V02

Soil Genomic DNA Extraction Kit

Cat: D2600

Size: 50T/100T

Storage: Dry storage at room temperature (15℃-25℃), valid for 12 months.

Kit content:

Component	50T	100T	Storage
Solution SA	30mL	60mL	RT
Solution SB	40mL	80mL	RT
Solution SC	5mL	10mL	RT
Solution SD	6mL	12mL	RT
Solution SE	35mL	70mL	RT
Wash Buffer 1	21mL	42mL	RT
Wash Buffer 2	7.5mL	15mL	RT
Grinding Beads	13g	26g	RT
adsorption column（Include collection tube）	50T	100T	RT
Elution Buffer	2mL	4mL	RT
Instruction	1	1	-

Product description:

This kit is suitable for extracting microbial DNA from various soil environments, including humus soil, brown soil, silt, and volcanic ash. It has a good lysis effect on various bacteria and fungi in the soil, and maximizes the polymorphism of microbial DNA. This kit adopts the unique humus adsorption material of our company, which can remove various humus components efficiently and specifically without affecting the yield of DNA. The purity is several times higher than that of phenol and chloroform extraction. The DNA extracted using this kit has a large yield and good integrity, and can be directly used in various routine operations, including enzyme digestion, PCR, library construction, Southern hybridization and other experiments.

Operation steps (for reference only):

Before use, please add anhydrous ethanol to Wash Buffer 1 and Wash Buffer 2. Refer to the bottle label for the required volumes. All centrifugation steps are performed using a benchtop centrifuge at room temperature (for 50T size, add 9mL and 22.5mL of anhydrous ethanol to Wash Buffer 1 and Wash Buffer 2, respectively; for 100T size, add 18mL and 45mL of anhydrous ethanol to Wash Buffer 1 and Wash Buffer 2, respectively).

1. Take 0.25g of soil sample in a 2mL centrifuge tube, add 500μL of solution SA, vortex, shock and mix well.
2. The samples were centrifuged at 12000rpm for 1min and the supernatant was aspirated using a pipette.
3. 0.25g of Grinding Beads was added to the above soil precipitate, 720μL of solution SB was added, and 80 μ L of solution SC was shaken for 10min.
4. Centrfuge at 12000rpm for 1min and draw 650μL supernatant into a new 2mL centrifuge tube.

5. Add 100μL of solution SD and 700μL of solution SE to the above centrifuge tube.
6. The solution from the above centrifuge tubes was added to the adsorption column with a maximum of 700μL each time, let stand for 1min and centrifuged at 12000rpm for 1min.
7. Remove the waste liquid from the collection tube and add 500μL of wash buffer 1 to the adsorption column (check for absolute ethanol before use).
8. Was centrifuged at 12000rpm for 1min.
9. Remove the waste liquid from the collection tube and add 500μL of wash buffer 2 to the adsorption column (check for absolute ethanol before use).
10. Was centrifuged at 12000rpm for 1min.
11. Centrifuge empty tubes at 12000 rpm for 2 min.
12. Remove the adsorption column, open the lid, and dry at room temperature for 10min, or 50℃ for 1min.
13. The adsorption column was placed into a new centrifuge tube with 30μL of elute and centrifuged at 12000rpm for 1min as the soil microbial DNA solution.

Note:

1. Fresh soil samples yield higher DNA yields. For different sample types, consult the appropriate optimal storage conditions prior to sampling.
2. If the solution appears turbid, incubate in a 37°C water bath until clear; this will not affect results.
3. When aspirating supernatant, avoid pipetting the pellet, as this will clog the adsorption column and reduce product purity.
4. Use at least 50 μL of elution buffer; smaller volumes reduce recovery efficiency. It is recommended to use the kit-provided elution buffer, as eluting with water may result in product loss. Store DNA at -20°C and avoid repeated freeze-thaw cycles to prevent degradation.
5. Humic acid residues in the final product will significantly affect DNA absorbance values. Use a combination of electrophoresis and spectrophotometry for accurate assessment.
6. Avoid contact of liquid reagents with skin. In case of accidental contact, rinse immediately with copious amounts of water.

Related products:

D1010 6×DNA Loading Buffer
T1060 50×TAE Buffer
T1050 5×TBE Buffer
M1060 D2000 DNA Ladder
M1400 1kb DNA Ladder
G8142 Gold View IInucleic acid stain (5000×)
D1500 Plant genomic DNA extraction kit
D1600 Bacterial genomic DNA extraction kit
D1700 Animal tissue / cell genomic DNA extraction kit
D1800 Blood genomic DNA extraction kit(Spin column)