



## **DISINFECTION PROCEDURE FOR AKS-BM2-2 BICARB SYSTEM**

**BEFORE PROCEEDING: BE SURE NO PATIENTS ARE ON DIALYSIS AND NO PATIENTS ARE SCHEDULED FOR DIALYSIS.**

**DISINFECTION MUST BE PERFORMED ONCE A WEEK.**

**Caution** - Rinsing the system must be performed prior to introducing bleach to disinfect the mix and delivery tanks and loop. Failure to rinse the bicarb from the system may cause bicarb to precipitate in the pumps, transfer solenoid and bicarb loop. **Rinsing must also be performed at the end of each day.**

### **RINSE PROCEDURE PRIOR TO DISINFECTON**

1. **Turn off the bicarb Delivery Pump and turn on the disinfect key.** This will activate audible and visual alarms on the control unit and at the nurse's monitor, and will allow the mix tank to transfer disinfecting solution or rinse water to the Distribution Tank. **A ten-minute time delay will be activated before the transfer can take place.**
2. Turn the 3-way valve on the left side of the Distribution Tank "TO DRAIN " (red ball valve points down.)
3. Open valves "BV1" and "BV3" at the bottom of the Mix Tank, and allow the Mix Tank to empty to drain.
4. Press the "Reset Fill" switch to refill the Mix Tank. Allow the sprayer to wash the inside of the Mix Tank to drain for 5 minutes. Close "BV3" and allow the Mix Tank to fill.
5. Open "Distribution Tank Rinse" valve on the R.O. pipe behind the Distribution Tank and open valve "BV7" on the bottom of the Distribution Tank. Allow the tank to rinse to drain for 5 minutes.
6. After the 5-minute rinse, close "BV7 " and "Distribution Tank Rinse" valve.  
**Caution: If the Distribution Tank Rinse Valve is left open the Distribution Tank will overflow.**
7. Follow Vinegar rinse procedure before continuing with disinfection.



## **VINEGAR RINSE PROCEDURE**

1. After rinsing bicarb from both the Mix Tank and the Distribution Tank, fill the Mix Tank by pressing "Reset Fill". After the Mix Tank is full, add two gallons of **5%** vinegar.
2. Check that the 3-way valve on left side of Distribution Tank is still turned "TO DRAIN".
3. Press "Mixer" switch. The Mix Tank will run 15 minutes before shutting off.
4. When "Mixer" light goes out, the mix cycle is complete. Press the "Transfer" switch to transfer the vinegar solution to Distribution Tank.
5. Turn on the "Delivery Pump" and "Rinse Pump". Allow the vinegar to circulate through the loop and out to drain. The Delivery and Rinse pumps will shut off automatically when the Distribution Tank is empty.
6. Open "BV3" under the Mix Tank. Press "Reset Fill" to rinse the Mix Tank to drain for 5 minutes. Then close "BV3". Allow the Mix Tank to fill with RO water, then transfer the RO water to the Distribution Tank. **THE DISINFECT KEY NEED TO BE IN THE DISINFCT MODE TO ALLOW YOU TO TRANSFER A SOLUTION THAT IS NOT WITHN LIMITS.**
7. Open the "Distribution Tank Rinse" valve on the R.O. pipe behind the Distribution Tank and allow the Distribution Tank to fill to 100 gallons.
8. Turn on the "Delivery Pump" and "Rinse Pump" to rinse the vinegar from the loop by circulating R.O. water through the loop and out to drain. When the vinegar is completely rinsed out of the bicarb loop, turn off Delivery and Rinse pumps. Continue with bicarb system disinfection procedure.

## **BICARB SYSTEM DISINFECTION PROCEDURE**

1. Turn the 3-way valve on the left side of the Distribution Tank to "RETURN TO TANK".
2. Press the "Reset Fill" switch to start filling the Mix Tank, when the tank is approximately ½ full, turn on the mixer by pressing the "Mixer" switch. Allow the tank to fill to 50 gallons.
3. Add one gallon of Bleach to the Mix Tank. The mixer must complete the 15-minute mix cycle before allowing the transfer of bleach solution to Distribution Tank.
4. Press the "Transfer" switch on the control unit to transfer the disinfecting solution to the Distribution Tank. The Transfer Pump will transfer the solution to the Distribution Tank. When the Mix Tank is empty the transfer pump will shut off.



5. A second tank of R.O. water must be transferred to the Distribution Tank to complete a 1-% disinfecting solution.
6. Turn on the Delivery Pump and the Rinse Pump. Allow the bleach solution to circulate through the bicarb loop and back to the Distribution Tank.
7. Verify with a chlorine test strip at the bicarb system drain that the bleach solution has been pumped throughout the bicarb loop and is in the system. A sample can be taken from the sample valve located on the return line to the Distribution Tank.
8. Test for positive bleach at each bicarb port in the treatment area, and in both Biomed equipment rooms. ALL POINTS OF USE MUST BE TESTED. Complete the Bicarb System Station Checklist.
9. Allow the bleach solution to remain in the system and loop for a minimum of ½ hour.

### **DISINFECTION RINSE PROCEDURE**

1. To rinse disinfectant from the bicarb system, turn the “3-way valve” on the left side of Distribution Tank “TO DRAIN” and open valve “BV7” on the bottom of the Distribution Tank. The Delivery Pump will automatically shut off when tank is empty.
2. Open valves “BV1” and “BV3” at the bottom of the Mix Tank. Press “Reset          Fill” to rinse the Mix Tank to drain for 5 minutes. Check for a negative disinfectant residual at the bicarb jug fill port on bottom of Mix Tank.
3. Close valve “BV3”, and allow the Mix Tank to fill to 50 gallons.
4. Open the “Distribution Tank Rinse” valve on the R.O. pipe behind the Distribution Tank and open valve “BV7” on the bottom of the Distribution Tank. Allow the tank to rinse to drain for 5 minutes. Close valve “BV7”.
5. Press the “Transfer” switch to fill the Distribution Tank with R.O. water.
6. After at least one transfer has been made from the Mix Tank, open valve “BV8” under Distribution Tank.
7. Turn on the “Rinse Pump” and verify the 3-way ball valve is pointing “TO DRAIN”. This will pump R.O. water from the Distribution Tank through the bicarb loop and rinse it to drain.
8. If off, turn on the delivery pump and allow it to rinse. The bicarb loop size will determine the number of transfers of R.O. water needed to properly rinse the loop and Distribution Tank.



9. Allow the pumps to flush the disinfectant from the bicarb loop to drain until the Distribution Tank and all points of use test negative for bleach with a chlorine test strip. Turn off the Rinse Pump and Delivery Pump.
10. Turn the 3-way ball valve on side of Distribution Tank to "RETURN TO TANK".
11. Press the "Reset Fill" switch and fill the Mix Tank with R.O. water.
12. Once the Mix Tank is full, press the "Transfer" switch to transfer the RO water to the Distribution Tank.
13. Turn on the Delivery Pump and Rinse Pump to circulate R.O. water in the bicarb loop overnight.
14. Remove the 1-micron filter housing and replace the 1-micron filter.
15. Turn the Disinfect Key to normal run position and remove the key.
16. Complete the Bicarb System Disinfection Log.