



ENVIRONMENTAL HEALTH & SAFETY

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Hazardous Chemicals Standard Operating Procedure Template

Environmental Health and Safety (EH&S) at UAB require all laboratories submit this Standard Operating Procedure (SOP) before working with any chemical designated as highly hazardous. All applicable sections must be completed and submitted to EH&S for review.

Standard Operating Procedures (SOP) are required prior to working with or near any chemical designated as highly hazardous. Some SOPs may require review and approval by Research Safety Committees prior to project approvals or the issuance of an Animal Use Safety Information (AUSI) Sheet.

Once complete, the principal investigator (PI) must review form with all personnel that will be working with or near the highly hazardous chemicals. PI and all personnel must sign final page to document they have reviewed the SOP.

General Information on Chemicals and Procedures

Contact Information	
PI:	
Date:	
Cell Phone:	
Lab Location:	

Hazardous Materials to be Used		
Name	Quantity/Concentration	CAS Number



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Protocol Summary and Procedure

Please outline the procedures to be taken for use with this chemical. Examples include:

- Administration to animals (by food, injection, etc.)
- Will it be used in cell culture
- Where will the work be done



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Potential Hazards from Chemical

Please describe the potential hazards associated with the chemicals. Examples include:

- Chemical hazards (carcinogenic, irritant, corrosive, acutely toxic)
- Reproductive hazards (teratogens or mutagens)
- Physical hazards (reactive, unstable, pyrophoric, implosion, exothermic)
- Compressed gases, cryogenics, sharps, high pressure etc.

Safety Data Sheets (SDS)

Please list locations of chemical specific SDS and describe how personnel can access SDS in the laboratory. Also, a copy of the SDS must be included in this SOP.



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Controls and Training

Engineering Controls

List and describe the engineering controls used/needed for the procedure. Examples include:

- Fume hood or glove boxes
- Special ventilation
- HEPA filtered vacuum lines
- Temperature control
- Safe sharp devices, other safety devices etc.

Work Practice/Administrative Controls

Please list and describe work practice or administrative controls used or needed for the procedure. Examples include:

- Designated areas for procedure (for highly toxic chemicals)
- Requirement of two people for procedure (UAB policy)
- Restricting access to the room, designated area, and/or storage area
- Special Signage
- Housekeeping



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Personal Protective Equipment (PPE)

Refer to SDS for specific minimal PPE requirements then list and describe them below.

Consult with EH&S for additional suggestions and resources. Examples include:

- Gloves (note the specific type)
- Lab coats, suits, aprons
- Safety glasses, goggles, face shields
- Respirators, hearing protection
- Special equipment such as blast shields etc.

Training Requirements

Please list and describe specific training personnel must complete before using the highly hazardous chemical or starting the procedure. Completion of such training must be documented and included at the end of this SOP.

Emergency Response

Emergency Procedure

Describe the procedures to be followed in the event of an emergency. Attach fire escape routes, corral points, and floor plan exits.

UAB Police Number	205-934-3535 from cell phone or 911 from a campus-lined phone
Emergency Contact Number	
Location of Eyewash	
Location of Safety Shower	
Location of Fire Extinguisher	
Location of First Aid Kit	
Spill Kit	



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Exposure

Provide specific instructions on what personnel should do in the event of an exposure. If first aid for exposure is available, describe the procedure. If first aid is not available, describe what steps personnel should take if injured.

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Spills or Releases

Please describe specific instructions on what personnel should do in the event of a spill or gas release.

MAJOR SPILL:

- Involves the release of a highly toxic chemical
- Involves fire or explosion.
- Involves more than 500ml
 - Take Action!
 - Activate the fire alarm and evacuate the building!
 - Call 911 from campus phone or 934-3535 from a cell phone
 - Tell the person who answers the phone:
 - The location – types of hazardous materials involved,
 - Your name, and a phone number.
 - Personal Injury or Chemical Contamination
 - Move the victim to safety (only if safe to do).
 - Locate nearest emergency eyewash/safety shower if contaminated.
 - Remove any contaminated clothing.
 - Flush the area for 15 minutes

MINOR SPILL

- Alert people in the immediate area and restrict access.
- Locate the correct spill kit.
- Don the appropriate PPE – consult the SDS for special precautions
 - Clean, buttoned, long sleeve lab coat
 - Nitrile gloves if appropriate
 - Safety goggles or a full-face shield
- Liquids:
 - Cover with the appropriate materials (vermiculate, absorbent pads, etc.) to absorb the liquid.
 - Dispose of as chemical waste.



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- Powders:
 - Carefully sweep into a dustpan.
 - Avoid generating respirable dust.
 - Dispose of as chemical waste.

Fires

Please describe specific instructions on what personnel should do in the event of a fire.

Activate fire alarm and evacuate the building.

Call UAB Police-205-934-3535 from cell phone or 911 from a campus-lined phone

Report incident to EH&S-205 934 2487

Suitable extinguishing agents:

Signs and Symptoms of Exposure/Accidental Release

Please describe the specific signs and symptoms of an exposure to the chemical (visual cues or particular odors).

Routes of Exposure

Please describe the potential routes of exposure (inhalation, injection, skin/eye contact etc).



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Exposure Limit

Please list the [Permissible Exposure Limit \(PEL\)](#) or Threshold Limit Value (TLV) of the chemicals if applicable.

N/A

Exposure Monitoring

Please describe any personnel exposure and/or gas/spill exposure monitoring needed for the procedure or chemicals. For any specialized monitoring equipment please include who will be in charge of calibration and how often it requires calibration.

N/A

Occupational Medicine Requirements

Please describe any Occupational Medicine requirements associated with the procedure.

Examples include:

- Medical evaluation
- Fit testing
- Hearing loss prevention

N/A

Maintenance, Storage, and Disposal

Cleanup/Decontamination Procedure

Please Describe the process for cleaning the work area during and after the procedure. Include all decontamination materials to be used.



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Storage

Please describe how the chemical will be safely stored and the location where it will be stored. Also include expiration dates if applicable and any security procedures in place.

Transportation Procedures

Please describe how the chemical will be transported on campus if applicable.

N/A

Waste Disposal Procedures

Please describe how waste will be safely disposed. Examples of types of waste include:

- Chemical
- Radioactive
- Sharps
- Animals (bedding, cages, and carcasses)



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Review and Approval

Review Acknowledgment: *I have read, asked questions, and fully understand the hazards listed here and understand the safe working procedures for the procedure/materials described herein*

Name	Signature	Date
PI:		

This SOP is to be reviewed every 6 months or whenever a new hazard introduced :