

Pymatuning Lab of Ecology (PLE) COVID-19 Reopening and Yellow Phase Operation Plan

1. Prior to arrival, or upon first arrival at PLE after its reopening, all users and staff must read PLE's Yellow Phase Operation Plan (this document) containing the rules specified herein and sign a statement that they agree to abide by these rules. Their signature will also attest that they recognize that use of PLE facilities during the Yellow Phase is not advised for persons with advancing age, comorbidities such as hypertension, diabetes, chronic kidney or heart disease, immunosuppression, obesity, or other conditions shown to increase risk of Covid-19. Legal guardians may sign for their children (in residential areas, not in research facilities), signifying that they will ensure that the children are informed and also follow these rules while at PLE. Researchers will be made aware at this time that if an outbreak of COVID-19 occurs or a return to the Red Phase is needed there is a possibility their research at PLE must be discontinued and they would have to leave the campus on short notice (see attached Stand Down Plan for details).
2. Anyone positive or probable for COVID-19 must stay away from PLE facilities and properties until medically cleared. No person shall work at PLE for at least 14 days without COVID-19 symptoms after coming into close contact with persons known or probable for COVID-19 unless they are cleared to end their quarantine sooner by a doctor. Close contact is defined as sharing same household or same workspace in the 48 hours prior to the emergence of symptoms or a positive test.
3. For PLE staff upon reopening:
 - Staff who can work remotely will continue to do so.
 - Staff will not travel together in PLE vehicles (each facilities staff member will have a PLE vehicle at their disposal).
 - Facilities staff will be encouraged to limit time in shared spaces (office, shop) and to communicate using electronic means whenever possible (each staff member has a PLE-issued cell phone).
 - Staff will be strictly limited in the building spaces they may enter to barest need. They will be provided a list of spaces they may enter and will need to seek permission from their supervisor to enter other spaces unless an emergency situation arises.
 - To proactively assist in contact tracing, each staff member will maintain a log of building spaces they enter each day. An electronic sign-in sheet will also be supplied for each building.
 - Staff should continue to follow all previously established safety requirements while at work.
 - Staff using shared tools will disinfect tools at the beginning and end of each day's use.
4. In order to use PLE facilities during the Yellow phase researchers must
 - Have approval from their PI/supervisor
 - Pitt undergraduate researchers must have received approval for participation in research through the appropriate channels on Pitt's main campus

- Have developed, and received the PLE Director's approval of, a lab-specific COVID-19 Mitigation Plan that includes their time at PLE. Guidelines for this plan will be available from PLE staff.
 - Have a Research Use Application on file and approved by PLE
 - Use the facilities no longer than is needed for the research
 - To proactively assist in contact tracing, PLE guests will be asked to electronically sign-in (via a QR code) to research and common-use spaces while at PLE.
 - There will be no outside visitors permitted to enter PLE facilities.
 - If researchers are coming from a different entity who is not affiliated with the University of Pittsburgh, they will need to provide their COVID-19 plan from their respected areas.
5. Any individual on any PLE property or conducting field research while residing at PLE should maintain fundamental mitigation measures including:
- Maintain physical distancing of six feet or more between people at all times
 - Wash hands frequently
 - Avoid touching their face
 - Use of face coverings (see section 7, below)
 - Sneeze or cough into a tissue, or corner of elbow if tissue is not available
 - Frequently disinfect high-contact surfaces
 - Signage will be placed at all building entrances to remind staff and researchers of these measures.
6. If symptoms of COVID-19 emerge:
- PLE staff members must stay home or return to home and promptly call their supervisor and call *MyHealth@Work* at 412-647-4949.
 - Researchers already at PLE must return to their permanent residence if at all possible and alert Chris Davis (PLE Assistant Director)
 - If a person sick with confirmed or suspected COVID-19 and that person is unable to return to their permanent residence, they and anyone sharing the same housing with them who is also unable to leave (e.g., a family member) may remain at PLE in quarantine but must remain in their PLE residence until medically cleared to leave. In this situation PLE staff will check in with the sick person (remotely if at all possible) and help them attain groceries and medical supplies they may need so that they can stay in quarantine until they are recovered enough to return to their permanent residence. Anyone needing transportation to a hospital will need to call 911 for an ambulance.
 - This information will be included on signage at all building entrances.
7. PPE and mask use:
- Staff will be provided with masks (though they may provide their own) and nitrile gloves; researchers must provide their own masks and gloves.
 - Researchers should continue to follow previously established lab-specific requirements for PPE use while in the lab. Masks will be worn in public, where "in public" is defined as

when the nearest person is in proximity to another person outside of their PLE residence. This applies to outdoor as well as indoor spaces.

- Masks will be required if entering any non-residence building at PLE.
- Cloth masks are acceptable.
- Cloth face coverings and barrier masks are not PPE and do not negate the need to practice social distancing and other mitigation measures. Face coverings are worn as a courtesy to mitigate asymptomatic individuals from unknowingly transmitting the virus.
- This information will be included on signage at all building entrances

8. Physical Distancing

8.1. Housing

- PLE has 15 units with full kitchen/baths. Including undergrad dorms (no kitchen, just fridge and microwave) adds capacity for 4 more.
- Estimated max researcher population is 16 during third week of May.
- Researchers will be housed at our site such that no one will need to share a bedroom, bathroom or kitchen space (exceptions would be for researchers bringing families or researchers who were cohabiting for 14 days or more prior to arriving at PLE).
- Unnecessary common areas will be closed (Dining Hall, Recreation Hall). Signage indicating their closure will be posted on all entrances.
- Needed common areas will be cleaned daily (laundry facility) and surfaces will be wiped down before and after use. Only one person will be allowed to use this facility at a time. Signage indicating this will be posted on the door
- Housing units will be thoroughly cleaned and disinfected between residents' stays.

8.2. Research facilities

- Initial plan is for labs not to be shared by multiple lab groups.
- If later we need to allow labs to share lab space temporally, we would expect researchers to maintain social distance and wear masks.
- Occupancy limits during this phase are 1 person per room, or 1 person per 150 square feet in rooms larger than 150 square feet.
- If PPE is normally not required for the research, then researchers will follow the guidelines regarding Yellow Phase mask use and disease mitigation measures specified in sections 5, 6 and 7 above.
- PLE will provide a shared scheduling resource to track, schedule and stagger lab usage among PLE staff, researchers and research groups. Individuals found to be occupying a space they were not scheduled to be in may have their access to PLE facilities revoked.
- Lab spaces that are shared/split will have areas defined for each researcher's use.
- Researchers requesting lab space that is to be shared by multiple researchers in their lab must communicate their plan for minimizing contact to their lab members and to PLE in their Covid-19 Mitigation plan (see section 4).

- Researchers should disinfect their work area with an EH&S-approved disinfectant (see below) before and after tasks are completed. Signage will be placed in lab spaces to indicate this. Researchers must provide their own disinfectant for this purpose.
 - The computer lab at the Admin (Sanctuary Lake) site will be closed.
 - PLE will provide a printer for use at Admin (in copy room) and at the Donald S. Wood Field Lab (in hallway on an AV cart) for common use. They will be disinfected daily.
9. Cleaning procedures (from CDC website, edited to reflect the priority of EH&S list of disinfectants)
- 9.1. Hard (Non-porous) Surfaces
- Wear disposable gloves when cleaning and disinfecting surfaces. Gloves should be discarded after each cleaning.
 - Consult the manufacturer's instructions for cleaning and disinfection products used.
 - Clean hands immediately after gloves are removed.
 - If surfaces are dirty, they should be cleaned using a detergent or soap and water prior to disinfection.
 - For disinfection, use a product approved by Pitt Environmental Health and Safety for use in the area being sanitized. The document (attached as an addendum) outlines the products to be used is also available on the EH&S website here:
 - <https://www.ehs.pitt.edu/sites/default/files/docs/Disinfectant-InfoAndRecommendations.pdf>
- 9.2. Soft (Porous) Surfaces
- For soft (porous) surfaces such as carpeted floor, rugs, and drapes, remove visible contamination if present and clean with appropriate cleaners indicated for use on these surfaces. After cleaning: launder items as appropriate in accordance with the manufacturer's instructions. If possible, launder items using the warmest appropriate water setting for the items and dry items completely.
 - Otherwise, use products [that are EPA-approved for use against the virus that causes COVID-19](#) and that are suitable for porous surfaces.
10. List of areas to target for daily cleaning and sanitizing
- Bathrooms at Sanctuary Lake Site (in both the Admin Complex and Bldg 12 if multiple labs are occupied)
 - Office/copy room
 - Bathroom in dining hall (if being used by multiple staff members)
 - Bathroom/hallway at Donald S. Wood Field Lab
 - Common hallway/doors used in Bldg 21 (if both labs in use)
 - Hand wash sinks in all occupied lab spaces

- High touch areas in lab spaces hosting multiple researchers (doors, door knobs, light switches)

11. Between users, lab spaces will be thoroughly cleaned and disinfected.

- List of specific surfaces to clean and disinfect: Tables, hard-backed chairs, doorknobs, doors, light switches, handles, desks, toilets, sinks.
- Cleaners/disinfectants being used: Bleach, Lysol Bathroom cleaner, Comet Bathroom cleaner, peroxide-based disinfectants.

12. Chris Davis (PLE Assistant Director) will monitor that the cleaning procedures listed in 9 10 and 11 above are being done appropriately.

13. If someone is confirmed or probable positive for COVID-19 while at PLE or within 14 days of having been there:

- PLE will follow protocols for contact tracing developed by The University of Pittsburgh's Department of Environmental Health and Safety (EH&S).
- Areas where the person visited in the 48 hours before emergence of symptoms (or positive test result) will be prepared to close for 24 hours. PLE will follow EH&S's guidelines and areas contract with a third-party for COVID-19 cleanup.

14. Communications:

- Researchers will be reminded about the need to maintain social distance and the protocols everyone should be following while at PLE via an email. EH&S has agreed to work with PLE on this.
- Researchers will communicate remotely (e.g., via email, phone or videoconference) with PLE staff, in so far as is possible.
- Researchers will wait for notification of a package/mail delivery prior to coming to office to collect the item.

Pymatuning Lab of Ecology (PLE) COVID-19 Stand Down Plan

In the event that an increase in the incidence of covid-19 should occur and necessitate the closing of the Pymatuning Lab of Ecology's facilities for research, the following steps will be undertaken.

- All researchers using PLE's facilities will be contacted via email and phone immediately to alert them of the facility's impending closure and begin their planning process.
- Regardless of the social-distancing requirement in effect immediately prior to the stand down order, researchers will immediately begin wearing cloth facemasks in public; facemasks will be available from the PLE main office. In addition, individuals will maintain at least a 6-foot distance from one another during stand-down procedures.
- Individuals residing in PLE housing will have no more than 48 hours to pack their belongings and vacate housing. Keys should be left in the residence, buildings locked, and PLE administration should be alerted by email or phone once they have left.
- Researchers proposing to continue any activities at PLE during the 'stand down' must submit documentation that the activities have been approved by Adam Leibovich, Dietrich School Associate Dean for Research. Please work with the PLE Director to request this permission. Only individuals approved as performing essential tasks by this body may continue to access PLE facilities and only to do the approved essential tasks.
- PLE administrators will work with each research group to devise a plan for shutting down the laboratories and office spaces they are using so as to minimize the impact of the closure on the research. We anticipate that the timeframe from decision to stand down and laboratory closure may be as little as 48 hours. Lab/office shutdown plans will include:
 - Instructions to researchers for final clean-up of lab and office spaces. Researchers will be instructed to pack equipment and samples for storage or transport and do a final sterilization of work surfaces.
 - Instructions to take anything they may need and to assume that the closure may last for a long time (e.g., computers, cables, plants).
 - Where (at PLE or elsewhere) equipment and samples will be stored during shutdown. Space for storage at PLE will be assigned if possible and desired by the researchers. If the researchers' home campus remains open they will also have the option to transport equipment/samples there.
 - An inventory of samples and equipment left at PLE to be filled out by the research team lead, which should be emailed to PLE administration (pymlab@pitt.edu). This will facilitate an orderly restart to research once we reopen the facilities.
- Researchers will be instructed to leave their keys inside offices and lab space and lock the buildings as they disperse. PLE staff will enter the buildings to retrieve them at a later time.

- PLE staff will enter each building once research tenants have left to prepare those spaces for long-term non-use, for example by turning off non-essential electronics, collecting left keys, arming alarm systems, and following EH&S guidelines for safe laboratory shut-down.
- PLE staff will resume their “red phase” status, with all only personnel performing essential facilities maintenance tasks allowed on the PLE campus and all others working from home.
- PLE administrators will communicate electronically with research users and staff regarding planned changes to the facility’s stand down status.

Choosing an Appropriate Disinfectant: Guidance for Laboratories and Non-laboratory Settings

Introduction

EH&S receives many questions regarding appropriate disinfectants for use in all University settings including laboratories, animal facilities and non-laboratory areas. Choosing an appropriate disinfectant requires knowledge of:

- Intended use:
 - General cleaning of non-laboratory areas (e.g. restrooms, office areas, common areas of buildings)
 - Decontamination of work surfaces, equipment and/or potentially infectious wastes in a laboratory
 - Approved animal use area where specific microorganisms must be inactivated and animal welfare must be considered
- Microorganisms to be inactivated:
 - Common bacteria and viruses found in the workplace or in human body fluids
 - Specific species or family of bacteria, parasite, virus or other microorganism used in the research area
- Surfaces and items/equipment to be disinfected:
 - Some classes of disinfectants can cause reactions or toxic fumes when mixed with certain chemicals
 - Each class of disinfectant may be incompatible with specific materials or equipment (e.g. bleach and other products using sodium hypochlorite as a primary active ingredient can corrode stainless steel and aluminum surfaces if use is not followed by adequate rinsing)
 - Fabrics and cloth items are difficult to disinfect and can be damaged by specific classes of disinfectants
 - Disinfection of surfaces that will contact food requires careful reading of product labels to ensure appropriate active ingredient, application, and rinsing (if needed) are considered

Choosing an appropriate class of disinfectant for laboratory and non-laboratory use

Table 1 provides general information on disinfectants grouped by type of active ingredient and lists selected advantages, disadvantages, and potential hazards associated with each class. When searching for an appropriate disinfectant, use the information in Table 1 to determine which classes of disinfectants may be appropriate for the intended use.

Table 1: Selecting a Class of Disinfectants

Disinfectant Class	Active Ingredient(s)	Advantages	Disadvantages	Suggested Uses	Potential Hazards
Alcohols	<ul style="list-style-type: none"> - Aqueous solutions of Ethanol (Ethyl alcohol) without additional active ingredients (e.g. 70% ethanol) - Aqueous solutions of Isopropanol (Isopropyl alcohol) without additional active ingredients (e.g. 70% isopropanol) - 	<ul style="list-style-type: none"> - Readily available and inexpensive - Aqueous solutions can be used to sanitize skin (e.g. hand sanitizers, preparation of skin for injections) 	<ul style="list-style-type: none"> - Not EPA-registered - Rapid evaporation makes achieving required 10 minute contact time difficult 	<ul style="list-style-type: none"> - Not recommended for primary disinfectant in laboratories - Use of alcohol-based hand sanitizer when hand washing is not possible is appropriate 	<ul style="list-style-type: none"> - Flammable - May react violently with strong oxidizer - Can cause skin and respiratory tract irritation

Disinfectant Class	Active Ingredient(s)	Advantages	Disadvantages	Suggested Uses	Potential Hazards
Alcohols with additional active ingredients	- Combination of ethanol or isopropanol, water, and <u>additional active ingredients, most often quaternary amines or phenolic ingredients</u>	<ul style="list-style-type: none"> - EPA-registered products available - Mixture of alcohols and additional active ingredients/surfactants ensure appropriate contact time by reducing evaporation - Non-corrosive to many hard surfaces and some electronic equipment 	<ul style="list-style-type: none"> - Usually available as ready to use solutions or wipes, restricting use to surface decontamination only 	<ul style="list-style-type: none"> - Consider use for surface decontamination of microscope stages, keyboards, some enclosed electronic equipment - Wipes are convenient for surface disinfection 	<ul style="list-style-type: none"> - Flammable - May react violently with strong oxidizer - Can cause skin and respiratory tract irritation
Aldehydes	<ul style="list-style-type: none"> - Formaldehyde - Glutaraldehyde - Ortho-phthalaidehyde (OPA) - Paraformaldehyde 	<ul style="list-style-type: none"> - Aldehydes rapidly inactivate a wide variety of organisms 	<ul style="list-style-type: none"> - Formaldehyde is a known carcinogen - Aldehydes are sensitizing agents - Irritating to skin and respiratory tract - Toxic and must be collected as chemical waste 	<ul style="list-style-type: none"> - Not recommended for use as disinfectants - Should not be used without prior consultation with EH&S 	<ul style="list-style-type: none"> - Formaldehyde is a known carcinogen - Aldehydes are sensitizing agents - Irritating to skin and respiratory tract - Toxic and must be collected as chemical waste

Disinfectant Class	Active Ingredient(s)	Advantages	Disadvantages	Suggested Uses	Potential Hazards
Chlorine compounds	<ul style="list-style-type: none"> - Sodium hypochlorite - Calcium hypochlorite - Chlorine dioxide 	<ul style="list-style-type: none"> - Sodium hypochlorite products (e.g. bleach) are readily available and inexpensive - Chlorine compounds inactivate a wide variety of organisms - Can be used on food prep surfaces 	<ul style="list-style-type: none"> - Can be corrosive to metals (e.g. stainless steel, aluminum) - Incompatible with strong acids, ammonia, amines, or reducing agents - Unpleasant odor - High concentrations irritating to skin and mucous membranes - Damaging to fabrics and some surfaces (bleaching effect) 	<ul style="list-style-type: none"> - Sodium hypochlorite (bleach) is a relatively inexpensive and effective disinfectant in the laboratory and the home - Most commercial sodium hypochlorite products provide ~5% hypochlorite ion <ul style="list-style-type: none"> - 1:10 dilution (v:v) in water for surface disinfection - 1:10 dilution (v:v) in cultures, etc. for liquid decontamination 	<ul style="list-style-type: none"> - Mixture with strong acids results in violent reactions that can release toxic gas - May react explosively with ammonia, amines, or reducing agents - Concentrated hypochlorite and chlorine dioxide products can cause chemical burns

Disinfectant Class	Active Ingredient(s)	Advantages	Disadvantages	Suggested Uses	Potential Hazards
Peroxides	<ul style="list-style-type: none"> - Hydrogen peroxide - Peroxyacetic acid 	<ul style="list-style-type: none"> - Hydrogen peroxide inactivates a wide variety of organisms - Products combining hydrogen peroxide and peracetic acid (peroxyacetic acid) can be used for high level disinfection of medical devices (cold sterilants) - Highly concentrated solutions of peroxide can be vaporized for room decontamination 	<ul style="list-style-type: none"> - Concentrated peroxide solutions are highly reactive and incompatible with flammable solvents and metal salts including acetone, methanol, ethanol, ferric chloride, and magnesium sulfate - Can damage fabrics and some types of surfaces - Material compatibility concerns (brass, zinc, copper, and nickel/silver plating) both cosmetic and functional 	<ul style="list-style-type: none"> - Diluted hydrogen peroxide solutions (0.5-3%) are effective - EH&S does not recommend use of highly concentrated hydrogen peroxide solutions or products combining hydrogen peroxide and peracetic acid - Should not be used without prior consultation with EH&S 	<ul style="list-style-type: none"> - Highly concentrated peroxide solutions are highly reactive and can decompose forming potentially explosive compounds. - Concentrated peroxide solutions and peroxyacetic acid based disinfectants may cause chemical burns for eyes and skin - Peroxyacetic acid based disinfectants are toxic and must be collected as chemical wastes
Phenolics	<ul style="list-style-type: none"> - 2-phenylphenol - O-Benzyl-p-chlorophenol - O-phenylphenol - Thymol 	<ul style="list-style-type: none"> - Inactivate a wide variety of organisms - Available in concentrated formulations - Many formulas also have surfactants which allows surface cleaning as well as disinfection 	<ul style="list-style-type: none"> - Less effective against non-enveloped viruses and specific bacterial species when compared with other classes - Unpleasant odor - Can leave residue on surfaces - Some Phenolics must be collected as chemical waste 	<ul style="list-style-type: none"> - Phenolic disinfectants are appropriate for use in many laboratories and concentrated formulas can be used for decontamination of surfaces and liquid waste - Not recommended for non-laboratory use 	<ul style="list-style-type: none"> - Can cause skin and eye irritation - Concentrated Phenolics can cause chemical burns - Toxic if inhaled, ingested, or applied to skin in high concentrations

Disinfectant Class	Active Ingredient(s)	Advantages	Disadvantages	Suggested Uses	Potential Hazards
Quaternary Ammonium products	- Various combinations of Alkyl ammonium salts	<ul style="list-style-type: none"> - Detergent action helps remove soil from surfaces - Non-corrosive - Can be used on food prep surfaces - Less toxic than other classes of disinfectants 	<ul style="list-style-type: none"> - Many formulations do not effectively inactivate TB bacteria and some types of viruses - Can leave soapy residue on surfaces - Incompatible with bleach and other chlorine solutions 	<ul style="list-style-type: none"> - Ready to use formulations are available for laboratory use and general cleaning - Some concentrated formulations are available for decontamination of liquid wastes in laboratories 	<ul style="list-style-type: none"> - Repeated exposure may cause contact dermatitis and can trigger asthma in some individuals - Can cause skin and mucous membrane injury

Disinfectant recommendations: Laboratory use

Table 2 provides examples of commonly recommended disinfectants for use in cleaning non-porous high touch surfaces in laboratories. For specific COVID-19 related cleaning concerns, additional brands of quaternary ammonium or hydrogen peroxide disinfectant products appropriate for cleaning hard surfaces may be found on the EPA's disinfectant list for SARS-COV-2 found at <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>.

Laboratories should consult with EH&S before changing a currently approved disinfectant to one that uses a different active ingredient, or if using a disinfectant that is not included in the table of selected products below. The suggested list in Table 2 is not all-inclusive. Additional lists of EPA-registered disinfectants appropriate for specific microorganisms can be found (<https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants>).

Table 2: Selected commonly recommended disinfectants for use in laboratories

<i>Alcohols with additional active ingredients (e.g. quaternary amines or phenolics)</i>			
Product Name	Formulation: Ready to Use or Concentrate	Use dilution (if applicable) and contact time	Appropriate for decontamination of liquid wastes*
Cavicide	Ready to use	RTU; 3-minute contact time	No*
CaviWipes	Ready to use	RTU; 3-minute contact time	No*
Lysol® Disinfectant Spray	Ready to use	RTU; 10-minute contact time	No*
<i>Sodium hypochlorite</i>			
Product Name	Formulation: Ready to Use or Concentrate	Use dilution (if applicable) and contact time	Appropriate for decontamination of liquid wastes*
Bleach	Concentrate	500 ppm; 1:10 v:v; 5-minute contact time	Yes
Sani-Cloth Bleach Germicidal Disposable wipe	Ready to use	RTU; 1-minute contact time	No*
<i>Quaternary ammonium</i>			
Product Name	Formulation: Ready to Use or Concentrate	Use dilution (if applicable) and contact time	Appropriate for decontamination of liquid wastes*
Sani-cloth Germicidal Disposable Cloth	Ready to use	RTU; 3-minute contact time	No*
Lysol® Brand All Purpose Cleaner	Ready to use	RTU; 10-minute contact time	No*
Virex™ II / 256	Concentrate	1:256 v:v; 10-minute contact time	Yes

Lysol® Disinfecting Wipes (All Scents)	Ready to use	RTU; 10-minute contact time	No*
<i>Phenolics</i>			
Product Name	Formulation: Ready to Use or Concentrate	Use dilution (if applicable) and contact time	Appropriate for decontamination of liquid wastes*
LpH® IIIse Phenolic Disinfectant	Concentrate	1:128 v:v; 10-minute contact time	Yes
Vesphene IIIse Phenolic Disinfectant	Concentrate	1:128 v:v; 10-minute contact time	Yes
<i>Hydrogen peroxide</i>			
Product Name	Formulation: Ready to Use or Concentrate	Use dilution (if applicable) and contact time	Appropriate for decontamination of liquid wastes*
Peroxigard	RTU or Concentrate	Concentrate (1:64 v:v); 5-minute contact time	Concentrate only - yes
Peridox	Concentrate	1:5 v:v; 3-minute contact time	Yes

* Disinfectants listed as not appropriate for decontamination of liquid wastes may be used on surfaces, but must not be used to decontaminate liquid wastes due to either their availability only as ready to use formulations or chemical waste disposal regulations, or both.

Disinfectant recommendations: Non-Laboratory use

Table 3 provides examples of commonly recommended disinfectants for use in cleaning non-porous high touch surfaces in non-laboratory areas. This suggested list in Table 3 is not all-inclusive, but Units must be aware that many of the disinfectant products appropriate for cleaning hard surfaces found on the [EPA's disinfectant list for SARS-COV-2](#) are very corrosive and/or toxic and are not appropriate for use in non-laboratory areas. Units should consult with EH&S before using a disinfectant that has a different active ingredient than the selected products below.

Table 3: Selected commonly recommended disinfectants for use in non-laboratory areas

Product name	Company	Ready to Use	Concentrate	Active Ingredient	Contact Time
Benefect Botanical Daily Cleaner Disinfectant	Cleanwell LCC	Spray Bottle/Wipes	N/A	Thymol	10 minutes
Clorox Healthcare® Bleach Germicidal Cleaner Spray	Clorox Professional Products Company	Spray Bottle	N/A	Sodium hypochlorite	1 minute
Clorox Commercial Solutions® Clorox® Clean-Up Disinfectant Cleaner with Bleach1	Clorox Professional Products Company	Spray Bottle	N/A	Sodium hypochlorite	5 minutes
Clorox Commercial Solutions® Clorox® Disinfecting Biostain & Odor Remover	Clorox Professional Products Company	Spray Bottle	N/A	Hydrogen peroxide	5 minutes
Clorox Commercial Solutions® Clorox® Disinfecting Spray	Clorox Professional Products Company	Spray Bottle	N/A	Quaternary ammonium; ethanol	10 minutes
Clorox Commercial Solutions® Clorox® Disinfecting Wipes	Clorox Professional Products Company	Wipes	N/A	Quaternary ammonium	4 minutes

Product name	Company	Ready to Use	Concentrate	Active Ingredient	Contact Time
Clorox Commercial Solutions® Hydrogen Peroxide Cleaner Disinfectant	Clorox Professional Products Company	Spray Bottle	N/A	Hydrogen peroxide	1 minute
Clorox Commercial Solutions® Hydrogen Peroxide Cleaner Disinfectant Wipes	Clorox Professional Products Company	Wipes	N/A	Hydrogen peroxide	2 minutes
Clorox Healthcare® Bleach Germicidal Wipes	Clorox Professional Products Company	Wipes	N/A	Sodium hypochlorite	3 minutes
Clorox Healthcare® VersaSure® Wipes	Clorox Professional Products Company	Wipes	N/A	Quaternary ammonium	5 minutes
CloroxPro™ Clorox® Germicidal Bleach	Clorox Professional Products Company	N/A	Yes (1:10 dilution)	Sodium hypochlorite	5 minutes
Clorox Clean Up Cleaner + Bleach	The Clorox Company	Spray Bottle	N/A	Sodium hypochlorite	1 minute
Clorox Disinfecting Bleach	The Clorox Company	N/A	Yes (1:10 dilution)	Sodium hypochlorite	10 minutes
Clorox Disinfecting Wipes	The Clorox Company	Wipes	N/A	Quaternary ammonium	4 minutes
Clorox Multi Surface Cleaner + Bleach	The Clorox Company	Spray Bottle	N/A	Sodium hypochlorite	1 minute

Product name	Company	Ready to Use	Concentrate	Active Ingredient	Contact Time
Clorox Pet Solutions Advanced Formula Disinfecting Stain & Odor Remover	The Clorox Company	Spray Bottle	N/A	Hydrogen peroxide	5 minutes
Ultra Clorox Brand Regular Bleach	The Clorox Company	N/A	Yes (1:10 dilution)	Sodium hypochlorite	5 minutes
Soft Scrub with Bleach	Combat Insect Control Systems	Bottle	N/A	Sodium hypochlorite	3 minutes
PURELL Professional Surface Disinfectant Wipes	GOJO Industries Inc	Wipes	N/A	Ethanol	5 minutes
Thymox Disinfecting Spray	Laboratorie M2	Spray Bottle	N/A	Thymol	4 minutes
LEXX™ Liquid Sanitizer and Cleaner Concentrate	ProNatural Brands	Spray Bottle/Wipes	Yes (1:64 dilution)	Citric acid	10 minutes
Lysol Brand Bleach Mold And Mildew Remover	Reckitt Benckiser	Spray Bottle	N/A	Sodium hypochlorite	30 seconds
Lysol disinfecting wipes (all scents)	Reckitt Benckiser	Wipes	N/A	Quaternary ammonium	10 minutes
Lysol Brand Clean & Fresh Multi-surface Cleaner	Reckitt Benckiser LLC	N/A	Yes (1:128 dilution)	Quaternary ammonium	3 minutes
Lysol Brand Deodorizing Disinfectant Cleaner	Reckitt Benckiser LLC	N/A	Yes (1:64 dilution)	Quaternary ammonium	10 minutes
Lysol Brand Heavy Duty Cleaner Disinfectant Concentrate	Reckitt Benckiser LLC	N/A	Yes (1:64 dilution)	Quaternary ammonium	5 minutes

Product name	Company	Ready to Use	Concentrate	Active Ingredient	Contact Time
Lysol Neutra Air® 2 in 1	Reckitt Benckiser LLC	Spray Bottle	N/A	ethanol	30 seconds
Lysol® Brand All Purpose Cleaner	Reckitt Benckiser LLC	Spray Bottle	N/A	Quaternary ammonium	2 minutes
Lysol® Disinfectant Max Cover Mist	Reckitt Benckiser LLC	Spray Bottle	N/A	Quaternary ammonium; ethanol	10 minutes
Lysol® Disinfectant Spray	Reckitt Benckiser LLC	Spray bottle	N/A	Quaternary ammonium; ethanol	10 minutes
Lysol® Kitchen Pro Antibacterial Cleaner	Reckitt Benckiser LLC	Spray Bottle	N/A	Quaternary ammonium	2 minutes
Windex disinfectant cleaner	S.C. Johnson & Sons	Spray Bottle	N/A	L-Lactic acid	5 minutes
Fantastik Multi-Surface Disinfectant Degreaser	S.C. Johnson Professional	Spray Bottle	N/A	Quaternary ammonium	5 minutes
CleanCide	Wexford Labs	Wipes	N/A	Citric acid	5 minutes
<u>BATHROOM SPECIFIC CLEANERS AND DISINFECTANTS</u>					
The Works® Basic Disinfectant Toilet Bowl Cleaner	Bio-Lab Inc	Bottle	N/A	hydrogen chloride	10 minutes
Claire Disinfectant Bathroom Cleaner	Claire Manufacturing Company	Spray Bottle	N/A	Quaternary ammonium	10 minutes

Product name	Company	Ready to Use	Concentrate	Active Ingredient	Contact Time
Lysol Bathroom Cleaner	Reckitt Benckiser LLC	Spray Bottle	N/A	Citric acid	5 minutes
Lysol Brand Cling & Fresh Toilet Bowl Cleaner	Reckitt Benckiser LLC	Bottle	N/A	Quaternary ammonium	30 seconds
Lysol Brand Foaming Disinfectant Basin Tub & Tile Cleaner II	Reckitt Benckiser LLC	Spray Bottle	N/A	Quaternary ammonium	10 minutes
Lysol Brand Lime & Rust Toilet Bowl Cleaner	Reckitt Benckiser LLC	Bottle	N/A	hydrochloric acid	10 minutes
Lysol Brand Power Plus Toilet Bowl Cleaner	Reckitt Benckiser LLC	Bottle	N/A	hydrochloric acid	10 minutes
Lysol Brand Toilet Bowl Cleaner with Bleach	Reckitt Benckiser LLC	Bottle	N/A	Sodium hypochlorite	5 minutes
Scrubbing Bubbles Bubbly Bleach Gel Toilet Bowl Disinfectant	S.C. Johnson & Son Inc	Bottle	N/A	Sodium hypochlorite	10 minutes
Scrubbing Bubbles Disinfectant Restroom Cleaner II	S.C. Johnson & Son Inc	Spray bottle	N/A	Quaternary ammonium	5 minutes
Scrubbing Bubbles Power Stain Destroyer Non-Bleach Toilet Bowl Disinfectant	S.C. Johnson & Son Inc	Bottle	N/A	hydrochloric acid	10 minutes
Scrubbing Bubbles® Bathroom Disinfectant Bathroom Grime Fighter	S.C. Johnson & Son Inc	Spray bottle	N/A	Quaternary ammonium	5 minutes
Clorox Disinfecting Bathroom Cleaner	The Clorox Company	Spray Bottle	N/A	Quaternary ammonium	10 minutes

Product name	Company	Ready to Use	Concentrate	Active Ingredient	Contact Time
Clorox Scentiva Bathroom Disinfecting Foam Cleaner	The Clorox Company	Spray Bottle	N/A	Quaternary ammonium	5 minutes
Clorox Toilet Bowl Cleaner with Bleach	The Clorox Company	Bottle	N/A	Sodium hypochlorite	10 minutes
Comet Disinfecting Bathroom cleaner	The Proctor & Gamble Company	Spray Bottle	N/A	Citric acid	10 minutes