CSUDH
CALIFORNIA STATE UNIVERSITY
DOMINGUEZ HILLS

Standard Operating Procedure

MASTER

Print a copy of this SOP and insert into your Safety Binder.

- SOP Information

Department:	**CSUDH – (Name of your Department)**
Date SOP was written:	Click or tap to enter a date.
Date SOP was approved by PI/lab supervisor:	Click or tap to enter a date.
Principal Investigator:	Click or tap here to enter text.
Chemical Hygiene Officer /Lab Manager:	**Ricardo Magallanes/**
Lab Phone:	**(XXX) – XXX – XXXX**
Office Phone:	**(XXX) – XXX – XXXX**
Emergency Contact:	**EHS (310) 243 – 3000** *(Name and Phone Number)*
Location(s) covered by this SOP:	**Campus** *(Building/Room Number)*

SOP Type:

[☐] Specific lab procedure or experiment

[☐] Generic use of specific chemical or class of chemicals w/ similar hazards

[☐] Generic use of high-risk equipment

Contents

Definitions

P.I. – Principal Investigator. Usually a professor in charge of a laboratory or set of laboratories who is actively undertaking research. They are considered the front-line supervisor and are responsible for training and personnel safety in the laboratory.

SDS – Safety Data Sheets. An essential component of the GHS and are intended to provide comprehensive information about a substance or mixture for use in workplace chemical management. Also Known as MSDS (Material Safety Data Sheet)

S.O.P. – Standard Operating Procedure. A written set of instructions that document how to safely perform work involving hazardous chemicals or hazardous operations. Includes training documentation.

1. Purpose

Insert content here.

2. Subject Chemicals Used in this Laboratory

Insert content here.

3. Properties & Hazards

Insert content here.

4. Administrative Control

Insert content here.

5. Engineering Controls

Insert content here.

6. Personal Protective Equipment

Insert content here.

7. Special Handling & Storage Requirements

Insert content here.

8. First Aid

Insert content here.

9. Medical Emergency

Insert content here.

10. Spill & Accident Procedures

Insert content here.

11. Decontamination & Waste Disposal Procedure

Insert content here.

12. Safety Data Sheet (SDS) Location

Online SDSs can be accessed at **http://hq.msdsonline.com/csuedusl**

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13. Required Travel/Approvals

In addition to the practices described below, follow procedures as specified in the lab-specific and special handling/use sections of this SOP.

All work with the subject chemical (s) requires the following prior to beginning work:

1. Must be pre-approved by the Principal Investigator prior to use and all training must be well documented.
2. Must be familiar with the CSUDH Chemical Hygiene Plan. https://www.csudh.edu/ehs/health-safety-programs-policies/
3. Must have documented Laboratory Safety training.
4. Must read the relevant Safety Data Sheet (formerly referenced as **M**aterial **S**afety **D**ata **S**heets).
5. Any additional laboratory specific training that is needed is referenced in the 'Laboratory Specific Use Procedures' section. Signed and dated training documents must be uploaded into each assigned researchers training records.

14. Additional Notes

Any deviation from this SOP requires approval from **P.I.**

15. Documentation of Training

- Prior to conducting any work with the subject chemicals, designated personnel must provide training to his/her laboratory personnel specific to the hazards and procedures involved in working with these substances.
- The Principal Investigator must provide his/her laboratory personnel with a copy of this SOP and a copy of the SDS provided by the manufacturer.
- The Principal Investigator must ensure that his/her laboratory personnel have attended appropriate laboratory safety training or refresher training within the last one year.

I have read and understand the content of this SOP:

Name	Signature	CSUDH ID #	Date

16. Lab Specific Procedures

The following describe how the subject chemicals are used in this laboratory beyond the practices described above.

This section must describe lab-specific procedures to address the safe use of all highly hazardous chemicals from this band in use in the laboratory. These procedures may be organized around specific chemicals, specific tasks or the band as a whole. The following minimum requirements must be met:

- Identify designated use areas within the laboratory for highly hazardous chemicals
- Identify maximum use quantities for which the procedures in this band apply.
- If it is determined that this SOP is sufficient to address the safe use of subject chemical in this lab, then include the following statement in this section: *"Procedures described in this SOP are sufficient for addressing the safe use of subject chemical in this laboratory within the listed quantity limitations."*
- If it is determined that this SOP is not sufficient to address the safe use of a chemical from the lab, then write lab-specific procedures for to address these high hazard operations. Such operations are generally indicated by:
    - tasks requiring the use of specialized PPE,
    - tasks using highly hazardous chemicals outside of the fume hood,
    - tasks using larger quantities of hazardous chemicals,
    - tasks involving the use of particular chemicals considered by CSUDH EHS to be extremely hazardous, and
    - tasks considered to present high risk by lab personnel.

A few examples of what lab-specific tasks may look like are provided below:

Task #1: Title of the specific procedure being done.

1) Provide step-by-step instructions in a numbered/lettered format.
2) Include in the procedure any relevant:
    a) Locations of "designated areas" as called for in the special handling section of the SOP, or as otherwise required by regulations. *The entire laboratory, fume hood, or a portion of the laboratory may be considered as a designated area.*
    b) Use of specific administrative, engineering and PPE controls.
    c) Specific quantity use limits/restrictions.
    d) Specific storage requirements.
    e) Specific first aid and spill procedures (including what should be handled by whom).
    f) Specific disposal procedures.
    g) Process-specific PI approvals required.

Task #2: Making dilutions of the acids and bases.

1) Consult with PI and obtain approval if quantities greater than 4 L are needed.
2) In a fume hood, add the appropriate amount of concentrated acid or base to the calculated amount of water.
3) Return the concentrated acids/bases to the proper secondary containment or cabinet.

Task #3: Using the pH meter.

1) Calibrate on the day of pH testing using at least 2 standards.
2) Before use, rinse the electrode with deionized water and blot dry with a kim-wipe.
3) Transfer the electrode to the test solution.
4) If using a stir plate, make sure the electrode does not touch the stir bar.

5) Record the pH when the reading is stable (5–20 seconds after insertion of the electrode into the solution)
6) Add dilute acid or dilute base drop-wise until the correct pH is reached.
7) Rinse the electrode with deionized water and store according to the manufacturer's instructions.
8) Make sure the acid and base caps are on tightly.

Add as many tasks as necessary.