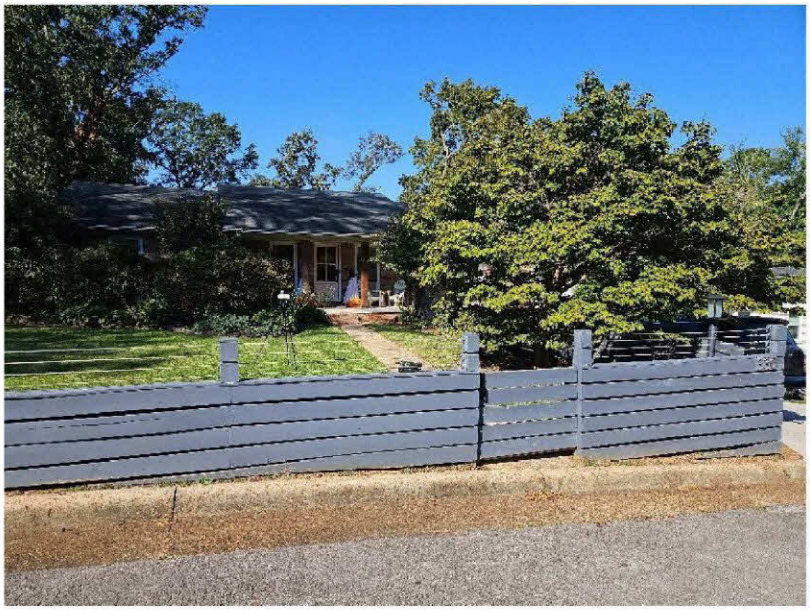
Bamaclean Inc.

Madison, AL 35757

Email:
Phone.



This report is solely for the benefit of the Client. Any person or party designated by the Client to receive information in this report shall be subject to the TERMS AND CONDITIONS contained herein. Such designation shall be provided in writing to the inspector. The recommendations and interpretations are just the opinion of the inspector and no guarantees of successful mitigation results are to be expected from adherence to the recommendations herein of this report are implied. Actions and remedies are not obligatory to the property owner but it's recommended that any mitigation efforts be performed by licensed mitigator and EPA and IICRC guidelines followed

Client Information:

Florence, AL 35630
Phone:

Property Information:

Florence, AL 35630

Scope of Inspection

This inspection was carried out using generally accepted methods and guidelines for mold evaluation, including those published by the American Industrial Hygiene Association. These standards helped guide the assessment of mold activity in the building and the development of any needed remediation recommendations.

Our scope of work was visual and limited to what is accessible in the home at the time of the inspection. this can include but not limited to moisture checks both invasive and noninvasive, air sampling, swab, and tape sampling. Photographic documentation, building material moisture measurements, temperature, and humidity data are also collected. All samples collected were authorized by the client.

Background Information: Fungi are part of the normal environment. Mold spores are present—usually at low levels—in the air and on surfaces in virtually all buildings. The practical goal isn't zero spores, but **moisture control**, which prevents indoor amplification.

When leaks, condensation, flooding, or chronic humidity occur, indoor fungal growth can increase and shift toward water-damage indicator organisms. That change in both the amount and type of spores can degrade indoor environmental quality. Best-practice guidance emphasizes locating and correcting moisture sources and repairing affected materials, rather than relying on a single "pass/fail" number.

Discussion: Mold — Key Concepts (Read Before the Results)

Regional Notes: North Alabama & the Southeast: Our warm, humid climate means outdoor molds are present year-round, typically higher in warm, wet periods. In well-performing buildings, indoor airborne spore profiles are usually similar to—or lower than—same-day outdoor air

Contamination levels (IICRC S520 terminology).
We classify conditions to guide decisions and scope:

Condition 1 — **Normal fungal ecology:** Indoor air/surfaces generally reflect normal background; no visible growth; materials dry.

Condition 2 — **Settled spores / cross-contamination:** Slightly elevated totals vs. outdoor; spores likely settled from a contaminated area or were re-suspended by activity. Cleaning and moisture control recommended.

Condition 3 —**Growth present:** Evidence of active or past mold growth (visible or hidden), often with elevated **Asp/Pen.** Requires targeted remediation and correction of moisture sources.

"Outdoor" vs. "indoor" spore types.
All molds originate outdoors. Some groups (e.g., many ascospores and basidiospores) are mainly associated with the outdoor environment and typically do not colonize building materials inside; when found indoors they usually reflect normal air exchange, not indoor growth. Other molds readily use indoor materials (paper, wood/cellulose, dust) and can amplify under damp conditions. In most buildings, **Aspergillus and Penicillium** are the primary moisture/leak indicators; **Cladosporium** can also amplify indoors when surfaces remain damp.

In homes and commercial spaces across the Southeast, typical background airborne mold levels indoors are generally **at or below** the same-day outdoor levels and are made up of common environmental types. Routine surface sampling in conditioned living/working areas commonly falls in the **~10 to 500 spores per cm² range**. By contrast, surfaces in **unconditioned or high-airflow/dust locations**—such as **attics, crawlspaces, fresh-air intakes, and HVAC components**—may show **substantially higher** surface spore accumulations depending on dust loading and age.

About "standards." Health & Regulatory Context
There are **no federal or universally accepted, health-based exposure standards for indoor mold spore levels**. People respond differently, and research does not support a single "safe vs. unsafe" cutoff In workplaces, OSHA may apply the General Duty Clause to address recognized dampness/mold hazards even

without numeric standards.

How We Interpret Results

- Compare indoor samples to same-day outdoor and to non-complaint areas; weigh results with moisture history and direct inspection.
- Look for shifts toward water damage indicator taking indoors out of proportion to outdoors.
- Use multiple lines of evidence (inspection, moisture readings, sampling) rather than any single number.

BamaClean air sample/spore trap screening targets (occupied interiors).
These are decision guidelines (not regulatory limits) to keep reports actionable and recommendations consistent in typical occupied areas, BamaClean uses conservative internal screening targets to guide next steps:

- **Total spores: target < 1,000 spores/m³** indoors.
- **Aspergillus/Penicillium-type spores: target < 500 spores/m³** indoors.
- Indoor results are compared to a **same-day outdoor sample**. In general, indoor totals and key species should be lower than outdoors.

Above outdoor = slightly elevated.
>= 10× outdoor = extremely elevated, strongly suggesting indoor amplification.

Sensitivity note: Some individuals may experience irritation or allergic symptoms at levels below the screening targets; clinical concerns should be addressed with a healthcare provider.

Major reviews (IOM/CDC/NIOSH; WHO) associate damp or moldy indoor environments with respiratory symptoms (e.g., cough, wheeze, asthma symptoms in sensitized people) and, in susceptible populations, illnesses such as hypersensitivity pneumonitis. Reducing dampness reduces risk.

These are not health standards or regulatory limits. They are decision-support guidelines interpreted with building history, moisture findings, season, space use, and occupant sensitivity. If targets are exceeded—or indoor profiles show water-damage indicators out of proportion to outdoors—we investigate moisture sources and recommend corrective actions.

Attics & crawlspaces are evaluated differently.
These are unconditioned areas. **Relative humidity (RH)** fluctuates strongly with temperature and is not a direct measure of how much water vapor is present.**GPP(grains per pound)** provides a true measure of the absolute moisture content of air and allows accurate comparison between conditioned and unconditioned spaces. We also prioritize moisture load(GPP), visible growth, and ventilation rather than the interior screening targets. Attics and vented crawlspaces should track equal to or below outdoor for RH, GPP and Fungi; they just **shouldn't exceed** the outdoor control. Duct work air tightness (when present) and overall condition of these areas is the key to preventing growth and migration into living spaces.

Ventilation Priority: Proper air movement is critical. Venting must allow air turnover to prevent humidity accumulation. Verify all bathroom, dryer, or exhaust fans terminate outdoors—not into attic or crawlspace. Check soffit, ridge, and foundation vents for blockages or insulation coverage.

Plain-English takeaway: Mold spores are everywhere at background levels; moisture drives problems. There are no federal "safe limits," so we evaluate findings against outdoor air and non-complaint areas and focus on finding the moisture source. BamaClean uses conservative screening targets as a decision aid—not as medical or regulatory thresholds. Proper air movement is critical in unconditioned areas like attics and crawlspaces.

Recommended mitigation practices: We recommend that any mitigation work being performed be by a certified IICRC professional and the general guidelines and standard practice put forth in "Guidelines on Assessment and Remediation of Fungi in Indoor Environments" by the New York City Department of Health & Mental Hygiene, Bureau of Environmental & Occupational Disease Epidemiology, "Mold Remediation in Schools and Commercial Buildings" by the US Environmental Protection Agency, "ANSI / IICRC S500

Standard and Reference Guide for Professional Water Damage Restoration" and "ANSI / IICRC S520 Standard and Reference Guide for Professional Mold Remediation" by the Institute of Inspection Cleaning and Restoration.

Our recommendations are preliminary and not absolute; The Mitigation company should use their best judgment and be diligent to find all affected areas even if beyond this scope. It is recommended to ensure that any water intrusion and elevated humidity issues impacting the structure have been confirmed and corrected prior to any work being started. As needed Containment and negative air systems should be established, HEPA filtration units used and HEPA vacuuming performed.

General Methods: For contents, hard non-porous items should be HEPA-Vacuumed hand-cleaned with a mild detergent and water and, where appropriate, treated with a suitable EPA-listed antimicrobial according to the label, then rinsed/wiped and thoroughly dried. Porous paper items with visible growth should be discarded, while salvageable books and important documents can be carefully HEPA-vacuumed (using a soft brush through a mesh screen) and lightly hand-wiped only if the material allows. Washable fabrics should be laundered per the manufacturer's instructions and dried completely. Upholstered or other fabric furniture should be slowly and thoroughly HEPA-vacuumed; if growth is present or odors persist, consider professional cleaning or disposal. After cleaning, remove all contents from the work area and store them in a clean, dry, climate-controlled space for the duration of remediation.

For building surfaces, the mitigated areas should first be HEPA-vacuumed to remove settled dust and spores, then damp-wiped with a mild detergent solution; where appropriate, follow with a suitable antimicrobial applied per label directions. This whole-room wipe-down includes wallboard or paneling, trim, shelving, cabinetry, doors, fixtures, and similar surfaces, taking care to avoid over-wetting and to allow thorough drying. Wood framing and sheathing should be cleaned in the same sequence (HEPA vacuum followed by detergent/antimicrobial scrub), and where staining or embedded growth remains, an abrasive method such as soda blasting may be used if appropriate and properly contained, followed by a final HEPA vacuum and wipe.

For crawl spaces,address moisture first, then clean. Correct active leaks or drainage issues, and establish ground moisture control before or alongside cleaning. Remove loose debris and any visibly impacted or matted insulation; bag and dispose of waste off-site. HEPA-vacuum accessible surfaces (joists, subfloor, piers, and the exteriors of ducts or equipment), then damp-wipe/scrub wood and masonry with a mild detergent solution; where appropriate, apply a suitable antimicrobial strictly per its label. Stubborn staining or embedded growth on wood may be abraded (for example, light sanding or soda blasting) under local containment with HEPA capture, followed by a final HEPA vacuum and wipe. After the area is clean and dry, install or replace a continuous ground vapor barrier (minimum 6-mil poly; reinforced membrane preferred), overlapping seams 6-12 inches, taping them, and turning/sealing the barrier up foundation walls and around piers. Re-insulate as needed once dry. If the crawl space will remain vented, verify adequate cross-ventilation; for closed/conditioned crawl spaces, air-seal to the living space and consider a dedicated dehumidifier set near 50-55% RH. Use appropriate PPE, watch for electrical and confined-space hazards, and avoid "fog-only" approaches—surface cleaning and moisture control are essential for durable results.

HVAC: If needed It is recommended that the HVAC systems be inspected by a licensed HVAC professional that the HVAC systems are functioning correctly, sized, balanced, and all ductwork / duct boots are adequately insulated / sealed. It is recommended that the HVAC systems servicing the structure be utilized to maintain an indoor relative humidity below 60% at all times. HVAC system should be professionally cleaned / decontaminated in accordance with the National Air Duct Cleaners Association (NADCA) guidelines. Cleaning should include the cooling coils, drain pans, blowers, return plenums, supply diffusers, return grilles, and all salvaged ductwork. any HVAC ductwork with significant rusting or damage be removed and replaced as opposed to being cleaned.

Exterior

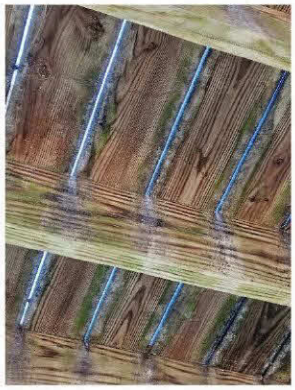
Our inspection of the Exterior grounds includes the surface drainage, grading, sidewalks, patios, and driveways adjacent to the structure. The inspection of the exterior of the building includes the cladding, trim, eaves, fascias, decks, porches, downspouts, doors, windows and flashings. Areas hidden from view by finished walls or stored items cannot be judged and are not a part of this inspection. The grading of the soil should allow for surface and roof water to flow away from the foundation. All items listed are inspected for their susceptibility to water and mold infiltration and general water damage. Where deck carpeting, stacked firewood, excessive vegetation, soil and other coverings are installed over decking and patio surfaces, the materials or their nature of construction and condition of the underneath these coverings cannot be determined.

Deck

Condition: Professional Consultation

Problems

·There are signs of microbial growth.



Potential growth on deck

Window Wells

Condition: Needs Maintenance

Problems

·There are cracks / open penetrations observed.
·The ground slopes toward the window well.

Comments:
Correct grading and vent-well ponding so water drains away from foundation.

Structure

The inspection of the structural components includes the foundation, roof covering, attic, basement, crawl space, and garage. The inspection of the roof system includes a visual examination of the surface materials, connections, penetrations and roof drainage systems. We examine the roof system for possible leaks, open penetrations, and mold growth. We may offer opinions concerning repair and/or replacement if warranted. Opinions stated herein concerning the roofing material are based on the general condition of the roof system as evidence by our visual inspection. These do not constitute a warranty that the roof is or will remain, free of leaks. All roofing systems require annual maintenance. Failure to perform routine maintenance will usually result in leaks and accelerated deterioration of the roof covering and flashings. The only way to determine whether a roof is absolutely watertight is to observe it during a prolonged rainfall. Many times, this situation is not present during the inspection and we cannot confirm this condition. We suggest that an annual inspection of the Attic area be performed where accessible to identify if any leaks are evident. It is not unusual to find occasional moisture and dampness in the Crawl Spaces or basements and we advise annual inspections of this area. Significant or frequent water accumulation can promote mold growth and would indicate the need for further evaluation by professional drainage contractor. We advise to monitor your Crawlspace during the rainy season. The Garage is inspected as best as possible, but can be limited due to parked cars or personal stored items. Due to this area be cluttered or areas being inaccessible, it is common for sections that cannot not be fully inspected or items identified during our limited inspection. We suggest that a walk-through be performed once the home is vacant. If this is a new construction inspection or vacant home this area will be inspected thoroughly.

Basement

Condition: Needs Maintenance

Problems

·There are water stains / efflorescence observed.

Comments:
GYM room -Maintain dehumidifier operation (RH 45-55 %). Correct grading and vent-well ponding so water drains away from foundation. After drying, repaint or reseal foundation walls with vapor-permeable coating.

Attic

Condition: Needs Maintenance
Access Method: Scuttle hole

Problems

·There are vents terminating inside the attic.

Comments:
Redirect the master-bath (and confirm no others) exhaust to vent outdoors through a sealed duct and roof or wall cap. Confirm soffit and ridge vents are clear for balanced airflow. After correction, verify attic GPP ? outdoor and framing MC < 16 %.

bath vent needs vent to exterior not into attic

Microbial Samples

There are various ways to test mold for toxicity and contamination. Direct, spore trap, swab and ATP. The method used to test mold or contamination normally depends on the situation, the type of microbial growth observed, the location, and the accessibility of the sample. The inspector will get the clients authorization before taking a sample to be sent to a lab for analysis. Samples are collected in the manner that is most appropriate for each situation. All microbial growth or contamination should be considered hazardous until laboratory analysis has determined otherwise.

Microbial Sample

Authorization: Authorized
Sample Type: Air

Sample Data

Location: Outside Control
Temperature: 76
Humidity %: 43
Lab Code: M001
Volume: 150L
Cassette Tape: 4107 8838

Outside temperature and humidity

Outside Sample

Calibration

Microbial Sample

Authorization: Authorized
Sample Type: Air

Sample Data

Location: Hallway
Temperature: 67
Humidity %: 53
Lab Code: M001
Volume: 150L
Cassette Tape: 4107 8840

Hallway Sample

Hallway temperature and humidity

Microbial Sample

Authorization: Authorized
Sample Type: Air

Sample Data

Location: Basement
Temperature: 68
Humidity %: 50
Lab Code: M001
Volume: 150L
Cassette Tape: 4107 8749

Basement temperature and humidity

Basement Sample

Microbial Sample

Authorization: Authorized
Sample Type: Air

Sample Data

Location: Attic
Temperature: 74
Humidity %: 56
Lab Code: M001
Volume: 150L
Cassette Tape: 4108 0315

Attic temperature and humidity

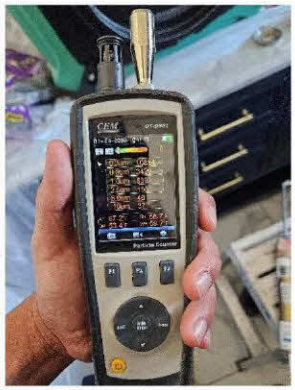
Attic sample

Microbial Sample

Authorization: Authorized
Sample Type: Tape

Sample Data

Location: Hall Bathroom
Temperature: 67
Humidity %: 59
Lab Code: M041
Volume: 1cmx1cm



Bathroom temperature and humidity

Tape lift location

Windows

Window

Condition: Needs Maintenance, Professional Consultation, Not Satisfactory
Location: Front windows

Problems

·There are signs of water damage.
·The grout / caulking is deteriorated.
·There are signs of past leakage.

Comments:
Continue drying four porch-side windows until MC < 16 %. Because one window revealed microbial growth, inspect other casings if moisture or staining persists. Remove casings as needed; HEPA-vacuum and clean wood with mild detergent / EPA-listed antimicrobial. Allow full drying before reinstallation and re-seal exterior joints


Moisture of window


Moisture of window


Water damage on window


water damage on windows

Bathrooms

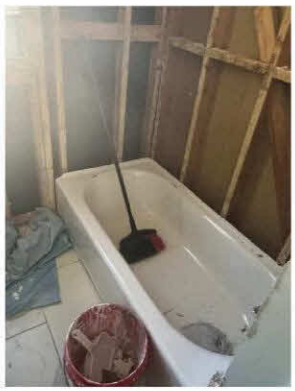
Bathroom

Condition: Satisfactory, Needs Maintenance
Room Description: hall bathroom
Location: hallway
Ventilation: Window

Problems

·There are water stains observed.

Comments:
Additional Observation - Hall Bath Area
The homeowner had undertaken their own mitigation work, focusing primarily on the hallway bathroom. Based on the tape-lift results showing a Condition 1 status, the area appears to have been thoroughly cleaned and properly addressed. As a preventative measure, any exposed wood framing in this area should be coated with a mold-resistant product such as **SurfaceShield** by *ProRestore* or an equivalent protective coating (e.g., **Fiberlock IAQ 6100**, **Concrobium Mold Control**, or **EnviroShield ES905**) to discourage future fungal activity and help maintain Condition 1.



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MOLD INSPECTION REPORT

Scope of Assessment

The homeowner had been conducting mold mitigation work independently and requested this inspection as a post-verification to evaluate the results of that work and to establish a baseline before any reconstruction activities.

A limited visual and instrumental inspection was performed to evaluate indoor air quality, moisture conditions, and potential fungal amplification. Air and surface samples were collected following BamaClean's IICRC-based protocols and analyzed by EMSL Analytical, Inc. (AIHA Accredited #100662). Temperature and relative humidity readings were used to calculate grains per pound (GPP) of water vapor for absolute-humidity comparison between conditioned and unconditioned spaces.

Outdoor Climate Conditions at Time of Sampling:
The day of inspection was clear with no precipitation in the prior 48 hours. Wind conditions were low during testing, providing stable sampling conditions.

Environmental & Sampling Data

Location	Temp (°F)	RH (%)	GPP	Total Spores /m^3	Aspergillus / Penicillium /m^3	Condition
Outdoor (Control)	76	43	72	10 370	570	— (reference)
Hallway	67	53	67	1 627	950 (58 %)	Condition 2 – Settled spores
Basement	68	50	66	1 807	460 (26 %)	Condition 2 – Slight elev.
Attic	74	56	89	4 670	660 (14 %)	Condition 2 – Elev. moisture load
Hall Bath (Tape)	67	59	74	—	—	Condition 1 – Normal ecology

Summary of Findings

Indoor fungi totals remain below outdoor control but show a modest Aspergillus/Penicillium elevation in the hallway. Attic moisture load (+17 gr/lb vs. outdoor) is possibly linked to the master-bath exhaust venting into the attic. Four porch-side windows (18–53 % MC) revealed localized growth after one had casing removed by home owner prior to inspection, confirming possible cause pressure-washing intrusion. Basement conditions stable with minor paint peeling/efflorescence suggesting past vapor drive. Exterior vent wells and grading may allow ponding near foundation vents.

Interpretation

Per BamaClean targets (<1,000 total / <500 Asp-Pen / indoor ≤ outdoor), the residence is primarily Condition 2 (Settled spores). No visible growth noted in living areas; attic and windows show localized moisture issues that can be corrected to restore Condition 1 (Normal Fungal Ecology).

Recommendations (to Restore to Condition 1)

1. Attic Moisture Source Correction

Redirect the master-bath (and confirm no others) exhaust to vent outdoors through a sealed duct and roof or wall cap. Confirm soffit and ridge vents are clear for balanced airflow. After correction, verify attic GPP ≤ outdoor and framing MC < 16 %. HEPA-vacuum and detergent-wipe surfaces. air polishing can be tried first if hepa and wipe protocol not feasible to home owner.

2. Front Window Assemblies

Continue drying four porch-side windows until MC < 16 %. Because one window revealed microbial growth, inspect other casings if moisture or staining persists. Remove casings as needed; HEPA-vacuum and clean wood with mild detergent / EPA-listed antimicrobial. Allow full drying before reinstallation and re-seal exterior joints. Goal: Return all window assemblies to Condition 1.

3. HVAC Maintenance

Because of hallway Asp/Pen elevation, Maintain RH < 55 % through HVAC and/or dehumidifiers. Replace filters (MERV 8–11 minimum). Inspect HVAC coils, drain pans, and ducts per NADCA guidelines and clean/service if needed.

3a. Interior Cleaning – Condition 2 (Settled Spores)

We recommend the following cleaning of occupied areas classified as Condition 2 (all interior):

1. Establish light containment and protect contents/floors; run HEPA air scrubbers during cleaning.
2. HEPA vacuum all accessible surfaces (, shelving, window sills, trim, baseboards, walls, fixtures, cabinets) and textiles.
3. Damp-wipe hard, non-porous surfaces with mild detergent; where appropriate, follow

with an EPA-registered antimicrobial per label.
4. Clean upholstered seating using professional methods; if visibly impacted or odorous after cleaning, consider replacement.
5. Carpet: perform hot-water extraction with proper drying; replace sections that remain wet or malodorous.
6. Replace HVAC return filters; remove and clean supply/return grilles and register boxes; wipe ceiling diffusers.
7. Remove visible dust/debris from A/V cabinets, closets, and storage areas; bag and discard unsalvageable porous items.
8. After cleaning, operate HVAC/ventilation to achieve ≤ 60 % RH; continue HEPA filtration for 24–48 hours post-clean.
9. Optional post-clean verification: visual inspection plus targeted air/surface sampling to confirm return to Condition 1.

10. Final Air Polishing Procedure (Optional Step): As a final step following cleaning and remediation, we recommend performing an "air polishing" cycle to further reduce residual airborne spores and fine particulates that may remain after interior cleaning.

This procedure applies only to occupied, conditioned interior areas such as classrooms, hallways, and the sanctuary. It is not required in crawlspaces or attic voids.

Recommended procedure:
1. Disable negative air systems during this process to prevent spores from being drawn in from uncleaned or adjacent areas.
2. Set up two to four HEPA air scrubbers per level, operating in recirculation mode (not exhaust) to continually filter and polish the air.
3. Position six to eight oscillating fans throughout the area to maintain steady airflow across floors and horizontal surfaces, minimizing stagnant air zones and particle settling.
4. Once or twice daily, gently agitate the environment using a low-power blower or compressed air to lift any settled spores into circulation for capture by the HEPA units. Exercise caution to avoid disturbing containment barriers or spreading contaminants.
5. Reposition fans and air scrubber exhausts periodically to promote even air movement across all surfaces and corners.
6. Operate the system for 48–60 hours, repeating light agitation and repositioning during that period.
7. After the final agitation, continue operating air scrubbers and fans for an additional 24 hours to capture remaining airborne particles.

This "air polishing" stage enhances final indoor air quality and supports post-remediation verification toward Condition 1 status.

sampling is recommended to confirm all interior areas have achieved Condition 1.

4. Basement and Exterior Envelope

Maintain dehumidifier operation (RH 45–55 %). Correct grading and vent-well ponding so water drains away from foundation. After drying, repaint or reseal foundation walls with vapor-permeable coating.

5. Verification / Post-Mitigation Testing

Re-inspect and sample after 2–4 weeks and 48 hours of stable RH. Confirm return to Condition 1 benchmarks (<1,000 total / <500 Asp-Pen; GPP ≤ outdoor).

Overall Summary

The property shows no widespread visible growth and is primarily Condition 2, with localized moisture sources (vented bath air and wet windows). Following these recommendations will go a long way in restoring the structure to Condition 1 (Normal Fungal Ecology) and stabilize humidity and airborne spore levels.

Additional Observation – Hall Bath Area: The homeowner had undertaken their own mitigation work, recent work noted primarily on the hallway bathroom. Based on the tape-lift results showing a Condition 1 status, the area appears to have been thoroughly cleaned and properly addressed. As a preventative measure, any exposed wood framing in this area should be coated with a mold-resistant product such as SurfaceShield by ProRestore or an equivalent protective coating (e.g., Fiberlock IAQ 6100, Concrobium Mold Control, or EnviroShield ES905) to discourage future fungal activity and help maintain Condition 1. This is not a substitution for moister control.

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EXPANDED FUNGAL REPORT ™

Prepared Exclusively For

BamaClean Inc

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Report Date:	**10/15/2025**
Project:	**Wester**
EMSL Order:	**072510370**

AIHA LAP, LLC.

AIHA LAP, LLCEMLAP #100662

EMSL Analytical, Inc.
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Madison, AL [redacted]

EMSL Order: [redacted]
Customer ID: [redacted]
Collected: 10/1[redacted]
Received: 10/1[redacted]
Analyzed: 10/15/2025

Proj:

1. Description of Analysis

Analytical Laboratory

EMSL Analytical, Inc. (EMSL) is a nationwide, full service, analytical testing laboratory network providing Asbestos, Mold, Indoor Air Quality, Microbiological, Environmental, Chemical, Forensic, Materials, Industrial Hygiene and Mechanical Testing services since 1981. Ranked as the premier independently owned environmental testing laboratory in the nation, EMSL puts analytical quality as its top priority. This quality is recognized by many well-respected federal, state and private accrediting agencies, and assured by our high quality personnel, including many Ph.D. microbiologists and mycologists.

EMSL is an independent laboratory that performed the analysis of these samples. EMSL did not conduct the sampling or site investigation for this report. The samples referenced herein were analyzed under strict quality control procedures using state-of-the-art microbiological methods. The analytical methods used and the data presented are scientifically and legally defensible.

The laboratory data is provided in compliance with ISO-IEC 17025 guidelines for the particular test(s) requested, including any associated limitations for the methods employed. These data are intended for use by professionals having knowledge of the testing methods necessary to interpret them accurately.

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EMSL Order: [illegible]
Customer ID: [illegible]
Collected: 10/10/2[illegible]
Received: 10/13/2[illegible]
Analyzed: 10/15/2[illegible]

Proj: [illegible]

Air Samples - Spore traps:

Spore traps are commercially available sampling devices that capture airborne particles on an adhesive slide. Air is pulled through the device using a vacuum pump. Spores, as well as other airborne particles, are impacted on the collection adhesive. Using spore trap collection methods has inherent limitations. These collection methods are biased towards larger spore sizes.

The analysis for total spore counts is a direct microscopic examination and does not include culturing or growing the fungi. Therefore, the results include both viable and non-viable spores. Some fungal groups produce similar spore types that cannot be distinguished by direct microscopic examination alone (i.e., *Aspergillus/Penicillium*, and others). Other spore types may lack distinguishing features that aid in their identification. These types are grouped into larger categories such as Ascospores or Basidiospores.

Fungal spores are identified and grouped by morphological characteristics including color, shape, septation, ornamentation, and fruiting structures (if present) which are compared to published mycological identification keys and texts. EMSL reports provide spore counts per cubic meter of air to three significant figures. Please note that each spore category is reported to three significant figures. Due to rounding and the application of three significant figures the sum of the individual spore numbers may not equal the total spore count on the report. EMSL does not maintain responsibility for final volume concentrations (counts/m3) since this volume is provided by the field collector and can not be verified by EMSL.

EMSL analyzes spore traps using phase contrast microscopy. There is a wide choice of collection devices (Air-O-Cell, Micro-5, Burkhard, etc.) on the market. Differences in analytical method may exist between spore trap devices.

Spore trap results are reported in spores per cubic meter of air. Due to the other airborne particles collected with the spores, EMSL reports a background particle density. Background density is an indication of overall particulate matter present on the sample (i.e. dust in the air). High background concentrations may obscure spores such as the *Penicillium/Aspergillus* group. The rating system is from 1-5 with 1 = 1 - 25% of the background obscured by material, 2 = 26 - 50%, 3 = 51 - 75%, 4 = 76% - 99%, 5 = 100% or overloaded. A background rating of 4 or higher should be regarded as a minimum count since the actual concentrations may be higher than those reported. EMSL will not be held responsible for overloading of samples. Sample volumes are left to the discretion of the company or persons conducting the fieldwork.

Skin fragment density is the percentage of skin cells making up the total background material, 1 = 1 - 25%, 2 = 26 - 50%, 3 = 51 - 75%, 4 = 76-100%. Skin fragment density is considered an indication of the general cleanliness in the area sampled. It has been estimated that up to 90% of household dust consists of dead skin cells.

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Phone: (770) 956-9150 Fax: (770) 956-9181 Web: http://www.EMSL.com Email:atlantalab@emsl.com

Attn: [illegible]
BamaClean Inc
[illegible]
Madison, AL 35757

EMSL Order: [illegible]
Customer ID: [illegible]
Collected: 10/10/2 2[illegible]
Received: 10/13/2 2[illegible]
Analyzed: 10/15/2 2[illegible]

Proj: W[illegible]

2. Analytical Results

See attached data reports and charts.

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Attn:

BamaClean Inc
[illegible]
Madison, AL 35757

EMSL Order: [illegible]
Customer ID: [illegible]
Collected: 10/10/2[illegible]
Received: 10/13/2[illegible]
Analyzed: 10/15/2[illegible]

Proj: [illegible]

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
072510370-0001	Alternaria (Ulocladium)	1	20	0.2	
	Ascospores	87	1900	18.3	
Client Sample ID	Aspergillus/Penicillium++	26	570	5.5	
41078838	Basidiospores	182	4020	38.8	
	Bipolaris++	1	20	0.2	
	Chaetomium++	-	-	-	
Location	Cladosporium	150	3310	31.9	
Outside	Curvularia	1	20	0.2	
	Epicoccum	-	-	-	
Sample Volume (L)	Fusarium++	-	-	-	
	Ganoderma	3	70	0.7	
150	Myxomycetes++	9	200	1.9	
	Pithomyces++	-	-	-	
Sample Type	Rust	1	20	0.2	
Background	Scopulariopsis/Microascus	-	-	-	
	Stachybotrys/Memnoniella	-	-	-	
Comments	Unidentifiable Spores	-	-	-	
	Zygomycetes	-	-	-	
	Cercospora++	7	200	1.9	
	Nigrospora	1	20	0.2	
	Total Fungi	**469**	**10370**	**100**	
	Hyphal Fragment	3	70	-	
	Insect Fragment	-	-	-	
	Pollen	-	-	-	

Analytical Sensitivity 600x: **22** counts/cubic meter
Analytical Sensitivity 300x *: **7*** 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.

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Initial report from: 10/15/2025 12:56:35

Daoxin Li, PH.D, Lab Manager
or Other Approved Signatory

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Attn:
BamaClean Inc

Madison, AL 35757

EMSL Order:
Customer ID:
Collected:
Received: 10/13/
Analyzed: 10/15/_

Proj:

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
072510370-0002	Alternaria (Ulocladium)	-	-	-	
	Ascospores	5	100	6.1	Acceptable
Client Sample ID	Aspergillus/Penicillium++	43	950	58.4	Slightly Elevated
41078840	Basidiospores	10	220	13.5	Acceptable
	Bipolaris++	-	-	-	
	Chaetomium++	-	-	-	
Location	Cladosporium	12	270	16.6	Acceptable
Hall	Curvularia	2	40	2.5	Slightly Elevated
	Epicoccum	-	-	-	
Sample Volume (L)	Fusarium++	-	-	-	
	Ganoderma	-	-	-	
150	Myxomycetes++	1	20	1.2	Acceptable
	Pithomyces++	1	20	1.2	Slightly Elevated
Sample Type	Rust	1*	7*	0.4	Acceptable
Inside	Scopulariopsis/Microascus	-	-	-	
	Stachybotrys/Memnoniella	-	-	-	
Comments	Unidentifiable Spores	-	-	-	
	Zygomycetes	-	-	-	
	Cercospora++	-	-	-	
	Nigrospora	-	-	-	
	Total Fungi	**75**	**1627**	**100**	Acceptable
	Hyphal Fragment	1	20	-	Acceptable
	Insect Fragment	-	-	-	
	Pollen	-	-	-	

Analytical Sensitivity 600x: **22** counts/cubic meter
Analytical Sensitivity 300x *: **7*** 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.

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Initial report from: 10/15/2025 12:56:35

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Attn:
BamaClean Inc

Madison, AL

EMSL Order:
Customer ID:
Collected: 10/10/2
Received: 10/13/2(
Analyzed: 10/15/2(

Proj:

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
072510370-0003	Alternaria (Ulocladium)	1	20	1.1	Acceptable
	Ascospores	11	240	13.3	Acceptable
Client Sample ID	Aspergillus/Penicillium++	21	460	25.5	Acceptable
41078749	Basidiospores	23	510	28.2	Acceptable
	Bipolaris++	3	70	3.9	Slightly Elevated
	Chaetomium++	-	-	-	
Location	Cladosporium	16	350	19.4	Acceptable
Basement	Curvularia	3	70	3.9	Slightly Elevated
	Epicoccum	1	20	1.1	Slightly Elevated
Sample Volume (L)	Fusarium++	-	-	-	
	Ganoderma	-	-	-	
150	Myxomycetes++	3*	20*	1.1	Acceptable
	Pithomyces++	2	40	2.2	Slightly Elevated
Sample Type	Rust	1*	7*	0.4	Acceptable
	Scopulariopsis/Microascus	-	-	-	
Inside	Stachybotrys/Memnoniella	-	-	-	
Comments	Unidentifiable Spores	-	-	-	
	Zygomycetes	-	-	-	
	Cercospora++	-	-	-	
	Nigrospora	-	-	-	
	Total Fungi	**85**	**1807**	**100**	Acceptable
	Hyphal Fragment	1	20	-	Acceptable
	Insect Fragment	-	-	-	
	Pollen	-	-	-	

Analytical Sensitivity 600x: **22** counts/cubic meter
Analytical Sensitivity 300x *: **7*** counts/cubic meter

Skin Fragments: **2** 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

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Potential for mycotoxin production exists with these fungi.
These fungi are considered water damage indicators.

++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

Initial report from: 10/15/2025 12:56:35

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Attn

Madison, AL 35757

EMSL Order:
Customer ID:
Collected: 10/10/20
Received: 10/13/2(
Analyzed: 10/15/2(

Proj:

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
072510370-0004	Alternaria (Ulocladium)	-	-	-	
	Ascospores	49	1100	23.6	Acceptable
Client Sample ID	Aspergillus/Penicillium++	30	660	14.1	Slightly Elevated
41080315	Basidiospores	85	1900	40.7	Acceptable
	Bipolaris++	-	-	-	
	Chaetomium++	-	-	-	
Location	Cladosporium	39	860	18.4	Acceptable
Attic	Curvularia	-	-	-	
	Epicoccum	-	-	-	
Sample Volume (L)	Fusarium++	-	-	-	
	Ganoderma	1	20	0.4	Acceptable
150	Myxomycetes++	3	70	1.5	Acceptable
	Pithomyces++	2	40	0.9	Slightly Elevated
Sample Type	Rust	-	-	-	
Inside	Scopulariopsis/Microascus	-	-	-	
	Stachybotrys/Memnoniella	-	-	-	
Comments	Unidentifiable Spores	-	-	-	
	Zygomycetes	-	-	-	
	Cercospora++	1	20	0.4	Acceptable
	Nigrospora	-	-	-	
	Total Fungi	**210**	**4670**	**100**	Acceptable
	Hyphal Fragment	2	40	-	Acceptable
	Insect Fragment	-	-	-	
	Pollen	-	-	-	

Analytical Sensitivity 600x: **22** counts/cubic meter
Analytical Sensitivity 300x *: **7*** 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

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++ Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.

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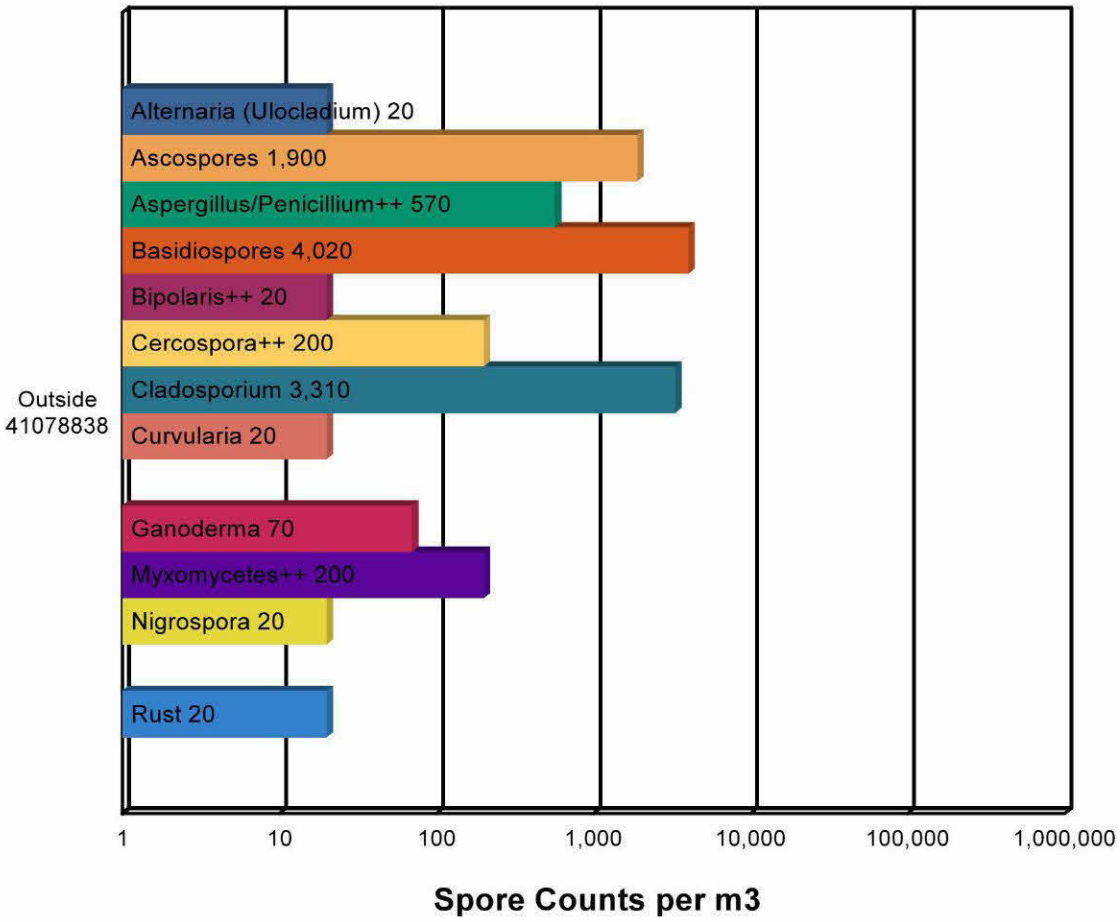
Attn:
BamaClean Inc

Madison, AL 35757

EMSL Order:
Customer ID:
Collected: 10/10/20
Received: 10/13/20
Analyzed: 10/15/20

Proj:

Spore Trap Report: Total Counts



* The chart is displayed using a logarithmic scale. Bar size is not directly proportional to the number of spores.

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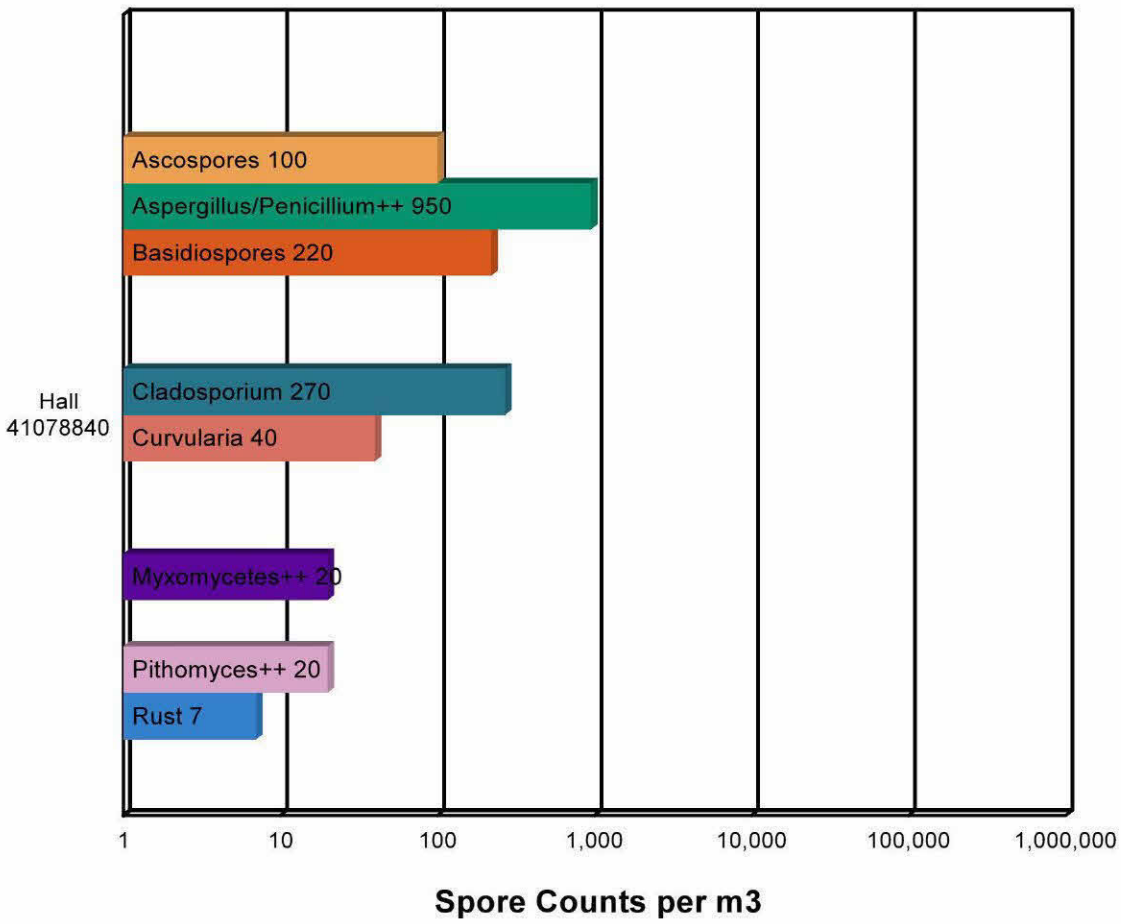
Attn

BamaClean Inc

EMSL Order:
Customer ID: BAMA42
Collected: 10/10/20
Received: 10/13/20
Analyzed: 10/15/20

Proj:

Spore Trap Report: Total Counts



Alternaria (Ulocladium)
Ascospores
Aspergillus/Penicillium++
Basidiospores
Bipolaris++
Cercospora++
Cladosporium
Curvularia
Epicoccum
Ganoderma
Myxomycetes++
Nigrospora
Pithomyces++
Rust

* The chart is displayed using a logarithmic scale. Bar size is not directly proportional to the number of spores.

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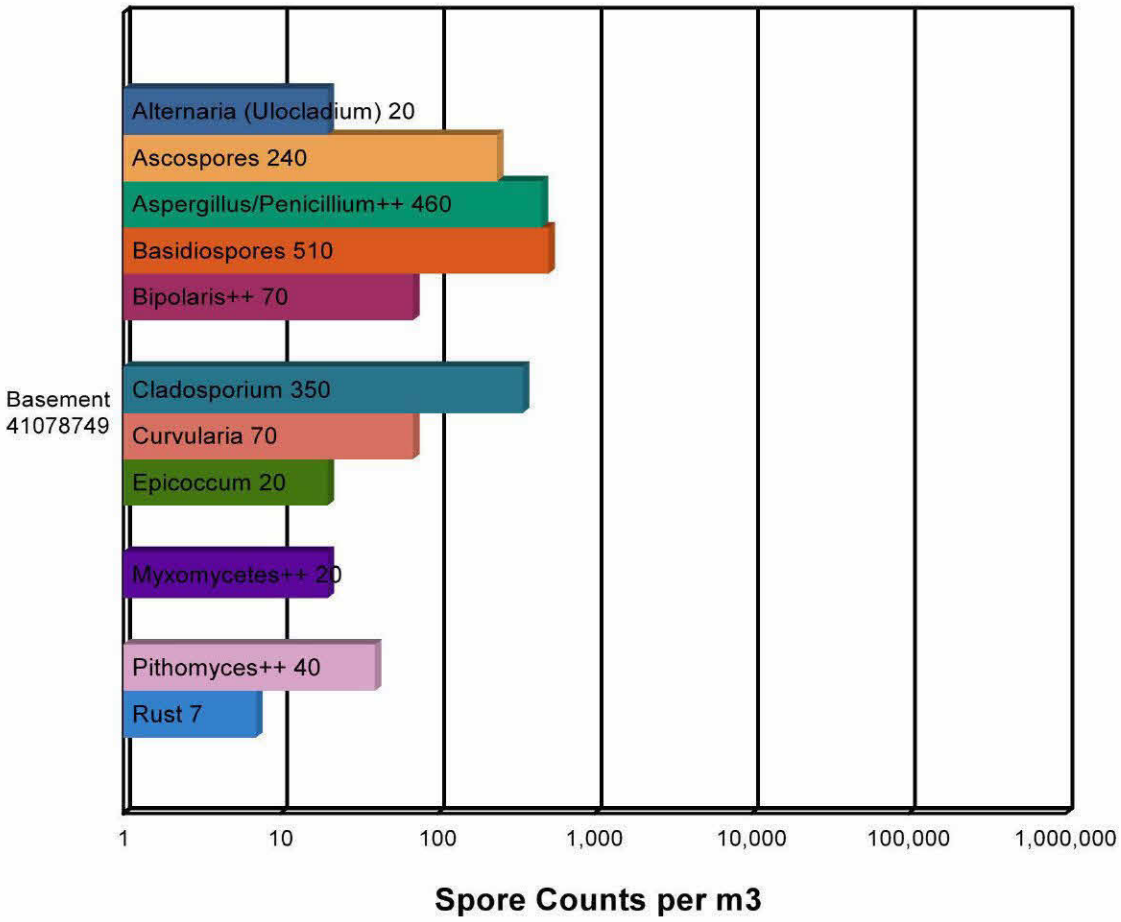
Attn: BamaClean

EMSL Order:
Customer ID:
Collected: 10/10/2
Received: 10/13/2
Analyzed: 10/15/2

Proj:

Spore Trap Report: Total Counts



Alternaria (Ulocladium) | Ascospores | Aspergillus/Penicillium++
Basidiospores | Bipolaris++ | Cercospora++
Cladosporium | Curvularia | Epicoccum
Ganoderma | Myxomycetes++ | Nigrospora
Pithomyces++ | Rust

* The chart is displayed using a logarithmic scale. Bar size is not directly proportional to the number of spores.

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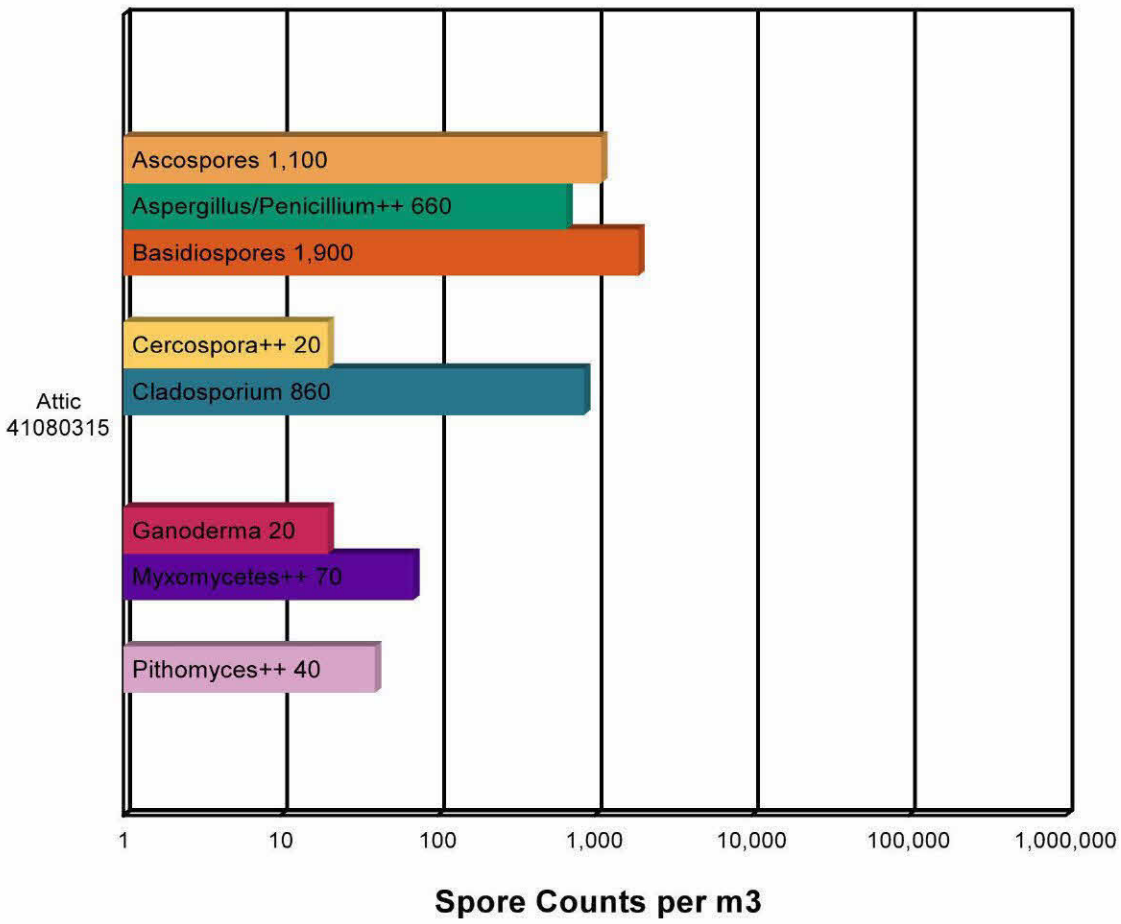
Attn:
BamaClean

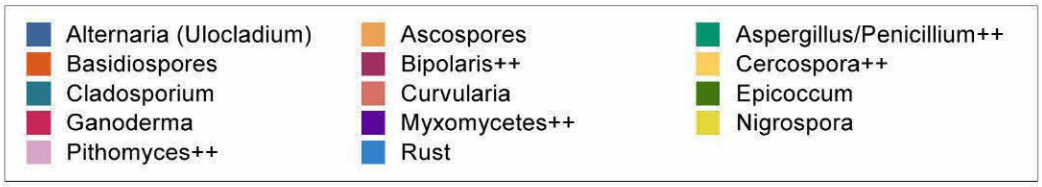
Madison, AL

EMSL Order:
Customer ID: B
Collected: 10/1
Received: 10/13/2
Analyzed: 10/15/

Proj:

Spore Trap Report: Total Counts





* The chart is displayed using a logarithmic scale. Bar size is not directly proportional to the number of spores.

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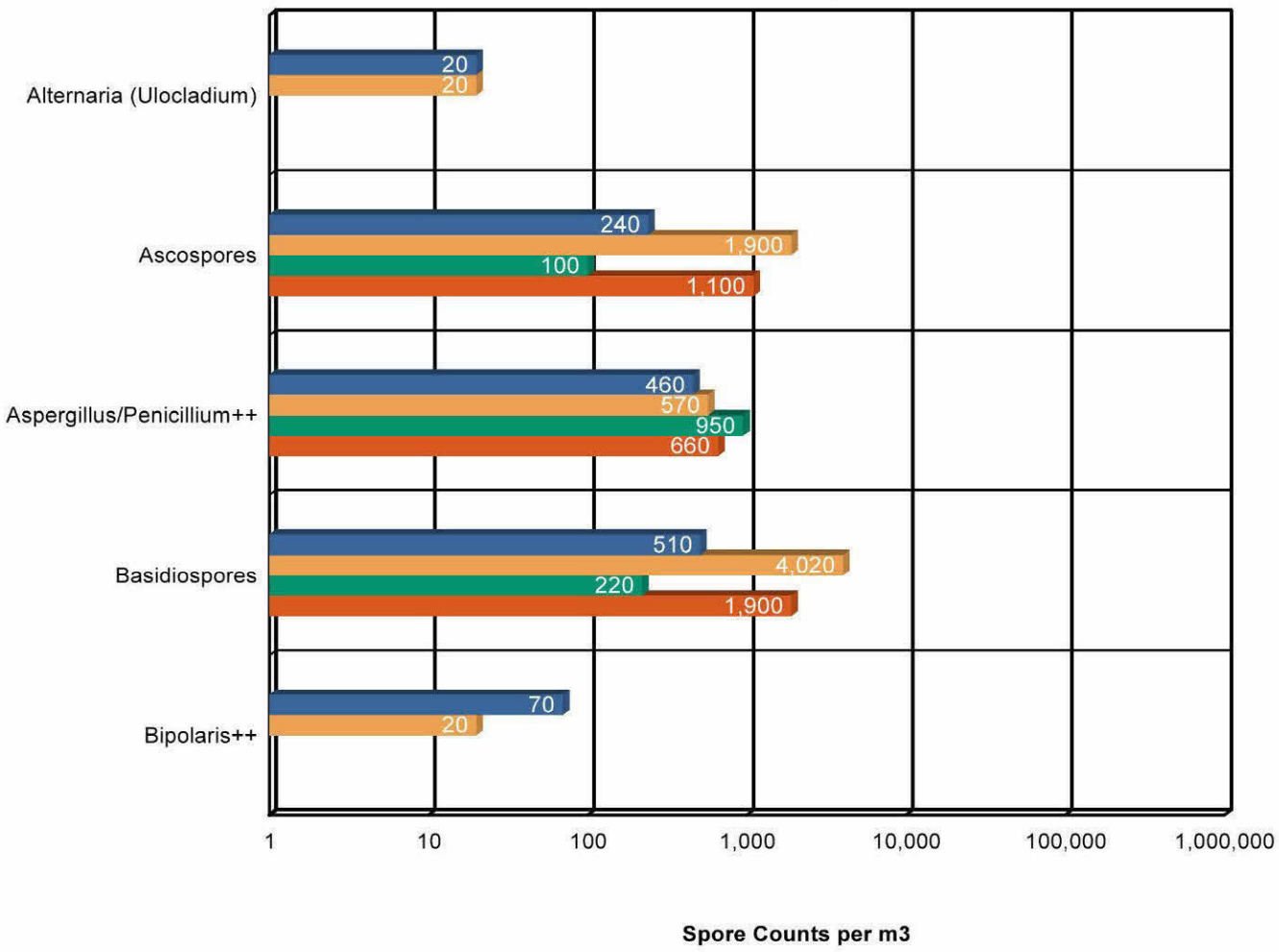
Attn:

Madison, AL 3

Proj:

EMSL Order:
Customer ID: B
Collected: 1
Received: 10/13/2
Analyzed: 10/15/2

Background Comparison Chart



* The chart is displayed using a logarithmic scale. The bar size is not directly proportional to the number of spores.

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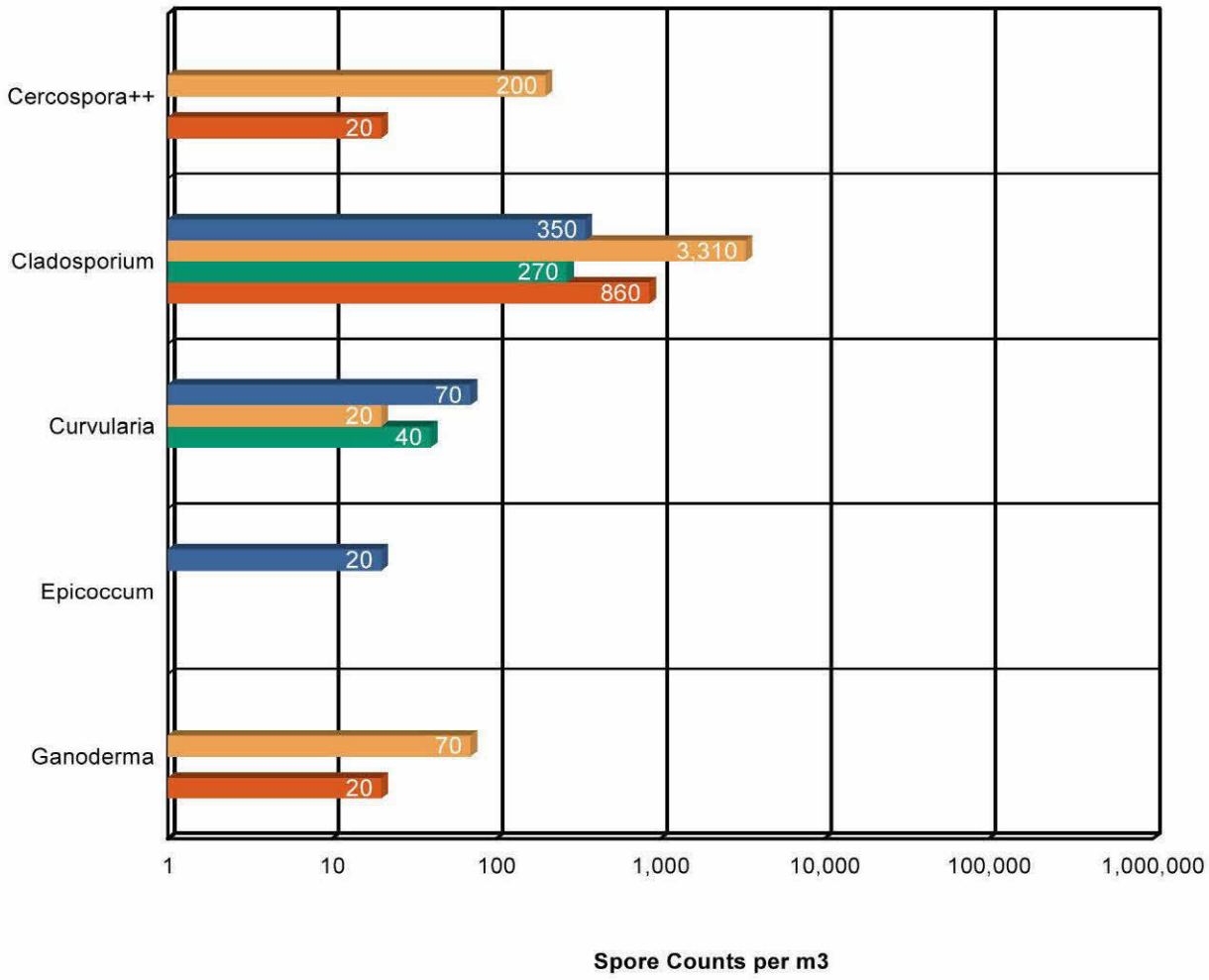
Attn:

Madison, AL 35757

EMSL Order:
Customer ID:
Collected:
Received: 10/13/
Analyzed: 10/15/

Proj:

Background Comparison Chart



* The chart is displayed using a logarithmic scale. The bar size is not directly proportional to the number of spores.

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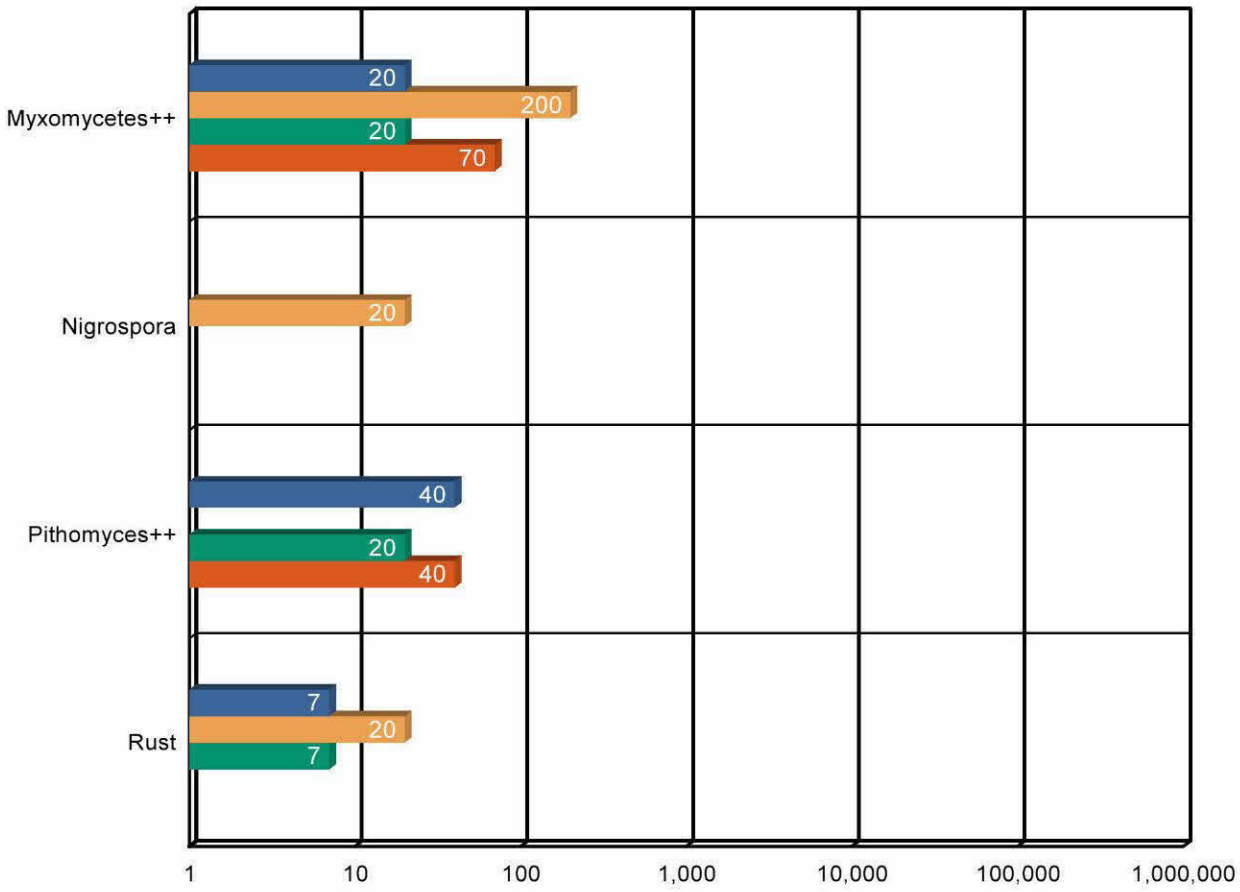
Attn:
RamaClean Inc
..adison, AL 35757

EMSL Order:
Customer ID:
Collected: 10/..
Received: 10/13/..
Analyzed: 10/15

Proj:

Background Comparison Chart



* The chart is displayed using a logarithmic scale. The bar size is not directly proportional to the number of spores.

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Attn:

Madison, AL 35757

EMSL Order: 5
Customer ID:
Collected:
Received: 10/13/2
Analyzed: 10/15/20

Proj:

Surface Contamination ASSESSMENTReport ™ **Tape Samples Based on Direct Microscopic Analysis MICRO-SOP-200**

Sample Information	Sample Location	Surface Contamination Rating (Referenced in IICRC S520)	Recommended Remedial Action (Referenced in IICRC S520)
Lab Sample #: 072510370-0005 Client Sample ID: 1	Bath 1	Condition 1: Normal fungal ecology	☑ None Required

Definitions (from IICRC S520 Standard)
☑ Condition 1 (normal fungal ecology): an indoor environment that may have settled spores, fragments, or traces of actual growth.
⚠ Condition 2 (settled spores): an indoor environment which is primarily contaminated with settled spores that were dispersed directly or indirectly from a Condition 3 area, and which may have traces of actual growth.
⊘ Condition 3 (actual growth): an indoor environment contaminated with the presence of actual mold growth and associated spores. Actual growth includes growth that is active or dormant, visible or hidden.

Data provided in this report are intended to facilitate the assessment process performed by an Indoor Environmental Professional (IEP). The IEP is responsible for final data interpretation and remediation conclusions based on their assessment which may include information on the building history, an inspection, sampling, and laboratory data. Post-remediation verification testing recommended after any remediation.

Daoxin Li, PH.D, Lab Manager
or Other Approved Signatory

Initial report from: 10/15/2025 12:56:39

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Attn:
BamaClean Inc
Madison, AL 35757

EMSL Order:
Customer ID:
Collected: 10 /202
Received: 10
Analyzed: 10/

Proj:

Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number:	072510370-0005				
Client Sample ID:	1				
Sample Location:	Bath 1				
Spore Types	Category				
Alternaria (Ulocladium)	-				
Ascospores	-				
Aspergillus/Penicillium++	-				
Basidiospores	-				
Bipolaris++	-				
Chaetomium++	-				
Cladosporium	-				
Curvularia	-				
Epicoccum	-				
Fusarium++	-				
Ganoderma	-				
Myxomycetes++	-				
Pithomyces++	-				
Rust	-				
Scopulariopsis/Microascus	-				
Stachybotrys/Memnoniella	-				
Unidentifiable Spores	-				
Zygomycetes	-				
Nigrospora	Rare				
Hyphal Fragment	-				
Insect Fragment	-				
Pollen	-				
Fibrous Particulate	-				

Category: Count/per area analyzed
Rare: 1 to 10 Low: 11 to 100 Medium: 101 to 1000 High: >1000
High background particulate: A high level of background particulate can obscure fungal matter and lead to underestimation or failure to detect
++ = Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.
- = Not detected.

Daoxin Li, PH.D, Lab Manager
or Other Approved Signatory

No discernable field blank was submitted with this group of samples.

Initial report from: 10/15/2025 12:56:39

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Attn:
BamaClean
Madison, AL 35757

EMSL Order:
Customer ID:
Collected: 10/10/20
Received: 10/13/20
Analyzed: 10/15/20

Proj:

3. Understanding the Results

EMSL Analytical, Inc. is an independent laboratory, providing unbiased and scientifically valid results. These data represent only a portion of an overall IAQ investigation. Visual information and environmental conditions measured during the site assessment (humidity, moisture readings, etc.) are crucial to any final interpretation of the results. Many factors impact the final results; therefore, result interpretation should only be conducted by qualified individuals. The American Conference of Governmental Industrial Hygienists (ACGIH) has published a good reference book covering sampling and data interpretation. It is entitled, Bioaerosols: Assessment and Control, 1999.

Fungal spores are found everywhere. Whether or not symptoms develop in people exposed to fungi depends on the nature of the fungal material (e.g., allergenic, toxic, or infectious), the exposure level, and the susceptibility of exposed persons. Susceptibility varies with the genetic predisposition (e.g., allergic reactions do not always occur in all individuals), age, pre-existing medical conditions (e.g., diabetes, cancer, or chronic lung conditions), use of immunosuppressive drugs, and concurrent exposures. These reasons make it difficult to identify dose/response relationships that are required to establish “safe” or “unsafe” levels (i.e., permissible exposure limits).

It is generally accepted in the industry that indoor fungal growth is undesirable and inappropriate, necessitating removal or other appropriate remedial actions. The New York City guidelines and EPA guidelines for mold remediation in schools and commercial buildings define the conditions warranting mold remediation. Always remember that water is the key. Preventing water damage or water condensation will prevent mold growth.

This report is not intended to provide medical advice or advice concerning the relative safety of an occupied space. Always consult an occupational or environmental health physician who has experience addressing indoor air contaminants if you have any questions.

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Attn:

Madison, AL 35757

Proj:

EMSL Order:
Customer ID:
Collected:
Received: 10/13/2
Analyzed: 10/15/20

4. Glossary of Fungi

ALTERNARIA(ULOCLADIUM)	
Natural Habitat	Common saprobe and pathogen of plants. Typically found on plant tissue, decaying wood, and foods. Soil . Air outdoors.
Suitable Substrates in the Indoor Environment	Indoors near condensation (window frames, showers), House dust (in carpets, and air). Also colonizes building supplies, computer disks, cosmetics, leather, optical instruments, paper, sewage, stone monuments, textiles, wood pulp, and jet fuel
Water Activity	Aw =0.85-0.88 (water damage indicator)
Mode of Dissemination	Wind
Allergic Potential	Type I allergies (hay fever, asthma), Type III (hypersensitivity pneumonitis)
Potential or Opportunistic Pathogens	Phaeohyphomycosis {causing cystic granulomas in the skin and subcutaneous tissue}. In immunocompetent patients, Alternaria colonizes the paranasal sinuses, leading to chronic hypertrophic sinusitis
Industrial Uses	Biocontrol of weed plants ·Biocontrol fungal plant pathogens.
Potential Toxins Produced	Alternariol (AOH) . Alternariol monomethylether (AME). Tenuazonic acid (TeA). Altenuene (ALT). Altertoxins (ATX)
Other Comments	Many species of Ulocladium have been renamed as Alternaria. Alternaria spores are one of the most common and potent indoor and outdoor airborne allergens. Additionally, Alternaria sensitization has been determined to be one of the most important factors in the onset of childhood asthma. Synergy with Cladosporium or Ulocladium may increase the severity of symptoms
References	Alternaria redefined. J. Woudenberg et al., Studies in Mycology. Volume 75, June 2013, Pages 171-212

ASCOSPORES	
Natural Habitat	Everywhere in nature.
Suitable Substrates in the Indoor Environment	Depends on genus and species.
Water Activity	Depends on genus and species.
Mode of Dissemination	Forcible ejection or passive release and dissemination by wind or insects.
Allergic Potential	Depends on genus and species.
Potential or Opportunistic Pathogens	Depends on genus and species.
Industrial Uses	Depends on genus and species.
Potential Toxins Produced	Depends on genus and species.
Other Comments	Ascospores are the result of sexual reproduction and produced in a saclike structure called an ascus. All ascospores belong to members of the Phylum Ascomycota, which encompasses a plethora of genera worldwide.

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ASPERGILLUS/PENICILLIUM++

Natural Habitat	Plant debris ·Seed ·Cereal crop
Suitable Substrates in the Indoor Environment	Grows on a wide range of substrates indoors ·Prevalent in water damaged buildings ·Foods (blue mold on cereals, fruits, vegetables, dried foods) ·House dust ·Fabrics ·Leather ·Wallpaper ·Wallpaper glue
Allergic Potential	Type I (hay fever, asthma) ·Type III (hypersensitivity)
Potential Opportunist or Pathogen	Possible depending on the species.
Potential Toxins Produced	Possible depending on the species.
Free moisture required for mold growth	Aw=0.75-0.94
Mode of Dissemination	Wind ·Insects
Industrial Uses	Many depending on the species
Other comments	Spores of Aspergillus and Penicillium (including others such as Geosmithia, Goidanichella, Nalanthamala, Rasamsonia, Samsoniella, and Talaromyces) are small and spherical with few distinguishing characteristics. They cannot be differentiated by non-viable impaction sampling methods. Some species with very small spores may be undercounted in samples with high background debris.

BASIDIOSPORES

Natural Habitat	Forest floors. Lawns .Plants (saprobes or pathogens depending on genus)
Suitable Substrates in the Indoor Environment	Depends on genus. Wood products
Water Activity	Unknown.
Mode of Dissemination	Forcible ejection. Wind currents.
Allergic Potential	Type I allergies (hay fever, asthma) . Type III (hypersensitivity pneumonitis)
Potential or Opportunistic Pathogens	Depends on genus.
Industrial Uses	Edible mushrooms are used in the food industry.
Potential Toxins Produced	Amanitins. monomethyl-hydrazine. muscarine. ibotenic acid. psilocybin.
Other Comments	Basidiospores are the result of sexual reproduction and formed on a structure called the basidium. Basidiospores belong to the members of the Phylum Basidiomycota, which includes mushrooms, shelf fungi, rusts, and smuts.

BIPOLARIS++

Natural Habitat	Plant saprophyte.Plant pathogen of many plants, causing leaf rot, crown rot, and root rot on warm season turf grasses
Suitable Substrates in the Indoor Environment	House plants, Indoor building materials
Free moisture required for mold growth	Unknown
Mode of Dissemination	Wind
Allergic Potential	Hay fever, asthma. Allergic and chronic invasive sinusitis
Potential or Opportunistic Pathogens	Invasive sinusitis, disseminated mycoses, peritonitis, keratitis, phaeohyphomycosis
Potential Toxins	Can potentially produce sterigmatocystin.
Other Comments	Includes Bipolaris, Drechslera, Exserohilum.

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CERCOSPORA++	
Natural Habitat	Parasite on higher plants, commonly causes leaf spot diseases.
Suitable Substrates in the Indoor Environment	Unknown
Water Activity	Moderate –High humidity
Mode of Dissemination	Irrigation water, Insects, Rain Wind
Allergic Potential	Unknown
Potential or Opportunistic Pathogens	Unknown
Other Comments	Includes morphologically similar spores of Cercospora, Pseudocercospora, Septoriella, and Septoria.

CLADOSPORIUM	
Natural Habitat	Dead plant matter. Straw. Soil. Woody plants
Suitable Substrates in the Indoor Environment	Fiberglass duct liner. Paint. Textiles. Found in high concentration in water-damaged building materials.
Water Activity	Aw 0.84-0.88
Mode of Dissemination	Air
Allergic Potential	Type I (asthma and hay fever).
Potential or Opportunistic Pathogens	Edema. keratitis. onychomycosis. pulmonary infections. Sinusitis.
Industrial Uses	Produces 10 antigens.
Potential Toxins Produced	Cladosporin and Emodin.

CURVULARIA	
Natural Habitat	A worldwide saprophytic fungi, being isolated from dead plant material and soil.
Suitable Substrates in the Indoor Environment	Paper, wood products
Free moisture required for mold growth	Unknown
Mode of Dissemination	Wind
Allergic Potential	Hay fever, asthma, allergic fungal sinusitis
Potential or Opportunistic Pathogens	In immunocompromised patients can cause cerebral abscess, endocarditis, mycetoma, ocular keratitis, onychomycosis, and pneumonia.

EPICOCCUM	
Natural Habitat	A worldwide saprophytic fungi, being isolated from dead plant material and soil.
Suitable Substrates in the Indoor Environment	Paper, textiles
Water Activity	0.86-0.90
Mode of Dissemination	Wind
Allergic Potential	Hay fever, asthma
Potential or Opportunistic Pathogens	Unknown

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GANODERMA	
Natural Habitat	Grows on conifers and hardwoods worldwide, causing white rot, root rot, and stem rot.
Suitable Substrates in the Indoor Environment	Unknown.
Water Activity	Unknown.
Mode of Dissemination	Wind.
Allergic Potential	Ganoderma species are known to cause allergies in people on a worldwide scale.
Potential or Opportunistic Pathogens	Unknown.
Industrial Uses	Biopulping of wood for the paper industry. Potential medicinal use due to: 1. Inhibition of Ras dependent cell transformation, 2. Antifibrotic activity, 3. Immunomodulating activity, 4. Free-radicle scavenging
Potential Toxins Produced	Unknown.
Other Comments	Used in traditional Chinese medicine as an herbal supplement. It is also known as a "shelf fungus" because the fruiting body forms a stalk-less shelf on the sides of trees and logs. It is sometimes called “artists conk” because when you scratch the white pores of the fruiting body, the white rubs away and exposes the brown hyphae underneath. Thus, pictures can be produced on the fruiting body.
Reference	References: Craig, R.L., Levetin, E. 2000. Multi-year study of Ganoderma aerobiology. Aerobiologia 16: 75-81. http://www.pfc.forestry.ca/diseases/CTD/Group/Heart/heart6_e.html

MYXOMYCETES++	
Natural Habitat	Decaying logs, Dead leaves , Dung , Lawns , Mulched flower beds, Lawns
Suitable Substrates in the Indoor Environment	Rotting lumber
Free moisture required for mold growth	Unknown
Mode of Dissemination	Insects, Water, Wind
Allergic Potential	Type I
Potential or Opportunistic Pathogens	Unknown
Industrial Uses	
Other Comments	Includes Myxomycetes, Smut, Rust, and Periconia.

NIGROSPORA	
Natural Habitat	Common on live or dead grass, seeds & soil.
Suitable Substrates in the Indoor Environment	Unknown
Water Activity	Unknown
Mode of Dissemination	Forcibly projected.
Allergic Potential	Type 1 allergies (hey fever, asthma)
Potential or Opportunistic Pathogens	Keratitis & skin lesions

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PITHOMYCES++	
Natural Habitat	A worldwide saprophytic fungi, being isolated from dead plant material and soil.
Suitable Substrates in the Indoor Environment	Paper
Water Activity	Requires high moisture for spore germination
Mode of Dissemination	Wind
Allergic Potential	Unknown
Potential or Opportunistic Pathogens	Mycosis in immunocompromised patients
Other Comments	Pithomyces++ includes spores of Pithomyces and Pseudopithomyces.

RUSTS	
Natural Habitat	Parasitic on cultivated and many types of plants
Suitable Substrates in the Indoor Environment	Unknown- rust fungi require a living plant host for growth
Free moisture required for mold growth	Unknown
Mode of Dissemination	Wind, Forcible Ejection
Allergic Potential	Type I. (hay fever, asthma)
Potential or Opportunistic Pathogens	Unknown

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5. References and Informational Links

Books

- Bioaerosols: Assessment and Control. Janet Macher, Ed., American Conference of Governmental Industrial Hygienists, Cincinnati, OH 1999.
- Exposure Guidelines for Residential Indoor Air Quality. Environmental Health Directorate, Health Protection Branch, Health Canada, Ottawa, Ontario, 1989.
- Fungal Contamination in Public Buildings: Health Effects and Investigation Methods. Health Canada, Ottawa, Ontario, 2004.
- IICRC: S500 Standard and Reference Guide for Professional Water Damage Restoration. 3rd Edition, Institute of Inspection, Cleaning, and Restoration Certification, Vancouver, WA, 2006

  IICRC: S520 Standard and Reference Guide for Professional Mold Remediation. 1st Edition, Institute of Inspection, Cleaning, and Restoration Certification, Vancouver, WA, 2004
- Field Guide for the Determination of Biological Contaminants in Environmental Samples. 2nd Edition, American Industrial Hygiene Association, 2005.

Consumer Links

Read the full text of AIHA's "The Facts About Mold" consumer brochure.
https://aiha-assets.sfo2.digitaloceanspaces.com/AIHA/resources/Facts-About-Mold-A-Consumer-Focus-Fact-Sheet.pdf

The Occupational Safety and Health Administration (OSHA)
http://www.osha.gov/SLTC/molds/index.html

CDC Mold Facts
https://www.cdc.gov/mold-health/about/index.html?CDC_AAref_Val=https://www.cdc.gov/mold/faqs.htm

CDC Stachybotrys - Questions and answers on Stachybotrys chartarum and other molds
https://www.cdc.gov/mold-health/data-research/facts-stats/?CDC_AAref_Val=https://www.cdc.gov/mold/stachy.htm

IOM, NAS: Clearing the Air: Asthma and Indoor Air Exposures
https://www.epa.gov/indoor-air-quality-iaq/should-you-have-air-ducts-your-home-cleaned

National Library of Medicine-Mold website
http://www.nlm.nih.gov/medlineplus/molds.html

California Department of Health Services (CADOHS)
https://www.cdph.ca.gov/Programs/cls/dehl/ehl/Pages/AQS/Mold.aspx

Minnesota Department of Health
https://www.health.state.mn.us/communities/environment/air/mold/index.html

New York City Department of Health and Mental Hygiene
https://www.nyc.gov/site/doh/health/health-topics/mold.page

EPA

"Should You Have the Air Ducts in Your Home Cleaned?"
https://www.epa.gov/indoor-air-quality-iaq/should-you-have-air-ducts-your-home-cleaned

General information about molds and actions that can be taken to clean up or prevent a mold problem.
https://www.epa.gov/mold/mold-cleanup-your-home

"A Brief Guide to Mold, Moisture, and Your Home" - Includes basic information on mold, cleanup guidelines, and moisture and mold prevention
https://www.epa.gov/mold/brief-guide-mold-moisture-and-your-home

"Mold Remediation in Schools and Commercial Buildings" - Information on remediation in schools and commercial property, references for potential mold and moisture remediators.
https://www.epa.gov/mold/mold-remediation-schools-and-commercial-buildings-guide

FEMA

"Homes That Were Flooded May Harbor Mold Problems" - Information and tips for cleaning mold.
https://www.fema.gov/press-release/20210318/fact-sheet-mold-problems-and-solutions

"Dealing With Mold & Mildew in Your Flood Damaged Home.
http://www.fema.gov/pdf/rebuild/recover/fema_mold_brochure_english.pdf

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6. Important Terms, Conditions, and Limitations

A. Sample Retention

Samples analyzed by EMSL will be retained for 60 days after analysis date Storage beyond this period is available for a fee with written request prior to the initial 30 day period. Samples containing hazardous/toxic substances which require special handling will be returned to the client immediately. EMSLreserves the right to charge a sample disposal fee or return samples to the client.

B. Change Orders and Cancellation

All changes in the scope of work or turnaround time requested by the client after sample acceptance must be made in writing and confirmed in writing by EMSL. If requested changes result in a change in cost the client must accept payment responsibility. In the event work is cancelled by a client, EMSL will complete work in progress and invoice for work completed to the point of cancellation notice. EMSL is not responsible for. holding times that are exceeded due to such changes.

C. Warranty

EMSL warrants to its clients that all services provided hereunder shall be performed in accordance with established and recognized analytical testing procedures and with reasonable care in accordance with applicable federal, state and local laws. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. EMSL disclaims any other warranties, express or implied, including a warranty of fitness for particular purpose and warranty of merchantability.

D. Limits of Liability

In no event shall EMSL be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL and whether EMSL has been informed of the possibility of such damages, arising out of or in connection with EMSL's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. EMSL will not be held responsible for the improper selection of sampling devices even if we supply the device to the user. The user of the sampling device has the sole responsibility to select the proper sampler and sampling conditions to insure that a valid sample is taken for analysis. Any resampling performed will be at the sole discretion of EMSL, the cost of which shall be limited to the reasonable value of the original sample delivery group (SDG) samples. In no event shall EMSL be liable to a client or any third party, whether based upon theories

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of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL by client thereunder.

E. Indemnification

Client shall indemnify EMSL and its officers, directors and employees and hold each of them harmless for any liability, expense or cost, including reasonable attorney's fees, incurred by reason of any third party claim in connection with EMSL services, the test result data or its use by client