

# AirSource 3000 Laboratory Tests

## Summary:

Below are links to a collection of test summaries relating to both laboratory and "real-world" tests performed on the AirSource 3000. This testing/validation program is ongoing and will be periodically updated. The test parameters were as follows:

- **Odor Reduction**
  - [Lab Test for Odors](#)
- **Microbial Reduction**
  - [Household Test for Bacteria, Mold, and Yeast](#)
  - [Office Test for Bacteria, Mold, and Yeast](#)
  - [Medical Clinic Test for Bacteria & Odors](#)
- **Volatile Organic Compound Reduction**
  - [Lab Test for VOC Reduction](#)
- **Ozone Levels**
  - [Lab and Household Ozone Levels](#)

Click on a link above to view the results of a particular test. You may print out these pages and use them in presentations, however you may not add, remove, or edit the text in any way (except to add your contact information).

## Background:

The technology utilized in the AirSource includes a photo-ionization cell and an electron generator. These are new and unique technologies and, as such, no UL, ETL or ASTM testing protocols are currently in existence. In addition, no single, independent lab is capable of performing all the tests we want. Accordingly, we used various labs and consultants to validate the tests they were capable of conducting. Together they form a fair and balanced performance validation of the AirSource 3000.

However, we want more! So the Shaklee/RGF AirSource team has developed a testing protocol to perform all the tests at one location with a team of independent experts to validate the tests. Consequently, we have performed a series of independent, preliminary tests - with both an AirSource 3000 prototype and on the production model. The results of these preliminary tests are available by clicking the links above.

We ask for your patience and understanding, as this scale of testing is a monumental task. There are numerous molds, bacteria and odors for us to analyze. Our plan is to test each one with a minimum of two test methods. For example, odors will be tested by a human panel and then a gas chromatograph test will back up the human test. Molds and bacteria will be tested in homes and in spiked lab test chambers.

We have developed a team of independent experts to evaluate the AirSource 3000 performance and are currently working with a national testing lab to develop an all-encompassing test/certification protocol. Our team of experts was developed to bring a variety of expertise. The team includes:

- A food scientist, bacteria and ozone expert
- **A licensed professional chemical engineer**
- **A biologist**
- **A medical doctor – Oncologist**
- **An equipment performance evaluation expert**
- **A university professor, bacteria and ozone expert**

This program will be an ongoing series of testing. Updated results will be posted periodically on this page so check back regularly.

## LAB TEST FOR ODORS

The device reduced the odors by the following percentage in four hours:

<b>Compound</b>	<b>Odor</b>	<b>% Reduction</b>
Hydrogen Sulfide	Rotten Eggs	32%
Methyl Mercaptan	Rotten Cabbage	40%
Carbon Disulfide	Vegetable Sulfide	11%
Butyl Acetate	Sweet Banana	50%
Methyl Methacrylate	Plastic/Sharp	56%

Qualifications

Performance Analytical, Inc. is a NELAP accredited lab that is certified for organic analyses by the American Ind. Hygiene Association.

## **HOUSEHOLD TEST FOR BACTERIA, MOLD, & YEAST**

After four days:

- Test 1** Mold: 97.7% reduction
- Test 2** Yeast & Mold: 90.9% reduction
- Test 3** Mold: 77.0% reduction
- Test 4** Bacteria\*: 34.5% reduction

## **OFFICE TEST FOR BACTERIA, MOLD, & YEAST**

*Centrifugal Test*

Total Plate Count Reduction by third day: 88% Yeast & Molds Reduction by third day: 71%

*Plate Test*

Total Plate Count Reduction by third day: 78%

Yeast & Molds Reduction by third day: 90%

## **MEDICAL CLINIC TEST FOR BACTERIA & ODORS**

Petri dishes were placed in five locations without the device on. Dishes were sealed and incubated. The machine was turned on and petri dishes were exposed after 24 hours.

Test Results

<b>Sample #</b>	<b>% Bacterial Reduction</b>	<b>Odor Reduction</b>
1	72%	Yes
2	71%	Yes
3	80%	Yes
4	74%	Yes
5	72%	Yes

