YamayBio

Stain Free Gradient-like PAGE Gel Kit

QUICK START GUIDE

Research use only.
Not for diagnostic procedures.

Contents and storage

Cat. No.	Quantity	Component	Cat. No.	Volume
RF1541	100 Assays	GL-Stacking Buffer A	RF1513	80 mL
		GL-Stacking Buffer B	RF1514	80 mL
		GL-Resolving Buffer A	RF1515	250 mL
		GL-Resolving Buffer B	RF1516	250 mL
		Enhanced Catalyst	RF1500	8 mL
		GL-PAGE Gel Running Buffer Instant Granules	MS8137	40 sticks(0.5Lx40)

Storage: The enhanced catalyst should be stored at -20°C; other components are stored at 4°C for 18 months. Granules are stored at room temperature for 36 months. Once opened, the enhanced catalyst can be stored at 4°C for 6 months. Product shipped at ambient temperature.

Introduction

The kit includes all necessary reagents for preparing PAGE gels and conducting the subsequent electrophoresis. The gel exhibits a gradient gel-like pattern that efficiently separates proteins over a broad molecular weight range of **10 to 250 kDa**, utilizing the provided running buffer. Furthermore, electrophoresis can be completed in approximately **25 minutes** at a constant voltage of **200 V**, significantly reducing the time typically required. Including multi-color (red, blue, and green) stacking gels facilitates the loading of protein samples. This PAGE gel is appropriate for both denatured and non-denatured protein electrophoresis.

To prepare the PAGE gel, combine equal volumes of the gel and buffer solutions with the polymerization initiator (ammonium persulphate solution). Pour the resolving gel, followed by the stacking gel, into the gel cassette sequentially, without waiting for the resolving gel to polymerize. There's no need to add TEMED, eliminating exposure to this unpleasant and hazardous chemical. Additionally, the proprietary polymerization initiator solution offers improved stability and catalytic efficiency, even after prolonged storage, compared to conventional ammonium persulphate solutions.

Quick Cast Protocol

Preparation of resolving solutions and stacking solutions for gel casting

For 1 mm thick mini-gel					
GL-Resolving Buffer A	**GL-Resolving Buffer B**	**Catalyst**	**GL-Stacking Buffer A**	**GL-Stacking Buffer B**	**Catalyst**
2.3 mL	2.3 mL	50µL	0.75 mL	0.75 mL	15µL

For 0.75 mm thick mini-gel					
GL-Resolving Buffer A	**GL-Resolving Buffer B**	**Catalyst**	**GL-Stacking Buffer A**	**GL-Stacking Buffer B**	**Catalyst**
1.75 mL	1.75 mL	35µL	0.5 mL	0.5 mL	10µL

For 1.5 mm thick mini-gel					
GL-Resolving Buffer A	**GL-Resolving Buffer B**	**Catalyst**	**GL-Stacking Buffer A**	**GL-Stacking Buffer B**	**Catalyst**
3.45 mL	3.45 mL	70µL	1.00 mL	1.00 mL	20µL

*Volumes listed are sufficient for casting one 7.4 x 8.2 cm mini-gel and can be multiplied by N (desired number of gels) to cast multiple gels at once.

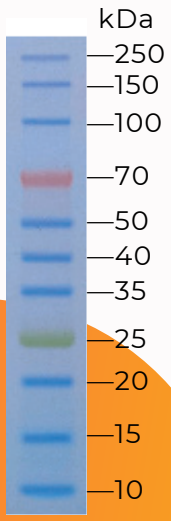
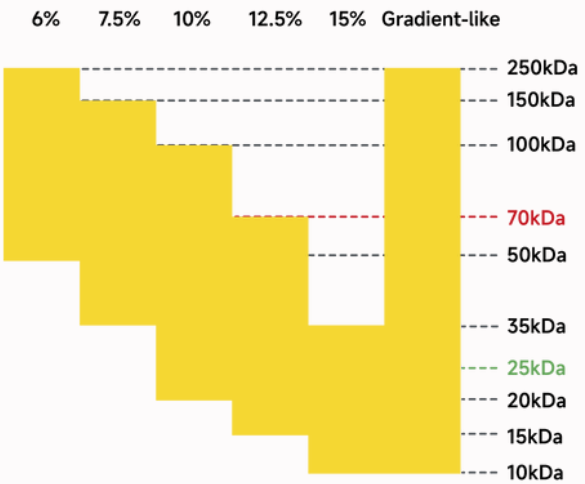


Image of prestained protein ladders (CY5466) on the gel.



Molecular weight range per gel concentration

Instructions:

1. Prepare the resolving gel with the desired acrylamide percentage by pipetting **equal volumes** of GL-Resolving Buffer A and GL-Resolving Buffer B into a clean conical tube.
2. Prepare the stacking gel by pipetting **equal volumes** of GL-Stacking Buffer A and GL-Stacking Buffer B into a clean conical tube.If needed, shake the colored buffer solution to ensure any settled dye is fully mixed before taken out.
3. Add the required volume of Enhanced Catalyst into the resolving tube. Gently mix reagents, avoiding the introduction of air bubbles into the gel mixture.Using a pipette, fill each cassette to 0.5-1 cm below the comb teeth.
4. Add the required volume of Enhanced Catalyst into the stacking tube. Gently mix reagents, avoiding the introduction of air bubbles into the gel mixture.
5. Position the pipette at the middle of the cassette and gently add the stacking gel, filling to the top of the short plate. If the interface between the resolving and stacking gels is not level, lightly tap the gel cassette against the benchtop to help achieve a horizontal boundary.
6. Quickly and carefully insert the comb and avoid air bubble entrapment below the teeth.
7. Allow gels to polymerize completely.
8. Gels can be used immediately or wrapped in DI water-soaked paper towels and stored in an airtight container at 4°C for up to 5 days.
9. Dissolve one stick of running buffer instant granules in 500 mL of ddH2O to prepare a 1× electrophoresis running buffer.
10. Remove the comb before loading samples. The recommended electrophoresis conditions are **200V for 25 minutes** or 150V for 35 minutes.

Note:

1. Gel polymerization time may vary depending on temperature. Higher temperatures generally accelerate polymerization, while lower temperatures may prolong the process. In colder environments, consider increasing the Catalyst volume by up to twofold.
2. If the kit has been stored at 4°C, allow it to reach room temperature before use to minimize the formation of air bubbles during gel casting.