

## CLEANING AND DISINFECTION – SARS-COV-2 RISK MITIGATION

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### SCOPE AND INTRODUCTION

SARS-CoV-2 is the causative agent of COVID-19 disease, which emerged as a world pandemic in 2019. At present, there is no vaccine to protect against this virus and there are no widely recognized pharmaceutical treatments. For these reasons, risk mitigation relies on several non-pharmaceutical interventions (NPIs), which are generally used simultaneously as layered protection. Some of the most basic NPIs include frequent hand-washing, wearing of a face covering when indoors in public spaces and outdoors when less than 6' from other people, and frequent cleaning and disinfection of surfaces, particularly high-touch common surfaces such as:

- Door, appliance, and cabinet handles;
- Light switches;
- Benchtops;
- Desks;
- Chairs/seats;
- Telephones;
- Computers, screens, keyboards, and other shared equipment (e.g., copiers, fax machines, etc.);
- Hand-washing sinks and handles.

Frequent and thorough cleaning and disinfection in public or shared spaces and equipment is a proactive approach to reducing the risk of exposure to SARS-CoV-2. Clean and disinfect non-disposable equipment and shared spaces at the end of each work shift when known to be contaminated, and before sharing with others. If this protocol is followed, shared spaces or equipment should not be a risk to others when it is learned that the space or equipment was used by someone later identified as being infected with the SARS-CoV-2 virus. If this protocol was not followed and the shared equipment/space has not been cleaned and disinfected since a person who is known to be infected with SARS-CoV-2 last used the space/equipment, contact EHS for guidance on cleaning/disinfection ([ehs@unl.edu](mailto:ehs@unl.edu)).



Personal spaces, such as an office, that has been occupied by a person known to have been infected with SARS-CoV-2 should be secured from use by others for 7 days, after which normal cleaning is appropriate. If this is not possible, contact EHS for guidance ([ehs@unl.edu](mailto:ehs@unl.edu))

Infectious agents on inanimate surfaces can be effectively inactivated if the correct disinfectant is used. Disinfectants that are effective against SARS-CoV-2 are on EPA's List N of registered disinfectants (<https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19>). Solutions containing at least 70% ethanol or bleach solutions containing 1/3 cup household bleach in 1 gallon of water are also effective against SARS-CoV-2. The disinfectant and hand sanitizing agents available through UNL's MarketPlace contains ethanol in the appropriate concentration.

Guidance in this SOP is based on recommendations by the United States Centers for Disease Control (<https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>). In the context of this SOP:

- **Cleaning** refers to the removal of dirt and impurities, including germs, from surfaces. Cleaning alone does not kill germs. But by removing the germs, it decreases their number and therefore any risk of spreading infection. Cleaning is achieved with soap and water.
- **Disinfecting** works by using chemicals, for example EPA-registered disinfectants, to kill germs on surfaces. This process does not necessarily clean dirty surfaces or remove germs. But killing germs remaining on a surface after cleaning further reduces any risk of spreading infection.

This SOP is designed to provide guidance for general *environmental surface* cleaning and disinfection. This SOP is not intended for residential areas of persons known to have COVID-19 since additional precautions are necessary.

## GENERAL CONSIDERATIONS

- Prepare the workplace to facilitate cleaning and disinfection. For example, use plastic keyboard covers for shared computers, and disposable plastic clings over touch screens. Avoid sharing items when feasible.
- Visibly soiled surfaces must be cleaned prior to disinfection.
- Disinfectants have a finite shelf life. Do not use expired disinfectants. Bleach solutions must be used within 24 hours of preparation.
- Disinfectants present health and physical hazards. Read and adhere to all precautions and instructions (including proper use concentration) in the manufacturer's Safety Data Sheet (SDS) and label.



**Wear appropriate PPE** as recommended in the SDS or label, which typically includes eye protection/face-shield and chemical-resistant disposable gloves.

- Disinfectant efficacy depends on proper contact time to achieve adequate kill time. This varies between disinfectants. Ensure proper contact time during use. This is typically achieved by applying a liberal amount of disinfectant and allowing it to air dry (generally 10 minutes for a bleach solution or ethanol).
- Pause typical operations in the target area during cleaning/disinfection.
- Use damp cleaning methods. **Do not** clean with dry dusting or sweeping as this may create airborne particles.
- Clean from least to most dirty areas. Change mop heads, rags, and similar items frequently during the cleaning/disinfection process. Consider using disposable cleaning items. If using ethanol with disposable wipers, discard the disposable wipers in a metal can and empty at the end of each day in the exterior refuse container.
- Use a double-bucket method when rinsing is necessary (one bucket for cleaning/disinfectant solution, one for rinsing). Some disinfectants, such as bleach, are corrosive or otherwise damaging to certain surfaces and will require rinsing after the appropriate contact time has been achieved.
- Wash hands thoroughly after completing cleaning or disinfection and after removing protective gloves.
- **Do not** mix disinfectants with other chemicals as toxic fumes may be generated.

## CLEANING WITH DETERGENT AND WATER

- Use warm water and properly diluted detergent (e.g., dish soap) to clean visibly dirty non-porous surfaces.
- Consult owner's manual for guidance on cleaning/disinfecting computer screens, and like items. Often, a pre-wetted disposable alcohol wipe is appropriate.
- Use slow, deliberate motions when cleaning. Avoid aggressive scrubbing that may cause splashing or airborne particles.
- Following detergent use, rinse with a clean wet cloth or sponge to remove detergent residue and allow to air dry.
- During cleaning, make note of any damaged surfaces and report them to BSM or the facility manager as soon as possible.
- To reduce the risk of electric shock, **DO NOT** use a wet sponge, cloth, or mop on electrical outlets or electrical cords. Light switches should be carefully cleaned so not to wet the internal electrical components.



## DISINFECTION

Use all disinfectants according to manufacturer's instructions. Proper disinfection procedure should include:

- Recommended dilution of disinfectant;
- Liberal application with clean cloth, sponge, or hand mop;
- Sufficient surface contact time as indicated by manufacturer;
- Allow to air dry.

## AFTER CLEANING AND DISINFECTION

- Promptly place used disposable cleaning/disinfection materials and PPE in a trash receptacle. Wipers used with ethanol should be deposited in a metal can and the can emptied daily in the exterior dumpster.
- Unused detergent, disinfectant, and rinse solutions may be disposed of down the drain followed by copious amounts of tap water.
- Ensure all areas have dried prior to resuming normal operations.

## ADDITIONAL RESOURCES

- Centers for Disease Control and Prevention: [www.cdc.gov](http://www.cdc.gov)
- Environmental Protection Agency: [www.epa.gov](http://www.epa.gov)