

SARS-CoV-2: the Cause of COVID-19

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Does the CDC publish a list of disinfectants that are effective against SARS-CoV-2?

The EPA has not established any efficacy protocols for surface disinfectants because SARS-CoV-2 is so new. That said, it is a Coronavirus based syndrome which is an enveloped virus and is considered to be easy to inactivate on non-porous surfaces. The scientific community believes, based on its knowledge of the structure of Coronaviruses, that when an EPA protocol is established the results will show that if your surface disinfectant is effective for other Coronaviruses, such as the Human Coronavirus, it will be effective against the SARS-CoV-2.

In order to address public concern, the EPA enacted the Emerging Viral Pathogen Policy and established List N (registered disinfectants that have been proven effective against Human Coronavirus).

What is the EPA Emerging Viral Pathogen Policy?

The EPA announced that the EPA emerging pathogen policy was triggered on January 22, 2020. Registrants of products with the previously mentioned label amendment and terms of registration would be allowed to use the designated statement in off-label communications intended to inform the user community/ public that the disinfectant product(s) may be used against the specific emerging viral pathogen. These offlabel statements can inform the public about the utility of these products against the emerging pathogen in the most expeditious manner and can be more easily removed once the outbreak has ended than statements on a label. This guidance is not binding on EPA or any outside parties, and EPA may depart from the guidance where circumstances warrant and without prior notice. Currently, two of Spartan's supplemental registrations are qualified to use this policy: BNC-15® (1056, 4856) and TB-Cide Quat® (1017, 1021).

What is List N: Disinfectants for Use Against SARS-CoV-2?

On March 13, 2020 the EPA published List N: Disinfectants for Use Against SARS-CoV-2. List N includes products that meet EPA's criteria for use against SARS-CoV-2, the cause of COVID-19. This list includes products with emerging viral pathogen claims and those with human coronavirus claims. https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

Which Spartan disinfectants are included on List N:

- BNC-15* (EPA# 6836-348-5741)
- TB-Cide Quat** (EPA# 1839-83-5741)
- Halt (EPA# 10324-93-5741)
- PSQ II (EPA# 10324-93-5741)
- HDQ Neutral (EPA# 10324-155-5741)
- Super HDQ Neutral (EPA# 10324-141-5741)
- HDQ C2 (EPA# 1839-169-5741)
- Super HDQ L10 (EPA# 1839-167-5741)
- GS Neutral (EPA# 1839-169-5741)
- GS Neutral High Dilution Disinfectant 256 (EPA# 1839-167-5741
- Hard Surface Disinfecting Wipes, Lemon Scent (EPA# 1839-190-5741)
- Hard Surface Disinfecting Wipes, Fresh Scent (EPA# 1839-190-5741)
- NABC® Hard Surface Disinfecting Wipes Lemon Scent (EPA# 1839-190-5741)

Why can't I find most of these products listed on List N?

This list displays the primary registrant information only. All supplemental registrations or alternative brand names are not listed. Spartan's products are marketed and sold under different brand names, but if they have the same EPA registration number, they are the same product.

How do I find the EPA registration number on Spartan products?

To find the EPA registration number on Spartan products, look directly below the Active Ingredients listing. You will see that the registration number for HALT (1018, 4806) is 10324-93-5741. While the Halt brand name is not listed on List N, you will find a match for 10324-93. The suffix "5741" is Spartan's EPA establishment number.



Does the Health Canada publish a list of disinfectants that are effective against SARS-CoV-2?

According to Health Canada, environmental cleaning products registered in Canada with a Drug Identification Number and labeled as broad-spectrum virucide are sufficient. Spartan's Canadian broad-spectrum disinfectants are:

- Damp Mop Quat (106504C)
- Super Neutral L (120904C)

Are hand hygiene products regulated by the EPA?

Antimicrobial hand hygiene products are regulated by The Food and Drug Administration (FDA). The FDA monograph (the FDA's set of rules and regulations) specifies the acceptable active ingredients and their use level. The two most popular on the market today are Ethanol (Alcohol) and Benzalkonium Chloride.

Why doesn't Spartan list the viruses that its hand hygiene products kill?

Unlike EPA registered disinfectants, FDA regulated products, such as antimicrobial handwashes or antibacterial hand sanitizers, do not undergo viral efficacy testing at the agency. The monograph assumes the active ingredients have antimicrobial activity, and responsible manufacturers self-verify their formula's efficacy against a list of 26 organisms including bacteria, yeast, and mold. This list of organisms is recommended by the FDA.

Making anti-viral claims or reduction in illness claims are considered false and misleading under the monograph. Making these claims could cause the FDA to issue a warning letter and a request (an order) to cease and desist making the claims.

Many customers may inquire about antimicrobial efficacy against specific organisms. Example: "What hand sanitizer kills COVID-19". This request may seem reasonable; however, the FDA considers making specific antimicrobial claims as a claim of preventing infection by the organism in humans and making these claims is prohibited. In special cases, infection control nurses or environmental services personnel may request efficacy data, but companies are never permitted to market efficacy data associated with a product.

Is alcohol sanitizer better than benzalkonium chloride sanitizers?

Ethanol (alcohol) and benzalkonium chloride have different modes of efficacy. Alcohol has high kill but evaporates in 15 seconds or so and has no continued efficacy. Benzalkonium chloride formulas such as Spartan's Lemon Blossom Hand Sanitizer have increasing efficacy over time. Our efficacy data demonstrates that the log kill goes up significantly from 15 seconds to 30 seconds. Both are effective at reducing the number of bacterial on the hands.

Why does the CDC only recommend alcohol sanitizers?

Approximately 15 years ago, the CDC began recommending greater than 60% alcohol hand sanitizers based on both limited available data and lobbying from the largest alcohol hand sanitizer manufacturer. In the past 15 years, many studies have been done on benzalkonium chloride that contradict the CDC's statements. Interestingly, many of the claims made by the CDC would be considered FALSE and MISLEADING by the FDA if Spartan or other manufacturers made the claims because there simply is not enough evidence that they are true. The CDC recommending alcohol is a recommendation only. The CDC has done no testing or studies of hand sanitizers effectiveness. It is the CDC's opinion and nothing more.

Which Spartan products are registered and approved by the FDA for antimicrobial activity?

- foamyiQ Lemon Blossom Hand Sanitizer (4604)
- foamyiQ Eucalyptus Mint Sanitizing Handwash (4603)
- foamyiQ Healthcare Personnel Handwash (4605)
- foamyiQ E2 Sanitizing Handwash (4606)
- Lite'n Foamy Lemon Blossom Hand Sanitizer (3338)
- Lite'n Foamy Eucalyptus Mint Sanitizing Handwash (3337)
- Lite'n Foamy Healthcare Personnel Handwash (3341)
- Lite'n Foamy E2 Sanitizing Handwash (3339)
- Lite'n Foamy E3 Hand Sanitizer (3340)

Can disinfectants be used as hand sanitizers?

No.

Does the CDC recommend electrostatic sprayers?

Electrostatic sprayers are one of many options that can be used to apply disinfectants to hard surfaces. Most disinfectants require pre-cleaning in order to decontaminate the surface prior to disinfection. Specific to SARS-CoV-2, the CDC is recommending a multi-step cleaning process with pre-cleaning preceding disinfection and observing recommended dwell times and post dwell cleaning instructions.

What is dwell time?

Dwell time is the required period of time that a surface must remain wet in order for a disinfectant to perform completely. Check the product label for dwell time requirements as this is specific to each product.

Which Spartan product has the least dwell time for Coronavirus?

Always refer to a product's label for recommended dwell time. For dwell times specific to fighting Coronavirus reference the EPA's List N, which includes products that meet EPA's criteria for use against SARS-CoV-2, the cause of COVID-19.

What is the mode of transmission for COVID-19?

The most common transmission of all Coronaviruses is airborne (sneezing and coughing). The second most common transmission is through close contact with an infected person (shaking hands, etc.). Coronavirus may possibly be transmitted by contacting a contaminated surface and then rubbing your eyes, ears, nose, or mouth.

Why is this spreading so fast?

SARS-CoV-2 is spread through asymptomatic carriers. You can have the virus and display no symptoms, but still infect other people. There are a lot of people that may be carrying the virus and don't know because they aren't showing any symptoms. When asymptomatic carriers go out in public and don't practice recommended social distancing, they can infect other people who then can carry the virus without being symptomatic as well.

What is the recommended duration for hand washing and sanitizing?

The CDC recommends that you lather your hands for at least 20 seconds before rinsing. With waterless sanitizers, it is recommended that hands remain wet with sanitizer product for at least 30 seconds.

Does UV disinfection work for COVID-19?

Currently this is an unresolved issue with EPA.

Is COVID-19 the same as SARS?

According to the CDC: No. Coronaviruses are a large family of viruses, some causing illness in people and others that circulate among animals, including camels, cats and bats. The recently emerged SARS-CoV-2 is not the same as the coronavirus that causes Middle East Respiratory Syndrome (MERS) or the coronavirus that causes Severe Acute Respiratory Syndrome (SARS). However, genetic analyses suggest this virus emerged from a virus related to SARS. There are ongoing investigations to learn more. This is a rapidly evolving situation and information will be updated as it becomes available.

Is microfiber effective for Coronavirus clean up?

Microfiber is effective for pre-cleaning steps, as well as disinfectant application. Over time, with repeated laundering microfiber will lose its charge and become less effective for cleaning.

Do you recommend spray or wiping disinfectants?

Wiping is a more appropriate way of cleaning for disinfection. Spraying can actually cause surface contamination to aerosolize. The bloodborne pathogen standard may apply and provides suggestions.

According to the Guidelines of Environmental infection control for cleaning up bloodborne pathogens. "A suggested technique when flooding the spill with germicide is to lay absorbent material down on the spill and apply sufficient germicide to thoroughly wet both the spill and the absorbent material."

Can we use Spartan disinfectants in a fogger?

Our products do not have use directions for that application. Fogging as a method of disinfection is discouraged for two very good reasons:

1. Lack of effectiveness. If a surface is dirty, the organic soil can shield microorganisms from contact with the disinfectant. Fogging also may not thoroughly wet all environmental surfaces. Physical cleaning is extremely important to ensure the proper action of the disinfectant. If environmental surfaces are thoroughly cleaned using an EPA registered disinfectant, additional actions like fogging become unnecessary.

2. Health Hazards. The fogging procedure produces very small droplets of the disinfectant. These droplets are easily inhaled and can penetrate deep into the lungs. Great care must be taken that no one will be exposed to the disinfectant fog. Individuals with respiratory ailments or asthma will react severely if exposed. The legal liability a public institution is exposing itself to here is great.

The Centers for Disease Control in their publication, "Guidelines for Environmental Infection Control in Healthcare Facilities" also discourages the use of disinfectant fogging in patient care areas.

"F. Do not perform disinfectant fogging in patient-care areas.2, 976 Category IB

G. Avoid large-surface cleaning methods that produce mists or aerosols or disperse dust in patient-care areas.9, 20, 109, 272 Category IB"

How are electrostatic sprayers different than foggers?

In theory an electrostatic sprayer is a little different than fogging. The Sprayer can be directed to a surface, where a fogger just makes an aerosolized cloud. Regardless if you are using an electrostatic sprayer or a simple quart bottle with a trigger in it, a surface must be cleaned prior to a sanitizer. Precleaning requires physical removal of soils with some sort of agitation and rinse to remove any cleaner residue off the surface. Even if a "disinfectant" is used through this, the surface would have to be cleaned. Think of a dusty warehouse, if you just spray and wet down a surface and do nothing, it's just going to make dust mud, clump up and sit there till it dries. If there were microorganisms present, they would most likely not be exposed to the chemical as the soil would be protecting them.

The coronavirus is only 0.12 microns big! That is slightly bigger than the ribosome in a single cell. A dust particle could easily act as a shield for a virion! If you want to think of it in common terms, think of a black

car that has been sitting under a tree in the spring time and has dust and pollen all over it. What do you think would happen if you just sprayed it down with a light mist of soap and do nothing else? You'd have car that looks worse than you started that's for sure!

What is a one-step disinfectant?

A one-step disinfectant has been verified by the EPA to be effective against named organisms in the presence of 5% blood serum solution. These products generally do not require pre-cleaning in order to disinfect a hard surface as long as dwell time is observed. However, related to COVID-19, the CDC is recommending a multi-step cleaning process including pre-cleaning prior to disinfection.

What is the difference between disinfection and decontamination?

According to the EPA, disinfection is 100% kill of named organisms on the disinfectant product label. Per OSHA's Bloodborne Pathogen Standard, decontamination means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

What is the difference between a disinfectant and sanitizer?

Disinfection is 100% kill of the claimed organism. A sanitizer claim for nonfood contact surfaces is 99.9% of the claimed organism, or reducing the level of bacteria to a level considered safe by public health standards or requirements. Sanitizers cannot claim viricidal data. For food service, a sanitizer should reduce the level of bacteria on a surface by 99.99%. Sanitizing does not necessarily clean dirty surfaces or remove germs. Most sanitizers, as well as disinfectants, require a clean surface in order to be effective at killing germs.

Are there differences in active ingredients in disinfectants?

There is no preferred active ingredient in disinfectants. All EPA registered disinfectants must provide efficacy data against the organisms claimed on the label. All active ingredients are somewhat equally effective at destroying SARS-CoV-2. Each has a different mechanism. When selecting a disinfectant, try to select a disinfectant that is appropriate for the surface it is intended to clean. There are advantages and disadvantages to every type of chemistry. Quat chemistry is a relatively surface safe type of chemistry. It can act as a surfactant and help with the emulsification of soils and physical breakdown. Bleach is a great oxidizer, but it is a corrosive with a high pH and not suitable for all surfaces. In certain applications bleach can cause more damage than good. Alcohol is a great anti-septic, but it is flammable and can flash off surfaces quickly. Peroxide chemistry can also be a good cleaner, however peroxide chemistry is acidic and not all surface are acid resistant.

Does the FDA monograph allow manufacturers to provide efficacy guidance for hand washes and sanitizers?

No, hand washes and sanitizers are over the counter drugs regulated by the FDA. The FDA monograph specifies the type of active and level used. Regarding efficacy, hand cleaners do not follow the same guidelines that hard surface disinfectants and sanitizers are subjected to. Invitro efficacy testing may be done on antimicrobial hand cleaner formulas but may not be used to promote prevention of any specific disease or organism.

Are popular Spartan Chemical products like NABC® and X-EFFECT® effective against Coronavirus?

General cleaning with one of Spartan's many popular products is more important than the destruction of any microorganism and is one of the best things you can do for a facility. As certified supplies run low, continue to clean with Spartan's vast line of cleaning products and only use disinfectants for critical high-touch surfaces.

What are the disinfection procedures for food processing and kitchens?

In food processing environments there should be SSOPs in place on how to properly sanitize and disinfect kitchen and food prep areas. Pre-cleaning surfaces followed by a potable water rinse to rid any cleaner residue and non-rinse food contact sanitizer is essential. Always use the proper PPM dosage and safe food handling practices when using a sanitizer. When it comes to food contact surfaces, do not overuse your sanitizers or use them at levels that are higher than the recommended level, as you can alter the food and potentially cause sickness. Spartan Chemical's CleanCheck Food Processing module is a great example of a validated cleaning procedure used to manage any microorganism in kitchen and food prep areas.

How do I disinfect my laundry for SARS-CoV-2?

There are many modes of inactivating pathogens that occur in the routine laundry cycle. Continue to use standard laundry practices. As when deciding which disinfectant to use, determine the surface to be cleaned. Use appropriate chemicals and water temperature based on the fabric being washed. Before placing in the dryer, make sure the fabric is free of all soils and stains. Then dry for as long and as hot as possible. Proper dilution, agitation, high pH to low pH shift, bleach application, dry time and the loss of humidity in the dryer are more than effective to rid laundry of any microorganisms.

Can you use TB-Cide Quat® on restaurant and break room tables?

TB-Cide quat qualifies for the Emerging Viral Pathogen list because it has a claim for Norovirus. Norovirus is a very difficult virus to inactivate. In order to get inactivation against harder organisms we must use harsher chemistry. TB-Cide Quat is a high pH, high solvent type of product degreaser. While it's fine to use it on break room tables, keep in mind that over time, if you're not wiping or rinsing the product off the surface you can leave a chemical buildup which can lead to skin burns. It's always best to wipe the surface post cleaning to make sure it is not left with chemical residue.

What cleaning procedure is recommended for fitness equipment?

A product with a high level of alkalinity, quat or bleach is not recommended because of the high traffic and potential for skin contact. Select the right product for the right surface and use it at the right level. Then be sure to wipe off. Focus on cleaning properly and not necessarily using a high pH product. If a fitness center provides product for members to use, make sure it is a light duty sanitizer. Disinfectants, require training and proper PPE and it is essential to keep people from harming themselves or equipment.

What are the recommended cleaning procedures for soft surfaces like carpet and upholstery that may have come in contact with SARS-CoV-2?

Porous surfaces such as carpet and upholstery can not truly be disinfected. Certain products make soft surface sanitizing claims, but they aren't viricidal and there are no disinfectant claims. Ideally, select a product that is applicable to the surface you are cleaning. Extraction products should be used on carpets and upholstery that can not be removed. Removable couch cushions and fabrics should be laundered.

Why are some products claiming a residual pathogen kill?

Products that have a residual kill claim fall under the EPA "treated article" exemption. For specific details click the link: https://www.epa.gov/safepestcontrol/consumer-products-treated-pesticides These products cannot make human health claims. Most of these products are for odor control or construction materials. They are not ideal for healthcare or similar environments because they give a false sense of security and the idea that you don't need to frequently clean surfaces. Additionally, many of these products have a cationic quat silicone chemistry and can attract dirt over time.

Is it true that this pathogen can live on surfaces up to 9 days?

The virus has been detected on certain surfaces for 9 days and possibly longer. However, it is important to understand that these studies are in controlled laboratory settings and are being taken out of context. Detection is done by genetic analysis. This information does not always translate to whether the virus is actually active or infectious.

How long does a disinfectant product protect a surface?

As soon as a hard surface is touched it can be it can be recontaminated.

Can I disinfect the air?

No, particles in the air cannot be disinfected with a spray. Hospitals and critical areas such as clean rooms use special pressurized HVAC systems and filters to cut down exposure of airborne particles not chemical sprays.

What is the shelf life of Spartan concentrated and diluted disinfectants?

The shelf life of the concentrated product itself is one year, minimum. These products do not have a strict expiration date like you might find on a FDA regulated product. Instead, Spartan has a quality guarantee that states, "If dissatisfied with performance of product, any unused portion may be returned for credit within one year of date of manufacture". The date of manufacture is stamped on each container for your easy reference.

In regards to the shelf life of diluted disinfectants, individual formulations will vary a great deal in this regard, but many products degrade very little with time. In spite of this, a disinfectant in its diluted form is at its most susceptible stage for contamination. There are many sources for this contamination including dirty containers, residue from previously used products, wrong dilution ratios and others. In light of these hazards, it is simply not a good idea to store diluted disinfectants for long periods of time. Even when disinfectants are diluted into clean, closed containers, the sooner the solution is used up, the better.

In any case diluted solutions of disinfectants should not be kept in trigger spray bottles for more than a week. To help with this, I recommend marking the container with an expiration date when it is filled. When sanitizing solutions are made up in a trigger spray bottle, I recommend the solutions to be changed daily.

Trigger spray bottles or other containers should be cleaned and dried before being refilled. Disinfectant solutions for pail cleaning should be made fresh for each application and renewed when they become dirty or at the end of each shift.

Can mixing products result in a more effective disinfectant?

No. This is very dangerous. The only diluent we suggest is water. Reference product labels for dilution instructions. Note that Spartan's products are intended for professional use.

If you aren't using an antimicrobial hand soap, is it still effective for handwashing at this time?

Any hand soap will be effective at removing gross soil and pathogens provided you are washing your hands properly. Wet your hands with warm, running water and apply hand soap. Lather well and rub vigorously together for at least 20 seconds. Remember to scrub all surfaces of your hands (fingernails, tops of hands, thumbs, in between fingers) and then rinse well. Dry your hands with a clean or disposable towel. If necessary, use a towel to turn off the faucet and open the door. There is no need to use only an antimicrobial hand soap during this pandemic. When you wash your hands with soap and water, you surround any microorganisms on your skin with soap molecules. The hydrophobic tails of the free-floating soap molecules attempt to evade water; in the process, they wedge themselves into the lipid envelopes of certain microbes and viruses, prying them apart. The act of frequently and thoroughly washing your hands is one of the best things that you can do to help stop the spread of this virus as well a myriad of other viruses or other pathogens.

How do you protect yourself when cleaning for COVID-19?

The CDC recommends adherence to Standard, Contact, and Airborne Precautions, Including the Use of Eye Protection. The specifics may be found here: <u>https://www.cdc.gov/coronavirus/2019-nCoV/hcp/infection-control.html</u>

Do you need to have a written Respiratory Protection Plan in order for employees to use N95 masks while cleaning potential or suspected areas in offices?

Due to limited availability of N95 masks, masks should only be worn by people showing symptoms, or personnel that will be handling infected individuals or if a particular job task requires it. Coronaviruses are extremely small, about 0.12 microns in size. (Smaller than the cell nucleus and just slightly bigger than the ribosomes in the cell.) Other fabric masks won't protect others from breathing in the virus particles. Fabric masks just help keep respiratory droplets from "going out" or traveling great distances from a sneeze or cough.

Masks have limited use time, and individuals have to be properly fitted for masks. Improper placement and facial hair can impede the effectiveness of the mask. In addition, wearing a mask makes people have a tendency to touch their face more often due to adjustments. If you are not sick, but do not wash your hands and touch your face, you are more at risk due to incidental contact with points of entry such as the eyes, nose and mouth.

Should foamyiQ dispensers be returned to my distributor for recycling?

There is no need to return the foamyiQ dispenser to your distributor. The foamyiQ dispenser can be recycled through your facilities standard recycling program.

How can I buy Spartan products? I don't see them available on your website.

Spartan sells through select distribution. To find a distributor near you click this link: <u>http://www.spartanchemical.com/where-to-buy/local-distributors</u>



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