



**Department of Health & Family Welfare  
Government of Karnataka**

7<sup>th</sup> July 2020

## **COVID-19: Standard Operating procedure for Sanitization of Common Places**

### **Context**

COVID-19 is an acute respiratory illness caused by novel Coronavirus (SARS-CoV-2), transmitted in most instances through respiratory droplets, direct contact with cases and also through contaminated surfaces/objects. SARS-CoV-2 is an enveloped virus with a fragile outer lipid envelope that makes it more susceptible to disinfectants compared to non-enveloped viruses such as rotavirus, norovirus and poliovirus. 22 Studies have evaluated the persistence of the COVID-19 virus on different surfaces. One study found that the COVID-19 virus remained viable up to 1 day on cloth and wood, up to 2 days on glass, 4 days on stainless steel and plastic, and up to 7 days on the outer layer of a medical mask. Another study found that the COVID-19 virus survived 4 hours on copper, 24 hours on cardboard and up to 72 hours on plastic and stainless steel. The COVID-19 virus also survives in a wide range of pH values and ambient temperatures but is susceptible to heat and standard disinfection methods. These studies, however, were conducted under laboratory conditions in absence of cleaning and disinfection practices and should be interpreted with caution in the real-world environment. The purpose of this document is to provide guidance on the cleaning and disinfection of environmental surfaces in the context of COVID-19. This document follows the Interim Guidance (dated 15th May 2020) Cleaning and disinfection of environmental surfaces in the context of COVID-19 by World Health Organization. This document will be updated if there are further updated to the guidance.

**Purpose: The SOP document provides the guidance on procedure for sanitization of common places during COVID-19**

### **Sanitization framework/ process**



This document follows the Interim Guidance (dated 15th May 2020) Cleaning and disinfection of environmental surfaces in the context of COVID-19 by World Health Organization. This document will be updated if there are further updated to the guidance.

## Team/ Crew

Cleaning crew team will comprise of 2 members.



**Cleaning Staff**

## Locations

**Sanitization is only recommended for Indoor Spaces including door handles. Cleaning and disinfection efforts should be targeted to frequently touched/contaminated surfaces.<sup>1</sup>**



**1. Workplace**



**2. Market area**



**3. Housing Societies**



**4. Malls/shopping complexes**

## Principles of Cleaning and Disinfecting

Cleaning helps to remove pathogens or significantly reduce their load on contaminated surfaces and is an essential first step in any disinfection process. Cleaning with water, soap (or a neutral detergent) and some form of mechanical action (brushing or scrubbing) removes and reduces dirt, debris and other organic matter such as blood, secretions and excretions, but does not kill microorganisms. Organic matter can impede direct contact of a disinfectant to a surface and inactivate the germicidal properties or mode of action of several disinfectants. In addition to the methodology used, the disinfectant concentration and contact time are also critical for effective surface disinfection. Therefore, a chemical disinfectant, such as chlorine or alcohol, should be applied after cleaning to kill any remaining microorganisms. Disinfectant solutions must be prepared and used according to the manufacturer's recommendations for volume and contact time. Concentrations with inadequate dilution during preparation (too high or too low) may reduce their effectiveness. High concentrations increase chemical exposure to users and may also damage surfaces. Enough disinfectant solution should be applied to allow surfaces to remain wet and untouched long enough for the disinfectant to inactivate pathogens, as recommended by the manufacturer.

## Frequency of Sanitization of places

**Frequency depends upon the people interaction with the outside environment or people visiting the premises from outside.**

<sup>1</sup> <https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludingoffices.pdf>

Spaces need to be sanitized before or after business hours with zero occupancy.

## Sanitization set up

1. All members of the team are to be donned with their personal protective gears - goggles, mask, gloves, gumboots, and apron perform the Sanitization. These protective gears needs to be changed frequently to avoid spread of Virus.

PPE kit based on GOI guidelines comprises of<sup>2</sup>:



Masks



Nitrite gloves



Apron



Goggles



Gumboots

Crew team to be donned with their personal protective gears - Triple layer cotton mask, Nitrite gloves, Apron and Goggles

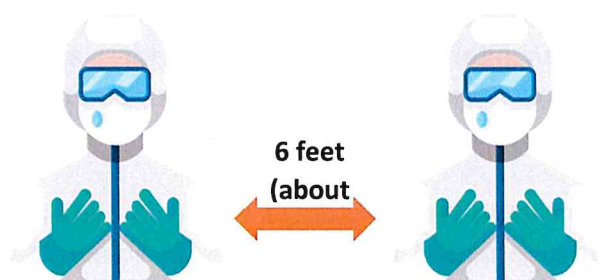
**Masks:** Coronaviruses target mainly the upper and lower respiratory tracts. Hence preventing the airway from the particulate matter generated by droplets / aerosols prevents human infection.

**Triple Layer Cotton Mask:** A triple layer Cotton mask is a reusable mask, fluid-resistant, provide protection to the wearer and better for skin and comfort for long-term use

**Gloves:** Nitrite gloves resist chemicals, including certain disinfectants such as chlorine.

**Apron:** Aprons are designed to protect torso of service providers from exposure to virus.

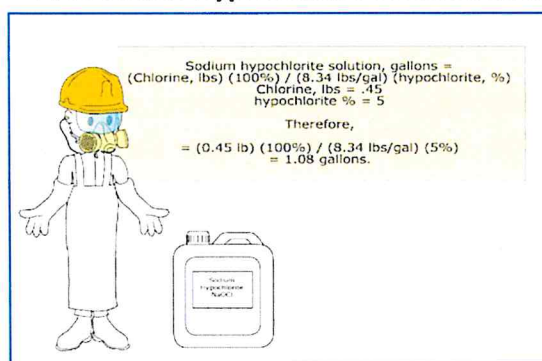
**Social distancing to be strictly followed during the process amongst the crew members**



<sup>2</sup> <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance>

## 2. Products to be used for cleaning and sanitization

Places to be thoroughly cleaned and disinfected, from both outside and inside, using **1% Sodium Hypochlorite solution** as mentioned in the given picture:



Making of Solution



Spray Machine to be used for the solution

Sodium Hypochlorite is easily available in any departmental or medical store.

GOI guidelines for preparing sodium hypochlorite (1%) solution released by Ministry of Health and Family Welfare<sup>3</sup>. Below mentioned products are Alternates/Options to prepare the solution:

**Table 1: Solution (1% Sodium Hypochlorite)**

Option	Product	Available chlorine	1 percent
1	Sodium hypochlorite – liquid bleach	3.5%	1 section of bleach to 2.5 sections of water
2	Sodium hypochlorite – liquid	5%	1 section of bleach to 4 sections of water
3	NaDCC (sodium dichloroisocyanurate) powder	60%	17 grams to 1 litre water
4	NaDCC (1.5 g/ tablet) – tablets	60%	11 tablets to 1 litre water
5	Chloramine – powder	25%	80 g to 1 litre water
6	Bleaching powder	70%	70 g to 1 litre water

Source- COVID-19: Guidelines on disinfection of common public places including offices

(<https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludingoffices.pdf>)

**Sodium hypochlorite can be stored:**

- Sodium hypochlorite is best stored for the longest storage life at temperatures around or below 60°F (15°C)<sup>4</sup>, when filtered and free of impurities, at dilute concentrations that maintain pH above 10, and without direct sun exposure due to the decomposition effects of ultraviolet radiation and heat
- Recommended most common bleach storage tank materials are HDPE, XLPE, fiberglass reinforced plastic, and chlorobutyl rubber-lined steel. Sodium Hypochlorite tanks should

<sup>3</sup> <https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludingoffices.pdf>

<sup>4</sup> <https://studyres.com/doc/13136770/guidelines-on-the-use-of-disinfectants>

be rated to 1.9 specific gravity. These tank materials are resistant to sodium hypochlorite corrosion.

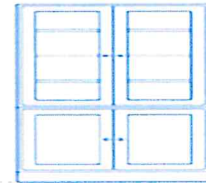
### Precautions for the use of Sodium hypochlorite (bleach)<sup>5</sup>

- Bleach can corrode metals and damage painted surfaces
- Avoid touching the eyes. If it gets into the eyes, immediately rinse with water for at least 15 minutes and further consult a physician
- Bleach should not be used together with, or mixed with, other household detergents because this reduces its effectiveness and can cause chemical reactions
- A toxic gas is produced when bleach is mixed with acidic detergents, such as those used for toilet cleaning, and this gas can cause death or injury. If necessary, use detergents first, and rinse thoroughly with water before using bleach for disinfection
- Undiluted bleach liberates a toxic gas when exposed to sunlight and should be stored in a cool, shaded place, out of the reach of children
- Sodium hypochlorite decomposes with time, so to ensure its effectiveness purchase recently manufactured one and avoid over stocking
- Diluted bleach should be made fresh daily, labelled, dated, and unused portions discarded 24 hours after preparation

### Before Sanitization



Remove or cover food items at Sanitization surface



All loose items, papers, important documents, employee's personal belonging etc. should be kept inside the cupboard/drawer



Empty & remove garbage



Remove loose soil and dirt from equipment/devices/machines and floor (top to bottom)

### During Sanitization

Process involves two major steps in decontaminating any common space:

#### Step 1: Surface sanitization



**Method:** Sanitize the sensitive surface areas first by spraying sodium hypochlorite (1%) solution and then wipe all the high touch areas like

[/sars/en/useofbleach.htm](https://www.canada.ca/en/health-canada/services/sars/en/useofbleach.htm)



working station, floors, door knobs, door handles, railings, table, phones, dining chair & so armrest, and other similar surfaces.

Sodium hypochlorite (1%) solution should be left for **one minute** in contact with the solution and then wiped off.

### Step 2: Spatial Sanitization



**Method:** Aerial disinfection will be carried out with the spray machine and prepared solution. The method will be used to disinfect areas which are less or inaccessible in normal procedure such as wall upto 6 feet, corners, etc. and dry the surface thoroughly



- If contact surface is visibly dirty, it should be cleaned with soap and water prior to disinfection
- Rinse to remove visible soils
- Consider the water temperature & pressure
- Rinse from top to bottom
- Target removal of 95% of visible soil
- Cleaner area to be approached first and then proceed towards dirtier surface



For soft surfaces such as carpeted floor, rugs, and drapes clean using soap and water or with cleaners appropriate for use on these surfaces



Indoor surfaces such as (corridors, etc ) to be mopped manually with a linen/absorbable cloth soaked in disinfectant with 1% sodium hypochlorite

Frequently touched areas like table tops, chair handles, pens, diary files, keyboards, mouse, mouse pad, tea/coffee dispensing machines etc. should specially be cleaned with alcohol based wipes and sprays



Dry clean & sanitize the electronic control equipment. Follow manufacturer's instruction for cleaning and disinfecting. If no guidance, use alcohol-based wipes or sprays containing at least 70% alcohol. Dry the surface thoroughly.



For metallic surfaces like door handles, security locks, keys etc. to be wiped 70% alcohol can be used to wipe down surfaces where the use of bleach is not suitable



High contact surfaces such elevator buttons, handrails / handles and call buttons, escalator handrails, public counters, intercom systems, equipment like telephone, printers/scanners, and other office machines should be cleaned daily by mopping with a linen/absorbable cloth soaked in 1% sodium hypochlorite.



Indicative time duration to sanitize the places and consumption of solution is given in the table 2 below:

**Table 2: Indicative Time duration for sanitization process**

Area(In Sq. Ft.)	Average Duration(In Minutes)*	Consumption of solution (In Ltr.)
1000 - 1500	70	3 -4
1500 - 2000	90	4-5
2000 - 2500	120	7 -8
2500 - 3000	150	10-11
3000 - 3500	175	11-13
3500 - 4000	200	13 -15
4000 - 4500	250	15 -17
4500 - 5000	300	18-20
5,000 - 10,000	600	20 -22

\* A team of two sanitization experts

### After Sanitization

1. The enclosed treatment areas need to be kept closed for a minimum of 2-3 hours post the Hygienic sanitization service
2. Open the windows and doors and make sure there is appropriate ventilation / air movement after sanitization of indoor surfaces
3. Sanitization crew will also educate existing housekeeping team on tips and treatments to maintain enhanced hygiene throughout the premises
4. **Dispose all wastes as infectious materials**



After cleaning, wrap the waste in a sealed plastic bag and dispose it carefully



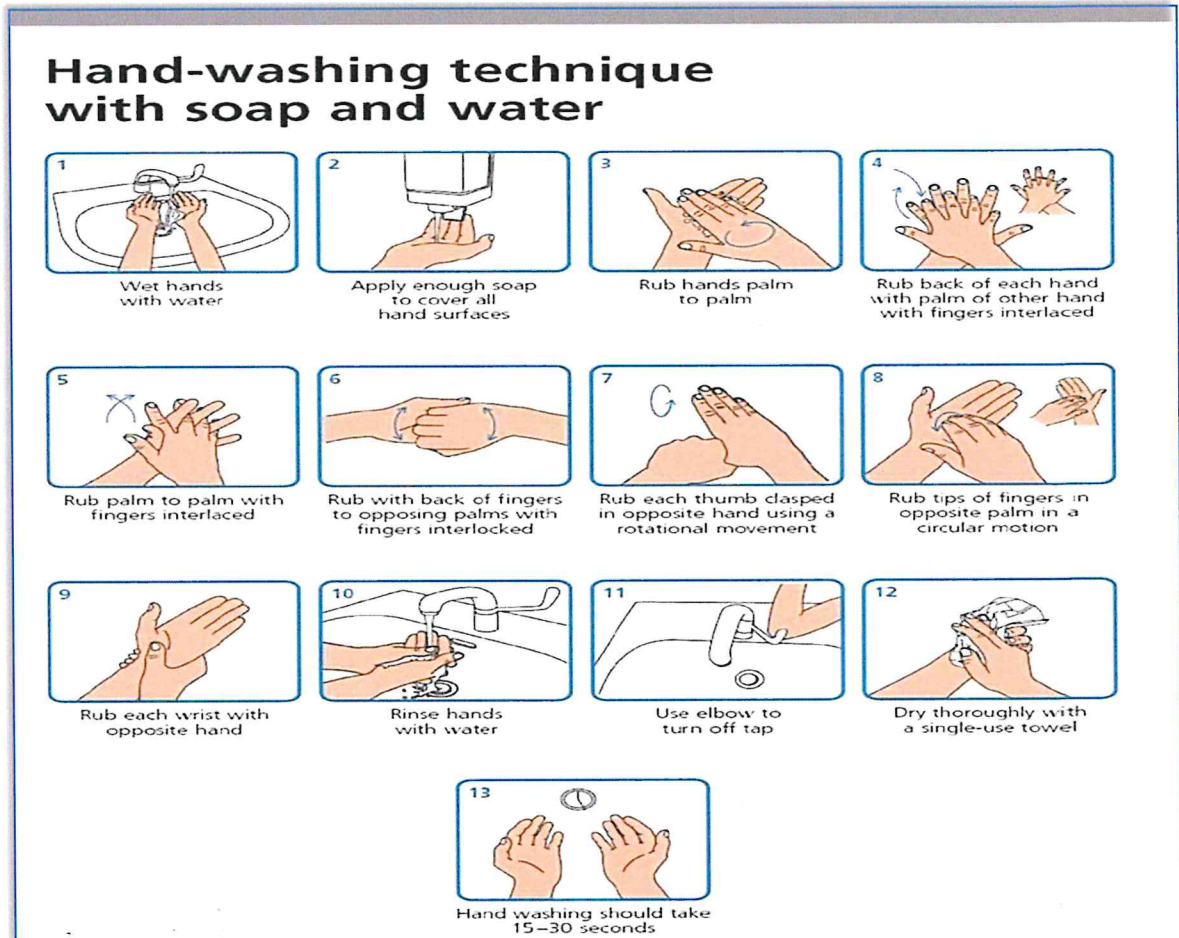
Crew member to carefully remove the PPE and dispose it as infectious waste

**Dispose all wastes as infectious materials**



5. Ensure Sanitization crew members consistently wash and sanitize their hands and have implemented a "no hand-shake" policy. Hands have to be washed properly with soap and water immediately after the removal of PPE.<sup>6</sup>

**Steps of Hand Hygiene:**



Source: COVID-19: Guidelines on disinfection of common public places including offices (<https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludingoffices.pdf>)

  
Commissioner,

**Health & Family Welfare Services**

**Copy for necessary action:**

1. DCs/CEOs/SPs of all districts.
2. DHO/RCHO/DSOs of all districts.

<sup>6</sup> <https://www.mohfw.gov.in/pdf/Guidelinesondisinfectionofcommonpublicplacesincludingoffices.pdf>

**Copy for information:**

1. Additional Chief Secretary, GoK, H&FW, Bengaluru.
2. Mission Director, NHM and OSD, SSU Covid-19.
3. Director, H&FWS, Bengaluru.
4. Project Director, RCH, Bengaluru.
5. Project Director, IDSP, Bengaluru.
6. Joint Director, CMD, Bengaluru.

**For COVID related queries, please contact:**

Helpline numbers 9745697456, 080-46848600, 080-66692000,14410

<https://covid19.karnataka.gov.in/>

Download Aarogyasetu and Apathamitra apps from below link

<https://covid19.karnataka.gov.in/new-page/Mobile%20Applications/en>

Kindly watch Jagruti Karnataka YouTube channel for COVID related information.

[https://www.youtube.com/channel/UC-jj\\_NNwB9m8\\_OocGo1Zfcg/videos](https://www.youtube.com/channel/UC-jj_NNwB9m8_OocGo1Zfcg/videos)

