



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: 0009

Date: 01/10/2018

Department:
BioEscalator
Innovation Building

Persons involved: Users – Lab Manager & Lab Technician & Tenants & Licensee's

Location of work:
BioE Level 1

Description of procedure: To fill supply tank with liquid nitrogen on a weekly basis for topping up main cryostorage tank in the freezer room level 1 of BioEscalator.

Substances used	Quantities used	Frequency of use	Hazards identified	Exposure route
liquid Nitrogen (N ₂) (UN Nr 1977) non-flammable non-toxic gas	240 litres	weekly	Refrigerated liquefied gas. Contact with liquid nitrogen may cause cold burns or frostbite. Asphyxiation in high concentration.	Skin, eyes, ingestion, inhalation.

Could a less hazardous substance (or form of the substance) be used instead? No

Justify not using it:

No alternative chemical can be used.

What measures have you taken to control risk?

Engineering controls:

Kept in a well ventilated room. 10 air change per hour (24/7), will low level extraction for spillage.

Access control to the freezer room.

2 low level Oxygen alarm sensors.

PPE:

Protect eyes, face and skin from liquid splashes. Wear lab coat (suitable protective clothing), goggles, full-face visor and cryogenic gloves (BS EN 511) long-length gloves or standard gloves with elasticated cuffs. Open-toed shoes and sandals are not suitable. If boots are worn, trousers should be worn outside the boots, to prevent liquid running into the top of the boot.

Management measures:

Technician /Tenants/Licensees must be given adequate instructions & training on the hazards, precautions, and emergency procedures.

Checks on control measures:

Visual inspection by laboratory manager or lab technician as well as annually service maintenance on the supply tank.



Is health surveillance required? No

Training requirements: Yes

Emergency procedures:

Personal precautions: Evacuate area. Use Protective clothing. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. I.e. check oxygen sensor for level of oxygen in the room.

Environmental precautions: Try to stop release. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

First aid measures:

Inhalation: Remove casualty to fresh air wearing self-contained breathing apparatus. Keep victim warm and rested. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician.

Skin/Eye contact: Rinse immediately with plenty of water for at least 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing. In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistant.

Ingestion: Not considered a potential route of exposure.

Waste disposal:

Surplus Liquid nitrogen should be allowed to evaporate naturally inside a fume cupboard or a well-ventilated area. Liquid nitrogen must not be poured down the sink or drain. Do not discharge into any place where its accumulation could be dangerous.

Name and position of assessor: Khwaja Islam

Signature: