LIMITED FUNGAL INSPECTION REPORT

ONSITE PRO RESTORATION



Prepared For:

Your Adress . City , CA 90293

Project No. 5555555 01/01/2025 10:20AM



Prepared By:

Onsite Pro Restoration

5062 Lankershim Blvd Unit 122, North Hollywood, CA 91601

818-336-1800 - info@onsitepro.org - onsitepro.org

FUNGAL ANALYSIS DATA

Sample #	1			2			3								
Client ID	3856-1539			4007-3786			4007-6902								
Sample Name	Outside			Clothing Bedroom			Downstairs Bathroom								
Sample Type	Air-O-Cell			Air-O-Cell			Air-O-Cell								
Volume	75 Liters			75 Liters			75 Liters								
LOD	13.3 S/M^3			13.3 S/M^3			13.3 S/M^3								
Background	1			1			1								
FUNGAL STRUCTURES IDENTIFIED ⊃	RC	S/M^3	%	RC	S/M^3	%	RC	S/M^3	%						
ALTERNARIA/ULOCLADIUM spp. ♁				2	26.6	5.0	1	13.3	2.4						
ASPERGILLUS / PENICILLIUM spp. ♁	10	133	43.5	15	199.5	37.5	19	252.7	45.2						
CLADOSPORIUM spp. ♁	6	79.8	26.1	18	239.4	45.0	12	159.6	28.6						
HYPHAL FRAGMENTS	5	66.5	21.7	1	13.3	2.5	7	93.1	16.7						
MYXO/PERICONIA/RUST/SMUT ○				4	53.2	10.0									
OIDIUM/PERONOSPORA	2	26.6	8.7				3	39.9	7.1						
	23	**305.9**	**100**	**40**	**532**	**100**	**42**	**558.6**	**100**						

♁=Known Mycotoxin Producing Mold

Blue=Water Damage Indicator Mold

Green=Common Allergen Mold

○ =Common Outdoor Mold Type

LOD=Limit of Detection (Count/M^3)

S/M^3=Spores Per Cubic Meter

RC=Raw Count (Spores seen under the microscope)

= Elevated Spores Above Control Sample

envirolabsinc

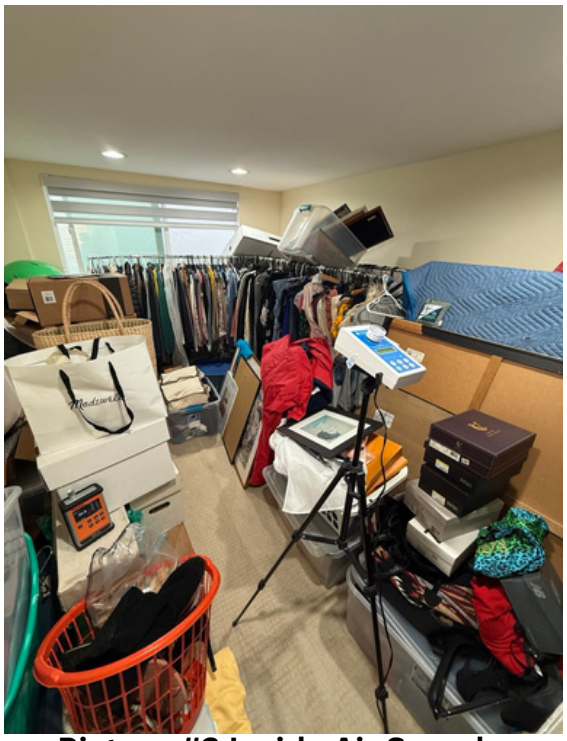
Analyst: S. Martinez



Picture #1 Air Sample (Outside)



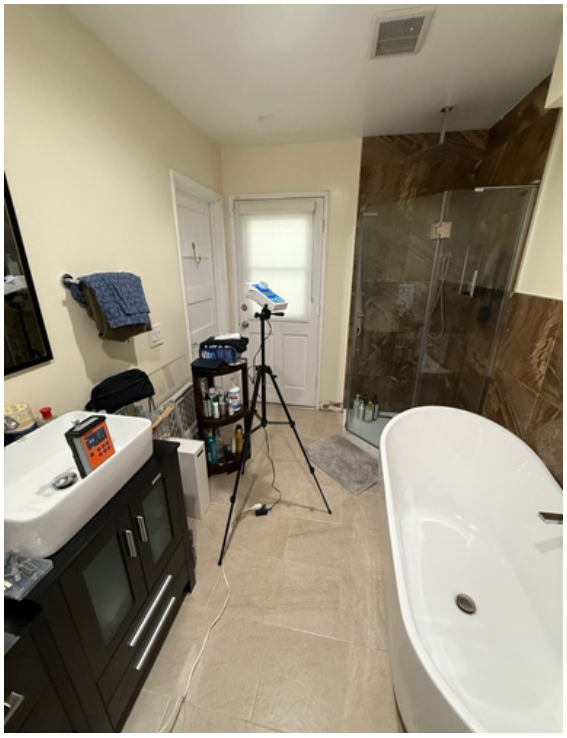
Outside AIR-O-CELL CASSETTE SAMPLE #3856-1539



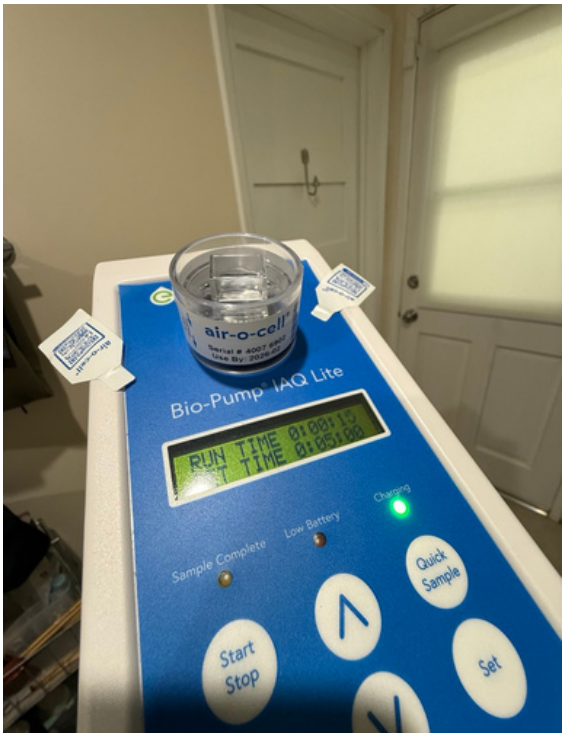
Picture #3 Inside Air Sample (Clothing Bedroom)



Clothing Bedroom AIR-O-CELL CASSETTE SAMPLE #4007-6786



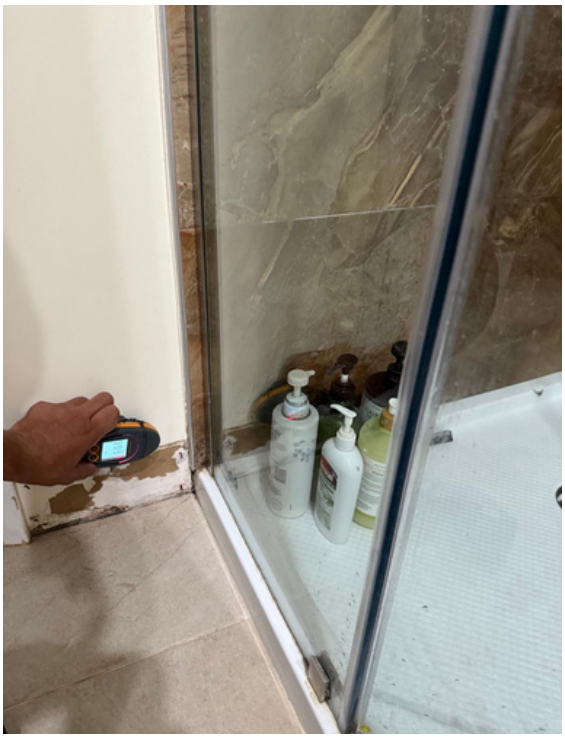
Picture #5 Inside Air Sample (Downstairs Bathroom)



Downstairs Bathroom AIR-O-CELL CASSETTE SAMPLE #4007-6902



Side of the stand-up shower showed high moisture readings and visible contamination along the lower portion of the wall.



The opposite wall did not show elevated moisture readings. Only this side.



Living Room



Living Room



Upstairs Bathroom



Upstairs Bathroom



Downstairs Hallway



Downstairs Hallway



Clothing Bedroom



Downstairs Bathroom

Airborne Particles

Temtop PMD 351 measures airborne particulate matter (PM) at different sizes, which can tell us a lot about indoor air quality and potential health concerns.

Here's what each reading means in plain terms:

- PM1.0 – Ultra-fine particles under 1 micron. These can penetrate deep into the lungs and even enter the bloodstream. Common sources: smoke, combustion, cooking, vehicle exhaust.
- PM2.5 – Fine particles under 2.5 microns. Strongly linked to respiratory and cardiovascular problems. Common from mold spores, dust, smoke, and outdoor pollution.
- PM4.0 – Particles under 4 microns. This range can include smaller mold spores and dust particles.
- PM10 – Larger inhalable particles under 10 microns, such as dust, pollen, and pet dander.
- TSP (Total Suspended Particles) – The total concentration of all particle sizes in the air.

Here's a breakdown of what your Temtop PMD 351 readings mean, compared to common EPA/WHO indoor air quality guidelines — focusing mostly on PM2.5 since it's the most health-relevant and widely referenced.

1. Clothing Bedroom

- PM2.5: 53.2 µg/m³ → Unhealthy for Sensitive Groups (EPA: >35 is elevated)
- Likely indicates fine particle pollution from dust, fibers, or possible mold spores.
- PM1 and TSP are also high, suggesting smaller respirable particles are dominating.
- Possible sources: stored clothing releasing fibers, poor ventilation, or dust build-up.

Recommendation: Deep clean, improve air filtration, consider a HEPA air purifier.

2. Downstairs Bathroom

- PM2.5: 26.9 µg/m³ → Moderate (not ideal, but not severe)
- PM10 and TSP are high for a bathroom, possibly from lint, skin cells, or moisture-related particles.
- Lower PM1 than bedroom, meaning fewer ultra-fine particles.

Recommendation: Improve exhaust ventilation, ensure no hidden mold growth.

3. Downstairs Hallway

- PM2.5: 33.0 µg/m³ → Upper Moderate (close to unhealthy threshold)
- Consistent particle sizes suggest a steady background source like settled dust being disturbed.

Recommendation: Vacuum with HEPA filter, improve whole-house airflow.

4. Living Room

- PM2.5: 38.9 µg/m³ → Unhealthy for Sensitive Groups
- Higher PM1 and PM4 indicate a mix of very fine and slightly larger particles — possibly from cooking emissions, dust, or HVAC system recirculation.

Recommendation: Air purifier, inspect HVAC filters, limit activities that create fine particles indoors.

5. Upstairs Bathroom

- PM2.5: 31.8 µg/m³ → Moderate
- Elevated PM1 and PM4, possible moisture-related particles or mild dust from towels, toilet paper, or vent duct contamination.

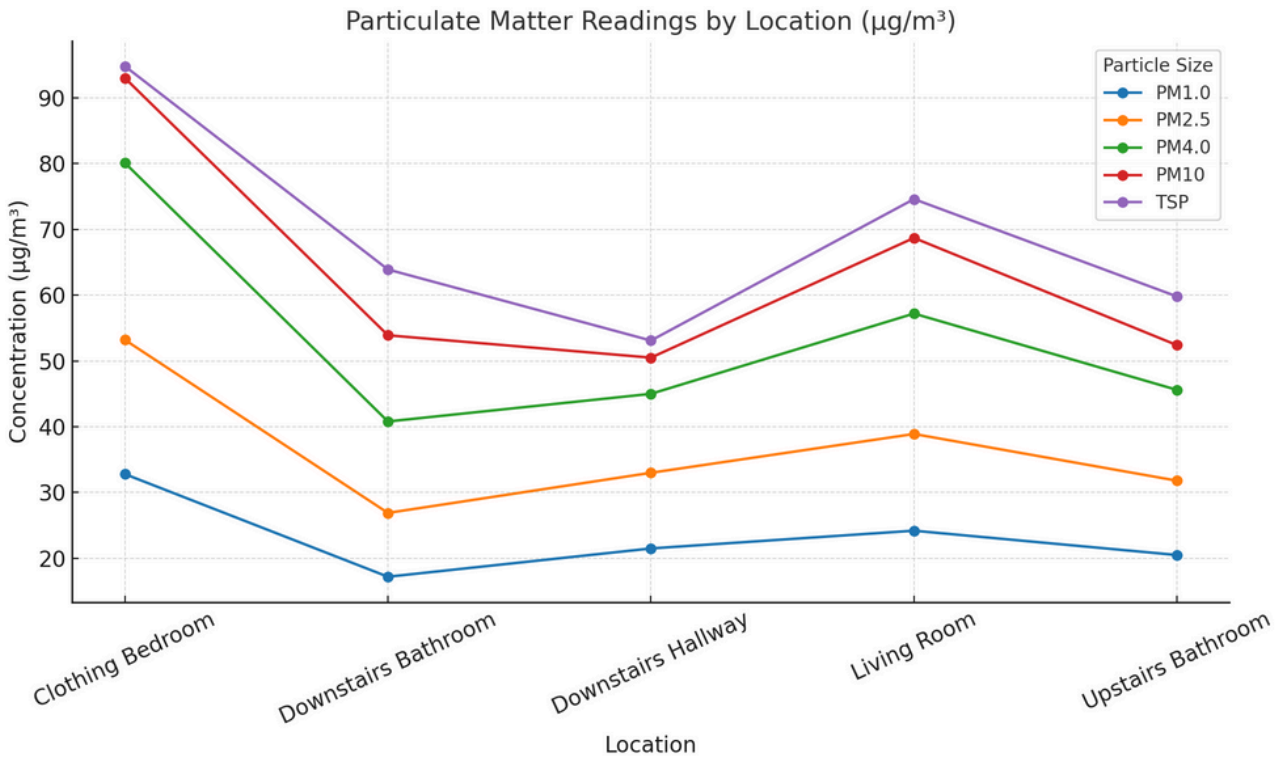
Recommendation: Check exhaust fan, control humidity to <50%.

Overall Analysis

- Your worst area is the Clothing Bedroom (PM2.5 at 53.2 — clearly elevated) and Living Room (38.9 — near unhealthy).
- Bathrooms and hallway are moderately elevated but still above the ideal indoor range (WHO recommends <10 for PM2.5 long-term exposure).
- Consistently high PM1 values mean there's a strong presence of ultra-fine particles that are harder to filter and can have greater health impacts.
- The TSP levels show that total particulate load is quite high in all areas, so filtration/ventilation is needed house-wide.

Action Steps

- Source Control – Identify possible pollutant sources (clothing fibers, dust buildup, HVAC dust, mold, or smoke).
- Filtration – Use a high-quality HEPA air purifier in worst rooms, and upgrade HVAC filters (MERV 11–13).
- Ventilation – Open windows when outdoor air quality is good, run exhaust fans in bathrooms/kitchen.
- Cleaning – HEPA vacuum + damp dusting weekly, especially in the Clothing Bedroom and Living Room.
- Moisture Control – Keep humidity between 40–50% to reduce mold and dust mite growth.



Mold Test Analysis:

Summary of Findings

Your samples were compared to an outdoor control to determine if indoor levels are elevated. The key indoor samples were taken from the Clothing Bedroom and Downstairs Bathroom.

Main Points:

- Aspergillus/Penicillium species – Detected indoors at higher levels than outside. These are common indoor molds that can trigger allergies and, in some cases, produce mycotoxins.
- Cladosporium species – Found both indoors and outdoors. Common outdoor mold but can colonize damp indoor areas. Levels indoors were above the outdoor control in at least one location.
- Alternaria/Ulocladium species – Known allergens; usually outdoor molds but can grow on damp indoor surfaces. Detected indoors but not significantly elevated compared to outdoors.
- Hyphal fragments – Present indoors, indicating active mold growth rather than just spores drifting in.

The findings suggest that remediation is necessary to address the elevated mold spore levels. To determine the source of the problem, a more thorough inspection of the residence is recommended. This may involve removing baseboards in certain areas to check for discoloration or other signs of mold growth behind them.

Likely Sources

Given the species found and your earlier PM readings, possible sources include:

- Damp building materials in bathrooms and bedrooms.
- Water intrusion behind shower walls or near plumbing.
- Moisture in stored fabrics or carpets in the Clothing Bedroom.

1. Aspergillus / Penicillium (elevated indoors)

Why it's indoors:

- Thrives in persistently damp areas — often behind walls, under floors, in insulation, or inside HVAC systems.
- Grows on cellulose-rich building materials (drywall, paper backing, wood, fabrics) and in dust layers.
- Can develop in hidden leaks that remain moist for more than 24–48 hours.

Possible cause in your case:

- Your particle data shows high PM1 and PM2.5 in the Clothing Bedroom and Living Room — the size range where Aspergillus/Penicillium spores often fall.
- This suggests spores are actively being released from hidden moisture-damaged areas — possibly the wall or ceiling cavities, stored fabrics, or carpet padding in the bedroom.

2. Cladosporium (above outdoor baseline)
Why it's indoors:
- While mostly an outdoor mold, it will grow indoors in condensation-prone areas — like window sills, HVAC coils, bathroom ceilings, or moist painted surfaces.
- Often a sign of humidity control issues or areas with surface condensation.

Possible cause in your case:
- Detected indoors above control levels means moisture-laden air or leaks are allowing it to colonize indoor surfaces.
- Could be linked to bathroom ventilation issues or window condensation in the bedrooms.

3. Alternaria / Ulocladium (detected indoors)
Why it's indoors:
- Usually enters from outdoors but will take hold on very wet drywall or wood.
- Common in bathrooms and around showers/tubs when caulking fails and water seeps into walls.

Possible cause in your case:
- You already mentioned shower wall moisture and visible contamination — this could be the growth site feeding these spores into the air.

4. Hyphal Fragments (found indoors)
Why it's indoors:
- Fragments of mold growth structures — only appear when mold is actively growing indoors.
- These are often larger than spores and can contribute to elevated PM4.0–PM10 readings.

Possible cause in your case:
- Your PM data shows elevated PM4.0 and PM10 in the Clothing Bedroom and Living Room, suggesting fragments are being released from a disturbed mold source (e.g., air movement, vacuuming without HEPA, foot traffic in contaminated areas).

Link Between Mold & Your Particle Readings
- High PM1 & PM2.5 → Indicates fine spores like Aspergillus/Penicillium are airborne.
- High PM4–PM10 → Suggests larger mold fragments, dust, and possibly dried spore clusters breaking apart.
- TSP levels elevated in all rooms → Mold contamination is not isolated to one area; spores are likely circulating via airflow, foot traffic, or HVAC.

Most Likely Causes in This Home
- Hidden water damage behind the shower wall (moisture readings confirmed) supporting Aspergillus/Penicillium and Ulocladium growth.
- Damp fabrics, carpets, or stored items in the Clothing Bedroom acting as spore reservoirs.
- Insufficient ventilation in bathrooms allowing condensation molds like Cladosporium to grow.
- Particles being redistributed by foot traffic, cleaning, or HVAC, keeping spore levels elevated in multiple rooms.