

## Chemistry Department Standard Operating Procedure

Title: Cryogenic Material

Updated: October 2010-Prabha Dwivedi

Only personnel who are authorized by the department should have access to facilities where cryogenics are stored.

### Personal Protective Equipment

When working with uncontained cryogenics, personnel shall wear PPE (such as safety goggles; dry, leather gloves; and clothing free of pockets or turned-up edges) as required by the laboratory SOP.

### Safety Precautions

#### a. Equipment Precautions

- Use only containers specifically designed for holding cryogenics.
- Follow approved procedures for handling and use.
- Store small, empty containers indoors or in areas free from rain or excessive moisture.

### Safe Work Habits

- Stand clear of cold gases and boiling or splashing liquids.
- Wear appropriate protective clothing.
- Fill containers slowly to minimize thermal shock to the container.
- Use approved and appropriate means for filling portable cryogen containers.
- Cover dewars when the liquid is not being transferred to prevent build up of oxygen and subsequent explosion.
- Always handle cryogenics in a well-ventilated area.
- Immediately call 911 in the event of an uncontrolled cryogen release that could result in injury or destruction of property.

**Use only containers designed for low-temperature liquids. Do not cover or plug the opening of any dewar or cryogen container.**

Proper PPE must contain at a minimum protective gloves and face shield or goggles with side shields.