

## **Safe-Red Nucleic Acid Gel Stain (10,000X)**

**Product #:** Bi2M-SrRed

**Quantity:** 250  $\mu$ L

### **Product Description**

- **Safe-Red Nucleic Acid Gel Stain** is an exceptionally sensitive, non-mutagenic, and ultra-safe fluorescent nucleic acid gel staining reagent.
- This stain offers superior stability and sensitivity compared to ethidium bromide (EtBr, EB), without the need for decolorization.
- Safe-Red shares identical spectral characteristics with EB, seamlessly replacing it without necessitating any alterations to the imaging system.

### **Storage**

- Store at room temperature.

### **Components Provided**

**Safe-Red Nucleic Acid Gel Stain**    250  $\mu$ L

### **Important Preparatory Notes (PLEASE READ CAREFULLY)**

1. Safe-Red dye does not need to be refrigerated at low temperature. Please store product at room temperature to avoid precipitation. If precipitation is found, please heat to 45-50°C for 2 min and shake to dissolve.
2. This product can stain single-stranded DNA and RNA, but is less sensitive to single-stranded DNA or RNA than double-stranded DNA.
3. Wear lab coats and disposable gloves during operation.

**Protocol****Option #1: Gel dyeing method (same usage as EB).**

1. To prepare the gel, add 5  $\mu\text{L}$  of Safe-Red nucleic acid dye (10,000X, water soluble) per 50 mL of agarose gel and mix thoroughly (Safe-Red has excellent thermal stability and can be added directly to the high-temperature gel solution without waiting for the gel solution to cool. It can also be made by pre-mixing Safe-Red with an electrophoresis buffer containing agarose powder and heating it).
2. Electrophoresis according to conventional methods.

**Option #2: Soak dyeing method**

1. Electrophoresis according to conventional methods.
2. Dilute Safe-Red Nucleic Acid Dye 10,000X stock solution approximately 3,300 times to make a 3X staining solution (for example, add 15  $\mu\text{L}$  of Safe-Red Nucleic Acid Dye 10,000X stock solution to 50 mL of  $\text{H}_2\text{O}$ ).
3. Carefully place the gel into a suitable container and soak the gel with a sufficient amount of 3X staining solution. In order to shorten the soaking time, the dyeing solution can be pre-heated to about  $70^\circ\text{C}$ , then put into the gel and incubate for 10 min to obtain the ideal effect (if not heated, incubate for 30 min in room temperature shaker; if it is acrylamide gel, incubate for 30-60 min and extend with the increase of acrylamide content). The dyeing solution can be reused for about 3 times for a single use. The 3X Safe-Red stain solution can be prepared in large quantities and stored at room temperature for 1 month.

**NOTES:**

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