

Use of Refrigerators and Freezers in Laboratories

SafetyNet #: 31

A. Summary

This SafetyNet outlines requirements for the safe use of refrigerators and freezers in the laboratory setting.

B. General Purpose

General purpose, household-type refrigerators and freezers are designed for storage of food and beverages. They are appropriate for use in lunchrooms and offices. General purpose units constitute a hazard if used for the storage of flammable materials or unstable chemicals. Household-type refrigerators and freezers are permitted in laboratories exclusively for storage of non-flammable aqueous solutions or other non-flammable or non-explosive materials.

C. Flammable Material

Only listed flammable material storage refrigerators and freezers are appropriate for storage of flammable materials, both liquid and solid. Flammable material storage refrigerators/freezers have no interior components which can provide a source of ignition. Flammable material storage refrigerators/freezers must be listed by a recognized testing laboratory, such as Underwriter's Laboratories (UL). For guidance on what constitutes a flammable liquid, refer to [SafetyNet #523: Flammable Liquid Storage](#) [1], or consult with EH&S or Fire Prevention.

D. Explosion-Proof

Explosion-proof refrigerators/freezers are designed to prevent ignition of flammable vapors or gases that may be present inside and outside of the unit. This type of refrigerator is needed in locations such as solvent dispensing rooms, where a flammable atmosphere may develop at some time in the room. Explosion-proof refrigerators have very limited use and require special hazardous-location wiring rather than the simple plug-in type power cord. If you think you need this type of unit, consult with EH&S or Fire Prevention.

D. Storage of Food and Drink

Do not store food or drink in any refrigerator/freezer in a laboratory. Eating and drinking, or storage of food and drink, is prohibited in laboratories where hazardous chemicals are used or

stored ([UC Davis Policy and Procedure Manual 290-56](#) [2]). All refrigerators must have a label that indicates that they are not for storage of food and drink. Contact EH&S for labels.

E. Labeling

All units must be clearly labeled to indicate whether they are appropriate for storage of flammable materials. All units must have a label that indicates that they are not for the storage of food and drink. Contact EH&S for labels.



F. Cleaning/Disposal

Refrigerators/freezers should be cleaned on a regular basis and old chemicals should be properly discarded through [WASTE](#) [3]. Freezers that are not frost-free should be defrosted regularly. Refrigerators/freezers use chlorofluorocarbons (CFCs) such as Freon. Before discarding old equipment, the CFCs must be removed by a certified technician. Contact the [Facilities Operations and Maintenance work order desk](#) [4] for assistance.

G. Special Considerations for the Sacramento Campus

All refrigerators/freezers located in hospital or clinical laboratories must be lab-safe. The Sacramento campus has a campuswide refrigerator/freezer monitoring system called Metasys. To add, delete, or make changes for Metasys monitoring, have your department submit a work order through the [online work order system](#) [5].

Contact

Research Safety

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More information

<https://safetyservices.ucdavis.edu/research-safety-staff-listing> [6]

Related content

1. Flammable Liquid Storage
2. Hazardous Materials Management

External links

1. <http://om-as.ucdavis.edu/FacOM/wwosFacilities.html> [4]
2. <https://request.ucdmc.ucdavis.edu/hs/logon.html?context=request&target=/request> [5]

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Links

- [1] <http://safetyservices.ucdavis.edu/safetynet/flammable-liquid-storage>
- [2] <https://ucdavispolicy.ellucid.com/documents/view/305>
- [3] <https://ehs.ucop.edu/waste/#/>
- [4] <http://om-as.ucdavis.edu/FacOM/wwosFacilities.html>
- [5] <https://request.ucdmc.ucdavis.edu/hs/logon.html?context=request&target=/request>
- [6] <https://safetyservices.ucdavis.edu/research-safety-staff-listing>