



ICP Spectrometer

LICP-A11

ICP SPECTROMETER LICP-A11

ICP Spectrometer LICP-A11 detects micro and macro elements using argon plasma with an analyzing rate of 15 elements per minute. Results can be achieved with lower levels of detection for qualitative and quantitative analysis. Detection of liquid flow from the spray chamber by optical drain sensor offers exceptional sensitivity and accuracy. Accurate signal-background ratio is attained by advanced control system.

Features

- Rapid analysis – 15 elements per minute
- Optical pathway – Czerny-turners
- Low detection limit
- Detection of multi-elements including non-metallic
- Single and multi-element measurement method
- Indication for wavelength error and repeatability
- Range of measurement – common to trace

Applications

Used in clinical analysis for detection of metals in biological fluids , environmental analysis for trace element detection in water , soil , plants , pharmaceuticals for traces of catalysts and poison metals like Cd , Pb , industries for noble metal detection

Specifications

Model No.	LICP-A11
Wavelength range	180 to 900 nm
Elements per minute	15 elements
Temperature	29 °C
Incident slit	25 µm
Standard deviation	RSD ≤ 2 %
Correlation coefficient	≥ 0.9995 %
Gas source	Argon (99.99 %)
Plasma gas flow meter	100 – 1000 L / h (1.6 - 16 L / min)
Auxillary gas flow meter	10 – 100 L / h (0.16 – 1.66 L / min)
Carrier gas flow meter	0 - 5 L / min
Cooling water flow rate	5 L / min
Cooling water temperature	20 - 26 °C
Water outlet diameter	10 mm
Line dispersion rate	0.26 nm
Resolving power	≤ 0.007 nm
Co-axial sprayer diameter	6 mm
Coil diameter	25 mm
Double room fog diameter	34 mm
Quartz tube torch diameter	20 mm
Mirror dimensions	80 x 110 x 16 mm

Element Detection Limits (Unit - µg / L and ppb)

Element	Be	Mg	Ca	Sr	Ba	Sc	Y	Eu	Yb
Wavelength (nm)	313.042	279.553	396.847	407.771	455.403	361.384	371.030	381.967	328.937
Detection limit	0.2	0.2	0.2	0.15	0.1	0.5	0.2	0.2	0.2

Element	Lu	La	Gd	Dy	Ho	Er	Tm	Zn	Cd
Wavelength (nm)	261.542	333.749	342.247	353.170	345.600	337.271	313.126	213.856	214.438
Detection limit	0.2	0.5	0.5	0.3	0.5	0.3	0.3	0.5	0.3

Element	Fe	Ti	Cu	Mn	V	B	Ni	Cr	Co
Wavelength (nm)	238.204	334.941	324.754	257.610	309.418	249.773	221.647	267.716	228.616
Detection limit	1	0.2	1	0.2	0.5	1	1	1	1

Element	Zr	Mo	Ag	Au	Si	Al	Pb	P	Na
Wavelength (nm)	343.823	202.030	328.068	242.795	251.611	396.152	220.353	213.618	588.995
Detection limit	0.4	1	0.3	1	5	2	5	6	29

Element	As	Bi	Ce	Ga	Hf	Nb	Cs	K	Tl
Wavelength (nm)	193.696	223.061	413.765	294.364	277.336	309.611	455.531	766.490	261.861
Detection limit	4	5	1.5	3	1	1	50000	60	5

Element	Tb	Ta	Sn	Se	Sb	Rb	Re	Pr	Pd
Wavelength (nm)	350.917	226.230	235.484	196.026	206.833	780.023	227.525	390.844	340.458
Detection limit	1	6	10	8	6	150	3	2	2

Element	Nd
Wavelength (nm)	401.225
Detection limit	1.5