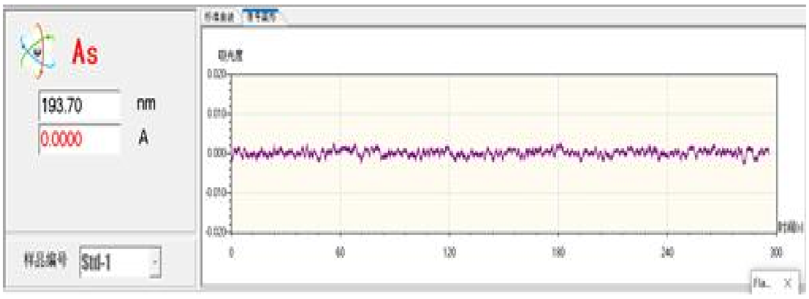
PAS-3268AA atomic absorption spectrophotometer, according to the effect of the ground state of the substance, sensitive and reliable determination of trace or trace elements.

main features:

▷ Excellent fully reflection optical system ensures that the instrument has excellent signal to noise ratio

The atomic absorption spectrometer adopts the unique design of full reflection full band chromatic optical system and full band energy automatic linear balance to ensure the unity and optimal optical position of the sample channel and reference channel at different wavelengths. Keep the beam imaging and SNR at an optimal level to ensure the accuracy and reliability of the measurement results. All optical components use special processing process is the whole optical system has good reflection efficiency in the deep ultraviolet zone, so that the instrument has a unique excellent signal-to-noise ratio in the full wavelength range.

Figure: AS edge energy

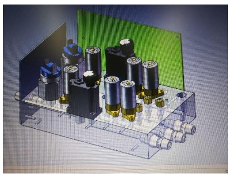


As

193.70 nm

0.0000 A

样品编号 Std-1

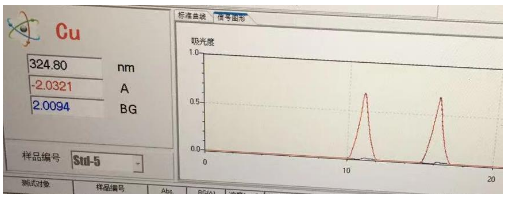


▷ Fully safe intelligent gas control module

Adopt modular concept, using integrated air island design and independent microcontroller control. Intelligent 32 grade acetylene gas linear flow regulation and multistage auxiliary air regulation control module; and has intelligent gas abnormal alarm and disconnection function. The safety tank design under the acetylene-air module increases the safety of the flame. Abnormal pressure monitor: the air pressure monitor can detect the change of air pressure at any time during the air-acetylene flame analysis. Once abnormal occurs, it will automatically cut off the acetylene gas and turn out safely. Safety measures of graphite furnace: cooling water flow of graphite furnace, protective gas pressure, furnace body temperature, automatic protection and alarm of graphite pipe installation.

▷ Excellent full-band deuterium lamp background correction technique and high-performance self-priming double background correction

The instrument has two background buckle modes of deuterium lamp and self-priming effect. The special automatic optical balance technology broadens the wavelength application range of deuterium lamp background correction. When the background absorbs 1A, the full wavelength light energy automatic balance and photoelectric signal automatic gain double balance technology can obtain more than 40 times, self-priming effect buckle background 80 times of excellent performance!

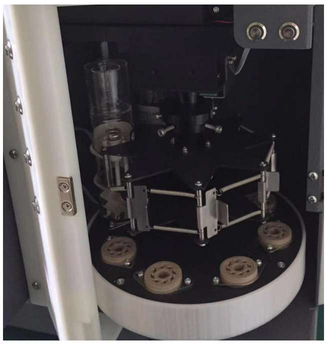

Cu
324.80 nm
-2.0321 A
2.0094 BG
样品编号 Std-5

▷ Fully automatic instrument control, light source support high-performance element lamp, one key fast completion

Automatic peak finding, automatically set the spectrum bandwidth, lamp current, negative high voltage, lamp position, automatic energy balance, two beams of light energy automatic balance. The light source supports high-performance element lamp; the wavelength, spectral bandwidth, lamp current, negative high voltage, energy balance.

▷ The original lamp frame 360 degrees rotation design

The unique automatic 8-lamp system can fully adjust the position of the hollow cathode lamp with the unique design to achieve 360-degree rotation, which completely avoids the instrument failure, and improves the reliability of the instrument.



▷ Design of novel atomizers and intelligent lift and fall

The unique designed full titanium burner and atomization system make the temperature equilibrium speed and smooth combustion. The atomizer can rise and fall automatically to achieve maximum sensitivity.

▷ MS Window Simple, professional, automatic and fully operated WinAAS workstation software

Rich application experience and professional development technology make the WinAAS operating system not only show excellent professional ability, but also show the humanized and practical characteristics of rich information but clear and understandable, complete functions but easy to use. No professional training that makes you an immediate expert in atomic absorption analysis. From the standard and sample setting, instrument conditions, sample measurement to the output, have experts for your real-time guidance, data output and save conform to the GLP standard, at the same time in the achievement of data, graphics sharing provide text, tables, graphic preservation and curve data export, provide a variety of information support for experimental researchers. If you are the tester, the function you want in the test can be reflected in the WinAAS software.

QA / QC function: Each test with Abs. SD, RSD, while providing the calculated concentration of SD, RSD, test standard sample working curve is automatically check the curve correlation coefficient to ensure the accuracy of the test.

Full information measurement: The results of different data processing methods (average, peak height, peak area and statistical results) are saved for users to study the results. Workstation software can meet the different needs of various users, save and output a variety of data and graphics data, support data processing.

- Six correction equations: Six linear and nonlinear concentration calibration methods are provided to ensure the accuracy and stability of the analysis results.
- **Work software has a rich expert system information database**
- **One key to quickly complete the wavelength, spectral bandwidth, lamp current, negative high voltage, energy balance and other Settings.**
- **The three atomized heating methods of graphite furnace system (general heating, light-controlled high power heating and spatial and temporal high power heating) increase the selectivity and practicability of the atomized temperature conditions.**
- **Unique strong antigenarizer (including graphite furnace and flame) light radiation interference ability;**
- **Appearance design of excellent instruments;**
- **Advanced functional module design and manufacturing process design make the instrument have good reliability.**

Simple and fully information interface

working curve

Show the working curve equations

The correlation coefficient is shown

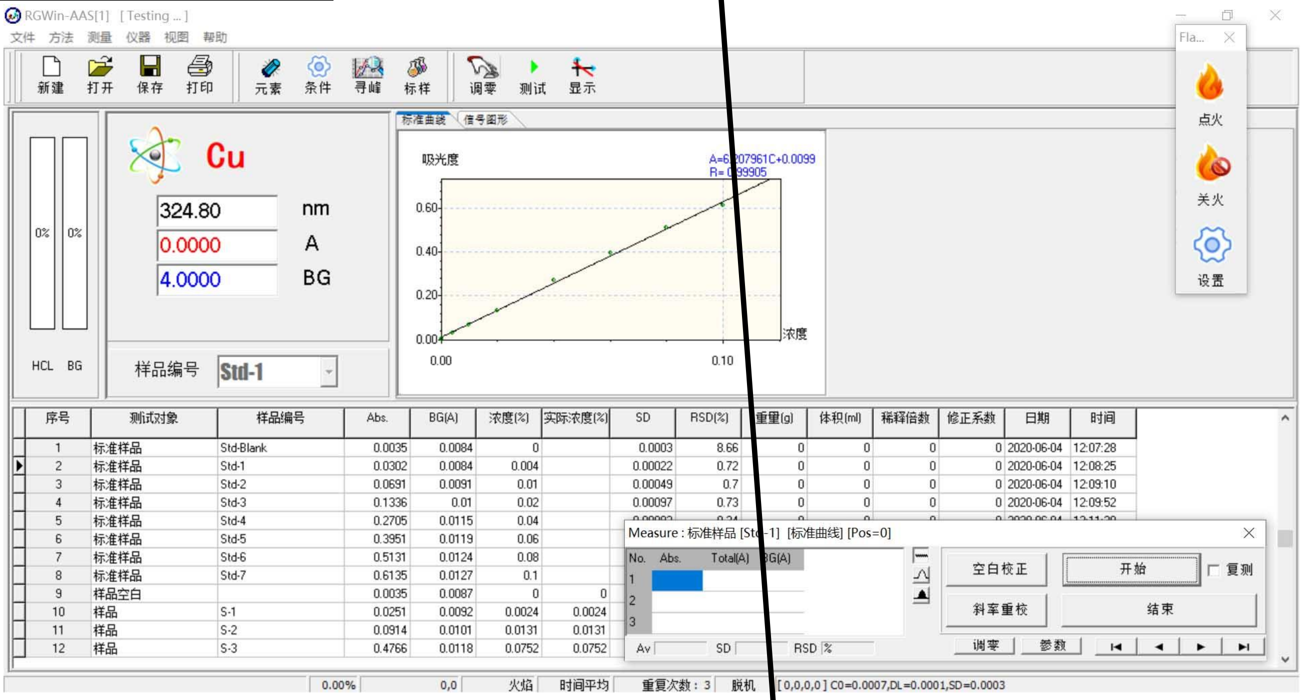
Flame floating tool bar

Elemental information

Sample number, element, name, wavelength, absorbance, etc.

Monitor the signal in real time

Signal changes in the stages of drying, ash, atomization and clearing are displayed in real time


RGWin-AAS[1] [Testing ...]
文件 方法 测量 仪器 视图 帮助
新建
打开
保存
打印
元素
条件
寻峰
标样
调零
测试
显示
Fla...
点火
关火
设置
0%
0%
HCL
BG
标准曲线
信号图形
吸光度
A=6 207961C+0.0099
R= 0 99905
0.60
0.40
0.20
0.00
0.00
0.10
浓度
空白校正
开始
斜率重校
结束
调零
参数
No.
Abs.
Total(A)
BG(A)
Av
SD
RSD %

Cu

324.80 nm

0.0000 A

4.0000 BG

样品编号 Std-1

序号	测试对象	样品编号	Abs.	BG(A)	浓度(%)	实际浓度(%)	SD	RSD(%)	重量(g)	体积(ml)	稀释倍数	修正系数	日期	时间
1	标准样品	Std-Blank	0.0035	0.0084	0		0.0003	8.66	0	0	0	0	2020-06-04	12:07:28
2	标准样品	Std-1	0.0302	0.0084	0.004		0.00022	0.72	0	0	0	0	2020-06-04	12:08:25
3	标准样品	Std-2	0.0691	0.0091	0.01		0.00049	0.7	0	0	0	0	2020-06-04	12:09:10
4	标准样品	Std-3	0.1336	0.01	0.02		0.00097	0.73	0	0	0	0	2020-06-04	12:09:52
5	标准样品	Std-4	0.2705	0.0115	0.04									
6	标准样品	Std-5	0.3951	0.0119	0.06									
7	标准样品	Std-6	0.5131	0.0124	0.08									
8	标准样品	Std-7	0.6135	0.0127	0.1									
9	样品空白		0.0035	0.0087	0	0								
10	样品	S-1	0.0251	0.0092	0.0024	0.0024								
11	样品	S-2	0.0914	0.0101	0.0131	0.0131								
12	样品	S-3	0.4766	0.0118	0.0752	0.0752								

Measure : 标准样品 [Std-1] [标准曲线] [Pos=0]

☐ 复测

0.00% | 0,0 | 火焰 | 时间平均 | 重复次数：3 | 脱机 | [0,0,0,0] C0=0.0007,DL=0.0001,SD=0.0003

Each element analysis result work order

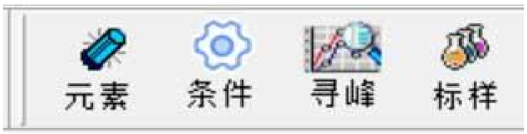
Sample number, absorbance, background signal, concentration calculated by working curve, actual concentration, etc.

Test command

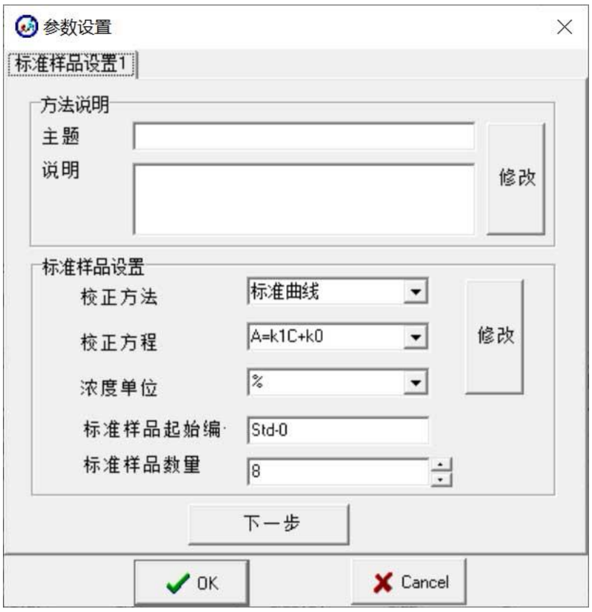
Press the [Start] key, and everything starts automatically

Free to do [blank] [reset] work

● The Sample Setup Wizard, easy and simple



1. Click [Standard sample] to start setting the


参数设置
标准样品设置1
修改
修改
下一步
✓ OK
✗ Cancel

方法说明

主题

说明

标准样品设置

校正方法 标准曲线

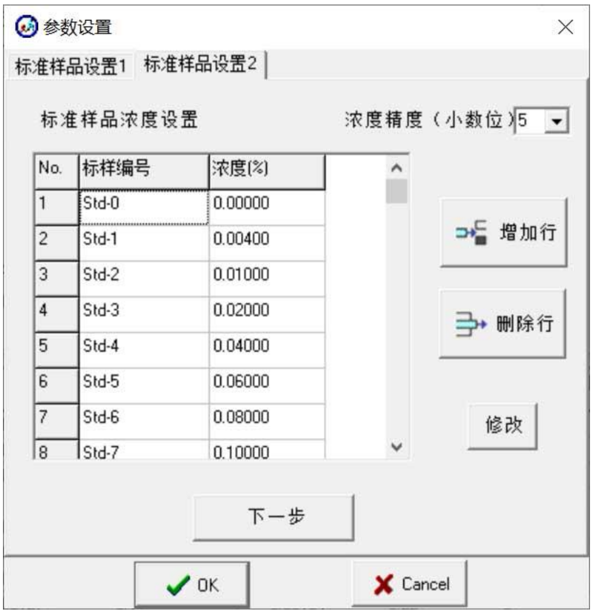
校正方程 A=k1C+k0

浓度单位 %

标准样品起始编 Std-0

标准样品数量 8

2. Standard sample information
Select the correction method, correction equation,

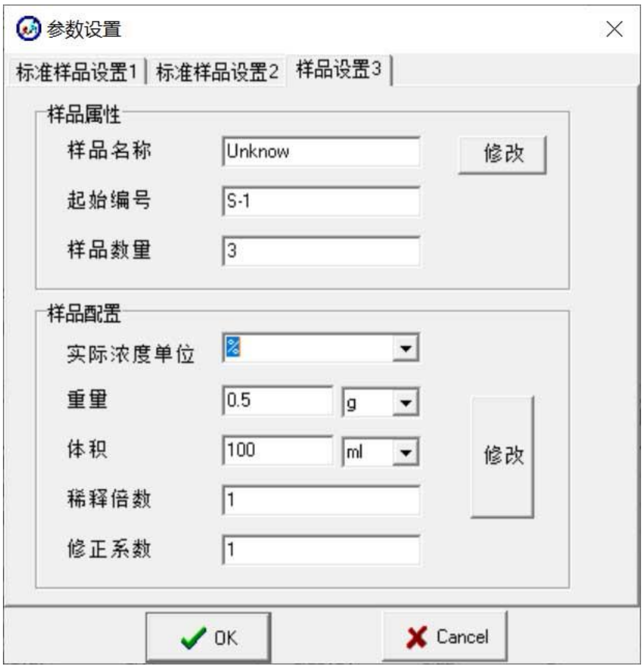

参数设置
标准样品设置1
标准样品设置2
增加行
删除行
修改
下一步
✓ OK
✗ Cancel

标准样品浓度设置

浓度精度（小数位）5

No.	标样编号	浓度(%)
1	Std-0	0.00000
2	Std-1	0.00400
3	Std-2	0.01000
4	Std-3	0.02000
5	Std-4	0.04000
6	Std-5	0.06000
7	Std-6	0.08000
8	Std-7	0.10000

3. The concentration of the standard



样品属性

样品名称: Unknow

起始编号: S-1

样品数量: 3

样品配置

实际浓度单位: %

重量: 0.5 g

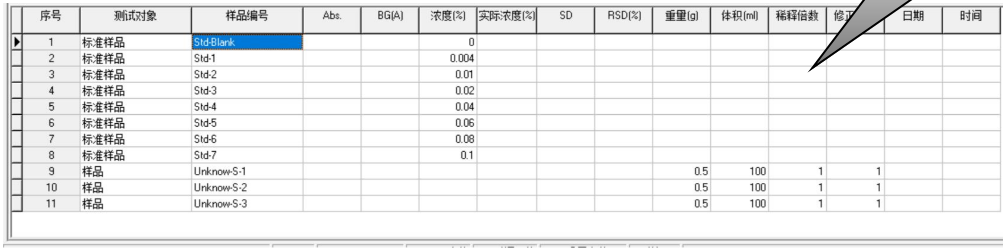
体积: 100 ml

稀释倍数: 1

修正系数: 1

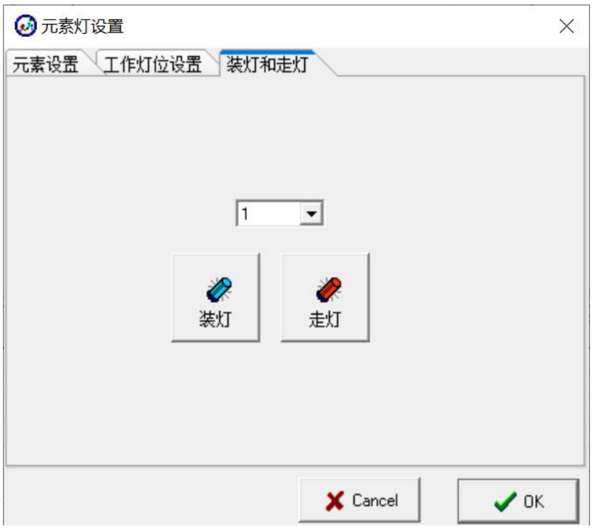
4. Sample attributes and sample

5. Automatically establish a new table after



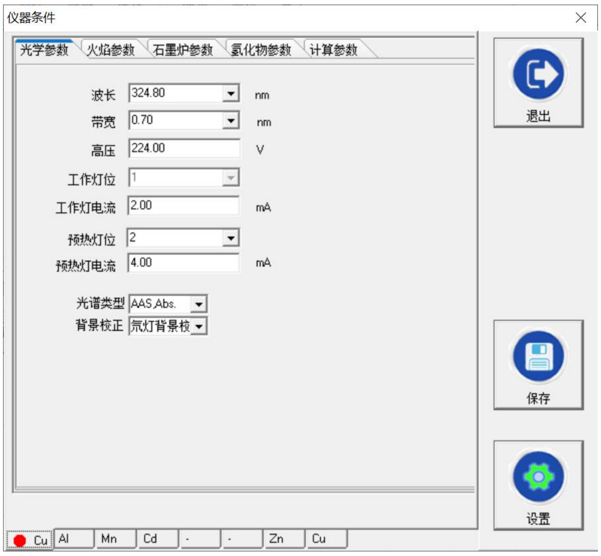
序号	测试对象	样品编号	Abs.	BG(A)	浓度(%)	实际浓度(%)	SD	RSD(%)	重量(g)	体积(ml)	稀释倍数	修正	日期	时间
1	标准样品	Std-Blank			0									
2	标准样品	Std-1			0.004									
3	标准样品	Std-2			0.01									
4	标准样品	Std-3			0.02									
5	标准样品	Std-4			0.04									
6	标准样品	Std-5			0.06									
7	标准样品	Std-6			0.08									
8	标准样品	Std-7			0.1									
9	样品	Unknow-S-1							0.5	100	1	1		
10	样品	Unknow-S-2							0.5	100	1	1		
11	样品	Unknow-S-3							0.5	100	1	1		

- **Instrument conditions and calculation conditions are set at one go**
  All instrument controls are completed automatically


元素灯设置
元素设置
工作灯位设置
装灯和走灯
装灯
走灯
Cancel
OK

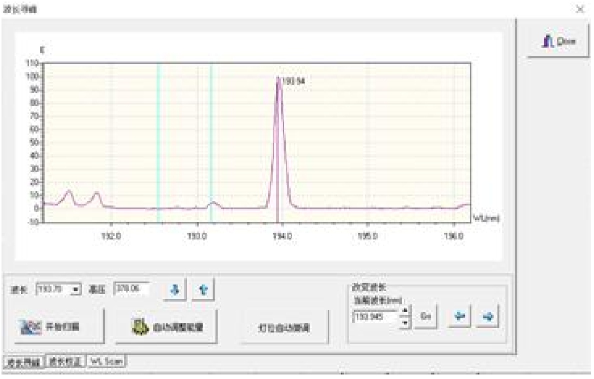
1

1. Settings such as elements
Set the properties of the 8
Set up the working light


仪器条件
光学参数
火焰参数
石墨炉参数
氢化物参数
计算参数
退出
保存
设置
Cu
Al
Mn
Cd
-
-
Zn
Cu

波长 324.80 nm
带宽 0.70 nm
高压 224.00 V
工作灯位 1
工作灯电流 2.00 mA
预热灯位 2
预热灯电流 4.00 mA
光谱类型 AAS Abs.
背景校正 氘灯背景校

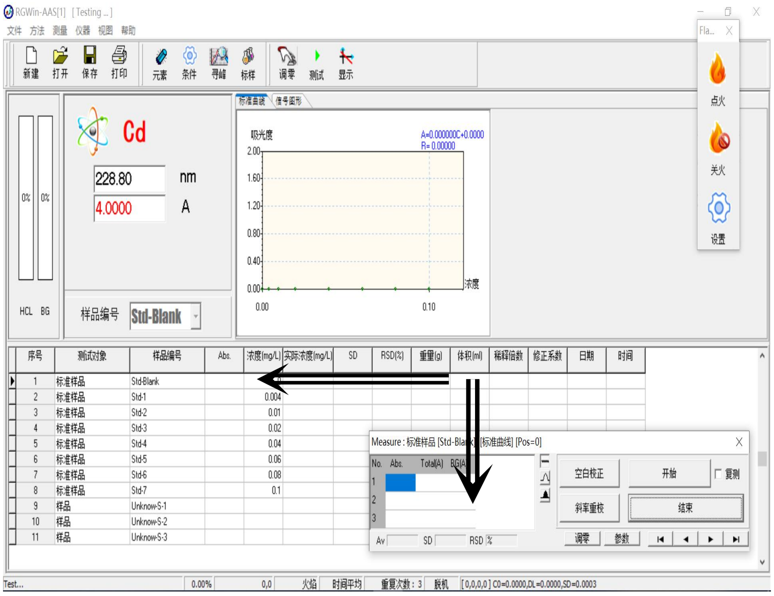
2. Instrument conditions, calculation conditions are set, each element has default values


E
110
100
90
80
70
60
50
40
30
20
10
0
-10
193.94
WL(nm)
192.0
193.0
194.0
195.0
196.0
WL Scan

3. After the instrument conditions are set automatically
Automatic peak and energy

Full information measurement

1. The results of different data processing methods (average, peak height, peak area and statistical results) are saved for the user to study the results. YK software can meet the different needs of various users, save and output a variety of data and graphics data, and support data processing.
2. Switching of calculation mode: just click the average, peak height, peak area mode button, that is, automatically update the information in the data table (Abs, SD, RSD), working curve (figure, equation, correlation coefficient), recalculate concentration, etc., to provide comparative data


RGWin-AAS[1] [Testing ...]
文件 方法 测量 仪器 视图 帮助
新建 打开 保存 打印 元素 条件 寻峰 标样 调零 测试 显示
Fla...
点火
关火
设置
0% 0%
HCL BG
标准曲线 信号图形
吸光度
A=0.000000C+0.0000
R= 0.00000
2.00
1.60
1.20
0.80
0.40
0.00
0.00
0.10
浓度
空白校正 开始 复制
斜率重校 结束
调零 参数

Cd

228.80 nm

4.0000 A

样品编号 Std-Blank

序号	测试对象	样品编号	Abs.	浓度(mg/L)	实际浓度(mg/L)	SD	RSD(%)	重量(g)	体积(ml)	稀释倍数	修正系数	日期	时间
1	标准样品	Std-Blank		0									
2	标准样品	Std-1		0.004									
3	标准样品	Std-2		0.01									
4	标准样品	Std-3		0.02									
5	标准样品	Std-4		0.04									
6	标准样品	Std-5		0.06									
7	标准样品	Std-6		0.08									
8	标准样品	Std-7		0.1									
9	样品	Unknow-S-1											
10	样品	Unknow-S-2											
11	样品	Unknow-S-3											

Measure : 标准样品 [Std-Blank] [标准曲线] [Pos=0]

No.	Abs.	Total(A)	BG(A)
1			
2			
3			

Av SD RSD %

Test... 0.00% 0,0 火焰 时间平均 重复次数 : 3 脱机 [0,0,0,0] C0=0.0000,DL=0.0000,SD=0.0003

Excellent data-processing capabilities

Contains 6 kinds of correction curve fitting mode (linear and non-linear), the standard points can be up to 30, to the maximum extent to meet the needs of user data correction

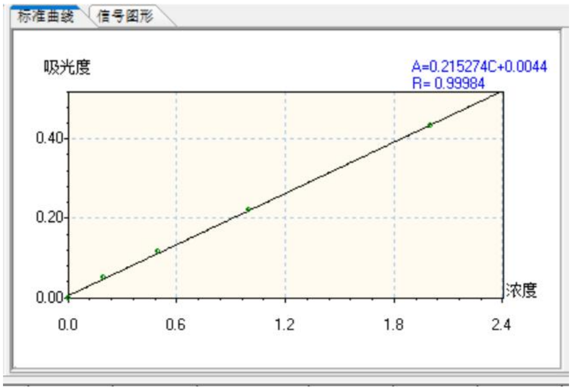
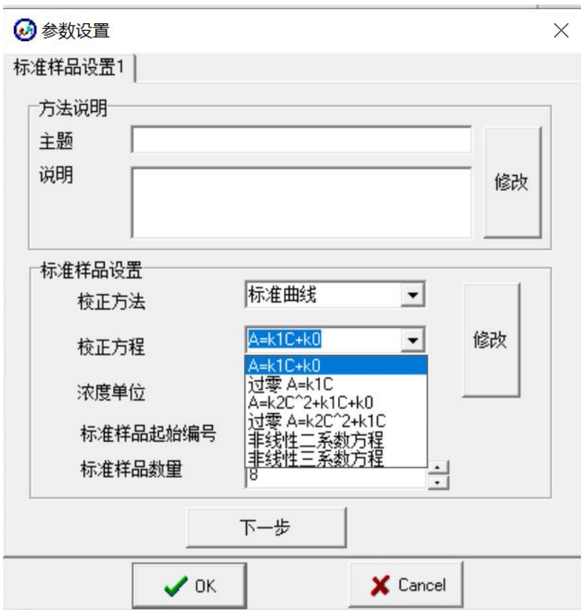


Figure: Measurement calibration curve of Cu _ low concentration solution


参数设置
标准样品设置1
修改
修改
下一步
OK
Cancel

方法说明

主题

说明

标准样品设置

校正方法 标准曲线

校正方程 A=k1C+k0

A=k1C+k0
过零 A=k1C
A=k2C^2+k1C+k0
过零 A=k2C^2+k1C
非线性二系数方程
非线性三系数方程

浓度单位

标准样品起始编号

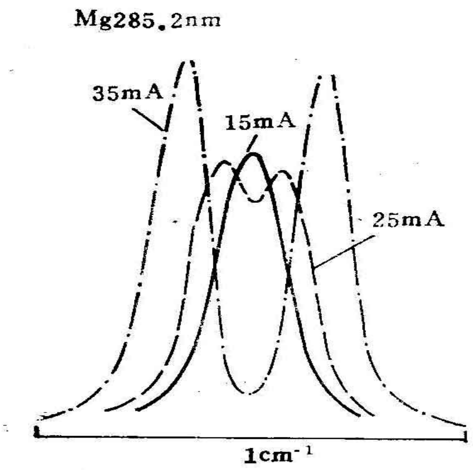
标准样品数量 8

High-performance self-priming background correction

Introduction to the high-performance self-priming background correction

1. Self-priming background correction principle:

The method of self-priming at the high current of the sample beam and low current in the same HCL lamp, as shown in Fig.



2. Comparison of several commonly used background correction methods

Compare the content		Deuterium lamp method	The man method			High-performance self-priming method
			Constant magnetic (horizontal)	Cross change (horizontal)	Crosschange (longitudinal)	
installation	Two beam consistency	difference	good	good	good	good
	Light energy balance	balance	Basic balance	Basic balance	Basic balance	out-off-balance
	energy utilization	loss	The loss is big	The loss is big	Loss is small	free of losses
function	The wavelength range was corrected	ultraviolet	Full wavelength	Full wavelength	Full wavelength	Full wavelength
	Loss of sensitivity	Basic no	big	Have a loss	Have a loss	more
	Baseline stability	leave much to be desired	good	good	good	preferably
	1A background	good	good	good	good	good
	2A background	difference	good	good	good	preferably
	Button structure background	cannot	approve	approve	approve	approve
	Spectral line overlap interference	cannot	Part of the buckle	Part of the buckle	Part of the buckle	With Zeman
	Curve flip (double value)	not have	More serious	More serious	More serious	nothing serious
prime cost		low	tall	tall	tall	Very low

3. Advantages of the high-performance self-priming method

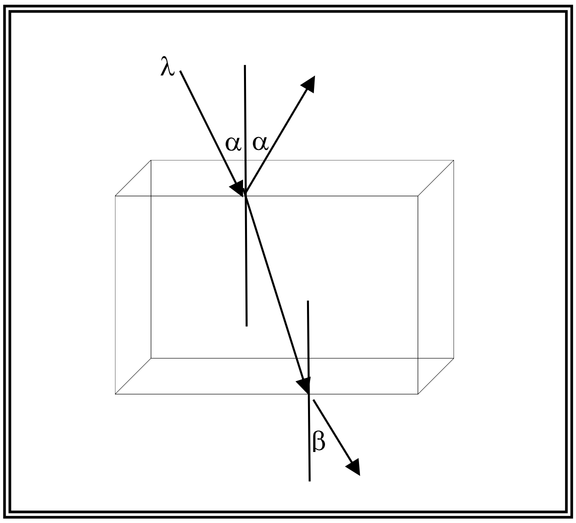
Self-priming background correction ability:

Background absorption of 1A, the background deduction capacity of more than 80 times, for the domestic leading!

Full-band deuterium-lamp background correction technique

◆ Full-band deuterium lamp background correction technology, a unique full-reflection optical system

The unique fully reflection optical system ensures the uniqueness of light transmission, so that the hollow cathode lamp and deuterium light beam under different elements and different wavelengths can overlap to the best, without the need to readjust the two light paths. Instead of the full reflection optical system, due to the addition of lenses, the optical physical channels at different wavelengths change, breaking the physical balance of the hollow cathode light and the deuterium light beam.



▶

The optical balance technology of hollow cathode lamp and deuterium light beam realizes the full band deuterium lamp background deduction, broadening the application range of deuterium lamp and background. At the same time, the full reflection strong light path and perfect data processing technology achieve the strong background correction ability.

Deuterium lamp background correction specialty:
Background correction ability was performed> 40-fold
Background corrected wavelength range: 190-900 nm

Atomic absorption spectrophotometer-flame method

Instrument model		**PAS -3204AA**
optics system	Instrument type	**single beam**
	monochromator	C-T, 350mm
	dispersion element	Rating 1200 bars / mm, flashing wavelength 250nm
	spectral bandwidth (nm)	0.1,0.2,0.4,0.7,1.4,2nm six gear automatic switch
	wavelength coverage (nm)	190-900nnm
	The wavelength indicated the error	0.3 nm
	Wavelength repeatability (nm)	≤0.1nm
	Spectral bandwidth bias	±0.02 nm
	The lamp position	4 Light
	Elemental lamp type	Ordinary element lamp
Photometric performance	Read the way	transmittance, absorbance, concentration
	Light range	0-125%，-0.1-3.00A
	Cu static baseline drift	±0.004A/30min
	The Cu dynamic baseline drift	±0.006A/15min
	background correction	Deuterium lamp background correction power> =30 x (1 Abs)
flame analysis	characteristic concentration (Cu)	≤0.04ug/ml
	detection limit (Cu)	≤0.008ug/ml
	repetitiveness	RSD≤1%
	Acetylene flow regulation	Automatic 12 gear
	Air-assisted air conditioning	Automatic 4 gear
	Burner lift	Automatic lifting
	burner	Metal titanium burner
	sprayer	High-efficiency glass atomizer
	atomizer chamber	Aatomization chamber of corrosion resistant materials
	safety precautions	Abnormal pressure protection of flame gas and combustion-supporting gas
data handling	Measurement method	Flame method, hydride generation-atomic absorption method, flame emission method
	Concentration calculation method	Standard curve method (6 linear, nonlinear fitting methods), standard addition method, interpolation method
	Number of repeated measurements	1-30 times, calculate and give the mean, standard deviation and relative standard deviation of the absorbance and concentration

	Report printing	Parameter printing, and data results printing
else	computer	circumscribed
	outline dimension	830*650*560
	Mass (weight) of kg	90Kg
	power requirement	The voltage is 220V ± 22V and the frequency is 50 Hz ± 1Hz
	end-use temperature	10℃ 30℃
	Use humidity	40% 85%

		Atomic absorption spectrophotometer-flame method
Instrument model		**PAS -3208AA**
optical system	Instrument type	single beam
	monochromator	C-T, 350mm
	dispersion element	Rating 1200 bars / mm, flashing wavelength 250nm
	spectral bandwidth (nm)	0.1,0.2,0.4,0.7,1.4,2nm six gear automatic switch
	wavelength coverage (nm)	190-900nnm
	The wavelength indicated the error	0.2 nm
	Wavelength repeatability (nm)	≤0.1nm
	Spectral bandwidth bias	±0.02 nm
	The lamp position	8 The lamp
	Elemental lamp type	Ordinary element lamp
Photometric performance	Read the way	transmittance, absorbance, concentration
	Light range	0-125%，-0.1-3.00A
	Cu static baseline drift	±0.003A/30min
	The Cu dynamic baseline drift	±0.005A/15min
	background correction	Deuterium lamp> =40 x (1 Abs)
flame analysis	characteristic concentration (Cu)	≤0.035ug/ml
	detection limit (Cu)	≤0.006ug/ml
	repetitiveness	RSD≤0.6%
	Acetylene flow regulation	Automatic 12 gear
	Air-assisted air conditioning	Automatic 4 gear
	Burner lift	Automatic lifting
	burner	Metal titanium burner
	sprayer	High-efficiency glass atomizer
	atomizer chamber	Aatomization chamber of corrosion resistant materials
	safety precautions	Abnormal pressure protection of flame gas and combustion-supporting gas
data handling	Measurement method	Flame method, hydride generation-atomic absorption method, flame emission method
	Concentration calculation method	Standard curve method (6 linear, nonlinear fitting methods), standard addition method, interpolation method
	Number of repeated measurements	1-30 times, calculate and give the mean, standard deviation and relative standard deviation of the absorbance and concentration

	Report printing	Parameter printing, and data results printing
else	computer	circumscribed
	outline dimension	830*650*560
	Mass (weight) of kg	90Kg
	power requirement	The voltage is 220V ± 22V and the frequency is 50 Hz ± 1Hz
	end-use temperature	10℃　30℃
	Use humidity	40%　85%

Atomic absorption spectrophotometer-graphite furnace method

	Instrument model	**PAS -3224AA**
	Instrument type	single beam
optical system	monochromator	C-T, 350mm
	dispersion element	Rating 1200 bars / mm, flashing wavelength 250nm
	spectral bandwidth (nm)	0.1,0.2,0.4,0.7,1.4,2nm six gear automatic switch
	wavelength coverage (nm)	190-900
	The wavelength indicated the error	0.3 nm
	Wavelength repeatability (nm)	≤0.1nm
	Spectral bandwidth bias	±0.02 nm
	The lamp position	4 Light
	Elemental lamp type	Ordinary element lamp
Photometric performance	Read the way	transmittance, absorbance, concentration
	Light range	0-125%，-0.1-3.00A
	Cu static baseline drift	±0.004A/30min
	The Cu dynamic baseline drift	±0.006A/15min
	background correction	Deuterium lamp background correction power> =30 x (1 Abs)
Graphite furnace analysis	Feature quantity	The Cd feature amount is 0.9 pg A Cu feature quantity of 20 pg
	detection limit	The Cd detection limit was 1.5 pg The detection limit of Cu was 25 pg
	repetitiveness (Cd)	RSD≤4%
	Graphite furnace heating range	Room temperature of ~ 3,000℃
	High-power heating range	1500℃～3000℃
	Slping with hold time	1s～255s
	heating rate	The maximum heating rate is 2000℃ / s
	Atomized heating mode	Light control heating, time control heating, general heating
	Outside the pipe to protect the air flow rate	1 L/min
	Protect the gas flow rate in the pipe	4 gear adjustable (0,50,200,250ml / min flow)
	safety precautions	Cooling water flow rate, protective gas pressure, furnace body temperature, power supply temperature, graphite pipe installation alarm
data handling	Measurement method	Graphite furnace method
	Concentration calculation method	Standard curve method (6 linear, nonlinear fitting methods), standard addition method, interpolation method

	Number of repeated measurements	1-30 times, calculate and give the mean, standard deviation and relative standard deviation of the absorbance and concentration
	Report printing	Parameter printing, and data results printing
else	computer	circumscribed
	outline dimension	830*650*560
	Mass (weight) of kg	90Kg
	power requirement	The voltage is 220V ± 22V and the frequency is 50 Hz ± 1Hz
	end-use temperature	10℃ 30℃
	Use humidity	40% 85%

		Atomic absorption spectrophotometer-graphite furnace method
Instrument model		**PAS -3228AA**
optical system	Instrument type	**single beam**
	monochromator	C-T, 350mm
	dispersion element	Rating 1200 bars / mm, flashing wavelength 250nm
	spectral bandwidth (nm)	0.1,0.2,0.4,0.7,1.4,2nm six gear automatic switch
	wavelength coverage (nm)	190-900
	The wavelength indicated the error	0.2 nm
	Wavelength repeatability (nm)	≤0.1nm
	Spectral bandwidth bias	±0.02 nm
	The lamp position	8 The lamp
	Elemental lamp type	Ordinary element lamp
Photometric performance	Read the way	transmittance, absorbance, concentration
	Light range	0-125%，-0.1-3.00A
	Cu static baseline drift	±0.003A/30min
	The Cu dynamic baseline drift	±0.005A/15min
	background correction	Deuterium lamp> =40 x (1 Abs)
Graphite furnace analysis	Feature quantity	The Cd feature amount is 0.6 pg A Cu feature quantity of 20 pg
	detection limit	The Cd detection limit was 1.0 pg The detection limit of Cu was 25 pg
	repetitiveness (Cd)	RSD≤3%
	Graphite furnace heating range	Room temperature of ~ 3,000℃
	High-power heating range	1500℃～3000℃
	Slping with hold time	1s～255s
	heating rate	The maximum heating rate is 2000℃ / s
	Atomized heating mode	Light control heating, time control heating, general heating
	Outside the pipe to protect the air flow rate	1 L/min
	Protect the gas flow rate in the pipe	4 gear adjustable (0,50,200,250ml / min flow)
	safety precautions	Cooling water flow rate, protective gas pressure, furnace body temperature, power supply temperature, graphite pipe installation alarm
data handling	Measurement method	Graphite furnace method
	Concentration calculation method	Standard curve method (6 linear, nonlinear fitting methods), standard addition method, interpolation method

	Number of repeated measurements	1-30 times, calculate and give the mean, standard deviation and relative standard deviation of the absorbance and concentration
	Report printing	Parameter printing, and data results printing
else	computer	circumscribed
	outline dimension	830*650*560
	Mass (weight) of kg	90Kg
	power requirement	The voltage is 220V ± 22V and the frequency is 50 Hz ± 1Hz
	end-use temperature	10℃　30℃
	Use humidity	40%　85%

		Original absorption spectrophotometer-flame & graphite furnace all-in-one machine
Instrument model		**PAS -3238AA**
optics system	Instrument type	**single beam**
	monochromator	C-T, 350mm
	dispersion element	Rating 1200 bars / mm, flashing wavelength 250nm
	spectral bandwidth (nm)	0.1,0.2,0.4,0.7,1.4,2nm six gear automatic switch
	wavelength coverage (nm)	190-900nm
	The wavelength indicated the error	0.2 nm
	Wavelength repeatability (nm)	≤0.1nm
	Spectral bandwidth bias	±0.02 nm
	The lamp position	8 The lamp
	Elemental lamp type	Ordinary element lamp
luminosity function	Read the way	transmittance, absorbance, concentration
	Light range	0-125%，-0.1-3.00A
	Cu static baseline drift	±0.003A/30min
	The Cu dynamic baseline drift	±0.005A/15min
	background correction	Deuterium lamp> =40 x (1 Abs)
flame analyse	characteristic concentration (Cu)	≤0.035ug/ml
	detection limit (Cu)	≤0.006ug/ml
	repetitiveness	RSD≤0.6%
	Acetylene flow regulation	Automatic 12 gear
	Air-assisted air conditioning	Automatic 4 gear
	Burner lift	Automatic lifting
	burner	Metal titanium burner
	sprayer	High-efficiency glass atomizer
	atomizer chamber	Aatomization chamber of corrosion resistant materials
	safety precautions	Abnormal pressure protection of flame gas and combustion-supporting gas
Graphite furnace analysis	Feature quantity	The Cd feature amount is 0.6 pg A Cu feature quantity of 20 pg
	detection limit	The Cd detection limit was 1.0 pg The detection limit of Cu was 25 pg
	repetitiveness (Cd)	RSD≤3%
	Graphite furnace heating range	Room temperature of ~ 3,000℃
	High-power heating range	1500℃～3000℃
	Slping with hold time	1s～255s
	heating rate	The maximum heating rate is 2000℃ / s
	Atomized heating mode	Light control heating, time control heating, general heating
	Outside the pipe to protect the air flow rate	1 L/min
	Protect the gas flow rate in the pipe	4 gear adjustable (0,50,200,250ml / min flow)
	safety precautions	Cooling water flow rate, protective gas pressure, furnace body temperature, power supply temperature, graphite pipe installation alarm

data handle	Measurement method	Flame method, graphite furnace method, hydride generation- -atomic absorption method, flame emission method
	Concentration calculation method	Standard curve method (6 linear, nonlinear fitting methods), standard addition method, interpolation method
	Number of repeated measurements	1-30 times, calculate and give the mean, standard deviation and relative standard deviation of the absorbance and concentration
	Report printing	Parameter printing, and data results printing
else	computer	circumscribed
	outline dimension	830*650*560
	Mass (weight) of kg	90Kg
	power requirement	The voltage is 220V ± 22V and the frequency is 50 Hz ± 1Hz
	end-use temperature	10℃ 30℃
	Use humidity	40% 85%

		Original absorption spectrophotometer-double beam-flame method
Instrument model		**PAS -3218AA**
optics system	Instrument type	**dual-beam**
	monochromator	C-T, 350mm
	dispersion element	Rating 1200 bars / mm, flashing wavelength 250nm
	spectral bandwidth (nm)	0.1,0.2,0.4,0.7,1.4,2nm six gear automatic switch
	wavelength coverage (nm)	190-900
	The wavelength indicated the error	0.15 nm
	Wavelength repeatability (nm)	≤0.05nm
	Spectral bandwidth bias	±0.02 nm
	The lamp position	8 The lamp
	Elemental lamp type	Ordinary, high-performance element lamp
luminosity function	Read the way	transmittance, absorbance, concentration
	Light range	0-125%， -0.1-3.00A
	Cu static baseline drift	±0.002A/30min
	The Cu dynamic baseline drift	±0.004A/15min
	background correction	Deuterium lamp> =40 x (1 Abs) Self-priming> =80 x (1 Abs)
flame analyse	characteristic concentration (Cu)	≤0.02ug/ml
	detection limit (Cu)	≤0.004ug/ml
	repetitiveness	RSD≤0.5%
	Acetylene flow regulation	Automatic 12 gear
	Air-assisted air conditioning	Automatic 4 gear
	Burner lift	Automatic lifting
	burner	Metal titanium burner
	sprayer	High-efficiency glass atomizer
	atomizer chamber	Aatomization chamber of corrosion resistant materials
	safety precautions	Abnormal pressure protection of flame gas and combustion-supporting gas
data handling	Measurement method	Flame method, hydride generation-atomic absorption method, flame emission method
	Concentration calculation method	Standard curve method (6 linear, nonlinear fitting methods), standard addition method, interpolation method
	Number of repeated measurements	1-30 times, calculate and give the mean, standard deviation and relative standard deviation of the absorbance and concentration
	Report printing	Parameter printing, and data results printing
else	computer	circumscribed
	outline dimension	830*650*560
	Mass (weight) of kg	100Kg
	power requirement	The voltage is 220V ± 22V and the frequency is 50 Hz ± 1Hz

	end-use temperature	10℃　30℃
	Use humidity	40%　85%

		Original absorption spectrophotometer-double beam-flame & graphite furnace all-in-one machine
Instrument model		**PAS -3268AA**
optics system	Instrument type	**dual-beam**
	monochromator	C-T, 350mm
	dispersion element	Rating 1200 bars / mm, flashing wavelength 250nm
	spectral bandwidth (nm)	0.1,0.2,0.4,0.7,1.4,2nm six gear automatic switch
	wavelength coverage (nm)	190-900
	The wavelength indicated the error	0.15 nm
	Wavelength repeatability (nm)	≤0.05nm
	Spectral bandwidth bias	±0.02 nm
	The lamp position	8 The lamp
	Elemental lamp type	Ordinary, high-performance element lamp
luminosity function	Read the way	transmittance, absorbance, concentration
	Light range	0-125%，-0.1-3.00A
	Cu static baseline drift	±0.002A/30min
	The Cu dynamic baseline drift	±0.004A/15min
	background correction	Deuterium lamp> =40 x (1 Abs) Self-priming> =80 x (1 Abs)
flame analyse	characteristic concentration (Cu)	≤0.02ug/ml
	detection limit (Cu)	≤0.004ug/ml
	repetitiveness	RSD≤0.5%
	Acetylene flow regulation	Automatic 12 gear
	Air-assisted air conditioning	Automatic 4 gear
	Burner lift	Automatic lifting
	burner	Metal titanium burner
	sprayer	High-efficiency glass atomizer
	atomizer chamber	Aatomization chamber of corrosion resistant materials
	safety precautions	Abnormal pressure protection of flame gas and combustion-supporting gas
Graphite furnace analysis	Feature quantity	The Cd feature amount is 0.5 pg A Cu feature quantity of 20 pg
	detection limit	The detection limit of 0.8 pg for Cd The detection limit of 25 pg for Cu
	repetitiveness (Cd)	RSD≤2.5%
	Graphite furnace heating range	Room temperature of ~ 3,000℃
	High-power heating range	1500℃～3000℃
	Slping with hold time	1s～255s
	heating rate	The maximum heating rate is 2000℃ / s
	Atomized heating mode	Light control heating, time control heating, general heating

	Outside the pipe to protect the air flow rate	1 L/min
	Protect the gas flow rate in the pipe	4 gear adjustable (0,50,200,250ml / min flow)
	safety precautions	Cooling water flow rate, protective gas pressure, furnace body temperature, power supply temperature, graphite pipe installation alarm
data handle	Measurement method	Flame method, graphite furnace method, hydride generation--atomic absorption method, flame emission method
	Concentration calculation method	Standard curve method (6 linear, nonlinear fitting methods), standard addition method, interpolation method
	Number of repeated measurements	1-30 times, calculate and give the mean, standard deviation and relative standard deviation of the absorbance and concentration
	Report printing	Parameter printing, and data results printing
else	computer	circumscribed
	outline dimension	830*650*560
	Mass (weight) of kg	100Kg
	power requirement	The voltage is 220V ± 22V and the frequency is 50 Hz ± 1Hz
	end-use temperature	10℃ 30℃
	Use humidity	40% 85%