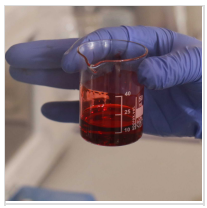

Jun 29, 2022

10000x DNA gel stain: User protocol

In 1 collection

Stephane Fadanka[1], Nadine Mowoh[1]

[1]Beneficial Bio, Mboalab

1 *Works for me* Share

This protocol is published without a DOI.

Nadine Mowoh

ABSTRACT

Beneficial Bio DNA Gel Stain is a conventional nucleic acid staining reagent made of Thiazole Orange dye and DMSO. The DNA gel stain compares favorably to common staining methods, in that it is sensitive, excitable with both UV or blue light (to prevent sample damage), which make it suitable for downstream experiments and safer than ethidium bromide and therefore can be generally disposed of as common chemical waste.

Features:

- Easy to Use: Classic DNA gel stain, View and document your results as you would with EtBr staining.
- Support dual visualisation: Results can be viewed under UV light or blue light.
- Safety: Safer alternative to toxic Ethidium Bromide (EtBr).

Applications

Preparation of agarose gels for visualisation of DNA after electrophoresis.

PROTOCOL CITATION

Stephane Fadanka, Nadine Mowoh 2022. 10000x DNA gel stain: User protocol. **protocols.io** https://protocols.io/view/10000x-dna-gel-stain-user-protocol-cbtusnnw

COLLECTIONS

Beneficial Bio Products: User Protocol

CREATED

Jun 22, 2022

LAST MODIFIED

Jun 29, 2022

PROTOCOL INTEGER ID

65108

PARENT PROTOCOLS

Part of collection

Beneficial Bio Products: User Protocol

GUIDELINES

Wear protective clothing and follow good laboratory practices although all the reagents for this experiment are generally safe to use.

MATERIALS TEXT

- 10000x TO-DMSO gel stain stock
- 10x TBE buffer
- Horizontal agarose gel electrophoresis system
- Visualization systems
- Beaker
- Micropipette and tips
- Agarose gel electrophoresis system
- Gel visualization system

SAFETY WARNINGS

Generally non-toxic and safe procedure.

BEFORE STARTING

Make sure your pipette and all other reagents or equipment you would need are available and set.

User protocol

1

The BenBio DNA gel stain is usually prepared as a 13mg/ml stock that is stored either at **-20 °C** , **4 °C** or **Room temperature** before usage.

Preparing a [M]0.0013 mg/mL final concentration of DNA gel stain in agarose gel for electrophoresis from a 13mg/ml stock

1. Prepare a 1x TBE buffer from a 10x stock by diluting **10 mL** of the 10x TBE buffer stock into **90 mL** of distilled water.
2. Prepare a 1% agarose gel by dissolving **0.25 g** of Agarose into **25 mL** of 1x TBE buffer, heat until it boils for about 1 min in a microwave .
3. Pipette **2.5 µL** of nucleic acid gel stain into **25 mL** of pre- heated TBE gel, swirl for some seconds to completely and evenly distribute the stain in the gel (mix gently to avoid bubbles).
4. Assemble the gel casting tray with combs and pour into the tray, leave it to stand for about 20 minutes to solidify.
5. Remove the comb, load and run the gel following the standard protocol to finish.
6. After the electrophoresis, visualize the gel on UV or a visible light transilluminator.

Notes and Troubleshooting

2

- To achieve optimal results, cast the gel in the dark or cast in the light and use immediately.
- The gel stain has been tested for stability and was able to allow visualization after 6 hours of casting in light and leaving at room temperature.
- If the DNA gel stain is not working, check to make sure it is stored at the right temperature, the right solvent was used to dissolve the dye and the right storage container is used (*to avoid it loosing its color and ability to stain DNA. The solvent that has been able to completely dissolve the dye is DMSO and storing the dye stock at* **4 °C** *is also increases its shelve life).*

The gel stain has been proven to be stable for more than 6 months at room temperature though optimal performance can be achieved by storing at **4 °C**