Instructions for use

ROTI®GelStain

20 000x solution in water

Green 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

- Alternative to ethidium bromide, non-carcinogenic and significantly less mutagenic
- Detection of 0.1 – 0.3ng nucleic acid per band
- Excitation via UV (302nm) and blue light (490nm)
- Compatible with all downstream applications

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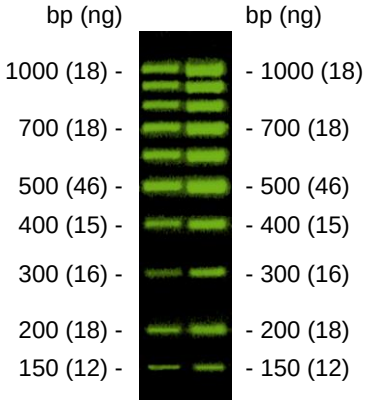
ROTI®GelStain is a safe nucleic acid stain for the detection of dsDNA, ssDNA and RNA in agarose and polyacrylamide gels. The dye is less toxic than ethidium bromide and can be used for in-gel staining. When bound to nucleic acids in agarose gels, ROTI®GelStain emits a brightly green fluorescence that may be documented by standard (broad-band) ethidium bromide foto filters or foto filters for SYBR® Green.
ROTI®GelStain is compatible with all standard down-stream applications and has been successfully tested for use with gel extraction, ligation, transformation and transfection.

ROTI®GelStain is distributed for laboratory research only. Not for diagnostic use.
Excitation maximum (bound to DNA): 302nm and 490nm
Emission maximum (bound to DNA): 515nm



Sensitivity:
ROTI®GelStain used for in-gel-staining, detects up to 0.1ng nucleic acid per band, making at least as sensitive as ethidium bromide.

Safe Use:
ROTI®GelStain causes significantly fewer mutations in the Ames test than ethidiumbromide and is non-carcinogenic as results of both, the mouse marrow chromophilous erythrocyte micronucleus test and mouse spermary spermatocyte chromosomal aberration test, were negative.

Application:

In-Gel Staining

1. Prepare 100ml of an agarose or polyacrylamide gel solution
2. Add 5µl ROTI®GelStain to 100ml gel solution
3. Mix gently (avoiding air bubbles)
4. For agarose gel: Let the solution cool down to 60-70ºC and then cast the gel.
   For polyacrylamide gel: Add APS and TEMED, then cast the gel.
5. Run electrophoresis with 5µl ROTI®GelStain per 100ml running buffer
6. View the results under UV or blue light.

Please note: Although ROTI®GelStain has not been classified as dangerous reagent, it is good laboratory practice to always wear gloves when working with the product.

Tested for use with the following applications:
In-Gel staining, gel extraction, transformation, ligation transfection. However, for downstream cloning and ligation reaction we recommend ROTI®GelStain Red (0094) as ROTI®GelStain might interfere with downstream ligation reactions.
Prior to setting, ROTI®GelStain /Agarose solution can be retained at 65°C for same day use. Also, Agarose stained with ROTI®GelStain that has not yet been used for gels may well be remelted and used for gel pouring without significant loss in staining sensitivity.

Content:
1ml or 5x 1ml ROTI®GelStain stock solution
1ml is sufficient for staining of approx. 600 minigels (with 30ml agarose each).

Storage:
Store at 4°C protected from light.

Frequently Asked Questions:

Q: Are there any samples of ROTI®GelStain?
A: No, sorry. By tube-internal evaporation, the quality of samples of less than 50 µl decreases rapidly. You may get some interesting test discount, however.

Q: What if the bands on the gel are too faint?
A: In order to increase the brightness of bands we suggest adding ROTI®GelStain to the running buffer as well as to the gel. Use 5 µl ROTI®GelStain per 100 ml buffer.

Q: How should I visualise the gels after staining with ROTI®GelStain?
A: Gels can be visualised under UV transilluminator; no filters are required.

Q: On UV-table the ROTI®GelStain stained bands are very bright, but on photos there is virtually no band visible. What is wrong?
A: Some ethidium bromide photo filters are very narrow banded, efficiently excluding other wave lengths like the green range needed here. Use broad-band photo-filters or filters for SYBR Green.

Q: Can ROTI®GelStain be used for post-run staining?
A: Post-run staining is not recommended.

Q: What is the shelf life of ROTI®GelStain?
A: ROTI®GelStain can be kept for 2 years under cooling.

Q: May a ROTI®GelStain containing agarose be cooked repeatedly in the microwave?
A: Yes, ROTI®GelStain staining is temperature-stable and may be remelted a few times.

Q: How should I dispose of ROTI®GelStain?
A: You should follow any existing departmental or company guidance on the disposal of reagents as indicated in the MSDS of ROTI®GelStain.
ROTI®GelStain should not be disposed of down the sink.

Q: May I also add ROTI®GelStain to the DNA/loading dye mix?
A: Yes, in principle this works. However, the dye has not been optimised for this and thus, staining quality may be diminished.

Q: May I also use ROTI®GelStain for staining of PAGE gels?
A: Yes.

Q: Does ROTI®GelStain also efficiently stain supercoiled plasmids?
A: Yes.

Q: Does ROTI®GelStain also efficiently stain RNA?
A: Yes.

Q: May gels stained with ROTI®GelStain be used for Southern blotting and detection?
A: Yes, without reservation. During blotting and denaturation, the dye simply diffuses from the DNA.

ROTI®GelStain	
3865.1	1 ml
3865.2	5 x 1 ml