



COLD ROOM GUIDELINES

WHAT ARE COLD ROOMS?

Cold rooms are walk-in spaces used by many laboratories around campus to keep research materials below room temperature. In almost all cases, the air in these rooms is 100% recirculated. Contained atmosphere environments present unique hazards and have important safety rules due to the air being recirculated.

WHAT ACTIVITIES ARE REQUIRED WHEN USING A COLD ROOM?

- Ensure all items are labeled with PIs name and a date.
- Regularly clean all surfaces with an appropriate cleaner.
- Promptly clean up spilled liquids such as buffers or media.
- Dispose of trash outside the cold room.
- Minimize door opening and keep the doors closed tightly. Keeping the doors open can lead to increased relative humidity, moisture problems, and mold growth.
- Check that all storage shelves are made of stainless steel or plastic. Wooden shelving can absorb moisture and can be a breeding ground for mold.
- Monitor for water leaks or mechanical issues.

WHAT ACTIVITIES ARE PROHIBITED WHEN USING A COLD ROOM?

- No storage or use of
 - **Cryogenics**— dry ice, liquid nitrogen, etc. due to oxygen deficiency risk.
 - **Compressed gases** (other than air) due to oxygen deficiency risk.
 - **Flammables**— ethanol, methanol, etc. due to risk of fire.
 - **Toxic chemicals** — BME, formalin, methanol, chloroform, etc. due to hazardous atmosphere if spilled.
 - **Acids** — due to possible corrosion/damage to the cold room and/or compressor.
 - **Food or beverages** — due to risk of contamination with lab materials.
- No open flames.

HOW CAN WE MINIMIZE MOLD GROWTH IN A COLD ROOM?

- Minimize storage of cardboard or paper. Use metal or plastic containers. If paper products (e.g. paper towels, Kim wipes) are needed, store the items in a closed plastic container when not in use.
- Limit storage in the space – too much clutter restricts airflow around items on shelves.
- Do not store items directly on the floor.
- Do not use 100% bleach on stainless steel items due to corrosion. If using bleach, ensure the items are wiped down with water and dried after being treated to reduce the chance of corrosion.

IF MY LAB NOTICES A PROBLEM IN A COLD ROOM, WHAT DO WE NEED TO DO?

- ⇒ Contact your Supervisor and Safety Contact and make them aware of the situation.
- ⇒ **If toxic or flammable chemicals are spilled in a cold room, leave the room and activate the Chemical Spill Response Team through Duke Police (919) 684-2444. This is a very hazardous situation due to lack of fresh air.**
- ⇒ For mechanical issues, contact Engineering and Operations (919-684-3232) or Facilities Management (919-684-2122).
- ⇒ If the problem persists, contact the Laboratory Safety Division using the below information.