



Episode 8: Disinfectant Application Methods

Why is it important to follow EPA / DIN and other registered disinfectant label directions?

Unlike most other types of product labels, pesticide (disinfectants are classified as pesticides by the EPA) labels are legally enforceable, and all of them carry the statement: “It is a violation of Federal law to use this product in a manner inconsistent with its labeling.” In other words, the label is the law. Using a disinfectant according to the label will help keep you and others safe. In addition, following the label instructions will help ensure the product works effectively.

<https://www.epa.gov/coronavirus/can-i-apply-product-using-method-not-specified-directions-use>

What are the appropriate steps when disinfecting, do I have to clean first?

Always follow the disinfectant label instructions for proper use. Some products are labeled as “One Step Cleaner Disinfectants”, this does not necessarily mean to skip the cleaning step. When the surface may have light soil that is not visible, a disinfectant that was tested in the presence of 5% soil is allowed to claim cleaning and disinfection in a single step. If a disinfectant was not tested in the presence of soil, all surfaces must be cleaned before they can be disinfected, whether there is visible soil or not. Any time there is visible soil the surface must be pre-cleaned as mentioned. Other key considerations include applying the disinfectant per label instructions and keeping the surface wet for the appropriate contact time.

What is meant by contact time / what if a disinfectant dries prior to the contact time?

Contact time is the time a disinfectant needs to remain wet on a surface in order to kill the pathogens listed in the product’s kill claims. If the disinfectant dries before the contact time, it should be re-applied until it remains wet for the duration.

Should I wear PPE even if the disinfectant SDS says I don’t have to?

A few things to always remember when considering personal safety and the use of disinfectants. First, always refer to the SDS for PPE requirements. The SDS has a section specific to Personal Protective Equipment and it will be broken into Undiluted Product and Diluted Product. Be sure to follow the recommendations based on which one you will be handling. Next, always follow your SOPs or safety guidelines specific to the facility type, application, chemical, etc. Finally, even though the SDS may not indicate the use of specific PPE, consider the soils and pathogens you are potentially coming into contact with.



Application Type	Description	Pros / Cons
Spray & Wipe	Using a trigger spray bottle, disinfectant is either sprayed directly onto the intended surface or sprayed onto a cloth and then applied to the surface.	<ul style="list-style-type: none"> + Familiar process / easy to train. + Surface is cleaned with some mechanical action during the wiping process. - Quat binding can occur when spraying a cloth with quat disinfectants. - Depending on contact time, the surface may not stay wet long enough requiring re-application. - Inhalation can occur when spraying (especially when spraying directly on surface or in the air). - Laundering of the cleaning cloths is required.
Dunk & Wring	Cotton or microfiber cloths are added to a pail of disinfectant solution. Cloths are pulled out one at a time for use and wrung out prior to wiping the intended surface.	<ul style="list-style-type: none"> + Familiar process / easy to train. + Surface is cleaned with some mechanical action during wiping the process. - Quat binding occurs with quat disinfectants. - Repetitive wringing motion may cause strain on the user. - Oversaturation of cloths can leave residue on surfaces. Too much liquid in a microfiber cloth also hinders the cleaning performance. - Laundering of the cleaning cloths is required.
Pre-Wet Microfiber	A specific amount of disinfectant solution is added to a specific number of microfiber cloths. The cloths then sit for a short period of time to allow the solution time to soak in before use.	<ul style="list-style-type: none"> + Good cleaning performance with microfiber. + Good productivity. - Some additional training is required to prepare the cleaning cloths properly. - Quat binding occurs with quat disinfectants. - Laundering of the cleaning cloths is required.
Disposable Wipes	Disposable wipes come either pre-wet with disinfectant solution and ready to use or you can also purchase just the wipes and then add the appropriate amount of disinfectant solution. Pull the wipe from the	<ul style="list-style-type: none"> + Good cleaning performance. + Highest productivity out of wiping options. + Contact time achieved. + No preparation required if using RTU wipes. + No quat binding with quat disinfectants. + No laundering of textiles. - Waste from disposables. - Higher price.



	container and ready to use.	
Electrostatic Sprayers	Electrostatic sprayers have been around for decades and a common method for applying paints. They work by creating small droplets of liquid through a spray nozzle while applying an electric charge to the liquid (disinfectant). The particles are positively charged and repel from one another, but are attracted to the negatively charged surfaces to which they are applied.	<ul style="list-style-type: none">+ Very high productivity rate for application.+ Good surface coverage.- Potential electrical shock if the user is not grounded appropriately.- Potential health concerns with inhalation depending on chemistry used.- Does not replace the need for manual cleaning.- Limited to disinfectants with the appropriate labeling / approval.- Initial equipment investment.- May not leave the surface wet enough to achieve necessary contact time, depending on disinfectant being used.
Foggers	Fogging machines utilize special spray nozzles to create very small droplets of liquid. The droplets are even smaller than those created by electrostatic sprayers. The spray nozzles can be built into the ceiling of a room to spray product (usually sanitizer) on to surfaces in an entire production room. Foggers can also be smaller, portable units.	<ul style="list-style-type: none">+ Very high productivity rate for application.+ Good surface coverage.- Potential health concerns with inhalation depending on chemistry used.- Does not replace the need for manual cleaning.- Limited to sanitizers / disinfectants with the appropriate EPA labeling / approval.- Initial equipment investment.- May not leave the surface wet enough to achieve necessary contact time, depending on the product being used.