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 determine training, protocols, and equipment needed to control these hazards. 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 on conducting a hazard assessment may be found here: [Ways to Conduct a Hazard Assessment - Hazards - Lab Safety - ACS Center.](https://institute.acs.org/acs-center/lab-safety/hazard-assessment/ways-to-conduct.html) 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 your lab and describe the PPE used, engineering controls (e.g., fume hoods, Biosafety cabinets, and gloveboxes) and administrative controls (e.g., work practices, policies, SOPs). For special processes with unique hazards that do not appear to fit in any of the delineated hazards, please describe the specifics in the “other” box under “Chemical Hazards” or attach to the form on a separate sheet.

Please fill out the sections of the Laboratory Hazard Assessment Form:

1) Laboratory Hazard Assessment table (for the lab as a whole)

2) Procedure Hazard Assessment (for a specific high hazard lab procedure/protocol)

Note that every hazard control method includes 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 a signed and dated copy 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)). Please keep 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:

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

Laboratory Hazard Assessment

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| --- | --- | --- | --- | --- |
| Name of PI/lab: | | | Department/institute: | |
| 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)** | **Procedures with this hazard** |
|  | 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 committee approval IRB, IBC. PPE, training on bloodborne pathogens, Biosafety level 2 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, local ventilation, no exposed skin and closed toe shoes, eye washes and showers, using limited quantities. |  |
|  | Carcinogen |
|  | Flammable |
|  | Asphyxiant |
|  | Corrosive |
|  | Reactive |
|  | Toxic |
|  | Other: |
|  | Sharps (needles, razor, scalpel, etc) | Injection of foreign material, skin damage, wounds, spills and blood hazards | Training, appropriate sharps disposal |  |
|  | Inhalation hazard: 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 | Committee 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, warning signage, 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, lock out-tag out. |  |
|  | 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, vacuum) | Uncontrolled release, breakage, cuts | Mechanical guards, shielding, training, work practices |  |
|  | \*Acutely toxic materials (EPA  P-listed 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 liquids, 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)

**Procedure Hazard Assessment**

(for procedures using hazardous materials or equipment)

**Name of Procedure:**

**Prepared By: Revision Date:**

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

**Building and room(s):**

**Location in lab:**

**HAZARDS – List the biological, chemical, or physical hazards associated with this procedure** (e.g. eye damage, oral toxicity, infection, or fire):

**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)**:**

**ADMINISTRATIVE CONTROLS – This procedure requires the following training** (e.g. bloodborne pathogen training, BSL2 training, laser safety training)**, techniques** (e.g. use aseptic technique)**, work practices** (e.g. working alone prohibited, notify lab occupants)**, and warning devices** (e.g. low oxygen monitor)**:**

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

**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 (see** [Hazardous Waste Pick-Up](https://safety.uoregon.edu/hazardous-waste)**):**

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

**SIGNS OF EXPOSURE – In the event of hazardous material exposure during this procedure, watch for the following signs/symptoms:**

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

- YES - - NO -

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

**Signature Name (Print)**

**Date** **Building and Room #**