

ION CHROMATOGRAPH - TORON-IC™ 100 (NEW)



Ion Chromatograph - Toron-IC™ 100 (New)

Toron-IC™ 100 Ion Chromatograph is a dependable, compact instrument engineered for accurate qualitative and quantitative analysis of inorganic anions and cations in aqueous samples.

This system is built with a high-performance dual-piston pump and metal-free flow paths, ensuring stable baselines, outstanding reproducibility, and consistent analytical performance for routine lab work.

Designed for ease of use, the Toron-IC™ 100 features integrated intelligent temperature control, automated post-flushing, and a high-sensitivity conductivity detection system. Its streamlined operation and small footprint make it an excellent choice for environmental, industrial, academic, and quality control laboratories needing reliable ion analysis without unnecessary complexity.

APPLICATIONS

Ion Chromatograph - Toron-IC™ 100 (New) Applications

The Ion Chromatograph - Toron-IC™ 100 serves a variety of sectors, offering essential ionic analysis capabilities. Its common applications include:

- **Water Quality Assessment:** Analyzing environmental samples, such as drinking water, wastewater, and surface water, to determine anion and cation content.
- **Industrial Stream Monitoring:** Monitoring processes in industries like chemical production, and analyzing boiler and cooling water.
- **Quality Control in Food & Beverage:** Performing ionic content analysis to ensure product quality.

- Laboratory Verification: Supporting pharmaceutical and chemical laboratories in verifying raw materials and formulation compositions.
- Education and Research: Used in academic and research institutions for routine ion chromatography training and research work.



FEATURES

Ion Chromatograph - Toron-IC™ 100 (New) Key Features

Core Performance Features:

- **High-Performance Dual-Piston Pump:** At the heart of the system is the robust dual-piston pump, designed to deliver a highly stable and consistent mobile phase flow. This configuration ensures minimal pulsation and high pressure capability, which is critical for achieving reproducible retention times and maintaining high-quality chromatographic separation across various methods.
- **Wide Flow Rate Range:** Offering exceptional flexibility, the pump's adjustable flow rate spans from a micro-scale 0.001 mL/min up to 12 mL/min. This broad range accommodates a variety of column chemistries and sizes, from narrow-bore to standard analytical columns, allowing researchers to optimize methods for sensitivity, speed, or sample throughput.
- **Metal-Free PEEK Flow Path:** To prevent corrosion and sample contamination, the system utilizes a chemically inert flow path constructed from Polyether Ether Ketone (PEEK). This design is highly compatible with virtually all ion chromatography eluents, safely handling the full pH 0 to 14 range without leaching metal ions, thus ensuring the integrity of trace-level analyses.

System Stability and Reliability:

- **3D Circulating Constant Temperature Control:** The system incorporates a sophisticated temperature management module that utilizes 3D circulating technology. This ensures rapid and precise thermal equilibration, reaching optimal stability in under 30 minutes. Maintaining a constant column and detector temperature is vital for improving baseline stability, reducing drift, and significantly enhancing overall analytical accuracy and reproducibility.

- **Gas-Liquid Separator:** To maintain a stable detector signal and prevent common chromatographic issues, an integrated gas-liquid separator efficiently and continuously removes micro-bubbles or dissolved gases from the mobile phase before they reach the detector. This crucial step ensures a stable and low-noise baseline, maximizing the signal-to-noise ratio for reliable trace analysis.
- **Built-In Peristaltic Pump for Maintenance:** The inclusion of a dedicated, built-in peristaltic pump streamlines routine maintenance. It specifically supports automated, post-analysis flushing routines, which are essential for removing residual reagents and improving the long-term cleanliness and stability of the entire flow system, extending component lifespan.

Advanced Maintenance and Control:

- **Self-Regenerating Suppressor Technology:** The system features advanced electrolytic micro-membrane suppressor technology. This innovation significantly enhances the sensitivity of the conductivity detection while simultaneously offering a self-regenerating capability. This eliminates the need for external regenerant solutions and tedious manual regeneration steps, dramatically reducing operational costs and maintenance requirements.
- **Intelligent Integrated Workstation:** The Toron-IC™ 100 is controlled via a centralized, intuitive workstation. This intelligent platform provides a unified control interface for system management, supporting critical functions such as automated startup, shutdown, and detailed maintenance logging. Furthermore, the workstation is designed for multi-instrument compatibility, allowing users to manage and monitor multiple IC systems from a single, integrated platform.

TECHNICAL SPECIFICATIONS

Ion Chromatograph - Toron-IC™ 100 (New) Technical Specifications

Parameter	Specification
Model	Toron-IC™ 100
Instrument Type	Ion Chromatograph

Parameter	Specification
Flow Path Material	Metal-free PEEK
Eluent Compatibility	pH 0–14, aqueous and compatible solvents
Pump Type	High-pressure, low-pulse dual-piston tandem pump
Maximum Pressure (Pump)	42 MPa
Flow Rate Range	0.001 – 12 mL/min
Flow Stability	≤ 0.1%
Pressure Ripple	≤ 0.5%
Column Heater Temperature Range	Ambient +5 °C to 60 °C
Temperature Control Accuracy (Column)	±0.1 °C
Suppressor Type	Self-regenerating electrolytic micro-membrane
Suppressor Max Pressure	6.0 MPa
Detection Method	Conductivity detection
Detector Cell Volume	≤ 0.4 µL
Detection Range	0 – 50,000 µS/cm
Baseline Noise	≤ 0.0003 µS/cm
Baseline Drift	≤ 0.001 µS
Minimum Detection Limit	Cl ⁻ ≤ 0.0001 µg/mL; Li ⁺ ≤ 0.0001 µg/mL
Linearity	≥ 0.999
Quantitative Repeatability	≤ 0.25%
Qualitative Repeatability	≤ 0.1%

Parameter	Specification
Power Consumption	150 W
Dimensions (W × D × H)	310 × 400 × 530 mm
Weight	22 kg



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