



Apex Safe DNA Stain FAQs

Q: What is the difference between Apex Safe DNA PS and Apex Safe DNA LD?

A: The main difference between the two is the protocol. PS (Pre Stain) is used like EtBr, a small amount is added to the agarose solution before pouring the gels, and also a small amount is added to the running buffer. LD (Loading Dye) is added to the DNA/RNA sample prior to pipetting into the gel wells. Both types of Apex Safe DNA Stains are considered safer than EtBr, they are considered non-hazardous for disposal, and are excited using blue light or UV light.

Q: Does Apex Safe DNA Loading Dye slow down or affect the separation of molecules (vs. non-stained nucleic acid samples)?

A: It is possible for the bound dye to slightly slow speed of migration, but generally not enough to significantly affect results. The Apex Safe DNA PS is added to the agarose prior to electrophoresis and will have less effect on migration rate.

Q: Can the Apex Safe DNA PS be used in a post stain process instead of pre-staining the gel?

A: The pre stain is not designed for post-staining gels.

Q: When is the Apex Safe DNA PS (Pre Stain) added to Agarose?

A: Add the appropriate amount of Apex Safe DNA PS to the agarose (2.5ul to 5ul per 100ml solution) *after* the microwaving or heating step. It is not recommended to add the stain before microwaving.

Q: Why is it recommended to add Apex Safe DNA PS to the running buffer as well as to the gel mixture?

A: Apex Safe DNA PS is positively charged and will migrate in the gel during electrophoresis in the opposite direction to the DNA bands. If stain is added to the running buffer, it will be "taken up" at the negative end of the gel, and then provide an even concentration of stain (and even staining of bands) in the gel through the electrophoresis process.

Q: What are the shipping and storage conditions recommended for the Apex Safe DNA Stains?

A: Apex Safe DNA stains should be stored in their opaque tubes at 4°C, and at this storage temperature they will have a shelf life of 2+ years. The stains can be shipped at ambient temperature, they are stable for up to 7 days outside of cold storage. Do not freeze Apex Safe DNA stains, this will inactivate them.

Q: Are Apex Safe DNA stains hazardous?

A: Apex Safe DNA products are considered safer than Ethidium Bromide. They are non-mutagenic at standard working concentration as determined by the Ames-test, with negative results in both mouse marrow chromophilous erythrocyte micronucleus and mouse primary spermatocyte chromosomal aberration tests. However, all laboratory chemicals and reagents should be handled with caution, and users should wear gloves and avoid skin contact.



Apex Safe DNA Stain FAQs (continued)

Q: What solvents are used in the Apex Safe DNA reagents?

A: Apex Safe DNA PS stain is supplied in water, Apex Safe DNA LD is supplied in 50% DMSO.

Q: How can Apex Safe DNA Stains be disposed?

A: Apex Safe DNA stains are considered non-hazardous waste as they are non-mutagenic, do not contain heavy metals, are non-corrosive, non-flammable, and non-reactive. In addition, Apex Safe DNA Stains have passed the environmental hazardous waste screen bioassay tests per California CCR Title 22. They can be safely disposed per your facility's SOP for non-hazardous waste.

Q: What are the excitation and emission wave lengths for Apex Safe DNA Stains?

A: Both Apex Safe DNA PS and LD have excitation peaks at 290nm (UV) and 490 nm (blue), and emission peaks at 520nm and 635nm.

Q: What is the sensitivity of Apex Safe DNA stains:

A: Apex Safe DNA PS has a sensitivity range for visualization of 0.1-0.3ng of nucleic acid per band. Apex Safe DNA LD has a sensitivity range of 0.2-0.6ng of nucleic acid per band.

Q: Is there a difference in excitation level using UV vs. Blue light for Apex Safe DNA?

A: UV light provides for slightly higher emission signal for Apex Safe DNA LD and PS.

Q: Is there a dye front included in the Apex Safe DNA LD?

A: Yes, Apex Safe DNA LD includes a bromophenol blue tracking dye.

Q: After running a gel using Apex Safe DNA PS, is there a recommended procedure for de-staining?

A: De staining should not be required. If there is significant background fluorescence, try decreasing the quantity of stain added to the gel and to the running buffer.

Q: Can a gel made with the Apex Safe DNA PS be stored and used later?

A: Yes, Apex Safe DNA PS will remain active in the gel for up to one week as long as the gel is stored at 4°C, and also covered so it will not be exposed to light.

Q: Are Apex Safe DNA stains compatible with gel extraction kits?

A: Yes, Apex Safe DNA stains have been tested with many of the popular gel extraction kits on the market, and we have found no compatibility issues.

Q: I am getting a lot of background in the agarose gel using the Apex Safe DNA PS, is there a way to improve contrast on the DNA bands?

A: It is recommended to add up to 5ul of the Apex Safe DNA PS stain per 100ml of running buffer. If the background glow on gel is high, the amount of stain can be reduced to 2.5ul/100ml.



Apex Safe DNA Stain FAQs (continued)

Q: Can Apex Safe DNA PS be stored at 1X, or at a diluted concentration?

A: Yes, diluted Apex Safe DNA PS can be stored at 4C, just as the concentrated product. For long term viability it should be protected from light.

Q: Is Apex Safe DNA light sensitive?

A: Apex Safe DNA Stain is supplied as a concentrate in amber, light blocking tubes. It should be stored at 4°C and protected from light exposure in the original tubes to maintain best performance. However, it is not overly light sensitive as other fluorescent stains, so it does not have to be protected from light during standard lab work.