

Principal Investigator: _____



Date Approved: _____

This document covers basic chemical safety information for ethidium bromide. The use of ethidium bromide is subject to pre-approval by the Principal Investigator (PI) and/or Supervisor. PI and/or Supervisor may use the sheet attached to this SOP to document any lab specific training for Ethidium Bromide. **DO NOT USE ETHIDIUM BROMIDE UNTIL YOU HAVE OBTAINED THE NECESSARY PRE-APPROVAL.**

Ethidium Bromide

Ethidium bromide is a commonly used chemical for the visualization of DNA in gel electrophoresis. It is known to intercalate into DNA and thought to cause reproductive harm and possibly act as a mutagen. Ethidium bromide powder is also highly toxic by inhalation.



Personal Protective Equipment & Personnel Monitoring		
 Lab Coat	 Gloves	 Eye Protection
Traditional lab coat or flame-resistant lab coat when working with flammable materials.	Nitrile gloves.	ANSI Z87.1-compliant safety glasses or safety goggles if a splash hazard is present.

Labeling & Storage

Store in secondary containment away from other materials that are not particularly hazardous or which may be chemically incompatible. Primary containers should be labeled according to the UNC Charlotte Chemical Hygiene Plan. The secondary container's label must contain the chemical name and corresponding hazards. Also, if not plainly visible (e.g. through a cabinet window), labelling must be applied to storage locations where these are stored to avoid an inadvertent encounter.

Engineering Controls, Equipment & Materials

Fume Hood

Use a fume hood when working with materials which are toxic by inhalation. If your protocol does not permit the handling of such materials in a fume hood, contact EHS to determine whether additional respiratory protection is warranted.

Housekeeping

Spills

Notify others in the area of the spill, including your supervisor. Evacuate the location where the spill occurred. Call 911 from any campus phone (or 704-687-2200 from a cell phone). Report any exposure to EHS at 704-687-1111. Remain on-site (at a safe distance) to provide detailed information to first responders.

Decontamination

Deactivation with a decontamination solution composed of sodium nitrite and hypophosphorous acid is the most-effective means of decontamination according to [Decontamination of Ethidium Bromide Spills](#), Lunn, G. and Sansone, E.B. Appl Ind Hyg 1989, 4 (9), 234-237.

Waste

Refer to the UNC Charlotte [Chemical Hygiene Plan](#) for details.

First Aid & Emergencies

Skin Contact

Immediately remove contaminated clothing and shoes; flush skin with water for at least 15 minutes. Get medical attention immediately.

Eye Contact

Check for and remove contact lenses. Immediately flush eyes with water for at least 15 minutes. Get medical attention immediately.

Inhalation

Move person into fresh air. Get medical attention immediately.

Ingestion

Get medical attention immediately.

