



Ethidium Bromide Disposal

Ethidium bromide (EtBr) is a potent mutagen. Stock solutions, typically 1%, must be disposed through EOHSS. Buffers with EtBr concentrations >0.5 mcg/ml should be filtered to remove the EtBr (see below) or disposed through EOHSS (they must not be drain disposed). Buffers with EtBr concentrations <0.5 mcg/ml may be drain disposed. EOHSS recommends the following for disposal of EtBr wastes.

Electrophoresis Gels

Gels made from buffers with ethidium bromide concentrations of <0.5 mcg/ml can be disposed in the laboratory trash, if no other contaminants are present. Gels made from stock or higher concentration buffers should be collected and disposed of through EOHSS.

Disposable Materials

Contaminated gloves, paper towels, etc., should be disposed as regulated medical waste. *(Use a soap and water solution to remove EtBr residue from equipment and environmental surfaces.)*

Sharps Contaminated with Ethidium Bromide

- ♦ Contaminated needles, syringes, etc. must be discarded into a sharps container marked with the universal biohazard symbol.
- ♦ Do not autoclave the container! Dispose of the container as regulated medical waste.

Ethidium Bromide Buffers

Federal law requires the University to reduce the amount of chemical waste it generates. Filtration using activated charcoal is a simple and effective way to remove EtBr from buffer solutions. The filtrate may be drain disposed. EOHSS recommends using one of the following filtration systems.

The Schleicher and Schuell's Filter Funnel Kit: VWR catalog numbers 448030 (2-pack) and 448031 (6-pack). Removes EtBr from up to 10 liters of solution.

EM Science's Gravity Flow Column: EM Science catalog number 2243-1. Cartridges can absorb more than 30 mg EtBr.

Bio101 Green Bags: VWR catalog number BIO101 22350-200 50 bags/pack. Each bag eliminates about 10 mg EtBr.

Powdered Activated Charcoal: Method adapted from Bensaude (*Trends Genet.* 4:89) for electrophoresis buffers containing .5 mcg/ml or less EtBr.

- ♦ Add 100 mg of powdered activated charcoal for each 100 ml waste buffer solution.
- ♦ Store the solution for 1 hour at room temperature, shaking it intermittently.
- ♦ Filter the solution through a Whatman No. 1 filter and drain dispose of the filtrate.
- ♦ Seal the filter and activated charcoal in a plastic bag and dispose through EOHSS.

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