



ICP-7700

Inductively coupled plasma emission spectrometer

ICP-7700 inductively coupled plasma emission spectrometer. The light source system adopts solid-state RF generator and end observation mode, featuring low detection limit, high resolution, stable operation and wide application. It can quickly and accurately detect 70 elements from trace to constant

Scope of application

Geology, metallurgy, rare earth separation, rare earth magnetic materials, medicine and health, environment, biology, ocean, petroleum, chemical industry, nuclear industry, agriculture, water quality and other scientific fields are widely used.

Instrument features:

- ICP solid RF generator: small size, light weight, high efficiency, automatic matching function, output power stability better than 0.1%, can test samples of organic solution
- Observation mode: end type, characterized by low detection limit;
- Sample injection system: precision mass flowmeter, stable and reliable. Advanced fog chamber, repeatability RSD can reach <1.0%;
- Automatic protection: water supply, gas supply, overcurrent, overheating, and prevention of torch tube burning.

Product data information is current as of publication data. Products conform to specifications per the terms of Optosky Standard warranty.

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Detection limit of some typical elements

Detection limit <1ppb

Be, Ca, Mg, Sr, Ba, Y, Sc, Eu, Yb, La, Lu, Co, Fe, Zn, Ho, Er, Cd, Mn, Ti;

Detection limit 1-10ppb

B, Si, Cr, Ni, Cu, Ga, Zr, Nb, Mo, Ru, Rh, Pd, W, Ir, Pt, Au, Ce, Pr, Nd, Sm, Tb, Al, Gd, Ag,

Detection limit 10-100ppb

P, Ge, As, Se, Rb, In, Sn, Te, Cs, Hf, Ta, Re, Os, Hg, Ti, Pb, Bi, Th, U, Sb

Detection limit 100-1000ppb

K, U

Elements that can be analyzed and detection limit

1																	2		
H																	He		
3	4													5	6	7	8	9	10
Li	Be													B	C	N	O	F	Ne
11	12													13	14	15	16	17	18
Na	Mg													Al	Si	P	S	Cl	Ar
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr		
37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54		
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe		
55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72		
Cs	Ba	L	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn		
87	88																		
Fr	Ra																		
		57	58	59	60	61	62	63	64	65	66	67	68	69	70	71			
		L	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu		
		鋼系																	
		89	90	91	92	93	94	95	96	97	98	99	100	101	102	103			
		A	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr		
		鋼系																	

Technical indicators

RF generator

Circuit type	Solid state device, separately excited type
working frequency	27.12MHz
output power	600W~1200W
Output power stability	<0.1%

Optical system

Optical path type	Czerny-Turner
Focal length	750mm
Grating	Ion etched holographic grating 3600line/mm, Reticle area (80×110) mm ²
Exit and entrance slit	20μm

Light metering device

Operating voltage	- 200~1000) V
Current measurement range	10-4~10-9A
Stability	<0.05%
Signal acquisition mode	V/E conversion

Injection device

Torch tube working coil	internal diameterφ22mm, 3T
Torch	external diameter φ20mm
Atomizer	Concentric Meinhard atomizer, outer diameterφ6mm
Fog chamber	Special and efficient
Specification of fog argon flowmeter	
a) Plasma gas	(100~1000) L/h
b) Auxiliary gas	(6~60) L/h
c) carrier gas	(0~5) L/min
Stable pressure value of argon	0.25MPa

Technical indexes of the whole machine

Measuring wavelength range	(180~500) nm
Resolution	≤0.012nm
Measurement repeatability	RSD≤1.0%
Measurement stability	RSD≤2.0%
Lower detection limit of representative element	ppb level

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