Directions for Use

EZ-Vision® Bluelight DNA Dye

Code	Description	Size
1B1680-0.5ML	**EZ-Vision® Bluelight DNA Dye, 10,000X**	0.5 ml

General Information

AMRESCO's EZ-Vision® Bluelight DNA dye is a sensitive, non-mutagenic and environmentally safe fluorescent DNA dye specifically designed for gel staining. As little as 1-2 ng of DNA can be detected with EZ-Vision® Bluelight DNA dye. The dye is compatible either with a UV transilluminator or a gel reader equipped with blue light excitation (such as a blue LED gel imaging system or a Dark Reader®).

EZ-Vision® Bluelight DNA dye was subjected to tests by independent testing services to assess the dye's safety for routine handling and disposal. The mutagenicity of EZ-Vision® Bluelight DNA dye was determined by Ames testing of S. typhimurium with and without metabolic activation with an S-9 activation system. No increase in His+ revertants was obtained compared to controls. EZ-Vision® Bluelight DNA dye successfully passed environmental safety testing in compliance with CCR Title 22 Hazardous Waste Characterization, under which EZ-Vision® Bluelight DNA dye is classified as non-hazardous waste. A complete safety report is available at http://www.amresco-inc.com.

EZ-Vision® Bluelight DNA dye, 10,000X, is a concentrated solution that can be diluted 10,000 times for use in either precast or post gel staining. One vial (0.5 mL) of 10,000X solution can be used to prepare at least 100 precast or post-stain 100 mini-gels.

Gel staining with EZ-Vision® Bluelight DNA dye is compatible with downstream applications such as gel extraction and cloning.

Storage/Stability

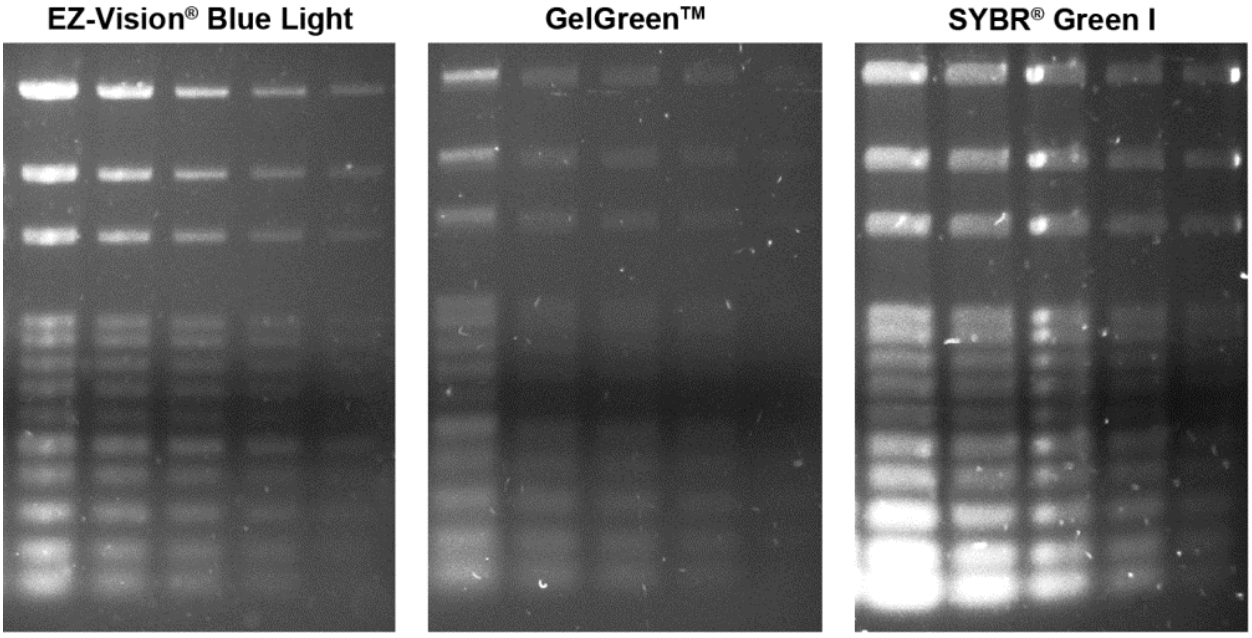
Store at room temperature (18 to 26°C) protected from light. EZ-Vision® Bluelight DNA dye 10,000 stock reagent is stable for at least one year when properly stored.

Product Use Limitations

For research use only. Not for therapeutic or diagnostic use.

Sensitivity

EZ-Vision® Bluelight DNA dye sensitivity is comparable with SYBR® Green I (Life Technologies) and GelGreen (Biotium).



Protocol/Procedure

Note: Although EZ-Vision® Bluelight DNA dye has undergone safety testing, AMRESCO recommends following universal safety precautions when working in the laboratory.

Pre-cast Protocol

1. Prepare molten agarose gel solution using your standard protocol.
2. Dilute the EZ-Vision® Bluelight DNA dye 10,000X stock reagent into the molten agarose gel solution at 1:10,000 and mix thoroughly. EZ-Vision® Bluelight DNA dye can be added while the gel solution is still hot.
3. Cast the gel and allow it to solidify.
4. Load samples and run the gel using your standard protocol.

5. Image the stained gel with a UV transilluminator, a Dark Reader® or a similar transilluminator, or gel imager using blue light (such as blue LED) and green filter such as a SYBR® filter.

Post-staining Protocol

1. Perform electrophoresis on an agarose or non-denaturing polyacrylamide gel.
2. Dilute the EZ-Vision® Bluelight DNA dye 10,000 times in water.
    - TBE, TAE or TE buffers may also be used to dilute EZ-Vision® Bluelight DNA dye 10,000X stock reagent.
    - Staining solution can be reused at least 2-3 times and is stable for at least one week. Store staining solution at room temperature protected from light.
3. Carefully place the gel in a suitable polypropylene container. Cover the gel with staining solution and incubate at room temperature for about 30 minutes.
    - Protect the staining container from light by covering it with aluminum foil or placing it in the dark.
    - Agitate the gel gently at room temperature.
4. Image the stained gel with a UV transilluminator, a Dark Reader® or a similar transilluminator, or gel imager using blue light (such as blue LED) and green filter such as a SYBR® filter.

Frequently Asked Questions

Why do I see smeared DNA on the gel?

- Too much DNA loaded on the gel; reduce the amount of DNA loaded by one-half to one-third.
- DNA was degraded, avoid nuclease contamination.
- Large DNA fragments are not sufficiently separated. Pour a lower percent gel.
- Improper electrophoresis conditions were used, do not allow voltage to exceed ~20 V/cm and maintain a temperature < 30°C during electrophoresis. Change buffer from TAE to TBE buffer which has a higher buffering capacity.
- There was too much salt in the DNA. Use ethanol precipitation to remove excess salts prior to electrophoresis.
- The DNA was contaminated with protein. Use phenol extraction to remove protein prior to electrophoresis.
- Small DNA bands may diffuse during post staining. Use EZ-Vision® in pre-cast protocol.

Why can't I see my DNA?

- There was insufficient quantity or concentration of DNA loaded on the gel. Increase the amount of DNA.
- The DNA was degraded. Avoid nuclease contamination.
- The DNA was electrophoresed off the gel. Electrophorese the gel for less time, use a lower voltage, or use a higher percent gel.
- Wrong lighting or filter was used. Visualize EZ-Vision® Bluelight-stained DNA fragments using either a UV- transilluminator and green filter such as a SYBR® filter or blue light (such as blue LED system)and green filter. You can also use a Dark Reader® or a similar transilluminator to visualize the gel.

Which downstream applications are compatible with usage of EZ-Vision® Bluelight DNA Dye?

- Restriction digests
- PCR
- Ligation
- Sequencing

How sensitive is EZ-Vision® Bluelight DNA Dye?

- As little as 1-2 ng of DNA can be detected with EZ-Vision® Bluelight DNA Dye. However, the detection limit will depend on instrument capability and exposure setting.

Is migration of DNA affected when stained with EZ-Vision® Bluelight?

- No, EZ-Vision® Bluelight stained DNA migrates at the same rate as unstained DNA.

Can EZ-Vision® Bluelight DNA Dye be used on polyacrylamide gels?

- Yes, use the post-staining protocol for non-denaturing polyacrylamide gels. Pre-cast protocol is not recommended for this application.

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For Technical Support

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