

ICP-MS 3200

Inductively Coupled Plasma Mass Spectrometry

- Cost-effective.
- Satisfy the client's requirements
- Quick analysis speed



EPC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

TO BE A WORLD-LEADING ANALYTICAL TESTING SOLUTIONS PROVIDER !

- Inletsystem:It has open-type inlet stem structure, outside installing atomizer which location by itself and need not 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/mm)
- 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 1600W controlled by computer, lire 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
- Spray chamber: Temperature controlled of cyclonic quartz with peltier cooling
- 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 it self 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 mmx 12 mm, head Quadrupole 20 mmx 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:2-260 amu
- Detector ETP dual mode detector, Divided into two parts in dynode electron multiplier, without digital / analog switch
- Test rarige:>10
- 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 IXP/ vista / win7(32 bit or 64 bit)
- Professional operating system
- Water circulation system: Temperature control: 10- 40°C; n Minimum velocity: 5L/Min, Pressure control:0-600 kPa

▶▶ **Introduction:**

Inductively Coupled Plasma Mass Spectrometry (ICP-MS), has a microscale (10^{-6}) trace (10^{-9}) ultra-trace (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 india. It's performance accord with national standard. It can satisfy the clientele requirements and has high performance-price ratio. It mainly applies to environmental foodstuL semi conductor 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)
- High grade sale service, 10minutes responds 48hours door-to-door services customer service center follow-up service at all times ensure service quality

▶▶ **Product Performance Superiority:**

- Quick analyse speeds simple operate high sensitivity% low background noise good effect of eliminating interferences 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

►► Main Apply Field:

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

►► Technical Parameters:

- Mass range: 2-260 amu
- Linear range: $\geq 10^8$
- Sensitivity: $\geq 2 \times 10^6$; $\ln \geq 35 \times 10^6$; $U \geq 30 \times 10^6$ unit (cps/mg/L)
- Detection limit: Be (9) - <0.5, In (115) - <0.1, Bi(209) - <0.1 unit (ppt)
- 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 $\leq 2\%$; long time 3%
- Oxide ion: CeO^+/Ce^+ 3%
- Divalent ions: 69 Ba²⁺/138 Ba 3%
- Isotope ratio: (107 Ag / 109 Ag) 0.3%
- Abundance sensitivity: 5×10^{-7} low mass number; 1×10^{-7} high mass number
- No gas mode sensitivity: Li (7) - 50, Co (59) - 100, U(238) - 300 unit (Kcps/ppm)
- Dwell time: 3ms
- Scan speed: 3000 amu/s

►► Software Advantage:

ICP-MS 3200 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.

▶▶ **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 PLC principles, operations, troubleshooting.
- Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/ GMP/U SFDA 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**

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|  |  |  |  |  |  |  |
| UV/VIS Spectro 2060+ Double Beam | FTIR | Gas Chromatograph 3000 | Gas Chromatograph 2979 Plus | Flash Chromatograph | Atomic Absorption Spectrophotometer | Liquid Partical Counter |
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| 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**

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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.

▶▶ **Reach us @**



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