Safe Image™ Red DNA Stain

(Cat# M1195-1000; 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 DNA and thus are 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™ Red DNA Stain has an Excitation Wavelength of 540 nm and Emission Wavelength of 630 nm, and its sensitivity range is between 0.3-0.8 ng. **Safe Image™ Red DNA Stain stains must be added to the sample before loading it to the gel.** Safe Image™ Red DNA Stain will stain all nucleic acid templates (dsDNA, ssDNA and RNA) in one color. *Safe Image™ Red DNA Stain does have an additional excitation wavelength of around 300 nm. The other wavelength reported is for other people who may decide to use other light sources for the visualization. During electrophoresis, when bound to DNA, Safe Image™ Red DNA Stain emits red fluorescence.*

II. Application:

- Safe detection of dsDNA, ssDNA and RNA in agarose and polyacrylamide gels
- Works only under UV light

III. Package Contents:

Cat. No.	Quantity
M1195-1000	1.0 ml

IV. User Supplied Reagents and Equipment:

- UV
- Pipettes
- Agarose

V. Shipment and Storage:

Upon arrival, the Safe Image™ should be stored at 4°C. The Safe Image™ Red 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™ Red DNA Stain, you do not need to add any dyes to the gel matrix or running buffers. Safe Image™ Red 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™ Red DNA Stain at a 1:5 (dye:sample) dilution rate**
5. Following electrophoresis, view the results under UV

VII. 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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