Atomic Absorption Spectrophotometer

AAS – 10A /B, AAS – 12A /B, AAS – 13A /B

- High sensitivity
- simple and safe operation
- Low analytical cost

Features

Innovated rich oxygen air-acetylene flame analysis technique (AAS-10)

The patented flame analysis technique adopting rich oxygen air-acetylene flame as the substitution for nitrous oxide-acetylene flame for high temperature element analyses, such as Ca, Al, Ba, W, Mo, Ti, V, etc. Flame temperature is continuously adjustable between 2300-2950 °C which makes it possible to choose the best atomization temperature for different elements. It features easy operation, low analysis cost and wide flame AAS analytical range. Rich oxygen flame will not pollute the environment and is not harmful to human bodies. It's break-through in flame AAS analysis.

Flame atomization system with flame emission burner

A flame emission burner head can be installed to perform flame emission analysis to Alkali metals as K, Na etc. (AAS-10/12).

Perfect safety protection measures

Alarm and automatic protection to fuel gas leakage, abnormal flow, insufficient air pressure and abnormal flame extinction in flame system.

Features

Accurate fully automated control system

- Automatic multi - lamp turret, automatic adjustment of lamp current and optimization of light beam position
- Automatic wavelength scanning and peak picking
- Automatic spectral bandwidth changing
- Automatic ignition

Advance and reliable electronic design

- Adopting large-scale programmable logic array and Inter I2C bus technology
- European type sockets and AMP adapters with high reliability to ensure long term reliability of the whole electronic system

Easy and practical analysis software

- Easy - to - use AAS analysis software is made under Windows operating system, realizing fast parameter setting and optimization
- Automatic sample dilution, automatic calculation and analytical result automatic print out

Main Specification

Wavelength range	190 - 900nm
Wavelength accuracy	± 0.25nm
Resolution	Two spectral lines of Mn at 279.5nm and 279.8nm can be separated with the spectral bandwidth of 0.2nm & valley-peak energy ratio less than 30%.
Baseline stability	0.004A/ 30min
Background correction	The D2 lamp background correction capability at 1A is better than 30 times. The S-H background correction capability at 1.8A is better than 30 times. (only for AAS-10/12)

Light Source System

Lamp turret	6-lamp turret (AAS-10/12), 4-lamp turret (AAS-13); Auto-alignment, fully automated scan and Peak-picking
Lamp current adjustment	400Hz square wave pulse Wide pulse current: 0~25mA Narrow pulse current: 0~10mA
Lamp power supply mode	400Hz square wave pulse 100Hz narrow square wave pulse+400Hz wide square wave pulse (AAS-10/12)

Optical System

Monochromator	Single beam, Czerny-Turner design grating
Grating	1800 l/mm
Focal length	277 mm
Blazed Wavelength	250 nm
Spectral Bandwidth	0.1 nm, 0.2 nm, 0.4 nm, 1.2 nm, automatic change

Flame Atomizer

Burner	10cm single slot all-titanium burner
Spray chamber	Corrosion resistant all-plastic spray chamber
Nebulizer	High efficiency glass nebulizer with metal sleeve, sucking up rate: 6 - 7 ml/min
Emission burner provided with AAS-10/12	

Detection and Data Processing System

Detector	R928 Photomultiplier with high sensitivity and wide spectral range.
Software	Windows operating system
Analytical method	Working curve auto-fitting; standard addition method; automatic sensitivity correction, automatic calculation of concentration and content.
Repeat times	Max. 20 times of repeat measurement, automatic calculation of mean value, standard deviation and relative standard deviation.
Multi-task Functions	Sequential measurement for multi-element determination in one sample
Condition reading	With model function
Result printing	Measurement data and final analytical report printout, editing with Excel
Standard RS-232 serial port communication	

Characteristic Concentration and Detection Limit

Normal Air-C2H2 flame / Oxygen- rich Air- C2H2 flame
Cu: Characteristic concentration ≤ 0.025 mg/L, Detection limit ≤ 0.006 mg/L
Ba: Characteristic concentration ≤ 0.22 mg/L
Al: Characteristic concentration ≤ 0.4 mg/L

Function Expansion	Hydride vapor generator can be connected for hydride analysis.

Dimensions and weight	Main unit 102×49×54cm, unpacked 80kg

Options

0.100.100	Air compressor
0.100.101	Hydride vapor generator
0.100.102	Pyrolytically coated platform graphite tube
0.100.103	Pyrolytically coated graphite tube
0.100.104	Normal graphite tube
0.100.105	High efficiency glass nebulizer
0.100.106	Water Chiller
0.100.107	PC-Working place incl. PC, Printer, TFT Display

Order Information's

0.100.013 AAS-13B Package	Atomic Absorption Spectrophotometer / flame type / Automatic PC control / 4- lamp turret / air-C2H2 flame / D2 background correction / Complete with the software and Cu, Mn, Hg Hollow Cathode Lamps
0.100.012 AAS-12B Package	Atomic Absorption Spectrophotometer / flame type / fully automatic PC control / 6- lamp turret / air- C2H2 flame / D2 & S-H background correction / Complete with the software and Cu, Mg, Hg Hollow Cathode Lamps
0.100.011 AAS-10B Package	Atomic Absorption Spectrophotometer / flame type / fully automatic PC control / 6-lamp turret / D2 & S-H background correction / Air- C2H2 flame and patented air- C2H2- O2 flame (Substitution for N2O- C2H2 flame) / Complete with the software and Cu, Mn, Hg and Ba Hollow Cathode Lamps
0.100.016 AAS-13A Package	Atomic Absorption, flame & graphite furnace type / Automatic PC control / 4-lamp turret / D2 background correction / Air- C2H2 flame and graphite furnace one touch changing, Complete with graphite furnace system / software and Cu, Mn, Hg, Cd Lamps
0.100.015 AAS-12A Package	Atomic Absorption / flame & graphite furnace type / Fully automatic PC contro / 6- lamp turret / D2 & S-H background correction / Air- C2H2 flame and graphite furnace one touch changing / Complete with graphite furnace system / software and Cu, Mn, Hg, Cd Lamps
0.100.014 AAS-10A Package	Model WFX-110A Atomic Absorption / flame & graphite furnace type / Fully automatic PC control / 6- lamp turret / D2 & S-H background correction Air- C2H2 flame and patented air- C2H2- O2 flame (Substitution for N2O- C2H2 flame) with graphite furnace one touch changing / Complete with graphite furnace system, software and Cu, Mn, Hg,Cd, Ba Lamps

Hollow cathode lamps

0.100.130	Al / Aluminium
0.100.131	Sb / Antimony
0.100.132	As / Arsenic
0.100.133	Ba / Barium
0.100.134	Be / Beryllium
0.100.135	Bi / Bismuth
0.100.136	B / Boron
0.100.137	Cd / Cadmium
0.100.138	Cs / *Cesium
0.100.139	Ca / Calcium
0.100.140	Ce / Cerium
0.100.141	Cr / Chromium
0.100.142	Co / Cobalt
0.100.143	Cu / Copper
0.100.144	Er / *Erbium
0.100.145	Eu / *Europium
0.100.146	Gd / Gadolinium
0.100.147	Ga / Gallium
0.100.148	Ge / Germanium
0.100.149	Au / Gold
0.100.150	Hf / *Hafnium
0.100.151	Ho / *Holmium
0.100.152	In / Indium
0.100.153	Ir / Iridium
0.100.154	Fe / Iron
0.100.155	La / Lanthanum
0.100.156	Pb / Lead
0.100.157	Li / Lithium
0.100.158	Lu / *Lutecium
0.100.159	Mg / Magnesium

0.100.160	Mn / Manganese
0.100.161	Hg / Mercury
0.100.162	Mo / Molybdenum
0.100.163	Nd / Neodymium
0.100.164	Ni / Nickel
0.100.165	Nb /Niobium
0.100.166	Os / *Osmium
0.100.167	Pd / Pallabium
0.100.168	Pt / Platinum
0.100.169	K / Potassium
0.100.170	Re / Rhanium
0.100.171	Rh / Rhodium
0.100.172	Rb / *Rubidium
0.100.173	Sm / Samarium
0.100.174	Sc / *Scandium
0.100.175	Se / Selenium
0.100.176	Si / Silicon
0.100.177	Ag / Silver
0.100.178	Na / Sodium
0.100.179	Sr / Strontium
0.100.180	Ta / Tantalum
0.100.181	Tb / *Terbium
0.100.182	Te / Tellurium
0.100.183	Tl / Thallium
0.100.184	Sn / Tin
0.100.185	Ti / Titanium
0.100.186	W / Tungsten
0.100.187	V / Vanadium
0.100.188	Zn / Zinc
0.100.189	Zr / Zirconium

Note: For elements marked with *, please confirm the availability before ordering.

Contact

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