Check the product label for actual catalog number, lot and expiry date.

StainIN™ eco-RED Nucleic Acid Stain

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
NAS0301	1 ml	1ml - StainIN™ eco-RED Nucleic Acid Stain	Red DNA and RNA stain, aqueous solution. 10000X concentrated, used at 1X conc. in agarose gels or in the post-staining buffer for agarose or PAA gels.

*STORAGE: **Store in the dark at +15 to +25°C.** Do not freeze, do not cool! Short exposure (few days) to +4°C temperature is not critical, but may cause precipitation which disappears after warming up. If frozen, the stain shall be disposed and not used anymore.*
DISPOSAL: Used dye solutions or melted gels shall be run through approved filters. If the absence of residual fluorescence is confirmed, the liquids can be disposed with plenty of water down the drain. Consult your safety office to match your local regulations, as they vary and change.

APPLICATIONS

- Staining of DNA or RNA in agarose and polyacrylamide gels
- ssDNA, dsDNA and RNA visualization under the UV light
- ssDNA, dsDNA and RNA visualization under LED light

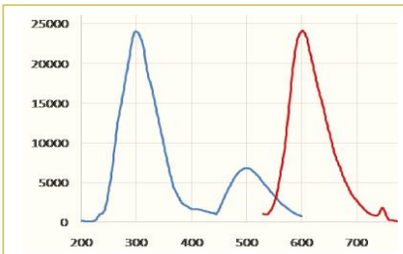
BENEFITS

- Safe, DMSO-free, economical alternative to ethidium bromide
- Universal – in gel staining, or post- run staining, no de-staining.
- Ambient temperature storage (protected from light)

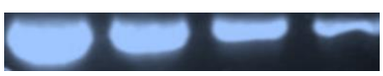
PRODUCT DETAILS

StainIN™ eco-RED Nucleic Acid Stain, a 10000X concentrated aqueous solution is a significantly safer alternative to ethidium bromide. It is same easy to use, twice as sensitive and much more secure. At least twice as economical as competing products, this novel DMSO-free stain can be also used and disposed with less environmental and health concerns compared to ethidium bromide. StainIN™ eco-RED is a fluorescent dye that allows detection of >0,1 ng of DNA in both agarose and polyacrylamide gels. It binds to both ds DNA, ssDNA and RNA and emits red fluorescence detectable under the LED or UV light and documented with same filters as ethidium bromide. For cloning applications, LED light is recommended. The lower than ethidium bromide carcinogenicity of the dye has been proven by Ames-test.

SPECTRA AND PERFORMANCE



y – fluorescence
x – wavelength, nm
blue – excitation (300 max)
red – emission (600 max)



DNA, stained during the run, LED exposure

500 ng 250 ng 120 ng 50 ng

PROTOCOL FOR NA STAINING DURING THE AGAROSE GEL ELECTROPHORESIS

1. Wear gloves when working with all NA stains, buffers and gels.
2. Prepare the agarose gel solution like recommended by supplier.
3. Cool down the agarose after boiling to a hand-friendly temperature.
4. **Add 8-10 µl of StainIN™ eco-RED solution per 100 ml of the gel right before casting the gel.**
5. Mix the gel solution very gently to distribute the dye but not to produce air bubbles. Pour the gel, insert the combs.
6. Prepare the required volume of 1X TAE or 1X TBE buffer to be used in the electrophoresis tank.
7. Optionally, if low NA concentration is expected, add 2-5 µl of StainIN™ eco-RED solution per 100 ml of the 1X electrophoresis running buffer.
8. Add both gel and the buffer into the electrophoresis tank and run electrophoresis like usual.
9. Visualize nucleic acids under the UV light or LED.

- Destaining is not needed, but it might help to reduce the background.
- Minimize UV exposure if you intend to clone the DNA, or use LED.
- Use ethidium bromide filters for gel photography.
- If you reuse the molten gel, add at least half a portion of the stain each time after boiling and cooling the gel solution down (like in step 4).

NA STAINING POST AGAROSE GEL ELECTROPHORESIS

- Perform gel electrophoresis as usual without any stains.
- Soak the gel for 10-30 minutes into the 100 ml solution of 1X electrophoresis buffer freshly mixed with 10 -30 µl of StainIN™ eco-RED. Keep it all protected from light (f.e., covered).
- Visualize the stained NA under the UV or LED.

Same staining solution can be used for up to 5-10 gels.
The amount of the stain can be adjusted, as the staining intensity depends on gel percentage and thickness.
Longer staining time of 30 minutes gives better results, however, it may cause background or diffusion of small NA fragments.

PROTOCOL FOR NA STAINING DURING THE POLYACRYLAMIDE GEL ELECTROPHORESIS

1. Wear gloves when working with all NA stains, buffers and gels.
2. Prepare the native or denaturing PAA gel as recommended by supplier.
3. Add TEMED and APS and proceed to the next step immediately.
4. **Add 8-10 µl of StainIN™ eco-RED per 100 ml of the gel right before casting the gel.**
5. Mix the gel solution very gently to distribute the dye but not to produce air bubbles. Pour the gel, insert the combs.
6. Prepare the required volume of 1X TBE buffer to be used in the electrophoresis tank.
7. Optionally, if low NA concentration is expected, add 2-5 µl of StainIN™ eco-RED solution per 100 ml of the 1X electrophoresis running buffer.
8. Add both gel and the buffer into the electrophoresis tank and run electrophoresis like usual.
9. Visualize nucleic acids under the UV light or LED.

- Destaining is not needed, but it might help to reduce the background.
- Minimize UV exposure if you intend to clone the DNA, or use LED.
- Use ethidium bromide filters for gel photography.

NA STAINING POST PAA GEL ELECTROPHORESIS

- Perform gel electrophoresis as usual without any stains.
- Soak the gel for 10-30 minutes into the 100 ml solution of 1X electrophoresis buffer freshly mixed with 10 -30 µl of StainIN™ eco-RED. Keep it all protected from light (f.e., covered).
- Visualize the stained NA under the UV or LED.

Same staining solution can be used for up to 5-10 gels.
The amount of the stain can be adjusted, as the staining intensity depends on gel percentage and thickness.
Longer staining time of 30 minutes gives better results, however, it may cause background or diffusion of small NA fragments.

IN VITRO RESEARCH USE ONLY

ORDERING
T: +49 7250 33 13 401
F: +49 7250 33 11 413
order@highQu.com
www.highQu.com

SALES
T: +49 7250 33 13 401
F: +49 7250 33 11 413
sales@highQu.com

TECHNICAL SUPPORT
T: +49 7250 33 13 401
F: +49 7250 33 11 413
tech-support@highQu.com