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Product information

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Reversible Zinc Stain Kit

Catalog #: BSP019
Size: 10 preps
Storage: Mixed components storage*

*: Product will be shipped at ambient temperature. Check storage conditions. Products have one year expiration from time of purchase.

Product Description:

The Reversible Zinc Stain Kit is designed for rapid detection of proteins fractionated by PAGE (native gels or SDS denatured gels). The stain is based on the interaction of Zinc ions with polyacrylamide and proteins. The stain works by depositing zinc metal precipitate in the gel, which turns the gel opaque white, while the SDS coating on the proteins prevents the stains from binding to the proteins. A negative image is produced; clear protein bands are detected against a semi-opaque white polyacrylamide background. Protein bands are visualized in as little as 10-15 minutes. The sensitivity of the Reversible Zinc Stain is 8-12 ng and does not interfere with the electroelution of proteins or alter their biological properties. Gels stained with the Reversible Zinc Stain can be erased in 15 minutes before the transfer or electroelution of proteins. This stain works with native as well as SDS denatured gels and gels containing Glycine, Tricine and a variety of primary-amine containing buffers. The kit is sufficient for 10 minigels.

Storage and Transportation:

The kit is shipped at ambient temperature. Upon arrival, store Stain Solution A at room temperature and Stain Solution B, C, Erasin Buffer at 2-8°C.

Composition:

Stain Solution A (10X)	20 ml
Stain Solution B (2X)	100 ml
Stain Solution C (10X)	20 ml
Erasin Buffer (10X)	20 ml

Procedures:

1. After electrophoresis, rinse gel with 50 ml de-ionized water, 3-5 minutes for 0.5 mm to 0.75 mm gel thickness and 3-7 minutes for 1.0 mm gel thickness, respectively. Repeat rinse step two times.
2. Add 20 ml diluted Stain Solution A (2 ml 10X Stain Solution A in 18 ml pure water) and agitate (on a platform mixer) for 15 minutes.
3. Discard diluted Solution A and wash gel surface with DDH_2O for 5 seconds.
4. Repeat Step 3 once more.
5. Add 20 ml diluted Stain Solution B (10 ml 2X Stain Solution B in 10 ml pure water) and agitate (on a platform mixer) for 35 seconds. protein bands are detected against a semi-opaque white polyacrylamide background
6. Discard diluted Stain Solution B and wash gel surface with DDH_2O for 5 seconds.
7. Repeat step 6 once more. Then store gel in Stain Solution C (2 ml 10X Stain Solution C in 18 ml pure water). Protein bands will become clearer.
8. For applications such as transfer, blotting, electroelution or MS analysis, staining the gel with other staining agents, please cut out protein band, wash gel surface with DDH_2O for 5 minutes and immerse the gel in 10 fold diluted Erasin buffer. Gently rock the tray for 15 minutes. Discard Erasin buffer, wash gel with DDH_2O for 5 minutes. Repeat washing in DDH_2O once more before proceeding with other applications.

Notes:

1. The staining box or dish should have dimensions that are similar to the size of gel to minimize the volume of staining solution required. The solutions must completely cover the protein gel.

2. Transfer the gel to a glass plate. Place a dark (black) sheet of paper under the glass plate and shine a bright light at an oblique angle above the gel. The gel protein bands will appear as dark bands against an opaque white background.

3. Step 1 can completely remove Tricine or Glycine, EDTA, EGTA in gel, in case of interference to gel stain.

4. After Erasin, the gel is ready for silver staining, blotting, or other analysis. For elution or transfer, equilibrate the gel or gel slice with elution or transfer buffer for 15 minutes. Electro-elute or transfer using the same buffer.

5. The volume of 20 ml is suitable for 80 × 60 × 1mm minigel. If using a big gel, please add more staining solution for completely covering the protein gel.

6. Stain Solution A at low temperature will appear as precipitates, please heat to 37°C to dissolve.

7. Stain time at step 5 must not exceed longer than 40-45 seconds or else the sensitivity of gel staining will decrease. Wash time at step 3 must not be extended too long, or else the sensitivity of gel staining will decrease.

8. The kit can only be used for in vitro experiments.