

Ethidium Bromide Disposal Guideline

Common Name:

Ethidium bromide

Synonyms:

2,7-Diamino-10-ethyl-9-phenylphenantridinium bromide; 3,8-Diamino-5-ethyl-6-phenylphenanthridinium bromide; Homodium bromide; Dromilac

CAS Number:

1239-45-8

Use:

Ethidium bromide is commonly used as a fluorescent dye in molecular biology techniques such as gel electrophoresis.

Recommended Disposal Procedures:

Waste Stream	Waste Management Procedures
Electrophoresis gel	Collect in appropriate containers or bags for disposal as hazardous waste. Ensure bags are in good condition. Double bag as required.
Buffer Solutions	Collect in appropriate containers for disposal as hazardous waste OR Filter/extract solution using commercially available filter or activated charcoal filtration. See below. Spent filters to be disposed of as hazardous waste.
Stock Solutions	Collect in appropriate containers or bags for disposal as hazardous waste.
Crystals or powders	Collect in appropriate containers or bags for disposal as hazardous waste.
Contaminated debris	Collect in appropriate containers or bags for disposal as hazardous waste.

Filtration methods using activated charcoal:

Note that solutions are only suitable for filtration if the only hazardous component they contain is ethidium bromide.

1. Bulk charcoal adsorption (for solutions with less than 10 µg/ml ethidium bromide).
 - a. Add 300 mg of activated charcoal for 100 ml of solution
 - b. Stir at room temperature for 20 hours.
 - c. Filter solution with filter paper to recover activated charcoal. Transfer filter paper and activated charcoal to suitable container for disposal as hazardous waste.
 - d. Filtrate may be poured down the sink.
2. Commercially available ethidium bromide filters.
 - a. E.g. S &S Extactor by Schleicher and Schuell. Uses charcoal filter disk to adsorb at least 5 mg of ethidium bromide from solutions of up to 0.5µg/ml ethidium bromide.
 - b. E.g. Green Bag by BIO 101. Uses pouch of activated charcoal to adsorb up to 10mg of ethidium bromide from solution.

Manufacturer's instructions are to be carefully followed with specific attention given to the capacity of the filters to ensure that solutions are effectively filtered.