BenBio Green DNA Stain, 20 000x
cat#BBr004
Size: 500 µl
Storage:
-20°C for 24 months

Features

- Post-electrophoresis staining dye
- Compatible for qPCR applications
- Visible at blue light
- Compatible with TE, TAE and TBE buffers
- 20 000x concentrated

Description

BenBio Green DNA stain is a next-generation DNA-binding dye ideal to use in quantitative real-time PCR (qPCR) and DNA gel staining. BenBio Green DNA stain can be used in an easy 2-step method to stain the DNA after electrophoresis. The dye was designed taking into consideration several properties relevant to PCR, including reduced PCR inhibition and increased safety and stability. The dye is excited mostly at 497nm (blue light) but also shows a secondary excitation peak at 248 nm. After DNA binding, the fluorescent emission of the BenBio Green is centered at 524 nm. 500 µl of BenBio Green DNA stain are enough to prepare 10L of staining buffer.
Note: BenBio Green DNA Stain is not suitable to stain pre-cast gels before electrophoresis

Protocol

Prepare BenBio Green DNA staining buffer

- Before opening, the vial should be warmed to the ambient temperature to ensure an homogeneous solution and that the DMSO is thawed thoroughly.
- Prepare the post-electrophoretic staining solution diluting BenBio Green DNA Stain 1 to 20,000 in TE, TAE or TBE buffer (e.g. 50 µL of BenBio Green DNA Stain in 1L of buffer).
- BenBio Green DNA staining buffer is stable in the dark at 4°C for 2 weeks.

Post-electrophoresis gel staining

1. Perform DNA electrophoresis on an agarose gel.
   ***Note**: the BenBio Green DNA Stain is compatible with TAE (40mM Tris-acetate, 1mM EDTA, pH 8), TBE (89 mM Tris base, 89 mM boric acid, 1mM EDTA, pH 8), and TE (20mM Tris base, 1mM EDTA, pH 8) buffers*.
2. After electrophoresis, cover the gel with the BenBio Green DNA staining buffer in a plastic container. Do not use a glass container since it will adsorb the dye in the staining solution.
3. Protect the staining container from light by covering it with the aluminum foil or place it in the dark.
4. Incubate and agitate the gel gently at the room temperature for 10-30 minutes.
   ***Note:** Staining time will vary with the thickness of the gel and the agarose percentage. No destaining is required.*
5. Photograph the gel with a blue-light transilluminator.

> ***Note**: It is **important** to clean the surface of the transilluminator after each use with the deionized water and a soft cloth. Otherwise, fluorescent dyes may accumulate on the glass surface and cause a high fluorescent background.*

Video cameras and CCD cameras have a different spectral response than the black and white print film, thus it may not exhibit the same degree of sensitivity.

Handling and Disposal

An independent laboratory has shown that BenBio Green DNA Stain is significantly less mutagenic than EtBr. However, we must caution that no data are available to address the mutagenicity or toxicity of the BenBio Green DNA Stain in humans. Because this reagent binds to nucleic acids, it should be treated as a potential mutagen and used with appropriate care. The DMSO stock solution should be handled with particular caution as DMSO is known to facilitate the entry of organic molecules into tissues. Dispose of the stain in compliance with local regulations.

Caution

- All products are for research use only