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# LIMITED INDOOR AIR QUALITY ASSESSMENT

# **Murray Elementary School**

505 Fast Renwick Road

City of Azusa County of Los Angeles State of California

Project Number: Atch-211878

August 12, 2021

PREPARED FOR:

**Azusa Unified School District** 

# PRIVILEGED & CONFIDENTIAL

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# INDOOR AIR QUALITY

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Atch-211878 Limited Indoor Air Quality Assessment 505 East Renwick Road Azusa, California 91702

August 12, 2021

Azusa Unified School District 546 South Citrus Avenue Azusa, California 91702

Attn: Mr. Brian Allen

Re: Murray Elementary School

505 East Renwick Road, Various Areas

Azusa, California 91702

Pursuant to your request, A-Tech Consulting, Inc. has completed a Limited Indoor Air Quality (IAQ) Assessment in various areas of Murray Elementary School located at 505 East Renwick Road, in Azusa, California. The following report summarizes the findings of this assessment.

#### 1.0 BACKGROUND

From July 15, 2021 to July 16, 2021, and on July 20, 2021 and August 9, 2021, Industrial Hygiene Technician Krizia Kolakowski, under the supervision of Certified Industrial Hygienist (CIH) Roosevelt Ward with A-Tech Consulting, Inc. performed a Limited Indoor Air Quality (IAQ) Assessment in various areas of the subject site. This assessment was performed due to concerns raised by occupants of Murray Elementary School regarding poor indoor air quality. These concerns were limited to the twenty-three (23) areas surveyed during this assessment: Room 1/2, Room 3 (Preschool), Room 5/6, Classrooms 7 through 23, Room 24/RSP Teacher Room, Classroom 25, Room 25, Room 27 (Band/Music Think Together Room), Room 28 (Parent Center), Classrooms 29 through 32, Rooms 33 and 34 (Think Together Rooms) and Classrooms 35 and 36.

At the time of the assessment, the areas were inspected and samples were collected to assess a) inside temperature and relative humidity as indicators of comfort, b) carbon dioxide levels as indicator of air flow, c) carbon monoxide, d) HVAC filtration efficiency and e) fungal spore exposure in the work areas to determine the IAQ impact in the various areas of concern. This IAQ assessment was performed in accordance with the scope of services authorized by Mr. Brian Allen with the Azusa Unified School District.

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#### 2.0 METHODOLOGY

As a precautionary measure, sampling of relative humidity (RH), temperature (T), carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), particle distribution and airborne fungal distribution was performed at the subject site to ensure that levels are within acceptable parameters for occupancy.

Continuous datalogged sampling was performed at stationary locations at approximate breathing zone height. The following table details the parameters monitored, sampling intervals and sampling durations of the two (2) continuous datalogging units used in this assessment:

<u>Unit</u>	Parameter(s)	Interval (seconds)	Sampling Duration (min)
TSI 7545 IAQCalc	Temperature Relative Humidity CO <sub>2</sub> CO	5	10
ThermoScientific pDR1500	Aerosols	60	10

In addition, exterior continuous measurements were taken by each instrument upwind of the building or by HVAC exterior air intakes, for comparison.

# 2.1 Carbon Dioxide (CO<sub>2</sub>), Carbon Monoxide (CO), Air Temperature and Relative Humidity

Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), air temperature and relative humidity were recorded using a TSI Model 7545 IAQCalc unit. Calibration on the IAQCalc unit was performed on December 21, 2020. Measurement ranges, accuracy and resolution for CO<sub>2</sub>, CO, air temperature and relative humidity can be found in the following table.

<u>Parameter</u>	Range	<u>Accuracy</u>	<u>Resolution</u>
Carbon Dioxide (CO <sub>2</sub> )	0 to 5,000 ppm	±3% or ±50ppm (whichever is greater)	1 ppm
Carbon Monoxide (CO)	0 to 500 ppm	±3% or ±3ppm (whichever is greater)	0.1 ppm
Air Temperature	32 to 140°F	±1.0°F	0.1° F
Relative Humidity	5.0 to 95.0%	±3.0%	0.1%

The results can be found on the attached tables. Carbon dioxide and carbon monoxide levels are reported in parts per million (ppm), air temperature in degrees Fahrenheit (°F) and relative humidity in percentages (%).

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# 2.2 Aerosol Particle Concentration

Aerosol particle (respirable dust <4.0  $\mu$ m in diameter) concentration was measured using a ThermoScientific pDR-1500 unit, along with an aluminum respirable dust cyclone. Calibration on the pDR-1500 unit was performed on December 7, 2020. Measurement range, accuracy and resolution for the aerosol monitor of the pDR1500 unit can be found in the following table.

<u>Parameter</u>	Range	<u>Accuracy</u>	<u>Resolution</u>
Aerosol	$0.001 \text{ to } 400 \text{ mg/m}^3$	±5%	$0.01~\mu g/m^3$

The results can be found on the attached tables. Aerosol concentration levels are reported in micrograms per cubic meter ( $\mu g/m^3$ ).

# 2.3 <u>Non-Viable Mold Air Sampling</u>

Air sampling was performed inside and outside of the subject building to characterize mold spore levels. The air sampling was performed using Air-O-Cell cassettes. High air volume air pump (Buck BioAire<sup>TM</sup> Bioaerosol sampling pump) was used to pull air through the cassettes for five (interior) to ten (exterior) minutes at flow rates of approximately 15 L/min. The cassette pump air sampling trains were calibrated before and after each use against a rotameter.

The thirty-nine (39) air samples were collected and submitted using chain-of-custody procedures to AIH Laboratory located at 2556 W. Woodland Drive, Anaheim, California 92801 for analysis of mold spores. This analytical method gives measured airborne levels of total (non-viable) mold spores in units of counts per cubic meter of air (spores/m³). This laboratory has been certified in environmental microbiology by the Laboratory Accreditation Program administered by the American Industrial Hygiene Association (AIHA) lab code #LAP-203769.

# 3.0 DISCUSSION

#### 3.1 <u>Indoor Air Quality</u>

The substances sampled are commonly known indoor air quality contaminants of concern in nonindustrial environments. Currently, there are no regulations pertaining to indoor air quality. However, the limits recommended by ASHRAE (American Society of Heating, Refrigerating, and Air Conditioning Engineers), National Institute for Occupational Safety and Health (NIOSH), Cal-OSHA (California Occupation Safety and Health Administration), Regional Exposure Levels (REL) as established by the California Office of Environmental Health Hazard Assessment (OEHHA), California Ambient Air Quality Standard (CAAQS), Regional Screening Levels (RSLs) as established by the Environmental Protection Agency (EPA) and LEED (Leadership in Energy and Environmental Design) are used for the evaluations of IAQ concerns. Keep in mind, concentrations that are within the recommended limits does not ensure freedom from sensory irritation or from all adverse health effects for all occupants.

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# 3.2 Mold

Currently, there are no regulations or guidelines that quantify acceptable or unacceptable levels of mold spore content in the air or on surfaces for either total mold spore count or mold spore count for individual genre. The current general industry standard of mold content in air samples states that "typically mold levels should be lower indoors than outdoors and similar in diversity of genera". In cases where the exterior samples are abnormally low or high for mold content (typical instances include where a day can be windy, raining or there is snow cover) the Certified Indoor Environmental Consultant (CIEC) reviews each sample analysis by genre and overall mold content and makes final determination of potential mold exposure and activity.

When collecting fungal species and spore counts there are no set exposure limits for the safe number of spores from a particular genus or species. Common practice is to compare the species and spore counts of the air samples collected indoors to those collected outdoors. All indoor air will contain some degree of mold with variations in species and spore counts. For indoor air quality to be considered "normal" the species present in the indoor air should be similar to those found in the exterior ambient air. There are two ways to interpret mold data.

- 1. The first is to compare the total spores per cubic meter (spores/m³) reported from the interior to the total spores/m³ reported from the exterior. The total interior spore count should not exceed the total exterior spore count concentration by any excessive magnitudes.
- 2. The second is to compare the concentration of each spore type in exterior air to the indoor air samples. Each spore type should not exceed the exterior result for that genus/species of mold. In buildings without mold problems, the qualitative diversity of interior and exterior airborne fungi should be similar.

If remedial recommendations are provided, they will be based on a combined analysis of data including but not limited to, a review of the air and surface analytical results (as applicable), review of on-site conditions including building use, building history, moisture/water intrusion activity, visible water damage and/or mold conditions, length of water exposure, occupant health related symptoms (as applicable), and any other information obtained during the assessment combined with historical professional experience with similar projects. Fungal spores are present in almost all environments and do not proliferate indoors unless environmental requirements exist. Fungal activity varies by genre, with differing needs for light, dampness, consumables (building materials, food), and temperature. In general, fungi require air, moisture content above 15%, and cellulose-based materials such as wood, glue, paper products (drywall backing), carpet, clothing, etc.

#### 4.0 ANALYTICAL RESULTS

# 4.1 Air Flow and Carbon Dioxide (CO<sub>2</sub>) Levels

The National Institute for Occupational Safety and Health (NIOSH) has determined that the most common of indoor air quality complaints are related to inadequate ventilation. Building Heating, Ventilation and Air Conditioning (HVAC) systems need to function properly in order to control temperature, humidity, odor, and general air quality. Carbon dioxide levels are an indicator on whether adequate outside air is entering the building because building occupants produce carbon dioxide, water vapor, particulates, biological aerosols, and other contaminants during metabolic activities. CO<sub>2</sub> concentrations increase as a result of human occupancy and the lower the amount of outside air entering the room, the higher the CO<sub>2</sub> levels indoors.

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The American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc. (ASHRAE) Standard 62.1-2016: Ventilation for Acceptable Indoor Air Quality recommends that indoor CO<sub>2</sub> concentrations no greater than 700 parts per million (ppm) above exterior CO<sub>2</sub> concentrations will satisfy a substantial majority (about 80%) of occupants (assuming exterior supply rate of 15 cfm/person). Thus, to determine if CO<sub>2</sub> levels are a concern, a CO<sub>2</sub> differential is calculated by subtracting the average interior CO<sub>2</sub> concentration from the exterior CO<sub>2</sub> concentration for each inspected area of concern.

For all surveyed interior areas of concern, the average indoor carbon dioxide (CO<sub>2</sub>) levels did not exceed the carbon dioxide concentration of the exterior control sample by more than 700 ppm. This indicates that indoor air quality concerns related to carbon dioxide are unlikely to exist in the areas inspected/tested. Please refer to the attached table (Appendix A) for detailed information on the sample results.

# 4.2 Air Temperature

Based on the experience of A-Tech Consulting, Inc., the air temperatures perceived as comfortable by most persons in interior environments and recommended by ASHRAE (Standard 55-2017) for occupant comfort, range between 67° and 82°F.

For all surveyed interior areas of concern, the average air temperatures recorded **were within** the ASHRAE recommended comfort ranges. This indicates that indoor air quality concerns related to temperature are unlikely to exist in the areas inspected/tested. Please refer to the attached table (Appendix A) for detailed information on the sample results.

# 4.3 Relative Humidity

For all surveyed interior areas of concern, recorded average relative humidity levels **were within** the 20-65 percent relative humidity range recommended by ASHRAE (Standard 62.1-2016) for occupant comfort. This indicates that indoor air quality concerns related to humidity are unlikely to exist in the areas inspected/tested. Please refer to the attached table (Appendix A) for detailed information on the sample results. Note that A-Tech Consulting, Inc. recommends that the relative humidity in buildings not exceed 50 percent in order to limit the potential for fungal growth.

# 4.4 Airborne Toxic, Flammable and Combustion Product Measurements (CO)

Carbon Monoxide is an indicator of a combustion by-product and is measured to confirm that no combustion sources are contained within, or are immediately adjacent to, the facility. It is frequently associated with headaches. Notable combustion sources include natural gas-fired furnaces, boilers, water heaters, cooking stoves or unvented combustion appliances as well as vehicular traffic, including all types of fossil-fueled industrial trucks. Depending on fuel sources present in interior locations, levels of carbon monoxide are normally less than exterior levels, unless a significant interior source exists. The Cal-OSHA 8-hour time weighted average Permissible Exposure Limit (PEL) for carbon monoxide is **25 ppm**. The OEHHA Regional Exposure Level (REL) for carbon monoxide is 31.2 ppm.

For all surveyed interior areas of concern, carbon monoxide was not detected, or was detected at low levels. These levels are **below** the Cal-OSHA PEL of **25 ppm** (8-hour time weighted average) and are less than common indoor levels (<4 ppm). This indicates that indoor air quality concerns related to carbon monoxide are unlikely to exist in the areas inspected/tested. Please refer to the attached table (Appendix A) for detailed information on the sample results.

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# 4.5 Airborne Particle Concentration

A mass concentration aerosol monitor was used to determine the air quality by quantifying the concentration of particles in the air. Inhalable airborne particulate matter (PM2.5) is defined by the EPA as fine particulate matter with aerodynamic diameters of  $2.5\mu m$  or smaller. Ultrafine Particles (particles with aerodynamic diameters less than  $1~\mu m$ ) are the result of combustion by-products or chemical reactions, which can help indicate the presence of a substance or its source. Though there is no standard for airborne ultra-fine particles, it is expected to find lower amounts of particles interior versus exterior, due to the Heating Ventilation and Air Conditioning (HVAC) filtering mechanism.

Note that an instrument failure occurred while collecting sample P-0037 (taken in Classroom 5/6 on July 20, 2021) and no results were recorded. This sample has been marked as Voided on the attached table in Appendix B. A-Tech returned to sample the particle concentration in Classroom 5/6 on August 9, 2021. The results for this sampling are indicated by samples P-40 through P-42.

There are currently no Federal government standards for PM2.5 in indoor air environments. However, the Cal-OSHA 8-Hour Time Weighted Average Permissible Exposure Limits for total dust and the respirable fraction of total dust are 10 mg/m<sup>3</sup> and 5 mg/m<sup>3</sup> respectively.

For all surveyed interior areas of concern, the results of the continuous sampling indicated that average respirable particle concentrations **were lower** than 5 mg/m $^3$  (5,000  $\mu$ g/m $^3$ ), indicating an efficient HVAC filtering system. Please refer to the attached table (Appendix B) for detailed information on the sample results.

# 4.6 Non-Viable Mold Air Sampling

Results for fungal air sampling are reported as spores per cubic meter (spores/m³), per industrial genre is identified. The individual results are then totaled into total spores per cubic meter (spores/m³). To determine if mold proliferation exists, counts of indicator spores are compared to counts present in the outdoor, exterior environments.

A total of thirty-nine (39) mold air samples were obtained during this assessment, including two (2) exterior samples. It was determined that three (3) interior samples had elevated levels of fungal growth. Spore counts presented in blue were spores found in the subject location but were not present in the control sample. Spore counts presented in red are higher than what was found in the control sample(s) and are considered elevated for the area tested.

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Following the direct microscopic examination of the air samples obtained, the exterior samples and interior samples with elevated fungal counts are outlined as follows:

<u>Sample</u> <u>Number</u>	Sample Location	<u>Prominent Mold - Genre Level (spores/m³)</u>	Total Mold Spores (spores/m³)
211878- MA-0001	Exterior	Aspergillus/Penicillium - 700 Cladosporium - 840 Chaetomium - 0 Alternaria - 100 Ascospores - 140 Basidiospores - 380 Bipolaris - 120 Epicoccum - 20 Periconia, Myxomycetes, Smuts - 60 Miscellaneous Spores - 20 Ganoderma - 80 Oidium - 80	2,480*
211878- MA-0006	Classroom 11	Aspergillus/Penicillium - 520 Chaetomium - 120 Ascospores - 40 Basidiospores - 40 Periconia, Myxomycetes, Smuts - 400 Miscellaneous Spores - 40	1,160
211878- MA-0009	Classroom 14	Aspergillus/Penicillium - 520 Cladosporium - 4,240 Alternaria - 40 Ascospores - 40 Basidiospores - 120 Miscellaneous Spores - 80	5,040
211878- MA-0039	Exterior	Aspergillus/Penicillium - 780 Cladosporium - 940 Alternaria - 20 Ascospores - 140 Basidiospores - 200 Epicoccum - 20 Periconia, Myxomycetes, Smuts - 60 Beltrania - 0	2,200*

<sup>\*</sup>Note: Total mold spore count reflects all genres detected in the exterior sample, including the genres not detected in the interior sample(s) obtained.

These results indicate elevated fungal counts in some interior areas compared to the exterior as noted in the above table. Interior mold air sample are considered elevated if the sample has both:

- 1. An interior mold genre count 20% greater than exterior levels, and
- 2. An interior mold genre count greater than 300 spores/m³

#### Chaetomium

Chaetomium is a common outdoor fungus typically found on soil and plant debris. Some cases of excessive Chaetomium spp. exposure have lead to allergic reactions and infections. Some species of Chaetomium have even been documented to lead to fatal deep infections in immunocompromised individuals.

#### Periconia

*Periconia* is a common outdoor fungus commonly found on stalks of grasses, herbaceous stems, dead leaves or leaf spots. They are found on soil, blackened and dead plants, and are associated with other fungi. *Periconia* is a potential allergen associated with hay fever and asthma effects.

#### Smuts

Smuts are found on cereal crops, grasses, weeds, and other fungi. They are commonly associated a black powder-like substance that causes plant diseases. Exposure to smuts can lead to allergies, such as hay fever and asthma.

# Myxomycetes

Myxomycetes are characterized as slime molds due to wet and dry spore phases. These funguslike organisms typically grow in cool, shady, moist locations and survive on decaying wood, leaves or other organic matter that retain large amounts of moisture. Exposure to myxomycetes can lead to allergies, such as hay fever and asthma.

#### Cladosporium

Cladosporium is a fungal genre that can grow indoors and outdoors. Cladosporium is commonly found in areas with humidity, moisture, and water damage, so it is more prone to be found in wet or damp areas such as bathrooms and basements. If high levels of Cladosporium are present in an area, some occupants (particularly those with family histories of allergies or chronic respiratory problems) may experience allergic reactions including serious asthma attacks.

All fungal spore counts detected in the remaining interior samples were lower than the exterior control samples. Please refer to the attached Mold Air Sample Summary table (Appendix C) for detailed information on the sample results.

#### 5.0 CONCLUSIONS

Based on this assessment and analytical data, it is A-Tech Consulting, Inc.'s professional opinion at the time of this assessment that there is an area of improvement in air quality in the assessed survey site.

#### Mold

Based on this limited industrial hygiene investigation for fungal activity and analytical results, elevated airborne fungal counts were present in the following interior area(s) when compared to the exterior:

- Classroom 11
- Classroom 14

Elevated interior mold levels could have originated from two sources:

- An indoor source such as moisture from high cellulose content material that was a result from water damage, water leaks, condensation, water infiltration, or flooding.
- An outdoor source that was inadvertently brought into the interior by occupants' shoes and clothing, house plants, trash, or method of transference the outdoors to the indoor space.

Based on this assessment and analytical data, it is A-Tech Consulting, Inc.'s professional opinion that at the time of the assessment, all remaining parameters sampled for indoor air quality were below or within acceptable limits. Following are the conclusions for these parameters:

- Temperature and relative humidity levels **were within** the recommended American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) standard recommended ranges.
- Elevated levels of carbon monoxide **were not** detected by the continuous monitoring instrument utilized during this assessment.
- Carbon dioxide concentrations were within the recommended ranges, based on building occupancy.
- Particulate levels monitored indicate concentrations **less than** typical ambient exterior concentrations, and **less than** comparable Environmental Exposure Limits or Occupation Exposure Limits.

#### **6.0 RECOMMENDATIONS**

Based on the conditions at the time of the inspection and the analytical results, A-Tech submits the following recommendations for preventing and minimizing indoor air quality problems in the surveyed areas of concern:

- 1. In the interior area(s) of concern where elevated airborne fungal counts were present when compared to the exterior:
  - a. Perform additional housekeeping of the carpets or flooring, ventilation grills, and other exposed surfaces, such as shelving, desks, and tables. This could include vacuuming or wiping down any surfaces.
  - b. Remove any potential interior sources of mold such as house plants, trash, or soil.
  - c. Perform additional air monitoring of the spaces for mold.

If occupant concerns about indoor air quality persist, then it is recommended to increase the ventilation within the areas of concern. The HVAC systems that service the areas of concern should be regularly maintained and inspected to reduce the risk of air quality concerns. It is also recommended to check the HVAC filters to ensure that they are properly maintained and changed out according to the appropriate preventative maintenance schedule.

# 7.0 DEFINTIONS

- A) AIHA The American Industrial Hygiene Association is a non-profit organization that works to provide resources and information to occupational health professionals to better protect worker health.
- B) ASHRAE The American Society of Heating and Air-Conditioning Engineers is a global professional association seeking to advance heating, ventilation, air conditioning and refrigeration systems design and construction.

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- C) Bioaerosols A general term for particles of biological origins such as microbes, airborne organisms, and/or viable pathogenic aerosols.
- D) Cal-OSHA The Division of Occupational Safety and Health (DOSH), better known as Cal-OSHA, protects and improves the health and safety of working men and women in California.
- E) EPA The Environmental Protection Agency is an independent agency of the United States federal government for environmental protection.
- F) HVAC refers to the different systems such as heating, ventilation and air conditioning which is used for moving air between indoor and exterior areas, along with heating and cooling both residential and commercial buildings.
- G) Indoor Air Quality Pollutants refers to the air quality within and around building and structures, especially as it relates to the health and comfort of building occupants. Some of the common pollutants are carbon monoxide, formaldehyde, indoor particulate matter, volatile organic compounds, VOCs, radon, and biological contaminants such as dust, mites, and pollen.
- H) Optical Microscopy Techniques used to magnify images of samples using visible light, often paired with illumination of the sample with polarized and reflected light.
- I) Particulate Matter (PM10 and PM 2.5) PM10 is particulate matter 10 micrometers or less in diameter, PM 2.5 is particulate matter of 2.5 micrometers or less in diameter.
- J) Relative Humidity The ratio of the amount of water vapor actually present in the air to the greatest amount possible at the same temperature.
- K) Volatile Organic Compounds (VOCs) Emitted gasses from certain solids or liquids. VOCs include a variety of chemicals, some which may have short -and long-term adverse health effects.

#### 8.0 LIMITATIONS

Keep in mind, the conclusions presented in this report are professional opinions based solely upon visual observations at the site and direct reading measurements, for the timeframe tested. They are intended exclusively for the purpose outlined herein, and for the site location and project indicated.

This report is intended for the sole use of the contracted client. The use or re-use of this document or the findings, conclusion or recommendations presented herein, by any other party or parties, is at the sole risk of said user.

Recognizing that even the most comprehensive inspection may fail to detect IAQ concerns at a particular site, this study was not intended to identify all potential IAQ pollutants present in the building or at the site for such reasons as (1) the possible existence of buried, covered and inaccessible areas and features; and (2) the limited number and type of samples collected.

No guarantee is expressed or implied that all IAQ concerns have been identified. A-Tech Consulting, Inc. assumes no responsibility for the identification of suspect and potential IAQ pollutants, which are concealed and/or inaccessible (i.e. locked rooms, etc.).

Services performed by A-Tech Consulting, Inc. were performed in a manner consistent with that of the care and skill ordinarily and currently exercised by members of the same profession that even the most comprehensive Scope of Services might fail to detect environmental liabilities on a particular site. Therefore, A-Tech Consulting, Inc. cannot act as insurers and cannot "certify" that a site is free of IAQ pollutant concentrations.

No expressed or implied representation or warranty is included or intended in our reports, except that our services were performed, within the limits prescribed by the scope of services, with the customary thoroughness and competence of our profession.

Information and opinions presented herein apply to the existing and reasonable foreseeable site conditions at the time of our investigation. They cannot necessarily apply to site changes of which this office is unaware and has not had the opportunity to review.

Changes in the conditions of this property may occur with time due to natural processes or works of man on the subject property or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond our control.

A-Tech Consulting, Inc. trusts that the information presented herein provides the data you require. Should you have any questions or comments, please contact A-Tech Consulting, Inc.

Respectfully submitted,

A-TECH CONSULTING, INC.

Roosevelt Ward, CIH, CSP, QISP

CIH 11208 CP





# Continuous Air Temperature, Humidity, Carbon Dioxide and Carbon Monoxide Monitoring Measurements (TSI 7545 IAQCalc)

Client Name: Azusa Unified School District

A-Tech Project Number: 211878

Location: Murray Elementary School, 505 East Renwick Road

				CO2 Concentration (ppm)			CO Concentration (ppm)		Temperature (°F)			<u>Humidity (%)</u>			
Sample Number	<u>Start</u> <u>Time</u>	End Time	<u>Duration</u> (min)	Sample Location	Min.	Max.	Average	Max.	Average	Min.	Max.	Average	Min.	Max.	<u>Average</u>
211878- I-0001	9:21 AM	9:31 AM	10	Exterior	417	446	429	0.4	0.1	65.2	73.2	69.9	69.9	77.8	75.8
211878- I-0002	9:35 AM	9:45 AM	10	Classroom 7	432	463	444	0.6	0.2	70.9	76.5	74.5	36.1	37.8	37.0
211878- I-0003	9:47 AM	9:57 AM	10	Classroom 8	428	463	441	0.4	0.1	68.6	71.6	70.4	41.5	44.4	42.9
211878- I-0004	10:01 AM	10:11 AM	10	Classroom 9	430	477	438	0.3	0.0	74.9	81.3	79.1	46.1	56.5	48.9
211878- I-0005	10:14 AM	10:24 AM	10	Classroom 10	423	451	440	0.6	0.1	68.6	77.6	72.1	44.0	55.7	51.6



				CO2 Concentration (ppm)			CO Concentration (ppm)		Temperature (°F)			<u>Humidity (%)</u>			
Sample Number	<u>Start</u> <u>Time</u>	End Time	Duration (min)	Sample Location	Min.	Max.	Average	Max.	Average	Min.	Max.	Average	Min.	Max.	<u>Average</u>
211878- I-0006	10:26 AM	10:36 AM	10	Classroom 11	431	465	443	0.3	0.0	69.7	70.3	70.0	43.2	44.2	43.9
211878- I-0007	10:37 AM	10:47 AM	10	Classroom 12	437	490	455	0.7	0.1	61.2	68.7	65.2	46.7	60.5	53.2
211878- I-0008	10:51 AM	11:01 AM	10	Classroom 13	433	590	454	0.7	0.2	67.4	81.6	76.5	47.0	75.6	56.0
211878- I-0009	11:04 AM	11:14 AM	10	Classroom 14	429	465	439	1.1	0.6	76.5	82.7	79.6	39.8	43.8	41.1
211878- I-0010	11:22 AM	11:32 AM	10	Classroom 15	419	522	437	0.7	0.2	70.2	52.2	72.2	38.1	49.1	44.9
211878- I-0011	11:34 AM	11:44 AM	10	Classroom 16	427	450	437	0.3	0.1	71.8	73.6	72.7	44.1	47.5	45.3
211878- I-0012	11:47 AM	11:57 AM	10	Classroom 17	428	458	437	0.3	0.1	71.8	73.7	72.9	50.1	54.9	51.4
211878- I-0013	12:02 PM	12:12 PM	10	Computer Lab	511	552	539	0.4	0.0	73.7	75.1	74.2	44.8	46.6	45.8
211878- I-0014	12:13 PM	12:23 PM	10	Library	433	469	445	0.3	0.0	0.0	72.6	70.9	51.4	57.3	52.1



					CO2 Concentration (ppm)			Conc	CO entration opm)	<u>Temperature (°F)</u>			<u>Humidity (%)</u>		
Sample Number	<u>Start</u> <u>Time</u>	End Time	Duration (min)	Sample Location	Min.	Max.	Average	Max.	Average	Min.	Max.	Average	Min.	Max.	Average
211878- I-0015	12:28 PM	12:38 PM	10	Classroom 18	458	474	466	0.3	0.0	67.3	69.6	68.3	54.2	72.5	65.3
211878- I-0016	12:42 PM	12:52 PM	10	Classroom 19	432	452	442	0.3	0.0	71.0	71.8	71.5	52.4	54.7	52.9
211878- I-0017	12:56 PM	1:06 PM	10	Classroom 20	423	451	436	0.3	0.0	65.8	71.2	67.8	44.6	48.9	46.2
211878- I-0018	1:08 PM	1:18 PM	10	Classroom 21	426	455	436	0.3	0.0	68.6	71.8	70.3	55.3	62.3	57.5
211878- I-0019	6:48 AM	6:58 AM	10	Exterior	435	569	450	0.0	0.0	65.2	73.2	69.9	66.4	86.3	73.9
211878- I-0020	6:58 AM	7:08 AM	10	Classroom 34	443	467	453	0.0	0.0	64.1	73.4	67.4	53.4	63.4	56.1
211878- I-0021	7:11 AM	7:21 AM	10	Classroom 33	438	493	450	0.0	0.0	65.1	74.5	73.1	60.1	69.8	63.1



					CO2 Concentration (ppm)		CO Concentration (ppm)		Temperature (°F)			Humidity (%)			
Sample Number	<u>Start</u> <u>Time</u>	End Time	Duration (min)	Sample Location	Min.	Max.	Average	Max.	Average	Min.	Max.	Average	Min.	Max.	Average
211878- I-0022	7:26 AM	7:36 AM	10	Classroom 32	428	456	440	0.0	0.0	70.4	75.5	72.8	42.6	50.1	47.5
211878- I-0023	7:38 AM	7:48 AM	10	Classroom 29	419	437	428	0.0	0.0	71.5	76.2	73.6	39.3	42.3	40.9
211878- I-0024	7:50 AM	8:00 AM	10	Classroom 30	427	555	459	0.0	0.0	74.1	75.5	74.7	43.5	46.1	44.8
211878- I-0025	8:03 AM	8:13 AM	10	Classroom 27	432	601	481	0.0	0.0	74.1	74.8	74.5	58.7	62.8	60.1
211878- I-0026	8:15 AM	8:25 AM	10	Classroom 26	443	459	450	0.0	0.0	71.0	73.1	71.7	42.3	46.2	44.7
211878- I-0027	8:27 AM	8:37 AM	10	Classroom 25	429	493	447	0.0	0.0	70.0	74.7	73.0	57.3	66.2	61.7
211878- I-0028	8:38 AM	8:48 AM	10	Classroom 24/RSP Teacher	432	448	439	0.0	0.0	70.9	71.6	71.4	45.3	50.2	46.0



					<u>CO2</u>	CO2 Concentration (ppm)			CO entration opm)	Temperature (°F)			<u>Humidity (%)</u>		
Sample Number	<u>Start</u> <u>Time</u>	End Time	Duration (min)	Sample Location	Min.	Max.	Average	Max.	Average	Min.	<u>Max.</u>	Average	Min.	Max.	Average
211878- I-0029	8:49 AM	8:59 AM	10	Classroom 23	490	519	501	0.0	0.0	69.2	71.8	70.6	49.3	54.2	51.5
211878- I-0030	9:04 AM	9:14 AM	10	Classroom 22	424	505	446	0.0	0.0	76.0	80.3	78.8	52.6	61.0	52.6
211878- I-0031	9:16 AM	9:26 AM	10	Classroom 31	418	438	429	0.0	0.0	73.7	80.2	76.6	43.7	59.0	55.1
211878- I-0032	9:34 AM	9:44 AM	10	Classroom 28	418	444	434	0.0	0.0	68.3	75.5	70.2	44.9	66.5	55.8
211878- I-0033	9:47 AM	9:57 AM	10	Classroom 37	432	507	445	0.0	0.0	73.4	74.2	73.9	46.5	50.3	48.1
211878- I-0034	9:59 AM	10:09 AM	10	Classroom 36	438	546	457	0.0	0.0	74.3	74.9	74.5	44.6	46.7	45.1
211878- I-0035	10:10 AM	10:20 AM	10	Classroom 35	424	460	435	0.0	0.0	67.1	73.5	69.0	50.8	71.3	58.5



				CO2 Concentration (ppm)			<u>CO</u> <u>Concentration</u> (ppm)		Temperature (°F)			Humidity (%)			
Sample Number	<u>Start</u> <u>Time</u>	End Time	Duration (min)	Sample Location	Min.	Max.	Average	Max.	Average	Min.	Max.	<u>Average</u>	Min.	Max.	Average
211878- I-0036	11:35 AM	11:45 AM	10	Classroom 1/2	414	480	431	0.0	0.0	66.8	81.1	71.2	29.8	47.1	40.2
211878- I-0037	11:45 AM	11:55 AM	10	Classroom 5/6	426	441	432	0.0	0.0	66.5	69.0	68.1	43.1	46.7	44.0
211878- I-0038	12:04 PM	12:14 PM	10	Classroom 3/4	431	455	445	0.0	0.0	70.1	73.3	71.1	30.5	38.2	35.2
211878- I-0039	12:15 PM	12:25 PM	10	Exterior	365	471	413	0.0	0.0	68.4	100.6	83.6	21.0	84.3	51.3

**Legend:** 

N/A = Not Applicable



# **Continuous Aerosol Monitoring Measurements (ThermoScientific pDR1500)**

Client Name: Azusa Unified School District

A-Tech Project Number: 211878

Location: Murray Elementary School, 505 East Renwick Road

					Aerosol C	oncentration (µg/m³)
Sample Number	Start Time	End Time	<u>Duration</u> (min)	Sample Location	<u>Max.</u>	<u>Average</u>
211878-P-0001	9:21 AM	9:31 AM	10	Exterior	32.40	28.89
211878-P-0002	9:35 AM	9:45 AM	10	Classroom 7	11.19	7.69
211878-P-0003	9:47 AM	9:57 AM	10	Classroom 8	45.13	8.72
211878-P-0004	10:01 AM	10:11 AM	10	Classroom 9	13.53	12.86
211878-P-0005	10:14 AM	10:24 AM	10	Classroom 10	10.03	9.02
211878-P-0006	10:26 AM	10:36 AM	10	Classroom 11	11.33	9.76
211878-P-0007	10:37 AM	10:47 AM	10	Classroom 12	9.17	8.74
211878-P-0008	10:51 AM	11:01 AM	10	Classroom 13	11.52	8.39
211878-P-0009	11:04 AM	11:14 AM	10	Classroom 14	10.84	9.66
211878-P-0010	11:22 AM	11:32 AM	10	Classroom 15	7.87	6.41



					Aerosol C	oncentration (µg/m³)
Sample Number	Start Time	End Time	Duration (min)	Sample Location	<u>Max.</u>	<u>Average</u>
211878-P-0011	11:34 AM	11:44 AM	10	Classroom 16	8.63	7.12
211878-P-0012	11:47 AM	11:57 AM	10	Classroom 17	8.95	7.92
211878-P-0013	12:02 PM	12:12 PM	10	Computer Lab	9.39	6.58
211878-P-0014	12:13 PM	12:23 PM	10	Library	8.70	7.80
211878-P-0015	12:28 PM	12:38 PM	10	Classroom 18	10.21	9.47
211878-P-0016	12:42 PM	12:52 PM	10	Classroom 19	6.70	5.86
211878-P-0017	12:56 PM	1:06 PM	10	Classroom 20	32.16	7.39
211878-P-0018	1:08 PM	1:18 PM	10	Classroom 21	10.40	9.12
211878-P-0019	6:48 AM	6:58 AM	10	Exterior	24.55	22.27
211878-P-0020	6:58 AM	7:08 AM	10	Classroom 34	12.21	9.99
211878-P-0021	7:11 AM	7:21 AM	10	Classroom 33	13.61	12.47
211878-P-0022	7:26 AM	7:36 AM	10	Classroom 32	10.58	9.24



					Aerosol C	oncentration (µg/m³)
Sample Number	Start Time	End Time	<u>Duration</u> (min)	Sample Location	Max.	<u>Average</u>
211878-P-0023	7:38 AM	7:48 AM	10	Classroom 29	10.16	9.04
211878-P-0024	7:50 AM	8:00 AM	10	Classroom 30	10.33	8.78
211878-P-0025	8:03 AM	8:13 AM	10	Classroom 27	12.34	11.0
211878-P-0026	8:15 AM	8:25 AM	10	Classroom 26	6.68	5.32
211878-P-0027	8:27 AM	8:37 AM	10	Classroom 25	12.83	11.12
211878-P-0028	8:38 AM	8:48 AM	10	Classroom 24/RSP Teacher	5.68	4.79
211878-P-0029	8:49 AM	8:59 AM	10	Classroom 23	14.67	12.7
211878-P-0030	9:04 AM	9:14 AM	10	Classroom 22	11.78	10.78
211878-P-0031	9:16 AM	9:26 AM	10	Classroom 31	10.96	9.85
211878-P-0032	9:34 AM	9:44 AM	10	Classroom 28	11.97	10.88
211878-P-0033	9:47 AM	9:57 AM	10	Classroom 37	8.91	7.94
211878-P-0034	9:59 AM	10:09 AM	10	Classroom 36	11.22	9.81



					<u>Aerosol C</u>	oncentration (µg/m³)
Sample Number	Start Time	End Time	<u>Duration</u> (min)	Sample Location	<u>Max.</u>	<u>Average</u>
211878-P-0035	10:10 AM	10:20 AM	10	Classroom 35	10.06	8.81
211878-P-0036	11:35 AM	11:45 AM	10	Classroom 1	7.55	6.43
211878-P-0037	Voided	Voided	Voided	Voided	Voided	Voided
211878-P-0038	12:04 PM	12:14 PM	10	Classroom 3	5.10	3.97
211878-P-0039	12:15 PM	12:25 PM	10	Exterior	14.25	12.55
211878-P-0040	2:02 PM	2:12 PM	10	Exterior	15.55	13.40
211878-P-0041	2:13 PM	2:23 PM	10	Classroom 5/6	18.10	15.36
211878-P-0042	2:24 PM	2:34 PM	10	Exterior	15.22	13.43

# Legend:

N/A = Not Applicable



# **Mold Air Sample Summary**

Location: Murray Elementary School, 505 East Renwick Road Client Name: Azusa Unified School District

Sample Number	Sample Date <u>&amp; Time</u>	Sample Location	Sample Description	Sampling Time	<u>Liters</u> <u>Per</u> <u>Min</u>	<u>Temp./Humidity</u>	<u>Prominent Mold - Genre Level (spores/m³)</u>	Total Mold Spores (spores/m³)
211878- MA-0001	7/15/2021 9:44 AM	Exterior	Ambient	10 Min.	15	73.0 °F / 70.0%	Aspergillus/Penicillium - 700 Cladosporium - 840 Chaetomium - 0 Alternaria - 100 Ascospores - 140 Basidiospores - 380 Bipolaris - 120 Epicoccum - 20 Periconia, Myxomycetes, Smuts - 60 Miscellaneous Spores - 20 Ganoderma - 80 Oidium - 80	2,480*
211878- MA-0002	7/15/2021 9:44 AM	Classroom 7	Background	5 Min.	15	73.5 °F / 37.7%	Aspergillus/Penicillium - 600 Cladosporium - 360 Chaetomium - 40 Ascospores - 80 Basidiospores - 80 Periconia, Myxomycetes, Smuts - 80	1,240
211878- MA-0003	7/15/2021 9:44 AM	Classroom 8	Background	5 Min.	15	71.2 °F / 42.3%	Aspergillus/Penicillium - 480 Cladosporium - 200 Ascospores - 40 Bipolaris - 80 Epicoccum - 40 Periconia, Myxomycetes, Smuts - 40 Miscellaneous Spores - 40	920



Sample Number	Sample Date <u>&amp; Time</u>	Sample Location	Sample Description	Sampling Time	<u>Liters</u> <u>Per</u> <u>Min</u>	<u>Temp./Humidity</u>	<u>Prominent Mold - Genre Level (spores/m³)</u>	Total Mold Spores (spores/m³)
211878- MA-0004	7/15/2021 9:51 AM	Classroom 9	Background	5 Min.	15	78.0 °F / 49.3%	Aspergillus/Penicillium - 720 Cladosporium - 960 Alternaria - 40 Ascospores - 40 Basidiospores - 240 Bipolaris - 80 Periconia, Myxomycetes, Smuts - 200 Miscellaneous Spores - 80 Oidium - 40	2,400
211878- MA-0005	7/15/2021 10:05 AM	Classroom 10	Background	5 Min.	15	72.5 °F / 50.2%	Aspergillus/Penicillium - 200 Cladosporium - 160 Ascospores - 40 Periconia, Myxomycetes, Smuts - 160	560
211878- MA-0006	7/15/2021 10:17 AM	Classroom 11	Background	5 Min.	15	70.0 °F / 43.8%	Aspergillus/Penicillium - 520 Chaetomium - 120 Ascospores - 40 Basidiospores - 40 Periconia, Myxomycetes, Smuts - 400 Miscellaneous Spores - 40	1,160
211878- MA-0007	7/15/2021 10:29 AM	Classroom 12	Background	5 Min.	15	68.0 °F / 47.6%	Aspergillus/Penicillium - 360 Alternaria - 40 Ascospores - 40	440
211878- MA-0008	7/15/2021 10:40 AM	Classroom 13	Background	5 Min.	15	74.0 °F / 62.5%	Aspergillus/Penicillium - 560 Cladosporium - 280 Alternaria - 40 Ascospores - 40 Miscellaneous Spores - 40	1,000



<u>Sample</u> <u>Number</u>	Sample Date & Time	Sample Location	Sample Description	Sampling Time	<u>Liters</u> <u>Per</u> <u>Min</u>	<u>Temp./Humidity</u>	<u>Prominent Mold - Genre</u> <u>Level (spores/m³)</u>	Total Mold Spores (spores/m³)
211878- MA-0009	7/15/2021 10:54 AM	Classroom 14	Background	5 Min.	15	81.0 °F / 40.6%	Aspergillus/Penicillium - 520 Cladosporium - 4,240 Alternaria - 40 Ascospores - 40 Basidiospores - 120 Miscellaneous Spores - 80	5,040
211878- MA-0010	7/15/2021 11:06 AM	Classroom 15	Background	5 Min.	15	70.0 °F / 40.1%	Aspergillus/Penicillium - 680 Cladosporium - 160 Alternaria - 40 Basidiospores - 80 Epicoccum - 40 Periconia, Myxomycetes, Smuts - 40 Miscellaneous Spores - 40	1,080
211878- MA-0011	7/15/2021 11:25 AM	Classroom 16	Background	5 Min.	15	72.6 °F / 45.4%	Aspergillus/Penicillium - 360 Cladosporium - 480 Ascospores - 40 Periconia, Myxomycetes, Smuts - 80	960
211878- MA-0012	7/15/2021 11:37 AM	Classroom 17	Background	5 Min.	15	73.0 °F / 52.3%	Aspergillus/Penicillium - 640 Cladosporium - 240 Basidiospores - 120 Periconia, Myxomycetes, Smuts - 40	1,040
211878- MA-0013	7/15/2021 11:49 AM	Computer Lab	Background	5 Min.	15	73.5 °F / 45.5%	Aspergillus/Penicillium - 680 Cladosporium - 120 Alternaria - 40 Ascospores - 40 Basidiospores - 40 Bipolaris - 40 Epicoccum - 40 Periconia, Myxomycetes, Smuts - 40	1,040



Sample Number	Sample Date <u>&amp; Time</u>	Sample Location	Sample Description	Sampling Time	<u>Liters</u> <u>Per</u> <u>Min</u>	<u>Temp./Humidity</u>	<u>Prominent Mold - Genre</u> <u>Level (spores/m³)</u>	Total Mold Spores (spores/m³)
211878- MA-0014	7/15/2021 12:05 PM	Library	Background	5 Min.	15	72.3 °F / 52.0%	Aspergillus/Penicillium - 440 Cladosporium - 160 Alternaria - 40 Periconia, Myxomycetes, Smuts - 40	680
211878- MA-0015	7/15/2021 12:15 PM	Classroom 18	Background	5 Min.	15	67.8 °F / 60.1%	Aspergillus/Penicillium - 520 Cladosporium - 200 Alternaria - 40 Ascospores - 40 Basidiospores - 160 Periconia, Myxomycetes, Smuts - 80	1,040
211878- MA-0016	7/15/2021 12:31 PM	Classroom 19	Background	5 Min.	15	71.4 °F / 53.3%	Aspergillus/Penicillium - 560 Cladosporium - 240 Ascospores - 40 Basidiospores - 40 Epicoccum - 40	920
211878- MA-0017	7/15/2021 12:44 PM	Classroom 20	Background	5 Min.	15	66.5 °F / 48.1%	Aspergillus/Penicillium - 40 Cladosporium - 200 Alternaria - 40 Basidiospores - 120 Bipolaris - 40 Periconia, Myxomycetes, Smuts - 160 Miscellaneous Spores - 40	640
211878- MA-0018	7/15/2021 1:03 PM	Classroom 21	Background	5 Min.	15	69.6 °F / 57.2%	Aspergillus/Penicillium - 320 Cladosporium - 200 Ganoderma - 40	560



Sample Number	Sample Date <u>&amp; Time</u>	Sample Location	Sample Description	Sampling Time	<u>Liters</u> <u>Per</u> <u>Min</u>	<u>Temp./Humidity</u>	<u>Prominent Mold - Genre Level (spores/m³)</u>	Total Mold Spores (spores/m³)
211878- MA-0019	7/20/2021 6:48 AM	Exterior	Ambient	10 Min.	15	70.6 °F / 72.4%	Aspergillus/Penicillium - 480 Cladosporium - 220 Alternaria - 0 Ascospores - 80 Basidiospores - 660 Epicoccum - 0 Periconia, Myxomycetes, Smuts - 80 Beltrania - 20	1,600*
211878- MA-0020	7/20/2021 6:58 AM	Classroom 34	Background	5 Min.	15	64.3 °F / 57.3%	Aspergillus/Penicillium - 160 Cladosporium - 80 Ascospores - 40 Basidiospores - 40 Periconia, Myxomycetes, Smuts - 40	360
211878- MA-0021	7/20/2021 7:11 AM	Classroom 33	Background	5 Min.	15	73.0 °F / 64.1%	Aspergillus/Penicillium - 120 Cladosporium - 80 Basidiospores - 120 Epicoccum - 40	360
211878- MA-0022	7/20/2021 7:26 AM	Classroom 32	Background	5 Min.	15	70.3 °F / 50.1%	Aspergillus/Penicillium - 400 Cladosporium - 80 Basidiospores - 80 Epicoccum - 40 Periconia, Myxomycetes, Smuts - 40	640
211878- MA-0023	7/20/2021 7:39 AM	Classroom 29	Background	5 Min.	15	73.6 °F / 41.0%	Aspergillus/Penicillium - 120 Basidiospores - 40	160
211878- MA-0024	7/20/2021 7:50 AM	Classroom 30	Background	5 Min.	15	74.7 °F / 43.6%	Aspergillus/Penicillium - 480 Periconia, Myxomycetes, Smuts - 40	520



Sample Number	Sample Date & Time	Sample Location	Sample Description	Sampling Time	<u>Liters</u> <u>Per</u> <u>Min</u>	<u>Temp./Humidity</u>	<u>Prominent Mold - Genre</u> <u>Level (spores/m³)</u>	Total Mold Spores (spores/m³)
211878- MA-0025	7/20/2021 8:04 AM	Classroom 27	Background	5 Min.	15	74.7 °F / 59.2%	Aspergillus/Penicillium - 280 Cladosporium - 80 Alternaria - 40 Basidiospores - 40	440
211878- MA-0026	7/20/2021 8:15 AM	Classroom 26	Background	5 Min.	15	71.6 °F / 44.7%	Aspergillus/Penicillium - 80 Cladosporium - 40 Periconia, Myxomycetes, Smuts - 80	200
211878- MA-0027	7/20/2021 8:27 AM	Classroom 25	Background	5 Min.	15	73.8 °F / 64.1%	Aspergillus/Penicillium - 280 Basidiospores - 40	320
211878- MA-0028	7/20/2021 8:38 AM	Classroom 24/RSP Teacher	Background	5 Min.	15	71.3 °F / 46.5%	Aspergillus/Penicillium - 240 Cladosporium - 280 Alternaria - 40 Ascospores - 40 Basidiospores - 40 Periconia, Myxomycetes, Smuts - 40	680
211878- MA-0029	7/20/2021 8:49 AM	Classroom 23	Background	5 Min.	15	69.5 °F / 53.0%	Aspergillus/Penicillium - 240 Cladosporium - 160 Alternaria - 40 Ascospores - 40 Basidiospores - 120 Epicoccum - 40	640
211878- MA-0030	7/20/2021 9:04 AM	Classroom 22	Background	5 Min.	15	78.7 °F / 55.7%	Aspergillus/Penicillium - 160 Cladosporium - 80	240
211878- MA-0031	7/20/2021 9:18 AM	Classroom 31	Background	5 Min.	15	76.3 °F / 51.0%	Aspergillus/Penicillium - 280 Cladosporium - 80 Alternaria - 80 Periconia, Myxomycetes, Smuts - 80	520
211878- MA-0032	7/20/2021 9:34 AM	Classroom 28	Background	5 Min.	15	72.5 °F / 46.3%	Aspergillus/Penicillium - 440 Alternaria - 40 Basidiospores - 40	520



Sample Number	Sample Date <u>&amp; Time</u>	Sample Location	Sample Description	Sampling Time	<u>Liters</u> <u>Per</u> <u>Min</u>	Temp./Humidity	<u>Prominent Mold - Genre</u> <u>Level (spores/m³)</u>	Total Mold Spores (spores/m³)
211878- MA-0033	7/20/2021 9:56 AM	Classroom 37	Background	5 Min.	15	74.0 °F / 48.9%	Aspergillus/Penicillium - 200 Cladosporium - 40 Beltrania - 120	360
211878- MA-0034	7/20/2021 9:59 AM	Classroom 36	Background	5 Min.	15	74.4 °F / 45.9%	Aspergillus/Penicillium - 400 Cladosporium - 40	440
211878- MA-0035	7/20/2021 10:11 AM	Classroom 35	Background	5 Min.	15	67.4 °F / 66.4%	Aspergillus/Penicillium - 120 Basidiospores - 40	160
211878- MA-0036	7/20/2021 11:35 AM	Classroom 1/2	Background	5 Min.	15	66.7 °F / 43.3%	Aspergillus/Penicillium - 280 Cladosporium - 40	320
211878- MA-0037	7/20/2021 11:42 AM	Classroom 5/6	Background	5 Min.	15	68.6 °F / 43.5%	Aspergillus/Penicillium - 240 Basidiospores - 40 Periconia, Myxomycetes, Smuts - 40	320
211878- MA-0038	7/20/2021 11:54 AM	Classroom 3	Background	5 Min.	15	73.4 °F / 31.4%	Aspergillus/Penicillium - 200 Alternaria - 40 Periconia, Myxomycetes, Smuts - 40	280
211878- MA-0039	7/20/2021 11:51 AM	Exterior	Ambient	10 Min.	15	100.1 °F / 50.1%	Aspergillus/Penicillium - 780 Cladosporium - 940 Alternaria - 20 Ascospores - 140 Basidiospores - 200 Epicoccum - 20 Periconia, Myxomycetes, Smuts - 60 Beltrania - 0	2,200*

<sup>\*</sup>Note: Total mold spore count reflects all genres detected in the exterior sample, including the genres not detected in the interior sample obtained.

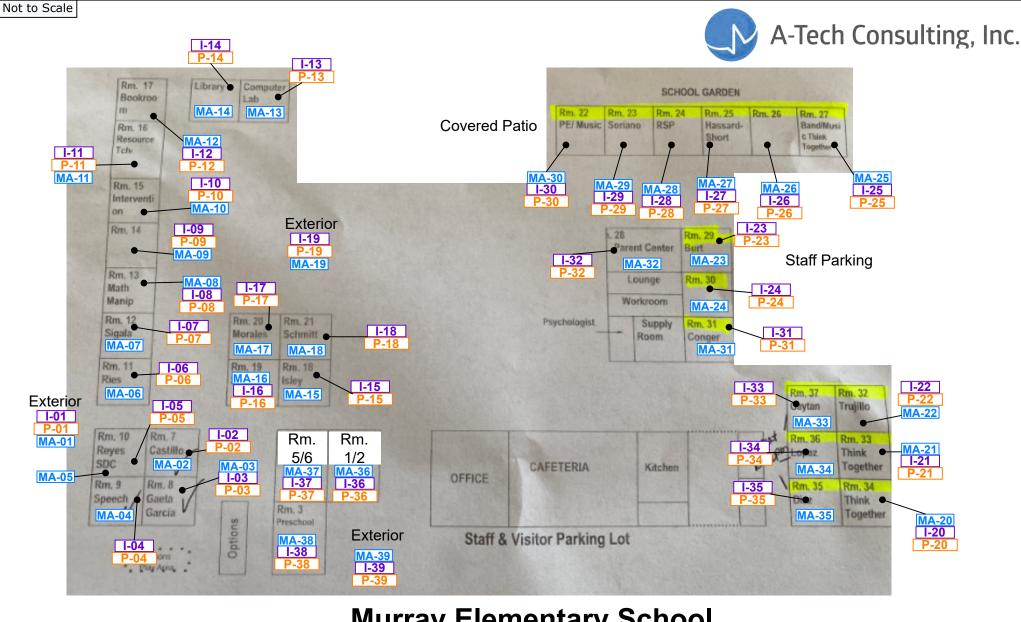
#### LEGEND:

<sup>(1)</sup> P = Present, NP = Not Present

<sup>(2)</sup> **RED** = Elevated Spore Concentrations of Specific Genres

<sup>(3)</sup> **BLUE** = Genre Found Inside at Low Levels but not found Outside

<sup>(4)</sup> N/A = Not Applicable



# **Murray Elementary School**

# Site Drawing - Indoor Air Quality - Page 1 of 1

Murray Elementary School 505 East Renwick Road Azusa, California 91702

**Project #: Atch-211878** 

**Azusa Unified School District** 

#### LEGEND:

**CO2** = IAQCalc Sample Locations P = PDR1500 Sample Locations MA = Mold Air Sample Locations



# **Digital Photographs - IAQ**

Locations: Murray Elementary School, 505 East Renwick Road

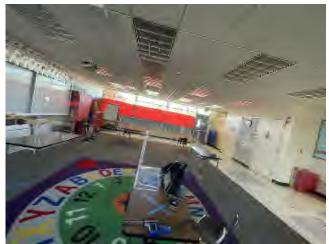
Client Name: Azusa Unified School District



View of Exterior



View of Indoor Air Quality Sampling



View of Indoor Air Quality Sampling



Phone:(562) 860-2201 www.aihlab.com

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

Laboratory Sample ID:	211146301	211146302	211146303
Client Sample ID:	MA-0001	MA-0002	MA-0003
Sample Location:	Exterior	1st Floor, Classroom 7	1st Floor, Classroom 8
Comments:	None	None	None

# **Quantitative Analysis**

		Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total
Inside/Outside	Aspergillus/Penicillium-like	35	700	28.2	15	600	48.4	12	480	52.2
iliside/Outside	Cladosporium	42	840	33.9	9	360	29	5	200	21.7
	Chaetomium	-	-	-	1	40	3.2	-	-	-
Water Damage Indication	Stachybotrys	-	-	-	-	-	-	-	-	-
water Damage mulcation	Trichoderma	-	-	-	-	-	-	-	-	-
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	5	100	4	-	-	-	-	-	-
	Ascospores	7	140	5.6	2	80	6.5	1	40	4.3
	Basidiospores	19	380	15.3	2	80	6.5	-	-	-
	Bipolaris	6	120	4.8	ı	-	-	2	80	8.7
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	1	20	8.0	ı	-	-	1	40	4.3
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	3	60	2.4	2	80	6.5	1	40	4.3
Outdoor Environment	Pithomyces	1	20	0.8	-	-	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	-
	Spegazzinia	-	1	-	-	-	-	-	-	-
	Tetraploa	-	-	-	-	-	-	-	-	-
	Torula	-	-	-	-	-	-	-	-	-
	Miscellaneous Spores	1	20	0.8	ı	-//	-	1	40	4.3
	Ganoderma	4	80	3.2	-	-	-	- [	-	1
	Oidium	-	1	-	-	/ -	//-	5 3- 1	-	-
	Total	124	2480	100	31	1240	100	23	920	100



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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

Laboratory Sample ID:	211146301	211146302	211146303
Client Sample ID:	MA-0001	MA-0002	MA-0003
Sample Location:	Exterior	1st Floor, Classroom 7	1st Floor, Classroom 8
_			_

# Sample Collection Data

Total Time:			
Flow Rate:			
Volume:	150	75	75

# **Qualitative Analysis**

Skin Fragments- 1 to 5 (low to high):	2	3	3
Background/m3- 1 to 5 (low to high):	5	4	4
Hyphal Fragments- 1 to 5 (low to high):	3	1	1





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111463

Samples Received: 18 Samples Analyzed: 18

Laboratory Sample ID:	211146304	211146305	211146306	
Client Sample ID:	MA-0004	MA-0005	MA-0006	
Sample Location:	1st Floor, Classroom 9	1st Floor, Classroom 10	1st Floor, Classroom 11	
Comments:	None	None	None	

# **Quantitative Analysis**

		Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m³	% Total
Inside/Outside	Aspergillus/Penicillium-like	18	720	30	5	200	35.7	13	520	44.8
iliside/Outside	Cladosporium	24	960	40	4	160	28.6	3	120	10.3
	Chaetomium	-	-	-	-	-	-	-	-	-
Water Damage	Stachybotrys	-	-	-	-	-	-	-	-	-
Indication	Trichoderma	-	-	-	-	-	-	-	-	-
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	1	40	1.7	-	-	-	-	-	-
	Ascospores	1	40	1.7	1	40	7.1	1	40	3.4
	Basidiospores	6	240	10	-	-	-	1	40	3.4
	Bipolaris	2	80	3.3	-	-	-	-	-	-
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	-	-	-	-	-	-	-	-	-
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	5	200	8.3	4	160	28.6	10	400	34.5
Outdoor Environment	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	-
	Spegazzinia	-	-	-	-	-	-	-	-	-
	Tetraploa	-	-	-	-	-	-	-	_	\ -
	Torula	-	-	-	-	-	-	-	-	-
	Miscellaneous Spores	2	80	3.3	-	- //	-	1	40	3.4
	Ganoderma	-	-	-	-	_	-		-	1
	Oidium	1	40	1.7	-	y -	// <del>-</del> _	3 -	Z	-
	Total	60	2400	100	14	560	100	29	1160	100



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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

Laboratory Sample ID:	211146304	211146305	211146306
Client Sample ID:	MA-0004	MA-0005	MA-0006
Sample Location:	1st Floor, Classroom 9	1st Floor, Classroom 10	1st Floor, Classroom 11

# Sample Collection Data

Total Time:			
Flow Rate:			
Volume:	75	75	75

# **Qualitative Analysis**

Skin Fragments- 1 to 5 (low to high):	2	3	2
Background/m3- 1 to 5 (low to high):	5	4	3
Hyphal Fragments- 1 to 5 (low to high):	1	1	1





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769

Lab Batch Number: 2111463

Samples Received: 18

	Laboratory Sample ID:	21	1146307		21	1146308	3	21	1146309	
	Client Sample ID:	M	A-0007		MA-0008  1st Floor, Classroom 13  None			MA-0009  1st Floor, Classroom 14		
	Sample Location:	1st Floo	or, Class 12	room						
	Comments:		None					None		
Quantitative Analysis		Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m³	% Total
	Aspergillus/Penicillium-like	9	360	81.8	14	560	56	13	520	10.3
Inside/Outside	Cladosporium	-	-	-	7	280	28	106	4240	84.1
	Chaetomium	-	-	_	-	-	-	-	-	_
Water Damage	Stachybotrys	-	-	-	-	-	-	-	-	-
Indication	Trichoderma	-	-	-	-	-	-	-	_	-
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	1	40	9.1	1	40	4	1	40	0.8
	Ascospores	1	40	9.1	1	40	4	1	40	0.8
	Basidiospores	-	-	-	-	-	-	3	120	2.4
	Bipolaris	ı	ı	-	1	ı	1	-	-	-
	Curvularia	-	1	-	-	ı	1	-	-	-
	Epicoccum	ı	ı	-	1	ı	ı	-	-	-
	Nigrospora	-	1	-	-	ı	ı	-	-	-
	Periconia/Myxo/Smut	-	-	-	-	-	-	-	-	-
<b>Outdoor Environment</b>	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	1	40	4	-	-	-
	Spegazzinia	-	-	-	-	-	-	-	<u> </u>	-
	Tetraploa	-	-	-	-	-		-	-	-
	Torula	-	-	-	-	-	-	-	-	-
	Miscellaneous Spores	-	-	-	-	-/	-	2	80	1.6
	Ganoderma	-	-	-	1	40	4		-	1 -
	Oidium	-	-	-	-	/ -	//-	-	-	-
						1		1717		
	Total	11	440	100	25	1000	100	126	5040	100



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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111463

Samples Received: 18

Laboratory Sample ID:	211146307	211146308	211146309
Client Sample ID:	MA-0007	MA-0008	MA-0009
Sample Location:	1st Floor, Classroom 12	1st Floor, Classroom 13	1st Floor, Classroom 14
Sample Collection Data			
Total Time:			
Flow Rate:			
Volume:	75	75	75
Qualitativa Analysis			
Qualitative Analysis	2	2	2
Skin Fragments- 1 to 5 (low to high):		2	
Background/m3- 1 to 5 (low to high):		3	4
Hyphal Fragments- 1 to 5 (low to high):	1	1	2





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111463

Samples Received: 18 Samples Analyzed: 18

Laboratory Sample ID:	211146310	211146311	211146312
Client Sample ID:	MA-0010	MA-0011	MA-0012
Sample Location:	1st Floor, Classroom 15	1st Floor, Classroom 16	1st Floor, Classroom 17
Comments:	None	None	None

# Quantitative Analysis

Quantitative Analysis		Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total
	Aspergillus/Penicillium-like	17	680	63	9	360	37.5	16	640	61.5
Inside/Outside	Cladosporium	4	160	14.8	12	480	50	6	240	23.1
	Chaetomium	-	-	-	-	-	-	-	-	-
Water Damage	Stachybotrys	-	-	-	-	-	-	-	-	-
Indication	Trichoderma	-	-	-	-	-	-	-	-	-
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	1	40	3.7	-	-	-	-	-	-
	Ascospores	-	-	-	1	40	4.2	-	-	-
	Basidiospores	2	80	7.4	-	-	-	3	120	11.5
	Bipolaris	-	-	-	-	-	-	-	-	-
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	1	40	3.7	-	-	-	-	-	-
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	1	40	3.7	2	80	8.3	1	40	3.8
Outdoor Environment	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	-
	Spegazzinia	-	-	-	-	-	-	-	<u> </u>	-
	Tetraploa	-	-	-	-	-	<del>/-</del>	-	-	-
	Torula	-	-	-	-	-	-	-	-	-
	Miscellaneous Spores	1	40	3.7	-	- /-	- /	-	-	-
	Ganoderma	-	-	-	-	-	//	-	-	-
	Oidium	-	-	-	-	/ - /	-	-	-	-
								17.17		
	Total	27	1080	100	24	960	100	26	1040	100



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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#: 203769** Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

Laboratory Sample ID:	211146310	211146311	211146312
Client Sample ID:	MA-0010	MA-0011	MA-0012
Sample Location:	1st Floor, Classroom 15	1st Floor, Classroom 16	1st Floor, Classroom 17

# Sample Collection Data

Total Time:			
Flow Rate:			
Volume:	75	75	75

# **Qualitative Analysis**

Skin Fragments- 1 to 5 (low to high):	2	2	1
Background/m3- 1 to 5 (low to high):	3	3	3
Hyphal Fragments- 1 to 5 (low to high):	1	1	1





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

Laboratory Sample ID:	211146313	211146314	211146315	
Client Sample ID:	MA-0013	MA-0014	MA-0015	
Sample Location:	1st Floor, Computer Lab	1st Floor, Library	1st Floor, Classroom 18	
Comments:	None	None	None	

# **Quantitative Analysis**

Quartitlative Arialysis		Raw Counts	Spores/m³	% Total	Paw Counts	Cnaras/m³	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total
	Aspergillus/Penicillium-like	17	680	65.4	11	440	64.7	13	520	50
Inside/Outside	Cladosporium	3	120	11.5	4	160	23.5	5	200	19.2
	Chaetomium	-	-	-	-	-	-	-	_	-
Water Damage	Stachybotrys	-	-	-	-	-	-	-	-	-
Indication	Trichoderma	-	-	-	-	-	-	-	-	-
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	1	40	3.8	1	40	5.9	1	40	3.8
	Ascospores	1	40	3.8	-	-	-	1	40	3.8
	Basidiospores	1	40	3.8	-	-	-	4	160	15.4
	Bipolaris	1	40	3.8	-	-	-	-	-	-
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	1	40	3.8	ı	-	-	1	-	-
	Nigrospora	-	-	•	-	-	-	-	-	-
	Periconia/Myxo/Smut	1	40	3.8	1	40	5.9	2	80	7.7
Outdoor Environment	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	ı	-	-	-	-	-
	Spegazzinia	-	-	-	-	-	-	-	-	-
	Tetraploa	-	-	-	-	-	-	-	_	-
	Torula	-	-	-	-	-	4-	-	-	-
	Miscellaneous Spores	-	-	-	-	-/	-	-	-	-
	Ganoderma	-	-	-	-	-	-		-	<u></u>
	Oidium	-	-	-	-	/ -	//-	-	-	-
					1/					
	Total	26	1040	100	17	680	100	26	1040	100



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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

report officer i man respond

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

Laboratory Sample ID:	211146313	211146314	211146315
Client Sample ID:	MA-0013	MA-0014	MA-0015
Sample Location: 1	Ist Floor, Computer Lab	1st Floor, Library	1st Floor, Classroom 18

# Sample Collection Data

Total Time:			
Flow Rate:			
Volume:	75	75	75

# **Qualitative Analysis**

Skin Fragments- 1 to 5 (low to high):	3	3	2
Background/m3- 1 to 5 (low to high):	4	3	4
Hyphal Fragments- 1 to 5 (low to high):	1	1	1





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

Laboratory Sample ID:	211146316	211146317	211146318
Client Sample ID:	MA-0016	MA-0017	MA-0018
Sample Location:	1st Floor, Classroom 19	1st Floor, Classroom 20	1st Floor, Classroom 21
Comments:	None	None	None

# Quantitative Analysis

<u>Quantitative Analysis</u>		Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total
	Aspergillus/Penicillium-like	14	560	60.9	11	40	6.3	8	320	57.1
Inside/Outside	Cladosporium	6	240	26.1	5	200	31.3	5	200	35.7
	Chaetomium	-	-	-	-	-	-	-	-	-
Water Damage	Stachybotrys	-	-	-	-	-	-	-	-	-
Indication	Trichoderma	-	-	-	-	-	-	-	-	-
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	-	-	1	1	40	6.3	-	-	-
	Ascospores	1	40	4.3	-	-	-	-	-	-
	Basidiospores	1	40	4.3	3	120	18.8	-	-	-
	Bipolaris	-	-	-	1	40	6.3	-	-	-
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	1	40	4.3	-	-	-	-	-	-
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	-	-	-	4	160	25	-	-	-
Outdoor Environment	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	
	Spegazzinia	-	-	-	-	-	-	-	<u> </u>	-
	Tetraploa	-	-	-	-	-	<del>/-</del>	-	-	-
	Torula	-	-	-	-	- /	-	-	-	-
	Miscellaneous Spores	-	-	-	1	40	6.3	-	-	\\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\
	Ganoderma	-	-	-	-	-	<u> </u>	1	40	7.1
	Oidium	-	-	-	-	/ - <i>/</i>	-	-	11 1 <del>-</del>	-
						14 /4 /		17.17		
	Total	23	920	100	26	640	100	14	560	100



2556 W Woodland Dr Anaheim, CA 92801

#### **MOLD AIR SAMPLE REPORT**

Phone:(562) 860-2201 www.aihlab.com

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

Laboratory Sample ID:	211146316	211146317	211146318
Client Sample ID:	MA-0016  1st Floor, Classroom	MA-0017	MA-0018 1st Floor, Classroom
Sample Location:	19	1st Floor, Classroom 20	21
Sample Collection Data		,	
Total Time:			
Flow Rate:			
Volume:	75	75	75
Qualitative Analysis			
Skin Fragments- 1 to 5 (low to high):	2	2	1
Background/m3- 1 to 5 (low to high):	3	4	4
Hyphal Fragments- 1 to 5 (low to high):	1	1	1

Analyzed by: Emily Chang Signature: Date: 07-21-2021

Reviewed by: Zubair Ahmed Signature: Date: 07-22-2021

No accepted regulatory standards currently exit by which to assess the health risks related to mold exposure. Molds have been associated with a variety of health effects and sensitivity varies from person to person. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. High levels of background particulate can obscure spores and other particulates leading to underestimation. "-" Denotes not detected. Background levels of 4 or 5 indicate an overload of background particulates, prohibiting accurate detection and quantification. AlH Laboratory maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by AlH Laboratory. AlH Laboratory bears no responsibility for sample collection activities or analytical method limitations. Spores/m³ calculation based on volume information provided by client. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. All report format and design are copyright of AlH Laboratory 2021.

AIHA LAP, LLC Accredited Laboratory for Microbiology Laboratory ISO/IEC 17025:2005, Lab ID# 203769



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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

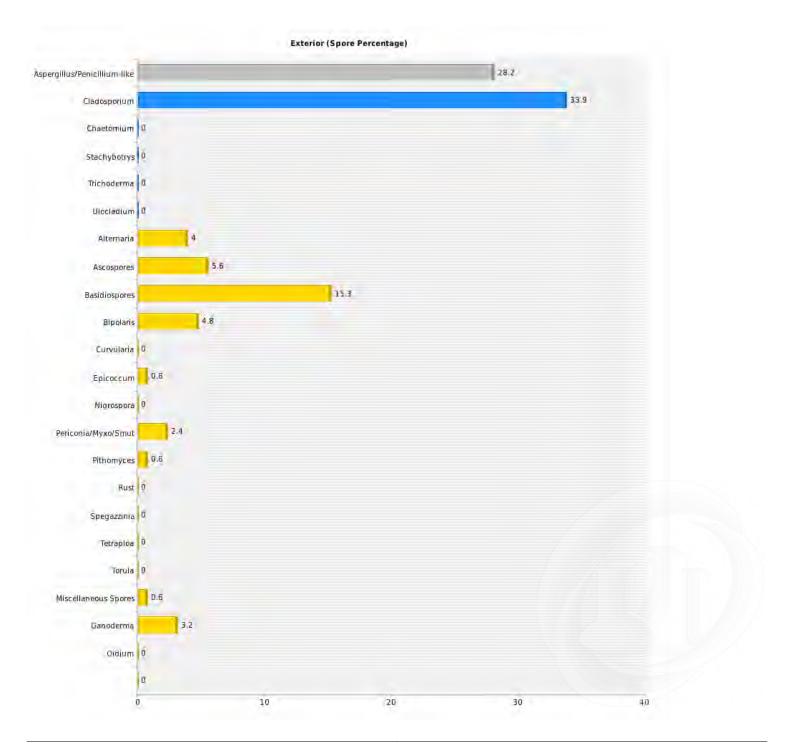
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111463 Samples Received: 18





Phone:(562) 860-2201 www.aihlab.com

2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

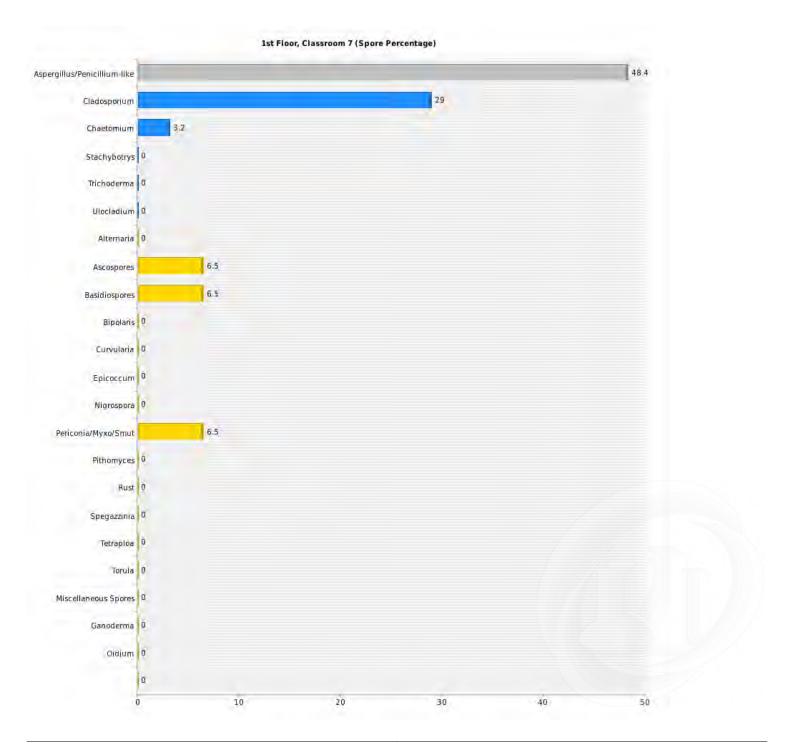
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

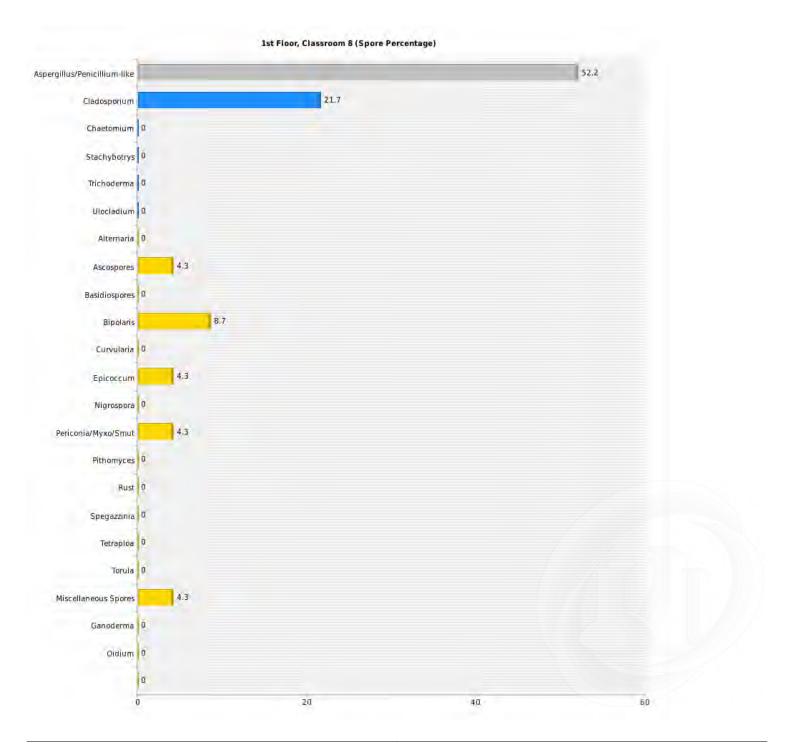
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111463 Samples Received: 18





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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

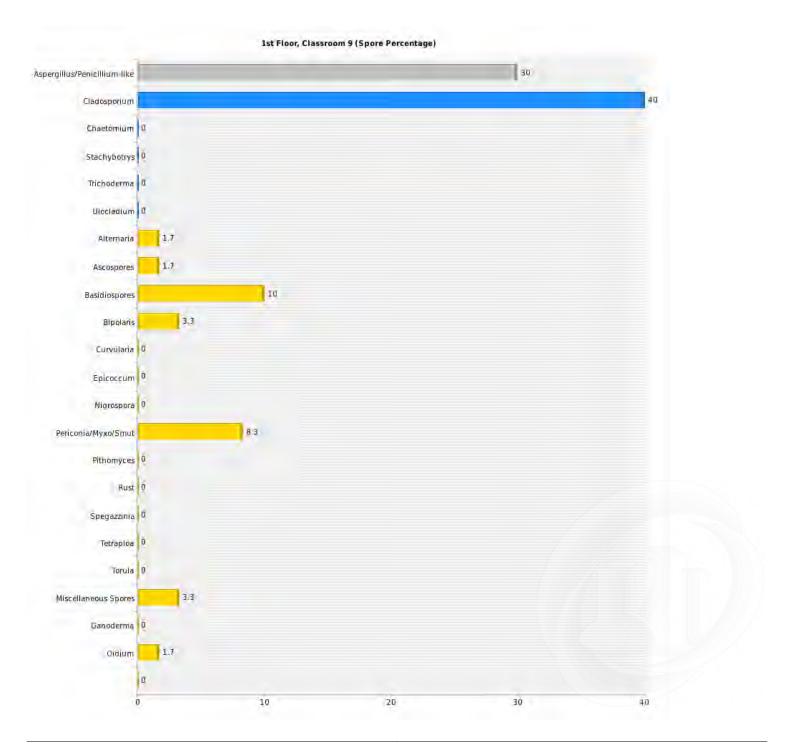
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18 Samples Analyzed: 18





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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

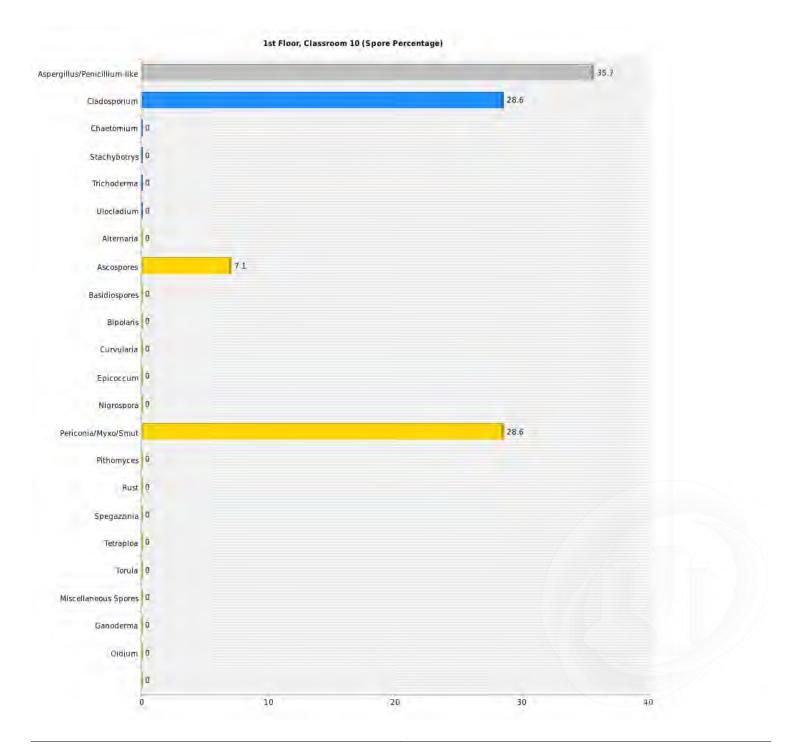
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

Project Number: 211878

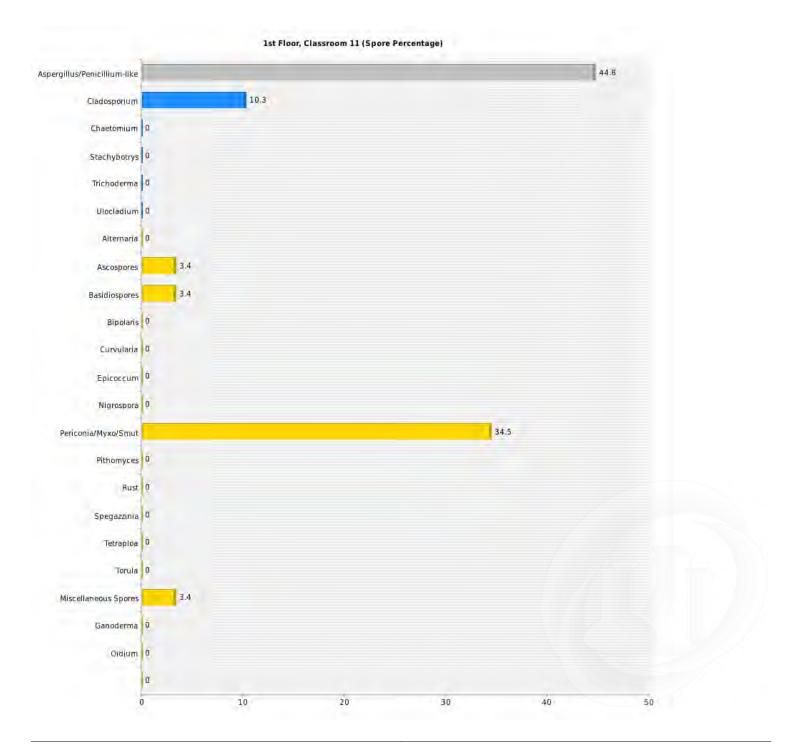
Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111463

Samples Received: 18 Samples Analyzed: 18





Phone:(562) 860-2201 www.aihlab.com

2556 W Woodland Dr Anaheim, CA 92801

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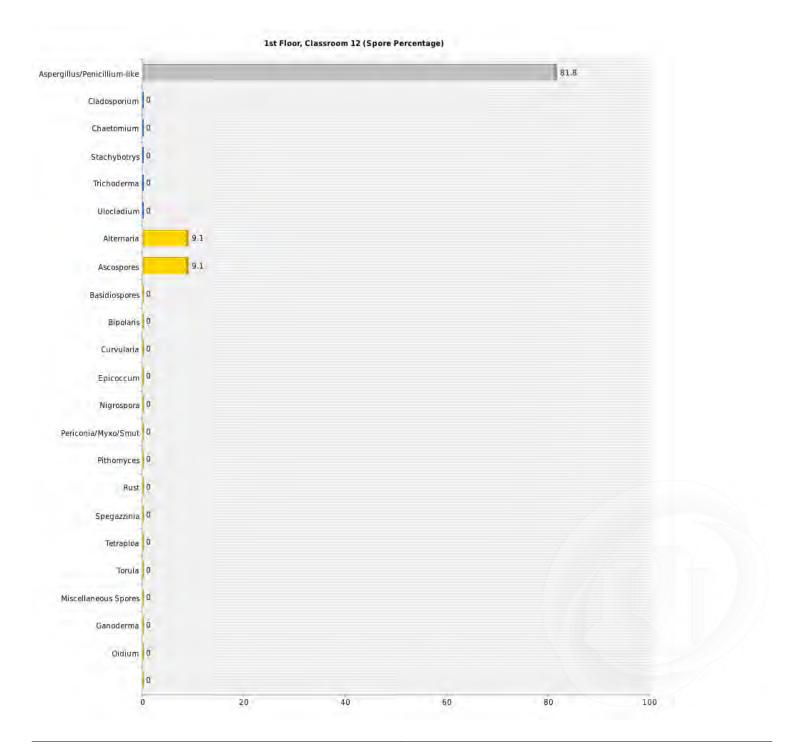
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

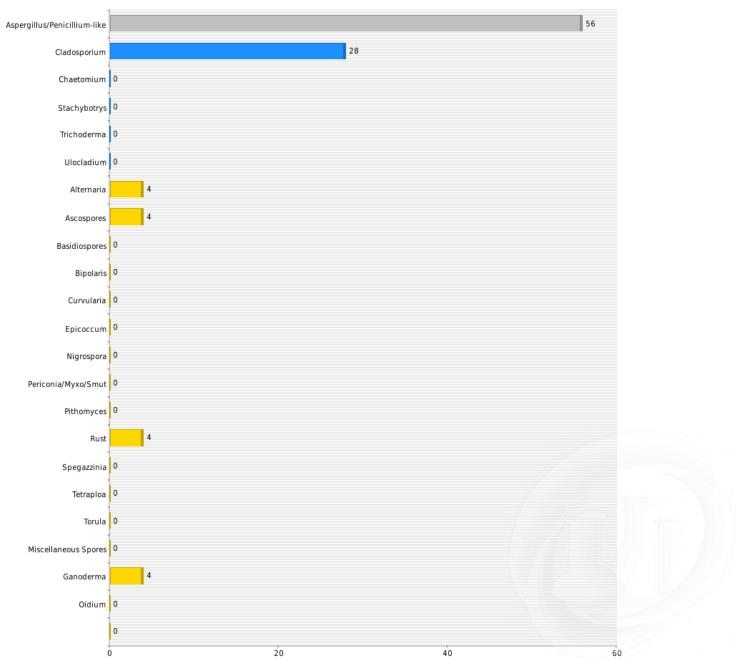
Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

## 1st Floor, Classroom 13 (Spore Percentage)





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2556 W Woodland Dr Anaheim, CA 92801

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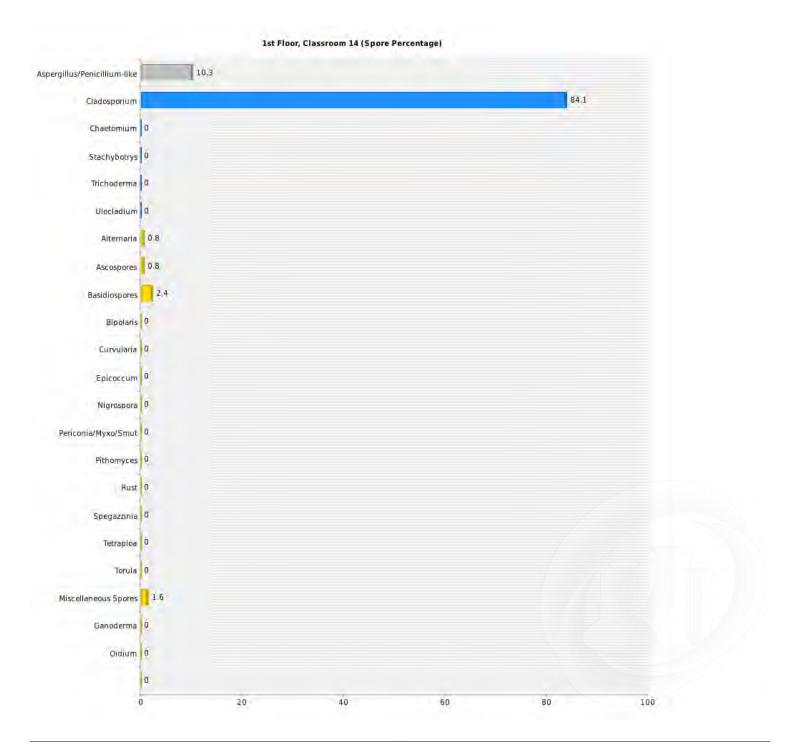
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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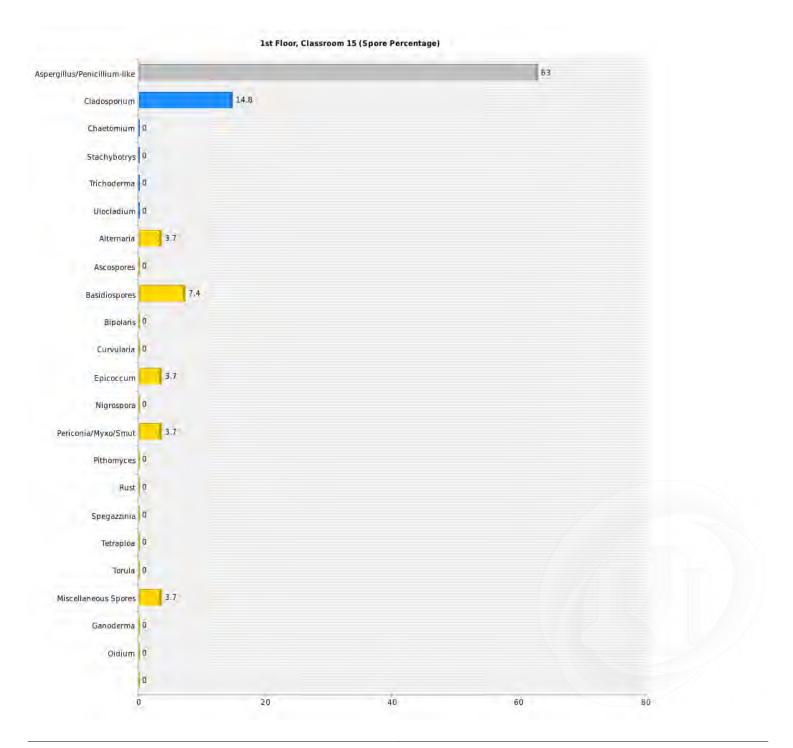
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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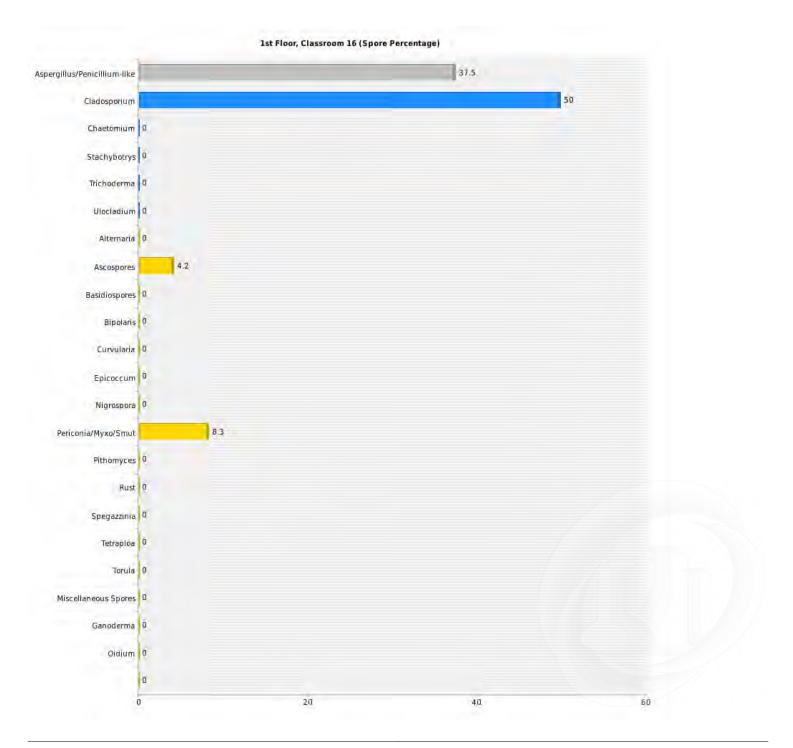
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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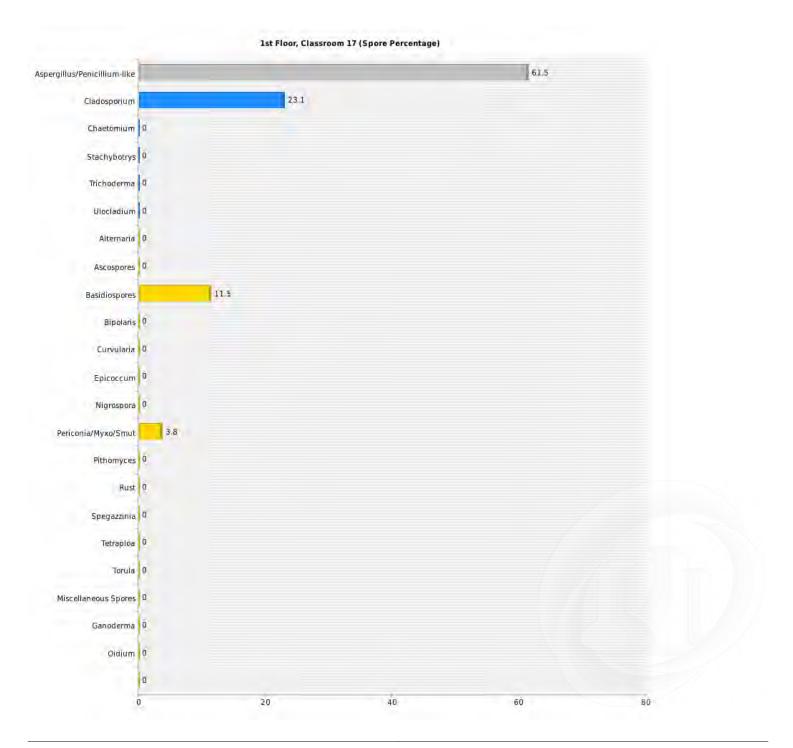
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

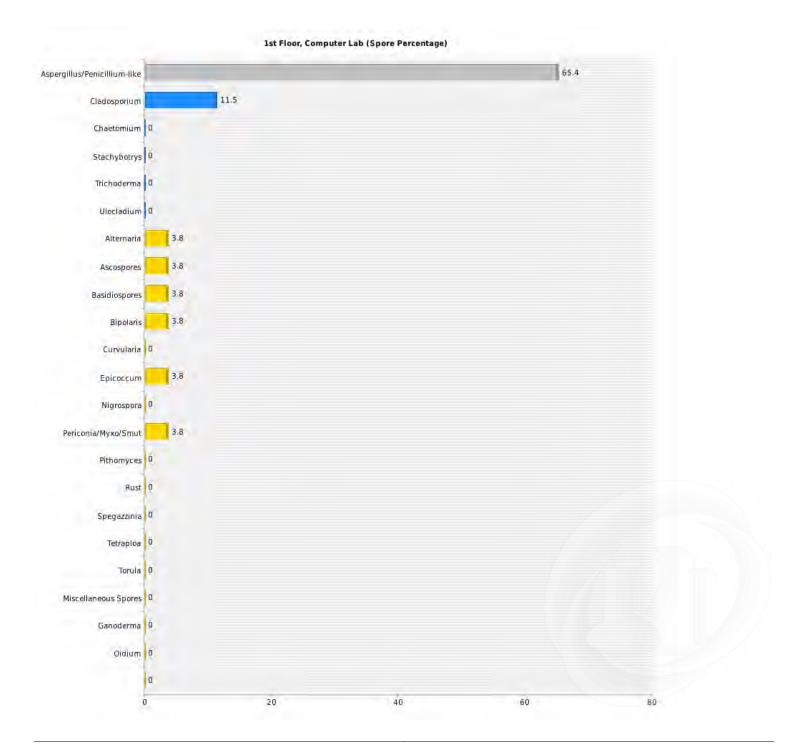
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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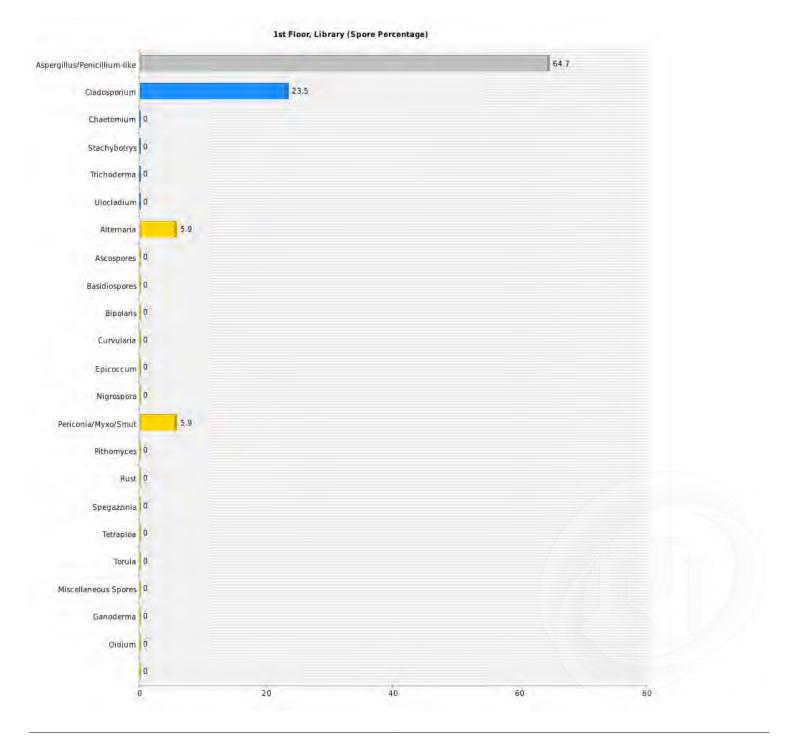
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18
Samples Analyzed: 18





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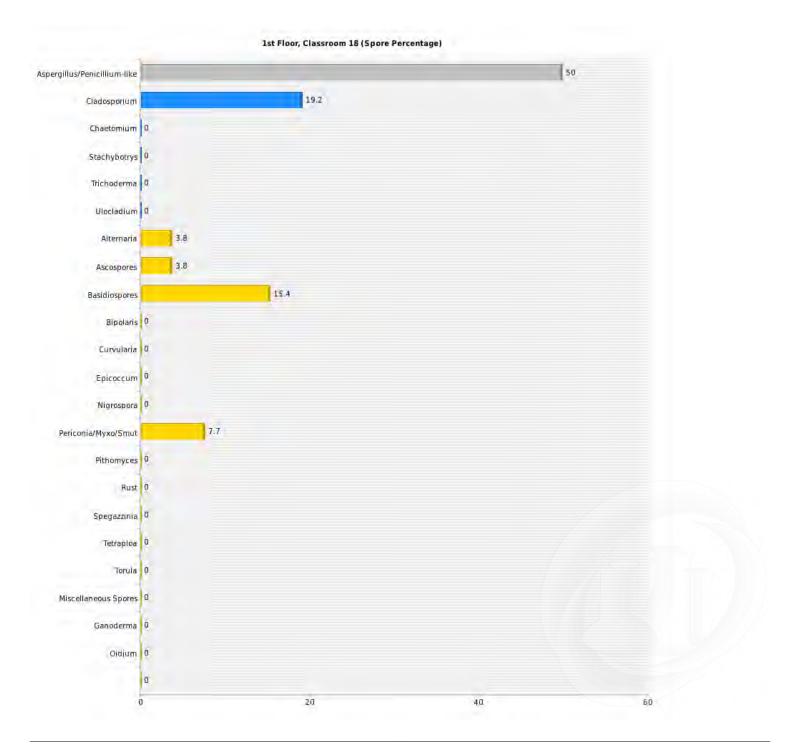
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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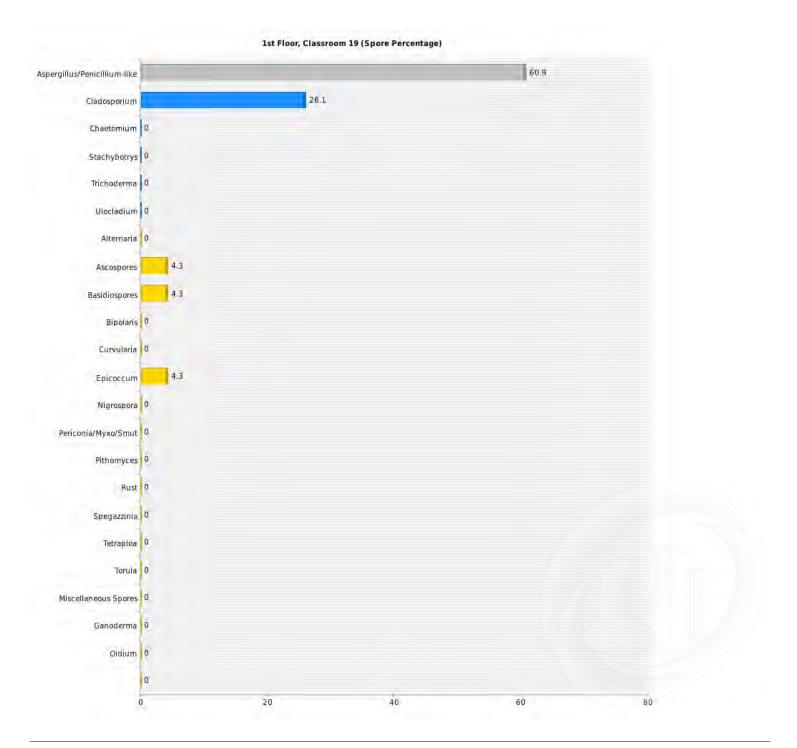
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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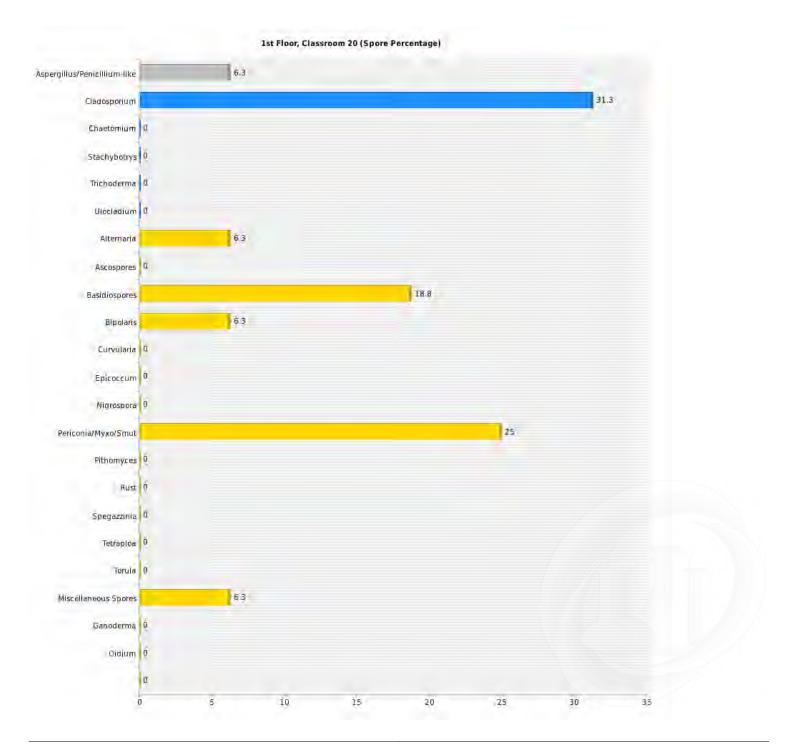
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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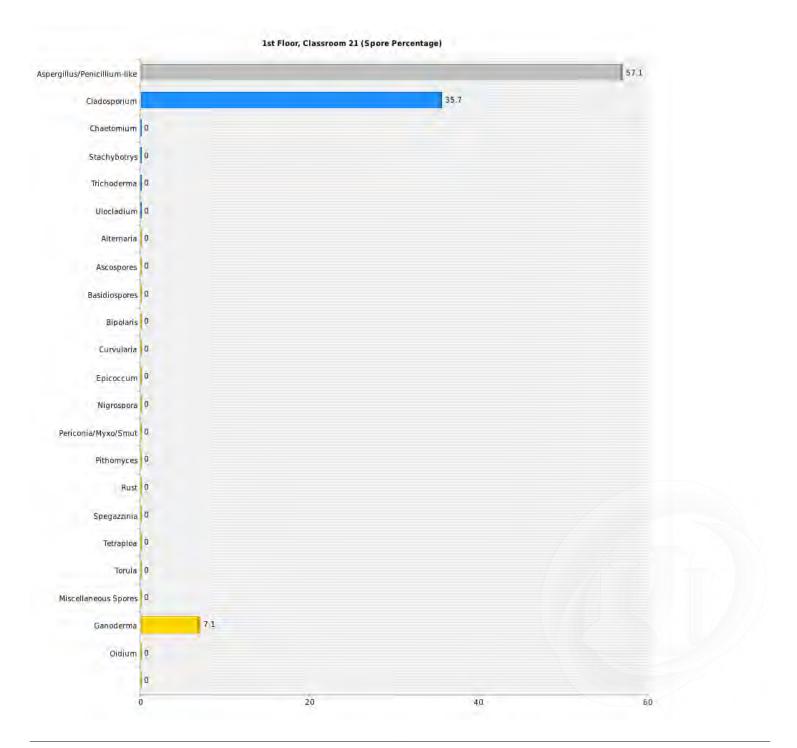
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18





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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

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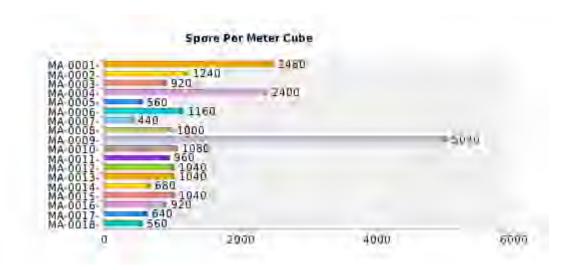
**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#: 203769** Lab Batch Number: 2111463

Samples Received: 18







Phone:(562) 860-2201 www.aihlab.com

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111463

Samples Received: 18

Samples Analyzed: 18

## **Understanding Sampling and Laboratory Methodologies**

Spore Trap Cassettes (Air Sampling media) are unique air sampling cassettes specifically designed for the rapid collection of a wide range of airborne aerosols including mold spores, pollen, insect parts, skin cell fragments, and inorganic particulate. The analytical results obtained from include both viable and non-viable spores. Some fungal groups produce similar spore types that are difficult to be distinguished only by direct microscopic examination like Aspergillus/Penicillium, or other identical spore. Similarly other spore types may lack distinguishing features that aid in their identification like hyphae. To avoid any confusion these types are grouped into larger categories such as Ascospores or Basidiospores.

## Examination Technique:

AIH Laboratory Fungal Air Sample Reports data results are provided in spore counts per cubic meter of air. Fungal spores are identified and grouped by morphological characteristics including color, shape, size, and fruiting structures (if present) which are compared to published mycological identification keys and texts.

## Qualitative Analysis:

It is difficult to precisely measure some analytical findings which aid in assessing the overall sample condition and density. Qualitative analysis is used to determine concentration of Skin Fragments, Background and Hyphal fragments. A number between 1-5 is used to rate the concentrations. Each number increase in rate adds a range of 1-20% Please understand that higher the number of skin fragments and background particle it may obscure small spore. Overloaded in comments indicate that sample failed to meet visibility density criteria and thus the quantitate analysis was not performed on the particular sample.

## Analysis:

This data is gathered by visual and statistical analysis performed on the specimen. The quantitative data is adhered to strict quality control procedures. This strict quality is achieved by reanalyzing at least 10% of samples. The results from original analysis and re-read must be close with only minor variation. If results do not fall under minor variation criteria, then all samples must be analyzed again. The quantitative data is used to produce the final result in spore(s) per meter cube.

## **About AIH Laboratory**

AIH Laboratory is renowned laboratory located in Anaheim, CA. The staff at AIH Laboratory is recognized by State, Federal agencies and International Accrediting Bodies. AIH Laboratory employs sophisticated techniques, strong professional experience along with recognized testing procedures in the industry. AIH Laboratory participates in Inter-laboratory testing program with various national laboratories to ensure conformance with newly adapted technologies, research and methodologies. The samples received by AIH Laboratory are processed under strict quality control procedures to avoid any discrepancy in results. The data generated by the laboratory from the analytical observation of the specimens is presented in a format that is easily understood by anyone with a science background. An environmental expert will accurately interpret the data and findings detailed in this report.



Phone:(562) 860-2201 www.aihlab.com

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153501	211153502	211153503
Client Sample ID:	MA-0019	MA-0020	MA-0021
Sample Location:	Exterior	1st Floor, Classroom 34	1st Floor, Classroom 33
Comments:	None	None	None

# **Quantitative Analysis**

		Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total
Inside/Outside	Aspergillus/Penicillium-like	24	480	30	4	160	44.4	3	120	33.3
iliside/Odiside	Cladosporium	11	220	13.8	2	80	22.2	2	80	22.2
	Chaetomium	-	-	-	1	ı	-	-	1	-
Water Damage Indication	Stachybotrys	-	-	-	ı	ı	-	1	1	-
water Damage mulcation	Trichoderma	-	-	-	-	-	-	-	-	-
	Ulocladium	-	-	-	ı	ı	-	-	1	-
	Alternaria	-	-	-	•	-	-	-	-	-
	Ascospores	4	80	5	1	40	11.1	-	-	-
	Basidiospores	33	660	41.3	1	40	11.1	3	120	33.3
	Bipolaris	1	20	1.3	-	-	-	-	-	
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	-	-	-	ı	ı	-	1	40	11.1
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	4	80	5	1	40	11.1	-	1	-
Outdoor Environment	Pithomyces	-	-	-	1	1	-	-	-	-
	Rust	1	20	1.3	ı	ı	-	1	1	-
	Spegazzinia	-	-	-	1	-	-	-	1	-
	Tetraploa	-	-	-	ı	ı	-	-	1	\ -
	Torula	-	-	-	-	-	-	-	-	-
	Miscellaneous Spores	1	20	1.3	ı	- /	-			-
	Beltrania	1	20	1.3	-	-	-		-	1
	Cercospora	-	-	-	-	/ -	// <del>-</del>		-	-
	Total	80	1600	100	9	360	100	9	360	100



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2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc Report Status: Final Report

Client Address: 1640 N. Batavia Street, Orange, CA 92867

AIHA EMPAT#: 203769

Project Number: 211878 Lab Batch Number: 2111535

Project Location: 505 East Renwick Road, Azusa, CA 91702 Samples Received: 21
Samples Analyzed: 21

Laboratory Sample ID:	211153501	211153502	211153503
Client Sample ID:	MA-0019	MA-0020	MA-0021
Sample Location:	Exterior	1st Floor, Classroom 34	1st Floor, Classroom 33

Sample Collection Data

Total Time:			
Flow Rate:			
Volume:	150	75	75

**Qualitative Analysis** 

Skin Fragments- 1 to 5 (low to high):	1	1	1
Background/m3- 1 to 5 (low to high):	4	2	3
Hyphal Fragments- 1 to 5 (low to high):	1	1	1





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153504	211153505	211153506
Client Sample ID:	MA-0022	MA-0023	MA-0024
Sample Location:	1st Floor, Classroom 32	1st Floor, Classroom 29	1st Floor, Classroom 30
Comments:	None	None	None

# Quantitative Analysis

Quantitative Analysis		Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m³	% Total
Incido/Outoido	Aspergillus/Penicillium-like	10	400	62.5	3	120	75	12	480	92.3
Inside/Outside	Cladosporium	2	80	12.5	-	-	-	-	-	-
	Chaetomium	-	-	-	-	-	-	-	-	-
Water Damage	Stachybotrys	-	-	-	-	-	-	-	-	-
Indication	Trichoderma	ı	ı	ı	ı	-	-	-	ı	-
	Ulocladium	-	ı	ı	-	-	-	-	ı	-
	Alternaria	-	-	ı	-	-	-	-	-	-
	Ascospores	-	-	-	-	-	-	-	-	-
	Basidiospores	2	80	12.5	1	40	25	-	-	-
	Bipolaris	-	-	ı	-	-	-	-	ı	-
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	1	40	6.3	-	-	-	-	-	-
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	1	40	6.3	-	-	-	1	40	7.7
Outdoor Environment	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	-
	Spegazzinia	-	-	-	-	-		-	_	-
	Tetraploa	-	-	-	-	-		-	-	-
	Torula	-	-	-	-	- /	-	-	-	-
	Miscellaneous Spores	-	-	-	-	-/	- /	-	-	-
	Beltrania	-	-	-	-	-	//_		· - \	17-
	Cercospora	-	-	-	-	-	//-	2 -	111-	-
								/////		
	Total	16	640	100	4	160	100	13	520	100



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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153504	211153505	211153506	
Client Sample ID:	MA-0022	MA-0023	MA-0024	
Sample Location:	1st Floor, Classroom 32	1st Floor, Classroom 29	1st Floor, Classroom 30	
_				
_				
Total Time:				
Flow Rate:				
Volume:	75	75	75	

# Qualitative Analysis

Sample Collection Data

Skin Fragments- 1 to 5 (low to high):	2	2	1
Background/m3- 1 to 5 (low to high):	3	2	2
Hyphal Fragments- 1 to 5 (low to high):	1	1	1





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153507	211153508	211153509	
Client Sample ID:	Client Sample ID: MA-0025		MA-0027	
Sample Location:	1st Floor, Classroom 27	1st Floor, Classroom 26	1st Floor, Classroom 25	
Comments:	None	None	None	

# Quantitative Analysis

<u>Quantitative Analysis</u>		Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m³	% Total
Inside/Outside	Aspergillus/Penicillium-like	7	280	63.6	2	80	40	7	280	87.5
	Cladosporium	2	80	18.2	1	40	20	-	-	-
	Chaetomium	-	-		-	-	-	-	-	-
Water Damage	Stachybotrys	-	1		1	-	-	-	-	-
Indication	Trichoderma	ı	ı	-	ı	-	-	-	-	-
	Ulocladium	ı	ı	-	ı	-	-	-	1	-
	Alternaria	1	40	9.1	1	-	-	-	-	-
	Ascospores	-	-	-	-	-	-	-	-	
	Basidiospores	1	40	9.1	-	-	-	1	40	12.5
	Bipolaris	-	-	-	-	-	-	-	-	-
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	-	-	-	-	-	-	-	-	-
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	-	-	-	2	80	40	-	-	-
Outdoor Environment	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	-
	Spegazzinia	-	-	-	-	-	-	-	-	-
	Tetraploa	-	-	-	-	-		-	-	-
	Torula	-	-	-	-	- /	<u> </u>	-	-	<b>\</b> -
	Miscellaneous Spores	-	-	-	-	-/	- /		-	-
	Beltrania	-	-	-	-	-	//		-	11-
	Cercospora	-	-	-	-		//6-	·	1 1 <del>-</del>	-
								/////		
	Total	11	440	100	5	200	100	8	320	100



Phone:(562) 860-2201 www.aihlab.com

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Sample Collection Data

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111535

Samples Received: 21

_						
Laboratory Sample ID:	211153507	211153508	211153509			
Client Sample ID:	MA-0025	MA-0026	MA-0027			
Sample Location:	1st Floor, Classroom 27	1st Floor, Classroom 26	1st Floor, Classroom 25			
_						
Total Time:						
Flow Rate:						
Volume:	75	75	75			

Qualitative Analysis			
Skin Fragments- 1 to 5 (low to high):	1	2	2
Background/m3- 1 to 5 (low to high):	3	2	3
Hyphal Fragments- 1 to 5 (low to high):	1	1	1





Phone:(562) 860-2201 www.aihlab.com

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153510	211153511	211153512	
Client Sample ID:	MA-0028	MA-0029	MA-0030	
Sample Location:	1st Floor, Classroom 24/RSP Teacher	1st Floor, Classroom 23	1st Floor, Classroom 22	
Comments:	None	None	None	

# Quantitative Analysis

		Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m³	% Total	Raw Counts	Spores/m³	% Total
Inside/Outside	Aspergillus/Penicillium-like	6	240	35.3	6	240	37.5	4	160	66.7
inside/Outside	Cladosporium	7	280	41.2	4	160	25	2	80	33.3
	Chaetomium	-	-	-	-	-	-	-	-	-
Water Damage	Stachybotrys	-	-	-	-	-	-	ı	-	-
Indication	Trichoderma	-	-	-	1	-	-	ı	-	-
	Ulocladium	-	-	-	-	-	-	ı	-	
	Alternaria	1	40	5.9	1	40	6.3	1	-	-
	Ascospores	1	40	5.9	1	40	6.3	-	-	-
	Basidiospores	1	40	5.9	3	120	18.8	-	-	-
	Bipolaris	-	-	-	-	-	-	-	-	
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	-	-	-	1	40	6.3	-	-	-
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	1	40	5.9	-	-	-	-	-	-
<b>Outdoor Environment</b>	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	-
	Spegazzinia	-	-	-	-	-	-4	-	-	-
	Tetraploa	-	-	-	-	-/	-	-	-	<u> </u>
	Torula	-	-	-	-	-	-	-	-	-
	Miscellaneous Spores	-	-	-	-	/ -	<u>//-</u> -	<b>(-</b>	-	
	Beltrania	-	-	-	-	- /	4	- 1		-
	Cercospora	-	-	-	- /	-//	-	<u> </u>	-	-
								H 19		
	Total	17	680	100	16	640	100	6	240	100



2556 W Woodland Dr Anaheim, CA 92801

## **MOLD AIR SAMPLE REPORT**

Phone:(562) 860-2201 www.aihlab.com

1

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Sample Collection Data

**Qualitative Analysis** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Hyphal Fragments- 1 to 5 (low to high):

Report Status: Final Report

AIHA EMPAT#: 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153510	211153511	211153512	
Client Sample ID:	MA-0028	MA-0029	MA-0030	
Sample Location:	1st Floor, Classroom 24/RSP Teacher	1st Floor, Classroom 23	1st Floor, Classroom 22	
on Data				
Total Time:				
Flow Rate:				
Volume:	75	75	75	
<u>ysis</u>				
Skin Fragments- 1 to 5 (low to high):	2	2	1	
Background/m3- 1 to 5 (low to high):	3	3	2	

2





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#: 203769** 

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

	Laboratory Sample ID:	21	1153513		21′	153514		211	1153515	
	Client Sample ID:	М	A-0031		M	A-0032		M	A-0033	
	Sample Location:	1st Floor, Classroom 31		1st Floor, Classroom 28		1st Floor, Classr 37		oom		
	Comments:		None			None			None	
uantitative Analysis			la , 3	la, <b>-</b>			o/ =			
		Raw Counts	Spores/m°	% I otal	Raw Counts	Spores/m°	% Total	Raw Counts	Spores/m°	% Total
Incido/Outoido	Aspergillus/Penicillium-like	7	280	53.8	11	440	84.6	5	200	55.6

## Qua

		Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total
Inside/Outside	Aspergillus/Penicillium-like	7	280	53.8	11	440	84.6	5	200	55.6
iliside/Outside	Cladosporium	2	80	15.4	-	ı	ı	1	40	11.1
	Chaetomium	-	-	-	-	-	-	-	-	-
Water Damage	Stachybotrys	-	-	-	-	-	•	-	-	-
Indication	Trichoderma	-	-	-	-	-	-	-	-	-
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	2	80	15.4	1	40	7.7	-	-	-
	Ascospores	-	-	-	-	-	-	-	-	-
	Basidiospores	-	-	-	1	40	7.7	-	-	-
	Bipolaris	-	-	-	-	-	-	-	-	-
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	-	-	-	-	-	-	-	-	-
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	2	80	15.4	-	-	-	-	-	-
Outdoor Environment	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	-
	Spegazzinia	-	-	-	-	-	-	-	•	-
	Tetraploa	-	-	-	-	-	<del>-</del>	-	-	-
	Torula	-	-	-	-	- /	-		-	<u> </u>
	Miscellaneous Spores	-	-	-	-	<u>-</u>	-/	(- <u>-</u> -	-	-
	Beltrania	-	-	-	-	-	//	-	· - \	11-
	Cercospora	-	-	-	-	- /	-	3	120	33.3
								(71)		
	Total	13	520	100	13	520	100	9	360	100



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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153513	211153514	211153515
Client Sample ID:	MA-0031	MA-0032	MA-0033
Sample Location:	1st Floor, Classroom 31	1st Floor, Classroom 28	1st Floor, Classroom 37
			_

#### Sample Collection Data

Total Time:			
Flow Rate:			
Volume:	75	75	75

#### **Qualitative Analysis**

Skin Fragments- 1 to 5 (low to high):	1	2	2
Background/m3- 1 to 5 (low to high):	2	3	3
Hyphal Fragments- 1 to 5 (low to high):	1	1	1





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Client Name: A-Tech Consulting Inc

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**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111535

Samples Received: 21

	Laboratory Sample ID:	21	1153516		211153517 MA-0035			21	1153518	
	Client Sample ID:	M	A-0034					MA-0036		
	Sample Location:	1st Floo	or, Classi 36	room	1st Floor	, Classr	oom 35	1st Floo	or, Class 1/2	room
	Comments:		None			None			None	
Quantitative Analysis		D 0	0	0/ <b>T</b> -/-1	ln	0	0/ 7-1-1	In	0	% Total
	Aspergillus/Penicillium-like	Raw Counts	Spores/m³	% Total 90.9	Raw Counts	Spores/m³	% Total 75	Raw Counts	Spores/m³	% Total
Inside/Outside	Cladosporium	10	400	90.9	- -	-	-	1	40	12.5
	Chaetomium	_	-	-	_	_	_	-	-	-
Water Damage	Stachybotrys	-	-	-	-	-	-	-	-	-
Indication	Trichoderma	-	-	_	-	-	-	-	-	_
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	-	-	-	-	-	-	-	-	-
	Ascospores	-	-	-	-	-	-	-	-	-
	Basidiospores	-	-	-	1	40	25	-	-	-
	Bipolaris	-	-	-	-	-	-	-	-	-
	Curvularia	-	-	-	-	-	-	-	-	-
	Epicoccum	-	-	-	-	-	-	-	-	-
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	-	-	-	-	-	-	-	-	-
Outdoor Environment	Pithomyces	-	-	-	-	-	-	-	-	-
	Rust	-	ı	1	-	ı	1	-	-	-
	Spegazzinia	-	-	-	-	-	-	-	-	-
	Tetraploa	-	-	-	-	-	<u></u>	-	-	<u>₹</u>
	Torula	-	-	-	-	-	-	-	-	-
	Miscellaneous Spores	-	-	-	-	-/	- /	-	-	-
	Beltrania	-	-	-	-	-	-/-	-	-	-
	Cercospora	-	-	-	-	-	//-	-	-	-
							7	////		
	Total	11	440	100	4	160	100	8	320	100



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1

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Client Name: A-Tech Consulting Inc Rep

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Sample Collection Data

**Qualitative Analysis** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Hyphal Fragments- 1 to 5 (low to high):

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153516	211153517	211153518
Client Sample ID:	MA-0034	MA-0035	MA-0036
Sample Location:	1st Floor, Classroom 36	1st Floor, Classroom 35	1st Floor, Classroom 1/2
n Data			
Total Time:			
Flow Rate:			
Volume:	75	75	75
sis			
Skin Fragments- 1 to 5 (low to high):	1	1	1
Background/m3- 1 to 5 (low to high):	2	1	2

1





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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153519	211153520	211153521
Client Sample ID:	MA-0037	MA-0038	MA-0039
Sample Location:	1st Floor, Classroom 5/6	1st Floor, Classroom 3	Exterior
Comments:	None	None	None

#### **Quantitative Analysis**

		Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total	Raw Counts	Spores/m <sup>3</sup>	% Total
Inside/Outside	Aspergillus/Penicillium-like	6	240	75	5	200	71.4	39	780	35.5
inside/Outside	Cladosporium	-	ı	ı	1	ı	1	47	940	42.7
	Chaetomium	-	1	-	-	ı	-	1	-	-
Water Damage Indication	Stachybotrys	-	ı	-	1	ı	-	1	-	-
water Damage mulcation	Trichoderma	-	-	-	-	-	-	-	-	-
	Ulocladium	-	-	-	-	-	-	-	-	-
	Alternaria	-	-	-	1	40	14.3	1	20	0.9
	Ascospores	-	-	-	-	-	-	7	140	6.4
	Basidiospores	1	40	12.5	-	-	-	10	200	9.1
	Bipolaris	-	-	-	-	-	-	1	20	0.9
	Curvularia	-	-	-	-	-	-	1	20	0.9
	Epicoccum	-	-	-	-	-	-	1	20	0.9
	Nigrospora	-	-	-	-	-	-	-	-	-
	Periconia/Myxo/Smut	1	40	12.5	1	40	14.3	3	60	2.7
Outdoor Environment	Pithomyces	-	-	-	-	1	-	-	-	-
	Rust	-	-	-	-	-	-	-	-	-
	Spegazzinia	-	-	-	-	ı	-	-	-	-
	Tetraploa	-	-	-	-	-	-	-	-	
	Torula	-	-	-	-	-	-	-	-	-
	Miscellaneous Spores	-	ı	ı	-	<u>-</u>	-	-	-	-
	Beltrania	-	-	-	-	-	-	-	-	-
	Cercospora	-	ı	1	- 1	- /	/	-	-	-
	Total	8	320	100	7	280	100	110	2200	100



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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535

Samples Received: 21

Samples Analyzed: 21

Laboratory Sample ID:	211153519	211153520	211153521
Client Sample ID:	MA-0037	MA-0038	MA-0039
Sample Location:	1st Floor, Classroom 5/6	1st Floor, Classroom 3	Exterior

Sample Collection Data

Total Time:			
Flow Rate:			
Volume:	75	75	150

Qualitative Analysis

Skin Fragments- 1 to 5 (low to high):	1	2	2
Background/m3- 1 to 5 (low to high):	2	2	4
Hyphal Fragments- 1 to 5 (low to high):	1	1	1

Analyzed by: Emily Chang Signature: Emily Date: 07-22-2021

Reviewed by: Zubair Ahmed Signature: Date: 07-23-2021

No accepted regulatory standards currently exit by which to assess the health risks related to mold exposure. Molds have been associated with a variety of health effects and sensitivity varies from person to person. Results are not blank corrected unless otherwise noted. The detection limit is equal to one fungal spore, structure, pollen, fiber particle or insect fragment. High levels of background particulate can obscure spores and other particulates leading to underestimation. "-" Denotes not detected. Background levels of 4 or 5 indicate an overload of background particulates, prohibiting accurate detection and quantification. AIH Laboratory maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by AIH Laboratory. AIH Laboratory bears no responsibility for sample collection activities or analytical method limitations. Spores/m³ calculation based on volume information provided by client. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. All report format and design are copyright of AIH Laboratory 2021.

AIHA LAP, LLC Accredited Laboratory for Microbiology Laboratory ISO/IEC 17025:2005, Lab ID# 203769



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Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

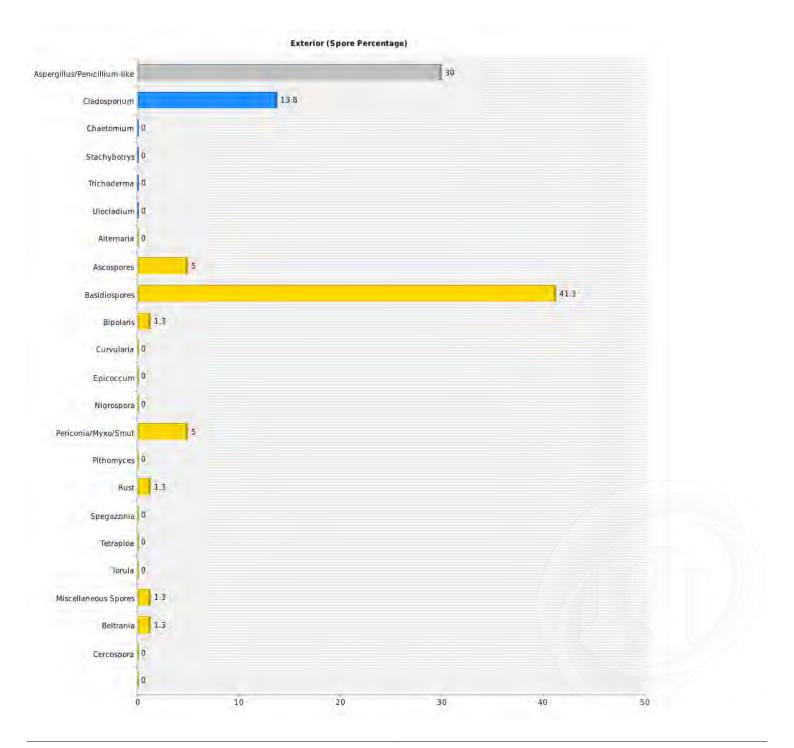
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report AIHA EMPAT#: 203769

Lab Batch Number: 2111535

Samples Received: 21 Samples Analyzed: 21





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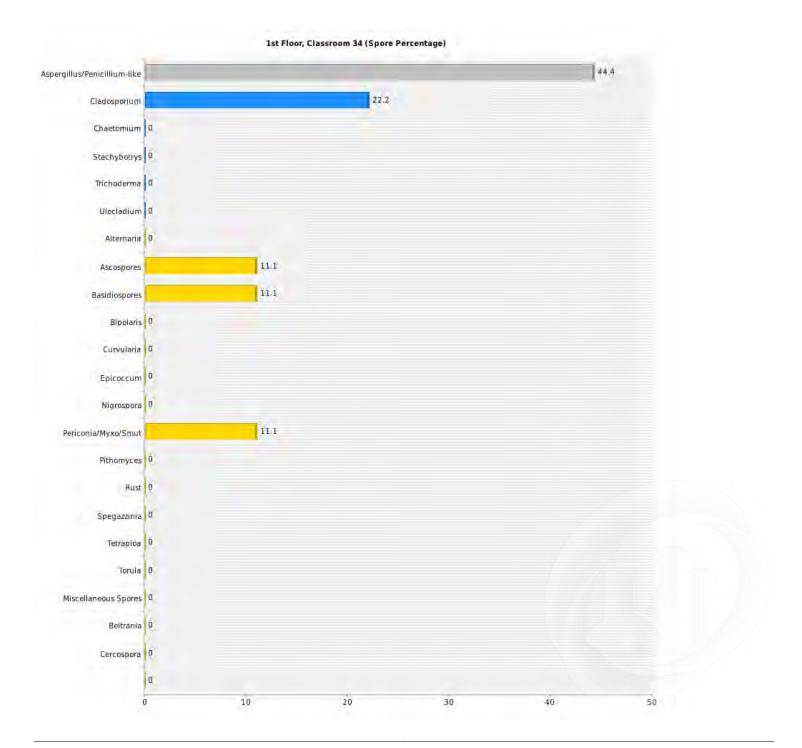
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AIHA EMPAT#: 203769 Lab Batch Number: 2111535

Samples Received: 21 Samples Analyzed: 21





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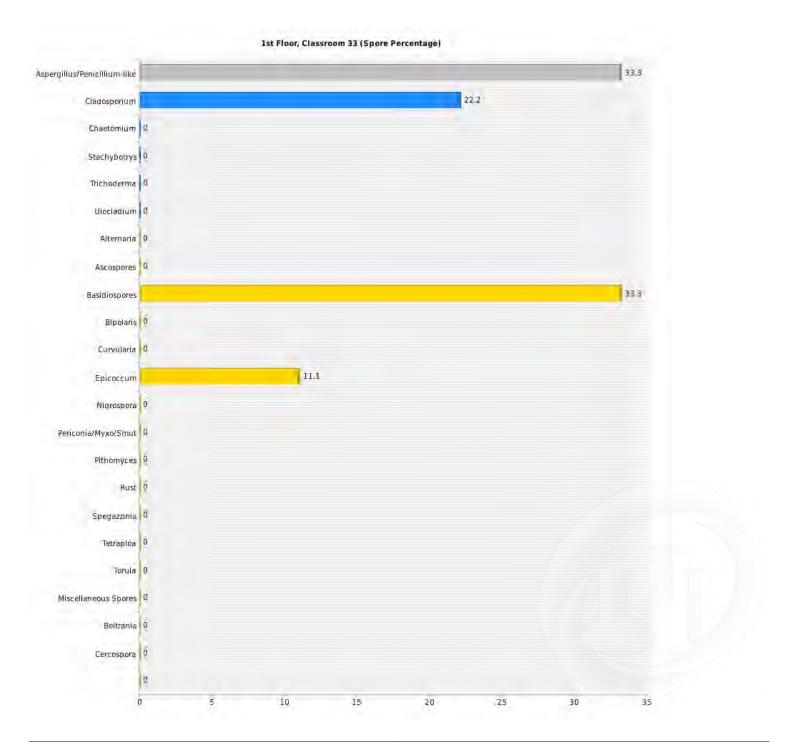
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Samples Received: 21





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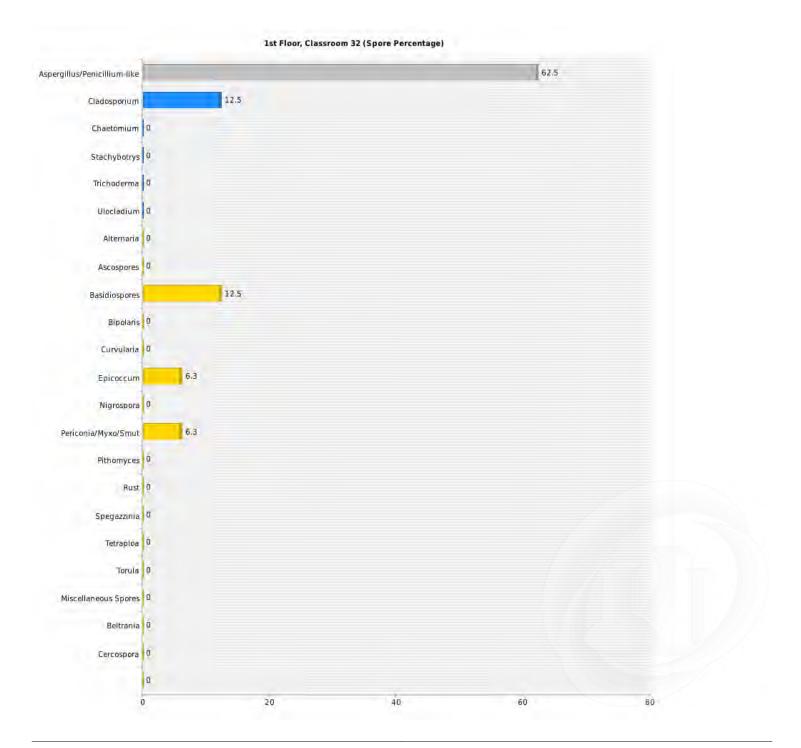
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AIHA EMPAT#: 203769 Lab Batch Number: 2111535

Samples Received: 21





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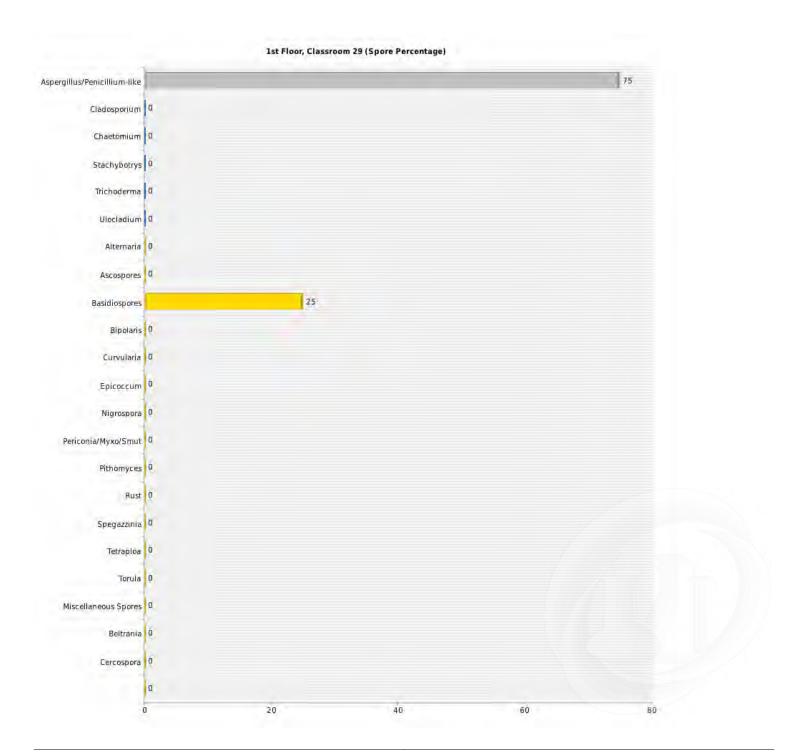
Project Number: 211878

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Report Status: Final Report

**AIHA EMPAT#: 203769** Lab Batch Number: 2111535

Samples Received: 21





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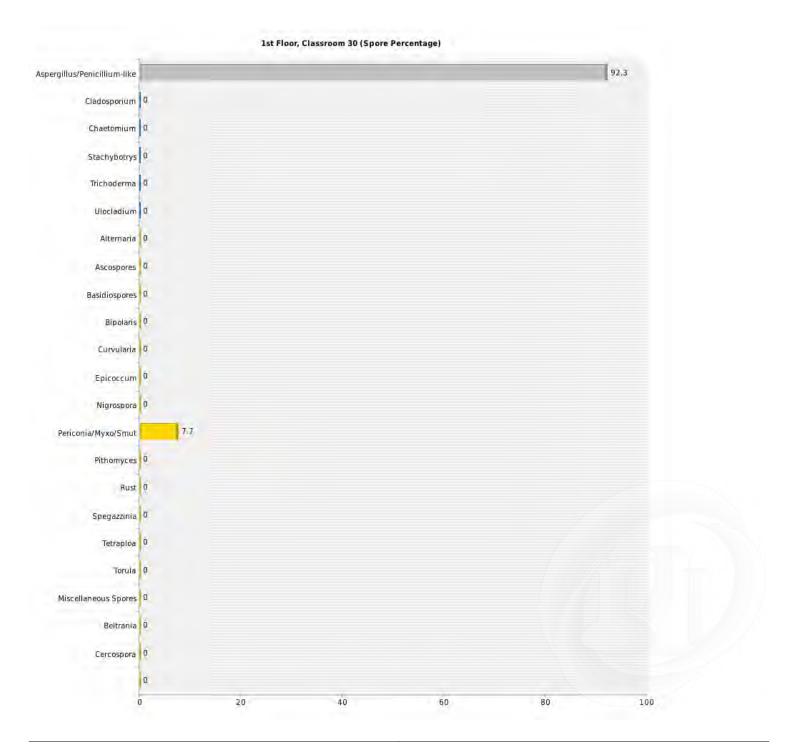
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Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535 Samples Received: 21





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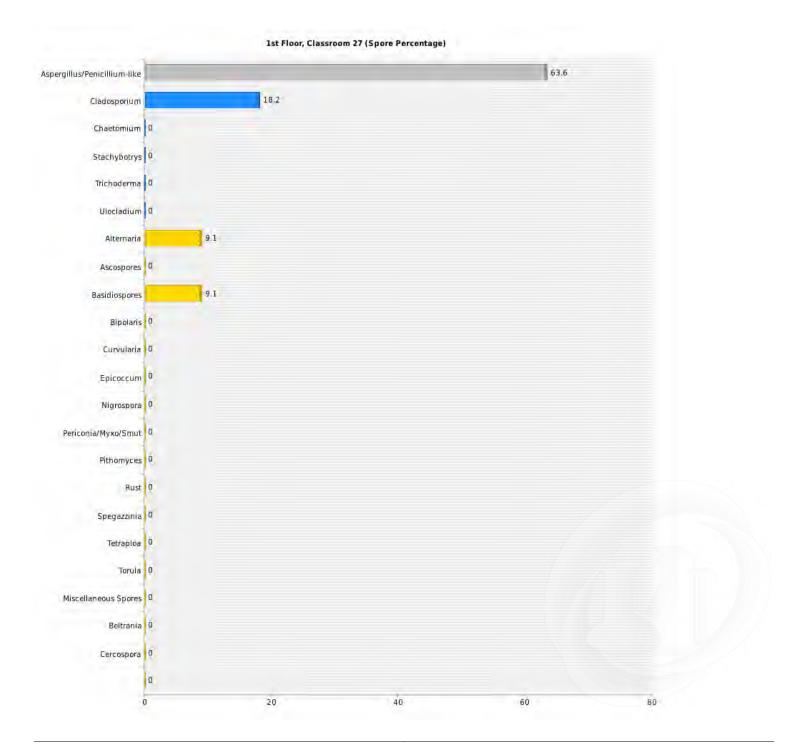
Project Number: 211878

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AIHA EMPAT#: 203769 Lab Batch Number: 2111535

Samples Received: 21





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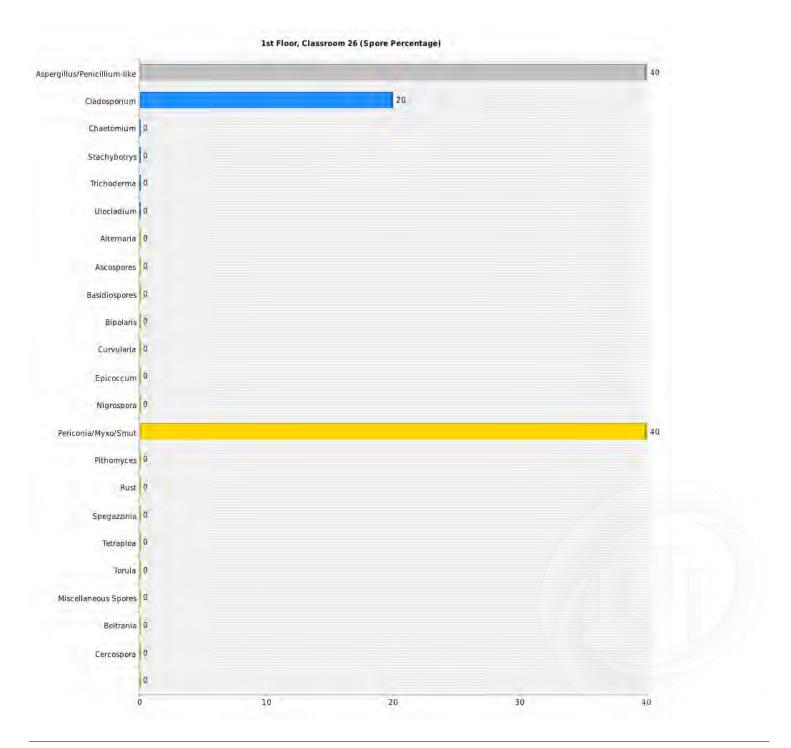
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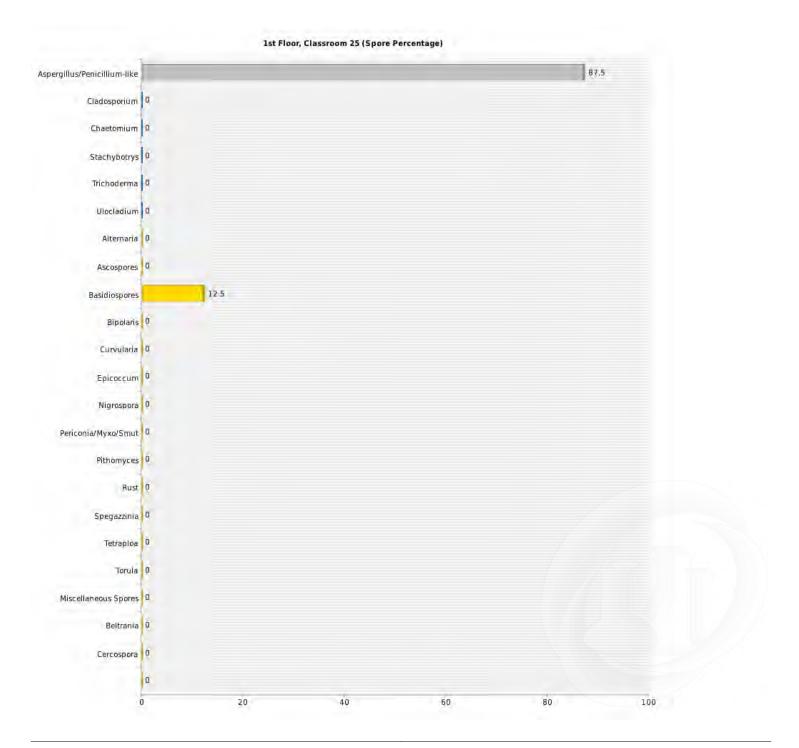
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Samples Received: 21





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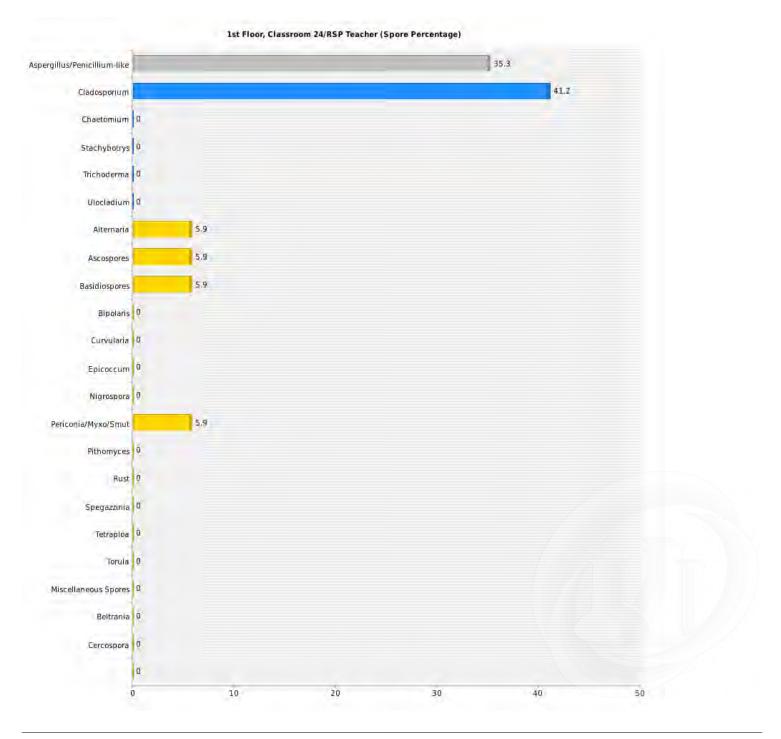
Project Number: 211878

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Samples Received: 21





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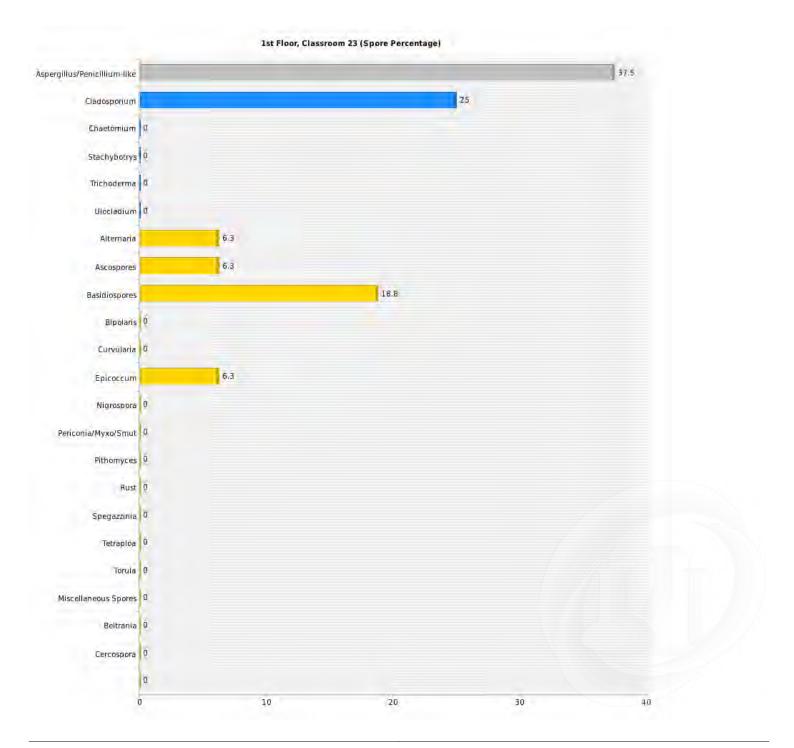
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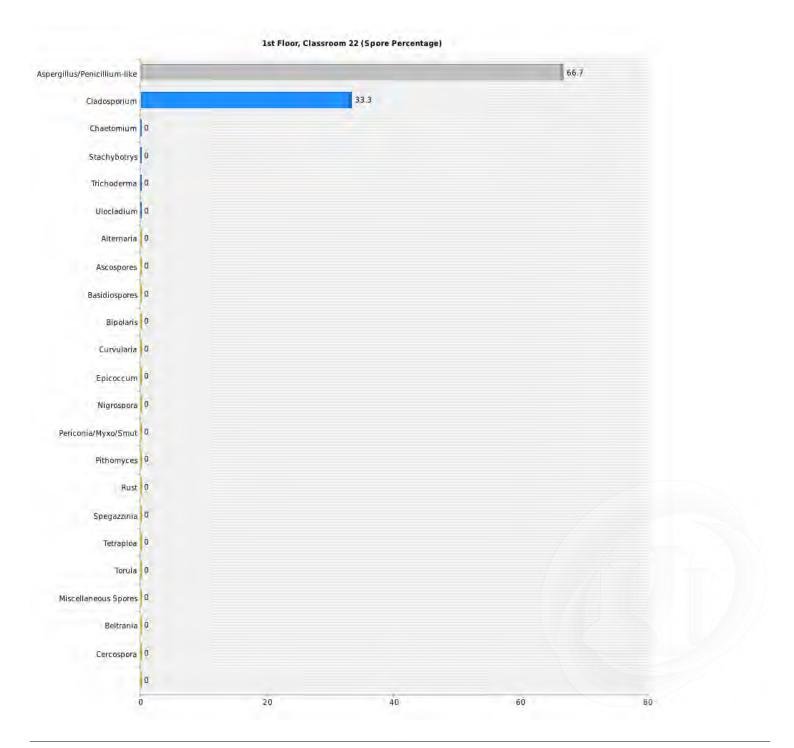
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AIHA EMPAT#: 203769 Lab Batch Number: 2111535

Samples Received: 21 Samples Analyzed: 21





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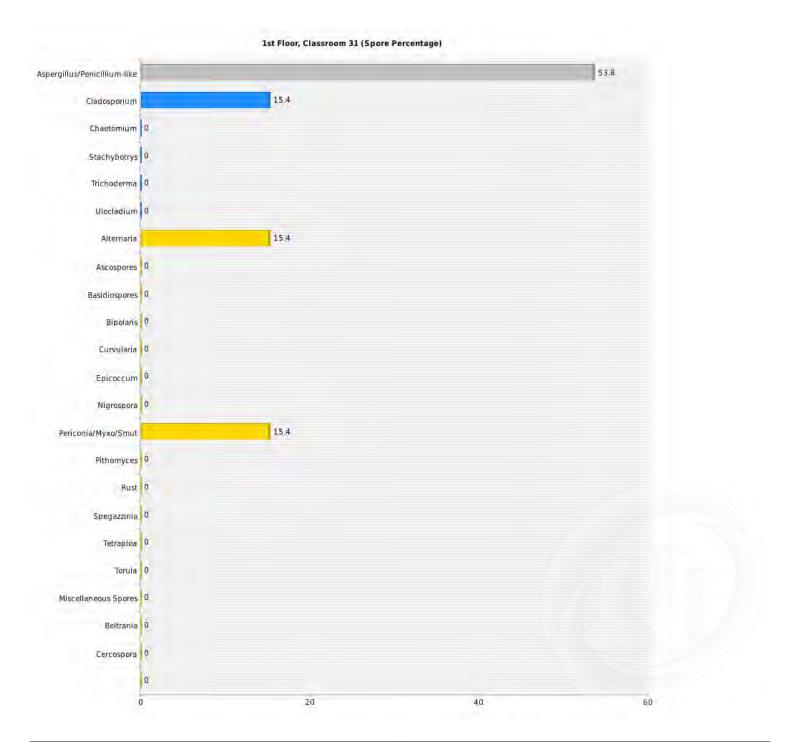
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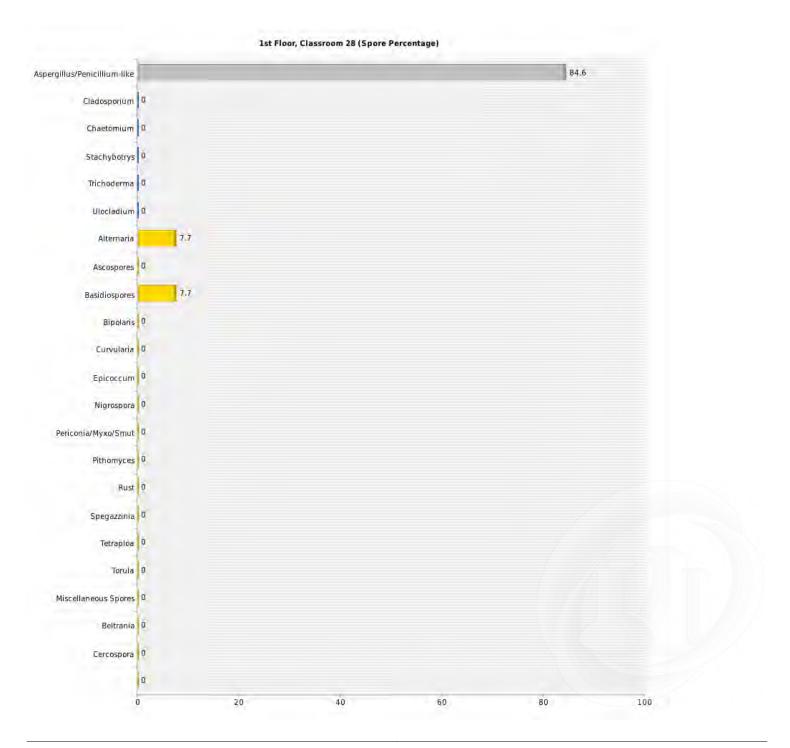
Project Number: 211878

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Report Status: Final Report

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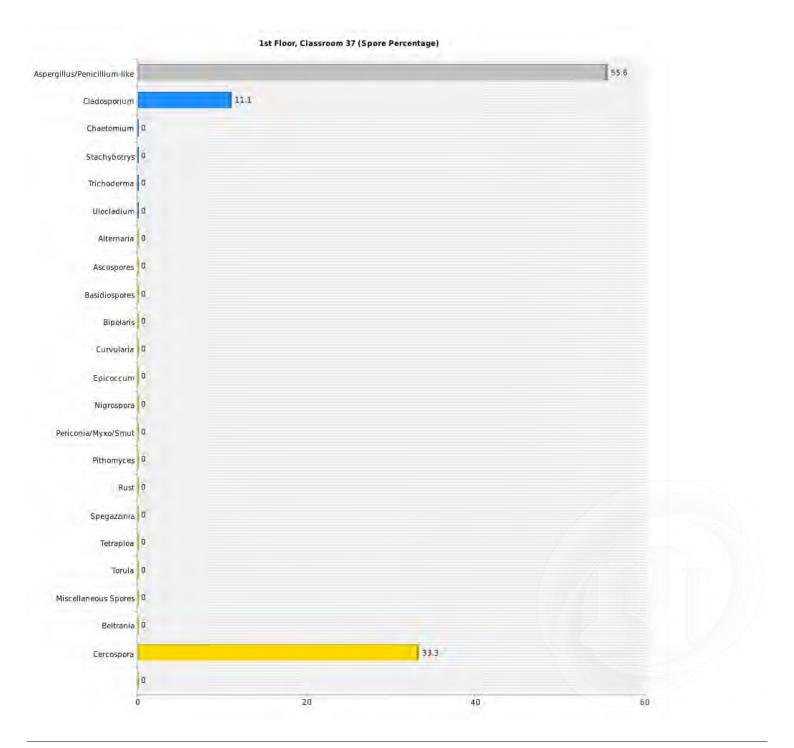
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

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Samples Received: 21





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Project Number: 211878

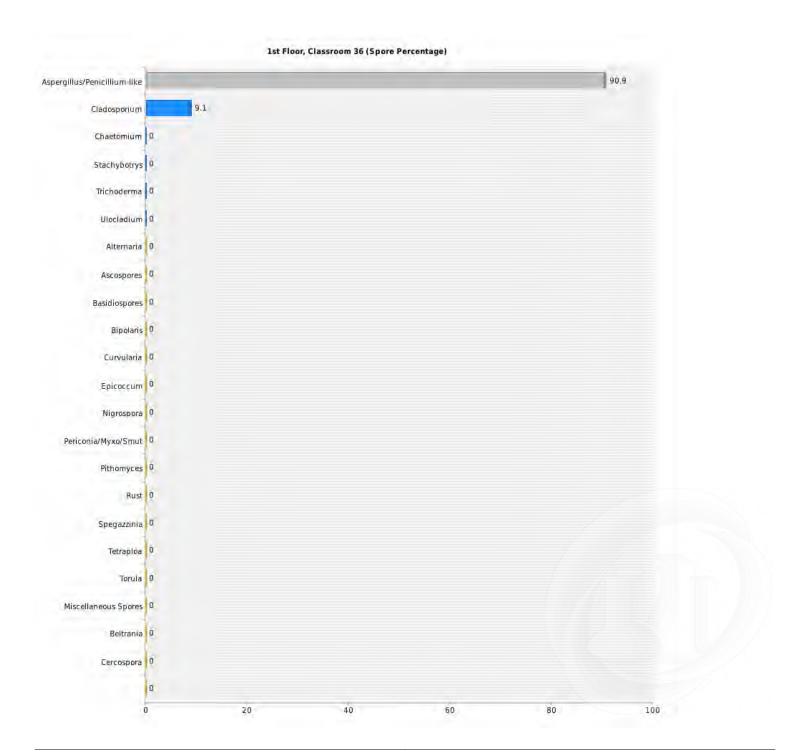
Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111535

Samples Received: 21 Samples Analyzed: 21





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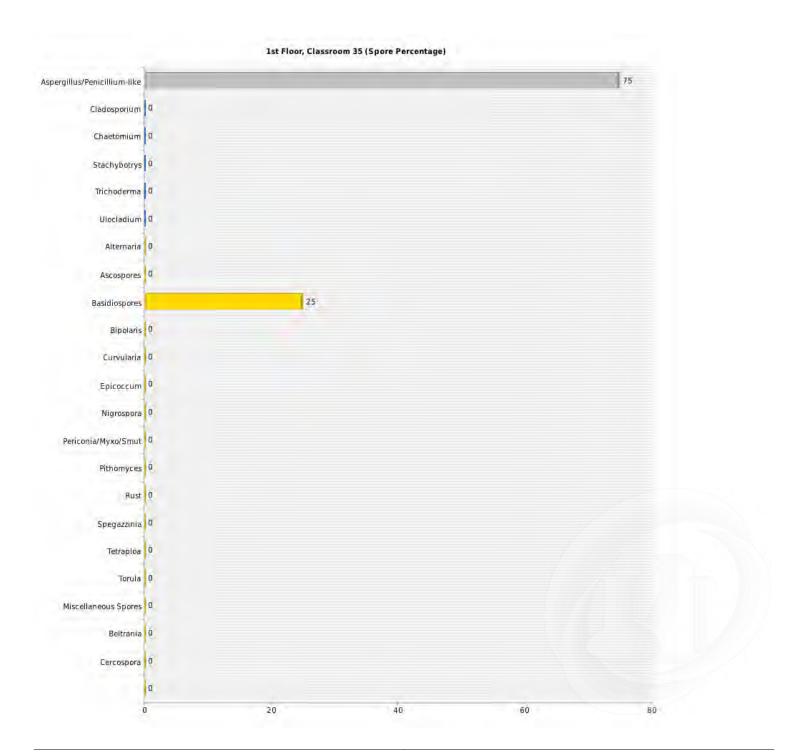
Project Number: 211878

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AIHA EMPAT#: 203769 Lab Batch Number: 2111535

Samples Received: 21





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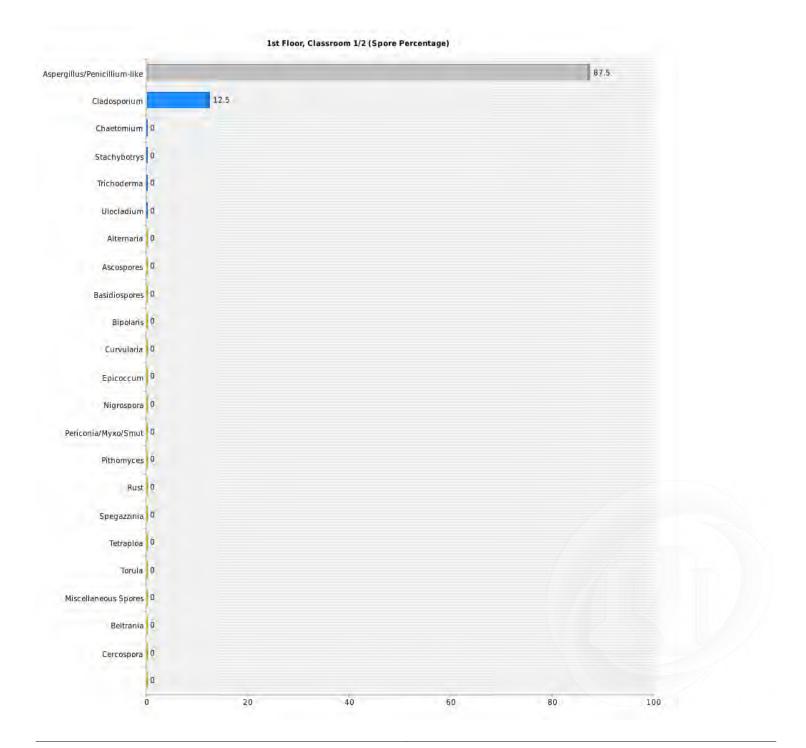
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#**: 203769

Lab Batch Number: 2111535 Samples Received: 21





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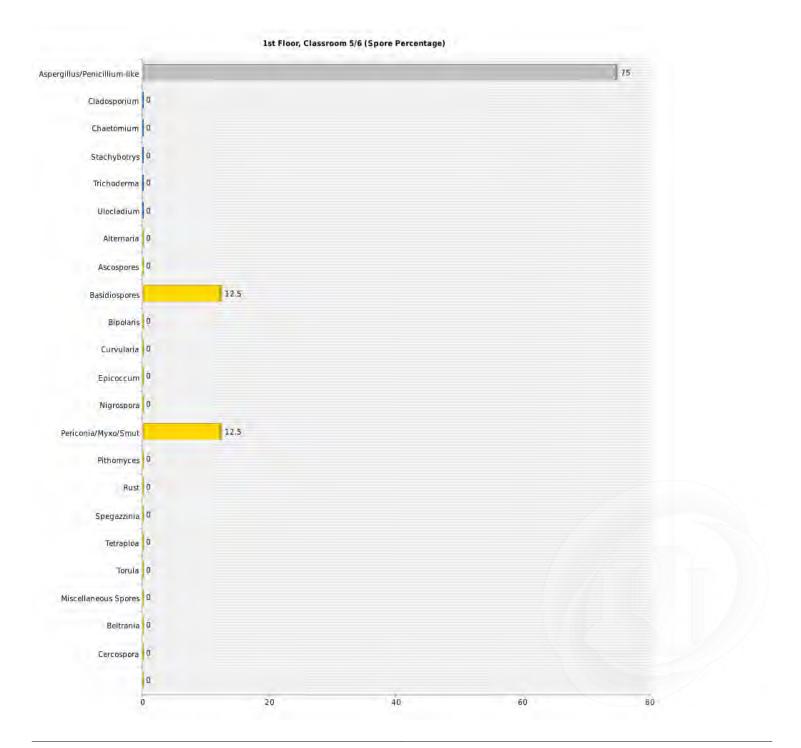
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535 Samples Received: 21





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2556 W Woodland Dr Anaheim, CA 92801

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Project Number: 211878

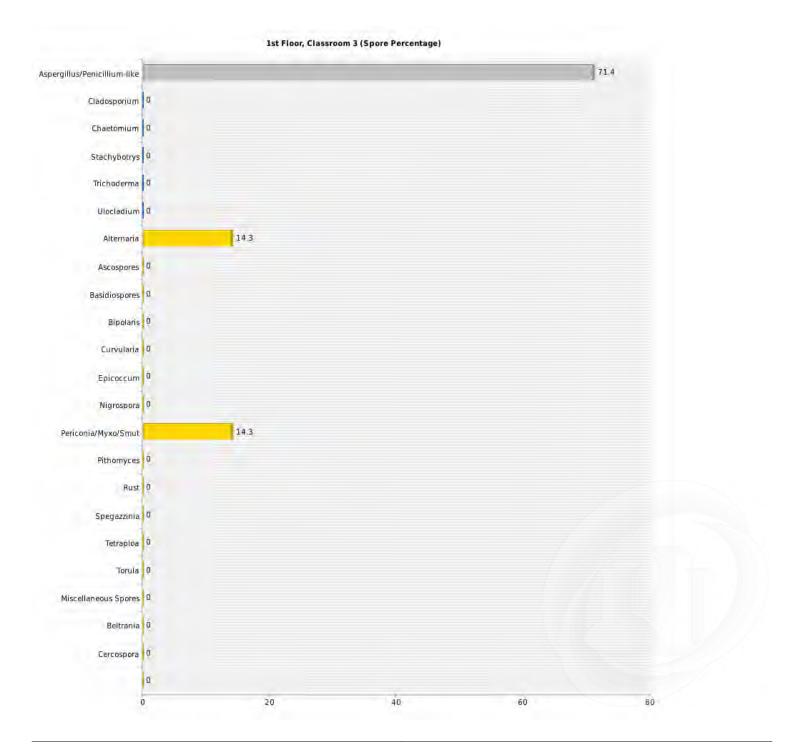
Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535

Samples Received: 21 Samples Analyzed: 21





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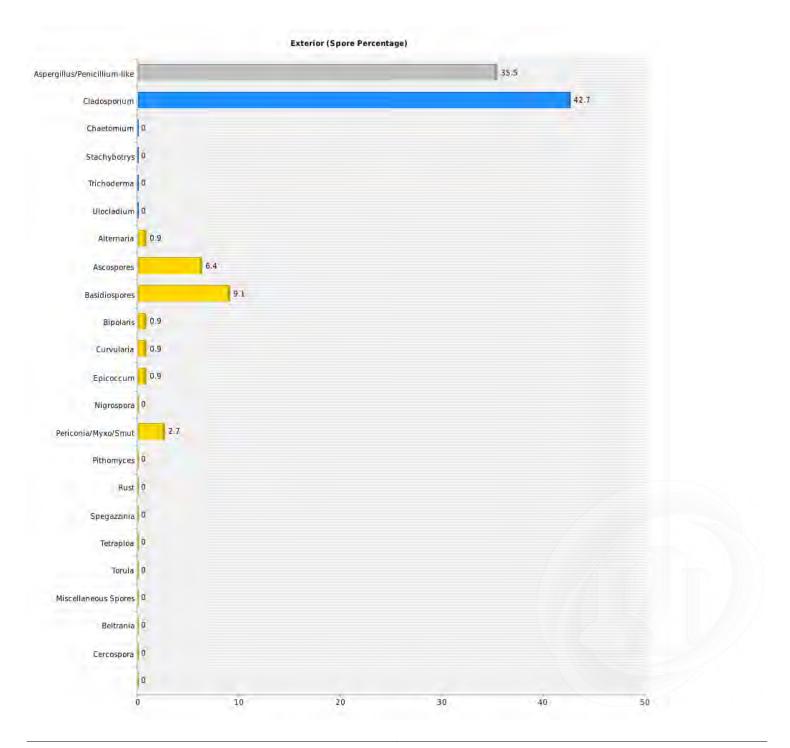
Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769 Lab Batch Number: 2111535

Samples Received: 21





Phone:(562) 860-2201 www.aihlab.com

2556 W Woodland Dr Anaheim, CA 92801

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

**Project Number: 211878** 

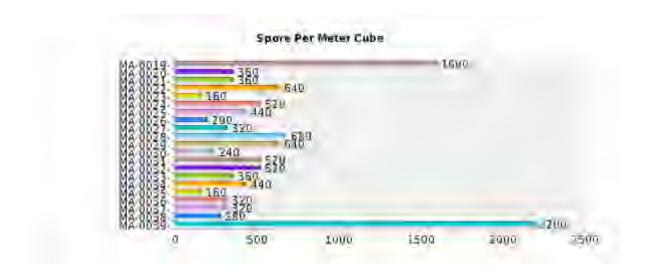
Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

**AIHA EMPAT#:** 203769

Lab Batch Number: 2111535

Samples Received: 21 Samples Analyzed: 21







Phone:(562) 860-2201 www.aihlab.com

Client Name: A-Tech Consulting Inc

Client Address: 1640 N. Batavia Street, Orange, CA 92867

Project Number: 211878

Project Location: 505 East Renwick Road, Azusa, CA 91702

Report Status: Final Report

AIHA EMPAT#: 203769

Lab Batch Number: 2111535

Samples Received: 21 Samples Analyzed: 21

Spore Trap Cassettes (Air Sampling media) are unique air sampling cassettes specifically designed for the rapid collection of a wide range of airborne aerosols including mold spores, pollen, insect parts, skin cell fragments, and inorganic particulate. The analytical results obtained from include both viable and non-viable spores. Some fungal groups produce similar spore types that are difficult to be distinguished only by direct microscopic examination like Aspergillus/Penicillium, or other identical spore. Similarly other spore types may lack distinguishing features that aid in their identification like hyphae. To avoid any confusion these types are grouped into larger categories such as Ascospores or Basidiospores.

**Understanding Sampling and Laboratory Methodologies** 

#### Examination Technique:

AIH Laboratory Fungal Air Sample Reports data results are provided in spore counts per cubic meter of air. Fungal spores are identified and grouped by morphological characteristics including color, shape, size, and fruiting structures (if present) which are compared to published mycological identification keys and texts.

#### Qualitative Analysis:

It is difficult to precisely measure some analytical findings which aid in assessing the overall sample condition and density. Qualitative analysis is used to determine concentration of Skin Fragments, Background and Hyphal fragments. A number between 1-5 is used to rate the concentrations. Each number increase in rate adds a range of 1-20% Please understand that higher the number of skin fragments and background particle it may obscure small spore. Overloaded in comments indicate that sample failed to meet visibility density criteria and thus the quantitate analysis was not performed on the particular sample.

#### Analysis:

This data is gathered by visual and statistical analysis performed on the specimen. The quantitative data is adhered to strict quality control procedures. This strict quality is achieved by reanalyzing at least 10% of samples. The results from original analysis and re-read must be close with only minor variation. If results do not fall under minor variation criteria, then all samples must be analyzed again. The quantitative data is used to produce the final result in spore(s) per meter cube.

#### **About AIH Laboratory**

AIH Laboratory is renowned laboratory located in Anaheim, CA. The staff at AIH Laboratory is recognized by State, Federal agencies and International Accrediting Bodies. AIH Laboratory employs sophisticated techniques, strong professional experience along with recognized testing procedures in the industry. AIH Laboratory participates in Inter-laboratory testing program with various national laboratories to ensure conformance with newly adapted technologies, research and methodologies. The samples received by AIH Laboratory are processed under strict quality control procedures to avoid any discrepancy in results. The data generated by the laboratory from the analytical observation of the specimens is presented in a format that is easily understood by anyone with a science background. An environmental expert will accurately interpret the data and findings detailed in this report.

# FA01860

# Thermo

#### Model PDR-1500 Calibration

IVIC	del PDR-150	0 Calibration	
Calibration 7		Ramon Almor	nte .
Date		5/20/2021	10.10
S/N:		0115250203	
Calibration I	Due:	5/21/2022	
Leak Check	@ 10 " w.c.	PASS	
Ta (deg C)		25	
RH (%)		27	
Pa (mmHg)		767	
Minimum Flo		1.0	
Max Flow (L)		3.5	
Flow Cal Co.	rrelation	0.995	
Source Leve	1	97	
Source Curr	ent (mA)	60	
Ref Det Volts	(VDC)	0.94	
Cal Factor		316	
Background	(ug/m3)	201	
Correlation		1.0000	PASS
6000 -	19.4	taland - (	
5000	*1-	100	y = 3.1668x + 622.
			$R^2 = 1$
8 4000			
11			A
5 3000 ↓		A	
0000		26	
R12		· A	
<b>2</b> 000 ⊢			
0007 PDR1500 FCF = 1000	State of the last		
<b>5</b> 1000	~		THE STATE OF THE S

All aerosol calibrations are traceable to Arizona Road Dust

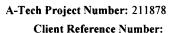
500

1000

Master DR4000

1500

0 | 0



Zip:



#### MOLD AIR SAMPLE CHAIN OF CUSTODY

Sampled By:

City:

Krizia Kolakowski

Analysis: Non-Viable Spore Trap (Air-O-Cell)(ID Fungal Count &	Analysis:	Non-Viable	Spore	Trap	(Air-Q-C	ell)(ID	Fungal	Count .	&
--	-----------	------------	-------	------	----------	---------	--------	---------	---

Genus; Direct Exam)

Project Address:

Turn Around Time: 72 Hour

Project Number and Name:

211878 - Azusa USD Murray Elementary School

**Phone Number:** (714) 434-6360

2111463

Fax Number: (714) 221-6360

Attn: Robert Williams

Results: Email to labs@atechinc.net

State:

Sample Date	Samula ID		
Sample Date	Sample ID	Sample Location	Sample Volume (L
7/15/2021 9:44 AM	211878-MA-0001	Exterior	150
7/15/2021 9:44 AM	211878-MA-0002	1st Floor, Classroom 7	75
7/15/2021 9:44 AM	211878-MA-0003	1st Floor, Classroom 8	75
7/15/2021 9:51 AM	211878-MA-0004	1st Floor, Classroom 9	75
7/15/2021 10:05 AM	211878-MA-0005	1st Floor, Classroom 10	75
7/15/2021 10:17 AM	211878-MA-0006	1st Floor, Classroom 11	75
7/15/2021 10:29 AM	211878-MA-0007	1st Floor, Classroom 12	75
7/15/2021 10:40 AM	211878-MA-0008	1st Floor, Classroom 13	75
7/15/2021 10:54 AM	211878-MA-0009	1st Floor, Classroom 14	75
7/15/2021 11:06 AM	211878-MA-0010	1st Floor, Classroom 15	75
7/15/2021 11:25 AM	211878-MA-0011	1st Floor, Classroom 16	75
7/15/2021 11:37 AM	211878-MA-0012	1st Floor, Classroom 17	75
7/15/2021 11:49 AM	211878-MA-0013	1st Floor, Computer Lab	75
	per: 211878-MA-0001 to 211		<u> </u>

1640 North Batavia Street, Orange, CA 92867-3509 Phone: 714-434-6360 Fax 714-221-6360 Web Address: www.atechinc.net

Time:

Time:

Time: 5:23 PM

Samples Received By:

Samples Received By:

Relinquished By:

Date:

Date:



2111463

A-Tech Project Number: 211878 Client Reference Number:

#### MOLD AIR SAMPLE CHAIN OF CUSTODY

7/15/2021 12:05 PM	211878-MA-0014	1st Floor, Library	75
7/15/2021 12:15 PM	211878-MA-0015	1st Floor, Classroom 18	75
7/15/2021 12:31 PM	211878-MA-0016	1st Floor, Classroom 19	75
7/15/2021 12:44 PM	211878-MA-0017	1st Floor, Classroom 20	75
7/15/2021 1:03 PM	211878-MA-0018	1st Floor, Classroom 21	75

Client Sample Number: 211878-MA	A-0001 to 211878-MA-0018			Total: 18		
Relinquished By:		Date: 7	/19/2021	<b>Time:</b> 5:23 PM		
Samples Received By: Kum	Sull CV	Date:	Hlakon	Time: 5 4 25		
Relinquished By:		Date:		Time:		
Samples Received By:		Date:		Time:		



#### MOLD AIR SAMPLE CHAIN OF CUSTODY

Analysis: Non-Viable Spore Trap (Air-O-Cell)(ID Fungal Count &

Genus; Direct Exam)

Turn Around Time: 72 Hour

Project Number and Name:

Project Address:

211878 - Azusa USD Murray Elementary School

Phone Number: (714) 434-6360

Sampled By: Krizia Kolakowski

City:

Fax Number: (714) 221-6360

Attn: Robert Williams

Results: Email to labs@atechinc.net

State:

2111535

Zip:

505 East Renwick Road		Azusa	CA	91702-5664
Notes:				
Sample Date	Sample ID	Samp	le Location	Sample Volume (L)
7/20/2021 6:48 AM	211878-MA-0019	E	Exterior	150
7/20/2021 6:58 AM	211878-MA-0020	1st Floor	, Classroom 34	75
7/20/2021 7:11 AM	211878-MA-0021	1st Floor	, Classroom 33	75
7/20/2021 7:26 AM	211878-MA-0022	1st Floor	, Classroom 32	75
7/20/2021 7:39 AM	211878-MA-0023	1st Floor	, Classroom 29	75
7/20/2021 7:50 AM	211878-MA-0024	1st Floor	, Classroom 30	75
7/20/2021 8:04 AM	211878-MA-0025	1st Floor	, Classroom 27	75
7/20/2021 8:15 AM	211878-MA-0026	1st Floor	r, Classroom 26	75
7/20/2021 8:27 AM	211878-MA-0027	1st Floor	r, Classroom 25	75
7/20/2021 8:38 AM	211878-MA <b>-</b> 0028	1st Floor, Class	sroom 24/RSP Teacher	75
7/20/2021 8:49 AM	211878-MA <b>-</b> 0029	1st Floor	r, Classroom 23	75
7/20/2021 9:04 AM	211878-MA-0030	1st Floor	r, Classroom 22	75
7/20/2021 9:18 AM	211878-MA-0031	1st Floor	r, Classroom 31	75

Client Sample Number: 211878-MA-0019 to 211878-MA-00	)39	Total: 21
Relinquished By:	Date: 7/20/2021	Time: 12:19 PM
Samples Received By: Sarah Tran 8	Date: 7 20 21	Time:  :  0pm
Relinquished By:	Date:	Time:
Samples Received By:	Date:	Time:

1640 North Batavia Street, Orange, CA 92867-3509 Phone: 714-434-6360 Fax 714-221-6360 Web Address: www.atechinc.net



2111 535

#### MOLD AIR SAMPLE CHAIN OF CUSTODY

7/20/2021 9:34 AM	211878-MA-0032	1st Floor, Classroom 28	75
7/20/2021 9:56 AM	211878-MA-0033	1st Floor, Classroom 37	75
7/20/2021 9:59 AM	211878-MA-0034	1st Floor, Classroom 36	75
7/20/2021 10:11 AM	211878-MA-0035	1st Floor, Classroom 35	75
7/20/2021 11:35 AM	211878-MA-0036	1st Floor, Classroom 1/2	75
7/20/2021 11:42 AM	211878-MA-0037	1st Floor, Classroom 5/6	75
7/20/2021 11:54 AM	211878-MA-0038	1st Floor, Classroom 3	75
7/20/2021 11:51 AM	211878-MA-0039	Exterior	150

Client Sample Number: 211878-MA-0019 to 211878-MA-00	39	Total: 21		
Relinquished By:	Date: 7/20/2021	Time: 12:19 PM		
Samples Received By: Sarah Tran	Date: 7 20 21	Time: 1:10pm		
Relinquished By:	Date:	Time:		
Samples Received By:	Date:	Time:		

# INSTRUMENT CALIBRATION REPORT



# A-Tech Testing

Instrument ID T75451842011

Description TSI 7545 IAQ-Calc

Calibrated 12/21/2020

Manufacturer TSI

Model Number 7545

Serial Number T75451842011

Location New Jersey

Temp 68

Classification

Status Pass

Frequency Yearly EOM

Department Lab Humidity 25

		Calil	oration Specific	cations			
Group	oup # 1 Name Tempera Accy Plus/M			Range Acc % Reading Acc % Plus/Minus	0.0000		
Nom In Val / In Val 20.00 / 17.70	In Type °C	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
20.00 / 17_/0	C	17.70	°C	17.80	17.70	0.00%	Pass
Group !	oup# 2 Name Relative Accy Plus/M	The second secon		Range Acc % Reading Acc % Plus/Minus	0.0000		
Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
30.00 / 29.40	%	29.40	%	31,10	29.40	0.00%	Pass
Group I	oup # 3 Name Carbon I Accy Pct of Re			Range Acc % Reading Acc % Plus/Minus	3.0000		
Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	LftAs	Dev%	Pass/Fail
0.00 / 0.00	ppm	0.00	ppm	6.00	0.00	0.00%	Pass
1000.00 / 1000.00	ppm	1000.00	ppm	970.00	1,002.00	0.20%	Pass
Group N	oup # 4 Name Carbon N Accy Pct of Re			Range Acc % Reading Acc % Plus/Minus	3.0000		
Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Dev%	Pass/Fail
0.00 / 0.00	ppm	0.00	ppm	0.40	0.00	0.00%	Pass
100.00 / 100.00	ppm	100.00	ppm	67.30	100.40	0.40%	Pass
Group N	up # 5 ame Barometr Accy Pet of Re			Range Acc % Reading Acc % Plus/Minus	3.0000		
Nom In Val / In Val	In Type	Out Val	Out Type	Fnd As	Lft As	Day9/	Dans/E-21
		29.71	2000	A 444 / XO	Luc Ma	Dev%	Pass/Fail

# INSTRUMENT CALIBRATION REPORT



# A-Tech Testing

Instrument ID T75451842011 Description TSI 7545 IAQ-Calc Calibrated 12/21/2020

Test Instrument 1D	Description	N. 6		(As Of Ca	l Entry Date)
A Section of the sect	The state of the s	Manufacturer	Serial Number	Last Cal Date	Next Cal Date
CO/CO2_105L- 375	100ppm CO, 1000ppm CO	2 Specialty Gases of America, Inc.	MBI-375-2	12/1/2018	12/11/2022
MICHELL DM-509-TX-01	Relative Humidity Meter	Michell	273296	11/3/2020	11/3/2021
NITROGEN_U HP	Nitrogen 99,999%	Liquid Technology	31821	12/1/2018	12/1/2023
OMEGA HX93AC/DP25- E	Omega HX93AC/DP25-E	Omega Engineering	1010368 035025 035026	11/25/2020	11/25/2022
DMEGA PX02K1-16A5T DP25-E-A	Omega PX02K1-16A5T/DP25-E-A	Omega Engineering	168377/8375030	11/25/2020	11/25/2022
OMEGA WT4401-D	Omega WT4401-D	Omega Engineering	101105	11/25/2020	11/25/2022
ZERO_AIR	Zero Grade Air THC <1.0 PPM	Liquid Technology	31845	3/1/2019	3/21/2023

# Notes about this calibration

Calibration Result Calibration Successful Who Calibrated Kevin Cole

Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.

# INSTRUMENT CALIBRATION REPORT



### **A-Tech Testing**

Instrument ID CM19362009

Description Thermo PDR-1500 Aerosol Monitor

Calibrated 12/7/2020

Manufacturer Thermo

Model Number PDR-1500

Serial Number CM19362009

Location New Jersey

Temp 70

Classification

Status Pass

Frequency Yearly

Department Lab

**Humidity 25** 

#### **Calibration Specifications**

Group # 1

Group Name Arizona Road Test Dust

Test Performed: Yes

As Found Result: Pass

As Left Result: Pass

#### Test Instruments Used During the Calibration

Test Instrument ID

Description

Thermo DataRAM-4000

**Manufacturer** 

Thermo

Serial Number

D780

(As Of Cal Entry Date)

Last Cal Date 3/6/2020

Next Cal Date

3/6/2021

DR-4 MASTER D780

Master

Notes about this calibration

Calibration Ratio: 1.15

Calibration Result Calibration Successful

Who Calibrated David Galego

Advanced Labs, Inc. hereby certifies that this instrument is calibrated and functions to meet the manufacture's specifications using NIST traceable standards, or is derived from accepted values of physical constants.