

LABORATORY PERSONAL PROTECTIVE EQUIPMENT (PPE) HAZARD ASSESSMENT

Purpose and Description

The laboratory personal protective equipment (PPE) hazard assessment guide identifies hazards to which laboratory workers may be exposed and specifies PPE to protect against these hazards during work operations. When completed, the document and its associated training will satisfy the Department of Labor and Industries requirements for PPE as required in Washington Administrative Code (WAC) 296-800-160.

This document must be completed by the Principal Investigator (PI), Lab Manager, or their designee. This person must conduct a laboratory hazard assessment that is specific to operations in their laboratories. EH&S personnel are available to assist with the hazard assessment and can review the form. EH&S may be consulted by calling 206-543-7388. The PI's/Lab Managers are responsible for ensuring PPE requirements are followed.

This Hazard Assessment document consists of the following.

Section 1: Instructions and Guidance on PPE Selection, Pages 2 and 3.

Section 2: Laboratory PPE Hazard Assessment, Pages 4 to 17.

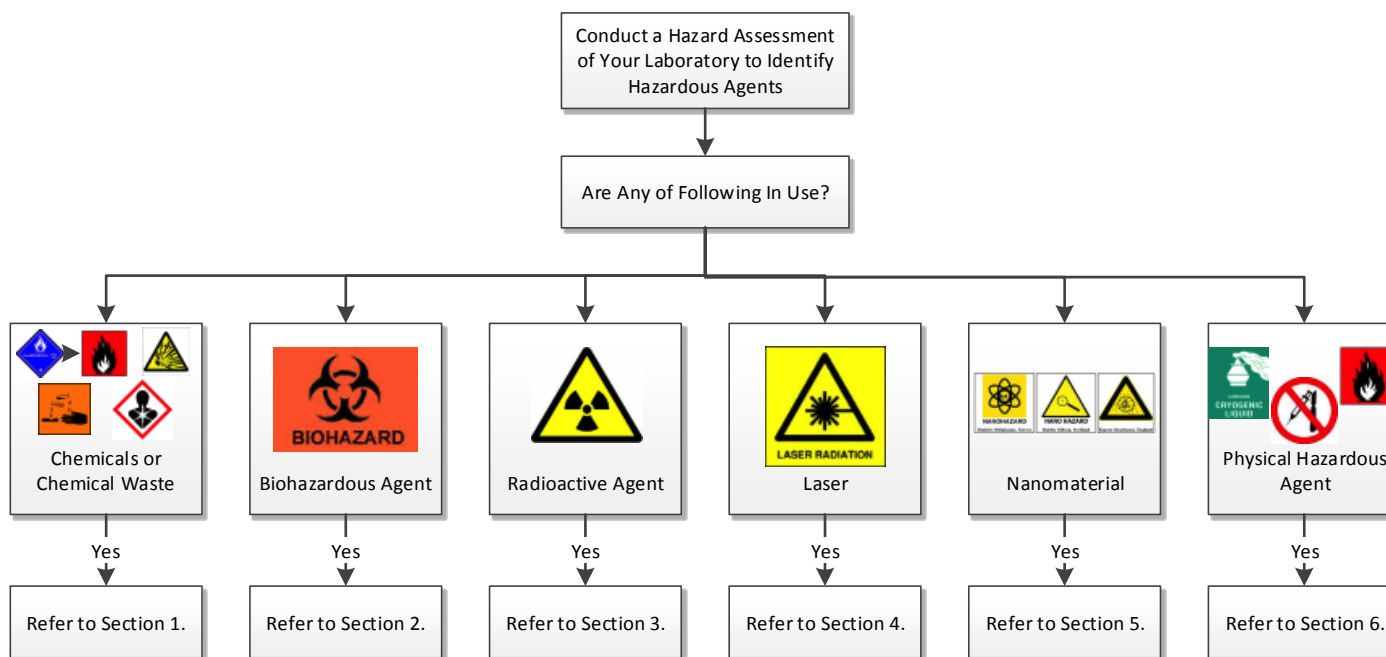
Section 3: Certify the Hazard Assessment, Page 18.

Section 4: PPE Training Documentation, Pages 19 and 20.

Section 1: Instructions and Guidance on PPE Selection

The Principal Investigator, Lab Manager, or their designee will conduct and certify the hazard assessment.

1. Conduct a hazard assessment of the laboratory operations using the PPE Assessment Guide.
 - Complete the section if the potentially hazardous agent is used in your laboratory: (1) chemical, (2) biohazard, (3) radioactive, (4) laser, (5) nanomaterial, and/or (6) physical.
 - This guide will assist in identifying work tasks that require the use of PPE to protect lab staff from exposures to hazards. If performed, check the applicable box for “Yes”. If not, check the applicable box for “No”. As needed, add tasks to the list to customize it for your laboratory.
 - For each task performed, provide additional information by marking the appropriate additional box or marking “Other PPE: Specify” and describing in the space provided the lab specific PPE designated for the work task.



GENERAL GUIDANCE ON PERSONAL PROTECTIVE EQUIPMENT (PPE) SELECTION

1. **Minimum Laboratory PPE.** In general, the minimum PPE that should be worn while performing laboratory work is the following:
 - Safety glasses
 - Disposable nitrile or other appropriate chemical resistant gloves
 - Lab coat (full length) and long pants, long skirt, or equivalent leg covering (no shorts)
 - Laboratory footwear (as described below)
2. **Chemical-Resistant Gloves.** Chemical-resistant gloves must be selected based on the specific chemical(s) used and manufacturer's glove permeation and compatibility charts. Guidance is available at:
<http://www.ehs.washington.edu/manuals/lsm/lsmg.pdf>
3. **Laboratory Footwear.** Laboratory footwear should fully cover the feet to protect against chemical spills. Avoid sandals, flip flops, flats, canvas/breathable fabric tops, and shoes constructed of mesh (such as athletic shoes) unless impervious chemical-resistant booties that protect the entire foot are worn over them.
4. **Airborne / Inhalation Hazard: Engineering Controls and Respiratory Protection.**
 - **Chemical Fume Hood.** When materials have a potential for becoming airborne, use a chemical fume hood or other engineering control whenever possible. Activities that generate airborne contaminants or odors that are not conducted inside of a chemical fume hood or using some other engineering control (such as a local exhaust at the workbench) should be evaluated to determine if the activity presents an inhalation hazard.
 - **Biosafety Cabinet Use.** Use a biosafety cabinet to minimize exposure. Activities that cannot be conducted inside of a biosafety cabinet should be separately evaluated by the EH&S Biosafety Office. For BSL-3 or ABL-3 activities, the PPE requirements will be addressed by the BSL-3 facility.
 - **Respiratory Protection.** If respiratory protection is identified during the hazard assessment, a respiratory protection program must be implemented that includes a hazard assessment, medical evaluation to wear a respirator, respirator training, and respirator fit testing. Contact EH&S at 543-7388 for assistance in developing the program. Guidance is available at: <http://www.ehs.washington.edu/ohsresp/index.shtm>



1.0 CHEMICAL HANDLING PROTECTION (Page 1 of 5)

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE Designated For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	C1. Working with solids of low or moderate toxicity. YES General chemicals for making buffers and solutions—PPE, where appropriate.	<ul style="list-style-type: none"> • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	C1. Working with solids of low or moderate toxicity. YES Aminoglycosides	<ul style="list-style-type: none"> • Skin damage • Eye damage • Toxic by skin contact Avoid breathing dust	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Other PPE, Specify: <p>Weigh aminoglycosides in a chemical fume hood. Wear gloves, safety goggles and lab coat.</p>
<input type="checkbox"/> <input type="checkbox"/>	C1. Working with solids of low or moderate toxicity.	<ul style="list-style-type: none"> • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Other PPE, Specify:

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<input type="checkbox"/> <input type="checkbox"/>	<p>C2. Working with small volumes (<100 ml.) of corrosive (acids or caustics) liquids or solids.</p> <p>YES</p> <p>Acids and bases are used in various procedures including titration of buffers, tissue fixation or cleaning of laboratory glassware—wear PPE.</p>	<ul style="list-style-type: none"> • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <p>Lab coat, nitrile gloves, eye protection. Heavy duty neoprene gloves should be worn when handling concentrated acids or bases.</p> <p>Acids are only dispensed in fume hood in CD 186A or CD 186D.</p>
<input type="checkbox"/> <input type="checkbox"/>	<p>C3. Working with large volumes of corrosive (acids or caustics) or acutely toxic materials that may splash.</p> <p>YES</p> <p>Histological procedures: Deparaffinizing and coverslipping: Xylene</p>	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage • Toxic by prolonged skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety goggles ✓ Face: If splash or splatter may occur – Face shield ✓ Hands: Disposable chemical resistant gloves (neoprene) ✓ Body: Lab coat;. <input type="checkbox"/> Body: Chemical resistant apron. <input type="checkbox"/> Inhalation: Respiratory protection. <i>Contact EH&S for respiratory protection program assistance.</i> <input type="checkbox"/> Other PPE, Specify: <p>Use in the hood. If using nitrile gloves, remove immediately or dry with paper towel upon contact. Place paper towels in hood until dry.</p>
<input type="checkbox"/> <input type="checkbox"/>	<p>C4. Working with small volumes (<100 ml.) of flammable solvents or materials.</p> <p>YES</p> <p>Molecular biology and histological procedures:</p> <p>Ethanol</p> <p>Isopropanol</p> <p>Propylene Oxide</p> <p>Xylene</p> <p>Methanol</p> <p>Choroform</p> <p>Phenol</p>	<ul style="list-style-type: none"> • Skin damage • Eye damage • Toxic by skin contact • Fire 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <p>Gloves:</p> <p>Nitrile for alcohol</p> <p>Butyl for Propylene oxide and xylene.</p> <p>For Propylene Oxide:</p> <p>Use slide racks and forceps to minimize contact.</p>

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<input type="checkbox"/> <input type="checkbox"/>	<p>C5. Working with large volumes (>100 ml.) of flammable solvents. Source of heat or ignition is nearby.</p> <p>YES Histological procedures</p> <p>Xylene Ethanol Isoheptane</p>	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage • Toxic by skin contact • Fire 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Inhalation: Respiratory protection. <i>Contact EH&S for respiratory protection program assistance.</i> <input type="checkbox"/> Other PPE, Specify: <p style="text-align: center;">USE IN HOOD ONLY.</p>



1.0 CHEMICAL HANDLING PROTECTION (Page 2 of 5)

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	C6. Working with chemicals of high acute toxicity (e.g. hydrogen fluoride, hydrogen cyanide). NO	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Eyes: Safety goggles <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Inhalation: Respiratory protection. <i>Contact EH&S for respiratory protection program assistance.</i> <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	C7. Working with particularly hazardous agent such as: <ul style="list-style-type: none"> • Human carcinogen. • Mutagen. YES Molecular Biology: Agarose Gels Ethidium Bromide Injection of BrdU or EdU for in vivo assay of DNA synthesis. BrdU EdU Chromagenic substrate for Immunocytochemistry: Diaminobenzidine	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; ✓ <input type="checkbox"/> Eyes: Safety goggles <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Inhalation: Respiratory protection. <i>Contact EH&S for respiratory protection program assistance.</i> <input type="checkbox"/> Other PPE, Specify: <p>Wear double nitrile gloves when performing BrdU administration.</p> <p>Accidental self-injection hazard with BrdU: Wear double gloves (latex or nitrile), protective gown and safety goggles or face shield.</p>
<input type="checkbox"/> <input type="checkbox"/>	C7. Working with particularly hazardous agent such as: <ul style="list-style-type: none"> • Toxin YES	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage • Toxic by skin contact 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)

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	<p>Injection of Mice with DT: Diphtheria Toxin</p> <p><i>DO NOT HANDLE UNLESS YOU have RECEIVED current diphtheria immunization.</i></p>	<p>Inhalation, ingestion , skin absorption, eye contact or accidental injection!</p> <p>No effect if administered orally, but injection is a danger.</p> <p>Do not work with toxin in a dried state. Work only with reconstituted material.</p>	<p><input type="checkbox"/> Eyes: Safety goggles</p> <p><input type="checkbox"/> Face: Splash or splatter may occur - Face shield</p> <p><input type="checkbox"/> Inhalation: Respiratory protection. <i>Contact EH&S for respiratory protection program assistance.</i></p> <p><input type="checkbox"/> Other PPE, Specify:</p> <p>Wear PPE: Nitrile gloves, goggles, face protection if splashing is possible, lab coat with tight fitting sleeves, respiratory protection if aerosol potential exists when work is done outside of a fume hood or approved containment.</p> <p>Wear double gloves (latex or nitrile), protective gown and safety goggles or face shield.</p> <p>✓ Wear protective gloves and work in a well ventilated area. Avoid contact with open wounds. Compound is inactivated by pH <1 , or >12.</p>
<p><input type="checkbox"/> <input type="checkbox"/></p>	<p>C7. Working with particularly hazardous agent such as:</p> <ul style="list-style-type: none"> • Human carcinogen. • Mutagen. • Antineoplastic. • Reproductive toxin. <p>YES</p> <p>Treatment of Fish with Cisplatin Cisplatin</p> <p>Treatment of mice with Tamoxifen</p> <p>Anesthetics: Injectables Inhaled</p>	<ul style="list-style-type: none"> • Inhalation • Skin damage • Toxic by skin contact 	<p>✓ Eyes: Safety glasses</p> <p>✓ Hands: For Carcinogens, Mutagens, and Chemotherapy/Other Hazardous Drugs: Chemo exam gloves that are tested to meet ASTM D6978-05; Double glove</p> <p>✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</p> <p><input type="checkbox"/> Eyes: Safety goggles</p> <p><input type="checkbox"/> Face: Splash or splatter may occur - Face shield</p> <p><input type="checkbox"/> Inhalation: Respiratory protection. <i>Contact EH&S for respiratory protection program assistance.</i></p> <p><input type="checkbox"/> Other PPE, Specify:</p> <p>✓</p>
		<ul style="list-style-type: none"> • 	<p>✓</p>
		<ul style="list-style-type: none"> • 	<p>✓</p>
<p><input type="checkbox"/> <input type="checkbox"/></p>	<p>C8. Working with an apparatus with contents under pressure or vacuum (mm of Hg, psi, or torr).</p>	<ul style="list-style-type: none"> • Skin damage • Eye damage 	<p>✓ Eyes: Safety glasses</p> <p>✓ Body: Lab coat;</p> <p><input type="checkbox"/> Face: Face shield</p> <p><input type="checkbox"/> Eyes and/or Face: For high risk activities - Safety goggles and face shield</p>

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	<p>YES</p> <p>Vacuum chamber (bell jar) for storing hygroscopic reagents and SEM specimens.</p>		<p><input type="checkbox"/> Body: For chemical use, chemical-resistant apron</p> <p><input type="checkbox"/> Other PPE, Specify:</p> <p>Open slowly, use caution, do not chip or scratch glass.</p> <p>WEAR EYE PROTECTION. LAB COAT AND GLOVES MAY ALSO BE DESIRABLE.</p>
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1.0 CHEMICAL HANDLING PROTECTION (Page 3 of 5)

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	C9. Working with air or water reactive chemicals NO	<ul style="list-style-type: none"> Exposure to toxic gases, heat, and/or energy Inhalation Skin damage Eye damage Fire 	<ul style="list-style-type: none"> ✓ Eyes: Safety goggles ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Hands: Heat resistant or chemical resistant gloves. Specify under other PPE. <input type="checkbox"/> Body: If fire hazard, flame-resistant lab coat <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	C10. Working with pyrophoric materials. NO	<ul style="list-style-type: none"> Fire Severe burns Inhalation Skin damage Eye damage 	<ul style="list-style-type: none"> ✓ Eyes: Safety goggles ✓ Hands: Inner disposable nitrile or appropriate chemical resistant gloves ✓ Hands: Outer heat-resistant gloves ✓ Body: Flame resistant lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) ✓ Body: Synthetic clothing must not be worn when working with pyrophoric materials <input type="checkbox"/> Face: Splash or splatter may occur – Face shield <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	C11. Working with potentially explosive chemicals. NO	<ul style="list-style-type: none"> Detonation Flying debris Skin damage Eye damage Fire 	<ul style="list-style-type: none"> ✓ Eyes: Safety goggles ✓ Hands: Inner disposable nitrile or appropriate chemical resistant gloves ✓ Hands: Outer heat-resistant gloves ✓ Body: Flame resistant lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) ✓ Body: Synthetic clothing must not be worn when working with explosive materials <input type="checkbox"/> Face: Splash or splatter may occur – Face shield <input type="checkbox"/> Eyes, Face, or Body: For high risk activities - Blast shield <input type="checkbox"/> Other PPE, Specify:



1.0 CHEMICAL HANDLING PROTECTION (Page 4 of 5)

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	<p>C12. Working with high temperature equipment or objects.</p> <p>YES</p> <p>Use insulated gloves to remove hot items</p> <p>Autoclave— Microwave— Bunsen burner; Caution with flammable materials in vicinity (including chemicals, clothing, hair, kimwipes).</p>	<ul style="list-style-type: none"> • Burns • Fire 	<ul style="list-style-type: none"> ✓ Hands: High temperature thermal insulated gloves ✓ Body: Synthetic clothing must not be worn when working with high temperature equipment or objects <input type="checkbox"/> Face: Splash or splatter may occur – Face shield <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	<p>C13. Working with cryogenic material.</p> <p>YES</p> <p>FREEZING TISSUE SAMPLES Isoheptane cooled on dry ice or liquid nitrogen.</p>	<ul style="list-style-type: none"> • Burns • Frostbite • Eye damage • Hypoxia in confined spaces 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Eyes: For large volumes - Safety goggles ✓ Face: Splash or splatter may occur - Face shield ✓ Hands: Inner gloves - Disposable nitrile or appropriate chemical resistant gloves ✓ Hands: Outer gloves: Cryogenic low temperature insulated gloves ✓ Body: Lab coat; Long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) <input type="checkbox"/> Other PPE, Specify: <p>Use in well ventilated area.</p>
<input type="checkbox"/> <input type="checkbox"/>		<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> ✓
<input type="checkbox"/> <input type="checkbox"/>	<p>C14. List any other particularly hazardous lab task involving chemicals.</p> <p>Preparation of Formaldehyde and Glutaraldehyde tissue fixatives:</p> <p>Both are known carcinogen.</p>	<p>Conduct risk assessment: Hazard depends on task and chemical properties</p> <ul style="list-style-type: none"> • Inhalation • Skin damage • Carcinogen • Ingestion 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or other appropriate chemical resistant gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Face: Splash or splatter may occur – Face shield <input type="checkbox"/> Body: Chemical resistant apron <input type="checkbox"/> Inhalation: Respiratory protection. <i>Contact EH&S for respiratory protection program assistance.</i>

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	<ul style="list-style-type: none"> Keep away from heat, sparks, and flame. Keep separate from oxidizing agents, alkalis, inorganic acid, ammonia, phenol, isocyanates, peracids (non-chlorine bleaching agents such as H₂O₂), and anhydrides. 	<ul style="list-style-type: none"> Eye damage Toxic by skin contact 	<input type="checkbox"/> Other PPE, Specify: <p>PPE: safety glasses or visor, lab coat, gloves.</p> <p>Carry out all work in the fume hood.</p> <p>Use prill rather than powder to reduce inhalation potential.</p>
<input type="checkbox"/> <input type="checkbox"/>	<p>C14. List any other particularly hazardous lab task involving chemicals.</p> <p>Secondary fixation following glutaraldehyde fixation for electron microscopy.</p> <p>OsO₄ (osmium tetroxide) is a strong oxidizer. Avoid contact with chemicals that are reactive with strong oxidizers. Toxic.</p> <p>Vapors can cause corneal burn.</p>	<p>Conduct risk assessment: Hazard depends on task and chemical properties</p> <ul style="list-style-type: none"> Highly toxic by: <ul style="list-style-type: none"> Inhalation Skin contact Ingestion Skin damage Eye damage (vapors) 	<input checked="" type="checkbox"/> Eyes: Safety glasses <input checked="" type="checkbox"/> Hands: Disposable nitrile (NOT LATEX) or other appropriate chemical resistant gloves <input checked="" type="checkbox"/> Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input checked="" type="checkbox"/> Use in hood. <input type="checkbox"/> . <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	<p>C14. List any other particularly hazardous lab task involving chemicals.</p> <p>Epoxy embedding: All of the component chemicals in epoxy resins are toxic in some degree. All are considered to be carcinogenic, all are known to be mutagenic and allergenic. WEAR PPE, avoid contact with them, or breathing their fumes.</p>	<p>Conduct risk assessment: Hazard depends on task and chemical properties</p> <ul style="list-style-type: none"> Skin damage Ingestion Inhalation Eye damage Toxic by skin contact 	<input checked="" type="checkbox"/> Eyes: Safety glasses <input checked="" type="checkbox"/> Hands: Disposable nitrile or appropriate chemical resistant gloves <input checked="" type="checkbox"/> Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Eyes: Safety goggles <input type="checkbox"/> Face: Splash or splatter may occur - Face shield <input type="checkbox"/> Inhalation: Respiratory protection. <i>Contact EH&S for respiratory protection program assistance.</i> <input type="checkbox"/> Other PPE, Specify: <input checked="" type="checkbox"/> Use in hood. <p>Note; Polymerized epoxy resins are inert.</p>
<input type="checkbox"/> <input type="checkbox"/>	<p>C14. List any other particularly hazardous lab task involving chemicals.</p> <p>Epoxy embedding:</p>	<p>Conduct risk assessment: Hazard depends on task and chemical properties</p> <ul style="list-style-type: none"> Skin damage Carcinogen 	<input checked="" type="checkbox"/> Eyes: Safety glasses <input checked="" type="checkbox"/> Hands: Butyl Rubber Gloves or other appropriate chemical resistant gloves <input checked="" type="checkbox"/> Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3). <input type="checkbox"/> Face: Splash or splatter may occur – Face shield

LABORATORY PPE HAZARD ASSESSMENT

	<p>Propylene oxide. Used as a transitional solvent between dehydration and infiltration/embedding in epoxy resin.</p> <p>Extremely flammable. Toxic. May cause cancer. Causes burns. Harmful by inhalation, skin contact or ingestion.</p>	<ul style="list-style-type: none"> • Ingestion • Inhalation • Eye damage • Toxic by skin contact • Fire • Skin irritation with prolonged exposure 	<p><input type="checkbox"/> Other PPE, Specify:</p> <p><input checked="" type="checkbox"/> Use in hood.</p> <p>Use extreme caution when handling. Keep away from any possible source of ignition.</p>
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1.0 CHEMICAL HANDLING PROTECTION (Page 5 of 5)

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	<p>C15. Minor (or small) spill cleanup. Spill can be cleaned up with standard spill kit.</p> <p>YES</p> <p>Aldehyde fixatives: Mop up and rinse materials down sink with lots of COLD running water.</p> <p>Xylene spills (and other volatile materials such as propylene oxide): (mop up, put materials in hood to evaporate)</p> <p>Alcohols: Mop up and allow to evaporate.</p> <p>Osmium Tetroxide: Mop up with paper or cotton towels. Place in sealed container or mix with corn oil to neutralize.</p>	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage 	<ul style="list-style-type: none"> ✓ Eyes: Safety goggles ✓ Face: Splash or splatter may occur - Face shield ✓ Hands: Chemical-resistant gloves for spill cleanup ✓ Body: Lab coat; Long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) ✓ As needed, contact EH&S for assistance <input type="checkbox"/> Foot: Shoes covers <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	<p>C16. Large spill cleanup. Spill is too large or complex to clean up with standard spill kit.</p> <p>YES</p> <p>Aldehyde fixatives: Neutralize and mop.</p> <p>Xylene spills: Use bucket of vermiculate absorbent.</p> <p>Acid spills:</p>	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage 	<ul style="list-style-type: none"> ✓ Mandatory: Follow Required Procedure <ul style="list-style-type: none"> • If possible, stop or contain the release • Evacuate and secure the area • Assist injured or contaminated persons • Call 911 for assistance: Report injuries, fires, or request cleanup assistance • Call EH&S for assistance

LABORATORY PPE HAZARD ASSESSMENT

	Use bucket of sodium bicarbonate.		
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 2.0 BIOHAZARDOUS AGENT PROTECTION GENERAL			
Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	B1. Working with human blood, body fluids, cell lines (primary or established), tissues, or blood borne pathogens (BBP). NO	<ul style="list-style-type: none"> • Exposure to infectious material 	<ul style="list-style-type: none"> ✓ Hand: Latex or nitrile gloves ✓ Body: Lab coat <input type="checkbox"/> Eye: Safety glasses <input type="checkbox"/> Face: Splatter shield on tabletop <input type="checkbox"/> Face: Face shield <input type="checkbox"/> Face: Safety glasses and a mask <input type="checkbox"/> Body: Disposable gown (optional) <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	B2. Working with animal and/or human specimens preserved in fixative (such as formalin or paraformaldehyde solution) Preserving animal and/or human specimens with fixative (such as formalin or paraformaldehyde solution) YES	<ul style="list-style-type: none"> • Exposure to fixative used to preserve specimen If tissue is fixed, there is no longer an exposure to infectious material.	<ul style="list-style-type: none"> ✓ Eye: Safety glasses ✓ Hand: Impermeable glove for preserved specimens that is chemical-resistant to fixative used ✓ Body: Lab coat <input type="checkbox"/> Body: Disposable gown <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	B3. Working with radioactive human blood, body fluids, or blood borne pathogens (BBP). NO	<ul style="list-style-type: none"> • Exposure to infectious material • Cell damage • Potential spread of radioactive contaminants 	<ul style="list-style-type: none"> ✓ Hand: Latex or nitrile gloves ✓ Eye: Safety glasses or safety goggles for splash hazard ✓ Face: Splash or splatter may occur - Face shield ✓ Body: Lab coat <input type="checkbox"/> Body: Disposable gown <input type="checkbox"/> Other PPE, Specify:





2.1 BIOHAZARDOUS AGENT PROTECTION – RISK GROUP 1, 2, 3

Task Performed Yes No	Task Description (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	B4. Working with agents or recombinant DNA classified as Risk Group 1 and requiring Biosafety Level 1 (BSL-1) containment. YES	<ul style="list-style-type: none"> Biological agents that typically pose a minimal potential for infection by injection, skin exposure, ingestion or inhalation. 	<input checked="" type="checkbox"/> Hand: Latex or nitrile gloves <input type="checkbox"/> Eye: Safety glasses, for splash or other eye hazard <input type="checkbox"/> Eye: Safety goggles, splash or other eye hazard <input type="checkbox"/> Body: Lab coat <input type="checkbox"/> Body: Disposable gown <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	B5. Manipulation of recombinant DNA, cell lines, viruses, bacteria, or other organisms classified as Risk Group 2 and requiring Biosafety Level 2 (BSL-2). YES Adenovirus Retinovirus (replication incompetent) Perform aerosol generating procedure: Vortex, sonicate, pipette, tissue harvest	<ul style="list-style-type: none"> Biological agents that pose a moderate potential for infection by injection, skin exposure, ingestion or inhalation. 	<input checked="" type="checkbox"/> Eye: If not working in a BSC: Safety glasses <input checked="" type="checkbox"/> Hand: Latex or nitrile gloves <input checked="" type="checkbox"/> Body: Lab coat <input type="checkbox"/> Eye: If not working in a BSC: Safety goggles <input type="checkbox"/> Body: Surgical gown <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	B6. Manipulation of infectious materials classified as Risk Group 3 but manipulated in a BSL 2 facility with BSL-3 practices (BSL 2+). NO	<ul style="list-style-type: none"> Biological agents that pose a moderate/ serious potential for infection by injection, skin exposure, ingestion or inhalation. 	<input checked="" type="checkbox"/> Eye: Safety glasses, for splash or other eye hazard <input checked="" type="checkbox"/> Hands: Nitrile gloves (double) <input checked="" type="checkbox"/> Body: Disposable gown (preferred) that ties in back <input checked="" type="checkbox"/> Inhalation: Respiratory protection as determined by risk assessment. <i>Contact EH&S for respiratory protection program assistance.</i> <input type="checkbox"/> Eye: Safety goggles, for splash or other eye hazard <input type="checkbox"/> Body: Lab coat <input type="checkbox"/> Other PPE, Specify:

LABORATORY PPE HAZARD ASSESSMENT

<input type="checkbox"/> <input type="checkbox"/>	<p>B7. Manipulation of infectious materials classified as Risk Group 3 and requiring Biosafety Level 3 (BLS-3) containment.</p> <p>NO</p>	<ul style="list-style-type: none"> • Biological agents that pose a serious or lethal potential for infection via injection, skin exposure, ingestion or inhalation 	<ul style="list-style-type: none"> ✓ Eye: Safety glasses, for splash or other eye hazard ✓ Hands: Nitrile gloves (double) ✓ Body: Full disposable coverall suit (preferred) ✓ Foot: Shoe cover or dedicated shoe ✓ Inhalation: Respiratory protection as determined by risk assessment. <i>Contact EH&S for respiratory protection program assistance.</i> <input type="checkbox"/> Eye: Safety goggles, for splash or other eye hazard <input type="checkbox"/> Other PPE, Specify:
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 2.2 BIOHAZARDOUS AGENT PROTECTION – BIOSAFETY LEVEL 1, 2, 3			
Task Performed Yes No	Task Description (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks Follow Appropriate BSL Practices
<input type="checkbox"/> <input type="checkbox"/>	B8. Working with live animals: General safety concerns YES Working with mice and rats: <ul style="list-style-type: none"> • Wear PPE • Wear SPF PPE when entering SPF facilities (CHDD vivarium and 6th floor animal housing areas). Chicken Eggs	<ul style="list-style-type: none"> • Animal bites • Exposure to animal allergens Eggs: Potential Staph and Strep exposure.	<input type="checkbox"/> Animal bites: Restraints or bite-resistant gloves YES <input type="checkbox"/> Animal allergen: Voluntary use of N95 respirator or PAPR. For allergens: Contact EH&S for respiratory protection program assistance. <input type="checkbox"/> Specific Pathogen Free (SPF) Area: Hair bonnet, gown, shoe covers, gloves YES <input type="checkbox"/> Other PPE, Specify: <i>Some recommend wiping Eggs with ethanol. Before handling or placing in incubator. Others advise against it due to the porous nature of the shell—consult with your PI.</i> <i>Wear gloves when handling eggs.</i> <i>If not, wash hands with soap and water after contact.</i>
<input type="checkbox"/> <input type="checkbox"/>	B9. Working with live animals: Animal Biosafety Level 1, (ABSL-1). YES	<ul style="list-style-type: none"> • Exposure to infectious material 	<input checked="" type="checkbox"/> Hands: Nitrile or vinyl gloves for broken skin <input type="checkbox"/> Eye: Safety glasses, for splash or other eye hazard <input type="checkbox"/> Eye: Safety goggles, for splash or other eye hazard <input type="checkbox"/> Body: Lab coat <input type="checkbox"/> Body: Gown <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	B10. Working with live animals: Animal Biosafety Level 2, (ABSL-2). NO	<ul style="list-style-type: none"> • Exposure to infectious material 	<input checked="" type="checkbox"/> Eye: Safety goggles, for splash or other eye hazard <input checked="" type="checkbox"/> Hands: Nitrile or vinyl gloves <input checked="" type="checkbox"/> Body: Disposable gown <input type="checkbox"/> Foot: Shoe covers <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	B11. Working with live animals: Animal Biosafety Level 2+, (ABSL-2+). NO	<ul style="list-style-type: none"> • Exposure to infectious material 	<input checked="" type="checkbox"/> Eye: Safety glasses, for splash or other eye hazard <input type="checkbox"/> Eye: Safety goggles, for splash or other eye hazard <input checked="" type="checkbox"/> Hands: Nitrile or vinyl gloves <input checked="" type="checkbox"/> Body: Disposable gown (tie in the back) <input checked="" type="checkbox"/> Foot: Shoe covers <input type="checkbox"/> Other PPE, Specify:

 2.2 BIOHAZARDOUS AGENT PROTECTION – BIOSAFETY LEVEL 1, 2, 3			
Task Performed Yes No	Task Description (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks Follow Appropriate BSL Practices
<input type="checkbox"/> <input type="checkbox"/>	B12. Working with live animals: Animal Biosafety Level 3, (ABSL-3). NO	<ul style="list-style-type: none"> • Exposure to infectious material • Exposure to infectious agent by airborne transmission 	<ul style="list-style-type: none"> ✓ Eye: Safety glasses, for splash or other eye hazard <input type="checkbox"/> Eye: Safety goggles, for splash or other eye hazard ✓ Hands: Nitrile or vinyl gloves <input type="checkbox"/> Body: Disposable gown ✓ Foot: Shoe covers ✓ Inhalation: Mandatory use of N95 respirator or PAPR, as determined by risk assessment. <i>For mandatory use: Contact EH&S for respiratory protection program assistance.</i> ✓ Additional PPE, Specify: A full body disposable coversuit is more appropriate in an animal facility.



3.0 RADIOACTIVE AGENT PROTECTION-- IONIZING, ULTRAVIOLET, INFRARED

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	R1. Working with solid radioactive material or solid radioactive waste. NO	<ul style="list-style-type: none"> • Cell damage • Potential spread of radioactive contamination 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or other appropriate radioactive material impermeable gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) ✓ Work on Sealed Source: Minimum PPE is unnecessary when working with sealed radiation sources
<input type="checkbox"/> <input type="checkbox"/>	R2. Working with liquid radioactive material (in corrosives, flammables, aqueous liquids – including liquid radioactive waste) or radioactive powders. NO	<ul style="list-style-type: none"> • Cell damage • Potential spread of radioactive contamination • Hazards presented by the specific chemical 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Disposable nitrile or appropriate chemical resistant gloves compatible with work with radioactive materials ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)
<input type="checkbox"/> <input type="checkbox"/>	R3. Working with ultraviolet radiation. YES Molecular biology: Visualization/Isolation of DNA or RNA on UV light box. Embeddig Resin Acrylic Derivatives Epoxy UV Light Chamber	<ul style="list-style-type: none"> • Conjunctivitis • Corneal damage • Skin burns 	<ul style="list-style-type: none"> ✓ Eye: UV face shield and/or goggles ✓ Hand: Nitrile gloves if hand exposure is possible ✓ Body: Lab coat <p>Epoxy UV Light Chamber: <i>Do not turn on UV light when chamber is open.</i></p>
<input type="checkbox"/> <input type="checkbox"/>	R4. Working with infrared-emitting equipment (e.g. glass blowing). NO	<ul style="list-style-type: none"> • Cataracts • Burns to cornea 	<ul style="list-style-type: none"> ✓ Eye: Appropriate polycarbonate infrared filter glasses ✓ Body: Lab coat, flame resistant



4.0 LASER PROTECTION

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
OPEN BEAM			
<input type="checkbox"/> <input type="checkbox"/>	L1. Performing beam alignment. Performing laser experiment. Trouble-shooting or maintenance that requires working with an open laser beam, and/or defeating the interlock(s) on any Class 3b or Class 4 laser system. NO	<ul style="list-style-type: none"> • Eye damage 	✓ Eye: Appropriate laser safety goggles/glasses with optical density based on individual beam parameters. <i>Contact EH&S to determine appropriate optical density.</i>
<input type="checkbox"/> <input type="checkbox"/>	L2. Viewing a Class 3R laser beam with magnifying optics (including eyeglasses). NO	<ul style="list-style-type: none"> • Eye damage 	✓ Eye: Appropriate laser safety goggles/glasses with optical density based on individual beam parameters. <i>Contact EH&S to determine appropriate optical density.</i>
<input type="checkbox"/> <input type="checkbox"/>	L3. Working with a Class 3b open beam laser system with the potential for producing direct or specular (mirror-like) reflections. NO	<ul style="list-style-type: none"> • Eye damage 	✓ Eye: Appropriate laser safety goggles/glasses with optical density based on individual beam parameters. <i>Contact EH&S to determine appropriate optical density.</i>
<input type="checkbox"/> <input type="checkbox"/>	L4. Working with infrared-emitting equipment (e.g. glass blowing). NO	<ul style="list-style-type: none"> • Cataracts • Burns to cornea 	✓ Eye: Appropriate laser safety goggles/glasses with optical density based on individual beam parameters. <i>Contact EH&S to determine appropriate optical density.</i> ✓ Hands: Nitrile gloves ✓ Body: Long sleeved shirt (tightly wound fabric) ✓ Body: Lab coat <i>Long sleeves, lab coat, gloves, etc. required only in the NHZ (Nominal Hazard Zone)</i>

LABORATORY PPE HAZARD ASSESSMENT

<input type="checkbox"/> <input type="checkbox"/>	<p>L5. Handling dye laser materials, such as powdered dyes, chemicals, and solvents.</p> <p>NO</p>	<ul style="list-style-type: none"> • Cancer • Fire • Explosion 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Chemical-resistant gloves ✓ Body: Flame-resistant lab coat or coveralls
<input type="checkbox"/> <input type="checkbox"/>	<p>L6. Maintaining and repairing power sources for Class 3B and Class 4 laser systems.</p> <p>NO</p>	<ul style="list-style-type: none"> • Electrocution • Fire • Explosion 	<ul style="list-style-type: none"> ✓ Eye: Safety glasses ✓ Hands: Insulated gloves ✓ Body: Flame-resistant lab coat ✓ Body Coveralls



5.0 NANOMATERIAL PROTECTION

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	N1. Working with bound or wet nanomaterials NO	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage • Chemical exposure 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Face: Splash or splatter may occur – Face shield ✓ Hands: Disposable nitrile or other appropriate chemical resistant gloves ✓ Hands: Routinely replace gloves to minimize exposure and hand contamination ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) <input type="checkbox"/> Other PPE, Specify:
<input type="checkbox"/> <input type="checkbox"/>	N2. Working with unbound or dry engineered nanomaterials. NO	<ul style="list-style-type: none"> • Inhalation • Skin damage • Eye damage • Chemical exposure 	For unbound or dry material: <ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Face: Splash or splatter may occur – Face shield ✓ Hands: Disposable nitrile or other appropriate chemical resistant gloves ✓ Hands: Routinely replace gloves to minimize exposure and hand contamination ✓ Body: Lab coat made of non-woven fabric and elastic at the wrists; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) ✓ Inhalation: Half face respirator with P100 cartridge if working with aerosolizing nanomaterials outside of a vented work enclosure. <i>Contact EH&S for respiratory protection program assistance.</i> ✓ Removal of PPE: Give special attention to technique used to remove and dispose of contaminated PPE to avoid skin contact <input type="checkbox"/> Other PPE, Specify:



6.0 PHYSICAL HAZARD PROTECTION (Page 1 of 2)

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	P1. Working with cryogenic liquids. <i>See section C13 above.</i>	<ul style="list-style-type: none"> • Skin damage • Eye damage 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Face: Face shield ✓ Hands: Cryogenic, low temperature insulated gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) <input type="checkbox"/> Body: Cryogenic apron
<input type="checkbox"/> <input type="checkbox"/>	P2. Removing freezer cryo vials from liquid nitrogen. YES Rarely accessed: Frozen cell lines in Tempel liquid nitrogen tank.	<ul style="list-style-type: none"> • Vials may explode upon rapid warming • Cuts to face/neck and frostbite to hands 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Face: Face shield ✓ Hands: Cryogenic, temperature thermal insulated gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) <input type="checkbox"/> Body: Cryogenic apron
<input type="checkbox"/> <input type="checkbox"/>	P3. Working with very cold equipment or dry ice. YES Cryostat freezing microtome. -80°C Freezer <ul style="list-style-type: none"> • FREEZING SAMPLES ON DRY ICE. • PREPARING SAMPLES FOR SHIPMENT ON DRY ICE 	<ul style="list-style-type: none"> • Frostbite • Hypothermia 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) ✓ Hands: Cryogenic low temperature insulated gloves
<input type="checkbox"/> <input type="checkbox"/>	P4. Working with hot liquids. Heating equipment. <ul style="list-style-type: none"> • MICROWAVE FOR AGAROSE GELS • AUTOCCLAVE FOR STERILIZING MEDIA OR SOLUTIONS • Hot plate (eg. for heating paraformaldehyde) 	<ul style="list-style-type: none"> • Burns resulting in skin or eye damage 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Inner disposable nitrile or appropriate chemical resistant gloves ✓ Hands: Outer thermal insulated gloves ✓ Body: Lab coat; Long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) ✓ Eyes: Safety goggles for work with hot liquids ✓ Face: Splash or splatter may occur - Face shield ✓ Hands: Autoclave gloves, impermeable insulated gloves for liquids and steam

LABORATORY PPE HAZARD ASSESSMENT

<input type="checkbox"/> <input type="checkbox"/>	P5. Glassware washing. YES	<ul style="list-style-type: none">• If glass breaks: Lacerations• Splash from cleaning agents	<ul style="list-style-type: none">✓ Eyes: Safety glasses✓ Hands: Nitrile or appropriate chemical-resistant gloves✓ Body: Lab coat; Long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)<input type="checkbox"/> Face: Face shield<input type="checkbox"/>
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6.0 PHYSICAL HAZARD PROTECTION (Page 2 of 2)

Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
<input type="checkbox"/> <input type="checkbox"/>	P6. Working with loud equipment, noises, sounds, alarms, etc. YES Sonicator	<ul style="list-style-type: none"> Potential ear damage and hearing loss 	<ul style="list-style-type: none"> ✓ Hearing: Earplugs or ear muffs, as necessary: <i>Contact EH&S for noise exposure assessment.</i> <i>Sonicator in CD 186N; use only when room is unoccupied (including yourself!).</i>
<input type="checkbox"/> <input type="checkbox"/>	P7. Working with an apparatus with contents under pressure or vacuum _____ (mm of Hg, psi, or torr). YES See section C8.	<ul style="list-style-type: none"> Skin damage Eye damage 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: If chemicals used, nitrile or other appropriate chemical-resistant glove ✓ Body: Lab coat; Long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3) <input type="checkbox"/> Face: Face shield <input type="checkbox"/> Eyes and/or Face: For high risk activities - Safety goggles and face shield <input type="checkbox"/> Body: If chemicals used, chemical-resistant apron <input type="checkbox"/> Other PPE, Specify
<input type="checkbox"/> <input type="checkbox"/>	P8. Working with sharps or broken glass YES	<ul style="list-style-type: none"> Cuts Possible contamination 	<ul style="list-style-type: none"> ✓ For Cuts: Use tongs for broken glass and designated sharps container for contaminated wastes ✓ Broom dustpan ✓
<input type="checkbox"/> <input type="checkbox"/>	P9. Working with sharps. Emptying a syringe used with chemicals YES Syringes utilized with BrdU, EdU, DT, Cisplatin, tamoxifen, anesthesia.	<ul style="list-style-type: none"> Exposure to aerosols from syringe 	<ul style="list-style-type: none"> ✓ For Aerosols: Safety glasses and mask. <input type="checkbox"/> Other PPE, Specify: Keep needle or tip within the receiving container or vial with rubber septum.


LABORATORY PPE HAZARD ASSESSMENT

<input type="checkbox"/> <input type="checkbox"/>	<p>P10. Working with compressed gases inside environmental chambers that vent to atmosphere.</p> <p>YES</p> <p>Anestheisa with isoflurane</p> <p>CO2 low flow tissue culture incubator.</p>	<ul style="list-style-type: none"> • Asphyxiation • Toxic gas exposure 	<p>Use caution in venting area. Animal surgery room has a special vent by the sink.</p>
<input type="checkbox"/> <input type="checkbox"/>	<p>P11. Maintaining and repairing electrically powered equipment.</p>	<ul style="list-style-type: none"> • Electrocutation 	<ul style="list-style-type: none"> ✓ Eyes: Safety glasses ✓ Hands: Insulated gloves ✓ Body: Coveralls
<input type="checkbox"/> <input type="checkbox"/>	<p>COMPRESSED GAS CYLINDERS IN CD 186J, K, N; CD 055, 056, 068, 076</p>	<ul style="list-style-type: none"> • falling over, • breaking off the valves 	<p>Keep tanks restrained at all times. Keep caps on. Transport with approved gas cylinder carts.</p> <p>It is recommended that all lab members take the compressed gas training offered by EH&S. http://www.ehs.washington.edu/psotrain/corsdesc.shtm - cqso</p>
	<p>Dispensing Liquid Nitrogen</p>	<ul style="list-style-type: none"> • freezing • splatter spot burns • spillage • hypoxia 	<ul style="list-style-type: none"> • Eyes: Safety glasses • Hands: If chemicals used, nitrile or other appropriate chemical-resistant glove • Body: Lab coat; Long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)

Section 3: Certify the Hazard Assessment

Please certify that the hazard assessment for the laboratory has been completed by filling out and signing this page.

CERTIFICATION OF THE LABORATORY HAZARD ASSESSMENT AND PPE SELECTION **

Principal Investigator's (PI) Name (Print Name): Edwin W Rubel	Department/Unit: Otolaryngology	
Building(s): CHDD	Room(s): CD055,056,056A, 056B, 056C, 056D, 056E, 068, 068, 175, 186A, 186C, 186D, 186F, 186H, 186J, 186K, 186L, 186N	
Lab Manager's Name: Robin Gibson	Lab Manager's Phone: 206-221-6438	
Completed by (Print Name): Robin Gibson	Signature:	Date
Signature of PI: 		Date 1/12/2016

Section 4: PPE Training Documentation

Laboratory safety training must be conducted by the Principal Investigator, Lab Manager, or their designee. Training will identify and discuss potentially hazardous tasks performed in the lab and selection and use of lab specific PPE to protect the laboratory worker or researcher. The training content, instructor, and student attendees must be documented. To provide adequate training, the PI, Lab Manager or their designee will provide the following:

1. Identify all applicable safety training courses needed for each staff member and assure that each staff member has these courses.
2. The PI, lab manager, or their designee will review the completed Lab PPE Hazard Assessment Guide with the employee. It describes the operations in the lab where employees need PPE for protection against exposure to hazards. In this step, the hazard assessment is used as a training tool. While discussing lab operations and the associated hazards with lab staff, the manager will address the following:
 - How the 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 inspect and what to look for to confirm PPE is in good condition before putting it on. If not, place the PPE.
 - How to put on, wear, adjust for proper fit, and remove PPE
 - How to properly use the PPE
 - How to properly decontaminate and clean reusable PPE, and how to properly dispose of single-use PPE
 - Discuss any limitations of the PPE
 - General PPE safety practices, including not wearing PPE outside of lab hazard areas (e.g. hallways and eating areas).
3. Each trained lab staff member will sign the training documentation to acknowledge that they have reviewed and been trained on the Laboratory PPE Assessment Guide.
4. Conduct refresher training whenever the hazard assessment and/or PPE selected for use is updated.

