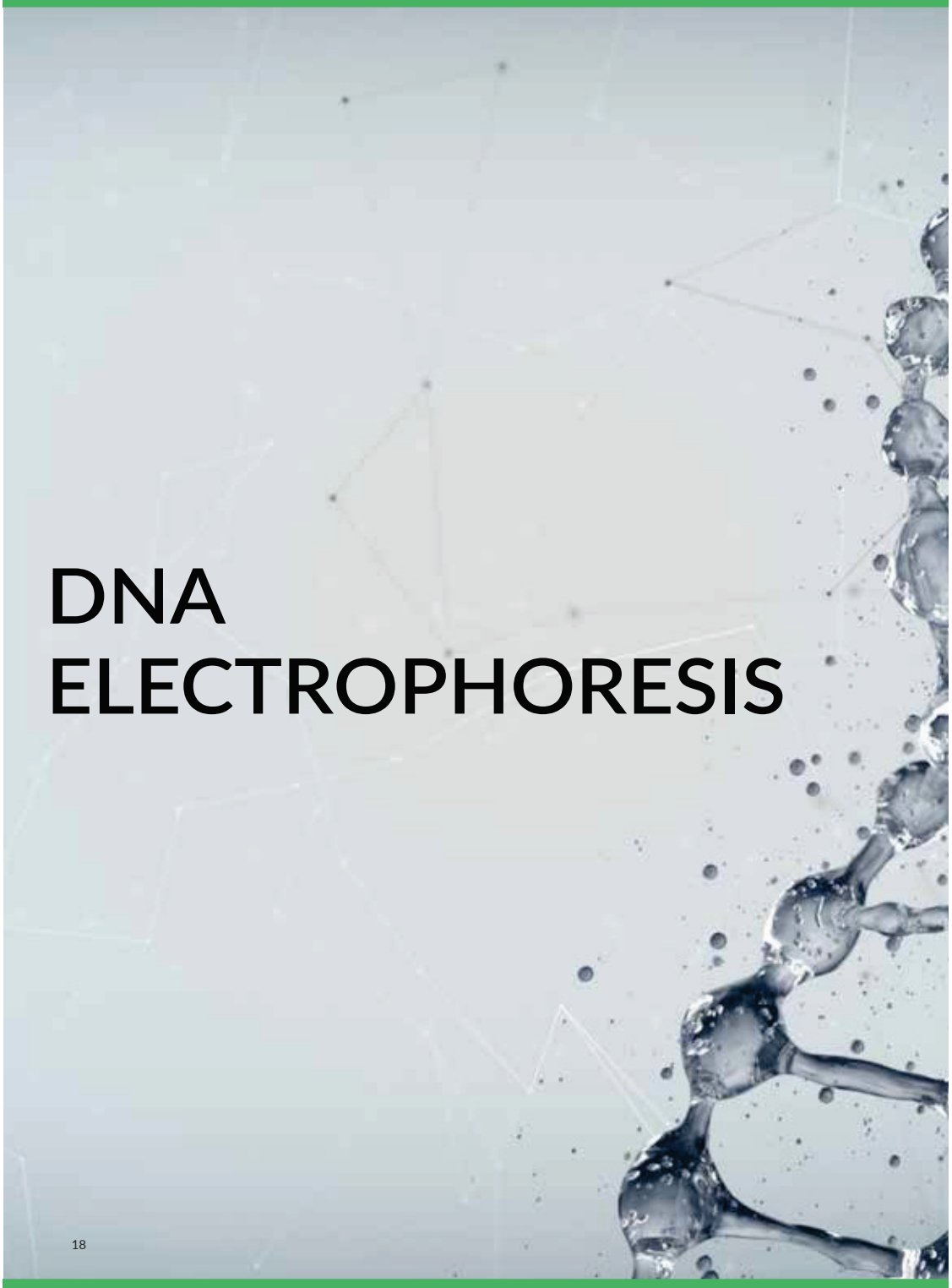
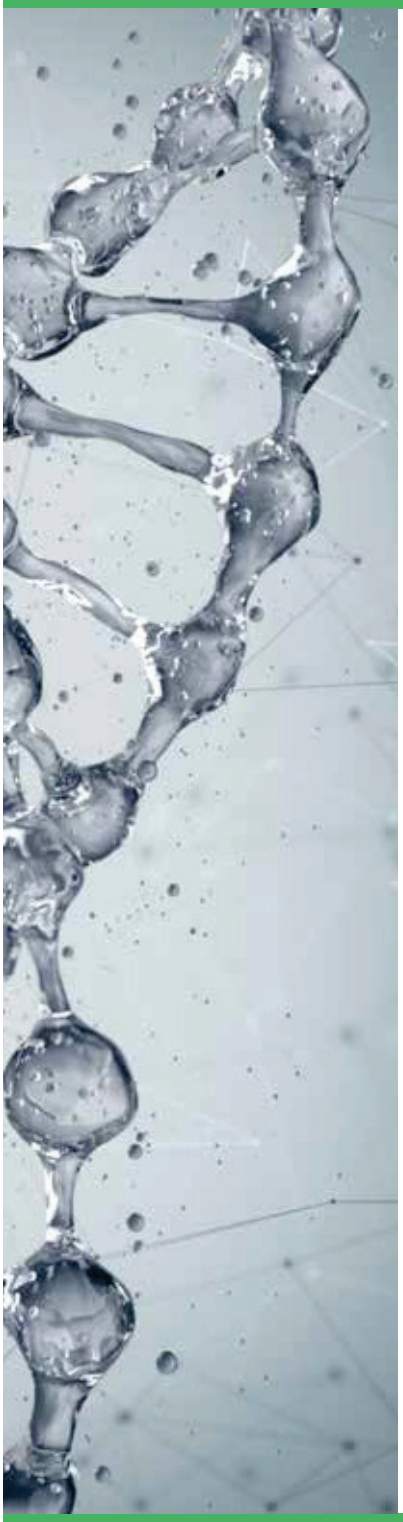
DNA ELECTROPHORESIS





MIDORI[Green] Xtra

Safe DNA stain with incredible 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**

Simply the best combination

MIDORI[Green] Xtra leads to unbeatable fluorescence signals of nucleic acids. The combination of MIDORI[Green] Xtra with Blue/Green LED light reaches an incredible level of sensitivity and sets the new gold standard for DNA detection. Even smallest quantities of DNA or RNA are detectable.

BG BLUE GREEN LED + 

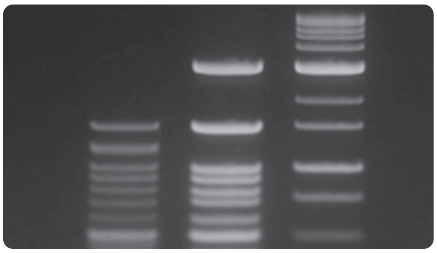
Read more about Blue/Green LEDs on PAGE 50

No changes in electrophoresis mobility

Some in-gel agarose staining dyes may cause a distortion of DNA bands, which can result in a change of the migration pattern. By using MIDORI[Green] Xtra the problem of distorted DNA bands is completely avoided and always the same migration pattern is observed, even at different DNA concentrations. Have a look at the Technical Note of the MIDORI[Green] Xtra migration pattern on page 23.

MIDORI[Green] Xtra: The revolution

MIDORI[Green] Xtra is a new highly sensitive green fluorescent stain for a safe visualisation 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.



Ultra-high sensitivity of DNA bands detected with MIDORI[Green] Xtra (dilution factor 1:25000) using Blue/Green LED light.

Optimal for Blue/Green LED technology

Agarose staining with MIDORI[Green] Xtra leads to an excellent signal-to-noise ratio. It is optimized for Blue/Green and Blue LED light, leading to unbeatable fluorescence signals of DNA and RNA in agarose gels. UV light is also suitable for the detection of MIDORI[Green] Xtra, but less efficient than safe visible light.

Proven safety

MIDORI[Green] Xtra delivers perfect DNA/RNA signals while it is completely safe to use. Unlike ethidium bromide, the DNA-stain is non-carcinogenic, non-mutagenic and non-toxic and therefore not harmful for the user. The safety was confirmed by independent laboratories.

Convince yourself of the safety of our DNA dyes with the safety reports - available on our website

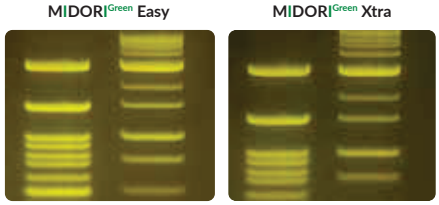
- **Ames-Test**
- **Cytotoxicity Test**

Ordering information

Cat. No.	Product	Content
MG10	MIDORI[Green] Xtra	1 ml (25,000x - for staining 25 l of agarose)

MIDORI[Green] Easy

Our latest MIDORI[Green] development



MIDORI[Green] Easy shows the same ultra-sensitive and sharp DNA bands as MIDORI[Green] Xtra when using Blue/Green LED excitation light.

- **Excellent signal quality**
- **Safe DNA dye**
- **Optimal for Blue/Green LED and Blue LED light**
- **Identical protocol to SYBR® Safe**
- **Unbeatable price**

Less than half the price for a tube of MIDORI[Green] Easy compared to SYBR® Safe

New

Easy switch from SYBR® Safe

MIDORI[Green] Easy enables an effortless switch from using SYBR® Safe to stain agarose gels. No changes are needed in the staining protocol. MIDORI[Green] Easy has exactly the same dye concentration and tube volume as SYBR® Safe - for less than half the price.

Excellent signal quality

We developed Midori[Green] Easy to have the same excellent signal quality and low background as Midori[Green] Xtra. It is also unbeatable with visible excitation light and shows the best results with our Blue/Green LED technology. The bands show outstanding sharpness and sensitivity. Midori[Green] Easy was designed to make the switch from SYBR® Safe as convenient as possible for you and get your DNA signals to the next level.

Ordering information

Cat. No.	Product	Content
MG12	MIDORI[Green] Easy	0.4 ml (10,000 x - for staining 4 l of agarose)

Convince yourself of our dye quality!

Would you like to test Midori[Green] Easy or Midori[Green] Xtra, or one of our other safe DNA dyes? Just give us a call, write us an email or fill in a form on our website. Get your free sample very soon!

+49 2421 554960
info@nippongenetics.de
www.nippongenetics.eu

MIDORI[Green] DNA Dyes

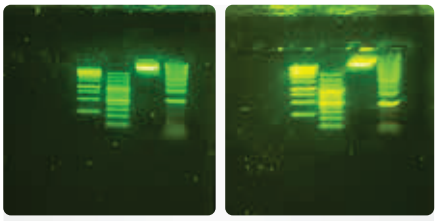
Customer Feedback

Satisfied customers

MIDORI[Green] dyes are safe stains for the detection of nucleic acids in agarose gels. They have been used very successfully by several laboratories with great results and positive feedback. Especially MIDORI[Green] Xtra, used with Blue/Green LED leads to fantastic results:

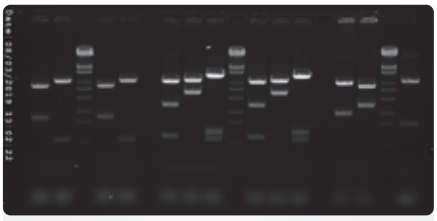
MIDORI[Green] Xtra
(4 µl, 100 ml agarose gel)

SYBR® Safe
(7 µl, 100 ml agarose gel)



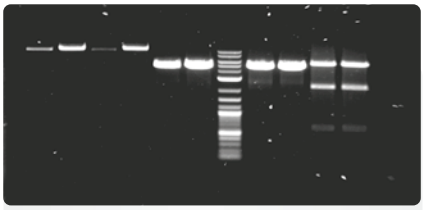
German Researcher
University of Göttingen

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



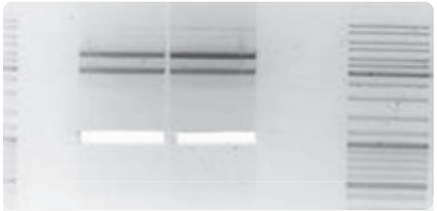
Sandra Gebauer
University Medical Center Göttingen

Images were taken with the FAS-V gel doc system. 2 µl MIDORI[Green] 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 µl MIDORI[Green] Xtra in 100 ml liquid 1% agarose.



Adivo GmbH
Martinsried, Germany

Images were taken with the FAS Digi. 4 µl MIDORI[Green] 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

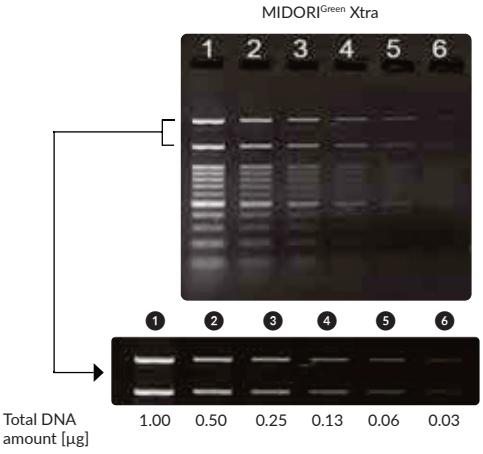
One method of staining DNA separated by gel electrophoresis is the "in-gel" staining method. For in-gel staining, electrophoresis is carried out using a gel containing nucleic acid staining reagent. Therefore, it is possible to observe the electrophoresis result without requiring DNA staining process. 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

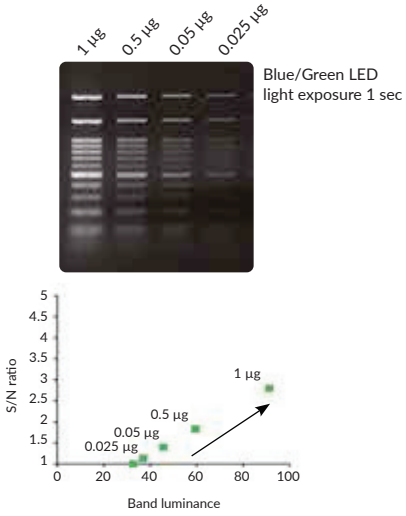
1) Gel preparation 2.0% TAE agarose gel with MIDORI^{Green} Xtra (4 µl for a 100 ml gel)
2) DNA sample: 100 bp DNA ladder, 0.1 µg/µl (FastGene® MWD100)
3) Agarose gel electrophoresis: 100 V, 30 min
4) Gel doc system: FAS-Digi (GP-05LED) with Blue/Green LED light
5) Images were analyzed with Image J and 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 ration



Summary

- MIDORI^{Green} Xtra is a reagent with no changes in electrophoretic mobility or 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.

MIDORI[Green] Advance

The safe stain for best results with UV light

- **Perfect staining of DNA/RNA in agarose gels**
- **Non-toxic, non-carcinogenic**
- **Safe alternative to ethidium bromide**
- **High fluorescence**
- **Optimal for UV light**

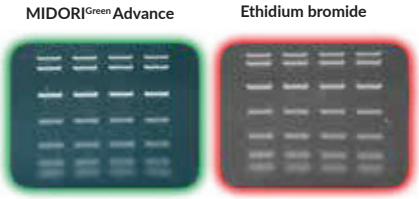
- Ames-Test
- Acute Oral Toxicity Test
- Chromosome Aberration Test
- Mouse Bone Marrow Micronucleus Test
- Latex and Nitrile Gloves Penetration Test

The perfect dye for UV light

MIDORI[Green] Advance is a safe alternative to the traditional nucleic acid stain ethidium bromide. It is a non-carcinogenic, non-mutagenic and non-toxic dye for detecting dsDNA, ssDNA and RNA in agarose gels with a very high sensitivity. MIDORI[Green] Advance gives the best signal results with UV light transilluminators.

Highly concentrated DNA dye

MIDORI[Green] Advance is highly concentrated (25,000 x), so one tube of MIDORI[Green] Advance can stain up to 25 l of agarose. It shows a very high sensitivity even for small DNA fragments and has an excellent signal-to-noise ratio.



Comparison of sensitivity between MIDORI[Green] Advance and ethidium bromide using a UV transilluminator.

Proven Safety

Delivering strong signals is very important for a good replacement of the mutagenic DNA stain ethidium bromide. MIDORI[Green] Advance delivers signals with comparable intensity while it is absolutely save to use. Several tests have been performed on MIDORI[Green] Advance proving that this dye can be used without concerns.

Staining RNA with MIDORI[Green] Advance

Method:
RNA samples were separated on a 1% agarose gel stained with MIDORI[Green] Advance (Fig. 1) or with ethidium bromide (Fig. 2). Lane 1 and 2: 0.5 µg of RNA. Lane 3: 0.3 µg of RNA. Lane 4: 0.7 µg of RNA. The separation of the RNA was performed using a 1x TBE Buffer and 100 V for 1 hour.

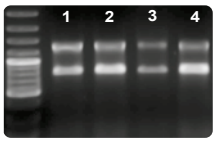


Fig. 1: RNA stained using MIDORI[Green] Advance. The two bands represent the major rRNA of 28S and 18S.

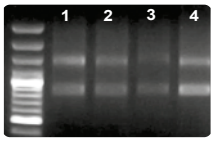


Fig. 2. RNA stained using ethidium bromide. The two bands represent the major rRNA of 28S and 18S.

Results/Conclusion:
MIDORI[Green] Advance delivered superior image quality and very distinctive bands indicating the presence of the expected 28S and 18S rRNA bands. Bands intensity correspond to the amount of RNA and the predicted bands were visible and distinctive.

Data kindly provided by Ms Kirstin Linsmeier, University of Heidelberg, Germany

Ordering information

Cat. No.	Product	Content
MG04	MIDORI[Green] Advance	1 ml (25,000x - for staining 25 l of agarose)

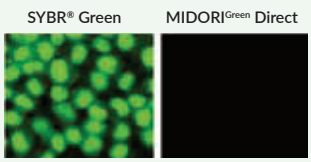
MIDORI[Green] Direct

Direct sample staining

- **Direct staining of DNA/RNA**
- **Non-toxic, non-carcinogenic**
- **Safe alternative to ethidium bromide**
- **Loading dye is included**
- **Very low background**

Safety first

MIDORI[Green] Direct is non-carcinogenic and non-mutagenic, unlike ethidium bromide. Furthermore, MIDORI[Green] Direct is impenetrable to latex gloves and cell membranes (Fig 1.). It is classified as non-hazardous to aquatic life, and small amounts of MIDORI[Green] Direct stain can be safely released into the environment.



HeLa cells were incubated at 37 °C with SYBR® Green I and MIDORI[Green] Direct. Images were taken following incubation for 30 min. SYBR® Green I entered into cells rapidly, as evident from the bright green nuclear staining. MIDORI[Green] Direct was unable to cross cell membranes, as shown by the lack of fluorescence staining.

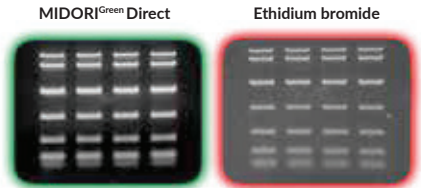
- Ames-Test
- Cytotoxicity Test
- Cell Membrane Permeability
- Hazardous Waste Screening
- Latex Gloves Penetration Test

In-sample staining for the strongest signal

MIDORI[Green] Direct stain is a safe nucleic acid stain for visualisation of double-stranded DNA, single-stranded DNA and RNA in agarose gels. In contrast to our other safe DNA dyes, MIDORI[Green] Direct is added straight to your samples.

Low background and high contrast signals

The direct staining of DNA in the sample eliminates background staining of the agarose, providing a very high contrast between the signal and the background. MIDORI[Green] Direct was developed for visible light transilluminators and the best signal quality can be achieved with our Blue/Green LED technology.



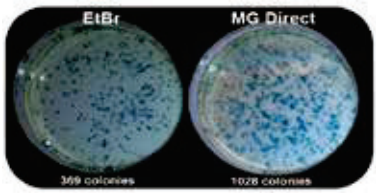
MIDORI[Green] Direct detected by Blue/Green LED light vs. ethidium bromide detected using UV light.

No extra step

MIDORI[Green] Direct is provided with a 10X sample loading buffer and is added directly to your samples and markers. No other dyes need to be added to the agarose gel matrix or running buffer.

Better results for downstream applications

DNA isolation from agarose gels for further applications is a standard procedure in biological laboratories. Intercalating dyes such as ethidium bromide or GelRed® can inhibit cloning processes due to their enzyme inhibiting effect. MIDORI[Green] dyes bind to the DNA backbone. This results in a much higher efficiency for downstream applications after gel extraction such as cloning, sequencing or PCR.



DNA was isolated from agarose gels stained with ethidium bromide (EtBr) or from agarose, where MIDORI[Green] Direct was used. The isolated DNA was transformed into E. coli. The transformed bacteria were plated on selective media and incubated for 16 hours at 37 °C.

Ordering information

Cat. No.	Product	Content
MG06	MIDORI[Green] Direct (with loading dye)	1 ml

Technical Note
2018 <01>

Technical Data — MIDORI[Green] Advance: Long term storage test (3 months) of prestained gels

Purpose

MIDORI[Green] Advance was used to prepare a prestained gel. One was used "on the day of making", another one was used "after 3 months". Each gel was subjected to electrophoresis. Gel images were taken under the same conditions and were compared afterwards.

Method

1. A prestained gel was prepared:
   1.5% TAE agarose gel | 12.5 ml mini gel | 0.5 µl MIDORI[Green] Advance

2. The prestained gel was used for electrophoresis:
   Condition 1: Used for electrophoresis on the day of creation
   Condition 2: Store at 4°C, after 3 months the gel was used for electrophoresis

3. Electrophoresis and gel imaging conditions:
   - DNA sample: Bioline Easy ladder I (Bio-33045) 5 µl / lane Conc. (250 ng / 5 µl)
   - Electrophoresis: SafeBlue Electrophoresis system (MBE-150 Plus) 100V 30min
   - Gel imaging: FAS-Digi (Pentax MX-1) Blue/Green LED transilluminator

Prestained gel storage method

Usually, when an agarose gel is refrigerated and stored at 4 °C, it is ideal to store it in a container containing "the same buffer solution used for gel preparation" in order to prevent drying. However, in the case of a prestained gel, in order to prevent dilution of the staining reagent, it is necessary to add the same concentration of the staining reagent to the storage buffer. Therefore, we did not use buffer for storage this time. We wrapped the gel as it was, shielded with aluminium foil, to avoid light exposure and tried a method to store it with a plastic bag with zipper.

1. Each gel is wrapped together with tray.

2. All gels are covered with aluminium foil.

3. All gels are packed in a sealable plastic bag and stored at 4 °C.

Result

On the day of creation

After 3 months of storage

Summary

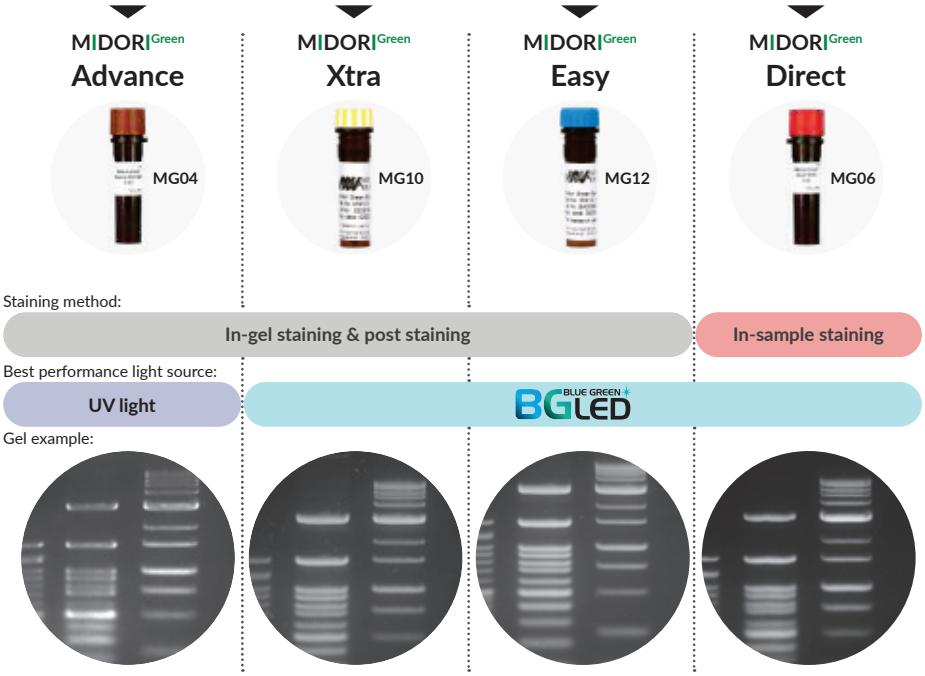
The result of this study shows, that even after refrigerating a gel which was stained with MIDORI[Green] Advance for 3 months at 4 °C there was no difference in the detection of sensitivity observed, and it was possible to use it for electrophoresis without problems.

MIDORI[Green] Dyes

Dye overview

Flexible solution for all light sources

Our set of MIDORI[Green] dyes offers a perfect solution for different staining preparation or gel documentation conditions. MIDORI[Green] Advance, MIDORI[Green] Xtra and MIDORI[Green] Easy are added to the melted agarose for gel staining. If direct addition of the dye to the samples is preferred, MIDORI[Green] Direct is the stain of choice. While MIDORI[Green] Advance shows the strongest DNA signals with UV light, MIDORI[Green] Xtra, MIDORI[Green] Easy and MIDORI[Green] Direct perform best with visible light and especially our Blue/Green LED light technology. No matter which MIDORI[Green] dye you use for your applications, all give excellent DNA signals and are completely safe to use, as certified by external safety labs.



Ordering information

Cat. No.	Product	Content
MG04	MIDORI[Green] Advance	1 ml (25.000x - for staining 25 l of agarose)
MG10	MIDORI[Green] Xtra	1 ml (25.000x - for staining 25 l of agarose)
MG12	MIDORI[Green] Easy	0.4 ml (10.000x - for staining 4 l of agarose)
MG06	MIDORI[Green] Direct (with loading dye)	1 ml (10x conc. for direct use in sample)

FastGene® MIDORI[Green] Agarose Tablets

- **Simple and safe gel pouring**
- **DNA dye is already in the tablet (MIDORI[Green] Xtra or Advance)**
- **High fluorescence**
- **Only water or buffer needed**
- **Increase your reproducibility and safe time**

Save time preparing gels

MIDORI[Green] Agarose Tablets are a fast, clean solution for preparing agarose gels without any additional time-consuming steps, such as weighing or adding different components. Just add the tablet to pure cold water or buffer, heat, and pour. Once the gel hardens, it's ready for loading. Each tablet contains the perfect amount of MIDORI[Green] Xtra or Advance.

If you're tired of preparing agarose gels for your lab, this is the quickest and easiest solution to reduce effort and improve the quality of your gels.

Easy workflow

The fastest workflow to make agarose gels: 1. Add the tablet to pure cold water (when using the tablets with TBE or TAE) or in cold buffer (when using the tablets without buffer); 2. Dissolve the tablet by shaking your solution; 3. Heat the solution until it is clear; 4. Add the solution to your gel tray; 5. Run the gel and detect your DNA bands.

Add tablet | Shake it | Heat it up | Pour in gel tray | Run the gel

FastGene® MIDORI Green Agarose Tablets

Get the right gel concentration

The manual of the MIDORI Green Agarose Tablets (Xtra or Advance) contains precise instructions to obtain the desired gel concentration. Simply dissolve the tablets in the specified amount of water or buffer.

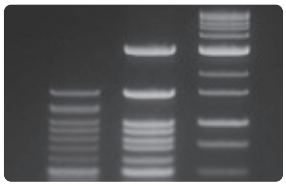
Choose your tablet

Depending on your preferences, NIPPON Genetics EUROPE provides MIDORI Green Agarose Tablets with different dyes and buffers. We offer tablets with MIDORI Green Xtra or MIDORI Green Advance, each either together with a buffer (TBE (MIDORI Green Advance) or TAE) or without any buffer additives. The tablets with buffer need to be dissolved in water, while the tablets without buffer can be dissolved in a running buffer of choice.

MIDORI Green Xtra Agarose Tablets

MIDORI Green Xtra Agarose Tablets **(without buffer)** 100 tablets

Cat. No.: AG12



Get the same excellent DNA signals as with the tablets as with the dyes, just with less effort and preparation time.

MIDORI Green Xtra **TAE** Agarose Tablets 100 tablets

Cat. No.: AG13

MIDORI Green Advance Agarose Tablets

MIDORI Green Advance Agarose Tablets **(without buffer)** 100 tablets

Cat. No.: AG11

MIDORI Green Advance **TAE** Agarose Tablets 75 tablets

Cat. No.: AG10

MIDORI Green Advance **TBE** Agarose Tablets 75 tablets

Cat. No.: AG09

Ordering information

Cat. No.	Product	Content
AG09	MIDORI Green Advance TBE Agarose Tablets	75 Tablets
AG10	MIDORI Green Advance TAE Agarose Tablets	75 Tablets
AG11	MIDORI Green Advance Agarose Tablets (without buffer)	100 Tablets
AG12	MIDORI Green Xtra Agarose Tablets (without buffer)	100 Tablets
AG13	MIDORI Green Xtra TAE Agarose Tablets	100 Tablets

FastGene® Agarose

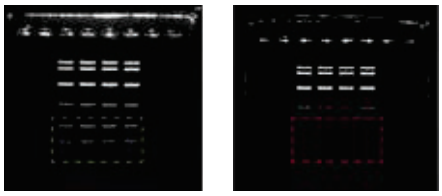
Molecular grade agarose

The FastGene® Agarose was developed for an accurate separation of DNA fragments, such as PCR products and plasmid DNA, as well as RNA. The very high quality allows all experiments for molecular biology. The purity of the agarose leads to an excellent transparency and a low background. This is especially important to obtain sharp and well-defined DNA and/or RNA bands with the highest sensitivity in the low molecular weight range.

- **Molecular grade agarose**
- **Perfect separation of DNA/RNA**
- **Sharp and well-defined DNA bands**
- **Electroendosmosis (EEO): 0.14-0.16**
- **Concentrations from 0.75 - 2%**

Reliable detection of small products

The detection of small bands is only possible with high quality agarose. Two gels were prepared using the FastGene® Agarose and a low quality agarose from competitor C. The ladder was stained with MIDORI^{Green} Direct and separation of the bands was done using the Mupid™-ONE electrophoresis system (MU2, next page). The comparison shows that the use of high quality agarose (FastGene®) can have a drastic impact on DNA signal quality.



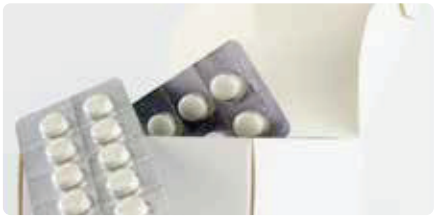
Detection of small bands using high quality FastGene® Agarose and Competitor C's agarose. All seven bands from the ladder are visible when using FastGene® Agarose. When comparing the green box to the red box, Competitor C's agarose does not show the lowest three bands.

Best quality agarose

Every batch of our agarose is tested with different-sized DNA fragments, and the background fluorescence is measured with ethidium bromide or non-toxic stains to assure the cleanest signals.

Agarose tablets - no weighing required

With the FastGene® Agarose Tablets, you can create agarose gels without time-consuming weighing. Just add one tablet to 50 ml of gel running buffer and heat — the result is a 1% agarose gel. It's that simple.



The tablets can be dissolved in your running buffer of choice.

Ordering information

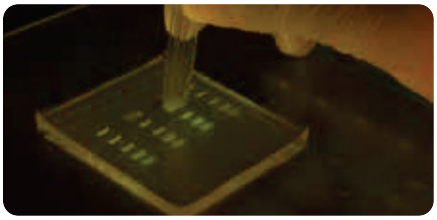
Cat. No.	Product	Content
AG01	FastGene® Agarose	100 g
AG02	FastGene® Agarose	500 g
AG05-100	FastGene® Agarose Tablets	100 Tablets (0.5 g Agarose per tablet)

FastGene® Agarose Gel Band Cutter

Save time cutting DNA bands

The FastGene® Agarose Gel Band Cutter is a simple tool that makes your daily laboratory work easier. You can use it to quickly cut out DNA bands without risking contamination or scratching the transilluminator surface. It simplifies the cleaning of fragments and eliminates the need to use sharp razor blades. The size of the gel band cut out is always 6 mm x 3 mm, and you can stack multiple bands in a single FastGene® Cutter. This makes even large DNA purifications effortless.

- **No scratches on glass surface**
- **Easily excise DNA bands**
- **No razor blades necessary**
- **Stack multiple DNA bands**



Using a FastGene® Agarose Gel Band Cutter is the best way to excise DNA bands from an agarose gel.

Ordering information

Cat. No.	Product	Content
FG-830	FastGene® Agarose Gel Band Cutter	50 Units

Customer Testimonial

"We are very happy using the FastGene® Gel Band Cutter and have successfully implemented it in our practical course. In the past, our students had issues cutting out the correct band without adding too much unnecessary agarose when using a scalpel and a tweezer. This is important since during the next step the same amount of extraction buffer has to be added to the agarose material. This problem was solved by using this product. We have tested similar products but they could not convince us."

Zeynep Weninger
Laboratory Biochemistry - Faculty of applied chemistry
Nürnberg Institute of Technology Georg Simon Ohm, Germany

★★★★★

Electrophoresis buffers

Solutions that are always needed

Ready solutions of TAE (50x) and TBE (10x) used as running buffers for gel electrophoresis. The concentrated solutions ensure a fast preparation and steady buffer concentrations, without fluctuations. The 6x NA Loading Buffer is added to the nucleic acid sample before it is applied to the agarose gel in order to allow the sample to sink into the gel pockets.

Ordering information

Cat. No.	Product	Content
ID1521	50x TAE Buffer	500 ml
ID1531	10x TBE Buffer	500 ml
ID1654	6x Nucleic Acid Loading Buffer	10 ml

TAE Buffer

TBE Buffer

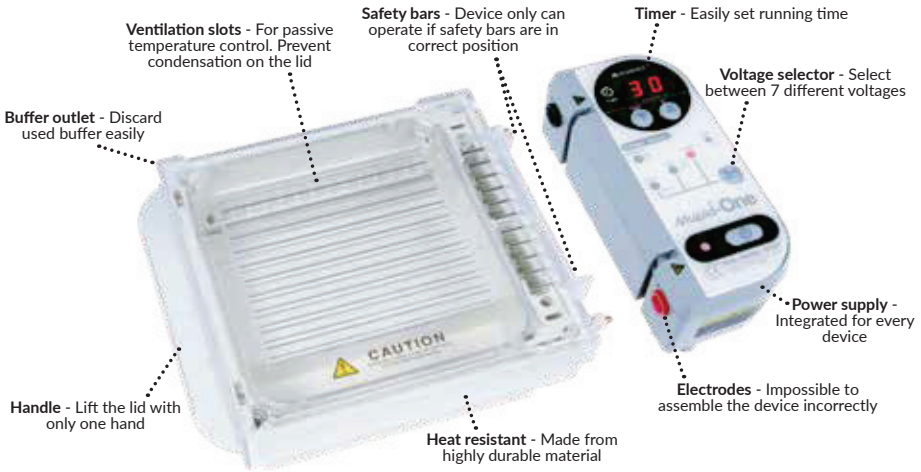
6x NA Loading Buffer

Mupid™-ONE Electrophoresis System

- **Smart power supply**
- **Heat resistant material**
- **Multichannel pipette compatible**
- **Memory function**
- **Gel casting set included**

Smart and safe DNA separation

The Mupid™-One Electrophoresis system is one of the most convenient DNA separation systems on the market. It has a integrated power supply, a simple buffer drainage system, support for multichannel pipettes, and seven output voltage settings (18, 25, 35, 50, 70, 100 and 135 V). The timer with alarm function allows to easily set the desired running time. All parameters of the last run are memorised and automatically saved. Safety bars in the lid ensure that the device can only be operated if the lid is in the correct position. The electrophoresis run cannot be started without it.

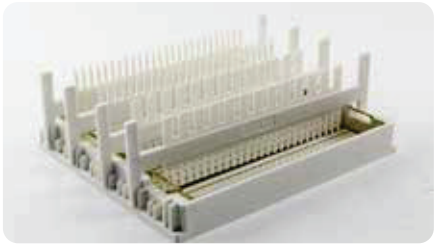


Mupid™-ONE Electrophoresis System

Everything you need for a perfect gel

The Mupid™-One package inclues the "Gel casting set standard" (ON-MS). This set comes with 4 combs, which can be used from both sides (13 wells or 26 wells) and two kinds of gel trays: 2x gel trays small (S) for preparation of mini gels and 1x gel tray large (L) for preparation of larger gels. The optional "Gel casting set large" GM-HR is additionally available and consists of two large combs and two different gel trays: 4x gel trays small (S) and 2x gel trays large (L).

All accessories are included in the package



Gel casting set standard (ON-MS), included with the Mupid™-One.

SPECIFICATIONS		
Compact design	✔	Overall dimensions (H x D x W): 5.9 cm x 16.2 cm x 18.3 cm Bath volume: 270 - 320 ml
Integrated power supply	✔	Input voltage: AC100 V - 240 V, 50-60 Hz Output voltage: 8 V, 25 V, 35 V, 50 V, 70 V, 100 V and 135 V
Memory function	✔	Automatic memory function from the last use
Safety lid	✔	Without the lid, main power can not be operated
Multi-channel pipette compatible	✔	The included combs are multichannel pipette compatible
Optimal gel tray size	✔	Small gel tray: 130 mm (B) x 16.5 mm (H) x 59.5 mm (L) Large gel tray: 130 mm (B) x 24 mm (H) x 122 mm (L)
Optimal comb size	✔	Number of wells: 13 or 26 Spacing size: 9 mm (13 wells)

Ordering information

Cat. No.	Product	Content
MU2	Mupid™-One	Mupid™-One electrophoresis system with 1x gel chamber, 1x power controller, 1x gel casting set, 4x combs, 2x gel trays S, 1x gel tray L

Accessories for the Mupid™-One

Cat. No.	Product	Content
ON-MS	Gel casting set standard	1x Mupid™-One gel casting set, 4x combs, 2x gel trays S, 1x gel tray L
GM-HR	Gel casting set large	1x Mupid™-One gel casting set large, 2x large combs, 4x gel trays S, 2x gel trays L
ON-GL	Large gel trays	2 gel trays L
ON-GS	Small gel trays	4 gel trays S
ON-SD	Gel casting stand standard	1 gel casting stand standard
AC-C1	Gel combs	2 combs for the Mupid™-One electrophoresis system

Mupid™-ONE LED Illuminator

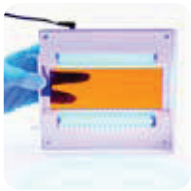
Visualize DNA during the run

The MUPID™-One LED Illuminator allows the visualisation and detection of DNA fragments during the run. The illuminator substitutes the MUPID™-One lid and includes an orange coloured filter to allow you to easily check the results without wearing goggles.

Blue LED light for a safe detection of DNA

The MUPID™-One LED Illuminator produces safe blue light with an emission peak at 470 nm, effective for the excitation of safe nucleic acid stains such as MIDORI^{Green} Xtra and SYBR® Safe. Since the illuminator does not emit UV radiation, it is completely safe to use and does not damage the DNA samples.

- **Follow the electrophoresis run live**
- **Safe Blue LED light**
- **Add-on for the Mupid™-One electrophoresis chamber**



SPECIFICATIONS		
Safe Blue LED light	✓	Blue LED light for the safe detection of green DNA dyes (wavelength of 470 nm)
Compact design	✓	Dimensions (H x D x W): 5.1 cm x 16.6 cm x 17 cm Viewing area: 15 cm x 6 cm
Compatible	✓	MUPID™-One, Mupid™ exU and Mupid™ ACE

Ordering information

Cat. No.	Product	Content
MU4	Mupid™-One LED Illuminator	Mupid™-One LED Illuminator with black gel trays

FastGene® DNA Markers

The right marker for each application

The FastGene® DNA Markers were developed for different applications: MWD50 is suitable for accurate size estimation of small PCR products, from 50 bp up to 1,500 bp. MWD100 contains 12 fragments from 100 bp up to 3,000 bp, for size determination of small plasmids and larger PCR products. MWD1P was developed for very large fragments and plasmids, starting from 100 bp and going up to 10,000 bp.

- **Molecular weight markers for each application**
- **Sharp and well defined DNA bands**
- **Loading dye is included**

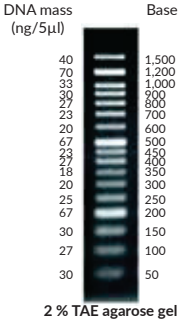
High stability at room temperature

FastGene® DNA Markers MWD100 and MWD1P are extremely stable. Stability tests show that the DNA ladders can be used for at least 12 months at 25 °C. For long term storage, the markers can be stored at 4 °C or -20 °C.

Easy electrophoresis tracking

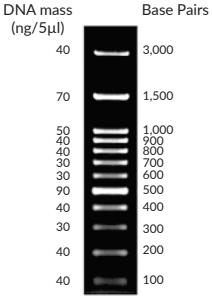
The DNA markers include a loading dye for easy application on the agarose gel, as well as a tracking dye. With the tracking dye, the movement of the DNA can be visualized and the optimal electrophoresis stopping point can be determined.

MWD50



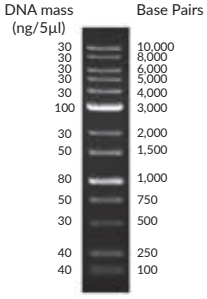
2 % TAE agarose gel

MWD100



1.5 % TAE agarose gel

MWD1P



1 % TAE agarose gel

SPECIFICATIONS			
Cat. No.	**MWD50**	**MWD100**	**MWD1P**
Description	50 bp Ladder	100 bp Ladder	1 kb Ladder
Range / bp	50 - 1,500	100 - 3,000	100 - 10,000
Number of bands	17	12	13
Reference bands	3 (200, 500, 1,200)	2 (500 & 1,500)	2 (1,000 & 3,000)
Loading dye	Orange G	Orange G & Xylene cyanol FF	Bromphenol blue
Content	56 µg in 500 µl	50 µg in 500 µl	50 µg in 500 µl
Recommended load	5 µl	5 µl	5 µl

Ordering information

Cat. No.	Product	Content
MWD50	FastGene® 50 bp Standard DNA Marker	500 µl
MWD100	FastGene® 100 bp Standard DNA Marker	500 µl
MWD1P	FastGene® 1 kb Standard DNA Marker Plus	500 µl