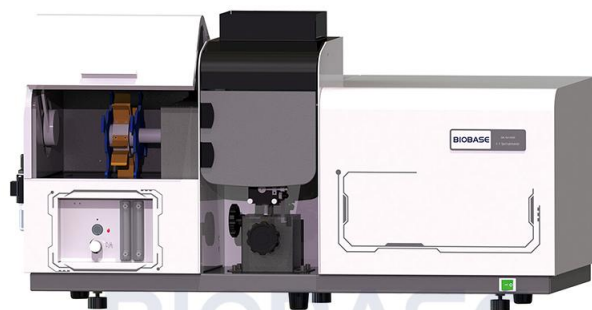


BK-AA180B Atomic Absorption Spectrophotometer



Introduction:

BK-AA180B features an 8-lamp turret design, a flame atomizer, 6-level spectral bandwidth adjustment, and deuterium lamp background correction. It is suitable for the detection of over 30 flame-analysis elements, with a quantitative concentration reaching the mg/L (10^{-6}) level and a detection concentration as low as $\mu\text{g/L}$ (10^{-9}). It is widely used in industries such as geology and mining, metallurgy, materials science, agriculture, forestry, soil and fertilizer, petroleum and chemical engineering, as well as third-party testing.

Features:

- * The instrument features a 20mm thick cast aluminum integrated optical platform with a suspended design, delivering exceptional stability of better than 0.002Abs/30min.
- * The flame atomizer system utilizes aerospace-grade polyphenylene sulfide (PPS) material with a molded one-piece construction, offering exceptional flame resistance, corrosion resistance, and high-temperature durability for extended service life.
- * The industrial-grade TA2 pure titanium burner, precision-finished with slow wire-cutting technology, provides excellent corrosion resistance and supports interchangeable wide-slit designs for high-salt sample analysis.
- * The next-generation flame control system integrates continuously adjustable gas flow, real-time status indicators, dual safety interlocks, and automatic ignition for reliable operation in demanding environments.
- * The optional oxygen-enriched flame upgrade achieves temperatures exceeding 2700°C without nitrous oxide, enabling precise determination of high-temperature elements like Ca, Al, Ba, Mo, Ti, and V.
- * Network port communication mode, offering significantly improved stability and data transfer rates compared to legacy interfaces like RS-232 and RS-485.

Technical Parameters:

Model	BK-AA180B
Wavelength Range	170~900nm
Spectral Bandwidth	0.1, 0.2, 0.4, 0.8, 1.6, 2.4nm
Wavelength Accuracy	$\pm 0.1\text{nm}$
Wavelength Repeatability	$\leq 0.05\text{nm}$
Detector	Photomultiplier tube detector
Baseline Stability	Drift $\leq 0.002\text{Abs}$, noise $\leq 0.001\text{Abs}$ (Steady 30min) Drift $\leq 0.002\text{Abs}$, noise $\leq 0.001\text{Abs}$ (Dynamic 15min)
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: $\leq 0.025\mu\text{g/mL}$ 1%
Detection Limit	Flame method for Cu: $\leq 0.002\mu\text{g/mL}$
Preciseness	Flame method for Cu: $\leq 0.3\%$
Background Correction Ability	Deuterium lamp calibration 1.0Abs, background ≥ 90 times
Diffraction Grating	Groove 1800lines/mm, blaze wavelength 250nm
Lamp Stand	8(Support simultaneous preheating of 1~4 lights)
Standard Accessory	Element lamp(Cu*1, Hg*1), software working station
Optional Accessory	Oxygen-enriched high-temperature flame, wide slit combustion head, adjustable nebulizer, hydride vapor generator, audit trailing software, oil-free air compressor, computer, printer
Power Supply	AC 220V, 50/60Hz
External Size(W*D*H)	1080*480*560mm
Package Size(W*D*H)	1220*670*840mm
Net Weight	70kg
Gross Weight	140kg

Flame System

Air-acetylene Burner	100mm all-titanium burner
Atomization Chamber System	Integrally molded from polyphenylene sulfide
Burner System	Flame height is adjustable and lockable, with a 360° rotatable combustion seam
Gas Flow Control System	Automatic ignition/flame-out
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, 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