



**Certificate of Laboratory Analysis**  
**Non-Viable Spore Trap Analysis**

Dare County Schools  
 Ian Adams  
 3020 S Wrightsville Ave  
 Nags Head, NC

**Project #:** 24-3281  
**Project Location:** Manteo Middle School

**Project Type:** IAQ  
**PO/Claim #:**

**Table 1: Non-Viable Air Samples**

Date Collected:	11/13/24	11/13/24	11/13/24	11/13/24	11/13/24
	1	2	3	4	5
Spore Identification	Cafeteria	Gym	Art Room	Hall at C27	Media
<i>Cladosporium</i>	53	27	27	67	67
Ascospores	13	-	-	13	53
Basidiospores <sup>2</sup>	40	40	27	13	53
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> <sup>4</sup>	27	27	13	13	93
<i>Penicillium/Aspergillus</i> Group <sup>1</sup>	-	-	27	-	-
Hyphal Elements <sup>3</sup>	-	80	-	-	133
<i>Alternaria</i>	-	-	-	13	40
<i>Curvularia</i>	-	93	93	40	280
<i>Epicoccum</i>	-	-	13	-	13
<i>Cercospora</i>	-	-	-	-	-
<i>Arthrinium</i>	-	-	-	-	-
Clear Brown	-	-	-	-	-
Colorless	-	-	-	-	-
<i>Trichocladium</i>	-	-	-	-	27
Unidentified	-	-	-	-	13
<i>Ulocladium</i>	-	13	-	-	-
Torula	-	-	-	-	-
Pithomyces	-	-	-	27	93
Rust <sup>5</sup>	-	-	-	-	-
<i>Drechslera/Bipolaris</i>	-	27	-	-	-
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
<b>Total Spores/m<sup>3</sup></b>	<b>133</b>	<b>307</b>	<b>200</b>	<b>187</b>	<b>867</b>
<b>Particulate Level</b>	<b>low</b>	<b>moderate</b>	<b>low-moderate</b>	<b>low-moderate</b>	<b>moderate-heavy</b>
<b>Date Analyzed:</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>

Analyzed by: Cathy A. Richmond, B.S.

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**Project Type:** IAQ  
**PO/Claim #:** -

**Table 1: Non-Viable Air Samples**

Date Collected:	11/13/24	11/13/24	11/13/24	11/13/24	11/13/24
	6	7	8	9	10
Spore Identification	Hall at D14	Hall at E5	E4	CR D7	Second Floor Center
<i>Cladosporium</i>	27	53	40	27	40
Ascospores	-	27	27	27	40
Basidiospores <sup>2</sup>	13	13	27	13	40
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> <sup>4</sup>	27	27	-	27	13
<i>Penicillium/Aspergillus</i> Group <sup>1</sup>	-	13	27	80	13
Hyphal Elements <sup>3</sup>	-	27	13	107	67
<i>Alternaria</i>	13	-	-	-	13
<i>Curvularia</i>	40	53	-	133	67
<i>Epicoccum</i>	-	-	-	-	13
<i>Cercospora</i>	-	-	-	-	-
<i>Arthrinium</i>	-	-	-	-	-
Clear Brown	-	-	-	-	-
Colorless	-	-	-	-	-
Trichocladium	-	-	-	-	-
Unidentified	-	-	-	-	13
<i>Ulocladium</i>	-	-	-	-	-
Torula	-	-	-	-	-
Pithomyces	-	27	-	13	13
Rust <sup>5</sup>	-	-	-	-	-
<i>Drechslera/Bipolaris</i>	-	13	-	27	13
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
<b>Total Spores/m<sup>3</sup></b>	<b>120</b>	<b>253</b>	<b>133</b>	<b>453</b>	<b>347</b>
<b>Particulate Level</b>	<b>low-moderate</b>	<b>moderate</b>	<b>low</b>	<b>moderate</b>	<b>moderate</b>
<b>Date Analyzed:</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>

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 140 Iowa Lane, Suite 102  
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 (919) 342-4936

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**Project #:** 24-3281  
**Project Location:** Manteo Middle School

**Project Type:** IAQ  
**PO/Claim #:**

**Table 1: Non-Viable Air Samples**

Date Collected:	11/13/24	11/13/24	11/13/24	11/13/24	11/13/24
	11	12	13	14	15
Spore Identification	Hall at G9	CR G6	Hall at F4	CR F6	Outdoor Air
<i>Cladosporium</i>	40	93	53	120	200
Ascospores	13	13	40	40	67
Basidiospores <sup>2</sup>	27	27	-	40	120
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> <sup>4</sup>	67	13	40	40	67
<i>Penicillium/Aspergillus</i> Group <sup>1</sup>	40	27	13	53	53
Hyphal Elements <sup>3</sup>	13	27	13	80	67
<i>Alternaria</i>	-	-	-	-	-
<i>Curvularia</i>	53	13	40	67	347
<i>Epicoccum</i>	-	-	13	-	-
<i>Cercospora</i>	-	-	-	-	-
<i>Arthrinium</i>	-	-	-	-	-
Clear Brown	-	-	-	-	-
Colorless	-	-	-	-	-
Trichocladium	-	-	-	-	-
Unidentified	-	-	-	-	-
<i>Ulocladium</i>	-	-	-	-	-
Torula	-	-	-	-	-
Pithomyces	-	-	13	-	13
Rust <sup>5</sup>	-	-	-	-	-
<i>Drechslera/Bipolaris</i>	13	-	13	-	13
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
<b>Total Spores/m<sup>3</sup></b>	<b>267</b>	<b>213</b>	<b>240</b>	<b>440</b>	<b>947</b>
<b>Particulate Level</b>	<b>low-moderate</b>	<b>low-moderate</b>	<b>low-moderate</b>	<b>low-moderate</b>	<b>low-moderate</b>
<b>Date Analyzed:</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>	<b>11/18/24</b>

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 Ian Adams  
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 -

**Project #:** 24-3281  
**Project Location:** Manteo Middle School  
  
**Project Type:** -  
 IAQ  
**PO/Claim #:** -

**Sample Number:** 1  
**Sample Location:** Cafeteria  
**Date Collected:** 11/13/24  
**Test Requested:** Non-viable spore trap analysis  
**Date Analyzed:** 11/18/24

**Volume (L):** 75  
**Percentage of Slide Read:** 100.0%  
**Detection Limit:** 13.33  
**Particulate Level:** low  
**Notes:**

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	4	53	spores/m <sup>3</sup>	40%
Ascospores	1	13	spores/m <sup>3</sup>	10%
Basidiospores	3	40	spores/m <sup>3</sup>	30%
Smuts, <i>Periconia</i> , Myxomycetes	2	27	spores/m <sup>3</sup>	20%
<i>Penicillium/Aspergillus</i> Group		-	spores/m <sup>3</sup>	-
Hyphal Elements		-	spores/m <sup>3</sup>	-
<i>Alternaria</i>		-	spores/m <sup>3</sup>	-
<i>Curvularia</i>		-	spores/m <sup>3</sup>	-
<i>Epicoccum</i>		-	spores/m <sup>3</sup>	-
<i>Cercospora</i>		-	spores/m <sup>3</sup>	-
<i>Arthrinium</i>		-	spores/m <sup>3</sup>	-
Clear Brown		-	spores/m <sup>3</sup>	-
Colorless		-	spores/m <sup>3</sup>	-
<i>Trichocladium</i>		-	spores/m <sup>3</sup>	-
Unidentified		-	spores/m <sup>3</sup>	-
<i>Ulocladium</i>		-	spores/m <sup>3</sup>	-
Torula		-	spores/m <sup>3</sup>	-
<i>Pithomyces</i>		-	spores/m <sup>3</sup>	-
Rust		-	spores/m <sup>3</sup>	-
<i>Drechslera/Bipolaris</i>		-	spores/m <sup>3</sup>	-
<i>Tetraploa</i>		-	spores/m <sup>3</sup>	-
<i>Chaetomium</i>		-	spores/m <sup>3</sup>	-
<i>Stachybotrys</i>		-	spores/m <sup>3</sup>	-
		-	spores/m <sup>3</sup>	-
<b>Total Spores</b>	<b>10</b>	<b>133</b>	<b>spores/m<sup>3</sup></b>	

Analyzed by: Cathy A. Richmond, B.S.





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**Project #:** 24-3281  
**Project Location:** Manteo Middle School  
  
**Project Type:** -  
 IAQ  
**PO/Claim #:** -

**Sample Number:** 3  
**Sample Location:** Art Room  
**Date Collected:** 11/13/24  
**Test Requested:** Non-viable spore trap analysis  
**Date Analyzed:** 11/18/24

**Volume (L):** 75  
**Percentage of Slide Read:** 100.0%  
**Detection Limit:** 13.33  
**Particulate Level:** low-moderate  
**Notes:**

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	2	27	spores/m <sup>3</sup>	13%
Ascospores		-	spores/m <sup>3</sup>	-
Basidiospores	2	27	spores/m <sup>3</sup>	13%
Smuts, <i>Periconia</i> , Myxomycetes	1	13	spores/m <sup>3</sup>	7%
<i>Penicillium/Aspergillus</i> Group	2	27	spores/m <sup>3</sup>	13%
Hyphal Elements		-	spores/m <sup>3</sup>	-
<i>Alternaria</i>		-	spores/m <sup>3</sup>	-
<i>Curvularia</i>	7	93	spores/m <sup>3</sup>	47%
<i>Epicoccum</i>	1	13	spores/m <sup>3</sup>	7%
<i>Cercospora</i>		-	spores/m <sup>3</sup>	-
<i>Arthrinium</i>		-	spores/m <sup>3</sup>	-
Clear Brown		-	spores/m <sup>3</sup>	-
Colorless		-	spores/m <sup>3</sup>	-
<i>Trichocladium</i>		-	spores/m <sup>3</sup>	-
Unidentified		-	spores/m <sup>3</sup>	-
<i>Ulocladium</i>		-	spores/m <sup>3</sup>	-
Torula		-	spores/m <sup>3</sup>	-
<i>Pithomyces</i>		-	spores/m <sup>3</sup>	-
Rust		-	spores/m <sup>3</sup>	-
<i>Drechslera/Bipolaris</i>		-	spores/m <sup>3</sup>	-
<i>Tetraploa</i>		-	spores/m <sup>3</sup>	-
<i>Chaetomium</i>		-	spores/m <sup>3</sup>	-
<i>Stachybotrys</i>		-	spores/m <sup>3</sup>	-
		-	spores/m <sup>3</sup>	-
<b>Total Spores</b>	<b>15</b>	<b>200</b>	<b>spores/m<sup>3</sup></b>	

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**Project #:** 24-3281  
**Project Location:** Manteo Middle School  
**Project Type:** - IAQ  
**PO/Claim #:** -

**Sample Number:** 5  
**Sample Location:** Media  
**Date Collected:** 11/13/24  
**Test Requested:** Non-viable spore trap analysis  
**Date Analyzed:** 11/18/24

**Volume (L):** 75  
**Percentage of Slide Read:** 100.0%  
**Detection Limit:** 13.33  
**Particulate Level:** moderate-heavy  
**Notes:** -

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	5	67	spores/m <sup>3</sup>	8%
Ascospores	4	53	spores/m <sup>3</sup>	6%
Basidiospores	4	53	spores/m <sup>3</sup>	6%
Smuts, <i>Periconia</i> , Myxomycetes	7	93	spores/m <sup>3</sup>	11%
<i>Penicillium/Aspergillus</i> Group		-	spores/m <sup>3</sup>	-
Hyphal Elements	10	133	spores/m <sup>3</sup>	15%
<i>Alternaria</i>	3	40	spores/m <sup>3</sup>	5%
<i>Curvularia</i>	21	280	spores/m <sup>3</sup>	32%
<i>Epicoccum</i>	1	13	spores/m <sup>3</sup>	2%
<i>Cercospora</i>		-	spores/m <sup>3</sup>	-
<i>Arthrinium</i>		-	spores/m <sup>3</sup>	-
Clear Brown		-	spores/m <sup>3</sup>	-
Colorless		-	spores/m <sup>3</sup>	-
<i>Trichocladium</i>	2	27	spores/m <sup>3</sup>	3%
Unidentified	1	13	spores/m <sup>3</sup>	2%
<i>Ulocladium</i>		-	spores/m <sup>3</sup>	-
Torula		-	spores/m <sup>3</sup>	-
<i>Pithomyces</i>	7	93	spores/m <sup>3</sup>	11%
Rust		-	spores/m <sup>3</sup>	-
<i>Drechslera/Bipolaris</i>		-	spores/m <sup>3</sup>	-
<i>Tetraploa</i>		-	spores/m <sup>3</sup>	-
<i>Chaetomium</i>		-	spores/m <sup>3</sup>	-
<i>Stachybotrys</i>		-	spores/m <sup>3</sup>	-
		-	spores/m <sup>3</sup>	-
<b>Total Spores</b>	<b>65</b>	<b>867</b>	<b>spores/m<sup>3</sup></b>	

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**Project #:** 24-3281  
**Project Location:** Manteo Middle School  
**Project Type:** - IAQ  
**PO/Claim #:** -

**Sample Number:** 7  
**Sample Location:** Hall at E5  
**Date Collected:** 11/13/24  
**Test Requested:** Non-viable spore trap analysis  
**Date Analyzed:** 11/18/24

**Volume (L):** 75  
**Percentage of Slide Read:** 100.0%  
**Detection Limit:** 13.33  
**Particulate Level:** moderate  
**Notes:** -

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	4	53	spores/m <sup>3</sup>	21%
Ascospores	2	27	spores/m <sup>3</sup>	11%
Basidiospores	1	13	spores/m <sup>3</sup>	5%
Smuts, <i>Periconia</i> , Myxomycetes	2	27	spores/m <sup>3</sup>	11%
<i>Penicillium/Aspergillus</i> Group	1	13	spores/m <sup>3</sup>	5%
Hyphal Elements	2	27	spores/m <sup>3</sup>	11%
<i>Alternaria</i>		-	spores/m <sup>3</sup>	-
<i>Curvularia</i>	4	53	spores/m <sup>3</sup>	21%
<i>Epicoccum</i>		-	spores/m <sup>3</sup>	-
<i>Cercospora</i>		-	spores/m <sup>3</sup>	-
<i>Arthrinium</i>		-	spores/m <sup>3</sup>	-
Clear Brown		-	spores/m <sup>3</sup>	-
Colorless		-	spores/m <sup>3</sup>	-
<i>Trichocladium</i>		-	spores/m <sup>3</sup>	-
Unidentified		-	spores/m <sup>3</sup>	-
<i>Ulocladium</i>		-	spores/m <sup>3</sup>	-
Torula		-	spores/m <sup>3</sup>	-
<i>Pithomyces</i>	2	27	spores/m <sup>3</sup>	11%
Rust		-	spores/m <sup>3</sup>	-
<i>Drechslera/Bipolaris</i>	1	13	spores/m <sup>3</sup>	5%
<i>Tetraploa</i>		-	spores/m <sup>3</sup>	-
<i>Chaetomium</i>		-	spores/m <sup>3</sup>	-
<i>Stachybotrys</i>		-	spores/m <sup>3</sup>	-
		-	spores/m <sup>3</sup>	-
<b>Total Spores</b>	<b>19</b>	<b>253</b>	<b>spores/m<sup>3</sup></b>	

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**Project #:** 24-3281  
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**Project Type:** -  
 IAQ  
**PO/Claim #:** -

**Sample Number:** 8  
**Sample Location:** E4  
**Date Collected:** 11/13/24  
**Test Requested:** Non-viable spore trap analysis  
**Date Analyzed:** 11/18/24

**Volume (L):** 75  
**Percentage of Slide Read:** 100.0%  
**Detection Limit:** 13.33  
**Particulate Level:** low  
**Notes:**

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	3	40	spores/m <sup>3</sup>	30%
Ascospores	2	27	spores/m <sup>3</sup>	20%
Basidiospores	2	27	spores/m <sup>3</sup>	20%
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m <sup>3</sup>	-
<i>Penicillium/Aspergillus</i> Group	2	27	spores/m <sup>3</sup>	20%
Hyphal Elements	1	13	spores/m <sup>3</sup>	10%
<i>Alternaria</i>		-	spores/m <sup>3</sup>	-
<i>Curvularia</i>		-	spores/m <sup>3</sup>	-
<i>Epicoccum</i>		-	spores/m <sup>3</sup>	-
<i>Cercospora</i>		-	spores/m <sup>3</sup>	-
<i>Arthrinium</i>		-	spores/m <sup>3</sup>	-
Clear Brown		-	spores/m <sup>3</sup>	-
Colorless		-	spores/m <sup>3</sup>	-
<i>Trichocladium</i>		-	spores/m <sup>3</sup>	-
Unidentified		-	spores/m <sup>3</sup>	-
<i>Ulocladium</i>		-	spores/m <sup>3</sup>	-
Torula		-	spores/m <sup>3</sup>	-
<i>Pithomyces</i>		-	spores/m <sup>3</sup>	-
Rust		-	spores/m <sup>3</sup>	-
<i>Drechslera/Bipolaris</i>		-	spores/m <sup>3</sup>	-
<i>Tetraploa</i>		-	spores/m <sup>3</sup>	-
<i>Chaetomium</i>		-	spores/m <sup>3</sup>	-
<i>Stachybotrys</i>		-	spores/m <sup>3</sup>	-
		-	spores/m <sup>3</sup>	-
<b>Total Spores</b>	<b>10</b>	<b>133</b>	<b>spores/m<sup>3</sup></b>	

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**Project #:** 24-3281  
**Project Location:** Manteo Middle School  
**Project Type:** -  
 IAQ  
**PO/Claim #:** -

**Sample Number:** 9  
**Sample Location:** CR D7  
**Date Collected:** 11/13/24  
**Test Requested:** Non-viable spore trap analysis  
**Date Analyzed:** 11/18/24

**Volume (L):** 75  
**Percentage of Slide Read:** 100.0%  
**Detection Limit:** 13.33  
**Particulate Level:** moderate  
**Notes:** -

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	2	27	spores/m <sup>3</sup>	6%
Ascospores	2	27	spores/m <sup>3</sup>	6%
Basidiospores	1	13	spores/m <sup>3</sup>	3%
Smuts, <i>Periconia</i> , Myxomycetes	2	27	spores/m <sup>3</sup>	6%
<i>Penicillium/Aspergillus</i> Group	6	80	spores/m <sup>3</sup>	18%
Hyphal Elements	8	107	spores/m <sup>3</sup>	24%
<i>Alternaria</i>		-	spores/m <sup>3</sup>	-
<i>Curvularia</i>	10	133	spores/m <sup>3</sup>	29%
<i>Epicoccum</i>		-	spores/m <sup>3</sup>	-
<i>Cercospora</i>		-	spores/m <sup>3</sup>	-
<i>Arthrinium</i>		-	spores/m <sup>3</sup>	-
Clear Brown		-	spores/m <sup>3</sup>	-
Colorless		-	spores/m <sup>3</sup>	-
<i>Trichocladium</i>		-	spores/m <sup>3</sup>	-
Unidentified		-	spores/m <sup>3</sup>	-
<i>Ulocladium</i>		-	spores/m <sup>3</sup>	-
Torula		-	spores/m <sup>3</sup>	-
<i>Pithomyces</i>	1	13	spores/m <sup>3</sup>	3%
Rust		-	spores/m <sup>3</sup>	-
<i>Drechslera/Bipolaris</i>	2	27	spores/m <sup>3</sup>	6%
<i>Tetraploa</i>		-	spores/m <sup>3</sup>	-
<i>Chaetomium</i>		-	spores/m <sup>3</sup>	-
<i>Stachybotrys</i>		-	spores/m <sup>3</sup>	-
		-	spores/m <sup>3</sup>	-
<b>Total Spores</b>	<b>34</b>	<b>453</b>	<b>spores/m<sup>3</sup></b>	

Analyzed by: Cathy A. Richmond, B.S.

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## Certificate of Laboratory Analysis

### Non-Viable Spore Trap Analysis

Dare County Schools  
 Ian Adams  
 3020 S Wrightsville Ave  
 Nags Head, NC  
 -

**Project #:** 24-3281  
**Project Location:** Manteo Middle School  
  
**Project Type:** - IAQ  
**PO/Claim #:** -

<b>Sample Number:</b>	12	<b>Volume (L):</b>	75
<b>Sample Location:</b>	CR G6	<b>Percentage of Slide Read:</b>	100.0%
<b>Date Collected:</b>	11/13/24	<b>Detection Limit:</b>	13.33
<b>Test Requested:</b>	Non-viable spore trap analysis	<b>Particulate Level:</b>	low-moderate
<b>Date Analyzed:</b>	11/18/24	<b>Notes:</b>	-

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	7	93	spores/m <sup>3</sup>	44%
Ascospores	1	13	spores/m <sup>3</sup>	6%
Basidiospores	2	27	spores/m <sup>3</sup>	13%
Smuts, <i>Periconia</i> , Myxomycetes	1	13	spores/m <sup>3</sup>	6%
<i>Penicillium/Aspergillus</i> Group	2	27	spores/m <sup>3</sup>	13%
Hyphal Elements	2	27	spores/m <sup>3</sup>	13%
<i>Alternaria</i>		-	spores/m <sup>3</sup>	-
<i>Curvularia</i>	1	13	spores/m <sup>3</sup>	6%
<i>Epicoccum</i>		-	spores/m <sup>3</sup>	-
<i>Cercospora</i>		-	spores/m <sup>3</sup>	-
<i>Arthrinium</i>		-	spores/m <sup>3</sup>	-
Clear Brown		-	spores/m <sup>3</sup>	-
Colorless		-	spores/m <sup>3</sup>	-
<i>Trichocladium</i>		-	spores/m <sup>3</sup>	-
Unidentified		-	spores/m <sup>3</sup>	-
<i>Ulocladium</i>		-	spores/m <sup>3</sup>	-
Torula		-	spores/m <sup>3</sup>	-
<i>Pithomyces</i>		-	spores/m <sup>3</sup>	-
Rust		-	spores/m <sup>3</sup>	-
<i>Drechslera/Bipolaris</i>		-	spores/m <sup>3</sup>	-
<i>Tetraploa</i>		-	spores/m <sup>3</sup>	-
<i>Chaetomium</i>		-	spores/m <sup>3</sup>	-
<i>Stachybotrys</i>		-	spores/m <sup>3</sup>	-
		-	spores/m <sup>3</sup>	-
<b>Total Spores</b>	<b>16</b>	<b>213</b>	<b>spores/m<sup>3</sup></b>	

Analyzed by: Cathy A. Richmond, B.S.





## Certificate of Laboratory Analysis

### Non-Viable Spore Trap Analysis

Dare County Schools  
 Ian Adams  
 3020 S Wrightsville Ave  
 Nags Head, NC  
 -

**Project #:** 24-3281  
**Project Location:** Manteo Middle School  
**Project Type:** -  
 IAQ  
**PO/Claim #:** -

**Sample Number:** 14      **Volume (L):** 75  
**Sample Location:** CR F6      **Percentage of Slide Read:** 100.0%  
**Date Collected:** 11/13/24      **Detection Limit:** 13.33  
**Test Requested:** Non-viable spore trap analysis      **Particulate Level:** low-moderate  
**Date Analyzed:** 11/18/24      **Notes:** -

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	9	120	spores/m <sup>3</sup>	27%
Ascospores	3	40	spores/m <sup>3</sup>	9%
Basidiospores	3	40	spores/m <sup>3</sup>	9%
Smuts, <i>Periconia</i> , Myxomycetes	3	40	spores/m <sup>3</sup>	9%
<i>Penicillium/Aspergillus</i> Group	4	53	spores/m <sup>3</sup>	12%
Hyphal Elements	6	80	spores/m <sup>3</sup>	18%
<i>Alternaria</i>		-	spores/m <sup>3</sup>	-
<i>Curvularia</i>	5	67	spores/m <sup>3</sup>	15%
<i>Epicoccum</i>		-	spores/m <sup>3</sup>	-
<i>Cercospora</i>		-	spores/m <sup>3</sup>	-
<i>Arthrinium</i>		-	spores/m <sup>3</sup>	-
Clear Brown		-	spores/m <sup>3</sup>	-
Colorless		-	spores/m <sup>3</sup>	-
<i>Trichocladium</i>		-	spores/m <sup>3</sup>	-
Unidentified		-	spores/m <sup>3</sup>	-
<i>Ulocladium</i>		-	spores/m <sup>3</sup>	-
Torula		-	spores/m <sup>3</sup>	-
<i>Pithomyces</i>		-	spores/m <sup>3</sup>	-
Rust		-	spores/m <sup>3</sup>	-
<i>Drechslera/Bipolaris</i>		-	spores/m <sup>3</sup>	-
<i>Tetraploa</i>		-	spores/m <sup>3</sup>	-
<i>Chaetomium</i>		-	spores/m <sup>3</sup>	-
<i>Stachybotrys</i>		-	spores/m <sup>3</sup>	-
		-	spores/m <sup>3</sup>	-
<b>Total Spores</b>	<b>33</b>	<b>440</b>	<b>spores/m<sup>3</sup></b>	

Analyzed by: Cathy A. Richmond, B.S.

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## Certificate of Laboratory Analysis

Project #: **24-3281**

### Report Information:

**DETECTION LIMITS (DL)** for samples are the minimum number of spores or colonies forming units that can be satisfactorily identified for each sample type.

**SPORE TRAP SAMPLES:** Calculations based on volume of air sampled & percentage of slide counted, i.e. DL = 1000 L / 75 L if 100% of the slide is counted.

**CODE 11:** Fungal content and/or particulate level on slide too heavy to identify and enumerate fungal content.

### Footnotes:

1. *Penicillium/Aspergillus* group spores are characterized by their small size, round to ovoid shape, being unicellular and usually colorless to lightly pigmented. There are numerous genera of fungi whose spore morphology is similar to that of the *Penicillium/Aspergillus* type. Several common examples would be *Acremonium*, *Paecilomyces*, and *Trichoderma*. Although the majority of spores placed in this group are *Penicillium*, *Aspergillus*, or a combination of both, these are not the only two possibilities.
2. Basidiospores are primarily transported indoors from outdoor sources and rarely grow indoors. A high basidiospore count indoors can be indicative of a wood decay problem or wet soil, and should be verified if and an outdoor source of the spores is not present.
3. Hyphae are the tubular filaments of fungi. Hyphae can fragment and become airborne much like spores and are potentially allergenic.
4. The Smut, *Periconia*, Myxomycete group is a group composed of three different types of organisms whose spores have similar morphologies. Smuts are plant pathogens, *Periconia* is a relatively uncommon mold indoors, and Myxomycetes are not fungi, but slime molds. Although these organisms do not typically proliferate indoors, their spores are potentially allergenic.
5. Rusts are plant pathogens. These fungi do not typically grow indoors unless an infected plant is present. Rust spores are potentially allergenic.

### Direct Microscopic Exam Reporting:

We use a 400x-600x magnification microscope.

Reporting Quantification Levels are as follows:

Reporting Level	Quantitative Description
Occasional	1-10 per square inch
Few	11-100 per square inch
Moderate	101-1000 per square inch
Numerous	More than 1,000 per square inch

### Submitted By Analyst:

**Cathy A. Richmond, BS**

11/18/2024