

## Laboratory Personal Protective Equipment (PPE) Hazard Assessment Tool

This tool is designed to:

- Identify and document hazards in your lab and the required PPE to minimize exposure.
- Document the required completion of laboratory-specific PPE training.

The Principal Investigator (PI) / Lab Supervisor may assign a designee to perform or assist in the above duties but must ensure they are carried out.

### Section 1: Laboratory Information

|   |  |
|---|--|
| <b>Department</b>                                   |  |
| <b>Principal Investigator (PI) / Lab Supervisor</b> |  |
| <b>Phone Number, E-mail, Office Number</b>          |  |
| <b>Building / Lab Rooms</b>                         |  |

### Section 2: PPE Assessment

1. Assess potential hazards and appropriate PPE for laboratory operations under your supervision.
  - a. Include a walk-through survey of lab areas.
  - b. Use the checklist below.
    - Check the corresponding boxes for the operations/tasks your lab conducts.  
Note: If a risk assessment by the PI/Lab Supervisor determines that, for some operations, more or less protective PPE is required than the applicable PPE indicated, this must be documented on the PPE assessment tool, the appropriate Standard Operating Procedure (SOP), or a separate document.
    - Use the section at the end of the checklist to include any hazards and PPE not covered in the form.
2. Complete and sign the “Certification of PPE Assessment.” Keep a local copy.
3. Update the PPE assessment when new hazards are introduced into your work area.

For further technical guidance and assistance with PPE selection, consult with UW Safety at 766-3277.

| <b>Chemical Hazards</b>                                  |   |   |
|--|---|---|
| Activities Performed in the lab?                         | Lab Operation/Task Involving <sup>1</sup> | <b>Applicable PPE</b><br>(in addition to proper street clothing <sup>2</sup> )<br>Consult with Chemical Safety Specialist<br>766-2649   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Flammable liquids                         | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Flame / Chemical Resistant lab coat, may be appropriate depending upon the quantity (&gt; 4L) or the task</li> <li>Appropriate chemical-resistant gloves</li> </ul> |

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| <input type="checkbox"/> Yes <input type="checkbox"/> No | Corrosive liquids   | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Chemical Resistant lab coat (Use chemical-resistant apron if splash potential exists.)</li> <li>Appropriate chemical-resistant gloves</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Cryogenic liquids or dry ice (including working with cryogenic Dewar's)   | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Chemical Resistant lab coat</li> <li>Insulated cryogenic gloves</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Compressed Gases  | <ul style="list-style-type: none"> <li>Safety glasses</li> <li>Chemical Resistant lab coat</li> <li>Gloves, as needed (e.g., work gloves when handling cylinders, chemical-resistant gloves when making or breaking connections with non-inert gases)</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Pyrophoric or water reactive compounds (or highly exothermic reactions)   | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Flame / Chemical Resistant lab coat</li> <li>Appropriate chemical-resistant gloves (Additional fire resistant gloves may be necessary, depending on the task.)</li> <li>Non-synthetic street clothing</li> </ul> |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Explosive compounds   | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Flame / Chemical Resistant lab coat</li> <li>Heavyweight gloves, such as anti-static PVC gauntlets</li> <li>Engineering control: Use blast shield.</li> <li>Non-synthetic street clothing</li> </ul>             |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Engineered nanomaterials  | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Disposable ®Tyvek-type coveralls or Chemical Resistant lab coat.</li> <li>Appropriate chemical-resistant gloves</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Particularly hazardous substances, including select carcinogens, reproductive toxins, and substances with a high degree of acute toxicity | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Chemical Resistant lab coat</li> <li>Appropriate chemical-resistant gloves</li> </ul>  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Chemically preserved animal and/or human specimens  | <ul style="list-style-type: none"> <li>Safety glasses</li> <li>Gown or Chemical Resistant lab coat</li> <li>Appropriate chemical-resistant gloves</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Hazardous chemical not in one of the above special categories   | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Chemical Resistant lab coat</li> <li>Appropriate chemical-resistant gloves</li> </ul>  |

### Biological Materials

| Activities Performed in the lab?                         | Lab Operation/Task Involving <sup>1</sup>   | Applicable PPE<br>(in addition to proper street clothing <sup>2</sup> )<br>Consult with Biological Safety Specialist<br>766-2723   |
|--|---|--|
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Working with biological agents or recombinant DNA classified as Biosafety Level 1 | <ul style="list-style-type: none"> <li>No PPE required. However, if working in conjunction with another hazard (e.g., flammable liquids), wear appropriate PPE for that hazard.</li> </ul> |

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| <input type="checkbox"/> Yes <input type="checkbox"/> No | Working with biological agents or recombinant DNA classified as Biosafety Level 2                        | <ul style="list-style-type: none"> <li>• Goggles or safety glasses + face shield</li> <li>• Barrier Fluid Resistant lab coat</li> <li>• Latex or nitrile gloves</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Working with infectious agents or recombinant DNA classified as Biosafety Level 2+                       | <ul style="list-style-type: none"> <li>• Goggles or safety glasses + face shield</li> <li>• Disposable gown or Barrier Fluid Resistant lab coat at</li> <li>• Latex or nitrile gloves</li> <li>• Respirator as determined by protocol review; contact UW Safety for assessment 766-3277</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Working with Infectious agents or recombinant DNA classified as Biosafety Level 3                        | <ul style="list-style-type: none"> <li>• Goggles or safety glasses + face shield</li> <li>• Full disposable gown or ®Tyvek suit</li> <li>• Shoe cover or dedicated shoes</li> <li>• Latex or nitrile gloves (double)</li> <li>• Respirator as determined by protocol review; contact UW Safety for assessment 766-3277</li> </ul>  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Human or non-human primate blood and other body fluids, tissues or cells, or blood borne pathogens (BBP) | <ul style="list-style-type: none"> <li>• Goggles or safety glasses + face shield</li> <li>• Barrier Fluid Resistant lab coat</li> <li>• Latex or nitrile gloves</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Live Animals (Animal Biosafety Level 1 or Risk Category 2 animals)                                       | <ul style="list-style-type: none"> <li>• Goggles or safety glasses + face shield</li> <li>• Barrier Fluid Resistant lab coat</li> <li>• Latex, nitrile, or vinyl gloves (+ wire mesh gloves as appropriate)</li> <li>• Consult with UW Safety for N95 respirator assessment, 766-3277</li> <li>• In the space provided at the end of the checklist, list any additional or modified PPE required by (1) IACUC protocol or (2) as determined by protocol review; contact UW Safety (766-3277).</li> </ul> |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Live Animals (Animal Biosafety Level 2 or Risk Category 1 animals)                                       | <ul style="list-style-type: none"> <li>• Goggles or safety glasses + face shield</li> <li>• Disposable gown, hair cover, shoe cover, and surgical mask</li> <li>• Latex, nitrile, or vinyl gloves (+ wire mesh gloves as appropriate)</li> <li>• In the space provided at the end of the checklist, list any additional or modified PPE required by (1) IACUC protocol or (2) as determined by protocol review; contact UW Safety (766-3277).</li> </ul>   |

**Laboratory Personal Protective Equipment (PPE) Hazard Assessment Tool**

**Radiation**

| <b>Activities Performed in the lab?</b>                  | <b>Lab Operation/Task Involving<sup>1</sup></b>             | <b>Applicable PPE</b><br>(in addition to proper street clothing <sup>2</sup> )<br>Consult with Radiation Safety Officer<br>766-2638.            |
|--|---|---|
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Unsealed radioactive materials or waste                     | <ul style="list-style-type: none"> <li>For radionuclide-specific PPE</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Class 3B or 4 laser   | <ul style="list-style-type: none"> <li>Appropriately laser safety goggles</li> </ul>  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Laser(s) modified by optics                                 | <ul style="list-style-type: none"> <li>Appropriately laser safety goggles</li> </ul>  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Ultraviolet (UV) radiation (from sources other than lasers) | <ul style="list-style-type: none"> <li>UV-blocking eye protection or UV-blocking face shield</li> <li>Appropriate UV blocking gloves</li> </ul> |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Infrared-emitting equipment                                 | <ul style="list-style-type: none"> <li>Appropriately-shaded goggles for infrared radiation</li> </ul>   |

**Physical Hazards**

| <b>Activities Performed in the lab?</b>                  | <b>Lab Operation/Task Involving<sup>1</sup></b>  | <b>Applicable PPE</b><br>(in addition to proper street clothing <sup>2</sup> )<br>Consult with Industrial Hygiene Specialist - 766-3203   |
|--|--|---|
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Glassware (or other vessels) under pressure or vacuum  | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Chemical-resistant apron for high risk activities</li> <li>Appropriate chemical-resistant gloves</li> <li>Engineering control: Use blast shield, as appropriate.</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Working with knives, scalpels, razor blades, etc. or handling broken glass                         | <ul style="list-style-type: none"> <li>Cut-resistant gloves</li> </ul>  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Centrifuge   | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>If centrifuging hazardous materials, wear additional PPE to match the hazard.</li> </ul>  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Sonicator or other loud equipment  | <ul style="list-style-type: none"> <li>Ear plugs or earmuffs may be required</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Removing freezer vials from liquid nitrogen  | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Chemical Resistant lab coat</li> <li>Insulated cryogenic gloves</li> </ul>  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Handling hot liquids / equipment (e.g., autoclaved materials, heated glassware, water or oil bath) | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield</li> <li>Chemical Resistant lab coat</li> <li>Thermally insulated gloves (Chemical-resistant gloves underneath, as needed.)</li> </ul>   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Machinery (e.g., lathes, saws) and hand tools  | <ul style="list-style-type: none"> <li>Goggles or safety glasses + face shield (If flying fragments or particles generated)</li> <li>Gloves appropriate for hazards (e.g., chemicals, sharp objects)<br/>Note: Gloves are not required if there is a potential to become entangled in moving parts</li> <li>Work Practice: Confine long hair/beards to prevent entanglement in machinery (e.g., via bun, pinned-up ponytail or hairnet).</li> <li>Do not wear any loose clothing and jewelry.</li> <li>Hearing protectors, respiratory protection, or safety shoes may be required consult</li> </ul> |

| <b>Other Laboratory Operations/Tasks</b>  |  |
|---|--|
| <b>Lab Operation/Task Involving:</b>  | <b>Applicable PPE:</b>   |
| Personnel that are not directly involved in the lab operations, but who are at risk for potential exposure to hazardous materials and/or physical hazards | <ul style="list-style-type: none"> <li>• Chemical Resistant lab coat</li> <li>• Goggles or safety glasses + face shield</li> <li>• Additional PPE deemed necessary (e.g., if touching contaminated surfaces, wear gloves to match the hazard)</li> <li>• Proper street clothing - long pants (or equivalent) that cover legs and ankles, and non-perforated, closed-toed shoes that completely cover the feet</li> </ul> |
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**1** Conduct activities with potential to generate airborne contaminants using appropriate engineering controls (e.g., laboratory fume hood, biosafety cabinet, glove box, local exhaust at workbench). If engineering controls are not feasible, consult UW Safety to determine if the activity presents a respiratory hazard, which may require a respirator; call 766-3277.

**2** Proper street clothing - *Long pants (or equivalent) that cover the legs and ankles, and non-perforated, closed-toed shoes that completely cover feet.*

| <b>Certification of PPE Assessment</b>      |              |
|---|--------------|
| <b>Name of person conducting assessment</b> |              |
| <b>Title</b>                                |              |
| <b>Phone Number, E-mail</b>                 |              |
| <b>Signature (digital):</b>                 | <b>Date:</b> |

### Section 3: Laboratory – Specific PPE Training

**1. Deliver laboratory-specific PPE training**

Train lab personnel upon their joining the lab or prior to performing work requiring the use of PPE. Training content shall include, but not be limited to:

- a. When and what PPE is required per *Section 2: PPE Assessment*
- b. Limitations of the PPE
- c. How to properly put on, adjust, wear, and remove PPE
- d. Proper care, maintenance, useful lifespan, and disposal of PPE

**2. Training documentation**

- a. When lab personnel have demonstrated an understanding of the above training and ability to the use PPE properly, the lab member and trainer must sign below that the PPE training has been conducted.
- b. Maintain training records for at least one year.

**2. Provide retraining**

Retraining is required of laboratory personnel when:

- a. Changes in laboratory activities/operations render previous PPE training obsolete.
- b. Inadequacy of laboratory personnel’s knowledge or use of PPE is evident.

| PPE Training Verification |                 |    |               |                        |                 |
|---------------------------|-----------------|----|---------------|------------------------|-----------------|
| Trainee Name (printed)    | Trainee Initial | W# | Training Date | Trainer Name (printed) | Trainer Initial |
|                           |                 |    |               |                        |                 |
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