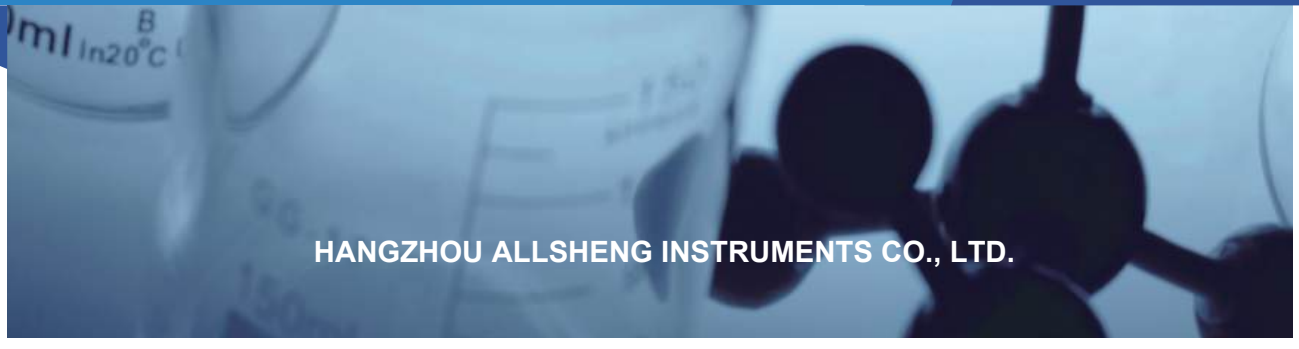
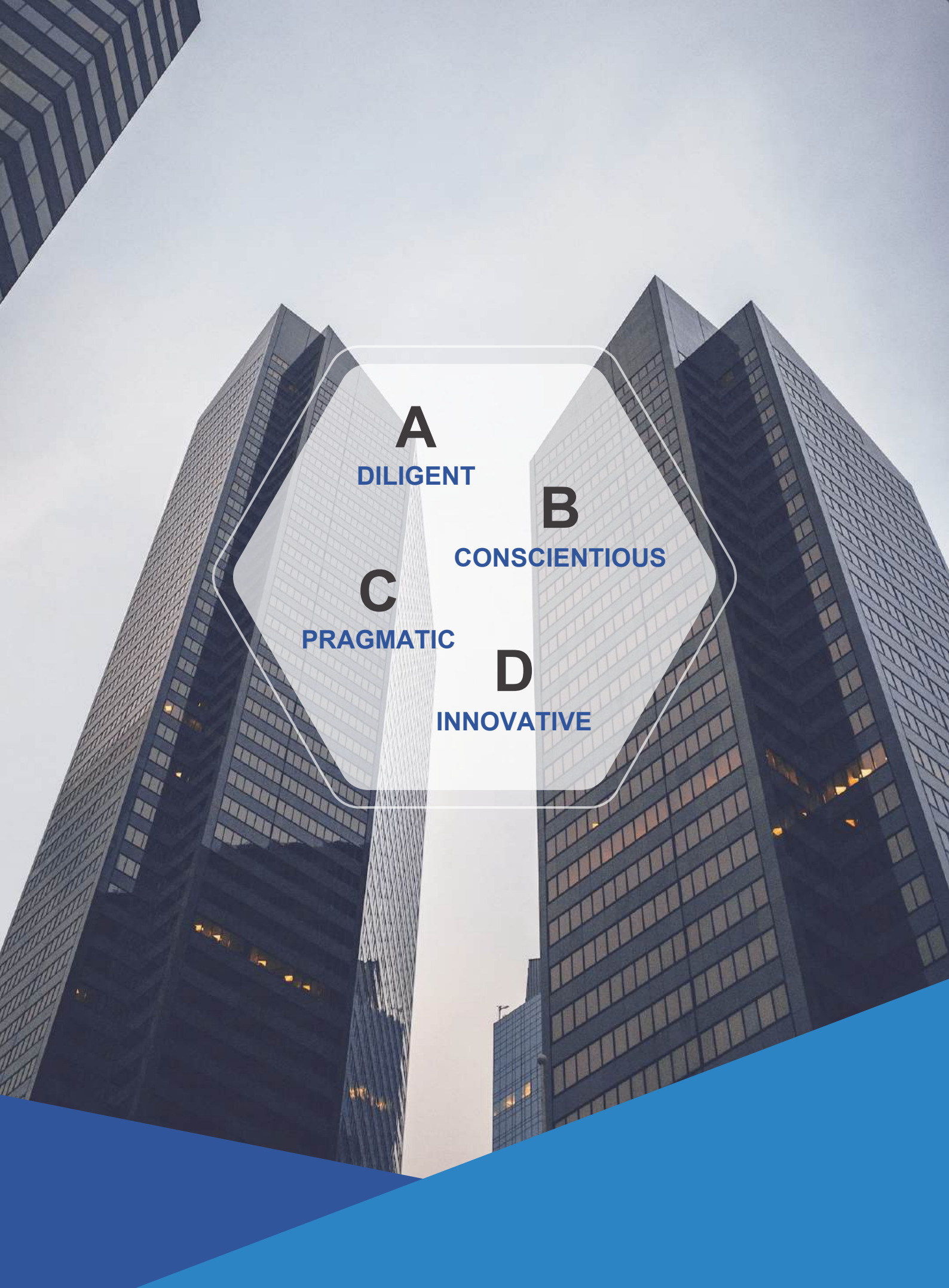
ALLSHENG

# FOR LIFE SCIENCE & AUTOMATION SOLUTIONS

PRODUCT CATALOGUE



HANGZHOU ALLSHENG INSTRUMENTS CO., LTD.


A
DILIGENT
B
CONSCIENTIOUS
C
PRAGMATIC
D
INNOVATIVE

# INTRODUCTION

ALLSHENG

Hangzhou Allsheng Instrument Co., Ltd. was established on January 17, 2006. It is a national high-tech enterprise that integrates research and development, production, and sales. It is also the supporting unit of the high-tech enterprise research and development center of Allsheng Biological Sample Pre-processing Platform in Zhejiang Province. Allsheng has a research and development team led by a doctorate, and invests 10% of its annual sales in research and development. After 17 years of exploration and accumulation, it has built a bioprocessing platform for nucleic acid and protein purification, an automated workstation technology platform, and an absorbance, fluorescence, and luminescence detection technology platform. In the future, Allsheng will focus on providing automation solutions in various fields to achieve comprehensive automation from sample preparation to result data analysis.

# BRAND PHILOSOPHY

## Business Philosophy

Adhere to the business philosophy of "constantly improving quality and service to achieve customers". The source of our company's achievements is to help customers achieve greater success and bring them more added value by providing them with high-quality products and services.

## Enterprise Spirit

Integrity & Respect | Solidarity & Dedication | Harmony & Innovation | Pursue Excellence

## Brand Philosophy

Become the provider of high-quality products,
the leader of industry technology,
and the holder of high-quality image

# CERTIFICATE

# PRODUCT CATALOGUE

01

## Biological Sample Preparation

### Automatic Nucleic Acid Extraction System


Auto-Pure 4800 Nucleic Acid Purification System 02

Auto-Pure 2400/2400M Nucleic Acid Purification System 05

Auto-Pure 96/48/24 Nucleic Acid Purification System 09

Auto-Pure S32 Nucleic Acid Purification System 12

Auto-Pure Mini Nucleic Acid Purification System 14

Auto-Pure 32A Nucleic Acid Purification System 16

Auto-Pure 20A/20B/24D Nucleic Acid Purification System 17

Auto-Pure 10B/10BS/16A Nucleic Acid Purification System 21


### Automated NGS Library Preparation Workstation


Auto-NGS 100 Automated NGS Library Preparation Workstation 23

Auto-NGS 100R Automated NGS Library Preparation Workstation 27


02

## Liquid Handling & Automation

### Liquid Handling Workstation


Au-Mate 96 Liquid Handling Workstation 32


### PCR Setup & Liquid Handling


Auto-NRT 100 Automated PCR Setup System 34


### Laboratory Automation Product


Dry Baths for Workstation 37

Shaker for Workstation 39

PCR for Workstation 46

03

# Detection Instrument

## Microplate Reader


Feyond A300/A400/A500 Microplate Reader 48

Feyond F100 Fluorescence Microplate Reader 52

Feyond L100 Luminescence Microplate Reader 53

FlexA-200/FlexA-200HT Microplate Reader 56

AMR-100/AMR-100T Microplate Reader 59

APW-200 Microplate Washer 62


## Micro-Spectrophotometer


Nano-100/300/400A/500 Micro-Spectrophotometer 63


## Fluorometer


Fluo-100 Fluorometer 68

Fluo-200/Fluo-800 Fluorometer 70

Gene-8C Isothermal Fluorescence PCR 73

TDH-500 Hybridization System 77


04

# Laboratory Instrument

## Homogenizer


Bioprep-6/24/24R Homogenizer 80


## Centrifuge


iCen-24/iCen-24R High Speed Centrifuge 84

Mini-15K High Speed Centrifuge 86

Mini-6KC/Mini-6KS Mini Centrifuge 87

Mini-6K/7K/10K Mini Centrifuge 88

MPC-P25/Mini-P25 Microplate Centrifuge 89

## Thermo Shaker and Incubator


MSC-3000/MS-3000 Thermo Shaker Incubator 91

MSC-100/MS-100 Thermo Shaker Incubator 95

TMS-200/TMS-300 Thermo Shaker Incubator 96

MB100-2A/MB100-4A Thermo Shaker for Microplate 98

MK100-2A/MK100-4A Incubator for Microplate 98

MX100-4A Microplate Shaker 99

MTV-100 Multi-Tube Vortex 100

MTV-1 Mini Vortex 101


## Dry Bath Incubator


MK3000 Dry Bath Incubator 102

MK2000 Dry Bath Incubator 105

MK200 Dry Bath Incubator 107

MK-10/MK-20 Dry Bath Incubator 109

K30 Dry Bath Incubator 111

MiniT Mini-Dry Bath Incubator 112

MiniT-H2C/MiniT-H3 Mini-Dry Bath Incubator 113

IB-10HL/IB-20HL Dry Bath Incubator 115


## Orbital Shaker


OS-100/OS-200 Orbital Shaker 117


## Film Sealer


SealBio-2 Semi Automated Plate Sealer 118

FCM-1 Film Cutting Machine 120


## Sample Concentration


MD200 Sample Concentration 121

KD200 Sample Concentration 122

### Sterilizer

HM-3000 Bacti-Cinerator Sterilizer 124
GBS-5000 Glass Bead Sterilizer 125

05

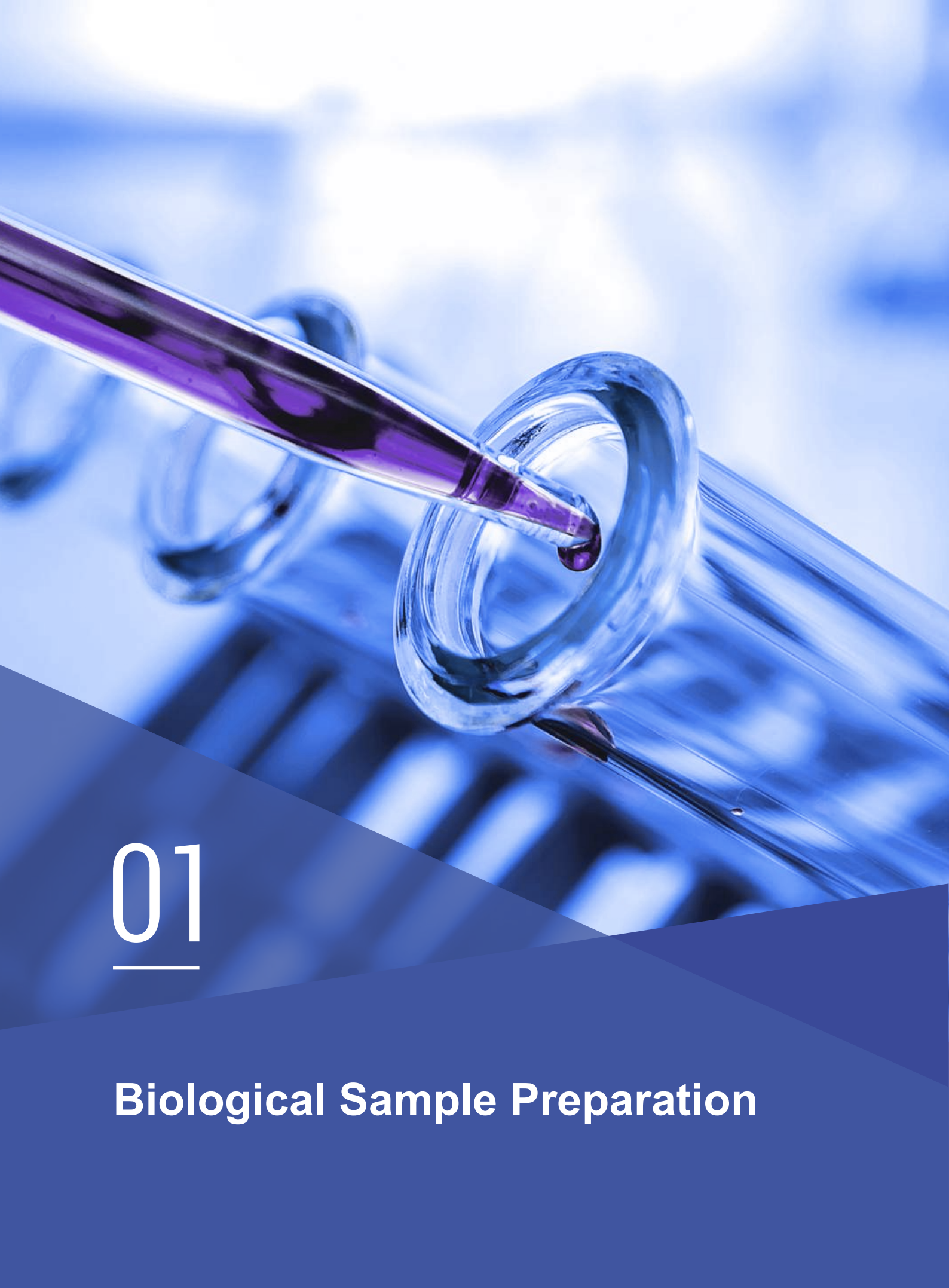
## Reagent & Consumable

cfDNA Extraction Reagent Kit 127
Fluorescence Reagent Kit 129
Luminescence Reagent Kit 130

06

## Others

TD2-12/TD2-24 Gel Card Centrifuge 132
K37-24 Gel Card Incubator 133
Mini-ES2 Mini-Electrophoresis System 133
MiniT-1/MiniT-3 Biological Indicator Incubator 134
TSR-100A/TSR-200 Test Strip Reader 135



# 01

# Biological Sample Preparation

# Auto-Pure 4800

## Nucleic Acid Purification System

CE

## 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

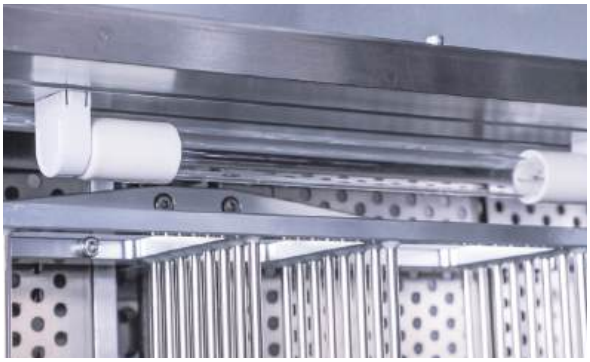
### 01

**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

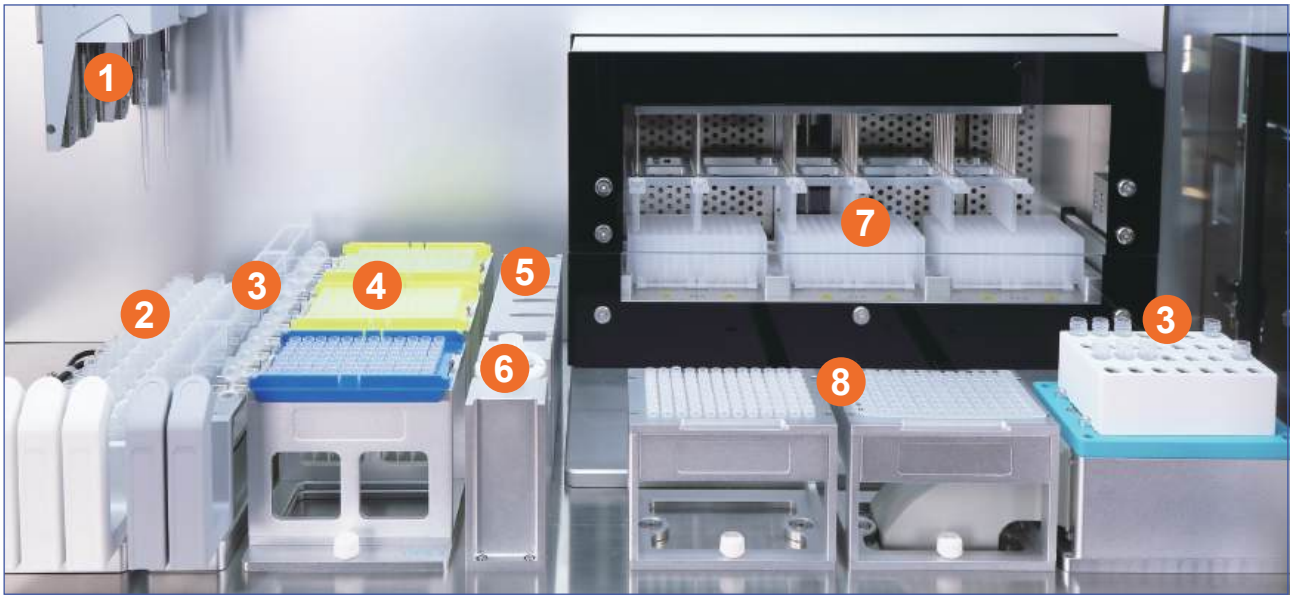
### Vortex Magnetic Beads and PCR Reagent Block

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 μL pipettors and one 200 μL pipettor |
| Pipetting range (μL) | 1 - 1000 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 | 1 - 48 |
| Process volume | 50 - 1000 μL |
| Extraction uniformity | CV ≤5 % |
| Single sample consumables | Support |
| Heating temperature | Elution and lysis temperature control: RT. ~ 120 °C |
| Cooling block | 0 °C ~ 105 °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 | ≤ 60 dB |
| Net weight | 130 kg |

## Pipetting Accuracy

| Pipettor | 200 μL | 1000 μL |
|---|---|---|
| Pipetting range | 1 - 200 μL | 5 - 1000 μL |
| Accuracy (A) | 1 μL: ±12 %<br>20 μL: ±3 %<br>100 μL: ±1 %<br>200 μL: ±1 % | 5 μL: ±5 %<br>100 μL: ±2 %<br>500 μL: ±1 %<br>1000 μL: ±1 % |
| Precision (CV) | 1 μL: ≤ 8 %<br>20 μL: ≤ 1.5 %<br>100 μL: ≤ 0.8 %<br>200 μL: ≤ 0.5 % | 5 μL: ≤ 2.5 %<br>100 μL: ≤ 1.25 %<br>500 μL: ≤ 0.4 %<br>1000 μL: ≤ 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 Acid Purification System

CE

## 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**

Reagent transfer → Sample transfer → Nucleic acid extraction → PCR setup

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

Reagent transfer → Sample transfer → Nucleic acid extraction → Quality control → Normalization → Sulfite conversion → Purification → 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 arriers and liquids

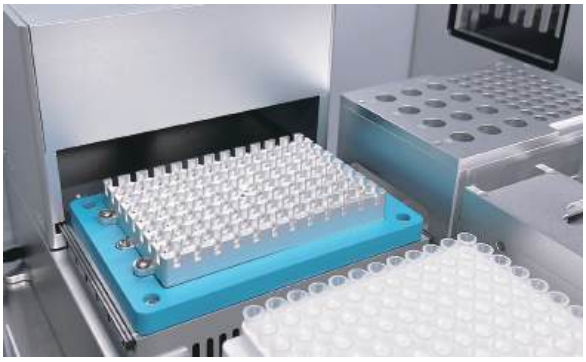
## 03

### High-Precision Liquid Handling

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

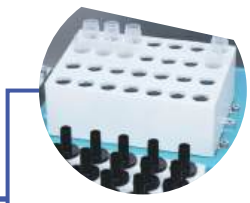
## 04

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

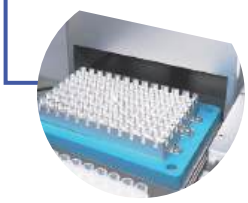


1. Block temperature control range 4 °C ~ 105 °C
2. In order to meet the methylation requirements, 2400M adds a temperature control block to realize multi-stage temperature change
3. Thermo lid design can prevent reagent condensation, and has the technology to prevent cross-contamination

## Plate Layout



PCR Reagent Area (2400)



Temperature Control Area for Methylation (2400M)

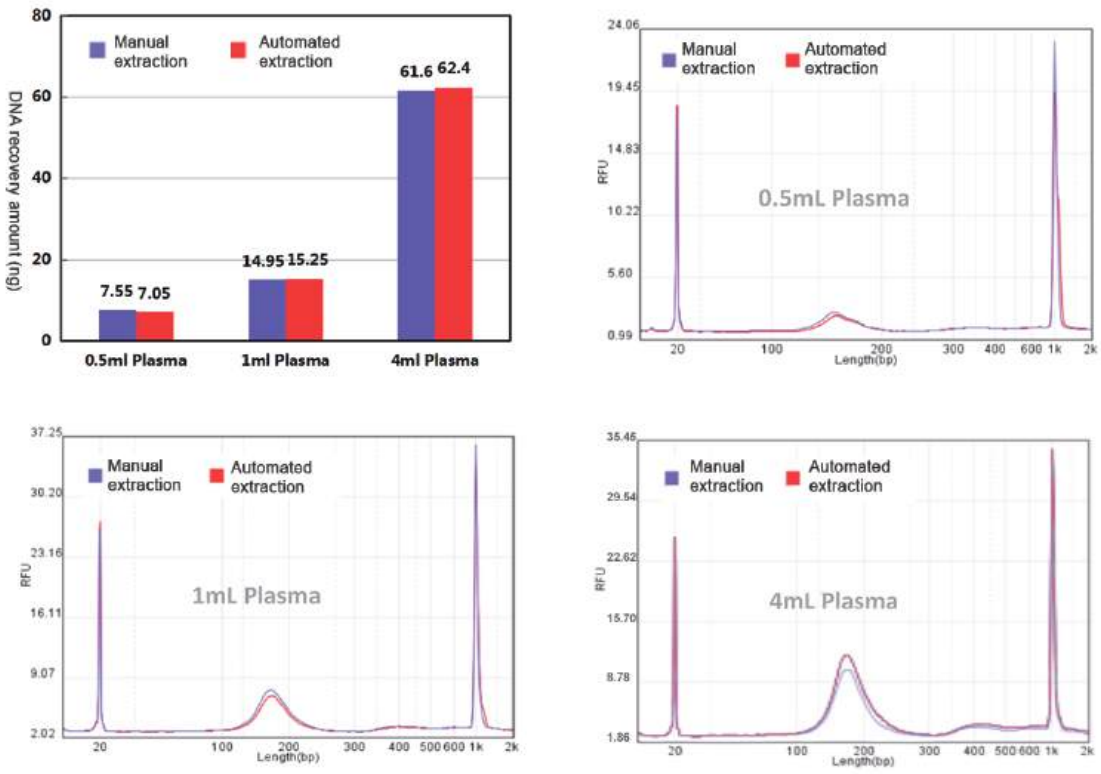
Note: The overall layout of 2400M is basically the same as that of 2400, but some blocks have been adjusted to meet the special needs in the methylation.

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 μL, 1000 μL and 200 μL 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×(50-5000 μL), suitable for 1 mL / 5 mL pipettors, 1×(1-200 μL), suitable for 200 μL 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 μL 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":

## Specification

| Model | Auto-Pure 2400 / 2400M |
|---|---|
| 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 | One 5000 μL pipettor and one 200 μL 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 | 1 - 24 |
| 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 | Standby 30 W, maximum 600 W |
| 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 %<br>100 μL: ±1 % | 20 μL: ±3 %<br>200 μL: ±1 % | 5 μL: ±5 %<br>100 μL: ±2 % | 500 μL: ±1 %<br>1000 μL: ±1 % | 50 μL: ±6 %<br>500 μL: ±5 % | 2500 μL: ±3 %<br>5000 μL: ±3 % |
| Precision (CV) | 1 μL: ≤8 %<br>100 μL: ≤0.8 % | 20 μL: ≤1.5 %<br>200 μL: ≤0.5 % | 5 μL: ≤2.5 %<br>100 μL: ≤1.25 % | 500 μL: ≤0.4 %<br>1000 μL: ≤0.4 % | 50 μL: ≤3 %<br>500 μL: ≤2 % | 2500 μL: ≤2 %<br>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

CE

## 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 μL reaction system); 48×5 mL deepwell plate, 48 magnetic rod's tip (5,000 μL reaction system); 24×14 mL deepwell plate, 24 magnetic rod's tip (10,000 μL 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

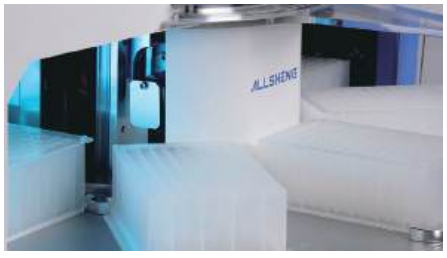
**Operational Advantages**

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 μL | 50~3000 μL | 50~10000 μL |
| 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

| Model | Auto-Pure S32 |
|---|---|
| Principle | Magnetic bead method |
| Throughput | 1 - 32 |
| Plate type | 96 deepwell plate |
| Process volume / μL | 30 - 1000 μL |
| Stability | CV ≤5 % |
| Heating for lysis tube | RT.~120 °C |
| Heating for elution tube | RT.~120 °C |
| Heating time | RT. ~120 °C ≤ 4 minutes |
| Cooling time | 100 °C~40 °C ≤ 10 minutes (RT. 25 °C) |
| Temperature precision | ±0.5 °C |
| Temperature uniformity | At 100 °C, ±1 °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 | Reserved 4G network |
| Barcode scanning | 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

| Code | Description |
|---|---|
| AS-17180-00 | Auto-Pure S32 nucleic acid purification system |
| AS-17061-02 | 96-deepwell plate for Auto-Pure 96 / Mini / S32 |
| 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

#### 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

#### 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

#### 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

CE

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 μL |
| Consumable | 8-tip comb 96 deepwell plate / single test strip |
| Principle / working mode | Magnetic beads absorption and seperation |
| Stability | CV ≤3 % |
| Magnetic bead recovery rate | >95 % |
| Lysis temperature | RT.~120 °C |
| Elution temperature | RT.~120 °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×26 cm×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

CE

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 CE

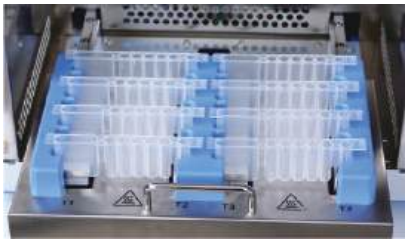
Auto-Pure 24D CE

## Modular Design

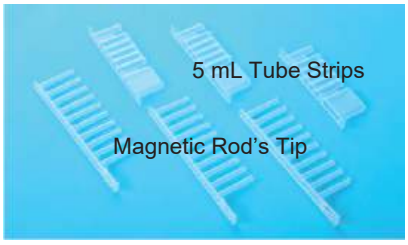
Auto-Pure 24D

Auto-Pure 20A Consumables

Auto-Pure 24D 5 mL Consumables



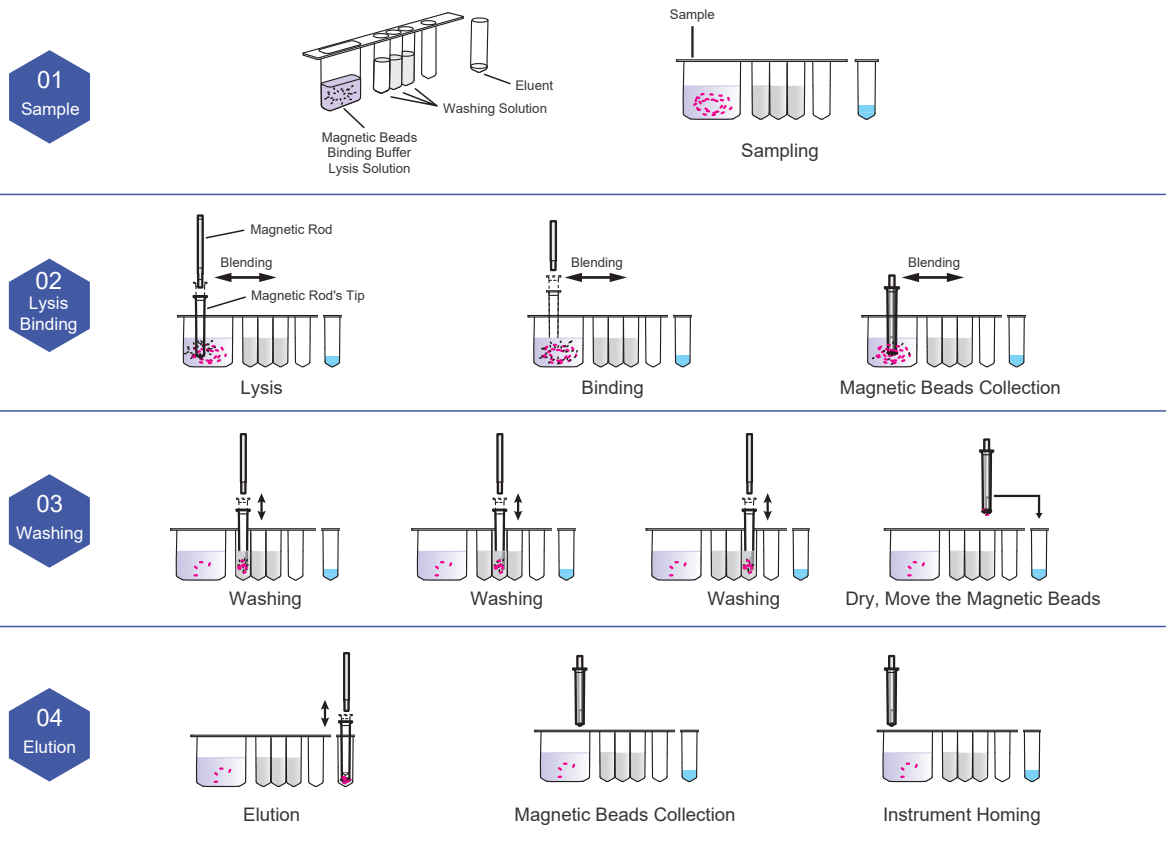
Auto-Pure 20B




Auto-Pure 20B Consumables

Auto-Pure 24D 10 mL Consumables

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




### ■ 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 mLTube 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 CE

Auto-Pure 10BS CE

Auto-Pure 16A CE

## 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.

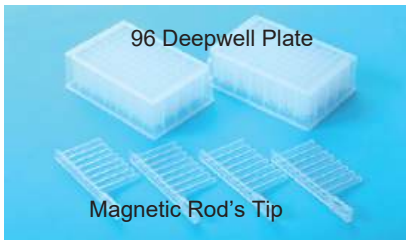
### Auto-Pure 16A

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.

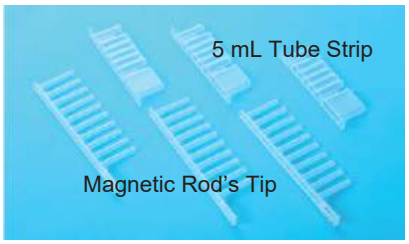
### Features

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 μL | 50~5000 μL | 50~1000 μL |
| 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 °C~105 °C) | ---- |
| Lysis temp. | RT.~120 °C | RT.~120 °C | RT.~120 °C |
| Elution temp. | RT.~120 °C | RT.~120 °C | RT.~120 °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

CE

## 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 μL

### 03

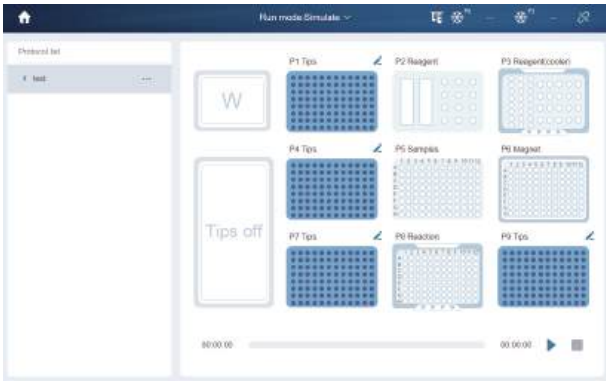
**Full Contamination Control**

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

## 04

### Innovative Design

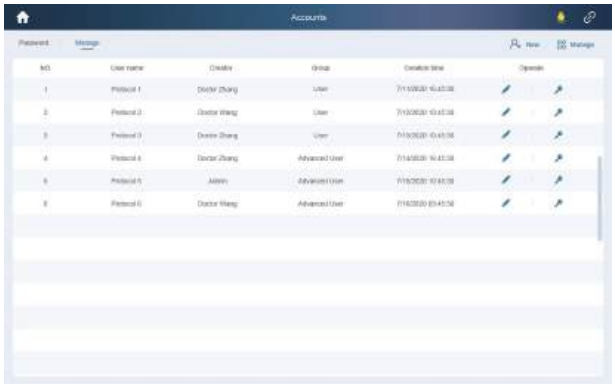
1. It is used for the design of 9 tiles + (TIP off box and waste liquid container) such as microplates, TIPs and accessories
2. In addition, the workstation can be customized according to actual needs




## 05

### Multiple Functions & Open Software Design

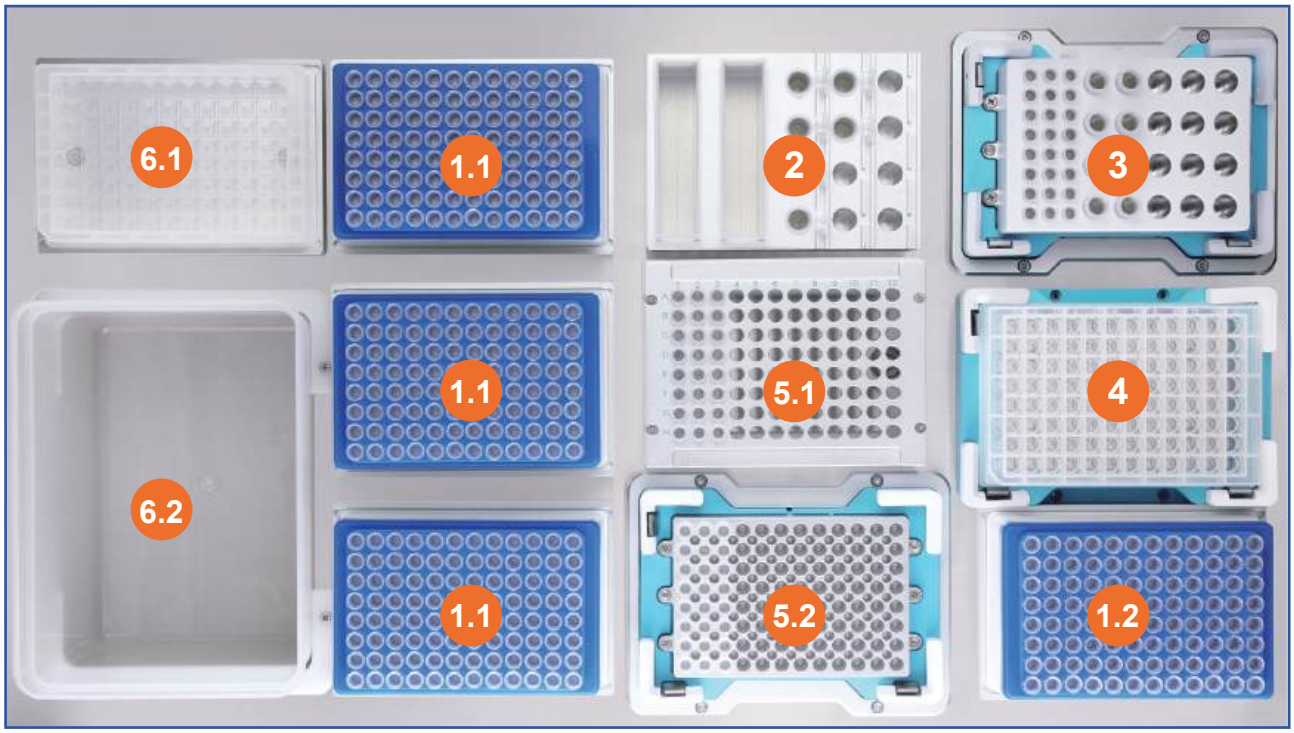
1. Multi-level account management system to support the different needs of new users and advanced users
2. GUI is can be easy to understand, easy to operate even for beginners



## 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 μL | | | |
| | Precision(CV) | 1 μL: ≤6 % | 20 μL: ≤2 % | 100 μL: ≤1 % | 200 μL: ≤1 % |
| | Accuracy | 2 μL: ±12 % | 20 μL: ±2 % | 100 μL: ±1 % | 200 μL: ±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 °C, temperature accuracy: 0.5 °C, @ 55 °C, temperature uniformity: 0.5 °C, @ 55 °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 °C, humidity: ≤80 % | | | | |
| Power input | 100~240 V, 50~60 Hz, power 300 W | | | | |
| Dimension (W×D×H) mm | 740×630×670 | | | | |

## Plate Layout




**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, 100-240 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 µL SBS Tips consumables) |
| AS-27021-03 | Heightened tray (higher than the standard tray for 200 µL 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 2×60 mL reservoir and 12×2 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 µL | Allsheng tip, transparent, boxed | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NL | 200 µL | Allsheng tip, transparent, boxed, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NS | 200 µL | Allsheng tip, transparent, boxed, sterile | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NSL | 200 µL | Allsheng tip, transparent, boxed, sterile, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TTF-200-NS | 200 µL | Allsheng tip, transparent, boxed, sterile, filter element | 96 pcs/box, 24 boxes/carton |
| AS-TTF-200-NSL | 200 µL | Allsheng tip, transparent, boxed, sterile, filter element, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-N | 50 µL | Allsheng tip, transparent, boxed | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NL | 50 µL | Allsheng tip, transparent, boxed, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NS | 50 µL | Allsheng tip, transparent, boxed, sterile | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NSL | 50 µL | Allsheng tip, transparent, boxed, sterile, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TTF-50-NS | 50 µL | Allsheng tip, transparent, boxed, sterile, filter element | 96 pcs/box, 24 boxes/carton |
| AS-TTF-50-NSL | 50 µL | 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 μL. 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.

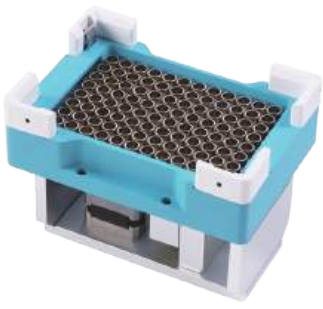
### 01

**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)**

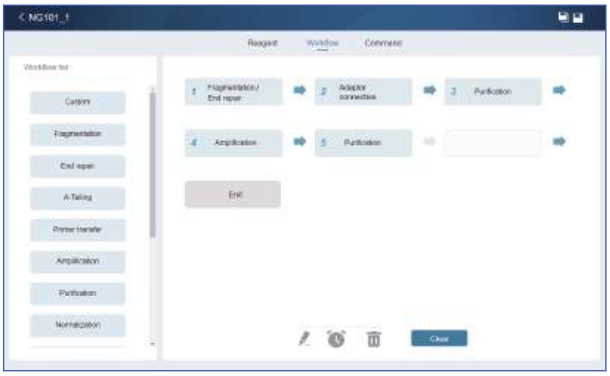


1. Equipped with several temperature control blocks to meet the special temperature requirements such as reagent and sample storage
2. High efficiency magnetic plate by rising and falling to avoid loss of magnetic beads or residual magnetic beads in liquid

## 03

### Simple and Intuitive GUI

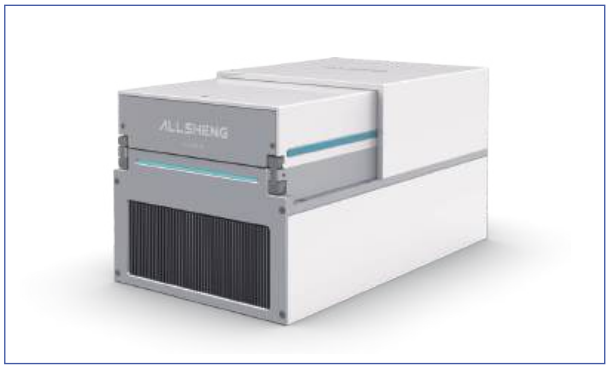
1. Allow users to freely choose and run part or all of the experimental processes
2. PC simulation operation experiment function enables users to find problems at any time and avoid wasting samples, reagents and time
3. Multi-level account management system supports the different needs of new users and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

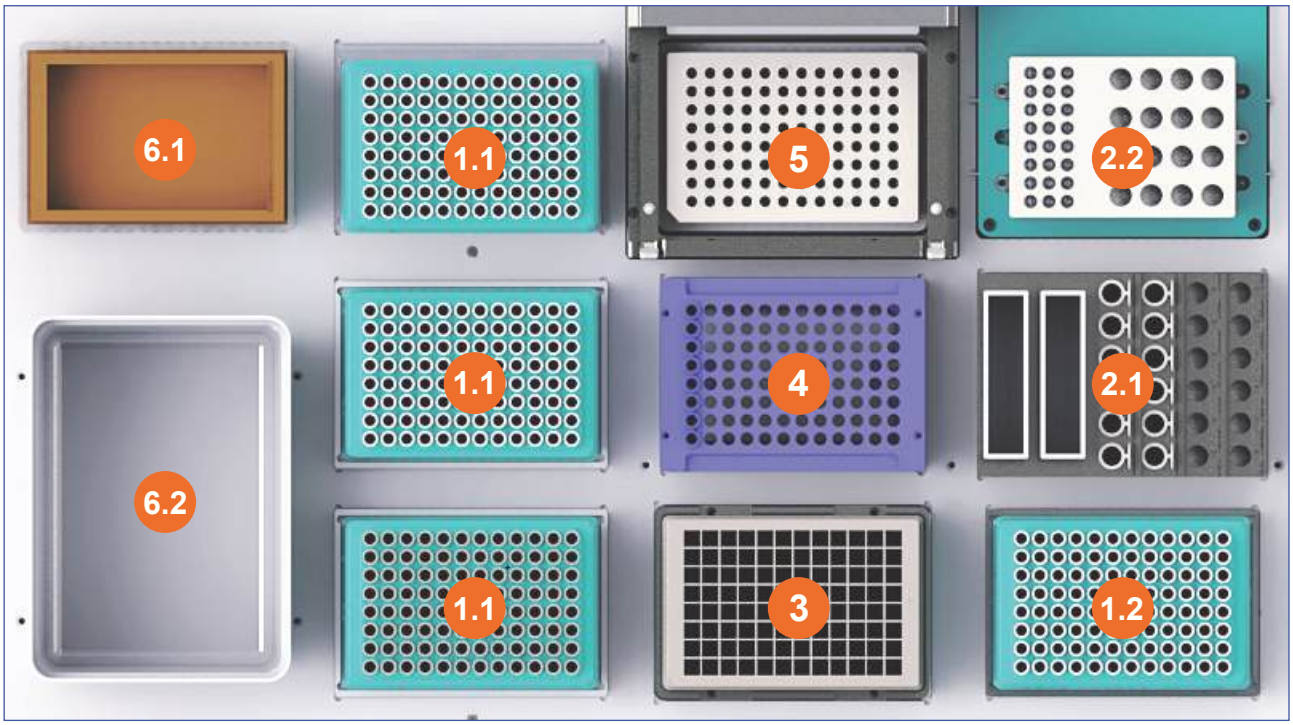
### Thermal Cycling Block

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 μL / 50 μL 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 °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: 4~105 °C, temperature accuracy: ≤1 °C, temperature uniformity: ≤1 °C @ 55 °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: 20±5 °C, humidity: ≤80 % |
| Power input | 100~240 V, 50~60 Hz, rated power 1200 W |
| Dimension (W×D×H) | 799×767×775 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 μL | | | |
| Precision(CV) | 1 μL: ≤5 % | 20 μL: ≤2 % | 100 μL: ≤1 % | 200 μL: ≤1 % |
| Accuracy | 1 μL: ±8 % | 20 μL: ±2 % | 100 μL: ±1 % | 200 μL: ±1 % |

## Ordering Information

| Code | Description |
|---|---|
| AS-27030-00 | Auto-NGS 100R automated NGS library preparation workstation, 100-240 V AC, 1200 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 12×2 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 μL | Allsheng tip, transparent, boxed | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NL | 50 μL | Allsheng tip, transparent, boxed, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NS | 50 μL | Allsheng tip, transparent, boxed, sterile | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NSL | 50 μL | Allsheng tip, transparent, boxed, sterile, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TTF-50-NS | 50 μL | Allsheng tip, transparent, boxed, sterile, filter element | 96 pcs/box, 24 boxes/carton |
| AS-TTF-50-NSL | 50 μL | Allsheng tip, transparent, boxed, sterile, filter element, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-N | 200 μL | Allsheng tip, transparent, boxed | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NL | 200 μL | Allsheng tip, transparent, boxed, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NS | 200 μL | Allsheng tip, transparent, boxed, sterile | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NSL | 200 μL | Allsheng tip, transparent, boxed, sterile, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TTF-200-NS | 200 μL | Allsheng tip, transparent, boxed, sterile, filter element | 96 pcs/box, 24 boxes/carton |
| AS-TTF-200-NSL | 200 μL | 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.

CE



### 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.

### 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.

### 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.

### 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.

### 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.

### 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

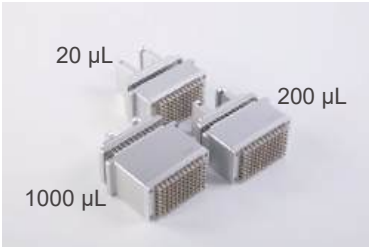
Movement speed can be adjustable: liquid aspirating and dispensing speed can be adjustable, to meet the requirements of different liquid physical properties for pipetting speed

## 07

### Replaceable Design of Multi-standard Pipetting Heads

A series of 20 μL and 200 μL pipetting heads can be freely replaceable for corresponding volume pipetting

B series adds a 1000 μL 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 μL, 200 μL); B series can be equipped with three kinds of pipetting heads (20 μL, 200 μL, 1000 μL)

## Adapted Pipetting Head and Holder

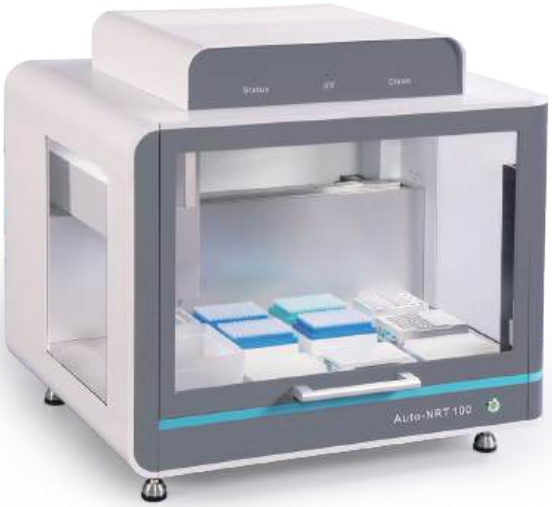
| Code | Description | Range | Optional instrument |
|---|---|---|---|
| AS-22011-01 | Au-Pipet N20 20 μL 96-channel pipetting head | 1~20 μL | A2 / A4 / B2 / B4 |
| AS-22011-02 | Au-Pipet N200 200 μL 96-channel pipetting head | 5~200 μL | A2 / A4 / B2 / B4 |
| AS-22051-01 | Au-Pipet N1000 1000 μL 96-channel pipetting head | 100~1000 μL | 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





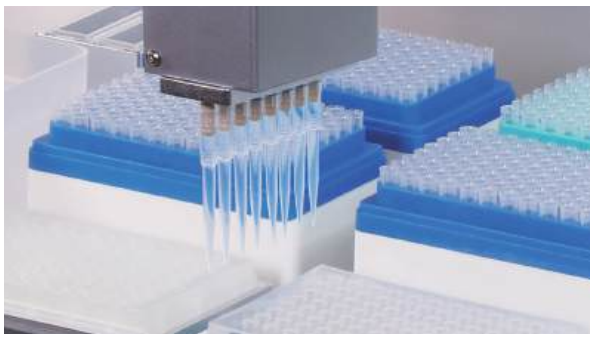

### Product Introduction

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**

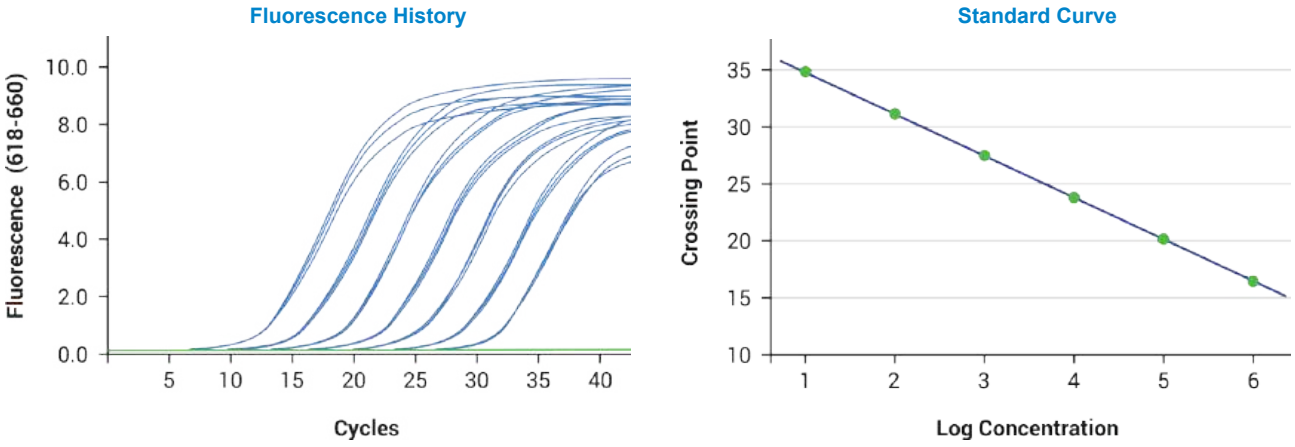
The system includes 3 layers of account permissions, which can ensure the safety of experimental data and prevent loss of data due to program errors. The system has detailed running records, which are helpful for tracing the source of the experimental records or troubleshooting.

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 IHHNV 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: ±0.5 °C, @55 °C; temperature uniformity: ±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: ≤ 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 μL |
| Accuracy | 1 μL: ±12 %　5 μL: ±8 %　100 μL: ±1 %<br>2 μL: ±12 %　20 μL: ±2 %　200 μL: ±1 % |
| Precision (CV) | 1 μL: ≤5 %　5 μL: ≤4 %　100 μL: ≤1 %<br>2 μL: ≤5 %　20 μL: ≤2 %　200 μL: ≤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 12×2 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 μL | Allsheng tip, transparent, boxed | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NL | 50 μL | Allsheng tip, transparent, boxed, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NS | 50 μL | Allsheng tip, transparent, boxed, sterile | 96 pcs/box, 24 boxes/carton |
| AS-TT-50-NSL | 50 μL | Allsheng tip, transparent, boxed, sterile, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TTF-50-NS | 50 μL | Allsheng tip, transparent, boxed, sterile, filter element | 96 pcs/box, 24 boxes/carton |
| AS-TTF-50-NSL | 50 μL | Allsheng tip, transparent, boxed, sterile, filter element, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-N | 200 μL | Allsheng tip, transparent, boxed | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NL | 200 μL | Allsheng tip, transparent, boxed, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NS | 200 μL | Allsheng tip, transparent, boxed, sterile | 96 pcs/box, 24 boxes/carton |
| AS-TT-200-NSL | 200 μL | Allsheng tip, transparent, boxed, sterile, low adsorption | 96 pcs/box, 24 boxes/carton |
| AS-TTF-200-NS | 200 μL | Allsheng tip, transparent, boxed, sterile, filter element | 96 pcs/box, 24 boxes/carton |
| AS-TTF-200-NSL | 200 μL | 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

| Model | Au-Heater | Au-Cooler |
|---|---|---|
| Temperature range | RT. +5 °C~105 °C | 0 °C~105 °C |
| Temperature setting | 0.1 °C | 0.1 °C |
| Time setting | 99 h59 min or 99 min59 s | 99 h59 min or 99 min59 s |
| Cooling time [1] | -- | 95 °C~ RT. ≤8 min |
| Cooling time [1] | -- | RT. ~ 4 °C ≤8 min |
| Heat-up time [1] | RT+5 °C~ 95 °C ≤10 min | RT. ~ 95 °C ≤8 min |
| Temp. uniformity [2] | ±0.5 °C | ±0.5 °C |
| Temp. accuracy | ±0.5 °C | ±0.5 °C |
| Workstation use | DB9 port, CAN communication | DB9 port, CAN communication |
| Stand-alone use | Support | Support |
| Input power | 24 V DC, 120 W | 24 V DC, 160 W |
| Signal line | 2 m cable, controlled by workstation | 2 m cable, controlled by workstation |
| 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

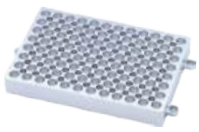
[2] According to different blocks, the temperature uniformity index is different

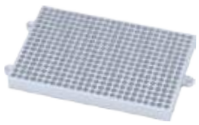
## Suitable Blocks

Au-01

Au-02

Au-03


Au-04


Au-05

Au-06

Au-07

Au-08

Au-09

Au-10

| 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

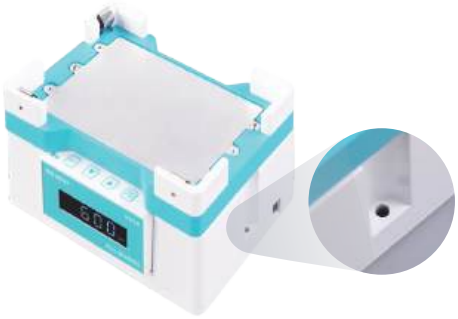
It's a thermo shaker incubator suitable for workstation, which can provide shaking of multiple blocks such as 96-well, 384-well microplates, centrifuge tubes and deepwell plates. It has a DB9 interface with CAN communication.

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

Toggle the handle on the back of the instrument

Place the microplate

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 positio-ning 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-23060-00 | Au-Shaker 2030 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-23090-00 | Au-Shaker 3020L automatic locking 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 |
| AS-23110-00 | Au-Shaker 5012L 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 |

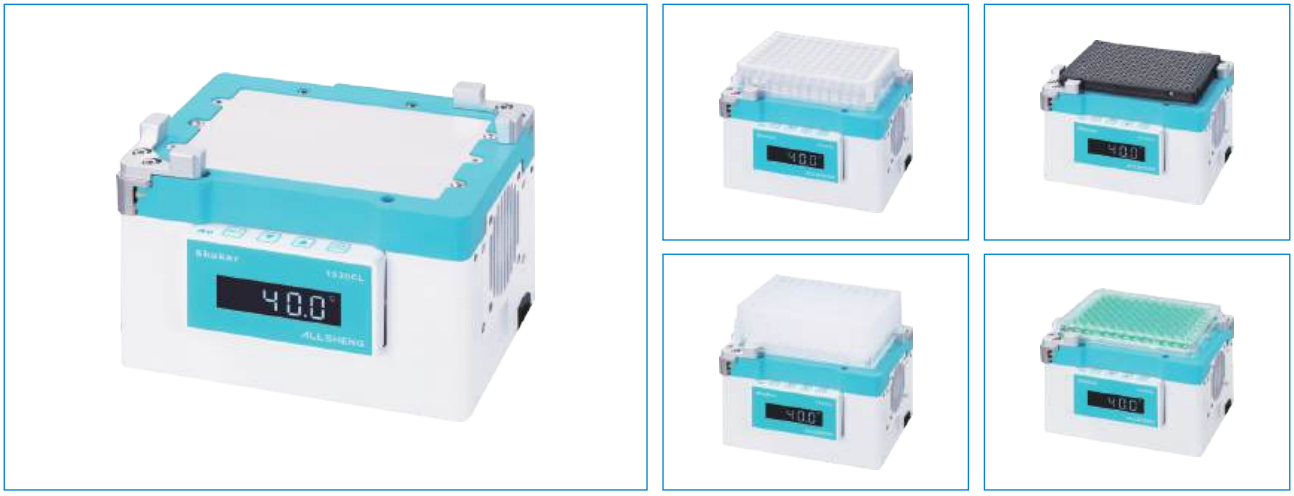
## 05

### 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

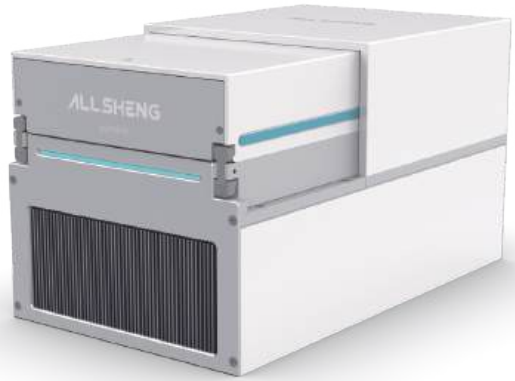
| Code | Description |
|---|---|
| AS-23170-00 | Au-Shaker 1530C thermo shaker incubator for workstation (heating / cooling), 24 V DC 160 W, with CAN communication |
| AS-23180-00 | Au-Shaker1530CL automatic locking thermo shaker incubator for workstation (heating / cooling), 24 V DC 160 W, with CAN 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

## 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

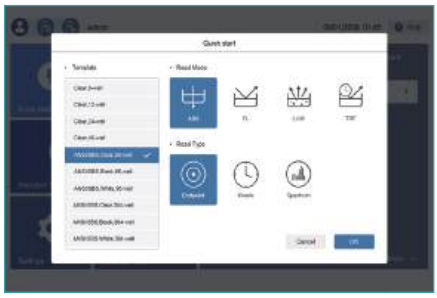
### MSS-2 Automatic Injector Block (Optional)

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 μL 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: ± (1.0 %+0.003 Abs) @ (0.0-2.0 Abs]<br>±2.0 % @ (2.0-3.0 Abs] | | |
| | Repeatability @450 nm | CV <1.0 % or SD <0.003 fast (0.0-3.0Abs]<br>CV <0.5 % or SD <0.003 accurate (0.0-3.0Abs] | | |
| | Stray light | 0.1% @ 220 nm | | |
| | Linear @450 nm | $R^2$ ≥0.999 @ [0.0 - 3.0 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 | ≤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

| Model | Feyond-A300 / A400 / A500 |
|---|---|
| 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

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

## Ordering Information

| Code | Description |
|---|---|
| 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, $Ca^{2+}$ 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 $Ca^{2+}$ 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

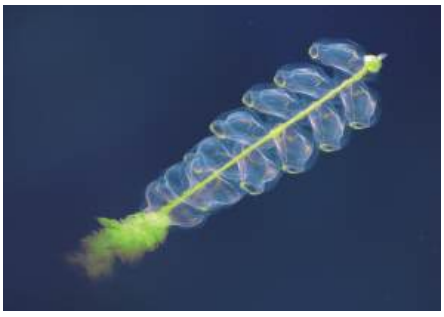
## Luminescence Microplate Reader

## 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.

### 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 %.

### 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.

### 04

### Low Noise PMT

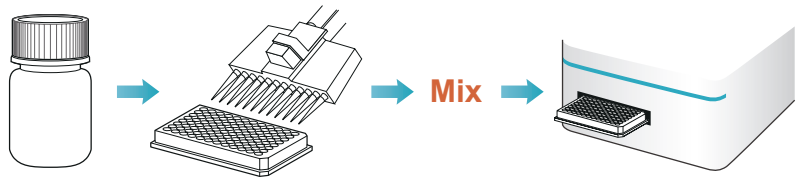
Combined with low-noise PMT, the collected signal is more accurate, and the lowest detection limit can reach 5 amol/well (ATP).

## 05

### Luminescence Kit

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

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




Substrate

Detection

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

## Feyond-F100/L100 Standard Software

### ■ User Authority Classification

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

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

### ■ Intuitive Interface Display

Intuitive selection of function modes, easy parameter setting.

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

### ■ 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.

## Technical Parameter

| 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: EX485 / EM530, 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

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

## Ordering Information

| Code | 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 |

# FlexA-200 / FlexA-200HT

## Microplate Reader

## 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.

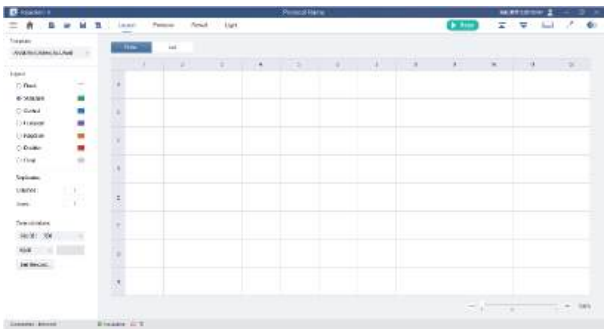
## 02

### 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: ±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

## 09

### 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 μL 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>$10^9$ |
| Wavelength range | 200 - 1000 nm |
| Wavelength accuracy | 2 nm |
| Wavelength repeatability | 0.2 nm |
| Optical system | Monochromator, 1 nm step |
| Reading range | 0 - 4.0OD |
| Bandwidth | <2.5 nm |
| Detection System | 2 silicon photodetectors, one for measurement, one for reference |
| Linear @450 nm | $R^2$ ≥0.999, [0.0 - 3.0 Abs] |
| Absorbance accuracy @450 nm | ± (1.0 % + 0.003 Abs), (0 ~2.0 Abs]; ± 2.0 %, (2.0 ~ 2.5 Abs] |
| Absorbance repeatability @450 nm | CV <0.5 % or SD <0.003 accurate mode; CV <1.0 % fast mode |
| Measuring speed | 96-well plate: fast mode <8 s, accurate mode <28 s (end point method) |
| Shaking | Linear, 3 speeds adjustable |
| Temperature range & uniformity | RT. +4 °C to 45 °C; ±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 |

# AMR-100 / AMR-100T

## Microplate Reader

## 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 | $R^2$ ≥0.995 absorbance range 0~3.0 Abs | $R^2$ ≥0.995 [0,3 Abs] |
| Wavelength accuracy | ≤±2 nm | |
| Absorbance repeatability | CV≤0.3 % [0,3 Abs); CV≤1 % [3,4 Abs) | |
| Absorbance stability | ≤0.005 Abs [0,3 Abs)<br>≤2.0 % [3,4 Abs) | ≤±0.005 Abs [0,2 Abs)<br>≤0.3 % [2,3 Abs)<br>≤2.0 % [3,4 Abs) |
| Absorbance accuracy | ≤±0.005 Abs [0,2 Abs)<br>≤±0.01 Abs [2,3 Abs)<br>≤±1.5 % [3,4 Abs) | ≤±0.005 Abs [0,2 Abs)<br>≤±1 % [2,3 Abs)<br>≤±1.5 % [3,4 Abs) |
| Sensitivity / detector | ≥0.01 A / photodiode | |
| Measuring speed | 6 s / 96-well plate, fast mode; single wavelength <15 s / 96-well,<br>dual wavelength <28 s / 96-well (common mode) | |
| Incubation temperature range | -- | RT. +4 °C ~ 50 °C |
| Temperature accuracy | -- | ±0.5 °C @ 37 °C |
| Temperature uniformity | -- | ±0.5 °C @ 37 °C |
| User Interface | Built-in software, touch screen input, external mouse | |
| Internal storage | Can store 1000 measurement programs and measurement results | |
| Port | 3×USB ports, connecting computer, printer and USB drive | |
| Power supply | 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 ≤ 1 μL
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 | ≤1 μL |
| Washing heads | 1×8 or 1×12 heads |
| Plate types | Flat, U, V, C bottom |
| Washing method | Single-point, two-point and multi-point |
| Washing volume | 50-2000 μL, increase by 50 μL |
| Washing times | 1~99 times |
| Washing channels | 3 |
| Bottles | 3 pcs 2.5 L washing bottle, 1 pcs 2.5 L washing bottle |
| Dispense accuracy | ≤2 % @300 μL |
| Liquid injection accuracy | CV≤1.5 % @300 μL |
| Soaking and shaking time | 99'00" |
| Date connection | USB |
| Weight | 12 kg |
| Power supply | 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

CE

Nano-300

CE

Nano-500

CE

## 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 μL-2 μL 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/μL (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/μL, fluorometer mode can be selected and the minimum detection limit can be up to 0.5 pg/μL.

**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

## 05

### 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/μL (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±20 nm | 420-480 nm (60 nm) |
| Nano-500 (standard) | Blue | 460±20 nm | 525~570 nm (45 nm) |
| Nano-500G (optional) | Green | 525±20 nm | 575-640 nm (65 nm) |
| Nano-500R (optional) | Red | 625±20 nm | 670~725 nm (55 nm) |

### Fluorescence Detection Mode - Specification

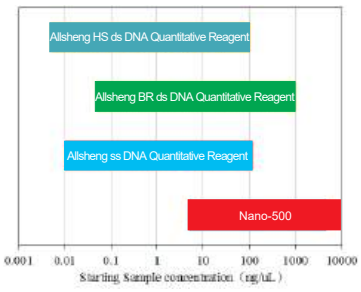
| | |
|---|---|
| Light source | LED |
| Dynamic range | 5 orders of magnitude |
| Linear dynamic range | $R^2$ ≥0.995 |
| Detector | Photodiode |
| Repeatability | ≤1.5 % |
| Stability | ≤1.5 % |
| Sensitivity | dsDNA: 0.5 pg/μL |
| Measurement speed | 3 s (once) |

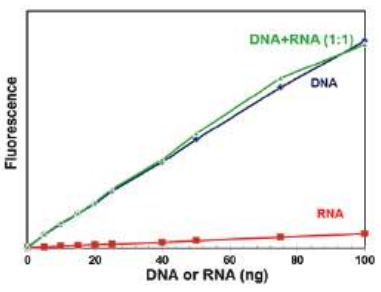
## Applications of Different Fluorescence Channels

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

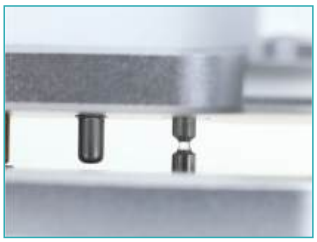
In the process of sample detection, when the sample concentration is high or the sample is viscous, the determination by micro-spectrophotometer wil often result in tha failure of liquid column tension or even the direct fracture of liquid column, which will directly affect the results of detection. 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 wil 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 μm, which effectively solves the above problems and makes the test results more stable and reproducible.

## 07

### Operation Process

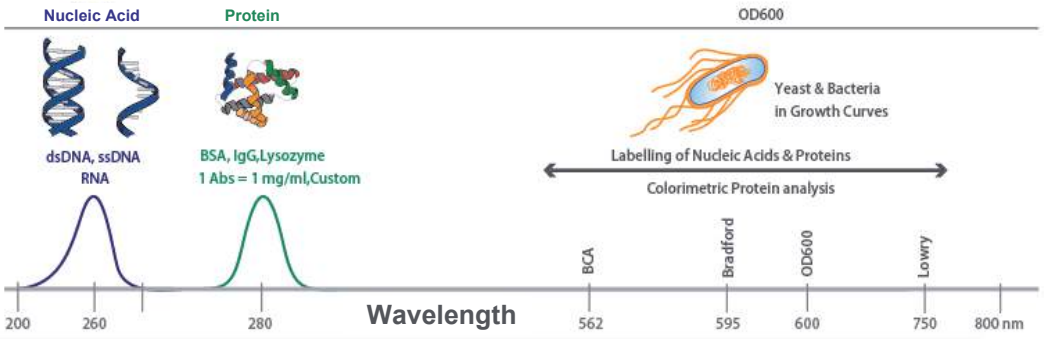
Adding sample



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 μL | 0.5~2.0 μL | 1.0~2.0 μL | 0.5~2.0 μL |
| Path length | 0.2 mm<br>1.0 mm | 0.2 mm<br>1.0 mm | 0.5 mm | 0.05 mm<br>0.2 mm<br>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 | ≤3 nm | ≤3 nm | ≤8 nm | ≤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/μL (dsDNA) | 2~4500 ng/μL (dsDNA) | 10-2500 ng/μL (dsDNA) | 2-15000 ng/μL (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±8 nm | 600±8 nm | 600±8 nm |
| Absorbance range | ---- | 0~4 A | 0~4 A | 0~4 A |
| **Fluorometer mode** | | | | |
| Sensitivity | ---- | ---- | ---- | dsDNA: 0.5 pg/μL |
| Linear dynamic range | ---- | ---- | ---- | $R^2$ ≥0.995 |
| Repeatability | ---- | ---- | ---- | ≤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

CE

## 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

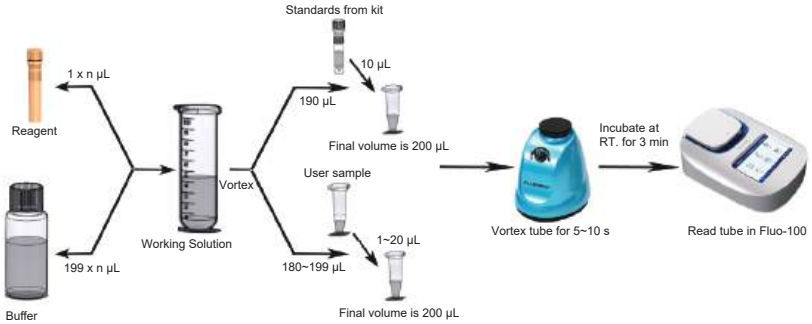
### Fluo-100 Quantitation Kit

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

## Specification

| | |
|---|---|
| Light source | LED |
| Dynamic range | 5 orders of magnitude |
| Linear dynamic range | $R^2$ >0.995 |
| Detector | Photodiode |
| Repeatability | <1.5 % |
| Stability | <1.5 % |
| Sensitivity | dsDNA: 0.5 ng/mL |
| Measurement speed | 3 s (once) |
| Dimension (W×D×H) mm | 194×155×72.5 mm |
| Weight | 0.4 kg |

## 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 μL samples

High sensitivity----the lowest detection limit can be 0.1 pg/μL (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 μL samples

High sensitivity----the lowest detection limit can be 1 pg/μL (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

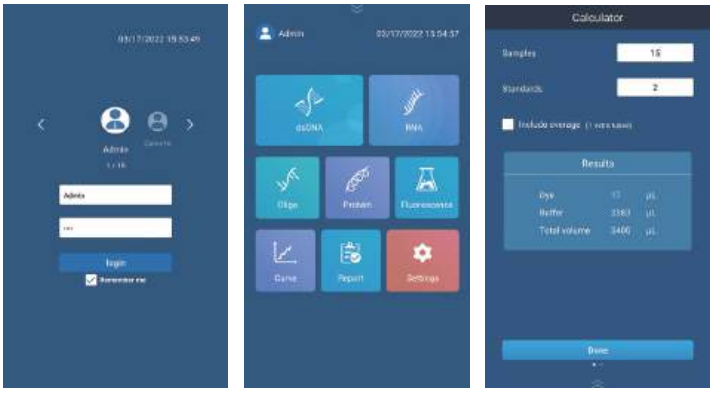
### User Authorization Management

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

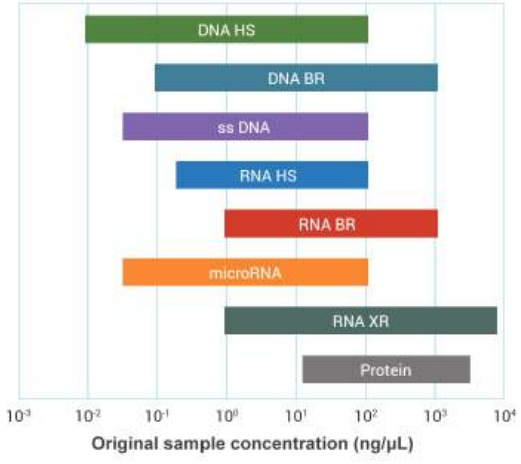
### NGS Workflow Calculator

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

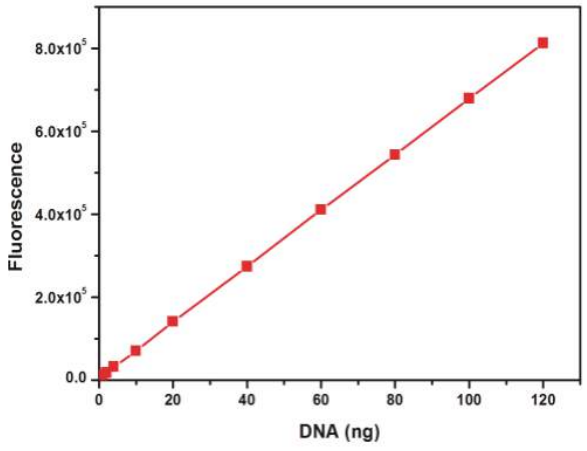
Required weight, concentration, or molarity can be easily normalized via the normalization calculator, which replaces spreadsheet calculations for standard normalization during sequence library preparation

## 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<br>Red: 625±20 nm | Blue: 460±20 nm<br>Red: 625±20 nm |
| Emission filter | Green: 525-570 nm (45 nm)<br>Red: 670-725 nm (55 nm) | Green: 525-570 nm (45 nm)<br>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 | $r^2$ ≥0.995 | $r^2$ ≥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,<br>USB (Type B) ×1, LAN ×1 | USB (Type A) ×2,<br>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 μL reaction system

Precise temperature control, the temperature difference between wells is less than 0.15 °C, and the temperature control accuracy reaches 0.1 °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

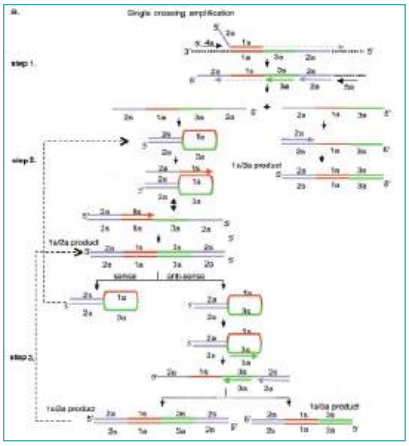
Isothermal amplification technology is a new type of nucleic acid amplification technology (NAIA) developed after PCR technology. The whole process of amplification reaction is carried out at the same temperature. Compared with the traditional PCR technology, it greatly simplifies their requirements 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)

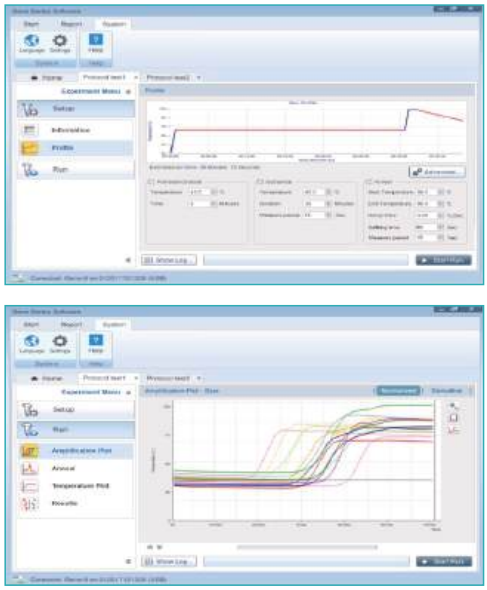
The isothermal nucleic acid kit developed by our company is based on the cross primer amplification technology (CPA) platform. It has the following advantages:

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

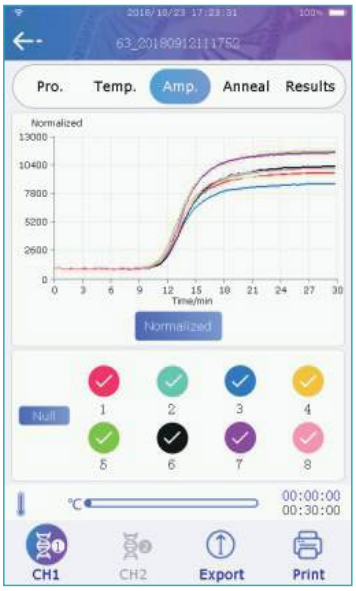


Singal Crossing CPA Technical Principles

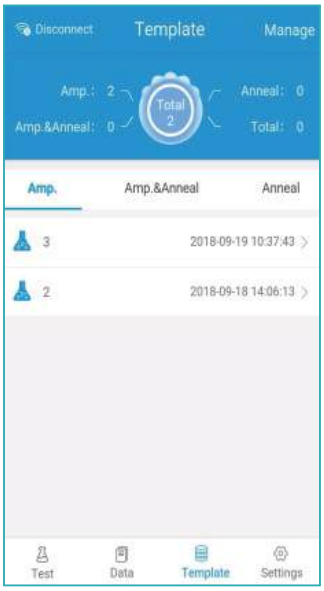
## Software



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 μL (20-30 μL recommended) |
| | Applicable dye | FAM / SYBR Green |
| Temperature control | Temperature range (°C) | 15 °C-99 °C |
| | Heating speed (°C) | 2 °C/s |
| | Cooling speed (°C) | 2 °C/s |
| | Temperature uniformity (°C) | ±0.15 °C; @39 °C |
| | Temperature accuracy/ temperature control precision (° C) | ±0.2 °C / 0.1 °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

CE

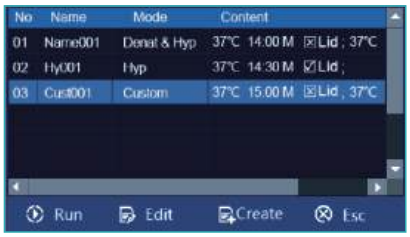
### Product Introduction

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 warmp-up and accuracy of ±1 °C
7. Superior temperature uniformity accross all slide positions
8. Perfect humidity control system

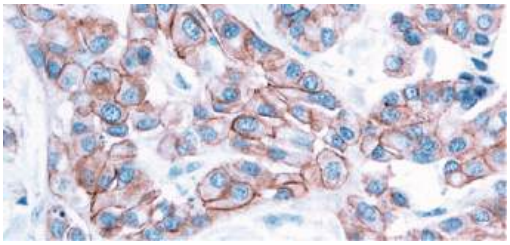
### Flow Diagram

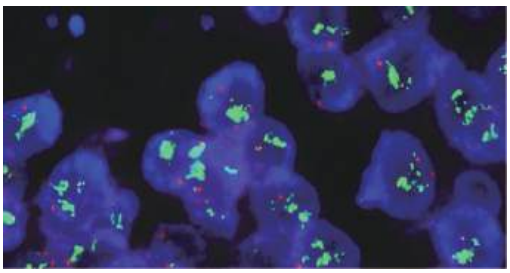



1. Touch screen display, easy programmable setting

2. Perfect humidity control system

3. Possibility to export cycles data





## Specification

| | |
|---|---|
| Temperature control range | RT. +5 °C-99.9 °C |
| Temperature accuracy | ≤±1 °C |
| Temperature uniformity | ≤±2 °C |
| Temp. display accuracy | ±0.1 °C |
| Timer | 1 min~99 h 59 min or 1 sec~99 min 59 sec |
| Heating time (37 °C to 95 °C) | ≤4 min |
| Cooling time (95 °C to 45 °C) | ≤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

CE

Bioprep-24

CE

Bioprep-24R

CE

## Method Comparison

| | Traditional method | Homogenizer |
|---|---|---|
| Sample preparation | 1. Liquid nitrogen grinding: the mortar needs to be replaced when processing different samples, and the operation is dangerous<br>2. Samples are grinded one by one, time-consuming and labor-intensive<br>3. Cross-contamination is easy to occur during grinding | 1. No liquid nitrogen treatment is required, just put the sample cut into the grinding tube, and the machine automatically grinds<br>2. Processing multiple samples at the same time makes the operation easier<br>3. Single sample and single operation to avoid cross-contamination<br>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 |
| 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)

### 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

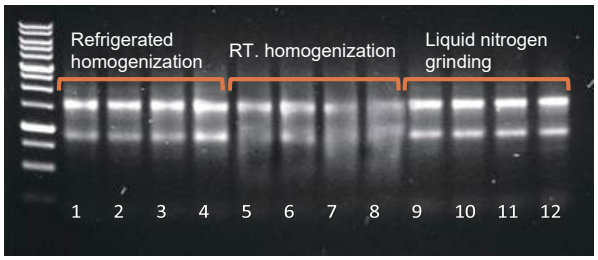
## Bioprep-24R Product Introduction

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.

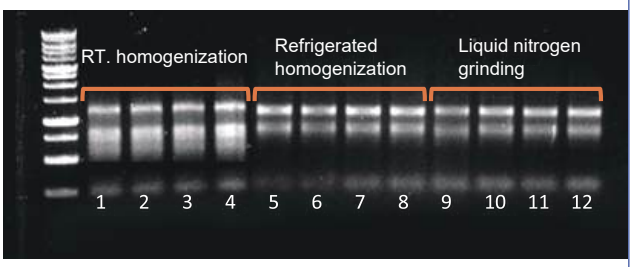
1. The lowest temperature: -10 °C
2. Internal turbo fan in the homogenized cavity can keep the temperature uniformity within 2 °C
3. Environment friendly for compressor
4. The refrigerated function effectively prevents the reduction of sample activity which caused by the high temperature when extracting 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 (Pachira macrocarpa) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 CE

Mini-6KS CE

Mini-6KC Quick Release Rotor

Mini-6KS 3-in-1 Rotor

Two Speed Options

# Mini-6K / 7K / 10K

## Mini Centrifuge

CE

## Specification

| Model | Mini-6KC | Mini-6KS | Mini-6K | Mini-7K | Mini-10K |
|---|---|---|---|---|---|
| Rotor | 8×1.5 mL / 2.0 mL tubes<br>4×8×0.2 mL PCR strip tubes<br>8 or 32×0.2 mL tubes<br>8×0.5 mL tubes | "3-in-1" rotor design, no need to replace<br>6×1.5 / 2.0 mL rotor<br>6×0.5 mL rotor<br>16×0.2 mL PCR strip rotor | 6×1.5 mL / 2.0 mL rotor<br>2×8×0.2 mL strip rotor | 6×1.5 mL / 2.0 mL rotor<br>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)<br>2,000×g (6,000 rpm) | 1,200×g (4,000 rpm)<br>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

CE

### MPC-P25 Operation

■ PCR Plates

■ Elisa Plates

■ 2 pcs PCR Plates, Skirted or Non-Skirted

■ 8×0.2 mL PCR Strip Tubes

### Specification

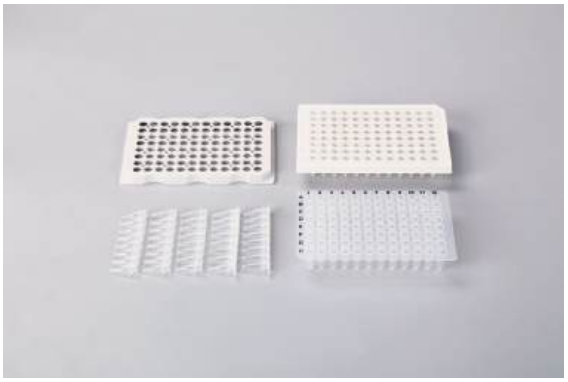
| Model | MPC-P25 |
|---|---|
| Max. rotational speed | 2,200 rpm |
| Max. RCF | 480×g |
| Capacity | 2 pcs PCR plates / Elisa plate / 24×PCR strip tubes / 192×0.2 mL PCR tubes |
| Weight | 3.6 kg |
| Dimensions (L×W×H) mm | 290×360×140 mm |
| Power supply | AC 220 V / AC 120 V, 50 / 60 Hz |

## 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

CE

## 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

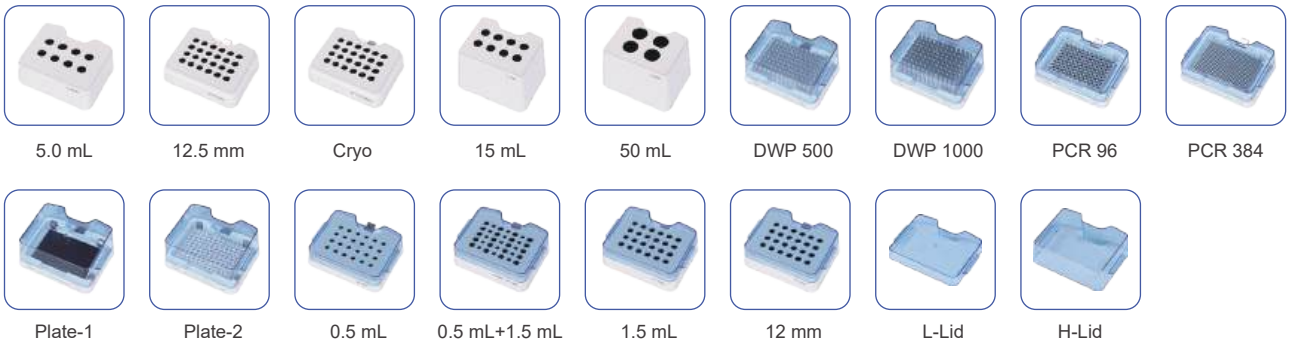
1. 4.3-inch color LCD screen display, intuitive and easy to operate
2. Power failure self-recovery function, the device can automatically resume operation according to the originally set procedure after power failure recovery
3. Various standard sample blocks are available, and the blocks can be automatically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

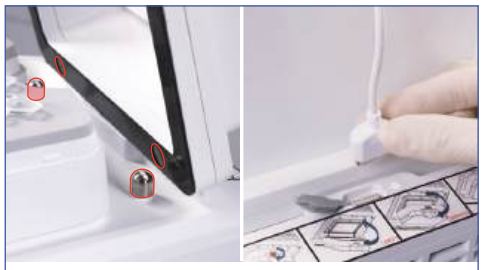
### Optional Performance Component: ThermoLid

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 |
| Cooling time 100 °C ~ 20 °C | ≤ 15 min | ---- |
| Cooling time 25 °C ~ 4 °C [1] | ≤ 20 min | ---- |
| Cooling time 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] | 100 - 3000 rpm | 100 - 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), AC 100-240 V, 200 W |
| AS-02090-00 | MS-3000 thermo shaker incubator (heating type), AC 100-240 V, 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

MS-100

## Product Introduction

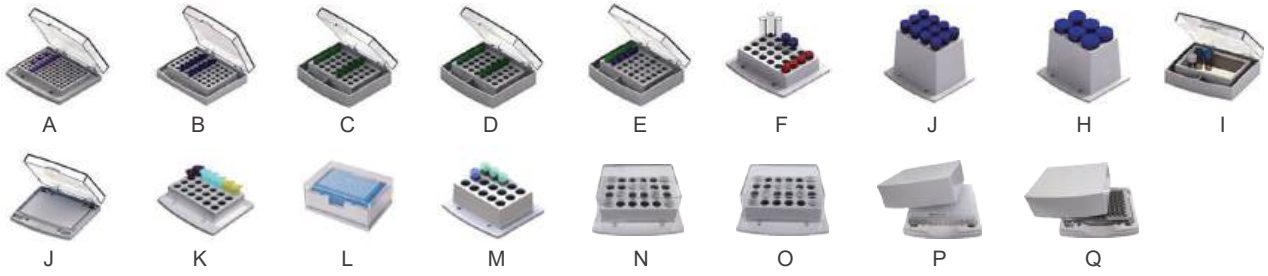
MSC-100 / MS-100 thermo shaker incubator designed for simultaneous heating, cooling and mixing of small samples. Both of them can be supplied with interchangeable blocks for microtubes.

## 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

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)<br>4 °C~100 °C (RT. ≤25 °C)<br>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)<br>≤20 min (AT. ≤25 °C: RT. ~4 °C)<br>≤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, AC 220 V / AC 120 V, 50 / 60 Hz, 150 W |
| AS-02020-00 | MSC-100 thermo shaker incubator, 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

| Code | Type | Description | Max. speed rpm |
|---|---|---|---|
| AS-02051-01 | A-200 | 96×0.2 mL tubes | 1700 / 1500 |
| AS-02051-02 | B-200 | 54×0.5 mL tubes | 1700 / 1500 |
| AS-02051-03 | C-200 | 35×1.5 mL tubes | 1700 / 1500 |
| AS-02051-04 | D-200 | 35×2.0 mL tubes | 1700 / 1500 |
| AS-02051-05 | E-200 | 15×1.5 mL+20×0.5 mL tubes | 1700 / 1500 |
| AS-02051-06 | F-200 | 24×Dia.≤Φ12 mm tube | 1500 / 1200 |
| AS-02051-07 | G-200 | 32×0.2 mL+25×1.5 mL tubes | 1700 / 1500 |
| AS-02051-08 | H-200 | 32×0.2 mL+10×0.5 mL+15×1.5 mL tubes | 1700 / 1500 |
| AS-02051-09 | I-200 | 103×67×30 mm rectangular bath block | 1500 / 1200 |
| AS-02051-10 | J-200 | 96×0.2 mL microplate | 1700 / 1500 |
| AS-02051-11 | K-200 | 24×5 mL tubes | 1500 / 1200 |
| AS-02031-01 | MIX-A | 96×0.2 mL PCR tube holder | 3000 / 2000 |
| AS-02031-02 | MIX-B | 24×0.5 mL tube holder | 3000 / 2000 |
| AS-02031-03 | MIX-C | 24×1.5 / 2.0 mL tube holder | 3000 / 2000 |
| AS-02031-04 | MIX-D | 8×15 mL tube holder | 1100 / 900 |
| AS-02031-05 | MIX-E | 3×50 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

CE

## 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-04041-01 | 20×1.5 mL tube holder (optional) |
| AS-04041-02 | 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

| Model | MTV-1 |
|---|---|
| Working mode | Continuous / short-spin |
| Shaking movement | Orbital |
| Mixing orbit | 3 mm |
| Speed range | 800~2500 rpm |
| Dimension (mm) | 74×91×84 mm |
| Input power | DC 6 V |
| 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.

5.0 mL

12.5 mm

Cryo

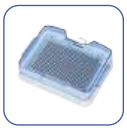
15 mL

50 mL

DWP 500

DWP 1000

PCR 96


PCR 384

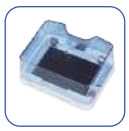


Plate-1

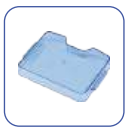
Plate-2

0.5 mL

0.5 mL+1.5 mL

1.5 mL

12 mm


L-Lid

H-Lid

Thermo Lid

## 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 |
| Cooling time 100 °C~20 °C<br>25 °C~4 °C [1]<br>20 °C~0 °C [2] | ≤ 10 min<br>≤15 min (25 °C~0 °C)<br>≤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), AC 100-240 V, 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

CE

## 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)<br>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

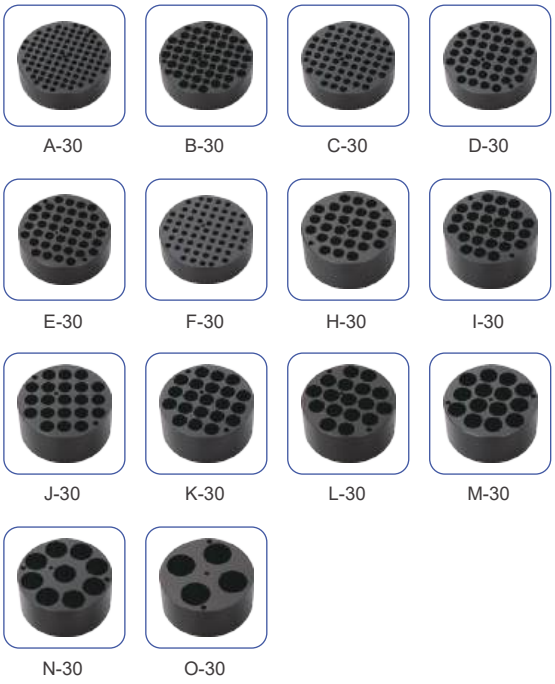
| Model | K30 |
|---|---|
| Temperature control range | RT. +5 °C-100 °C |
| Timer range | 1 min~99 h59 min |
| Temp. control accuracy | ±0.5 °C |
| Heating time (25 °C to 100 °C) | ≤15 min (@20 °C~30 °C) |
| Certificate | CE |
| Dimension (L×W×H) mm | 225×160×197 mm |
| Weight | 3 kg |

### 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 sereis 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

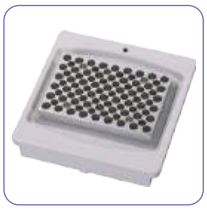
1. Adopt innovative replaceable aluminum alloy block design; block automatic identification function
2. Stepless adjustable thermo lid design, suitable for 0.2 mL, 0.5 mL, 1.5 mL, 2.0 mL centrifuge tubes, effectively preventing tube cover explosion and evaporation
3. Customize the thermo lid switch status

   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)<br>0 °C~105 °C (AT. ≤25 °C)<br>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

CE

### OS-100 / OS-200 Platforms

### Specification

| Model | OS-100 | OS-200 |
|---|---|---|
| Shaking Speed | 50--300 rpm | 50--250 rpm |
| Orbit | 10 mm | 20 mm |
| Timer range | 1 min~99 h59 min | 1 min~99 h59 min |
| Load capacity | See below table | See below table |
| Max. capacity | 3.0 kg | 2.5 kg |
| Motor | DC brushless | DC brushless |
| Operating ambient | 4~45 °C | 4~45 °C |
| Dimension (mm) | 280×270×110 mm | 280×270×110 mm |

### 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

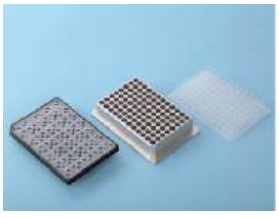
#### Security

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

CE

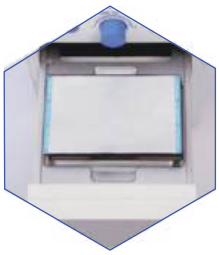
## Operation Steps

**Step1**

Pull the drawer

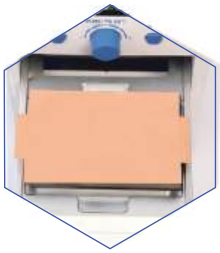
**Step2**

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

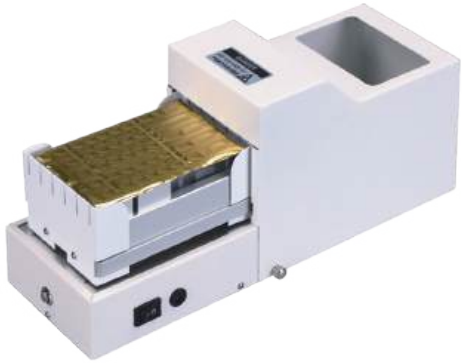
| | |
|---|---|
| Display | OLED |
| Sealing temperature | 80~200 °C (increment 1.0 °C) |
| Temperature accuracy | ±1.0 °C |
| Temperature uniformity | ±1.0 °C |
| Sealing time | 0.5~10 s (increment 0.1 s) |
| Seal plate heights | 9 to 48 mm |
| Input power | 300 W |
| Dimension (D×W×H) mm | 370×178×330 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-polyproylene 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

| Model | KD200 |
|---|---|
| Temperature control range | RT. +5 °C~150 °C |
| Temperature stability | ≤±1 °C (RT. +5 °C~100 °C) / ≤±1.5 °C (100 °C~150 °C) |
| Heating time (from 40 to 150 °C) | ≤30 min |
| Timer range | 1 min-99 h59 min |
| Maximum input power | 400 W |
| Temperature control precision | 0.1 °C |
| Needle length | 150 mm |
| Capacity | 12 pcs |
| 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-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

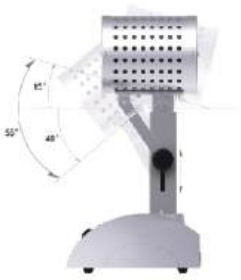
## Bacti-Cinerator Sterilizer

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 ºF (815.6 ºC). 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, 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 workside 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 μL 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

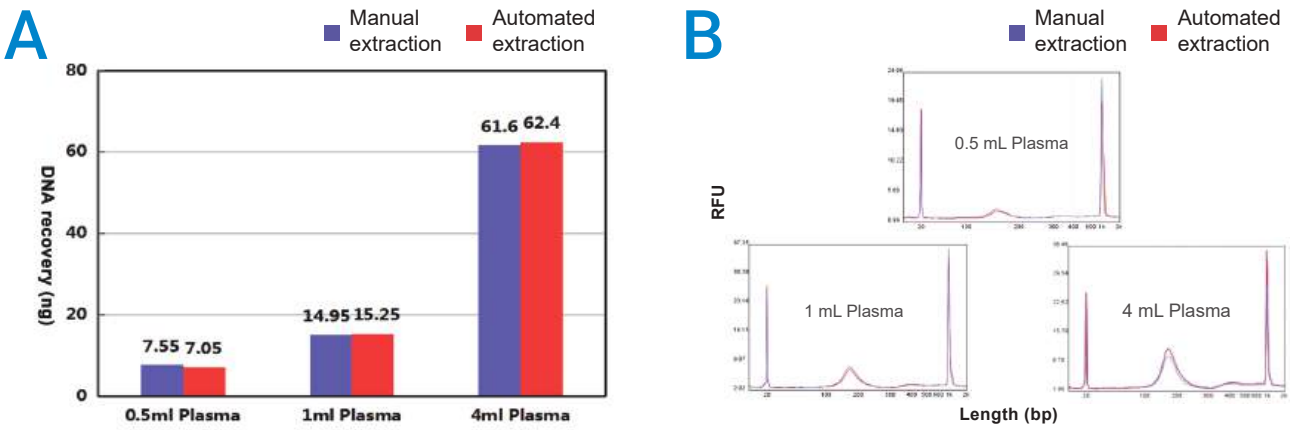
Simple operation without multiple centrifugation

### 30 μL Elution

The minimum elution volume is 30 μL to ensure nucleic acid concentration

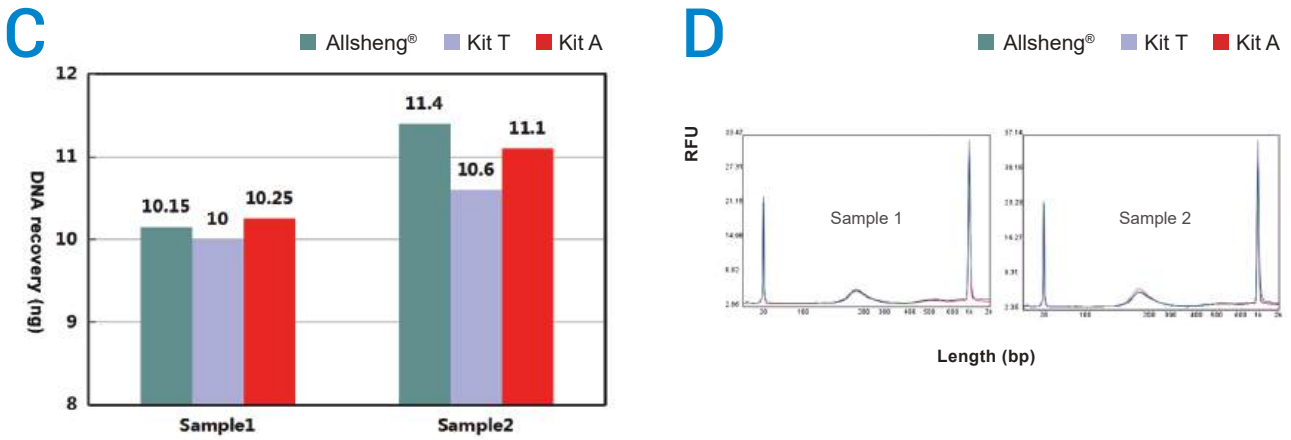
## Main Components and Specifications

| 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.

### 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.

### 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 Ranilla 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 Ranilla luciferase is usually used as an internal reference.

### 04

### Gaussia Luciferase Assay Kit

Gaussia Luciferas (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

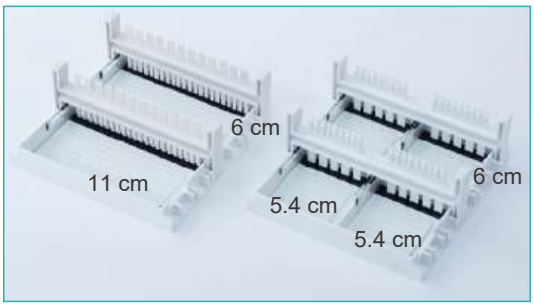
1. 2 independent incubation zones with a capacity for 12 gel cards
2. Incubator for 24 gel cards in racks at 37 °C
3. Digital interface screen for control and visualization of remaining incubation time and real temperature for each zone

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

## 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 ±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)

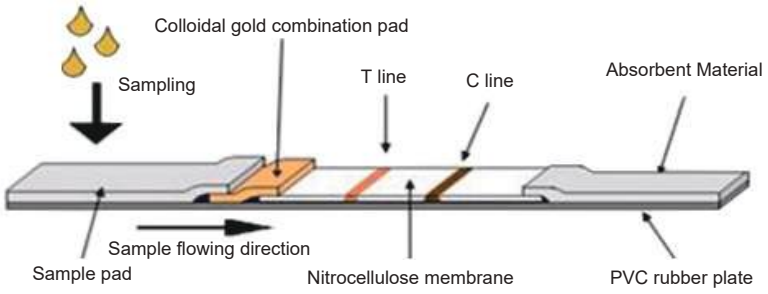
## 05

### 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 ±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)

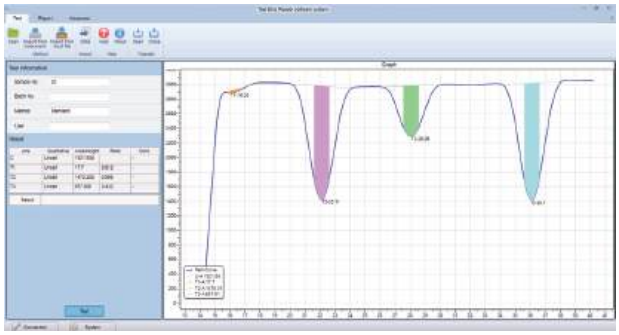
## Detection Principle

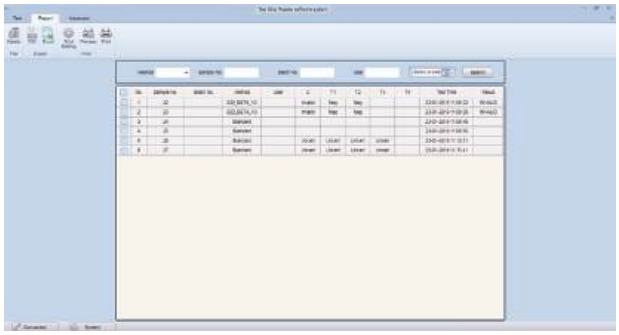
Standard test strip structure as right picture, these equipments detect sample positive or negative (concentration) by measuring reflection of light intensity of T and C line. These are also suitable for some test strip with several T lines. The TSR-100A can test 4 T lines and the TSR-200 can test 4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




## 06

### Test Strip Reader PC Software Interface





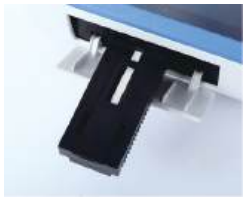
## 07

### 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 |

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Printed Version 2023.04 The products are constantly changing technology. Please refer to the real object.