

Ion Chromatograph

IC-W6200

Description

The intelligent integrated ion chromatograph can be remotely controlled, instructed and software updated through Ethernet connection. It features one-button intelligent maintenance, offering high precision, high stability, and intelligence, all of which can effectively improve laboratory productivity.

Features

● Leakage alarm

When leakage is detected, the instrument will promptly detect and automatically alarm, and can automatically shut down;

● Auto range detector

Based on a DSP architecture, the output is direct conductivity, with a detection frequency up to 100Hz, flexible and adjustable, and capable of auto-ranging.

● Simple piping layout

The piping design is simple and intuitive, making it easy to operate and maintain, which improves work efficiency.

● Consumable ID recognition and life monitoring

It can realize ID coding and lifetime monitoring of consumables such as suppressors, provide effective reminders, and avoid the reduction of detection efficiency caused by consumables.

● Online emptying

Automatic evacuation of the high-pressure flow path can be realized, reducing manual operation.

● Peristaltic pump post-pump cleaning function

Used for cleaning the plunger rod of the chromatography pump to reduce the precipitation of buffer salts and avoid wear of the plunger pad and gem rod.

● High-definition 10-inch touch screen

The instrument flow path and the operating status of each component are displayed in real time, with one-button operation and viewing at any time.



Key Component Advantages

Precision ion chromatography pump made of PEEK

Full PEEK material pump head, resistant to acid, alkali and reverse phase organic solvents, preventing metal contamination;

Optimized floating mechanical design extends the lifetime of the pump and the pressure transducer, thereby reducing instrument operation costs and the frequency of maintenance;

The intelligent electronic pulsation suppression technology supplies eluent with high precision, low pulsation, and low drift;

Equipped with high and low pressure protection mechanisms, it instantly safeguards the entire analytical system;

All-plastic non-metallic flow path

All PEEK pumps;

PEEK motorized injection valve;

Eluent generator cartridge, liquid pipeline and connector are made of acid and alkali corrosion resistant materials such as PEEK, PTFE, PP, etc;

All-plastic colorful liquid pipelines are convenient for customers to identify the operation;



Highly precise temperature control for the whole system

The built-in column oven and high-efficiency heat exchange technology ensure the heating efficiency and temperature control accuracy of the chromatographic column, ensuring the stability of the results.

Lysate (Eluent) preheating function: Lysate (Eluent) and sample are preheated before entering the column to avoid the negative effects of poor reproducibility and peak spreading (such as repeatability and peak diffusion) caused by temperature difference;

The high-precision, efficient temperature control and temperature compensation functions of the conductivity cell ensure the stability and high sensitivity of the detection, provide a wide dynamic detection range, and achieve simultaneous analysis of high and low content components.

Key Component Advantages

Electrolytic regenerated membrane suppressor

Electrolytic self-regenerating membrane suppression method, reagent-free design, without the requirement of additional acid and alkali, without regeneration;

Provides continuous and stable suppression capability, greatly improves analytical stability, and reduces system noise and drift;

Fast balance time, no risk of membrane drying and cracking, long service life;

Special suppressors are available for both anion and cation analysis;

One-button intelligent health maintenance

One-button rinsing: The system enables automatic rinsing after analysis, ensuring effective cleaning, reducing time costs, and improving work efficiency;

One-button maintenance: With one-button operation, the system automatically performs instrument maintenance without the need for manual supervision or intervention, prolonging the instrument's lifespan;

Environmentally friendly, reagent-free ion chromatography

The "Water Only" eluent generator harnesses electrodialysis technology to produce the reagent on-demand, eliminating manual preparation;

A comprehensive range of eluent generators includes varieties of generating hydroxide, carbonate, and methanesulfonate, catering to meet various experimental analyzing needs;

The system achieves gradient elution under isocratic pump conditions, reducing costs, significantly improving the reproducibility of experimental results, and reducing labor and environmental pollution;

Autosampler

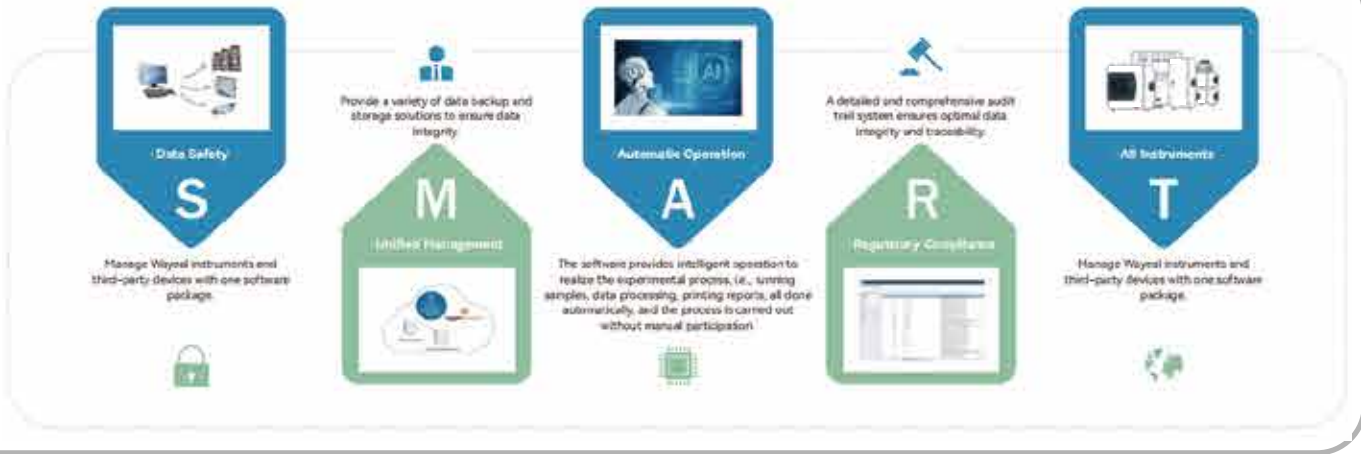
AS2800 Series Autosampler

- Equipped with sample cover to effectively avoid environmental pollution;
- Supports single-channel injection and dual-channel injection for analysis;
- Supports large sample volume (2mL);
- Supports different sample trays replacement;
- Can be used for the analysis of trace sample concentration;
- With a variety of wash modes, such as coarse washing, fine washing, and so on;

AS3110 Series Autosampler

- Supports multiple sample vials of different volumes;
- Different sample trays up to 120 sample well positions available;
- Supports auto dilution for calibration curve measurement with a single standard sample;
- Supports temperature control for sample stability;
- Supports multiple injection mode (push mode, pull mode, single channel sampling, dual channel sampling);

Smart Lab Chromatography Workstation



Ion Chromatograph

IC-W6300

Description

The system is rich in configuration, powerful in function, simple in layout and convenient in operation. The new intelligent control system, equipped with in-line eluent generator and built-in quadratic gradient pump made of PEEK material, is a multifunctional system, which is an ideal partner for your experiments, and helps you to achieve your experimental goals easily.

The integrated intelligent ion chromatography system adopts all-plastic non-metallic flow path, optimized piping layout and flexible configuration, which is specially designed and crafted around the operation and process problems in the laboratory.



Features

① Eluent Generator

Continuing the development of reagent-free ion chromatography technology, electrolysis of deionized water is used to produce a precise concentration of eluent;

Dramatically improve the reproducibility of experimental results while reducing labor;

Comprehensively supports isocratic elution or isocratic pump gradient separation with flexible settings, convenient operation and better cost;

The eluent purification system effectively removes trace impurity ions and provides ultra-pure eluent system.

Features

② High Pressure Pump

PEEK ion chromatography pump with high pressure resistance up to 42Mpa.

The intelligent electronic pulsation suppression technology, very low pressure pulsation of the flow rate.

Optimized floating mechanical design extends the lifetime of the pump and the pressure transducer.

Achieve higher sample throughput and increase laboratory productivity;

Flexible switching of isocratic and gradient pumps to meet various experimental analyzing needs.

③ Flexible Choice of Detectors

Conductivity, electrochemical, UV, fluorescence and other detectors can be flexibly selected to expand the application scenarios of ion chromatography;

Modular pluggable conductivity detector and electrochemical detector, software automatic identification;

Electrochemical detector supports DC amperometric, pulsed amperometric, integral pulsed amperometric and so on.

④ Intelligent and Powerful Hyphenated Technology

Easily realize a variety of hyphenated technologies: IC-UV, IC-MS, IC-MS/MS and IC-ICP/MS.

Two-dimensional chromatography technology: column types of column switching functions are reserved to easily complete a variety of complex applications such as two-dimensional chromatography technology;

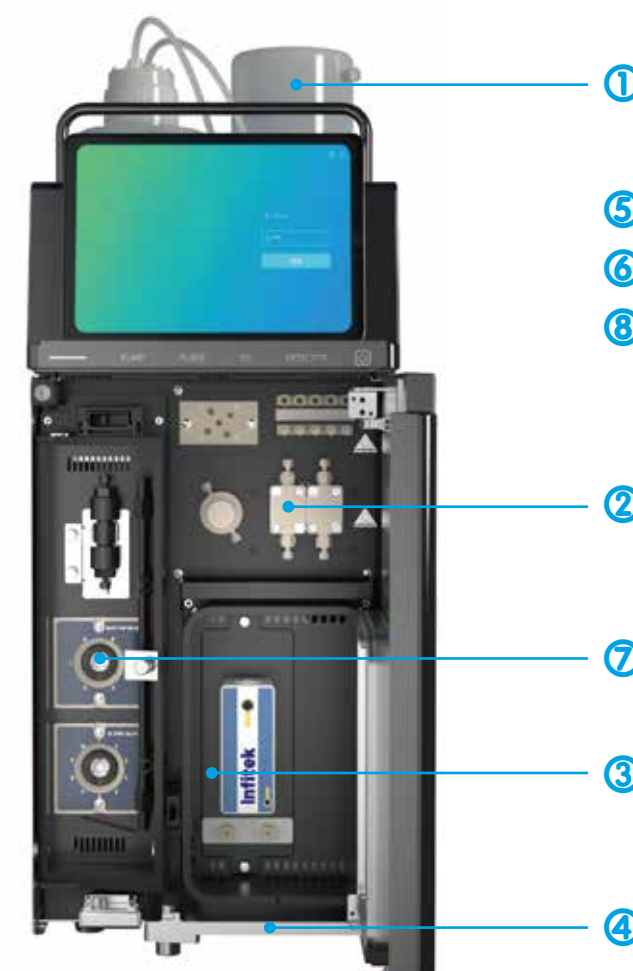
A variety of pre-treatment functions for complex matrix samples: through various types of valves and control technology, it can complete on-line enrichment, on-line matrix elimination and other complex sample pre-treatment functions.

⑤ Simplified Flow Path

The flow path design is simple and smooth, easy to understand;

Easy operation and maintenance, improve analyzing efficiency;

Adopting modular design: pump, column oven, detector and eluent generator are designed independently.



Features

⑥ Chemically Inert Non-metallic Flow Path

The eluent storage tank, liquid pipeline and connector are all made of acid and alkali corrosion-resistant materials such as PEEK, PTFE and PP;

Chemical inert colorful liquid line piping, convenient for customers to identify the operation;

Consistently small dead volume (almost zero) connections for optimal chromatographic performance;

Can withstand high pressure up to 6000psi, perfectly supporting HPIC high pressure ion chromatography



⑦ High Precision Temperature Controller

Column Oven

Air-bathing column oven, precise temperature control and eluent preheating and reduction of temperature gradients ensure system stability and productivity.

The temperature can be adjusted from 5°C above ambient to 70°C.

Optional configuration of high-pressure valves and low-pressure valves, suitable for various IC chromatographic columns.

⑧ Temperature-controlled Detection Module (built-in suppressor)

Dual temperature control for suppressor and detector to ensure system stability.

Better conductivity and electrochemical detection signal-to-noise ratio ratio, higher detection sensitivity.

Digital conductivity detector, based on DSP architecture design.

Flexible and Optional Configuration Multiple Application Scenarios



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With a variety of wash modes, such as coarse washing, fine washing, and so on.



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Supports auto dilution for calibration curve measurement with a single standard sample;

Supports temperature control for sample stability;

Supports multiple injection mode (push mode, pull mode, single channel sampling, dual channel sampling).

Flexible Configuration of Detectors

Supports electrochemical detector, conductivity detector, UV detector, fluorescence detector, etc., which could be automatically recognized by the software; The pluggable machine design makes the detector easier installation.



Conductivity Detector



Electrochemical Detector



UV Detector



Fluorescence Detector

Reagent Free Eluent Generator (OH⁻, CO₃²⁻, MSA)



The eluent generator could electrolytically generate basic or acid Eluents in-line for IC analysis. Users only need to add deionized water. This allows for more accurate eluent concentration and more convenient operation.

Save Labor and Time

Only deionized water is need to produce different concentrations of eluent;

Cost Savings for Customers

The eluent generator enables gradient elution with a single pump;

Extend instrument lifetime

Only deionized water is pumped into the system; The pump and the pressure transducer are no longer corroded by acid, base and salt, reducing the pump failure rate and prolonging the life of the pump;

High Reproducibility and High Repeatability

Positioned after the pump and before the inlet valve, the reagent-free eluent generator's concentration adjustment is not influenced by the pump's internal volume, resulting in a rapid response with virtually no delay.

Automatic Gradient Elution

By controlling the electrolytic current to precisely generate different concentrations of eluent, the whole chemical process is completed in a sealed volume, avoiding the error caused by manual preparation of eluent and the contamination caused by exposure to air, and effectively improving the concentration accuracy.

Accurate Results and Stable Spectrum

The chromatographic columns include ion chromatography columns, guard columns, pre-treating columns, as well as liquid chromatography columns, etc., which are widely used in many fields, such as environmental, food, pharmacy, semiconductor industry, new energy, and so on.