

# 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 OSHA 29 CFR 1910.132 Personal Protective Equipment Standard which requires all employers to assess their workplace for hazards that might require the use of personal protective equipment. If PPE has to be used, the supervisor must select the proper equipment and require its use.

This document must be completed by the Lab Manager or their designee who has all the protocols and information to respond to the Hazard Assessment questions. This person must conduct a laboratory hazard assessment that is specific to operations in their laboratory space(s). EH&S personnel are available to assist with the hazard assessment and will review the form. EH&S may be consulted at [environmentalsafety@montgomerycollege.edu](mailto:environmentalsafety@montgomerycollege.edu). The Lab Manager and instructor are responsible for ensuring PPE requirements are followed.

## This hazard assessment guide 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 12

Section 3: Certify the Hazard Assessment, page 13

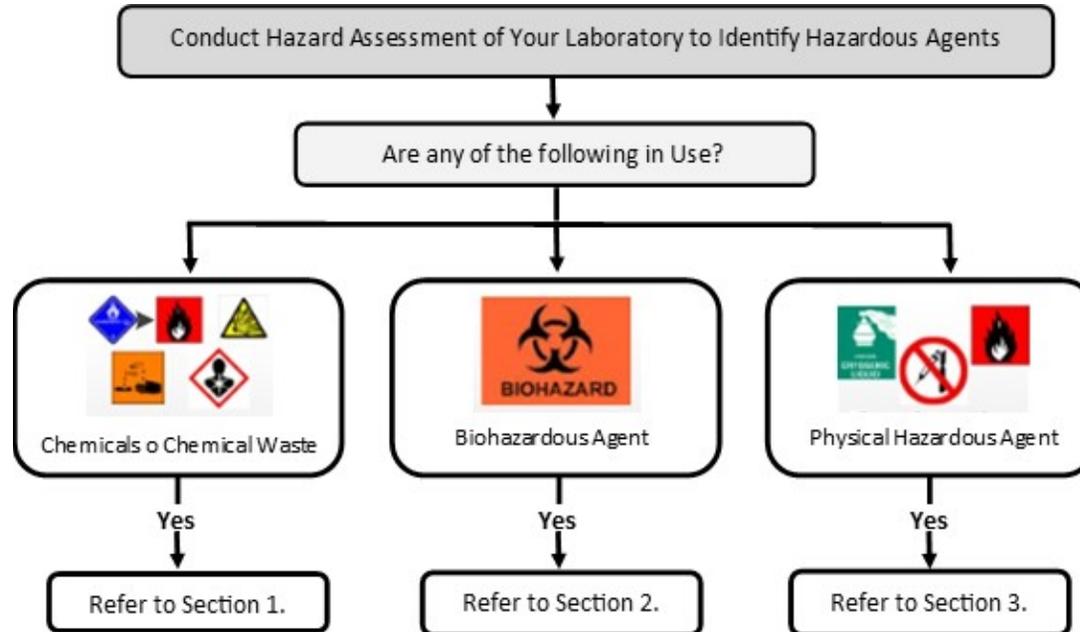
Section 4: PPE Training Documentation, pages 14 and 15

## LABORATORY PPE HAZARD ASSESSMENT

### Section 1: Instructions and Guidance on PPE Selection

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

1. Conduct a hazard assessment of the laboratory operations using the Laboratory PPE Hazard Assessment.
  - Complete each section for the potentially hazardous agent(s) used in your laboratory: (1) chemical, (2) biohazard, (3) physical.
  - This guide will assist in identifying work tasks that require the use of PPE to protect lab staff from exposures to hazards. For each work task listed, check the “Yes” box if the work is performed in your laboratory. If not, check the “No” box. As needed, add tasks to the list to customize it for your laboratory.
  - Note the designated PPE for each task performed. Check additional boxes as appropriate or check “Other PPE: Specify” and describe in the space provided the lab specific PPE designated for the work task.



## LABORATORY PPE HAZARD ASSESSMENT

### 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.
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 Office.
  - **Respiratory Protection.** If respiratory protection is identified as a necessary control during the hazard assessment, users must be enrolled in the MC Respiratory Protection Program. This includes EH&S performing a respirator-specific hazard assessment, as well as having all users undergo a medical evaluation to wear a respirator, respirator training and respirator fit testing. Contact EH&S at [environmentalsafety@montgomerycollege.edu](mailto:environmentalsafety@montgomerycollege.edu) for assistance in these steps.

**LABORATORY PPE HAZARD ASSESSMENT**

     <b>1.0 CHEMICAL HANDLING PROTECTION (Page 1 of 5)</b>			
Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE Designated For Lab Specific Tasks
	C1. Work with solids of low or moderate toxicity	<ul style="list-style-type: none"> <li>• Skin damage</li> <li>• Eye damage</li> <li>• Toxic by skin contact</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Hands:</b> Disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3).</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C2. Work with small volumes (<100 ml.) of corrosive (acids or caustics) liquids or solids	<ul style="list-style-type: none"> <li>• Skin damage</li> <li>• Eye damage</li> <li>• Toxic by skin contact</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Hands:</b> Disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3).</li> </ul>
	C3. Work with large volumes of corrosive (acids or caustics) or acutely toxic materials that may splash	<ul style="list-style-type: none"> <li>• Inhalation</li> <li>• Skin damage</li> <li>• Eye damage</li> <li>• Toxic by skin contact</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety goggles</li> <li>✓ <b>Face:</b> Face shield as splash or splatter may occur</li> <li>✓ <b>Hands:</b> Disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3).</li> <li><input type="checkbox"/> <b>Body:</b> Chemical resistant apron</li> <li><input type="checkbox"/> <b>Inhalation:</b> Respiratory protection; <i>contact EH&amp;S for respiratory protection program assistance</i></li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C4. Work with small volumes (<100 ml.) of flammable solvents or materials	<ul style="list-style-type: none"> <li>• Skin damage</li> <li>• Eye damage</li> <li>• Toxic by skin contact</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Hands:</b> Disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3).</li> </ul>
	C5. Work with large volumes (>100 ml.) of flammable solvents with a source of heat or ignition nearby	<ul style="list-style-type: none"> <li>• Inhalation</li> <li>• Skin damage</li> <li>• Eye damage</li> <li>• Toxic by skin contact</li> <li>• Fire</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Hands:</b> Disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3).</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Inhalation:</b> Respiratory protection; <i>contact EH&amp;S for respiratory protection program assistance</i></li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>

**LABORATORY PPE HAZARD ASSESSMENT**

 <b>1.0 CHEMICAL HANDLING PROTECTION (Page 2 of 5)</b>			
Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
	C6. Work with chemicals of high acute toxicity (e.g. hydrogen fluoride, hydrogen cyanide)	<ul style="list-style-type: none"> <li>Inhalation</li> <li>Skin damage</li> <li>Eye damage</li> <li>Toxic by skin contact</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Eyes:</b> Safety glasses</li> <li><input checked="" type="checkbox"/> <b>Hands:</b> Disposable nitrile or appropriate chemical resistant gloves</li> <li><input checked="" type="checkbox"/> <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3).</li> <li><input type="checkbox"/> <b>Eyes:</b> Safety goggles</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Inhalation:</b> Respiratory protection; <i>contact EH&amp;S for respiratory protection program assistance</i></li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C7. Work with particularly hazardous agent such as: <ul style="list-style-type: none"> <li>Human carcinogen</li> <li>Mutagen</li> <li>Antineoplastic</li> <li>Reproductive toxin</li> </ul>	<ul style="list-style-type: none"> <li>Inhalation</li> <li>Skin damage</li> <li>Eye damage</li> <li>Toxic by skin contact</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Eyes:</b> Safety glasses</li> <li><input checked="" type="checkbox"/> <b>Hands: For Carcinogens, Mutagens, and Chemotherapy/Other Hazardous Drugs:</b> Chemo exam gloves that are tested to meet ASTM D6978-05; Double glove</li> <li><input checked="" type="checkbox"/> <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Eyes:</b> Safety goggles</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Inhalation:</b> Respiratory protection; <i>contact EH&amp;S for respiratory protection program assistance</i></li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C8. Work with an apparatus with contents under pressure or vacuum (mm of Hg, psi, or torr)	<ul style="list-style-type: none"> <li>Skin damage</li> <li>Eye damage</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Eyes:</b> Safety glasses</li> <li><input checked="" type="checkbox"/> <b>Hands:</b> Disposable nitrile or appropriate chemical resistant gloves</li> <li><input checked="" type="checkbox"/> <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Face:</b> Face shield</li> <li><input type="checkbox"/> <b>Eyes and/or Face:</b> For high risk activities - Safety goggles and face shield</li> <li><input type="checkbox"/> <b>Body:</b> For chemical use, chemical-resistant apron</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>

**LABORATORY PPE HAZARD ASSESSMENT**

 <b>1.0 CHEMICAL HANDLING PROTECTION (Page 3 of 5)</b>			
Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
	C9. Work with air or water reactive chemicals	<ul style="list-style-type: none"> <li>• Exposure to toxic gases, heat, and/or energy</li> <li>• Inhalation</li> <li>• Skin damage</li> <li>• Eye damage</li> <li>• Fire</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety goggles</li> <li>✓ <b>Hands:</b> Disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Hands:</b> Heat resistant or chemical resistant gloves; please specify:</li> <li><input type="checkbox"/> <b>Body:</b> Flame-resistant lab coat if fire hazard is present</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C10. Work with pyrophoric materials	<ul style="list-style-type: none"> <li>• Fire</li> <li>• Severe burns</li> <li>• Inhalation</li> <li>• Skin damage</li> <li>• Eye damage</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety goggles</li> <li>✓ <b>Hands:</b> Inner disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Hands:</b> Outer heat-resistant gloves</li> <li>✓ <b>Body:</b> Flame resistant lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li>✓ <b>Body:</b> Synthetic clothing must not be worn when working with pyrophoric materials</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C11. Work with potentially explosive chemicals	<ul style="list-style-type: none"> <li>• Detonation</li> <li>• Flying debris</li> <li>• Skin damage</li> <li>• Eye damage</li> <li>• Fire</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety goggles</li> <li>✓ <b>Hands:</b> Inner disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Hands:</b> Outer heat-resistant gloves</li> <li>✓ <b>Body:</b> Flame resistant lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li>✓ <b>Body:</b> Synthetic clothing must not be worn when working with explosive materials</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Eyes, Face, or Body:</b> Blast shield for high risk activities</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>

**LABORATORY PPE HAZARD ASSESSMENT**

 <b>1.0 CHEMICAL HANDLING PROTECTION (Page 4 of 5)</b>			
Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
	C12. Work with high temperature equipment or objects	<ul style="list-style-type: none"> <li>• Burns</li> <li>• Fire</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety goggles</li> <li>✓ <b>Hands:</b> Inner disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Hands:</b> High temperature thermal insulated gloves</li> <li>✓ <b>Body:</b> Flame resistant lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li>✓ <b>Body:</b> Synthetic clothing must not be worn when working with high temperature equipment or objects</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C13. Work with cryogenic material	<ul style="list-style-type: none"> <li>• Burns</li> <li>• Frostbite</li> <li>• Eye damage</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Eyes:</b> Safety goggles for large volumes</li> <li>✓ <b>Face:</b> Face shield as splash or splatter may occur</li> <li>✓ <b>Hands:</b> Inner gloves - disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Hands:</b> Outer gloves - cryogenic low temperature insulated gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C14. List any other particularly hazardous lab task involving chemicals	Conduct risk assessment: Hazard depends on task and chemical properties  <ul style="list-style-type: none"> <li>• Inhalation</li> <li>• Skin damage</li> <li>• Eye damage</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Hands:</b> Disposable nitrile or other appropriate chemical resistant gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Face:</b> Face shield as splash or splatter may occur</li> <li><input type="checkbox"/> <b>Body:</b> Chemical resistant apron</li> <li><input type="checkbox"/> <b>Inhalation:</b> Respiratory protection; <i>contact EH&amp;S for respiratory protection program assistance.</i></li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>

**LABORATORY PPE HAZARD ASSESSMENT**

    			
<b>1.0 CHEMICAL HANDLING PROTECTION (Page 5 of 5)</b>			
Task Performed Yes No	Task Performed in Lab (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
	C15. Minor (or small) spill cleanup; spill can be cleaned up with standard spill kit	<ul style="list-style-type: none"> <li>• Inhalation</li> <li>• Skin damage</li> <li>• Eye damage</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety goggles</li> <li>✓ <b>Face:</b> Face shield as splash or splatter may occur</li> <li>✓ <b>Hands:</b> Chemical resistant gloves for spill cleanup</li> <li>✓ <b>Body:</b> Lab coat; long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li>✓ As needed, contact EH&amp;S for assistance</li> <li><input type="checkbox"/> <b>Foot:</b> Shoe covers</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	C16. Large spill cleanup; spill is too large or complex to clean up with standard spill kit	<ul style="list-style-type: none"> <li>• Inhalation</li> <li>• Skin damage</li> <li>• Eye damage</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Mandatory: Follow required procedures</b> <ul style="list-style-type: none"> <li>• If possible, stop or contain the release</li> <li>• Evacuate and secure the area</li> <li>• Assist injured or contaminated persons</li> <li>• Call 911 for assistance; report injuries, fires, or request cleanup assistance</li> <li>• Call Public Safety report incident and Inform Environmental Safety</li> </ul> </li> </ul>

**LABORATORY PPE HAZARD ASSESSMENT**

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

**LABORATORY PPE HAZARD ASSESSMENT**

 <b>2.1 BIOHAZARDOUS AGENT PROTECTION – RISK GROUP 1, 2, 3</b>			
Task Performed Yes No	Task Description (Modify wording to fit your needs)	Potential Hazards	PPE For Lab Specific Tasks
	B4. Work with agents or recombinant DNA classified as Risk Group 1 and requiring Biosafety Level 1 (BSL-1) containment	<ul style="list-style-type: none"> <li>Biological agents that typically pose a minimal potential for infection by injection, skin exposure, ingestion or inhalation</li> </ul>	<input checked="" type="checkbox"/> <b>Hand:</b> Latex or nitrile gloves <input type="checkbox"/> <b>Eye:</b> Safety glasses for splash or other eye hazard <input type="checkbox"/> <b>Eye:</b> Safety goggles for splash or other eye hazard <input type="checkbox"/> <b>Body:</b> Lab coat <input type="checkbox"/> <b>Body:</b> Disposable gown <input type="checkbox"/> <b>Other PPE, Specify:</b>
	B5. Manipulation of recombinant DNA, cell lines, viruses, bacteria or other organisms classified as Risk Group 2 and requiring Biosafety Level 2 (BSL-2) containment  Perform aerosol generating procedure: Vortex, sonicate, pipette, tissue harvest	<ul style="list-style-type: none"> <li>Biological agents that pose a moderate potential for infection by injection, skin exposure, ingestion or inhalation</li> </ul>	<input checked="" type="checkbox"/> <b>Eye:</b> Safety glasses if not working in a biosafety cabinet <input checked="" type="checkbox"/> <b>Hand:</b> Latex or nitrile gloves <input checked="" type="checkbox"/> <b>Body:</b> Lab coat <input type="checkbox"/> <b>Eye:</b> Safety goggles if not working in a biosafety cabinet <input type="checkbox"/> <b>Body:</b> Surgical gown <input type="checkbox"/> <b>Other PPE, Specify:</b>
	B6. Manipulation of infectious materials classified as Risk Group 3 but manipulated in a BSL 2 facility with BSL-3 containment practices (BSL 2+).	<ul style="list-style-type: none"> <li>Biological agents that pose a moderate or serious potential for infection by injection, skin exposure, ingestion or inhalation</li> </ul>	<input checked="" type="checkbox"/> <b>Eye:</b> Safety glasses for splash or other eye hazard <input checked="" type="checkbox"/> <b>Hands:</b> Nitrile gloves (double) <input checked="" type="checkbox"/> <b>Body:</b> Disposable gown (preferred) that ties in back <input checked="" type="checkbox"/> <b>Inhalation:</b> Respiratory protection as determined by risk assessment; <i>contact EH&amp;S for respiratory protection program assistance</i> <input type="checkbox"/> <b>Eye:</b> Safety goggles for splash or other eye hazard <input type="checkbox"/> <b>Body:</b> Lab coat <input type="checkbox"/> <b>Other PPE, Specify:</b>
	B7. Manipulation of infectious materials classified as Risk Group 3 and requiring Biosafety Level 3 (BLS-3) containment	<ul style="list-style-type: none"> <li>Biological agents that pose a serious or lethal potential for infection by injection, skin exposure, ingestion or inhalation</li> </ul>	<input checked="" type="checkbox"/> <b>Eye:</b> Safety glasses for splash or other eye hazard <input checked="" type="checkbox"/> <b>Hands:</b> Nitrile gloves (double) <input checked="" type="checkbox"/> <b>Body:</b> Full disposable coverall suit (preferred) <input checked="" type="checkbox"/> <b>Foot:</b> Shoe cover or dedicated shoe <input checked="" type="checkbox"/> <b>Inhalation:</b> Respiratory protection as determined by risk assessment; <i>contact EH&amp;S for respiratory protection program assistance</i> <input type="checkbox"/> <b>Eye:</b> Safety goggles for splash or other eye hazard <input type="checkbox"/> <b>Other PPE, Specify:</b>

**LABORATORY PPE HAZARD ASSESSMENT**

**3.0 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
	P1. Work with cryogenic liquids	<ul style="list-style-type: none"> <li>• Skin damage</li> <li>• Eye damage</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Face:</b> Face shield</li> <li>✓ <b>Hands:</b> Cryogenic, low temperature insulated gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Body:</b> Cryogenic apron</li> </ul>
	P2. Remove freezer cryo vials from liquid nitrogen	<ul style="list-style-type: none"> <li>• Vials may explode upon rapid warming</li> <li>• Cuts to face/neck and frostbite to hands</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Face:</b> Face shield</li> <li>✓ <b>Hands:</b> Cryogenic, temperature thermal insulated gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Body:</b> Cryogenic apron</li> </ul>
	P3. Work with very cold equipment or dry ice	<ul style="list-style-type: none"> <li>• Frostbite</li> <li>• Hypothermia</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li>✓ <b>Hands:</b> Cryogenic low temperature insulated gloves</li> </ul>
	P4. Work with hot liquids, heating equipment and/or open flames (autoclave, Bunsen burner, water bath, oil bath)	<ul style="list-style-type: none"> <li>• Burns resulting in skin or eye damage</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Hands:</b> Inner disposable nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Hands:</b> Outer thermal insulated gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, long skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li>✓ <b>Eyes:</b> Safety goggles for work with hot liquids</li> <li>✓ <b>Face:</b> Face shield as splash or splatter may occur</li> <li>✓ <b>Hands:</b> Autoclave gloves, impermeable insulated gloves for liquids and steam</li> </ul>
	P5. Wash glassware	<ul style="list-style-type: none"> <li>• Lacerations if glass breaks</li> <li>• Splash from cleaning agents</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Eyes:</b> Safety glasses</li> <li>✓ <b>Hands:</b> Nitrile or appropriate chemical resistant gloves</li> <li>✓ <b>Body:</b> Lab coat; long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Face:</b> Face shield</li> <li><input type="checkbox"/> <b>Hands:</b> Cut resistant gloves if glass breaks</li> </ul>

**LABORATORY PPE HAZARD ASSESSMENT**

**3.0 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
	P6. Work with loud equipment, noises, sounds, alarms, etc.	<ul style="list-style-type: none"> <li>Potential ear damage and hearing loss</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Hearing:</b> Earplugs or ear muffs, as necessary; <i>contact EH&amp;S for noise exposure assessment.</i></li> </ul>
	P7. Work with an apparatus with contents under pressure or vacuum _____ (mm of Hg, psi, or torr)	<ul style="list-style-type: none"> <li>Skin damage</li> <li>Eye damage</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Eyes:</b> Safety glasses</li> <li><input checked="" type="checkbox"/> <b>Hands:</b> If chemicals used, nitrile or other appropriate chemical-resistant glove</li> <li><input checked="" type="checkbox"/> <b>Body:</b> Lab coat; Long pants, skirt, or equivalent leg covering (no shorts); lab footwear (Refer to Page 3)</li> <li><input type="checkbox"/> <b>Face:</b> Face shield</li> <li><input type="checkbox"/> <b>Eyes and/or Face:</b> For high risk activities - Safety goggles and face shield</li> <li><input type="checkbox"/> <b>Body:</b> If chemicals used, chemical-resistant apron</li> <li><input type="checkbox"/> <b>Other PPE, Specify</b></li> </ul>
	P8. Work with sharps or broken glass	<ul style="list-style-type: none"> <li>Cuts</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>For Cuts:</b> Use tongs for broken glass and designated sharps container for contaminated wastes</li> <li><input checked="" type="checkbox"/> <b>For Cuts:</b> Cut resistant outer glove (Kevlar) with nitrile inner gloves</li> </ul>
	P9. Work with sharps and/or empty a syringe used with chemicals	<ul style="list-style-type: none"> <li>Exposure to aerosols from syringe</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>For Aerosols:</b> Safety glasses and mask.</li> <li><input type="checkbox"/> <b>Other PPE, Specify:</b></li> </ul>
	P10. Work with compressed gases inside environmental chambers	<ul style="list-style-type: none"> <li>Asphyxiation</li> <li>Toxic gas exposure</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Employee is not allowed to enter and work inside of an oxygen deficient or hazardous chamber.</li> </ul>
	P11. Maintain and repair electrically powered equipment	<ul style="list-style-type: none"> <li>Electrocution</li> </ul>	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Eyes:</b> Safety glasses</li> <li><input checked="" type="checkbox"/> <b>Hands:</b> Insulated gloves</li> <li><input checked="" type="checkbox"/> <b>Body:</b> Coveralls</li> </ul>

**LABORATORY PPE HAZARD ASSESSMENT**
**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 \*\***

Requestor Name (Print Name):	Requestor Signature:	
Department:	Campus:	
Lab Manager's Name:	Lab Manager's Phone:	
Reviewed by (Print Name):	Reviewer Signature:	Date
PPE Recommendations:	Recommended Standard:	

## LABORATORY PPE HAZARD ASSESSMENT

### Section 4: PPE Training Documentation

Laboratory safety training must be conducted by the Lab Manager or their designee. A general training is available on Workday to provide guidelines for personal protective equipment users. 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. The training content, instructor and student attendees must be documented. To provide adequate training, the 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 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.

