GelRed Nucleic Acid Staining Dye (10000×)

Code No.:RSD-100 Volume:500ul

DESCRIPTION

GelRed Nucleic Acid Staining Dye is designed to be a safer replacement for conventional EtBr which poses a significant health and safety hazard for its users. This dye is far more sensitive and stable than EtBr for staining dsDNA, ssDNA or RNA in agarose or polyacrylamide gels. This dye and EB have virtually the same spectra, so you can directly replace EB with this dye without changing your existing imaging system.This dye can be used to stain dsDNA, ssDNA or RNAin agarose gels via either precast or post gel staining, and in in polyacrylamide gels via post gel staining.

KIT CONTENTS and STORAGE

One tube 500ul . Store in the dark at room temperature.

FEATURES

- A safer alternative to EtBr because of nonmutagenic and noncytotoxic.
- Ultra-sensitive and extremely stable than other nucleic acid staining dye.
- Easy disposal: direct disposal down the drain or in regular trash
- Compatible with a 302nm UV transilluminator : replaces EtBr with no optical setting change
- Compatible with a high intensity 470nm blue light transilluminator : increased cloning efficiency.

PROTOCOL

Because high molecular weight and high affinity nucleic acid binding dyes can affect DNA migration during electrophoresis,post-staining of gels is highly recommended.Agarose gels can be precast with GelRed Nucleic Acid Staining Dye, however, it may affect the migration or resolution of some DNA samples in precast gels. The precast protocol is not recommended for polyacrylamide gels.

Before opening, spin down the content of the tube to ensure the solution is at the bottom.

1.Post-Staining Gels

1.1 Perform agarose or polyacrylamide gel electrophoresis as usual according to your standard protocol.

1.2 Dilute GelRed Nucleic Acid Staining Dye 10000× stock solution 3300 fold to make a 3× staining solution in 0.1 M NaCl aqueous solution.

1.3 Place the agarose or polyacrylamide gel in a suitable container such as a polypropylene staining tray. Add a sufficient amount of the 3×staining solution to submerge the agarose or polyacrylamide gel.

1.4 Agitate the agarose or polyacrylamide gel gently at room temperature for ~30 minutes.
Note: Optimal staining time may vary somewhat depending on the thickness of the agarose gel and the percentage of agarose. For polyacrylamide gels containing 3.5-10% acrylamide, typical staining time is 30 minutes to 1 hour with gels of higher acrylamide content requiring longer staining time.

1.5 Destaining is not required, but the gel can be washed in water to reduce background if necessary.

1.6 View the stained gel with a 302nm UV light or high intensity 470nm blue light transilluminator.

1.7 Staining solution can be reused at least 2-3 times. Store staining solution at room temperature protected from light.

2.2.Precasting Agarose Gels

2.1 Prepare molten agarose gel solution using your standard protocol.
Note: the precast protocol is not recommended for polyacrylamide gels. Polyacrylamide gels can be stained using the post-stain protocol.

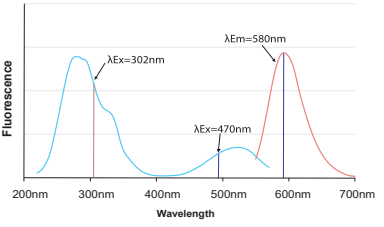
2.2 Dilute the GelRed Nucleic Acid Staining Dye 10000 ×stock solution into the molten agarose gel solution at 1:10000 and mix thoroughly. The GelRed Nucleic Acid Staining Dye can be added while the molten gel solution is still hot.

2.3 Cast the agarose gel and allow it to solidify. Load samples and perform agarose o gel electrophores is as usual according to your standard protocol.

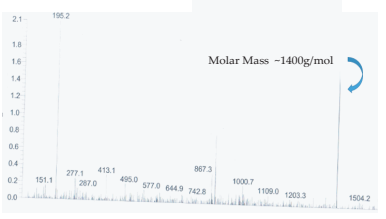
2.4 View the stained gel with a 302nm UV light or high intensity 470nm blue light transilluminator.

2.5 Precast the agarose gels containing GelRed Nucleic Acid Staining Dye can be stored for future use for up to a week. We recommend storing gels at room temperature in the dark.Storage of precast gels at 4℃ can cause dye precipitation and poor performance.

FLUORESCENCE SPECTRUM



MASS SPECTRUM



CELL PERMEABILITY TEST