

ICPOES-3500E

Inductively coupled plasma emission spectrometer



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

www.analyticalgroup.net

Product features:

Spectroscopy family gains another new member - ICPOES-3500 Inductively Coupled Plasma Emission Spectrometer. Light source system adopts solid-state RF generator and end-on viewing mode, which has the characteristics of low detection limit, high resolution, stable operation and wide application. Can quickly and accurately detect 70 elements from micro to macro quantity.

Application range:

Widely used in geological, metallurgical, rare earth separation, rare earth magnetic materials, medical and health, environmental, biological, marine, petroleum, chemical, nuclear, agricultural, water quality and other scientific area.

Instrument characteristics:

- **ICP solid-state RF generator** : Small size, light weight, high efficiency, automatic matching function, output power stability better than 0.1%, can test samples of organic solution;
- **Viewing method**: end-on type, with low detection limit;
- **Injection system**: using stable and reliable Precision Mass Flow Meter. Advanced spray chamber, repeatability RSD can reach <1.0%;
- **Automatic protection**: water cut-off, gas cut-off, over-flow, overheating, prevent torch from melting, etc.

Detection limit <1ppb

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

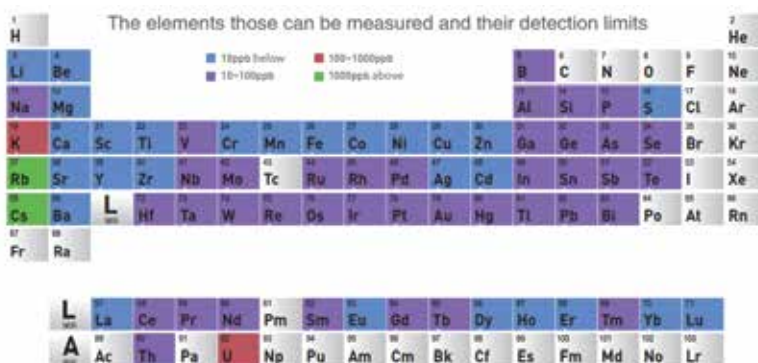
Detection limit 1-10ppb

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

Detection limit 10-100ppb

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

The elements those can be measured and their detection limits



Element	Detection Limit
H	<1ppb
He	>1000ppb
Li	<1ppb
Be	<1ppb
B	1-10ppb
C	>1000ppb
N	>1000ppb
O	>1000ppb
F	>1000ppb
Ne	>1000ppb
Na	<1ppb
Mg	<1ppb
Al	1-10ppb
Si	1-10ppb
P	10-100ppb
S	>1000ppb
Cl	>1000ppb
Ar	>1000ppb
K	<1ppb
Ca	<1ppb
Sc	<1ppb
Ti	<1ppb
V	1-10ppb
Cr	1-10ppb
Mn	<1ppb
Fe	<1ppb
Co	<1ppb
Ni	1-10ppb
Cu	<1ppb
Zn	<1ppb
Ga	1-10ppb
Ge	10-100ppb
As	10-100ppb
Se	10-100ppb
Br	>1000ppb
Kr	>1000ppb
Rb	<1ppb
Sr	<1ppb
Y	<1ppb
Zr	<1ppb
Nb	1-10ppb
Mo	1-10ppb
Tc	>1000ppb
Ru	1-10ppb
Rh	1-10ppb
Pd	1-10ppb
Ag	1-10ppb
Cd	<1ppb
In	1-10ppb
Sn	1-10ppb
Sb	1-10ppb
Te	10-100ppb
I	>1000ppb
Xe	>1000ppb
Cs	<1ppb
Ba	<1ppb
La	<1ppb
Ce	<1ppb
Pr	<1ppb
Nd	<1ppb
Pm	>1000ppb
Sm	<1ppb
Eu	<1ppb
Gd	<1ppb
Tb	<1ppb
Dy	<1ppb
Ho	<1ppb
Er	<1ppb
Tm	<1ppb
Yb	<1ppb
Lu	<1ppb
Fr	>1000ppb
Ra	>1000ppb
Ac	<1ppb
Th	<1ppb
Pa	10-100ppb
U	10-100ppb
Np	>1000ppb
Pu	>1000ppb
Am	>1000ppb
Cm	>1000ppb
Bk	>1000ppb
Cf	>1000ppb
Es	>1000ppb
Fm	>1000ppb
Md	>1000ppb
No	>1000ppb
Lr	>1000ppb

Technical specifications:

RF generator:

Circuit type	: Solid state component, passive type
Working frequency	: 27.12MHz
Output Power	: 700W~1200W
Output power stability	: <0.1%

Optical system

Light path type	: Czerny-Turner
Focal length	: 1000mm
Grating	: Ion-etched holographic grating, 2400line/mm , : Grating line area (80×110) mm ²
Exit, entrance slit	: 20μm

Photometric device:

Operating Voltage	: - (200~1000) V
Current measurement range	: $10^{-4} \sim 10^{-9}$ A
Stability	: <0.05%
Signal acquisition method	: V/F conversion

Sample introduction device:

Torch working coil	: Inner diameter φ22mm, 3T
Torch	: Three concentric quartz torch, φ20mm
Nebulizer	: Concentric Meinhard nebulizer, φ6mm
Spray chamber	: Special high efficiency
Argon flowmeter	: Double cylinder swirling compound chamber
a) Plasma gas	(0~20) L/min
b) Auxiliary gas	(0~2) L/min
c) Carrier gas	(0~2) L/min

Machine technical specifications

Measuring wavelength range	: (190~800) nm
Resolution	: ≤0.015nm
Measurement repeatability	: RSD≤1.0%
Measurement stability	: RSD≤2.0%
Representative element detection lower limit	: ppb

HPLC Servicing, Validation, Trainings and Preventive Maintenance :

HPLC Servicing :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

Trainings :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

AMC's/CMC :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

Validations :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

Instruments :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

Our Products & Technologies



LCMS



Maldi TOF



Optima Gas
Chromatograph



Flash
Chromatograph



DAC
Column



GCMS
3068



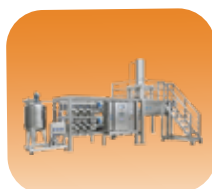
UHPLC



HPTLC



Ion Chromatograph



Production
HPLC



HPLC



Column



DLS



Water purification
system

▶▶▶ Regulatory compliances



▶▶▶ Corporate Social Responsibility

ANALYTICAL FOUNDATION is a Nonprofit Organization (NGO) for the purpose of:



Analytical Foundation

1. Research & Innovation **Scientist's awards & International Conference visit sponsorship / QC Professional Awards:** Quality life is possible by innovation only and the innovation is possible by research only, hence **ANALYTICAL FOUNDATION** is committed to identify such personallities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research /testing/ publication at info@analyticalfoundation.org

2. Improving quality of life by offering **YOGA Training courses, Work shops / Seminars** etc.

3. **ANALYTICAL FOUNDATION** aims to DETOXIFY human minds, souls and body by means of Yoga, Meditation, Ayurveda, Naturecure, Health Care, Ara, Events, Camps etc.

▶▶ A portion of profit of **ANALYTICAL GROUP** Company's goes into **ANALYTICAL FOUNDATION** for the aboce noble cause.

▶▶▶ Reach us @



 **Analytical**®
Technologies Limited

Subsidiaries



Note : Company reserves rights to add/delete/modify the contents / technical specifications of the catalogue without prior notice

HPLC Solutions

MultipleLabs

Infinite Multiplelabs LLP

Analytical Bio-Med

Analytical Foundation (Trust)

Corporate & Regd. Office:
Analytical House, # E67 & E68,
Ravi Park, Vasna Road, Baroda,
Gujarat 390 015. INDIA

T: +91 265 2253620
+91 265 2252839
+91 265 2252370
F: +91 265 2254395

E :- info@analyticalgroup.net
info@hplctechnologies.com
info@multiplelabs.com

W:- www.analyticalgroup.net
www.hplctechnologies.com
www.multiplelabs.com

Sales & Support Offices:
across the country :
Distributors & Channel
partners World Wide
USA| UK| Australia| Dubai| Malaysia