MERCK

User Guide

mPAGE® Lux Gel Casting System

Kit component quantities may vary from photo.

SigmaAldrich.com

Millipore®

mPAGE® Lux Casting System makes polyacrylamide gels that are ready to use in under 2 minutes.

mPAGE® Lux Gel Casting System Components

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mPAGE® Lux Gel Casting System Components

mPAGE® Lux Curing Station

The mPAGE® Lux Curing Station contains a UV LED panel designed to polymerize polyacrylamide gels in under 2 minutes. The Curing Station is compatible only with the mPAGE® Gel Caster and mPAGE® Lux Reagent Kit.

Please read the Safety Sheet provided in the box prior to use. It can also be downloaded from the product page at SigmaAldrich.com.

mPAGE® Lux Curing Station

Components

- mPAGE® Lux Curing Station
- Quick Start Guide with reusable Volume Worksheet
- Safety Sheet, multilingual
- Power cord
  - DC power supply (shipped with Curing Station)
  - AC power cord specified when ordered (shipped separately)

Set up

1. Place Curing Station on a level surface away from direct sunlight.
2. Assemble the power cord by plugging the AC power cord in to the DC power supply. Plug the power cord into electrical port on back of instrument.
3. Insert the AC power cord plug into the mains power supply.
4. Ensure the mPAGE® Lux Curing Station door is closed.
5. See page 8 to power ON.

mPAGE® Gel Caster

The mPAGE® Gel Caster is used for hand casting polyacrylamide gels with a 0.75, 1.0, or 1.5 mm thickness. The mPAGE® Gel Caster is designed to fit within the mPAGE® Lux Curing Station and allow full illumination of the gel during curing.

The gels prepared with the mPAGE® Gel Caster are compatible with the mPAGE® Mini Gel Tank or Bio-RAD® Mini-PROTEAN Cell.

Components

- mPAGE® Gel Caster Base (qty 2)
  Holds the gel casting frame. Tensioned lever at top securely holds the gel cassette against the sealing gasket to prevent spills and leaks.
- mPAGE® Gel Caster Frame (qty 2)
  Evenly aligns the spacer and short plates and holds them in place for gel casting. Casting frame also displays a suggested fill line for resolving solution, which results in a 5 mm stacker.
- mPAGE® Gel Caster Sealing Gaskets (qty 2)
  Seals the bottom of the gel cassette.
- mPAGE® Gel Releasers (qty 5) (not shown)

mPAGE® Gel Caster shown with gel cassette and combs in place

mPAGE® Mini Spacer Plates

Specify thickness when ordering.

- 0.75 mm (5 plates) or
- 1.0 mm (5 plates) or
- 1.5 mm (5 plates)

mPAGE® Mini Short Plates

10 plates

mPAGE® Lux Clip-on Mask

- 10 wells (2 each)
- 15 wells (2 each)

mPAGE® Combs

- 0.75 mm, 10 well and 15 well combs (5 each), or
- 1.0 mm, 10 well and 15 well combs (5 each), or
- 1.5 mm, 10 well and 15 well combs (5 each)

mPAGE® Mini Spacer Plates, combs, and mPAGE® Lux Clip-on Masks can be ordered separately. See page 17 in Product Ordering.

Maintenance of mPAGE® Glass Plates, Clip-on Masks and Combs

Wash with a laboratory detergent and rinse thoroughly with distilled water prior to first use and after each subsequent use, to remove acrylamide residue. Combs are not compatible with exposure to 100% TEMED. Spacer plates should not be submerged in strongly basic solutions or cleaning solutions for longer than 1 hour. 70% Ethanol or other alcohols may be used to clean plates of particulates prior to gel casting. Proper maintenance will increase the lifespan of the plates.

mPAGE® Lux Mixing Tubes

Opaque 50 mL conical tubes (5). Use mixing tubes or other opaque containers to prepare the Resolving Gel Solution.

mPAGE® Lux Bis-Tris Reagent Kit

(sold separately)

This flexible reagent kit is designed to simplify casting solution preparation. The Bis-Tris gel chemistry allows for crisp separation of proteins at neutral pH. By mixing Resolving Solution and Diluent, single percentage resolving gels can be cast between 8-13.5%. The Stacking Solution is ready-to-use and does not require mixing.

The number of gels made by this kit depends on the thickness and gel %. Up to 75 mini gels of 8% or 12% can be made in 10-well or 15-well formats with a thickness of 1.0 mm.

Components

- Resolving Solution (225 mL)
- Diluent (225 mL)
- Stacking Solution (112 mL)

Storage Conditions

Store the mPAGE® Lux Bis-Tris Gel Casting Kit at 2-8 °C. Protect solutions from sunlight while in use and during storage. Storing solutions in kit box is recommended. See package label for expiration date.

Important: Bis-Tris gels are not compatible with Tris-Glycine-SDS running buffer. Only use MOPS-SDS or MES-SDS running buffers with this kit.

To avoid drying of residual acrylamide, casting materials should be washed soon after use.

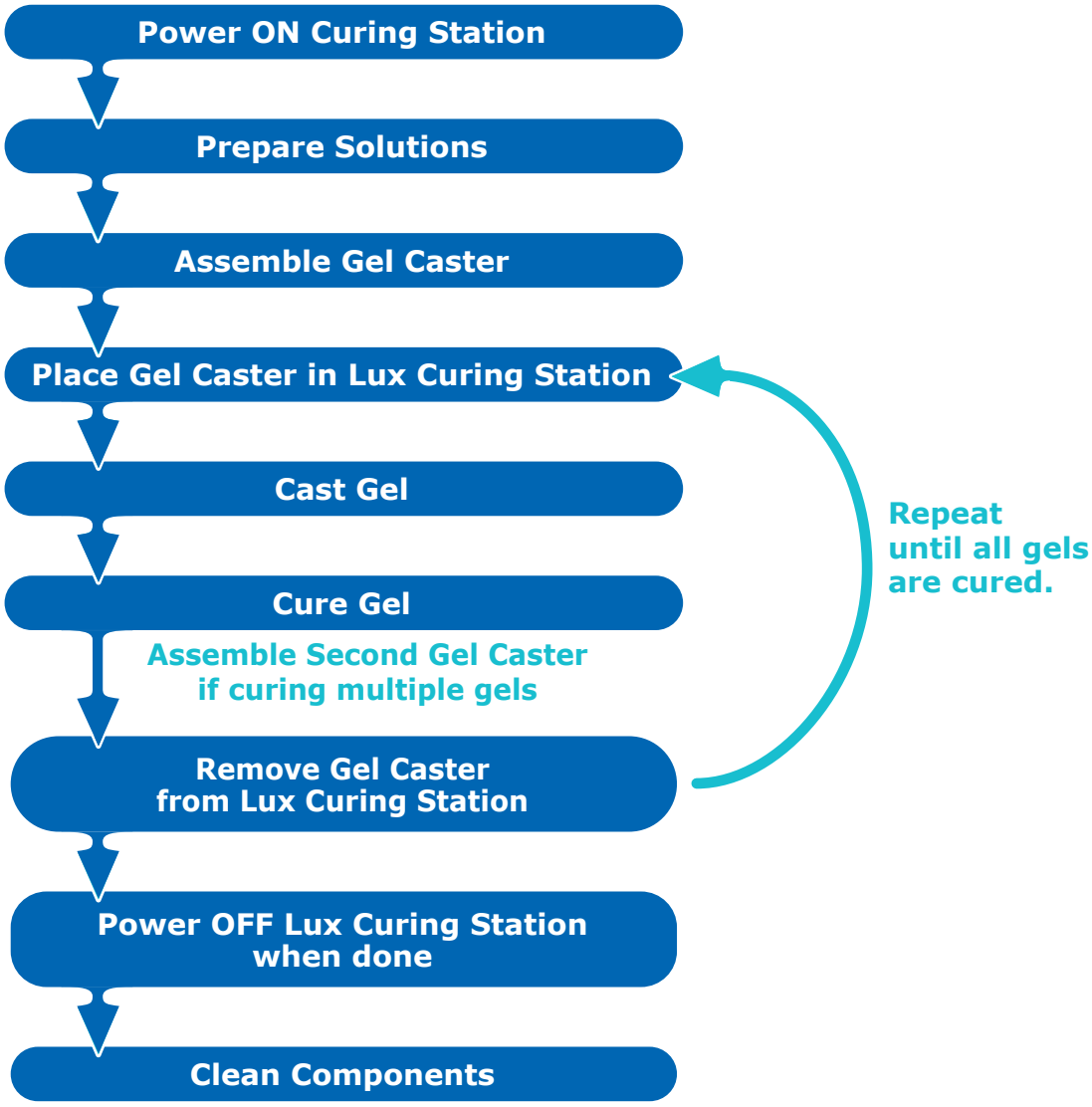
Additional Items Required

(not provided)

- 5 mL Sterile Serological Pipettes
- Pipette Controller
- Deionized Water (DI water)
- 70% Ethanol
- Lint-free Cloth

Workflow

Casting Single or Multiple Gels



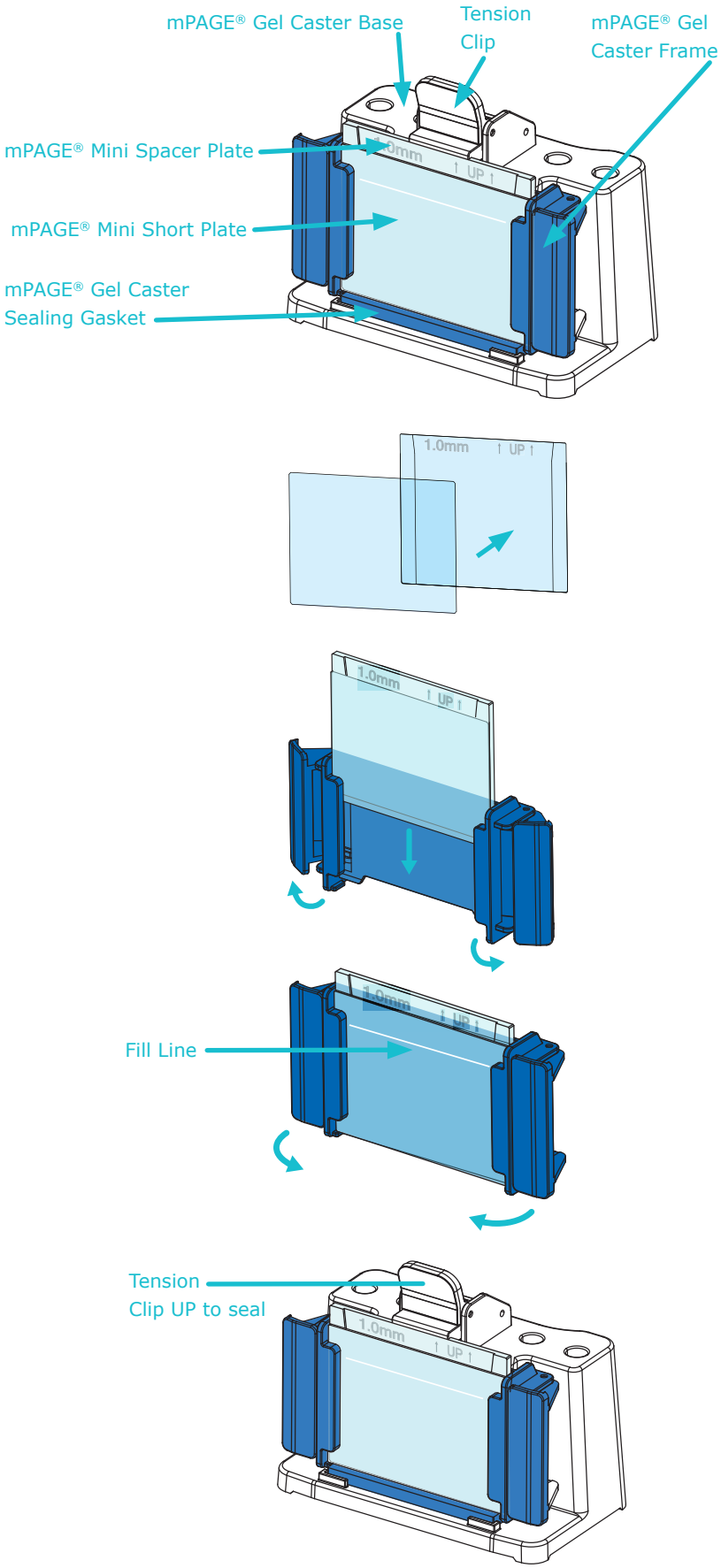
Preparation

Assemble mPAGE® Gel Caster

Assembly

1. Inspect the gel sealing gasket for defects. Place gasket between the alignment tabs on the bottom of the gel caster base.
2. Clean glass plates with 70% Ethanol and a lint-free cloth before each use. Plates should be clean and dry before assembly.
3. Form the cassette by placing the mPAGE® Mini Short Plate on top of the mPAGE® Mini Spacer Plate.

   Note: if using mPAGE® Lux Masked Short Plates, see page 15.
4. With the side clamps open, slide cassette into caster frame until aligned on the dead-stops located on the bottom. Secure glass cassette by swinging side clamps inward.
5. Place the assembled caster frame onto the caster base and raise the tension clip to seal cassette against the gasket.



Prepare Gel Solutions

Protect all solutions from light to prevent polymerization. Before casting, bring all solutions to room temperature. Choose a gel percentage to best separate your target protein(s). See table below for general separation ranges.

Gel %	Protein Separation Range
8%	50-550 kDa
10%	25-200 kDa
12%	10-100 kDa
13.50%	5-60 kDa

Resolving Gel

1. Prepare resolving gel solution by mixing Resolving Solution and Diluent. See Solution Volume tables below for mixing volumes.

   Note: Resolving gel solution can be prepared in a large batch to make several gels sequentially.
2. Using a clean pipette, add Resolving Solution to provided black mixing tube or other opaque container.
3. Using a clean pipette, add Diluent to the same mixing tube.
4. Mix by turning container end over end. **Do not vortex.** Protect solution from direct sunlight.

0.75 mm Solution Volumes

Gel %	Resolving Solution		Diluent		Total Volume
8%	1.5 mL	+	2.25 mL	=	3.75 mL
10%	1.87 mL	+	1.87 mL	=	3.75 mL
12%	2.25 mL	+	1.5 mL	=	3.75 mL
13.5%	2.5 mL	+	1.25 mL	=	3.75 mL

1.0 mm Solution Volumes

Gel %	Resolving Solution		Diluent		Total Volume
8%	2 mL	+	3 mL	=	5 mL
10%	2.5 mL	+	2.5 mL	=	5 mL
12%	3 mL	+	2 mL	=	5 mL
13.5%	3.3 mL	+	1.7 mL	=	5 mL

1.50 mm Solution Volumes

Gel %	Resolving Solution		Diluent		Total Volume
8%	3 mL	+	4.5 mL	=	7.5 mL
10%	3.75 mL	+	3.75 mL	=	7.5 mL
12%	4.5 mL	+	3 mL	=	7.5 mL
13.5%	5 mL	+	2.5 mL	=	7.5 mL

Stacking Gel

The Stacking Solution is ready to use directly from the bottle, do not dilute.

For 0.75 mm gels, use 1.1 mL Stacking Solution.

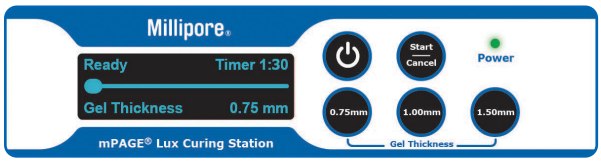
For 1.0 mm gels, use 1.5 mL Stacking Solution.

For 1.5 mm gels, use 2.25 mL Stacking Solution.

Methods

Gel Casting and Curing

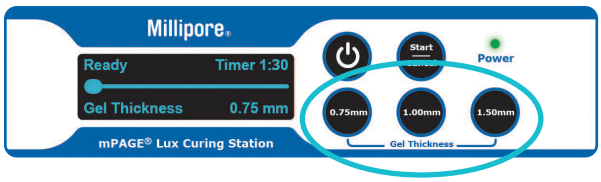
1. Ensure the mPAGE Lux Curing Station door is closed, then power ON by pressing ⏻. The device will initiate a self-check. After self-check is complete, the ready screen will appear.



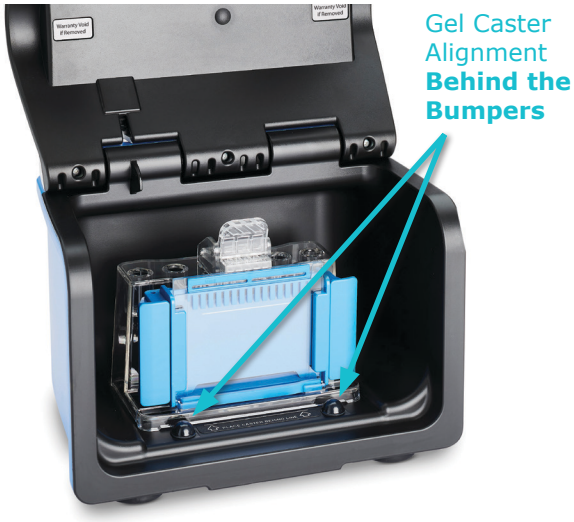
Note:

- If self-test fails, record error code and see Troubleshooting on page 12.
- If mPAGE® Lux Curing Station is in sleep mode, press any button to wake. The mPAGE® Lux Curing Station will enter sleep mode after 30 minutes of inactivity. During sleep mode, the display screen only show a bouncing dot and the power LED light will be green.

2. From the Ready screen, select gel thickness by pressing 0.75 mm, 1.00 mm, or 1.50 mm button on the display.



3. Open the mPAGE® Lux Curing Station door. Insert assembled mPAGE® Gel Caster into mPAGE® Lux Curing Station by placing the front edge of the caster behind the left and right alignment bumpers.

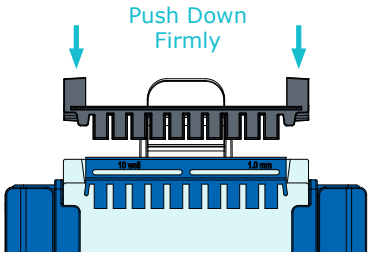


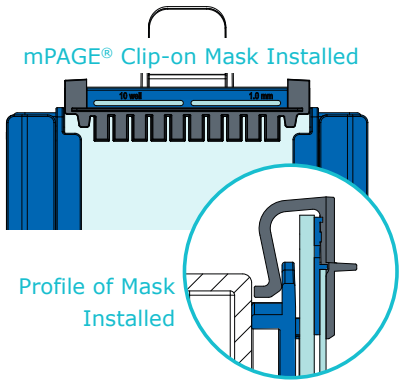
4. Using a clean serological pipette, add prepared Resolving Gel Solution to the indicated fill line. Position the pipette in the center of the glass when filling the cassette.
5. Using a clean serological pipette, slowly add Stacking Solution to the top of the short plate. Position the pipette in the center of the glass when filling the cassette. A dip may occur but will level out.
6. Insert comb into cassette at an angle to help prevent bubble entrapment under comb teeth.
7. Wipe away any acrylamide spill-over onto the short plate.
8. With the hooks towards the back, firmly push the mPAGE® Clip-on Mask down over glass cassette and back of caster frame. The front of the mask should sit snuggly against the short plate, covering the comb teeth completely. The mPAGE® Clip-on Mask prevents the gel from curing around the comb. See FAQs on page 15 for more details.

Note: Avoid pushing on the front of the plates while installing the mPAGE® Clip-on Mask, this may cause the gel to seep out.

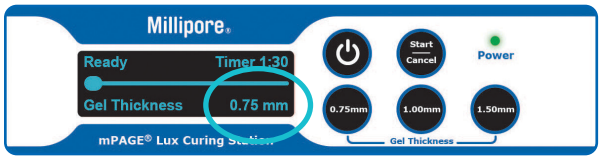
Important: Mixing different well formats may result in improper well formation. Use:

- 10-well combs with 10-well mPAGE® Clip-on Mask
- 15-well combs with 15-well mPAGE® Clip-on Mask





9. Close mPAGE® Lux Curing Station door. Ensure door is completely closed before proceeding to gel curing.
10. Confirm Gel Thickness setting displayed on screen is correct for your gel.



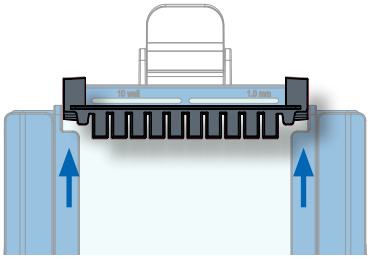
11. Press Start/Cancel button to begin gel curing. A timer will display time remaining. Pressing Start/Cancel again or opening the curing station door at any point during the initialization and curing process will cancel the run and turn off the light source.

    Note: If run is canceled during curing, the gel should not be used. If run is canceled during initialization, the run may be restarted using the same gel.

    Multiple Gels

    To cast multiple gels, assemble the second Gel Caster while the first gel is curing.

12. When curing is complete, a beep will sound and the screen will flash COMPLETE.
13. Open door and remove Gel Caster from the mPAGE® Lux Curing Station.



14. Remove mPAGE® Clip-on Mask.

    Option: After curing, the mPAGE® Clip-on Mask can be removed from the Gel Caster while it is in the mPAGE® Lux Curing Station.

15. Lowering the tension clip to release the cassette from the Gel Caster frame. Then open the sides of the frame and slide cassette out from top.

Use gel immediately or wrap in DI water-soaked paper towels and store in an airtight container at 2-8 °C for up to 2 weeks. Store gels horizontally (laying flat).

Sample Preparation and Electrophoresis

The gels prepared with the mPAGE® Gel Caster are compatible with the mPAGE® Mini Gel Tank or Bio-RAD Mini-PROTEAN Cells.

Gels should be run with MOPS-SDS or MES-SDS running buffer. Do not use Tris-Glycine running buffer. Gels can be run at up to 200 V, depending on gel thickness, running buffer, and number of gels per tank.

Samples should be prepared just prior to electrophoresis; see the Suggested Maximum Sample Volume table below.

Suggested Maximum Sample Volumes

	0.75 mm	1.0 mm	1.5 mm
10 well	25 µL	40 µL	60 µL
15 well	10 µL	25 µL	36 µL

Example Sample Prep Volumes

Reagent	Reduced Sample	Non-reduced Sample
Protein Sample	X µL	X µL
4X LDS Sample Buffer	2.5 µL	2.5 µL
1M DTT	1 µL	N/A
Deionized Water	6.5-X µL	7.5-X µL
Final Volume	10 µL	10 µL

1. Prepare samples with LDS buffer and DTT according to the Example Sample Prep Volume table above.
2. Heat samples for 10 minutes at 70 °C then briefly centrifuge. Do not boil samples.
3. For best results, remove comb before installing gel in electrophoresis tank. To remove the comb, firmly and evenly pull up both sides of the comb from the gel.
4. Install gels into the electrophoresis core and place inside tank. Add 1X MOPS-SDS or 1X MES-SDS running buffer.
5. Rinse wells with running buffer gently to remove any debris.
6. Load samples and protein standard(s) using gel loading pipette tip.

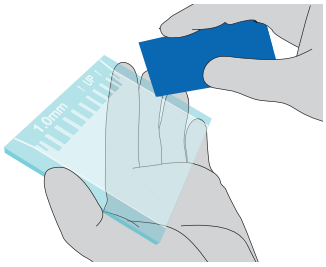
   Note: Do not overfill wells. See table above for Suggested Sample Volumes.

7. Attach lid and connect leads to appropriate power supply.
   - When using MOPS-SDS running buffer, gels can be run at 200 V.
   - When using MES-SDS running buffer, gels can be run at 180 V.

   Note: 1.5 mm gels should be run at 150 V in MOPS-SDS running buffer or 120 V in MES-SDS running buffer to minimize heat generation and obtain sharper bands.
8. Monitor protein separation by using a pre-stained protein standard and stop the run when proteins of interest have achieved adequate separation.
9. Remove gel cassette from tank.

How to Remove Gel After Electrophoresis

Open cassette and insert a gel releaser to cut along the edges of the gel adhered to the spacer as shown. Use the gel releaser to remove the stacker/gel wells. Gently remove the gel from the glass cassette by lifting the bottom corner or by floating the gel in a tray of buffer.



Gel Staining

Proteins can be visualized using any Bis-Tris compatible gel staining method. Refer to manufacturer's guidelines for specific gel stains. Bis-Tris compatible gel stains include:

- ReadyBlue™ Protein Gel Stain
- EZFluor™ 1-step Fluorescent Protein Gel Stain*
- EZFluor™ UV 1-step Fluorescent Protein Gel Stain
- SYPRO® Ruby Protein Gel Stain*
- Traditional Coomassie brilliant blue staining*
- Traditional Silver Nitrate staining*

*Fixation of the gel is required before staining

If proteins will be transferred to a membrane for immunodetection, gels must be destained prior to transfer.

Note: 1.5 mm gels may require extra time for various steps in staining protocols, which are typically optimized for 1.0 mm mini gels. If sufficient visualization is not achieved, try using a thinner gel.

Transfer

Proteins can be transferred to PVDF or nitrocellulose blotting membrane after electrophoresis. Gels are compatible with wet transfer (also known as tank transfer), semi-dry transfer, and fast semi-dry transfer.

Prepare fresh transfer buffer based on the type of transfer to be performed (see table below).

Transfer conditions listed below are a general guideline for 1 mm gels. Transfer time and voltage may need to be adjusted for different gel thicknesses and acrylamide percentages and optimized for your samples.

Compatible Transfer Buffers

	Wet transfer	Semi-Dry Transfer	Fast Semi-Dry Transfer
Transfer system	mPAGE® Mini Wet Transfer System (MWTS)	Trans-Blot® SD Semi-Dry Transfer Cell (Bio-Rad®, 1703940)	Trans-Blot® Turbo™ Transfer System (Bio-Rad®, 1704150)
Transfer condition	50-100 V, 30-60 minutes, depending on protein size. Small MW proteins will require shorter transfer time.	25 V, 30 minutes	1.3 A, 25 V limit 7 minutes
Gel incubation prior to transfer	Optional	5-10 minutes	No gel incubation
Filter paper	Immobilon® Blotting Filter Paper, Chromotography Grade, 7 cm x 8.4 cm (IBFP0785C)	BioRad® Extra Thick Blot Filter Paper, Precut, 7 cm x 8.4 cm (Bio-Rad®, 1703966)	Part of transfer kit
Compatible transfer buffer	1X mPAGE® Transfer Buffer with 10% or 20% methanol	2X mPAGE® Transfer Buffer with 10% methanol	Proprietary transfer buffer only available as part of a kit
	Tris-Glycine Buffer, pH 8.3 with 20% methanol	Tris-Glycine Buffer, pH 8.3 with 20% methanol	
	Bjerrum Schafer-Nielsen Buffer with 20% methanol	Tris-Glycine Buffer, pH 8.3 with 20% methanol, 0.025% SDS (best for high MW proteins)	

Troubleshooting

Basic

Issue	Cause	Resolution
Gel did not cure or is still liquid	Instrument not started	Ensure initialization and countdown begins after pressing start
	Cure cycle not completed, error message displayed	Never open instrument door during curing cycle
		LED Operation Fault, contact Tech Service at SigmaAldrich.com/TechService
Gel was partially polymerized	Run interrupted, error message displayed	Never open instrument door during curing cycle
	Wrong program used	Before each run, ensure that the correct gel thickness is shown on the instrument display
Gel solution leaks during hand casting	Chipped or incompatible glass plates	Inspect plates prior to use, do not use chipped or broken plates
	Incorrect caster assembly	Refer to mPAGE® Gel Caster Assembly on page 6, make sure plates are aligned evenly and all parts are functional
	Sealing gasket is missing or improperly placed	Refer to mPAGE® Gel Caster Assembly on page 6, make sure all parts are correctly placed
	Masked short plate is in wrong orientation	Ensure the "mPAGE® LUX" is on the left-hand side of the short plate during assembly
Side clamps on casting frame are difficult to close or make noise when moving	Residue has built up at the pivot joint	Clean frame throughly with mild soap and hot water to remove dried acrylamide residue. Keep residue from building up by cleaning casting equipment after casting is complete. If problems persist, contact Tech Service at SigmaAldrich.com/TechService
Bubbles form under comb teeth during curing	Residue on comb teeth or plate	Clean combs and plates thoroughly before use
	Cassette was not filled to the top of the short plate	Add stacking solution to the top of the short plate before inserting comb and wipe spill-over from the front of gel cassette before casting. Inserting the comb at an angle may help to prevent bubble entrapment.
Interface between resolving gel and stacking gel is slanted or curved	Stacking solution added too quickly	Add stacking solution at a slower rate to prevent large dip from occurring or solution mixing
	Gel caster moved or jostled after solution is added	Caster should be placed in Curing Station before solutions are added. Do not move or shake caster after adding solutions.
	Gel caster not level in Curing Station	Place caster behind the bumpers in the curing station, NOT on top of the bumpers
Inconsistent gel curing	Gel caster placed incorrectly	Make sure caster is placed in the curing station behind the bumpers, NOT atop the bumpers
	Solutions at variable temperatures	Bring solutions to room temperature before use
Wells deform/well fingers bend after comb removal	Comb removed unevenly	Remove comb slowly and evenly. Results may improve if removing the comb before installing in electrophoresis core
Protein bands blurry after gel run	Voltage too high during electrophoresis	Run gels at a lower voltage. Limit gels to 1-2 per gel tank during electrophoresis.

Issue	Cause	Resolution
Air pockets form between gel and glass during electrophoresis	Too much heat generated during electrophoresis	Run gels at lower voltage. Limit gels to 1-2 gels per gel tank during electrophoresis
Separation range looks different	Incorrect reagent dilution	Confirm the correct volume of Resolving Solution and Diluent were used when mixing Resolving Gel Solution
	Same pipette used in Resolving Solution, Diluent, and Stacking Solution bottles causes solution percentages to drift	Use a clean pipette in each bottle
Gel tears during removal from spacer plate	Sticking to the side of spacer plate	Score along the edges of the gel with a gel releaser or gel knife to easily remove the gel
Gel tears/breaks during staining procedure	Shaker speed too high, too many gels in a staining container	Reduce speed of shaker and confirm the volume of staining solution is sufficient and that the gel is not catching on the side of the container. Limit number of gels per staining container to one
Proteins did not migrate during electrophoresis	Wrong running buffer used	Use only MOPS or MES running buffer. Do not use Tris-Glycine running buffer
	Gel tank leaking during run	Reassemble gel tank and test for leaks before re-starting run
Bands appear wavy or jagged	Residue on short plate disrupts polymerization	Wipe excess acrylamide solution from front of short plate before curing

Error Codes

Error Code	Issue	Solution
During Self-Test		
Over Temp	LED board too hot when self-test initialized	Allow mPAGE® Lux Curing Station to complete cool down, then hold power button for 5 seconds to re-initiate self-test
Door Open	Door partly open during self-test	Close door, then hold power button for 5 seconds to re-initiate self-test
	Safety switch not engaging	Contact Tech Service at SigmaAldrich.com/techservice
LED Fault	Current or voltage measurement is out of range	Hold power button for 5 seconds to re-set system and re-initiate self-test. If LED fault error persists, contact Tech Service at SigmaAldrich.com/techservice
During Operation		
Over Temp	LED board too hot during operation	mPAGE® Lux Curing Station will initiate cool down. Discard gel. Allow cool down cycle to complete
Door Open	Door partly open when starting run	Close door completely and re-start run
	Safety switch not engaging	Contact Tech Service at SigmaAldrich.com/techservice
LED Fault /Alarm	Current or voltage measurement is out of range	Discard gel. Hold power button for 5 seconds to re-set system and re-start run.
	Voltage spike may have occurred	Discard gel. Press the power button to turn mPAGE® Lux Curing Station off. Unplug Curing Station from mains power supply. Wait for 30 seconds before plugging back in. See page 8 to restart.
		If LED fault error persists, contact Tech Service at SigmaAldrich.com/techservice
Run Cancelled	Power failure/outage	Discard gel. Press any button to clear the error message. Cast new gel and refrain from opening door during run or manually cancelling run
	Door opened during run	
	Run manually cancelled	

FAQs

Can resolving gel solution be stored in mixing tubes?

Resolving gel solution is stable and can be stored in Mixing tube at 2-8 °C for short periods. Longer term storage introduces a risk of microorganism contamination. Solution should be clear and free of particulates during use.

Can I set up the gel caster and pour a gel outside of the curing station and then move the full caster into the curing station?

This is not recommended because casting the gel in the curing station lowers the risk of a hazardous spill if the full caster is dropped. Resolving and stacking gel solutions may mix if the caster is shaken while being moved into curing station. If pouring a gel outside of the curing station, be sure to move the caster into the curing station slowly and carefully, and reduce the distance the prepared caster is carried as much as possible.

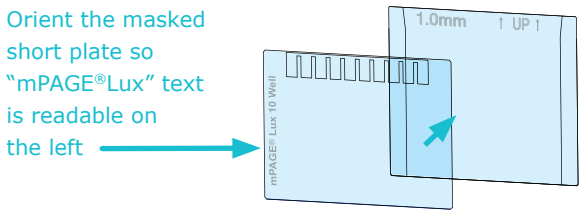
Should I use the mPAGE® Lux Clip-on Mask with the mPAGE® Lux Masked Short Plate?

It is not necessary to use both in the same cassette. The mPAGE® Lux Clip-on Mask and the mPAGE® Lux Masked Short Plate are both designed to form wells.

How do I use the mPAGE® Masked Short Plate (instead of the mPAGE® Lux Clip-on Mask)?

Form the cassette by placing the mPAGE® Lux Masked Short Plate on top of the mPAGE® Mini Spacer Plate so that "mPAGE® Lux" text is on the left-hand side of the cassette, and readable from the front.

With the side clamps open, slide cassette into caster frame until aligned on the dead-stops located on the bottom.



What if run is interrupted accidentally (by opening curing station door or pressing cancel)?

If run is interrupted during initialization period, the run can be restarted with existing gel. If run is interrupted during curing period, the gel should be discarded and a new gel should be cast.

I have liquid acrylamide waste, how do I solidify it before disposal?

Pour the liquid acrylamide solution into a clear container and place it in direct sunlight or place in the curing station and run the program. The UV rays will cure the solution into a polymer.

Are gels prepared with the mPAGE® Gel Caster compatible with other electrophoresis tanks?

Yes, the gels prepared with the mPAGE® Gel Caster are compatible with the mPAGE® Mini Gel Tank, Bio-RAD® Mini-PROTEAN Cells or any electrophoresis tank that can accommodate 10.1 cm x 8.3 cm glass gel cassettes.

Why are masked components needed?

The curing process polymerizes gel around the comb teeth, which can make the comb difficult to remove and lead to acrylamide residue in the wells. The mPAGE® Lux Clip-on Mask was designed to cover the comb area and prevent polymerization of acrylamide around the comb teeth.

Product Ordering

Order products at SigmaAldrich.com

mPAGE® Lux Gel Casting System

Select gel thickness and power cord.

0.75 mm

Includes	Qty	Power Cord For	Catalogue Number
• mPAGE® Lux Curing Station, with Power Cord	1	United States	LUXCSYS-75M-US
• mPAGE® Gel Casters with Sealing Gaskets	2	Europe	LUXCSYS-75M-EU
• mPAGE® Gel Releasers	5	United Kingdom	LUXCSYS-75M-UK
• mPAGE® Comb, 0.75 mm 10 wells	5	Japan	LUXCSYS-75M-JP
• mPAGE® Comb, 0.75 mm 15 wells	5	China	LUXCSYS-75M-CN
• mPAGE® Mini Spacer Plate 0.75 mm	5		
• mPAGE® Mini Short Plates	10		
• mPAGE® Lux Clip-on Mask (10-well comb)	2		
• mPAGE® Lux Clip-on Mask (15-well comb)	2		
• mPAGE® Lux Mixing Tubes	5		

1.0 mm

Includes	Qty	Power Cord For	Catalogue Number
• mPAGE® Lux Curing Station, with Power Cord	1	United States	LUXCSYS-1M-US
• mPAGE® Gel Casters with Sealing Gaskets	2	Europe	LUXCSYS-1M-EU
• mPAGE® Gel Releasers	5	United Kingdom	LUXCSYS-1M-UK
• mPAGE® Comb, 1.0 mm 10 wells	5	Japan	LUXCSYS-1M-JP
• mPAGE® Comb 1.0 mm, 15 wells	5	China	LUXCSYS-1M-CN
• mPAGE® Mini Spacer Plate 1.0 mm	5		
• mPAGE® Mini Short Plates	10		
• mPAGE® Lux Clip-on Mask (10-well comb)	2		
• mPAGE® Lux Clip-on Mask (15-well comb)	2		
• mPAGE® Lux Mixing Tubes	5		

1.5 mm

Includes	Qty	Power Cord For	Catalogue Number
• mPAGE® Lux Curing Station, with Power Cord	1	United States	LUXCSYS-15M-US
• mPAGE® Gel Casters with Sealing Gaskets	2	Europe	LUXCSYS-15M-EU
• mPAGE® Gel Releasers	5	United Kingdom	LUXCSYS-15M-UK
• mPAGE® Comb, 1.5 mm 10 wells	5	Japan	LUXCSYS-15M-JP
• mPAGE® Comb 1.5 mm, 15 wells	5	China	LUXCSYS-15M-CN
• mPAGE® Mini Spacer Plate 1.5 mm	5		
• mPAGE® Mini Short Plates	10		
• mPAGE® Lux Clip-on Mask (10-well comb)	2		
• mPAGE® Lux Clip-on Mask (15-well comb)	2		
• mPAGE® Lux Mixing Tubes	5		

mPAGE® Lux Solution Kits and Refills

	Qty	Catalogue Number
mPAGE® Lux Bis-Tris Reagent Kit	1	LUXRGTKIT
Includes		
• mPAGE® Lux Bis-Tris Resolving Solution	225 mL	
• mPAGE® Lux Bis-Tris Diluent	225 mL	
• mPAGE® Lux Bis-Tris Stacking Solution	112 mL	
mPAGE® Lux Bis-Tris Resolving Solution	225 mL	LUXRGTRES
mPAGE® Lux Bis-Tris Diluent	225 mL	LUXRGTDIL
mPAGE® Lux Bis-Tris Stacking Solution	112 mL	LUXRGTSTK

Description	Qty	Catalogue Number
mPAGE® Lux Masks		
mPAGE® Lux Clip-on Mask		
Use with 10-well combs	2	LUXCLP10W
Use with 15-well combs	2	LUXCLP15W
mPAGE® Lux Masked Short Plates		
Use with 10-well combs	5	LUXSHRTP10W
Use with 15-well combs	5	LUXSHRTP15W
mPAGE® Gel Caster		
mPAGE® Gel Caster, 2pk		GCR2
mPAGE® Combs		
0.75 mm, 10 wells	5	C75M10W
0.75 mm, 15 wells	5	C75M15W
1.0 mm, 10 wells	5	C1M10W
1.0 mm, 15 wells	5	C1M15W
1.5 mm, 10 wells	5	C15M10W
1.5 mm, 15 wells	5	C15M15W
mPAGE® Mini Spacer Plates		
0.75 mm	5	MSPA75
1.0 mm	5	MSPA10
1.5 mm	5	MSPA15
mPAGE® Mini Short Plates	10	MSHRT
mPAGE® Gel Caster Base	1	GCBASE
mPAGE® Gel Caster Frame	1	GCFRM
mPAGE® Gel Caster Sealing Gaskets	5	GCSEAL
mPAGE® Gel Releasers	5	GREL5
mPAGE® Casting Plate Rack	1	CPS1
SDS-PAGE and Transfer Systems		
mPAGE® Mini Gel Tank, 2 gel	1	MGT-2
mPAGE® Mini Gel Tank, 4 gel	1	MGT-4
mPAGE® Mini Wet Transfer System	1	MWTS
SDS-PAGE and Transfer Reagents		
mPAGE® Color Protein Standard	500 µL	MPSTD4
mPAGE® Unstained Protein Standard	500 µL	MPSTD3
mPAGE® Western Protein Standard	250 µL	MPSTD2
MES SDS running buffer powder for mPAGE® Bis-Tris gels, each packet makes 1 L	5 pk	MPMES
MOPS SDS Running Buffer Powder for mPAGE® Bis-Tris gels, each packet makes 1 L	5 pk	MPM0PS
mPAGE® Transfer Buffer Powder, each packet makes 1 L	10 pk	MPTRB

Description	Qty	Catalogue Number
Immunodetection Devices		
SNAP id® 2.0 Systems		
Mini, 7.5 cm x 8.4 cm	2	SNAP2MINI
MultiBlot, 4.5 cm x 8.4 cm	2	SNAP2MB3
Mini, 7.5 cm x 8.4 cm and MultiBlot, 4.5 cm x 8.4 cm	1 pk	SNAP2MB1
Power Supplies		
Basic power supply for protein and DNA electrophoresis	US Plug	MA400-US
	Euro plug	MA400-EU
	UK plug	MA400-UK
	Japan plug	MA400-NI
	China plug	MA400-ZH
High capacity power supply for electrophoresis and Western blotting	US Plug	MA700-US
	Euro plug	MA700-EU
	UK plug	MA700-UK
	Japan plug	MA700-NI
	China plug	MA700-ZH
Staining Reagents		
Colorimetric		
EZBlue™ Gel Staining Reagent	500 ML	G1041-500ML
	3.8 L	G1041-3.8L
Readyblue® Protein Gel Stain	1 L	RSB-1L
ProteoSilver™ Plus Silver Stain Kit	1 kit	PROTSIL2-1KT
ProteoSilver™ Silver Stain Kit	1 kit	PROTSIL1-1KT
Reversible Protein Detection Kit for membranes and polyacrylamide gels	1 kit	RPROB-1KT
Ponceau S solution, 0.1% (w/v) in 5% acetic acid	1 L	P7170
Coomassie® Brilliant Blue G Solution, concentrate	1 L	B8522
Coomassie® Brilliant Blue R, pure	10 G	B7920-10G
	50 G	B7920
Fast Green FCF, die content ≥ 85%	5 G	F7252-5G
	25 G	F7252-25G
	100 G	F7252-100G
Fluorescent		
EZFluor™ 1-step Fluorescent Protein Gel Stain		SCT145
EZFluor™ UV 1-step Fluorescent Protein Gel Stain		SCT147
SYPRO® Orange Protein Gel Stain		S5692
SYPRO® Ruby Protein Gel Stain		S4942

Transfer Membranes and Blotting Paper

Description	Qty	Catalogue Number
Immobilon® Blotting Filter Paper		
sheet, 7 cm x 8.4 cm	100	IBFP0785C
Immobilon®-E Blotting Sandwich		
sheet, 7 cm x 8.4 cm	20	IESN07852
Immobilon®-E PVDF Membrane		
roll, 26.5 cm x 1.875 m	1	IEVH00005
roll, 8.5 cm x 10 m	1	IEVH85R
sheet, 7 cm x 8.4 cm	50	IEVH07850
Immobilon®-FL PVDF Membrane		
roll, 26.5 cm x 1.875 m	1	IPFL00005
roll, 26.5 cm x 3.75 m	1	IPFL00010
roll, 8.5 cm x 10 m	1	IPFL85R
sheet, 7 cm x 8.4 cm	10	IPFL07810
Immobilon®-P Blotting Sandwich		
sheet, 7 cm x 8.4 cm	20	IPSN07852
Immobilon®-P PVDF Membrane		
roll, 26.5 cm x 1.875 m	1	IPVH00005
roll, 26.5 cm x 3.75 m	1	IPVH00010
roll, 8.5 cm x 10 m	1	IPVH85R
sheet, 7 cm x 8.4 cm	20	IPSN07852
sheet, 7 cm x 8.4 cm	50	IPVH07850
Immobilon®-PSQ PVDF Membrane		
roll, 26.5 cm x 1.875 m	1	ISEQ00005
roll, 26.5 cm x 3.75 m	1	ISEQ00010
roll, 8.5 cm x 10 m	1	ISEQ85R
sheet, 7 cm x 8.4 cm	50	ISEQ07850
Immobilon®-NC Transfer Membrane		
roll, 33 cm x 3 m	1	HATF00010
roll, 8.5 cm x 10 m	1	HATF85R
sheets, 7 cm x 8.4 cm	50	HATF07850
Immobilon® NOW Dispenser	1	IMDISP

Western Blotting Detection Reagents

Immobilon® UltraPlus Western HRP Substrate	20 mL	WBULP-20ML
	100 mL	WBULP-100ML
Immobilon® ECL Ultra Western HRP substrate	20 mL	WBULS0100-20ML
	100 mL	WBULS0100
Immobilon® Western Chemiluminescent HRP substrate	2x 50 mL	WBKLS0100
	2x 250 mL	WBKLS0500
Immobilon® Forte Western HRP substrate	100 mL	WBLUF0100
	500 mL	WBLUF0500
Immobilon® Crescendo Western HRP substrate	100 mL	WBLUR0100
	500 mL	WBLUR0500
Immobilon® Classico Western HRP substrate	100 mL	WBLUC0100
	500 mL	WBLUC0500

Blocking, Enhancing and Stripping Reagents

Description	Qty	Catalogue Number
Immunoblot Blocking Reagent	20 G	20-200
ChemiBLOCKER™ membrane-blocking agent	500 mL	2170
5% Alkali-soluble Casein	225 mL	70955
Tris Buffered Saline	1 L	T5912
TWEEN® 20, for molecular biology, viscous liquid	50 mL	P9416-50ML
	100 mL	P9416-100ML
Immobilon® Block-PO Reagent, Phosphoprotein Detection	100 mL	WBAVDP001-100ML
	500 mL	WBAVDP001-500ML
Immobilon® Block-FL Reagent, Fluorescent Detection	100 mL	WBAVDFL01-100ML
	500 mL	WBAVDFL01-500ML
Immobilon® Block-CH Reagent, Chemiluminescent Detection	100 mL	WBAVDCH01-100ML
	500 mL	WBAVDCH01-500ML
Western Blocker™ Solution	400 mL	W0138
Immobilon® Signal Enhancer for Immunodetection	100 mL	WBSH0500-100ML
	500 mL	WBSH0500-500ML
Blot Restore Membrane Rejuvenation Kit, 10x Solution A, 50 mL Solution B, 50 mL	1	2520-M
Re-Blot™ Plus Mild Antibody Stripping Solution	50 mL	2502
Re-Blot™ Plus Strong Antibody Stripping solution, 10X	25 mL	2504
Western-Re-Probe Reagent	100 mL	WB59

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