



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 #: 23-2208
Project Location: First Flight Middle School
 109 Veterans Drive
 Kill Devil Hills, NC
Project Type: IEQ
PO/Claim #: -

Table 1: Non-Viable Air Samples

Date Collected:	11/10/23	11/10/23	11/10/23	11/10/23	11/10/23
	1	2	3	4	5
Spore Identification	Cafeteria	Gym	Room H 120	Hall at J 122	Hall at A103
<i>Cladosporium</i>	13	67	80	40	40
Ascospores	13	-	27	13	-
Basidiospores ²	40	67	27	13	27
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> ⁴	13	13	27	-	13
<i>Penicillium/Aspergillus</i> Group ¹	120	227	53	40	13
Hyphal Elements ³	-	13	-	13	13
<i>Alternaria</i>	-	-	-	-	-
<i>Curvularia</i>	13	-	-	-	-
<i>Epicoccum</i>	-	-	-	-	-
<i>Cercospora</i>	-	-	-	-	-
<i>Arthrinium</i>	-	-	-	-	-
Clear Brown	-	-	-	-	-
Colorless	-	-	-	-	-
<i>Trichocladium</i>	-	-	-	-	-
Unidentified	-	-	-	-	-
<i>Ulocladium</i>	-	-	-	-	-
Torula	-	-	-	-	-
Pithomyces	-	-	-	-	-
Rust ⁵	-	-	-	-	-
<i>Drechslera/Bipolaris</i>	-	-	-	-	-
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
Total Spores/m³	213	387	213	120	107
Particulate Level	low-moderate	low	low	low	low
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:	11/10/23	11/10/23	11/10/23	11/10/23	11/10/23
	6	7	8	9	10
Spore Identification	CR A103	Hall at A110	Hall at CR K132	Hall at CR K118	CR K126
<i>Cladosporium</i>	27	27	120	13	40
Ascospores	-	-	27	-	-
Basidiospores ²	-	-	13	40	27
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> ⁴	13	-	-	40	-
<i>Penicillium/Aspergillus</i> Group ¹	13	-	53	-	13
Hyphal Elements ³	13	13	-	-	-
<i>Alternaria</i>	-	-	-	-	-
<i>Curvularia</i>	-	-	-	-	-
<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>	-	-	-	-	-
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
Total Spores/m³	67	40	213	93	80
Particulate Level	low	low	low-moderate	low	low
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:	11/10/23	11/10/23	11/10/23	11/10/23	11/10/23
	11	12	13	14	15
Spore Identification	Media Center	Hall at L108	CR L102	Hall at L149	CR 155
<i>Cladosporium</i>	93	27	13	13	27
Ascospores	40	-	13	-	27
Basidiospores ²	67	-	40	27	13
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> ⁴	27	-	40	-	27
<i>Penicillium/Aspergillus</i> Group ¹	280	-	-	40	40
Hyphal Elements ³	27	13	-	-	13
<i>Alternaria</i>	-	-	-	-	-
<i>Curvularia</i>	27	-	-	-	-
<i>Epicoccum</i>	-	-	-	-	-
<i>Cercospora</i>	-	-	-	-	-
<i>Arthrinium</i>	-	-	-	-	-
Clear Brown	-	-	-	-	-
Colorless	-	-	-	-	-
Trichocladium	-	-	-	-	-
Unidentified	-	-	-	-	-
<i>Ulocladium</i>	-	-	-	-	-
Torula	-	-	-	-	-
Pithomyces	13	-	-	-	-
Rust ⁵	-	-	-	-	-
<i>Drechslera/Bipolaris</i>	-	-	-	-	-
<i>Tetraploa</i>	-	-	-	-	-
<i>Chaetomium</i>	-	-	-	-	-
<i>Stachybotrys</i>	-	-	-	-	-
	-	-	-	-	-
Total Spores/m³	573	40	107	80	147
Particulate Level	low-moderate	low	low-moderate	low-moderate	low
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:	11/10/23	11/10/23	11/10/23	11/10/23	11/10/23
	16	17	18	19	20
Spore Identification	Hall at M120	M113	Hall at Media Center	Hall at J111	Outdoor Air
<i>Cladosporium</i>	13	27	53	40	387
Ascospores	27	-	13	-	493
Basidiospores ²	13	13	-	13	173
Smuts, <i>Periconia</i> , <i>Myxomycetes</i> ⁴	-	-	13	-	40
<i>Penicillium/Aspergillus</i> Group ¹	-	40	40	27	107
Hyphal Elements ³	13	13	27	-	27
<i>Alternaria</i>	-	-	-	-	13
<i>Curvularia</i>	-	-	13	-	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	67	93	173	80	1267
Particulate Level	low-moderate	low	low-moderate	low-moderate	moderate
Date Analyzed:	11/13/23	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: Cafeteria
Date Collected: 11/10/23
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:

11/13/2023	Count	Results	Units	Percentage
<i>Cladosporium</i>	1	13	spores/m ³	6%
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	9	120	spores/m ³	56%
Hyphal Elements		-	spores/m ³	-
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>	1	13	spores/m ³	6%
<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	16	213	spores/m³	

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Sample Number: 2
Sample Location: Gym
Date Collected: 11/10/23
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>	5	67	spores/m ³	17%
Ascospores		-	spores/m ³	-
Basidiospores	5	67	spores/m ³	17%
Smuts, <i>Periconia</i> , Myxomycetes	1	13	spores/m ³	3%
<i>Penicillium/Aspergillus</i> Group	17	227	spores/m ³	59%
Hyphal Elements	1	13	spores/m ³	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	29	387	spores/m³	

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Sample Number: 3
Sample Location: Room H 120
Date Collected: 11/10/23
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>	6	80	spores/m ³	38%
Ascospores	2	27	spores/m ³	13%
Basidiospores	2	27	spores/m ³	13%
Smuts, <i>Periconia</i> , Myxomycetes	2	27	spores/m ³	13%
<i>Penicillium/Aspergillus</i> Group	4	53	spores/m ³	25%
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	16	213	spores/m³	

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Sample Number: 6
Sample Location: CR A103
Date Collected: 11/10/23
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	1	13	spores/m ³	20%
<i>Penicillium/Aspergillus</i> Group	1	13	spores/m ³	20%
Hyphal Elements	1	13	spores/m ³	20%
<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	5	67	spores/m³	

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Sample Number: 7
Sample Location: Hall at A110
Date Collected: 11/10/23
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	67%
Ascospores		-	spores/m ³	-
Basidiospores		-	spores/m ³	-
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m ³	-
<i>Penicillium/Aspergillus</i> Group		-	spores/m ³	-
Hyphal Elements	1	13	spores/m ³	33%
<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	3	40	spores/m³	

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Sample Number: 8
Sample Location: Hall at CR K132
Date Collected: 11/10/23
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>	9	120	spores/m ³	56%
Ascospores	2	27	spores/m ³	13%
Basidiospores	1	13	spores/m ³	6%
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m ³	-
<i>Penicillium/Aspergillus</i> Group	4	53	spores/m ³	25%
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	16	213	spores/m³	

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



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Nags Head, NC

Project #: 23-2208
Project Location: First Flight Middle School
 109 Veterans Drive
 Kill Devil Hills, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 9
Sample Location: Hall at CR K118
Date Collected: 11/10/23
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>	1	13	spores/m ³	14%
Ascospores		-	spores/m ³	-
Basidiospores	3	40	spores/m ³	43%
Smuts, <i>Periconia</i> , Myxomycetes	3	40	spores/m ³	43%
<i>Penicillium/Aspergillus</i> Group		-	spores/m ³	-
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	7	93	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 #: 23-2208
Project Location: First Flight Middle School
 109 Veterans Drive
 Kill Devil Hills, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 11
Sample Location: Media Center
Date Collected: 11/10/23
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>	7	93	spores/m ³	16%
Ascospores	3	40	spores/m ³	7%
Basidiospores	5	67	spores/m ³	12%
Smuts, <i>Periconia</i> , Myxomycetes	2	27	spores/m ³	5%
<i>Penicillium/Aspergillus</i> Group	21	280	spores/m ³	49%
Hyphal Elements	2	27	spores/m ³	5%
<i>Alternaria</i>		-	spores/m ³	-
<i>Curvularia</i>	2	27	spores/m ³	5%
<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	2%
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	43	573	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 #: 23-2208
Project Location: First Flight Middle School
 109 Veterans Drive
 Kill Devil Hills, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 12 **Volume (L):** 75
Sample Location: Hall at L108 **Percentage of Slide Read:** 100.0%
Date Collected: 11/10/23 **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>	2	27	spores/m ³	67%
Ascospores		-	spores/m ³	-
Basidiospores		-	spores/m ³	-
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m ³	-
<i>Penicillium/Aspergillus</i> Group		-	spores/m ³	-
Hyphal Elements	1	13	spores/m ³	33%
<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	3	40	spores/m³	

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



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Non-Viable Spore Trap Analysis

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

Project #: 23-2208
Project Location: First Flight Middle School
 109 Veterans Drive
 Kill Devil Hills, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 13 **Volume (L):** 75
Sample Location: CR L102 **Percentage of Slide Read:** 100.0%
Date Collected: 11/10/23 **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>	1	13	spores/m ³	13%
Ascospores	1	13	spores/m ³	13%
Basidiospores	3	40	spores/m ³	38%
Smuts, <i>Periconia</i> , Myxomycetes	3	40	spores/m ³	38%
<i>Penicillium/Aspergillus</i> Group		-	spores/m ³	-
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	8	107	spores/m³	

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



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Non-Viable Spore Trap Analysis

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

Project #: 23-2208
Project Location: First Flight Middle School
 109 Veterans Drive
 Kill Devil Hills, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 16
Sample Location: Hall at M120
Date Collected: 11/10/23
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>	1	13	spores/m ³	20%
Ascospores	2	27	spores/m ³	40%
Basidiospores	1	13	spores/m ³	20%
Smuts, <i>Periconia</i> , Myxomycetes		-	spores/m ³	-
<i>Penicillium/Aspergillus</i> Group		-	spores/m ³	-
Hyphal Elements	1	13	spores/m ³	20%
<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	5	67	spores/m³	

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



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Non-Viable Spore Trap Analysis

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

Project #: 23-2208
Project Location: First Flight Middle School
 109 Veterans Drive
 Kill Devil Hills, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 18
Sample Location: Hall at Media Center
Date Collected: 11/10/23
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	31%
Ascospores	1	13	spores/m ³	8%
Basidiospores		-	spores/m ³	-
Smuts, <i>Periconia</i> , Myxomycetes	1	13	spores/m ³	8%
<i>Penicillium/Aspergillus</i> Group	3	40	spores/m ³	23%
Hyphal Elements	2	27	spores/m ³	15%
<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	1	13	spores/m ³	8%
<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	13	173	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 #: 23-2208
Project Location: First Flight Middle School
 109 Veterans Drive
 Kill Devil Hills, NC
Project Type: IEQ
PO/Claim #: -

Sample Number: 20 **Volume (L):** 75
Sample Location: Outdoor Air **Percentage of Slide Read:** 100.0%
Date Collected: 11/10/23 **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>	29	387	spores/m ³	31%
Ascospores	37	493	spores/m ³	39%
Basidiospores	13	173	spores/m ³	14%
Smuts, <i>Periconia</i> , Myxomycetes	3	40	spores/m ³	3%
<i>Penicillium/Aspergillus</i> Group	8	107	spores/m ³	8%
Hyphal Elements	2	27	spores/m ³	2%
<i>Alternaria</i>	1	13	spores/m ³	1%
<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>	1	13	spores/m ³	1%
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	95	1267	spores/m³	

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



Certificate of Laboratory Analysis

Project #: **23-2208**

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