

## WFX-810 Zeeman Atomic Absorption Spectrophotometer



### Features:

#### **1 Dual light sources and dual atomizers (national patent), a unique integrated structure design with a high degree of user friendliness**

1.1 Parallel flame and graphite furnace atomizer, without mechanical movements and changeover, ensuring long time stability and reliability

1.2 Time-sharing dual light sources, no need for changing lamps, increasing the number of analyzable elements to the maximum and reducing operation and adjustment time to the minimum

1.3 Alternate use of the shortest optical path, to reduce light energy losses

#### **2 More powerful dual magnetic fields Zeeman background correction technology**

2.1 Adopting constant magnetic field, transverse Zeeman background correction device for both flame and graphite furnace analysis, with super powerful dual atomizer high background correction capability over the whole wavelength range

2.2 Intensified flame constant magnetic field to improve the analytical sensitivity

2.3 Quasi double beam design to correct baseline drift, shorten preheating time and improve analytical accuracy

#### **3 Integrated design of graphite furnace power supply with the main unit**

3.1 Multiple shielding technology successfully decreases magnetic interference

3.2 Shortening the distance of power supply reduces power losses dramatically

3.3 Compact structure, small space requirement, easy and simple installation and moving

#### **4 Advanced electronic design**

4.1 New generation large scale integration technology with simple and reliable PC boards

4.2 New generation bus and internal network technology, enhancing the anti-interference capability of the system

#### **5 Fully automatic operation with high accuracy**

5.1 Automatic 8x2 lamp turrets, automatic adjustment of lamp current and optimize of light beam position

5.2 Automatic wavelength scanning and peak picking

5.3 Automatic spectral bandwidth changing

5.4 Automatic changeover between flame and graphite furnace operation, automatic ignition and automatic gas flow setting

#### **6 Brand-new fully automated flameless analysis technology with high reliability**

6.1 Newly designed graphite furnace and its power supply system with ultra-rapid heating, super long time stability and super high power efficiency

6.2 Intelligent fully automated sampler, with automatic working curve generation, automatic tracing and correction of liquid surface height in the sample vessel, automatic long term memorizing of the sampling probe position

#### **7 Perfect safety protection measures**

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

7.2 Monitoring, alarm and protection function to insufficient protective gas pressure and cooling water supply in graphite furnace system

7.3 Cooling water monitoring and protection in magnetic field system

7.4 Drain tube water seal monitoring and alarm

#### **8 User friendly operation software**

8.1 Convenient, friendly and reliable AAS software under Windows XP operation system

- 8.2 Quick setting, automatic adjustment and automatic optimization of instrument parameters
- 8.3 Safety monitoring, quick prompt ad protection
- 8.4 Intelligent analytical quality control, precision control, standard sample check and Spike check functions
- 8.5 User selectable analytical report formats

Main Specification	Wavelength range	190-900nm
	Wavelength accuracy	±0.5nm
	Resolution	Better than 0.3nm.
	Baseline stability	0.005A/30min
Light Source	Lamp turret	Automatic 8x2 lamp turrets (Two high performance hollow cathode lamps can be mounted on each turret);
	Lamp current	0~15mA
	Lamp power supply mode	200Hz narrow square wave pulse
Optical System	Monochomator	Czerny-Turner type
	Grating	1800 l/mm
	Focal length	430mm
	Blazed Wavelength	250nm
	Spectral Bandwidth	Flame mode:0.2nm, 0.4nm, 0.8nm, 1.6nm Graphite furnace mode: 0.2,0.4, 1.2nm
Atomizer	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
	Position adjustment: flame heigh is adjustable	
	Graphite Furnace atomizer	Temperature range: Room temperature~3000°C
Heating rate: 2000°C/s		
Graphite tube dimensions: 28mm(L)×8mm(OD)		
Detection and Data Processing System	Detector	R955 Photomultiplier with high sensitivity and wide spectral range.
	Software	Professional AAS software under Windows XP 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, standdard deviation and relative standard deviation.
	Multi-task Functions	Sequential measurement for multi-element in same sample
	Condition reading	With model function
	Result printing	Measurement data and final analytical report print out, editing with Excel
	Communication	Standard RS-232 serial port; supporting USB port communication
Background Correction System	Flame constant magnetic field Zeeman background correction	Magnetic flux density:1.0T
	Graphite furnace constant magnetic field Zeeman background correction	Magnetic flux density:1.0T
Dimensions and weight	Main unit	1160×630×570mm, unpacked 160kg
	Auto-sampler	320×270×260mm, unpacked 15kg