Atomic Absorption Spectrophotometer



BK-AA3618



BK-AA3638/3668

Introduction:

BK-AA3618 is a dedicated flame atomic absorption spectrophotometer, BK-AA3638 and BK-AA3668 are integrated systems combining both flame and graphite furnace atomization technologies. These instruments are widely utilized in environmental monitoring, food safety testing and metallurgical analysis for the accurate determination of trace and major elements.

Features:

* Total reflection optical system ensures excellent signal-to-noise ratio of the instrument.
* Eight-lamp position with 360° rotation design.
* Workstation software under MS Windows system, featuring concise, professional, automatic and full operation.
* QA/QC functions: For each test, the SD and RSD of absorbance are submitted, while the SD and RSD of calculated concentration are provided; the working curve for standard samples automatically checks the correlation coefficient.
* Full information measurement: Each measurement saves results from different data processing methods (average, peak height, peak area, and statistical results) for user analysis.
* One-click database quickly completes settings such as wavelength, spectral bandwidth, lamp current, negative high voltage, and energy balance.
* Graphite Furnace Heating Method: Longitudinal heating of the graphite furnace (ensures uniform gas-phase temperature inside the graphite tube, allowing the sample to reach atomization temperature simultaneously and instantaneously, thereby improving atomization efficiency and measurement accuracy, ensuring more reliable analytical results, reducing performance requirements for the furnace body, and extending its service life)(Only for BK-AA3638 & BK-AA3668).

Technical Parameters:

Model		BK-AA3618	BK-AA3638	BK-AA3668
Instrument Type		Flame system	Flame & GFAA integrated system	
Optical System	Beam Type	Double-beam		
	Diffraction Grating	Groove 1800lines/mm, blaze wavelength 250nm		
	Wavelength Range	185~900nm		
	Spectral Bandwidth	0.1, 0.2, 0.4, 0.7, 1.4, 2.0nm		
	Wavelength Accuracy	±0.15nm	±0.2nm	±0.15nm
	Wavelength Repeatability	≤0.05nm	≤0.1nm	≤0.05nm
	Spectral Bandwidth Deviation	±0.02nm		
	Lamp Stand	8(Support simultaneous preheating of 1~4 lights)		

Technical Parameters:

Model		BK-AA3618	BK-AA3638	BK-AA3668
Photometric Performance	Reading Modes	Transmittance, absorbance, concentration		
	Photometric Range	0~125%T, -0.1~3.00Abs		
	Baseline Stability	Drift ±0.002Abs (Steady 30min) Drift ±0.004Abs (Dynamic 15min)	Drift ±0.003Abs (Steady 30min) Drift ±0.005Abs (Dynamic 15min)	Drift ±0.002Abs (Steady 30min) Drift ±0.004Abs (Dynamic 15min)
	Background Correction Ability	Deuterium lamp: ≥40 fold(at 1Abs) Self-reversal: ≥80 fold(at 1Abs)	Deuterium lamp: ≥40 fold(at 1Abs)	Deuterium lamp: ≥40 fold(at 1Abs) Self-reversal: ≥80 fold(at 1Abs)
Flame Analysis	Characteristic Concentration	Flame method for Cu: ≤0.02μg/mL	Flame method for Cu: ≤0.035μg/mL	Flame method for Cu: ≤0.02μg/mL
	Detection Limit	Flame method for Cu: ≤0.004μg/mL	Flame method for Cu: ≤0.006μg/mL	Flame method for Cu: ≤0.004μg/mL
	Repeatability	Flame method for Cu: ≤0.5%	Flame method for Cu: ≤0.6%	Flame method for Cu: ≤0.5%
	Burner	Titanium burner head		
	Nebulizer	High-efficiency glass nebulizer		
	Safety Features	Flame gas & auxiliary gas abnormal pressure protection		
Graphite Furnace Analysis	Characteristic Mass	/	Cd ≤0.6pg Cu ≤20pg	Cd ≤0.5pg Cu ≤20pg
	Detection Limit	/	Cd ≤1.0pg Cu ≤25pg	Cd ≤0.8pg Cu ≤25pg
	Repeatability(Cd)	/	≤3%	≤2.5%
	Graphite Furnace Temperature Range	/	RT~3000°C	
	Heating Rate	/	Maximum 2000°C/s	
	Safety Features	/	Alarms for cooling water flow, protective gas pressure, furnace body temperature, power supply temperature, and graphite tube installation	
Data Processing	Calculation Method for Concentration	Standard curve method(6 linear and non-linear fitting methods), standard addition method, interpolation method		
	Number of Repeated Measurements	1~30 times; calculates and provides the average value, standard deviation and relative standard deviation of absorbance and concentration		
Standard Accessory		Element lamp(Cu*1), oil-free air compressor, software, U disk	Element lamp(Cu*1, Cd*1), oil-free air compressor, software, U disk, graphite tube*5, pipette*1(5~50μl), pipette tip*1000(200μl)	
Optional Accessory		Oxygen-enriched high-temperature flame, hydride generator, audit trailing software, flame autosampler	Oxygen-enriched high-temperature flame, hydride generator, audit trailing software, recirculating chiller, graphite furnace autosampler, flame autosampler	
Power Supply		AC 220V, 50/60Hz		
External Size(W*D*H)		Main unit: 830*650*550mm Air compressor: 400*400*520mm		
Package Size(W*D*H)		Main unit: 1010*780*825mm Air compressor: 455*455*575mm		
Net Weight		Main unit: 84kg Air compressor: 20.6kg	Main unit: 117kg Air compressor: 20.6kg	Main unit: 119kg Air compressor: 20.6kg
Gross Weight		Main unit: 126kg Air compressor: 26.4kg	Main unit: 159kg Air compressor: 26.4kg	Main unit: 161kg Air compressor: 26.4kg

Note: For BK-AA3638/3668, it is recommended to use with a recirculating chiller.

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