NuPAGE® Bis-Tris Mini Gels

Package Contents

Product	Quantity
10% Bis-Tris Gels	Box of 2 or 10 gels
4–12% Bis-Tris Gels	Box of 2 or 10 gels
12% Bis-Tris Gels	Box of 2 or 10 gels

Storage Conditions

- Store at 4–25°C for a 1-year shelf life.
- Do not freeze.

Required Materials

- Protein sample and standard
- NuPAGE® MES or MOPS SDS Running Buffer (20X)
- NuPAGE® LDS Sample Buffer (4X)
- NuPAGE® Sample Reducing Agent (10X)
- NuPAGE® Antioxidant
- Novex® Power Supply Adapters (Cat. no. ZA10001) if not using a Life Technologies power supply
- XCell SureLock® Mini-Cell gel running tank

Timing

Run Time: 35 minutes with MES Buffer
50 minutes with MOPS Buffer
Voltage: 200 V constant

Selection Guide

Protein Gels
Go online to view related products.

Product Description

NuPAGE® Bis-Tris Gels are precast polyacrylamide gels designed for optimal separation and resolution of small- to medium- sized proteins (1–200 kDa) under denaturing gel electrophoresis conditions.

NuPAGE® Bis-Tris Mini Gels are available in the following variations:

- **Polyacrylamide percentages**: 10%, 4–12%, and 12%
- **Well formats**: 1, 9, 10, 12, 15, 17, IPG, and 2D
- **Thicknesses**: 1.0 mm and 1.5 mm

Important Guidelines

- This system is designed for use in the XCell SureLock® Mini-Cell gel running tank.
- Use the NuPAGE® MES SDS Running Buffer for small proteins or NuPAGE® MOPS SDS Running Buffer for medium-size proteins.

Online Resources

Visit our product page for additional information and protocols. For support, visit www.lifetechnologies.com/support.

For Research Use Only. Not for use in diagnostic procedures.

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Print Options

Protocol Outline

A. Prepare samples, buffers, and gels.
B. Assemble the gel apparatus.
C. Load buffer, samples, and standards.
D. Perform electrophoresis.

Electrophoresis Protocol

See page page 2 to view a procedure for preparing and running your electrophoresis experiment.

Choosing the Right Gel Type for Your Application

Review the table in the pop-up to determine the best gel type for your experiment.

Choosing the Right Gel Percentage and Buffer

Refer to the migration and conversion charts in the pop-up to find the gel best suited for your application. As a general rule, your proteins of interest should migrate through ~70% of the length of the gel for the best resolution. When protein molecular weights are wide ranging or unknown, gradient gels are usually the best choice.

Choosing a Well Format and Gel Thickness

We offer polyacrylamide gels in a choice of nine well formats and two thicknesses, depending on gel type. When loading large samples (>30 µL), a thicker gel with fewer wells is more appropriate; Bolt™ Bis-Tris Plus gels are the best choice when loading large samples. When blotting, however, proteins will transfer more easily from a thinner gel.

Choosing a Protein Standard for your Application

Choose a Life Technologies™ standard based on your experiment:

Pre-Stained: SeeBlue® Plus2 Pre-Stained Standard or Novex® Sharp Pre-Stained Protein Standard

Unstained: Novex® Sharp Unstained Protein Standard or Mark12™ Unstained Standard

Western: MagicMark™ XP Western Protein Standard

For all other specialty standards, please view further information here.

Limited Product Warranty and Disclaimer Details

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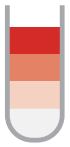
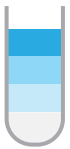
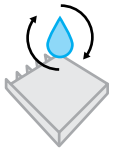
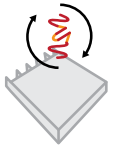
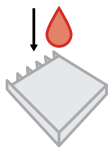
NuPAGE® Bis-Tris Mini Gel Electrophoresis Protocol

Follow the procedure below to prepare for and perform SDS polyacrylamide gel electrophoresis using NuPAGE® Bis-Tris Mini Gels.

Timeline	Steps	Procedure Details
1 	**Prepare samples**	See table below
2 	**Prepare buffers**	Add 50 mL of 20X NuPAGE® MES or MOPS SDS Running Buffer to 950 mL of deionized water to prepare 1X SDS Running Buffer. For reduced samples, prepare the running buffer for the Upper Buffer Chamber by adding 500 µL of NuPAGE® Antioxidant to 200 mL 1X SDS Running Buffer.
3 	**Prepare gels**	a. Remove the comb, and rinse the gel wells three times using 1X Running Buffer. b. Remove the white tape near the bottom of the gel cassettes. c. Place the gels in the XCell *SureLock*® Mini-Cell gel running tank. d. Fill the gel wells with 1X Running Buffer.
4 	**Load gels**	Load the appropriate volume and protein mass of your sample on the gel. Then, load your standards.
5 	**Load buffers**	Fill the Upper (200 mL) and Lower (600 mL) Buffer Chambers with the appropriate 1X Running Buffer.
6 	**Run**	**Note:** If you are not using a Life Technologies™ power supply, install the Novex® Power Supply Adapters (Catalog number ZA10001). When using MES Running Buffer, run for 35 minutes at 200 V constant. When using MOPS Running Buffer, run for 50 minutes at 200 V constant.

Procedure Details

Components	Reduced Sample	Non-Reduced Sample
Sample	x µL	x µL
NuPAGE® LDS Sample Buffer (4X)	2.5 µL	2.5 µL
NuPAGE® Reducing Agent (10X)	1 µL	--
Deionized Water	to 6.5 µL	to 7.5 µL
Total Volume	10 µL	10 µL

Heat samples at 70˚C for 10 minutes.

Prepare 1X Sample Buffer for dilutions of samples, if needed.