

COMPANY PROFILE

Guangzhou Prin-Cen Scientific Co., Ltd. (Prin-Cen for short) is a high-tech company focusing on the development of analytical instruments and their application methods. Prin-Cen's flagship product, the ion chromatography system, provides anion/cation detection functions and can be used with a series of analytical instruments such as AFS, ICP-OES, ICP-MS, UV-VIS, etc. to perform elemental speciation analysis (including inorganic arsenic, methylmercury, hexavalent chromium, selenium speciation, bromate, nitrite, etc.), rapid sample analysis, trace/ultra-trace analysis, and direct sample analysis of complex matrices.

Detection application areas include consumer toys, leather, fabrics, environmental samples, water quality, food safety, electronic products, petrochemicals, etc.

In addition, the company also provides value-added services such as instrument upgrades, software customization, and method development and validation.

Staying true to our company's mission statement of "innovative solutions, simplified tasks", Prin-Cen continues to develop excellent instrument hardware and dedicated application solutions to simplify complex and tedious analytical problems.



Ultra-trace Hexavalent Chromium Analyzer

The analyzer is dedicated to the analysis of hexavalent chromium in toys, leather, textiles, water, environment and other samples. It is an independent and complete system with a measurement range of 0.05ppb-100ppm. It has strong anti-interference ability and can effectively reduce the interference of sample matrix color and excessive trivalent chromium concentration.



Elemental Speciation Analyzer

In conjunction with detectors such as ICP-MS and AFS, the analyzer is suitable for arsenic, mercury and selenium elemental speciation analysis in food, water and environmental samples with a detection range of ppt to ppm.

Contact Us

For China Sales

Guangzhou Prin-Cen Scientific Co., Ltd

Phone: +86 20 82510732

Fax: +86 20 82510732

Sales Director: Simon CHEN

E-mail: jingcheng.chen@princensci.com

Address: Room 406-414, Block B, No. 33 Science Avenue, Huangpu District, Guangzhou, Guangdong Province, China

Website: www.princensci.com/en/

For Oversea Sales

GP LAB TECH Pte Ltd

Sales Director: Gary Liao

Phone: +65 97703383

Email: peter@gplabtech.com

Address: 205 Balestier Road #02-06, The Mezzo, Singapore 329682

Technical Manager: Peter Chen

Phone: +65 86008560

Email: peter@gplabtech.com

 Prin-Cen
make hard things easy

CIC-200/500 Combustion Ion Chromatography



CIC-200/500 COMBUSTION ION CHROMATOGRAPHY

Working Principle

Combustion ion chromatography uses a high-temperature furnace to pyrolyze and oxidize organic compounds, releasing the halogens and sulfur into the gas, which is then absorbed by the absorption liquid and automatically transferred to the ion chromatograph for measurement. It is primarily used for the detection of fluorine, chlorine, bromine, iodine, and sulfur in pharmaceutical raw materials and finished products, polymers, petrochemicals, ores, inks, metals, polishes, lubricants, electronic components, and environmental or wastewater samples.

1. High Degree of Automation

- Automatic sampling, automatic step-by-step sample pyrolysis and analytes collection, automatic solution transfer and ion chromatography separation, and automatic calculation of chromatograms.
- The 50-position high-throughput solids autosampler is equipped with a dust cover to prevent contamination from particles in a busy, crowded laboratory environment.
- The software workstation integrates instrument control, chromatogram acquisition and processing, data management and is compatible with LIMS system.
- Automatic calibration of ion chromatographs reduces manual preparation time.
- Unattended and fully automatic operation is possible.

2. Intelligent temperature control suitable for a variety of samples

- Furnace temperature is adjustable, with a maximum of 1200°C, ensuring complete combustion of samples.

3. High flexibility

- Fine combustion program with adjustable steps, rates and residence times to accommodate the analysis of different elemental species in different samples.
- Dual electronic gas flow meters, with a flow accuracy of up to 1mL/min, can adjust the flow at any time through software control to meet the gas supply needs of different pyrolysis and combustion stages.

4. Easy Maintenance

- The furnace chamber is easy to open for maintenance and replacement of the combustion tube.
- The pyrolysis tube and the combustion tube are separated, which reduces the replacement cost and facilitates cleaning and maintenance.

5. Advanced Features

- Position sensor ensures safe transport and detection of sample boats.
- Level sensors on the absorption tube allow precise volume measurement.
- IC analysis is automatically triggered after combustion absorption, and the next sample combustion is automatically prepared and started, minimizing sample analysis cycle.
- An optional 120-position 15 mL fraction collector is available for collecting absorption solutions and offline IC analysis.

IC-20/ IC-50 SERIES

IC-20/IC-50 series ion chromatographs use dual-piston serial pumps driven by independent motors, equipped with ultra-wide range digital conductivity detectors, and high-performance, high-throughput autosamplers. They can be used in conjunction with fully automatic combustion instruments to achieve direct sample injection (solid, liquid) and high-temperature pyrolysis for the determination of halogens and sulfur. They can also be used in conjunction with ICPMS for elemental speciation analysis.



Ion chromatography	IC-50Series	IC-20Series	IC-10Series
Pump	Dual-piston serial pumps driven by independent motors		
Measuring Range (μS/cm)	0-100,000	0-20,000(optional: 0 - 100,000)	0-10,000
Resolution	0.001nS/cm	0.001nS/cm	0.001nS/cm
Conductivity Cell Voltage Resistance	≥10Mpa	≥10Mpa	≥10Mpa
Four-element Gradient Pump	✓	-	-
Plunger Rod Cleaning	✓	✓	-

MSS-2 MULTIFUNCTIONAL SAMPLE PREPARATION SYSTEM

The MSS-2 multifunctional sample preparation system can be configured with a variety of 3-way, 4-port and 6-port switching valves, syringe pumps, high-pressure ion chromatography pumps, peristaltic pumps, and temperature control module, providing automated sample pretreatment, preparation, and injection functions, and can be used with a variety of spectrometers, liquid/ion chromatographs, and mass spectrometers to achieve quantitative dilution, pre-column/post-column derivatization, two-dimensional/multidimensional switching, and other functions.



Model	MSS-2
Application areas	Automatic sample preparations
High-pressure ion chromatography pump	Maximum pressure 35MPa(5000psi)
	Flow rate range 0.01~5.00mL/min (increments of 0.01)
	Flow accuracy < 0.2%
High-pressure six/ten-port switching valves	Two six/ten-port switching valves with a full PEEK pump head and flow pathMaximum pressure > 35MPa (5000psi)
Three-way switching valves	Plastic flow path, pressure resistance > 1MPa (150psi)
Temperature control module	PTFE flow path, ambient to 100°C, continuously adjustable
Syringe pump	Volume options range from 0.25ml to 10ml, with 1μL increments

