SHORT PROTOCOL No. 53

Fresh Look, Same Trusted Performance: QIAGEN[®] MagAttract[®] PowerSoil[®] on epMotion[®] 5075t and 5075vt

Introduction

Setting up the optimal DNA isolation procedure is crucial for minimizing biases. Here we introduce a microbial DNA purification protocol automated on the epMotion® 5075t using the QIAGEN® MagAttract® PowerSoil® Pro DNA Kit with optimized sample lysis and inhibitor removal technology. The resulting purified and high-quality DNA can be used in sensitive downstream applications such as PCR, qPCR and NGS. Automation of the protocol ensures great reproducibility of your experiments and frees up time for the evaluation and interpretation of your results!

Here we show, as a proof-of-principle, the migration of the QIAGEN MagAttract PowerSoil Pro method from an epMotion 5075t of the 2022 generation to the improved epMotion 5075t of the 2023 generation. Besides keeping the same high quality of results, the 2023 generation of the epMotion 5075t increases the walk-away-time of this method by reducing the number of user interventions.



Features

- > Automatic exchange of up to 4 dispensing tools (1-channel and 8-channel) and gripper supporting volume ranges from $0.2 1000 \mu$ L
- > Optical sensor for touch-free detection of liquids, labware, and tips
- > Integrated Eppendorf ThermoMixer[®] for reliable mixing and temperature control
- > Intuitive drag-and-drop-based software
- > Integrated LED status display

Advantages

- > Enhance throughput: Process up to 96 samples for DNA extraction with minimal manual interaction
- > Ensure reproducibility: calibrated dispensing tools providing highest accuracy
- > Minimize contamination: Autoclavable dispensing tools and additional CleanCap option guarantee sample/user safety
- > Minimize biases in DNA quality: Ensure excellent quality and complete removal of PCR inhibitors
- > Stay flexible: Fast and easy adjustments of the protocol



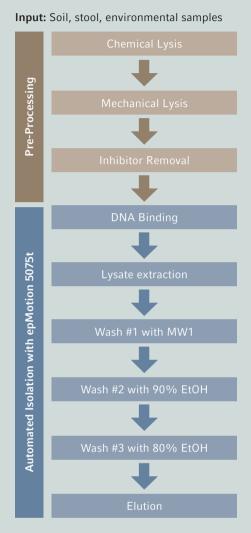


Figure 1 – Method overview: manual preprocessing steps and automated workflow on the epMotion.

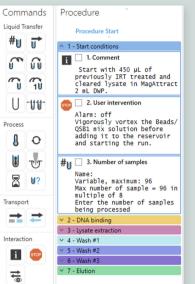


Figure 2 – Grouping of commands: A new feature for the 2023 generation of epMotion. Allows for easy method navigation.

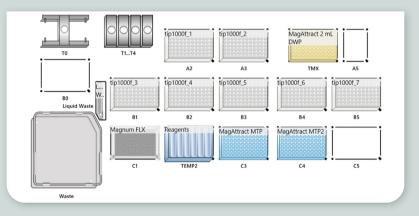
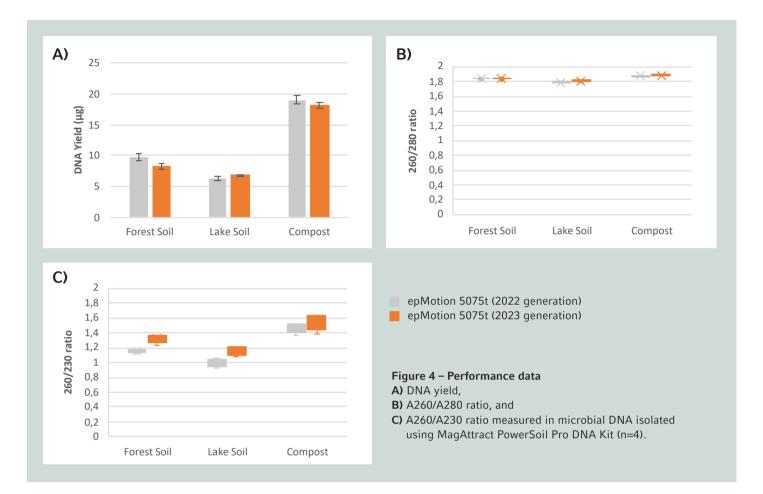


Figure 3 – Worktable layout for the MagAttract PowerSoil Pro Kit – For processing of up to 96 samples. The consumables labelled with MagAttract are part of the isolation kit (DWP: Deepwell Plate, MTP: Microtiter Plate). Tip consumption (1000f): 800 tips for 96 samples (8.3 tips/sample).





Read the original Application Note

Reference

- [1] Eppendorf Application Note 460: Automated Microbial DNA Purification Using the MagAttract[®] PowerSoil[®] Pro Kit on epMotion[®] 5075t or 5075vt
- [2] QIAGEN MagAttract PowerSoil Pro DNA Kit Handbook 11/2020

Ordering information

Description	Order no.
epMotion [®] configuration	
epMotion® 5075t	5075 000 042
Thermal module (C2) – optional	5075 757 508
epBlue ID software and hardware upgrade set – optional	5075 002 701
Enhanced Feature Set 1 – optional	5075 000 964
Required Tools/Accessories	
Gripper	5282 000 018
Eppendorf Magnum FLX [®] Magnet Adapter	5075 751 836
TM 1000-8 eight-channel dispensing tool	5280 000 258
Reservoir Rack 7	5075 754 002
Required Consumables	
epT.I.P.S. [®] Motion 1,000 μL, Filter	0030 014 499
Waste bags	5075 752 050
epMotion [®] reservoir 100 mL for use with Reservoir Rack 7	0030 126 513

Reagents	
QIAGEN® MagAttract® PowerSoil Pro DNA EP Kit (384)	47119

For more information about QIAGEN, please visit: www.qiagen.com

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