GPC CLEAN-UP SYSTEMS

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Automated Systems for Gel Permeation Chromatography

PESTICIDE RESIDUES
POST-EXTRACTION SAMPLE CLEAN-UP
SEMI-VOLATILES
MYCOTOXINS
GEL PERMEATION
CHROMATOGRAPHY
PAHs PCBs
ORGANIC COMPOUNDS
SOIL EXTRACTS

GILSON®

禹重科技® UZONGLAB

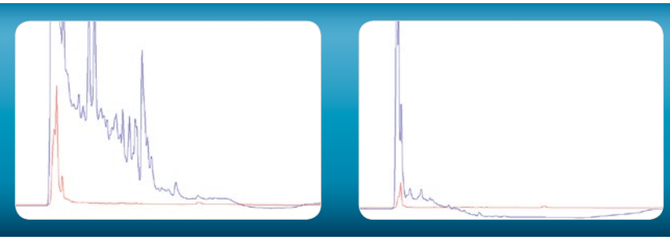
Automated GPC Clean-up System

Remove analytical interferences while improving method efficiency and reproducibility with GPC!

GPC (Gel Permeation Cleanup) removes high molecular weight compounds that are visible as analytical interferences if not removed. As a post-extraction step, GPC is used for a wide range of residue and chemical contaminant testing with stainless steel or glass columns from a variety of sample matrices prior to analysis, producing more reliable results and fewer sample repeats with less analytical system down time.

Meet food safety and environmental monitoring regulatory requirements with Gilson!

Extend Your Analytical Column Life by Removing Interferences with the Gilson Automated GPC Clean-up System:



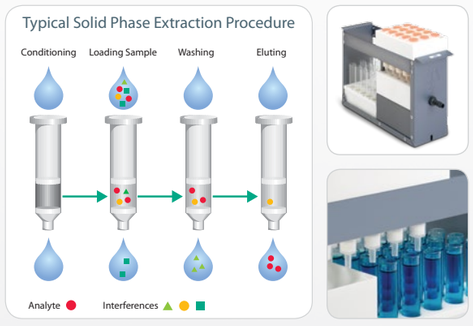
Left: Liver extract analyzed via HPLC with diode array and fluorescence detection without performing GPC. **Right:** Sample liver extract as left with GPC clean-up performed prior to HPLC analysis on the same system.

Efficiency with No Carryover

Standard GPC clean-up methods are included and tested for no carryover. The GX-271 Liquid Handler allows for separation of sample injection and fraction collection flow paths, eliminating sample carryover in the isolated fractions from GPC clean-up.

Perform SPE and GPC Together!

The Automated GPC Cleanup System can accommodate methods that require both SPE (Solid Phase Extraction) and GPC on the same sample extract without a separate system. Running multiple residue methods? With Gilson, easily switch between SPE and GPC.



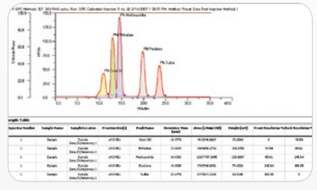
Residues and Food Safety Applications

- US EPA 8270D, 3640A, SW 846, and many more
- AOAC 970.52, 984.21 and USDA FSIS-CHC3-19
- USGS Methods for Organic Contaminants and Residues in Soil & Sediments
- US EPA Post-Extraction Methods Employing SPE
- US FDA Pesticide Analytical Manual
- CEN/TC 275 Methods
- ISO 10832:2002 Soil Quality Method
- GB/T 14552 Organophosphorous Pesticides
- JIS K 01 28:2000 Industrial Water and Wastewater Pesticide Method
- CFIA - Canadian National Chemical Residues Monitoring Program

Example of separation of high and low molecular weighted analytes.

Manual GPC Clean-up System

- Bench space-efficient system incorporating a stackable modular design.
- System coordinates the elution and collection to user-defined parameters.
- Economical system requiring little effort; ideal for small sample load requirements.
- Semi-automate clean-up processes by automatically collecting multiple fractions by time windows that are pre-programmed through Gilson's mobile phase 307 pump keypad.



GPC Calibration Reports

Methods that require a GPC calibration standard to be injected and evaluated prior to running samples will utilize the default GPC reports created in accordance with EPA regulations in TRILUTION® LC System Software.

Simple System Operation — 5 Mouse Clicks!

TRILUTION® LC System Software contains pre-configured methods specifically designed for enabling GPC clean-up efficiently, according to EPA guidelines, and with minimal training for the busy laboratory.

Typical Analytical Laboratory Workflow

Sample Collection → Sample Preparation → Extraction → Post-extraction Clean-up → Analysis → Data Handling

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Residues Matrix

Sample Type	Typical Analytes
Animal Fats (beef, poultry, porcine, etc.)	Pesticides, chlorinated hydrocarbons, PAHs, EDCs, antibiotics
Animal Tissue	Pesticides, chlorinated hydrocarbons, PAHs, EDCs, SVOCs, antibiotics, pharmaceuticals
Cottonseed, Cotton, Cotton Gin Trash	Pesticides, chlorinated hydrocarbons
Dust	Pesticides, chlorinated hydrocarbons
Edible Oils (olive, corn, rice, peanut, etc.)	Pesticides, chlorinated hydrocarbons, EDCs
Foods, Fatty (> 2% fat)	Pesticides, chlorinated hydrocarbons, PAHs, EDCs, SVOCs, antibiotics, pharmaceuticals, illegal dyes
Foods, Non-Fatty (< 2% fat)	Pesticides, chlorinated hydrocarbons, PAHs, EDCs, SVOCs, antibiotics, illegal dyes, plasticizers
Food Packaging	Pesticides, chlorinated hydrocarbons, EDCs, SVOCs
Fish Tissue (including shrimp)	Pesticides, chlorinated hydrocarbons, PAHs, EDCs, SVOCs, antibiotics, illegal dyes, plasticizers
Grains	Pesticides, chlorinated hydrocarbons, SVOCs
Grasses	Pesticides, chlorinated hydrocarbons, SVOCs
Human Blood, Plasma, Urine, etc.	Pesticides, chlorinated hydrocarbons, PAHs, EDCs, SVOCs, PPCPs, antibiotics, plasticizers
Insects	Pesticides
Lanolin	Pesticides
Marine Life	Pesticides, chlorinated hydrocarbons, PAHs, EDCs, SVOCs, PPCPs, antibiotics, illegal dyes, plasticizers
Nuts and Seeds	Pesticides, chlorinated hydrocarbons, some SVOCs
Plant Tissue	Pesticides, chlorinated hydrocarbons, EDCs, some SVOCs, some illegal dyes
Soil/Sludge/Sediment	Pesticides, chlorinated hydrocarbons, PAHs, EDCs, SVOCs, PPCPs, antibiotics, plasticizers, other organic residues
Spices	Pesticides, chlorinated hydrocarbons, EDCs, some SVOCs, illegal dyes
Water (wastewater, ground and surface)	All residue categories except illegal dyes
Wool	Pesticides





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