SmartGlow™ Safe Green Stain FAQs

SMART
SAFE Nucleic Acid Stain
GLOW™

Q: What is the difference between SmartGlow™ PS and SmartGlow™ LD?

A: PS (Pre Stain) is used like EtBr, a small amount is added to the agarose solution before pouring the gel. LD (Loading Dye) is added to the sample prior to pipetting into the gel wells. Both types of SmartGlow™ are considered safer than EtBR. They are non-hazardous for disposal and are excited using blue light or UV light.

Q: Does SmartGlow™ LD 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 SmartGlow™ PS is added to the agarose prior to electrophoresis and will have less effect on migration rate.

Q: Can the SmartGlow™ 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 SmartGlow™ PS (Pre Stain) added to Agarose?

A: Add the appropriate amount of SmartGlow™ PS to the agarose (5µl per 100ml solution) after the microwaving or heating step. It is not recommended to add the stain before microwaving.

Q: What are the shipping and storage conditions recommended for the SmartGlow™ Stains?

A: SmartGlow™ stains should be stored in their opaque tubes at 4°C and at this storage temperature they have a shelf life of 2+ years. The SmartGlow™ stains should not be frozen. The stains are shipped at ambient temperature and are stable for up to 7 days outside of cold storage.

Q: Are SmartGlow™ stains hazardous?

A: SmartGlow™ products are considered safer than Ethidium Bromide. They are non-carcinogenic as determined by the Ames-test, with negative results in both mouse marrow chromophilous erythrocyte micronucleus and mouse primary spermatocycte chromosomal aberration tests. However, all laboratory chemicals and reagents should be handled with caution and users should wear gloves and avoid skin contact.

Q: What solvents are used in the SmartGlow™ reagents?

A: SmartGlow™ PS is supplied in water, SmartGlow™ LD is supplied in 50% DMSO.

Q: How can SmartGlow™ Stains be disposed of?

A: SmartGlow™ stains are considered non-hazardous waste as they are non-carcinogenic, do not contain heavy metals, are non-corrosive, non-flammable and non-reactive. They can be safely disposed down the drain or per your facility's SOP for non-hazardous waste.

Q: What are the excitation and emission wavelengths for SmartGlow™ Stains?

A: Both SmartGlow™ 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 SmartGlow™ stains:

A: SmartGlow™ PS has a sensitivity range for visualization of 0.1-0.3ng of nucleic acid per band. SmartGlow™ 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 SmartGlow™?

A: UV light provides for slightly higher emission signal for SmartGlow™ LD and PS.

Q: What is the loading dye included in the SmartGlow™ LD?

A: Yes, SmartGlow™ LD is supplied with the tracking dye bromphenol blue in a 6x concentration.

Q: After running a gel using SmartGlow™ PS, is there a recommended procedure for destaining?

A: Destaining should not be required. If there is significant background fluorescence, eliminate or decrease the amount of PS added to the running buffer.

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