

SARS-CoV-2 Integrated Microfluidic Chip Analysis System



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Product Introduction

The product, adopting two cutting-edge technologies (Integrated nucleic acid extraction/purification in microfluidic chip technology and high-sensitivity isothermal amplification technology), provides a “samples in, answers out” testing in a fully-automated and fully-integrated mode. The disc chip can realize a whole testing process in 45 min, including sample lysis, nucleic acid extraction, on-chip nested isothermal amplification, and fluorescence detection.

Advantages

● Simple and Quick

“Samples in, answers out” Manual operation for 1min, whole-process detection ≤ 45 mins

● High Sensitivity

LoD ≤ 150 copies/ml

● High Accuracy

Original patented technology of micro-fluidic chip, built-in IC, PC and BC

● High Safety

Patent fully-enclosed chip, nucleic acid extraction and amplification are carried out in the enclosed chip

● High-Efficiency Specificity

Double targets ORF1ab and N of COVID-19 gene can be detected by an experiment

● Wide Test Range

- Cover mainly epidemic variant strains of 2019-nCoV (SARS-CoV-2), including common strain, UK strain, India strain, South Africa strain and Brazil strain etc.
- Also support the detection of Influenza A, Influenza B, Respiratory Syncytial virus, Rhinovirus, Adenovirus and Tuberculosis.

Sample Types

Sample type	Sample amount
Oropharyngeal swabs /Nasopharyngeal swabs	≥ One swab

Workflow



Applicable Patients

COVID-19 close contacts

Fever clinic patients

Others who need Corona virus nucleic acid test

Automatic Nucleic Acid Analyzer

The automatic microfluidic chip analyzer (DxLab-2A), working with microfluidic chips, adopts multiple advanced technologies, including nucleic acid extraction, nested isothermal amplification, and real-time confocal fluorescence detection in a fully automated manner. It is specifically made to seamlessly work with a fully integrated disc chip to perform the fast and accurate testing for SARS-CoV-2.



Specification	Description
Excitation light source	The blue LED excitation wavelength is 460~475 nm, powered by constant current source, and the current is 0~100mA
Testing system	Photoelectric detector, with a detection wavelength of 300nm~1100nm
Module temperature control accuracy	Half of the difference between the highest value and the lowest value of the temperature measurement data within 30s from the beginning of the constant temperature timing to the end of the timing, not greater than 0.5° C
Temperature accuracy	The absolute value of the difference between the average value of the temperature measurement data and the set temperature of the module within 30s from the beginning of the constant temperature timing to the end of the timing, not greater than 0.5° C
File format	mcd xls xlsx csv pdf
Operating system	Microsoft Windows 10 Pro 64 bit operating system
Size	485 (±5) mm (length) × 452 (±5) mm (width) × 331 (±5) mm (height)
Weight	25 (±2) kg

SARS-CoV-2 Nucleic Acid Detection Kit (Integrated Isothermal Amplification Chip Method)

Chip specifications	The chips are made of polycarbonate (PC), polymethylmethacrylate (PMMA) or polyethylene (PE), with a diameter of 100mm and a thickness of 6.3mm.
Package	12 tests/box

