# AU680 Monthly Maintenance

| Step | Action |
|---|---|
| 1 | Perform the **Clean the Sample Probe, Reagent Probe, HbA1c, and Mix Bar Wash Wells** procedure |
| 2 | Perform the **Clean the Wash Nozzle Component, Inspect the Tube Mounting Joints, Clean the Deionized Water Tank, and Clean the Deionized Water and Sample Probe Filters** procedure |

## For Training Purposes Only

These job aids are shortened versions of the procedures found in the source below. The procedures are listed in the order to perform in the most efficient manner. Where it is possible, procedures have been combined for efficiency. Information in the job aid is correct as of the date published. Verify you have the correct information.

Source: AU680 Chemistry Analyzer Instructions for Use B04779AB (June 2015)

## WARNINGS AND PRECAUTIONS

Read all product manuals and consult with Beckman Coulter-trained personnel before attempting to operate the instrument.

Beckman Coulter, Inc. urges its customers and employees to comply with all national health and safety standards such as the use of barrier protection. This may include, but is not limited to, protective eyewear, gloves, suitable laboratory attire when operating or maintaining this or any other automated laboratory equipment.

## INTENTION FOR USE

**This document is not intended to replace the information in your Instructions for Use or Reference Manual. Information in the Instructions for Use and Reference Manual supersedes information in any other manual.**

## REVISION STATUS

Version 1.0 (September 2016)

Based on:

- AU680 Chemistry Analyzer Software version 4.0
- AU680 Chemistry Analyzer Instructions for Use B04779AB

## TRADEMARKS

The following Beckman Coulter trademarks are registered in the USPTO and may be used in this manual:

- Beckman Coulter and the Beckman Coulter logo
- AU

All other trademarks are property of their respective owners.

# Clean the Sample Probe, Reagent Probe, HbA1c, and Mix Bar Wash Wells

**Supplies Required**:

- Cotton-tipped applicators
- Disposable transfer pipette
- 0.5% sodium hypochlorite solution (5% Sodium Hypochlorite Solution diluted 1:10)

Confirm the system is in *Warm Up* or *Standby* mode.
Lift the upper cover of the analyzer

Select **Home > Analyzer Maintenance.**
Place a ✓ in the **Analyzer Maintenance** check box

Select **Cleaning Wash Tank,** select **OK**

Press the green **TABLE ROTATION/DIAG** button to move the probes away from the wash wells. Manually turn the mix bar components so the mix bars are away from the wash wells

Use a transfer pipette to dispense diluted sodium hypochlorite solution into each wash well. Use a separate cotton-tipped applicator to clean each wash well. Avoid splashing and clean up spills immediately

Press the green **TABLE ROTATION/DIAG** button to move the probes to the wash wells. Manually turn the mix bar components so the mix bars are over the wash wells

Select **Prime Washing-line,** select **OK** (leave default primes).
Press the green **TABLE ROTATION/DIAG** button to prime the probes and wash wells. Inspect the Sample Probe, Reagent Probe, and HbA1c wash wells for proper drainage

Select **Replacing Mixing Bar.** Make the following selections:

- At **Unit**, select **The First Mixer**
- At **Times**, enter 1, select **OK**

Press the green **TABLE ROTATION/DIAG** button to initialize the R1/S mix bar component and perform a sequence. Inspect the wash wells for proper drainage

Select **Replacing Mixing Bar.** Make the following selections:

- At **Unit**, select **The Second Mixer**
- At **Times**, enter 1, select **OK**

Press the green **TABLE ROTATION/DIAG** button to initialize the R2 mix bar component and perform a sequence. Inspect the wash wells for proper drainage

Are wash wells draining properly?

Yes → Deselect the **Analyzer Maintenance** check box. Close the upper cover

Document you completed the procedures on the paper maintenance log

No → Repeat cleaning of wash wells for the component that is not draining

# Clean the Wash Nozzle Component, Inspect the Tube Mounting Joints, Clean the Deionized Water Tank, and Clean the Deionized Water and Sample Probe Filters

**Supplies Required**:

- Clean, dry, lint-free absorbent tissue
- Basin
- 1% sodium hypochlorite solution (5% Sodium Hypochlorite Solution diluted 1:5)
- Extra DI water tank filled with 5 L of DI water
- Sonicator filled with DI water

Note: A sonicator is recommended for cleaning the nozzles but if one is not available, clean the nozzles with the supplied stylet and DI water

Confirm the system is in *Warm Up* or *Standby* mode.
Lift the upper cover of the analyzer

↓

Select **Home > Analyzer Maintenance**.
Place a ✓ in the **Analyzer Maintenance** check box

↓

Select **Replacing Wash Nozzle**, select **OK**

↓

Press the green **TABLE ROTATION/DIAG** button to drain the liquid from the wash nozzle tubing

Always drain the fluid from the wash nozzle before removing the tubing to avoid spills in the cuvette wheel

↓

Deselect the **Analyzer Maintenance** check box

↓

Select **Home** and select the **End** button 
to shut down the system

↓

Open the front left door on the analyzer.
Place a basin on the floor in front of the DI water tank to catch spilled water. Disconnect the float sensor connector 868

Be sure to remove the float sensor connector to prevent water from pouring out of the DI water tubing

↓

Press the gray quick disconnect joints on the front of the tank, remove the tubing from the front of the tank

↓

Pull the DI water tank forward and pull out the tubes from the top of the tank. Wrap the tubes with clean absorbent tissue (one tube has the DI water filter attached)

↓

Pull the DI water tank out of the analyzer.
Unscrew and remove the float sensor from the DI water tank, wipe the float sensor with DI water, then wipe the float sensor dry with a clean, dry lint-free tissue. Install the float sensor in the spare DI water tank containing 5 L of DI water

↓

Discard the DI water from the tank you removed from the analyzer and rinse the tank with the diluted sodium hypochlorite solution. Rinse the tank thoroughly with DI water and allow to dry

↓

Locate the filter on the DI water supply tubing removed from the tank. Position the tubing over the basin and unscrew the filter case, remove the filter and allow the water to drip

Continue on the next page

## Clean the Wash Nozzle Component, Inspect the Tube Mounting Joints, Clean the Deionized Water Tank, and Clean the Deionized Water and Sample Probe Filters,

continued, page 2

Remove the sample probe filter case from the bracket located directly to the left of the DI water tank. Press the gray quick disconnect joints on the top and the bottom, remove tubes, and pull the sample probe filter case forward

Unscrew the filter case over the basin, remove the filter and allow the water to drip. Do not lose the O-ring and the filter positioning insert. Note the orientation of the filter positioning insert for reinstallation. You will place both filters in the sonicator after removing the wash nozzle component

Open the rear cover. Loosen the 4 gray manifolds of the wash nozzle and remove them from their mounting positions.

Perform the following inspections :

- Inspect the 6 O-rings in the water supply manifold and confirm all O-rings are present, not worn (over stretched), or torn and that the area is free of dust or detergent crystals. Clean or replace O-rings. if necessary
- Inspect the packing (thin black ring) inside each manifold of the three tube mounting joints. If damaged, replace the packing

Loosen the silver knob holding the wash nozzle component and lift the wash nozzle component up over the positioning screws. Remove the wash nozzle component along with tubing and inspect the joints (flexible tubing joining the metal nozzle to the tubing) for cracks. Replace any joints, if necessary

Clean the wash nozzle component by placing it in a sonicator filled with DI water. Only the nozzles need to be submerged. Do not wet or place the springs in the DI water. If the springs get wet, wipe them with a clean, dry, lint-free tissue. Place the DI water filter and the sample probe filter in the sonicator filled with DI water. Turn the sonicator on for 15 minutes

Remove the wash nozzle component from the sonicator and dry thoroughly with a clean, dry, lint-free tissue

Install the wash nozzle component by placing it over the positioning screws and tighten the silver screw to hold it in place

Install each manifold using the color-coded positions for proper placement. Tighten the manifolds finger tight to prevent cuvette overflow but do not over-tighten

Remove the DI water and sample probe filter from the sonicator and dry thoroughly with a clean, dry, lint-free tissue

Insert the DI water filter into the case on the DI water supply tubing and tighten the case cap. The sample probe and DI water supply filters are interchangeable

Insert the sample probe filter into the case, confirm the O-ring is installed and the filter positioning insert is oriented inside the filter; tighten the case

Confirm the top of the case is oriented correctly. Reconnect the gray quick disconnect joints at the top and bottom of the filter case. Listen for a distinct click to confirm proper installation. Place the sample probe filter back into the bracket

Place all the water supply tubes into the top of the DI water tank containing 5 L of DI water. Push the tank into place. Reconnect the gray quick disconnect joints on the front of the tank by listening for a distinct click to confirm proper installation

Continue on the next page

**Clean the Wash Nozzle Component, Inspect the Tube Mounting Joints, Clean the Deionized Water Tank, and Clean the Deionized Water and Sample Probe Filters,**
continued, page 3