Prin-Cen

EXPERTISE IN ION CHROMATOGRAPHY
INNOVATIVE SOLUTIONS
SIMPLIFIED TASKS

PRODUCTS
BROCHURE

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Guangzhou Prin-Cen Scientific Co., Ltd



Instrumental analysis has never been this easy

OUR PRODUCTS

The value and significance of the corporation within society, its future expectations, and pursuits, along with the core values embraced in its business operations. This includes the manner in which it engages with customers, approaches the market, and strategizes resource allocation to cultivate and enhance its competitive edge.

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Company Profile



Customer List

Prin-Cen Scientific Limited (Prin-Cen) is a high-tech enterprise specializing in the development of scientific instruments and methods and has played a leading role in drafting several national and industry standards.

Prin-Cen's independently developed products are primarily used for trace and ultra-trace analysis (ng~pg level), including high-performance ion chromatographs, liquid chromatography form analyzers, ultra-trace hexavalent chromium analyzers, fully automatic desalination/enrichment systems, etc. The analytical projects cover anions/cations, elemental form analysis (such as inorganic arsenic, methylmercury, hexavalent chromium, selenium forms, etc.), rare earth elements, and direct sample analysis of complex matrices (such as seawater&high salt).

Prin-Cen's EasySpec series of chromatography workstations are powerful and user-friendly, compatible with various liquid chromatography and liquid-mass spectrometry, gas chromatography and gas-mass spectrometry, LC-ICPMS, etc., and fully comply with 21 CFR PART 11, rivaling imported large-scale chromatography workstations.

Prin-Cen adheres to "Make hard things easy" as the core concept for development. We use excellent instruments and comprehensive methods to turn the detection problem into easy daily testing, making the test effortless.

Prin-Cen also provides instrument customization services, customizing specialized instruments for high-end scientific research, breaking the limits of existing instruments, and making it impossible becomes possible.

Prin-Cen



CIC-200/500 Combustion Ion Chromatography

Introduction

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.

Features

◆ **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.

◆ **Intelligent temperature control suitable for a variety of samples**

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

◆ **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.

◆ **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.

◆ **Advanced Features**

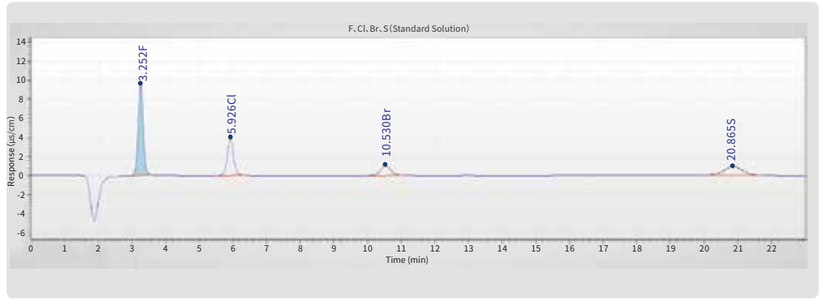
Position sensor ensures safe transport and detection of sample boats.
Level sensors on the absorption tube allow precise volume measurement.
IC analysis is automatically triggered after combustion absorption, and the next sample combustion is automatically prepared and started, minimizing sample analysis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

Specifications

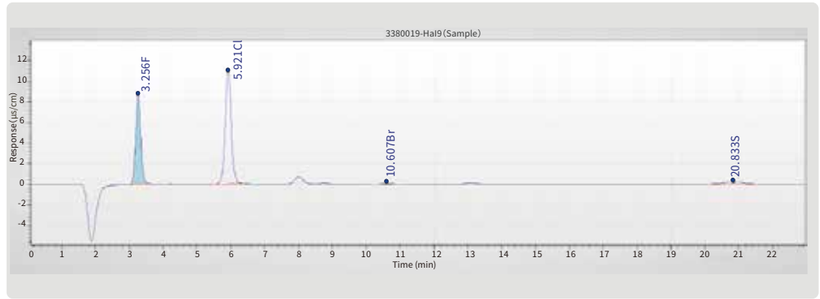
Model	CIC-200/CIC-500
Application Fields	On-line combustion ion chromatography is mainly used for determination of total halide (fluorine, chlorine, bromine, iodine), total sulfur in the sample. Applications for online combustion ion chromatography are mainly in the petroleum, chemical, energy, environmental, plant, consumer, industrial catalyst and electronics industries.
Detection Limit	＜ 2 ppm
Pyrolysis Temperature	Max. 1200°C
Turnover	＜ 25 min
Analysis Method	CIC
Software Function	Available in both Chinese and English versions, with functions such as simultaneous control, data acquisition/storage/processing. It supports chromatographic peak integration setting, qualitative analysis by retention time , peak area and concentration calculations, half-peak width calculation, and signal-to-noise ratio calculation.
Power Supply	220V±10%, 50HZ

Applications

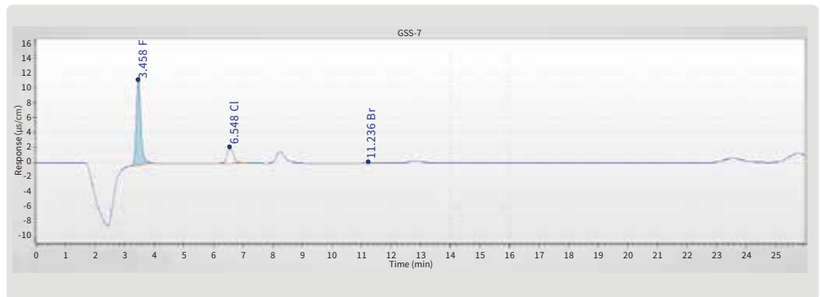
Chromatogram of standard solution of halogens and sulfur



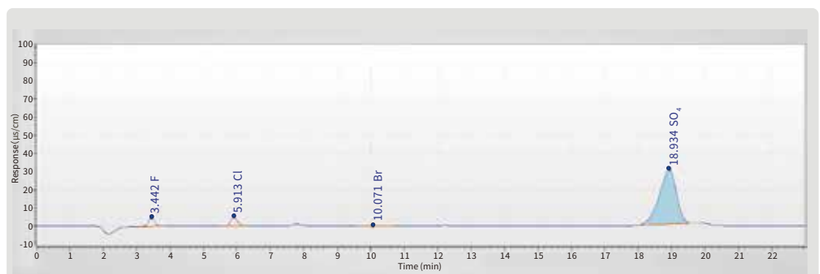
Detection of halogens and sulfur in textile



Detection of halogens in soil



Detection of halogens and sulfate in coal mine



Combustion Ion Chromatography



(CIC-500)

A List of Customers

eurofins intertek TÜVRheinland® Precisely Right. TÜV SGS

EN14582(Halogen)、ASTM1645、ASTM D7359、ASTM D5987



(CIC-200)



IC-50 Super Ion Chromatograph System

Introduction

The IC-50 Super Ion Analysis System is an open multifunctional chromatography platform that can be flexibly configured with a quaternary gradient pump ion chromatograph, an MSS-2 multifunctional sample preparation system with all-PEEK flow channel, a post-column derivatization system, a high-throughput autosampler, and other accessories such as optional interfaces for connecting detectors such as atomic fluorescence (AFS) and ICP-MS.

It can be used as a typical ion chromatograph for routine sample analysis, as well as for the detection of complex matrix samples or ultra-trace ions; it can also be used as a completely inert biological system for the separation and detection of sugars, amino acids, nucleic acids and proteins; in addition, moreover it can be combined with ICP-MS to provide a metal-free separation system for high-salt matrix elimination and multi-element speciation analysis.

Features

- The IC-50 quaternary gradient pumps offer the widest range of applications and the greatest flexibility in eluent composition (e.g. gradients of sodium acetate, methanol or acetonitrile), which is essential for the separation and detection of sugars and amino acids.
- Dual-motor independent drive technology, series dual-piston pump with high pressure resistance and low pulse. Full PEEK flow path compatible with 0-14 pH eluent, built-in degasser for stable baseline and reliable detection, and integrated piston cleaning function.
- Digital conductivity detector, standard measuring range is 0-100,000 μs/cm, fully automatic range conversion, no manual setting required.

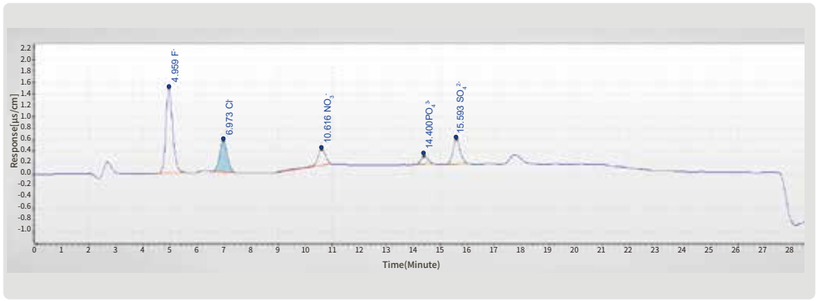
- Conductivity detector with resolution down to 0.001 nS/cm.
- Thermostated cell, temperature resolution up to 0.001°C.
- The conductivity cell can withstand pressure up to 10Mpa or higher
- Controlled external water addition mode of the suppressor.
- One or more different types of detectors can be configured to meet the need for different analytes and the need for comparing different detectors for the same analyte.
- Expandable with additional accessories and hyphenated technologies.

Specifications

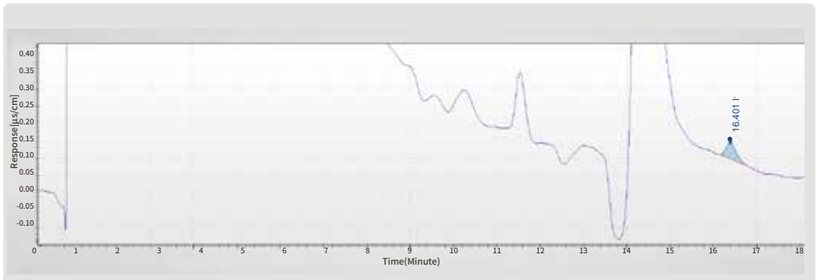
Model	IC-50
Application areas	Marine, environmental, food, pesticide residues, semiconductor, geological, pharmaceutical impurities, biological, cosmetics, drinking water, and other fields.
Detection Limit	ppt level
Flow Rate Range	0.01-5.00 mL/min (standard), 0.01-20.00 mL/min (optional, in 0.01 mL/min increments).
Flow Rate Accuracy	＜0.1%
Pressure Range	0~6000psi（42MPa）
Pressure Pulsation	＜0.1%
Temperature Range	Room temperature +5℃ to 80℃
Temperature Stability	±0.1℃
Software	EasySpec Workstation provides Instrument control and data acquisition/storage/processing, such as Chromatographic peak integration, qualitative analysis by retention time, peak area and concentration calculations, half-peak width calculation, and signal-to-noise ratio calculation.
Power Supply	220V ±10%, 50Hz
Instrument Dimensions	Desktop design, modular assembly, 602mm * 525mm * 830mm (LWH)
Instrument Weight	67kg

Applications

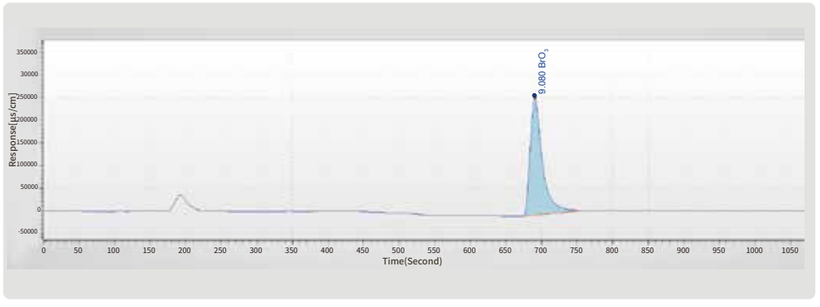
Detection of anions in boric acid solution (nuclear power industry)



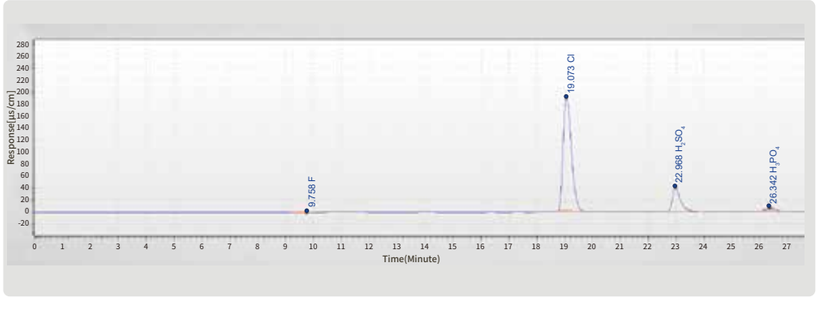
Detection of Iodine in sea-water (two-dimensional chromatography)



Nitrite salt derivatization method: Nitrite salts in seawater (post-column derivatization)



Detection of fluoride in urine





IC-20 series Ion Chromatograph

Introduction

The IC-20 series ion chromatography uses dual-piston serial pumps driven by independent motors, equipped with ultra-wide range digital conductivity detectors and high-performance, high-throughput autosamplers. The external water addition method of the suppressor expands the application field of the ion chromatograph and provides a cleaning function for the piston pump, thereby extending the service life of the pump.

Features

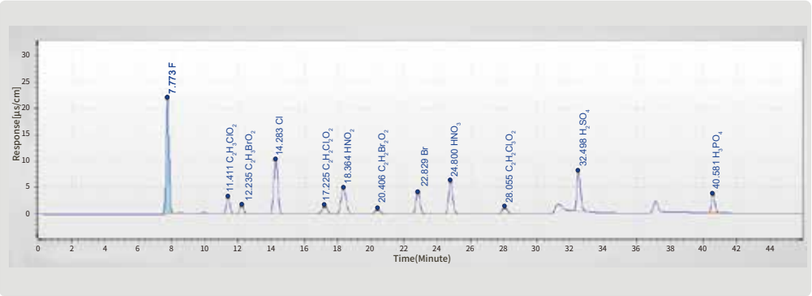
- Dual-motor independent drive technology, series dual-piston pump with high pressure resistance and low pulse. Full PEEK flow path compatible with 0-14 pH eluent, built-in degasser for stable baseline and reliable detection, and integrated piston cleaning function.
- Digital conductivity detector, standard measuring range is 0-50,000 μs/cm(optional 0-100,000 μs/cm), fully automatic range conversion, no manual setting required.

- Conductivity detector with resolution down to 0.001 nS/cm.
- Thermostated cell, temperature resolution up to 0.001°C.
- The conductivity cell can withstand pressure up to 10Mpa or higher.
- Controlled external water addition mode of the suppressor.

Specifications

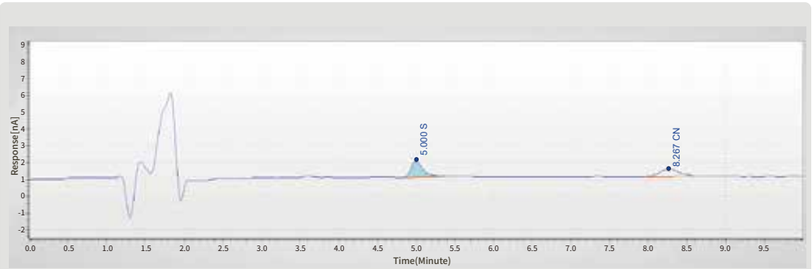
Model	IC-20
Application areas	Marine, environmental, food, water quality, semiconductor, geological, pharmaceutical impurities, biological, cosmetics, drinking water, and other fields.
Detection Limit	ppb level
Flow Rate Range	0.01-5.00 mL/min (standard), 0.01-10.00 mL/min (optional, in 0.01 mL/min increments)
Flow Rate Accuracy	＜0.2%
Pressure Range	0~5000psi（35MPa）
Pressure Pulsation	＜0.1%
Column Compartment Temperature Range:	Room temperature +5°C to 80°C
Temperature Stability	±0.1℃
Software	EasySpec Workstation provides Instrument control and data acquisition/storage/processing, such as Chromatographic peak integration, qualitative analysis by retention time, peak area and concentration calculations, half-peak width calculation, and signal-to-noise ratio calculation.
Power Supply	220V ±10%, 50Hz
Instrument Dimensions	Bench top, modular stacking, 456mm * 420mm * 522mm (LWH)
Instrument Weight	43kg

Applications

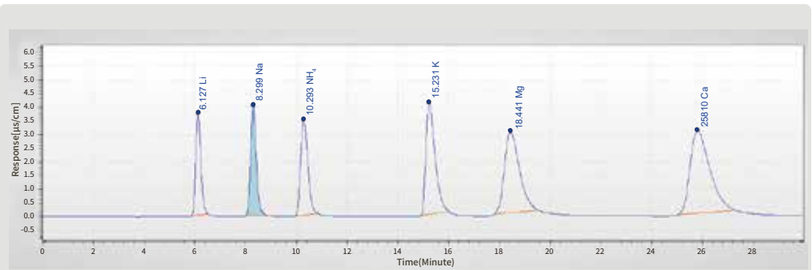


Detection of disinfection by-products in drinking water (seven anions + five haloacetic acids)

Five types of disinfection byproducts



Detection of Sufide and cyanide in waste water and solid waste (Direct current ampere detector, 1 μg/L)



Detection of Conventional Cations



IC-10 series Ion Chromatograph

Introduction

IC-10 ion chromatograph combines a high-performance pump with a digital conductivity detector, and has the characteristics of high stability and high sensitivity; the unique analytical column and eluent conditions have good separation effect and rapid analysis; the high-performance, high-throughput automatic sampler greatly saves labor costs and improves operating efficiency. It is an ideal tool for sample analysis of electronics, environment, food, geology, cosmetics, drinking water, etc.

Features

- Independently driven dual piston serial pump provide stable high pressure and small pressure pulsation. Fully inert PEEK pump head and flow path, compatible with 0-14 pH eluent.
- Digital conductivity detector with a measurement range of 0-20000 μS/cm, automatic full-range conversion without the need for gear setting or manual shifting.
- Conductivity detector with resolution down to 0.001 nS/cm

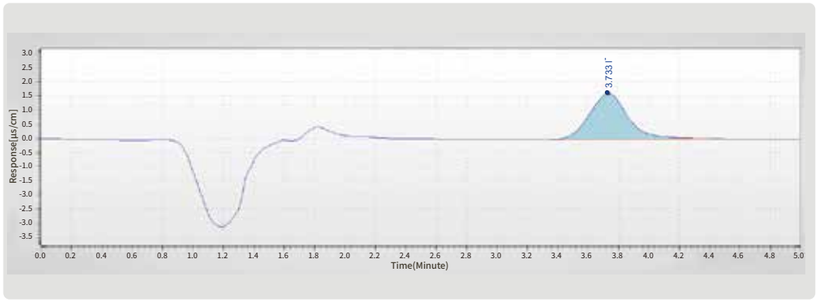
- Thermostated and temperature accuracy up to 0.001°C.
- The conductivity cell can withstand pressure up to 10Mpa or higher

Specifications

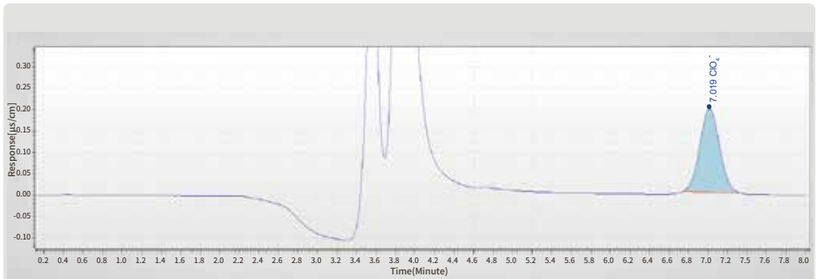
Model	IC-10
Application areas	Electronics, Environmental, Food, Geological, Cosmetics, Drinking water, and other fields.
Detection Limit	ppb level
Flow Rate Range	0.01-5.00 mL/min (increment of 0.01 mL/min)
Flow Rate Accuracy	＜0.2%
Pressure Range	0~5000psi(35MPa)
Pressure Pulsation	＜0.1%
Column Compartment Temperature Range:	Room temperature +5°C to 80°
Temperature Stability	±0.1℃
Software	EasySpec Workstation provides Instrument control and data acquisition/storage/processing, such as Chromatographic peak integration, qualitative analysis by retention time, peak area and concentration calculations, half-peak width calculation, and signal-to-noise ratio calculation.
Power Supply	220V±10%,50HZ
Instrument Dimensions	Benchtop, modular stacking, 456mm * 420mm * 522mm (LWH)
Instrument Weight	43kg

Applications

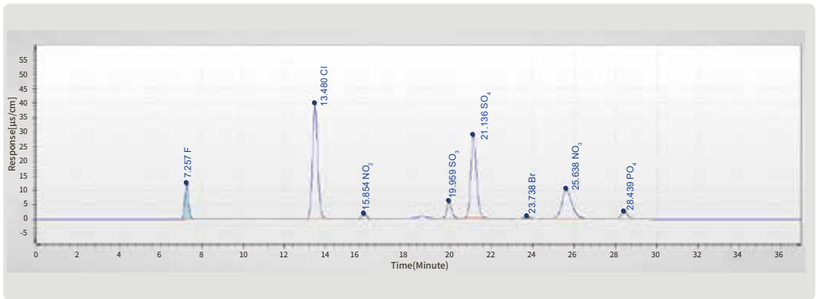
Detection of iodide ion in water



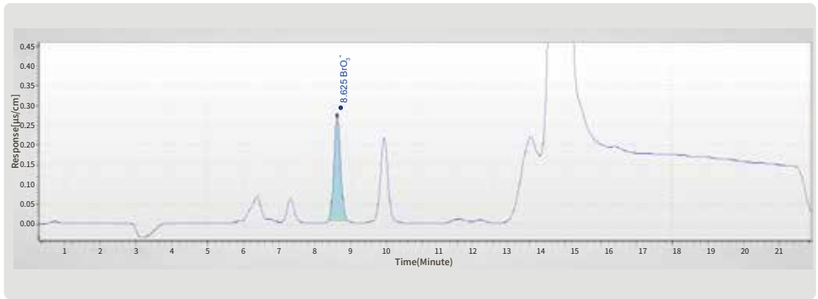
Detection of per-chlorate in water (0.5mg/L)



Detection of eight anions in water



Detection of bro-mate(50μg/L)





ELSpe-2 Elemental speciation analyzer

Introduction

The ELSpe-2 Elemental Speciation Analyzer includes a high-pressure ion chromatography pump, an online speciation digestion system, a post-column hydride generation system (including a gas-liquid separation device), and a chromatography workstation. The detection range of the product covers toys, food, environment, leather, water, and other fields. It enables the elemental speciation analysis of multiple elements, such as As, Hg, Se, Sb, Cr, Br, Sn, Fe, Mn. The As Column and reagent kit are specifically designed for inorganic arsenic analysis. It offers advantages such as good separation efficiency, fast analysis speed, low reagent consumption, low operating costs, and easy operation. It can also perform analysis of methylmercury and ethylmercury.

Features

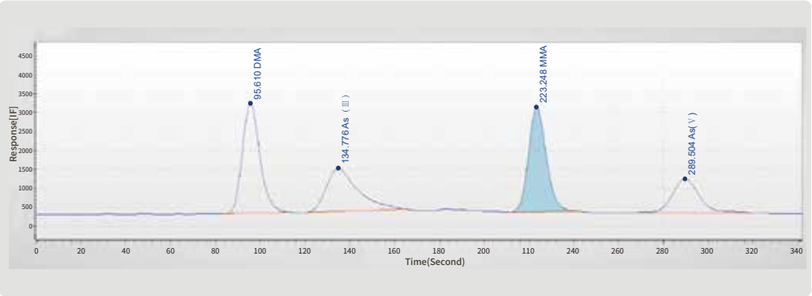
- The system consist of high-pressure ion chromatography pump, online speciation digestion system, post-column hydride generation system (including a gas-liquid separation device), chromatography workstation, and interface for hyphenation with AFS and ICPMS. It has a complete structure, full functionality, and optimal performance.
- Benefit by the high separation efficiency of the ELSpe AS Spec dedicated arsenic speciation column, it can separate five arsenic species within 6 minutes, with all components achieving baseline separation.
- The patented hydride generation device, it can save over 80% of reagent consumption (hydrochloric acid and potassium borohydride).

◆ High Sensitivity: With AFS detector, at a concentration of 5 ppb, the signal-to-noise ratios for all components are greater than 30, and the detection limits are below 0.5 ppb for all species.

Specifications

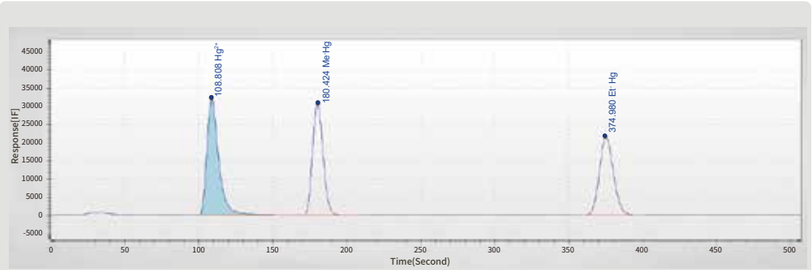
Model	ELSpe-2
Application areas and Standards methods followed	Toys, food, environmental sample, leather, water, etc. Satisfy the needs of ***EU - EN 71-3:2019+A1:2021***"Safety of toys - Part 3: Migration of certain elements
Detection Limit	ppb level
Flow Rate Range	0.01~5.00mL/min
Flow Accuracy	＜0.1%
Pressure Range	0~5000psi（35MPa）
Pressure Pulsation	＜0.1%
Analyze Time	＜7mins
Analysis Method	LC-AFS / LC-ICPMS
Software	Available in both Chinese and English versions, with functions such as simultaneous control, data acquisition/storage/processing. It supports chromatographic peak integration setting, qualitative analysis by retention time , peak area and concentration calculations, half-peak width calculation, and signal-to-noise ratio calculation.
Power Supply	220V±10%, 50HZ
Instrument Dimensions	Desktop, modular constructionn 470mm*440mm*480mm(LWH)
Instrument Weight	36kg

Applications

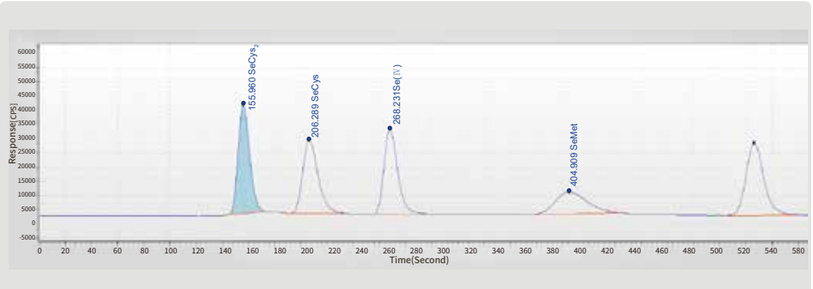


LC-AFS detection of four arsenic species (Concentration 5μg/L)

LC-ICPMS detection of five arsenic species



LC-ICPMS Detection of three mercury species.



LC-ICPMS detection of selenium



Automated Trace Metals Preconcentration & Matrix Removal System

Introduction

ELSpe-2 PreCon automated trace metals preconcentration and matrix removal system is a sample preparation system for complex samples such as seawater, alkali metal salts, alkaline earth metal salts, acid and base reagents, etc. It utilizes the different retention characteristics of the chelate column for different metals to retain and enrich the transition metals and rare earth elements passing through the chelate column while eluting the salt matrix.

Features

- Extreme high desalting ability: The environmental concentration of transition elements and heavy metals in seawater is generally at the ng/L level, and the salt matrix content is about 3.5%, which brings great challenges to analysis. ELSpe-2 PreCon fully automatic seawater desalting separation and concentration system can remove 99.9% of the salt content, making the analysis of seawater samples easier than ever before.

- Ultra-high sensitivity and ultra-fast analysis speed: High-efficiency salt removal eliminates matrix interference, thereby improving the signal-to-noise ratio and detection limit. With a 400uL injection volume, the signal-to-noise ratio of 0.1ppb Cd is greater than 1000, the detection limit can be less than 1ppt, and the analysis time is less than 3 minutes.

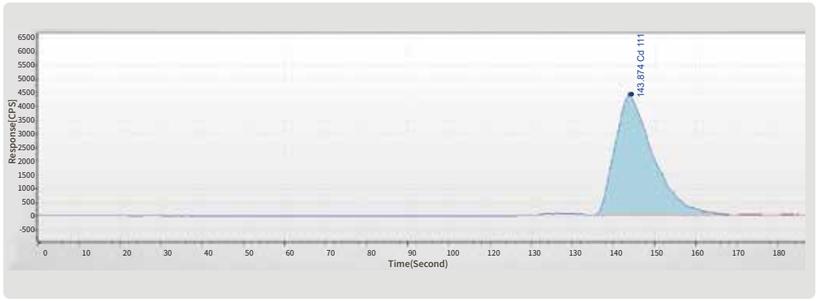
- Multiple analysis modes: Desalting/enrichment (pre-concentration) analysis, automatic dilution analysis, Speciation analysis, and hydride generation mode can be flexibly configured and switched.
- High compatibility: The ELSpe-2 Prin-Cen system can be used in conjunction with ICP-MS of all major brands .

Specifications

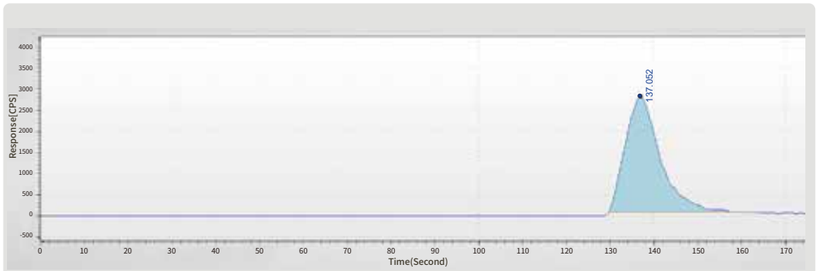
Model	ELSpe-2 PreCon
Application areas and Standards methods followed	Meet the standards of ***USEPA200.10*** " Determination of Trace Elements in Marine Waters by On-Line Chelation Preconcentration and Inductively Coupled Plasma - Mass Spectrometry".
Detection Limit	ppt level
Flow Rate Range	0.01~5.00mL/min
Flow Accuracy	＜0.1%
Pressure Range	0~5000psi（35MPa）
Pressure Pulsation	＜0.1%
Analyze Time	3mins
Analysis Method	Chelation chromatography - ICPMS
Software	EasySpec Workstation provides Instrument control and data acquisition/storage/processing, such as Chromatographic peak integration, qualitative analysis by retention time, peak area and concentration calculations, half-peak width calculation, and signal-to-noise ratio calculation.
Power Supply	220V±10%, 50HZ
Instrument Dimensions	Benchtop, modular stacking, 470mm*440mm*735mm(LWH)
Instrument Weight	52kg

Applications

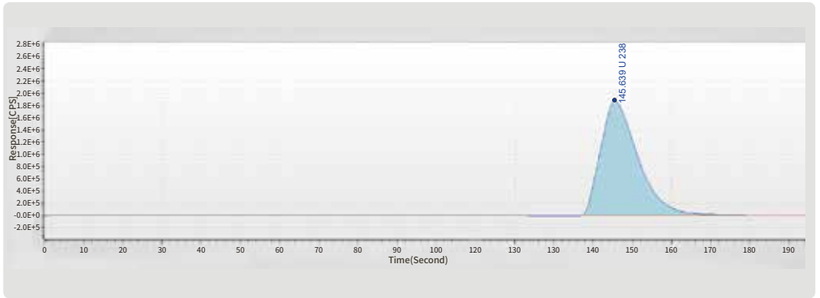
Determination of heavy metals in seawater by chelate chromatography-ICPMS（0.1μg/L）



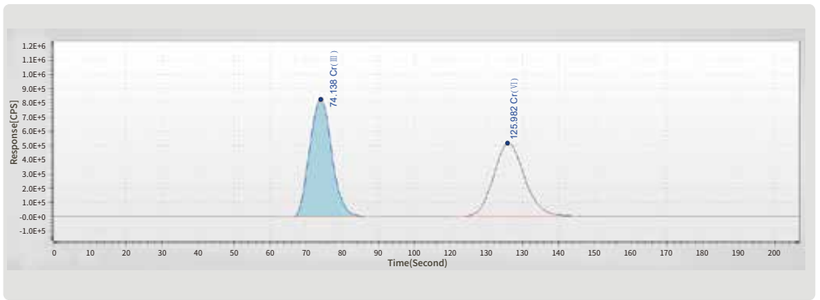
Detection of rare earth elements by chelate chromatography-ICPMS（20ng/L）



Detection of uranium in seawater by chelate chromatography-ICPMS(3μg/L)



Detection of trivalent chromium and hexavalent chromium by LC-ICP-MS





ELSpe-2 Ultra-trace Hexavalent Chromium Analyzer

Introduction

The ELSpe-2 hexavalent chromium analyzer is a dedicated system for the determination of ultra-trace hexavalent chromium in soil, solid waste, water, toys, leather and food with high sensitivity, high throughput, high accuracy, high speed, high resolution, full automatic and simple operation.

Features

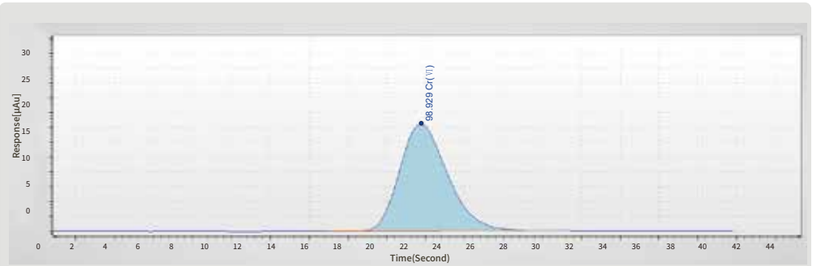
- High Sensitivity: The industry's first dual ion chromatography pump system reduces infusion pulses, lowers baseline noise, and improves signal-to-noise ratio; the unique ultra-long optical path TLD detector has the highest sensitivity among similar products.
- High accuracy: The "WATER ONLY" hexavalent chromium analysis kit, combined with the interference matrix removal column, it greatly reduces the matrix interference in the sample and ensures the accuracy of the measurement.
- High-throughput: The high-capacity 120-position EAS-2A autosampler features pre- and post-injection washes and overlap injection mode to minimize waiting time and reduce total analysis time. The special Cr(Ⅵ) analytical column achieves separation in 3 minutes, cutting the separation time in half compared to competitor columns.
- Ease to use: “water only” column and reagent kit as well as optimized system configuration and validated method setup simplify sample analysis.
- Multifunction: The Ultra Trace Hexavalent Chromium Analyzer can be used to test nitrite\bromate \silicate\Fe\Cu\Zn\Ni when use other analysis kits. It also can coupled to IC-ICPMS for additional elemental speciation. It can also be used as a standalone formaldehyde analyzer for formaldehyde analysis and detection

◆ Wide Applications: The Ultra Trace Hexavalent Chromium Analyzer can be expanded to include analysis of nitrite, bromate, silicate,borate,iron,copper ion,zinc ion,nickel ion and other analytes by adding analysis packages. It can also function as an independent ion chromatograph (IC) and be coupled with IC-ICPMS for the analysis of various elemental speciations including As,Cr, Hg, Se, Sb,Br, Sn, Fe, Mn. It can also be used as a standalone formaldehyde analyzer for formaldehyde analysis and detection.

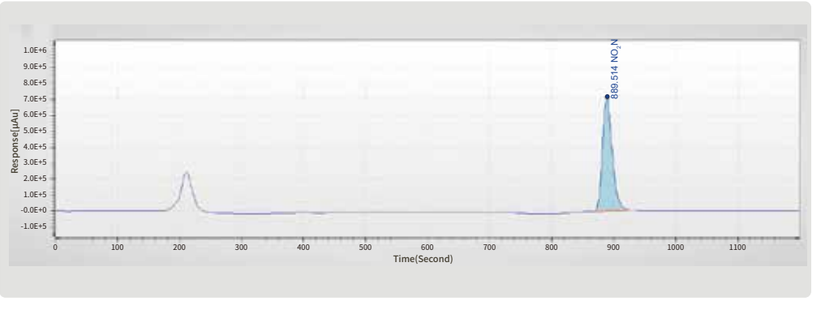
Specifications

Model	ELSpe-2
Application areas and Standards methods followed	Soil, solid waste, water, toys, leather, food, environment, etc. ***EN71-3:2021***"Safety of toys - Part 3: Migration of certain elements". ***ISO17075-2:2017*** "Leather — Chemical determination of chromium(VI) content in leather — Part 2: Chromatographic method". ***GB/T38402-2019*** "Leather and fur—Chemical tests—Determination of chromium (Ⅵ) content:Chromatographic method". ***DIN EN15192:2007*** "Characterisation Of Waste And Soil - Determination Of Chromium(VI) In Solid Material By Alkaline Digestion And Ion Chromatography With Spectrophotometric Detection". ***EPA Method218.7*** "Determination of Hexavalent Chromium in Drinking Water by Ion Chromatography with Post-Column Derivatization and UV-Visible Spectroscopic Detection". ***EPA Method 3060A***"ALKALINE DIGESTION FOR HEXAVALENT CHROMIUM".
Detection Limit	ppt level
Flow rate range	0.01~5.00mL/min
Flow Accuracy	＜0.1%
Pressure Range	0~5000psi（35MPa）
Pressure Pulsation	＜0.1%
Analyze Time	3mins
Analysis Method	Post-column derivatization-ion chromatography(IC-UV/VIS)
Software	EasySpec Workstation provides Instrument control and data acquisition/storage/processing, such as Chromatographic peak integration, qualitative analysis by retention time, peak area and concentration calculations, half-peak width calculation, and signal-to-noise ratio calculation.
Power Supply	220V±10%, 50HZ
Instrument Dimensions	Desktop, modular construction, 470mm x 440mm x 735mm (LWH)
Instrument Weight	52kg

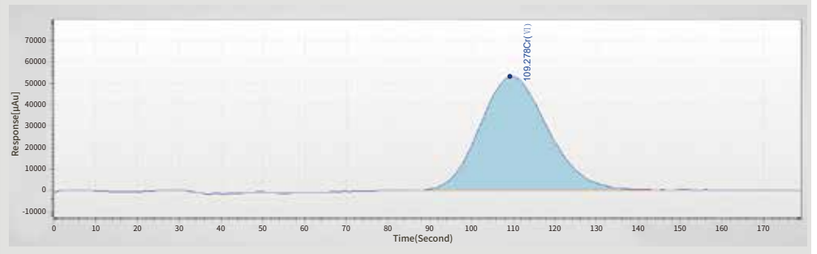
Applications



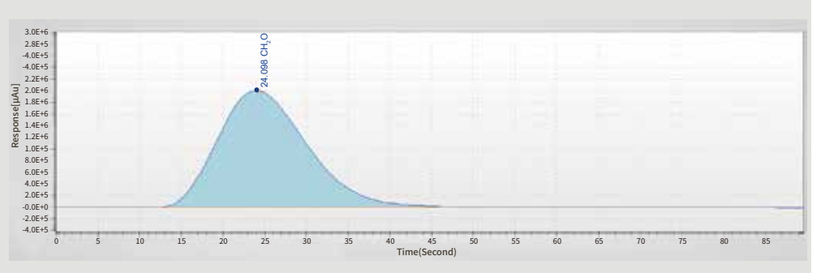
Analysis of hexavalent chromium



Detection of nitrite (Concentration 28 μg/L)



Analysis of hexavalent chromium complies with EN71-3 ISO17075-2



Formaldehyde Test



EAS-2A Autosampler

Introduction

The EAS-2A Autosampler adopts a dual-stroke inner and outer dual-needle structure, where the outer metal needles open the septum and the inner PEEK needle pull the sample solution.This design prevents sample contamination, exhibits strong anti-interference capability, and ensures high accuracy. It is a high-precision, high-throughput scientific instrument.

Features

- Dual-stroke inner and outer dual-needle structure is compatible with septum protected corrosive sample.
- Enables unattended automated analysis, making it an essential option for batch analysis.
- Allows for adjustable sample volume to accommodate various sample types.
- Equipped with pre-wash needle and pre-sampling functions, reducing cross-contamination and minimizing waiting time between injections, thus achieving high-throughput analysis.
- The autosampler can be used with various brands of analytical instruments.

Specifications

Model	EAS-2A
Application areas	Applications requiring automated sampling.
Type	Automatic sampler with X, Y, Z three-dimensional motor drive.
Quantification Method	Can choose full-loop injection (quantification by the quantification loop) or partial-loop injection (quantification by the built-in high-precision syringe pump).
Sample Capacity	120-position (2 mL, optional 2.5 mL) injection vial
Injection Volume	1-500 μL (standard), 2500μL,5000μL are optional, continuously adjustable under software control.
Washing	Can set pre/post-wash needles with pre-wash needle function to minimize ineffective waiting time.
Repeatability	＜0.5%
Cross-Contamination	＜0.02%
Compatibility	Can trigger other detectors such as ICP-MS,AFS,MS and other IC
Function	Single-point automatic preparation of standard curves, with a linearity greater than 0.999.
Power Supply	220V ±10%, 50Hz
Instrument Dimensions	Desktop design, 462mm * 438mm * 252mm (LWH)
Instrument Weight	20kg



MSS-2 Multifunctional Sample Handling System

Introduction

The MSS-2 Multifunctional Sample Processing System is a pretreatment system that can be configured with up to four “six/ten-port switching valves”, two “three-way switching valves”, four “syringe pumps”, one set of “high-pressure ion chromatography pump”, one set of “vacuum pump”, one set of “peristaltic pump”, and one “temperature control reaction module”. It can be used in conjunction with various spectrometers, chromatographs, and mass spectrometers, and provides interfaces for coupling. It offers automated pre-processing for complex samples.

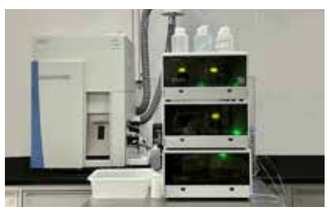
Features

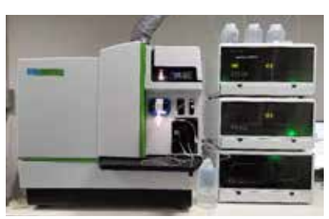
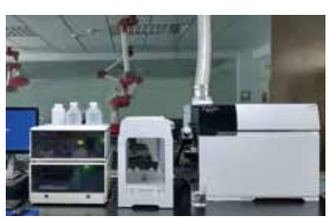
- Intelligent software, customizable operation workflow.
- Medium-pressure six/ten-port switching valves: Two-position six/ten-port switching valves with a plastic flow path, pressure resistance > 1MPa (150psi).
- Dual-motor independent drive technology for high-pressure constant flow pump, dual-plunger pump - series/parallel/independent operation.

Specifications

Model	MSS-2
Application areas	Automated pre-processing for complex samples
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-position six/ten-port switching valves with a full PEEK flow path, pressure resistance > 35MPa (5000psi)
Three-way switching valves	Plastic flow path, pressure resistance > 1MPa (150psi)
Intelligent temperature control module	PTFE flow path, temperature adjustable from room temperature to 100℃.
Precision syringe pump	0.25ml-10ml is optional,1μL step increase volume
Instrument Dimensions	344mm*360mm*512mm(LWH)
Instrument weight	21kg

Expand Application Scenarios



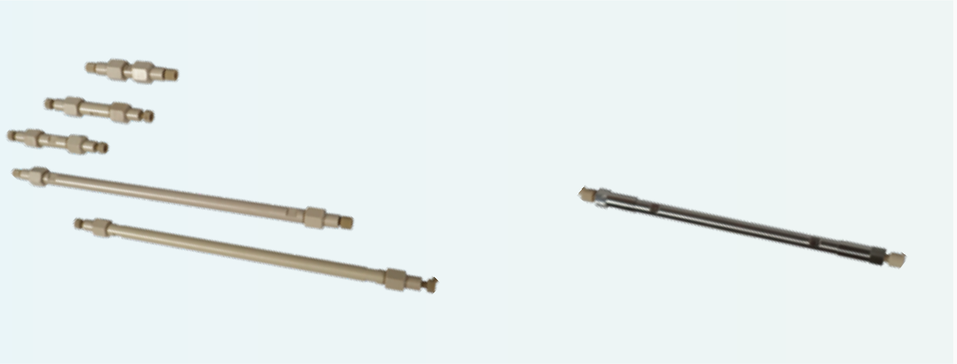





Speciation and Heavy Metal Analysis Column



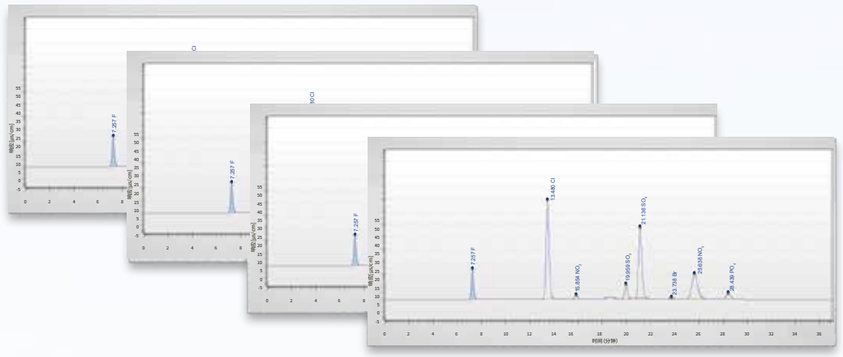
Product/Model	Specifications	Features	Application Areas
Hexavalent Chromium Analysis "Only Water"Kit OWT104	-	Hexavalent Chromium Analysis and Detection	Applicable to the determination of hexavalent chromium in soil, solid waste, water, toys, leather, and food.
Solid Form Analysis Kit OWT201-AFS	-	Liquid Chromatographyand Atomic Fluorescence CoupledDetection of Arsenic Species	Applicable to the detection of arsenic and mercury in soil, solid waste, water, toys, leather, and food.
Solid Form Analysis Kit OWT201-MS	-	Liquid Chromatographyand ICP-MS Coupled Detection ofArsenic Species.	
"Water Only" Analysis Column OWT105	4..0*50mm	Hexavalent Chromium Analysis and Detection	Applicable to the determination of hexavalent chromium in soil, solid waste, water, toys, leather, and food.
"Water Only" Analysis Column OWT106	3.0*50mm		
Arsenic speciation column OWT209	4.0*50mm	Arsenic Speciation Analysis	Applicable to the detection of arsenic and mercury in soil, solid waste, water, toys, leather, and food.
Fast Arsenic Speciation Column OWT210	4.0*50mm		
Trace Metal Enrichment Column OWT401	3.0*50mm	Chelation of Metal Ions in Sample	Applicable to high-salinity matrices such as open ocean water, nearshore water, and estuarine water.
Trace Metal Capture Column OWT402	4.0*50mm	Removal of Heavy Metal Ions from Solution Systems, Purification of Solutions	

Conventional Ion Chromatography Column



Model	Specifications	Features	Application Areas
PAF-9	4.0*50mm	Compatibility with Carbonate and Hydroxide Systems: Rapid analysis of conventional 7 anions F^-,Cl^-,NO_2^-,Br^-,NO_3^-,PO_4^{3-},SO_4^{2-},within 15 minutes in carbonate system, maintaining separation of F- and water peak without affecting F- quantification. Rapid analysis of I- and other conventional anions within 5 minutes in hydroxide system without affecting I- quantification.	Applicable to industries including disease control, food, environmental protection, water quality, and consumer products. Used for separation and quantitative analysis of conventional anions, and rapid separation and quantification of I^-.
PAS-19	4.0*250mm	Hydroxide System: Mainly used for the analysis of conventional 7 anions F^-, Cl^-, NO_2^-, Br^-,NO_3^-,PO_4^{3-},SO_4^{2-}, with analysis completed within 25 minutes.	Applicable to various industries including food, environmental protection, metallurgy, geology, etc. Used for separation and quantitative analysis of conventional anions, disinfection by-products, organic acids. Recommended for analysis and determination of drinking water.
PAS-22	3.0*50mm	Carbonate System: Simultaneous analysis of F^-,Cl^-,NO_2^-,Br^-,NO_3^-,PO_4^{3-},SO_4^{2-},I^-,within 15 minutes.	Applicable to industries including environmental protection, food, geology, consumer products, etc. Used for separation and quantitative analysis of conventional anions and iodide ions. Recommended for analysis and determination of halogens and sulfides.
PAS-23	4.0*150mm	Carbonate System: Elution of F^-, Cl^-, NO_2^-, Br^-, NO_3^-, PO_4^{3-}, SO_4^{2-} within 25 minutes.	Applicable to industries including environmental protection, food, geology, consumer products, etc. Used for separation and quantitative analysis of conventional anions, disinfection by-products, organic acids, etc. Particularly suitable for analysis and determination of drinking water.
PCG-1	4.0*30mm	Methanesulfonic Acid System: Elution of Li^+, Na^+, NH_4^+, K^+, Ca^{2+}, Mg^{2+} within 26 minutes.	Applicable to industries including environmental protection, metallurgy, geology, etc. Used for separation and quantitative analysis of conventional cations. Recommended for analysis and determination of drinking water.
PCS-1	4.0*250mm		

Intelligent Software (Chromatography Workstation)







Introduction

EasySpec Workstationis an analytical instrument control software independently developed by Guangzhou Prin-Cen Scientific Co., Ltd. It is easy to operate and supports functions such as data processing, online instrument control, real-time monitoring, and report generation.

Features

- EasySpec Workstation controls all existing instruments, including ELSpe-2 Ultra Trace Hexavalent Chromium Analyzer, ELSpe-2 Elemental Speciation Analyzer, ELSpe-2 PreCon Fully Automated Desalting and Enrichment System, IC-10 Ion Chromatograph, IC-20 Ion Chromatograph, IC-50 Ion Chromatograph, EAS-2A Autosampler, and MSS-2 Multifunctional Sample Processing System.
- EaseSpec Workstation consists of two independent instrument control and chromatography data processing interfaces.
- The instrument can be initialized with a simple one-button operation, and more detailed parameters of each module can be set individually through the workstation.
- Workstation provides automatic chromatogram acquisition, instantaneous signal acquisition, peak integration, results calculation, and automatic report generation. All data can be logged for audit trail.
- The software is compatible with WIN XP/7/8/10, and is available in Chinese / English version.

Instrument Control

Instrument control includes worklists, real-time graphics, and control panel interfaces. Different instruments are adapted to different control panels, accurately controlling instrument parameters such as pumps, temperature, and time. Intelligent operations are provided to realize automatic analysis.

Signal Acquisition

- Real-time collection of chromatogram signals;
- Channel settings are adjustable, allowing for the selection of multiple channels or multiple mass numbers to display. Monitor pool temperature, column temperature, pump pressure, suppression current, and other parameters in real time.

Data Processing

- One-click bulk analysis of all chromatograms in the worklist.
- Peak addition, peak deletion, peak merging, shoulder peak cutting, and specific baseline correction schemes are provided. Undo and redo actions for manual processing operations on spectra are possible.
- Qualitative and quantitative analysis can be performed on collected spectra during the acquisition process.

Analysis Report

- The report template can flexibly customize the report, select Chinese or English mode, and directly generate and print.
- Analysis reports for a series of samples can be printed in batches at one time.



After-sales Service

Guangzhou Prin-Cen Scientific Co., Ltd. (hereinafter referred to as Prin-Cen) has established after-sales service management systems and workflows to standardize after-sales services, satisfy user needs, ensure the maximum benefits when users use our products, and enhance user satisfaction and trust in our products.

Installation and Repair

After-sales service

The after-sales engineers of Prin-Cen are responsible for after-sales maintenance and support, providing product installation, instrument debugging, maintenance, and troubleshooting services. On-site or remote after-sales service methods are available to actively solve problems and meet customer needs.

On-site Installation

On-site product installation should be notified at least 3 working days in advance according to customer requirements. After confirming the product installation and debugging conditions with the installation confirmation form, professional installation engineers will be dispatched to install on-site within 48 hours.

Warranty Repair

The product warranty period is 12 months. Except for man-made damages, product failures within the warranty period will be repaired for free. Repairs beyond the warranty period will be charged at a certain fee according to the same approved standard.

Quality Assurance

The product quality, work quality, and service quality of Prin-Cen are all based on customer satisfaction and aimed at gaining customer trust. We ensure that all instrument accessories are genuine products from manufacturers, safeguarding user rights.

Training Services

01 Technical Documents

During the installation and debugging period, free user operation training will be provided, along with product-related technical manuals or other training materials.

02 On-site Training

After the completion of instrument installation, installation engineers will provide one-on-one on-site training for users to ensure they fully understand the usage of the instrument and software and can independently operate the instrument.

03 Remote Training

When users encounter difficulties during the use process, our after-sales engineers will patiently provide the best solutions for you."

Global Distribution Network



Guangzhou Prin-Cen Scientific Co., Ltd

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