Precast Protein Gel (Bis-Tris), 1.0mm – Instruction Manual

Catalogue Information

Catalogue No.	Product Name	Pack Size
BL989A	Bis-Tris Precast Protein Gel, 10%, 10-well	10 Gels
BL1395A	Bis-Tris Precast Protein Gel, 15%, 10-well	10 Gels
BL1397A	Bis-Tris Precast Protein Gel, 4-15%, 10-well	10 Gels
BL1399A	Bis-Tris Precast Protein Gel, 4-20%, 10-well	10 Gels
BL990A	Bis-Tris Precast Protein Gel, 10%, 15-well	10 Gels
BL1396A	Bis-Tris Precast Protein Gel, 15%, 15-well	10 Gels
BL1398A	Bis-Tris Precast Protein Gel, 4-15%, 15-well	10 Gels
BL1400A	Bis-Tris Precast Protein Gel, 4-20%, 15-well	10 Gels

Product Description

Biosharp Bis-Tris Precast Protein Gels are safe, fast, and high-performance polyacrylamide gels. The combination of MOPS and MES buffers allows efficient separation of both medium-to-large and small molecular weight proteins. They provide sharp, straight bands with high-capacity wells, and can be used for both denaturing and non-denaturing electrophoresis.

Product Feature

1. Versatile – Gel does not contain SDS; suitable for both denaturing and non-denaturing electrophoresis.
2. Stable Performance – Automated gel casting ensures high stability and reproducibility.
3. Plastic Gel Plates – Reduce non-specific protein adsorption; produce sharper, clearer protein bands.
4. Short Run Time – Electrophoresis completes in 40–50 minutes at 150 V.
5. Easy Operation – Cassette can be easily opened with a lifting tool.
6. Multiple Options – Available as uniform gels (10%, 15%) and gradient gels (4-15%, 4-20%)
7. Broad Compatibility – Compatible with most mini electrophoresis tanks (AperioBio, Bio-Rad, TianNeng, JunYi Oriental, etc.)

Specification

Parameter	Value
Cassette Size (W×H×T)	100 × 89 × 4.8 mm
Gel Size (W×H×T)	84 × 74 × 1.0 mm
Gel Thickness	1.0 mm
Stacking Gel	4%, 1.5 cm
Separating Gel	Varies, 5.9 cm
Buffer System	Bis-Tris system
Max Sample Volume	30 µL per well, 15-well 50 µL per well, 10-well

Instructions for Use

Buffer Preparation

Non-denaturing electrophoresis buffer:
1. 10× MOPS buffer: Tris base 60.6 g, MOPS 104.6 g, EDTA 3 g, Deionized water to 1000 mL
2. 10× MES buffer: Tris base 60.6 g, MES 97.6 g, EDTA 3 g, Deionized water to 1000 mL

Denaturing electrophoresis buffer (with SDS):
1. 10× MOPS buffer with SDS: Tris base 60.6 g, MOPS 104.6 g, SDS 10 g, EDTA 3 g, Deionized water to 1000 mL
2. 10× MES buffer with SDS: Tris base 60.6 g, MES 97.6 g, SDS 10 g, EDTA 3 g, Deionized water to 1000 mL

Native-PAGE

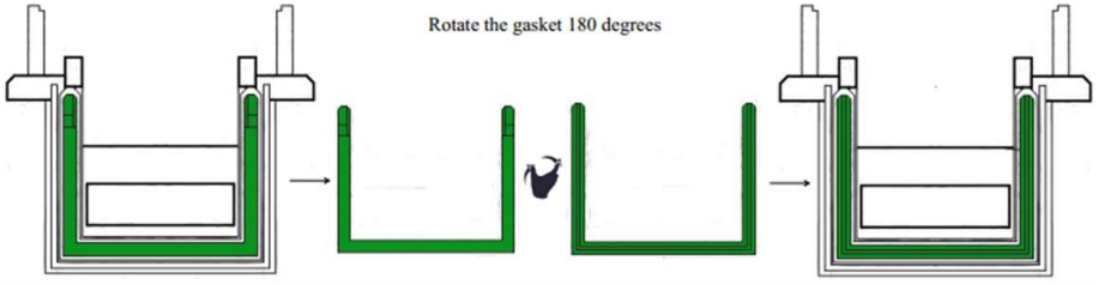
1. Remove the precast gel from packaging and **peel off the bottom seal tape**.
2. Fix the precast gel into the electrophoresis tank.
3. Prepare native electrophoresis buffer.
4. Fill the inner chamber with buffer. For the outer chamber, add buffer to at least 1/3 of the plate height but not above the gel plate. Slowly remove the comb.
5. Before loading, flush wells gently with buffer using a pipette to remove residual gel.
6. Load samples mixed with native sample buffer. Avoid puncturing or deforming the gel.
7. **Run at 150 V for 60 minutes**, stopping when the dye front reaches the bottom or predetermined position.
8. After electrophoresis, carefully open the cassette with a tool and remove the gel. Cut along the side strips to avoid sticking.

** SDS-PAGE **

1. Remove gel from package; **peel off sealing tape** at the bottom.
2. Fix the precast gel into the electrophoresis tank.
3. Prepare denaturing electrophoresis buffer (see Buffer Preparation).
4. Fill the inner chamber fully. Outer chamber should be at least 1/3 full but not overflowing. Slowly remove the comb.
5. Before loading, flush wells gently with buffer using a pipette.
6. Mix protein samples with denaturing sample buffer, preheat for denaturation, load carefully.
7. Run at 150 V for 40-50 minutes, stopping when the dye front reaches the bottom or predetermined position.
8. After electrophoresis, open the cassette carefully and remove the gel. Cut along the side strips to avoid sticking.

Modification required to switch from handcast to precast electrophoresis tanks (Bio-Rad, AperBio)

1. Manual modification is required on the silicone gasket of the electrode inner core/s to ensure that the precast gels fits firmly to the core.
2. Pull up the U-shaped silicone gasket as shown in the picture below.
3. Fip the gasket inside-out so that the flat-side of the gasket is now facing outwards. This will allow a seamless contact between the gasket and the precast gel, and prevents leakage



Notes

⚠ MES buffer is more suitable for small proteins compared to MOPS.

⚠ Do not use Tris-Glycine buffers with Bis-Tris precast gels (incompatible)

⚠ For sharper bands, reduce voltage to 100-120 V and extend run time.

⚠ At 150 V: current ≈ 70 mA (1 gel), 140 mA (2 gels). Current decreases over time.

⚠ For wet transfer: 120 V, 60–90 min. Adjust based on pre-stained marker performance.

⚠ Cassette design is compatible with Bio-Rad and most other mini-tanks; see manual for setup tips.

⚠ For research use only (RUO). Not for diagnostic or therapeutic use.

⚠ Wear lab coat and gloves during handling.

Storage and Stability

1. Transport at room temperature. Store in cool place, avoid sunlight and temperature fluctuations.
2. Store 4–8 °C for up to 6 months.
3. Do not store below 0 °C (freezing damages gel).

Notice

For in vitro research use only, not for diagnostic or therapeutic use. This product is not a medical device.
Contact:

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