SAFETY BULLETIN

ETHIDIUM BROMIDE HANDLING AND DISPOSAL

Ethidium Bromide (EtBr) is used in biochemical laboratories as a marker or stain for identifying nucleic acids in electrophoresis gels. Since EtBr is widely used at Caltech, EtBr safety precautions and the proper management of EtBr waste are very important.

Safety Precautions

Researchers using Ethidium Bromide should follow these safety procedures:

- **Wear Proper Protective Equipment** including a lab coat, closed-toed shoes, Nitrile gloves (or other appropriate chemically resistant gloves), and safety glasses.
- **Wash Your Hands** after removing gloves.
- **Do Not Eat or Drink** in areas where Ethidium Bromide is being used.

Disposal Procedures

- **Aqueous Solutions**: All Ethidium Bromide solutions, including buffers, must be either:
  - disposed of as a hazardous waste or
  - rendered non-toxic at the end of the experimental protocol
    - Use an extraction/absorption system, such as the Schleicher and Schuell kit.
      - This method uses an activated charcoal filtration system, which traps the Ethidium Bromide.
    - The filtrate from the operation may be placed down the drain after testing with an ultraviolet light to observe whether any Ethidium Bromide is still present in the filtrate.
    - Once the filter is saturated, the charcoal filter must be disposed of as a hazardous waste.
- **Electrophoresis Gels:** All gels, filters, and or other solids containing more than 0.1% EtBr must be disposed of as a hazardous waste. Laboratory personnel can place them in a sealed bag or request a 5 gallon poly container from the EH&S office.

If you have a specific question regarding waste being generated in your work area, please contact the EH&S Office at ext. 6727 or via email at safety@caltech.edu.

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