

A close-up photograph showing a hand wearing a blue nitrile glove holding a white disinfecting cloth. The hand is positioned to wipe a cylindrical metal door handle. The background is a light-colored door with another handle visible below. The text 'DISINFECTION OF SURFACES' is overlaid in a large, bold, black serif font.

DISINFECTION OF SURFACES

**COVID-19 TRANSMISSION PREVENTION
SOP FOR MASENO UNIVERSITY**

General information

- ▶ Disinfection is an infection prevention control (IPC) measure.
- ▶ It involves practices and procedures that are applied consistently to prevent or reduce the risk of transmission of contagious diseases like COVID-19
- ▶ It involves the elimination of most pathogenic microorganisms excluding bacterial spores on inanimate objects.
- ▶ COVID-19 is a highly infectious disease with the transmission mainly through droplets of saliva or discharge from the nose when an infected person coughs or sneezes.
- ▶ Hand hygiene before and after every procedure is paramount in disinfection.

General principles of disinfection

- ▶ Good hand hygiene is essential to minimize transmission of infectious droplets.
- ▶ Hand gloves, face mask and face shield should be worn when cleaning.
- ▶ When finished with cleaning, used rubber hand gloves should be placed in a rubbish bin but heavy duty ones can be re-used after cleaning and disinfecting them.
- ▶ Hands should be washed immediately after handling PPEs and cleaning materials.
- ▶ Hands should be washed thoroughly with soap and water for at least 20 seconds, making sure they are dried thoroughly thereafter.
- ▶ If soap and water is not available and hands are not visibly dirty, hand sanitizer can be used.
- ▶ All surfaces of hands should be rubbed together thoroughly until they feel dry.

When cleaning, it is good to remember the following **two** principles:

- **Top to bottom:** Cleaning surfaces should start higher up and worked down to the floor. This method ensures that any particulates or debris fall to the floor which will be cleaned last.
- ▶ **Clean to dirty:** Cleaning surfaces and objects should start with those that are cleaner then continued to dirtier items such as toilets. Moving from an area that has not been cleaned to an area that has been cleaned should be avoided. This avoids dirtying the cleaned area and ensures cross-contamination of items or surfaces is avoided

Requirements for disinfection

Cleaners require the following items for use during cleaning disinfection:

- ▶ Heavy duty gloves, Face mask
- ▶ Face shield, Gumboots, Broom
- ▶ Dustpan, Sodium hypochlorite solution 0.5% (JIK)
- ▶ Bucket, Water, Apron (water proof)
- ▶ Damp dusting cloth
- ▶ Liquid soap, Mop stick
- ▶ Bucket with squeezer
- ▶ Brush



Items needed for waste disposal

During the process of cleaning and disinfection, waste is generated hence disposal requirements are:

- ▶ Non-infectious pedal black bin with liner
- ▶ Infectious pedal yellow bin with liner
- ▶ Disinfectant (0.5% JIK)
- ▶ Match box; Apron; Gumboot
- ▶ Heavy duty gloves
- ▶ Face mask; Face shield
- ▶ Long sleeved gown
- ▶ Fuel preferably methylated spirit
- ▶ Designated means of transport

Preparation of the disinfectant

- ▶ For disinfection and cleaning of surfaces at Maseno University, Sodium Hypochlorite solution 0.5% (JIK) shall be used.
- ▶ Other detergents like liquid soap and lavix can be used in mopping the floor.
- ▶ Disinfection of surfaces in lecture halls, hostels, auditoriums and boardrooms shall be done with 0.5% JIK solution
- ▶ Disinfection of re-useable PPEs is done with JIK 0.5%.
- ▶ Non re-useable PPEs are disposed in infectious bin with the yellow bin liner.
- ▶ The waste is collected once daily by trained personnel for incineration.
- ▶ Bin liners are changed daily.

Preparation of disinfectant cont'd.....

- ▶ Non-infectious waste is disposed in the non-infectious black bin.
- ▶ JIK should be diluted at the same time of use and not left exposed to either sunlight or left to stay overnight.
- ▶ Each and every lecture hall and hostel entrance should be provided with infectious pedal bin with liner.
- ▶ Information and communication stickers on proper use of PPEs and safe disposal should be placed on the notice boards, lecture halls and offices within the University.
- ▶ Gloves should be worn when handling and preparing chlorine solutions.
- ▶ Protective eye wear should be worn in case of splashing while mask should be worn to avoid inhaling chlorine fumes.

Preparation of disinfectant using Chlorine Liquid

► The formula used is:

$\frac{\% \text{ Chlorine in Liquid Product}}{\% \text{ Chlorine Desired}}$

} minus one = Total parts of water for each part of Chlorine Liquid

Example: To make a 0.5% Chlorine solution from 3.5% chlorine liquid:

$\frac{3.5\% \text{ of Chlorine Liquid}}{0.5\% \text{ Chlorine Desired}}$

- 1 = 7-1 = 6

✓ Therefore, 6 parts of water is added each time to one part of chlorine liquid.

Things to be disinfected

- ▶ Door handles or knobs and keys
- ▶ Stair rails; Office tables; Trays
- ▶ Chairs; Computers (keyboard, desk top)
- ▶ Document trays; Floors
- ▶ Windows / glasses; Office fans (portable)
- ▶ Regularly touched surfaces like door frames and walls
- ▶ Cupboard and drawer handles
- ▶ Waiting benches / Chairs; Cutlery / utensils;
- ▶ Hospital coaches, beds and other equipment
- ▶ Ambulance and other university vehicles actively on use
- ▶ Telephone heads; Office sinks

Disinfection steps

- ▶ Wash hands first.
- ▶ Assemble requirements needed for disinfection.
- ▶ Put on appropriate PPEs.
- ▶ Start with high dusting.
- ▶ Sweep if necessary.
- ▶ Damp dusting of the surfaces from higher surfaces to low.
- ▶ Mopping of the floor.
- ▶ Removal of PPE after finishing as described below (5.3).
- ▶ Disinfection of re-useable PPEs after the procedure then cleaning with soapy water then rinsing with clean water and lastly drying for next use.

Disinfection steps cont'd....

- ▶ Dispose off non-re-useable PPEs safely in the infectious bin.
- ▶ Wash hands or take a shower after the procedure.
- ▶ All the waste to be taken for incineration and the bin liners replaced.

Order for removing PPE after cleaning

- ▶ Remove gloves and dispose.
- ▶ Wash hands or sanitize them.
- ▶ Remove the gown
- ▶ Wash hands again or sanitize them.
- ▶ Remove protective eyewear (if separate from mask).
- ▶ Wash hands again or sanitize them.
- ▶ Remove the mask
- ▶ Wash hands again or sanitize them.

Disposal of waste generated

- ▶ The waste generated during cleaning of surfaces in offices, lecture halls and hostels during the COVID-19 pandemic is considered infectious.
- ▶ Lecture halls, hostels and laboratories should have yellow colored bins for waste disposal. Such waste is considered infectious. The bins should have double layered liners which are changed daily.
- ▶ Waste handlers must put on appropriate PPE such as mask, apron, heavy duty gloves, eye protector and long sleeved gown.
- ▶ The waste should be collected and stored separately by cleaning staff.
- ▶ The waste must be transported in waste bins from the room it is generated into the interim storage room and ultimately to the Designated Accumulation Area. From this area, the waste will then be treated onsite or prepared for transportation offsite for treatment. All containers for offsite transport must be well labeled hazardous COVID-19 waste and sealed.

END

THANK YOU