DATA SHEET

cellco
Biotecnologia ao seu alcance

Safedye Nucleic Acid Stain

DNA/RNA intercalating dye
10.000X concentrated

Cat. Nº.	Amount
☐ PCK-301 XS	400 µL
■ PCK-301 S	500 µL
☐ PCK-301 L	1 mL
☐ PCK-301 XL	5 mL

For *in vitro* use only!

Description:
Safedye Nucleic Acid Stain (10,000x) is a new and safe nucleic acid stain, an alternative to the traditional ethidium bromide(EtBr) stain for detecting nucleic acid in agarose gels. It emits green fluorescence when bound to DNA or RNA. This new stain has two fluorescence excitation maxima when bound to nucleic acid, one centered at 309 nm and a nother at 419 nm. In addition, it has one visible excitation at 514 nm. The fluorescence emission of Safedye bound to DNA is centered at 537 nm. Safedye Nucleic Acid Stain (10,000x) is as sensitive as EtBr. The staining protocol for Safedye Nucleic Acid Stain (10,000x) is similar to that for EtBr. Compared to EtBr, known as a strong mutagen, Safedye Nucleic Acid Stain causes much fewer mutations in the Ames test. In addition, Safedye Nucleic Acid Stain (10,000x) has a negative result in mouse marrow chromophilous erythrocyte micronucleus test and mouse spermary spermatocyte chromosomal aberration test. So it is wise to choose Safedye Nucleic Acid Stain (10,000x) instead of EtBr for detecting nucleic acid in agarose gels.

Characteristics:
- Used for detecting double-strand DNA and single-stranded RNA
- Alternative to the ethidium bromide staining
- As sensitive as EtBr or more sensitive than that
- Non-toxic, non-mutagenic and non-carcinogenic
- No hazard waste

Shipping:
Shipped at room temperature

Storage Conditions:
Store at room temperature

Additional Storage Conditions:
Store in the dark

Shelf Life:
24 months

Form:
Liquid, red

Concentration:
10.000X conc.

Spectroscopic Properties:
λ_{exc} 309 and 419 nm ; λ_{em} 514 nm

Suggested protocol:
1. Prepare a 100 ml of agarose gel solution (concentration from 0.8~3 %) in a 250 ml flask and mix it thoroughly. Place the flask in the microwave, heat in until the solution is completely clear and on small floating particles are visible (about 2~3 minutes).
Note :The thickness of gel should be less than 0.5 cm since thick gels may decrease sensitivity.

2. Add 10 µL of Safedye Nucleic Acid Stain (10,000x) to the agarose solution. Swirl the flask gently to mix the solution and avoid forming bubbles.

3. While the agarose solution cools, pour it into the gel tray until the comb teeth are immersed about 1/4~1/2 into the agarose.
Note: Repeated melting of gels containing Safedye Nucleic Acid Stain (10,000x) may result in low sensitivity.

4. Allow the agarose gel to cool until solidified. Load samples on the gel and perform electrphoresis.

5. Detect the bands under UV illumination.
Note: Safedye Nucleic Acid Stain (10,000x) allows visualization of DNA(>50 ng) in the agarose gel under visible light. This eliminates the need for exposure to UV light, which may nick and damage DNA. The intact DNA fragments purified from agarose gel can increase the efficiency of subsequent molecular biology manipulations such as cloning, transformation and transcription.