

**Easy diagnostic automation
one button to result**

iFIND® S2



iFIND® S4



iFIND® S8



iFIND®

Automatic Nucleic Acid Detection and Analysis System

Fully automatic | Fully integrated | Convenience | Standardization

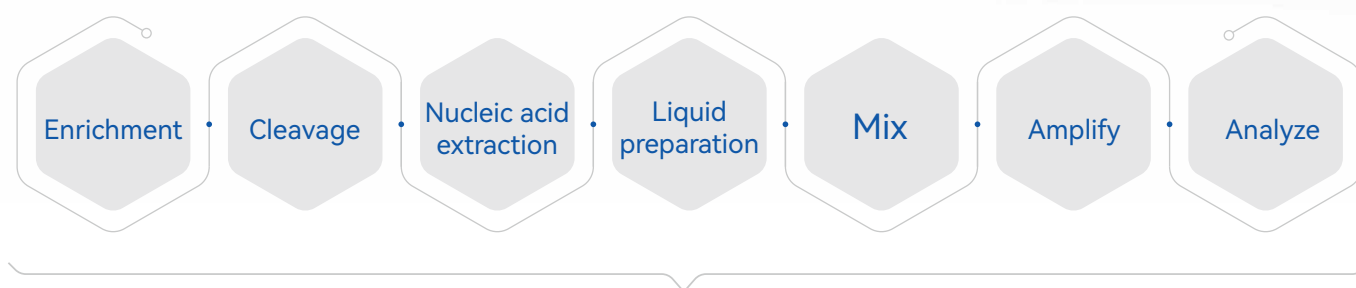
Usher in a new era of fully integrated molecular diagnostics automation



PRODUCT ADVANTAGES

Subvert the tradition, redefine molecular POCT

IFIND automatic nucleic acid detection and analysis system, based on microfluidic technology, with integrated closed cartridge, built-in pre-loaded freeze-dried detection reagents, breaking the traditional molecular detection laboratory requirements of environmental conditions, a variety of supporting equipment requirements, personnel experimental skills requirements of many constraints, subverted the traditional nucleic acid detection process complex, cumbersome operation, time-consuming and labor-consuming, environmental requirements. High disadvantages, the real realization of "sample in, result out" automatic nucleic acid detection.



Addition

7 in
ONE



Result



Sample in,
result out



Independent module,
on the spot check

30-100_{min}
RR report

1-8 Samples
Simultaneous detection
by a single machine



S2/S4/S8 multiple
flux flexible selection



Detection of infectious disease
pathogens, drug resistance
genes and tumor genes, etc.

64 Samples
Were detectable at
a maximum of 8 hours

6 Colors
Fluorescence
Channels

10+
Single tube can be over
10 re-scale detection

| Minimal operation process



Sample
pre-processing



One step
sample



Software
setup



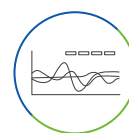
Code
entry



Box
loading



warehouse
operation



automatic a
nalysis



TECHNICAL CHARACTERISTICS



Automatic analysis

- One-click software, quickly complete the program setting,
- Automatic analysis, report direct reading



Microfluidic Cartridge

- Fully enclosed cartridge to eliminate contamination
- Fully automatic experimental process without manual operation
- Combined with freeze-dried enzyme reaction bead technology, the reagent can be stored at room temperature for 2 years



Multi-target detection

- 6-channel fluorescence
- Nested PCR method
- Fluorescence probe melting curve technology
- Single tube more than 10 multiple target detection



Ultra-fast temperature change

- Sheet type reaction chamber, combined with sonic heat transfer temperature control technology
- The maximum temperature change rate exceeds 10°C/s
- Time to first result < 30mins



MicroUnit sample processing technology

- A new generation of automated ultrasonication combined with chemical treatment technology
- Efficient treatment of fungi, Mycobacterium tuberculosis and other difficult samples



Microfluidic technology



Efficient sample processing technology



Optical coaxial control technology



Sonic heat transfer technique



Totally enclosed pollution technology



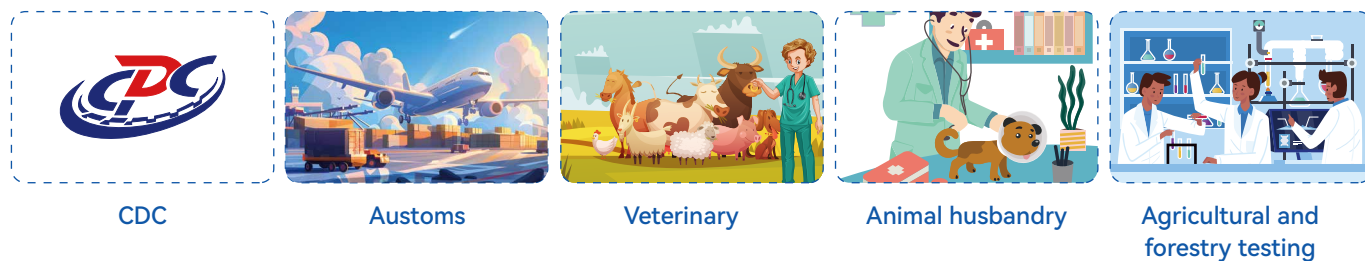
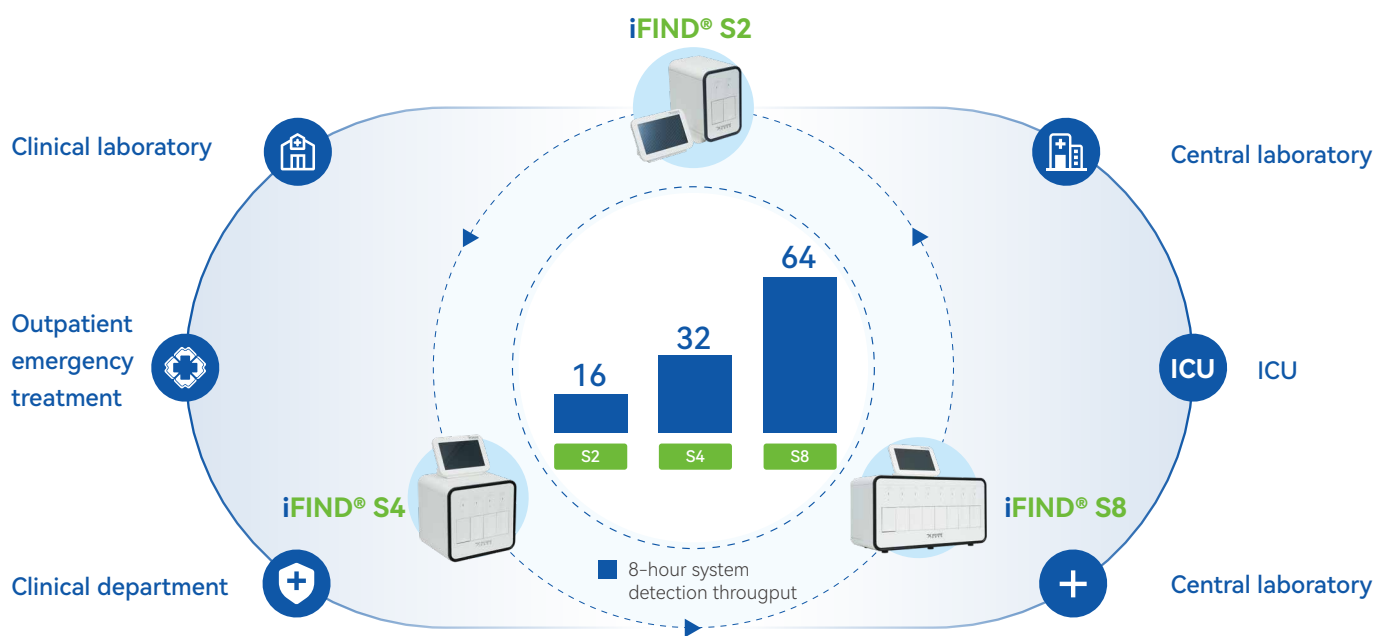
Reagent freeze-drying technique



APPLICATION SCENARIO

The "iFIND" system adopts a modular design, and each operating module has independent devices for sample processing, nucleic acid purification, PCR temperature control and fluorescence detection. Each module does not interfere with each other, and can run different types of pathogen nucleic acid detection projects at any time to realize the on-site detection of different samples and different detection items.

The reasonable operation cost and small size enable the test to be carried out closer to the patient. While ensuring the safety of the test, it greatly shortens the turnaround, transportation and waiting time required to send samples to the central laboratory for testing. It is more suitable for clinical departments, outpatient and emergency departments, primary medical institutions, on-site emergency and other application scenarios. When the throughput demand increases, the throughput can be rapidly expanded through the splicing of iFIND system, so that the detection application has greater flexibility.





APPLICATION AREA

Tuberculosis infection

- Mycobacterium Tuberculosis and Rifampicin Resistance Gene Test Kit (Fluorescent PCR Method)
- Mycobacterium Tuberculosis Isoniazid and Fluoroquinolone Resistance Gene Test Kit (Fluorescent PCR Method)
- Mycobacterium Tuberculosis and Non-mycobacterium Tuberculosis Identification Kit (Fluorescent PCR Method)

Fungal infections

- Five Candida Nucleic Acid Test Kit
- Multiple Invasive Fungal Nucleic Acid Test Kit
- Dermatophyte nucleic acid detection

iFIND®

Bacteria and drug resistance

- Five Infectious Diarrhea Virus Nucleic Acid Test Kit
- Five Food Borne Bacteria Nucleic Acid Test kit
- Staphylococcus Aureus and Methicillin-resistant Staphylococcus Aureus Nucleic Acid Test Kit
- Five Genital Tract Infection Pathogen Nucleic Acid Test Kit

Virus infection

- Five Infectious Diarrhea Virus Nucleic Acid Test Kit (PCR-Fluorescent Probe Method)
- Dengue virus & Zika virus & Chikungunya virus & Hantavirus Nucleic Acid Test Kit
- Coxsackievirus A6/A10/A16 & Enterovirus 71 & Enterovirus Universal Nucleic Acid Test

Test item information

Test item	Product name	Detection target
Tuberculosis detection	Mycobacterium Tuberculosis and Rifampicin Resistance Gene Test Kit (Fluorescent PCR Method)	Identification of Mycobacterium tuberculosis complex: IS6110+IS1081(Curve of amplification) Rifampicin resistance: rpoB Gene 81bpResistance determining region (Curve of melting)
	Mycobacterium Tuberculosis Isoniazid and Fluoroquinolone Resistance Gene Test Kit (Fluorescent PCR Method)	Isoniazid inhA and katG gene resistance loci Fluoroquinolones gyrA gene resistance loci
	Mycobacterium Tuberculosis and Non-mycobacterium Tuberculosis Identification Kit (Fluorescent PCR Method)	Mycobacterium, Mycobacterium tuberculosis complex, Mycobacterium avium, Mycobacterium intracellulare, Mycobacterium kansasii, Mycobacterium abscessus complex, Mycobacterium chelonae and Mycobacterium fortuitum
Detection of Fungi	Five Candida Nucleic Acid Test Kit (Fluorescent PCR Method)	Candida albicans, tropical Candida, smooth Candida, near smooth Candida, Klebsiella pneumoniae
	Multiple Invasive Fungal Nucleic Acid Test Kit (Fluorescent PCR Method)	Aspergillus, Aspergillus terreus, Cryptococcus, Pneumocystis jirovecii, Mucorales, Talaromyces marneffei
	Dermatophyte nucleic acid detection kit (PCR-fluorescent probe Method)	Dermatophyte, Trichophyton SPP., Microsporum SPP., and epidermophyton SPP
Drug resistance n bacteria	ESKAPE Multipathogenic Nucleic Acid Test Kit (Fluorescent PCR Method)	Escherichia coli, Pseudomonas aeruginosa, Acinetobacter baumannii, Klebsiella pneumoniae, Enterococcus,
	Staphylococcus Aureus and Methicillin-resistant Staphylococcus Aureus Nucleic Acid Test Kit(PCR-Fluorescent Probe Method)	Staphylococcus aureus,Staphylococcus aureus, Methicillin resistant Staphylococcus aureus (MRSA)
	Carbapenem-resistant Gene Nucleic Acid Test Kit (Fluorescent PCR Method)	KPC、NDM、VIM、IMP、OXA-48
Pathogens of diarrhea	Five Infectious Diarrhea Virus Nucleic Acid Test Kit (PCR-Fluorescent Probe Method)	Norovirus, rotavirus, enteric adenovirus, astrovirus, Sapovirus
	Five Food Borne Bacteria Nucleic Acid Test kit (PCR-Fluorescent Probe Method)	Salmonella, Shigella, Campylobacter jejuni, Campylobacter coli, Vibrio parahaemolyticus
	Five Food Borne Bacteria Nucleic Acid Test kit (PCR-Fluorescent Probe Method)	Salmonella, Shigella, Escherichia coli O157, Staphylococcus aureus, Listeria monocytogenes
Insect-borne transmission	Dengue virus & Zika virus & Chikungunya virus & Hantavirus Nucleic Acid Test Kit (PCR-Fluorescent Probe Method)	Norovirus, rotavirus, enteric adenovirus, astrovirus, Sapovirus
Reproductive tract	Five Genital Tract Infection Pathogen Nucleic Acid Test Kit (PCR-Fluorescent Probe Method)	Salmonella, Shigella, Campylobacter jejuni, Campylobacter coli, Vibrio parahaemolyticus
Hand, foot and mouth	Coxsackievirus A6/A10/A16 & Enterovirus 71 & Enterovirus Universal Nucleic Acid Test Kit (PCR-Fluorescent Probe Method)	Salmonella, Shigella, Escherichia coli O157, Staphylococcus aureus, Listeria monocytogenes

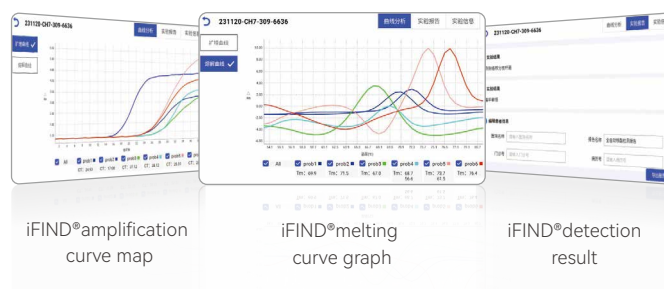


APPLICATION CASES

| TB series cartridge performance parameters

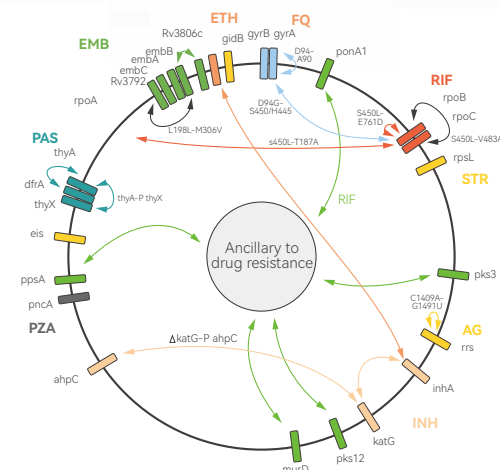
	Mycobacterium Tuberculosis and Rifampicin Resistance Gene Test Kit (Fluorescent PCR Method)		Mycobacterium Tuberculosis Isoniazid and Fluoroquinolone Resistance Gene Test Kit (Fluorescent PCR Method)		Mycobacterium Tuberculosis and Non-mycobacterium Tuberculosis Identification Kit (Fluorescent PCR Method)
Function	identification of Mycobacterium tuberculosis complex (MTBC)	Rifampicin resistance testing	Testing for isoniazid resistance	Testing for fluoroquinolone resistance	Avium, intracellulare, Chelonae, Abscessus, Mycobacterium kansasii, Mycobacterium fortuitum, Mycobacterium tuberculosis complex, Mycobacterium SPP
Target of detection	IS6110 IS1081	The rpoB gene 81bp resistance-determining region	The inhA gene The katG gene	The 9rA gene	ITS interval
Index of determination	Curve of amplification Ct value	Curve of melting T _m value	Curve of melting Value of T _m	Curve of melting T _m value	Ct value of amplification curve + T _m value of melting curve
Limit of detection (LOD)	10 CFU/mL	100 CFU/mL	100 CFU/mL	100 CFU/mL	100 CFU/mL
Type of Sample	Sputum, bronchoalveolar lavage fluid, culture, etc				
Sample handling	Automated sonication combined with chemical treatment				
Whole process time	90min		100min		100min

Identification of Mycobacterium tuberculosis complex by using iFind system and kit Compared with the similar method recommended by WHO, the detection of rifampicin resistance determining region of rpoB gene can ensure the consistency of identification results and shorten the reporting time Twenty percent.



| rpoB gene resistance loci high coverage

The nucleic acid samples were detected by Mycobacterium tuberculosis and rifampicin resistance gene detection kit. A total of 143 samples, except for 1 case was not detected, the rest of the test results and drug resistance evaluation The coincidence rate was 100%.





CLINICAL SIGNIFICANCE

| Tuberculosis

Number of cases

748,000

30,000

People died

550/100^{thousand}

Incidence rate

20/100^{thousand}

Mortality

| Drug-resistant tuberculosis

410,000

Global Patient numbers

—WHO Global tuberculosis report 2023

| International and domestic clinical guidelines actively promote the detection of molecular drug resistance of tuberculosis to detect patients with drug resistance as early as possible

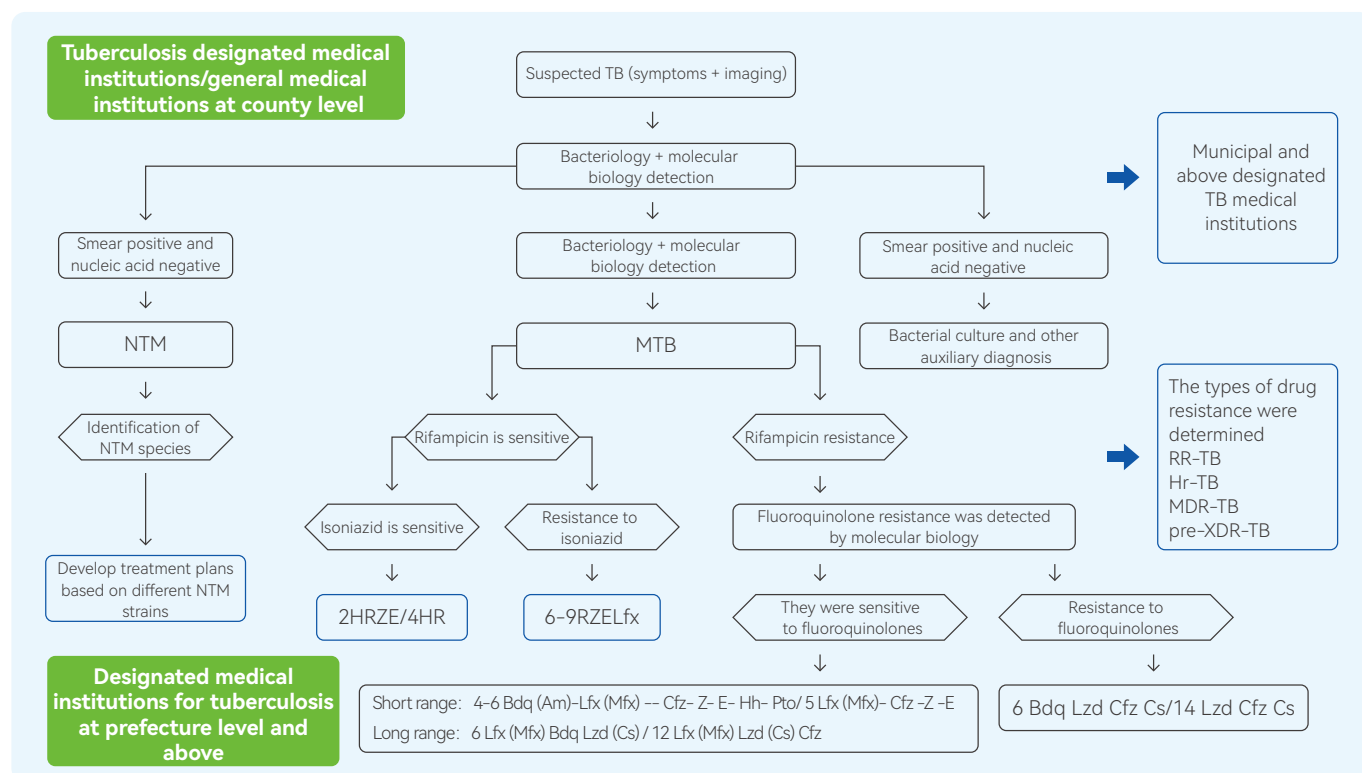
- 01 Molecular DST is recommended to detect smear-positive specimens for early diagnosis and treatment^[1].
- 02 The rapid detection technology of multidrug resistance should be actively promoted to find drug-resistant patients as soon as possible^[2].
- 03 Regardless of rifampicin resistance, TB patients should be timely tested for isoniazid and fluoroquinolones resistance to guide the development of treatment plans^[3].

[1] Expert consensus on the detection of Mycobacterium tuberculosis drug resistance (2019)

[2] Technical Guidelines for tuberculosis prevention and control in China (2021)

[3] To accurately identify strains and clarify the types of drug resistance to guide clinical treatment decisions

| To accurately identify strains and clarify the types of drug resistance to guide clinical treatment decisions



Remarks: MTB: Mycobacterium tuberculosis complex, NTM: non-tuberculous mycobacteria, RR-TB: rifampin-resistant tuberculosis, Hr-TB: single isoniazid resistant tuberculosis, MDR-TB: multi-drug resistant tuberculosis, pre-XDR-TB: quasi-extensive drug resistance tuberculosis, R rifampin, H: isoniazid, Z pyrazinamide,

E: Ethambutol, Lfx: Levofloxacin, Mfx: Moxifloxacin, S: Streptomycin, Pto: prothionamide, Bdq: Bedaquene, Mfx: moxifloxacin, Lzd: linezolid, Cfz: clofazimine, Cs: cycloserine, Am: Amikacin, Cm: coilimulab



INSTRUMENT PARAMETERS

Instrument performance parameters

Thermal parameters

Mode of operation	Operation mode Each module runs independently
Temperature control mode	Temperature control mode Peltier semiconductor module temperature control
Maximum warming rate	≥11.5 °C/SEC (from 50 °C to 95 °C)
Maximum cooling rate	≥9.5 °C/SEC (from 95 °C to 50 °C)
Accuracy of temperature	±0.1 °C
Temperature uniformity	±0.1 °C @60 °C ±0.1 °C @90 °C

Optical parameters

Excitation light source	Excitation light source maintenance-free monochrome LED
Detection device	high performance photodetector
Optical features	Excitation light: 404-650, emission light:460-765 (The excitation and emission light can be freely combined)

Parameters of detection

Repeatability of fluorescence intensity detection	CV ≤3%
he precision CV of fluorescence intensity detection	CV ≤5%
Interference of different fluorescence channels	The fluorescence detection intensity values of different channels interfering with other channels were not higher than the fluorescence threshold of the target channel
The CV of sample repeatability	CV ≤3%
The detection of fluorescence intensity was linear	Fluorescence intensity detection linear five concentration gradient range, linear regression coefficient r 0.990 or higher
Sample linear dependence	Sample concentration gradient of the linear correlation between five range, linear regression coefficient r 0.980 or higher

Performance parameters of the card box

Material quality	Polypropylene polypropylene
Frequency of use	One time
Sample pretreatment methods	Automated sonication combined with chemical treatment
Accounting purification method	Automatic adsorption and purification of microfiltration membrane
Tuberculosis identification and drug resistance detection technology	Nested PCR and melting curve of fluorescent probes
reagent	Nested PCR and melting curve of fluorescent probes

System information

Model number	iFIND® S2	iFIND® S4	iFIND® S8
Dimensions	260 mm(L)×320 mm (W)×365 mm (H)	370 mm(L)×320 mm (W)×365 mm (H)	650 mm(L)×320 mm (W)×365 mm (H)
Weight	15kg	27kg	50kg
Power supply specification	Power supply voltage: 100-240V(power supply voltage fluctuation within ±10%) Power supply frequency: 50/60 Hz		

Professional information for healthcare professionals only

For more information, please visit www.rocgenecom or scan the QR code below to follow Kunpeng Gene official wechat account.

The right of final interpretation of the above content belongs to Kunpeng Gene (Beijing) Technology Limited.



📍 Bld 1,TBD Center, Changping District, Beijing,China

☎ 010-86229225

🌐 www.rocgenecom

