Standard Operating Procedure

Lithium Bromide (Anhydrous)

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 insert into your
Laboratory Safety Manual and *Chemical Hygiene Plan*.
Refer to instructions for assistance.

Department:	Bioengineering
Date SOP was written:	7/22/14
Date SOP was approved by PI/lab supervisor:	Click here to enter a date.
Principal Investigator:	Click here to enter text.
Internal 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 ☐ Hazardous Class

Purpose

Lithium Bromide has been characterized as a solubilizing agent for Bombyx Mori spider silk. Lithium Bromide is a corrosive salt that can potentially cause harm to skin upon contact and harm to the respiratory tract if vapor is inhaled.

Physical & Chemical Properties/Definition of Chemical Group

CAS#: 7550-35-8.

Class: Corrosive

Molecular Formula: LiBr.

Form (physical state): Solid

Color: White

Boiling point: 1265 ^{o}C

Potential Hazards/Toxicity

Contact with the salt causes burns to the skin and eyes and vapor inhalation can irritate the respiratory tract. The chemical is also flammable. .

Personal Protective Equipment (PPE)

Respirator Protection
A breathing apparatus should be used only if aerosol or dust is formed.

Respirators should be used only under any of the following circumstances:

- As a last line of defense (i.e., after engineering and administrative controls have been exhausted).
- When Permissible Exposure Limit (PEL) has exceeded or when there is a possibility that PEL will be exceeded.
- Regulations require the use of a respirator.
- An employer requires the use of a respirator.
- There is potential for harmful exposure due to an atmospheric contaminant (in the absence of PEL)
- As PPE in the event of a chemical spill clean-up process

Lab personnel intending to use/wear a respirator mask must be trained and fit-tested by EH&S. This is a regulatory requirement. (http://map.ais.ucla.edu/go/1004655)

Hand Protection
PVC or other plastic material gloves should be worn.

NOTE: Consult with your preferred glove manufacturer to ensure that the gloves you plan on using are compatible with corrosive chemicals.

Refer to glove selection chart from the links below:
http://www.ansellpro.com/download/Ansell_8thEditionChemicalResistanceGuide.pdf
OR
http://www.allsafetyproducts.biz/page/74172
OR
http://www.showabestglove.com/site/default.aspx
OR
http://www.mapaglove.com/

Eye Protection
Safety Glasses.

Skin and Body Protection
Impervious, long sleeve clothing.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practices..

Engineering Controls:

Use a chemical fume hood with proper ventilation when working with the chemical..

First Aid Procedures

If inhaled
Call a physician immediately and move subject to fresh air.

In case of skin contact
Rinse with plenty of water for 15 minutes and seek medical attention.

In case of eye contact
Rinse immediately with water and seek medical attention

If swallowed
Do not induce vomiting. Consult a physician

Special Handling and Storage Requirements

Can be stored at room temperature in appropriate container..

Spill and Accident Procedure

Chemical Spill Dial 911 and x59797

Spill – Assess the extent of danger. Help contaminated or injured persons. Evacuate the spill area. Avoid breathing vapors. If possible, confine the spill to a small area using a spill kit or absorbent material. Keep others from entering contaminated area (e.g., use caution tape, barriers, etc.).

Small (<1 L) – If you have training, you may assist in the clean-up effort. Use appropriate personal protective equipment and clean-up material for chemical spilled. Double bag spill waste in clear plastic bags, label and take to the next chemical waste pick-up.

Large (>1 L) – Dial **911** (or 310-825-1491 from cell phone) and EH&S at x59797 for assistance.

Chemical Spill on Body or Clothes – Remove clothing and rinse body thoroughly in emergency shower for at least 15 minutes. Seek medical attention. *Notify supervisor and EH&S at x59797 immediately.*

Chemical Splash Into Eyes – Immediately rinse eyeball and inner surface of eyelid with water from the emergency eyewash station for 15 minutes by forcibly holding the eye open. Seek medical attention. *Notify supervisor and EH&S at x59797 immediately.*

Medical Emergency Dial 911 or x52111

Life Threatening Emergency, After Hours, Weekends And Holidays – Dial **911** (or 310-825-1491 from cell phone) or contact the Ronald Reagan UCLA Medical Center (emergency room) directly at **x52111** (located at 757 Westwood Plaza, enter from Gayley Avenue). *Note: All serious injuries must be reported to EH&S at **x59797** within 8 hours.*

Non-Life Threatening Emergency – Go to the Occupational Health Facility (OHF), **x56771,** CHS room 67-120 (This is on the 6th floor, 7th corridor, room 120. Enter through the School of Dentistry on Tiverton Drive and proceed to the “O” elevator to the 6th floor.)Hours: M - F, 7:30 a.m. to 4:30 p.m. At all other

times report to Ronald Regan UCLA Medical Center (emergency room) at **x52111**. *Note: All serious injuries must be reported to EH&S at x59797 within 8 hours.*

Needle stick/puncture exposure (as applicable to chemical handling procedure) – Wash the affected area with antiseptic soap and warm water for 15 minutes. For mucous membrane exposure, flush the affected area for 15 minutes using an eyewash station. Page the needle stick nurse by dialing **231** from a campus phone, enter **93333** when prompted and then enter your extension. Hours: M – F, 8:00 a.m. to 4:00 p.m. At all other times report to Ronald Regan UCLA Medical Center (emergency room) at **x52111**. *Note: All needle stick/puncture exposures must be reported to EH&S at x59797 within 8 hours.*

Decontamination/Waste Disposal Procedure

Disposal must be in accordance with Federal, State, and local regulations. .

General hazardous waste disposal guidelines:

Label Waste

- Affix an on-line hazardous waste tag on all waste containers using the Online Tag Program http://otp.ucop.edu/ 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
- Double-bag dry waste using transparent bags http://map.ais.ucla.edu/go/1002774
- 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
- Call EH&S at x61887 for questions
- Empty Containers
    - Dispose as hazardous waste if it once held extremely hazardous waste (irrespective of the container size) http://ehs.ucla.edu/Pub/ExtremelyHazardousWaste.pdf
    - Consult waste pick-up schedule http://ehs.ucla.edu/pub/HazWaste%20Pickup%20Schedule.pdf

  Prepare for transport to pick-up location
        - Check on-line waste tag
        - Write date of pick-up on the waste tag
        - Use secondary containment

Safety Data Sheet (SDS) Location

Online SDS can be accessed at http://msds.ehs.ucla.edu.

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

Gloves must be worn at all times when using the chemical. All reactions must be performed over ice with glass containers in a fume hood. The bottle of Lithium Bromide should not be exposed to air for extended amounts of time given the possibility it could react with air molecules..

NOTE

Any deviation from this SOP requires approval from PI.

Documentation of Training (signature of all users is required)

- Prior to conducting any work with Lithium Bromide., 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 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	Date
Click here to enter text.		Click here to enter a date.
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