# EXTRACTION PERFORMANCE TEST

- **Test method** Manual vs Automated
- Evaluation standard RT-PCR
- Test samples Simulated samples of throat swab containing SARS-CoV-2(R-NA), dilute them in different concentrations.
- Test results Ct value of fluorescent quantitative PCR acquired by using automation is lower than using manual, which demonstrates that the yield of virus RNA is higher than using manual. Meanwhile , the curves concentrate on the peak diagram, an indicator of good reproducibility.



• Simulated samples of throat swab 1



• Simulated samples of throat swab 3

---- Base line ---- Result of automation ---- Result of manual

• Simulated samples of throat swab 2



• Simulated samples of throat swab

# nroat swab 2

Manual Extraction

RNA virus extraction kit (silica membrane)

Automated Extraction

MGIEasy Nucleic Acid

Extraction Kit + MGISP-960

# MGISP-960

High-throughput Automated Sample Preparation System **Perform 192 samples extraction within 60min** 

# **ORDER INFORMATION**

# Equipment

Cat. No.	Product name	Specification
900-000154-00	High-throughput Automated Sample Preparation System MGISP-960RS, V9	EA,CE RUO
900-000165-00	High-throughput Automated Sample Preparation System MGISP-960, V9	EA,CE IVD

# Reagents

Cat. No.	Product name	Specification
1000020261	MGIEasy Nucleic Acid Extraction Kit	1728 preps,RUO
1000021043	Nucleic Acid Extraction Kit	1728 preps,IVD

### Consumables

Cat. No.	Product name	Specification
100000723	250µL automated filter tips	96 tips/box, 10 boxes/bag
1000004644	1.3mL U-bottom deep-well plate	2 plates/bag
100000671	0.2mL 96 Well Half-skirt PCR Plate	200 plates/case
091-000152-00	70µL Automated Filter Tips	96 tips/box, 10 boxes/bag

# CONTACT US

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# HIGH-THROUGHPUT AUTOMATED SAMPLE PREPARATION SYSTEM

MGISP-960







Leading Life Science Innovation

# MGISP-960

MGISP-960 is a liquid handling workstation with integrated 96 channel pipette, which can be used for extraction. MGISP-960 can work with MGIEasy Nucleic Acid Extraction Kit and extract 96/192 samples per run. It can also be used to set up RT-PCR after automated extraction

Can op	perate 96 wells at one tim
Pipette Type	96 channel pipette
Pipetting Range	1 μL~200 μL
Pipetting Precision	2 μL:<5% 200 μL:<1%

2 μL: <±10%

200 µL:<±1%

±0.1mm

Pipetting Accuracy

Positioning Precision Of Robotic Arm 96 Channel Pipette

# ONE-STOP PLATFORM

Provide instrument, consumables and kits for extraction





Temperature Range	4~90°C
Temperature Accuracy	±1°C at 55°C
Temperature Uniformity	±1°C at 72°C

Microplate Gripper

Move consumables between

MGIEasy

# HEPA system

### Positive pressure Filtration efficiency 99.995% @ 0.3µm



Integrated UV lamps to ensure all spaces of the instrument receives the same level of UV exposure.

# Radiation dose

higher than 100,000  $\mu$ W.s/cm<sup>2</sup>

## **Microplate Shaker**

Rotary speed range: 100rpm to 2000rpm

# Magnetic Rack

Equipped with 2 high-effcient 96-well magnetic racks.

High	• 192 samples can be processed in a single run within 60min.
throughput	• Easy to operate, no manual intervention during extraction.
Efficient	• Integrate various functions, require less than 1 m <sup>3</sup> .
	• Can perform extraction and RT-PCR setup, facilitated by minimal common auxiliary devices.
Safe	Use filter tips to avoid cross contamination.
	<ul> <li>Enclosed safety protection door and automated extraction to ensure safety of operators.</li> </ul>

- Good repeatability between runs, stable extraction Reliable performance.
  - The lower limit of the pipetting range is 1  $\mu\text{L}$  . The accurate pipetting precision ensure higher extraction efficiency.

# CROSS CONTAMINATION TEST

• **Test method** Take simulated samples of throat swab containing SARS-CoV-2(RNA) as positive control, and Nuclease free water as blank. Arrange these samples according to the checkboard pattern, and extract these samples with 2 plates scripts for MGISP-960.

# • Evaluation standard RT-PCR

	1	2	3	4	5	6	7	8	9	10	11	12
A	Blank	Positive										
в	Positive	Blank										
С	Blank	Positive										
D	Positive	Blank										
Е	Blank	Positive										
F	Positive	Blank										
G	Blank	Positive										
н	Positive	Blank										

• **Test results** The results of all positive samples are stable. The blank did not show any cross contamination.

Ct value of plate 1

	1	2	3	4	5	6	7	8	9	10	11	12
А	NoCt	21.62	NoCt	22.13	NoCt	22.45	NoCt	22.05	NoCt	22.37	NoCt	22.25
В	21.12	NoCt	21.69	NoCt	22.16	NoCt	21.94	NoCt	22.28	NoCt	22.04	NoCt
С	NoCt	21.27	NoCt	21.84	NoCt	22.3	NoCt	22.03	NoCt	22.41	NoCt	22.11
D	21.61	NoCt	21.58	NoCt	22.18	NoCt	22.21	NoCt	22.29	NoCt	21.73	NoCt
Е	NoCt	21.31	NoCt	21.44	NoCt	22.28	NoCt	22.28	NoCt	22.27	NoCt	22.28
F	22.17	NoCt	21.52	NoCt	22.25	NoCt	22.33	NoCt	22.35	NoCt	21.92	NoCt
G	NoCt	21.3	NoCt	21.57	NoCt	22.36	NoCt	22.08	NoCt	22.13	NoCt	22.31
н	22.59	NoCt	21.6	NoCt	22.43	NoCt	22.18	NoCt	22.54	NoCt	21.81	NoCt

### Ct value of plate 2

	1	2	3	4	5	6	7	8	9	10	11	12
A	NoCt	21.86	NoCt	21.96	NoCt	22.23	NoCt	22.33	NoCt	22.1	NoCt	22.06
В	21.83	NoCt	21.8	NoCt	22.12	NoCt	22.15	NoCt	22.17	NoCt	22.34	NoCt
С	NoCt	21.62	NoCt	21.65	NoCt	21.96	NoCt	22.09	NoCt	22.16	NoCt	22.1
D	22.06	NoCt	22.06	NoCt	22.04	NoCt	22.05	NoCt	22.26	NoCt	22.28	NoCt
E	NoCt	21.63	NoCt	21.9	NoCt	22.04	NoCt	22.09	NoCt	22.16	NoCt	21.93
F	22.1	NoCt	22.09	NoCt	22.09	NoCt	22.57	NoCt	22.27	NoCt	22.37	NoCt
G	NoCt	22.19	NoCt	22.04	NoCt	21.91	NoCt	22.06	NoCt	22.09	NoCt	22.08
н	22.19	NoCt	22.04	NoCt	22.08	NoCt	22.25	NoCt	21.97	NoCt	22.06	NoCt