



# Propidium Iodide at 250 µg/mL

## Chemical Identification

Catalog #: 557, 638  
 Synonyms: PI  
 CAS # of Active Reagent: 25535-16-4  
 Chemical Name of Active Reagent: Phenanthridinium, 3,8-diamino-5-[3-(diethylmethylammonio) propyl]-6-phenyl,-diiodide  
 Molecular Weight of Active Reagent: 668.4  
 Chemical Formula of Active Reagent:  $C_{27}H_{34}I_2N_4$

## Hazards Identification

Contains propidium iodide (PI) staining reagent at 250 µg/ml in DI H<sub>2</sub>O. PI exhibits mutagenic properties as demonstrated in Salmonella typhimurium using 200 µg/plate and at 25 µM/L with Saccharomyces cerevisiae. PI is not currently listed as a carcinogen by NTP, IARC or OSHA but should be treated as such. Symptoms of exposure are undefined but this staining reagent should always be handled using protective gloves, clothing, and eyewear. It was determined to have a LD50 level of 16 mg/kg when administered subcutaneously in mice.

## Characteristics

PI stain is a clear, light pink, odorless solution.

Boiling point, C: 100  
 Vapor pressure (mm Hg): No data available.  
 Vapor density: No data available.  
 Solubility in water: Soluble at room temperature.  
 Specific gravity: Not applicable.  
 % volatile by volume: Not applicable.  
 Evaporation rate: No data available.  
 pH: 4.5 - 6.0

## Storage and Stability

Propidium iodide stain, as supplied by ICT, is stable for 18 months at 2 - 8°C when stored in amber vials and protected from light. Always store protected from light in a tightly closed vial. Vials may be hazardous when empty since they contain product residues. Do not breathe vapor or mist.

## Health Hazard

Propidium iodide may enter the body through inhalation, ingestion, and skin and eye contact.

## Safety Control Measures

Personal protective equipment, such as lab coat, safety glasses with side shields, gloves should be worn at all times while handling this product. Maintain eye wash fountain and safety shower in work area. Safe laboratory practices should be followed. Always wash thoroughly after handling. Never take internally. Do not breathe vapor or mist.

## Exposure Guidelines

No exposure guidelines are available.

## First Aid Measures

Propidium iodide could be a potential carcinogen; avoid any contact with skin, eyes, or take internally. Carefully remove and dispose of gloves after use. Remove contaminated clothing and shoes; wash before reuse.

Skin: Wash thoroughly with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Launder contaminated clothing. Throw away contaminated shoes.  
 Eyes: Immediately flush with plenty of water for at least 15 minutes.  
 Ingestion: If solution is swallowed, seek medical advice.  
 Inhalation: Remove to fresh air, seek medical advice.

## Fire/Explosion Hazard

The 250 µg/ml solution of propidium iodide stain is not a potential fire or explosion hazard.

## Accidental Release Measures

For simple counter top spills, use protective gloves and clothing when promptly cleaning up spills. Spilled solutions may be adsorbed into paper towel and disposed of according to local waste management ordinances. The water-soluble characteristics of this reagent allow the area to be cleaned up using soap and water. For large spills, evacuate area of all unnecessary employees. Wear appropriate personal protective equipment including: neoprene (or equivalent) gloves, safety glasses with side shields, and lab coat. Contain the spill and dispose of in compliance with federal, state, and local regulations. US regulations (CERCLA) require reporting spills and releases to soil, water, and air in excess of reportable quantities. Toll free number to US Coast Guard National Response Center is (800) 424-8802.

**EMERGENCY # FOR NATIONAL RESPONSE CENTER (800) 424-8802**



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