Dual BiPolar Purification & Sanitization Technology as used in the Intellipure Premium Plus system

Three primary reasons are at the root of poor indoor air quality (IAQ) in homes and offices:

**Energy conservation measures, including tighter, well-insulated buildings.** A consequence of air tight and well-insulated building construction is less fresh air enters the building, allowing pollutant levels to increase by trapping air inside. This will also lead to excessive moisture and uncontrolled humidity elevating allergens and molds.

**Increasing use of synthetic building materials, furnishings, paints and carpets.** There are three ways in which people are exposed to chemicals: ingestion, dermal absorption and inhalation. Ingestion occurs when materials that have chemical content are eaten or placed in the mouth. Dermal absorption occurs when chemicals come into contact with the skin. While these are both significant forms of chemical exposure, the majority of everyday chemical exposure occurs through the air we breathe in our homes, offices, schools and other indoor environments. These airborne chemicals are commonly referred to as volatile organic compounds (VOC's).

**Contaminants generated by People and activities within the building.**

Occulant activities, including smoking, use of cleaning products, pesticides, water leaks and water damaged building materials left untreated, and poor maintenance of the home and its heating, ventilating and air-conditioning (HVAC) system.

According to air quality industry professionals and the US Environmental Protection Agency, the answer to indoor air quality problems are **SOURCE ELIMINATION**, remove the actual source of contaminant(s) within the home or office, **DILUTION**, attempt to increase fresh air from outside to inside in an attempt to dilute the contaminant(s) and **UTILIZE AIR QUALITY IMPROVEMENT TECHNOLOGIES.**

**OUR SOLUTION:** Utilize our patented proprietary Dual BiPolar Sanitization and Purification Technology. This process combined with the DFS Filtration utilized in the Intellipure Premium+Plus system effectively eliminates the contaminants from our homes and offices, Increases the concentration and percentage of fresh air oxygen which naturally occurs as contaminants are destroyed effectively providing truly fresh air. BiPolar Ionization is a safe, nature based technology that has been researched for over a hundred years, yet truly goes back to the beginning of time. It is the very essence of what allows “outside air” to be “fresh air”. There is a reason why people often feel more energized, more invigorated, sleep better and just naturally feel better when they are near the mountains, waterfalls, waves near the beach and nature based settings. Science clearly has demonstrated there are much higher levels of naturally occurring positive and negative ion charged molecules in these
environments. Many air purifier companies have “tried” to mimic this nature based process but often have utilized only a “piece of the puzzle” by adding just negative ionization. Their reasoning is because negative ionization can create a fresh clean smell to the air. However, just like everything else in nature, there must be a balance. It is the balance and natural occurrence of BOTH positive and negative ionization, “BIPOLAR” ionization that creates not only a smell of fresh clean air, but the actual high concentration of pure oxygen ions and a truly purified air with the molecular destruction of bio-toxins, chemicals and pollutants. True BiPolar Ionization does not produce ozone or toxic gasses. The BiPolar Ionization sanitization and purification technology used in the Intellipure Premium+Plus system is often imitated, yet never duplicated. This is why we have been able to consistently deliver high purity, safe and healthy homes and offices for thousands of individuals and families for decades. We understand the problems and we understand the solutions. We also know that you must use safe, natural, proven technologies to bring your life and health back to balance.

How It Works: The Dual BiPolar Sanitization and Purification technology is a proactive approach to truly cleaning your air. Even a really good air filter is simply a reactive process waiting for the air to come to it and reduce some particles. The Dual BiPolar sanitization technology is what we call 3D purification in which the purifying positive and negative ions actively go out into the air and on surfaces to search out and destroy harmful breathable particulates, volatile chemicals and dangerous microbiological toxins. This is why we call our process DUAL BiPolar. It not only purifies the air within the Intellipure Premium+Plus system, but provides a secondary purifying process that goes out beyond the system creating safe and healthier air throughout your indoor environment. Our Dual BiPolar process is a no ozone, cold plasma based technology that splits water vapor from naturally occurring humidity into positive and negative ions that are discharged into the air. These ions attach themselves to allergens such as smoke, dust, pollen, pet dander, and much more. The particles continue to bond to each other allowing them to become non breathable because of their larger size and are more easily collected in filters. The positive and negative ions attack odors and other chemical contaminants and convert them into oxygen, water vapor, and carbon dioxide, neutralizing odors and greatly improving your Indoor Air Quality (IAQ). The Intellipure Dual BiPolar Sanitization technology also prevents allergens from reproducing by removing hydrogen and disrupting the DNA of the pathogen. It operates on principal much like Hydrogen Peroxide. Effectively purifies and sanitizes toxins on and around us, yet does us no harm. Safe for people, children and our pets, yet very powerful against chemicals, breathable particles and microbiological bio-toxins. As an added benefit, static electricity is quickly reduced! Think about, when is the last time you received a “shock” walking on grass. Our homes and offices are filled with toxic, unbalanced, unhealthy low level ions filling our air with pollutants. Take a step in the right direction, into a home with healthy, abundant levels of safe and naturally balanced positive and negative ions. Safe, Healthy
Balanced. That is our solution. That is your answer to the best air possible for you and your family.

Other Advantages:

No Ozone

No Replaceable Parts

No Moving Parts

Extremely Low Energy Usage

UL & ETL Listed for Electrical Safety

Nothing to Clean

Lifetime Warranty, Never needs replacing
**Reduction in Airborne Particles** - The positive and negative ions are drawn to airborne particles by their electrical charge, not just particle size. Once the ions attach to the particle, the particle grows larger by attracting and agglomerating nearby particles of the opposite polarity. This converts small ultrafine breathable particles into larger non breathable ones thereby allowing filtration to be even more effective in capturing them.

**Kills Virus, Bacteria, Mold & Bio-Toxins** – Similar to how positive and negative ions surround particles, they are also attracted to pathogens. When the ions combine on the surface of a pathogen, they rob the pathogen of the hydrogen necessary for them to survive. During the final step of deactivation, the ions eliminate hydrogen from the pathogen and then the plasma cleansing process is complete, thus rendering the airborne virus, bacteria or mold spore inactive. The Dual BiPolar ions destroy the virus surface structure, on a molecular level. As a result, the virus cannot infect even if it were to enter the body. More technical, yet very important, the BiPolar Ion technology process also deactivate the molecules of the IgE antibody binding site of the allergen. No allergic symptoms occur even if allergens were to enter the body. Unlike a UV light or traditional filter which requires a contaminant to come to it with a long time of exposure required, the BiPolar Ions proactively go to the contaminant in its search and destroy mode effectively and rapidly destroying the toxin on a molecular basis.

Dual BiPolar Ionization Kills Virus, Bacteria and Mold - Positive and negative ions (nature’s air purifiers) surrounds the pathogen (See Figure 1). Next, the BiPolar ions rob the pathogens of the hydrogen necessary for them to survive (See Figure 2). During the final step, the BiPolar ions eliminates hydrogen from the pathogen and then the cleansing process is complete, making the airborne virus, bacteria or mold spore inactive.
Hundreds of thousands of dollars have been invested into third party, independent certified laboratory testing Elite rated by The Centers for Disease Control. The independent laboratory testing confirmed the effectiveness of the Intellipure Premium+ Plus BiPolar ionization technology against the pathogens listed below within 15-60 minutes, not days, weeks or months.

Airborne mold spores - Reduced 99.5%
STAPH - Reduced 96.24%
MRSA - Reduced 96.24%
C. diff - Reduced 86.87%
Legionella - Reduced 99.71%
E. Coli - Reduced 99.68%

And here are just a few more contaminants proven to be effectively reduced:

H1N1    Polio Virus
H5N1    SARS Virus
Feline Coronavirus    Coxsackie Virus
Serratia Bacterium (TB)

This was just using the BiPolar technology. The combination of DFS filtration and BiPolar Sanitization and Purification as used in the Intellipure Premium+Plus system has an even wider range of contaminant removal and effectiveness capabilities.

Over 100,000 of our BiPolar Sanitization and Purification systems are in use throughout the world.

Some of our BiPolar satisfied clients include:

University of Pittsburg Medical Center
Baylor College of Medicine
Children’s Hospital Boston
Presidential Palace, Abu Dhabi
Tampa Bay Times Forum
UNC Hospital
US Army and Marines
Clemson University
Phoenix Sky Harbor Airport
Over 600 K-12 Schools
Virginia Military Institute