

Vital Oxide® 2019 Novel Coronavirus Guidelines

SPECIAL NOTE

We currently do not know of any domestic product that can make direct claims regarding the 2019-nCoV as testing is not available in the US. We do fit the emerging pathogen requirements for viruses showing efficacy against envelope and non-envelope viruses, both large and small. As the 2019-nCoV is in the Coronavirus genus and we currently have efficacy on Feline Coronavirus, Strain WSU 79-1683, ATCC VR 989** and Canine Coronavirus, Strain 1-71, ATCC VR-809** we believe Vital Oxide will be effective against this strain as well.

FOR THE 2019 NOVEL CORONAVIRUS

This is a guide for using Vital Oxide® in the cleaning and disinfecting of confirmed or suspected 2019 Novel Coronavirus (2019-nCoV) contamination in healthcare and home environments. This guideline may be superseded by Federal, State, and local guidelines and regulations. Discuss any additional questions you have with your state or local health department.

Note: The potential for human-to-human transmission of 2019-nCoV is not yet fully understood; therefore, taking precautions described below to prevent the spread of 2019-nCoV is most important.

ABOUT THE 2019 NOVEL CORONAVIRUS

A coronavirus is a kind of common virus that causes an infection in your nose, sinuses, or upper throat. Most coronaviruses infect animals, not people. However, rarely, these viruses can evolve to infect humans and spread from person to person.

Most coronaviruses are not dangerous, causing only upper respiratory infection symptoms like a stuffy nose, cough, and sore throat. However, if a coronavirus infection spreads to the lower respiratory tract (the windpipe and lungs), it can cause pneumonia and be life threatening, especially in older people and people with weakened immune systems.

There are some very serious types of coronaviruses, such as the SARS-associated coronavirus (SARS-CoV) and MERS-associated coronavirus (MERS-CoV). In early January 2020, the World Health Organization (WHO) identified a new serious type of coronavirus—the 2019 Novel Coronavirus (2019-nCoV).

GUIDELINE FOR PREVENTING THE SPREAD OF THE 2019 NOVEL CORONAVIRUS

Standard precautions and procedures:

- Ensure proper hand and respiratory hygiene:
 - Wash your hands often and thoroughly with soap and water for at least 20 seconds. You can use an alcohol-based hand sanitizer if soap and water are not available and if your hands are not visibly dirty. Avoid touching your eyes, nose, and mouth with unwashed hands.
 - If you are confirmed to have or being evaluated for nCoV, wear a disposable facemask when you are in the same room with other people and when you visit a healthcare provider.
 - Wear a disposable facemask if you do not have nCoV but are a household member of or in close contact with someone who is confirmed to have or being evaluated for nCoV.
- Ensure that cleaning and disinfection procedures are followed consistently and correctly. Thoroughly clean surfaces with water and detergent and apply the Vital Oxide® EPA-registered hospital disinfectant.
- Manage laundry, food service utensils, and medical waste in accordance with safe routine procedures.

For individuals who are confirmed to have or being evaluated for 2019-nCoV:

- Restrict activities outside your home, except for getting medical care. Do not go to work, school, or public areas. Do not use public transportation, rideshares, or taxis.
- Stay in a different room from other people in your home as much as possible. Use a separate bathroom, if available.
- Before your medical appointment, call the healthcare provider and tell them that you have, or are being evaluated for, nCoV infection, so they can take appropriate steps to keep other people from getting infected.
- Wear a disposable facemask when you are in the same room with other people and when you visit a healthcare provider. If you cannot wear a facemask, the people who live with you or are in close contact with you should wear one while they are in the same room with you.
- Cover your mouth and nose with a tissue when you cough or sneeze, or you can cough or sneeze into your sleeve. Throw used tissues in a lined trash can, and immediately wash your hands with soap and water for at least 20 seconds.
- Wash your hands often and thoroughly with soap and water for at least 20 seconds. You can use an alcohol-based hand sanitizer if soap and water are not available and if your hands are not visibly dirty. Avoid touching your eyes, nose, and mouth with unwashed hands.
- Do not share dishes, drinking glasses, cups, eating utensils, towels, bedding, or other household items with others. After using these items, you should wash them thoroughly with soap and water.

For caregivers and household members of individuals confirmed to have or being evaluated for 2019-nCoV:

- Follow the healthcare provider's instructions for medication and care. You should help the person with basic needs in the home and provide support for getting groceries, prescriptions, and other personal needs.
- Restrict visitors who do not have an essential need to be in the home.
- Have only people in the home who are essential for providing care for the person. Other household members should stay in another place of residence. If this is not possible, they should stay in another room or be separated from the person as much as possible. Use a separate bathroom, if available.
- Keep elderly people and those who have compromised immune systems or chronic health conditions away from the infected person.
- Make sure that shared spaces in the home have good air flow, such as by an air conditioner or an opened window, weather permitting.
- Wash your hands often and thoroughly with soap and water for at least 20 seconds. You can use an alcohol-based hand sanitizer if soap and water are not available and if your hands are not visibly dirty. Avoid touching your eyes, nose, and mouth with unwashed hands.
- Wear a disposable facemask, gown, and gloves when you touch or have contact with the person's blood, body fluids and/or secretions, such as sweat, saliva, sputum, nasal mucus, vomit, urine, or diarrhea.
- Throw out disposable facemasks, gowns, and gloves after using them. Do not reuse.
- Wash your hands for at least 20 seconds immediately after removing your facemask, gown, and gloves.
- Avoid sharing household items. You should not share dishes, drinking glasses, cups, eating utensils, towels, bedding, or other items with a person who is confirmed to have or being evaluated for nCoV infection. After the person uses these items, you should wash them thoroughly.
- Clean all "high-touch" surfaces, such as counters, tabletops, doorknobs, bathroom fixtures, toilets, phones, keyboards, tablets, and bedside tables, every day. Also, clean any surfaces that may have blood, body fluids and/or secretions or excretions on them.
- Use the Vital Oxide® EPA-registered hospital disinfectant.
- Read the Vital Oxide® label instructions for safe and effective use of the product, including precautions you should take when applying the product. Wear gloves or aprons and make sure you have good ventilation during use of the product.

- Wash laundry thoroughly. Immediately remove and wash clothes or bedding that have blood, body fluids and/or secretions or excretions on them. Wear disposable gloves while handling soiled items. Wash your hands immediately after removing your gloves. Read and follow directions on labels of laundry or clothing items and detergent. In general, wash and dry with the warmest temperatures recommended on the clothing label.
- Place all used disposable gloves, gowns, facemasks, and other contaminated items in a lined container before disposing them with other household waste. Wash your hands immediately after handling these items.
- Monitor the person's symptoms. If they are getting sicker, call their medical provider and tell them that the person has, or is being evaluated for, 2019-nCoV infection. This will help the healthcare provider's office take steps to keep other people from getting infected. Ask the healthcare provider to call the local or state health department.

For anyone who has had close contact with individuals confirmed to have or being evaluated for 2019-nCoV:

- Follow procedures for proper hand and respiratory hygiene described above.
- Monitor your health starting from the day you first had close contact with the person and continue for 14 days after you last had close contact with the person. Watch for these signs and symptoms:
 - Fever. Take your temperature twice a day.
 - Coughing.
 - Shortness of breath or difficulty breathing.
 - Other early symptoms to watch for are chills, body aches, sore throat, headache, diarrhea, nausea/vomiting, and runny nose.
- If you develop fever or any of these symptoms, call your healthcare provider right away.
- Before going to your medical appointment, be sure to tell your healthcare provider about your close contact with someone who is confirmed to have, or being evaluated for, 2019-nCoV infection. This will help the healthcare provider's office take steps to keep other people from getting infected. Ask your healthcare provider to call the local or state health department.
- If you do not have any symptoms, you can continue with your daily activities, such as going to work, school, or other public areas.

GUIDELINE FOR CONTACT AND DROPLET PRECAUTIONS

- Place patients in adequately ventilated single rooms. For naturally ventilated general ward rooms, this is considered to be 160 L/second/patient.
- When single rooms are not available, cohort patients suspected of nCoV infection together. Place patient beds at least 1 meter apart.
- Where possible, cohort healthcare workers to exclusively care for cases to reduce the risk of spreading transmission due to inadvertent infection control breaches.
- Use a medical mask.
- Use eye/facial protection (i.e. goggles or a face shield).
- Use a clean, non-sterile, long-sleeved fluid resistant gown.
- Use gloves.
- Use either single use disposable equipment or dedicated equipment (e.g. stethoscopes, blood pressure cuffs and thermometers). If equipment needs to be shared among patients, clean and disinfect between each patient use (e.g. ethyl alcohol 70%).
- Refrain from touching your eyes, nose, or mouth with potentially contaminated hands.
- Avoid the movement and transport of patients out of the room or area unless medically necessary. Use designated portable X-ray equipment and/or other important diagnostic equipment. If transport is required, use pre-determined transport routes to minimize exposures to staff, other patients, and visitors and apply medical mask to patient.
- Ensure that healthcare workers who are transporting patients wear the appropriate personal protective equipment (PPE) described in this section and perform good hand hygiene.
- Notify the receiving area of necessary precautions as soon as possible before the patient's arrival.
- Routinely clean and disinfect patient-contact surfaces.
- Limit the number of healthcare workers, family members, and visitors in contact with a patient with suspected nCoV infection.
- Maintain a record of all persons entering the patient's room, including all staff and visitors.

GUIDELINE FOR AEROSOL-GENERATING PROCEDURES

- Ensure that healthcare workers performing aerosol-generating procedures:
 - Use a particulate respirator at least as protective as a NIOSH-certified N95, EU FFP2, or equivalent; when putting on a disposable particulate

respirator, always perform the seal-check. Note that if the wearer has facial hair (beard) this can prevent a proper respirator fit.

- Eye protection (i.e. goggles or a face shield).
- Clean, non-sterile, long-sleeved gown and gloves.
- If gowns are not fluid resistant, use a waterproof apron for procedures with expected high fluid volumes that might penetrate the gown. Perform procedures in an adequately ventilated room; i.e. at least natural ventilation with at least 160 L/second/patient air flow or negative pressure rooms with at least 12 air changes per hour (ACH) and controlled direction of air flow when using mechanical ventilation.
- Limit the number of persons present in the room to the absolute minimum required for the patient's care and support.

GUIDELINE FOR HANDLING INFECTIOUS MATERIALS AND SPECIMENS

- Wear appropriate personal protective equipment (PPE), which includes disposable gloves, long-sleeved coat/gown, and eye protection when handling potentially infectious specimens. If the specimen is collected under aerosol generating procedure, personnel should wear a particulate respirator at least as protective as a NIOSH-certified N95, EU FFP2, or equivalent.
- Ensure that all personnel who transport specimens are trained in safe handling practices and spill decontamination procedures.
- Place specimens for transport in leak-proof specimen bags (secondary container) that have a separate sealable pocket for the specimen (i.e. a plastic biohazard specimen bag), with the patient's label on the specimen container (primary container), and a clearly written laboratory request form.
- Ensure that healthcare facility laboratories adhere to appropriate biosafety practices and transport requirements according to the type of organism being handled.
- Deliver all specimens by hand whenever possible. DO NOT use pneumatic-tube systems to transport specimens.
- Document patients full name, date of birth of suspected nCoV of potential concern clearly on the accompanying laboratory request form. Notify the laboratory as soon as possible that the specimen is being transported.

GUIDELINE FOR DECONTAMINATION (CLEANING AND DISINFECTING)

Procedures to Disinfect Confirmed or Suspected 2019 Novel Coronavirus Contaminated Areas Using the Vital Oxide® EPA-registered hospital disinfectant:

The 2019 Novel Coronavirus contamination requires thorough cleaning and disinfection of surfaces, paying special attention to common-use areas where cross-contamination is most likely to occur. Vital Oxide® disinfectant contains active ingredients that are EPA-registered to kill Coronaviruses.

Put on personal protective equipment (PPE), including two sets of disposable gloves, masks, and gowns previously described.

All surfaces and materials within the affected area should be cleaned and thoroughly disinfected with Vital Oxide®, paying special attention to common use areas where nCoV can be easily spread through direct contact with others. Vital Oxide® can be applied to surfaces with saturated towels or sponges, as well as by spraying or misting with a mechanical device, such as a trigger sprayer or pressure sprayer.

Pre-clean: Apply Vital Oxide® to remove any bacterial biofilm, soil, and debris from surfaces. Wipe with a clean towel or sponge.

Disinfection: Completely wet pre-cleaned surfaces with Vital Oxide® and allow to remain for 10 minutes to kill nCoV.

Clean up visible debris using disposable absorbent material (paper towels or other type of disposable cloths) and minimize aerosols.

Discard soiled items and gloves carefully in an impervious plastic bag.

Thoroughly clean affected areas.

Disinfect area and objects surrounding the contamination with Vital Oxide®.

Take off outer set of gloves, gown and mask, in that order, and discard before exiting contaminated clean-up area.

Place discarded PPE in an impervious plastic bag.

Wearing the inner set of gloves, transport bag to a secure trash container; do not allow the bag to come into contact with clothing.

Always wash your hands for at least 20 seconds after handling any contaminated material, trash, or waste.

Allow surfaces to remain wet for 10 minutes for nCoV inactivation.

Special Instructions for Cleaning and Decontaminations Against Surfaces or Objects Soiled with Blood/Bodily Fluids:

Blood and other bodily fluids must be thoroughly cleaned from surfaces and objects before application of this product.

When handling items soiled with blood or bodily fluids use disposable latex gloves, gowns, masks, and eye coverings as previously described.

Allow surfaces to remain wet for 10 minutes for nCoV inactivation.

RECOMMENDED EQUIPMENT

- Disposable gloves
- Rubber boots
- a particulate respirator at least as protective as a NIOSH-certified N95, EU FFP2, or equivalent
- Eye protection (i.e. goggles or face shield)
- Clean, non-sterile, long-sleeved, fluid resistant gown
- Recommended cleaning materials:
 - Paper towels and/or disposable cloths
 - Scrub brushes and/or cleaning sponges
 - Trigger sprayers or pressure sprayers (for applying Vital Oxide® disinfectant)
 - Trash bags
 - Duct tape for sealing waste bags
 - Mops and buckets
 - Portable carpet extractor (if needed, for cleaning carpets and upholstery)

After specimens are processed, decontaminate work surfaces and equipment with Vital Oxide®, following the manufacturer's recommendations for dilution/concentration, contact time, and care in handling.

DISINFECTION OF EQUIPMENT, TOOLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE)

All tools, equipment and individual personal protective equipment used in the cleanup of NCoV contaminated areas should be cleaned and disinfected using Vital Oxide® prior to removal from the contaminated area.

HANDLING AND DISPOSAL OF INFECTIOUS MATERIALS

Soiled cleaning materials, such as paper towels, cloths, sponges and mop heads, should be placed in trash bags, sealed with duct tape, and discarded in the regular trash. Vital Oxide® products can be disposed of by pouring the liquid down the regular sewer drain and discarding the empty container in the regular trash. Follow local regulations.

Blood and other body fluids should be autoclaved and disposed of according to Federal, State, and local regulations for infectious waste disposal.

REFERENCES

- Interim Guidance for Preventing 2019 Novel Coronavirus (2019-nCoV) from Spreading to Others in Homes and Communities (<https://www.cdc.gov/coronavirus/2019-ncov/guidance-prevent-spread.html>)
- Infection Prevention and Control During Health Care When Novel Coronavirus (nCoV) Infection is Suspected ([https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected))
- Update and Interim Guidance on Outbreak of 2019 Novel Coronavirus (2019-nCoV) in Wuhan, China (<https://emergency.cdc.gov/han/han00426.asp>)