Microplate Reader

One-Stop Solution

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Choose a microplate reader that best suits your research needs...

Microplate reader is a high-quality scientific research instrument specially designed for medicine, biology, drug research and development, food and cosmetics industries. Allsheng's microplate reader series have the characteristics of flexibility, ease of use and diverse styles. There are not only single-function models, but also "three-in-one" combined multi-mode models; not only filter-type detection systems, but also monochromator detection systems with raster. You can choose the appropriate configurations and models according to the laboratory application and budget.

Multi-Mode Microplate Reader Series Products
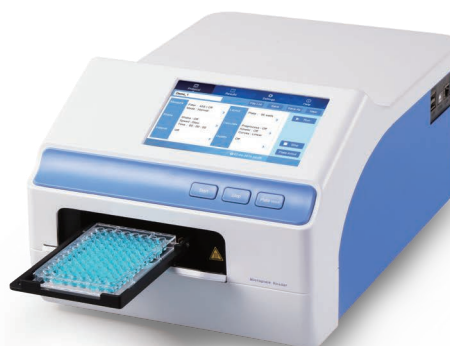

UT-A300 / A400 / A500

UT-F100 / L100

Microplate Reader Series Products

UT-200 / 200HT

UT-100 / 100T

▌ Function Configuration Overview

	Monochromater Type				Filter Type		
	UT-200/200HT	UT-A300	UT-A400	UT-A500	UT-100/100T	UT-F100	UT-L100
Absorbance-monochromater	●	●	●	●			
Absorbance-filter					●		
Fluorescence-filter		●	●	●		●	
Time-resolved fluorescence			●	●			
Fluorescence polarization-filter				●			
Luminescence		●	●	●			●
u-Nano Plate	●	●	●	●			
Injector (optional)		○	○	○		○	○
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▌ Application Examples

ELISA

Cell Viability

ORAC

Cell Multiplication

Cytotoxicity

cAMP Detection

Nucleic Acid/ Protein Quantification

Apoptosis

GPCR Analysis

Reporter Gene

ATP Quantification

Receptor-Ligand Binding

Ca²⁺ Signaling

Ion Channel Detection

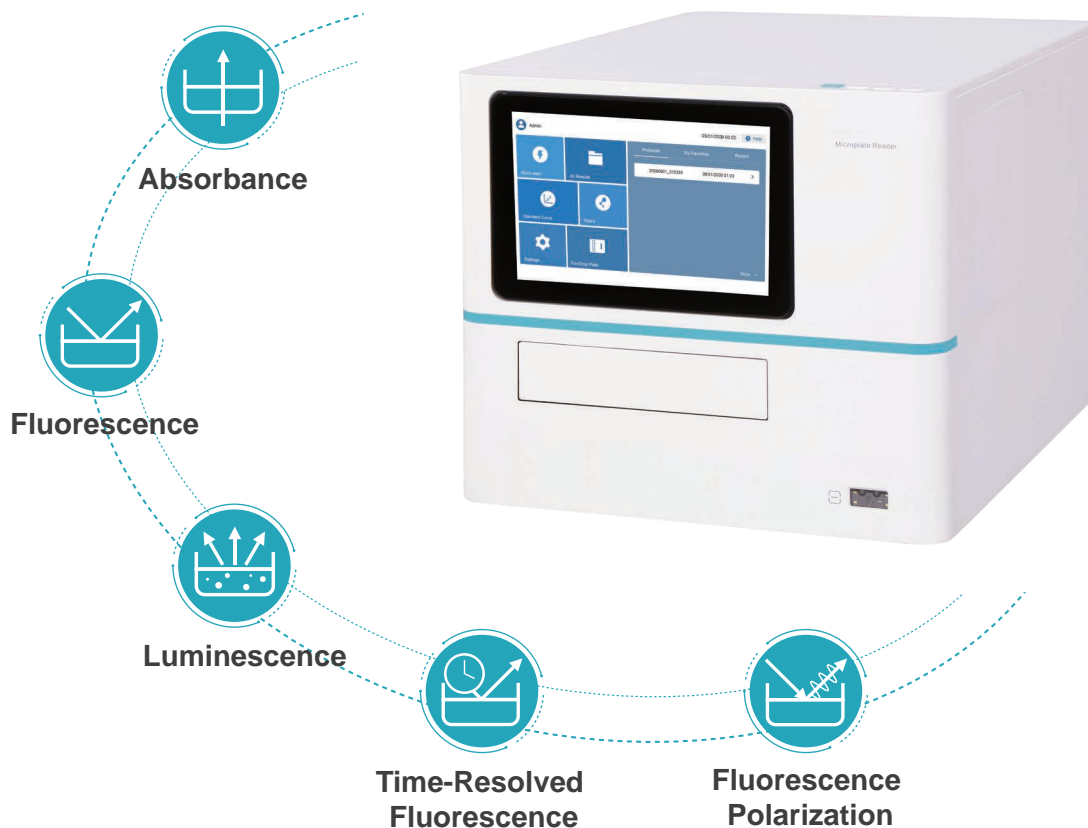Gfp and Other Fluorescent Protein Detection

Multi-Mode
Microplate Reader

MRC multi-mode microplate reader series products can meet your various detection needs for microplates. We offer a variety of microplate reader solutions including absorbance, fluorescence, luminescence, time-resolved fluorescence, and fluorescence polarization to meet your specific workflow needs. We also offer a range of special, modular, and upgradeable detection accessories to enhance your detection experi-ence

Multi-Mode Microplate Reader Selection Guide

Model	UT-A300	UT-A400	UT-A500	UT-F100	UT-L100
Plate	6-384				
Absorbance	✓	✓	✓	--	--
Fluorescence	✓	✓	✓	✓	--
Luminescence	✓	✓	✓	--	✓
Time-resolved fluorescence	--	✓	✓	--	--
Fluorescence polarization	--	--	✓	--	--
Xenon lamp	✓	✓	✓	✓	--
Wavelength range	Absorbance: 200-1000 nm			Fluorescence: EX: 200-1000 nm EM: 270-850 nm	Luminescence: 200-850 nm
	Fluorescence: EX: 200-1000 nm; EM: 270-850 nm				
	Luminescence: 200-850 nm				
	--	--	Fluorescence polarization: 300 - 850 nm		
Wavelength selection	Absorbance: monochromator / fluorescence: filter			Filter	Filter
Incubation temperature	RT+4 °C~45 °C				
Screen size	10 inch				
System	Android system				
Analysis software	Reader It-II				
Accessories	Microplate, injector			Injector	

UT-A300/A400/A500 Multi-Mode Microplate Reader

Absorbance

Fluorescence

Luminescence

Time-Resolved Fluorescence

Fluorescence Polarization

UT series multi-mode microplate reader is specially designed or medical, biological and pharmaceutical research andf evelopment institutions to meet the needs of various drugd evelopment and life science research. The high-qualityd detection performance ensures high-quality analysis based on molecular biology, biochemistry and cytology.

In addition to the most basic absorbance, fluorescence and chemiluminescence detection functions, high-performance fluorescence polarization and time-resolved fluorescence detection can also be selected. The instrument is compatible with the client-side modular upgrade function, and users can upgrade and equip with microplates and automatic injectors according to their needs.

The absorbance detection is based on monochromator, which can realize continuous spectrum detection of 200-1000 nm without a filter, which meets almost all absorbance detection applications. Fluorescence detection adopts the detection light path of the filter. The fluorescence path composed of Xenon lamp, filter and PMT can fit the characteristics of fluorescent dye to the greatest extent, ensuring excellent detection performance and high-quality detection effect. The optimized optical path design can be used for time-resolved fluorescence and fluorescence polarization detection with higher sensitivity requirements. Luminescence detection also uses PMT as the detector, and the sensitivity can reach a dynamic range of more than 6 orders of magnitude.

The detachable modular fluorescence detection filter can identify the filter information only by scanning the code. The
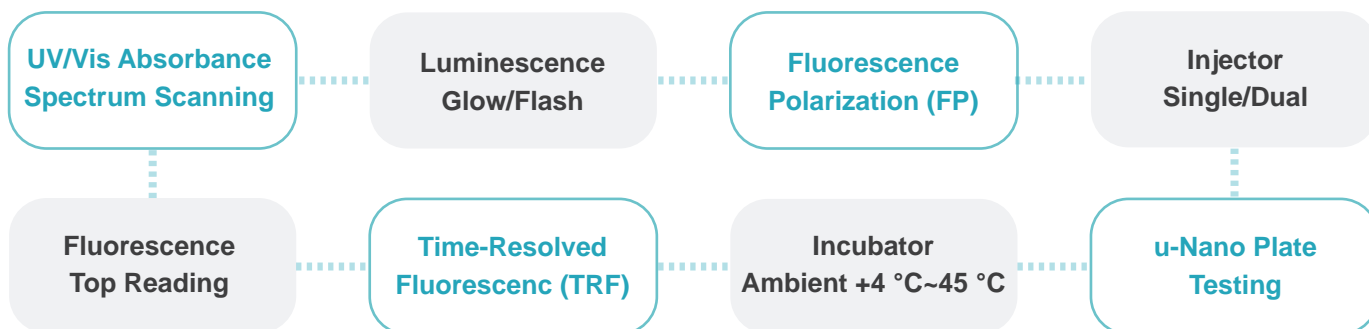
modular design provides the convenience of filter replacement to shorten the operation time.

The instrument is equipped with a 10-inch touch screen, According to the researcher's operation habit of the instrument, the screen angle can be converted through the LCD control button to facilitate the researcher's setting of the instrument. The instrument is no need to connect a computer. The layout, operating parameters, and algorithm and the other settings can be completed by a single machine. The built-in software of the instrument includes multiple algorithm analysis functions of standard curve, qualitative and quantitative, basic calculation, kinetics, spectroscopy and etc, which makes more convenient for the processing and research of experimental data.

Incubation adopts PID temperature control technology. When the experimental plate is covered or closed, the edge effect can be reduced through the differential temperature between the top and bottom of the plate, so as to ensure the data stability of the sample in the process of dynamic analysis.

In addition, the instrument has a code scanning function, which can not only identify the filters informations, but also create a QR code for the experimental program or standard curve. Researcher can quickly import the experimental program into the instrument through the QR code.

Flexible and Changeable Upgradeability

| UV/Vis Absorbance Spectrum Scanning	Luminescence Glow/Flash	Fluorescence Polarization (FP)	Injector Single/Dual
Fluorescence Top Reading	Time-Resolved Fluorescenc (TRF)	Incubator Ambient +4 °C~45 °C	u-Nano Plate Testing

◉ UV/Vis Absorbance

Wavelength selection is done by using an advanced monochromator system. Any wavelength between 200 to 1000 nm can be selected. Using the spectral scanning feature, the whole spectrum of a sample be scanned in 1 nm increments to allow identification of the optimal measurement wavelength for a new assay.

Long life xenon lamp which can be used for 10^9	Fast reading mode only need time 15 s for 96-well whole plate	Can be used for spectral scanning, endpoint and kinetic detection
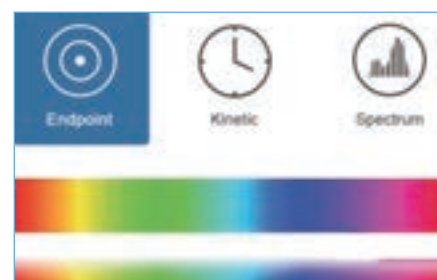
◉ Fluorescence

Instrument is equipped with filter-based fluorescence optics and dichroic mirrors for screening applications such as fluorescence polarization, and TR-FRET. Standard applications such as fluorescence-based DNA/RNA quantification assays are not only supported in microplates, but also in low volume u-Nano ultra-micro plate.

The independent removable filter modules make it more convenient for users to replace the filter. The filter-based fluorescence optics detection ensures high sensitivity, greater light transmission, precise control over transmitted peak shape, excellent blockage of undesired wavelengths. This is ideal for excitation and emission applications. The filters are also the technically preferred and most cost efficient technology for non-abosrbance based assays.

◉ Luminescence

UT series luminescence microplate readers show excellent sensitivity and wide ynamic range in both glow and flash based assays. The PMT enhances thed faximum sensitivity of weak luminescence signals, prevents oversaturation om igh signals, effectively improves the detection range of luminescence. Theh optimized light path minimizes signal crosstalk between holes and ensures the accuracy of experimental results. The precise dual-channel injector ensures assay performance even when assaying high-density 384-well plates.

◉ Time-Resolved Fluorescence (TRF)

Time-resolved fluorescence is based on lanthanide elements as dyes. When excited, the emission time is much longer than that of ordinary fluorescein. After the excitation light is turned off, the emitted light can still be continuously expressed and released, thereby eliminating the interference of excitation light and scattered light.

Time-resolved fluorescence has high sensitivity, strong specificity, good stability, and short operation flow. It is suitable for ultra-micro analysis in biology and medicine, hormone detection, viral hepatitis marker detection, target cell marker detection, and drug screening.

Time

◉ Fluorescence Polarization (FP)

The optimized optical path design of UT-A500 combined with the perfor-mance of the fast switching polarizer can effectively reduce the detection devia-tion. The 10-inch lower computer touch screen can improve the flexibility of experimental parameter setting. This function is often used to detect the interac-tion between small molecules and macromolecules, such as the determination of drugs and hormones, tyrosine kinase detection, receptor/ligand research, protein/polypeptide interactions, DNA/protein interactions, etc
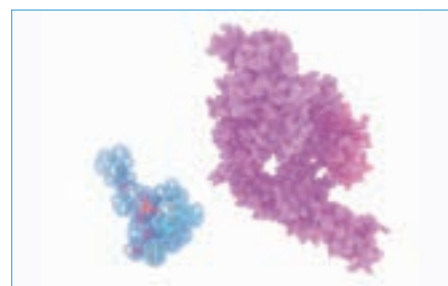
UT-F100 Fluorescence Microplate Reader

UT-F100 is an economical, single fluorescence microplate reader. Its high-quality optical path design makes it have excellent optical performance. This product is designed for bioluminescence scientific research, and can meet the requirements of nucleic acid quantification, fluorescent protein determination, molec-ular interaction studies, Ca^{2+} flow analysis, as well as reporter genes, fluorescent kinases and cell-based studies

Long-Life Xenon Light Source

UT-F100 adopts high-energy xenon lamp as light source, which can realize ice life canvhigh-resolution, high-sensitivity and ultra-fast detection test. The ser turned be up to 10 years, no need to warm up, and it can be detected when it is on.

High Performance Filter

Filter-based fluorescence detection has high advantages in sensitivity and wavelength selection. Filters provide higher sensitivity, greater light transmittance, better filtering, and faster band selection. UT series adopts the optical path design of xenon lamp and filter, which can make the detection limit reach 1 pM (sodium fluorescein).

Hole Scanning Function

Using flexible orbital motion and precise detection points to achieve a scanning detection method of more than 700 points per well, providing more accurate and comprehensive detection data for cells cultured in suspension, reducing differences caused by different positions reading. The analysis software can give the information of each point scan, and can display the point information of each well in color blocks.

Type

| horizontal | vertical | cross | annular | full |

Precise Dynamics

UT-F100 can be used for fast kinetic analysis (such as Ca^{2+} flux analysis) with a high-precision injector. It can monitor the fast kinetic reaction in time from the beginning of the experiment to ensure the integrity of the experiment.

UT-F100 Fluorescence

Microplate Reader

Common Applications

• Ca^{2+} flow analysis	• Ion channel	• Nucleic acid quantitative assay
• Cell proliferation	• Immunodetection	• Bacterial quantitative assay
• Cytotoxicity	• Enzymatic activity	• Oligonucleotide assay
• Cell adhesion	• Phagocytosis	• Reporter gene detection

UT-L100 Luminescence Microplate Reader

UT-L100 is a compact and powerful luminescence microplate reader. It can provide a variety of microplate readings, and the fast reading speed combined with the automatic injector can effectively improve your work efficiency.

◉ High-Sensitivity Detection

UT-L100 is equipped with a high-sensitivity luminescence detection module, which can realize a variety of throughput detection in 6-384-well plates, and can also accurately quantify micro samples.

◉ Ultra-Low Well-to-Well Interference

The unique optical path design effectively reduces the signal cross-interference between holes, and the cross-talk is less than 0.005%.
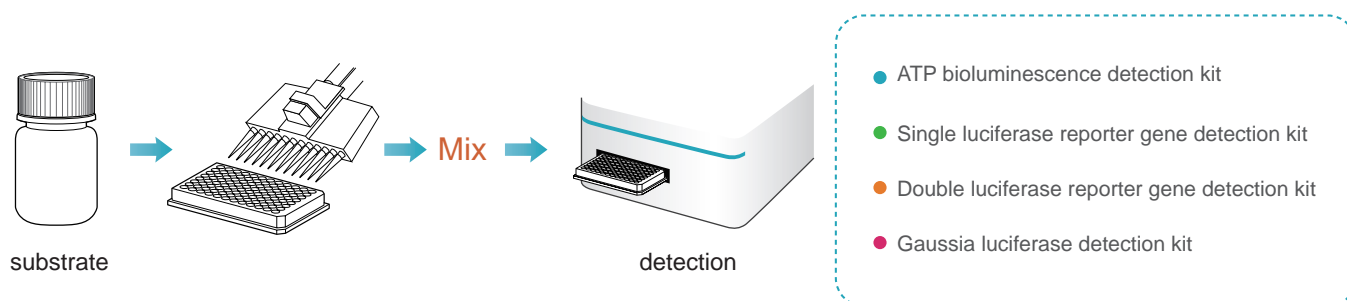
◉ Quick Flash Test

The perfect combination of precise injectors and detection modules provides an easy-to-use solution for cell-associated luciferase reporter gene detection and ATP-based luminescence quantification.

$$HO-\text{(Luciferin ring structure)}-COOH + \text{ATP} + O_2 \xrightarrow[Mg^{2+}]{Luciferase} Light$$
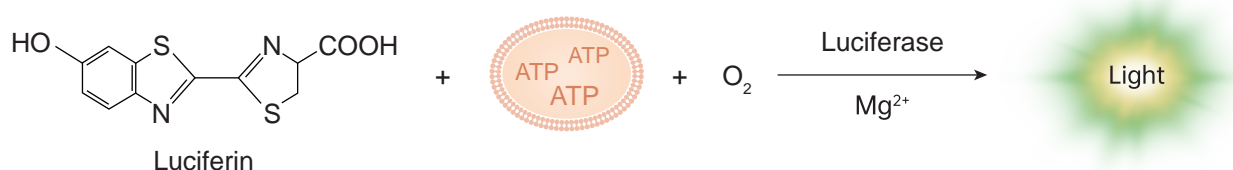
Luciferin

◉ Luminescence Kit

UT luminescence series kits are based on the construction, transfection and expression of luciferase reporter gene vector. The luciferase can catalyze the conversion of the substrate and emit photons, and finally the detection system is used to obtain the detection data

The reagent adopts an optimized reaction system, which is easy to prepare, easy to operate and has high accuracy

substrate → Mix → detection

- ● ATP bioluminescence detection kit
- ● Single luciferase reporter gene detection kit
- ● Double luciferase reporter gene detection kit
- ● Gaussia luciferase detection kit

◉ Standard Filter

The chemiluminescence detection function is equipped with two filters, 460 nm and 560 nm, which can effectively reduce the background noise and improve the detection sensitivity during the luciferase reporter gene detection process.

◉ Low Noise PMT

Combined with low-noise PMT, the collected signal is more accurate, and the lowest detection limit can reach 5 amol/well (ATP).

◉ Flexible Options

Filters with specific wavelengths can be customized according to experimental needs, providing excellent degrees of freedom for luminescence experiments and more convenient for most typical chemiluminescence experiments, such as ATP quantification, chemiluminescence ELISA, reporter genes, etc.

Easy-to-Use and Flexible Software

Multi-mode microplate reader provides powerful independent instrument control software. Through the 10-inch high-resolution touch screen, you can perform board layout, parameter setting and data analysis operations. The intuitive interface, simple operation, and abundant functions will significantly improve the efficiency of your experiment.

⊚ User Authority Classification

- User permissions are divided into four levels, with clear permissions

- The users have independent accounts and passwords to ensure the safety and confidentiality of experimental results
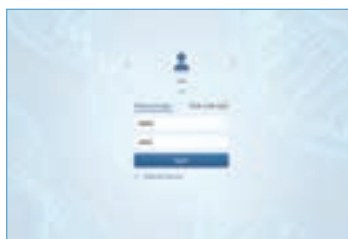

⊚ Intuitive Interface Display

- Intuitive selection of function modes, easy parameter setting

- Programs and results are stored independently, making it easy to be found the required applications

⊚ Powerful Data Analysis and Process

- Provide multiple data processing methods including blank subtraction, standard curve creation, qualitative analysis, quality control, kinetics and spectral analysis

- Algorithm customization: according to your assays needs, can customize the required algorithm
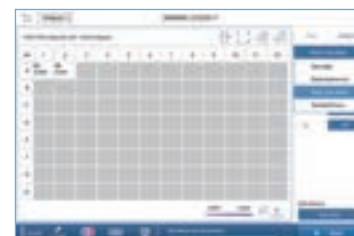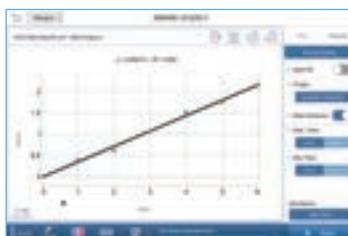
⊚ Liberalized User Communication

- The software has with a shared library, which can store the program, results and standard curves for sharing them with others

- The program and standard curve can be created in real time to a QR code, and the required content can be imported only by scanning the code with the instrument

⊚ FTP (File Transfer Protocol)

- Upload the data directly to a computer with a FTP server, and users can view the data results at any time in the authorized folder

Optional Accessories

◉ u-Nano Ultra-Micro Plate

- Quickly complete high-throughput quantification of nucleic acid and proteins without samples dilution.

- 1~16 samples can be detected at the same time, only 2~4 μL sample volume is needed.

- No need to calibrate; reliable performance.

◉ ABS Optical Performance Validation Board

- ABS optical performance validation board is mainly used to comprehensively evaluate the performance of absorbance function. It can conveniently, quickly and easily check whether absorbance function of the instrument is working properly. It is suitable for the system check of installation and operation identification.

◉ Modular Filter

- The easy-to-disassemble modular filter will bring an economical and highly sensitive solution to your fluorescence detections. Only by scanning the QR codes on the module, the instrument can read the filter information to ensure accurate experimental parameters for convenient and quick operation.

◉ MSS-2 Automatic Injector Module

- Equipped with dual automatic injector modules of the instrument is critically important for a myriad of assays, most notably flashluminescence and calcium flux assays etc. The instrument is equipped with a standard injector module, which can meet the precise sample addition operation of 384-well plates and realize the possibility of rapid detection of high-throughput plates.

- The automatic injector module can be purchased at the same time with the device and can also be upgraded later.

- Liquid injection protection: The software has a liquid injection protection function to effectively prevent the risk of sample overflow.

◉ UT-ll PC Analysis Software

- The UT-ll PC analysis software is with graphical operation interface design. Data export is convenient and fast. Detailed result reports can be created through built-in tools. UT-ll software can also provide a more comprehensive and complex data analysis algorithm than the instrument APP software. The UT-II PC software makes more convenient for customers to process assay results

Product Parameter

● Technical Parameter

Model		UT-A300	UT-A400	UT-A500
Absorbance	Light source	Xenon lamp		
	Detector	PD		
	Wavelength accuracy	2 nm		
	Wavelength repeatability (SD)	0.2 nm		
	Half width (FWHM)	<2.5 nm		
	Wavelength range	200-1000 nm, 1 nm step		
	Measure range	0-4 OD		
	Resolution	0.0001 OD		
	Accuracy @450 nm	96-precision mode: ± (1.0 %+0.003 Abs) @(0.0-2.0 Abs] ±2.0 % @(2.0-3.0 Abs]		
	Repeatability @450 nm	CV < 1.0 % or SD < 0.003 fast (0.0-3.0Abs] CV < 0.5 % or SD < 0.003 accurate (0.0-3.0Abs]		
	Stray light	0.1% @220 nm		
	Linear @450 nm	$R^2 \geq 0.999$ @[0.0 - 3.0 Abs]		
	Reading time	96-well plate: fast <15 s		
Luminescence	Detector	PMT		
	Detection limit	15 amol/hole; 5 amol/hole (photon PMT)		
	Linear dynamic range	6 logs		
	Crosstalk	≤ 0.005 %		
	Wavelength range	200-850 nm		
Fluorescence	Reading mode	Top reading		
	Excitation light source	Xenon lamp		
	Detector	PMT		
	Wavelength range	EX: 200-1000 nm; EM: 270-850 nm		
	Filter EX/EM	3 groups: EX470/EM525, EX523/EM564, EX624/EM692 (other wavelengths can be replaced)		
	Detection limit	1 pM		
	Linear dynamic range	6 logs		
TRF	Wavelength range	--	EX: 200-1000 nm; EM: 270-850 nm	
	Detection limit	--	0.05 pM	
FP	Wavelength range	--	--	λ1-λ2
	Detection limit	--	--	5 mP

Model		UT-L100
Luminescence	Detector	PMT
	Detection limit	5 amol/well
	Linear dynamic range	6 logs
	Crosstalk	≤ 0.005 %
	Wavelength range	200-850 nm
	Filter	460 nm, 560 nm

Model		UT-F100
Fluorescence	Reading time	Top reading
	Excitation light source	Xenon lamp
	Detector	PMT
	Wavelength range	EX: 200-1000 nm; EM: 270-850 nm
	Filter EX/EM	3 groups: EX470/EM525, EX523/EM564, EX624/EM692 (other wavelengths can be replaced)
	Detection limit	2.5 pM
	Linear dynamic range	6 logs

◉ Basic Parameter

Model		UT-A300	UT-A400	UT-A500	UT-F100	UT-L100
Support	Plate	6-384 well				
	Accessories	Microplate, injector			Injector	
Shaking & Incubation	Shaking mode	Linear, annular, double annular				
	Incubation temperature	RT+4 °C ~ 45 °C				
	Temperature uniformity	±0.5 °C @37 °C				
Software	Software interface	Chinese / English				
	Screen size	10-inch				
	Operation method	Capacitive screen touch, mouse				
	Data capacity	10 GB				
	Compatibility	Support PC software, Win7/Win10 64 bit				
	Network transmission	The test data report can be uploaded to the PC server through FTP				
Others	Instrument port	2 USB Type A ports, 1 USB Type B port, 1 Ethernet port, Rs232 bus interface (connected to the injector)				
	Power supply	AC 100-240 V, 50-60 Hz				
	Size (W×D×H)	420×550×386 mm			440×420×315 mm	
	Weight	33 kg			25 kg	

⊙ Accessory Parameter

Microplate	Sample number	1-16
	Sample detection volume	2-4 µL
Automatic Injector	Quantity	1/2
	Dispensing volume	5-1000 µL, 1 µL increment
	Liquid injection speed	125-500 µL/s
	Accuracy	±1 µL @5-50 µL ±2 % @51-1000 µL
	Waste liquid collection	50 mL
Software	Analysis Software	ReaderIt-II software

Ordering Information

Code	Product Description
AS-19050-00	UT-A300 microplate reader (multi-mode
AS-19060-00	UT-A400 microplate reader (multi-mode
AS-19070-00	UT-A500 microplate reader (multi-mode
AS-19090-00	UT-L100 luminescence microplate reader
AS-19100-00	UT-F100 fluorescence microplate reader
AS-19011-01	UT-ll PC analysis software
AS-19011-02	u-Nano ultra-micro plate
AS-19011-03	ABS optical performance validation board
AS-19011-04	MSS-2 automatic injector

Microplate Reader

Absorption-based detection modes have been the preferred mode of ELISA and are widely used in ELISA, protein analysis, nucleic acid quantification, and enzyme kinetics experiments.

MRC microplate reader series has fast plate reading speed, powerful functions and excellent performance, suitable for various medical laboratories, biological laboratories or central laboratories, etc.

Microplate Reader Selection Guide

Model	UT-100	UT-100T	UT-200	UT-200HT
Detection mode	Absorbance			
Plate	96		96/384	
Light source	Halogen lamp		Xenon lamp	
Wavelength range	340-750 nm		200-1000 nm	
Wavelength selection	Filter		Monochromator	
Incubation temperature	--	RT+4 °C~50 °C	RT+4 °C~45 °C	RT+4 °C~45 °C
Screen size	7-inch		10-inch	
System	Single-chip microcomputer		Android	
Cuvette	--	--	--	✓
Analysis software	Reader It-I		Reader It-II	
Accessories	--		Microplate	

UT-200/UT-200HT Microplate Reader

UT-200 microplate reader is a high-quality microplate reader based on a monochromator with a wavelength range of 200~1000 nm. It can be used for spectral scanning, endpoint method and kinetic detection. Suitable for 96-well plates and 384-well plates with and without lids. UT-200 can be shaken and cultured in micro-plates, and the culture temperature is up to 45 °C.

It can be operated independently through the built-in software of the instrument, and also can be operated by the UT-II software.

◉ High Quality Data and Stable Performance

The optional system makes sure the high quality data and stabilized performance of UT-200.

- Double beam optional system has the reference optional channel system, which make the data more stabilization;

- After the instrument is started, the light source, grating, detector, position, etc. are automatically calibrated to ensure stable and reliable operation of the instrument;

- Long life xenon lamp which can be used for 10^9 times.

## ◉ Choose Detection Wavelength Freely with Raster

UT-200 adopts the xenon flash lamp as light source, which chooses the wavelength range from 200-1000 nm with 1 nm step by grating monochromator for the full spectrum scanning.

◉ u-Nano Ultra-Micro Plate

- Quickly complete high-throughput quantification of micro nucleic acid and proteins without samples dilution;

- Independent lower computer software, can quickly read the sample concentration and purity report;

- 1~16 samples can be detected at the same time, only 2~4 μL sample volume is needed;

- During continuous testing, you only need to wipe off the last batch of samples with dust-free paper.

Temperature control range: RT. +4 °C to 45 °C

Incubation module performance
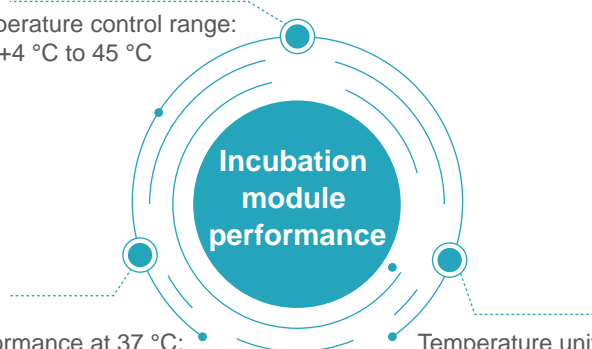
Performance at 37 °C: Average temperature difference between wells: ±0.5 °C

Temperature uniformity of well plate: <1.0 °C (96-well plate without cover)

11 Hz — **Intermediate speed**

Liner shaking function of microplate

Low speed — 5 Hz

High speed — 20 Hz

◉ (Cuvette Mode (UT-200HT Model

- Independent cuvette slot;

- Detection wavelength 200~1000 nm;

- With incubation function, RT+4 °C to 45 °C;

- Independent cuvette software can be directly used for endpoint method, kinetics, spectral scanning and standard curve establishment.

## ◉ UT-200 Instrument Interface Can Be Used Independently for Rapid Detection

UT-200 built-in software is designed for independent use of the ument. With a 10-inch high-resolution touch screen and arnsti eical user interface, the editing of programs and templathrapg presets are very simple.

In addition, support for USB data export is fast, convenient and easy to operate.

◉ Through PC Software, Advanced Detection Mode and Powerful Data Analysis Can Be Set

UT-ll software designed with graphical operation interface has a simulation demonstration function. Data export is conve-nient and fast, and detailed result reports can be generated through built-in tools. The built-in software and UT-ll of the UT-200 instrument are both Chinese/English interfaces. GUI is convenient for customers to use
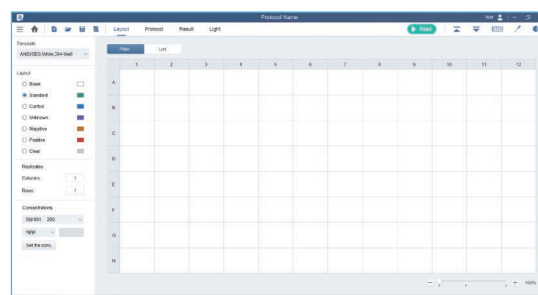
Powerful and Flexible Software

◉ User Authority Classification

- Administrator can manage the accounts of different sub-users, which is convenient for the account management of experimenters;

- Set up multiple user accounts and passwords to facilitate the confidentiality of experiments for different users;

- Only personal experiment content is left in the sub-account, which is convenient for experiment recording;

- No password is required for the guest account, and you can quickly enter the experimental program.

◉ Powerful Data Analysis And Process

- Provides multiple data processing methods including blank subtraction, standard curve creation, qualitative analysis, quality control, kinetics, and spectral analysis to help you obtain the analysis results you want.

◉ Standard Curve Library

- The instrument is equipped with a standard curve library. The standard curve established in the first experiment can be stored in the standard curve library, which is convenient for direct being used in the next experiment. No need to build a standard curve every time, more convenient and faster.
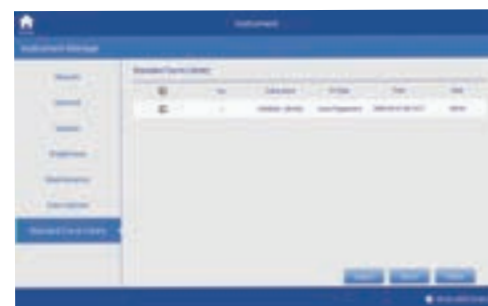
◉ FTP (File Transfer Protocol)

- Upload instrument data directly to a computer with an FTP server, and users can view the data results at any time in the authorized folder.

◉ Multiple Report Export Types

- The instrument comes with four data file export modes: Excel, TXT, CSV, and PDF.

Product Parameter

Model	UT-200/UT-200HT Microplate Reader
Display	10 inch high-resolution capacitive touch screen
Light source	Xenon flash lamp/number of flashes>10^9
Wavelength range	200~1000 nm
Wavelength accuracy	2 nm
Wavelength repeatability	0.2 nm
Optical system	Monochromator, 1 nm step
Reading range	0~4.0 OD
Bandwidth	<2.5 nm
Detection System	2 silicon photodetectors, one for measurement, one for reference
Linear @450 nm	$R^2 \geq 0.999$, [0.0 - 3.0 Abs]
Absorbance accuracy @450 nm	± (1.0 % + 0.003 Abs), (0 ~2.0 Abs]; ± 2.0 %, (2.0 ~ 2.5 Abs]
Absorbance repeatability @450 nm	CV<0.5 % or SD<0.003 accurate mode; CV<1.0% fast mode
Measuring speed	96-well plate: fast mode <8 seconds, accurate mode <28 seconds (end point method)
Shaking	Linear, 3 speeds adjustable
Temperature range	RT+4 °C to 45 °C
Temp. accuracy & uniformity	±0.5 °C @37 °C, ±0.5 °C @37 °C
User interface	Built-in software, independent use
Analysis software	UT-II software
Operation display	Touch screen input, Android system, 10-inch LCD display full board information, can be connected with keyboard and mouse
Internal storage	16 G storage, can store more than 20,000 data files
Port	1 type B USB interface, 2 type A USB interfaces, 1 network port
Robotic arm compatible	Temporarily incompatible
Power supply	DC24 V 6.67 A
Dimension	300×500×260 mm
Net weight	15.5 kg

Ordering Information

Code	Product Description	Code	Product Description
AS-19010-00	UT-200 microplate reader	AS-19011-02	u-Nano ultra-micro plate
AS-19020-00	UT-200HT microplate reader	AS-19011-03	ABS optical performance validation board
AS-19011-01	ReaderIt-II analysis software		

UT-100/UT-100T Microplate Reader

The UT-100/UT-100T is a high-quality light absorption microplate reader based on a filter, with a wavelength range of 340 nm~750 nm, suitable for scientific research and clinical applications. 7-inch touch screen color LCD display, no keyboard required, easy to use

UT-100T medical record certificate No.: MRC machinery registration permission 20182400109

UT-100T has additional incubation function, with temperature range is from RT+4 °C to 50 °C

◉ Feature

- High-resolution 7-inch color touch screen, easy to operate, no keyboard required, easy to use;

- Multiple software configuration, which can be used as a single machine or connected with a computer, and the results are exported in real time;

- Absorbance range: 0.0~4.000 Abs, meeting different measurement requirements;

- 8-position filter wheel, standard 4 filters, optional other filters;

- The built-in software can provide instrument control and data analysis, and can be directly connected to a U disk;

- The detection speed is fast, and the whole 96-well microplate detection can be completed within 6 seconds.

◉ UT-100 Unique Advantages of Microplate Reader

- High-resolution 7-inch touch screen, simple and intuitive operation, no keyboard required;

- Visual layout, convenient and practical;

- The microplate reader is equipped with the standard control and data analysis software UT-I, which is convenient and quick for data detection

- Powerful data analysis function and excellent result report, not only can run the analysis independently, but also run the analysis on the computer.

UT-100T Operation Interface
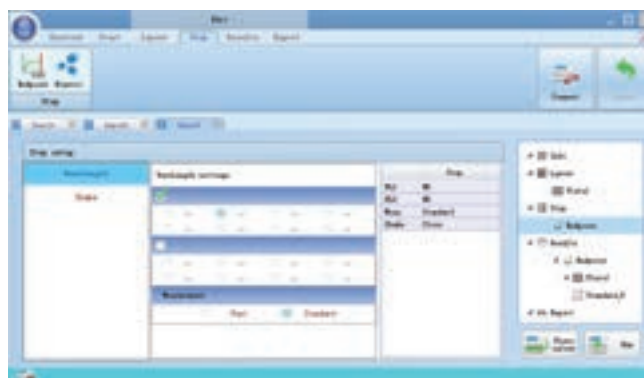
UT-I Software Interface

Product Parameter

Model	UT-100	UT-100T
Display	7 inch high resolution capacitive touch screen	
Light source	6 V, 10 W halogen lamp	
Wavelength range	340 nm~750 nm	
Optical filter	8-position filter wheel, standard 4 filters: 405 nm, 450 nm, 492 nm, 630 nm	
Absorbance range	0~4.0 Abs	
Resolution	0.001 Abs	
Linear range	$R^2 \geq 0.995$ absorbance range 0~3.0 Abs	$R^2 \geq 0.995$ [0,3 Abs]
Wavelength accuracy	$\leq \pm 2$ nm	
Absorbance repeatability	CV≤0.3 % [0,3 Abs); CV≤1 % [3,4 Abs)	
Absorbance stability	≤0.005 Abs [0,3 Abs) ≤2.0 % [3,4 Abs)	≤±0.005 Abs [0,2 Abs) ≤0.3 % [2,3 Abs) ≤2.0 % [3,4 Abs)
Absorbance accuracy	≤±0.005 Abs [0,2 Abs) ≤±0.01 Abs [2,3 Abs) ≤±1.5 % [3,4 Abs)	≤±0.005 Abs [0,2 Abs) ≤±1 % [2,3 Abs) ≤±1.5 % [3,4 Abs)
Sensitivity / detector	≥0.01 A / photodiode	
Measuring speed	6 s / 96-well plate, fast mode; single wavelength <15 s / 96-well, dual wavelength <28 s / 96-well (common mode)	
Incubation temperature range	--	RT+4 °C ~ 50 °C
Temperature accuracy	--	±0.5 °C @ 37 °C
Temperature uniformity	--	±0.5 °C @ 37 °C
User Interface	Built-in software, touch screen input, external mouse	
Internal storage	Can store 1000 measurement programs and measurement results	
Port	3×USB ports, connecting computer, printer and USB drive	
Power supply	AC100~240 V, 50~60 Hz, 2 A	
Dimension (W×D×H)	295×440×225 mm	
Net weight	10 kg	11 kg

Ordering Information

Code	Product Description	Code	Product Description
AS-16050-00	UT-100 microplate reader	AS-16051-17	Optical filter 510 nm
AS-16060-00	UT-100T microplate reader	AS-16051-18	Optical filter 520 nm
AS-16051-01	Optical filter 340 nm	AS-16051-19	Optical filter 532 nm
AS-16051-02	Optical filter 380 nm	AS-16051-20	Optical filter 546 nm
AS-16051-03	Optical filter 405 nm	AS-16051-21	Optical filter 560 nm
AS-16051-04	Optical filter 415 nm	AS-16051-22	Optical filter 562 nm

Code	Product Description	Code	Product Description
AS-16051-05	Optical filter 450 nm	AS-16051-23	Optical filter 600 nm
AS-16051-06	Optical filter 492 nm	AS-16051-24	Optical filter 620 nm
AS-16051-07	Optical filter 540 nm	AS-16051-25	Optical filter 646 nm
AS-16051-08	Optical filter 570 nm	AS-16051-26	Optical filter 663 nm
AS-16051-09	Optical filter 578 nm	AS-16051-27	Optical filter 700 nm
AS-16051-10	Optical filter 590 nm	AS-16051-28	Optical filter 750 nm
AS-16051-11	Optical filter 595 nm	AS-16051-50	Halogen lamp
AS-16051-12	Optical filter 630 nm	AS-16051-51	Printer
AS-16051-13	Optical filter 650 nm	AS-16051-52	Printer paper
AS-16051-14	Optical filter 690 nm	AS-19011-03	ABS optical performance validation board
AS-16051-15	Optical filter 470 nm	AS-16051-54	ReaderIt-I analysis software
AS-16051-16	Optical filter 490 nm		

UT-W200 Microplate Washer

Microplate washer is an automatic plate washer for washing 96-well microplate. compact construction, efficient washing and durable, it is suitable for the washing of flat bottom, U-shaped bottom, v-shaped bottom, c-shaped bottom of various specifications. It has various special functions selected and matched by other board washer. The programmed design is especially suitable for laboratory with heavy workload of multi-application of microplate. It can also be used to soak and shock.

◉ Feature

- Low residual liquid, each well ≤ 1 μL;

- 4.3 inch color LCD display, easy to operate;

- Microplate can be soaked and shocked simultaneously;

- Strainer in the pipeline and automatic washingfunctions avoid the liquid blocking the pipeline;

- Pipeline flushing and distilled water washing functions can be set, flushing time and number of spacers can be adjusted;

- With pause function, you can continue to complete the rest of washing procedures;

- Washing bottle has uniform volume calibration line, alarm function to avoid the washing liquid used up or waste liquid from overflow;

- 100 programs can be save.

◉ Easy Operation

- The UT-W200 microplate washer has 4.3 inch LCD display with friendly interface, U-disk can be to transfer the datas between the PC and the washer or between two washers, it can also be used to upgrade the software. The washing head can be replaced easily for different kinds of microplates.

◉ Safety and Reliable Feature

- The UT-W200 microplate washer is equipped with liquid position sensor to avoid the washing liquid used up or waste liquid from overflow, minimize the risk and avoid the liquid being sucked into the pump to break the equipment. Besides it has shaking function, which can improve the washing efficiency

Product Parameter

Model	UT-W200 Microplate Washer
Residual liquid	≤1 µL
Washing heads	1×8 or 1×12 heads
Plate types	Flat, U, V, C bottom
Washing method	Single-point, two-point and multi-point
Washing volume	50-2000 µL, increase by 50 µL
Washing times	1~99 times
Washing channels	3
Bottles	3 pcs 2.5 L washing bottle, 1 pcs 2.5 L washing bottle
Dispense accuracy	≤2 % @300 µL
Liquid injection accuracy	CV≤1.5 % @300 µL
Soaking and shaking time	99'00"
Date connection	USB
Weight	12 kg
Power supply	AC100-240 V; 50/60 Hz

Ordering Information

Code	Product Description
AS-16020-00	UT-W200 microplate washer AC100-240 V, 50/60 Hz
AS-16011-01	8 needles washing head
AS-16011-02	12 needles washing head
AS-16011-03	Washing liquid bottle
AS-16011-04	Waste liquid bottle

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