

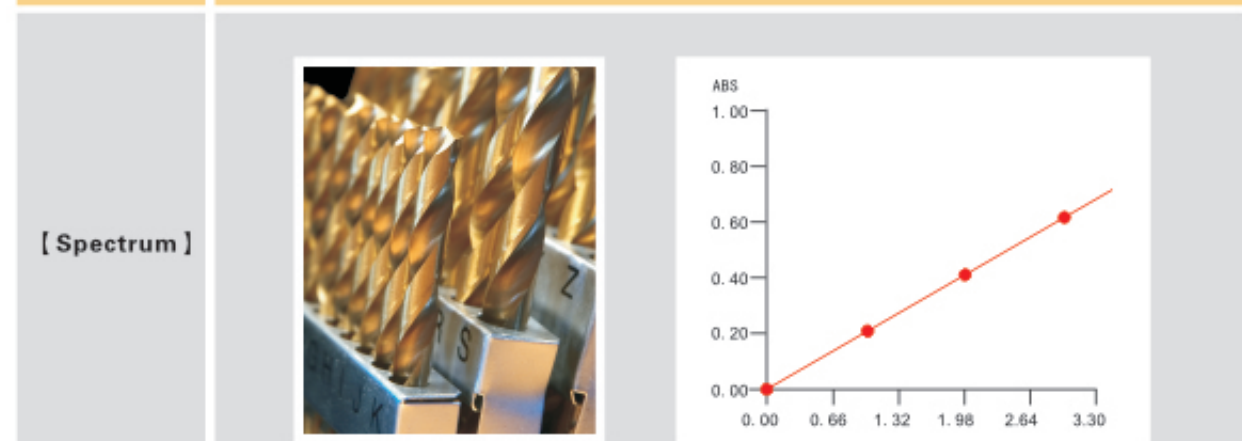
Test report:

Cu ore sample inspection report

Project name: Straight-line method Cu  
 Sample name: Cu ore samples Method: Atomic absorption Analytical instruments: AAS6000

**[ Instrument parameters ]**  
 Lamp current: 2mA Negative high-pressure: 221.56V  
 Slit: 0.2nm G<sub>2</sub>H<sub>2</sub> flow: 1.6L/min  
 Before and after combustion chamber: 13.794 Combustion chamber fluctuation: 9.4316  
 Back button state: without Back button current

**[ Analysis parameters ]**  
 Element information: Cu Fit method: Linear  
 Integral time: 1 Formula: Y=0.2041X+0.0039  
 Sample unit: ppm R: 0.99987



**[ Analysis result ]**

Name	concentration	ABA	Average ABS	SD	RSD
	0.00	0.0187	0.0190	0.0003	0.0136
	0.00	0.0193			
Standard1	0.00	0.0190			
Standard1	1.00	0.2168	0.2126	0.0010	0.0047
Standard1	1.00	0.2154			
Standard1	1.00	0.2174			
Standard2	2.00	0.4174	0.4144	0.0035	0.0085
Standard2	2.00	0.4105			
Standard2	2.00	0.4153			
Standard3	3.00	0.6096	0.6129	0.0030	0.0049
Standard3	3.00	0.6157			
Standard3	3.00	0.6132			

The ISO 9001:2008 international quality certification system is adopted by our company



**AAS6000**  
**Atomic Absorption Spectrometer**

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Test data in this manual, if not noted, is our company's test data.  
 All information in this manual is for reference only, which is subject to any change without notice.

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## AAS6000 Atomic Absorption Spectrometer

### Good stability, high sensitivity, low LOD and easy operation

With its years of experience in spectrometer developing and research, Skyray brings AAS6000 flame atomic absorption spectrometer out as one of the main products. Designed with latest international technology, the instrument can provide customers with modularization, automation and humanity, more convenient product upgrade, easier instrument operation, more smooth analysis.



### Technical specifications:

Atomizer : flame atomizer

Wavelength range : 190nm-900nm

Monochromator type : Czerny-TurnerType

Spectral bandwidth : 0.1/0.2/0.4/0.7/1.4 nm  
automatically switch

Blazed wavelength of gratings : 230nm

Grating number : 1800wires/mm

Wavelength accuracy :  $\pm 0.25$ nm

Wavelength repeatability :  $< 0.1$ nm

Resolution :  $> 0.3$ nm

Characteristic concentration (Cu) : 0.025ug/ml/1%

Detection limit (Cu) : 0.006ug/ml

Precision (Cu) :  $\leq 1\%$

Baseline Stability : 0.004 Abs (static state)  
0.005 Abs (dynamic state)

### Application fields:

Geology and minerals, metallurgical analysis, steel, nonferrous metal analysis

Environmental analysis, air, water quality and soil analysis

Petrochemical complex and light industrial products analysis, crude oil and related products analysis

Food, biomedicine and health care products analysis, green agricultural products and feed analysis



### AAS6000 Performance characteristics:

#### Total reflection achromatic optical system

effectively solve the achromatic problem of different focuses of different elements, increasing the efficiency of optical system.

#### Full automatic design

The instrument is totally monitored and controlled by computer, except for mainframe power switch.

#### 8-element lamp beacon

When one of the lamps is working, the other seven ones are being preheated at the same time, saving lamp changing and preheating time, the operation is more convenient as a result.

#### USB2.0 mode

Update the old 232 faucet mode into the latest USB2.0 mode, increase the communication speed, and compatible with the new operation system.

#### Pure Ti atomization chamber

Anti-erosion of acids and alkalis and a longer working life as a result.

#### Efficient glass nebulizer

Adopting efficient glass nebulizer of Wu Family, providing you with higher nebulization efficiency and better popularity.

#### Mass flow controller makes the flow of C2H2 controllable

Making the C2H2 flow adjustable, monitoring the flow dynamically, ensuring it to be convenient and safe.

#### More safety protection measures, ensuring the reliability of the sample analysis

- (1) C2H2 leaking preventive measure
- (2) C2H2 pressure monitoring
- (3) Air pressure monitoring
- (4) Explosive-proof monitoring
- (5) Flaming burning monitoring

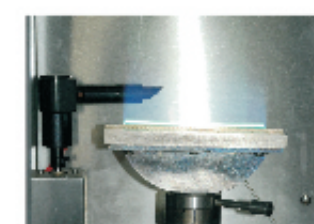
#### Background correction system

Deuterium lamp background correction: Be able to correct A1 background  
Self-absorption background correction: Be able to correct A1 background

#### With streamlined appearance using sheetmetal craftwork, it is fashionable and beautiful.

#### Proprietary intellectual property rights and powerful activity manager

Humanized operation interface makes your operation easy, the interface of the software can be switched automatically between English and Chinese. Full automatic qualitative and quantitative analysis can calculate element contents and generate report automatically.



### AAS6000 Configurations:

Mainframe Standard Equipment			
Monochromator	1Set	Burner head	1Set
Photomultiplier tubes	1	Atomizing chamber	1Set
Mass flow controller	1	Efficient glass atomizer	2Set
Hollow cathode lamp	3	Circuit control system	1Set
Standard Configurations			
AAS6000 mainframe	1set	Accessory Box	1Set
Optional components			
Oil-free air compressor with lower noise		Hydride generator HG600	
136 Autosampler As100		Brand computer, Printer	
Power requirements			
Single-phase 220V $\pm 10\%$	50HZ $\pm 1$ HZ	The power supply shall be well connected to ground	
Gas			
Acetylene (standard)		Purity > 99.9%	

### Test example:

The case below is an example of Skyray AAS6000's analysis of Cu content in waste copper samples.

The way to analyze Cu is flame atomic absorption, without background correction system. Set lamp current as 2 mA, slit as 0.2 nm and wavelength 324.8 nm. After the position optimization of burning chamber and slight adjustment of lamp bracket, automatic gain atomic absorption energy reaches 80%, and negative high voltage is 221.56V.

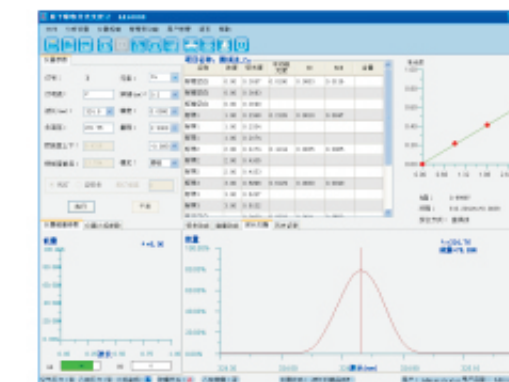


Figure-1

Figure-1 shows setting results of display instrument and the standard testing curve.



Figure-2

As is shown in Figure-2, it is very convenient to see the display of result and the information of analysis. According to the test result, AAS flame analysis method is scientific, rational, accurate and of good repeatability.