

University of Oxford COSHH Assessment Form

Read the notes on completion before attempting to fill in this form. If insufficient space is available under any section, use a separate piece of paper and attach it to the form.

**File ref: TDI-019-COSHH
Date: 18/04/2013**

Department: Target Discovery Institute, NDM Research Building

Persons involved: NMR staff

Location of work: NMR equipment room (ground floor)

Description of procedure: Liquid nitrogen (LN2) is used for cold storage in cryo freezers but may also be drawn and contained in a dewar for procedures such as snap freezing.

Substances used	Quantities used	Frequency of use	Hazards identified	Exposure route
Liquid Nitrogen	1L upwards	Daily	Asphyxiation Cold Burns Explosions from trapped gas	Inhalation Skin and eye contact

Could a less hazardous substance (or form of the substance) be used instead? No
Justify not using it:

What measures have you taken to control risk?

Engineering controls:

Oxygen sensors are present, when the low oxygen alarm is triggered an audible alarm sounds and flashing light is activated outside the rooms.

Low level extraction is present, providing 20 air changes per hour.

The low oxygen level alarm also activates a solenoid valve to isolate the external bulk tank to prevent further liquid nitrogen from entering the building.

Personal oxygen monitors are also available.

PPE: Face visor, cryo gloves and lab coat. Suitable foot ware MUST be worn, foot ware must cover the whole foot

Management measures:

ONLY trained persons may use liquid nitrogen and ideally when in the LN2 room this should be done in pairs. Only trained personnel may use the dewar fill point and a maximum of 1L is all that may be drawn at any time. Filling of cold shippers must only be done by trained personnel

The TDI has a policy on the safe use of cryogenic liquids, which all new starters should be taken through during their group inductions.

Personal oxygen sensors also available for use.

Checks on control measures:

Service and calibration of oxygen sensor.

Is health surveillance required? No

Training requirements:

All staff to attend University Safety Office cryogenic safety course.
All staff to be taken through the TDI's policy on safe use of cryogenic liquids.

Emergency procedures:

If alarm sounds LEAVE ROOM IMMEDIATELY
DO NOT re-enter the room whilst alarm is sounding
If casualty in room whilst alarm is sounding call emergency services.

Waste disposal: N/A

Name and position of assessor: Andrea Keepence-Keyte, TDI lab manager

Signature:

Name of supervisor (student work only):

Signature:

Name of head of department or nominee:

Signature: