

WARM & COLD ROOMS - SAFE WORK PRACTICES

Uses: Warm and cold rooms, also referred to as environmental rooms, are designed to control temperature and humidity. Cold rooms can function as low as 35°F and warm rooms up to 120°F. They are used primarily for cell and bacterial culture and storage of biological reagents, but can also be used as work areas for temperature-sensitive experiments.

Ventilation: To reduce heating/cooling costs, environmental rooms are typically unventilated. Fresh air only enters the room when the door is opened and closed. Therefore, **the release of hazardous materials due to spills or vaporization poses potential health and safety hazards to occupants.**

USE AND STORAGE

Do not conduct work with or store the following materials and equipment in environmental rooms:

- **Particularly Hazardous Chemicals** (i.e., highly acutely toxic chemicals, carcinogens, reproductive toxins): Personnel exposure to these chemicals may occur due to the lack of exhaust ventilation.
- **Volatile flammable solvents:** Exposed circulation fan motors and electrical laboratory equipment are potential ignition sources for flammable vapors.
- **Volatile acids:** Acidic vapors can damage refrigeration equipment and work surfaces.
- **Asphyxiants** (e.g., compressed gases such as nitrogen or carbon dioxide): May displace oxygen due to limited ventilation, resulting in an oxygen-deficient environment.
- **Dry Ice:** An oxygen-deficient environment can occur from the release of carbon dioxide gas.
- **Open flames** (e.g. Bunsen burners)
- **Food or Beverages:** Food and drink stored in cold rooms can become contaminated by chemicals or biological organisms. (This includes unopened bottles of beer and other beverages!)

Read about hazardous materials incidents that occurred in cold/warm rooms [here](#).

PREVENTING MOLD GROWTH

Unabated mold growth on environmental room surfaces may lead to mycological contamination of research projects and pose potential health problems from inhalation of spores. Spores can also be tracked out of the room and around the entire floor of the building. Minimizing mold growth requires the control of moisture in the environmental room:

- Keep door firmly shut – if left open, water condensation on surfaces increases due to the introduction of water vapor from outside air, promoting mold growth.
- Immediately clean up spilled laboratory liquids (e.g., buffers and media). Moisture may also lead to rust, corrosion, or degradation of surfaces in the environmental room (shelves, walls).
- Promptly dispose of wet or damp organic materials (e.g., paper products, cardboard, miscellaneous trash, etc.)
- Store paper products (e.g., Kim wipes) in closed plastic containers. Do not use or store cardboard boxes or other absorptive materials in cold rooms.

REPORTING PROBLEMS

- Report any leaks and maintenance issues to:
 - Building and Grounds Maintenance (Main campus): 723-2281
 - Ops. & Maintenance (SOM): 721-2146
- Report health & safety concerns to EH&S at 723-0448.



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