



# PURE BREEZE HEPA AIR PURIFIER PRODUCT CASE STUDY

VANIMAN MANUFACTURING CO.

# DANGER IN THE AIR

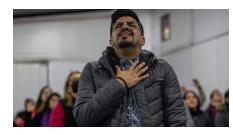
What you can't see **can** hurt you.

Every day, everywhere we go, we breathe in whatever's in the air, whether we see it or not. Air can contain alarmingly high amounts of:

- Pollen
- Dust
- Mold
- Smoke particulates
- Chemical fumes
- Biological hazards

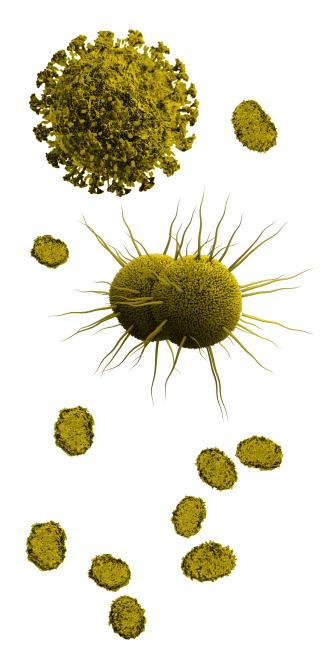
...And much more.

**Air quality** matters more than most people think, especially in work or school environments (source: NIH). Adverse effects of breathing contaminated air can range from sneezing, congestion, itching, and runny nose all the way up to breathing difficulty, headaches, fatigue, severe allergic reactions, contracting contagious diseases, long term respiratory issues, and even death (source: EPA).









### THE VANIMAN PURE BREEZE HEPA AIR PURIFIER

The **Pure Breeze HEPA Air Purifier** was designed to protect indoor spaces from such airborne hazards. It's a California Air Resources Board (CARB)-certified mechanical air purifier with no unnecessary or dangerous extra parts.

It uses a powerful yet quiet motor rated at up to 297 working CFM, which adds approximately 2-3 ACH to a roughly 1,000-sq. ft. room with a standard 8' ceiling. This, in conjunction with building ventilation, can help achieve the recommended 5 air changes per hour (ACH) for healthy indoor air (source: CDC).

Internal structure and sound dampening technology keep it at 56 dBA on the highest speed setting – quieter than the average human conversation.







# HEPA FILTRATION

This commercial-grade industrial air scrubber has **four stages of filtration:** two for larger particulates like dust and pollen, an activated carbon filter for fumes and odors, and a laboratory-grade HEPA filter to capture much finer particles, including bioaerosols that carry disease.



### CONFIGURATIONS

Multiple configuration options are available: stand-up (with casters for portability), mounted on a wall or ceiling, and even on a stand for a benchtop workspace setup. A variety of ways to place this unit make it ideal for a wide range of environments. The stand-up version allows for an optional clear acrylic Table Top accessory (also manufactured by Vaniman), allowing for double-duty use as furniture in waiting rooms, offices, and other such settings.



### TESTING THE PURE BREEZE HEPA AIR PURIFIER IN A REAL WORLD SETTING

Vaniman wanted to know the **real world effect** of this unit, especially in regards to bacteria in the air. We enlisted Dental Advisor, a professional scientific testing company well respected for combining clinical experience with laboratory data and reporting on long-term in-vivo performance of materials over time.

The test took place in an **actual dental practice** in Michigan who volunteered to allow for the sampling with volunteer patients and licensed dental professionals.

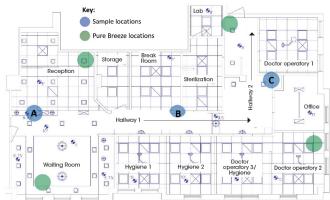


### The test worked like this:

- Bacterial load samples taken with SAS Super 180 Bioaerosol Samplers
- Multiple Pure Breeze units placed throughout the clinic
- Samples taken on closed days (Friday) as control groups
- Samples taken on business days (Monday, Tuesday, and Wednesday) with and without the units operating
- Measurements of colony forming units (CFUs) on the sample plates used for comparisons to determine effectiveness of the Pure Breeze units in this setting



SAS Super 180 Bioaerosol Sampler



## **RESULTS OF THE STUDY**

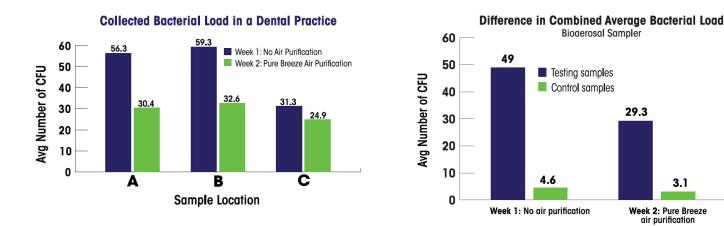
Control samples were taken on two separate Fridays, when the practice was closed.

Test samples were taken multiple times during normal office hours over two separate weeks at multiple locations throughout the space, during which the practice performed aerosol generating procedures in both the hygiene and doctor operatories.

The first week's samples were taken without the Pure Breeze units; the second week's samples were taken with the units in place and operating at the highest setting.

Microbial growth on the sample plates was quantified, analyzed, and recorded.

Bacterial load for all sample locations was lower when the Pure Breeze units were operating — showing, on average, a whopping **40% reduction in bacterial load**.



### KNOWN BENEFITS OF IMPROVED INDOOR AIR QUALITY IN THE WORKPLACE

- Increased cognitive function
- Reduced allergy and asthma symptoms
- Fewer absences
- Increased productivity
- Improved long-term heart health
- Better staff morale and lower turnover

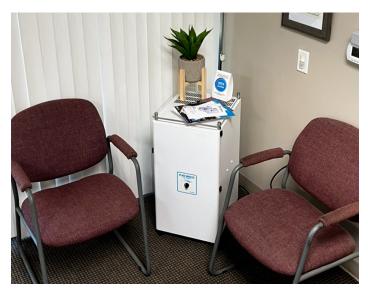


### EXPLORE THE VANIMAN PURE BREEZE HEPA AIR PURIFIER

- <u>Vaniman.com</u>
- sales@vaniman.com
- (760) 723-1498



SCAN FOR MORE INFO



#### SOURCES:

NIH-National Institute of Environmental Health Sciences, *Indoor Air Quality*: <u>https://www.niehs.nih.gov/health/topics/agents/indoor-air/index.cfm</u>

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Dental Advisor, *Air Purification and Bacterial Reduction Efficacy of the PURE BREEZE HEPA Air Purifier when used as a Whole Office Solution:* https://www.vaniman.com/wp-content/uploads/bsk-pdf-manager/2023/09/RR-150\_Vaniman-PureBreeze\_ONLINE.pdf