

# Disinfecting FAQs

## How long does a surface stay protected from germs after disinfecting?

The short answer is the surface stays free of pathogens until the next person touches the surface, so one might assume that a surface must be disinfected after each person uses or touches the surface.

Let's dig a little deeper to answer the above question. The likelihood of disease transmission from a surface can be correlated to the number of pathogens on the surface. For instance, a single pathogenic bacteria on a surface reproduces and grows exponentially to 2.4 million in about 6 hours and continues to multiply at an exponential rate. Neglecting to disinfect these surfaces easily create pathogen levels in the 100's of billions. It is these neglected surfaces that can transmit disease. This concept is well known in food processing, where killing every single bacterial pathogen on a surface is not possible, it only needs to be brought to a safe level. This is why food contact surfaces are sanitized (killing 99.99% of pathogens).

In the case of viral pathogens, it can be minutes to days depending on the pathogens and surrounding conditions. Eventually, without a host, the viral pathogen will die on its own. While a single viral pathogen on a surface could in theory infect someone, it is more likely this occurs when there are 100's of millions of viral pathogens present.

## What's the difference between disinfecting and sanitizing?

The basic difference is that disinfectants kill 100% of the pathogens claimed on the product label. Sanitizers kill 99.99% of pathogens. It seems that there is very little difference, but there are some other key differences.

**Cleaning and Killing Germs in One Step:** Disinfectants are designed to clean and kill germs in one step. Beside germicidal ingredients, they contain detergents to assist removing soils, dyes, and fragrances for easy identification and pleasant use. Sanitizers typically require pre-cleaning and do not contain fragrances and often no dye.



## Are there any disinfectants that have been tested on the actual virus SARS-CoV-2 that causes COVID-19?

None. The virus that causes COVID-19 is an emerging viral pathogen that is classified as a human corona virus. It has been given the official name SARS-CoV-2 which stands for Severe Acute Respiratory Syndrome-Corona Virus #2 (the first SARS human corona virus was discovered in 2003).

In general, previously discovered human corona viruses are known to be easily inactivated by many disinfectants. However, the agency that regulates disinfectants, the EPA (Environmental Protection Agency) has an emerging pathogens policy that was recently triggered by the COVID-19 crisis. That policy states that the primary registrant of a disinfectant formula can apply to make off label kill claims for an emerging pathogen if that disinfectant has efficacy claims for a more difficult to kill pathogen. Some examples of more difficult to kill viral pathogens (than human corona virus) include NOROVIRUS, and Canine Parvovirus.

## How do I know the disinfectant I am using has an emerging pathogens claim and can be used to kill the novel corona virus SARS-CoV-2, the cause of COVID-19?

The EPA has published LIST N: Disinfectants for Use against SARS-CoV-2. This list identifies disinfectant formulas that have a previously known human corona virus claim and/or an Emerging Viral Pathogen Claim.

A big source of confusion is that any disinfectant should be referenced by the EPA registration number, NOT the product name or manufacturer. The reason... the primary registrant is usually the supplier of the disinfectant active ingredient raw material, not the actual disinfectant. These primary registrants license the manufacture of their formulas to EPA registered manufacturing establishments. By law, the EPA registration number must be displayed on the label of the product along with active ingredients. As long as the EPA registration numbers match the first 2 sets of numbers xxxxx-xxx, the product is approved for use on the virus that causes COVID-19.

Note the recommended guidance recommends a disinfectant with an Emerging Viral Pathogen Claim be the first choice.

## What is the definition of hospital grade disinfectant?

A hospital grade disinfectant must have efficacy claims for a minimum of these 3 pathogens 1) pseudomonas aeruginosa 2) staphylococcus aureus 3) salmonella cholerasius. Most modern disinfectants have many more claims including superbugs such as MRSA and other anti-biotic resistance bacteria, viral pathogens, molds, and fungi.

## What is the difference between cleaning and disinfecting?

Without proper training, most people would disinfect just like they clean, apply a disinfectant product to a surface and wipe to dryness. Unfortunately, that is cleaning, NOT disinfecting. Disinfectants need to stay moist (wet) for a period of time and allowed to air dry.



## What is meant by disinfectant contact time?

This is the amount of time the disinfecting solutions should stay moist on a surface to kill all the claimed pathogens. While many might focus on contact time, it is the process of leaving surfaces visibly moist that most often is neglected. By leaving the surface moist, the contact time is achieved and the pathogens inactivated.

## What is a Corona Virus?

Corona Viruses are a large family of viruses with similar characteristics that are common in animals and humans. Corona viruses can cause a variety of illnesses with differing severity ranging from the common cold to severe respiratory illness.

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