

ICP900T Full Spectrum Direct Reading **Inductively Coupled Plasma Emission Spectrometer**

Introduction

The full spectrum direct reading inductively coupled plasma emission spectrometer is used to determine the content of major,trace,and trace elements in different samples. It can be used for qualitative, semi quantitative, and precise quantitative analysis of elements in samples, with a detection limit of up to one part per billion.

At present, instruments are widely used in various fields such as environmental protection, food safety, geology and mineral resources, metallurgy, non-ferrous metals, rare earths, chemical engineering, clinical medicine, petroleum products, semiconductors, agricultural research, etc.

Features

1. Multiple testing elements

There are many testing elements, with a maximum of over 70 elements being tested

2. Simultaneous testing of multiple elements

One injection, all elements tested simultaneously

3.Fast analysis speed

Fast analysis speed, measuring one sample per minute.

4. Low detection limit

The detection limit is low, and the majority of elements can reach ppb level.

5. Wide linear range

Up to 5-6 orders of magnitude, achieving simultaneous detection of high and low content without the need to replace standard curves.

6. Less chemical interference

Less chemical interference, more accurate test results.







• Environmental protection industry

Accurately and quickly analyze the elemental composition of environmental samples(water quality, soil, atmosphere),

providing protection for human daily life.

• Metallurgical industry

The analysis of product ingredients can control the production process and process in real-time, ensuring the ingredient

content of the final product and ensuring the quality requirements of the final product





• Precious Metals Industry

The content of impurity elements in precious metals directly affects the purity and performance of precious metals. Accurately measuring the content of low impurity elements is extremely important for the precious metal industry.

• Geological and Mineral Industry

Accurately and quickly analyzing the element content in minerals has strict guiding significance for the early mining,mid-term control,and later restoration of mines.

• Toy and consumer goods industry

Analyze the heavy metal elements in children's toys and consumer goods to ensure that the content of heavy metal elements in the products produced is within the control range, making parents feel more at ease.

• Rare earth industry

The value and use of rare earth elements are increasingly favored, and the application range of high-purity rare earth elements is also becoming wider. The analysis of impurity elements is particularly important, and the accuracy and efficiency required for rare earth testing can be fully met.

Specifications

Input power supply	AC 220V,current 20A
Input power	700-1500W
Power Efficiency	Greater than 70%
Output power stability	<0.01%
Power frequency	27.12MHz
Frequency Stability	<0.01%
Observation method	Vertical observation
Stability	Relative standard deviation RSD<1% @ 2 hours
Element detection limit (ug/)	Most elements range from lppb to 10ppb
Repeatability	(i.e. short-term stability) relative standard deviation RSD<0.5%%
Test speed	The reading time of a single spectral line CID is only 2 seconds,
	and all elements can be measured within 20 seconds
Output working coil	silver plated high-firequency coil with an inner diameter of 25mm and 3 turns
Total argon consumption	The total argon consumption is less than l4L/min
Atomization chamber	Double tube atomization chamber, optional with swirl atomization chamber
Peristaltic pump	five channels and sixteen rollers, with adjustable speed according to the required flow rate
Three concentric quartz torch tube	outer diameter 20mm; Multiple models available in different industries
Efficient imported atomizer	concentric circular atomizer with an outer diameter of 6mm, Multiple models available, high salt, Hf resistant, etc
Detector type	American original Thermo Charge Injection Detector (CD)
Target size	27.6x27.6mm, 1024
Quantum efficiency	No coating, up to 35% in the 200nm ultraviolet region
Detector cooling	high-efficiency three-level semiconductor cooling, cooling temperature -45°C
Reading methods	Non destructive reading (NDRO), full amplitude reading (F), and arbitrary read integration (RAI)
Grating	medium stepped grating, 52.67lp/mm, 64° flare angle
Light chamber	distributed precision constant temperature, 35 + 0.1 $^\circ$
Prism	ultrapure Corning ultraviolet fused silica, with filtration greater than 99% at 170nm
Stray light	Equivalent background concentration of 10000ppmCa solution at As189.042nm<2ppm