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A Geno Technology, Inc. (USA) brand name

RAPIDstain™

For Staining of Polyacrylamide Gels

(Cat. # 786-31, 786-31G, 786-31S)



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INTRODUCTION

RAPIDstain™, a mass spectrometry compatible stain, is based on Coomassie dye and only stains proteins, leaving the background clear that result in high band visibility. The staining of gels with RAPIDstain™ allows the examination of protein bands during the staining process as they become visible within 5-10 minutes (depending on protein concentration) and reach a maximum intensity within 60 minutes in most applications. After the staining process, the band intensity may be further enhanced by equilibrating the stained gel in the deionized water. RAPIDstain™ has the sensitivity of staining 4-8ng protein/band e.g., 4-8ng of BSA is visible in 4-20% SDS acrylamide gels.

ITEM(S) SUPPLIED

Cat. #	Description	Size
786-31	RAPIDstain™	1L
786-31G	RAPIDstain™	1gal
786-31S	RAPIDstain™	125ml

STORAGE CONDITIONS

It is shipped at ambient temperature. Store it at room temperature upon arrival. Stable for one year when stored and used properly.

ADDITIONAL ITEM(S) REQUIRED

- Deionized water
- Methanol
- 40% Methanol, 10% Acetic acid for fixing peptides and IEF strips
- 5% acetic acid or gel drying reagents for long term storage

PROTOCOL

Polyacrylamide Gel Staining Protocol

1. Wash polyacrylamide gel 3 times for 5 minutes in a large volume of deionized water
2. Remove all free water from the gel.
3. Add an adequate volume of RAPIDstain™ (50ml/mini gel) to cover the gel.
4. Gently, shake the gel in RAPIDstain™ stain for 1-2 hour maximum. Protein bands will be visible within 5-10 minutes and reach a maximum intensity within 1 hour in most applications. Incubation longer than 1 hour has marginal impact on staining and will not increase the background.
5. Rinse the stained gel in a large volume of deionized water, 3 times for 10-15 minutes each.
6. The stained gels can be stored in water for up to 3 days. For longer storage, either dry the gel (Gel Drying Solution, Cat. # 786-685) or store in 5% acetic acid solution at 4°C.

Peptide Gel Staining Protocol for Mass Spectrometry

For mass spectrometry analysis of peptides, follow this procedure for staining peptides (<20kDa) on all gel types and for peptides and proteins in Bis-Tris gels.

1. Fix the gel in 40% methanol, 10% acetic acid for 30 minutes.
2. Remove the free fixing agent and continue with Step 3 in the protocol above.
3. After staining wash the gel with water for 2 hours

Isoelectric Focusing (IEF) Gel Staining Protocol

1. Fix the gel in 12% TCA (w/v) with 3.5% sulfosalicylic acid (w/v) or 40% methanol, 10% acetic acid for 30 minutes.
2. Remove the free fixing agent and continue with Step 1 in the polyacrylamide gel staining protocol above.

TROUBLESHOOTING

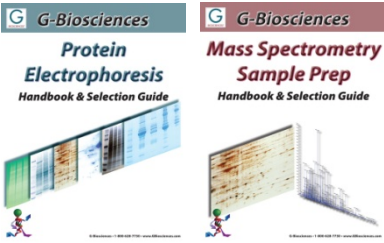
Issue	Possible Reason	Suggested Solution
No Protein Bands Visible	The gel was not adequately washed with water	Add fresh stain and stain for 1-2 hrs
	Water was not completely removed from the gel after washing step	
	Not enough stain was used for staining the gel	
Poor staining of proteins	Inadequate washing, water was not removed completely or not enough stain for staining the gel	Add fresh stain and stain for 1-2 hrs
	Gel matrix density and gel buffer composition reduced the diffusion of stain across the gel matrix to react with the proteins	After staining extend the washing step to 1-2 hours.
	Protein diffused in the gel, poor gel quality, not enough protein present in the sample, protein loss during sample loading step or poor handling.	Add fresh stain and increase the incubation time to 2 hours or longer
		After staining extend the washing step to 1-2 hours.
The gel has high background	Inadequate washing, poor handling, poor quality of water or residual SDS contamination in the gel	Repeat the electrophoresis with either a different gel or increase the amount of protein loaded on the gel. After staining extend the washing step to 1-2 hours
		Extended washing with deionized water will remove the background staining

CITATIONS

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RELATED PRODUCTS

Download our Protein Electrophoresis and Mass Spectrometry Sample Preparation Handbooks.



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