

# FACT SHEET: Ethidium Bromide (EtBr)

## Safe Use and Handling



EtBr is a non-radioactive DNA stain used in genomic research to identify nucleic acid bands during electrophoresis by fluorescing when exposed to UV light. EtBr is both a mutagen and an irritant to the skin, eyes, mouth, and respiratory tract. All personnel using EtBr must review the EtBr SDS prior to its use and be trained on its unique health hazards, PPE requirements, proper clean-up, and disposal.

### NEED TO KNOW:

1. Always wear appropriate PPE when working with EtBr.
2. **NEVER** work with powder outside of a fume hood.
3. Seek immediate medical attention after any exposure (skin, ingestion, inhalation, eye contact).
4. Report all exposures and spills.
5. **ALWAYS** dispose of EtBr as hazardous waste; never drain dispose.

### HOW CAN I AVOID EXPOSURE TO EtBr?

- Use premixed solutions rather than powders. If you must use a dry material, **ALWAYS** work inside a fume hood to avoid possible inhalation exposure.
- Thoroughly wash hands after removing gloves.
- Clean up work area after using EtBr.
- **ALWAYS** wear appropriate PPE: nitrile gloves (latex gloves are not recommended), lab coat, safety goggles, long pants and closed-toe/heel shoes to avoid possible skin exposure. Wear UV eye protection or work behind UV shielding when using UV light.

### HOW DO I DISPOSE OF MATERIALS?

- **COLLECT:** Gels and contaminated “non-sharp” lab debris (e.g., gloves, pads, towels, tubes, etc.) into a 5-gallon pail, lined with a clear plastic bag provided by OEHS. The container must remain closed at all times except when immediately adding or removing wastes from the container.
- **LABEL:** Place chemical name (no abbreviations) on the OEHS-provided label.
- **NO SHARPS: DO NOT** place sharps (e.g., pipettes, razor blades, etc.) into container. Sharps must be discarded in an approved red sharps container.
- **DISPOSE:** Once the 5-gallon pail is 75% full, fill out the [Hazardous Waste Collection Form](#) available on the OEHS website, and email it to [oehs@tulane.edu](mailto:oehs@tulane.edu).

### WHAT SHOULD I DO IN THE EVENT OF A SPILL?

- Notify nearby individuals and isolate the contaminated area.
- If possible, confine liquid spills from spreading using a spill kit or other absorbent materials (e.g., paper towels).
- If staff are aware of the hazards of EtBr, have the appropriate spill cleanup supplies and PPE. Small spills of dilute EtBr solutions may be cleaned by staff without OEHS assistance.
- Wearing appropriate PPE, absorb spill, and clean the area three times with tap water. Discard cleanup materials in EtBr waste container.

### MORE INFO:



### ! IN CASE OF EXPOSURE:

- **Inhalation:** If EtBr is inhaled, immediately move to an area with fresh air before getting medical attention. Dial 911 in case of emergency.
- **Ingestion:** If swallowed, immediately get medical attention.
- **Eye Exposure:** Immediately go to emergency eye wash station and flush eyes for at least 15 minutes; then get medical attention.
- **Skin Exposure:** Remove any contaminated clothing and wash exposed skin with soap and running water; use the emergency shower as necessary; then get medical attention.
- **Report Incident:** Contact your supervisor and complete an Employee Incident Report.

### ADDITIONAL RESOURCES:

- EnviroServe: [6 Steps For Proper Hazardous Waste Disposal](#)
- CDC/NIOSH: [School Chemistry Laboratory Safety Guide](#)