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<b>Standard of Operating Procedure</b>	<b>Freezer/Refrigerator Use and Monitoring</b>	Page 1 of 2

**PURPOSE:** To define the use, maintenance, and monitoring of freezer and refrigerated units for research specimens located in the CHPS units on Perelman Center for Advanced Medicine (PCAM) 4<sup>th</sup> floor, Dulles 1<sup>st</sup> floor and the Smilow 12<sup>th</sup> floor of the Hospital of the University of Pennsylvania (HUP).

**SCOPE:** CHPS staff and Clinical Study Teams

**PROCEDURE:**

**A. Equipment Use**

1. Freezers, refrigerators and cold centrifuges can only be used for research samples for CHPS-approved protocols.
2. The CHPS unit does not provide long term storage of samples. The CHPS unit provides short term storage only (up to two weeks).
3. All freezers and refrigerators are regularly inspected and kept clean and free of obstructions. No boxes or supplies may be placed on top of the units.
4. All specimens requiring freezer or refrigerator storage must be placed in an appropriately labeled container and stored in an upright position. Appropriate labelling for the container includes the Principal Investigator’s last name, CHPS #, and either Patient Name or Subject ID.
5. A CHPS staff member must be present when a CHPS freezer or refrigerator is opened.
6. No food, beverages, or medications can be stored in research specimen refrigerators or freezers.

**B. Equipment Monitoring**

1. The CHPS Nurse Manager, Nursing Staff, Research Facilitator and Medical Technicians are responsible for monitoring the status of the freezers and refrigerators.
2. Freezers and refrigerators are electronically monitored by the TempTrak System.

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- Daily temperature readings are manually documented Monday through Friday on the CHPS Refrigerator/Freezer temperature log.

**C. Maintenance**

- Penn Medicine’s Clinical Engineering Department inspects the condition of all units on a yearly basis to ensure safe operation. Inspection labels with dates are placed on each unit.
- All CHPS refrigerated centrifuges are maintained by Penn Medicine’s Clinical Engineering Department and repaired on an as-needed basis.
- All CHPS research freezers and refrigerators are under a yearly maintenance contract with Scientific Apparatus Services Inc. Routine maintenance inspections occur every four months. Repairs are done on an as-needed basis.
- The CHPS -80 Freezers are defrosted on a yearly basis to prevent excessive frosting and poor cooling.

**D. Storage Capacity**

The CHPS keeps extra storage capacity to perform defrosting maintenance or in the event of a freezer/refrigerator malfunction. All samples from a defrosting or malfunctioning unit are to be immediately transferred to the excess storage until the maintenance is completed or the malfunctioning unit is repaired.

**E. Dry Ice**

- The CHPS unit does not maintain a supply of dry ice for specimens that require it. Dry ice coolers are available for use at the Penn Presbyterian, Dulles 1 and PCAM 4 locations, however individual investigators are required to obtain dry ice and ensure that it is delivered to the correct CHPS location.
- The CHPS unit requires that all staff and study team members follow Penn Medicine’s Dry Ice Safety and Handling Procedures

Supersedes: Freezer/Refrigerator Use and Monitoring 2018, November 2021

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