INSTRUCTIONS

GelCode™ Blue Safe Protein Stain

24594 24596

1995.0

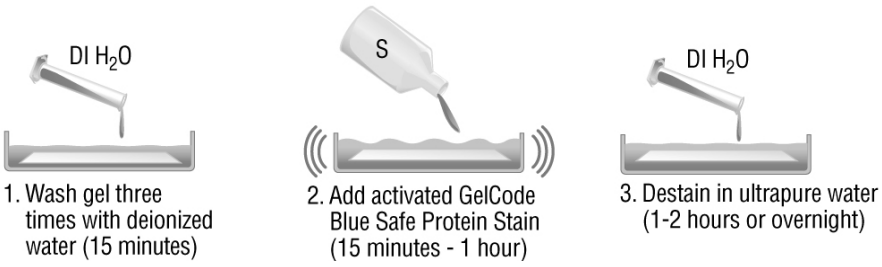
Number	Description
24594	**GelCode Blue Safe Protein Stain,** 1 L, sufficient for 40-50 mini gels
	Contents:
	GelCode Blue Safe Protein Stain, 1 L
	Activator Crystals, 1 each
24596	**GelCode Blue Safe Protein Stain,** 3.5 L, sufficient for 140-175 mini gels
	Contents:
	GelCode Blue Safe Protein Stain, 3.5 L
	Activator Crystals, 1 each

Storage: Upon receipt store at room temperature.

Introduction

GelCode Blue Safe Protein Stain is a coomassie G-250 dye-based reagent for staining protein on polyacrylamide gels and membranes. GelCode Blue Safe Stain provides considerable sensitivity, allowing for the detection down to 9 ng of protein. This protein-specific stain allows bands to be viewed directly on a gel or membrane during staining and is compatible with mass spectrometry applications. The staining process is simple and flexible, usually requiring a 15 minute incubation in stain and then a simple water wash to yield a clear background. GelCode Blue Safe Protein Stain is noncorrosive, non-flammable and is classified as non-hazardous under the U.S. Department of Transportation (DOT) shipping requirements.

Procedure Summary



Pierce Biotechnology 3747 N. Meridian Road | PO Box 117 Rockford, IL 61105 USA | (815) 968-0747 (815) 968-7316 fax | www.thermo.com/pierce

Stain Preparation

The Activator Crystals must be dissolved in the staining reagent before use for proper protein staining. Add the entire bottle contents of the Activator Crystals into the GelCode Blue Safe Protein Stain bottle. Dissolve the crystals by end-over-end mixing for 1 minute and then allow it to remain at room temperature for 5 minutes before use.

Record the date the Activator Crystals were added on the label of the stain reagent bottle. After activation, the stain is ready for use. Store the stain at room temperature.

Procedure for Staining Gels

1. **For SDS-PAGE:** Place gel in a clean tray and wash three times for five minutes with 50-100 ml of ultrapure water. Alternatively, wash the gel in 200 ml of ultrapure water with gentle shaking for 15 minutes.

   For native PAGE: Wash gel with 50-100 ml of ultrapure water for five minutes.
2. Mix the activated GelCode Blue Safe Protein Stain immediately before use by gently inverting or tipping and swirling the bottle several times.
3. Decant water wash and add a sufficient volume of stain to completely cover the gel. Typically, 20-25 ml of stain is sufficient for one 8 × 10 cm gel. Incubate on an orbital shaker for 15 minutes to 1 hour at room temperature.
4. Decant staining reagent and replace with 200 ml of ultrapure water. Place gel on an orbital shaker to destain for 1-2 hours. Frequently replacing water and washing longer will increase band intensity in contrast to the background. Placing a ~40 cm^2 folded Kimwipe™ Tissue (or paper towel) in the water with the gel will enhance the destaining process by absorbing excess stain leaching from the gel. Remove the tissue or paper towel from the container when destaining is complete. Overnight destaining will not reduce band intensity, but will reduce background signal.

Alternative Microwave Procedure for Staining Gels

This procedure results in faster staining with minimal reduction in signal intensity. Bands develop in approximately 30 minutes, but actual times may vary depending on the microwave. The procedure is optimized for standard 1 mm thick mini gels. Larger or thicker gels may require additional volumes of reagents and/or longer microwave and incubation times.

1. Wash the gel by microwaving for 90 seconds in 100 ml of ultrapure water.
2. Mix the activated GelCode Blue Safe Protein Stain immediately before use by gently inverting or tipping and swirling the bottle several times.
3. Decant water wash and add 50 ml of GelCode Blue Safe Protein Stain and microwave for 90 seconds or until solution is about to boil. Do not let solution boil to evaporation.
4. Place tray on an orbital shaker and incubate for five minutes.
5. Decant staining reagent and replace with 100 ml of ultrapure water. Microwave gel for 90 seconds. Place tray on an orbital shaker and destain for five minutes. Placing an approximately 40 cm^2 folded Kimwipe Tissue (or paper towel) in the gel container will enhance the destaining process by absorbing excess stain leaching from the gel.

Procedure for Staining Membranes

1. Place membrane containing transferred proteins in a clean tray and rinse for 1-2 minutes with ultrapure water.
2. Mix the activated GelCode Blue Safe Protein Stain immediately before use by gently inverting or tipping and swirling the bottle several times.
3. Decant water rinse and add sufficient volume of stain to completely cover the membrane. Typically, 20-25 ml of stain is sufficient for one 8 × 10 cm membrane. Incubate on an orbital shaker for 2-5 minutes.
4. Reduce background with a solution of 50% methanol/10% acetic acid for 4-10 minutes, replacing the solution 2-3 times.
5. Before drying the membrane for preservation, rinse it with 10% methanol to prevent wrinkling.

Troubleshooting

Problem	Possible Cause	Solution
High Background	SDS interference	Wash gel with ultrapure water extensively before staining
No band development	The staining reagent was not activated before use	Before use, add the Activator Crystals to the stain reagent and allow the crystals to dissolve by end-over-end mixing for one minute and then incubate for 5 minutes
	Gel is > 1 mm thick	Perform the staining step for 2-4 hours; alternatively, use thinner gels

Additional Information

A. Please visit our website for additional information on this product including the following:

- Frequently Asked Questions
- Tech Tip: Process stained polyacrylamide gel pieces for mass spectrometry

Related Products

24580 **MemCode™ Reversible Protein Stain Kit for Nitrocellulose Membranes**

24602 **SilverSNAP® Silver Stain Kit II**

24597 **Pierce® Color Silver Stain Kit**

26681 **BlueRanger® Prestained Protein Molecular Weight Marker Mix,** 1 × 48 microtubes

28378 **BupH™ Tris-Glycine-SDS Buffer Packs,** 40 packs, each pack makes 500 ml

25200-25244 **Precise™ Protein Gels, see catalog or website for a complete listing**

28398 **BupH Tris-HEPES-SDS Buffer Packs, 1**0 packs, each pack makes 500 ml

89871 **In-Gel Tryptic Digestion Kit**

Kimwipe™ is a trademark of Kimberly-Clark

Current versions of product instructions are available at www.thermo.com/pierce. For a faxed copy, call 800-874-3723 or contact your local distributor.

Pierce Biotechnology 3747 N. Meridian Road | PO Box 117 Rockford, IL 61105 USA | (815) 968-0747 (815) 968-7316 fax | www.thermo.com/pierce