

PORTABLE ION CHROMATOGRAPH - TORON-IC™ 80



Portable Ion Chromatograph - Toron-IC™ 80

Toron-IC™ 80 is a compact, field-deployable portable ion chromatograph engineered to deliver laboratory-grade analysis directly at the sampling site. Designed for environments where traditional systems are impractical, this fully integrated unit combines rugged durability with battery-powered operation, making it the ideal solution for immediate on-site and outdoor testing.

Despite its portability, the Toron-IC™ 80 utilizes advanced conductivity detection to precisely quantify anions and cations from trace (ppb) to ppm levels. Featuring metal-free PEEK flow paths, stable pumping technology, and automatic signal ranging, the system ensures reliable, high-performance ion chromatography results in the field without compromising on accuracy.

APPLICATIONS

Portable Ion Chromatograph - Toron-IC™ 80 Applications

The Toron-IC™ 80 Portable Ion Chromatograph offers robust capabilities across several key sectors:

- **Environmental Monitoring:** Facilitates on-site analysis of anions and cations in surface water, groundwater, and wastewater, eliminating delays associated with sample transport.
- **Water Utilities & Drinking Water:** Enables rapid field verification of compliance parameters and ionic contaminants within potable water systems.
- **Industrial Process Monitoring:** Provides real-time ion analysis for monitoring process fluids, chemical solutions, and cooling water.
- **Emergency & Mobile Laboratories:** Ideal for use in field investigations, spill response, and mobile testing units due to its portable nature.

- Research & Education: Suitable for applied ion chromatography and demonstration purposes where ease of use and portability are essential.



FEATURES

Portable Ion Chromatograph - Toron-IC™ 80 Key Features

Optimized for Field Use:

- True Portable Design: Lightweight and compact, specifically engineered for on-site and outdoor ion chromatography analysis.
- Dual Power Capability: Operates via both 220V AC power and a built-in lithium battery, ensuring continuous field analysis.
- Uninterruptible Power Supply (UPS): Allows for battery hot-swapping without interrupting operation, thereby protecting data integrity.
- Water-Electricity Separation Design: Enhanced safety feature to prevent circuit damage from potential eluent leakage during field operations.

Advanced Performance:

- Metal-Free Flow Path: Utilizes a chemically inert PEEK flow system, compatible with aqueous eluents (pH 0-14) and reversed-phase solvents.
- Auto-Range Conductivity Detection: Automatically adjusts the detection range for highly accurate ion concentration measurements, spanning from ppb to ppm levels.

Simplified Operation:

- User-Friendly Control: Supplied with a Bluetooth keyboard and mouse for easy and intuitive instrument management.

TECHNICAL SPECIFICATIONS

Portable Ion Chromatograph - Toron-IC™ 80 Technical Specifications

Parameter	Specification
Instrument Type	Portable Ion Chromatograph
Pump Type	Dual-piston serial pump
Maximum Pump Pressure	42 MPa
Flow Rate Range	0.001 – 12 mL/min
Flow Stability	≤ 0.67%
Flow Path Material	Metal-free PEEK
Supported Column Sizes	2, 3, 4, and 5 mm I.D.
Maximum Column Length	250 mm analytical + 50 mm guard
Suppressor Type	Self-regenerating electrolytic micro-membrane
Detection Method	Auto-range conductivity detector
Detector Cell Volume	≤ 0.8 µL
Detection Range	0 – 45,000 µS/cm
Resolution	≤ 0.0020 nS/cm
Linearity	≥ 0.999
Quantitative Repeatability	≤ 0.71%
Qualitative Repeatability	≤ 0.07%

Parameter	Specification
Minimum Detectable Concentration	$\text{Cl}^- \leq 0.0012 \text{ } \mu\text{g/mL}$; $\text{Li}^+ \leq 0.0012 \text{ } \mu\text{g/mL}$
Column Heater Range	Ambient +5 °C to 60 °C
Temperature Accuracy	$\pm 0.2 \text{ } ^\circ\text{C}$
Voltage	220V AC or built-in lithium battery
External Dimensions (L × W × H)	420 × 320 × 190 mm
Net Weight	$\leq 9 \text{ kg}$



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