High-Q™-Spin-Column Soil DNA Purification Kit

Ordering info

TBK0249, 3 reactions (sample)

TBK0250, 50 reactions

TBK0251, 200 reactions

Description

High-Q™-Spin-Column Soil Genomic DNA Purification Kit is an easy silica-membrane-based system for DNA purification from different soil types. The combination of an optimized lysis buffer, heat and mechanical disruptions using beads, guarantees a good yield. The use of High-Q™ Spin Columns and the PCR inhibitors removing buffer allow a good quality DNA, suitable for downstream applications.

Features

- **High yield and purity,** 1-10 µg depending on sample material, A260/A280 1.4 - 1.8.
- Approximately 50 minutes of complete procedure.
- **Easy and cost-effective protocol.**

Applications

DNA obtained is suitable for downstream molecular biology applications such as PCR techniques, microbiome analysis (NGS) and hybridization methods.

Quality Control

Soil DNA isolation is checked by: integrity (agarose gel electrophoresis), quantity and quality (A260/280= 1.4 - 1.8).

Technical Assistance

Please refer any technical questions to info@tiarisbiosciences.com

Kit Components

Components	TBK0250	TBK0251
High-Q™ Spin Column with Collection Tubes	50	200
Bead Tubes	50	200
BSoil-1 Buffer	45 mL	180 mL
BSoil-2 Buffer	10 mL	25 mL
BSoil-3 Buffer	15 mL	55 mL
BSoil-4 Buffer	15 mL	55 mL
BSoil-5 Buffer	60 mL	210 mL
WB2 Buffer	25 mL[a]	80 mL[b]
Elution Buffer	10 mL	25 mL

Order Info Kit Components: *High-Q™ Spin Column with Collection Tubes (TBM0010)* | Beads Tubes (TBR0128) | *BSoil-1 Buffer (TBB0574)* | *BSoil-2 Buffer (TBB0575)* | *BSoil-3 Buffer (TBB0576)* | *BSoil-4 Buffer (TBB0577)* | *BSoil-5 Buffer (TBB0578)* | *WB2 Buffer (TBB0512)* | *Elution Buffer (TBB0510).*

¡Components for samples are ready to use!

Before its use:

[a] Add 25 mL absolute ethanol and mix well.

[b] Add 80 mL absolute ethanol and mix well.

Storage

Store the kit at 25°C.

Material required (not supplied)

Ethanol (CAS 64-17-5)

PROTOCOL

1. Place 200-500 mg of soil sample in a Bead Tube.

   If the soil sample is very wet, transfer the sample to a clean tube and centrifuge for 1 minute at 10,000g to remove the excess of liquid.
2. Add 0.8 mL **BSoil-1 Buffer** and mix by vortex.
3. Add 0.1 mL **BSoil-2 Buffer**. Homogenize by continuously shaking at 1,000 rpm for 15 minutes.

   If BSoil-2 Buffer is precipitated heat the buffer to 60°C until the precipitate has dissolved.
4. Incubate at 95 °C for 5 minutes.
5. Centrifuge at 13,000 x g for 2 minutes.
6. Collect carefully the supernatant and transfer to a clean 1.5 mL microcentrifuge tubes.
7. Add **250 µL BSoil-3 Buffer** and mix by vortex. Incubate at 2-8°C for 10 minutes.
8. Centrifuge at 13,000 x g for 2 minutes and avoiding the pellet, transfer the supernatant to a clean 1.5 mL microcentrifuge tubes.
9. Add **200 µL BSoil-4 Buffer** and mix by vortex. Incubate at 2-8°C for 10 minutes.
10. Centrifuge at 13,000 x g for 5 minutes and avoiding the pellet, transfer up to 900 µL of supernatant to a clean 2 mL-microcentrifuge tubes.
11. Add **1.1 mL BSoil-5 Buffer** and mix by inversion.
12. Transfer up **700 µL mixture** to a High-Q™ Spin Column placed into a Collection Tube.
13. Centrifuge at 10,000 x g for 1 minute. Remove the flow-through and place back the High-Q™ Spin Column into a Collection Tube.
14. Repeat steps 12 and 13 until all the sample has been processed.
15. Add **700 µL WB2 Buffer**.

    Check absolute ethanol has been added to WB2 Buffer.
16. Centrifuge at 10,000 x g for 1 minute. Remove the flow-through and place back the High-Q™ Spin Column into a Collection Tube.
17. To dry Spin Column and eliminate residual ethanol, centrifuge again at 10,000 x g for 1 minute.
18. Place the High-Q™ Spin Column into a clean 1.5 mL Tube. Add **50-100 µL prewarmed Elution Buffer**.

    To improve the efficiency of genomic DNA elution from membrane, Elution Buffer can be heated to a temperature of 70°C.
19. Incubate at room temperature for 2 minutes.
20. Centrifuge at 10,000 x g for 1 minute to elute purified DNA.
21. Store DNA at -20°C.

    Quantify DNA not only by UV-VIS but also run an agarose gel to verify yield and DNA quality.