



UltraPower™ Nucleic Acid Stain

- a new **non-toxic** and **non-carcinogenic** fluorescent dye for agarose and PAGE gels staining

EP2001 UltraPower™ DNA Stain 10.000 x Run (1 ml)

42 EUR ex VAT

Ultrasensitivity -	visualization of as little as 20 pg dsDNA , around 5-10 times more sensitive than EtBr
Wide range -	suitable for agarose gels or PAGE
Specificity -	strong signal and no background
No side effect -	on down stream experiments such as RT, PCR, enzyme digestion and ligation
Low cost -	1 ml UltraPower™ Nucleic Acid Stain is sufficient to load 10,000 samples

STORAGE: -20°C in the dark

Protocol for UltraPower™ Nucleic Acid Stain

Protocol 1: **Stain nucleic acid in electrophoresis**

1. Make gels: Add 10 µl UltraPower™ Nucleic Acid Stain per 100 ml gel when cool down to 50°C. Usually, 1 ml UltraPower™ Nucleic Acid Stain is sufficient for making 100 gels (100 ml per gel).
2. Run gels based on the routine method and visualize in UV transilluminator. Exact molecular weight can be measured by this method.

Protocol 2: **Stain nucleic acid before electrophoresis**

1. Prepare **working solution**: Dilute 10 µl UltraPower™ Stain with 100 µl running buffer TBE or TAE. This solution is stable up to one month at 4°C in the dark.
2. Make gels: based on the routine method. Do not add any DNA/RNA stain in the gel.
3. Stain Nucleic Acid: Add 1 µl UltraPower™ Nucleic Acid Stain **working solution** to 10 µl mixture of sample and loading buffer, let it stay at RT for 3-5 min. Normally, 1 µl working solution is enough for one sample loading.
4. Stain markers: Mix 5 µl Marker and 1 µl UltraPower™ Nucleic Acid Stain working solution thoroughly, let it stay at RT for 5min.
5. Load samples, run gels and visualize in UV transilluminator

Big fragments (>2 kb) will move slowly when bind to the stain. So stain DNA after electrophoresis or add stain in gels to measure molecular weight exactly.

Protocol 3: **Stain Nucleic Acid after electrophoresis**

1. Make gels: Do not add any nucleic acid stain when make gels.
 2. Prepare UltraPower™ Nucleic Acid Staining solution: dilute UltraPower™ Nucleic Acid Stain with TAE or TBE on ratio 1:1000. Stain gels in the dark for 10-30 min and visualize in UV transilluminator. Staining time depends on gel concentration and thickness.
- PAGE** can be stained directly on the glass, but glass binds strongly UltraPower™. Let staining solution cover only PAGE gels for 30 min. Exact molecular weight can be measured by this method.

Notes:

1. Do not run gels over 2 hrs. Smear bands appear because UltraPower™ Stain will dissociate from DNA/RNA.
2. UltraPower™ Stain can dissociate from nucleic acids in ethanol.
3. Stain nucleic acid in the gel or after electrophoresis to check the exact molecular weight of fragments when compared with molecular weight markers.
4. Use **plastic tubes and other plastic wares** in UltraPower™ Stain storage, dilution and staining. UltraPower™ Stain can bind strongly to glassware.

Sensitivity and DNA staining intensity with EtBr and UltraPower Nucleic Stain

