

Science Lab Chemical Handling | SAFE WORK METHOD STATEMENT (SWMS)

TASK OR ACTIVITY: Science Lab Chemical Handling

| | | |
|-------------------|--------|--------|
| Business Name: | ABN: | SWMS# |
| Business Address: | | |
| Contact Person: | Phone: | Email: |

THIS SAFE WORK METHOD STATEMENT IS APPROVED BY THE PCBU OF THE PROJECT

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a safe work method statement (SWMS) is prepared before the proposed work starts.

| | | |
|---|--------|--------|
| Full Name: | | |
| Signature: | Title: | Date: |
| Details of the person(s) responsible for ensuring implementation, monitoring compliance of the SWMS as well as reviews and modifications of the SWMS. | | |
| Full Name: | Title: | Phone: |

ALL PERSONNEL PARTICIPATING IN ANY ACTIVITY ON THIS SWMS MUST HAVE THE FOLLOWING COMMUNICATED

Safety meetings or toolbox talks will be scheduled in accordance with legislative requirements to first identify any site hazards, then to communicate those hazards and then to further take steps to either eliminate or control each hazard.

If an incident or a near miss occurs, all work must stop immediately. Depending on the severity of the incident, a meeting will be called with all workers to amend the SWMS if required. The meeting may also be an educational opportunity.

Any changes made to the SWMS after an incident or a near miss must be approved by the Person Conducting Business or Undertaking and communicated to all relevant personnel.

The SWMS must be kept and be available for inspection at least until the work is completed. Where a SWMS is revised, all versions should be kept. If a notifiable incident occurs in relation to which the SWMS relates, then the SWMS must be kept for at least two years from the occurrence of the notifiable incident.

NAME OF ALL RELEVANT PERSONNEL WHO HAVE BEEN CONSULTED AND COMMUNICATED TO IN THE DEVELOPMENT AND APPROVAL OF THIS SWMS

CLIENT OR PRINCIPAL CONTRACTOR DETAILS

| | |
|--|----------------|
| Client: | SCOPE OF WORKS |
| Project Name: | |
| Project Address: | |
| Project Manager: | |
| Contact Phone: | |
| Date SWMS supplied to Project Manager: | |

ANY HIGH-RISK CONSTRUCTION WORK BEING CARRIED OUT

- | | |
|--|--|
| <input type="checkbox"/> involves a risk of a person falling more than 2 meters | <input type="checkbox"/> is carried out on or near pressurised gas mains or piping |
| <input type="checkbox"/> is carried out on a telecommunication tower | <input type="checkbox"/> is carried out on or near chemical, fuel or refrigerant lines |
| <input type="checkbox"/> involves demolition of an element of a structure that is load-bearing | <input type="checkbox"/> is carried out on or near energised electrical installations or services |
| <input type="checkbox"/> involves demolition of an element related to the physical integrity of a structure | <input type="checkbox"/> is carried out in an area that may have a contaminated or flammable atmosphere |
| <input type="checkbox"/> involves, or is likely to involve, disturbing asbestos | <input type="checkbox"/> involves tilt-up or precast concrete |
| <input type="checkbox"/> involves structural alteration or repair that requires temporary support to prevent collapse | <input type="checkbox"/> is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor |
| <input type="checkbox"/> is carried out in or near a confined space | <input type="checkbox"/> is carried out in an area of a workplace where there is any movement of powered mobile plant |
| <input type="checkbox"/> is carried out in/near a shaft or trench deeper than 2m or tunnel involving use of explosives | <input type="checkbox"/> is carried out in areas with artificial extremes of temperature. |
| <input type="checkbox"/> is carried out in or near water or other liquid that involves a risk of drowning. | <input type="checkbox"/> involves diving work. |

ANY HIGH-RISK MACHINERY OR EQUIPMENT NEARBY

| RISK MATRIX | | | | | | | | | |
|----------------|---------------|---------------|---------------|------------|--------------|----------------|-----------------------------------|--|--|
| LIKELIHOOD | INSIGNIFICANT | MINOR | MODERATE | MAJOR | CATASTROPHIC | SCORE | ACTION | HEIRARCHY OF CONTROLS | |
| ALMOST CERTAIN | 3 HIGH | 3 HIGH | 4 ACUTE | 4 ACUTE | 4 ACUTE | | |  <p>Elimination Remove the hazard.</p> <p>Substitution Replace the hazard.</p> <p>Isolation Isolate People from the hazard</p> <p>Engineering Isolate the hazard.</p> <p>Administrative Change the work.</p> <p>PPE</p> | |
| LIKELY | 2 MODERATE | 3 HIGH | 3 HIGH | 4 ACUTE | 4 ACUTE | 4A ACUTE | DO NOT PROCEED | | |
| POSSIBLE | 1 LOW | 2 MODERATE | 3 HIGH | 4 ACUTE | 4 ACUTE | 3H HIGH | Review before work starts. | | |
| UNLIKELY | 1 LOW | 1 LOW | 2 MODERATE | 3 HIGH | 4 ACUTE | 2M MODERATE | Ensure control measures in place. | | |
| RARE | 1 LOW | 1 LOW | 2 MODERATE | 3 HIGH | 3 HIGH | 1L LOW | Monitor and keep records | | |

Notes on Hierarchy of Controls: Elimination methods are the most effective and preferred when controlling a hazard. Substitution is the second most effective method of controlling a hazard. Engineering by isolation is the third most effective, while Administrative Controls by changing the work is the fourth most effective method. PPE (Personal Protective Equipment) is the least effective method.

| PERSONAL PROTECTIVE EQUIPMENT (PPE) | | | | | | | | | | | |
|---|--|--|--|--|---|--|--|--|--|--|--|
| Select the appropriate PPE above suitable for the equipment used or the job task being performed (if applicable). | | | | | | | | | | | |
| FOOT PROTECTION | HAND PROTECTION | HEAD PROTECTION | HEARING PROTECTION | EYE PROTECTION | RESPIRATORY PROTECTION | FACE PROTECTION | HIGH-VIS CLOTHING | PROTECTIVE CLOTHING | FALL PROTECTION | SUN PROTECTION | HAIR/JEWELLERY SECURED |
|  |  |  |  |  |  |  |  |  |  |  |  |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other PPE Required: | | | | | | | | | | | |
| Permit or Licenses Requirements | | | | | | Mandatory Qualifications and Training | | | | | |
| | | | | | | | | | | | |

| JOB STEP | POTENTIAL HAZARDS | IR | CONTROL MEASURES | RR |
|----------------------------|---|--------------|--|---------------|
| SPECIFIC WORK STEPS | HAZARDS THAT MAY ARISE | INITIAL RISK | SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS | RESIDUAL RISK |
| 1. Preparation | Chemical spill, Incorrect handling of chemicals | 3H | <ul style="list-style-type: none"> - Conduct thorough chemical risk assessment before any handling begins to identify potential hazards and appropriate control measures. - Ensure all personnel involved in chemical handling are properly trained on safe practices, including the use of personal protective equipment (PPE). - Implement standard operating procedures (SOPs) for the correct handling, storage, and disposal of chemicals. - Provide appropriate PPE, such as gloves, goggles, and lab coats, and ensure they are worn at all times when handling chemicals. - Install and maintain safety showers and eyewash stations within easy reach of areas where chemicals are handled. - Ensure that safety data sheets (SDSs) for all chemicals are readily available and understood by all personnel handling these substances. - Use spill containment kits specifically designed for the types of chemicals being handled, and ensure staff are trained in their use. - Label all chemical containers clearly with correct identification, hazard symbols, and information about handling precautions. - Limit the amount of chemicals stored and used within workspaces to minimise the risk of spillage or accidents. - Maintain good housekeeping practices, ensuring work surfaces are clear of unnecessary items and regularly cleaned to prevent contamination. - Establish an emergency response plan tailored to chemical spills and exposure incidents, and conduct regular drills to ensure preparedness. | 2M |
| 2. Chemical Identification | Incorrect labelling, Misidentification of chemicals | 3H | <ul style="list-style-type: none"> - Conduct regular training sessions for all staff on proper labelling standards and chemical identification procedures. - Implement a clear, standardised labelling system that includes chemical name, concentration, and hazard symbols. - Display Material Safety Data Sheets (MSDS) prominently for easy access to information about chemicals. - Carry out routine audits of chemical labels and storage areas to ensure up-to-date and correct labelling. - Use barcode or QR code systems linked to a digital database for accurate chemical tracking and identification. - Colour-code chemical containers according to hazard classifications to assist in quick visual identification. | 2M |

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| | | | <ul style="list-style-type: none"> - Ensure all temporary containers are labelled immediately with the contents and potential hazards before use. - Assign a designated person responsible for overseeing chemical inventory and proper labelling compliance. - Develop a detailed chemical handling protocol document that all laboratory personnel must review and understand. - Implement a double-check system for labelling where at least two qualified staff members verify chemical identification before it is shelved. - Provide clearly visible laminated posters throughout the lab detailing common chemical hazard signs and their meanings. - Regularly update and maintain an electronic inventory list that correlates with physical labels to prevent data discrepancies. - Encourage open communication and immediate reporting of any labelling issues or chemical misidentifications to prevent incidents. | |
| 3. Lab Setup | Miscalibration of equipment, Improper setup causing accidents | 3H | <ul style="list-style-type: none"> - Conduct thorough training for staff on the correct calibration procedures and potential risks associated with handling equipment. - Implement a checklist system to verify that equipment calibration is completed according to manufacturer specifications before use. - Clearly label all equipment with their last calibration date and the due date for the next calibration. - Use only certified and regularly maintained calibration tools to ensure accuracy. - Set up workstations with adequate space, ensuring there are no tripping hazards or clutter that could interfere with equipment operation. - Establish a double-check system where another trained staff member verifies the setup before any experiments commence. - Ensure proper ergonomic arrangements to prevent strain injuries when interacting with equipment during setup. - Maintain a well-ventilated environment to minimise exposure to chemical fumes that may affect the calibration process's accuracy and individuals' health. - Display clear and visible emergency protocols in case of equipment failure or accidents, including shutdown procedures and contact information for safety officers. - Regularly review and update lab setup protocols based on new research findings or after incidents, to continually improve safety and efficiency. | 1L |
| 4. Handling of Chemicals | Skin or eye exposure, Inhalation of vapours | 4A | <div></div> <div></div> | 2M |

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| | | | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> | |
| 6. Test Running | Improper handling or usage of lab equipment, gas leaks | 3H | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> | 1L |

| | | |
|---|-----------|-------------------|
| | | <p>[REDACTED]</p> |
| <p>ingous fumes, chemical reactions</p> | <p>3H</p> | <p>[REDACTED]</p> |
| | | <p>[REDACTED]</p> |
| | | <p>[REDACTED]</p> |
| | | <p>[REDACTED]</p> |
| | | <p>[REDACTED]</p> |

| JOB STEP | POTENTIAL HAZARDS | IR | CONTROL MEASURES | RR |
|---------------------|---|--------------|---|---------------|
| SPECIFIC WORK STEPS | HAZARDS THAT MAY ARISE | INITIAL RISK | SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS | RESIDUAL RISK |
| | | | <div>SAMPLE</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> | |
| 9. Cleanup Process | Chemical spills, Incomplete removal of hazardous materials, lingering fumes | 3H | <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div> | 2M |

| JOB STEP | POTENTIAL HAZARDS | IR | CONTROL MEASURES | RR |
|-----------------------------|--|--------------|--|---------------|
| SPECIFIC WORK STEPS | HAZARDS THAT MAY ARISE | INITIAL RISK | SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS | RESIDUAL RISK |
| 11. Equipment Sterilisation | Biological hazards, improper sterilisation leading to cross-contamination | 3H | [REDACTED] | 1L |
| 12. Handwashing | Insufficient cleaning methodology, cross-contamination, biological hazards | 2M | [REDACTED] | 1L |

| JOB STEP | POTENTIAL HAZARDS | IR | CONTROL MEASURES | RR |
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| | | | | |
| 13. Documentation | Miscommunication or misunderstanding of recorded information | 1M | | 1L |
| 14. Inventory Check | Inaccurate stock tracking, mishandling of chemicals | 2M | | 1L |

[illegible]

ing of emergency
ayed response time

3H

SAMPLE

| JOB STEP | POTENTIAL HAZARDS | IR | CONTROL MEASURES | RR |
|-----------------------|--|--------------|--|---------------|
| SPECIFIC WORK STEPS | HAZARDS THAT MAY ARISE | INITIAL RISK | SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS | RESIDUAL RISK |
| | | | <div>SAMPLE</div> <div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div> | |
| 19. Employee Training | Inadequate knowledge about chemicals and their reactions, mishandling of chemicals | 4A | <div>SAMPLE</div> <div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div> | 1L |

Reporting system,
w- on identified issues 2M

SAMPLE

EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

LEGISLATIVE REFERENCES

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES IF ANY STATE THAT ARE NOT APPLICABLE

Queensland & Australian Capital Territory

Work Health and Safety Act 2011

Work Health and Safety Regulations 2011

Legislation QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws>

Codes of Practice QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>

Legislation ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations>

Codes of Practice ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice>

Victoria

Occupational Health and Safety Act 2004

Occupational Health and Safety Regulations 2017

Legislation VIC: <https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations>

Codes of Practice VIC: <https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice>

New South Wales

Work Health and Safety Act 2011

Work Health and Safety Regulations 2017

Legislation NSW: <https://www.safework.nsw.gov.au/legal-obligations/legislation>

Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-codes-of-practice>

Western Australia

Work Health and Safety Act 2020

Work Health and Safety Regulations 2022

Legislation Western Australia: <https://www.commerce.wa.gov.au/worksafe/legislation>

Codes of Practice WA: <https://www.commerce.wa.gov.au/worksafe/codes-practice>

Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011

Work Health and Safety (National Uniform Legislation) Regulations 2011

Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>

Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/codes-of-practice>

Safe Work Australia Links

Law and Regulation (All States): <https://www.safeworkaustralia.gov.au/law-and-regulation>

Model Codes of Practice: <https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice>

Model Codes of Practice

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work

South Australia

Work Health and Safety Act 2012 (SA)

Work Health and Safety Regulations 2012 (SA)

Legislation for SA: <https://www.safework.sa.gov.au/resources/legislation>

Codes of Practice for SA: <https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs>

Tasmania

Work Health and Safety Act 2012

Work Health and Safety (Transitional and Consequential Provisions) Act 2012

Work Health and Safety Regulations 2012

Work Health and Safety (Transitional) Regulations 2012

Legislation for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations>

Codes of Practice for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice>

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.

SIGNATORIES OF THE SAFE WORK METHOD STATEMENT

The signed and dated personnel listed below have cooperated in the consultation and development of this Safe Work Method Statement which has been approved by the Person/s Conducting a Business or Undertaking (PCBU). In signing this Safe Work Method Statement each individual acknowledges and confirms that they have read this SWMS in full, having raised any questions for items on this Safe Work Method Statement that require clarification, and confirms that they are competent, skilled and knowledgeable for the task assigned to them. Every person acknowledges that they have received the relevant training and qualifications where required, before carrying out any work contained in this Safe Work Method Statement. By signing this Safe Work Method Statement each individual agrees to work safely, to follow any safe work instructions which are provided, and agrees to use all Personal Protective Equipment where appropriate.

| Worker Name | Signature | Date |
|-------------|-----------|------|
| | | |
| | | |
| | | |
| | | |
| | | |

SAFE WORK METHOD STATEMENT MONITORING AND REVIEW

The SWMS must be reviewed regularly to make sure it remains effective and must be reviewed (and revised if necessary) if relevant control measures are revised. The review must be carried out in consultation with workers (including contractors and sub-contractors) who may be affected by the operation of the SWMS and their health and safety representatives who represent that work group at the workplace.

When the SWMS has been revised the PCBU must ensure that all persons involved with the work are advised that a revision has been made and how they can access the revised SWMS, including all persons who will need to change a work procedure or system as a result of the review are advised of the changes in a way that will enable them to implement their duties consistently with the revised SWMS. All workers that will be involved in the work must be provided with the relevant information and instruction that will assist them to understand and implement the revised SWMS.

The SWMS must be monitored regularly for the effectiveness of ensuring hazard controls are effective in reducing the risk of incidents, keeping the workplace safe for all personnel. The person responsible for monitoring the effectiveness of the Safe Work Method Statement should employ a multi-faceted approach which includes but is not limited to:

1. Spot Checks.
2. Consultation with workers, contractors and sub-contractors.
3. Internal audits on a continual basis.

An approach of continuous improvement, promptly recording inconsistencies or deficiencies, followed up by immediate corrective action and consultation with all relevant personnel ensures that the PCBU is consistently developing ever-improving systems of safe work principles.

| REVIEW NUMBER | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------|---|---|---|---|---|---|---|
| NAME | | | | | | | |
| INITIALS | | | | | | | |
| DATE | | | | | | | |

SAFE WORK METHOD STATEMENT REVIEW CHECKLIST

This Safe Work Method Statement Review Checklist is to be followed and used upon initial development of the SWMS to help ensure that all steps have been adequately taken before work commences. Think of this document as an internal audit review checklist before commencing work, and may form part of a Toolbox Talk (safety meeting) and may be used as an opportunity for education and training.

| ITEMS WHICH MUST BE INCLUDED IN THE SWMS | COMPLETED | COMMENTS |
|--|-------------------------------------|----------------|
| The company details have been entered, including the project name and address. | <input checked="" type="checkbox"/> | |
| All relevant personnel consulted during the development of the SWMS. | <input checked="" type="checkbox"/> | |
| Name, signature, position and date signed of the person approving the SWMS. | <input type="checkbox"/> | |
| Specific personnel and qualifications, experience is noted in the SWMS. | <input checked="" type="checkbox"/> | |
| Provides a step-by-step process of tasks required to carry out the activity or task. | <input checked="" type="checkbox"/> | |
| Adequate risk assessment of any identified hazards has been completed. | <input checked="" type="checkbox"/> | |
| Foreseeable hazards are identified and documented for each step. | <input checked="" type="checkbox"/> | |
| Any hazards listed in any site risk assessments have been added to the SWMS. | <input checked="" type="checkbox"/> | |
| SWMS initial risk (IR) column as well as residual risk (RR) column completed. | <input checked="" type="checkbox"/> | |
| Check control measures added to the SWMS are the most effective selected. | <input checked="" type="checkbox"/> | |
| Responsible person is assigned and listed on the SWMS for the implementation of control measures. | <input checked="" type="checkbox"/> | |
| Permit or licenses requirements specified, such as Hot Work, Electrical Work, Work at Heights etc. | <input checked="" type="checkbox"/> | |
| SWMS identifies plant and equipment to be used. | <input checked="" type="checkbox"/> | |
| Details of inspection checks required for any equipment listed as noted on the SWMS. | <input checked="" type="checkbox"/> | |
| Describes any mandatory qualifications, experience, training or skills required to perform the work. | <input checked="" type="checkbox"/> | |
| Applicable personal protective equipment is selected on the SWMS. | <input checked="" type="checkbox"/> | |
| Reflects and documents any legislative references and/or Australian Standards. | <input checked="" type="checkbox"/> | |
| Identifies any hazardous substances used with specific control measures in line with any SDS. | <input checked="" type="checkbox"/> | |
| | | |
| REVIEWED BY | | DATE REVIEWED |
| SIGNATURE | | DATE COMPLETED |