



Technical Tip 10

ZEUS AtheNA Multi-Lyte[®] Test System

Subject: Manual Filter Plate Washer Adjustments for the AtheNA Multi-Lyte[®] Test System Wash Procedure

When performing the AtheNA Multi-Lyte[®] Test System procedure wash step on a manual filter plate washer, it is critical that the Washer being used is properly set up to ensure optimal assay read times and results. Follow the guidelines outlined below to ensure that the manual filter plate washer is properly set up.

1. **Manual Washer:** If a metal grid is currently installed for use underneath the plate and inside the blue gasket, it will need to be removed, for a sufficient seal to be created, when using the filter plate.
 - A. **Manual Suitable Pressure Range:** (300 – 500 mm Hg) or (12 -19.5 Hg)
 - B. **Previously Used and/or Unused Plate Well:**
 - Whether using the filter plate for the first time or re-using the filter plate, it is important to make sure that previously used wells and unused wells (not involved in immediate testing) are covered to ensure that proper pressure is being applied on the wells in use.
 - Please use tape that has not been previously exposed to any Biological Material, or *parafilm* to cover the previously used wells.
 - The use of parafilm or a gloved hand should be used to cover unused wells (Tape may leave residue on lips of wells and could cause erroneous results if reagents were to come into contact with it and therefore, is not suggested for unused wells).
 - NOTE: If using tape or parafilm, it is important that these do not come into contact with the bottom of the filter plate as this could cause the filter plate to form a poor seal with the vacuum manifold.
 - NOTE: If using parafilm to cover used or unused wells, ensure that the parafilm is still intact and has not “popped” due to vacuuming pressure. If parafilm has “popped”, it is suggested to add additional parafilm or use a gloved hand to cover the opened parafilm.

C. Evacuation of Wells During Wash Step:

- Allow Pressure to reach optimal level : (300 – 500 mm Hg) or (12 -19.5 Hg)
- Once optimal pressure has been reached, ensure that pressure is applied to the filter plate, by pressing down on the filter plate while it is on the Vacuum Manifold, to guarantee a proper seal of the filter plate with the Vacuum Manifold. Release pressure lever and observe wells to ensure they have been evacuated.
- If wells have not evacuated, close pressure lever to allow pressure to build to optimal level and then reapply more pressure by pressing more firmly on the filter plate while it is on the Vacuum Manifold and then releasing the Pressure Lever. (Ensure all used or unused wells are covered). This should allow all wells to evacuate.
- If wells are still not evacuating after reapplying pressure to the filter plate, then it is recommended a Blot (Procedure Listed Below) is performed in between washes to remove any excess liquid or bubbling that may occur and then continue washing once the wells have been evacuated.

2. Filter Plate Blotting & Air Dry Step: Blotting and Air Drying Steps must be followed to ensure any excess liquid has been removed from the filter plate.

A. Blotting:

- When Blotting the filter plate, Paper Towels should be used. It is suggested to lay 3-4 Paper Towels on the Lab Bench.
- Place filter plate on top of Paper Towels.
- Blot filter plate by placing gloved hand(s) over the wells in use and applying a downward pressure onto the wells in use.
- Lift up the filter plate and liquid may be observed on the Paper Towel. If liquid is observed, move the filter plate onto a dry part of the Paper Towel and repeat the blotting procedure.
- Repeat Blotting Procedure until little to no liquid is observed on the Paper Towel. Proper Blotting will remove any excess liquid from any wells with liquid remaining in them.

B. Air Drying:

- After the Blotting Procedure has been completed, the filter plate must be allowed to air dry for 3-5 minutes.
- Air Drying should occur on a non-absorptive surface.

3. Addition of & Mixing of Reagents in Pall Filter Plate:

A. Addition of Reagents: When adding reagents (Bead Mix, Diluted Serum, Wash Buffer & Conjugate) to the filter plate, ensure that reagent addition is occurring below the lip of the filter plate.

- NOTE: Avoid contact of Pipette Tip with Filter Paper

B. Mixing of Reagents: When either mixing Diluted Serum to Bead Mix or adding and mixing Conjugate after the Air Drying Step, ensure this occurs below the “lip of the filter plate.

- NOTE: Avoid contact of Pipetter Tip with Filter Paper.



4. **Re-using Pall Filter Plates:**

A. After Initial Use: To reuse the filter plate after the initial usage:

- The customer should remove the filter plate from the AtheNA Multi-Lyte[®] Instrument.
- Place filter plate on the Washer and vacuum all liquid from used wells.
- NOTE: Ensure that blotting step is followed after liquid has been removed from wells.

B. Storage:

- Once the used filter plate has had all remaining liquid evacuated from the wells, cover the used wells with Tape or parafilm, again ensuring that the Tape or parafilm does not come into contact with the bottom of the filter plate causing a poor seal with the vacuum manifold.
- Replace the lid that comes with the filter plate on the filter plate
- Store according to filter plate Packaging Label.