

Human Immunology Center Core Laboratory
David H. Smith Center for Vaccine Biology and Immunology
Aab Institute of Biomedical Sciences

STANDARD OPERATING PROCEDURE: Operation and Maintenance of the -80°C Freezer

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1. Purpose/Scope:

The purpose of this procedure is to outline the operation and maintenance of the -80°C freezer located in the Human Immunology Core Laboratory (HIC).

2. General Policy:

The HIC will adhere to the specific guidelines recommended by the manufacture for the use and maintenance of the -80°C freezer. The specific policy will be outline below for use and care of the -80°C freezer. This will also include the proper documentation indicating that the maintenance recommended has been completed and also tracking of any issues or problems with the -80°C freezer on the maintenance log worksheet

3. Specific Policy**3.1. Installation of the -80°C Freezer**

3.1.1. Reference the operation manual for the specific installation procedure of the -80°C freezer.

3.1.1.1.The -80°C freezer should be installed in a place that maintains ambient temperature and also away from direct sunlight and sources of heat.

3.1.1.2.The -80°C freezer should be installed in a level area free of vibration with at least 6 inches of clearance on all sides.

3.2. Operation of the -80°C Freezer

3.2.1. Reference the specific -80°C freezer manual for operation

3.2.1.1.Record all relevant information on the current maintenance log worksheet located on the -80°C freezer.

3.2.1.2.A clean glove should be worn on the hand when opening the -80°C freezer door. After each use spray door handle with Vesphene.

3.2.1.3.Verify proper maintenance has been performed as documented on the maintenance log worksheet located on the -80°C freezer door.

3.2.1.4.Do not keep the door to the -80°C freezer open for long periods of time. This can cause frost build up on the inside of the freezer.

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3.3. Maintenance of the -80°C Freezer

3.3.1. Daily

- 3.3.1.1. Record the temperature daily from the temperature display on the front of the -80°C freezer.

3.3.2. Monthly (Chest Freezer Only)

3.3.2.1. Alarm Testing

- 3.3.2.1.1. Turn the key on the front of the -80°C chest freezer to the alarm test position.

3.3.3. Every 6 Months

3.3.3.1. Alarm Testing (Upright Freezer)

- 3.3.3.1.1. Press and hold the Alarm Test Pad. When the temperature reaches the warm alarm value, the alarm will sound. (This does not change the temperature of the freezer. The sensor itself is warmed and not the freezer)
- 3.3.3.1.2. Release the Alarm Test Pad and the cabinet temperature will return within a few minutes.

3.3.3.2. Clean the Condenser and filter

- 3.3.3.2.1. Pull the grill open.
- 3.3.3.2.2. Remove the filter and check the fan.
- 3.3.3.2.3. Shake the filter to remove excess dirt and rinse with water.
- 3.3.3.2.4. Shake the filter to remove excess water and replace.
- 3.3.3.2.5. Vacuum the condenser.
- 3.3.3.2.6. Close the grill

3.3.3.3. Gasket Maintenance

- 3.3.3.3.1. Visually check the gasket around the door or lid for tears or punctures. Leaks are indicated by a streak of frost that forms at the point of gasket failure. Clean with towel with vesphene sprayed on it.

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3.3.3.4. Verify digital display temperature with thermocouple

3.3.3.4.1. Reference SOP HIC-4-0022

3.3.4. Yearly

3.3.4.1. Defrost the -80°C freezer

3.3.4.1.1. Remove the contents.

3.3.4.1.2. Unplug and allow the freezer to reach room temperature.

3.3.4.1.3. Discard any remaining ice and wipe down inside of the freezer with 70% EtOH and repeat with vesphene.

3.3.5. Every 3 years

3.3.5.1. Replace the Condenser filter

Reference:

Revco Installation and Operation Manual

GE Owner's Manual and Installation Instructions

Attachments:

Maintenance Log Worksheet

Revision History

Version	Change	Impact	Justification	Change Date:
Legacy	No sign off	New/HIC startup		10/13/05
HIC-4-0008	New	Glove policy	Control document management system	01/10/07