Fluo-DNA/RNA Gel Staining Solution (Cat. GS-001)

Product Information:

Contents: An environmentally friendly DNA/RNA stain dye in DMSO solution, (30,000x).

Catalog Number: GS-001 ***For research use only.***

Size: 500 ul (enough for staining ~ 200 agarose or polyacrylamide mini gels).

Storage Conditions: Stored at -20°C. Protected from light, stable for 2 years.

Note: ***This product is non-carcinogenic but irritant to skins and eyes. Wear goggles and gloves are necessary. In case of contact with eyes or skins, rinse immediately with plenty of water and seek medical advice.***

Benefits and Features:

1. **Safe:** Non-toxic and non-genotoxicity for waste disposal, directly into the wastewater systems or clean up with 70% ethanol.
2. **Sensitive:** Detect down to 0.1-1 ng of DNA per band with UV light, ≥5-10 fold more sensitive than Ethidium Bromide for detecting DNA, RNA and single strand conformation polymorphism (SSCP) products in agarose gel, denaturing urea, glyoxal, and formaldeyde gels.
3. **Convenient**: Visualize DNA bands with a U.V transilluminator during/after electrophoresis in TAE/TBE buffer.
4. **Compatible:** Fluorescent DNA dye can be completely removed from nucleic acids by alcohol precipitation or Qiagen QIAquick Gel Extraction, leaving pure DNA/RNA templates for downstream cloning/sub-cloning application or analysis.
5. **Broadband fluorescence excitation/emission:** Approximately 300nm, 490nm/540nm (max emission).
6. **Improved effective:** Lower background and higher signal-to noise ratio than most competitors' solutions due to the low intrinsic fluorescence of the unbound dye. The presence of the dyes in gels does not interfere with restriction endonucleases, DNA ligations, and other in-gel digestion assays.
7. **Enhanced effective:** Produce enhancing fluorescence signals when combining with the Fluo-DNA loading buffer (Cat.#:LB-001), suitable for detecting **pico-gram** Nucleic acids.

DNA/RNA gel staining procedure:

1. Prepare **90ml** of 0.8-3% agarose gel buffer or polyacrylamide buffer (e.g., 1X TBE or 1X TAE) in a 250ml flask and heat in the microwave for 2~3 minutes until completely melted.
2. After cooling the solution to about 70°C, add **3**$\mu\ell$ of fluo-DNA/RNA gel staining solution (30,000x) into the heated agarose or polyacrylamide solution.
3. Swirl the flask gently to mix well and avoid forming bubbles.
4. Pour solution into the clean gel tray containing a sample comb and allow the gel to cool until solidified at room temperature or, if you are in a big hurry, in a refrigerator.
5. Remove the comb and insert the gel into the electrophoresis chamber with 1xTBE/TAE buffer.
6. Mix **0.5-3ul** PCR product or DNA/RNA sample with loading buffer or Fluo-DNA loading buffer (Cat.#: LB-001).
7. Load DNA or RNA samples on the gel and perform electrophoresis.
8. Detect the DNA/RNA bands under UV light or blue light transilluminator/imager.

Precautions and Disclaimer:

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