

Defrosting Research Freezers and Refrigerators

Planning is key to properly thawing a research freezer. Expect two days of freezer downtime during the process. Follow these guidelines for a safe meltdown:

1. **Never move a freezer to a non-research space** during this process (e.g. balcony, corridor, office, etc.).
2. **Treat all containers as though they are potentially contaminated**, unless you're certain they are not – wear gloves.
3. **Unplug the freezer in the morning** so you can monitor runoff throughout the day. Never allow liquid to run directly onto floors (**slip hazard**) or down any outside drain (**potentially regulatory violation**).
4. **Identify hazardous materials** that are or were stored in the freezer prior to thawing:
 - **Radioactive material** – if radioactive material was in the freezer, prior to relocating any of its contents, collect and test an ice sample with a liquid scintillation counter. If you find greater than three times background (using tap water as your control), collect the ice as radioactive waste and label it for pick up by the Office of Safety.
If the unit is contaminated, follow decontamination protocol for your lab. For assistance, contact the Radiation Safety Officer (7-3341).
 - **Biohazardous material** – if biohazardous material was in the freezer, collect the ice and add 1 part bleach to 9 parts melted ice. Allow 20 minutes of contact time before pouring down the drain (preferably in a fume hood)
 - **Hazardous chemicals** – wipe down the unit if contamination is suspected or visible contamination is present.
5. **Remove the contents of the freezer.** It's a good time to clean out unwanted contents.
6. **Establish a wick and reservoir system to manage the melting ice.** Place a bench pad (paper side down, plastic side up) on the freezer compartment bottom and lead it into a large autoclave pan. Surround the freezer and autoclave pan with absorbent paper towels or bench paper.
7. **Never chip away at the ice with sharp objects.** The unit's refrigeration coil can easily be damaged by sharp objects, allowing coolant to escape and resulting in expensive repairs or replacement costs.
8. **If used for biohazardous storage**, clean unit inside and out with a freshly made 10% bleach solution.
9. **Clean the dirt and dust off the exterior coils**, if you can access them, to extend the life of the unit and save energy - think green!
10. **Plug in the freezer** and wait for it to return to desired temperature.