

BK-AA220AES Atomic Absorption Spectrophotometer



Introduction:

BK-AA220AES flame graphite furnace integrated atomic absorption spectrophotometer, as an important precision instrument for metal analysis, has many advantages such as good selectivity, wide application range, high sensitivity, simple and fast operation, low analysis cost and high accuracy. It was widely used in industrial and livelihood fields such as geology, mining, metallurgy, agriculture, forestry, soil and fertilizer, hydrology and environmental protection, petrochemical industry, food and drug hygiene, and third-party testing.

Features:

- * The flame and graphite furnace analysis device is fully automatic switching, convenient for time-saving, one click in place.
- * The flame system adopts high-reliability flow control and has automatic control such as automatic ignition.
- * Graphite furnace system built-in multiple temperature control protection system, using double air circuit breaker and other design methods, effectively preventing current overload or abnormal temperature rise.
- * Equipped with a reliable gas-liquid separation system, gas filter, and other accessories to ensure the working condition of the instrument when the ambient humidity is high and the gas source is limited.
- * Equipped with multiple safety interlocking devices and prompt information protection functions, the instrument has an automatic power outage, alarm prompts protection in case of abnormal situations involving safety.
- * The instrument features a modular design for easy customer replacement or repair.
- * The instrument supports functional extensions such as hydride method.

Technical Parameters:

Model	BK-AA220AES
Wavelength Range	170~900nm
Spectral Bandwidth	0.1, 0.2, 0.4, 1.6nm
Wavelength Accuracy	±0.1nm
Wavelength Repeatability	±0.05nm
Detector	Photomultiplier tube detector
Baseline Stability	Drift ≤0.002Abs, noise ≤0.001Abs(Steady 30min) Drift ≤0.002Abs, noise ≤0.001Abs(Dynamic 15min)
Resolution	Spectral bandwidth deviation ≤0.02nm Manganese double line valley to peak energy ratio ≤25%
Characteristic Concentration /Content	Flame method for Cu: ≤0.025µg/mL/1% Graphite furnace method for Cd: ≤0.5pg

Technical Parameters:

Model	BK-AA220AES
Detection Limit	Flame method for Cu: ≤0.002µg/mL Graphite furnace method for Cd: ≤0.4pg
Preciseness	Flame method for Cu: ≤0.3% Graphite furnace method for Cd: ≤2.0%
Background Correction Ability	Deuterium lamp calibration 1.0Abs, background ≥90 times Self-absorption method correction 2.0Abs, 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, Cd*1, Hg*1), software working station
Optional Accessory	Wide slit combustion head, adjustable nebulizer, hydride vapor generator, audit trailing software, oil-free air compressor, recirculating cooling water system, computer, printer, autosampler, oxygen-enriched high-temperature flame
Power Supply	AC 220V, 50Hz
External Size(W*D*H)	Main unit: 1020*530*500mm GF power supply: 350*530*430mm
Package Size(W*D*H)	Main unit: 1280*750*830mm GF power supply: 610*670*810mm
Net Weight	Main unit: 85kg GF power supply: 32kg
Gross Weight	Main unit: 160kg GF power supply: 70kg

Flame System

Air-acetylene Burner	100mm all-titanium burner
Atomization Chamber System	Integrally molded from polyphenylene sulfide
Burner System	Burner head height and horizontal position automatic adjustment, with burner angle rotatable
Gas Flow Control System	Automatic ignition/fame-out
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.

Graphite Furnace System

Temp. Control Mode	Optical and constant voltage
Heating Mode	Slope and stepped temperature programming
Temp. Range	RT~3000°C
Heating Rate	≥3000°C/s
Precision Error	≤1%
Graphite Tube Type	Straight, platform, concave type
Water & Gas Control Monitoring System	Inner gas, external gas and make up gas are controlled separately. Circulating water and gas flows monitoring system is equipped
Safety System	Graphite furnace cut-off high current protection switch, automatic pause/cooling/alarm in case of abnormal furnace state/water and gas circuit control failure/graphite tube problem/temperature control failure, 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