Laboratory Hazard Assessment Form

This form is to assist the Principal Investigator (PI), Lab Supervisor, or responsible personnel in assessing their lab spaces for hazards and to document trainings given to lab members to inform, educate, and mitigate the common hazards found in laboratories. A hazard assessment will also identify personal protective equipment (PPE) needs and training on proper PPE use. The State of Oregon mandates the use of hazard assessments; more information can be found at the following website: [PPE hazard assessment guide](https://osha.oregon.gov/OSHAPubs/2738.pdf). Assessments are also a major element of the University’s Chemical Hygiene Plan, [(see Chemical hygiene Plan information)](https://safety.uoregon.edu/chemical-safety), and keeping faculty, staff, students, and visitors safe while performing duties in and around laboratories.

Please take time to examine the processes in the lab and the PPE used. Check the appropriate hazard box and give a brief note in the column “Control Methods Used in Assessed Lab” on what PPE is used and what training is given. If applicable, mechanical controls (e.g., fume hoods, shields, restraints) and administrative controls (e.g., work practices, policies, SOPs) should be described. If there are special processes with unique hazards that do not appear to fit in any of the delineated hazards, please describe in the “other” box under “Chemical Hazards” or attach to the form on a separate sheet.

Please fill out all 3 sections of the Laboratory Hazard Assessment Form: 1) Hazard Assessment Worksheet, 2) Laboratory Safety Standard Operating Procedure (SOP) Template, and 3) Personal Protective Equipment (PPE) Selection Worksheet.

Note that every hazard control method has training as a form of control. **It is vital that we train lab members before placing them in a potentially hazardous situation**. Tracking this training identifies opportunities to improve our work environment and safety on campus. Please use the [Laboratory Safety Training Worksheet](https://safety.uoregon.edu/sites/default/files/2024-02/1-page-laboratory-safety-training-worksheet-2024.pdf) to help in this task, and maintain in the lab’s records.

When completed, please send a copy of this form to Environmental Health & Safety via email ([ehsinfo@uoregon.edu](mailto:ehsinfo@uoregon.edu)), or mail or hand deliver to 1715 Franklin Blvd. Suite 2A. Retain a copy of this form in the laboratory (must be accessible for all lab members). Questions on using this form, PPE selection, or trainings can be directed to the Laboratory Safety team:

* **Laurie Graham**, Laboratory Safety Manager, Biosafety Officer
  + (P) 541-346-2864, [lgraham@uoregon.edu](mailto:lgraham@uoregon.edu)
* **Nicole Nesser**, Research Compliance and Outreach Associate,
  + (P) 541-346-2060, [nkn@uoregon.edu](mailto:nkn@uoregon.edu)
* **Laura Taggart-Murphy**, Laboratory Safety Research Assistant
  + (P) 541-346-0616, [ltaggart@uoregon.edu](mailto:ltaggart@uoregon.edu)

Date revised: April 10, 2024

Hazard Assessment Worksheet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of Procedure: | | | Department and lab: | |
| Name of Person Completing this hazard assessment: | | | | |
| Signature: | | | Date: | |
| **Check if Hazard is Present** | **Type of Hazard** | **Hazard Description** | **Potential Hazard Control Methods (Engineering, Administrative, PPE)** | **Control Methods Used in Assessed Lab (what controls do you use)** |
|  | Animal Hazard | Allergens, bites, body fluids, zoonoses | IACUC approval, PPE, work area and access controls, training |  |
|  | Biological (e. g. biological toxins, blood or body fluids, genetically modified organisms, infectious materials, tissues) | Disease transmission, foreign genetic material introduction | Possible board approval IRB, IBC. PPE, training on blood borne pathogens and universal precautions |  |
|  | Chemical Hazards: | Skin and eye irritation or damage, skin absorption, inhalation of toxic vapors, cancer or mutagenic effects, environmental impact, sensitization, dangerous reactions, poisoning | Proper PPE selection for the hazard (safety glasses/goggles, lab coats (possible flame retardant), gloves), training, fume hood, glove boxes, ventilation, no exposed skin and closed toe shoes, eye washes and showers, using limited quantities. |  |
|  | Carcinogen |
|  | Flammable |
|  | Asphyxiant |
|  | Corrosive |
|  | Reactive |
|  | Toxic |
|  | Other: |
|  | Cuts/Penetration/Punctures | Injection of foreign material, skin damage, wounds, spills and blood hazards | Training, compatible storage (hard impenetrable materials) |  |
|  | Harmful Atmospheres dust/fumes/mists/vapors (e.g. animal bedding, welding fumes, silica, gasses, nanomaterials) | Allergens, metal poisoning, respiratory track irritation or damage, CNS effects | PPE, local exhaust ventilation, monitoring, possible respirator use, fume hood, training |  |
|  | Ionizing Radiation (e.g. radioactive decay particles, X-rays) | Cellular damage, cancers | Board approval RSC, controls (time distance and shielding), training |  |
|  | Non-Ionizing Radiation (e.g. lasers, UV, infrared | Cellular damage especially to eyes or skin, burns | Training, curtains, access control, laser-specific safety glasses or UV face shields |  |
|  | Mechanical Hazards (e.g. crush/pinch points, moving equipment, impacts) | Injury, dismemberment, loss of digits or limb | Mechanical guards, training, work practices |  |
|  | Noise | Hearing damage, loss of communicative ability | PPE, engineering controls (shielding, mufflers), work practices, monitoring, training |  |
|  | Pressure Hazards (e.g. compressed gas usage, rotavaps, air lines) | Uncontrolled release, breakage, cuts | Mechanical guards, training, work practices |  |
|  | \*Acutely toxic materials (e.g. P-list material, select agents, poison gases, controlled substances) See links below | Environmental Release, severe injury, death | Institutional approval, training, PPE, tracking/inventory, storage |  |
|  | Thermal Hazards (e.g. oil baths, cryogenic gasses, autoclaves) | Frostbite, burns | Training, PPE (face shields, insulating gloves, shoes), work practices, ventilation |  |

\* UO controlled substances webpage <https://safety.uoregon.edu/controlled-substances>

EPA P-listed waste [http://www.gpo.gov/fdsys/pkg/CFR-2012-title40-vol27/xml/CFR-2012-title40- vol27-sec261-33.xml](https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes)

**Laboratory Safety Standard Operating Procedure (SOP) Template**

**(for the use of hazardous materials or equipment)**

**Name of Procedure:**

**Prepared By: Revision Date:**

**LOCATION – This procedure may be performed at the following location(s):**

**HAZARDS – The materials and equipment associated with this procedure present the following exposure or physical health hazards. Safety precautions are prudent and mandatory:**

**ENGINEERING CONTROLS – Prior to performing this procedure, the following safety equipment or device features must be available and ready for use** (e.g., chemical fume hood, glove box, gas cabinet, pressure-relief valve, automatic shut-off, intrinsically safe hot plate)**:**

**ADMINISTRATIVE CONTROLS – This procedure requires the following training** (e.g., pyrophorics handling, corrosive gas techniques)**, techniques** (e.g., use spatula when weighing powder, warm cryogenically cooled material in stages)**, work practices** (e.g., attended operation only, working alone prohibited, notify lab occupants)**, and warning devices** (e.g., toxic gas detection, smoke detectors)**:**

**PROTECTIVE EQUIPMENT – Prior to performing this procedure, the following personal protective equipment must be worn and kept available** (e.g., safety eyewear, acid resistant gloves, lab coat, chemical splash apron, closed toed shoes, long pants)**:**

**See PPE Selection Worksheet for more detailed information.**

**WASTE DISPOSAL – This procedure will result in the following regulated waste that must be disposed of in compliance with environmental regulations:**

**ACCIDENTAL SPILL – In the event of hazardous material spill during this procedure, be prepared to execute the following emergency procedure:**

**PRIOR APPROVAL – Is this procedure is considered hazardous enough to warrant prior approval from the Principal Investigator and/or Environmental Health and Safety.**

**- YES - - NO - - YES - - NO -**

**CERTIFICATION – I have read and understand the above SOP. I agree to contact my Supervisor or Lab Manager if I plan to modify this procedure.**

**Signature Name (Print)**

**Date Building and Room #**

**Personal Protective Equipment (PPE) Selection Worksheet**

**(to be completed and included with Laboratory Safety SOP)**

Title: Date:

Department: Supervisor:

Location: Analysis By:

Employee Name(s): Signature:

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| **Tasks** | **Hazards** | **Required PPE** |
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NOTE: For glove selection for a particular hazard, please refer to the specific glove manufacturer’s selection chart.