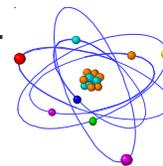


LABORATORY SAFETY FACT SHEET #24



Environmental Rooms and Walk-in Freezers



Environmental rooms (cold or hot rooms) and walk-in freezers are considered to be intrinsically hazardous because of the following risks:

- Persons can potentially be trapped within if the door latch fails to operate, or if objects are placed outside the door. This is particularly so for sliding doors.
- Unless suitable ventilation is provided, the risk of low oxygen or hazardous atmospheres is particularly real when
 - compressed gases or volatile chemicals are stored or used
 - persons work within for any length of time
 - storing or using dry ice which could displace oxygen and pose a danger of asphyxiation.

RECOMMENDATIONS

1. Environmental rooms intended for use other than immediate walk-in/walk-out storage areas (e.g., work rooms) must have an appropriate number of air changes per hour of fresh air via mechanical ventilation. Individuals may be able to verify that the ventilation is on or off, but to quantitatively measure the adequacy of ventilation consult Facilities or EH&S. Also, it is easy for those not familiar with ventilation systems to mistake the refrigeration air circulation fan for one providing fresh air.
2. Where compressed gases are stored or used, there should be a low oxygen detector and alarm installed and maintained - consult EH&S. Minimize gas storage.
3. Door release mechanisms should be examined to ensure they are in good working condition and the door can be opened with a minimum of effort. If a positive latch device is fitted, there should also be an emergency door release. Latching devices and emergency release mechanisms should be tested regularly and maintained.
4. Doors should be kept free of obstructions such as carts or equipment.
5. Ideally, there should be a bell or alarm which can be activated from within to alert persons within the vicinity in an emergency – newer rooms tend to have these. Also, do not confuse a low or high temperature alarm system for a trapped-person alarm.
6. Solo use of an environmental room, particularly after-hours should be discouraged.
7. Mold growth can have adverse health effects. So, thoroughly clean these rooms on a regular basis.
8. Note whether your unit is, or should be, placed on your building emergency generator. If not, don't work in such a room without ventilation, light, etc.