



Ministry of Public Health

GUIDANCE FOR ENVIRONMENTAL CLEANING IN NON HEALTHCARE FACILITIES IN RELATION TO COVID-19

Guidance for Environmental Cleaning in Non-healthcare Facilities

In relation to COVID-19

Background

Coronavirus disease 2019 (COVID-19) is a respiratory illness that can spread from person to person through large respiratory droplets and contact transmission. The virus that causes COVID-19 is a novel coronavirus that was first identified during an investigation of the current outbreak in Wuhan, China and other countries.

COVID-19 virus

COVID-19 virus belongs to the family of Coronaviridae. Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold (such as Common human coronaviruses types 229E, NL63, OC43, and HKU1) to more severe diseases (such as and Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV) and current COVID-19.

Scope of this document

This document aims to provide guidance about the environmental cleaning in non-healthcare facilities; schools and universities, public transportation, hotels or in any other public place.

Environmental cleaning options

As the COVID-19 virus is new, no study has been published on the virus specifically. This assessment is thus based on published scientific studies on coronaviruses, a group to which the COVID-19 virus would belong.

COVID-19 virus has the potential to survive in the environment for several days. The premises and areas potentially contaminated with COVID-19 should be cleaned before their re-use, using products containing antimicrobial agents known to be effective against coronaviruses.

- General precautionary cleaning with water and household detergents and use of common disinfectant products should be sufficient for routine cleaning.
- Many general household products contain the appropriate concentrations of active ingredients for disinfection of areas that are very likely to be contaminated with COVID-19 virus (e.g. bedroom of a person confirmed to have a COVID-19 virus infection).
- Some of the active common disinfectants, e.g. sodium hypochlorite (contained in the household bleach) and ethanol are widely available and can be used in non-healthcare and non-laboratory settings

Antimicrobial agents effective against different coronaviruses

ANTIMICROBIAL AGENT	CONCENTRATION	ACTION
Ethanol	70%	HCoV-229E, MHV-2, MHV-N, CCV, TGEV
Sodium hypochlorite	0.1–0.5%	HCoV-229E SARS-CoV
Povidone-iodine	10% (1% iodine)	HCoV-229E
Isopropanol	50%	MHV-2, MHV-N, CCV
Sodium chlorite	0.23%	MHV-2, MHV-N, CCV

*human coronavirus 229E (HCoV-229E), mouse hepatitis virus (MHV-2 and MHV-N), canine coronavirus (CCV), transmissible gastroenteritis virus (TGEV), and severe acute respiratory syndrome coronavirus (SARS-CoV).

Cleaning approaches

Products

- The use of 0.1% sodium hypochlorite (dilution 1:50 if household bleach at an initial concentration of 5% is used) after cleaning with a neutral detergent is suggested for decontamination purposes, although no data on the effectiveness against the COVID-19 are available.
- For surfaces that could be damaged by sodium hypochlorite, 70% concentration of ethanol is needed for decontamination after cleaning with a neutral detergent.

Process of cleaning and disinfection

- Cleaning and disinfection should be performed by well trained staff, using the proper personal protective equipment (PPE). The correct donning and doffing of PPE should be followed.
- The following PPE items are suggested for use when cleaning facilities likely to be contaminated by COVID-19:
 - o Surgical mask
 - o Goggles or face shield
 - o Disposable long-sleeved water-resistant gown
 - o Disposable gloves.
- Disposable PPE should be treated as potentially infectious material and disposed in accordance with national rules. The use of disposable or dedicated cleaning equipment is recommended; non-single use PPE should be decontaminated using the available products (e.g. 0.1% sodium hypochlorite or 70% ethanol).
- When other chemical products are used, the manufacturer's recommendation should be followed, and the products prepared and applied according to them. When using chemical products for cleaning, it is important to keep the facility ventilated (e.g. by opening the windows) in order to protect the health of cleaning personnel.

Cleaning:

Clean surfaces using soap and water. Practice routine cleaning of frequently touched surfaces.

Disinfection:

- Use diluted household bleach solutions if appropriate for the surface. Check to ensure the product is not past its expiration date. Unexpired household bleach will be effective against coronaviruses when properly diluted.

Follow manufacturer's instructions for application and proper ventilation. Never mix household bleach with ammonia or any other cleanser.

To make a bleach solution, mix:

- 5 tablespoons (1/3rd cup) bleach per gallon of water (Gallon is = 3.8 Litter)
 - OR
 - 4 teaspoons bleach per quart of water (Quart = 0.98 Litter)
- Use Alcohol solutions with at least 70% alcohol.
 - Household cleaners and disinfectants: Clean the area or item with soap and water or another detergent if it is dirty. Then, use a household disinfectant.

Follow the instructions on the label to ensure safe and effective use of the product.

Many products recommend:

- Keeping the surface wet for several minutes to ensure germs are killed.
- Precautions such as wearing gloves and making sure you have good ventilation during use of the product.

Important points to note when using disinfectants:

1. Hands must be washed using soap and warm water for a sufficient period of time (20 to 30 seconds) to remove any infectious material before and after cleaning.
2. Check the labels and use according to instructions and be aware of the potential hazard of each product.
3. Strictly follow contact time as per manufacture recommendation and cleaning procedures
4. Avoid contact with eye and skin when handling cleaning products and keep them away from children.
5. Do not mix different cleaning products and use in a well-ventilated area.
6. Use PPE (disposable gloves, mask, gown) to be protected from direct contact with chemicals and against direct contact with secretions/blood/body fluids.
7. Change PPE frequently, especially if they become damaged during cleaning and disinfection or visibly soiled
8. Use additional barriers (e.g., leg covers, shoe covers) as needed
9. Used PPE should be disposed of in plastic bags, tied up, and labelled with a biohazard symbol. Do not shake the PPE while handling to prevent producing aerosols
10. For disinfection of highly contaminated surfaces or material, avoid the use of spray, and allow appropriate time needed for disinfection (refer to product instruction).

Key tips for cleaning and disinfecting

- Apply disinfectant ONLY on surfaces/items with direct contact with person having presented with symptoms, especially the areas which may have been occupied by the person.
- Clean the hard, non-porous surfaces first with detergent and water, and then apply disinfectants according to the product instructions. (Use disinfectant wipes if available)
- Clean all 'high-touch' surfaces such as desks, counters, table tops, doorknobs, bathroom fixtures, toilets, phones, keyboards and bedside tables every day with antiseptic wipes or disinfectant, including bleach solutions
- Clean toilets with a separate set of cleaning equipment (disposable cleaning cloths, mops, etc).
- Clean floors with disinfectant or bleach solution, starting from one end of the premises to another (from the exit inwards) every day.
- Ensure correct concentrations and sufficient contact time for effective disinfection.
- Carefully remove porous materials, where possible, such as upholstery, rugs, and carpeting that have been in contact with the suspect case and Launder in accordance with the product instructions or dispose of the materials appropriately.
- Wash laundry items such as bedding, towels, tea towels, cushion covers and other fabrics and dry thoroughly outside or with a dryer. Wear disposable gloves while handling soiled items. Wash hands immediately after removing gloves or after handling these items. In general, wash and dry laundry and clothing with the warmest temperatures recommended on the label.
- You should read all cleaning product labels and follow the recommendations provided on them. Product 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 or aprons and making sure you have good ventilation (eg, open windows) while you use it.

References

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