

*STANDARD OPERATING PROCEDURE*

**Using Laboratory Freezers**

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2030 SRTC, 5-4403  
Dec 14, 2018

**Minimum Personal Protective Equipment Required:** insulated gloves, skin and body protection (long pants, lab coat, closed toed shoes, appropriate gloves)

**Risks:** Frostbite, Slipping on wet floor from melted ice, Electrical shock

**Special Handling:**

- ✓ No food or beverages are to be stored in the freezers
- ✓ Temperatures of -70C to -80C can quickly cause frostbite and samples stored at these temperatures can damage the skin if handled with bare hands.

**Protocol/Procedure:**

1. All items **MUST** be placed in a sample or soil box and put into a rack
  - a. **DO NOT** put samples in freezer in bags.
  - b. For items that do not fit into freezer boxes, discuss with Joy
2. All freezer contents must be labeled (Contents, date (including year), owner)
3. Samples should be placed into the appropriate project freezer.
  - a. If you are unclear which freezer should be used, discuss with Joy
  - b. If you are expecting a large number of samples, check with Joy to make sure there is sufficient space prior to the samples being shipped here.
4. Every time you open a freezer, check for frost build-up on the seals and doors. Brush any frost off doors and remove ice from seals.
  - a. Ice buildup causes the compressor to run more often reducing the life of compressor.
  - b. Leaving the door to the freezers open for extended periods of time promotes the development of frost.
  - c. Close doors as soon as possible, especially in the summer, to prevent frosting
  - d. Note that the freezer may vacuum down the door and it may take several minutes for you to re-open the door.
5. An alarming freezer, one that is above temperature, or is making strange sounds must be immediately reported to lab staff/supervisor.

Maintenance:*1. Daily*

- a. Check the compressor for any unusual sound and for overheating.
- b. Check for frost and ice build-up each time unit is opened
- c. Check freezer temperature

*2. Monthly*

- a. Remove dust, dirt and lint from condensers with a wire or stiff-bristle brush and vacuum it away. This is an important step because a dirty condenser can cause temperature loss and damage the compressor
- b. Clean the filters and screens of the ventilator system with a brush or vacuum cleaner.

*3. Every 6-12 months*

- a. Freezers should be defrosted at least annually. If frost is too thick to see the inside walls of the unit, the unit should be defrosted.
- b. Remove all items from the freezer and into an alternate freezer space.
- c. Switch the freezer off and disconnect it from the electrical supply. Open the freezer door and leave it open.
- d. Position a container to catch the melted ice.
- e. Never use sharp tools to chip off the ice.
- f. Sponge up any melted ice.
- g. Reconnect the freezer to the main power supply and switch it on.
- h. Replace the original freezer contents once the temperature has reached