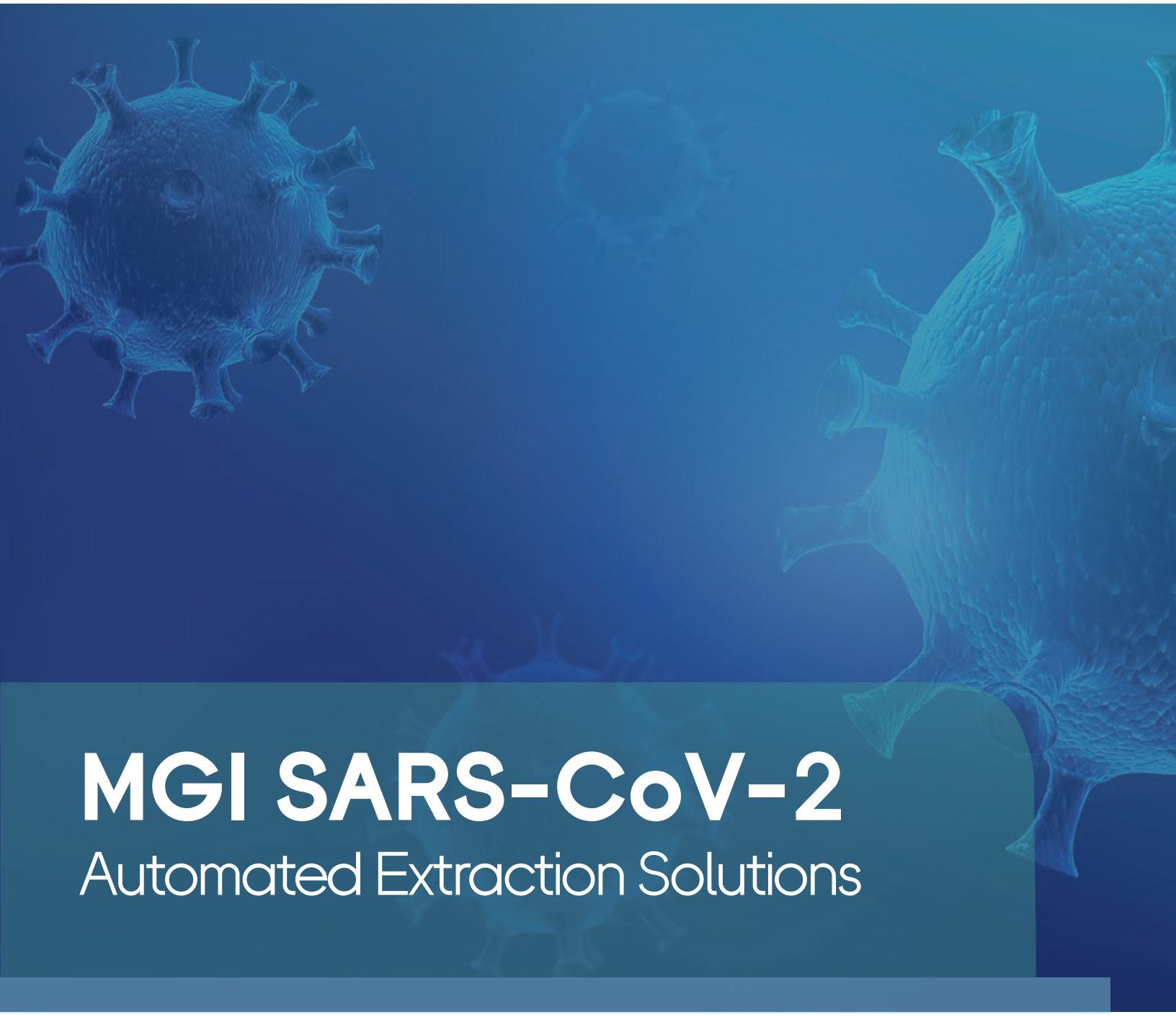
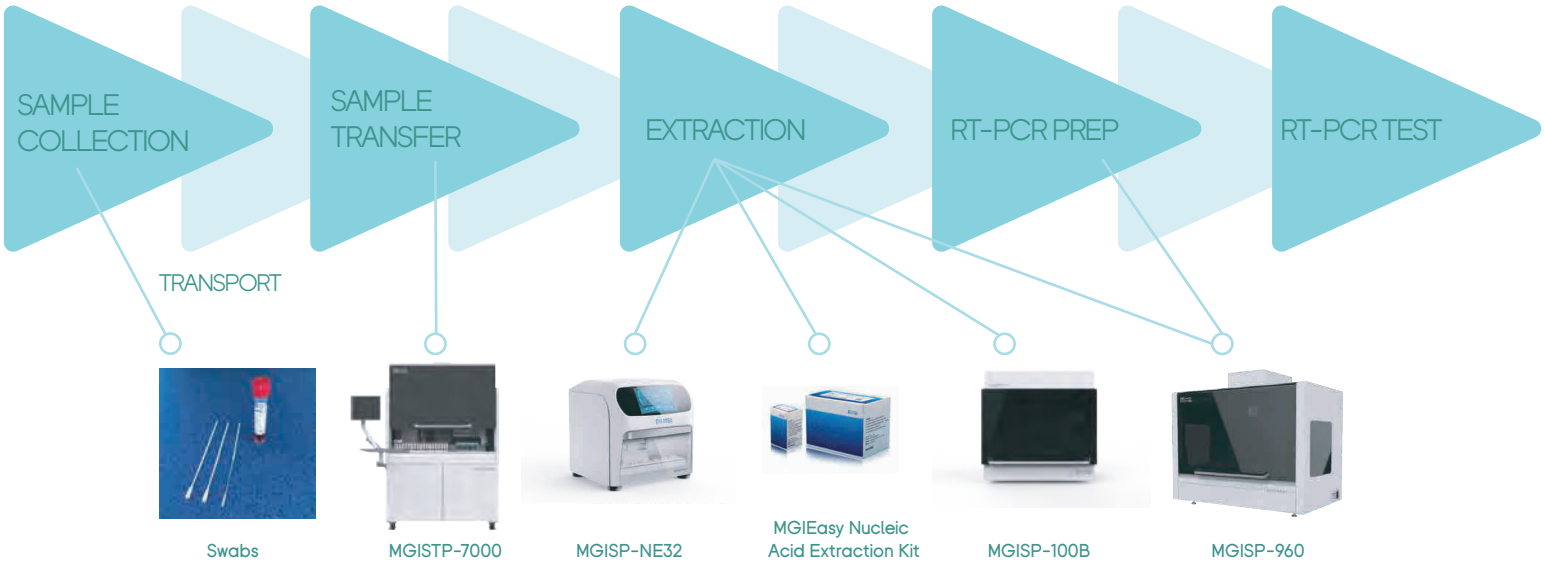


MGI SARS-CoV-2

Automated Extraction Solutions

MGI has been at the forefront of developing and deploying SARS-CoV-2 testing solutions from day one. We've enabled accurate and reliable virus detection through high throughput automated extraction solutions in more than 80 countries. Improving accuracy and throughput of testing is our top priority.

SARS-CoV-2 Testing Workflow



Swabs & VTM

SAMPLE COLLECTION

Product details

Product Name	Disposable Sampling Kit
Specification	50 PCS/BOX
Product Components	A pcs including a swab and a preservation solution
Tip Material	Nylon flocking
Regulatory Approvals	NMPA; CE [Check with MGI sales for local compliance]

● ● Sterile ● ● Safe

MGISTP-7000

SAMPLE TRANSFER

Convenient Sample Loading

Airtight sample tubes in a standard rack reduces exposure to samples. System can run up to 7000 samples per day.

No Manual Handling

One Epson robot arm, four recap and de-cap modules, four barcode scanners, and two channel-independent pipette heads. Barcode information can be automatically stored and transferred to any LIMS system.

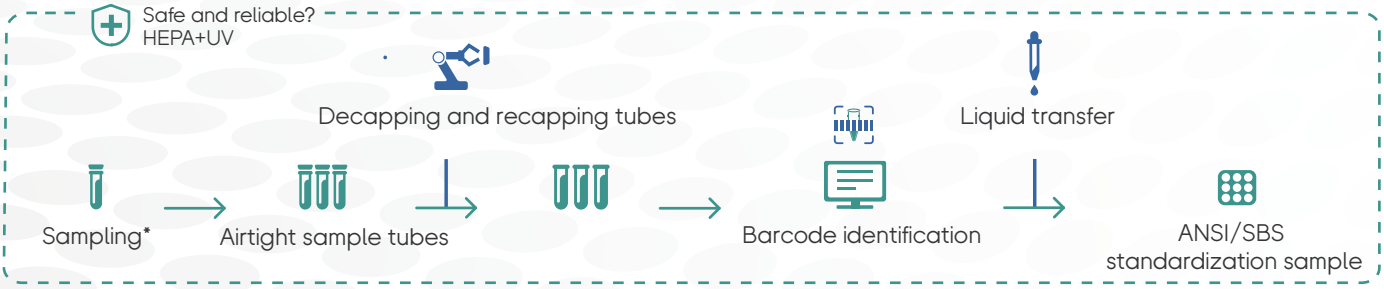
Highly Versatile

Two pipetting channels allow free configuration for volume range and disposable tips. Samples can be trasnferred into ANSI/SBS 96-well microplates rapidly without manual pipetting errors, supporting a wide variety of automation laboratory equipment.

Unmatched Safety

Re-cap sample tubes after liquid transfer to minimize sample exposure and prevent cross contamination. All samples will be returned to their original location. Provide HEPA-filtration and UV light to ensure a safer operation envrionment.

High Productivity



*Universal fit. Excellent fit on 5mL and 10mL Transport Tubes,with Screw cap.

Efficient, safe, and reliable

SAMPLE TRANSFER

10,000 samples per day:

INCREASIED AUTOMATION

14 Lab Technicians	4 Biosafety Cabinets	4 MGISP-960	83 hours manual work	With MGISP-960
2 Lab Technicians	2 MGISTP-7000	4 MGISP-960	8 hours manual work	With MGISP-960 and MGISTP-7000

Product Specifications

Functions	Integrates multiple functions, including decapping, recapping,barcode identification, automated liquid transfer, HEPA-filtration and negative pressure protection
Throughput	192 samples/40 min; 7000 samples/day
Barcode Scanner	1D & 2D Scanner Sensors
Tube Compatibility	Universal fit. Excellent fit on 5 mL and 10 mL Transport Tubes, with Screw cap
Dimensions	1470mm(W) * 960mm(D) * 2100mm(H)

Pipetting Precision	Pipetting Method	Based on the principle of air displacement, with disposable tips
	Volume Range	10 μL-1000 μL
	CV	10 μL: <5% ; 100 μL: <2%
		1000 μL: <1%
	Accuracy	10 μL: <±10% ; 100 μL: <±5%
		1000 μL: <±2%
Weight	550 kg	

Ordering Information

Equipment

Cat. No.	Product name	Specification
900-000336-00	MGISTP-7000RS Sample Transfer Processing System	CE RUO
900-000334-00	MGISTP-7000RS Sample Transfer Processing System	CE IVD

Consumables

Cat. No.	Product name	Specification
1000023969	1000ul black conductive tips, sterile, filter	16 boxes/case
1000023970	1000ul transparent tips, sterile, filter	16 boxes/case
014-000101-00	MGISTP-7000 sample rack A	EA

OVERVIEW

MGIEasy Nucleic Acid Extraction Kit

EXTRACTION

- Magnetic beads-based automated extraction
- Higher specificity for viral SARS-Cov-2 nucleic acids

Workflow:

1. **Lysis/Bind** — Sample lysis, nucleic acid binding with magnetic particles.
2. **Wash** — Magnetic particles washing, removing contaminants and inhibitors.
3. **Elute** — Nucleic Acid separation with magnetic particles and elution in elution buffer.

MGISP-960 High-throughput Extraction

EXTRACTION

RT-PCR PREP

- 192 samples in 80 min
- High recovery and reproducibility
- Upgradable to sequencing library prep capability
- Compatible with throat swabs
- Complete set of supplies

MGISP-100B Medium Throughput and Flexible

EXTRACTION

- 8, 16, 24, or 32 samples in 40-80 min
- Safe with UV disinfection and positive pressure HEPA system
- Can be upgraded to sequencing library prep capabilities
- All supplies readily available

MGISP-NE32 Medium Throughput and Economical

EXTRACTION

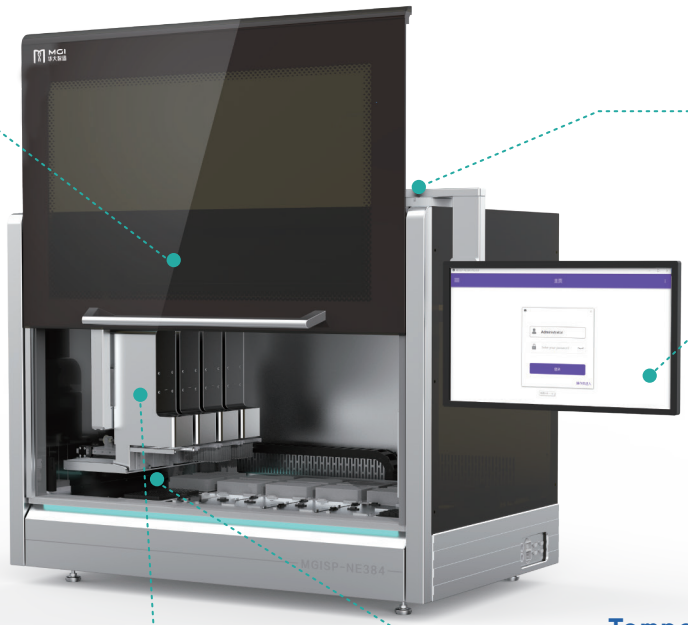
- 1-32 samples in approximately 9 min
- Based on magnetic rod technique, moves magnetic particles instead of liquids; collection efficiency > 98%
- Ready 96-well pre-packed plate and disposable tip
- Lowest per sample extraction cost
- 8-inch built-in touch screen

*For Research Use Only, Not for Use in Diagnostic Procedures

MGISP-NE384

NUCLEIC ACID EXTRACTION

MGISP-NE384 is a high-throughput automated nucleic acid extractor adopting magnetic rod technology. Together with nucleic acid extraction kits, MGISP-NE384 is able to extract and purify nucleic acid from 96/192/288/384 samples. HEPA filtration system and UV lamp ensure a safe working environment for lab technicians.



UV Lamp

More than 100 000μW.s/cm²

HEPA Filtration System

99.99% @ 3μm

23-inch Built-in Touch Screen, Windows software

User-friendly Interface
Create, edit and delete program

4x96 Mixing & Magnetic Module

Positioning Precision of Robotic Arm:±0.1mm
Z axis Independent Control, 1-4 modules running choice

Temperature Control Module

Temperature Range	From +5℃ above ambient temperature to 115℃
Temperature Precision	≤±1℃

Flexible
- Mixing and magnetic module Z axis independent control, 1-4 modules running choice for 96/192/288/384 samples.

Efficient
- Moving and processing magnetic particles, extracting and purifying nucleic acid from 384 samples.

Safe
- HEPA filtration system and UV lamp, ISO Class 5, avoiding cross-contamination and ensuring a safe working environment.

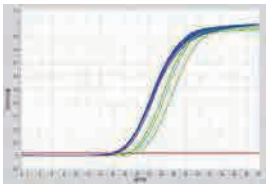
Stable
- Reliable hardware design, 96-well plate reagent and disposable tip, minimizing operational errors.

PERFORMANCE

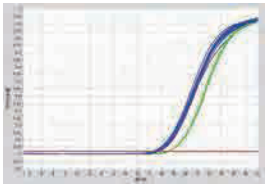
SARS-CoV-2 Extraction using MGISP-960

- **Test method**
  Compare automated extraction using RT-PCR with MGIEasy Nucleic Acid and Qiagen Virus RNA Extraction Kits with flourescent PCR to quantify virus RNA.
- **Test results**
  Lower Ct values using the MGIEasy Extraction Kit demonstrated a higher viral RNA yield compared to Qiagen Extraction Kit.

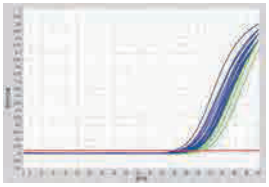
■ Comparison of fluorescent PCR peak diagram of two nucleic acid extraction reagent kits :



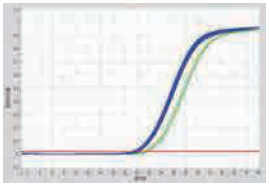
Simulated sample of saliva 1



Simulated sample of saliva 2



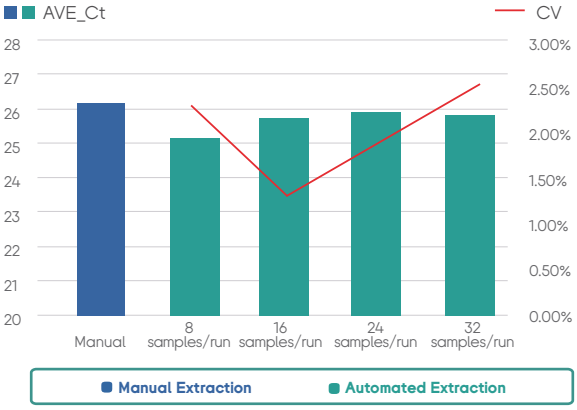
Simulated sample of saliva 3



Simulated sample of throat swab

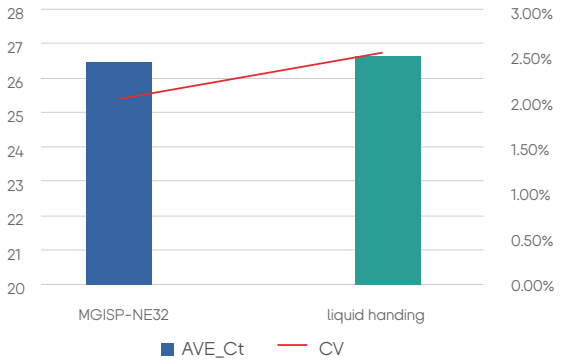
In the above diagrams, the blue curve refers to the fluorescent PCR test result of MGIEasy Nucleic Acid Extraction Kit + MGISP-960, and the green curve refers to fluorescent PCR test result of competitor's Q Virus RNA Extraction Reagent Kit + manual.

SARS-CoV-2 Extraction using MGISP-100B



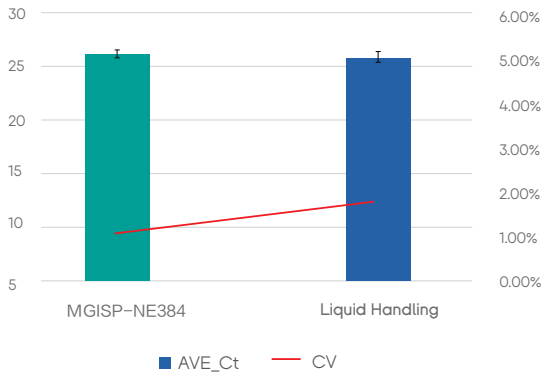
- **Test method**
  Compare manual vs. automation using MGIEasy Nucleic Acid Extraction Kit and RT-PCR
- **Test samples**
  Simulated samples of throat swab containing novel corona virus (RNA), dilute them in different concentrations
- **Test results**
  Data demonstrates a higher viral RNA yield and better CV using MGISP-100B

SARS-CoV-2 Extraction using MGISP-NE32



- **Test method**
  Compare manual vs. automation using RT-PCR
- **Test samples**
  Simulated samples of throat swab containing novel corona virus (RNA), dilute them in different concentrations
- **Test results**
  Comparable Ct values using both methods demonstrated the similar viral RNA yields between MGISP-NE32 and manual extraction. The CV for Ct value using MGISP-NE32 is less than 2.5%

SARS-CoV-2 Extraction using MGISP-NE384



- **Test Method**

  MGISP-NE384 VS Liquid handling method

- **Evaluation Standard**

  RT-PCR

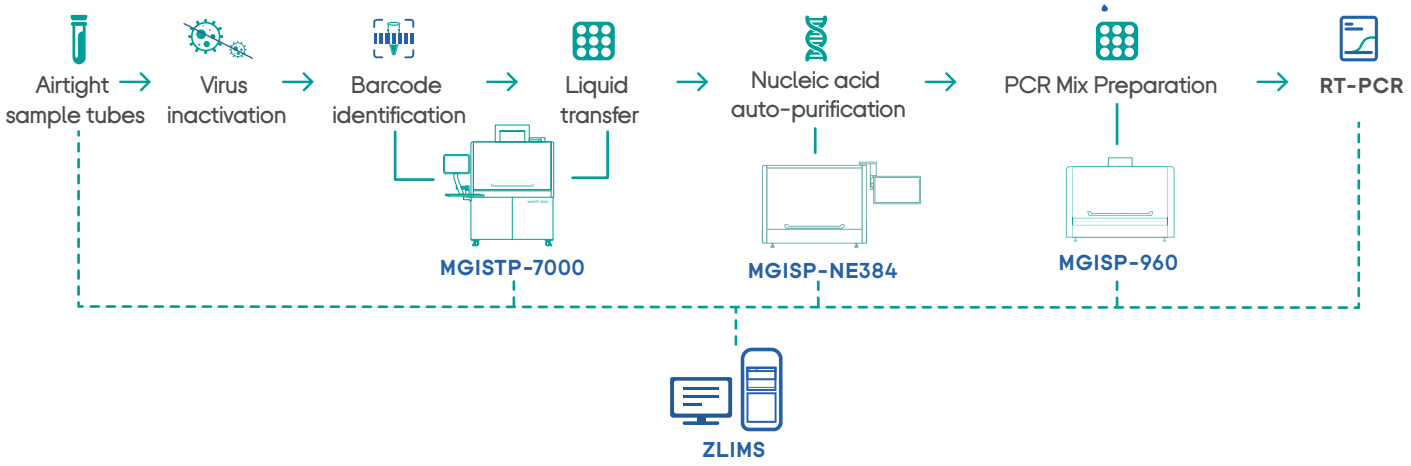
- **Test Samples**

  Simulated samples of throat swab containing virus(RNA), dilute them in different concentrations

- **Test Results**

  Ct value of fluorescent quantitative PCR is almost equally, that demonstrated the yield of virus RNA is coincident between MGISP-NE384 and liquid handling method. Meanwhile, Ct value reproducibility is great.

High-throughput Nucleic Acid Testing Laboratory Total Solution



MGISP-NE384

- Automated nucleic acid extraction
- Moving and processing magnetic particles
- 1-4 modules running choice for 96/192/288/384 samples

Nucleic Acid Extraction Kit

- Good extraction stability and reproducibility
- Compatible with Automated Nucleic Acid Extractor
- Adapted to most downstream applications: PCR, RT-PCR, Sequencing, etc.

ORDERING INFORMATION

MGISP-960

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 Magnetic Beads Virus DNA/RNA Extraction	1728 preps, RUO
1000020471	MGIEasy Magnetic Beads Virus DNA/RNA Extraction	96 preps,RUO

Consumables

Cat. No.	Product name	Specification
1000000723	250μL automated filter tips	10 boxes/case
1000004644	1.3mL U-bottom deep-well plate	2 plates/bag
1000012059	Hard-shell thin-wall 96-well skirted PCR plates, white shell/clear well	10 plates/bag

MGISP-100B

Equipment

Cat. No.	Product name	Specification
900-000286-00	MGISP-100BRS Automated Nucleic Acid Extraction and Purification System	EA, CE RUO
900-000285-00	MGISP-100B Automated Nucleic Acid Extraction and Purification System	EA, CE IVD

Reagents

Cat. No.	Product name	Specification
1000020471	MGIEasy Nucleic Acid Extraction Kit	96 preps, CE RUO
1000021042	Nucleic Acid Extraction Kit	96 preps, CE IVD

Consumables

Cat. No.	Product name	Specification
1000000723	250μL automated filter tips	10 boxes/case
1000004644	1.3mL U-bottom deep-well plate	2 plates/bag
1000023283	0.2mL PCR 8-Strips with flat caps	125 strips/box

MGISP-NE32

Equipment

Cat. No.	Product name	Specification
950-000020-00	MGISP-NE32RS Automated Nucleic Acid Extractor	EA, CE RUO
950-000013-00	MGISP-NE32 Automated Nucleic Acid Extractor	EA, CE IVD

Reagents

Cat. No.	Product name	Specification
1000023774	Nucleic Acid Extraction Kit	32 preps, CE RUO
1000022606	Nucleic Acid Extraction Kit	32 preps, CE IVD

MGISP-NE384

Equipment

Cat. No.	Product name	Specification
900-000358-00	MGISP-NE384RS High-throughput Automated Nucleic Acid Extractor	EA, CE RUO
900-000359-00	MGISP-NE384 High-throughput Automated Nucleic Acid Extractor	EA, CE IVD

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