M5 SuperGreen I nucleic acid gel stain 10,000× concentrate in DMSO (Electrophoresis Grade)使用说明书

产品名称	单位	货号
M5 SuperGreen I nucleic acid gel stain (10000X)	100μl	MF621-01
M5 SuperGreen I nucleic acid gel stain (10000X)	5x100μl	MF621-05

【储存条件】

2-8°C（避免太阳光直射）。

【产品简介】

SuperGreen I Nucleic Acid Stains is a kind of novel generation of fluorescent nucleic acid gel stains designed to replace the highly toxic ethidium bromide (EtBr). SuperGreen I is nontoxic and more sensitive than EtBr. Gels can be visualized under UV or Visible Light.

【产品特点】

1. Safety: SuperGreen I is nontoxic and noncarcinogenic.
2. Ultra-sensitivity: It allows the visualization of as little as 20pg dsDNA, around 5-10 times more sensitive than EtBr under UV and 8-20 times more sensitive than EtBr in Visible Light.
3. Convenience: NO need to rinse or wash gels. Add stain before load samples. Visualize gels under UV or Visible Light to avoid UV damage on DNA/RNA.
4. Wide range: suitable for agrose gel or PAGE.
5. No impact for the next experiments such as RT, PCR, enzyme digestion, and ligation.
6. Strong signal and no background
7. Lower cost: 1 ml SuperGreen I Nucleic Acid Stain is sufficient to load 10,000 samples.

【操作步骤】

Protocol 1: Stain nucleic acid in electrophoresis (add stain in the gel)

1. Make gels: Add 10μl SuperGreen I Nucleic Acid Stain per 100ml gel when cool down to 50℃. Usually, 1ml SuperGreen I Nucleic Acid Stain is sufficient for making 100 gels (100ml per gel) and one gel is enough to load 100 samples. So, 1ml SuperGreen I Nucleic Acid Stain is enough to load 5000 samples.
2. Running the gels according to the routine method.
3. Visualize gels under UV or Visible Light. The Visible light is much better to avoid UV damage on DNA/RNA.
4. Exact molecular weight can be measured by this method, also 1mL SuperGreen can be used to load 5000samples (50 samples per 100mL gel).

Protocol 2: Stain nucleic acid before electrophoresis (add stain in the loading buffer)

1. Prepare working solution: Dilute 100 μl SuperGreen I Stain with 1ml running buffer TBE or TAE. This solution is stable up to one month at 4℃
2. Make gels: based on the routine method. Do not add any DNA/RNA stain in the gel.
3. Stain Nucleic Acid: Add 1μl SuperGreen I Nucleic Acid Stain working solution to 10μ mixture of sample and loading buffer, let it stay at RT for 3-5min for stain binding to nucleic acid completely. Normally, 1μl working solution is enough for one sample loading, and 1ml SuperGreen I Nucleic Acid Stain is enough to load 10,000 samples.
4. Stain markers: Mix 5μL Marker and 1μL SuperGreen I Nucleic Acid Stain working solution thoroughly, let it stay at RT for 5min to let SuperGreen I Stain and DNA/RNA binding completely.
5. Load samples and run gels.
6. Visualize gels in UV or Visible Light to avoid UV damage on DNA/RNA.

Usually 1uL stain is enough to stain one sample. That is 1mL SuperGreen I is enough to load 10000 samles. However, big fragments (>2Kb) will move slowly when bind to the stain. So please stain in DNA after electrophoresis or add stain in gels to measure molecular weight exactly.

Protocol 3: Stain Nucleic Acid after electrophoresis (add stain in gel staining solution)

1. Make gels: Do not add any nucleic acid stain when make gels.
2. Prepare SuperGreen I Nucleic Acid Staining solution: dilute SuperGreen I Nucleic Acid Stain with TAE or TBE on ratio 1:1000. Stain gels in the dark for 10-30min. Staining time depends on gel concentration and thickness. PAGE can be stained directly on the glass. Let staining solution cover PAGE gels for 30min. Please use glassware to store staining solution or silicified glassware because stain will absorb on the glass.
3. Visualize gels in UV or Visible Light to avoid UV damage on DNA/RNA.

Exact molecular weight can be measured by this method but the dye is used much more in this way.

Protocol 4: Stain Nucleic Acid after electrophoresis (add stain in gel staining solution)

Combine protocol 1 and protocol 2. It is the most sensitive method in all protocols to detect nucleic acids.