



# Specifications

## PLC 2020 Personal Purification System

### Detector

Microprocessor-controlled absorbance detector providing dual wavelength detection

- Dual, variable wavelengths
- Range: 190–700 nm
- Spectral bandwidth: 9 nm
- Setting accuracy:  $\pm 2$  nm
- Setting precision:  $\pm 0.2$  nm

### Flow Cell

- Preparative 0.2 mm pathlength, 0.7  $\mu$ L
- Preparative 0.05 mm pathlength, 0.16  $\mu$ L
- High pressure preparative 0.5 mm pathlength, 2.0 mL

### Pumping System

- \* • **25SC Pump Head**
  - Flow: 1–25 mL/min
  - Pressure: 4060 psi (280 bar)
- \* • **50SC Pump Head**
  - Flow: 1–50 mL/min
  - Pressure: 2030 psi (140 bar)
- \* • **100SC Pump Head**
  - Flow: 1–100 mL/min
  - Pressure: 1015 psi (70 bar)

#### Flow Rate Accuracy:

$\pm 1\%$  of requested composition

#### Minimum Flow Rate Adjustment:

0.01% of Pump Head Size

#### Mixing Volume:

2.87 mL

#### Composition Accuracy:

$\pm 2\%$

#### Gradient Linearity:

1–99% using Pump B

\* 1 mL/min flow rates are for Analytical Scout Runs and will show delays in gradient response time.

### Solvent Selection

- Up to 4 solvents selectable on Pump B
- 20  $\mu$ m inlet solvent filter

### Injection

Manual 0.030" bore valve with electronic actuator

### Loop Sizes

100  $\mu$ L–5 mL (or greater)

### Injection Syringe

10 or 1 mL with disposable syringe (20 gauge needles)

### Fraction Collection Valve

**Valve Dead Volume:** 144  $\mu$ L internal volume; 6  $\mu$ L dead volume from common port to normally closed port

**Flow Rate:** 200 mL/min

**Valve Switching Speed:** < 20 ms

**Liquid Contact Material:** PTFE and 316 Stainless Steel

### Fraction Capacity (3 Racks)

- 13 x 100 mm (180) test tubes
- 15 x 45 mm (144) test tubes
- 16 x 100 mm (144) test tubes
- 16 x 150 mm (144) test tubes
- 18 x 150 mm (132) test tubes
- 20 and 40 mL (42) Scintillation vials
- Custom racks available

### System Controller

- Chemical resistant 10" WSVGA TFT Touch Panel PC
- 5-wire resistive touchscreen
- 1.6 GHz Intel Atom processor
- 2 GB of RAM
- 160 GB internal hard drive

### Connections

- Contacts: 2 input and 2 output
- 24 V Output
- USB ports for keyboard, mouse and/or printer connection
- Ethernet

### Dimensions (w x d x h)

42.5 x 57.5 x 75 cm  
17" x 23" x 30" in

### Environmental Conditions

**Altitude:** up to 2000m

**Temperature Range:** 5°–40°C,

**Humidity:** Maximum relative humidity 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C



# PLC 2020

## Personal Purification System



PREPARATIVE CHROMATOGRAPHY SOLUTIONS  
FLASH – NORMAL PHASE – REVERSE PHASE



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Purification Solutions from the Purification Leader



# HPLC in a Box

Performs various techniques

- FLASH
- Normal Phase
- Reverse Phase

Superior resolution  
than FLASH

Save time—no need  
to purify sample  
multiple times in order  
to get separation



now available  
**NEW**  
now available

# PLC 2020 Purification System

It's Your Chemistry ... *Make it Personal!*

A fully-functioning purification system in a small, compact footprint, the PLC 2020 Personal Purification System was developed in response to the growing need for an easy-to-use, self-contained system to handle a chemist's purification needs on a more personal level. The PLC 2020 Personal Purification System is ideally suited for low-throughput, high pressure purification needs and is intended to support an individual or a small group of chemists.



## Running the System is as Easy as ...

- 1 Press Run button from Main Menu screen



- 2 Select Method & press Run



- 3 Load & Inject sample



- Intuitive, easy-to-use software interface allows you to be purifying compounds in minutes



- Real-time, graphical gradient modifications and real-time sample tracking during run
- Monitor the progress of the system without being next to it as run light indicators, illuminating the bed during a run, turn off when a run is complete and flash if an error has occurred.
- Easily download/upload methods and results via USB drive.
- Conditional logic fraction collection based on up to two detector channels using any combination of Slope and/or Level
- Determine your optimum flow range with interchangeable pump heads.
- Auto-Print and Auto-Export of sample reports at the end of a run

**GILSON**

*A robust system true to its name to last through the years.*