MagaBio Fecal pathogens DNA/RNA Purification Kit

【Product Name】MagaBio Fecal pathogens DNA/RNA Purification Kit

【Packing Size】 16Tests；32Tests

【Usage】Purify high-quality nucleic acids from pathogens in fecal samples.

【Principle】

The nucleic acid in the sample is released under the action of Lysis Buffer and PK, and the released nucleic acid specifically binds to the magnetic beads. The magnetic bead particles that bind the nucleic acid are captured by the magnetic material, and the contaminants are removed through multiple washing processes. Finally, the DNA is eluted and collected from the magnetic beads under the action of the eluent.

【Main Components】

<table>
<tr><th>Cat</th><th>BSC78T1S</th><th>BSC78S1S</th></tr>
<tr><td>Component Name</td><td>16T</td><td>32T</td></tr>
<tr><td>Proteinase K (PK)</td><td>160μL</td><td>320 μL</td></tr>
<tr><td>Lysis Buffer</td><td>3.2mL</td><td>6.4mL</td></tr>
<tr><td>DA Buffer</td><td>1.12 mL</td><td>2.24 mL</td></tr>
<tr><td>Binding Buffer</td><td rowspan="5">16 Pre-packaged Reagent Strips</td><td rowspan="5">32 Pre-packaged Reagent Strips</td></tr>
<tr><td>G Binding Buffer</td></tr>
<tr><td>Wash Buffer</td></tr>
<tr><td>Elution Buffer</td></tr>
<tr><td>MagaBio Reagent</td></tr>
<tr><td>Grind Tube</td><td>16</td><td>32</td></tr>
<tr><td>Manual</td><td>1</td><td>1</td></tr>
</table>

【Apparatus and materials to be prepared by the user】

1. Bioer NPA-32P purification instrument
2. Water bath or Dry bath
3. Vortex mixer

【Storage and Shelf life】

1. The kit can be transported at room temperature.
2. The kit should be stored at 2~8℃.
3. All reagents, when stored properly, are stable for 12 months from the time of delivery.

【Sample requirements】

The kit can extract pathogen nucleic acid in fecal samples.

【Protocol】

1. Sample Preparation:

- Take 200ul liquid fecal sample/100-200mg solid fecal sample into the grinding tube.
- Add 10μL PK and 200μL Lysis Buffer to the grinding tube.
- The maximum speed of shaking and mixing is 5-10mins, or placed in a grinder 6.0 Hz shaking for 60sec.

  Note: This step must be vigorously shaken until there are no particles to ensure sufficient lysis.
- After 10 minutes of incubation in a 65 ℃ bath, remove the centrifuge tube from the 65 ℃ water bath.

- Add 70μL DA Buffer, mix and place on ice for 5 minutes to help precipitate formation.

  Note: If ice bath conditions are not available, it can also be placed at room temperature for 5 minutes.

- Centrifuge at 12000 g for 5 min. Pipette the supernatant (not more than 350μL) into a new 1.5mL centrifuge tube.

2. Nucleic acid purification (Manual extraction method):

- Remove the required number of pre-packaged reagent strips from the self-sealing plastic bag. If you find magnetic beads sticking to the tube wall or sealing film of the pre-packaged strip, mix the strip upside down several times to re-levitate the beads.
- The pre-packaged reagent strip was fixed on the plate rack (see installation diagram on page 4 for details), and centrifuged briefly in a 96-well plate centrifuge to avoid liquid hanging on the tube wall and sealing film, so as to ensure the volume of the purified reagent.

Note: when placing the preencapsulated reagent strip, see the reagent strip installation diagram. Ensure that the reagent strip is inserted into the bottom of the tray.

- Remove the tray from the centrifuge and tear the reagent strip seal film.
- Add 200μL sample and 10μL protease K to the first well of each prepackaged reagent strip. Avoid cross contamination.
- The reagent position of each pre-packaged reagent strip is shown in the following table:

Hold	1	2	3	4	5	6
Reagent	Binding Buffer	G Binding Buffer	Wash Buffer	Wash Buffer	Elution Buffer	MagaBio Reagent
Volume	570μL	500μL	600μL	600μL	60μL	200μL

- Place the rack with reagent strips in the Bioer NPA-32P purification instrument.Insert the jacket into the instrument.

  Note: Double check that the reagent strip is inserted into the bottom of the tray

- Import the pre-set running program and start the program. Please refer to the following table for running program settings：

Step	Well	Name	Waiting Time (min: ss)	Mixing Time (min: ss)	Magnet Time (min: ss)	Adsorption	Speed	Volume (μL)
1	1	Lysis	00 : 00	01 : 00	00 : 00	Normal	Fast	920
2	6	Beads	00 : 00	00 : 20	00 : 30	Strong	Slow	200
3	1	Binding	00 : 00	10 : 00	00 : 35	Strong	Fast	920
4	2	Wash 1	00 : 00	03 : 00	00 : 35	Strong	Fast	500
5	3	Wash 2	00 : 00	02 : 00	00 : 35	Strong	Fast	600
6	4	Wash 3	00 : 00	02 : 00	00 : 35	Strong	Fast	600
7	5	Elution	01 : 00	05 : 00	00 : 35	Normal	Slow	60
8	6	Discard	00 : 00	00 : 30	00 : 00	Normal	Slow	200

Heating setting：

Elution temperature: 65℃, Elution start heating step: 7.

- At the end of the program, transfer the eluent in the 5th well of each pre-packaged reagent strip to a clean nuclease-free centrifuge tube. If not immediately tested, please transfer the extracted products to below -20℃ for storage.

【Interpretation of test results】

When using this kit to extract a fecal sample, if the lysis product is found to be sticky after completing the sample lysis procedure, the amount of fecal sample can be appropriately reduced.

【Limitations of the test method】

The volume of liquid samples should not exceed 200μL, and the volume of tissue samples should be up to 200mg.

【Product performance index】

Extraction product detection (OD260-OD320)/(OD280-OD320) ratio: 1.7-2.1

【Notes】

1. The following procedures are suitable for use with the Bioer NPA-32P nucleic acid purification instrument. If other nucleic acid purification instruments are used, the operating procedures need to be adjusted according to the performance of different instruments.
2. Store at 2℃-8℃ after receiving the kit.

【Company Information】

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【Reagent strip installation diagram】