

Many thanks to **Steve Bailey** for this contribution.

WORKPLACE RISK ASSESSMENT FORM

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Originator	A. Sessor	Originating Department	Health & Safety	Date of assessment	29/2/02
Approved by	A. Manager	Job Title	H&S Manager	Review date due	Feb 2005

Department/area	Quality Assurance	Operation	Storage within Quality Assurance Area
Location	Block 3	Activity	Storage and handling

Title/extended description

**Storage and handling of chemicals, gases, equipment, reagents and materials within the QA areas.
Does not cover the Retained Sample Stores – this area is covered in RA119**

Since the previous assessment in 1998, the following changes have occurred:

- **A new purpose built “fire proof” solvent store has been installed**
- **The old solvent store has been re-designated a non-flammable reagent store.**

There should be sufficient detail for others to know precisely what was covered. Make particular note of any ancillary jobs (cleaning, maintenance etc.) which are included in the assessment. A separate assessment for some of these may need to be carried out).

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Number and types of employees involved			Have you considered:
Job Tupe	No. Involved	Gender (M/F)	
Scientist	60+	M+F	<ul style="list-style-type: none"> ● Known history <ul style="list-style-type: none"> ○ Accidents ○ Dangerous occurrences ○ Breakdown history ○ Inspection/hazard spotting ○ Audits ○ Machine safety checks

<p>Additional Information (drawing, operating procedure, process information etc)</p> <p>Areas investigated in this Risk Assessment are:</p> <ul style="list-style-type: none"> ● Dry Reagent Store ● Stationery cupboard ● Fridges and freezers ● General store (above Microbiology) ● Solvent store ● Gas cylinder cages ● Solvents (laboratory store cupboards) ● Dry reagent (dry chemicals/media/cupboards/benches/fume cupboards) 	<ul style="list-style-type: none"> ● Other risk assessments related to this activity ● The “out-of-hours” situation ● Other people who may be affected/work in the area ● Whether existing controls are used/work/are in place
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Examples	Description of Hazards/risks	Existing Controls Are controls working/in place?	Likelihood	Severity	Risk
<p>Observe the operation and ask questions about it, using the prompt list to help you identify hazards. Cross off any hazards that are not present to show that they have been considered and not overlooked. Where a hazard exists, write in the appropriate column a brief description of the nature of the hazard; any control measures which are already in place to reduce the risk; any factors that increase the risk including any apparent deficiencies in the controls; assign a magnitude appropriate to the risk, ie. Low, Medium, High.</p>					

<p><i>Gravity Hazards</i></p> <ul style="list-style-type: none"> ● Fall from a height (ladders, scaffolding, roof, platform) ● Fall into a hole ● Fall from a level (tripping, slipping) ● Dropping of materials/objects ● Overturning of machine/object <p><i>Machinery/Tool Hazards</i></p> <ul style="list-style-type: none"> ● Moving parts (entanglement, impact, ejection, crushing) ● Sharp edges ● Breakage/shock loading ● Environmental releases (sparks, chips, dust, fume) ● Inadequate guarding, safety devices ● Vibration <p><i>Ergonomic Hazards</i></p> <ul style="list-style-type: none"> ● Lifting, carrying, lowering, pulling, pushing, supporting ● Load/task/environment/ individual ● Repetitive movement/posture ● Ways of working 	<p>Fall on General Store stairs</p> <ul style="list-style-type: none"> ● Carrying loads/accessibility ● Carrying loads/storing below waist height ● Carrying loads when traffic is around 	<p>Hand rails on stairs Anti slip paint on steps Winchester carriers Spill kits Training</p>	L	M	L	
		<p>Back injury from solvent drums (25 litres) – large volumes required frequently Back injury from changing gas cylinders</p>	<p>Fork lift truck available Trolleys available</p>	M	H	M
			<p>Trolley and chain training</p>	M	H	M

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<p><i>Fire/explosion/hazard</i></p> <ul style="list-style-type: none"> ● Flammable/combustible material ● Gases and vapours ● Chemical reactions ● Smoking ● Access/egress ● Extinguishers ● Dust explosion ● Static electricity <p><i>Electrical Hazards</i></p> <ul style="list-style-type: none"> ● High voltages ● Defective plugs or wires ● Exposed conductors ● Overloaded sockets ● Incorrectly rated equipment (eg not waterproof) <p><i>Hazardous chemicals</i></p> <ul style="list-style-type: none"> ● Skin contact ● Inhalation ● Ingestion ● Oxygen deficiency/toxic gases ● Spillage 	<p>Spillages and fumes from organic solvents, reagents, acids and bases</p> <ul style="list-style-type: none"> ● Some low flashpoints ● Possible exothermic reactions between incompatible materials <p>Skin contact or overcome with fumes from dropping/spilling solvents/reagents during carrying and transporting Decomposition on storage</p>	<p>Stored in purpose made facility Segregated according to type/reactivity Metal storage cupboards in lab areas Fire extinguishers Spill kits Training given</p> <p>Winchester carriers Trolleys PPE</p>	<p>M</p> <p>L</p>	<p>M</p> <p>M</p>	<p>M</p> <p>M</p>
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<p><i>Confined Spaces</i></p> <ul style="list-style-type: none"> ● Asphyxiation ● Explosion ● Restricted access/egress <p><i>Biological Hazards</i></p> <ul style="list-style-type: none"> ● Pathological Organisms (incl. Legionella) ● Biological fluids ● Animals – bites, kicks, stings <p><i>Pressure Hazards</i></p> <ul style="list-style-type: none"> ● Pressurised plant ● Compressed air/gas/liquids ● Vacuum plant <p><i>Radiation Hazards</i></p> <ul style="list-style-type: none"> ● Microwaves/radio frequency ● UV/IR ● Laser ● X-rays/other ionising radiation ● Welding arc <p><i>Vehicle Hazards</i></p> <ul style="list-style-type: none"> ● Traffic ● Mobile plant (overhead cranes, fork lifts) 	<p>Infection from spillages and aerosols from stored micro-organisms and enriched fluids/media in the Micro lab.</p>	<p>Organisms ordered only when required - small volumes stored</p> <p>Samples stored in ampoules in sealed containers in freezer</p>	L	M	M
	<p>Explosion if compressed gases dropped during handling</p>	<p>Autoclaved after use</p> <p>Working surfaces disinfected daily</p>	L	M/ H	L
	<p>Injury from delivery vehicles/ forklift trucks</p>	<p>Biohazard signs.</p> <p>Washing facilities</p> <p>Lack of training</p>	L	M/H	L
	<p>Stored externally in metal cages</p> <p>Gas cylinder handling training</p> <p>Speed Limits.</p> <p>Warning signs.</p> <p>Sleeping policemen.</p> <p>Site policy.</p>				

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<p><i>Burns and Scalds Hazards</i></p> <ul style="list-style-type: none"> ● Hot surfaces/flames ● Hot liquids <p><i>Drowning Hazards</i></p> <ul style="list-style-type: none"> ● Deep liquids/vessels/sumps <p><i>People hazards</i></p> <ul style="list-style-type: none"> ● Violence/behaviour ● Young persons ● Expectant mothers <p><i>Environmental Hazards</i></p> <ul style="list-style-type: none"> ● Heat or cold ● Extreme weather (wind, fog, rain, wet, ice, lightning) ● Noise ● Vibration ● Lighting levels/glare/contrast <p><i>Power outage & start-up</i></p> <ul style="list-style-type: none"> ● Fume cupboards ● LEV ● Solvent transfer <p><i>Any Other Hazards?</i></p>	<p>Slip on external steps of general store – especially if icy</p> <p>Loss of fume cupboards and lighting</p>	<p>Handgrips Gritting Anti-slip paint Signs in use</p> <p>Storage in fume cupboards is minimal Back up generator installed</p>	<p>L</p> <p>L</p>	<p>L</p> <p>L</p>	<p>L</p> <p>L</p>

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Assessor Recommendation	Priority L. M. H	Agreed Actions	Action Plan Ref.	
<p>Review the risks identified, using the risk magnitude already assigned as a guide. Only those risks which need to be actioned need be entered below. The descriptions can be brief as the risk has already been described in the previous section.</p>				
1.	Ensure all Winchesters purchased are of "Safe-break type"	M	To be specified in Purchasing Policy	HS354
2.	Regular stocktake of reagents store to remove out-of-date materials	L	To be conducted during Christmas shut-down	HS361

3.	Review Biosafety training	M	Biosafety Training included in annual training plan	HS374
4.				
5.				
6.				
7.				
8.				

Disclaimer: This example is only intended to be illustrative of the technique; the conclusions and recommendations should not be taken as a basis for actions in any specific situation.

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