Quick-Start Protocol February 2017

MagAttract® PowerWater® DNA/RNA Kit (384)

All reagents and kit components of the MagAttract PowerWater DNA/RNA Kit (384) should be stored at room temperature (15–25°C).

Further information

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

Notes before starting

- Warm Lysis Solution MBL at 60°C for 15–20 minutes before use to dissolve precipitates.
- To extract both DNA and RNA OR only RNA, add 25 µl β-mercaptoethanol (β-ME) per 975 µl of Solution MBL. You will need 98 ml of Solution MBL/β-ME per 96 samples (1 ml/sample + 2 ml to account for loss during pipetting).
- To extract only DNA, add 9 µl of RNase A per ml of Solution MBL. You will need 98 ml of Solution MBL/RNase A per 96 samples; β-ME is not required.

1. Filter air or water sample through a 25 mm or 47 mm membrane.
   Note: If you are using glass fiber filter (GF/F) membranes or gelatin filters, please refer to the relevant sections of the Troubleshooting Guide in the Handbook before continuing.
2. Using two sets of sterile forceps, pick up the filter membrane at opposite edges and roll the filter into a cylinder with the top side facing inward.
3. Insert the rolled filter membrane into a 5 ml PowerWater Bead Tube.
4. Add 1 ml of warmed Solution MBL/β-ME to each 5 ml PowerWater Bead Tube (if isolating DNA only, add 1 ml of warmed Solution MBL/RNase A).
5. Place 16 of the 5 ml PowerWater Bead Tubes into each 5 ml Tube Adapter (cat. no. 11980) and place on a TissueLyzer II (cat. no. 85300). Refer to the protocol provided with the 5 ml Tube Adapter Set for proper placement. Shake at speed 20 for 5 min.
6. After the 5 min cycle, rotate the Tube Adapter assemblies so that the side closest to the machine body is now furthest from it. Shake again at speed 20 for 5 min.
   Note: For assistance with loading/unloading Tube Adapter assemblies, please contact technical support.
7. Centrifuge the 5 ml Bead Tubes at 4500 x *g* for 1 min at room temp.
   Note: You will need 5 ml Tube Centrifuge Blocks (cat. no. 11981).

8. Transfer the supernatant to a clean 2 ml Collection Plate. Push the pipette tip through the beads into the bottom of the bead tube to recover as much supernatant as possible. **Note:** The supernatant may still contain some bio-solid particles.
9. Add 200 µl of Solution IRS to each well and apply Sealing Tape. Vortex horizontally for 5 s to ensure that solution is mixed well. Incubate at room temperature for 5 min.
10. Centrifuge at 4500 x *g* for 6 min at room temp. Remove and discard Sealing Tape.
11. Avoiding the pellet, transfer all of the supernatant to a new 2 ml Collection Plate.
12. Apply Sealing Tape. Centrifuge at 4500 x *g* for 6 min to clear any residual particulates.
13. Avoiding the pellet, transfer no more than 850 µl of supernatant to a new 2 ml Collection Plate. Place the 2 ml Collection Plate containing the supernatant on the ep*Motion*® robotic deck as indicated in the epMotion program worktable.
14. For each 96 well plate to be processed, add 174 ml of ClearMag® Wash Solution into an Eppendorf 400 ml reservoir placed at the appropriate location on the deck as indicated in the ep*Motion* program worktable.
15. For each 96 well plate to be processed, add 11 ml of RNase-free water (provided) into an Eppendorf 30 ml reservoir placed in an Eppendorf tub holder located at the appropriate location on the deck as indicated in the ep*Motion* program worktable.
16. Vortex the bottle containing ClearMag Beads (Zorb reagent) to resuspend the beads. For each 96 well plate to be processed, add 2 ml of ClearMag Beads to 85 ml of ClearMag Binding Solution in a mixing vessel (user provided). Vortex well to mix.
17. Transfer all of the ClearMag Binding Solution/ClearMag Beads into an Eppendorf 100 ml reservoir placed in an Eppendorf tub holder located at the appropriate location on the deck as indicated in the ep*Motion* program worktable.
18. Initiate the protocol. You must start the protocol immediately to avoid settling of the beads. If there is a delay of more than 3 min, re-agitate the beads.
19. Upon completion, cover the wells of the 96 Well Microplate with the Elution Sealing Mat provided. The DNA/RNA is now ready for downstream applications.