MagBeads FastDNA® Kit

Ready-to-Use for MPure-32™ aNAP System

Cat. No.: 117033600 (96 PREPS)

Quick-Start Manual

Revision 3.0 Dec 2023

Notes before starting:

- Add 2.5 mL Protease Dissolve Buffer to the Proteinase K, and store at -20~8℃ after dissolve.
- Add 1.25 mL Protease Dissolve Buffer to the RNase A, and store at -20~8℃ after dissolve.

Automation Extraction

Sample Preparation

A. Solid tissue (1-20mg)

1. Cut ~20 mg tissue into small pieces and transfer into a new 1.5 mL microcentrifuge tube. Add 200 µL Buffer ATL and 20 µL Proteinase K and incubate with shaker at 55˚C for 30 to 180 mins.
2. (Optional) Add 10 µL RNase A into the lysate and incubate at room temperature for 10 mins.
3. Add 200 µL Buffer AL into the samples, mix thoroughly by vortexing to yield homogenous solution.
4. Incubate at 70˚C for 10 mins.

B. Anticoagulated blood or Plasma (200 µL)

1. Transfer 20 µL Proteinase K to a new 1.5 mL microcentrifuge tube.
2. Add 200 µL whole blood, plasma, or other body fluids into the tube. Shake to mix for 5 seconds.
3. Add 200 µL Buffer AL into the samples. Invert the tube for 3 - 5 times, and vortex at maximum speed for 10s. Incubate at 70˚C for 10 mins.

C. Saliva sample

1. Add 20 µL Proteinase K and 10 µL RNase A into a 1.5 mL microcentrifuge tube.
2. Transfer 450 µL saliva to the tube and shake to mix for 5 s.
3. Incubate at 55˚C for 30 mins.

D. Culture cells

1. Collect cells (<2 x10^6) by centrifuging at 2,000 x g for 5 mins. Remove the supernatant.
2. Add 200 µL Buffer PBS, 20 µL Proteinase K, and 10 µL RNase A into the sample. Resuspend the cells by vortexing.
3. Add 200 µL Buffer AL and vortex for 10 seconds. Incubate the mixture at 70˚C for 10 mins.

E. Semen sample

1. Transfer 100 µL semen to a 1.5 mL microcentrifuge tube.
2. Add 100 µL Buffer ATL, 10 µL DTT Solution (1M), and 20 µL Proteinase K into the samples. Shake at 55˚C for 30 mins.
3. Add 200 µL Buffer AL into the sample, then vortex to mix and incubate at 70˚C for 10 mins.

F. Swab DNA extraction

1. Transfer the swabs to a 2.0 mL microcentrifuge tube.
2. Add 500 µL ATL and 20 µL Proteinase K to the swab. Shake at 55˚C for 15 to 30 mins.
3. Transfer the supernatant into a new 2.0 mL microcentrifuge tube.

G. Blood stains/Seminal stains

1. Transfer 3 slices (3mm) to the 2.0 mL microcentrifuge tube.
2. Add 250 µL Buffer ATL and 20 µL Proteinase K to the sample. Shake at high speed for 30 to 60 mins at 55˚C .
3. Add 250 µL Buffer AL into the samples, Shake at high speed for 10 mins at 70˚C .
4. Centrifuge at 13,000 x g for 1 min.
5. Transfer 400 µL of the supernatant to a new 2.0 mL microcentrifuge tube.

H. FFPE Samples

1. Using a scalpel, trim excess paraffin off the sample block. Transfer 1 to 3 sections (5 - 10 µm) into a 1.5 mL microcentrifuge tube.
2. Remove Paraffin by xylene or Buffer DPS (not provided).
3. Add 200 µL Buffer ATL and 20 µL Proteinase K into the sample, mix well and incubate at 56˚C for 60 mins, and 90˚C for 60 mins.
4. Cool the sample to room temperature and add 200 µL Buffer AL. Mix well before proceeding to extraction step.

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Extraction

1. Transfer 400 µL of supernatant carefully to well #1 or #7 of the pre-filled reagent.
2. Place the reagent plate on MPure-32™ aNAP System and run the assay with the program named "**FastDNA**" which has the following setting:

Step	Well	Process	Time (s)			Mixing Speed	Temp (˚C)
			Mix	Wait	Attract		
1	#1/#7	Bind	240	0	90	Medium	RT
2	#2/#8	Wash 1	120	0	60	Medium	RT
3	#3/#9	Wash 1	90	0	60	Medium	RT
4	#4/#10	Wash 2	90	0	60	Medium	RT
5	#5/#11	Wash 2	90	0	60	Medium	RT
6	#5/#11	Dry	0	300	0	-	RT
7	#6/#12	Elute	480	0	120	Medium	55
8	#1/#7	Magbeads Release	60	0	0	Medium	RT

3. Transfer the eluted DNA into a clean 1.5 mL microcentrifuge tube. DNA is now ready for PCR and other downstream applications. Store the purified nucleic acid at -20˚C for an extended storage.

Note: If there are still Magnetic Beads remaining in eluted DNA, please centrifuge at 14,000 x g for 3-5 mins and transfer the supernatant into a clean 1.5 mL microcentrifuge tube.

Ordering Information

Equipment

Automated extraction system from low to high throughput

Catalog No.	Product Name	Throughput
07EMC043	MPure-32™ aNAP System	Up to 32 samples
07EMC044	MPure-96™ aNAP System	Up to 96 samples

Instruments for lysing and homogenizing environmental and biological samples

Catalog No.	Product Name
116004500	FastPrep™ Classic
116005500	FastPrep-24™ 5G
116010500	FastPrep-96™
116012500	SuperFastPrep-2™

MP BIOMEDICALS

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