



# GPC CLEANUP AUTOMATION THAT IMPROVES DATA

## AUTOMATED GPC CLEANUP FOR IMPROVED DATA QUALITY AND LAB EFFICIENCY

The VERITY® GPC Cleanup System is a fully integrated, automated solution for sample cleanup prior to GC, LC, and MS analysis. Based on Size Exclusion Chromatography (SEC), it removes high-molecular-weight contaminants (lipids, proteins, pigments, and humic substances) while recovering analytes of interest in a clean solvent fraction.

### KEY BENEFITS

- Improves analytical accuracy, sensitivity, and reproducibility
- Reduces matrix effects and sample rework
- Extends GC/LC column life and minimizes downtime
- Enables high-throughput, unattended operation

### TYPICAL APPLICATIONS

#### Used for cleanup of:

- Pesticides, PCBs, PAHs, antibiotics, plasticizers, dyes, endocrine disruptors
- Sample matrices including food, tissue, soil, sediment, sludge, and wastewater

### PERFORMANCE AND THROUGHPUT

#### High Capacity and Efficiency

- Processes up to 80 samples unattended
- Reduces manual intervention and increases lab productivity

#### Flexible Operation

- Compatible with glass and stainless steel GPC columns
- Supports multiple fractions per sample and repeated injections
- Configurable racks and collection vessels
- Expandable to SPE or isocratic HPLC workflows



verity®

GPC CLEANUP

### Sample Integrity and Reliability

- Direct injection minimizes sample loss (no loop overflow required)
- Independent flow paths reduce cross-contamination risk
- Built-in probe rinsing and optional liquid level sensing
- Fraction valve placement minimizes dead volume and carryover
- Optional septum piercing maintains closed-sample integrity

### User-Friendly Software (TRILUTION® LC)

- No programming required; ready-to-run GPC methods included
- Adjustable fraction collection windows using calibration data
- Flexible rack and vessel configuration
- Integrated error handling reduces solvent waste and sample loss

### Regulatory Compliance

#### Meets major global guidelines:

- USEPA, USDA, FDA, USGS, CDC
- EU (EN 1528, EN 12393), AOAC, JIS, GB/T 14552
- Optional UV detector supports post-extraction compliance verification

### THE VERITY GPC CLEANUP SYSTEM SUPPORTS:

- Automated cleanup prior to GC, LC, and MS analysis
- Multiple fractions per sample and repeated injections
- Configurable racks, collection vessels, and column options
- Expansion to SPE or isocratic HPLC workflows
- Glass and stainless steel GPC column compatibility
- Integrated TRILUTION® LC Software with ready-to-run GPC methods

## TECHNICAL SPECIFICATIONS

PUMPING SYSTEM	
Isocratic Pump	VERITY® 3011 Isocratic Pump: Reciprocating pump with single-piston, quick-connect pump head, integrated pulse dampener and pressure sensor
Flow Rate Range	50 µL/min to 10 mL/min with 10 SS pump head
Flow Accuracy	±2% of the requested flow rate with water 10 SS Pump Head: 0.1 to 10 mL/min
Flow Precision	< 1% relative standard deviation (RSD) with water 10 SS Pump Head: 0.1 to 10 mL/min
Operating Pressure	0-600 bar (0-8702 psi)
Power Requirements	Line Voltage: 120 to 240 V Frequency: 50 to 60 Hz Power Consumption: 75 W
Dimensions (W x D x H)	27.1 x 41.2 x 17.3 cm (10.7 x 16.3 x 6.8 in)



VERITY® 3011 Isocratic Pump

AUTOSAMPLER / FRACTION COLLECTOR	
Automated Liquid Handler	GX-271 Liquid Handler with GX Direct Injection Module
Injection Volume	20 µL to 5 mL (5 mL standard loop)
Syringe Pump	VERITY® 4020 Single Syringe Pump with 10 mL Syringe
Vertical Punch Strength	4.5 kg (10 lb.) for septum piercing
Sample Rack Capacity Options	13 x 100 mm tubes, 16 x 100 mm tubes Other options available upon request
Collection Rack Capacity Options	<ul style="list-style-type: none"> <li>• 25 x 200 mm tubes</li> <li>• 38 x 200 mm tubes</li> <li>• Boston round bottles (125 mL)</li> <li>• Evaporator tubes (50 mL and 200 mL)</li> <li>• Labconco RapidVap vessels (100 mL flat and 450 mL flat)</li> <li>• Round flasks (125 mL and 250 mL)</li> <li>• Other options available upon request</li> </ul>
Power Requirements	Frequency: 50 to 60 Hz Current rating: 2.0A for 100-120 V, 1.0A for 220-240 V Power consumption: 250W
Dimensions (W x D x H)	59.7 x 54.1 x 57.1 cm (23.5 x 21.3 x 22.5 in) <b>Note:</b> This does not include the VERITY® 4020 Single Syringe Pump or Z-arm



VERITY® 4020 Syringe Pump and  
GX-271 Liquid Handler

## TECHNICAL SPECIFICATIONS CONTINUED

### UV-VIS DETECTOR (OPTION)

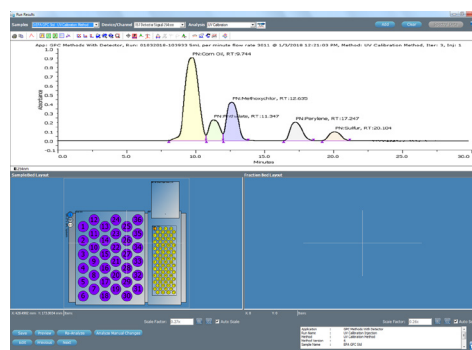
<b>Detector</b>	VERITY® 1741 UV-VIS Detector
<b>Wavelength Range</b>	200–800 nm (256 CCD elements)
<b>Flow Cell</b>	Maximum pressure for all flow cells is 6 MPa (870 psi, 60 bar) Flow cell, 1.3 mm pathlength, 1/16" stainless steel tubing
<b>Power Requirements</b>	Voltage: 100–240 VAC Frequency: 50/60 Hz
<b>Dimensions (W x D x H)</b>	37 x 14.9 x 45.5 cm (14.6 x 5.9 x 17.9 in)



VERITY® 1741 UV-VIS Detector

### GENERAL SPECIFICATIONS

<b>Software Control</b>	TRILUTION® LC Software v4 or above
<b>GPC Cleanup Columns</b>	Compatible with various columns from low pressure glass to high pressure stainless steel
<b>Dimensions of System Organizer (W x D x H)</b>	39.2 x 37.9 x 93.7 cm (15.5 x 14.9 x 36.9 in)
<b>Environmental Conditions</b>	Indoor use Altitude: up to 2000 m Temperature range: 5°C–40°C Humidity: Maximum relative humidity 80% for temperatures up to 31°C, decreasing linearly to 50% relative humidity at 40°C
<b>Safety and Compliance</b>	VERITY GPC System instruments have been certified to safety standards specified for Canada, Europe, and the United States. Refer to the instrument labeling and the Declaration of Conformity documents for the current standards to which each has been found compliant.



TRILUTION® LC Software