



COVID-19 – What WQA Members Should Know: Technical Guidance for Handling Customer’s Questions about the Coronavirus

What is COVID-19, how is it spread, and what are the symptoms?

COVID-19 (also known as the coronavirus disease 2019) is an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), however the virus is commonly called the COVID-19 virus.¹ The COVID-19 virus is part of a large family of viruses called coronaviruses, which typically cause respiratory tract infections. The virus is a “novel” coronavirus, meaning it is a new coronavirus that has not been previously identified.² The virus is spread mainly through respiratory droplets between people in close proximity to each other, such as when an infected person coughs or sneezes. A person can also get COVID-19 by touching a surface with the virus on it, then touching their nose or mouth. Symptoms of COVID-19 most commonly include fever, cough, and shortness of breath. There is currently no vaccine to protect against COVID-19.³

Can the COVID-19 virus survive in raw water (e.g., surface water that also serves as a source for drinking water)?

Based on current evidence, the risk to water supplies is low.^{4,5} The COVID-19 virus is enveloped by a lipid host cell membrane, which is not robust. Enveloped viruses are less stable in the environment.

These viruses are also very susceptible to common disinfection techniques used for drinking water. It is therefore no surprise that the World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), and the United States Environmental Protection Agency (U.S. EPA), have all confirmed that the COVID-19 virus has not been detected in drinking water supplies.^{4,6,7} See also the answer to the next question.

Do I need to worry about the COVID-19 virus being in the drinking water?

There is no evidence suggesting that consumers should be concerned about the COVID-19 virus in their drinking water. According to the WHO, the CDC, and the U.S. EPA, there have been no documented incidents of the COVID-19 virus being found in a drinking water supply. Further, enveloped viruses like COVID-19 are easily inactivated by common disinfection techniques used on drinking water, including oxidants such as chlorine and Ultraviolet (UV).^{4,8}

COVID-19 is being transmitted through respiration and contact.⁴ Transmission through respiration occurs when an infected person coughs or sneezes, and others in close proximity inhale the virus. When an infected individual coughs or sneezes, the virus can also land on nearby surfaces, or it can be transmitted to doorknobs, countertops, and other surfaces through direct contact by an infected individual. Transmission by contact occurs when other people touch those surfaces and transfer the virus to themselves, often by then touching their eyes, nose or mouth. Frequent hand washing can help prevent transmission through contact, and it is also beneficial to avoid touching your eyes, nose and mouth.

I have a customer who insists on having a final barrier to capture the COVID-19 virus in their drinking water. What products would work?

WQA agrees with the WHO, the CDC and the U.S. EPA that there is no evidence suggesting consumers should be concerned about the COVID-19 virus in the drinking water supplies. Therefore, the first thing you should do is make sure that your customer understands this. If the customer still insists on a final barrier against the COVID-19 virus, it is no more difficult to deal with than other common viruses.

Chemical disinfection would be a viable option for private well owners. The COVID-19 virus can be inactivated through oxidation such as with chlorine. Normal dosing rates will suffice.

The COVID-19 virus is also susceptible to inactivation by UV. Based on studies with other coronaviruses, the COVID-19 virus should be just as susceptible to inactivation as rotavirus and poliovirus, if not more. The U.S. EPA Guide Standard and Protocol for Testing Microbiological Water Purifiers (aka: U.S. EPA Guide Standard, and also re-published as NSF P231) requires a dose of 40 mJ/cm² to inactivate rotavirus and poliovirus. This is also consistent with the American National Standard, NSF/ANSI 55 for Ultraviolet Microbiological Water Treatment Systems. Therefore, based on the best available evidence, any UV system which has a certified virus claim listed under the U.S. EPA Guide Standard or NSF P231, or any UV system which is certified as a Class A system under NSF/ANSI 55, should be equally sufficient at deactivating the COVID-19 virus.

The COVID-19 virus is also larger than the MS-2 coliphage (27 nm)^{9,10,11}, which is currently used to test and certify virus claims under the U.S. EPA Guide Standard and NSF P231. Therefore, any water treatment system which has a certified virus claim, based on mechanical removal (size exclusion), listed under the U.S. EPA Guide Standard or NSF P231, should be equally effective at capturing the COVID-19 virus.

Be aware that other standards cover microbiological claims, including bacteria and cyst. But a bacteria or cyst claim is not adequate to ensure the removal of the COVID-19 virus (or any virus).

I have systems/components that are made in China (or any area where COVID-19 outbreaks have been reported), can COVID-19 be transmitted through packages/products?

Based on studies with other coronaviruses, it is suspected that the COVID-19 virus can remain viable on surfaces for several hours, and possibly up to 9 days.^{4,12} The survival time depends on many factors, but the same research also found that coronaviruses are easily inactivated using common disinfectants, such as rubbing alcohol or bleach. It would be prudent to practice good disinfection procedures with all installations, regardless of where your products are made or shipped from (see also next question).

What precautions can I take to help protect myself and prevent the spread of COVID-19 during installation and service calls?

Follow manufacturers' instructions for disinfection of systems during installations and service calls. It is recommended to follow these guidelines, adapted from OSHA and the CDC, to protect your customers and employees from exposure to COVID-19.^{13,14}

- Frequently wash hands with soap and water for at least 20 seconds
- When handwashing is unavailable, use a hand sanitizer with at least 60% alcohol
- Avoid touching your eyes, nose, and mouth
- Avoid close contact with people who are sick
- Maintain a distance of at least 6 feet from other people
- Stay home if you're sick, except to get medical care
- Cover coughs or sneezes with the inside of your elbow
- Clean and disinfect surfaces you touch frequently with an EPA approved disinfectant for the COVID-19 virus

Where can I find a list of U.S. EPA approved disinfectants to use against viral pathogens like the COVID-19 virus?

Follow this link:

<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

References:

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