

## **Molecular Foundry EH&S Policy & Procedure Document**

### **Cold-Trap and Dewar Use**

#### **Policy**

This policy document provides necessary direction, as well as recommended guidelines for the use of Cold-Traps and Dewars during chemical synthesis. Molecular Foundry personnel are expected to work as safely as possible while using cold-traps and/or dewars for chemical synthesis.

#### **Process**

Inspect equipment for damage prior to use. Be mindful of cracks or chips in the glass/metal as these can lead to catastrophic failure. Inspect the manifold, reaction glassware, and any dewars to be used. Note: chips in the paint coating will not impact safe usage. If damage to the glass/metal is discovered, DO NOT USE the dewar or glassware. Dispose of damaged equipment immediately. Ensure the surrounding space in the fume hood is clear of debris and clutter. Check that all tubing, dewars and glassware (including the solvent trap) are clean and completely dry. Use caution and required personal protective equipment while filling a dewar, as hairline cracks in glass may not be visible to the eye.

If the science permits, consider replacing glass dewars with those of stainless steel construction.

Keep reaction vessels behind lowered fume hood sashes whenever possible. Monitor reactions as necessary to look for equipment damage, loose fittings, etc.

When using solvent traps on Schlenk lines for short amounts of time consider using a dry ice mixture (such as acetone/dry ice or alcohol/dry ice) in place of liquid nitrogen.