



AIR & SURFACE PURIFIER BY
puracenz

Photocatalytic Oxidation (PCO) Summary

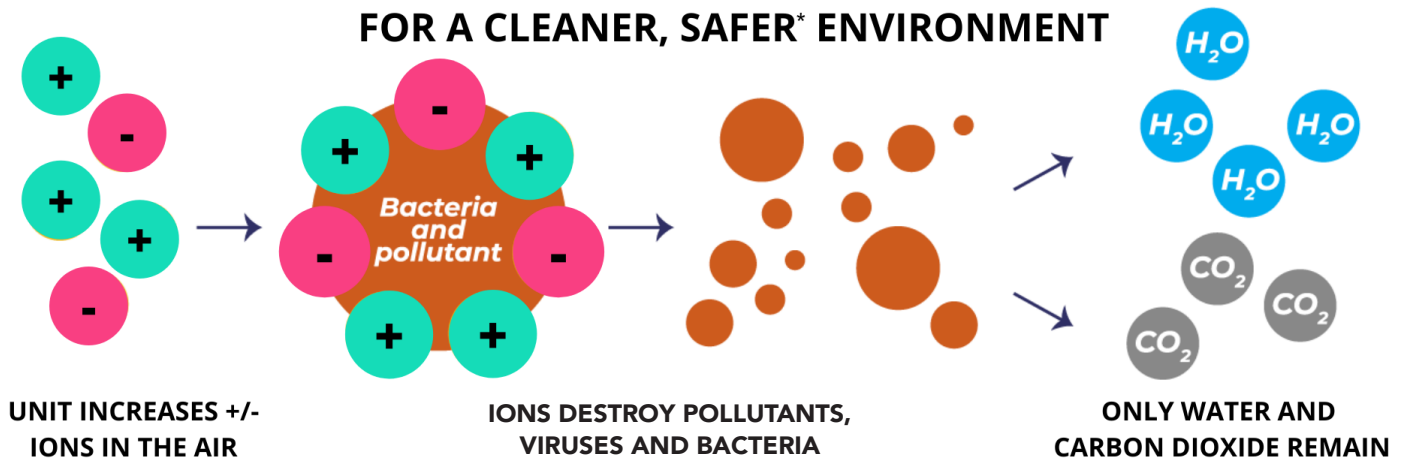
The OgenaShield Air & Surface Purifier by Puraclenz next generation Photocatalytic Oxidation (PCO) unit is a newly patented solution that further reduces the risk of transmitting diseases in an indoor environment. It is a cost effective device that runs continuously 24/7, covering multiple rooms and up to 3,000 sq.ft. while requiring very little up-keep or maintenance.

PCO is a natural process that occurs in nature with things like sunlight, lightning and even waterfalls creating ions in the air around us. When the number of ions reaches a certain point, the ions destroy pathogens and pollutants in the air (much like after a thunderstorm or standing by a large waterfall where we notice the freshness in the air).

PCO can also be created artificially using devices equipped with a UV light that shines onto a titanium dioxide (TiO₂) coated surface. The negative with first generation PCO devices was that they generated ozone, and ozone is considered a harmful substance that shouldn't be used indoors. Recent design breakthroughs, such as the one patented by Puraclenz, involves a design that produces very powerful ions without the use or creation of any ozone whatsoever.

With the newly patented system, an ozone free UV light activates the TiO₂ and there is a shift in the electrons in the air which creates positive and negative ions that are very reactive. These active ions react with moisture and oxygen in the air creating very powerful multi clusters of electrically charged ions. In turn these clusters react with organic and inorganic materials causing complete oxidation/destruction. Furthermore they attack microorganisms such as viruses and bacteria by destroying their membranes (the outer part of a cell) and cytoplasm (the inner part of a cell) causing death.

FOR A CLEANER, SAFER* ENVIRONMENT



*All Puraclenz units are both CARB** (California Air Resource Board) Certified for safe indoor use and UL2998 Certified as zero Ozone products.

** CARB is widely recognized as the toughest indoor air quality standard in the world.





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Traditional ionizing systems have had three reported issues:

1. The use or development of ozone during their operation.
2. Their use causing dramatic increases in different types of VOC's at levels that could be harmful to people and animals.
3. Increase the levels of ultrafine particles in the room.

These types of earlier systems have been classified by the CDC and ASHRAE as being an emerging technology for just these reasons. In the case of the Puraclenz systems, the patented technology behind them has finally advanced PCO technology to the point where it is not only very effective at killing pathogens mid-air and on exposed surfaces in any facility where they're used, but most importantly does so in a manner that is safe for people, animals, and our environment.

Puraclenz's technology has been tested and shown that they do not cause any of the 3 reported issues of other ionizing systems:

1. Unlike most other ionizers, Puraclenz uses zero ozone technology that passes UL2998 certification, the most stringent ozone free safety standard. [Please click here to view our UL2998 certificate on our website.](#)
2. Puraclenz passes CARB (California Air Regulation Board) regulations and is listed under EO#21-214.
3. Unlike traditional ion generation systems that generate harmful levels of VOC's, independent laboratory studies show that VOC's measured were at least 35 times below the OSHA permissible exposure limits standard for safe use around people. [Click here to view our VOC lab report.](#)
4. No particulate formation was measured during the VOC challenge test, which proves Puraclenz does not have the same side effect of creating ultrafine particles as other ionizing technologies.

