

# Safe Image™ Basic DNA Stain

(Cat# M1193-1000; Substitute for Ethidium Bromide; Store at 4°C)

## I. Introduction:

Safe Image™ Stain represents a new and safe class of nucleic acid stains 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™ Basic DNA stain** is used the same way as Ethidium Bromide in agarose gel electrophoresis. **It is used directly in the gel and in the running buffer prior to the loading of the samples.** The sensitivity range is between **0.1-0.3 ng**. Under UV light, Safe Image™ Basic DNA Stain emits green fluorescence when bound to dsDNA and ssDNA, and red fluorescence when bound to RNA. This stain has one excitation (490 nm) and two emission spectra (520 nm and 635 nm).

## II. Application:

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

## III. Package Contents:

Cat. No.	Quantity
M1193-1000	1.0 ml

## IV. User Supplied Reagents and Equipment:

- UV and LED transilluminators
- Pipettes
- Agarose

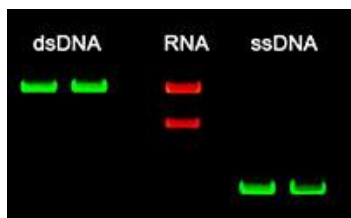
## V. Shipment and Storage:

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

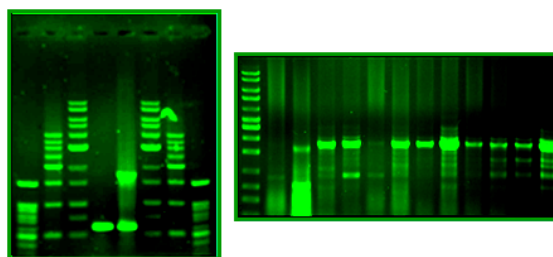
## VI. Protocol:

1. Prepare a 100 ml agarose or polyacrylamide solution
2. **\*Add 5 µl Safe Image™ Basic DNA Stain to the gel solution**
3. Mix gently; the solution should have no air bubbles
4. For agarose gel, let the solution cool down to 60-70°C and cast the gel
5. For polyacrylamide gel, add APS and TEMED and cast the gel according to regular polyacrylamide gel casting protocol
6. **\*Run gel electrophoresis with 5 µl Safe Image™ Basic DNA Stain per 100 ml buffer**
7. View the results under UV or blue LED light

## VII. Data:



Safe Image™ DNA Stain



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

FOR RESEARCH USE ONLY! Not to be used on humans.