



CENTRAL LABORATORY, DELHI STANDARD OPERATING PROCEDURE PROCEDURE FOR MAINTENANCE OF REFRIGERATOR

DOC: CB/CL/SOP/6.4/3

Issue No.: 03

Issue Date: 16.08.2023

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1.0 PURPOSE

The purpose of the procedure is to ensure temperature maintenance and cleanliness of refrigerator for microbiological purpose.

2.0 SCOPE

The purpose covers temperature maintenance and cleanliness of the refrigerator for storing of samples, media, indicators, reference cultures etc.

3.0 RESPONSIBILITY

The concerned laboratory staff shall be overall responsible for proper operation and maintenance of refrigerator.

4.0 PROCEDURE

- 4.1 Keep the refrigerator connected with the mains.
- 4.2 Arbitrarily set the temperature setter at colder position so as to attain temperature within a range of 1.0 to 4.4 °C.
- 4.3 Keep a glass bottle having plain water inside the refrigerator permanently for temperature recording.
- 4.4 Use a standard reference thermometer for temperature recording of refrigerator. Dip the reference thermometer bulb in water of glass bottle, kept in refrigerator for temperature and record the temperature.
- 4.5 For cleaning of refrigerator, switch off the mains. Empty the refrigerator and clean its internal area with soap / detergent solution followed by water. After washing and complete removal of water, spray alcohol (95 % ethanol) with a sprayer covering the entire internal area of the refrigerator. Keep the refrigerator door closed for 1-2 hrs. Wipe the dust on the external body of the refrigerator and clean with damp rag / cloth soaked in diluted soap / detergent solution. Switch on the mains and replace the stored material in the refrigerator after 2 hrs. of alcohol spray.

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Prepared by	Reviewed & Recommended by	Approved By	Issued By
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5.0 DATA RECORDS

- 5.1 Record the refrigerator's temperature obtained by the reference thermometer along with its correction factor in the monthly temperature sheet. Display this temperature sheet on the refrigerator showing the refrigerator code/model, month, reference thermometer code, date and time, temperature observed and signature of the concerned staff.
- 5.2 Maintain a temperature record file containing monthly refrigerator temperature record sheets.
- 5.3 Record the data of cleaning of the refrigerator in a common equipment maintenance register of the laboratory.

6.0 PRECAUTIONS

- 6.1 Temperature of all the refrigerator utilized in the microbiology laboratory should be checked daily and maintain temperature within 1.0 to 4.4 °C.
- 6.2 Material stored inside the refrigerator should be displayed on the refrigerator along with monthly temperature record sheet.
- 6.3 Defrost the refrigerator in case the temperature rises. If even after defrosting the rise in temperature persists, get the refrigerator rectified.
- 6.4 Keep the mains off while cleaning. Store the refrigerated material removed from the refrigerator under cleaning in another refrigerator to avoid spoiling. So clean the laboratory refrigerators alternatively. Cleaning should be done once in a month.
- 6.5 Staff engaged in cleaning operation should wear hand gloves facemask and laboratory coat.

7.0 REFERENCES

APHA (American Public Health Association). 1998; Standard Methods for the examination of water and wastewater 23rd Ed. Washington DC, pp. 9-15.

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