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Product information

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Reversible Copper Stain Kit

Catalog #: BSP017
Size: 10 preps
Storage: RT*

*: Upon arrival, store at room temperature. The kit is stable for 1 year when stored and handled properly. Check storage conditions.

Product Description:

The Reversible Copper Stain Kit is designed for the rapid detection of proteins fractionated by SDS-PAGE. The stain is based on the interaction of copper ions with polyacrylamide and proteins. The stain works by depositing a copper metal precipitate in the gel, which turns the gel opaque green, 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 blue polyacrylamide background. Protein bands are visualized in as little as 30 minutes. The sensitivity of the Reversible Stain is 5-12 ng. Staining does not interfere with the electroelution of proteins or alter their biological properties. Gels stained with the Reversible Copper Stain kit can be erased in 15-20 minutes before the transfer or electroelution of proteins. This stain can also be suitable for native gels or gels containing Tricine or Glycine. The kit is sufficient for 10 minigels.

Storage:

The kit is shipped at ambient temperature. Upon arrival, store at room temperature. The kit is stable for 1 year when stored and handled properly.

Composition:

Components	BSP017
Stain Solution I (2X)	100 ml
Stain Solution II	2 ml
Erasin buffer (5X)	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 three times.

2. Add 20 ml 1x separation gel buffer (0.375 M Tris-HCl pH8.8) and agitate (on a platform mixer) for 5-10 minutes.

3. Discard separation gel buffer, wash two gel surface with DDH_2O for 10 seconds each.

4. Mix 20 ml diluted 1X Stain I (10ml 2X Stain I in 10 ml pure water) and 200 µl Stain II, then add them into staining box or dish containing protein gel and agitate (on a platform mixer) for 5-10 minutes. Clear protein bands appear against a semi-opaque blue polyacrylamide background.

5. Discard stain mixture and wash the gel 2-3 minutes with water. Store the stained gel in de-ionized water for further analysis.

6. For later 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 5 fold diluted Erasin buffer. Gently rock the tray for 15 minutes. Discard Erasin buffer, wash gel with DDH_2O for 5 minutes, repeat once more.

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.

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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 blue-green background.
3. Step 1 can completely remove tricine, glycine, EDTA, or 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 × 1 mm mingels, if using big gel, please add more staining solution for completely covering the protein gel.
6. At a low temperature, precipitates may appear in Stain Solution II. Please heat to 37°C to dissolve precipitates.
7. The kit can only be used for in vitro experiments.

PRODUCTS ARE INTENDED FOR BASIC SCIENTIFIC RESEARCH ONLY.
NOT INTENDED FOR HUMAN OR ANIMAL USE.