

Soil DNA Extraction Kit

Galenvs *magnetiQ Soil DNA Extraction* Kit is a rapid and simple DNA extraction and purification protocol for topsoil, sand, compost, and manure samples. The extraction protocol consists of 7 steps with each kit containing (i) lysis, (ii) Inhibitor's removal, (iii) binding buffer, (iv) wash #1 buffer, (v) wash #2 buffer(2X), and (vi) elution buffer. The protocol is completed within 20 min and is amenable for low and high-throughput semi-automated workflow. The protocol requires only a benchtop vortex and centrifuge (14,000 rpm) for the lysis step.

The kit is available in bottle formats allowing for processing of 50 (SD0050) and semi-automated for processing of 16 (SD0016). Kits can be stored at room temperature for six months post-manufacture date.

Applications

- Quantification via qPCR.
- Next Generation Sequencing (NGS)
- Southern Blot

Performance

Galenvs *magnetiQ Soil DNA Extraction* Kit's performance was evaluated for yield and quality assessment of the extracted genomic DNA from a variety of soil types and compared to two widely used, industry-leading kits:

- Qiagen DNeasy PowerSoil Pro Kit (Qiagen)
- OmegaBioTek E.Z.N.A. Soil DNA Kit (Omega)

250 mg of different soil types were prepared according to prepared as per manufacturer instructions and following the *magnetiQ Plant DNA Kit* protocol.

Yield

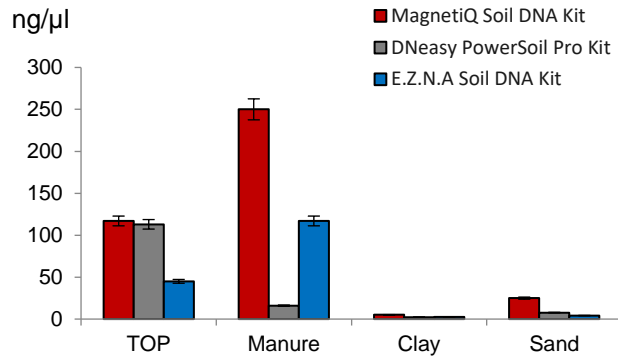


Figure1: Extract more high-quality genomic DNA

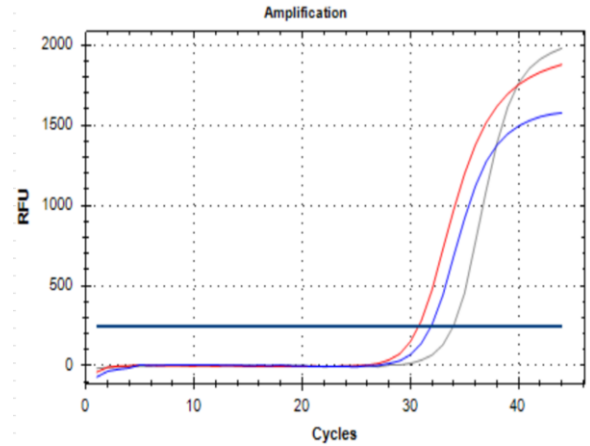


Figure2: Increased purity with no inhibition of PCR.

Gel Electrophoresis

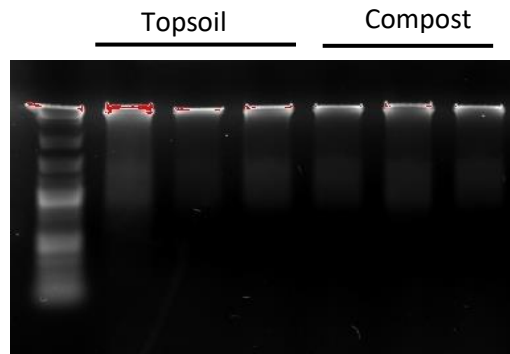


Figure3: Strong gel bands show high quality DNA yields with *magnetiQ* Soil DNA Kit

For Topsoil, manure, clay, and sand samples, the *magnetiQ* Plant DNA Kit outperformed the other commercial kits in terms of extracted DNA yield. qPCR results also show corresponding lower C_T values and efficient inhibitor removals. Results are confirmed by 1% agarose gel electrophoresis showing high-quality DNA yields for topsoil and compost samples.

Specifications

Sample Type	Topsoil, Sand, Manure, and Compost.
Quantity	50 assays
Elution Volume	100µl
DNA Recovery	99%
Processing Mode	Manual/Semi-Automated
Processing Technology	Magnetic Beads
Components	(i) lysis, (ii) Inhibitor's removal, (iii) binding buffer, (iv) wash #1 buffer, (v) wash #2 buffer, and (vi) elution buffer.
Storage	Room Temperature

Product codes

50 preps	SD0050
Prefilled plates 16-well	SD0016