## PARAMETERS

| | |
|---|---|
| **Model** | Panall 8000 |
| **Sample Throughput** | 1~8 samples at the same time |
| **Pipetting Range** | 20μL ~250μL |
| **Detection time** | 1~2 hours,relying on the reagent |
| **Channel and Available Fluorescein** | Channel 1: FAM, SYBR Green I, etc.<br>Channel 2: VIC, HEX, TET, JOE, etc.<br>Channel 3: ROX, Texas Red, etc.<br>Channel 4: Cy5, etc. |
| **Pipetting Performance** | 20μL ≤ V＜40μL: accuracy: A≤5.0%, repeatability: CV≤3.0%<br>40μL ≤ V＜100μL: accuracy: A≤3.0%, repeatability: CV≤1.5%<br>V ≥100μL: accuracy: A≤1.0%, repeatability: CV≤1.0% |
| **Extraction Heating Rate** | Average heating rate: ≥ 1.5℃/s； |
| **Extraction Temperature Accuracy** | ≤ 1.0℃ |
| **PCR Heating Rate** | Average heating rate: ≥ 4.5℃/s<br>Maximum heating rate: ≥ 6.1℃/s |
| **PCR Cooling Rate** | Average cooling rate: ≥ 3.5℃/s;<br>Maximum cooling rate: ≥ 5.0℃/s. |
| **PCR Temperature Accuracy** | ≤ 0.1℃ |
| **Sample Testing Linearity and Repeatability** | Linear correlation: /r/ ≥ 0.998<br>Repeatability: CV≤ 1.5% |
| **Information Management** | Sample information: with scanner inside,<br>Panall 8000 can scan and record the sample information;<br>Reagent information: visual system can automatically identify the kit information and run the corresponding program |
| **Minimized Contamination** | Directional exhaust & negative pressure system;<br>HEPA filtration;<br>UV disinfection;<br>Shortest fixed path for sample operation |
| **Data Storage** | 1000 experiment files can be stored |
| **Language** | Chinese and English |
| **Power Supply and Power Consumption** | AC 100~240V, 50/60Hz; 1200VA |
| **Communication Specification** | Internet Port: TCP/IP protocol, Ethernet connection<br>USB Port: USB 2.0 |
| **Dimension** | 750mm(L) × 350mm (W) × 600mm (H) |
| **Weight** | 80Kg |

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*Bring Technology to Life*

TIAN LONG

# Panall 8000

## *All-in-one Molecular Diagnosis System*

Embrace flexibility with ***open system*** to create broad molecular test menu



Tianlong Panall 8000 All-in-one Molecular Diagnosis System is a simple and secure molecular diagnosis system that integrates the functions of sample tube decapping/capping, sample loading, nucleic acid extraction, PCR setup, PCR detection and result analysis, which can realize a true sample in -result out detection process and bring great convenience for professionals with only one-key operation.

Panall 8000 is designed as an open platform that is compatible with molecular diagnostic tests from different manufacturers. Tianlong intends to collaborate with best-in-class IVD assay developers to bring new tests to the Panall 8000 All-in-one Molecular Diagnosis System for a broad range of disease categories.

## COMPATIBLE CONSUMABLES

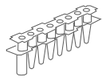


Specialized sample tube



Specialized nucleic acid extraction kit

*Tianlong can customize nucleic acid extraction reagents to match your PCR detection needs



Specialized nucleic acid detection kit

*Open system for PCR protocol and compatible with PCR reagents from different manufactures




Sample in -result out system

## TEST PORTFOLIO

Tianlong offers an extensive menu of tests on the system covering respiratory infections, encephalitis/meningitis infections, gastrointestinal infections, and pharmacogenomics. Tianlong also offers customized reagents for the Panall 8000 All-in-one Molecular Diagnosis System that enables labs to program user-defined PCR analysis protocols and streamline their PCR tests.

**Gastrointestinal Infections**

**Respiratory Infections**

**Pharmacogenomics**

Expand Testing Menu

**Bloodborne Infections**

**Encephalitis/Meningitis Infections**

**Customized reagents**
(open system for PCR protocol)

## OPEN SYSTEM

Tianlong Panall 8000 is an open system that enables laboratories to program user-defined PCR analysis protocols. Laboratories can use user-defined protocols in addition to those developed by Tianlong. The simple and efficient design of the Tianlong Panall 8000 allows you to test a wide range of sample types and meet emerging diagnostic requirements through customized reagents. Tianlong intends to work with our partners to bring more new tests to the Panall 8000 for detection of a broad range of disease categories.

***Features***

**Compatible with PCR reagents from different manufactures**

Empty PCR tubes work with your PCR reagents




**Customize collaboration mode for a more diversified menu**

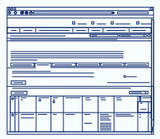
Tianlong will collaborate with our partners to jointly expand the testing menu. Tianlong can customize nucleic acid extraction reagents to match your PCR reagents for more business possibilities.

**Available for more application scenarios**

An open system with a diversified testing menu can meet your emerging diagnostic requirements and apply in more scenarios. Tianlong Panall 8000 compatible with your reagents can optimize the detection process with minimal hands-on time and make detection more efficient.

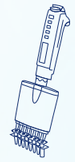
### The open system workflow on Tianlong Panall 8000

**Set user-defined protocols**



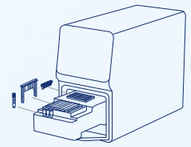
Laboratories can program user-defined PCR analysis protocols according to their testing needs.

**Tranfer PCR reagents**



Professionals can transfer your PCR reagents to the Tianlong specialized PCR tubes.

**Load samples and reagents**



Load the sample tubes, extraction reagent, and PCR reagent to Tianlong Panall 8000 and start your experiment.

**Analysis and report**




Panall 8000 can start detection with one-key operation and report in about 1-2 hours, relying on the reagent.

## APPLICATION AREA












# APPLICATION CASE

## Bloodborne pathogen detection reagents from KHB on Tianlong panall 8000




- Detection of top 3 bloodborne pathogens: HBV, HCV, HIV (Type1+2)
- High sensitivity and high specificity
- Wide subtypes coverage

| Testing item | Product Name | Target Pathogen |
|---|---|---|
| Bloodborne Infections | KHB Nucleic Acid Testing Kit for HBV DNA, HCV RNA and HIV RNA (Type 1+2) | HBV, HCV, HIV(Type 1+2) |
| | KHB Hepatitis B Virus (HBV) Nucleic Acid Detection Kit | HBV |
| | KHB Hepatitis C Virus (HCV) Nucleic Acid Detection Kit | HCV |
| | KHB Immunodeficiency Virus Type 1 (HIV-1) Nucleic Acid Detection Kit | HIV (Type 1) |

### Kit Specifications

| Product Name | KHB Nucleic Acid Testing Kit for HBV DNA, HCV RNA and HIV RNA (Type 1+2) (Real-time PCR) | KHB Hepatitis B Virus (HBV)Nucleic Acid Detection Kit (Fluorescence PCR Method) | KHB Hepatitis C Virus (HCV) Nucleic Acid Detection Kit (Fluorescence PCR Method) | KHB Human Immunodeficiency Virus Type 1(HIV-1) Nucleic Acid Detection Kit (Fluorescence PCR Method) |
|---|---|---|---|---|
| Specimen | Serum/plasma | | | |
| Analysis Method | Qualitative | Quantitive | Quantitive | Quantitive |
| 95% LOD | HBV: 1.087 IU/mL, HCV: 3.385 IU/mL HIV-1: 12.957 IU/mL, HIV-2: 22.592 IU/mL | 5 IU/mL | 12.5 IU/mL | 20 IU/mL |
| Precision | CV≤5% | CV≤5% | CV≤5% | CV≤5% |
| Storage & Validity | -20℃±5℃ for 12 months | | | |
| Cat.No | KH-G-M-568-96-W1 | KH-G-M-569-96-W KH-G-M-569-32-W | KH-G-M-570-96-W KH-G-M-570-32-W | KH-G-M-582-96-W KH-G-M-582-32-W |
| Specification | 96T/Kit | 96T/Kit 32T/Kit | 96T/Kit 32T/Kit | 96T/Kit 32T/Kit |
| Compatible Extraction Kit | T552H-Tianlong Nucleic Acid Extraction Kit (For blood screening)  | | T562H-Tianlong Nucleic Acid Extraction Kit (For HIV/HBV/HCV)  | |

# ATTACHED FILE

## SOP for setting your PCR protocol in panall 8000 open system

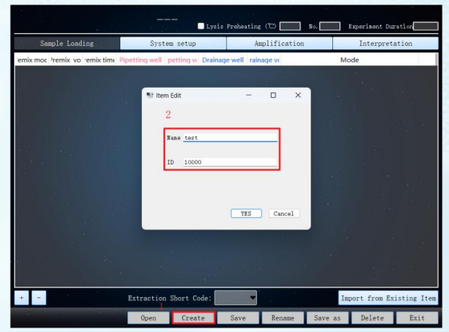
### 1 Start setting

Login in superadmin mode. Choose in turn Setting>Item Management>Item Edit



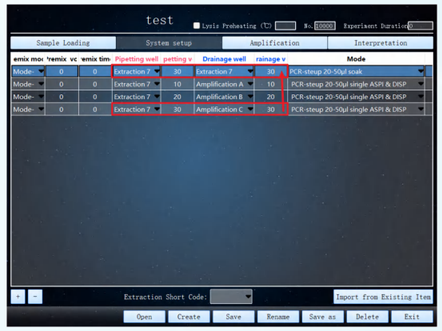

### 2 Set new experiment

Edit the new experiment name and ID



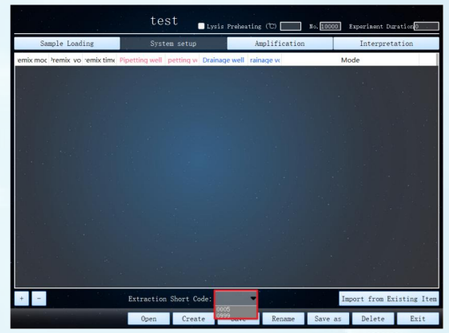

### 3 Sample loading and PCR system setup

Choose sample loading, mixing and dispensing mode and set parameters



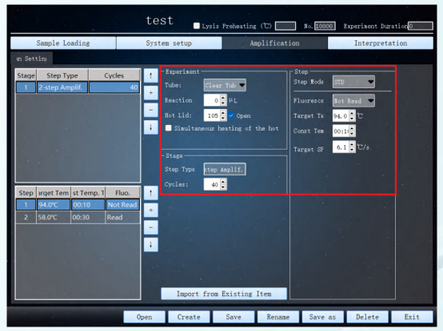

### 4 Choose extraction protocol

Choose the extraction reagent protocol according to your detection needs




### 5 Set PCR protocol

Choose the amplification method and set the amplification cycles and steps




### 6 Set target gene and internal control

Result analysis by independent gene interpretation or Joint gene interpretation




*After PCR protocol set up, user can save the protocol as an template, and start your new experiment quickly with pre-configured templates.