



LRC Indoor Testing and Research
 140 Iowa Lane, Suite 102
 Cary, NC 27511
 (919) 342-4936

Certificate of Laboratory Analysis
Non-Viable Spore Trap Analysis

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

Project #: 23-2206
Project Location: Kitty Hawk Elementary
 16 S Dogwood Trail
 Kitty Hawk, NC
Project Type: IEQ
PO/Claim #: -

Table 1: Non-Viable Air Samples

Date Collected:	11/11/23	11/11/23	11/11/23	11/11/23	11/11/23
	1	2	3	4	5
Spore Identification	Hall at Entrance	Media center	Hall at 116	Hall at 129	CR D106
<i>Cladosporium</i>	40	40	13	27	27
Ascospores	27	-	-	-	27
Basidiospores ²	80	13	13	-	13
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> ⁴	40	-	13	-	-
<i>Penicillium/Aspergillus</i> Group ¹	107	13	27	27	13
Hyphal Elements ³	53	-	-	-	-
<i>Alternaria</i>	-	-	-	-	-
<i>Curvularia</i>	13	-	-	13	13
<i>Epicoccum</i>	13	-	-	-	-
<i>Cercospora</i>	-	-	-	-	-
<i>Arthrinium</i>	-	-	-	-	-
Clear Brown	-	-	-	-	-
Colorless	-	-	-	-	-
Trichocladium	-	-	-	-	-
Unidentified	-	-	-	-	-
<i>Ulocladium</i>	-	-	-	-	-
Torula	-	-	-	-	-
Pithomyces	-	-	-	-	-
Rust ⁵	-	-	-	-	-
<i>Drechslera/Bipolaris</i>	-	-	-	-	-
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
Total Spores/m³	373	67	67	67	93
Particulate Level	moderate	low	low	low	low-moderate
Date Analyzed:	11/13/23	11/13/23	11/13/23	11/13/23	11/13/23

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

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Table 1: Non-Viable Air Samples

Date Collected:	11/11/23	11/11/23	11/11/23	11/11/23	11/11/23
	6	7	8	9	10
Spore Identification	CR D122	Hall at Gym	Gym	Caferteria	Hall at 100P
<i>Cladosporium</i>	40	53	40	27	27
Ascospores	13	13	13	-	27
Basidiospores ²	-	40	13	27	13
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> ⁴	13	13	27	-	13
<i>Penicillium/Aspergillus</i> Group ¹	53	13	13	27	27
Hyphal Elements ³	-	27	40	-	27
<i>Alternaria</i>	-	13	-	-	-
<i>Curvularia</i>	-	27	13	-	-
<i>Epicoccum</i>	-	-	-	-	-
<i>Cercospora</i>	-	-	-	-	-
<i>Arthrinium</i>	-	-	-	-	-
Clear Brown	-	-	-	-	-
Colorless	-	-	-	-	-
Trichocladium	-	-	-	-	-
Unidentified	-	13	-	-	-
<i>Ulocladium</i>	-	-	-	-	-
Torula	-	-	-	-	-
Pithomyces	-	-	13	-	-
Rust ⁵	-	-	-	-	-
<i>Drechslera/Bipolaris</i>	-	-	-	-	-
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
Total Spores/m³	120	213	173	80	133
Particulate Level	low	low-moderate	low-moderate	low-moderate	low-moderate
Date Analyzed:	11/13/23	11/13/23	11/13/23	11/13/23	11/13/23

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Table 1: Non-Viable Air Samples

Date Collected:	11/11/23	11/11/23	11/11/23	11/11/23	11/11/23
	11	12	13	14	15
Spore Identification	Hall at A109	Hall at A104	CR 103	CR 108	Hall at B111
<i>Cladosporium</i>	13	40	67	53	120
Ascospores	-	27	-	13	13
Basidiospores ²	13	27	-	13	27
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> ⁴	-	13	27	27	-
<i>Penicillium/Aspergillus</i> Group ¹	27	27	-	27	40
Hyphal Elements ³	-	27	13	27	13
<i>Alternaria</i>	-	-	-	-	-
<i>Curvularia</i>	-	-	-	-	-
<i>Epicoccum</i>	-	-	-	-	-
<i>Cercospora</i>	-	-	-	-	-
<i>Arthrinium</i>	-	-	-	-	-
Clear Brown	-	-	-	-	-
Colorless	-	-	-	-	-
Trichocladium	-	-	-	-	-
Unidentified	-	-	-	-	13
<i>Ulocladium</i>	-	-	-	-	-
Torula	-	-	-	-	-
Pithomyces	-	-	-	-	-
Rust ⁵	-	-	-	-	-
<i>Drechslera/Bipolaris</i>	-	-	-	-	27
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
Total Spores/m³	53	160	107	160	253
Particulate Level	low-moderate	low	low	low	low-moderate
Date Analyzed:	11/13/23	11/13/23	11/13/23	11/13/23	11/13/23

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Table 1: Non-Viable Air Samples

Date Collected:	11/11/23	11/11/23	11/11/23	11/11/23
	16	17	18	19
Spore Identification	Hall at B103	CR 105	CR 112B	Outdoor Air
<i>Cladosporium</i>	53	53	80	507
Ascospores	-	13	13	747
Basidiospores ²	-	27	40	320
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> ⁴	-	13	-	53
<i>Penicillium/Aspergillus</i> Group ¹	-	13	27	133
Hyphal Elements ³	13	-	13	27
<i>Alternaria</i>	-	-	-	-
<i>Curvularia</i>	-	-	13	13
<i>Epicoccum</i>	-	-	-	-
<i>Cercospora</i>	-	-	-	-
<i>Arthrinium</i>	-	-	-	-
Clear Brown	-	-	-	-
Colorless	-	-	-	-
Trichocladium	-	-	-	-
Unidentified	-	-	-	-
<i>Ulocladium</i>	-	-	-	-
Torula	-	-	-	-
Pithomyces	-	-	-	-
Rust ⁵	-	-	-	-
<i>Drechslera/Bipolaris</i>	-	-	-	27
<i>Tetraploa</i>	-	-	-	-
<i>Chaetomium</i>	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-
	-	-	-	-
Total Spores/m³	67	120	187	1827
Particulate Level	low	low	low	moderate
Date Analyzed:	11/13/23	11/13/23	11/13/23	11/13/23

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Project Type: IEQ
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Sample Number: 1
Sample Location: Hall at Entrance
Date Collected: 11/11/23
Test Requested: Non-viable spore trap analysis
Date Analyzed: 11/13/23

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>	3	40	spores/m ³	11%
Ascospores	2	27	spores/m ³	7%
Basidiospores	6	80	spores/m ³	21%
Smuts, <i>Periconia</i> , Myxomycetes	3	40	spores/m ³	11%
<i>Penicillium/Aspergillus</i> Group	8	107	spores/m ³	29%
Hyphal Elements	4	53	spores/m ³	14%
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>	1	13	spores/m ³	4%
<i>Epicoccum</i>	1	13	spores/m ³	4%
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	28	373	spores/m³	

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Sample Number: 4
Sample Location: Hall at129
Date Collected: 11/11/23
Test Requested: Non-viable spore trap analysis
Date Analyzed: 11/13/23

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>	2	27	spores/m ³	40%
Ascospores		-	spores/m ³	-
Basidiospores		-	spores/m ³	-
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m ³	-
<i>Penicillium/Aspergillus</i> Group	2	27	spores/m ³	40%
Hyphal Elements		-	spores/m ³	-
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>	1	13	spores/m ³	20%
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	5	67	spores/m³	

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Project Type: IEQ
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Sample Number:	5	Volume (L):	75
Sample Location:	CR D106	Percentage of Slide Read:	100.0%
Date Collected:	11/11/23	Detection Limit:	13.33
Test Requested:	Non-viable spore trap analysis	Particulate Level:	low-moderate
Date Analyzed:	11/13/23	Notes:	-

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	2	27	spores/m ³	29%
Ascospores	2	27	spores/m ³	29%
Basidiospores	1	13	spores/m ³	14%
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m ³	-
<i>Penicillium/Aspergillus</i> Group	1	13	spores/m ³	14%
Hyphal Elements		-	spores/m ³	-
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>	1	13	spores/m ³	14%
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	7	93	spores/m³	

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Project Type: IEQ
PO/Claim #: -

Sample Number: 7
Sample Location: Hall at Gym
Date Collected: 11/11/23
Test Requested: Non-viable spore trap analysis
Date Analyzed: 11/13/23

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>	4	53	spores/m ³	25%
Ascospores	1	13	spores/m ³	6%
Basidiospores	3	40	spores/m ³	19%
Smuts, <i>Periconia</i> , Myxomycetes	1	13	spores/m ³	6%
<i>Penicillium/Aspergillus</i> Group	1	13	spores/m ³	6%
Hyphal Elements	2	27	spores/m ³	13%
<i>Alternaria</i>	1	13	spores/m ³	6%
<i>Curvularia</i>	2	27	spores/m ³	13%
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified	1	13	spores/m ³	6%
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	16	213	spores/m³	

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Project Type: IEQ
PO/Claim #: -

Sample Number: 8
Sample Location: Gym
Date Collected: 11/11/23
Test Requested: Non-viable spore trap analysis
Date Analyzed: 11/13/23

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>	3	40	spores/m ³	23%
Ascospores	1	13	spores/m ³	8%
Basidiospores	1	13	spores/m ³	8%
Smuts, <i>Periconia</i> , Myxomycetes	2	27	spores/m ³	15%
<i>Penicillium/Aspergillus</i> Group	1	13	spores/m ³	8%
Hyphal Elements	3	40	spores/m ³	23%
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>	1	13	spores/m ³	8%
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>	1	13	spores/m ³	8%
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	13	173	spores/m³	

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Project Type: IEQ
PO/Claim #: -

Sample Number: 13 **Volume (L):** 75
Sample Location: CR 103 **Percentage of Slide Read:** 100.0%
Date Collected: 11/11/23 **Detection Limit:** 13.33
Test Requested: Non-viable spore trap analysis **Particulate Level:** low
Date Analyzed: 11/13/23 **Notes:**

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	5	67	spores/m ³	63%
Ascospores		-	spores/m ³	-
Basidiospores		-	spores/m ³	-
Smuts, <i>Periconia</i> , Myxomycetes	2	27	spores/m ³	25%
<i>Penicillium/Aspergillus</i> Group		-	spores/m ³	-
Hyphal Elements	1	13	spores/m ³	13%
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>		-	spores/m ³	-
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	8	107	spores/m³	

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



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Project Type: IEQ
PO/Claim #: -

Sample Number: 14 **Volume (L):** 75
Sample Location: CR 108 **Percentage of Slide Read:** 100.0%
Date Collected: 11/11/23 **Detection Limit:** 13.33
Test Requested: Non-viable spore trap analysis **Particulate Level:** low
Date Analyzed: 11/13/23 **Notes:**

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	4	53	spores/m ³	33%
Ascospores	1	13	spores/m ³	8%
Basidiospores	1	13	spores/m ³	8%
Smuts, <i>Periconia</i> , Myxomycetes	2	27	spores/m ³	17%
<i>Penicillium/Aspergillus</i> Group	2	27	spores/m ³	17%
Hyphal Elements	2	27	spores/m ³	17%
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>		-	spores/m ³	-
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	12	160	spores/m³	

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 #: 23-2206
Project Location: Kitty Hawk Elementary
 16 S Dogwood Trail
 Kitty Hawk, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 15 **Volume (L):** 75
Sample Location: Hall at B111 **Percentage of Slide Read:** 100.0%
Date Collected: 11/11/23 **Detection Limit:** 13.33
Test Requested: Non-viable spore trap analysis **Particulate Level:** low-moderate
Date Analyzed: 11/13/23 **Notes:**

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	9	120	spores/m ³	47%
Ascospores	1	13	spores/m ³	5%
Basidiospores	2	27	spores/m ³	11%
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m ³	-
<i>Penicillium/Aspergillus</i> Group	3	40	spores/m ³	16%
Hyphal Elements	1	13	spores/m ³	5%
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>		-	spores/m ³	-
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified	1	13	spores/m ³	5%
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>	2	27	spores/m ³	11%
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	19	253	spores/m³	

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

The results reported by LRC are a record of the microbes identified by our laboratory staff. We assume responsibility over analysis conducted in the laboratory, but cannot assume responsibility for activities completed in the field by the client, other personnel associated with the samples submitted, or other activities beyond the laboratory. Any information given other than microbial information, is provided as general reference information from published sources and is not an extension of liability to LRC.



Certificate of Laboratory Analysis

Non-Viable Spore Trap Analysis

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

Project #: 23-2206
Project Location: Kitty Hawk Elementary
 16 S Dogwood Trail
 Kitty Hawk, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 17 **Volume (L):** 75
Sample Location: CR 105 **Percentage of Slide Read:** 100.0%
Date Collected: 11/11/23 **Detection Limit:** 13.33
Test Requested: Non-viable spore trap analysis **Particulate Level:** low
Date Analyzed: 11/13/23 **Notes:**

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	4	53	spores/m ³	44%
Ascospores	1	13	spores/m ³	11%
Basidiospores	2	27	spores/m ³	22%
Smuts, <i>Periconia</i> , Myxomycetes	1	13	spores/m ³	11%
<i>Penicillium/Aspergillus</i> Group	1	13	spores/m ³	11%
Hyphal Elements		-	spores/m ³	-
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>		-	spores/m ³	-
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	9	120	spores/m³	

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 #: 23-2206
Project Location: Kitty Hawk Elementary
 16 S Dogwood Trail
 Kitty Hawk, NC
Project Type: IEQ
PO/Claim #: -

Sample Number:	18	Volume (L):	75
Sample Location:	CR 112B	Percentage of Slide Read:	100.0%
Date Collected:	11/11/23	Detection Limit:	13.33
Test Requested:	Non-viable spore trap analysis	Particulate Level:	low
Date Analyzed:	11/13/23	Notes:	-

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	6	80	spores/m ³	43%
Ascospores	1	13	spores/m ³	7%
Basidiospores	3	40	spores/m ³	21%
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m ³	-
<i>Penicillium/Aspergillus</i> Group	2	27	spores/m ³	14%
Hyphal Elements	1	13	spores/m ³	7%
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>	1	13	spores/m ³	7%
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>		-	spores/m ³	-
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	14	187	spores/m³	

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 #: 23-2206
Project Location: Kitty Hawk Elementary
 16 S Dogwood Trail
 Kitty Hawk, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 19 **Volume (L):** 75
Sample Location: Outdoor Air **Percentage of Slide Read:** 100.0%
Date Collected: 11/11/23 **Detection Limit:** 13.33
Test Requested: Non-viable spore trap analysis **Particulate Level:** moderate
Date Analyzed: 11/13/23 **Notes:**

Spore Identification	Count	Results	Units	Percentage
<i>Cladosporium</i>	38	507	spores/m ³	28%
Ascospores	56	747	spores/m ³	41%
Basidiospores	24	320	spores/m ³	18%
Smuts, <i>Periconia</i> , Myxomycetes	4	53	spores/m ³	3%
<i>Penicillium/Aspergillus</i> Group	10	133	spores/m ³	7%
Hyphal Elements	2	27	spores/m ³	1%
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>	1	13	spores/m ³	1%
<i>Epicoccum</i>		-	spores/m ³	-
<i>Cercospora</i>		-	spores/m ³	-
<i>Arthrinium</i>		-	spores/m ³	-
Clear Brown		-	spores/m ³	-
Colorless		-	spores/m ³	-
<i>Trichocladium</i>		-	spores/m ³	-
Unidentified		-	spores/m ³	-
<i>Ulocladium</i>		-	spores/m ³	-
Torula		-	spores/m ³	-
<i>Pithomyces</i>		-	spores/m ³	-
Rust		-	spores/m ³	-
<i>Drechslera/Bipolaris</i>	2	27	spores/m ³	1%
<i>Tetraploa</i>		-	spores/m ³	-
<i>Chaetomium</i>		-	spores/m ³	-
<i>Stachybotrys</i>		-	spores/m ³	-
		-	spores/m ³	-
Total Spores	137	1827	spores/m³	

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



Certificate of Laboratory Analysis

Project #: **23-2206**

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.

Chain of Custody available on request

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

11/13/2023