

# SAFETY DATA SHEET

Cat# 1203-10 Ethidium Bromide

SDS DATE: Jan 9, 2012

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Ethidium Bromide

**PRODUCT CODES:** Cat# 1203-10

**MANUFACTURER:** BioVision, Inc.

**DIVISION:**

**ADDRESS:** 155 S. Milpitas Boulevard, Milpitas, CA 95035

**EMERGENCY PHONE:** 858-373-8066

**CHEMTREC PHONE:**

**OTHER CALLS:** 408-493-1800

**FAX PHONE:** 408-493-1801

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Component	Description	Volume	Safety Information
Ethidium Bromide	1 mg/ml in H <sub>2</sub> O	10 ml	See below

## SECTION 3: HAZARDS IDENTIFICATION

Product Name/Chemical Name	CAS Number	EC-No.	Concentration	Chemical Formula
Ethidium Bromide	1239-45-8	214-984-6	1%	C <sub>21</sub> H <sub>20</sub> BrN <sub>3</sub>
Water	7732-18-5	231-791-2	99%	H <sub>2</sub> O

### Ethidium Bromide:

#### Emergency Overview

**OSHA Hazards:** Highly toxic by inhalation, harmful by ingestion, mutagen

#### GHS Classification:

Acute toxicity, Inhalation (Category 3)

Germ cell mutagenicity (Category 2)

#### GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

Hazard statement(s): H331 Toxic if inhaled.  
H341 Suspected of causing genetic defects.

Precautionary statement(s): P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P281 Use personal protective equipment as required.  
P311 Call a POISON CENTER or doctor/physician

#### HMIS Classification

Health hazard: 3

Chronic health hazard: \*

Flammability: 0

Physical hazards: 0

#### NFPA Rating

Health hazard: 4

Fire: 0

Reactivity Hazard: 0

#### Potential Health Effects

**Inhalation:** May be fatal if inhaled. May cause respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. May cause skin irritation.

**Eyes:** May cause eye irritation.

**Ingestion:** Harmful if swallowed.

## SECTION 4: FIRST AID MEASURES

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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## 5: FIRE-FIGHTING MEASURES

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters:** Wear self contained breathing apparatus for fire fighting if necessary.

**Hazardous combustion products:** Hazardous decomposition products formed under fire conditions— Carbon oxides, nitrogen oxides (NOx), hydrogen bromide gas

**Conditions of flammability:** Not flammable or combustible.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for cleaning up:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20 °C

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

#### Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Ethidium Bromide
Appearance:	Liquid
pH:	4.0 – 7.0
Water Solubility:	No data available
Specific Gravity (g/ml):	No data available
Boiling Point (°C):	No data available
Melting Point (°C):	No data available
Flash Point (°C):	No data available
Ignition Temperature (°C):	No data available

## SECTION 10: STABILITY AND REACTIVITY

Property	Ethidium Bromide
Chemical stability	Stable under recommended storage conditions
Conditions to avoid:	Not available
Materials to avoid:	Strong oxidizing agents
Hazardous decomposition products:	Carbon oxides, nitrogen oxides, hydrogen bromide gas

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### Ethidium Bromide

#### Acute toxicity:

Oral LD50: LD50 Oral – rat – 2,177 mg/kg

Inhalation LC50: LC50 Inhalation – rat – 1 h – 11.8-134 mg/l

Dermal LD50: no data available

Other information on acute toxicity: LD50 Subcutaneous – mouse – 100 mg/kg  
LD50 Intravenous – rat – 16 mg/kg

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: In vitro tests showed mutagenic effects

#### Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity – single exposure (GHS): no data available

Specific target organ toxicity – repeated exposure (GHS): no data available

Aspiration hazard: no data available

#### Potential Health Effects

Inhalation: May be fatal if inhaled. May cause respiratory tract irritation.

Skin: Harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: Harmful if swallowed.

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## SECTION 12: ECOLOGICAL INFORMATION

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### Ethidium Bromide

Elimination information (persistence and degradability): no data available

Ecotoxicity effects: no data available

Further information on ecology: no data available

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## SECTION 13: DISPOSAL CONSIDERATIONS

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Product: Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Dispose of as unused product.

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## SECTION 14: TRANSPORT INFORMATION

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### Ethidium Bromide

DOT (US): UN-Number: 2810 Class: 6.1 Packaging group: III; Proper shipping name: Toxic, liquids, organic, n.o.s. (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide); Marine pollutant: No; Poison Inhalation Hazard: No

IMDG: UN-Number: 2810 Class: 6.1 Packaging group: III EMS-No: F-A, S-A; Proper shipping name: Toxic liquid, organic, n.o.s. (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide); Marine pollutant: No

IATA: UN-Number: 2810 Class: 6.1 Packaging group: III; Proper shipping name: Toxic liquid, organic, n.o.s. (3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide)

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## SECTION 15: REGULATORY INFORMATION

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### Ethidium Bromide

OSHA Hazards: Highly toxic by inhalation, harmful by ingestion, mutagen

DSL Status: All components of this product are on the Canadian DSL list.

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components: 3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide CAS-No. 1239-45-8

New Jersey Right To Know Components: 3,8-Diamino-1-ethyl-6-phenylphenantridinium bromide CAS-No. 1239-45-8

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

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## EU regulations

Component	Risk Phrases	Safety Phrases
Ethidium Bromide	R22, R26, R36/37/38, R68	S24/25

## SECTION 16: OTHER INFORMATION

### OTHER INFORMATION:

### PREPARATION INFORMATION:

### DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.