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General Laboratory Safety Rules

The following rules and regulations have been established to minimize hazardous conditions for everyone in the laboratory. They will not restrict your learning but will help provide a safe environment in which to learn. Read these rules carefully. You will be expected to follow them when you are in the laboratory.

1. Chemical safety goggles and closed-toe shoes are required for entry into lab.
2. Conduct only authorized experiments and activities.
3. Do not eat or drink in the laboratory.
4. Know the location of fire extinguishers, eyewash fountains, safety showers, ventilation hoods, and solid or liquid waste containers. Know how to use these safety features.
5. Report all accidents and injuries immediately to the laboratory supervisor.
6. Treat all chemicals as if they were poisons and, therefore could be dangerous if absorbed through the skin, inhaled, or tasted. Read all labels and directions carefully. Also, if you will be using a sample for subsequent lab time, be certain to accurately and completely label your secondary container of chemical sample. Use the chemical name and hazard statement(s) as they appear on the MSDS.
7. Always replace the stopper or cap on a reagent bottle after removing a sample of material.
8. Never return unused chemical (solid or liquids) to the original reagent bottles or containers. The possibility of contamination of the reagent overrides any benefit of "saving" unused materials.
9. Return all items used to the proper location. Clean and put away all laboratory glassware and equipment used.
10. Wash hands well before leaving the laboratory.
11. Do not work alone in the laboratory.

Laboratory Roster

Lab Location

Building ____________________ Room ______________________ Bench ______________

Other spaces utilized: ____

Laboratory Supervisor Information

Name: ____

Office: ________________Phone number:_________________ email: _________________

Emergency Phone number:___________________

Laboratory Staff

Name	Type of Employee (academic staff, student employee, student volunteer, etc...)	Date Hired	End of Employment Date

Laboratory Roster Continued

Laboratory Supervisor Name ____

Name	Type of Employee (academic staff, student employee, student volunteer, etc...)	Date Hired	End of Employment Date

UW-Stout
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- ☐ Emergency Eyewashes
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UW – STOUT

LABORATORY-SPECIFIC SAFETY (SOP) STANDARD OPERATING PROCEDURES

SOP Title			
Date of Creation			
Principal Investigator		Signature	
Lab Bldg/Rm Location		Contact Number	

Please fill out this form, print it, and keep it with your other training documentation.

Section 1: Type of SOP

☐ Hazardous Chemical

☐ Hazardous Process

Section 2: Purpose of Use in Research

…tion 3: Description of Hazards.

A. Potential Hazards – Chemicals, Biologicals and Physicals (List hazard(s) and check all applicable boxes)

Hazard	Select Carcinogens*	Reproductive & Developmental Toxins*	Acute Toxicity*	Pyrophoric	Flammable	Corrosive	Oxidizers	Poisons	Water Reactive	Explosive	Biohazardous ǂ	Sharps	Pressure (Hi/Lo)	Thermal (Hot/cold)	ǂ Be Specific Other Comments
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
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	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

*Work with Particularly Hazardous Substances requires specialized signage, training and prior approval from both the …ervisor and CHO. Fill out a PHS Approval Form to begin this process.

B. Summary of Potential Hazard(s) of Process or Procedure (Summarize the anticipated and potential hazards and the required precautions including prohibited activities or cautionary statements where applicable to avoid harm.)

Section 4: Personal Protective Equipment. (Check all applicable boxes. Standard PPE should always be worn. The section below is for *additional* PPE required due to the unusual nature of materials involved.)

If no additional PPE is needed, check here ☐

Gloves (thickness, length, and disposable or reusable should also be considered in glove selection)				
☐ Nitrile (thick)	☐ Butyl	☐ Latex Rubber	☐ Neoprene	☐ PVA
☐ Silver shield	☐ Thermal	☐ Other:		
Eye/Face Protection				
☐ Chemical Splash Goggles		☐ Face Shield		
Protective Clothing				
☐ Lab coat		☐ Chemical resistant apron		
☐ Respirator (If checked, contact Safety & Risk Management (x2258) for required training)				
☐ Other:				

Section 5: Engineering Controls. (Check all applicable boxes)

Containment Equipment			
☐ Fume Hood	☐ Glove Box	☐ Biosafety Cabinet	☐ Other:
Location:	Designated Area*:		

Section 6: Handling and Storage Requirements.

A. Labeling/Identification of Chemical and Hazard (GHS compliant label elements)

B. Handling Procedure (during transport and use – include PPE and secondary containment concerns)

C. Storage Requirements (location, secondary containment, temperature, etc...)

Section 7: Spill and Accident Response Procedures. (Check all applicable boxes)

☐ Chemical Spill Kit	Location:
Description of spill kit contents:	
☐ Eye Wash+	Location:
☐ Shower+	Location:
+Eyewash and Shower are required to be located within 10 seconds of work when using corrosives, particularly hazardous chemicals, spontaneously combustible materials, or air reactive chemicals	
☐ Fire Extinguisher	Location:
Protocol for Spill Clean-up:	
Exposure/First Aid Procedures:	

Section 8: Decontamination Procedures (for equipment or affected surfaces)

Section 9: Waste Disposal Procedures

☐ P-listed chemical	Special Considerations:

Section 10: Safety Data Sheet Locations

☐ Hard Copy Availability	Location:
☐ Web Availability (requires computer and internet connection in lab, and sign with instructions)	

Section 11: Additional Approvals

☐None		
☐ PHS Approval	Date Submitted:_____	Approved ☐
☐ Other	Date Submitted:_____	Approved ☐

Section 12: SOP Training Record (Training must be administered by the Supervisor to all personnel in lab prior to start of work with hazardous chemical(s) listed in this SOP. Refresher training will need to be provided when there is a change to the work procedure, an accident occurs, or repeated non-compliance.)

I have attended laboratory specific safety training for this standard operating procedure. I have read and understood this standard operating procedure and I have had my questions answered.

Date	Name (Print)	Signature

LABORATORY-SPECIFIC SAFETY (SOP) STANDARD OPERATING PROCEDURES

SOP Title			
Date of Creation			
Principal Investigator		Signature	
Lab Bldg/Rm Location		Contact Number	

Please fill out this form, print it, and keep it with your other training documentation.

Section 1: Type of SOP

☐ Hazardous Chemical

☐ Hazardous Process

Section 2: Purpose of Use in Research

Section 3: Description of Hazards.

A. Potential Hazards – Chemicals, Biologicals and Physicals (List hazard(s) and check all applicable boxes)

Hazard	Select Carcinogens*	Reproductive & Developmental Toxins*	Acute Toxicity*	Pyrophoric	Flammable	Corrosive	Oxidizers	Poisons	Water Reactive	Explosive	Biohazardous ‡	Sharps	Pressure (Hi/Lo)	Thermal (Hot/cold)	‡ Be Specific Other Comments
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	
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	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	

*Work with Particularly Hazardous Substances requires specialized signage, training and prior approval from both the supervisor and CHO. Fill out a PHS Approval Form to begin this process.

B. Summary of Potential Hazard(s) of Process or Procedure (Summarize the anticipated and potential hazards and the required precautions including prohibited activities or cautionary statements where applicable to avoid harm.)

Section 4: Personal Protective Equipment. (Check all applicable boxes. Standard PPE should always be worn. The section below is for *additional* PPE required due to the unusual nature of materials involved.)

If no additional PPE is needed, check here ☐

Gloves (thickness, length, and disposable or reusable should also be considered in glove selection)				
☐ Nitrile (thick)	☐ Butyl	☐ Latex Rubber	☐ Neoprene	☐ PVA
☐ Silver shield	☐ Thermal	☐ Other:		
Eye/Face Protection				
☐ Chemical Splash Goggles		☐ Face Shield		
Protective Clothing				
☐ Lab coat		☐ Chemical resistant apron		
☐ Respirator (If checked, contact Safety & Risk Management (x2258) for required training)				
☐ Other:				

Section 5: Engineering Controls. (Check all applicable boxes)

Containment Equipment			
☐ Fume Hood	☐ Glove Box	☐ Biosafety Cabinet	☐ Other:
Location:	Designated Area*:		

Section 6: Handling and Storage Requirements.

A. Labeling/Identification of Chemical and Hazard (GHS compliant label elements)

B. Handling Procedure (during transport and use – include PPE and secondary containment concerns)

C. Storage Requirements (location, secondary containment, temperature, etc...)

Section 7: Spill and Accident Response Procedures. (Check all applicable boxes)

☐ Chemical Spill Kit	Location:
scription of spill kit contents:	
☐ Eye Wash+	Location:
☐ Shower+	Location:
+Eyewash and Shower are required to be located within 10 seconds of work when using corrosives, particularly hazardous chemicals, spontaneously combustible materials, or air reactive chemicals	
☐ Fire Extinguisher	Location:
Protocol for Spill Clean-up:	
Exposure/First Aid Procedures:	

Section 8: Decontamination Procedures (for equipment or affected surfaces)

Section 9: Waste Disposal Procedures

☐ P-listed chemical	Special Considerations:

Section 10: Safety Data Sheet Locations

☐ Hard Copy Availability	Location:
☐ Web Availability (requires computer and internet connection in lab, and sign with instructions)	

Section 11: Additional Approvals

☐None		
☐ PHS Approval	Date Submitted:_____	Approved ☐
☐ Other	Date Submitted:_____	Approved ☐

Section 12: SOP Training Record (Training must be administered by the Supervisor to all personnel in lab prior to start of work with hazardous chemical(s) listed in this SOP. Refresher training will need to be provided when there is a change to the work procedure, an accident occurs, or repeated non-compliance.)

I have attended laboratory specific safety training for this standard operating procedure. I have read and understood this standard operating procedure and I have had my questions answered.

Date	Name (Print)	Signature

Print Form

UW-Stout

Particularly Hazardous Substance (PHS) Approval Form

UW-Stout faculty or staff shall submit this completed form and receive approval from the Chemical Hygiene Officer (CHO) before beginning any work with a particularly hazardous substance (PHS). Please consult with CHO for assistance in completing form. Submit to CHO for review and approval.

Instructor/Researcher Name:

Supervisor/PI Name: Lab Group:

Phone: Building: Date:

1. Substance Information

A. Chemical Name: CAS Number:

Manufacturer/Supplier: Catalog Number:

B. ☐ Carcinogen ☐ Reproductive Toxin ☐ High Acute Toxicity ☐ Highly Reactive

C. Estimated Rate of Use (e.g., g/month): ☐ Continuous Use OR ☐ One-Time Use

2. Hazards

Physical Hazards

A. List the physical hazards:

B. Known incompatibilities:

Health Hazards

C. List the health hazards:

D. Significant route(s) of exposure

☐ Inhalation hazard ☐ Skin absorption ☐ Ingestion

E. Medical consultation needed ☐ Yes ☐ No

3. Procedure

A. Briefly describe how the material will be used, including how/ where/by whom the work will be prepped (if applicable):

B. Vacuum system used? ☐ Yes ☐ No

C. If yes, describe the method for trapping effluents:

4. Exposure Controls

Ventilation/Isolation

A. Chemical fume hood required? ☐ Yes ☐ No

Hood must operate at a minimum 100 feet per minute (fpm) face velocity.

B. Glove box required? ☐ Yes ☐ No C. Vented gas cabinet required? ☐ Yes ☐ No

D. Personal Protective Equipment (PPE) (Check all that apply)

☐ Safety glasses ☐ Chemical splash goggles ☐ Face shield

☐ Lab coat ☐ Apron ☐ Gloves (type): _____

☐ Respirator (use of any type of respirator requires prior approval from the CHO)

☐ Other (describe): _____

5. Location/Designated Area

A. Building: _____ B. Room: _____

C. Describe the area where the substance will be used. _____

D. Location where substance will be stored: _____

E. Storage Method/Precautions

☐ Refrigerator/freezer ☐ Chemical fume hood

☐ Double containment ☐ Vented cabinet

☐ Flammable storage cabinet ☐ Other (describe): _____

6. Spills and Decontamination

A. Spill control materials readily available? ☐ Yes ☐ No

B. Special personal protective equipment needed? ☐ Yes ☐ No Describe: _____

C. Decontamination method: _____

7. Waste Disposal

A. In-lab neutralization ☐ Yes ☐ No B. Deactivation ☐ Yes ☐ No

C. Dispose of as hazardous waste ☐ Yes ☐ No

8. Responsibility

I will maintain the signs as required by the UW-Stout Chemical Hygiene Plan and I will ensure all users of this PHS within my laboratory are appropriately trained on the hazards and procedures associated with this product. I will maintain training records for those approved for use of this product.

_____ _____

Instructor/Researcher Date

9. Authorization

This individual has demonstrated an understanding of the hazards of the listed substance and plans to handle the substance in a manner that minimizes risk to health and property. He/she is authorized to use the substance in the manner described.

_____ _____

Department Chair/Date Chemical Hygiene Officer/Date

Using this form

For purposes of this form, a particularly hazardous s[illegible]tance (PHS) includes known or suspected human c[illegible]nogens, reproductive toxins, and substances with acute toxicity above certain thresholds. Some highly reactive chemicals (e.g., pyrophorics) may also be considered PHSs. A more complete definition is included in Appendix F of the UW-Stout Chemical Hygiene Plan (CHP).

Each individual planning to use a PHS shall complete this form and have it approved by the UW-Stout Chemical Hygiene Officer (CHO) prior to initial use.

Responsibility for determining whether a chemical is a PHS and completing this form rests jointly with the PI/supervisor and the individual seeking use approval. The CHO can be consulted in determining whether substance is a PHS.

1. Substance Information

A. Enter chemical name, CAS (Chemical Abstract Service) number, and manufacturer/supplier as they appear on the Safety Data Sheet (SDS). Enter the catalog/product number if known.

B. Refer to the ***Toxicological Information*** section of the SDS.

***Carcinogen*: IARC Group 1, 2A, 2B; NTP "known to [illegible]e carcinogen;" OSHA regulated**
***Reproductive Toxin*: mutagens, teratogens, embryotoxins**
***High Acute Toxicity:* oral $LD_{50} \leq 50$ mg/kg, skin $LD_{50} \leq 200$ mg, air $LC_{50} \leq 200$ ppm or ≤ 2 mg/l**

***Highly Reactive:* pyrophorics, explosives, strong oxidizers, peroxide formers**

C. Please enter the amount to be used and rate, if known, and check whether the PHS will be in continuous use or if it will be used one time.

2. Hazards

A. List the physical hazards as found in the *Hazards Identification, Physical and Chemical Properties,* and/or *Stability and Reactivity* sections of the SDS. Physical hazards include:

- Flammable (flash pt < 100F/37.8C)
- Combustible (100F/37.8C ≤ flash pt ≤ 200F/93.3C)
- Compressed gas
- Explosive
- Organic peroxide
- Oxidizer
- Pyrophoric
- Unstable (reactive)
- Water reactive

B. List chemicals or materials that might cause instability or adverse conditions if mixed with the PHS (refer to *Stability and Reactivity* section of the SDS).

C. List the health hazards as found in the *Hazards Identification* and/or *Toxicological Information* sections of the SDS. Health hazards include:

- Carcinogen
- Toxic
- Reproductive toxin
- Irritant
- Sensitizer
- Corrosive
- Target organ effects (list the target organ)

D. *Inhalation:* inhalation of the substance may cause adverse health effects.

Skin exposure: substance is readily absorbed through the skin or can cause significant damage to skin upon contact.

Ingestion: swallowing the substance may cause adverse health effects.

E. Some chemicals can accumulate in body tissues and may require initial or periodic medical surveillance (e.g., heavy metals). Contact the CHO for more information.

3. Procedure

A. Briefly describe the part of the experimental procedure that involves the substance, with particular attention to how the chemical will be manipulated. Include information on who will prep the material, how and where.

B. Vacuum systems include central vacuum systems and vacuum pumps within the lab.

C. Describe what will be done to ensure that the substance is not accidentally drawn into the vacuum system. Cold traps or filters are some examples of such measures.

4. Exposure Controls

A. A chemical fume hood should be used for chemicals that may produce vapors, mists, or fumes, or if the procedure may cause generation of aerosols.

The hood must have a minimum average face velocity of 100 feet per minute. If the hood has a sticker that says "Passed," it met this criterion on the date on the sticker. If the hood is equipped with a built-in monitor, the face velocity should also be checked prior to and during use of the hood.

B. A glove box should be used if protection from atmospheric moisture or oxygen is needed or when a fume hood may not provide adequate protection from exposure to the substance; e.g., a protection factor of 10,000 or more is needed.

C. Highly toxic gases must be used and stored in a vented gas cabinet connected to a laboratory exhaust system. Gas feed lines operating above atmospheric pressure must use coaxial tubing.

D. ***Safety glasses*** protect from flying particles and minor chemical splashes, for instance, from opening a centrifuge tube.

Chemical splash goggles shall be worn when there is a possibility of a chemical splash. Most chemical manipulations, particularly where pressure is involved, warrant chemical splash goggles.

Face shield, worn with splash goggles, provides full face protection when working with large volumes of chemicals.

Gloves should be worn when working with any PHS. Since not all gloves offer significant protection from every chemical, it is important to choose the glove that offers the best resistance. See Appendix L in the UW-Stout CHP for more information.

Lab coats should be worn when working with hazardous substances. The coat should not be worn outside the laboratory and should be laundered separately from other clothing. Flame-resistant lab coats should be worn when working with pyrophorics and flammables.

Aprons offer chemical resistance and protection from splashes and can be used in conjunction with a lab coat.

Respirators offer protection from inhalation of substances when engineering controls are not sufficient. Use of respirators must be approved by the CHO to ensure compliance with the UW-Stout Respiratory Protection Plan.

Location/Designated Area

A and B. Building and room number where the substance will be used.

C. Describe where in this room the substance will be used. For example, in a hood, on a specific benchtop, in several areas of the laboratory, etc. This room or area must be posted with a *Danger* sign that will be provided by the CHO upon signing this form.

D. Describe where the substance will be stored. Be specific, e.g, on a shelf, in a refrigerator, in a hood, etc. This room or area must be posted with a *Danger* sign that will be provided by the CHO upon signing this form.

E. Self-explanatory. *Double containment* means that the container will be placed inside another container that is capable of holding the contents in the event of a leak and provides a protective outer covering in the event of contamination of the primary container.

6. Spills and Decontamination

A. Self-explanatory.

B. Refer to the *Accidental Release Measures* section of the SDS.

C. Describe how the work area will be decontaminated after use, in the event of a spill, or upon completion of the work and before removal of the designated area signage.

7. Waste Disposal

A. Some corrosive chemicals may be neutralized before disposal via the drain or the hazardous waste program. Contact the CHO for guidance.

B. Some materials, such as ethidium bromide, can be chemically deactivated before disposal via the drain or the hazardous waste program. Contact the CHO for guidance.

C. Contact the CHO for additional information on hazardous waste disposal.

Particularly Hazardous Substance – Record of Training

My signature below signifies that I understand the hazards associated with the use of the designated PHS and have had the opportunity to discuss and clarify them with my supervisor. I agree to follow the General Laboratory Safety Rules and the specific guidelines including storage, handling, and disposal – as found in the PHS Approval Form and as discussed with my supervisor – for safely working with this PHS.

Lab Supervisor _____

Name (Print)	Signature	PHS	Date	Supervisor Initials

Equipment

List equipment used in your lab that requires training. Examples include: chemical fume hoods, biosafety cabinets, centrifuges, vacuum systems, autoclaves, ovens, UV equipment, x-ray equipment, high voltage equipment, NMR, SEM, etc...

Note whether use of this equipment requires supervision, prior PI approval and/or working alone is not permitted.

Equipment	Notes and Comments

Personnel Equipment Training Log

Equipment	Employee	Notes and Comments	Date of Training	Supervisor Initials

For faculty, staff and students working in the laboratories in the Departments of Biology, Chemistry & Physics, and Food Science & Nutrition:

Online training is through Learn@UW-Stout. Enrollment is through the Chemical Hygiene Officer (Rebecca Hoeft, hoeftr@uwstout.edu, x2151). Once enrolled, the course can be found under the "Ongoing" heading in the Student tab of My Courses and is called "Laboratory Safety Training".

Training Group	Modules/Quizzes	Date to complete
New Faculty and Staff	All Modules and Quizzes	October 1st
***New Student Employees**	Modules 1-9 and Quizzes 1-3 Also any additional modules assigned by supervisor	Before work begins
Returning Faculty, Staff and *Students	Annual Refresher Training Module and Quiz	October 1st
Students Enrolled in Courses	General Laboratory Safety Rules and Safety Signature Sheet and/or modules assigned by instructor	Determined by instructor

"Returning" Employees implies previous completion of necessary training (see "New")

*These trainings are the bare minimum and cover basic safety information for access to our labs. Documentation of lab specific/SOP training is each supervisor's responsibility.

SDS Information

Find Safety Data Sheet Information for all chemicals used in our labs at this website:

https://cisprolive1.chemswlive.com/cispro/login_msds.asp?accessid=2640

No login required

Proper Secondary Container Labeling

Required Information

1. Identity - spelled out in plain English (no abbreviations or formulas)
2. Signal Word - either Danger or Warning as necessary
3. Hazard information - in either statement OR GHS pictogram form
4. Owner information - can be a class or individual

Batch labeling (for samples, etc...) is acceptable. Small samples of similar hazards can be stored and labeled together. These containers should be clearly grouped together in a drawer, box or other larger container, and the larger container can be labeled as described.

Examples:

UW-Stout
Acetone

Danger! Flammable liquid and vapor. Irritating to eyes and skin. May cause irritation of respiratory tract. Vapors may cause drowsiness and dizziness. Repeated exposure may cause skin dryness or cracking.

Prepared by/for: hoeft 5-21-15

UW-Stout
Sodium Hydroxide

DANGER!

Prepared By/For: 349 Prep

I.D. 1.0 M Hydrochloric Acid

DANGER

Hazard Corrosive

Target Organ(s) Eyes, Skin, Respiratory Tract, Teeth

Manufacturer

User Chem 135 Date 5-21-15

Secondary containers do not need to be labeled as above if both the following conditions are met:

1. It is a single user chemical (the preparer is the only one using the chemical)
2. It will not be stored (it will be used up and/or disposed of within the work session)

Chemical Storage and Handling Safety Tips

Storage

Chemical Inventory must be current (to the day)! UW-Stout maintains chemical inventory in CISPro.

Familiarize yourself with specific chemical handling and storage requirements by reading labels and SDSs.

Do not use fume hoods as long term chemical storage.

Do not store chemicals on the floor or above 6 feet off the floor.

Minimize the amount of flammables you buy and store.

General Chemical Compatibility Tips:

Separate acids from bases

Separate oxidizers  and acids  from flammables  .

Separate acute toxins  and carcinogens  from all other chemicals.

Handling

Always use secondary containment when moving chemicals.

Familiarize yourself with the hazards of all chemicals you use.

Use proper labeling techniques for all chemicals.

Always wear PPE appropriate for the hazards.

Follow good hygiene practices in the lab:

No eating or drinking.
When wearing gloves - don't touch things that are used by non-gloved hands (phones, keyboards, door knobs, elevator buttons, etc...).
Wash your hands thoroughly and frequently.

Proper Use of a Fume Hood

1. Turn the hood on.
2. Allow the airflow to stabilize for a few minutes.
3. Open the sash to 18 inches and verify that the face velocity is over 100 cfm.
4. Keep the sash as low as possible when working in the hood. Never raise it higher than 18 inches for extended periods of time.
5. Keep your head out of the hood except when installing and dismantling equipment.
6. Work at least 6 inches into the hood.
7. Raise large lab equipment 1-2 inches to allow air to flow underneath.
8. Keep the hood free of clutter. Avoid blocking the exhaust slots at the back of the hood.
9. Minimize movement in front of the hood.
10. Clean the hood after each use.
11. Turn off the hood and close the sash when finished.

Use of a fume hood is NOT a substitute for personal protective equipment! Wear eye protection, gloves and lab coat, etc... as required.

Do not use hoods as long-term chemical storage.

Close the sash and turn off the hood when not in use.

Storage Groups

This storage system is a guide. Always refer to the manufacturer's label and SDS for specific storage recommendations.

When possible, isolate storage groups in separate cabinets. Use this scheme to combine storage groups if necessary. When using this strategy **always use secondary containment**.

General Storage
Not Intrinsically Reactive, Flammable or Combustible

1 Inorganic Acids
Hydrochloric, Phosphoric Acids

2 Organic Acids
Acetic, Acrylic, Propionic Acids

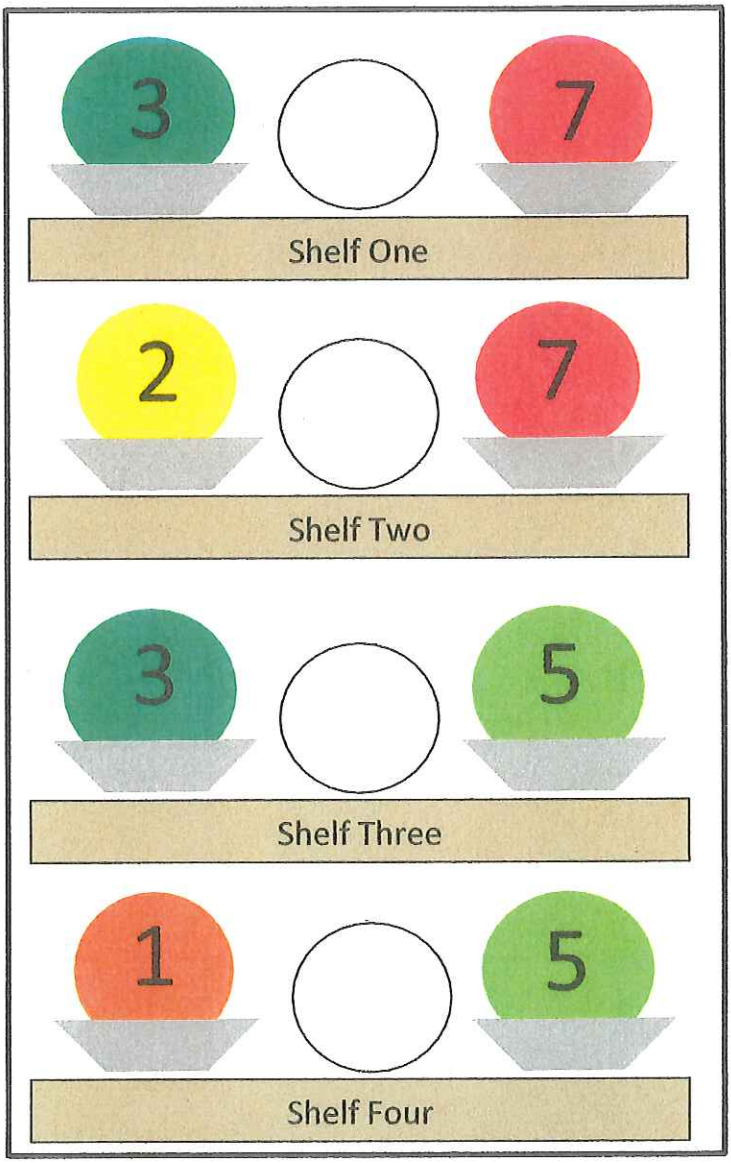
3 Bases
Hydroxides, Glutaraldehyde

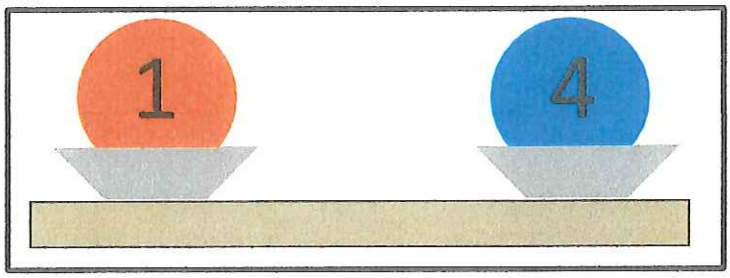
4 Oxidizing Inorganic Acids
Nitric, Sulfuric Acids

5 Oxidizers
Nitrates, Nitrites, Chlorates, Chlorites, Perchlorates, Permanganates, Hydrogen Peroxide

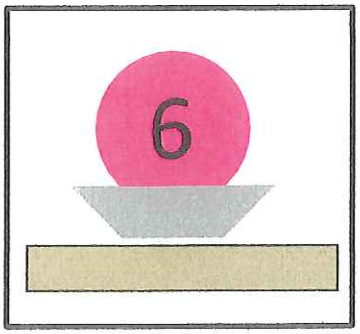
6 Toxics
Carcinogens, Acute Toxins, Reproductive Hazards

7 Flammables
Acetone, Alcohols, Acetonitrile, Hexanes, etc...





Pyrophorics & Water Reactive Materials



Glove Selection/Compatibility

SDSs for each chemical should be consulted prior to use. This table is for quick reference only.

Material	Brand	Uses (Brief)	Do NOT Use With
Neoprene Blend	MAPA	Concentrated Nitric acid Methanol	Most Organics
Butyl	North or Best	Organics – Acetone, Phenol, Concentrated Sulfuric acid, Concentrated Hydrofluoric acid	Ethers Methylene Chloride
Nitrile (Sol-Vex) (Kleenguard G80)	Ansell or Kimberly-Clark	Most Oxidizers, Concentrated Phosphoric acid, Concentrated Hydrochloric acid, Concentrated Ammonium hydroxide	Organics
EVOH/PE Laminate (Silver Shield)	North	Organics, Chloroform, Phenol, Methylene chloride, Tetrahydrofuran	
PVA	Ansell	Chloroform, Carbon disulfide	Caustics (Acids or Bases) Amides Alcohols
Fluorinated rubber (Viton)	Vitoject or Best	Bromine, Toluene	Acetone, Tetrahydrofuran

Chemical Ordering Guide

Consider using a centralized purchasing program in which one person, who is knowledgeable of all the chemicals on hand, does all the purchasing, and checks purchasing requests with your inventory system so that excess chemicals in stock can be used before buying more.

Before purchasing a chemical you are unfamiliar with, you should familiarize yourself with the hazards associated with that chemical. You should follow these steps:

1. Obtain the current SDS. These are almost always found online on the item shopping page.

2. Assess the hazards and physical properties. These are found in **Section 2 Hazards Identification.** Look for either of the two symbols to the right. If any of these terms are listed, this chemical may be considered a particularly hazardous substance (PHS), a class of chemicals that have additional legal requirements, training, and signage for use. To determine if the chemical is a PHS, use the SDS **Section 11 Toxicological Information** and the PHS Determination Flow Chart and/or contact the CHO for guidance. If neither of these symbols appears, then look for words like "explosive", "pyrophoric", "highly water reactive", or "peroxide formation without concentration". If any of these terms are listed, the chemical may be treated as a PHS (contact the CHO for guidance). If the chemical you want to work with is a PHS, fill out the PHS Approval Form which will need to be signed by your department chair and the CHO prior to use.

3. See **Section 7 Handling and Storage**. What are the storage requirements? Are you prepared to meet them? Example – if the SDS indicates that it should be stored between 4 and 8°C, but it is also flammable (Section 2 Hazards Identification), you will need a flammable refrigerator.

4. See **Section 8 Exposure Controls/Personal Protection**. What are the handling requirements? Is specific PPE required? Are engineering controls needed? Do you need a hood? Note: All gloves are not created equal! Be sure you have the appropriate glove type for the chemical in question.

5. Consider the worst case scenario. If it spills, or someone is exposed are you prepared? Consider spill kits, and emergency equipment (safety eye wash/shower).

5. See **Section 13 Disposal Considerations**. What is your plan for disposing of the chemical and/or its end product? Does this chemical have any special disposal considerations? Contact the CHO or Safety and Risk Management for additional guidance.

6. Order minimum quantities that are consistent with the rate of use.

Chemical Ordering Flow Chart

Obtain *Current* Safety Data Sheet

Section 2 Hazards Identification
Are any of these words/symbols identified?
Pyrophoric, Explosive, Highly water reactive, Peroxide Former
Carcinogen/Mutagen, Reproductive Toxin/Teratogen, Acute Toxin

No

Yes

If a PHS, additional requirements are mandatory for use

Section 7 Handling and Storage
Are you prepared to meet the storage requirements?

No

Yes

Section 8 Exposure Controls/Personal Protection
Do you have the specific PPE and/or engineering controls required for safe use? Are you prepared if there is a spill or exposure?

No

Consult CHO

Yes

No

Section 13 Disposal Considerations
Is it or any end product(s) hazardous waste? If so, **do you have a plan for disposal?**

Yes

Order! Try to order the minimum quantity that is consistent with the rate of use.

Laboratory Waste Disposal Table

Do not dump any waste down the drain or throw in the garbage unless you are SURE it is non-hazardous and it is legal to do so.

Wastes	Characteristics	Examples	Disposal
Corrosives	pH <2 or >12.5	solutions of acids and bases	In lab dilution and neutralization, then drain
Halogenated Solvents	Flammable	chloroform, dichloromethane	Hazardous Waste – Commingle with other halogenated solvents
Non-Halogenated Solvents	Flammable	acetone, acetonitrile, hexane, alcohols, THF, phenol	Hazardous Waste – Commingle with other non-halogenated solvents
Heavy Metals	Toxic	cadmium, chromium, lead, barium	Hazardous Waste – Commingle with other heavy metals (NOT mercury)
Mercury and compounds	Toxic	Devices, mercury compounds	Hazardous Waste – Collect separately
Reactive		sodium metal phosphorus	Consult CHO
P-listed	Toxic	sodium azide, acetaldehyde, nicotine compounds, cyanides, carbon disulfide	Consult CHO
Formaldehyde	Toxic	formalin and specimens in formalin	Hazardous Waste – Collect separately
Broken glass (clean)	Sharp	broken glassware, Pasteur pipettes, used slides	Collect in broken glass box. When full close according to instructions, secure with tape and leave for Custodial
All Other Sharps	Sharp	needles, scalpels, razor blades	Collect in biohazard sharps container
Infectious waste (not sharps)	Potentially infectious	Blood or body fluids, animal bedding, microbiological lab waste	Autoclave then trash
Batteries	Contain hazardous materials. Possible fire hazard. Recyclable.	alkaline, lead acid, nickel-cadmium, nickel-hydride, lithium	Use clear tape so that leads can't contact each other and collect for recycling through Surplus
Lamps/Bulbs	Contain mercury and other heavy metals	fluorescent lamps, light bulbs	Collect for recycling (Custodial)
Oil (Uncontaminated)	Recyclable	vacuum pumps	Collect and Label as "Used Oil" (Maintenance)
Electronics	banned from landfills	tvs, monitors, keyboards, mice, speakers, media players, phones, appliances	Recycle through Surplus

UNIVERSITY OF WISCONSIN STOUT

Sharps and Lab Glass/Plastic Disposal

Sharps, biohazardous materials and hazardous chemicals are prohibited in normal trash

NEEDLES AND OTHER SHARPS

Sharps: Items designed to cut or puncture skin and sharp items contaminated with blood or other biohazardous materials.

Sharps container: Closable, puncture resistant, leak-proof. Labeled with biohazard emblem or "sharps," "infectious waste," or "biohazard."

- Needles
- Syringes with needles
- Capillary tubes
- Scalpel blades

- Razor and utility blades
- ***Contaminated*** broken vials, broken glass, pipette tips, Pasteur pipettes, Petri plates and laboratory slides
- Contaminated tissues, paper towels, gloves and other "soft" items should go in a red bag, not a sharps container.

Disposal procedure:

- *Do not* fill above the fill line (about 2/3 full).
- When full, take to Student Health Services or call Campus Police (x2222) for transport.

HAZARDOUS GLASS AND PLASTIC

Hazardous glass and plastic:
Uncontaminated items that can cut or puncture if disposed of in normal trash containers.

- Pasteur pipettes
- Other pipettes and tips
- Slides and cover slips
- Broken or fragile glass
- Broken petri dishes

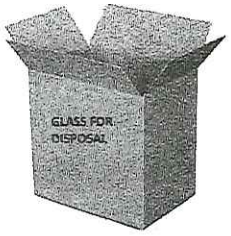
Sturdy, leak-proof container:

- Use a designated lab glass container if available,
- Or find a used cardboard box and a plastic liner bag.
- Double box or tape seams to contain waste, use heavy duty tape.
- Limit weight to 20 lbs/9 kg.

OR

Disposal procedure:

- Drain liquids; dispose of hazardous chemicals properly.
- Seal container closed when 2/3 full.
- If using a plain cardboard box, mark with the words "Glass for Disposal."
- Place next to your normal/regular trash basket. Custodians will dispose of containers or lab staff can take it to dumpster.



EMPTY BOTTLES, OTHER GLASS AND PLASTIC

Unbroken glass and plastic:
Items that present no hazard if disposed of as normal/regular trash.

- Petri dishes (decontaminated)
- Sturdy test and centrifuge tubes
- Microtiter plates
- Empty bottles

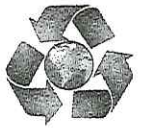
Disposal procedure:

- Decontaminate if contaminated with biohazardous materials (autoclave or other method).
- Drain liquids and triple rinse; dispose of hazardous chemicals properly.
- Place in wastebasket if small, place large (≥4 liter) bottles next to wastebasket.
- Custodian will take trash to dumpster.

OR

Reuse or recycle!

- Bottles can be re-purposed as waste containers.
- Unbroken glass and plastic (#1-7) can be recycled if properly decontaminated, drained and rinsed (see disposal procedure).



Hazardous Waste Guide

ntainment

Choose the correct container for the waste. Take into consideration:

- Chemical compatibility
- Strength of container
- Size

Keep containers **closed** except when adding waste. No exceptions.

Use **secondary containment** to ensure no leakage into drains and to separate incompatible wastes from each other

Labeling

Label the container. Labels must include:

- The words "Hazardous Waste"
- A clear description of the waste - no abbreviations or formulas
- An accumulation start date

There is no required format, color or size for the waste label. Acceptable methods include:

- Writing on the container with permanent marker or paint
- Using a label you design and print yourself (labels are available from the CHO)
- Using a commercially printed label

Inspection

Inspect the hazardous waste containers for leaks, labeling and proper storage regularly.

Wastes that are not fully regulated, such as used oil and universal waste, have different labeling requirements - Do NOT label as "Hazardous" - they only need a clear description of the waste.

Biosafety Level 2 (BSL-2) Lab Training

This training provides a basic understanding of biosafety hazards and practices required to enter UW-Stout's designated BSL-2 laboratory spaces. **If you will be working with biological agents that require BSL-2 containment, you must receive additional training (such as bloodborne pathogens training, safe use of biosafety cabinets, standard microbiological practices) from your instructor/laboratory supervisor.**

- ☐ The "biosafety level" defines the laboratory practices and techniques, safety equipment and laboratory facilities recommended for work with biohazardous materials.
- ☐ Biohazardous materials are infectious agents or hazardous biological materials that present a potential risk to the health of humans, animals or the environment.
- ☐ BSL-2 is for work with moderate-risk agents that are associated with human disease of varying severity.
- ☐ All doors to laboratory or classroom spaces designated as BSL-2 labs have a sign with a large orange "biohazard" symbol and entry and exit requirements for everyone who enters the space.
- ☐ What are the potential hazards?
    - Exposure is most likely to occur via accidental needle stick; splash into the eyes, nose or mouth; or accidental ingestion → people working with the material.
    - The risk of exposure by being in the room and inhaling the material is extremely low.
- ☐ What are the rules?
    - Lab coats are mandatory for everyone who enters.
    - No open-toed shoes.
    - Safety glasses must be worn by everyone who enters if anyone in the room is working with a liquid chemical or biohazardous material.
    - Doors must not be propped open.
    - No eating, drinking, applying cosmetics or storing food for human consumption at any time.
    - Wash hands with soap and water before leaving the room.

Safe Practices in using Biohazardous Materials

Treat all microorganisms as potential pathogens

Receive training on sterile techniques prior to use of any microorganism

Use appropriately sterilized equipment and materials - All materials including media, tubes, plates, loops, needles, pipettes should be sterilized by autoclaving (or use commercially sterilized products).

Disinfect work areas before and after use.

Gloves should be worn when appropriate and care should be taken to remove and dispose of them with proper technique.

Do not eat, drink, apply cosmetics, manipulate contact lenses, or touch your face or hair while in the lab.

Label everything clearly - All chemicals need to have appropriate secondary container labels and samples, media, plates etc... should also be labeled with their names and dates.

Utilize biosafety cabinets as necessary. Training is required prior to use.

Wash your hands after handling microorganisms.

Biohazardous Waste Guide

Biohazardous materials include cultures/items contaminated with:

Microorganisms - Bacteria and viruses
Recombinant DNA
Continuous Cell Lines
Toxins
Allergens

All biohazardous waste must be sterilized/sanitized prior to disposal.

Methods of Collection and/or Storage

Biohazard bags for cell culture dishes, plates, serological pipettes, disposable culture flasks, disposable centrifuge tubes

Biohazard sharps containers for contaminated lancets, razor blades, etc...

Beakers with 10% bleach solution for other secondary exposure items such as glass slides, pipette tips, toothpicks, swabs, etc... .

Methods of Sterilization/Sanitization

Use an autoclave as the primary means of sterilization of all biohazardous materials

Secondary exposure items as described above can be sanitized by soaking in a 10% bleach solution for at least five minutes.

Methods of Disposal

After sterilization and/or sanitization, biohazardous materials can go into the trash or broken glass receptacles as appropriate.

Biological Safety Cabinet Use

DO

- Always use cabinet with the sash at the correct height.
- Keep all materials at least 4" inside the sash.
- Turn the cabinet on and run the fan for at least 15 minutes before use.
- Wipe down unit work surface with appropriate disinfectant prior to and immediately following use.
- Periodically check under the cabinet surface for spills or materials - clean out and wipe surface with appropriate disinfectant.
- Use the cabinet in conjunction with good microbiological techniques.
- Work carefully and conscientiously.
- Immediately notify Biosafety Officer of cabinets which are not operating properly.
- Limit traffic in the area when the cabinet is in use.

DO NOT

- Use a Biological Safety Cabinet unless there is a current certification label attached.
- Overload the containment area or block front, side or rear air grills.
- Use the cabinet for storage.
- Change baffle, damper, speed control settings.
- Place items on top of unit blocking or damaging exhaust filter.
- Lean into the cabinet so that the user's head is inside the plane of the cabinet's face without adequate PPE except for work or maintenance with all hazardous materials removed.
- Use UV light for cabinet disinfection.
- Use open flames in cabinets.

For questions, contact the Biosafety Officer at 215-232-5048.

UNIVERSITY OF WISCONSIN
STOUT

Liquid Nitrogen

Safe handling procedures

- Be familiar with the hazards
- Work in an open, well-ventilated location
- Always wear splash goggles, full face shield, leather or cryogenic gloves, long sleeves and long pants without cuffs, close-toed shoes when handling/transferring
- Transfer or pour carefully to avoid splash
- Do not touch uninsulated pipes or other metallic or non-metallic vessels that contain liquid nitrogen
- Examine containers and pressure relief valves for signs of defect – never use a container that has defects
- All systems and containers must have pressure relief valves that are inspected regularly
- When transferring to a secondary container, do not fill the secondary container more than 80% of capacity
- Immediately re-cap any containers to prevent atmospheric moisture from forming an ice plug in the opening
- Use care in transporting containers
- Never plug, restrict, cap or remove any pressure relief device
- Remove ice or frost buildup on a pressure relief valve with a damp cloth (wear leather or cryogenic gloves)

Dangers of liquid nitrogen:

- ✓ Nitrogen gas can displace oxygen in a room and cause asphyxiation
  - Liquid nitrogen should always be used and stored in well-ventilated areas
- ✓ Liquid nitrogen is extremely cold; contact with bare skin can cause severe frostbite and burns
  - Always wear splash goggles, full face shield, leather or cryogenic gloves, long sleeves and long pants without cuffs when handling
- ✓ Liquid nitrogen boils rapidly and at a very low temperature (-196°C/ -321°F), which can generate a lot of pressure very quickly
  - Only use approved cryogenic containers with relief valves
  - Transfer very carefully and slowly to avoid splash

Normal functions of a liquid nitrogen cylinder:

- ✓ Cylinder will periodically vent through a safety valve if pressure builds (usually due to infrequent use)
- ✓ A slight hiss from the pressure relief valve is normal operation

Emergency!

- ✓ If there is a large spill or rupture, or if you hear a loud sound (the safety valve backup disc rupturing): **Evacuate and call 911**
- ✓ If your eyes or skin come in contact with liquid nitrogen: **Call 911 to get immediate medical attention!** Run the area under cool or warm water for 15 minutes. Do not rub or massage affected areas.

Gas Cylinder Safety Tips

Storage

Always store cylinders upright.

Separate full tanks from empty tanks.

Secure all tanks with chain or belt to immobile units/surfaces (walls or lab benches).

Separate tanks of incompatible hazard classes.

Keep tanks capped when not in use.

Handling

Always use a cart or hand truck designed for cylinder transport (with a chain/belt).

Secure caps during transport.

Labeling

Use only the vendor label for identification of tank contents.

Empty cylinders must be labeled as "empty"

Use

Be sure to use a regulator designed for that cylinder AND chemical type.

Be sure the pressure control valve on a regulator is closed before attachment to cylinder.

Stand to the side of the regulator and valve outlet during attachment/detachment.

Close valves on cylinders when not in use.

Always use appropriate PPE (closed-toe shoes and safety glasses at a minimum).

Appendix I
Emergency and Medical Response

Emergency: To report an accident, fire, serious illness injury or crime in progress that requires immediate response ***call 911.***

An emergency is defined by the Federal Emergency Management Agency as "Any unplanned event that can cause deaths or significant injuries to employees, customers or the public; or that can shut down your business, disrupt operations, cause physical or environmental damage, or threaten the facility's financial standing or public image." Laboratory emergencies can include chemical spills/releases that have the potential for harm to human health or the environment (see Appendix J); laboratory fires or explosions; or severe injuries from sharps, equipment malfunctions or other accidents.

The following information is provided in this appendix:

- UW-Stout Emergency Guide – includes emergency guidelines identifying various types of emergency situations, suggested actions and who to call.
- UW-Stout Laboratory Medical Emergency Action Plan – provides information for faculty and staff on responsibilities for responding to medical emergencies in the laboratory.
- UW-Stout Laboratory First Aid Guide – guidance on responding to common first aid emergencies encountered in laboratories. These are intended as limited involvement measures to take until emergency personnel arrive on the scene.

Each faculty and staff member has the responsibility to:

- Educate their students concerning the emergency procedures as outlined in the UW-Stout Emergency Guide.
- Inform their students and visitors of an emergency and initiate emergency procedures when needed.

The *UW-Stout Incident Report Form* at the end of this appendix should be used to report incidents listed above and injuries involving non-employees (e.g., students and visitors). All incidents involving employee injury must be reported to the University Worker Compensation Coordinator using the form found here: http://www.uwstout.edu/hr/upload/employee_work_injury_rpt.pdf.

UW-Stout policy requires a *UW-Stout Incident Report Form* be filled out for the following occurrences:

- Significant personal injuries, such as those incurred because of cuts, burns, electric shock, etc. Report any incident:
    - Where first aid is involved with the exception of minor cuts or burns.
    - That requires treatment by an emergency responder, off-campus healthcare provider or at Student Health Services.

- When the eye wash or body shower is activated for response.

- Fires that require use of fire extinguisher.
- Mercury spills other than breakage of standard mercury thermometer.
- All chemical spills exceeding 100 mL.
- Large water spills including use of safety showers and eye wash stations.
- Exposure incidents involving blood or other potentially infectious materials.
- Any spill where a chemical is accidently released into the sewer system or where a chemical is spilled onto ground outside.

University of Wisconsin Stout
Emergency Guide

Emergency: To report an accident, fire, serious illness, injury or crime in progress that requires immediate response	**Call 911**
Non-emergency: UW Stout Campus Police	Call 232-2222

Situation	Action	Call
Medical Emergency	Report any serious injury or illness. Begin first aid if qualified (use protective equipment when in contact with blood or other body fluids).	911
	Non-emergencies injuries or illness should be reported to Campus Police.	X2222
Fire	In case of fire or smoke, activate nearest fire alarm to warn occupants of building to evacuate. **Caution – the building fire alarm will sound in the building but it does not automatically notify emergency personnel. Someone must call 911.**	911
	Evacuation • Leave lights on, close but do not lock the doors. • Evacuate building using nearest uninvolved exit. • Assist the disabled to the nearest stairwell in the building. Have them wait on landing. • Immediately notify police or fire department if a disabled person is waiting on a stairwell landing. • Do not re-enter until instructed to do so by emergency personnel.	
Explosion	Report immediately by calling 911. If necessary, or directed to do so, activate building fire alarm system to evacuate building (see evacuation procedures under Fire above). **Caution – the building fire alarm will sound in the building but it does not automatically notify emergency personnel. Someone must call 911.**	911
Bomb Threat	If you receive: • Keep caller on the line – do NOT hang up phone. • Gather and pay close attention to certain information. • Keep a copy of bomb threat card near phone and record information the card contains.	911
Hazardous Substance Spill	Hazardous substance spill which you cannot safely clean or control: • Contact the fire department first by calling 911. • If the spill occurred during business hours, contact Safety and Risk Management. During non-business hours call Campus Police. • Evacuate affected area. • Seal off the contaminated area to prevent further contamination. • Seek medical treatment immediately if contaminated or injured.	911 and Safety and Risk Management (X2258 or X1793) during business hours or X2222 after hours
Fumes and vapors	Suspected toxic fumes or vapors – emergency: • Evacuate area. • Ventilate area if appropriate.	911
	Non-emergency toxic fumes or vapors.	Physical Plant X2200
Violent or Criminal Behavior	Report all violent/criminal behavior immediately.	911
	Threat and other crime reports	Campus Police X2222
Severe Weather/Tornado Watch	Severe weather/ tornado conditions are present and could occur • Monitor local radio or TV for weather conditions	
Severe Weather/Tornado Warning	Severe weather/tornado sighting occurs. Warning will be signaled by a continuous sounding of emergency sirens. • Seek shelter in the nearest strong building. Go to basement or interior walls of lower floors. Stay away from windows and exterior doors. Avoid auditoriums, gymnasiums and similar large rooms with wide roofs. • For an all-clear check local TV station via computer or use radio to listen to local radio station.	

S[illegible]nt Crisis	Emergencies involving student crisis issues including • Alcohol and other drug use emergency • Disruptive behavior • Death of student, friend or family member • Discipline issues • Mental health/behavioral incidents or concerns • Physical injury • Sexual assault • Threats to public welfare	911
	Non-emergency student crisis issues	Campus Police X2222 or the Dean of Students X1181
Mechanical/utility failure/flooding	Report the following to Physical Plant: • Utility failures • Building or facility problems • Equipment failure or erratic operation • Flooding Note: if there is a potential danger to building and/or occupants call 911 immediately	X2200 during business hours or Campus Police X2222 after hours

UW-Stout Laboratory Medical Emergency Action Plan

- Report any serious injury or illness by calling **911** immediately.
- Non-emergency injuries or illness should be reported to University Police at **X2222.**
- UW-Stout faculty and laboratory staff are not responsible for providing first aid. Their primary responsibility is to ensure emergency personnel are summoned when needed. Limit first aid to provision of band aids only. Any injury requiring a greater degree of care requires emergency personnel to be summoned to the scene.
- Notify the Chemical Hygiene Officer of any injury or illness that has occurred.
- Chemical burns and accidents that involve chemicals in the eyes or on skin should be flooded with cool water for at least 15 minutes by using the eyewash or emergency shower until the arrival of medical personnel.
- Personal safety is your first priority. Use protective equipment when in contact with the victim's blood or body fluids. If victim's blood or body fluids come in contact with skin, wash area immediately and report to Safety and Risk Management for Bloodborne Pathogen exposure follow-up.
- There will be no cost to the student to summon **911**. If transport by ambulance is required, the student is responsible for the cost incurred. The student has the right to refuse additional medical treatment.
- A *UW-Stout Incident Report Form* must be completed for any injury sustained by a student (non-employee) in your laboratory. A copy of this form is in Appendix I of the Chemical Hygiene Plan or can be obtained from the Chemical Hygiene Officer (CHO) or online (http://www.uwstout.edu/healthandsafety/safety/accidentform.cfm). The original should be returned to the CHO with a copy to Safety and Risk Management. A copy shall be provided to the student for their personal record. It is important that each incident is reported. This protects the student as well as the University should additional medical attention be needed at a later date due to this incident. This also helps to identify trends of injurious activities whereby methods could be modified to prevent further injury.
- Also use the *UW-Stout Incident Report Form* to report incidents involving employees. Injuries sustained by employees must be reported to Human Resources for workers compensation consideration. The *Employee's Work Injury and Illness Report* form must be completed and submitted to the employee's supervisor within 24 hours of the incident. A copy can be obtained from the CHO or online (http://www.uwstout.edu/hr/upload/employee_work_injury_rpt.pdf).

UW-Stout Laboratory First Aid Guide

UW-Stout faculty and staff are not responsible for providing first aid. Their primary responsibility is to summon emergency personnel when needed. The following information is provides guidance on how to manage first aid incidents in the few minutes before emergency personnel arrive. Faculty and staff should consider personal safety first when responding to a first aid incident in the lab.

Cuts	• If a person has received a minor cut, have them rinse the wound with clean water. All laboratories in Jarvis Science Wing and Addition and Heritage Hall are equipped with first aid kits stocked with bandages. Advise the injured to watch for signs of infection. If there is a possibility of contamination of the wound by chemicals or glassware fragments, the injured should be urged to seek additional medical attention. • A cut that is deep, severe, or bleeding profusely may require stitches. Instruct the victim to lie down and elevate the injured area to a position higher than their heart. **Call 911.** Provide a copy of the Safety Data Sheet for each chemical involved (if applicable) to the emergency personnel when they arrive.
Burns	• For **minor burns,** including **second-degree burns** limited to an area no larger than 2 to 3 inches in diameter with no open blisters, cool the burn by holding it under running water for 15 minutes. Do not put ice on the burn. Advise the victim to see a physician to prevent infection and to assure that the victim's tetanus vaccination records are up-to-date. • For **second-degree burns with open blisters and third-degree burns,** do not use water. Call **911** immediately.
Chemical Burns	1. **Immediately flush the affected area with water** for at least 15 minutes. If the burning chemical is a powder-like substance such as lime, brush it off the skin before flushing. 2. **Remove clothing or jewelry** that has been contaminated by the chemical. 3. Advise the victim to seek further medical attention. 4. **Seek emergency medical assistance by calling 911** if: • The victim has signs of shock, • The chemical burned through the first layer of skin and the resulting second-degree burn covers an area more than 2-3 inches in diameter, • The chemical burn occurred on the eye, hands, feet, face, groin or buttocks or over a major joint. 5. Provide a copy of the Safety Data Sheet to the Emergency Medical Technician upon arrival.

[illegible]trical [illegible]ns	**Call 911 immediately.** An electrical burn may appear minor, but the damage can extend deep into the tissues beneath skin. If a strong electrical current passes through the body, internal damage such as a heart rhythm disturbance or cardiac arrest can occur. While helping someone with an electrical burn and waiting for medical help, do the following: • **Look first. Do not touch.** The person may still be in contact with the electrical source. Touching the person may pass the current through you. • **Turn off the source of electricity if possible.** If not, move the source away from you and the affected person using a non-conducting object made of cardboard, plastic or wood. • **Check for breathing.** Once the person is free of the source of electricity, ensure the person is breathing. If breathing has stopped or you suspect the person's airway is blocked, begin cardiopulmonary resuscitation (CPR) if you have been trained to do so.
Unconscious person	1. **Call 911 immediately.** 2. **If you do not suspect a back or neck injury, position the person on his or her back.** If you are not sure if there is a back or neck injury, do not move the victim. 3. **Watch the airway carefully.** People who lose consciousness may vomit. If vomiting occurs, turn the victim on their side so that the stomach contents are not aspirated into the lungs. 4. **Check for breathing.** Position your ear over the person's mouth to listen for breathing sounds. Begin CPR if you are trained to do so. 5. Provide a copy of the Safety Data Sheet for each chemical involved to the Emergency Medical Technicians.
Seizures/ Convulsions	1. **Call 911 immediately.** 2. Loosen clothing around person's neck. 3. Remove anything nearby that might cause harm to the victim such as glasses, furniture or other objects. 4. If the victim begins to vomit, turn the head so that the contents will not be aspirated into the lungs. 5. Remain with the victim until the ambulance arrives. Give the victim reassurance to remain calm. 6. Provide a copy of the Safety Data Sheet for each chemical involved to the Emergency Medical Technicians.
Chemical ingestion	1. **Call 911 immediately.** 2. Do not induce vomiting except under the advice of a physician. 3. Remain with the victim until the ambulance arrives. 4. Save all chemical containers. 5. Provide a copy of the Safety Data Sheet for each chemical involved to the Emergency Medical Technicians.

UW-Stout Incident Report Form

Accident Details

Full Name

Birth Date

Address

Telephone

Date

Time

Location (Building and Room)

Witnesses (names, addresses, phone numbers)

Were you an employee at the time of the accident? ☐ Yes ☐ No

If yes, who was your supervisor?

Describe Injury in Detail: (use additional page as necessary)

Severity: ☐ Non-disabling ☐ Disabling ☐ Fatal

Emergency Care & Patient Status

☐ First aid only ☐ Treatment at University Health Center ☐ Treatment at local hospital

☐ Confinement at hospital ☐ Other, please describe:

Details of Accident: (describe event, conditions including environmental, physical and emotional/personal factors which contributed to the injury. Use reverse side if necessary.) Be very specific.

Report Prepared By (if other than injured party)

Name Address Telephone

Signature

Please complete this report in full within 24 hours of incident. Return to the Chemical Hygiene Officer (349B Science Wing Jarvis Hall) and Safety & Risk Management (130 University Services) as soon as possible. Any questions, please call x1793.