Nucleic Acid Gel Stain (10,000× in Water)

Product description

This nucleic acid stain has been validated by the Ames test to be completely non-mutagenic at gel staining concentrations, serving as a novel, non-toxic nucleic acid dye. It is a safe alternative to ethidium bromide (EB), retaining EB-equivalent thermal stability, sensitivity, and UV spectral properties. Detection can be performed under 300 nm UV excitation, and it is suitable for staining dsDNA, ssDNA, and RNA in both agarose and polyacrylamide gel electrophoresis (PAGE). Compatible with in-gel staining or solution-based staining methods, it offers flexible application and delivers high-resolution detection.

Components

Components No.	N132109S
Size	500 μL

Shipping and Storage

Store at room temperature protected from light, valid for five years.

Notes

1. If high molecular weight bands exhibit smearing or poor resolution, it is recommended to reduce the loading amount of DNA marker or nucleic acid samples.
2. In-gel staining is not suitable for precast polyacrylamide gels. For polyacrylamide gels, use solution-based staining methods.
3. For your safety and health, please wear a lab coat and disposable gloves.
4. For research use only!

Instructions

1. In-Gel Staining (similar to EB, pre-electrophoresis staining)

1) Prepare agarose gel at the desired concentration and heat in a microwave until fully melted.

2) Add nucleic acid stain at a final concentration of 1× (i.e., add 5 μL of 10,000× aqueous nucleic acid stain per 50 mL agarose solution). Mix gently.

3) Pour the agarose solution containing the stain into a gel-casting tray, insert a comb, and allow to solidify at room temperature for 30-60 min.

4) Load samples and perform electrophoresis using standard protocols.

5) Image under UV light.

【Note】This stain exhibits excellent thermal stability. The dye may also be added directly to the electrophoresis buffer containing agarose powder, followed by heating via microwave or

conventional methods to prepare the gel.

2. Post-Electrophoresis Staining (solution-based staining)

1）Prepare agarose gel at the desired concentration and heat in a microwave until fully melted.

2） Pour the agarose solution into a gel-casting tray, insert a comb, and allow to solidify at room temperature for 30-60 min.

3）Load samples and perform electrophoresis using standard protocols.

4）Dilute the 10,000×aqueous nucleic acid stain to a 3×working solution using 0.1 M NaCl (i.e., add 15 µL of 10,000×stain to 50 mL of 0.1 M NaCl). This working solution can be reused up to 3 times and stored at room temperature protected from light.

5) Place the gel in a suitable container, submerge it in the 3×staining solution, and stain with gentle agitation at room temperature for about 30 min.

【 **Note** 】 Optimal staining time depends on gel thickness and concentration. For 3.5-10% polyacrylamide gels, staining typically requires 30 min to 1 h, with longer times needed for higher polyacrylamide content.

6）Image under UV light.