



Cyrusbioscience

Safe Nucleic Acid Stain (Green)

Product No.: A-GREEN

Package: 1ml

Storage: Store at 4 °C.

Technical Specifications

Excitation: 490 nm

Emission: 525 nm (green)

Light Source: UV and blue light

Sensitivity Limit: 0.2 - 0.6 ng DNA per band

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 Nucleic Acid Stain products as you would any other non-carcinogenic fluorescent dye (eg. Acridine orange; Propidium iodide).

Description

Safe Nucleic Acid Stain 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. Safe Nucleic Acid Stain 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.

Simply mix Safe Nucleic Acid Stain with your samples before loading into the gel and visualize the gel by UV or blue light source.

Protocol

1. Prepare a 100 ml agarose or polyacrylamide solution with no stain. Mix gently to avoid bubbles.
2. 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.
3. Mix samples or DNA marker with Safe Nucleic Acid Stain dye at a 1:5 (dye : sample) dilution rate. Our unstained DNA Ladder Marker 100 bp (Cat. No 2009), 200bp (Cat. No 2010) or 1 kb (Cat. No. 2011) can also be used with Safe Nucleic Acid Stain dye.
4. Following electrophoresis, view the results under UV. Safe Nucleic Acid Stain can also be viewed under blue LED light.



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Troubleshooting

Problem	Solution
Weak signal	Safe Nucleic Acid Stain must be mixed with samples before loading the gel. Casting these dyes into the gel or soaking the gel post electrophoresis will result in little or no staining.
Inhibited downstream application	Use Safe Nucleic Acid Stain 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.