



January 18, 2024

Acadia University – Physical Plant Service  
15 University Avenue  
Wolfville, NS, B4P 2R6

**Re: Mould Air Sampling Report**  
15 University Avenue, Wolfville, NS  
Pinchin File: 330548.003

## 1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by Acadia University – Physical Plant Service (Client) to conduct mould air sampling within Elliot Hall, Chase Court Residence, Vaughan Memorial Library (VML), and Horton Hall on the campus of Acadia University located at 15 University Avenue, Wolfville, NS. The sampling was undertaken to determine airborne fungal particulate concentrations within the selected buildings at the request of the Client to address recommendations made in the previously-issued sampling reports. The sampling was performed by Pinchin on December 7, 2023.

Initial airborne sampling was conducted on August 10, 2023, in various locations. Refer to the report titled “330548 Mould Air Sample Report 15 University Ave Wolfville NS Acadia Sept 21, 2023” for previous results and recommendations.

Additional airborne sampling was conducted on September 25, 2023, in various locations. Refer to the report titled “330548 Mould Air Sample Report 15 University Ave Wolfville NS Acadia Oct 17, 2023” for previous results and recommendations.

Since the previous sampling, it was reported that Elliot Hall, Chase Court Residence, Vaughan Memorial Library, and Horton Hall had cleaning, remediation, and/or flooring replacements performed in these areas based on previous recommendations.

## 2.0 METHODOLOGY

Airborne mould samples were taken using Allergenco-D brand impactor cassettes and a calibrated pump. Samples were collected at Elliot Hall in the Lab and Hallway, Chase Court Residence in the B208 Suite and Linen Storage, Vaughan Memorial Library in Room 410 and 214, and Horton Hall in Room 112B and 107. One reference sample was collected outdoors for comparison purposes. One field blank was collected for quality control purposes.



## Mould Air Sampling Report

Elliot Hall, Chase Court Residence, Vaughan Memorial Library (VML), and Horton Hall on the campus of Acadia University, 15 University Avenue, Wolfville, NS  
Acadia University – Physical Plant Service

January 18, 2024

Pinchin File: 330548.003

The mould analysis was performed at the Pinchin Environmental Microbiology Laboratory, located in Mississauga, ON. The laboratory is independently accredited to ISO/IEC 17025:2017 for mould analysis by the American Industrial Hygiene Association Laboratory Accreditation Program LLC (AIHA LAP LLC) (Lab ID 158835),<sup>1</sup> and the Quebec government (Lab ID 495).<sup>2</sup>

### 3.0 RESULTS AND CONCLUSIONS

#### 3.1 Elliot Hall

The concentration of the outdoor reference sample was less than analytical sensitivity ( $< 26$  spores/m<sup>3</sup>), which is not uncommon during the colder winter months. The concentrations of the indoor samples collected in Elliot Hall ranged from 79 - 530 spores/m<sup>3</sup>. The concentrations of each of the indoor samples were slightly higher than the concentration of the outdoor reference sample. The compositions of the samples collected in Elliot Hall differed from the composition of the outdoor reference sample. However, the spores identified do not present a concern at the concentrations measured.

Sample results suggest that airborne mould levels were acceptable in the indoor sample locations on the sampling day.

#### 3.2 Chase Court Residence

The concentration of the outdoor reference sample was  $< 26$  spores/m<sup>3</sup>. The concentrations of the indoor samples collected in the Chase Court Residence ranged from 650 – 1,500 spores/m<sup>3</sup>. The concentrations of each of the indoor samples were higher than the concentration of the outdoor reference sample. The compositions of the samples collected in the Chase Court Residence differed from the composition of the outdoor reference sample. However, the spores identified do not present a concern at the concentrations measured.

Sample results suggest that airborne mould levels were acceptable in the indoor sample locations on the sampling day.

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1 Accredited by the American Industrial Hygiene Association Laboratory Accreditation Program LLC (AIHA LAP LLC) under the Environmental Microbiology Laboratory Accreditation Program (EMLAP), for Bulk, Surface and Air testing for moulds, Escherichia coli, Legionella by the ISO 11731 method and for Legionella pneumophila by qPCR ISO 12869 method (Lab ID 158835).

2 Accredited by the Quebec government under the Programme d'accréditation des laboratoires d'analyses (PALA) program for Air Microbiology – domains 601, 603, 604, 605, 606.



### **3.3 Vaughan Memorial Library**

The concentration of the outdoor reference sample was  $< 26$  spores/m<sup>3</sup>. The concentrations of the indoor samples collected in the Vaughan Memorial Library were both  $< 26$  spores/m<sup>3</sup>. The concentrations of each of these samples were the same as the concentration of the outdoor reference sample. The compositions of the indoor samples were similar to the composition of the outdoor sample.

Sample results suggest that airborne mould levels were acceptable in the indoor sample locations on the sampling day.

### **3.4 Horton Hall**

The concentration of the outdoor reference sample was  $<26$  spores/m<sup>3</sup>. The concentrations of the indoor samples collected in Horton Hall were also  $<26$  spores/m<sup>3</sup>. The concentrations of each of these samples were the same as the concentration of the outdoor reference sample. The compositions of the indoor samples were similar to the composition of the outdoor sample.

Sample results suggest that airborne mould levels were acceptable in the indoor sample locations on the sampling day.

## **4.0 CONCLUSION**

The findings of this report should be communicated to the occupants and building staff as recommended by current mould guidelines.

Based on the sample results, Pinchin does not have any recommendations at this time.

## **5.0 TERMS AND LIMITATIONS**

This work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project.

Information provided by Pinchin is intended for Client use only. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.



**Mould Air Sampling Report**

Elliot Hall, Chase Court Residence, Vaughan Memorial Library (VML), and Horton Hall on the campus of Acadia University, 15 University Avenue, Wolfville, NS  
Acadia University – Physical Plant Service

January 18, 2024

Pinchin File: 330548.003

Sincerely,

**Pinchin Ltd.**

Prepared by:

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Encl.: Analytical Results

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Template: Master Mould Air Sampling Report, IEQ, February 5, 2021



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## Certificate of Analysis

Pinchin Environmental Microbiology Laboratory



Laboratoire d'analyse  
accrédité par le  
gouvernement du Québec



**CUSTOMER:** Kyra Kinsman

**COMPANY:** Pinchin Ltd.

**ADDRESS:** 42 Dorey Ave  
Dartmouth, NS B3B 0B1

**PROJECT NAME:**

**TYPE OF SAMPLES:** AllergencoD

**NO. OF SAMPLES:** 10

**DATE COLLECTED:** December 7, 2023

**DATE RECEIVED:** December 8, 2023

**DATE ANALYSED:** December 13, 2023

**DATE REPORTED:** December 13, 2023

**PROJECT NO:** 330548.003

**LAB REFERENCE NO:** m305446

**ANALYST:** Inesa Liashko B.Eng.  
Environmental Microbiologist

**REVIEWER:** Rawah Naeem, M.Sc.  
Environmental Microbiologist

**CONDITION OF SAMPLES ON RECEIPT:** Acceptable

### Method of Analysis: Analysis of Air Samples for Fungal Spores (SOP: DME-SPT, Rev. 15, 16 May 2023)

This SOP is based on the method described in the AIHA's "Field Guide for the Determination of Biological Contaminants in the Environmental Samples" and also partially on the ASTM method D7391-20.

Results are not corrected for blanks. Estimation of the measurement of uncertainty is available upon request.

### Comments/Observations (if any):

#### Notes:

1. The laboratory is not responsible for sample collection and sample information provided by the customer on the chain of custody.
2. The report applies to the samples submitted to the laboratory and, the result(s) relate only to sample(s) tested.
3. The report shall not be reproduced except in full, without written approval of the laboratory.
4. Services are subject to Pinchin Ltd. Standard Terms and Conditions for Laboratory Services.



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DATE ANALYSED:

December 13, 2023

ANALYST: Inesa Liashko B.Eng.

PROJECT NO: 330548.003  
LAB REFERENCE NO: m305446

Customer Sample No:	5647305	5695552	5695458	5564526	5695488	5564691	5695468											
Lab Sample ID:	m305446-1	m305446-2	m305446-3	m305446-4	m305446-5	m305446-6	m305446-7											
Description	Outdoor	Elliot Lab	Elliot Hallway	Chase B208 Suite	Chase Linen Storage	Library VML 410	VML Kirkconell 214											
Total Air Volume (L)	150	150	150	150	150	150	150											
% of Sample Counted	25.4	25.4	25.4	25.4	25.4	25.4	25.4											
Fungal spores identified	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>
Alternaria/Ulocladium-like																		
Ascospores, non-specified							15	60	390	19	34	500						
Aspergillus/Penicillium-like										1	2	26						
Basidiospores, non-specified				1	5	26												
Bipolaris/Drechslera/ Exserohilum/Helminthosporium																		
Botrytis																		
Chaetomium-like																		
Cladosporium				19	95	500	3	100	79	10	40	260	36	64	940			
Coprinus																		
Epicoccum																		
Fusarium-like																		
Ganoderma																		
Myxomycetes/Periconia/Rusts/Smuts																		
Non-specified spores																		
Oidium-like																		
Pithomyces-like																		
Polythrincium																		
Stachybotrys																		
Pollens																		
Fungal fragments													1		26			
Non-fungal material	2			2			2			3			2			2		1
Spores/sample				20			3			25			56					
<b>TOTAL SPORES/M<sup>3</sup></b>		< A.S.		530			79			650			1500			< A.S.		< A.S.
<b>A.S. (SPORES/M<sup>3</sup>)</b>		26		26			26			26			26			26		26

Note: 1. Samples analysed at 600X magnification. 2. A.S. = Analytical Sensitivity  
3. Total spores/m<sup>3</sup> and counts/m<sup>3</sup> reported to two significant figures where applicable



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DATE ANALYSED:

December 13, 2023

ANALYST: Inesa Liashko B.Eng.

PROJECT NO: 330548.003  
LAB REFERENCE NO: m305446

Customer Sample No:	5647285			5695525			5564525												
Lab Sample ID:	m305446-8			m305446-9			m305446-10												
Description	Horton 112B			Horton 107			Field Blank												
Total Air Volume (L)	150			150			N/A												
% of Sample Counted	25.4			25.4			25.4												
Fungal spores identified	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	raw ct.	%	ct./m <sup>3</sup>	
Alternaria/Ulocladium-like																			
Ascospores, non-specified																			
Aspergillus/Penicillium-like																			
Basidiospores, non-specified																			
Bipolaris/Drechslera/ Exserohilum/Helminthosporium																			
Botrytis																			
Chaetomium-like																			
Cladosporium																			
Coprinus																			
Epicoccum																			
Fusarium-like																			
Ganoderma																			
Myxomycetes/Periconia/Rusts/Smuts																			
Non-specified spores																			
Oidium-like																			
Pithomyces-like																			
Polythrincium																			
Stachybotrys																			
Pollens																			
Fungal fragments																			
Non-fungal material	2			2															
Spores/sample																			
<b>TOTAL SPORES/M<sup>3</sup></b>			< A.S.			< A.S.			No fungal spores										
<b>A.S. (SPORES/M<sup>3</sup>)</b>			26			26													

Note: 1. Samples analysed at 600X magnification. 2. A.S. = Analytical Sensitivity  
3. Total spores/m<sup>3</sup> and counts/m<sup>3</sup> reported to two significant figures where applicable



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**Environmental Microbiology Laboratory**  
 Chain of Custody Form

m305446

<b>REPORT RESULTS TO</b>	Contact: <b>Kyra Kinsman</b>			Dept: <b>IEQ</b>	
	Company: <b>Pinchin Ltd</b>			Tel: <b>(902)-210-9212</b> Fax:	
	Mailing Address: <b>42 Dorey Ave</b>			Email: <b>kkinsman@pinchin.com</b>	
	City: <b>Dartmouth</b>	Prov: <b>NS</b>	Postal Code: <b>B3B 0B1</b>	Customer Job / P.O. #: <b>NA</b>	
Special Instructions: <b>Please cc: slmcintyre@pinchin.com and erogers@pinchin.com</b>				Project: <b>330548.003</b>	
Report Language		English <input checked="" type="checkbox"/>	French <input type="checkbox"/>	No. Samples Submitted: <b>10</b>	Invoice To: <b>Accounts Payable</b>

ANALYSIS TYPES					
1. <input checked="" type="checkbox"/> Total Fungal Particulate (Spore Count and Identification)		5. <input type="checkbox"/> Bacteria (Quantification / Gram Staining)			
2. <input type="checkbox"/> Direct Microscope Examination (Fungal)		6. <input type="checkbox"/> Heterotrophic Plate Counts (HPC)			
3. <input type="checkbox"/> Direct Microscope Examination (Particulate):		7. <input type="checkbox"/> E. coli / Total Coliforms			
		a: Quantitative <input type="checkbox"/>		b: Qualitative <input type="checkbox"/>	
4. <input type="checkbox"/> Fungal Qualification & Identification (Anderson / RCS)		8. <input type="checkbox"/> Legionella		a: Culture <input type="checkbox"/>	
				b: QPCR <input type="checkbox"/>	

Sample #	Description	Analysis Requested (e.g. 3a)	Date Sampled	Vol (L) or Area (cm <sup>2</sup> )	TAT		FOR LAB USE ONLY LAB #
					REG.	RUSH	
5647305	Outdoor	1	Dec 7 2023	150	X		m305446-1
5695552	Elliot Lab	1	Dec 7 2023	150	X		-2
5695458	Elliot Hallway	1	Dec 7 2023	150	X		-3
5564526	Chase B208 Suite	1	Dec 7 2023	150	X		-4
5695488	Chase Linen Storage	1	Dec 7 2023	150	X		-5
5564691	Library VML 410	1	Dec 7 2023	150	X		-6
5695468	VML Kirkconell 214	1	Dec 7 2023	150	X		-7
5647285	Horton 112B	1	Dec 7 2023	150	X		-8
5695525	Horton 107	1	Dec 7 2023	150	X		-9
5564525	Field Blank	1	Dec 7 2023	0	X		-10

<b>CHAIN OF CUSTODY</b>	Collected by: <b>Kyra Kinsman</b>			
	Relinquished by: <b>Kyra Kinsman</b>	Date/Time: <b>Dec 7 2023 14:50</b>	Received by: <b>CF</b>	Date/Time: <b>12/08/23 3:53</b>
	Method of Shipment: <b>Courier</b>		Sample Condition Upon Receipt: Acceptable <input type="checkbox"/> Other (explain) <input type="checkbox"/>	

Authorized by: **Kyra Kinsman** Date: **December 7 2023**

*Reviewed*  
 12/13/23

Customer Signature MUST Accompany Request. Customer accepts Pinchin Ltd. Standard Terms and Conditions for laboratory Services (See Over)

Distribution: White = Laboratory, Yellow = Customer Copy