Quick-Start Protocol June 2016

MagAttract® PowerSoil® DNA KF Kit

The MagAttract PowerSoil DNA KF Kit (cat. no. 27000-4-KF) can be stored at room temperature (15–25°C) until the expiry date printed on the box label. RNase A solution should be stored at 2–8°C.

Further information

- Safety Data Sheets: **www.qiagen.com/safety**
- Technical assistance: **support.qiagen.com**

Notes before starting

- Before starting, add 400 µl of RNase A Solution to each 75 ml of PowerMag Bead Solution for every 96-well plate you plan to process.
- If the SL Solution has precipitated, heat at 60°C until precipitate dissolves.

1. Carefully peel off the Square Well Mat that covers the PowerMag Bead Plate and set aside. Add 0.25 g of soil sample to each well of the PowerMag Bead Plate.
   Note: This is an appropriate stopping point. You can store the PowerMag Bead Plate at 2–8°C covered with the Square Well Mat.
2. Add 750 µl of PowerMag Bead Solution/RNase A Solution to each well of the plate.
3. Add 60 µl of SL Solution to each well. Secure the Square Well Mat tightly.
   Note: A proper seal of the mat is critical to prevent loss of sample and leakage
4. Place PowerMag Bead Plate with mat securely fastened between 2 adapter plates (cat. no. 11990) on a Plate Shaker or TissueLyser II (cat. no. 85300).
5. Shake at speed 20 Hz for 10 min. Re-orient plates so that the side that was closest to the machine body is now farthest from it and shake again at speed 20 for 10 min.
6. Centrifuge the plate at room temperature for 6 min at 4500 x *g*.

7. Carefully remove and discard the Square Well Mat. Transfer supernatant to a clean 1 ml collection plate.
   Note: The supernatant may still contain some soil particles.
8. Add 450 µl of IRT Solution to each well and apply sealing tape. Vortex horizontally for 5 s. Incubate at 2–8°C for 10 min. Centrifuge at room temperature for 6 min. at 4500 x *g*.
   Note: You can skip the 10 min incubation. However, if you have already validated the MagAttract PowerSoil extractions with this incubation, we recommend you retain this step.
9. Remove and discard sealing tape. Avoiding the pellet, transfer the entire volume of supernatant to a new collection plate.
10. Apply sealing tape. Centrifuge at room temperature for 6 min. at 4500 x *g*.
11. Taking care to avoid any residual pellet, transfer no more than 450 µl of supernatant from each well to a clean KingFisher® Deep Well 96 Plate.
    Note: If you wish to use the remaining 400 µl of supernatant in each well, transfer to another KingFisher® Deep Well 96 Plate and store at 2–8°C until they can be processed.
12. Resuspend ClearMag® Beads by vortexing. For each 96-well plate to be processed, add 2 ml of the resuspended ClearMag Beads to 45 ml of ClearMag Binding Solution and mix well. Immediately transfer to a multi-channel pipette reservoir.
    Note: Maintain the ClearMag Beads in suspension to ensure uniform distribution.
13. Add 470 µl of the ClearMag Beads/ClearMag Binding Solution to each well containing lysate in a KingFisher Microtiter Deep Well 96 Plate.
14. Place the plate on the robotic deck at the specified location indicated in the program.
15. Add 500 µl of ClearMag Wash Solution to each well of three clean KingFisher Microtiter Deep Well 96 plates. Place on the robotic deck at the specified locations indicated in the program.
16. Add 100 µl of EB Solution to each well of a clean KingFisher 96 KF plate and place on the robotic deck at the specified location. Initiate the robotic program.
17. Upon completion of the robotic program, cover the wells of the KingFisher 96 KF plate with an appropriate storage seal. DNA is now ready for downstream applications.