

NOVEL CORONAVIRUS (COVID-19)

Cleaning and disinfecting guidance for
K-12 schools and higher education



GENERAL INFECTION PREVENTION GUIDELINES

Preventative measures that may help prevent an outbreak of COVID-19 as well as other illnesses.

1

MONITOR NEWS AND ADVICE FROM PUBLIC HEALTH AGENCIES

Follow local public health recommendations related to local infection activity and need for isolation and closing.

2

IMPLEMENT GOOD INFECTION PREVENTION PRACTICES

Reinforce personal hygiene throughout your operation.

Provide hygiene materials such as tissues, hand soap and sanitizer.

Stock effective disinfectant products and follow protocols.

3

COMMUNICATE WITH AND MONITOR EMPLOYEES

Educate and inform employees.

Closely monitor employee health.

Have symptomatic employees stay home.

ABOUT THIS GUIDANCE

Dated 4/10/20: The novel coronavirus is an emerging pathogen and the situation is constantly evolving. This guidance references CDC and WHO guidelines and is supplemented with Ecolab expertise.

For the most up-to-date information, please refer to [Centers for Disease Control and Prevention \(CDC\)](#), [World Health Organization](#) or your local health authority.

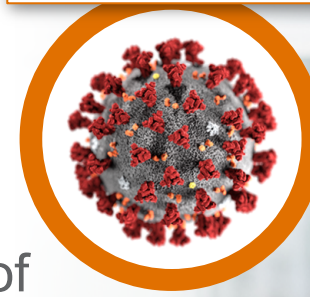
Contact your Ecolab representative for additional questions on products or procedures.

Additional information:

- [CDC: Interim Guidance for Business and Employers](#)
- [CDC: Guidance for Cleaning and Disinfection](#)
- [CDC: Prevention in Communities, schools, healthcare settings and businesses](#)

WHAT WE KNOW ABOUT CORONAVIRUS (COVID-19)

Coronaviruses



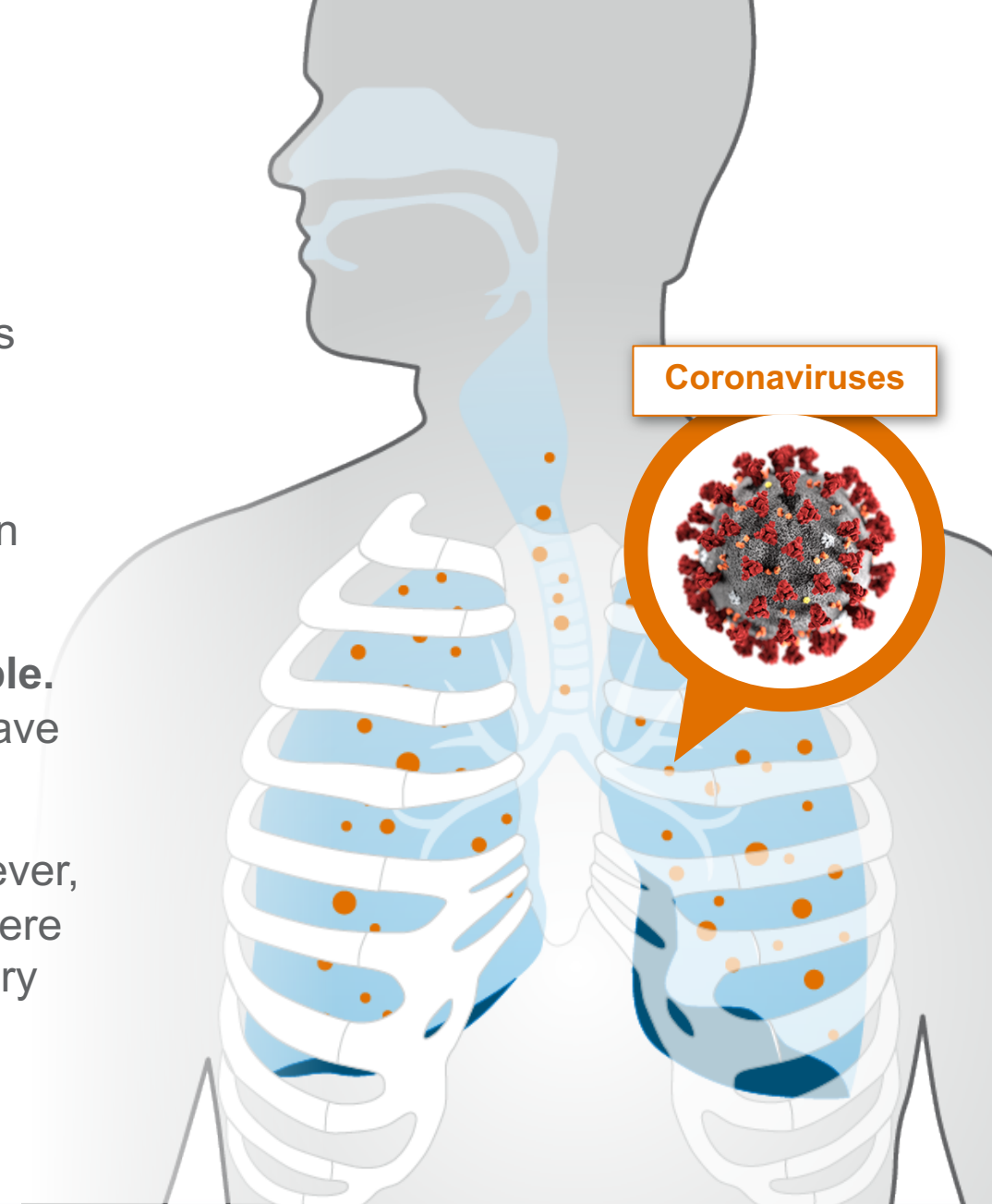
- **Coronavirus disease (COVID-19)** is a respiratory disease of international public health concern caused by a “novel coronavirus” not previously seen.
- The virus causes fever and respiratory symptoms.
- To date, the virus has infected greater than 1.4 million people, with thousands of reported deaths.
 - There may be more cases identified--access case counts here: [Global Map of Confirmed Cases](#)
- Public health authorities are actively investigating this outbreak and **the situation is evolving.**
 - Please follow local public health authority and World Health Organization guidance for the most up-to-date information.



Sources: (1) <http://jiangsu.sina.com.cn/news/s/2020-01-15/detail-iihnzhha2508664.shtml> (2) <http://wjw.wuhan.gov.cn/front/web/showDetail/2020011509040>
(3) http://news.youth.cn/jsxw/202001/t20200115_12170407.html (4) https://www3.nhk.or.jp/nhkworld/en/news/20200116_46/ (5)
<http://wjw.wuhan.gov.cn/front/web/showDetail/2020011609057>
(6) <http://wjw.wuhan.gov.cn/front/web/list2nd/no/710> (7) <http://wjw.wuhan.gov.cn/front/web/showDetail/2020011909074>

WHAT IS A CORONAVIRUS?

- **Coronaviruses (CoV)** are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).
- **A novel coronavirus (nCoV)** is a new strain that has not been previously identified in humans.
- **Coronaviruses are transmitted between animals and people.** Several known coronaviruses are circulating in animals that have not yet infected humans.
- **Common signs of infection** include respiratory symptoms, fever, cough, shortness of breath and trouble breathing. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

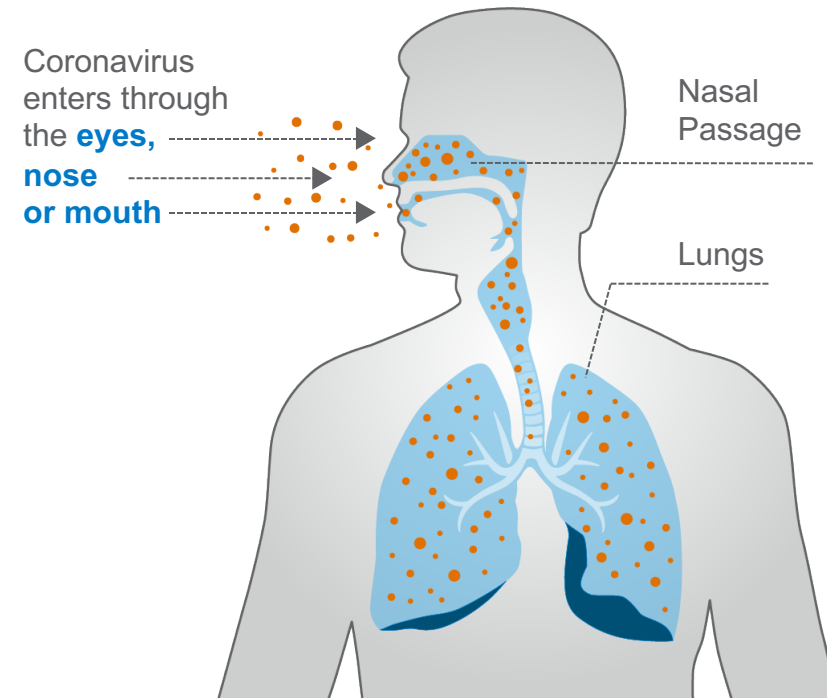


HOW DOES CORONAVIRUS SPREAD?

It depends on the particular coronavirus.

Human coronaviruses **may spread by respiratory droplets from an infected person to others through:**

- **The air** by coughing and sneezing
- **Close personal contact**, such as touching or shaking hands
- **Touching** an object or surface with the virus on it, then touching your mouth, nose or eyes before washing your hands



Transmission from person to person is occurring **with COVID-19**. Surveillance continues.

STEPS TO HELP PROTECT YOURSELF AND YOUR EMPLOYEES, STUDENTS AND GUESTS

Public health recommendations focus on **standard infection control practices, training and compliance.**



Good News

Coronavirus is a small-enveloped virus. Enveloped viruses are the least resistant to disinfection, which means **disinfectants can be used to effectively kill coronavirus on surfaces.**



HOW TO PROTECT YOURSELF

➤ There are currently no vaccines available to protect you against human coronavirus infection.

You may be able to **reduce your risk** of infection by doing the following:

- 1 Wash your hands** often and correctly.
 - The World Health Organization recommends performing hand hygiene with soap and water or alcohol-based hand sanitizer if soap and water are not available.
- 2 Avoid touching** your eyes, nose or mouth with unwashed hands.
- 3 Avoid close contact** with people who are sick.
- 4 Avoid areas where live animals are being sold or raised** in regions where excessive cases are being reported.
- 5 Wear a mask if directed by health care or local requirements.**
- 6 Seek medical advice immediately** if you have a fever or other symptoms after traveling. Tell the doctor where you have traveled.



HOW TO PROTECT OTHERS

If you have cold-like symptoms, you can **help protect others** by doing the following:



Wear a mask if advised by healthcare experts or local requirements.



Wash your hands.



Stay home while sick.



Cover your mouth and nose.



Avoid close contact.



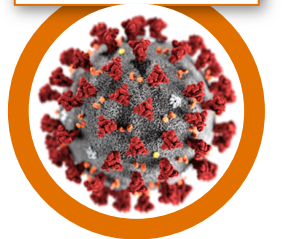
Contact a doctor immediately.



Clean and disinfect.

PROCEDURES BASED ON RISK PROFILE

Coronavirus



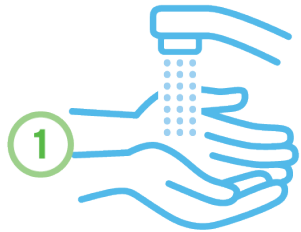
Ecolab recommends that customers take the following steps based on the risk profile of their operations. This 3-tiered guidance is informed by public health reports and our understanding of the scientific characteristics of underlying causes.

LEVEL	GREEN: Standard Prevention	YELLOW: Risk Reduction	RED: Remediation
DESCRIPTION	RISK PROFILE: No known outbreak in your geographic area	RISK PROFILE: The potential exists for an outbreak in your geographic area	RISK PROFILE: A publicly declared outbreak in your facility or region is disrupting normal business
ACTIONS	<ul style="list-style-type: none"> Follow current procedures Regularly revisit training to ensure compliance Maintain standard hygiene and sanitizing/disinfection practices 	<ul style="list-style-type: none"> Educate employees on infection control, PPE use and communicate Infection Control Procedures Assess your preparedness status and collaborate with vendor partners on response readiness Evaluate facility usage, lead times and stock shelf life and their impact on ordering supplies Increase frequency of standard procedures 	<ul style="list-style-type: none"> Enhance procedures to respond to an outbreak in your facility, designed to break the chain of infection or illness Facilitate training for heightened procedures Perform heightened procedures using approved products Plan for deep cleaning and reopening procedures after down time or quarantine

Increase frequency of cleaning and disinfection of high-touch surfaces

HAND HYGIENE

Practice and promote **proper hand hygiene**.



WET

hands with clean running water, turn off the tap and apply soap.



LATHER

the back of hands, between fingers and under nails.



SCRUB

for at least 20 seconds.



RINSE

hands well under clean running water.



DRY

hands using a clean towel or air dryer.



IF SOAP AND WATER ARE NOT AVAILABLE,
use an alcohol-based hand sanitizer

DISINFECTION: NON-FOOD CONTACT

Clean and disinfect hard surfaces and high-touch objects with approved disinfectants.
Increase frequency as needed.

1 PRE-CLEAN

Pre-clean visibly soiled areas to be disinfected

2 DISINFECT

For an emerging viral pathogen, use a disinfectant with an EPA-approved emerging viral pathogen or coronavirus claim. Refer to the product label for complete directions for use.



3 WAIT

Allow surface to remain wet for the time indicated in the directions for use on the product label.



4 DRY

Wipe the surface or allow to air dry.



DISINFECTION: FOOD CONTACT

During RED REMEDIATION: Clean and disinfect hard surfaces and high-touch objects with approved disinfectants. **Increase frequency as needed.**

1 PRE-CLEAN

Pre-clean visibly soiled areas to be disinfected

2 DISINFECT

For an emerging viral pathogen, use a disinfectant with an EPA-approved emerging viral pathogen or coronavirus claim. Refer to the product label for complete directions for use.



3 WAIT

Allow surface to **remain wet** for the time indicated in the directions for use on the product label.



4 DRY

Wipe the surface or allow to air dry.



5 RINSE AND SANITIZE

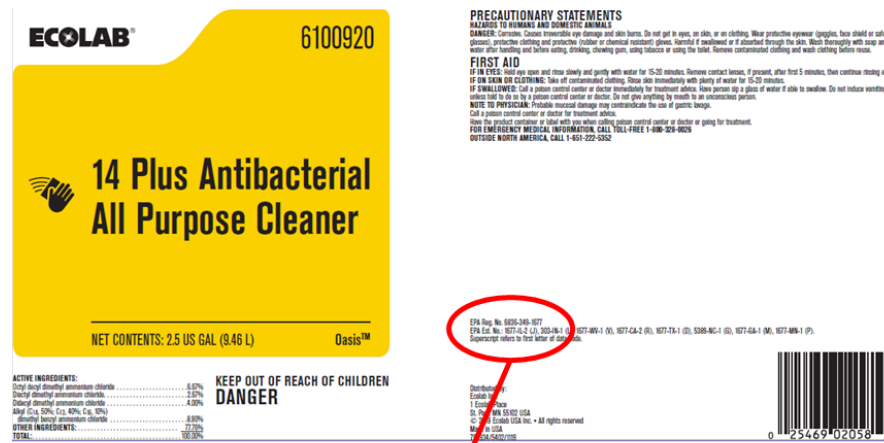
Rinse the surface with potable water and sanitize using food-contact sanitizer according to label directions.



RED: REMEDIATION

HOW TO KNOW IF DISINFECTANTS ARE APPROVED FOR USE AGAINST NOVEL CORONAVIRUS

Find the EPA Registration Number on the product label



EPA Reg. No. 6836-349-1677

Base Registrant Company Number

Product Number

Sub-Registrant Company Number

Not all products have a three-part EPA Registration Number. Ecolab-owned registrations are only two-parts.

To verify your product is on the list of [EPA registered antimicrobial products for use against novel coronavirus](#), match the first two parts of the EPA Registration Number.

Note: Searching by product or company name will not yield full approved list.

List N: Disinfectants for Use Against SARS-CoV-2

List N includes products that meet EPA's criteria for use against SARS-CoV-2, the cause of COVID-19.

When purchasing a product, check if its EPA registration number is included on this list. If it is, you have a match and the product can be used against SARS-CoV-2. You can find this number on the product label - just look for the EPA Reg. No. These products may be marketed under different brand names, but if they have the same EPA registration number, they are the same product.

This list includes products with emerging viral pathogen claims and those with human coronavirus claims. If a product with an emerging viral pathogen claim is not available, use a product with a coronavirus claim. If the product is listed as "N" under the Emerging Viral Pathogen column, then it has a human coronavirus claim.

- [Frequently Asked Questions about List N: Disinfectants for Use Against SARS-CoV-2](#)
- [Emerging Viral Pathogen Claims for SARS-CoV-2: Submission Information for Registrants](#)

Note: Inclusion on this list does not constitute an endorsement by EPA. There may be additional disinfectants that meet the criteria for use against SARS-CoV-2. EPA will update this list with additional products as needed.

Show 13 items PDF

List N: Products with Emerging Viral Pathogens AND Human Coronavirus claims for use against SARS-CoV-2

EPA Registration Number	Active Ingredient/s	Product Name	Company	Follow the disinfection directions and preparation for the following virus
1677-256	Quaternary ammonium	FSC 35K	ECOLAB, INC.	Coronavirus
1677-251	Hydrogen Peroxide	PEROXIDE DISINFECTANT AND GLASS CLEANER RTU	Ecolab Inc/Kay Chemical Co.	Canine Parvovirus
1677-250	Hydrogen peroxide; peroxyoctanoic acid; peroxyacetic acid	Synergex	Ecolab Inc	Reovirus
1677-249	Isopropanol	KLERCIDE 70/30 IPA	Ecolab Inc	Rhinovirus

EPA list of registered antimicrobial products for use against novel coronavirus, the cause of COVID-19.

CLASSROOM GUIDELINES

STANDARD PROCEDURES

- Dust file cabinets and bookshelves, if needed.
- Remove any large debris from hard surfaces and then **disinfectant** on all high touchpoint surfaces including desks, chair arm rests, door handles, light switches, etc.
- Wipe black and white boards as well as the ledges
- Empty trash cans and replace liners. Clean the outside of trash.
- Vacuum/sweep floors and mop hard surface floors.

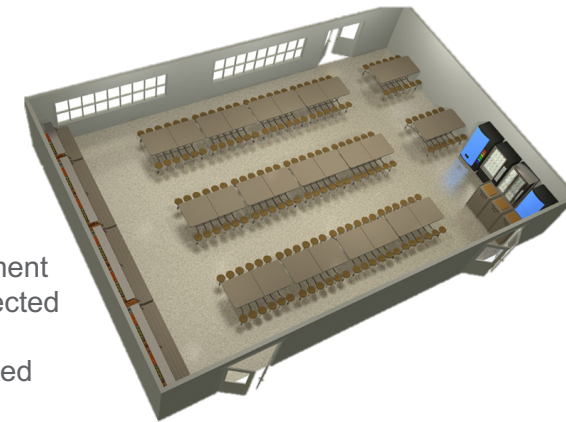
RISK REDUCTION PROCEDURES

- Increase frequency of cleaning and **disinfection** of high-touch areas.

REMEDIAL PROCEDURES

- Follow **STANDARD PROCEDURES** above.
- Increase frequency of hard surface **disinfection** using an EPA-registered disinfectant with an emerging viral pathogens claim. **Disinfect** ALL hard surfaces, not just high touch points. Carefully read and follow label directions.
- It is recommended to close off areas used by the ill persons and wait as long as practical before beginning cleaning and **disinfection** to minimize potential for exposure to respiratory droplets. Open outside doors and windows to increase air circulation in the area. If possible, wait up to 24 hours before beginning cleaning and **disinfection**.

Refer to product label for complete directions for use



CONSIDERATIONS

- Provide Personal Protective Equipment (e.g., gloves, gowns, masks) as directed by local and federal public health authorities for employees and infected individuals.
- Post signs regarding cough etiquette & hand washing/sanitizer procedures.
- Provide **disinfectant** wipes in classrooms for use between periods.
- Provide hand sanitizer in high traffic areas.
- Consider limiting non-essential visitors.

Specific touchpoints

Door handles, push plates, thresholds and hand railings, light switches, desks, tables, and chair arms, file cabinet handles, trash receptacle touch points, shared learning materials, computer keypad & mouse

PUBLIC AREA GUIDELINES

Lobbies, entrances, hallways, offices, lounges, gyms/athletic areas, etc.



STANDARD PROCEDURES

- Pick up debris and remove gum from floor with putty knife or blunt-edged tool.
- Empty and **disinfect** trash can and replace can liner.
- Clean and **disinfect** all hard surfaces including high-touch surfaces.
- Follow proper operation, maintenance, and **disinfection** (e.g., with chlorine and bromine) of pools and hot tubs.*
- Clean glass and windows.
- Refill air freshener and hand sanitizer dispensers as needed; **disinfect** dispensers regularly.
- Vacuum soft-surfaced floors (carpet/rug/walk-off mat); sweep then mop hard-surfaced floors (tile/wood/LVT).

RISK REDUCTION PROCEDURES

- Increase frequency of cleaning and **disinfection** of high-touch areas.

REMEDIAL PROCEDURES

- Follow **STANDARD PROCEDURES** above.
- Increase frequency of hard surface **disinfection** using an appropriate EPA-registered product with an emerging viral pathogen or coronavirus claim. Refer to product label for directions for use.
- Consider closing non-essential public gathering areas such as bar, fitness center and pool to limit transmission.
- Consider providing alcohol-based hand sanitizers in public areas especially near touchpoints.

CONSIDERATIONS

- Provide Personal Protective Equipment (e.g., gloves, gowns, masks) as directed by local and federal public health authorities for employees and infected individuals.
- Increase cleaning and **disinfection** frequency of high touch surfaces in public areas.
- Provide hand sanitizer in high traffic areas.
- Discourage gatherings of people and encourage social distancing
- Consider limiting non-essential visitors; restrict entry of symptomatic visitors or those who have been exposed.
- Per CDC, there is no evidence that COVID-19 can be spread to humans through the use of pools and hot tubs.
- Follow all guidance as directed by public health authorities.

Specific touchpoints

Lockers, door handles, push plates, thresholds and hand railings, light switches, elevator buttons, tables and chair arms, drinking fountains, cabinet handles, faucets, vending and ice machines, telephone and keypad, gym equipment and machines.

POOL AND SPA GUIDELINES

Per CDC, there is no evidence that COVID-19 can be spread to humans using pools and hot tubs.

STANDARD PROCEDURES

- Follow standard operating procedures as recommended by your chemical provider.

RISK REDUCTION PROCEDURES

- Follow **STANDARD PROCEDURES** above.
- Increase your defensive measures and reinforce training.
- Increase frequency of **disinfection** of common high touch points in the pool and spa area.
- Follow all guidance as directed by public health authorities.

POOL CLOSURES

- DO NOT drain pools – in most cases it is safer and more cost effective to continue treating the water during a shut down period.
- Maintain pump performance and keep water circulating to prevent stagnation.
- Heater and chlorine set points may be lowered if desired (2 ppm).
- Follow proper operation, maintenance, and **disinfection** guidelines (e.g., with chlorine and bromine) – this helps prevent additional expenditures upon re-opening.

SPAS / HOT TUBS:

- Small bodies of water can typically be drained in a safe manner – ensure the entire system, filters and lines are clear of water to prevent mold and biofilm build-up.
- If spas/hot tubs are not going to be drained, follow the pool closure treatment guidelines.



CONSIDERATIONS

- CDC guidance suggests there is no evidence that COVID-19 can be spread to humans using pools and hot tubs. Proper operation, maintenance, and **disinfection** (e.g., with chlorine and bromine) of pools and hot tubs should remove or inactivate the virus that causes COVID-19.¹
- Increase frequency of **disinfection** of common high touch points in the pool and spa area.
- If local authorities mandate pool closures or the facility elects to close the pool, avoid completely draining the pool.
- A pool closure typically refers to ingress, egress, use, and occupancy by members of the public. Consider taking the following steps to restrict guest access:
 - Lock access doors to the pool area.
 - Post signage informing guests of the restriction.
 - Perform maintenance in off-peak hours to avoid guest confusion.

Specific touchpoints

Door handles, push plates, thresholds and hand railings, tables and chairs, trash can, etc.

FOODSERVICE GUIDELINES

Food Contact Surfaces

Currently there is no evidence to support transmission of COVID-19 associated with food.

STANDARD PROCEDURES

- Clear surfaces of objects, food debris and other items.
 - Wash the surface using a multi-purpose cleaner or manual detergent.
 - Rinse with clean potable water using a clean cloth and allow to air dry.
 - Sanitize surface with food contact sanitizer according to label directions for use.
- OR
- Follow standard operating procedures for washing items in the dishmachine.

RISK REDUCTION PROCEDURES

- Increase your defensive measures and reinforce training.
- Increase frequency of cleaning, rinsing, and sanitizing food contact surfaces.

REMEDIAL PROCEDURES

- Follow **STANDARD PROCEDURES** above.
- Follow your standard procedures to sanitize ware through low- and high- temperature dishmachines or a 3-compartment sink.
- Wash and sanitize food contact surfaces and equipment on a more frequent basis.
- Change out utensils in buffet line on a more frequent basis.
- Consider the addition of a **disinfection** step using an EPA-registered product with an emerging viral pathogen or coronavirus claim. Refer to product label for directions for use. Before putting back in service, continue with **STANDARD PROCEDURES** (i.e., wash if needed, rinse, sanitize in 3-compartment sink or process in dishmachine).



CONSIDERATIONS

- Provide Personal Protective Equipment (e.g., gloves, gowns, masks) as directed by local and federal public health authorities for employees and infected individuals.
- Reinforce all personal hygiene requirements, with special attention to hand hygiene. Refer to food code and hand hygiene procedures.
- Perform training to reinforce cleaning, sanitizing, and **disinfection** procedures.
- Verify dishmachine has product before use.
- Follow all guidance as directed by public health authorities, especially in regards to food handling via take-out or delivery or room-service.

Specific touchpoints

Food Contact: tables, ice machine/bucket and scoop, food prep tools and equipment (e.g., cutting boards, knives, mixing bowls), plates and flatware, glassware, buffet serving trays, handles of all the equipment doors and operation push pads, highchairs, bar top and tools

FOODSERVICE GUIDELINES

Non-Food Contact Surfaces

STANDARD PROCEDURES

- Clean surfaces with a multi-purpose cleaner or manual detergent.
- To **disinfect** high touch points, pre-clean visibly soiled areas.
- Spray **disinfectant** on surface making sure to wet thoroughly.
- Allow the surfaces to remain wet for the time indicated in the directions for use on the product label.
- Wipe the surfaces or allow to air dry.

RISK REDUCTION PROCEDURES

- Increase your defensive measures and reinforce training.
- Increase frequency of cleaning and **disinfection** of high-touch areas.

REMEDIAL PROCEDURES

- Follow **STANDARD PROCEDURES** above.
- Increase frequency of hard surface **disinfection** using an appropriate EPA-registered product with an emerging viral pathogen or coronavirus claim. Refer to product label for directions for use.

Refer to product label for complete directions for use



CONSIDERATIONS

- Provide Personal Protective Equipment (e.g., gloves, gowns, masks) as directed by local and federal public health authorities for employees and infected individuals.
- Reinforce all personal hygiene requirements, with special attention to hand hygiene. Refer to food code and hand hygiene procedures.
- Perform training, reinforcing cleaning, sanitizing, and **disinfection** procedures.
- Increase frequency of cleaning and **disinfection** of “high-touch” hard surfaces.
- Follow all guidance as directed by public health authorities, especially in regard to food handling via take-out or delivery.

➤ Specific touchpoints

Door handles, push plates, cash register, thresholds and hand railings, chairs and booths, non-food contact tables/counters, beverage station, drive-through window/counter, vending machine, public information/ordering kiosk, take-out order shelves, trash can, telephone and keypad, remotes, refrigerator and freezer handles, refrigerator and freezer curtains, 3-compartment sink and mop sink, sink faucets, soap, sanitizer and towel dispenser, non-food contact cleaning tools, mop buckets, computer and keypad, menus and bill folders, pens

RESTROOM GUIDELINES

STANDARD PROCEDURES

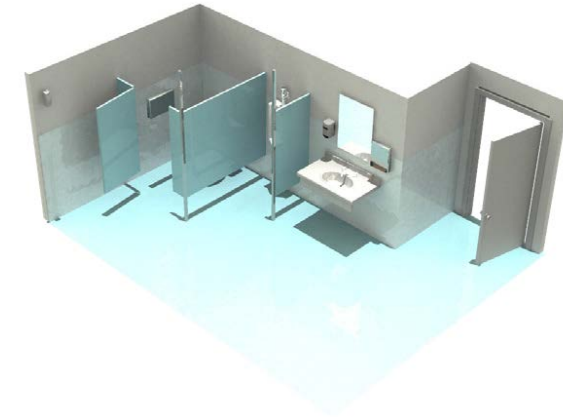
- Place wet floor sign at entrance.
- Evaluate restroom and remove debris from floors and counters.
- Spray (and do not wipe) all bathroom hard surfaces with **disinfectant** cleaner—toilet, urinals, sinks, countertops and fixtures.
- Restock supplies and empty trash.
- Clean mirrors, glass and windows.
- Scrub toilet and urinals.
- Wipe bathroom hard surfaces and high touch points after required **disinfectant** contact time. Refer to product label.
- Clean and **disinfect** floors and apply odor control product (as needed).
- Inspect for quality and remove floor sign when floor is dry.

RISK REDUCTION PROCEDURES

- Increase your defensive measures and reinforce training.
- Increase frequency of cleaning and **disinfection** of high-touch areas.

REMEDIATION PROCEDURES

- Follow **STANDARD PROCEDURES** above.
- Increase frequency of deep cleaning and high touchpoint **disinfection**.
- Increase frequency of hard surface **disinfection** using an EPA-registered disinfectant with an emerging viral pathogen or coronavirus claim. Carefully read and follow label directions.



CONSIDERATIONS

- Provide Personal Protective Equipment (e.g., gloves, gowns, masks) as directed by local and federal public health authorities for employees and infected individuals.
- Provide alcohol-based hand sanitizer outside of public restrooms.
- Ensure hand soap is properly stocked.
- Follow all guidance as directed by public health authorities.

➤ Specific touchpoints

Door handles, bathroom stalls (latch) fixtures, toilet and urinal handles, towel and soap dispensers, hand dryers, baby changing station, trash can, countertops, feminine hygiene receptacle, toilet paper dispensers,

LAUNDRY GUIDELINES

Currently there is no evidence to support transmission of COVID-19 associated with linens.

STANDARD PROCEDURES

- Dirty laundry should be placed into bags or carts for transport.
- Use gloves when handling laundry.
- Machine Loading:
 - For towels: Fill wash wheel.
 - For sheets: Leave 6"-10" of free space in wash wheel.
- Follow standard wash formulas and dry times.
- Avoid clean laundry contact with floors, walls or dirty carts.
- Clean and **disinfect** all equipment, carts, tables and floors at the end of the day.

RISK REDUCTION PROCEDURES

- Increase your defensive measures and reinforce training.
- Increase frequency of cleaning and **disinfection** of high-touch areas.

REMEDATION PROCEDURES

- Follow **STANDARD PROCEDURES** above.
- Collect laundry with minimum agitation, do not shake or "hug" and avoid direct contact of the skin and clothes with the contaminated laundry.
- Consider using gloves, gowns and dissolving bags for laundry collection.

Refer to product label for complete directions for use



CONSIDERATIONS

- Provide Personal Protective Equipment (e.g., gloves, gowns, masks) as directed by local and federal public health authorities for employees and infected individuals.
- Laundry movement should be one-way (i.e., dirty in and clean out).
- Do not use the same gloves when handling clean and dirty laundry.
- Per the CDC, dirty laundry that has been in contact with an ill person can be washed with other people's items.
- Consider **disinfecting** the rim of the machine and door so that laundry is not re-contaminated upon removal.
- Damp laundry should not be left in machines overnight.
- Follow proper hand hygiene procedures before and after glove use.
- Follow all guidance as directed by public health authorities.

Specific touchpoints

Laundry carts, housekeeping carts, folding tables and shelves, washer and dryer controls, light switches.

EMPLOYEE GUIDELINES

- Reinforce personal hygiene and cough etiquette.
- Closely monitor employee health and have symptomatic employees stay home per illness policy.
- Identify critical staff members and functions – develop a facility/operations continuity plan. Consider the ability for employees to work from home.
- Provide hygiene materials such as tissues, hand soap and sanitizer.
- Have employees **disinfect** all personal hard surfaces as referenced on the product label.
- Educate and inform all employees of pandemic status and proper infection control procedures.

Make sure your **team knows**:



To **stay home if ill** per your company illness policy



To **contact you if:**

- They were exposed to someone **confirmed to have COVID-19**
- **They reside in a restricted area**



How to limit exposure by avoiding large gatherings and close contact with people who are coughing or sneezing.



How to keep business operationally ready during shutdown or quarantine:

- Make sure regular cleaning and **disinfection** continues to take place.



For more information contact
your Ecolab Representative
or visit [ecolab.com/coronavirus](https://www.ecolab.com/coronavirus)