Safe Image™ Green DNA Stain

(Cat# M1194-1000; Substitute for Ethidium Bromide; Store at 4°C)

I. Introduction:

Safe Image™ DNA Stains represents a new and safe nucleic acid stain for the visualization of double-stranded DNA (dsDNA), single-stranded DNA (ssDNA), and RNA in agarose and polyacrylamide gels. The dyes have the capability to bind to DNA and are thus developed to replace toxic Ethidium Bromide (EtBr, a potent mutagen), commonly used in gel electrophoresis for visualization of nucleic acids. Safe Image™ products are non-carcinogenic by the Ames-test. The results are negative in both the mouse marrow chromophilous erythrocyte micronucleus and mouse spermary spermatocyte chromosomal aberration tests.

Safe Image™ Green DNA Stain has an Excitation Wavelength of 490 nm and Emission Wavelength of 525 nm, and its sensitivity range is between 0.2-0.6 ng. Safe Image™ Green DNA stain stains must be added to the sample before loading it to the gel. Safe Image™ Green DNA Stain will stain all nucleic acid templates (dsDNA, ssDNA and RNA) in one color. During electrophoresis, when bound to DNA, Safe Image™ Green DNA Stain emits green fluorescence.

II. Application:

- Safe detection of dsDNA, ssDNA and RNA in agarose and polyacrylamide gels
- Works under blue light/LED

III. Package Contents:

Cat. No.	Quantity
M1194-1000	1.0 ml

IV. User Supplied Reagents and Equipment:

- UV and LED transilluminators
- Pipettes
- Agarose

V. Shipment and Storage:

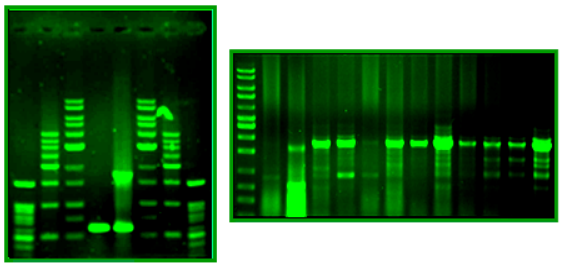
Upon arrival, the Safe Image™ should be stored at 4°C. The Safe Image™ Green DNA Stain is stable for 2 years from the date of shipping when stored and handled properly. Briefly centrifuge small vials prior to opening.

VI. Protocol:

With Safe Image™ Green DNA Stain, you do not need to add any dyes to the gel matrix or running buffers. Safe Image™ Green DNA stain is provided in a form of 6X sample loading dyes and it should be added to your samples only. The Safe Image™ dyes eliminate contamination risk of glassware or gel running tank as associated with EtBr. After the electrophoresis, view and document your results as you would do with EtBr staining protocols.

1. Prepare a 100 ml agarose or polyacrylamide solution
2. Mix gently without introducing any air bubbles
3. For agarose gel, let the solution cool down to 60 - 70ºC and cast the gel. For polyacrylamide gel, add APS and TEMED and cast the gel according to regular polyacrylamide gel casting protocol
4. **Mix samples and DNA marker with Safe Image™ dye at a 1:5 (dye:sample) dilution rate**
5. Following electrophoresis, view the results under UV
   Safe Image™ Green DNA Stain can also be visible under blue LED light

VII. Data:



Visualization of PCR amplified DNA using Safe Image™ DNA Stain

VIII. Related Products:

BV Cat. No.	Product Name
M1193-1000	Safe Image™ Basic DNA Stain
M1194-1000	Safe Image™ Green DNA Stain
M1195-1000	Safe Image™ Red DNA Stain
M1196-1000	Safe Image™ White DNA Stain
M1197-1000	Safe Image™ DNA Stain Pack
M1198-1000	Safe Image Super™ DNA Stain
M1199-1000	Safe Image™ Fire Red DNA Stain

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