

LABORATORY SAFETY AUDIT

Department: _____

Building/Room No.: _____

Principal Investigator: _____

Lab Safety Officer: _____

Audited by: _____

Date Surveyed: _____

The Administration of Indiana University supports a safe research community that is expected to comply with applicable federal, state and local regulatory requirements. To ensure compliance with these regulations the Office of Environmental, Health, and Safety Management conducts regular Laboratory Safety Audits designed to identify potential EPA or OSHA violations.

General Laboratory Safety		Yes	No	Comments/Corrections
1.	Emergency information posted			
2.	Safety training completed by all lab personnel			
3.	Lab Chemical Safety Plan and MSDS sheets available			
4.	Personal protective equipment (gloves, safety glasses) available			
5.	Spill Response Guide and spill kit available			
6.	First aid kit available			
7.	Good housekeeping/all spills cleaned up			
8.	No food or drinks stored in chemical refrigerators or lab work areas			
9.	Exits and aisles are unobstructed			
10.	Combustibles not stored within 24 in. of ceiling (18 in. if sprinklered)			
11.	Fire doors and lab doors are unobstructed and not wedged open			
12.	Fire extinguishers present, unobstructed and in working order			
13.	Approved eyewash and shower available and unobstructed			
14.	Fume hood working properly			
15.	Machine guarding on all belts, pulleys, & mechanical devices			
16.	Extension cords not being used permanently			
17.	Electrical outlets not overloaded, piggybacked, or cascaded			
18.	Electrical cords are not frayed			
19.	Glass apparatus set up properly with all hose connections clamped			
Chemical Labeling, Handling, and Storage		Yes	No	Comments/Corrections
20.	All containers labeled (includes carboys, reagents, & wash bottles)			
21.	Container labels are in good condition and legible			
22.	Container labels have full chemical name and hazard identified			
23.	Chemical container integrity and lid are good			
24.	Chemicals segregated by hazard class and chemical compatibility			
25.	Flammable liquids are in approved cabinet (if >10 gal. in lab)			
26.	Refrigerated flammables stored in a proper fireproof refrigerator			
27.	Chemical storage freezers are defrosted			
28.	Chemicals are not stored in or around sinks or floor drains			
29.	Hazardous or corrosive <u>liquids</u> are not stored above eye level			
30.	Reactive and explosive chemicals are stored properly			
31.	All peroxide forming chemicals have date received or not expired			
32.	Controlled substances are securely stored and inventoried.			
33.	Perchloric acid digestions only in a perchloric acid fume hood			
34.	Fume hood not used for excess storage of chemicals or equipment			
35.	Gas cylinders stored away from ignition sources and secured			
Waste and Hazardous Waste		Yes	No	Comments/Corrections
36.	All sharps are disposed of properly in a labeled sharps container			
37.	Broken glassware is being disposed of properly			
38.	Biohazards and animal waste are stored and disposed of properly			
39.	All hazardous waste containers are labeled as "Hazardous Waste"			
40.	All waste containers are closed when not in use			
41.	Full waste containers are being delivered to EH&S or picked up			
42.	All waste is being disposed of properly (no drain or evaporation)			
43.	No excess combustibles (boxes, paper, plastic in lab or fume hoods)			

LABORATORY SAFETY REVIEW
Indiana University

SAFETY ITEMS

Location

Policy Documentation:

- ___ Laboratory Chemical Safety Plan
- ___ Hazardous Waste Management Guide
- ___ Spill Response Guide
- ___ Other

Information:

- ___ Material Safety Data Sheets
- ___ Other Reference Material

Safety Equipment:

- ___ Fire Extinguisher(s)
- ___ Emergency Eyewash
- ___ Safety Shower
- ___ Chemical Spill Control Kit
- ___ First Aid Kit
- ___ Fire Alarm
- ___ Emergency Telephones (and phone numbers)
- ___ Personal Protective Equipment (gloves, safety glasses, etc.)
- ___ Fume Hoods
- ___ Other

General Safety Items:

- ___ Emergency Exits
- ___ Emergency Contacts/Telephone Numbers
- ___ Electrical Panels/Circuit Breakers
- ___ Gas Shut-Off Valves
- ___ Other

Special Safety Equipment:

Location

___ Describe:

___ Describe:

I have reviewed the location and function of the above safety items:

Signature: _____

Date: _____

(Please document the successful completion of this training on form LCS-3 *Laboratory Safety Training*, page B-3.)

Keep this form on file in Appendix B of the *Laboratory Chemical Safety Plan*. Do not return this form to the Office of Environmental Health and Safety Management.

Personal Protective Equipment Hazard Assessment for Laboratory Workers

The Occupational Safety and Health Administration (OSHA) requires a personal protective equipment hazard assessment for any tasks that require personal protective equipment (i.e. gloves, safety glasses, etc.). Please check all activities that apply to your area. If a task is not listed add a new task at the bottom with the associated hazards and personal protective equipment (PPE). Please complete the hazard assessment for your laboratory and keep it in Appendix B of the Laboratory Chemical Safety Plan.

Date: _____

Supervisor/PI: _____ Assessment by: _____

Department: _____ Building/Room Number(s): _____

Chemical Hazards			
Check All That Apply	Task	Potential Hazard	Recommended PPE
<input type="checkbox"/>	Working with small volumes of corrosive liquids (< 1 liter).	Skin or eye damage	Safety glasses or goggles Light chemically resistant gloves Lab coat, closed shoe, pants
<input type="checkbox"/>	Working with large volumes of corrosive liquids (> 1 liter), acutely toxic corrosives, or work which creates a splash hazard	Large surface area skin or eye damage, poisoning, or great potential for eye and skin damage	Safety goggles and face shield Heavy chemically resistant gloves Lab coat, closed shoe, pants, and chemically resistant apron
<input type="checkbox"/>	Working with small volumes of organic solvents (< 1 liter).	Skin or eye damage Slight poisoning potential through skin contact	Safety glasses or goggles Light chemically resistant gloves Lab coat, closed shoe, pants
<input type="checkbox"/>	Working with large volumes of organic solvents (> 1 liter), very dangerous solvents, or work which creates a splash hazard	Major skin or eye damage, or potential poisoning through skin contact	Safety goggles and face shield Heavy chemically resistant gloves Lab coat, closed shoe, pants, and chemically resistant apron
<input type="checkbox"/>	Working with toxic or hazardous chemicals (solid or liquid).	Potential skin or eye damage, potential poisoning through skin contact.	Safety glasses (goggles for large quantities), light chemically resistant gloves, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with acutely toxic or hazardous chemicals (solid or liquid).	Great potential skin or eye damage, great potential poisoning through skin contact.	Safety goggles, appropriate heavy chemically resistant gloves, lab coat, closed shoe, pants Coveralls and booties if necessary.
<input type="checkbox"/>	Working with explosives.	Skin or eye damage from flying projectiles or chemicals.	Blast shield, safety goggles or full face shield, chemically resistant gloves, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with chemical dusts.	Skin or eye damage, respiratory damage.	Safety glasses or goggles, appropriate gloves, lab coat, closed shoes or boots if necessary, pants, Approved respiratory protection (call EH&S).
<input type="checkbox"/>	Chemical spill cleanup.	Skin or eye damage, respiratory damage.	Safety glasses or goggles, appropriate gloves, lab coat, closed shoes or boots if necessary, pants, respiratory protection (call EH&S).
Radiological Hazards			
<input type="checkbox"/>	Working with solid radioactive materials or waste.	Potential cell damage, potential spread of radioactive materials.	Safety glasses, gloves, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with radioactive chemicals (corrosives, flammables, liquids, powders, etc.).	Potential cell damage or spread of contamination plus hazards for the appropriate chemical hazards above.	Safety glasses (or goggles for splash hazard), light chemically resistant gloves, lab coat, closed shoe, pants. Use PPE for applicable chemical hazards above.
<input type="checkbox"/>	Working with ultraviolet radiation.	Conjunctivitis, corneal damage, erythema.	UV face shield and goggles, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with Laser radiation.	Retinal eye damage, skin damage.	Appropriate shaded goggles with optical density based on individual beam parameters, lab coat, closed shoe, pants. No jewelry or reflective items allowed.

**APPENDIX B
FORM LCS-4**

Check All That Apply	Task	Potential Hazard	Recommended PPE
<input type="checkbox"/>	Working with infrared emitting equipment (i.e. glass blowing).	Cataracts, flash burns to cornea.	Appropriate shaded goggles, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with radioactive human blood, body fluids, or blood borne pathogens (BBP).	Potential cell damage, potential spread of radioactive contaminants, or potential BBP exposure.	Safety glasses (goggles for splash hazard), light latex gloves, lab coat, closed shoe, pants.
Biological Hazards			
<input type="checkbox"/>	Working with small volumes of human blood, body fluids, tissues, or blood borne pathogens.	Potential contraction of infectious disease, potential spread of infectious disease.	Safety glasses, light latex gloves, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with large volumes of human blood, body fluids, tissues, or blood borne pathogens.	Increased potential for contraction of infectious disease or increased potential for spread of infectious disease.	Safety goggles with face shield, latex gloves, lab coat, closed shoe, pants. Coveralls and boot covers if necessary.
<input type="checkbox"/>	Working with live or poisonous animals and plants.	Animal bites, stings, or infectious disease. Skin or eye damage from contact with animal or plant poisons.	Safety glasses or goggles, protective gloves, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with animal specimens (preserved or unpreserved).	Potential exposure to infectious disease, animal toxins, or preservatives.	Safety glasses or goggles, protective gloves, lab coat, closed shoe, pants.
Physical Hazards			
<input type="checkbox"/>	Working with cryogenic liquids.	Major skin, tissue, or eye damage.	Safety glasses or goggles for large volumes, heavy insulated gloves, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with very cold equipment or dry ice.	Frostbite, hypothermia.	Safety glasses, insulated gloves and warm clothing, lab coat, closed shoe, pants.
<input type="checkbox"/>	Working with hot liquids, equipment, open flames (autoclave, bunsen burner, water bath, oil bath).	Burns resulting in skin or eye damage.	Safety glasses or goggles for large volumes, insulated gloves, lab coat, closed shoe, pants.
<input type="checkbox"/>	Metal arc or tungsten arc (TIG) welding.	Conjunctivitis, corneal damage, erythema, skin burns.	Appropriate shaded goggles and face shield, gloves, lab coat, closed shoe, pants.
<input type="checkbox"/>	Instrument repair.	Eye damage from foreign objects.	Safety glasses, no loose clothing or jewelry.
<input type="checkbox"/>	Metal or woodworking.	Eye damage from foreign objects, lacerations from burrs or splinters.	Safety glasses, gloves, no loose clothing or jewelry.
<input type="checkbox"/>	Working in nuisance dusts.	Skin or eye damage, respiratory damage.	Safety goggles, appropriate gloves, lab coat, closed shoes or boots if necessary, pants, NIOSH approved dust mask or other respiratory protection (call EH&S).
<input type="checkbox"/>	Glassware washing.	Lacerations.	Heavy rubber gloves, lab coat, closed shoes, pants.
<input type="checkbox"/>	Working with loud equipment, noises, sounds, or alarms, etc.	Potential ear damage and hearing loss.	Ear plugs or headphones as necessary.
New Tasks or Other Hazards			
Check All That Apply	Task	Potential Hazard	Recommended PPE
<input type="checkbox"/>			
Exempted Areas (Use the following space to describe protected lab areas where PPE is not required)			
Check All That	Lab Area	Physical Barrier (ie wall, curtain, lab bench)	Exemption (eyewear, gloves, etc.)
<input type="checkbox"/>			