# *MagicPure*® Up 32 Viral DNA/RNA Kit

**Please read the manual carefully before use**

**Catalog No.** EC341-32

**Version:** 1.0

**Description**

This kit is designed for rapid lysis of various and complicated sample, 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 content**

| Component | EC341-32-01 (32 T/box) |
|---|---|
| Viral DNA/RNA Reagents Plate | 2 plates |
| 8-Tip Comb | 4 pieces |

**Viral DNA/RNA Reagent Plate Contents**

| Column | Reagents Name | Volume |
|---|---|---|
| Column 1/7 | Binding Buffer 46 (BB46) | 375 µl |
| Column 2/8 | Magnetic Virus Beads for Plate | 300 µl |
| Column 3/9 | Clean Buffer 46 (CB46) | 400 µl |
| Column 4/10 | Wash Buffer 46 (WB46) | 100 µl |
| Column 5/11 | Wash Buffer 46 (WB46) | 100 µl |
| Column 6/12 | RNase-free Water | 80 µl |

**Storage conditions and shelf life:** This kit should be stored at (5-30°C) and can be kept for one year. Avoiding freezing. Please refer to the product label for the production date and expiration date of the kit.

**Sample storage requirement:** At 2-8℃ for no more than 72 hrs, or at -70℃ for long term storage. Avoid repeated freeze-thaw cycle.

**Testing methods**

**1. Viral DNA/RNA extraction reagent preparation**

1.1 Remove the outer packaging of the pre-packaged 96 deep-well plates, mix it upside down for several times to resuspend the magnetic beads. Briefly centrifuge the plates to concentrate the reagents and magnetic beads at the bottom of the deep well plate (or centrifuge at 500 rpm for no more than 1 minute by a deep-well plate centrifuge). Carefully tear off the aluminium foil sealing film and avoid vibration of deep-well plates to prevent splashing.

1.2 Before use, please add 400 µl of absolute ethanol (analytical grade) to each well of Column 3/9, Column 4/10 and Column 5/11.

1.3 Before use, please add 125 µl of isopropanol (analytical grade) to each well of Column 1/7.

**2. Operational procedure of automated nucleic acid extractor**

2.1 Sample processing

For liquid samples:

(For example, whole blood, plasma, serum, saliva, nasal secretion, urine, vaccine)

For fresh liquid samples containing viruses, thorough mixing is required (whole blood samples should be collected and stored

in anticoagulant tubes), and samples should be equilibrated to room temperature. If the sample volume is less than 200 µl, supplement to 200 µl with 1×PBS or 0.9% NaCl.

**For vaccines in the form of milk or oil emulsions, it is necessary to perform emulsion breaking before extraction. The recommended method is as follows:**

(1) Add 1/2 of the original sample volume of chloroform to the sample and mix thoroughly, then add 2 M ammonium sulfate solution at a volume equal to 1/5 of the original sample volume.

(2) Mix thoroughly, cCentrifuge at 5,000×g for 3 minutes at room temperature after thorough mixing.

(3) Pipette 200 µl of the supernatant and proceed with nucleic acid extraction according to the "liquid sample processing" method.

For solid samples:

(For example, nasopharyngeal swabs, environmental swabs, fecal swabs)

Vortex the swab head or gauze with its storage solution for 5 minutes to fully elute the adherent sample.

(For example, animal tissues, feed particles)

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

2.2 Add 200 µl of the above supernatant to each well in column 1/7 (containing BB46 for plate), and place the 96-well 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 virus automated extraction program on the 32-channel automated nucleic acid extractor.

*Set the lysis temperature to 80 °C, elution temperature to 80 °C, and then follow the program settings in the table below.

| Step | Station | Procedure | Waiting Time | Mixing Time | Mixing Speed | Beads Absorption Time | Volume |
|---|---|---|---|---|---|---|---|
| 1 | 1 | Lysis | 0 min | 2 min | Fast | 0 sec | 700 µl |
| 2 | 2 | Transfer Beads | 0 min | 10 sec | Fast | 30 sec | 300 µl |
| 3 | 1 | Attachment | 0 min | 3 min | Fast | 30 sec | 700 µl |
| 4 | 3 | Wash 1 | 0 min | 30 sec | Fast | 30 sec | 800 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 | Beads Disposal | 0 min | 10 sec | Fast | 0 sec | 300 µl |

2.5 At the end of the procedure, pipette out the DNA/RNA of each well of Column 6/12. Store at -20°C or -70°C.

**Notes**

• Avoid repeated freeze-thaw cycle samples to ensure high quality of viral DNA/RNA.

• Use Nuclease-free sterile micro-centrifuge tubes and pipette tips to avoid viral DNA/RNA degradation.

**For research use only, not for clinical diagnosis**

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