



GROUND WATER TESTING AND RESEARCH EQUIPMENTS

EPC/LABS/PRODUCTS/APPLICATIONS/SOFTWARE/ACCESSORIES/CONSUMABLES/SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net



Digital Conductivity Meter

DCM-3001 Series



Characteristics:

1. Double digits LED display with big screen and blue back light, display conductivity value and temperature value.
2. It can be used to measure conductivity, TDS, salinity and temperature.
3. Automatic temperature compensation, automatic calibration, automatic range changing and electricity cutting off protection.
4. Measurement results can be stored, deleted, consulted and printed. It can store at most sets of measurement data.
5. With RS-232 interface, Model TP-16 printer can be connected.
6. With calibration function, can set electrode constant and TDS switching coefficient.
7. Measuring ultrapure water with using $K=0.01\text{cm}^{-1}$ titanium alloy electrode and sealing measuring cell with 1.00 & 0.5 cell constant.
8. Connecting PC with the meter with selecting data software.

Specification

Measurement range:	Conductivity:	0-1.999L105 $\mu\text{S}/\text{cm}$ (be divided into six ranges and can change range automatically) 0-1.999 $\mu\text{S}/\text{cm}$ 2.00-19.99 $\mu\text{S}/\text{cm}$ 20.0-199.9 $\mu\text{S}/\text{cm}$ 200-1999 $\mu\text{S}/\text{cm}$ 0-19.99 ms/cm 0-199.9ms/cm
	TDS:	0-1.9900mg /L (be divided into five ranges and can change range automatically) 0-10.00mg/L 10.0-100.0mg/L 100-1000mg/L 1.00-10.00g/L 10.0-19.00g/L
	Salinity:	0.0-80 ppt(0.0-8.00)%
	Temperature:	-5-105°C
Electrode constant		cm-1:0.01.0.1,1.0.10.0
Accuracy of the electronic unit:	Conductivity:	+0.5%(FS) +1bit
	Salinity:	+1.0ppt
	Temperature:	+0.3 C+1.bit
Stability of the electronic unit:		+0.33%(FS) +1bit/3h
Accuracy		+0.75% (SF) +1bit
The range of temperature compensation:		0-80°C
Dual Power Supply		AC: 220V \pm 10%, 50Hz

*Note: Company Can Custom/Tailor make as per the customer orders/requirements.

Standard configuration:

1. Main instrument
2. Power cable
3. Platinum-black Electrode
4. Temperature sensor
5. Multi-function Electrode support stand
6. Data Collecting software
7. RS-232 Connection Line
8. Print Connection Line
9. Electrode with temperature Probe.

Optional accessories:

1. AJS - 1 brighth electrode
2. ALS - 10 conductivity electrode
3. AJS - 0.1 platinum electrode
4. AJS - 0.01 titanium alloy electrode

Overall dimension & weight

Shipping package dimension:	332-265-275mm
Gross weight:	3Kg
Net weight:	2Kg

Digital PH Meter

DPM-3001 Series

Characteristic:

1. With touching LCD displaying, operation easy;
2. To select one or more PH buffer solutions to calibrate the meter;
3. With more calibration functions (maximum three points calibration);
4. RS-232 interface;
5. Protection from electricity cutting off;
6. Measuring results can be stored, deleted, viewed Acommunicated and printed.

Specifications:

Measuring range:	pH	(-2.000-16.000)pH
	mV	(-1400-1400)mV
	Temp	(-5.0~105.0)°C
Accuracy	pH	0.001pH
	mV	+1%(FS)+1 bit
	Temp	+0.2°C+1bit
Resolution:	pH	± 0.001pH
	mV	0.1mV
	Temp	+0.1°C
Range of temp compensation:	(-5.0~105.0)°C	
Measuring range:	(5-60)°C	
Dual Power Supply	AC: 220V ±10%; 50Hz	

*Note: Company Can Custom/Tailor make as per the customer orders/requirements.

Standard configuration:

- | | |
|---|---|
| 1. Main instrument. | 1 |
| 2. Power cable. | 1 |
| 3. pH Combined Electrode. | 1 |
| 4. Temperature sensor. | 1 |
| 5. Mutli-function Electrode Supportr Stand. | 1 |
| 6. pH 4, 7, 10 Buffer 5 bags for each. | 1 |
| 7. Data Collecting software. | 1 |
| 8. Communication Line. | 1 |
| 9. Print Connection Line. | 1 |



Overall dimention &weight:

Shipping Package dimension :	320-240-90 mm
Gross weight:	3kg
Net weight:	2kg

DO 3000



The DO3000 is a rugged, portable dissolved oxygen (DO) meter designed for demanding applications. This professional, waterproof meter complies with IP67 standards and measures DO, barometric pressure, BOD and temperature. The DO3000 is supplied complete with all accessories to perform a DO measurement packaged into a durable carrying case.

- Preformed PTFE Membrane
- Quick Connect
- Ergonomic, One-Handed Operation

Details

For the measurement of DO, the DO3000 is supplied with the DO3000 polarographic dissolved oxygen probe. This probe uses preformed PTFE membrane caps that are field replaceable. The probe connects to the meter with a unique quick connect waterproof DIN connector allowing for a secure attachment without a threaded connect that is also easy to remove.

The DO3000 portable DO meter has extended ranges of up to 50 ppm and 600% saturation. When measuring dissolved oxygen, compensations for pressure, temperature and salinity are essential for an accurate reading.

Pressure compensation can be done automatically with the meter's built-in barometer or by manual entry. Calibration of the built-in barometer is done to one point by entering the value of a reference barometer. Pressure is displayed in user-selectable units including mmHg, inHg, atm, psi, kPa, and mbar.

The DO3000 DO probe has a built-in temperature sensor for automatic temperature compensation. The temperature sensor can be calibrated to one or two points. Manual entry of salinity values allows for the salinity compensation of dissolved oxygen readings in saline waters.

Other features include built-in methods and calculations for the measurement of Biological Oxygen Demand (BOD), Oxygen Uptake Rate (OUR) and Specific Oxygen Uptake Rate (SOUR).

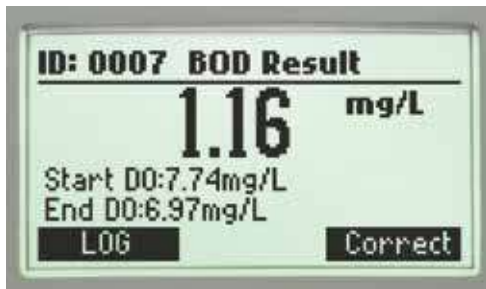
The DO3000's log on-demand feature allows users to store up to 400 readings. This data can then be transferred to a PC with the DO3000 USB cable and DO3000 software.

GLP data is accessible by a fixed dedicated key this data includes date, time, pressure, calibrated value, temperature and salinity value of the last calibration.

The high contrast graphic LCD is easy to read outdoors in bright sunlight to low-lit areas with the backlight. A combination of dedicated and virtual keys allows easy, intuitive operation in a choice of languages.

The compact, durable DO3000 carrying case is thermoformed to hold all necessary components for taking a field measurement, including the meter and electrode, beakers, buffer solutions, cleaning solutions and storage solutions.

On-screen Features



BOD results

BOD is calculated in mg per liter from the difference between the initial and final dissolved oxygen concentration readings.



BOD parameters and records

All necessary parameters for BOD testing can be set and displayed at once.

A list of all saved BOD data can be easily retrieved and shown on the LCD display.



OUR results

Measured in mg of oxygen consumed per L per hour.



SOUR results

Measured in mg of oxygen consumed per g of volatile suspended solids per hour.

Features/Benefits:

Ergonomic, rugged, waterproof (IP67) design Choice of units

- Display dissolved oxygen in % saturation or mg/L Built in Barometer
- Automatic barometric pressure compensation with 1 point calibration Displays pressure in user-selectable units (mmHg, inHg, atm, psi, kPa, mbar) Built-in temperature sensor
- Automatic temperature compensation with one or two point temperature calibration Displays temperature in °C or °F Salinity compensation
- Manual salinity compensation with a selectable salinity value Built-in calculations
- Determination of Biochemical Oxygen Demand (BOD), Oxygen Uptake Rate (OUR) and Specific Oxygen Uptake Rate (SOUR)

Polarization

- Automatic polarization of polarographic probe at startup to ensure that the probe is ready to use when measurement screen is displayed Membrane caps
- Ready-to-use field replaceable PTFE membrane caps Log-on-demand
- Store measurement data at the press of a button GLP features
- GLP data provides calibration data including date, time, pressure, calibrated value, temperature and salinity value of the last calibration Contextual help at the press of a button
- Backlit, Graphic LCD

Specifications

DO Range :	0.00 to 50.00 ppm (mg/L); 0.0 to 600.0% saturation
DO Resolution :	0.01 ppm (mg/L); 0.1% saturation
DO Accuracy :	±1.5% of reading ±1 digit
DO Calibration :	automatic one or two point at 100% saturation (8.26 mg /L) and 0% saturation (0 mg/L).
Atmospheric Pressure Range :	450 to 850 mmHg
Atmospheric Pressure Resolution :	1 mmHg
Atmospheric Pressure Accuracy :	± 3 mmHg within ±15% from the calibration point
Atmospheric Pressure Calibration :	one point at any in range pressure value
Temperature Range :	-20.0 to 120.0°C (-4.0 to 248.0°F)
Temperature Resolution :	0.1°C (0.1°F)
Temperature Accuracy :	±0.2°C; ±0.4°F (excluding probe error)
Temperature Calibration :	one or two point at any in range temperature value
Temperature Compensation :	automatic from 0 to 50°C (32 to 122°F)
Measurement Modes :	direct DO; BOD (biochemical oxygen demand); OUR (oxygen uptake rate); SOUR (specific oxygen uptake rate)
Barometric Compensation :	automatic from 450 to 850 mmHg
Salinity Compensation :	automatic from 0 to 70 g/L
Electrode/Probe :	DO3000 polarographic DO probe with protective sleeve, internal temperature sensor, DIN connector and 4m (13') cable (included)
Log-on-demand :	up to 400 samples
PC Connectivity :	opto-isolated USB with optional DO3000 software and micro USB cable
Battery Type/Life :	1.5V AA batteries (4) / approximately 200 hours of continuous use without backlight (50 hours with backlight)
Auto-off :	user selectable: 5, 10, 30, 60 min or can be disabled
Environment :	0 to 50°C (32 to 122°F); RH 100% (IP67)
Dimensions :	185 x 93 x 35.2 mm (7.3 x 3.6 x 1.4")
Weight :	400 g (14.2 oz.)

DO 3002



The DO3002 is a rugged, portable dissolved oxygen (DO) meter designed to provide laboratory precision and accuracy under harsh environmental and industrial conditions. This meter offers many features including automatic calibration, auto-endpoint detection, and compensation for temperature, salinity and altitude. The DO3002 is supplied complete with polarographic probe, PTFE membrane caps, electrolyte fill solution, and rugged carrying case.

- Easily Replaceable Membrane Caps
- Automatic Calibration
- Good Laboratory Practice (GLP)

Details

Dissolved oxygen is a commonly measured parameter in aquaculture, wastewater treatment, environmental studies, and wine analysis. The DO3002 is a rugged, portable dissolved oxygen (DO) meter designed to provide high accuracy measurements whether in the field or in the lab. The meter features automatic calibration performed at one or two points in saturated air and/or zero oxygen solution. All readings are automatically compensated for temperature variations and can be frozen on the display upon stability using the auto-end feature. Salinity and altitude compensation are user adjustable based on the environmental conditions that are present. The DO3002 features a Battery Error Prevention System (BEPS) that detects when the batteries become too weak to ensure reliable measurements. The DO3002 is supplied complete and ready to use.

Features at a Glance

- **Polarographic Measuring System** : The meter and probe use polarographic sensor technology based on the Ross and Clark polarographic measurement method. The probe is comprised of a platinum cathode and silver anode in an electrolyte solution held in place over the surfaces of the electrodes by a polymer membrane. An external voltage applied across the system establishes a current proportional to the concentration of dissolved oxygen.
- **Replaceable Membrane Caps** : The pretensioned thin polytetrafluoroethylene (PTFE) membranes employ a screw cap design that can be changed quickly by simply filling with the DO3002 electrolyte fill solution and screw on the DO probe.
- **Automatic Calibration** : Calibration can be performed at one or two points to 100% and/or 0% saturation. The 100% saturation is done in air while the 0% is done with the DO3002 bicomponent zero oxygen solution.
- **Good Laboratory Practice (GLP)** : The Good Laboratory Practice feature allows the user to recall calibration information including date, time and calibrations points.
- **Automatic Temperature Compensation** : All readings are automatically compensated for temperature variations with a high accuracy, built-in linearized thermistor temperature sensor behind a stainless steel cover.

- **Altitude Compensation :** The DO3002 allows for altitude compensation for up to 4000 meters with a 100-meter resolution.
- **Salinity Compensation :** Salinity compensation is adjustable from 0 to 80 g/L (ppt) with a 1 g/L resolution for the measurement of DO in brackish and sea water.
- **Auto End Point :** The DO3002 features an auto endpoint mode in which, when selected, the reading will freeze on the display once a stable measurement is obtained. The auto-end feature allows for consistency among various users by ensuring that stability has been achieved before recording a measurement.
- **Backlit LCD :** The DO3002 has a display with a backlight for easy viewing of readings in poor lighting conditions.
- **Battery Error Prevention System (BEPS) :** The Battery Error Prevention System detects when the batteries become too weak to ensure reliable measurements. The backlight feature is automatically disabled when batteries are getting low and a clear indication is displayed to warn the user of this condition.

Specifications

DO Range :	0.00 to 45.00 ppm (mg/L), 0.0 up to 300.0% saturation
DO Resolution :	0.01 ppm (mg/L); 0.1% saturation
DO Accuracy :	±1.5% F.S. or ±1 digit, whichever is greater
DO Calibration :	one or two points at 0% (DO3002 solution) and 100% (in air)
Temperature Range :	0.0 to 50.0°C / 32.0 to 122.0°F
Temperature Resolution :	0.1°C / 0.1°F
Temperature Accuracy :	±0.2°C; ±0.4°F (excluding probe error)
Temperature Compensation :	automatic from 0 to 50°C (32 to 122°F)
Altitude Compensation :	0 to 4000 m (resolution 100 m)
Salinity Compensation :	0 to 80 g/L (ppt) (resolution 1 g/L)
Electrode/Probe :	polarographic DO probe, internal temperature sensor, DIN connector
Battery Type/Life :	1.5V AAA (3) /approximately 200 hours of continuous use without backlight (50 hours with backlight on)
Environment :	0 to 50°C (32 to 122°F); RH max 95%
Dimensions :	185 x 72 x 36 mm (7.3 x 2.8 x 1.4")
Weight :	300 g (10.6 oz.)



Microprocessor Flame Photometer

2382

Microprocessor Flame Photometer

2382



Advantages

- μ P Based With Printer Interface
- Four Element Measurement In Single Aspiration Of The Sample
- Calibration Curve Programmability Using Maximum Of 5 Standards
- Data Processing Through Curve Fitting Techniques - Least Squares, Quadratic
- Multiple Calibration Curves Saving Facility
- Samples Data Storage Facility
- Printer Attachment Facility
- Measurement In ppm & meq
- Useful For Both Medical & Soil Testing Applications



MICROPROCESSOR FLAME PHOTOMETER, MODEL 2382 is an ideal instrument for the determination of Sodium, Potassium, Calcium and Lithium. It uses the latest microcontroller technology and advanced engineering techniques so as to give enhanced accuracy and reproducibility. It has soft touch membrane keys for ease of operation. The solution is aspirated through an atomiser. Air, sample and the fuel are mixed in the mixing chamber which is then sprayed as a very fine mist into the flame.

The color of the flame is changed depending upon the concentration of elements present. Radiations from the flame passes through the sensing system and specific narrow band interference filter which permits only the characteristic radiation to pass to the photo-detector. The output of the photo-detector is then processed by the microcontroller and the final results are displayed on the digital display.

The 5 point calibration facility and non-linearity correction is provided through an automatic curve fitting software. Facility has been provided for re-standardization with a single standard, thereby, eliminating the need of multiple standards once a calibration has been performed.

Flame Photometer

Technical Data

	ppm	General Range meq/l	Serum Range meq/l	Urine Range meq/l
RANGE	Na : 0-100 K : 0-100 Ca : 0-100 Li : 0-100	Upto 250 meq/l, 1:100 dil. Upto 250 meq/l, 1:100 dil. Upto 250 meq/l, 1:100 dil. Upto 250 meq/l, 1:100 dil.	0-200 meq/l, 1:100 dil. 0-10 meq/l, 1:100 dil. - 0-2 meq/l, 1:5 dil.	0-250 meq/l, 1:100 dil. 0-100 meq/l, 1:100 dil. 0-10 meq/l, 1:2 dil. -
SENSITIVITY	General Mode : Na:0.5 ppm, K:0.5 ppm, Li:0.5 ppm, Ca:15 ppm			
FILTERS	Na & K Supplied (Ca & Li are optional at extra cost)			
RESOLUTION	0.1 ppm / meq.			
REPRODUCIBILITY	±2% FS ± 2 Digits			
CURVE FIR ACCURACY	±2% of FS			
DISPLAY	20 x 4 Character alphanumeric LCD display with backlit			
AVERAGE TIME	In-built in Software			
FLAMESYSTEM	LPG & Dry Oil Free Air			
DETECTOR	Photodiode			
CALIBRATION	Up to 5 Point Calibration with Curve Fitting Software			
GAS CONTROL	Adjustable with knob			
IGNITION SYSTEM	Auto Ignition			
AUTOMISER	Axial Flow Type			
DIMENSIONS(LxBxH)	365 x 245 x 220 mm Approx.			
PRINTER	Provision for attachment of Dot-Matrix Printer or HP Laserjet/ Inkjet printer (non-win printers) with centronics parallel interface			
RS 232 INTERFACE	Available (PC software at extra cost)			
WEIGHT	Main Unit : 7.5 Kg. (Approx.) Compressor : 8 Kg(Approx.)			
POWER SUPPLY	230 V AC ± 10%, 50 Hz			

COMPRESSOR UNIT

Air Supply : By oil free mini compressor unit with pressure regulator

Combustion Gas LPG : Controlled by precision regulator

Power : 230 V ± 10% AC, 50 Hz

Dimensions (LxBxH) : 290 x 255 x 210 mm (Approx.)

Weight : 8 Kg. (Approx.)

Product Range

Semi Auto Analyser, Microprocessor UV/VIS Spectrophotometer, Microprocessor pH Meter, Microprocessor Conductivity Meter, Microprocessor Photo Colorimeter, Turbidity Meter, Microprocessor KF Titrimeter, Microprocessor DO Meter, Microprocessor TDS Meter, Temperature Indicator, Microprocessor Water & Soil Analysis Kit, Microprocessor Salinity Meter, Digital Colony Counter, Portable pH Meter, Portable Conductivity Meter, Portable TDS Meter, Portable DO Meter, Digital Tablet Disintegration Apparatus, Digital Friability Test Apparatus.

Other Flamephotometers available : Microprocessor Flame Photometer Model 2391, 2381 & 2382

Benchtop Ion Meter



Safety Features:

- Professional benchtop ion meter is capable of connecting the various ion selective electrodes.
- Microprocesso Controlled with ORP Measurement.
- 2 to 5 points calibration from low to high concentrations.
- Direct ion concentration readout simplifies the elaborate measurement process.
- Selectable multiple concentration units include the ppm, mg/L and mol/L.
- mV measurement mode allows checking the performance of ion selective electrode.
- Automatic Temperature Compensation ensures accurate measured values.
- Calibration Due Reminder prompts user to calibrate the meter regularly.
- Stability indicator automatically shows current measurement status.
- Auto-Hold function freezes stable reading for easy viewing and recording.
- Selectable temperature unit (°C or °F) meets different application requirements.
- Automatic electrode diagnosis shows offset and electrode slope.
- Help message as a operational guide that helps you quickly begin using the meter.
- System menu allows setting the 8 parameters, including the ion valence, number of calibration points, stability condition, etc.
- Reset feature automatically resumes parameters back to factory default options.
- Expanded memory stores and recalls up to 500 readings.
- Built-in real-time clock stamps stored data to meet GLP standard.
- Stored data can be transferred into computer by USB communication interface.

Meter Includes:

- Ion Selective Electrode (Chosen by the customer)
- Temperature probe
- USB cable
- DC5V power adapter

Specifications:

Model	Analytical - BIM - 3931
Ion Concentration Range	Refer to the range of ISE
Ion Concentration Accuracy	±0.5% F.S (Monovalent), ±1% F.S (Divalent)
Resolution	0.001, 0.01, 0.1, 1
Calibration Points	2~5 points
pH Range	-2.000 to 19.999
Calibration Solutions	0.001, 0.01, 0.1, 1, 10, 100, 1000, 10000ppm, mg/L, mol/L
Temperature Compensation	0-5°C~105°C, 32~212°F, Manual or Automatic
Relative Humidity	5-85%
mV Range	-1999.9~1999.9mV
mV Accuracy	±0.2mV
Resolution	0.1, 1mV, Selectable
Hold Function	Manual or Automatic
Relative Accuracy	±0.004
Stability Conditions	Low or High
Power Off	Manual or Automatic (10, 20, 30 minutes)
Memory	Stores up to 500 data sets
Output	USB Communication Interface
Connector	BNC
Power Requirements	DC5V/400mA power adapter
Dimensions	210(L)×188(W)×60(H)mm
Weight	1.5Kg
Display	LED

Ion Selective Electrode Features:

- Combination ion selective electrode
- No reference electrode needed
- Solid state sensors Ideal for unskilled operatives
- No filling solution required
- Can be left dry for long periods
- Long lifetime

Specifications:

Model	Ion	Concentration (mol/L)	Limits (ppm)	pH Range	Temperature Range
NH4	Ammonium	$5 \times 10^{-6} \sim 1$	0.1~18000	4~10	0~50°C
Br	Bromide	$5 \times 10^{-6} \sim 1$	0.4~79900	1~12	0~80°C
Cd	Cadmium	$1 \times 10^{-6} \sim 0.1$	0.01~11200	2~12	0~80°C
Ca	Calcium	$5 \times 10^{-7} \sim 1$	0.02~4000	2.5~11	0~40°C
CL	Chloride	$5 \times 10^{-6} \sim 1$	1.8~35500	2~12	0~80°C
Cu	Cupric	$1 \times 10^{-8} \sim 0.1$	0.006~6400	2~12	0~80°C
Cn	Cyanide	$5 \times 10^{-6} \sim 0.01$	0.2~260	10~14	0~80°C
F	Fluoride	$1 \times 10^{-6} \sim \text{Saturation}$	0.02~Saturation	5~7	0~80°C
I	Iodide	$5 \times 10^{-8} \sim 1$	0.06~127000	0~14	0~50°C
Pb	Lead	$1 \times 10^{-8} \sim 0.1$	0.2~20700	4~7	0~80°C
NO3	Nitrate	$7 \times 10^{-6} \sim 1$	0.4~62000	2.5~11	0~80°C
K	Potassium	$1 \times 10^{-6} \sim 1$	0.04~39000	2~12	0~40°C
Ag	Silver	$1 \times 10^{-7} \sim 1$	0.01~107900	2~12	0~80°C
Na	Sodium	$1 \times 10^{-5} \sim 1$	0.1~23000	>9	0~80°C
S	Sulphide	$1 \times 10^{-7} \sim 1$	0.003~23100	2~12	0~80°C
NH3	Ammonia	$1 \times 10^{-6} \sim 1$	0.02~17000	11	0~50°C

Ultra M Series Water Purification System



▶▶▶ New Upgrade

Ultra M series is high-end water purification system. And it is the sole leading brand of Indian good Instrument in lab water area. It is the most representative products in Indian lan water market.

Ultra M has Q/S/D/R, total 4 sub-series.

Ultra MQ series produces deionized water and RO water. Its resistivity can reach to 16-18.2MΩ.cm. And it's output is 15 or 30 liters/hour.

Ultra MS series produces ultrapure water and RO water. It's resistivity can reach to 18.2MΩ.cm. And its output is 15 or 30 liters/hour.

Ultra MD series produces ultrapure water and deionized water. It's resistivity can reach to 18.2Ω.cm. And its most output is 2.0 liters/minute.

Ultra MR series is double stage reverse osmosis. And its Output is 15-20 liters/hour.

▶▶▶ Features and Advantages

- ▶ Automatic microcomputer controlling system, multi-menu operating, real-time animation mode display.
- ▶ Super-large LCD (Resolution:240x128, Dimension:106x57mm) display, display the system running state and various parameters intuitively.
- ▶ 3 way on-line sensor, detect the quality of feed water, RO water, or ultrapure water respectively.
- ▶ System steillization procedure, achieve the disinfection of ultrapure water's pipeline.
- ▶ System circulation function circulate water when the system stops working, to keep water quality.
- ▶ Self-flushing of the reverse osmosis membrane, extend the life of RO membrane.
- ▶ Multiple alarm functions: such water, full water, disqualification of feed water, RO water, deionized water or ultrapure water, cartridges' life-span ands.
- ▶ The cartridges' life-span can be set, the time used and left can be displayed, replacing auto-reminding, avoiding the decline of water quality.
- ▶ Level II password, protect all the parameters setting, and prohibit any unauthorized setting change.
- ▶ Water dispensing function-timing and quality (Time range: 1-99min, water quality range 0.1-18.2MΩ.cm).
- ▶ RS 232/USB communication port (optional), at least store 1 years' water quality data.
- ▶ Different external tanks (optional) to meet every need-strength, streamline plastic shell.
- ▶ Human engineering design, molding process, high-strength, streamline plastic shell.
- ▶ Pretreatment cartridges, RO module, ultrapure cartridges, all designed to modularization independently. Easy to Maintenance and replacement.
- ▶ Pipeline and fast-plug adaptor with NSF authorization, assure high quality ultrapure water.
- ▶ KDF pretreating cartridge, replace the ordinary active carbon, the life-span to 12 months, reduce the running cost.
- ▶ DOW's RO membrane, ensure stable operation and high desalination rate.
- ▶ 4 in 1 ultrapure cartridge (also can be divided to 4 independent cartridge), With DOW's nuclear-grede polishing resin, ensure ultrapure water's quality up to 18.2MΩ.cm, with the lowest TOC dissolution.
- ▶ Double wavelength (185&254nm) ultraviolet lamp module, restrain bacteria's increase and reduce TOC.
- ▶ MWCO 5000D ultrafiltration module, effectively eliminate endotoxin precise cell cultivating and IVF.
- ▶ (0.45+0.1)µm double layer PES terminal disinfection filter, assure the quality absolutely axenic.

Ultra MQ Deionized Water System (Tap water inlet)



Ultra MQ series is popular superior choice of high performance for general analysis pure water. It has 2 kinds of output, 15 or 30 liters/hour. And the resistivity, reaching to 16-18.2MΩ.cm, is above of the grade I standard of GB6682-2008. It also meets the most requirements of chemical and biological experiments' pure water.

▶▶▶ Applications:

- Feed of ultrapure water system
- Glassware washing
- Microcological analysis
- Sample dilution and reagent preparation
- Chemical and qualitative analysis
- Water analysis and universal HPLC
- Spectrum measurement
- Disposing of buffer, medium
- Feed of autoclave sterilizer, biochemical analyzer, immunoassay analyzer, constant temperature and humidity chamber, salt spray test chamber, dapping machine and etc.

▶▶▶ Specifications:

Model	Ultra MQ-3015	Ultra MQ-3015UT	Ultra MQ-3030	Ultra MQ-3030UT
Feed water requirements*	Tap water. TDS<200 ppm 5-45°C, 1.0-4.0 Kg/cm ² (Extra pretreatment filter is recommended, if TDS>200ppm)			
Flow procedure**	PF+KDF+AC+RO+AC+DI	PF+KDF+AC+RO+AC+DI+UV+TF	PF+KDF+AC+RO+AC+DI	PF+KDF+AC+RO+AC+DI+UV+TF
Deionized water quality:				
Resistivity	>16-18.2MΩ/cm			
Heavy metal ion	<0.1ppb			
Bacteria	N/A	<0.1cfu/ml	N/A	<0.1cfu/ml
Partical (>0.2µm)	N/A	<0.1cfu/ml	N/A	<0.1cfu/ml
RO water quality:				
Ion rejection rate	96% 99% (New RO membrane)			
Organic rejective rate	>99%, when MW>200 Dalton			
Partides and bacteria rejection rate	>99%			
Output (25°C)***	15 liters/hour		30 liters/hour	
Flow rate	2.0 liters/minute (with pressure tank)			
Pure water outlet	2. RO water, deionized water			
Dimension/Weight	Length x Width x Height : 500 x 360 x 540mm/Weight: about 22Kg			
Electric requirements	AC110-220, 50/60Hz, 120W			
Standard configuration	Main body (Including 1 set of cartridges) +15 liters tank+ accessory bag			

* The feed water quality will influence the pure water's quality and cartridges' life-span.

** PF: polypropylene spun fiber, KDF: kinetic degradation fluxion, AC: active cartive carbon, RO: reverse osmosis, DI: Ion exchange, UV: ultraviolet, TF: terminal microfiltration.

*** All the specifications are tested under the situation: feed water's TDS+200ppm, 25°C, 50psi and 15% recovery rate.

Ultra MS Ultrapure Water System (Tap water inlet)



Ultra MS series is popular superior choice of high performance for high grade experiments ultrapure water. With tap water inlet, it has 2 kinds of output, 15 or 30 liters/hour. And the resistivity, absolutely reaching to 18.2MΩ completely meets the highest grade I standard of GB6682682-2008, ASTM, CAP, CLSI, EP nad USP.

▶▶▶ Applications:

- HPLC, GC-MS, ICP-AES
- ICP-MS, AAS, GF-AAS
- TOC analysis, IC
- Electrochemistry
- Organic and inorganic trace analysis
- Molecular biology, microbiology
- PCR analysis
- DNA order analysis
- Cell culture
- Cell and cultivation medium preparation
- Monoclonal antibody production
- Gel electrophoresis analysis

▶▶▶ Specifications:

Model	Basic Ultra MS-3015 Ultra MS-3030	Eliminating endotoxin Ultra MS-3030UF Ultra MS-3030UF	Low Toc Ultra MS-3015UV Ultra MS-3030UV	Synthesizing Ultra MS-3015 UVF Ultra MS-3030 UVF
Feed water requirements*	Tap water. TDS<200 ppm 5-45°C, 1.0-4.0 Kg/cm ² (Extra pretreatment filter is recommended, if TDS>200ppm)			
Flow procedure**	PF+KDF+AC+RO+DI+TF	PF+KDF+AC+RO+DI+UF+TF	PF+KDF+AC+RO+UV+DI+TF	PF+KDF+AC+RO+UV+DI+UF+TF
Ultrapure water quality:				
Resistivity (25°C)	18.2MΩ.cm			
Heavy Metal ion	<0.1ppb			
TOC***	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Endotoxin	N/A	<0.001Eu/ml	N/A	<0.001Eu/ml
Particle(>0.2µm)	<1/ml			
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/µl	N/A	<0.01pg/µl
Conductivity	0.055-0.067µS			
Ion rejection rate	96% 99% (New RO membrane)			
Organic rejection rate	>99% when MW>200 Dalton			
Partides and bacteria rejection rate	>99%			
Output (25°C)****	S 15:15 Liters/hour, S30:30 liters/hour			
Flow rate	2.0 liters/minute (with pressure tank)			
Pure water outlet	2:RO water, ultrapure water			
Dimension/Weight	Length x Width x Height : 500 x 360 x 540mm/Weight about 25Kg			
Electric requirements	AC 110-220V, 50/60Hz, 120W			
Standard configuration	Main body (Including 1 set of cartridges) +15 liters tank+ accessory bag			

- * The feed water quality will influence the pure water's quality and cartridges' life-span.
 ** PF: polypropylene spun fiber, KDF: Kinetic degradation fluxion, AC: active carbon, RO: reverse osmosis, DI: ion exchange, UV: ultraviolet, UF: ultrafiltration, TF: terminal microfiltration.
 *** Value of number will be influenced by temperature and feed water quality.
 **** All the specifications are tested under the situation: feed water's TDS+200ppm, 25°C, 50psi and 15% recovery rate.

Ultra MD UP Water System (Distilled water inlet)



Ultra MD series is popular superior choice of high performance for high grade experiments ultrapure water. With distilled or other pure water inlet, the most output is 2liters/minute and the resistivity absolutely reaching to 18.2MΩ.cm, completely meets the highest grade I standard of GB6682-2008, ASTM, CAP, CLSI, EP and USP.

▶▶ Applications:

- HPLC, GC-MS, ICP-AES
- ICP-MS, AAS, GF-AAS
- TOC analysis. IC
- Electrochemistry
- Organic and inorganic trace analysis
- Molecular Biology, microbiology
- DNA order analysis
- Cell culture
- Cell and cultivation medium preparation
- Monoclonal antibody production
- Gel electrophoresis analysis

▶▶ Specifications:

Model	Basic Ultra MD	Eliminating endotoxin Ultra MD UF	Low Toc Ultra MD UV	Synthesizing Ultra MD UVF
Feed water requirements*	RO water, Distilled water, deionized water. 5-45°C, 1atm*			
Flow procedure**	AC+DI+TF	AC+DI+UF+TF	UV+AC+DI+TF	UV+AC+DI+UF+TF
Ultrapure water quality:				
Resistivity (25°C)	18.2MΩ.cm			
Heavy Metal ion	<0.1ppb			
TOC***	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Endotoxin	N/A	<0.001Eu/ml	N/A	<0.001Eu/ml
Particle(>0.2µm)	<1/ml			
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/µl	N/A	<0.01pg/µl
Deionized water quality:				
Resistivity	>5MΩ.cm			
Output (25°C)****	Utmost up to 2.0 liters/minute (less output with UF cartridge)			
Pure water outlet	2: deionized water, ultrapure water			
Dimension/Weight	Length x Width x Height : 500 x 360 x 540mm/Weight about 20Kg			
Electric requirements	AC 110-220V, 50/60Hz, 120W			
Standard configuration	Main body (Including 1 set of cartridges) + accessory bage			

- * The feed water quality will influence the pure water's quality and cartridges' life-span.
 ** AC active carbon, DI: ion exchange, UV: ultraviolet, UF: ultrafiltration, TF: terminal microfiltration.
 *** Value of number will be influenced by feed water quality.
 **** The output will decrease with terminal filter or UF cartridge.

Double Beam Spectrophotometer 2080 Plus



**Touch
Screen
2080
Plus**

- Double Beam Optical system
- 8 inch multi color tough screen
- Thermal plotter optional
- Automatic wavelength settings
- Equipped with USB port

Features:

- 1) 2080 plus Spectrophotometer adopt double beam survey optical system, and blazed holographic gratings. They have outstanding test precision and very competitive prices.
- 2) 8-inch multi color touch screen cutting-edge user interface, powerful functions and easy operation.
- 3) Monochromator with high end optics(Czerny-Turner mounting for high energy)
- 4) With powerful functions, the equipment shows great performance in qualitative and quantitative testing. such as
 - Full-spectrum scanning
 - Detailed spectrum scanning
 - Time-based kinetics determination
 - GOTO λ
 - Linear regression
 - Concentration direct reading
 - Peak/Valley detecting
 - Multi-wavelength simultaneous measurement
- 4) The equipment is designed with sophisticated power protecting system. With high capacity of internal memory, it can store testing results, scanned images, regression equations and Correction data. Therefore, it follows a fast initialization when power on.
- 5) The instrument can be connected with dedicated printer, which can print testing results, or draw curve from spectral scanning. fixed wavelength time-based scanning, and linear regression.
- 6) There is a USB port on the device, and UVwin-8 Software is optional to order. The device be connected to a PC, which can not only enhance the performance in data testing and spectrum scanning, but also expand the memory to save more testing results.

Specification:

Model	2080 Plus
Operation and display	LCD 8 inch Touch Screen
Light Source	Philip halogen, deuterium lamp (2000h) (Opt: Xenon flash lamp)
Wavelength range	190-1100nm
Wavelength Accuracy	± 0.1 nm or better
Wavelength Repeatability	±0.1nm
Photometric range	-4 to +4Abs/0 to 400%
Photometric Repeatability	±0.001Abs at 1Abs
Noise level	0.00005A at 700nm
Baseline stability	< 0.0003Abs/hour at 700nm
Transmittance MPE	±0.3%T
Transmittance Repeatability	≤0.15%T
Transmittance Measuring Range	0.0%-200.0%T
Absorbance Measuring Range	-0.301-4.000 (A)
Spectrum Bandwidth	2nm
Stray Light	0.03%T at 220nm (NaI)and 340nm (NaNO ₂)
Drift	≤0.0005A/hour (250nm/500nm. 2h warm up)
Detector	Dual Silicon Photodiodes
Signal Noise	100%T noise ≤0.15%T 0%T noise ≤ 0.10%T
Baseline Flatness	±0.0002A (190-1100nm)
Scan Speed	Max 10000nm/min
Overall Dimensions	600(L) x 450(w) x 200(H)mm
Weight	23kg
Power	230 ±5V 50Hz

Standard Accessories

User Manual	1 pc
1cm quartz cuvette	2 pcs
Power cable	1 pc

Optional Accessories

Thermal plotter
UVwin8 software

Atomic Absorption Spectrophotometer AAS 3500 plus



The Main Features

Reflection achromatic optical system :

AAS-3500plus Atomic Absorption Spectrometer using a large aperture of 355.8 and 345.6 mm focal length monochromatic roads and 1800/mm diffraction grating monochromator, total reflection optical systems, as well as aberration aspheric mirrors, the instrument has a high luminous flux, no color, excellent optical performance without chromatic aberration. Keep the measurement is accurate and reliable. Make the analysis is effective.

Pioneering lamp turret position vertical structure :

8 lamps turret position vertical structure for maximum automatic changer.

Automatic ignition for flame mode

The ignition of flame on the burner head is controlled from the software.

Good ability to resist atomizer optical radiation reasonable design.

Autosampler for flame and graphite furnace :

One unit of autosampler can operate with flame and graphite furnace mode. The number of sample is 85 positions for flame mode and 87 positions for graphite furnace mode.

Auto flame ignition and gas flow automatic setup

It is important to determine the optimal gas flow rate for the flame when using an organic solvent or after changing the burner height.

Automatic burner height

The absorption sensitivity for flame analysis depends on the atomization position at the proper burner height .
Automatic burner cleaner for 50 mm. burner head (Option)

Automatic slit selection :

The system can select for four slits: 0.1, 0.2, 0.7 and 1.4 nm.

Powerful software and data process ability, humanistic operation interface and beautiful graphic output :

Fashion design, element lamp multi-dimensional automatic adjustment system, gas path, electronics functional and modular design, No-adjustment D₂ lamp holder numerous technological innovation and renewal.

Other automatic function :

- Full wavelength scan and peak seeking.
- Negative voltage and energy balance.
- Auto optical balance in D₂ lamp balance correction.
- Lamp current setting.
- Alarm and safety protection.

Fields of Application/Industry:

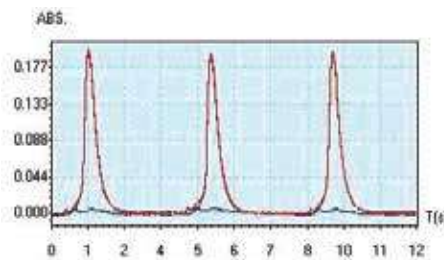
- Chemistry / Polymer Industry
- Clinical Chemistry / Medicine/
- Hygiene / Health Care
- Cosmetics
- Electronics
- Energy
- Environment / Water / Waste
- Food / Agriculture
- Geology / Mining
- Material Analysis
- Metallurgy / Galvanization
- Pharmacy
- Refineries / Petrochemistry
- Semi-Conductor Technology
- Others



Example of application case

1. Soil analysis

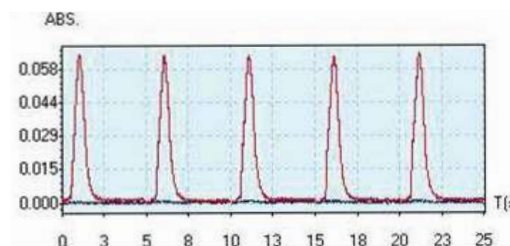
Test content of Pb in soil sample



Pb Atomization Graphic of soil sample

2. Food analysis

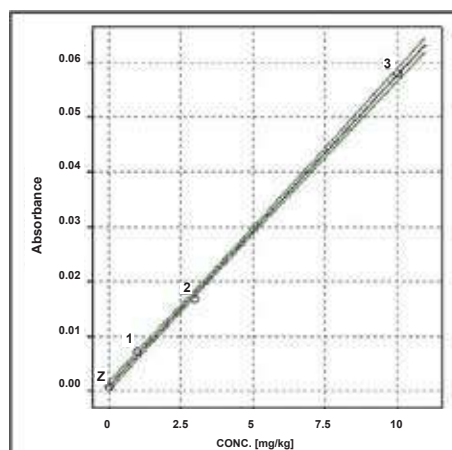
Graphite Furnace test content of Cd in tea leaf sample.



Cd Atomization Graphic of Tea leaf sample

3. Petroleum analysis

Determination of Al in motor oil by flame mode. Al calibration standards have been prepared in a solution containing 20 g oil and 35g IMBK. The calibration standards have been prepared using fresh motor oil (clean oil).



Determination of Al in motor oil

Atomic Absorption Spectrometer
AAS - 3500plus Performance Specification
System Design

Optical system	Dual Optics combined for single beam and double beam mode. True Double Beam developed optical noise reduction technology, which combined optical component UV enhancement technology. Measurement modes of atomic absorption and atomic emission.
Monochromator	Czerny-Turner type with 2 focal lengths at 355.8 and 345.6 mm, automated wavelength selection and slit selection. The monochromator provides a true double beam operation.
Wavelength range	185-900 nm
Grating	Holographic grating with 1800 lines/mm
Wavelength accuracy	±0.2 nm
Sensitivity (Cu)	approx. 0.8A at 5 ppm
Slits	Automated slit selection 0.1; 0.2; 0.7 and 1.4 nm
Detector	Wide range UV sensitive photomultiplier tube
Lamp	Automated 8-lamp turret with independent lamp power supply for each lamp and two heating circuits for preheating lamp operation.
Background Correction	Deuterium (D2) Background Correction and Self-absorption Background Correction.

Flame System

Burner-Nebulizer-System	All-titanium 100mm and 50mm burners are available:-100mm burner for air / acetylene operation, 50mm burner for both air / acetylene and nitrous oxide /acetylene operation. Adjustable nebulizer with internal Platinum / Iridium capillary, PEEK Nozzle and fixed ceramic impact bead are supplied as standard. SP-AA 5000 features automated setting of burner height for each elements.
Spray Chamber	The PPS (Polyphenylene Sulfide) spray chamber is used for both aqueous and organic solution.
Gas Controls	Programmable gas control features software-controlled gas flows with automatic setting of gas flows for each element.
Safety Functions	Interlocked safety system prevents selection of the nitrous oxide flame if the nitrous oxide burner is not fitted. Sensor controls for protection to use the incorrect burner head and check the siphon system. To ensure correct operating fuel gas and oxidant pressures are maintained also to check the flow rate. In case of the system power failure, safety interlocks will shut down the gases automatically.
Hydride System	The Hydride system is a continuous flow technique for the determination of As, Se,Sb, Sn, Te, Bi and Hg at low microgram per liter (ppb) concentration with electrothermal heating unit (600-950°C) to heat the quartz cell. The Hg will be determined with the cold vapour technique. The system has the gas flow control including two peristaltic pumps for supply the reagent, acid and samples solution.
Autosampler for Flame	Corrosion resistant sample tray is consist of 85 positions. Integral peristaltic pump with speed control provides on-demand rinsing of the probe, eliminating carryover.

Graphite furnace System

Heating System	Integrated computer-controlled Longitudinal Heated Graphite Furnace.
Function	Analytical furnace programs up to 9 steps can be set up.
Temperature	Programmable temperature up to 3000 °C in 1 °C increment. Maximum linear heating rate is 2000 °C/s under software control.
Gas Flow	Choice of two inert gases with computer-controlled flows. Separate control of inert gas stream is Argon for internal and external gas flow. The external gas flow is 1 L/min and internal gas flow in the graphite tube can be adjusted to 250 mL/min.
Cooling System	A closed circuit optimized to save time, water and provide stable condition. Water temperature during operation is approx. 38 °C.
Autosampler for Graphite	Injection volumes from 1 to 50 µL in increments of 1 µL are user selectable. Automatic dilutions and additions of three different modifiers are available. Corrosion resistant sample tray holds 87 positions.
Safety Functions	Warning will function when cooling water flow failure, gas pressure over, Furnace temperature too high, Graphite tube broken.
Camera for Graphite tube	This camera provides a full-color image monitoring for observation of the sample injection by autosampler or manual injection. It is also able to observe the sample drying in Graphite tube.

Other information

Software	SPWinAA Software Package
Weight	150kg
Dimensions (W x D x H)	800 mm x 800 mm x 575 mm
Environmental Requirements	10 °C up to 35 °C Rel. humidity max. 85 %
Power Requirements	110 / 220V±10%, 50/60Hz


ATL-3800

Total Organic Carbon Analyzer



Use High-temperature catalytic oxidation –NDIR detection to detect the Total organic carbon concentrations in water samples, range from 0.05ppm–35000ppm.

Technical Parameters:

Fundamentals: catalytic combustion oxidation –NDIR	carrier gas: High purity oxygen
Detect range: 0.05-35000.0mg/L 50ppb-35000ppm	Communication: No external
TOC precision: 0.005mg/L 50ppb	Display and operator: 7 inches touch screen
Accuracy error: $\leq \pm 5\%$	data storage: 2-year data (date measured 500 times)
Repeatability error: $\leq \pm 3\%$	printer: Embedded dot matrix printer
Span drift: $\leq \pm 2\%/D$	Options: Autosampler Online device Dilution module Solid Injector
Zero drift: $\leq \pm 2\%/D$	power: 220V AC $\leq \pm 10\%$ 50Hz
Conductivity detection range: 	output: 800W
Showing Data: TC, IC, TOC, NPOC	Ambient temperature: 0-40 degree Celsius
Response time: 3-8 mins	Dimensions (W*D*H mm) : 600*430*420
Injection method: Self-priming electromagnetic pump	weight: 40Kg
reagent: phosphoric acid	

Fundamentals:

Performance by the combustion furnace to the oxidation catalyst at a high temperature combustion of the sample is decomposed into carbon dioxide and water vapor through a condenser to cool after removing the carbon dioxide measured by non-dispersive infra-red detector (NDIR), total carbon in the sample to determine the TC the content ; By the inorganic acid reagent in the sample is decomposed into carbon dioxide and water vapor through a condenser to cool after removing the carbon dioxide measured by non-dispersive infra-red detector (NDIR), the samples to determine the content of total inorganic carbon TIC ; TOC TOC = TC-TIC.

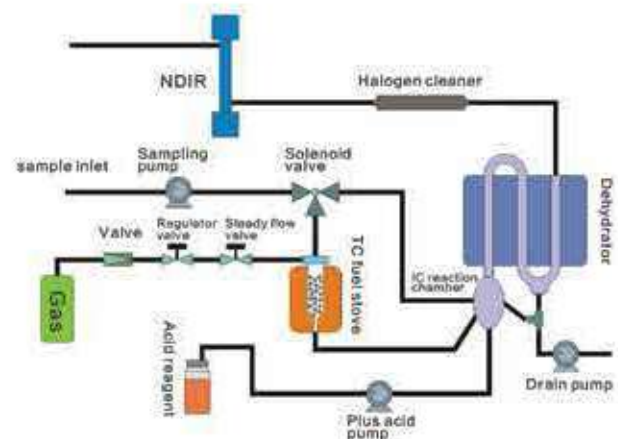


Product Features:

- ★ Three -way electronic condensate dehydration
- ★ Place the burner anyway integrated design , easy to replace , you can configure a solid injector, in solid samples into the sample
- ★ TC, TIC, TOC, NPOC Detection mode : TC, TIC, TOC, NPOC
- ★ A highly reflective gold plating chamber , an infrared light source and condensing the high sensitivity of the infrared detector, to ensure superior performance NDIR ; ppb level data measured with sufficient sensitivity and precision
- ★ Real-time detection of curves visible
- ★ Liquid samples autosampler , precision electromagnetic metering pumps , injection volume 50–1000 μ L
- ★ Multiple temperature , pressure, flow in real-time self-monitoring
- ★ Embedded 7-inch touchscreen
- ★ Built-in dot matrix printer
- ★ quantity : 100g / L
- ★ Configuring online modules , online monitoring
- ★ The maximum temperature up to 1100 degrees, depending on the sample to select a different catalysts (such as CeO, Pt, CuO) , and to set different temperatures

Application:

- ★ Cleanliness verify wash water
- ★ Tap water, surface water
- ★ Rivers, lakes and water
- ★ Chemical water (washing water , cooling water, recycled water , sewage water, etc.)
- ★ Chemical production process and finished product testing
- ★ Laboratory research



ICP-MS 3200

Inductively Coupled Plasma Mass Spectrometry

- Cost-effective
- Satisfy the clientele's requirements
- Quick analysis speed



TO BE A WORLD-LEADING ANALYTICAL TESTING SOLUTIONS PROVIDER !

Instrument mountings:

- Inletsystem:It has open-type inlet stem structure, outside installing atomizer which location by itself and needn't be adjusted
- Peristaltic pump:The Low Pulse peristaltic pump which the computer controlled 3 channels and 12 rollers can be adjust rotate speed
- Atomizer:The atomizer is a quartz glass concentric atomizer. (0.8 mL/min)
- Atomizing chamber:The high-purity quartz atomizing chamber which use semiconductor refrigerating plant is a small size, short memory effect, single channel, pear shape, Impact bead possessed atomizing chambe
- Torch tube:The quartz torch tube has 1.5 mm caliber to spray
- ICP source:27.12 MHz Solid State Technology, water-cooling, power 1600 W controlled by computer, fire up automatically
- Adjustment system of torch tube position The computer controls x、 y、 z three-dimensional accurate position. All the tuning parameter is accessed to analytical method
- Control system of gases:3 mass flow meters controlled by computer controls all the gas flow atomization gas, Aux gas, plasma gas
- Power-off protection system:when power off , it can shut down by itself with no damage the instrument system
- Connector:Nickel Cone special event connector structure, easy to replace, installation, demolition, sampling and skimmer cone
- Activities valve:It is a computer control valv. It protect instrument vacuum convenient for installing and dismantling sampling cone and skimmer cone when the vacuum system working
- Ion lens system:It has high efficiency hexapole ion guiding system. In all the mass range, it can get the best ion transmission efficiency. It has Ions deflection system. Lens installation and easy removal
- Quadrupoles characteristic:Mo Quadrupole, main Quadrupole 180 mm×12 mm, head Quadrupole 20 mm×12 mm, uncover to installing and dismantling
- Quadrupoles RF generator:air patenting, solid state, 2.0 MHz, mass number adjust stability <0.05 amu/day
- Mass spectra range:2~255 amu
- Detector ETP dual mode detector, Divided into two parts in dynode electron multiplier, without digital / analog switch
- Test range:>10⁸
- Multichannel signal analyzer:65000 channels to adapt to the requirements of the transient signal analysis
- Signal acquisition mode:Jump peak, scanning, sectional scanning, at the same time jump peak and scanning of mixed type
- Software:To provide automatic control instruments and their accessories ability, Windows 2000/XP/vista/win7(32 bit or 64 bit) Professional operating system
- Water circulation system:Temperature control:10~40℃ ; Minimum velocity:5L/Min, Pressure control:0~600 kPa

ICP-MS 3200

Inductively Coupled Plasma Mass Spectrometry

ICP-MS 3200-good analyse effect!



Introduction:

Inductively Coupled Plasma Mass Spectrometry (ICP-MS), has a microscale (10^{-6}), trace (10^{-9}), ultratrace (10^{-12}) element analyses technique. It can analyse most of the elements in the periodic table. It has very low detection limit, wide trends linearity range, low interference, high accuracy, high analyzed speed, and it also can analyze isotope.

ICP-MS3200 is the first inductively plasma mass spectrometer in China, and R & D by Skyray-instrument. It's performance accord with national standard. It can satisfy the clientele requirements and has high performance-price ratio. It mainly applies to environmental, foodstuff, semiconductor, medicine and physiological analysis, nuke industry etc.

Instrument features :

- Open-type inlet system, plug-in installing atomizer, self positioning, maintain easily by customer.
- The network interface for serial inductance, enhanced resistance to interference, improve the data transmission efficiency and stability
- Very kinds of protect function
- The software is easy operated. No special training
- The ion lens, Quadrupole are easily installing, dismantling and maintain
- Perfectly technique of electromagnetic shielding can reduce electromagnetic interference (EMI)
- Consuming material of instrument is developed by skyray itself, it is cost-effective
- High grade sale service, 10minutes respond, 48hours door-to-door service, customer service center follow-up service at all times, ensure service quality

Product performance superiority:

- Quick analyse speed, simple operate, high sensitivity, low background noise, good effect of eliminating interference, easy maintain
- OneClick plasma setting made plasma optimizing more convenient and excellent reproducibility
- Advanced plasma shielding Technology greatly improve the instrument response rate and limit of low mass number, achieve ppt level
- It has particular Activity connector structure, and it can replace, install, dismantling sampling cone and skimmer cone in empty space, it's convenient for daily maintenance
- The Ion efficiency of transmission and eliminate interference capability of polyatomic ion is improved by using the hexapole collision cell
- It don't need Digital/Analogue Conversion, controlled by computer and can achieve consistence dynamic range to 9 order of magnitude
- The new type Vacuum Chambers structure has no wire to connect. Each module use dissymmetric(al) and plug-in installing

ICP-MS 3200

Inductively Coupled Plasma Mass Spectrometry



Main apply field:

- Environment field: drinking water、seawater、environment water resource foodstuff、hygiene and disease control、commodity inspection ect
- Semiconductor field: high pure metal、high purity reagent、ultratrace impurity of Si wafe、photoresist etc
- Medicine and physiological analysis field: Medical Research of hair、whole blood、serum、urine sample、biological organization ect. Especially the test of Pb in whole blood
- Nuke industry field: analysis of nuclear fuel radioisotope、pollution of Primary cooling water etc
- Other field: as chemical industry、lithification、geology etc

Technical parameters:

- Mass range:2~255 amu
- Linear range: $\geq 10^8$
- Sensitivity: Be $\geq 2 \times 10^6$; In $\geq 35 \times 10^6$; U $\geq 30 \times 10^8$ unit (cps/mg/L)
- Detection limit: Be ≤ 10 ; In ≤ 2 ; U ≤ 2 unit (ng/L)
- Resolution:0.6~0.8 amu
- SNR(Signal to Noise Ratio): $\geq 50 \times 10^6$
- Background noise: ≤ 2 cps (all mass number range)
- Mass axis stability: ≤ 0.05 amu/24 h
- Stability RSD: short period $\leq 3\%$; long time $\leq 4\%$
- Oxide ion:CeO⁺/Ce⁺ $\leq 3\%$
- Divalent ions:⁶⁰Ba²⁺/¹³⁸Ba⁺ $\leq 3\%$
- Isotope ratio:(¹⁰⁷Ag/¹⁰⁹Ag) $\leq 0.3\%$
- Abundance sensitivity: $\leq 1 \times 10^{-6}$ low mass number; $\leq 5 \times 10^{-7}$ high mass number

Software advantage:

ICP-MS3200 provides the most convenient operating software, very intuitive, comprehensive. The software contains all current analysis methods, including a special isotope ratio and isotope dilution method. Intelligent selection method, intelligent instrument tuning, QC, various analysis methods combination function, sequence analysis, the function of automatic monitoring, custom report format.

IC-3130

Ion Chromatograph

Technical Feature

◆ **Compound and modularized design with digital display:**

Compound and modularized design with digital display It has a 5.7-inch Liquid Crystal Display (LCD). Voltage, Conductance, Pressure, Measurement range, Volume of flow and other operating parameters showed on the full screen and to be memorized at real time automatically.

◆ **Multi-detector mode:**

Double conductivity detector can detect anion and cation simultaneously; UV-Vis detector can detect ultraviolet absorbed compound; Post-Column Derivation system can detect several transition and heavy metals, CrO_4^{2-} , oxyhalogenide and so on.

◆ **Control mode:**

Either software or LCD can set all of the operating parameters. The apparatus has false-operation-avoiding system, perfect data recovery capacity which can get back data in case of power failure, false operation and other accidents.

◆ **Double suppressing function:**

Self-regenerative and CO_2 post-suppress mode unite together can reduce background conductance and sample's disturbance dramatically.

◆ **Column Thermostats inside:**

To keep column temperature invariable accurately by operating software.

◆ **Automatic alarm function:**

Eluent and pump alarm are set inside to protect the apparatus.

◆ **Solvent processing module:**

There is an on-line eluent processing system, consisting of gas-liquid separator, degasser, eluent sanctifier and so on.

Major standards

◆ **Ion Chromatographic Pump**

- ◆ Type: WellChrom HPLC-Pump KP-24
- ◆ Pressure range: 0~42 MPa
- ◆ Volume of flow range: 0.001 ~ 9.999 mL/min
- ◆ Pressure accuracy: ≤ 0.1 Mpa
- ◆ Volume of flow accuracy (setting error): $\text{RSD} \leq 0.1\%$
- ◆ Over pressure and leak protection: it will give an alarm and stop working in these situation.



◆ Digital Temperature-control detection system

- Conductivity Detector:

- ◆ Structure: five-polar ring passively and 316 stainless steel conductance detector.
- ◆ Detection Mode: Double conductivity detection
- ◆ Conductance cell size: $\leq 0.8\mu\text{l}$
- ◆ Output voltage: $-5000\sim 5000\text{ mV}$ (to regulate)
- ◆ Measure range: $0\sim 30,000\ \mu\text{S/cm}$ (10 level to choose)
- ◆ Resolution: $\leq 0.025\text{ ns}$
- ◆ Conductance cell temperature: $5\sim 50^\circ\text{C}$ (to regulate)
- ◆ Constant temperature accuracy: $\pm 0.01^\circ\text{C}$
- ◆ Baseline noise: $\leq 0.6\%\text{FS}$
- ◆ Baseline drift: $\leq 2.0\%\text{FS}$

◆ Flow System

- ◆ The whole plastic pipeline: made of PEEK materials.
- ◆ Six-way valve: Rheodyne electromagnetic six-way valve made in America, compression resistance of 7000 psi. Collect signals automatically.

◆ Analytic Capability

For high capacity anion column, pH 0~14, compatible organic solvent, F^- , Cl^- , NO_2^- , PO_4^{3-} , Br^- , NO_3^- , SO_4^{2-} , ClO_2^- , BrO_3^- , ClO_3^- etc. can be analyzed at the same time with one injection.

For high capacity cation column, lycine Li^+ , Na^+ , NH_4^+ , K^+ , Mg^{2+} , Ca^{2+} , Sr^{2+} , BA^{2+} Choline chloride can be separated and analyzed.

Different types of detectors can detect several transition metallic ions, heavy metallic ions and special ions.

Analyse repeatability: $\leq 1.0\%$ (see SO_4^{2-} , Na^+)

Linear range: $\leq 10^3$

Minimum concentration of detection: $\leq 0.0001\ \mu\text{g/g}$ (see Cl^-); $\leq 0.005\ \mu\text{g/g}$ (see BrO_3^-); $\leq 0.001\ \mu\text{g/g}$ (see Ca^{2+}); $\leq 0.001\ \mu\text{g/g}$ (see Cu^{2+}); $\leq 0.001\ \mu\text{g/g}$ (see CrO_4^{2-});

Auto-injection specifications



Injection mode	Inhalation
Indicator characters	It has large sample injection table which is divided into 50 2ml vials to do sample dilution
Injection valve	Electromagnetic six-way valve
Repeatability	Whole loop RSD<0.5%
Residue	<0.01%
Maximum number of samples	The number of 2ml samples is 40.
Switching speed of the injection valve	<100 mS
Position control accuracy	<0.1 mm
Movement Mode	Rotary Type

HPLC Servicing, Validation, Trainings and Preventive Maintenance :

- HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.
- Trainings :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.
- AMC's/CMC :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, troubleshooting.
- Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.
- Instruments :Instruments :We offer instruments / Renting Services Modules like pumps, detector etc. on Rent.



About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the globe. Analytical Technologies Limited is an ISO :9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

Our Products & Technologies

						
UV/VIS Spectro 2060+ Double Beam	FTIR	Gas Chromatograph 3000	Gas Chromatograph 2979 Plus	Flash Chromatograph	Atomic Absorption Spectrophotometer	Liquid Partical Counter
						
Optical Emission Spectrophotometer	DSC/TGA	NOVA 2020 plus Automated Bio Chemistry Analyzer	HEMA 2020 Hematology Analyzer	Micro Plate Reader/Washer	URINOVA 2800 Urine Analyzer	Total Organic Carbon
						
Fully Automated CLIA	NOVA Basic Semi-Auto Chemistry Analyzer	PCR/Gradient PCR/ RTPCR	Blood Gas Analyzer	Random access Analyzer for immunoassay Proteins & clinical chemistry	Semen Analyzer	Water purification system

Regulatory compliances



Corporate Social Responsibility

Analytical Foundation is a Nonprofit Organization (NGO) found for the purpose of:



Analytical
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1. Research & Innovation Scientist's awards / QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at info@analyticalfoundation.org

2. Improving quality of life by offering YOGA Training courses, Work shops / Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.

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