
dsSafe Nucleic Acid Gel Staining Solution, 10,000×

<http://cn.lumiprobe.com/p/dssafe-gel-stain>

dsSafe is a fluorescent dye for nucleic acid staining in agarose and polyacrylamide gels. dsSafe is the best and safer alternative to ethidium bromide (EtBr); it was shown to be less toxic, non-mutagenic, and non-carcinogenic.

dsSafe allows nucleic acid visualization with sensitivity similar to that of ethidium bromide. Dye excitation can be performed with both conventional UV transilluminators and blue light transilluminators, with the latter ones being safer for the eyes and nucleic acid sample. When blue light is used for dsSafe excitation, background fluorescence is lower than in the case of ethidium bromide excitation with UV light. Excised DNA fragments for subsequent cloning are not exposed to damaging UV radiation, thus increasing cloning efficacy and reducing the frequency of adverse mutations caused by UV.

The spectrum of the DNA-dye complex has two excitation maxima [in the UV (280 nm) and blue ranges (502 nm)] and one emission maximum in the green range (~530 nm). Available as 10,000× concentrate in DMSO. To stain the gel, add the dye to melted agarose solution* or stain the gel after gel electrophoresis in TAE/TBE buffer for 10–20 minutes.

Key dye advantages:

- Non-mutagenic, non-carcinogenic, far less toxic dye for DNA and RNA staining
- High sensitivity identical to that of EtBr
- Excitation both with UV and blue light
- Easy to use: the dye can be added to melted agarose solution or the gel can be stained within 10 to 20 minutes after gel electrophoresis completion
- Can be used for all routine laboratory procedures requiring nucleic acid visualization
- Does not require special storage or disposal conditions

For nucleic acid gel staining, we also offer [dsGreen Gel Staining Solution](#) with higher sensitivity to DNA. However, in contrast with dsSafe, gel staining with [dsGreen Gel Staining Solution](#) is recommended only after the completion of gel electrophoresis.

**Similarly to ethidium bromide, dsSafe when added in melted agarose solution can slightly reduce the mobility of nucleic acid sample in the gel.*