

## ME-ZCA1000AFG Auto Flame&Graphite Furnace Atomic Absorption Photometer



### I Specifications:

#### 1. Optical System

Wavelength range	190nm—900nm auto adjust
Grating groove density	1800 lines/mm
Monochromator	An aberration Czerny-Turner Type of monochromator
Spectral bandwidth	0.1、0.2、0.4、1.0、2.0nm, Several automatic switching
wavelength Accuracy	±0.10nm
wavelength repeatability	0.05nm
Baseline drift	Static 0.002A/30min Dynamic 0.006 A/30min
Detector	Wide spectral range photomultiplier tubes
Resolution	Can distinguish the manganese lamp 279.5nm & 279.8nm double lines, and the energy between the two spectral lines should be ≤20 %

#### 2. The light source system

Lamp holder	8 lamp holders switch
The lamp power supply mode	400Hz square-wave pulse
Lamp current adjusting range	2 — 10mA average current

#### 3. The atomization system

Flame analysis method	
Detection limit(Cu)	0.003μg/ml
Burner	100mm All titanium burner
Accuracy	RSD≤0.5%
Atomizer	Metal sleeve efficient glass spray
Atomizing chamber	Corrosion-resistant all plastic spray chamber
Safety measures	Has a variety of automatic safety protection function: Acetylene gas leakage alarm、Automatic shutdown system, etc
No flame (graphite furnace) analysis method	
Detection limit (Cd)	<0.4*10 <sup>-12</sup> g
Hydride generator atomic absorption method	

#### 4. The flame analysis method

Measuring method	Air - acetylene flame method
Concentration calculation	standard curve method, standard addition method, interpolation technique.
Number of repeated measurements	1~99 times, Automatically calculate the average、Content、Standard deviation、Relative standard deviation.
Print result	Print the test data or the final analysis report, the results can be exported as Excel worksheet.
Software environment	Windows XP/ Windows 7 operating system.

#### 5. No flame (graphite furnace) analysis method

Measuring method	The court, graphite furnace peak method of graphite furnace peak area
Concentration calculation	Standard curve method, standard addition method, interpolation method.
Background correction	Deuterium lamp background correction $\geq 60$ times, since the absorption buckle background $\geq 60$ times
Number of repeated measurements	1-30 times, Calculate average, standard deviation and the phase of the standard deviation is given
Print result	Print the test data or the final analysis report, the results can be exported as Excel worksheet.
Software environment	Windows XP/ Windows 7 operating system.

### II Instrument parameter

Power Source	AC 220V/50HZ
Power	150VA
Net weight	55kg
Gross weight	80kg
volume	1110mm× 400mm× 500mm
Packing volume	1350mm× 600mm× 850mm
Working Temperature	10~35°C
Working environment humidity	$\leq 80\%$

### III. Standard accessories:

1. AAS
2. Low noise oil free air compressor
3. Hollow cathode lamp

#### 4. Operating software

#### **IV. ME-ZCA1000AFG Automatic atomic absorption spectrophotometer design characteristics:**

1. The total reflection optical system, all band achromatic, automatic scanning, homing peak wavelength.
2. With a deuterium lamp button background, self-priming button background.
3. The unique design of the titanium burner, burning steady, fast heat balance.
4. Automatically adjust the negative high voltage, lamp current, automatically adjust the best elements lamp position, automatic ignition, automatic flame-out protection. 8 lamp (optional two high-performance lamp) automatic control system, can adjust the hollow cathode lamp to best buy, can be set in a single lamp position a particular element, it can be set free working light.
5. Graphite furnace heating. The user can be set freely heating curves according to need.
6. Advanced graphite furnace temperature constant power control design: Implements the graphite tube temperature uniformity, graphite tube working temperature to maintain good dynamic stability, ensure the accuracy of the analysis.