



**TYLER**

Research Instruments Corporation

# *Horizontal Electrophoresis*



**Tyler Research Instruments Corporation** designs and manufactures precision instruments for biomedical research. The corporation was founded by a research biochemist in response to his own needs for innovative laboratory equipment. He established a precedent for application of the highest standards in instrument design and construction, a policy to which the corporation remains firmly committed.

Every Tyler Research apparatus is carefully engineered to provide peak performance at a competitive price. The instruments in this catalog have been refined and perfected through years of use in laboratories throughout the world.



A complete line of high precision horizontal gel electrophoresis systems from Tyler Research Instruments. Computer aided design and manufacturing techniques have enabled us to incorporate the advanced features demanded by researchers at very competitive prices:

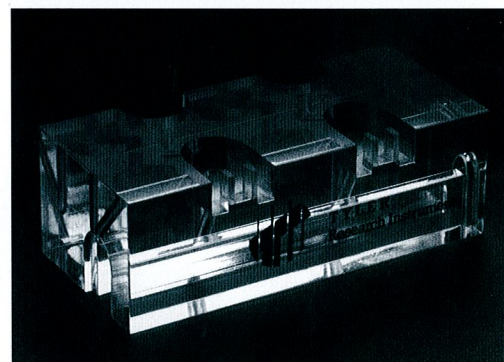
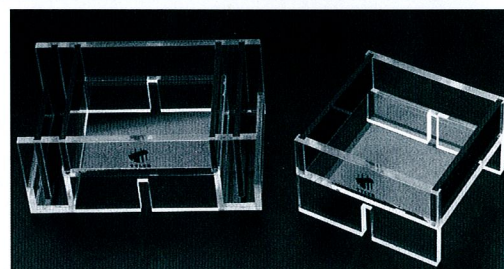
- Rugged construction for hard laboratory use
- Safety-interlocked hinged covers
- Ports and fittings for buffer recycling
- Submarine and agarose wick running modes in all units
- Fully adjustable analytical and preparative slot forming assemblies
- Ultrapure twisted pair platinum electrodes
- Uniform high flux electrical field strength
- Unique sliding gate technology for gel casting
- UV-blocking exterior shells and UV-transmitting gel beds and trays
- Custom modifications readily accommodated



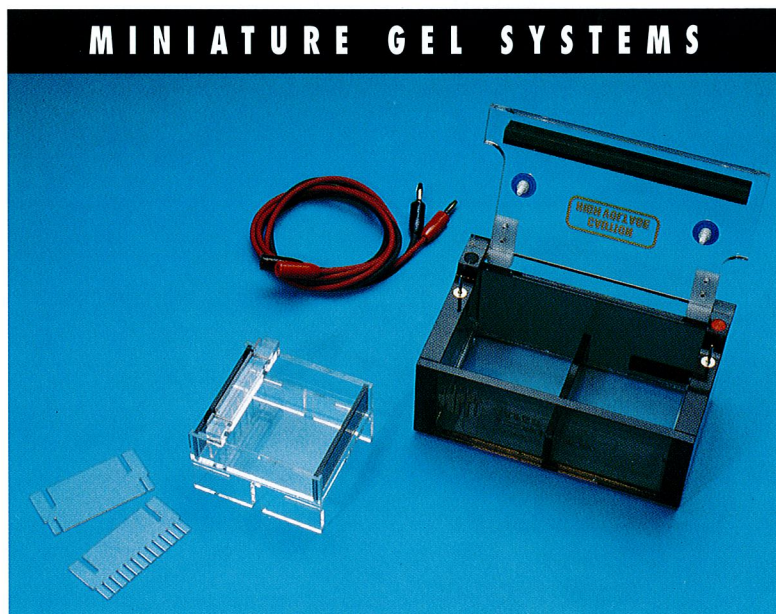
## HORIZONTAL GEL SYSTEMS



Seven classes of Tyler Research standard horizontal gel systems are available with gel bed dimensions ranging from 65mm x 65mm to 200mm x 250mm. The sliding gate design in all of these permits the pouring and running of gels of different lengths in the same unit (see the comparison matrix on the reverse of this brochure for detailed information relating to each model). This allows the investigator to conserve agarose whenever possible, while still permitting maximum resolution when required.



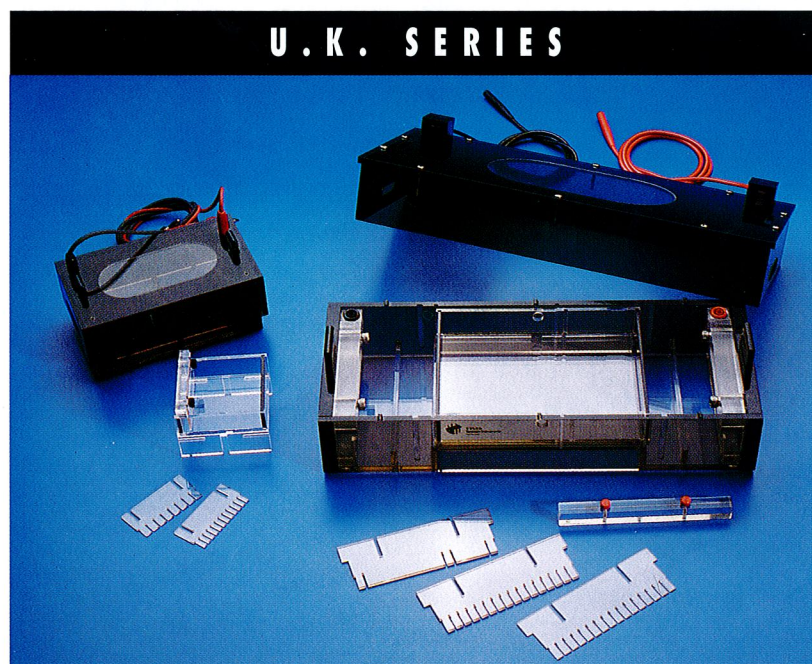
## MINIATURE GEL SYSTEMS



All Tyler Research horizontal systems may be run in both submarine and agarose wick formats. The latter is particularly useful for high resolution separation of RNA fractions, and the sliding gate system operates within a modified J-wick assembly that permits rapid gel preparation and safe disposal of potentially toxic gel waste.



The MB-10 MegaBase system is capable of resolving nucleic acids in the range of 1 kilobase to more than 10 megabases. Clean straight banding patterns are achieved through a hexagonal array of 24 platinum electrodes driven by a solid state switching circuit under software control. An infinite number of separation profiles may be programmed by the user through pulse width modulation in both steady state and ramping modes for analytical runs lasting as long as three weeks. The system includes an integrated 50 watt power supply, buffer recirculation pump and high performance heat exchange manifold for cooling the gel and buffer, 2 gel casting assemblies with slot formers, a mold for casting agarose sample plugs, RS-232 communications port and software. The MB-10 is suitable for control by any DOS-based computer (also available from Tyler Research).



Tyler Research manufactures a complete line of horizontal electrophoresis systems conforming to the stringent Cambridge University (U.K.) guidelines for safety interlocking. Any system described in this brochure may be ordered to these standards by using the suffix-UK after the model number (e.g. MHG-06UK and HG-12UK pictured at left). All such models feature full inversion-seal chambers and integral shrouded power cables.



## ISOELECTRIC FOCUSING SYSTEMS



The IEF-12 series units are exceptionally versatile, high precision isoelectric focusing systems. Two independent sets of surface and submarine platinum electrodes and high capacity thermoregulation ensure uniform, reproducible separation of complex samples. Because of their advanced design, in addition to isoelectric focusing the IEF-12 systems are ideally suited to high resolution agarose gel electrophoresis and two-dimensional peptide mapping.

In the IEF-12T, thermal control is achieved by means of a solid state peltier heat pump capable of extracting up to 40 watts of Joule heat and maintaining platen temperature to within fractions of a degree.

The operator simply sets the desired temperature (0-60°C) by means of the front panel display and the IEF-12T ramps to and maintains the setpoint. For labs on a tight budget, the economical IEF-12L employs a liquid-cooled platen designed for use with a re-circulating water bath.

IEF-12 gel beds measure 120mm x 200mm, and are capable of accepting any commercially prepared analytical isoelectric focusing gels. In addition, granulated matrices are readily accommodated for large scale purification of molecular structures focusing in discrete pH zones.



## PRODUCT COMPARISON MATRIX

MODEL	DESCRIPTION	SLOT FORMERS SUPPLIED	GEL SIZES (WxL)
<b>MHG-06</b>	Complete miniature horizontal gel system (65mm x 65mm), supplied with hinged safety-interlocked cover, UV-transparent gel tray, gel casting gates, analytical and preparative slot formers, slot former holder, power leads and instructions.	8-position x 1.5mm 12-position x 1.5mm Preparative x 1.5mm	65mm x 65mm
<b>MLB-06</b>	Complete long bed miniature horizontal gel system (65mm x 100mm), supplied with hinged safety-interlocked cover, UV-transparent gel tray, gel casting gates, analytical and preparative slot formers, slot former holder, power leads and instructions.	8-position x 1.5mm 12-position x 1.5mm Preparative x 1.5mm	65mm x 100mm
<b>MWB-12</b>	Complete miniature wide bed horizontal gel system (120mm x 65mm), supplied with hinged safety-interlocked cover, UV-transparent gel tray, gel casting gates, analytical and preparative slot formers, slot former holder, power leads and instructions.	16-position x 1.5mm 24-position x 1.5mm Preparative x 1.5mm	120mm x 65mm
<b>HG-12</b>	Complete horizontal gel system (120mm x 180mm), supplied with hinged safety-interlocked cover, UV-transparent gel tray, gel casting gates, analytical and preparative slot formers, slot former holder, power leads and instructions.	16-position x 1.5mm 16-position x 3.0mm Preparative x 3.0mm	120mm x 65mm 120mm x 100mm 120mm x 180mm
<b>HLB-12</b>	Complete long bed horizontal gel system (120mm x 250mm), supplied with hinged safety-interlocked cover, UV-transparent gel tray, gel casting gates, analytical and preparative slot formers, slot former holder, power leads and instructions.	16-position x 1.5mm 16-position x 3.0mm Preparative x 3.0mm	120mm x 80mm 120mm x 160mm 120mm x 250mm
<b>HG-20</b>	Complete horizontal gel system (200mm x 250mm), supplied with hinged safety-interlocked cover, UV-transparent gel tray, gel casting gates, analytical and preparative slot formers, slot former holder, power leads and instructions.	20-position x 1.5mm 20-position x 3.0mm Preparative x 3.0mm	200mm x 70mm 200mm x 85mm 200mm x 160mm 200mm x 250mm
<b>MB-10</b>	Complete MegaBase gel system (150mm x 150mm), supplied with hinged safety-interlocked cover, UV-transparent gel trays, gel casting assemblies and support, slot formers, mold for casting agarose plugs, 50 watt power supply, solid state switching circuitry, buffer recirculation pump, heat exchange manifold, connecting tubing, RS-232 communications port, and control software. Specify 115V or 230V.	12-position x 1.5mm 12-position x 3.0mm 16-position x 1.5mm 16-position x 3.0mm	100mm x 100mm 150mm x 150mm
<b>IEF-12L</b>	Complete isoelectric focusing system (120mm x 200mm), supplied with safety-interlocked cover, liquid-cooled platen, platinum submarine electrodes, fully adjustable platinum surface electrode arrays, gel casting gates and preparative gel gates, 20 acid/base electrode pads, 100 sample application filters, power leads and instructions.	20-position x 1.5mm 20-position x 3.0mm Preparative x 3.0mm	120mm x 200mm
<b>IEF-12T</b>	Complete isoelectric focusing system (120mm x 200mm), supplied with safety-interlocked cover, digitally controlled solid state Peltier cooled platen, platinum submarine electrodes, fully adjustable platinum surface electrode arrays, gel casting gates and preparative gel gates, 20 acid/base electrode pads, 100 sample application filters, power leads and instructions. Specify 115V or 230V.	20-position x 1.5mm 20-position x 3.0mm Preparative x 3.0mm	120mm x 200mm
<b>NOTE:</b>	Replacement parts and accessories for all units are detailed in the accompanying price list. For a U.K. version of any of the above systems, apply the suffix -UK to the model number (e.g. MHG-06UK) when ordering.		



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