

SafeDye for UV (6x)

Cat # : PT-D4001 / SA-D4001

Size : 1ML / 30 μ L

Product Description:

1. SafeDye for UV (6x) replace toxic Ethidium Bromide (EtBr), a potent mutagen, for the visualization of double-stranded DNA, single-stranded DNA, and RNA in agarose and polyacrylamide gel electrophoresis. SafeDye for UV (6x) is non-carcinogenic and the mutagenicity was determined by the Ames-test. The results are negative in both the mouse marrow chromophilous erythrocyte micronucleus and mouse spermatocyte chromosomal aberration tests.
2. SafeDye for UV (6x) emits green fluorescence when bound to DNA or RNA. It has two fluorescence excitation peaks, ~300 nm. The fluorescence emission is at ~600 nm. Thus, SafeDye for UV (6x) is compatible with a wide variety of gel reading instruments, UV or blue light illumination. We recommend using UV illumination rather than blue light.
3. SafeDye for UV (6x) is supplied in 6X loading buffer. Simply mix dye with your samples before loading into the gel. There is no need to perform post-staining or destaining. Sensitivity of SafeDye for UV (6x) is 0.1 ng DNA per band.

Safety:

SafeDye for UV (6x) is a Non-carcinogenic by the Ames test. May cause skin and eye irritation. Always wear gloves when working with the product.

Protocol:

- Prepare a 100 ml agarose or polyacrylamide solution with no stain. Mix gently to avoid bubbles.
- For agarose gels, let the solution cool down to 60 - 70 °C before casting the gel. For polyacrylamide gel, add APS and TEMED and cast the gel according to regular protocol.
- Mix samples or DNA marker with SafeDye for UV (6x) at a 1:5 (dye: sample) dilution rate.
****NOTE: D4001 is quite viscous, please make sure to thoroughly mix or vortex it before use.**
- Following electrophoresis, view the results under UV or blue LED light.

Troubleshooting:

• **Weak Signal-**

SafeDye for UV (6x) must be mixed with samples before loading the gel. Casting the dyes into the gel or soaking the gel post electrophoresis will result in little or no staining.

• **Inhibited Downstream Application-**

Use SafeDye for UV (6x) with blue light to visualize your gel for gel extraction. UV light excitation can cause nicking and mutations in DNA, which negatively impact enzymatic reactions and transformations.

• **Poor Image Quality-**

Many gel doc systems are optimized for EtBr, and so pictures taken with these settings favor EtBr over other stains. When possible adjust the system settings for the dye you are using.

Form & Storage:

Liquid form (protected from light).

Store at -20°C. This product is stable for 1 year from the date of shipment.

Product Use Limitations:

This product is designed for research purposes and *in vitro* use only. According to common laboratory safety practice, it is recommended to wear protective clothing, gloves, and safety glasses.

Manufactured for and distributed by Protech Technology Enterprise Co.,Ltd

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