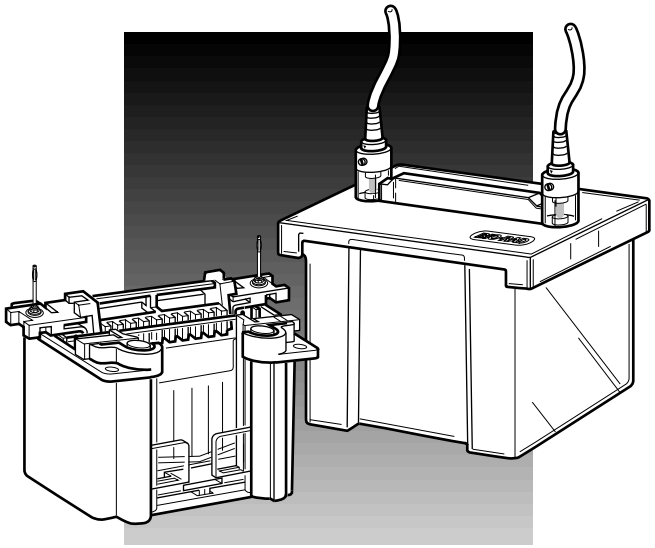

READY GEL CELL

INSTRUCTION MANUAL

Catalog Numbers
165-3125
165-3126

BIO-RAD

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SAFETY

Power to the Ready Gel Cell is supplied by an external DC voltage power supply. The output of this power supply must be isolated from external ground in such a way that the DC voltage output floats with respect to ground. All Bio-Rad power supplies meet this important safety requirement. Regardless of which power supply is used, the maximum specified operating parameters for the Ready Gel Cell are:

- 600 VDC maximum voltage limit
- 15 Watts maximum power limit
- 50° C maximum ambient temperature limit

Current to the cell, provided from the external power supply, enters the unit through the lid assembly, which provides a safety interlock to the user. Current to the cell is broken when the lid is removed. Always turn off the power supply before removing the lid. **Do not attempt to use the cell without the safety lid.**

Important:

This Bio-Rad product is designed and certified to meet EN61010-1 safety standards. Certified products are safe to use when operated in accordance with the instruction manual. This instrument should not be modified or altered in any way. Alteration of this instrument will:

- Void the manufacturer's warranty,
- Void the EN61010-1 certification, and
- Create a potential safety hazard.

Bio-Rad is not responsible for any injury or damage caused by use of this instrument for purposes other than for which it is intended or by modifications of the instrument not performed by Bio-Rad or an authorized agent.

This product conforms to the class A standards for Electromagnetic Emissions, intended for laboratory equipment applications. It is possible that emissions from this product may interfere with some sensitive appliances when placed nearby or on the same circuit as those appliances. The user should be aware of this potential and take appropriate measures to avoid interference.

* EN61010-1 is an internationally accepted electrical safety standard for laboratory instruments.

1.0 GENERAL INFORMATION

The Ready Gel Electrophoresis Cell will run all Bio-Rad precast Ready Gel products. The Ready Gel Cell is designed to make running precast gels very simple. Ready Gels are easily inserted into the cell and self align with the gasket to form a leak proof seal for the upper buffer. At the end of a run, the Ready Gels are easily removed.

The Ready Gel Cell can run two precast Ready Gels; one gel can be run when the Mini Cell Buffer Dam is used in place of the second gel. The Ready Gel mini tank and lid can be used with a variety of different electrode modules to run handcast gels, to blot mini gels, to run 2-D electrophoresis, or for electroelution.

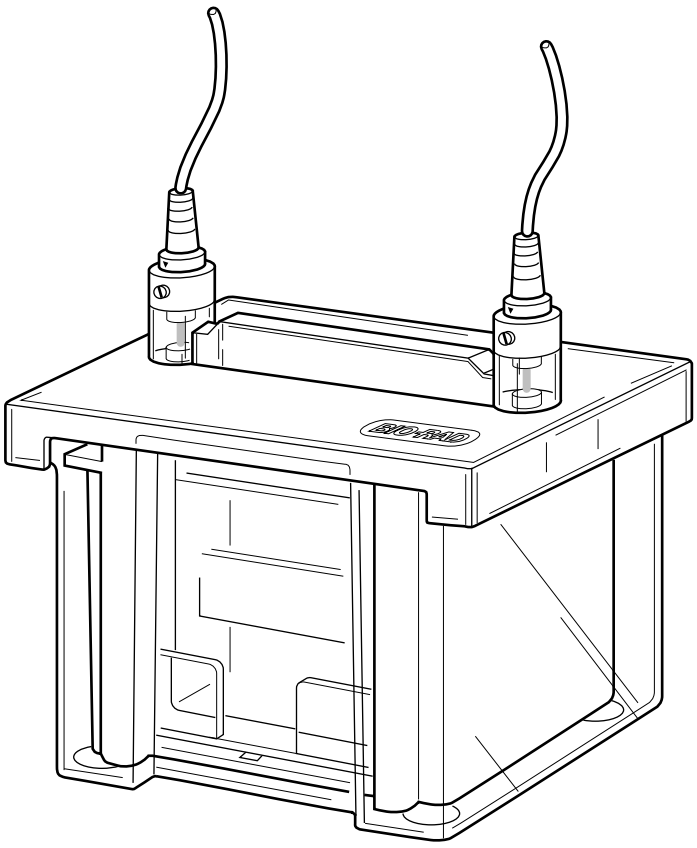

Figure 1. Ready Gel Cell Prepared for Use

1.1 UNPACKING

When you receive the Ready Gel Cell, carefully inspect the shipping container for any damage which may have occurred in shipping. Severe damage to a container may indicate damage to its contents. If you suspect damage to the contents may have occurred in shipping, immediately file a claim with the carrier in accordance with their instructions before contacting Bio-Rad Laboratories.

Inspect the unit for external damage. If any part is missing or damaged, contact Bio-Rad Laboratories immediately.

1.2 ACCESSORIES

The following options are available with your Ready Gel Cell.

- **Sample Loading Guides, 10 and 15 Well**: The two sided sample loading guides match the well spacing of the 10 and 15 well Ready Gels. The sample guides serve to align a Hamilton Syringe or pipet tip with each of the sample wells in the gels.
- **Mini Cell Buffer Dam**: The Mini Cell Buffer Dam substitutes for a Ready Gel cassette when running only one gel. The buffer dam can also be used with the Mini-PROTEAN® II cell.

2.0 SET UP AND BASIC OPERATION

To get the best performance from your Ready Gel Cell, familiarize yourself with the unit's components by assembling and disassembling the cell before using it. Refer to Figure 2, which shows the assembling of the Ready Gel Cell, tank, and lid.

Feature	Description
Clamping Frame	This serves as the frame for the inner chamber. The Clamping Frame includes pressure plates and closure cams. When the cams are closed the Electrode Assembly is clamped snugly and evenly against the back of the Clamping Frame, sealing the inner chamber.
Electrode Assembly	The Electrode Assembly houses the molded U-shaped gasket, the upper and lower electrodes, and the connecting banana plugs. The anode (lower electrode) jack is identified with a red marker, and the cathode (upper electrode) jack with a black marker. The Electrode Assembly holds the Ready Gel cassettes.
Inner Chamber	The Electrode Assembly, two Ready Gel cassettes, and the Clamping Frame form the inner chamber.
Mini Tank and Lid	The mini tank and lid combine to fully enclose the inner chamber during electrophoresis. The lid cannot be removed without disconnecting the electrical circuit. The mini tank and lid can be used with a variety of different Mini-PROTEAN II electrode modules to run handcast gels, blot mini gels, to run 2-D electrophoresis or for electroelution.

2.1 ASSEMBLY OF THE READY GEL CELL

1. Remove the Electrode Assembly from the Clamping Frame. Rotate the cams outward to release the Electrode Assembly. Refer to Figure 2.

2. Prepare a Ready Gel by removing the pull tab from the bottom of the cassette and removing the comb. Rinse the sample wells with running buffer before use. For complete instructions on using the Ready Gel, see the Ready Gel box or request the Ready Gel Application Guide, catalog # 161-0993.

3. Repeat the procedure for a second Ready Gel cassette. If you will not be preparing a second Ready Gel cassette, you will need to use the mini cell buffer dam.

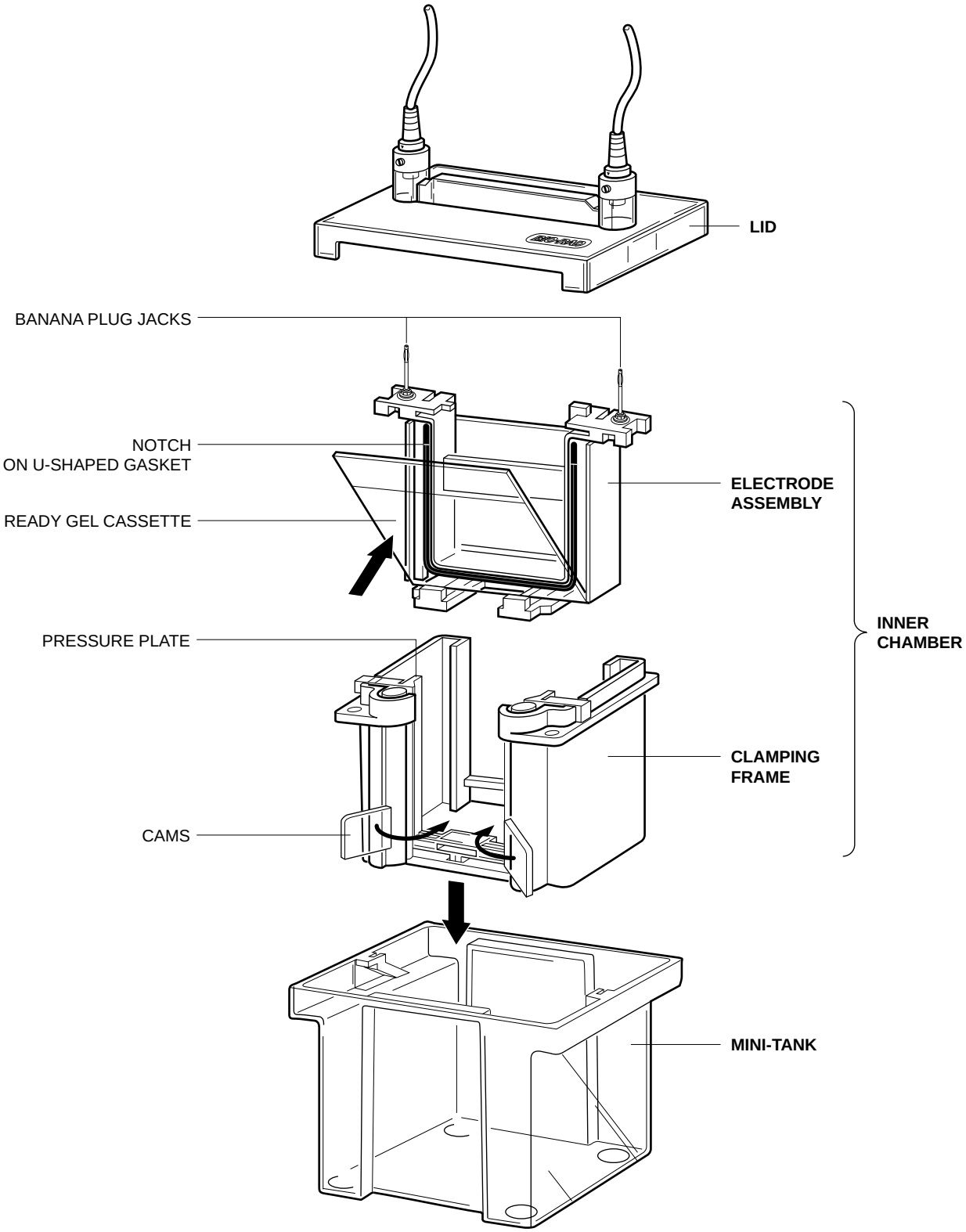

Figure 2. Assembling the Ready Gel Cell

4. Place the Ready Gel cassettes into the slots at the bottom of each side of the Electrode Assembly. Be sure that the short glass plate of the Ready Gel cassette faces inward toward the notches on the green U-shaped gaskets.

5. Press the Ready Gel cassettes up against the gaskets. The Ready Gel cassettes and the Electrode Assembly fit together to form the inner chamber.

6. Transfer the Electrode Assembly and gels into the Clamping Frame.

7. Press down on the Electrode Assembly while closing the two cam levers of the Clamping Frame. See Figure 3.

   Note: Gently pressing the top of the Electrode Assembly forces the top of the short glass plate on each Ready Gel cassette to seat against the rubber gasket. If you do not push down, the upper buffer may leak.

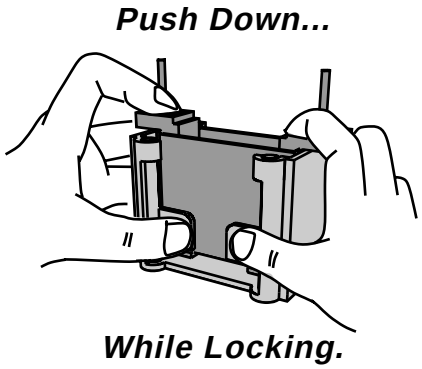

Figure 3. Sealing the Inner Chamber

8. Lower the Electrode Assembly and Clamping Frame into the mini tank. Fill the inner chamber with approximately 125 ml of running buffer, so that the buffer reaches a level between the tops of the short and long plates of the Ready Gel.

   Note: Do **not** overfill the inner chamber so that buffer spills over the top of the long plate. Overfilling may cause siphoning of the buffer, resulting in buffer loss and interruption of the electrophoresis.

9. Add approximately 200 ml of running buffer to the mini tank.

2.2 SAMPLE LOADING

1. Load the samples into the wells with a Hamilton syringe or a pipet using gel loading tips.

2. If you are using a Sample Loading Guide, place the guide between the two gels in the Electrode Assembly. The guide rests across the top of the Electrode Assembly.

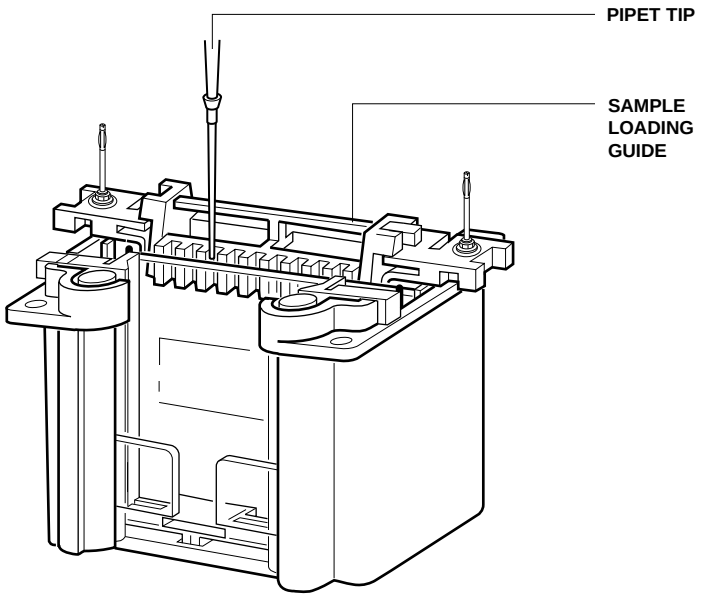

Figure 4. Using the Sample Loading Guide

3. Use the Sample Loading Guide to locate the sample wells. Insert the Hamilton syringe or pipet tip into the slots of the guide and fill the corresponding wells.

   Note: Load samples slowly and allow them to settle evenly on the bottom of the well. Be careful not to puncture the bottom of the well with the syringe needle or pipet tip.

2.3 RUNNING THE GEL

1. Align the electrode plugs and jacks and place the lid on top of the mini tank. The correct orientation is made by matching the colors of the plugs on the lid with the jacks on the electrode assembly. A stop on the lid prevents it from being orientated incorrectly.

2. Attach the electrical leads to a suitable power supply (150 V minimum) with the proper polarity.

3. Apply power to the Ready Gel Cell and begin electrophoresis; 200 volts, constant is recommended. No adjustment of the setting is necessary for the number of gels. The usual run time is approximately 35 minutes.

2.4 REMOVING THE GEL

1. After electrophoresis is complete, turn off the power supply and disconnect the electrical leads.

2. Remove the cell lid and carefully lift out the Electrode Assembly and Clamping Frame. Pour off and discard the buffer in the inner chamber.

   Note: Always pour off the upper buffer before opening the cams. Otherwise the buffer will flow out of the chamber.

3. Open the cams of the clamping box. Pull the Electrode Assembly out of the Clamping Frame and remove the gel cassettes.

4. To remove the gel from the Ready Gel cassette, slice the tape along the sides of the Ready Gel cassette where the inner glass plate meets the outer plastic plate.

   Separate the plates of the cassette and float the gel off the glass plate by inverting the gel and plate under fixative solution, agitating gently until the gel separates from the plate.

5. The Ready Gel Cell's electrode assemby, Clamping Frame, and mini tank should be rinsed thoroughly with distilled, deionized water after every use.

3.0 MAINTENANCE

Bio-Rad recommends that all Ready Gel Cell components and accessories be cleaned with suitable laboratory cleaner such as Bio-Rad Cleaning Concentrate, and rinsed thoroughly with distilled, deionized water before use.

Note: Ready Gel Cell components are not compatible with acetone or ethanol. Use of organic solvents voids all warranties. Call 1-800-4BIORAD or your local Bio-Rad representative, for technical information regarding chemical compatibility of the Ready Gel Cell components with various laboratory reagents.

APPENDIX A. SPECIFICATIONS

Clamping Frame	Glass-filled liquid crystal polymer
Pressure Plate and Cams	Polycarbonate
Electrode Assembly	Glass-filled liquid crystal polymer
Mini Tank and Lid	Molded polycarbonate
Electrodes	Platinum wire, 0.010 inches diameter
Gasket, electrode inner core	Silicone Rubber
Shipping Weight	2.0 kg
Overall Size	16 cm (L) x 12 cm (W) x 18 cm (H)
Ready Gel Size	7 cm x 8 cm
Voltage Limit	600 VDC and 15 watts

APPENDIX B. WARRANTY AND ORDERING INFORMATION

The Ready Gel Cell is warranted for 1 year against defects in materials and workmanship. If any defects should occur during this warranty period, Bio-Rad Laboratories will replace the defective parts without charge. However the following defects are specifically excluded:

1. Defects caused by improper operation.
2. Repairs or modifications done by anyone other than a Bio-Rad Laboratories or their authorized agent.
3. Damaged caused by accidental misuse.
4. Damage caused by disaster.
5. Common replacement parts including platinum wire and the rubber gasket.
6. Damage caused by the use of organic solvents.

For inquiry or request for repair service, contact your local Bio-Rad office.

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WARRANTY INFORMATION

Model_____

Catalog Number _____

Date of Delivery_____

Serial Number _____

Invoice Number _____

Purchase Order No _____

ORDERING INFORMATION

Catalog Number	Description
165-3125	**Ready Gel Cell**, includes Ready Gel Cell Electrode Assembly, Clamping Frame, mini tank, lid with power cables, mini cell buffer dam and instructions.
165-3126	**Ready Gel Cell Module**, includes Electrode Assembly, Clamping Frame, mini cell buffer dam and instructions.
165-3130	**Mini Cell Buffer Dam**
165-3146	**Sample Loading Guide, 10 well**
165-3132	**Sample Loading Guide, 15 well**
165-3149	**Ready Gel Cell Replacement Gaskets**
165-2975	**Mini Tank and Lid with Power Cables**
900-7680	**Platinum Wire** (Cathode = 8”, Anode =11”)

BIO-RAD

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SIG 020996 Printed in USA

4006075 Rev B