

## COMPANY INTRODUCTION

Since 2008, We have been dedicating to excellence in manufacturing laboratory and scientific instruments. We provide a full range of spectrophotometers including UV/VIS spectrophotometers, Microwave Digestion system, TOC analyzer. With high quality and good service, our products go into Environmental, Food, Cosmetics, Pharmaceutical, life science and chemical fields. Metash has a strong reputation in users and distributors.

We aim to be the leading supplier of analytical instruments in both China and worldwide, so we always attach great importance to the fact that we should provide the best to our customers. We have a first class management team, a strong R&D team and a passionate sales team who are willing to offer you reliable products and satisfactory service.

Our products are exported to over 80 countries through our authorized distribution network. We are also working on OEM and ODM basis with other major companies worldwide. We continue to look for reliable partners around the world and we look forward to growing with you.



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## V-5000 VISIBLE SPECTROPHOTOMETER

V-5000 is a single beam visible spectrophotometer with manual wavelength setting. It is a basic model and ideal choice for routine analysis and general experiments. This specially designed single beam spectrophotometer is a low cost spectrophotometer which offers high performance, easy operation and wide application.

### [Features]

#### \* Microprocessor controlled

With microprocessor controlled, V-5000 can realize auto Zero and auto 100%T adjustment with one button. V-5000 has a LCD display instead of LED display for direct readout of Transmittance, Absorbance Concentration.

#### \* Grating Monochromator

V-5000 uses 1200 line grating which ensures high resolution, low stray light and high parameters accuracy.

#### \* Date output

V-5000 has a USB port which can be connected to PC to edit date through software. Data can also be printed through a parallel port when connected to a micro printer.

#### \* Compact design, easy to carry

The compact design of V-5000 saves bench space while all components function remain performed like 120mm wide sample compartment and long optical path monochromator.

#### \* Four Display Mode

V-5000 can display absorbance, transmittance, concentration and coefficient directly by different mode switching.

### Technical Specification

Model	V-5000	Photometric Mode	T,A,C,F
Optical System	Single Beam, Grating 1200lines/mm	Stray Light	$\leq 0.2\%T@360nm$
Wavelength Range	325-1000nm	Stability	$\pm 0.002A/h@500nm$
Spectral Bandwidth	4nm	Display	LCD
Wavelength Accuracy	$\pm 2nm$	Detector	Silicon Photodiode
Wavelength Repeatability	$\leq 0.5nm$	Output	USB Port & Parallel Port(Printer)
Wavelength Setting	Manual	Light Source	Tungsten Halogen Lamp
Photometric Accuracy	$\pm 0.5\%T$	Power Requirements	AC 85-250V
Photometric Repeatability	$\leq 0.2\%T$	Dimension	420*280*180mm
Photometric Range	-0.3-3A, 0-200%T, 0-9999C	Weight	8kg

### Standard Accessories

Item	Description	Quantity	Unit
1	Spectrophotometer	1	set
2	1cm Glass cuvette	4	pcs
3	Power cord	1	pcs
4	User's Manual	1	pcs
5	Black block	1	pcs
6	Dust Cover	1	pcs



## V-5100/UV-5100 SPECTROPHOTOMETER

5100 series include 2 classic models with V-5100 works in visible range and UV-5100 works in UV/Vis range.

### [Features]

#### \* 2.5' LCD screen

Equipped with a 2.5' LCD screen to give a clear display of standard curves and groups of results.

#### \* Imported deuterium lamp

UV-5100 is equipped with imported deuterium lamp which ensures low stray light, photometric accuracy and is easy to be replaced.

#### \* Standard curve

Can set up various standard curves according to customer's solutions and find the concentration of unknown solutions.

#### \* Date output

5100 Series have a USB port to connect with a PC to display spectrum scanning, kinetics and multi-wavelength testing results on the screen. The software is optional

#### \* Multiple results readout

5100 Series display, wavelength, absorbance and transmittance with 5 results per screen. It also has a memory store of up to 200 results.

#### \* Auto setting wavelength

Users set wavelength automatically through arrow keys to avoid operation errors.

## Technical Specification

Model	V-5100 / UV-5100	Photometric Mode	T,A,C,F
Optical System	Single Beam, Grating 1200lines/mm	Stray Light	$\leq 0.1\%T$
Wavelength Range	325-1000nm/190-1000nm	Stability	$\pm 0.002A/h@500nm$
Spectral Bandwidth	2nm	Display	128*64LCD
Wavelength Accuracy	$\pm 2nm$	Detector	Silicon Photodiode
Wavelength Repeatability	0.5nm	Output	USB Port & Parallel Port(Printer)
Wavelength Setting	Auto	Light Source	Tungsten Lamp/Tungsten Lamp&D2 lamp
Wavelength Resolution	0.1nm	Power Requirements	AC 85-250V
Photometric Accuracy	$\pm 0.5\%T$	Dimension	420*280*180mm
Photometric Repeatability	$\leq 0.2\%T$	Weight	10kg/11kg
Photometric Range	-0.3-3A,0-200%T,0-9999C		

## Standard Accessories

Item	Description	Quantity	Unit
1	Spectrophotometer	1	set
2	1cm Glass cuvette	4	pcs
3	Power cord	1	pcs
4	User's Manual	1	pcs
5	1 cm quartz cuvette(UV series)	2	pcs
6	Dust Cover	1	pcs





## UV-5100B SPECTROPHOTOMETER

UV-5100B is a practical UV visible spectrophotometer. Its special structural design ensures high reliability and easy replacing of components.

### [Features]

#### \* Low stray light

UV-5100B is made of high quality components with rigid structure which ensures low stray light.

#### \* Auto setting wavelength

Users can set wavelength automatically through arrow keys to avoid operation errors.

#### \* Date output

UV-5100B has a USB port to connect with a PC to display spectrum scanning, kinetics and multi-wavelength testing results on the screen. The software is optional.

#### \* Standard curve

UV-5100B can set up various standard curves according to customer's solutions and find the concentration of unknown solutions.

#### \* Multiple results readout

UV-5100B can display wavelength, absorbance and transmittance with 5 results per screen. It also has a memory store of up to 200 results.

## Technical Specification

Model	V-5100B / UV-5100B	Photometric Mode	T,A,C,F	
Optical System	Single Beam, Grating 1200lines/mm	Stray Light	$\leq 0.05\%T@360nm$	$\leq 0.05\%T@220,360nm$
Wavelength Range	325-1000nm/190-1000nm	Stability	$\pm 0.001A/h@500nm$	
Spectral Bandwidth	2nm or 4nm	Display	128*64LCD	
Wavelength Accuracy	$\pm 1nm$	Detector	Silicon Photodiode	
Wavelength Repeatability	$\leq 0.2nm$	Output	USB Port&Parallel Port(Printer)	
Wavelength Setting	Auto	Light Source	Tungsten Lamp/Tungsten Lamp&D2 lamp	
Wavelength Resolution	0.1nm	Power Requirements	AC 85-250V	
Photometric Accuracy	$\pm 0.5\%T$	Dimension	490*370*220mm	
Photometric Repeatability	$\leq 0.2\%T$	Weight	14kg/15kg	
Photometric Range	-0.3-3A, 0-200%T, 0-9999C			

## Standard Accessories

Item	Description	Quantity	Unit
1	Spectrophotometer	1	set
2	1cm Glass cuvette	4	pcs
3	Power cord	1	pcs
4	User's Manual	1	pcs
5	1 cm quartz cuvette(UV series)	2	pcs
6	Dust Cover	1	pcs



## V-5600/UV-5600, V-5800/UV-5800 SPECTROPHOTOMETER

The 5600 and 5800 series include 4 models: V-5600, UV-5600, V-5800 and UV-5800. They all have a lead screw structure which ensures high wavelength accuracy of the instrument. 5800 series with more accurate technical specification is your best choice for single beam spectrophotometer.

### [Features]

- \* **Lead screw structure**  
The instrument uses a lead screw structure so that the instrument wavelength accuracy and wavelength resolution can be greatly improved.
- \* **Auto setting wavelength**  
Users set wavelength automatically through arrow keys to avoid operation errors.
- \* **Numerical Keys**  
With microprocessor controlled, all parameters of the instrument can be easily set by numerical keys.
- \* **Date output**  
These series have a USB port to connect with a PC to display spectrum scanning, kinetics and multi wavelength testing results on the screen by optional software.
- \* **8mm thick optical base**  
The instrument uses a rigid die-cast aluminum base as its optical mount to ensure instrument stability and reliability.
- \* **Imported high quality deuterium lamp**  
The UV instruments use imported deuterium lamp with low stray light, photometric accuracy and easy replacing.
- \* **Standard curve**  
5600 and 5800 instruments can set up various standard curves according to customer's solutions and find the concentration of unknown solutions.

## Technical Specification

Model	V-5600/UV-5600	V-5800/UV-5800	Model	V-5600/UV-5600	V-5800/UV-5800
Wavelength Range	320nm-1100nm/190-1100nm	320nm-1100nm/190-1100nm	Stability	$\pm 0.002A/h@500nm$	
Bandwidth	2nm		Display	128*64 Dots LCD	
Wavelength Accuracy	$\pm 0.5nm$		Detector	Silicon Photodiode	
Wavelength Repeatability	$\leq 0.2nm$		Output	USB	RS232
Wavelength Setting	Auto		Light Source	W Lamp/D2&W Lamp	
Photometric Accuracy	$\pm 0.3\%T$	$\pm 0.2\%T$	Power Requirements	AC 220V/50Hz or 110V/60Hz	
Photometric Repeatability	0.2%T		Dimension	460*360*225mm	
Photometric Range	- 0.3-3A, 0-200%T, 0-9999C		Weight	16kg/18kg	16kg/18kg
Stray Light	$\leq 0.05\%T@220nm, 360nm$				

## Standard Accessories

Item	Description	Quantity	Unit
1	Spectrophotometer	1	set
2	1cm Glass cuvette	4	pcs
3	Power cord	1	pcs
4	User's Manual	1	pcs
5	1 cm quartz cuvette(UV series)	2	pcs
6	Dust Cover	1	pcs





## UV-6000 SPECTROPHOTOMETER

UV-6000 spectrophotometer equipped with 6 inches LCD display is an ideal and advanced analytical instrument for laboratory to realize wavelength scanning, Kinetics test, multi-wavelength functions. All functions can be operated on spectrophotometer and can be read directly on the display.

### [Features]

#### \* 6 inches LCD display

UV-6000 series has a 6 inches LCD display to show results and curves directly on the screen.

#### \* 8mm thick optical base

UV-6000 uses a rigid 8mm die-cast aluminum base as its optical mount to ensure instrument stability and reliability.

#### \* Powerful functions

Multi functions like spectrum scanning, standard curve, kinetics, multi-wavelength, DNA/Protein testing can be operated directly on the spectrophotometer and all corresponding curves and data can be displayed directly.

#### \* Date output

UV-6000 is equipped with USB port to connect with a PC to display spectrum scanning, kinetics and multi-wavelength testing results on the screen. The software is optional.

## Technical Specification

Model	UV-6000	Stability	±0.002A/h@500nm
Wavelength Range	190- 1100nm	Noise	±0.0005A
Bandwidth	1.8nm	Display	320*240 Dots LCD
Wavelength Accuracy	±0.5nm	Detector	Silicon Photodiode
Wavelength Repeatability	≤0.2nm	Output	USB
Photometric Accuracy	±0.3%T(0-100%T)	Lamps	W Lamp / D2&W Lamp
Photometric Repeatability	≤0.15%T	Power Requirements	AC 220V/50Hz or 110V/60Hz
Photometric Range	-0.3-3A,0-200%T,0-9999C	Dimension	460*380*180mm
Stray Light	≤0.05%T @220nm,360nm	Weight	20kg

## Standard Accessories

Item	Description	Quantity	Unit
1	Spectrophotometer	1	set
2	1cm Glass cuvette	4	pcs
3	Power cord	1	pcs
4	User's Manual	1	pcs
5	1 cm quartz cuvette(UV series)	2	pcs
6	Dust Cover	1	pcs



## UV-6100 SERIES SINGLE BEAM SPECTROPHOTOMETER

UV-6100 series are large scanning UV visible Spectrophotometers which combine best features of single beam spectrophotometers. It is your ideal choice for stand-alone spectrophotometers. UV-6100 series spectrophotometer: UV-6100, UV-6100A and UV-6100S.

### [Features]

#### \* Long light path design

UV-6100 series' unique 520mm long light path design greatly improved resolution and the bandwidth can reach 0.5nm.

#### \* Multi functions on spectrophotometer

Multi functions operated directly on the spectrophotometer and display the test results/curve and data: wavelength scanning, standard curve, kinetics, multi wavelength scanning, DNA/Protein test.

#### \* 16mm optical base

UV-6100 series use a rigid 16mm die-cast aluminum base as its optical mount to ensure instrument stability and reliability.

#### \* Perfect calibration system

All baseline, wavelength, dark current can be calibrated automatically to keep good running conditions.

#### \* 6 inches LCD display

UV-6100 series have a 6 inches LCD display to show results and curves directly on the screen.

#### \* Data output

UV-6100 series are equipped with USB port to connect with a PC, and the software comes standard with the instruments.

#### \* Powerful software functions

Multi functions like spectrum scanning, standard curves, kinetics, multi wavelength scanning, DNA/Protein testing can be operated directly on the PC.

## Technical Specification

Model	UV -6100/UV -6100A/UV - 6100S	Stability	±0.0008A/h@500nm
Wavelength Range	190- 1100nm	Noise	±0.001A
Bandwidth	1.8nm/1nm/0.5 , 1.0 ,2.0 ,4.0nm	Display	320*240 Dots LCD
Wavelength Accuracy	±0.1@656.1nm, ±0.3nm@all	Detector	Silicon Photodiode
Wavelength Repeatability	0.1nm	Output	USB
Photometric Accuracy	±0.2%T(0-100%T)	Lamps	D2 Lamp/W Lamp
Photometric Repeatability	≤0.1%T(0-100%T)	Power Requirements	AC 220V/50Hz or 110V/60Hz
Photometric Range	-0.3-3A, 0-200%T, 0-9999C	Dimension	625*430*206mm
Stray Light	≤0.03%T @220nm, 360nm	Weight	28kg/28kg/30kg

## Standard Accessories

Item	Description	Quantity	Unit
1	Spectrophotometer	1	set
2	1cm Glass cuvette	4	pcs
3	Power cord	1	pcs
4	User's Manual	1	pcs
5	1 cm quartz cuvette(UV series)	2	pcs
6	Dust Cover	1	pcs
7	Software	1	pcs



UV-6000T Touch Screen  
UV/Visible Spectrophotometer

UV-8000T Touch Screen Double Beam  
UV/VIS Spectrophotometer



Intelligent Alarm function



System Encryption function



Display several groups of data at the same time for direct reading



Module design for easy operation



New panel with touch screen

### Features and Functions

- \* 800\*480 touch screen displays which shows clear graphs
- \* Stand-alone system which can realize spectrum measurement, quantitative, wavelength scanning, kinetics, system setting directly on the instrument
- \* The instrument uses a rigid 8mm (UV-6000T) or 16mm (UV-8000T) die-cast aluminum base as its optical mount to ensure instrument stability and reliability
- \* Automatic system calibration and positioning to recover deviation after long-time use
- \* Imported main optical spare parts to ensure low stray light, stability and reliability
- \* The instrument has powerful memory which can print data and graphs in A4 format directly by connecting to a printer
- \* Data can export to USB directly

### Technical Specification

Model	UV-6000T	Photometric Range	0-200%T, -4.0-4.0A, 0-9999C
Wavelength Range	190-1100nm	Baseline flatness	±0.001A
Spectral Bandwidth	2nm	Noise	±0.0005A
Wavelength Accuracy	±0.5nm	Display	800*480 Smart touch screen
Wavelength Repeatability	≤0.2nm	Data Output Por	USB
Stray Light	≤0.05%T220nm,360nm	Print Port	USB Port
Photometric Accuracy	±0.2T(0-100%T) ±0.002Abs(0-0.5Abs) ±0.004Abs(0.5-1.0Abs)	Light source	Tungsten Lamp&D2 lamp
		Power Requirements	AC220V/50Hz or110V/60Hz
Photometric Repeatability	≤0.05%T(0-100%T) 0.001Abs(0-0.5Abs) 0.002Abs(0.5-1.0Abs)	Detector	Silicon Photodiode
		Dimension	460*380*180nm
Stability	±0.001A/h@500nm	Weight	20Kg

### Technical Specification

Model	UV-8000T	Photometric Range	0-200%T, -4.0-4.0A, 0-9999C
Wavelength Range	190-1100nm	Baseline flatness	±0.001A
Spectral Bandwidth	1.8nm	Noise	±0.0004A
Wavelength Accuracy	±0.1nm(D2 656.1nm), ±0.3nm full range	Display	800*480 touch screen
Wavelength Repeatability	≤0.1nm	Data Output Port	USB
Stray Light	≤0.03%T220nm,360nm	Print Port	USB Port
Photometric Accuracy	±0.2T(0-100%T) ±0.002Abs(0-0.5Abs) ±0.004Abs(0.5-1.0Abs)	Light source	Tungsten Lamp & D2 lamp
		Power Requirements	AC220V/50Hz or110V/60Hz
Photometric Repeatability	≤0.05%T(0-100%T) 0.001Abs(0-0.5Abs) 0.002Abs(0.5-1.0Abs)	Detector	Silicon Photodiode
		Dimension	630*430*210nm
Stability	±0.0004A/h@500nm	Weight	28Kg





UV-9000/UV-9000A/UV-9000S  
DOUBLE BEAM UV/VIS SPECTROPHOTOMETER

UV-9000 series are wide screen double beam spectrophotometer. They adopt double beam long light path design to ensure the stability and accuracy; They are the best choice of high quality spectrophotometers.

#### [Features]

- \* **Light path design: double beam**  
UV-9000 series' double light path design can prevent circuit fluctuation and stray light to ensure stability of the instrument.
- \* **Powerful software functions**  
Multi functions like spectrum scanning, standard curve, kinetics, multi wavelength scanning; DNA/Protein testing can be operated directly on the PC.
- \* **Long path light design**  
UV-9000 series' unique 520mm long light path design greatly improved resolution and the bandwidth can reach 0.5nm.
- \* **Multi functions on Spectrophotometer**  
Multi functions operated directly on the spectrophotometer and display the test results' curve and data: wavelength scanning, standard curve, kinetics, multi wavelength scanning, DNA/Protein test.
- \* **16mm optical base**  
UV-9000 series use a rigid 16mm die-cast aluminum base as their optical mount to ensure the stability and reliability.
- \* **Perfect calibration system**  
All baseline, wavelength, dark current can be calibrated automatically to keep good conditions.
- \* **6 inches LCD display**  
UV-9000 series have a 6 inches LCD display to show results and curves directly on the screen.
- \* **Data output**  
UV-9000 series are equipped with USB port to connect with a PC; the software comes standard with the instrument.

### Technical Specification

Model	UV -9000/UV -9000A/UV -9000S	Stability	±0.0003A/h@500nm
Optical System	Double Beam(1200 Lines/mm Grating)	Noise	±0.0005A
Wavelength Range	190- 1100nm	Display	320*240 Dots LCD
Bandwidth	1.8nm/1nm/0.5, 1.0,2.0,4.0nm	Detector	Silicon Photodiode
Wavelength Accuracy	±0.1nm(D2 656.1), ±0.3nm@all	Output	USB/Parallel Port
Wavelength Repeatability	≤0.1nm	Lamps	D2 Lamp/W Lamp
Photometric Accuracy	±0.2%T(0-100%T)	Power Requirements	AC 220V/50Hz or 110V/60Hz
Photometric Repeatability	≤0.1%T(0-100%T)	Dimension	625*430*206mm
Photometric Range	-0.3-3A,0-200%T,0-9999C	Weight	32kg/32kg/34kg
Stray Light	≤0.03%T @220nm,360nm		

### Standard Accessories

Item	Description	Quantity	Unit
1	Spectrophotometer	1	set
2	1cm Glass cuvette	4	pcs
3	Power cord	1	pcs
4	User's Manual	1	pcs
5	1 cm quartz cuvette(UV series)	2	pcs
6	Dust Cover	1	pcs
7	Software	1	pcs



## B-500 BIOPHOTOMETER

B-500 is a new designed model that is suitable for quick test of DNA, RNA and Protein.

### [Features]

- \* Can measure 0.5-2ul samples
- \* Quick measurement without pre-warming
- \* No need to dilute the samples
- \* Quick Scanning, scanning curve can be got in only 0.2 seconds
- \* Long life lamp with more than 2000 hours lifetime
- \* Software comes standard with the instruments

### Technical Specification

Model	B-500
Wavelength Range	220nm- 850nm
Wavelength Accuracy	±1nm
Wavelength Repeatability	1nm
Optical Accuracy	0.002Abs
Optical Range	0.02 - 300Abs
Measurement Speed	2 - 5 Seconds



## Spectrophotometer Accessory



Quartz Cuvettes



Printer



Deuterium lamp



Manual 10mm 8 cell holder



Automatic 10mm 8 cell holder



Sipper system/Peltier system



Printer



Transparent film holder



Tungsten Halogen lamp



Micro cuvettes cell holder



10mm 4-hole cell holder



Test tube holder

All spectrophotometers are shipped out with standard accessories. The above accessories can be ordered separately once needed.



## Spectrophotometer Accessories

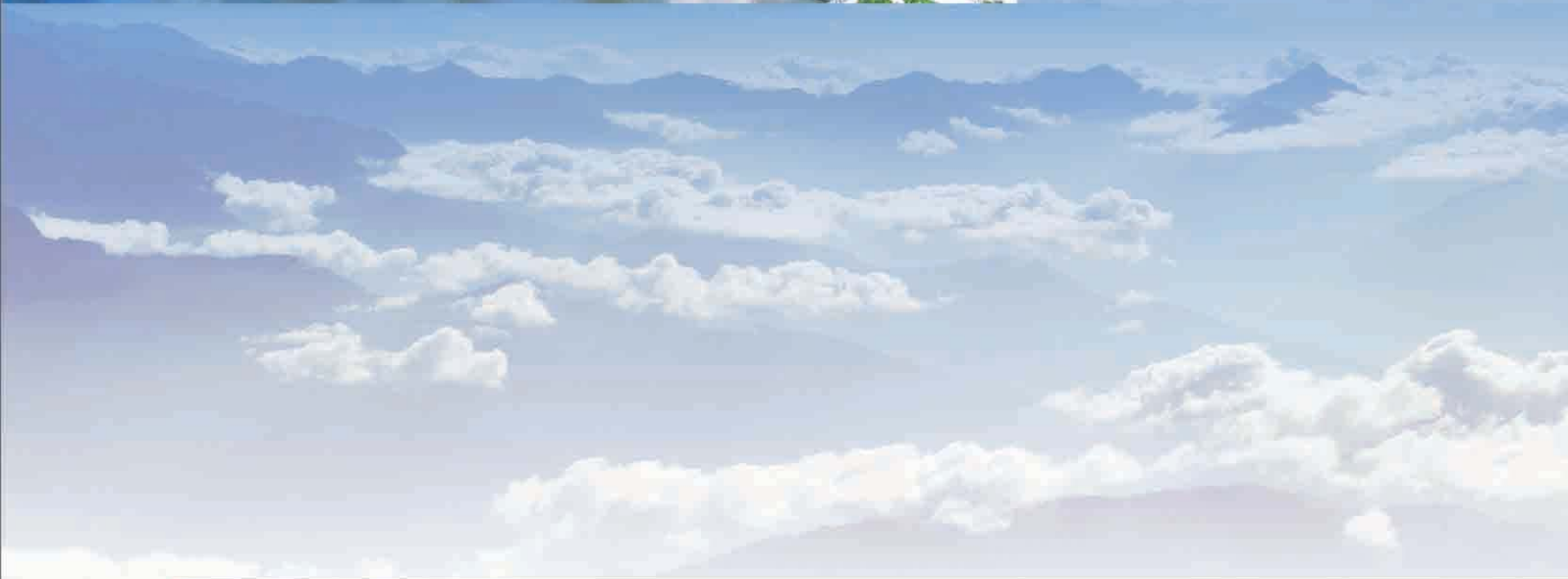
	Model No.	Description	Unit
Cell Holder	10101	10mm single cell holder	Pcs
	10102	10mm 4-hole cell holder	Pcs
	10103	50mm 4-hole cell holder	Pcs
	10104	100mm 4-hole cell holder	Pcs
	10105	10mm 8-hole auto cell holder	Pcs
	10106	10mm 8-hole manual cell holder	Pcs
	10201	10mm single hole water jacketed ambient cell holder	Pcs
	10301	Adjustable cell holder for micro cuvettes	Pcs
	10401	Transparent film holder	Pcs
	10501	Test tube holder	Pcs
Control Units	20101	Peltier system	Pcs
	20102	Sipper system	Pcs
	20103	Peltier/Sipper system	Pcs
	20201	Micro printer	Pcs
Lamps	30101	W lamp 12V, 20W	Pcs
	30201	D2 lamp ( Milas, for all models except UV-5100, UV-5100H)	Pcs
	30202	D2 lamp ( Milas, only for UV-5100, UV-5100H)	Pcs

Item	Model No.	Description L*W*H mm	Volume ul	Path Length mm	Unit
Glass Cuvettes with Stopper	40301	7.5*12.5*45	1.7	5	Set (4Pcs)
	40302	12.5*12.5*45	3.5	10	Set (4Pcs)
	40303	22.5*12.5*45	7	20	Set (4Pcs)
	40304	32.5*12.5*45	10.5	30	Set (4Pcs)
	40305	42.5*12.5*45	14	40	Set (4Pcs)
	40306	52.5*12.5*45	17.5	50	Set (4Pcs)
	40307	102.5*12.5*45	35	100	Set (2Pcs)
Quartz Cuvettes with Stopper	40401	7.5*12.5*45	1.7	5	Set (2Pcs)
	40402	12.5*12.5*45	3.5	10	Set (2Pcs)
	40403	22.5*12.5*45	7	20	Set (2Pcs)
	40404	32.5*12.5*45	10.5	30	Set (2Pcs)
	40405	42.5*12.5*45	14	40	Set (2Pcs)
	40406	52.5*12.5*45	17.5	50	Set (2Pcs)
	40407	102.5*12.5*45	35	100	Set (2Pcs)

Item	Model No.	Description L*W*H mm	Volume ul	Path Length mm	Unit
Glass Cuvettes with Lid	40101	7.5*12.5*45	1.7	5	Set (4Pcs)
	40102	12.5*12.5*45	3.5	10	Set (4Pcs)
	40103	22.5*12.5*45	7	20	Set (4Pcs)
	40104	32.5*12.5*45	10.5	30	Set (4Pcs)
	40105	42.5*12.5*45	14	40	Set (4Pcs)
	40106	52.5*12.5*45	17.5	50	Set (4Pcs)
	40107	102.5*12.5*45	35	100	Set (4Pcs)
Quartz Cuvettes with Lid	40201	7.5*12.5*45	1.7	5	Set (2Pcs)
	40202	12.5*12.5*45	3.5	10	Set (2Pcs)
	40203	22.5*12.5*45	7	20	Set (2Pcs)
	40204	32.5*12.5*45	10.5	30	Set (2Pcs)
	40205	42.5*12.5*45	14	40	Set (2Pcs)
	40206	52.5*12.5*45	17.5	50	Set (2Pcs)
	40207	102.5*12.5*45	35	100	Set (2Pcs)

Item	Model No.	Description L*W*H mm	Volume ul	Unit
Micro Cuvettes	40501	12.5*12.5*45	100	Set (2Pcs)
	40502	12.5*12.5*45	200	Set (2Pcs)
	40503	12.5*12.5*45	500	Set (2Pcs)
	40504	12.5*12.5*45	700	Set (2Pcs)
Software	50101	UV Basic; Quantitative & Kinetics; Series 5 models except PC models	Set (Disc. + USB cable + Manual)	
	50102	MetaSpec; Quantitative & Kinetics & Wavelength scan & DNA/Protein & Multi-wavelength; Series 5 models except PC models	Set (Disc. + USB cable + Dognle + Manual)	
	50103	UV Analyst; Quantitative & Kinetics & Wavelength scan & DNA/Protein & Multi-wavelength; Series 6 & Series 8 & Series 9.	Set (Disc. + USB cable + Dognle + Manual)	

# SOFTWARE



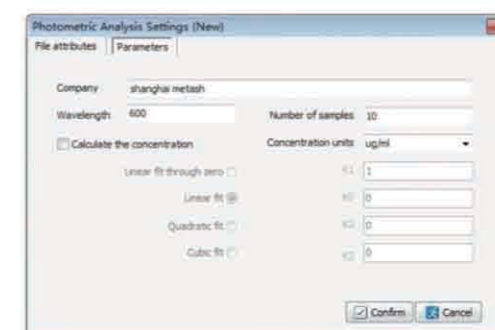
## UV/V-5 Series/UV-6000T/UV-8000T Spectrophotometers

**METASPEC** is a new windows based PC software designed by engineers. It is compatible with V/UV5 Series spectrophotometers. Metaspec takes the best features of the stand-alone version Spectrophotometers with more powerful data processing and expanded data collecting and storage capability. It can realize basic testing, Quantitative, Wavelength, Scanning, Kinetics, DNA and standard curve functions.

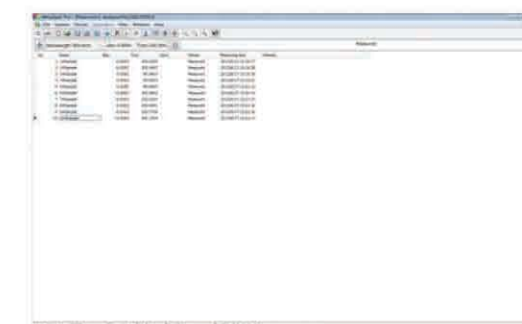
### Functions

#### Basic test

Measure the Transmittance or Absorbance of the samples



Setting

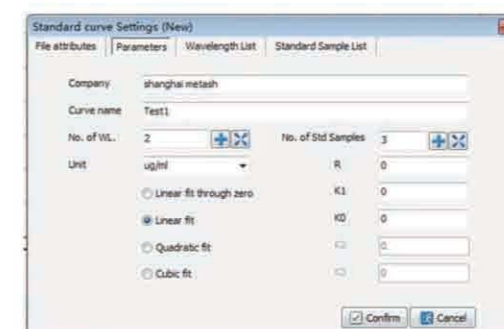


Results

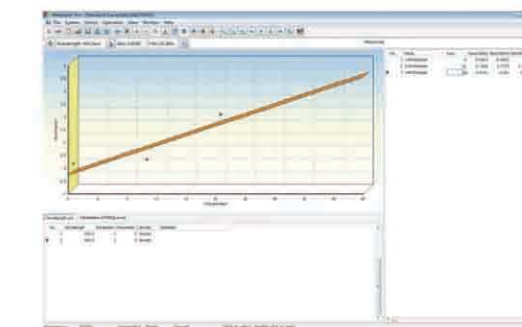
#### Standard Curve

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

- Linear fit
- Linear through zero
- Square fit
- Cubic Fit



Setting



Results

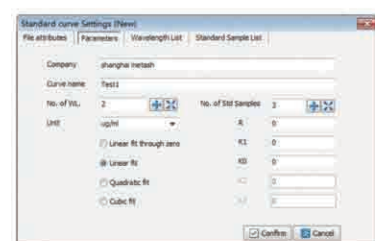


## UV/V-5 Series/UV-6000T/UV-8000T Spectrophotometers

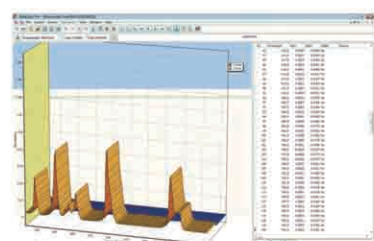
## Wavelength scanning

The software can save record of peaks and valleys automatically. The capacity of standard curve saving is unlimited. Post-run manipulation and processing includes:

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



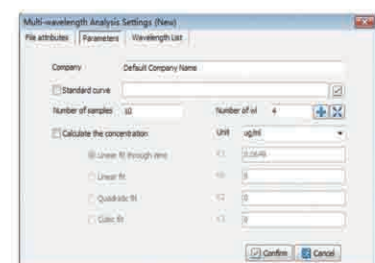
Setting



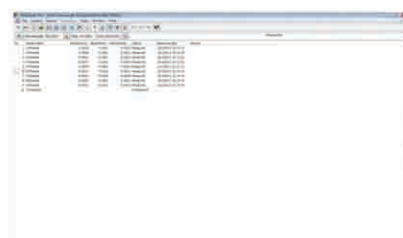
Results

## Multi Wavelength Analysis

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

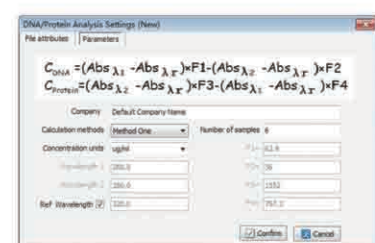


Setting

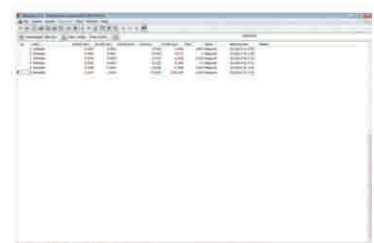


Results

## DNA/ Protein Analysis

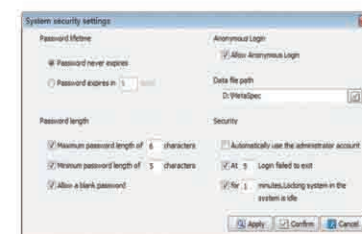


Setting

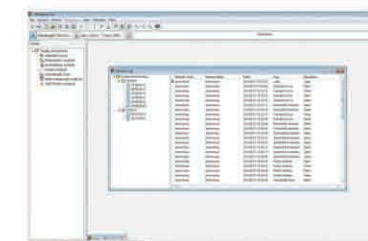


Results

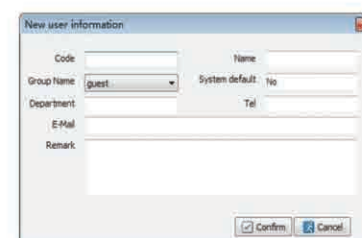
## UV/V-5 Series/UV-6000T/UV-8000T Spectrophotometers



System security setting



Historical data management

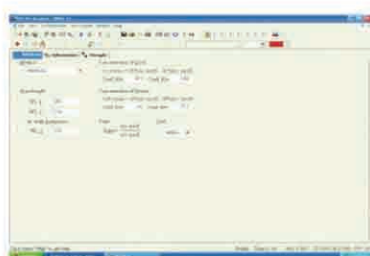


New user management system

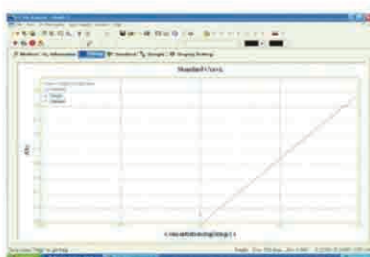


## UV-6/9 Series Spectrophotometers

Metash UV /VIS analyst is the PC control software which is compatible with Metash UV-6/9 series of spectrophotometers It offers the following functions:

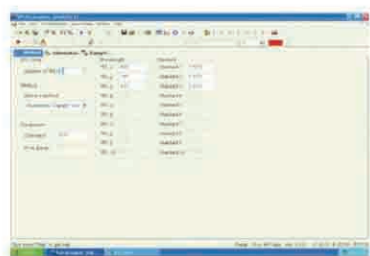
**Standard Curve**

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**

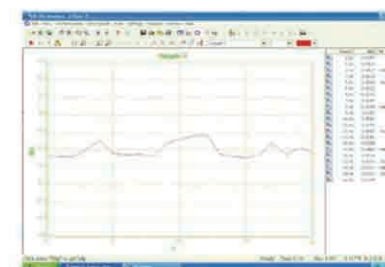
Concentration and DNA purity are quickly and easily calculated:

Absorbance ratios 260nm/280nm with optional subtracted absorbance at 320nm

DNA concentration= $62.9 \times A_{260} - 36.0 \times A_{280}$

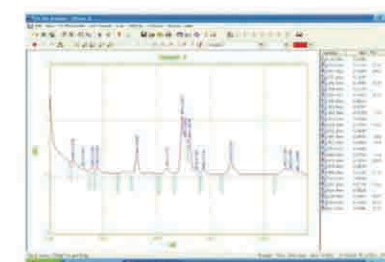
Protein concentration= $1552 \times A_{260} - 757.3 \times A_{280}$

## UV-6/9 Series Spectrophotometers

**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 and of the part of the curve required for the rate calculation . Rate is calculation . Rate is calculated using a linear regression algorithm before multiplying by the entered factor

**Wavelength Scan**

- The wavelength scan intervals are 0.1 , 0.2 , 0.5 , 1, 2, 5nm
- High medium and low scan speeds are available. They vary from 100 to 3000 nm/ min.
- Wavelengths are scanned from high to low so that the instrument waits at high WL.

# METASH



## MWD-850 MICROWAVE DIGESTION SYSTEM

## MWD-800 MICROWAVE DIGESTION SYSTEM



- \* Vent and Self-reseal digestion vessel: self vent and reseal structure with patented law ensures that vessels will release pressure and instantly reseal when a sudden over-pressurization occurs. This prevents waste of batch samples and solutions, and also avoids sample vessel damage.
- \* Temperature-pressure monitoring/protection system: Advanced contactless temperature control technology which measures real temperature of solution in each digestion vessel. Meanwhile, it adopts multi-fiber to monitor pressure in a contactless way. This realizes isolation between temperature and pressure control system, avoids cross-contamination of all samples and also ensures temperature and pressure monitor and control for each and every vessel. All temperature and pressure data are displayed in real time during the microwave run, allowing a visual check of digestion conditions. It prevents over-pressurization and over-heating.
- \* Large storage capacity: can edit and store 255 programs according to user's requirements and each method program can set 10 digestion steps. Users can set parameters (temperature, pressure, time, microwave power) according to their own requirements which provides convenient operation for users.
- \* Multi safety protection functions: high strength double security door, temperature monitoring, high temperature prevention, pressure monitoring, high pressure prevention, instruments fault monitoring alert, innovative stopping running when opening door, instruments abnormal sound monitoring.
- \* Power and power regulation mode: using variable frequency resonance or non-pulse (optional) continuous rotating mode to ensure high efficient and even microwave throughput. Users can adjust it according to users' requirement between 0~3000W.



### Quality components

- \* 360° continuous rotator: Realize continuous rotation in the same direction in cavity to ensure even and complete digestion of different vessel. The 360° continuous rotating reduces impact on rotary motor, which greatly extends the service life of rotary motor.
- \* Color touch-screen display: 7 inch LCD touch-screen display to show real-time temperature, pressure, time and curves. It also contains a real time display for pressure and temperature of each individual vessel to give a clear check of digestion processing.
- \* Digestion vessel material: imported TFM material for inner vessel, imported PEEK and glass fiber for outer protection vessel, which prevents high temperature, high pressure and corrosion, and assures safe operation.



Interface



Functions



Methods



Calibration



Self-diagnosis



Work interface

### Technical Specification

Model	MWD-850	MWD-800	Outer vessel pressure limit	20MPa
Pressure Control	50 vessels	40 vessels	Temperature control Range	50~400°C
Temperature Control	50 vessel scan temperature control	40 vessel scan temperature control	Maximum working temperature	250°C
Vessel Volume	50ml		Temperature control accuracy	±0.3°C
Pressure Testing	Contactless		Inner vessel temperature limit	300°C
Temperature Testing	Contactless		Microwave power	0-3000w adjustable
Vessel Material	Inner vessel: imported TFM Outer vessel: imported PEEK+glass fiber		Microwave Frequency	2450MHz
Display	External 8" inches touch screen		Rotation Mode	360 continuous rotation
Pressure control range	0-10MPa(0-100KG/CM)		Microwave leak	< 5mw/cm2
Maximum working pressure	6MPa		power	AC 220V, 16A, 50/60HZ
Pressure control accuracy	0.01MPa(1KG/CM)		Dimension	640mm*630mm*590mm
			weight	88kg/78kg



## MWD-700 MICROWAVE DIGESTION SYSTEM

## MWD-650 MICROWAVE DIGESTION SYSTEM



- \* Vent and Self-reseal digestion vessel: self vent and reseal structure with patented law ensures that vessels will release pressure and instantly reseal when a sudden over-pressurization occurs. This prevents waste of batch samples and solutions, and also avoids sample vessel damage.
- \* Temperature-pressure monitoring/protection system: Advanced contactless temperature control technology which measures real temperature of solution in each digestion vessel. Meanwhile, it adopts multi-fiber to monitor pressure in a contactless way. This realizes isolation between temperature and pressure control system, avoids cross-contamination of all samples and also ensures temperature and pressure monitor and control for each and every vessel. All temperature and pressure data are displayed in real time during the microwave run, allowing a visual check of digestion conditions. It prevents over-pressurization and over-heating.
- \* Large storage capacity: can edit and store 255 programs according to user's requirements and each method program can set 10 digestion steps. Users can set parameters (temperature, pressure, time, microwave power) according to their own requirements which provides convenient operation for users.
- \* Multi safety protection functions: high strength double security door, temperature monitoring, high temperature prevention, pressure monitoring, high pressure prevention, instruments fault monitoring alert, innovative stopping running when opening door, instruments abnormal sound monitoring.
- \* Power and power regulation mode: using variable frequency resonance or non-pulse (optional) continuous rotating mode to ensure high efficient and even microwave throughput. Users can adjust it according to users' requirement between 0~3000W.



### Quality components

- \* 360° continuous rotator: Realize continuous rotation in the same direction in cavity to ensure even and complete digestion of different vessel. The 360° continuous rotating reduces impact on rotary motor, which greatly extends the service life of rotary motor.
- \* Color touch-screen display: 7 inch LCD touch-screen display to show real-time temperature, pressure, time and curves. It also contains a real time display for pressure and temperature of each individual vessel to give a clear check of digestion processing.
- \* Digestion vessel material: imported TFM material for inner vessel, imported PEEK and glass fiber for outer protection vessel, which prevents high temperature, high pressure and corrosion, and assures safe operation.



Interface



Functions



Methods



Calibration



Self-diagnosis



Work interface

### Technical Specification

Model	MWD-700	MWD-650	Outer vessel pressure limit	20MPa
Pressure Control	18 vessels	12 vessels	Temperature control Range	50~400°C
Temperature Control	18 vessels	12 vessels	Maximum working temperature	250°C
Vessel Volume	100ml		Temperature control accuracy	±0.3°C
Pressure Testing	Contactless		Inner vessel temperature limit	300°C
Temperature Testing	No-contact		Microwave power	0-3000W adjustable/0-2000W adjustable
Vessel Material	Inner vessel : imported TFM Outer vessel: imported PEEK+glass fiber		Microwave Frequency	2450MHz
Display Display	8" inches touch screen external		Rotation Mode	360 continuous rotation
			Microwave leak	< 5mw/cm2
Pressure control range	0-10MPa		Power	AC 220V, 16A, 50/60HZ
Maximum working pressure	6MPa		Dimension	640mm*630mm*590mm
Pressure control accuracy	0.01MPa		weight	75kg/70kg



## MWD-600 MICROWAVE DIGESTION SYSTEM

## MWD-500/520 MICROWAVE DIGESTION SYSTEM



- \* External lid locking design: make sure if there is any abnormal circumstances, it can cut off the power supply in a quick, timely and effective way, which improves user's ease of handling.
- \* Color touch-screen display: 7 inch LCD touch-screen display to show real-time temperature, pressure, time and curves. It also contains a real time display for pressure and temperature of each individual vessel to give a clear check of digestion processing.
- \* Large storage capacity: can edit and store 255 programs according to user's requirements and each method program can set 10 digestion steps. Users can set parameters (temperature, pressure, time, microwave power) according to their own requirements which provides convenient operation for users.
- \* Power and power regulation mode: using variable frequency resonance or non-pulse (optional) continues microwave intelligent control mode, microwave output is highly efficient. Users can adjust it according to users' requirement between 0~1500W.
- \* Digestion vessel material: imported TFM material for inner vessel, imported PEEK and glass fiber for outer protection vessel, which prevents high temperature, high pressure and corrosion, and assures safe operation.
- \* 360° continuous rotator: Realize continuous rotation in the same direction in cavity to ensure even and complete digestion of different vessel. The 360° continuous rotating reduces impact on rotary motor, which greatly extends the service life of rotary motor.

- \* Temperature-pressure dual monitoring/protection system: Advanced contactless infrared temperature measurement technology which measures the real temperature of the solution in each digestion vessel. And using multi fiber contactless high precise pressure scanning measurement system. This isolates sample and temperature-pressure protecting and monitoring system to avoid cross-contamination among samples, and also realize monitoring for each sample digestion vessel. Meanwhile, the instruments have special protection for over-pressure and temperature.
- \* Vent and Self-reseal digestion vessel: self vent and reseal structure with patented law ensures that vessels will release pressure and instantly reseal when a sudden over-pressurization occurs. This prevents waste of batch samples and solutions, and also avoids sample vessel damage.



Interface



Functions



Methods



Calibration



Self-diagnosis



Work interface

## Technical Specification

Model	MWD-600	MWD-520	MWD-500	Outer vessel pressure limit	15MPa
Pressure Control	10 vessels	6 vessels		Temperature control Range	50~300°C
Temperature Control	10 vessels	6 vessels	NONE	Maximum working temperature	250°C
Vessel Volume	60ml			Temperature control accuracy	±0.5°C
Pressure Measurement	Contactless			Inner vessel temperature limit	300°C
Temperature Measurement	Contactless		NONE	Microwave power	0-1500W 0-1000W
Vessel Material	Inner vessel : imported TFM Outer vessel: imported PEEK+glass fiber			Microwave Frequency	2450MHz
Display	External 7" inches touch screen			Rotation Mode	360 continuous rotation
				Microwave leak	< 5mw/cm2
Pressure control range	0-10MPa	0-6MPa		Power	AC 220V, 10A, 50/60HZ
Maximum working pressure	6MPa	5MPa		Dimension	520mm*560mm*460mm
Pressure control accuracy	±0.01MPa	±0.1MPa		weight	43kg 34kg 32kg



## TOC-2000 / TOC-3000

Metash TOC-2000/TOC-3000 is our new launched total organic carbon analyzer that uses non-dispersive infrared (NDIR) detection to measure parameters as TOC, NPOC, TC, and TIC easily. TOC (Total Organic Carbon), which directly shows the total organic content, is regarded as a key factor to evaluate pollution potentials of organic compound in water.

We have 2 models TOC: TOC-2000 (Catalytic high temperature combustion) and TOC-3000 (Wet chemical oxidation by UV). TOC-2000 is ideal for quality control of drinking water, industrial water, sewage and waste water. TOC-3000 is ideal for pharmaceutical application like cleaning validation, water for injection.

### Features

- \* TOC detector with 24 bits data solution extends monitoring range. Controlling system with 32bin processing technology greatly improves performance.
- \* Signal management system with our own patent law which has great advantages of online setting, real-time monitoring, self diagnosis and flow rate control to ensure high performance and safe operation.
- \* Weak current system design also ensures operation safety.
- \* Compact design for TOC saves bench top space and also makes TOC an ideal choice for laboratory.
- \* Automatic leak check system to avoid operation mistakes and improve instrument performance, so as to ensure operation safety and instrument's safety.
- \* Flow rate controlling system to avoid any effect caused by flow rate fluctuation which ensures accurate data.

### Technical Specification

Model	TOC-2000
Detector	NDIR
Parameters	TC/TIC/TOC/NPOC
Method	High Temperature Combustion
Operation	PC control
Application	Liquid Sample, Gas Sample
Gas Requirement	Oxygen/Nitrogen ≥ 99.995%
Measurement Range	0-30000mg/l (ppm)
Detection Limit	50 μg /l (ppb)
Repeatability	3%
Maximum Salinity	85g/l
Power	AC220V , 50Hz/AC110V,60Hz,200w
Dimension	430*455*440mm

### Technical Specification

Model	TOC-3000
Detector	NDIR
Parameters	TC/TIC/TOC/NPOC
Method	Wet chemical oxidation by UV
Operation	PC control
Application	Liquid Sample, Gas Sample,
Gas Requirement	Oxygen ≥ 99.995%
Measurement Range	0-10000mg/l (ppm)
Detection Limit	5 μg /l (ppb)
Repeatability	3%
Maximum Salinity	85g/l
Power	AC220V , 50Hz/AC110V,60Hz,200w
Size	430*455*440mm



**TOC-1500  
ANALYZER**



**TOC-1700  
ANALYZER (ON LINE)**



Unlike TOC-2000 and TOC-3000, TOC-1500 and TOC-1700 are equipped with direct conductometric detection method. TOC-1500 is off-line while TOC-1700 integrated on-line sampling while enables easy and quick sample introduction. This series TOC is ideal for application in microelectronics water, purified water, water for injection, cleaning validation and etc.

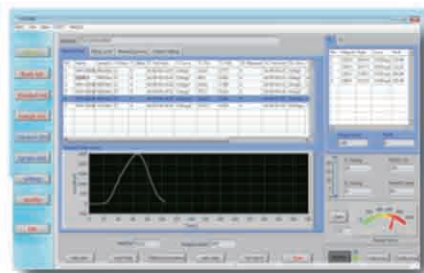
#### Features

- \* Automatic sample introduction with enter of trace sample, we can control the value of the trace sample. No contamination will occur during testing which will be harmful to human being and environment.
- \* It adopts UV Catalytic oxidation during which there is no need to add acid, gas or catalyzer with low lost of routine maintenance cost.
- \* 7 inches touch screen with operation panel, which is easy to operate and maintain.
- \* The system is set with password for protection which is in compliance with FDA-21 CFR Part11 Requirements. Also, it is in compliance with USP32-643 requirements.
- \* Automatic alarm when the value is beyond maximum setting value to protect the instrument and to avoid any incorrect operation.
- \* Auto sampler is optional which can be used for testing various different samples without person.
- \* Special designed for testing water less than 1.5ppm. Online and office testing function can be easily switched.
- \* 8GB Mass storage memory which does not restrict date and time.
- \* Less than 3 minutes for each analysis.
- \* Clear historical records which is traceable according to analysis date.
- \* Data for specific whole day can be derived and saved to USB directly.
- \* Equipped with Bluetooth printer which is easy to operate and print quickly.
- \* Modular design ensures quick installation and easy maintenance.
- \* Optional online monitoring device meets different requirements.

#### Technical Specification

Model	TOC-1500	TOC-1700
Detector Range	0.001-1.5mg/L (ppm)	0.001-1.500mg/L (ppm)
Detection limit	1ppb	1ppb
Max Tolerance	±5%	±5%
Analysis time	3min	3min
Response time	within 10min	within 10min
Sample temperature	1-95°C	1-95°C
Environment temperature	10-40°C with temperature change ±5°C/d	10-40°C with temperature change ±5°C/d
Sample flow speed	3ml/min	3ml/min
Relative humidity	≤85%	≤85%
Drifting	±5%	±5%
Repeatability Tolerance	≤3%	≤3%
Drifting	±5%	±5%
Power	220V±10%	220V±10%
Frequency	50Hz±1Hz	50Hz±1Hz
Power	100W	100W
Dimension	440*220*300mm	440*220*300mm

## TOC software (for TOC-2000 &amp; TOC-3000)

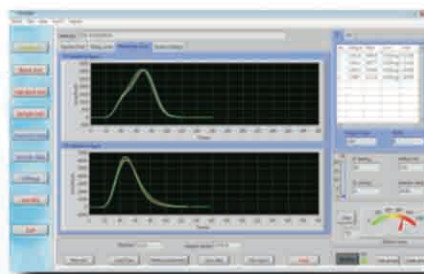
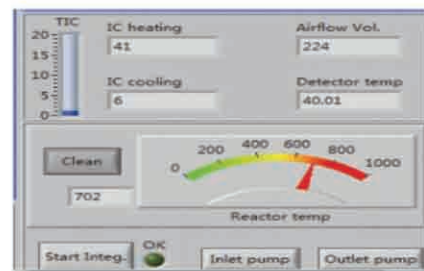
**Sample measurement processing monitoring**

1. Set different name, concentration and sample volume
2. Real-time sample reaction

On-line AVG and RSD calculation of testing results

**Display and monitoring of sampling**

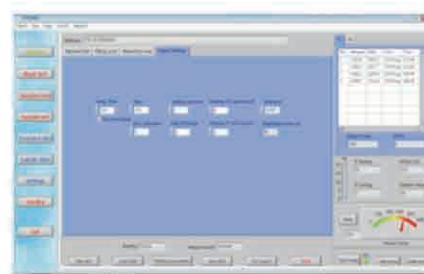
1. Sampling volume real-time monitoring
2. Automatic sample draining monitoring
3. Real time display and monitoring for Heating, cooling and furnace temperature
4. Auto switch of sampling and draining
5. Acidification operation by peristaltic pumps

**Scanning Curves**

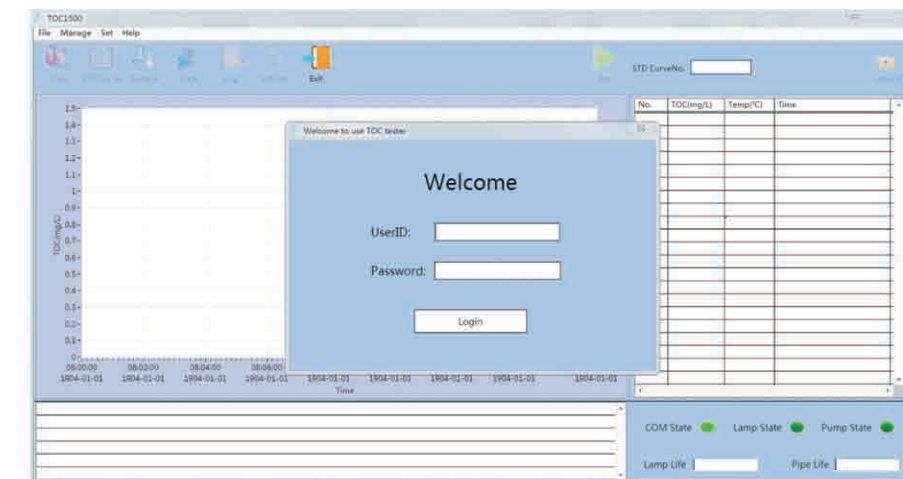
1. Samples curves shows in the same coordinate system for easy reading of repeatability

**Parameter Setting Interface**

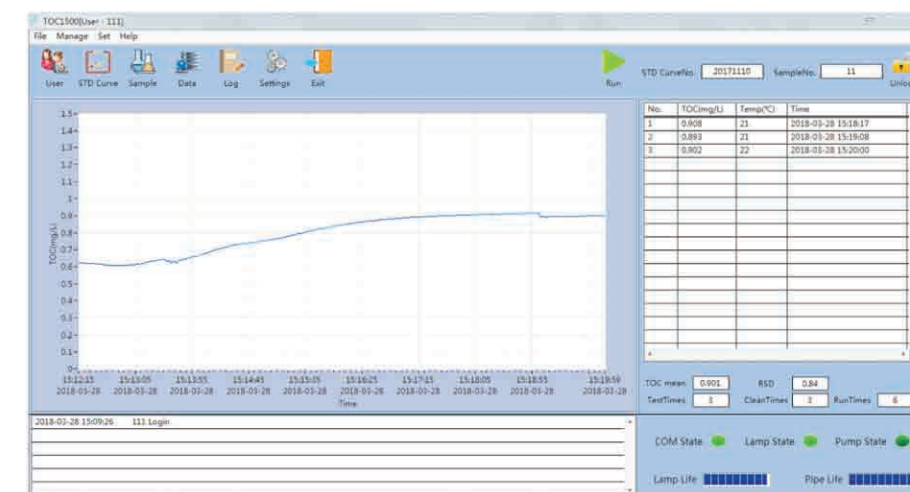
1. Settings for heating and cooling
2. Temperature; acidification sampling and draining time; Basic setting for pump, valve and temperature Control
3. Press "TC" clean, the system will automatically start drain-add sodium persulfate draining sampling draining



## TOC software (for TOC-1500/TOC-1700)



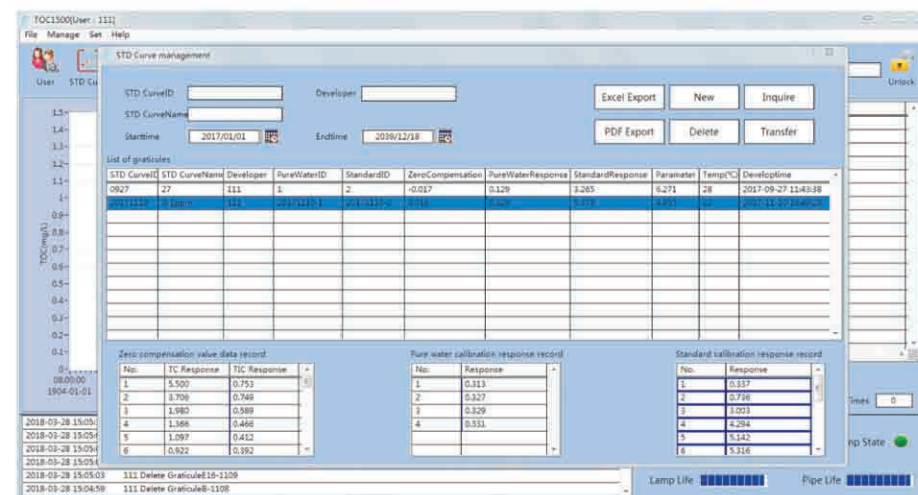
Log in with User ID and password.



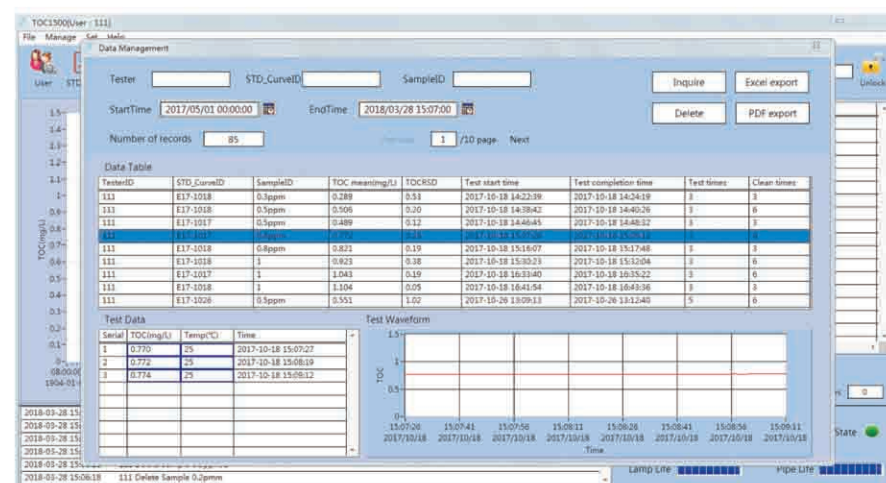
Main interface for software shows running status and all data. User can switch to other functions on this interface.



## TOC software (for TOC-1500/TOC-1700)

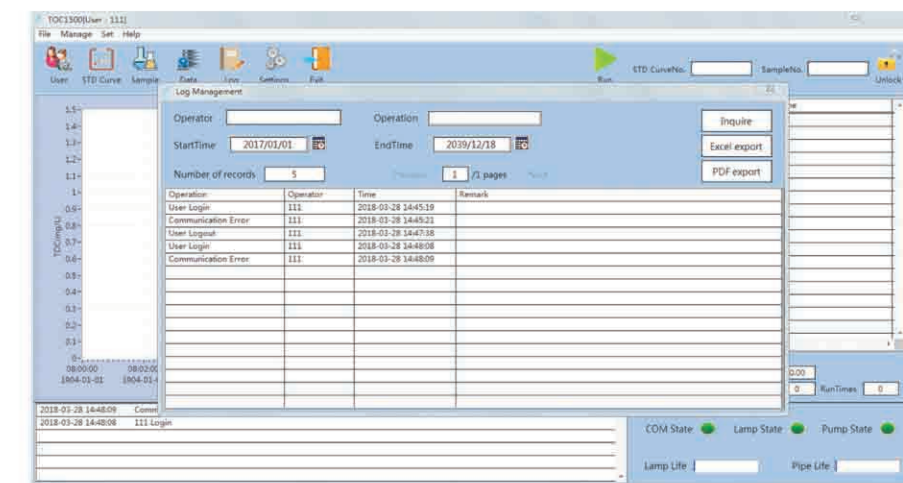


User can choose and check saved curves on this interface.

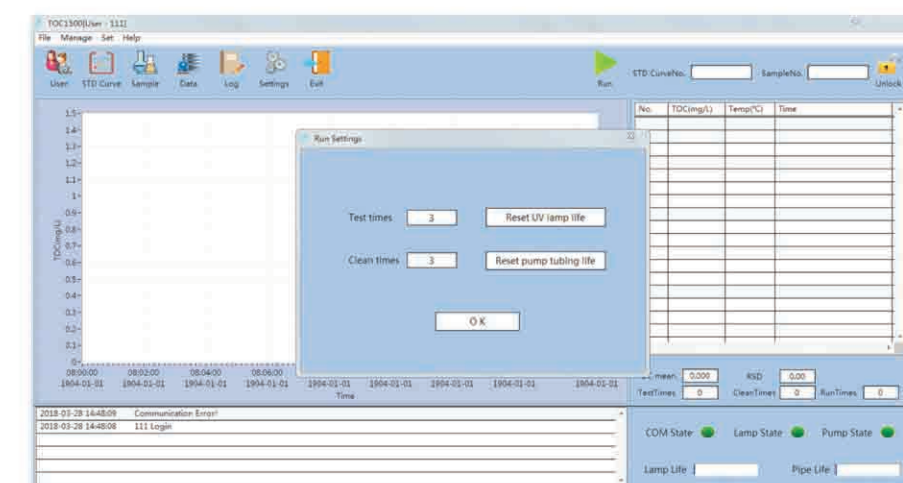


Sample interface: User can check previous analysis data on this interface.

## TOC software (for TOC-1500/TOC-1700)



Record interface: Users can check previous record on this interface.



Running interface: User can set test times and clean times. Also they can reset UV lamp and pump tubing on this interface.