**AU5800 Monthly Maintenance**

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**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 them in the most efficient manner. Where it is possible, procedures have been combined for efficiency. The optional ISE module has references for two flow cells. Information in the job aid is correct as of the date published. Verify you have the correct information. Part numbers for supplies required for the maintenance procedures are found in the reference listed below.

Source: AU5800® Chemistry Analyzer User’s Guide PN A98352AB (October 2012)
## Document Disclaimers

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

Ensure the system is in **Standby Mode**

Open the front and rear cover of each analyzer unit

From the Home screen, select the **Analyzer Maintenance** jump button

Place a ✓ in the **Analyzer Maintenance** check box

Select **Clean Wash Well** (systems with multiple units are all selected by default, deselect units if not required), select **OK**

Press the green **DIAG** button to move all inner probes away from the wash wells

Use a transfer pipette to dispense 10% bleach solution into each inner probe wash well. Use a separate cotton swab to clean each wash well. Avoid splashing and clean up spills immediately

Press the green **DIAG** button to move the inner probes back to their home position.

Press the green **DIAG** button to move all outer probes away from the wash wells

Use a transfer pipette to dispense 10% bleach solution into each outer probe wash well. Use a separate cotton swab to clean each wash well. Avoid splashing and clean up spills immediately

Select **Prime Washing Line, for Times**, enter 3 (systems with multiple units are all selected by default, deselect units if not required), select **OK**. Press the green **DIAG** button to prime the wash wells. Inspect the wash wells for proper drainage

Are wash wells draining?

Yes

No

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**Supplies Required:**
- Cotton swabs
- Disposable transfer pipette
- 10% Bleach (Beckman Sodium Hypochlorite 5%) diluted 1:10 concentration. Prepare by adding 10 parts bleach to 90 parts DI water)
Clean the Sample Probe, Reagent Probe and Mix Bar Wash Wells continued page 2

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Manually turn the mix bar units so the mix bars are away from the wash wells

Use a transfer pipette to dispense 10% bleach solution into each wash well. Use a separate cotton swab to clean each wash well. Avoid splashing and clean up spills immediately

Select Replace Mix Bar. Make the following selections:
- All units are selected by default, deselect units not required
- Select The First Mixer
- At Times, enter 1, select OK

Press the green DIAG button to initialize the R1/S mix bar unit

Select Prime Washing Line. Make the following selections:
- All units are selected by default, deselect units not required
- At Times, enter 1, select OK

Press the green DIAG button. The analyzer will prime DI water through the sample and reagent probes, mix bars, and the wash nozzle. Inspect the wash wells for proper drainage

Are wash wells draining properly?

No

Yes

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Clean the Sample Probe, Reagent Probe and Mix Bar Wash Wells continued page 3

1. **Start here**

2. **Do you have an ISE unit?**
   - **No**
   - **Yes**

   **Yes**

3. **Deselect the Analyzer Maintenance check box. Select the ISE Maintenance button.**

4. **Place a ✓ in the ISE Maintenance check box. Select Clean Wash Well, select OK.**

5. **Open the rear main cover of the ISE unit. Press the green DIAG button to move the sample probe away from the wash well.**

6. **Use a transfer pipette to dispense 10% bleach solution into the wash well. Use a cotton swab to clean the wash well. Avoid splashing and clean up spills immediately.**

7. **Select Replace Sample Probe, for Times, enter 3, select OK. Press the green DIAG button to prime the wash well. Inspect the wash wells for proper drainage.**

8. **Is wash well draining?**
   - **No**
   - **Yes**

   **Yes**

9. **Deselect the ISE Maintenance check box.**

10. **Close the front and rear main cover of each analyzer unit and the rear main cover of the ISE unit.**

11. **Document you completed all the procedures on the paper maintenance log.**
Clean the Wash Nozzle Unit, Check the Tube Mounting Joints, Clean the DI Water Tank, DI Water and Sample Probe Filters

Supplies Required:
- Dry clean lint free cloth
- Basin
- 20% Bleach (Beckman Sodium Hypochlorite (5%) diluted 1:20. Prepare by adding 20 parts bleach to 80 parts DI water)
- DI water tank filled with 5 L of DI water
- Sonicator 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

Perform this procedure on each analyzer unit. Ensure the system is in **Standby** Mode. Open the rear main cover of each analyzer unit.

From the Home screen, select the Analyzer Maintenance jump button.

Place a ✓ in the Analyzer Maintenance check box.

Select Replace Wash Nozzle, (systems with multiple units are all selected by default, deselect units if not required), select OK. Press the green DIAG button to drain the liquid from the tubing.

Deselect the Analyzer Maintenance check box, select Home. From the Home screen, select the End Process button.

Open the front right door on each analyzer unit. Place a basin on the floor in front of the DI Water tank to catch spilled water. Disconnect the float sensor connector #795.

Press the grey quick disconnect joints on the front of the tank, remove the tubings from the front of the tank.

Pull the DI water tank forward and pull out the tubings from the top of the tank. Wrap the tubings with a dry clean lint-free cloth (1 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 dry clean lint free cloth. 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 20% bleach 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.

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

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

Avoid pulling the DI water tank by the front valves.

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- Remove the sample probe filter case from the bracket located directly to the left of the DI water tank. Press the grey 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.

- Loosen the 6 grey wash nozzle manifolds and remove them from their mounting positions. Inspect the 6 o-rings in the water supply manifold and verify 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 any o-ring if necessary.

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

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

- Install each wash nozzle unit by placing it over the positioning screws and tighten the silver knob to hold it in place. Each wash nozzle has been aligned to a specific analyzer unit. Ensure the wash nozzle is returned to the correct analyzer unit.

- Inspect the packing (thin ring) for each manifold to ensure it is not worn or damaged. Install each manifold using the color coded positions for proper placement. Tighten the manifolds finger tight to prevent cuvette overflow but do not overtighten.

- Remove the DI water and sample probe filters from the sonicator and dry thoroughly with a dry clean lint free cloth.

- 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 ensuring the o-ring is installed and the filter positioning insert is oriented inside the filter, tighten the case.

- Ensure the top of the case is oriented correctly. Reconnect the grey quick disconnect joints at the top and bottom of the filter case. Listen for a distinct click to ensure 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 grey quick disconnect joints on the front of the tank by listening for a distinct click to ensure proper installation.

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Wipe up any spills and remove the basin. Reconnect the float sensor connector labeled #795

Press the green ON button. At the Data Index window, make the appropriate index selection, select OK

When the system is in Warmup, from the Home screen, select the Analyzer Maintenance jump button. Place a ✔ in the Analyzer Maintenance check box

Select Prime Washing Line, at Times, enter 3, select OK

Press the green DIAG button and watch the prime. Repeat the prime by pressing the green DIAG button until all bubbles are removed from the DI water supply line

Close the door on each analyzer unit.

Select Prime Wash Nozzle, (systems with multiple units are all selected by default, deselect units if not required), at Times, enter 5, select OK

Press the green DIAG button. Verify the wash nozzle unit moves up and down without interference and that there are no leaks

Deselect the Analyzer Maintenance check box

Close the rear main cover of each analyzer unit

Document you completed all the procedures on the paper maintenance log