MB132_IFU_EN_V2401

GreenSafe Premium

Catalogue number	Presentation
MB13201	1 mL

Features

- Detects double-strand DNA and single-stranded RNA effectively.
- Offers a safe alternative to ethidium bromide staining.
- Exhibits sensitivity on par with EtBr.
- Non-toxic, non-mutagenic, and non-carcinogenic composition.
- Produces no hazardous waste, ensuring environmental friendliness.

Description

GreenSafe Premium presents a safer alternative to ethidium bromide for detecting nucleic acids in agarose gels. With comparable sensitivity, it seamlessly integrates into agarose gel electrophoresis protocols, emitting green fluorescence upon binding to DNA or RNA. This advanced stain showcases two secondary fluorescence excitation peaks at approximately 270 nm and 290 nm, alongside a robust excitation peak at 490 nm. Its fluorescence emission closely resembles that of ethidium bromide when bound to DNA, peaking at around 530 nm, ensuring compatibility with a wide range of gel reading instruments. Embrace the next generation of nucleic acid staining with GreenSafe Premium - where safety, sensitivity, and compatibility converge.

Shipping & Storage Conditions

This product can be shipped from Blue Ice to Room temperature. Upon receipt, store GreenSafe Premium at Room temperature or at 2°C to 8°C protected from light. Storage at temperatures below may degrade GreenSafe Premium.

Components

COMPONENT	TUBES	VOLUME
GreenSafe Premium	1	1 mL

Standard Protocol

Pre-staining protocol

1. Prepare 70 -100 mL of an agarose gel solution (concentration from 0.8-3.0%) and heat until the solution is completely clear, and no small floating particles are visible.

2. Let the solution cool down and add 2-3 µL of GreenSafe Premium to the gel solution.

3. Mix gently and cast into the tray.

4. When the gel is solid, load the samples and perform electrophoresis.

5. Detect the bands under an UV trans-illuminator.

Post-staining protocol

1. For <0.5 cm thick agarose gels, add 10-15 µL of stain per 100 mL of buffer. Please notice that the amount of stain may depend on the thickness of the gel and the percentage of agarose.

2. Staining time can range from 5 to 60 minutes.

3. The post-staining solution may be used 2-3 times. Staining solution to be reused should preferably be stored at room temperature in the dark.

Technical Notes

- 1 mL of GreenSafe Premium is sufficient for 17-25 litres of agarose.
- The thickness of the gel should be <0.5 cm.
- GreenSafe Premium is non-carcinogenic but may irritate skin and eyes. Please wear gloves while handling.
- Waste must be disposed in accordance with environmental control regulations.

Quality control assays

Functional assay

70 mL of a 1% (w/v) agarose gel are previously prepared with 2 µL of GreenSafe Premium. 5 µL of NZYDNA Ladder III (MB04401) is loaded onto a 1% (w/v) agarose gel with TAE buffer containing and separated by electrophoresis to check the intensity and the pattern of bands. It is expected to observe 14 regularly spaced bands.