

**Ethidium Bromide, 5G****PG-2940-5G**

Ethidium Bromide is a fluorescent dye used in molecular biology to stain and visualize DNA and RNA in agarose gels under UV light. It binds to DNA by intercalation and produces bright fluorescence. It is effective but hazardous due to its mutagenic properties .

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<b>Parameter</b>	<b>Details</b>
<b>Product Name</b>	Ethidium Bromide
<b>Description</b>	Fluorescent intercalating agent used for detection of DNA and RNA in molecular biology. Binds to nucleic acids and fluoresces under UV light for visualization in gel electrophoresis.
<b>Molecular Weight</b>	394.31 g/mol
<b>Appearance</b>	Dark red to purple crystalline powder/solid
<b>Formula</b>	$C_{21}H_{20}BrN_3$
<b>Solubility</b>	Water: Moderately soluble; Ethanol: Soluble; DMSO: Highly soluble
<b>pH (1% Solution)</b>	5.0 – 7.0 (varies depending on solvent)
<b>CAS Number</b>	1239-45-8
<b>Storage Condition</b>	Store at 2–8 °C, tightly sealed, protected from light and moisture

**Applications / Uses** / DNA/RNA staining, agarose gel electrophoresis, nucleic acid visualization under UV light, molecular biology research

**Safety**

Ethidium Bromide is a mutagenic, suspected carcinogenic chemical that can damage DNA and is harmful if inhaled, ingested, or absorbed through skin. Use PPE such as gloves, lab coat, and goggles, and handle in a fume hood to reduce exposure. In case of contact, wash immediately with water and seek medical attention if needed. Store at 2–8 °C, protected from light, and dispose of as hazardous waste following safety guidelines.