MagBeads FastDNA Kit for Soil

Cat. No.: 116564384/116564384C2 (384 PREPS)

Quick-Start Protocol

Revision June 25, 2024

Scan QR code for more information from instruction manual

Notes before starting:

- Store Magnetic Beads MS at 2-8 ˚C upon arrival, do not freeze.
- Expect precipitation in Lysis Buffer S1, warm the solutions to 55 ˚C will dissolve the precipitate.
- Add 140 mL isopropanol to Binding Buffer MS and mark on the bottle.
- Add 224 mL 100% ethanol to Wash Buffer S1 and mark on the bottle.
- Add 300 mL 100% ethanol to Wash Buffer S2 and mark on the bottle.
- Vortex the sample in a Lysing Matrix E tube at the maximum speed for 10 mins if a FastPrep® Instrument is unavailable. Secure samples on the vortex through an adapter to ensure homogenization.
- Centrifugation speed stated in the manual will be a guideline, use the maximum speed available if 14,000 x g is not feasible.

Automation Extraction

Lyse

1. Add 100-500 mg soil sample to **Lysing Matrix E** tube.
Note: After adding the sample to the tube, make sure there is still 1/3-1/4 empty space in the tube.

2. Add 800 µL **Lysis Buffer S1** and 10 µL **RNase A Solution** to sample in Lysing Matrix E tube, vortex to mix.

3. Homogenize sample in FastPrep® Instrument for 20-40 seconds at a speed setting of 6.0 m/s.
Note: The speed and time can be changed according to different soil samples. Vortex 5-10 mins at maximum speed if FastPrep® Instrument is not available. If you use homogenizers from other manufacturers, you need to consult them for appropriate homogenization parameters.

4.Centrifuge at 14,000 x g for 5 mins to pellet debris.

Purify

5. Transfer the supernatant to a clean 1.5 mL microcentrifuge tube. Add 100 µL **Inhibitor Removal MS** and mix by inverting the tube 20 times.
6. Centrifuge at 14,000 x g for 5 mins to pellet precipitate.

Auto Bind, Wash & Elute

Work on MPure-32™ aNAP System

1. Transfer 500 µL supernatant carefully to well 2 of 96-well plate. Add other liquid into respective well as shown.

Well	Reagents	Volume (µL)
1	Magnetic Beads MS	800
2	Sample supernatant	500
	Binding Buffer MS	500
3	Wash Buffer S1	800
4	Wash Buffer S2	800
5	DES Buffer	100

2. Run the instrument according to following settings.

Step	Well	Process	Time (s)			Mixing Speed	Temp (˚C)
			Mix	Wait	Attract		
1	1	Magnetic Beads Preparation	60	0	120	Medium	RT
2	2	Bind	600	0	150	Medium	RT
3	3	Wash 1	180	0	120	Medium	RT
4	4	Wash 2	180	0	150	Medium	RT
5	4	Dry	0	600	0	-	RT
6	5	Elute	300	0	150	Medium	55

3.Transfer eluted DNA into a clean 1.5 mL microcentrifuge tube. DNA is now ready for PCR and other downstream applications. Store at -20˚C for extended periods.
Note: If there are still Magnetic Beads remaining in eluted DNA, please centrifuge at 14,000 x g for 3-5 mins and take the supernatant again.

MagBeads FastDNA Kit for Soil

Cat. No.: 116564384/116564384C2 (384 PREPS)

Quick-Start Protocol

Automation Extraction

Auto Bind, Wash & Elute

Work on MPure-96™ aNAP System

1. Transfer 500 µL supernatant carefully to 96-well plate 2. Put the other plates in their position as shown.
2. Run the instrument according to following settings.

Step	Plate	Position	Process	Time (s)			Mixing Speed	Temp (˚C)
				Mix	Wait	Attract		
1	1	1	Magnetic Beads Preparation	60	0	120	Medium	RT
2	2	2	Bind	600	0	150	Medium	RT
3	3	3	Wash 1	180	0	120	Medium	RT
4	4	4	Wash 2	180	0	150	Medium	RT
5	4	4	Dry	0	600	0	-	RT
6	5	6	Elute	300	0	150	Medium	55

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

Note: If there are still Magnetic Beads remaining in eluted DNA, please centrifuge at 14,000 x g for 3-5 mins and take the supernatant again.

Related DNA Extraction Kits Order Information

Product	Package	Cat. No.
MagBeads FastDNA Kit for Soil	4x96 well	116564096
MagBeads FastDNA Kit for Feces	384preps	116570384
MagBeads FastDNA Kit for Feces	4x96 well	116570496

Related DNA Extraction Instruments Order Information

Product	Package	Cat. No.
FastPrep-24™ 5G Instrument Including 24 x 2 mL samples adapter	1ea	116005500
MPure-32™ aNAP System	1ea	07EMC043
MPure-96™ aNAP System	1ea	07EMC044