Appendix：The automation purification, take Bioer NPA-32P as an example

1. Reagent preparation

1) For BSC71S1B and BSC71M1B

Add 600μL Lysis Buffer to the 2.2mL 96 deep well plate column #1 and #7. Add 700μL Wash Buffer I to column #2 and #8. Add 700μL Wash Buffer II to column #3, #4, #9, and #10. Add 80μL Elution Buffer to column #5 and #11. Add 175μL Pure Water and 25μL MagaBio Reagent to column #6 and #12.

2) For BSC71S1E

Turn the 96-well plate upside down three times after placed at room temperature, then rip off plastic film, centrifuge in 96-well centrifuge for seconds (or swing by hand) to avoid adhered liquid. Rip off aluminum foil film of 96-well plate; make sure the direction of the plate (magnetic beads in column 6th&12th).

2. Add 300μL sample and 10μL PK Solution to the 96 well plate columns Lysis Buffer strip.

NOTE: The sample pretreatment procedure can be referred to the manual purification. Add 200μL of sample for saliva or other viscous liquid.

3. Place 96 deep well plate to the instrument, install the 8-strip tips on the instrument and run the program.

Step	Well	Name	Waiting Time (min: ss)	Mixing Time (min: ss)	Magnet Time (min: ss)	Adsorption	Speed	Volume（μL）
1	1	Lysis	00 : 00	10 : 00	00 : 00	Normal	F	900
2	6	Beads	00 : 00	00 : 15	00 : 30	Strong	M	200
3	1	Bind	00 : 00	10 : 00	00 : 35	Strong	F	900
4	2	Wash 1	00 : 00	02 : 00	00 : 30	Strong	F	700
5	3	Wash 2	00 : 00	01 : 00	00 : 30	Strong	F	700
6	4	Wash 3	00 : 00	01 : 00	00 : 30	Strong	F	700
7	5	Elution	02 : 00	05 : 00	00 : 35	Normal	F	80
8	6	Discard	00 : 00	00 : 30	00 : 00	Normal	S	200

Lysis temperature: 75℃. Lysis heating ends at Step 2.

Elution temperature: 75℃. Elution starts heating at Step 7.

4. After the automatic purification is over, transfer the Elution Buffer in columns 5 and 11 to a clean nuclease-free 0.5mL centrifuge tube; if not using it immediately, please store at -20 degrees.

Basic Information

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MagaBio plus Virus DNA/RNA Purification Kit II

Instruction For Use

Product Name MagaBio plus Virus DNA/RNA Purification Kit II

Packing Size 32 Tests/box; 50 Tests/box; 100 Tests/box

Usage Used for nucleic acid extraction, enrichment, purification and other steps. The isolated product is used for clinical in vitro testing.

Principle and Advantage

Nucleic acid in tissue, feces, blood, serum, plasma and other body fluid samples is released by using Lysis Buffer. Released virus DNA/ RNA is bound exclusively and specifically to the Magnetic beads. The virus DNA/ RNA bound to magnetic particles is captured by magnetic material; contaminants are removed by washing with Wash Buffer. The nucleic acid is then eluted from the particles with an Elution Buffer.

Kit Components

Cat#	BSC71S1E	BSC71S1B	BSC71M1B	Components
Components	**32T**	**50T**	**100T**	
PK Solution	320 μL	500 μL	1 mL	Protease K
Lysis Buffer	96 well pre- packed plates 2 pieces	30 mL	60 mL	Surfactant and Tris buffer
Wash Buffer I		※24 mL	※24 mL×2	High-salt solution
Wash Buffer II		※12 mL×2	※24 mL×2	Low-salt solution
Elution Buffer		10 mL	20 mL	DNase/RNase free H_2O
MagaBio Reagent		1.25mL	1.25mL×2	Magnetic particles coated with silica
HandBook	1	1	1	/

Notes：Buy BSC71S1B，add 16 mL Absolute ethanol to ※24 mL Wash Buffer I before use; add 28 mL Absolute ethanol to ※12mL Wash buffer II before use；

Buy BSC71M1B，add 16 mL Absolute ethanol to ※24 mL Wash Buffer I before use; add 56 mL Absolute ethanol to ※24mL Wash buffer II before use.

Reagents to be prepared by the user

Buy BSC71S1B and BSC71M1B, please prepare the absolute ethanol (analytical grade) by yourself.

Storage and transportation

1. The kit can be transported at room temperature.
2. The kit should be stored at 2~8℃.
3. All reagents are valid for 12 months if stored properly.

Applicable instrument

1. Magnetic rack or Bioer NPA-32P nucleic acid purification instrument;
2. Water bath or dry bath;
3. Vortex mixer.

Sample Requirements

If the sample volume is less than 300μL, you can add an appropriate volume of PBS buffer or saline to make the total volume reach 300μL.

Procedure

Buy BSC71S1B and BSC71M1B; please follow the manual extraction method below.

I. Sample preparation:

1. Sample processing from different sources

（1）Serum, Plasma, Ascites or other liquid samples virus: Add 300μL sample to a 1.5mL microcentrifuge tube.

（2）Animal /plant tissue virus: Grind sample fully with normal saline or PBS, centrifuge at 12,000g for 5-10min, and add 300μL supernatant to a 1.5mL microcentrifuge tube.

（3）Faeces virus: Grind sample fully with normal saline or PBS, centrifuge at 12,000g for 5-10min, and add 300μL supernatant to a 1.5mL microcentrifuge tube.

（4）Whole blood, saliva or other viscous liquid virus: Add 200μL sample to a 1.5mL microcentrifuge tube.

2. Add 600μL Lysis Buffer and 10μL PK Solution to the 1.5mL microcentrifuge tube.

3. Incubate at 70℃ for 10 minutes. (For virus difficult to be lyzed, please appropriately increase incubation time).

After the automatic purification is over, transfer the Elution Buffer to a clean nuclease-free 0.5mL centrifuge tubes; if not using it immediately, please store at -20 degrees.

II. Sample extraction operation Purification

1. Add 25μL of the well-mixed (particles should be suspended) MagaBio Reagent.Mix the tube gently and incubate for 5 minutes at room temperature while mixing.
2. Centrifuge the tubes for a short while. Put it on magnetic rack for 1 minute. Discard the supernatant.

3. Add 700μL Wash Buffer I and vortex for 15 seconds. Centrifuge the tube for a short while. Put it on magnetic rack for 1 minute. And then discard the clarified supernatant.
4. Add 700μL Wash Buffer II and vortex for 15 seconds. Centrifuge the tube for a short while. Put it on magnetic rack for 1 minute. And then discard the clarified supernatant.
5. Add 700μL Wash Buffer II and vortex for 15 seconds. Centrifuge the tube for a short while. Put it on magnetic rack for 1 minute. And then discard the clarified supernatant. Meanwhile, Open the cap and keep the 1.5mL centrifuge tube still on the magnetic rack, dry for 5min.
6. Add 80μL of Elution Buffer and vortex for 30s.Incubate at 70℃ for 5 minutes. Waving the tube lightly twice during this time in order to elute the DNA/RNA.
7. Centrifuge the tube for a short while. And then put it on magnetic rack for 1 minute, and transfer the supernatant to a new tube for use later.

Note: If liquid is adhered on the tube wall and tube cover during operation, please centrifuge briefly to gather all liquid into the bottom of the tube, and then place it on the magnetic rack.

Explanation of test results

This kit is suitable for the extraction of viral nucleic acid in tissue, feces, blood, serum, plasma and other body fluid samples.

Limitations of the test method

Sample size: The sample size should be less than 300μL;

Sensitivity: It requires high-sensitivity PCR detection reagents

Performance Indicators

The extracted product is confirmed by the high sensitivity HBV DNA detection reagents that the sensitivity reaches 5 IU/mL; The extracted product is confirmed by the high sensitivity HCV RNA detection reagents that the sensitivity reaches 50 IU/mL. This result is repeatedly tested and confirmed by national standard quality-controlled product.

Notes

1. The following procedure is suitable for the use of Bioer NPA-32P nucleic acid purification instrument. If other nucleic acid purification systems are used, the operating procedures need to be adjusted according to the performance of different instruments.
2. After receiving the kit, it should be stored at 2～8℃.