

ICP700T PRO

Inductively Coupled Plasma Emission Spectrometer

Introduction

Inductively coupled plasma emission spectrometer, as a professional laboratory analysis instrument, has many characteristics such as testing multiple elements, being able to detect up to 70 elements, fast testing speed, and low detection limit. Not only has the efficiency of solid-state RF power supply and instrument status monitoring functions been optimized and upgraded from the perspective of instrument configuration, but also functions such as audit tracking, flame video display, and direct display of sample results when tracing samples have been integrated into the software.

The stability of the instrument and the convenience of software operation are closer to customer use,providing customers with a better experience. The whole machine has a high degree of automation and intelligence, and the software operation is simple and easy to learn.



Features

1. Real time observation window for flames

The instrument is equipped with a highly sensitive flame sensing system and a visual video monitoring camera, which can observe the flame status of the combustion chamber in real-time and automatically turn off the RF power supply when the engine is turned off, protecting important components of the instrument.

2. Safe and reliable airflow protection function

The instrument is equipped with an argon gas monitoring and protection device. When the argon gas is below the safety limit for use, the instrument will automatically turn off the working power and immediately issue an alarm reminder to avoid





damage to the equipment due to the depletion of argon gas.

3. Peristaltic pump injection device

The instrument is equipped with a high-precision peristaltic pump with five channels and sixteen rollers, which can ensure the accuracy of sample injection and prevent liquid accumulation at the same time. The rotational speed of the peristaltic pump is

continuously adjustable, meeting various testing requirements of customers.







4. High precision airflow control and protection system

The plasma gas,auxiliary gas,and carrier gas in the instrument's operation are all controlled by an integrated high-precision mass flow controller (MFC),with an accuracy of 0.01L/min.It has continuously adjustable flow rate and high accuracy in outputting airflow,ensuring the accuracy of test data.

5. High precision constant temperature system

The overall optical path of the instrument is protected by a precision constant temperature system. The temperature control can be set in real time according to the actual environmental temperature of the customer's laboratory, without the need for continuous adjustment for a long time. The temperature control accuracy is $\leq \pm 0.1$ °C. The precision constant temperature system ensures the stability of the optical path, and the test data is more stable.

6. Automatic adjustment of observation position

The plasma flame can be adjusted in three dimensions(controlled by a computer), including front and back, up and down, and left and right. It integrates an integrated quartz torch tube, which can achieve one second positioning of the torch tube and complete replacement in ten seconds, ensuring the performance of the instrument after replacing the torch tube. Find optimized observation positions through feedback signal values to obtain strong sensitivity and accurate testing results.

Specifications

Input power supply	voltage AC 220V, current 20A
Optical path type	Czerny Turner type optical path with a focal length of 1000mm
Grating	Ion etched holographic grating, with a scratch area of (80 x 110) mm
Resolution ratio (Mn257.610nm)	<0.005nm(4320rlinggrating);<0.008nm(3600ruling grating);<0.015nm(2400ruling grating)
Wavelength range	190-460nm(4320muing grating);190-500nm(3600ruling grating);190-800nm(2400mling grating);
Atomizer	High precision and efficient concentric nebulizer 2ml/min, can be equipped with various injection systems such as high salt resistance,hydrofluoric acid resistance, and organic resistance.
Atomization chamber	The patented extended double tube atomization chamber has a better solvent removal effect.
Total argon consumption	less than l4 L/min
Stability	2 hours RSD ≤ 2.0%
Replacement of tooling	Quickly replace the infection system, using patented technology for torch tube tooling and torch tube installation platform.
Power characteristics	Equipped with reverse power protection for RF power supply (patented technology)
Precision	2ppm mixed multi-element solution, RSD< 1.0%
Detection limit	meets the A-level requirements of the national standard
Flexibility of spectral lines	Test spectral lines can be added arbitrarily according to usage requirements
Frequency	27.12MHz, coupling efficiency greater than 80%, frequency stability:<0.01%
Adopting a concentric atomizer with patented technology chamber, with a strength of 1ppmMn>1000000cps	
Independently developed all solic continuously adjustable, adjusta	d-state RF power supply with output powver of 500-1600W, ble accuracy of 1W, power stability:<0.01%







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