

BK-AA860B Pro Atomic Absorption Spectrophotometer



Introduction:

BK-AA860B Pro features an advanced 8-lamp design, a flame atomizer, 7-level spectral bandwidth adjustment, and Zeeman background correction. It delivers full-wavelength, full-element analysis with high-precision background compensation, capable of detecting over 30 elements at concentrations ranging from mg/L (10^{-6}) to $\mu\text{g/L}$ (10^{-9}) levels. Ideal for geochemistry, metallurgy, materials science, agriculture, petrochemicals, third-party testing, and academic research.

Features:

- * The flame system uses high-precision mass flow controllers for precise automated flow control.
- * The constant transverse magnetic field Zeeman background correction technology provides superior full-spectrum background absorption correction capability.
- * Built-in cooling water detection and temperature monitoring ensure reliable operation of the magnetic field system.
- * The patented quick-release burner head design solves cleaning challenges, allowing tool-free disassembly in just 3 seconds.
- * A complete gas-liquid separation system and fuel filtration unit ensure stable operation in high-humidity environments or with limited gas supply.
- * Multiple safety interlock mechanisms with automatic shutdown and alarm functions protect against operational anomalies.
- * The modular instrument design and circuit architecture enable easy maintenance and quick component replacement.

Technical Parameters:

Model	BK-AA860B Pro
Wavelength Range	170~900nm
Spectral Bandwidth	0.1, 0.2, 0.4, 0.8, 1.2, 1.6, 2.6nm
Wavelength Accuracy	$\pm 0.1\text{nm}$
Wavelength Repeatability	$\leq 0.05\text{nm}$
Detector	Photomultiplier tube detector
Monochromator	Classic Czerny-Turner configuration
Optical System Focal Length	430mm
Baseline Stability	Drift $\leq 0.0005\text{Abs}$, noise $\leq 0.0005\text{Abs}$ (Steady 60min) Drift $\leq 0.001\text{Abs}$, noise $\leq 0.001\text{Abs}$ (Dynamic 30min)
Resolution	Spectral bandwidth deviation $\leq 0.02\text{nm}$ Manganese double line valley to peak energy ratio $\leq 25\%$
Characteristic Concentration	Flame method for Cu: $\leq 0.03\mu\text{g/mL}/1\%$
Detection Limit	Flame method for Cu: $\leq 0.002\mu\text{g/mL}$
Preciseness	Flame method for Cu: $\leq 0.25\%$
Background Correction Ability	Zeeman correction: $\geq 1.8\text{Abs}$, background ≥ 150 times
Diffraction Grating	Plane diffraction grating (1800 grooves/mm, blazed at 250nm)
Lamp Stand	8(Support simultaneous preheating of 1~4 lights)
Standard Accessory	Element lamp(Cu*1, Hg*1), software working station
Optional Accessory	Wide slit combustion head, adjustable nebulizer, green energy-saving accessories, audit trailing software, oil-free air compressor, computer, printer, recirculating chiller, flame autosampler
Power Supply	AC 220V, 50Hz
External Size(W*D*H)	1010*620*630mm
Package Size(W*D*H)	1220*800*910mm
Net Weight	115kg
Gross Weight	190kg

Flame System

Air-acetylene Burner	100mm all-titanium burner
Atomization Chamber System	Integrally molded from polyphenylene sulfide
Magnetic Field Strength	$\geq 1.0\text{T}$
Reading Mode	Foot pedal operation
Safety System	Emergency shutdown protection switch, automatic gas cut-off/shutdown/alarm in case of abnormal status, abnormal air pressure, ignition failure, gas leakage, water seal, abnormal flow rate, etc.

Software Working Station

Smart Optimization	One-key operation for instrument optimization, supporting multi-task analysis
Repeat Measurement	1~99 replicates with auto-calculation of mean/SD/RSD
Print/Export Reports	Word/Excel supported
Auto-Calibration	Curve fitting, re-slope & concentration calculation, incl. standard addition method