

Chemical Hygiene Plan Chemical Hazard Assessment

Review KSU Chemical Hygiene Plan: <https://www.k-state.edu/safety/docs/CHP-FINAL.PDF>

Current Lab Group Members and Emergency Contact Information

Name	Email	Cell Phone	Home Phone

Other Emergency Contacts:

KSU (Medical Emergency, Fire, and Police) (785)-532-6412 or 911*

KSU Environmental, Health, and Safety (Lab Incidents and Spills) (785)-532-5856

Lab Building(s):Specify

Lab Building(s) Street Address: Specify

Lab Room(s) In Each Building: Specify

Responsibilities Within The Lab and Department

Responsibility	Frequency	Responsible Person
Self-Inspections	Routine	
Emergency Eyewash Station	Weekly	
Emergency Shower	Semi-Annual	
Fume Hood/Biosafety Cabinet	Annually	
Laminar Flow Hood	Annually	

Table F-5: Hazard Assessment for a Chemical

Laboratory Chemical Hazard Assessment and Overview
Laboratory Director / Principal Investigator: Location: Chemical Name: Description:

HIGH HAZARD SUBSTANCE (HHS) CHECKLIST
High Hazard Classification: <input type="checkbox"/> High Acute Toxicity <input type="checkbox"/> Carcinogen <input type="checkbox"/> Reproductive Toxin <input type="checkbox"/> Air Reactive / Pyrophoric <input type="checkbox"/> Water Reactive <input type="checkbox"/> Explosive / Unstable
Physical state/concentration:
Maximum quantity kept on hand: _____ Estimated rate of use (e.g., grams/month): _____
Toxicity: LD ₅₀ Oral (Rat) _____ LD ₅₀ Skin (Rabbit) _____ Other _____ Reactivity and Incompatibility: _____
SIGNIFICANT ROUTE(S) OF EXPOSURE (CHECK ALL THAT APPLY)
<input type="checkbox"/> Inhalation <input type="checkbox"/> Skin contact <input type="checkbox"/> Percutaneous injection <input type="checkbox"/> Eye contact <input type="checkbox"/> Ingestion
ADDITIONAL MATERIALS FOR REVIEW (ATTACHED)
<input type="checkbox"/> Safety Data Sheet (SDS) <input type="checkbox"/> Laboratory/Experimental Protocol <input type="checkbox"/> Other: _____
EXPOSURE CONTROLS
Ventilation/Isolation: Personnel must work under/in the following equipment to minimize personal exposure: <input type="checkbox"/> Chemical hood <input type="checkbox"/> Glove box/AtmosBag <input type="checkbox"/> BioSafety Cabinet <input type="checkbox"/> Balance Enclosure <input type="checkbox"/> Other (list): _____ If Glove box or AtmosBag, identify gas environment: _____
Personnel Protective Equipment (PPE)/Clothing: Laboratory coats, close-toed shoes, clothing that covers the legs and gloves (disposable latex or nitrile) are the minimum PPE requirements for all personnel working in the laboratory. Identify additional PPE requirements for work with HHS:
Protective clothing: <input type="checkbox"/> Disposable laboratory coat <input type="checkbox"/> Fire-resistant laboratory coat (e.g., Nomex) <input type="checkbox"/> Others (list): _____
Face / Eyes: <input type="checkbox"/> Face shield <input type="checkbox"/> Safety goggles <input type="checkbox"/> Safety glasses
Gloves (type): _____ <input type="checkbox"/> Respirator (type): _____
USE AND STORAGE
Authorized personnel: Identify categories of laboratory personnel who could obtain approval to handle and use this HHS:
<input type="checkbox"/> Principal Investigator <input type="checkbox"/> Employees/Staff <input type="checkbox"/> Students <input type="checkbox"/> Volunteers

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<input type="checkbox"/> Postdoctoral Employees <input type="checkbox"/> Other (describe):	
<input type="checkbox"/> Personnel must not work alone in the laboratory while handling this material	
<p>Procedure: In addition to the institution's chemical hygiene plan, identify what procedures/guidelines are available for the safe handling and use of this HHS. Check all that apply and list below.</p> <input type="checkbox"/> Laboratory procedure(s) <input type="checkbox"/> Journals <input type="checkbox"/> Manufacturer Guidelines <input type="checkbox"/> Other List all procedures:	
Vacuum system used? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, <input type="checkbox"/> Cold trap <input type="checkbox"/> Filter <input type="checkbox"/> other (list): Administered to animals? <input type="checkbox"/> Yes <input type="checkbox"/> No	
<p>Use Location: Bldg(s)/ Room(s): Identify location(s) where HHS is used (check all that apply): <input type="checkbox"/> Entire laboratory <input type="checkbox"/> Chemical hood <input type="checkbox"/> Designated area <input type="checkbox"/> Other (list): _____</p>	<p>Storage Location: Bldg(s)/ Room(s): Identify location(s) where HHS is stored (check all that apply): <input type="checkbox"/> Refrigerator/freezer <input type="checkbox"/> Hood <input type="checkbox"/> Double containment <input type="checkbox"/> Vented cabinet <input type="checkbox"/> Flammable liquid storage cabinet <input type="checkbox"/> Other (list): _____</p>
<p>Hazard Communication and Signage: Confirm that the hazards of the HHS are communicated to laboratory personnel and visitors where HHS is stored and used. <input type="checkbox"/> All containers are clearly labeled with the identity of the High Hazard Substance. <input type="checkbox"/> Designated storage and use locations within laboratory have signage identifying the HHS hazards present in those locations.</p>	
MEDICAL ATTENTION AND FIRST-AID	
Laboratory personnel should seek medical attention when: <ul style="list-style-type: none"> • signs or symptoms associated with a hazardous chemical exposure are experienced, or • exposure monitoring reveals an exposure level routinely above acceptable levels, or • a spill, leak, explosion or other event results in the likelihood of a hazardous exposure. Emergency Medical Provider: Location: Contact Information:	
<p>Are specific first-aid supplies/procedures required (e.g., antitoxin) for work with this material? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, attach the specific procedures to be followed post exposure to this form.</p>	
DECONTAMINATION	
<p>Are special decontamination procedures required for this HHS? <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, provide information below: Identify items that require decontamination: <input type="checkbox"/> Work areas <input type="checkbox"/> Nondisposable equipment <input type="checkbox"/> Glassware <input type="checkbox"/> Disposable laboratory equipment and supplies <input type="checkbox"/> Other (list):</p> <p>Decontamination Method (describe):</p>	
EMERGENCY PROCEDURES AND SPILL RESPONSE	
<p>Emergency Safety Equipment: In addition to an eyewash station, emergency shower and ABC fire extinguisher, are any other</p>	

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specialized emergency spill control or clean-up supplies required when working with this HHS? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, list all required supplies/equipment with locations:
WASTE MANAGEMENT AND DISPOSAL
Identify waste management methods for all research and waste byproducts associated with this HHS: <input type="checkbox"/> Chemicals wastes are collected and disposed as EPA hazardous waste including chemically contaminated sharps. <input type="checkbox"/> Neutralization or deactivation in laboratory prior to disposal (describe method; this method requires EHS preapproval). <input type="checkbox"/> HHS is EPA Acutely Toxic Chemical. Collect Sharps and used containers as Hazardous Waste. <input type="checkbox"/> Other disposal method (describe method; this method requires EHS preapproval). Chemical Waste Storage Location: _____
TRAINING
All laboratory personnel must at a minimum completed safety training on an annual basis. Additionally, laboratory personnel who handle or use the High Hazard Substance must demonstrate specific competency and familiarity regarding the safe handling and use of this HHS prior to purchase or use. The Principal Investigator is responsible for ensuring all laboratory personnel handling and using this HHS are trained in the following: <input type="checkbox"/> Review of HHS Checklist and associated documentation including Exposure Controls and PPE. <input type="checkbox"/> Review Safety Data Sheet including Signs and Symptoms of Exposure. <input type="checkbox"/> Hands-on training with the Principal Investigator or other knowledgeable and experienced senior laboratory staff member on the safe handling and use of the High Hazard Substance. <input type="checkbox"/> New personnel must work under close supervision of Principal Investigator or other knowledgeable and experienced senior laboratory staff member. <input type="checkbox"/> Other (list): _____

Referenced from the University of Massachusetts Amherst Environmental Health and Safety Department and the American Chemical Society's Committee Identifying and Evaluating Hazards in Research Laboratories