YamayBio

One-Step Stain-Free PAGE Gel Rapid Preparation Kit

QUICK START MANUAL

For research use only.
Not for use in diagnostic procedures.

Contents and Storage

Product	Cat. No.	Quantity	Component	Cat. No.	Volume
One-Step Stain-Free PAGE Gel Rapid Preparation Kit (6%)	RF1521	100 Assays	Stacking Buffer A	RF1501	80 mL
			Stacking Buffer B	RF1502	80 mL
			Resolving Buffer A (6%)	RF1503	250 mL
			Resolving Buffer B (6%)	RF1508	250 mL
			Enhanced Catalyst	RF1500	8 mL
One-Step Stain-Free PAGE Gel Rapid Preparation Kit (7.5%)	RF1522	100 Assays	Stacking Buffer A	RF1501	80 mL
			Stacking Buffer B	RF1502	80 mL
			Resolving Buffer A (7.5%)	RF1504	250 mL
			Resolving Buffer B (7.5%)	RF1509	250 mL
			Enhanced Catalyst	RF1500	8 mL
One-Step Stain-Free PAGE Gel Rapid Preparation Kit (10%)	RF1523	100 Assays	Stacking Buffer A	RF1501	80 mL
			Stacking Buffer B	RF1502	80 mL
			Resolving Buffer A (10%)	RF1505	250 mL
			Resolving Buffer B (10%)	RF1510	250 mL
			Enhanced Catalyst	RF1500	8 mL
One-Step Stain-Free PAGE Gel Rapid Preparation Kit (12.5%)	RF1524	100 Assays	Stacking Buffer A	RF1501	80 mL
			Stacking Buffer B	RF1502	80 mL
			Resolving Buffer A (12.5%)	RF1506	250 mL
			Resolving Buffer B (12.5%)	RF1511	250 mL
			Enhanced Catalyst	RF1500	8 mL
One-Step Stain-Free PAGE Gel Rapid Preparation Kit (15%)	RF1525	100 Assays	Stacking Buffer A	RF1501	80 mL
			Stacking Buffer B	RF1502	80 mL
			Resolving Buffer A (15%)	RF1507	250 mL
			Resolving Buffer B (15%)	RF1512	250 mL
			Enhanced Catalyst	RF1500	8 mL

Storage: The enhanced catalyst should be stored at -20°C; other components are stored at 4°C for 12 months. This Product is shipped at ambient temperature. After opening, the enhanced catalyst may be stored at 4°C for three months.

Introduction

This kit simplifies polyacrylamide gel preparation for standard Tris-glycine electrophoresis. These solutions allow quick casting with **no polymerization waiting time** between pouring the resolving gel and the stacking gel.
The stacking gel is color-coded (red, blue, or green) for easy sample loading.

Instead of TEMED, an odorless catalyst ensures rapid polymerization (15-30 minutes at room temperature). This versatile kit produces gels suitable for both denaturing and native PAGE, and **protein bands can be visualized** directly under UV light (302 nm) after the gel has polymerized.

Quick Cast Protocol

Preparation of resolving solutions and stacking solutions for gel casting

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

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

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

*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.

Instructions:

1. Prepare the resolving gel with the desired acrylamide percentage by pipetting **equal volumes** of Resolving Buffer A and Resolving Buffer B into a clean conical tube.
2. Prepare the stacking gel by pipetting **equal volumes** of Stacking Buffer A and Stacking Buffer B into a clean conical tube.
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. A slight dip may appear where pipetting occurs, but it will level out.
6. Quickly and carefully insert the comb to prevent any air bubble entrapment beneath the teeth.
7. Allow gels to polymerize for 15 minutes.
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. Remove the comb before loading samples. The recommended electrophoresis conditions are **150 V for 60 minutes** or **200 V for 45 minutes**.
10. Following electrophoresis, carefully remove the gel cassette and glass slides. Protein bands can be visualized directly under **UV light** (302 nm).
11. After transferring proteins to a Nitrocellulose Membrane or polyvinylidene fluoride (PVDF)membrane, expose it again to UV light to confirm protein transfer.
12. Please note that the excitation of fluorescent dyes may take approximately 1-5 minutes. Allow sufficient time for the protein bands to become clearly visible.
13. For optimal visualization of fluorescent protein bands on the membrane, pre-exposure to UV light may be necessary before protein transfer. This pre-excitation step can enhance fluorescence signal intensity.

Note:
1. Gel polymerization time may vary depending on temperature. **Warmer temperatures speed up polymerization, while cooler temperatures slow it down, resulting in longer processing times.** 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.