

## How Sun Aire™ UV Purifiers Work Clean Fresh Air – Breathe Easier with Sun Aire™

Ultraviolet germicidal air filtration products are used all over the world to control pathogens. Ultraviolet lamps can make ozone when they produce energy at around 185 nanometers (which is how UV ozone machines function). However, when they operate at 257 nanometers (UVC) they do not produce ozone but this energy is a powerful bactericide and virucide. **Sun Aire™** purifiers use UVC lamps and operate at 257 nanometers for SAFE indoor air purification. UVC alters the genetic code of any single-celled microorganism, causing it to virtually destroy itself.

**Sun Aire™** purifier uses a process to make allotropic oxygen from O<sub>2</sub> up to O<sub>3</sub>. These are unstable molecules that oxidize harmful pollutants and pathogens much more effectively than ozone. **Sun Aire™** purifiers do not produce nitrous oxides, unlike many other purifiers.

When so-called air purifiers use heat to excite molecules in the air, much like lightening occurs, Nitrogen Oxides form. This is a positive occurrence outdoors because the rain follows and washes the nitrogen into the soil for plants to utilize. However, when heat is used indoors to excite oxygen molecules in the air into O<sub>3</sub> (OZONE), these same nitrogen oxides combine with moisture found in the lungs of humans and animals and becomes nitric acid, an unhealthy purification process indoors where humans and animals are breathing. An excerpt from Ed McCabe's book on the new technology reviews the differences between the PHOTOZONE (COOL LIGHT PHOTON) process and traditional OZONE, with our UVCC lamps. Ultraviolet in the C spectrum is what PURIFIES the air. The sun forms PHOTOZONE daily and continually purifies the air in the same way Naturallighting.com **Sun Aire™** purifiers do.

Mold and fungi are spread by airborne spores, and **Sun Aire™** purifiers stop mold, mildew, fungi by oxidizing these airborne contaminants on contact. By stopping the airborne reproductive cycle, spores are unable to reproduce when and if they land on a host.

### NEW TECHNOLOGY

*From the book - "Oxygen Therapies" - by Ed McCabe - Pages 140-141*

As we have seen in the previous section about the lab researchers, "Cold process" or "Nitric oxide free" types of ozone can be formed from special "ceramic sandwich" composition generators. Cold process ozone can also be formed from air or water that is subjected to high frequencies or ultraviolet light. The amount of type of ozone produced depends on the wavelength of the light being used. The closer we are to naturally sun-produced ozone, we experience fewer problems.

Scientists consider light to be a stream of invisible packets or compressions of energy that are called photons or waves. The energy carried by a light's photons increases as the length of the light's wave (wavelength) shortens. Only the UV light that is actually absorbed causes any chemical or physical changes, and atoms and molecules absorb only those wavelengths that provide the right frequency of energy to produce any changes to their status. Let's examine the differences between the traditional commercially produced ozone and the special UV lamp Photozone gas:

### PHOTOZONE AND TRADITIONAL HOT SPARK OZONE COMPARISON

#### PHOTOZONE

- Negative Ions
- pH Basic
- No nitrogen oxides
- 2= hour half-life in tap water
- 66% negatively charged ozone

#### OZONE

- Positive Ions
- pH Acid
- Nitrogen oxides present
- 20 minutes half-life in tap water
- 96.4% positively charged ozone

As you can see from the comparison information above, the patented Photozone Advanced Photo Oxidation (APO) process generates ozone, but has some significant differences: The special Photozone UV lamps produce the exact wavelength needed to produce not only ozone, but other higher forms of activated oxygen as well. No significant corrosive nitric oxides are present. The gas is full of negative ions. Note the similarity to the negative ion avalanche effect noted by the Japanese physicist in the section on cold process ozone. A Photozone gas compound analysis follows:

#### **COMPOUNDS IN PHOTOZONE ACTIVATED OXYGEN GAS**

- Ozone, O<sub>3</sub>, 66.7%
- Hydroxyl Radical, OH 14.7%
- Hydroperoxy Radical, HO<sub>2</sub>, 6.3%
- Hydrogen Peroxide, H<sub>2</sub>O<sub>2</sub>, 5.9%
- Atomic Oxygen O, 4.4%
- Other Oxidants, 2.0%
- Nitrogen Oxides, NO, <0.1%

*NOTE: Please note the presence of our friends, the peroxide radicals, and hydrogen peroxide.*