

## **RADIANT CATALYTIC IONIZING RCI INDOOR AIR PURIFIER - TECHNOLOGY**

### **Ionic Air Purifier with Advanced Air Cleaning Technology**

While most manufacturers of ozone air purifier systems use the older, corona discharge (high voltage electricity) method to create ozone, RADIANT CATALYTIC IONIZING RCI's Photohydroionization™ AHPCO or RCI Cell is the latest advanced oxidation technology used in air purifiers that consists of a proprietary, high-intensity broad spectrum UV tube (100 – 300nm) in a hydrated catalytic matrix cell. Low-level ozone is produced in the cell, the majority of which is converted into airborne hydro peroxides and super oxide ions. The UV bulb is encased in a protective metal cell. Like ozone, UVGI destroys bacteria, viruses, and fungi and has been used in medical facilities for years for those exact purposes. Combining photolic ozone with UVGI and moisture (humidity) produces a powerful oxidant known as hydroxyl radicals.

These purifying hydroxyls have been described as "the single most important cleansing agent in the earth's atmosphere". They break down hazardous organic compounds and are a catalyst in the chain reaction necessary for contaminant oxidation. In addition to these purification methods, RADIANT CATALYTIC IONIZING RCI air purifier units produce negative ions via ultraviolet wavelengths. The RCI™ Cell Technology combines the best of science and electronics to produce the purest of air. RADIANT CATALYTIC IONIZING RCI's Systems Makes Air Purification SIMPLE

There is no consensus as to when ozone levels become harmful to humans, but based on available research, regulatory agencies such as the FDA have set safe levels at .05 ppm (parts per million) for continual exposure and OSHA has set 0.1 PPM as a maximum for 8-hour exposures. Other agencies and organizations have similar recommendations. Previously, all ozone generators used for air purification had the potential to produce ozone levels over these recommendations.

To combat this problem, some manufacturers of portable ozone home air purifiers introduced models with ozone sensors that automatically shut off the units when ozone levels rise above a prescribed limit. While this is a step in the right direction, these devices are not foolproof, nor do they seem to work well in all size environments, nor do they control the "blasting" of high concentrations of ozone when operating. RADIANT CATALYTIC IONIZING RCI™ Air purifier has developed another method to ensure safe ozone levels. RADIANT CATALYTIC IONIZING RCI's technology will not allow the accumulation of ozone to exceed recommended, safe levels. It is a fail-safe method. It does not rely on electronic gadgetry or inexpensive sensors, but combines the science of ultraviolet radiation, atom disassociation, quantum yield, and optimization of unit geometry.

In practical terms, this means as the ozone level in an environment begins to rise, the machine will automatically reduce the amount of ozone being produced, thereby keeping the accumulation at low levels. There is no longer a reason to have concern about the potential harmful effects of too much ozone. A RADIANT CATALYTIC IONIZING RCI home air purifier will provide all the wonderful, powerful benefits of ozone but with none of the worry associated with previous ozone devices. If you love the pure air at Yosemite National Park, Lake Tahoe, or Sequoia National Park, then you will love the results of the RADIANT CATALYTIC IONIZING RCI method.

## **Safe Air Ionizer For Your Home Or Office**

“The advantage of our RCI™ technology is its ability to reduce microbials at the source. Most air purification/decontamination systems work on the air being transferred through ducts. These systems only work on the air being filtered. The RADIANT CATALYTIC IONIZING or RCI™ technology actually sends oxidizers throughout the room to make a kill at the source.” The cell is not a medical device and RADIANT CATALYTIC IONIZING RCI makes no medical claims.”

The RCI™ cell works on a quad metallic hydrate targeted UV light technology developed by RADIANT CATALYTIC IONIZING RCI. The RCI™ technology has achieved the following results in tests by commercial, governmental and academic independent labs:

### **WITH RCI / APHCO TECHNOLOGY:**

- 4-log reduction (99.99%) surface bacteria reduction
- Tested and approved by the Chinese Government to aid in the protection against the SARS virus.
- Over 80% VOC reduction
- 97% airborne bacterial reduction
- 85% odor reduction
- 99.99% bacteria in water reduction
- 97% airborne mold reduction
- Hospital approvals Infectious Diseases - U.S. and international
- 99% food surface microbial reduction
- Approved by the USDA, FSIS and FDA for use in food processing plants
- Fox News three-part indoor air series featured RADIANT CATALYTIC IONIZING RCI and concluded substantial mold and bacteria reductions
- RADIANT CATALYTIC IONIZING RCI's technology has been featured on Fox, ABC, CBS and in Popular Science Magazine

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