RISK ASSESSMENT – HANDLING OF GAS CYLINDERS

Department: Exp Psychol	**Location:** 12a Priory Rd	**Activity:** Research	**Date:** 21st January 2014

Hazard	**Who Might be Harmed?**	**Is the Risk Controlled?**	**Action**
1. Weight and stability of pressurised gas cylinders.	1. Laboratory staff.	1. Yes. Cylinder trolleys will be used for transport, and for storage, and appropriate safe handling techniques adopted.	1. Cylinder trolleys to be used for transport. 2. Secure gas cage is provided for storing cylinders. **CYLINDERS MUST NEVER BE LEFT UNSECURED**. 3. Only users of appropriate physique to handle cylinders. 4. Manual handling training required to handle cylinders. 5. Suitable closed-toe shoes to be used when moving cylinders. 6. New users must attend training prior to using cylinders.
2. High pressure gas contained within gas cylinders.	1. Laboratory staff.	1. Yes. Only medical air and CO2 gas (7.5% and 35%) will be used, and the number of gas cylinders stored in the laboratory kept to a minimum. Empty cylinders will be removed to the gas cage.	1. Only medical air and CO2 gas (7.5% and 35%) to be used. 2. Number of gas cylinders at any site to be kept to a minimum. 3. Empty cylinders will be removed to the gas cage.
3. Escaping gas under high pressure.	2. Laboratory staff.	1. Yes. Pressure Regulator and gas lines will be regularly inspected and tested, and appropriate safe handling	1. Pressure regulators to be tested for function annually. 2. Gas lines to be leak tested before commissioning.

		techniques adopted.	3. Gas lines to be inspected/tested at suitable intervals thereafter. 4. New users must attend training prior to using cylinders.
4. Damage to gas cylinder valves and/or gas pressure regulators.	1. Laboratory staff.	1. Yes. Only trained staff will undertake gas line installation.	1. Gas line installation may be undertaken only by trained staff.

Assessment undertaken by Angela Attwood Review Date: 4th January 2017

Signature

Notes:

This Risk Assessment has been prepared with reference to, and is in compliance with, the University of Bristol Mechanical Safety Code of Practice (http://www.bris.ac.uk/safe/Safety/mech/mech.htm#PRESSURESYSTEMS).

Full details of Standard Operating Procedures / operating precautions are detailed in the Standard Operating Procedures: Medical Air and Carbon Dioxide Inhalations. Below is a summary of key safety points for safe handling.

Cylinders will be checked to ensure that they contain the expected gas by examining the label and the (less reliable) colour code.

The cylinder must be transported on an approved trolley by pushing and not by pulling.

If the trolley shows signs of wear or damage, it must be returned to the Mechanical Workshop for repair/exchange.

The cylinder must be secured firmly in an approved location. **CYLINDERS MUST NEVER BE LEFT FREESTANDING**.

The Pressure Regulator should be checked to ensure it is appropriate for the gas in use and pressure rating.

If the Pressure Regulator shows signs of wear or damage, it must be returned to the Mechanical Workshop for repair/exchange.

Correctly fitting tools/spanners should be used when fitting regulators to avoid damage to the screw fittings.

The Pressure Regulator should be turned to zero before opening the valve at the spindle and, when not in use, the valve closed at the spindle.

Cylinders must **NEVER** be transported with their Pressure Regulators in place.

For small non-toxic leaks, a senior member of the laboratory staff should be informed, and the room ventilated, evacuated, sealed and secured.

If a cylinder falls over, no one should **EVER** attempt to catch it. It is much too heavy and will cause serious injury.

Cylinders are very robust and unlikely to be damaged. Competent help should be called to assist in setting it upright.