

Liquid *assets*

BIOLOGIC LP LOW PRESSURE
LIQUID CHROMATOGRAPHY SYSTEM

BIO-RAD

THE BIOLOGIC LP LOW PRESSURE L

A VALUABLE ASSET FOR BIOMOLECULE PURIFICATION.

Achieving separations is remarkably easy and affordable with our BioLogic LP low pressure chromatography system. Here's a workstation that offers numerous user-friendly features, making it a truly valuable tool for the lab or cold room.

Incorporating the latest state-of-the-art amenities, the BioLogic LP System meets the needs of both novice and skilled chromatographers.

- The user-friendly programming and interface make overall operation exceptionally easy
- All-in-one compact design conserves valuable laboratory bench space
- From sample injection to fraction collection, the BioLogic LP System automates biochromatography – it frees you up to concentrate on other tasks
- The BioLogic LP System is easy and affordable to maintain

The following pages describe the BioLogic LP System in detail. Learn why it's one of the best assets you can have in your lab.

COMPONENTS OF THE BIOLOGIC LP SYSTEM:

- 1 Peristaltic Pump
- 2 UV Monitor
- 3 Gradient Monitor
- 4 Proportioning Valve/Mixer
- 5 Inject Valve
- 6 BioLogic Rack
- 7 Buffer Select Valve (optional)
- 8 Fraction Collector Divert Valve and Column Bypass Valve (both optional)
- 9 Dual Pen Chart Recorder (optional)
- 10 Model 2110 Fraction Collector (optional)



LIQUID CHROMATOGRAPHY SYSTEM.



THE BIOLOGIC LP SYSTEM IS PACKED WITH USER-FRIENDLY FEATURES.

- STORE UP TO 50 METHODS
- ALPHANUMERIC METHODS NAMING PROTOCOL
- CONTROL OF (UP TO) 5 BUFFERS
- TIME OR VOLUME-BASED PROGRAMMING
- IN-PROGRESS METHODS EDITING
- ONLINE, CONTEXT-SENSITIVE 'HELP' FUNCTION
- AUTOMATIC SENSING OF VALVE PRESENCE
- FLOW RATES TO 40 ML PER MINUTE
- PROGRAM UP TO 50 COLLECTION WINDOWS
- THREE PROGRAMMABLE ALARMS AND HOLD OPTION
- CONDUCTIVITY MONITORING
- STANDARD 280 NM AND 254 NM UV FILTERS
- CHOICE OF BIO-RAD 2110 OR 2128 COLLECTORS



INTUITIVE CONTROL PANEL GUIDE

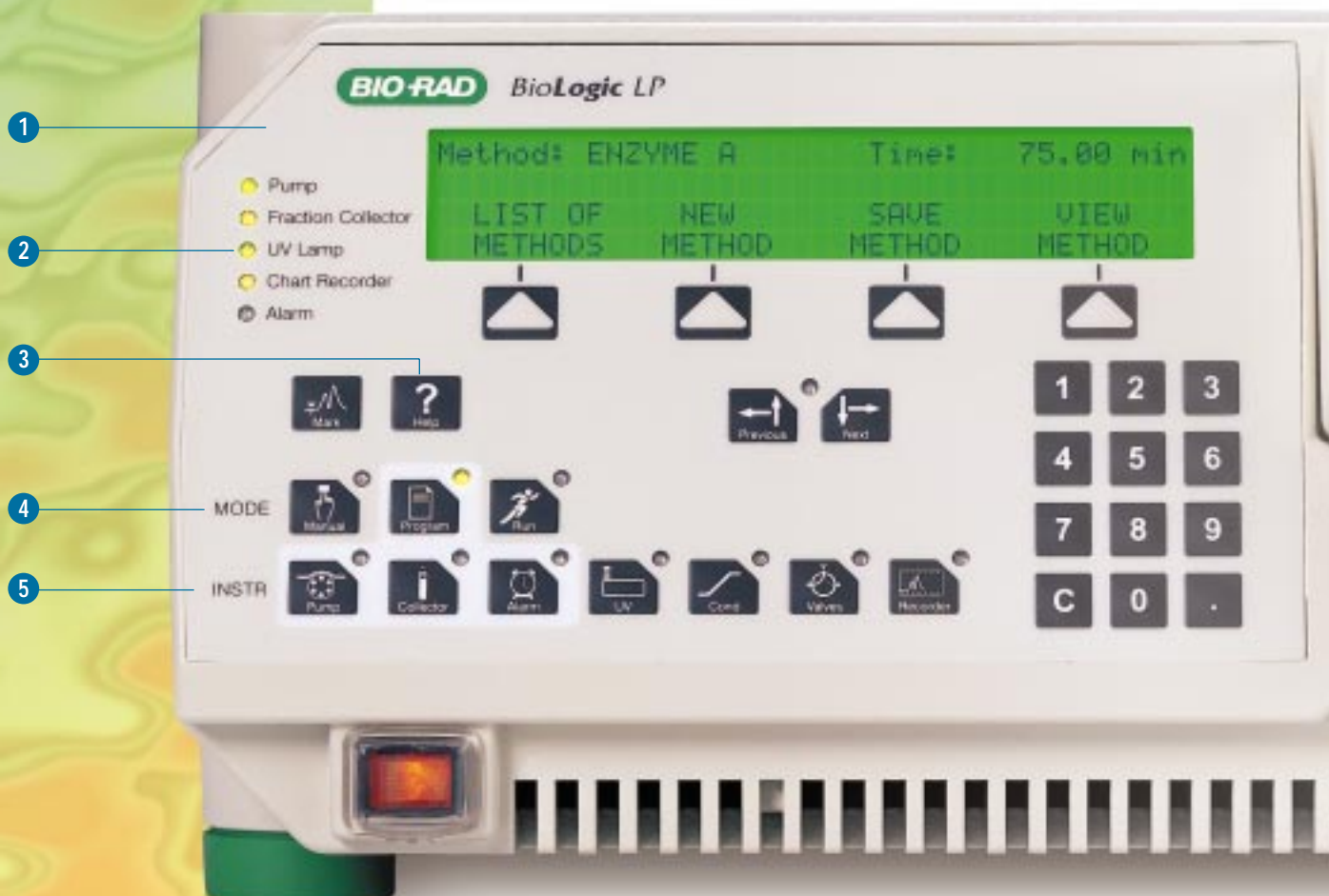
- 1 Single keypad control of all instruments
- 2 LED status light lets you know which component is operating
- 3 Online context-sensitive 'Help' offers immediate answers to questions
- 4 Selectable modes of operation
- 5 Instrument keys and icons address instruments independently

Running the BioLogic LP System is an almost effortless task. The front control panel offers a logical layout, as well as instrument keys with icons that are identifiable at a glance. And once you've actually tried the system, programming quickly becomes second nature.

One of the many advantages of the BioLogic LP System is the ability to *edit methods in progress*. You'll spend far less time trying to optimize your separation. Plus, the BioLogic LP stores commonly used methods indefinitely, so you spend less time preparing your separation.

Because the BioLogic LP *automatically senses valves*, there's no need for you to configure the system before writing and running a method – the BioLogic LP workstation does it for you!

In addition, *delay volume is completely programmable*; the fraction collector tubes and chart recorder fraction advance marks are synchronized, so you know exactly which tubes contain the peak of interest.



ES YOU THROUGH THE PROCESS.

The BioLogic LP System makes it easy to accomplish multiple tasks. *Three programmable alarms* let you program alert signals informing you when an action is needed during the separation process. The *alarm and hold functions* allow you to program the system to hold a method in progress until a corrective action has been completed. You're free to concentrate on other projects, knowing you'll be alerted when the separation requires attention.

LED SCREEN COMMUNICATES EACH MODE.

An easy-to-read and follow display is just one of the features that makes the BioLogic LP simple for everyone in the lab to use.



METHODS MODE

Store up to 50 methods on the BioLogic LP System. Each method can contain as many as 50 pump steps, up to 50 collection windows (with or without threshold values), and three programmable alarms.



TIME/VOLUME-BASED PROGRAM MODE

For greater application flexibility, choose between time and volume-based programming.



BUFFER SELECTION MODE

Customize the BioLogic LP System to fit your application needs, from binary gradient formation to control of up to 5 buffers.



FRACTION COLLECTOR MODE

Customize fraction collection – you can collect everything that elutes from a column during the run, or specify collection using collection windows, a UV threshold value, or a combination of both.



METHODS NAMING MODE

Personalize your methods with the alphanumeric naming protocol. You can name each method with up to 12 characters and spaces.

ADD PERIPHERALS, COLUMNS, AND

The BioLogic LP System is compatible with additional instruments recommended for top performance. This includes Bio-Rad's Valves, Fraction Collector Models 2110 and 2128, and the Model 1327 Chart Recorder. All are operated by the BioLogic LP Controller.



SV-5 BUFFER SELECT VALVE

For even greater flexibility, add the SV-5 Buffer Select Valve to your BioLogic LP System. You'll be able to access a total of 5 buffers or samples.



MODEL 2128 FRACTION COLLECTOR

This state-of-the-art collector accommodates a selection of racks for collection of any sample size, expanding your range of applications from analytical to preparative. You can collect overlay functions when the Model 2128 is connected to the BioLogic LP System's sophisticated collection control.



MODEL 2110 FRACTION COLLECTOR

Like the BioLogic LP System itself, this instrument is highly economical and user-friendly, enabling you to collect 0.1 - 10 ml fractions in 13 x 100 mm tubes or 1.5 ml micro test tubes. The Model 2110 Collector takes full advantage of the BioLogic LP System's sophisticated windows and threshold collection modes.



MODEL 1327 CHART RECORDER

This dual-channel chart recorder features automatically-controlled pen lift, paper start/stop, and event mark functions when connected to the BioLogic LP System. Its compact, flat bed design allows the chart recorder to fit neatly on the BioLogic Rack or alongside the instrument.

ND SUPPORTS TO YOUR SYSTEM.

GLASS ECONO-COLUMN® CHROMATOGRAPHY COLUMNS

The economical, high-quality choice for your BioLogic LP System. Maximum volumes of columns available range from 1 ml to over 1 liter. To optimize your sample application and buffer delivery, we recommend adding a flow adaptor to your Econo-Column column.

ECONO-PAC® CARTRIDGES

These prepacked chromatography columns last longer, flow faster, and often provide better resolution than self-prepared columns. Their prepacked convenience and low cost make them ideal for:

- First step purification of crude samples
- Methods development – an affordable way to test your method before scaling up
- Applications requiring frequent column disposal
- Single users – everyone can have their own set
- Devoting a cartridge to a single sample, eliminating the potential for cross contamination

Econo-Pac cartridges are available in 1 ml or 5 ml formats, packed with a range of Macro-Prep® supports. Up to three cartridges can be connected in series to triple sample capacity.

ALL THE SUPPORT YOU NEED

Bio-Rad offers a variety of chromatography supports and media for your applications, including Macro-Prep ion exchange, HIC, and ceramic hydroxyapatite.



BioLogic LP Specifications

Pump

Flow range	0.1-40 ml/min
Maximum counterpressure	30 psi (2 bar)
Gradient formation	Solenoid-activated proportioning valve. Mixer volume ~750 µl

Detection Performance

UV	Single channel, 280/254 nm with auto zero. Detection range: 0.001-2 AUFS
Conductivity	Detection range: 0.5-500 mS/cm FS

Temperature Range

4-40 °C

Sample loading

Manual loop fill
Automatic loading through SV-5
Buffer Select Valve

Fraction Collector Specifications

Model 2110 Fraction Collector

Capacity	Eighty 13 x 100 mm glass, polypropylene, or polystyrene test tubes, or 1.5 ml micro test tubes when using optional adaptor
Collection basis	1-999 drops in 1 drop increments 0.05-9.99 minutes in 0.01 minute increments 10.0-99.9 minutes in 0.1 minute increments
Materials of construction	Case and carousel: polypropylene Front panel: hard-coated polycarbonate Drop former: silicone rubber Waste outlet tube: polyurethane
Operating temperature	4-40 °C
Dimensions	24 x 33 x 25 cm (W x D x H)
Safety certification	Meets I.E.C. 1010 and C.S.A. 22.2

Model 2128 Fraction Collector

Fractionation	Time, drop or volume Time: 0.03-99.9 min in 0.1 min units Drop: 0-999 drops
Operating modes	Time, drop, time windows (20), peak detection, time windows plus peak detection
Peak detection	Threshold, including detection of maxima/minima for collection of double peaks above a set threshold
Flow rate capacity	Up to 100 ml/min; counts drops up to 5 ml/min
Detector input	± 0-10 mV, 0-100 mV, 0-1 V
Wetted parts	All non-metal, including Teflon, Tefzel, PPS, PEEK, Kel-F
Dimensions	30.5 x 42 x 24 cm (W x D x H) (unit with Rack 1)
Safety certification	Meets I.E.C. 1010 and C.S.A. 22.2

BioLogic LP Ordering Information

Catalog Number

Product Description

731-8300	Standard BioLogic LP System , 110/120 V, includes BioLogic LP Controller, BioLogic Rack, and Accessory Kit containing inject valve (MV-6), proportioning valve/mixer, (Econo) UV optics, conductivity cell, tubing and fittings kit, user manual, starter kit and conductivity cell/column holder
731-8301	Standard BioLogic LP System , same as 731-8300 except 220/240 V
731-8302	BioLogic LP System with 2110 Fraction Collector , 110/120 V, includes BioLogic LP Controller, BioLogic Rack, and Accessory Kit containing inject valve (MV-6), proportioning valve/mixer, (Econo) UV optics, conductivity cell, tubing and fittings kit, user manual, starter kit and conductivity cell/column holder, plus Model 2110 Fraction Collector.
731-8303	BioLogic LP System with 2110 Fraction Collector , 220/240 V
731-8304	BioLogic LP System with 2128 Fraction Collector , 110/120 V, includes BioLogic LP Controller, BioLogic Rack, and Accessory Kit containing Inject valve (MV-6), proportioning valve/mixer, (Econo) UV optics, conductivity cell, tubing and fittings kit, user manual, starter kit and conductivity cell/column holder, plus Model 2110 Fraction Collector.
731-8305	BioLogic LP System with 2128 Fraction Collector , 220/240 V
731-8306	BioLogic LP System with 2110 Fraction Collector and chart recorder , 110/120 V, includes BioLogic LP Controller, BioLogic Rack, and Accessory Kit containing Inject valve (MV-6), proportioning valve/mixer, (Econo) UV optics, conductivity cell, tubing and fittings kit, user manual, starter kit and conductivity cell/column holder, plus Model 2110 Fraction Collector and Model 1327 Chart Recorder.
731-8307	BioLogic LP System with 2110 Fraction Collector and chart recorder , 220/240 V
731-8308	BioLogic LP System with 2128 Fraction Collector and chart recorder , 110/120 V, includes BioLogic LP Controller, BioLogic Rack, and Accessory Kit containing Inject valve (MV-6), proportioning valve/mixer, (Econo) UV optics, conductivity cell, tubing and fittings kit, user manual, starter kit and conductivity cell/column holder, plus Model 2110 Fraction Collector and Model 1327 Chart Recorder.
731-8309	BioLogic LP System with 2128 Fraction Collector and chart recorder , same as 731-8308 except 220/240 V

All specifications subject to change without notice.

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Laboratories**

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