

YTA Safe Stain

Cat No. YT0001

Store at 4 °C for 2 years

Description

YTA safe stain is a new nucleic acid stain, the best choice to the traditional ethidium bromide (EB) 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 268 nm and another at 294 nm. In addition, it has one visible excitation at 491 nm. The fluorescence emission of YTA safe stain bound to DNA is centered at 530 nm.

Protocol

1. Prepare 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 it until the solution is completely clear and no small floating particles are visible (about 2_3 minutes).
2. Add 2-5 ul of YTA safe stain to the gel solution. Swirl the flask gently to mix the solution and avoid forming bubbles.
3. While the gel solution cools, pour it into the gel tray until the comb teeth are immersed about 1/4_1/2 into the gel solution.
4. Allow the agarose gel to cool until solidified. Load samples on the gel and perform electrophoresis.
5. Detect the bands under UV illumination.

Notes

1. The thickness of gel should be less than 0.5 cm since thick gels may decrease sensitivity.

2. Repeated melting of gels containing YTA safe stain may result in low sensitivity.
3. YTA safe stain allows visualization of DNA (>100 ng) in the agarose gel 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 manipulations such as cloning, transformation and transcription.
4. YTA safe stain may irritate skin and eyes. Please wear gloves while handling.