

**OLIVE VIEW-UCLA MEDICAL CENTER  
DEPARTMENT OF NEPHROLOGY  
POLICY & PROCEDURE**

**NUMBER: 11762  
VERSION: 1**

**SUBJECT/TITLE: DIALYSIS: DIALYSIS: DISINFECTION AND CLEANING OF DIALYSIS MACHINE AFTER PATIENT USE**

**POLICY:** Cleaning and disinfection of dialysis machines will be performed after patient use by the hemodialysis nurse or renal equipment technician according to the following established procedures.

**PURPOSE:** To identify and reduce the risk of infections in dialysis patients

**DEPARTMENTS:** ALL

**DEFINITIONS:**

**PROCEDURE:**

**Cleaning of Dialysis Machine after each Patient Use**

After each use the outside of the dialysis machine is cleaned and disinfected with hospital approved bleach wipes following manufactures recommendations:

- Perform hand hygiene and don PPE.
- Thoroughly wipe the dialysis machine with 1:100 bleach wipes. Start from the top bag hangers of the infusion pole (including emergency kit and scissor clamp); top surfaces; front and sides of the machine; and ending with underneath the base and wheels.
- Empty the effluent collection bucket that is hanging on the site of the machine, rinse and clean with bleach wipes.
- Thoroughly wipe back of the machine, portable RO system starting from top to bottom with another bleach wipes.
- Thoroughly wipe the water and drain hose starting from the machine port connection until the end of the hose (including machine electrical cords) with another bleach wipes.
- Observe for dwell time of bleach wipe used (wet time) per manufacturer's recommendation.
- If there is any sign of rust, it must be addressed immediately (machine removed from service) as rust can cannot be cleaned properly and can harbor organisms.
- Remove PPE and perform hand hygiene.

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**Bibag Connector**

- The *bibag* connector is connected to the 2008T hemodialysis machine's hydraulics so running rinse or disinfection programs from the "Select Program" screen will also rinse or disinfect the *bibag* connector.
- To prevent bicarbonate buildup on the *bibag* connector:
  - Clean the exterior of the sealing area of the *bibag* nozzles with very dilute 1:100 bleach every day before running a rinse program.
  - Run an Acid Clean program at the end of every treatment day before running a Heat/Chemical Disinfection program.

**Acetic Acid Rinse Procedure**

**Purpose:**

To remove bicarbonate precipitate that may occur in machine using bicarbonate dialysate. Accumulation of precipitate in the fluid pathway can affect operation of the dialysis machine. This procedure is appropriate for all dialysis machines using bicarbonate dialysate.

**Frequency:**

This procedure should be performed daily after each last treatment of the day.

**Supplies:** Acetic Acid (6%) or white distilled vinegar with equivalent strength.

Fresenius (2008T) Machine:

1. Perform hand hygiene and don PPE
2. Connect water supply

**To run the Acid Clean program:**

- Attach a sign to the front of the machine that identifies the chemical being used to acid clean the machine.
- Ensure that both dialysate lines are on the shunt and both concentrate connectors are in their respective ports.
- From the "Select Program" screen, touch Acid Clean.
- Message "Wait: rinsing Line" appears.
- Attach the acid and bicarbonate connectors to a jug(s) containing an acid cleaner when prompted.
- Press CONFIRM to start the Acid Clean program. The "Acid Clean" screen appears in the display. The progress of the acid cleaning is indicated by horizontal bar.
- Return connectors to their ports when prompted.

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- Press CONFIRM to exit.

**Chemical Disinfection**

**Purpose:**

The Chemical/Rinse program should be used when disinfecting the hydraulic system using corrosive chemicals, such as bleach. The chemical/Rinse program consists of a disinfection cycle followed by a water rinse cycle. Because bacterial growth can begin soon after the rinse cycle, the machine should be disinfected again if it has remained idle more than 48 hours after its previous disinfection.

**To run the Chemical/Rinse program:**

1. Attach a sign to the front of the machine that identifies the chemical being used to disinfect the machine.
2. Ensure that both dialysate lines are on the shunt and both concentrate connectors are in their respective ports.
3. From the “Select Program” screen, touch Chemical/Rinse.
4. The “Chemical/Rinse” screen appears in the display. The progress of the disinfection program is indicated by the horizontal bar. The program starts with a 45 second pre-rinse. The message, “Rinsing Lines, Please Wait” is displayed in the Status Box.
5. Connect the red connector to a jug containing the chemical disinfectant and press CONFIRM when prompted.
6. Water pre-rinse will start. Remaining Pre-rinse Time meter box will count down.
7. When Remaining Pre-rinse Time meter box reads 0:00, chemical rinse will start after a delay. Remaining Time meter box will count down.
8. When the Remaining Time meter box reads 0:00, remove the acid connector from the disinfectant jug and insert it into the acid rinse port when prompted. Post rinse will start and Remaining Post Rinse time meter box counts down.
9. Press CONFIRM to exit.
10. NOTE: the machine will automatically perform a Diasafe test after the Chemical Rinse program completes.

**Heat Disinfection:**

**Purpose:**

The Heat Disinfect program disinfects the machine by running hot water (about 80<sup>0</sup>C) through the machine. The water recirculates at a program-controlled flow of about 400 ml/min. The program time can be set internally to run between 10 and 60 minutes. The timer starts as soon as the temperature of the water reaches 80<sup>0</sup>C.

**To run the Heat Disinfect program:**

1. Ensure that both dialysate lines are on the shunt and both concentrate connectors in their respective ports.
2. From the “Select Program” screen, touch Heat Disinfect to start the Heat

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Disinfect program. The “Heat Disinfect” screen appears in the control panel display. In the machine was not rinsed prior to this, it will automatically run a short rinse (7 min) or an extended rinse (20 min) depending on how the machine was configured in Service Mode.

3. After the heat disinfection is complete, if the machine is not configured to automatically turn off at the completion of the cycle, press CONFIRM to exit when prompted.

**DOCUMENTATION**

1. Documentation of cleaning for each machine will be done immediately following cleaning.
2. Documentation will be kept in a binder for each machine.
3. Dialysis Nurse Manager or SSN will be responsible for oversight and will audit once a month for completeness.

References:	
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