



TOOLS DNA View

Cat. no.: TT-DNA01

Storage: Store at 4°C

Product Size: 1 mL

Introduction

TOOLS DNA View is an innovative nucleic acid stain that replaces highly toxic ethidium bromide (EtBr) in the detection of nucleic acid agarose gels. TOOLS DNA View emits green fluorescence when bound to DNA and RNA.

TOOLS DNA View is as sensitive as EtBr, with a similar staining protocol. However, compared with EtBr, a strong mutagen, TOOLS DNA View causes much fewer mutations in the Ames test. In addition, it yields a negative result in the mouse marrow chromophilous erythrocyte micronucleus test and mouse spermary spermatocyte chromosomal aberration test. Most importantly, after use, TOOLS DNA View is considered to be nonhazardous waste and can be disposed of according to standard laboratory procedure. It also remains stable for many years (excitation: 309, 419, and 541 nm; emission: 537 nm).

Protocol

1. Prepare 100 mL of agarose gel solution (0.8%–3%) in a 250-mL flask.
2. Heat the flask in a microwave until the solution is clear.
3. Add 5 ul – 10 ul of TOOLS DNA View to the gel solution. Swirl the flask gently when mixing the solution to prevent bubbles from forming.
4. After polymerization, perform gel electrophoresis and detect the bands under UV illumination.

Recommendations

1. Gel thickness should be <0.5 cm because thick gels potentially decrease sensitivity.
2. Repeatedly melting gels containing TOOLS DNA view may result in low sensitivity. TOOLS DNA view allows for the visualization of DNA (>50 ng) in agarose gels under visible light. This eliminates the need for exposure to UV light, which can nick and damage DNA. The intact DNA fragments purified from agarose gel can increase the efficiency of subsequent molecular biology–based manipulations, such as cloning, transformation, and transcription.