



## BEGINNER'S GUIDE

# Redefining The Science Of Clean

# Is It Clean?

While infection prevention is a top-of-mind initiative for most businesses, organizations and public facilities, there is still an unmet need for ensuring public health and safety through improved cleaning protocols. Some operate under the misconception that “if it looks clean, it is clean.”

**But just because a surface looks clean doesn't mean it is.**

As few as 18 invisible viral particles can make you sick.<sup>1</sup> To put things in perspective, about 18,000 viral particles can comfortably sit on the tip of a pencil. Knowing that, it can be hard to fathom the sheer number of viral particles that may be resting under the lip of a counter or even on an airplane seat. That's why it's crucial to ensure that your disinfecting method can handle the task of truly “cleaning.”

<sup>1</sup> Centers for Disease Control and Prevention (CDC)





A pen-tip amount of virus particles  
is enough to infect more than

**1,000 people.<sup>1</sup>**



**8% of the population**  
or over 26.4 million people  
get the flu each season.<sup>2</sup>



In 2020, there were over  
**20 million cases**  
of COVID-19 in the United States.<sup>3</sup>



<sup>1</sup> Centers for Disease Control and Prevention (CDC)

<sup>2</sup> Jerome I Tokars, Sonja J Olsen, Carrie Reed, Seasonal Incidence of Symptomatic Influenza in the United States, Clinical Infectious Diseases, Volume 66, Issue 10, 15 May 2018, Pages 1511–1518, <https://doi.org/10.1093/cid/cix1060>

<sup>3</sup> Centers for Disease Control and Prevention (CDC) COVID Data Tracker





# Understand The Difference

## **CLEANING**

Removes visible soil, debris, microorganisms and organic substances from surfaces. Does not eliminate germs but may reduce their numbers.

## **SANITIZING**

Reduces bacteria to levels deemed safe by public health safety standards, decreasing the risk of infection. It may not kill all viruses.

## **DISINFECTING**

Eliminates pathogens and disease-causing microorganisms, except bacterial spores.



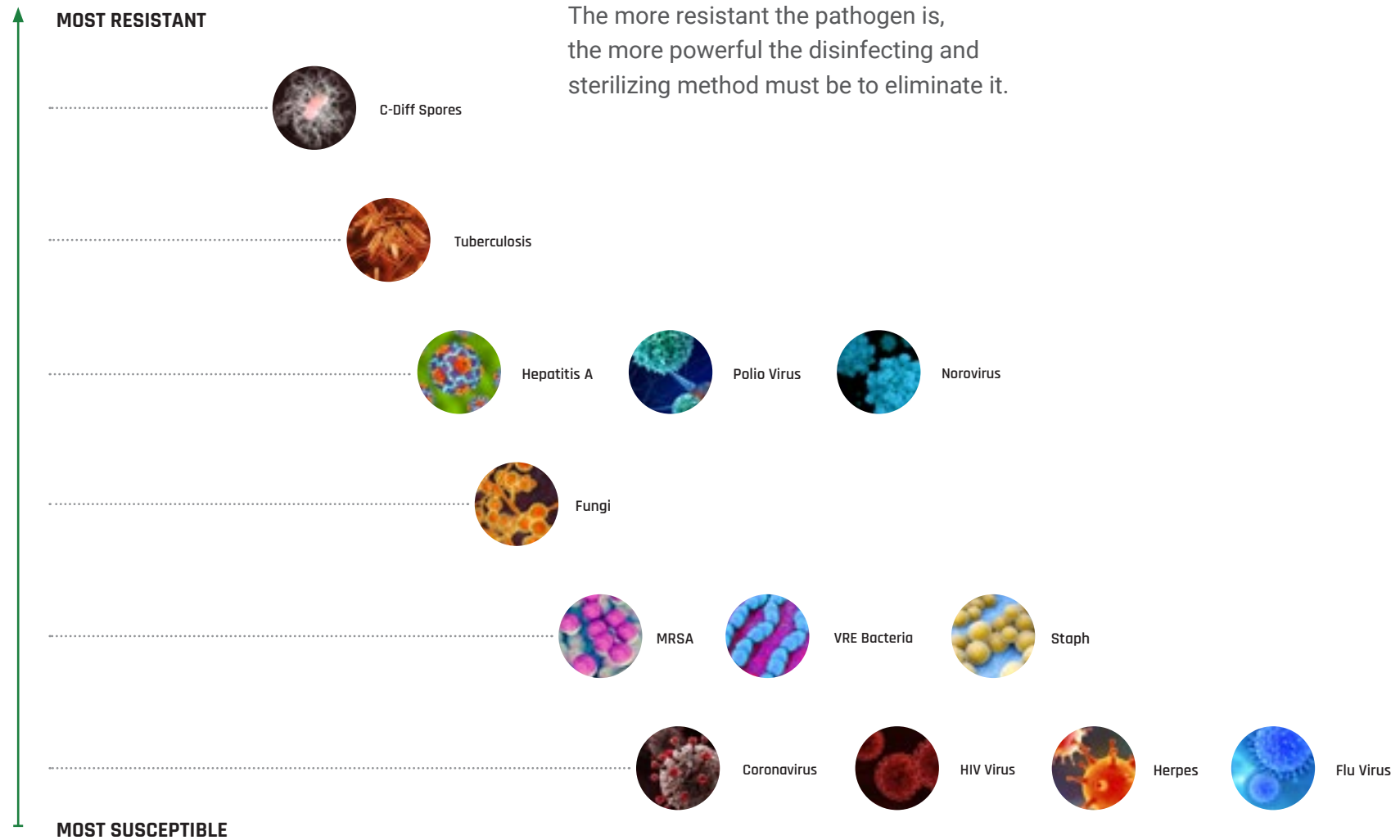
# Know What You're Up Against

Keyboards, office phones, sink faucet handles, water fountains, door handles and vending machines are just a few examples of common surfaces with hard-to-reach areas that can harbor high levels of contaminants. And while pathogens like the flu virus are relatively susceptible to basic disinfecting solutions, stronger viruses, bacteria and fungi will require more powerful disinfecting methods.

Keep in mind, extreme disinfecting is not needed in every case. But it is recommended that you establish a consistent disinfecting routine to help minimize the spread of most common illnesses. For more information, visit the [CDC website](#) for disinfecting best practices as well as pathogen-specific control.

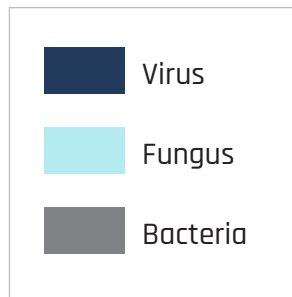


# Pathogen Chemical Resistance



# Pathogen Surface Survival<sup>1</sup>

Some pathogens can survive on surfaces for months, causing a continuous source of transmission if proper disinfecting steps are not taken.



<sup>1</sup> Adapted from Hota B, et al. Clin Infect Dis 2004; 39:1182-9 and Kramer A, et al. BMC Infectious Diseases 2006; 6:130

<sup>2</sup> Riddell, S., Goldie, S., Hill, A. et al. The effect of temperature on persistence of SARS-CoV-2 on common surfaces. Virol J 17, 145 (2020). <https://doi.org/10.1186/s12985-020-01418-7>



# Degrees Of Disinfectant

There are several grades of chemical disinfectants, all differing in their application and effectiveness. It's important to choose one that meets your facility's needs.





### **LOW-LEVEL DISINFECTANT**

Kills almost all vegetative bacteria as well as some viruses and fungi, but not bacterial spores.

### **HIGH-LEVEL DISINFECTANT**

Eliminates all microorganisms except for small numbers of bacterial spores. It's only capable of killing bacterial spores when used in adequate concentration under suitable conditions.

### **HOSPITAL-GRADE DISINFECTANT**

Approved by the Environmental Protection Agency (EPA) for use in hospitals and other medical facilities. Destroys viruses and fungi as well as many known infection- and disease-causing bacteria.

# Popular Disinfecting Methods

The way you apply or combine your disinfectants can mean the difference between something that looks clean and is truly disinfected. Here are the four main methods used today:



## **PRE-SATURATED WIPES**

Helps remove dust, stains and soil from surfaces.



## **STANDARD SPRAYERS**

Provides targeted (or spot) application of disinfectants.



## **FOGGING AND GASSING**

Disperses disinfectant solutions as an aerosol.



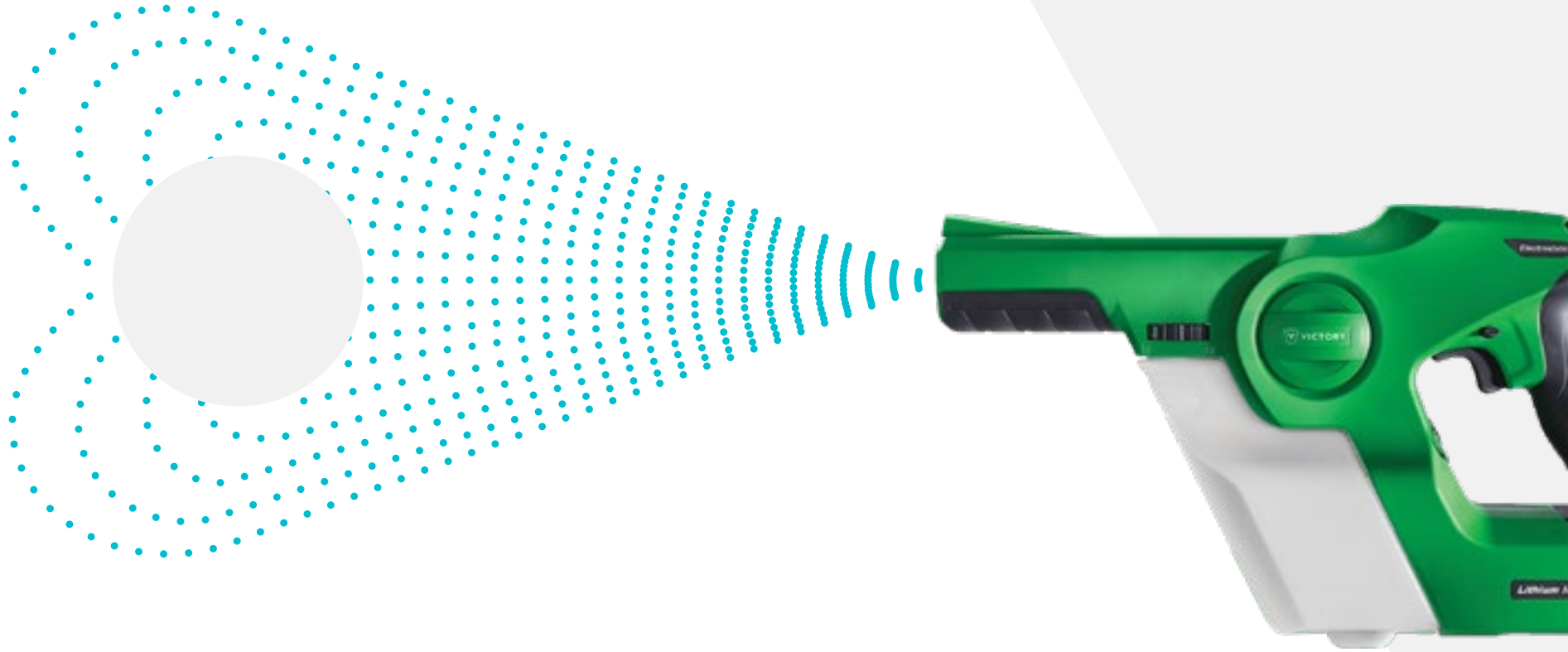
## **ELECTROSTATIC SPRAYERS**

Charges disinfectant solution particles to stick to and wrap around surfaces.



# Exploring Electrostatic Technology

Electrostatic sprayers change the electrical charge of the particles in the disinfecting solution from Neutral (+’s and -’s) to either Positive (+) or Negative (-).



Electrostatic-sprayed particles will have an attraction up to 75 times that of gravity and will seek out items to land on versus “floating” in the air. Once the like-charged particles land upon a surface, they repel each other like magnets — spreading out evenly across the sprayed surface and providing excellent solution coverage.

If the sprayed particles have the opposite charge as the material they are sprayed on, the electrical force will cause the particles to reverse course and coat hidden or hard-to-reach surfaces that would typically be missed by conventional spraying or wiping. Most surfaces are negatively charged, which means most electrostatic sprayers produce a positive charge.



Electrostatic-sprayed particles will have an attraction up to 75 times that of gravity.

# High-Touch Surfaces Need High-Tech Disinfecting Solutions.



Electrostatic sprayers from Victory Innovations can help you achieve full-surface disinfecting confidence – giving peace of mind to your staff and customers.





#### EFFECTIVE COVERAGE

Some disinfectant spray methods only cover a small area or leave chemicals floating in the air. But electrostatic sprayers from Victory Innovations charge the disinfectant solution's particles, driving the disinfectant directly to surfaces and hard-to-reach areas. The touchless application also reduces the risk of cross-contamination.



#### EASY TO APPLY

Electrostatic sprayers from Victory Innovations are cordless, so there's nothing to trip over and no extra weight to drag around — which allows for effortless maneuvering from room to room. Plus, the handheld sprayer weighs only 5.9 lbs. with a full tank while the backpack sprayer comes with a removable, easy-fill tank that can tackle up to 23,000 sq. ft. of spraying.



#### TIME + COST SAVING

An electrostatic sprayer from Victory Innovations can apply disinfecting solutions with 90% greater efficiency when compared with a traditional hand pump sprayer.\* And because the sprayer design keeps chemicals from floating in the air and ensures even coverage, your space is usable sooner.



90%  
more  
efficient\*

\*Derived from research conducted by ISSA on average time to disinfect per square foot.

# Designed To Disinfect Your Space

Electrostatic sprayers from Victory Innovations can be used to disinfect a wide range of spaces and surfaces, including but not limited to:

Airports + airplanes

Ambulances

Athletic facilities

Correctional facilities

Daycare centers

Government buildings

Gyms + health clubs

Health care facilities

Hotels

Institutional kitchens

Laundry rooms

Office + retail spaces

Schools



# Patented Technology

Victory Innovations sprayers use a unique patented charging technology. The charge ring is placed inside of the sprayer, where it adds a positive charge to particles immediately before they exit. This allows for the highest possible charge density and an even distribution of charge, which means the best wrapping performance and most efficient use of chemicals.





# Equip Yourself With The Right Information

There's a decent amount of misinformation circulating around infection prevention and proper disinfecting methods. That's why it's important to refer to reputable sources when developing your own infection prevention practices.



Academy of  
Cleaning Excellence  
[academyofcleaning.com](http://academyofcleaning.com)



Global Biorisk  
Advisory Council  
[gbac.issa.com](http://gbac.issa.com)



Centers for Disease  
Control and Prevention  
[cdc.gov](http://cdc.gov)



Healthy Schools  
Campaign  
[healthygreenschools.org](http://healthygreenschools.org)



Clean Link  
[cleanlink.com](http://cleanlink.com)



International Sanitary  
Supply Association  
[issa.com](http://issa.com)



Environmental  
Protection Agency  
[epa.gov](http://epa.gov)



Occupational Safety and  
Health Administration  
[osha.gov](http://osha.gov)



## Ready To Take Charge Of Disinfecting Your Space?

Request a free virtual demo today and discover why electrostatic sprayers from Victory Innovations are a superior method for applying disinfectant.



[victoryinnovations.com](https://victoryinnovations.com)

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