International Freezer Challenge

Cold storage maintenance tips for your McGill lab

Proper maintenance of laboratory freezers and refrigerators can significantly reduce a lab's energy consumption and costs, while also reducing the risk of equipment failure, extending the lifespan of expensive cold storage equipment, and supporting efficient research practices. While it's recommended to consult an appliance's manual before conducting any maintenance, here are a few tips for defrosting and cleaning lab freezers and refrigerators at McGill and its research institutes.

How to remove frost buildup

Frost buildup can generally be removed from the gasket and sealing surfaces using a soft brush or cloth.

When to defrost a lab freezer

Regularly brush off frost buildup, as this will reduce how frequently a freezer needs to be defrosted. If ice cannot be easily removed from the interior walls or door, it might be time for a full defrost.

How to defrost a lab freezer

1. **Move all samples to a different freezer.** Find out if a neighbouring lab has space in their freezer, or ask the building manager if a temporary freezer is available. If you work in the Life Sciences Complex or with the Faculty of Medicine and Health Sciences, fill out a portable freezer request form.
2. **Place absorbent pads around the base of the unit.** This will prevent flooding and slipping hazards. Additionally, remove any loose chunks of ice and place them in a bucket.
3. **Turn off the freezer, unplug it, and leave the doors ajar.** Let the unit thaw completely. This may take several days, so consider beginning the process just before a weekend.
4. **Clean and dry the interior.** Use a soft lint-free cloth dampened with water and a mild detergent. Do not use abrasive cleaners or solvents. Disinfect stainless steel parts using 70% isopropyl alcohol.

Turn the freezer back on. Allow the unit about 12 hours to return to its operating temperature before transferring samples back to the freezer.

How to clean coils

Once the appliance is unplugged, coils can generally be cleaned by gently vacuuming or brushing them in the direction of the lines on the coils, or gently wiping them with a wet paper towel. Be careful not to bend the metal lines.

How to clean filters

Once the appliance is unplugged, a filter can generally be cleaned by removing it and rinsing it with water (choosing the direction carefully so lint is pushed off filter). It is not necessary to dry the filter before placing it back in the freezer.

For more information about cold storage maintenance at McGill, consult the Office of Sustainability website or contact labs.sustainability@mcgill.ca.

Join the International Freezer Challenge any time from January to June 2023 at freezerchallenge.org.