Instructions for use

ROTI®GelStain Red Eco

10 000x solution in Water

Red fluorescent staining reagent for non-toxic staining of nucleic acids in agarose gels and polyacrylamide gels.

To be used at 1x concentration in agarose or polyacrylamide gels or in post-staining buffer

- Alternative to ethidium bromide, non-toxic, non-mutagen
- Detection of >0.1 ng nucleic acid per band
- Usable with the same filters as ethidium bromide
- For staining od dsDNA, ssDNA and RNA
- Excitation via UV light (300 nm) and blue light (500 nm)
- Compatible with all usual downstream applications

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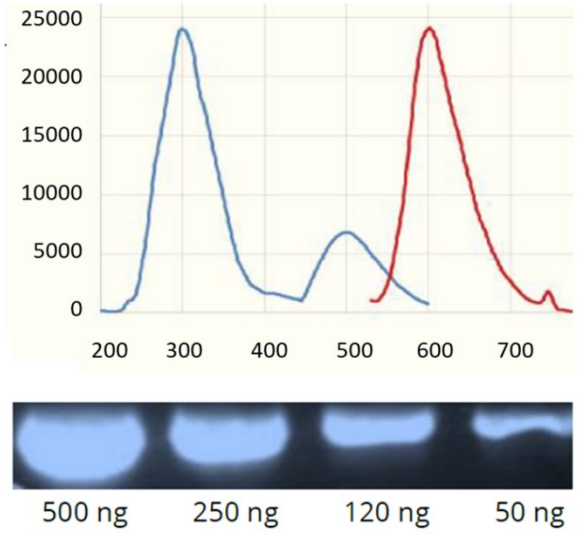
ROTI®GelStain Red Eco is a new designed red fluorescent dye that can be used like ethidium bromide for staining of nucleic acids. In comparison to ethidium bromide, ROTI®GelStain Red Eco is significantly less mutagenic and less toxic. It is suitable for staining of dsDNA, ssDNA and RNA, in both, agarose as well as polyacrylamide gels. Bound to nucleic acid it emits a brightly red fluorescence that can be documented by all usual ethidium bromide foto filters.
ROTI®GelStain Red is compatible with all usual down-stream applications.

ROTI®GelStain Red is distributed for laboratory research only. Not for diagnostic use.
Excitation maximum (bound to DNA): approx. 300 nm and 500 nm
Emission maximum (bound to DNA): 600 nm



Sensitivity:
ROTI®GelStain Red Eco, used for in-gel staining, detects up to 0.1 ng/band of nucleic acid and is therefore twice as sensitive as ethidium bromide.

Safe Use:
ROTI®GelStain Red is significantly less mutagenic than ethidium bromide as proven with the Ames-test. However, we recommend strongly to **wear gloves** when working with all kinds of DNA stains.

Application:
In-Gel Staining of Agarose Gels

1. Prepare a 100 ml Agarose solution in either TBE or TAE.
2. Let the solution cool down to 60-70 °C.
3. Add 8-10 µl ROTI®GelStain Red Eco to 100 ml agarose right before casting the gel.
4. Mix gently (avoiding air bubbles) and cast the gel.
5. Optionally: If low nucleic acid concentration is expected add 2-5 µl ROTI®GelStain Red Eco per 100 ml running buffer.
6. Run the gel as usual and visualize nucleic acids under UV light or blue light (see ‘Helpful Comments’ below).

Post-run staining of agarose gels

1. Prepare a tub with approx. 100 ml of electrophoresis buffer.
2. Add 10-30 µl ROTI®GelStain Red Eco per 100 ml electrophoresis buffer.
3. After electrophoresis, transfer the gel to the tub containing the buffer with the stain and incubate the gel for appr. 10-30 min
4. visualize nucleic acids under UV light or blue light (see ‘Helpful Comments’ below).

In-Gel Staining of Polyacrylamide Gels

1. Prepare the native or denaturing PAA gel solution according to our application note for ROTIPHORESE® PAGE-Gel solutions.
2. Add TEMED and APS and proceed to the next step immediately.
3. Add 8-10 µl of ROTI®GelStain Red Eco solution per 100 ml of the gel right before casting the gel.
4. Mix gently (avoiding air bubbles) and cast the gel.
5. Optionally: If low nucleic acid concentration is expected add 2-5 µl ROTI®GelStain Red Eco per 100 ml running buffer.
6. Add both gel and the buffer into the tank and run electrophoresis like usual and visualize nucleic acids under UV light.

Helpful Comments:

- Destaining is not needed, but it might help to reduce the background.
- Only use Blue light if you intend to clone the DNA.
- Use Ethidium bromide filters for gel photography. Minimize UV exposure if you intend to clone the DNA
- If you melt and reuse agarose, add at least half a portion of the stain each time after boiling and cooling the gel solution down.
- Although ROTI®GelStain Red has not been classified as dangerous reagent, it is good laboratory practice to always wear gloves when working with the product.

Content:

1 ml or 5 x 1 ml ROTI®GelStain Red stock solution

1 ml is sufficient for staining of approx. 300 minigels (with 30 ml agarose each).

Storage:

Store at 15-25 °C protected from light.

ROTI®GelStain Red Eco	
223C.1	1 ml
223C.2	5 x 1 ml