MGIEasy Nucleic Acid Extraction Kit User Manual

Manual Version: A1 Model: OP02-32

【Product Name】

MGIEasy Nucleic Acid Extraction Kit

【Package】

Cat. No.	Model	Specification
1000023774	OP02-32	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

Cat #	Components		Spec & Quantity
1000023774	PK Solution		320 μL * 1 tube
	96-well pre-packed plate	Lysis Buffer	2 plates
		Wash Buffer I	
		Wash Buffer II	
		Elution Buffer	
		Magnetic beads	
	Magnetic bar protection case		2 pieces/ bag * 2 bags
	Manual		1 piece

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

【Storage Conditions】

Different reagents in this kit have different storage conditions. Please store them respectively according to the following conditions:

Table 2. Reagents storage conditions and validity period

Reagent	Storage Conditions	Validity Period
96-well pre-packed plate	2°C to 8°C	12 months
PK Solution	2°C to 8°C	12 months
Others	0°C to 30°C	12 months

【Applicable Instrument】

Applicable instrument: Automated Nucleic Acid Extractor

Model: MGISP-NE32

【Sample Conditions】

1. The kit is suitable to extract virus DNA or RNA from throat swabs.
2. The samples are recommended to be extracted within 24 h 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 Safety: All samples are regarded as potentially infectious items. The operations shall be performed in accordance with relevant national standards.

【Precautions】

1. This product is only used for scientific 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.

【Experimental Workflow】

Please follow the workflow as below:

A. Required Materials Not Supplied

Table 3. Materials required but not provided

Type	Item Name	Note
Instrument	MGISP-NE32 Automated Nucleic Acid Extractor	Cat.# 950-000013-00
	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. If you have other questions, please contact MGI technical support: MGI-service@genomics.cn

C. Sample Preparation (recommended)

1. For swab samples without storage buffer: add 400~500 μL 1x PBS, or saline, or certified sample storage buffer, vigorously vortex the sample for 1min, then samples should be incubated at 56°C water bath for 30 min (temperature and incubation time can be adjusted).
2. For swab samples with storage buffer: samples should be vigorously vortexed for 1 min, then incubated at 56°C water bath for 30 min (temperature and incubation time can be adjusted).

D. Automated Extraction Standard Workflow

1. Reagent preparation

   Invert the 96-well pre-packed plate three times after placed at room temperature, then remove the plastic film, centrifuge in 96-well centrifuge for seconds (or swing by hand) to avoid adhered liquid. Remove the aluminum foil film of 96-well plate; make sure the direction of the plate is right (magnetic beads in column 6th&12th).

2. Add 300 µL sample and 10 µL PK Solution to the columns #1 and #7 of the 96-well pre-packed plate.

3. Place the plate onto the instrument, install the magnetic bar protection case (8-strip tips) on the instrument and run the following program.

Table 4. automated extraction program

Step	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step8
Hole	1	6	1	2	3	4	5	6
Name	Lysis	Beads	Bind	Wash1	Wash2	Wash3	Elute	Elute
WaitTime (min: ss)	00:00	00:00	00:00	00:00	00:00	00:00	02:00	00:00
MixTime (min: ss)	10:00	00:15	10:00	02:00	01:00	01:00	05:00	00:30
Mag Time (min: ss)	00:00	00:30	00:35	00:30	00:30	00:30	00:35	00:00
Volume (µL)	900	200	900	700	700	700	80	200
Mixing Method	Fast	Medium	Fast	Fast	Fast	Fast	Fast	Slow
Collect Method	Normal	Strong	Strong	Strong	Strong	Strong	Normal	Normal

Lysis temperature: 75°C. Lysis heating ends at Step 2.

Elution temperature: 75°C. Elution starts heating at Step 7.

4. After the procedure completes, transfer the eluted products in column #5 and # 11 to new nuclease-free centrifuge tubes; if the products are not used immediately, store the samples in -20°C or below.

【Production Company Information】

Manufacturer: Wuhan MGI Tech Co., Ltd.

Address: Building 24, Stage 3.1, BioLake Accelerator No.388 2nd Gaoxin Road, East Lake High-Tech Development Zone 430075 Wuhan P.R. China

Manufacturer Site:

Building 24, Stage 3.1, BioLake Accelerator No.388 2nd Gaoxin Road, East Lake High-Tech Development Zone 430075 Wuhan P.R. China

Building B13, No.818, High-Tech Avenue, East Lake High-Tech Development Zone 430075 Wuhan P.R. China

Service Hotline: (+86) 4000-966-988

Website: en.mgitech.cn

Email: MGI-service@genomics.cn