



PREPARED FOR: PRIORITYLAB CLIENT TEST ACCOUNT

TEST ADDRESS: 123 ELM STREET DAVIS, CA 95616

# CERTIFICATE OF INDOOR AIR QUALITY PARTICULATE REPORT

## PREPARED FOR

PRIORITYLAB CLIENT TEST ACCOUNT

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TEST LOCATION:
TEST CLIENT
123 ELM STREET
DAVIS, CA 95616
CHAIN OF CUSTODY # 52992428

COLLECTED: TUE JUNE 17, 2025

RECEIVED: WED JUNE 18, 2025

REPOR<mark>TED: WED JU</mark>NE 18, 2025



APPROVED BY:

John D. Shane PhD Laboratory Manager

VERSION: 1.0 (A VERSION NUMBER GREATER THAN ONE (1) INDICATES THAT THE DATA IN THIS REPORT HAS BEEN AMENDED)

EPA regulations or standards for airborne or surface mold concentrations have not been established. There are also no EPA regulations or standards for evaluating health effects due to mold exposure. Information about mold can be found at www.epa.gov/mold.

All samples were received in an acceptable condition for analysis unless noted specifically in the Comments section under a particular sample. All results relate only to the samples submitted for analysis and apply to the samples as received by the laboratory. Volumes, flowrates, areas or other information are supplied by the customer. This information can affect the validity of the results. Results have not been adjusted for field or laboratory unless otherwise noted. PriorityLab bears no responsibility for sample collection activities or analytical method limitations. No warranty is either express or implied and PriorityLab assumes no responsibility or itability for errors in public information utilized, statements from sources other than PriorityLab, or developments resulting from situations outside the scope of this analysis, nor for the purpose for which the client uses the analysis. The determinations in this report are outside the scope of the AIHA LAP, LLC scope of accreditation. PriorityLab is not accredited by AIHA for culturable fungi. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. PriorityLab liability is limited to the cost of the sample analysis and may not exceed the amount of the fee paid by the client.

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## **Detailed Particle Identification Report**

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Analysis Method	Air Analysis			Air Analysis			Air Analysis			Air Analysis		
Lab Sample #	52992428-1			52992428-2			52992428-3			529 <mark>92428-4</mark>		
Sample Identification	12345			23456			34567			45678		
Sample Location	OUTSIDE			KITCHEN			DEN			UPSTAIRS		
Sample Type / Metric	Breeze ST/150L			Breeze ST/150L			Breeze ST/150L			Breeze ST/150L		
Analysis Date	Wed June 18, 2025			Wed June 18, 2025			Wed June 18, 2025			Wed June 18, 2025		
Determination	CONTROL			POOR			FAIR			CLEAR		
Particle Types Identified	Raw Count	Particles / m³	% of Total	Raw Count	Particles / m³	% of Total	Raw Count	Particles / m³	% of Total	Raw Count	Particles / m³	% of Total
Fiberglass				55	369	2	12	80	<1	5	34	1
Insect Fragments	6	40	<1	55	369	2	27	181	1	7	47	1
Pet Dander				451	3022	17	42	281	2	15	101	3
Soot	15	101	<1	93	623	3	33	221	2	11	74	2
Tire Rubber	27	181	1	6	40	<1	22	147	1	3	20	<1
Charred Plant Debris	5	34	<1	2	13	<1						
Fibers-Cellulose	3	20	<1	29	194	1	31	208	2	72	482	19
Fibers-Synthetic	1	7	<1	5	34	<1	3	20	<1	6	40	1
Mineral Dust	2576	17259	96	1290	8643	50	1235	8275	84	102	683	27
Plant Fragments	37	248	1	12	80	<1				3	20	<1
Pollen-Undifferentiated	5	34	<1	2	13	<1	1	7	<1	4	27	1
Skin Cells	2	13	<1	453	3035	17				67	449	17
Starch Grains	5	34	<1	77	516	3	54	362	3	82	549	21
Minimum Detection Limit	7			7			7			7		
Comments/Definitions Raw Count: Actual number of particles observed and counted. Particles/m³: Particles per cubic meter. % of Total: Percentage of a particular particle type in relation to total number of other particles: Particle type was not observed.	compared. Particles in the Outside Air can be a major source of the particles indoors. Comparison of particles between outside and inside can help determine the origin of particles inside and any			The origin of particles in the air can often be traced. Comparisons between outside and inside can be valuable to help determine the presence of particles originating from outside. Particle concentrations should be used with caution when using them as a health surrogate because no standards exist for concentrations in homes.			The origin of particles in the air can often be traced. Comparisons between outside and inside can be valuable to help determine the presence of particles originating from outside. Particle concentrations should be used with caution when using them as a health surrogate because no standards exist for concentrations in homes.			The origin of particles in the air can often be traced. Comparisons between outside and inside can be valuable to help determine the presence of particles originating from outside. Particle concentrations should be used with caution when using them as a health surrogate because no standards exist for concentrations in homes.		

Particle types not listed in this report were not observed. Total percent may not equal 100% due to rounding.

<sup>\*</sup>Total Particle Counts are reported to 2 significant figures.



## Particle Glossary

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### Introduction

All particles are generated from substances, either organic, inorganic, living or dead. Particle generation is a natural consequence of growth, friction, combustion or some other process. Particles are found everywhere in the built and natural environment and therefore, it is not unusual to find particles in indoor and outdoor air. Furthermore, since homes are not built to prevent the entry of outside air, the same kind of particles can be found in the outdoor as well as the indoor air. This Particle Glossary is only intended to provide general information about the particles and their origin in the samples provided to the laboratory.

Interpretation of any Particle Report is the responsibility of the company and/or individual collecting the samples.

### **Fiberglass**

**Comments:** Fiberglass is inert and is the predominant material of insulation inside most modern buildings. A few counts of fiberglass is considered normal in homes. A large amount of fiberglass in the air could indicate a breach in fiberglass ducting, a filter that is disintegrating, HVAC system sound liners and ceiling tiles. Although mineral wool is dissimilar to fiberglass, our reports include it in this category because it has it is used in the similar building applications. Fiberglass may cause irritation to eyes, skin, nose, and throat. Direct contact with fiberglass can sometimes cause dermatitis.

### **Insect Fragments**

**Comments:** Large or small insect parts, e.g., wing scales, antennae hairs, various body parts. Insect fragments are frequently found in homes and offices in low concentrations. High numbers of insect fragments can be problematic and may indicative of an infestation or indicate the area be cleaned or the filtration system is not functioning properly.

#### Pet Dander

Comments: One of the most common allergies in the US is pet dander. Dog and cat dander can look similar so is not separated in our category of Pet Dander. Dog and cat Dander is common in homes with pets as well as schools and offices. Dog and cat dander can be present in homes and offices without cats or dogs because these allergens are sticky and travel on shoes and clothing. Cat dander can linger for months in a home or office because it is stickier than dog dander. Cats produce a protein known as Fel dland dog dander contains Can fl and Can f2. These protein can trigger allergic reactions in people. Dog dander lingers in a home much shorter than cat dander. About 10-20% of people in the United States have dog and/or cat allergies. Cat allergies are more common and often more severe than dog allergies Allergies to Dog dander is less common than allergies to cat dander.



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#### Soot

**Comments:** Soot particles are ubiquitous in the environment due to the presence of not only natural sources of combustion such as wildfires, but also from a very large number of human-generated sources (e.g., automobiles, power generation, aircraft, barbeques, fireplaces, candles, cigarettes, etc.).

Soot is derived from incomplete combustion of any product in a conversion process. It is impossible to identify the type of soot or its origin based on light microscopic techniques. Soot particles are normally fine to ultrafine (<100 nm) and can be volatile or semi-volatile.

When micron to sub-micron size aciniform (grape cluster-like) soot-like particles are present in the sample, the individual particles cannot be identified or quantified using optical microscopy analysis alone. Electron microscopy analysis may be warranted and helpful in determining the presence or absence of fine nonvolatile combustion soot. Semi-volatile soot particles may not be readily observed.

Wildfire debris contains minimal soot. Soot is more important for residential and industrial fires.

Because of the uncertainty of the exact origin of soot, it should only be treated as a secondary indicator of fires.

#### Tire Rubber

Comments: Tire rubber is produced from friction degrading car and truck tires. A small amount is normal in most outdoor air. It is not common indoors.

#### Charred Plant Debris

Comments: This category of debris consists of carbonized, burned or heat altered wood/plant

minerals from the soil, and pyrolyzed calcium oxalate or silica phytoliths from various plants and trees.

Charred plant assemblage analysis can potentially detect the characteristic particle signature or unique assemblage of particles created by a specific fire event (e.g., charred Douglas Fir wood can be indicative of the framing timbers used in many homes, burned leaf material a yard fire, etc.)



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#### Fibers-Cellulose

Comments: These are cotton plant fibers. They originate from clothes and paper as a normal consequence of wear on these items. Their presence is almost always noted in inside and outside environments. However, they are most common indoors. Cellulose fibers do not indicate an environment is dirty or clean. They can be irritating to humans if they are in large concentrations. Not allergenic or toxic.

### Fibers-Synthetic

**Comments:** Synthetic fibers are derived mostly from carpets and synthetic clothing materials. They are considered non-allergenic and normally found indoors in small concentrations. Their concentration can be dependent upon the activities in the home or office and types of fabrics.

Synthetic fibers do not trigger or cause allergies.

#### Mineral Dust

**Comments:** Inorganic, generally crystalline, naturally occurring, solid and generally opaque. These particles can be derived from weathered soils, and construction processes. Mineral debris can be abundant in outdoor samples and this can impact the indoor samples tremendously. These particles should not be a major particle type found in indoor air samples, or even surface samples. The indoor mineral debris concentration should always be smaller than the outdoor concentration.

### **Plant Fragments**

**Comments:** Plant fragments derived from the degradation of non-woody parts of plants that are naturally found inside and (mostly) outside.

#### Pollen-Undifferentiated

Comments: Uncategorized pollen derived from flowering plants. Pollen is overwhelmingly derived from the outside air. There should much less pollen inside than outside. Pollen can be allergenic, especially during certain times of the year. Keeping the doors and windows shut and having a high quality filter can help reduce the amount of allergenic pollen in the air inside buildings.



## Particle Glossary

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#### Skin Cells

Comments: Skin cell fragments are found indoors and to a much lesser extent, outdoors. Skin cell fragments are often the most abundant debris type indoors. Skin cells are derived from the human body and normally found in all environments humans live in. Amounts of skin cells in homes or offices can vary widely by age of individuals, furnishing, etc. A large concentration could mean an abnormal exposure to dust mite allergens. Dust mites eat skin cells and their droppings are allergenic.

### Starch Grains

**Comments:** Starch grains are found in and on a variety of products people have in their homes like food, clothing and paper. Most starch grains in homes and on and in products are drived from corn and are considered non-allergenic.