



Technical Data

## Long-term storage of Agarose gels stained with Midori Green Xtra (MGX)

Product

### Midori Green Xtra (MG10)

The nucleic acid staining reagent Midori Green Xtra (MGX) demonstrates excellent performance using the pre-staining method. However, there has been no knowledge so far if it is possible to preserve a MGX stained gel.

Overview

In this technical note, an agarose gel containing MGX is prepared and stored in a solution with the same concentration of MGX.

We show that it is possible to store a gel for less than a month by putting it in a dark area.

### Recommended gel storage method



2% agarose gel containing MGX  
(MGX 4  $\mu$ L/ TAE 100 mL)

#### Storage in TAE



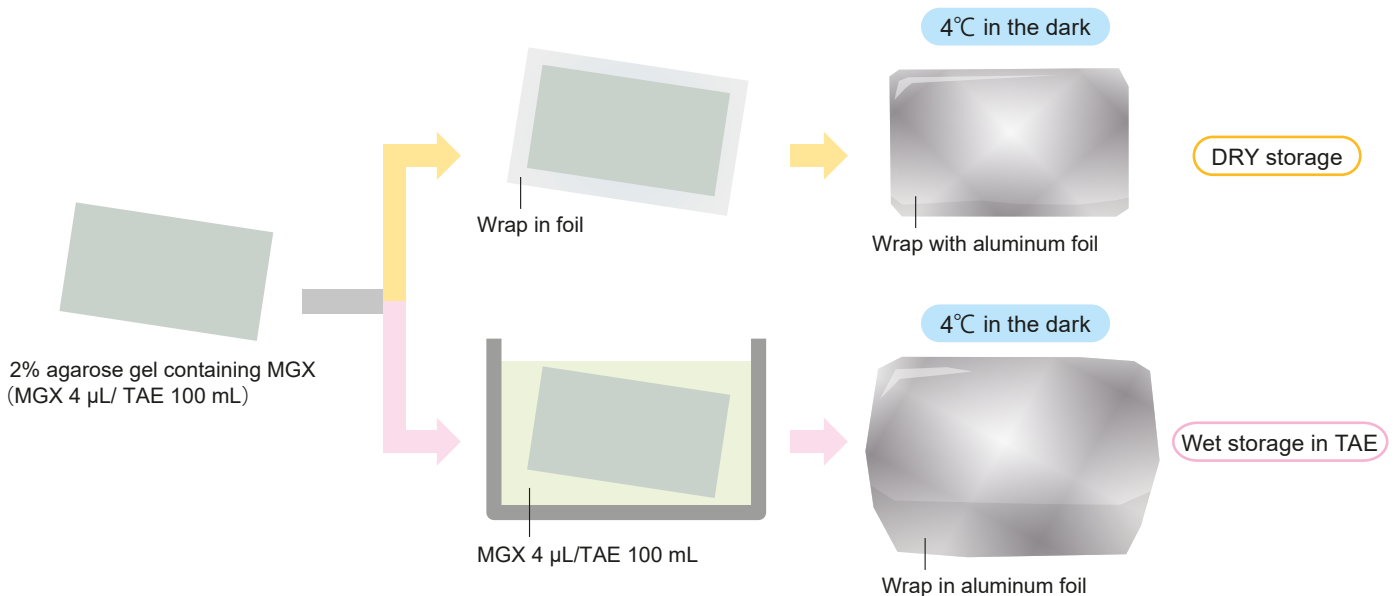
TAE buffer with MGX in same concentration as in agarose gel  
(MGX 4  $\mu$ L/TAE 100 mL)

#### 4°C in the dark

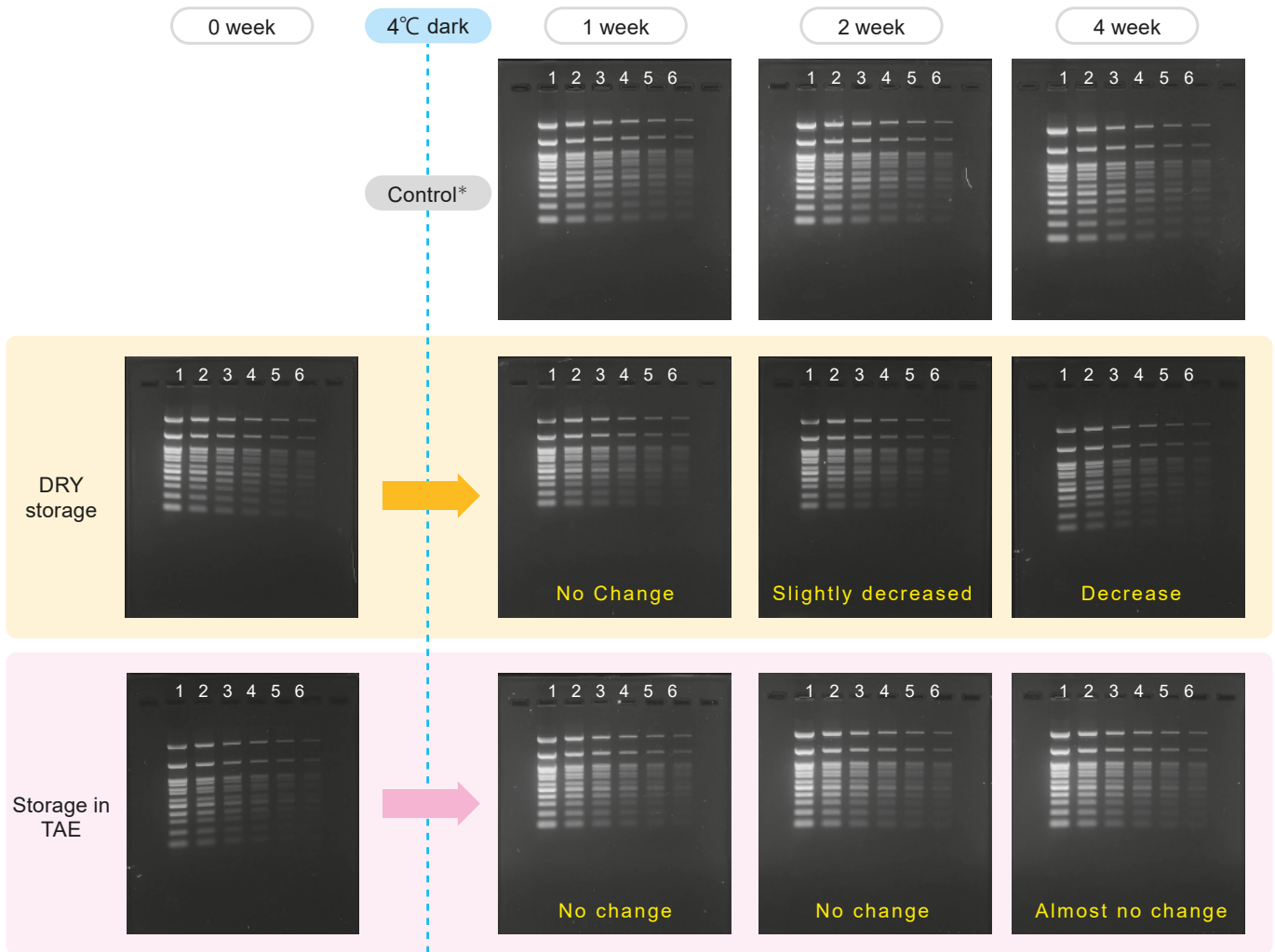


### Experiment 1

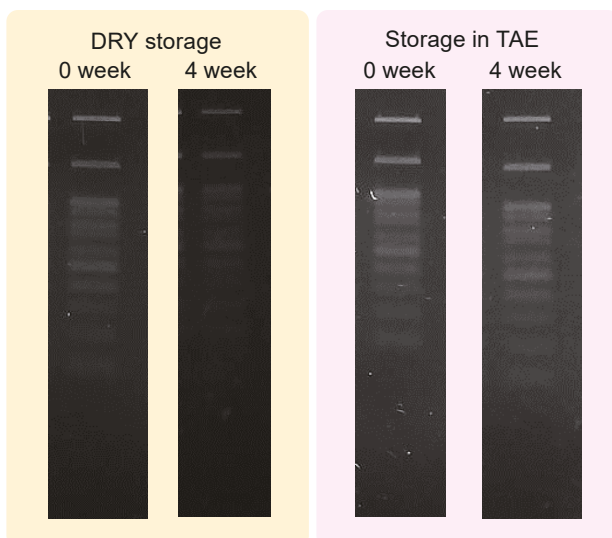
Experiment purpose: In this experiment we stored a gel wrapped in plastic wrap at 4°C (DRY) or in a MGX/TAE solution with the same MGX concentration as in the gel, to determine the best storage condition.



## Result 1



Lane 6 (0.3 μL) enlarged view



&lt;Shooting conditions&gt;

Pentax MX-1

f = 4.0, ISO = 100

Exposure = 2 sec

&lt;Electrophoresis condition&gt;

FastGene® 100 bp DNA ladder (MWD100, Nippon Genetics Europe),

From left to right: Apply amount 10.0 μL, 5.0 μL, 2.5 μL, 1.3 μL, 0.6 μL, 0.3 μL

1. With DRY preservation, band brightness decreases after 4 weeks.

2. When stored in TAE, the band brightness showed almost no decrease after 4 weeks.

\*Result of gel run on the day of confirmation.

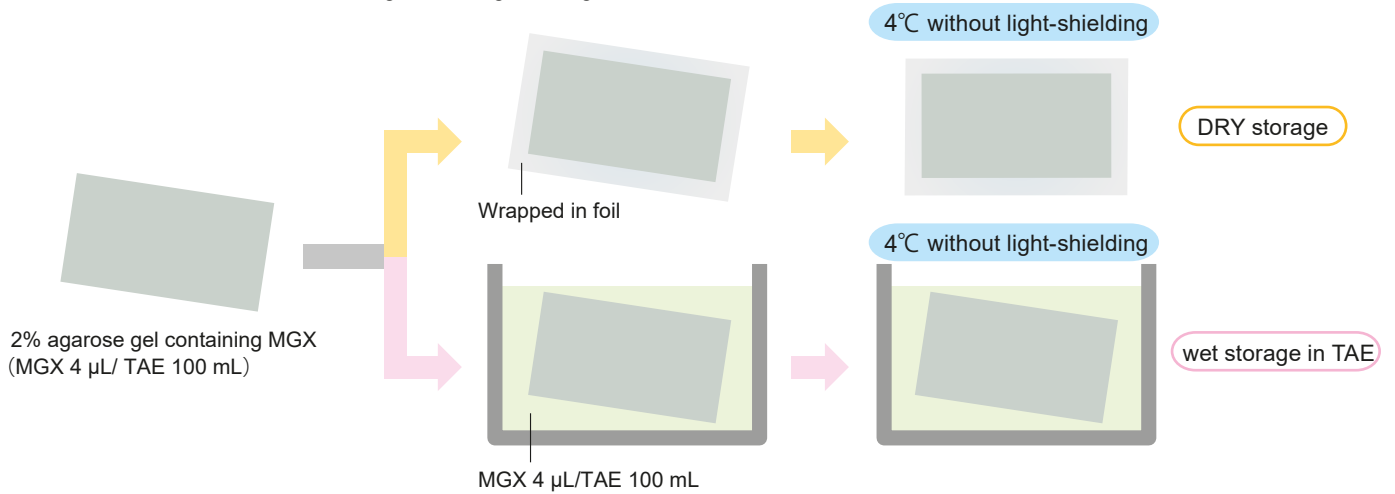
Comparison target to confirm that there is no change in DNA status compared to 0 week.

## Conclusion

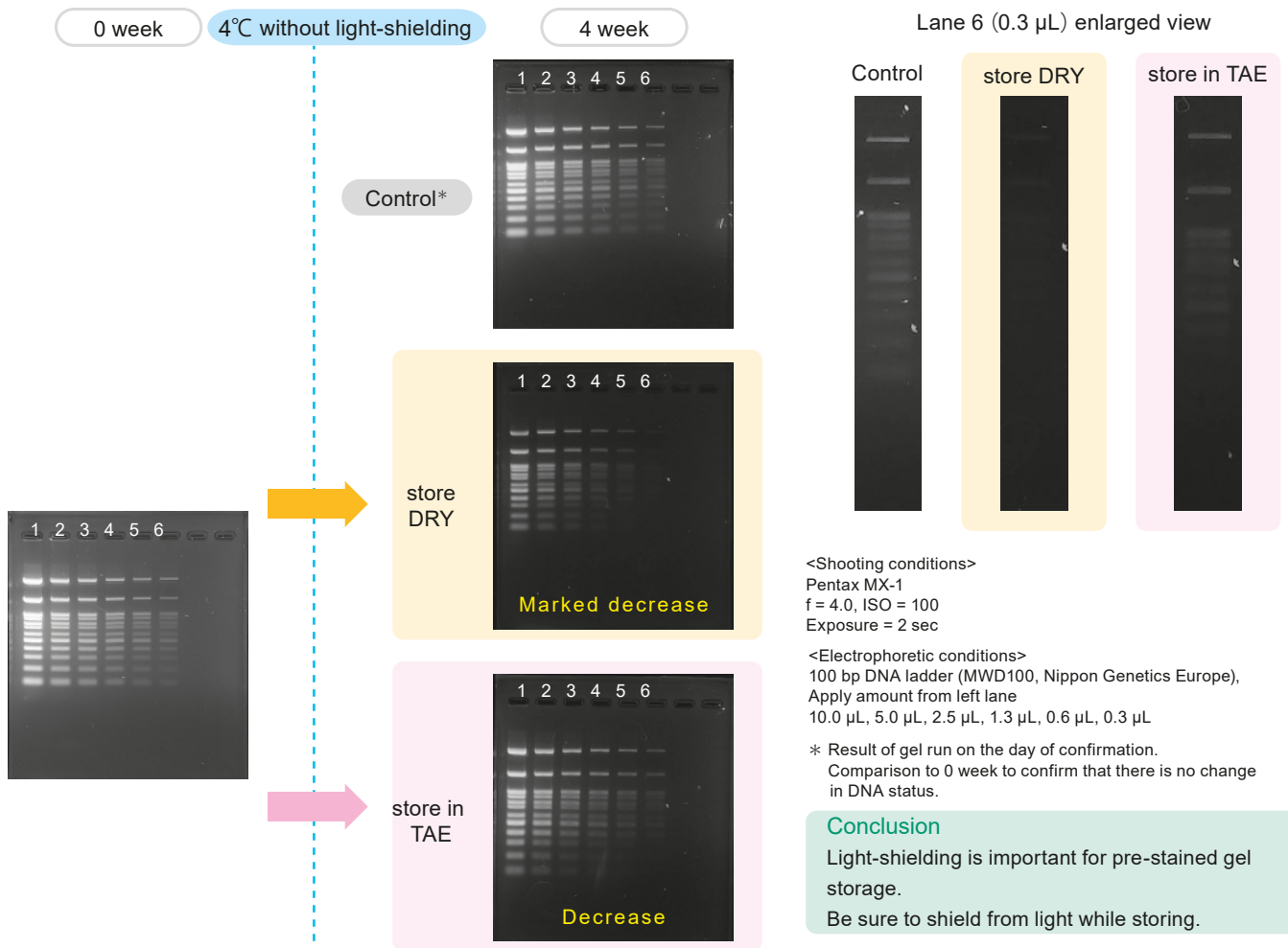
- For gel storage it is recommended to store in TAE supplemented with the same concentration of MGX as the MGX-containing agarose gel.
- Agarose gel containing MGX can be used for about one month when stored in TAE with MGX.

## Experiment 2

Purpose of Experiment: In Experiment 2, a comparative study of gels stored with and without light-shielding was performed in order to examine the effectiveness of light-shielding in storage.



## Results 2



## Summary

Agarose gel containing MGX can be stored for less than a month by immersing it in a solution containing MGX, etc. and placing it in a light-shielding environment.