

# OLMSTED ENVIRONMENTAL SERVICES, INC

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Mold Survey: 240 E 18th St, Brooklyn, NY, United States

Survey Date: July 24, 2023

Edward Olmsted, CIH, CSP conducted a mold inspection and testing in eight (8) apartments and common areas in the residential buildings at 240 East 18<sup>th</sup> Street in Brooklyn, NY. The survey aimed to evaluate the apartments for the presence of water incursion and mold growth. The inspection was done on July 24<sup>th</sup>, 2023 and included the following:

1. Visual inspection of apartments 3C, 4A, 6B, 3A, 5F, 2C, 2E, and 5B
2. Testing walls and floors for the presence of moisture;
3. Collecting surface samples for mold using tape lift methods;
4. Collecting bulk samples for laboratory analysis for mold growth by microscopic methods and culture methods;
5. Collecting bulk samples for lab analysis for the presence of fecal coliform, total coliform and E coli; and
6. Collecting air samples for microscopic analysis for mold growth.

The survey was not a comprehensive inspection of each apartment and a detailed scope of abatement work requires a more comprehensive survey. Seven of the eight apartments were found to have mold growth and water damage. Some had sewage contamination. This indicates that a detailed and comprehensive inspection of each apartment should be done.

### **BACKGROUND**

The 240 East 16th Street building is a six-story pre-war residential apartment building with a masonry exterior and flat roof. The interior walls and ceilings are plaster on lath except where sheetrock was used to replace damaged plaster. There has been a history of dampness and water damage, impacting mainly the bathrooms and some bedrooms.

The water damage occurs due to steam leaks from plumbing leaks, radiator leaks and associated condensation, and bathroom waste line leaks. There have also been leaks around the bathroom shower and bathtub tile walls. Ceramic bathroom tiles were often in poor condition, leaking water and with visible mold. The building's interior has plaster walls and ceilings. The floors are finished with hardwood in bedrooms and living rooms. The floors are finished with tiles in the bathrooms and kitchen.

The tenants' group reports that there have been water leaks in many apartments. They were concerned that the leaks caused mold growth. Some reported accumulations of visible black mold on walls and ceilings. They report that the landlord's response to the visible mold was to have the super attempt repairs by painting over mold. Water leaks and condensation are a concern since moisture is a risk factor for mold growth. The American Industrial Hygiene Association has indicated that most fungal spores can germinate when exposed to water for more than 24 to 48 hours or prolonged periods of elevated relative humidity at normal room temperature.<sup>1</sup> Vegetative growth and ultimately sporulating growth occurs anywhere from 1 week to a month of dampness, depending on the material affected. Growth of molds in plaster, paint, sheetrock and insulation can lead to the amplification of airborne fungi and bacteria including higher levels of airborne spores and microbial fragments. Exposure to elevated levels of molds can cause health complaints of allergy, upper respiratory irritation, sinusitis, and eye irritation.<sup>2</sup> Some of the tenants interviewed for this survey reported experiencing allergy symptoms and experienced asthma episodes.

Each apartment is heated by steam radiators and cooled by window unit air conditioners. The apartments have operable windows that can be opened for outside air.

## **SURVEY METHODS**

Eight apartments were inspected for the presence of water damage and mold growth. Moisture readings were taken at suspect water leak areas. Tape lift samples were collected from suspect water-damaged materials for mold and analyzed by Ed Olmsted. Tape lifts, bulk samples, and air samples were collected for lab analysis for the presence of mold. The criteria used for evaluating the presence of mold colonization in buildings have been published by the American Conference of Governmental Industrial Hygienists and are summarized below.<sup>3</sup>

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<sup>1</sup> Prazant P, Weekes D, and Miller D; American Industrial Hygiene Association; Recognition, Evaluation and Control of Indoor Mold Growth; P 77 © 2008

<sup>2</sup> Reijula K, Occupational Exposure to Molds, Diseases and Diagnosis; Bioaerosols, Fungi and Mycotoxins: Health Effects, Assessment, Prevention and Control © 1999 Eastern New York Occupational and Environmental Health Center Albany, NY; p 38 - 47

<sup>3</sup> American Conference of Governmental Industrial Hygienists (ACGIH); Bioaerosols: Assessment and Control; p 19-12; © 1999

- (1) the presence of visible fungal growth confirmed by source sampling;
- (2) the presence of moldy odors in occupied spaces;
- (3) the persistent presence of water in indoor areas;
- (4) the presence of accumulations of organic debris;
- (5) interpretation of source or air sampling data in the absence of the above conditions.

The reliance on the presence of visible mold may fail to notice hidden mold growth or invisible levels of mold growth that are capable of producing airborne spores and other dust associated with allergy. Molds are microscopic organisms and mold growth is often invisible. The reliance on air sampling alone can also fail to detect mold growth in light of the potential for false negative results and the statistical error associated with air sampling. This survey relied on a combination of methods including source sampling (tape and bulk samples), air sampling, moisture measurements, and careful inspection of water-damaged materials. The following summarizes the interpretation of sample methods:

#### Moisture Levels

Moisture levels were measured using a Protimeter Surveymaster moisture meter, which was field tested using the 18 % field check device provided by the manufacturer. The presence of dampness was screened using the meter in scanning mode and where dampness was detected the area was further probed using the pin measurement, which measures in percent moisture. A level of moisture exceeding 20 % in wood is above normal and suggests active water intrusion.<sup>4</sup> The Institute for Inspection Cleaning and Restoration Certification (IICRC) indicates that a moisture level above 17 % in wood or sheetrock is sufficient to support mold growth.<sup>5</sup> Levels above 20 % are sufficient to germinate spores in some species of mold resulting in fungal growth. Water intrusion is the principal risk factor for mold and bacterial growth as well as infestation by mites and insects.

#### Bulk and Tape Sample Analysis for Molds

Prestige analyzed one of the bulk samples by culture methods many of the tape lift samples by direct microscopic exam. Ed Olmsted analyzed the tape lift samples by microscopic methods. Microscopic analysis of a bulk or tape lift sample detects the presence of spores, hyphae and fruiting bodies (conidiophores, sporangium, ascomata). This method confirms the presence of mold growth by identifying the reproductive, hyphael structures as well as spores. This method also identifies the molds to the genus level. The microscopic evaluation of a bulk and tape lift sample provides the best measure of the presence of mold growth and the culture analysis provides additional information on the species and genera present. There are no governmental regulatory requirements for evaluation of mold growth in materials, however the American Industrial Hygiene Association (AIHA) indicates that

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<sup>4</sup> American Industrial Hygiene Association; Recognition, Evaluation and Control of Indoor Mold Growth; P 73 © 2008

<sup>5</sup> ANSI/IICRC S520; Standard and Reference Manual for Professional Mold Remediation; page 69; © 2008 Institute for Inspection Cleaning and Restoration

a finding of elevated levels of spores in combination with the microscopic identification of hyphae or other sporulating fungal structures is evidence of mold growth. Bulk samples when cultured in growth media are reported in colony-forming units per gram of material (CFU/g). The analysis includes identifying mold species for *Aspergillus* and other molds and identifying at the genus level for *Penicillium* and *Cladosporium*. There are no governmental regulatory requirements for the evaluation of mold growth in materials, however the American Industrial Hygiene Association (AIHA) indicates that a finding of elevated levels of spores in combination with the microscopic identification of hyphae or other sporulating fungal structures is evidence of mold growth.<sup>1</sup> Most building surfaces have mold spores settled on them. As such levels of spores below 10,000 CFU/g in a bulk sample cannot provide conclusive evidence of mold growth because it is possible for levels below 10,000 CFU per gram to be a result of settled spores on a surface that has not been cleaned for a significant period. Levels between 10,000 and 100,000 CFU/gram can result from heavy levels of settled spores but may also signify elevated spore levels caused by the growth of mold and the production of spores on fruiting bodies. Levels over 100,000 indicate mold colonization and consistently reflect the presence of fruiting bodies and the growth of mold and production of spores and could not be the result of settling of spores. In addition to the number of spores on a surface, the species can be an indicator of mold colonization. A monoculture of spores is also an indicator of mold growth and certain species not normally present in settled dust are also an indicator of colonization. This includes the dominance of species of *Aspergillus*, *Ulocladium*, *Chaetomium*, *Paecilomyces* and *Stachybotrys*. Prestige analyzed three bulk samples for the presence or absence of fecal coliform, total coliform and *E coli*. A positive test indicates contamination with sewage.

#### Mold Spores in Air

Allergenco D spore trap sample cassettes were used to collect air samples in the apartment and an outdoor control sample was collected as well. The cassette is attached to a spore trap air sampler pump manufactured by Zefon. The sampler was calibrated at 15 liters per minute using a flow meter designed for the pump and provided by the manufacturer. Each sample was collected over a period of 8 minutes. Levels of airborne mold spores measured with the Allergenco D cassettes represent total mold spores and are reported in fungal structures per cubic meter of air (FS/M3). This method uses microscopic analysis of the air samples and it is not possible to differentiate between *Penicillium* and *Aspergillus* species.

There are no regulatory standards for numerical levels of bioaerosols in air. Fungi are ubiquitous and can be measured in the air both indoors and outdoors. Mold spore levels can often change over time in any given location even under similar environmental conditions. As such, interpreting air-sampling results can be difficult. The ACGIH and AIHA recommend that the rank order of mold genera and /or species of airborne mold indoors should generally reflect levels measured in the control outdoor air. When the assemblage of molds and the numbers of spores significantly differ, it can be inferred that there is a building-related source.

## FINDINGS

The lab results from Prestige Enviromicrobiology (Prestige) are attached. Photos are attached. The following summarizes the survey findings:

### Apartment 3C

There were water leaks reported in the living room and bedroom closet. The leak was from the apartment above and was repaired. Drying of the water damaged plaster was not done and the area was allowed to dry naturally. This is unfortunate since mold growth will occur on surfaces that remain wet for over a week. The water-damaged walls were repaired by painting over the damage. The damage occurred on both sides of the shared wall between the living room and the master bedroom closet.

1. The plaster in the closet and living room was dry when tested with a moisture meter.
2. A bulk sample was collected from the damaged paint on the closet wood shelves. The sample, number 240E183C-1, was cultured for mold and had 550,000 colony-forming units per gram (CFU/g) dominated by *Aspergillus sydowii*. This indicates mold growth under the new paint.
3. In the living room a bulk sample was collected from the wall where water damaged. The sample, number 240E183C-4, had 2 million CFU/g dominated by *Aspergillus sydowii*. This indicates mold growth under the new paint.
4. An air sample was collected in the master bedroom, and a sample was collected outside. The results are indicated below:
  - a. Outside – This sample had 5,600 fungal structures per cubic meter of air (fs/m<sup>3</sup>) and was dominated by ascospores and basidiospores. The level of pen-asp spores was 730 fs/m<sup>3</sup>. The outdoor sample serves as a reference level for the indoor samples.
  - b. Master Bedroom – This sample was collected in the master bedroom where the closet had water damage. The sample had 2,300 fs/m<sup>3</sup> and was dominated by pen-asp spores at 1,400 fs/m<sup>3</sup>. This suggests mold growth.

### *Recommendations*

*The survey indicates there is mold growth and water damage in the living room and master bedroom closet. The following steps are recommended:*

1. *Remove the clothes from the bedroom closet and launder or dry clean*
2. *Remove, clean and scrape lose paint from the wood shelves in the closet.*
3. *Scrape the damaged paint and plaster and remove wood trim in the back wall and ceiling of the closet.*
4. *Scrape the damaged paint and plaster and remove wood trim in the living room.*

### Apartment 4A

There were active water leaks in the bathroom and hallway outside the bathroom. There was a sewage odor in the bathroom, and water dripped from the ceiling. The kitchen floor has visible water damage to the floor. The super put up plastic to stop the leaks, which did not work.

1. The plaster ceiling in the hallway and bathroom tested wet at 99%, indicating an active leak. There was standing water on the bathroom floor and above the plastic. The walls in the bathroom were wet.
2. A bulk sample was collected from the wet and damaged plaster in the hall outside the bathroom. The sample, number 240E184A-7, was analyzed by the lab and reported to be positive for the presence of fecal coliform bacteria, total coliform and *E coli*. This indicates the leak is sewage. The guidelines for cleaning up sewage recommend the removal of all impacted porous materials. Sample 7 was also cultured for mold spores. The sample had 470,000 colony-forming units per gram (CFU/g) dominated by *Aspergillus sydowii* and *Aspergillus versicolor*. This indicates mold growth.
5. In the kitchen, the floor was water-damaged from past flooding. There is visible mold on the plywood beneath the vinyl tiles. A tape lift from the plywood, number 240E18-4A-5, had ascospores and ascomata of an ascomycete and spores, conidiophores and hyphae of *Aspergillus*. This indicates mold growth.
6. An air sample was collected in the master bedroom, and a sample was collected outside. The results are indicated below:
  - a. Outside – This sample had 5,600 fungal structures per cubic meter of air (fs/m<sup>3</sup>) and was dominated by ascospores and basidiospores. The level of pen-asp spores was 730 fs/m<sup>3</sup>. The outdoor sample serves as a reference level for the indoor samples.
  - b. Hallway outside bathroom – This sample was collected in the hallway outside the bathroom. The sample had 16,000 fs/m<sup>3</sup> and was dominated by pen-asp spores at 7,400 fs/m<sup>3</sup>. Levels of *Chaetomium* spores were elevated at 3,200 fs/m<sup>3</sup> and hyphae were elevated at 3,100 fs/m<sup>3</sup>. This indicates mold growth.

### Recommendations

*The survey indicates there is mold growth and water damage in the bathroom, the hallway outside the bathroom, and the kitchen floor. The plaster in the bathroom and hall outside the bathroom is contaminated with sewage. The following steps are recommended:*

- *Gut renovate the bathroom down to the substrate. Remove walls and ceilings.*
- *Remove the water damaged plaster ceiling in the hallway outside the bathroom.*
- *Remove the wall between the bathroom and hallway*
- *Remove the kitchen floor tiles and clean the plywood.*

### Apartment 3A

There were active water leaks in the bathroom and hallway outside the bathroom. The condition was similar to that found in the 4A apartment above. The sewage leaks run into 4A bathroom and down to 3A bathroom. There was a sewage odor in the bathroom, and water dripped from the ceiling. The super put up plastic to stop the leaks, which did not work.

- The plaster ceiling in the hallway and bathroom tested wet at 99%, indicating an active leak. There was standing water on the bathroom floor and above the plastic. The walls in the bathroom were wet.
- 3. A bulk sample was collected from the wet and damaged plaster ceiling in the bathroom. The sample, number 240E183A-12, was analyzed by the lab and reported to be positive for the presence of total coliform. The sample was also cultured for mold and had 5.1 million CFU/g dominated by *Cladosporium* and *Aspergillus sydowii*, indicating mold growth.
- 4. Another bulk sample was collected from the wet wall in the bathroom. The sample, number 240E18-13 was positive for total coliform. This indicates the leak is sewage. The guidelines for cleaning up sewage recommend the removal of all impacted porous materials. Sample 13 was also cultured for mold spores. The sample had >14 million colony-forming units per gram (CFU/g) dominated by *Penicillium*. This indicates mold growth.
- 7. An air sample was collected in the master bedroom, and a sample was collected outside. The results are indicated below:
  - a. Outside – This sample had 5,600 fungal structures per cubic meter of air (fs/m<sup>3</sup>) and was dominated by ascospores and basidiospores. The level of pen-asp spores was 730 fs/m<sup>3</sup>. The outdoor sample serves as a reference level for the indoor samples.
  - b. Hallway outside bathroom – This sample was collected in the hallway outside the bathroom. The sample had 16,000 fs/m<sup>3</sup> and was dominated by pen-asp spores at 7,400 fs/m<sup>3</sup>. Levels of *Chaetomium* spores were elevated at 3,200 fs/m<sup>3</sup> and hyphae were elevated at 3,100 fs/m<sup>3</sup>. This indicates mold growth.

### Recommendations

*The survey indicates there is mold growth and water damage in the bathroom and the hallway outside the bathroom. The plaster in the bathroom and hall outside the bathroom is contaminated with sewage. The following steps are recommended:*

- *Gut renovate the bathroom down to the substrate. Remove walls and ceilings.*
- *Remove the water-damaged plaster ceiling in the hallway outside the bathroom.*

### Apartment 2C

Water leaks were reported in the living room, master bathroom and master bedroom closet. The leak between the living room and the master bedroom closet is likely from the same source that impacted 3C. Drying of the water-damaged plaster was not done and the area was allowed to dry naturally. Mold growth will occur on surfaces that remain wet for over a week. The water-damaged walls were repaired by painting over the damage. The leak in the bathroom is around the window and may be from condensation. The plaster was patched and painted in the living room leak area.

1. The plaster in the closet and living room was dry when tested with a moisture meter.
2. A tape lift sample was collected from the damaged paint on the back wall of the master bedroom closet. The sample, number 240E182C-21, was analyzed microscopically by Ed Olmsted and Prestige. The sample had heavy growth of *Stachybotrys*. A sample from the ceiling in the closet, number 240E182C-23, was analyzed by Ed Olmsted and Prestige. The sample had heavy amounts of fungal spores.
3. In the master bathroom, a tape lift sample was collected from the water-damaged wall, which had visible mold. The sample, number 240E182C-22, had moderate growth of *Cladosporium* and *Altenaria*.
4. An air sample was collected in the master bedroom, and a sample was collected outside. The results are indicated below:
  - a. Outside – This sample had 5,600 fungal structures per cubic meter of air (fs/m<sup>3</sup>) and was dominated by ascospores and basidiospores. The level of pen-asp spores was 730 fs/m<sup>3</sup>. The outdoor sample serves as a reference level for the indoor samples.
  - b. Bedroom by closet – This sample was collected in the bathroom and had 3,300 fs/m<sup>3</sup> and was dominated by pen-asp spores at 2,900 fs/m<sup>3</sup>. This indicates mold growth. The sample had a *Stachybotrys* conidiophore, which indicates growth of mold.

### Recommendations

*The survey indicates there is mold growth, dampness and water damage in the bathroom. And master bedroom closet. The following steps are recommended:*

1. *Remove the clothes from the bedroom closet and launder or dry clean*
2. *Remove, clean and scrape loose paint from the wood shelves in the closet.*
3. *Scrape the damaged paint and plaster and remove wood trim in the back wall and ceiling of the closet.*
5. *Scrape the damaged paint and plaster and remove wood trim in the master bathroom.*



### Apartment 6B

There were reported water leaks in the past around the kitchen window. There was evidence of mold growth around the kitchen window. The bathroom shower does not work, and the family uses the bathtub with a flexible shower hose. The bathtub walls are not adequately protected from water damage. The tiles only extend from the top of the tub to approximately 2.5 feet. This causes the upper part of the plaster wall to become wet.

1. The wall above the tiles in the bathtub area tested damp with moisture meter measuring 99%.
2. The bathroom shower reportedly does not work and has been abandoned. There is visible mold on the grout in the tiles shower ceiling and walls. A tape lift from the ceiling in the shower, number 240E18-16, was analyzed by Ed Olmsted and Prestige. The sample had growth of *Cladosporium*.
3. A tape lift was collected from the bathroom wall above the tiles around the tub. The sample 240E18-6B-14, was analyzed by Ed Olmsted and had no fungal structures.
4. Another tape lift was collected from the bathroom wall above the tiles around the tub. The sample 240E18-6B-15, was analyzed by Ed Olmsted and had no fungal structures.
5. The kitchen sink cabinet in 6B is wet and moldy and rotted.
6. An air sample was collected in the bathroom, and a sample was collected outside. The results are indicated below:
  - a. Outside – This sample had 5,600 fungal structures per cubic meter of air (fs/m<sup>3</sup>) and was dominated by ascospores and basidiospores. The level of pen-asp spores was 730 fs/m<sup>3</sup>. The outdoor sample serves as a reference level for the indoor samples.
  - b. Bathroom – This sample was collected in the bathroom and had 3,000 fs/m<sup>3</sup> and was dominated by pen-asp spores at 2,900 fs/m<sup>3</sup>. This indicates mold growth.

### Recommendations

1. *Clean the shower tiles with a strong detergent.*
2. *Repair the shower and regrout the tiles so that it works properly and does not leak.*
3. *Clean the walls above the tiles in the bathroom and repaint.*
4. *Replace the kitchen sink cabinet.*

### Apartment 5F

The bathroom shower does not work, and the family uses the bathtub with a flexible shower hose. The bathtub walls are not adequately protected from water damage. The shower is in very poor condition. The tiles only extend from the top of the tub to approximately 2.5 feet. This causes the upper part of the plaster wall to become wet. The tiles around the bathtub are in very poor condition. The tenant reports mold growth occurs around the windows, and condensation occurs on the windows primarily in the winter. This is caused by condensation, most likely due to radiator leaks and the poor insulating value of the windows.

1. There is visible mold on the bathroom walls. A sample from the wall, number 240E185F-17, was analyzed by Ed Olmsted and Prestige. The sample had moderate growth of *Cladosporium*.
2. The bathroom window does not stay open and had to be propped open. There is visible mold growth around the window. A tape lift sample from around the window, number 240E185F-18, had moderate growth of *Cladosporium*.
3. As indicated above, there have been episodes of condensation around the bedroom windows in the winter. Two tape lifts were collected from each of the two bedroom windows. Sample 240E185F-19, was analyzed by Ed Olmsted and Prestige. The sample had growth of mold evidenced by spores, hyphae and conidiophores of *Cladosporium*. Sample 240E185F-20, had spores, hyphae and conidiophores of *Cladosporium*, indicating growth. This confirms there is condensation and mold growth around the windows.

### Recommendations

1. *Clean the bathroom walls, including the shower tiles with a strong detergent.*
2. *RegROUT the tiles around the tub.*
3. *Repair the bathroom shower and remove and replace the tiles so that it works properly and does not leak.*
4. *Clean the walls above the tiles around the bathtub in the bathroom and repaint.*
5. *Clean the walls and windows in the bedrooms and repaint.*
6. *Steam radiators should be inspected and repaired by a plumber to eliminate stem leaks that cause condensation.*

### Apartment 2E

There were leaks and visible mold in this apartment. The super scraped the walls and replastered and painted. Currently, the walls test dry and are in good condition. There was no visible mold or dust and the surfaces were cleaned.

1. An air sample was collected in the bedroom, and a sample was collected outside.

The results are indicated below:

- a. Outside – This sample had 5,600 fungal structures per cubic meter of air (fs/m<sup>3</sup>) and was dominated by ascospores and basidiospores. The level of pen-asp spores was 730 fs/m<sup>3</sup>. The outdoor sample serves as a reference level for the indoor samples.
- b. Bedroom – This sample was collected in the bathroom, had 1,600 fs/m<sup>3</sup>, and was dominated by pen-asp spores at 630 fs/m<sup>3</sup>. This reflects normal background.

There are no recommended actions for this apartment.

### Apartment 5B

The bathroom is in poor condition. The floors are damaged, lifting up and in poor condition. The tiles around the bath are in poor condition.

1. The bathroom tiles around the tub are cracked and lifting. The wall tests damp with a moisture meter, which indicates the tiles are leaking water into the wall. The tiles were painted in the past. This provides a substrate for mold growth and should not be done.
2. A tape lift from the visible mold on the wall was analyzed by Olmsted and Prestige. The sample, 240E185B-5, had spores, hyphae and conidiophores of *Cladosporium*, indicating mold growth.
3. There have been episodes of condensation around the bedroom windows in the winter. This caused condensation and visible mold on the bedroom window and door. Two tape lifts were collected from each of the bedroom window and bedroom door. Sample 240E185B-28, from the bedroom window was analyzed by Ed Olmsted and Prestige. The sample had growth of mold evidenced by spores, hyphae and conidiophores of *Cladosporium*. Sample 240E185F-27, was from the bedroom door had spores, hyphae and conidiophores of *Cladosporium*, indicating growth. This confirms there is condensation and mold growth around the windows and on the door and is likely on other contents.

### *Recommendations*

1. *The bathroom should be renovated. Remove and replace the floor and tile walls around the tub.*
2. *RegROUT the tiles around the tub.*
3. *Repair the shower and regROUT the tiles so that it works properly and does not leak.*
4. *Clean the walls above the tiles around the bathtub in the bathroom and repaint.*
5. *Clean the door, walls, and windows in the bedroom and repaint.*
6. *A plumber should inspect and repair steam radiators to eliminate steam leaks that cause condensation.*

## DISCUSSION AND RECOMMENDATIONS

Mold surveys are valid to a degree of scientific certainty, but it is impossible to guarantee that all hidden mold has been located. This survey indicated the following:

1. There is evidence of condensation around many windows and this caused mold growth. This is most often caused by steam leaks from radiators. A plumber should check the radiators and verify there are no leaks.
2. The showers do not work in most of the apartment inspected. This caused tenants to use the bathtub for showering. The showers should be restored so the plumbing works and the tiles regouted so they do not leak.
3. There is an active sewage leak impacting the bathrooms and hallways in 4A and 3A. It was reported that the same condition exists in 2A. This is a serious infection risk. These bathrooms and hallway ceilings should be gutted.

According to the most accepted criteria for assessing mold in buildings, the ACGIH (American Conference of Governmental Industrial Hygienists) Bioaerosols manual, microbial growth in occupied interiors, in HVAC systems, and on building materials and furnishings should not be allowed, and such contamination should be removed, and further contamination should be prevented”.<sup>6</sup> The New York City Department of Health (NYC DOH) has developed guidelines for the abatement of mold contamination in buildings. These guidelines are available from the NYC DOH website. The US Environmental Protection Agency (EPA) and the U.S. Department of Labor Occupational Safety and Health Administration (OSHA) also publish mold guidelines. The Institute publishes the most comprehensive guidelines for Inspection, Cleaning, and Restoration Certification (IICRC) in the standard S520. These guidelines all recommend that water-damaged porous building materials be removed under controlled conditions. There is a recommended scope of work for each apartment in this report. During the course of this abatement project, the contractor should report the discovery of hidden mold growth made apparent during the process of the work. Hidden mold growth is of significance because mold particulate (spores, mycelial fragments, etc.) has the potential to migrate into occupied areas and result in fungal particulate exposures to occupants.<sup>7</sup> The U.S. Environmental Protection Agency has stated “Mold may be hidden in places such as the back side of drywall, wallpaper, or paneling, the top side of ceiling tiles, the underside of carpets and pads, etc. Other possible locations of hidden mold include areas inside walls around pipes (with leaking or condensing pipes), the surface of walls behind furniture (where condensation forms), inside ductwork, and in roof materials above ceiling tiles (due to roof leaks or insufficient

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<sup>6</sup> ACGIH American Conference of Industrial Hygienists Bioaerosols Assessment and Control; page 14-6 ©1999)

<sup>7</sup> American Industrial Hygiene Association Recognition, Evaluation and Control of Indoor Mold Growth 2<sup>nd</sup> Edition; P 74 © 2019

insulation).”<sup>8</sup> Pessi et al report the presence of microbial growth inside insulation on external walls and inside wall cavities resulted in a degradation of indoor air quality by releasing microbial contamination into the house.<sup>9</sup> The EPA further states “Dead mold may still cause allergic reactions in some people, so it is not enough to simply kill the mold, it must also be removed.”<sup>10</sup>

A New York State professional mold remediation contractor and licensed mold abatement workers should do all mold removal work. A work plan should be done following the New York City Department of Health guidelines. The work should be filed with the New York City Department of Environmental Protection (NYC DEP) if required by Local Law 61. The result should, at a minimum, adhere to the following methods:

1. The work is restricted only to authorized, trained, and protected personnel. These may include the Contractor's employees, employees of Subcontractors, Client's employees and representatives, State and local inspectors, and any other designated individuals. At a minimum, respiratory protection should consist of full-face air-purifying respirators with high-efficiency cartridges and, if required, acid gas (chlorine) cartridges, organic vapor(s) cartridges, or other respiratory protective equipment necessary to prevent inhalation of aerosolized disinfectant. Disposable respirators are not permitted. The contractor should also provide disposable Tyvek coveralls and protective gloves.
2. All contents should be cleaned and moved from the work areas.
3. Plastic sheeting should be used to isolate and enclose the demolition area. The plastic should be six mil in thickness and supported by wood studs.
4. The debris should be carefully removed from the building in sealed containers.
5. Use exhaust ventilation to keep the work areas under negative pressure for the remainder of the building. The use of HEPA-filtered exhaust fans is recommended. The HEPA air scrubbers should be operated after the demolition and cleaning for at least 24 hours. The contractor should install and activate negative air filtration (AFDs) systems that provide four air changes per hour in each work area. The negative air systems must be created in a work area enclosure such that airborne dust will tend to be drawn through the filtration system rather than leak out into the surrounding areas. The air pressure inside the work area should be less than that outside. The Contractor should establish, at a minimum, a negative air pressure differential of 0.02 inches of water inside the work area relative to areas outside the containment before remedial operations begin. All vacuum collection equipment exhausted within the building envelope during this remediation project should utilize HEPA final filtration with a 99.97% collection efficiency at 0.3 microns.

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<sup>8</sup> USEPA; A Brief Guide to Mold, Moisture and Your Home; [www.epa.gov/mold/hiddenmold](http://www.epa.gov/mold/hiddenmold)

<sup>9</sup> Pessi A.M., Suonketo J, Pentti M, Kurkilahti M, Peltola K, Rantio-Lehyimaki A; Microbial Growth Inside Insulated Walls as an Indoor Biocontaminant Source; APPLIED AND ENVIRONMENTAL MICROBIOLOGY, Feb. 2002, p. 963-967 Vol. 68, No. 2 099-2240/02/\$04.000 DOI: 10.1128/AEM.68.2.963-967.2002; Copyright © 2002, American Society for Microbiology. Vol. 68.

<sup>10</sup> USEPA; A Brief Guide to Mold, Moisture and Your Home; [www.epa.gov/mold/hiddenmold](http://www.epa.gov/mold/hiddenmold)

- HEPA filters and pre-filters for AFDs should be replaced to maintain pressurization performance requirements during demolition and cleaning and after work in a containment work area. Filters should not be reused. Used filters should be bagged in 6-mil polyethylene bags within the containment.
6. The contractor should use HEPA-filtered vacuum cleaners for cleaning dust and debris. Nozzle attachments should include those as required by the Remediation Contractor to remove all dust adequately. Nozzle attachments should consist of a crevice and extended bristle brush nozzles.
  7. When visibly clean, the surfaces in the work area should be sampled to determine any residual mold contamination, and air sampling should be conducted with spore traps.

Table 1  
Tape Lift Sample Results

LOCA4TION	RESULT
240E18-3C-2 BEDROOM CLOSET SHELVES #3C	no fungal structures
240E18-3C-3 LIVING ROOM BEHIND PAINT LEAK AREA	no fungal structures
240E18-4A-6 APT 4A HALL OUTSIDE BATHRM BEHIND PAINT	no fungal structures
240E18-3A-9 BATHROOM WALL	budding yeasts indicting fungal growth
240E18-3A-10 BATHROOM WALL BEHIND PAINT	spores, hyphae and conidiophores of <i>Aspergillus</i> indicating growth
240E18-11 APARTMENT 3A BEHIND BATHROOM CEILING PAINT AND SKIM COAT	spores, hyphae and conidiophores of <i>Penicillium</i> indicating growth
240E18-6B-14 BATHROOM WALL ABOVE THE TILES – 6B	no fungal structures
240E18-6B-15 BATHTUB WALLS ABOVE TILES - 6B	no fungal structures
240E18-6B-16 BATHROOM SHOWER CEILING TILES – 6B	spores, hyphae and conidiophores of <i>Cladosporium</i> indicating growth
240E18-5F-17 IN SHOWER FROM WALLS 5F	trace spores, hyphae and conidiophores of <i>Cladosporium</i> indicating trace growth
240E18-5F-18 AROUND BATHROOM WINDOW 5F	spores, hyphae and conidiophores of <i>Aureobasidium</i> indicating growth
240E18-5F-19 BEDROOM AROUND WINDOW	spores, hyphae and conidiophores of <i>Cladosporium</i> indicating growth
240E18-5F-20 BEDROOM AROUND WINDOW	spores, hyphae and conidiophores of <i>Cladosporium</i> indicating growth
240E18-2C-21 BACK WALL OF THE BEDROOM CLOSET	spores, hyphae and conidiophores of <i>Stachybotrys</i> indicating growth
240E18-2C-22 MASTER BATHROOM AROUND WINDOW – DAMAGED PAINT	ascospores, ascomata and hyphae of <i>Chaetomium</i> indicating growth
240E18-2C-23 BEDROOM CLOST CEILING	ascospores, ascomata and hyphae of <i>Chaetomium</i> indicating growth
240E185B-24 BATHROOM WALL ABOVE TILES	a few loose spores
240E185B-25 BATHROOM WALL TILES 5B	spores, hyphae and conidiophores of <i>Aureobasidium</i> indicating growth
240E185B-27 BEDROOM DOOR 5B	spores, hyphae and conidiophores of <i>Cladosporium</i> indicating growth



240E185B-28 BEDROOM WINDOW	spores, hyphae and conidiophores of <i>Cladosporium</i> indicating growth
240E18-26 5B BATHROOM WINDOW	spores, hyphae and conidiophores of <i>Cladosporium</i> indicating growth

**Prestige EnviroMicrobiology, Inc.**  
Scientific, Laboratory and Technical Services



**Analytical Test Report**

Client: Olmsted Environmental Services Inc., 1992 Route 9, Garrison, NY 10524  
Client Project/Name: 240 East 18  
Samples submitted by: Edward Olmsted, CIH  
Prestige report number: 230727-05  
Sample date: 7-24-2023  
Receipt date: 7-27-2023  
Analysis date: August 1, 2023  
Date of issue of report: August 1, 2023  
Analyst: Ching-Yi Tsai, Ph.D.

Report approved by:

Theresa Lehman, MPH Laboratory Director

AIHA LAP, LLC accredited Lab ID#192810

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Scientific, Laboratory and Technical Services



**Microscopic Method (P003): Analysis of Tape-Lift Samples for Fungi by Optical Microscopy**

Prestige # Client sample ID Location	Sample dimension	Fungal ID	Fungal structures observed	Fungal density	Notes
230727-05-017 240E185B-28 5B Bedroom Window	1/2" x 2"	<i>Cladosporium</i>	spores, conidiophores, hyphae	4	Fungal growth, some fungal structures in fragments.
230727-05-018 240E18-26 5B Bathroom Window	1/2" x 1 3/4"	<i>Cladosporium</i>	spores, conidiophores, hyphae	5	Fungal growth, some fungal structures in fragments; mites and their fecal matter observed.
230727-05-019 240E182C-23 Bedroom Closet Ceiling 2C	1/2" x 1 1/2"	unknown fungi	spores	5	Fungal growth; mites and their fecal matter observed; nematodes observed.
230727-05-020 240E182C-22 Bathroom Around Window 2C	1/2" x 2"	<i>Alternaria (Ulocladium)</i> <i>Cladosporium</i>	spores, conidiophores, hyphae spores, conidiophores, hyphae	<1 2	Fungal growth, some fungal structures in fragments; mites and their fecal matter observed.
230727-05-021 240E182C-21 Bedroom Closet Back Wall 2C	1/2" x 2"	<i>Aspergillus</i> <i>Stachybotrys</i>	spores, conidiophores, hyphae spores, conidiophores, hyphae	<1 5	Fungal growth, some fungal structures in fragments; mites, insects and their fecal matters observed.
230727-05-022 240E185B-25 Tiles Around Tub	3/4" x 2"	<i>Cladosporium</i> <i>Phoma</i>	spores, conidiophores, hyphae spores, pycnidia, hyphae	1 3	Fungal growth, some fungal structures in fragments.
230727-05-023 240E185B-27 Bedroom Door 5B	1/2" x 2"	<i>Cladosporium</i>	spores, conidiophores, hyphae	3	Fungal growth, some fungal structures in fragments.

Notes:

- Fungal density rating 1-5 (1 being the lowest and 5 the highest) indicates density of fungal growth structures observed. No fungal density is provided for loose spores, hyphal fragments and other structures. (<1) is used to indicate a light fungal density. NA=not applicable. ND=not detected.
- Growth coverage, if provided, is based on estimation of the entire bulk sample surface on all sides.
- Fungal contamination is noted when an analyst, at times during sample analysis, can differentiate the unusual compositions (types or numbers) of fungal spores or structures from background fungal compositions.
- For technical information on result interpretation, please visit [www.Prestige-EM.com](http://www.Prestige-EM.com) or call Prestige EnviroMicrobiology @ 856-767-8300.

**Prestige EnviroMicrobiology, Inc.**  
Scientific, Laboratory and Technical Services



**Analytical Test Report**

Client: Olmsted Environmental Services Inc., 1992 Route 9, Garrison, NY 10524  
Client Project/Name: 240 East 18  
Samples submitted by: Edward Olmsted, CIH  
Prestige report number: 230726-06  
Sample date: 7-24-2023  
Receipt date: 7-26-2023  
Analysis date: July 28, 2023  
Date of issue of report: July 28, 2023  
Analyst: Ching-Yi Tsai, Ph.D.

Report approved by:

A handwritten signature in cursive script that reads "Theresa Lehman".

Theresa Lehman, MPH Laboratory Director

AIHA LAP, LLC accredited Lab ID#192810

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 Scientific, Laboratory and Technical Services



Microscopic Method (P003): Analysis of Tape-Lift Samples for Fungi by Optical Microscopy

Prestige # Client sample ID Location	Sample dimension	Fungal ID	Fungal structures observed	Fungal density	Notes
230726-06-047 240E18-4A-5 Apt 4A Kitchen Floor	1/2" x 1 1/2"	ascomycetes <i>Aspergillus</i> <i>Chaetomium</i>	ascospores, ascomata spores, conidiophores, hyphae loose spores	4 <1 NA	Fungal growth, some fungal structures in fragments.
230726-06-048 240E18-11 Apt 3A Ceiling	1/2" x 1 3/4"	<i>Alternaria</i> <i>Aspergillus</i> <i>Cladosporium</i> <i>Humicola</i> <i>Penicillium</i>	spores, conidiophores, hyphae spores, conidiophores, hyphae spores, conidiophores, hyphae spores, conidiophores, hyphae spores, conidiophores, hyphae	<1 1 4 1 1	Fungal growth, some fungal structures in fragments; mites and their fecal matter observed; nematodes observed.
230726-06-049 240E18-3A-9 Apt 3A Wall Bathroom	1/2" x 2"	<i>Alternaria (Ulocladium)</i> <i>Cladosporium</i>	spores, conidiophores, hyphae spores, conidiophores, hyphae	3 3	Fungal growth, some fungal structures in fragments.
230726-06-050 240E183A-10 Apt 3A Behind Paint Wall	1/2" x 1 1/2"	<i>Chaetomium</i> <i>Humicola</i> <i>Penicillium</i>	ascospores, ascomata, hyphae spores, conidiophores, hyphae spores, conidiophores, hyphae	<1 1 1	Fungal growth, some fungal structures in fragments.
230726-06-051 240E185F-17 Apt 5F Bathroom Wall	1/2" x 1 1/2"	<i>Cladosporium</i>	spores, conidiophores, hyphae	2	Fungal growth, some fungal structures in fragments.
230726-06-052 240E185F-19 Apt 5F Bedroom Around Window	1/2" x 2"	<i>Cladosporium</i>	spores, conidiophores, hyphae	4	Fungal growth, some fungal structures in fragments.
230726-06-053 240E18-5F-18 Bathroom Window Apt 5F	1/2" x 1 3/4"	<i>Cladosporium</i>	spores, conidiophores, hyphae	4	Fungal growth, some fungal structures in fragments.
230726-06-054 240E18-6b-16 Shower at Ceiling	3/4" x 2"	<i>Cladosporium</i>	spores, conidiophores, hyphae	2	Fungal growth, some fungal structures in fragments.
230726-06-055 240E18-5F-20 Bedroom Around 5F Window	1/2" x 2"	<i>Cladosporium</i>	spores, conidiophores, hyphae	5	Fungal growth, some fungal structures in fragments.

Notes:

1. Fungal density rating 1-5 (1 being the lowest and 5 the highest) indicates density of fungal growth structures observed. No fungal density is provided for loose spores, hyphal fragments and other structures. (<1) is used to indicate a light fungal density. NA=not applicable. ND=not detected.
2. Growth coverage, if provided, is based on estimation of the entire bulk sample surface on all sides.
3. Fungal contamination is noted when an analyst, at times during sample analysis, can differentiate the unusual compositions (types or numbers) of fungal spores or structures from background fungal compositions.
4. For technical information on result interpretation, please visit [www.Prestige-EM.com](http://www.Prestige-EM.com) or call Prestige EnviroMicrobiology @ 856-767-8300.

**Prestige EnviroMicrobiology, Inc.**  
Scientific, Laboratory and Technical Services



**Analytical Test Report**

Client: Olmsted Environmental Services Inc., 1992 Route 9, Garrison, NY 10524  
Client Project/Name: 240 East 18 Street  
Samples submitted by: Edward Olmsted, CIH  
Prestige report number: 230726-06  
Sample date: 7-24-2023  
Receipt date: 7-26-2023  
Inoculation date: 7-26-2023 (Bulk)  
Analysis date: August 2, 2023  
Date of issue of report: August 2, 2023  
Analyst: Ching-Yi Tsai, Ph.D.

Report approved by:

Theresa Lehman, MPH Laboratory Director

AIHA LAP, LLC accredited Lab ID#192810

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Culture Method (P009): Culture Analysis of Bulk Samples for Fungi

Prestige # Client sample ID Location	Wt. (g)	Medium used	Dilution factor	Fungal Identification	Colony counts	Conc. (CFU/g)	Percentage
230726-06-042 240E183C-1 Damaged Paint Closer Shelf Apt 3C	0.3015	MEA	1,000x	<i>Aspergillus calidoustus</i> <i>Aspergillus sydowii</i>	2 162	6,600 540,000 Total 550,000	1% 99%
230726-06-043 240E183C-4 Living Room Paint Wall	0.3307	MEA	10,000x	<i>Aspergillus calidoustus</i> <i>Aspergillus sydowii</i>	1 67	30,000 2,000,000 Total 2,000,000	1% 99%
230726-06-044 240E184A-7 Hallway 4A	0.2825	MEA	10,000x	<i>Aspergillus sydowii</i> <i>Aspergillus versicolor</i>	9 7	320,000 250,000 Total 570,000	56% 44%
230726-06-045 240E183A-12 Ceiling Bathroom Apt 3A	0.2759	MEA	10,000x	<i>Aspergillus sydowii</i> <i>Cephalophora</i> spp. <i>Cladosporium</i> spp. <i>Penicillium</i> spp.	12 4 115 10	430,000 140,000 4,200,000 360,000 Total 5,100,000	9% 3% 82% 7%
230726-06-046 240E183A-13 Bathroom Wall Apt 3A	0.2917	MEA	10,000x	Fungi overloaded <i>Aspergillus sydowii</i> <i>Aspergillus versicolor</i> <i>Penicillium</i> spp.	>500  Domin.	>17,000,000  Domin. Total >17,000,000	NA

Notes:

1. Percentage is for each group in total population.
2. Concentrations and percentages are rounded. Total percentage may not add up to 100% due to rounding.
3. Abbreviations where applicable: CMA = cornmeal agar, DG18 = Dichloran 18% glycerol agar, MEA = 2% malt extract agar, PCA = plate count agar, TSA = tryptic soy agar, ND = not detected, NA = not applicable.
4. All culture samples are incubated at 25± 1°C unless otherwise indicated.
5. Field blank, if submitted with the project, has not been used to adjust data.
6. Data provided by the client: sample area taken for swab sample collection.
7. The detection limit of this analysis is one fungal colony, one bacterial colony or one fungal structure. The analytical sensitivities vary from analysis to analysis or by air volume. For calculation of your analytical sensitivities, please visit our webpage <http://prestige-em.com/index-tech.htm>.
8. For technical information on result interpretation, please visit [www.Prestige-EM.com](http://www.Prestige-EM.com) or call Prestige EnviroMicrobiology @ 856-767-8300.

***Prestige EnviroMicrobiology, Inc.***  
*Scientific, Laboratory and Technical Services*

**Analytical Test Report**

Client: Olmsted Environmental Services, 1992 Route 9 Garrison NY 10524  
Client Project/Name: 240 East 18  
Samples submitted by: Edward Olmsted, CIH  
Prestige report number: 230726-06  
Sample date: 7-24-2023  
Receipt date: 7-26-2023  
Analysis date: July 28, 2023  
Date of issue of report: July 28, 2023  
Analyst: Theresa Lehman

Report approved by:



Theresa Lehman, MPH Laboratory Director

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Culture Method (P029):

Presence/Absence Test for Total Coliform, *E. coli* and Fecal Coliform Bacteria in Bulk Samples

Prestige # Client sample ID Location	Total coliform bacteria	<i>E. coli</i>	Fecal coliform bacteria
230726-06-044 240E184A-7 Hallway 4A	<b>Present</b>	Absent	<b>Present</b>
230726-06-045 240E183A-12 Ceiling bathroom apt 3A	<b>Present</b>	Absent	Absent
230726-06-046 240E183A-13 Bathroom wall apt 3A	<b>Present</b>	Absent	Absent

Laboratory controls:

	Total coliform bacteria	<i>E. coli</i>	Fecal coliform bacteria
<i>E. coli</i>	Present	Present	Present
<i>Enterobacter cloacae</i>	Present	Absent	Absent
<i>Pseudomonas aeruginosa</i>	Absent	Absent	Absent
Blank	Absent	Absent	Absent

Notes:

1. Laboratory controls are used as testing reference for comparisons.
2. For technical information on result interpretation, please visit [www.Prestige-EM.com](http://www.Prestige-EM.com) or call Prestige EnviroMicrobiology @ 856-767-8300.

**Prestige EnviroMicrobiology, Inc.**  
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**Analytical Test Report**

Client: Olmsted Environmental Services Inc., 1992 Route 9, Garrison, NY 10524  
Client Project/Name: 240 East 18 Street  
Samples submitted by: Edward Olmsted, CIH  
Prestige report number: 230726-06  
Sample date: 7-24-2023  
Receipt date: 7-26-2023  
Analysis date: July 31, 2023  
Date of issue of report: July 31, 2023  
Analyst: Theresa Lehman

Report approved by:

A handwritten signature in black ink that reads "Theresa Lehman".

Theresa Lehman, MPH Laboratory Director

AIHA LAP, LLC accredited Lab ID#192810

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Microscopic Method (P001):

Analysis of Allergenco Samples for Total Fungal Structures by Optical Microscopy

Prestige # Client sample ID Location	Air vol. (m <sup>3</sup> )	% read	Presumptive fungal ID	Counts of fungal structures	Fungal structures/m <sup>3</sup>	Percentage	Background rating
230726-06-035 5485963 Closet area apt 3C	0.075	25.5	ascospores	14	730	32%	3
			basidiospores	1	52	2%	
			<i>Cladosporium</i>	1	52	2%	
			<i>Ganoderma</i>	1	52	2%	
			myxomycetes	1	52	2%	
			Pen/Asp-like	26	1,400	59%	
			Total				
230726-06-036 5486005 Apt 4A kitchen and hall	0.075	25.5	<i>Alternaria</i>	1	52	<1%	3
			ascospores	33	1,700	10%	
			basidiospores	10	520	3%	
			<i>Cercospora</i>	1	52	<1%	
			<i>Chaetomium</i>	62	3,200	20%	
			<i>Cladosporium</i>	6	310	2%	
			<i>Ganoderma</i>	2	100	1%	
			hyphal fragments	60	3,100	19%	
			Pen/Asp-like	142	7,400	45%	
Total				16,000			
230726-06-037 5485964 Apt 3A bathroom	0.075	2.6	ascospores	1	510	<1%	3
			basidiospores	1	510	<1%	
			<i>Cladosporium</i>	1	510	<1%	
			<i>Ganoderma</i>	1	510	<1%	
			Pen/Asp-like	206	110,000	98%	
			Total				
230726-06-038 5485956 Apt 6B bathroom	0.075	25.5	ascospores	1	52	2%	4
			<i>Cladosporium</i>	5	260	8%	
			Pen/Asp-like	55	2,900	89%	
			<i>Scopulariopsis</i>	1	52	2%	
			Total				
230726-06-039 5486019 Apt 2C at closet	0.075	25.5	ascospores	15	780	31%	3
			basidiospores	4	210	8%	
			<i>Cladosporium</i>	1	52	2%	
			<i>Ganoderma</i>	1	52	2%	
			hyphal fragments	1	52	2%	
			Pen/Asp-like	24	1,300	49%	
			smuts	1	52	2%	
			<i>Stachybotrys</i>	1	52	2%	
			<i>Stachybotrys</i> conidiophore	1	52	2%	
			Total				
230726-06-040 5485972 Apt 2E bedroom	0.075	25.5	ascospores	9	470	29%	2
			basidiospores	7	370	23%	
			<i>Cladosporium</i>	1	52	3%	
			myxomycetes	1	52	3%	
			Pen/Asp-like	12	630	39%	
			unknowns	1	52	3%	
			Total				

**Prestige EnviroMicrobiology, Inc.**  
Scientific, Laboratory and Technical Services



230726-06-041	0.075	25.5		<i>Alternaria</i>	1	52	1%	
5486002				ascospores	57	3,000	54%	
outside				basidiospores	24	1,300	23%	
				<i>Cladosporium</i>	4	210	4%	
				<i>Ganoderma</i>	4	210	4%	
				myxomycetes	1	52	1%	
				Pen/Asp-like	14	730	13%	
				unknowns	1	52	1%	
						Total 5,600		1

Notes:

1. Spore trap samples are first scanned at 200x and then analyzed at 600x magnification.
2. Concentrations and percentages are rounded. Total percentage may not add up to 100% due to rounding. Percentage is for each group in total population. ND=not detected. NA=not applicable.
3. Data provided by the client: sample air volume taken.
4. Background rating 1-5 (1 being the lowest and 5 the highest) indicates density of sample deposit. The higher the sample deposit is, the more likely some fungal structures are obscured. A "0" background indicates no trace was observed.
5. The detection limit of this analysis is one fungal colony or one fungal structure. The analytical sensitivities vary from analysis to analysis or by air volume. For calculation of your analytical sensitivities, please visit our webpage <http://prestige-em.com/index-tech.htm>
6. For technical information on result interpretation, please visit [www.Prestige-EM.com](http://www.Prestige-EM.com) or call Prestige EnviroMicrobiology @ 856-767-8300.

**Prestige EnviroMicrobiology, Inc.** Tel: 856-767-8300  
 242 Terrace Boulevard, Suite B-1, Voorhees, New Jersey 08043

Fax: 856-767-8305

Prestige Proj #: 230727-05

**Chain-of-Custody and Analysis Request Form**

Client name: OLMSTED ENVIRONMENTAL SERVICES Tel: 845 424 4077 Client proj #: 240 East 18  
 Address 1992 ROUTE 9 GARRISON NY 10524 Fax: 845 424 3482 P.O.#: \_\_\_\_\_  
 E-mail: OLMSTED.MAC@MAC.COM Date sampled: July 24, 2023

Sample ID	Location or source	Sample type	Air vol (L) or Area (inch <sup>2</sup> )	Water: potable or non-potable	Analysis requests code or description	Turnaround time	Notes or special instructions
240E185B-28	5B bedroom window	tape			P003	standard	
240E18-26	5B bathroom window	tape			P003	standard	
240E182C-23	bedroom closet ceiling 2C	tape			P003	standard	
240E182C-22	bathroom around window 2C	tape			P003	standard	
240E182C-21	bedroom closet back wall 2C	tape			P003	standard	
240E185B-25	tiles around tub	tape			P003	standard	
240E185B-27	bedroom door 5B	tape			P003	standard	

Contact name: Ed Olnsted Submitted by: (sign & print) [Signature] Date submitted: July 25, 2023

Received by: (sign & print) [Signature] Date & time received: 7/27/23, 10:50 am Delivered by: Fedex UPS, USPS, in person

(For lab use only) Processed by: \_\_\_\_\_ Sample type: \_\_\_\_\_ Date: \_\_\_\_\_

Prestige EnviroMicrobiology, Inc. Tel: 856-767-8300  
 242 Terrace Boulevard, Suite B-1, Voorhees, New Jersey 08043

Fax: 856-767-8305

Prestige Proj. #: 230726-06

**Chain-of-Custody and Analysis Request Form**

P. 1 of 3

Client name: OLMSTED ENVIRONMENTAL SERVICES Tel: 845 424 4077 Client proj. #: 240 East 18 Street  
 Address 1992 ROUTE 9 GARRISON NY 10524 Fax: 845 424 3482 P.O. #: \_\_\_\_\_  
 E-mail: OLMSTED.MAC@MAC.COM Date sampled: July 24, 2023

Sample ID	Location or source	Sample type	Air vol (L) Area (inch <sup>2</sup> )	Water: potable or non-potable	Analysis requests code or description	Turnaround time	Notes or special instructions
5485963	closet area apt 3C	air	75		P001	standard	
<del>5486025</del> <i>OS sample 5/28/05</i>	apt 4A kitchen and hall	air	75		P001	standard	
<del>5485964</del> <i>OS sample 5/28/05</i>	apt 3A bathroom	air	75		P001	standard	
5485956	apt 6B bathroom	air	75		P001	standard	
5486019	apt 2C at closet	air	75		P001	standard	
5485972	apt 2E bedroom	air	75		P001	standard	
5486002	outside	air	75		P001	standard	
240E183c-1	damaged paint closer shelf apt 3c	bulk			p009	standard	
240E183c-4	living room paint wall	bulk			P009	Standard	

Contact name: Ed Olmsted Submitted by: (sign & print) [Signature] Date submitted: 7/25/23

Received by: (sign & print) [Signature] Date & time received: 7/26/23, 11am Delivered by: [Signature] Fedex, UPS, USPS, in person

(For lab use only) Processed by: \_\_\_\_\_ Sample type: \_\_\_\_\_ Date: \_\_\_\_\_

**Prestige EnviroMicrobiology, Inc.** Tel: 856-767-8300 Fax: 856-767-8305  
 242 Terrace Boulevard, Suite B-1, Voorhees, New Jersey 08043

Prestige Proj #: 230726-06

**Chain-of-Custody and Analysis Request Form**

P.2073

Client name: OLMSTED ENVIRONMENTAL SERVICES Tel: 845 424 4077 Client proj.#: 240 east 18 page 2  
 Address 1992 ROUTE 9 GARRISON NY 10524 Fax: 845 424 3482 P.O.#: \_\_\_\_\_  
 E-mail: OLMSTED.MAC@MAC.COM Date sampled: 7/24/23

Sample ID	Location or source	Sample type	Air vol (L) <sup>1</sup> Area (inch <sup>2</sup> )	Water: potable or non-potable	Analysis requests code or description	Turnaround time	Notes or special instructions
240E184A-7	hallway 4A	bulk			P009/P029	standard	
240E183A-12	ceiling bathroom apt 3A	bulk			P009/P029	standard	
240E183A-13	bathroom wall apt 3A	bulk			P009/P029	standard	
240E18-4A-5	apt 4A kitchen floor	Tape			P003	standard	
240E18-11	apt 3A ceiling	Tape			P003	standard	
240E18-3A-9	apt 3A wall	Tape			P003	standard	
240E183A-10	apt 3A behind paint wall	Tape			P003	standard	
240E185F-17	apt 5F bathroom wall	Tape			P003	standard	
240E185F-19	apt 5F bedroom around window	Tape			P003	standard	

Contact name: Ed Olmsted Submitted by: (sign & print) [Signature] Date submitted: 7/25/23

Received by: (sign & print) [Signature] Date & time received: 7/26/23 11am Delivered by: Fedex USPS, USPSO, in person

Data QC'd by: [Signature]  
 Report reviewed by: [Signature]  
 Request created by: [Signature]  
 Date & Time: 7-25-23 @ 5:14pm

**Prestige EnviroMicrobiology, Inc.** Tel: 856-767-8300  
 242 Terrace Boulevard, Suite B-1, Voorhees, New Jersey 08043

Fax: 856-767-8305

Prestige Proj.#: 230726-06

**Chain-of-Custody and Analysis Request Form**

P 3043

Client name: OLMSTED ENVIRONMENTAL SERVICES Tel: 845 424 4077 Client proj.#: 240 east 18 page 3  
 Address 1992 ROUTE 9 GARRISON NY 10524 Fax: 845 424 3482 P.O.#: \_\_\_\_\_  
 E-mail: OLMSTED.MAC@MAC.COM Date sampled: 7/24/23

Sample ID	Location or source	Sample type	Air vol (L) Area (ft <sup>2</sup> )	Water: potable or non-potable	Analysis requests code or description	Turnaround time	Notes or special instructions
240E18-5F-18	bathroom window Apt 5F	Tape			P003	standard	
240E18-6b-16	shower at ceiling	Tape			P003	standard	
240E18-5F-20	bedroom around 5F window	Tape			P003	standard	

Contact name: Ed Olmsted Submitted by: (sign & print) [Signature] Date submitted: 7/25/23

Received by: (sign & print) [Signature] Date & time received: 7/26/23, 11am Delivered by: Fedex, UPS, USPS, in person

(For lab use only) Processed by: \_\_\_\_\_ Sample type: \_\_\_\_\_ Date: \_\_\_\_\_





PHOTOGRAPHS  
240 EAST 18<sup>TH</sup> STREET BROOKLYN NY  
July 24, 2023



damage to the bedroom closet 3C



damage and moldy plaster in the living room of 3C



sewage leak in 4A bathroom



the floor is wet from dripping sewage in apartment 4A bathroom



moisture in the hallway wall in 4A long wall shared with the bathroom



soaked bathroom ceiling 4A



Moldy floor in the kitchen in 4A





visible mold in the bathroom of 3A – there is an active sewage leak



bathroom ceiling in 3A – sewage is leaking



3A bathroom walls are soaked and saturated with sewage



apartment 6B – the walls are soaked around the tub



The sink in the kitchen in 6B is water-damaged and moldy



The shower in 5F is in poor condition and cant be used



Moldy bedroom closet in 2C



Mold growth and water damaged in the 2C bathroom





The damaged floor in the 5B bathroom



visible mold around the tub in 5B bathroom



visible mold on the bedroom door in 5B



Mold growth around the windows in 5B