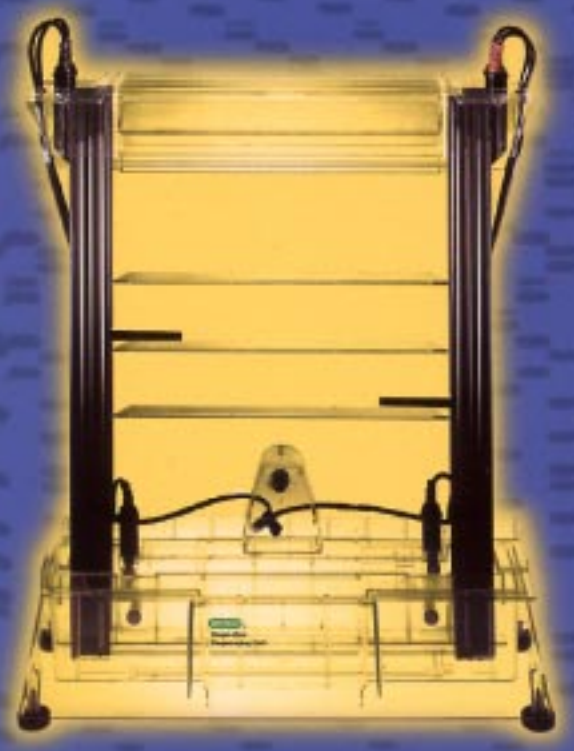
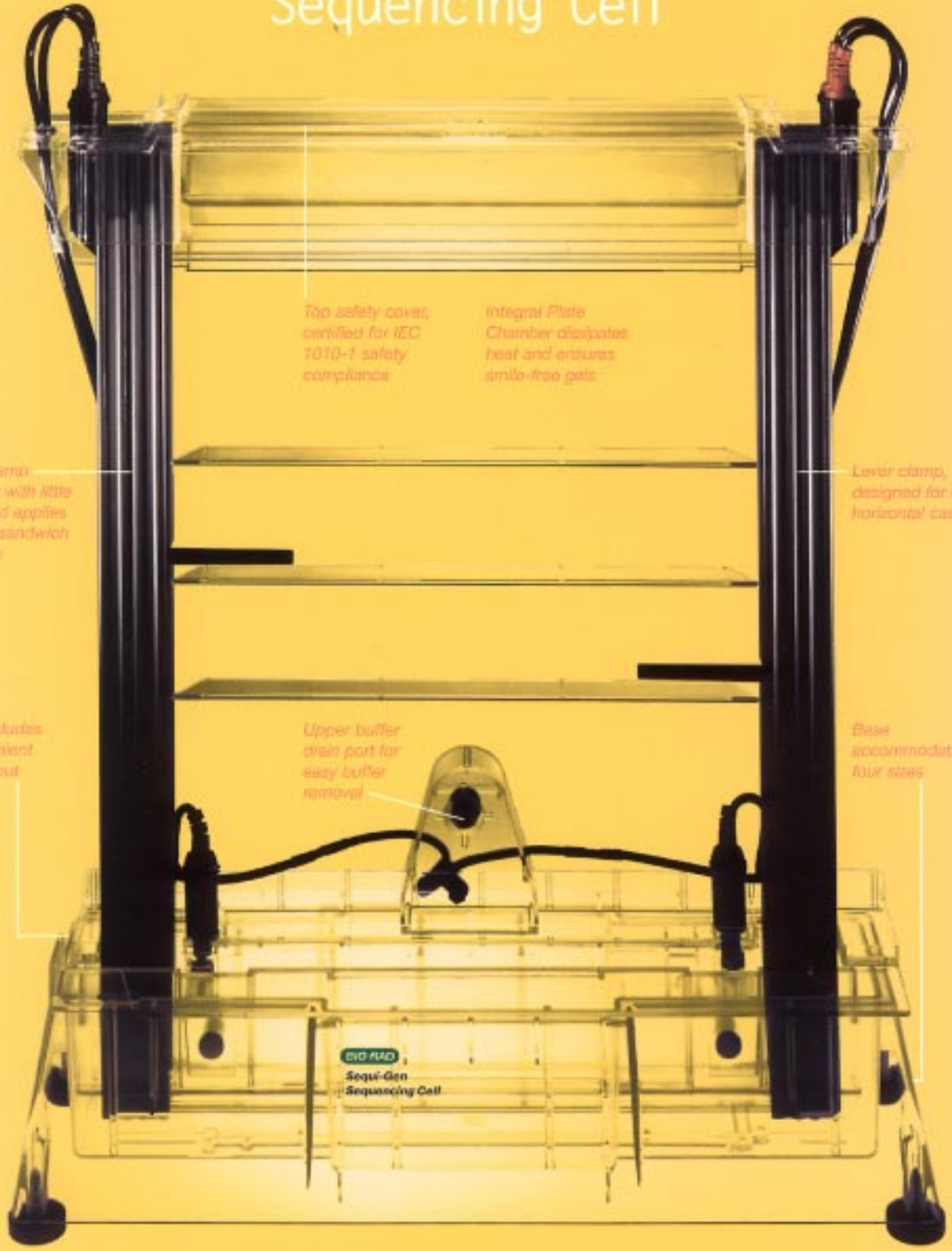
By the way, it even does sequencing



The Sequi-Gen® GT is more than just a sequencing cell

BIO-RAD

Here's the Sequi-Gen GT Sequencing Cell



It's the most versatile, easy-to-use system

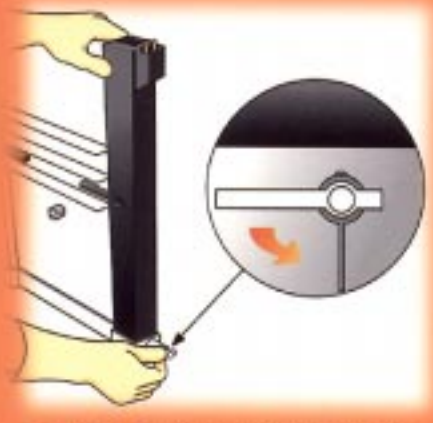
Integral Plate Chamber Eliminates Mobility Artifacts
The IPC, a patented upper buffer chamber, maintains uniform heat distribution over the entire gel surface. The IPC is a glass plate and plastic panel bonded together to form a thin upper buffer chamber that covers the entire area of the gel. The cathode is at the bottom of the chamber, and the buffer makes contact with the gel at the top of the assembly. The heat generated during electrophoresis is rapidly and evenly distributed across the gel by convection and the action of bubbles rising from the cathode. IPC advantages include:

- Elimination of smile patterns and other mobility artifacts
- Even heat distribution increases throughput by allowing samples to be loaded across the entire width of the comb
- Tempered glass plates reduce cracking
- Assembled IPC offers electrical safety, unlike conventional aluminum plate heat sinks
- Convenient fill spout and drain port make buffer addition and drainage safe and easy

Horizontal Gel Casting is Simple and Convenient
When assembling the Sequi-Gen GT, lever clamps slide easily over the gel sandwich and exert an even pressure over the entire plate for a strong, positive seal. The precision caster attaches to the bottom of the cell, and this assembly is placed flat onto your lab bench. Gel is injected through an injection port in the precision caster, and you're finished.

- Lever clamps facilitate rapid assembly and eliminate the need for tape and grease
- The even pressure exerted by the lever clamps prevents damage and leakage associated with binder clamp methods
- Horizontal gel casting is frustration-free, with no uncomfortable or awkward gel casting positions

1. Assemble the gel sandwich and slide the lever clamps over the sandwich



2. Insert the sandwich assembly into the cam-operated precision caster base

3. Lay the assembly flat, attach the syringe, inject gel solution between the glass plates

With the support you need to keep it going strong

Interchangeable Cell Sizes Fit Any Application
Sequi-Gen GT easily accommodates four gel sizes (21 cm x 40 cm, 21 cm x 50 cm, 38 cm x 30 cm and 38 cm x 50 cm). The new 38 x 30 cm Integral Plate Chamber is wide enough to allow loading of up to 100 samples and is designed for applications that require faster run times, such as microsatellite mapping, SSCP and oligonucleotide analysis. The space-saving, transparent universal base works as the lower buffer chamber and can be used with all sizes.

A Large Selection of Combs and Spacers
Sharkstooth and well-forming combs are available for Sequi-Gen GT cells. Bio-Rad combs and spacers are color-coded, based on thickness, and made of durable vinyl. Clear plastic combs and spacers are also offered. Combs are made in 15 and 30 cm lengths and a range of well formats. Spacers are made in 30, 40 and 50 cm lengths. Multi-channel pipet/microplate-compatible combs are available for high-throughput applications.

Team Up Sequi-Gen GT with the PowerPac 3000
Sequi-Gen GT, coupled with our PowerPac 3000 power source, is an economical choice that creates the ultimate team for your lab. The PowerPac 3000 is lightweight, with four sets of output terminals. 400 watts provide power to run even the most demanding experiments and up to four cells at a time. A numeric keypad with four multi-purpose keys makes programming effortless. The LCD displays running conditions in large, easy-to-read numbers. A temperature probe allows automatic and precise operational temperature control between 5 and 60 °C during electrophoresis.

Quality Bis Solutions and Pre-Mixed Buffers
Bio-Rad acrylamide/bis solutions are made from 99.9% pure acrylamide and bis-acrylamide. The solutions are ready to use, in 30 or 40% concentrations and three crosslinker ratios of 19:1, 29:1 and 37.5:1. High purity reagents and carefully-controlled manufacturing conditions allow solutions to remain stable for up to one year, at 4 °C. Available in six different formulas, including 10x TBE, the premixed liquid concentrate buffers standardize electrophoresis runs and save preparation time.

It just might be the one system you'll ever need

Single-Strand Conformation Polymorphism
SSCP helps you detect sequence variations in PCR*-amplified fragments of DNA. This type of analysis requires uniform low temperature non-denaturing electrophoresis to maintain single-stranded DNA secondary structure. Sequence differences as small as a single base change can affect this structure and result in mobility shifts. Our unique heat dissipation design minimizes temperature variations that can affect sensitivity and reproducibility.

Single-Strand Conformation Polymorphism. Photo contributed by Richard A. Gatti, M.D., Department of Pathology, UCLA School of Medicine, Los Angeles, California.

Microsatellite Mapping (Short Tandem Repeats)
Microsatellite mapping is used in genetic linkage analysis to identify DNA polymorphisms. DNA is amplified by PCR to detect variations in simple-sequence tandem repeats (microsatellites). Differences as small as one tandem repeat (two base pairs) are possible. Nucleic acid sequencing gels are required for separation. Sequi-Gen GT is the perfect choice, with wide formats for high throughput analysis and multi-pipeter compatible combs to simplify sample loading.

Microsatellite analysis. Photo contributed by Catriona MacGeoch, David P. Kelsell and Nigel K. Spurr, Imperial Cancer Research Fund, United Kingdom.

Sequi-Gen GT is Ideal for Many Applications
The long, thin acrylamide gel format of Sequi-Gen GT provides excellent separation for DNA sequencing, SSCP, microsatellite analysis and other applications as well. Sequi-Gen GT is the one system you need for any method requiring base-pair resolution. The Integral Plate Chamber (IPC) heat dissipation system makes Sequi-Gen GT ideal for studies requiring lane-to-lane comparisons, especially those where individual bands may need to be excised. Simple gel casting, a variety of gel sizes, combs and spacers make the Sequi-Gen GT one of the most versatile electrophoresis systems your lab can have. Here are some of the other applications well-suited for Sequi-Gen GT.

- **Differential Display**
- **AFLP Analysis**
- **DNA Fingerprinting**
- **Heteroduplex Analysis**
- **DNA Footprinting**
- **RNase Protection Assays**
- **S1 Nuclease Mapping**
- **Primer Extension Analysis**
- **DNA/Protein Binding (Gel Shift Assays)**
- **Oligonucleotide Analysis**

Specifications

IPC Dimension	Actual Gel Area	Min. Buffer Volume Upper	Min. Buffer Volume Lower	Recommended Constant Power	Expected Voltage	Expected Current	Expected Temperature
21 x 40 cm	17 x 40 cm	500 ml	350 ml	40 W	1,600 V	25 mA	50 °C
21 x 50 cm	17 x 50 cm	550 ml	350 ml	50 W	2,000 V	25 mA	50 °C
38 x 30 cm	34.5 x 30 cm	700 ml	350 ml	70 W	2,200 V	32 mA	50 °C
38 x 50 cm	34.5 x 50 cm	1,400 ml	350 ml	80 W	2,500 V	32 mA	50 °C

Voltage, Current and Temperature are typical electrophoresis conditions for a 0.4 mm, 6% gel in 1x TBE.

Ordering Information

Sequi-Gen GT Systems

Cat. No. Product Description

165-3860 **Sequi-Gen GT System**, 21 x 40 cm

165-3861 **Sequi-Gen GT System**, 21 x 50 cm

165-3862 **Sequi-Gen GT System**, 38 x 30 cm

165-3863 **Sequi-Gen GT System**, 38 x 50 cm

Sequi-Gen GT systems include IPC assembly (IPC and bonded inner glass plate, outer glass plate, clamp set), universal base, safety covers with cables, stabilizer bar, precision caster assembly (precision caster base, gasket, tubing, luer tapers, tubing, syringe), 0.40 mm vinyl sharkstooth comb and spacers, gel temperature indicator, leveling bubble, drain port connector, instruction manual.

Sequi-Gen GT/PowerPac Systems

165-3802 **Sequi-Gen GT/PowerPac 3000 System**, 21 x 40 cm, 100/120 V

165-3805 **Sequi-Gen GT/PowerPac 3000 System**, 21 x 40 cm, 220/240 V

165-3803 **Sequi-Gen GT/PowerPac 3000 System**, 21 x 50 cm, 100/120 V

165-3806 **Sequi-Gen GT/PowerPac 3000 System**, 21 x 50 cm, 220/240 V

165-3810 **Sequi-Gen GT/PowerPac 3000 System**, 38 x 30 cm, 100/120 V

165-3811 **Sequi-Gen GT/PowerPac 3000 System**, 38 x 30 cm, 220/240 V

165-3804 **Sequi-Gen GT/PowerPac 3000 System**, 38 x 50 cm, 100/120 V

165-3807 **Sequi-Gen GT/PowerPac 3000 System**, 38 x 50 cm, 220/240 V

Sequi-Gen GT/PowerPac 3000 systems include the appropriate Sequi-Gen GT system, PowerPac 3000 power supply, temperature probe, instruction manual.

**The Polymerase Chain Reaction (PCR) process is covered by patents owned by Hoffmann-LaRoche. Use of the PCR process requires a license.*

Acrylamide/Bis Solutions

161-0154 **30% Acrylamide/Bis Solution**, 19:1, 500 ml

161-0155 **30% Acrylamide/Bis Solution**, 19:1, 2 x 500 ml

161-0144 **40% Acrylamide/Bis Solution**, 19:1, 500 ml

161-0145 **40% Acrylamide/Bis Solution**, 19:1, 2 x 500 ml

Premixed Buffer Solutions

161-0733 **10x Tris/Boric Acid/EDTA**, 1 L

161-0756 **10x Tris/Boric Acid/EDTA**, 6 x 1L

161-0741 **10x TBE Extended Range**, 1 L

161-0758 **10x TBE Extended Range**, 6 x 1L

For acrylamide/bis solutions, hazardous shipping charges may apply. Store at 4 °C. All other reagents should be stored at room temperature, dry and away from direct sunlight. Bulk and custom packaging is available. Contact your local representative or Bio-Rad for information.

Convert Older Systems to the New Casting Method

There are differences between the Sequi-Gen GT and older versions of Bio-Rad sequencing cells (Sequi-Gen II and original Sequi-Gen). Parts are not interchangeable between Sequi-Gen GT and previous models. However, replacement parts for older systems are available. To take advantage of the new casting method, you have the option of converting to horizontal gel casting by using a Sequi-Gen II precision caster adaptor kit. All combs and spacers are compatible with older Sequi-Gen models.

Sequi-Gen II Adaptor Kits

165-3850 **Sequi-Gen II Precision Caster Adaptor Kit**, 21 x 40 cm

165-3851 **Sequi-Gen II Precision Caster Adaptor Kit**, 21 x 50 cm

165-3852 **Sequi-Gen II Precision Caster Adaptor Kit**, 38 x 30 cm

165-3853 **Sequi-Gen II Precision Caster Adaptor Kit**, 38 x 50 cm

Sequi-Gen II adaptor kits include Precision Caster Assembly (base, gasket, adaptor spacers, syringe, tubing and luer tapers), Sequi-Gen II lever clamp set, leveling bubble, instruction manual.

BIO-RAD **Bio-Rad Laboratories**

Molecular Bioscience Group

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