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METASH

PRODUCT CATALOG

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METASH

Shanghai Metash Instruments Co.,Ltd.

COMPANY

INTRODUCTION

Since 2008, Metash Instruments has been dedicating to excellence in manufacturing laboratory and scientific instruments.

We provide a full range of UV/VIS Spectrophotometers, TOC Analyzer and Microwave Digestion System.

Premium product quality, competitive market strategy and perfect service are our core competitiveness.

With strong global distribution network and good reputation, our products have been sold to 90+ countries and 50,000+ instruments are serving for Environment, Food, Cosmetics, Pharmaceuticals, Life science and Chemical fields, etc.

We aim to be the leading supplier of analytical instruments worldwide, so we always attach great importance to product quality and services. We possess 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.

OEM or ODM request is also welcomed. We have established stable cooperations with many famous companies based on OEM/ODM. We will continue looking for reliable partners and look forward to growing with you.

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History



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 applications.

Features

- ◆ Latest Microprocessor Controlling System

With latest microprocessor controlled, V-5000 could realize Auto Zero and Auto 100%T adjustment only with one button. It equips with 128*64 LCD display instead of LED for direct readout of Transmittance, Absorbance and Concentration.

- ◆ Precision 1200 lines/mm Grating Monochromator

The precision 1200 lines/mm grating Monochromator ensures high wavelength resolution, high parameters accuracy and low stray light.

- ◆ Easy Data Output by USB/Parallel Port

V-5000 equips with a USB port which could connect to PC to edit data through a specific software. The data also can be printed through the parallel port when connected to a micro thermo printer. The PC software and micro printer are optional.

- ◆ Elegant Streamlined Design, Multi-function Operation System

V-5000 has an elegant streamlined design, the compact body only occupies little space while it still equips with 120mm wide sample compartment and long optical path monochromator to reserve enough space for optional accessories to realize multi functions.

- ◆ Four Display Modes, One-Button Quick Switching

Transmittance, Absorbance, Concentration and Factor (coefficient) mode could be one-button switched quickly.

Technical Specification

Model	V-5000	Photometric Mode	T, A, C, F
Optical System	Single Beam, Grating 1200 lines/mm	Stray Light	≤0.2%T@360nm
Wavelength Range	325-1000nm	Stability	± 0.002A/h @ 500nm
Spectral Bandwidth	4nm	Display	128*64 Dots LCD
Wavelength Accuracy	±2nm	Detector	Silicon Photodiode
Wavelength Repeatability	≤ 0.5nm	Output	USB Port & Parallel Port
Wavelength Setting	Manual	Light Source	Tungsten Halogen Lamp
Photometric Accuracy	±0.5%T	Power Requirements	AC 85~250V
Photometric Repeatability	≤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 includes 2 classic models: V-5100 and UV-5100

V-5100 only works in visible range while UV-5100 works in both visible and UV range.

Features

- ◆ 2.5 inches high-definition LCD Display

V-5100 and UV-5100 equip with a 2.5 inches high-definition LCD display which clearly shows standard curves and test results.

- ◆ Imported Tungsten Lamp and Deuterium Lamp

The imported tungsten lamp and deuterium lamp reduce most stray light which ensures high photometric accuracy. The ultra-long service life and stable working status make V-5100/UV-5100 perform perfectly.

- ◆ Standard Curve, Quick Establishing

It's easy and quick to establish various standard curve according to different samples and find the concentration of unknown samples.

- ◆ Easy Data Output, USB/Parallel Port

The USB port is used for PC connection to realize spectrum scanning, kinetics, multi-wavelength, etc. The Parallel port is used for micro printer connection to print data and standard curve directly. PC software and micro printer are optional.

- ◆ Multiple Results Readout, Large Storage Capacity

V-5100/UV-5100 could display wavelength, absorbance and transmittance with 5 lines of results per page. The large storage capacity could save up to 200 groups of test results.

- ◆ Automatic Wavelength Setting

The wavelength could be set automatically through arrow keys to avoid misoperation.

Technical Specification

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

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	1cm Quartz cuvette(UV series)	2	pcs
6	Dust Cover	1	pcs

UV-5100B

Spectrophotometer



UV-5100B is a practical UV Visible Spectrophotometer, it's upgraded from model UV-5100. The special designed inner structure ensures high stability and makes it easy to replace spare parts.

Features

◆ Low Stray Light

UV-5100B is made of high-quality optical components which ensures very low stray light.

◆ Automatic Wavelength Setting

The wavelength could be set automatically through arrow keys to avoid misoperation.

◆ Rigid Structure, High Stability and Durability

UV-5100B is with special rigid inner structure, all optical components are fixed on a special rigid baseboard which ensures high stability and reliability.

◆ Easy Data Output

The USB port is used for PC connection to realize spectrum scanning, kinetics, multi-wavelength, etc. The Parallel port is used for micro printer connection to print data and standard curve directly. PC software and micro printer are optional.

◆ Standard Curve, Quick Establishing

It's very easy and quick to establish various standard curve according to different samples and find the concentration of unknown samples

◆ Multiple Results Readout, Large Storage Capacity

Wavelength, absorbance and transmittance could be displayed with 5 lines of results per page. The large storage capacity could save up to 200 groups of test results.

Technical Specification

Model	UV-5100B	Photometric Range	-0.3-3A, 0-200%T, 0-9999C
Optical System	Single beam, Grating 1200 lines/mm	Stray Light	≤0.05%T@220,360nm
Wavelength Range	190-1000nm	Stability	± 0.001A/h @ 500nm
Bandwidth	2nm	Display	128*64 Dots LCD
Wavelength Accuracy	±1nm	Detector	Silicon Photodiode
Wavelength Repeatability	≤0.2nm	Output	USB Port & Parallel Port
Wavelength Setting	Auto	Light Source	Tungsten Lamp & Deuterium Lamp
Wavelength Resolution	0.1nm	Power Requirements	AC 85~250V
Photometric Accuracy	±0.5%T	Dimension	490*370*220mm
Photometric Repeatability	≤0.2%T	Weight	14KG/15KG

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	1cm quartz cuvette	2	pcs
6	Dust Cover	1	pcs



V-5600/UV-5600

V-5800/UV-5800

Spectrophotometer

5600 and 5800 series include 4 models: V-5600, UV-5600, V-5800 and UV-5800.

Both series are designed with precision lead screw structure, it ensures extremely high wavelength accuracy.

The 5800 series which with advanced technical specification would be your best choice of single beam spectrophotometer.

Features

◆ Precision Lead Screw Structure

Designed with precision lead screw structure which highly improves wavelength accuracy and wavelength resolution.

◆ Automatic Wavelength Setting

The wavelength could be set automatically through arrow keys to avoid misoperation.

◆ Complete Numerical Keys

All parameters, like wavelength, concentration, etc. can be easily set by complete numerical keys.

◆ Easy Data Output

The USB port is used for PC connection to realize spectrum scanning, kinetics, multi-wavelength, etc.

The Parallel port is used for micro printer connection to print data and standard curve directly. PC software and micro printer are optional.

◆ 8mm-thick Optical Base

All optical components are fixed on an 8mm-thick rigid die-cast aluminum board which ensures high stability and reliability.

◆ Imported Tungsten Lamp and Deuterium Lamp

The imported tungsten lamp and deuterium lamp reduce most stray light which ensures high photometric accuracy. The ultra-long service life and stable working status make device perform perfectly.

◆ Standard Curve, Quick Establishing

Easy and quick to establish various standard curve according to different samples and find the concentration of unknown samples.

Technical Specification

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

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	1cm quartz cuvette(UV series)	2	pcs
6	Dust Cover	1	pcs

UV-6000

UV/VIS Spectrophotometer



UV-6000 equips with a 6 inches large LCD display, it is an ideal and advanced analytical instrument for laboratory to realize Wavelength Scanning, Kinetics, Multi-wavelength test, etc. All functions can be realized with the advanced stand-alone system, all data and graphs can be shown on device directly.

Features

- ◆ 6 inches high-definition Large LCD Display

Equipped with a 6 inches large LCD display, all data and graphs can be shown directly and clearly on device screen.

- ◆ Rigid Structure, 8mm-thick Optical Base

All optical components are fixed on an 8mm-thick rigid die-cast aluminum board which ensures high stability and reliability.

- ◆ Advanced stand-alone system, Powerful Functions

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

- ◆ Easy Data Output

The USB port is used for PC connection to realize spectrum scanning, kinetics, multi-wavelength, etc.

The Parallel port is used for micro printer connection to print data and standard curve directly. PC software and micro printer are optional.

Technical Specification

Model	UV-6000	Stray Light	$\leq 0.05\%T @ 220nm, 360nm$
Wavelength Range	190-1100nm	Noise	$\pm 0.0005A$
Bandwidth	1.8nm	Display	320*240 Dots LCD
Wavelength Accuracy	$\pm 0.5nm$	Detector	Silicon Photodiode
Wavelength Repeatability	$\leq 0.2nm$	Output	USB Port & Parallel Port
Photometric Accuracy	$\pm 0.3\%T(0-100\%T)$	Lamps	Tungsten Lamp and Deuterium Lamp
Photometric Repeatability	$\leq 0.15\%T$	Power Requirements	AC 220V/50Hz or AC 110V/60Hz
Photometric Range	-0.3-3A, 0-200%T, 0-9999C	Dimension	460*380*180mm
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	1cm quartz cuvette	2	pcs
6	Dust Cover	1	pcs



UV-6100 SERIES

Single Beam Spectrophotometer

UV-6100 series is the advanced scanning UV Visible spectrophotometer which combines all best features of single beam spectrophotometers. It is the most ideal choice of stand-alone spectrophotometers.

3 models are included in this series: UV-6100, UV-6100A and UV-6100S.

Features

- ◆ 520mm Long Light Path

The unique 520mm long light path design greatly improves the wavelength resolution and make the bandwidth reach 0.5nm.

- ◆ Multi Functions, Advanced Stand-alone System

Wavelength scanning, Standard curve, Kinetics, Multi-wavelength scanning, DNA/Protein test could be realized on device directly without PC software. The standard curves and test results would be shown on device directly as well.

- ◆ 16mm Thick Aluminum Optical Base

A 16mm thick rigid aluminum base is used as the optical mount which ensures high stability and reliability.

- ◆ Convenient Calibration System

The baseline, wavelength, dark current can be calibrated automatically to keep device in perfect working status.

- ◆ 6 inches High-definition LCD Display

UV-6100 series equip with a 6 inches large LCD display to show results and curves.

- ◆ Data Output

The USB port is equipped for PC connection and the PC software would come standard with the instrument.

- ◆ Easy Operation by PC Software

Spectrum scanning, Standard curve, Kinetics, Multi-wavelength scanning, DNA/Protein test can also be realized by PC software. The standard curve and test results is available to be exported and saved on PC directly.

Technical Specification

Model	UV-6100/UV-6100A/UV-6100S	Stray Light	≤0.03%T @ 220nm,360nm
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	±0.1nm@656.1nm,±0.3nm@all	Detector	Silicon Photodiode
Wavelength Repeatability	0.1nm	Output	USB Port & Parallel Port
Photometric Accuracy	±0.2%T(0-100%T)	Lamps	Tungsten Lamp and Deuterium Lamp
Photometric Repeatability	≤0.1%T(0-100%T)	Power Requirements	AC 220V/50Hz or AC 110V/60Hz
Photometric Range	-0.3-3A,0-200%T,0-9999C	Dimension	625*430*206mm
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	1cm quartz cuvette	2	pcs
6	Dust Cover	1	pcs



UV-6000T

Touch Screen UV/Visible 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 high-definition touch screen clearly shows test results and graphs.
- ◆ Powerful data analysis system with internal computer host could realize multi functions independently. Like establishing calibration curve, photometric measurement, quantitative measurement, spectral scanning, kinetics, DNA/Protein test, multi-wavelength analysis and data printing.
- ◆ Optical system adopts suspension design. All optical parts are independently fixed on the 8mm thick aluminum deformation-free base to avoid the impact of bottom plate deformation and outside vibration on optical system. This premium design greatly improved the stability and reliability of the instrument.
- ◆ Convenient data storage and printing function. UV-6000T can be directly connected to the printer for A4 format data and graph printing.
- ◆ Automatic power on self test and system positioning function could inspect and calibrate the deviation before every use.
- ◆ All test data and analysis reports can be exported to USB disk directly.

Technical Specification

Model	UV-6000T	Baseline flatness	±0.001A
Wavelength Range	190-1100nm	Noise	± 0.0005A
Spectral Bandwidth	2.0nm	Display	800*480 Smart touch screen
Wavelength Accuracy	±0.5nm	Data Output Port	USB Port
Wavelength Repeatability	≤0.2nm	Print Port	USB Port
Stray Light	≤0.05%T @ 220nm,360nm	Light source	Tungsten Lamp& Deuterium Lamp
Photometric Accuracy	±0.2%T(0-100%T),±0.002Abs(0-0.5Abs), ±0.004Abs(0.5-1.0Abs)	Power Requirements	AC 220V/50Hz or AC 110V/60Hz
Photometric Repeatability	±0.1%T(0-100%T),0.001Abs(0-0.5Abs), 0.002Abs(0.5-1.0Abs)	Detector	Silicon Photodiode
Stability	±0.001A/h@500nm	Dimension	460*380*180mm
Photometric Range	0-200%T, -0.3-3.0A, 0-9999C	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	1cm quartz cuvette	2	pcs
6	Dust Cover	1	pcs



UV-8000T/UV-8000TS

Touch Screen
Double Beam UV/VIS Spectrophotometer



Features

- ◆ Adopt dual beam optical system with precision vertical-type dual optical path and dual detector.
- ◆ Imported grating of high performance greatly reduced the stray light and improved the stability and reliability of device.
- ◆ 10 inches large touch screen, built-in 32G memory, support Bluetooth connection network.
- ◆ Three operation modes are available: Host, Computer and App of mobile phone (Android).
- ◆ Powerful data analysis system with internal computer host could realize multi functions independently. Like establishing calibration curve, photometric measurement, quantitative measurement, spectral scanning, kinetics, DNA/Protein test, multi-wavelength analysis and data printing.
- ◆ Optical system adopts suspension design. All optical parts are independently fixed on the 16mm thick aluminum deformation-free base to avoid the impact of bottom plate deformation and outside vibration on optical system. This premium design greatly improved the stability and reliability of the instrument.
- ◆ Convenient data storage and printing function. UV-8000T can be directly connected to the printer for A4 format data and graph printing.
- ◆ Automatic power on self test and system positioning function could inspect and calibrate the deviation before every use.
- ◆ All test data and analysis report can be exported to USB disk directly.
- ◆ PC software is in compliance with 21CFR PART 11 requirements.
- ◆ Graphs support 3D display on PC software.

Technical Specification

Model	UV-8000T	UV-8000TS	Baseline flatness	±0.001A
Wavelength Range	190-1100nm		Noise	± 0.0004A
Spectral Bandwidth	1.8nm	0.5, 1.0, 2.0, 4.0nm	Display	10 inches smart touch screen
Wavelength Accuracy	±0.1nm(D ₂ 656.1nm), ±0.3nm@full range		Data Output Port	USB Port
Wavelength Repeatability	≤0.1nm		Print Port	USB Port
Stray Light	≤0.03%T @ 220nm, 360nm		Light source	Tungsten Lamp and Deuterium Lamp
Photometric Accuracy	±0.2%T(0-100%T), ±0.002Abs(0-0.5Abs), ±0.004Abs(0.5-1.0Abs)		Power Requirements	AC 220V/50Hz or AC 110V/60Hz
Photometric Repeatability	≤0.1%T(0-100%T), 0.001Abs(0-0.5Abs), 0.002Abs(0.5-1.0Abs)		Detector	Silicon Photodiode
Stability	±0.0004A/h@500nm		Dimension	630*430*210mm
Photometric Range	0-200%T, -0.3-3.0A, 0-9999C		Weight	28KG

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	1cm quartz cuvette	2	pcs
6	Dust Cover	1	pcs

UV-9000 SERIES

Double Beam UV/VIS Spectrophotometer



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

Features

◆ Dual Beam Light Path Design

UV-9000 series adopt double light path design, it greatly reduces circuit fluctuation and stray light and ensures high stability of the instrument.

◆ Powerful Stand-alone Operation System

UV-9000 series are equipped with stand-alone operation system. Functions like spectrum scanning, standard curve, kinetics, multi wavelength scanning, DNA/Protein test, etc. can be directly completed on device without connecting PC software.

◆ Long Light Path Design

The unique 520mm long light path design is adopted to improve the wavelength resolution and make the bandwidth of UV-9000S can be switched to 0.5nm.

◆ UV Analyst PC Software

PC software is provided to connect device with PC for easy data output and analysis, the functions include wavelength scanning, standard curve, kinetics, multi wavelength scanning, DNA/Protein test, etc.

◆ 16mm Rigid Aluminum Optical Base

A rigid 16mm thick die-cast aluminum base is used as the optical mount to ensure high stability and reliability.

◆ One-button Automatic Calibration System

The baseline, wavelength and dark current can be calibrated automatically to keep device in good running conditions.

◆ 6 inches Large LCD display

Equipped with a 6 inches large LCD display to show results and curves directly on the screen.

◆ Easy Data Output and Printing

Equipped with USB port to connect with PC, easy to export and print data and analysis report.

Technical Specification

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

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	1cm quartz cuvette	2	pcs
6	Dust Cover	1	pcs
7	Software	1	pcs

UV/VIS
Spectrophotometer

SOFTWARE



UV-SPA/DPA & UV Analyst



UV/V-5 SERIES/UV-6000T/UV-8000T Spectrophotometers < Software >

UV-SPA/DPA analysis software is a new version of PC software for V-5/UV-5 series and UV-6000T/8000T/8000TS UV-Vis Spectrophotometer designed by Metash engineers. It has powerful functions, such as instrument control, measurement, data analysis and data processing. User management, file security and 3D display are also available. The main measurement functions contain Photometric Analysis, Quantitative Analysis, Kinetics Analysis, Wavelength Scan, Multi-wavelength Analysis and DNA/Protein Analysis.

Basic Test (Photometric Analysis)

ID	Wavelength	Abs	ST	Conc	Factor	Remarks
001	440nm	-0.0001	100.0213	0.000	0.000	校正内大
002	440nm	0.0744	84.2475	0.000	0.000	校正内大
003	440nm	0.1122	17.2287	0.000	0.000	校正内大
004	500nm	0.0000	99.9905	0.000	0.000	校正内大
005	500nm	0.1961	63.2127	0.000	0.000	校正内大
006	500nm	1.8940	1.2763	0.000	0.000	校正内大
007	600nm	0.2360	98.0817	0.000	0.000	校正内大
008	700nm	0.0003	99.9271	0.000	0.000	校正内大
009	700nm	0.1814	65.0503	0.000	0.000	校正内大
010	700nm	2.4428	0.2607	0.000	0.000	校正内大
011	700nm	0.1926	17.6197	0.000	0.000	校正内大
012	1100nm	0.0001	99.9692	0.000	0.000	校正内大
013	1100nm	0.2713	42.5299	0.000	0.000	校正内大
014	1100nm	0.4271	37.4383	0.000	0.000	校正内大
015	180nm	0.0000	100.0000	0.000	0.000	校正内大
016	180nm	0.1963	15.9838	0.000	0.000	校正内大
017	180nm	0.2532	54.5476	0.000	0.000	校正内大

Quantitative Analysis

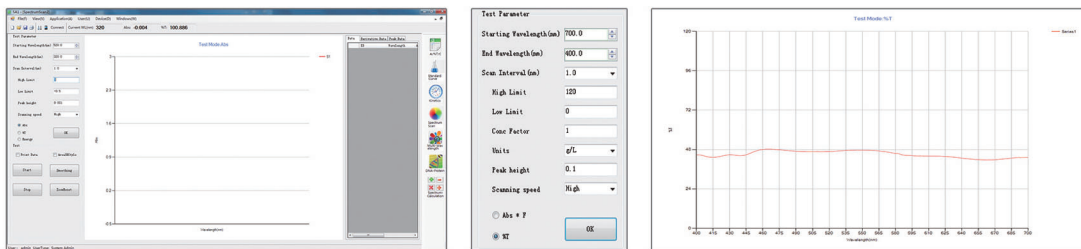
ID	Conc	Abs
01		
02		

Graph Equation: $C = 23.3457A + 0.026$, $R = 0.999895$

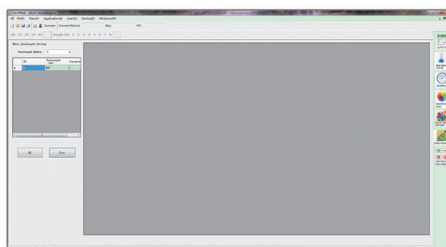
Kinetics Analysis

Test Parameter: Trial Run Time(s) = 60, Sampling Interval(s) = 1, High Limit = 3, Low Limit = -0.1, Conc Factor = 1.0, Waits = 0/L, Abs = F, ST =

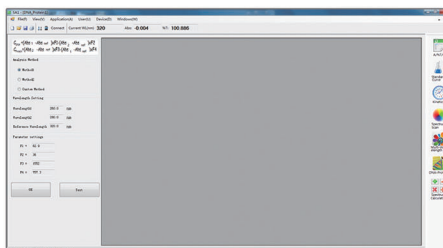
Wavelength Scan



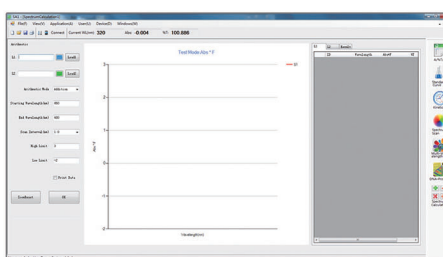
Multi-wavelength Analysis



DNA/Protein Analysis



Spectrum Calculation





UV-6/9 SERIES Spectrophotometers

< Software >

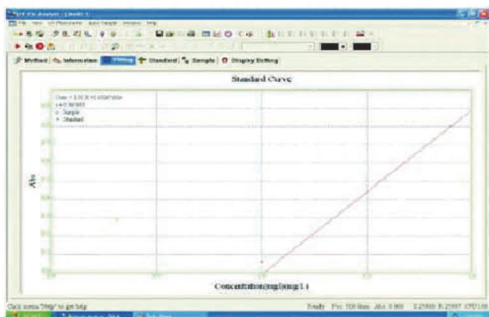
Metash UV/VIS analyst is the PC control software which is compatible with Metash UV-6/9 series of spectrophotometers . It offers the following functions.

Quantitative

Up to 10 standard samples can 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

- Coefficient Method
- Standard Curve



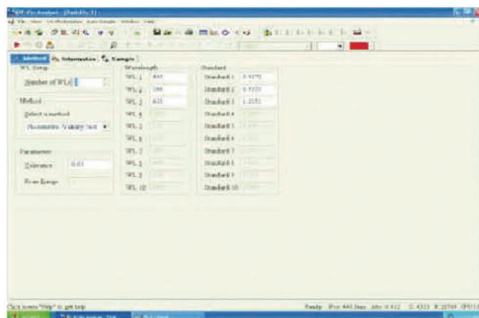
DNA/Protein Test

Concentration and DNA purity are quickly and easily calculated:

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

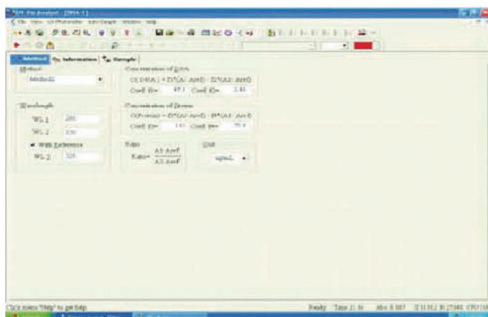
DNA concentration= $62.9 \cdot A_{260} - 36.0 \cdot A_{280}$

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



Standard Curve

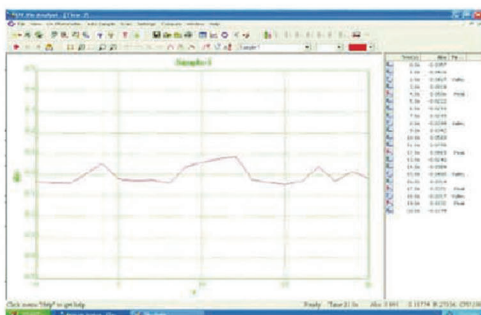
Up to 32 wavelengths can be selected and multiple samples can be measured.



Kinetics

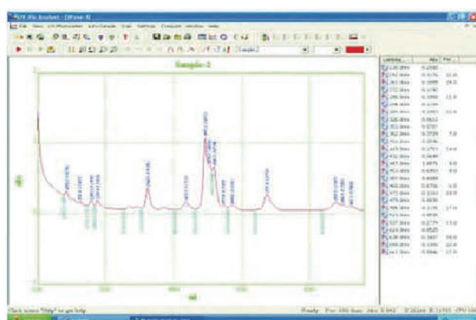
This mode may be used for time course scanning or reaction rate calculations.

- 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 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.



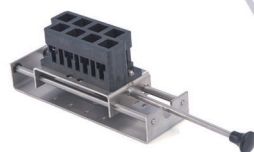


Spectrophotometer Accessory

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



Quartz Cuvettes



Manual 10mm 8 Cell Holder



Printer



Deuterium Lamp



Sipper System
Peltier System



Tungsten Halogen Lamp

METASH



10mm 4-Hole Cell Holder



Transparent Film Holder



Micro Cuvettes Cell Holder



Automatic 10mm 8 Cell Holder



Test Tube Holder



Printer

MWD-800/850

Microwave Digestion System



Features

◆ Special Designed Sample Digestion Vessel

The automatic vent and self-resealing structure which won national patent ensures the digestion vessels can automatically release pressure and instantly reseal when a sudden over-pressure situation occurs. It prevents waste of batch samples and solutions and also avoids vessel damage.

◆ Contact-less Temperature and Pressure Monitoring System

The advanced contact-less IR sensor could measure the real-time temperature of sample solutions in each digestion vessel. Meanwhile, the contact-less pressure sensor could monitor the real-time pressure of each vessel. This realizes isolation between temperature and pressure controlling system, also avoids sample cross-contamination. Each real-time temperature and pressure value is displayed during the whole digestion process, allowing a clear check of digestion conditions.

◆ Large Storage Capacity

It can edit and store 255 types of programs according to user's requirements and each method program can set parameters (temperature, pressure, time, microwave power) according to their own requirements which provides convenient operation for users.

◆ Safety Protection System

With high-strength double locked security door, the real-time temperature and pressure monitoring, automatic adjustment of over-pressure and over-temperature and abnormal sound monitoring, the device can run in a highly safe environment.

◆ Power Adjustment

The variable frequency resonance or non-pulse(optional) continues rotating mode ensures high efficient and even microwave throughput. It can be set between 0~3000W according to user's requirements.

Technical Specification

Vessel Quantity	40 vessels / 50 vessels	Temperature Control	Scanning control of each vessel
Vessel volume	50 ml	Pressure Testing	Contactless pressure sensor
Temperature Monitoring	Contactless IR sensor	Vessel material	Inner:Imported TFM Outer:Imported PEEK+Glass Fiber
Display	7 inches Touch Screen	Pressure Control range	0-10MPa
Maximum Working Pressure	6 MPa	Pressure Control Accuracy	0.01MPa
Temperature Control Range	50~400℃	Power	AC 220V,16A,50/60Hz
Dimension	640*630*590mm	Weight	78KG
Maximum Working Temperatur	250℃	Temperature Control Accuracy	±0.3℃
Inner Vessel Temperature Limit	300℃	Microwave Frequency	2450Hz
Rotation Mode	360 Continuous Rotation	Microwave Leak	<5mw/cm ²
Microwave Power	0-3000W Adjustable		

MWD-650/700

Microwave Digestion System



Features

◆ Special Designed Sample Digestion Vessel

The automatic vent and self-resealing structure which won national patent ensures the digestion vessels can automatically release pressure and instantly reseal when a sudden over-pressure situation occurs. It prevents waste of batch samples and solutions and also avoids vessel damage.

◆ Contact-less Temperature and Pressure Monitoring System

The advanced contact-less IR sensor could measure the real-time temperature of sample solutions in each digestion vessel. Meanwhile, the contact-less pressure sensor could monitor the real-time pressure of each vessel. This realizes isolation between temperature and pressure controlling system, also avoids sample cross-contamination. Each real-time temperature and pressure value is displayed during the whole digestion process, allowing a clear check of digestion conditions.

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◆ Safety Protection System

With high-strength double locked security door, the real-time temperature and pressure monitoring, automatic adjustment of over-pressure and over-temperature and abnormal sound monitoring, the device can run in a highly safe environment.

◆ Power Adjustment

The variable frequency resonance or non-pulse(optional) continues rotating mode ensures high efficient and even microwave throughput. It can be set between 0~2000W/0~3000W according to user's requirements.

Technical Specification

Vessel Quantity	12 Vessels /18 Vessels	Temperature Control	Scanning control of each vessel
Vessel Volume	100 ml	Pressure Testing	Contactless pressure sensor
Temperature Monitoring	Contactless IR sensor	Vessel material	Inner:Imported TFM Outer:Imported PEEK+Glass Fiber
Display	7 inches Touch Screen	Pressure Control range	0-10MPa
Maximum Working Pressure	6 MPa	Pressure Control Accuracy	0.01MPa
Temperature Control Range	50~400℃	Power	AC 220V,16A,50/60Hz
Dimension	640*630*590mm	Weight	70KG/75KG
Maximum Working Temperatur	250℃	Temperature Control Accuracy	±0.3℃
Inner Vessel Temperature Limit	300℃	Microwave Frequency	2450Hz
Rotation Mode	360 Continuous Rotation	Microwave Leak	<5mw/cm ²
Microwave Power	0-2000W Adjustable/ 0-3000W Adjustable		

MWD-610 SERIES

Microwave Digestion System



MWD-610 series is a new series of microwave digestion system which launched in 2019.

It is newly designed and fully upgraded with higher performance and safer protection system.

The smart design and perfect performance make it warmly welcomed by users worldwide.

Features

- Optional vessel quantity, up to 12 vessels to meet different digestion requirements.
- Vertical design for even distribution of microwave.
- Real-time monitoring for both temperature and pressure of each vessel.
- Contactless sensor monitoring with no burst disk design saves consumables cost and maintenance cost.
- Imported vessel material for both sample vessel and protection vessel highly ensures safety.
- 7 inch color Touch screen with user-friendly interface for easy operation.
- Imported CFRP outer shell material with high strength ensures impact resistance.
- Pre-installed general standard methods, users can also create, save, modify and delete the method.
- 316L industrial stainless steel cavity with multilayer teflon coating avoids acid corrosion, also improves cooling efficiency.

Technical Specification

Model	MWD-610-T6	MWD-610-T8	MWD-610-T10	MWD-610-T12
Vessel Quantity	6	8	10	12
Temperature Monitoring System	Temperature Monitoring: Contactless IR Sensor; Scan monitoring for each vessel Temperature Controlling Range: 50~400°C; Temperature Accuracy: ±0.1°C; Display Accuracy: ±0.1°C			
Pressure Monitoring System	Pressure monitoring: Contactless Sensor; Scan monitoring for each vessel Pressure Controlling Range: 0~15MPa Pressure Accuracy: ±0.01MPa Display Accuracy: ±0.01Mpa			
Vessel Volume	100ml			
Sample Vessel Material	Imported TFM			
Protection Vessel Material	Peek+Glass Fiber			
Display	7 inch Touch Screen			
Rotation	360° Continuous Rotating			
Microwave Tank	316L Stainless Steel tank With Corrosion-Proof Coating			
Microwave Power	0-1000W (Adjustable)			
Microwave Leakage	<5mw/cm ²			
Air Exhaust	High Power Corrosion-Proof Air Blower			
Power	AC 220V±10%, 10A, 50/60Hz			
Dimension	490×560×630mm (L×W×H)			
Weight	47KG			

MWD-610 MINI

Microwave Digestion System



MWD-610 MINI is a mini and economic model of MWD-610 Series. The compact body owns same powerful performance, up to 10-position rotor meets most of experiment requirements, which would be a good choice for school labs, general factory labs and research institutes, etc.

Features

- Compatible with 6/8/10-position rotor which meets different digestion demands.
- Vertical waveguide design, 3D output technology and harmonic power frequency highly ensure uniform microwave distribution.
- The imported contactless IR sensor and pressure sensors are adopted in temperature and pressure controlling system, which realizes the real-time monitoring of temperature and pressure in each vessel and display the T&P scanning curve.
- No consumables, e.g. bursting disk, sealing cup, etc. lower the maintenance cost.
- The strong outer shell is made of intensive carbon fiber and polymeric materials which highly ensure the safety.
- Equip with smart 7 inch touch screen, intelligent software and user-friendly interface.
- Multiple international application methods are pre-installed. Users can also edit, modify and delete the specific methods.
- Equip with 316L stainless explosion-proof cavity, coated with multilayer anticorrosive and heat resisting coatings, which greatly prolongs its service life and ensure the safety of operation.
- High power turbulent air cooling design makes fast cooling.
- Professional electromagnetic protection design, compatible with high-level microwave leakage protection standards.

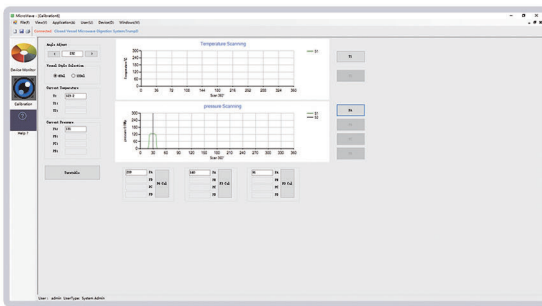
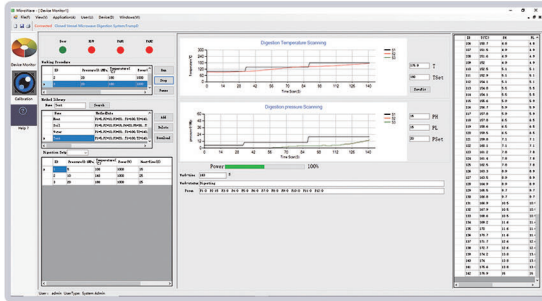
Technical Specification

Vessel Quantity	6	8	10
Temperature Monitoring System	Contactless IR sensor All vessels scanning monitoring		
Pressure Monitoring System	Contactless pressure sensors All vessels scanning monitoring		
Working Pressure Range	0-6MPa		
Working Temperature Range	50-400℃ Accuracy: ±0.1℃		
Max. Working Temperature	250℃		
Vessel Volume	100mL		
Display	Smart 7 inch color touch screen		
Rotation Mode	360° continuous rotation		
Microwave Power	0 ~ 1000 W (Adjustable)		
Microwave Frequency	2450MHz		
Cavity Volume	35L		
Microwave Leakage	<5mw/cm ²		
Power	AC 220V±10%, 10A, 50/60Hz		
Dimension (L×W×H)	490mm*560mm*533mm		
Weight	40KG		



PC Software

Microwave Digestion System



Features ■

- Comply with 21 CFR Part 11, which enables users to realize e-signatures, limits of authority management and audit trail, etc.
- User-friendly interface with modular design makes easy operation.

Functions ■

[Standard Method Library]

The software has built-in standard method library and pre-installed various general sample digestion methods. Users can also search, edit, save, modify and delete the specific methods.

[Temperature and Pressure Monitoring Window]

The real-time data and scanning curve of temperature and pressure of each vessel would be shown in the T&P monitoring window.

[Real-time Data Scrolling Window]

All data of the whole running process would be saved automatically, users can check the specific digestion process so that to improve the digestion method.

[FAQ]

Built-in instruction of calibration and FAQ provides a simple and fast maintenance service.

HEATING BLOCKS (SPH SERIES)

Heating blocks is the optional accessory of Metash microwave digestion system.

It is mainly used for pre-heating of some food, cosmetics and organic samples to check the intensity of sample reaction before digestion; it is also used for acid removing after digestion.



Features

- Coated with PFA which is of high temperature and corrosion resistance, also extends device service life.
- Equipped with AI and PID smart temperature controlling system to realize automatic temperature adjustment and improve the accuracy.
- Over-temperature protection and alarm system greatly improve experiment safety.

Technical Specification

Model	SPH-1	SPH-2	SPH-3
Sample Number	12	20	56
Applicable Models	MWD-610 Series	MWD-650/700	MWD-800/850
Aperture And Hole Depth	Φ39*65mm	Φ41*150mm	Φ32*118mm
Temperature Control Range	RM Temperature~250℃	RM Temperature~250℃	RM Temperature~250℃
Temperature Control Accuracy	±0.5℃	±0.5℃	±0.5℃
Temperature Setting Resolution	0.1℃	0.1℃	0.1℃
Heating Power	1600W	2000W	2000W
Power	AC220V±10%	AC220V±10%	AC220V±10%
Weight	13kg	34kg	40kg

TOC-1500/1700(Online)

Total Organic Carbon Analyzer



Features

- Equipped with conductivity detector to quantify TOC concentration .
- TOC-1700 is able to work under on-line mode to realize real-time monitoring.
- Ideal choice to measure and monitor microelectronics water, purified water, water for injection, etc.
- Automatic sample introduction with one-button setting, no sample contamination, no harm on operator and environment.
- UV oxidation by UV lamp, no need to add acid, gas or catalytic, greatly reduces the experiment and maintenance cost.
- 7 inches touch screen with smart UI, easy to operate and read test data.
- In compliance with FDA-21 CFR Part11 requirements and USP, EP,JP and ChP.
- Auto sampler is optional according to different experiment requirements.
- Online and offline mode can be easily switched. (TOC-1700)
- 8GB large storage capacity, no restriction of data and time.
- Quick test, each analysis takes less than 3 minutes.
- All historical records can be traced by searching test date.
- Data can be retrieved and saved to USB directly.
- Equipped with Bluetooth printer for quick and easy data printing.
- Modular design for quick installation and easy maintenance.

Technical Specification

Detection Range	0.001-1.5mg/l	Detection Limit	1ppb
Max Tolerance	±5%	Analysis Time	3 min
Response Time	Within 10 min	Sample Temperature	1-95°C
Environment Temperature	10-40°C with temperature change ±5 °C/d	Sample Flow Speed	3ml/min
Relative Humidity	≤85%	Repeatability Tolerance	≤3%
Drifting	±5%	Power Supply	AC 220V, 50/60Hz or AC 110V, 50/50Hz
Frequency	50/60Hz	Rated Power	100W
Dimension	440*220*300mm		

TOC-2000/3000

Total Organic Carbon Analyzer



Features

- Equipped with national patented signal management system to realize accurate online setting, real-time monitoring, self-testing and flow speed controlling, also ensures perfect device performance and experiment safety.
- Low current system design highly ensures the safety of operators.
- Temperature can be set according to different samples which ensures complete sample digestion.
- The power of cooling module can be set according to sampling volume which improves drying performance, also prohibits wet gas damaging the NDIR detector.
- Automatic leakage checking system not only avoids misoperations, also improves device performance and operation safety.
- Flow rate controlling system avoids the influence of flow rate fluctuation which ensures more accurate data.
- TOC detector with 24 bits data solution extends monitoring range. Controlling system with 32bin processing technology greatly improves device performance.

Technical Specification

Model	TOC-2000	Parameters	TC, TIC, TOC, NPOC
Detector	NDIR	Operation Mode	PC software Controlled
Digestion Mode	High Temperature Combustion	Gas Requirement	Oxygen \geq 99.995%
Application	Liquid Sample	Detection Limit	50 μ g/l (ppb)
Measurement Range	0-30000mg/l (ppm)	Maximum Salinity	85g/l
Repeatability	3%	Dimension	430*455*440mm
Power Supply	AC220V, 50Hz or AC110V, 60HZ, 200W		

Model	TOC-3000	Parameters	TC, TIC, TOC, NPOC
Detector	NDIR	Operation Mode	PC software Controlled
Method	Wet Chemical Oxidation By UV	Gas Requirement	Nitrogen \geq 99.995%
Application	Liquid Sample	Detection Limit	5 μ g/l (ppb)
Measurement Range	0-10000mg/l (ppm)	Maximum Salinity	85g/l
Repeatability	3%	Dimension	430*455*440mm
Power Supply	AC220V, 50Hz or AC110V, 60HZ, 200W		

AS-D20/AS-W20

Optional Accessory

Autosampler AS-D20/AS-W20 are optional accessories of Metash TOC-2000/TOC-3000 analyzer. The compact design with powerful auto sampling function could save 80% measurement time. The positioning system adopts multi-sensors for monitoring which ensures extremely high precision.



Features

- ◆ Compact design, only occupy little space.
- ◆ 20 positions, meet most of experiment needs
- ◆ Easy to operate, no need special operation training.
- ◆ Equipped with USB port for PC connection.
- ◆ Perfectly work with Metash TOC analyzer.
- ◆ Equipped with multi-sensors for real-time monitoring which ensures precision positioning and operation safety.
- ◆ No need special calibration or maintenance after long time use.

Technical Specification

Model	AS-D20	Maximum Number	19
Sample Bottle Volume	30ml	Power Adapter	AC 100-240V, 50/60HZ
Rated Power	120W	Ambient Temperature	0-40℃
Relative Humidity	≤85%	Size	265*373*395 mm
Injection Arm Stroke	85mm		

Model	AS-W20	Maximum Number	19
Sample Bottle Volume	60ml	Power Adapter	AC 100-240V, 50/60HZ
Rated Power	120W	Ambient Temperature	0-40℃
Relative Humidity	≤85%	Size	265*373*395 mm
Injection Arm Stroke	85mm		

Total Organic Carbon Analyzer

SOFTWARE



TOC SOFTWARE

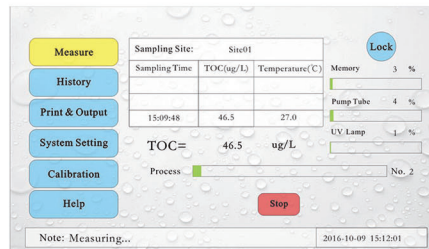
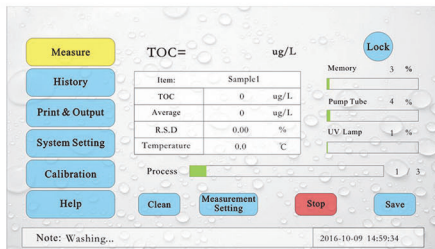


TOC-1500/TOC-1700

Total Organic Carbon Analyzer < Software >

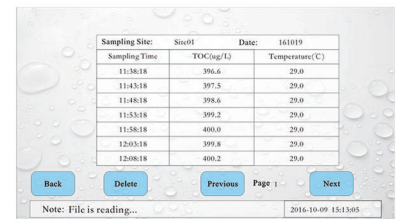
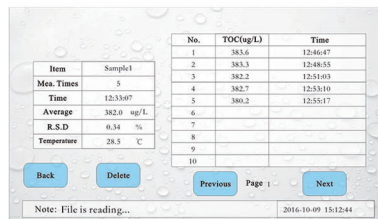
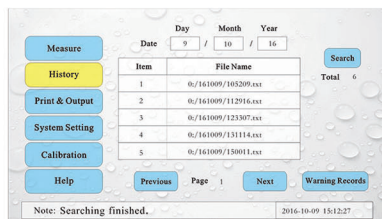
Measure

1. One-click operation, real-time measurement data displayed.
2. Automatic save of measurement data when test finished.
3. Real-time monitoring of UV Lamp and Pump Tube with automatic prompt when out of service.
4. Quick cleaning, cleaning time and speed can be set as required.
5. User interface can be locked to ensure data safety.
6. Sampling site can be set under ONLINE mode.
7. Rolling update of measurement data under ONLINE mode.



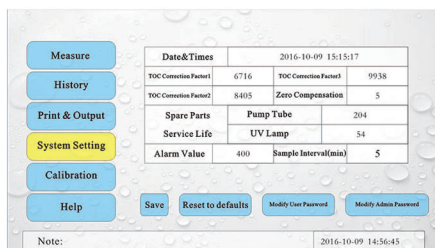
History

1. Historical measurements can be retrieved by date search.
2. Data displayed clearly and can be deleted as need.
3. Alarm record can be retrieved and exported out.
4. Sampling site, date, time and data recorded in details under online mode.



System Setting

1. Calibration data, Service life of consumables and Alarm value can be easily set.
2. System time can be set according to different time zones.
3. Factory reset is available to restore defaults.
4. User or Admin password can be reset.



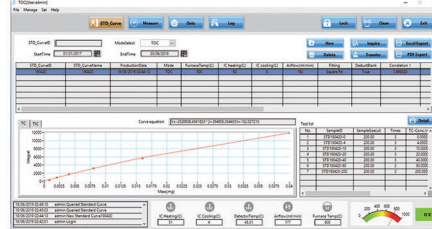
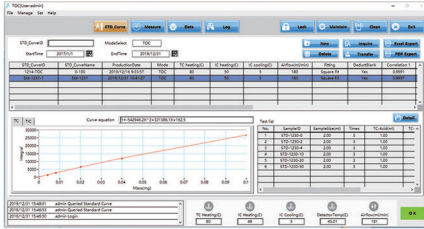
TOC-2000/TOC-3000

Total Organic Carbon

Analyzer < Software >

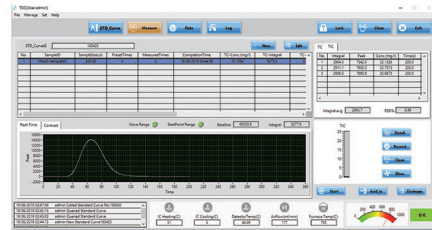
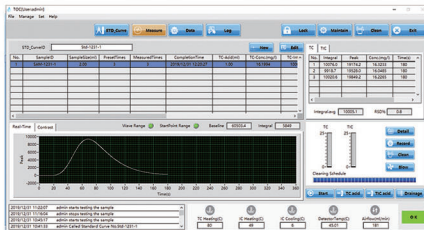
Standard Curve

1. Real-time monitoring of temperature and air flow with automatic prompt.
2. Fitted equation of standard curve and test data can be stored and retrieved easily.
3. The data of standard curve can be exported out as Excel or PDF files.



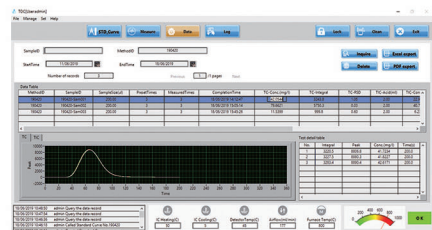
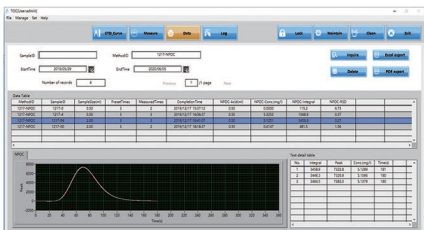
Measure

1. Batch test is available with clear data display, easy to make comparisons.
2. Real-time display of peak changes.
3. History data can be inquired and retrieved quickly.



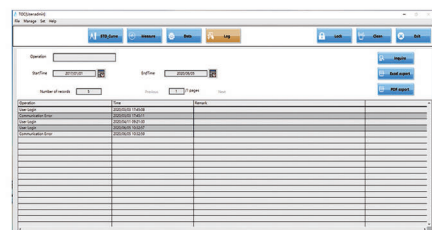
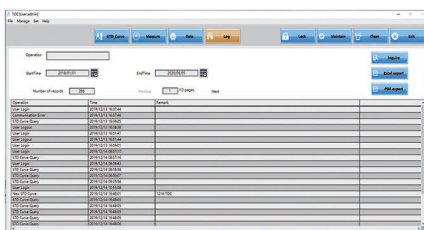
Data

1. Quick search according to conditions, like Sample ID, Test time, etc.
2. Data under same test conditions can be exported by groups for clear comparison.
3. Test data can be stored as curve with peak, easy to compare with historical data.



Log

1. Users' each operation can be traced and managed, comply with 21 CFR Part 11 requirements.
2. Log can be exported out as Excel or PDF files for easy check.



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