COVID-19

What type of virus is COVID-19?
Viruses can be generally categorized into three groups by virus structure.\(^1\) This affects the effectiveness of disinfectants in killing the viruses.

- Enveloped viruses are easiest to kill. (An example is Influenza A Virus.)
- Large, non-enveloped viruses are more difficult to kill. (An example is Rotavirus.)
- Small, non-enveloped viruses are hardest to kill. (Examples are Rhinovirus and Norovirus.)

Coronaviruses are enveloped viruses, meaning they are one of the easiest types of viruses to kill with the appropriate disinfectant product.

How do we know a virus is harder or easier to kill?
Viruses can be separated into classes based on structure, for example in simplest form, enveloped (e.g. SARS-VoV-2, the cause of COVID-19) and non-enveloped (e.g. Norovirus). Years of research and testing have shown that enveloped viruses are easier to kill using disinfectants than non-enveloped viruses, and a hierarchy of viruses has been developed.

How can a company claim a product will be effective against SARS-CoV-2?
At the initial outbreak of the SARS-CoV-2 virus/COVID-19, no products existed on the market that could make a claim to kill the specific strain of virus. This is due to the simple fact that the virus was not available to test. More recently, the virus has been available for testing, and as of July 6, 2020, EPA approved products that have been directly tested on SARS-CoV-2. Currently, products must meet one of three EPA qualifications in order to be considered effective in killing SARS-CoV-2 when used according to label directions:

- Demonstrate efficacy against the coronavirus SARS-CoV-2 (current strain);
- Demonstrate efficacy against a pathogen that is harder to kill than SARS-CoV-2; or
- Demonstrate efficacy against a different human coronavirus similar to SARS-CoV-2 (COVID-19).

\(^1\) E.H. Spaulding *Chemical disinfection and antisepsis in the hospital*
CBC Coronavirus-Fighting Products List

Do you have to be a member of the Center for Biocide Chemistries to list a product on the CBC Novel Coronavirus (COVID-19)-Fighting Products List?
As a public service, CBC is offering listing to both member and non-member companies. To list a product, the manufacturer must be prepared to provide copies of the product’s EPA-approved Master Label.

What requirements are necessary in order to have my company’s product listed on the CBC Novel Coronavirus (COVID-19)-Fighting Products List?

**CBC Group 1: Products that Demonstrate Efficacy against the Coronavirus SARS-CoV-2**

Products that appear in Group 1 have been tested directly against SARS-CoV-2. This means the EPA reviewed laboratory testing data and approved the associated label claims against SARS-CoV-2.

**CBC Group 2: Products that Demonstrate Efficacy against a Pathogen that is Harder-to-Kill than SARS-CoV-2**

Group 2 includes products that demonstrate efficacy against a pathogen that is harder-to-kill than SARS-CoV-2. Group 2 is comprised of products that qualify per EPA’s *Emerging Viral Pathogen Guidance for Antimicrobial Pesticides*. Products qualify for the Emerging Viral Pathogen claim if:
1. The product is an EPA-registered, hospital/healthcare or broad-spectrum disinfectant with directions for use on hard, porous or non-porous surfaces.
2. The currently accepted product label (from an EPA-registered product as described above) should have disinfectant efficacy claims against the following viral pathogen groupings: one large or one small non-enveloped virus.

**CBC Group 3: Products that Demonstrate Efficacy against a Different Human Coronavirus Similar to SARS-CoV-2 OR Products that Demonstrate Efficacy Against Norovirus, Tuberculosis, or Ebola**

EPA supports the use of disinfectant products that have demonstrated efficacy against another human coronavirus similar to SARS-CoV-2 on its List N. CBC’s Group 3 listing of products includes those products that state that they can disinfect human coronavirus, Norovirus, Tuberculosis, or Ebola.

Why are there 3 groupings for CBC Novel Coronavirus (COVID-19)-Fighting Products List?
CBC wants users of its list to know how the product qualified as a COVID-19 fighting product. Specifically, we want users of these products to know which viruses or pathogens the product has been tested against. Regardless of grouping, all products listed on the CBC Novel Coronavirus (COVID-19) Fighting Products List are deemed effective against SARS-CoV-2.
Do the products included on CBC’s COVID-19 Fighting Products List disinfect against newer strains of the coronavirus?
Guidance provided by the EPA states that the products included on the CBC list are expected to kill all strains of SARS-CoV-2. The EPA states that genetic changes to the virus do not impact the efficacy of disinfectants. Disinfectants work by chemically inactivating viruses. The difficulty of killing a virus depends on its physical features, and the recent mutations to SARS-CoV-2 have not changed the basic physical properties.

What does it mean if a product qualifies for an Emerging Viral Pathogen Claim?
Despite the fact that some products have an EPA approved Emerging Viral Pathogen Claim, the EPA expects all products that fall within CBC’s Group 1, 2, or 3 to be effective against SARS-CoV-2. That said, in 2016 the EPA developed a voluntary, two-stage process that allowed EPA-registered disinfectant products the ability to be used against emerging viral pathogens that are not listed on the product label. Due to the outbreak of SARS-CoV-2, the emerging viral pathogen guidance was triggered. It is important to note that this strain of human coronavirus is an enveloped virus. As mentioned above, this is one of the easiest types of viruses to kill. As long as the product in question satisfies requirements for CBC’s Group 1, 2, or 3, and is used according to label directions, the product is effective against SARS-CoV-2. Products that do not have the Emerging Viral Pathogen are still considered just as effective as products that do.

X product has an EPA-approved Master Label, so why isn’t X product listed on the CBC Novel Coronavirus (COVID-19)-Fighting Products List?
Submissions to CBC are voluntary. A product can only be listed if the manufacturer of the product meets the criteria referenced above. CBC did not contact any company directly to include product(s).

If your company’s product(s) qualifies, please contact Ms. Komal K. Jain at Komal_Jain@americanchemistry.com and the necessary steps will be taken to verify and add your company’s product to the CBC list.

Use of COVID-Fighting Products

Can CBC verify the effectiveness of “Product X”?
The CBC cannot make a determination of the effectiveness of any product in fighting pathogens like COVID-19. In order to make a claim that the product should be effective against COVID-19, the manufacturer of the product must have a pesticide registration from the U.S. Environmental Protection Agency (EPA).

How do I know that a U.S. company’s claim that it is effective against COVID-19 is legitimate?
Any company marketing hard-surface disinfectant products in the United States for use during the COVID-19 outbreak MUST meet EPA’s qualifications:
- Demonstrate efficacy against the coronavirus SARS-CoV-2 (current strain);
- Demonstrate efficacy against a pathogen that is harder to kill than SARS-CoV-2; or
- Demonstrate efficacy against a different human coronavirus similar to SARS-CoV-2.

Additionally, EPA is supporting the use of products that state they can disinfect against Ebola, norovirus,
Can hand sanitizing wipes and gels be added to the CBC Novel Coronavirus (COVID-19)-Fighting Products List?
Hand wipes, soaps and gels are regulated by the Food and Drug Administration, not EPA. CBC’s compilation of products are only those registered by EPA for use on hard surfaces (e.g., countertops, floors, fixtures, etc.), not the human body.

Viral claims on hand hygiene products (soaps, wipes, hand sanitizers) are not currently allowed by FDA.

How should a listed product be used?
The instructions for use on the product label should be followed. If there are use directions for enveloped viruses, follow those directions. EPA recommends that if the directions for use for viruses/virucidal activity list different contact times or dilutions, use the longest contact time or most concentrated solution [See https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2].

What should you look for in a cleaning product if you’re aiming to prevent the spread of coronavirus?
If you are aiming to help stop the spread of COVID-19, a list of products presumed by EPA to be effective is available from the CBC Novel Coronavirus (COVID-19)-Fighting Products List. These products contain antimicrobials that kill many disease-causing viruses and other microbes. They have been tested against hundreds of pathogens, such as norovirus and MERS, and based on those results, EPA expects them to be effective against the virus that causes COVID-19. Each of these products on the list have been tested to stop the spread of pathogens from hard surfaces. The public should feel confident that the products included on CBC’s list are available to help protect themselves from the spread of the novel coronavirus.

Are there any benefits of ingesting or injecting disinfectants into a human or animal body?
Disinfectants should never, under any circumstances, be ingested or injected into a human or animal for any reason. Many of these products are poisonous when ingested and are intended for surface use only. Please refer to CDC’s guidelines here. Additional information on the topic can be found here.

Can products listed on CBC’s Novel Coronavirus (COVID-19) Fighting Products List be used on materials not specifically identified on the label’s directions for use?
No, users should carefully read and follow the product’s directions for use, which includes the method and place of application. Products on CBC’s list are intended for surface use only. The Centers for Disease Control and Prevention (CDC) states that applying disinfection products to materials that directly contact your skin can cause serious harm and should be avoided. For more information, please visit CDC’s site.
Other Lists

On March 4, 2020, EPA issued a “List N: Disinfectants for Use Against SARS-CoV-2”. How does this differ from the CBC Novel Coronavirus (COVID-19)-Fighting Products List?
The lists should be consistent with one another. You will likely find a greater number of products on the CBC list because the CBC lists products by marketed and brand names while EPA does not.

On April 2, 2020, EPA expanded List N to include “List G: Products effective against norovirus” and “List L: Products effective against the Ebola virus”. Why this addition and how does it compare to CBC’s Novel Coronavirus (COVID-19)-Fighting Products List?
EPA decided to expand List N to include surface disinfectant products effective against norovirus and Ebola virus under the principle that these products “demonstrate efficacy against a harder-to-kill virus, or demonstrate efficacy against another type of human coronavirus similar to SARS-CoV-2”. Products that fall under this category will be found in Group 3 of CBC’s list.

On July 6, 2020, EPA announced the first two products that have been tested directly against SARS CoV-2. What does this mean and how has this update been reflected on the CBC Novel Coronavirus (COVID-19) Fighting Products List?
The EPA reviewed and approved laboratory testing data that indicates certain products are now effective against SARS-CoV-2. The CBC list has been reorganized to reflect this update. CBC’s Group 1 now lists the products that have been tested directly against SARS-CoV-2.

Is there a list of products used for coronavirus cleaning in schools?
A list of coronavirus-fighting products can be accessed at https://www.americanchemistry.com/Novel-Coronavirus-Fighting-Products-List.pdf. CBC suggests selecting a product from this list and follow label instructions on use.

Good Practices

What are steps that an average American can take to make sure their homes/offices are disinfected, sanitized, etc., to protect from COVID-19?
Antimicrobials, also known as biocides, prevent the growth and spread of unwanted microbes. We rely on a class of antimicrobial products known as disinfectants to kill many disease-causing viruses, like COVID-19.

First, it is critical that people understand the difference between cleaning, disinfecting and sanitizing – there are distinct differences. “Cleaning” removes dirt and impurities from surfaces or objects, but it does not kill germs. “Sanitizing” lowers the number of germs on a surface or object by reducing the germs to levels considered safe by public health standards or requirements. “Disinfecting” kills germs by using antimicrobials directly on surfaces and objects.

Additional tips for keeping healthy include:

- According to the U.S. Centers for Disease Control and Prevention (CDC), in most situations, cleaning alone removes most virus particles on surfaces. Disinfection is most appropriate when someone in your home/facility is sick, or someone who tested positive for COVID-19 was within your home/facility in the last 24 hours.
- Keep in mind that germs and bacteria can hide in many places. Use a disinfectant on your
countertops, sinks, cabinets, appliance surfaces, and all handles or drawer pulls.

- Use antimicrobials on highly touched surfaces.
- Use antimicrobials in highly populated areas. Use antimicrobials to disinfect armrests, seats, and other places while traveling on airplanes, trains and automobiles.
- Finally, everyone should wash their hands regularly with soap and water.

For more tips, visit GoodChemistryLivesHere.com

Want further information on the COVID-19 outbreak? Additional information linked below:
