

MIDORI^{Green} Xtra

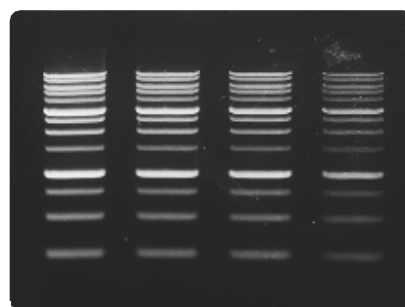
DNA stain with the strongest signal



- ✓ Staining of DNA/RNA in agarose gels
- ✓ Ultra-sensitive
- ✓ Safe DNA dye
- ✓ Optimal for Blue/Green LED and Blue LED light
- ✓ Almost no background

Optimal for Blue/Green LED technology

MIDORI^{Green} Xtra is optimized for Blue/Green and Blue LED light, leading to unbeatable fluorescence signals of DNA and RNA in agarose gels. In addition, UV-light is also suitable for the detection of nucleic acid, but less efficient than non-damaging visible light. Remarkably, MIDORI^{Green} Xtra did not stain the agarose gel, leading to an excellent signal to noise ratio.



Ultra-high sensitivity of DNA bands detected with MIDORI^{Green} Xtra (dilution factor 1:25000) using with a Blue/Green LED transilluminator.

MIDORI^{Green} Xtra: The revolution

MIDORI^{Green} Xtra is a new highly sensitive green fluorescent stain for a safe visualization of DNA and RNA in agarose gels. This DNA stain is a safe and better alternative to the traditional nucleic acid stain ethidium bromide (EtBr). Remarkably, agarose gels stained with MIDORI^{Green} Xtra have a very low background fluorescence, which makes the identification of low amounts of DNA very easy.

Proven safety

MIDORI^{Green} Xtra delivers even better DNA/RNA signals than ethidium bromide. However, this innovative DNA stain is non-carcinogenic, non-mutagenic and non-toxic and therefore not harmful for your health. Independent laboratories confirmed its safety: Both the mutagenicity test (Ames-Test) and the cytotoxicity test were negative.

Safe DNA stain with an unbeatable sensitivity

- ✓ Ames-Test
- ✓ Cytotoxicity Test

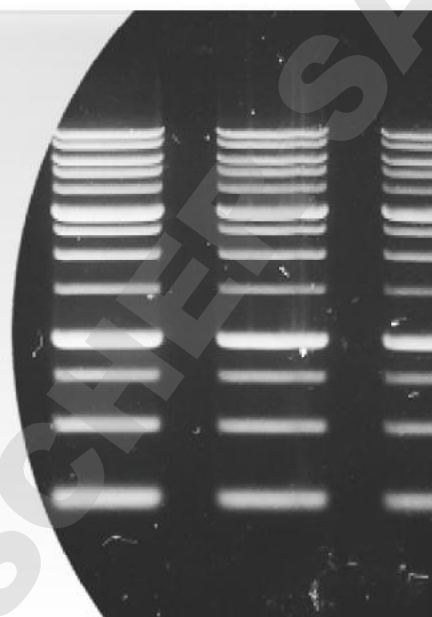


MIDORI^{Green} Xtra

DNA stain with the strongest signal



FREE SAMPLE

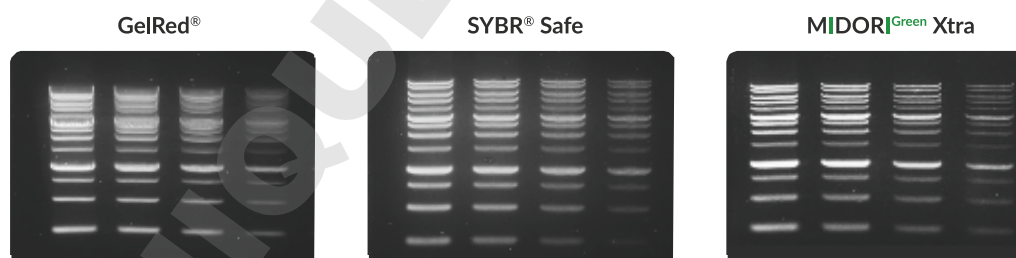


Simply the best

MIDORI^{Green} Xtra leads to unbeatable fluorescence signals of nucleic acids. The direct comparison with the popular DNA dyes GelRed[®] and SYBR[®] Safe shows, that MIDORI^{Green} Xtra reach new levels of sensitivity: Even the detection of the smallest quantities of DNA or RNA is possible. But don't take our word for it - try them for yourself! Just contact us, and get your free sample.

No changes in electrophoresis mobility and band distortion

The in-gel staining of agarose gels can cause a distortion of DNA bands and can result in a change of the migration pattern. However, with MIDORI^{Green} Xtra you never have problems with distorted DNA bands and you obtain always the same migration pattern, even at different DNA concentrations. Look at the Tech Note at the next page for more information.



Comparison of the sensitivity between GelRed[®], SYBR[®] Safe and MIDORI^{Green} Xtra using a Blue/Green LED transilluminator. For each gel we loaded different amounts of our DNA Marker MWD1P (Page 29) (10 μ L, 7.5 μ L, 5 μ L and 2.5 μ L).

Ordering information

Cat. No.	Product	Content
MG10	MIDORI ^{Green} Xtra	1 ml (staining up to 25 liters of agarose)



MIDORIGreen Xtra

Happy customers

MIDORIGreen Xtra is a new and safe stain for the detection of DNA in agarose gels. This dye has been already used very successfully by several laboratories. The feedback from the scientific society is very positive. Especially with Blue/Green LED, MIDORIGreen Xtra leads to fantastic results.

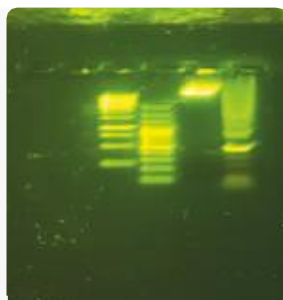
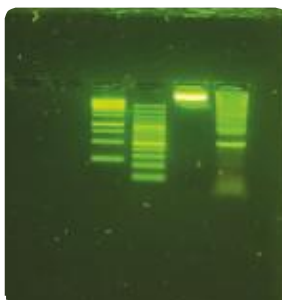
Still destroying your DNA with UV-light?
Try the new Blue/Green LED technology!

BLUE GREEN
BGLED

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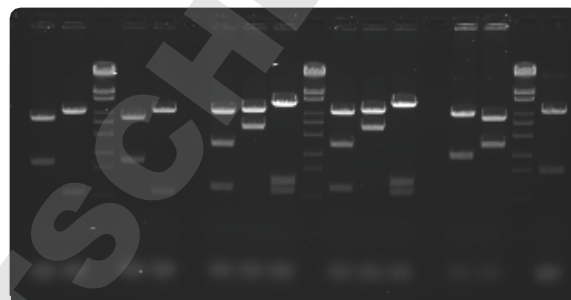
MIDORIGreen Xtra
(4 μ l, 100 ml agarose gel)

SYBR[®] Safe
(7 μ l, 100 ml agarose gel)



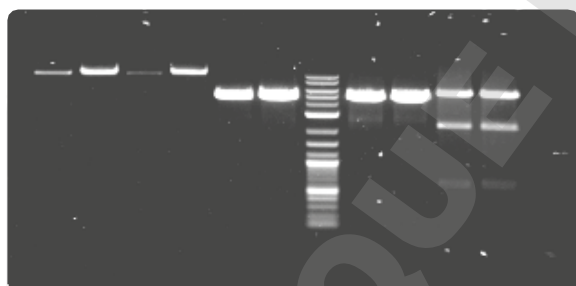
German Researcher
University of Göttingen

Images were taken with a phone on a
Blue/Green LED Transilluminator (FG-09).



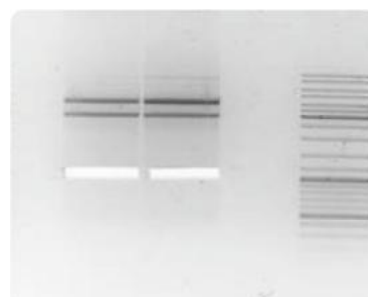
Sandra Gebauer
University Medical Center Göttingen

Images were taken with the FAS-V gel doc system.
2 μ l MIDORIGreen Xtra in 150 ml TAE buffer (1% gel).



German Researcher
University of Hannover

Images were taken with a Blue/Green LED gel doc system.
2 μ l MIDORIGreen Xtra in 100 ml liquid 1% agarose.



Adivo GmbH
Martinsried, Germany

Images were taken with the FAS Digi.
4 μ l MIDORIGreen Xtra in 100 ml 1% agarose.

Customer Testimonial

"Overwhelming results with Blue LED light. Much better than Ethidium bromide!"



Japanese Researcher
Jichi Medical University
Department of Regenerative Medicine, Shimotsuke, Japan



Technical Note

2018 <06>

Technical Data

Product evaluation of MIDORI^{Green} Xtra in DNA staining

Purpose

Evaluate the performance of the new staining reagent MIDORI^{Green} Xtra by using the in-gel staining method.

Background

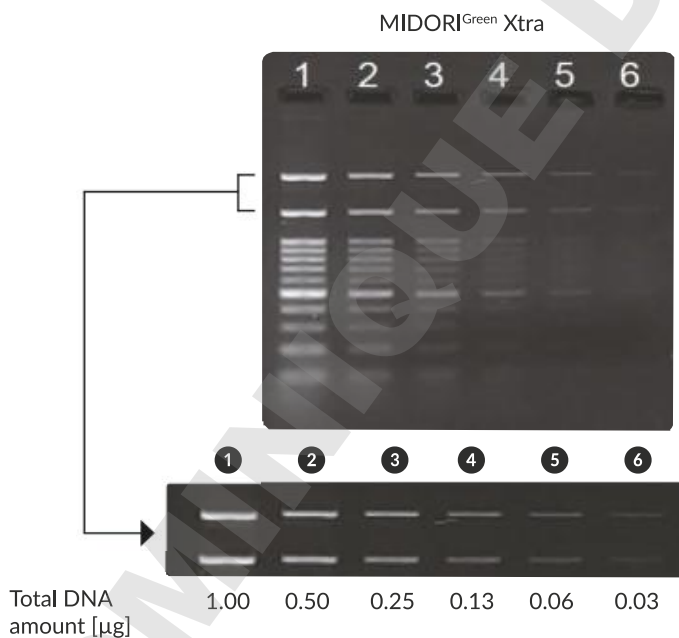
One method of staining DNA separated by gel electrophoresis is the “in-gel” staining method. For in-gel staining, electrophoresis is carried out using a gel containing nucleic acid staining reagent. Therefore, it is possible to observe the electrophoresis result without requiring DNA staining process. However, it can come to a distortion of the bands and there is a risk of causing a change in migration pattern, which should be molecular weight dependent. For this reason, in addition of being able to detect the band with high sensitivity, the reagent used for in-gel staining should precisely separate the DNA by size.

Experimental procedure

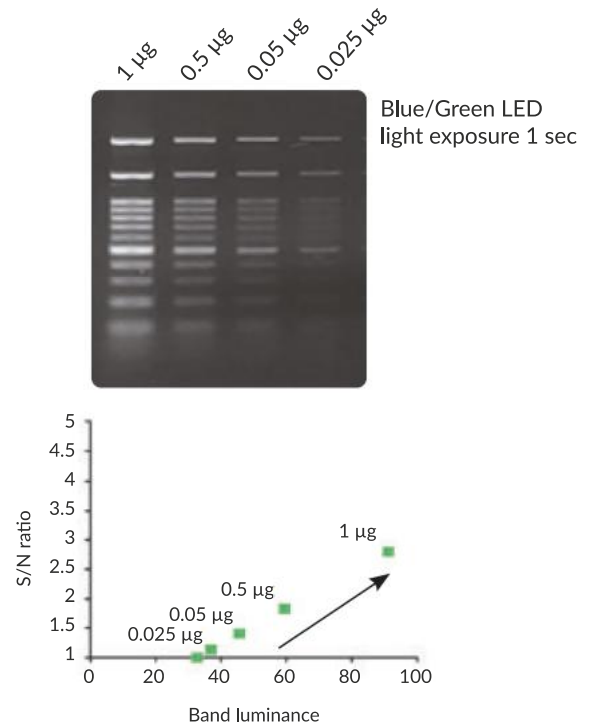
- 1) Gel preparation 2.0% TAE agarose gel with MIDORI^{Green} Xtra (4 μ l for a 100 ml gel)
- 2) DNA sample: 100 bp DNA ladder, 0.1 μ g/ μ l (FastGene[®] MWD100)
- 3) Agarose gel electrophoresis: 100 V, 30 min
- 4) Gel doc system: FAS-Digi (GP-05LED) with Blue/Green LED light
- 5) Images were analyzed with Image J and the band luminance and S/N ratio were calculated for the 100 bp band

Result

① Influence on band formation



② Band luminance and S/N ratio



Summary

- MIDORI^{Green} Xtra is a reagent with no changes in electrophoretic mobility and band distortion.
- MIDORI^{Green} Xtra is a DNA staining reagent that enables lower background and higher signal-to-noise ratio.

→ MIDORI^{Green} Xtra has the ideal properties for the in-gel staining method with Blue/Green LEDs.