 **EHS Environmental Health and Safety**

**Handling Ethidium Bromide**

**Standard Operating Procedure**

Name:

Date:

Revision Number:

Date of Revision:

**\*Attach description of process that involves the use of ethidium bromide.\***

**1.0 Hazards Associated with ethidium bromide:**

Ethidium bromide is toxic if inhaled. It is suspected of causing genetic defects. Along with being a suspect mutagen, it may be a carcinogen or teratogen. It is an eye and respiratory tract irritant.

**2.0 Controls:**

**2.1 Engineering Control:**

* Utilize a fume hood.

**2.2 Administrative Controls:**

* Do not work alone in the lab. Implement the buddy system.
* Attend baseline laboratory safety training (required annually). The training schedule is located at the following link - <http://www.uml.edu/ehs/Training_Schedule.html>.
* Attend laboratory-specific training on handling ethidium bromide.
  + Document this training in section 8 of the Chemical Hygiene Plan Notebook.
* Know the location of the emergency shower and eyewash station.
* Review this SOP and applicable safety data sheets as part of your laboratory-specific training on handling ethidium bromide.
* Keep a hard copy of the safety data sheet (SDS) for ethidium bromide in section 6 of the CHP Notebook.
* Place the ethidium bromide SOP in section 7 of the CHP Notebook.
* Purchase only enough material needed to complete an experiment.
* Wash hands thoroughly with soap and water after removing gloves.
* Launder lab coats on a periodic basis. (Lab coats that are dropped off for cleaning in the lab coat room are picked up on Monday mornings by the lab coat company and the clean lab coat is delivered to the lab coat room the following Monday. Go to <http://www.uml.edu/EEM/Programs/Lab-Safety.aspx> and click on lab coat program for more information.)

**2.3 Personal Protective Equipment:**

* Safety goggles are required if there is a splash hazard. Safety glasses are required at a minimum.
* Face shield required if there is a splash hazard to the face.
* Laboratory coat
* Nitrile gloves with a minimum thickness of 0.11 mm
* Closed toe shoes and pants

**3.0 Precautions:**

* Avoid contact with eyes and skin.
* Avoid inhalation of vapor or mist.

**4.0 Storage:**

* Store in a well-ventilated location.

**5.0 Disposal:**

Place the UMass Lowell Hazardous Waste Label on the container and fill out the label. Full and/or dated containers of hazardous waste are picked up by EHS during the weekly inspection checks for satellite accumulation areas or upon request by calling 42543 or emailing hazardous\_receiving@uml.edu. Remember, the container must be picked up within 3 days after the container is full or dated.

Empty containers that once contained ethidium bromide must be disposed of as hazardous waste. Please properly label the empty container with a hazardous waste label.

**6.0 Emergency Procedures:**

**6.1 Spills**

**For spills that occur inside of a fume hood (< 100 milliliters)**

* If lab group has received proper training and a proper spill kit is available, the spill may be cleaned up by the lab group if the spill occurs inside of a fume hood.
* If the lab group has not received proper training and a spill kit is not available, please evacuate the lab and call 44911.

**For spills that occur outside of a fume hood**

* Evacuate the lab, post a restriction on the lab door and call UMass Lowell Police at extension 44911.
* Stay close by to answer questions when EEM-EHS and emergency response personnel arrive.

**6.2 First Aid**

For eyes

* Irrigate the eyes for 15 minutes, holding eyelids apart.
* Buddy must call extension 44911 to seek medical assistance and then can keep track of the length of time eyes are being irrigated.
* Give SDS for epoxies to medical personnel when they arrive on scene.

For skin

* For full body exposure, remove contaminated clothing and go under the emergency shower for 15 minutes. If bare hands and/or arms are contaminated, rinse area with water for 15 minutes. Remove clothing and rinse contaminated area for 15 minutes.
* Buddy must call extension 44911 immediately to seek medical assistance.
* Give SDS for epoxies to medical personnel when they arrive on scene.

For inhalation

* Remove to fresh air. Seek medical attention immediately (call extension 44911).
* Give SDS for epoxies to medical personnel when they arrive on scene.

**6.3 Fire:**

* Evacuate the lab, pull the nearest fire alarm pull station and then go to a safe area and call extension 44911. Follow the fire safety evacuation plan.

**NOTE:** All work-related injuries must be reported immediately to Human Resources (HR) by calling extension 43560. An Incident/Injury Report Form must be filled out and faxed to EHS at 934-4018. [The Incident/Injury Report Form is available on-line at <http://www.uml.edu/ehs>. Please double click on the link at the end of this web page entitled [UMass Lowell Emergency Accident / Incident Report Form (PDF).]](http://www.uml.edu/ehs/Documents/UMass_Lowell_Emergency_Accident-%20Incident_%20Report_%20Form.pdf) The original Incident/Injury Report Form must be turned in to HR.

*\*The buddy, supervisor, or Principal Investigator may fill out the Incident/Injury Report Form while the injured employee follows first aid procedures and seeks medical attention.*