

UV/VIS SPECTROPHOTOMETER



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METASH

Shanghai Metash Instruments Co.,Ltd.

ABOUT US



SHANGHAI METASH INSTRUMENTS CO.,LTD.

Shanghai Metash Instruments Co., Ltd. is a professional manufacturer of UV/Vis Spectrophotometers. It can provide the market full range of products which include Visible & UV/Vis, Single Beam & Double Beam, Fixed Bandwidth & Variable bandwidth. Now, Metash's products are widely used in many fields such as Educational, Pharmaceutical, Environmental, Chemical and some other fields.

Metash aims to become the best manufacturer of UV/Vis Spectrophotometers in China, so the product quality is highly attentioned by everyone. All the company is full of energy and liveliness, most of the members have worked in this field more than 7 years.

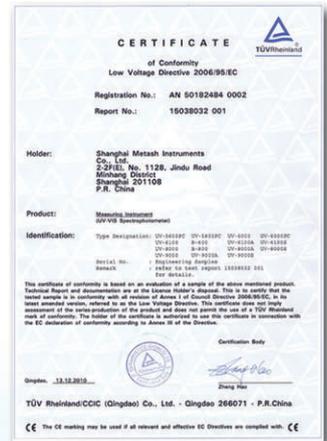
Metash is now still trying to exploit more overseas market. In the base of mutual benefit, Metash would like to cooperate with any distributor or manufacturer in the future.



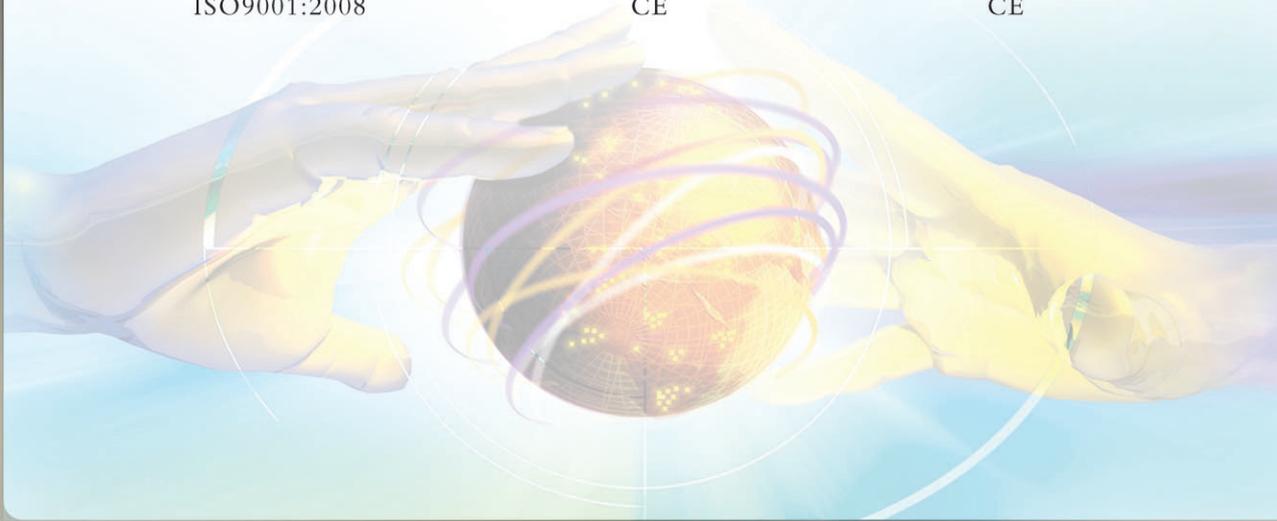
ISO9001:2008



CE



CE



V-5000



V-5000 VISIBLE SPECTROPHOTOMETER

V-5000 is a basic model with high cost-performance. High quality silicon photometric diode detector and 1200 lines/mm grating ensure the high accuracy and precision.

Features

- ※ Easy to use, Press one button for easy switching of Transmittance, Absorbance and Concentration modes.
- ※ Auto zero and blank
- ※ LED display is large enough to read from any distance, there's no need to search or squint.
- ※ Large sample compartment, it can accommodate 5-100mm path length cuvettes with optional holders.
- ※ Pre-aligned design ensures the user to change lamp conveniently
- ※ Optional software based on windows® can expand the applications to Standard Curve & Kinetics.
- ※ Two-points-method to measure concentration of unknown samples.

Specifications:

Optical System:	Single beam, 1200lines/mm grating	Photometric Range:	-0.3-3A, 0-200%T
Wavelength Range:	320-1000nm	Output:	USB Port(PC) Parallel Port(Printer)
Bandwidth:	4nm	Display:	4 Bits LED
Wavelength Accuracy:	±2nm	Light Source:	Tungsten Halogen Lamp
Wavelength Repeatability:	1nm	Detector:	Silicon Photodiode
Photometric Accuracy:	±0.5%T	Photometric Mode:	T, A, C, F
Photometric Repeatability:	0.3%T	Dimension:	420*280*180mm
Stray Light:	≤0.2%T	Weight:	8kg
Stability:	±0.002A/h	Power Requirements:	AC 85~250V

V-5100B/UV-5100B



V-5100B/UV-5100B SPECTROPHOTOMETER

Features

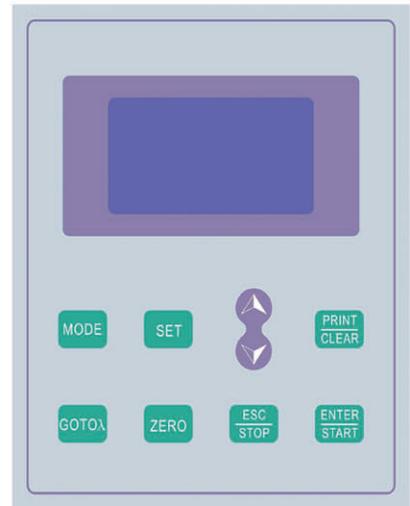
- ※ Large LCD screen (128x64 Dots).
- ※ Can display and save 50 groups of data, 5 groups per screen.
- ※ Data can be restored after a sudden power cut.
- ※ Auto setting wavelength.
- ※ Tungsten lamp & deuterium lamp can be turned on/off individually to extend lifetime.
- ※ Automatical WL. calibration and dark current getting.
- ※ Optional software UV-BASIC can expand the applications to Kinetics and Quantitatives.

Specifications

Model	V-5100B	UV-5100B
Optical System	Single Beam, Grating 1200lines/mm	
Wavelength Range	325-1000nm	190-1000nm
Spectral Bandwidth	4 nm	
Wavelength Accuracy	±1 nm	
Wavelength Repeatability	0.5nm	
Wavelength Setting	Auto	
Photometric Accuracy	±0.5% T	
Photometric Repeatability	0.3% T	
Photometric Range	-0.3-3A, 0-200% T	
Stray Light	≤ 0.3% T	
Stability	±0.002 A/h @ 500nm	
Display	128 x 64 Dots LCD	
Detector	Silicon Photodiode	
Standard Cell Holder	4-position 10mm cell changer	
Light Source	Tungsten lamp	Tungsten & Deuterium lamp
Output	USB Port & Parallel Port (printer)	
Power Requirement	AC 85~250V	AC 220V/50Hz or AC 110V/60Hz
Dimensions (W x D x H)	420*280*180mm	
Weight	12 kg	15 kg

V-5100B/UV-5100B

The Metash 5100 Series provide excellent application functions without sacrificing accuracy and precision. It is an ideal instrument for various applications.



Main Control Panel

Firmware Functions

T Mode: Continuously measure the Transmittance of samples



A Mode: Continuously measure the Absorbance of samples



C Mode: Standard Curve method, can use at most 9 standard samples to create a new standard curve, and to measure the unknown samples by the new one.



F Mode: Coefficient Method, Input the known K and C to measure the unknown concentration samples.



UV-5200/5300/5500



UV-5200/5300/5500 SPECTROPHOTOMETER

The Metash UV-5200/5300/5500 spectrophotometers have the most attractive cost performance. They are widely used in colleges and enterprises for general quantitative analysis and experiments.

Features

- ※ Large LCD screen(128x64Dots).Can display total 200 groups of data,5 groups per screen. Can display standard curve and the curve equation.
- ※ Can save 200 groups of curve equation. Convenient for check and reload.
- ※ Data can be restored after a sudden power cut.
- ※ Auto setting wavelength. Auto zero and blank.
- ※ Tungsten lamp & deuterium lamp can be turned on/off individually to extend lifetime.
- ※ The Metash application software UV-Professional provides complete control of the spectrophotometer from a computer through the USB port. The following functions can be easily achieved: Quantitative, Kinetics, Wavelength Scan, DNA/ Protein Test and Multi-wavelength Test.
- ※ The flange of the D2 lamp makes it become true (Pre-aligned design) that there's no need to adjust the lamp when replace it.
- ※ Large sample compartment, It can accommodate 5-100mm path length cuvettes with optional holders. A variety of optional accessories are under your choice.

Functions

1. Basic Mode

To measure the Absorbance or Transmittance of the samples.



Main Menu

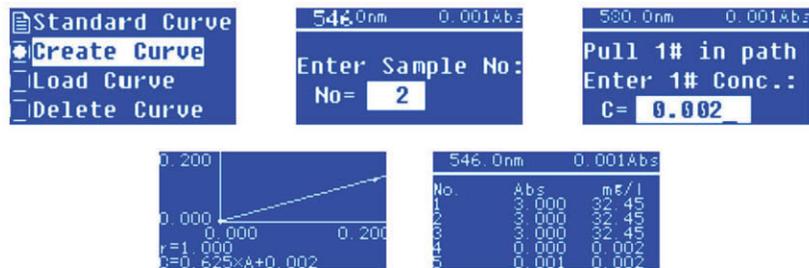
546.0nm		0.000Abs
No.	WL	Abs
1	546.0	-0.000
2	546.0	-0.000
3	546.0	-0.000
4	546.0	-0.000
5	546.0	-0.000

Data Record

2. Quantitative

I) Standard Curve

At most 9 standard samples can be used to establish a standard curve, the curve and the curve equation will display on the screen simultaneously. You can measure your unknown concentration solutions by the new curve.



II) Coefficient Method

If you have known the coefficient k & b of the formula $C=kA+b$, just input the value directly by the keypad, then test the unknown solutions.

3. System Functions

WL, Calibration, Get Dark Current, Lamp Management, etc.

Specifications

Model	UV-5200	UV-5300	UV-5500
Wavelength Range	190-1100nm		
Spectral Bandwidth	2nm		
Optical System	Single Beam, Grating 1200lines/mm		
Wavelength Accuracy	±1nm	±0.8nm	±0.5nm
Wavelength Repeatability	0.5nm	≤0.4nm	≤0.3nm
Photometric Accuracy	±0.3%T		±0.5%T
Photometric Repeatability	≤0.2%T		≤0.3%T
Photometric Range	-0.3-3A, 0-200%T		
Stray Light	≤0.1%T@220nm,340nm		
Stability	±0.002A/h @500nm		
Display	Graphic LCD (128X64 dots)		
Sample Compartment	Standard 10mm pathlength cuvette		
Light Source	Tungsten & Deuterium lamp		
Output	USB Port & Parallel Port (printer)		
Power Requirement	AC 220V/50Hz or AC 110V/60Hz		
Dimensions (W x D x H)	460 x 380 x 180mm		
Weight	18kg		



V-5600/5800 UV-5600/5800



V-5600/5800 UV-5600/5800 SPECTROPHOTOMETER

V-5600/5800& UV-5600/5800 have all the features that UV-5200/5300/5500 have, besides these, they have their own advantage:

Low Stray Light

The stray light of V-5600/V-5800 is below 0.05%T. The monochromator is totally sealed and the optical surfaces are protected with a silicon dioxide membrane. The excellent optical system and electric circuit design ensures the very low stray light.

Can upgrade to scanning model

The instrument can be controlled by Metash's scanning software UV-Professional developed based on Windows® through the USB port. The software expands the function to Quantitative, Kinetics, Multi-wavelength and Wavelength Scanning. (Pls. see Page 8 for details)

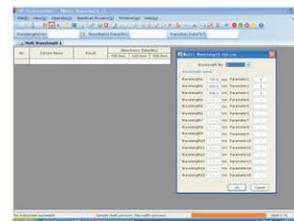
Specifications

Model	V-5600(PC)	UV-5600(PC)	V-5800(PC)	UV-5800(PC)
Wavelength Range	320-1100nm	190-1100nm	320-1100nm	190-1100nm
Band Width	2nm			
Wavelength Accuracy	±0.8nm		±0.5nm	
Wavelength Repeatability	0.3nm		0.2nm	
Wavelength Setting	Auto			
Photometric Accuracy	±0.3%T			
Photometric Repeatability	0.2%T			
Photometric Display Range	0-200%T, -0.3-3.0A, 0-9999C			
Stability	0.002A/h @ 500nm			
Baseline Flatness	±0.002A		±0.0015A	
Stray Light	≤0.05%T			
Data Output Port	USB			
Printer Port	Parallel Port			
Display	128*64 Dots LCD			
Lamps	W Lamp	D2 Lamp& W Lamp	W Lamp	D2 Lamp& W Lamp
Detector	Silicon Photodiode			
Dimension (L*W*H)	460*360*225mm			
Weight	18kg			

Metash PC-Control Software : UV-Professional (For UV/V-5 Series)

Multi-Wavelength Test

You can set at most 20 wavelengths to measure a sample.



Kinetics

The Kinetics mode may be used for time course scanning or reaction rate calculations. Abs. Vs. time graphs is displayed on the screen in real time.

Wait time, test time and time intervals may be set.

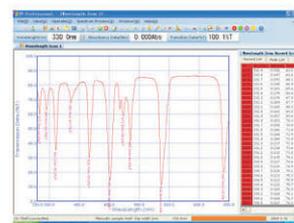


Wavelength Scan

Automatically record peaks and valleys. The quantity of the curves is unlimited that you store.

Post-run manipulation and processing includes:

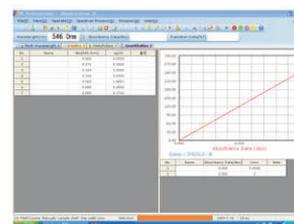
1. Re-scaling axes, curve
2. Smoothing, combination, zooming, overlap. . .
3. 1st to 4th derivative.



Quantitative

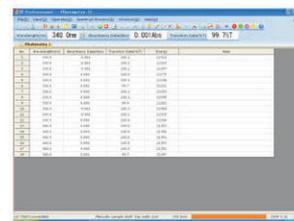
Use up to 38 standards to establish standard curve. Four methods for fitting a curve:

1. Linear fit
2. Linear through zero
3. Square fit
4. Cubic fit



Basic Mode

Measure the Transmittance or Absorbance of the samples.



UV-6000/6000PC

Stand-alone Model



UV-6000/6000PC SPECTROPHOTOMETER

Metash UV-6 series of spectrophotometers are advanced single beam design consisting of 5 models. They vary in bandwidth, wavelength accuracy and dimension. They provide excellent performance for measurements in the range of 190nm to 1100nm. All spectrophotometers features high performance sealed optics mounted on a stable machined platform.

They are suitable for clinical lab applications, pharmaceutical and bio-chemical as well as routine applications such as quantitative analyses, kinetics, wavelength scanning, multiple components and DNA/Protein analysis.

The comprehensive features, sophisticated powerful software, variety of accessories and model configurations will meet or exceed your expectations for performance and value.

Features

- ※ The innovative optical layout and state of art mono-chromator with high grade blazed holographic grating ensure accuracy. Its integrated design assures long term stability and durability.
- ※ The precisely aligned detector and quality deuterium and halogen lamps enhance the precision across the UV/Vis spectrum starting from 190nm and into the near-infrared 1100nm.
- ※ Online software upgrade capability via Internet.
- ※ Full A4 print-out of graphs and tables of results with popular printers such as HP or Epson Deskjet.
- ※ Real-time clock for date and time stamping of results.
- ※ Large LCD display(320X240 Dots Matrix)

Functions

Basic Mode, Quantitative, Kinetics, Multi-wavelength, Wavelength Scan, DNA/Protein Test, Utility.

(Please Ref. Page 13 & 14 for details)

Stand-alone Model



UV-6100/6100A/6100S

UV-6100/6100A/6100S SPECTROPHOTOMETER

The light path length of UV-6100 Series are longer than UV-6000, So UV-6100 Series are better for micro volume sample test.

Specification

Model	UV-6000	UV-6000PC	UV-6100	UV-6100A	UV-6100S
Optical System	Single Beam (1200 Lines/mm Grating)				
Wavelength Range	190-1100nm				
Band Width	1.8nm			1nm	0.5/1.0/2.0/4.0nm
Wavelength Accuracy	±0.5nm		±0.3nm		
Wavelength Repeatability	0.3nm		0.2nm		
Photometric Accuracy	±0.3%T				
Photometric Repeatability	0.2%T				
Photometric Display Range	0-200%T, -0.3-3.0A, 0-9999C				
Stability	0.002A/h @ 500nm				
Baseline Flatness	±0.002A		±0.001A		
Noise	±0.001A		±0.001A		
Stray Light	≤0.05%T @220nm, 360nm				
Data Output Port	USB				
Printer Port	Parallel Port				
Display	LCD (320*240 Dots)				
Lamps	Deuterium Lamp & Tungsten Halogen Lamp				
Detector	Silicon Photodiode				
Dimension (L*W*H)	460*380*180mm		625*430*206mm		
Weight	20kg		28kg		30kg

METASH
PRODUCTS

SHANGHAI METASH INSTRUMENTS CO.,LTD.



UV-8000/8000A/8000S/8500

Double Beam



UV-8000/8000A/8000S SPECTROPHOTOMETER



UV-8500 SPECTROPHOTOMETER

Metash UV-8 Series are advanced Double Beam design consisting of 4 models: UV-8000, UV-8000A, UV-8000S and UV-8500. All the 4 models are Stand-alone models : UV8000 with 1.8nm fixed bandwidth, UV8000A with 1.0nm fixed bandwidth, UV-8000S with 0.5nm/1.0nm/2.0nm/4.0nm variable bandwidth and UV-8500 with optional bandwidth(0.5nm,1nm,2nm,4nm) Except bandwidth, other specifications of the 4 models are almost the same, but UV-8500 has its own new designed cover.

The two detectors are used to measure sample and reference respectively and simultaneously for optimizing measurement accuracy.

Functions

Basic Mode, Quantitative, Kinetics, Multi-wavelength, Wavelength Scan, DNA/Protein Test, Utility.
(Please Ref. Page 13 & 14 for details)

Specifications

Model	UV-8000	UV-8000A	UV-8000S	UV-8500
Optical System	Double Beam (1200 Lines/mm Grating)			
Wavelength Range	190-1100nm			
Band Width	1.8nm	1nm	0.5/1.0/2.0/4.0nm Variable	0.5/1.0/2.0/4.0nm Optional
Wavelength Accuracy	±0.3nm			
Wavelength Repeatability	0.2nm			
Photometric Accuracy	±0.3%T			
Photometric Repeatability	0.2%T			
Photometric Display Range	0-200%T, -0.3-3.0A, 0-9999C			
Stability	0.001A/h @ 500nm			
Baseline Flatness	±0.001A			
Noise	±0.001A			
Stray Light	≤0.05%T @220nm, 360nm			
Data Output Port	USB			
Printer Port	Parallel Port			
Display	LCD (320*240 Dots)			
Lamps	Deuterium Lamp & Tungsten Halogen Lamp			
Detector	Silicon Photodiode			
Dimension (L*W*H)	625*430*206mm			
Weight	30kg			



UV-6000/UV-6000PC/UV-6100/UV-6100A/UV-6100S/UV-8000/UV-8000A/UV-8000S/UV-8500



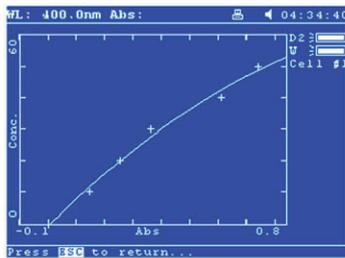
Basic Mode

To measure the Absorbance and Transmittance



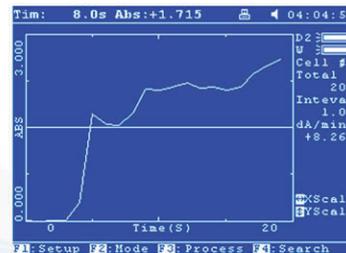
Wavelength Scan

- 1) The wavelength scan intervals are 0.1, 0.2, 0.5, 1, 2, 5nm.
- 2) Hi, Medium and Low scan speeds are available. They vary from 100 to 3000 nm/min.
- 3) Wavelengths are scanned from high to low so that the instrument waits at high WL. and it minimizes the degradation of UV sensitive samples.



Quantitative

1. Coefficient Method
 2. Standard Curve
- Up to 10 standard samples may be used to establish a curve. Four methods for fitting a curve through the calibration points: Linear fit, Linear fit through zero, Square fit and Cubic fit.



Kinetics

This mode may be used for time course scanning or reaction rate calculations. Abs. vs. time graphs is displayed on the screen in real time. Wait time and measurement time up to 12 hours may be entered with time intervals of 0.5, 1, 2, 5, 10, 30 seconds and 1 min. Post-run manipulation includes re-scaling, curve tracking and selection of the part of the curve required for the rate calculation. Rate is calculated using a linear regression algorithm before multiplying by the entered factor.



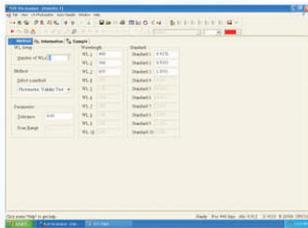
DNA/Protein Test

Concentration and DNA purity are quickly and easily calculated:
 Absorbance ratios 260nm/280nm with optional subtracted absorbance at 320nm.
 DNA concentration= 62.9 x A260 - 36.0 x A280
 Protein concentration= 1552 x A260 - 757.3 x A280

Metash PC-Control Software: UV/VIS-ANALYST

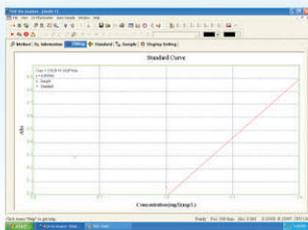
UV-6000PC/UV-6100/UV-6100A/UV-6100S/UV-8000/UV-8000A/UV-8000S/UV-8500

The PC Control software comes standard with the above mentioned models. It offers the following functions:



Multi-Wavelength

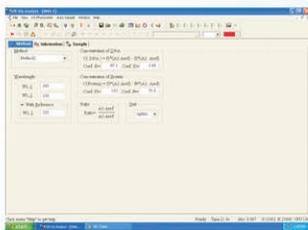
Up to 32 wavelengths can be selected and multiple samples can be measured.



Quantitative

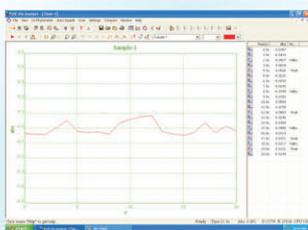
1. Coefficient Method
2. Standard Curve

Up to 10 standard samples may be used to establish a curve. Four methods for fitting a curve through the calibration points: Linear fit, Linear fit through zero, Square fit and Cubic fit.



DNA/Protein Test

Concentration and DNA purity are quickly and easily calculated:
Absorbance ratios 260nm/280nm with optional subtracted absorbance at 320nm.
DNA concentration = $62.9 \times A_{260} - 36.0 \times A_{280}$
Protein concentration = $1552 \times A_{260} - 757.3 \times A_{280}$

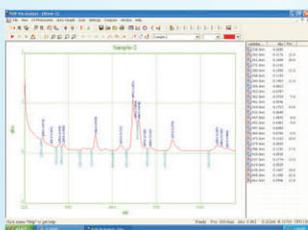


Kinetics

This mode may be used for time course scanning or reaction rate calculations. Abs. vs. time graphs is displayed on the screen in real time.

Wait time and measurement time up to 12 hours may be entered with time intervals of 0.5, 1, 2, 5, 10, 30 seconds and 1 min.

Post-run manipulation includes re-scaling, curve tracking and selection of the part of the curve required for the rate calculation. Rate is calculated using a linear regression algorithm before multiplying by the entered factor.



Wavelength Scan

- 1) The wavelength scan intervals are 0.1, 0.2, 0.5, 1, 2, 5nm.
- 2) Hi, Medium and Low scan speeds are available. They vary from 100 to 3000 nm/min.
- 3) Wavelengths are scanned from high to low so that the instrument waits at high WL. and it minimizes the degradation of UV sensitive samples.

METASH

UV/VIS SPECTROPHOTOMETER



ISO
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Optional Accessories

5cm,10cm Cell holders
1 or 4 cell water-jacketed cell holder
All kinds of Quartz & Glass Cuvettes
Micro Cuvettes
Test Tube Holder

Auto 8-cell Holder
Printer
Software
Ambient Sipper Unit
Peltier/Sipper System

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