**Spotts, Stevens and McCoy**
1047 N. Park Road > Reading PA 19610
**610.621.2000** > F. 610.621.2001 > SSMGROUP.COM

August 29, 2024

Mr. Joe Gnoffo
Operations Supervisor
Montoursville Area School District
50 North Arch Street
Montoursville, PA 17754
*[jgnoffo@montoursville.k12.pa.us]*

RE: Montoursville Area School District
District Wide Random Mold/IAQ Sampling
SSM File 109944.0018

Dear: Mr. Gnoffo:

On August 14, 2024, at the request of the Montoursville Area School District, Spotts, Stevens & McCoy (SSM) performed District Wide, Random Mold and Indoor Air Quality (IAQ) sampling at Loyalsock Valley Elementary School, C. E. McCall Middle School, Lyter Elementary School and Montoursville Area High School. The sampling included twenty (20) total airborne mold spore samples inside the schools and five (5) exterior samples for comparison purposes. The sampling was done at random locations throughout each of the School Buildings. Some areas chosen in the Schools included areas with the most student traffic such as cafeterias and libraries.

**Results and Observations**

The results of the total airborne mold spore sampling showed that the air quality was generally acceptable throughout the Loyalsock Valley Elementary School, C. E. McCall Middle School, Lyter Elementary School and Montoursville Area High School, as compared to the exterior comparison samples. Below is a summary of the sampling from each building. The total airborne mold spore results are categorized as "Acceptable", where the concentration is at or below the background (exterior) samples, "Slightly Elevated" when the concentration is above the background samples and "Elevated", when the concentration if ten times or more than the background samples.

**Loyalsock Valley Elementary School**
The results of the total airborne mold spore sampling showed that the air quality was generally acceptable throughout the Loyalsock Valley Elementary School. The areas sampled included the Café, Room A-6, the Art Room, Room B-4, Library and the Hallway outside Room B4. The sample results showed the Library (Sample No. LS-8-14-03) was "Slightly Elevated" for Myxomycetes and Polythrincium; The Cafe (Sample LS-8-14-04) was "Slightly Elevated" for Pithomyces, Room B-4 (Sample LS-8-14-07) was "Slightly Elevated" for Myxomycetes, as compared to the exterior background samples (Samples LS-8-14-01 and LS-8-14-02). All other airborne mold spore samples found were at "Acceptable" levels as compared to the exterior "background" samples.

Direct read instrument sampling showed that the Café, Room A-6, Art Room, Room B-4 and the Hallway outside Room B-4 were elevated for Relative Humidity (RH). All other direct read sampling results were within industry standards.

**Lyter Elementary School**
The results of the total airborne mold spore sampling showed that the air quality was acceptable throughout the Lyter Elementary School. The areas sampled included the Café, Room C-7 - STEM, Library and Hallway outside Room B-15. Room C-7 - STEM (Sample L-8-14-02) was "Slightly Elevated" for Pithomyces. There were no "Slightly Elevated" or "Elevated" sample results for any of the other locations tested.

Direct read instrument sampling showed that the Café, Room C-7 - STEM, Library and Hallway outside Room B-15 were elevated for Temperature. All other direct read sampling results were within industry standards.

**McCall Middle School**
The results of the total airborne mold spore sampling showed that the air was acceptable throughout the McCall Middle School. The areas sampled included the Library, Room 141, Room 220-Science Lab and the Hallway outside Room 220. The sample collected in the Library (Sample M-8-14-01) and Room 141 (Sample M-8-14-02) were "Slightly Elevated" for Pithomyces as compared to the exterior background samples (Samples M-8-14-Ext, L-8-14-Ext and HS-8-14-Ext). All remaining air born mold spores samples were at "Acceptable" levels.

Direct read instrument sampling showed that all areas sampled were elevated for Temperature and Relative Humidity (RH), with the exception of Room 141. (Room 141 was slightly below the industry standard). All other direct read sampling results were within industry standards.

**Montoursville Area High School**
The results of the total airborne mold spore sampling showed that the air was acceptable throughout the Montoursville Area High School. The areas sampled included the Café, Hallway outside Room 206, Library, 3rd Floor Commons and Room 310. The sample collected in the 3rd Floor Commons (Sample HS-8-14-04) was "Slightly Elevated" for Torula; The sample collected in the Room 310 (Sample HS-8-14-05) was "Slightly Elevated" for Pithomyces as compared to the exterior background samples (Samples M-8-14-Ext, L-8-14-Ext and HS-8-14-Ext). All other mold spores found were at "Acceptable" levels when compared to the exterior background samples.

Direct read instrument sampling showed that all areas sampled were elevated for Temperature. All other direct read sampling results were within industry standards.

See "Description of Molds Identified" attached to this letter for explanations of mold species found at "Slightly Elevated" or "Elevated" levels.

**Criteria and Observations of Evaluated Areas**
**Criteria for Mold Sampling**

If airborne mold spores are found in the interior samples, they generally should be similar to the varieties found in the outside samples, and should be at a substantially lower number (1/2 to 1/4 or less of the outside count), unless the windows are open for ventilation which can result in virtual equality. If windows are not open in an area sampled and the results are comparable to outside, it may indicate inadequate filtration on the HVAC system or outside air may be following a less obvious pathway (for example in a window in an adjacent room and then into the sampled area). If varieties of mold are found that are not present in the outside samples, they may be artifacts (entered the building with normal air exchange when different varieties of mold were outside,

possibly hours, days, or even months before). They could also indicate localized mold growth occurring outside near an entry point (such as a window or a fresh air intake for an HVAC system) that did not directly affect the outside samples. An additional possible source is that they could indicate mold growth occurring in a hidden or distant location within the building or possibly a passive reservoir such as carpeting where mold spores have settled into the carpet with other dust and dirt and get released by activity (people walking in a hall or on the carpet, etc). If an option other than active growth in the sampled area is suspected, similar mold varieties will usually be noted in samples collected closer to the unknown source. If mold spores are found in substantially higher number than the outside sample, or elevated counts appear for varieties not found outside, then this could indicate some mold growth in the vicinity of the collected sample and a careful visual inspection is in order. Some specific varieties of mold can indicate problems; for example: the presence of significant numbers of Stachybotrys or Chaetomium can indicate very wet conditions were occurring recently or in the past at a prime mold food source (such as drywall, cellulose ceiling tile or paper products including cardboard).

### Direct Read IEQ Parameters

Direct read parameters were used to evaluate general air quality conditions in the Loyalsock Valley Elementary School, C. E. McCall Middle School, Lyter Elementary School and Montoursville Area High School during the IEQ Evaluation. The direct read criteria included:

- Carbon Monoxide (CO) levels which are measured to evaluate possible intrusion of combustion exhaust
- Carbon Dioxide ($CO_2$) levels which are measured as an indicator of adequate ventilation
- Total particulate levels that are measured for IAQ evaluations to determine the presence of dust and particulate as a potential allergen/irritant and for cleanliness.
- Relative humidity levels were measured since humidity in excess of 60% could contribute to increased microbial growth, which in turn may aggravate allergic conditions or create biological hazards. Values near the 60% RH level are more common in the cooling season and values lower than 30% RH are very common in the heating season. Interior humidity can shift quickly depending on the outside conditions and the amount of outside air being introduced to the building.
- Total volatile organic compounds (VOC's) are often present in the indoor environment from many familiar sources, (inks, glues, etc.), however, elevated concentrations are generally to be avoided, making TVOC's a common parameter in IAQ/IEQ evaluations.

## CONCLUSION

The results of the District Wide Limited Mold/IAQ sampling of the Montoursville Area School District showed generally acceptable conditions throughout the buildings.

## RECOMMENDATIONS

SSM makes the following recommendations:

- Ensure that all HVAC filters are changed as per manufacturer's recommendations.
- Try to have RH levels maintained at 60% or lower during summer months.
- At Loyalsock Valley Elementary School, consider an HVAC engineering specialist to evaluate the system in the building to ensure RH levels are below 60%, especially in summer months when there is little or no activity in the building.
- As always, staff should be vigilant when leaks are discovered to address the source, clean the moisture and replace discolored building materials such as ceiling tiles.

We appreciate the opportunity to provide the Montoursville Area School District with mold consulting services for this project. Should you have questions or require additional information, please contact me.

Very truly yours,
Spotts, Stevens and McCoy

David L. Kuchinski
Industrial Hygienist
dave.kuchinski@ssmgroup.com

Enclosures

# Laboratory Analytical Report
# Loyalsock Valley Elementary School

# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com


| | |
|---|---|
| Order ID: | 372413762 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

| | |
|---|---|
| Phone: | (610) 621-2000 |
| Fax: | |
| Collected: | 08/14/2024 |
| Received: | 08/16/2024 |
| Analyzed: | 08/20/2024 |

**Proj:** 109944.0018/Montoursville SD/Loyalsock

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413762-0001 | Alternaria (Ulocladium) | 1 | 40 | 0.1 | |
| | Ascospores | 34 | 1400 | 2.3 | |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | |
| LS-8-14--01 | Basidiospores | 1400 | 59100 | 95.1 | |
| | Bipolaris++ | - | - | - | |
| | Chaetomium++ | - | - | - | |
| **Location** | Cladosporium | 9 | 400 | 0.6 | |
| Ext. Front Lot | Curvularia | - | - | - | |
| | Epicoccum | - | - | - | |
| **Sample Volume (L)** | Fusarium++ | - | - | - | |
| | Ganoderma | 25 | 1100 | 1.8 | |
| 75 | Myxomycetes++ | - | - | - | |
| | Pithomyces++ | - | - | - | |
| **Sample Type** | Rust | - | - | - | |
| Background | Scopulariopsis/Microascus | - | - | - | |
| | Stachybotrys/Memnoniella | - | - | - | |
| **Comments** | Unidentifiable Spores | 1 | 40 | 0.1 | |
| | Zygomycetes | - | - | - | |
| | Nigrospora | 1 | 40 | 0.1 | |
| | Polythrincium | - | - | - | |
| | Trichoderma | - | - | - | |
| | **Total Fungi** | **1471** | **62120** | **100** | |
| | Hyphal Fragment | - | - | - | |
| | Insect Fragment | - | - | - | |
| | Pollen | - | - | - | |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **1** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **1** | 1 to 4 (low to high); 5 (overloaded) |

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 17:03:37

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

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| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | - | - | - | |
| Ascospores | 15 | 630 | 0.7 | ✹ |
| Aspergillus/Penicillium++ | 3 | 100 | 0.1 | ✹ |
| Basidiospores | 2000 | 84400 | 98.2 | 🌲 ✹ |
| Bipolaris++ | - | - | - | |
| Chaetomium++ | - | - | - | |
| Cladosporium | 5 | 200 | 0.2 | ✹ |
| Curvularia | - | - | - | |
| Epicoccum | - | - | - | |
| Fusarium++ | - | - | - | |
| Ganoderma | 14 | 590 | 0.7 | 🌲 ✹ |
| Myxomycetes++ | - | - | - | |
| Pithomyces++ | - | - | - | |
| Rust | - | - | - | |
| Scopulariopsis/Microascus | - | - | - | |
| Stachybotrys/Memnoniella | - | - | - | |
| Unidentifiable Spores | - | - | - | |
| Zygomycetes | - | - | - | |
| Nigrospora | - | - | - | |
| Polythrincium | 1* | 10* | 0 | 🌲 |
| Trichoderma | 4* | 50* | 0.1 | ✹ |
| **Total Fungi** | **2042** | **85980** | **100** | |
| Hyphal Fragment | - | - | - | |
| Insect Fragment | - | - | - | |
| Pollen | - | - | - | |

| | | | |
|---|---|---|---|
| **Client Sample ID** | | | |
| LS-8-14--02 | | | |
| **Location** | | | |
| Ext. Rear Lot | | | |
| **Sample Volume (L)** | | | |
| 75 | | | |
| **Sample Type** | | | |
| Background | | | |
| **Comments** | | | |
| 372413762-0002 | | | |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

🌲 Not commonly found growing indoors, spores likely come from outside.
✹ Spores reported to be able to cause allergies in individuals.
☣ Potential for mycotoxin production exists with these fungi.
💧 These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

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| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413762-0003 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | - | - | - | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| LS-8-14--03 | Basidiospores | 3 | 100 | 55.6 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | - | - | - | Acceptable |
| Library (L-2) | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | 1 | 40 | 22.2 | Slightly Elevated |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Nigrospora | - | - | - | Acceptable |
| | Polythrincium | 1 | 40 | 22.2 | Slightly Elevated |
| | Trichoderma | - | - | - | Acceptable |
| | **Total Fungi** | **5** | **180** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **2** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

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| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413762-0004 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | 3 | 100 | 0.5 | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| LS-8-14--04 | Basidiospores | 468 | 19800 | 98.3 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | 4 | 200 | 1 | Acceptable |
| Cafe | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | 1 | 40 | 0.2 | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | 1* | 10* | 0 | Slightly Elevated |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Nigrospora | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Trichoderma | - | - | - | Acceptable |
| | **Total Fungi** | **477** | **20150** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

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Skin Fragments: **2** 1 to 4 (low to high)
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Background: **1** 1 to 4 (low to high); 5 (overloaded)

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**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

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| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413762-0005 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | 1 | 40 | 16.7 | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| LS-8-14--05 | Basidiospores | 5 | 200 | 83.3 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | - | - | - | Acceptable |
| Rm. A-6 | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Nigrospora | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Trichoderma | - | - | - | Acceptable |
| | **Total Fungi** | **6** | **240** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

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| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413762-0006 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | 1 | 40 | 1.3 | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| LS-8-14--06 | Basidiospores | 62 | 2600 | 83.1 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | 9 | 400 | 12.8 | Acceptable |
| Art Room | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | 2 | 80 | 2.6 | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | 1* | 10* | 0.3 | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Nigrospora | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Trichoderma | - | - | - | Acceptable |
| | **Total Fungi** | **75** | **3130** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **2** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 17:03:37

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com

Order ID: 372413762
Customer ID: SPOT50
Customer PO:
Project ID:

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/Loyalsock

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413762-0007 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | 1 | 40 | 8.7 | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| LS-8-14--07 | Basidiospores | 6 | 300 | 65.2 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | 2 | 80 | 17.4 | Acceptable |
| Rm. B4 | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | 1 | 40 | 8.7 | Slightly Elevated |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Nigrospora | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Trichoderma | - | - | - | Acceptable |
| | **Total Fungi** | **10** | **460** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 17:03:37

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

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http://www.EMSL.com / cinnmicrolab@emsl.com


| | |
|---|---|
| Order ID: | 372413762 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/Loyalsock

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413762-0008 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | 2 | 80 | 1.2 | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | 4 | 200 | 3.1 | Slightly Elevated |
| LS-8-14--08 | Basidiospores | 147 | 6200 | 95.7 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | - | - | - | Acceptable |
| Hall O/S B4 | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Nigrospora | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Trichoderma | - | - | - | Acceptable |
| | **Total Fungi** | **153** | **6480** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **2** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 17:03:37

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

# Laboratory Analytical Report

# Lyter Elementary School

# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / ˆßµ□ˆßµ□
http://www.EMSL.com / cinnmicrolab@emsl.com


| | |
|---|---|
| Order ID: | 372413761 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/Lyter ES

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | - | - | - | Acceptable |
| Ascospores | - | - | - | Acceptable |
| Aspergillus/Penicillium++ | - | - | - | Acceptable |
| Basidiospores | 9 | 400 | 100 | Acceptable |
| Bipolaris++ | - | - | - | Acceptable |
| Chaetomium++ | - | - | - | Acceptable |
| Cladosporium | - | - | - | Acceptable |
| Curvularia | - | - | - | Acceptable |
| Epicoccum | - | - | - | Acceptable |
| Fusarium++ | - | - | - | Acceptable |
| Ganoderma | - | - | - | Acceptable |
| Myxomycetes++ | - | - | - | Acceptable |
| Pithomyces++ | - | - | - | Acceptable |
| Rust | - | - | - | Acceptable |
| Scopulariopsis/Microascus | - | - | - | Acceptable |
| Stachybotrys/Memnoniella | - | - | - | Acceptable |
| Unidentifiable Spores | - | - | - | Acceptable |
| Zygomycetes | - | - | - | Acceptable |
| Pestalotia++ | - | - | - | Acceptable |
| Polythrincium | - | - | - | Acceptable |
| **Total Fungi** | **9** | **400** | **100** | Acceptable |
| Hyphal Fragment | - | - | - | Acceptable |
| Insect Fragment | - | - | - | Acceptable |
| Pollen | - | - | - | Acceptable |

| | | | |
|---|---|---|---|
| **372413761-0001** | | | |
| **Client Sample ID** | | | |
| L-8-14-01 | | | |
| **Location** | | | |
| Cafe | | | |
| **Sample Volume (L)** | | | |
| 75 | | | |
| **Sample Type** | | | |
| Inside | | | |
| **Comments** | | | |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

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**Slightly Elevated** Concentration above background
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/21/2024 07:27:43

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory



For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

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Phone/Fax: (800) 220-3675 / ˆßµ□ˆßµ□
http://www.EMSL.com / cinnmicrolab@emsl.com


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|---|---|
| Order ID: | 372413761 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

| | |
|---|---|
| Phone: | (610) 621-2000 |
| Fax: | |
| Collected: | 08/14/2024 |
| Received: | 08/16/2024 |
| Analyzed: | 08/20/2024 |

**Proj:** 109944.0018/Montoursville SD/Lyter ES

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | - | - | - | Acceptable |
| Ascospores | 3 | 100 | 1.9 | Acceptable |
| Aspergillus/Penicillium++ | - | - | - | Acceptable |
| Basidiospores | 118 | 4980 | 94.7 | Acceptable |
| Bipolaris++ | - | - | - | Acceptable |
| Chaetomium++ | - | - | - | Acceptable |
| Cladosporium | 3 | 100 | 1.9 | Acceptable |
| Curvularia | - | - | - | Acceptable |
| Epicoccum | - | - | - | Acceptable |
| Fusarium++ | - | - | - | Acceptable |
| Ganoderma | 1 | 40 | 0.8 | Acceptable |
| Myxomycetes++ | - | - | - | Acceptable |
| Pithomyces++ | 1* | 10* | 0.2 | Slightly Elevated |
| Rust | 2* | 30* | 0.6 | Acceptable |
| Scopulariopsis/Microascus | - | - | - | Acceptable |
| Stachybotrys/Memnoniella | - | - | - | Acceptable |
| Unidentifiable Spores | - | - | - | Acceptable |
| Zygomycetes | - | - | - | Acceptable |
| Pestalotia++ | - | - | - | Acceptable |
| Polythrincium | - | - | - | Acceptable |
| **Total Fungi** | **128** | **5260** | **100** | Acceptable |
| Hyphal Fragment | - | - | - | Acceptable |
| Insect Fragment | - | - | - | Acceptable |
| Pollen | - | - | - | Acceptable |

| | | | |
|---|---|---|---|
| Analytical Sensitivity 600x: | **42** | counts/cubic meter | |
| Analytical Sensitivity 300x *: | **13*** | counts/cubic meter | |
| Skin Fragments: | **1** | 1 to 4 (low to high) | |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) | |
| Background: | **1** | 1 to 4 (low to high); 5 (overloaded) | |

**Acceptable** Concentration at or below background

**Slightly Elevated** Concentration above background

**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.

Spores reported to be able to cause allergies in individuals.

Potential for mycotoxin production exists with these fungi.

These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum

Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/21/2024 07:27:43

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

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Phone/Fax: (800) 220-3675 / ˆßµ□ˆßµ□
http://www.EMSL.com / cinnmicrolab@emsl.com


| | |
|---|---|
| Order ID: | 372413761 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/Lyter ES

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | - | - | - | Acceptable |
| Ascospores | 1 | 40 | 2.8 | Acceptable |
| Aspergillus/Penicillium++ | 2 | 80 | 5.6 | Acceptable |
| Basidiospores | 29 | 1200 | 83.3 | Acceptable |
| Bipolaris++ | - | - | - | Acceptable |
| Chaetomium++ | - | - | - | Acceptable |
| Cladosporium | 2 | 80 | 5.6 | Acceptable |
| Curvularia | - | - | - | Acceptable |
| Epicoccum | - | - | - | Acceptable |
| Fusarium++ | - | - | - | Acceptable |
| Ganoderma | 1 | 40 | 2.8 | Acceptable |
| Myxomycetes++ | - | - | - | Acceptable |
| Pithomyces++ | - | - | - | Acceptable |
| Rust | - | - | - | Acceptable |
| Scopulariopsis/Microascus | - | - | - | Acceptable |
| Stachybotrys/Memnoniella | - | - | - | Acceptable |
| Unidentifiable Spores | - | - | - | Acceptable |
| Zygomycetes | - | - | - | Acceptable |
| Pestalotia++ | - | - | - | Acceptable |
| Polythrincium | - | - | - | Acceptable |
| **Total Fungi** | **35** | **1440** | **100** | Acceptable |
| Hyphal Fragment | - | - | - | Acceptable |
| Insect Fragment | - | - | - | Acceptable |
| Pollen | - | - | - | Acceptable |

| | | | |
|---|---|---|---|
| Analytical Sensitivity 600x: | **42** | counts/cubic meter | |
| Analytical Sensitivity 300x *: | **13*** | counts/cubic meter | |
| Skin Fragments: | **2** | 1 to 4 (low to high) | |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) | |
| Background: | **1** | 1 to 4 (low to high); 5 (overloaded) | |

**Client Sample ID**
L-8-14-03

**Location**
Hall O/S B-15

**Sample Volume (L)**
75

**Sample Type**
Inside

**Comments**

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

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| | |
|---|---|
| Order ID: | 372413761 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
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1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/Lyter ES

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413761-0004 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | - | - | - | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| L-8-14-04 | Basidiospores | - | - | - | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | - | - | - | Acceptable |
| Library | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Pestalotia++ | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | **Total Fungi** | **-** | **None Detected** | **-** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **2** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/21/2024 07:27:43

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| | |
|---|---|
| Order ID: | 372413761 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/Lyter ES

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | 1* | 10* | 0 | |
| Ascospores | 6 | 300 | 1.1 | |
| Aspergillus/Penicillium++ | 128 | 5590 | 19.8 | |
| Basidiospores | 480 | 20900 | 74 | |
| Bipolaris++ | 1 | 40 | 0.1 | |
| Chaetomium++ | - | - | - | |
| Cladosporium | 20 | 870 | 3.1 | |
| Curvularia | - | - | - | |
| Epicoccum | - | - | - | |
| Fusarium++ | - | - | - | |
| Ganoderma | 12 | 520 | 1.8 | |
| Myxomycetes++ | - | - | - | |
| Pithomyces++ | - | - | - | |
| Rust | - | - | - | |
| Scopulariopsis/Microascus | - | - | - | |
| Stachybotrys/Memnoniella | - | - | - | |
| Unidentifiable Spores | - | - | - | |
| Zygomycetes | - | - | - | |
| Pestalotia++ | - | - | - | |
| Polythrincium | - | - | - | |
| **Total Fungi** | **648** | **28230** | **100** | |
| Hyphal Fragment | - | - | - | |
| Insect Fragment | - | - | - | |
| Pollen | 1* | 10* | - | |

| | | | |
|---|---|---|---|
| **Client Sample ID** | 372413761-0005 | | |
| **Location** | M-8-14-Ext. | | |
| **Sample Volume (L)** | McCall | | |
| **Sample Type** | 75 | | |
| **Comments** | Background | | |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **2** 1 to 4 (low to high); 5 (overloaded)

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These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/21/2024 07:27:43

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / ˆßµ□ˆßµ□
http://www.EMSL.com / cinnmicrolab@emsl.com


| | |
|---|---|
| Order ID: | 372413761 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |


**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:


Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/Lyter ES

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413761-0006 | Alternaria (Ulocladium) | 1* | 10* | 0.1 | |
| | Ascospores | 9 | 400 | 2.3 | |
| **Client Sample ID** | Aspergillus/Penicillium++ | 21 | 920 | 5.2 | |
| L-8-14-Ext. | Basidiospores | 333 | 14500 | 81.9 | |
| | Bipolaris++ | - | - | - | |
| | Chaetomium++ | 1 | 40 | 0.2 | |
| **Location** | Cladosporium | 18 | 790 | 4.5 | |
| Lyter | Curvularia | - | - | - | |
| | Epicoccum | - | - | - | |
| **Sample Volume (L)** | Fusarium++ | - | - | - | |
| | Ganoderma | 15 | 660 | 3.7 | |
| 75 | Myxomycetes++ | 7 | 300 | 1.7 | |
| | Pithomyces++ | - | - | - | |
| **Sample Type** | Rust | 1 | 40 | 0.2 | |
| Background | Scopulariopsis/Microascus | - | - | - | |
| | Stachybotrys/Memnoniella | - | - | - | |
| **Comments** | Unidentifiable Spores | - | - | - | |
| | Zygomycetes | - | - | - | |
| | Pestalotia++ | 1 | 40 | 0.2 | |
| | Polythrincium | - | - | - | |
| | **Total Fungi** | **407** | **17700** | **100** | |
| | Hyphal Fragment | - | - | - | |
| | Insect Fragment | 1 | 40 | - | |
| | Pollen | 1 | 40 | - | |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **1** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **2** | 1 to 4 (low to high); 5 (overloaded) |

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/21/2024 07:27:43

Vincent Iuzzolino, M.S., Laboratory Director
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| Order ID: | 372413761 |
| Customer ID: | SPOT50 |
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| Project ID: | |


**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:


Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/Lyter ES

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413761-0007 | Alternaria (Ulocladium) | 2 | 90 | 0.7 | |
| | Ascospores | 6 | 300 | 2.4 | |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | |
| HS-8-14-Ext. | Basidiospores | 204 | 8900 | 70 | |
| | Bipolaris++ | - | - | - | |
| | Chaetomium++ | - | - | - | |
| **Location** | Cladosporium | 67 | 2900 | 22.8 | |
| High School | Curvularia | - | - | - | |
| | Epicoccum | - | - | - | |
| **Sample Volume (L)** | Fusarium++ | - | - | - | |
| | Ganoderma | 12 | 520 | 4.1 | |
| 75 | Myxomycetes++ | - | - | - | |
| | Pithomyces++ | - | - | - | |
| **Sample Type** | Rust | - | - | - | |
| Background | Scopulariopsis/Microascus | - | - | - | |
| | Stachybotrys/Memnoniella | - | - | - | |
| **Comments** | Unidentifiable Spores | - | - | - | |
| | Zygomycetes | - | - | - | |
| | Pestalotia++ | - | - | - | |
| | Polythrincium | 1* | 10* | 0.1 | |
| | **Total Fungi** | **292** | **12720** | **100** | |
| | Hyphal Fragment | 2 | 90 | - | |
| | Insect Fragment | - | - | - | |
| | Pollen | 1 | 40 | - | |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **2** 1 to 4 (low to high); 5 (overloaded)

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/21/2024 07:27:43

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

# Laboratory Analytical Report

# McCall Middle School

# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com

| | |
|---|---|
| Order ID: | 372413773 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018 / Montoursville SD / McCall

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413773-0001 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | - | - | - | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| M-8-14-01 | Basidiospores | 8 | 300 | 71.4 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | - | - | - | Acceptable |
| Library | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | 1 | 40 | 9.5 | Acceptable |
| 75 | Myxomycetes++ | 1 | 40 | 9.5 | Acceptable |
| | Pithomyces++ | 1 | 40 | 9.5 | Slightly Elevated |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Pestalotia++ | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | **Total Fungi** | **11** | **420** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **2** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 19:57:58

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory



For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

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|---|---|
| Order ID: | 372413773 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018 / Montoursville SD / McCall

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

**Client Sample ID:** 372413773-0002
**Location:** M-8-14-02
**Sample Volume (L):** Room 141
**Sample Type:** 75
**Comments:** Inside

| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | - | - | - | Acceptable |
| Ascospores | - | - | - | Acceptable |
| Aspergillus/Penicillium++ | - | - | - | Acceptable |
| Basidiospores | 3 | 100 | 58.8 | Acceptable |
| Bipolaris++ | - | - | - | Acceptable |
| Chaetomium++ | - | - | - | Acceptable |
| Cladosporium | - | - | - | Acceptable |
| Curvularia | - | - | - | Acceptable |
| Epicoccum | - | - | - | Acceptable |
| Fusarium++ | - | - | - | Acceptable |
| Ganoderma | - | - | - | Acceptable |
| Myxomycetes++ | 1 | 40 | 23.5 | Acceptable |
| Pithomyces++ | 2* | 30* | 17.6 | Slightly Elevated |
| Rust | - | - | - | Acceptable |
| Scopulariopsis/Microascus | - | - | - | Acceptable |
| Stachybotrys/Memnoniella | - | - | - | Acceptable |
| Unidentifiable Spores | - | - | - | Acceptable |
| Zygomycetes | - | - | - | Acceptable |
| Pestalotia++ | - | - | - | Acceptable |
| Polythrincium | - | - | - | Acceptable |
| **Total Fungi** | **6** | **170** | **100** | Acceptable |
| Hyphal Fragment | - | - | - | Acceptable |
| Insect Fragment | - | - | - | Acceptable |
| Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **2** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

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| Order ID: | 372413773 |
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|---|---|
| Phone: | (610) 621-2000 |
| Fax: | |
| Collected: | 08/14/2024 |
| Received: | 08/16/2024 |
| Analyzed: | 08/20/2024 |

**Proj:** 109944.0018 / Montoursville SD / McCall

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | 1* | 10* | 8.3 | Acceptable |
| Ascospores | - | - | - | Acceptable |
| Aspergillus/Penicillium++ | - | - | - | Acceptable |
| Basidiospores | 2 | 90 | 75 | Acceptable |
| Bipolaris++ | - | - | - | Acceptable |
| Chaetomium++ | - | - | - | Acceptable |
| Cladosporium | 1* | 10* | 8.3 | Acceptable |
| Curvularia | - | - | - | Acceptable |
| Epicoccum | - | - | - | Acceptable |
| Fusarium++ | - | - | - | Acceptable |
| Ganoderma | - | - | - | Acceptable |
| Myxomycetes++ | - | - | - | Acceptable |
| Pithomyces++ | - | - | - | Acceptable |
| Rust | 1* | 10* | 8.3 | Acceptable |
| Scopulariopsis/Microascus | - | - | - | Acceptable |
| Stachybotrys/Memnoniella | - | - | - | Acceptable |
| Unidentifiable Spores | - | - | - | Acceptable |
| Zygomycetes | - | - | - | Acceptable |
| Pestalotia++ | - | - | - | Acceptable |
| Polythrincium | - | - | - | Acceptable |
| **Total Fungi** | **5** | **120** | **100** | Acceptable |
| Hyphal Fragment | - | - | - | Acceptable |
| Insect Fragment | - | - | - | Acceptable |
| Pollen | - | - | - | Acceptable |

| | | | |
|---|---|---|---|
| Analytical Sensitivity 600x: | **44** | counts/cubic meter | |
| Analytical Sensitivity 300x *: | **13*** | counts/cubic meter | |
| Skin Fragments: | **1** | 1 to 4 (low to high) | |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) | |
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

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Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018 / Montoursville SD / McCall

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413773-0004 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | - | - | - | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| M-8-14-04 | Basidiospores | 13 | 570 | 65.5 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | 7 | 300 | 34.5 | Acceptable |
| Hall o/s 220 | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Pestalotia++ | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | **Total Fungi** | **20** | **870** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **2** 1 to 4 (low to high); 5 (overloaded)

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**Slightly Elevated** Concentration above background
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

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Reading, PA 19610

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|---|---|
| Phone: | (610) 621-2000 |
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| Collected: | 08/14/2024 |
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| Analyzed: | 08/20/2024 |

**Proj:** 109944.0018 / Montoursville SD / McCall

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413773-0005 | Alternaria (Ulocladium) | 1* | 10* | 0 | |
| | Ascospores | 6 | 300 | 1.1 | |
| **Client Sample ID** | Aspergillus/Penicillium++ | 128 | 5590 | 19.8 | |
| M-8-14-Ext. | Basidiospores | 480 | 20900 | 74 | |
| | Bipolaris++ | 1 | 40 | 0.1 | |
| | Chaetomium++ | - | - | - | |
| **Location** | Cladosporium | 20 | 870 | 3.1 | |
| McCall | Curvularia | - | - | - | |
| | Epicoccum | - | - | - | |
| **Sample Volume (L)** | Fusarium++ | - | - | - | |
| | Ganoderma | 12 | 520 | 1.8 | |
| 75 | Myxomycetes++ | - | - | - | |
| | Pithomyces++ | - | - | - | |
| **Sample Type** | Rust | - | - | - | |
| Background | Scopulariopsis/Microascus | - | - | - | |
| | Stachybotrys/Memnoniella | - | - | - | |
| **Comments** | Unidentifiable Spores | - | - | - | |
| | Zygomycetes | - | - | - | |
| | Pestalotia++ | - | - | - | |
| | Polythrincium | - | - | - | |
| | **Total Fungi** | **648** | **28230** | **100** | |
| | Hyphal Fragment | - | - | - | |
| | Insect Fragment | - | - | - | |
| | Pollen | 1* | 10* | - | |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **2** 1 to 4 (low to high); 5 (overloaded)

Not commonly found growing indoors, spores likely come from outside.
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Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

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| Phone: | (610) 621-2000 |
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| Collected: | 08/14/2024 |
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**Proj:** 109944.0018 / Montoursville SD / McCall

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413773-0006 | Alternaria (Ulocladium) | 1* | 10* | 0.1 | |
| | Ascospores | 9 | 400 | 2.3 | |
| **Client Sample ID** | Aspergillus/Penicillium++ | 21 | 920 | 5.2 | |
| L-8-14-Ext. | Basidiospores | 333 | 14500 | 81.9 | |
| | Bipolaris++ | - | - | - | |
| | Chaetomium++ | 1 | 40 | 0.2 | |
| **Location** | Cladosporium | 18 | 790 | 4.5 | |
| Lyter | Curvularia | - | - | - | |
| | Epicoccum | - | - | - | |
| **Sample Volume (L)** | Fusarium++ | - | - | - | |
| | Ganoderma | 15 | 660 | 3.7 | |
| 75 | Myxomycetes++ | 7 | 300 | 1.7 | |
| | Pithomyces++ | - | - | - | |
| **Sample Type** | Rust | 1 | 40 | 0.2 | |
| Background | Scopulariopsis/Microascus | - | - | - | |
| | Stachybotrys/Memnoniella | - | - | - | |
| **Comments** | Unidentifiable Spores | - | - | - | |
| | Zygomycetes | - | - | - | |
| | Pestalotia++ | 1 | 40 | 0.2 | |
| | Polythrincium | - | - | - | |
| | **Total Fungi** | **407** | **17700** | **100** | |
| | Hyphal Fragment | - | - | - | |
| | Insect Fragment | 1 | 40 | - | |
| | Pollen | 1 | 40 | - | |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **1** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **2** | 1 to 4 (low to high); 5 (overloaded) |

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 19:57:58

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com


| | |
|---|---|
| Order ID: | 372413773 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018 / Montoursville SD / McCall

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413773-0007 | Alternaria (Ulocladium) | 2 | 90 | 0.7 | |
| | Ascospores | 6 | 300 | 2.4 | |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | |
| HS-8-14-Ext. | Basidiospores | 204 | 8900 | 70 | |
| | Bipolaris++ | - | - | - | |
| | Chaetomium++ | - | - | - | |
| **Location** | Cladosporium | 67 | 2900 | 22.8 | |
| High School | Curvularia | - | - | - | |
| | Epicoccum | - | - | - | |
| **Sample Volume (L)** | Fusarium++ | - | - | - | |
| | Ganoderma | 12 | 520 | 4.1 | |
| 75 | Myxomycetes++ | - | - | - | |
| | Pithomyces++ | - | - | - | |
| **Sample Type** | Rust | - | - | - | |
| Background | Scopulariopsis/Microascus | - | - | - | |
| | Stachybotrys/Memnoniella | - | - | - | |
| **Comments** | Unidentifiable Spores | - | - | - | |
| | Zygomycetes | - | - | - | |
| | Pestalotia++ | - | - | - | |
| | Polythrincium | 1* | 10* | 0.1 | |
| | **Total Fungi** | **292** | **12720** | **100** | |
| | Hyphal Fragment | 2 | 90 | - | |
| | Insect Fragment | - | - | - | |
| | Pollen | 1 | 40 | - | |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **1** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **2** | 1 to 4 (low to high); 5 (overloaded) |

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 19:57:58

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

# Laboratory Analytical Report
# Montoursville Area High School

# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com


| | |
|---|---|
| Order ID: | 372413760 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

| | |
|---|---|
| Phone: | (610) 621-2000 |
| Fax: | |
| Collected: | 08/14/2024 |
| Received: | 08/16/2024 |
| Analyzed: | 08/20/2024 |

**Proj:** 109944.0018/Montoursville SD/High School

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413760-0001 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | - | - | - | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| HS-8-14-01 | Basidiospores | 10 | 420 | 100 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | - | - | - | Acceptable |
| Cafe | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Pestalotia++ | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Torula++ | - | - | - | Acceptable |
| | **Total Fungi** | **10** | **420** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **2** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **1** | 1 to 4 (low to high); 5 (overloaded) |

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 15:16:32

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Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/High School

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413760-0002 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | - | - | - | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| HS-8-14-02 | Basidiospores | 7 | 300 | 100 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | - | - | - | Acceptable |
| Hall O/S 206 | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | - | - | - | Acceptable |
| **Sample Type** | Rust | - | - | - | Acceptable |
| Inside | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Pestalotia++ | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Torula++ | - | - | - | Acceptable |
| | **Total Fungi** | **7** | **300** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **2** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 15:16:32

Vincent Iuzzolino, M.S., Laboratory Director
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For Information on the fungi listed in this report please visit the Resources section at www.emsl.com

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| Order ID: | 372413760 |
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Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/High School

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | - | - | - | Acceptable |
| Ascospores | 3 | 100 | 11.1 | Acceptable |
| Aspergillus/Penicillium++ | - | - | - | Acceptable |
| Basidiospores | 18 | 760 | 84.4 | Acceptable |
| Bipolaris++ | - | - | - | Acceptable |
| Chaetomium++ | - | - | - | Acceptable |
| Cladosporium | - | - | - | Acceptable |
| Curvularia | - | - | - | Acceptable |
| Epicoccum | - | - | - | Acceptable |
| Fusarium++ | - | - | - | Acceptable |
| Ganoderma | 1 | 40 | 4.4 | Acceptable |
| Myxomycetes++ | - | - | - | Acceptable |
| Pithomyces++ | - | - | - | Acceptable |
| Rust | - | - | - | Acceptable |
| Scopulariopsis/Microascus | - | - | - | Acceptable |
| Stachybotrys/Memnoniella | - | - | - | Acceptable |
| Unidentifiable Spores | - | - | - | Acceptable |
| Zygomycetes | - | - | - | Acceptable |
| Pestalotia++ | - | - | - | Acceptable |
| Polythrincium | - | - | - | Acceptable |
| Torula++ | - | - | - | Acceptable |
| **Total Fungi** | **22** | **900** | **100** | Acceptable |
| Hyphal Fragment | - | - | - | Acceptable |
| Insect Fragment | - | - | - | Acceptable |
| Pollen | - | - | - | Acceptable |

| | | | |
|---|---|---|---|
| **372413760-0003** | | | |
| **Client Sample ID** | | | |
| HS-8-14-03 | | | |
| **Location** | | | |
| Library | | | |
| **Sample Volume (L)** | | | |
| 75 | | | |
| **Sample Type** | | | |
| Inside | | | |
| **Comments** | | | |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **2** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 15:16:32

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|---|---|
| Order ID: | 372413760 |
| Customer ID: | SPOT50 |
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| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/High School

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

**Client Sample ID:** HS-8-14-04
**Location:** 3rd Floor Commons
**Sample Volume (L):** 75
**Sample Type:** Inside
**Comments:**

| Lab ID | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413760-0004 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | - | - | - | Acceptable |
| | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| | Basidiospores | 4 | 200 | 71.4 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| | Cladosporium | 1 | 40 | 14.3 | Acceptable |
| | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | - | - | - | Acceptable |
| | Rust | - | - | - | Acceptable |
| | Scopulariopsis/Microascus | - | - | - | Acceptable |
| | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Pestalotia++ | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Torula++ | 1 | 40 | 14.3 | Slightly Elevated |
| | **Total Fungi** | **6** | **280** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **2** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **1** | 1 to 4 (low to high); 5 (overloaded) |

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
**ELEVATED** Concentration 10X or more above background

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 15:16:32

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|---|---|
| Order ID: | 372413760 |
| Customer ID: | SPOT50 |
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| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/High School

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413760-0005 | Alternaria (Ulocladium) | - | - | - | Acceptable |
| | Ascospores | - | - | - | Acceptable |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | Acceptable |
| HS-8-14-05 | Basidiospores | 4 | 200 | 83.3 | Acceptable |
| | Bipolaris++ | - | - | - | Acceptable |
| | Chaetomium++ | - | - | - | Acceptable |
| **Location** | Cladosporium | - | - | - | Acceptable |
| Rm. 310 | Curvularia | - | - | - | Acceptable |
| | Epicoccum | - | - | - | Acceptable |
| **Sample Volume (L)** | Fusarium++ | - | - | - | Acceptable |
| | Ganoderma | - | - | - | Acceptable |
| 75 | Myxomycetes++ | - | - | - | Acceptable |
| | Pithomyces++ | 1 | 40 | 16.7 | Slightly Elevated |
| **Sample Type** | Rust | - | - | - | Acceptable |
| | Scopulariopsis/Microascus | - | - | - | Acceptable |
| Inside | Stachybotrys/Memnoniella | - | - | - | Acceptable |
| **Comments** | Unidentifiable Spores | - | - | - | Acceptable |
| | Zygomycetes | - | - | - | Acceptable |
| | Pestalotia++ | - | - | - | Acceptable |
| | Polythrincium | - | - | - | Acceptable |
| | Torula++ | - | - | - | Acceptable |
| | **Total Fungi** | **5** | **240** | **100** | Acceptable |
| | Hyphal Fragment | - | - | - | Acceptable |
| | Insect Fragment | - | - | - | Acceptable |
| | Pollen | - | - | - | Acceptable |

Analytical Sensitivity 600x: **42** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

Skin Fragments: **1** 1 to 4 (low to high)
Fibrous Particulate: **1** 1 to 4 (low to high)
Background: **1** 1 to 4 (low to high); 5 (overloaded)

**Acceptable** Concentration at or below background
**Slightly Elevated** Concentration above background
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Not commonly found growing indoors, spores likely come from outside.
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Potential for mycotoxin production exists with these fungi.
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| Phone: | (610) 621-2000 |
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| Collected: | 08/14/2024 |
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**Proj:** 109944.0018/Montoursville SD/High School

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413760-0006 | Alternaria (Ulocladium) | 1* | 10* | 0 | |
| | Ascospores | 6 | 300 | 1.1 | |
| **Client Sample ID** | Aspergillus/Penicillium++ | 128 | 5590 | 19.8 | |
| M-8-14-Ext. | Basidiospores | 480 | 20900 | 74 | |
| | Bipolaris++ | 1 | 40 | 0.1 | |
| | Chaetomium++ | - | - | - | |
| **Location** | Cladosporium | 20 | 870 | 3.1 | |
| McCall | Curvularia | - | - | - | |
| | Epicoccum | - | - | - | |
| **Sample Volume (L)** | Fusarium++ | - | - | - | |
| | Ganoderma | 12 | 520 | 1.8 | |
| 75 | Myxomycetes++ | - | - | - | |
| | Pithomyces++ | - | - | - | |
| **Sample Type** | Rust | - | - | - | |
| Background | Scopulariopsis/Microascus | - | - | - | |
| | Stachybotrys/Memnoniella | - | - | - | |
| **Comments** | Unidentifiable Spores | - | - | - | |
| | Zygomycetes | - | - | - | |
| | Pestalotia++ | - | - | - | |
| | Polythrincium | - | - | - | |
| | Torula++ | - | - | - | |
| | **Total Fungi** | **648** | **28230** | **100** | |
| | Hyphal Fragment | - | - | - | |
| | Insect Fragment | - | - | - | |
| | Pollen | 1* | 10* | - | |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **1** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **2** | 1 to 4 (low to high); 5 (overloaded) |

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
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Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

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Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/High School

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|
| Alternaria (Ulocladium) | 1* | 10* | 0.1 | |
| Ascospores | 9 | 400 | 2.3 | |
| Aspergillus/Penicillium++ | 21 | 920 | 5.2 | |
| Basidiospores | 333 | 14500 | 81.9 | |
| Bipolaris++ | - | - | - | |
| Chaetomium++ | 1 | 40 | 0.2 | |
| Cladosporium | 18 | 790 | 4.5 | |
| Curvularia | - | - | - | |
| Epicoccum | - | - | - | |
| Fusarium++ | - | - | - | |
| Ganoderma | 15 | 660 | 3.7 | |
| Myxomycetes++ | 7 | 300 | 1.7 | |
| Pithomyces++ | - | - | - | |
| Rust | 1 | 40 | 0.2 | |
| Scopulariopsis/Microascus | - | - | - | |
| Stachybotrys/Memnoniella | - | - | - | |
| Unidentifiable Spores | - | - | - | |
| Zygomycetes | - | - | - | |
| Pestalotia++ | 1 | 40 | 0.2 | |
| Polythrincium | - | - | - | |
| Torula++ | - | - | - | |
| **Total Fungi** | **407** | **17700** | **100** | |
| Hyphal Fragment | - | - | - | |
| Insect Fragment | 1 | 40 | - | |
| Pollen | 1 | 40 | - | |

**Client Sample ID:** L-8-14-Ext.
**Location:** Lyter
**Sample Volume (L):** 75
**Sample Type:** Background
**Comments:**

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **1** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **2** | 1 to 4 (low to high); 5 (overloaded) |

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 15:16:32

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

# EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-0262
http://www.EMSL.com / cinnmicrolab@emsl.com


| | |
|---|---|
| Order ID: | 372413760 |
| Customer ID: | SPOT50 |
| Customer PO: | |
| Project ID: | |

**Attn:** Dave Kuchinski
Spotts Stevens and McCoy, Inc.
1047 North Park Road
Reading, PA 19610

Phone: (610) 621-2000
Fax:
Collected: 08/14/2024
Received: 08/16/2024
Analyzed: 08/20/2024

**Proj:** 109944.0018/Montoursville SD/High School

**Spore Trap ASSESSMENTReport™ Air-O-Cell(™) Analysis of Fungal Spores & Particulates (Methods MICRO-SOP-201, ASTM D7391)**

| | Particle Identification | Raw Count | (Count/m³) | % of Total | Interpretation Guideline |
|---|---|---|---|---|---|
| 372413760-0008 | Alternaria (Ulocladium) | 2 | 90 | 0.7 | |
| | Ascospores | 6 | 300 | 2.4 | |
| **Client Sample ID** | Aspergillus/Penicillium++ | - | - | - | |
| HS-8-14-Ext. | Basidiospores | 204 | 8900 | 70 | |
| | Bipolaris++ | - | - | - | |
| | Chaetomium++ | - | - | - | |
| **Location** | Cladosporium | 67 | 2900 | 22.8 | |
| High School | Curvularia | - | - | - | |
| | Epicoccum | - | - | - | |
| **Sample Volume (L)** | Fusarium++ | - | - | - | |
| | Ganoderma | 12 | 520 | 4.1 | |
| 75 | Myxomycetes++ | - | - | - | |
| | Pithomyces++ | - | - | - | |
| **Sample Type** | Rust | - | - | - | |
| Background | Scopulariopsis/Microascus | - | - | - | |
| | Stachybotrys/Memnoniella | - | - | - | |
| **Comments** | Unidentifiable Spores | - | - | - | |
| | Zygomycetes | - | - | - | |
| | Pestalotia++ | - | - | - | |
| | Polythrincium | 1* | 10* | 0.1 | |
| | Torula++ | - | - | - | |
| | **Total Fungi** | **292** | **12720** | **100** | |
| | Hyphal Fragment | 2 | 90 | - | |
| | Insect Fragment | - | - | - | |
| | Pollen | 1 | 40 | - | |

Analytical Sensitivity 600x: **44** counts/cubic meter
Analytical Sensitivity 300x *: **13*** counts/cubic meter

| | | |
|---|---|---|
| Skin Fragments: | **1** | 1 to 4 (low to high) |
| Fibrous Particulate: | **1** | 1 to 4 (low to high) |
| Background: | **2** | 1 to 4 (low to high); 5 (overloaded) |

Not commonly found growing indoors, spores likely come from outside.
Spores reported to be able to cause allergies in individuals.
Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

Bipolaris++ = Bipolaris / Drechslera / Exserohilum
Myxomycetes++ = Myxomycetes / Smut /

Initial report from: 08/20/2024 15:16:32

Vincent Iuzzolino, M.S., Laboratory Director
or Other Approved Signatory

# Description of Common Molds Found

## Slightly Elevated

***Torula*** - mold is a yeast that has practical uses but can also be pathogenic. One the one hand, this common mold, in its inactive form, can be a flavor enhancer, a starter culture in the production of certain cheeses, and, when dissolved in water, can organically control olive flies in California and Europe. Torula can be found on wood, paper, and straw baskets, as well as on ceiling tiles and drywall. Outside, you might see torula mold growing on grass, dead stems, and in soil.

***Pithomyces*** (pith-oh-my-sees) – contaminant, found on decaying plants, especially leaves and grasses. Rarely found indoors, but it can grow on paper. No reports of allergies or infections, but some species produce a toxin that causes facial eczema in sheep.

***Myxomycete / Rust / Smut*** (mix-oh'-my-seat) – general category for commonly found genera usually associated with living and decaying plants as well as decaying wood. Sometimes can be found indoors. Some allergenic properties reported, but generally pose no health concerns to humans or animals. Smuts are ubiquitous parasitic plant pathogens, which require a living host to complete their life cycle and are not usually found growing indoors. Smuts are most often found on corn, grass, weeds, flowering plants and other fungi; they are usually disseminated by wind. They are called smuts because they form black powdery spore masses that resemble soot or smut. Myxomycetes are ubiquitous outdoor molds (often considered a slime mold), and are commonly found in forested areas where bark, soil, dung, and leaf litter are present.

***Polythrincium*** is a leaf mold. Allergic reactions or negative health reactions in humans are not well studied.

# Air Monitoring Data Form
## Loyalsock Valley Elementary School

# SSM Group, Inc. Air Monitoring Data Form

**Date:** August 14, 2024 **Project Name:** Montoursville Area School District, Loyalsock Valley Elementary School

**Client/Work Order #:** 109944.0018 **Analysts:** David L. Kuchinski

| Sample | Location | $CO_2$ (PPM) | CO (PPM) | Temperature (°F) | Relative Humidity (%) | VOC (ppb) | Total Particulate (<10 µm) (mg/m3) | Total Resipitable Particulate (<10 µm) ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|
| | ***Recommended IAQ Limits**** | ***<1058*** | ***<9*** | ***68 - 75*** | ***30 - 60*** | ***< 1000*** | ***<0.150*** | ***<0.150*** |
| 1 | Exterior-Front Parking Lot | 456 | 0.0 | 70.6 | 63.1 | 0 | 0.038 | 0.044 |
| 2 | Exterior-Rear of Building | 460 | 0.0 | 65.3 | 74.9 | 0 | 0.045 | 0.035 |
| 3 | Library (L-2) | 553 | 0.0 | 70.1 | 40.0 | 48 | 0.042 | 0.025 |
| 4 | Café | 271 | 0.0 | 71.4 | 61.7 | 8 | 0.043 | 0.031 |
| 5 | Room A-6 | 505 | 0.0 | 73.6 | 62.7 | 24 | 0.047 | 0.026 |
| 6 | Art Room | 515 | 0.0 | 74.3 | 61.9 | 3 | 0.036 | 0.034 |
| 7 | Room B-4 | 561 | 0.0 | 73.1 | 64.8 | 19 | 0.035 | 0.031 |
| 8 | Hallway outside Room B-4 | 520 | 0.0 | 73.6 | 63.0 | 31 | 0.024 | 0.026 |
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Units - ppm = parts/million; ppb = parts/billion; mg/m3 = milligrams/cubic meter *CO2 recommended limit is outside ppm + 700 ppm. CO is an ASHRAE recommended level. For VOC's, recommended limit is 10% of PADOH IAQ for Schools evacuation limit and is generally for normal classrooms and hallways, special use areas such as Art rooms could be significantly higher due to expectation of some exposure in these areas and potential exposure duration would be shorter. Particulate values are based on EPA Ambient Air Quality values and are approximately 100 times lower than OSHA limits.

# Air Monitoring Data Form
## Lyter Elementary School

# SSM Group, Inc. Air Monitoring Data Form

**Date:** August 14, 2024 **Project Name:** Montoursville Area School District, Lyter Elementary School

**Client/Work Order #:** 109944.0018 **Analysts:** David L. Kuchinski

| Sample | Location | $CO_2$ (PPM) | CO (PPM) | Temperature (°F) | Relative Humidity (%) | VOC (ppb) | Total Particulate (<10 µm) (mg/m3) | Total Resipitable Particulate (<10 µm) ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|
| | ***Recommended IAQ Limits**** | ***<1126*** | ***<9*** | ***68 - 75*** | ***30 - 60*** | ***< 1000*** | ***<0.150*** | ***<0.150*** |
| 1 | Exterior- East Side Lot | 426 | 0.0 | 77.2 | 57.5 | 0 | 0.042 | 0.054 |
| 2 | Café | 543 | 0.0 | 79.4 | 54.5 | 0 | 0.039 | 0.026 |
| 3 | Room C-7 - STEM | 507 | 0.0 | 77.6 | 55.6 | 0 | 0.041 | 0.041 |
| 4 | Hallway outside Room B-15 | 497 | 0.0 | 76.0 | 58.1 | 16 | 0.043 | 0.031 |
| 5 | Library | 556 | 0.0 | 75.3 | 57.5 | 67 | 0.028 | 0.042 |
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Units - ppm = parts/million; ppb = parts/billion; mg/m3 = milligrams/cubic meter *CO2 recommended limit is outside ppm + 700 ppm. CO is an ASHRAE recommended level. For VOC's, recommended limit is 10% of PADOH IAQ for Schools evacuation limit and is generally for normal classrooms and hallways, special use areas such as Art rooms could be significantly higher due to expectation of some exposure in these areas and potential exposure duration would be shorter. Particulate values are based on EPA Ambient Air Quality values and are approximately 100 times lower than OSHA limits.

# Air Monitoring Data Form
## McCall Middle School

# SSM Group, Inc. Air Monitoring Data Form

**Date:** August 14, 2024 **Project Name:** Montoursville Area School District, C.E. McCall Middle School

**Client/Work Order #:** 109944.0018 **Analysts:** David L. Kuchinski

| Sample | Location | $CO_2$ (PPM) | CO (PPM) | Temperature (°F) | Relative Humidity (%) | VOC (ppb) | Total Particulate (<10 µm) (mg/m3) | Total Resipitable Particulate (<10 µm) ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|
| | ***Recommended IAQ Limits**** | ***<1122*** | ***<9*** | ***68 - 75*** | ***30 - 60*** | ***< 1000*** | ***<0.150*** | ***<0.150*** |
| 1 | Exterior-Side Lot | 422 | 0.0 | 82.0 | 50.0 | 1 | 0.035 | 0.025 |
| 2 | Library | 493 | 0.0 | 76.8 | 61.8 | 129 | 0.027 | 0.036 |
| 3 | Room 141 | 780 | 0.0 | 76.7 | 58.8 | 179 | 0.038 | 0.027 |
| 4 | Room 220-Science Lab | 496 | 0.0 | 77.1 | 61.4 | 245 | 0.031 | 0.032 |
| 5 | Hallway outside Room 220 | 545 | 0.0 | 78.0 | 60.2 | 172 | 0.050 | 0.031 |
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Units - ppm = parts/million; ppb = parts/billion; mg/m3 = milligrams/cubic meter *CO2 recommended limit is outside ppm + 700 ppm. CO is an ASHRAE recommended level. For VOC's, recommended limit is 10% of PADOH IAQ for Schools evacuation limit and is generally for normal classrooms and hallways, special use areas such as Art rooms could be significantly higher due to expectation of some exposure in these areas and potential exposure duration would be shorter. Particulate values are based on EPA Ambient Air Quality values and are approximately 100 times lower than OSHA limits.

# Air Monitoring Data Form
## Montoursville Area High School

# SSM Group, Inc. Air Monitoring Data Form

**Date:** August 14, 2024 **Project Name:** Montoursville Area School District, High School

**Client/Work Order #:** 109944.0018 **Analysts:** David L. Kuchinski

| Sample | Location | $CO_2$ (PPM) | CO (PPM) | Temperature (°F) | Relative Humidity (%) | VOC (ppb) | Total Particulate (<10 µm) (mg/m3) | Total Resipitable Particulate (<10 µm) ($mg/m^3$) |
|---|---|---|---|---|---|---|---|---|
| | ***Recommended IAQ Limits**** | ***<1126*** | ***<9*** | ***68 - 75*** | ***30 - 60*** | ***< 1000*** | ***<0.150*** | ***<0.150*** |
| 1 | Exterior, East Side Lot | 426 | 0.0 | 84.9 | 47.0 | 0 | 0.071 | 0.034 |
| 2 | Café | 461 | 0.0 | 81.0 | 43.6 | 28 | 0.038 | 0.042 |
| 3 | Hallway outside Room 206 | 512 | 0.0 | 78.0 | 49.0 | 76 | 0.028 | 0.029 |
| 4 | Library | 501 | 0.0 | 80.0 | 55.0 | 62 | 0.045 | 0.035 |
| 5 | 3rd Floor Commons | 485 | 0.0 | 80.4 | 46.6 | 39 | 0.077 | 0.067 |
| 6 | Room 310 | 490 | 0.0 | 79.7 | 48.7 | 74 | 0.027 | 0.029 |
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Units - ppm = parts/million; ppb = parts/billion; mg/m3 = milligrams/cubic meter *CO2 recommended limit is outside ppm + 700 ppm. CO is an ASHRAE recommended level. For VOC's, recommended limit is 10% of PADOH IAQ for Schools evacuation limit and is generally for normal classrooms and hallways, special use areas such as Art rooms could be significantly higher due to expectation of some exposure in these areas and potential exposure duration would be shorter. Particulate values are based on EPA Ambient Air Quality values and are approximately 100 times lower than OSHA limits.

# Direct Read Instrument Parameters

**Carbon Monoxide**

Carbon Monoxide (CO) levels are measured to evaluate possible intrusion of combustion exhaust.

- **Criteria**
    - The Occupational Safety and Health Administration Permissible Exposure Limit (OSHA PEL) for carbon monoxide is 50 ppm.
    - The National Institute of Occupational Safety and Health Recommended Exposure Limit (NIOSH REL) is 35 ppm.
    - The American Council of Governmental Industrial Hygienists Threshold Limit Value (ACGIH TLV) is 25 ppm.
    - The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) recommended guideline for IAQ purposes is 9 ppm.

**Carbon Dioxide**

Carbon Dioxide ($CO_2$) levels are measured as an indicator of adequate ventilation.

- **Criteria**
    - The OSHA Permissible Exposure Limit (PEL) for carbon dioxide is 5,000 ppm.
    - The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) recommended guideline for IAQ purposes is site specific. The limit is calculated as the amount of $CO_2$ outside the building at the time of sampling plus 700 ppm.

**Relative Humidity (% RH)**

Relative humidity in excess of 60% potentially contributes to increased microbial growth, which in turn may aggravate allergic conditions or create biological hazards. Values near the 60% RH level are more common in the cooling season and values lower than 30% RH are very common in the heating season. Interior humidity can shift quickly depending on the outside conditions and the amount of outside air being introduced.

- **Criteria**

  Relative humidity affects occupant comfort when it is either too high or too low. The American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) recommended range for comfort is 30 to 60%.

**Temperature**

Occupant comfort may be affected by temperatures that are either too cold or too warm.

- **Criteria**

  The ASHRAE 55-2010 Standard provides calculations that produce an acceptable temperature range for interior applications during the heating season of 69 to 78 °F; these values are for temperature controlled buildings. Note the different ranges for different humidity.

| Temperature / Humidity Ranges for Comfort | | | |
|---|---|---|---|
| **Conditions** | **Relative Humidity** | **Acceptable Operating Temperatures** | |
| | | **°C** | **°F** |
| Summer (light clothing) | If 30%, then<br>If 60%, then | 24.5 - 28<br>23 - 25.5 | 76 - 82<br>74 - 78 |
| Winter (warm clothing) | If 30%, then<br>If 60%, then | 20.5 - 25.5<br>20 - 24 | 69 - 78<br>68 - 75 |

Source: Adapted from ASHRAE 55-2010.

**Total Volatile Organic Compound (TVOC)**

Volatile organic compounds are often present in the indoor environment from many familiar sources, (inks, glues, etc.), however, elevated concentrations are generally to be avoided, making TVOC's a common parameter in IAQ/IEQ evaluations.

- **Criteria**

  The recommended limit for TVOC is based on a percentage (10% or 1000 ppb) of the Pennsylvania Department of Health (PADOH) IAQ for Schools VOC evacuation limit of 10,000 ppb. The 1000 ppb limit is generally for regular classrooms and hallways with special use areas such as Art rooms having a higher acceptable limit primarily due to use and shorter duration exposure.

**Total Particulate**

Total particulate levels are measured for IAQ evaluations to determine the presence of dust and particulate as potential allergen/irritant exposure and cleanliness.

- **Criteria**

  The OSHA Permissible Exposure Limit (PEL) for particulate is 15.0 $mg/m^3$. Particulate values are based on EPA Ambient Air Quality values and are 100 times lower than the OSHA PEL or 0.15 $mg/m^3$.