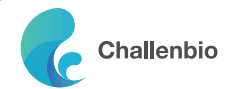## About Us

Beijing Challen Biotechnology Co., Ltd., located in Zhongguancun Science and Technology Park Biological Pharmaceutical Industry Base, Daxing District, Beijing, is a technology company specializing in the R&D, production and sales of biomedical technology products. Challen Biotechnology is committed to providing users with excellent one-stop services of flow cytometry (FCM), instruments and reagents. At present, its products mainly cover Mate-Cyte™ and LongCyte™ FCM series, as well as auxiliary diagnostic reagent and automatic sample preparation instruments. There are nearly 300 users in China. Challen Biotechnology also provides solutions for clinical diagnosis, biotherapy, basic biomedical research, drug R&D, environmental materials, food toxicity monitoring, etc.

Enterprise Culture

Mission: providing excellent products and services and letting our users satisfied, employees grow and itself develop and trustworthy!
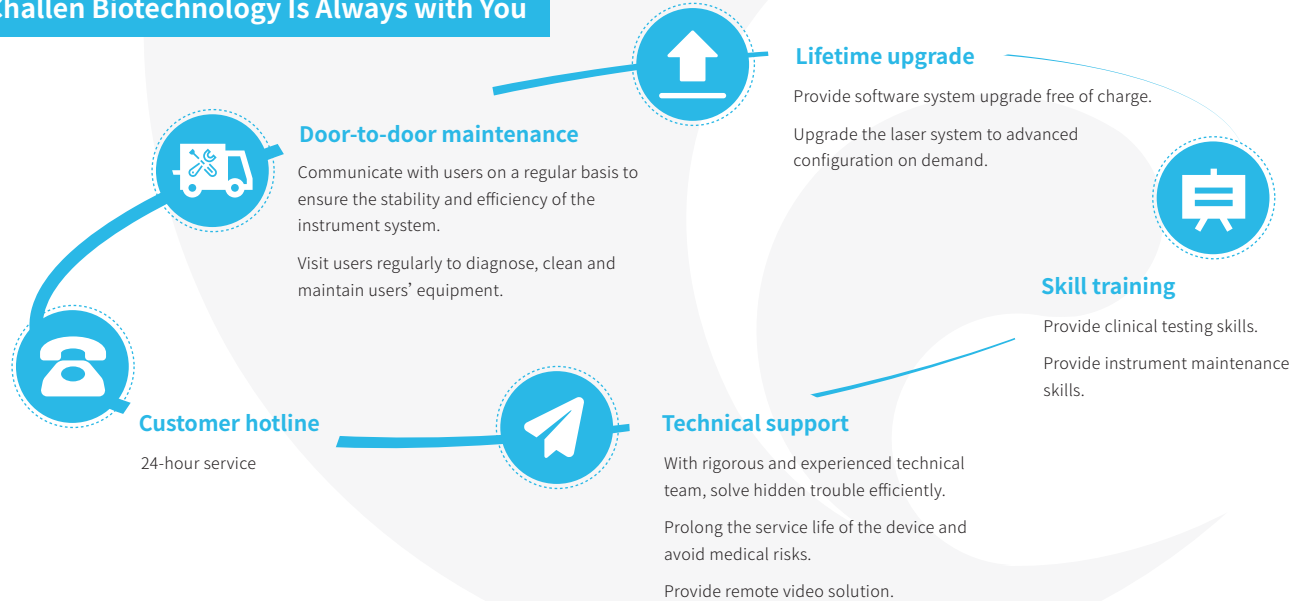Vision: to be a great global company supplying biomedical service!
Values: Be great, striving, cooperation and win-win!

After-sales Services

Challen Biotechnology Is Always with You

Lifetime upgrade

Provide software system upgrade free of charge.

Upgrade the laser system to advanced configuration on demand.

Door-to-door maintenance

Communicate with users on a regular basis to ensure the stability and efficiency of the instrument system.

Visit users regularly to diagnose, clean and maintain users' equipment.

Skill training

Provide clinical testing skills.

Provide instrument maintenance skills.

Customer hotline

24-hour service

Technical support

With rigorous and experienced technical team, solve hidden trouble efficiently.

Prolong the service life of the device and avoid medical risks.

Provide remote video solution.

Challenbio

Trustworthy FCM Partner

LongCyte™ Series 3-Laser 14-Color
Flow Cytometer

LongCyte

Beijing Challen Biotechnology Co., Ltd.

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Website: www.challenbio.com
Email：sale@challenbio.com

CE CERTIFICATION

Colorful World
Beautiful Life

Five Features of LongCyte™ Flow Cytometer

SUPERIOR
3-laser, 14-color, 16-channel, up to 26 optical configurations
Configured with autoloader for free

STABLE
Semiconductor laser, optical fiber conduction
constant temperature control
Excellent stability of optical structure

SPECIAL
Absolute counting by volumetric method
Patented sampling probe mixing function
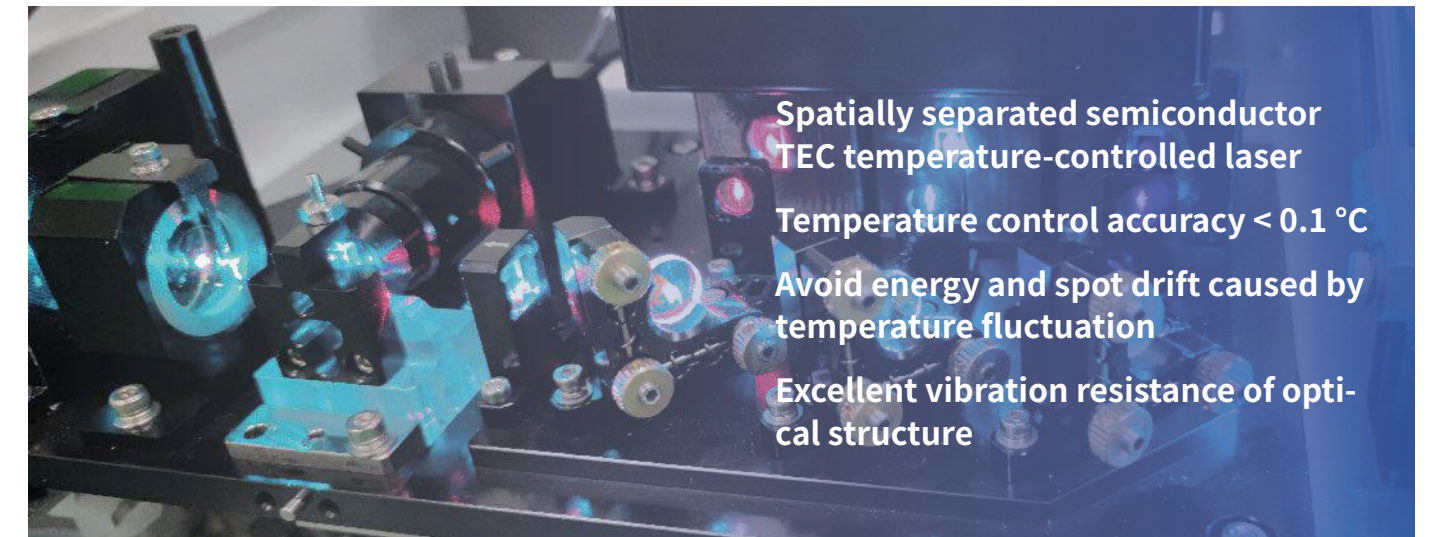Embedded cytokine analysis function,
no need of third-party software software

SMART
Automatic quality control for monitoring instrument status
Detailed and comprehensive fault monitoring and alarm function
Fast / automatic fluorescence compensation
One-touch startup/shutdown

SMALL
Compact structure and low running noise suitable for various
experimental environments
Patented magnetic rack that saves space

LongCyte™ Performance

INDEX	ILLUSTRATE
Forward scatter (FSC) and side scatter (SSC) resolution	FSC resolution：500 nm SSC resolution：200 nm Optimize for resolving the white blood cell subsets (lymphocytes, monocytes, and granulocytes), red blood cells and platelets.
Fluid capacity	Standard 5 L tanks
Automated maintenance cycles	Startup (initialization), sample mixing, priming, shutdown (daily cleaning), deep cleaning.
Autoloader	Tube racks and 96-well plates supported 40-tube rack (12 x 75-mm tubes / 1.5 mL and 2 mL microcentrifuge) 96-well plates, standard height / half deep/deep, with U/V/flat shape bottom.
Power specifications	Voltage: 100-240 V, power: 160W
Dimensions (W x D x H)	Cytometer: 39 cm x 43 cm x 43 cm
Weight	Cytometer: 30 kg

High-performance Design Features of LongCyte™ - Optics

Spatially separated semiconductor TEC temperature-controlled laser

Temperature control accuracy < 0.1 °C

Avoid energy and spot drift caused by temperature fluctuation

Excellent vibration resistance of optical structure

3-laser, 14-color, 16-channel, up to 26 optical configurations

Channel / Model	Blue Laser Channels 488 nm Laser					Red Laser Channels 638nm laser			Violet Laser Channels 405nm laser					
	BL1	BL2	BL3	BL4	BL5	RL1	RL2	RL3	VL1	VL2	VL3	VL4	VL5	VL6
C1040	✓	✓		✓	✓									
C1050	✓	✓	✓	✓	✓									
C2040	✓	✓		✓		✓								
C2041	✓	✓				✓		✓						
C2042	✓	✓							✓	✓				
C2050	✓	✓		✓		✓		✓						
C2060	✓	✓		✓	✓	✓		✓						
C2061	✓	✓		✓					✓	✓	✓			
C2080	✓	✓	✓	✓	✓	✓	✓	✓						
C2081	✓	✓		✓	✓				✓	✓	✓	✓		
C2082	✓	✓	✓	✓	✓				✓	✓	✓			
C2090	✓	✓		✓	✓				✓	✓	✓	✓		✓
C2100	✓	✓	✓	✓	✓				✓	✓	✓	✓		✓
C2110	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓
C3080	✓	✓		✓	✓	✓	✓	✓						
C3090	✓	✓		✓	✓	✓		✓			✓			
C3100	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓			
C3101	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			
C3110	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓			
C3111	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
C3112	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	
C3130	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
C3131	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
C3132	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C3133	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C3140	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Fluorescent configurations in various channels of LongCyte™

Laser	Channel		Dyes
488nm	BL1	530/30	FITC, Alexa Fluor 488, CFSE, Fluo-3
	BL2	577/25	PE, PI
	BL3	620/30	ECD, PE-Texas Red, PE-CF594, PI
	BL4	690/50	PerCP, PC5, PC5.5, PerCP-Cy5.5, PI
	BL5	780/60	PE-Cy7
638nm	RL1	660/20	APC, Alexa Fluor 647, eFluor 660
	RL2	710/20	APC-Alexa Fluor 700, Alexa Fluor 700
	RL3	780/60	APC-Cy7, APC-Alexa Fluor 750, APC-H7, APC-eFluor 780
405nm	VL1	450/50	Pacific Blue, V450, eFluor 450, BV421
	VL2	530/30	Krome Orange, AmCyan, V500,BV510
	VL3	610/20	Violet610, BV605, Qdot 605
	VL4	660/20	Violet660, BV650, Qdot 655
	VL5	710/50	BV711, Qdot 705
	VL6	780/60	Violet780, BV785, Qdot800

LongCyte™ ModelFlower Analysis Software

Free use of English or Chinese software UI

Embedded cytokine analysis function, no need of third-party software

Fast/automatic fluorescence compensation

Before compensation

After compensation

Flexible configuration of LIS export content format
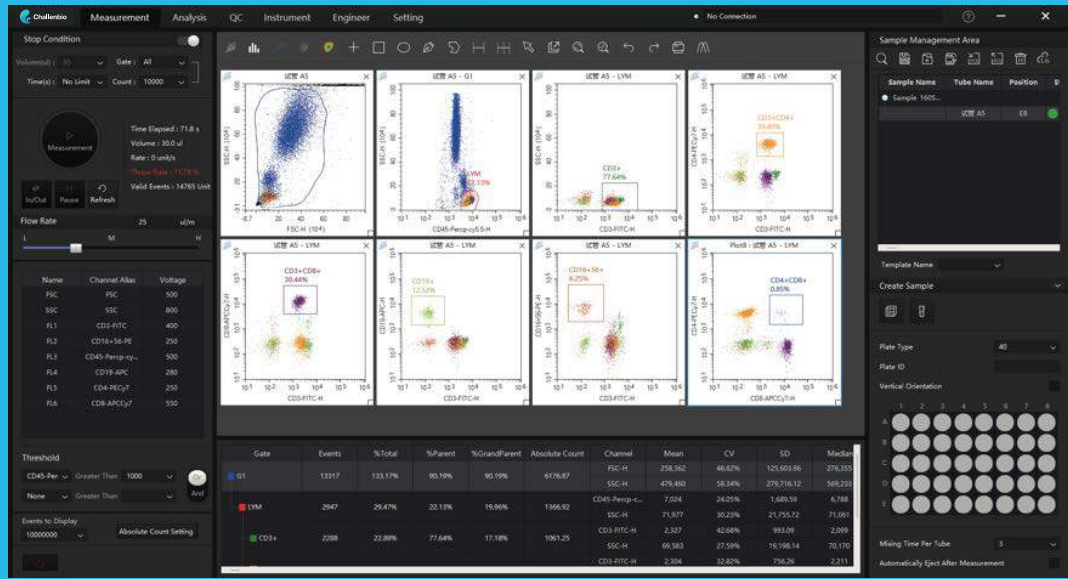
One-touch maintenance
Cleaning - declogging - degassing - priming easily
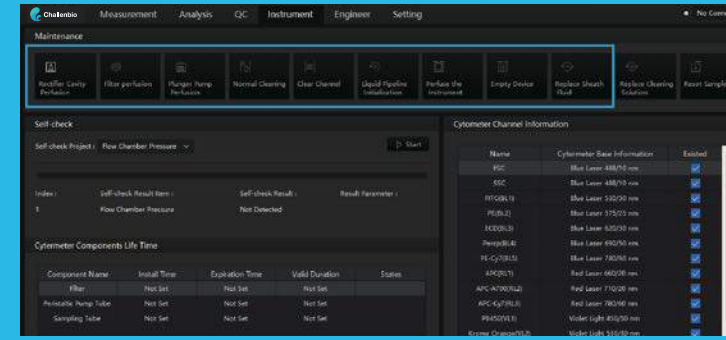
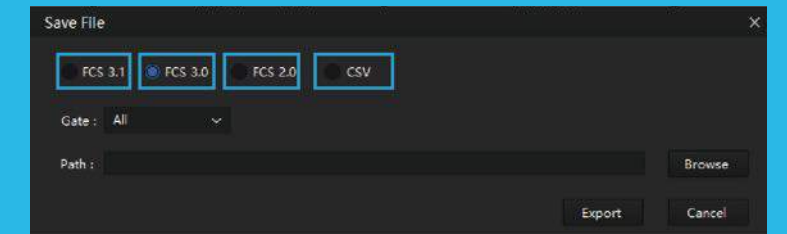
Automatic quality control for monitoring instrument status
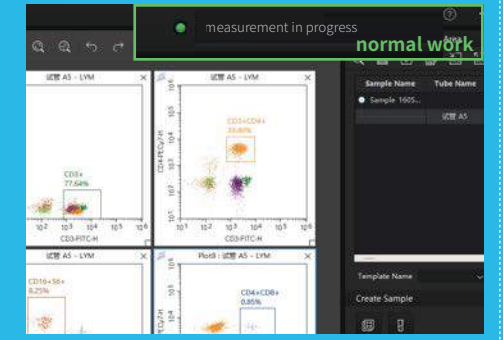
Detailed and comprehensive fault monitoring and alarm function Intelligent identification of probe clogging, sample exhaustion, sampling probe striking and other fault.
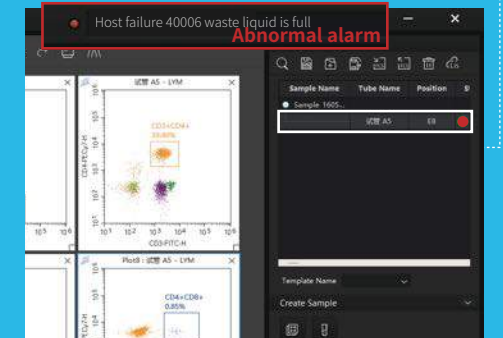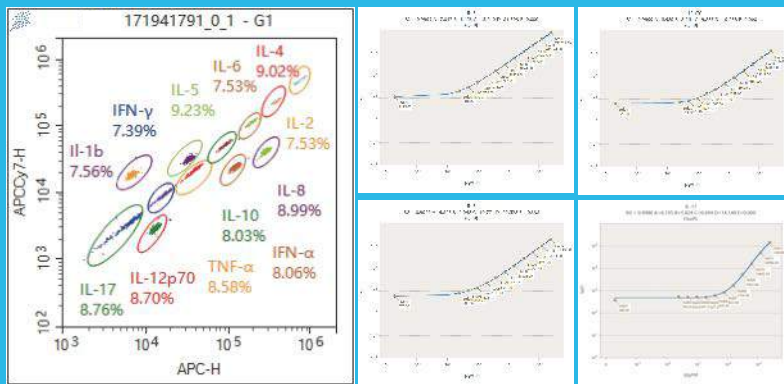
Quickly import and export data in batches and save files, suitable for a variety of analysis software

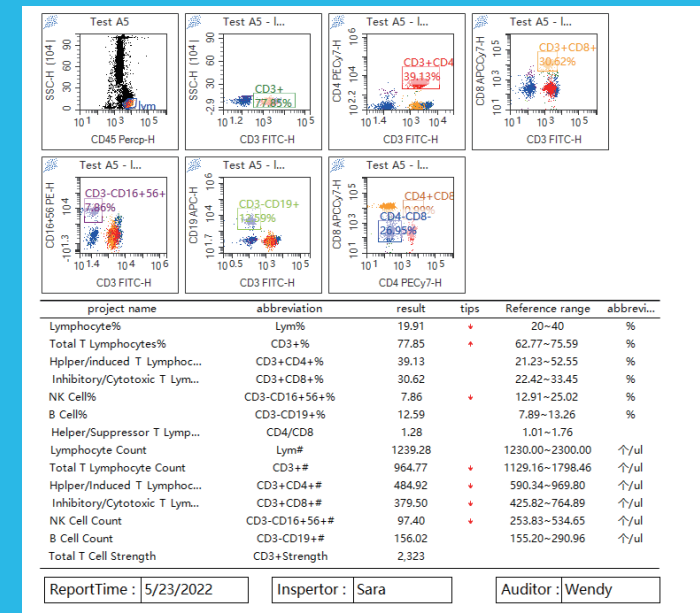One-touch shutdown, automatic cleaning, automatic power-off, needless to wait

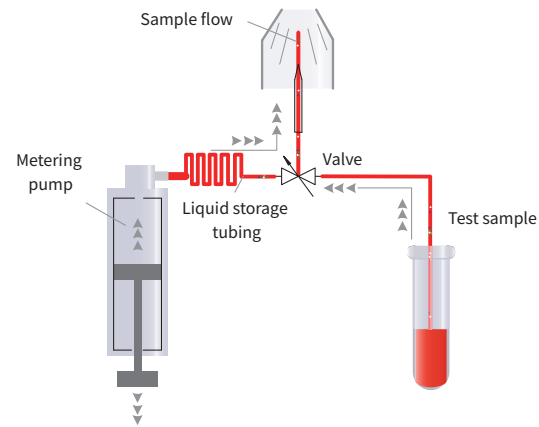One-touch shutdown

Automatic cleaning

Automatic power-off

The software enables direct output of the diagnosis report, free edition of its content, and provision of customized design for it.

High-performance Design Features of LongCyte™ - Fluidics

Absolute counting by volumetric method

Sample flow

Metering pump

Valve

Liquid storage tubing

Test sample

Adopt high-precision metering pump without worry about clogging
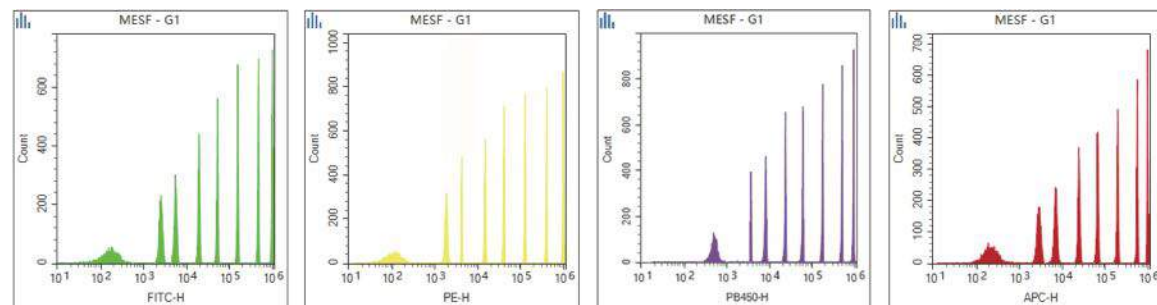
Trucount test compatible

Patented magnetic rack, simple and practical
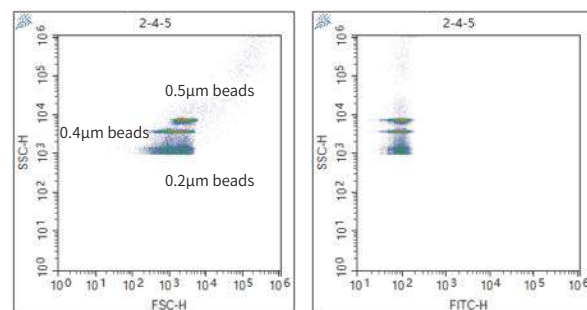

Superior detection performance of LongCyte™

Superior sensitivity

The detection results of eight-peak rainbow particles in each detection channel are not only excellent in common detection channels, but also outstanding in violet and far-infrared channels.

Detection of extremely small particles


0.5μm beads

0.4μm beads

0.2μm beads

The FSC and SSC parameters are used to distinguish particles of different sizes. 0.2 μm particles can be monitored with SSC signal, and 0.4 μm and 0.5 μm particles can be clearly distinguished.

High-performance Design Features of LongCyte™ - Autoloader

Configured with autoloader for free

Compatible with various types of plate adapters: 96-well standard (flat, U- and V-bottom) plates, 40- tube racks and 40-EP tube racks
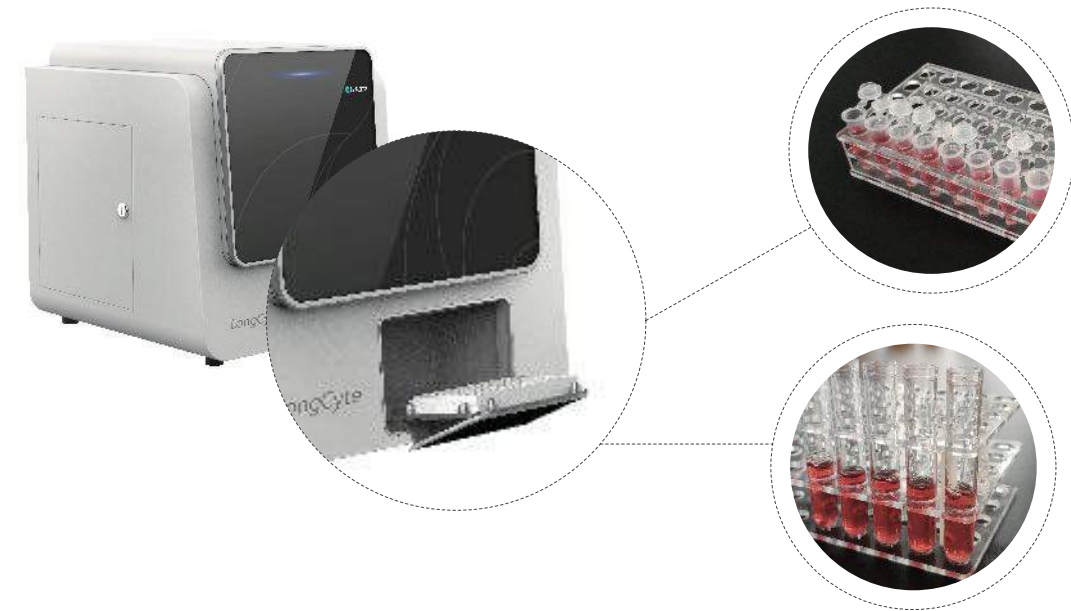
Patented sampling probe mixing design