

<b>University of Pittsburgh Safety Manual</b>	<b>EH&amp;S Guideline Number: 03-015</b>	
Subject: <b>ETHIDIUM BROMIDE DISPOSAL</b>	Effective Date 12/9/14	Page 1 of 2

## **ETHIDIUM BROMIDE DISPOSAL**

Although ethidium bromide is not regulated as a hazardous waste, its mutagenic properties may present a human health hazard if it is placed in the trash or poured down the sanitary sewer system. Use the following procedures when disposing ethidium bromide solutions, gels, and contaminated materials.

1. **Do not discard ethidium bromide solutions containing organic solvents/alcohols down the drain.** Only aqueous solutions containing  $<10\mu\text{g/ml}$  (10 ppm) may be released to the sanitary sewer. Aqueous solutions containing  $>10\mu\text{g/ml}$  ethidium bromide must be treated via the S&S Extractor system with a charcoal filter or the Green Bag method prior to sewer disposal. All untreated ethidium bromide solutions must be disposed of as liquid waste via the University's Chemical Waste Program.
  - 1.1 Ethidium bromide solution can be filtered using either the S&S Extractor or Green Bag systems (both are available via University-approved scientific vendors). Once the solution is filtered, the filtrate can be poured down the drain, and the filter placed in a sealed plastic bag. **Do not use red biological waste bags or any type of bag marked with the biohazard symbol.** Place a completed orange WASTE CHEMICALS label on the sealed bag, and dispose through the Chemical Waste Program.
  - 1.2 If the aqueous ethidium bromide solution is not going to be treated, it must be collected as liquid waste, labeled with a completed orange WASTE CHEMICALS label, and disposed through the Chemical Waste Program.
2. **Do not dispose of ethidium bromide gels as a biological waste or in the regular trash.** All ethidium bromide gels must be disposed through the University's Chemical Waste Program. Ethidium bromide gels should be placed in a container or sealed plastic bag. If using a sealable plastic bag, the bag should be placed into a sturdy cardboard box. Ethidium bromide gel waste must be labeled with a completed orange WASTE CHEMICALS label (label as "ethidium bromide gels"). **Do not use red biological waste bags or any type of bag or box marked with the biohazard symbol to collect ethidium bromide gels.**
3. Gloves and debris (e.g. pipette tips) that are visibly contaminated with ethidium bromide should be placed in a sturdy plastic bag, and the bag should then be placed into a sturdy cardboard box (**Do not use red biological waste bags or any type of bag or box marked with the biohazard symbol.**). Label with a completed orange WASTE CHEMICALS label and dispose through the Chemical Waste Program.
4. Glassware contaminated with ethidium bromide should be emptied prior to disposal. Dispose of the liquid according to the above procedures. Contaminated glassware should be washed with bleach prior to disposal in a broken glass box.

<b>University of Pittsburgh Safety Manual</b>	<b>EH&amp;S Guideline Number: 03-015</b>	
Subject: <b>ETHIDIUM BROMIDE DISPOSAL</b>	Effective Date 12/9/14	Page 2 of 2

5. Sharps and needles contaminated with ethidium bromide should be placed into a dedicated sharps container that is used for the collection of non-biological sharps. A completed orange WASTE CHEMICALS label should be placed on the sharps container. Label as “ethidium bromide-contaminated sharps”, and dispose through the Chemical Waste Program.

Gels containing less-mutagenic (or non-mutagenic) stains (e.g. SYBRSafe, SYBRGreen, SYBRGold, GelRed, GelGreen, etc.), polyacrylamide gels, and/or unstained agarose gels should also be disposed through the University’s Chemical Waste Program. Follow the same packaging procedures outlined above. Boxes must be labeled with a completed orange WASTE CHEMICALS label identifying the type of waste (e.g. - “SYBRSafe Gels”).

If you have any questions about the proper handling and disposal of ethidium bromide or other types of gels, please contact EH&S at 412-624-9505.