OSIS Quality & Reliability

GENERAL CATALOGUE

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OSIS Quality & Reliability

Promoting Craftsman Spirit

Creating National Brand

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COMPANY PROFILE

OSIS is a leading driven enabling next generation of science and technology. We delivering advanced analytical products and solutions to achieve customer expectation and requirements. We are committed continuously introducing laboratory cutting edge technology and scientific products.

As a vital source for scientific community and laboratory research industries the company committed to building system solutions for high-performance and intelligent laboratory analytical instruments with professional technical services and continuous technology accumulation, and strive to promote the rapid development of laboratory testing instruments.

Our Core Values

~ Innovation: We agility learning and stimulate new approaches embed in new solutions. Our principle practices rely in quality, reliability and sustainability.

~ Integrity: Our concepts are honest, ethic and promise. We openly collaborate with our partnership in pursuit of the truth and flexibility.

~ Excellence: We passionate achieving the highest quality and professional standards in laboratory articulating by understanding uncertainty and rigorous ensuring the best scientific contemporary.

ION CHROMATOGRAPH

OIC-900 ion chromatograph

More stable five-pole anti-interference conductivity detector with temperature compensation,suitable for general laboratory use.

Intuitive observation with 5.0-inch high-brightness LCD real-time display of parameters.

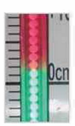
One-key shutdown

Self-regenerating membrane suppressor, low background suppression, high suppression capacity, can be a perfect substitute for imported suppressors.

Two-pole conductivity detector with temperature compensation and high sensitivity, suitable for laboratories with high sensitivity requirements.

Built-in eluent preheating system to quickly and efficiently balance the eluent system.

Fully compatible full PEEK flow path, acid and alkali resistant, corrosion-free.



Liquid level warning and self-processing system to automatically monitor low liquid level of the eluent and high liquid level of the waste liquid, automatic pump stop and power off under abnormal conditions, safe and effective protection of suppressor.

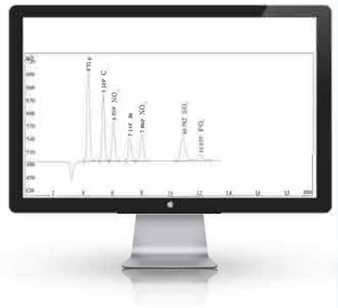
Imported manual six-way valve, leak proof up to 100,000 times of repeated switches.

Self-innovated embedded column heater with imported grade A+ platinum resistance for more accurate temperature measurement.

More efficient, patented constant current source device for current adjustment according to different conditions.

- On-line electrolysis of water to produce suppression, continuous self-regeneration
- Small dead volume: <90 µL
- Low suppression background: <1.0 µS/cm
- Types of suppressor: anion and cation
- Classes of suppressor: electrochemical self-regeneration and chemical suppression
- Suppression capacity: >100µeq/min

Electrodialytical membrane suppressor



Patented embedded column Heater

- Imported grade A+ platinum resistance
- Temperature control range: room temperature +5 °C-60 °C
- Temperature control accuracy: ±0.01 °C

- Patented continuous flow (MBB) structural design to maintain flow continuity during sampling and injection switching, greatly reduced interference of transient pressure shocks on the system
- 30-degree wide port for easy connection to connectors
- Single point pressure regulation reduces friction between the rotor seal and the stator for extended lifetime
- Built-in position sensing switch, reproducible start signal for the system

Withstand voltage	35MPa
Connection piping	1/16''
Flow path diameter	0.5mm(0.02'')
Screw specifications	No.10-32UNF
Sample loop	25µL
Injection mark	Built-in type

Six-way injection valve

Electrical conductivity detector

- Material: 316 stainless steel needle electrode
- Cell volume: ⩽0.8 µL
- Temperature control range: room temperature +5 °C-60 °C
- Temperature control accuracy: ±0.01 °C
- Baseline noise: ⩽0.2% FS
- Baseline drift: ⩽1% FS
- Quantitative repeatability: RSD⩽1.0%
- Qualitative repeatability: RSD⩽0.2%
- Minimum detection concentration: Cl-⩽0.0006 µg/mL

- Pump withstand pressure: 42MPa (6000psi)
- Maximum operating pressure: 5000 psi
- Flow range: RSD⩽0.01%
- Flow accuracy: 5000psi
- Flow repeatability: RSD⩽0.1%
- High-performance corrosion-resistant sealing rings for various eluent systems, effective prevention of liquid leakage, prolonged lifetime.

Intelligent miniature high pressure constant current pump

Chromatography workstation

- Unique technology of intelligent spectral peak identification for the basically automatic processing of peaking, baseline calibrating and overlapping peak segmentation
- Customized illustrated Chinese/ English analysis report, direct export to Word for printing
- Optional data export to a spreadsheet such as Excel for secondary calculations or for custom format report printing
- Batch post-processing of multiple spectra

OIC-600 ion chromatograph

More stable five-pole anti-interference conductivity detector with temperature compensation,suitable for general laboratory use.

Intuitive observation with 5.0-inch high-brightness LCD real-time display of parameters.

Fully compatible all PEEK flow pats, acid and alkali resistant, corrosion proof.

More efficient, patented constant current source device for current adjustment according to different conditions.

Self-regenerating membrane suppressor, low background suppression, high suppression capacity, a perfect substitute for imported suppressors.

Imported manual six-way valve, leak proof up to 100,000 times of repeated switches.

Double plunger series advection pump

- Pump withstand pressure: 35 MPa (5000 psi)
- Maximum operating pressure: 4000 psi
- Flow range: 0.001-9.999 mL/min
- Flow accuracy: RSD≤0.1%
- Flow repeatability: RSD≤0.01%
- High-performance corrosion-resistant sealing ring for various eluent systems, effective prevention of liquid leakage, prolonged lifetime.

Six-way injection valve

- Japanese imported;
- Compatible with SUS and PEEK materials, leak-proof up to 100,000 times switches.

Withstand voltage	35MPa
Connection piping	1/16''
Flow path diameter	0.5mm(0.02'')
Screw specifications	No.10-32UNF
Sample loop	25μL
Injection mark	Built-in type

Electrodialytical membrane suppressor

- On-line electrolysis water produces suppression ions, continuous self-regeneration
- Small dead volume (<90 μL)
- Low suppression background (<1.0 μS/cm)
- Types of suppressor: anion and cation
- Classes of suppressor: electrochemical self-regeneration and chemical suppression
- Suppression capacity: >100μeq/min

Electrical conductivity detector

- Material: five-pole pulse ring passivated 316 stainless steel
- Cell volume: ≤1.0μL
- Output range: -2000~2000mv (12-step adjustment)
- Baseline noise: ≤0.2%FS/30min
- Baseline drift: ≤2%FS/30min
- Quantitative repeatability: ≤2.0%
- Qualitative repeatability: ≤0.2%
- Minimum detection concentration: Cl ≤0.001μg/mL

Chromatography workstation

- Unique technology of intelligent spectral peak identification to basically realize automatic processing of peaking, baseline calibrating and overlapping peak segmentation
- Customized illustrated Chinese/English analysis report, direct export to Word for printing
- Optional data export to a spreadsheet such as Excel for secondary calculations or for custom format report printing
- Batch post-processing of multiple spectra

ACCESSORIES AND CONSUMABLES

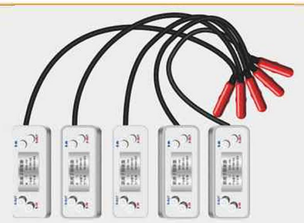
Electrodialytical membranesuppressor

Autosamp1er

MODEL:UC-3265

- Sample tube positions: 120
- Injection repeatability: full-quantity loop injection: RSD6 ⩽0.3%.partial loop injection: RSD6 ⩽0.5% (injection volume⩾3 μL)
- Sample residue: ⩽0.01% (according to the specified needle washing procedure)
- Operation control mode: combined panel direct operation control and RS-232 control
- Display: LCD, 4.3-inch true color, animated graphical interface
- Control: 32-bit embedded microprocessor with ARM7 core

E1ectrofi1m suppressor



ADVANTAGES

- On-line electrolysis of water for production of suppression, continuous self-regeneration
- Small dead volume and low background
- High compatibility

MAIN TECHNICAL PARAMETERS

- Types of suppressor: anion and cation
- Classes of suppressor: electrochemical self-regeneration, chemical suppression
- Suppression capacity: >100 μeq/min
- Dead volume: <90 μL
- Suppression background: <1.0 μS/cm

E1ectric eluent Generator

- Eluent type: KOH、K_2CO_3 /$KHCO_3$ 、K_2CO_3、 CH_3SO_3H
- Eluent concentration range: 0.5-100mM (KOH、CH_3SO_3H) ;0.5-10mM (K_2CO_3)
- Trial flow rate range: 0.1-2.0 mL/min
- Maximum operating pressure: 3000 psi (21 Mpa)
- High-purity on-line-produced eluent, controllable concentration
- Highly automatic, plug and play
- Program-controlled gradient elution, low baseline drift, low detection limit

Co1umn co1umn oven

- Model: OT-704
- Dimension: 60 mm x 100 mm x 500 mm
- Power: 200 W
- Temperature range: room temperature to 60 ° C
- Temperature control accuracy: ±0.1 ℃

Quantitative ring

- Brand: OURUN
- Material: PEEK
- Specifications: 20.0, 25.0, 50.0, 100.0, 200.0, 250.0 and 500.0 μL

Column type and description

- OURUN-AC-1 type: A universal ion chromatography column with 100% organic solvent compatibility and a pH tolerance range of 0-14. It can be widely used in routine anion detection in various fields and is extremely cost-effective. Completely separation of F^-,Cl^-,Br^-,No_3^-,No_2^-,Po_4^{3-} and SO_4^{2-} can be achieved within 20 minutes.

- OURUN-AC-S type: A fast ion chromatography column with 100% organic solvent compatibility and a pH tolerance range of 0-14. It can be widely used in routine anion detection in various fields and is extremely cost-effective. Completely separation of F^-,Cl^-,Br^-,No_3^-,No_2^-,Po_4^{3-} and SO_4^{2-} can be achieved within 10 minutes.

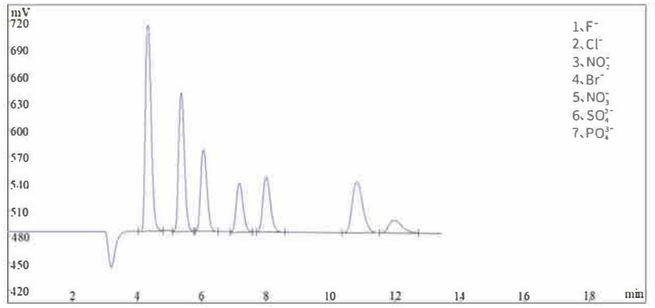
- OURUN-AC-OH type: A hydroxide ion column with a pH tolerance range of 0-14, which meets the requirements for hydroxide selective columns in various standards.

- OURUN-CC Cane ion column can detect both monovalent and divalent cations, to meet the requirements of HJ812-2016 standard, no tailing phenomenon.

APPLICATION SCOPE AND EXAMPLES

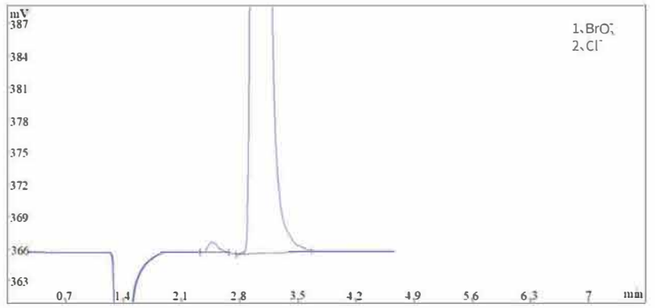
Application range

Applications



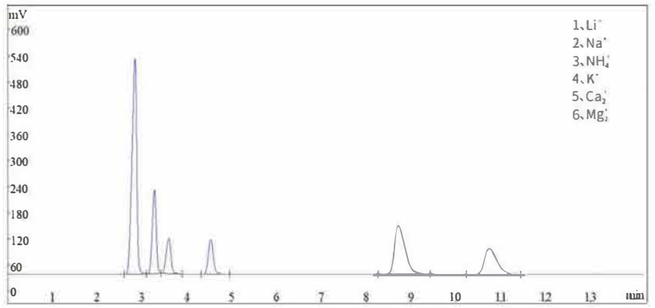
7 anions in water

- Column type: OURUNet-AC-S
- Flow rate: 1.0 mL/min
- Suppressor current: 30 mA
- Eluent: 8mMNaHCO$_3$



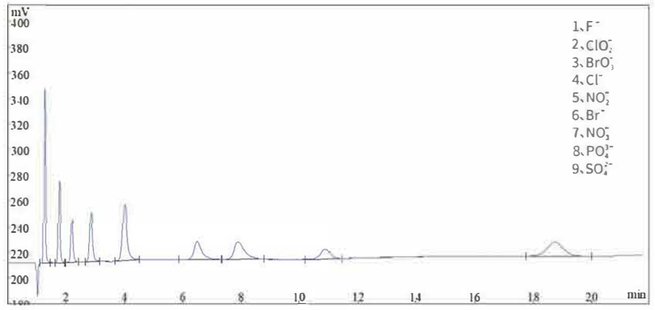
Bromate in high chlorine

- Column type: OURUNet-AC-1
- Flow rate: 1.3 mL/min
- Suppressor current: 30 mA
- Eluent: 2mM Na_2CO_3 /1mM $NaHCO_3$



6 cations in water

- Column type: OURUNet-CC
- Column temperature: 30 °C
- Flow rate: 1.0 mL/min
- Suppressor current: 30 mA
- Eluent: 4 mM methanesulfonic acid



7 anions and disinfection by-products

- Column type: OURUNet-AC-1
- Flow rate: 1.3 mL/min
- Suppressor current: 30 mA
- Eluent: 2mM Na_2CO_3 /1mM $NaHCO_3$

FLOW INJECTION ANALYZER

ORFIA-605 FLOW INJECTION ANALYZER

INSTRUMENT INTRODUCTION

The FIA-605 flow injection analyzer is a multi-channel, fully automatic flow injection analyzer with on-line sample processing. The instrument consists of a multi-parameter analysis channel, an autosampler, and a software workstation. Each analysis channel has an independent peristaltic pump, chemical analysis template, photodetector, system control, and signal acquisition circuitry. The channel is equipped with on-line heating, on-line distillation, on-line UV digestion and on-line extraction devices required by the method, and the chemical reaction process is controlled by software. Each channel is completely independent, and there is no need to change hardware to replace the analysis method. The software workstation supports simultaneous detection of 8 channels.logy accumulation, and strive to promote the rapid development of laboratory testing technology.

INSTRUMENT PRINCIPLE

Based on the theory of flow injection analysis (FIA), in a closed pipeline, the sample solution is directly injected into the reagent carrier in the form of a “sample plug”. The reagent and the sample are mixed and reacted in the pipeline, and can be tested before the completion of reaction. Thus, it can get rid of the traditional concept that the analysis must be conducted under steady state conditions. Chemical analysis can be carried out under unbalanced dynamic conditions, which greatly improves the analysis speed.

PRODUCT PERFORMANCE AND TECHNICAL ADVANTAGES

01

- Fully automatic multi-channel analysis, software workstation support

  Up to 8 channels for simultaneous detection and replacement of analysis method

  Simple and fast, fully automatic entire analysis process

  No manual intervention is required.

02

FIA-605 autosampler

- Large-capacity polar coordinate autosampler with 162 sample tube positions, needle washing position and two large-capacity cleaning liquid levels to meet the needs of large numbers of sample analysis
- Code disc positioning, high positioning accuracy, no system cumulative error
- Precisely machined sampling syringe, anti-collision device, immediate stop when puncturing human hand or other obstacles to avoid injury and waste of reagent
- Dual-channel rehydration pump, program-controlled automatic replenished cleaning solution, no need to manually replenish the cleaning solution

03

High precision peristaltic pump

- An independent 12-channel peristaltic pump for each analysis channel with settable pump speed at 5-100 rpm
- Integral gland design, adjustable elastic device to ensure pressure of each pump tube and improves reliability, special coating treated gland surface, chemical corrosion-resistant, reduced pump tube fatigue
- Multiple clamps of each pump tube for frequent change of the clamp position, prolonged lifetime of pump tube

04

Online sample preparation device

- On-line heating, distillation, UV digestion, extraction and reduction for fast and accurate sample processing, low sample and reagent consumption
- On-line distillation-condensation unit with quartz gas-liquid separator, high distillation speed and high efficiency; no need for dialysis membrane, no trouble of changing the membrane (patent applied. Patent No.: ZL2018 2 0335841.1)
- Built-in 254 nm UV lamp digestor, program-controlled light on and off, effectively extended lifetime of UV lamp
- Programmable setting, precise control of heating temperature to ensure the consistency of each reaction process, safe and reliable over-temperature protection device
- Double-beam optical system with excellent stability and high detection accuracy
- Configure LED light source for certain wavelengths, ultra-long lifetime, low noise, low drift and good stability
- High-sensitivity blue-enhanced photodetector with wavelength detection range of 340-1050 nm
- High-precision A/D converter, detection dynamic range not less than 3 orders of magnitude
- Advanced online degassing device to remove bubbles online to avoid interference
- Liquid leakage detection device, automatic alarm and detection stop after detecting liquid leakage to avoid instrument damage and reduce reagent waste
- Customized flow injection analysis software workstation, Chinese operating system, user-friendly interface design, easy to learn and operate, convenient software-preset method analysis conditions
- Proportional diluter, automatically preparation of standard samples for calibration and online dilution of over-standard samples, fast dilution and high accuracy, automatic dilution of samples with excessive concentration according to preset procedure, pipeline cleaning to avoid contaminating the next sample
- Stable and multiple safety protection devices

  All analytical methods conform to national standards and EPA/ISO methods

ORFIA-605 FLOW INJECTION ANALYZER

TECHNICAL PARAMETER

- Analysis channel dimensions: 210 mm (L) x 640 mm (W) x 310 mm (H)
- Automatic sampler dimensions: 360 mm (L) x 460 mm (W) x 350 mm (H)
- Diluter dimensions: 180 mm (L) x 220 mm (W) x 220 mm (H)
- Power requirements: AC 220 V, 50-60 Hz
- Peristaltic pump: 12-channel peristaltic pump with settable speed at 5-100 rpm
- Autosampler: large-capacity, coordinated, more than 160 sample tube positions, anti-collision device
- Photodetector: wavelength detection range of 340-1050 nm, high-sensitivity blue-enhanced photodetector and high-precision A/D converter, detection dynamic range not less than 3 orders of magnitude.
- Diluter: automatic preparation of standard samples for calibration, automatic online dilution of over-standard, dilution factor of 1.5-10000.
- Reagent consumption from 10-100 μg according to different methods
- Analysis frequency: up to 120 samples/hour according to different methods,
- Temperature control range: room temperature to 180 °C, over temperature protection
- Working conditions: indoor use only, ambient temperature 10-35 °C, relative humidity 25%-85%, no condensation

Technological innovation，pursuit of quality

Patented technology: online distillation unit, quartz gas-liquid separator

- Fast distillation, high efficiency, short detection period, reagent-saving
- No need to change film, maintenance-free, easy to use

Patented technology: dual beam optical system

- Good stability and high detection accuracy
- High-efficiency online bubble removing device to effectively remove air bubbles and avoid abnormal detection caused by bubbles
- Automatic sampler code disc positioning, high positioning accuracy
- Automatic anti-collision device, immediate stop of detection when the needle hits a foreign object to prevent personal injury and needle damage
- Optimized analysis method, shortened detection cycle, reagent-saving

Multiple security protection

Over temperature protection device

A computer program controls the heating temperature. In the event of a fault that causes the heating temperature to be too high, the power is automatically turned off and the heating circuit is protected from damage.

Autosampler anti-collision device

When the needle accidentally touches a human hand or other obstacles, it will immediately stop falling, avoiding injury and avoiding the waste of reagents in the wrong position.

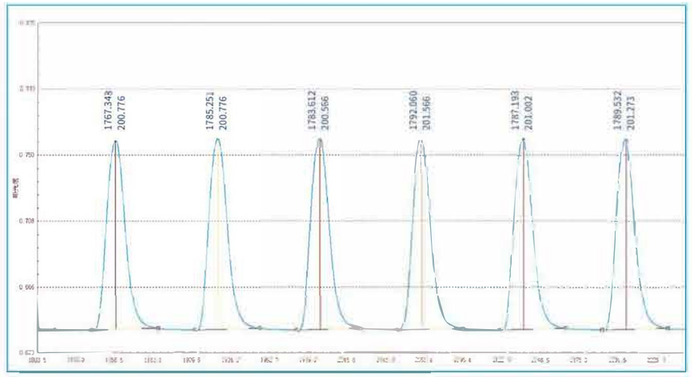
Install insulation jacket (tube) for high temperature parts

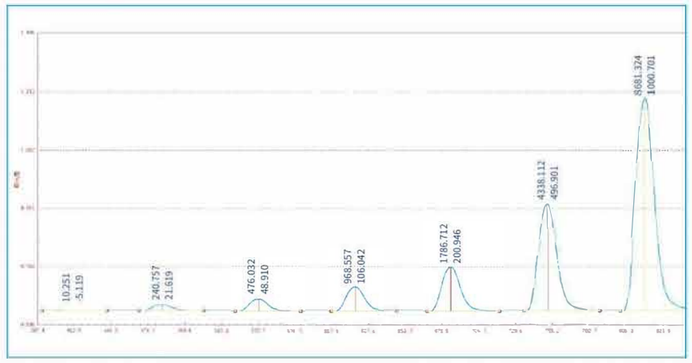
Avoid touching people and causing burns.

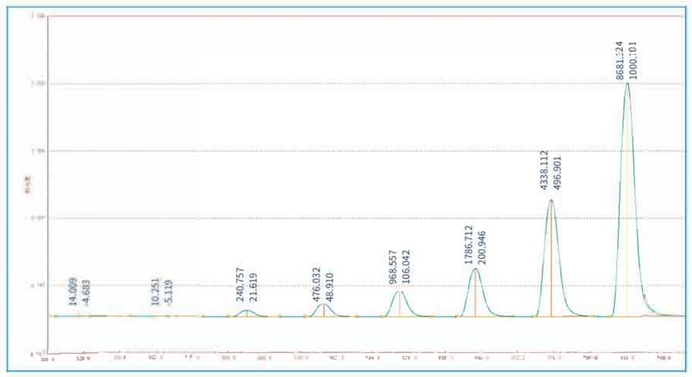
Chemical reaction system safety shield

It not only helps the temperature of the chemical reaction system to be stable, but also avoids the influence of environmental temperature changes on the test results. It can also effectively avoid possible heat and cause leakage of personnel.

EXPERIMENTAL SPECTRUM







LABORATORY PURE WATER/ ULTRA PURE WATER SERISE

BIO SERISE

The Bio Touch series of pure water/ultra-pure water manufacturing equipment is equipped with a new high-resolution 5.0-inch color touch screen display, dual-channel quantitative water intake, and comprehensive system optimization and technology upgrades.

The existing Bio touch-Q/S/R/D 4 sub-product series has a water resistivity of 18.2MΩ.cm (AT 25℃), which can produce RO reverse osmosis water, DI deionized water/high purity water, UP ultra-pure. Water, production: 16 liters, 32 liters / hour.

Main interface | Quantitative water withdrawal | Ultrapure water circulation | System disinfection | Consumable life setting

FEATURES AND ADVANTAGES

- 5.0-inch color touch screen, animated menu, finger touch operation
- 3-way water quality monitoring, real-time monitoring of source water, RO reverse osmosis water, DI deionized water/UP ultra-pure water quality, no need to take water samples
- 2-way quantitative (10-999999 mL) and qualitative (1-18.25 MΩ.cm) water intake function
- Free starting and shutdown of ultra-pure water circulation system to maintain low bacterial contamination level of the system
- Ultra-pure water full pipeline disinfection program, manual “circulation disinfection”, “water intake disinfection”, “water tank hydration”, “manual sewage discharge”, “stop disinfection”
- Settable consumable lifetime of PP, KDF, AC, RO, UP, UF, TF, UV, display of the used time, automatic replacement reminder
- System time setting (year/month/day/hour/minute), timed standby (0-60 min), timed shutdown (0-24 hour)
- Water shortage alarm, full water alarm, standard-excessive alarms of source water, RO reverse osmosis water and DI deionized water/UP ultra-pure water
- Compatible with both pressure bucket and liquid level tank storage methods of pure water, direct display of storage capacity of water tank for various application requirements
- Factory and customer secondary password, password-protected system settings to prevent unauthorized changes
- Fully automatic RO membrane anti-scaling flushing (settable flushing interval and duration) and manual forced flushing procedure to extend the lifetime of RO membrane
- Display and record of the consumable replacement time for fully understand of the equipment maintenance information
- Complete information inquiry and data management functions, comprehensive control of system operation status, water quality, consumable condition, timely alarm, historical alarm, etc.
- Built-in memory card to automatically record one year's running data, complete data export through USB port with settable time range
- Integrated molded plastic chassis, ergonomic design, water and electricity separated
- Pre-treatment, RO, ultra-purification components, modular independent structure, system maintenance, convenient filter replacement, in accordance with Good Laboratory Practice (GLP)
- NSF certified pure water pipelines and joints
- Original ultra-long-lifetime composite KDF pre-filter column can be used without replacement for one year to reduce running cost
- Original RO membrane module design with Dow’s original imported RO membrane to realize the combination of long lifetime RO membrane and high-quality water
- Original, unique and independently dismountable 4-column ultra-purification column module with Dow's original imported nuclear grade resin to ensure top quality.
- Dual-wavelength (185 nm & 254 nm) UV lamp assembly (imported lamp) for effective sterilization, lower TOC, and enhanced system coverage
- MWCO5000DUF ultrafiltration unit (original import) for effective removal of heat source (endotoxin), applicable to precision cell culture and IVF
- (0.45+0.1) μm imported PES polyethersulfone composite membrane terminal sterilization filter to ensure absolutely sterile water

Model	Water production	Resistivity	Total organic carbon (TOC)	Heat source (endotoxin)	Ribonuclease (Rnases)	Deoxyribonuclease (Dnases)	Bacteria	Particulate (>0.1μm)
Bio Touch-Q deionized water purification system								
Bio Touch-Q16	16L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	N/A	N/A
Bio Touch-Q16UT	16L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-Q32	32L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	N/A	N/A
Bio Touch-Q32UT	32L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-S ultra-pure water system								
Bio Touch-S16	16L/h	18.2MΩ.cm@25℃	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-S16UF	16L/h	18.2MΩ.cm@25℃	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Bio Touch-S16UV	16L/h	18.2MΩ.cm@25℃	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-S16UVF	16L/h	18.2MΩ.cm@25℃	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Bio Touch-S32	32L/h	18.2MΩ.cm@25℃	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-S32UF	32L/h	18.2MΩ.cm@25℃	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Bio Touch-S32UV	32L/h	18.2MΩ.cm@25℃	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-S32UVF	32L/h	18.2MΩ.cm@25℃	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Bio Touch-R Bipolar reverse osmosis pure water / ultra-pure water system								
Bio Touch-RRO	24L/h	>0.2MΩ.cm	N/A	N/A	N/A	N/A	N/A	N/A
Bio Touch-RQ	24L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	N/A	<1/ml
Bio Touch-R	24L/h	18.2MΩ.cm@25℃	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-RUF	24L/h	18.2MΩ.cm@25℃	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Bio Touch-RUV	24L/h	18.2MΩ.cm@25℃	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-RUVF	24L/h	18.2MΩ.cm@25℃	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Bio Touch-D ultra-pure water system (pure water as source)								
Bio Touch-D	⩽ 2.0 L/min	18.2MΩ.cm@25℃	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-DUF	⩽ 2.0 L/min	18.2MΩ.cm@25℃	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Bio Touch-DUV	⩽ 2.0 L/min	18.2MΩ.cm@25℃	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Bio Touch-DUVF	⩽ 2.0 L/min	18.2MΩ.cm@25℃	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml

Ana series

Ana series pure water / ultra-pure water system, the ultra-pure water machine is more economical and cost-effective system optimization, the system built-in 12 liter pressure bucket, integrated filter, with 2 water quality monitoring and water quality alarm, consumable life Management, system maintenance and security alarms, humanized water intake and other functions, is an excellent economic choice for laboratory water!

The existing Ana-Q/S 2 product series has a water resistivity of 18.2MΩ.cm (at 25°C), which can produce RO reverse osmosis water, DI deionized water and UP ultrapure water. The output is 16 liters. 32 liters / hour.

FEATURES AND ADVANTAGES

- Fully automatic microcomputer-controlled system, multi-level menu operation
- Backlit LCD screen (resolution: 128×64, size: 66×33mm), full-time real-time animation mode display, online 2-way water quality monitoring, real-time monitoring of RO reverse osmosis water (conductivity), DI deionization water or UP ultrapure water (resistivity) quality
- Fully automatic RO membrane anti-scaling flushing (2 hour interval flushing) and manual forced flushing procedure to extend the lifetime of RO membrane
- Perfect management of consumables: settable lifetime of pretreatment, RO membrane, UV lamp and ultra-purification, display of remaining consumable lifetime, automatic replacement reminder to avoid water quality decline
- Comprehensive system maintenance and safety alarm: water shortage alarm, full water alarm, standard-excessive alarms of source water, RO reverse osmosis water and DI deionized water/UP ultra-pure water, consumable life end alarm
- User-friendly manual/automatic water withdrawal mode, timing of 1-99 min, qualitative water intake function (0.1-18.2 MΩ.cm)
- System time setting function (year/month/day/hour/minute)
  Factory, customer secondary password, password-protected system settings to prevent unauthorized changes
- Three status indicators for operation, alarm and full water to make the system working status clear at a glance
- Built-in 12-liter pressure bucket to save space with convenient installation and maintenance
- Compatible with both pressure water bucket and liquid level water tank storage methods of pure water, optional external large capacity water storage bucket to meet different application needs
- Ultra-pure water circulation and disinfection function, free starting and shutdown to maintain low bacterial contamination level of the system (optional)
- External hidden DC24V power supply, system working voltage lower than human body safety voltage, convenient maintenance and replacement to ensure security
- Integrated molded plastic chassis, ergonomic design, water and electricity separation
- More convenient pre-treatment, RO, ultra-purification components, modular independent structure, system maintenance and filter replacement, in accordance with Good Laboratory Practice (GLP)
- NSF certified pure water pipelines and joints
- Original ultra-long-lifetime composite KDF pre-filter column can be used without replacement for one year to reduce running cost
- Original RO membrane module design with Dow's original imported RO membrane to realize the combination of long lifetime RO membrane and high-quality water
- Original, unique and independently dismountable 4-column ultra-purification column module with Dow's original imported nuclear grade resin to ensure top quality.
- Dual-wavelength (185 nm & 254 nm) UV lamp assembly (imported lamp) for effective sterilization, lower TOC, and enhanced system coverage
- MWCO5000DUF ultrafiltration unit (original import), effective removal of heat source (endotoxin), applicable to precision cell culture and IVF
- (0.45+0.1) μm imported PES polyethersulfone composite membrane terminal sterilization filter to ensure absolutely sterile water

Main technical parameters

Model	Water production	Resistivity	Total organic carbon (TOC)	Heat source (endotoxin)	Ribonuclease (Rnases)	Deoxyribonuclease (Dnases)	Bacteria	Particulate (>0.1μm)
Ana-Q deionized water purification system								
Ana-Q16	16 L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	N/A	N/A
Ana-Q16UT	16 L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Ana-Q32	32 L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	N/A	N/A
Ana-Q32UT	32 L/h	16-18.2MΩ.cm	N/A	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Ana-S ultra-pure water system								
Ana-S16	16 L/h	18.2MΩ.cm@25°C	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Ana-S16UF	16 L/h	18.2MΩ.cm@25°C	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Ana-S16UV	16 L/h	18.2MΩ.cm@25°C	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Ana-S16UVF	16 L/h	18.2MΩ.cm@25°C	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Ana-S32	32 L/h	18.2MΩ.cm@25°C	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Ana-S32UF	32 L/h	18.2MΩ.cm@25°C	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Ana-S32UV	32 L/h	18.2MΩ.cm@25°C	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Ana-S32UVF	32 L/h	18.2MΩ.cm@25°C	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml

Basic series

Basic series of economical pure water / ultra-pure water manufacturing equipment, with Basic-RO/Q/S/D 4 sub-product series, RO reverse osmosis water can be produced when the water resistivity reaches 18.2MΩ.cm (25°C) , DI deionized water / high purity water, UP ultrapure water, production: 16 liters, 32 liters / hour.

FEATURES AND ADVANTAGES

- Domestic exclusive injection molded chassis with sanitary PP plastic
- Built-in design for all filter cores, most integrated and exquisite equipment among similar types in China, minimum occupation of external space
- Quickly unscrewed top cover of chassis for quick replacement of pre-filter column without opening the box, in compliance with Good Laboratory Practice (GLP)
- Automatic pressure sensor and microcomputer-controlled work to realize automatic production of pure water
- Automatic shutdown of cut-off, automatic cut-off of shutdown, automatic replenishment of water tank, automatic shutdown of water overflow
- Fully automatic RO membrane anti-scaling washing program to extend the lifetime of RO membrane
- High-brightness backlit LCD online resistivity tester, real-time monitoring of DI deionized water/UP ultra-pure water quality
- Portable TDS/conductivity test pen, dry battery design, ready to measure TDS total solid solubility, conductivity, water temperature of tap water and RO water
- Standard quick-connect external equipment water supply port, upgradable system
- A variety of storage buckets available to meet different water level requirements
- NSF certified pure water pipelines and joints
- Original RO membrane module design with Dow's original imported RO membrane to realize the combination of long lifetime RO membrane and high-quality water
- Original, unique and independently dismountable 4-column ultra-purification column module with Dow's original imported nuclear grade resin to ensure top quality
- Dual-wavelength (185 nm & 254 nm) UV lamp assembly (imported lamp) for effective sterilization, lower TOC, and enhanced system coverage
- MWCO5000DUF ultrafiltration unit (original import) for effective removal of heat source (endotoxin), applicable to precision cell culture and IVF
- (0.45+0.1) μm imported PES polyethersulfone composite membrane terminal sterilization filter to ensure absolutely sterile water

Model	Water production	Ion Retention Rate	Organic Retention Rate	Particles and Bacteria Retention Rate	Bacteria	Particulate(>0.1μm)
Basic-RO reverse osmosis pure water machine						
Basic-RO15	15 L/h	96%-99%	>99%	>99%	N/A	N/A
Basic-RO30	30 L/h	96%-99%	>99%	>99%	N/A	N/A

Model	Water production	Resistivity	Total organic carbon (TOC)	Heat source (endotoxin)	Ribonuclease (Rnases)	Deoxyribonuclease (Dnases)	Bacteria	Particulate (>0.1μm)
Basic-Q deionized water purification system								
Basic-Q16	16 L/h	15-18.2MΩ.cm	N/A	N/A	N/A	N/A	N/A	N/A
Basic-Q16UT	16 L/h	15-18.2MΩ.cm	N/A	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Basic-Q32	32 L/h	15-18.2MΩ.cm	N/A	N/A	N/A	N/A	N/A	N/A
Basic-Q32UT	32 L/h	15-18.2MΩ.cm	N/A	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Basic-S ultra-pure water system								
Basic-S16	16 L/h	18.2MΩ.cm@25°C	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Basic-S16UF	16 L/h	18.2MΩ.cm@25°C	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Basic-S16UV	16 L/h	18.2MΩ.cm@25°C	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Basic-S16UVF	16 L/h	18.2MΩ.cm@25°C	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Basic-S32	32 L/h	18.2MΩ.cm@25°C	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Basic-S32UF	32 L/h	18.2MΩ.cm@25°C	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Basic-S32UV	32 L/h	18.2MΩ.cm@25°C	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Basic-S32UVF	32 L/h	18.2MΩ.cm@25°C	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Basic-D ultra-pure water system (pure water as source)								
Basic-D	⩽ 2.0 L/min	18.2MΩ.cm@25°C	<10 ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Basic-DUF	⩽ 2.0 L/min	18.2MΩ.cm@25°C	<10 ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml
Basic-DUV	⩽ 2.0 L/min	18.2MΩ.cm@25°C	<3ppb	N/A	N/A	N/A	<0.1 cfu/ml	<1/ml
Basic-DUVF	⩽ 2.0 L/min	18.2MΩ.cm@25°C	<3ppb	<0.001 Eu/ml	<0.01ng/ml	<4pg/μl	<0.1 cfu/ml	<1/ml

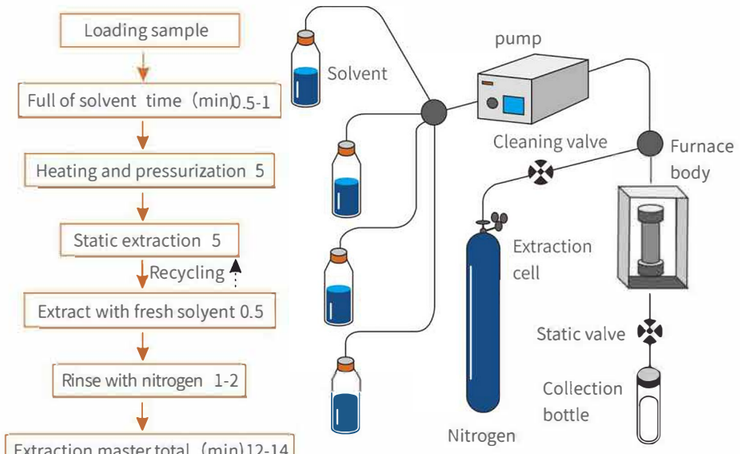
FAST SOLVENT EXTRACTOR

Fast Solvent Extractor

PRODUCT DESCRIPTION:

The Fast Solvent Extractor uses high-temperature and pressurized solvent extraction technology to quickly extract solid-liquid extraction methods for organic target ingredients in solid or semi-solid samples with solvents. Because both its extraction efficiency and sample flux are far superior to other traditional extraction methods, it is a widely used technology in the market today.

FSE Schematic

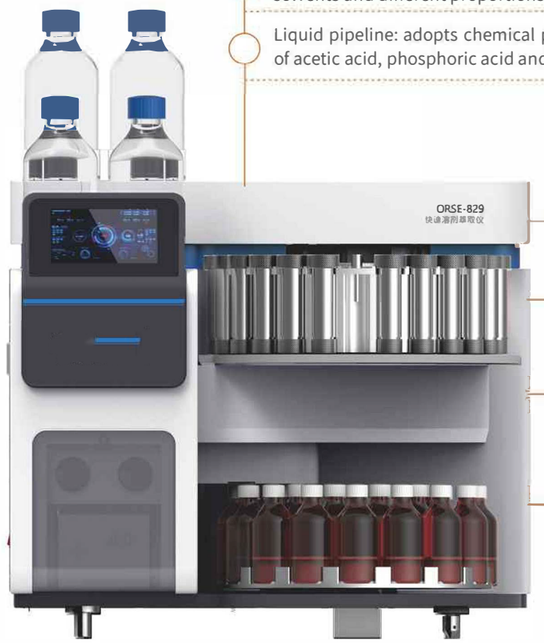


Method comparison

Extraction method	Sample throughput (g)	Solvent consumption (ml)	Sample throughput (g)Solvent consumption (ml)	Average extraction time
Soxhlet extraction	10-30	300-500	16-30	4-48h
Ultrasonic extraction	30	300-400	10-13	0.5-1h
Microwave extraction	5	30	6	0.5-1h
Automatic Soxhlet extraction	10	50	5	1-4h
ORSE-829	10-100	15-150	1.5	15min

Technical characteristics

- Standard configuration: 26-position extraction cell tray (including 24 cell positions, 2 rinse positions);
- 1, 5, 10, 22, 34, 66, 100 mL extraction cells are available;
- New T-type extraction cell: simple structure, easy to disassemble;
- Collection tray: 26 position tray for 250mL bottles, or 26 position tray for 60mL vials (requires adapter), or 26 position tray for customized combination of 250mL bottles and 60mL vials (requires adapter);
- Working temperature range: room temperature ~ 210 ° C; oven temperature control precision ⩽ ± 1 ° C; separate temperature control for every extraction cell;
- Working pressure range: 0 ~ 20Mpa; every extraction cell can be pressured individually ;
- Oven: It adopts a new 360-degree full-circumference heating method, which can be quickly heated to the set temperature, and at the same time ensure that the extraction cell is evenly heated and has an over-temperature protection function;
- Pressure control unit: built-in pressure control unit and overpressure protection system and gas-liquid isolation protection device;
- Solvent controller: quaternary low-pressure gradient, automatic switching of up to 4 kinds of solvents and different proportions of solvent ratio, mixing;
- Liquid pipeline: adopts chemical passivation technology treatment, can use a certain proportion of acetic acid, phosphoric acid and other non-strong acid extractor;



- Control interface: touch screen, easy to operate;
- Collection bottle detection function: ensure safe collection of extracted samples;
- The lighting function of the extraction and collection area facilitates the operator to keep abreast of the operation of the instrument;
- The extraction tray and collection tray use dust-proof design, protecting the instrument from dust pollution when it is running or when the instrument is idle.

Application areas

1

Environment

Soil,solid waste,sediments,inhalable particles in the air, polychlorinated biphenyls,polycyclic aromatic hydrocarbons, organophosphorus pesticides,organochlorine pesticides,phenolic compounds,pesticides,phenoxy herbicides,triazine weeding Agent,diesel, total petroleum hydrocarbons,dioxins,furans,explosives,etc.extractio n of toxic and hazardous substances

2

Food and agricultural products

Fats,additives,pigments,agricultural residues,veterinary residues, herbicides,fungicides,solvent residues,benzodiazepines,phthalates,metal form extraction(e.g.seafood,arsenic patterns in feed(triamcinolone arsenic,pentaprice arsenic,methyl arsenic,arsenic beetroot,etc.), mercury forms(dival,methylmercury ethyl mercury, etc.),mercury forms(dival, methylmercury, ethyl mercury, etc.),selenium form(tetravalent selenium,hexaselsel,selenium substitute methionine,selenium replacement cysteine)and tin form(dibutylt,tributylchtin,tribenzene tin,etc.)etc.)

3

Medical field

The extraction of active ingredients in Chinese herbal medicine, natural products, agricultural residue detection, etc

4

Electronic product

Polycyclic aromatic hydrocarbons, flame retardants such as PBBs (ethers), etc

5

Polymer

Additives, plasticizers (polyvinyl chloride), monomer extraction, flame retardants, etc., including free toluene diisocyanate (TDI) in plastic

6

Criminal investigation

Extraction analysis of drugs, poisons, explosive residues, fire site residues, etc

INSTRUMENT PARAMETERS

Ambient temperature: 5 to .45°C	**Ambient humidity:** 20% to 80%
Host size (cm): 80 lengths x 75 w x 65 h	**Net weight:** 76Kg
Power requirements: AC 220V, 50 to 60HZ	**Full machine power:** 700W
Working temperature range: room temperature ~ 210 °C	**heating furnace temperature control accuracy:** ⩽±1℃
Working pressure range: 0 ~ 20Mpa;	**Output pressure:** normal pressure-25MPa
High pressure infusion pump: 0-100ml / min	

Collection tray: 26-position 250ml collection position, or 26-position 60ml collection position (requires adapter), or 26-bit 250ml and 60ml collection position (requires adapter) custom combination;