Standard Operating Procedure (SOP)

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| --- | --- |
| **SOP Title:** | **Click here to enter text.** |
| **Date:** | Click here to enter a date. |
| **Principal Investigator:** | Click here to enter text. |
| **SOP Written By:** | Click here to enter text. |
| **Lab Phone:** | Click here to enter text. |
| **Location(s) covered by this SOP:** | Click here to enter text. |
| *(Building/Room Number)* |

**Research Purpose/Scope**

Click here to enter text.

**Hazardous Chemicals/Hazard Identification**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Hazardous Chemicals Used** | **Acutely Toxic** | **Corrosive** | **Flammable** | **Oxidizer** | **Irritant** | **Explosive** | **Health Hazard** | **Compressed Gas** | **Environmental Hazard** |
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**Important Chemical Hazard Considerations**

*Important chemical specific reminders for the chemicals listed above (These considerations can be taken from chemical-specific* [*Lab Safety Guidelines*](https://www.ehs.harvard.edu/programs/lab-safety-guidelines-sops) *or* [*Safety Data Sheets*](https://www.ehs.harvard.edu/news/material-safety-data-sheets-msds)*)*

**Prior Approval/Reviews Required**

*As they deem necessary, the PI/supervisor should insert here any prior approval or review needed before an individual can perform the operation/procedure.*

No [ ]  Yes [ ]

*If Yes please list needed approvals/reviews:*

*Please check all that apply.*

[ ]  EHS [ ] COMS [ ] PI

[ ]  Building Manager [ ] Department [ ] HCCM/OAR

[ ]  Other: If other please describe ­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Special Handling and Storage Requirements**

*Any special handling or storage requirements not noted in other sections.*

* Return all original chemical containers to appropriate storage areas following Harvard University [Laboratory Chemical Storage Guide](https://www.ehs.harvard.edu/node/7968)
	+ Storage Group: Click here to enter text;
	+ Store in original containers or other appropriate containers;
	+ Store primary containers in designated area and when possible, compatible secondary containment;
	+ Store away from incompatibles;

**Engineering Controls**

*Please check all that apply*

[ ]  Chemical fume hood [ ] Glove box [ ] Other: If other please describe \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[ ]  Biosafety cabinet [ ] Exposure Control Device (Snorkel) [ ]  Slot hood [ ] Pressure and Vacuum Systems

[ ]  Other: If other please describe ­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Designated Area**

Will this be done in a designated area? Yes[ ]  No[ ]

If Yes, please indicate location/area: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Personal Protective Equipment (PPE)**

* Use appropriate personal protective equipment (PPE):
	+ Wear a lab coat, a garment covering to the ankles, and closed-toed shoes, Enter other specifics (e.g., apron) ;
	+ Enter eye/face protection
	+ Enter appropriate gloves (if possible, include splash/immersion protection info)
	+ Always consult Safety Data Sheet to ensure proper glove selection
	+ Gloves must be thoroughly inspected prior to each use. Do not use damaged gloves;
	+ Change gloves whenever you suspect they have become contaminated;
	+ Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact;
	+ Wash hands and forearms thoroughly with soap and water each time gloves are removed;
* Respirator – if a respirator must be used for the procedure contact EHS for additional assistance

**Additional Precautions**

*Please indicate here if there are any additional precautions not discussed*

**Decontamination/Waste Disposal Procedure**

* Dispose of Enter chemical name waste following Harvard University [Hazardous Waste Procedures](https://www.ehs.harvard.edu/programs/chemical-waste)
	+ Hazardous Waste Classification: Click here to enter text
	+ Include any important considerations that they would need to be aware of, e.g., incompatible containers, materials, need for the chemical container to remain sealed…
* Wash hands and forearms thoroughly with soap and water before leaving the lab.

**Spill and Accident Procedure**

**Before beginning work**

* Review manufacturer’s Safety Data Sheet and additional chemical information at [ehs.harvard.edu/safety-data-sheets-sds](http://www.ehs.harvard.edu/safety-data-sheets-sds);
* Ensure that a written experimental protocol including safety information is available;
* Be familiar with general University emergency procedures in the [EHS Lab Emergency Response Guide](https://ehs.harvard.edu/sites/ehs.harvard.edu/files/lab_emergency_response_guide_.pdf);
* Order the most dilute solutions available that will meet experimental needs. Order only the quantity that you need;
* Identify the location of the nearest eyewash and shower and verify that they are accessible;
* Locate and verify that appropriate spill cleanup materials are available, including the following:
	+ Enter spill supplies/neutralizers
	+ Location of these supplies
	+ Any important notes about cleanup materials

**First Aid**

For serious medical emergencies, go to the closest emergency room or call 911.

SKIN CONTACT

* Wash with plenty of tepid water for at least 15 minutes using the closest available sink, safety shower or drench hose. Remove any exposed clothing as well as any jewelry.
* Seek medical attention;

EYE CONTACT

* Using eyewash, flush eyes while holding eyelids open;
* Seek medical attention;

INHALATION

* Remove person immediately to fresh air;
* Seek medical attention;

INGESTION

* Never give anything by mouth to an unconscious person as it can block their airway;
* Seek medical attention;

**Spill Response**

OUTSIDE FUME HOOD OR VENTILATED ENCLOSURE

* Alert others and evacuate to a safe distance and prevent entry.
* Assess spill hazard (location, volume, volatility, health risk, etc..) and follow guidance in [Emergency Response Guide](https://www.ehs.harvard.edu/system/files/lab_emergency_response_guide.pdf).
* Call Operations immediately for spills involving elemental mercury, any spill/hazard requiring respiratory protection to clean, spills where appropriate spill supplies are not available, spills that individuals are not comfortable cleaning, and/or spills has been released into the environment (down a drain, spilled outside, etc.).
* Contact the University Operations Center at (617) 49**5-5560** [HMS/HSDM (617) 43**2-1901**]
* Remain in a safe location until EH&S or other response personnel arrive.
* If trained and confident, you may assist in the clean-up effort of small amounts, wearing PPE described above and using appropriate spill supplies.
	+ Click here to enter the specific spill cleanup procedure
	+ Collect debris in appropriate container and move to your Satellite Accumulation Area. Label with appropriately completed hazardous waste tag and request a waste pickup.

INSIDE FUME HOOD OR VENTILATED ENCLOSURE (< 500 ml)

* If trained and confident, you may assist in the clean-up effort of small amounts, wearing PPE described above and using appropriate spill supplies.
	+ Click here to enter the specific spill cleanup procedure
	+ Collect debris in appropriate container and move to your Satellite Accumulation Area. Label with appropriately completed hazardous waste tag and request a waste pickup.
* Otherwise close the fume hood sash and await support.

**Protocol/Procedure (Add lab specific Protocol/Procedure here)**

*Attach or insert the instructions to be followed in performing the procedure. The steps should be detailed and should include prohibited activities and cautionary statements, where applicable. Add appropriate lab-specific information here describing how this material(s) is going to be used. E.g., name of protocol, frequency done, scale, temperature, etc.*

Click here to enter text.

**Reference(s):**

*(please include all web and text-based references used in this document)*

Click here to enter text.

**NOTE**

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

**Principal Investigator or Lab Supervisor SOP Approval**

Print name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Approval Date:

I have read and understand the content of this SOP:

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