



ProtoGel[®] Quick-Cast[™]

- Cast a Gel in 20 Minutes
- Finish your Westerns in a Normal Working Day
- Precast Convenience without the Precast Price

The twenty minute casting protocol provided below represents the best combination of performance and convenience for most standard applications, including Western blotting. The forty minute protocol describes how to add a stacking gel to augment band sharpness.

Twenty Minute Casting

ProtoGel Quick-Cast contains the monomers and buffer components to produce a 12% gel.

1. Measure out the volume of ProtoGel Quick-Cast needed to fill the cassette - typically 10ml for one mini-gel, 15ml for two.
2. Add 100 microliters of fresh 10% APS and 10 microliters of TEMED per 10ml ProtoGel Quick-Cast. Mix briefly and pour into the gel cassette.
3. Insert comb and allow to polymerize at room temperature for 20 minutes. The gel is now ready to run.

Forty Minute Casting - Quick-Cast with a Stacking Gel

1. Cast resolving gel as described above, but do not insert comb. Fill only to within ~2cm of top of cassette. Overlay the gel with 1-2 mm of water saturated butanol to ensure a flat interface between the resolving and stacking gel.
2. After 20 minutes pour off the butanol and rinse with water.
3. Dilute ProtoGel Quick-Cast 1:1 with water to produce casting solution for a 6% stacking gel or 1:1.5 to give a 4.8% stacking gel. 2ml is a typical final volume.
4. To 2ml of casting solution, add 10 microliters of fresh 10% APS and 5 microliters of TEMED. Mix briefly and cast over resolving gel.
5. Insert comb and allow to polymerize at room temperature for 20 minutes. The gel is ready to run.

Loading Buffer

For optimal results, use ProtoGel Quick-Cast Loading Buffer (product no. EC-896). This unique buffer has been formulated specifically for use with Quick-Cast gels. It results in the sharpest possible bands and the best resolution.

Run Conditions

ProtoGel Quick-Cast gels are run in standard 1X Tris-Glycine SDS. Electrical parameters will vary from apparatus to apparatus, but typically gels are run at 200V for 60 minutes.

Frequently Asked Questions

What is the smallest protein size that can be resolved with ProtoGel Quick-Cast?

ProtoGel Quick-Cast can be used to resolve proteins down to 10kD.

What is the largest protein size that can be resolved with ProtoGel Quick-Cast?

ProtoGel Quick-Cast has been used to resolve proteins up to 200kD.

Do ProtoGel Quick-Cast gels require any special handling after electrophoresis?

No, Quick-Cast gels do not require any special handling different from Laemmli gels after electrophoresis.

Do I need a modified transfer buffer to perform Western Blots?

No special transfer buffer is needed. ProtoGel Quick-Cast works with regular Tris-Glycine transfer buffer containing methanol.

Do I need to change my blotting conditions?

The blotting conditions that work for you should work for the ProtoGel Quick-Cast gel with little or no modification.

What stains can be used with ProtoGel Quick-Cast?

ProtoGel Quick-Cast is compatible with Coomassie R-250 and Coomassie G-250 based stains. National Diagnostics Insite Stain and Sterling Silver Stain can also be used without modification of the protocol.

Can cast ProtoGel Quick-Cast gels be stored overnight?

Yes, cast gels can be stored overnight. The buffer in ProtoGel Quick-Cast gels is a neutral pH buffer. This greatly diminishes the hydrolysis of polyacrylamide. The buffer components react with acrylamide at a negligible rate so there is no gel degradation from overnight storage. Store cast gel at 4°C wrapped in plastic to prevent dehydration. It is best to remove the comb before storage if the gel was cast without a stacking gel.

How does the relative mobility of proteins in a 12% ProtoGel Quick-Cast gel compare with that in a 12% Laemmli formulation gel?

The relative mobility relationships of different sized proteins within ProtoGel Quick-Cast gels closely tracks Laemmli gels, although the highest molecular weight band in the linear range is of a lower molecular weight for ProtoGel Quick-Cast than a Laemmli formulation gel.

ProtoGel Quick-Cast 12%	
EC-895	100 ml 450 ml
ProtoGel Quick-Cast Loading Buffer	
EC-896	5 x 1 ml