

# *From Sample to Vial*

Automated Sample Prep Solutions

Extraction • Cleanup • Concentration



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# PowerPrep® GPC

The PowerPrep GPC® system is a low cost automated Gel Permeation Chromatography system designed to separate synthetic macromolecules such as pesticides, PCBs, PAHs etc. from interfering compounds. It uses glass or teflon columns packed with styrene-divinylbenzene resin beads to perform sample clean-up using size exclusion chromatography technique. The samples are loaded onto the column, then washed and collected in the appropriate fraction vessels. The PowerPrep GPC system greatly simplifies sample cleanup through its unattended operation, increased speed and precision. Options such as different types of columns, UV detector and a PC allow versatility in a sample type, automatic monitoring, data recording and programmable control over all aspects of the separation procedure.

The PowerPrep GPC system can automate pesticide sample cleanup procedures specified by the US EPA and FDA methods. The modularity and expansion features of the GPC-Prep allow the user to expand the system for use in other applications such as the separation of Dioxins and PCBs from environmental and biological samples.



*The PowerPrep GPC/ Parallel System is modular & expandable from one to four modules processing 2 to 8 samples simultaneously*

## Applications

Pesticides, PCBs, PAHs, Dioxins, Furans

## Supported EPA Methods

Methos 3649 Gel Permeation Cleanup

## Cost Effective Expandable Systems

The PowerPrep GPC system fits into the smallest budget. With its modular design, you can cost effectively automate your sample clean-up procedure by purchasing one module and expand it to 5, 10, 15 or up to 40 samples as needed.

The PowerPrep GPC system provides major savings in solvents and glassware as compared with the amounts typically required in manual procedures. With FMS's low cost pre-packed Teflon columns the savings become more substantial.



*PowerPrep GPC /Sequential system processes 5 samples sequentially*

**PowerPrep GPC system includes:**

- Main Controller
- Sample Processing Module
- UV detector
- Pre-packed Teflon or Glass Column

**Easy Monitoring With The UV detector**

UV detector with a 254 nm flow cell is used for easy column calibration and monitoring the elution profile.

**Enhanced Monitoring & Real Time Plotting**

The PowerPrep GPC controls all the fluid handling, including the pump, valves and columns. The entire separation procedure, including sample loading, column washing, elution and peak separation, is coordinated by the GPC controller. The Editor function allows the operator to create, review and run various separation protocols. The PowerPrep GPC also plots, displays and stores the separation data.

**Column Calibration**

Flow: 5ml/min

Detector: UV, 254 nm

Columns:

- 450 x 25 mm Glass column
- 300 x 20 mm Pre-Packed Teflon column
- 150 x 20 mm Pre-Packed Teflon column

**Standard CLP Calibration Standard**

- Corn oil (125 mg)
- Diethyl phthalate (5 mg)
- Methoxychlor (1 mg)
- Perylene (0.1 mg)
- Sulfur (0.4 mg)

**System Configurations:****PowerPrep GPC /P Parallel System**

This system is modular and expandable from 2 to 8 samples. The samples are loaded and processed simultaneously

**PowerPrep GPC /S Sequential system**

The PowerPrep GPC basic system consists of one or more modules where each module can sequentially process up to five samples automatically and unattended. By upgrading from one to up to eight modules, you can expand the system's capability from 5 to up to 40 samples, where all modules are processed in parallel.

**Gel Permeation Chromatography** is a size exclusion technique. Large compounds, greater than the molecular exclusion limit, pass through the column unhindered, whereas small compounds, within the molecular weight operating range, will be retained in the column. The small compounds permeate the pores of the styrene-divinylbenzene beads, and thus they take longer to pass through the column.



*The PowerPrep Parallel GPC System is expandable from one to four modules and can process eight samples at the same time.*



*SuperVap concentration system for one step GPC clean-up and concentration for fast analysis*





## Columns:

### Glass Columns

These columns are packed with SDVB resin beads. The innovative design of these glass columns allows you to adjust the gel bed height for better reliability and turbulence-free applications.

### Teflon Columns

FMS's pre-packed disposable Teflon columns employ a proprietary design that allows up to a 70% solvent reduction. These columns are easy to use and dramatically reduce elution time.

## Specifications

Dimensions: 15" W x 18" D x 35" H

Weight: 65 lbs.

Pump: Piston Displacement

Flow rate: 0.2 to 15ml/minute

Electrical Input: 110/220 Volts, 50/60 HZ

Controller: PC Integrated Touch Screen Control

## Ordering information

PowerPrep GPC / Parallel

Part number Description

PowerPrep GPC/P2	2 sample GPC, 1 module
PowerPrep GPC/P4	4 sample GPC, 2 modules
PowerPrep GPC/P6	6 sample GPC, 3 modules
PowerPrep GPC/P8	8 sample GPC, 4 modules

### PowerPrep GPC/Sequential

PowerPrep GPC/S5	5 sample GPC, 1 module
PowerPrep GPC/S10	10 sample GPC, 2 modules
PowerPrep GPC/S15	15 sample GPC, 3 modules
PowerPrep GPC/S20	20 sample GPC, 4 modules
PowerPrep GPC/S25	25 sample GPC, 5 modules
PowerPrep GPC/S30	30 sample GPC, 6 modules
PowerPrep GPC/S35	35 sample GPC, 7 modules
PowerPrep GPC/S40	40 sample GPC, 8 modules

### GPC Columns & Accessories

GPC-UV-254 UV detector, 254 nm

TEF-COL-300 GPC Pre-packed Teflon column 300 x 20 mm

TEF-COL-150 GPC Pre-packed Teflon column 150 x 20 mm

GLS-COL-450 GPC Glass column 450 x 25mm mm

STR-DVI-100 Styrene-divinylbenzene

Copolymer, 100 grams