Standard Operating Procedures

Washington State University Health Sciences Spokane

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<th>SOP #</th>
<th>WSUS-SOP-COVID-002</th>
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<tbody>
<tr>
<td>Revision #</td>
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Procedure: COVID-19 deep cleaning laboratories

1. Personal Protective Equipment

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<th>Head</th>
<th>Eyes</th>
<th>Face</th>
<th>Hearing</th>
<th>Gloves</th>
<th>Boots</th>
<th>Body</th>
<th>Respiratory</th>
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Head: 

 Eyes: Potentially goggles or splash-proof safety glasses when mixing dilutions (read product SDS or label).

Face: A face shield is required if cleaning ceilings or other surfaces overhead.

Hearing:

Gloves: Disposable gloves. Gloves must be discarded after each cleaning. Wash hands immediately after removing gloves.

Boots:

Body: Coveralls, gowns, or lab coats. Disposable clothing must be discarded after each cleaning. Lab coats must be laundered after each cleaning.

Respiratory: Required if working in an area that has not been closed for 24-hours.

The risk of exposure to cleaning staff is inherently low. Cleaning staff should wear disposable gloves and gowns for all tasks in the cleaning process, including handling trash. Additionally, PPE may be required based on the cleaning and disinfecting products being used. Review the products SDSs to identify additional PPE required based on the products.

PPE must be compatible with the cleaning and disinfecting products used.

Face shields are required if disinfecting ceilings or other surfaces over-head where there is a potential for cleaning and or disinfecting product to drip onto the workers face.
Respiratory protection is required if the area is not able to be closed for 24-hours and when the individual was within a building unless that person meets the following criteria:

- **Individuals with symptoms** who tested positive for COVID-19: It has been at least 3-days (72-hours) since the individual has recovered defined as resolution of fever without the use of fever-reducing medications and improvement in respiratory symptoms (e.g., cough, shortness of breath) and it has been at least 10 days since symptoms first appeared.
- **Individuals who tested positive for COVID-19 have not had any symptoms**: At least 10-days have passed since the date of their positive COVID-19 test result and have had no subsequent illness.

Any employee wearing a respirator must be in the respiratory protection program with the exception of an employee **voluntarily** wearing a disposable filtering facepiece. Contact EH&S for information about the respiratory program.

2. **Purpose**

Cleaning of visibly dirty surfaces followed by disinfection is a best practice measure for prevention of viral respiratory illnesses. This SOP provides additional guidance when cleaning laboratory areas where chemical use can pose additional health and safety risks to cleaning staff.

3. **Prerequisites**

Employees working with hazardous chemicals must have had HAZCOM training within the last year as well as proper training for PPE used.

4. **Procedure**

Cleaning of visibly dirty surfaces followed by disinfection is a best practice measure for prevention of viral respiratory illnesses.

- Prior to cleaning and disinfecting, close off areas for 24-hours if possible before beginning cleaning and disinfecting to minimize potential for exposure to respiratory droplets.
- Clean and disinfect all touch points, not just frequently touched surfaces.
- Clean and disinfect surfaces from clean areas to dirty areas, for example if cleaning a building, restrooms being one of the highly contaminated areas should be cleaned last.
- Clean and disinfect surfaces from high areas to low areas so that any dirt or dust dislodged from above are removed when you clean the lower surfaces.
- Disinfect last, after other cleaning activities are complete (including emptying the trash can, removing visible soil and vacuuming) are complete so that any potentially contaminated dirt and dust does not re-contaminate already disinfected surfaces.

**Personnel**

- WSUS custodial staff is responsible for disinfection of floors and common areas and surfaces like door handles and light switches.
- Laboratory personnel are responsible for disinfection of areas where research is conducted or hazards materials are stored such as countertops, fume hoods, cabinets and shelves over counters.

**General Procedures**
A. Clean Surface: The cleaning process should be executed as a wet cleaning. See cleaning in definitions for more information.
   a. Use warm to hot water (90-130 °F/32-54 °C).
   b. Add soap or detergent according to product label.
   c. Use rags/sponges/brushes to scrub surfaces ensuring that area is free of dirt and debris. Caked on material may require prolonged soaking.
   d. Rinse as necessary.

B. Disinfect Surface: Use an EPA-registered household disinfectant, a diluted bleach solution or alcohol solutions. See disinfectant in the definitions for more information on disinfectant.
   a. Apply disinfectant to the surface and ensure disinfectant remains it to dry as required by manufacturer. Treated surface must remain wet for time required on manufacturers label or allowed to air dry.

Laboratory Personnel

In laboratories, not all chemicals are compatible with detergents and/or disinfectants. Carefully read the SDSs associated with each chemical prior to cleaning. Section 10 of the SDS contains information on chemical reactivity. Soaps and detergents are often also organic solvents or have strong alkaline pH. If unsure about chemical compatibility, it is better to rinse in hot water alone than to use detergents or soaps.

Check instrument manuals for suitable cleaning detergents. Many precision instruments, especially those with optics, must be cleaned in specific manners.

If no suitable chemical disinfectant can be identified, UV decontamination can be attempted. Check the SDS for photoreactivity, photosensitivity or warnings such as “avoid direct sunlight” for indications that UV disinfection is unsuitable.

- Place all objects requiring UV decontamination in a biosafety cabinet. Secure bottle lids before laying bottles on their sides.
- Activate the UV light sterilization function on the cabinet with the shield down. A blue violet light should appear.
- After 20 minutes, turn the light off and rotate bottles a quarter turn. For flat objects, flip over.
- Repeat until all sides have been irradiated.

If suitable cleaning and decontamination methods cannot be identified, close the area to all traffic for at least 96-hours.

6. Definitions

Cleaning: The removal of gross contamination, organic material, and debris from the premises or respective structures, via mechanical means like sweeping (dry cleaning) and/or the use of water and soap or detergent (wet cleaning). The goal is to minimize organic material so disinfection can be effective. Cleaning alone does not kill germs, but by removing the germs, it decreases their numbers and therefore any risk of spreading infection. Cleaning helps reduce the number of microorganisms and to remove any oil, grease, or other substance that may inhibit the action of disinfection. The cleaning process should be executed as a wet cleaning, dry cleaning involves removal of dust, dirt and other debris from the surface which may become airborne. Wet cleaning involves the use of water and soap or detergent. Cleaning prior to disinfection is one of the most commonly overlooked steps in disinfection.
**Disinfecting:** Methods used on surfaces to destroy or eliminate a specific species of infectious microorganism. This process does not necessarily clean dirty surfaces or remove germs, but killing germs remaining on a surface after cleaning further reduces any risks of spreading infection.

- **EPA approved disinfectant:** Use a disinfectant that has been approved by the EPA for use in disinfecting COVID-19. A list of EPA approved disinfectants can be found at the following site: [https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2](https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2)
  - Allow to remain on the surface for the duration identified by the manufacturer.

- **Diluted bleach solution:** Diluted bleach solution can be used if appropriate for the surface. Prepare bleach solution (5 tablespoons (1/3rd cup) of bleach per gallon of water or 4 teaspoons per quart.
  - Check label to confirm the bleach has 5% - 6% hypochlorite concentration, some bleaches, such as those designed for safe use on colored clothing or for whitening may not be suitable for disinfection.
  - Ensure the product is appropriate for the surface (for example not fabric).
  - Ensure the product is not past its expiration date.
  - Wear appropriate PPE when mixing bleach solution (check label and SDS).
  - Don’t make more solution that can be used in 1-day. The bleach solution will be effective against coronavirus for up to **24-hours**.
  - Leave bleach solution on the surface for at least **1-minute**.
  - Never mix bleach with ammonia or other cleaner.

- **Alcohol Solution:** Alcohol solutions with at least 70% alcohol.
  - Allow alcohol solution disinfectant to air dry.

**Frequently touched surfaces:** Surfaces commonly touched by building occupants such as doorknobs, light switches, counter tops, and tables/desks. In labs, frequently touched surfaces include instruments, computers, and pipettes which can pose challenges for both cleaning and disinfection.

By signing below, I certify that I have reviewed and understand this SOP and have had the opportunity to ask questions. I will use the PPE identified and comply with safety procedures identified within this SOP.

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