MGIEasy Nucleic Acid Extraction Kit User Manual

Manual Version: 4.0 Model: VDR03P-32

【Product Name】

MGIEasy Nucleic Acid Extraction Kit

【Package】

Cat. No.	Model	Specification
1000023938	VDR03P-32	32 preps

【Intended Use】

Nucleic Acid Extraction Kit can efficiently purify the viral DNA and RNA from throat swabs. This kit is suitable for automated extraction on MGISP-NE32 (Automated Nucleic Acid Extractor and purification system).

【Kit Components】

Table 1. Main Components and specification

Components		Specification
96-well pre-packed plate	Buffer Lys	2 plates
	Magnetic beads	
	Buffer RW	
	Nuclease Free Water	
magnetic bar protection case		2 pieces/ bag * 2 bags
Manual		1 piece

Note: Do not mix components in different batches of kits.

【Storage Conditions】

- Storage temperature and conditions: 2°C to 8°C. Dry and dark environment.
- Validity Period: 12 months
- Use immediately after peeling off the sealing film. Avoid placing the kit below 0°C to prevent the magnetic beads from being frozen.

Note *: The Buffer Lys and Buffer RW may have some precipitation which will not affect the function. If it precipitates, please heat the reagent plate in 37°C water bath properly for around 10 min until the precipitation disappear, then mix thoroughly before use.*

【Applicable Instrument】

Applicable instrument: Automated Nucleic Acid Extractor
Model: MGISP-NE32

【Sample Conditions】

1. The kit is suitable to extract virus DNA and RNA from throat swabs.
2. The samples are recommended to be extracted within 24 h if stored at 2°C to 8°C after collection; If can't be extracted within 24 h, the samples should be stored at -70°C or below. Avoid repeated freezing and thawing; Frozen samples need to be thawed and mixed before use.
3. Sample transportation: use dry ice for transportation. Don't transport the samples exceeding 7 days. Avoid repeated freezing and thawing during transportation.
4. Sample Biosafety: All samples are regarded as potentially infectious items. The operations shall be performed in accordance with relevant national standards.

【Experimental Workflow】

Please follow the workflow as below:

A. Required Materials Not Supplied

Table 2. Materials required but not provided

Type	Item Name	Note
Instrument	MGISP-NE32 Automated Nucleic Acid Extractor	Cat. # 950-000020-00
	Plate centrifuge	/
	Vortex mixer	/
	Pipette	1 mL, 200 µL, 20 µL
Consumables	0.5 mL or 1.5 mL centrifuge tube	Nonstick, DNase-free, RNase-free
	Pipette tips	1 mL, 200 µL,20 µL

B. Read before uses

1. Avoid repeatedly freezing and thawing samples, which may result in low DNA or RNA quality.
2. All reagents and samples need to be equilibrated to room temperature (10°C -30°C) before use.

3. Please read the manual carefully before the experiment.

C. Automated Extraction Standard Workflow

1. Fully invert and mix the 96-well pre-packed plate after placed at room temperature, until the magnetic beads in the plate are in a mixed state. Then remove the plastic package, centrifuge in 96-well centrifuge for seconds to avoid adhered liquid. Remove the aluminum foil film of 96-well plate; make sure the direction of the plate is correct (magnetic beads in column 2nd & 8th).
2. Add 200μL sample to the columns #1 and #7 of the 96-well pre-packed plate.
3. Place the plate onto the instrument, install the plastic magnetic bar protection case (8-strip tips) on the instrument.
4. Run the following program.

Table 3. automated extraction program

Step	Step 1	Step 2	Step 3	Step 4	Step 5
Hole	2	1	3	5	2
Name	Beads	Lysis	Wash	Elute	Discard
Wait Time (min: ss)	0:00	0:00	0:00	0:00	0:00
Mix Time (min: ss)	0:00	3:00	0:25	1:30	0:00
Mag Time (min: ss)	0:15	1: 00×3	0: 40×2	0:15	0:00
Volume （μL）	100	700	200	50	100
Mixing Method	Slow	Fast	Fast	Fast	Slow
Collect Method	Strong	Cycle	Cycle	Strong	Normal

Lysis temperature: 55°C. Lysis heating ends at Step 3.

Elution temperature: 80°C. Elution starts heating at Step 3.

Note:

1) The running time is 10 min 30 sec. Please arrange the follow-up work properly.

2) After the program finished, the magnetic beads will remain on the plastic magnetic bar protection case. Please carefully remove the magnetic bar protection case and put it in a ziplock bag or special garbage bag before proceeding to the next step.

5. After the procedure completed, transfer the eluted products in column #5 and # 11 to new nuclease-free centrifuge tubes. The products can be used immediately or stored in -80°C.

【Precautions】

1. This product is only used for research. Please read this manual carefully before use;
2. Please familiarize the operation and precautions of various instruments to be used before testing;
3. When the reagents are taken out from the specified storage environment, please use them according to the requirements. The reagents should be shaken and mixed before use;
4. Please use the micro- Pipette to pipette sample;
5. All samples and reagents should be avoided to directly contact with skin and eyes; do not swallow, once happen, please rinse with plenty of water immediately and go to the hospital as soon as possible;
6. All the samples and wastes should be treated according to the relevant regulations.

【Production Company Information】

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