

## NEWLY RELEASED STUDY - JUNE 10, 2020

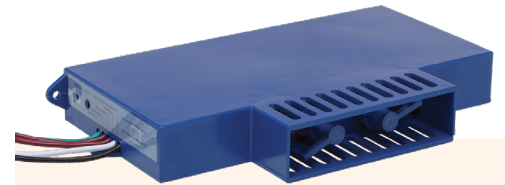
**Global Plasma Solutions Virtually Eliminates Static SARS CoV-2 with Proprietary NPBI™ Technology**

...industry-leading ionization testing results, demonstrating a 99.4% reduction rate on a SARS-CoV-2 (COVID-19) surface strain within 30 minutes  
[See test results...](#)

# NBPI Whole Home In-Duct Air Purifier from Global Plasma Solutions (GPS)

## Needlepoint Bipolar Ionization (NBPI)

GPS' NPBI technology works to safely clean the air inside 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 gases. 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 Potential under twelve ( $eV < 12$ ) into harmless compounds like O<sub>2</sub>, CO<sub>2</sub>, N<sub>2</sub>, and H<sub>2</sub>O. The ions produced travel within the air stream into the occupied spaces, cleaning the air everywhere the ions travel, even in spaces unseen.



### Who is GPS?

GPS provides products using their proven Needlepoint Bipolar Ionization (NPBI) technology to deliver clean indoor air that is safe and healthy—producing neither ozone nor other harmful by-products. Through NPBI, their products purify the air by eliminating airborne particulates, odors and pathogens. The combined effect is a lowered carbon footprint for your facility and up to 30% energy savings through a reduced (up to 75%) outdoor air intake.

Notable Clients: Mayo Clinic, Boston Children's Hospital, Houston Memorial Hospital Baylor UMC, Google, The White House, WeWork, Harvard University, and Clemson University.

**Now available for commercial and residential installation through Commercial Service!**

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

### NEW Test Data

See page 2 for independent laboratory test results

SARS-CoV-2 (COVID-19)	30 min	99.40%	Innovative Bioanalysis
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# Independent Laboratory Test Results



Laboratory Name: Innovative Bioanalysis

Cap Lic No: 9501843

Date: 5/27/2020

Pathogen Tested: SARS-CoV-2

## Objective:

Aviation Clean Air commissioned testing on Global Plasma Solutions' GPSDM48-AC model to assess its ability to neutralize SARS CoV-2 in high-ion concentration specialty applications.

## Methodology:

Single RE22 control chambers were set on a stainless steel table with pressure verification seals. The chambers had an internal working dimension of 16.5"W x 9"H x 12"D for a total cubic footage of 1.031. Under initial observation it was determined to seal the unit completely with no intake or exhaust port. Testing and control were conducted in an average ambient temperature of 72.6 degrees Fahrenheit. A singular fan unit was set up at a 45-degree angle and affixed to the testing chamber. The initial control fan speed was measured at an average of 870 Ft/m. Under the original control section, the primary fan was set 10 inches away from ion production unit A and the average air flow speed past the ion producing nodes was 250Ft/m.

## Experimental Results:

SARS-CoV-2 was exposed to needlepoint bipolar ionization for a period of 10, 15, and 30 minutes. Based on viral titrations it was determined that at 10 minutes 84.2% of the viral particles became inactive, at 15 minutes 92.6% of the viral particles became inactive, and at 30 minutes 99.4% of the viral particles became inactive.

### Performance Validation



#### Sensitivity Testing

A petri dish containing a pathogen is placed underneath a laboratory hood, then monitored to assess the pathogen's reactivity to NPBI™ over time. This controlled environment allows for comparison across different types of pathogens.

TIME IN  
CHAMBER  
**30**  
MINUTES

RATE OF REDUCTION  
**99.4%**