Nucleic acid extraction and purification kit

【Product Name】

Nucleic acid extraction and purification kit.

【Packing size】

Catalog No.	Size
TQ-BG-001-025	25 reactions
TQ-BG-001-050	50 reactions
TQ-BG-001-100	100 reactions
TQ-BG-001-200	200 reactions

【Intended Use】

Nucleic acid extraction and purification kit is used for isolating high-quality pathogen nucleic acids (DNA/RNA) from a variety of specimens. Nucleic acid can be directly extracted from liquid samples such as blood, serum, plasma, urine, nasopharyngeal swabs, and cell culture. And soil samples such as stool, tissue samples need to be pre-treated, obtaining a supernatant and carrying out extraction and purification to obtain the nucleic acids. The obtained nucleic acids can be directly used in related experiments such as Fluorescence quantitative PCR, RT-PCR, biochip analysis, second-generation sequencing.

【Detection Principle】

Nucleic acid extraction and purification kit is based on superparamagnetic particles technology with high adhesion. Under the condition of high concentration of ionizing agent, the nanometer magnetic particles can specifically adsorb nucleic acids through hydrogen bonding and electrostatic, while proteins or other impurities are not absorbed. The nucleic acid-adsorbed nanoparticles are washed to remove proteins, salts and other impurities on the particles surface by washing buffer. Finally, the low-salt buffer can be used to elute the purified nucleic acids on the particles. The magnetic beads with special surface modification have stronger ability of binding nucleic acid and easier elution, which can minimize the risk of cross-contamination and improve detection sensitivity and accuracy. The kit has simple operation steps in a short time, and can complete the entire extraction process at room temperature(about 25℃).

【Kit Contents】

Catalog No.	TQ-BG001-025		TQ-BG001-050		TQ-BG001-100		TQ-BG001-200	
Type of reagent	Reagent No.	Size	Reagent No.	Size	Reagent No.	Size	Reagent No.	Size
Beads*	BG001-PA1	0.8mL	BG001-PD1	1.7mL	BG001-PB1	3.3mL	BG001-PC1	6.6mL
Lysate	BG001-PA2	15mL	BG001-PD2	30mL	BG001-PB2	50mL	BG001-PC2	100mL
Washing buffer I**	BG001-PA3	6.6mL *Need add 8.4mL anhydrous ethanol before use*	BG001-PD3	17mL *Need add 22mL anhydrous ethanol before use*	BG001-PB3	33mL *Need add 42mL anhydrous ethanol before use*	BG001-PC3	66mL *Need add 84mL anhydrous ethanol before use*
Washing buffer II**	BG001-PA4	6mL *Need add 24mL anhydrous ethanol before use*	BG001-PD4	15mL *Need add 60mL anhydrous ethanol before use*	BG001-PB4	25mL *Need add 100mL anhydrous ethanol before use*	BG001-PC4	50mL *Need add 200mL anhydrous ethanol before use*
Eluate buffer	BG001-PA5	10mL	BG001-PD5	25mL	BG001-PB5	50mL	BG001-PC5	100mL

Tips：

① "" For the first use, the magnetic beads must be thoroughly mixed ensuring the magnetic beads is fully dispersed.*

*② "**" Please add suitable anhydrous ethanol into washing buffer I and washing buffer II before use, and store at about 25 ℃.*

③ Please prepare anhydrous ethanol by yourself.

【Storage Conditions and Expiry Date】

1. Date of manufacture and expiry: see outer packing box.
2. Transport and store at room temperature(about 25℃), and the validity period is 6 months.

【Applicable Instrument】

Magnetic separator, vortex oscillator, Centrifuge, Pipette, Water bath, etc.

【Operation steps】

1. **Adsorption：** Add 400μL lysate, 30μL magnetic beads suspension and 200μL sample into centrifuge tube, swirl and mix 15 Sec with a vortex oscillator, and leave at room temperature for 15 minutes (with moderate blending for 2 to 3 times). Then collecting the magnetic bead with magnetic separator (30Sec) and discard supernatant.
2. **Washing ①：** Add 500μL washing buffer I, swirl and mix by a vortex oscillator for 15 Sec. Then collecting the magnetic bead with magnetic separator (30Sec) and discard supernatant.
3. **Washing ②：** Add 500μL washing buffer II, swirl and mix by a vortex oscillator for 15 Sec. Then collecting the magnetic bead with magnetic separator (30Sec) and discard supernatant.
4. **Washing ③：** Add 500μL washing buffer II, swirl and mix by a vortex oscillator for 15 Sec. Then collecting the magnetic bead with magnetic separator (30Sec) and discard supernatant.
   Tips：If low temperature storage causes precipitation of lysate and washing buffer, please dissolve them in a 37 degree water bath before use
5. **Drying：** Drying at room temperature for 3~5min to evaporate residual ethanol.
6. **Eluting：** Add 100μL eluate buffer and moderate blending 15Sec, and then, waiting for 2～3min and instant centrifugal. Adsorb the magnetic bead with magnetic separator and collect nucleic acid eluent into RNase-free centrifuge tube for subsequent testing or storage below -20℃.
   Tips： *If the nucleic acid concentration is too low, 50 μL of eluent can be added for elution, and concentrated concentration extraction is performed.*

【Warnings and Precaution】

1. Please read this manual carefully before extraction and operate strictly in accordance with the requirements.
2. Laboratory operations were performed in accordance with the "*Administrative Measures for Clinical Gene Expansion Laboratory of Medical Institutions*". The experimental operation must be strictly partitioned, and the instruments, equipment, consumables and work clothes used in each area must be dedicated to avoid cross contamination.
3. Samples should be handled in strict accordance with bio safety.
4. This kit is only for researching and development, not for clinical diagnosis.
5. The solution contains guanidine salt protein denaturant, if accidentally spilled the skin, please flush the skin with plenty of water.

【Basic Information】

1. Registrant/Manufacturer:

Shanghai BioGerm Medical Technology Co., LTD
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2. After-sales service unit:

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【Issue Date】

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