



Coronavirus



Coronavirus Disease 2019 – COVID-19

Section Navigation Detailed Disinfection Guidance

Interim Recommendations for facilities with Suspected/Confirmed Coronavirus Disease 2019

Background

There is much to learn about the novel coronavirus that causes Coronavirus disease 2019 (COVID-19). Based on what is currently known about the novel coronavirus and similar coronaviruses that cause SARS and MERS, spread from person-to-person with these viruses happens most frequently among close contacts (within about 2 meters). This type of transmission occurs via respiratory droplets. On the other hand, transmission of novel coronavirus to persons from surfaces contaminated with the virus has not been documented. Transmission of coronavirus occurs much more commonly through respiratory droplets than through fomites (objects or materials which are likely to carry infection, such as clothes, utensils, and furniture). Current evidence suggests that novel coronavirus may remain viable for hours to days on surfaces made from a variety of materials. Cleaning of visibly dirty surfaces followed by disinfection is a best practice measure for prevention of COVID-19 and other viral respiratory illnesses.

Purpose

This guidance provides recommendations on the cleaning and disinfection of facilities where persons under investigation (PUI) or those with confirmed COVID-19 reside or might have worked. It is aimed at limiting the survival of the virus in the environments. These recommendations will be updated if additional information becomes available.

These guidelines are focused on settings and are meant for the general public.

- **Cleaning** refers to the removal of germs, dirt, and impurities from surfaces. Cleaning does not kill germs, but by removing them, it lowers their numbers and the risk of spreading infection.
- **Disinfecting** refers to using chemicals to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs, but by killing germs on a surface *after* cleaning, it can further lower the risk of spreading infection.



Coronavirus



General Recommendations for Routine Cleaning and Disinfection of Facilities exposed to COVID-19 contamination

Cleaning staff can practice routine cleaning of frequently touched surfaces (for example: tables, doorknobs, light switches, handles, desks, toilets, faucets, sinks) with detergent and disinfectants that are appropriate for the surface, following label instructions. Labels contain instructions for safe and effective use of the cleaning product including precautions you should take when applying the product, such as wearing gloves and making sure you have good ventilation during use of the product.

Quats (Quaternary Ammonium Chlorides) are the best choice: They provide safe and effective one-step cleaning and disinfecting

Quaternary Ammonium Chlorides or “quats” as they are commonly known are based upon the active ingredient benzalkonium chloride. These quaternary salt compounds can be formulated with a variety of ingredients to provide a safe and effective neutral pH, disinfectant-cleaner without damaging floor finishes or sensitive floor surfaces. In addition, quats are economical and extremely effective odor control agents when used according to label directions.

The rationale for this recommendation is if disinfectants inactivate harder to inactivate microorganisms (e.g., mycobacteria, non-enveloped viruses) than coronaviruses, they should be expected to inactivate COVID-19. This logic is based on the recognition by the CDC (Centre for Disease Control - USA) and the EPA (Environmental Protection Agency) that certain microorganisms can be ranked with respect to their tolerance or resistance to chemical disinfectants (i.e., Spaulding classification model).

Quats are effective in destroying a broad spectrum of harmful microorganisms. They are effective in killing the following microorganisms while cleaning the surfaces upon which they reside – all in one simple step.

- Gram-negative and gram-positive bacteria like salmonella typhi, staphylococcus aureus, streptococcus epidermidis and pseudomonas aeruginosa,
- Viruses like HIV-1, Herpes simplex 1 and 2
- Antibiotic resistant strains of bacteria including *methicillin resistant staphylococcus aureus* (MRSA).
- Fungi like *trichophyton interdigitale* (athlete’s foot).



Coronavirus



Questions to Answer Before Selecting a Disinfectant-Cleaner

- | | |
|--|------------|
| ○ What is the active ingredients? (Quats, Phenolics, Chlorine Bleach, Iodine or Pine Oil?) | QAC |
| ○ Is it safe for daily use by housekeepers and custodians? | YES |
| ○ Will it damage the surfaces cleaned with it? | NO |
| ○ What germs does it kill? | 99.9% |
| ○ What is the dilution ratio of the product? | 1:100 |
| ○ Is it a “one-step” disinfectant-cleaner or a disinfectant? | ONE STEP |
| ○ Is it effective in hard water? | YES |
| ○ Is it effective in the presence of organic soil? | YES |

Equipment Required



Surfaces:

Wear disposable gloves when cleaning and disinfecting surfaces. Gloves should be discarded after each cleaning. If reusable gloves are used, those gloves should be dedicated for cleaning and disinfection of surfaces for COVID-19 and should not be used for other purposes. Consult the manufacturer’s instructions for cleaning and disinfection products used. Clean hands immediately after gloves are removed.

If surfaces are dirty, they should be cleaned using a detergent or soap and water prior to disinfection. **As you are using a QAC you can safely clean and disinfect at the same time.**

- For disinfection, diluted concentrated disinfectant according to the manufacturer’s directions – a 50ml sachet of Multi-San diluted into 5 l of water.
- Always follow the manufacturer’s instructions for all cleaning and disinfection products (e.g., concentration, application method and contact time, etc.).



Coronavirus



Disinfectants must always be diluted as per manufacturer's recommendation as if over diluted disinfectants are used the contaminated surfaces will not be effectively disinfected.

- For soft (porous) surfaces such as carpeted floor, rugs, and drapes, remove visible contamination if present and clean with appropriate cleaners indicated for use on these surfaces. Clothing, cleaning cloths, and other items that go in the laundry should be washed as soon as possible after the cleaning task ends.
- Wear disposable gloves when handling a decontamination cleaning task and then discard after each use. If using reusable gloves, those gloves should be dedicated for cleaning and disinfection of surfaces for COVID-19 and should not be used for other cleaning task. Clean hands immediately after gloves are removed. If no gloves are used when handling dirty laundry, be sure to wash hands afterwards.
- If possible, do not shake dirty items. This will minimize the possibility of dispersing virus through the air.
- Launder items as appropriate in accordance with the manufacturer's instructions. If possible, launder items using the warmest appropriate water setting for the items and dry items completely. Dirty laundry and cleaning cloths cannot be washed with other non-contaminated items.

Standard Operating Procedure

Principles of cleaning after the case has left the setting or area

If the affected area can be kept closed and secure for 72 hours, wait until this time has passed for cleaning as the amount of virus living on surfaces will have reduced significantly by 72 hours.

The best plan of action would be to fog the facility with a disinfectant, but due to the fact that there are no foggers available in South Africa, so the following process is our alternative decontamination method.

- Ensure that all cleaning staff has been issued with the necessary PPE (gloves, masks and safety glasses).
- Dilute Multi-San as follows:
- Fill the pressurized sprayer with clean water and dilute 1 part of Multi-San (50ml Multi-San sachet into 5 litres of clean water)
- Finely mist the diluted Multi-San over the contaminated surfaces.
- If the contaminated areas are heavily soiled, it would require the surface to be wiped down with a clean cloth. Remember to rinse the cloth frequently in a bucket filled with clean water.



Coronavirus



- Once all areas have been sprayed, do not rinse off the product as this will allow the maximum contact time for the Multi-San to kill all pathogens that might still be on the surfaces.

Hand hygiene and other preventive measures

- Cleaning staff members should wash and sanitise their hands often, including immediately after removing gloves and after contact with possible contaminated surface. by washing hands with soap and water for 20 seconds. If soap and water are not available and hands are not visibly dirty, an alcohol-based hand sanitizer that contains at least 60% alcohol may be used. However, if hands are visibly dirty, always wash hands with soap and water.
- Cleaning staff should follow normal preventive actions while at work and home including recommended hand hygiene and avoiding touching eyes, nose, or mouth with unwashed hands.
- Additional key times to clean hands include:
 - After blowing one's nose, coughing, or sneezing
 - After using the restroom
 - Before eating or preparing food

References:

William A. Rutala, PhD, MPH, CIC, is a consultant for PDI. He is also director of the North Carolina Statewide Program for Infection Control and Epidemiology (SPICE) and professor at the University of North Carolina School of Medicine.

David J. Weber, MD, MPH, is a consultant for PDI. He is also the medical director at UNC Hospitals' Departments of Hospital Epidemiology (Infection Prevention).

Weber DJ, Sickbert-Bennett EE, Kanamori H, Rutala WA. 2019. New and emerging diseases (Ebola, MERS-CoV, carbapenem-resistant Enterobacteriaceae, Candida auris): Focus on environmental survival and germicide susceptibility. Am J. Infect Control. 2019;47S:A29-A38. doi: 10.1016/j.ajic.2019.03.004.

Environmental Protection Agency. Process for making claims against emerging viral pathogen not on EPA-registered disinfectant labels. EPA website. <https://www.epa.gov/pesticide-registration/guidance-registrants-process-...>

Environmental Protection Agency. List N: disinfectants for use against SARS-CoV-2. EPA website. <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-agai...>



Coronavirus



Centers for Disease Control and Prevention. Interim infection prevention and control recommendations for patients with suspected or confirmed coronavirus disease 2019 (COVID-19) in healthcare settings, March 10. CDC website. <https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-reco...>

Centers for Disease Control and Prevention. Rutala WA, Weber DJ, HICPAC. Guideline for disinfection and sterilization in healthcare facilities, 2008. CDC website. <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/index.html>

Centers for Disease Control and Prevention. Morbidity and Mortality Weekly Report, March 18, 2020.) <https://assets.documentcloud.org/documents/6812675/CDC-Life-Care-Center-...>

Fang L, Karakiulakis G, Roth M. Are patients with hypertension and diabetes mellitus at increased risk for COVID-19 infection? Lancet. March 11, 2020. DOI:[https://doi.org/10.1016/S2213-2600\(20\)30116-8](https://doi.org/10.1016/S2213-2600(20)30116-8)

Kuster GM, Pfister O, Burkard T, et al. SARS-CoV2: should inhibitors of the renin–angiotensin system be withdrawn in patients with COVID-19? Eur Heart J. March 20, 2020. ehaa235, <https://doi.org/10.1093/eurheartj/ehaa235>

Hughes, S. COVID-19 and angiotensin drugs: help or harm? Medscape. 3-25-20. Medscape website. <https://www.medscape.com/viewarticle/927542>