

OVERVIEW

This guidance document has been developed by Risk Management & Safety to assist lab personnel with the disinfection of laboratories and other research areas (shared equipment rooms, cold rooms, dark rooms, etc.) to prevent the potential spread of SARS-CoV-2 virus, causative agent of COVID-19, among users.

This document applies to all faculty, staff, and students who work in a lab (including principal investigators (PIs), professors, scientists, postdoctoral fellows, graduate and undergraduate students, laboratory technicians, student-workers, volunteers, and associated staff).

GUIDANCE

- At a minimum, wear disposable nitrile gloves to clean and disinfect.
- Additional PPE may be needed (safety glasses or goggles, lab coat) depending on the disinfectant.
- Disinfect reusable PPE immediately after use.
- If visibly dirty, first clean surfaces with soap and water, then use an appropriate disinfectant.
- Different disinfectants have different required contact times. Ensure you follow all product instructions on the label, so the surface remains wet for the minimum required time before wiping off the disinfectant. For fast-evaporating disinfectants (such as 70% alcohol) it may be necessary to use more than one wipe to keep the surface wet for the required contact time.
- Ensure the disinfectant is compatible with the surface before using.
- **Never mix disinfectants** - a dangerous chemical reaction may occur.
- As a best practice, instead of spraying, apply disinfectant to a cloth and wipe surfaces afterwards to avoid aerosolization.
- Safety staff can assist in determining if the available disinfectants are appropriate for use.

Laboratory Areas & Shared Spaces

Every researcher is responsible for cleaning and disinfecting surfaces of shared laboratory work areas frequently, at a minimum: before use, during the middle of the work shift, and after use. Examples include, but are not limited to:

- Benchtops
- Desks, tables, and chairs
- Freezer, refrigerator, cold room, and incubator doors
- Cabinet and drawer handles
- Door handles/knobs and light switches
- Sink faucets
- Phones
- Shared equipment, instruments, and tools
- Shared electronics, including computer mouse, keyboard, & displays



Electronics

- Consider putting wipeable covers on tablets, touch screens, keyboards, cell phones, and laboratory equipment monitors for easier disinfection.
- Follow the manufacturer's recommendations for cleaning and disinfection of electronic equipment, ensuring that the disinfectant is approved for use against SARS-CoV-2.
- In the absence of guidance, use alcohol-based wipes containing at least 70% alcohol and dry surface thoroughly.
- Do not spray electronics if you use a liquid disinfectant.



Appropriate Disinfectants for SARS-CoV-2:

1. Alcohol solution with at least 70% ethanol or isopropanol: Effective against enveloped viruses and often used as wipes for cleaning electronics. Alcohol is also used as a “rinse” after using a stronger disinfectant containing bleach or quaternary ammonium compounds on other surfaces.
2. Bleach: Solutions with at least 1,000 ppm sodium hypochlorite are effective against SARS-CoV-2. Most household bleach products contain 5.25% sodium hypochlorite, so a 2% dilution (980 ml water + 20 ml bleach) would be effective. Ensure the product is not past its expiration date. Some bleaches, such as those designed for safe use on colored clothing or for whitening, may not be suitable for disinfection. Bleach solutions should be prepared fresh daily. Leave solution on the surface for at least 1 minute. The [Chlorine Dilution Calculator](#) is a useful tool to calculate your dilution.
3. An EPA-registered disinfectant approved for use against SARS-CoV-2: Follow the specific instructions on the webpage to use the searchable list.

**** If you work with infectious agents, ensure that your disinfectant is effective not only against SARS-CoV-2, but also against the pathogens you are using in the lab ****

RESOURCES

EPA N List of Disinfectants Approved for SARS-CoV-2:

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

CDC Guide to Cleaning and Disinfecting Your Facility:

<https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility-H.pdf>

Public Health Ontario Chlorine Dilution Calculator to calculate bleach dilutions:

<https://www.publichealthontario.ca/en/health-topics/environmental-occupational-health/water-quality/chlorine-dilution-calculator>

UVM Decontamination and Disinfection:

<https://www.uvm.edu/riskmanagement/decontamination-and-disinfection>