



## Frequently Asked Questions

### How does Agriair® purification work?

Agriair® purifiers produce Ionized Hydro-Peroxides (IHP), oxidizing gas molecules, by UV energy reacting with a quad metallic shield. The IHP is generated from humidity and O<sup>2</sup> in the air without adding any chemicals. The IHP oxidizer plasma is exhausted in the air, where it proactively seeks any type of bio-contaminant to destroy. The unused oxidizer plasma reverts back to humidity and oxygen in about 15 minutes, leaving no chemical residues behind. The cycle of IHP oxidizer plasma generation, reaction with contaminants, and breakdown to O<sup>2</sup> and humidity is going on 24/7, sanitizing and protecting your plants.



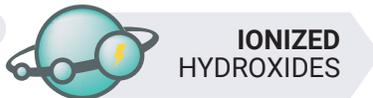
### Is Ionized Hydro-peroxide safe for plant, animal and human exposure?

Ionized Hydro-Peroxides occur in nature in levels similar to those produced by our purifiers, or about 0.03 ppm which is 30 times lower than the OSHA limit.



### Does an Agriair® Purifier alter the quality of the harvested crop, THC or CBD?

Based on independent lab reports the harvest retained its normal quality while mold and fungus were eliminated. Independent labs show no loss of cannabinoids, trichomes, taste, or terpenes from the final product.



### Does IHP reduce the level of CO<sup>2</sup> in the air?

The CO<sup>2</sup> levels are not reduced by the IHP oxidizer plasma. By breaking down the VOC's and converting them not CO<sup>2</sup>, our

purification system adds carbon dioxide into the environment and eliminated or minimizes the need for CO<sup>2</sup> boosters.

### How much space does each purifier sanitize?

As an example, the purifier with a single 14" IO (ionized oxidation) generator can sanitize and control odor in about 5,000 cubic ft. of space, with 100 plants. The unit with 9" and 14" generators can run on low output and cover 3,000 cubic ft., at medium 5,000 cubic ft. and at high, 8,000 cubic ft. of space with over 175 plants. The purifiers with two 14" generators can effectively sanitize over 10,000 cubic ft. of space with over 200 plants. These are only guidelines and, in our experience, these units can sanitize and control odor in considerably larger areas. It is important to have air constantly moving in the grow area to distribute IHP to all the plants and surfaces.

### How does installing an Agriair® purifier benefit my grow operation and save me money?

The Agriair® purifier sanitizes the air and surfaces in the grow area, thus greatly reducing the need for fungicides and pesticides to keep plants healthy. It kills pollen, viruses and molds, such as Aspergillum and Botrytis, which can destroy entire crops. IHP also prevents mold from growing on the HVAC system and kills the mold spores in the air. Additional benefits of the Agriair® purifier is the removal of odors and VOCs inside the grow area by converting them into CO<sub>2</sub>. This eliminates the need for CO<sub>2</sub> boosters and for a carbon filtration system for the exhausted air.



### **How much service does the Agriair® purifier require?**

Agriair® purifiers contain particulate filters, which capture pollen, dust and mold spores and should be replaced. We have two types of purifiers; in-duct and self-standing. Both type of purifiers require changing the generator cell every 2½-3 years of continued operation as the UV light loses its capacity.

Agriair® self-standing purifiers contain particulate filters, which capture pollen, dust and mold spores and should be replaced when loaded with contaminants approximately every three months. Some Agriair® purifiers contain carbon filters, which block any visible light radiating from the unit and should be replaced annually. All service can be done on site.

### **What is the best way to install an Agriair® purifier unit?**

Most Agriair® purifiers are portable and easy to set up without ducting and require only a 115 Volt outlet. The units are designed to generate IHP gas which mixes with air circulating inside the grow area. These units should be installed elevated above the floor or hanging from the ceiling. This will assure complete mixing of exhausted peroxides with the air in the grow or processing area. As an optional accessory, the units could be ordered with flexible ducting to direct the hydro-peroxide rich exhaust to any area desired.

### **Does the Agriair® purification process generate Ozone?**

The Agriair® purifier does not product Ozone. Its purification action utilizes the oxidation process where ionized hydro-peroxides add or remove an oxygen molecule from the organic contaminants to destroy them.

### **Where should I use the IO purifier with HEPA filter?**

The drying period is a critical time in the grow process, when the cannabis can easily get moldy and contaminated. During this time, we recommend our purifiers with IO generators to sanitize the entire processing environment and HEPA filters to enhance the process by capturing even sub-micron contaminants.

### **Could I use an Agriair® purifier for rapid sanitation of a contaminated area?**

We recommend sanitizing your grow area thoroughly before each new cycle, followed by setting up the Agriair® purifiers, to maintain sanitation of the space 24/7. If use of the purifiers begins in an environment with sick plants containing powdery mildew, for example, the existing mildew will be brought under control and will not spread to healthy plants. Depending on the level of the bio-contamination and the size of the space, multiple units can be used to control highly contaminated areas; increasing the concentration of IHP without harming the plants. While the IHP is considered safe for human exposure, each operator must determine how to maintain a safe and comfortable IHP level while the area is occupied.

### **What are the important factors to consider when choosing Agriair® Purifiers for a contained grow environment?**

- Goals - What are the goals I'm trying to achieve - control of odors, mold, mildew, fungus, microbes?
- Size - The total cubic feet of the grow space determines how many Agriair® purifiers are required to generate the amount of peroxides needed to purify the whole space.
- Distribution of Peroxides - The IHP plasma generated by the purifiers has to be exhausted into air circulating in the grow space. Turbulent airflow through the grow space is necessary to assure an even distribution of peroxides and to achieve complete sanitation of plants and surfaces.



## **Is the Agriair® effective on destroying formaldehyde?**

Our purifiers effectively eliminate off-gassing of formaldehyde and many other chemical fumes and VOCs.

## **How do I know if I have enough concentration of IHP in the air of a contained grow environment?**

If odors are greatly reduced within hours of the installation of the purifiers, it is a good indication that the IHP level is sufficient for sanitizing the air & surfaces. It is important to watch your plants closely assuring they remain healthy, mold and mildew free, and calibrating the level of hydro-peroxides in your grow space appropriately. The ultimate purpose of the IO purification process is to have healthy plants without using chemical pesticides and fungicides. Another indication that the purifiers are working is that the HVAC system stays clean of mold or is gradually purified of existing mold after the installation of Agriair® purifiers.

## **How does the Agriair® purifier compare with the use of carbon filters?**

Carbon filters remove odor and VOCs from the air exhausted to the outdoors and create negative pressure inside the building, allowing pollen and other contaminants to leak into the grow area. Also, carbon filters do not sanitize the air and surfaces inside your grow space. Agriair® purifiers remove odors inside the grow area, sanitize the air and hard surfaces, prevent growth of mold inside HVAC systems, and create a healthy environment for plants and workers. Our purifiers also enable growers to reduce the use of fungicide and pesticide. While the carbon filter initially costs less to install, the high cost of energy to operate, the replacement of filter media and the maintenance of the units makes this system more expensive to operate than Agriair® purifiers which are more energy efficient.

## **Can Agriair® purifiers sanitize existing contaminated HVAC systems?**

Yes, the IHP molecules destroy mold growth in the HVAC system and ducting. This can be done gradually, during the normal air sanitizing process, or rapidly, by sending the Agriair® purifier output directly into the intake of the HVAC unit.

## **Are Agriair® purifiers effective in greenhouses?**

Agriair® purifiers provide multiple functions in greenhouse applications to keep the plants and the environment healthy including the following:

- They purify incoming outside air by deactivating pollen, mold spores, virus and bacteria.
- Kill mold, mildew, fungus and bacteria generated inside the green house.
- Reduce or eliminate odor from the air before it is exhausted to the outside.

## **How much hydro-peroxide is required to provide complete sanitation and control odors in the green house?**

There are many variations of greenhouse construction and methods of growing crops. Also, variations in the climate from hot, wet, dry, cold and seasonal changes in the environment need to be considered. Agriair® purifiers generate strong peroxide molecules which are exhausted and mixed into the surrounding turbulent air where they pro-actively seek and destroy bio-contaminants. These peroxides are active for about 15 minutes, during which time they either react with bio-contaminants or convert back to O<sup>2</sup> and humidity. Each Agriair® purifier, depending on the number and size of its IHP generators, can release enough peroxides to purify from 3,000 to 12,000 cubic feet of air. Depending on the size, its operation and required level of purification, multiple units can be installed throughout the greenhouse to maintain an elevated level of Ionized-Hydro-Peroxide



in the air to continuously destroy bio-contaminants. Our modular approach using Agriair® purification units provides maximum flexibility to respond to changing conditions inside and outside the greenhouse.

**What are some important factors to consider when choosing Agriair® purifiers in my greenhouse?**

- Goals – What are the goals I’m trying to achieve – control of odors, mold, mildew, fungus?
- Size – The total cubic feet of the greenhouse determines how many Agriair® purifiers are required to generate the amount of peroxides needed to purify the whole space.
- Air Flow – The number of air changes per hour inside the greenhouse must be considered when calculating the number of purifiers required.
- Distribution of Peroxides – A turbulent airflow through the greenhouse is necessary to assure an even distribution of peroxides through the whole space to achieve a complete sanitation. To provide sufficient exposure to IHP, the greenhouse cannot be open to outside air. To build up sufficient concentration of IHP inside the greenhouse, Agriair® machines need to operate in a closed cycle for a minimum of 12 out of each 24-hour period.

**for further information please visit us at**

**agriair**equipment.com****