

ALLSHENG

Auto-NRT 100 Automated PCR Setup System



Precise, Fast, Simple, Open
—Automated PCR Setup System

HANGZHOU ALLSHENG INSTRUMENTS CO., LTD.



Auto-NRT 100

Automated PCR Setup System



Multiple Feature

Meet the needs of PCR reagent, sample and other liquid transfer



Precise and Efficient

8-channel pipettor, quick pipetting



Graphical Software

Simple setup to complete processes



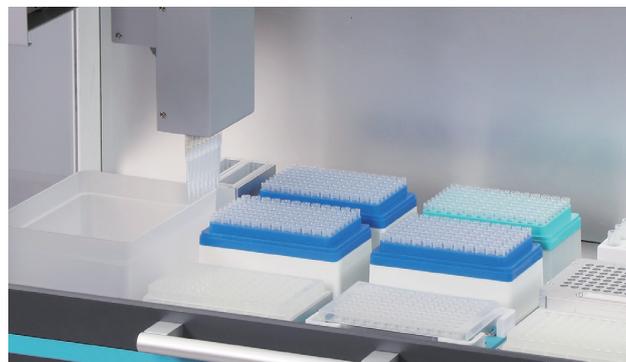
Open Design

Meet the requirements of various kits

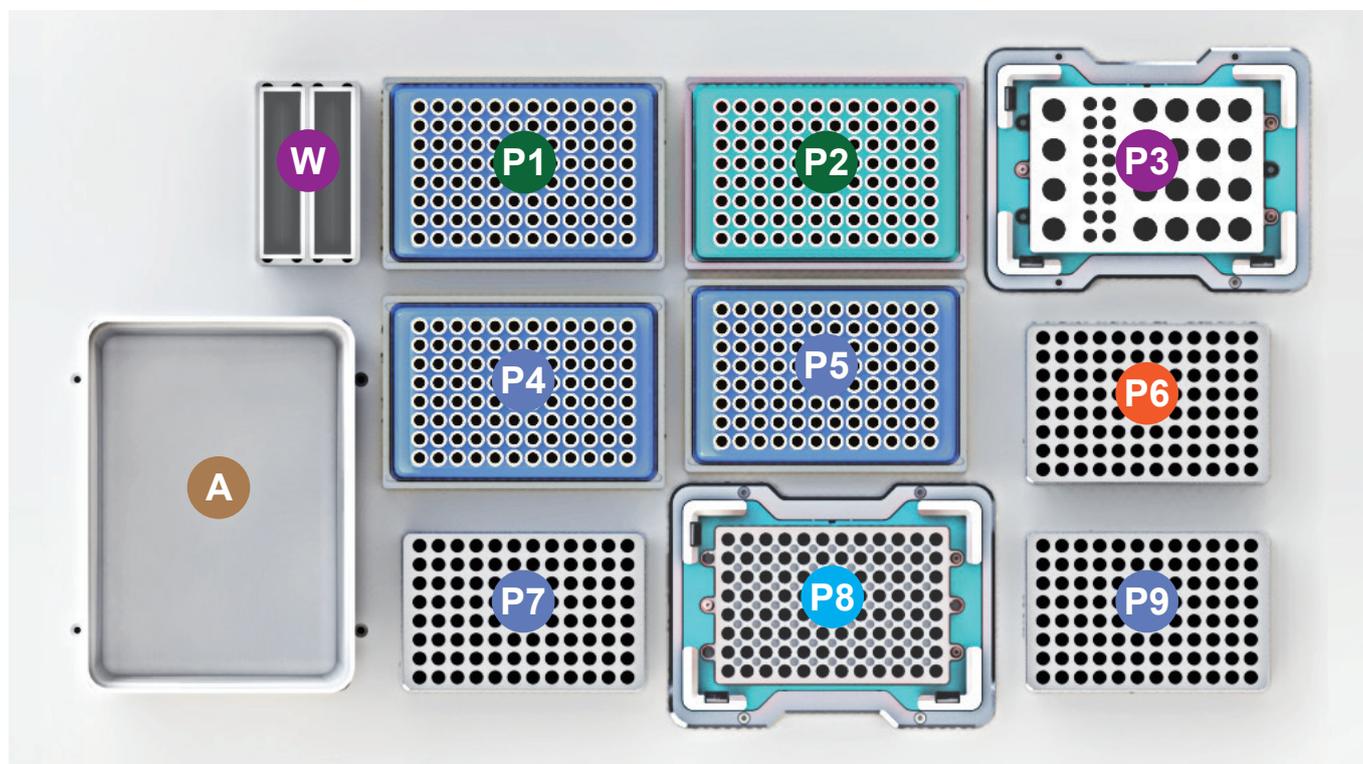
Auto-NRT 100 is a pipetting workstation specially designed for automated PCR set-up system, which can meet the set-up requirements of various types of PCR systems such as PCR and qPCR.

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.



Flexible Plate Layout



Tip Area

P1, P2 Can place 20 μL , 50 μL or 200 μL tip holder, only for single channel use.

Reaction Area

P8 Reaction area, 8-strip PCR tubes or PCR plates can be used for mixing of mix and template and subsequent PCR reactions.

- Optional temperature control module^[1] can meet special temperature needs.

Variable Area

P4, P5, P7, P9 The functional positioning of the plate position can be flexibly adjusted according to the experimental needs (can be set as TIP area or reaction area).

- TIP area: can place 20 μL , 50 μL or 200 μL of tip holder for 8-channel use.
- Reaction area: 8-strip PCR tubes or PCR plates can be placed, without temperature control module.

Reagent Area

W 2 \times 60 mL liquid tank, can be used to hold large volumes of liquids, such as ultrapure water for gradient dilution, etc.

P3 Reagent area, can be equipped with a reagent rack (2 \times 8 \times 0.2 mL PCR tubes+20 \times 2.0 mL tubes). 8 \times 0.2 mL PCR tubes can be used for gradient dilution of standards, and the other column is used for placement of small volume reagents.

- The reagent slot module can be selected according to the customer's experimental needs.
- Optional temperature control module^[1] can meet the needs of low temperature storage of special reagents.

Sample Area

P6 Equipped with a normal temperature sample rack, the corresponding sample rack can be selected according to the sample tube type. 8-strip PCR tubes or PCR plates can be placed.

Waste Area

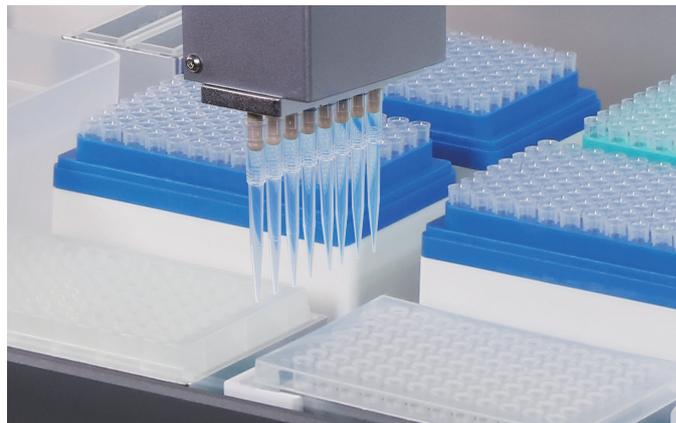
A Tip off box can be freely accessible.

[1] Temperature control module (P3, P8) parameters: temperature range: 4 ~ 105 $^{\circ}\text{C}$, accuracy: ± 0.5 $^{\circ}\text{C}$ (55 $^{\circ}\text{C}$), uniformity: ± 0.5 $^{\circ}\text{C}$ (55 $^{\circ}\text{C}$)

Features

Flexible pipettor collocations to ensure multiple throughput needs

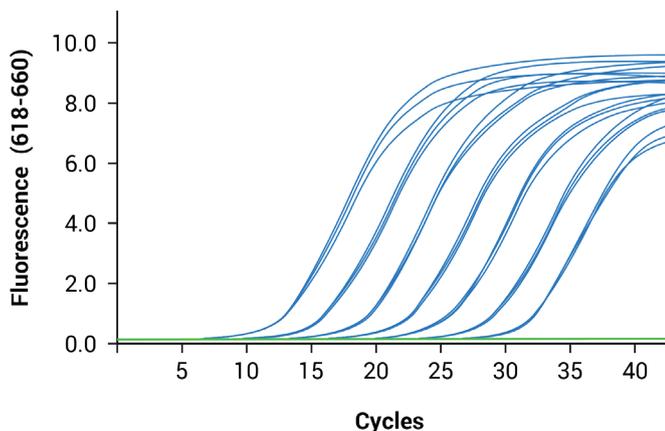
The 8-channel pipettor can be used for rapid pipetting of 8 samples, reagent addition, etc. It can also be used as a single-channel pipettor to pipetting single-well reagents, such as Mix components in advance, or gradient dilution of standards.



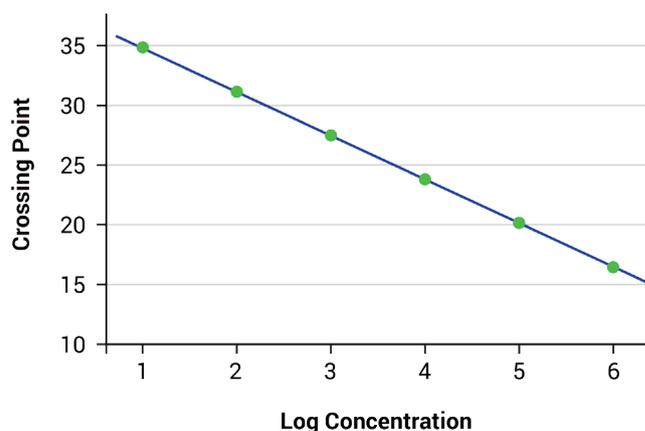
High-precision pipetting to ensure accurate results

In the process of PCR system set-up, accurate and stable pipetting volume is crucial to the accuracy and repeatability of the results. The 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.

Fluorescence History



Standard Curve



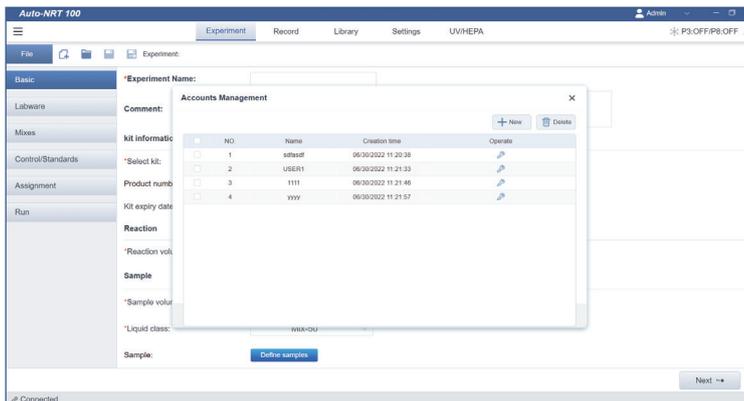
Auto-NRT 100 Gradient Dilution Result

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

Graphical software design, simple settings can complete complex processes

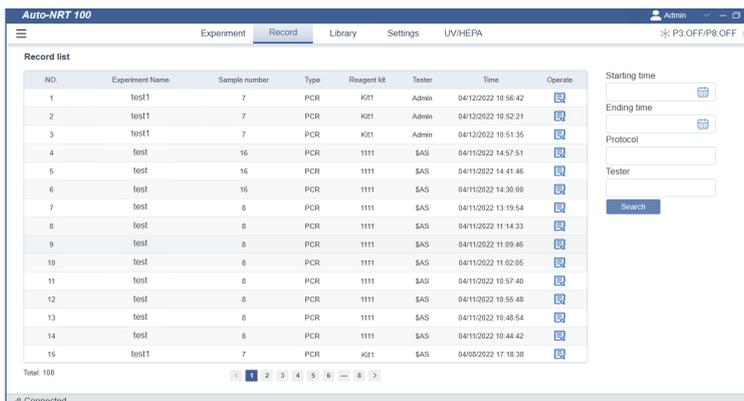
Complete User Management System

The system includes 3 layers of account permissions, which are suitable for different customer needs. Only users with valid user ID and password can log in to create programs, run applications or access electronic records. Ensure the privacy of experimental data and prevent program errors or loss due to misoperation.



Detailed Running Records

Auto-NRT 100 records all the operating procedures on the instrument in detail, which is helpful for the traceability of later experimental records. And it can be exported in pdf format, which is helpful for quick troubleshooting of instrument alarms or experimental errors.



Multiple Reagent Management Functions

The instrument can save multiple sets of kit information, and can individually set liquid parameters for different components to ensure pipetting accuracy. It can be called directly during the program setting process, which avoids repeated input of reagent information and facilitates later use. With the intelligent reminder function of the instrument, once the reagent exceeds the expiration date, the instrument will automatically alarm and prompt, avoiding the failure of the experiment caused by the problem of the reagent.



Specification

Main Machine 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 module	Equipped with 2 temperature control modules; temperature control range: 4~105 °C; temperature accuracy: 0.5 °C, @55 °C; temperature uniformity: 0.5 °C, @55 °C
UV sterilization	Equipped with UV sterilization lamp, high-efficiency purification filter device
Instrument port	USB port, CAN communication
IoT	Expandable
Size (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 %
	2 μL: ±12 %
	5 μL: ±8 %
	20 μL: ±2 %
	100 μL: ±1 %
	200 μL: ±1 %
Precision (CV)	1 μL: ≤5 %
	2 μL: ≤5 %
	5 μL: ≤4 %
	20 μL: ≤2 %
	100 μL: ≤1 %
	200 μL: ≤1 %

Ordering Information

Main Machine Ordering Information

Code	Description
AS-26010-00	Auto-NRT 100 automated PCR setup system, 100-24 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-24030-00	Au-Cooler dry baths for workstation (heating/cooling), 24 VDC, 160 W, with CAN

TIP Consumables

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	
AS-TT-50-NS	50 µL	Allsheng tip, transparent, boxed, sterile	
AS-TT-50-NSL	50 µL	Allsheng tip, transparent, boxed, sterile, low adsorption	
AS-TTF-50-NS	50 µL	Allsheng tip, transparent, boxed, sterile, filter element	
AS-TTF-50-NSL	50 µL	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption	
AS-TT-200-N	200 µL	Allsheng tip, transparent, boxed	
AS-TT-200-NL	200 µL	Allsheng tip, transparent, boxed, low adsorption	
AS-TT-200-NS	200 µL	Allsheng tip, transparent, boxed, sterile	
AS-TT-200-NSL	200 µL	Allsheng tip, transparent, boxed, sterile, low adsorption	
AS-TTF-200-NS	200 µL	Allsheng tip, transparent, boxed, sterile, filter element	
AS-TTF-200-NSL	200 µL	Allsheng tip, transparent, boxed, sterile, filter element, low adsorption	

Consumable

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

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