Risk Assessment Form

(Refer to Notes for Guidance before completing this form)

School Assessment No:	CDBS-RA-041
Title of Activity:	Handling dry ice (solid Carbon dioxide)
Location(s) of Work:	Hugh Robson Building
Brief Description of Work: This risk assessment covers all aspects of the safe handling and storage of dry ice.	

1. Hazard Identification: *Identify all hazards; evaluate risks (low/medium/high); describe all existing control measures and identify any further measures required. Specific hazards should be assessed on a separate risk assessment form and cross-referenced with this document. Specific assessments are available for hazardous substances, biological agents, display screen equipment, manual handling operations and fieldwork. See http://www.ed.ac.uk/schools-departments/health-safety/risk-assessments-checklists/risk-assessments for details.*

Hazard(s)	**Current Risk Eval.** L/M/H	**Control Measures** (i.e. alternative working methods, mechanical aids, engineering controls, etc.)	**Risk Eval. after control** L/M/H
Risk of ice burns	H	Contact with skin - Dry ice can easily cause ice "burns" (frostbite) if it comes into contact with bare skin for even several seconds. Lab coats, safety specs and thermal protective gloves must always be worn whilst handling dry ice, or opening packages/freezer boxes suspected of containing dry ice. Use of Scoops - Plastic scoops are provided for transferring dry ice from storage containers into freezer boxes, although these must be used in conjunction with protective gloves. Suitable receptacle - It is imperative that dry ice is only transported in suitable receptacles such as **freezer boxes with lids**, which prevent the rapidly sublimating CO2 from escaping into the air and provide a thermal shield (though this is to be done in conjunction with the appropriate personal protective equipment, not as a substitute for it).	L
Risk of asphyxiation	H	Suitable Ventilation - Dry ice rapidly sublimes at room temperature and in -20 freezers to form carbon dioxide gas, an asphyxiant. Therefore, it must only be handled and transported in well-ventilated areas. Storage - Dry ice should not be stored in -80 or -20 freezers, and storage containers of dry ice must not be kept in confined spaces (this includes elevators meaning appropriate receptacles containing dry ice should be transported using stairs with the aforementioned personal protective equipment worn). Dry ice should only be kept in appropriate locations including wet labs where the dry ice is needed, storage vessels, or transport receptacles.	L

		If you feel any symptoms of reduced oxygen levels whilst working with dry ice (light-headedness, dizziness, headaches or nausea) then leave the area immediately and consult your laboratory manager. When preparing packages for samples to be shipped via courier on dry ice, the weight of dry ice contained within must be indicated on the waybill, and a UN1845 warning label must be attached to the outside of the parcel. These are available from stores.	
Explosion from Gas Pressure in Sealed Container	H	Never store dry ice in airtight or sealed containers. Use vented containers specifically designed for dry ice.	L
Eye Injury from Splinters or Gas Discharge	M	Wear safety goggles or face shield during handling. Handle carefully to avoid chipping or rapid gas discharge.	L
Slip Hazard from Condensation or Spillage	M	Clean spills promptly. Use caution signs in areas of frequent use.	L

**Continue on separate sheet if necessary*

2. Engineering Controls: *Tick any relevant boxes.*

Guarding		Air Extraction (LEV)		Interlocks		Enclosure	
Other relevant information (incl. testing frequency if appropriate):							

3. Personal Protective Equipment (PPE): *Identify all necessary PPE.*

Eye / Face	✓	Hand /Arm	✓	Feet / Legs		Respiratory	
Body (clothing)	✓	Hearing		Other (Specify)			
Specify the grade(s) of PPE to be worn: Safety specs, lab coat and gloves.							
Specify when during the activity the item(s) of PPE must be worn: At all times.							

Non-disposable items of PPE must be inspected regularly and records retained for inspection.

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4. Persons at Risk: *Identify those at risk when procedure is carried out.*

Academic staff	✓	Technical staff	✓	PostGrad students	✓	UnderGrad students	✓
Maintenance staff		Office staff		Cleaning staff		Emergency personnel	
Contractors		Visitors		Others	✓		

5. Additional Information: *Identify any additional information relevant to the activity, including supervision, training requirements, special emergency procedures, requirement for health surveillance etc.*

This risk assessment should be read alongside the Safe Systems of Work CIP-SSW-041.

Assessment carried out by:

Name:	Efe Scott-Emuakpor	Date:	08//05/2025
Signature:		Review Date:	08/05/2026

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