

Risk Assessment Form

(This is an active document and must be maintained)



UNIVERSITY OF
CAMBRIDGE

Materials Science and Metallurgy

Date: 14/09/18

Building: 27 Charles Babbage Road

Supervisor of Room/Area: A. Di Bernardo

Room or area: Basement, Measurement lab DMG -1_015 Name of Assessor(s): J.M. Devine-Stoneman
(Describe location)

Title of Activity / Experiment / Work Area:

Use of cryogen-free 1T magnet system

Description of Activity / Experiment / Work Area:

Electrical measurements using a system containing a 1 Tesla superconducting electromagnet.

SECTION 1: Identify all significant hazards, who or what may be affected by each individual hazard and controls in place to reduce risk to a minimum.

Hazard Description	Hazard to whom or what	Controls in place to reduce risk to a minimum
Magnetic field in excess of 5 Gauss	Those with pacemakers in the vicinity	Pacemaker users should not approach the magnet. The entrance is marked with a warning sign.
Frostbite from cold sample rod	User when removing sample after cooling	
Electric shock from energized high inductance magnet	User, only when servicing magnet or power supply	Gloves provided.
Asphyxiation or other injury from release of high pressure helium gas	User, only when servicing gas bottle or compressor	Magnet must be de-energized before disconnecting from power supply. Ensure that the power supply reads zero, then switch off the supply. Gas circuits have isolating valves and relief valves. Gas bottle is restrained. When the gas bottle is exchanged or moved, it must be capped.

SECTION 2: Emergency Procedures

The system may be safely switched off at the mains. In the event of a power failure, the magnet will warm up and de-energize automatically, requiring no intervention. In the event of a severe leak in any of the gas circuits, the room should be evacuated and re-entry should only be attempted by trained personnel with an oxygen monitor.

Signature of Assessor(s)		Date: 14/09/18
Signature of Supervisor		Date: 14/09/18

SECTION 3: Review - This assessment must be reviewed every 12 months or earlier if the basis of the original assessment is altered.

Review Date	Reviewed by (Signature)

Review Date	Reviewed by (Signature)