How Ionization Works

GPS' NPBI technology works to safely clean the air inside industrial, commercial and residential buildings. The patented technology uses an electronic charge to create a plasma field filled with a high concentration of + and - ions. As these ions travel with the air stream they attach to particles, pathogens and gas molecules. The ions help to agglomerate fine sub-micron particles, making them filterable. The ions kill pathogens by robbing them of life-sustaining hydrogen. The ions breakdown harmful VOCs with an Electron Volt Potenial under twelve (eV<12) into harmless compounds like O_2, CO_2, N_2, and H_2O. The ions produced travel within the air stream into the occupied spaces, cleaning the air everywhere the ions travel, even in spaces unseen.

What is an Ion you may ask?

An ion is a molecule or atom that is positively or negatively charged, meaning that it has electrons to give or needs electrons to become uncharged, thus becoming stable.

Mother Nature's Way of Cleaning

GPS' technology generates the same ions as Mother Nature creates with lightning, waterfalls, and ocean waves. Mother Nature uses energy to break apart molecules. It is nature's way of cleansing the air naturally and creating a healthy environment. The only difference is that GPS' technology does it without forming ozone or other harmful byproducts.

GPS' NPBI technology has been certified by UL 867 and UL 2998 to be ozone free.

VALIDATED
• ZERO OZONE EMISSIONS - MEASURED OZONE EMISSIONS FROM GPS IMOD DURING USE PHASE DOES NOT EXCEED 0.005 PPM AS TESTED BY UL 2998
UL.COM/ECV

3rd Party Testing Summary

Pathogen	Time in Chamber	Kill Rate	Test Agency
Tuberculosis	60 minutes	69.09%	EMSL
Clostridium Difficile	30 minutes	86.87%	EMSL
Norovirus	30 minutes	93.50%	ATS Labs
MRSA	30 minutes	96.24%	EMSL
Staphylococcus	30 minutes	96.24%	EMSL
Mold Spores	24 hours	99.50%	GCA
E.coli	15 minutes	99.68%	EMSL
Legionella	30 minutes	99.71%	EMSL

Airborne Mold Spores Reduced by 95%

EMSL

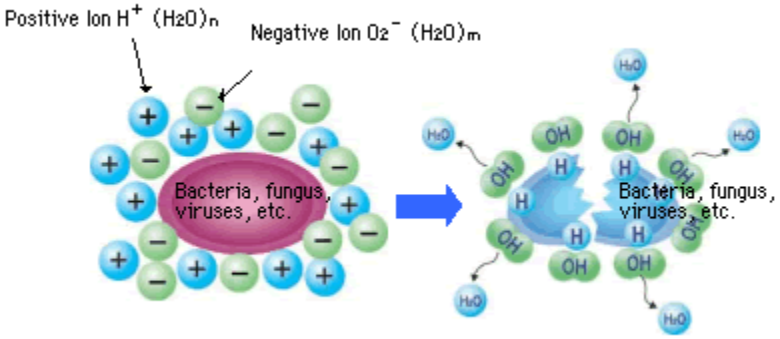
ATS LABS
EXCELLENCE IN ANTIMICROBIAL TESTING
Owned by Accuratus Lab Services

www.GlobalPlasmaSolutions.com

Mechanism of Bi-polar Ionization for Inactivating Harmful Substances

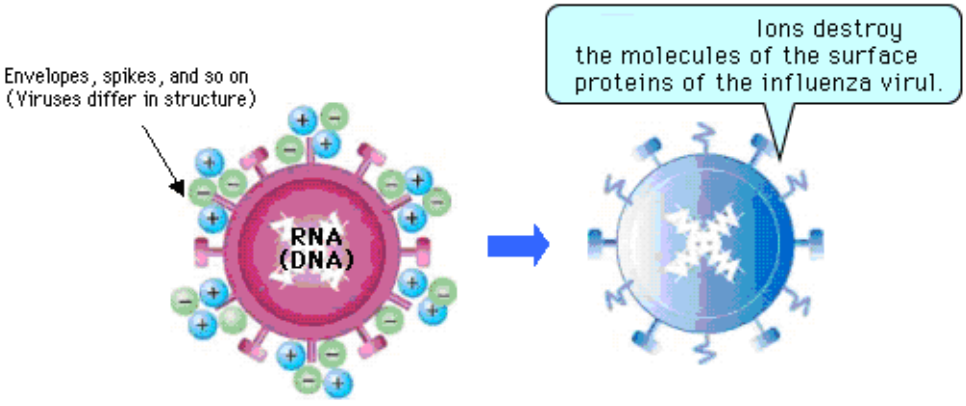
Mechanism for Inactivating Airborne Fungi

The positive (H^+) and negative (O_2^-) ions cluster together on the surface of airborne fungi, causing a chemical reaction that results in the creation of highly reactive OH groups called hydroxyl radicals (•OH). The hydroxyl radical will take a hydrogen molecule from the cell wall of an airborne fungi particle. Inhibits mold infestation as well as controls musty and household odors (caused in large part by mold fungi) as they occur.



Mechanism for Inactivating Airborne Virus

The positive (H^+) and negative (O_2^-) ions surround the hemagglutinin (surface proteins that form on organisms and trigger infections) and change into highly reactive OH groups called hydroxyl radicals (•OH). These take a hydrogen molecule from the hemagglutinin and change into water (H_2O). The ions destroy the virus surface structure, for example its envelopes and spikes, on a molecular level. As a result, the virus cannot infect even if it enters the body.



Mechanism for Deactivating Airborne Allergens

The positive (H^+) and negative (O_2^-) ions surround the airborne allergen and change into highly reactive hydroxyl radicals (•OH). The hydroxyls then deactivate the molecules of the IgE antibody binding site of the allergen. No allergic symptoms occur even if allergens enter the body.