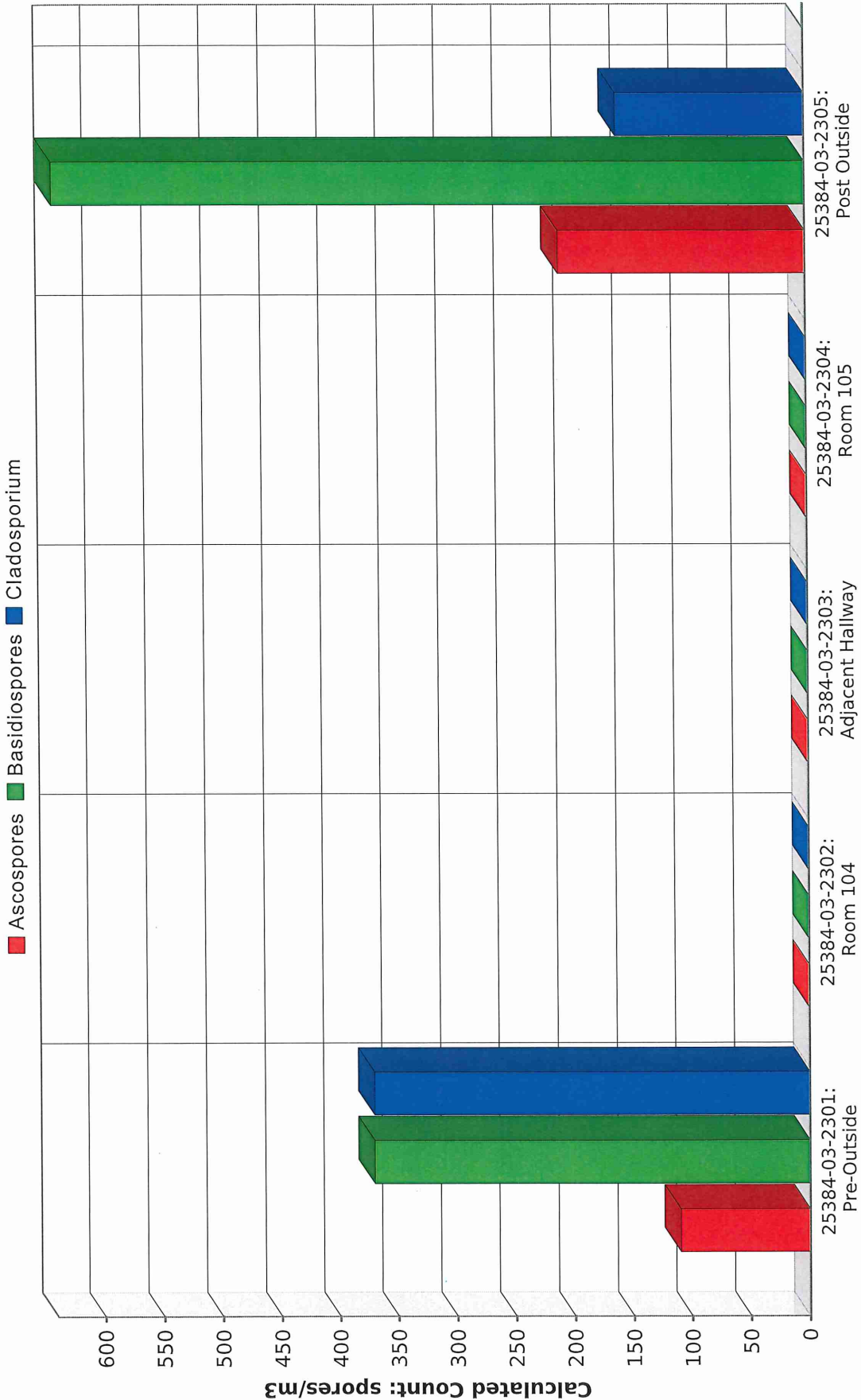
** An agreement ratio is a simple method for assessing the similarity of two samples (in this case the indoor sample and the outdoor summary) based on the spore types present. A score of one indicates that the types detected in one location are the same as that in the other. A score of zero indicates that none of the types detected indoors are present outdoors. Typically, an agreement of 0.8 or higher is considered high.

*** The Spearman rank correlation is a non-parametric test that examines correlation between two sets of data (in this case the indoor location and the outdoor summary). The null hypothesis (H0) being tested is that the indoor and outdoor samples are unrelated. The alternative hypothesis (used if the test disproves the null hypothesis) is that the samples are similar. The null hypothesis is rejected when the result of the test is greater than the critical value. The critical value that is displayed is based on the degrees of freedom (dF) of the test and a significance level of 0.05.

**** MoldSCORE™ is a specialized method for examining air sampling data. It is a score between 100 and 300, with 100 indicating a greater likelihood that the airborne indoor spores originated from the outside, and 300 indicating a greater likelihood that they originated from an inside source. The Result displayed is based on the numeric score given and will be either Low, Medium, or High, indicating a low, medium, or high likelihood that the spores detected originated from an indoor source. Eurofins EMLab P&K reserves the right to, and may at anytime, modify or change the MoldScore algorithm without notice.

Interpretation of the data contained in this report is left to the client or the persons who conducted the field work. This report is provided for informational and comparative purposes only and should not be relied upon for any other purpose. "Typical outdoor ranges" are based on the results of the analysis of samples delivered to and analyzed by Eurofins EMLab P&K and assumptions regarding the origins of those samples. Sampling techniques, contaminants infecting samples, unrepresentative samples and other similar or dissimilar factors may affect these results. With the statistical analysis provided, as with all statistical comparisons and analyses, false-positive and false-negative results can and do occur. Eurofins EMLab P&K hereby disclaims any liability for any and all direct, indirect, punitive, incidental, special or consequential damages arising out of the data contained in, or any actions taken or omitted in reliance upon, this report.

SPORE TRAP REPORT: NON-VIABLE METHODOLOGY



Comments:

Note: Graphical output may understate the importance of certain "marker" genera.
Eurofins EPK Built Environment Testing, LLC

CHAIN OF CUSTODY

www.eurofinsus.com/Built

East: (866) 871-1984
Central: (800) 651-4802
West: (866) 888-6653

Weather	Ex	Rain	Snow	Fog	Client
None	☐	☐	☐	☐	☐
Light	☐	☒	☐	☐	☐
Moderate	☐	☐	☐	☐	☐
Heavy	☐	☐	☐	☐	☐

CONTACT INFORMATION		
Company	JMS Environmental Associates, Ltd.	
Contact	Joyce Ciesla	
Phone	630-204-8580	
Address: 816 Burr Oak Drive, Westmont, IL		
Special Instructions		
E-mail Results to: jciesla@jmsenviro.com		

PROJECT INFORMATION				TURN AROUND TIME CODES (TAT)			
Project ID:	J25384			STD - Standard (DEFAULT)	Rushes received after 2pm or on weekends will be considered received the next business day. Please alert us in advance of weekend analysis needs.		
Project Description:	IVY Hall			ND - Next Business Day			
Project Zip Code:	60089			SD - Same Business Day Rush			
PO Number:	25384			WH - Weekend / Holiday			
Sample ID	Description	Sample Type (Flow)	TAT (Flow)	Total Volume / Area (as applicable)	Notes	Time of day (Temp, RH, etc.)	
25384-03	Pre-outside	ST	STD	75	7 May 65 44		
2302	Room 104	ST	STD	75			
2303	Adjacent Hallway	ST	STD	75			
2304	Room 105	ST	STD	75			
2305	Post outside	ST	STD	75			

SAMPLE TYPE CODES				RELINQUISHED BY		DATE & TIME	
BC - BioCassette™	CP - Contact Plate	T - Tape	D - Dust	<i>Joyce Ciesla</i>		3/23/23	
A15 - Anderson	ST - Spore Trap Zefon, Allergenco, Burkard	SW - Swab	W - Water				
SAS - Surface Air Sampler	B - Bulk	SO - Soil					
O - Other							

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at: <https://www.eurofins.com/environment-testing/chain-of-custody-guidelines-and-terms>

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FUNGAL ANALYSIS

REQUESTED SERVICES
(Check boxes below)

Non-Culturable	Culturable	
	Spore Trap	Tape Swab Bulk
Score Trap Analysis - Other particles	☒	☐
Direct Microscopic Exam (Qualitative)	☒	☐
Quantitative Spore Count Direct Exam	☒	☐
Dust Characterization	☒	☐
Air Fungi (Genus ID + Asp. speciation)	☒	☐
Air Fungi (Full speciation)	☒	☐
1-Media Surface Fungi - Full spec. Penicillium only	☒	☐
1-Media Surface Fungi - Full speciation	☒	☐
2-Media Surface Fungi (Gen)	☒	☐
2-Media Surface Fungi - Full	☒	☐
3-Media Surface Fungi (Genus)	☒	☐
3-Media Surface Fungi - Full sp.	☒	☐

