

Midi Gel Adapter

Catalog number WA0999

Publication Part number WA0999.PPS

MAN0001541

Rev. Date 4 June 2012

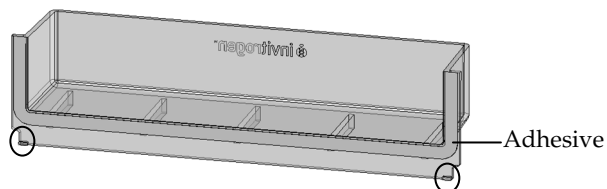
Contents and Storage

Quantity: 10 adapters

Store at room temperature, 15°C to 30°C

Description

The Midi Gel Adapter (see the following figure) is a convenient, disposable adapter designed for use with the Novex® Midi Cassette (NuPAGE® or Tris-Glycine) to perform electrophoresis using a Criterion™ Cell (available from Bio-Rad).



Each adapter is designed with two alignment tabs (indicated with circles in the figure) that fit into the slots on the Novex® Midi Cassette and facilitate the attachment of the adapter onto the Novex® Midi Cassette. The Midi Gel Adapter contains an adhesive on the inner side. After removing the adhesive liner from the adapter and placing the adapter on a **dry** surface of the Novex® Midi Cassette, the adhesive creates a tight seal between the adapter and cassette and holds each adapter on to the cassette. The Novex® Midi Cassette/Adapter assembly makes the Novex® Midi Gel compatible for use with the Criterion™ Cell and creates an upper buffer chamber that can hold ~75 mL of running buffer for electrophoresis.

Instructions for using the Midi Gel Adapter with the Novex® Midi Cassette are described in this section. For details on using the Criterion™ Cell, refer to the manual supplied with the apparatus.

Specifications

Size: 13.7 cm (w) × 3.3 cm (h) × 2.8 cm (thick)

Buffer Volume: 75 mL

Adapter Material: Styrene Copolymer

Adhesive Material: Acrylic Based

The Midi Gel Adapter with the Adhesive Liner is compatible with commonly used electrophoresis buffers.

Important Notes

- To efficiently use the Novex® Midi Gels with the Criterion™ Cell from Bio-Rad, you will need to use the Midi Gel Adapter with the Novex® Midi Gel. The Midi Gel Adapter is supplied with the Novex® Midi Gels with Adapters as well as available separately.
- The Midi-Gel Adapter is designed for use with the Novex® Midi Gel in the Criterion™ Cell (Bio-Rad) **only**. Do not use the Midi-Gel Adapter with any other electrophoresis apparatus.
- **Do not** re-use the Midi Gel Adapter. Discard the adapter after use.

Materials Needed

You will need the following items. Ordering information is on page 4.

- Novex® Midi Gel with Adapters
- Criterion™ Cell (available from Bio-Rad)
- Appropriate 1X Running Buffer (see **Recommended Buffers**)
- NuPAGE® Sample Reducing Agent (10X) for reduced samples
- NuPAGE® Antioxidant for reduced samples with NuPAGE® gels
- Protein sample prepared in the appropriate sample buffer (see **Recommended Buffers**)
- Power Supply

Recommended Buffers

Prepare protein sample at the appropriate concentration using the recommended sample buffer. Dilute the recommended Running Buffer to 1X before use.

Gel Type	Running Buffer	Sample Buffer
NuPAGE® Novex® Bis-Tris Midi Gels	NuPAGE® MES SDS Running Buffer (20X) to resolve small proteins by SDS-PAGE	NuPAGE® LDS Sample Buffer (4X)
	NuPAGE® MOPS SDS Running Buffer (20X) to resolve mid-size proteins by SDS-PAGE	NuPAGE® LDS Sample Buffer (4X)
NuPAGE® Novex® Tris-Acetate Midi Gels	NuPAGE® Tris-Acetate SDS Running Buffer (20X) to resolve large proteins by SDS-PAGE	NuPAGE® LDS Sample Buffer (4X)
	Tris-Glycine Native Running Buffer (10X) to perform native gel electrophoresis	Tris-Glycine Native Sample Buffer (2X)
Novex® Tris-Glycine Midi Gels	Tris-Glycine SDS Running Buffer (10X) to perform SDS-PAGE	Tris-Glycine SDS Sample Buffer (2X)
	Tris-Glycine Native Running Buffer (10X) to perform native gel electrophoresis	Tris-Glycine Native Sample Buffer (2X)

Attach the Midi Gel Adapter

1. Remove 1 Midi Gel Adapter and 1 Novex® Midi Gel from their individual packages.
2. **After ensuring that your hands are dry, blot any excess liquid from the cassette using a paper towel.**
3. Locate the slots on the Novex® Midi Cassette as shown in the figure A below. Avoid introducing any liquid onto the cassette surface.
4. Peel off the Adhesive Liner from the Midi Gel Adapter with dry hands.
5. Hold the Midi Gel Adapter such that the logo is facing towards you (adhesive side towards the cassette) and align the alignment tabs of the adapter with the 2 slots on the cassette. **Place the adapter on the cassette and apply firm pressure to the adapter on the adhesive area to ensure a tight seal between the adapter and cassette (Figure B).**

Figure A (Cassette only)

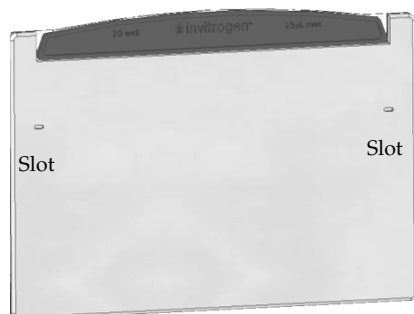
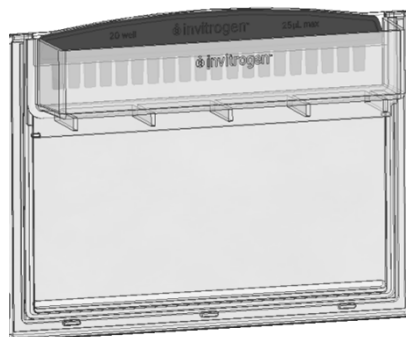


Figure B (Cassette/Adapter assembly)



Attach the Midi Gel Adapter, continued

- The attachment of the adapter on the gel cassette generates an **upper buffer chamber** that can hold ~ 75 mL running buffer and is required for use with the Criterion™ Cell.
- Remove the comb from the cassette and rinse the wells with 1X Running Buffer.
- Remove the tape from the bottom of the cassette.

Use the Novex® Midi Cassette/Adapter assembly immediately for electrophoresis as described on the page 4. We recommend using the cassette/adapter assembly within 1 hour of assembly to obtain the best results and prevent any leaks.

Important Notes

- It is important to create a tight seal between the Midi Gel Adapter and Novex® Midi Cassette to prevent leaks. To obtain a tight seal, be sure to insert the alignment tabs of the adapter into the 2 slots of the cassette and press the adapter firmly on the cassette.
- To ensure a tight seal, avoid introducing any liquid in the cassette area where the adapter will be placed.

Performing Electrophoresis

Brief instructions for using the Novex® Midi Cassette/Adapter assembly with the Criterion™ Cell are described in this section. For details, refer to the Criterion™ Cell manual supplied with the apparatus.

- Insert the Novex® Midi Cassette/Adapter assembly into one of the slots in the Criterion™ Cell tank such that the adapter is facing the center of the cell.
- Add 60 mL of the appropriate 1X Running Buffer into the upper buffer chamber. For reduced samples, use 60 mL 1X Running Buffer containing 150 µl NuPAGE® Antioxidant.

If you notice any leaks, see the **Note** on page 4.

- Load the appropriate volume of samples and protein molecular weight markers in the wells.
- Load each half of the lower buffer chamber with 400 mL 1X Running Buffer (for electrophoresis of 2 gels).
- Place the lid on the Criterion™ Cell.
- With the power off, connect the electrode cords to the power supply. Turn on the power supply and perform electrophoresis using the following settings:

Gel Type	Voltage	Expected Current	Run Time
NuPAGE® Novex® Bis-Tris with MES Running Buffer (denaturing, reducing)	200 V	Start: 250–270 mA End: 150–170 mA	35 minutes
NuPAGE® Novex® Bis-Tris with MOPS Running Buffer (denaturing, reducing)	200 V	Start: 250–270 mA End: 150–170 mA	40 minutes
NuPAGE® Novex® Tris-Acetate with Tris-Acetate Running Buffer (denaturing, reducing)	150 V	Start: 80–100 mA End: 50–60 mA	60 minutes
NuPAGE® Novex® Tris-Acetate with Tris-Glycine Native Running Buffer (non-denaturing)	150 V	Start: 50–60 mA End: 15–20 mA	1.5–2 hours
Tris-Glycine with Tris-Glycine SDS Running Buffer	125 V	Start: 55–70 mA End: 20–30 mA	90 minutes (depending on gel type)
Tris-Glycine with Tris-Glycine Native Running Buffer (non-denaturing)	125 V	Start: 45–55 mA End: 15–20 mA	100 minutes (depending on gel type)

- Disassemble the Criterion™ Cell as described in the manual supplied with the apparatus.

Note

The Midi Gel Adapter is designed to fit onto a **dry** Novex® Midi Cassette to generate an upper buffer chamber that can hold ~75 mL buffer.

Leaks are generally caused due to the reasons described below. When leaks occur, it is best to remove the adapter and discard it. Remove any remaining adhesive on the cassette, dry the cassette with a paper towel and then place a fresh new adapter on the **dried** surface of the cassette as described on the previous page.

- Improper seal

Improper seal is caused when the adapter is not firmly pressed onto the cassette or the surface of the cassette was wet when the adapter was applied. **To obtain a tight seal, press the adapter firmly on the cassette.**

- Excess solution

The Midi Gel Adapter is designed to hold ~75 mL buffer. Adding excess buffer will generate spills.

Additional Products

A large variety of Novex® Midi Gels are available separately. The following pre-made buffers are also available from separately. For more details on these products, visit www.lifetechnologies.com or contact Technical Support.

Product	Quantity	Cat. no.
NuPAGE® LDS Sample Buffer (4X)	10 mL	NP0007
NuPAGE® Sample Reducing Agent (10X)	10 mL	NP0009
NuPAGE® Antioxidant	15 mL	NP0005
NuPAGE® MOPS SDS Running Buffer (20X)	500 mL	NP0001
NuPAGE® MES SDS Running Buffer (20x)	500 mL	NP0002
NuPAGE® Tris-Acetate SDS Running Buffer (20X)	500 mL	LA0041
Novex® Tris-Glycine SDS Sample Buffer (2X)	20 mL	LC2676
Novex® Tris-Glycine SDS Running Buffer (10X)	500 mL	LC2675
Novex® Tris-Glycine Native Sample Buffer (2X)	20 mL	LC2673
Novex® Tris-Glycine Native Running Buffer (10X)	500 mL	LC2672
PowerEase® 500 Power Supply	1 each	EI8600

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