

## Soil DNA Isolation 96-Well Kit

Norgen's Soil DNA Isolation 96-Well Kit provides a fast, reliable and simple procedure for high throughput isolation of DNA from all types of soil samples including common soil samples and difficult soil samples with high humic acid content such as compost and manure. A combination of chemical and physical homogenization effectively lyses all microorganisms in the soil sample, and the kit removes all traces of humic acid using the provided Organic Substance Removal (OSR) Solution and Humic Acid Removal plate (HAR). 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



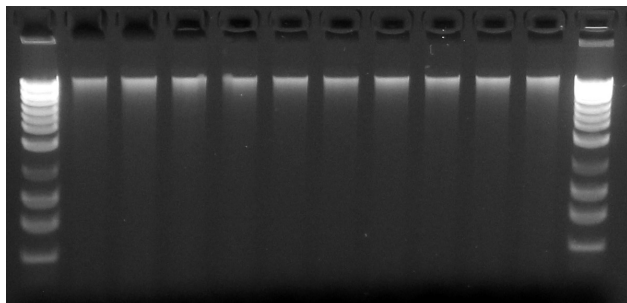
is fully compatible with downstream PCR applications for any metagenomic study, as all humic acid substances and PCR inhibitors are removed during the isolation. Purification is based on 96-well column chromatography. The DNA is preferentially purified from other cellular components such as proteins without the use of phenol or chloroform. The purification could be performed on either a vacuum manifold or using centrifugation.

Kit Specifications			
Maximum Soil Input	250 mg	Type of Soil Processed	All types, including common soil, compost and manure
Maximum 96-Well Loading Volume	500 $\mu$ L	Time to Complete 96 Purifications	50 minutes

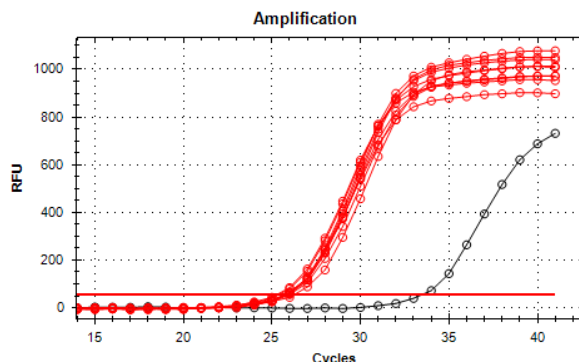
### Soil DNA Isolation 96-Well Kit (Slurry Format) Benefits

Versatile procedure	96-well plates can be processed using either centrifugation or vacuum manifold.
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
Effective removal all humic acid from DNA samples	The kit removes all traces of humic acid using the provided Organic Substance Removal (OSR) solution and Humic Acid removal (HAR) plate.
High DNA quality for Metagenomic studies in soil samples	Inhibition-free high quality of DNA supports sensitive downstream applications to identify the diversity of all microorganisms found in soil, including bacteria, fungi and algae.
Fast and easy processing	Rapid 96-well format allows for the high throughput isolation of DNA

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**Figure 1. Consistent Yield of High Quality of Soil DNA Isolation.** Total soil DNA was isolated from gardening top soil samples using Norgen's Soil DNA Isolation 96-Well Kit . Ten  $\mu\text{L}$  from each 100  $\mu\text{L}$  elution isolated from 10 different wells was run on a 1.2% TAE agarose gel. Lane M is Norgen's High Ranger DNA ladder.



**Figure 2. Consistent and High DNA Quality.** Total DNA was isolated from gardening top soil samples using Norgen's Soil DNA Isolation 96-Well Kit . Three  $\mu\text{L}$  of DNA from each 100  $\mu\text{L}$  elution was used as the template in a real-time PCR reaction (SYBR Green) for the detection of the 16s rDNA. All DNA templates from different wells showed a consistent Ct, indicating the consistent high DNA quality and yield. Black circle: NTC.

### Soil DNA Isolation 96-Well Kit Contents

1. Bead Tubes
2. Lysis Buffer G
3. Lysis Additive A
4. Binding Buffer I
5. OSR Solution
6. Buffer SK
7. Wash Solution A
8. Elution Buffer B
9. HAR Plate
10. 96-Well Filter Plate
11. 96-Well Collection Plate
12. Adhesive Tape
13. 96-Well Elution Plate
14. Product Insert

### 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.

### Customer-Supplied Reagents and Equipment

- Micropipettors and multichannel pipettes
- 96%-100% ethanol
- Ice bath
- Collection/Waste Tray for vacuum manifold or 96-well bottom plate (96-well format) for centrifugation
- Flat bed vortex or bead beater equipment (e.g. MP Biomedicals' FastPrep®-24 instrument)
- For Vacuum Format: Vacuum manifold with vacuum pump capable of generating a minimum pressure of -60 kpa or -15 in. Hg (such as PALL Life Sciences Multi-Well Plate Vacuum manifold)
- For Centrifuge Format: Centrifuge with rotor for 96-well plate assembly (such as Thermo Fisher IEC Centra CL3 series or Beckman GS-15R)

Cat #	Description	Quantity
26560	Soil DNA Isolation 96-Well Kit	96 preps

3430 Schmon Parkway, Thorold, ON, Canada L2V 4Y6

Phone: 905-227-8848 Fax: 905-227-1061

North American Toll Free: 1-866-667-4362