



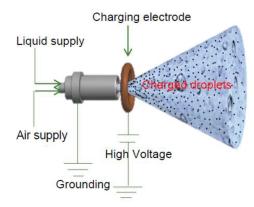


# India's First Electrostatic Disinfectant Sprayer to Stay Protected from CVID-19

Electrostatic
Generator and
Sprayer is a disinfectant
machine that ejects uniform
droplets of a charged
disinfectant solution to kill
all kinds of pathogens.



### **Working Principle:**



Like charges repel
Unlike charges attract



The disinfectant solution is made with a mixture of water and compressed air which passes through the charging electrode. The charged solution is ejected from the nozzle in the form of spray droplets. The negative charge impinged into the droplet enables it to cover the complex and hidden surfaces uniformly.

The innovative electrostatic sprayer delivers a disinfectant solution to the front, back, and sides of the surface, providing uniform coverage for better germ control.

In disinfection the most important principle is that when you want to kill a germ you want to cover every part of that surface, any spots missed it's a chance for that germ to be there and grow. The ENCEE CHLOR unit ensures 360-degree coverage of all surfaces with the disinfectant chemical (electro hypo) generated by the machine by negatively charging the disinfectant particles. Atomized air droplets pass through an electrode embedded in nozzle. Negative charge gets induced in the droplets by charging electrode having high voltage and positive polarity The negatively charged droplets are carried along with the air stream towards the target surface. Since the surface has neutral positive charge, the droplets are electrostatically attracted to target surface.

The Electrostatic Disinfection Machine (ENCEE SPRAY) is based on the electrostatic principles, produces uniform and fine spray droplets of disinfection material in the range of 10-20  $\mu$ m. Due to the small size of droplets, the surface area of spray droplets increases which enhances the interaction with the harmful microorganisms. Charged droplets cover the directly exposed and obscured surfaces uniformly with increased efficiency and efficacy. Therefore, it kills or inhibits the growth of pathogens. The machine uses very less disinfection material as compared to conventional methods, which helps to save natural resources and negligible increase of chemical waste in the environment.

Corona virus avg size is 80 nm which is 0.08 micron. For surface disinfection the smaller the disinfectant droplet size the better are the results. ENCEE Spray is the only sprayer that produces droplets as low as 10 mircon whereas as conventional sprays have droplet sizes of 50-500 micron

### **Benefits:**



Overdose Charged spray droplet reduces overspray and other ambiguities



Uniformity Electrostatic disinfection machine is target-specific which uses less material and achieves 360° coverage



**Droplet Size** produces uniform micro droplets as low as 10 microns, which is more effective in killing the pathogens and viruses



It is **7-8 times** more **efficient** than conventional spraying.

- Charged sprays are more effective and efficient to kill the virus and microorganisms
- Easy to install and easy to use

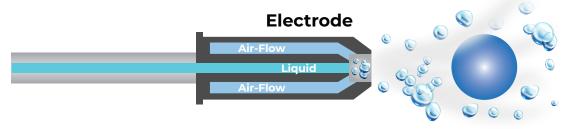
### PROCESS AND REASON OF DISINFECTION:

1.

Atomized droplets pass an electrode embedded in the nozzle. Negative charge gets induced in the droplets by charging electrode having high voltage of positive polarity.

2

The droplets travel in an aerodynamic region and reverse their direction to spray the surfaces uniformly and evenly



3.

The negatively charged droplets are carried along with air stream towards the target surface. Since the surface has neutral positive charge, the droplets are electrostatically attracted towards the target surfaces.

Source: AEF Lab, CSIR-CSIO

## **Specifications:**

- Single-headed nozzles
- Tank capacity- 10 to 15 liters
- Materials usage reduced by 50-60%
- Compressor in built in the unit
- Trolley mounted

# **Applications:**

The Electrostatic Generator and Sprayer can be used in,



Hospitals



**Public Transport** 



Airports and Railways



Poultry areas



**Hotels and Catering** 



Workplace and Offices

# Patented Technology Developed BY CSIR-CSIO, Govt. of India



# Get in Touch with us,

We have over 15 years of experience in providing disinfectant and water treatment solutions for urban and rural areas across India.



**Email:** beyondcorona@ritewater.in | **Website:** www.ritewater.in

Contact: +91 798 1290216