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

StainIN™ RED Nucleic Acid Stain

CAT.#	SIZE	COMPONENTS	COMPONENT COMPOSITION
NAS0101	1 ml	1ml - StainIN™ RED Nucleic Acid Stain	Red DNA and RNA stain in diluted DMSO. Provided as 20000 X solution to be used at 1 X concentration in agarose or polyacrylamide gels and at 0,5 X concentration in electrophoresis buffers.

STORAGE: Store in the dark at +4°C for at least two years.

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 NA in agarose and polyacrylamide gels during electrophoresis for ssDNA, dsDNA and RNA visualization and gel documentation under the UV light

BENEFITS

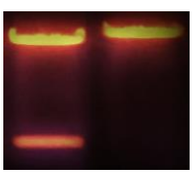
- Much more safe, economical alternative to ethidium bromide
- Highly sensitive NA detection - up to 2x more sensitive than EtBr
- Time saving – in gel stain, no post- run staining, no destaining

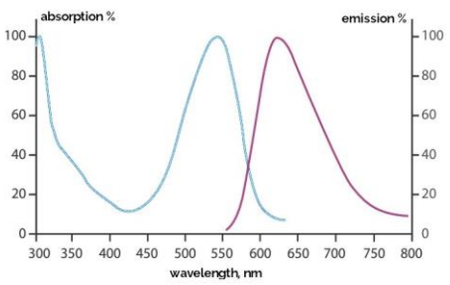
PRODUCT DETAILS

StainIN™ RED Nucleic Acid Stain 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 stain can be also used and disposed with less environmental and health concerns compared to ethidium bromide.

StainIN™ RED is a fluorescent dye that allows detection of >0,3 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 UV light and documented with same filters as ethidium bromide. For cloning applications, UV exposure shall be minimized. Much smaller than ethidium bromide carcinogenicity of the dye has been proved by Ames-test. Mammalian cell mutagenicity tests, both mouse marrow erythrocyte micronucleus and spermatocyte chromosomal aberration tests gave negative mutagenicity results.

PERFORMANCE





Left image - agarose gel stained with StainIN™ RED Nucleic Acid Stain
Right image - StainIN™ RED excitation maxima - 540 nm, emission maxima - 630 nm.

PROTOCOL FOR 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 5µl of StainIN™ 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. **Add 2,5 - 3 µl of StainIN™ 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.

- Destaining is not needed, but it might help to reduce the background; post-run staining is not recommended.
- Minimize UV exposure if you intend to clone the DNA.
- Use Ethidium bromide filters for gel photography.
- After a few runs refresh the electrophoresis buffer in electrophoresis tank prepared as in step 7.
- If you reuse the gel, add at least half a portion of the stain each time after boiling and cooling the gel solution down (like in step 4).

PROTOCOL FOR POLYACRYLAMIDE GEL ELECTROPHORESIS

1. Wear gloves when working with all NA stains, buffers and gels.
2. Prepare the native or denaturing PAA gel solution like recommended by supplier.
3. Add TEMED and APS and proceed to the next step immediately.
4. **Add 5µl of StainIN™ 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 TBE buffer to be used in the electrophoresis tank.
7. **Add 2,5 - 3 µl of StainIN™ 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.

- Destaining is not needed, post-run staining is not recommended.
- Use Ethidium bromide filters for gel photography.
- After a few runs refresh the electrophoresis buffer in electrophoresis tank prepared as in step 7.

IN VITRO RESEARCH USE ONLY

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