adding the liquid, and discard 40μL Elution buffer from well #5.)

4) Place the reagent strip rack with reagent strip to the NPA-32P; install the 8-strip tips on the instrument.

Note: Make sure again that the reagent strip has been inserted into the bottom of the reagent strip rack.

Step	Name	Well	Volume (μL)	Waiting Time (min ： ss)	Speed	Mixing Time (min ： ss)	Adsorption	Magnet Time (min ： ss)
1	Lysis	1	710	-- : --	fast	10 : 00	N	-- : --
2	Lysis	1	710	00 : 05	fast	00 : 00	N	-- : --

Lysis temperature:65℃, lysis stop heating step: 2th

5) At the end of step 4, take the reagent strip out. Add 300μL isopropanol in well #1, and put the reagent strip back into NPA-32P nucleic acid purification system. The automatic extraction experiment was carried out according to the following procedure:

Step	Name	Well	Volume (μL)	Waiting Time (min ： ss)	Speed	Mixing Time (min ： ss)	Adsorption	Magnet Time (min ： ss)
1	Beads	6	200	-- : --	slow	00 : 30	N	00 : 30
2	Bind	1	1000	-- : --	fast	08 : 00	S	02 : 00
3	Wash 1	2	700	-- : --	fast	03 : 00	S	01 : 00
4	Wash 2	3	600	-- : --	fast	03 : 00	S	01 : 00
5	Wash 3	4	600	-- : --	fast	03 : 00	S	01 : 00
6	Elution	5	100	05 : 00	fast	10 : 00	C	01 : 40
7	Discard	6	200	-- : --	slow	00 : 30	N	-- : --

Elution temperature: 60℃, Elution start heating step: 6th

After the automation process is completed, the purified nucleic acid is in well #5; if not used immediately, transfer the elution to a new 0.5 mL nuclease-free centrifuge tube and save it at -80 ℃.

【Analysis Nucleic Acid】

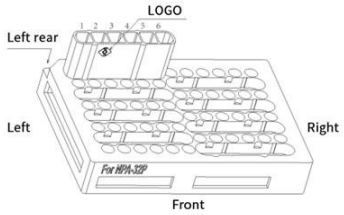
Get some DNA, diluted in a advisable factor with elution buffer.

Survey the OD260, OD280 and OD320.

Concentration（μg/mL）＝50×OD260×dilution fact.

1.7≤OD260-320/ OD280-320≤2.1.

【Reagent strip installation diagram】



【Basic Information】

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Aftersales Service Provider: Hangzhou Bioer Technology Co.,Ltd

MagaBio plus General Genomic DNA Purification Kit II

【Kit Components】

Cat#	BSC74T1S	BSC74S1S
Components	**16Tests**	**32Tests**
TES Buffer	8mL	16 mL
PK Solution	160 μL	320 μL
RNase A Solution	16 μL	32 μL
Lysis Buffer	Pre-loaded reagents strip 1T * 16	Pre-loaded reagents strip 1T * 32
Wash Buffer I		
Wash Buffer II		
Elution Buffer		
Maganetic beads		
Handbook	1	1

【Storage】

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

【Introduction】

MagaBio plus General Genomic DNA Purification Kit II is designed for rapid and reliable isolation of high-quality genomic DNA from blood, tissue, saliva, buccal swabs, cultured cells, and dry blood spots. MagaBio Particles, magnetic beads, provide a quick magnetic response time reducing overall processing time. This system combines the reversible nucleic acid-binding properties of MagaBio paramagnetic particles with the time-proven efficiency of Bioer automatic nucleic acid purification system to provide a fast and convenient method to isolated DNA from a variety of samples. Utilizing paramagnetic particles provides high-quality DNA that is suitable for direct use in most downstream applications, such as amplification and enzymatic reactions, next-generation sequencing.

【Principle and Advantage】

Nucleic acid is released under the action of Proteinase K Solution and Lysis Buffer. Magnetic beads can combine with DNA exclusively and specifically after adding isopropanol. Magnetic beads combined with DNA are captured by magnetic rod; Multiple Wash Buffers will remove contaminants. Purified DNA is released into the Elution Buffer by Magnetic beads.

MagaBio technic has great advantages:

1. Mini sample, high purification;
2. Simple and streamline separation procedure, used for auto-platform;
3. First elution can acquire 85% or more DNA;
4. No high salt solution. No inhibitor;
5. No spin column.

【Materials and Equipment to be prepared by user】

Magnetic Rack or Bioer NPA-32P purification instrument;

【Reagent preparing】

1. Take out the required number of pre-packed reagent strips from the sealing plastic bag. If the magnetic beads adhered to the tube wall or sealing film of the pre-packed reagent strip, please invert the reagent strip upside down and mix several times to re-suspend the magnetic beads.
2. Identify the direction of the pre-loaded reagent strip (magnetic beads in well #6). Fix the pre-packed reagent strip on the reagent strip rack, and centrifuge it briefly in a 96-deep-well plate centrifuge to avoid adhering liquid on the tube wall and sealing film, in order to ensure the certain volume of the purified reagent.

Note: When placing the pre-packed reagent strip, please refer to the installation diagram of the reagent strip. Make sure that the reagent strip has been inserted into the bottom of the reagent strip rack.

3. Take out the reagent strip racks from the centrifuge. Identify the direction of the pre-loaded reagent strip (magnetic beads in well #6). Tear off sealing film of the reagent strip.

【Protocol】

1. Blood or saliva processing

1) Add 250μL blood or saliva and 10μL PK Solution in well #1 of the reagent strip, please avoid cross-contamination.
2) Place the reagent strip rack with reagent strip to the NPA-32P; install the 8-strip tips on the instrument.
Note: Make sure again that the reagent strip has been inserted into the bottom of the reagent strip rack.
3) Run the program according to the following procedures:

Step	Name	Well	Volume (μL)	Waiting Time (min : ss)	Speed	Mixing Time (min : ss)	Adsorption	Magnet Time (min : ss)
1	Lysis	1	710	-- : --	fast	10 : 00	N	-- : --
2	Lysis	1	710	00 : 05	fast	00 : 00	N	-- : --

Lysis temperature:65°C, lysis stop heating step: 2th

4) At the end of step 3, take the reagent strip out. Add 300μL isopropanol in well #1, and put the reagent strip back into NPA-32P nucleic acid purification system. The automatic extraction experiment was carried out according to the following procedure:

Step	Name	Well	Volume (μL)	Waiting Time (min : ss)	Speed	Mixing Time (min : ss)	Adsorption	Magnet Time (min : ss)
1	Beads	6	200	-- : --	slow	00 : 30	N	00 : 30
2	Bind	1	1000	-- : --	fast	08 : 00	S	02 : 00
3	Wash 1	2	700	-- : --	fast	03 : 00	S	01 : 00
4	Wash 2	3	600	-- : --	fast	03 : 00	S	01 : 00
5	Wash 3	4	600	-- : --	fast	03 : 00	S	01 : 00
6	Elution	5	100	05 : 00	fast	10 : 00	C	01 : 40
7	Discard	6	200	-- : --	slow	00 : 30	N	-- : --

Elution temperature: 60°C, Elution start heating step: 6th

2. Tissue processing

1) Prepare all reagents and samples under room temperature. Grind the tissue into powder under the liquid nitrogen.
2) Add 30mg sample powder to the 1.5mL DNase-free tube. Add 10μL PK Solution and 300μL TES Buffer into the tube and mix by pulse-vortexing for 15 seconds.
3) Incubate at 56°C for 30 minutes（The lysis step can be more longer for 1-3h,or overnight for ear and tail）.
4) Remove the tube from 56°C.Centrifuge for 5min at 12000g. Transfer 300μL of the supernatant in well #1 of the reagent strip.
5) Place the reagent strip rack with reagent strip to the NPA-32P; install the 8-strip tips on the instrument.
Note: Make sure again that the reagent strip has been inserted into the bottom of the reagent strip rack.

Step	Name	Well	Volume (μL)	Waiting Time (min : ss)	Speed	Mixing Time (min : ss)	Adsorption	Magnet Time (min : ss)
1	Lysis	1	710	-- : --	fast	10 : 00	N	-- : --
2	Lysis	1	710	00 : 05	fast	00 : 00	N	-- : --

Lysis temperature:65°C, lysis stop heating step: 2th

6) At the end of step 5, take the reagent strip out. Add 300μL isopropanol in well #1, and put the reagent strip back into NPA-32P nucleic acid purification system. The automatic extraction experiment was carried out according to the following procedure:

Step	Name	Well	Volume (μL)	Waiting Time (min : ss)	Speed	Mixing Time (min : ss)	Adsorption	Magnet Time (min : ss)
1	Beads	6	200	-- : --	slow	00 : 30	N	00 : 30
2	Bind	1	1000	-- : --	fast	08 : 00	S	02 : 00
3	Wash 1	2	700	-- : --	fast	03 : 00	S	01 : 00
4	Wash 2	3	600	-- : --	fast	03 : 00	S	01 : 00
5	Wash 3	4	600	-- : --	fast	03 : 00	S	01 : 00
6	Elution	5	100	05 : 00	fast	10 : 00	C	01 : 40
7	Discard	6	200	-- : --	slow	00 : 30	N	-- : --

Elution temperature: 60°C, Elution start heating step: 6th

3. Oral swab processing

1) Use a cotton swab in intraoral wipes 15-20 times. Put the swab to a 2mL centrifuge tube, Cut out stem part from the swab with scissors.
2) Add 400μL－500μL of TES Buffer and 10 μL PK Solution to the 1.5mL DNase-free tube from the above.
3) Mix by pulse-vortexing for 15 seconds. Put it in a 56°C thermostat oscillator, Vortex 900rpm for 30mins. Centrifuge for a few seconds.
4) Transfer all liquid in well #1 of the reagent strip.
5) Place the reagent strip rack with reagent strip to the NPA-32P; install the 8-strip tips on the instrument.
Note: Make sure again that the reagent strip has been inserted into the bottom of the reagent strip rack.

Step	Name	Well	Volume (μL)	Waiting Time (min : ss)	Speed	Mixing Time (min : ss)	Adsorption	Magnet Time (min : ss)
1	Lysis	1	710	-- : --	fast	10 : 00	N	-- : --
2	Lysis	1	710	00 : 05	fast	00 : 00	N	-- : --

Lysis temperature:65°C, lysis stop heating step: 2th

6) At the end of step 5, take the reagent strip out. Add 300μL isopropanol in well #1, and put the reagent strip back into NPA-32P nucleic acid purification system. The automatic extraction experiment was carried out according to the following procedure:

Step	Name	Well	Volume (μL)	Waiting Time (min : ss)	Speed	Mixing Time (min : ss)	Adsorption	Magnet Time (min : ss)
1	Beads	6	200	-- : --	slow	00 : 30	N	00 : 30
2	Bind	1	1000	-- : --	fast	08 : 00	S	02 : 00
3	Wash 1	2	700	-- : --	fast	03 : 00	S	01 : 00
4	Wash 2	3	600	-- : --	fast	03 : 00	S	01 : 00
5	Wash 3	4	600	-- : --	fast	03 : 00	S	01 : 00
6	Elution	5	100	05 : 00	fast	10 : 00	C	01 : 40
7	Discard	6	200	-- : --	slow	00 : 30	N	-- : --

Elution temperature: 60°C, Elution start heating step: 6th

4. Blood spot processing

1) Put 8 pieces of blood spots sample to a 1.5mL DNase-free tube. The area of each blood spots is 3×3mm.
1) Add 300μL TES Buffer and 10μL PK into the 1.5mL DNase-free tube.
2) Mix by pulse-vortexing intensively for 10 seconds. Put it in a 56°C thermostat oscillator, Vortex 900rpm for 45mins.
3) Transfer all liquid in the well #1 of the reagent strip. (**Discard 150μL Lysis buffer from well #1 before**