

Markers stained with SmartGlow LD*

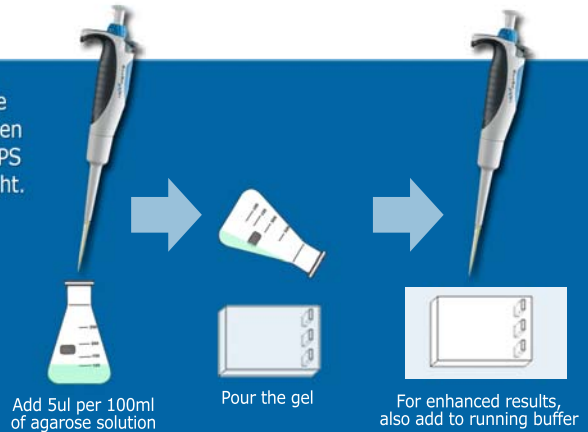


- **Replaces hazardous Ethidium Bromide (EtBr)**
- **Better sensitivity than EtBr**
- Detect as little as 0.1ng of DNA
- **Two types available**
- PS Pre Stain
- LD Loading Dye
- **Excitation by UV light or blue light**
- **Compatible with Accuris SmartBlue™ Transilluminator**
- **Ships at ambient temperature (stored at 4°C)**

*Excitation with Accuris SmartBlue™ Transilluminator. Imaged using Accuris SmartDoc™ Blue with iPhone®.

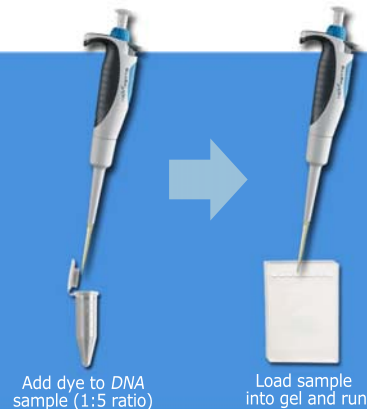
SmartGlow™ PS (Pre Stain) can be used as a direct replacement for Ethidium Bromide in agarose and polyacrylamide gel electrophoresis. The stain emits green fluorescence when bound to dsDNA or ssDNA and emits red fluorescence when bound to RNA. SmartGlow™ PS exhibits excitation peaks at 290nm and 490nm, allowing it to be used with UV and blue light.

- Protocol**
1. Prepare 100ml of agarose or polyacrylamide solution.
 2. Add 5ul of SmartGlow PS stain to the gel solution before pouring gels.
 3. For enhanced results, add SmartGlow PS to the running buffer at a ratio of 5ul per 100ml. Adding SmartGlow PS to the running buffer will result in increased sensitivity and better detection of small quantities of nucleic acid.
 4. After electrophoresis is complete, view the gel using a UV or blue light illuminator.



SmartGlow™ LD (Loading Dye) is supplied at 6X concentration and is added directly to the samples. No dye needs to be added to the gel or running buffer. After electrophoretic separation, view and document your results using a UV or blue light illuminator. SmartGlow™ LD emits green fluorescence when bound to dsDNA, ssDNA and RNA.

- Protocol**
1. Prepare agarose or polyacrylamide solution
 2. Pour gels
 3. Mix SmartGlow LD with samples & DNA markers at a 1:5 (dye to sample) dilution
 4. After electrophoresis, view the gel using a UV or blue light illuminator



Ordering Information:

- E4500-PS SmartGlow™ Pre Stain, 1ml (20,000x)*
- E4500-LD SmartGlow™ Loading Dye with Stain, 1ml (6x)*
- E4000** SmartBlue™ Blue Light transilluminator, US Plug

*Storage: 4°C for 2 years **For EU plug, please add (-E)



Item: E4000

SmartGlow is considered safer than Ethidium Bromide. Ames tests show that they are non-carcinogenic, results are negative in mouse primary spermatocyte chromosomal aberration and mouse marrow chromophilous erythrocyte micronucleus test. SmartGlow can be disposed as non-hazardous waste.

SmartGlow™ Safe Green Stain FAQs



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 spermatocyte 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.