Cat. No. 291

GEL-SAFE 10000X in DMSO
Technical Manual

Information

This product was developed with similar optical properties as SYBR Safe, as shown in **Fig. 1**. The GEL-SAFE, with the same chemical structure as Sybr Safe, has been proved having reduced mutagenicity, making it safer than ethidium bromide. As staining DNA in agarose or acrylamide gels, the performance is almost the same with competitor. (**Fig. 2**).

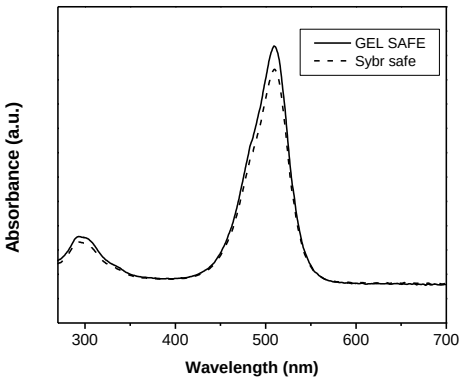

Fig. 1. The compared emission spectra of commercial Sybr safe and Gel safe. Both were diluted with 1000X volume of DMSO.

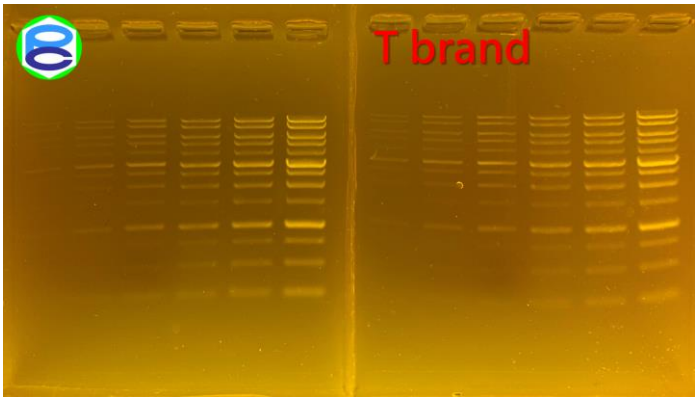

Fig. 2. DNA fragments were electrophoresed through an agarose gel, then stained with GEL-SAFE and SYBR Safe under the same conditions.

Shipping and Storage Information

Product Name	shipping	Storage
GelSafe (Cat. No. : 292)	Shippimg under room temperature	1. 6 months under 4 °C with protection from light. 2. 1 year under <-20℃ with protection from light.

Precautions

1. GEL-SAFE is dissolved in DMSO, which may freeze at low temperatures; therefore, the product must be completely thawed and mixed before using.
2. Repeated freeze-thawing has minimal impact on product properties, however, but excessive repeated freezing and thawing (more than 10 times) is still not recommended.

Protocol

1. Staining nucleic acids after electrophoresis :
   A. Working solution preparation : Dilute GEL-SAFE 10,000X solution in TAE or TBE buffer prior to use.

B. Place the gel in a plastic container, do not use a glass container, because the dye in the staining solution may adsorb to the walls of the container, resulting in poor gel staining. Add sufficient diluted GEL-SAFE solution to cover the gel, and ensure that the gel is fully immersed during staining.
C. Incubate for 30 minutes. Cover the gel and the staining solution with aluminum foil or place them in the dark to protect from light. Continuously agitate the gel on an orbital shaker at 50 rpm. No destaining is required.

2. Precasting GEL-SAFE stain in agarose gels：
   A. Prepare 100 mL of agarose gel solution (concentration from 0.8-3.0%) and heat until the solution is completely clear and no small floating particles are visible.
   B. Add 10 µL of GEL-SAFE DNA Stain to the gel solution and mix it gently.
   C. Cool the gel to 50-60ºC and cast the gel, into the gel tray.
   D. When the gel is solid, load the samples and perform electrophoresis.
   E. No post-staining or destaining is needed.

   Note: The mobility of nucleic acid fragments in the gel may be somewhat slower when run in these gels compared to their mobility in the gel without stain.
3. Viewing and photographing the gel：
   A. You can view stained gels using a standard 280~300 nm UV illuminator.

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