01 Nano-100 / Nano-300 / Nano-400A / Nano-500 Micro-Spectrophotometer

Nano-100

Nano-400A

Nano-300

Nano-500

Description

1. User-friendly software, easy to use

It is easy to use, free software updates are available

2. Micro-volumes measuring

Only require 0.5~2μl sample to accurate determinate of nucleic acids, proteins

3. Fast and easy measurements

Turn on and instantly measure without lamp warm up time; Easy measurement within 8 sec

4. Long life's Xenon flash lamp

Xenon flash lamp, 10 flashes, up to 10 years, no dilutions and expensive consumables

5. No consumables required

Direct microvolume measurements from 1–2μL of sample. Eliminates the need for expensive accessories

6. No computer required and with touch screen (Nano-300, Nano-400A, Nano-500)

Nano-300, Nano-400A, Nano-500 is equipped with Android system operation

7. The Nano-100 / Nano-300 / Nano-500 are full range of wavelength (200-800nm) detection ability; The Nano-400A is a basic UV spectrophotometer specifically designed (only two types of wavelength 260nm and 280nm) for nucleic acids and proteins

8. Nano-500 also can be used to test the Fluorescence

For samples with concentrations below 2 ng/μl, fluorometric mode can be used, and the minimum detection limit can reach 0.5pg/μl

Nano-100/Nano-300/Nano-400A/Nano-500
Micro-Spectrophotometer

01

NANO-100 Highlights

1. Turn on and instantly measure without lamp warm up time; Full scan capability from 200-800nm within 5 sec
2. Detects Nucleic Acids up to 4500ng/ul (dsDNA)
3. 3864-Element linear silicon CCD array
4. Need to connect computer
5. Software compatibility: WinXP, Win7, Win8

02

NANO-300 Highlights

1. Nano-300 is an improved Micro-Spectrophotometer based on Nano-100 with 200-800nm. It is added a function of bacterium cell concentration detection (OD600)
2. Android system, 7 inch touch screen, APP software, simple interface, easy to use
3. Equipped with HD touch screen, no need to connect PC
4. 2048-Element linear silicon CCD array detector
5. Turn on and instantly measure without lamp warm up time; Full scan capability from 200-800nm within 6 sec
6. To detect the concentration of bacteria and microorganism are more convenient with the OD600 function
7. The data can be printed with built-in printer, and can output via USB for data analysis and storage
8. When the Nano-300 is idly left more than 5mins, it will switch off automatically. Then, the user can awake the machine by touching the screen

OD600 detection

03

NANO-400A Highlights

1. Nano-400A is a basic micro-volume UV spectrophotometer designed (only 3 types of wavelength: 260nm, 280nm and 365nm) for the measurement of nucleic acids and proteins
2. Android system operation, 7-inch touch screen no computer, APP software, simple interface, easy to use
3. To detect the concentration of bacteria and microorganism are more convenient with the OD600 function
4. Measures nucleic acid concentration at 260nm and purity using the ratio 260/280
5. Measure purified protein concentration at 280nm
6. The data can be printed with built-in printer, the data can output via SD-RAM Card and USB memory

04

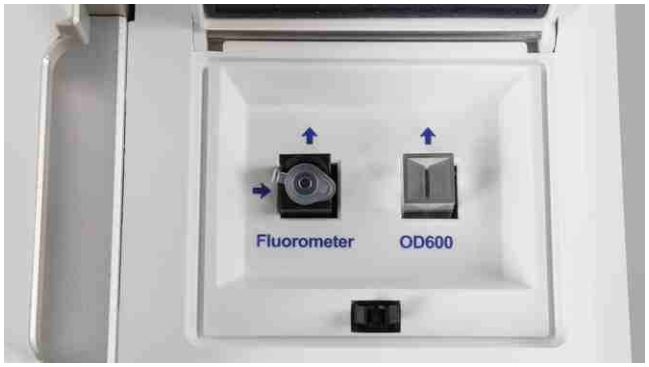
NANO-500 Highlights

1. Nano-500 is designed base on nano-300:
   A. To added the 0.05mm optical path length, and the highest detection concentration up to 15000ng/ul
   B. To added the Fluorescence detection function, which can be used for accurate quantification of extremely low concentration nucleic acid with a lower limit of 0.5pg/μl
   C. Automatic detect after put down the arm
2. The patented lifting motor structure makes the liquid column stretch more gentle, preventing the liquid column from breaking due to structural problems. In addition, the structure can effectively solve the instability of reading caused by high concentration sample, especially suitable for precise quantification of protein samples
3. Android system, 7-inch capacitive touch screen, intuitive APP software, simple and easy to use
4. To detect the concentration of bacteria and microorganism are more convenient with the OD600 function
5. With a 2048-Element linear CCD array detector, the detection and display can be completed in 6s
6. Equipped with HD touch screen, no need to connect computer.
7. Longer service life of optical component, intelligent identification of user usage. The light source will auto off after 5 minutes without any operation to extend service life
8. The result can be printed by a built-in printer or exported via USB for data analysis and storage

05

New fluorescence detection function for nano-500

Fluorescence detection combined with fluorescence quantitative analysis kit, able to accurately quantify DNA, RNA and protein concentration through the specific binding of fluorochrome with target material, and the minimum limit is 0.5pg/u(dsDNA). Nano-500 can be compatible with common fluorescence quantitative reagent to provide users with maximum convenience and minimum detection cost.



Fluorescence mode

Code	Light	Excitation Filters	Emission Filters
Nano-500U (optional)	UV	365±20nm	420-480nm (60nm)
Nano-500 (standard)	Blue	460±20nm	525-570nm (45nm)
Nano-500G (optional)	Green	525±20nm	575-640nm (65nm)
Nano-500R (optional)	Red	625±20nm	670-725nm (55nm)

Specification

Light source	LED
Dynamic range	Five orders of magnitude
Linear Dynamic Range	R^2>0.995
Detector	Photodiode
Repeatability	<1.5%
Stability	<1.5%
Sensitivity	dsDNA: 0.5ng/ml
Measurement speed	3s (Once)

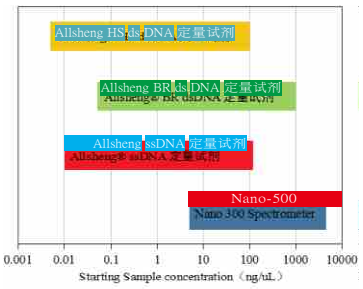
Application of different fluorescence channel

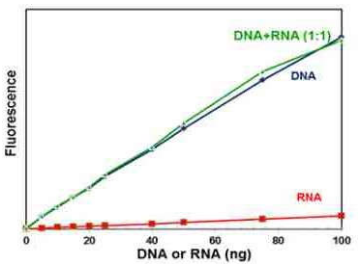
Channel	Excitation Filters	Normal kits	Applications
UV channel	365±20nm	Hoechst 33258, 4-MU, EnZCheK Caspase	Nuclear acid quantification, Plant GUS reporter gene detection, Poptosis detection
Blue channel	460±20nm	PicoGreen®, oligreen, RiboGreen®, GFP, Protein, Fluorescein, Quant-iT™	dsDNA, ssDNA, RNA quantification, GFP gene detection, Fluorescein detection, Protein detection
Green channel	525±20nm	Rhodamine, Cy3, RFP Vybrant Cytotoxicity	Rhodamine detection, Cy-3 fluorescence labeling detection, RFP gene detection, Cell activity position detection
Red channel	625±20nm	Cy5, Quant-iT RNA	Cy-5 fluorescence labeling detection, RNA quantification

Fluorescence detection features

Fluorescence detection is able to precise quantification the concentration of DNA, RNA, protein with the high sensitive fluorescence analysis kits. The related fluorochrome could be emission the optical wave which waveband is larger than absorbing light, only when combined with the target molecule in the sample, after absorbed a certain optical wave, to quantify the intensity of this fluorescent. Then, confirm the target material contents according to the standard curve

Compare to the Nano-300, added function of fluorescence detection is available to increase the lower limit (see the left draw) of sample detection. In addition, even there is the RNA existing in the sample when doing the DNA detection, the fluorescence still with the strong specificity (see the right draw)





06

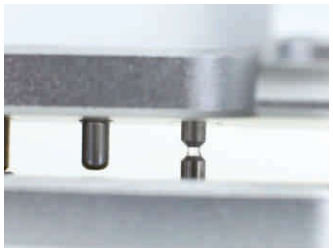
Nano-300 and Nano-500 Capabilities

1. Wide spectral range (200-800nm) for measuring a variety of samples types:
   A. DNA and RNA (260nm)
   B. Purified protein (280nm)
   C. Industrial dyes (490nm)
   D. Gold nanoparticles (520nm)
   E. Colorimetric protein assays (BCA 562nm, Branford 595nm Modified Lowry 650nm)
   F. Optical Density measurements (OD600)
3. 2048-Element linear silicon CCD array
4. To calculate sample purity ratios: A260/A280, A260/A230
5. User-friendly software includes custom methods and data export capabilities

07

Easy Handling:

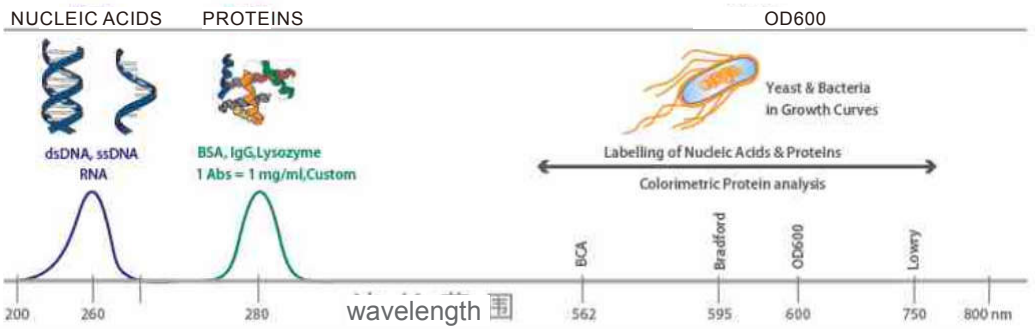
■ Adding sample



■ Measuring sample

■ quick and easy cleaning

Applications



Ordering Information

No.	Description
AS-11060-00	Nano-500 Micro-Spectrophotometer, DC24V 5W (Standard)
AS-11070-00	Nano-500U Micro-Spectrophotometer, DC24V 5W (Optional)
AS-11080-00	Nano-500G Micro-Spectrophotometer, DC24V 5W (Optional)
AS-11090-00	Nano-500R Micro-Spectrophotometer, DC24V 5W (Optional)

Specification

Type	Nano-100	Nano-300	Nano-400A	Nano-500
Wavelength Range	200-800nm	200-800nm	260nm, 280nm	200-800nm
Minimum Sample Size	0.5-2.0μl	0.5-2.0μl	1-2.0μl	0.5-2.0μl
Path Length	0.2mm 1.0mm	0.2mm 1.0mm	0.5mm	0.05mm 0.2mm 1.0mm
Light Source	Xenon flash lamp	Xenon flash lamp	UV LED	Xenon flash lamp
Detector Type	3864-Linear CCD array	2048-Linear CCD array	UV-sillion photocell	2048-Linear CCD array
Wavelength Accuracy	1nm	1nm	—	1nm
Spectral Resolution	≤3nm (FWHM at Hg546nm)	≤3nm (FWHM at Hg546nm)	—	≤3nm (FWHM at Hg546nm)
Absorbance Precision	0.003Abs	0.003Abs	0.005Abs	0.003Abs
Absorbance Accuracy	1% (7.332Abs at 260nm)	1% (7.332Abs at 260nm)	1% (7.332Abs at 260nm)	1% (7.332Abs at 260nm)
Absorbance Range	0.02 - 90A	0.02 - 100A	0.02 - 80A	0.02 - 100A
Detects Nucleic Acid up to	2-4500ng/ul (dsDNA)	2-5000ng/ul (dsDNA)	10-4000ng/ul (dsDNA)	2-15000ng/ul (dsDNA)
Measurement Time	<8S	<5S	<8S	<6S
Data Output	Connect PC	USB	USB	USB
Sample Pedestal Materia	Aluminum alloy and Quartz fiber			
Operating Voltage	24V DC	24V DC	24V DC	24V DC
Operating Power	20W	25W	25W	25W
Standby Power	5W	5W	5W	5W
Dimension (W x D x H)mm	200 x 250 x 166	210 x 268×181	210 x 280 x 181	210 x 310×181
Weight	2.6kg	2.8kg	3.5kg	2.8kg
Software Compatibility	WinXP，Win7，Win8	Android System	Android System	Android System
Fluorescent detection				
Sensitivity	—	—	—	dsDNA: 0.5pg/ul
Linear Dynamic Range	—	—	—	R^2＞0.995
Repeatability	—	—	—	＜1.5%
OD600nm Measurement				
Light Source	—	LED	LED	LED
Wavelength Range	—	600±8nm	600±8nm	600±8nm
Absorbance Range	—	0-4A	0-4A	0-4A

Ordering information

No.	Code	Description
01	AS-11010-00	Nano-100 Micro-Spectrophotometer, DC24V 5W
02	AS-11020-00	Nano-300 Micro-Spectrophotometer, DC24V 5W
03	AS-11050-00	Nano-400A Micro-Spectrophotometer, DC24V 5W
04	AS-11021-01	Cuvette for Nano-300, Nano-400A and Nano-500

02 Fluo-100 Fluorometer

01

Fluorometer technical background

Our nano series Micro-Spectrophotometer measure the concentration and purity of the sample, because it is able to measure the absorbance of the whole ingredient(such as DNA, RNA, oligos and so on) of the sample at 260nm, that may make the read inaccuracy. While the fluorometer measure the fluorescence intensity of the fluorescent reagent which combine with the target molecule to read the concentration of sample. Generally, the read is lower than Nano series products but much accuracy than it

The sensitivity of Nano series products are above 5ng/ul, and while the fluorometer is 0.5pg/ul in measuring DNA concentration. It is important and necessary for the most applications to read the lower and accuracy concentration of the sample. Using the Fluo-100 fluorometer with the quantitation kit can measure the sample concentration rapidly, sensitively and accurately

02

Fluo-100 Simple, easy to use and applications

The Fluo-100 is a dual-channel fluorometer, it provides high-sensitive fluorescent detection when quantifying nucleic acids and proteins, simple and cost to operate

Applications:

1. The sample is scarce and difficultin processing
2. The low quantity of DNA, RNA, or protein afterextraction
3. The sample will be used in the expensive experiments: qPCR, PCR cloning, transfection, the next generation sequencing and etc.

03

Fluo-100 Highlights

1. Simple – 4.3 inch touch screen, small and easy to use
2. Easy measurement within 3 sec for DNA, RNA, and protein
3. High sensitivity – Lowest DNA detection limit is 0.5pg/ul
4. Two optical channels – Equipped with two fluorescence channels for nucleic acid, protein quantitation in one detection
5. Linear Dynamic Range--Five orders of magnitude.
6. Opening system--You can match the instrument with the reagent you choose
7. It can save at most 1,000 data and output data by USB port
8. Adapter: 0.5ml qPCR tube adapter
   0.2ml qPCR tube adapter

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04

Two detection models of Fluo-100

Code	Light	Excitation Filters	Emission Filters
Fluo-100A	UV	365±20nm	420-480nm (60nm)
	Blue	460±20nm	525-570nm (45nm)
Fluo-100B	Blue	460±20nm	525-570nm (45nm)
	Red	625±20nm	670-725nm (55nm)
Fluo-100C	Blue	460±20nm	525-570nm (45nm)
	Green	525±20nm	575-640nm (65nm)

05

Fluo-100 Quantitation kit

High sensitivity of dsDNA Quantitation Kit: 0.2--100ng

High sensitivity of ssDNA Quantitation Kit: 1--200ng

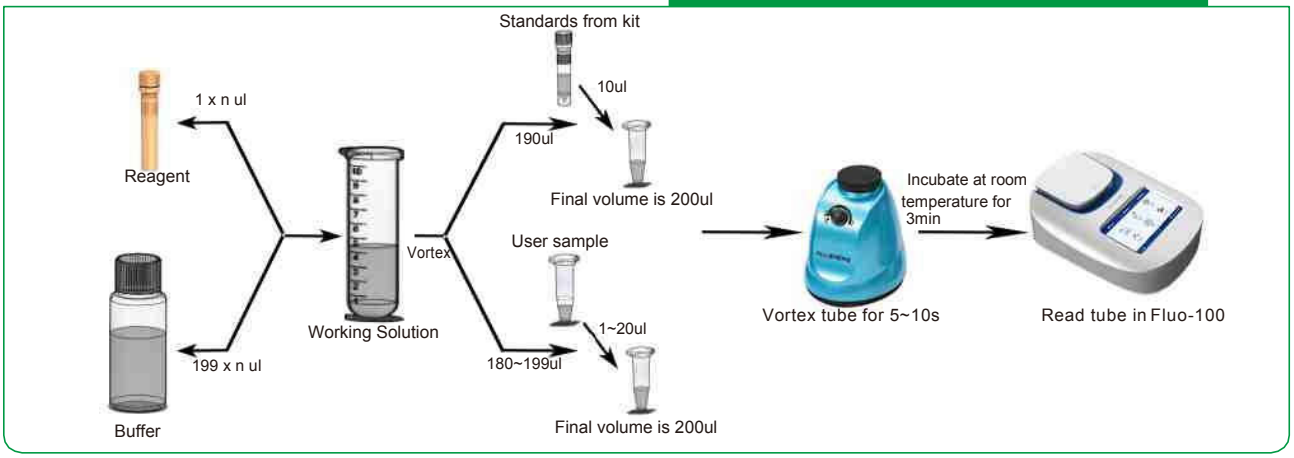
Broad range of dsDNA Quantitation Kit: 100--1600ng

Protein Quantitation Kit is researching

Specification

Light source	LED
Dynamic range	Five orders of magnitude
Linear Dynamic Range	R^2>0.995
Detector	Photodiode
Repeatability	<1.5%
Stability	<1.5%
Sensitivity	dsDNA: 0.5ng/ml
Measurement speed	3s (Once)
Dimension (W×D×H)mm	194 × 155 × 72.5 mm
Weight (kg)	0.4Kg

Fluo-100 Quantitation kit operation



Application of different fluorescence channel

Channel	Excitation Filters	Normal kits	Applications
UV channel	365±20nm	Hoechst 33258, 4-MU, EnZCheK Caspase	Nucleic acid quantification, Plant GUS reporter gene detection, Poptosis detection
Blue channel	460±20nm	PicoGreen®, oligreen, RiboGreen®, GFP, Protein, Fluorescein, Quant-iT™	dsDNA, ssDNA, RNA quantification, GFP gene detection, Fluorescein detection, Protein detection
Green channel	525±20nm	Rhodamine, Cy3, RFP Vybrant Cytotoxicity	Rhodamine detection, Cy-3 fluorescence labeling detection, RFP gene detection, Cell activity position detection
Red channel	625±20nm	Cy5, Quant-iT RNA	Cy-5 fluorescence labeling detection, RNA quantification

Ordering information

Code	Description	Code	Description
AS-18010-00	Fluo-100A Fluorometer, DC12V 1A	RS-FL0101-S RS-FL0101-M RS-FL0101-L	High-sensitivity dsDNA Quantitation kits (100 assays) High-sensitivity dsDNA Quantitation kits (200 assays) High-sensitivity dsDNA Quantitation kits (1000 assays)
AS-18020-00	Fluo-100B Fluorometer, DC12V 1A		
AS-18030-00	Fluo-100C Fluorometer, DC12V 1A	RS-FL0102-S RS-FL0102-M RS-FL0102-L	Broad-range dsDNA Quantitation kits (100 assays) Broad-range dsDNA Quantitation kits (200 assays) Broad-range dsDNA Quantitation kits (1000 assays)
AS-18011-01	Adapter for 0.5ml qPCR tube (Standard)		
AS-18011-02	Adapter for 0.2ml qPCR tube (Optional)	RS-FL0103-S RS-FL0103-M RS-FL0103-L	High-sensitivity ssDNA Quantitation kits (100 assays) High-sensitivity ssDNA Quantitation kits (200 assays) High-sensitivity ssDNA Quantitation kits (1000 assays)

03 Gene-8C / Gene-8C2
Isothermal Fluorescence PCR

01

Gene-8C/Gene-8C2

Gene-8C / Gene-8C2 is an Isothermal fluorescence PCR instrument, it is a compact, lightweight, low cost, stand alone, sensitive instrument suitable for field based and point of care diagnostic applications.

The Gene-8C is a portable instruments that provides measurement of one fluorophore, and the Gene-8C2 provide measurement of two fluorophores.

We designed these to run any isothermal amplification method that employs target detection by fluorescence measurement. The Gene-8C/Gene-8C2 boast low power requirements and includesa rechargeagle Lithium-polymer battery that can keep it running for 2-5 hours

Gene-8C / Gene-8C2 have a 7inch touch screen. Real- time temperature and fluorescence data are displayed graphically and in real-time during a run and all of the data are held in the instrument's large internal Flash memory. These data are permanently stored and can be reviewed at any time after the run has finished or uploaded to a PC or an android mobile via USB link or WIFI

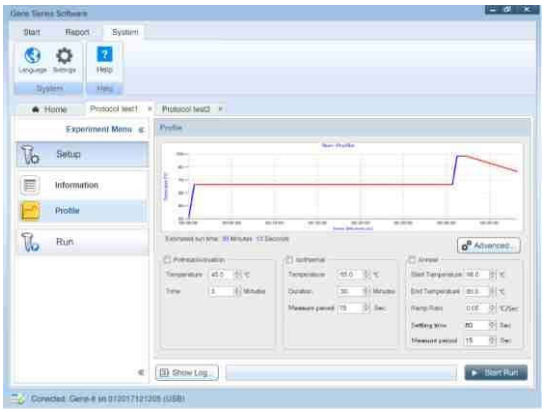
01

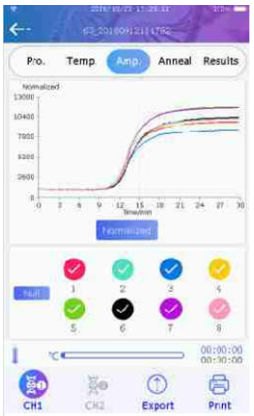
Features

1. Small footprint, low-cost and easy to use, suitable for bench top and field applications
2. Purpose-designed sophisticated instruments that support any isothermal DNA/RNA amplification method employing fluorescence readout
3. 7 inch touchscreen, and offers stand-alone operation, it no need for a host computer
4. Support eight standard 0.2ml tubes
5. One channel or two channel fluorescence detection per tube
6. Easy to use advanced desktop software and APP software (Android mobile) for the test configuration management and export
7. Testing temperature range: RT. to 99℃
8. PC software, APP software and bulit-in software for powerful and validated data analysis and review
9. Easy access to data via USB interface and WIFI
10. Use independently via touch screen, link to computer via a USB cable or link to android mobile via WIFI
11. To link printer via USB cable and print the text data and results which you require
12. Mains or battery-powered

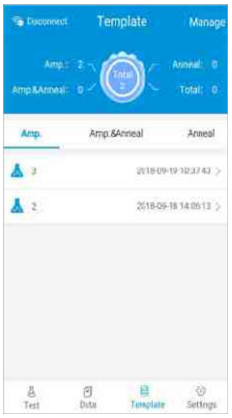
Software

PC software interface





Built-in software



Android mobile's APP software

03

Allow molecular detection to be portable, sensitive, fast

1. The software are simple touse
2. Fully automated interpretation ofresultas
3. PC and APP software also included
4. Suitable for use with any isothermal amplification protocol
5. Observe real-time data from isothermal amplification reactions
6. Monitor all dyes with excitation at 470nm anddetection above 520nm
7. Application: LAMP, CPA, RPA, RAA, RCA , SDAetc. Isothermal amplification

Ordering information

Code	Description
AS-20010-00	Gene-8C Isothermal Fluorescence PCR
AS-20020-00	Gene-8C2 Isothermal Fluorescence PCR
AS-20011-01	Charger for Gene-8C/8C2

Specification

Type	Gene-8C	Gene-8C2
Sample Number	8 wells (1x8 strip)	8 wells (1x8 strip)
Sample Volume	15ul-150ul	15ul-150ul
Touchscreen	7 inch	7 inch
Temperature control range	ambient - 99	ambient - 99
Temperature accuracy	±0.1	±0.1
Temperature uniformity	±0.15	±0.15
Heating speed	2 /s	2 /s
Cooling speed	2 /s	2 /s
Channels	one	two
Optics source	F1: 470nm	F1: 470nm F2: 590nm
Detection	F1: 525nm	F1: 525nm F2:630nm
Power Adapter	DC15V 8A	DC15V 8A
Dimensions (WxDxH) mm	145x305x100mm	145x305x100mm
Weight	1.9kg	1.9kg

AMR-100
Microplate Reader

Description

AMR-100 Microplate Reader is a reliable and robust instrument for a wide variety of research and clinical applications. It reads various kinds of 96-wells plates and equipped with shaking function. It can be used as a stand alone instrument or under PC control with regular or APP software. The software is easy-to-use..

AMR-100 Microplate Reader is a 9-channel absorbance microplate reader that provides not only accurate, reproducible and fast measurements, but also offer innovative design with its easy-to-use control and data analysis software. It is ideal for a variety of ELISA applications in the biology laboratory

1. Easy of use with 7 inch touch screen together with 3 external keys
2. A broad wavelength range of 340-750nm
3. Able to use individually or connect with PC and export results
4. Absorbance range: 0.0~4.000Abs
5. 8 positions optical filter wheel, equipped with 4 standard optical filters
6. Rapid and accurate measurement of 96-well plates within 6 seconds
7. 9-channel ELISA reader for fast measurements
8. Additional reference channel for optimized light intensity
9. Endpoint, kinetic and multi-label measurements for a variety of applications
10. Shaking with variable time and speed
11. PC software, APP software and bulit-in software for powerful and validated data analysis