Liquid nitrogen - Standard operating procedure

Potential hazards

Liquid nitrogen has a boiling temperature of -196 degrees Celsius. Upon contact it may cause severe cold burns and eye damage. Due to a high expansion factor (~700), vaporization of liquid nitrogen may cause an explosion of a sealed container.

Storage

Liquid nitrogen should be stored in specially designed containers in well ventilated areas.

Handling

Only trained personnel may handle liquid nitrogen.

When handling liquid nitrogen, always wear the following personal protective equipment (PPE):

- a full face shield with safety goggles,
- cryogenic gloves
- lab coat
- long pants
- closed toe shoes

Only liquid nitrogen dewars may be used to transport liquid nitrogen. Use a cylinder cart when appropriate.

Dispensing

1. Place the receiving dewar on the wooden box, under the transfer hose
2. Insert the transfer hose inside the dewar; hold the hose slightly above the bottom of container
3. Slowly open the liquid nitrogen valve to control gas escape
4. Transfer liquid nitrogen; avoid splashing
5. Never leave the filling process unattended
6. When filling is done, slowly push away the wooden box, and remove the dewar
7. Record the amount of liquid nitrogen that you take

Emergency

In case of a large spill or disintegration of a container, call Campus Security at 403-220 5333.

Cold burns should be immediately flushed with warm water.

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