



**FOR LIFE SCIENCE &  
AUTOMATION SOLUTIONS**

**PRODUCT  
CATALOGUE**



# PRODUCT CATALOGUE

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01

## **Biological Sample Preparation**

# Auto-Pure 4800

## Nucleic Acid Purification System



### Product Introduction

Auto-Pure 4800 is a high-throughput automatic nucleic acid extraction equipment, based on the magnetic bead method to extract nucleic acid. The steps of pipetting, lysis, washing, elution and PCR system construction can be automatically completed in the workstation, one-stop operation without manual intervention. The maximum reaction system is 1 mL. It can extract 48×1 mL sample system at the same time. Compared with manual extraction, it is more efficient and convenient. At the same time, the standardized and automated operation steps avoid human error, and the experimental results are more reliable and repeatable.

#### Automated Extraction + PCR Setup:

Reagent  
transfer

Sample  
transfer

Nucleic acid  
extraction

PCR setup

### 01

#### Fast & Flexible Experiment



1. Time for the extraction: 48 samples - 15 ~ 30 min (depending on different reagents)  
Time for the pipette sample: 48 samples - 13 min
2. Bottled or prefilled reagents can be selected for extraction according to actual needs

### 02

#### Effective Cross-Contamination Prevention



1. Negative pressure filter system to prevent aerosol contamination
2. Full coverage UV sterilization, exhaustive to clean the worktable



### 03

#### High-Precision Liquid Handling

1. 1+2 pipettors combination with pressure detection technology
2. Detailed pipetting parameter settings for different liquids can effectively improve the accuracy

### 04

#### Vortex Magnetic Beads and PCR Reagent Block

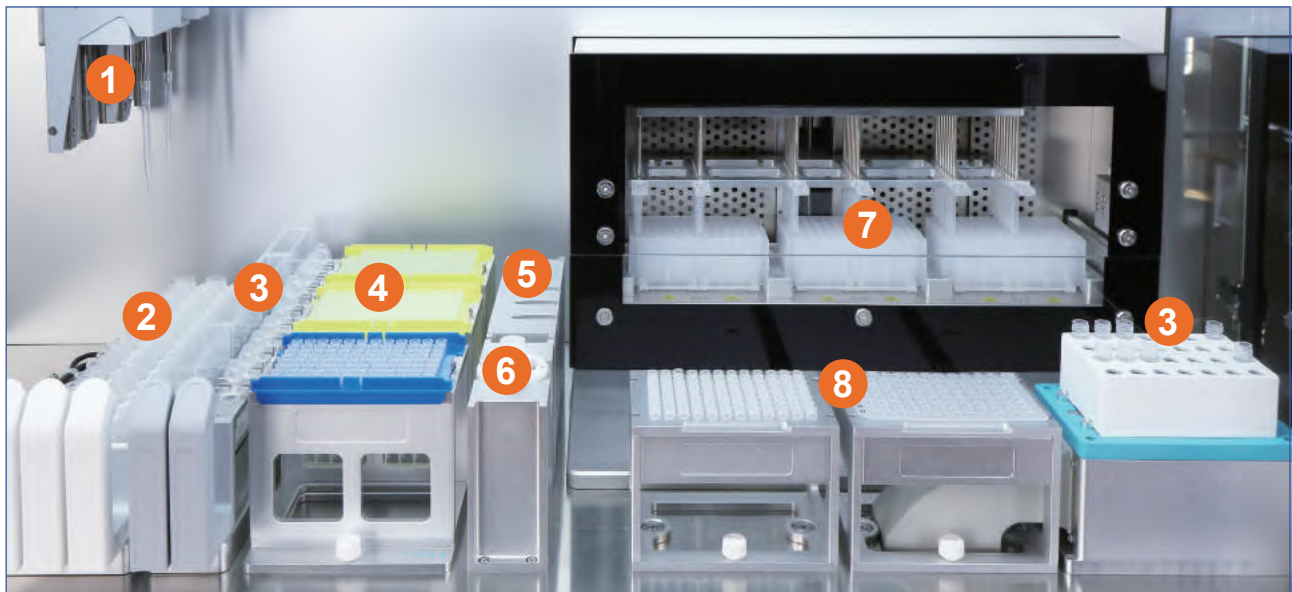
1. Specially designed for magnetic beads, the vortex is stable which improves the efficiency of the experiment
2. The PCR reagent block can be customized according to customer needs

### 05

#### Graphical User Interface, Simple and Easy to Operate



## Plate Layout



- 1 Pipetting Arm** ----- 3-channel pipetting arm, 2×1000 µL pipettors, 1×200 µL pipettor
- 2 Samples Area** ----- The 48 test tube rack can hold different consumables such as sample tubes, test tubes and centrifuge tubes. And it is equipped with a barcode scanner.
- 3 Reagents Area** ----- Two areas: nucleic acid extraction reagent and PCR reagents
- 4 Tips Area** ----- 2×1000 µL and 1×200 µL tip racks
- 5 Waste Area** ----- Used tips will be disposed into the waste container, which can intelligently calculate whether the tips are full and increase the storage space
- 6 Vortex Magnetic-beads** ----- Specially designed for magnetic beads, the vortexing is stable which improves the efficiency of the experiment
- 7 Nucleic Acid Extraction Area** ----- Can extract 48 samples at the same time. Built-in heating incubator temp. range up to 120 °C, which can process the sample lysis and nucleic acid elution
- 8 PCR Setup Area** ----- 2 x 96 PCR plates or 24 x 8 strip PCR tubes



## Specification

Model	Auto-Pure 4800
Function	Automatic pipette samples, extract nucleic acid and setup PCR systems
Information management	Support external USB scanner, barcode scanning function, automatic scanning function
Pipetting principle	Air displacement pipetting technology
Pipettor	Two 1000 $\mu$ L pipettors and one 200 $\mu$ L pipettor
Pipetting range ( $\mu$ L)	1 - 1000 $\mu$ L
Tips	Allsheng tips, and other tips compatible with this instrument
Liquid detection	Pressure detection: liquid level detection, tip clogging detection and residual liquid detection
Samples per run	1 - 48
Process volume	50 - 1000 $\mu$ L
Extraction uniformity	CV $\leq$ 5 %
Single sample consumables	Support
Heating temperature	Elution and lysis temperature control: RT. $\sim$ 120 $^{\circ}$ C
Cooling block	0 $^{\circ}$ C $\sim$ 105 $^{\circ}$ C (optional)
UV sterilization	Separate UV lamp: extraction area, pipetting area and waste container area
Fan filter	Equipped with three HEPA filters
Instrument port	USB port
Power supply	220 V, 8 A, 50 / 60 Hz
Power	Standby 30 W, maximum 550 W
Noise	$\leq$ 60 dB
Net weight	130 kg

## Pipetting Accuracy

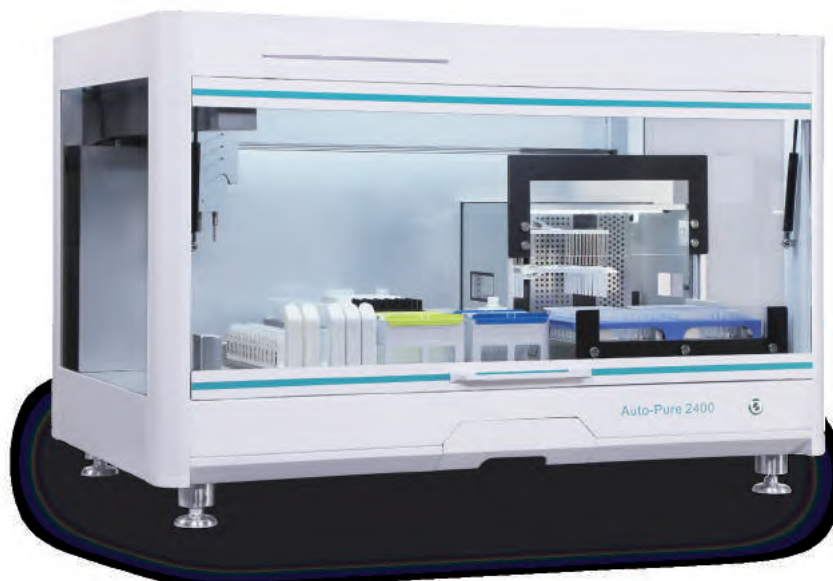
Pipettor	200 $\mu$ L	1000 $\mu$ L
Pipetting range	1 - 200 $\mu$ L	5 - 1000 $\mu$ L
Accuracy (A)	1 $\mu$ L: $\pm$ 12 % 20 $\mu$ L: $\pm$ 3 % 100 $\mu$ L: $\pm$ 1 % 200 $\mu$ L: $\pm$ 1 %	5 $\mu$ L: $\pm$ 5 % 100 $\mu$ L: $\pm$ 2 % 500 $\mu$ L: $\pm$ 1 % 1000 $\mu$ L: $\pm$ 1 %
Precision (CV)	1 $\mu$ L: $\leq$ 8 % 20 $\mu$ L: $\leq$ 1.5 % 100 $\mu$ L: $\leq$ 0.8 % 200 $\mu$ L: $\leq$ 0.5 %	5 $\mu$ L: $\leq$ 2.5 % 100 $\mu$ L: $\leq$ 1.25 % 500 $\mu$ L: $\leq$ 0.4 % 1000 $\mu$ L: $\leq$ 0.4 %

## Ordering Information

Code	Product Description
AS-17210-00	Auto-Pure 4800
RS-HSCF0101	Nucleic acid extraction or purification reagents (1 mL) Specification: 10 T, 24 T, 50 T, 100 T

# Auto-Pure 2400 / 2400M

## Nucleic



### Product Introduction

Auto-Pure 2400 / 2400M is a high-throughput automatic nucleic acid extraction equipment, based on the magnetic bead method to extract nucleic acid. The steps of pipetting, lysis, washing, elution and PCR system construction can be automatically completed in the workstation, one-stop operation without manual intervention. The maximum reaction system is 10 mL. It can extract 24×10 mL sample system at the same time. Compared with manual extraction, it is more efficient and convenient. At the same time, the standardized and automated operation steps avoid human error, and the experimental results are more reliable and repeatable.

2400M includes a temperature change block with no cross-contamination. With the corresponding software, it can automate the entire process of methylation transfer, simplifying complicated experiments. In addition, the full-coverage UV sterilization system and negative pressure filter system effectively prevent cross-contamination.

#### Auto-Pure 2400: Automated Extraction + PCR Setup



#### Auto-Pure 2400M: Automated Extraction + Methylation Transfer + PCR Setup



Note: In addition to meeting the needs of automated nucleic acid extraction as 2400, 2400M can also automate the methylation transfer process.

This step of "Quality control" is completed using the supporting instrument - Fluo-200 / 800 fluorometer.

## 01

### Large Volume Extraction to Meet Special Needs

1. The maximum reaction system of the sample library is 5 / 10 mL, which can meet the needs of cfDNA extraction
2. The elution well is eluted in a small volume to meet the nucleic acid concentration requirements

## 02

### Easy-to-Learn Operating Software

1. Graphical user interface, program editing can be completed without complicated operations
2. Built-in comprehensive libraries of consumable carriers and liquids

### 03

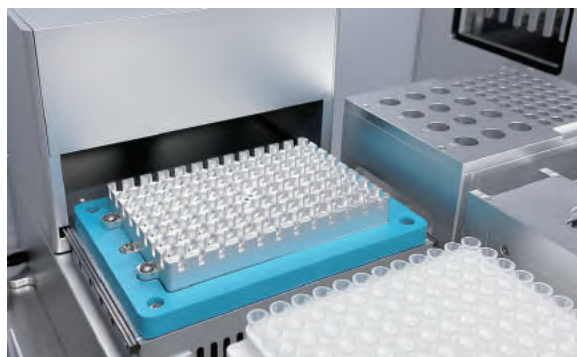
#### High-Precision Liquid Handling



1. Dual-channel pipetting design, suitable for 1 mL / 5 mL / 200  $\mu$ L pipettor
2. Pipettor's pressure detection technology
3. Detailed pipetting parameter settings for different liquids can effectively improve the accuracy

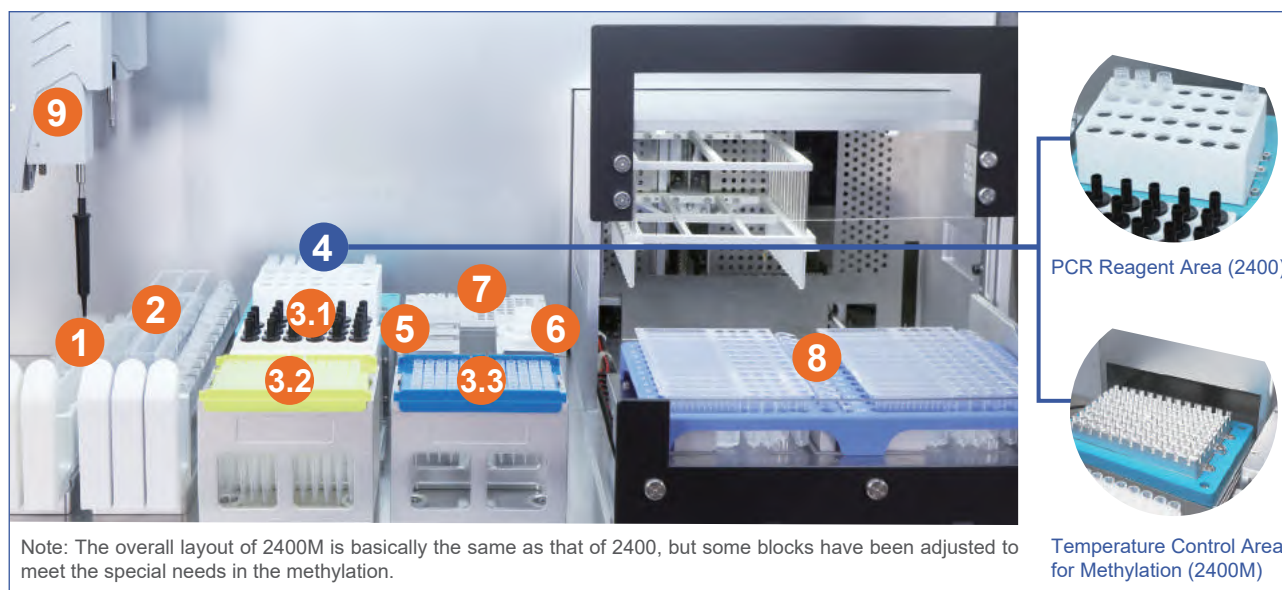
### 04

#### Methylation Transfer Special Functional Blocks (2400M)



1. Block temperature control range 4  $^{\circ}$ C ~ 105  $^{\circ}$ C
2. In order to meet the methylation requirements, 2400M adds a temperature control block to realize multi-stage temperature change
3. Thermo lid design can prevent reagent condensation, and has the technology to prevent cross-contamination

### Plate Layout

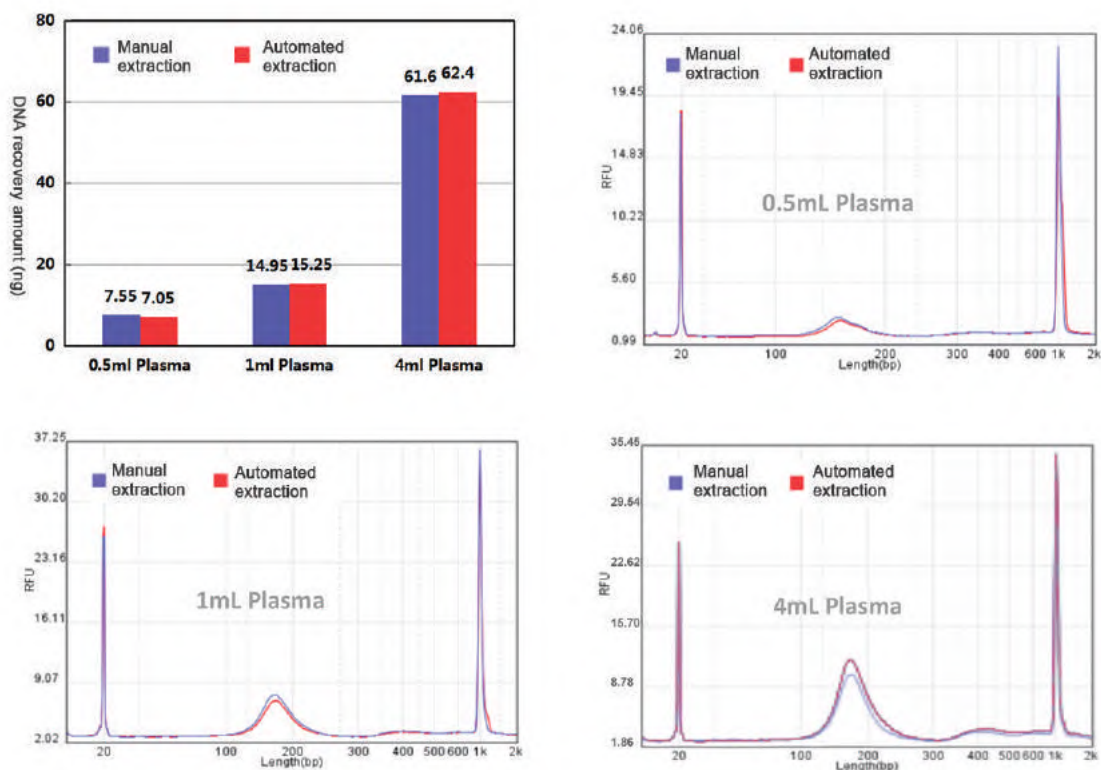


- 1 Samples Area** ----- The sample barcode of each test tube is automatically scanned during sample rack loading
- 2 Reagents Area** ----- Includes 100 mL reagent positions, 7 mL centrifuge tube positions and 1.5 mL / 2 mL centrifuge tube positions
- 3 Tips Area** ----- Includes 5000  $\mu$ L, 1000  $\mu$ L and 200  $\mu$ L tip racks
- 4 PCR Reagent Area (Auto-Pure 2400)** ----- RT. PCR reagent rack, optional refrigeration block  
**Temperature Control Area (Auto-Pure 2400M)** ----- Multi-stage automatic temperature change can be realized to meet the needs of methylation
- 5 Waste Area** ----- Used tips will be disposed into the waste container, which can intelligently calculate whether the tips are full and increase the storage space
- 6 Vortex Magnetic-beads** ----- Specially designed for magnetic beads, the vortexing is stable which improves the efficiency of the experiment
- 7 PCR Setup Area** ----- 2400 can setup 4 detection item systems while 2400M is 2
- 8 Nucleic Acid Extraction Area** ----- Can extract 1-24 samples. Elution well 2 mL centrifuge tube design, the elution product can be used directly for subsequent experiments
- 9 Pipetting Arm** ----- Two-channel pipetting arm, 1 $\times$ (50-5000  $\mu$ L), suitable for 1 mL / 5 mL pipettors, 1 $\times$ (1-200  $\mu$ L), suitable for 200  $\mu$ L pipettors.

## Application - cfDNA Extraction

### The Automatic Extraction Effect of Plasma from Tumor Patients

Compared with the combination of DNA Ladder and newborn bovine serum, the plasma environment of tumor patients is more complicated. In the manual method, the sample needs to undergo high-temperature lysis and other processes, while the automatic method adopts the method of directly mixing reagents such as lysis solution, magnetic beads, and binding solution with the sample and then running on the machine. In order to verify the extraction efficiency of this method for actual samples, 0.5 mL, 1 mL, and 4 mL of tumor patient plasma were taken for cfDNA extraction, and compared with the results of the same sample and manual extraction. The results showed that there was no significant difference in the yields of the two extraction methods under the three volumes, indicating that the automation of the reagents was well matched and met the needs of normal sample extraction.



0.5 mL, 1 mL, and 4 mL of tumor patient plasma were extracted using manual method and automated instruments respectively, with 50  $\mu$ L elution volume. The results showed that there was no significant difference between the manual method and the automatic method in terms of concentration or fragment size.

## 2400M Special Application - Methylation Detection

2400M large volume extraction with special functional blocks and software design meet the requirements of methylation detection sample pre-processing experiments, realize the automation of the overall process, effectively reduce labor time and improve the stability of experimental results. The process shown in the figure below can be completed within 2400M except for "quality control":

Large volume nucleic acid, FFPE extraction and purification

Quality control

Normalization

Sulfite conversion

Magnetic bead purification

PCR system setup



## Specification

Model	
Function	Automatic pipette samples / reagents, extract nucleic acid and setup PCR systems
Information management	Support external USB scanner, barcode scanning function, automatic scanning function
Pipetting principle	Air displacement pipetting technology
Pipettor	
Pipetting range (μL)	1 - 5000 μL
Tips	Allsheng tips, and other tips compatible with this instrument
Liquid detection	Pressure detection: liquid level detection, tip clogging detection and residual liquid detection
Samples per run	
Process volume	50 - 10000 μL
Extraction uniformity	CV ≤5 %
Single sample consumables	Support
Heating temperature	Elution and lysis temperature control: RT. ~ 120 °C
Temp. control block (2400M)	4 °C ~ 105 °C
UV sterilization	Separate UV lamp: extraction area, pipetting area and waste container area
Fan filter	Equipped with three HEPA filters
Instrument port	USB port
Power supply	220 V, 8 A , 50 / 60 Hz
Power	
Noise	≤ 60 dB
Net weight	130 kg

## Pipetting Accuracy

Pipettor	200 μL		1000 μL		5000 μL	
Pipetting range	1 - 200 μL		5 - 1000 μL		50 - 5000 μL	
Accuracy (A)	1 μL: ±12 %	20 μL: ±3 %	5 μL: ±5 %	500 μL: ±1 %	50 μL: ±6 %	2500 μL: ±3 %
	100 μL: ±1 %	200 μL: ±1 %	100 μL: ±2 %	1000 μL: ±1 %	500 μL: ±5 %	5000 μL: ±3 %
Precision (CV)	1 μL: ≤8 %	20 μL: ≤1.5 %	5 μL: ≤2.5 %	500 μL: ≤0.4 %	50 μL: ≤3 %	2500 μL: ≤2 %
	100 μL: ≤0.8 %	200 μL: ≤0.5 %	100 μL: ≤1.25 %	1000 μL: ≤0.4 %	500 μL: ≤2 %	5000 μL: ≤1 %

## Ordering Information

Code	Product Description	
AS-17200-00	Auto-Pure 2400	
AS-17220-00	Auto-Pure 2400M	
Code	Product Description	Specification
RS-HSCF0101	Nucleic acid extraction or purification reagents (1 mL)	10 T, 24 T, 50 T, 100 T
RS-HSCF0102	Nucleic acid extraction or purification reagents (2 mL)	24 T, 50 T
RS-HSCF0104	Nucleic acid extraction or purification reagents (4 mL)	24 T, 50 T



# Auto-Pure 96 / 48 / 24

## Nucleic Acid Purification System



### Product Introduction

Auto-Pure 96 / 48 / 24 nucleic acid purification system adopts magnetic bead separation technology, using 96×2.2 mL deepwell plate and 96 magnetic rod's tip (1,000  $\mu$ L reaction system); 48×5 mL deepwell plate, 48 magnetic rod's tip (5,000  $\mu$ L reaction system); 24×14 mL deepwell plate, 24 magnetic rod's tip (10,000  $\mu$ L reaction system). Combined with different kinds of magnetic bead nucleic acid extraction kits, it can operate 1-96 samples, 1-48 samples or 1-24 samples simultaneously and extract DNA and RNA rapidly in 30-60 minutes.

1. High throughput fast extraction, 1-96 or 1-48 or 1-24 samples can be extracted at the same time
2. Open design, complete software functions.  
Diversified mixing and magnetic absorption methods provide more reliable methods for reagent manufacturers to optimize reagents
3. 7-inch color touch screen display, parameters and programs can be freely edited, and the kit can be freely matched. With Chinese and English operation interface, program editing can be realized without connecting to a computer. Flexible and simple operation can meet the needs of multiple sample extraction
4. The instrument has 8 plate positions, and 2 plate positions can be used for heating and precise temperature control. Self-defined lysis and elution temperature, RT.+5 °C~120 °C temperature control, meet different lysis conditions of various samples. Customized service is provided for the instrument heating plates, which can be increased up to 4, and the shape of the heating plate can be adjusted according to the reagent kit to maximize the heating efficiency
5. Center rotary table design with small shape, stable operation, safe and reliable
6. Automatic detection in case kit missing
7. Automatic loading and unloading structure of magnetic rod tip comb, which guarantee stability and liability
8. With QR code identification, special reagent can be recognized, without setting program or obtaining protocols
9. UV sterilization lamp function and pollution prevention control eliminate cross-contamination; built in LED, convenient for observing the instrument operation
10. At the end of program operation, the software has the function of generating reports to meet the experimental traceability
11. Expandable Ethernet remote control and wireless WIFI function, can be achieved unattended remote monitoring control

## 01

High Throughput, Fast Extraction and Modular Design Can Meet Variety of Needs by One Unit.



Auto-Pure 96 Consumable



Auto-Pure 48 Consumable



Auto-Pure 24 Consumable



Auto-Pure 48 Consumable

## 02

### Operational Advantages

1. High-throughput:  
Auto-Pure 96 can process 96x1 mL samples simultaneously  
Auto-Pure 48 can process 48x3 mL samples simultaneously  
Auto-Pure 24 can process 24x10 mL samples simultaneously
2. Open and multiple functions design can be provided more methods for reagent optimization, and also a reliable choice
3. Touchscreen interface and easy operation, parameters can be tuned based on experimental requirements
4. Accurate temperature control system ensures stability of purification performance
5. Patent structure design with center rotary table which makes it occupies smaller area
6. Patent design for automatic loading and unloading structure of magnetic rod tip comb, which guaranteed stability and liability (success rate >99.99%)

## 03

### Antipollution Measures

1. Avoid reagent splashing through drip shield plate and beads dried way controlled by software
2. Disposable consumables which can avoid cross-contamination



## 04

### Simple and Intelligent Operation

1. Front door can be opened, you can stop it at any moment which is very convenient for reagent optimization and experimental status viewing
2. Start with self-check, equipped with power-off protection
3. 8-plate identification design guaranteed their target position, even though external forces exist
4. Automatic detection in case kit missing
5. With QR code identification, special reagent can be recognized, without setting program or obtaining protocols



Auto-Pure 96 / 48 / 24  
the front door can be opened

## 05

### Compatible with Automated Systems (Optional)

Auto-Pure 96 / 48 / 24 can be used with automatic equipment, including mechanical arm, liquid processing system, etc., which meet the demand of high-flux experiment



## Specification

Model	Auto-Pure 96	Auto-Pure 48	Auto-Pure 24
Throughput	1~96	1~48	1~24
Process volume	50~1000 $\mu$ L	50~3000 $\mu$ L	50~10000 $\mu$ L
Consumables	96-deep well plate + 96 magnetic rod's tip	3 mL tube strips + magnetic rod's tip	10 mL tube strips + magnetic rod's tip
Working principle	Magnetic bead method, magnetic rod type / center rotary table		
Software security	Operating system encryption function can effectively prevent malicious tampering with parameters and programs		
Purification accuracy	100 copy sample positive rate >95 %		
Stability	CV <5 %		
Collection efficiency	>95 %		
Lysis temp.	RT.~120 °C		
Elution temp.	RT.~120 °C		
Mixing	Mixing ways can be editable		
Operation interface	7-inch touch screen, 3 shortcut buttons and mouse is available		
Built-in program	8 groups of preset programs, 100 groups of programs can be stored		
Program management	New, edit, delete, save as		
Expansion interface	Standard USB, ethernet port and WIFI are available		
Lighting	Yes		
Sterilization	UV light		
Exhaust way	Fan		
Data storage	Available, with built-in SD card		
Max. input power	300 W		
Dimension (W×D×H)	56 cm×62 cm×50 cm		
Weight	54 kg		

## Ordering Information

Code	Description	Code	Description
AS-17060-00	Auto-Pure 96 Nucleic acid purification system	AS-17061-03	96-Elution plate for Auto-Pure 96
AS-17070-00	Auto-Pure 24 Nucleic acid purification system	AS-17071-01	Magnetic tip comb for Auto-Pure 24
AS-17080-00	Auto-Pure 48 Nucleic acid purification system	AS-17071-02	24 x 14.6 mL plate for Auto-Pure 24
AS-17061-01	Magnetic tip comb for Auto-Pure 96	AS-17081-01	Magnetic tip comb for Auto-Pure 48
AS-17061-02	96-Deepwell plate for Auto-Pure 96	AS-17081-02	48 Well plate for Auto-Pure 48

# Auto-Pure S32

## Nucleic Acid Purification System



### Product Introduction

Auto-Pure S32 is a device for nucleic acid extraction and purification based on magnetic bead method. It can be used for fully automatic extraction and purification of DNA, RNA and protein. Through the adsorption, transfer and release of magnetic beads by magnetic rods and magnetic rod sleeve, the transfer of magnetic beads / samples is realized, and the automatic extraction and purification operation is completed. The operation is automated, fast and easy. Using special kits or 96-well plates, 1 to 32 samples can be processed at the same time. With different types of magnetic bead and nucleic acid extraction reagents, rapid extraction of animal, plant tissue, blood and other body fluid samples can be achieved. It is mainly used for the extraction and purification of nucleic acid from human samples.

### Features

#### ■ Humanized Operating System

1. Chinese and English interface operation, touch screen operation, and external mouse, easy to use
2. Built-in lighting LED for real-time observation of operating status
3. Short operation time, with different reagents, the general extraction time is 10~60 minutes / time
4. Support external scanner, automatically identify program / sample and other information after scanning

#### ■ Open Design, Flexible Extraction

1. 1-32×1 mL samples can be extracted in one run
2. Realize lysis heating and elution heating
3. The mixing speed of 1-10 gears can be set flexibly, and the methods are more diverse

#### ■ Stable Operation, Safe and Reliable

1. The instrument runs quietly and the whole machine has no vibration
2. Automatic reagents and disposable consumables reduce operator exposure to harmful reagents
3. Select high-quality materials and processes, low loss of magnetic beads, high yield
4. Built-in UV sterilization function reduces the risk of contamination

#### ■ Intelligent and Diverse Network System

1. Network control ---- extensible Ethernet remote control, WiFi function
2. APP software ---- can expand the Android tablet computer, mobile phone monitoring system
3. Expanded functions ---- IOT to achieve efficient background management

### Consumables



96-Deepwell Plate



Magnetic Rod's Tip

## Specification

<b>Model</b>	<b>Auto-Pure S32</b>
Principle	Magnetic bead method
Throughput	1 - 32
Plate type	96 deepwell plate
Process volume / $\mu\text{L}$	30 - 1000 $\mu\text{L}$
Stability	CV $\leq$ 5 %
Heating for lysis tube	RT. $\sim$ 120 $^{\circ}\text{C}$
Heating for elution tube	RT. $\sim$ 120 $^{\circ}\text{C}$
Heating time	RT. $\sim$ 120 $^{\circ}\text{C} \leq$ 4 minutes
Cooling time	100 $^{\circ}\text{C} \sim$ 40 $^{\circ}\text{C} \leq$ 10 minutes (RT. 25 $^{\circ}\text{C}$ )
Temperature precision	$\pm$ 0.5 $^{\circ}\text{C}$
Temperature uniformity	At 100 $^{\circ}\text{C}$ , $\pm$ 1 $^{\circ}\text{C}$
Shake mixing	1-10 gear can be set
Operation interface	7 inch color large touch screen
Internal procedure	Up to 500 programs can be stored
Instrument interface	2 USB (dual A type), 1 USB (B type), 1 Ethernet port
Network	Standard Wifi network, reserved 4G network
Barcode scanning	Support external scanner, automatically identify program / sample and other information
Sterilization	UV sterilization
Purification filter	Equipped with a purification filter system to reduce cross-contamination such as aerosols
Power supply	AC110-240 V, 50 / 60 Hz, 450 VA
Dimension (W×D×H) mm	417×410×426 mm
Weight	20 kg

## Ordering Information

<b>Code</b>	<b>Description</b>
AS-17180-00	Auto-Pure S32 nucleic acid purification system
AS-17031-01	96-Deepwell plate for Auto-Pure S32 / 32A / 16A
AS-17031-02	Magnetic rod's tip for Auto-Pure S32 / 32A / 16A / Mini

# Auto-Pure Mini

## Nucleic Acid Purification System

### Product Introduction

Auto-Pure Mini nucleic acid purification system is featured with mini size and powerful function to meet the daily testing requirements of small labs. Supporting the use of cell phone APP to remote edit protocols, import and export data, check running log etc, make it much more convenient for users.

### Features

#### ■ Open Design, Free Editing Software

Accurate temperature control of ambient +5 °C~120 °C  
Easy to set program with open and humanized software  
Powerful open software can match with different kinds of magnetic bead kits  
Special single test strip mode makes single test much more cheaper

#### ■ Simple and Intelligent Operation

Built-in lighting LED, real-time observation of the running status  
Graphical interface design makes the operation easier  
Create, edit and manage programs can be completed on one cell phone by APP

#### ■ Field Experiment

Special design of the instrument, small size, easy to carry  
Intelligent energy-saving mode for reducing the power consumption of battery supply  
External battery power supply, DC 24 V / 5 A can be available

#### ■ High-Quality Fast Extraction

Up to 16 samples with max 1 mL / process volume per run  
Equipped with lead screw drive to achieve high precision lifting movement  
UV sterilization function to reduce the contamination of samples between different batches



Auto-Pure Mini Single  
Sample Consumables



Auto-Pure Mini Consumables

## Related Accessories



Holder for Auto-Pure Mini Single Tank



Auto-Pure Mini Code Scanner



Auto-Pure Mini External Battery Power Supply

## Specification

Throughput	1~16
Processing volume	20~1000 $\mu$ L
Consumable	8-tip comb 96 deepwell plate / single test strip
Principle / working mode	Magnetic beads absorption and separation
Stability	CV $\leq$ 3 %
Magnetic bead recovery rate	>95 %
Lysis temperature	RT.~120 $^{\circ}$ C
Elution temperature	RT.~120 $^{\circ}$ C
Mixing	Mixing ways can be editable
Operation interface	4.3 touch screen, 3 shortcut keys and external mouse
Program	Preset 6 programs, max store 100 programs
Program management	New, edit, save as, delete
Port	Standard USB, Ethernet port, WiFi
Lighting	LED
Sterilization	Fan exhaustion, UV sterilization
Dimension	20 cm $\times$ 26 cm $\times$ 30 cm
Weight	7 kg

## Ordering Information

Code	Description	Code	Description
AS-17170-00	Auto-Pure Mini nucleic acid purification system	AS-17031-02	Magnetic rod's tip for Auto-Pure Mini
AS-17171-01	Single tank for Auto-Pure Mini	AS-17061-02	96-Deepwell plate for Auto-Pure Mini
AS-17171-02	Holder for Auto-Pure Mini single tank		
AS-17171-03	Code scanner for Auto-Pure Mini		

# Auto-Pure 32A

## Nucleic Acid Purification System



Convenient Drawer Sampling



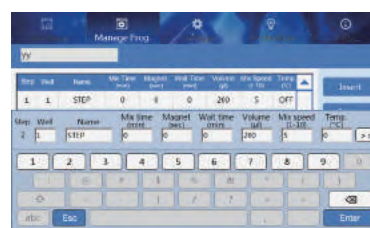
Auto-Pure 32A Consumables

### Features

Auto-Pure 32A nucleic acid purification system is a device for extracting and purifying nucleic acid by magnetic bead method. It has the advantages of high automation, fast extraction speed, stable results and simple operation. Using 96 deepwell plate, 1-32 samples can be purified simultaneously. DNA and RNA in animal and plant tissues, blood, body fluids and criminal samples can be extracted quickly with different kinds of bead nucleic acid reagents. It is widely used in scientific research, disease control system, food safety, forensic medicine, clinical monitoring and other fields.

#### Product Features

1. Purification of 32 samples in one run
2. Drawer type sampling, convenient and safe
3. Screw rod design, higher operation accuracy
4. Open system, suitable for various magnetic bead extraction reagents
5. Large guide rail design, small clearance, more stable structure
6. UV lamp to avoid cross contamination



# Auto-Pure 20A / 20B / 24D

## Nucleic Acid Purification System

### Product Introduction

Auto-Pure 20 series nucleic acid purification system has further improved the sample processing capacity based on 32A. The maximum processing volume of 20A is 3 mL; and the maximum processing volume of 20B / 24D is 5 mL and 10 mL, combined with the patented left and right mixing method and reagent strips. In addition, the single-strip design of the kit can effectively avoid the waste of the kit, which is more suitable for customers with a small amount of samples.

### Features

1. Single machine operation, 7-inch color touch screen display, easy to use
2. Customize temperature and program according to requirements to meet different reagent requirements
3. Short operation time, 15-40 min / time, and up to 20 / 24 samples can be extracted at the same time
4. High nucleic acid yield, low magnetic bead loss and good repeatability
5. UV sterilization function to reduce the pollution of samples between different batches
6. Open system, suitable for reagent extraction by various magnetic bead methods
7. Can monitor the system by APP in real time through mobile devices
8. Screw rod design, high operation accuracy; large guide rail design, small clearance, more stable structure
9. Drawer type sampling, convenient and safe
10. Open instrument parameter settings, which can be set independently: mixing speed, magnetic absorption, release, cooling fan and other functions
11. Auto-Pure 24D maximum processing volume is 10 mL



Auto-Pure 20A / 20B



Auto-Pure 24D





## Modular Design



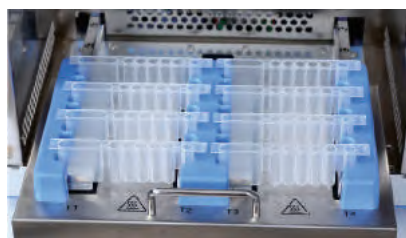
Auto-Pure 24D



Auto-Pure 20A Consumables



Auto-Pure 24D 5 mL Consumables



Auto-Pure 20B



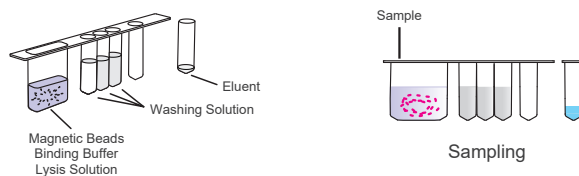
Auto-Pure 20B Consumables



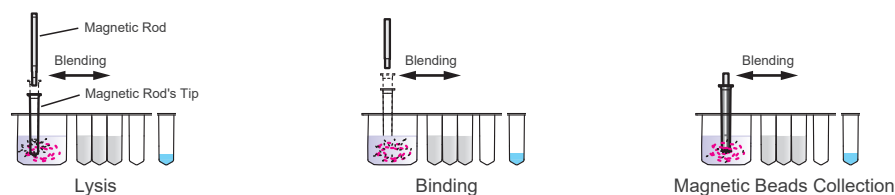
Auto-Pure 24D 10 mL Consumables

## Magnetic Bead Extraction (Auto-Pure 20A)

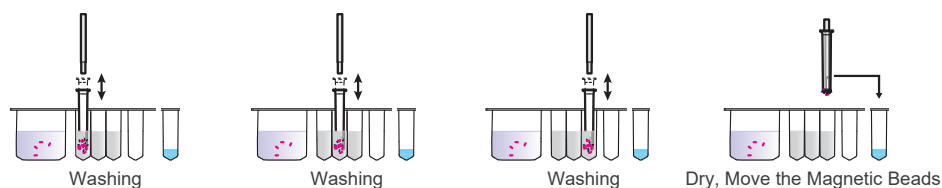
01  
Sample



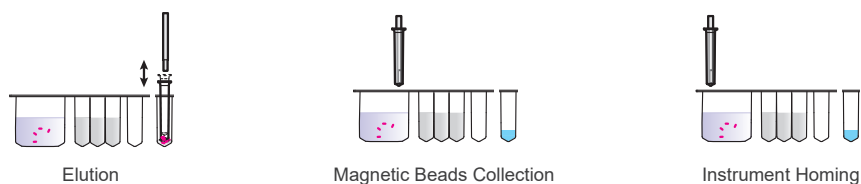
02  
Lysis  
Binding



03  
Washing



04  
Elution



## Working Principle of Nucleic Acid Extraction

Use the magnetic rod on the magnetic rod holder in the instrument to move the magnetic beads with nucleic acid into different reagent wells. Then use the mixing sleeve on the outer layer of the magnetic rod to repeatedly and rapidly mix the sample. Finally obtain purified nucleic acid after cell lysis, nucleic acid adsorption, washing and elution.

## 01

### Special Features for Auto-Pure 20A

1. Patented design of 9-strip tubes
2. 9-strip tubes has two sample wells, the first sample well is 2 mL, and the second sample well is 1 mL. The user can choose any sample well as required
3. Process samples up to 3 mL and Max. sample volume is 1.2 mL
4. Reducing reagent waste and good for research use



## 02

### Special Features for Auto-Pure 20B / Auto-Pure 24D

1. Patented design for 5 mL tube strips
2. Reducing reagent waste
3. Large processing volume: Max. processing volumes of 20B and 24D are 5 mL and 10 mL, which improves detection sensitivity and meets various applications
4. Two Max. processing volumes for 24D, are suitable for 5 mL and 10 mL consumables
5. Patented design for line-mixing the sample, is good for next-generation sequencing cfDNA extraction, nucleic acid library construction, blood nucleic acid screening, nucleic acid hypersensitivity detection



## 03

### Matching Product for Auto-Pure Series: SealBio-2 SealBio-2 of Adapter for Auto-Pure Tube Strips



SealBio-2 Plate Sealer



Adapter for Auto-Pure 20 Series Tube Strips

## 04

### Matching Product for Auto-Pure 20 Series: FCM-1 FCM-1 Film Cutting Machine



FCM-1

1. Easy to operate; to push the button once and the workstation will move back and forth once
2. The motor have a self-locking function to protect user
3. Hold an adapter for SealBio-2. After filming and take it onto the machine, then be able to cut the film
4. The waste generated after film cutting can be automatically taken out of the instrument
5. Specification:
  - 1) Type: FCM-1
  - 2) Power: 10 W
  - 3) Cutting time: 2.5 s
  - 4) Weight: 1.5 kg
  - 5) Dimension: 346x108x148.5 mm

Note 1: Auto-Pure 20A / Auto-Pure 20B adopts patented 9-strip tubes, which can be separately packaged and separately used for nucleic acid extraction and purification to reduce reagent waste, especially suitable for scientific research institutions

Note 2: The maximum processing volume of Auto-Pure 20B is 5 mL, and the maximum sample volume is 2 mL

## Specification

Model	Auto-Pure 32A	Auto-Pure 20A	Auto-Pure 20B	Auto-Pure 24D
Throughput	1~32	1~20	1~20	1~24
Process volume	50~1000 μL	50~3000 μL	50~5000 μL	50~10000 μL / 50~5000 μL
Consumables	96 deepwell plate + magnetic rod's tip	2 mL tube strips + magnetic rod's tip	5 mL tube strips + magnetic rod's tip	5 mL tube strips + magnetic rod's tip/ 10 mL tube strips + magnetic rod's tip
Working principle	Magnetic bead method, magnetic rod type/ up and down mixing, left and right mixing	Magnetic bead method, magnetic rod type/ up and down mixing	Magnetic bead method, magnetic rod type/ up and down mixing, left and right mixing	
Software security	Operating system encryption function can effectively prevent malicious tampering with parameters and programs			
Purification accuracy	100 copy sample positive rate >95 %			
Stability	CV <5 %			
Collection efficiency	>95 %			
Lysis temp.	RT.~120 °C			
Elution temp.	RT.~120 °C			
Mixing	Mixing ways can be editable			
Operation interface	7-inch touch screen, 3 shortcut buttons and mouse is available			
Built-in program	8 groups of preset programs, 100 groups of programs can be stored			
Program management	New, edit, delete, save as			
Expansion interface	Standard USB, ethernet port and WIFI are available			
Lighting	Yes			
Sterilization	UV light			
Exhaust way	Fan			
Data storage	Available, with built-in SD card			
Max. input power	450 W			
Dimension (W×D×H)	40 cm×47 cm×45 cm	40 cm×52 cm×45 cm		
Weight	28 kg	30 kg		

## Ordering Information

Code	Description	Code	Description
AS-17030-00	Auto-Pure 32A nucleic acid purification system	AS-17151-03	5 mL Tube strips for Auto-Pure 24D
AS-17040-00	Auto-Pure 20A nucleic acid purification system	AS-17151-04	Tube strip holder for Auto-Pure 24D
AS-17050-00	Auto-Pure 20B nucleic acid purification system	AS-17100-00	FCM-1 Film cutting machine
AS-17150-00	Auto-Pure 24D nucleic acid purification system	AS-15020-00	SealBio-2 Semi automated plate sealer
AS-17031-01	96-Deepwell plate for Auto-Pure 32A	AS-15021-01	SBA-1 Standard plater adapter
AS-17031-02	Magnetic rod's tip for Auto-Pure 32A	AS-15021-02	SBA-2 96 well PCR plater adapter
AS-17041-01	Tube strips for Auto-Pure 20A	AS-15021-03	SBA-3 Weighted sealing platen
AS-17041-02	Magnetic rod's tip for Auto-Pure 20A / 20B	AS-15021-04	Adapter for Auto-Pure 20 / 10 series tube strips
AS-17051-01	Tube strips for Auto-Pure 20B	AS-15021-11	Seal-150 Peelable clear seal
AS-17151-01	10 mL Tube strips for Auto-Pure 24D	AS-15021-12	Seal-200 Peelable seal for storage
AS-17151-02	Magnetic rod's tip for Auto-Pure 24D	AS-15021-13	Seal-300 Pierce aluminum heating sealing film

# Auto-Pure 10B / 10BS / 16A

## Nucleic Acid Purification System



Auto-Pure 10B



Auto-Pure 10BS



Auto-Pure 16A



### Product Introduction

Auto-Pure 10B series / Auto-Pure 16A is a miniaturized nucleic acid extraction and purification instrument adopting magnetic bead method, which is developed on the basis of Auto-Pure 20B and Auto-Pure 32A. Auto-Pure 10B series can extract 10 samples in one run, maximum sample volume is 5 mL. Auto-Pure 10BS integrates dry bath heating function, and the extracted template can be subject to subsequent processing such as isothermal amplification reaction, which is convenient for on-site extraction and detection of results. Auto-Pure 16A can extract 16 samples in one run, maximum sample volume is 1 mL. With different types of magnetic bead nucleic acid reagents, it can quickly extract nucleic acids from animal and plant tissues, blood, body fluids, criminal specimens and other samples.

### Features

#### ■ Auto-Pure 10B Series

Auto-Pure 10B series includes two models:

##### Auto-Pure 10B

Maximum sample processing volume 5 mL, up to 10 samples can be processed at the same time, the instrument has its own lysis well, elution well, heating function.

##### Auto-Pure 10BS

Composite, maximum sample volume 5 mL, up to 10 samples can be processed at the same time, on the basis of 10B, increase the function of block heating.

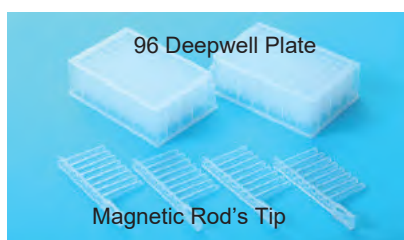
#### ■ Auto-Pure 16A

On the basis of Auto-Pure 32A, the maximum sample handling capacity can be reduced, and up to 16×1 mL samples can be processed simultaneously. It is an ideal choice for automated extraction in small laboratories.

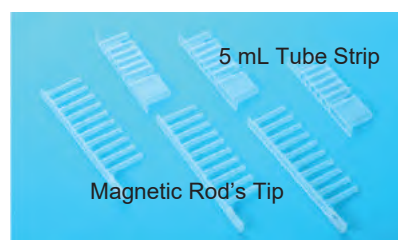
#### Features

1. 4.3 inch touch screen, easy to use
2. Temperature and programs can be edited and saved according to different reagent requirement
3. Short operation time: 15~40 min per run
4. High yield of nucleic acid with low magnetic bead loss and good repeatability of results
5. UV sterilization, avoid cross-contamination
6. Open system which can apply to different magnetic bead extraction reagent
7. Can monitor the system by APP in real time through mobile devices
8. With PC software and APP, edit, set and manage programs more easily
9. Screw rod design which guarantee high operating accuracy; large guide rail design makes the structure more reliable
10. With QR code identification function, special reagent can be recognized, no need to program or obtain protocols
11. Open instrument parameters can be set by itself: mixing speed, magnetic absorption and release, cooling fan and other functions
12. Small volume, suitable for extraction on site

## Modular Design



Auto-Pure 16A Consumables



Auto-Pure 10B / 10BS Consumables

## Specification

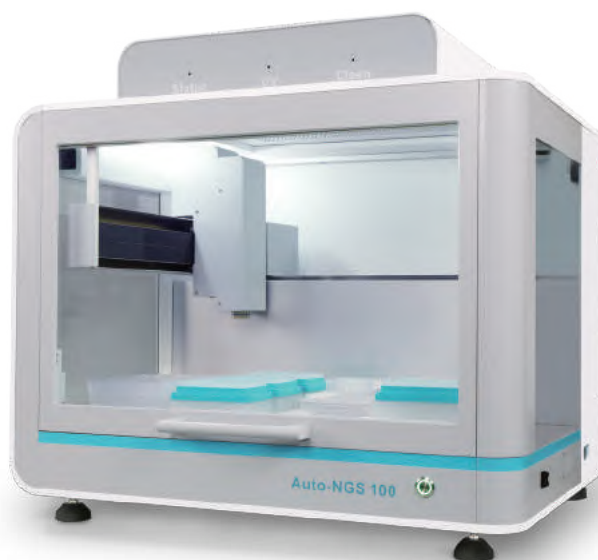
Model	Auto-Pure 10B	Auto-Pure 10BS	Auto-Pure 16A
Throughput	1~10	1~10	1~16
Process volume	50~5000 $\mu$ L	50~5000 $\mu$ L	50~1000 $\mu$ L
Consumable	5 mL tube strip+magnetic rod's tip	5 mL tube strip+magnetic rod's tip	96 deepwell plate+magnetic rod's tip
Block heating	----	Yes (RT.+5 $^{\circ}$ C~105 $^{\circ}$ C)	----
Lysis temp.	RT.~120 $^{\circ}$ C	RT.~120 $^{\circ}$ C	RT.~120 $^{\circ}$ C
Elution temp.	RT.~120 $^{\circ}$ C	RT.~120 $^{\circ}$ C	RT.~120 $^{\circ}$ C
Purification accuracy	100 copy sample positive rate >95 %		
Stability	CV <5 %		
Collection efficiency	>95 %		
Mixing	Mixing ways can be editable		
Operation interface	4.3 inch touch screen, 3 shortcut keys, external mouse		
Built-in program	6 groups of preset programs, 100 groups of programs can be stored		
Program management	PC software, APP software, easier program editing and management		
Extension interface	Standard USB, ethernet port and WIFI are available		
Lighting	Yes		
Sterilization	UV light		
Exhaust way	Fan		
Data storage	Built-in SD card		
Max. input power	300 W	350 W	300 W
Dimension	340 mm×350 mm×410 mm	340 mm×350 mm×410 mm	340 mm×350 mm×410 mm
Weight	18 kg	18.5 kg	18 kg

## Ordering Information

Code	Description	Code	Description
AS-17110-00	Auto-Pure 10B Nucleic acid purification system	AS-17031-02	Magnetic rod's tip for Auto-Pure 16A
AS-17130-00	Auto-Pure 10BS Nucleic acid purification system	AS-17041-02	Magnetic rod's tip for Auto-Pure 10B / 10BS
AS-17140-00	Auto-Pure 16A Nucleic acid purification system	AS-17051-01	Tube strips for Auto-Pure 10B / 10BS
AS-17031-01	96-Deepwell plate for Auto-Pure 16A	/	/

# Auto-NGS 100

## Automated NGS Library Preparation Workstation



### Product Introduction

Auto-NGS 100 is an efficient and unattended automated NGS library preparation workstation, which can improve the repeatability of the library preparation process, greatly liberate laboratory manpower, minimize possible errors, and improve the stability of library preparation. It has a simple tabletop design and an intuitive user interface, which can avoid user misoperation. And it has a UV sterilization lamp and a high-efficiency purification filter device to avoid cross-contamination. It is designed for efficient sample preparation of up to 24 NGS libraries.

#### 01

##### Equipped with Multiple Functional Blocks

2 units temperature control block  
High-efficiency automatic lifting magnetic plate

#### 02

##### Precise Pipetting

Equipped with an 8-channel pipettor  
Pipetting range: 2-200  $\mu$ L

#### 03

##### Full Contamination Control

Equipped with positive pressure HEAP system and UV lamp sterilization to prevent cross-contamination of the experimental cabin

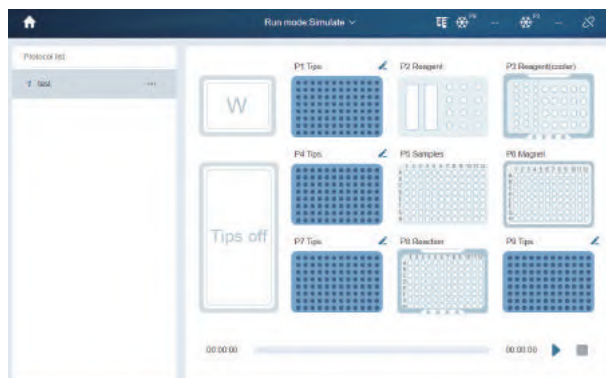




## 04

### Innovative Design

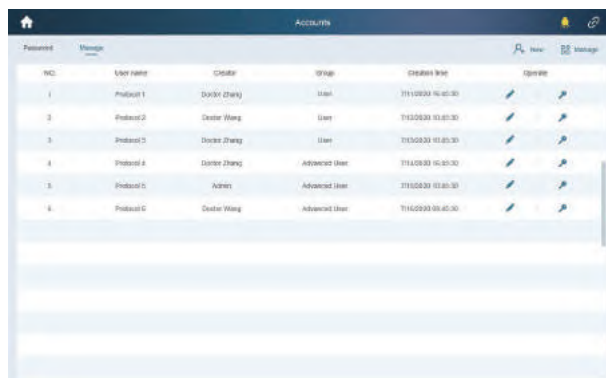
1. It is used for the design of 9 tiles + (TIP off box and waste liquid container) such as microplates, TIPs and accessories
2. In addition, the workstation can be customized according to actual needs



## 05

### Multiple Functions & Open Software Design

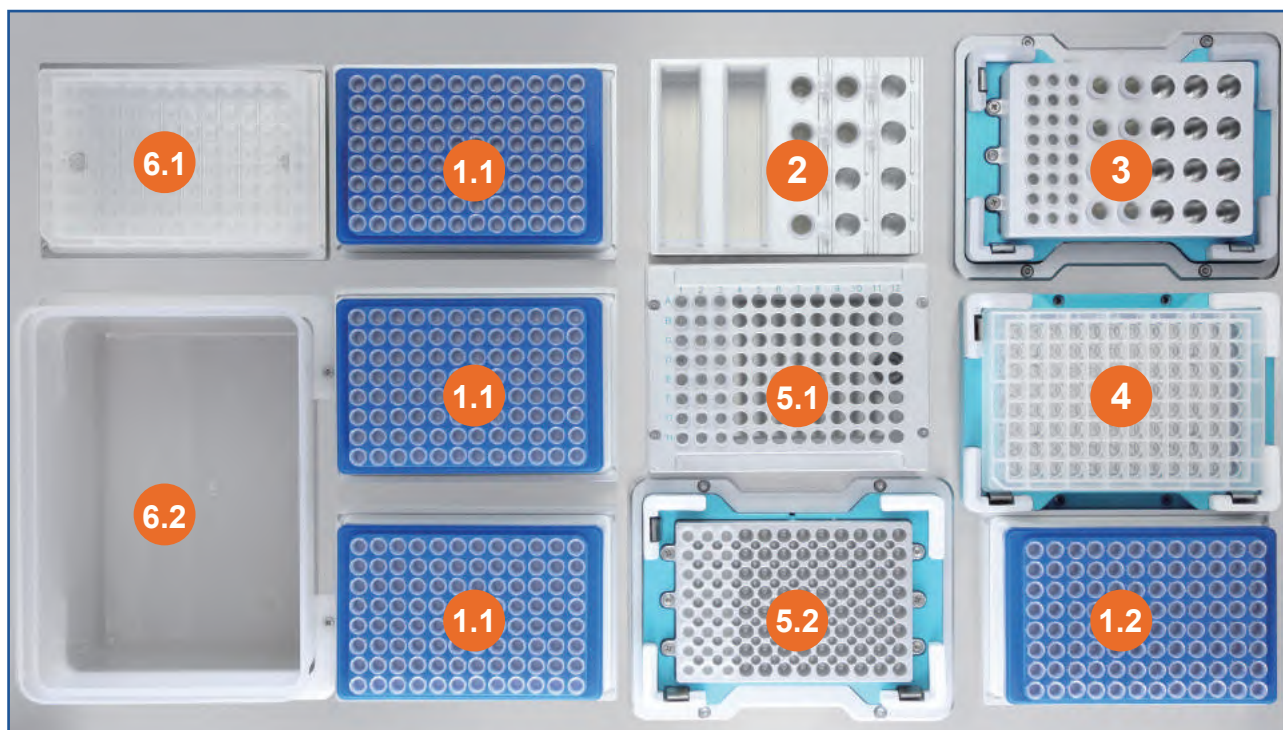
1. Multi-level account management system to support the different needs of new users and advanced users
2. GUI is can be easy to understand, easy to operate even for beginners



## Specification

Model	Auto-NGS 100				
Throughput	1-24				
Tiles number	9 standard tiles + (TIP off box + waste liquid area)				
Pipettor	Pipettor type	8-channel fixed spacing pipettors, can be used as a single channel			
	Pipetting principle	Air displacement pipetting technology			
	Pipetting range	2-200 $\mu$ L			
	Precision(CV)	1 $\mu$ L: $\leq 6\%$	20 $\mu$ L: $\leq 2\%$	100 $\mu$ L: $\leq 1\%$	200 $\mu$ L: $\leq 1\%$
	Accuracy	2 $\mu$ L: $\pm 12\%$	20 $\mu$ L: $\pm 2\%$	100 $\mu$ L: $\pm 1\%$	200 $\mu$ L: $\pm 1\%$
Available well plate	SBS standard 24 / 96 / 384 deep and shallow well plates				
Consumable	Matching Allsheng TIP				
Temperature control block	Equipped with 2 temperature control blocks; temperature control range: 4~105 $^{\circ}$ C, temperature accuracy: 0.5 $^{\circ}$ C, @ 55 $^{\circ}$ C, temperature uniformity: 0.5 $^{\circ}$ C, @ 55 $^{\circ}$ C				
Magnetic plate	96-well annular magnetic plate				
UV sterilization	Equipped with UV sterilization lamp, high-efficiency purification filter device				
Instrument port	USB port, CAN communication				
Ambient condition	Temperature requirement: 10~40 $^{\circ}$ C, humidity: $\leq 80\%$				
Power input	100~240 V, 50~60 Hz, power 300 W				
Dimension (W×D×H) mm	740×630×670				





### 1 TIP Area

3×200 µL TIP holders (1.1), 1×200 µL independent TIP holder (1.2)

### 2 Reagent Area

Can be equipped with a reagent rack (2×60 mL storage tank + 12×2.0 mL centrifuge tube). The reagent slot block can be selected according to the customer's experimental needs.

### 3 Temperature Control Area

The temperature control block can precisely control the temperature. The temperature control range: 4-105 °C, meeting the low-temperature storage function of special reagents.

### 4 Magnetic Plate

Equipped with 96-well magnetic plate by rising and falling to combine and separate the magnetic beads

### 5 Sample Area

Equipped with a normal sample rack (5.1) and temperature control block (5.2)

### 6 Waste Area

300 mL waste liquid container (6.1), TIP off box (6.2)

## Ordering Information

Code	Description
AS-27020-00	Auto-NGS 100 automated NGS library preparation workstation, 100-24 V AC, 300 W
AS-27021-01	TIP off box (recommended to store less than 700 pcs)
AS-27021-02	Standard tray (standard height plate for 200 $\mu$ L SBS Tips consumables)
AS-27021-03	Heightened tray (higher than the standard tray for 200 $\mu$ L SBS Tips consumables)
AS-27021-04	PCR tube holder (8-strip PCR tube, non-skirted 96-well PCR plate)
AS-27021-05	Reagent rack (place 2 $\times$ 60 mL reservoir and 12 $\times$ 2 mL / 1.5 mL tubes)
AS-27021-06	Au-Magnet 100 magnetic plate for workstation (96 deepwell plate), 24 V DC, 10 W, with CAN
AS-27021-07	Au-Magnet 200 magnetic plate for workstation (96 PCR plate), 24 V DC, 10 W, with CAN
AS-23010-00	Au-Cooler dry bath incubator for workstation (heating and cooling type), 24 V DC, 160 W, with CAN

Code	Description	Remark
AS-22012-201	1.6 mL 96-well U deepwell plate	/
AS-22012-202	2.0 mL 96-well U deepwell plate	/
AS-22012-203	96 V bottom reservoir	/
AS-RT-60-N	Disposable 60 mL reagent tank, PP material, transparent and sterile	20 pcs/bag, 10 bags/carton

Code	Volume	Description	Packing
AS-TT-200-N	200 $\mu$ L	Allsheng tip, transparent, boxed	96 pcs/box, 24 boxes/carton
AS-TT-200-NL	200 $\mu$ L	Allsheng tip, transparent, boxed, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-200-NS	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile	96 pcs/box, 24 boxes/carton
AS-TT-200-NSL	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, low adsorption	96 pcs/box, 24 boxes/carton
AS-TTF-200-NS	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element	96 pcs/box, 24 boxes/carton
AS-TTF-200-NSL	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-50-N	50 $\mu$ L	Allsheng tip, transparent, boxed	96 pcs/box, 24 boxes/carton
AS-TT-50-NL	50 $\mu$ L	Allsheng tip, transparent, boxed, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-50-NS	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile	96 pcs/box, 24 boxes/carton
AS-TT-50-NSL	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, low adsorption	96 pcs/box, 24 boxes/carton
AS-TTF-50-NS	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element	96 pcs/box, 24 boxes/carton
AS-TTF-50-NSL	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption	96 pcs/box, 24 boxes/carton

# Auto-NGS 100R

## Automated NGS Library Preparation Workstation

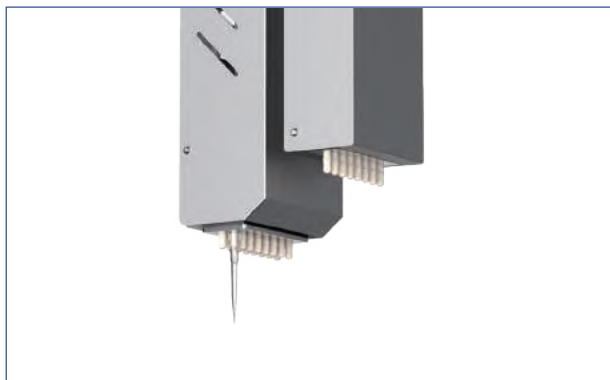


### Product Introduction

Auto-NGS 100R is based on the direct loading of nucleic acid samples to realize the full-automatic library construction process of fragmentation, end repair, adaptor connection and PCR amplification. The single / 8-channel pipettor is with pipetting range of 1 - 200  $\mu$ L. With accurate PLLD / CLLD and multiple liquid parameter settings, it can flexibly handle samples and reagents of different properties and volumes to meet various application scenarios. At the same time, the workstation integrates heating and cooling block, magnetic plate lifting block, PCR thermal cycle block, UV sterilization lamp and efficient purification filter block, ensuring efficient library construction and eliminating cross-contamination.

### 01

#### Precise Pipetting



1. High-precision 8-channel fixed spacing pipettor can be used as a single channel
2. PLLD / CLLD function ensures accurate control of sample volume

### 02

#### Multiple Functional Blocks (Optional)

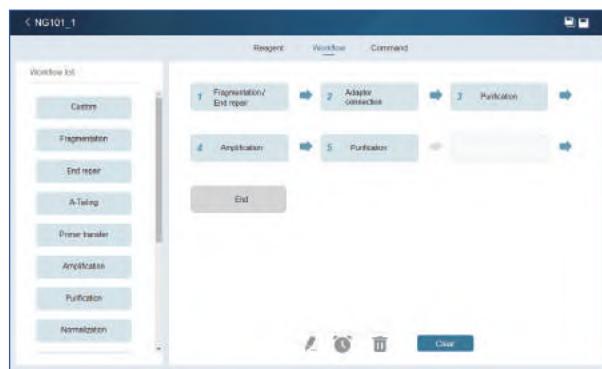


1. Equipped with several temperature control blocks to meet the special temperature requirements such as reagent and sample storage
2. High efficiency magnetic plate by rising and falling to avoid loss of magnetic beads or residual magnetic beads in liquid

## 03

### Simple and Intuitive GUI

1. Allow users to freely choose and run part or all of the experimental processes
2. PC simulation operation experiment function enables users to find problems at any time and avoid wasting samples, reagents and time
3. Multi-level account management system supports the different needs of new users and advanced users
4. GUI is easy to be understood and edited



## 04

### Efficient Pollution Prevention

Equipped with positive pressure HEPA system and UV sterilization to prevent cross-contamination of the experimental cabin

## 05

### Thermal Cycling Block

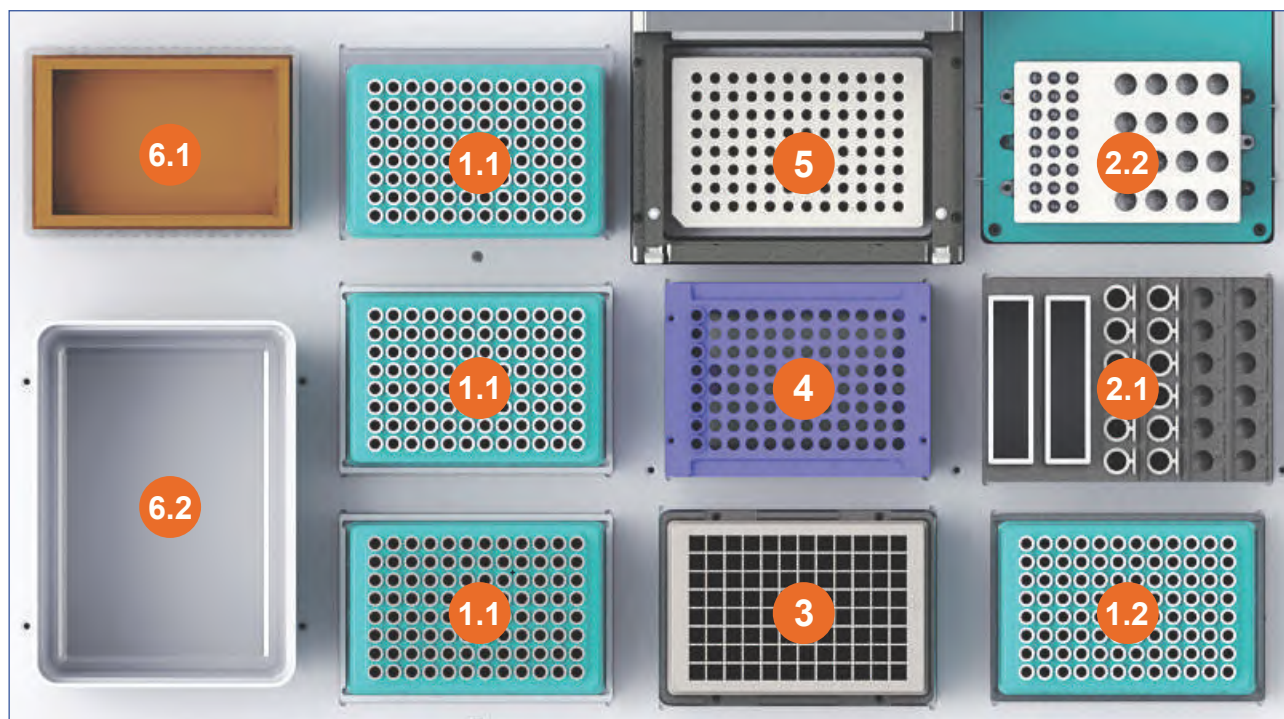
In order to prevent cross-contamination from affecting the experimental results, you can choose to use a reusable cover plate or a disposable PCR sealing film to seal the PCR plate during the experiment



### Thermal Cycling Block Specification

Applicable consumables	96 PCR plate
Application scenarios	For independent PCR experiment or liquid handling workstation
Temperature control range	Thermo lid: +30 °C~+120 °C; block: +4 °C~+99 °C
Default use temperature of thermo lid	110 °C
Average heating rate	Block 50 °C~90 °C: ≥2.8 °C/s
Max. heating rate	Block 50 °C~90 °C: ≥4.5 °C/s
Average cooling rate	Block 90 °C~50 °C: ≥2.2 °C/s
Max. cooling rate	Block 90 °C~50 °C: ≥4.5 °C/s
Temperature accuracy	±0.2 °C
Block temperature control accuracy	±0.1 °C
Temperature uniformity	±0.25 @55 / 72; ±0.35 @95
Temperature duration accuracy	±5 %
Power supply	AC 100-240 V 50-60 HZ Max. 600 W
Thermo lid cleaning	The thermo lid can be flipped for easy cleaning and disinfection
4 °C heat preservation	Unlimited
Communication port	CAN
Control software	When connecting to the workstation, it can be controlled by workstation; When used alone, it can be controlled by APP
Dimension	162×280×160 mm
Weight	<10 kg

## Plate Layout



- ① **TIP Area** -----200  $\mu$ L / 50  $\mu$ L TIP holders
- ② **Reagent Area** ----- Normal temperature area (2.1): 60 mL storage tank +2.0 mL centrifuge tube; temperature control area (2.2): 0.2 mL PCR tube+ 2.0 mL centrifuge tube, temperature control range: 0-105  $^{\circ}$ C
- ③ **Magnetic Plate** ----- The bottom 96-well magnetic plate can closely fit with the 2.0 mL / 1.0 mL 96-well plate, and use rising and falling function of the magnetic plate to achieve the combination and separation function with the magnetic beads.
- ④ **Sample Area** ----- Equipped with a normal sample rack, which can place 8-strip PCR tubes; the corresponding sample rack can also be selected according to the type of sample tube.
- ⑤ **Thermal Cycling Area** ----- It is mainly used for PCR amplification step in the process of library construction, and can be placed full-skirted PCR consumables
- ⑥ **Waste Area** ----- 300 mL waste liquid container (6.1); TIP off box (6.2)

## Specification

Model	Auto-NGS 100R
Throughput	1-24
Tiles number	9 standard tiles + (TIP off box + waste liquid area)
Available well plate	SBS standard 24 / 96 / 384 deep and shallow well plates
Consumable	Matching Allsheng TIP
Temperature control block	The reagent area is equipped with a temperature control block; temperature control range: 0~105 $^{\circ}$ C, temperature accuracy: 0.5 $^{\circ}$ C @ 55 $^{\circ}$ C, temperature uniformity: 0.5 $^{\circ}$ C @ 55 $^{\circ}$ C
Magnetic plate	96-well annular magnetic plate
UV sterilization	Equipped with UV sterilization lamp, high-efficiency purification filter device
Instrument port	USB port, CAN communication
Ambient condition	Temperature requirement: 10~40 $^{\circ}$ C, humidity: $\leq$ 80 %
Power input	100~240 V, 50~60 Hz, power 300 W
Dimension (W×D×H)	740×630×670 mm



## Pipetting Parameters

Pipettor type	8-channel fixed spacing pipettors, can be used as a single channel					
Pipetting principle	Air displacement pipetting technology					
Pipetting range	1-200 $\mu$ L					
Precision(CV)	1 $\mu$ L: $\leq 5\%$	2 $\mu$ L: $\leq 5\%$	5 $\mu$ L: $\leq 4\%$	20 $\mu$ L: $\leq 2\%$	100 $\mu$ L: $\leq 1\%$	200 $\mu$ L: $\leq 1\%$
Accuracy	1 $\mu$ L: $\pm 12\%$	2 $\mu$ L: $\pm 12\%$	5 $\mu$ L: $\pm 8\%$	20 $\mu$ L: $\pm 2\%$	100 $\mu$ L: $\pm 1\%$	200 $\mu$ L: $\pm 1\%$

## Ordering Information

Code	Description
AS-27030-00	Auto-NGS 100R automated NGS library preparation workstation, 100-24 V AC, 300 W
AS-27021-01	TIP off box (recommended to store less than 700 pcs)
AS-27021-02	Standard tray (standard height plate for SBS consumables, such as ALLSHENG boxed TIPS)
AS-27021-03	Heightened tray (higher than the standard tray for SBS consumables, such as ALLSHENG boxed TIPS)
AS-27021-04	PCR tube holder (8-strip PCR tube, non-skirted 96-well PCR plate)
AS-27021-05	Reagent rack (place 60 mL reservoir and 12 $\times$ 2 mL / 1.5 mL tubes)
AS-27021-06	Au-Magnet 100 magnetic plate for workstation (96 deepwell plate), 24 V DC, 10 W, with CAN
AS-27021-07	Au-Magnet 200 magnetic plate for workstation (96 PCR plate), 24 V DC, 10 W, with CAN
AS-23010-00	Au-Cooler dry bath incubator for workstation (heating and cooling type), 24 V DC, 160 W, with CAN

Code	Volume	Description	Packing
AS-TT-50-N	50 $\mu$ L	Allsheng tip, transparent, boxed	96 pcs/box, 24 boxes/carton
AS-TT-50-NL	50 $\mu$ L	Allsheng tip, transparent, boxed, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-50-NS	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile	96 pcs/box, 24 boxes/carton
AS-TT-50-NSL	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, low adsorption	96 pcs/box, 24 boxes/carton
AS-TTF-50-NS	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element	96 pcs/box, 24 boxes/carton
AS-TTF-50-NSL	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-200-N	200 $\mu$ L	Allsheng tip, transparent, boxed	96 pcs/box, 24 boxes/carton
AS-TT-200-NL	200 $\mu$ L	Allsheng tip, transparent, boxed, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-200-NS	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile	96 pcs/box, 24 boxes/carton
AS-TT-200-NSL	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, low adsorption	96 pcs/box, 24 boxes/carton
AS-TTF-200-NS	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element	96 pcs/box, 24 boxes/carton
AS-TTF-200-NSL	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption	96 pcs/box, 24 boxes/carton

Code	Description	Packing
AS-22012-201	1.6 mL 96-well U deepwell plate	--
AS-22012-202	2.0 mL 96-well U deepwell plate	--
AS-22012-203	96 V bottom reservoir	--
AS-RT-60-N	Disposable 60 mL reagent tank, PP material, transparent and sterile	20 pcs/bag, 10 bags/carton



02

**Liquid Handling & Automation**



# Au-Mate 96

## Liquid Handling Workstation

### Product Introduction

For complex experimental procedures and precise pipetting operations, Au-Mate 96 series liquid handling workstation can bring you unlimited imagination. Through the external tablet computer, you can easily set up, save and operate the experimental process. Through the software control, the difference between aspirating and dispensing is truly eliminated, which improves the repeatability of pipetting.

The simple and easy-to-operate software system controls the process of loading and unloading pipetting heads, aspirating and dispensing liquid, so as to complete complex multi-step experiments. A large amount of repetitive work can be completed in a short time, thereby reducing most of the manual pipetting burden, and significantly improving the sample processing speed and repeatability.



### 01

#### Small Size and Saving Space

Au-Mate 96 with 2 plate positions has a compact structure. It only takes up a very little space on the laboratory table, and is easy to install in the clean bench, safety cabinet, and fume hood so that you can work in narrow spaces. Lots of repetitive work can be easily completed by switching the pipetting positions on the mobile table.

### 03

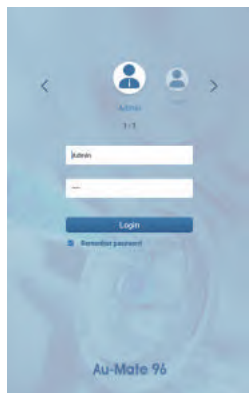
#### Multiple Plate Positions and High Automation

You can choose 2 / 4 plate positions, or you can customize 3 / 6 plate positions, which can move automatically. The pipetting heads and plate positions can run automatically.

### 05

#### Intuitive Program Setting Interface

Graphical software interface, which is easy to be understood and edited. Through the standard 8-inch Android tablet, users can experience free process editing. The instrument has a built-in user management system to facilitate the management of the experimental program.



### 02

#### Support Wired Operation and Wireless Bluetooth Control

For some experimental environments with special requirements, the instrument can be placed in fume hoods, clean benches, etc. Using Bluetooth wireless control of the instrument, which not only reduces the interference to the experiment, but also ensures the safety of the experimenters.

### 04

#### Compatible with Multiple Consumables

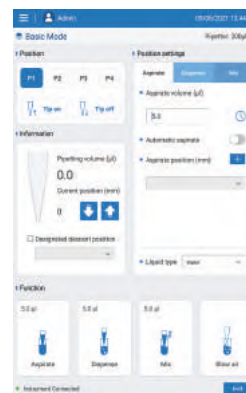
Can select Allsheng tips, and other tips compatible with this instrument. In addition, customized services can be provided for special TIP.

### 06

#### Powerful Software Functions

Integrate a variety of pipetting functions: aspirating, dispensing, blowing air, continuous blowing air, column-separated aspiration, stepper pipette, mixing, dilution, reverse aspiration

Movement speed can be adjustable: liquid aspirating and dispensing speed can be adjustable, to meet the requirements of different liquid physical properties for pipetting speed

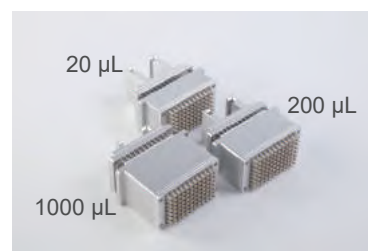


## 07

### Replaceable Design of Multi-standard Pipetting Heads

A series of 20  $\mu\text{L}$  and 200  $\mu\text{L}$  pipetting heads can be freely replaceable for corresponding volume pipetting

B series adds a 1000  $\mu\text{L}$  pipetting head on the basis of A, which is convenient for large-volume pipetting



### Au-Mate 96 Series Specification

Model	Au-Mate 96 A2	Au-Mate 96 A4	Au-Mate 96 B2	Au-Mate 96 B4
Plate number	2	4	2	4
Adapted pipetting head	Adapt to Au-Pipet N20 & N200 heads		Adapt to Au-Pipet N20, N200 & N1000 heads	
Software control mode	Basic mode	Basic & advanced mode	Basic mode	Basic & advanced mode
Channel	8 / 96 channel	8 / 96 channel	8 / 96 channel	8 / 96 channel
Technical principle	Air displacement			
Available well plate	SBS standard 24 / 96 / 384 deep and shallow well plates			
Consumables	Matching Allsheng Tip			
System	Standard 8-inch Android tablet, software adaptive to mainstream size tablet			
Communication method	CAN communication			
Power supply	100~240 V, 50~60 Hz			
Power	100 W	100 W	100 W	100 W
Wireless control	The instrument has a built-in Bluetooth block, which can be connected wirelessly			
N.W. (kg)	26	30	29	33
Dimension (W×D×H) mm	475×343×535	690×343×535	475×350×673	690×350×673

The instrument is divided into A and B series: A series can be equipped with two kinds of pipetting heads (20  $\mu\text{L}$ , 200  $\mu\text{L}$ ); B series can be equipped with three kinds of pipetting heads (20  $\mu\text{L}$ , 200  $\mu\text{L}$ , 1000  $\mu\text{L}$ )

### Adapted Pipetting Head and Holder

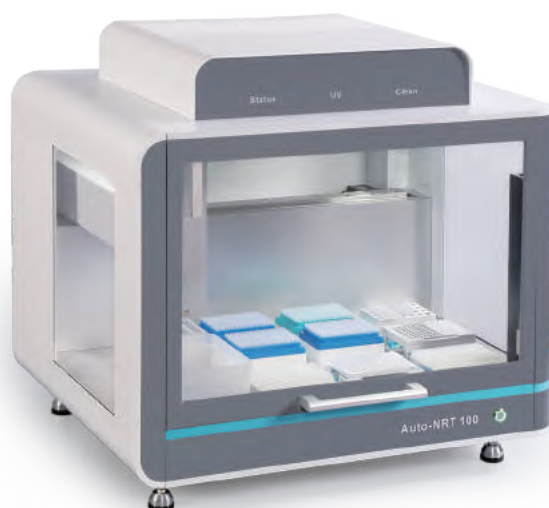
Code	Description	Range	Optional instrument
AS-22011-01	Au-Pipet N20 20 $\mu\text{L}$ 96-channel pipetting head	1~20 $\mu\text{L}$	A2 / A4 / B2 / B4
AS-22011-02	Au-Pipet N200 200 $\mu\text{L}$ 96-channel pipetting head	5~200 $\mu\text{L}$	A2 / A4 / B2 / B4
AS-22051-01	Au-Pipet N1000 1000 $\mu\text{L}$ 96-channel pipetting head	100~1000 $\mu\text{L}$	B2 / B4
AS-22011-03	384 well adapter	/	A2 / A4 / B2 / B4

### Ordering Information

Code	Description
AS-22010-00	Au-Mate 96 A2 liquid handling workstation, 2 types of pipetting heads available, 100-24 VAC, 100 W
AS-22030-00	Au-Mate 96 A4 liquid handling workstation, 2 types of pipetting heads available, 100-24 VAC, 100 W
AS-22050-00	Au-Mate 96 B2 liquid handling workstation, 3 types of pipetting heads available, 100-24 VAC, 100 W
AS-22070-00	Au-Mate 96 B4 liquid handling workstation, 3 types of pipetting heads available, 100-24 VAC, 100 W

# Auto-NRT 100

## Automated PCR Setup System



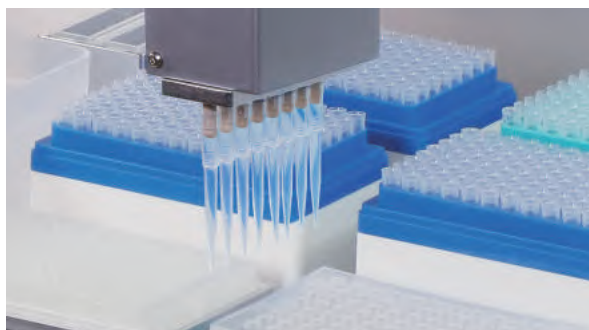
### Product Introduction

Auto-NRT 100 is a pipetting workstation specially designed for automated PCR set-up system, which can meet the set-up requirements of various types of PCR systems such as PCR and qPCR. 9 standard plate positions are designed, and the PCR system can be automatically constructed for up to 384 regular samples per run. It supports reagent transfer of various centrifuge tubes and 96 / 384-well PCR plates.

Auto-NRT 100 is fast and reliable, effectively reducing various results deviations caused by manual pipetting steps, and ensuring the reproducible results required by the experiment. It can help you achieve simple, fast and accurate PCR system set-up.

### 01

#### Flexible Pipettor Collocations



The 8-channel pipettor can be used for rapid pipetting of 8 samples, reagent addition, etc. It can also be used as a single-channel pipettor to pipetting single-well reagents, such as Mix components in advance, or gradient dilution of standards.

### 02

#### Open Graphical Software Design



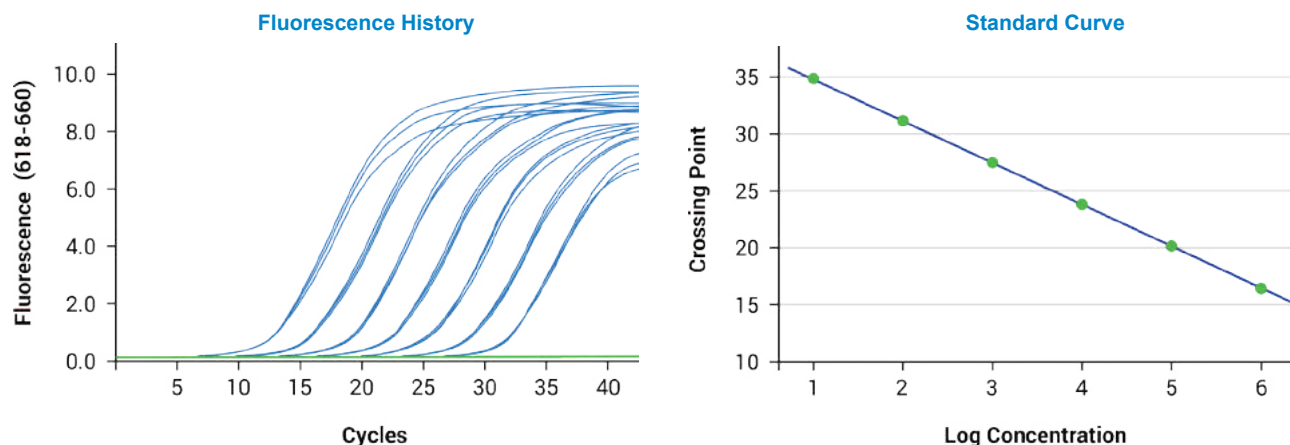
The system includes 3 layers of account permissions, which can ensure the safety of experimental data and prevent loss of data due to program errors. The system has detailed running records, which are helpful for tracing the source of the experimental records or troubleshooting.

The system also has multiple reagent management functions, which can save multiple sets of kit information, and can individually set liquid parameters for different components.

### 03

#### High-Precision Pipetting Function

In the process of PCR system set-up, accurate and stable pipetting volume is crucial to the accuracy and repeatability of the results. Auto-NRT 100 uses a self-developed high-precision pipettors, which can ensure the accuracy of pipetting even with low liquid volumes. With the open software design, corresponding pipetting parameters can be set for liquids of different properties to ensure that there is no adhesion during liquid pipetting as far as possible.



Auto-NRT 100 Gradient Dilution Result

Note: The shrimp genomic DNA infected with IHNV was serially diluted with Auto-NRT 100, and the corresponding reaction system was configured according to the detection requirements, and then qPCR detection was performed, and a standard curve was constructed. The results showed good repeatability of 3 samples per concentration and a standard curve  $R^2$  of 0.996.

#### Specification

Model	Auto-NRT 100
Throughput	1-384
Plate number	9 standard plates+(TIP off box+waste liquid area)
Available well plate	SBS standard 24 / 96 / 384 deep and shallow well plates
UV sterilization	Equipped with UV sterilization lamp, HEPA filter device
Consumable	Matching Allsheng TIP
Temp. control block	Equipped with 2 temperature control blocks; temperature control range: 4~105 °C; temperature accuracy: $\pm 0.5$ °C, @55 °C; temperature uniformity: $\pm 0.5$ °C, @55 °C
Instrument port	USB port, CAN communication
IoT	Expandable
Dimension (W×D×H)	740×630×670 mm
Ambient condition	Temperature requirement: 10~40 °C; relative humidity: $\leq 80$ %
Power input	100-240 V, 50 / 60 Hz, rated power 550 W

## Pipettor Specification

Pipettor	8-channel fixed spacing pipettor, can be used as a single channel		
Pipetting principle	Air displacement pipetting technology		
Pipetting range	1 - 200 $\mu$ L		
Accuracy	1 $\mu$ L: $\pm 12$ %	5 $\mu$ L: $\pm 8$ %	100 $\mu$ L: $\pm 1$ %
	2 $\mu$ L: $\pm 12$ %	20 $\mu$ L: $\pm 2$ %	200 $\mu$ L: $\pm 1$ %
Precision (CV)	1 $\mu$ L: $\leq 5$ %	5 $\mu$ L: $\leq 4$ %	100 $\mu$ L: $\leq 1$ %
	2 $\mu$ L: $\leq 5$ %	20 $\mu$ L: $\leq 2$ %	200 $\mu$ L: $\leq 1$ %

## Ordering Information

Code	Description
AS-26010-00	Auto-NRT 100 automated PCR setup system, 100-240 VAC, 550 W
AS-27021-01	TIP off box (recommended to store less than 700)
AS-27021-02	Standard tray (can place SBS standard consumables without special requirements, such as Allsheng TIPS)
AS-27021-03	Heightened tray (can place SBS standard consumables that need to be heightened , such as Allsheng TIPS)
AS-27021-04	PCR tube holder (place 8-strip PCR centrifuge tube, non-skirted 96-well PCR plate)
AS-27021-05	Reagent rack (places 60 mL reservoir and 12 $\times$ 2 mL / 1.5 mL centrifuge tubes)
AS-23010-00	Au-Cooler dry baths for workstation (heating / cooling), 24 VDC, 160 W, with CAN

Code	Volume	Description	Packing
AS-TT-50-N	50 $\mu$ L	Allsheng tip, transparent, boxed	96 pcs/box, 24 boxes/carton
AS-TT-50-NL	50 $\mu$ L	Allsheng tip, transparent, boxed, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-50-NS	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile	96 pcs/box, 24 boxes/carton
AS-TT-50-NSL	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, low adsorption	96 pcs/box, 24 boxes/carton
AS-TTF-50-NS	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element	96 pcs/box, 24 boxes/carton
AS-TTF-50-NSL	50 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-200-N	200 $\mu$ L	Allsheng tip, transparent, boxed	96 pcs/box, 24 boxes/carton
AS-TT-200-NL	200 $\mu$ L	Allsheng tip, transparent, boxed, low adsorption	96 pcs/box, 24 boxes/carton
AS-TT-200-NS	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile	96 pcs/box, 24 boxes/carton
AS-TT-200-NSL	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, low adsorption	96 pcs/box, 24 boxes/carton
AS-TTF-200-NS	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element	96 pcs/box, 24 boxes/carton
AS-TTF-200-NSL	200 $\mu$ L	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption	96 pcs/box, 24 boxes/carton

Code	Description	Packing
AS-26010-00	Disposable 60 mL reagent tank, PP material, transparent and sterile	20 pcs/bag, 10 bags/carton

# Heating; Heating & Cooling

## Dry Baths for Workstation

### Product Introduction

It's dry baths suitable for laboratory automation system. The instrument has its own display screen, which is easy to read programmed or measured parameters and can also be used alone; it has a DB9 interface with CAN communication, which can be used for online communication with automation workstations of various manufacturers.

There are two products: Au-Heater dry baths for workstation (heating) and Au-Cooler dry baths for workstation (heating / cooling).

### 01

#### Au-Heater Dry Baths for Workstation (Heating)



### 02

#### Au-Cooler Dry Baths for Workstation (Heating / Cooling)



### Ordering Information

Code	Description
AS-23020-00	Au-Heater dry baths for workstation (heating), with CAN communication
AS-23010-00	Au-Cooler dry baths for workstation (heating / cooling), with CAN communication



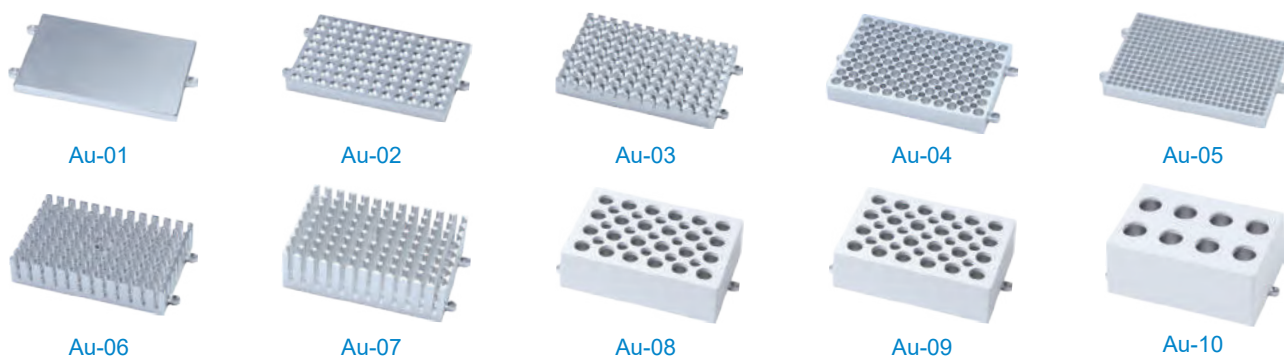
## Specification

Temperature range	RT. +5 °C~105 °C	0 °C~105 °C
Time setting	99 h59 min or 99 min59 s	99 h59 min or 99 min59 s
Cooling time [1]	--	RT. ~ 4 °C ≤8 min
Temp. uniformity [2]	±0.5 °C	±0.5 °C
Workstation use	DB9 port, CAN communication	DB9 port, CAN communication
Input power	24 V DC, 120 W	24 V DC, 160 W
Dimension / mm	142×105×77	142×105×82

[1] The heating and cooling speed is related to the type of block. This indicator is tested in 0.5+1.5 mL block

[2] According to different blocks, the temperature uniformity index is different

## Suitable Blocks



Code	Type	Description
AS-23011-01	Au-01	Adapt to flat bottom microplate
AS-23011-02	Au-02	Adapt to 96-well round bottom microplate / deepwell plate
AS-23011-03	Au-03	Adapt to 96-well conical bottom deepwell plate
AS-23011-04	Au-04	Adapt to 96×0.2 mL PCR plate
AS-23011-05	Au-05	Adapt to 384×0.1 mL PCR plate
AS-23011-06	Au-06	Adapt to DWP500 µL deepwell plate
AS-23011-07	Au-07	Adapt to DWP1000 µL deepwell plate
AS-23011-08	Au-08	Adapt to 24×1.5 mL+15×0.5 mL block
AS-23011-09	Au-09	Adapt to 24×2.0 mL+15×0.5 mL block
AS-23011-10	Au-10	Adapt to 8×5 mL block

# Shaking; Shaking & Automatic Plate Clamping

## Shaker for Workstation

### Product Introduction

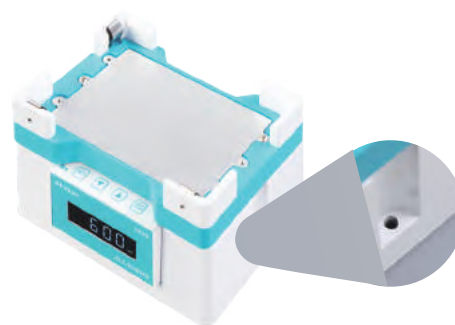
It's a thermo shaker incubator suitable for workstation, which can provide shaking of multiple blocks such as 96-well, 384-well microplates, centrifuge tubes and deepwell plates. It has a DB9 interface with CAN communication.

There are 6 products:

1. Au-Shaker 5012 / 3020 / 2030 ----- Shaker for Workstation
2. Au-Shaker 5012L / 3020L / 2030L ----- Automatic Locking Shaker for Workstation
3. Au-Shaker 3020T / 2030T ----- Thermo Shaker Incubator for Workstation (Heating)
4. Au-Shaker 3020TL / 2030TL ----- Automatic Locking Thermo Shaker Incubator for Workstation (Heating)
5. Au-Shaker 1530C ----- Thermo Shaker Incubator for Workstation (Heating / Cooling)
6. Au-Shaker 1530CL ----- Automatic Locking Thermo Shaker Incubator for Workstation (Heating / Cooling)

### Feature

1. Anti-vibration technology and 2D motion control, ensure the uniformity of sample mixing
2. Has its own display screen, which is easy to read programmed or measured parameters and can be used alone
3. The high-precision zero positioning function ensures the safe pipetting
4. Can be fixedly installed on workstation, running more stably
5. Blocks can be customized according to different applications



Mounting holes for fixing to workstations

## 01

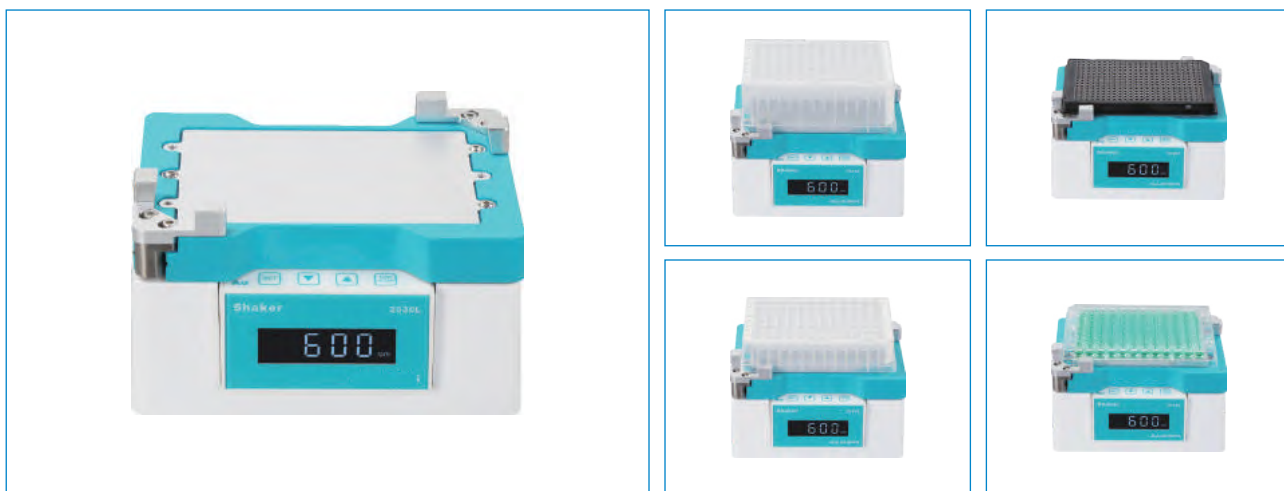
### Au-Shaker 5012 / 3020 / 2030 Shaker for Workstation



Using for: 96-well and 384-well microplates, deepwell plates, PCR plates, centrifuge tubes, glass tubes and other working blocks  
Mixing orbit 3 mm, 2 mm and 1.2 mm are optional, corresponding max speed are 2000 rpm, 3000 rpm and 5000 rpm

## 02

### Au-Shaker 5012L / 3020L / 2030L Automatic Locking Shaker for Workstation



Using for: 96-well, 384-well and 1536-well microplates, 0.5-2.5 mL deepwell plates, PCR plates and other working blocks  
Mixing orbit 3 mm, 2 mm and 1.2 mm are optional, corresponding max speed are 2000 rpm, 3000 rpm and 5000 rpm  
·Au-Shaker 5012L is suitable for 384-well & 1536-well microplates, etc.  
·Au-Shaker 3020L / 2030L is suitable for 96-well & 384-well microplates, 0.5-2.5 mL deepwell plates, PCR plates, etc.

#### Process of Microplate Installation



1  
Toggle the handle on the back of the instrument



2  
Place the microplate



3  
Finish

## Specification

Model	Au-Shaker 5012	Au-Shaker 3020	Au-Shaker 2030	Au-Shaker 5012L	Au-Shaker 3020L	Au-Shaker 2030L
Speed / rpm	200~5000	200~3000	200~2000	200~5000	200~3000	200~2000
Mixing orbit / mm	1.2	2.0	3.0	1.2	2.0	3.0
Time setting	99 h59 min or 99 min59 s					
Speed accuracy	±7.5 rpm					
Acceleration time	1 - 10 sec					
Block locking method	Adjustable shrapnel			Edge lock		
Zero positioning	Zero automatic positioning function					
Zero positioning time	1 - 10 sec					
Zero positioning accuracy	±0.1 mm					
Automatic locking	----			Automatic locking for easy gripping by manipulator		
Locking positioning accuracy	----			±0.1 mm		
Workstation use	Au series supports workstation use, DB9 port, CAN communication, and stand-alone use; Be series can only be used stand-alone, without CAN communication					
Input power	24 V DC, 48 W					
Signal line	Au series shaker, 2 m cable, DB9 port, controlled by workstation					
Dimension / mm	142×105×90			142×105×94		

## Ordering Information

Code	Description
AS-23050-00	Au-Shaker 3020 shaker for workstation, 24 V DC 48 W, with CAN communication
AS-23070-00	Au-Shaker 5012 shaker for workstation, 24 V DC 48 W, with CAN communication
AS-23100-00	Au-Shaker 2030L automatic locking shaker for workstation, 24 V DC 48 W, with CAN communication
Suitable block	For details, refer to page 38

### 03

#### Au-Shaker 3020T / 2030T Thermo Shaker Incubator for Workstation (Heating)



Using for: 96-well and 384-well microplates, deepwell plates, PCR plates, centrifuge tubes, glass tubes and other working blocks  
Mixing orbit 3 mm and 2 mm are optional, corresponding max speed are 2000 rpm and 3000 rpm

### 04

#### Au-Shaker 3020TL / 2030TL Automatic Locking Thermo Shaker Incubator for Workstation (Heating)



Using for: 96-well, 384-well microplates, 0.5-2.5 mL deepwell plates, PCR plates and other working blocks  
Mixing orbit 3 mm and 2 mm are optional, corresponding max speed are 2000 rpm and 3000 rpm

## Specification

Model	Au-Shaker 3020T	Au-Shaker 2030T	Au-Shaker 3020TL	Au-Shaker 2030TL
Speed / rpm	3000	2000	3000	2000
Mixing orbit / mm	2.0	3.0	2.0	3.0
Temperature range	RT. +5 °C~105 °C			
Temperature setting	0.1 °C			
Heat-up time [1]	RT. +5 °C~ 95 °C ≤10 min			
Temp. uniformity [2]	±0.5 °C			
Temp. accuracy	±0.5 °C			
Time setting	99 h59 min or 99 min59 s			
Speed accuracy	±7.5 rpm			
Acceleration time	1 - 10 sec			
Block locking method	Adjustable shrapnel		Edge locking	
Zero positioning	Zero automatic positioning function			
Zero positioning time	1 - 10 sec			
Zero positioning accuracy	±0.1 mm			
Automatic locking function	----		Automatic locking function is convenient for manipulators to grasp	
Locking positioning accuracy	----		±0.1 mm	
Workstation use	Au series supports workstation use, DB9 port, CAN communication or stand-alone use; Be series can only be used alone, without CAN communication			
Input power	24 V DC, 120 W			
Signal line	Au series shaker, 2 m cable, DB9 port, controlled by workstation			
Dimension / mm	142×105×90		142×105×94	

[1] The heating and cooling speed is related to the type of block. This indicator is tested in 0.5+1.5 mL block

[2] According to different blocks, the temperature uniformity index is different

## Ordering Information

Code	Description
AS-23130-00	Au-Shaker 3020T thermo shaker incubator for workstation (heating), 24 V DC 120 W, with CAN communication
AS-23140-00	Au-Shaker 2030T thermo shaker incubator for workstation (heating), 24 V DC 120 W, with CAN communication
AS-23150-00	Au-Shaker 3020TL automatic locking thermo shaker incubator for workstation (heating), 24 V DC 120 W, with CAN communication
AS-23160-00	Au-Shaker 2030TL automatic locking thermo shaker incubator for workstation (heating), 24 V DC 120 W, with CAN communication
Suitable block	For details, refer to page 38



## 05

### Au-Shaker 1530C Thermo Shaker Incubator for Workstation (Heating / Cooling)



Using for: 96-well and 384-well microplates, deepwell plates, PCR plates, centrifuge tubes, glass tubes and other working blocks  
Mixing orbit 3 mm, corresponding max speed is 1500 rpm

## 06

### Au-Shaker 1530CL Automatic Locking Thermo Shaker Incubator for Workstation (Heating / Cooling)



Using for: 96-well, 384-well microplates, 0.5-2.5 mL deepwell plates, PCR plates and other working blocks  
Mixing orbit 3 mm, corresponding max speed is 1500 rpm

## Specification

Model	Au-Shaker 1530C	Au-Shaker 1530CL
Speed / rpm	1500	1500
Mixing orbit / mm	3.0	
Temperature range	0 °C~105 °C	
Temperature setting	0.1 °C increment	
Heat-up time [1]	RT. ~ 95 °C ≤7 min	
Cooling speed [1]	95 °C ~ RT. ≤7 min	
Cooling speed [1]	RT. ~ 4 °C ≤10 min	
Temp. uniformity [2]	±0.5 °C	
Temp. accuracy	±0.5 °C	
Time setting	99 h59 min or 99 min59 s	
Speed accuracy	±7.5 rpm	
Acceleration time	1 - 10 sec	
Block locking method	Adjustable shrapnel	Edge locking
Zero positioning function	Zero automatic positioning function	
Zero positioning time	1 - 10 sec	
Zero positioning accuracy	±0.1 mm	
Automatic locking function	----	Automatic locking function is convenient for manipulators to grasp
Locking positioning accuracy	----	±0.1 mm
Workstation use	Au series supports workstation use, DB9 port, CAN communication or stand-alone use; Be series can only be used alone, without CAN communication	
Input power	24 V DC, 160 W	
Signal line	Au series shaker, 2 m cable, DB9 port, controlled by workstation	
Dimension / mm	142×110×113	142×110×110

[1] The heating and cooling speed is related to the type of block. This indicator is tested in 0.5+1.5 ml block

[2] According to different blocks, the temperature uniformity index is different

## Ordering Information

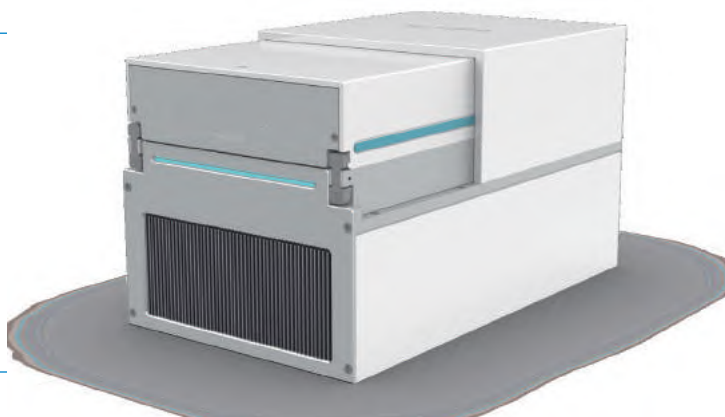
Code	Description
AS-23170-00	Au-Shaker 1530C thermo shaker incubator for workstation (heating / cooling), 24 V DC 160 W, with CAN communication
AS-23180-00	Au-Shaker1530CL automatic locking thermo shaker incubator for workstation (heating / cooling), 24 V DC 160 W, with CAN communication
Suitable block	For details, refer to page 38

# Au-PCR 96

## PCR for Workstation

### Product Introduction

Au-PCR 96 for workstation is a compact PCR cycler suitable for laboratory automation systems. Freely programmable temperature process and thermo lid temperatures, can maintain excellent heating performance even with misaligned PCR plate reagent loads. It has good temperature uniformity, precise run times, ideal for use on liquid handling workstation.



### Feature

1. Use imported customized long-life Peltier block, cycle number is more than 1 million times
2. Anodized aluminum blocks that retain fast thermal conductivity and corrosion resistance
3. Fast heating and cooling rate, the fastest heating and cooling rate is 5 °C/s, saving experimental time
4. Motorized self-adaptive thermo lid, suitable for full-skirted and semi-skirted 96-well PCR plates
5. Small size, linked through CAN communication port
6. Automatic power-off protection, automatically execute the unfinished cycle after the power supply is restored, to ensure the safe operation of the whole process of amplification
7. Support silicone thermo lid to meet a variety of experimental needs

### Specification

Applicable consumables	96 PCR plate
Application scenarios	For stand-alone PCR labs or pipetting workstations
Temperature range	Block : 4 °C~99 °C
Max. Temp. of thermo lid	120 °C
Average heating rate	Block 50 °C~90 °C: ≥2.0 °C/s
Maximum heating rate	Block 50 °C~90 °C: ≥3.5 °C/s
Average cooling rate	Block 90 °C~50 °C: ≥2.2 °C/s
Maximum cooling rate	Block 90 °C~50 °C: ≥4.5 °C/s
Temperature accuracy	≤±0.2 °C @ 55 °C
Temp. control accuracy	±0.3 °C @ 55 °C
Temp. duration accuracy	≤±5 %

Temperature uniformity	±0.35 °C
Power supply	AC100-240 V 50-60 HZ Max 600 W
Thermo lid clean	The thermo lid can be flipped for easy cleaning and disinfection
4 °C heat preservation	Infinity
Communication port	CAN / RS232
Controlling software	When connected to the workstation, it is controlled by the workstation; it can be controlled by the APP software when it is used alone
Weight	<10 kg
Dimension (L×W×H)	305×155×160 mm

### Ordering Information

Code	Description
AS-24010-00	Au-PCR 96, with CAN communication, AC 100-240 V / AC 600 W
AS-24011-01	Au-PCR 96 power supply parts

03

**Detection Instrument**

# Feyond-A300 / A400 / A500

## Multi-Mode Microplate Reader



### Product Introduction

Feyond series multi-mode microplate reader is specially designed for medical, biological and pharmaceutical research and development institutions to meet the needs of various drug development and life science research. The high-quality detection performance ensures high-quality analysis based on molecular biology, biochemistry and cytology.

In addition to the most basic absorbance, fluorescence and luminescence 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.

### Features

#### ■ UV/Vis Absorbance (ABS)

Wavelength selection is done by using an advanced monochromator system. Any wavelength between 200 to 1000 nm can be selected. Almost satisfy all absorbance detection applications.

#### ■ Fluorescence (FL)

Fluorescence detection adopts the filter-based optics detection, which is composed of xenon lamp, filter and PMT and can best fit the characteristics of fluorescent dyes.

#### ■ Luminescence (LUM)

Feyond series luminescence microplate readers show excellent sensitivity and wide dynamic range in both glow and flash based assays. The optimized light path minimizes signal crosstalk between holes and ensures the accuracy of experimental results.

#### ■ Time-Resolved Fluorescence (TRF)

Time-resolved fluorescence is based on lanthanide elements as dyes. 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.

#### ■ Fluorescence Polarization (FP)

The optimized optical path design of Feyond-A500 combined with the performance of the fast switching polarizer can effectively reduce the detection deviation. This function is often used to detect the interaction 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.

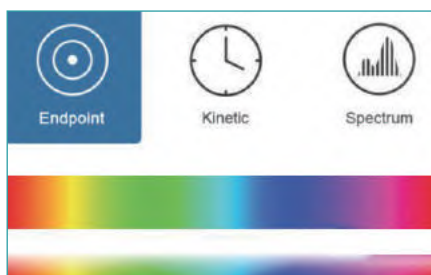
## 01

### Rotating Touch Screen

The instrument is equipped with a 10-inch touch screen, whose angle can be converted through the LCD control button to facilitate the researcher's setting of the instrument.

## 02

### High-Quality Stable Performance



It has reference optical path to ensure more stable detection data. After the instrument is started, the light source, monochromator, detector, position, etc. will be calibrated automatically to ensure the stable and reliable operation of the instrument.

## 03

### 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 block, the instrument can read the filter information to ensure accurate experimental parameters for convenient and quick operation.

## 04

### MSS-2 Automatic Injector Block (Optional)

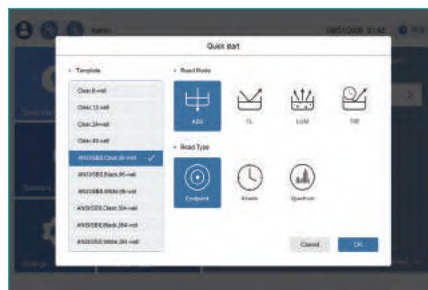


The automatic injector block can be purchased at the same time with the device and can also be upgraded later.

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

## 05

### Easy-to-Use and Flexible Software



#### 1. User Authority Classification

Intuitive selection of function modes and programs and results are stored independently

#### 2. Intuitive Interface Display

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

#### 3. Powerful Data Analysis and Process

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

#### 4. 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

## 06

### u-Nano Ultra-Micro Plate (Optional)



1. Quickly complete high-throughput quantification of nucleic acid and proteins without samples dilution
2. The independent software can quickly give the sample concentration and purity report
3. 1~16 samples can be detected at the same time, only 2~4  $\mu$ L sample volume is needed

## 07

### ReaderIt-II PC Analysis Software (Optional)



1. Can provide a more comprehensive and complex data analysis algorithm than the instrument APP software
2. Data export is convenient and fast. Detailed result reports can be created through built-in tools



## Technical Parameter

Model		Feyond-A300	Feyond-A400	Feyond-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: $\pm (1.0 \% + 0.003 \text{ Abs}) @ (0.0-2.0 \text{ Abs})$ $\pm 2.0 \% @ (2.0-3.0 \text{ Abs})$		
	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	$R^2 \geq 0.999 @ [0.0 - 3.0 \text{ Abs}]$		
	Reading time	96-well plate: fast <15 s		
Luminescence	Detector	PMT		
	Detection limit	15 amol / well; 5 amol / well (photon PMT)		
	Linear dynamic range	6 logs		
	Crosstalk	$\leq 0.005 \%$		
	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	--	--	300 - 850 nm
	Detection limit	--	--	5 mP

## Basic Parameter

<b>Model</b>	<b>Feyond-A300 / A400 / A500</b>
Plate	6-384 well
Accessories	Microplate, injector
Shaking mode	Linear, annular, double annular
Incubation temperature	RT. +4 °C ~ 45 °C
Temperature uniformity	±0.5 °C @ 37 °C
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
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
Dimension (W×D×H)	420×550×386 mm
Weight	33 kg

## Accessory Parameter

<b>Microplate</b>	Sample number	1-16
	Sample detection volume	2-4 µL
<b>Automatic Injector</b>	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
<b>Software</b>	Analysis software	ReaderIt-II software

## Ordering Information

<b>Code</b>	<b>Description</b>
AS-19050-00	Feyond-A300 microplate reader (multi-mode)
AS-19060-00	Feyond-A400 microplate reader (multi-mode)
AS-19070-00	Feyond-A500 microplate reader (multi-mode)
AS-19011-01	ReaderIt-II 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

# Feyond-F100

## Fluorescence Microplate Reader



### Product Introduction

Feyond-F100 is an economical, single fluorescence microplate reader. This product is designed for bioluminescence scientific research, and can meet the requirements of nucleic acid quantification, fluorescent protein determination, molecular interaction studies,  $\text{Ca}^{2+}$  flow analysis, as well as reporter genes, fluorescent kinases and cell-based studies.

#### 01

##### Long-Life Xenon Light Source



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

#### 02

##### 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 wave range selection.

#### 03

##### Precise Kinetics

Feyond-F100 can be used for fast kinetic analysis (such as  $\text{Ca}^{2+}$  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.

# Feyond-L100



## Product Introduction

Feyond-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.

### 01

#### High-Sensitivity Detection



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

### 03

#### Standard Filter

The luminescence 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.

### 02

#### 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 %.

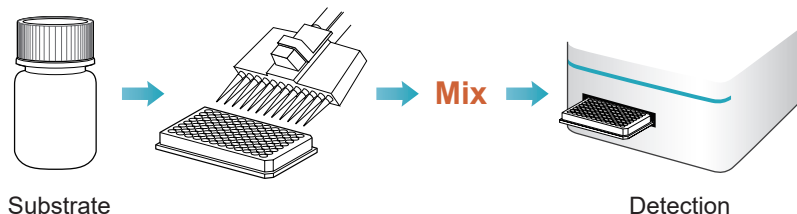
### 04

#### 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).

## Luminescence Kit

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



- ATP luminescence detection kit
- Single luciferase reporter gene detection kit
- Double luciferase reporter gene detection kit
- Gaussia luciferase detection kit

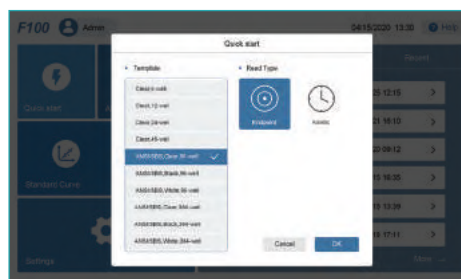
## ■ User Authority Classification

## ■ Intuitive Interface Display

## ■ FTP (File Transfer Protocol)

The screenshot shows the F100 Admin interface. The top navigation bar includes the F100 logo, an Admin user profile, and a date/time stamp (04/15/2020 13:30). The left sidebar contains navigation icons and labels: 'Onion alert', 'All Results', 'Standard Curve', 'Share', and 'Settings'. The main content area displays a table of protocols with columns for 'Protocol', 'My Favorites', and 'Recent'. The table lists several protocols with their IDs and timestamps.

Protocol	My Favorites	Recent
20200426_121500		2020/05/25 12:15
CHEN006 Protocol		2020/05/21 16:10
LUOXI 20200520		2020/05/20 09:12
F1000 Protocol		2020/05/15 16:35
PJM100 Protocol		2020/04/19 13:39
LUOXI018		2020/03/15 17:11



Model	Feyond-F100
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

Model	Feyond-L100
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

## Basic Parameter

Model	Feyond-F100 / L100
Plate	6-384 well
Accessories	Injector
Shaking mode	Linear, annular, double annular
Incubation temperature	RT. +4 °C ~ 45 °C
Temperature uniformity	±0.5 °C @ 37 °C
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
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
Dimension (W×D×H)	440×420×315 mm
Weight	25 kg

## Accessory Parameter

<b>Automatic Injector</b>	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
<b>Software</b>	Waste liquid collection	50 mL
	Analysis software	ReaderIt-II software

## Ordering Information

Code	Description
AS-19090-00	Feyond-L100 luminescence microplate reader
AS-19100-00	Feyond-F100 fluorescence microplate reader
AS-19011-01	ReaderIt-II PC analysis software
AS-19011-04	MSS-2 automatic injector





## Product Introduction

FlexA-200 microplate reader is a high-quality microplate reader based on a monochromator with a wavelength range of 200~1000 nm. It has the advantage of flexible detection and does not need additional filters. 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. FlexA-200 can be shaken and incubated in microplates, and the incubation 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 ReaderIt-II software. The software has the characteristics of intuitive interface, clear and flexible operation, which can work in both Chinese and English environments.

FlexA-200 can be used for a variety of applications, including nucleic acid and protein analysis, ELISA, enzyme activity detection, cytotoxicity and cell proliferation tests, apoptosis detection, microbial identification, bacterial concentration, etc.

## Features

- 1. 10-inch touch screen, can be used independently for the whole detection process, which is convenient to operate and easy to use**

FlexA-200 built-in software is designed for independent use of the instrument. With a 10-inch high-resolution touch screen and a graphical user interface, the editing of programs and template presets are very simple. In addition, support for USB data export is fast, convenient and easy to operate.

- 2. Complete functional ReaderIt-II enzyme data analysis software, which can meet most data processing needs**

ReaderIt-II is designed for FlexA-200. With intuitive graphical operation interface design, you can master various operations through simple training. A variety of built-in data processing methods, including quantitative curve fitting, qualitative analysis, kinetics calculation, user-defined equation, 4PL, and customized services are supported, which can increase the calculation method according to customer needs. The data can be exported to Excel with one click, or detailed results reports can be generated through the built-in tools.

- 3. 200-1000 nm full wavelength design, 1 nm increments, basically meet all light absorption detection applications**

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 and measurement bandwidth at 2.5 nm to allow identification of the optimal measurement wavelength for a new assay. The built-in reference channel ensures that the accuracy of light intensity without preheating each time, and ensures consistent results under any measurement conditions. The self-test function of the instrument checks the key components such as light sources, detectors, and load positions to ensure the stability and reliability of the instrument operation.

- 4. Fast detection speed, only need time 8 s for 96-well whole microplate**

The detection speed of the microplate reader refers to the time it takes to complete the colorimetric determination. Under the FlexA-200 fast reading mode, only need time 8 s for 96-well whole microplate. The fast detection speed is conducive to improving the precision of detection, and can effectively avoid the difference in absorbance between each micropore due to different determination time during the determination process.

## 01

### Choose Detection Wavelength Freely with Raster

FlexA-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.

## 02

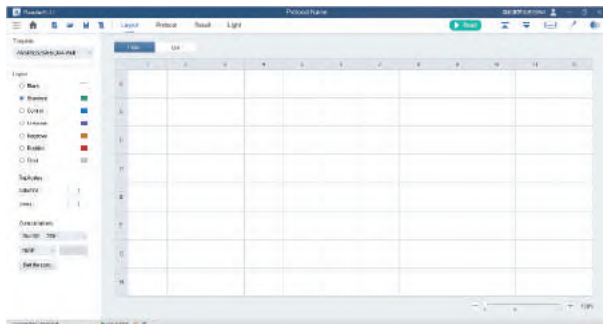
### FlexA-200 Instrument Interface Can Be Used Independently for Rapid Detection



FlexA-200 built-in software is designed for independent use of the instrument. With a 10-inch high-resolution touch screen and a graphical user interface, the editing of programs and template presets are very simple. In addition, support for USB data export is fast, convenient and easy to operate.

## 03

### Through PC Software, Advanced Detection Mode and Powerful Data Analysis Can Be Set (Optional)



Intuitive graphical operation interface design.

A variety of data analysis functions, including quantitative curve fitting, qualitative analysis, kinetics calculation and 4PL. The data can be exported to Excel with one click, or detailed results reports can be generated through the built-in tools.

The built-in software and ReaderIt-II of the FlexA-200 instrument are both Chinese / English interfaces. graphical user interface is convenient for customers to use.

## 04

### 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.

## 05

### Incubation Block Performance

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

Performance at 37 °C: average temperature difference between wells:  $\pm 0.5$  °C; temperature uniformity of well plate:  $< 1.0$  °C (96-well plate without cover)

## 06

### High Quality Data and Stable Performance

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

1. Double beam optional system has the reference optional channel system, which makes the data stabler
2. After the instrument is started, the light source, grating, detector, microplate position, temperature measurement deviation, XY position, integrator, analog digital converter, etc. are automatically calibrated to ensure stable and reliable operation of the instrument
3. Long life xenon lamp which can be used for  $10^9$  times.

## 07

### Cuvette Mode (FlexA-200HT Model)

1. Independent cuvette slot
2. Detection wavelength 200~1000 nm
3. With incubation function, RT. +4 °C to 45 °C
4. Independent cuvette software can be directly used for endpoint method, kinetics, spectral scanning and standard curve establishment



## 08

### Liner Shaking Function of Microplate

1. Three speed options: low speed, medium speed and high speed
  - Low speed 5 Hz
  - Medium speed 11 Hz
  - High speed 20 Hz
2. Background shaking mode can be executed during kinetics

**u-Nano Ultra-Micro Plate (Optional)**

1. Quickly complete high-throughput quantification of micro nucleic acid and proteins without samples dilution
2. Independent lower computer software, can quickly read the sample concentration and purity report
3. 1~16 samples can be detected at the same time, only 2~4  $\mu\text{L}$  sample volume is needed
4. During continuous testing, you only need to wipe off the last batch of samples with dust-free paper

**Specification**

Display	10-inch high-resolution capacitive touch screen
Light source	Xenon flash lamp/number of flashes>10 <sup>9</sup>
Wavelength range	200 - 1000 nm
Wavelength accuracy	2 nm
Wavelength repeatability	0.2 nm
Optical system	Monochromator, 1 nm step
Reading range	0 - 4.0OD
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	$\pm (1.0 \% + 0.003 \text{ Abs})$ , (0 ~2.0 Abs); $\pm 2.0 \%$ , (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 s, accurate mode <28 s (end point method)
Shaking	Linear, 3 speeds adjustable
Temperature range & uniformity	RT. +4 °C to 45 °C; $\pm 0.5$ °C @37 °C
User interface	Built-in software, independent use
Analysis software	ReaderIt-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	DC 24 V 6.67 A
Dimension (W×D×H) mm	300×500×260 mm
Net weight	15.5 kg

**Ordering Information**

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



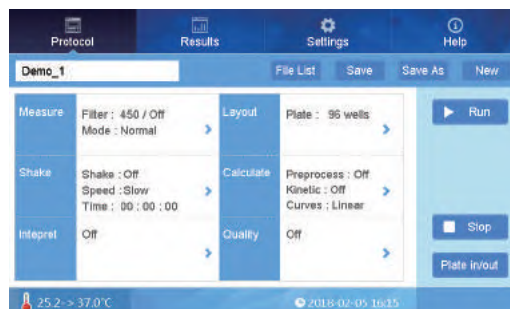
## Product Introduction

AMR-100 / AMR-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.

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

## Features

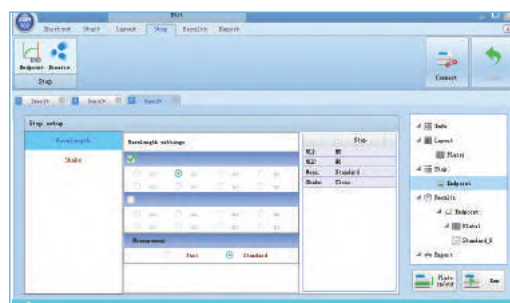
1. High-resolution 7-inch color touch screen, easy to operate, no keyboard required, easy to use
2. Multiple software configuration, which can be used as a single machine or connected with a computer, and the results are exported in real time
3. Absorbance range: 0.0~4.000 Abs, meeting different measurement requirements
4. 8-position filter wheel, standard 4 filters, optional other filters
5. The built-in software can provide instrument control and data analysis, and can be directly connected to a U disk
6. The detection speed is fast, and the whole 96-well microplate detection can be completed within 6 seconds



AMR-100T Operation Interface

## AMR-100 / AMR-100T Unique Advantages

1. High-resolution 7-inch touch screen, simple and intuitive operation, no keyboard required
2. Visual layout, convenient and practical
3. The microplate reader is equipped with the standard control and data analysis software ReaderIt-I, which is convenient and quick for data detection
4. Powerful data analysis function and excellent result report, not only can run the analysis independently, but also run the analysis on the computer



ReaderIt-I Software Interface

## Specification

Model	AMR-100	AMR-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	$CV \leq 0.3\%$ [0,3 Abs]; $CV \leq 1\%$ [3,4 Abs]	
Absorbance stability	$\leq 0.005$ Abs [0,3 Abs] $\leq 2.0\%$ [3,4 Abs]	$\leq \pm 0.005$ Abs [0,2 Abs] $\leq 0.3\%$ [2,3 Abs] $\leq 2.0\%$ [3,4 Abs]
Absorbance accuracy	$\leq \pm 0.005$ Abs [0,2 Abs] $\leq \pm 0.01$ Abs [2,3 Abs] $\leq \pm 1.5\%$ [3,4 Abs]	$\leq \pm 0.005$ Abs [0,2 Abs] $\leq \pm 1\%$ [2,3 Abs] $\leq \pm 1.5\%$ [3,4 Abs]
Sensitivity / detector	$\geq 0.01$ 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	--	$\pm 0.5$ °C @ 37 °C
Temperature uniformity	--	$\pm 0.5$ °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	AC 100-240 V, 50-60 Hz, 2 A	
Dimension (W×D×H)	295×440×225 mm	
Net weight	10 kg	11 kg

## Ordering Information

Code	Description
AS-16050-00	AMR-100 microplate reader
AS-16060-00	AMR-100T microplate reader
AS-16051-01	Optical filter 340 nm
AS-16051-02	Optical filter 380 nm
AS-16051-03	Optical filter 405 nm
AS-16051-04	Optical filter 415 nm
AS-16051-05	Optical filter 450 nm
AS-16051-06	Optical filter 492 nm
AS-16051-07	Optical filter 540 nm
AS-16051-08	Optical filter 570 nm
AS-16051-09	Optical filter 578 nm
AS-16051-10	Optical filter 590 nm
AS-16051-11	Optical filter 595 nm
AS-16051-12	Optical filter 630 nm
AS-16051-13	Optical filter 650 nm
AS-16051-14	Optical filter 690 nm
AS-16051-15	Optical filter 470 nm
AS-16051-16	Optical filter 490 nm

Code	Description
AS-16051-17	Optical filter 510 nm
AS-16051-18	Optical filter 520 nm
AS-16051-19	Optical filter 532 nm
AS-16051-20	Optical filter 546 nm
AS-16051-21	Optical filter 560 nm
AS-16051-22	Optical filter 562 nm
AS-16051-23	Optical filter 600 nm
AS-16051-24	Optical filter 620 nm
AS-16051-25	Optical filter 646 nm
AS-16051-26	Optical filter 663 nm
AS-16051-27	Optical filter 700 nm
AS-16051-28	Optical filter 750 nm
AS-16051-50	Halogen lamp
AS-16051-51	Printer
AS-16051-52	Printer paper
AS-16051-53	ABS optical performance validation board
AS-16051-54	ReaderIt-I analysis software



# APW-200

## Microplate Washer



### Features

1. Low residual liquid, each well  $\leq 1 \mu\text{L}$
2. 4.3 inch color LCD display, easy to operate
3. Microplate can be soaked and shocked simultaneously
4. Strainer in the pipeline and automatic washing functions avoid the liquid blocking the pipeline
5. Pipeline flushing and distilled water washing functions can be set, flushing time and number of spacers can be adjusted
6. With pause function, you can continue to complete the rest of washing procedures
7. Washing bottle has uniform volume calibration line, alarm function to avoid the washing liquid used up or waste liquid from overflow
8. 100 programs can be save

## 01

### Easy Operation

The APW-200 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.

## 02

### Safety and Reliable

The APW-200 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.

### Specification

Residual liquid	$\leq 1 \mu\text{L}$
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 $\mu\text{L}$ , increase by 50 $\mu\text{L}$
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	$\leq 2\%$ @300 $\mu\text{L}$
Liquid injection accuracy	$\text{CV} \leq 1.5\%$ @300 $\mu\text{L}$
Soaking and shaking time	99'00"
Date connection	USB
Weight	12 kg
Power supply	AC 100-240 V; 50 / 60 Hz

### Ordering Information

Code	Description
AS-16020-00	APW-200 microplate washer, AC 100-240 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

# Nano-100 / 300 / 400A / 500

## Micro-spectrophotometer



Nano-100



Nano-400A



Nano-300



Nano-500

### Features

#### 1. User-friendly software, easy to use

Graphical software operation, more intuitive interface, the results can be directly exported, easy to save, view and output data.

#### 2. Micro-volumes measuring

Only 0.5  $\mu$ L-2  $\mu$ L sample is needed for each test. After the measurement, the samples can be recovered and the precious samples can be studied with confidence.

#### 3. Fast detection

No dilution or cuvette needed in the detection process; 5 s can complete the test and display the result.

#### 4. Long life light source, do not need to warm up

Xenon flash, life span is  $10^9$  (up to 10 years). No preheating, direct use, ready to test in any time.

#### 5. High concentration detection

The maximum concentration of the detectable sample is 15000 ng/ $\mu$ L (Nano-500, dsDNA as an example), and the sample basically does not need to be diluted.

#### 6. Convenient and easy to use

Directly point the sample on to the sample plate without dilution or cuvette. The sample concentration can be measured as 50 times of the conventional uv-visible photometer, and the result can be directly output as the sample concentration.

#### 7. Nano-500 added fluorometer mode, accurate quantitative nucleic acid concentration

For samples with concentrations lower than 2 ng/ $\mu$ L, fluorometer mode can be selected and the minimum detection limit can be up to 0.5 pg/ $\mu$ L.

#### 8. Single machine operation, convenient and efficient (Nano-300, Nano-400A, Nano-500)

#### 9. Nano-100 / Nano 300 / Nano-500 is full-wavelength micro-spectrophotometer, and Nano-400A is a fixed wavelength ultra-micro nucleic acid analyzer.

## 01

### Nano-100 Unique Advantages

1. Nano-100 is a micro-spectrophotometer with full wavelength (200-800 nm)
2. The detectable sample is 50 times that of conventional UV/Vis spectrophotometer, and maximum detection concentration up to 4500 ng/μL (dsDNA)
3. High resolution CCD array detector, 5 s can complete the detection, display the results
4. Long life pulse xenon lamp light source
5. Need to connect PC computer to run detection, data saving, printing, sorting are very convenient

## 02

### Nano-300 Unique Advantages

1. Nano-300 is a full wavelength (200~800 nm) micro-spectrophotometer based on Nano-100, which adds detection of bacterial cell density (OD600) without a computer
2. Android system, 7-inch capacitive touch screen, optimized APP software
3. Newly designed OD600 optical path detection system, new cuvette mode, convenient for the concentration detection of bacteria, microorganisms and other culture solutions
4. High resolution CCD array detector, 5 s can complete the detection, display the results
5. With its own high-definition touch screen and control program, it can be detected without a computer connection
6. Long life pulse xenon light source, intelligently identify the user's usage. No operation within 5 minutes, the light source will be automatically turned off to prolong the service life
7. The test data is transferred to your computer via USB flash memory for easy data sorting, analysis and storage
8. Easy-to-use data to printer option, can print reports directly through the built-in printer
9. Automatic detection and automatic blank function: automatically detect the sample concentration when the detection arm is lowered, which greatly shortens the detection time of large batches of samples



Nano-300 Main Interface

## 03

### Nano-400A Unique Advantages

1. Nano-400A is a fixed wavelength (260 nm, 280 nm, 365 nm) ultra-micro nucleic acid analyzer, which is used for routine analysis of micro sample testing and is a supplement to the full wavelength instruments Nano-100, Nano-300 and Nano-500
2. Android system, 7-inch capacitive touch screen, no computer connection required
3. LED light source, long life component
4. It is mainly used to detect the concentration and purity of nucleic acid, and to detect the concentration of nucleic acid at 260 nm, the concentration of protein at 280 nm. The 260 / 280 ratio is used to measure the purity
5. Newly designed OD600 optical path detection system, new cuvette mode, convenient for the concentration detection of bacteria, microorganisms and other culture solutions
6. The test data is transferred to the computer via USB for easy sorting and analysis
7. Easy-to-use data printing options, can print the report directly through the built-in printer

## 04

### Nano-500 Unique Advantages

1. Nano-500 adds the following functions on the basis of the Nano-300:
  - A. Increase the optical path by 0.05 mm to make the detection of nucleic acid concentration up to 15,000 ng/μL
  - B. Fluorescence detection function is added to accurately determine the concentration of DNA samples below 5 ng/μL. In the detection of double-stranded DNA, the detection limit can be up to 0.5 pg/μL (equivalent to increasing the function of Fluo-100 fluorometer produced by our company)
  - C. Automatic detect after put down the arm
2. The patented motor lifting 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, optimized APP software
4. To detect the concentration of bacteria and microorganism are more convenient with the OD600 function
5. High resolution CCD array detector, 6s can complete the detection and display results
6. Equipped with HD touch screen, no need to connect computer
7. Long life pulse xenon lamp light source, intelligent identification of user usage. The light source will auto off after 5 minutes without any operation to extend service life
8. The detection data can be transferred to the computer through USB, which is convenient for data processing and analysis
9. Easy-to-use data printing options, can print the report directly through the built-in printer
10. Automatic detection and automatic blank function: automatically detect the sample concentration when the detection arm is lowered, which greatly shortens the detection time of large batches of samples

### New Fluorescence Detection Function for Nano-500

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



### Fluorescence Detection Mode (Can Be Customized)

Model	Channel	Excitation wavelength	Emission wavelength
Nano-500U (optional)	UV	365 $\pm$ 20 nm	420-480 nm (60 nm)
Nano-500 (standard)	Blue	460 $\pm$ 20 nm	525-570 nm (45 nm)
Nano-500G (optional)	Green	525 $\pm$ 20 nm	575-640 nm (65 nm)
Nano-500R (optional)	Red	625 $\pm$ 20 nm	670-725 nm (55 nm)

### Fluorescence Detection Mode - Specification

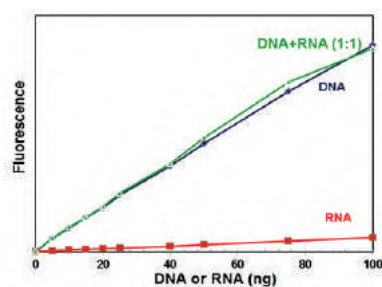
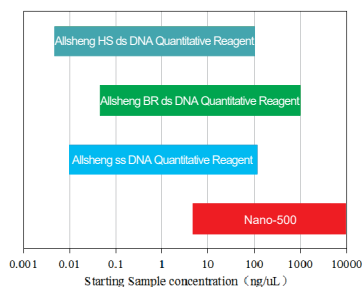
Light source	LED
Dynamic range	5 orders of magnitude
Linear dynamic range	R <sup>2</sup> $\geq$ 0.995
Detector	Photodiode
Repeatability	$\leq$ 1.5 %
Stability	$\leq$ 1.5 %
Sensitivity	dsDNA: 0.5 pg/ $\mu$ L
Measurement speed	3 s (once)

### Applications of Different Fluorescence Channels

Channel	Excitation wavelength	Common reagent	Application
UV channel	365 $\pm$ 20 nm	Hoechst 33258, 4-MU, EnZCheK Caspase	Nucleic acid quantification, plant GUS reporter gene detection, apoptosis detection
Blue channel	460 $\pm$ 20 nm	PicoGreen®, oligreen, RiboGreen®, GFP, Protein, Fluorescein	dsDNA, ssDNA, GFP, gene detection, fluorescein detection, protein quantification
Green channel	525 $\pm$ 20 nm	Rhodamine, Cy3, RFP Vybrant Cytotoxicity	Rhodamine detection, Cy-3 fluorescence labeling detection, RFP gene detection, cytotoxicity detection
Red channel	625 $\pm$ 20 nm	Cy5, Quant-iT RNA	Cy-5 fluorescence labeling detection, RNA quantification

### Features

The fluorometer with a highly sensitive fluorescence analysis kit can accurately quantify the concentration of DNA, RNA and protein. The matched fluorescent dye can only be specifically combined with the target molecule in the sample. After absorbing the light wave of a certain wavelength, it can emit the light wave whose wavelength is larger than the absorbance. The fluorescence intensity can be measured quantitatively, and then the content of the target substance can be determined according to the standard curve. Compared with Nano-300, the addition of fluorescence detection mode can increase the lower limit of sample detection (left). In addition, in the process of DNA detection, even if there is RNA at the same time, fluorescence detection still has strong specificity (right).



## 06

### Unique Advantages for Nano-500

In the process of sample detection, when the sample concentration is high or the sample is viscous, the determination by micro-spectrophotometer will often result in the failure of liquid column tension or even the direct fracture of liquid column, which will directly affect the results of detection. In addition, when the sample concentration is high, some tiny bubbles are easily generated in the sample. When these bubbles are in the detection light, the detection results are not stable.

Finally, because the stepper motor generates the liquid column in a gentler process, there will be less loss in the detection of the liquid. If the customer's sample is very precious and needs to be recycled, stepper motor is more suitable for sample recovery. Nano-500 adopts the patented sample stretching technology and the optical path length accuracy reaches 1  $\mu\text{m}$ , which effectively solves the above problems and makes the test results more stable and reproducible.



## 07

### Operation Process



Adding sample

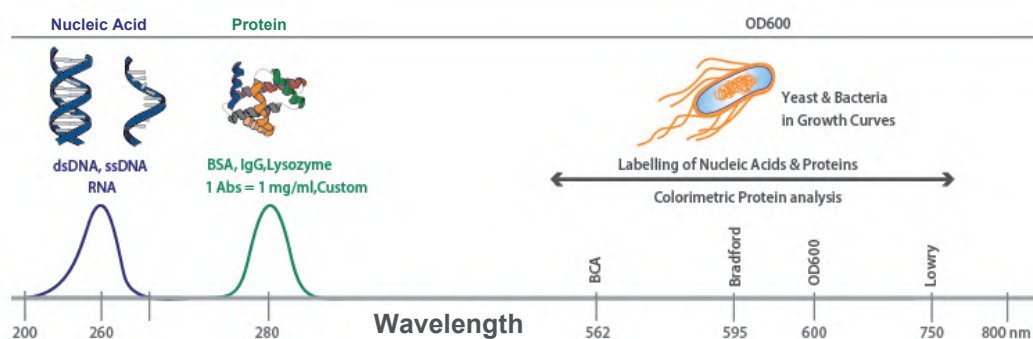


Measuring sample



Quick and easy cleaning

### Application



### Ordering Information

Code	Description
AS-11060-00	Nano-500 micro-spectrophotometer (standard), DC 24 V 5 W
AS-11070-00	Nano-500U micro-spectrophotometer (optional), DC 24 V 5 W
AS-11080-00	Nano-500G micro-spectrophotometer (optional), DC 24 V 5 W
AS-11090-00	Nano-500R micro-spectrophotometer (optional), DC 24 V 5 W

## Specification

Model	Nano-100	Nano-300	Nano-400A	Nano-500
Wavelength range	200-800 nm	200-800 nm	260 nm, 280 nm	200-800 nm
Minimum sample size	0.5~2.0 $\mu$ L	0.5~2.0 $\mu$ L	1.0~2.0 $\mu$ L	0.5~2.0 $\mu$ L
Path length	0.2 mm 1.0 mm	0.2 mm 1.0 mm	0.5 mm	0.05 mm 0.2 mm 1.0 mm
Light source	Xenon flash lamp	Xenon flash lamp	LED	Xenon flash lamp
Detector type	2048-linear CCD array	2048-linear CCD array	UV-silicon photocell	2048-linear CCD array
Wavelength accuracy	1 nm	1 nm	----	1 nm
Spectral resolution	$\leq 3$ nm	$\leq 3$ nm	$\leq 8$ nm	$\leq 3$ nm
Absorbance precision	0.003 Abs	0.003 Abs	0.005 Abs	0.003 Abs
Absorbance accuracy	1 % (7.332 Abs at 260 nm)	1 % (7.332 Abs at 260 nm)	2 % (7.332 Abs at 260 nm)	1 % (7.332 Abs at 260 nm)
Absorbance range	0.04~90 A	0.04~90 A	0.2~50 A	0.04~300 A
Nucleic acid detection range	2~4500 ng/ $\mu$ L (dsDNA)	2~4500 ng/ $\mu$ L (dsDNA)	10-2500 ng/ $\mu$ L (dsDNA)	2-15000 ng/ $\mu$ L (dsDNA)
Measurement time	< 5 s	< 5 s	< 6 s	< 6 s
Data output	Connect the computer	USB	USB	USB
Sample pedestal material	Aluminum alloy and quartz fiber	Aluminum alloy and quartz fiber	Aluminum alloy and quartz fiber	Aluminum alloy and quartz fiber
Operating voltage	DC 24 V 2 A	DC 24 V 2 A	DC 24 V 2 A	DC 24 V 2 A
Operating power	20 W	25 W	25 W	25 W
Standby power	5 W	5 W	5 W	5 W
Dimension (W×D×H) mm	200×250×166 mm	210×268×181 mm	208×280×186 mm	208×320×186 mm
Weight	2.6 kg	2.8 kg	2.0 kg	3.6 kg
Software compatibility	Win XP, Win 7, Win 8	Android system	Android system	Android system

### Cuvette mode (OD600 measurement)

Light source	----	LED	LED	LED
Wavelength range	----	600 $\pm$ 8 nm	600 $\pm$ 8 nm	600 $\pm$ 8 nm
Absorbance range	----	0~4 A	0~4 A	0~4 A

### Fluorometer mode

Sensitivity	----	----	----	dsDNA: 0.5 pg/ $\mu$ L
Linear dynamic range	----	----	----	R <sup>2</sup> $\geq$ 0.995
Repeatability	----	----	----	$\leq$ 1.5 %

## Ordering Information

Code	Description
AS-11010-00	Nano-100 micro-spectrophotometer, DC 24 V 5 W
AS-11020-00	Nano-300 micro-spectrophotometer, DC 24 V 5 W
AS-11050-00	Nano-400A ultra-micro nucleic acid analyzer, DC 24 V 5 W
AS-11060-00	Nano-500 micro-spectrophotometer (standard), DC 24 V 5 W
AS-11021-01	Cuvette for Nano-300, Nano-400A, Nano-500



# 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 260 nm, 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 are above 5 ng/μL, and while the fluorometer is 0.5 pg/μL 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

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 difficult in processing
2. The low quantity of DNA, RNA or protein after extraction
3. The sample will be used in the expensive experiments: qPCR, PCR cloning, transfection, the next generation sequencing and etc.

### 03

#### Fluo-100 Features

1. Simple - 4.3 inch touch screen, small and easy to use
2. Easy measurement within 3 s for DNA, RNA and protein
3. High sensitivity - lowest DNA detection limit is 0.5 pg/μL
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: 0.5 mL qPCR tube adapter  
0.2 mL qPCR tube adapter

## 04

### Two Detection Modes of Fluo-100

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

## 05

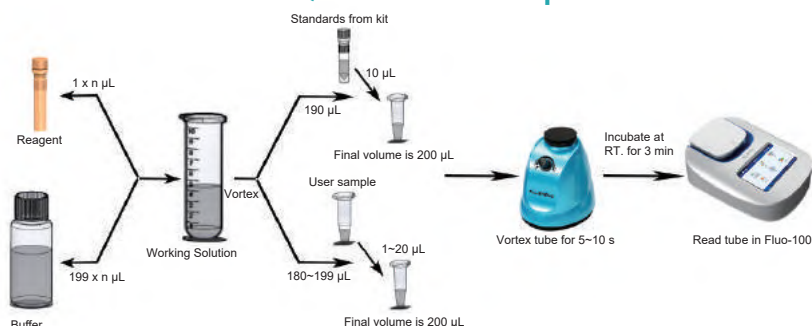
### Fluo-100 Quantitation Kit

High sensitivity of dsDNA quantitation kit: 0.2-100 ng

High sensitivity of ssDNA quantitation kit: 1-200 ng

Broad range of dsDNA quantitation kit: 10-1000 ng

### Fluo-100 Quantitation Kit Operation



### Application of Different Fluorescence Channel

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

### Ordering Information

Code	Description
AS-18010-00	Fluo-100A fluorometer, DC 12 V 1 A
AS-18020-00	Fluo-100B fluorometer, DC 12 V 1 A
AS-18030-00	Fluo-100C fluorometer, DC 12 V 1 A
AS-18011-01	Adapter for 0.5 mL qPCR tube (standard)
AS-18011-02	Adapter for 0.2 mL qPCR tube (optional)

Code	Description
RS-FL0101-S	Allsheng® high sensitivity dsDNA quantitation kit (100 assays)
RS-FL0101-M	Allsheng® high sensitivity dsDNA quantitation kit (200 assays)
RS-FL0101-L	Allsheng® high sensitivity dsDNA quantitation kit (1000 assays)
RS-FL0102-S	Allsheng® broad range dsDNA quantitation kit (100 assays)
RS-FL0102-M	Allsheng® broad range dsDNA quantitation kit (200 assays)
RS-FL0102-L	Allsheng® broad range dsDNA quantitation kit (1000 assays)
RS-FL0103-S	Allsheng® high sensitivity ssDNA quantitation kit (100 assays)
RS-FL0103-M	Allsheng® high sensitivity ssDNA quantitation kit (200 assays)
RS-FL0103-L	Allsheng® high sensitivity ssDNA quantitation kit (1000 assays)

# Fluo-200 / Fluo-800

## Fluorometer



Fluo-200



Fluo-800

### Product Introduction

The new fluorometer Fluo-200 and Fluo-800 are used for high sensitivity quantitative analysis of DNA, RNA and protein. Fluo-800 is available to do the fluorescence detecting for 8 samples in simultaneous. High precision detection method reduces the variation effectively. Easy and humanized software, intuitive user interface and rapid test method greatly shorten the testing time.

### Features

#### ■ Fluo-200

- Simple and intuitive----7 inch color touch screen
- Fast detection----fast & accurate quantification of DNA, RNA & protein in 5 s
- Accurate quantification----high accuracy with only 1-20  $\mu\text{L}$  samples
- High sensitivity----the lowest detection limit can be 0.1  $\text{pg}/\mu\text{L}$  (dsDNA)
- Dual channel detection----adapt to more dyes
- Stores results----up to 20000 programs can be stored
- Data save----save sample data as a CSV or PDF file
- Data export----be exported directly to U disk, or connected to an external printer
- Open reagent application----can match reagents from different manufacturers



#### ■ Fluo-800

- Simple and intuitive----7 inch color touch screen
- High throughput----8 samples per run
- Fast detection----8 samples can be detected in 6 s
- Accurate quantification----high accuracy with only 1-20  $\mu\text{L}$  samples
- High sensitivity----the lowest detection limit can be 1  $\text{pg}/\mu\text{L}$  (dsDNA)
- Stores results----up to 20000 programs can be stored
- Dual channel detection----adapt to more dyes
- Data export----be exported directly to U disk, or connected to an external printer
- Data save----save sample data as a CSV or PDF file
- Open reagent application----can match reagents from different manufacturers



## 01

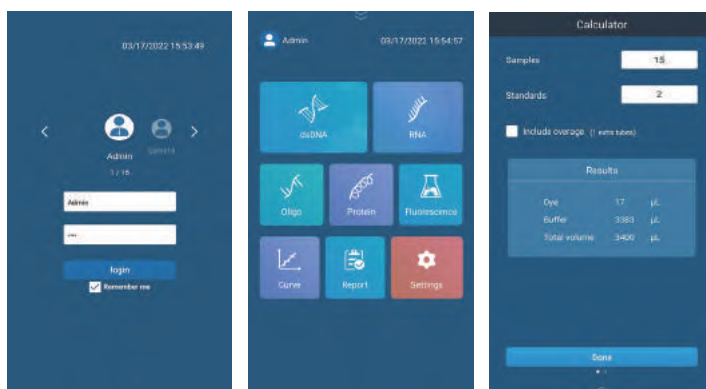
### User Authorization Management

User independent account and password to ensure program stability

## 02

### Intuitive Interface Display

Modular layout makes function display more intuitive



## 03

### Sample Concentration Analysis

To use the calculator to show how the assay range changes. It can help to select the appropriate assay based on sample volume and estimated sample concentration for the most accurate quantification

## 04

### Reagent Concentration Calculator

Quickly generate working solution preparation dosage, shorten reagent preparation time

## 05

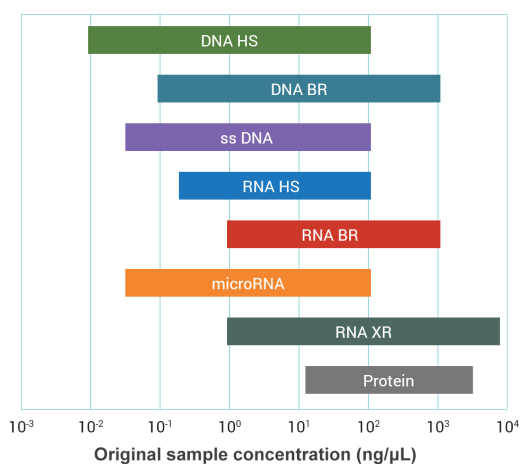
### NGS Workflow Calculator

Use the molarity calculator to convert to molarity based on nucleic acid length and measured concentration.

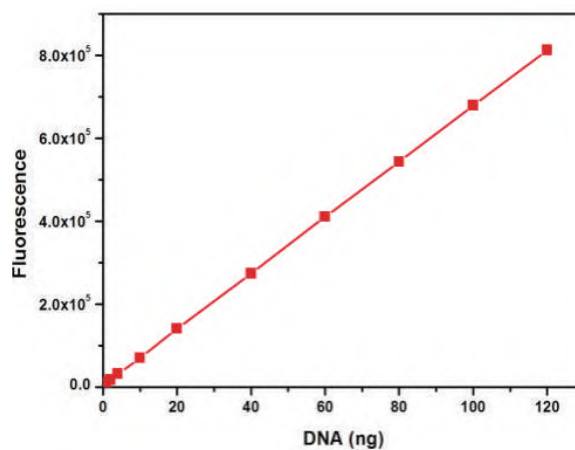
Required weight, concentration, or molarity can be easily normalized via the normalization calculator, which replaces spreadsheet calculations for standard normalization during sequence library preparation

## Performance Test

### ① Common samples and quantitative ranges



### ② Allsheng® High Sensitivity dsDNA Quantification Kit with linear quantitation range of 0.2–100 ng



## Specification

Model	Fluo-200	Fluo-800
Light source	LED	LED
Excitation filter	Blue: 460±20 nm Red: 625±20 nm	Blue: 460±20 nm Red: 625±20 nm
Emission filter	Green: 525-570 nm (45 nm) Red: 670-725 nm (55 nm)	Green: 525-570 nm (45 nm) Red: 670-725 nm (55 nm)
Detector	Photodiode	Photodiode
Throughput	1	8
Sample tube type	0.5 mL PCR tube	0.2 mL tube strip
Linear	$r^2 \geq 0.995$	$r^2 \geq 0.995$
Linear range	5 orders of magnitude	4 orders of magnitude
Sensitivity (detection limit)	<0.1 pg/μL (dsDNA HS)	<1 pg/μL (dsDNA HS)
Measurement time	≤5 s / sample	≤6 s / 8 samples
Input power	24 V 2 A	24 V 2 A
Operating voltage	100-240 V@50-60 Hz	100-240 V@50-60 Hz
External port	USB (Type A) ×2, USB (Type B) ×1, LAN ×1	USB (Type A) ×2, USB (Type B) ×1, LAN ×1
Display	7-inch touch screen	7-inch touch screen
Dimension (D×W×H)	286 mm×161 mm×61 mm	286 mm×161 mm×75 mm
Weight	1.5 kg	2 kg
Storage capacity	20000 programs	20000 programs

## Ordering Information

Code	Description
AS-18050-00	Fluo-200 fluorometer (Blue & Red)
AS-18060-00	Fluo-800 fluorometer (Blue & Red)
RS-FL 0101-S	Allsheng® high sensitivity dsDNA quantitation kit (100 assays)
RS-FL 0101-M	Allsheng® high sensitivity dsDNA quantitation kit (200 assays)
RS-FL 0101-L	Allsheng® high sensitivity dsDNA quantitation kit (1000 assays)
RS-FL 0102-S	Allsheng® broad range dsDNA quantitation kit (100 assays)
RS-FL 0102-M	Allsheng® broad range dsDNA quantitation kit (200 assays)
RS-FL 0102-L	Allsheng® broad range dsDNA quantitation kit (1000 assays)
RS-FL 0103-S	Allsheng® high sensitivity ssDNA quantitation kit (100 assays)
RS-FL 0103-M	Allsheng® high sensitivity ssDNA quantitation kit (200 assays)
RS-FL 0103-L	Allsheng® high sensitivity ssDNA quantitation kit (1000 assays)

# Gene-8C

## Isothermal Fluorescence PCR



### 01

#### Gene-8C Product Introduction

Gene-8C isothermal fluorescence PCR is mainly used for isothermal amplification and real-time fluorescence detection of samples. It is widely used in rapid detection of pathogenic microorganisms (including viruses, bacteria, fungi, mycoplasma, parasites, etc.), clinical disease diagnosis, food hygiene inspection and environmental monitoring. It can also be used for sex identification of animal embryos and detection of genetically modified food. The humanized operating system can directly interpret the results. The supporting APP software makes the experiment truly realize real-time detection. The design of the built-in battery makes it possible to use the instrument outdoors.



### 02

#### Gene-8C Features

##### 1. More reliable results

The side optical path detection system can detect at least 20  $\mu\text{L}$  reaction system

Precise temperature control, the temperature difference between wells is less than 0.15  $^{\circ}\text{C}$ , and the temperature control accuracy reaches 0.1  $^{\circ}\text{C}$

Real time monitoring of fluorescent signals to avoid subjective errors caused by manual interpretation

##### 2. Easier operation

The positive and negative results of the experiment can be directly interpreted without other calculations

With a 7-inch touch screen, a single machine can complete the setting, detection, interpretation and saving

Humanized software function, dual channel design to adapt to different reagent testing needs

##### 3. Provide multiple data export methods

Use USB and WIFI connection to transfer the experimental data and results to your computer, or save the data directly to the cloud through WIFI (it needs to be developed according to customer needs)

##### 4. View the results on the computer, sort out and share data

Once the data is exported, you can use PC software to view data in various formats and sort out experimental data

##### 5. Easy to use "data printer" option

You can directly print the results from the instrument through the USB printer interface. You can also use PC software to print and export the results from the computer

##### 6. Outdoor use, convenient and portable

Small size, equipped with rechargeable batteries, make the detection real-time and practical. Portable experimental box, equipped with other necessary instruments, to improve experimental efficiency



## 03

### Gene-8C Features

#### 7. More intelligent software system

The instrument software is simple and clear, which can be easily mastered by new users

Android APP software, which can control the operation of monitoring instruments

It can be operated by an external computer to meet various customer needs

With mobile APP real-time data transmission, it is a real real-time detection system

Data statistics function, recording experimental parameters and data, convenient for tracing and searching

Real-time detection, automatic identification of negative and positive, melting curve and other functions

## 04

### Gene-8C Advantages

- Single / dual channel (mode selection) fluorescent excitation and detection
- Amplification process point monitoring
- Support WiFi data transmission mode
- USB port printing
- Software compatible with Android system phones
- Portable
- Built in rechargeable lithium battery, durable, weather-proof and able for outdoor use
- Peltier semiconductor temperature control component produced by Marlow
- Open isothermal fluorescent detection reagent
- Built in software, Android mobile app software and computer software

## 05

### Introduction to Cross Primer Amplification (CPA)

CPA amplification mainly includes the following steps:

1. Cross-positive primer CPF complement PFs and PFa in the template DNA, start the DNA synthesis, so that the PRa is introduced into the amplified product
2. The peripheral primer DP1s complements the DP1a sequence at the front end of PFa, and extends forward through the strand replacement DNA polymerase, replacing the single strand product (structure 3) synthesized by CPF that can combine with CPR and DP2a, while forming a double strand product (structure 2) with the template DNA
3. In structure 3, DP2a extends forward through the strand replacement type DNA polymerase to replace the single strand product extended by CPR (structure 5), while synthesizing the double strand product (structure 4) from the single strand DNA generated by CPF extension in step 2, while structure 5 has more PRs and PFs segment sequences than the initial DNA template
4. PFa and PRs of the 3-end of the single-chain structure 5 can be combined with PRs in the CPF and PRa in CPR, respectively, and can extend and replace the corresponding single-chain products under the action of chain replacement DNA polymerase. The relative structure of the extension product 5 adds a PFs area (structure 8)
5. Therefore, the breakdown and extension of CPF and CPR in the amplification of primers not only keep the length of the structure 5 continuously lengthened, thereby introducing more CPF and CPR 3' end complementary areas, but also replace various single chain products that can complement the 3' end of CPF and CPR
6. The continuous hybrid extension of CPF and CPR and the chain replacement of the DNA polymerase, so that the number of DNA copies continuously increases, thereby achieving the effect of genetic amplification

## Features

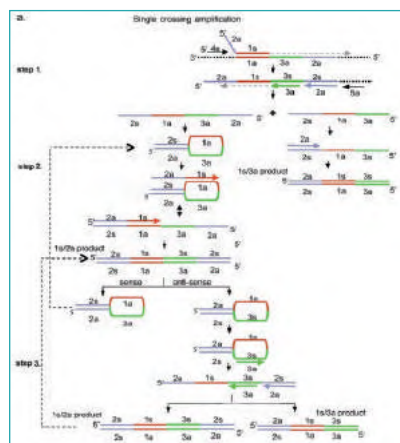
Isothermal amplification technology is a new type of nucleic acid amplification technology (NAIA) developed after PCR technology. The whole process of amplification reaction is carried out at the same temperature. Compared with the traditional PCR technology, it greatly simplifies their requirements for the instruments needed for amplification, and greatly shortens the reaction time. Therefore, it has great application value and has become a hot spot in the development of the molecular diagnosis industry.

At present, the main isothermal amplification technologies are:

1. Cross primer amplification (CPA)
2. Transcription-mediated amplification (TMA)
3. Nucleic acid sequence-based amplification (NASBA)
4. Strand displacement amplification (SDA)
5. Loop-mediated isothermal amplification (LAMP)
6. Helicase-dependent amplification (HDA)
7. Recombinase polymerase amplification (RPA)
8. Recombinase aided amplification (RAA)
9. Rolling circle amplification (RCA)

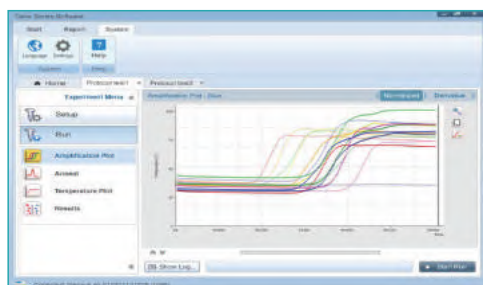
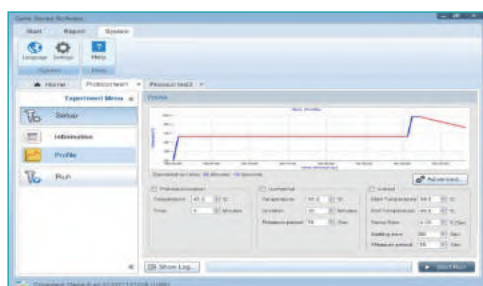
The isothermal nucleic acid kit developed by our company is based on the cross primer amplification technology (CPA) platform. It has the following advantages:

1. Fast reaction speed
2. Low detection cost
3. Simple operation
4. Low skill requirements for experimenters

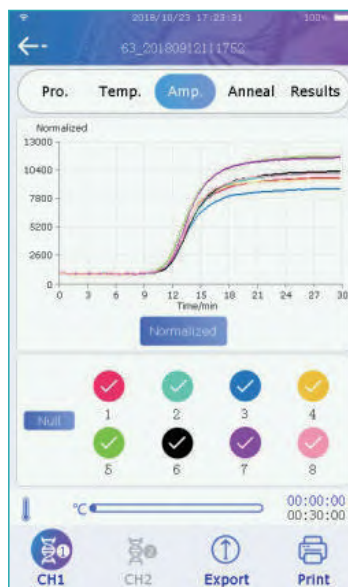


Singal Crossing CPA Technical Principles

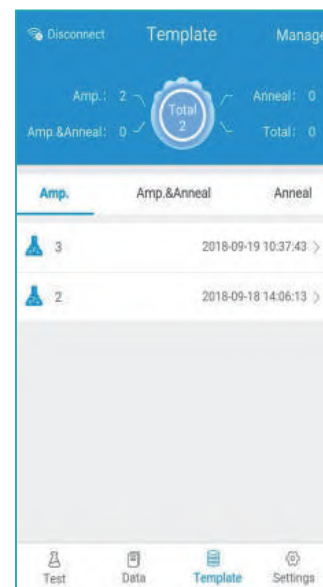
## Software



PC Software Interface



Built-in Software



Android Mobile's APP Software

## Gene-8C Supporting Kit

1. qPCR Reagent
  - qPCR Probe Master Mix (Probe Method)
  - U+qPCR Probe Master Mix (Probe Method)
  - WSSV qPCR Kit (Probe Method)
  - IHHNV qPCR Kit (Probe Method)
  - EHP qPCR Kit (Probe Method)
  - One Step qRT-PCR Probe Master Mix (Probe Method)
  - U+One Step qRT-PCR Probe Master Mix (Probe Method)
  - TSV qPCR Kit (Probe Method)
2. Isothermal Amplification PCR Reagent
  - Isothermal PCR Master Mix
  - Isothermal PCR Master Mix (RNA template)
3. Aquatic Virus Series
  - WSSV Isothermal Amplification PCR Master Mix Kit
  - IHHNV Isothermal Amplification PCR Master Mix Kit
  - EHP Isothermal Amplification PCR Master Mix Kit
  - TSV Isothermal Amplification PCR Master Mix Kit
  - SHIV Isothermal Amplification PCR Master Mix Kit
4. Animal Origin Doping Series
  - Porcine-origin Gene Isothermal Amplification PCR Kit
  - Chicken-origin Gene Isothermal Amplification PCR Master Mix Kit
  - Duck-origin Gene Isothermal Amplification PCR Master Mix Kit
  - Bovine-origin Gene Isothermal Amplification PCR Master Mix Kit
  - Sheep-origin Gene Isothermal Amplification PCR Master Mix Kit
5. Cell-free Recombinant Protein Expression Kit
  - Non-dialysis Escherichia Coli Cell-free Recombinant Protein Expression Kit
  - Dialysis Escherichia Coli Cell-free Recombinant Protein Expression Kit
  - High-throughput Dialysis Escherichia Coli Cell-free Recombinant Protein Expression Kit

## Specification

Model		Gene-8C
Sample tray	Sample size	0.2 mL–8-well (8-strip tube available)
	Sample Volume	15-150 $\mu$ L (20-30 $\mu$ L recommended)
	Applicable dye	FAM / SYBR Green
Temperature control	Temperature range ( $^{\circ}$ C)	15 $^{\circ}$ C-99 $^{\circ}$ C
	Heating speed ( $^{\circ}$ C)	2 $^{\circ}$ C/s
	Cooling speed ( $^{\circ}$ C)	2 $^{\circ}$ C/s
	Temperature uniformity ( $^{\circ}$ C)	$\pm$ 0.15 $^{\circ}$ C; @39 $^{\circ}$ C
	Temperature accuracy/ temperature control precision ( $^{\circ}$ C)	$\pm$ 0.2 $^{\circ}$ C / 0.1 $^{\circ}$ C
	Thermo lid	Yes
Optical path system	Channel	One
	Excitation wavelength	F1: 470 / 30 nm
	Detection wavelength	F1: 525 / 20 nm
	Excitation light source/detection mode	LED / real-time fluorescent signal detection
Function	Result display mode	1. Negative/positive; 2. peak time; 3. melting Tm value
	Interpretation Mode	1. Construct amplification curve judgment; 2. The instrument automatically analyzes and determines positive or negative
	Touch screen	7-inch touch screen
	Control software	Instrument software, PC software, supporting app (Android system)
Power supply	Input power	100~240 V, 50~60 Hz
	Lithium battery	With charging battery (optional)
Appearance	Dimension (WxDxH) mm	145x305x100 mm

Code	Description
AS-20010-00	Gene-8C Isothermal Fluorescence PCR

### qPCR Reagents

RS-QP01001	qPCR Probe Master Mix (Probe Method)
RS-QP01002	U+qPCR Probe Master Mix (Probe Method)
RS-QP01003	WSSV qPCR Kit (Probe Method)
RS-QP01004	IHHNV qPCR Kit (Probe Method)
RS-QP01005	EHP qPCR Kit (Probe Method)
RS-QP01006	One Step qRT-PCR Probe Master Mix (Probe Method)
RS-QP01007	U+One Step qRT-PCR Probe Master Mix (Probe Method)
RS-QP01008	TSV qPCR Kit (Probe Method)

### Cell-free Recombinant Protein Expression Kit

RS-IP04001	Non-dialysis Escherichia Coli Cell-free Recombinant Protein Expression Kit
RS-IP04002	Dialysis Escherichia Coli Cell-free Recombinant Protein Expression Kit
RS-IP04003	High-throughput Dialysis Escherichia Coli Cell-free Recombinant Protein Expression Kit

### Aquatic Virus Series

RS-IP02001	WSSV Isothermal Amplification PCR Master Mix Kit
RS-IP02002	IHHNV Isothermal Amplification PCR Master Mix Kit
RS-IP02003	EHP Isothermal Amplification PCR Master Mix Kit
RS-IP02004	TSV Isothermal Amplification PCR Master Mix Kit
RS-IP02005	SHIV Isothermal Amplification PCR Master Mix Kit

### Animal Origin Doping Series

RS-IP03001	Porcine-origin Gene Isothermal Amplification PCR Kit
RS-IP03002	Chicken-origin Gene Isothermal Amplification PCR Master Mix Kit
RS-IP03003	Duck-origin Gene Isothermal Amplification PCR Master Mix Kit
RS-IP03004	Bovine-origin Gene Isothermal Amplification PCR Master Mix Kit
RS-IP03005	Sheep-origin Gene Isothermal Amplification PCR Master Mix Kit

### Isothermal Amplification PCR Reagent

RS-IP01001	Isothermal PCR Master Mix
RS-IP01002	Isothermal PCR Master Mix (RNA template)

# TDH-500

## Hybridization System



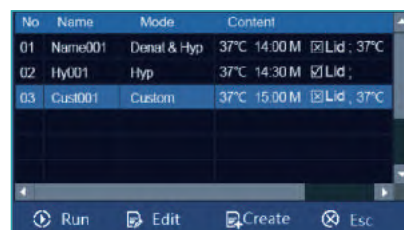
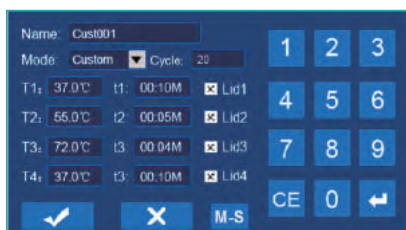
### Product Introduction

Programmable system and humidifying that automates the steps in a slide-based FISH procedure, and provides walkaway convenience for clinical and research personnel. Up to 12 slides can be easily be added or removed with one hand. Two-side heating of slides that allows achieving exact correspondence of the set and actual temperature and maintaining uniform temperature across all slide positions. To built upon the innovative design, TDH-500 is ideally suited for the needs of cytogenetic laboratories to provide a good instrument.

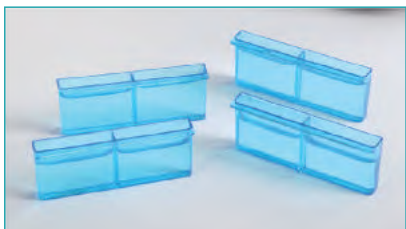
### Features

1. Touch screen easy to read, program and use
2. It can run In-situ PCR experiments
3. Possibility to export cycles data via USB memory
4. Four operation modes: denaturation / hybridization, hybridization fixed temperature, custom, In-situ PCR
5. Can be used as a fixed temperature slide warmer
6. Rapid temperature warm-up and accuracy of  $\pm 1^{\circ}\text{C}$
7. Superior temperature uniformity accross all slide positions
8. Perfect humidity control system

### Flow Diagram

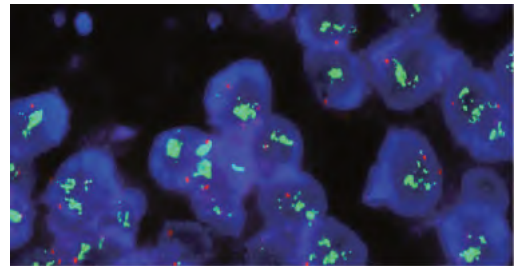
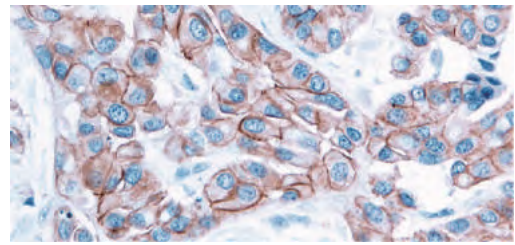


1. Touch screen display, easy programmable setting



2. Perfect humidity control system

3. Possibility to export cycles data



## Specification

Temperature control range	RT. +5 °C-99.9 °C
Temperature accuracy	$\leq \pm 1$ °C
Temperature uniformity	$\leq \pm 2$ °C
Temp. display accuracy	$\pm 0.1$ °C
Timer	1 min~99 h 59 min or 1 sec~99 min 59 sec
Heating time (37 °C to 95 °C)	$\leq 4$ min
Cooling time (95 °C to 45 °C)	$\leq 8$ min
Operation mode	Denaturation/hybridization, hybridization fixed temperature, custom and in-situ PCR
Capacity	12 Slides
Dimension (D×W×H) mm	225×420×143 mm
Weight	6.2 kg
Power	460 W

## Ordering Information

Code	Description
AS-05010-00	TDH-500 AC 120 V, 3 A or AC 220 V, 2 A 50 / 60 Hz

04

**Laboratory Instrument**



# Bioprep-6 / 24 / 24R

## Homogenizer

### Product Introduction

Bioprep series is a fast and effective homogenizer with function of grinding, lysis and homogenizing by three-dimensional vibration and the coordination of the grinding beads (glass beads, silica beads, metal beads etc.). Effective to homogenize the animal or plant tissue, bacteria, fungus and so on. It also has extraordinary power for processing hard lysis samples such as spores, hair, bones, feces, soil etc. With the use of relevant kits, it can quickly, efficiently and steadily extract DNA / RNA / protein from samples in bulk, and preserve the integrity of biomacromolecule.

### ■ Features

1. Available to lysis most of biological samples and preserve the integrity of biomolecule (DNA, RNA and protein) and pharmaceutical molecule
2. Process 24 samples at the same time within 35 seconds
3. Choose different programs and grinding beads according to different samples
4. Accurate setting of lysis time and speed, total 50 programs can be saved. Reduce the inter-batch and intra-batch differences
5. Disposable tubes ensure no cross-contamination or sample degradation
6. Multiple material and diameter beads for the choice of different type of samples
7. Not only saving time and effort, but also smaller differences between batches

### ■ Safety

Equip with open lid protection and emergency braking function. Device will be stop running automatically when the lid open or program error for the safety operation



Bioprep-6



Bioprep-24



Bioprep-24R

## Method Comparison

	Traditional method	Homogenizer
Sample preparation	<ol style="list-style-type: none"> <li>1. Liquid nitrogen grinding: the mortar needs to be replaced when processing different samples, and the operation is dangerous</li> <li>2. Samples are grinded one by one, time-consuming and labor-intensive</li> <li>3. Cross-contamination is easy to occur during grinding</li> </ol>	<ol style="list-style-type: none"> <li>1. No liquid nitrogen treatment is required, just put the sample cut into the grinding tube, and the machine automatically grinds</li> <li>2. Processing multiple samples at the same time makes the operation easier</li> <li>3. Single sample and single operation to avoid cross-contamination</li> <li>4. After putting the sample into the grinding tube, it is recommended to keep the grinding tube at low temperature (below -40 °C) for 12 hours before taking it out for homogenization, so that the homogenization effect will be better</li> </ol>
Grinding effect	Operation difference and inconsistent grinding effect	Processing multiple samples at the same time, good homogeneity

### 01

#### Holder and Adapter

Holder for 6×2.0 mL and for 2×5.0 mL  
For Bioprep-6



Tray of 2.0 mL tubes



Tray of 5.0 mL tubes



### 02

#### Rotor Adapter

Rotor for 24×2.0 mL / Rotor for 12×5.0 mL  
For Bioprep-24(R)



24×2.0 mL Rotor



12×5.0 mL Rotor

### 03

#### Application

Any researcher who requires genomic DNA, total RNA or recombinant protein as a starting material will benefit from the unit system.

- Northern blot analysis, qPCR and microarrays
- Optimization of recombinant protein expression
- Library synthesis and Southern blots
- RT-PCR and differential display
- Pathogen screening of soil or water
- Environmental surveys
- Verification of food safety

#### Typical Samples

1. Bones, brains, tumors
2. Bacteria gram + or -
3. Yeast, fungi, spores
4. Seeds, roots
5. Feces, swabs
6. Soil, sediments

#### Grinding Tubes

1. Bioprep-6: simultaneous processing 6×2 mL / 1.5 mL / 0.5 mL tubes or 2×5 mL tubes
2. Bioprep-24 (R): simultaneous processing 24×2 mL / 1.5 mL tubes or 12×5 mL tubes
3. The grinding tubes must be with high toughness and low temperature resistance

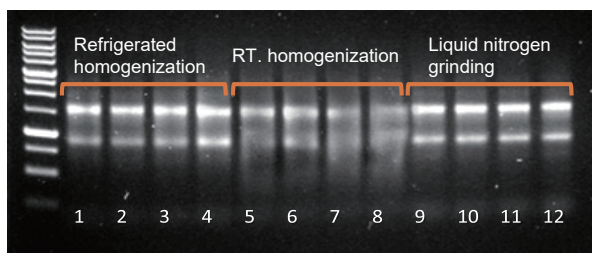
## Bioprep-24R Product Introduction

Bioprep-24R refrigerated homogenizer has the internal compressor which was upgraded on the basis of normal Bioprep-24 homogenizer. Partial active ingredients will be negatively affected when use the conventional methods to homogenize most of the soft or sensitive samples under room temperature, while the low temperature can prevent this situation. Therefore the cooling technique is the key effective method to save the complete sample. In addition, the sample will change more crisp which can be homogenized easily and efficiently. Thus, Bioprep-24R refrigerated homogenizer plays an important role in the extraction progress of RNA, DNA and the protein activity determination.

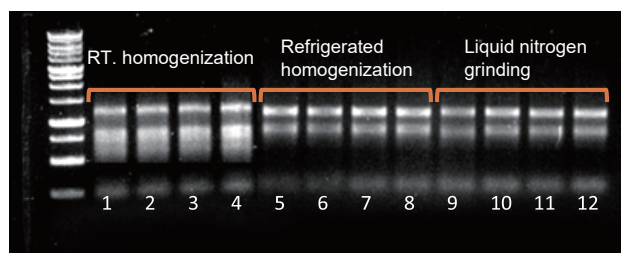
1. The lowest temperature: -10 °C
2. Internal turbo fan in the homogenized cavity can keep the temperature uniformity within 2 °C
3. Environment friendly for compressor
4. The refrigerated function effectively prevents the reduction of sample activity which caused by the high temperature when extracting the RNA, Protein etc
5. Has the dry homogenization and wet homogenization function

## Bioprep-24R Extraction Effect

### Extraction Effect from Animal Tissues



### Extraction Effect from Plant Tissues



#### ■ RNA Extraction Effect from Animal Tissues

Material	Mouse liver											
No.	1	2	3	4	5	6	7	8	9	10	11	12
Mass (mg)	59	62	60	63	61	62	63	60	59	61	58	62
Sample pre-processing	Refrigerated homogenization				RT. homogenization				Liquid nitrogen grinding			
Nucleic acid extraction	Trizol precipitation method											
RNA (ng/μL)	1252	1828	1735	2057	1728	1643	1649	1600	801	843	832	856
A260 / 280	2.02	2.05	2.06	2.06	2.05	2.01	2.04	2.02	1.98	1.92	1.95	1.97
A260 / A230	2.30	2.05	2.30	2.27	2.29	2.28	2.28	2.28	2.20	2.24	2.18	2.19
Volume	80 μL											

#### ■ RNA Extraction Effect from Plant Tissues

Material	Plant leaves ( <i>Pachira macrocarpa</i> )											
No.	1	2	3	4	5	6	7	8	9	10	11	12
Mass (mg)	51	50	52	52	51	50	50	49	50	57	56	56
Sample pre-processing	Refrigerated homogenization				RT. homogenization				Liquid nitrogen grinding			
Nucleic acid extraction	Trizol precipitation method											
RNA (ng/μL)	475	465	394	408	491	486	469	473	272	302	307	263
A260 / 280	2.05	2.05	2.03	2.03	2.06	2.03	2.07	2.07	2.05	2.06	2.05	2.04
A260 / A230	1.87	1.83	1.82	1.86	1.93	1.90	2.07	1.96	2.12	2.13	2.04	1.93
Volume	80 μL											

Note: By comparing the measured RNA concentration and electropherogram, it can be analyzed that the RNA extracted by the normal temperature homogenizer will be discrete, while the RNA extracted by refrigerated homogenization and liquid nitrogen grinding is complete and not discrete, but from the concentration and total amount, refrigerated homogenization extraction is higher than liquid nitrogen grinding. After many tests on different samples, we found that the effect of refrigerated homogenizer for RNA extraction is equivalent to that of liquid nitrogen grinding, but for samples with soft materials, the effect of refrigerated homogenization is slightly worse than that of liquid nitrogen grinding, which is mainly because the liquid nitrogen immersion makes the sample brittle and ground more fully.

## Specification

Model	Bioprep-6	Bioprep-24	Bioprep-24R
Temperature range	----	----	-10 °C~40 °C
From RT. to 0 °C	----	----	<30 min
Temperature uniformity	----	----	≤±2 °C
Display	LCD	OLED	OLED
Speed range (m/s)	4.00 m/s~7.00 m/s, increment 0.05 m/s	4.00 m/s~7.00 m/s, increment 0.05 m/s	4.00 m/s~7.00 m/s, increment 0.05 m/s
Speed range (rpm)	2500 rpm -- 4350 rpm, increment 10 rpm	2430 rpm -- 4260 rpm, increment 10 rpm	2430 rpm -- 4260 rpm, increment 10 rpm
Cycle duration	1 s -- 90 s, increment 1 s	1 s -- 90 s, increment 1 s	1 s -- 90 s, increment 1 s
Pause time	1 s -- 90 s, increment 1 s	1 s -- 120 s, increment 1 s	1 s -- 120 s, increment 1 s
Cycle	10	10	10
Stored program	1	50	50
Sample volume	6×2 mL / 1.5 mL, 2×5 mL	24×2 mL / 1.5 mL, 12×5 mL	24×2 mL / 1.5 mL, 12×5 mL
Acceleration/ deceleration time	<2 s	<4 s	<4 s
Noise	<65 db	<70 db	<70 db
Wearing part	No	No	No
Rotor	Rotor for 2 mL / 5 mL (standard)	Rotor for 2 mL (standard), rotor for 5 mL (optional)	
Power	150 W	500 W	1000 W
Dimension (W×D×H)	354 mm×218 mm×206 mm	280 mm×360 mm×385 mm	330 mm×520 mm×400 mm
Weight (kg)	8.9 kg	25 kg	40.0 kg
Power supply	AC 100~240 V, 50 / 60 Hz	AC 100~240 V, 50 / 60 Hz	AC 100 / AC 240 V, 50 / 60 Hz

## Ordering Information

No.	Code	Description	No.	Code	Description
01	AS-13010-00	Bioprep-24 homogenizer	11	AS-13011-03	2.0 mL tubes
02	AS-13020-00	Bioprep-6 homogenizer	12	AS-13011-04	5.0 mL tubes
03	AS-13030-00	Bioprep-24R homogenizer (w/cooling)	13	AS-13011-05	Φ1.4 mm silica beads
04	AS-13011-01	Rotor for 24×2.0 mL (Bioprep-24 / Bioprep-24R)	14	AS-13011-06	Φ2.8 mm silica beads
05	AS-13011-02	Rotor for 6×5.0 mL (Bioprep-24) -- stop production	15	AS-13011-07	Φ3 mm metal beads
06	AS-13011-30	Rotor for 12×5.0 mL (Bioprep-24 / Bioprep-24R)	16	AS-13011-08	Φ6 mm metal beads
07	AS-13021-01	Holder for tubes (Bioprep-6)	17	AS-13011-09	Φ0.2 mm glass beads
08	AS-13021-02	Adapter for 3×2 mL (Bioprep-6)	18	AS-13011-10	Φ0.5 mm glass beads
09	AS-13021-03	Adapter for 5 mL (Bioprep-6)	19	AS-13011-12	Φ3.0 mm glass beads
10	AS-13021-04	DC 24 V, 6 A adapter (Bioprep-6)	20	AS-13011-13	Φ1.4mm metal beads

# iCen-24 / iCen-24R

## High Speed Centrifuge

### Features

1. Max. rotor capacity: 24×1.5 mL / 2.0 mL  
Max. speed: 21,400×g (15000 rpm)
2. Safe and reliable, various safety protections conforming CE safety standard
3. Imported motor, maintenance free
4. Soft-brake function to prevent resuspension and protect sensitive samples
5. Automatic lid opening at the end of run - prevents sample warming and allows easy access to samples (iCEN-24)
6. Separate short-spin key for quick centrifugation
7. 3 types of rotors are available, suitable for 1.5, 2.0, 5.0 mL tubes and 0.2, 0.5 PCR strip tubes
8. Key operation, simple parameter settings
9. iCEN-24 gas ventilation and cooling design ensures minimum temperature rise of samples

### iCEN-24R Unique Features

1. Strong cooling capacity, can maintain 4 °C at the max. speed
2. Rapid cooling speed, from RT. to 4 °C in less than 20 min
3. In static precooling mode, when the centrifuge cover is closed, it automatically starts to cool;  
In case of no sample, the temperature of rotor and chamber shall be rapidly reduced to the set temperature
4. Temperature control range: -10 °C to 40 °C



iCEN-24



iCEN-24R  
Strong Refrigeration Capacity

## Specification

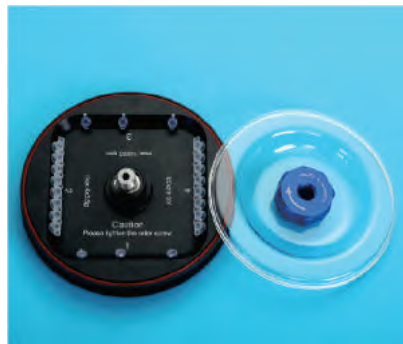
Model	iCEN-24	iCEN-24R	
Speed (rpm)	500-15000 rpm (increment 100 rpm)	500-15000 rpm (increment 100 rpm)	
Max. centrifugation medium density	1.2 g/mL	1.2 g/mL	
Acceleration and deceleration time (soft off)	15 s	15 s	
Acceleration and deceleration time (soft on)	45 s	45 s	
Max. capacity	24×1.5 mL/2.0 mL	4×PCR strip rotor	12×5 mL (suitable for round-bottom tubes) rotor
Max. rotor radius	85 mm	68 mm	85 mm
Max. RCF	100-21400×g	100-17100×g	100-21400×g
Temp. control accuracy (@ 4 °C)	---	±2 °C	
Cooling time to 4 °C	---	≤20 min	
Temperature range	---	-10 °C to +40 °C	
Noise	≤62 db	<60 db	
Power	350 W	500 W	
Dimension (L×W×H) mm	260×410×225 mm	300×500×320 mm	
Weight (including rotor)	14 kg	28 kg	
Timer	1 s-99 min59 s (short-spin)	1 s-99 min59 s (short-spin)	
Power supply	AC 100-120 V / AC 200-240 V 50-60 Hz		AC 100-120 V / AC 200-240 V 50-60 Hz

## Ordering Information

Code	Description
AS-08120-00	iCEN-24 High speed centrifuge, AC 100 V-120 V / 200 V-240 V, 50-60 Hz
AS-08130-00	iCEN-24R High speed refrigerated centrifuge, AC 100 V-120 V / 200 V-240 V, 50-60 Hz
AS-08121-01	24×1.5 mL / 2.0 mL rotor
AS-08121-02	4×8×0.2 mL PCR strip rotor
AS-08121-03	12×5 mL rotor
AS-08041-01	Adapters for 0.5 mL tubes
AS-08041-02	Adapters for 0.2 mL tubes



24×1.5 mL / 2.0 mL  
Rotor



4 - 8×0.2 mL  
PCR Strip Rotor



12×5 mL  
Rotor



# Mini-15K

## High Speed Centrifuge

### Features

1. Unique airflow guide to keep samples at low temperature. After 30 minutes of running at the max. speed, the temperature rise only 10 °C
2. Sensitive and efficient speed control, takes only 15 s to rise to the max. speed, and 15 s to drop from the max. speed to 0
3. High-strength aluminum alloy rotor can be sterilized at high temperature and high pressure to prevent pollution



Mini-15K  
Operation Interface



Mini-15K  
Rotor



### Accessories

AS-08041-01	Adapters for 0.5 mL tubes
AS-08041-02	Adapters for 0.2 mL tubes

### Specification

Model	Mini-15K
Speed (rpm)	14,500 rpm
Max. RCF	14,000×g
Timer	20 sec~99 min
Acceleration time to max. speed	17 s
Deceleration time from max. speed	15 s
Dimension (L×W×H) mm	270×230×155 mm
Power	100 W

### Ordering Information

Code	Description
AS-08110-00	Mini-15K High speed centrifuge; AC 100-240 V, 50 / 60 Hz, 3 A

# Mini-6KC / Mini-6KS

## Mini Centrifuge

### Features

1. Composite shell, shatter-resistant
2. The electronic braking system for rapid sample processing
3. Quick release rotor tub, allows for easy rotor exchange
4. Mini-6KC / Mini-6KS two speed options: 4,000 & 6,000 rpm
5. Mini-6KC include 2 quick release interchangeable rotors
  - 8×1.5 / 2.0 mL tube rotor, --4 place PCR Strip rotor
6. Mini-6KS: 3-in-1 rotor design, high capacity and time-saving
  - 6×1.5 / 2.0 mL tubes, --6×0.5 mL tubes, --2-8×0.2 mL PCR strip tubes



Mini-6KC



Mini-6KS



Mini-6KC Quick Release Rotor



Mini-6KS 3-in-1 Rotor



Two Speed Options

# Mini-6K / 7K / 10K

## Mini Centrifuge



### Specification

Model	Mini-6KC	Mini-6KS	Mini-6K	Mini-7K	Mini-10K
Rotor	8×1.5 mL / 2.0 mL tubes 4×8×0.2 mL PCR strip tubes 8 or 32×0.2 mL tubes 8×0.5 mL tubes	"3-in-1" rotor design, no need to replace 6×1.5 / 2.0 mL rotor 6×0.5 mL rotor 16×0.2 mL PCR strip rotor	6×1.5 mL / 2.0 mL rotor 2×8×0.2 mL strip rotor	6×1.5 mL / 2.0 mL rotor 2×8×0.2 mL strip rotor	6×1.5 mL / 2.0 mL rotor
Speed	4000 rpm & 6000 rpm	4000 rpm & 6000 rpm	6,000 rpm	7,000 rpm	10,000 rpm
Max. RCF	1,200×g (4,000 rpm) 2,000×g (6,000 rpm)	1,200×g (4,000 rpm) 2,000×g (6,000 rpm)	2,000×g	2,300×g	5,000×g
Power	AC 100-240 V, 50 / 60 Hz	AC 100-240 V, 50 / 60 Hz	AC 100-240 V, 50 / 60 Hz	AC 100-240 V, 50 / 60 Hz	AC 100-240 V, 50 / 60 Hz

### Ordering Information

Code	Description
AS-08060-00	Mini-6K Centrifuge, AC 100-240 V, 50 / 60 Hz
AS-08070-00	Mini-7K Centrifuge, AC 100-240 V, 50 / 60 Hz
AS-08080-00	Mini-10K Centrifuge, AC 100-240 V, 50 / 60 Hz
AS-08020-00	Mini-6KC Mini centrifuge, AC 100-240 V, 50 / 60 Hz
AS-08030-00	Mini-6KS Mini centrifuge, AC 100-240 V, 50 / 60 Hz

### Accessories

Mini-6K / Mini-7K / Mini-10K		Mini-6KC	
AS-08061-01	Allen wrench	AS-08021-01	8×1.5 mL / 2.0 mL rotor
AS-08061-02	6×1.5 mL / 2.0 mL rotor	AS-08021-02	4×8×0.2 mL strip rotor
AS-08061-03	2×8×0.2 mL strip rotor	AS-08061-05	Adapters for 0.5 mL tubes
AS-08061-04	Slide rotor	AS-08061-06	Adapters for 0.2 mL tubes
AS-08061-05	Adapters for 0.5 mL tubes	Mini-6KS	
AS-08061-06	Adapters for 0.2 mL tubes	AS-08031-01	3-in-1 rotor

# MPC-P25 / Mini-P25

## Microplate Centrifuge

### Features

1. Unique design for the horizontal rotor centrifuge (patented)
2. Short-spin and timing of two operations make the tests more convenient
3. Braking time from max. speed: less than 30sec
4. Timer can be set up to 10 minutes
5. Streamlined appearance and transparent lid design
6. It can accept below formats:
  - 96-well, 384-well PCR standard plates, skirted or non-skirted
  - 96-well Elisa plates
  - 8×0.2 mL PCR strip tubes or 0.2 mL PCR tubes



### MPC-P25 Operation



■ PCR Plates



■ Elisa Plates



■ 2 pcs PCR Plates,  
Skirted or Non-Skirted



■ 8×0.2 mL PCR Strip Tubes

### Specification

Model	MPC-P25
Max. rotational speed	2,200 rpm
Max. RCF	480×g
Capacity	2 pcs PCR plates / Elisa plate / 24×PCR strip tubes / 192×0.2 mL PCR tubes
Weight	3.6 kg
Dimensions (L×W×H) mm	290×360×140 mm
Power supply	AC 220 V / AC 120 V, 50 / 60 Hz

## Ordering Information

Code	Description
AS-08090-00	MPC-P25 Mini-Plate Centrifuge
AS-08091-01	Adaptor for PCR plates, skirted and non-skirted
AS-08091-02	Adaptor for 8×0.2 mL strip or 0.2 mL PCR tubes

### 01

MPC-P25: adaptor for PCR plates, skirted and non-skirted



### 02

MPC-P25: adaptor for 8×0.2 mL strip or 0.2 mL PCR tubes



## Features

1. Quickly spin down droplets hanging walls
2. Use before PCR to improve amplification
3. Accepts skirted, non-skirted and all standard PCR plates



Mini-P25

## Specification

Model	Mini-P25
Max. rotational speed	2,500 rpm
Max. RCF	500×g
Capacity	2 pcs PCR plate
Weight	2.1 kg
Dimensions (L×W×H) mm	190×220×186 mm
Power supply	AC 120 V / 220 V, 50 / 60 Hz

## Ordering Information

Code	Description
AS-08010-00	Mini-P25 Microplate centrifuge

# MSC-3000 / MS-3000

## Thermo Shaker Incubator



### Product Introduction

MSC-3000 / MS-3000 is an upgrade of the existing thermo shaker incubator operation mode. Different from the common instrument parameter setting through membrane keys, MSC-3000 / MS-3000 uses 4.3-inch color LCD screen combined with the graphical operation interface to give users a better experience. Various program editing options, such as shaking start time, cycle steps, heating rate, etc., help to find the best experimental conditions.

Convenient block replacement method, only need to flip the block handle to quickly replace. In addition, thermo lid accessories with a magnetic port design can effectively improve the temperature uniformity in the test tube, avoid changes in the concentration of reagents in the test tube caused by liquid evaporation and condensation, and ensure the stability of the reaction conditions.

### Features

#### ■ Stable Performance and Long Service Life

1. Microprocessor control, good temperature control linearity, accurate shaking speed, small fluctuation
2. DC brushless motor drive, long service life, maintenance-free
3. Built-in over-temperature protection device, more reliable to use

#### ■ Excellent Performance, Precise Temperature Control

1. Full power heating or other heating rate gears can be chosen to prevent the experiment from failing due to uneven temperature changes
2. Optional thermo lid accessories can effectively improve the temperature uniformity in the test tube
3. Optional full power cooling and other cooling rate gears

#### ■ Multiple Block Choices, Faster Loading and Unloading

1. Various blocks are available, and can be customized
2. New designed method of block loading and unloading, blocks can be replaced without tools

#### ■ Open Design, More Comprehensive Program Settings

1. Various heating methods can be chosen according to the experimental needs
2. Shaking method can be set according to requirements, and both forward and reverse rotation can be set
3. Program continuous operation function, multiple programs are connected to each other, no need to set repeatedly
4. MSC-3000 low-temperature storage function, the program is completed, and the samples can be automatically stored in low-temperature

#### ■ Smarter and Easier to Use

1. 4.3-inch color LCD screen display, intuitive and easy to operate
2. Power failure self-recovery function, the device can automatically resume operation according to the originally set procedure after power failure recovery
3. Various standard sample blocks are available, and the blocks can be automatically identified



## 01

### Suitable Block: MateB Series

According to different needs, Allsheng has designed their own blocks for consumables such as 0.2 mL to 50 mL centrifuge tubes, MTP, DWP, 96 / 384 PCR plates and so on.

All blocks are equipped with a convenient replacement mechanism, making block replacement quick and easy. No tools required, just press the handle on the rear of the block to remove the block in seconds. In addition, the thermal insulation block considers the user's safety and effectively prevents burning fingers.



## 02

### Optional Performance Component: ThermoLid

When incubating test tubes, PCR plates, etc., condensation will form on the tube walls and caps. Allsheng new generation of temperature control and mixing instrument with ThermoLid technology that reliably prevents condensation inside the tube, allowing consistent sample concentrations over the incubation time.

#### Thermo Lid



Effectively prevent reagent evaporation, improve the uniformity of concentrations

#### Installation and Wiring



Magnet port, easy and fast installation; stable data transmission to ensure thermo lid performance

#### Height Adjustment



Compatible with various specifications of centrifuge tubes; can be used for up to 5 mL centrifuge tubes

1. ThermoLid has height-adjustable technology, which makes the thermal lid fit on the top of the sample tube and closely contact with the sample, providing more precise temperature control, enabling better heat transfer anywhere in the sample tube, and improving temperature uniformity for safe sample heating
2. Links with automatic identification and user-friendly operation
3. Obtain constant reaction conditions for best results
4. ThermoLid can be used with various blocks that load tubes below 5 mL, such as 0.5 mL, 1.5 mL, 5 mL and 96 PCR plates.

## Specification

Model	MSC-3000	MS-3000
Type	heating / cooling / mixing	heating / mixing
Temp. control range	0 °C ~ 105 °C	RT. +5 °C~105 °C
Time setting	99 h 59 min / 99 min 59 s	99 h 59 min / 99 min 59 s
Temp. control accuracy @20 °C~50 °C	±0.5 °C	±0.5 °C
Temp. uniformity @20 °C~50 °C	±0.5 °C	±0.5 °C
Display accuracy	0.1 °C	0.1 °C
Heating time 20 °C ~ 100 °C	≤ 15 min	≤15 min
100 °C ~ 20 °C	≤ 15 min	----
Cooling time 25 °C ~ 4 °C [1]	≤ 20 min	----
20 °C ~ 0 °C [2]	≤ 20 min	----
Heating rate gear [3]	5 gears can be set	5 gears can be set
Cooling rate gear [4]	4 gears can be set	----
Speed [5]	200 - 3000 rpm	200 - 3000 rpm
Mixing orbit	3 mm	3 mm
Program number	50	50
A single program can be divided into number	5	5
Cycle number	99	99
Block identification function	Yes	Yes
Display	4.3 inch touch screen	4.3 inch touch screen
Port	USB (program related); 4-pin plug (thermo lid related)	USB (program related); 4-pin plug (thermo lid related)
Thermo lid	Yes (optional)	Yes (optional)
Thermo lid Temp. range	RT. +5 °C~110 °C	RT. +5 °C~110 °C
Maximum power	200 W	200 W
Net weight (including blocks)	≤ 10 Kg	≤ 9 Kg
Dimension (W×D×H) mm	220×318×154	220×318×154

[1] Indicates detection at AT. ≤ 25 °C

[2] Indicates detection at AT. ≤ 20 °C

[3] 5 gears including: MAX, 3 °C/min, 2 °C/min, 1 °C/min, 0.1 °C/min

[4] 4 gears including: MAX, 1 °C/min, 0.5 °C/min, 0.1 °C/min

[5] The maximum speed varies according to the block used

## Ordering Information

Code	Description
AS-02080-00	MSC-3000 thermo shaker incubator (heating and cooling type), 100-24 V AC, 200 W
AS-02090-00	MS-3000 thermo shaker incubator (heating type), 100-24 V AC, 200 W

## Suitable Blocks

Code	Type	Description	Max. speed	Max. Temp.	Thermo lid available
AS-02081-01	MateB 0.5 mL	24×0.5 mL tube	2000 rpm	105 °C	✓
AS-02081-02	MateB 1.5 mL	24×1.5 mL tube	2000 rpm	105 °C	✓
AS-02081-03	MateB 2.0 mL	24×2.0 mL tube	2000 rpm	105 °C	✓
AS-02081-04	MateB 0.5 mL+1.5 mL	15×0.5 mL+20×1.5 mL tube	2000 rpm	105 °C	✓
AS-02081-05	MateB 5.0 mL	8×5 mL tube	1000 rpm	105 °C	✓
AS-02081-06	MateB 12 mm	24×Φ12 mm tube	2000 rpm	105 °C	-
AS-02081-08	MateB Cryo	24x1.5 mL / 2.0 mL cryovial	2000 rpm	105 °C	-
AS-02081-09	MateB 15 mL	8×15 mL tube	1000 rpm	105 °C	-
AS-02081-10	MateB 50 mL	4×50 mL tube	1000 rpm	105 °C	-
AS-02081-11	MateB Plate-1	96x0.2 mL microplate	3000 rpm	105 °C	✓
AS-02081-12	MateB Plate-2	96x2 mL deepwell plate	1000 rpm	105 °C	-
AS-02081-13	MateB PCR 96	96x0.2 mL PCR plate	2000 rpm	105 °C	✓
AS-02081-14	MateB PCR 384	384-well PCR plate	3000 rpm	105 °C	✓
AS-02081-15	MateB DWP 500	96 / 500 µL deepwell plate	1600 rpm	105 °C	✓
AS-02081-16	MateB DWP 1000	96 / 1,000 µL deepwell plate	1600 rpm	105 °C	✓
AS-02081-17	MateB L-Lid	L-Lid transparent lid (low) is suitable for MateB 0.5 mL, 1.5 mL, 2.0 mL, 5 mL, Plate-1, Plate-2, PCR96 and PCR384			
AS-02081-18	MateB H-Lid	H-Lid transparent lid (high) is suitable for MateB DWP 500 / 1000			
AS-02081-26	ThermoLid	Thermo lid	-	-	-

# MSC-100 / MS-100

## Thermo Shaker Incubator

### Product Introduction

MSC-100 / MS-100 thermo shaker incubator designed for simultaneous heating, cooling and mixing of small samples. Both of them can be supplied with interchangeable blocks for microtubes.

### Features

1. Power failure self-recovery function, the device can automatically resume operation according to the originally set procedure after power failure recovery
2. Various standard sample blocks are available, which is easy to be replaced
3. Timing function, freely set the incubation time within 0~100 hours
4. Besides heating, MSC-100 has refrigeration function to meet the needs of different users

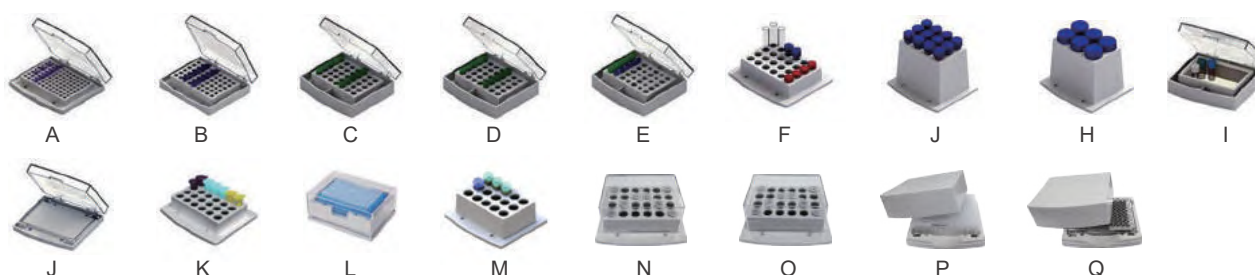


MS-100



MSC-100

### Suitable Blocks



### Specification

Model	MS-100	MSC-100	TMS-200	TMS-300
Temp. control range	RT. +5 °C~100 °C	0 °C~100 °C (RT. ≤20 °C) 4 °C~100 °C (RT. ≤25 °C) 10 °C~100 °C (RT. ≤30 °C)	RT. +5 °C~100 °C	RT. +5 °C~100 °C
Temp. uniformity	≤0.5 °C	≤0.5 °C	≤0.5 °C	≤0.5 °C
Timer range	1 min~99 h59 min	1 min~99 h59 min	1 min~99 h59 min	1 min~99 h59 min
Temp. control accuracy	±0.5 °C	±0.5 °C	±0.3 °C	±0.3 °C
Display accuracy	±0.1 °C	±0.1 °C	±0.1 °C	±0.1 °C
Shaking speed	200-1500 rpm*	200-1500 rpm*	300-3000 rpm	300-2000 rpm
Heating time	40~100 °C ≤10 min	40~100 °C ≤15 min	25~100 °C ≤12 min	25~100 °C ≤12 min
Cooling time	----	≤20 min (AT. ≤20 °C: 20 °C~0 °C) ≤20 min (AT. ≤25 °C: RT. ~4 °C) ≤20 min (AT. ≤30 °C: RT. ~10 °C)	----	----
Mixing orbit	2 mm	2 mm	2 mm	3 mm
Dimension (mm)	300×220×170 mm	300×220×170 mm	230×170×165 mm	230×170×165 mm
Weight	7 kg	8.5 kg	5.5 kg	5.5 kg

\*The upper limit of temperature and shaking speed shall be determined according to the block used

# TMS-200 / TMS-300

## Thermo Shaker Incubator

### Features

1. Thermo shaker for microplates, tubes, and glass vials
2. Fast shaking and mixing up to 3,000 rpm
3. Perfectly controlled 3-dimensional mixing prevents spilling and lid wetting
4. 2 programmable soft keys, integrated vortex and short mix functions
5. Very small, light, efficient and quiet
6. Adapter plates:
  - Microplates: 96-well, 384-well, 1536-well microplates / deepwell plates / PCR plates
  - Holder: 0.2 mL PCR tubes holder, 0.5 mL tubes holder, 1.5 / 2.0 mL tubes holder  
15 mL micro tubes holder, 50 mL micro tubes holder
  - Block: 10 types aluminum blocks for user choosing



TMS-200



TMS-300

### Suitable Blocks



### Ordering Information

Code	Description
AS-02010-00	MS-100 thermo shaker incubator, with a block; AC 220 V / AC 120 V, 50 / 60 Hz, 150 W
AS-02020-00	MSC-100 thermo shaker incubator, with a block; AC 220 V / AC 120 V, 50 / 60 Hz, 250 W
AS-02050-00	TMS-200 thermo shaker incubator; AC 100-240 V, 50 / 60 Hz, 150 W
AS-02060-00	TMS-300 thermo shaker incubator; AC 100-240 V, 50 / 60 Hz, 150 W

## MSC-100 / MS-100 Suitable Blocks

Code	Type	Description	Max. Temp.	Max. speed
AS-01051-01	A	96×0.2 mL tubes	100 °C	1500 rpm
AS-01051-02	B	54×0.5 mL tubes	100 °C	1500 rpm
AS-01051-03	C	35×1.5 mL tubes	100 °C	1500 rpm
AS-01051-04	D	35×2.0 mL tubes	100 °C	1500 rpm
AS-01051-05	E	15×0.5 mL+20×1.5 mL tubes	100 °C	1500 rpm
AS-01051-06	F	24×Dia.≤Φ12 mm tubes	100 °C	1200 rpm
AS-01051-07	G	12×15 mL Falcon tube	100 °C	750 rpm
AS-01051-08	H	6×50 mL Falcon tube	100 °C	750 rpm
AS-01051-09	I	103×67×30 mm rectangular bath block	100 °C	1500 rpm
AS-01051-10	J	96×0.2 mL microplate	100 °C	1500 rpm
AS-01051-11	K	24×5 mL tubes	100 °C	1200 rpm
AS-01051-12	L	96 deep-well microplate	80 °C	800 rpm
AS-01051-13	M.	15×5 mL Eppendorf tubes	100 °C	1200 rpm
AS-01051-14	N	24×2 mL tubes	100 °C	1200 rpm
AS-01051-15	O	24×1.5 mL tubes	100 °C	1200 rpm
AS-01051-16	P	96×1000 µL deep-well plate	100 °C	1200 rpm
AS-01051-17	Q	MTPs deep-well plate	100 °C	1200 rpm

## TMS-200 / TMS-300 Suitable Blocks

AS-02051-01	A-200	96×0.2 mL tubes	1700 / 1500
AS-02051-03	C-200	35×1.5 mL tubes	1700 / 1500
AS-02051-05	E-200	15×1.5 mL+20×0.5 mL tubes	1700 / 1500
AS-02051-07	G-200	32×0.2 mL+25×1.5 mL tubes	1700 / 1500
AS-02051-09	I-200	103×67×30 mm rectangular bath block	1500 / 1200
AS-02051-11	K-200	24×5 mL tubes	1500 / 1200
AS-02031-02	MIX-B	24×0.5 mL tube holder	3000 / 2000
AS-02031-04	MIX-D	8×15 mL tube holder	1100 / 900

Note: The number in red means Max. speed when this block in TMS-200, and the number in black means Max. speed when this block in TMS-300.



# MB100-2A / MB100-4A Thermo Shaker for Microplate

## MK100-2A / MK100-4A Incubator for Microplate

### Product Introduction

MK / MB series are commonly used for incubation of microplates and cell culture plates in microplate insects culture, animal and plant cell incubation, ELISA and other experimental processes.

### Features

1. Heating plates above and below the microplates
2. Exact correspondence of the designed and actual temperature
3. LCD display. It is easy to set up and use
4. MB series have incubation and shaking functions



MB100-2A / MK100-2A



MB100-4A / MK100-4A

### Specification

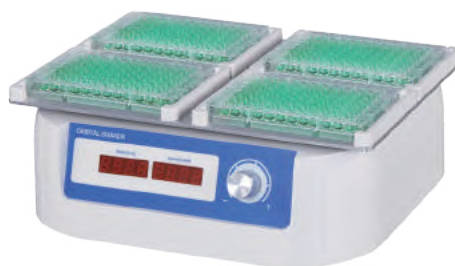
Model	MK100-2A	MB100-2A	MK100-4A	MB100-4A
Temp. control range	RT. +5 °C~70 °C	RT. +5 °C~70 °C	RT. +5 °C~70 °C	RT. +5 °C~70 °C
Timer range	1 min~99 h59 min	1 min~99 h59 min	1 min~99 h59 min	1 min~99 h59 min
Temp. control accuracy	±0.5 °C	±0.5 °C	±0.5 °C	±0.5 °C
Display accuracy	±0.1 °C	±0.1 °C	±0.1 °C	±0.1 °C
Shaking speed	----	100-1200 rpm	----	100-1500 rpm
Mixing orbit	----	2 mm	----	2 mm
Heating time (20 to 70 °C)	≤20 min	≤20 min	≤20 min	≤20 min
Capacity	2 microplates	2 microplates	4 microplates / deepwell plates	4 microplates / deepwell plates
Dimension (mm)	280×270×150	280×270×150	320×350×185	320×350×185
Weight	4 kg	6.5 kg	8 kg	9 kg

### Ordering Information

Code	Description
AS-01140-00	MK100-2A, AC 100-240 V, 50 / 60 Hz, 150 W
AS-03030-00	MB100-2A, AC 100-240 V, 50 / 60 Hz, 150 W
AS-01060-00	MK100-4A, AC 120 / 220 V, 50 / 60 Hz, 200 W
AS-03020-00	MB100-4A, AC 120 / 220 V, 50 / 60 Hz, 300 W

# MX100-4A

## Microplate Shaker



### Product Introduction

The microplate shaker is driven by a DC brushless motor, which is mainly used for microplate (96-well / 384-well plate), cell culture plate (24-well plate, 48-well plate, 96-well plate, etc.) and 1.5 / 2.0 mL centrifuge test tube and other solutions to mix and shake.

### Features

1. Continuous or timing operation
2. DC brushless motor for gentle and powerful vibration
3. Orbital of 3 mm for efficient mixing in small sample vessels
4. Simple spring holders for easy and quick plate installation

### Specification

Model	MX100-4A
Shaking speed setting accuracy	10 rpm
Shaking speed	200~1500 rpm standard microplate / 200~1000 rpm deepwell plate or tube holder
Timer range	1 min~99 h59 min
Mixing orbit	3 mm
Power supply	24 VDC
Dimension (mm)	290×270×120
Weight	6.5 kg

### Ordering Information

Code	Description
AS-04040-00	MX100-4A microplate shaker
AS-02041-01	20×1.5 mL tube holder (optional)
AS-02041-02	20×0.5 mL tube holder (optional)

# MTV-100

## Multi-Tube Vortex

### Product Introduction

MTV-100 can mix up to 50 samples at a time. A variety of accessories can be used to meet the needs of different specifications of tube vortex.

### Features

1. Mix up to 50 samples at the same time
2. Pulsing mode and continuous mode can be freely chosen
3. The microprocessor precisely controls the mixing time and speed
4. Standard 12 mm tube racks and tray pad set



### Specification

Model	MTV-100
Mixing orbit	3.6 mm
Shaking speed	500-2500 rpm
Timer range	1 min-99 h59 min
Maximum Weight Capacity	4.5 kg
Speed Accuracy	10 rpm
Tray Dimension (L x W) mm	310×180 mm
Dimensions (L x W x H) mm	426×250×480
Weight	21.5 kg
Power	60 W

### Ordering Information

Code	Description		
AS-02040-00	MTV-100 multi-tube vortex, AC100-240 V, 1.5 A		
Code	Type	Description	Dimension (mm)
AS-02041-01	MTV-B01	50×Φ10 mm tube racks	245×132×45
AS-02041-02	MTV-B02	50×Φ12 mm tube racks	245×132×45
AS-02041-03	MTV-B03	50×Φ13 mm tube racks	245×132×45
AS-02041-04	MTV-B04	50×Φ16 mm tube racks	245×132×45
AS-02041-05	MTV-B05	15×Φ25 mm tube racks	245×132×45
AS-02041-06	MTV-B06	15×Φ29 mm tube racks	245×132×45
AS-02041-00	MTV-B00	Tray pad set	305×178.5×25

# MTV-1

## Mini Vortex



### Product Introduction

MTV-1 is the smallest vortex on the market, suitable for shaking and mixing samples of various reagents, solutions, chemicals, etc. With standard battery box, it's especially suitable for wild and crowded laboratories.

### Features

1. Touch mode (short-spin), continuous mode (continuous work for a long time) can be chosen
2. Compact structure, reliable quality
3. Adjustable speed, suitable for centrifuge tubes and test tubes below 15 mL

### Specification

Working mode	Continuous / short-spin
Mixing orbit	3 mm
Dimension (mm)	74×91×84 mm
Weight	0.35 kg

### Ordering Information

Code	Description
AS-02080-00	MTV-1 mini vortex, DC 6 V, 0.6 W

# MK-3000

## Dry Bath Incubator



### Product Introduction

Many experiments require precise temperature control while rapidly heating/cooling. The MK-3000 achieves precise control of sample temperature by using Peltier technology.

Superior temperature control, excellent mixing performance and easy-to-use software function ensure complete, reliable and repeatable experimental results.

With Allsheng MateB series blocks, it can meet your multiple experimental requirements.

### Features

#### ■ Smarter and Easier to Use

1. 4.3-inch touch screen, intuitive and easy to operate;
2. Power-off recovery function, it can automatically run according to the originally set program when the power is restored;
3. Multiple blocks are optional and can be automatically identified.

#### ■ Excellent Software Features for Superior Temperature Management

1. Multi-level heating and cooling rate settings, can select the appropriate method according to the experimental needs;
2. Freely programmable, the program runs continuously, and multiple programs are linked to each other;
3. Can choose full power heating and cooling, or choose the heating and cooling rate of other gears to prevent the experiment from failing due to uneven temperature changes;
4. Optional ThermoLid accessories can effectively prevent condensation on the tube lid and tube walls and improve the temperature uniformity in the test tube.

## MK-3000 Suitable Blocks and Thermo Lid

According to different needs, Allsheng has designed their own blocks for consumables such as 0.2 mL to 50 mL centrifuge tubes, MTP, DWP, 96 / 384 PCR plates and so on.

All blocks are equipped with a convenient replacement mechanism, making block replacement quick and easy. No tools required, just press the handle on the rear of the block to remove the block in seconds. In addition, the thermal insulation block considers the user's safety and effectively prevents burning fingers.



## Specification

Model	MK-3000
Type	heating / cooling
Temp. control range	-10 °C~105 °C
Time setting	99 h59 min / 99 min59 s
Temp. control accuracy @20 °C~50 °C	±0.5 °C
Temp. uniformity @20 °C~50 °C	±0.5 °C
Display accuracy	0.1 °C
Heating time 20 °C~100 °C	≤ 10 min
100 °C~20 °C	≤ 10 min
Cooling time 25 °C~4 °C [1]	≤15 min (25 °C~0 °C)
20 °C~0 °C [2]	≤15 min (25 °C~-10 °C)
Heating rate gear [3]	5 gears can be set
Cooling rate gear	5 gears can be set
Program number	50
A single program can be divided into number	5
Cycle number	99
Block identification function	Yes
Display	4.3 inch touch screen
Port	USB (program related); 4-pin plug (thermo lid related)
ThermoLid	Yes (optional)
Thermo lid Temp. range	RT+5 °C~110 °C
Maximum power	200 W
Net weight (including blocks)	≤ 7 kg
Dimension (W×D×H) mm	220×318×154

[1] Indicates detection at AT. ≤ 25 °C

[2] Indicates detection at AT. ≤ 20 °C

[3] 5 gears including: MAX, 3 °C/min, 2 °C/min, 1 °C/min, 0.1 °C/min



## Ordering Information

Code	Description
AS-01280-00	MK-3000 dry bath incubator (heating and cooling type), 100-24 V AC, 200 W

## Suitable Blocks

Code	Type	Description	Max. speed	Max. speed	Thermo lid available
AS-02081-01	MateB 0.5 mL	24×0.5 mL tube	2000 rpm	105 °C	✓
AS-02081-02	MateB 1.5 mL	24×1.5 mL tube	2000 rpm	105 °C	✓
AS-02081-03	MateB 2.0 mL	24×2.0 mL tube	2000 rpm	105 °C	✓
AS-02081-04	MateB 0.5 mL+1.5 mL	15×0.5 mL+20×1.5 mL tube	2000 rpm	105 °C	✓
AS-02081-05	MateB 5.0 mL	8×5 mL tube	1000 rpm	105 °C	✓
AS-02081-06	MateB 12 mm	24×Φ12 mm tube	2000 rpm	105 °C	-
AS-02081-08	MateB Cryo	24×1.5 mL / 2.0 mL cryovial	2000 rpm	105 °C	-
AS-02081-09	MateB 15 mL	8×15 mL tube	1000 rpm	105 °C	-
AS-02081-10	MateB 50 mL	4×50 mL tube	1000 rpm	105 °C	-
AS-02081-11	MateB Plate-1	96×0.2 mL microplate	3000 rpm	105 °C	✓
AS-02081-12	MateB Plate-2	96×2 mL deepwell plate	1000 rpm	105 °C	-
AS-02081-13	MateB PCR 96	96×0.2 mL PCR plate	2000 rpm	105 °C	✓
AS-02081-14	MateB PCR 384	384-well PCR plate	3000 rpm	105 °C	✓
AS-02081-15	MateB DWP 500	96 / 500 µL deepwell plate	1600 rpm	105 °C	✓
AS-02081-16	MateB DWP 1000	96 / 1,000 µL deepwell plate	1600 rpm	105 °C	✓
AS-02081-17	MateB L-Lid	L-Lid transparent lid (low) is suitable for MateB 0.5 mL, 1.5 mL, 2.0 mL, 5 mL, Plate-1, Plate-2, PCR96 and PCR384			
AS-02081-18	MateB H-Lid	H-Lid transparent lid (high) is suitable for MateB DWP 500 / 1000			
AS-02081-26	ThermoLid	Thermo lid	-	-	-

# MK2000

## Dry Bath Incubator



MK2000-1



MK2000-2



MK2000-2E

Each block can be set  
at different temperatures



MK2000-2HL

Can run some  
simple PCR tests

### Product Introduction

MK2000 series dry bath incubator are ideal for incubation and activation of cultures, enzyme reactions, immunoassays, melting / boiling points and a wide variety of other laboratory procedures.

### Features

1. Exceptional temperature uniformity and accuracy
2. Wide range of interchangeable aluminium blocks, blocks are accessories for all applications
3. Block extraction tool is supplied, allowing blocks to be removed easily
4. Blocks as accessories for all applications -- tubes, vials and microplates
5. Auto-stop and sound-alert after program completed

#### Special Features of MK2000-2HL

1. Touch screen allows for easy to read and easy programming and easy to use
2. Hold a heating lid, 60 user programmable settings
3. Programmable system, program link functions, some simple PCR tests can be performed

### Suitable Blocks



BH01



BH02



BH03



BH04



BH05



BH06



BH07



BH08



BH09



BH10



BH11



BH12



BH13



BH14



BH15



BH16



BH17



BH18



BH19



BH20



BH21



BH22



BH23



BH24



BH25



BH26

## Specification

Model	MK2000-1	MK2000-2	MK2000-2E	MK2000-2HL
Temperature control range	RT. +5 °C~105 °C	RT. +5 °C~105 °C	RT. +5 °C~105 °C	RT. +5 °C~100 °C
Timer range	1 min-99 h59 min	1 min-99 h59 min	1 min-99 h59 min	1 min-99 h59 min
Temp. stability @100 °C	≤0.5 °C	≤0.5 °C	≤0.5 °C	≤0.5 °C
Uniformity: within the block @37 °C	±0.2 °C	±0.2 °C	±0.2 °C	±0.2 °C
across similar block @37 °C	----	±0.3 °C	----	±0.3 °C
Heating time (25 °C to 105 °C)	≤20 min	≤20 min	≤20 min	≤20 min
Display accuracy	0.1 °C	0.1 °C	0.1 °C	0.1 °C
Block quantity	1	2	2 (Independent)	2
Dimension (L×W×H) mm	250×190×130	365×210×150	365×210×150	420×225×145
Weight	2.5 kg	4.5 kg	4.5 kg	5.5 kg

## Ordering Information

Code	Description
AS-01180-00	MK2000-1, AC 220 V / AC 120 V, 50 / 60 Hz, 100 W
AS-01190-00	MK2000-2, AC 220 V / AC 120 V, 50 / 60 Hz, 200 W
AS-01120-00	MK2000-2E, AC 220 V / AC 120 V, 50 / 60 Hz, 200 W
AS-01210-00	MK2000-2HL (thermo lid), AC 220 V / AC 120 V, 50 / 60 Hz, 200 W

## Suitable Blocks

Code	Type	Description
AS-01181-01	BH01	96×0.2 mL PCR tubes
AS-01181-02	BH02	45×0.5 mL tubes
AS-01181-03	BH03	35×1.5 mL tubes
AS-01181-04	BH04	35×2.0 mL tubes
AS-01181-05	BH05	15×0.5 mL+20×1.5 mL tubes
AS-01181-06	BH06	20×1.5 mL+15×2.0 mL tubes
AS-01181-07	BH07	32×0.2 mL+22×0.5 mL+9×1.5 mL tubes
AS-01181-08	BH08	20×5 mL tubes
AS-01181-09	BH09	20×10 mL tubes
AS-01181-10	BH10	12×15 mL tubes
AS-01181-11	BH11	6×50 mL tubes
AS-01181-12	BH12	96×0.2 mL Elisa plate or 4 slides
AS-01181-13	BH13	Solid block (no holes)
AS-01181-14	BH14	384 well PCR plate

MK2000-2HL can just use the BH01~BH08, BH12~BH14 blocks, L4 is special for MK2000-2HL

Code	Type	Description
AS-01181-15	BH15	40×Φ6 mm
AS-01181-16	BH16	28×Φ10 mm
AS-01181-17	BH17	24×Φ12 mm
AS-01181-18	BH18	24×Φ13 mm
AS-01181-19	BH19	14×Φ15 mm
AS-01181-20	BH20	14×Φ16 mm
AS-01181-21	BH21	12×Φ19 mm
AS-01181-22	BH22	11×Φ20 mm
AS-01181-23	BH23	6×Φ26 mm
AS-01181-24	BH24	6×Φ28 mm
AS-01181-25	BH25	2×Φ40 mm
AS-01181-26	BH26	2×7-12.5×12.5 cuvette
AS-01181-27	PT1000	External extraction tool
AS-01181-28	T4	Block extraction tool
AS-01211-01	L4	Stainless plate

# MK200

## Dry Bath Incubator



MK200-1



MK200-1A



MK200-2



MK200-4

### Product Introduction

MK200 series maximum temperature can reach 150 °C, which can replace the traditional water bath device. It can be widely used in sample preservation and reaction, DNA amplification and electrophoresis predenaturation, serum coagulation, etc.

### Suitable Blocks



BK01



BK02



BK03



BK04



BK05



BK06



BK07



BK08



BK09



BK10



BK11



BK12



BK13



BK14



BK15



BK16



BK17



BK18



BK19



BK20

### Ordering Information

Code	Description
AS-01080-00	MK200-1, AC 220 V / AC 120 V, 50 / 60 Hz, 200 W
AS-01090-00	MK200-1A, AC 220 V / AC 120 V, 50 / 60 Hz, 200 W
AS-01100-00	MK200-2, AC 220 V / AC 120 V, 50 / 60 Hz, 400 W
AS-01110-00	MK200-4, AC 220 V / AC 120 V, 50 / 60 Hz, 600 W

## Specification

Model	MK200-1	MK200-1A	MK200-2	MK200-4
Temperature control range	RT. +5 °C~150 °C	RT. +5 °C~150 °C	RT. +5 °C~150 °C	RT. +5 °C~120 °C
Timer range	1 min-99 h59 min	1 min-99 h59 min	1 min-99 h59 min	1 min-99 h59 min
Temp. stability @100 °C	±0.5 °C	±0.5 °C	±0.5 °C	±0.5 °C
Temp. control accuracy @40 °C	±0.3 °C	±0.3 °C	±0.3 °C	±0.3 °C
Temp. control accuracy @120 °C	±1 °C	±1 °C	±1 °C	±1 °C
Heating time (25 °C to 150 °C)	≤30 min	≤30 min	≤30 min	≤30 min
Display accuracy	0.1 °C	0.1 °C	0.1 °C	0.1 °C
Dimension (L×W×H) mm	280×240×110	280×240×110	280×240×110	380×240×110
Block quantity	1	1	2	4
Display screen	LED	LED	LED	LED

## Ordering Information

Code	Type	Description	Dimension (mm)
AS-01081-01	BK01	49×Φ6 mm	96×96×49 mm
AS-01081-02	BK02	49×Φ7 mm	96×96×49 mm
AS-01081-03	BK03	25×Φ10 mm	96×96×49 mm
AS-01081-04	BK04	25×Φ12 mm	96×96×49 mm
AS-01081-05	BK05	25×Φ13 mm	96×96×49 mm
AS-01081-06	BK06	12×Φ15 mm	96×96×49 mm
AS-01081-07	BK07	16×Φ15 mm	96×96×49 mm
AS-01081-08	BK08	12×Φ16 mm	96×96×49 mm
AS-01081-09	BK09	16×Φ16 mm	96×96×49 mm
AS-01081-10	BK10	12×Φ19 mm	96×96×49 mm
AS-01081-11	BK11	16×Φ19 mm	96×96×49 mm
AS-01081-12	BK12	9×Φ20 mm	96×96×49 mm
AS-01081-13	BK13	9×Φ26 mm	96×96×49 mm
AS-01081-14	BK14	4×Φ28 mm	96×96×49 mm
AS-01081-15	BK15	4×Φ40 mm	96×96×49 mm
AS-01081-16	BK16	49×0.5 mL tubes	96×96×49 mm
AS-01081-17	BK17	25×1.5 mL tubes	96×96×49 mm
AS-01081-18	BK18	25×2.0 mL tubes	96×96×49 mm
AS-01091-01	BK19	96×0.2 mL tubes	78×114×26 mm
AS-01091-01	BK20	96×0.2 mL ELISA plate	81×123×19 mm

BK19 and BK20 are only used in MK200-1A

# MK-10 / MK-20

## Dry Bath Incubator



### Product Introduction

MK-10 dry bath incubator is controlled by microcomputer; MK-20 dry bath incubator is controlled by microcomputer and with semiconductor refrigeration technology. The instrument can be configured with a variety of blocks, which can be widely used in the preservation of samples, preservation and reaction of various enzymes, denaturation of nucleic acids and proteins, PCR reaction, pre-denaturation of electrophoresis, and coagulation of serum.

### Features

1. LCD display. It is easy to set up and use
2. Simultaneous display of set and actual time, temperature
3. Temperature deflection adjusting meets with different demands
4. Easy to replace the metal blocks and simple to clean and sterilize
5. Incubation time and temperature are controlled by microprocessor
6. Beep-signal / stop after program completed
7. Peltier design of MK-20 provides efficient thermal control

### Suitable Blocks



A



B



C



D



E



F



G



H



I



J



K



L



M



N



O



P



Q



## Specification

Model	MK-10	MK-20
Temperature control range	RT. +5 °C-100 °C	-10 °C-100 °C
Timer range	1 min-99 h59 min	1 min-99 h59 min
Temp. stability @100 °C	±0.5 °C	±0.5 °C
Display accuracy	±0.1 °C	±0.1 °C
Heating time (25°C to 100°C)	≤12 min	≤15 min
Cooling time	----	25 °C~-10 °C ≤15 min (AT. 20 °C) 25 °C~0 °C ≤15 min (AT. 30 °C)
Certificate	CE	CE
Dimension (L×W×H) mm	300×220×180 mm	300×220×180 mm
Weight	2.5 kg	5 kg

## Ordering Information

Code	Description
AS-01040-00	MK-10 dry bath incubator (heating), AC 220 V / 120 V, 50 / 60 Hz, 150 W
AS-01050-00	MK-20 dry bath incubator (heating / cooling), AC 220 V / 120 V, 50 / 60 Hz, 200 W

## Suitable Blocks

Code	Type	Description	The Highest Temp.	The Lowest Temp.
AS-01051-01	A	96×0.2 mL tubes	100 °C	-10 °C
AS-01051-02	B	54×0.5 mL tubes	100 °C	-10 °C
AS-01051-03	C	35×1.5 mL tubes	100 °C	-10 °C
AS-01051-04	D	35×2.0 mL tubes	100 °C	-10 °C
AS-01051-05	E	15×0.5 mL+20×1.5 mL tubes	100 °C	-10 °C
AS-01051-06	F	24×≤Φ12 mm tubes	100 °C	0 °C
AS-01051-07	G	12×15 mL Falcon	100 °C	0 °C
AS-01051-08	H	6×50 mL Falcon	100 °C	0 °C
AS-01051-09	I	103×67×30 mL bath block	100 °C	0 °C
AS-01051-10	J	96×0.2 mL microplate	100 °C	0 °C
AS-01051-11	K	24×5 mL tubes	100 °C	0 °C
AS-01051-12	L	96 deepwell plate	80 °C	8 °C
AS-01051-13	M	15×5 mL Eppendorf tubes	100 °C	0 °C
AS-01051-14	N	24×2 mL tubes (deep-well)	100 °C	0 °C
AS-01051-15	O	24×1.5 mL tubes (deep-well)	100 °C	0 °C
AS-01051-16	P	Deepwell plate 96 / 1000 µL	100 °C	0 °C
AS-01051-17	Q	MTPs and deepwell plate	100 °C	0 °C

# K30

## Dry Bath Incubator

### Product Introduction

1. Round metal blocks and more compact structure, suitable for most centrifuge tubes
2. Blocks replacement is convenient, easy to clean and disinfect

### Specification

Model	K30
Temperature control range	RT. +5 °C-100 °C
Timer range	1 min~99 h59 min
Temp. control accuracy	±0.5 °C
Heating time (25 °C to 100 °C)	≤15 min (@20 °C~30 °C)
Certificate	CE
Dimension (L×W×H) mm	225×160×197 mm
Weight	3 kg

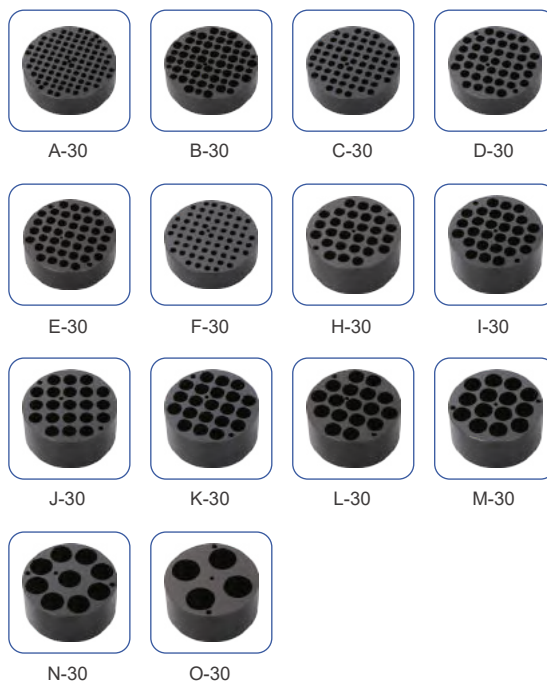


### Ordering Information

Code	Description
AS-01030-00	K30, AC 220 V / AC 120 V, 50 / 60 Hz, 100 W

### Suitable Blocks

Code	Type	Description
AS-01031-01	A-30	96×0.2 mL tubes
AS-01031-02	B-30	29×0.5 mL+ 32×1.5 mL tubes
AS-01031-03	C-30	61×0.5 mL tubes
AS-01031-04	D-30	41×1.5 mL tubes
AS-01031-05	E-30	41×2.0 mL tubes
AS-01031-06	F-30	61×Φ6 mm tubes
AS-01031-07	H-30	28×Φ12 mm tubes
AS-01031-08	I-30	28×Φ13 mm tubes
AS-01031-09	J-30	21×Φ15 mm tubes
AS-01031-10	K-30	21×Φ16 mm tubes
AS-01031-11	L-30	17×Φ18 mm tubes
AS-01031-12	M-30	14×Φ20 mm tubes
AS-01031-13	N-30	9×Φ25 mm tubes
AS-01031-14	O-30	4×Φ32 mm tubes



# MiniT

## Mini-Dry Bath Incubator

### Product Introduction

1. LCD display. It is easy to set and use
2. Small footprint: MiniT series are a personal sized that fits in the palm on your hand
3. Simultaneous display of actual time, temperature
4. Temperature deflection adjusting meets with different demands
5. With DC 12V or DC 24V power for total portability, beep-signal / stop after program completed
6. Interchangeable aluminum alloy sample blocks provide versatility and allow easy cleaning and disinfecting



MiniT



MiniT-C



MiniT-100



MiniT-100H

### Specification

Model	MiniT	MiniT-C	MiniT-100	MiniT-100H
Temperature control range	RT. +5 °C~80 °C	0 °C~100 °C	RT. +5 °C~100 °C	RT. +5 °C~100 °C
Timer range	1-999 min or 1-999 sec	1-999 min or 1-999 sec	1-999 min or 1-999 sec	1-999 min or 1-999 sec
Temp. control accuracy	±0.5 °C	±0.5 °C	±0.5 °C	±0.5 °C
Display accuracy	±0.1 °C	±0.1 °C	±0.1 °C	±0.1 °C
Heating time (25 °C to Max.)	≤12 min	≤20 min	≤15 min	≤15 min
Cooling time (20 °C to 0 °C)	----	≤25 min	----	----
Temp. stability	±0.3 °C	±0.3 °C	±0.3 °C	±0.3 °C
Thermo lid	----	----	----	Thermo lid
Thermo lid Temp. control range	----	----	----	RT. +5 °C~100 °C
Dimension (L×W×H) mm	150×110×100	162×110×140	152×120×112	152×120×112
Weight	0.5 kg	1.0 kg	0.8 kg	0.9 kg
Power supply	DC 12 V	DC 12 V	DC 24 V	DC 24 V

# MiniT-H2C / MiniT-H3

## Mini-Dry Bath Incubator



### Product Introduction

1. Working area dimension: 3 individual controller
2. LCD display. It is easy to set and use
3. Simultaneously display the set and actual time, temperature, auto-stop and sound-alert after program completed
4. Temperature deflection adjusting meets different demands
5. MiniT-H3 has a heating function only and its temperature range from RT. +5 °C~100 °C
6. MiniT-H2C has cooling / heating functions and its temperature range from 0 °C~99.9 °C

### Suitable Blocks



A-MiniT



B-MiniT



C-MiniT



D-MiniT



E-MiniT



F-MiniT



G-MiniT

### Specification

Model	MiniT-H3			MiniT-H2C		
Working area	Block-A	Block-B	Block-C	Block-A	Block-B	Block-C
Temp. control range	RT. +5 °C to 99.9 °C	RT. +5 °C to 99.9 °C	RT. +5 °C to 99.9 °C	0 °C to 99.9 °C	RT. 5 °C to 99.9 °C	RT. 5 °C to 99.9 °C
Heating time (25 °C to 99.9 °C)	≤20 min	≤20 min	≤20 min	≤20 min	≤20 min	≤20 min
Cooling time (20 °C to 0 °C)	-----	-----	-----	≤25 min *	-----	-----
Temp. control accuracy	≤0.5 °C			≤0.5 °C		
Temp. stability @37 °C	0.2 °C			0.2 °C		
Display accuracy	0.1 °C			0.1 °C		
Timer range	1~999 h or 1~999 min or 1~999 sec			1~999 h or 1~999 min or 1~999 sec		
Block quantity	3			3		
Power supply	DC12 V, 120 W			DC12 V, 120 W		
Dimension (mm)	360×180×150			360×180×150		
Weight	3 kg			3 kg		

\* Tested in AT. <25 °C

## Ordering Information

Code	Description
AS-01130-00	MiniT mini dry bath, DC 12 V, 40 W
AS-01170-00	MiniT-C mini dry bath, DC 12 V, 60 W
AS-01150-00	MiniT-100 mini dry bath, DC 24 V, 40 W
AS-01160-00	MiniT-100H mini dry bath, DC 24 V, 50 W
AS-01220-00	Mini-H3 3-in-1 mini dry bath
AS-01230-00	Mini-H2C 3-in-1 mini dry bath

## Ordering Information

Code	Type	Description
AS-01131-01	A-MiniT	40×0.2 mL tubes
AS-01131-02	B-MiniT	24×0.5 mL tubes
AS-01131-03	C-MiniT	15×1.5 mL tubes
AS-01131-04	D-MiniT	15×2.0 mL tubes
AS-01131-05	E-MiniT	8×12.5×12.5 mL cuvette block
AS-01131-06	F-MiniT	4×15 mL tubes
AS-01131-07	G-MiniT	2×50 mL tubes
AS-01131-99	Can be customized	

Note: MiniT-100H can just use A-MiniT block and can not exchange!

# IB-10HL / IB-20HL

## Dry Bath Incubator



IB-10HL



IB-20HL

The PCR reaction program  
can be edited and run

### Product Introduction

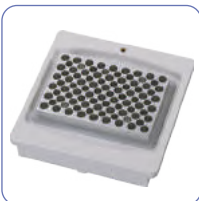
1. Adopt innovative replaceable aluminum alloy block design; block automatic identification function
2. Stepless adjustable thermo lid design, suitable for 0.2 mL, 0.5 mL, 1.5 mL, 2.0 mL centrifuge tubes, effectively preventing tube cover explosion and evaporation
3. Customize the thermo lid switch status

IB-20HL unique feature: the PCR reaction program can be edited and run

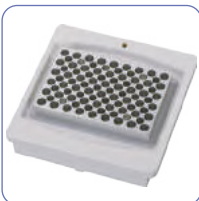
-Can independently set / display block temperature, constant temperature time, thermo lid temperature

-4 programs can be preset, 9 steps can run in a cycle, the number of cycles is up to 99

### Easy to Exchange Blocks



IB10-A



IB10-B



IB10-C



IB10-D



IB10-E



Block for IB-20HL



## Specification

Model	IB-10HL	IB-20HL
Temperature control range	RT. +5 °C~105 °C	-5 °C~105 °C (AT. ≤20 °C) 0 °C~105 °C (AT. ≤25 °C) 4 °C~105 °C (AT. ≤30 °C)
Lid's temperature range	RT. +5 °C~110 °C	RT. +5 °C~110 °C
Timer range	0~99 h59 min / 0~99 min 59 sec	0~99 h59 min / 0~99 min 59 sec
Temp. accuracy for blocks	±0.5 °C	±0.5 °C
Temp. accuracy for lid	±1 °C	±1 °C
Uniformity within the block	±0.5 °C	±0.5 °C
Display accuracy	0.1 °C	0.1 °C
Heating time (RT. 25 °C)	≤15 min (25 °C-100 °C, @20 °C-30 °C)	Heating speed: (37 °C-100 °C) ≥6 °C/min
Cooling time	----	Cooling speed: (100 °C-37 °C) ≥6 °C/min
Dimension (mm)	267×166×167	313×168×196
Weight	2.3 kg	3.0 kg

## Ordering Information

Code	Description
AS-01270-00	IB-10HL, AC 100~240 V, 50 / 60 Hz, 120 W
AS-01280-00	IB-20HL, AC 100~240 V, 50 / 60 Hz, 120 W

## Suitable Blocks

	Code	Block	Description
IB-10HL	AS-01271-01	IB10-A	96×0.2 mL PCR tubes
	AS-01271-02	IB10-B	54×0.5 mL tubes
	AS-01271-03	IB10-C	35×1.5 mL tubes
	AS-01271-04	IB10-D	35×2.0 mL tubes
	AS-01271-05	IB10-E	15×0.5 mL+20×1.5 mL tubes
	AS-01181-28	T4	Block extraction tool
IB-20HL	AS-01281-01	IB20-A	96×0.2 mL PCR tubes
	AS-01281-02	IB20-B	54×0.5 mL tubes
	AS-01281-03	IB20-C	35×1.5 mL tubes
	AS-01281-04	IB20-D	35×2.0 mL tubes
	AS-01281-05	IB20-E	15×0.5 mL+20×1.5 mL tubes
	AS-01181-28	T4	Block extraction tool

# OS-100 / OS-200

## Orbital Shaker

### Product Introduction

OS-100 and OS-200 orbital shaker are powerful variable speed shaker which provides efficient orbital motion. Speed and time are under microprocessor control. OS-200 / OS-100 shaker can be applicable in different labs: microbiology, chemistry, immunology, biochemistry and molecular biology.

### Features

1. Timer function, set the working time within 1 min-100 h
2. Normal operation at 4~45 °C, safe and convenient
3. A variety of pallets are available for different mixing operation



### OS-100 / OS-200 Platforms



### Specification

Shaking Speed	50--300 rpm	50--250 rpm
Timer range	1 min~99 h59 min	1 min~99 h59 min
Max. capacity	3.0 kg	2.5 kg
Operating ambient	4~45 °C	4~45 °C

### Ordering Information

Code	Description
AS-04030-00	OS-100, AC 100-240 V, 50 / 60 Hz, 2 A
AS-04020-00	OS-200, AC 100-240 V, 50 / 60 Hz, 2 A

### Suitable Blocks

AS-04021-01	PP-1, flat platform with non-slip rubber mat
AS-04021-02	PP12-100, platform with clamps for flasks, 100-150 mL
AS-04021-03	PP06-250, platform with clamps for flasks, 250-300 mL
AS-04021-04	UP-1, universal platform with adjustable bars for different types of flasks, bottles
AS-04021-05	MP-1, platform with springs

# SealBio-2

## Semi Automated Plate Sealer

### Product Introduction

SealBio-2 Plate Sealer is a semi-automatic thermal sealer which is ideal for the low to medium throughput laboratory that requires uniform and consistent sealing of micro-plates. Unlike manual plate sealer, the SealBio-2 produces repeatable plate seals. With variable temperature and time settings, sealing conditions are easily optimised to guarantee consistent result, eliminating sample loss. The SealBio-2 can be applied in product quality control of many manufacture enterprises such as plastic film, food, medical, inspection institute, scholastic scientific research and teaching experiment. Offering complete versatility, the SealBio-2 will accept a full range of plates for PCR, assay or storage applications.

### Features

#### Highlights

1. Format different micro well plates and heat seals
2. Adjustable Sealing Temperature: 80~200 °C
3. OLED screen, high light and no visual angle limit
4. Plate adapters allow use of PCR plate or virtually any ANSI microplate

#### Energy Saving Functions

1. When the SealBio-2 is left idle more than 60 min, it will automatically switch into stand-by mode during when the temperature of the heating element will be reduced to 60 °C to save energy
2. When the SealBio-2 is left idle more than 120 min, it will switch off automatically for safe. It will switch off the display and the heating element. then, the user can awaken the machine by pushing any button

#### Controls

Sealing time and temperature can be set by using the control knob. OLED display screen, high light and no visual angle limit.

1. Sealing time and temperature
2. Sealing pressure can be adjustable
3. Automatic counting function

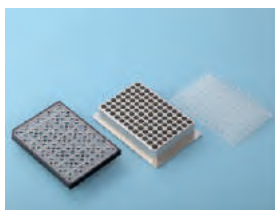
#### Security

1. If a hand or objects stuck in the drawer when it's moving, the drawer motor will automatically reverse. This feature prevents injury to the user and the unit
2. Special and smart design on the drawer, it can be detached from the main device. So user can maintain or clean the heating element easily



**01**  
**SBA-1**

Standard plate adapter



**02**  
**SBA-2**

96-well PCR plate adapter



**03**  
**SBA-3**

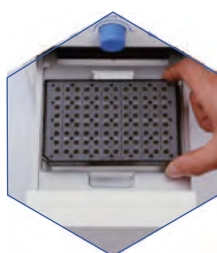
Weighted seal platen



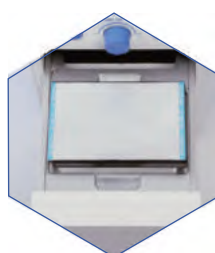
## Operation Steps



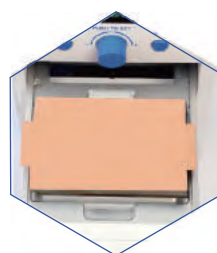
**Step1**  
Pull the drawer



**Step2**  
Put the adapter plate



**Step3-1**  
Put a sealing film



**Step3-2**  
Put the weighted seal platen if the film is curly



**Step4**  
Press "RUN"

Remark: when using the weighted seal platen, the recommended sealing time should be increased by 1 second!

## Specification

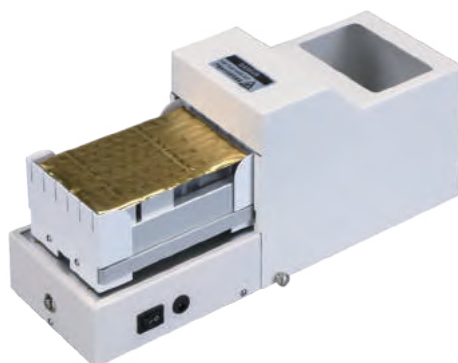
Display	OLED
Sealing temperature	80~200 °C (increment 1.0 °C)
Temperature accuracy	±1.0 °C
Temperature uniformity	±1.0 °C
Sealing time	0.5~10 s (increment 0.1 s)
Seal plate heights	9 to 48 mm
Input power	300 W
Dimension (D×W×H) mm	370×178×330 mm
Weight	9.6 kg
Compatible plate materials	PP (Polypropylene), PS (Polystyrene), PE (Polyethylene)
Compatible plate types	SBS standard plates, deep-well plates, PCR plates (skirted, semi-skirted and no-skirted formats)
Heating sealing films & foils	Foil-polypropylene laminate, clear polyester-polypropylene laminate, clear polymer, thin clear polymer

## Ordering Information

Code	Description
AS-15020-00	SealBio-2 AC 220 V or AC 120 V, 50 / 60 Hz, 300 W
AS-15021-01	SBA-1 standard plate adapter
AS-15021-02	SBA-2 96-well PCR plate adapter
AS-15021-03	SBA-3 weighted sealing platen
AS-15021-11	Seal-150 peelable clear Seal
AS-15021-12	Seal-200 peelable Seal for storage
AS-15021-13	Seal-300 pierce aluminum heating sealing film

# FCM-1

## Film Cutting Machine



### Product Introduction

FCM-1 film cutting machine for nucleic acid reagent kit is specially developed for the packaging of single sample extraction reagent kit of Auto-Pure 20 series nucleic acid purification system. Auto-Pure 20A / Auto-Pure 20B adopts a patented 9-strip extraction tube, which can be packaged separately, and can be used for nucleic acid extraction and purification separately on the machine to reduce reagent waste. FCM-1 uses a DC motor to drive the way to achieve the automatic membrane cutting process of single sample nucleic acid extraction reagent kit. Sealed enclosure makes the machine run more safely.

### Features

1. Easy to operate; To push the button once and the workstation will move back and forth once
2. The motor have a self-locking function, to protect user
3. Hold an adapter for SealBio-2. After filming and take it onto the machine, then the film can be cut
4. Push the button one time, the work-station will move one time
5. Specification:
  - 1) Type: FCM-1
  - 2) Power: 10 W
  - 3) Cutting time: 2.5 s
  - 4) Weight: 1.5 kg
  - 5) Dimension: 346×108×148.5 mm

### Specification

Maximum output power	10 W
Cutting time	2.5 s
Dimension (mm)	346×108×148.5
Weight (kg)	1.5

### Ordering Information

Code	Description
AS-17100-00	FCM-1 film cutting machine

# MD200

## Sample Concentration



MD200-1



MD200-1A



MD200-2

### Product Introduction

MD200-1 / MD200-2 / MD200-1A sample concentration consists of a base and stand assembly, sample holder and gas distribution system.

### Features

1. Blowing a large number of samples at one time
2. Easy operation, safe and reliable to use, amount of airflow can be adjusted
3. High precision and wide range of temperature control

### Specification

Model	MD200-1	MD200-1A	MD200-2
Temperature control range	RT. +5 °C~150 °C	RT. +5 °C~150 °C	RT. +5 °C~150 °C
Temp. control accuracy @40~100 °C	±0.5 °C	±0.5 °C	±0.5 °C
Temp. control accuracy @100-150 °C	±1 °C	±1 °C	±1 °C
Temp. accuracy for blocks @40°C	±0.3 °C	±0.3 °C	±0.3 °C
Display accuracy	0.1 °C	0.1 °C	0.1 °C
Heating time (from 40-150 °C)	≤30 min	≤30 min	≤30 min
Standard blocks	1	1	2
Needle length	150 mm	80 mm	150 mm
Nitrogen consumption	0~15 L/min	0~15 L/min	0~15 L/min
Dimension (mm)	280×240×500 mm	280×240×500 mm	280×240×500 mm



# KD200

## Sample Concentration



### Product Introduction

1. Professionally-designed block, tester can be observed at the surface location of concentrated samples
2. Depending on the test-tube size and solvent volume they can increase or decrease the height individually
3. Easy operation; safe and reliable to use

#### 01

Flow Control Valve



#### 02

KD200 Visual Diagram



### Specification

Temperature control range	RT. +5 °C~150 °C
Heating time (from 40 to 150 °C)	≤30 min
Maximum input power	400 W
Needle length	150 mm
Dimension (mm)	280×240×500 mm

### Ordering Information

Code	Description
AS-06050-00	MD200-1, AC 220 V / AC 120 V, 50 / 60 Hz, 200 W
AS-06060-00	MD200-1A, AC 220 V / AC 120 V, 50 / 60 Hz, 200 W
AS-06070-00	MD200-2, AC 220 V / AC 120 V, 50 / 60 Hz, 400 W
AS-06090-00	KD200, AC 220 V / AC 120 V, 50 / 60 Hz, 400 W
AS-06080-00	WD-12, AC 220 V / AC 120 V, 50 / 60 Hz, 1000 W
AS-06051-01	150 mm needles (just for MD200-1 and MD200-2)
AS-06061-01	80 mm needles (just for MD200-1A)
AS-06081-01	128 mm needles (just for WD-12)
AS-06091-11	150 mm needles (just for KD200)
AS-06051-02	Flow control valve (optional)

## Ordering Information

### MD200 Series Sample Concentration

Code	Type	Description	Dimension (mm)
AS-01081-01	BK01	49×Φ6 mm	96×96×49 mm
AS-01081-02	BK02	49×Φ7 mm	96×96×49 mm
AS-01081-03	BK03	25×Φ10 mm	96×96×49 mm
AS-01081-04	BK04	25×Φ12 mm	96×96×49 mm
AS-01081-05	BK05	25×Φ13 mm	96×96×49 mm
AS-01081-06	BK06	12×Φ15 mm	96×96×49 mm
AS-01081-07	BK07	16×Φ15 mm	96×96×49 mm
AS-01081-08	BK08	12×Φ16 mm	96×96×49 mm
AS-01081-09	BK09	16×Φ16 mm	96×96×49 mm
AS-01081-10	BK10	12×Φ19 mm	96×96×49 mm
AS-01081-11	BK11	16×Φ19 mm	96×96×49 mm
AS-01081-12	BK12	9×Φ20 mm	96×96×49 mm
AS-01081-13	BK13	9×Φ26 mm	96×96×49 mm
AS-01081-14	BK14	4×Φ28 mm	96×96×49 mm
AS-01081-15	BK15	4×Φ40 mm	96×96×49 mm
AS-01081-16	BK16	49×0.5 mL tubes	96×96×49 mm
AS-01081-17	BK17	25×1.5 mL tubes	96×96×49 mm
AS-01081-18	BK18	25×2.0 mL tubes	96×96×49 mm
AS-01091-01	BK19	96×0.2 mL tubes	78×114×26 mm
AS-01091-02	BK20	96×0.2 mL microplate	81×123×19 mm

### KD200 Sample Concentration

Code	Type	Description	Dimension (mm)
AS-06091-01	BD01	12×Φ10 mm	192×96×49 mm
AS-06091-02	BD02	12×Φ12 mm	192×96×49 mm
AS-06091-03	BD03	12×Φ13 mm	192×96×49 mm
AS-06091-04	BD04	12×Φ15 mm	192×96×49 mm
AS-06091-05	BD05	12×Φ16 mm	192×96×49 mm
AS-06091-06	BD06	12×Φ19 mm	192×96×49 mm
AS-06091-07	BD07	12×Φ20 mm	192×96×49 mm

Note: BK19 and BK20 are special for MD200-1A

# HM-3000

## Bacti-Cinerator Sterilizer



HM-3000A



HM-3000C



HM-3000D



HM-3000E



HM-3000D and  
HM-3000E  
Adjustable Heater

### Product Introduction

The bacti-cinerator sterilizer sterilizes micro-organisms utilizing infrared heat produced by a ceramic core element. The ceramic element contains no asbestos and ensures maximum sterility without splatter across the work surface area. Complete sterilization occurs within 5-7 sec at optimum sterilizing temperature of 1500 °F (815.6 °C). The small footprint makes the bacti-cinerator sterilizer an ideal instrument for anaerobic and aerobic chambers alike. Several user friendly accessories are also available for the bacti-cinerator sterilizer.

### Specification

Model	HM-3000A	HM-3000C	HM-3000D	HM-3000E
Center high-temperature	825 °C±50 °C	825 °C±50 °C	825 °C±50 °C	825 °C±50 °C
Adjustable angle range	----	----	40° down horizontally, 15° up	40° down horizontally, 15° up
Max-sterilizer goods diameter	Φ14 mm	Φ35 mm	Φ14 mm	Φ35 mm
Length of sterilizer	150 mm	100 mm	150 mm	100 mm
Dimension (D×W×H) mm	185×98×185 mm	162×98×225 mm	159×100×260 mm	153×100×280 mm
Power	170 W	320 W	170 W	320 W
Weight	1.3 kg	1.3 kg	1.5 kg	1.6 kg

### Ordering Information

Code	Description
AS-07020-00	HM-3000A, AC 220 V / AC120 V, 50 / 60 Hz, 1 A
AS-07050-00	HM-3000C, AC 220 V / AC120 V, 50 / 60 Hz, 1 A
AS-07090-00	HM-3000D, AC 220 V / AC120 V, 50 / 60 Hz, 1 A
AS-07100-00	HM-3000E, AC 220 V / AC120 V, 50 / 60 Hz, 1 A
AS-07021-01	220 V Heater for HM-3000A
AS-07051-01	220 V Heater for HM-3000C
AS-07021-03	Holder for HM-3000A
AS-07051-03	Holder for HM-3000C

# GBS-5000

## Glass Bead Sterilizer



GBS-5000A



GBS-5000B

### Product Introduction

Glass bead sterilizers are a quick, easy and accurate alternative to traditional methods of sterilization, and compact enough to be placed on any laminar air flow work benches or any other worksite tables in a clean room atmosphere.

### Specification

Model	GBS-5000A	GBS-5000B
Crucible size	Φ40 mm×80 mm	Φ40 mm×140 mm
Weight of glass bead	150g	300 g
Temperature range	100 °C~300 °C	100 °C~300 °C
Temp. control accuracy	≤±5 °C	≤±5 °C
Heating time (40 °C~300 °C)	≤25 min	≤25 min
Power	120 W	250 W
Weight	2 kg	2.5 kg
Dimension (D×W×H) mm	130×145×155 mm	130×145×215 mm

### Ordering Information

Code	Description
AS-07070-00	GBS-5000A, AC 200-AC 240 V / AC 100-AC 120 V, 50 / 60 Hz
AS-07080-00	GBS-5000B, AC 200-AC 240 V / AC 100-AC 120 V, 50 / 60 Hz
AS-07071-01	150 g glass beads (Φ3 mm)
AS-07071-02	300 g glass beads (Φ3 mm)



05

**Reagent & Consumable**

# cfDNA Extraction Reagent Kit



## Product Introduction

Allsheng nucleic acid extraction or purification reagents are designed for fast and stable extraction of cfDNA from 500-5000  $\mu$ L plasma or serum samples. Reagents are based on the magnetic bead method, which can be used manually or with Allsheng and other automated platforms.

## Features

### ■ Multiple Systems Available

Different reaction systems, suitable for 0.5 / 1 / 2 / 3 / 4 / 5 mL sample extraction

### ■ Automated Extraction

Match Allsheng automatic nucleic acid extraction instrument to realize automatic extraction

### ■ Suitable for a Variety of Sample Sources

For fresh and frozen samples preserved in EDTA, citrate or STRECK non-invasive tubes

### ■ Stable Extraction

Manual and automated extraction results are stable and reliable

### ■ Magnetic Bead Extraction

Simple operation without multiple centrifugation

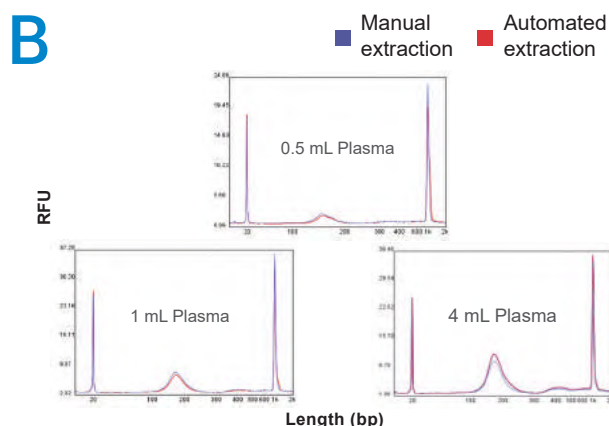
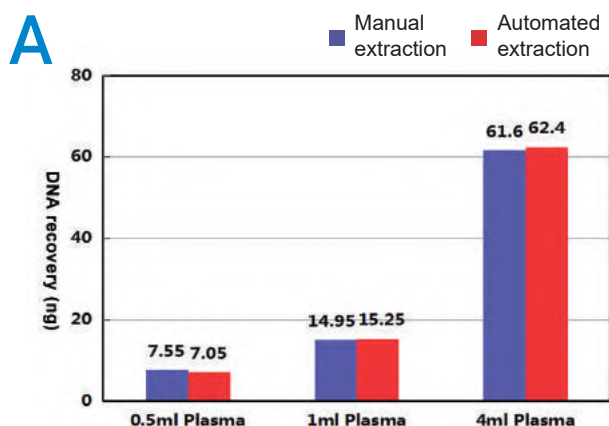
### ■ 30 $\mu$ L Elution

The minimum elution volume is 30  $\mu$ L to ensure nucleic acid concentration

## Main Components and Specifications

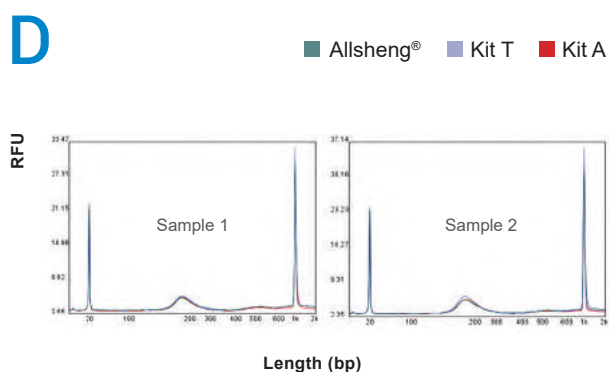
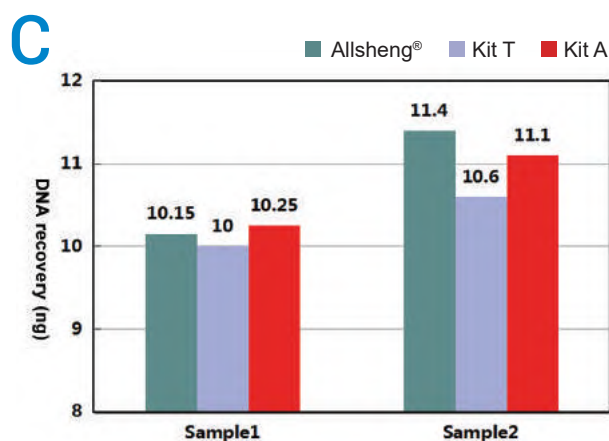
Specification Component	1 mL Sample			2 mL Sample			4 mL Sample		
	24 persons	50 persons	100 persons	24 persons	50 persons	100 persons	24 persons	50 persons	100 persons
Magnetic beads	0.72 mL	1.5 mL	3.0 mL	1.44 mL	3.0 mL	6.0 mL	3.0 mL	6.0 mL	12 mL
Protease K	2.4 mL	5.0 mL	10.0 mL	3.0 mL	6.25 mL	12.5 mL	4.2 mL	8.75 mL	17.5 mL
Lysis solution	1.2 mL	2.5 mL	5.0 mL	2.4 mL	5.0 mL	10.0 mL	4.8 mL	10 mL	20 mL
cfDNA binding solution	30 mL	62.5 mL	125 mL	60 mL	125 mL	250 mL	120 mL	250 mL	500 mL
cfDNA washing solution 1	48 mL	100 mL	200 mL	48 mL	100 mL	200 mL	48 mL	100 mL	200 mL
cfDNA washing solution 2	48 mL	100 mL	200 mL	48 mL	100 mL	200 mL	48 mL	100 mL	200 mL
cfDNA elution solution	2.4 mL	5.0 mL	10 mL	2.4 mL	5.0 mL	10 mL	2.4 mL	5.0 mL	10 mL





### Comparison of the results of manual extraction and automated extraction of plasma from tumor patients with Allsheng nucleic acid extraction or purification reagents

0.5 mL, 1 mL, and 4 mL of tumor patient plasma were taken for cfDNA extraction, and compared with the same samples and the results of manual extraction. The results showed that there was no significant difference in the yields of the two extraction methods under the three volumes (A), and the fragment size distributions were roughly the same (B), indicating that the reagent automation was well matched and met the requirements of normal sample extraction.



### Comparison of plasma DNA extraction effect from tumor patients between Allsheng nucleic acid extraction or purification reagents and other brand reagents on the market

Allsheng®, imported kit T and domestic kit A were used to extract DNA from two different samples respectively. The recovery results showed that the extraction effect of Allsheng® and kit A was slightly better than that of kit T (C), and there were no differences in the extracted fragments (D).

## Ordering Information

Code	Description	Standard
RS-HSCF0101	Nucleic acid extraction or purification reagents (1 mL)	10 T / 24 T / 50 T / 100 T
RS-HSCF0102	Nucleic acid extraction or purification reagents (2 mL)	24 T / 50 T
RS-HSCF0104	Nucleic acid extraction or purification reagents (4 mL)	24 T / 50 T

# Fluorescence Kit

## Product Introduction

By using Allsheng dsDNA HS (high-sensitivity), dsDNA BR (broad range) and ssDNA (single-strand) assay kit, precise DNA quantification can be achieved. These DNA quantitation kits can quickly and selectively detect low concentration and high concentration DNA samples and tolerance pollutants, such as salt, solvents, or detergents.

### 01

#### Allsheng® High Sensitivity dsDNA Quantitation Kit

- **Analysis range: 0.2-100 ng**

Allsheng® high sensitivity dsDNA quantitation kit is suitable for accurate quantitative analysis of low concentration double stranded DNA. The fluorescent dye in this kit can specifically bind double stranded DNA. The fluorescence quantum yield is high, the molar extinction coefficient is large, and the fluorescence value after connecting double stranded DNA is at least 1000 times higher, with good sensitivity and specificity. This kit is used together with our company's Fluo-100, Fluo-200 or Fluo-800 fluorometer, which has the advantages of simplicity, rapidity, high degree of automation, accurate quantification, etc. It can be applied to the detection of exogenous DNA residues in recombinant products, the detection of drug residues and the detection of cfDNA content.

### 02

#### Allsheng® Broad Range dsDNA Quantitation Kit

- **Analysis range: 10-1000 ng**

The sensitivity and accuracy of Allsheng® broad range dsDNA quantitation kit are significantly higher than those of UV absorbance detection, which is suitable for precise quantitative analysis of medium and high concentration dual-strand DNA. The fluorescent dye in this kit can specifically combine dual-strand DNA and can be used together with our company's Fluo-100, Fluo-200 or Fluo-800 fluorometer. It can be applied to the quantitative analysis of genomic DNA, the detection of exogenous DNA residues in recombinant products, the detection of drug residue DNA, etc.

### 03

#### Allsheng® ssDNA Quantitation Kit

- **Analysis range: 1-200 ng**

Fluo-100, Fluo-200 or Fluo-800 fluorometer matches with Allsheng® ssDNA quantitation kit. The sensitivity and accuracy are significantly higher than those of UV absorbance detection, which is suitable for accurate quantitative analysis of low concentration single-strand DNA. Fluorescent dyes in the kit can specifically bind single-strand DNA. It can be used to detect the concentration of synthetic primers and the residues of exogenous single-strand DNA in recombinant products.

## Ordering Information

Code	Description
RS-FL 0101-S	Allsheng® high sensitivity dsDNA quantitation kit (100 assays)
RS-FL 0101-M	Allsheng® high sensitivity dsDNA quantitation kit (200 assays)
RS-FL 0101-L	Allsheng® high sensitivity dsDNA quantitation kit (1000 assays)
RS-FL 0102-S	Allsheng® broad range dsDNA quantitation kit (100 assays)
RS-FL 0102-M	Allsheng® broad range dsDNA quantitation kit (200 assays)
RS-FL 0102-L	Allsheng® broad range dsDNA quantitation kit (1000 assays)
RS-FL 0103-S	Allsheng® high sensitivity ssDNA quantitation kit (100 assays)
RS-FL 0103-M	Allsheng® high sensitivity ssDNA quantitation kit (200 assays)
RS-FL 0103-L	Allsheng® high sensitivity ssDNA quantitation kit (1000 assays)

# Luminescence Kit

## Product Introduction

Based on the construction, transfection and expression of the luciferase reporter gene vector, Allsheng luminescent series kits use luciferase to catalyze the transformation of substrate and emit photons. Finally, the detection system is used to obtain the detection data. The reagent adopts an optimized reaction system, which is easy to prepare, convenient operation and high accuracy.

### 01

#### ATP Bioluminescence Assay Kit

Firefly luciferase is used to catalyze the conversion of substrate luciferin, and efficiently use the energy of ATP to emit photons. The bioluminescence detection of ATP is based on the principle that the luminous signal is proportional to the amount of ATP. The product can be used for rapid and quantitative determination of ATP (adenosine 5'-triphosphate) level in liquid samples or cells or tissues. Lysis buffer in the product can effectively lyse bacteria, cells and microbial samples, fully release ATP, and is suitable for ATP detection from multiple sample sources. Luciferase/luciferin substrate adopts an optimized enzyme reaction system, and the fluorescence generated is stable within one minute. The detection sensitivity of this product reaches 10-16 mol, and the detection range is 10-11 mol to 10-16 mol, which can be used for the detection of micro ATP.

### 03

#### Double Luciferase Reporter Gene Assay Kit

Bioluminescent is the most effective method to detect reporter gene. Luciferase can catalyze the conversion of the substrate luciferin and emit photons. The luminescence reaction catalyzed by firefly luciferase and Renilla luciferase has similar optical characteristics and good linear range of concentration (7-8 orders of magnitude). The detection sensitivity of the enzyme is 10-14 mol~10-20 mol, but the chemical reaction substrate and optimal reaction conditions catalyzed by the two are completely different. Using this feature, the combination of these two luciferases can form a very effective double luciferase reporter gene system, in which Renilla luciferase is usually used as an internal reference.

### 02

#### Single Luciferase Reporter Gene Assay Kit

The common method of eukaryotic gene expression regulation research is to detect reporter gene, and bioluminescence is the most commonly used and effective means of reporter gene detection. Luciferase can catalyze the conversion of the substrate luciferin and emit photons. This product provides a rapid, sensitive and stable detection method for the expression of firefly luciferase reporter gene in mammalian cells. It can detect the lowest 10-20 mol of luciferase, showing a good linear relationship in the range of 10-14 mol to 10-20 mol of enzyme concentration. Luciferase assay reagent adopts an optimized enzyme reaction system, which produces fluorescence with a half-life of more than 15 minutes. The reagent is easy to prepare and operate, and is suitable for high-throughput detection of firefly luciferase activity.

### 04

#### Gaussia Luciferase Assay Kit

Gaussia Luciferase (Gluc) is a new type of luciferase, which is a marine copepod isolated from Hawaiian waters. Gaussia luciferase is a secretory luciferase. After the report plasmid is transfected into mammalian cells, it is expressed and can be secreted outside the cells. The supernatant can be directly taken for detection without cell lysis. The operation is more convenient, and it is more suitable for detection of report genes at different time points and high-throughput screening. The luminous intensity of Gaussian Luciferase is higher than that of Firefly Luciferase and Renilla Luciferase, and the detection sensitivity is better.

## Ordering Information

Code	Description
RS-CL 0101	ATP bioluminescence assay kit
RS-CL 0102	Single luciferase reporter gene assay kit
RS-CL 0103	Double luciferase reporter gene assay kit
RS-CL 0104	Gaussia Luciferase assay kit

06

**Others**

# TD2-12 / TD2-24

## Gel Card Centrifuge



TD2-12



TD2-24

### Product Introduction

The gel card centrifuge holds automatic balance control and user can set speed and centrifugation time. It can be suitable for many types gel cards from different manufacturers.

### Features

1. Digital interface visor control and visualization of centrifuge speed and time remaining for processing
2. Automatic balance control
3. Pre-defined centrifugal parameters for optimum gel cards procession, acceleration, speed, braking and time
4. Programmable audible alarms for end of centrifuge time periods

### Specification

Model	TD2-12	TD2-24
Speed range	800~1800 rpm	500~1500 rpm
RCF. range	54~272×g	33~294×g
Capacity	12 gel cards	24 gel cards
Timer	1~20 min	1~20 min
Noise	≤55 db(A)	≤55 db(A)
Power	AC 100-240 V 85 W	AC 100-240 V 85 W
Dimension (L×W×H) mm	440×340×170 mm	530×410×180 mm
Weight	7 kg	11.5 kg
Temperature control range	37 °C	
Temperature uniformity	≤±0.5 °C	
Temperature stability	≤±0.2 °C	
Temperature accuracy	<0.5 °C	
Capacity	24 gel cards	
Power	220 V 3 A 200 W	
Dimension (L×W×H) mm	220×380×115 mm	

### Ordering Information

Code	Description
AS-10020-00	K37-24, AC 120 / AC 220 V, 50 / 60 Hz, 3 A
AS-10030-00	TD2-12, AC 100~240 V, 50 / 60 Hz, 3 A
AS-10010-00	TD2-24, AC 100~240 V, 50 / 60 Hz, 3 A

## K37-24

### Gel Card Incubator

#### Product Introduction

The K37-24 gel card incubator can be suitable for many types gel cards from different manufacturers.

#### Features

1. 2 independent incubation zones with a capacity for 12 gel cards
2. Incubator for 24 gel cards in racks at 37 °C
3. Digital interface screen for control and visualization of remaining incubation time and real temperature for each zone

Heating time: 25 °C~37 °C ≤ 5 min

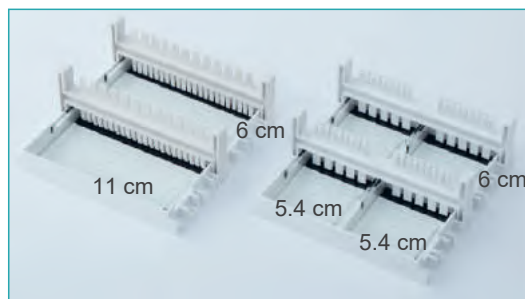


## Mini-ES2

### Mini-Electrophoresis System



1. Timer function, unattended after startup
2. Safety cover design, and the power is cut off immediately when the cover is open
3. 110×60 mm, 54×60 mm two sizes of gel migration board



#### Specification

Input power	AC 100~120 V, 50~60 Hz / AC 220~240 V, 50~60 Hz
Output power	DC 35 V / DC 50 V / DC 100 V
Bath dimension (mm)	110×121×43 mm
Volume of bath	230 mL
Construction of bath	PC+ABS with high temperature resistance
Timer range	1 min~99 min
Max. power	40 W
Dimension (W×D×H) mm	190×130×60 mm
Tooth wide (Width×Thickness×No.)	3 mm×1 mm×22 / 5.6 mm×1 mm×12 / 3 mm×1 mm×18 / 5.6 mm×1 mm×10
Gel dimension (W×D) mm	126×126 mm-1 pcs
Gel migration board (W×D) mm	110×60 mm-2 pcs / 54×60 mm-4 pcs

#### Ordering Information

Code	Description
AS-14020-00	Mini-ES2, AC 200~240 V, 50~60 Hz

# MiniT-1 / MiniT-3

## Biological Indicator Incubator



MiniT-1



MiniT-3

### Product Introduction

MiniT-1 and MiniT-3 biological indicator incubator are designed for temperature incubation of the EO biological indicators. Both of them are compact, tabletop incubator.

### Features

1. LCD display
2. User can set the incubating temperature and time
3. Exact correspondence of the set and actual temperature
4. It is easy to set up and use
5. The Incubator has many wells for placement of the biological indicator vials and the wells can be custom-made

### Specification

Model	MiniT-1	MiniT-3
Temp. control range	RT. +5 °C~80 °C	RT. +5 °C~100 °C
Timer range	1 min-99 h59 min	1 min-99 h59 min
Temp. control accuracy	±0.5 °C	±0.5 °C
Display accuracy	±0.1 °C	±0.1 °C
Heating time (25 to 57 °C)	≤6 min	≤6 min
Dimension (D×W×H) mm	110×150×80 mm	120×152×112 mm
Weight	0.5 kg	0.85 kg
Temp. stability @ 57 °C	±0.35 °C	±0.35 °C

### Ordering Information

Code	Description
AS-09020-00	MiniT-1, AC 100~240 V, 50 / 60 Hz, 0.5 A
AS-09030-00	MiniT-3, AC 100~240 V, 50 / 60 Hz, 0.5 A

Code	Type	Description
AS-09021-01	A-MiniT-1	15×Φ10 mm
AS-09021-02	B-MiniT-1	15×Φ12 mm
AS-09021-03	C-MiniT-1	6×Φ15 mm
AS-09021-04	D-MiniT-1	6×Φ16 mm
AS-09021-05	E-MiniT-1	24×Φ8.8 mm
AS-09021-06	F-MiniT-1	18×Φ9 mm
AS-09021-07	G-MiniT-1	12×Φ12.5 mm
AS-09021-08	H-MiniT-1	6×Φ16.5 mm



# TSR-100A / TSR-200

## Test Strip Reader



TSR-100A



TSR-200

### 01

#### Description

TSR-100A and TSR-200 test strip reader are suitable for test the immunochromatographic test strips. By using modern photoelectric technology and photodiode to detect the intensity of the reflected light, the reader can detect the color of the strip, then calculate the quanting or concentration. It can avoid reading mistake by eyes and make rapid, high sensitivity when using reader to detect the color change of test strip.

### 02

#### Easy to Use and High Accuracy

1. 6.2 inch touch screen for TSR-100A
2. Powerful program design, it is easy to be used
3. Patented design offer good solutions guaranteed and excellent results
4. Each testing result is available to check and it can show the graph of the result
5. Build-in or external thermal printer
6. Rapid instrument calibration

### 03

#### Customization Acceptable

1. Equipped specialized software of different test strips, increase or decrease detection program according to the manufacturers requirements
2. Support customization according to user needs
3. Test card and test strip for user flexible choice
4. Desktop and portable for user choice:  
TSR-100 Desktop test strip reader  
TSR-200 Portable test strip reader



TSR-100A / TSR-200 Test Strip

## 04

### TSR-100A Highlights

1. 6.2 inch touch screen for easy use
2. Strict calibration system for stable results
3. Automatically identify CT line position, error correction range  $\pm 3$  mm
4. Fast and accurate test reduce human errors, automatic calculate concentration and judgment
5. Accurately identify one or more( up to 5) T lines value and CT ratio
6. Large built-in memory can save 10000 records
7. Build-in thermal printer
8. Powerful software, build-in 2 systems software (one for the end-user, another one for the reagent manufacturer)

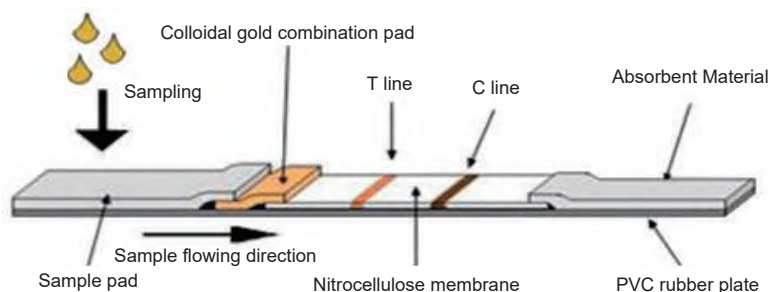
## 05

### TSR-200 Highlights

1. Small size and light weight for easy carrying
2. Simply operation with 1~3 steps quantitative detection
3. Semi-automatic detection with high speed, test time only 5 s except prepare sample time
4. Automatically identify CT line position, Error correction range  $\pm 3$  mm
5. Accurately identify one or more( up to 4) T lines value and CT ratio
6. Large built-in memory can save 10000 records
7. External thermal printer for printing reports
8. Powerful software, build-in 2 systems software (one for the end-user, another one for the reagent manufacturer)

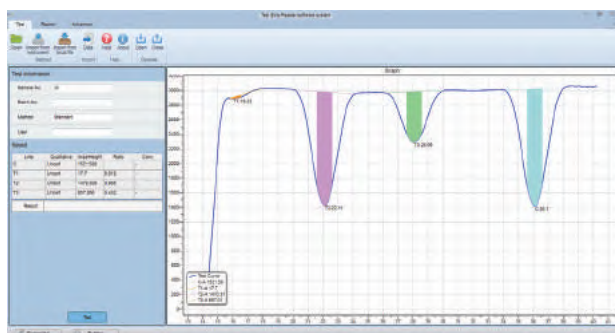
### Detection Principle

Standard test strip structure as right picture, these equipments detect sample positive or negative (concentration) by measuring reflection of light intensity of T and C line. These are also suitable for some test strip with several T lines. The TSR-100A can test 4 T lines and the TSR-200 can test 4 T lines.



## 06

### Test Strip Reader PC Software Interface



Date	Sample No.	Batch No.	Lot No.	T1	T2	T3	T4	Test Time
2014-07-10	1	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	2	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	3	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	4	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	5	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	6	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	7	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	8	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	9	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00
2014-07-10	10	1000000	1000000	17.7	14.8	10.0	10.0	2014-07-10 10:00:00

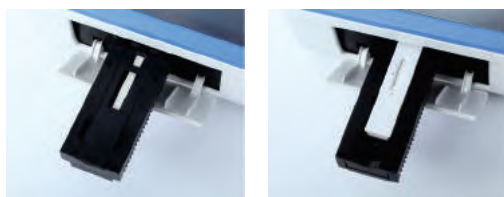
## 07

### Remarks for Test Strip Reader

1. Test strip reader must match the test strip, cooperate with the manufacturer of test strip
2. Support customization according to test strip manufacturer needs
3. Fluorescence detection must be provided excitation wavelength, emission wavelength and life of fluorochrome

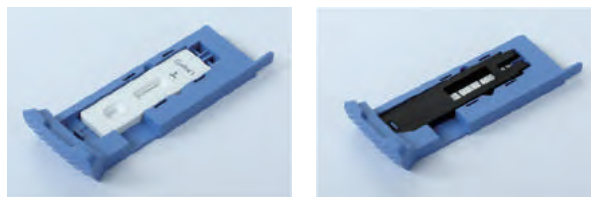
## 08

### Adapter for TSR-100A



## 09

### Adapter for TSR-200



## Specification

Model	TSR-100A	TSR-200
Wavelength	525±30 nm (base the requirement of customer)	525±30 nm (base the requirement of customer)
Detector type	Photodiode	Photodiode
Test item	Immunochromatographic test cards or wide 3~6 mm test strips	Immunochromatographic test cards or wide 3~6 mm test strips
Parameter of test item	According to the requirement of test strips	According to the requirement of test strips
Test result	Multi-algorithm, quantitative, selected results, save and print results	Multi-algorithm, quantitative, selected results, save and print results
Test speed	240 strips each hour	240 strips each hour
Repeatability	CV <2 %	CV <2 %
Stability	Drift value ≤3 % in 2 hours	Drift value ≤3 % in 2 hours
Data analysis	Qualitative, quantitative, semi-quantitative, multi-algorithm	Qualitative, quantitative, semi-quantitative, multi-algorithm
Display	6.2 inch touch screen	3.2 inch LCD screen
Port	2×USB, Ethernet port	2×USB
Number of T-line	4 lines	4 lines
Printer	Built-in printer	External printer
Save type	Nanoflash chip	Micro SD card (4GB)
Power adapter	DC 12 V 4 A	DC 9 V 1.5 A
Power	20 W	9 W
Dimension (W×D×H) mm	320×195×156 mm	225×109×46 mm
Weight	6 kg	0.5 kg
Software operation	ARM	ARM

## Ordering Information

Code	Description
AS-12010-00	TSR-100A test strip reader, DC 24 V 2 A (standard: adapter S-100)
AS-12011-01	Adapter C-100 for TSR-100A
AS-12020-00	TSR-200 portabel test strip reader, DC 9 V 1.5 A (standard: adapter S-200)
AS-12021-01	Adapter C-200 for TSR-200