



July 17, 2023

Sodexo  
61 University Ave  
Wolfville, Nova Scotia, B4P 2R5

Attention:       Andreas Dutkewych, PMP  
                      *Facilities Project Manager*

**Re:**               **Mould Air Sampling Report**  
                      Festival Theatre, 504 Main Street, Wolfville, Nova Scotia  
                      Pinchin File: 327284.001

## 1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by Sodexo (Client) to conduct mould air sampling within the Festival Theatre located at 504 Main Street, Wolfville, Nova Scotia. The sampling was undertaken to assess airborne fungal particulate concentrations of the Basement Storage Area and the Box Office (Room 113) within the building. The sampling was performed by Pinchin on June 1, 2023.

## 2.0 METHODOLOGY

Airborne mould samples were taken using Allergenco-D brand impactor cassettes and a calibrated pump. Samples were collected in the Basement, Entrance Hallway and Room 113. One reference sample was collected outdoors for comparison purposes. One field blank was collected for quality control purposes.

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>


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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.

### 3.0 FINDINGS

#### Basement Storage Area

Extent of Mould Growth	Approximately 18 ft <sup>2</sup>	Extent of Water Damage Including Mould Growth	Approximately 30 ft <sup>2</sup>
			
Photo 1 – View of mould-impacted wood pallets.	Photo 2 – View of the water-stained table and rusty column.	Photo 3 – View of the debris on the water-stained table.	Photo 4 – View of the mould-impacted pallet and rusty columns.

#### Observations and Comments

Within the Basement Storage Area, three mould-impacted wood pallets were observed. All lower sections of the steel columns were noted to be rusty. The wooden legs of a table were also noted to be water-stained. Dust accumulation and debris were noted on top of this table.

### 4.0 AIRBORNE MOULD SAMPLING RESULTS

Five indoor airborne mould spore trap samples were collected on the day of sampling (June 01, 2023), including one outdoor sample and one field blank. Indoor samples were collected in the Basement Storage Area, the Entrance Hallway, and the Box Office (Room 113).

Generally, the composition and concentration of mould recovered from indoor samples should be similar to the composition and concentration of the mould recovered from the outdoor reference sample. Many



elements inside a building can affect the concentration and composition of indoor mould samples. These elements include occupant activities, furnishings and the amount of air exchange.

The concentration of the outdoor reference sample on the sampling day was 4,000 spores/m<sup>3</sup>. The concentrations of the indoor samples ranged from 340 spores/m<sup>3</sup> to 1,400 spores/m<sup>3</sup>. The concentrations of each of the indoor samples were below the concentration of the outdoor reference sample. However, the composition of the sample collected in the Basement Storage Area had elevated levels of *Aspergillus/Penicillium* – like spores compared to the outdoor reference sample and the other indoor samples. The compositions of the remaining indoor samples were similar to the composition of the outdoor reference sample.

Spore trap sample results suggest that airborne mould levels were negatively impacting the air quality in the Basement Storage Area on the sampling day. Sample results further suggest that airborne mould levels were acceptable in the remaining sample locations.

## **5.0 RECOMMENDATIONS**

Pinchin offers the following recommendations:

1. The findings of this report should be communicated to the occupants as recommended by current mould guidelines, and in workplaces, as mandated by occupational health and safety legislation.
2. The mould-impacted wooden pallets within the Basement Storage Area should be discarded following Level 1 mould abatement procedures as per the Canadian Construction Association's, "Mould Guidelines for the Canadian Construction Industry".
3. Dust accumulation and debris noted within the Basement Storage Area should be thoroughly cleaned.
4. Porous items (cloth materials, cardboard boxes, etc.) should not be stored on the floor of the Basement Storage Area.

## **6.0 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.



Sincerely,

**Pinchin Ltd.**

Prepared by:

Reviewed by:

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Encl.: Analytical Results for Airborne Mould Sampling (2 pages)

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Mould Sampling Report Festival Theatre 504 Main St Wolfville NS Jul 17 2023.docx  
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:** Chen Zhang  
**COMPANY:** Pinchin Ltd.  
**ADDRESS:** 42 Dorey Ave.  
 Dartmouth, NS B3B 0B1

**PROJECT NAME:**  
**TYPE OF SAMPLES:** AllergencoD  
**NO. OF SAMPLES:** 5  
**DATE COLLECTED:** June 1, 2023  
**DATE RECEIVED:** June 2, 2023  
**DATE ANALYSED:** June 5, 2023  
**DATE REPORTED:** June 6, 2023

**PROJECT NO:** 327284.001  
**LAB REFERENCE NO:** m292715  
**ANALYST:** Jaybeeramy Naiken, B.Sc.  
**REVIEWER:** Rawah Naeem, M.Sc.  
 Environmental Microbiologist  
 Environmental Microbiologist

*Handwritten signature and initials*

**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:

June 5, 2023

ANALYST: Jaybeeramy Naiken, B.Sc.

PROJECT NO: 327284.001  
LAB REFERENCE NO: m292715

Customer Sample No:	4875122			5311099			5311096			4875118			4865739					
Lab Sample ID:	m292715-1			m292715-2			m292715-3			m292715-4			m292715-5					
Description	Outdoor			Basement			Entrance Hallway			Room 113			Field Blank					
Total Air Volume (L)	150			150			150			150			N/A					
% of Sample Counted	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	51	33	1300	1	2	26	3	23	79	14	67	370						
Aspergillus/Penicillium-like	1	1	26	46	87	1200	3	23	79	2	10	52						
Basidiospores, non-specified	97	63	2500	2	4	52	7	54	180	3	14	79						
Bipolaris/Drechslera/ Exserohilum/Helminthosporium																		
Botrytis																		
Chaetomium-like																		
Cladosporium	5	3	130	3	6	79				2	10	52						
Coprinus	1	1	26															
Epicoccum																		
Fusarium-like																		
Ganoderma																		
Myxomycetes/Periconia/Rusts/Smuts																		
Non-specified spores				1	2	26												
Oidium-like																		
Pithomyces-like																		
Polythrincium																		
Stachybotrys																		
Pollens	1																	
Fungal fragments	3		79	12		310	2		52	1		26						
Non-fungal material	3			4			3			3								
Spores/sample	155			53			13			21								
<b>TOTAL SPORES/M<sup>3</sup></b>	4000			1400			340			550			No fungal spores					
<b>A.S. (SPORES/M<sup>3</sup>)</b>	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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**Environmental Microbiology Laboratory**  
Chain of Custody Form

M292715

<b>REPORT RESULTS TO</b>	Contact: <b>Chen Zhang</b>			Dept: <b>IEQ</b>		
	Company: <b>Pinchin Ltd</b>			Tel: <b>(902)-471-5519</b>	Fax: <b>(902)-461-9932</b>	
	Mailing Address: <b>42 Dorey Ave</b>			Email: <b>czhang@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</b>				Project: <b>327284.001</b>		
Report Language	English <input checked="" type="checkbox"/>	French <input type="checkbox"/>	No. Samples Submitted: <b>5</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): a: Quantitative <input type="checkbox"/> b: Qualitative <input type="checkbox"/>	7. <input type="checkbox"/> E. coli / Total Coliforms
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	
4875122	Outdoor	1	June 01, 2023	150 L	X		M292715-1
5311099	Basement	1	June 01, 2023	150 L	X		-2
5311096	Entrance Hallway	1	June 01, 2023	150 L	X		-3
4875118	Room 113	1	June 01, 2023	150 L	X		-4
4865739	Field Blank	1	June 01, 2023	0 L	X		-5

<b>CHAIN OF CUSTODY</b>	Collected by: <b>Chen Zhang</b>			
	Relinquished by: <b>Chen Zhang</b>	Date/Time: <b>June 01, 2023/ 15:51 PM</b>	Received by:	Date/Time: <b>6/2/23 12:10</b>
	Method of Shipment: <b>Courier</b>		Sample Condition Upon Receipt: Acceptable <input checked="" type="checkbox"/> Other (explain) <input type="checkbox"/>	

Authorized by: Chen Zhang Date: June 01, 2023

*Reviewed*  
6/6/23

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

Distribution: White = Laboratory, Yellow = Customer Copy