MQ Soil DNA Extraction Kit

Cat No. SDE-M-001-50
Size: 50 preps

MOLEQULE-ON®

Components	SDE-M-001-50 (50 Preps)
SCL Solution (a)	25 ml
SP Solution	25 ml
SB Solution	40 ml
Wash Solution (b)	12 ml
Elution Buffer	5 ml
MQ Spin Column and 2.0ml Collection Tube	50

(a) SCL Solution and SP solution is colorless liquid; precipitate may form in SCL Solution after stored at 4°C. Dissolve the precipitate by warming the solution to 65°C with gentle mixing.
(b) **Before use, add 48 ml of 96-100% ethanol to 12ml Wash Solution.** For other volumes of wash solution, simply add enough ethanol to make a 4:1 ratio (volume of added ethanol: volume of Wash Solution = 4:1).

Description

MQ Soil DNA Extraction Kit is designed for the preparation of high-quality DNA from sand, soil, and fecal samples. These samples are considered challenging as they contain rich humic acid that may interfere with PCR reactions. The kit provides simple, rapid isolation of PCR-ready total DNA from soil. Purified DNA does not contain humic acid and can be used for PCR and other downstream applications. The molecular size of the purified DNA is around 20-50 kb. Average DNA yields are 5-50 µg per gram of the soil sample.

Features

- Fast isolation of high-quality DNA from sand, soil and fecal samples.

Storage

MQ spin columns and all buffers should be stored dry, at room temperature (15-25°C).

Materials Supplied by User

- Microcentrifuge capable of at least 12,000 × g
- Pipettes and pipette tips
- Vortexer
- Ethanol (96-100%)
- Water bath for heating at 56°C

Protocol

1. Pre-warm SCL Solution to 65°C.

2. Weigh 0.1~0.3 g of soil sample to a 1.5 ml centrifuge tube, add 0.5 ml SCL Solution, vortex vigorously for 3 minutes. Incubate at 65 °C for 5 minutes.

3. Centrifuge at 13,000 × g for 3 minutes at room temperature, transfer the supernatant to a new microtube.

4. Add equal volume of SP Solution, mix thoroughly by inverting, keep on ice for 10 minutes

5. Centrifuge at 13,000 × g for 3 minutes at room temperature, transfer the supernatant to a new microtube.

6. Add 0.2 ml of chloroform, mix thoroughly by vortexing.

7. Centrifuge at 13,000 × g for 3 minutes at room temperature, transfer the supernatant to a new microtube.

8. Add 1.5 volume of SB Solution, mix thoroughly by inverting.

9. Transfer the mixture to an MQ Spin Column, spin for 30 seconds at 12,000 × g.

10. Add 0.7 ml of Wash Solution, spin for 30 seconds at 12,000 × g.

11. (Optional) Add 0.3 ml Wash Solution, spin for 30 seconds at 12,000 × g.

12. Spin for 30 seconds at 12,000 × g to remove residual Wash Solution.

13. Transfer the MQ Spin Column to a new 1.5 ml centrifuge tube, add 50~100 µl Elution Buffer to the column. Incubate at room temperature for 2 minutes.

14. Centrifuge at 12,000 × g for 1 minutes at room temperature, store DNA at -20°C