

OESO Environmental Programs Waste Management Guidelines

For Ethidium Bromide Disposal

April 2009

Ethidium bromide is commonly used in molecular biology laboratories. While not regulated as a “hazardous waste”, the mutagenic properties of this substance may present a hazard if improperly disposed of down the drain or placed into the trash.

Based on these considerations, OESO Environmental Programs recommends the following disposal procedures:

1. Dilute Aqueous Solutions –

- a. Solutions containing less than 0.1% ethidium bromide by wt. may be discharged to sinks, while flushed with copious amounts of water.
- b. Solutions containing more than 0.1% by wt. can be:
 - i. filtered through commercially available carbon filter cartridges to remove ethidium bromide. Spent cartridges or bags must be collected in waste containers labeled with the words “*Waste Ethidium Bromide (Mutagen)*” and submitted to OESO for proper disposal, or
 - ii. Solutions that are not filtered in the laboratory should be collected in containers that are labeled with the words “*Waste Ethidium Bromide (Mutagen)*” and submitted to OESO for proper disposal.

2. Ethidium Bromide Gels –

- a. Spent ethidium bromide gels that are colorless may be:
 - i. collected in double-bags and placed into a waste container labeled with the words “*Waste Ethidium Bromide (Mutagen)*” and submitted to OESO for proper disposal, or
 - ii. placed into autoclave bags, autoclaved, and disposed of as solid waste.
- b. All other gels should be collected in double-bags and placed into a waste container labeled with the words “*Waste Ethidium Bromide (Mutagen)*” and submitted to OESO for proper disposal.

3. Unused Stock Solutions, Crystals, and Powders – Collect in waste containers labeled with the words “*Waste Ethidium Bromide (Mutagen)*” and submit to OESO for proper disposal.

4. **Spill Clean-up Material** – Contaminated gloves, mats, or other spill clean-up waste should be collected in 4mm plastic bags, double-packed if necessary, labeled as “*Waste Ethidium Bromide (Mutagen)*”, and submitted to OESO for proper disposal.