# Product information

## Eco-DNA Dye, ready to use

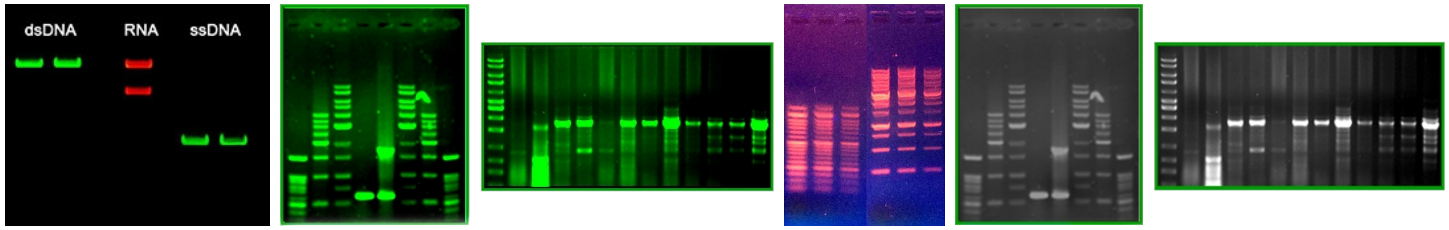
Storage: 4°C

| Cat. No. | Description | Quantity |
|---|---|---|
| DT81413 | Eco-Stain, ready to use | 1ML |
| DT81413 | Eco-Stain, ready to use | 5X1ML |
| DT81414 | Eco-Green-DNA Dye, ready to use | 5X1ML |
| DT81415 | Eco-Red-DNA Dye, ready to use | 1ML |
| DT81415 | Eco-Red-DNA Dye, ready to use | 5X1ML |
| DT81417 | Eco-White-DNA Dye, ready to use | 1ML |
| DT81417 | Eco-White-DNA Dye, ready to use | 5X1ML |
| DT81418 | Eco-Stain Plus, ready to use | 1ML |
| DT81418 | Eco-Stain Plus, ready to use | 5X1ML |

### Product Description:

DNA, single-stranded DNA and RNA in Agarose gels. This dye replaces Ethidium Bromide (toxic, potential mutagen) for visualization of DNA or RNA in Agarose gel. Eco-DNA Dye products are non-carcinogenic and causes significantly fewer mutations in the Ames-test, it also tests negative in both the mouse marrow chromophilous erythrocyte micronucleus test and mouse spermary spermatocyte chromosomal aberration test.

**NOTE:** *Eco-DNA Dye products are non-carcinogenic, but may cause skin and eye irritaions. Always wear gloves when working with the product.*




Eco-Stain (DT81413) | Eco-Green-DNA Dye (DT81414) | Eco-Red-DNA Dye (DT81415) | Eco-White-DNA Dye (DT81417)

### Eco-Stain-Substitute for Ethidium Bromide in Electrophoresis Gels (DT81413)

Eco-Stain is used the same way as Ethidium Bromide in agarose and polyacrylamide gel electrophoresis. Eco-Stain emits green fluorescence when bound to dsDNA and ssDNA, and red fluorescence when bound to RNA. This stain has one excitation (490 nm) and two emission spectra (520 nm and 635 nm). Eco-Red-DNA Dye emits red fluorescence when bound to dsDNA, ssDNA, and RNA.

### Protocol

1. Prepare a 100 ml agarose or polyacrylamide solution.
2. Add 5µl Eco-Stain to the gel solution.
3. Mix gently; the solution should have no air bubbles.
4. For agarose gel, let the solution cool down to 60 – 70°C and cast the gel.
   For polyacrylamide gel, add APS and TEMED and cast the gel according to regular polyacrylamide gel casting protocol.
5. Run gel electrophoresis with 5µl Eco-Stain per 100 ml buffer.
6. View the results under UV or blue LED light.

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## Eco-DNA Dye-Green, Red, White-Substitute for loading dye (DT81414, DT81415, DT81417)

With Eco-DNA Dye you do not add any dyes to the gel matrix or running buffers, the dye is provided as a 6X concentrated sample loading buffer which you mix your samples. This significantly reduces possible contamination of glassware and gel running tank. After electrophoresis, view and document your results under UV as you would do with Ethidium Bromide stain.

Eco-DNA Dye emits green fluorescence when bound to dsDNA and ssDNA, and red fluorescence when bound to RNA. This stain has one excitation (290nm) and two emisson spectra (490nm and 605nm).

### Protocol

1. Prepare a 100 ml agarose or polyacrylamide solution.
2. Mix gently without introducing any air bubbles.
3. For agarose gel, let the solution cool down to 60 - 70°C and cast the gel.
   For polyacrylamide gel, add APS and TEMED and cast the gel according to regular polyacrylamide gel casting protocol.
4. Mix samples and DNA marker with Eco-DNA dye at a 1:5 (dye: sample) dilution rate.
5. Following electrophoresis, view the results under UV.

**Note:**
*Eco-Green can also be visible under blue LED light.*

## Eco-Stain Plus-Substitute for Ethidium Bromide in Electrophoresis Gels (DT81418)

Eco-Stain Plus represents the most sensitive DNA stain in the latest generation of biosafe nucleic acid stains. It can be used as a substitute for ethidium bromide for post electrophoresis DNA staining. There is no need to add it to the electrophoresis buffer or casting gel. The fluorescence has an excitation maxima at approximately 490 nm.
note: **Eco-Stain Plus is for POST electrophoresis applications**.

### Protocol

1. Prepare staining solution by diluting Eco-Stain Plus 1:5,000 - 1:10,000 in TE, TAE or TBE buffer.
2. **After performing electrophoresis**, place the dye-free gel in a plastic container and cover with the staining solution. Ensure the box is covered to protect the contents from light. Agitate gently and incubate at room temperature for 10 - 40 minutes.
3. No distaining is required - visualize results directly under UV light.
4. The staining solution may be reused up to 4 times. Keep stored at 4°C and protected from light. Do not store the solution in glass containers, as these surfaces adsorb the dye in the solution, reducing the staining efficacy.

 