magtivio

MagSi-DNA Soil

Extraction of Microbial DNA from Soil Samples

Microbial DNA isolation from soil samples

Soil is a major reservoir of microbial diversity. Microorganisms are heterogeneously distributed within the soil and form the connection between soil and plants. The goal of investigating soil microbial community compositions is to evaluate soil fertility and land quality. **MagSi-DNA Soil** is intended for manual and automated extraction of DNA from various soil types.

Features

- Suitable for different soil types
- Up to 2x higher yields compared to competitor kits
- High recovery of high molecular weight DNA
- Removal of (PCR) inhibitors such as humic acids
- Suitable for downstream applications (PCR, NGS...)
- No phenol-chloroform extraction
- Ready-to-use kit (no addition of alcohols)
- Convenient protocol

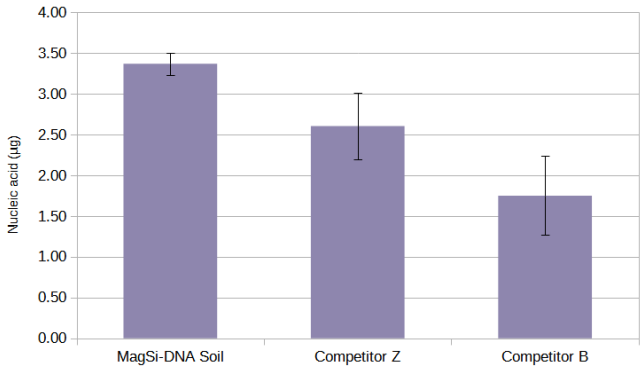

Figure 1. *DNA yield (NanoDrop™ One) obtained from loamy soil samples using MagSi-DNA Soil versus two competitor kits. The data are presented as mean (n=5, ±1 SD).*

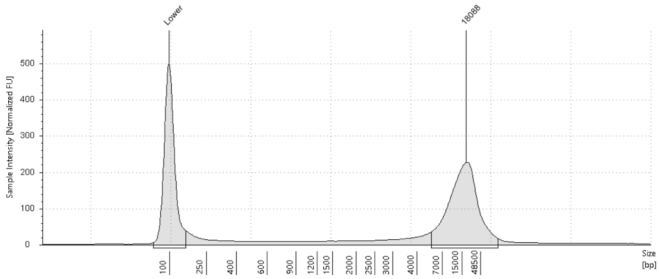

Figure 2. *TapeStation electropherogram for DNA obtained with the MagSi-DNA soil kit. The sizing (x-axis) demonstrates a peak of high molecular weight at 18 000 base pairs.*

Ordering Information

Order via order@magtivio.com, visit our website www.magtivio.com for a complete overview of our sample preparation kits.

Art. No.	Description	Amount
MDKT00280096	MagSi-DNA Soil	96 preps
Ask for our customized, bulk options and accessory products (e.g. RNase A)		

PCR inhibition of a sample can be investigated by spiking the sample with pure DNA. The resulting Ct is compared with the Ct of pure DNA in elution buffer. Samples are free from inhibitors when the Ct difference is close to 0.

Table 1. Evaluation of PCR inhibition by DNA spiking.

Kit	Soil type	ΔCt
MagSi-DNA Soil	Loam	0.39
Competitor Z	Loam	2.39
Competitor B	Loam	0.54

ΔCt was calculated as the Ct difference between spiked 10-fold diluted samples and DNA spiked in elution buffer (n=5).

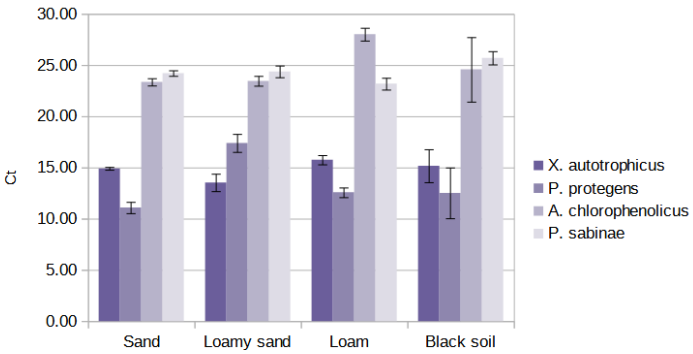

Figure 3. *Species-specific PCR after pre-amplification of the DNA obtained with MagSi-DNA Soil. X. autotrophicus and P. protegens are the most prevalent bacteria in all investigated soil types. The ability to detect specific bacterial species and their relative abundance proves that the kit generates good quality DNA. The data are presented as mean (n=5, ±1 SD).*

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