

## Freezer Defrosting Fact Sheet

Freezers must be defrosted on a regular basis to prevent build-up of ice, which ensures proper operation of the unit and safe storage of hazardous materials. The frequency at which defrosting is required depends on the usage rate of the freezer, humidity, quality of seals, and other factors. It is generally a good idea to defrost freezers before 1 inch of ice has accumulated.

The following are general guidelines that must be followed when defrosting freezers.

- Remove all items from the freezer and arrange for alternate freezer storage during the defrost process. This process could take two or more days to complete depending on the level of ice build-up. Plan accordingly.
- Freezers must be defrosted in the spaces in which they are stored. If this presents a safety issue for any reason, please contact EH&S (413-545-2682) to discuss other options prior to beginning the process.
- If there is evidence of a spill in the freezer, please contact EH&S (413-545-2682) prior to beginning the defrost process to discuss disposal of ice/water. Likewise, contact EH&S if a spill is discovered or occurs during the process.
- All melt must be contained. Please use bins, absorbent material, or other items, as appropriate, to do so. Do not let the water gather on the floor as it is a slip hazard, and may penetrate the floor and cause damage or seepage to lower building levels. The picture below demonstrates an effective containment strategy.
- Empty collection bins frequently to ensure they do not overflow.
- Uncontaminated melt water may be dumped down a drain.
- Laboratories are responsible for providing their own bins, absorbent material, and other supplies for defrosting. Do not use bins labeled for hazardous waste for this process. The following items are recommended.
  - Regular bins-5 in. height, fit on most shelves and can comfortably contain 4 gal. of water
    - E.g., Item NC1217741 from Fisher
  - Shallow bins-2.5 in. height, fit in between narrow shelves or under protruding ice
    - E.g., Item 13-361-20 from Fisher
  - Universal absorbent mat-can be used to wick water which misses main bins into containers
    - E.g., Item 443R23 from Grainger
  - Absorbent Booms-can be placed around the outside of the unit to contain any residual runoff
    - E.g., Item 443R57 from Grainger
- If glass or plastic containers are fused to shelves because of ice, do not try to force these items free as they may break.
- In cases of severe ice buildup, it may be desirable to remove chunks of ice from shelves, ceiling, and sides of the unit with a tool to make the defrost process more efficient. Only do this with units that do not have interior refrigerant lines and only use blunt tools. Puncturing



or breaking such a line can release gas that is harmful to both the environment and human health and will render the units inoperable. Follow the manufacturer's directions regarding the use of tools to remove ice during the defrost process.

- Wipe down the inside of the freezer once the ice has completely melted to remove all water and clean the unit. A mild detergent may be used if desired or necessary. Units used for the storage of biological materials should be wiped down with a freshly prepared 10% bleach solution, allowed to stand for 10 minutes, and then wiped down with a cloth wetted with water to remove any residual bleach. Allow units to dry before plugging in.
- Units which are to be disposed of should be cleaned as described above, and labelled as "decontaminated" with the date and responsible party. The disposal process is initiated by completing a surplus equipment disposal form: <https://www.umass.edu/wastemanagement/how-file-sed-form>
- Allow units which are returned to service to reach thermal equilibrium before returning contents. This can take up to a day. Temperature should be monitored to ensure it reaches the appropriate level.
- Contact EH&S (413-545-2682) with any other concerns or questions.