Electrophoresis

News in DNA/RNA electrophoresis: Midori Green DNA Stain

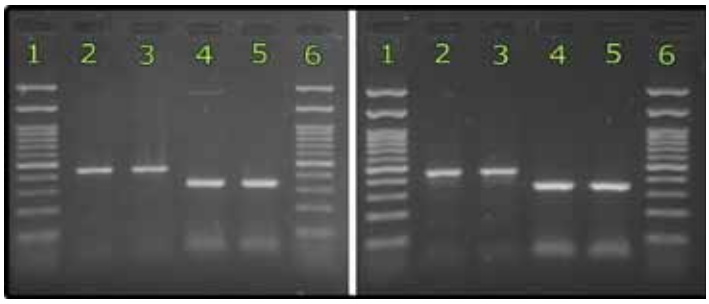

Fig. 1: Nippon Genetics 100 bp DNA ladder MWD100 stained with Midori Green (left side, lanes 1 & 6) and Ethidium Bromide (right side, lanes 1 & 6)

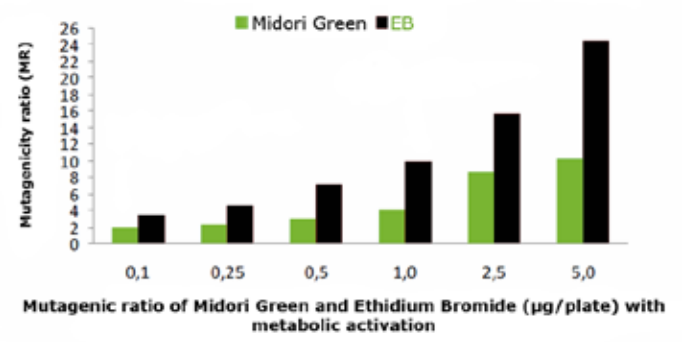

Fig. 2: Summary of Ames test results. Mutagenicity ratio of Midori Green DNA Stain and Ethidium Bromide with metabolic activation (S9) in TA98 mutagenicity assay: a dose-response. According to the results of the Ames test, Midori Green DNA Stain is significantly less mutagenic compared to Ethidium Bromide.

Cat. No.	Article	Volume
MG01	Midori Green	20µl
MG02	Midori Green	1ml

Midori Green DNA Stain is a nucleic acid stain which can be used as a safer alternative to the traditional Ethidium Bromide stain for detecting nucleic acid in agarose gels. It is as sensitive as ethidium bromide and can be used exactly the same way in agarose gel electrophoresis (Figure 1).

Midori Green DNA Stain emits green fluorescence when bound to DNA or RNA. It has two secondary fluorescence excitation peaks (~300 nm; ~400 nm) and one strong excitation peak centered around 500 nm. The fluorescence emission is centered at ~540 nm. Thus, Midori Green DNA Stain is compatible with a wide variety of gel reading instruments.

Midori Green DNA Stain is non-carcinogenic and according to the Ames test it causes significantly fewer mutations than ethidium bromide (Figure 2).

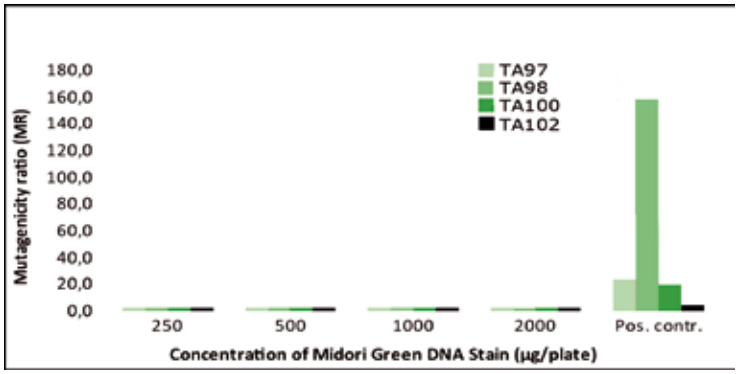

Fig. 3: Midori Green DNA Stain was tested by an independent licensed testing laboratory at the following concentrations: 0, 250, 500, 1000 and 2000 µg/plate. In presence of metabolic activation S9 mix, the numbers of revertant colonies of strains TA97 and TA100 were close to the spontaneous revertant colony plate counts. The numbers of revertant colonies of strains TA98 and TA102 were increased, but did not exceed as twice as those of the spontaneous revertant colonies, and there was no dose-response relationship. Appropriate reference mutagens were used as positive controls and they showed a distinct increase of induced revertant colonies. In conclusion, the test item Midori Green DNA Stain is considered to be non-mutagenic.

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Midori Green 5K/02/10

Electrophoresis

The MUPID One electrophoresis system includes the power controller as well as one gel casting stand, two different gel trays and 4 combs.

Global input voltage compatibility

Variable input voltage of 100 to 240 V supports the use virtually anywhere in the world.

Safety lid with Interlock System

For the prevention of an electric shock, the system is running only if both parts (chamber and power controller) are connected and if the lid is closed. With an open lid the main power can't be switched on.

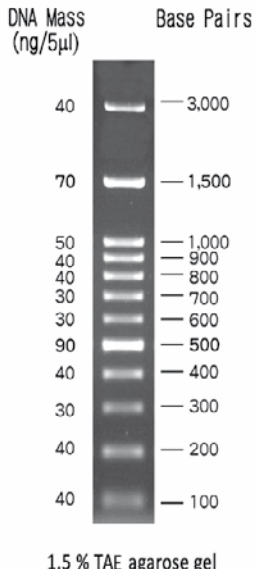
Gel casting stand is extremely heat resistant

By using a novel polymeric material (PPHOX) for the gel tray, gel solution up to 100°C can be poured into the tray. The clean up of the used gel tray can be performed with boiling water.

Multi pipette and multi sample

13 or 26 wells can be made with one comb. Comb teeth matches the multi channel pipette.

Ready to use DNA molecular weight marker (includes loading dye)



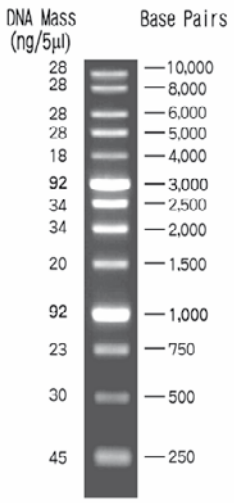
1.5 % TAE agarose gel

A unique combination of PCR products and a number of proprietary plasmids digested with appropriate restriction enzymes to yield 12 fragments, suitable for use as molecular weight standards for agarose gel electrophoresis.

The DNA marker (MWD100) includes fragments ranging from 100-3,000 base pairs. The 500 and 1,500 base pair bands have increased intensity to serve as reference points.

The approximate mass of DNA in each band is provided (0.5 µg a load) for approximating the mass of DNA in comparably intense samples of similar size.

Cat. No.	Article	Volume
MWD100	DNA ladder	500µl
MWD1	DNA ladder	500µl



1 % TAE agarose gel

A unique combination of a number of proprietary plasmids digested with appropriate restriction enzymes and PCR products to yield 13 fragments, suitable for use as molecular weight standards for agarose gel electrophoresis.

The DNA marker (MWD1) includes fragments ranging from 250-10,000 base pairs. The 1000 bp and 3000 bp bands have increased intensity to serve as reference points. The approximate mass of DNA in each band is provided (0.5 µg a load) for approximating the mass of DNA in comparably intense samples of similar size.

Excellent agarose for electrophoresis

Coming soon!

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