

HIGH-THROUGHPUT PRESSURIZED FLUID EXTRACTOR



High-throughput Pressurized Fluid Extractor – ToronHPFE™ Series (Automated)

High-throughput Pressurized Fluid Extractor performance matters when your lab handles difficult, high-matrix samples. ToronHPFE™ Series is an automated pressurized fluid extraction platform designed to pull organic analytes from solid and semi-solid matrices using elevated pressure and temperature. Target compounds that bind tightly to the matrix, such as PAHs and PCBs, become easier to extract with faster turnaround than conventional liquid extraction workflows.

ToronHPFE helps reduce typical extraction time to 15–30 minutes and lowers solvent use to 20–50 mL per run, compared with longer, solvent-heavy approaches like Soxhlet extraction. The system runs 6 samples simultaneously and supports over 96 samples per day (depending on method settings and lab workflow).

APPLICATIONS

High-throughput Pressurized Fluid Extractor – ToronHPFE™ Series (Automated) Applications



Environmental analysis

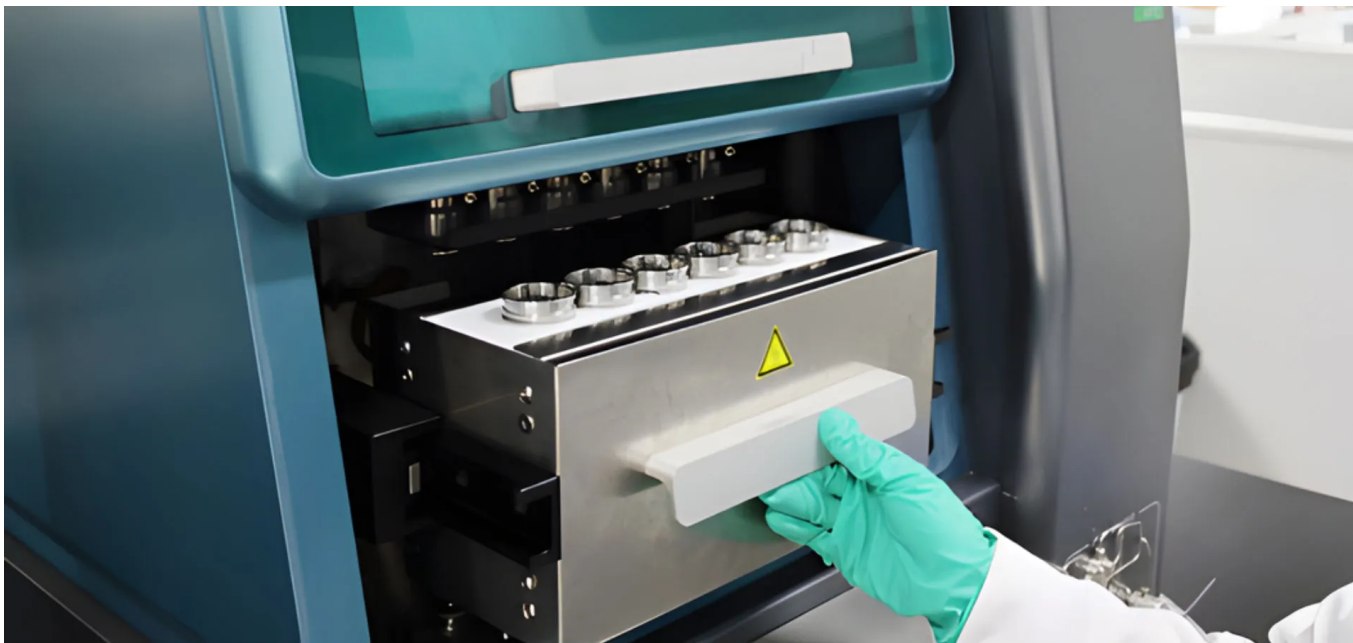
Soil, sediment, sludge, and solid waste often trap organics inside complex matrices. ToronHPFE supports pressurized fluid extraction for hazardous residues, herbicides, and pesticide-related targets, helping labs improve repeatability and shorten sample prep timelines.

Food and agriculture testing

Multi-residue pesticide workflows depend on consistent extraction from challenging samples. ToronHPFE supports pesticide residues testing in food and additives, plus crop-focused workflows such as pesticide residues in crops and extracted seed oils.

Polymers, petrochemicals, and industrial materials

Some polymer and petrochemical workflows require controlled pressurized extraction to isolate target fractions or extractables. ToronHPFE supports extraction approaches used in materials testing environments, including gel-content style workflows referenced in ASTM methods.



Standards

ASTM (international)

- ASTM D7567 references pressurized liquid extraction for determining gel content in crosslinked ethylene plastics. ToronHPFE supports this type of pressurized extraction workflow when labs need faster solvent extraction under controlled pressure and temperature.

FEATURES

High-throughput Pressurized Fluid Extractor - ToronHPFE™ Series

(Automated) Key Features

- 6-channel parallel extraction for high throughput
 - Run 6 samples at one time to support higher daily capacity and consistent batch processing.
- Pressurized, temperature-controlled extraction to shorten cycle time
 - Elevated pressure raises solvent boiling point, while higher temperature improves solubility and diffusion for target compounds, supporting faster extraction and lower solvent consumption.
- Four-solvent capability with flexible mixing ratios
 - Supports 4 solvent positions with dispensing and mixing in user-defined ratios for method flexibility across different matrices.
- Broad consumables compatibility
 - Supports multiple extraction cell sizes and a wide collection-vial range, with compatibility for downstream concentration modules.
- Smart software and space-saving touchscreen control
 - Simple method editing and programmed runs support repeatable operation with a 10-inch built-in screen for direct control at the instrument.
- Safety and monitoring designed for unattended operation
 - Protection logic supports over-pressure, over-temperature, and leak-related safeguards. Sealed construction with active exhaust plus full logs and alarms helps labs track runs and respond quickly to method issues.
- Fits into an automated organic sample prep workflow
 - Designed to integrate with automated SPE, vacuum evaporation, and liquid handling as part of a larger sample preparation line.

TECHNICAL SPECIFICATIONS

High-throughput Pressurized Fluid Extractor – ToronHPFE™ Series

(Automated) Technical Specifications

Parameter	Specification
Extraction channel	6
Pump pressure range	Atmospheric pressure to 200 bar (20 MPa)
Flow rate	0 to 70 mL/min
Temperature range	Room temperature to 200°C (±1°C)
Solvent capacity	4
Extraction cell	11 mL, 22 mL, 34 mL
Collection vials	60 to 370 mL
Software interface	10-inch built-in screen
Dimensions	72 cm × 56 cm × 77 cm
Weight	120 kg
Voltage	200 to 240 V, 50/60 Hz (110V is also available)
Power rate	1600 W
Storage temperature	0 to 40°C
Storage humidity	20 to 85%
Operating temperature	10 to 40°C
Operating humidity	20 to 80%



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