

The ProteomeWorks™ System

Now get more
from 2-D.



ReadyStrip™ IPG Strips and the PROTEAN® IEF Cell
Streamline Handling and Increase Your
Resolving Power in the First Dimension.

BIO-RAD

Reproducible High-Resolution First-Dimension Runs

ReadyStrip IPG strips provide true linearity of pH gradient, allowing greater certainty of pI determination. A series of narrow overlapping pH ranges (3–6, 5–8, 7–10) enhances and increases resolution by creating “virtual” gels with up to 40 cm equivalent of pI separation across a pH 3–10 range. Tight gel length tolerances (± 2 mm) guarantee pH consistency. Each strip is labeled for quick identification of polarity and pH range.

Streamlined Handling

ReadyStrip IPG strips are available in three lengths. Use 17 cm strips with the PROTEAN II XL cell for maximum resolution. The 11 cm strips and Criterion™ gels provide a high-resolution, high-throughput combination. The 7 cm strips are compatible with the Mini-PROTEAN® II cell, the new Mini-PROTEAN 3 system, and the Ready Gel® cell. Focusing trays hold up to 12 strips, and the cell accommodates one large (17 or 11 cm) or two small (7 cm) trays for up to 24 mini strips per run! For high-throughput applications, you can focus one set of strips while rehydrating a second set in the economical rehydration trays.

Quick Start to 2-D Separations

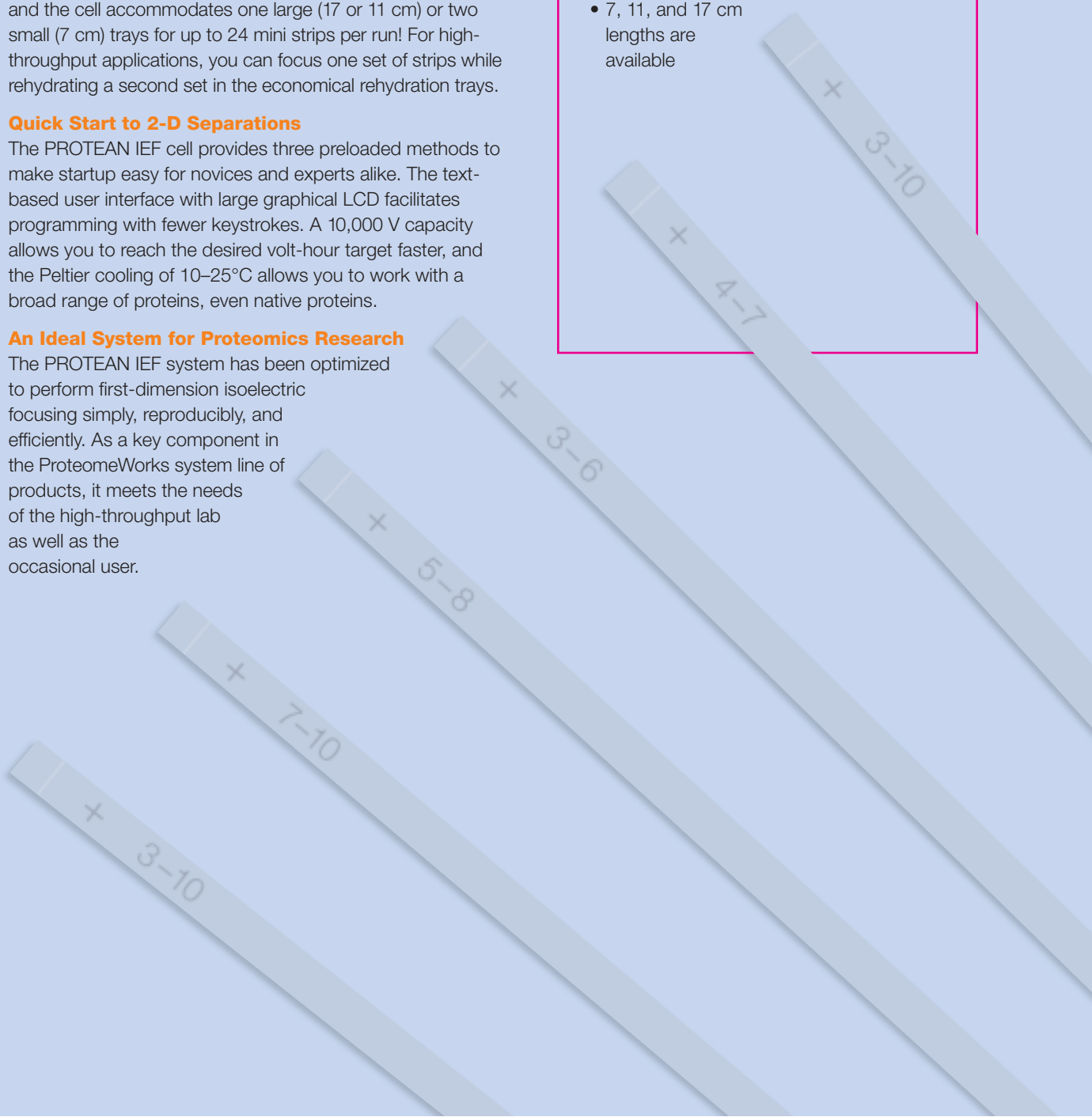
The PROTEAN IEF cell provides three preloaded methods to make startup easy for novices and experts alike. The text-based user interface with large graphical LCD facilitates programming with fewer keystrokes. A 10,000 V capacity allows you to reach the desired volt-hour target faster, and the Peltier cooling of 10–25°C allows you to work with a broad range of proteins, even native proteins.

An Ideal System for Proteomics Research

The PROTEAN IEF system has been optimized to perform first-dimension isoelectric focusing simply, reproducibly, and efficiently. As a key component in the ProteomeWorks system line of products, it meets the needs of the high-throughput lab as well as the occasional user.

ReadyStrip IPG Strips

- Narrow pH ranges increase the number of centimeters per pH unit for enhanced resolution
- Narrow-range gradients overlap to produce virtual gels of up to 40 cm of pI separation
- True linearity of pH gradient allows greater certainty of pI determination
- Tight gel length tolerances of ± 2 mm guarantee pH consistency
- Each strip is labeled for quick identification of polarity and pH range
- 7, 11, and 17 cm lengths are available



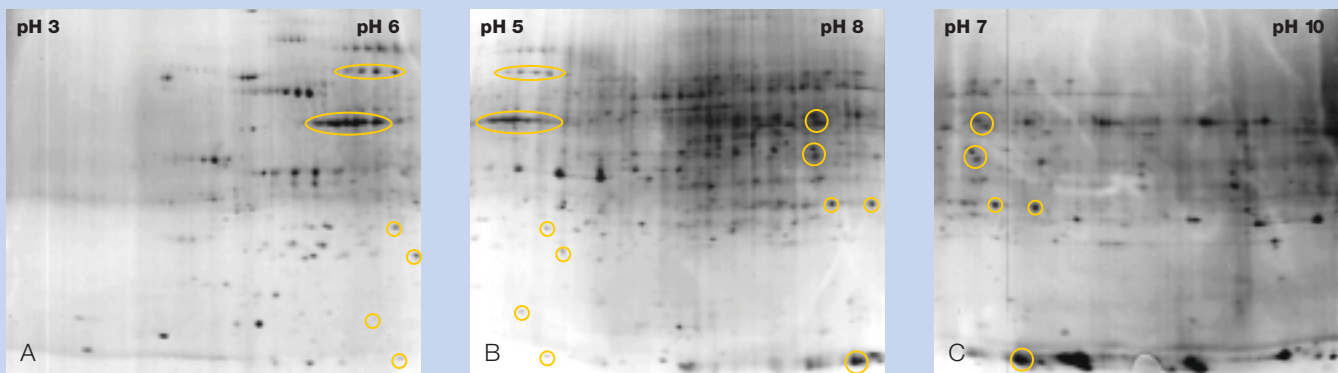
ReadyStrip IPG Strips and the PROTEAN IEF Cell: Unbeatable Performance for First-Dimension Runs.

If you've ever felt 2-D could be even more productive to your research, here's something that will confirm your suspicions: the PROTEAN IEF system. Consisting of ReadyStrip IPG strips and the PROTEAN IEF cell for isoelectric focusing of proteins in 2-D applications, this unique system offers a number of major advantages: streamlined handling, enhanced resolution, and increased reproducibility. Whether you're running 10 gels a month or 10 gels a day, the PROTEAN IEF system consistently provides great 2-D results.

PROTEAN IEF Cell

- High-capacity running platform holds 1 large or 2 mini trays, allowing up to 24 strips per run in the mini format
- Three preprogrammed methods enable a quick start to electrophoresis
- Text-based user interface is simple to program and keeps you updated on the run's progress
- Real-time editing capability gives you maximum control over the run
- The Peltier-cooled platform maintains consistent temperature for reproducibility. An expanded cooling range of 10–25°C lets you work with a broader range of protein samples and conditions
- Integral 10,000 V power supply allows you to reach the desired volt-hour target faster
- Optional thermal printer records progress of run for accurate documentation





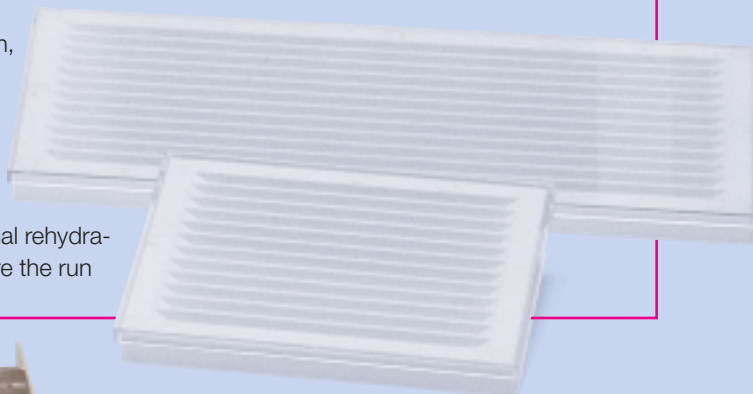
Initial screening of complex samples is simplified. A series of overlapping narrow pH-range ReadyStrip IPG strips (panels A–C) enhances and increases resolution by creating virtual gels of up to 40 cm equivalent of pI separation across a pH 3–10 range. This, in combination with the ReadyPrep™ sequential extraction kit for fractionating samples by solubility, significantly increases your resolving power and allows definition of proteins not visible by traditional methods. Data provided by the Australian Proteome Analysis Facility.

Focusing Trays

- Focusing trays hold 1–12 strips for flexibility and streamlined handling
- Platinum electrode is physically embedded into running trays, ensuring the integrity of each well and the sample
- Durable polycarbonate trays ensure sufficient heat transfer for accurate and reproducible pI determination
- Numbered channels aid in strip identification and sample tracking

Rehydration/Equilibration Trays

- Separate rehydration/equilibration trays increase throughput: Run one set of samples while rehydrating or equilibrating a second set
- Because they can be either reused or discarded, these trays maximize user options and accommodate any budget
- Multipurpose: Also use them to store focused strips at -20°C prior to second-dimension run
- After rehydration, transfer strips directly to the running tray and skip the tedious step of removing residual rehydration buffer before the run



Electrode Wicks

- Electrode wicks remove salts and other run-interfering contaminants present in complex samples; to minimize handling, preload the wicks into the 12-channel trays before adding the rehydrated strips



The Total Solution: Complete Your Separation With Our Second-Dimension Systems.

Bio-Rad complements its first-dimension products with a full line of second-dimension instruments and reagents. This interconnected system helps achieve better results in record time!

PROTEAN II XL Cell With PROTEAN II Ready Gel Precast Gels

The PROTEAN II XL cell is the second-dimension instrument compatible with 17 cm ReadyStrip IPG strips. This version of the classic PROTEAN II xi cell has been "stretched" to an 18.5 x 20 cm usable gel surface area to maximize resolving power and allow for a molecular weight standard. The cell retains all the features of the original PROTEAN II xi cell, such as a patented* leakproof clamp assembly and simple gel casting. And now with precast gels in a large format, you can save hours of preparation time with consistently uniform gradients.

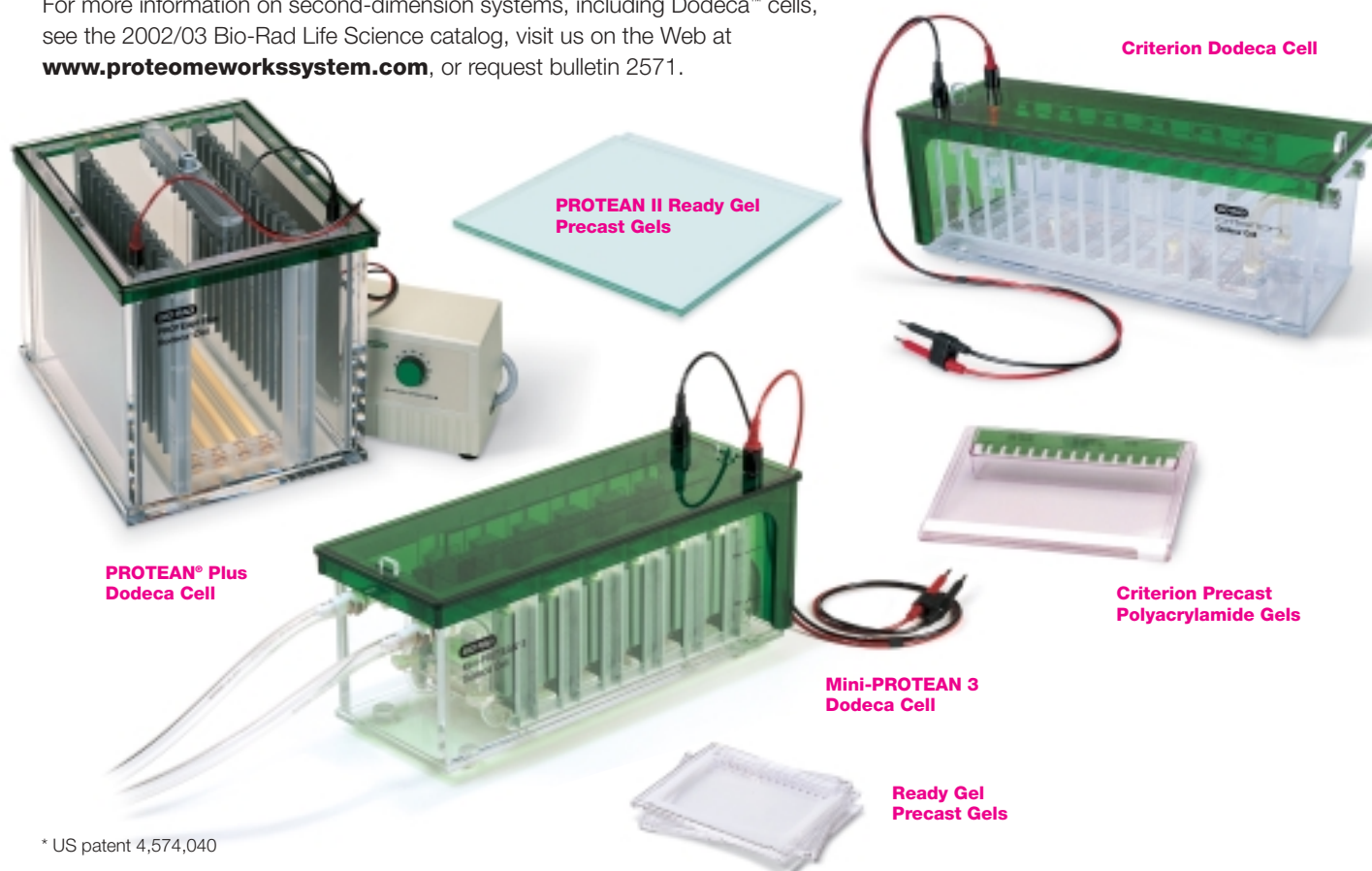
Criterion System

The Criterion system is the new standard in precast gel systems; it stretches the traditional mini format, providing 60% more resolving area in the first dimension and 24% more resolving area in the second dimension. Get more separation power without the difficulty of handling a large gel.

Mini-PROTEAN 3 System and Ready Gel Precast Gels

The 7 cm ReadyStrip IPG strips are designed to run on handcast or Ready Gel precast gels in the Mini-PROTEAN 3 system. This unique system provides the ultimate in easy assembly, and provides fast, reliable results.

For more information on second-dimension systems, including Dodeca™ cells, see the 2002/03 Bio-Rad Life Science catalog, visit us on the Web at www.proteomeworkssystem.com, or request bulletin 2571.



* US patent 4,574,040

Ordering Information

Catalog #	Description
PROTEAN IEF System	
165-4000	PROTEAN IEF System, complete, includes basic unit, 17, 11, and 7 cm focusing trays with lid, 1 pack each of 17, 11, and 7 cm rehydration/equilibration trays with lid, 2 pairs of forceps, electrode wicks, mineral oil, cleaning brushes
165-4001	PROTEAN IEF Cell, 90–240 VAC, basic unit, includes cell and instructions
165-4010	17 cm Focusing Tray With Lid, 1
165-4020	11 cm Focusing Tray With Lid, 1
165-4030	7 cm Focusing Tray With Lid, 1
165-4040	18 cm Focusing Tray With Lid, 1
165-4042	24 cm Focusing Tray With Lid, 1
165-4015	Disposable Rehydration/Equilibration Tray With Lid, 17 cm, 25 pack
165-4025	Disposable Rehydration/Equilibration Tray With Lid, 11 cm, 25 pack
165-4035	Disposable Rehydration/Equilibration Tray With Lid, 7 cm, 25 pack
165-4041	Disposable Rehydration/Equilibration Tray With Lid, 18 cm, 25 pack
165-4043	Disposable Rehydration/Equilibration Tray With Lid, 24 cm, 25 pack
165-4070	Forceps, 1 pair
165-4071	Electrode Wicks, precut, 500 pack
165-4072	Cleaning Brush, set of 2
163-2129	Mineral Oil, 500 ml
165-4080	Thermal Printer, 100 V
165-4082	Thermal Printer, 120 V
165-4085	Thermal Printer, 220 V
170-2412	Thermal Printer Paper, 10 rolls

ReadyStrip IPG Strips (12 Strips/Pack)

pH Range	7 cm	11 cm	17 cm
3–10	163-2000	163-2014	163-2007
4–7	163-2001	163-2015	163-2008
3–6	163-2003	163-2017	163-2010
5–8	163-2004	163-2018	163-2011
7–10	163-2005	163-2019	163-2012

PROTEAN II Ready Gel Precast Gels

161-1450	Ready Gel Tris-HCl Gel, 10%, IPG comb
161-1451	Ready Gel Tris-HCl Gel, 12%, IPG comb
161-1452	Ready Gel Tris-HCl Gel, 10–20%, IPG comb
161-1453	Ready Gel Tris-HCl Gel, 8–16%, IPG comb

Catalog #	Description
High-Throughput Second-Dimension Cells	
165-4100	Mini-PROTEAN 3 Dodeca Cell
165-4130	Criterion Dodeca Cell
166-4150	PROTEAN Plus Dodeca Cell, 100/120V
166-4151	PROTEAN Plus Dodeca Cell, 200/240V

PROTEAN IEF Cell Specifications

Power Output

Voltage: 50–10,000 V, 10 V increments

Current: 0–3 mA, 0.01 mA increments

Power: 3 W

Strip Holders	7 cm	11 cm	17 cm	18 cm	24 cm
Focusing Tray					
Electrode distance (mm)	64.5	102.1	162.0	170.7	226.5
Total strip length accommodated (mm)	82.3	121.4	181.0	201.0	253.0
Rehydration/Equilibration Tray					
Total strip length accommodated (mm)	80	127	186	204	253

Peltier Platform

Strip holder capacity: twelve 11, 17, 18, or 24 cm or twenty-four 7 cm IPG strips

Temperature: 10–25°C

Regulatory

CE, EN61010-1

Dimensions

28 x 30 x 14 cm (W x D x H)

User Interface

Control Panel

12-key alphanumeric keypad with 4 soft keys and 3 function keys

Programmable Parameters

Rehydration and focusing time, platform temperature, current limit per IPG strip, voltage, and voltage ramping time for each step

Voltage Ramping Profiles

Slow, linear, or rapid

Protocol Capacity

3 semi-programmable preloaded methods
10 programmable methods with up to 10 steps

Data Collection

RS-232 serial port and optional thermal printer

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