Limited Mold Assessment Rooms 1106,1107,1108,1109,1110

Treadway, David <treadwayd@lisd.net>

Thu 10/6/2022 3:10 PM

To: Deaton, Angela <deatona@lisd.net>;Beecher, Suzanne <beechers@lisd.net>
Cc: Ontiveros, Sara <ontiveross@lisd.net>;Hughes, Jason <hughesjk@lisd.net>;Jones, Steven <jonessa@lisd.net>;Sayers, Allen <sayersa@lisd.net>

Mrs. Deaton,

Good afternoon. I am sending this email to follow up with the results of the limited mold assessment that was requested by your campus for Rooms 1106-1110. The assessment was conducted on 9/29 and 9/30 by Ensolum LLC. It is typically assumed that the indoor spore levels in an area with filtered or air-conditioned air average below the outdoor levels. Data from the airborne mold/fungi sampling indicated that the total indoor concentration of mold/fungi was as follows: Room 1106 was **8.3%**, Room 1107 was **7.1%**, Room 1108 was **8%**, Room 1109 was **21.4**%, and Room 1110 was **9.7 %** of the outdoor levels. Utilizing this theory, the indoor concentrations are within the acceptable guidelines for areas with filtered or air-conditioned air at the time of the assessment. Even though the spore count is within an acceptable range, due to staff concerns in these rooms I am recommending that the carpet be replaced in these rooms with VCT. I would also recommend that the rooms be thoroughly cleaned and all plants and animals be removed. The full report will be available on the LISD website once it is received from the vendor. If you have any questions or any other environmental concerns, please feel free to reach out.

Sincerely,
David Treadway

David Treadway
LISD Environmental Coordinator
Facility Services Department
469-948-7823

ENSOLUM

October 21, 2022

Lewisville Independent School District
1597 Edmonds Lane
Lewisville, Texas 75067
Attn: Mr. David Treadway

Re: Limited Mold Assessment
Lewisville Learning Center – Rm. 1106, 1107,1108, 1109, and 1110
1601 S. Edmonds Lane
Lewisville, TX 75067
Ensolum Proposal No. P01A1288171

Ensolum, LLC (Ensolum) was retained to perform limited mold assessment services within Rooms 1106, 1107,1108, 1109, and 1110 of Lewisville Learning Center, 1601 S. Edmonds Lane, Lewisville, TX 75067. Enclosed is the report, including analytical data.

Ensolum appreciates this opportunity to be of service and looks forward to our continued work together. Please contact the undersigned with any questions or concerns you may have.

Sincerely,

Clinton S. Jech
Mold Assessment Consultant
MAC1444

Darren G. Bowden
Principal
MAC0321 EXP: 2/15/2024

1.0 INTRODUCTION

Ensolum was retained by David Treadway, LISD, to complete a Limited Mold Assessment within Rooms 1106, 1107,1108, 1109, and 1110 of Lewisville Learning Center, 1601 S. Edmonds Lane, Lewisville, TX 75067. The purpose of this investigation was to determine if elevated concentrations of airborne fungal spores and structures were present within the above-referenced areas. Ensolum completed the on-site investigation on September 29, 2022. The Limited Mold Assessment was performed in response to a complaint of possible indoor air quality issues within specific areas.

2.0 PROCEDURE

Ensolum visually inspected accessible areas of Rooms 1106, 1107,1108, 1109, and 1110. Water damage was observed in the following locations:

VISIBLE WATER DAMAGE		
LOCATION	DATE	EXPLANATION
Classroom 1110	9/30/2022	Visible water damage was observed on 2 ceiling tiles on the perimeter wall, HVAC Filter/Return is dirty.

Following the inspection of potential water-damaged building materials, Ensolum conducted a moisture investigation in the identified areas to determine if nonvisible water-damaged materials and other building materials within the investigation area were present. The moisture investigation was completed with a GE Protimeter BLD5364 moisture meter on accessible porous and semi-porous building materials in each area of concern. At the time of investigation, monitored building materials did not exhibit elevated moisture concentrations in comparison with similar and non-affected building materials in the structure and standard scientific guidelines.

Representative Relative Humidity readings were collected and recorded using an Extech Instruments Humidity / Temperature Pen. Measurements recorded during the investigation are listed in the chart below:

TEMPERATURE, RELATIVE HUMIDITY & SPECIFIC HUMIDITY				
LOCATION	**DATE**	**Temperature: F**	**Relative Humidity**	**Specific Humidity**
Classroom 1106	9/29/2022	77	36.0	49.0
Classroom 1107	9/29/2022	75	36.0	46.0
Classroom 1108	9/29/2022	74	34.0	42.0
Exterior Southeast Entry	9/29/2022	74	23.0	35.0
Classroom 1109	9/30/2022	74	34.0	46.0
Classroom 1110	9/30/2022	73	34.0	41.0
Exterior, Northwest Entry Door	9/30/2022	71	37.0	42.0

Area air samples were collected with Allergenco-D spore trap cassettes and analyzed for airborne fungal spores and structures. Samples were collected at a rate of 15 liters per minute. Indoor air sample(s) were collected for a five (5) minute period (75 liters) at a height of approximately five (5) feet above finished floor (AFF). Outdoor air samples were collected for a five (5) minutes period (75 liters) at a height of approximately five (5) feet above level ground. American Conference of Governmental Industrial Hygienists (ACGIH) guidelines were followed for the sample collection. Fungal air samples were collected in the following areas:

SPORE TRAP LOCATIONS	
SAMPLE NUMBER	**LOCATION**
1	Exterior
2	Exterior
3	Room 126

3.0 RESULTS

Currently, there are no regulatory standards for airborne fungal contamination. Therefore, results of the fungal analysis are compared against scientific guidelines. Bioaerosol samples are evaluated by comparing the indoor samples against the outdoor sample. The same types of fungi should be found in both the indoor and outdoor samples.

Should higher fungal concentrations occur in the indoor sample(s) or complaint areas, this generally indicates there is a source of fungal growth in the area. The types of fungi are also evaluated-the same types/genus of fungi should be present in both the indoor/complaint and outdoor/non-complaint samples.

The results of the fungal air samples collected were evaluated. Air testing performed using spore traps found that airborne mold spores within the investigation area were considerably lower and were qualitatively like those measured outside of the building at the time the sampling was performed.

CONCLUSIONS

Based on ENSOLUM's limited assessment and the analytical results, it appears that the indoor air quality, as it relates to airborne fungi, was within recommended guidelines on the day of the assessment.

ENSOLUM

APPENDIX A

ANALYTICAL RESULTS

IAQ Mold Report

Summary

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11045
Report Date : 10/02/2022
Sample Date: 09/29/2022
Spore Trap Type: Zefon - Air-O-Cell

On 9/29/2022, four (4) samples were submitted by a representative of Ensolum, LLC (located at 2351 W. Northwest Hwy Suite #1203, Dallas, TX 75220) for Spore Trap, Non-cultured mold analysis. This report consists of three sections; a summary section, a data detail section, and an analytical notes section.

Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter	
1	75	Classroom 1106	Myxomycete / Periconia / Rust / Smut	360	56%
			Aspergillus / Penicillium	93	15%
			Hyphal / Spore Fragments - Dematiaceous	67	10%
			Curvularia	40	6%
			Ascospores	27	4%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	13	2%
			Chaetomium	13	2%
			Basidiospores	13	2%
			Alternaria	13	2%
			Total:	639	100%
2	75	Classroom 1107	Aspergillus / Penicillium	293	54%
			Myxomycete / Periconia / Rust / Smut	80	15%
			Hyphal / Spore Fragments - Dematiaceous	53	10%
			Cladosporium	40	7%
			Curvularia	27	5%
			Ascospores	27	5%
			Pithomyces	13	2%
			Basidiospores	13	2%
			Total:	546	100%

IAQ Mold Report

Summary

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11045
Report Date : 10/02/2022
Sample Date: 09/29/2022
Spore Trap Type: Zefon - Air-O-Cell

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Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter	
3	75	Classroom 1108	Myxomycete / Periconia / Rust / Smut	160	26%
			Cladosporium	160	26%
			Aspergillus / Penicillium	147	24%
			Hyphal / Spore Fragments - Dematiaceous	80	13%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	27	4%
			Curvularia	27	4%
			Ascospores	13	2%
			Total:	614	100%
4	75	Exterior, Southeast Entry 5 * See Analytical Notes report for further details	Cladosporium	3086	40%
			Aspergillus / Penicillium	2380	31%
			Myxomycete / Periconia / Rust / Smut	1146	15%
			Hyphal / Spore Fragments - Dematiaceous	413	5%
			Alternaria	200	3%
			Ascospores	133	2%
			Basidiospores	93	1%
			Curvularia	67	<1%
			Cercospora / Pseudocercospora	40	<1%
			Nigrospora	27	<1%
			Ganoderma	27	<1%
			Spegazzinia	13	<1%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	13	<1%
			Total:	7638	100%

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

Summary

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11045
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Sample Date: 09/29/2022
Spore Trap Type: Zefon - Air-O-Cell

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Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter

Analyst(s): Elham Mohammadian

Lab Director : Heather Lopez — Approved Signatory : Heather Lopez

Lab Director : Bruce Crabb — Approved Signatory : Bruce Crabb

Thank you for choosing Moody Labs

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IAQ Mold Report

Data Detail

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11045
Report Date : 10/02/2022
Sample Date: 09/29/2022
Spore Trap Type: Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Sample ID:	1					2					3				
Location:	Classroom 1106					Classroom 1107					Classroom 1108				
Media Expires On:	Aug 2023					Aug 2023					Aug 2023				
Notes Included:															
Volume:	75					75					75				
	raw ct	RL	spores/m³	%total	spores/m³ SF	raw ct	RL	spores/m³	%total	spores/m³ SF	raw ct	RL	spores/m³	%total	spores/m³ SF
Alternaria	1	13	13	2%	10										
Ascospores	2	13	27	4%	30	2	13	27	5%	30	1	13	13	2%	10
Aspergillus / Penicillium	7	13	93	15%	90	22	13	293	54%	290	11	13	147	24%	150
Basidiospores	1	13	13	2%	10	1	13	13	2%	10					
Cercospora / Pseudocercospora															
Chaetomium	1	13	13	2%	10										
Cladosporium						3	13	40	7%	40	12	13	160	26%	160
Curvularia	3	13	40	6%	40	2	13	27	5%	30	2	13	27	4%	30
Drechslera / Bipolaris / Helminthosp	1	13	13	2%	10						2	13	27	4%	30
Ganoderma															
Hyphal / Spore Fragments - Dematia	5	13	67	10%	70	4	13	53	10%	50	6	13	80	13%	80
Hyphal / Spore Fragments - Hyaline															
Myxomycete / Periconia / Rust / Sm	27	13	360	56%	360	6	13	80	15%	80	12	13	160	26%	160
Nigrospora															
Pithomyces						1	13	13	2%	10					
Spegazzinia															
Stachybotrys															
TOTALS	48		639	100%	640	41		546	100%	550	46		614	100%	610
Analyst	Elham Mohammadian					Elham Mohammadian					Elham Mohammadian				
Analysis Date	10/2/2022					10/2/2022					10/2/2022				
Debris Rating	3					2					2				
Debris Composition															
Fibers	2/5					1/5					1/5				
Inorganic/Other	3/5					2/5					2/5				
Insect Parts	0/5					0/5					0/5				
Pollen	0/5					1/5					1/5				
Skin/Dander	3/5					2/5					2/5				

IAQ Mold Report

Data Detail

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11045
Report Date : 10/02/2022
Sample Date: 09/29/2022
Spore Trap Type: Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Sample ID:	4				
Location:	Exterior, Southeast Entry 5				
Media Expires On:	Aug 2023				
Notes Included:	See Analytical Notes				
Volume:	75				
	raw ct	RL	spores/m³	%total	spores/m³ SF
Alternaria	15	13	200	3%	200
Ascospores	10	13	133	2%	130
Aspergillus / Penicillium	119	20	2380	31%	2400
Basidiospores	7	13	93	1%	90
Cercospora / Pseudocercospora	3	13	40	<1%	40
Chaetomium					
Cladosporium	108	29	3086	40%	3100
Curvularia	5	13	67	<1%	70
Drechslera / Bipolaris / Helminthosp	1	13	13	<1%	10
Ganoderma	2	13	27	<1%	30
Hyphal / Spore Fragments - Dematia	31	13	413	5%	410
Hyphal / Spore Fragments - Hyaline					
Myxomycete / Periconia / Rust / Sm	86	13	1146	15%	1100
Nigrospora	2	13	27	<1%	30
Pithomyces					
Spegazzinia	1	13	13	<1%	10
Stachybotrys					
TOTALS	390		7638	100%	7600
Analyst	Elham Mohammadian				
Analysis Date	10/2/2022				
Debris Rating	3				
Debris Composition					
Fibers	1/5				
Inorganic/Other	3/5				
Insect Parts	0/5				
Pollen	1/5				
Skin/Dander	1/5				

End of Data Detail section
22F-11045

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IAQ Mold Report

Analytical Notes

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11045
Report Date : 10/02/2022
Sample Date : 09/29/2022
Spore Trap Type: Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Samples Analyzed

Sample No 4 : Exterior, Southeast Entry 5

Notes: Please note: the minimum reporting limit for Cladosporium is 29 spores / cubic meter. When comparing results to other samples, use calculated results, not raw numbers.
Please note: the minimum reporting limit for Aspergillus / Penicillium is 20 spores / cubic meter. When comparing results to other samples, use calculated results, not raw numbers.

Field Blanks

No discernable field blanks were submitted with this set of samples.

NOTE: All remaining samples suitable for analysis.

Methods

Method: MLQ - 0112 / ASTM D7391: Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction.
Sample by Optical Microscopy.
Samples are read at 100% under 400x magnification unless noted. Partial readings may be employed when concentrations are elevated. Use final spore concentrations, not raw spore counts, for interpretation of results.
Calculation: Spores/cubic meter = (Raw spore count)*(RL)
Note: RL (Reporting Limit) is based upon 1 raw spore count.
Moody Labs recommends two significant figures for calculated values based on ASTM D7391.

This report must not be used by the customer to claim product certification, approval, or endorsement by AIHA, ISO, or any agency of the Federal Government.

Debris Rating Key

0 - No linear trace detected
1 - Trace particulate/debris
2 - Light particulate/debris
3 - Moderate particulate/debris
4 - Substantial particulate/debris
5 - Extensive particulate/debris
6 - Field blank
10 - Hold Sample
11 - Modified Analysis per Client Instructions

NOTE: Particulate/debris are defined as skin, fibers, pollen grains, insect parts, fungal and/or other non-fungal particles.

IAQ Mold Report

Analytical Notes

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11045
Report Date : 10/02/2022
Sample Date : 09/29/2022
Spore Trap Type: Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Lab ID # 102577

End of Analytical Notes section
22F-11045

IAQ Mold Report

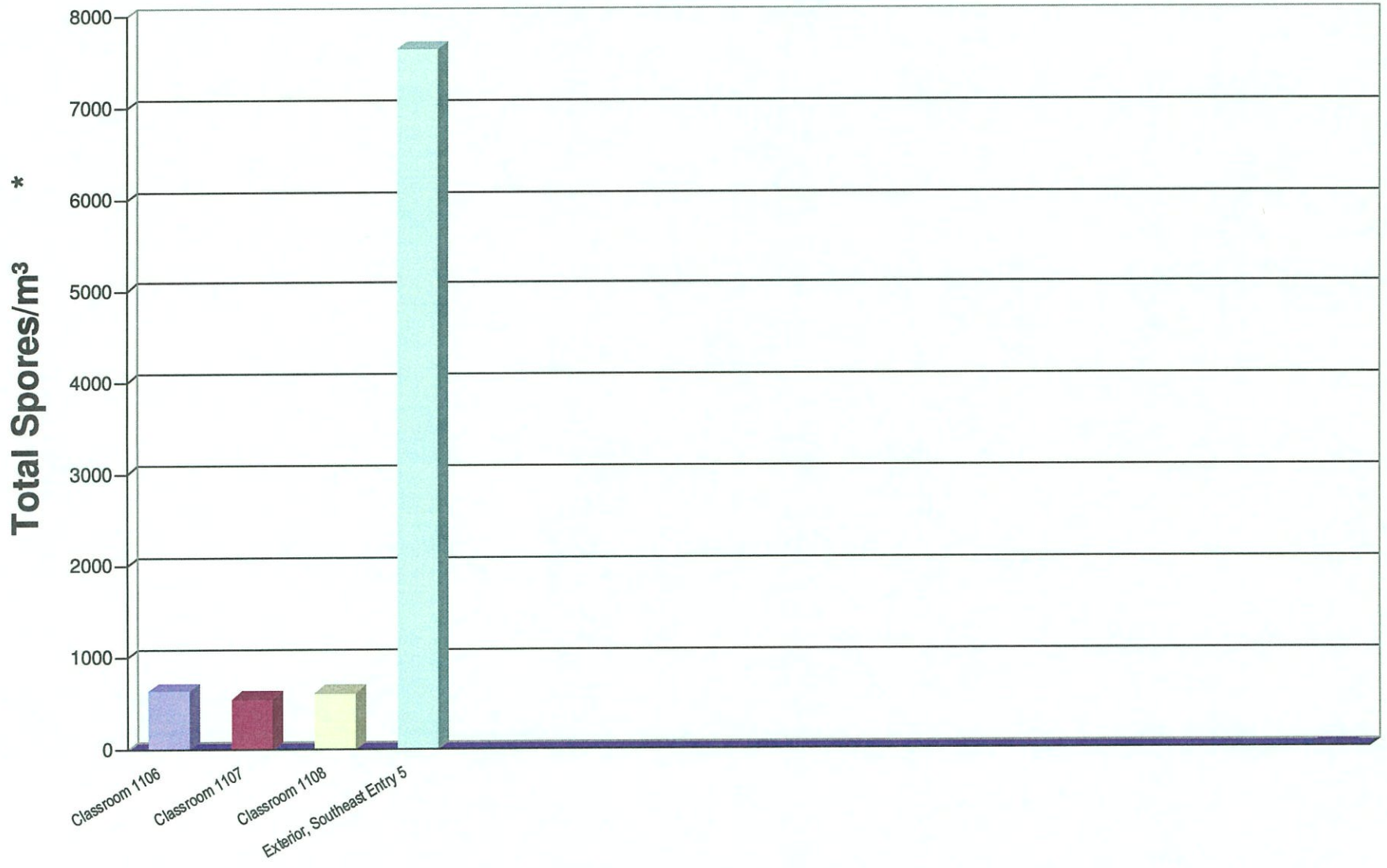
Supplemental Overview

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Lab Job No. 22F-11045
Report Date 10/02/2022
Sample Date : 09/29/2022



IAQ Mold Report

Supplemental Overview

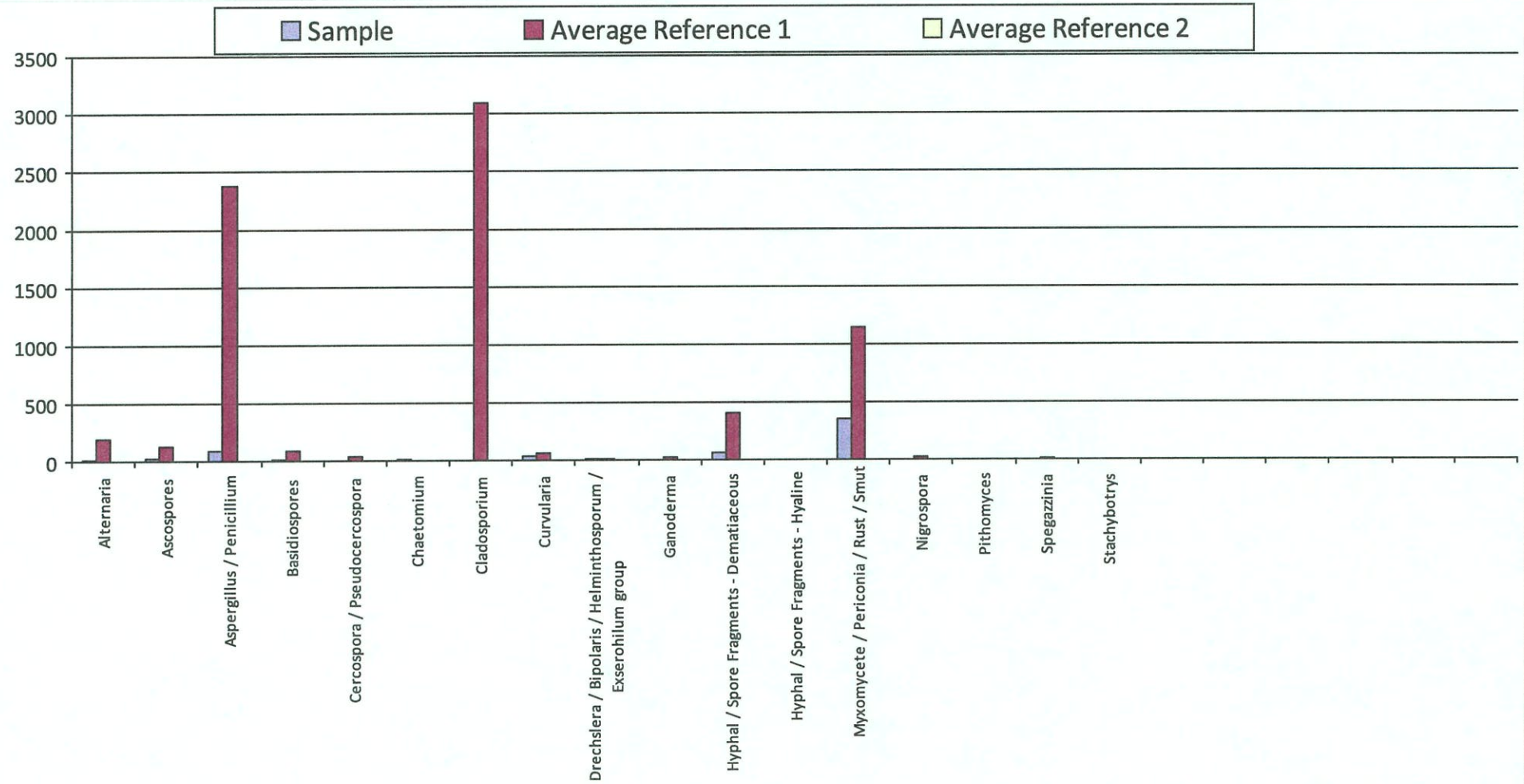
Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Classroom 1106

Lab Job No. 22F-11045
Report Date 10/02/2022
Sample Date : 09/29/2022



Average Reference 1 = Exterior, Southeast Entry 5

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

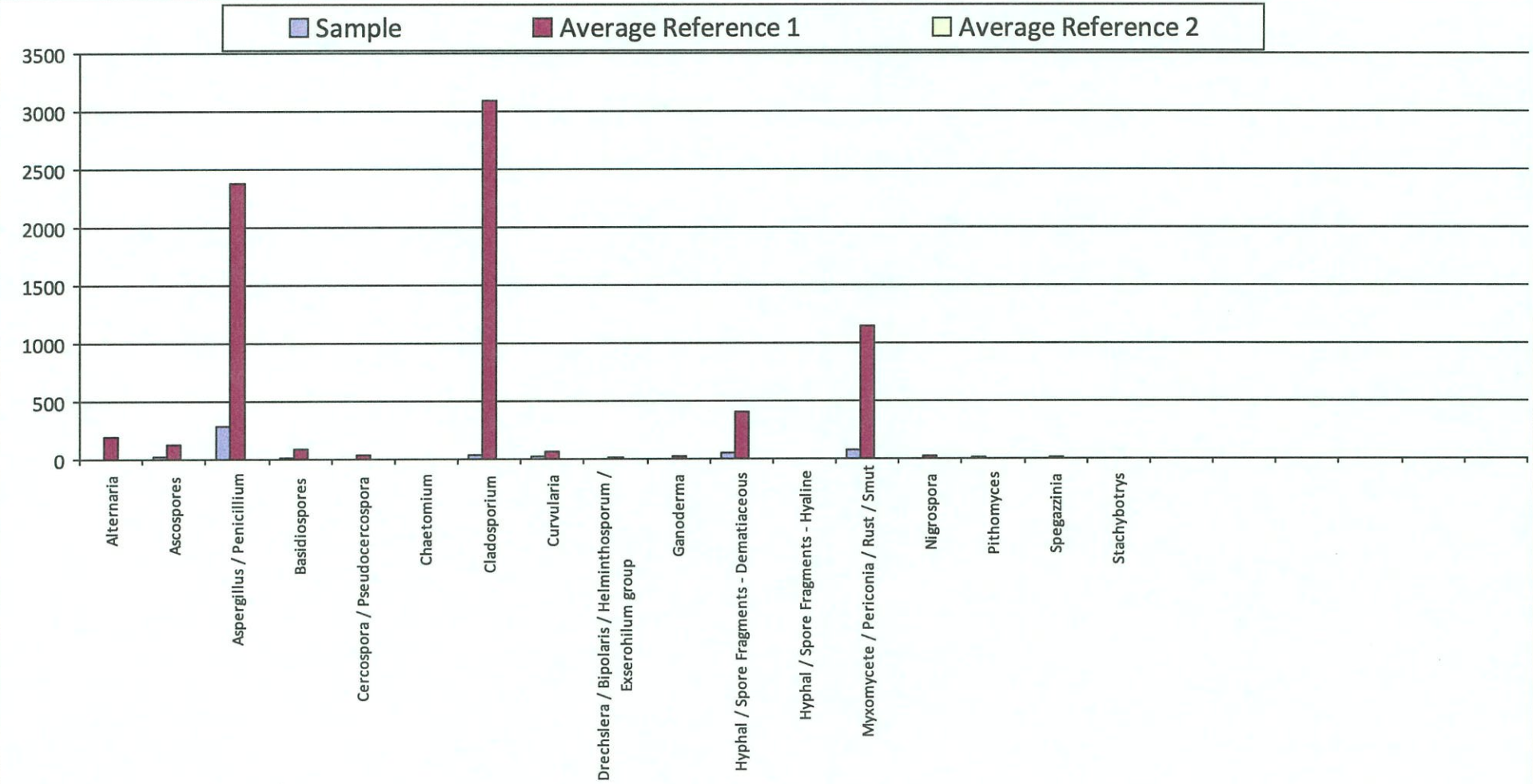
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Classroom 1107

Lab Job No. 22F-11045
Report Date 10/02/2022
Sample Date : 09/29/2022



Average Reference 1 = Exterior, Southeast Entry 5

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

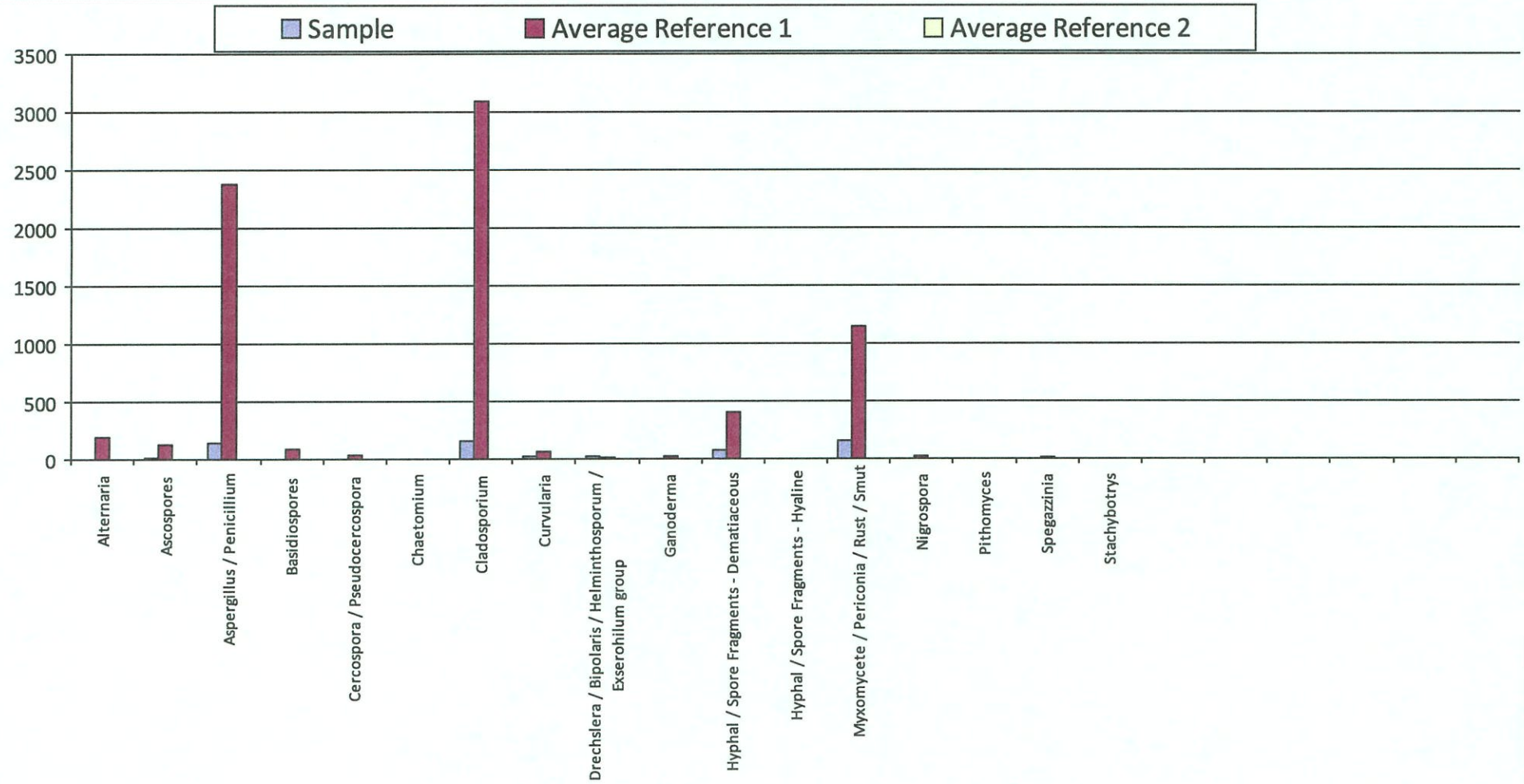
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Classroom 1108

Lab Job No. 22F-11045
Report Date 10/02/2022
Sample Date : 09/29/2022



Average Reference 1 = Exterior, Southeast Entry 5

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

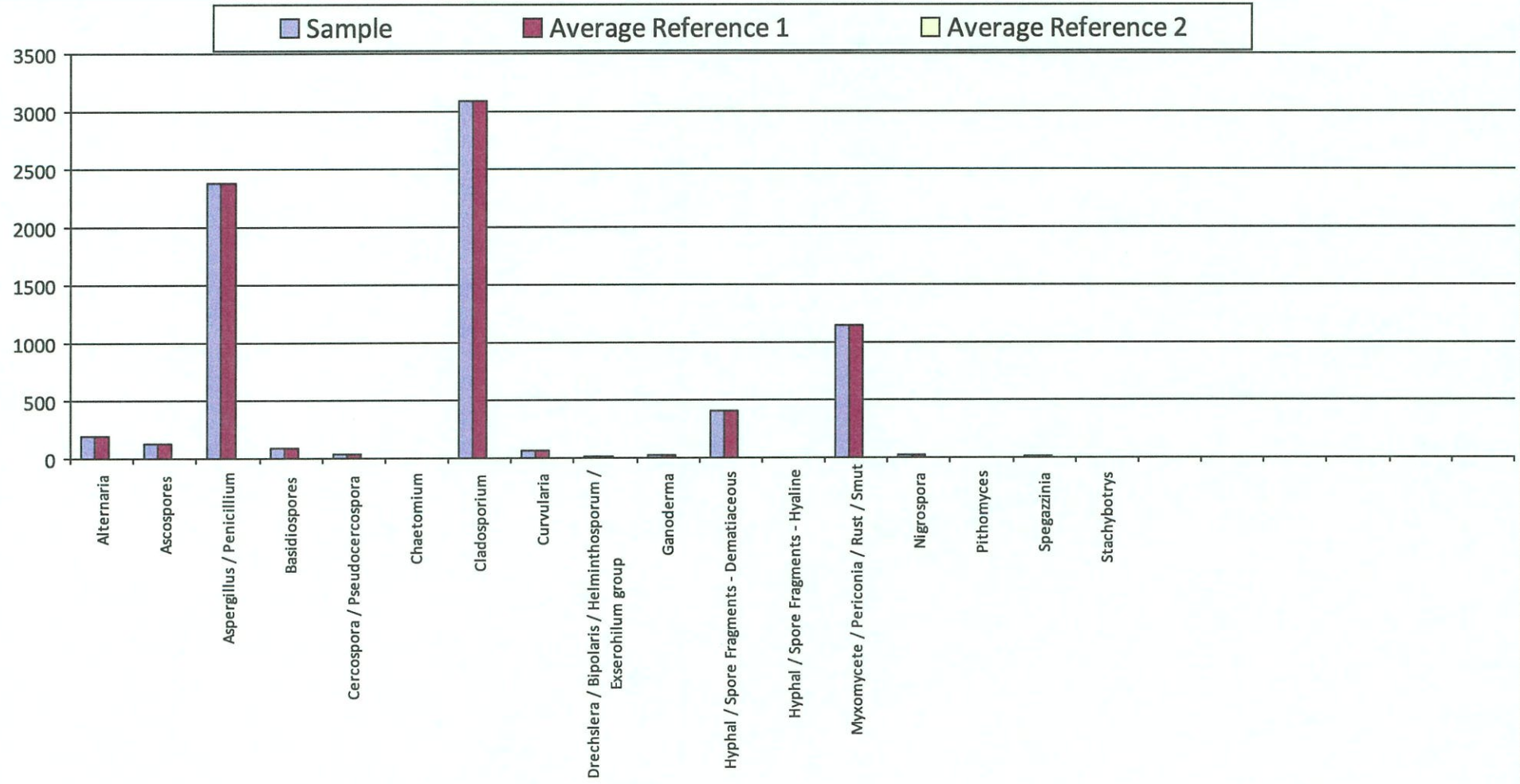
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Lab Job No. 22F-11045
Report Date 10/02/2022
Sample Date : 09/29/2022

Exterior, Southeast Entry 5



Average Reference 1 = Exterior, Southeast Entry 5

End of Supplemental Overview section
22F-11045

Moody Labs

Chain of Custody

Lab Job # 22E-11045 Std
Lab Job # 4AOC
Lab Job #

AFTER HOURS / WEEKEND WORK: ☐ YES ☐ NO
Please call in advance for after hours / immediate pricing & availability

ASBESTOS PLM

Bulk ☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
☐ **Analyze All** ☐ **Positive Stop**

PCM Air (7400)

☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Analyze Blanks ☐ **Yes** ☐ **No**

TOTAL DUST(0500/0600)

☐ 1 day ☐ 2 day

ASBESTOS TEM

Air AHERA Method ☐ Late Night* ☐ 6 hr ☐ 12 hr ☐ 24 hr
Air 7402 (Modified) ☐ 1 day ☐ 2 day ☐ 3 day
Bulk ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Water/Wipe/Micro Vac ☐ 1 day ☐ 2 day ☐ 3 day
Analyze Blanks ☐ **Yes** ☐ **No**

*Late night analysis surcharges apply

MOLD

Direct Exam ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Standard Air ☐ Immed ☐ 1 day ☒ 2 day ☐ 5 day
Expanded Air ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Culture** ☐ 10-14 days
TPC w/ Yeast & Mold (TYMC)** ☐ 5 day
Analyze Blanks ☐ **Yes** ☐ **No**

BACTERIA**

Total Plate Count (TAMC) ☐ 2 day
Coliform & E. coli (P/A) ☐ 1 day
Staphylococcus aureus ☐ 1 day

Please note Bateria / Mold Culture turnarounds are approximate and subject to analytical requirements

OTHER:

Billing Company / City: Ensolum, LLC Dallas # of Samples: 4 Sample Date: 9/29/2022
Project: Lewisville Learning Center Classrooms 1106, 1107, 1108, 1109, 1110 Project #: 01A1288171
Contact Information: Name: Clint Jech Phone #:
E-mail Results to: Clint/Darrian/Toni: Martin Mobile #: (972)989-1081
Invoice Address: tmartin@ensolum.com P.O. #:

Please review paperwork and samples before submitting to lab. Unsealed / improperly packaged / damaged / expired samples or excessive administrative requests may incur additional fees

Notes: Note Move Samples to Follow on 9/30/2022.

Sample #	Sample Description	Vol. / Area (if applicable)	Location / Notes
1	Classroom 1106	75	T= 77 °H= 36 % SH= 49 %. M= 8-13 %. Ceilings= Ceiling Tile / Walls= Sheetrock Floor = Carpet
2	Classroom 1107	75	T= 75 °H= 36 %. SH= 46% M= 9-12 %. Ceilings= Ceiling Tile / Walls= Sheetrock Floor = Carpet
3	Classroom 1108	75	T= 74 °H= 34 %. SH= 42 %. M= 10-12 %. Ceiling= Ceiling Tile / Walls= Sheetrock Floors = Carpet
4	Exterior, Southeast Entry 8	75	T= 74 °H= 28 %. SH= 35 %.

Released By:	Date / Time:	Received By:	Date / Time:
Released By:	Date / Time:	Received By:	Date / Time:

IAQ Mold Report

Summary

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11122
Report Date : 10/04/2022
Sample Date: 09/30/2022
Spore Trap Type: Zefon - Air-O-Cell

On 9/30/2022, three (3) samples were submitted by a representative of Ensolum, LLC (located at 2351 W. Northwest Hwy Suite #1203, Dallas, TX 75220) for Spore Trap, Non-cultured mold analysis. This report consists of three sections; a summary section, a data detail section, and an analytical notes section.

Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter	
5	75	Classroom 1109	Aspergillus / Penicillium	1026	40%
			Hyphal / Spore Fragments - Dematiaceous	400	15%
			Myxomycete / Periconia / Rust / Smut	400	15%
			Cladosporium	200	8%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	147	6%
			Curvularia	133	5%
			Alternaria	133	5%
			Basidiospores	80	3%
			Pithomyces	40	2%
			Nigrospora	27	1%
			Total:	2586	100%
6	75	Classroom 1110	Aspergillus / Penicillium	1093	62%
			Cladosporium	200	11%
			Hyphal / Spore Fragments - Dematiaceous	120	7%
			Myxomycete / Periconia / Rust / Smut	120	7%
			Alternaria	67	4%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	53	3%
			Basidiospores	40	2%
			Curvularia	27	2%
			Ganoderma	13	<1%
			Coprinus group	13	<1%
			Torula	13	<1%
			Ascospores	13	<1%
			Total:	1772	100%

IAQ Mold Report

Summary

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
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Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11122
Report Date : 10/04/2022
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Sample Number	Volume (liters)	Sample Description	Identification	Concentration spores/cubic meter	
7	75	Exterior, Northwest Entry Door 1 * See Analytical Notes report for further details	Aspergillus / Penicillium	6733	56%
			Cladosporium	2353	20%
			Hyphal / Spore Fragments - Dematiaceous	933	8%
			Basidiospores	493	4%
			Myxomycete / Periconia / Rust / Smut	387	3%
			Cercospora / Pseudocercospora	293	2%
			Paecilomyces	213	2%
			Alternaria	160	1%
			Ascospores	133	1%
			Nigrospora	107	<1%
			Curvularia	80	<1%
			Fusarium	53	<1%
			Drechslera / Bipolaris / Helminthosporum / Exserohilum group	53	<1%
			Pithomyces	13	<1%
			Coprinus group	13	<1%
			Ganoderma	13	<1%
			Spegazzinia	13	<1%
			Epicoccum	13	<1%
			Total:	12056	100%

Analyst(s): Elham Mohammadian

Lab Director : Heather Lopez

Approved Signatory : Heather Lopez

Lab Director : Bruce Crabb

Approved Signatory : Bruce Crabb

Thank you for choosing Moody Labs

IAQ Mold Report

Data Detail

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11122
Report Date : 10/04/2022
Sample Date: 09/30/2022
Spore Trap Type: Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Sample ID:	5					6					7				
Location:	Classroom 1109					Classroom 1110					Exterior, Northwest Entry Door 1				
Media Expires On:	Aug 2023					Aug 2023					Aug 2023				
Notes Included:											See Analytical Notes				
Volume:	75					75					75				
	raw ct	RL	spores/m³	%total	spores/m³ SF	raw ct	RL	spores/m³	%total	spores/m³ SF	raw ct	RL	spores/m³	%total	spores/m³ SF
Alternaria	10	13	133	5%	130	5	13	67	4%	70	12	13	160	1%	160
Ascospores						1	13	13	<1%	10	10	13	133	1%	130
Aspergillus / Penicillium	77	13	1026	40%	1000	82	13	1093	62%	1100	101	67	6733	56%	6700
Basidiospores	6	13	80	3%	80	3	13	40	2%	40	37	13	493	4%	490
Cercospora / Pseudocercospora											22	13	293	2%	290
Chaetomium															
Cladosporium	15	13	200	8%	200	15	13	200	11%	200	100	24	2353	20%	2400
Coprinus group						1	13	13	<1%	10	1	13	13	<1%	10
Curvularia	10	13	133	5%	130	2	13	27	2%	30	6	13	80	<1%	80
Drechslera / Bipolaris / Helminthosp	11	13	147	6%	150	4	13	53	3%	50	4	13	53	<1%	50
Epicoccum											1	13	13	<1%	10
Fusarium											4	13	53	<1%	50
Ganoderma						1	13	13	<1%	10	1	13	13	<1%	10
Hyphal / Spore Fragments - Dematia	30	13	400	15%	400	9	13	120	7%	120	70	13	933	8%	930
Hyphal / Spore Fragments - Hyaline															
Myxomycete / Periconia / Rust / Sm	30	13	400	15%	400	9	13	120	7%	120	29	13	387	3%	390
Nigrospora	2	13	27	1%	30						8	13	107	<1%	100
Paecilomyces											16	13	213	2%	210
Pithomyces	3	13	40	2%	40						1	13	13	<1%	10
Spegazzinia											1	13	13	<1%	10
Stachybotrys															
Torula						1	13	13	<1%	10					
TOTALS	194		2586	100%	2600	133		1772	100%	1800	424		12056	100%	12000
Analyst	Elham Mohammadian					Elham Mohammadian					Elham Mohammadian				
Analysis Date	10/4/2022					10/4/2022					10/4/2022				
Debris Rating	4					3					3				
Debris Composition															
Fibers	2/5					2/5					2/5				
Inorganic/Other	3/5					3/5					3/5				
Insect Parts	0/5					1/5					1/5				
Pollen	1/5					1/5					1/5				
Skin/Dander	4/5					3/5					1/5				

End of Data Detail section
22F-11122

IAQ Mold Report

Analytical Notes

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11122
Report Date : 10/04/2022
Sample Date : 09/30/2022
Spore Trap Type: Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Samples Analyzed

Sample No 7 : Exterior, Northwest Entry Door 1

Notes: Please note: the minimum reporting limit for Aspergillus / Penicillium is 67 spores / cubic meter. When comparing results to other samples, use calculated results, not raw numbers.
Please note: the minimum reporting limit for Cladosporium is 24 spores / cubic meter. When comparing results to other samples, use calculated results, not raw numbers.

Field Blanks

No discernable field blanks were submitted with this set of samples.

NOTE: All remaining samples suitable for analysis.

Methods

Method: MLQ - 0112 / ASTM D7391: Categorization and Quantification of Airborne Fungal Structures in an Inertial Impaction.
Sample by Optical Microscopy.
Samples are read at 100% under 400x magnification unless noted. Partial readings may be employed when concentrations are elevated. Use final spore concentrations, not raw spore counts, for interpretation of results.
Calculation: Spores/cubic meter = (Raw spore count)*(RL)
Note: RL (Reporting Limit) is based upon 1 raw spore count.
Moody Labs recommends two significant figures for calculated values based on ASTM D7391.

This report must not be used by the customer to claim product certification, approval, or endorsement by AIHA, ISO, or any agency of the Federal Government.

Debris Rating Key

0 - No linear trace detected
1 - Trace particulate/debris
2 - Light particulate/debris
3 - Moderate particulate/debris
4 - Substantial particulate/debris
5 - Extensive particulate/debris
6 - Field blank
10 - Hold Sample
11 - Modified Analysis per Client Instructions

NOTE: Particulate/debris are defined as skin, fibers, pollen grains, insect parts, fungal and/or other non-fungal particles.

IAQ Mold Report

Analytical Notes

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460
TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171
Sample Type: Spore Trap, Non-cultured
Test Method: Mold: MLQ - 0112 - Standard Profile

Lab Job No. : 22F-11122
Report Date : 10/04/2022
Sample Date : 09/30/2022
Spore Trap Type: Zefon - Air-O-Cell

This report consists of three sections; a summary section, a data detail section, and an analytical notes section. Results may not be reported except in full.

Lab ID # 102577

End of Analytical Notes section
22F-11122

IAQ Mold Report

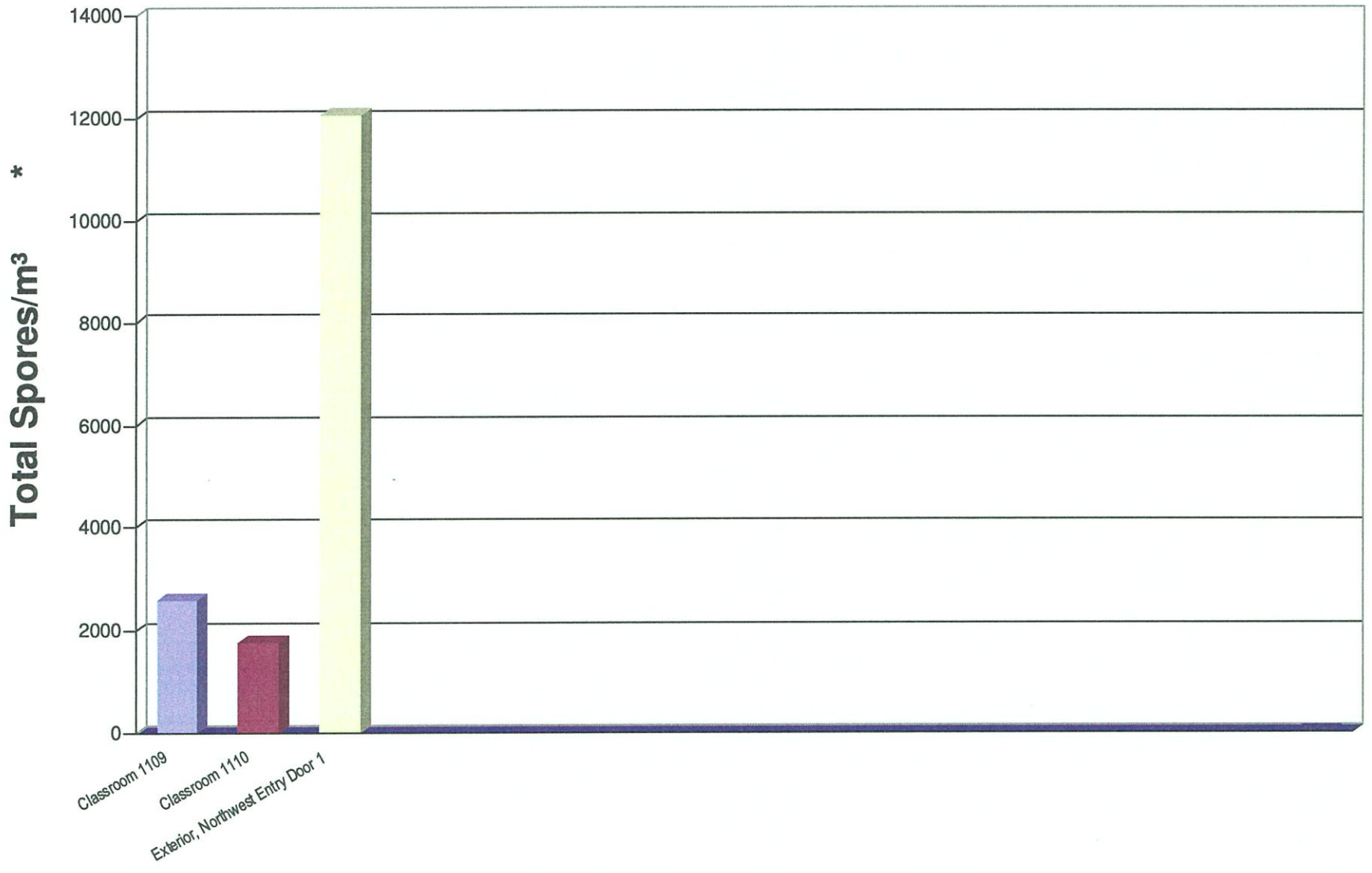
Supplemental Overview

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Lab Job No. 22F-11122
Report Date 10/04/2022
Sample Date : 09/30/2022



IAQ Mold Report

Supplemental Overview

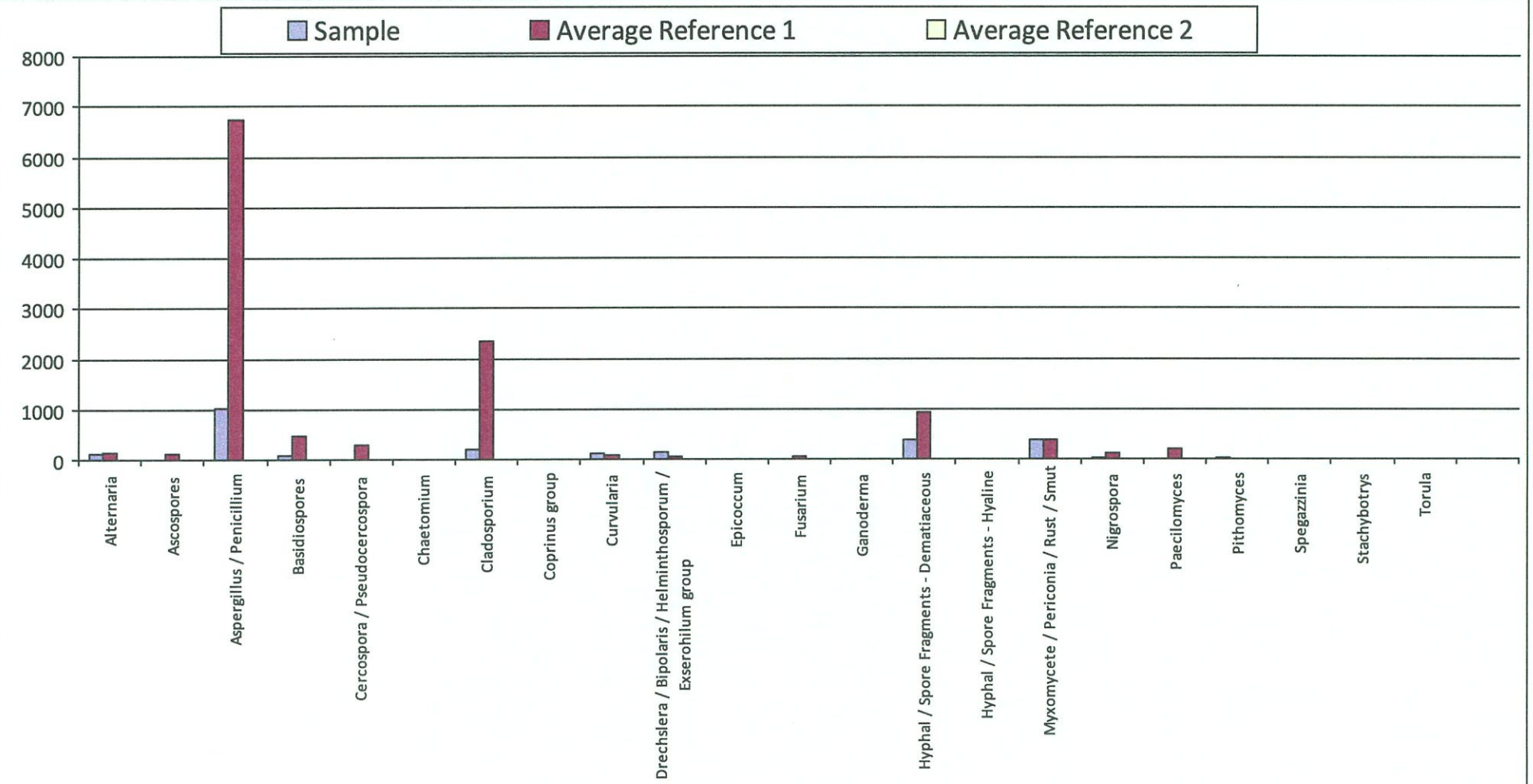
Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Classroom 1109

Lab Job No. 22F-11122
Report Date 10/04/2022
Sample Date : 09/30/2022



Average Reference 1 = Exterior, Northwest Entry Door 1

Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

IAQ Mold Report

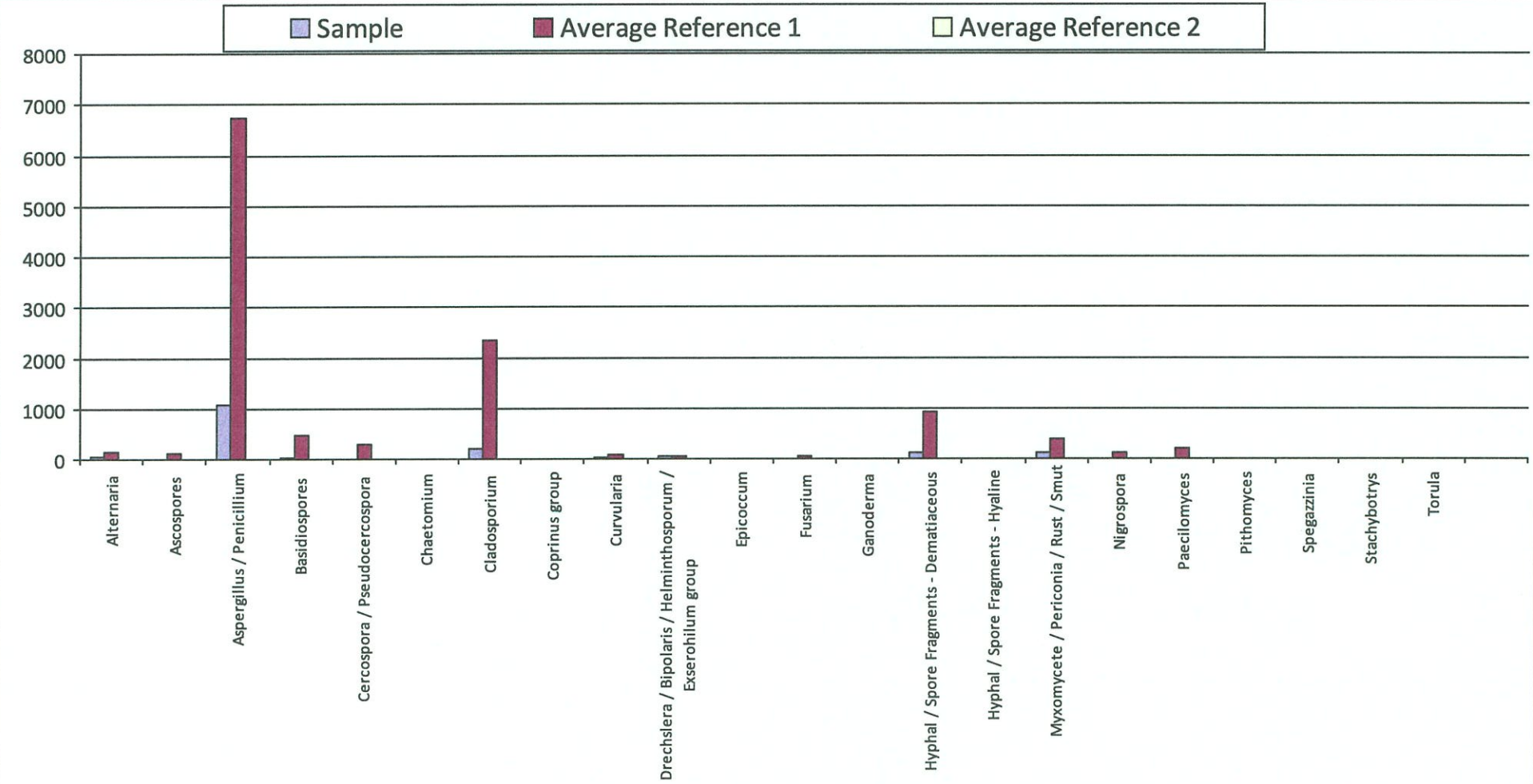
Supplemental Overview

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Classroom 1110

Lab Job No. 22F-11122
Report Date 10/04/2022
Sample Date : 09/30/2022



Average Reference 1 = Exterior, Northwest Entry Door 1

IAQ Mold Report

Supplemental Overview

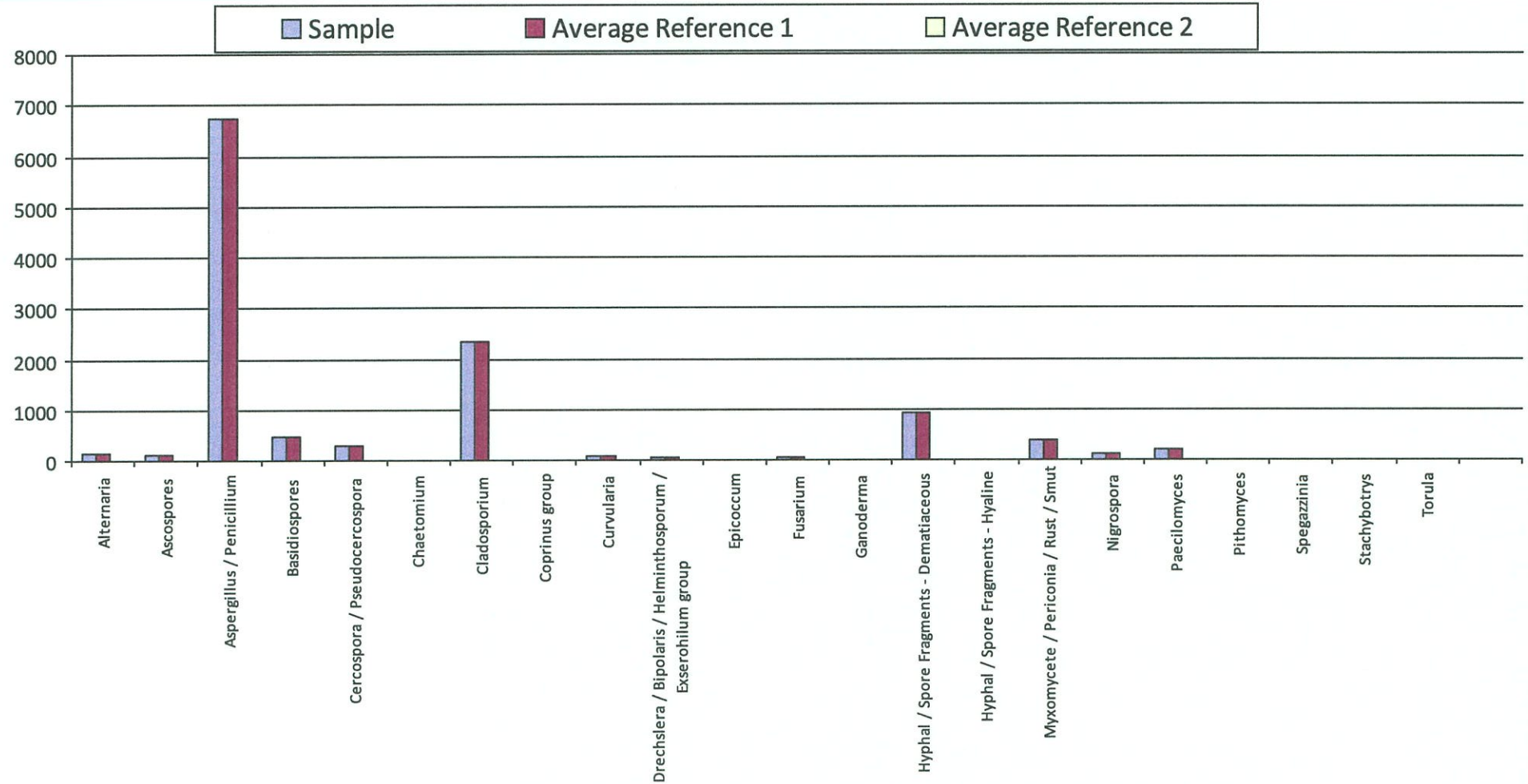
Moody Labs
2051 Valley View Lane
Farmers Branch, TX 75234 Phone: (972) 241-8460

TDLR License No.: LAB0117
AIHA EMPAT ID: 102577

Client : Ensolum, LLC
Project : Lewisville Learning Center Classrooms 1106 - 1110
Project # : 01A1288171

Exterior, Northwest Entry Door 1

Lab Job No. 22F-11122
Report Date 10/04/2022
Sample Date : 09/30/2022



Average Reference 1 = Exterior, Northwest Entry Door 1

End of Supplemental Overview section
22F-11122

Moody Labs

Chain of Custody

Lab Job # 22-11122 Std
Lab Job # 3 Air
Lab Job #

AFTER HOURS / WEEKEND WORK: ☐ YES ☐ NO
Please call in advance for after hours / immediate pricing & availability

ASBESTOS PLM

Bulk ☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day ☐ **Analyze All** ☐ **Positive Stop**

PCM Air (7400)

☐ Immediate ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day **Analyze Blanks** ☐ **Yes** ☐ **No**

TOTAL DUST(0500/0600)

☐ 1 day ☐ 2 day

ASBESTOS TEM

Air AHERA Method ☐ Late Night* ☐ 6 hr ☐ 12 hr ☐ 24 hr
Air 7402 (Modified) ☐ 1 day ☐ 2 day ☐ 3 day
Bulk ☐ 1 day ☐ 2 day ☐ 3 day ☐ 5 day
Water/Wipe/Micro Vac ☐ 1 day ☐ 2 day ☐ 3 day
Analyze Blanks ☐ **Yes** ☐ **No**

*Late night analysis surcharges apply

MOLD

Direct Exam ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Standard Air ☐ Immed ☐ 1 day ☒ 2 day ☐ 5 day
Expanded Air ☐ Immed ☐ 1 day ☐ 2 day ☐ 5 day
Culture** ☐ 10-14 days
TPC w/ Yeast & Mold (TYMC)** ☐ 5 day
Analyze Blanks ☐ **Yes** ☐ **No**

BACTERIA**

Total Plate Count (TAMC) ☐ 2 day
Coliform & E. coli (P/A) ☐ 1 day
Staphylococcus aureus ☐ 1 day

Please note Bateria / Mold Culture turnarounds are approximate and subject to analytical requirements

OTHER:

Billing Company / City: Ensolum, LLC Dallas # of Samples: 3 Sample Date: 9/30/2022

Project: Lewisville Learning Center Classroom 1106, 1107, 1108, 1109, 1110 Project #: 01A1255171

Contact Information: Name: Clint Jech Phone #:

E-mail Results to: Clint / Darren / Tom: Martin Mobile #: (972) 989-1081

Invoice Address: tmartin@ensolum.com P.O. #:

Please review paperwork and samples before submitting to lab. Unsealed / improperly packaged / damaged / expired samples or excessive administrative requests may incur additional fees

Notes:

Sample #	Sample Description	Vol. / Area (if applicable)	Location / Notes
5	Classroom 1109	75	T=74 °F H=37 % SH=46% M=8.10%
			Ceiling = Ceiling Tile/Walls = Sheetrock
			Floor = Carpet
6	Classroom 1110	75	T=73 °F H=34 % SH=41% M=8.11%
			Ceiling = Ceiling Tile/Walls = Sheetrock
			Floor = Carpeting
7	Exterior, Northwest Entry Door	75	T=71 °F H=34 % SH=42% M= 3% (Ref)
			Note: Classroom 1109 HVAC Filters Needs to be changed
			Note: Classroom 1110 Has 2 (two) Stained Ceiling Tiles on Perimeter Wall, HVAC Filter/Return is Dirty

Released By:	Date / Time:	Received By:	Date / Time:
	9/30/2022 1456		9/30/22 3:00pm
Released By:	Date / Time:	Received By:	Date / Time:

ENSOLUM

APPENDIX B

DEFINITIONS AND LIMITATIONS

ENSOLUM

Mold Services Definitions & Limitations

Ensolum performed services in accordance with generally accepted practices of the profession undertaken in similar services at the same time and in the same geographical area. No other warranties, express or implied, apply to the services hereunder or the final report.

Ensolum's services and any report have been prepared on behalf of and for the exclusive use of the Client solely for its use and reliance in assessing the presence of mold in the Investigation Areas of the site. The Client was the only party to which Ensolum explained the risks and limitations of the services and was solely involved in shaping the scope of services. Accordingly, reliance on this report by any other party may involve assumptions leading to an unintended interpretation of findings and opinions. With the consent of the Client, Ensolum may offer reliance to third parties or contract with other parties to develop findings and opinions related to such party's unique risk management concerns. Notwithstanding the foregoing, reliance by any and all third parties upon this deliverable, Ensolum's services or any subsequent report shall be limited in the aggregate to the fair market value of the services provided by Ensolum.

"Limited Mold Assessment". This deliverable uses the term "Limited Mold Assessment" to denote that Ensolum's mold assessment services are limited: (i) to certain portions of the building structure (e.g., the Investigation Areas), by non-destructive sampling methodologies, and/or by access limitations to building materials or components within the Investigation Area(s). In contrast to a "Limited Assessment" is a comprehensive assessment would involve destructive sampling methods with the assessment to be conducted throughout the entire building structure.

Time sensitive. One must keep in mind that mold assessments are essentially a "snap shot in time," and the results are only relevant at the time of site reconnaissance. Because mold, when biologically active, is a living organism, its presence is influenced and controlled by environmental conditions. Mold assessments, therefore, are "time sensitive" in that the presence and concentration of mold and similar organisms in building structures or in the air is directly influenced by environmental conditions (such as humidity, moisture, nutrients and substrates), whether natural or caused by man, which conditions may vary significantly over relatively short periods of time.

Methodologies. Currently, mold assessment methodologies and protocols in Texas are governed by persuasive guidelines (rather than promulgated federal/state or local regulations). Presently, there is no data that supports a threshold limit or dose-response relationship for exposure to mold aeroallergens, individual pathogens, opportunistic pathogens and/or mycotoxins. The Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety and Health (NIOSH) and other non-governmental associations, have not yet established permissible exposure limits (PELs), recommended exposure limits (RELs), or other limit values for fungi. Because no limit values presently exist. Ensolum will not and cannot represent that the site contains no harmful microbes, mold, fungi, or their metabolites, or other latent conditions beyond those identified by the limited scope of this mold assessment.

Findings limited. Findings in an LMA are limited due to the nature of the information obtained such as a visual reconnaissance of readily accessible areas of building structures, interview information, anecdotal information, and limited sampling data derived from one or more specific sampling events. Ensolum cannot warrant the accuracy of prior or subsequent information/data, reports and services performed by other firms at the Site. Ensolum assumes no responsibility or liability for errors in information or data provided by or through the client or third party sources. Ensolum's services are not to be construed as legal or medical interpretation or advice.

Moisture Intrusion Limitation. Ensolum performs mold assessment services and is not a moisture intrusion, HVAC, plumbing or building envelope specialist. However, during the course of conducting its mold assessment services, Ensolum will report observed areas of apparent moisture intrusion. Ensolum does not and will not investigate the cause or causes of such observed moisture intrusion. In the event apparent moisture intrusion is observed, Ensolum will recommend that the client contact a specialist (i.e., plumbing contractor, building envelope specialist, HVAC contractor, water intrusion specialist, etc.) to assist the client in determining the specific cause or causes of the moisture intrusion and remedial options.

Certificate of Mold Damage Remediation (CMDR). For mold remediation projects (above certain size thresholds), applicable Texas law (i.e., Texas Occupation Code Section 1958.54 and T.A.C. Section 295.397 (the Texas Mold Assessment and Remediation Rules), requires that a "Certificate of Mold Damage Remediation" be issued by the Mold Remediation Contractor upon successful completion of the project. This certificate must be provided to property owners no later than the 10th day after the date on which the mold remediation is completed at a property. The Mold Remediation Certificate issued by the Mold Remediation Contractor must include a certification by the Mold Assessor that the mold remediation project has been successfully completed in accordance with the mold remediation protocol.

Be advised that Ensolum's issuance of a CMDR upon successful completion of a Mold Remediation project does not mean, warrant or otherwise guarantee that mold will not be subsequently found in any portion of an Investigation Area or the Site. In the event that Ensolum is engaged to render services in connection with a mold remediation project, ENSOLUM will require Client to provide to Ensolum written documentation that all sources of moisture which contributed to the presence of mold in the Investigation Area have been fully remediated and corrected prior to achieving clearance.