



**BioLogic™** LP System  
Low-Pressure Liquid Chromatography



# BioLogic LP System

Low Pressure Liquid Chromatography

The BioLogic LP system is a valuable asset for biomolecule purification. Protein separations are achieved with the easy-to-use, flexible, space-saving, and modular features of the BioLogic LP low pressure chromatography system. This workstation offers numerous user-friendly features, making it a truly valuable tool for either the lab or the cold room.

### Common Applications

- Affinity purification
- Tagged protein purification
- Monoclonal antibody purification

The BioLogic LP System meets the needs of both novice and expert users with:

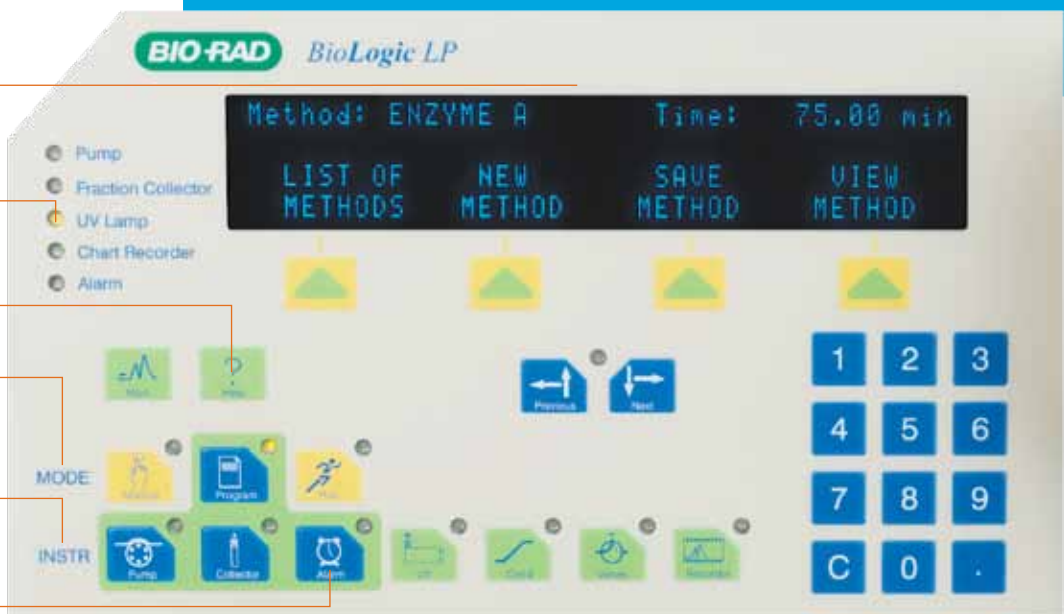
- User-friendly programming and control interface, making overall operation exceptionally easy
- An all-in-one compact design to conserve valuable laboratory bench space
- A system that achieves reproducible separations with confidence
- Flexible compatibility with all low-pressure columns

## Easy to Use

Intuitive control panel guides you through the process

- Store up to 50 methods
- Program or edit methods during a run
- Program up to 50 fraction collection windows
- Delay volume is completely programmable for easy identification of which tubes contain the peak of interest
- Customize fraction collections (program up to 50 collection windows) — UV threshold value and/or fraction collection windows

- Single keypad control of all instruments
- LED status light lets you know which component is operating
- Online context-sensitive Help offers immediate answers to questions
- Selectable modes of operation
- Instrument keys and icons address instrument components independently
- 3 programmable alarms and hold option to indicate when an action is needed



# BioLogic LP System Tour

Flexible, space-saving, and modular system

## Manual Inject Valve

flexible control of sample application, accommodating user-made loops of any volume

## Gradient Mixer/Valve

allows high-accuracy gradient formation

## Buffer Select Valve (Optional)

selective control of up to five buffers and automatic injection of large-volume samples

## BioLogic LP Data View Software

record chromatograms, enable easy rescaling of chromatogram axes — multitask during chromatogram data capture and print to any printer



#### UV Monitor

single-wavelength, high-sensitivity detector (0.001 AUFS)

#### Gradient Monitor

conductivity monitoring

#### Fraction Collector Divert Valve and Column Bypass Valve (Both Optional)

two-position solenoid valve for directing effluent flow from the column to a bypass position or from the fraction collector to a waste position

#### BioLogic Rack

adaptable solvent-resistant racking system; expansion options are available for custom racking applications

#### Peristaltic Pump

capable of generating flow rates ranging from 0.05–40 ml/min and a maximum backpressure of 30 psi (2 bar, 0.2 MPa)



#### BioFrac™ Fraction Collector

The BioFrac fraction collector offers flexibility with numerous collection rack options, including both custom and off-the-shelf collection racks. The custom racks provide a wide range of collection capability, from 1 drop (~50 µl) to 99 liters. Off-the-shelf racks extend the versatility of collection schemes and provide cost-effective storage of samples. Off-the-shelf racks are autoclavable, can be easily assembled, and lie flat, requiring little storage space.

#### Key features include:

- Time, drop, or volume collection
- Collection of peaks by peak detection, time windows (up to 20), or a combination of both
- Drop arm movement in an x, y motion over each collection vessel; column, row, or serpentine pattern option available for microplates or tubes
- Dispenser arm that is manually adjustable to tube heights up to 150 mm
- Numerous off-the-shelf racks to accommodate tubes (12–20 mm diameter), microtubes (0.5, 1.5, or 2.0 ml), or scintillation vials
- Optional BioFrac ice bath/microplate rack with tube grips that hold tubes firmly in any position; ice bath rack allows cooling of 13 mm tubes or microplates and tubes that adhere to SBS standards
- Optional BioFrac prep-20 preparative rack with up to 20 collection ports for collection from bottles to carboys
- Optional microplate drophead kit for precise collection of small volumes into microplates
- Manual-advance tube changes
- Cold room compatible
- Small footprint of 44.5 x 35.6 x 38.7 cm

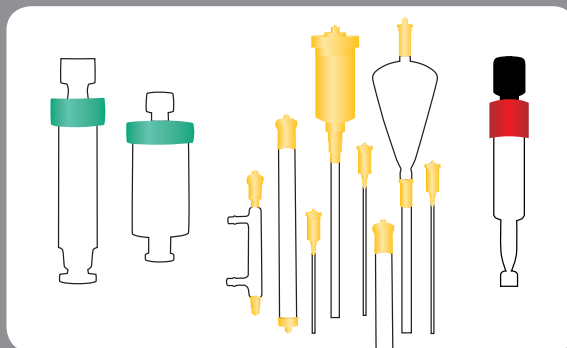


#### Model 2110 Fraction Collector

The easy-to-use Model 2110 fraction collector provides multiple collection modes for chromatographic separations.

#### Key features include:

- Time, drop, and volume collection
- Collection of 1 drop (~50 µl) to 9 ml fractions in 80 test tubes or microtubes (with optional adaptor)
- Manual-advance tube changes
- Cold room compatible
- Small footprint of 24 x 33 cm



#### Compatible Columns

The BioLogic LP System is compatible with all low-pressure columns

- Bio-Scale™ Mini cartridges
- Econo-Column® columns
- HiTrap columns

#### Low-Pressure System Fittings Kit (catalog #731-8220)

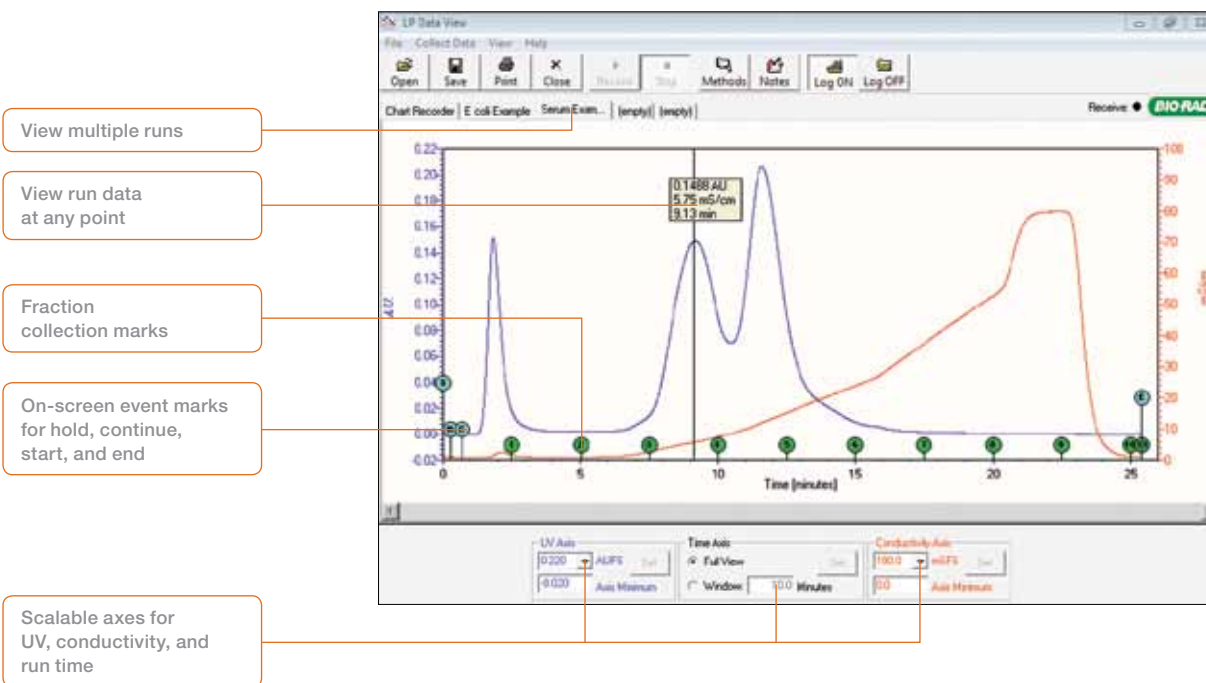
For the Chromatography Column Connection Guide, request bulletin 5326.

# BioLogic™ LP Data View™ Software

Simple, easy-to-use software to record chromatograms

## Advantages of the BioLogic LP Data View Software

- Automatically collects UV and conductivity data from the BioLogic LP system using any PC running Windows XP or Windows 7
- All three axes — UV, conductivity, and run time — can be rescaled independently both during and after data collection
- Automatically records method information for each run and allows notes to be recorded with the data
- Automatically records run events such as start, end, fraction advance, pause, hold, continue, and user event mark
- Includes a data logging feature, which can be used to record all data rather than only chromatogram run data, and prevents loss of information in the event of a power failure
- Selected parts of either run data or logged data can be saved in independent data files
- Prints customized reports
- Exports data to other applications, such as Microsoft Excel



## Specifications

### BioLogic LP Specifications

#### Pump

Flow rate 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

#### Sample loading

4–40°C  
Manual loop fill  
Automatic loading through SV-5  
Buffer Select Valve

### Fraction Collector Specifications

#### BioFrac Fraction Collector

##### Collection modes

Time	0.02–99,999 min
Drop	1–99,999 drops, flow rate ≤5.0ml/min
Volume	0.02–99,999 ml

##### Collection rack options

180 x 12–13 mm tubes, 120 x 15–16 mm tubes, 80 x 18–20 mm tubes, 168 x 1.5 ml microtubes, 24 x 30 mm tubes, 4 x 96, 48, 24 or 12 position microplates, and 20 x unlimited preparative volumes adaptor

##### Operating temperature

4–40°C

##### Dimensions (W x D x H)

44.5 x 35.6 x 38.7 cm

##### Safety

Meets IEC 61010 and CSA 22.2 certification

#### 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

##### Construction

Case and carousel: polypropylene  
Front panel: hard-coated polycarbonate  
Drop former: silicone rubber  
Waste outlet tube: polyurethane

##### Operating temperature

4–40°C

##### Dimensions (W x D x H)

24 x 33 x 25 cm

##### Safety

Meets IEC 1010 and CSA 22.2 certification

## Related Product Literature

Description	Bulletin #
Bio-Scale Mini Cartridges	5584
Chromatography Column Connection Guide	5326
Empty Column Selection Guide	2289
Prepacked Cartridge Selection Guide	See website

## Ordering Information

### BioLogic LP System

Catalog#	Description
731-8300	<b>Standard BioLogic LP System</b> , 100/120 V, includes BioLogic LP controller, BioLogic rack, and accessory kit containing inject valve (MV-6), proportioning valve/mixer, UV optics, conductivity cell, tubing and fittings kit, conductivity cell/column holder, user manual, and starter kit
731-8301	<b>Standard BioLogic LP System</b> , same as 731-8300 except 220/240 V

### BioLogic LP System + BioFrac Fraction Collector

731-8304	<b>BioLogic LP System with BioFrac Fraction Collector</b> , 110/120 V, includes standard BioLogic LP system, system cables 3 and 15
731-8305	<b>BioLogic LP System with BioFrac Fraction Collector</b> , 220/240 V
731-8338	<b>BioLogic LP System with BioFrac Fraction Collector and LP Data View Software</b> , 110/120 V, includes system cables 3 and 15
731-8339	<b>BioLogic LP System with BioFrac Fraction Collector and LP Data View Software</b> , 220/240 V

### BioLogic LP System + Model 2110 Fraction Collector

731-8302	<b>BioLogic LP System with Model 2110 Fraction Collector</b> , 110/120 V, includes BioLogic LP system, SV-3 diverter/bypass valve, system cable 1, plus Model 2110 fraction collector
731-8303	<b>BioLogic LP System with Model 2110 Fraction Collector</b> , 220/240 V
731-8336	<b>BioLogic LP System with Model 2110 Fraction Collector and LP Data View Software</b> , 110/120 V, includes SV-3 diverter/bypass valve, system cable 1
731-8337	<b>BioLogic LP System with Model 2110 Fraction Collector and LP Data View Software</b> , 220/240 V

### Fraction Collectors

731-8122	<b>Model 2110 Fraction Collector</b> , 100/120 V, carousel-type fraction collector, 80 tube capacity, for use in chromatographic separations
731-8120	<b>Model 2110 Fraction Collector</b> , 220/240 V, carousel-type fraction collector, 80 tube capacity, for use in chromatographic separations
741-0002	<b>BioFrac Fraction Collector</b> , 100/240 V, fraction collector, includes power cord, rack set F1 (2 x flatpack, 13 mm), BioFrac diverter valve, fittings kit

### Valves

731-8321	<b>SV-5 Buffer Select Valve</b> , 5-port, 4-position solenoid random-access valve, 30 psi (2 bar) limit
731-8320	<b>MV-6 Manual Inject Valve</b> , 6 ports
731-8322	<b>SV-3 Diverter/Bypass Valve</b> , 3-way valve

### Software

731-8365	<b>LP Data View Software for BioLogic LP System</b> , includes software CD, port adaptor
----------	--

Excel, Windows 7, and Windows XP are trademarks of Microsoft Corporation.

HiTrap is a trademark of GE Healthcare group companies.



**BIO-RAD**

**Bio-Rad  
Laboratories, Inc.**

Life Science  
Group

**Web site** [www.bio-rad.com](http://www.bio-rad.com) **USA** 800 424 6723 **Australia** 61 2 9914 2800 **Austria** 01 877 89 01 **Belgium** 09 385 55 11 **Brazil** 55 11 5044 5699  
**Canada** 905 364 3435 **China** 86 21 6169 8500 **Czech Republic** 420 241 430 532 **Denmark** 44 52 10 00 **Finland** 09 804 22 00  
**France** 01 47 95 69 65 **Germany** 089 31 884 0 **Greece** 30 210 9532 220 **Hong Kong** 852 2789 3300 **Hungary** 36 1 459 6100 **India** 91 124 4029300  
**Israel** 03 963 6050 **Italy** 39 02 216091 **Japan** 03 6361 7000 **Korea** 82 2 3473 4460 **Mexico** 52 555 488 7670 **The Netherlands** 0318 540666  
**New Zealand** 64 9 415 2280 **Norway** 23 38 41 30 **Poland** 48 22 331 99 99 **Portugal** 351 21 472 7700 **Russia** 7 495 721 14 04  
**Singapore** 65 6415 3188 **South Africa** 27 861 246 723 **Spain** 34 91 590 5200 **Sweden** 08 555 12700 **Switzerland** 061 717 95 55  
**Taiwan** 886 2 2578 7189 **Thailand** 800 88 22 88 **United Kingdom** 020 8328 2000