Gelite™ Red Nucleic Acid Gel Stain *10,000X DMSO Solution*

Catalog number: 17600
Unit size: 1 mL

Component	Storage	Amount
Gelite™ Red Nucleic Acid Gel Stain *10,000X DMSO Solution*	Freeze (<-15 °C), Minimize light exposure	1 mL

OVERVIEW

Gelite™ Red is the most recent addition to our Gelite™ nucleic acid gel stain family. Now we have a complete family of multicolor gel stains for detecting nucleic acids in gels. Gelite™ Red is an extremely sensitive nucleic acid gel stain for detecting DNA in gels using a standard 300 nm UV transilluminator and Polaroid 667 black-and-white print film. Under the same conditions it is more sensitive than the popular SYBR® Gold gel stain. This remarkable sensitivity can be attributed to a combination of unique dye characteristics of Gelite™ Red. Because the nucleic acid–bound Gelite™ Red dye exhibits excitation maxima close to 488 nm and ~300 nm (the emission maximum is ~610 nm), it is compatible with a wide variety of instrumentation, ranging from UV epi- and transilluminators and blue-light transilluminators, to mercury-arc lamp– and argon-ion laser–based gel scanners. Our Gelite™ Red is a superior alternative to SYBR® Gold, SYBR® Safe and Ethidium Bromide. It provides a convenient solution for staining nucleic acid samples in gels.

AT A GLANCE

Spectral Properties of Gelite™ Red Nucleic Acid Gel Stain
Excitation/Emission: 538/609 nm when bound to DNA

PREPARATION OF WORKING SOLUTION

Gelite™ Red working solution (1X):
Make 1X-3X Gelite™ Red working solution by diluting the 10,000X stock reagent into pH 7.5 - 8 buffer (e.g., TAE, TBE or TE, preferably pH 8.0).

Note 1X staining solution can also be used for post gel staining, but the sensitivity will be much improved if staining with 3X staining solution. *Note:* Staining solutions prepared in water are less stable than those prepared in buffer and must be used within 24 hours to ensure maximal staining sensitivity.

Note In addition, staining solutions prepared in buffers with pH below 7.5 or above 8.0 are less stable and show reduced staining efficacy.

SAMPLE EXPERIMENTAL PROTOCOL

Post-Staining Protocol

1. Run gels based on your standard protocol.
2. Place the gel in a suitable polypropylene container. Gently add a sufficient amount of the Gelite™ Red working solution to submerge the gel.

   Note Do not use a glass container, as it will adsorb much of the dye in the staining solution.
3. Agitate the gel gently at room temperature for ~30 minutes, protected from the light.

   Note The staining solution can be stored in the dark (preferably refrigerated) for a week and reused up to 2 - 3 times.
4. Image the stained gel with a 254 nm transilluminator or a laser-based gel scanner using a long path green filter, such as a SYBR® filter or GelStar® filter.

Pre-Casting Protocol

1. Prepare agarose gel solution using your standard protocol.
2. Add 1X Gelite™ Red working solutionthe gel and mix thoroughly.
3. Run gels based on your standard protocol.
4. Image the stained gel with a 254 nm transilluminator or a laser-based gel scanner using a long path green filter, such as a SYBR® filter or GelStar® filter.

DNA-Staining Before Electrophoresis

1. Incubate DNA with a 1:1000 to 1:3000 dilution of the dye (in TE, TBE, or TAE) for at least 15 minutes prior to electrophoresis.
2. Run gels based on your standard protocol.
3. Image the stained gel with a 254 nm transilluminator, or a laser-based gel scanner using a long path green filter such as a SYBR® filter or GelStar® filter.

EXAMPLE DATA ANALYSIS AND FIGURES

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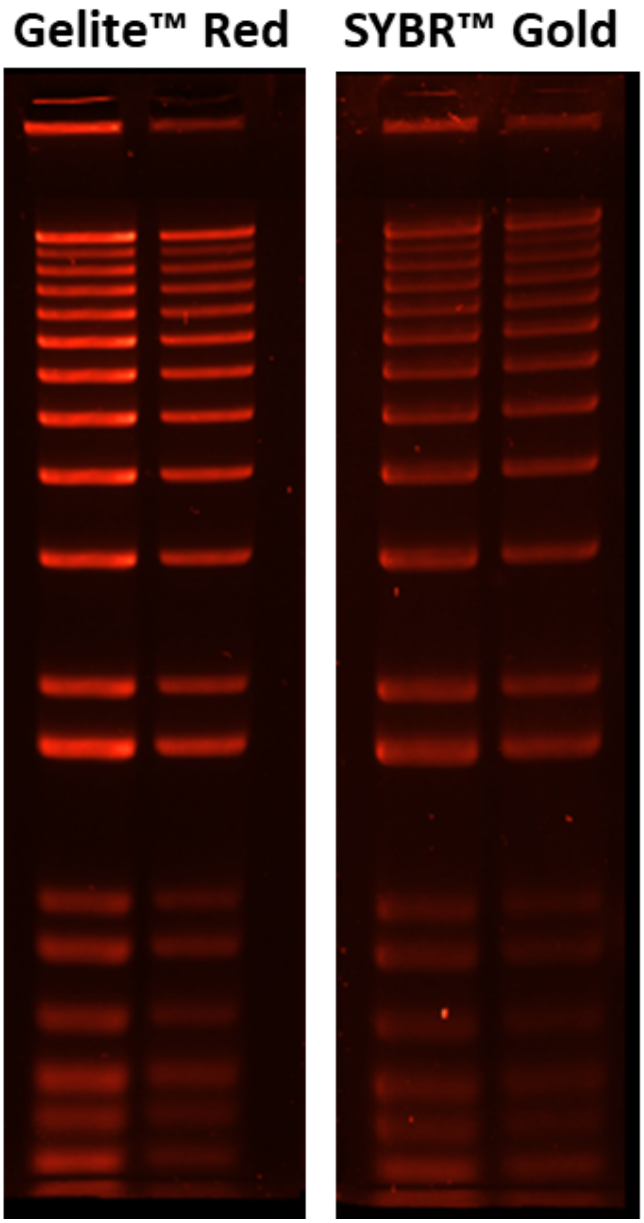

Figure 1. Comparison of Gelite™ Red and SYBR™ Gold in post gel staining. 1 kb Plus DNA Ladder (200ng and 100ng per lane) were subjected to electrophoresis in 0.9% agarose in 1 x TAE buffer. The gels were subsequently stained with a 1x Gelite™ Red or SYBR™ Gold in 1x TAE for 30 minutes and photographed using ChemiDoc™ MP Imager with an EtBr filter.

DISCLAIMER