

This form must be completed by the Principal Investigator (PI) in order to conduct a laboratory hazard assessment specific to the activities in their laboratories. The laboratory hazard assessment identifies hazards to employees and specifies personal protective equipment (PPE) to protect employees during work activities. The PI conducting the assessment must complete this Lab Hazard Assessment and review the completed assessment with their laboratory group. This completed form should be returned to The Environmental Health and Safety Office (EHSO) at LabSafety@uic.edu.

Procedure

Step 1

The PI or lab supervisor assures that all employees review the Laboratory Safety Plan, available electronically at <http://www.uic.edu/depts/envh/HSS/UICLabSafetyPlan.html>

Step 2

The PI, lab supervisor, or their designee completes this Lab Hazard Assessment and then reviews this document with all lab employees. It describes the tasks in the lab when an employee needs PPE to protect themselves from exposure to hazards. In this step, the hazard assessment is used as a training tool.

While discussing lab activities and the associated hazards with lab staff, the supervisor should address how their lab obtains PPE, what types of PPE are used in the lab and for which tasks, where and how the PPE is stored and maintained, how to properly use the PPE, and discuss any limitations of the PPE. The supervisor should also discuss general PPE safety practices, including not wearing PPE outside of lab hazard areas (e.g. hallways and eating areas). More information about PPE can be found in the [PPE Guide](#), [Glove Compatibility Charts](#), and [Respiratory Protection Program](#). www.uic.edu/depts/envh/HSS/LabSafety.html

Step 3

When the supervisor believes the employee has demonstrated understanding, the employee(s) and the supervisor then sign the following *Verification of PPE Training* form (section 3, last page) to document that PPE training has been conducted. A printed copy of this form is to be maintained inside your lab. You must also submit an electronic copy to EHSO by emailing LabSafety@uic.edu. (From the website, you should save this blank document locally on your computer before filling out.) If needed, the form can be returned via intracampus mail at mail code 645.

Step 4

Repeat or conduct a refresher training annually; whenever hazards change or are added; and/or before a new employee begins work in the lab.

This assessment consists of three sections and serves as a step in satisfying PPE training requirements.

Section 1: Lab Information

Section 2: Laboratory Hazard Assessment

Section 3: Verification of PPE Training

Section 1: Lab Information

Department	
Building Name (SES,COMRB, SEL,etc.)	
Lab Room Number	
Principal Investigator	
Phone Number	
Email Address	
Date hazard assessment completed	

Section 2: Laboratory Hazard Assessment

In this section, you will conduct a hazard assessment of the laboratory to identify activities where PPE is needed to protect the lab staff from exposure to hazards.

The following checklists are an overview of common lab activities and associated potential hazards and applicable PPE. Check each box that describes activities performed by lab personnel. If any hazards exist in your lab that have not been covered, please fill out the last item, "Other Hazards".

Are the following activities performed in the lab?		Chemical Hazards		
Yes	NO	Activity	Potential Hazard	Applicable PPE
<input type="checkbox"/>	<input type="checkbox"/>	Are you working inside a laboratory where chemicals manipulations are carried out?	Chemical exposure to the body, face, or hand.	At a minimum ANSI approved safety glasses, nitrile gloves, and a laboratory coat. See the chemical glove compatibility chart for help identifying gloves for laboratory use.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with large volumes (>4 liters) of flammable organic compounds?	Chemical exposure to the body, face, hand, and possible fire.	At a minimum ANSI approved safety glasses, nitrile gloves, and a laboratory coat. See the chemical glove compatibility chart for help identifying gloves for laboratory use.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with large volumes (>4 liters) of corrosive liquids that can create a splash hazard?	Chemical burns to face, hands, and body. Acids cause burns but bases vigorously attack proteins such as those in the eyes.	At minimum wear ANSI approved safety goggles, heavy chemical resistance gloves (ex. Neoprene), and lab coat. See the chemical glove compatibility chart for help identifying gloves for laboratory use.

Are the following activities performed in the lab?		Chemical Hazards (continued)		
Yes	NO	Activity	Potential Hazard	Applicable PPE
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with acutely toxic chemicals or OSHA regulated carcinogens?	Carcinogens specifically target certain parts of the body and cause cancer.	Please call 6-7411 or email LabSafety@uic.edu for guidance on appropriate PPE and engineering controls. See the Standard Operating Procedures (SOP) for acute toxins and carcinogens at www.uic.edu/depts/envh/HSS/LabSafety.html
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with air or water reactive chemicals?	Spontaneous fires, hydrogen gas fires, toxic gas by-products, and explosions are possible.	Work in inert atmosphere such as a glove box when possible. Safety glasses must be used at a minimum. Chemical-resistant gloves. A flame resistant lab coat should be used (e.g. Nomex). See the chemical glove compatibility chart for help identifying gloves for laboratory use.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with potentially explosive chemicals?	All explosive work requires a permit from EHSO. Danger to the public and possible death to the user.	No PPE is available to protect anyone from explosive materials; engineering controls are the only solution. Call 6-7411 immediately.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with perchloric acid?	Severe burns to the entire body. Perchloric Acid is a strong oxidizer that can result in explosions when in contact with flammable materials and certain metals.	At minimum wear ANSI approved safety goggles, heavy chemical resistance gloves (ex. Neoprene), and lab coat. Engineering controls need to be implemented to ensure fume hoods do not explode.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with Hydrofluoric acid (HF)? Calcium Gluconate, the antidote to HF, must be available when using this corrosive liquid.	HF can be fatal if absorbed into the skin. It is also a strong corrosive and causes severe burns. It damages bone marrow and contact with metals can cause a hydrogen fire.	At minimum wear ANSI approved safety goggles or face shield, heavy chemical resistance gloves (ex. Neoprene), including boots or safety shoes with polyvinyl chloride (PVC) or neoprene, as well as a lab coat.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with peroxidizable chemicals?	Peroxides have the potential to generate and accumulate peroxide crystal formations which may violently detonate when subjected to thermal or mechanical shock.	No amount of PPE can protect you from an explosion. Proper storage away from the sun, heat fluctuations, and dating/using all of the material before six months is recommended. Please see UIC Laboratory Safety Plan for more info.

Are the following activities performed in the lab?		Biological Hazards (Refer to the Biosafety in Microbiological & Biomedical Laboratories Manual for Detailed Explanations)		
Yes	NO	Activity	Potential Hazard	Applicable PPE
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with human derived blood, body fluids, tissues, or bloodborne pathogens (BBP)?	Exposure to infectious material.	Biosafety Level 2 containment practices. Safety glasses, goggles or face shield for protection from aerosols, splashes, or other eye hazard, light latex or nitrile gloves for broken skin or skin rash, lab coat or gown.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with preserved animal and/or human specimens?	Exposure to infectious material or preservatives.	Safety glasses or goggles, protective gloves such as light latex or nitrile for unpreserved specimens (select protective glove for preserved specimens according to preservative used), lab coat or gown.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with radioactive human blood, body fluids, or bloodborne pathogens (BBP)?	Cell damage, potential spread of radioactive contaminants, or potential BBP exposure.	Biosafety Level 2 containment practices. Safety glasses, face shield (goggles for splash hazard), light latex or nitrile gloves, lab coat or gown. Also requires use of a personal dosimeter.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with infectious agents or recombinant DNA classified as Risk Group 1?	These agents are not normally associated with disease in healthy human adults and are unlikely to cause human or animal diseases.	Biosafety Level 1 containment practices. Safety glasses or goggles for protection from splash or other eye hazard, light latex or nitrile gloves for broken skin or skin rash, lab coat or gown.
<input type="checkbox"/>	<input type="checkbox"/>	Are you manipulating cell lines, viruses, bacteria, or other organisms classified as Risk Group 2.?	These agents are associated with human disease but are rarely serious. Exposure to infectious materials by contact, mucous membranes, or inhalation.	Biosafety Level 2 containment practices. Safety glasses, goggles or face shield for protection from aerosols, splashes, or other eye hazard, light latex or nitrile gloves for broken skin or skin rash, lab coat or gown.
<input type="checkbox"/>	<input type="checkbox"/>	Are you manipulating infectious materials classified as Risk Group 2 with BSL-3 practices (BSL-2+)?	These agents are associated with human disease but are rarely serious. However, the laboratory procedures increase the risk of potential exposure. Exposure to infectious materials with moderate risk of exposure by contact, mucous membranes or inhalation.	Biosafety Level 2 plus containment practices. Safety glasses, faceshield or goggles for protection from splash or other eye hazard, light latex or nitrile gloves (double for certain procedures), lab coat or disposable gown (preferred),

Are the following activities performed in the lab?		Biological Hazards (continued) (Refer to the Biosafety in Microbiological & Biomedical Laboratories Manual for Detailed Explanations)		
Yes	NO	Activity	Potential Hazard	Applicable PPE
<input type="checkbox"/>	<input type="checkbox"/>	Are you manipulating infectious materials classified as Risk Group 3?	Exposure to infectious materials with high risk of exposure, particularly through the inhalation route. These agents are associated with serious or lethal human disease. Not ordinarily spread from one individual to another.	Biosafety Level 3 containment practices. Safety glasses, goggles for protection from splash or other eye hazard, light latex or nitrile gloves (double), full disposable gown or Tyvek suite (preferred) or scrubs with gown, Personal Air Protective Respirator (PAPR) respirator, shoe cover, dedicated shoes
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with live animals (Animal Biosafety Level 1, ABSL-1)? All animal lab procedures need to be checked by UIC Biologic Resources Laboratory 312-996-7040	Animal bites, scratches, and allergies.	Consider need for wire mesh glove.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with live animals (Animal Biosafety Level 2, ABSL-2)? All animal lab procedures need to be checked by UIC Biologic Resources Laboratory 312-996-7040	Animal bites, exposure to infectious material, Allergies, scratches.	Consider need for wire mesh glove. Safety glasses or goggles for protection from splash or other eye hazard, light latex, nitrile or vinyl gloves, lab gown, hair cover, shoe covers, surgical mask. Respiratory protection may be required for work with infected animals.

Are the following activities performed in the lab?		Radiological Hazards		
Yes	NO	Activity	Potential Hazard	Applicable PPE
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with unsealed and sealed radioactive materials or waste?	Cell damage, potential spread of radioactive materials is possible.	Safety glasses, impermeable gloves, lab coat. Requires use of a personal dosimeter.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with radioactive materials in hazardous chemicals (corrosives, flammables, liquids, powders) i.e. xylene/toluene scintillation cocktail)?	Cell damage or spread of contamination plus hazards for the specific chemical.	Safety glasses (or goggles for splash hazard), light chemical-resistant gloves, lab coat. Note: Select glove for the applicable chemical hazard. Requires use of a personal dosimeter. See the chemical glove compatibility chart for help identifying gloves for laboratory use.

Are the following activities performed in the lab?		Nanomaterial Hazards		
Yes	NO	Activity	Potential Hazard	Applicable PPE
<input type="checkbox"/>	<input type="checkbox"/>	Are you on working with engineered nanomaterials?	Inhalation, exposure, dermal exposure.	Contact EHSO at 6-7411 or LabSafety@uic.edu for specific guidance.

Are the following activities performed in the lab?		Laser Hazards		
Yes	NO	Activity	Potential Hazard	Applicable PPE
		Open-Beam		
<input type="checkbox"/>	<input type="checkbox"/>	Performing alignment, trouble-shooting or maintenance that requires working with an open beam and/or defeating the interlock(s) on any Class 3 or Class 4 laser system.	Eye damage, Skin damage	Appropriate Laser Safety Glasses with optical density based on individual beam parameters. Appropriate skin protection, i.e. long sleeves or lab coat. See Laser Safety Manual for further guidance
<input type="checkbox"/>	<input type="checkbox"/>	Viewing a laser beam with magnifying optics (including eyeglasses).	Eye damage, Skin damage	Appropriate Laser Safety Glasses with optical density based on individual beam parameters. Appropriate skin protection, i.e. long sleeves or lab coat. See Laser Safety Manual for further guidance
<input type="checkbox"/>	<input type="checkbox"/>	Working with a Class 3B laser open beam system with the potential for producing direct or Specular Reflections.	Eye damage, Skin damage	Appropriate Laser Safety glasses with optical density based on individual beam parameters. Appropriate skin protection, i.e. long sleeves or lab coat. See Laser Safety Manual for further guidance
		Closed-Beam		
<input type="checkbox"/>	<input type="checkbox"/>	Are you handling laser dye materials, such as powdered dyes, chemicals, and solvents?	Cancer, explosion, fire.	Safety glasses, flame-resistant lab coat, chemical resistant gloves. Select glove for the applicable chemical hazard. See the chemical glove compatibility chart for help identifying gloves for laboratory use.
<input type="checkbox"/>	<input type="checkbox"/>	Maintaining and repairing power sources for large Class 3B and Class 4 laser systems.	Electrocution, explosion, fire.	Electrical isolation mat. Appropriate skin protection, i.e. long sleeves or lab coat. See Laser Safety Manual for further guidance

Are the following activities performed in the lab?		Physical Hazards		
Yes	No	Activity	Potential Hazard	Applicable PPE
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with cryogenic liquids?	Major skin, tissue, or eye damage.	Face shield, cryogenic gloves, and a lab coat.
<input type="checkbox"/>	<input type="checkbox"/>	Are you removing freezer vials from liquid nitrogen?	Vials may explode upon rapid warming. Cuts to face/neck and frostbite to hands.	Face shield, cryogenic gloves, and a lab coat.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with very cold equipment or dry ice?	Cuts to face/neck and frostbite to hands.	Safety glasses, cryogenic gloves, possibly warm clothing, lab coat.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with hot liquids, hot equipment, open flames (i.e. autoclave, Bunsen burner, water bath, oil bath)?	Burns resulting in skin or eye damage.	Safety glasses or goggles for large volumes, insulated gloves (impermeable insulated gloves for liquids, steam), lab coat.
<input type="checkbox"/>	<input type="checkbox"/>	Are you washing glassware?	Lacerations are possible.	Heavy rubber gloves and a lab coat.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with loud equipment, noises, sounds, alarms, etc.	Potential ear damage and hearing loss.	Earplugs or ear muffs may be needed. Contact EHSO for noise monitoring.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with an Ultra centrifuge?	Imbalanced rotor can lead to broken vials, cuts, and possible explosion.	Safety glasses, lab coat, or nitrile gloves. Keep a maintenance log to prevent imbalanced rotor and possible explosion.
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with a sonicator?	Ear damage is possible.	Safety glasses or goggles, lab coat, latex, vinyl, or nitrile gloves. Earplugs or ear muffs may be needed. Contact EHSO for noise monitoring
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with sharps?	Cuts and exposure.	Safety glasses, lab coat, vinyl and nitrile gloves
<input type="checkbox"/>	<input type="checkbox"/>	Are you working with electromagnetic fields?	Electromagnetic fields can damage pacemakers and are a hazard to people with sickle cell anemia.	There is no PPE to protect an individual from electromagnetic fields. Maintaining a proper distance is critical. Cell phones and credit cards also should not be exposed to electromagnetic fields.

Are the following activities performed in the lab?		Other Hazards (fill in specific lab hazards that were not mentioned)		
Yes	NO	Activity	Potential Hazard	Applicable PPE
<input type="checkbox"/>	<input type="checkbox"/>			
<input type="checkbox"/>	<input type="checkbox"/>			

