

Soil DNA Isolation Kit

Norgen's Soil DNA Isolation Kit provides a convenient and rapid method for the detection of microorganisms from soil samples. All types of soil samples can be processed with this kit, including common soil samples and difficult soil samples with high humic acid content such as compost and manure. The kit removes all traces of humic acid using the provided Bead Tubes and a combination of chemical and physical homogenization and lysis. A simple and rapid spin column procedure is then used to further purify the DNA. Total genomic DNA can be isolated and purified from all the various microorganisms found in soil, such as bacteria, fungi and algae. The purified DNA is of the highest quality and is fully compatible with downstream PCR applications, as all humic acid substances and PCR inhibitors are removed during the isolation.



Kit Specifications			
Maximum Soil Input	250 mg	Type of Soil Processed	All types, including common soil, compost and manure
Maximum Column Loading Volume	650 μ L	Time to Complete 10 Purifications	30 minutes

Soil DNA Isolation Kit Benefits

Process all types of soil	All types of soil samples can be processed with this kit, including common soil samples and difficult soil samples with high humic acid content such as compost and manure
Remove all humic acid from DNA samples	The kit removes all traces of humic acid using the provided Bead Tubes and a combination of chemical and physical homogenization and lysis. Remove all brown colour from the samples.
Rapid detection of microorganisms in soil samples	Isolate total DNA from all microorganisms found in soil, including bacteria, fungi and algae.
Fast and easy processing	Rapid spin column format allows for the isolation of DNA in under 30 minutes.
Isolate high quality total DNA	The purified DNA is free from all inhibitors including humic acid, and can be used directly in downstream applications including PCR.

Soil DNA Isolation Kit

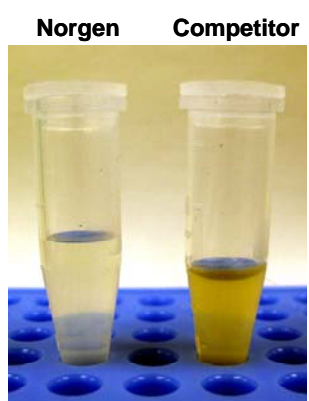


Figure 1. Removal of Humic Acid

A sample of clay was processed using Norgen's Soil DNA Isolation Kit and a leading competitor's kit. As it can be seen, Norgen's kit successfully removed more humic acid than the competitor, as evidenced by the removal of the brown colour in Norgen's sample. Humic acids in soil are known PCR inhibitors and inhibit a number of downstream applications.

Soil DNA Isolation Kit Contents

1. Lysis Solution
2. Lysis Additive
3. Binding Solution
4. Wash Solution I
5. Wash Solution II
6. Elution Buffer
7. Bead Tubes
8. Mini Spin Columns
9. Collection Tubes
10. Elution Tubes
11. Product Insert

Shipping Conditions

The Soil DNA Isolation Kit is shipped at room temperature.

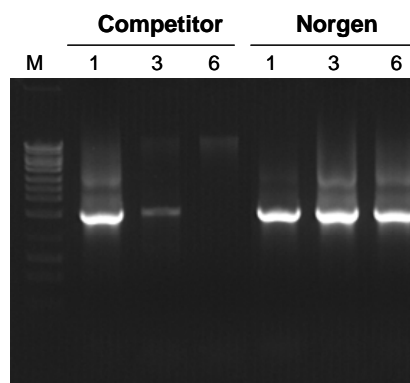


Figure 2. High Quality DNA free from PCR Inhibitors

Total DNA was isolated from samples of clay using Norgen's Soil DNA Isolation Kit and a leading competitor's kit. Increasing amounts of the purified DNA (1 µL, 3 µL, and 6 µL) were then used as the template in 20 µL PCR reactions using universal prokaryotic 16s rDNA primers. Norgen's DNA was successfully amplified in all 3 cases, indicating the high quality of the inhibitor-free DNA, whereas competitor-isolated DNA showed PCR inhibition when 6 µL of DNA was used as the input. Lane M is Norgen's HighRanger 1kb DNA Ladder, and the number above each lane indicates the µL of DNA input.

Customer-Supplied Reagents and Equipment

- Benchtop microcentrifuge
- DNase-free microcentrifuge tubes
- Flat bed vortex or bead beater equipment
- 96 - 100% ethanol
- 70% ethanol

Storage Conditions

All solutions should be kept tightly sealed and stored at room temperature. All the reagents should remain stable for at least 1 year in their unopened containers.

Cat #	Description	Quantity
26500	Soil DNA Isolation Kit	50 preps