



Material Safety Data Sheet  
Ethidium Bromide Solution

MSDS# 45442

Section 1 - Chemical Product and Company Identification

MSDS Name:	Ethidium Bromide Solution
Catalog Numbers:	BP1302-10
Synonyms:	None
Company Identification:	Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410
For information in the US, call:	201-796-7100
Emergency Number US:	201-796-7100
CHEMTREC Phone Number, US:	800-424-9300

Section 2 - Composition, Information on Ingredients

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Risk Phrases:

CAS#:	1239-45-8
Chemical Name:	Ethidium bromide
%:	1
EINECS#:	214-984-6
Hazard Symbols:	

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Risk Phrases:

CAS#:	7732-18-5
Chemical Name:	Water
%:	99
EINECS#:	231-791-2
Hazard Symbols:	

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Text for R-phrases: see Section 16

Hazard Symbols: T



Risk Phrases: 23 68

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Harmful if inhaled. May be harmful if swallowed. May cause eye, skin, and respiratory tract irritation. Causes eye, skin, and respiratory tract irritation. Target Organs: No data found.

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.

May cause respiratory tract irritation. Methemoglobinemia is characterized by dizziness, drowsiness, headache,

Inhalation: shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown blood. Harmful if inhaled. May cause methemoglobinemia.

May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache,

Chronic: weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death. May alter genetic material.

#### Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

#### Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature: Not available.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 2; flammability: 0; instability: 0;

#### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

#### Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use only with adequate ventilation or respiratory protection.

Storage: Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances.

#### Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethidium bromide	none listed	none listed	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs: Ethidium bromide: None listed Water: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

## Exposure Limits

### Personal Protective Equipment

- Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
- Skin: Wear appropriate gloves to prevent skin exposure.
- Clothing: Wear appropriate protective clothing to prevent skin exposure.
- Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: red-orange

Odor: no odor

pH: Not available

Vapor Pressure: Negligible.

Vapor Density: Not available

Evaporation Rate: Negligible.

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: Not available

Decomposition Temperature: Not available

Solubility in water: Not available.

Specific Gravity/Density: Not available.

Molecular Formula: Solution

Molecular Weight: 0

### Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen bromide.

Hazardous Polymerization: Will not occur.

### Section 11 - Toxicological Information

RTECS#: CAS# 1239-45-8: SF7950000  
CAS# 7732-18-5: ZC0110000  
RTECS: Not available. RTECS:  
**CAS# 7732-18-5:** Oral, rat: LD50 = >90 mL/kg;

LD50/LC50: Other: Ethidium Bromide:, LC50 (inhalation, rat): 0.0118 - 0.1340 mg/L/6H. LD50 (oral,rat): 1503 mg/kg., By mists determined to be toxic based on: LC50 (inhalation rat) 0.0472mg/L/1H \* 100 (dilution rate)=approximately 4.72mg/L/1H.

Carcinogenicity: Ethidium bromide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.  
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: The toxicological properties have not been fully investigated.

### Section 12 - Ecological Information

Not available

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

US DOT

Shipping Name: TOXIC LIQUIDS, ORGANIC, N.O.S. (Ethidium bromide)

Hazard Class: 6.1  
UN Number: UN2810  
Packing Group: III  
Canada TDG  
Shipping Name: TOXIC LIQUIDS, ORGANIC, N.O.S. (Ethidium bromide)  
Hazard Class: 6.1  
UN Number: UN2810  
Packing Group: III

#### Section 15 - Regulatory Information

##### European/International Regulations

###### European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases:

R 23 Toxic by inhalation.

R 68 Possible risk of irreversible effects.

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with plenty of water.

##### WGK (Water Danger/Protection)

CAS# 1239-45-8: 2

CAS# 7732-18-5: Not available

##### Canada

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: D1B, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 1239-45-8 is not listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

##### US Federal

###### TSCA

CAS# 1239-45-8 is not listed on the TSCA Inventory. It is for research and development use only.

CAS# 7732-18-5 is listed on the TSCA Inventory.

**REVIEWED**

#### Section 16 - Other Information

MSDS Creation Date: 4/08/1999

Revision #15 Date 7/20/2009

DATE: July 31/2012  
*Crutcherford*

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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