BIOGENIX

LABORATORY CLEANING AND DISINFECTION

	NAME	DESIGNATION	SIGNATURE	DATE
Prepared by	SHIVARAJ NAIK	INFECTION CONTROL OFFICER		01/07/2020
Reviewed by	DR. JULIET TEDDY	DEPUTY LABORATORY DIRECTOR		01/07/2020
Reviewed & Approved by	DR. SALLY ABDULLA IBRAHIM	LABORATORY DIRECTOR		01/07/2020

1. TABLE OF CONTENT

2 REVISION HISTORY

#	Version	Date	Changes Made by	Reason for Changes	Clause Changed
1	1.0				

3 REVIEW HISTORY

#	Version	Date	Changes Made by	Reason for Changes	Clause Changed
1	1.0				

4 POLICY STATEMENT:

4.1 Routine cleaning of environmental performed according to a predetermined schedule and shall be sufficient to keep surfaces clean and dust free.

4.2 Real time fluorescent RT-PCR technique is very sensitive that could be affected by contaminants on the bench or in the air leading to false results. Hence, daily cleaning of working benches and laboratory apparatus is essential to have a DNA-free working environment.

4.3 Housekeeping equipment's and articles are color coded according to DOH requirement which is communicated to all by training. All articles using in clean areas are blue color coded whereas articles for the dirty areas including toilets are color coded with red. Yellow for inside laboratory.

5 PURPOSE

5.1 To show the procedure of performing daily cleaning after completing the work, at the end of the shift, and before handling samples.

5.2 To provide guidance on the cleaning and disinfection of environmental surfaces in the context of COVID-19.

6 SCOPE

6.1 The scope of this policy extends to routine cleaning and disinfection in Laboratory to performed by all the staff of Biogenix laboratory.

7 DEFINITIONS

7.1 FUMIGATION: to apply smoke, vapor, or gas to especially for the purpose of disinfecting or of destroying pests

7.2 CONTAMINATION: inadvertent transfer of bacteria or other contaminants from one surface, substance,

7.3 BIOSAFETY CABINET: A biosafety cabinet (BSC) also called a biological safety cabinet or microbiological safety cabinet is an enclosed, ventilated laboratory workspace for safely working with materials contaminated with (or potentially contaminated with) pathogens requiring a defined biosafety level.

7.4 DISINFECTION: the process of cleaning something, especially with a chemical, in order to destroy bacteria.

7.5 HYDROGEN PEROXIDE 10% It is a colorless liquid and is used in aqueous solution for safety reasons. It acts as a bleaching agent and is also used as a disinfectant

8 ACRONYMS

8.1 PPE – Personal Protective Equipment

8.2 HP - Hydrogen peroxide

8.3 RT-PCR - Reverse transcription-polymerase chain reaction

8.4 DNA - Deoxyribonucleic acid

8.5 BSC - Biosafety cabinet

9 RESPONSIBILITIES

9.1 Laboratory Director is responsible for compliance with health and safety requirements and implementation of this policy in Biogenix laboratory which includes Molecular Laboratory and Core Laboratory.

9.2 Management personnel are responsible for the continuous supply of cleaning and disinfecting agents and other resources for cleaning and disinfection.

9.3 Biogenix laboratory staff are responsible for following laboratory cleaning and disinfection as defined in this policy and in corresponding laboratory specific training.

9.4 Infection control personnel should monitor the Laboratory technologists/technician and provide continuous training.

10 PROCEDURE

10.1 Preparation of Disinfection Solution:

10.1.1 Preparation of 0.525% Sodium Hyphochorite solution:

10.1.1.1 Dilute the CloroxTM containing 5.25% sodium hypochlorite with purified water in 1:10 ratio (Figure1).

Figure 1 . Dilute the Clorox 10 times to prepare 0.525% using the graduated cylinder and then pour into a spray bottle.

10.1.1.2 Pour the solution into the spray bottle marked with 0.525% chlorine-based agents.

10.1.1.3 The prepared reagent is stable for 24 hours at Room temperature.

10.1.2 Preparation of 75% ethanol solution:

10.1.2.1 75% ethanol is available as ready to use. So no preparation required.

10.2 Cleaning Procedure

10.2.1 Cleaning Work Benches

10.2.1.1 Wipe the benches with tissue/towel wet with 0.525% CloroxTM solution (not on the instruments, CloroxTM may damage the equipment), and leave it for 10 mins.

10.2.1.2 Wipe the benches using purified water to remove the chlorine.

10.2.1.3 Spray the 75% ethanol on the work benches and clean it with tissues. Leave ethanol to dry to meet contact time.

10.2.1.4 Fill in the checklist.

Note: In Core Laboratory clean the work bench with 75% ethanol only.

10.2.2 Pipette Cleaning

10.2.2.1 Clean the pipette 75% alcohol wipe from top to bottom i.e. starting from the relatively clean area to the relatively polluted area.

10.2.2.2 Wipe the outer surface of instruments using tissue with 75% ethanol.

10.2.2.3 Pipette should be cleaned before and after each use and when visibly soiled.

10.2.2.4 Fill in the checklist

10.2.3 Biosafety cabinet Operation & Cleaning

10.2.3.1 The cabinet fan should be run for at least 5 min before beginning work and after completion of work in the cabinet.

10.2.3.2 All items within BSCs, including equipment, should be surface-decontaminated and removed from the cabinet when work is completed.

10.2.3.3 The interior surfaces of BSCs should be decontaminated before and after each batch of samples with 75% Ethanol.

10.2.3.4 It is recommended that the cabinet is left running. If not, it should be run for 5 min in order to purge the atmosphere inside before it is switched off.

10.2.3.5 Close the sliding sash while stop the ventilation fan. Only when all works have been completed and all contaminated products have been disposed, could the fan be stopped, close the sliding sash simultaneously.

10.2.3.6 Keep pressing the  button for 3s in order to stop the fan. The cabinet will return to standby status. Reminder: Terminate all operations if the ventilation fan is stopped, otherwise serious accidents may happen.

10.2.3.7 Turn off the light press  and turn on the UV light press  . Reminder: UV light, light and sliding sash are interlocked, UV light can only be turned on when the light is off and sliding sash is fully closed. Warning: Keep away from the cabinet when the UV light is on.

10.2.3.8 Once the UV light turned off automatically, turn off the power supply.

10.2.3.9 If the UV light is turned on manually, it will work in setting time. The default setting of the delay time is 30 mins. The UV light can be turned off automatically using the setting time.

10.2.3.10 Fill in the checklist.

10.3 Fumigation with Hydrogen Peroxide12%

10.3.1 Fumigation is the action or process of disinfecting or purifying an area with the fumes of certain chemicals.

10.3.2 For detailed procedure refer BG-PP-INF-011 Operation & Maintenance of Medibios

10.4 Laboratory Environmental Cleaning:

10.4.1 Dry dusting will be performed by using high efficiency dusters which is separated for dirty and clean areas respectively. Dusting of the floor is done using dust-control dry mop.

10.4.2 Damp mops will be performed by using dedicated color coded mops in such a way avoiding cross contamination. Used mops will be disinfected with 0.525% bleach after each use.

10.4.3 Housekeeping items are color coded with blue in general areas (office, common corridor), Red in dirty area such as toilets, wash rooms etc.., yellow for laboratory testing area.

10.4.4 Biogenix Laboratory uses cleaning solution and disinfectant agents which are EPA approved and approved by the facility.

10.4.5 Testing area in the Molecular laboratory moped by technical staff of each shift using 0.525% Clorox solution to clean the floor which is left for 10 mins for contact time, followed by moping with water to remove the chlorine residues.

10.4.6 Other all area cleaned using reload 5 multipurpose detergents. Frequency of cleaning twice in day.

10.4.7 Document in checklist.

10.4.8 Factors influencing effective cleaning.

10.4.8.1 Fresh solution, correct dilution, clean dry container, fresh tap water (not hard water) Note: Hot water cleans better than cold.

10.4.8.2 Cleaning must be focused on the technique of cleaning, frequency and contact time.

10.4.8.3 Apply cleaning solution to entire surface needs cleaning.

10.4.8.4 Do not over wet the surface.

10.4.8.5 Change the mops and change the solution frequently.

10.4.8.6 Provide contact time for solution as per the manufacture's instruction.

10.4.8.7 Dry thoroughly.

10.4.8.8 Immediately removes cleaning equipment after use, store in a designated area.

10.4.8.9 Visible spillage of blood and body fluids are managed by using bod fluid spill kit.

10.4.8.10 Sanitize hand.

11 CROSS REFERENCE:

11.1 DOH Abu Dhabi Policy on Policy for Infection Control in the Health Care Facilities (PPR/HCP/P0010/07).

11.2 https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cleaning-disinfection.html

11.3 Cleaning and disinfection of environmental surfaces in the context of COVID-19-Interim guidance by WHO. 15 May 2020

11.4 https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2-covid-19

11.5 https://medium.com/@SilverHydrogenPeroxide/silver-hydrogen-peroxide-disinfecting-the-eco-friendly-way-9e176f1e9e97

12 RELEVANT DOCUMENTS & RECORDS:

12.1 BG-REC-INF-003 Fumigation Checklist