ROYAL CENTRE FOR DISEASE CONTROL

SOP No. RCDC/QMS/QSE/SOP/2.11

STANDARD OPERATING PROCEDURE FOR LABORATORY SURFACE & EQUIPMENT DISINFECTION

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Prepared by: Tenzin Dorji, Sr.Laboratory Technician IDSL

Reviewed by: Quality team and Technical Committee, RCDC

Approved by: Dr.Sonam Wangchuk, Head RCDC

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ACRONYMS AND DEFINITION

PPE- Personal Protective Equipment
RCDC- Royal center for disease control

1. PURPOSE

To ensure safety of laboratory personal working at Royal center for disease control. This SOP should help maintain clean environment to reduce risk of infections to the laboratory staff as well as to reduce the risk of cross-contamination.

2. APPLICATION

This procedure ensures safety of laboratory personal working at Royal center for disease control.

3. RESPONSIBILITIES

It is the responsibility of each lab personnel at RCDC to follow safe laboratory practices at all time. The biosafety Officer of RCDC supervises the overall laboratory procedures in the centre.

4. PRINCIPLE

This SOP is to maintain uniformity of all safety practices followed at RCDC and to maintain clean environment in the RCDC.

5. PROCEDURES

5.1 Materials needed

- 1% virkon myco-bactericidal disinfectant)
- 0.5% sodium hypochlorite solution
- Spray bottles
- Protective equipment – gowns / laboratory coats / masks / gloves

- Paper towels
- Broom, mop and bucket

Each of the rooms should have a set of the above equipment and reagents allocated to them, which should only be used for cleaning and should be stored in the room.

5.2 Formulae for cleaning agents

Fresh cleaning reagents should be prepared on a daily basis and should not be stored in diluted form because their activity will diminish with time. Label all prepared reagents with name and date of preparation.

- **1% sodium hypochlorite solution**

Adjust the sodium hypochlorite daily cleaning solution concentration to ensure optimal disinfection efficiency. Store concentrated sodium hypochlorite in a cool place. Ensure the lid is tightly sealed after opening. Refer table below for dilution (To make a 200ml of a 1% sodium hypochlorite solution add the concentrated stock solution to water):

Stock concentration	**3%***	**3.5%***	**4%***	**4.5%***	**5%***
Volume stock solution	67ml	57ml	50ml	44ml	40ml
Volume water	133ml	143ml	150ml	156ml	160ml
Final concentration	1%	1%	1%	1%	1%

*** Consult the container for the concentration of the stock solution (It is typically 3% - 5%)**

- **70% ethanol**

Take 700ml of absolute ethanol and add 300ml of distilled water to produce 1 litre of 70% ethanol.

5.3 Cleaning procedures

- **Daily cleaning**
- Prepare fresh cleaning solutions on a daily basis.

- Put on protective clothing, mask and gloves.
- Clean equipment according to individual equipment SOPs.
- After work in the room has been completed, repeat the cleaning in the manner described above.
- Mop up with clean paper towel.
- When molecular work is to be done, the operator should clean work surfaces, biological safety cabinet, and appropriate equipment with 1% bleach solution before and after work procedures:

- **Weekly cleaning**
  - Prepare sufficient fresh cleaning solutions.
  - Put on protective clothing, mask and gloves.
  - Mop the floor with soap solution (disinfectant).
  - Clean outer surfaces of cupboards, trolleys, sinks and chairs with soap solution on a weekly basis or when necessary.
  - Chang the water in the water bath on a weekly basis and clean with 1% sodium hypochlorite (bleach) solution. Refill with fresh distilled water.
  - Clean all racks for specimens and tubes on a weekly basis by allowing equipment to air-dry.
  - Racks for molecular testing should be cleaned after use by immersion in 1% sodium hypochlorite (bleach) solution.

6 ASSOCIATED DOCUMENTS

6.1 Decontamination Log

6.2 Housekeeping check list form

7.2 Incident reporting forms

7 PRECAUTIONS

To follow all necessary precautions for laboratory safe practices to protect yourself and co-workers

8. PROCEDURE

- The laboratories should be cleaned by the laboratory staff. Cleaning staff should only clean enter laboratories under supervision of the laboratory staff and will only be involved in cleaning of the office space and corridor.
- All surfaces and equipment within the laboratory should be considered as potentially infectious and should be cleaned on a daily basis. Exterior surfaces of equipment should be wiped with normal water.
- Decontaminate all work surfaces after any spill of potentially dangerous material.
- Floors should be mopped weekly with soap solution followed by an appropriate mycobactericidal disinfectant.
- Floors and work surfaces should be kept as free of dust as possible. Materials should be stored in closed cupboards where possible. Excess reagents should be labeled and stored in an appropriate storage condition.
- Fresh disinfectant must be prepared each week.
- Record all cleaning in the Logbook.
- Always wash hands after handling potentially infectious materials and before leaving the laboratory.

9. QUALITY CONTROL

NA

11. LIMITATIONS

None

12. ANNEXURE

Forms

13. REFERENCE

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