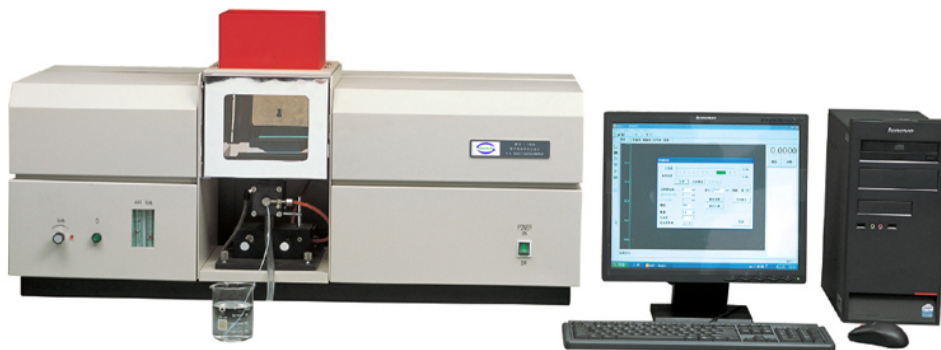# IFX-110B/120B/130B

Flame Atomic Absorption Spectrophotometer

Innotech

FEATURES:

Innovated rich oxygen air-acetylene flame analysis technique (WFX-110B)

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℃, 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 a 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. (IFX-110B/120B)

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

Perfect safety protection measures

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

Advanced 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 display of measured data, automatic calculation and analytical result automatic print out.

SPECIFICATIONS:

Main Specification	Wavelength range	190-900n
	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 and 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 IFX-110B/120B)
Light Source	Lamp turret	6-lamp turret (IFX-110B/120B), 4-lamp turret (IFX-130B) auto alignment, fully automated scan and peak-picking.
	Lamp current adjustment	Automatic adjustment and display. 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 (IFX-110B/120B)
Optical System	Monochomator	Single beam, Czerny-Turner design grating monochromator
	Grating	1800 l/mm
	Focal length	277mm
	Blazed wavelength	250nm
	Spectral bandwidth	0.1nm, 0.2nm, 0.4nm, 1.2nm 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: 6-7mL/min
	Emission burner	Provided with IFX-110A/120A
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	Maximum 20 times of repeat measurement, automatic calculation of mean value, standard deviation and relative standard deviation.
	Multi-task function	Sequential measurement of multi-elements 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-C$_2$H$_2$ flame	Cu: Characteristic concentration≤0.025mg/L, Detection limit≤0.006mg/L;
	Rich oxygen Air-C$_2$H$_2$ flame	Ba: Characteristic concentration ≤ 0.22mg/L Al: Characteristic concentration ≤ 0.4mg/L (for IFX-110A)
Function Expansion	Hydride vapor generator can be connected for hydride analysis.	
Dimensions and weight	1020 (L) × 490(W) × 540 (H) mm (main unit), unpacked 80kg	