

LIFE SCIENCES CENTRE

Protocols for the Transportation of Cryogenic Materials and Other Hazardous Materials in LSC Elevators

Background

1. A comprehensive risk assessment has determined that a maximum quantity of 2kg (5 lbs) of dry ice may be safely transported in an occupied LSC elevator (providing the criteria listed below are met).¹
2. A comprehensive risk assessment has determined that liquid nitrogen dewars may be safely transported in an occupied LSC elevator (providing the criteria listed below are met).²
3. In order to address the concerns and rights of non-laboratory staff at the LSC, cryogenic and other hazardous materials may only be transported in LSC elevators #2 and #4.
2. As per University policy and provincial occupational safety regulations, hazardous materials may only be transported by personnel who have received proper chemical and/or biological safety training and are aware of LSC emergency response procedures.
3. LSC elevator fans are to remain on at all times. In the event of a power failure, LSC elevators run normally on emergency back-up power.
4. In the event of an elevator incident, Campus Security may be contacted by depressing the “telephone” button on the elevator panel. Campus Security may initiate an emergency “9-1-1” call, if deemed necessary.

Procedures

Liquid Nitrogen

1. **Liquid nitrogen dewars may only be transported using appropriate dollies, trolleys and/or restraints.** For additional information, please contact the LSC Safety Advisor at 604-827-4127.
2. **Liquid nitrogen dewars must have the lid in place while in an elevator.** Pressure-relief mechanisms must not be tampered with or altered.

Dry Ice

1. **No more than 2 kg (5 lbs) of dry ice may be transported at one time in an LSC elevator.** If larger quantities are required, these shipments may be transported using the stairs or by multiple trips up the elevators (with no more than 2kg of dry ice).

In cases where meeting the 2kg limitation is not feasible or practicable, users are to contact Sophia Wang (604-827-3936) or Pierre Tanguay (604-827-4127) to pre-arrange for the shipment to be transported in an unoccupied elevator as per an established LSC procedure. This service will only be offered during regular work hours, on a case by case basis.
2. **All dry ice will be transported in a solid, well-insulated container with the lid held securely in place** using tape, a cord or an elastic band. If dropped, container should stay intact.
3. **It is recommended that personnel transporting dry ice (max 2 kg) after-hours inform at least one other co-worker when dry ice is to be transported in an elevator.**

¹ Report to the Life Sciences Centre (LSC): Evaluation of recommendations for the transport of dry ice (CO₂) and liquid nitrogen (N₂) in LSC elevators (June 2010) – by David Kodama and Karen Bartlett, PhD (School of Environmental Health, University of British Columbia). pp

² Ibid, pp