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SafeView™ Plus Nucleic Acid Stain

Replace Ethidium Bromide in post electrophoresis staining

Cat. No.	Description	Quantity
G468	SafeView™ Plus	1.0 ml

SafeView™ products 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. SafeView™ products are non-carcinogenic by the Ames-test. The results are negative in both the mouse marrow chromophilous erythrocyte micronucleus and mouse spermatocyte chromosomal aberration tests.

SafeView™ Plus directly replaces EtBr in agarose and polyacrylamide post gel electrophoresis staining. Simply soak the gel in diluted SafeView™ Plus post electrophoresis.

Technical Specifications

Spectral Properties	Max Excitation 490 nm; Additional Excitation ~285 nm Max Emission 525 nm (green-cyan)
Light Source	Compatible with UV and blue light.
Sensitivity Limit	Detect as little as 0.05 - 0.1 ng DNA per band.
Storage	Store at 4 °C.
Shelf life	Two years from date of shipping.
Safety	Non-carcinogenic by the ames test. May cause skin and eye irritation. Always wear gloves when working with the product.
Disposal	Dispose of Safe-View™ products as you would any other non-carcinogenic fluorescent dye (eg. Acridine orange; Propidium iodide).

Protocol

1. Prepare a 100 ml agarose or polyacrylamide solution with no staining dye. Mix gently to avoid bubbles. For agarose gels, let the solution cool down to 60 - 70 °C before casting. For polyacrylamide gel, add APS and TEMED and cast the gel according to regular protocol.
2. Prepare staining solution by diluting SafeView Plus™ 1:5,000 - 1:10,000 in TE, TAE or TBE buffer.
3. After performing electrophoresis, place the dye-free gel in a plastic container and cover with the staining solution. Ensure the box is covered to protect the contents from light. Agitate gently and incubate at room temperature for 10 - 40 minutes.
4. No destaining is required - visualize results directly under UV or blue light.
5. The staining solution may be reused up to 4 times. Keep stored at 4°C and protected from light. Do not store the solution in glass containers, as these surfaces adsorb the dye in the solution, reducing the staining efficacy.

Troubleshooting

Problem	Solution
Weak or No Signal	• SafeView™ Plus must be used as a post electrophoresis stain only. Casting into the gel or mixing with samples will result in little or no staining. •Increase the concentration of SafeView™ Plus or the incubation time •Use only with plastic containers as glass is known to absorbe dye. •Protect from light.
Inhibited downstream application	Use 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.