

Guidelines on Cleaning and Disinfection

(1) Hypochlorite Disinfectant (Bleach)

- a. Hypochlorite solution, commonly known as 'bleaching solution', is a very powerful disinfectant and with precautionary measures, should be safe to use.
- b. Bleach is available from supermarkets. Regular bleach may contain up to 5.25% hypochlorite and concentrated bleach has 6% of the active chemical.
- c. As an alternate source, University Safety Office has concentrated hypochlorite solution that can be provided to users for disinfection (contact no. 3943-7958).
- d. In areas with heavy human traffic, a working solution of 0.1% strength of hypochlorite solution (1 part of household bleach in 49 parts of water) should be used for disinfection.
- e. For domestic uses, half of the above strength, that is, 0.05% strength of hypochlorite solution (1 part of household bleach in 99 parts of water) should be adequate.

(2) Safety Precautions in Diluting Bleach

- a. Remember:
 - Do not mix bleach with acids or alkaline.
 - Do not use hot water to dilute the chemical.
 - Do not use bleach in undiluted form.
 - Store concentrated bleach in secure places and away from sunshine or source of heat.
 - Always ensure that proper label is adhered to container of solution.
 - For effective disinfection, use diluted bleach within 24 hours after preparation as decomposition increases with time if left unused.
 - Call University Safety Office (phone no. 3943-7958) for advice if in doubt.
- b. For personal protection:
 - Prepare diluted bleach in place with good ventilation.
 - Put on gloves, masks and eye protector/chemical face shield before handling bleach.
 - Prepare the quantity of diluted solution you are going to use for your work. Excessive chemicals mean additional risks and wastage.
 - Wash with copious amount of water if your body has been in contact with hypochlorite solution.

(3) Procedures for Using Diluted Bleach

- a. Dilute and use bleach in a well-ventilated area.
- b. Put on appropriate Personal Protective Equipment (e.g. mask, gloves, safety goggles and plastic apron) when diluting or using bleach.
- c. Mix bleach with cold water as hot water decomposes the active ingredient of bleach and renders it ineffective.
- d. Clean and disinfect frequently touched surfaces, furniture, floor, toilets and bathrooms regularly, for example daily clean and disinfect with 1 in 99 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 99 parts of water), leave for 15-30 minutes, and then rinse with water and wipe dry.
- e. For places soiled by vomitus, excreta or secretions, clean up the visible matter with strong absorbent disposable material, then disinfect with 1 in 49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water), leave for 15-30 minutes, and then rinse with water and wipe dry.

- f. For spillage of blood, clean the visible matter with strong absorbent disposable material, then disinfect with 1 in 4 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 4 parts of water), leave for 10 minutes and then rinse with water and keep dry.
- g. Use a tablespoon or measuring cup for accurate measurement of the amount of bleach added.
- h. Wash hands thoroughly after the procedure.

(4) Disinfection of Filters in Ventilation System

Filters should be changed or cleaned according to the manufacturer's instructions. Staff should put on appropriate PPE (such as masks, goggles and gloves etc.) when changing the filter.

(5) Procedures for Cleaning and Disinfection of Computer Stations

Keyboards and mouse of computer workstations, especially those intended for multiple users, should be cleaned and disinfected periodically.

- a. Before cleaning, ensure that the computer and monitor are turned off.
- b. Direct the suction nozzle of vacuum cleaner across rows of keys on the keyboard to remove dirt/dust accumulated in between keys. Hand brush may be used to assist in removing settled dirt/dust between punches.
- c. Use cloth dampens with ethyl alcohol to wipe clean the keyboard and mouse. Do not use excessive alcohol as the disinfectant is flammable. Wait until the residual alcohol has evaporated before returning the computer for normal usage.
- d. Clean the surface of CPU and monitor casings with 1 in 99 diluted household bleach solution. Wait for 5 minutes and use another piece of cloth dampen with water to clean off residual bleach.
- e. The video display surface of LCD monitor should be wiped very gently using cloth dampen with water. No chemical disinfectant should be used to clean the delicate surfaces of LCD monitors.

(6) Procedures for Disinfecting Offices and Office Equipment

While floor in offices are usually cleaned periodically by cleaners, furniture and office equipment may not be included in normal cleaning cycles. Occupants should make their own arrangements for cleaning.

- a. Floors with PVC floor tiles should be mop-cleaned using 1 in 99 diluted household bleach solution, and then rinse with water and wipe dry.
- b. Floors with carpets should be vacuum cleaned before using carpet shampoo for further cleaning.
- c. Work desks should be cleaned and disinfected using 1 in 99 diluted household bleach solution and followed by cloth dampened with water.
- d. Keyboards and mouse of the computer station should be cleaned periodically using ethyl alcohol while the CPU and monitor casing should be cleaned using 1 in 99 diluted household bleach solution followed by water as described in Section 5(c) to 5(e) above.
- e. Other office equipment such as photocopiers and laser printers should be cleaned following the procedures outlined in Section 5(c) to 5(e) above.

(7) Procedures for Disinfection of Hostel

- a. Mop-clean the floor with 1 in 99 diluted household bleach solution, and use the disinfectant to wipe clean surfaces in common areas such as corridors, pantry and bathrooms on a daily basis.
- b. Resident's room should be cleaned by the residents themselves.

- c. Cooking utensils, food containers, and cutlery should be thoroughly cleaned and disinfected.
- d. All rubbish bins should be emptied daily and the contents properly disposed of.
- e. Filters of window-mounted air conditioners should be taken out and washed to remove dust accumulated on it. After washing, the filters should be dipped into 1 in 99 diluted household bleach solution for 10 minutes, follow by rinsing in water and drying, before returning to the filter slot in the air condition again. Cleaning and disinfection of the filters should be repeated every week.
- f. Prepare approximately 10 litres of 0.1% hypochlorite solution (approximately 200 millilitres of concentrated hypochlorite solution in 10 litres of water) in plastic buckets and flush down the toilet. Do not use the toilet for the next fifteen minutes.
- g. Prepare 1 litre of 0.1% hypochlorite solution (approximately 20 millilitres concentrated hypochlorite solution in 1 litre of water) and pour down the washing basin. Do not use the washing basin for the next fifteen minutes. Rinse off the residual disinfectant by turning on the water taps of the washing basin. Similar procedures should be repeated for other drainage openings.

(8) Procedures for Cleaning and Disinfecting Rooms in Hostels

Students should clean their own room, as there may be problems in handling their personal belongings and properties by cleaners as well as difficulties in making arrangement for the service.

Most of the cleaning and disinfection works should follow the guidelines outlined above. Cleaning tools and disinfectant can be obtained from the hostel cleaners.

(8a) Window-mounted Air Conditioner

- a. Put on masks and gloves. Before removing the filter from the window-mounted air conditioner, ensure that it is turned off.
- b. Take the filter out and bring it to the cleaner's basin in the washroom. Turn on the water tap and wash off the accumulated dirt from the filter. After washing, the remaining dirt should be removed from the sink and dumped properly.
- c. Disinfect the filter with 1 in 99 diluted household bleach solution for ten minutes.
- d. Take the filter out and wash it again with water. Put the filter aside for drying.
- e. When the filter is thoroughly dried, put it back into the filter slot in the air conditioner.
- f. The filter should be cleaned and disinfected on a weekly basis.

(8b) Desks, Chairs, Wardrobe, Window Sill, Windows, Blinds, Bed Frames and Bookshelves

- a. Before cleaning, all items should be removed from the surfaces to be cleaned.
- b. Clean the surface with 1 in 99 diluted household bleach solution. Wait until the disinfectant is dried up, and then repeat the process again using water.

(8c) Computer Station

- a. Before cleaning, ensure that the computer and monitor are turned off.
- b. Direct the suction nozzle of vacuum cleaner across rows of keys on the keyboard to remove dirt/dust accumulated in between keys. Hand brush may be used to assist in removing settled dirt/dust.
- c. Use cloth dampens with ethyl alcohol to wipe clean the keyboard and mouse. Do not use excessive alcohol as the disinfectant is flammable.
- d. Wait until the residual alcohol has evaporated before returning the computer for normal usage.
- e. Clean the surface of CPU and monitor casings with 1 in 99 diluted household bleach solution. Wait for 5 minutes and use another piece of cloth dampen with water to clean off residual bleach.

- f. The video display surface of LCD monitor should be wiped very gently using cloth dampen with water.

(8d) Clothing, Bed Sheets, Blankets, Shoes and Personal Items

Dirty and soiled items should be washed immediately and not kept in student's room for prolonged periods. Whether bleaching agent can be added during washing would depend on individual items. Students should consult washing guides or instruction of the items.

(8e) Ventilation Fans

- a. Make sure that the fan is turned off.
- b. Carefully remove the guard from the fan.
- c. Bring the guard to the cleaner's basin in the washroom. Turn on the water tap and wash off the accumulated dirt from the guard. After washing, the remaining dirt should be removed from the sink and dumped properly.
- d. Rinse the guard with 1 in 99 diluted household bleach solution and let it stands for ten minutes.
- e. Wash the guard with water and put it aside for drying.
- f. When the guard is thoroughly dried, put it back onto the fan.
- g. The guard should be cleaned and disinfected on a weekly basis.

(8f) Floor

- a. Ensure that the floor is free from electric bars and other appliance before cleaning.
- b. Mop clean the floor with 1 in 99 diluted household bleach solution.
- c. Do not enter into the cleaned area while it is still wet.
- d. The floor should be cleaned once per week.

(9) Procedures for Disinfection of Canteens

- a. Mop-clean the floor with 1 in 99 diluted household bleach solution, and use the disinfectant to wipe clean surfaces in common areas on a daily basis.
- b. Cooking utensils, food containers, and cutlery should be thoroughly disinfected and rinsed.
- c. Staff working in canteens must wear masks. Those involved in handling food must also wear gloves.

(10) Procedures for Disinfection of Buses

- a. Mop-clean the floor with 1 in 99 diluted household bleach solution, and use the disinfectant to wipe clean the seats, metal window grille and handlebars, etc.
- b. Buses with sliding windows should be opened fully for maximum fresh air.
- c. Buses without sliding windows should switch on mechanical ventilation to allow maximum fresh air intake. Filters in the ventilation system should be cleaned and disinfected every day using disinfectant.

(11) Disinfection of Residence

While common areas are handled by cleaners, residents staying in hostels and staff quarters on campus should be responsible for cleaning and disinfecting their own premises. In principle, the guidelines listed under the section on diluting and using disinfectant should be used. However, the frequency of cleaning and disinfection would depend on the actual need of the residents.

(12) Procedures for Disinfecting Lifts

- a. Mop-clean the floor in lifts with 1 in 99 diluted household bleach solution.
- b. The wall panels, including control panel, must be cleaned and disinfected with cloth dampened with 1 in 99 diluted household bleach solution.
- c. Wait for 5 minutes and use another piece of cloth dampened with water to wipe clean the control panel and any other parts of the wall panels made from metal.
- d. Lifts should be cleaned more frequently and preferably twice every day.

(13) Procedures for Disinfecting Garbage Collection Stations

- a. Prepare 0.2% hypochlorite solution (1 part in 25 parts of water for regular bleach and 1 part in 30 parts of water for concentrate bleach) outside the garbage shelter.
- b. Put on rubber gloves and masks and spray the plastic rubbish bags inside the garbage trolley with the prepared disinfectant.
- c. Wash the external parts of the trolleys.
- d. Let the hypochlorite solution to drain off.
- e. Use 0.2% hypochlorite solution to wash the walls inside the garbage collection stations. Wait for fifteen minutes and hose-spray the walls again with water.