

# 4 KEYS TO TRANSIT DISINFECTION

## Essentials for COVID & Beyond

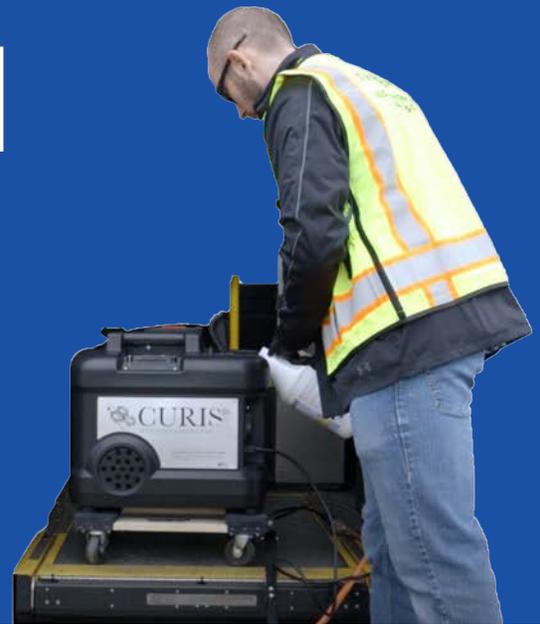


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# DISINFECTION SURVIVAL TIPS



In a world turned upside down by pandemic uncertainty, Disinfection remains a top priority for transportation providers across the nation. This booklet outlines key considerations for ANY disinfection situation. Proper training and equipment ensure your fleet keeps running with safety and efficacy.



**transport people,  
not germs**

# USE THE PROPER TOOLS

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While it may seem basic, reviewing your equipment supply and protocols is essential. Changes in personnel, products, or federal recommendations (like [www.CDC.gov](http://www.CDC.gov)) may require further training or new PPE.



**PPE:** Use appropriate personal protective equipment such as gloves, eye protection, and respirators, as needed.

1. Assess risk of exposure to dangerous pathogens.
2. Check your disinfectant label for chemical safety.



**Disinfectant:** Ensure your disinfectant is EPA/FDA registered with adequate kill claims against the target pathogen. See next page.



**Disposable Wipes:** To avoid cross contamination, it is best to use disposable wipes when possible. A detailed guide for environmental cleaning procedures can be found on the CDC website in Section 4.1 at <https://www.cdc.gov/hai/prevent/resource-limited/cleaning-procedures.html>. If disposables are not available, then microfiber cloths can be used, fully wet with disinfectant, and folded to expose a clean surface for each swipe (wipe, fold in half, wipe, fold in half, wipe).

# ALWAYS READ THE LABEL

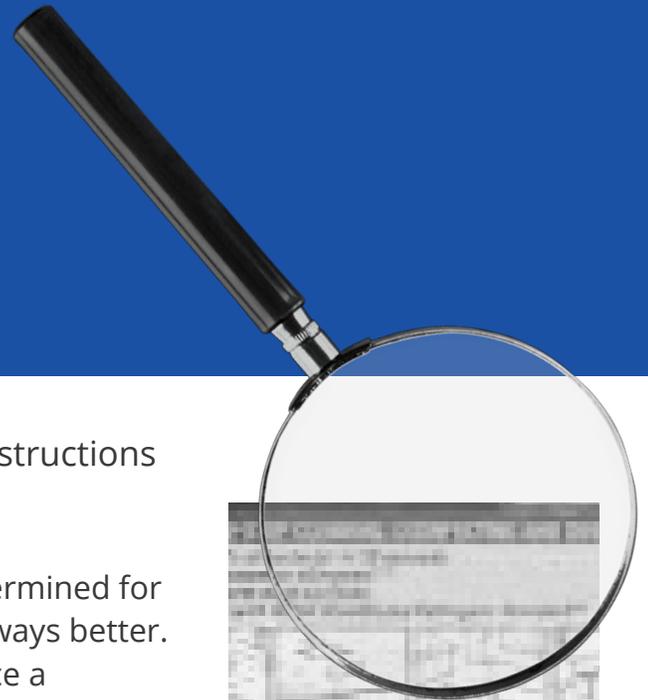
Verify kill claims and follow the instructions for things such as...

- **Dilution:** Mixture ratios are determined for optimal efficacy. More is NOT always better. Too much disinfectant can reduce a solution's ability to kill germs, cause extra grimy residues, or damage surfaces.

## EPA registration

WHAT IS IT PROVEN TO KILL?

- **Federal Registration:** Make sure to use EPA or FDA registered products. Check the label or go to [EPA.gov](http://EPA.gov) to learn more about your products. The master label will contain detailed information regarding what specific pathogens the solution can kill, what log reduction to expect (99.9% to 99.9999%), and how to use it properly. For COVID-19, is the product on the EPA List N?
- **Contact Time:** How long should the disinfectant stay wet before you wipe it up? (more on this later...)
- **Removal:** Does the label say you should rinse the surface after use? Many disinfectants do. The same chemicals that make them powerful could be poisonous if left behind on a surface where people might absorb or ingest them.



# WATCH YOUR DWELL TIME

So essential, it's worth its own page....



**Contact Time:** How long should the surface stay wet with disinfectant before you wipe it up? **You might not be killing germs if you don't wait the full "dwell time."** Make sure the surface stays wet with disinfectant for the length of time listed on its label, even if this means you must re-spray every few minutes (for longer contact times like 5 or 10 minutes).

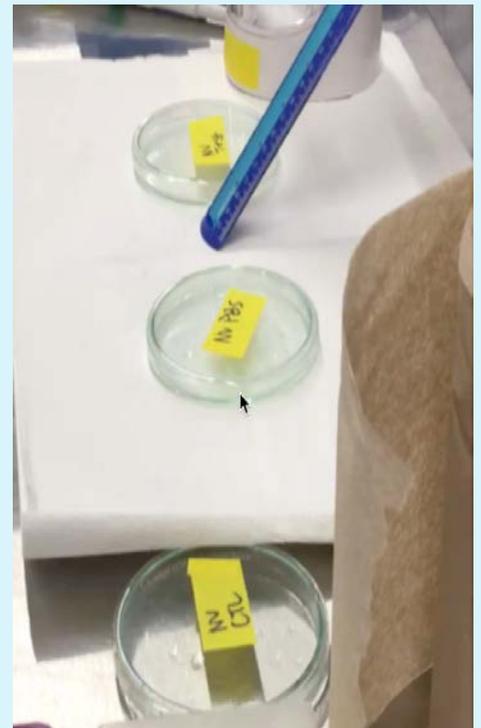
## How Disinfectants Get Their Kill Claims

In order to be considered a spray disinfectant by the EPA, a product must be tested in a high-level, certified laboratory.

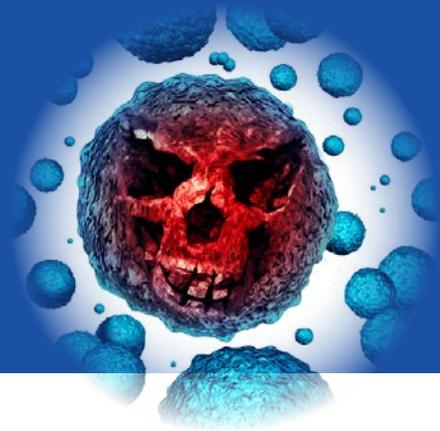
The lab sprays the solution onto the target pathogen (multiple sprays to **totally wet** the surface and covered to make sure it stays wet). After a timed dwell period (e.g., 2 or 10 minutes), the surface is thoroughly wiped and then tested for any live pathogens left behind.

If successful, a product can then claim efficacy for that specific pathogen for that specific amount of dwell time (e.g., a kill claim for *Pseudomonas* at a 10 minute dwell time).

**Takeaway:** If you're not keeping the surface wet enough or for a long enough time, you can't be sure you are killing the germs (pathogens).



# BE AWARE OF RESIDUES



INTERRUPTION OF PATHOGEN TRANSFER FROM METAL DISKS TO FINGERPADS  
(SATTAR ET AL. AEM 69:1579-1585, 1993; ICHE 15:751-756, 1964)

TREATMENT	% VIRUS TRANSFERRED		
	ROTA	RHINO	POLIO
TAP WATER	5.6±1.1	NOT DONE	3.5±1.5
ETHANOL-BASED SPRAY	0	0	0
BLEACH (800 PPM)	0	0	3.6±2.4
QUAT. AMMON.	7.6±2.5	8.4±3.6	5.3±2.4
PHENOLIC	0	3.3±1.9	11.9±6.6

SATTAR, ICAN CONF., HARARE, ZIMBABWE, NOV. 2014

## FINGERTIP PATHOGEN TRANSFER VIA CHEMICAL RESIDUE

Dr. Sattar, a leading expert on chemical residues and pathogen transfer, has done extensive studies on the effectiveness of various chemicals against dangerous pathogens and the possible environmental and health impacts from such use. He emphasizes **extra caution should be observed when applying disinfectants to avoid causing future health risks or outbreaks as a result of residues.**

- Biofilms:** One dangerous effect of most commonly used disinfectants are the residues they cause. On a surface, a sticky biofilm can be left behind by these products. This causes germs, dust, and debris to become fixed in that location. This sticky residue can lead to a greater presence of germs than before use, which is hardly the goal. Residues might even release germs back into the air (pose a risk of aerosolization) with later cleaning.
- Superbugs:** By far, the most dangerous effect of the overuse of chemical disinfectants is unintentionally creating “superbugs.” Superbugs are defined as multi-drug resistant organisms (MDRO). When exposed to disinfectants over time, pathogens develop the ability to push toxins (like disinfectants or antibiotics) out of the cells. This response makes them resistant to specific types of disinfectants, and this resistance can be passed on to future generations of that pathogen.

**If it's sticky,  
it's tricky.**



# TRANSIT MATTERS



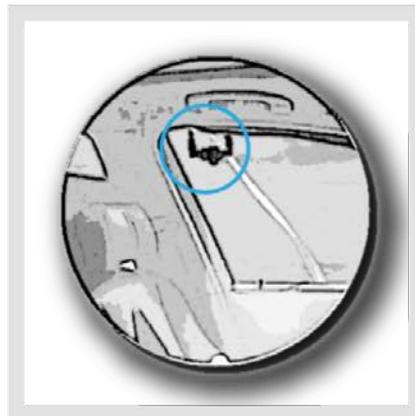
we hope we've helped you

STAY SAFE AND HEALTHY WHILE PROTECTING YOUR RIDERSHIP

CURIS has partnered with mass transit and motorcoach companies across the nation, supplying **hydrogen peroxide disinfectant fogging solutions and training** to help win the battle against COVID-19 and other, harder-to-kill pathogens. We would love to partner with you, too...



FOG



PORT INTO A SPACE



SPRAY

Please visit [www.CURISsystem.com](http://www.CURISsystem.com) or call **800-928-8708** for more information.