Product Information

Plus Juice 6X DNA Loading Dye
ABMBD-002 1 ml × 1

Storage

Protected from light
-20°C for 24 months

Working Reagent Preparation

1:6 dilution in DNA electrophoresis sample.
(Add 1 µl ABMBD-002 with 5 µl DNA sample)

Features:

1. ensitivity: 0.14ng DNA
2. A safer alternative to EtBr
3. Compatibility : suitable to blue or UV light
4. Increased cloning efficiency (blue light)
5. For real-time monitoring electrophoresis

Description

Plus Juice 6X DNA Loading Dye is a ready-to-use 6X DNA loading dye designed for fast qualitative electrophoresis analysis. Containing sensitive fluorescent dye with high specific affinity towards double stranded DNA (dsDNA), the Plus Juice 6X DNA Loading Dye has negligible background and renders destaining process unnecessary. The Plus Juice 6X DNA Loading Dye allows the user to immediately visualize electrophoresis result upon completion or to monitor the electrophoresis in real time. Plus Juice 6X DNA Loading Dye is compatible with both the conventional UV gel - illuminating system as well as the less harmful long wavelength blue light illumination system. Plus Juice 6X DNA Loading Dyeemission as bound to dsDNA is 522 nm, while its excitation peaks are at 270, 370 and 497 nm (Fig. 1). Plus Juice 6X DNA Loading Dye is capable of detecting dsDNA fragments down to 0.14 ng in electrophoresis analysis (Fig. 2).

Contents

Plus Juice 6X DNA Loading Dye is stored in 6X concentration in 60% glycerol and buffered with Tris-HCl and EDTA, containing Bromophenol blue, Xylene cyanol FF, and Orange G as tracking dyes.

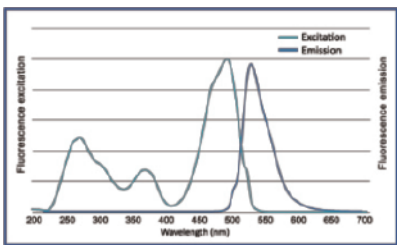

Fig. 1. Plus Juice 6X DNA Loading Dye emission as bound to dsDNA is 522 nm while its excitation peaks are at 270, 370 and 497 nm.

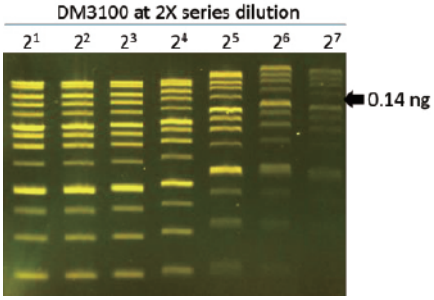

Fig.2.Plus Juice 6X DNA Loading Dye is capable of detecting dsDNA fragments down to 0.14 ng in DNA markers

Cautions

It is important to dispos of the staineing dye in accordance with local regulations. There is no data that addresses the mutagenicity or toxicity of the fluorescent dye in humans. However, fluorescent dye binds to nucleic acids, thus it should be recognized as a potential mutagen and used with appropriate care.

Quality Control

The product must show 3 reference dyes separated (Xylene Cyanol FF, Bromophenol blue and Orange G) by electrophoresis on a 1.5% agarose gel with a 0.5x TAE buffer. The product must be sufficiently dense when diluted 6 times with an queous solution in a 1x TAE buffer and 1× TBE buffer. When combined with use of ABMBD-002 in a standard protocol, all bands of 1 µl ABMBD-002 must be visible when separated on a 1% agarose gel with a a 0.5x TAE buffer under B-Box™470 nm blue light illumination.

Experimental Protocols

1. Mix Plus Juice 6X DNA Loading Dye with the DNA sample at a volume ratio of 1:5. (Add 1 µl ABMBD-002 with 5 µl DNA sample)
2. Plus Juice 6X DNA Loading Dye

- Load smaple and run according to standard procedures.

3. Perform agarose gel electrophoresis (avoid light).
4. Visualize or photograph the gel with UV or blue- light illumination (blue-light is recommended).

- It is important to clean the surface of the illuminator before and after each use with deionized water. Otherwise, fluorescent dyes will accumulate on the surface and create a high fluorescent background.
- Video cameras and CCD cameras have a different spectral response compared to the black-and-white print film and therefore may not exhibit the same sensitivity.