

MagicPure® Up 32 Viral DNA/RNA Kit

Please read the manual carefully before use

Cat. No. EC341-32

Version No. Version 1.1

Storage: The reagent kit is stable for 18 months when stored at 15°C–30°C. Avoid freezing.

Description

This kit is designed for rapid lysis of aquatic and livestock samples, releasing viral DNA/RNA, followed by purification of viral DNA/RNA using silica-based magnetic beads. It is suitable for extracting viral DNA/RNA from ≤200 µl whole blood, plasma, serum, oral/nasal fluids, urine, tissues, feces, feed, and environmental samples. The resulting product is highly pure and suitable for experiments such as PCR, RT-PCR, qPCR, and qRT-PCR.

Kit Contents

Component	EC341-32-11 (32 T/box)	EC341-32-12 (64 T/box)
Viral DNA/RNA Reagents Plate	2 plates	4 plates
8-Tip Comb	4 each	8 each

Viral DNA/RNA Reagent Plate Contents

Column	Reagent Name	Volume
Column 1/7	Binding Buffer 46 for Plate (BB46 for Plate)	500 µl
Column 2/8	Magnetic Virus Beads for Plate	300 µl
Column 3/9	Clean Buffer 46 for Plate (CB46 for Plate)	500 µl
Column 4/10	Wash Buffer 46 for Plate (WB46 for Plate)	500 µl
Column 5/11	Wash Buffer 46 for Plate (WB46 for Plate)	500 µl
Column 6/12	RNase-free Water	80 µl

Sample Requirements

- Samples should be stored at 2°C–8°C for no more than 72 hours, or stored at -70°C for long-term preservation.
- Avoid repeated freeze-thawing of samples.

Detection Method

1. Preparation of Viral DNA/RNA Extraction Reagents

Remove the pre-sealed 96-deep-well plate from the reagent kit and take off the outer packaging. Invert and mix the 96-deep-well plate several times to resuspend the magnetic beads. Gently shake the deep-well plate to collect the reagents and magnetic beads to the bottom of the plate (alternatively, use a deep-well plate centrifuge at 500 rpm for no more than 1 minute). Carefully peel off the aluminum foil sealing film, avoiding vibration of the deep-well plate to prevent liquid splashing.

2. Automated Nucleic Acid Extractor Operating Procedure

2.1 Sample Processing

•Liquid Sample Processing:

(e.g., whole blood, plasma, serum, saliva, nasal swabs, urine, vaccines)

Fresh liquid samples containing virus should be mixed thoroughly (whole blood samples should be collected and stored in anticoagulant tubes), and the samples need to be equilibrated to room temperature. If the sample volume is less than 200 µl, it can be made up to volume with 1× PBS or 0.9% NaCl.



When the vaccine sample is in the form of an emulsion or oil adjuvant, a demulsification operation is required before extraction. The recommended method is as follows:

- (1) Add 1/2 volume of chloroform to the sample and mix thoroughly, then add 1/5 of the original sample volume of 2 M ammonium sulfate solution.
- (2) After thorough mixing, centrifuge at 5,000×g for 3 min at room temperature.
- (3) Aspirate 200 µl of the supernatant and perform nucleic acid extraction according to the "Liquid Sample Processing" method.

• **Solid Sample Processing:**

(e.g., nasal swabs, environmental gauze, fecal swabs)

Vortex the swab head or gauze after sampling together with its preservation solution for 5 minutes, so that the sample attached to the swab is fully washed off.

(e.g., animal tissues, feed pellets)

Take fresh tissue or feed samples, add an appropriate amount of 1× PBS or physiological saline, homogenize thoroughly, vortex for 5 minutes, and centrifuge fully to completely separate the solid and liquid phases.

2.2 Add 200 µl of the above sample liquid supernatant to each well in columns 1/7 (containing BB46 for plate), and place the 96-deep-well plate on the base of the 32-channel automated nucleic acid extractor.

2.3 Insert the magnetic rod sleeve into the magnetic rod sleeve slot of the 32-channel automated nucleic acid extractor.

2.4 Run the viral automated extraction program of the 32-channel automated nucleic acid extractor.

*Set the lysis temperature to 80°C and the elution temperature to 80°C, then set the program according to the table below.

Step	Position	Name	Waiting Time	Mixing Time	Mixing Speed	Magnetic Collection Time	Volume
1	1	Lysis	0 min	2 min	Fast	0 sec	700 µl
2	2	Transfer Magnetic Beads	0 min	10 sec	Fast	30 sec	300 µl
3	1	Binding	0 min	3 min	Fast	30 sec	700 µl
4	3	Wash 1	0 min	30 sec	Fast	30 sec	500 µl
5	4	Wash 2	0 min	30 sec	Fast	30 sec	500 µl
6	5	Wash 3	0 min	30 sec	Fast	30 sec	500 µl
7	6	Elution	2 min	2 min	Fast	30 sec	80 µl
8	2	Discard Magnetic Beads	0 min	10 sec	Fast	0 sec	300 µl

2.5 After the program ends, aspirate the DNA/RNA from each well in columns 6/12 and store it at -20°C or -70°C.

Notes

- To ensure the quality of the extracted nucleic acid, avoid repeated freeze-thawing of samples.
- Use Nuclease-free sterile centrifuge tubes and pipette tips to avoid degradation of viral DNA/RNA.

For research use only, not for clinical diagnosis.

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