**Standard Operating Procedure**

**[Chemical/Process/Equipment Name]**

***This is an SOP template and is not complete until:*** *1) lab specific information is entered into the box below 2) lab specific protocol/procedure is added to the protocol/procedure section and
3) SOP has been signed and dated by the PI and relevant lab personnel.*

 Print a copy and keep with your
*Chemical Hygiene Plan* and/or *Lab Safety Resources Binder*

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| --- | --- |
| **Department:** | Click here to enter text. |
| **Date SOP was approved by PI/lab supervisor:** | Click here to enter a date. |
| **Principal Investigator:** | Click here to enter text. |
| **Lab Safety Coordinator/Lab Manager:** | Click here to enter text. |
| **Lab Phone:** | Click here to enter text. |
| **Office Phone:** | Click here to enter text. |
| **Emergency Contact:** | Click here to enter text. |
| *(Name and Phone Number)* |
| **Location(s) covered by this SOP:** | Click here to enter text. |
| *(Building/Room Number)* |

**Type of SOP:** ☐ Process ☐Hazardous Chemical ☐Equipment

1. **Purpose**

[Identify the intended use of a process/equipment/chemical]

1. **Procedure/Scope:**

[Identify when the procedure is to be followed]

[Include laboratory procedure and specify hazardous stages of the procedure]

1. **Physical & Chemical Properties/Definition of Chemical Group (Only applies to hazardous chemicals)**

CAS#: [Insert CAS Number]

Class: [Toxic, Corrosive, Caustic, Radioactive, Poison Inhalation Hazard, Oxidizer, Flammable, Explosive, Cryogenic Liquid, Pyrophoric Liquid, etc.]

1. **Safety Data Sheet (SDS) Location**

Online SDS can be accessed at (<http://oregonstate.edu/ehs/sds>). A hard copy can be found at Oak Creek Building with Environmental Health & Safety.

1. **Personal Protective Equipment (PPE) (Describe the correct PPE for working with the chemical or needed during the process)**

Laboratory personnel must always wear a lab coat when working in a lab. Closed-toed shoes are also required at all times.

**Hand Protection**

**Eye Protection**

**Skin and Body Protection**

**Respiratory Protection**

**Hygiene Measures**

1. **Equipment and Supplies**

[List any equipment or supplies need for the procedure above.]

1. **Engineering Controls**

[Describe the engineering controls that will be implemented in your laboratory when working with the specific chemical. (i.e. working in a fume hood)]

1. **Calibration/Settings: (Only applies equipment SOP)**

[Describe who is responsible calibration and if the equipment needs to be calibrated.]

[Describe the settings the equipment must be on to get desire results.]

1. **Repair & Maintenance: (Only applies equipment SOP)**

[Contact information for repairs or in case of a malfunction.]

1. **First Aid Procedures**

If an accident happens the following documents must be completed:

* Online OSU HR Advocate Public Incident Reporting Form within 24 hours of the incident
* If the employee’s incident resulted in the need for medical treatment, have the employee complete the worker section of the SAIF 801 Form and fax to risk management at 541-737-4855 within 24 hours.

**If inhaled**

[Describe the response plan in the event that someone inhaled a hazardous substance]

Example:
*Move to fresh air. If the person is not breathing, give artificial respiration. Avoid mouth to mouth contact. Call 911 from a phone. Call EHS at 541-737-2273 after emergency services have been contacted to report the incident.*

**In case of skin contact**

[Describe the response plan in the event that someone’s skin comes in contact with a hazardous substance]

Example:

*Immediately (within seconds) flush affected area for at least 15 minutes. Remove all contaminated clothing. Call 911 immediately. Call EH&S at 541-737-2273.*

**In case of eye contact**

Use eye wash to flush eyes for 15 minutes. Call 911. Follow safety instruction for further assistance: <http://ehs.oregonstate.edu/sites/ehs.oregonstate.edu/files/pdf/si/eyewash_and_safety_shower_si.pdf>

**If ingested**

Do not induce vomiting. Contact 911 and/or poison control center if swallowed: 1(800)222-1222

1. **Special Storage & Handling Requirements**

[Include information for any special storage or handling (i.e. pyrophoric chemicals or cryogenic liquids)]

**Handling**:

[Example: wash hands after handling, use only within fume hood, wear gloves while handling, etc.]

**Storage:**

[Example: do not store flammables next to oxidizers, store in a cool dry location, store in secondary container, etc.]

**Transporting:**

[Example: transport with secondary container, always follow OSU labeling requirements, etc..]

1. **Chemical Spill (Change this for radioactive spills or biohazardous spills)**

**OSU Chemical Spill Safety Instruction**: <http://ehs.oregonstate.edu/sites/ehs.oregonstate.edu/files/pdf/si/spill_response-chemicals_si.019.pdf>

**General Guidelines**

**For spills less than 1 gallon in size, low hazard chemicals:**

Preparation: Ensure employees have adequate Personal Protective Equipment and spill control materials before attempting to clean up a spill

1. Assess the magnitude of the spill and the associated hazards (broken glass, toxic fumes, risk of fire, etc.).

2. If the hazards can be safely mitigated with available personal protective equipment (PPE), do so. This includes informing co-workers of the spill, removing ignition sources, and moving equipment that may be damaged by the spilled chemicals. (Note: If the spill is more than 1 gallon of liquid or 1 pound of solid, contact Public Safety at 541-737-7000 and ask them to notify EH&S.)

3. Once all hazards have been assessed, put on appropriate PPE (respiratory protection, goggles, body protection, gloves, impervious shoes/boots, etc.).

4. Apply the Pig Pads to the spill and give the pads time to absorb the chemical.

5. Use gloves and cardboard to move the used Pig Pads to a garbage bag. 6. Seal the garbage bag with a zip tie and label the bag with a Hazardous Waste Label.

7. Place the garbage bag in secondary containment (a cardboard box or plastic tote/bin) labeled “Hazardous Waste.” Place the box in a location in the laboratory where EH&S personnel will easily find it.

8. Request a Hazardous Waste Pickup (<http://oregonstate.edu/ehs/waste>).

9. Replenish you spill kit’s contents immediately.

**For spills greater than 1 gallon in size, high hazard chemicals:**

1. In general, if a chemical spill is greater than 1 gallon in volume or is a particularly hazardous material (strong acid or base, carcinogen, highly reactive chemical, etc.), call Public Safety (541-737-7000), and tell them to contact the on-call EH&S personnel to respond to the spill.

2. Provide the following information:

o Your name and contact phone number

o Location of the spill (Building and room number)

o Approximate volume of spilled liquid

o Name of chemical

3. Do not attempt to clean up large and/or hazardous chemical spills.

4. Notify all other workers who could be affected by the spill and vacate the laboratory/floor/building, particularly if the chemical produces hazardous fumes or poses other potential health hazards.

5. Wait at the building entrance for EH&S personnel.

6. Serve as a point of contact and provide information about the spill, as requested by EH&S personnel.

**Personal precautions**

[Include information and PPE that may be needed for the person responsible for cleaning the spill.]

**Environmental precautions**

[Include information on how the process or chemical might alter the surrounding environment.]

**Methods and materials for containment and cleaning up**

 A hard copy of this Safety Instruction

 A hard copy of the Pink Pig Absorbent Pad Chemical Compatibility Chart <http://www.newpig.com/wcsstore/NewPigUSCatalogAssetStore/Attachment/documents/ccg/HAZMAT.pdf>

 Bucket with screw-on lid

 6 Pink Pig Absorbent Pads (Item number MAT301 at [www.newpig.com](http://www.newpig.com))

 Heavy duty black plastic garbage bags  Zip ties (to seal garbage bags)

 Hazardous Waste Labels (available at <http://oregonstate.edu/ehs/waste>)

 Cardboard rectangles/squares for handling used Pig Pads, if necessary

 Appropriate lab-specific PPE, such as lab coats, goggles, gloves, etc., should be available in each laboratory

1. **Other Emergencies**

**Medical Emergency Dial 911**

**Life Threatening Emergency, After Hours, Weekends and Holidays** – Dial **911** (This will connect you to Good Samaritan Hospital Corvallis where they will be able to treat the victim).

**Non-Life Threatening Emergency** – [Instructions on how to handle a non-life threating chemical exposure, process injury, or procedural injury.]

1. **Decontamination/Waste Disposal Procedure**

*General hazardous waste disposal guidelines:*

**Label Waste**

* Affix an EH&S hazardous waste label on all waste containers (<http://ehs.oregonstate.edu/sites/ehs.oregonstate.edu/files/pdf/hwlabelfull.pdf>) as soon as the first drop of waste is added to the container.

**Store Waste**

* Store hazardous waste in closed containers, in secondary containment and in a designated location. ([http://ehs.oregonstate.edu/sites/ehs.oregonstate.edu/files/pdf/si/waste\_hazardous\_disposal\_si.pdf)](http://ehs.oregonstate.edu/sites/ehs.oregonstate.edu/files/pdf/si/waste_hazardous_disposal_si.pdf%29).
* Double-bag dry waste using transparent bags
* Waste must be under the control of the person generating & disposing of it

**Dispose of Waste**

* Dispose of regularly generated chemical waste within 90 days
* Put in a waste request at: <http://ehs.oregonstate.edu/waste>
1. **References**

[Include any references useful to employees]

1. **Training Requirements**

[Example: OSU’s lab safety training, hazardous waste, hazard communication/SDS, lab-specific training, this SOP, etc.]

**Documentation of Training** (signature of all users is required)

* Prior to conducting any work with [chemical/process/equipment name] designated personnel must provide training to his/her laboratory personnel specific to the hazards involved in working with this substance, work area decontamination, and emergency procedures.
* The Principal Investigator must provide this SOP and a copy of the SDS (can be available online) available to all laboratory personnel.
* The Principal Investigator must ensure that his/her laboratory personnel have attended appropriate laboratory safety training or refresher training.

**Principal Investigator SOP Approval**

By signing and dating here the designee certifies that the Standard Operating Procedure (SOP) for *Insert SOP Name* is accurate and effectively provides standard operating procedures for laboratory personnel.

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Signature Printed Name/Title Date

I have read and understand the content of this SOP:

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| --- | --- | --- |
| **Name** | **Signature** | **Date** |
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