

## **ICP-MS-2000 Inductively Coupled Plasma Mass Spectrometer**



- Inductively coupled plasma mass spectrometer ( abbreviated ICP-MS), was developed in the 1980s, a new micro ( 10-6 ) trace ( 10-9 ) and ultra-trace ( 10-12 ) elemental analysis technology. Most of the periodic table of elements can be determined , very low detection limit , a very wide dynamic range , simple lines , less interference , high precision, fast speed , can provide isotopic analysis .
- This product is the first domestic industrial inductively coupled plasma mass spectrometer, the instrument of the performance reached the national standard, to meet the needs of user applications, cost-effective; the products are mainly used in environmental, food, semiconductor, medical and physiological analysis, nuclear industrial fields.



• Injection System: open-injection system architecture, using nebulizer externally mounted, self-positioning, without

- adjustment.
- Torch position adjustment system : full control of the computer x, y, z torch accurate three-dimensional position , all adjustment parameters stored in the analysis.
  - **Plasma shielding technology :** greatly improved sensitivity, improve the detection limit of the number of elements of low quality, to ppt level
- Activities valves: computer control, protection equipment vacuum, easy disassembly and cleaning sampling and skimmer cones work in the vacuum system.
- Ion lens system : with a high efficiency hexapole ion guide system , ion transmission efficiency to get the best quality in the whole range of ion focusing automatic tuning process , the vacuum chamber of the lens using asymmetric installation , easy disassembly positioning.
- Detector : ETP dual mode detector , without digital / analog switch .

The new vacuum chamber structure : the cavity without any wires , each component asymmetric installation and plug-in installation .

- Power protection systems: power outage occurred in the accident, security itself off without damaging the instrument system.
- Software: Provides automatic control instruments and their accessories abilities, software encompasses a variety of analyt-

ical methods, including special isotope ratio determination and isotope dilution method.

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## Parameters

Quality Quantity Range :	2 ~ 255 amu
Measuring range :	≥108
Sensitivity :	Be≥2 × 106; In≥35 × 106; U≥30 × 106 units (cps / mg / L)

The detection limit :	Be $\leq 10$ ; In $\leq 2$ ; U $\leq 2$ units (ng / L)
<b>Resolution :</b>	0.6 ~ 0.8 amu
SNR :	≥50 × 106
Background noise :	≤2 cps ( full mass range )
Mass axis stability :	≤0.05 amu / 24 h
Stability RSD:	short-term ≤3%; long ≤4%
Oxide ions :	CeO + / Ce + ≤3%
<b>Bivalent ions :</b>	69Ba2 + / 138Ba + ≤3%
Isotope ratio :	(107Ag / 109Ag) ≤0.3%
Abundance sensitivity :	$\leq 1 \times 10-6$ low quality end ; $\leq 5 \times 10-7$ high mass



