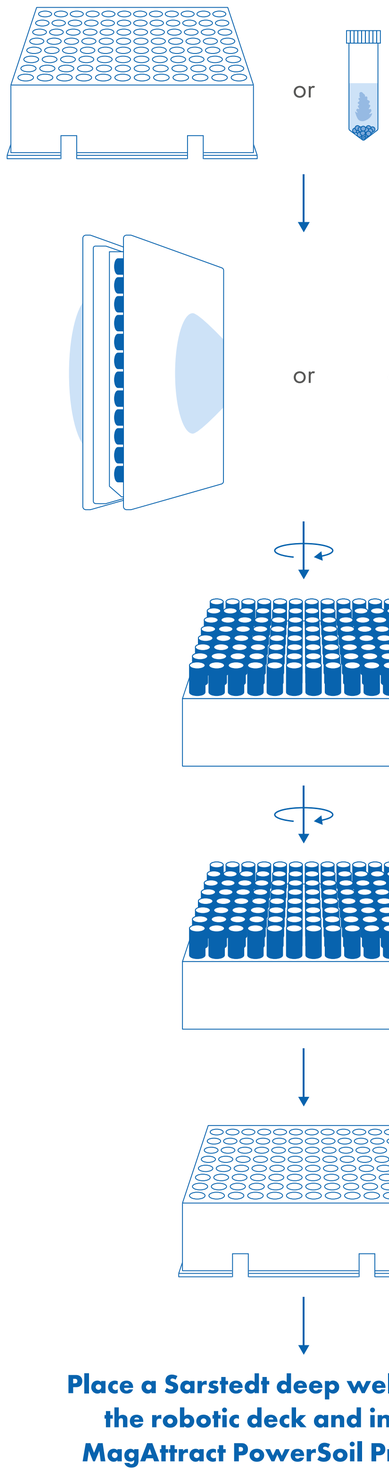
MagAttract PowerSoil Pro DNA EP Kit

Sample to Insight

MagAttract PowerSoil Pro DNA Procedure



Features and benefits

- Higher yield (due to more efficient PowerBead Pro technology and lysis chemistry)
- Greater purity, better inhibitor removal
- More accurate representation of the microbiome

Features	Specifications
Sample types	Soil and stool
Sample size	0.25 g of soil or 0.1 g of stool
Processing	Bead beating using PowerBead Pro Tubes or Plates
Bead type	Mixture of zirconium beads
Storage temperature	Solution CD2 should be stored at 2–8°C upon arrival. All other reagents and kit components of the MagAttract PowerSoil Pro DNA Kit can be stored at room temperature (15–25°C).
Throughput	96-well plate
Automated on	epMotion

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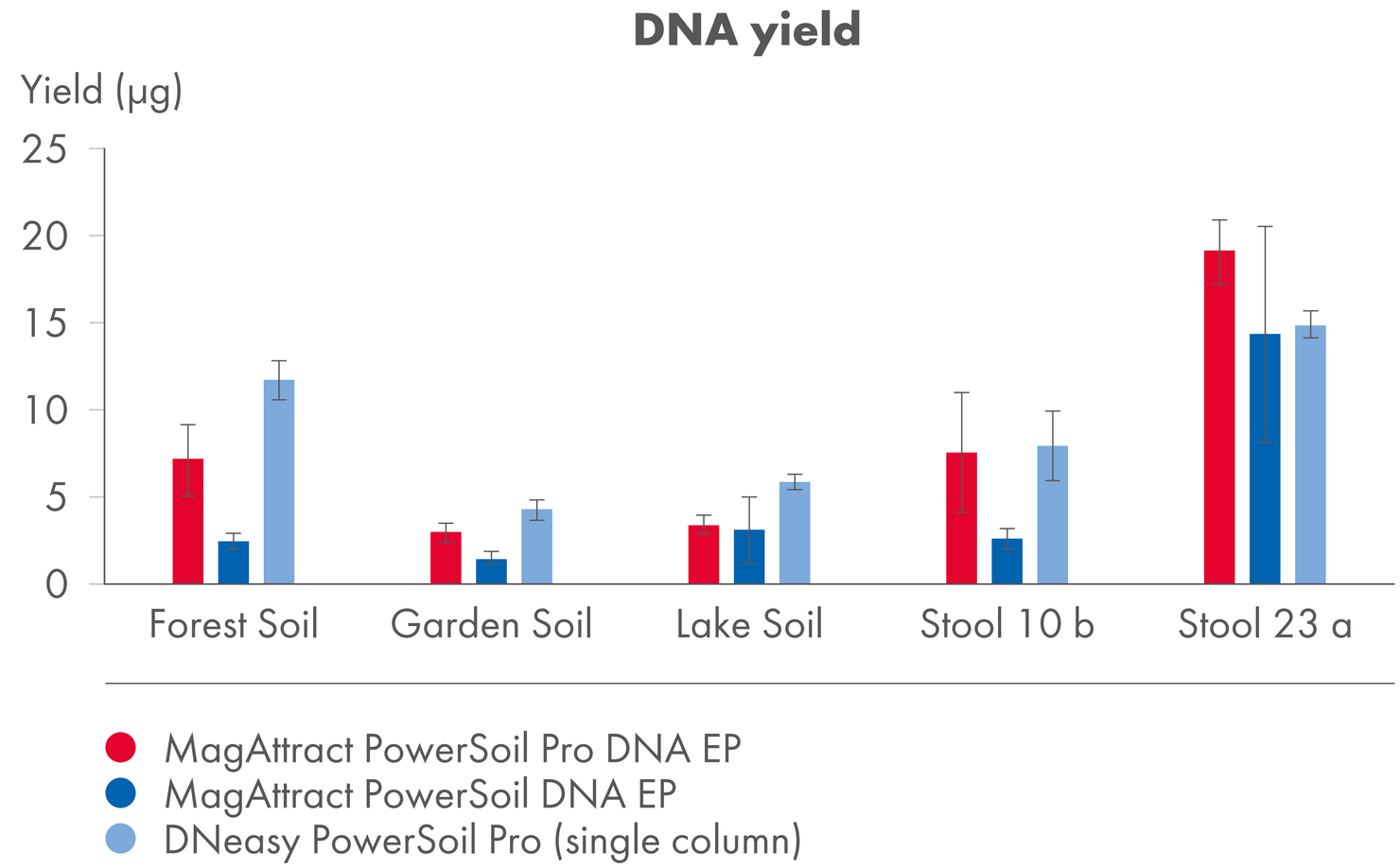
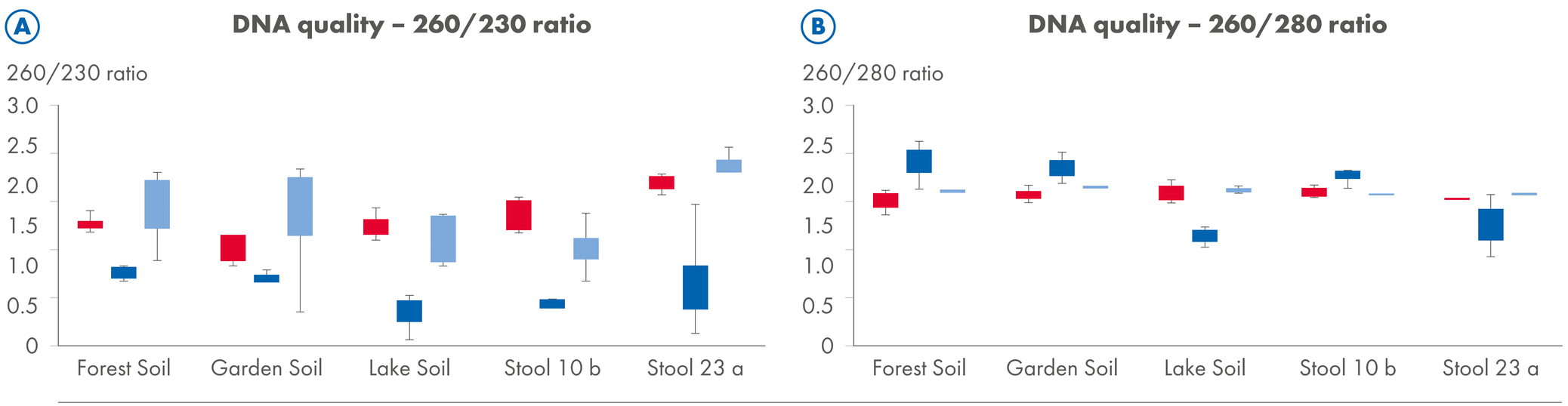
Higher DNA yields with the Pro kits



Increased performance of the MagAttract PowerSoil Pro DNA EP Kit in comparison with the legacy MagAttract PowerSoil DNA EP Kit and comparable to the manual DNeasy PowerSoil Pro Kit.

DNA was isolated from 100 mg stool and 250 mg soil samples. Samples were processed according to the protocols of the kits. For the MagAttract PowerSoil Pro DNA EP Kit protocol, 300 µl CD2, 450 µl lysate, QSB1 buffer for binding, MW1 buffer for wash step 1 and 80% ethanol for wash steps 2 and 3; and for the legacy MagAttract PowerSoil DNA EP and the DNeasy PowerSoil Pro Kit, 450 µl lysates were used. The DNA yields were measured with a Nanodrop. According to these results, samples purified with the MagAttract PowerSoil Pro DNA EP Kit (red) contained higher DNA yields for all sample types compared to samples purified with the legacy MagAttract PowerSoil DNA EP Kit (dark blue) and comparable yields to samples purified with the manual DNeasy PowerSoil Pro Kit (light blue).

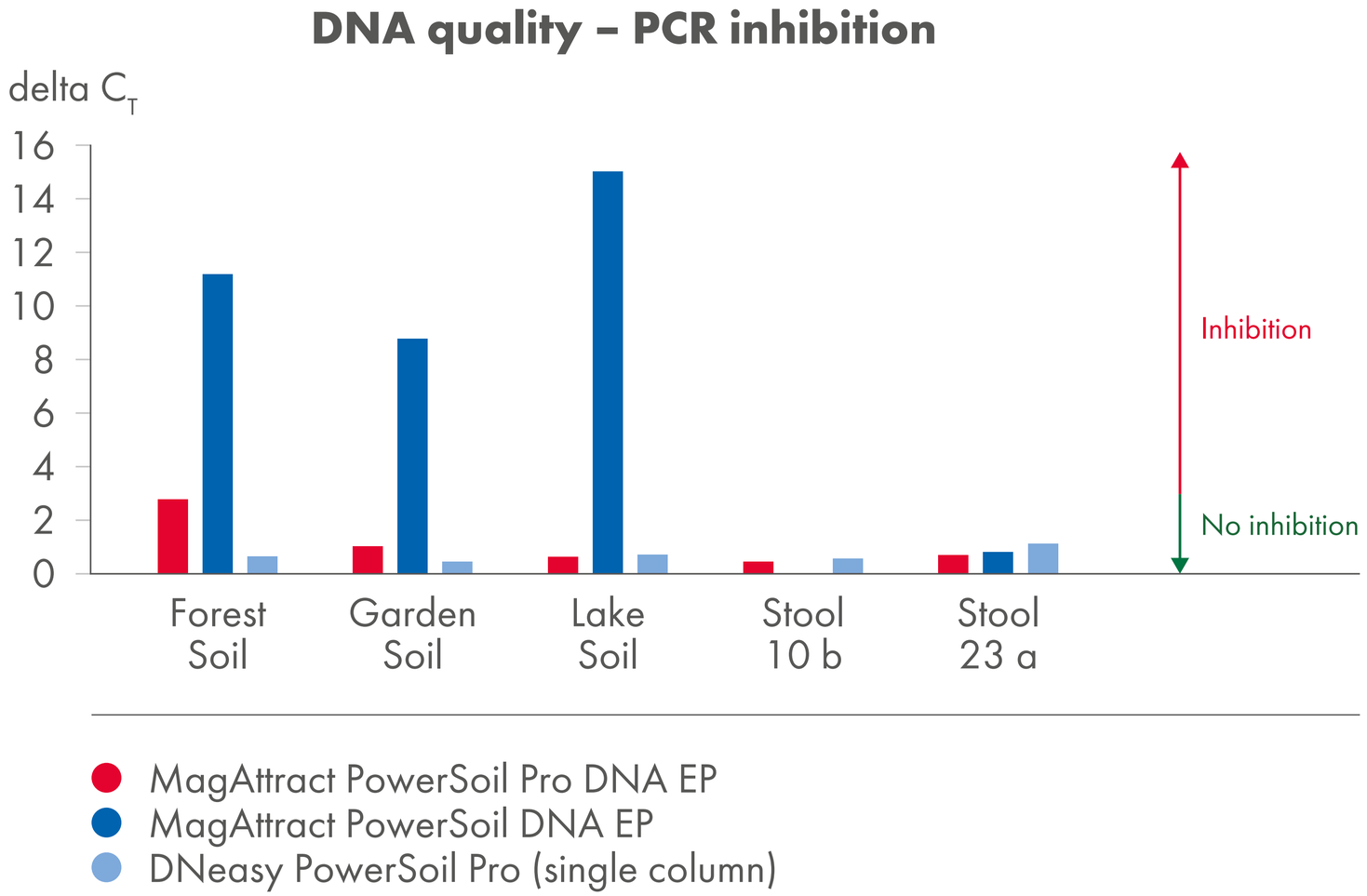
Better DNA quality with the Pro kits



Increased DNA quality of samples purified with the MagAttract PowerSoil Pro DNA Kit in comparison to samples purified with the legacy MagAttract PowerSoil DNA EP Kit and comparable to the manual DNeasy PowerSoil Pro Kit.

Soil and stool samples were processed according to the kit protocol and their DNA isolated. The DNA quality, as the 260/230 and 260/280 ratios, was determined using QIAxpert. The 260/230 ratios of samples processed with the MagAttract PowerSoil Pro DNA EP Kit (red) were higher than the 260/230 ratios of samples processed with the legacy MagAttract PowerSoil DNA EP Kit (dark blue) and comparable to the 260/230 ratios of samples processed with the manual DNeasy PowerSoil Pro Kit (light blue). The 260/280 ratios of samples processed with the MagAttract PowerSoil Pro DNA EP Kit (red) and the DNeasy PowerSoil Pro Kit were similarly high indicating uncontaminated DNA. The deviating 260/280 ratios of samples processed with the legacy MagAttract PowerSoil DNA indicate protein and residual RNA carry-over.

Better DNA quality with the Pro kits

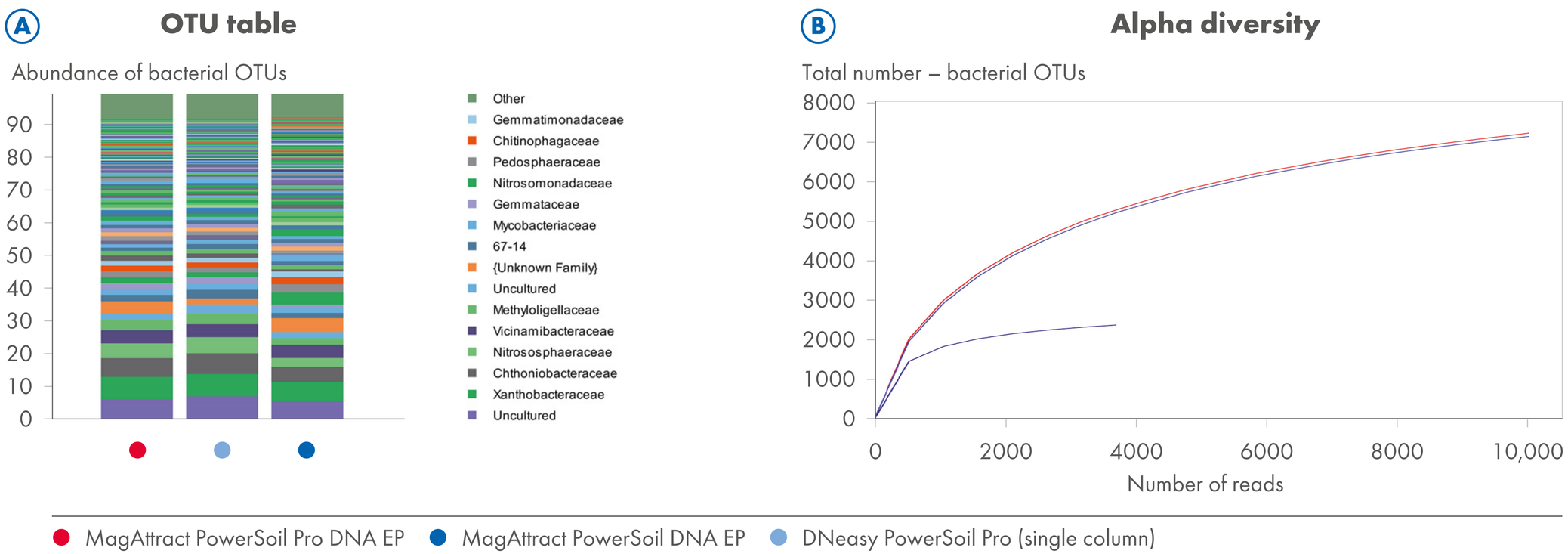


Increased purity of isolated DNA obtained with the MagAttract PowerSoil Pro DNA EP Kit in comparison to DNA obtained with the legacy MagAttract PowerSoil DNA EP Kit and comparable to the manual DNeasy PowerSoil Pro Kit.

Soil and stool samples were processed according to the kit protocol and their DNA isolated. The co-isolation of inhibitors was assessed via Inhibition PCR. The internal control (IC) from the QuantiFast Pathogen +IC Kit was spiked with 4 µl isolated DNA (4 replicates). After IC amplification via PCR, the C_T values were compared to the C_T values for PCR with water added to the IC (representing no inhibition) by calculating Delta C_T (C_T (PCR spiked with isolated DNA) – C_T (PCR spiked with water)). Eluates obtained from samples processed with the MagAttract PowerSoil Pro DNA EP (red) and DNeasy PowerSoil Pro (light blue) showed no inhibition whereas eluates obtained from samples processed with the legacy MagAttract PowerSoil DNA EP Kit (dark blue) contained inhibitors.

More accurate representation of the microbial diversity

Forest Soil

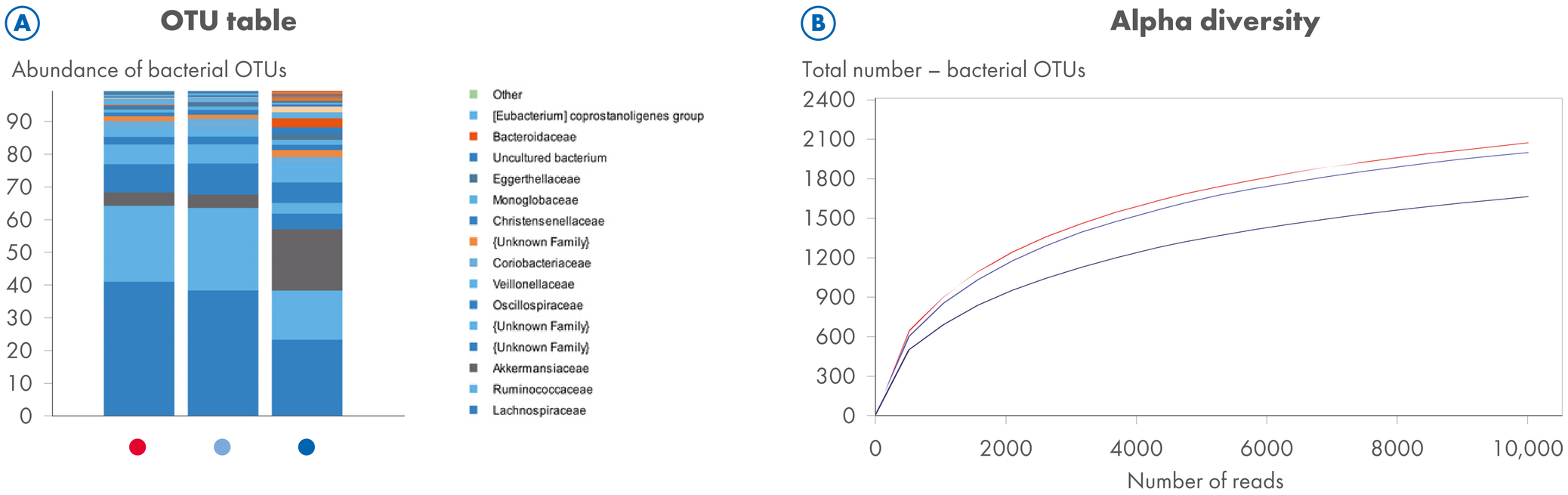


Increased bacterial representation of stool samples after purification with the MagAttract PowerSoil Pro DNA EP Kit in comparison with the legacy MagAttract PowerSoil DNA EP Kit and comparable to the manual DNeasy PowerSoil Pro Kit.

DNA prepared from stool samples was isolated with MagAttract PowerSoil Pro DNA EP (red), MagAttract PowerSoil DNA EP (dark blue) and DNeasy PowerSoil Pro (single column, light blue) Kits. **A** The abundance of bacterial operational taxonomic units (OTUs) is visualized in the OTU table. **B** Alpha diversity was determined by the total number of OTUs.

More accurate representation of the microbial diversity

Stool 10 b



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DNA prepared from stool samples was isolated with MagAttract PowerSoil Pro DNA EP (red), MagAttract PowerSoil DNA EP (dark blue) and DNeasy PowerSoil Pro (single column, light blue) Kits. **A** The abundance of bacterial operational taxonomic units (OTUs) is visualized in the OTU table. **B** Alpha diversity was determined by the total number of OTUs. Samples purified with the MagAttract PowerSoil Pro DNA EP Kit resulted in increased numbers of identified species compared to samples purified with the legacy MagAttract PowerSoil DNA EP Kit.

Ordering Information

Product	Contents	Cat. no.
MagAttract PowerSoil Pro DNA EP Kit	For 4 x 96 preps, for the epMotion: Racked collection microtubes with caps, Solution CD1, Solution CD2, RNase A, MagAttract Suspension G, QSB1 concentrate, MW1 concentrate, Solution C6	47119
PowerBead Pro Tubes (50)	Prefilled bead tubes, 2 ml for sample disruption	19301
PowerBead Pro Plates (4 x 96)	Prefilled bead plates for sample disruption	19311