

Faculty of Forestry, University of Toronto

Earth Science Centre

33 Willcocks Street

Toronto, ON M5S 3B3

***Procedure for filling & transport for Cryogenic Cooling Vessel (50L) of TA instrument in ESC 2008***

**Transport of Cryogenic Cooling Vessel for filling in ESC 1012L Within Building**

Cooling vessels of TA instrument on handcart in ESC 2008 should be travelled along the hallway (facing the courtyard) to elevator (Preferable to use moving elevator at 33 Willcocks). Send another person to meet the elevator at ground level before sending cryogenic liquids vessel in elevator to street level. Ensure that no passengers get on the elevator while the cryogen is being transported on the inside of the doors with a sign saying “warning, cryogenic materials in transport - do not enter”. Once the vessel is secure in the elevator, press S and back door button without any passengers will ensure opening both front and back doors of the elevator at street level. The receiving end will be the back elevator door facing loading dock (ESC1012L) where the cryogenic liquid vessel is stored. The same handling procedure should be followed for transporting of filled cryogenic vessel back to the Lab ESC 2008.

**Protective Equipment (PPE)**

Frostbite occurs almost instantly when skin is wet, for instance from sweat. Cryogen splashed into the eye can cause immediate frostbite and severe eye damage. To protect against these hazards the following PPE should be used.

**Safety glass and Cryogen gloves should be worn when handling and transferring cooling vessel.**

• \_Where transfer of cryogens is occurring, the equipment should never be left unattended.

• \_Cryogenic liquids and their containers should be kept free of contaminants of any kind.

• \_Absorbent materials should not be exposed to cryogens.

• \_Do not overfill cooling vessel of TA instrument.

• \_When filling containers or inserting objects into a cryogen, minimize boiling and splashing by proceeding slowly.

• \_Allow cryogenic liquids to flow off the glove without contacting the skin. This provides protection for small splashes that result in exposures of short duration.

• \_Closed toe shoes, a non porous lab coat, and long pants must be worn. Cuffs of any type should be avoided, as they can trap cryogens close to the body.

• \_The bottoms of the pants should cover past the tops of the shoes to ensure that no cryogen can be inadvertently poured into the shoe.

• \_No watches, rings or other jewelry should be worn, as a splash can freeze these objects to the skin.

**In the Event of a Spill**

**LIQUID NITROGEN FACILITY 416-978-8510**

**CAMPUS SERVICES MANAGER 416-978-2098**

**CAMPUS POLICE 416-978-2222**

**LIQUID NITROGEN FACILITY SUPERVISOR HOME # 416-491-8575**