

COLD ROOM STORAGE & USE PROCEDURES

Cold rooms within research buildings are commonly shared by multiple researchers. Therefore, each lab which utilizes the shared space must take a responsibility in maintaining the room. Proper work practices within cold rooms are essential to ensure clean and safe research environments. When proper work practices are compromised in a cold room, a number of health and safety issues may occur including:

- *Mold growth throughout the cold room:* Mold may contaminate research samples and may also be tracked out of the room into other areas of a building.
- *Chemical Safety Hazards:* Safety and health hazards may be created if proper chemical storage is not maintained within cold rooms. Most cold rooms have closed air circulation, so improperly exhausted highly toxic chemicals could lead to worker exposures and illnesses. Flammable solvents may create fire hazards, as many cold rooms contain ignition sources.
- *Structural Compromise:* Excess moisture or spilled chemicals may cause rust, corrosion, or other structural problems which negatively affect cold room integrity. For example, strong acids or bases may cause corrosion of cooling coils in a cold room's refrigeration system.

To prevent common problems from occurring, cold room users should routinely perform the following tasks for cold rooms currently in use:

1. **Annual** – A uniform clean-up of each cold room by all departments who use the space is required annually.
2. **Monthly** – An inventory of the cold room and removal of items which are no longer needed, have expired, or which are harboring mold is required monthly.
3. Each laboratory will be responsible for ensuring that nothing being stored is harboring mold. *COLD ROOM USERS WILL BE RESPONSIBLE FOR MOLD REMOVAL COSTS.*
4. Keep the cold room door firmly shut.
5. Organize the cold room by using metal or plastic shelving storage units, in lieu of wooden shelves or other porous materials.
6. Label shelves, containers and other items to identify the contents and establish ownership.
7. DO NOT store items in cardboard boxes, as they may harbor mold. Move items to securely closed plastic or metal containers. If you must store paper products (e.g., Kim wipes, paper towels), do so in closed air-tight plastic containers.
8. DO NOT store hazardous chemicals, including but not limited to, volatile flammable solvents, highly toxic chemicals, (e.g. carcinogens, regulated chemicals), volatile acids, asphyxiant gases, and compressed gases such as carbon dioxide or nitrogen in cold rooms.
9. DO NOT store food or beverages in cold rooms.

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10. Do not store equipment in cold rooms, except when necessary for keeping samples cold.
11. In general and when using equipment, be sure to promptly clean and remove any residual or spilled liquids or chemicals (e.g. buffers, media).
12. Keep electrical cords to a minimum and do not allow cords to come in contact with water or other liquids. Ground Fault Circuit Interrupters (GFCI's) should be installed on the electrical outlets in cold rooms since they can be damp environments. Older cold rooms may not have GFCI's, so verify they are in place before plugging in equipment.
13. Keep all surfaces clean and wipe down surfaces on a routine basis or at least annually.
 - a. Use a wet clean up method (e.g. damp cloth with 10% bleach).
 - b. Be sure to dry surfaces after cleaning to ensure moisture is removed.
14. Promptly report water leaks, temperature issues or other cold room maintenance issues to Physical Plant on HSC Campus 852-5695 or Belknap Campus 852-6241 or Shelby Campus 852-6241.
15. Dispose of waste into proper waste streams **outside** of cold rooms.

For Cold Rooms abandoned or no longer in use:

Follow the laboratory close-out procedures and complete the lab close-out notification form located at the link below for the Department of Environmental Health & Safety (DEHS) to facilitate your Cold Room closeout:

<https://louisville.edu/dehs/forms/labcloseout>

Contact Physical Plant after DEHS completes your Cold Room close-out to remove the room from service or to install dehumidifiers and lock the cold room.

Physical Plant may be contacted as follows:

HSC Campus: 852-5695 Belknap Campus: 852-6241 Shelby Campus: 852-6241

AVOID THIS!

