

GUIDELINES FOR CLEANING AND DISINFECTING LABORATORY SPACES

The purpose of this guidance is to assist lab personnel with the disinfection of laboratory spaces and surfaces to help prevent COVID-19 transmission among occupants. This guidance is intended to compliment, not supersede, existing protocols for human, animal or plant pathogens.

Common surfaces within the lab must be cleaned as necessary and disinfected before and after use. Normal routine cleaning with soap and water will decrease how much of the virus is on surfaces and objects, which reduces the risk of exposure. Disinfectants kill germs on surfaces, which further reduces the risk of spreading infection.

Housekeeping will be critical to efficient daily disinfection. Soft and porous materials are not as easy to disinfect as hard and non-porous surfaces. Consider whether items can be moved or removed completely to reduce frequent handling or contact from multiple people. Consolidate storage of lab disposables and eliminate cardboard and Styrofoam to the extent possible.

GENERAL STEPS TO SURFACE DISINFECTION

- Wear disposable nitrile gloves to clean and disinfect; depending on the disinfectant and method of application, safety glasses and a lab coat may be needed
- If surfaces are visibly dirty, first clean them with soap and water, then disinfect
- Follow the manufacturer's instructions for concentration, dilution, application method, contact time, and any other special considerations
- Ensure the disinfectant is compatible with the surface
- As a best practice, apply disinfectant to a cloth and wipe surfaces, rather than spray, to avoid aerosolization. Safety glasses should not be necessary with this method.
- Ensure that surfaces remain wet for the minimum required time before wiping off the disinfectant
- Do not mix bleach or other cleaning or disinfection products together, as

this can generate hazardous fumes

- Disinfect reusable safety glasses after use
- Wash hands thoroughly with soap and water and put on a fresh pair of gloves before beginning regular lab work

APPROPRIATE DISINFECTANTS FOR SARS-COV-2

Chlorine bleach (1%, 2%) and 70% ethanol are effective against live virus in lab tests.

<https://www.medrxiv.org/content/medrxiv/early/2020/03/27/2020.03.15.20036673.full.pdf>

- Alcohol solutions with at least 70% ethanol or isopropanol are often used to clean electronics. Alcohol solutions evaporate quickly, so it may be necessary to use more than one wipe to keep the surface wet for the required contact time of 10 minutes. Alcohol is also used as a “rinse” after stronger disinfectants containing bleach or quaternary ammonium compounds.
- 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, and therefore a 2% dilution (98 ml water + 2 ml bleach) would be effective. Bleach products formulated for use on colored clothing or for whitening may not be suitable for disinfection. Ensure the product is not past its expiration date and prepare dilute bleach solutions fresh daily. Leave solution on the surface for at least 1 minute.
- EPA – Approved Disinfectants have been identified for use against SARS-CoV-2, however, solutions were not tested on live virus.

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

EXAMPLE SURFACES FOR DISINFECTION

- Sink faucets
- Benchtops
- Desks, tables, and chairs
- Fume hood and biosafety cabinet sashes
- Freezer, refrigerator, cold room, and incubator doors
- Cabinet and drawer handles

- Door handles/knobs and light switches
- Shared equipment, instruments, and tools
- Shared electronics, including computer mouse, keyboard, & displays.
 - Consider putting wipe-able covers on tablets, touch screens, keyboards, cell phones, and laboratory equipment monitors for easier disinfection.
 - Do not directly spray electronics with liquid disinfectant.

If your laboratory has been unoccupied for the last 7 days or longer, surfaces will only need routine cleaning. Going forward, you are responsible for cleaning bench and equipment surfaces as necessary and disinfecting them prior to use.