



## WASHINGTON TOWNSHIP SCHOOL DISTRICT

### INDOOR AIR QUALITY INVESTIGATION FINAL REPORT

Prepared For:

**Washington Township Board of Education**  
206 East Holly Avenue  
Sewell, New Jersey 08080

Prepared by:

**Coastal Environmental Compliance, LLC**  
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October 19, 2017

**INDOOR AIR QUALITY INVESTIGATION  
FINAL REPORT**

**FACILITIES:**

**BELLS ELEMENTARY SCHOOL  
BIRCHES ELEMENTARY SCHOOL  
BUNKER HILL MIDDLE SCHOOL  
CHESTNUT RIDGE MIDDLE SCHOOL  
GRENLOCK TERRACE ELEMENTARY SCHOOL  
HURFFVILLE ELEMENTARY SCHOOL  
ORCHARD VALLEY MIDDLE SCHOOL  
THOMAS JEFFERSON ELEMENTARY SCHOOL  
WEDGEWOOD ELEMENTARY SCHOOL  
WHITMAN ELEMENTARY SCHOOL**

# WASHINGTON TOWNSHIP SCHOOL DISTRICT

## INDOOR AIR QUALITY INVESTIGATION FINAL REPORT

Prepared By:

Cathy Ledden

Cathy Ledden  
Sr. Environmental Compliance Officer

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# WASHINGTON TOWNSHIP SCHOOL DISTRICT

## INDOOR AIR QUALITY INVESTIGATION FINAL REPORT

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## **1.0 BACKGROUND**

Coastal Environmental Compliance, LLC was contacted by the Washington Township School District (the District) to conduct indoor air quality inspections and testing throughout the District.

This investigation and testing was conducted proactively, following concern due to surrounding school districts with indoor air quality issues.

This report details the investigation and testing of the schools.

## **2.0 APPROACH**

### **2.1 VISUAL INSPECTION**

The visual inspection of the schools was conducted between October 13 through October 19, 2017. Areas and classrooms were inspected for any factors that might influence the air quality.

### **2.2 SAMPLING METHODOLOGY**

Microbiological air samples were taken throughout random areas at each school, along with outdoor samples using a low flow pump and air-o-cell cassettes (spore traps). Samples were evaluated for total count and identification of fungi.

Pro-Lab, Weston, Florida, and EMSL Analytical, Cinnaminson, NJ, performed the analysis, according to guidelines proposed by the USEPA, and the AIHA Field Guide For The Determination Of Biological Contaminants In Environmental Samples, 1996.

## 3.0 FINDINGS & OBSERVATIONS

### 3.1 VISUAL INSPECTION

Results of the visual inspection are as follows:

**Bunker Hill Middle, Orchard Valley Middle, Chestnut Ridge Middle, Wedgewood Elementary, Whitman Elementary, Grenlock Terrace Elementary (Old Building) and Hurffville Elementary Schools.**

- ✦ No visible mold or moisture issues.

**Bells Elementary, Birches Elementary and Hurffville Elementary Schools.**

- ✦ Minor visible mold growth was found on various surfaces, such as desks and chairs throughout these schools. These items were identified, and taken outside by district staff for cleaning. This ensured that mold spores were not released in the air.

**Thomas Jefferson Elementary and Grenlock Terrace Elementary (New Building) Schools.**

- ✦ Minor visible mold growth was found on various surfaces, such as desks and chairs throughout these schools. These items were identified, and taken outside for cleaning, to avoid the possibility of spores being released in the air.
- ✦ Minor visible mold growth (<10Sf) was found on several tall cabinets and doors throughout these school, the areas were cleaned by district staff.

**Thomas Jefferson Elementary School.**

- ✦ Visible dust was found on the HVAC vents and surrounding ceiling tiles throughout the school. The vents were cleaned, and the ceiling tiles were replaced by district staff.

### 3.2 SAMPLE RESULTS

Microbiological testing was conducted throughout the District. Sample results are as follows. (see attached laboratory results)

#### BELLS ELEMENTARY SCHOOL

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	53	Cercospora
		690	Cladosporium
		53	Epicoccum
		53	Nigrospora
		320	Other Ascospores
		270	Other Basidiospores
		1,800	Penicillium/Aspergillus
		110	Smuts, myxomycetes
	<b>Total Fungi Count</b>		<b>3,349</b>
Air-o-cell	Ambient - Back	53	Cercospora
		480	Cladosporium
		160	Ganoderma
		320	Other Ascospores
		370	Other Basidiospores
		53	Penicillium/Aspergillus
		53	Pithomyces
		110	Smuts, myxomycetes
	<b>Total Fungi Count</b>		<b>1,599</b>
Air-o-cell	Room 16	53	Other Basidiospores
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>		<b>106</b>
Air-o-cell	Room 200 - Art	53	Cladosporium
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>		<b>106</b>
Air-o-cell	Room 9	110	Cladosporium
		53	Other Basidiospores
		53	Penicillium/Aspergillus
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>		<b>269</b>
Air-o-cell	Room 10	53	Cladosporium
		53	Other Ascospores
		160	Other Basidiospores
	<b>Total Fungi Count</b>		<b>266</b>

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Room 2	53	Cladosporium
		53	Other Ascospores
		160	Other Basidiospores
		110	Penicillium/Aspergillus
		160	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>536</b>	

**BIRCHES ELEMENTARY SCHOOL**

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	850	Cladosporium
		53	Epicoccum
		370	Other Ascospores
		320	Other Basidiospores
		210	Penicillium/Aspergillus
		53	Rusts
		210	Smuts, myxomycetes
		53	Ulocladium
	<b>Total Fungi Count</b>	<b>2,119</b>	
Air-o-cell	Ambient - Back	850	Cladosporium
		270	Other Ascospores
		750	Other Basidiospores
		320	Penicillium/Aspergillus
		53	Rusts
		110	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>2,353</b>	
Air-o-cell	Room 1	53	Cladosporium
		53	Other Ascospores
		110	Other Basidiospores
		320	Penicillium/Aspergillus
	<b>Total Fungi Count</b>	<b>536</b>	
Air-o-cell	Room 10	160	Cladosporium
		110	Other Basidiospores
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>323</b>	
Air-o-cell	Room 20	53	Cladosporium
		53	Other Ascospores
		53	Other Basidiospores
		53	Penicillium/Aspergillus
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>265</b>	

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Room 28	53	Cladosporium
		53	Other Ascospores
		160	Other Basidiospores
		53	Penicillium/Aspergillus
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>372</b>	
Air-o-cell	Room 35	53	Other Basidiospores
		53	Smuts, myxomycetes
		<b>Total Fungi Count</b>	<b>106</b>

**BUNKER HILL MIDDLE SCHOOL**

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	110	Cladosporium
		53	Ganoderma
		750	Other Ascospores
		2,000	Other Basidiospores
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>2,966</b>	
Air-o-cell	Ambient - Back	430	Other Ascospores
		850	Other Basidiospores
		<b>Total Fungi Count</b>	<b>1,280</b>
Air-o-cell	Room A3	53	Other Basidiospores
		53	Rusts
		<b>Total Fungi Count</b>	<b>106</b>
Air-o-cell	Room A9	--	No fungi detected
Air-o-cell	Room B1	53	Smuts, myxomycetes
		<b>Total Fungi Count</b>	<b>53</b>
Air-o-cell	Room B8	--	No fungi detected
Air-o-cell	Room C26	53	Epicoccum
		110	Penicillium/Aspergillus
		53	Pithomyces
		53	Smuts, myxomycetes
		<b>Total Fungi Count</b>	<b>269</b>

**CHESTNUT RIDGE MIDDLE SCHOOL**

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	210	Cladosporium
		53	Ganoderma
		210	Other Ascospores
		800	Other Basidiospores
		53	Penicillium/Aspergillus
	110	Smuts, myxomycetes	
	<b>Total Fungi Count</b>	<b>1,436</b>	
Air-o-cell	Ambient - Back	53	Cladosporium
		53	Ganoderma
		210	Other Ascospores
		960	Other Basidiospores
		53	Penicillium/Aspergillus
		<b>Total Fungi Count</b>	<b>1,329</b>
Air-o-cell	Room 109	53	Other Basidiospores
		53	Penicillium/Aspergillus
	<b>Total Fungi Count</b>	<b>106</b>	
Air-o-cell	Room 118	53	Other Basidiospores
	<b>Total Fungi Count</b>	<b>53</b>	
Air-o-cell	Room 121	53	Other Basidiospores
		53	Rusts
		110	Smuts, myxomycetes
		<b>Total Fungi Count</b>	<b>216</b>
Air-o-cell	Room 204	110	Other Basidiospores
		110	Penicillium/Aspergillus
		53	Smuts, myxomycetes
		<b>Total Fungi Count</b>	<b>273</b>
Air-o-cell	Room 227	110	Other Basidiospores
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>163</b>	

**GRENLOCH TERRACE ELEMENTARY SCHOOL**

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	53	Alternaria
		53	Bipolaris/Drechslera
		53	Cercospora
		430	Cladosporium
		53	Curvularia
		53	Epicoccum
		53	Ganoderma
		640	Other Ascospores
		1,500	Other Basidiospores
		160	Penicillium/Aspergillus
		53	Rusts
	53	Ulocladium	
	<b>Total Fungi Count</b>	<b>3,154</b>	
Air-o-cell	Ambient - Back	110	Alternaria
		1,000	Cladosporium
		320	Other Ascospores
		590	Other Basidiospores
		53	Penicillium/Aspergillus
		53	Pithomyces
		53	Rusts
	160	Smuts, myxomycetes	
	<b>Total Fungi Count</b>	<b>2,339</b>	
Air-o-cell	Room 25	270	Cladosporium
		53	Other Basidiospores
	<b>Total Fungi Count</b>	<b>323</b>	
Air-o-cell	Room 23	53	Other Ascospores
		110	Other Basidiospores
		110	Penicillium/Aspergillus
		110	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>383</b>	
Air-o-cell	Room 27	53	Cladosporium
		53	Other Ascospores
		160	Other Basidiospores
		210	Penicillium/Aspergillus
	<b>Total Fungi Count</b>	<b>476</b>	
Air-o-cell	Room 20	53	Curvularia
		53	Other Ascospores
		53	Other Basidiospores
		110	Penicillium/Aspergillus
		53	Pithomyces
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>375</b>	

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Room 13	53	Cladosporium
		110	Other Basidiospores
	<b>Total Fungi Count</b>	<b>163</b>	
Air-o-cell	Old Building Faculty Room	53	Curvularia
		53	Other Basidiospores
	<b>Total Fungi Count</b>	<b>159</b>	Smuts, myxomycetes
Air-o-cell	Old Building Room 2	160	Cladosporium
		53	Epicoccum
		53	Other Ascospores
		110	Other Basidiospores
		53	Penicillium/Aspergillus
	53	Rusts	
<b>Total Fungi Count</b>	<b>592</b>	Smuts, myxomycetes	
Air-o-cell	Old Building Room 1	160	Cladosporium
		53	Other Basidiospores
	<b>Total Fungi Count</b>	<b>266</b>	Smuts, myxomycetes
Air-o-cell	Old Building Room 5	53	Cladosporium
		210	Other Basidiospores
	<b>Total Fungi Count</b>	<b>373</b>	Smuts, myxomycetes
Air-o-cell	Old Building Room 7	53	Cladosporium
		53	Other Ascospores
		110	Other Basidiospores
	<b>Total Fungi Count</b>	<b>269</b>	Smuts, myxomycetes

**HURFFVILLE ELEMENTARY SCHOOL**

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	53	Cladosporium
		53	Ganoderma
		270	Other Ascospores
		1,200	Other Basidiospores
		<b>Total Fungi Count</b>	<b>1,576</b>
Air-o-cell	Ambient - Back	370	Cladosporium
		110	Other Ascospores
		1,800	Other Basidiospores
		<b>Total Fungi Count</b>	<b>2,280</b>
Air-o-cell	Room 102	53	Other Basidiospores
		<b>Total Fungi Count</b>	<b>53</b>
Air-o-cell	Room 111	53	Other Basidiospores
		110	Penicillium/Aspergillus
		<b>Total Fungi Count</b>	<b>163</b>
Air-o-cell	Room 116	--	No fungi detected
Air-o-cell	Room 119	--	No fungi detected
Air-o-cell	Room 134	53	Cladosporium
		53	Other Ascospores
		53	Other Basidiospores
		320	Penicillium/Aspergillus
		<b>Total Fungi Count</b>	<b>479</b>

**ORCHARD VALLEY MIDDLE SCHOOL**

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	320	Cladosporium
		53	Epicoccum
		480	Other Basidiospores
		53	Penicillium/Aspergillus
		110	Smuts, myxomycetes
		<b>Total Fungi Count</b>	<b>1,016</b>
Air-o-cell	Ambient - Back	53	Other Ascospores
		910	Other Basidiospores
		53	Smuts, myxomycetes
		53	Torula
		<b>Total Fungi Count</b>	<b>1,069</b>
Air-o-cell	Room 104	53	Penicillium/Aspergillus
		<b>Total Fungi Count</b>	<b>53</b>
Air-o-cell	Room 118	--	No fungi detected

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Room 121	53	Other Basidiospores
	<b>Total Fungi Count</b>	<b>106</b>	Penicillium/Aspergillus
Air-o-cell	Room 211	110	Other Basidiospores
	<b>Total Fungi Count</b>	<b>163</b>	Penicillium/Aspergillus
Air-o-cell	Room 214	53	Other Ascospores
	<b>Total Fungi Count</b>	<b>159</b>	Other Basidiospores Smuts, myxomycetes

**THOMAS JEFFERSON ELEMENTARY SCHOOL**

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	790	Ascospores
		920	Aspergillus/Penicillium
		2,600	Basidiospores
		1,400	Cladosporium
		40	Curvularia
		10	Epicoccum
		40	Ganoderma
		400	Myxomycetes
	<b>Total Fungi Count</b>	<b>6,270</b>	Pithomyces
Air-o-cell	Ambient - Back	830	Ascospores
		660	Aspergillus/Penicillium
		2,300	Basidiospores
		1,800	Cladosporium
		30	Curvularia
		200	Ganoderma
		200	Myxomycetes
		90	Pithomyces
	<b>Total Fungi Count</b>	<b>6,120</b>	Torula
Air-o-cell	Room 105 - Art	100	Ascospores
		90	Aspergillus/Penicillium
		40	Basidiospores
		90	Cladosporium
		<b>Total Fungi Count</b>	<b>410</b>

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Room 8A	100	Aspergillus/Penicillium
		200	Basidiospores
		40	Cladosporium
		10	Curvularia
		90	Myxomycetes
	<b>Total Fungi Count</b>	<b>440</b>	
Air-o-cell	Room 106	40	Alternaria
		570	Aspergillus/Penicillium
		300	Basidiospores
		40	Cladosporium
		40	Epicoccum
	<b>Total Fungi Count</b>	<b>1,430</b>	Myxomycetes
Air-o-cell	Room Ms. Wade	40	Aspergillus/Penicillium
		300	Basidiospores
		40	Cladosporium
	<b>Total Fungi Count</b>	<b>380</b>	
Air-o-cell	Room 21	40	Ascospores
		200	Aspergillus/Penicillium
		570	Basidiospores
		200	Cladosporium
		10	Curvularia
		10	Epicoccum
	<b>Total Fungi Count</b>	<b>1,330</b>	Myxomycetes

**WEDGEWOOD ELEMENTARY SCHOOL**

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	110	Cladosporium
		110	Ganoderma
		53	Other Ascospores
		800	Other Basidiospores
	<b>Total Fungi Count</b>	<b>1,073</b>	
Air-o-cell	Ambient - Back	53	Ganoderma
		160	Other Ascospores
		480	Other Basidiospores
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>746</b>	
Air-o-cell	Room 3	53	Penicillium/Aspergillus
	<b>Total Fungi Count</b>	<b>53</b>	

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Room 8	53	Penicillium/Aspergillus Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>110</b>	
		<b>163</b>	
Air-o-cell	Room 14	--	No fungi detected
Air-o-cell	Room 26	53	Cladosporium Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>53</b>	
		<b>106</b>	
Air-o-cell	Room 46	53	Penicillium/Aspergillus Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>53</b>	
		<b>106</b>	

### WHITMAN ELEMENTARY SCHOOL

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Ambient - Front	27	Bipolaris/Drechslera
		27	Cercospora
		130	Cladosporium
		27	Epicoccum
		80	Ganoderma
		27	Nigrospora
		210	Other Ascospores
		510	Other Basidiospores
		450	Penicillium/Aspergillus
		27	Rusts
		27	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>1,542</b>	
Air-o-cell	Ambient - Back	130	Cladosporium
		53	Epicoccum
		27	Ganoderma
		160	Other Ascospores
		640	Other Basidiospores
		27	Rusts
		53	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>1,090</b>	
Air-o-cell	Room 18	--	No fungi detected
Air-o-cell	Room 24	27	Ganoderma
		27	Other Basidiospores
		27	Penicillium/Aspergillus
		27	Smuts, myxomycetes
	<b>Total Fungi Count</b>	<b>108</b>	
Air-o-cell	Room 105	27	Cladosporium
		27	Penicillium/Aspergillus
	<b>Total Fungi Count</b>	<b>54</b>	

Type of Sample	Location	Fungi (CTS/m3)	Type of Fungi
Air-o-cell	Room 5	27	Ganoderma
		27	Other Ascospores
		27	Other Basidiospores
	<b>Total Fungi Count</b>	<b>81</b>	
Air-o-cell	Room 8	--	No fungi detected

Air sampling results for the above schools indicate acceptable airborne levels of fungi, as compared to outdoor air. No further action required.

## 4.0 RECOMMENDATIONS

Based upon the testing results and visual observations, Coastal Environmental Compliance, LLC recommends the following:

### **BUILDING MAINTENANCE:**

#### **Thomas Jefferson Elementary School**

- ✦ Due to the amount of dust/debris found on the HVAC vent covers and ceiling tile, consider hiring an HVAC contractor to clean and service the unit(s).

### **BUILDING MAINTENANCE:**

#### **All Facilities**

- ✦ Ensure all old wood surfaces are professionally sealed. This will help prevent mold growth to occur in the future.
- ✦ Ensure all HVAC units are cleaned, serviced and maintained on a regularly basis.
- ✦ Maintain humidity levels below 60% throughout the schools to prevent excessive moisture from causing mold growth.

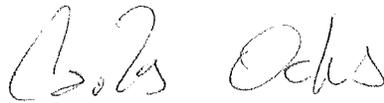
Coastal is pleased to provide the Washington Township Schools with professional services.

**APPENDIX A**  
**LAB RESULTS**

COASTAL ENVIRONMENTAL  
PO BOX 167  
HAMMONTON, NJ 08330

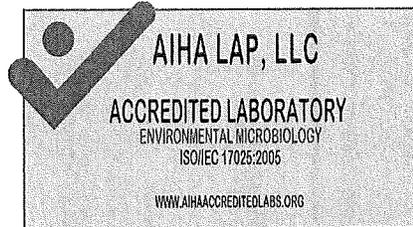
## Certificate of Mold Analysis

Prepared for: COASTAL ENVIRONMENTAL  
Phone Number:  
Fax Number:  
Project Name: WASHINGTON TWP - BELLS ES  
Test Location: 227 GREENTREE RD  
SEWELL, NJ  
Chain of Custody #: 1080462  
Received Date: October 18, 2017  
Report Date: October 18, 2017



Carlos Ochoa, Technical and Quality Control Manager

Currently there are no Federal regulations for evaluating potential health effects of fungal contamination and remediation. This information is subject to change as more information regarding fungal contaminants becomes available. For more information visit <http://www.epa.gov/mold> or [www.nyc.gov/html/doh/html/epi/mold.shtml](http://www.nyc.gov/html/doh/html/epi/mold.shtml). This document was designed to follow currently known industry guidelines for the interpretation of microbial sampling, analysis, and remediation. Since interpretation of mold analysis reports is a scientific work in progress, it may as such be changed at any time without notice. The client is solely responsible for the use or interpretation. PRO-LAB/SSPTM Inc. makes no express or implied warranties as to health of a property from only the samples sent to their laboratory for analysis. The Client is hereby notified that due to the subjective nature of fungal analysis and the mold growth process, laboratory samples can and do change over time relative to the originally sampled material. PRO-LAB/SSPTM Inc. reserves the right to properly dispose of all samples after the testing of such samples are sufficiently completed or after a 7 day period, whichever is greater.



LAB # 163230

For more information please contact PRO-LAB at (954) 384-4446 or email [info@prolabinc.com](mailto:info@prolabinc.com)

Prepared for : COASTAL ENVIRONMENTAL

Test Address : WASHINGTON TWP - BELLS ES  
227 GREENTREE RD  
SEWELL, NJ

ANALYSIS METHOD	Spore trap analysis	Spore trap analysis	Spore trap analysis	Spore trap analysis
LOCATION	AMBIENT FRONT	AMBIENT BACK	RM 16	RM 200 - ART
COC / LINE #	1080462-1	1080462-2	1080462-3	1080462-4
SAMPLE TYPE & VOLUME	AIR-O-CELL - 75L	AIR-O-CELL - 75L	AIR-O-CELL - 75L	AIR-O-CELL - 75L
SERIAL NUMBER	24935345	24935508	24935440	24935330
COLLECTION DATE	Oct 16, 2017	Oct 16, 2017	Oct 16, 2017	Oct 16, 2017
ANALYSIS DATE	Oct 18, 2017	Oct 18, 2017	Oct 18, 2017	Oct 18, 2017
CONCLUSION	CONTROL	NOT ELEVATED	NOT ELEVATED	NOT ELEVATED

IDENTIFICATION	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total
Cercospora	4	53	2	4	53	3						
Cladosporium	52	690	21	36	480	30				4	53	50
Epicoccum	4	53	2									
Ganoderma				12	160	10						
Nigrospora	4	53	2									
Other Ascospores	24	320	10	24	320	20						
Other Basidiospores	20	270	8	28	370	23	4	53	50			
Penicillium/Aspergillus	136	1,800	54	4	53	3						
Pithomyces				4	53	3						
Smuts, myxomycetes	8	110	3	8	110	7	4	53	50	4	53	50
<b>TOTAL SPORES</b>	<b>252</b>	<b>3,349</b>	<b>100</b>	<b>120</b>	<b>1,599</b>	<b>100</b>	<b>8</b>	<b>106</b>	<b>100</b>	<b>8</b>	<b>106</b>	<b>100</b>
<b>MINIMUM DETECTION LIMIT*</b>	<b>4</b>	<b>53</b>		<b>4</b>	<b>53</b>		<b>4</b>	<b>53</b>		<b>4</b>	<b>53</b>	
<b>BACKGROUND DEBRIS</b>	Light			Light			Light			Light		
Cellulose Fiber							4	53		4	53	
Pollen	4	53										
OBSERVATIONS & COMMENTS												

Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy and Too Heavy for Accurate Count, are used to indicate the amount of deposited debris. Light (None to up to 25% obstruction); Medium (26% to up to 75% obstruction); Heavy (76% to up to 90% obstruction); Too Heavy (Greater than 90% obstruction). Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is 'Heavy' or 'Too Heavy for Accurate Count'. All calculations are rounded to two significant figures and therefore, the total percentage of spore numbers may not equal 100%.

\* Minimum Detection Limit. Based on the volume of air sampled, this is the lowest number of spores that can be detected and is an estimate of the lowest concentration of spores that can be read in the sample. NA = Not Applicable.

Spores that were observed from the samples submitted are listed on this report. If a spore is not listed on this report it was not observed in the samples submitted.

**Interpretation Guidelines:** A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For questions relating to medical conditions you should consult an occupational or environmental health physician or professional.

**CONTROL** is a baseline sample showing what the spore count and diversity is at the time of sampling. The control sample(s) is usually collected outside of the structure being tested and used to determine if this sample(s) is similar in diversity and abundance to the inside sample(s).

**ELEVATED** means that the amount and/or diversity of spores, as compared to the control sample(s), and other samples in our database, are higher than expected. This can indicate that fungi have grown because of a water leak or water intrusion. Fungi that are considered to be indicators of water damage include, but are not limited to: *Chaetomium*, *Fusarium*, *Memnoniella*, *Stachybotrys*, *Scopulariopsis*, *Ulocladium*.

**NOT ELEVATED** means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are lower than expected and may indicate no problematic fungal growth.

**UNUSUAL** means that the presence of current or former growth was observed in the analyzed sample. An abundance of spores are present, and/or growth structures including hyphae and/or fruiting bodies are present and associated with one or more of the types of mold/fungi identified in the analyzed sample.

**NORMAL** means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s) tested.

Prepared for : COASTAL ENVIRONMENTAL

Test Address : WASHINGTON TWP - BELLS ES  
227 GREENTREE RD  
SEWELL, NJ

ANALYSIS METHOD	Spore trap analysis	Spore trap analysis	Spore trap analysis	INTENTIONALLY BLANK
LOCATION	RM 9	RM 10	RM 2	
COC / LINE #	1080462-5	1080462-6	1080462-7	
SAMPLE TYPE & VOLUME	AIR-O-CELL - 75L	AIR-O-CELL - 75L	AIR-O-CELL - 75L	
SERIAL NUMBER	24935496	24935441	24935518	
COLLECTION DATE	Oct 16, 2017	Oct 16, 2017	Oct 16, 2017	
ANALYSIS DATE	Oct 18, 2017	Oct 18, 2017	Oct 18, 2017	
CONCLUSION	NOT ELEVATED	NOT ELEVATED	NOT ELEVATED	

IDENTIFICATION	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total
Cercospora												
Cladosporium	8	110	41	4	53	20	4	53	10			
Epicoccum												
Ganoderma												
Nigrospora												
Other Ascospores				4	53	20	4	53	10			
Other Basidiospores	4	53	20	12	160	60	12	160	30			
Penicillium/Aspergillus	4	53	20				8	110	21			
Pithomyces												
Smuts, myxomycetes	4	53	20				12	160	30			
<b>TOTAL SPORES</b>	20	269	100	20	266	100	40	536	100			
<b>MINIMUM DETECTION LIMIT*</b>	4	53		4	53		4	53				
<b>BACKGROUND DEBRIS</b>	Light			Light			Light					
Cellulose Fiber	4	53										
Pollen												
<b>OBSERVATIONS &amp; COMMENTS</b>												

Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy and Too Heavy for Accurate Count, are used to indicate the amount of deposited debris. Light (None to up to 25% obstruction); Medium (26% to up to 75% obstruction); Heavy (76% to up to 90% obstruction); Too Heavy (Greater than 90% obstruction). Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is 'Heavy' or 'Too Heavy for Accurate Count'. All calculations are rounded to two significant figures and therefore, the total percentage of spore numbers may not equal 100%.

\* Minimum Detection Limit. Based on the volume of air sampled, this is the lowest number of spores that can be detected and is an estimate of the lowest concentration of spores that can be read in the sample. NA = Not Applicable.

Spores that were observed from the samples submitted are listed on this report. If a spore is not listed on this report it was not observed in the samples submitted.

**Interpretation Guidelines:** A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For questions relating to medical conditions you should consult an occupational or environmental health physician or professional.

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**NOT ELEVATED** means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are lower than expected and may indicate no problematic fungal growth. **UNUSUAL** means that the presence of current or former growth was observed in the analyzed sample. An abundance of spores are present, and/or growth structures including hyphae and/or fruiting bodies are present and associated with one or more of the types of mold/fungi identified in the analyzed sample.

**NORMAL** means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s) tested.



1675 North Commerce Parkway, Weston, FL 33326 (954) 384-4446

Chain of Custody # 1080462

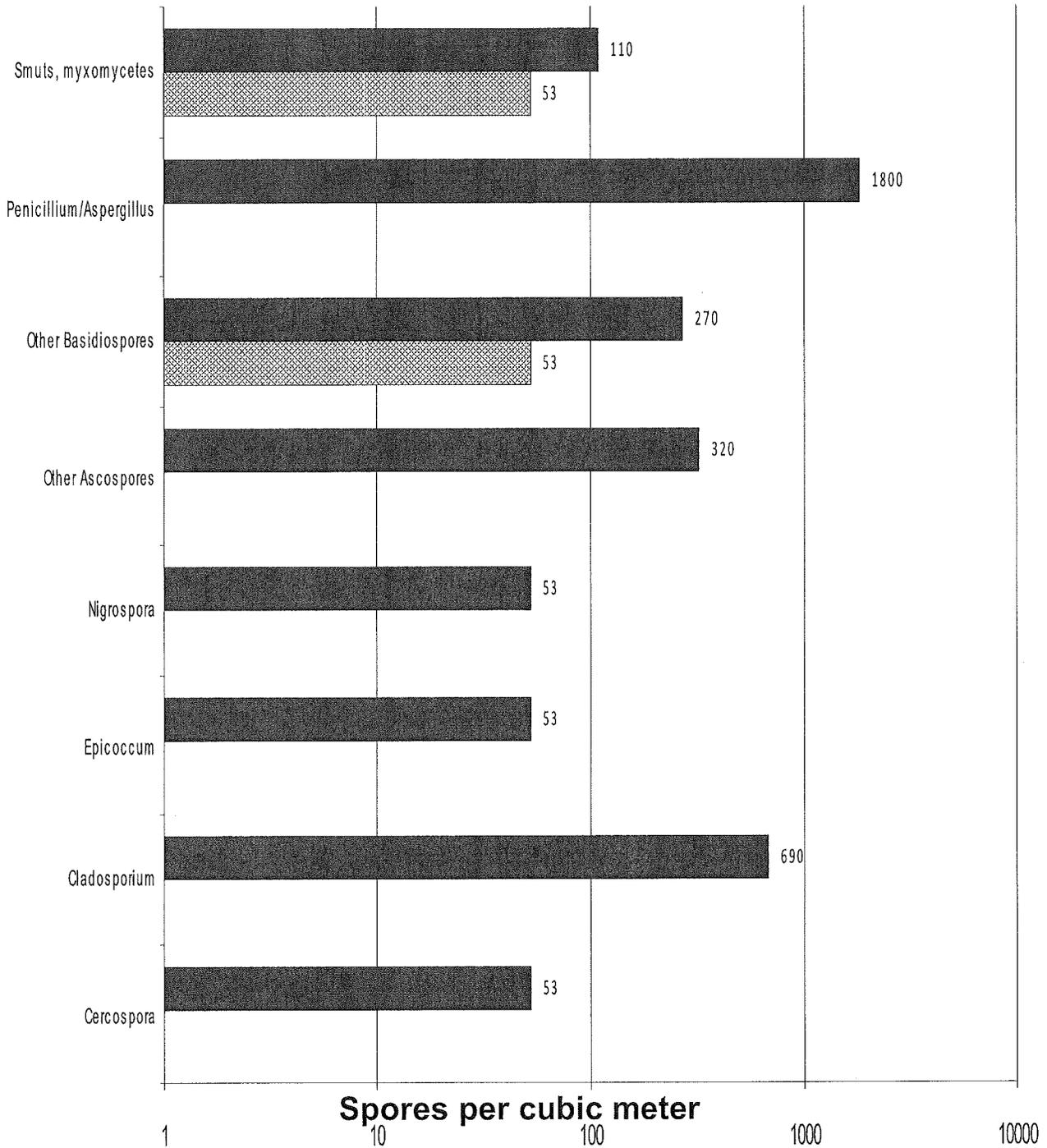
 Ambient Back



**Spores per cubic meter**

Chain of Custody # 1080462

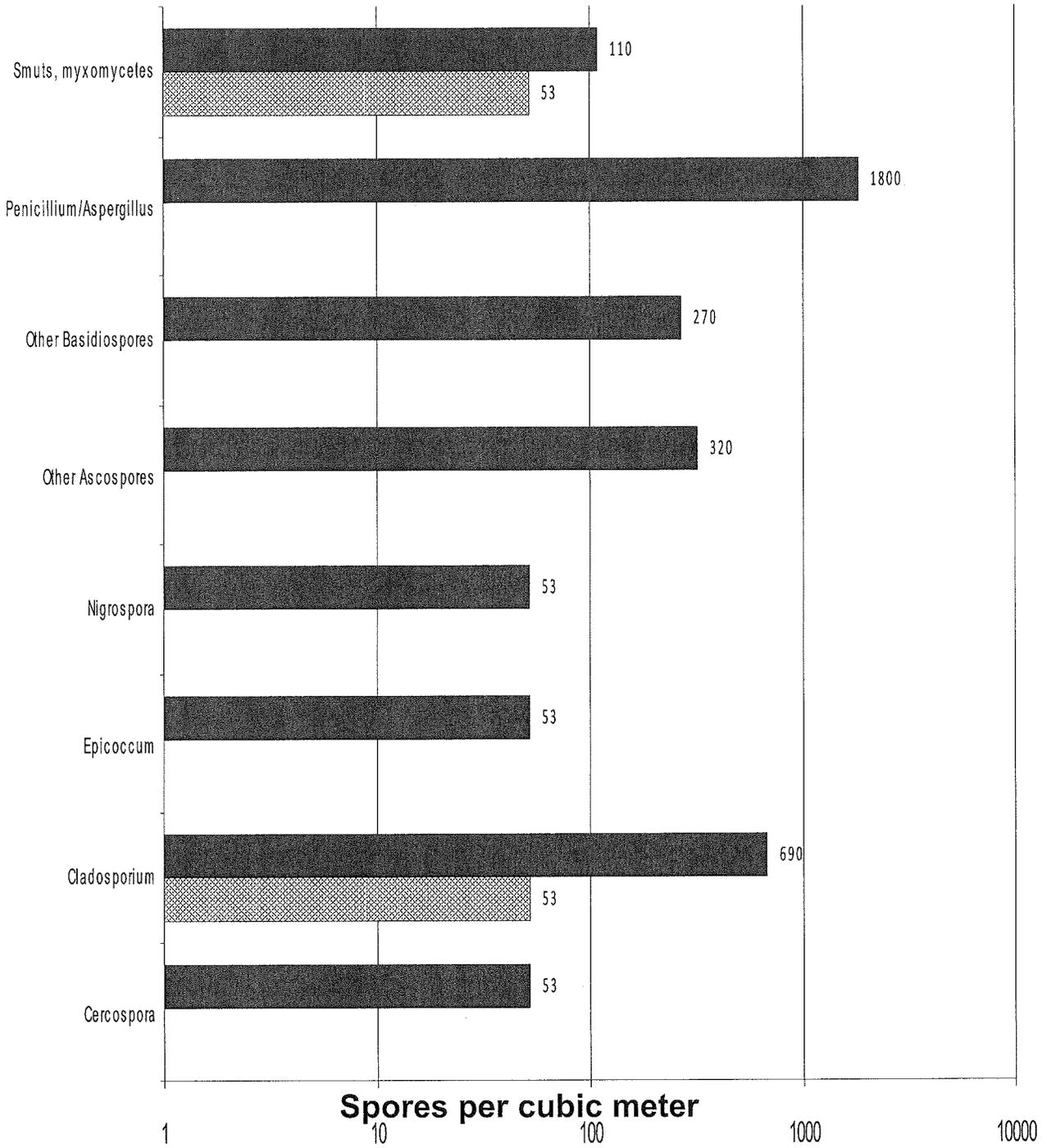
▨ Rm 16  
■ Ambient Front





Chain of Custody # 1080462

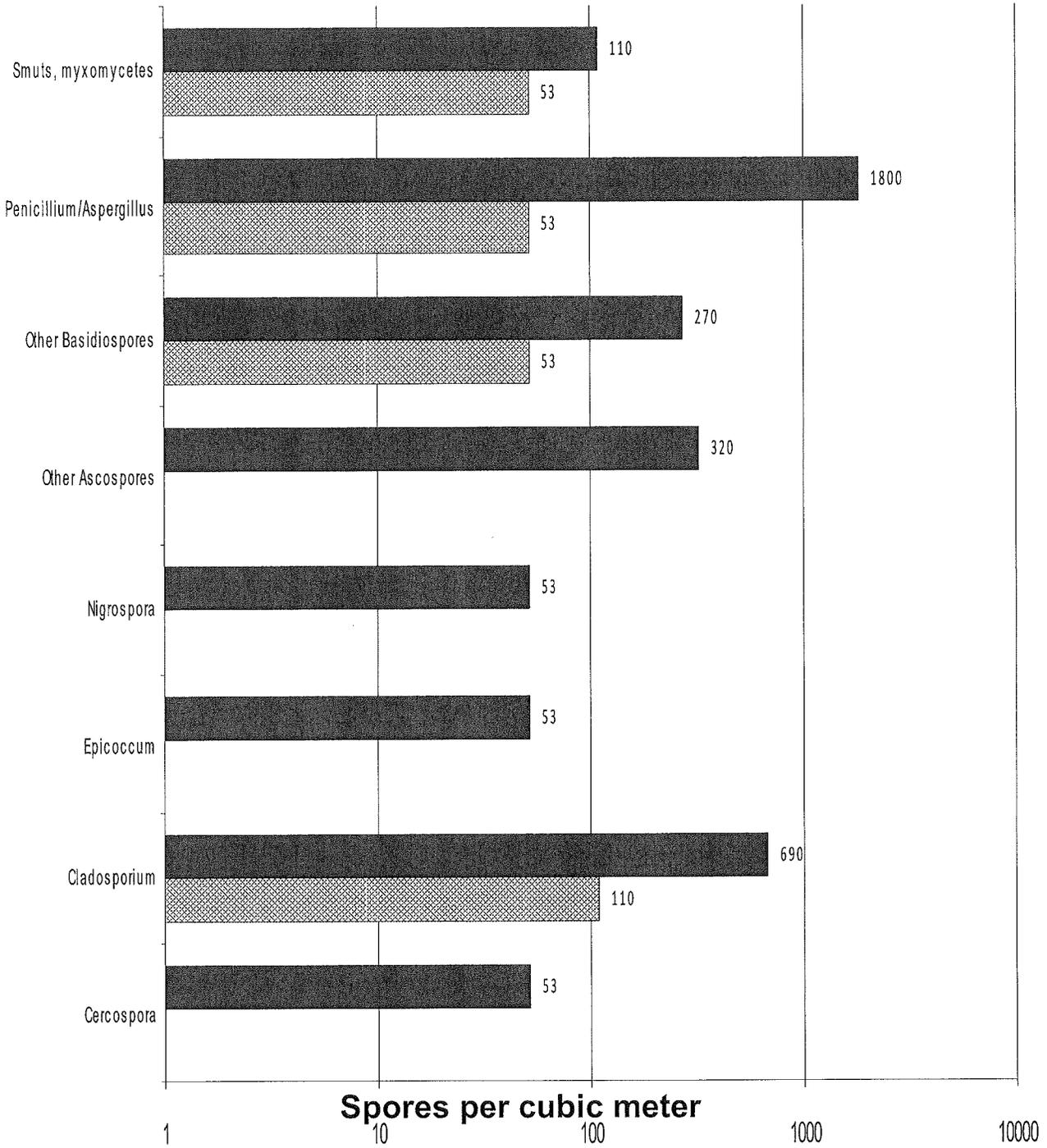
▨ Rm 200 - Art  
■ Ambient Front





Chain of Custody # 1080462

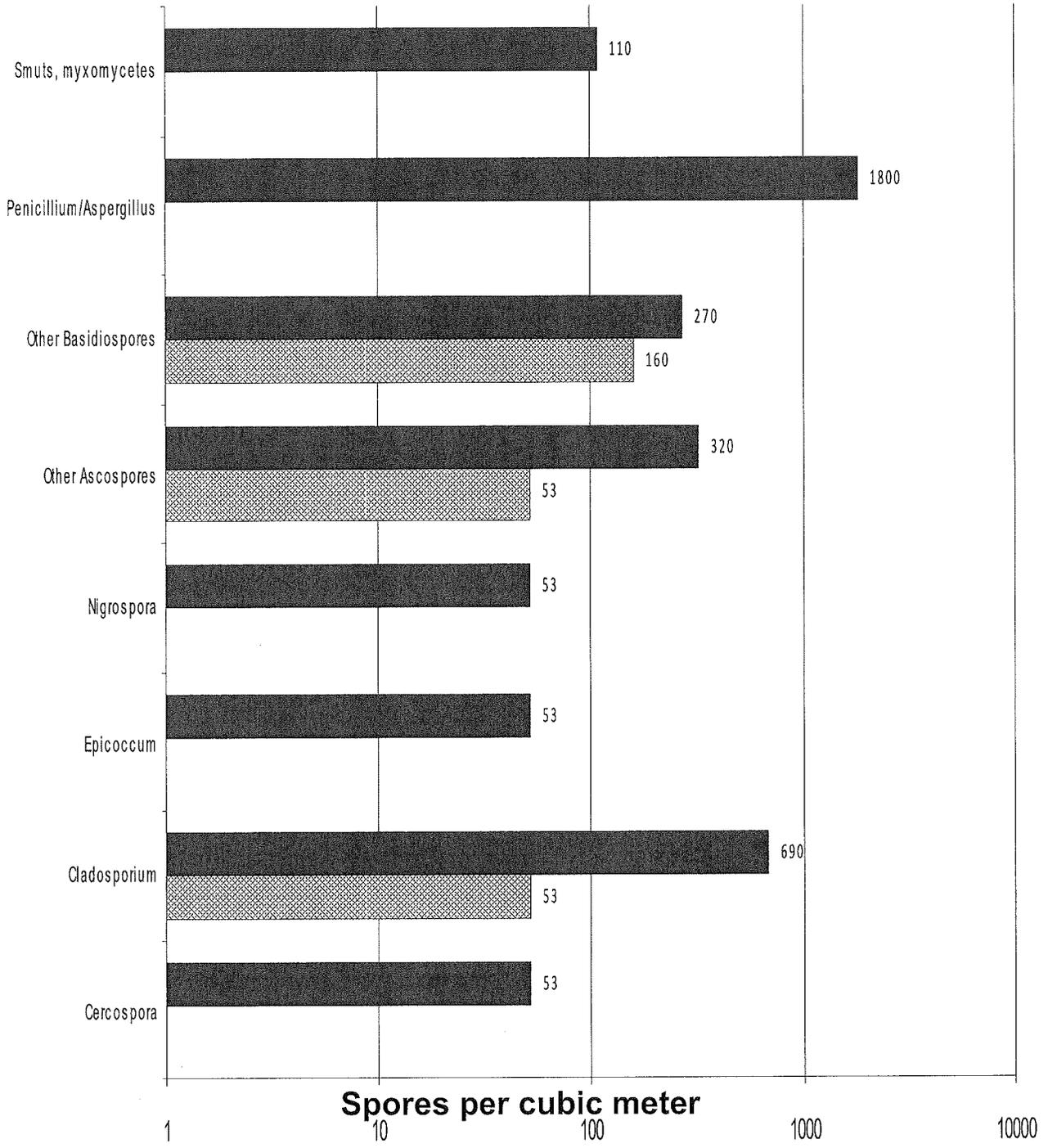
▨ Rm 9  
■ Ambient Front





Chain of Custody # 1080462

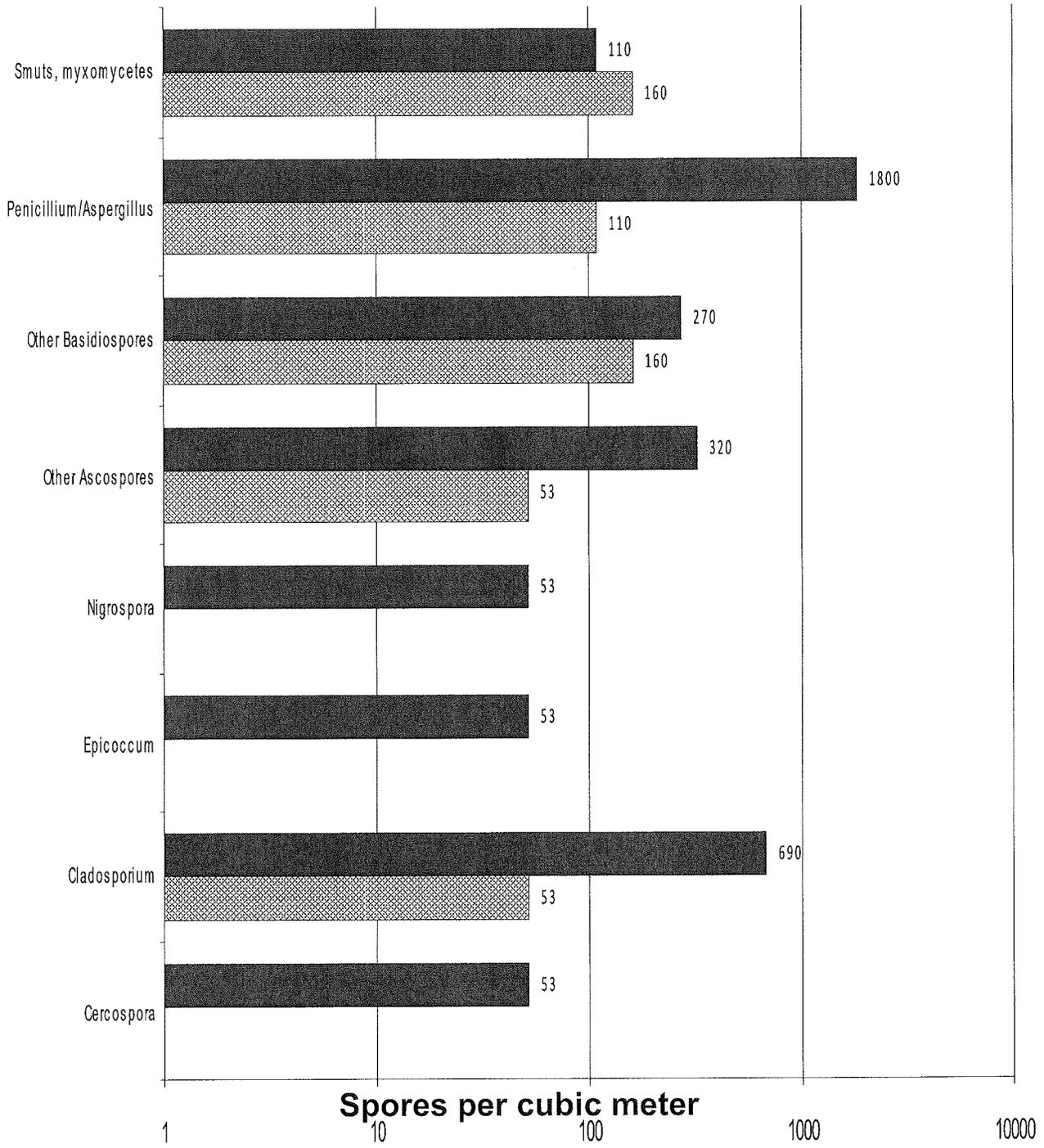
▨ Rm 10  
■ Ambient Front





Chain of Custody # 1080462

▨ Rm 2  
■ Ambient Front





1675 North Commerce Parkway, Weston, FL 33326 (954) 384-4446

Identification	Outdoor Habitat	Indoor Habitat	Possible Allergic Potential Not an opinion or interpretation	Comments
Cercospora	Common everywhere, especially growing on leaves. The most common spore type reported in the air worldwide. Found on dead and dying plant litter, and soil.	Not known to grow indoors.	None known.	
Cladosporium	Commonly found everywhere. Grows on plant debris, insects and soil.	Commonly found on wood and wallboard. Commonly grows on window sills, textiles and foods.	Type I (hay fever and asthma), Type III (hypersensitivity pneumonitis) allergies.	A very common and important allergen source both outdoors and indoors.
Epicoccum	Commonly found everywhere. Grows on plant debris, insects and soil.	Capable of growing on several different substrates, notably wallboard and paper.	Type I (hay fever and asthma) allergies.	Very common in the summer, especially in the midwest and during harvest time.
Ganoderma	Common everywhere growing on hardwood trees.	None known.	None known.	
Nigrospora	Commonly found everywhere. Grows on decaying plant material	Does not normally grow on building materials, but occasionally can be found growing on wallboard.	Type I (hay fever and asthma) allergies.	Very distinctive spore that is easy to identify.
Ascospores	Common everywhere. Constitutes a large part of the airspora outside. Can reach very high numbers in the air outside during the spring and summer. Can increase in numbers during and after rainfalls.	Very few of this group grow inside. The notable exception is Chaetomium, Ascotricha and Peziza.	Little known for most of this group of fungi. Dependent on the type (see Chaetomium and Ascotricha).	
Basidiospores	Commonly found everywhere, especially in the late summer and fall. These spores are from Mushrooms.	Mushrooms are not normally found growing indoors, but can grow on wet lumber, especially in crawlspaces. Sometimes mushrooms can be seen growing in flower pots indoors.	Some allergenicity reported. Type I (hay fever, asthma) and Type III (hypersensitivity pneumonitis).	Among the group of Mushrooms (Basidiomycetes) are dry rot fungi Serpula and Poria that are particularly destructive to buildings.
Penicillium/Aspergillus	Common everywhere. Normally found in the air in small amounts in outdoor air. Grows on nearly everything.	Wetted wallboard, wood, food, leather, etc. Able to grow on many substrates indoors.	Type I (hay fever and asthma) allergies and Type III (hypersensitivity pneumonitis) allergies.	This is a combination group of Penicillium and Aspergillus and is used when only the spores are seen. The spores are so similar that they cannot be reliably separated into their respective genera.
Pithomyces	Commonly seen everywhere growing dead leaves, soil and grasses.	Not normally found growing indoors, sometimes on wallboard.	None known.	
Smuts, myxomycetes	Commonly found everywhere, especially on logs, grasses and weeds.	Smuts don't normally grow indoors, but can occasionally be found on things brought from outside and stored in the house. Myxomycetes can occasionally grow indoors, but need lots of water to be established.	Type I (hay fever and asthma) allergies.	Smuts and myxomycetes are a combined group of organisms because their spores look so similar and cannot be reliably distinguished from each other.



1675 North Commerce Parkway, Weston, FL 33326 (954) 384-4446

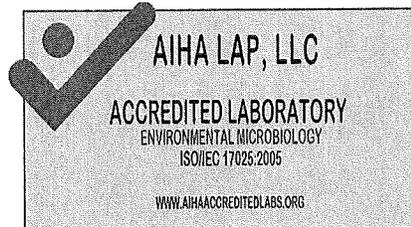
COASTAL ENVIRONMENTAL  
PO BOX 167  
HAMMONTON, NJ 08330

## Certificate of Mold Analysis

Prepared for: COASTAL ENVIRONMENTAL  
Phone Number:  
Fax Number:  
Project Name: WASHINGTON TWP BIRCHES ES  
Test Location: 416 WESTMINSTER AVE  
TURNERSVILLE, NJ  
Chain of Custody #: 1080459  
Received Date: October 18, 2017  
Report Date: October 18, 2017

Carlos Ochoa, Technical and Quality Control Manager

Currently there are no Federal regulations for evaluating potential health effects of fungal contamination and remediation. This information is subject to change as more information regarding fungal contaminants becomes available. For more information visit <http://www.epa.gov/mold> or [www.nyc.gov/html/doh/html/epi/mold.shtml](http://www.nyc.gov/html/doh/html/epi/mold.shtml). This document was designed to follow currently known industry guidelines for the interpretation of microbial sampling, analysis, and remediation. Since interpretation of mold analysis reports is a scientific work in progress, it may as such be changed at any time without notice. The client is solely responsible for the use or interpretation. PRO-LAB/SSPTM Inc. makes no express or implied warranties as to health of a property from only the samples sent to their laboratory for analysis. The Client is hereby notified that due to the subjective nature of fungal analysis and the mold growth process, laboratory samples can and do change over time relative to the originally sampled material. PRO-LAB/SSPTM Inc. reserves the right to properly dispose of all samples after the testing of such samples are sufficiently completed or after a 7 day period, whichever is greater.



LAB # 163230

For more information please contact PRO-LAB at (954) 384-4446 or email [info@prolabinc.com](mailto:info@prolabinc.com)

Prepared for : COASTAL ENVIRONMENTAL

Test Address : WASHINGTON TWP BIRCHES ES  
416 WESTMINSTER AVE  
TURNERSVILLE, NJ

ANALYSIS METHOD	Spore trap analysis											
LOCATION	AMBIENT FRONT			AMBIENT FRONT			RM 1			RM 10		
COC / LINE #	1080459-1			1080459-2			1080459-3			1080459-4		
SAMPLE TYPE & VOLUME	AIR-O-CELL - 75L											
SERIAL NUMBER	24935342			24935460			24935375			24935403		
COLLECTION DATE	Oct 16, 2017											
ANALYSIS DATE	Oct 18, 2017											
CONCLUSION	CONTROL			NOT ELEVATED			NOT ELEVATED			NOT ELEVATED		
IDENTIFICATION	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total
Cladosporium	64	850	40	64	850	36	4	53	10	12	160	50
Epicoccum	4	53	3									
Other Ascospores	28	370	17	20	270	11	4	53	10			
Other Basidiospores	24	320	15	56	750	32	8	110	21	8	110	34
Penicillium/Aspergillus	16	210	10	24	320	14	24	320	60			
Rusts	4	53	3	4	53	2						
Smuts, myxomycetes	16	210	10	8	110	5				4	53	16
Ulocladium	4	53	3									
<b>TOTAL SPORES</b>	160	2,119	100	176	2,353	100	40	536	100	24	323	100
<b>MINIMUM DETECTION LIMIT*</b>	4	53		4	53		4	53		4	53	
<b>BACKGROUND DEBRIS</b>	Light			Light			Light			Light		
Cellulose Fiber										4	53	
<b>OBSERVATIONS &amp; COMMENTS</b>												

Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy and Too Heavy for Accurate Count, are used to indicate the amount of deposited debris. Light (None to up to 25% obstruction); Medium (26% to up to 75% obstruction); Heavy (76% to up to 90% obstruction); Too Heavy (Greater than 90% obstruction). Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is 'Heavy' or 'Too Heavy for Accurate Count'. All calculations are rounded to two significant figures and therefore, the total percentage of spore numbers may not equal 100%.

\* Minimum Detection Limit. Based on the volume of air sampled, this is the lowest number of spores that can be detected and is an estimate of the lowest concentration of spores that can be read in the sample. NA = Not Applicable.

Spores that were observed from the samples submitted are listed on this report. If a spore is not listed on this report it was not observed in the samples submitted.

**Interpretation Guidelines:** A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For questions relating to medical conditions you should consult an occupational or environmental health physician or professional.

**CONTROL** is a baseline sample showing what the spore count and diversity is at the time of sampling. The control sample(s) is usually collected outside of the structure being tested and used to determine if this sample(s) is similar in diversity and abundance to the inside sample(s).

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**NORMAL** means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s) tested.

Prepared for : COASTAL ENVIRONMENTAL

Test Address : WASHINGTON TWP BIRCHES ES  
416 WESTMINSTER AVE  
TURNERSVILLE, NJ

ANALYSIS METHOD	Spore trap analysis	Spore trap analysis	Spore trap analysis	INTENTIONALLY BLANK
LOCATION	RM 20	RM 28	RM 35	
COC / LINE #	1080459-5	1080459-6	1080459-7	
SAMPLE TYPE & VOLUME	AIR-O-CELL - 75L	AIR-O-CELL - 75L	AIR-O-CELL - 75L	
SERIAL NUMBER	24935395	24935404	24935524	
COLLECTION DATE	Oct 16, 2017	Oct 16, 2017	Oct 16, 2017	
ANALYSIS DATE	Oct 18, 2017	Oct 18, 2017	Oct 18, 2017	
CONCLUSION	NOT ELEVATED	NOT ELEVATED	NOT ELEVATED	

IDENTIFICATION	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total
Cladosporium	4	53	20	4	53	14						
Epicoccum												
Other Ascospores	4	53	20	4	53	14						
Other Basidiospores	4	53	20	12	160	43	4	53	50			
Penicillium/Aspergillus	4	53	20	4	53	14						
Rusts												
Smuts, myxomycetes	4	53	20	4	53	14	4	53	50			
Ulocladium												
<b>TOTAL SPORES</b>	20	265	100	28	372	100	8	106	100			
<b>MINIMUM DETECTION LIMIT*</b>	4	53		4	53		4	53				
<b>BACKGROUND DEBRIS</b>	Light			Light			Light					
Cellulose Fiber	4	53										
<b>OBSERVATIONS &amp; COMMENTS</b>												

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1675 North Commerce Parkway, Weston, FL 33326 (954) 384-4446

Chain of Custody # 1080459

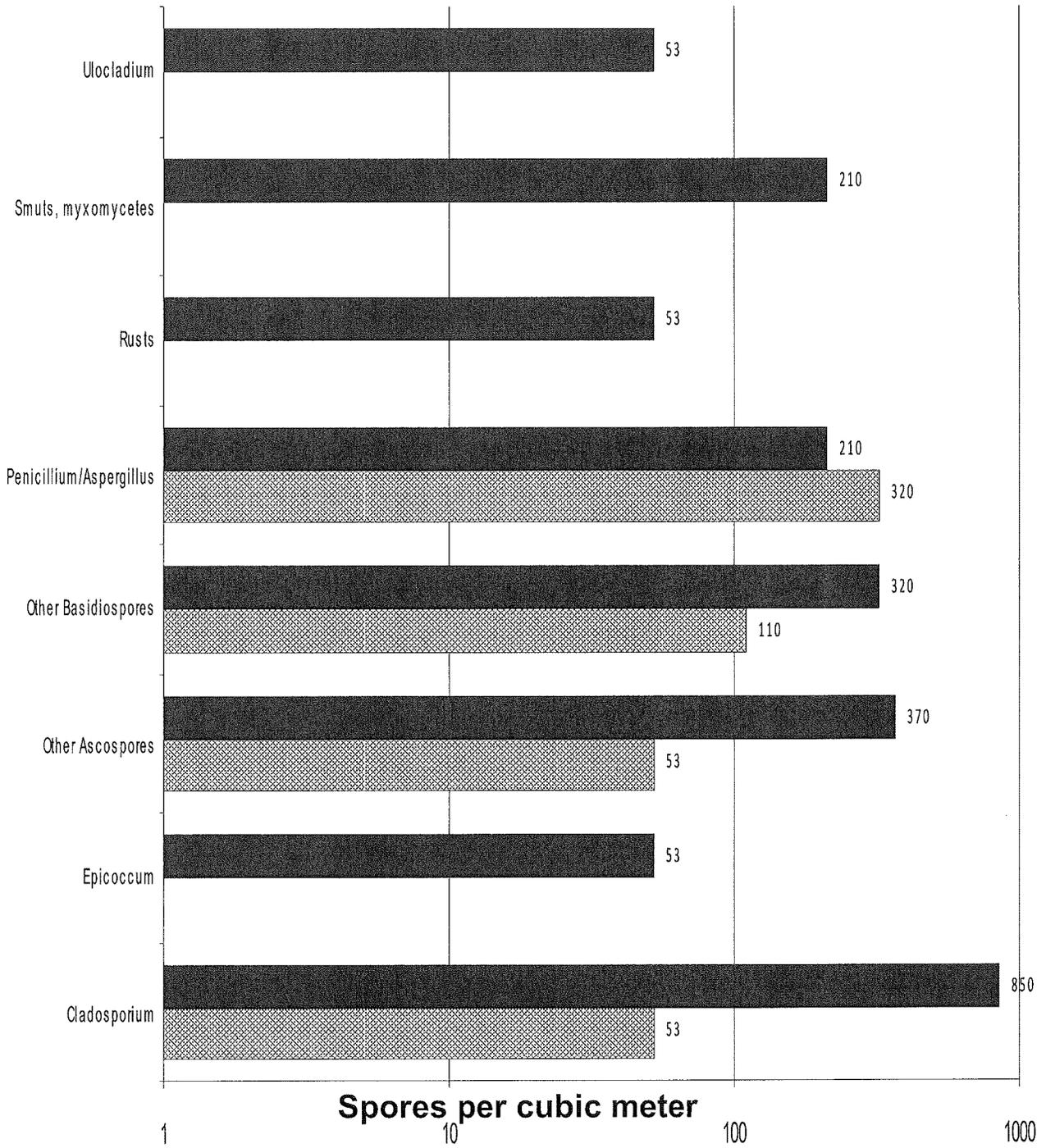
▒ Ambient Front



**Spores per cubic meter**

Chain of Custody # 1080459

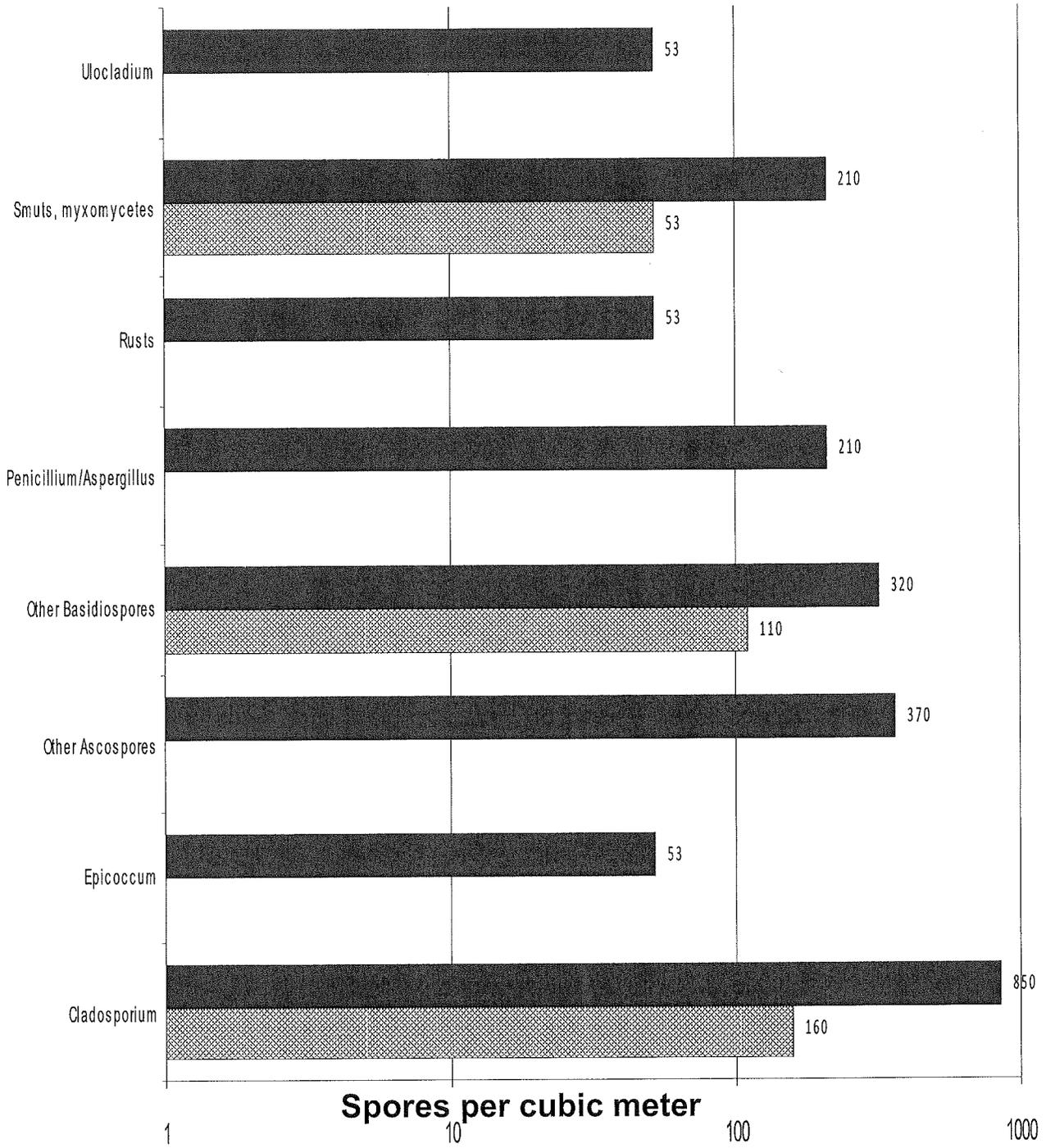
▨ Rm 1  
■ Ambient Front





Chain of Custody # 1080459

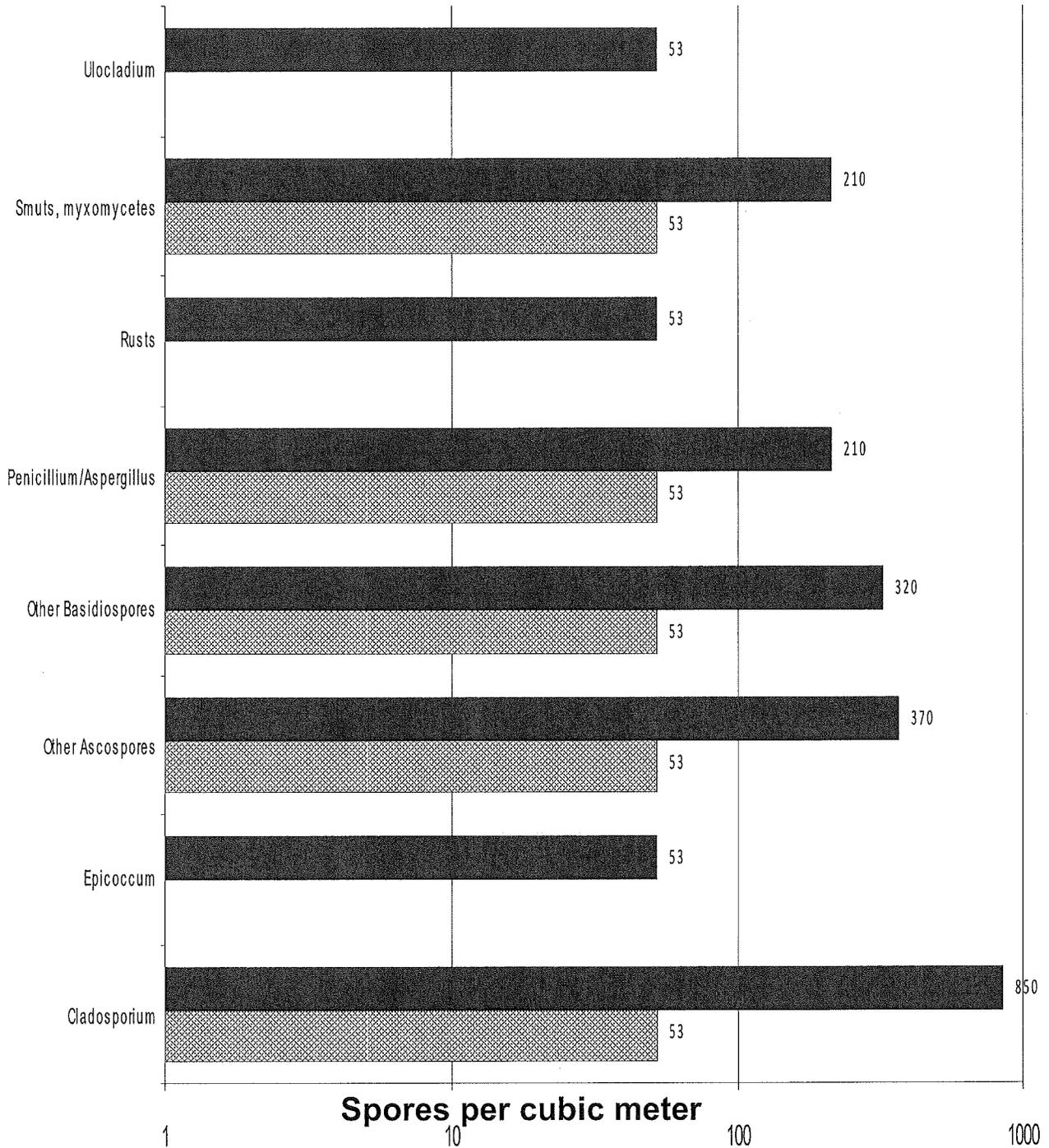
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■ Ambient Front





Chain of Custody # 1080459

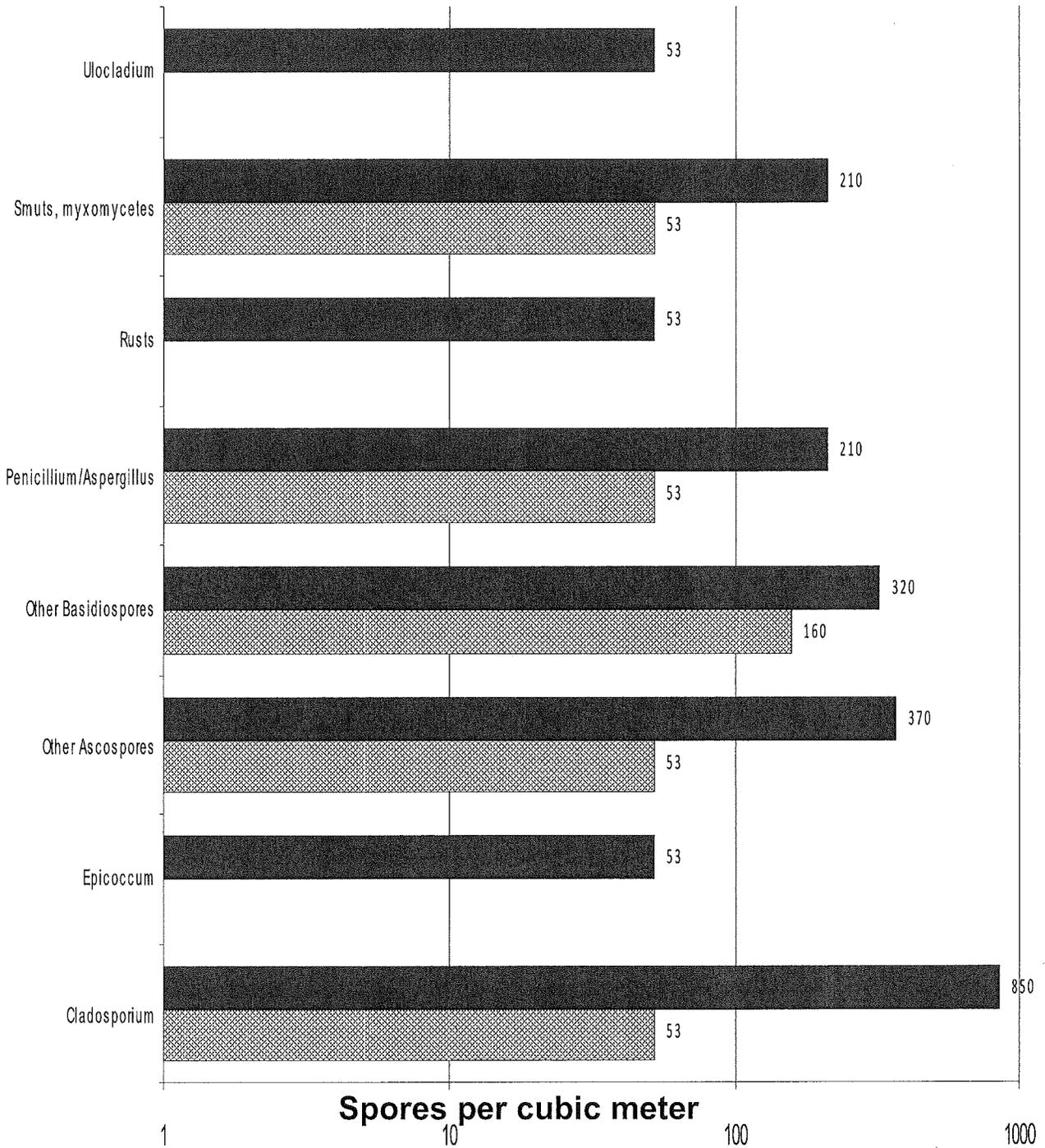
▨ Rm 20  
■ Ambient Front





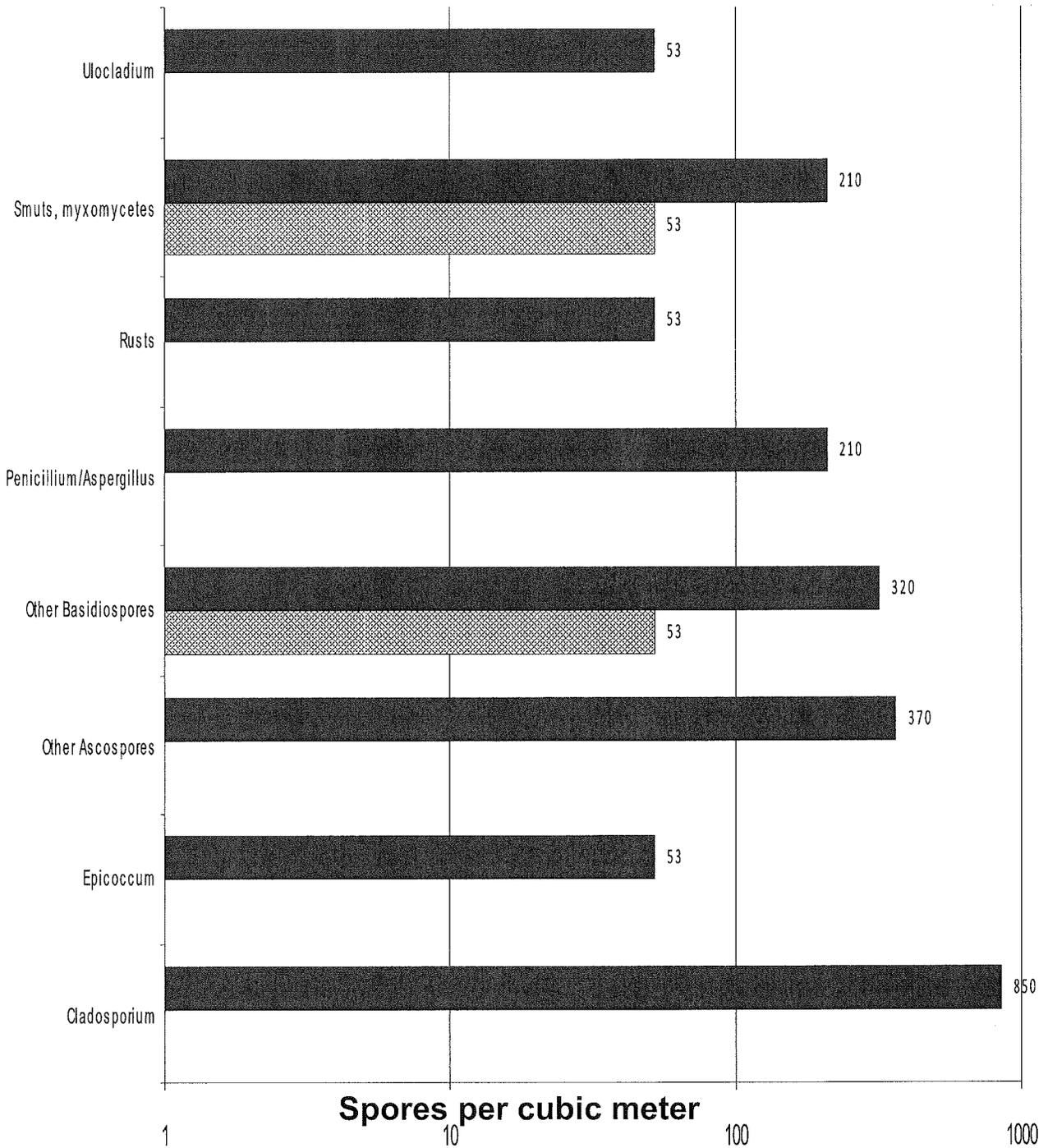
Chain of Custody # 1080459

▨ Rm 28  
■ Ambient Front



Chain of Custody # 1080459

▨ Rm 35  
■ Ambient Front



Identification	Outdoor Habitat	Indoor Habitat	Possible Allergic Potential <small>Not an opinion or interpretation</small>	Comments
Cladosporium	The most common spore type reported in the air worldwide. Found on dead and dying plant litter, and soil.	Commonly found on wood and wallboard. Commonly grows on window sills, textiles and foods.	Type I (hay fever and asthma), Type III (hypersensitivity pneumonitis) allergies.	A very common and important allergen source both outdoors and indoors.
Epicoccum	Commonly found everywhere. Grows on plant debris, insects and soil.	Capable of growing on several different substrates, notably wallboard and paper.	Type I (hay fever and asthma) allergies.	Very common in the summer, especially in the midwest and during harvest time.
Ascospores	Common everywhere. Constitutes a large part of the airspora outside. Can reach very high numbers in the air outside during the spring and summer. Can increase in numbers during and after rainfalls.	Very few of this group grow inside. The notable exception is Chaetomium, Ascotricha and Peziza.	Little known for most of this group of fungi. Dependent on the type (see Chaetomium and Ascotricha).	
Basidiospores	Commonly found everywhere, especially in the late summer and fall. These spores are from Mushrooms.	Mushrooms are not normally found growing indoors, but can grow on wet lumber, especially in crawlspaces. Sometimes mushrooms can be seen growing in flower pots indoors.	Some allergenicity reported. Type I (hay fever, asthma) and Type III (hypersensitivity pneumonitis).	Among the group of Mushrooms (Basidiomycetes) are dry rot fungi Serpula and Poria that are particularly destructive to buildings.
Penicillium/Aspergillus	Common everywhere. Normally found in the air in small amounts in outdoor air. Grows on nearly everything.	Wetted wallboard, wood, food, leather, etc. Able to grow on many substrates indoors.	Type I (hay fever and asthma) allergies and Type III (hypersensitivity pneumonitis) allergies.	This is a combination group of Penicillium and Aspergillus and is used when only the spores are seen. The spores are so similar that they cannot be reliably separated into their respective genera.
Rusts	Common everywhere growing on grasses, trees and other living plants.	Does not grow indoors.	Type I (hay fever and asthma) allergies.	Rust requires a living plant host to complete part of its lifecycle and thus, is not normally found growing indoors except perhaps on an infected house plant.
Smuts, myxomycetes	Commonly found everywhere, especially on logs, grasses and weeds.	Smuts don't normally grow indoors, but can occasionally be found on things brought from outside and stored in the house. Myxomycetes can occasionally grow indoors, but need lots of water to be established.	Type I (hay fever and asthma) allergies.	Smuts and myxomycetes are a combined group of organisms because their spores look so similar and cannot be reliably distinguished from each other.
Ulocladium	Grows on wood, dung, decaying plant litter, and soil.	Wetted wood, cellulosic material and textiles. Uncommon / Unusual to see this growing indoors.	Type I allergies (hay fever and asthma).	Wet spored mold that generally must be dried out and disturbed before spores can be found in the air. Spores of this type of mold should not be observed in significant numbers in the air above background/control. If growth and/or significantly higher than background/control spore numbers are reported, corrective action should be considered to eliminate the water source, reduce moisture levels and/or spore numbers in the living space.



1675 North Commerce Parkway, Weston, FL 33326 (954) 384-4446



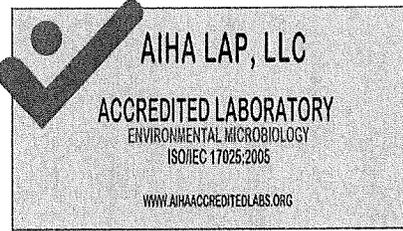
COASTAL ENVIRONMENTAL  
PO BOX 167  
HAMMONTON, NJ 08330

## Certificate of Mold Analysis

Prepared for: COASTAL ENVIRONMENTAL  
Phone Number:  
Fax Number:  
Project Name: WASHINGTONSCHOOL DISTRICT *BHMS*  
Test Location: 972 PITMAN DOWNER RD  
SEWELL, NJ  
Chain of Custody #: 1080001  
Received Date: October 17, 2017  
Report Date: October 17, 2017

Carlos Ochoa, Technical and Quality Control Manager

Currently there are no Federal regulations for evaluating potential health effects of fungal contamination and remediation. This information is subject to change as more information regarding fungal contaminants becomes available. For more information visit <http://www.epa.gov/mold> or [www.nyc.gov/html/doh/html/epi/mold.shtml](http://www.nyc.gov/html/doh/html/epi/mold.shtml). This document was designed to follow currently known industry guidelines for the interpretation of microbial sampling, analysis, and remediation. Since interpretation of mold analysis reports is a scientific work in progress, it may as such be changed at any time without notice. The client is solely responsible for the use or interpretation. PRO-LAB/SSPTM Inc. makes no express or implied warranties as to health of a property from only the samples sent to their laboratory for analysis. The Client is hereby notified that due to the subjective nature of fungal analysis and the mold growth process, laboratory samples can and do change over time relative to the originally sampled material. PRO-LAB/SSPTM Inc. reserves the right to properly dispose of all samples after the testing of such samples are sufficiently completed or after a 7 day period, whichever is greater.



LAB # 163230

For more information please contact PRO-LAB at (954) 384-4446 or email [info@prolabinc.com](mailto:info@prolabinc.com)

Prepared for : COASTAL ENVIRONMENTAL

Test Address : WASHINGTONSCHOOL DISTRICT  
972 PITMAN DOWNER RD  
SEWELL, NJ

ANALYSIS METHOD	Spore trap analysis											
LOCATION	AMBIENT FRONT			AMBIENT BACK			RM A3			RM A9		
COC / LINE #	1080001-1			1080001-2			1080001-3			1080001-4		
SAMPLE TYPE & VOLUME	AIR-O-CELL - 75L											
SERIAL NUMBER	24933594			24933637			24933592			24933630		
COLLECTION DATE	Oct 13, 2017											
ANALYSIS DATE	Oct 17, 2017											
CONCLUSION	CONTROL			CONTROL			NOT ELEVATED			NOT ELEVATED		
IDENTIFICATION	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total
Cladosporium	8	110	4									
Epicoccum												
Ganoderma	4	53	2									
Other Ascospores	56	750	25	32	430	34						
Other Basidiospores	152	2,000	67	64	850	66	4	53	50			
Penicillium/Aspergillus												
Pithomyces												
Rusts							4	53	50			
Smuts, myxomycetes	4	53	2									
<b>TOTAL SPORES</b>	224	2,966	100	96	1,280	100	8	106	100			
<b>MINIMUM DETECTION LIMIT</b>	4	53		4	53		4	53		4	53	
<b>BACKGROUND DEBRIS</b>	Light			Light			Light			Light		
<b>OBSERVATIONS &amp; COMMENTS</b>												

Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy and Too Heavy for Accurate Count, are used to indicate the amount of deposited debris. Light (None to up to 25% obstruction); Medium (26% to up to 75% obstruction); Heavy (76% to up to 90% obstruction); Too Heavy (Greater than 90% obstruction). Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is 'Heavy' or 'Too Heavy for Accurate Count'. All calculations are rounded to two significant figures and therefore, the total percentage of spore numbers may not equal 100%.

\* **Minimum Detection Limit.** Based on the volume of air sampled, this is the lowest number of spores that can be detected and is an estimate of the lowest concentration of spores that can be read in the sample. NA = Not Applicable.

Spores that were observed from the samples submitted are listed on this report. If a spore is not listed on this report it was not observed in the samples submitted.

**Interpretation Guidelines:** A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For questions relating to medical conditions you should consult an occupational or environmental health physician or professional.

**CONTROL** is a baseline sample showing what the spore count and diversity is at the time of sampling. The control sample(s) is usually collected outside of the structure being tested and used to determine if this sample(s) is similar in diversity and abundance to the inside sample(s).

**ELEVATED** means that the amount and/or diversity of spores, as compared to the control sample(s), and other samples in our database, are higher than expected. This can indicate that fungi have grown because of a water leak or water intrusion. Fungi that are considered to be indicators of water damage include, but are not limited to: *Chaetomium*, *Fusarium*, *Memnoniella*, *Stachybotrys*, *Scopulariopsis*, *Ulocladium*.

**NOT ELEVATED** means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are lower than expected and may indicate no problematic fungal growth.

**UNUSUAL** means that the presence of current or former growth was observed in the analyzed sample. An abundance of spores are present, and/or growth structures including hyphae and/or fruiting bodies are present and associated with one or more of the types of mold/fungi identified in the analyzed sample.

**NORMAL** means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s) tested.

Prepared for : COASTAL ENVIRONMENTAL

Test Address : WASHINGTONSCHOOL DISTRICT  
972 PITMAN DOWNER RD  
SEWELL, NJ

ANALYSIS METHOD	Spore trap analysis	Spore trap analysis	Spore trap analysis	INTENTIONALLY BLANK
LOCATION	RM B1	RM B8	RM C26	
COC / LINE #	1080001-5	1080001-6	1080001-7	
SAMPLE TYPE & VOLUME	AIR-O-CELL - 75L	AIR-O-CELL - 75L	AIR-O-CELL - 75L	
SERIAL NUMBER	24933619	24933617	24933605	
COLLECTION DATE	Oct 13, 2017	Oct 13, 2017	Oct 13, 2017	
ANALYSIS DATE	Oct 17, 2017	Oct 17, 2017	Oct 17, 2017	
CONCLUSION	NOT ELEVATED	NOT ELEVATED	NOT ELEVATED	

IDENTIFICATION	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total
Cladosporium												
Epicoccum							4	53	20			
Ganoderma												
Other Ascospores												
Other Basidiospores												
Penicillium/Aspergillus							8	110	41			
Pithomyces							4	53	20			
Rusts												
Smuts, myxomycetes	4	53	100				4	53	20			

<b>TOTAL SPORES</b>	4	53	100				20	269	100			
<b>MINIMUM DETECTION LIMIT</b>	4	53		4	53		4	53				

<b>BACKGROUND DEBRIS</b>	Light			Light			Light					
Cellulose Fiber	4	53					4	53				

<b>OBSERVATIONS &amp; COMMENTS</b>												
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Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy and Too Heavy for Accurate Count, are used to indicate the amount of deposited debris. Light (None to up to 25% obstruction); Medium (26% to up to 75% obstruction); Heavy (76% to up to 90% obstruction); Too Heavy (Greater than 90% obstruction). Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is 'Heavy' or 'Too Heavy for Accurate Count'. All calculations are rounded to two significant figures and therefore, the total percentage of spore numbers may not equal 100%.  
 \* **Minimum Detection Limit.** Based on the volume of air sampled, this is the lowest number of spores that can be detected and is an estimate of the lowest concentration of spores that can be read in the sample.  
 NA = Not Applicable.

Spores that were observed from the samples submitted are listed on this report. If a spore is not listed on this report it was not observed in the samples submitted.

**Interpretation Guidelines:** A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For questions relating to medical conditions you should consult an occupational or environmental health physician or professional.

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**NOT ELEVATED** means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are lower than expected and may indicate no problematic fungal growth.

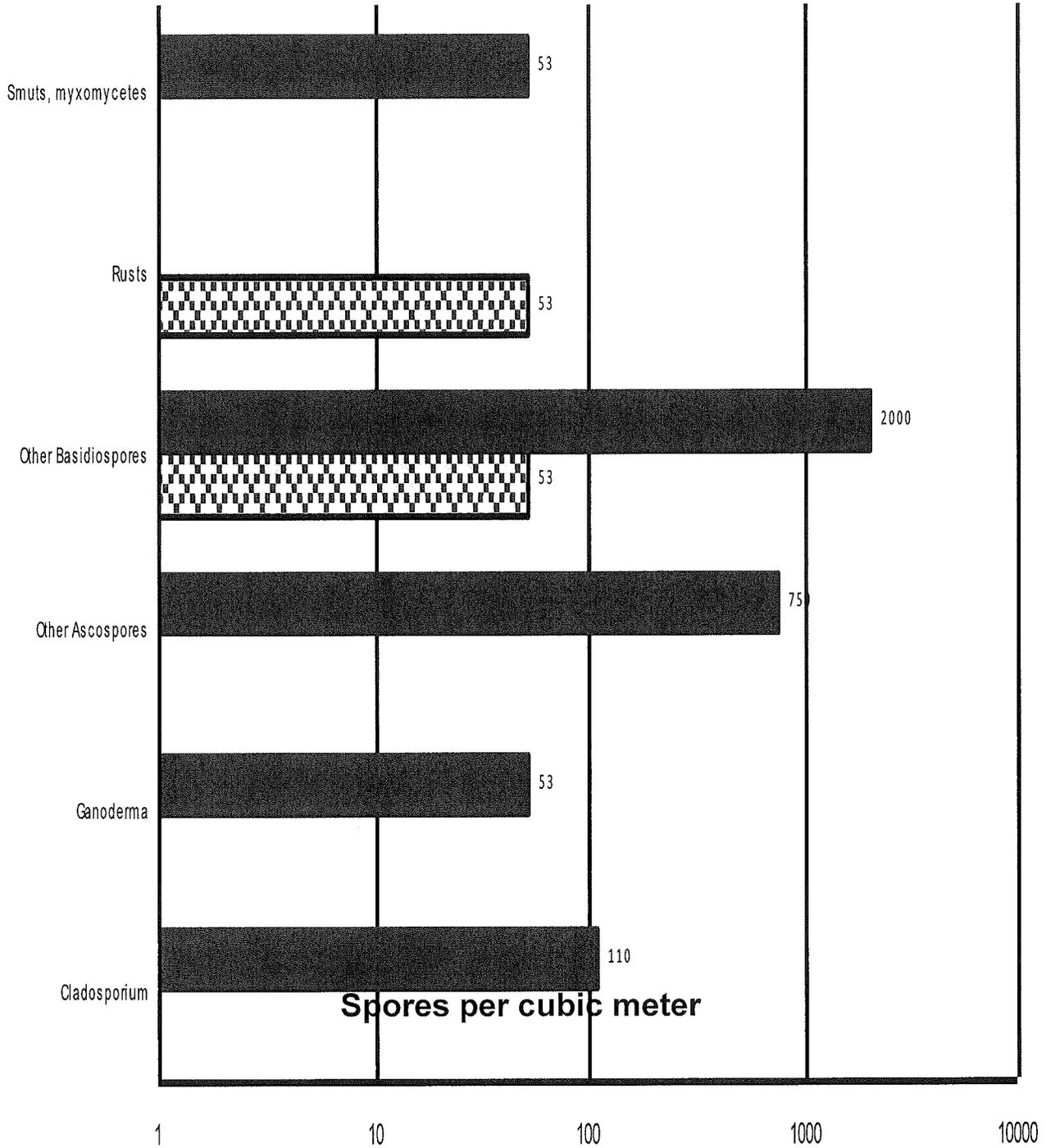
**UNUSUAL** means that the presence of current or former growth was observed in the analyzed sample. An abundance of spores are present, and/or growth structures including hyphae and/or fruiting bodies are present and associated with one or more of the types of mold/fungi identified in the analyzed sample.

**NORMAL** means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s) tested.



Chain of Custody # 1080001

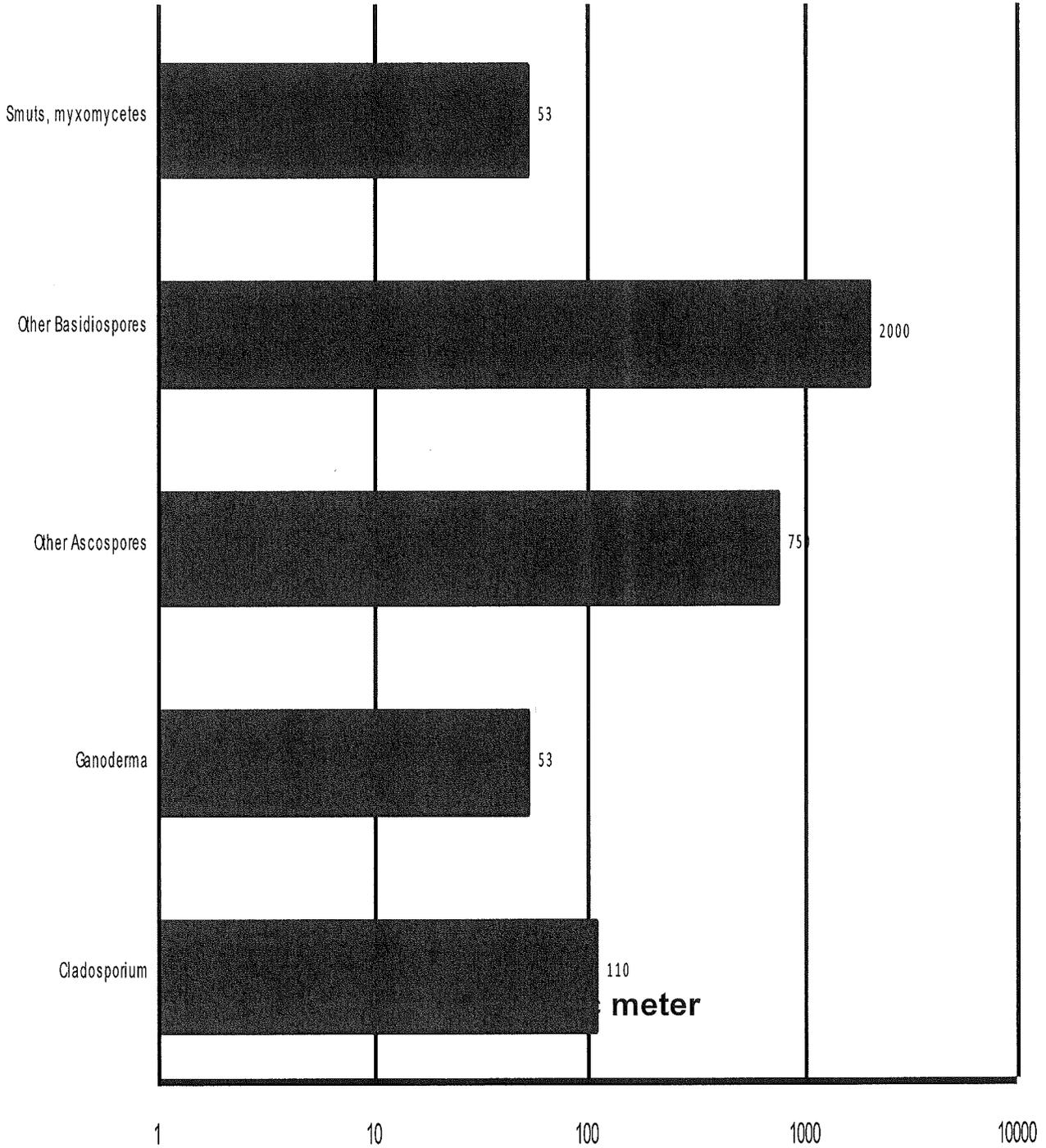
▨ Rm A3  
■ Ambient Front





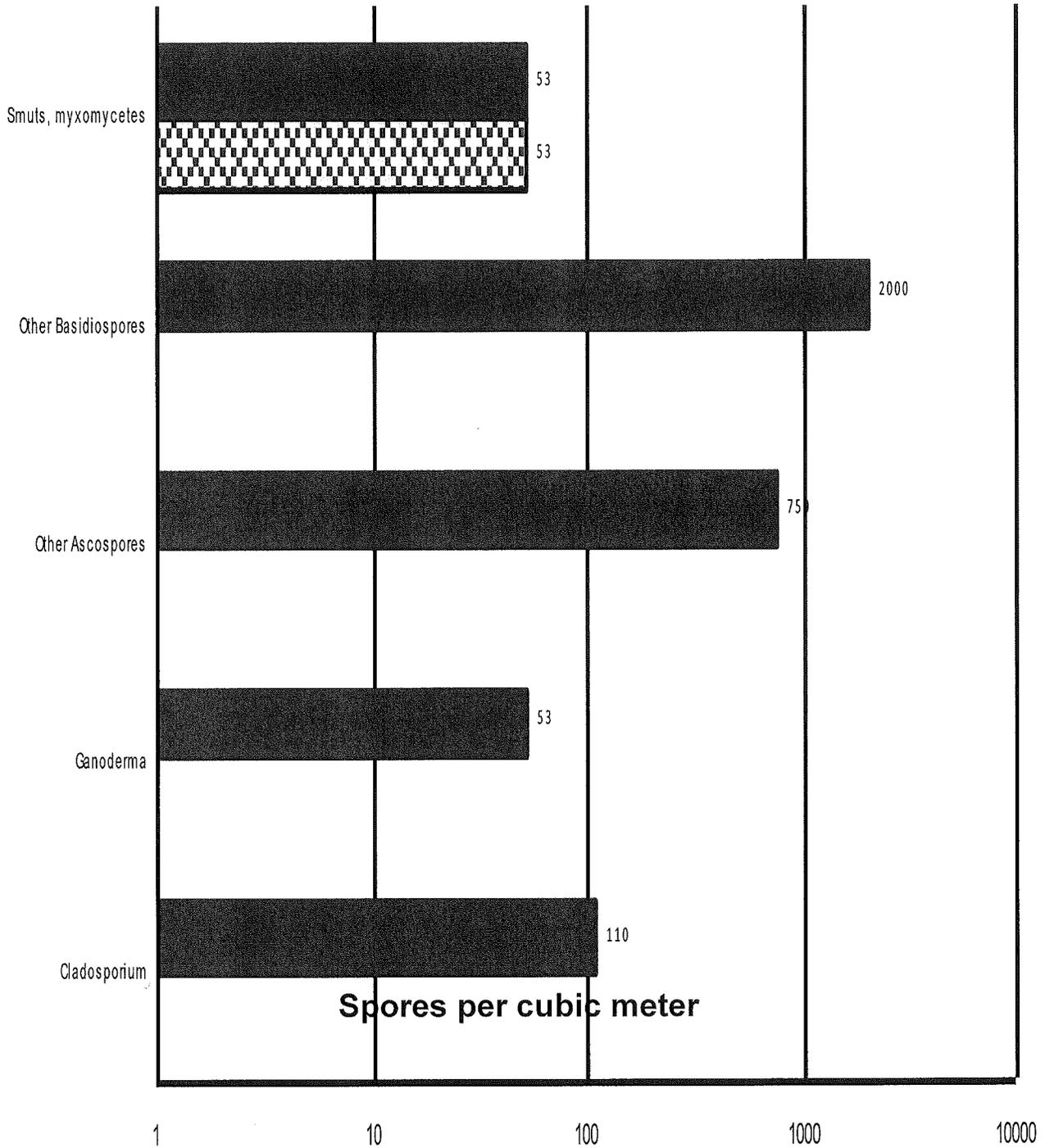
Chain of Custody # 1080001

▨ Rm A9  
■ Ambient Front



Chain of Custody # 1080001

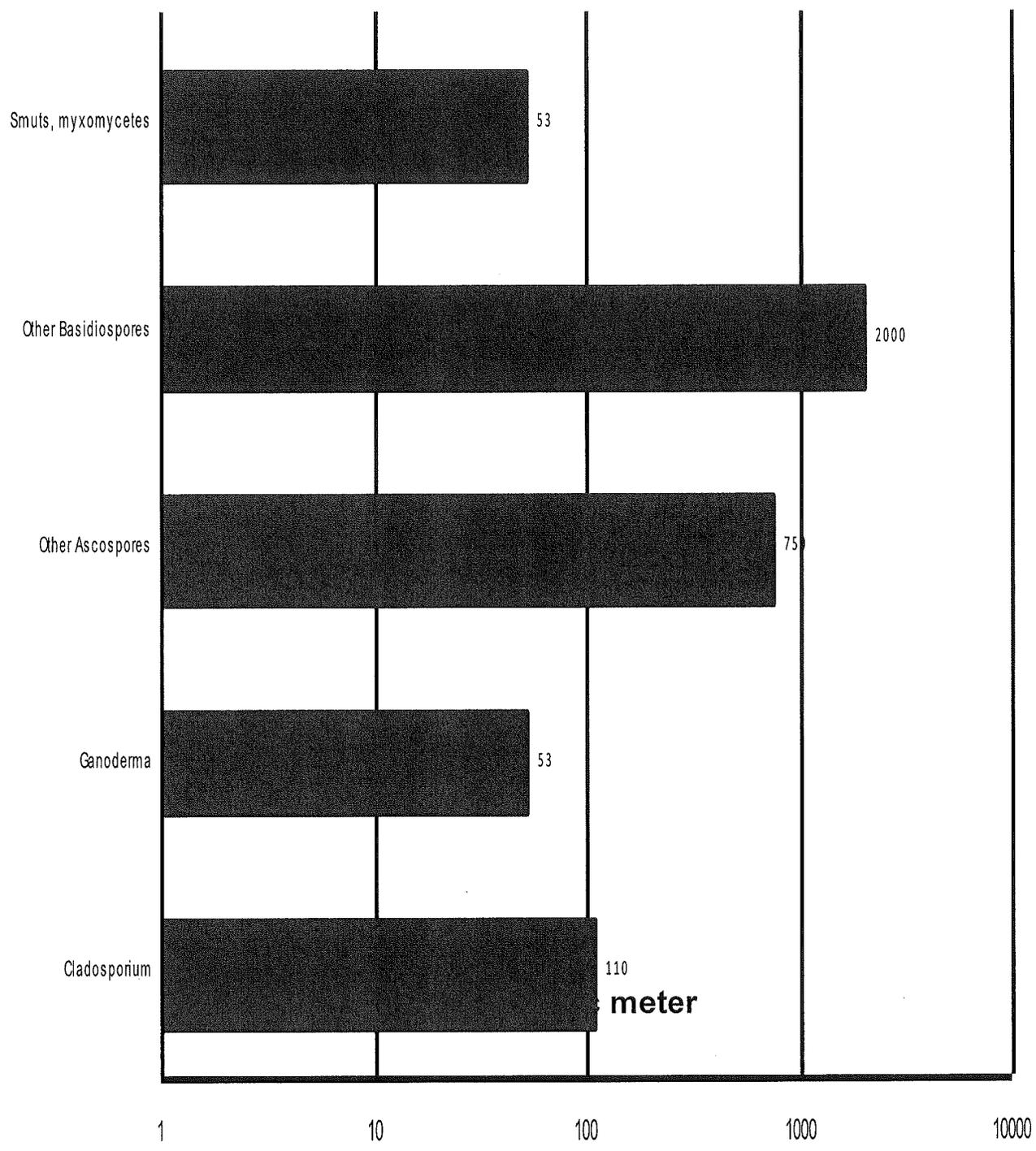
▨ Rm B1  
■ Ambient Front





Chain of Custody # 1080001

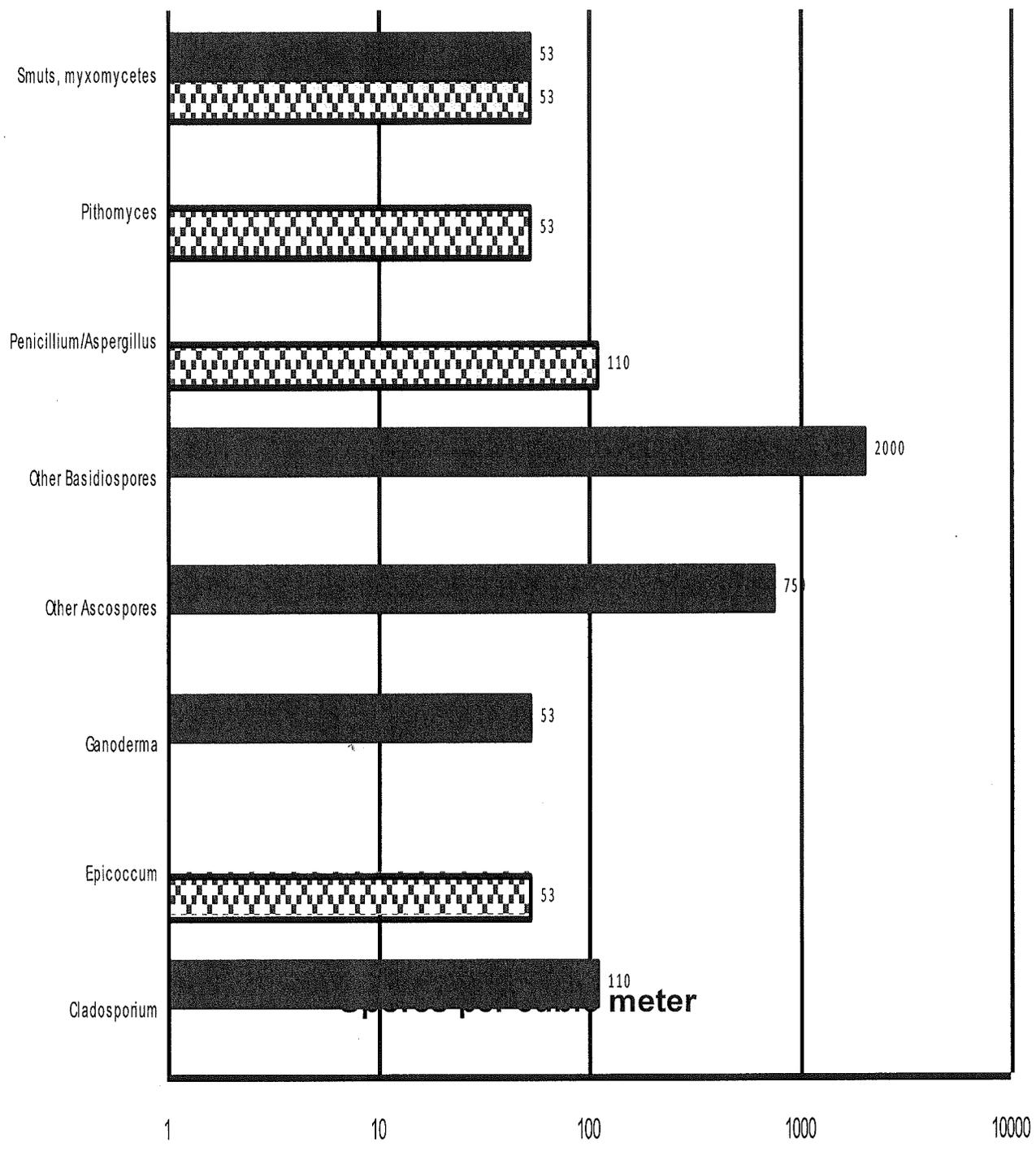
▨ Rm B8  
■ Ambient Front





Chain of Custody # 1080001

▨ Rm C26  
■ Ambient Front



Identification	Outdoor Habitat	Indoor Habitat	Possible Allergic Potential Not an opinion or interpretation	Comments
Cladosporium	The most common spore type reported in the air worldwide. Found on dead and dying plant litter, and soil.	Commonly found on wood and wallboard. Commonly grows on window sills, textiles and foods.	Type I (hay fever and asthma), Type III (hypersensitivity pneumonitis) allergies.	A very common and important allergen source both outdoors and indoors.
Epicoccum	Commonly found everywhere. Grows on plant debris, insects and soil.	Capable of growing on several different substrates, notably wallboard and paper.	Type I (hay fever and asthma) allergies.	Very common in the summer, especially in the midwest and during harvest time.
Ganoderma	Common everywhere growing on hardwood trees.	None known.	None known.	
Ascospores	Constitutes a large part of the airspora outside. Can reach very high numbers in the air outside during the spring and summer. Can increase in numbers during and after rainfalls.	Very few of this group grow inside. The notable exception is Chaetomium, Ascotricha and Peziza.	Little known for most of this group of fungi. Dependent on the type (see Chaetomium and Ascotricha).	
Basidiospores	Commonly found everywhere, especially in the late summer and fall. These spores are from Mushrooms.	Mushrooms are not normally found growing indoors, but can grow on wet lumber, especially in crawlspaces. Sometimes mushrooms can be seen growing in flower pots indoors.	Some allergenicity reported. Type I (hay fever, asthma) and Type III (hypersensitivity pneumonitis).	Among the group of Mushrooms (Basidiomycetes) are dry rot fungi Serpula and Poria that are particularly destructive to buildings.
Penicillium/Aspergillus	Common everywhere. Normally found in the air in small amounts in outdoor air. Grows on nearly everything.	Wetted wallboard, wood, food, leather, etc. Able to grow on many substrates indoors.	Type I (hay fever and asthma) allergies and Type III (hypersensitivity pneumonitis) allergies.	This is a combination group of Penicillium and Aspergillus and is used when only the spores are seen. The spores are so similar that they cannot be reliably separated into their respective genera.
Pitheomyces	Commonly seen everywhere growing dead leaves, soil and grasses.	Not normally found growing indoors, sometimes on wallboard.	None known.	
Rusts	Common everywhere growing on grasses, trees and other living plants.	Does not grow indoors.	Type I (hay fever and asthma) allergies.	Rust requires a living plant host to complete part of its lifecycle and thus, is not normally found growing indoors except perhaps on an infected house plant.
Smuts, myxomycetes	Commonly found everywhere, especially on logs, grasses and weeds.	Smuts don't normally grow indoors, but can occasionally be found on things brought from outside and stored in the house. Myxomycetes can occasionally grow indoors, but need lots of water to be established.	Type I (hay fever and asthma) allergies.	Smuts and myxomycetes are a combined group of organisms because their spores look so similar and cannot be reliably distinguished from each other.



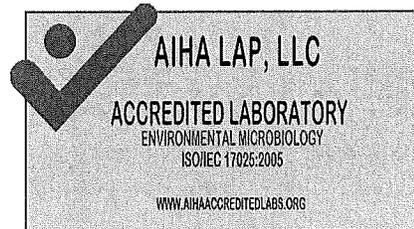
COASTAL ENVIRONMENTAL  
PO BOX 167  
HAMMONTON, NJ 08330

## Certificate of Mold Analysis

Prepared for: COASTAL ENVIRONMENTAL  
 Phone Number:  
 Fax Number:  
 Project Name: WASHINGTON TWP SCHOOL DIST - CHESTNUT RIDGE MS  
 Test Location: 641 HURFFVILL CROSSKEYS RD  
 SEWELL, NJ  
 Chain of Custody #: 1079996  
 Received Date: October 17, 2017  
 Report Date: October 17, 2017

Carlos Ochoa, Technical and Quality Control Manager

Currently there are no Federal regulations for evaluating potential health effects of fungal contamination and remediation. This information is subject to change as more information regarding fungal contaminants becomes available. For more information visit <http://www.epa.gov/mold> or [www.nyc.gov/html/doh/html/epi/mold.shtml](http://www.nyc.gov/html/doh/html/epi/mold.shtml). This document was designed to follow currently known industry guidelines for the interpretation of microbial sampling, analysis, and remediation. Since interpretation of mold analysis reports is a scientific work in progress, it may as such be changed at any time without notice. The client is solely responsible for the use or interpretation. PRO-LAB/SSPTM Inc. makes no express or implied warranties as to health of a property from only the samples sent to their laboratory for analysis. The Client is hereby notified that due to the subjective nature of fungal analysis and the mold growth process, laboratory samples can and do change over time relative to the originally sampled material. PRO-LAB/SSPTM Inc. reserves the right to properly dispose of all samples after the testing of such samples are sufficiently completed or after a 7 day period, whichever is greater.



LAB # 163230

For more information please contact PRO-LAB at (954) 384-4446 or email [info@prolabinc.com](mailto:info@prolabinc.com)

Prepared for : COASTAL ENVIRONMENTAL

Test Address : WASHINGTON TWP SCHOOL DIST - CHESTNUT RIDGE MS

641 HURFFVILL CROSSKEYS RD  
SEWELL, NJ

ANALYSIS METHOD	Spore trap analysis	Spore trap analysis	Spore trap analysis	Spore trap analysis
LOCATION	AMBIENT FRONT	AMBIENT BACK	RM 109	RM 118
COC / LINE #	1079996-1	1079996-2	1079996-3	1079996-4
SAMPLE TYPE & VOLUME	AIR-O-CELL - 75L	AIR-O-CELL - 75L	AIR-O-CELL - 75L	AIR-O-CELL - 75L
SERIAL NUMBER	24933604	24933597	24933611	24933606
COLLECTION DATE	Oct 13, 2017	Oct 13, 2017	Oct 13, 2017	Oct 13, 2017
ANALYSIS DATE	Oct 17, 2017	Oct 17, 2017	Oct 17, 2017	Oct 17, 2017
CONCLUSION	NOT ELEVATED	CONTROL	NOT ELEVATED	NOT ELEVATED

IDENTIFICATION	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total
Cladosporium	16	210	15	4	53	4						
Ganoderma	4	53	4	4	53	4						
Other Ascospores	16	210	15	16	210	16						
Other Basidiospores	60	800	56	72	960	72	4	53	50	4	53	100
Penicillium/Aspergillus	4	53	4	4	53	4	4	53	50			
Rusts												
Smuts, myxomycetes	8	110	8									

TOTAL SPORES	108	1,436	100	100	1,329	100	8	106	100	4	53	100
MINIMUM DETECTION LIMIT*	4	53		4	53		4	53		4	53	

BACKGROUND DEBRIS	Light			Light			Light			Light		
Cellulose Fiber										4	53	

OBSERVATIONS & COMMENTS												
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Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy and Too Heavy for Accurate Count, are used to indicate the amount of deposited debris. Light (None to up to 25% obstruction); Medium (26% to up to 75% obstruction); Heavy (76% to up to 90% obstruction); Too Heavy (Greater than 90% obstruction). Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is 'Heavy' or 'Too Heavy for Accurate Count'. All calculations are rounded to two significant figures and therefore, the total percentage of spore numbers may not equal 100%.  
\* Minimum Detection Limit. Based on the volume of air sampled, this is the lowest number of spores that can be detected and is an estimate of the lowest concentration of spores that can be read in the sample.  
NA = Not Applicable.

Spores that were observed from the samples submitted are listed on this report. If a spore is not listed on this report it was not observed in the samples submitted.

**Interpretation Guidelines:** A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For questions relating to medical conditions you should consult an occupational or environmental health physician or professional.  
**CONTROL** is a baseline sample showing what the spore count and diversity is at the time of sampling. The control sample(s) is usually collected outside of the structure being tested and used to determine if this sample(s) is similar in diversity and abundance to the inside sample(s).  
**ELEVATED** means that the amount and/or diversity of spores, as compared to the control sample(s), and other samples in our database, are higher than expected. This can indicate that fungi have grown because of a water leak or water intrusion. Fungi that are considered to be indicators of water damage include, but are not limited to: *Chaetomium*, *Fusarium*, *Memnoniella*, *Stachybotrys*, *Scopulariopsis*, *Ulocladium*.  
**NOT ELEVATED** means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are lower than expected and may indicate no problematic fungal growth.  
**UNUSUAL** means that the presence of current or former growth was observed in the analyzed sample. An abundance of spores are present, and/or growth structures including hyphae and/or fruiting bodies are present and associated with one or more of the types of mold/fungi identified in the analyzed sample.  
**NORMAL** means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s) tested.

Prepared for : COASTAL ENVIRONMENTAL

Test Address : WASHINGTON TWP SCHOOL DIST - CHESTNUT RIDGE MS

641 HURFFVILL CROSSKEYS RD  
SEWELL, NJ

ANALYSIS METHOD	Spore trap analysis	Spore trap analysis	Spore trap analysis	INTENTIONALLY BLANK
LOCATION	RM 121	RM 204	RM 227	
COC / LINE #	1079996-5	1079996-6	1079996-7	
SAMPLE TYPE & VOLUME	AIR-O-CELL - 75L	AIR-O-CELL - 75L	AIR-O-CELL - 75L	
SERIAL NUMBER	24933613	24933607	24933626	
COLLECTION DATE	Oct 13, 2017	Oct 13, 2017	Oct 13, 2017	
ANALYSIS DATE	Oct 17, 2017	Oct 17, 2017	Oct 17, 2017	
CONCLUSION	NOT ELEVATED	NOT ELEVATED	NOT ELEVATED	

IDENTIFICATION	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total	Raw Count	Spores per m <sup>3</sup>	Percent of Total
Cladosporium												
Ganoderma												
Other Ascospores												
Other Basidiospores	4	53	25	8	110	40	8	110	67			
Penicillium/Aspergillus				8	110	40						
Rusts	4	53	25									
Smuts, myxomycetes	8	110	51	4	53	19	4	53	33			
<b>TOTAL SPORES</b>	16	216	100	20	273	100	12	163	100			
<b>MINIMUM DETECTION LIMIT*</b>	4	53		4	53		4	53				
<b>BACKGROUND DEBRIS</b>	Light			Light			Light					
Cellulose Fiber	4	53					4	53				
<b>OBSERVATIONS &amp; COMMENTS</b>												

Background debris qualitatively estimates the amount of particles that are not pollen or spores and directly affects the accuracy of the spore counts. The categories of Light, Moderate, Heavy and Too Heavy for Accurate Count, are used to indicate the amount of deposited debris. Light (None to up to 25% obstruction); Medium (26% to up to 75% obstruction); Heavy (76% to up to 90% obstruction); Too Heavy (Greater than 90% obstruction). Increasing amounts of debris will obscure small spores and can prevent spores from impacting onto the slide. The actual number of spores present in the sample is likely higher than reported if the debris estimate is 'Heavy' or 'Too Heavy for Accurate Count'. All calculations are rounded to two significant figures and therefore, the total percentage of spore numbers may not equal 100%.  
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**Interpretation Guidelines:** A determination is added to the report to help users interpret the mold analysis results. A mold report is only one aspect of an indoor air quality investigation. The most important aspect of mold growth in a living space is the availability of water. Without a source of water, mold generally will not become a problem in buildings. These determinations are in no way meant to imply any health outcomes or financial decisions based solely on this report. For questions relating to medical conditions you should consult an occupational or environmental health physician or professional.  
**CONTROL** is a baseline sample showing what the spore count and diversity is at the time of sampling. The control sample(s) is usually collected outside of the structure being tested and used to determine if this sample(s) is similar in diversity and abundance to the inside sample(s).  
**ELEVATED** means that the amount and/or diversity of spores, as compared to the control sample(s), and other samples in our database, are higher than expected. This can indicate that fungi have grown because of a water leak or water intrusion. Fungi that are considered to be indicators of water damage include, but are not limited to: *Chaetomium*, *Fusarium*, *Memoniella*, *Stachybotrys*, *Scopulariopsis*, *Ulocladium*.  
**NOT ELEVATED** means that the amount and/or the diversity of spores, as compared to the control sample and other samples in our database, are lower than expected and may indicate no problematic fungal growth.  
**UNUSUAL** means that the presence of current or former growth was observed in the analyzed sample. An abundance of spores are present, and/or growth structures including hyphae and/or fruiting bodies are present and associated with one or more of the types of mold/fungi identified in the analyzed sample.  
**NORMAL** means that no presence of current or former growth was observed in the analyzed sample. If spores are recorded they are normally what is in the air and have settled on the surface(s) tested.



1675 North Commerce Parkway, Weston, FL 33326 (954) 384-4446

Chain of Custody # 1079996

 Ambient Front

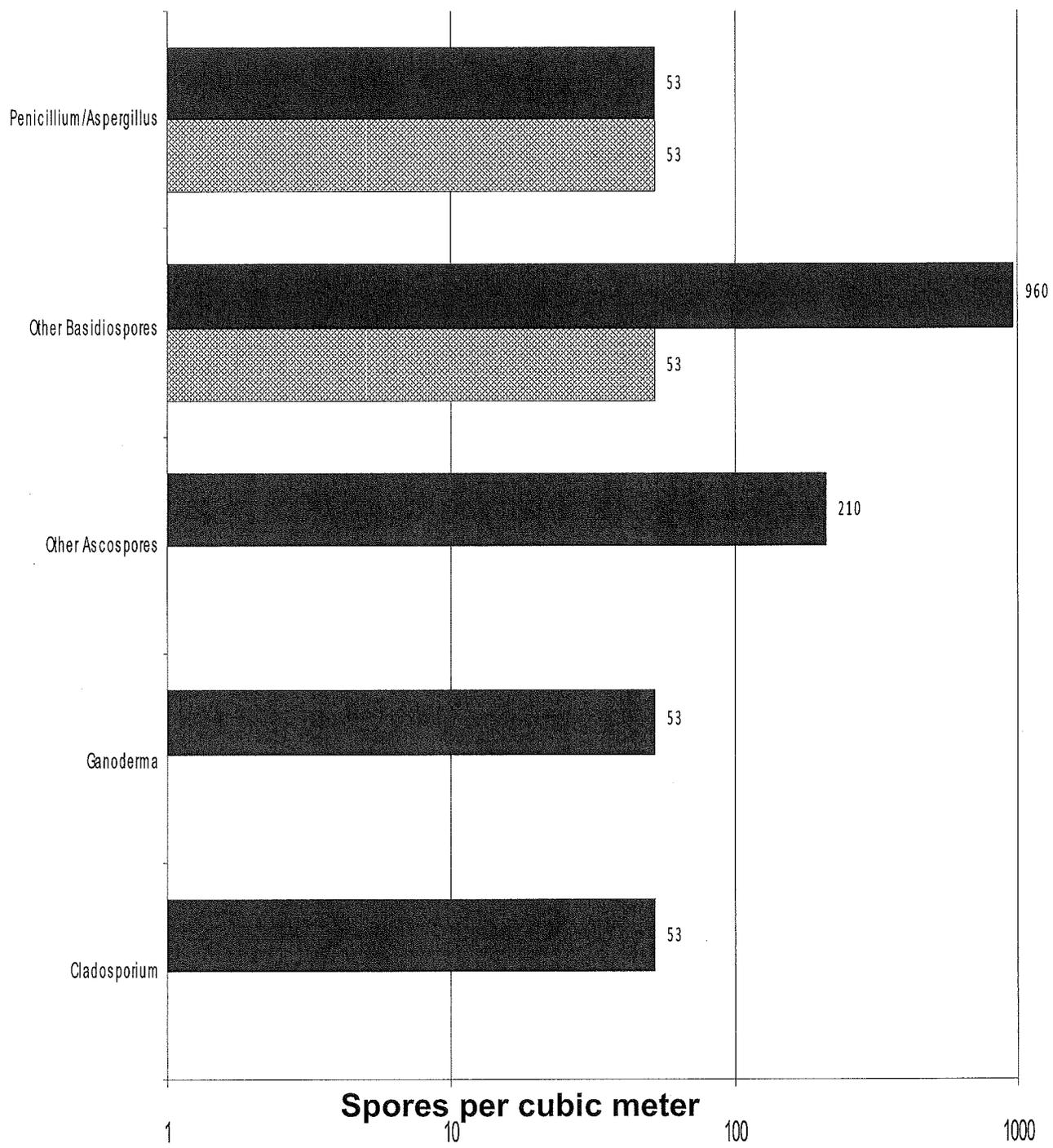


**Spores per cubic meter**



Chain of Custody # 1079996

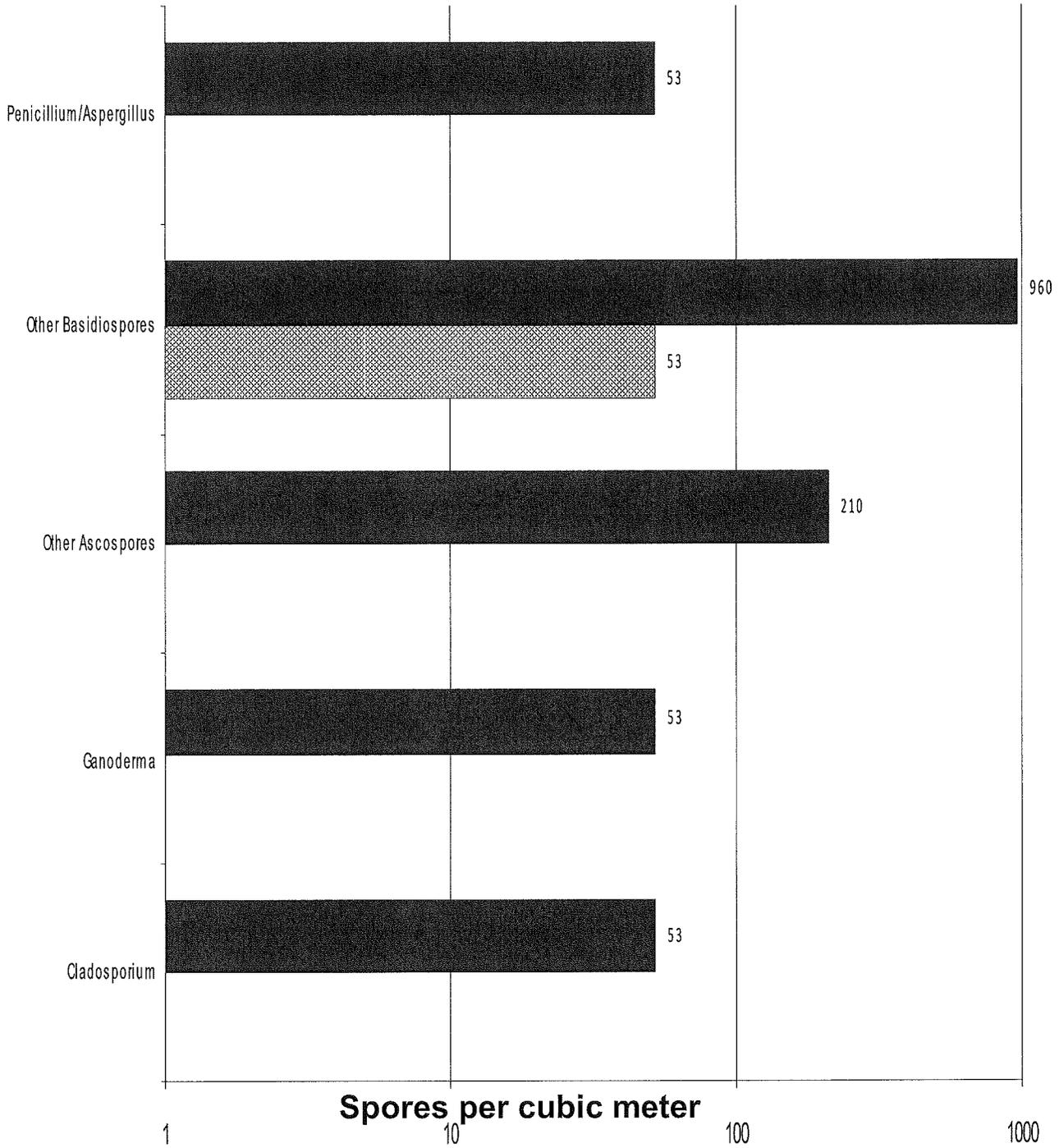
▨ Rm 109  
■ Ambient Back





Chain of Custody # 1079996

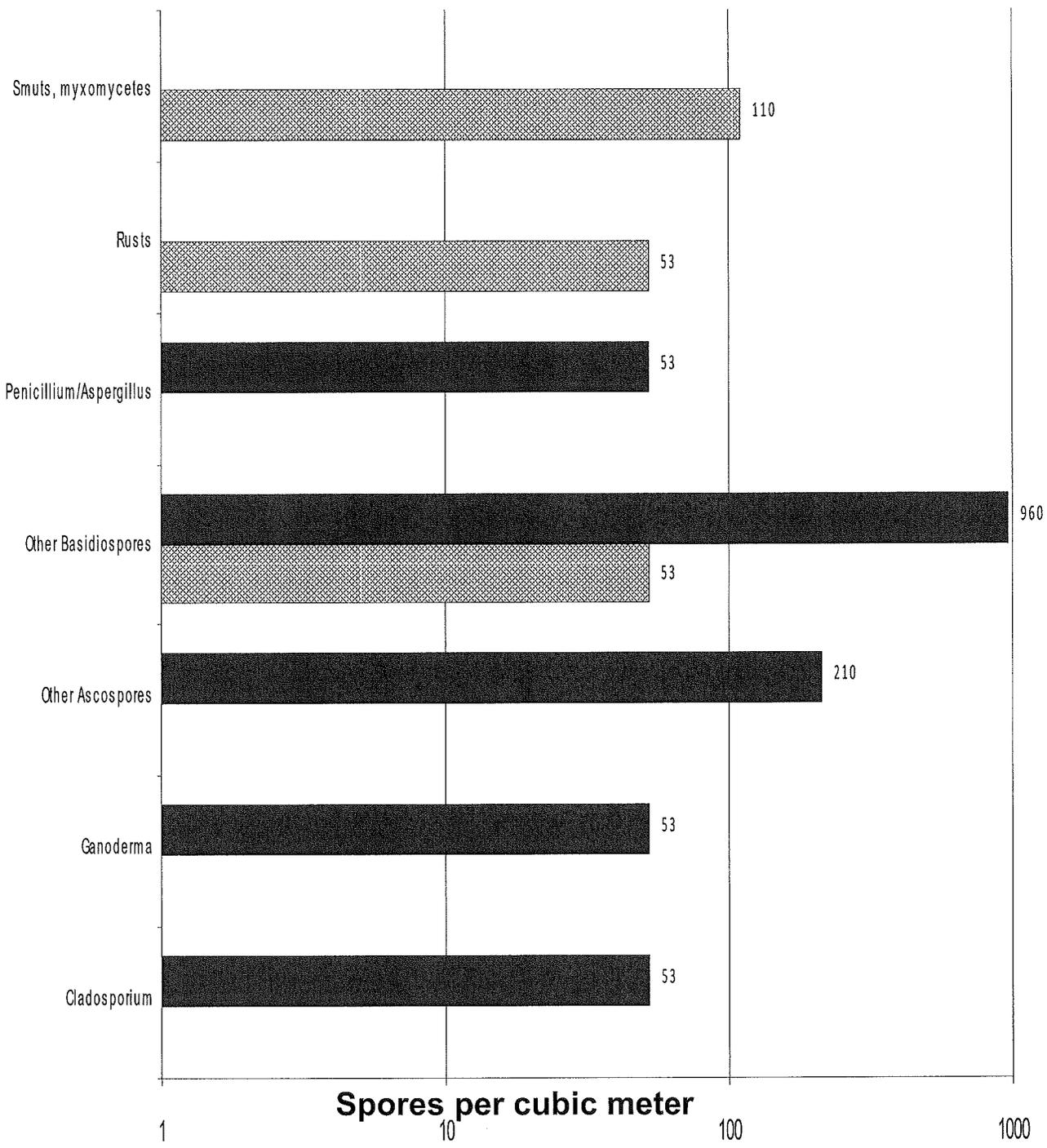
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■ Ambient Back





Chain of Custody # 1079996

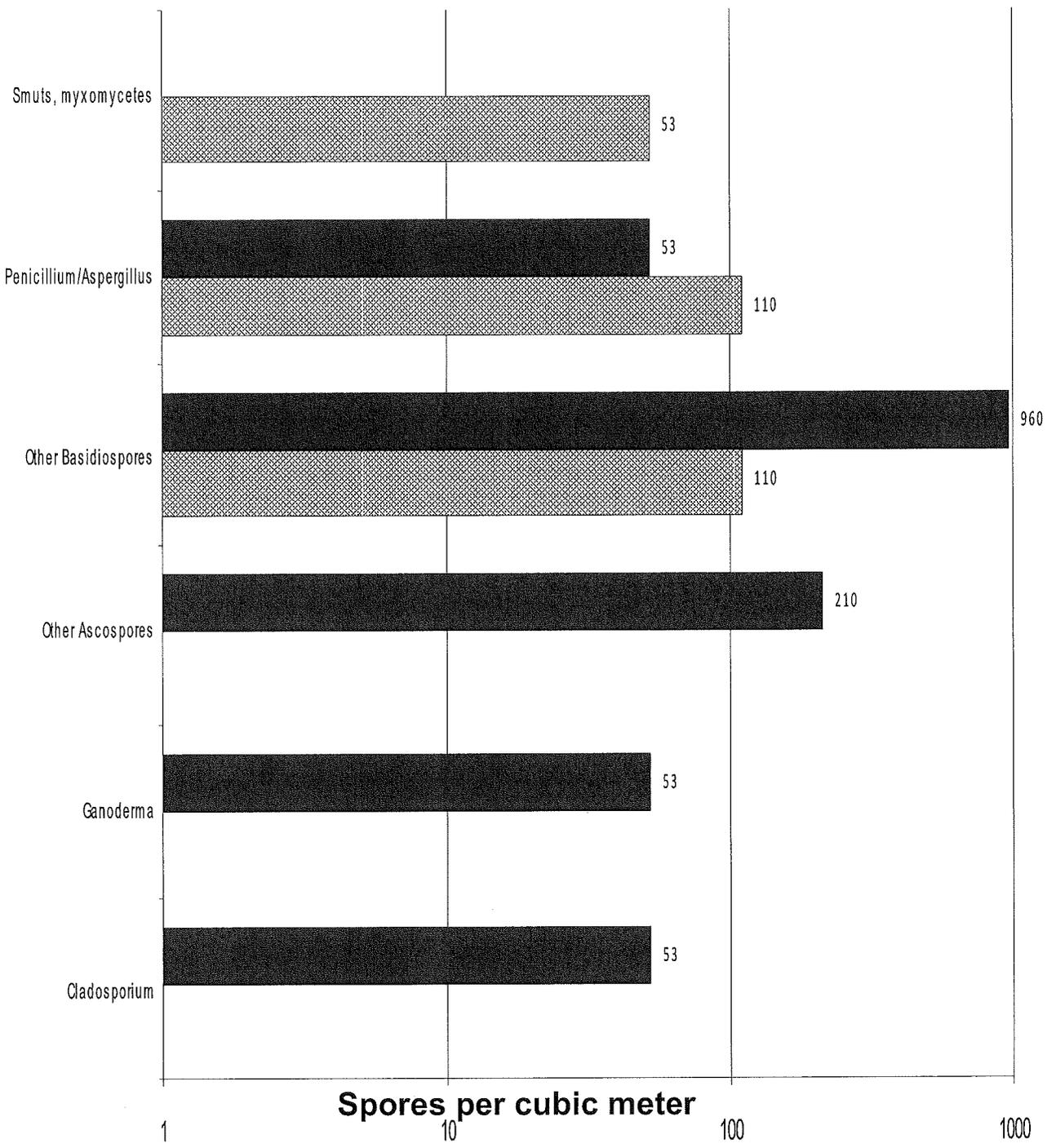
▨ Rm 121  
■ Ambient Back





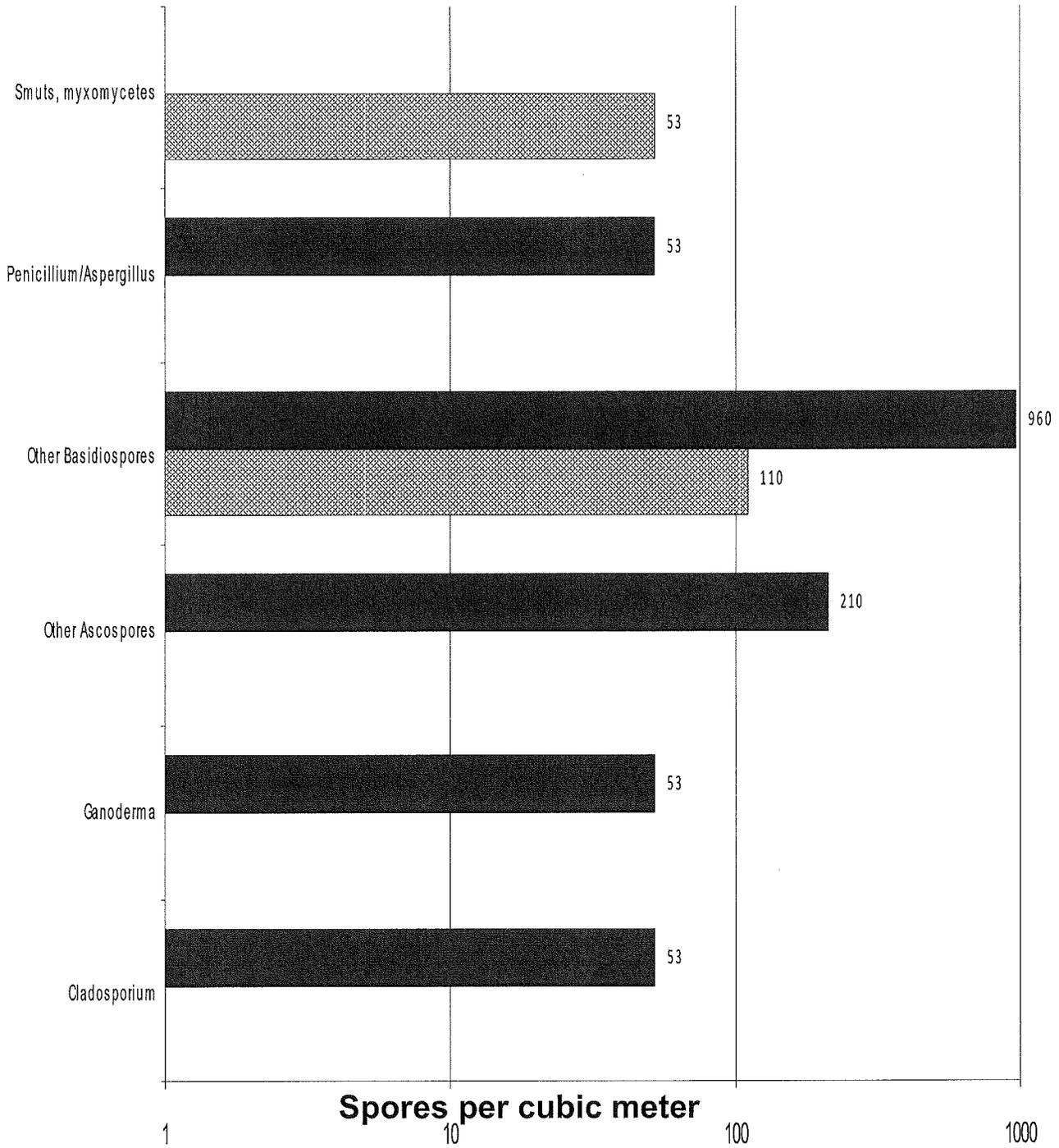
Chain of Custody # 1079996

▨ Rm 204  
■ Ambient Back



Chain of Custody # 1079996

▨ Rm 227  
■ Ambient Back



Identification	Outdoor Habitat	Indoor Habitat	Possible Allergic Potential Not an opinion or interpretation	Comments
Cladosporium	The most common spore type reported in the air worldwide. Found on dead and dying plant litter, and soil.	Commonly found on wood and wallboard. Commonly grows on window sills, textiles and foods.	Type I (hay fever and asthma), Type III (hypersensitivity pneumonitis) allergies.	A very common and important allergen source both outdoors and indoors.
Ganoderma	Common everywhere growing on hardwood trees.	None known.	None known.	
Ascospores	Common everywhere. Constitutes a large part of the airspora outside. Can reach very high numbers in the air outside during the spring and summer. Can increase in numbers during and after rainfalls.	Very few of this group grow inside. The notable exception is Chaetomium, Ascotracha and Peziza.	Little known for most of this group of fungi. Dependent on the type (see Chaetomium and Ascotracha).	
Basidiospores	Commonly found everywhere, especially in the late summer and fall. These spores are from Mushrooms.	Mushrooms are not normally found growing indoors, but can grow on wet lumber, especially in crawlspaces. Sometimes mushrooms can be seen growing in flower pots indoors.	Some allergenicity reported. Type I (hay fever, asthma) and Type III (hypersensitivity pneumonitis).	Among the group of Mushrooms (Basidiomycetes) are dry rot fungi Serpula and Poria that are particularly destructive to buildings.
Penicillium/Aspergillus	Common everywhere. Normally found in the air in small amounts in outdoor air. Grows on nearly everything.	Wetted wallboard, wood, food, leather, etc. Able to grow on many substrates indoors.	Type I (hay fever and asthma) allergies and Type III (hypersensitivity pneumonitis) allergies.	This is a combination group of Penicillium and Aspergillus and is used when only the spores are seen. The spores are so similar that they cannot be reliably separated into their respective genera.
Rusts	Common everywhere growing on grasses, trees and other living plants.	Does not grow indoors.	Type I (hay fever and asthma) allergies.	Rust requires a living plant host to complete part of its lifecycle and thus, is not normally found growing indoors except perhaps on an infected house plant.
Smuts, myxomycetes	Commonly found everywhere, especially on logs, grasses and weeds.	Smuts don't normally grow indoors, but can occasionally be found on things brought from outside and stored in the house. Myxomycetes can occasionally grow indoors, but need lots of water to be established.	Type I (hay fever and asthma) allergies.	Smuts and myxomycetes are a combined group of organisms because their spores look so similar and cannot be reliably distinguished from each other.