

**Science (Chemicals) – Risk Assessment Template No. 50 (List additional hazards, risks and controls particular to your school using Template No.74)**

Hazards	Is the hazard present? Y/N	What is the risk?	Risk rating H = High M = Medium L = Low	Control measures	Is this control in place? Y/N	If no, what actions are required to implement the control?	Person responsible	Date action completed
Access to the laboratory		Uncontrolled exposure to hazardous properties of laboratory chemicals	H	Access to the laboratory is well controlled, e.g. locked when not in use  Unauthorised access is prohibited				
Limited or poor information on hazardous chemicals in use		Inadvertent exposure to teachers/ students environment due to unknown hazardous laboratory chemicals	M	Safety Data Sheets (SDS) are readily available for all hazardous chemicals  An up-to-date chemical inventory is readily available				
Limited or poor information on labels		Inadvertent/ incorrect use of chemicals	M	All hazardous chemicals are labelled correctly in line with the Classification, Labelling and Packaging (CLP) Regulation  (Are labels understood, intact and legible?)  Information on the hazard label corresponds to information on the SDS				
			H	Containers with non-hazardous chemicals, e.g. water, are clearly labelled to avoid confusion				
Use of hazardous chemicals		Exposure to toxic or very hazardous chemicals	H	Elimination/substitution considered, e.g. toxic/ carcinogenic chemicals				
Poor storage arrangements for laboratory chemicals		Uncontrolled access and exposure to hazardous laboratory chemicals	H	Chemicals are stored in separate and well ventilated room – access is controlled				

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Incorrect storage of chemicals		Chemical reaction or exposure to chemicals	H	Chemicals are stored in accordance with the SDS requirements  Chemicals are not stored on benches or within fume cabinets				
Chemical spills or reactions of chemicals in storage		Chemicals being inadvertently knocked off shelves  Chemical(s) with specific storage requirements not being adhered to resulting in an incident		Established conventions used, e.g. incompatible chemicals are segregated and stored in compatible hazard classes; Chemicals stored below eye level; Secondary containment is provided for liquid chemicals, anti-roll lips on shelves etc.				
Flammable Chemicals		Fire		Fire, smoke and heat detectors fitted in store rooms - appropriate fire extinguishers available  Quantities are kept to a minimum especially flammable liquids  SDSs are readily available in the event of an emergency				
Out of date chemicals in use		Chemicals being used outside the manufacturer's specifications	M	Checks are undertaken at regular intervals, for the purposes of disposal of out-of-date chemicals  Chemicals are disposed of in accordance with the SDS and the Local Authority				
Broken glassware		Lacerations/ burns/ chemical exposure	H	All glassware and storage vessels are periodically examined for star cracks  Correct disposal procedures are in place for glass waste				

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Incorrect disposal of chemicals		Lacerations/ needle stick injuries and environmental contamination	H	Chemicals are disposed of in accordance with the SDS and the Local Authority. Tick where appropriate  Specific storage containers provided for chemical waste  Recyclable solvents  Designated Sharps Disposal Unit				
Inadequate administrative controls		Uncontrolled exposure to hazardous laboratory chemicals to students	H	General laboratory rules are understood and followed by students  Particular risks identified for an experiment to be communicated to students  Relevant sections of the SDS is conveyed to students  Bench tops are clean, organised and environs maintained to eliminate harmful exposures to unsafe conditions  <b>See Cleaning (Hazardous Chemicals and Biological Agents) - Template No. 7</b>				
Lack of knowledge of risks in relation to laboratory experiments		Personal injury to persons working in the laboratory	H					
		Incorrect use of chemicals leading to chemical exposure	H					
Cluttered bench tops and unclean laboratory environment		Contact with chemicals	H					
Poor personal protective equipment (PPE) controls/ lack of PPE		Contamination by chemicals	H	Appropriate PPE is available, e.g. face shields, goggles, lab coats, appropriate hand protection, etc.  Students are instructed by teacher before using any equipment				

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Inadequate maintenance of fume cupboard		Exposure to chemicals/ fumes	H	Fume cupboard fit for purpose and use supervised				
				Fume cupboard inspected regularly, tested and maintained with test label affixed - records stored appropriately and easily retrievable				
				Regular checks are made to ensure the average face velocity on these units is adequate (0.5 m/s or higher)				
Poor engineering controls		Uncontrolled exposure to hazardous properties of laboratory chemicals	H	SDS consulted for correct engineering controls				
Poor hygiene controls		Inadvertent exposure of teachers/ students to hazardous laboratory chemicals	H	General laboratory rules are understood and followed by students, e.g. no eating, drinking, or tasting anything in the laboratory. No food permitted to be brought into the laboratory				
Chemical Ingestion		Chemical ingestion resulting in illness or chemical poisoning	H	Safety bulbs must be used when pipetting to avoid inadvertent ingestion				
Ingestion/ absorption of chemicals		Illness or chemical poisoning	H	Adequate handwash facilities and eye wash station available, unobstructed and maintained				

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Lack of other essential safety items in laboratory		Reduced ability to manage emergencies, incidents/spillages	H	Safety items to be available in the laboratory, e.g. <ul style="list-style-type: none"> <li>• Safety screen</li> <li>• Fire extinguishers (CO2/Dry powder)</li> <li>• Fire blankets</li> <li>• Fire buckets with sand</li> <li>• Chemical spill clean-up kit -absorbing agent</li> <li>• First aid kit</li> <li>• Warning notices</li> <li>• Contact notice for emergency services, National Poisons Centre etc.</li> </ul>				

If there is one or more **High Risk (H)** actions needed, then the risk of injury could be high and immediate action should be taken.  
**Medium Risk (M)** actions should be dealt with as soon as possible. **Low Risk (L)** actions should be dealt with as soon as practicable.

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**Risk Assessment carried out by:** \_\_\_\_\_

**Date:**    /    /