

DNA Loading Buffer I Fluoro

DNA Sample Stain - 6X in DNA Loading buffer

Component	Cat#	M3323.001	Colour code of cap colour of tube
6X DNA Loading Buffer I Fluoro		1mL	amber

Product description

DNA Loading Buffer I Fluoro is a fluorescent reagent that produces instant visualization of DNA bands upon blue light (e.g., BLook™) or UV illumination of agarose gels. It is an ideal alternative to the highly toxic and mutagenic Ethidium bromide (EtBr).

DNA Loading Buffer I Fluoro is used to prepare DNA markers or samples for loading on agarose or polyacrylamide gels. It is a sensitive staining reagent and is used to detect the double-stranded DNA (dsDNA). The three tracking dyes allow a visual tracking of the DNA migration during the gel electrophoresis.

DNA Loading Buffer I Fluoro is supplied in 6X DNA Loading Buffer and contains three tracking dyes: bromophenol blue, xylene cyanol FF, and orange G. Approximate fluorescence excitation / emission: 300, 495 / 537 nm, bound to nucleic acid (Fig. 1).

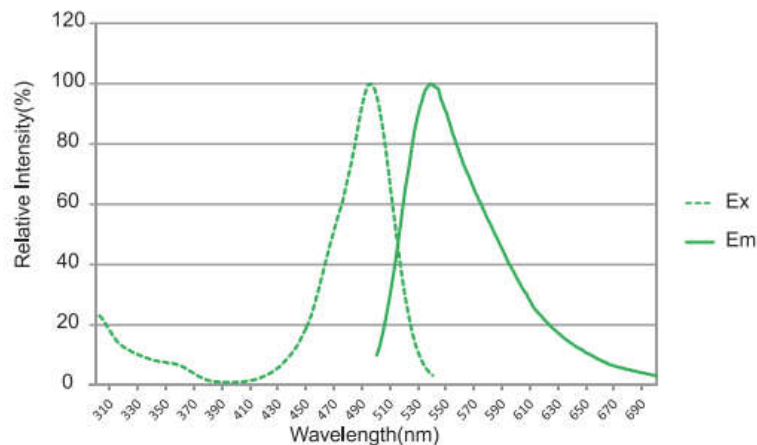


Fig. 1: Fluorescence excitation (dotted line Ex) / emission (solid line EM) spectra of DNA Loading Buffer I Fluoro nucleic acid gel stain bound to DNA.

Product Specification

6-time loading buffer for agarose gels

Contains: Glycerin, EDTA, Bromophenol blue, Xylene cyanol FF, Orange G plus a fluorescence dye.

In 1% agarose gels, xylene cyanol FF co-migrates with ~4000 bp DNA, while bromophenol blue co-migrates with ~300 bp DNA, and Orange G co-migrates with smallest fragments, ~50 bp.

Product Quantity

DNA Loading Buffer I Fluoro is supplied as a 6X loading buffer in 1mL aliquots. We recommend using 1µL of DNA Loading Buffer I Fluoro in each well for gel applications.

Quality Control

The quality of the DNA Loading Buffer I Fluoro is tested on a lot-to-lot basis to ensure consistent product quality.

Storage and Handling

DNA Loading Buffer I Fluoro is a light sensitive dye and should be stored protected from light. Ideally, store DNA Loading Buffer I Fluoro at -20 °C for longer periods. When stored at +4 °C, DNA Loading Buffer I Fluoro is stable up to 12 months.

Features of DNA Loading Buffer I Fluoro

Highly sensitive

High degree of sensitivity comparable to EtBr.

Simple to use

Ready to use.
Same application procedures as the 6X Loading Dye.

Timesaving

No de-staining requirement, low background value, and image displayed after coupling with the nucleic acid.

Perfectly compatible with a standard UV transilluminator

Replaces EtBr with no optical setting change. Simply use the blue light or UV to detect the signal.

Easy disposal

No expenses required for the waste management.

Required Materials

For using DNA Loading Buffer I Fluoro to visualize your DNA bands, you only need an electrophoresis equipment, optional DNA markers and a UV or blue light transilluminator.

Product Use Limitations

DNA Loading Buffer I Fluoro is developed, designed, and sold for laboratory usage only.

Protocol for Loading

1. Vortex DNA Loading Buffer I Fluoro for 10 seconds prior to use.
2. Dilute 1 part DNA Loading Buffer I Fluoro with 5 parts DNA sample and mix.
Note: DNA Loading Buffer I Fluoro must be added to DNA markers in order to visualize the ladder bands simultaneously with the sample after electrophoresis.
3. Load sample and run according to standard procedures.
4. After the electrophoresis, remove gel and place on UV or a blue -light transilluminator to immediately visualize bands.
5. Gels can be post-stained with EtBr if desired.

Trouble shooting

Problem	Cause	Suggestion
Bands are shifted	The nucleic acid binding dyes can affect the DNA migration during gel electrophoresis.	Loading more DNA sample for electrophoresis, thus not causing any obvious shift in the migration pattern
	The selected wavelength may not be right.	Check the fluorescence excitation and emission wavelengths.
Low sensitivity	Dilution ratio may not be right.	Check the dilution ratio: 1 part DNA Loading Buffer I Fluoro with 5 parts DNA sample dilution.