

University of Wisconsin-Madison Laboratory Chemical Hygiene Plan

For

Center for Limnology – Trout Lake Station

Certification and Annual Review and Updates

By signing and dating here, the Laboratory Chemical Hygiene Officer and Principal Investigator certify that this Laboratory-Specific Chemical Hygiene Documentation is accurate and that it effectively provides for the chemical safety of employees and students in this laboratory.

Principal Investigator (Station Director):

Gretchen Gerrish

Signature

Printed Name

Date

Laboratory Chemical Hygiene Officer (if other than PI):

Carol Warden

Signature

Printed Name

Date

By signing and dating here, the Laboratory Chemical Hygiene Officer certifies that the required annual review (and update, if needed) of the Laboratory-Specific Chemical Hygiene Documentation has been completed, and that this document continues to be accurate and to effectively provide for the chemical safety of employees in this laboratory.

Reviewed by: Review Date:

Reviewed by: Review Date:

Reviewed by: Review Date:

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Section 1: Personnel

1.1 Safety Personnel

List the names of key safety personnel. In addition to indicating the individual in charge of the laboratory (i.e. the P.I. or lab manager) and the Laboratory Chemical Hygiene Officer the names of key staff such as building manager or other important individuals should be included.

Name	Position	Phone
Gretchen Gerrish	Station Director	608-890-4763
Michael Coakley	Building Maintenance	608-890-4704
Carol Warden	Chemical Safety Officer	608-890-4721
Jonathan Lytle	Research Maintenance	608-890-4967
Vilas County	Police, Fire, Ambulance	911

1.2 Laboratory Staff/Students

List all individuals who work with hazardous chemicals in the labs and are therefore subject to this plan.

Name	Name	Name
Carol Warden	Paul Schramm	Noah Lottig
Jeff Rubsam	Gretchen Gerrish	Carl Watras

Section 2: Laboratory Room Locations

List all rooms in which use of hazardous chemicals *may* occur:

Building	Rooms	Room Assigned to the PI (Y/N)	Shared Facility (Y/N)
Trout Lake Station	109, 114, 115, 116,117, 118, 123, 125, 126, 127, 203, 206, 208, 214	N	Y

Section 3: Laboratory-Specific Policies

Include below all laboratory-specific policies instituted by the Principal Investigator (e.g., lab coats must be worn in the lab at all time, no working alone, etc.). This space provides the opportunity to place in one location and document the lab's safety policies related to the use of hazardous chemicals.

All accidents resulting in injury or possible exposure to chemicals must be reported to the individual's supervisor and the Station Director.

Personal protective equipment (goggles, gloves, lab coat, apron etc.) compatible with the degree of protection for the substances handled shall be used. All work with volatile compounds or any procedure that might produce toxic vapors must be done in a fume hood.

Whenever a procedure allows a choice of chemicals, the least hazardous chemical should be used.

Eating and drinking are not allowed in chemical laboratory areas.

Flammable chemicals should be stored in the yellow flammables cabinet in Room 126. Acids should be stored in the cabinet under the hood in Chem Lab 208 or in Room 126.

Equipment that must be left running unattended must be clearly marked with a name of the person responsible, and a phone number where that person can be reached. Adequate safety precautions must have been taken to deal with any complications from events such as power failure, loss of gas/air pressure etc.

Section 4: Laboratory SOPs – Procedure Form

Title: WEIGH SODIUM AZIDE FOR LTER SED. TRAPS **Rev. Date:** May 2023

Prepared By: CAROL WARDEN **P.I.:** NOAH LOTTIG

Prior Approval: This procedure is considered hazardous enough that prior approval is needed from the Principal Investigator: Y N

Involves Use of Particularly Hazardous Substance (PHS)? Y N

Carcinogen Reproductive Toxin High Acute Toxicity

Does this procedure require medical surveillance? Y N

Does this require use of a fit-tested respirator? Y N

Brief Description of Procedure (100 words or less):

Weigh 0.2 g of Sodium Azide, and place in 4 ml vial.

Location: List the locations (buildings/rooms) where this procedure may be performed. For use of a PHS indicate a more precise location within the room, if appropriate, as the designated area.

Chemistry Lab Room 208

Chemicals Involved:

Chemical	Physical or Health Hazard (e.g., carcinogen, corrosive)
Sodium Azide	Serious, potentially fatal, eye/skin/respiratory irritation

Other Hazards: Include other hazards, other than chemical, that may be present during operation of the procedure.

Exposure Controls: (check all that apply)

PPE: Safety Glasses Face shield Chemical Splash Goggles
 Chemical apron Gloves (type): vinyl, nitrile, or latex are all appropriate
 Lab coat Respirator (type): _____
 Other: Wear a dust mask

Engineering Control:

Fume hood Biosafety cabinet Glove box Vented gas cabinet
 Other: Cover work surface with paper or plastic sheeting to contain small spills in an easily wrapped up material.

Administrative Controls: List any specific work practices needed to perform this procedure (e.g., cannot be performed alone, must notify other staff members before beginning, etc.).

Task should be done by an experienced technician rather than part time or temporary student help.

Task Hazard Control Table: For procedures involving numerous steps it may be convenient to indicate specific requirements for individual tasks in the table below:

Task	Required PPE and/or Engineering Controls

Waste Disposal: Describe any chemical waste generated and the disposal method used.

No waste is generated.

Accidental Spills: Describe procedure for handling small chemical spills that may occur during this procedure. Note that for large spills it may be appropriate to call 911.

Small spills will fall on the covered surface, and may be wrapped in it and bagged for disposal. All spills must be disposed of by the UW Safety Department.

Decontamination Procedures (required for PHS use): Describe the procedure for decontamination of personnel and equipment.

Sweep up any spill, avoiding raising dust. Wipe down surface. Place wipe in bag with spill. For skin or eye contact, flush with water for 15 minutes. Remove contaminated clothing and wash before reuse.

Training: Describe any training needed prior to performing this procedure. Include training performed in-lab and any required demonstrations of competency.

Principal Investigator Approval: I have reviewed this procedure and approved it for use. Note: Modifications to the procedure may require update to this form.

NOAH LOTTIG

Name

Signature

Date

Section 4: Laboratory SOPs – Task Table

Prepared By: CAROL WARDEN **Revision Date:** May 2023

*For many procedures a simple description of the tasks, the associated hazards, and the PPE required to mitigate risks is acceptable. This table is **not appropriate** for work involving Particularly Hazardous Substances or for use of chemicals that pose a high risk due to reactivity or other properties. This table is appropriate for describing safety requirements for miscellaneous tasks performed in a laboratory.*

Task	Hazard Description	Required PPE and Engineering Controls
Use of small amounts of various acids	Potentially severe eye, skin, and respiratory tract irritation	Work in fume hood. Wear safety glasses and disposable gloves.
Use of ethanol or methanol	Eye and respiratory irritation	Use with adequate ventilation, safety glasses and gloves.
Use of MS222 as fish anesthetic	Eye, skin, respiratory tract irritation	Prepare in fume hood. Wear safety glasses and gloves.

Section 5: Orientation Checklist:

A checklist for all laboratory personnel listed in Section 1 must be filled out.

As part of my orientation with the laboratory operation I have read and am familiar with the contents (and location) of:

- | | |
|---|---|
| <input checked="" type="checkbox"/> The OSHA Laboratory Standard | <input checked="" type="checkbox"/> The UW-Madison Campus CHP |
| <input checked="" type="checkbox"/> The UW-Madison <i>Laboratory Safety Guide</i> | <input checked="" type="checkbox"/> The Laboratory CHP |
| <input checked="" type="checkbox"/> SDSs for lab chemicals | |

I have been instructed on:

- The chemical hazards in the lab Laboratory-specific policies
- The relevant exposure limits [PELs (OSHA), TLVs (ACGIH), etc.]
- The signs and symptoms associated with exposures to hazardous chemicals used in the lab
- The physical hazards of the laboratory (heat, electrical, mechanical, etc.)

Reviewed the laboratories emergency procedures, including:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Emergency phone numbers | <input checked="" type="checkbox"/> Procedures for uncontrolled releases |
| <input checked="" type="checkbox"/> Evacuation routes | <input checked="" type="checkbox"/> Safety equipment failure procedures |
| <input checked="" type="checkbox"/> Review location and use of chemical spill kits | |
| <input checked="" type="checkbox"/> Laboratory exhaust failure procedure | |

The location of emergency equipment:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Fire extinguishers | <input checked="" type="checkbox"/> Eye wash stations |
| <input checked="" type="checkbox"/> Safety showers | <input checked="" type="checkbox"/> First-aid supplies |

I have been made familiar with routine operations of the laboratory, including:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Lab cleaning and maintenance rules | <input checked="" type="checkbox"/> Waste handling procedures |
| <input checked="" type="checkbox"/> Proper use of PPE | <input checked="" type="checkbox"/> Chemical procurement practices |
| <input checked="" type="checkbox"/> Chemical storage policies for the lab | <input checked="" type="checkbox"/> The proper use of chemical fume hoods |

In addition, I have been made familiar with the following lab-specific health and safety features and safety resources:

<input type="checkbox"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/>
<input type="checkbox"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/>
<input type="checkbox"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/>
<input type="checkbox"/> <input type="text"/>	<input type="checkbox"/> <input type="text"/>

I have completed orientation of all the above items

Name:

Date:

Signature:

PI (or Lab CHO) Signature:

Section 6: Laboratory Safety Training
Master List of Required Training

List the training required in order to work with hazardous chemicals in your laboratory. This list should include training provided by the university, outside sources, and hands-on training of tasks and procedures provided in-lab. It is understood that the training below does not apply to all students or staff but will be based on each individual's work assignments.

Training Title	Description/Purpose
Lab Orientation and Emergency Procedures	To ensure all on station know where SDS, PPE, fire extinguishers, and spill kits are located.

Section 7: Prior Approvals

This section of the lab-specific CHP allows the PI to document approval for individuals to perform specific Standard Operating Procedures (as indicated in the SOP description).

No procedures at Trout Lake require PI prior approval.

Section 8: SDSs and Inventory of Hazardous Chemicals

A number of regulations require that Safety Data Sheets (SDSs) be maintained and readily accessible for all hazardous chemicals. The Campus Chemical Hygiene Plan also requires that inventories be maintained for a certain categories of hazardous chemicals above specified amounts (see Section 6.3 of the Campus CHP). Provide a description of where the SDSs are stored and how inventory records are maintained.

Safety Data Sheets

Location of SDSs:

A link to an online library of SDSs is on each of the general use computers at Trout Lake Station. All staff are notified of this.

Format of SDS (electronic, hard copy, etc):

electronic online

Chemical Inventory

Method of Maintaining Inventory:

Inventories are maintained individually by the researchers using the chemicals.

Location of Inventory Records

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Section 9: Exposure Monitoring Records

In rare instances it may be necessary to perform personnel exposure monitoring when working with a hazardous chemical. This can occur when chemical exposure levels approach or exceed the Permissible Exposure Limit (PEL) of OSHA and the Threshold Limit Value (TLV) of ACGIH (see Section 12 and Appendix A of the Campus CHP for details). Initial monitoring is required if there is reason to believe that the action level (or PEL if there is no applicable action level) for a substance is routinely exceeded. If the initial monitoring discloses employee exposure over the action level or PEL an exposure monitoring program may be initiated. Employees must be notified of the results within 15 working day after the receipt of the results by posting in an accessible location.

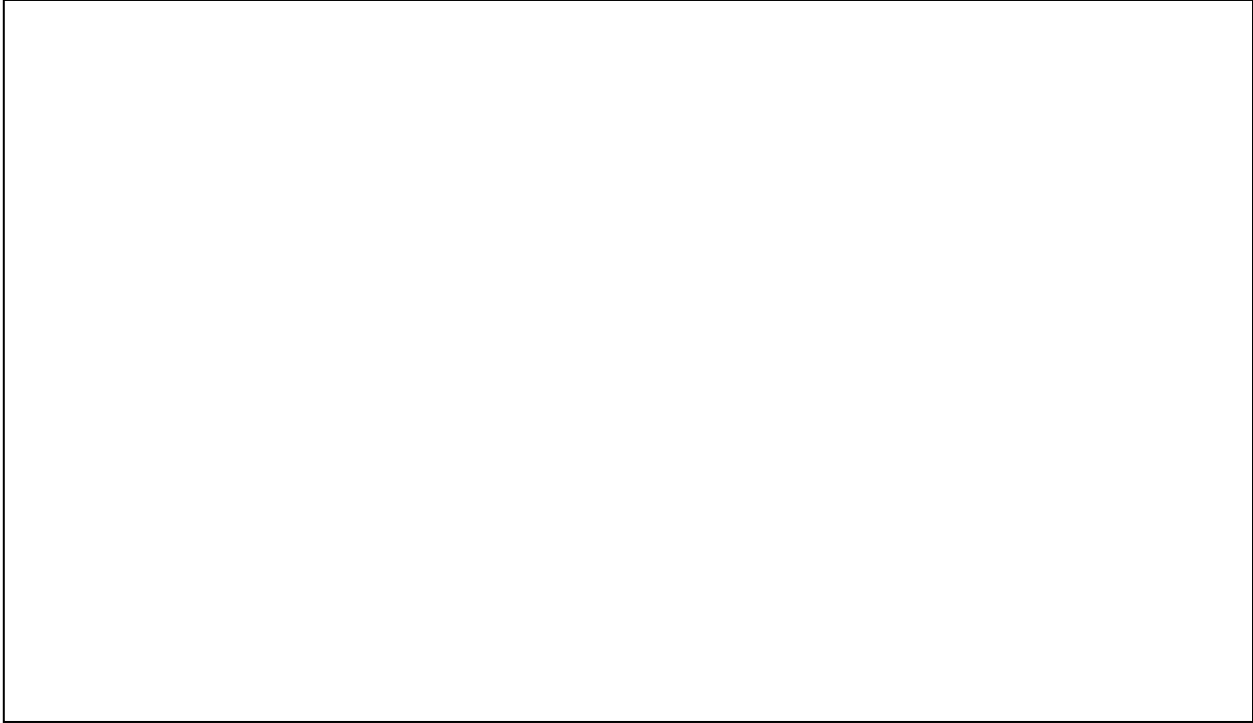
Describe any exposure monitoring requirements for laboratory operations:

No exposure monitoring is necessary at Trout Lake Station.

Section 10: References

This section can be used to include chemical or laboratory safety information relevant to the operations of the laboratory. The references can either be appended to the end of this section or references can be cited below.

References:

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Appendix A: Location of Safety Facilities at Trout Lake

Eye Wash / Drench Hose: Chem Lab 208 and Hood Room 126

Shower: First floor hall by lockers

Chemical Spill Kits and bicarbonate for acid spills: Chem Lab 208 and Hood Room 126

Broken Glass Collection Container: Chem Lab 208

Sharps container for needles: Room 117, 118

Tornado Shelter Areas: Basement of Main Lab: any windowless room