TY-9900 Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES)

- Specification

Simultaneous ICP-AES for elemental analysis of liquids
Wavelength range:195-800nm
For 70 trace elements and macro elements
Analyze up to 600 samples per day
Low operating costs
Intuitive operation
Ultra-low limits of detection
Ultra-high speed of measurement

Summary

TY-9900 Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES)is developed based on both the tradition of inductively coupled plasma atomic emission spectroscopy technique and the absorption of the latest technological achievements of international research. The series are high-precision, high sensitivity and high stability. The instrument consists of a scanning beam splitter, the RF generator, sample introduction systems, photovoltaic conversion, control systems, data processing systems, analysis and operating software.

Applications

TY-9900 Inductively Coupled Plasma Atomic Emission Spectrometer (ICP-AES) can be applied in sample analysis of machinery, steel, geology, metallurgy, rare earth and magnetic materials, environment, medicine and health, biological, marine, petroleum, chemical new materials, nuclear industry, agriculture, food commodity inspection, water quality and other fields and disciplines. It can quickly and accurately detect about 70 kinds of elements from microelements to macro elements.

Features

1.High-stability RF output, with stable light source and low detection limit that can reach the level of PPb(one billionth) at minimum.
2. The working curve has wide linear range that reach 5-6 orders of magnitudes.
3. Multiple elements are analyzed at the same time with fast analytical speed and wide range of applications. It can almost analyze all metallic and part of non-metallic elements in periodic table of elements.
4. Excellent optical system, advanced control system makes sure of the signal-back-ground ratio accurate.
5. Imported key components: to ensure the accuracy and sensitively of the instrument.
6. Minimal matrix effect 99% of the sample without matrix separation.
7. Wide measuring range: ultra volume to the constant analysis.
8. Excellent precision: relative standard deviation RSD≤1.5%
9. Stability: the relative standard deviation RSD≤2.0%
10.Rapid analysis: sequential scan elements per minute, the fastest in more than 15.
11.Analysis of many elements: 70 metal elements can be analyzed and also some non-metallic elements.
12.Low detection limit: ug/L level
13.Do qualitative and quantitative analysis:
14.Convenience of analysis software: Window XP platform based on the third generation of China or English operating software to make it easier to use easily, the data processing system provides a variety of functions, the output data can be print.
15.TY-9900 ICP Spectrometer uses analysis software with convenient operations and powerful functions. It can also realize functions including measurement, data processing, correction and data output.

Parameter

Item	Index
Analytical speed	10 elements every minute
Accuracy	Relative standard deviation RSD⩽2%
Stability	Relative standard deviation RSD⩽3%（measured within one hour）
Measuring linear range	(Relative coefficient)⩾0.9995%
Low detection limit	As listed below for representative elements

Element Limit of Detection(Unit:ppb & ug/L)

Element	Wavelength(nm)	LOD(ppb &ug/L)	Element	Wavelength(nm)	LOD(ppb &ug/L)
Ag	328.068	0.3	Nd	401.225	1.5
Al	396.152	2	Ni	221.647	1
As	193.696	4	Na	588.995	29
Au	242.795	1	P	213.618	6
B	249.773	1	Pb	220.353	5
Ba	445.403	0.1	Pd	340.458	2
Be	313.042	0.2	Pr	390.844	2
Bi	223.061	5	Re	227.525	3
Ca	396.847	0.2	Rb	780.023	150
Cd	214.438	0.3	Sb	206.833	6
Ce	413.765	1.5	Sc	361.384	0.5
Co	228.616	1	Se	196.026	8
Cr	267.716	1	Si	251.611	5
Cu	324.754	1	Sm	359.260	1
Dy	353.170	0.3	Sn	235.484	10
Er	337.271	0.3	Sr	407.771	0.15
Eu	381.967	0.2	Ta	226.230	6
Fe	238.204	1	Tb	350.917	1
Ga	294.364	3	Ti	334.941	0.2
Gd	342.247	0.5	Tl	261.861	5
Hf	277.336	1	Tm	313.126	0.3
Ho	345.600	0.5	V	309.418	0.5
La	333.749	0.5	W	207.911	4
Lu	261.542	0.2	Y	371.030	0.2
Mg	279.553	0.2	Yb	328.937	0.2
Mn	257.610	0.2	Zn	213.856	0.5
Mo	202.030	1	Zr	343.823	0.4
Nb	309.611	1	K	766.490	60
			Cs	455.531	50000