

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 Humic Acid Removal Column and the OSR (Organic Substance Removal) Solution. 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 applica-



tions, as all humic acid substances and PCR inhibitors are removed during the isolation. Purification is based on spin column chromatography. The purified total DNA is free of all inhibitors, including humic acid, and can be used in sensitive downstream applications including PCR.

Kit Specifications			
Maximum Soil Input	250 mg	Type of Soil Processed	All soil types
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 common soil samples can be processed, 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 using the provided Humic Acid Removal Column and the OSR (Organic Substance Removal) Solution. 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

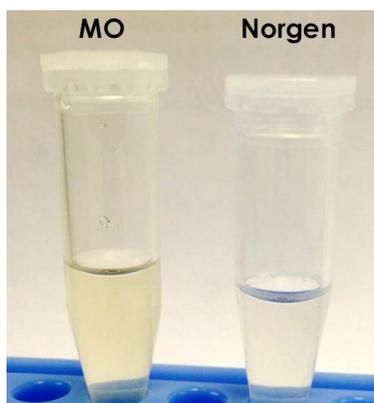


Figure 1. Superior Removal of Humic Acid Versus Competitor Kit (MO). Samples of clay (250 mg) were processed using Norgen's Soil DNA Isolation Kit and a competitor's kit (MO). As can be seen, Norgen's kit successfully removed more humic acid than the competitor, as evidenced by the removal of the brown colour in Norgen's lysed sample. Humic acids in soil are known PCR inhibitors and inhibit a number of downstream applications.

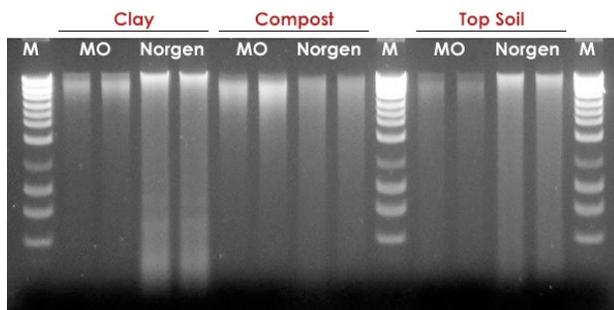


Figure 2. High Yields of Genomic DNA. DNA was isolated from 250 mg of clay, compost and top soil using Norgen's kit and a competitor's kit (MO). Following isolation, 10 μ L from each 100 μ L elution was loaded on 1% TAE agarose gel. Lane M: Norgen's HighRanger 1kb DNA Ladder.

Soil DNA Isolation Kit Contents

1. Lysis Buffer G
2. Lysis Additive A
3. Binding Buffer I
4. OSR Solution
5. Buffer SK
6. Wash Solution A
7. Elution Buffer B
8. Bead Tubes
9. Humic Acid Removal Columns
10. Spin Columns
11. Collection Tubes
12. Elution tubes (1.7 mL)
13. Product Insert

Shipping Conditions

The Soil DNA Isolation Kit is shipped at room temperature.

Customer-Supplied Reagents and Equipment

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