

LABdex



Atomic Absorption Spectrophotometer LX705AAS

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Atomic Absorption Spectrophotometer LX705AAS is an integrated flame/graphite furnace atomization system where the graphite system is fully automatic. They analyze the concentration of elements in a liquid sample based on energy absorbed from certain wavelength of light. They are equipped with turrets that can hold multiple lamps to reduce downtime between samples or allow for sequential analysis.

Features

- ❑ The changeover of the integrated flame and graphite furnace atomizer is automatically controlled featuring easy operation and time saving which eliminates human labor
- ❑ To perform flame emission analysis, flame emission burner head can be installed for alkali metals as K, Na etc.
- ❑ Provided with automatic 8-lamp turret, automatic adjustment of lamp current and optimization of light beam position
- ❑ Parameters like Wavelength scanning, peak picking, change in spectral bandwidth, optimization of position parameters, automatic ignition and gas flow setting are done automatically
- ❑ The graphite furnace analysis is fully reliable and automatic, dual curve mode light-controlled temperature control technique, temperature auto-correction technique, ensures fast heating, good temperature reproducibility and high analytical sensitivity
- ❑ Graphite furnace with pneumatic control and pressure lock ensures constant pressure and reliable contact
- ❑ Automatic standard sample preparation, automatic correction of sampling probe depth, automatic tracing and correction of liquid surface height in the sample vessel, with sampling accuracy of 1% and reproducibility of 0.3%
- ❑ Equipped with alarm and automatic protection to fuel gas leakage, abnormal flow, insufficient air pressure and abnormal flame extinction in flame system
- ❑ Protection function and alarms for insufficient carrier gas and protective gas pressure, insufficient cooling rate supply and over-heating in graphite furnace system
- ❑ AAS analysis is made under windows operating system which is easy-to-use with fast parameter setting and optimization

- ❑ In order to increase the sensitivity in flame analysis, two high performance HCLs can be mounted on the lamp turret
- ❑ Data processing system: provided with analytical methods – Working curve auto-fitting standard addition method, automatic sensitivity correction, automatic calculation of concentration and content with windows operating system software
- ❑ Experiments can be repeated 1~99 times along with automatic calculation of mean value, standard deviation and relative standard deviation
- ❑ Equipped with multi task functions- sequential determination of multi-elements in the same sample, condition reading- with model function and result printing- measured data and final analytical report printout in excel
- ❑ Provided with standard RS-232 serial port connection

Application

Used for testing the metal element concentration analyze in agriculture, chemical, environmental study, food, mining, and petrochemical, pharmaceutical industry.

Specifications

Model	LX705AAS	
Wavelength range	190-900nm	
Wavelength accuracy	≤±0.25nm	
Wavelength repeatability	≤±0.15nm	
Spectral bandwidth	≤±0.02nm	
Stability of baseline	Static	Zero Drift of Baseline ≤ 0.005Abs/30min, Baseline transient noise ≤0.001Abs
	Dynamic	Zero Drift of Baseline ≤ 0.005Abs/10min, Baseline transient noise ≤0.005Abs
Light source system	Lamp turret	Motorized 8-lamp turret
	Lamp current	Wide pulse current: 0~25mA

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	adjustment	Narrow pulse current: 0~10mA
	Lamp power supply mode	400Hz square wave pulse 100Hz narrow square wave pulse+400Hz wide square wave pulse
Optical system	Monochomator	Single beam, Czerny-Turner design grating monochromator
	Grating	1800 lines/mm
	Blazed wavelength	250nm
	Focal length	277mm
	Spectral bandwidth	0.1nm, 0.2nm, 0.4nm, 1.2nm, auto-switch over
Flame atomizer	Burner	10cm single slot all-titanium burner, Emission burner provided
	Spray chamber	Corrosion resistant all-plastic spray chamber
	Nebulizer	High efficiency glass nebulizer with metal sleeve, sucking up rate: 6-7ml/min
Graphite furnace	Temperature range	Room temperature~3000°C
	Heating rate	3000°C/s
	Graphite tube dimensions	28mm(L)×8mm(OD)
	Characteristic mass	Cd≤0.5 ×10 ⁻¹² g, Cu≤5 ×10 ⁻¹² g, Mo≤1×10 ⁻¹¹ g
	Precision	Cd≤3%, Cu≤3%, Mo≤4%
Detection and Data processing system	Detector	CR131 Photomultiplier with high sensitivity and wide spectral range

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	Software	Under windows operating system
	Analytical method	Working curve auto-fitting; standard addition method; automatic sensitivity correction, automatic calculation of concentration and content
	Repeat times	1-99 times, automatic calculation of mean value, standard deviation and relative standard deviation
	Multi-task functions	Sequential measurement for multi-element determination to the same sample
	Condition reading	With model function
	Result printing	Measurement data and final analytical report printout, editing with Excel
	Communication port	Standard RS-232 serial port communication
Function expansion	Hydride vapor generator can be connected for hydride analysis	
Power requirement for main unit	Monophase alternating current, 220V, average power dissipation $\leq 0.3\text{kVA}$	
Power requirement for accessories	Monophase alternating current, 220V, peak power dissipation 0.3kVA	
Packing dimension (L x W x H) and Gross weight	Main unit: 1280 x 750 x 830 mm, 150 kgs Graphite furnace power supply: 660 x 600 x 800 mm, 70 kgs	

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Double Beam Spectrophotometer LX242DS

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Description:

Double beam Spectrophotometer LX242DS is a high sensitive double beam spectrophotometer with a wavelength of 190 to 1100 nm for absorbance spectra of chemical and biochemical compounds. It having real double beam metering and control system with latest circuit measurement which provide instrument high reliable and low noise. The highly stable optics and silicon photodiode detector measures the sample and reference simultaneously optimizing the measurement accuracy.

Specifications :

Optical system	Double beam, Grating 1200 lines/mm
Wavelength range	190 ~ 1100 nm
Spectral bandwidth	0.5 nm, 1 nm, 2 nm, 4 nm, 5 nm
Wavelength accuracy	$\pm 0.1\text{nm}@656.1\text{nm}$, $\pm 0.3\text{nm}@all$
Wavelength repeatability	0.1 nm
Photometric accuracy	$\pm 0.3 \% T (0\sim 100 \% T)$
Photometric repeatability	0.1 % T (0~100 % T)
Photometric range	0-200%T, -0.3~3A, 0-9999C
Stray light	0.05%T@220nm,360nm
Stability	$\pm 0.0003A/h @500 \text{ nm}$
Baseline flatness	$\pm 0.001A$
Photometric mode	T , A , C , E
Noise	0.0005A@500nm

Scanning speed	Hi, Med, Low (Max. 3000nm/min)
Wavelength setting	Automatic
Display	320 x 240 mm LCD screen
Light source	Imported deuterium & Tungsten lamp
Detector	Imported silicon photodiode
Cuvette holder	10mm single hole cell holder
Data output	Printer or USB export
Power	AC 220 / 50 Hz or AC 110 / 60 Hz
Packaging dimension	880 x 690 x 520 mm
Gross weight	45 kg

Features :

- Large 320*240 dots highlighted LCD for visual optimization and access to a range of functions
- Wavelength (190 to 1100 nm)
- Spectral Bandwidth (0.5/1/2/4/5 nm)
- Silicon photodiode detector
- Built-in ARM system for high accuracy and good stability
- Dual lamp system (Deuterium and Tungsten) for higher accuracy
- Data export - USB / can be connected to computer and printer

Applications :

Used for quality control, general research, pharmaceutical, biochemical and clinical laboratory.

Standard accessories :

Glass cuvette 10 mm / 1 set of 4

Quartz cuvette 10 mm / 1 set of 2

Power cable

PC software

Optional accessories :

Auto 8-cell holder

Film holder

Peltier/sipper system

21 CFR compliant software

Built-in thermal printer



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