

## Midori Green Direct DNA Stain

MIDORI GREEN DIRECT represents a new and safe class of nucleic acid stain for visualization of double-stranded DNA, single-stranded DNA, and RNA in agarose gels.

The dyes are developed to replace toxic Ethidium Bromide (EtBr, a potent mutagen), commonly used in gel electrophoresis for visualization of nucleic acids in agarose gels. MIDORI GREEN DIRECT was developed to work with Blue Light LED illuminators (e.g. the Fastgene® Blue Light LED Illuminator) but it can be used with regular UV transilluminators as well.

The exact excitation wavelength peaks are 290 nm and 490 nm. Emission peak is 530 nm.

### Safety

MIDORI GREEN DIRECT stain is non-carcinogenic and less mutagenic compared to Ethidium Bromide. Furthermore we can state that MIDORI GREEN DIRECT is impenetrable to latex gloves and cell membranes.

MIDORI GREEN DIRECT is classified as non-hazardous to aquatic life, under CCR Title 22 regulation. Thus, small amounts of MIDORI GREEN DIRECT stain can be safely released into the environment.

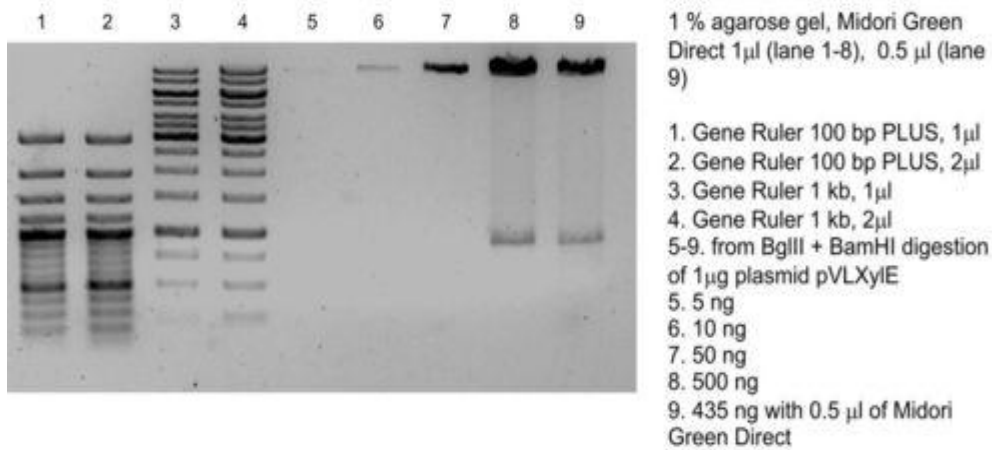
### Loading dye

MIDORI GREEN DIRECT stains are provided in a form of 6X sample loading dyes and they are to be added directly to samples only. There is no need to add any other dyes to either the gel matrix or running buffers.

### Protocol

1. Prepare the agarose solution
2. Mix gently without having air bubbles
3. Let the solution cool down to 60-70°C and cast the gel
4. Mix samples and DNA markers with MIDORI GREEN DIRECT stain at 1:10 (dye:sample) dilution
5. After the electrophoresis, view and document your results as you would do with Ethidium Bromide staining protocols. View the results under traditional UV light after electrophoresis or use the Fastgene® Blue Light LED Illuminator

Midori Green Direct Test Result  
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Genotyping PCR: 15 µl from 50 µl of PCR reaction + 1 µl Midori Green Direct

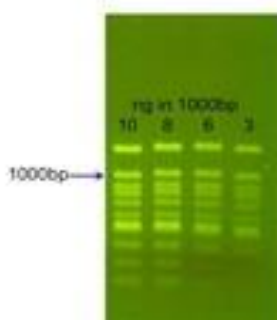


Fig.2

1% agarose gel – samples were directly stained with MIDORI GREEN DIRECT