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ADVANCE SOLID PHASE EXTRACTION (SPE) SYSTEM

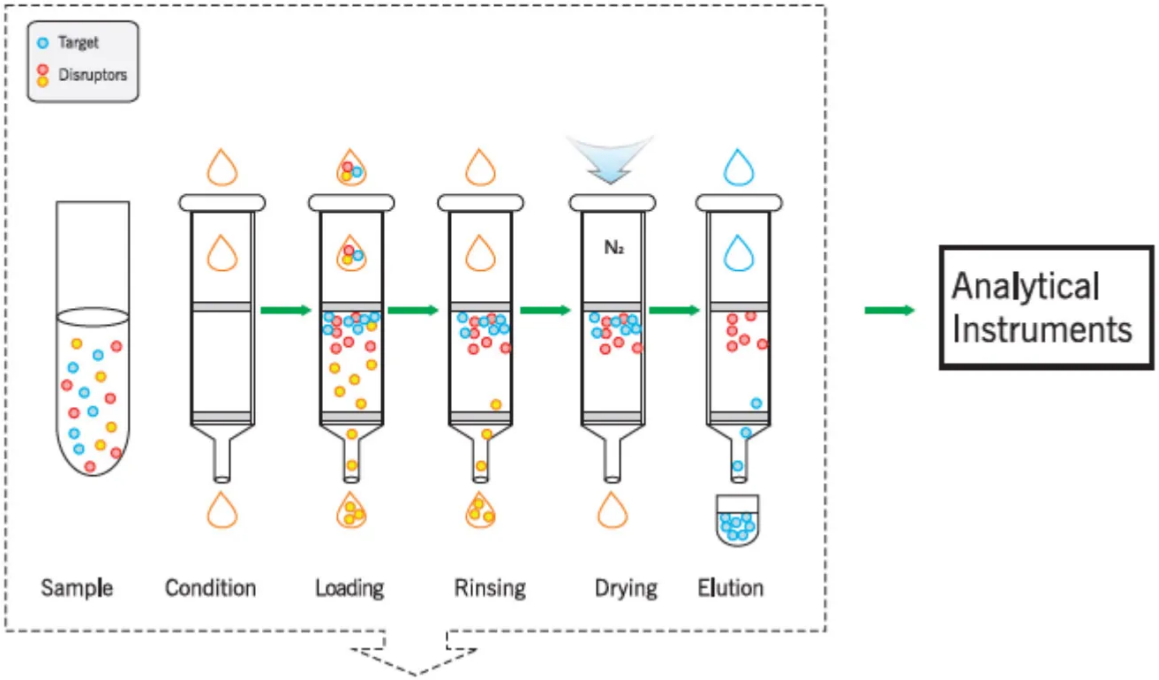
Advance Solid Phase Extraction (SPE) System – ToronSPE™ Alpha Series

ToronSPE™ Alpha Series is an Advance Solid Phase Extraction (SPE) System built for automated, high-throughput sample preparation with precise, stable flow control to improve repeatability and parallel results across batches.

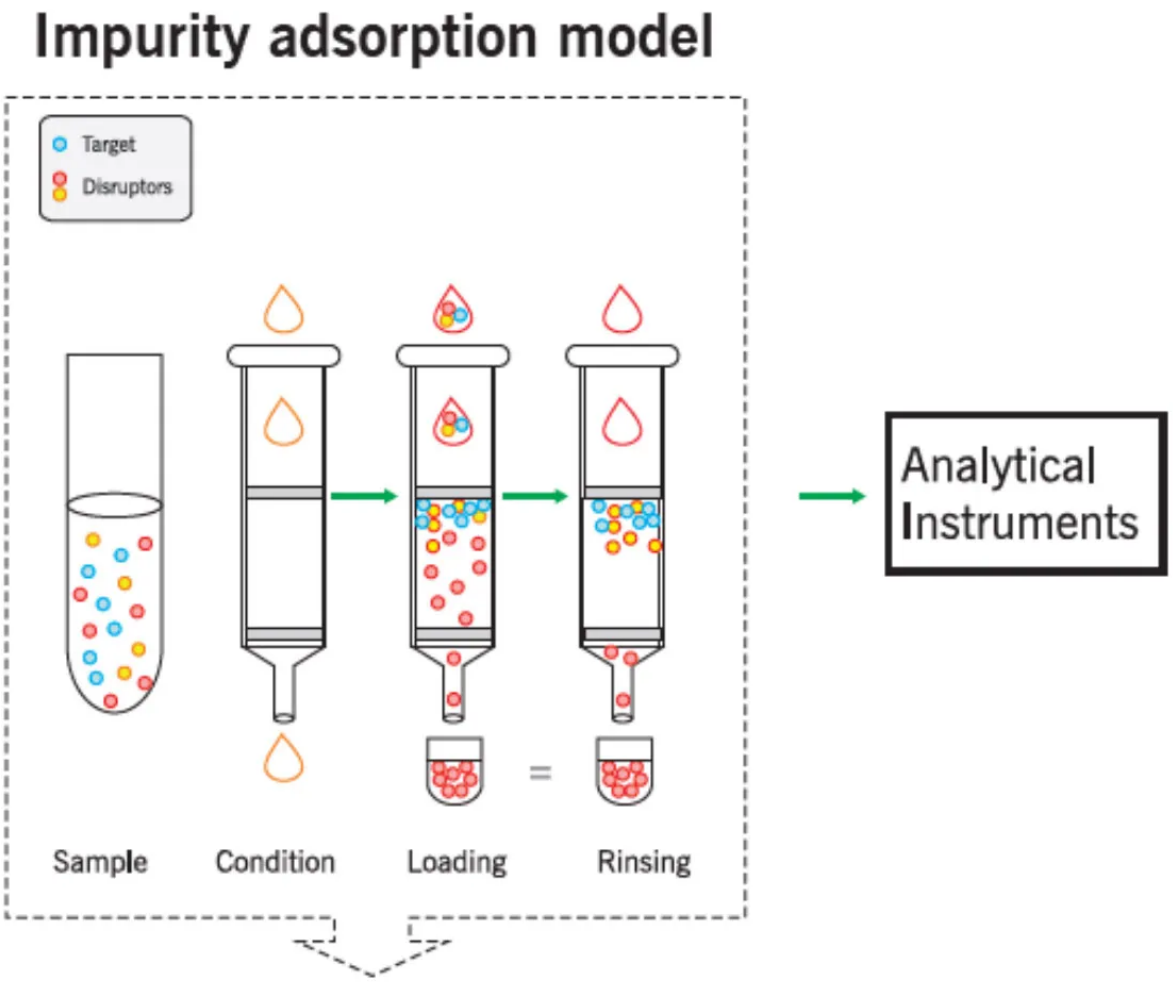
Designed to reduce hands-on time and improve lab safety, the system automates the full SPE workflow and can be placed in a fume hood to help limit exposure to hazardous organic reagents.

APPLICATIONS

Target compound adsorption model



ToronSPE™ Alpha Series automatically complete the above steps



ToronSPE™ Alpha Series automatically complete the above steps

Advance Solid Phase Extraction (SPE) System – ToronSPE™ Alpha Series Applications

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- Food safety testing (pesticide & veterinary drug residues): Automates cleanup and concentration steps to improve consistency across large sample sets.
- Environmental analysis (harmful organic compounds): Supports routine SPE preparation for environmental monitoring workflows, including higher-volume batch handling with modular expansion.
- Clinical/toxicology screening (poisonous materials in blood & urine): Provides controlled, repeatable extraction conditions to reduce variability between runs and operators.

FEATURES

Advance Solid Phase Extraction (SPE) System – ToronSPE™ Alpha Series Key Features

- Fully automated SPE workflow to reduce manual steps and improve throughput.
- Precise, stable flow-rate control to support repeatability and result parallelism.
- Patented plunger pole design closely interfaces with the SPE cartridge to help keep flow consistent across different cartridge conditions.
- Multi-channel simultaneous operation using the same method/conditions for batch consistency.
- Fast solvent switching via multi-port valves to reduce cycle time between steps.
- Multi-rail operation design to help reduce cross-contamination risk from back-and-forth movement.
- Surface-inert flow path & injection needle with configurable needle rinsing to help reduce carryover.

- Monitoring logs + intelligent error handling with abnormal samples handled separately and records saved for review.
- Remote wireless monitoring through a graphical software interface.
- Expandable, modular platform including compatibility with special cartridges/modules (e.g., immune affinity) and configurations for larger environmental batches.
- Improved sealing and leakage prevention using O-ring sealing (as shown in the brochure).

TECHNICAL SPECIFICATIONS

Advance Solid Phase Extraction (SPE) System – ToronSPE™ Alpha Series Technical Specifications

Parameter	Specification			
Product	ToronSPE™ Alpha 2	ToronSPE™ Alpha 6	ToronSPE™ Alpha 8	ToronSPE™ Alpha 6 Lite
Extraction Channel	2 channels in parallel	6 channels in parallel	8 channels in parallel	6 channels in parallel
Sample Capacity	20, 12	60, 36	80, 48	36
SPE Cartridge Size	3 mL, 6 mL	1 mL, 3 mL, 6 mL, 12 mL, 20 mL	1 mL, 3 mL, 6 mL	3 mL, 6 mL, 12 mL
Sample Vials	15 mL, 20 mL, 60 mL, 80 mL	15 mL, 20 mL, 60 mL, 80 mL	15 mL, 20 mL, 60 mL, 80 mL	15 mL, 20 mL, 80 mL
Collection Vials	15 mL, 20 mL, 60 mL, 80 mL	15 mL, 20 mL, 60 mL, 80 mL	15 mL, 20 mL, 60 mL, 80 mL	15 mL, 20 mL, 80 mL
Solvent Capacity	8	8	8	8
Flow Rate	0.1 to 100 mL/min	0.1 to 100 mL/min	0.1 to 10 mL/min	0.1 to 100 mL/min
Gas Supply and Connection	Nitrogen gas; Max. input: 100 psi/6.9 bar; Output: 0 to 20 psi/1.4 bar	Nitrogen gas; Max. input: 100 psi/6.9 bar; Output: 0 to 20 psi/1.4 bar	Nitrogen gas; Max. input: 100 psi/6.9 bar; Output: 0 to 20 psi/1.4 bar	Nitrogen gas; Max. input: 100 psi/6.9 bar; Output: 0 to 20 psi/1.4 bar

Parameter	Specification			
Fume Hood / Ventilation	Required	Required	Required	Required
Control Software	Windows PC; WiFi connection	Windows PC; WiFi connection	Windows PC; WiFi connection	Windows PC; WiFi connection
Dimensions	40 cm × 38 cm × 58 cm	62 cm × 38 cm × 63 cm	77 cm × 45 cm × 64 cm	62 cm × 38 cm × 63 cm
Weight	30 kg	68 kg	72 kg	68 kg
Voltage	200 to 240 V, 50/60 Hz (110V is also available)			
Storage Temperature	0 to 40°C	0 to 40°C	0 to 40°C	0 to 40°C
Storage Humidity	20 to 85%	20 to 85%	20 to 85%	20 to 85%
Operating Temperature	10 to 40°C	10 to 40°C	10 to 40°C	10 to 40°C
Operating Humidity	20 to 80%	20 to 80%	20 to 80%	20 to 80%

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