



# Rancho Los Amigos National Rehabilitation Center

## DEPARTMENT OF NURSING

### ADMINISTRATIVE

### POLICY AND PROCEDURE

**SUBJECT:** Hemodialysis: Disinfecting and Cleaning of  
Dialysis Machine after Patient Use

**Policy:** A190.3

**Effective Date:** July 3, 2023

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

#### **POLICY STATEMENTS:**

Daily cleaning and disinfection of dialysis machines will be performed after patients' use by the hemodialysis nurse or hemodialysis equipment technician according to the following established procedures.

#### **PROCEDURE:**

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

After each use the outside of the dialysis machine can be cleaned with bleach wipes (1:100) or other hospital-approved wipes following manufactures recommendations:

- Perform hand hygiene and don PPE
- Thoroughly wipe the dialysis machine with 1:100 bleach wipes or other approved hospital disinfectant. 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
- Use of bleach solution (1:100) is currently recommended by the Center of Disease Control as a suitable disinfectant for the Hepatitis virus
- 70% isopropyl is an acceptable cleaning option for the touchscreen of all 2008T machines
- Use cleaning surface agents sparingly to avoid excess cleaner from entering interior of the machine, and do not use it at all in the back panel. Rinse off cleaning solution with a water-dampened cloth, especially if a corrosive, cleaning agent such as bleach is used
- Empty the effluent collection bucket that is hanging on the site of the machine, rinse and clean with disinfectant wipes
- Thoroughly wipe back of the machine, portable Reverse Osmosis (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 disinfectant wipe
- Observe the dwell time of disinfectant wipe used (wet time) per manufacturer's recommendation. Rinse off cleaning solution with a water-dampened cloth, especially if bleached is used
- If there is any sign of rust, it must be addressed immediately (machine removed from service) as rust cannot be cleaned properly and can harbor organisms
- Remove PPE and perform hand hygiene.

##### **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

##### **Acid Clean Program**

**Purpose:** The purpose of the Acid Clean procedure is to prevent the build-up of bicarbonates inside the machine that can have a detrimental effect on the machine's performance and treatment efficacy. **The Acid Clean procedure is not a method of disinfection**

**Frequency:**

This procedure should be performed daily when using bicarbonate concentration during dialysis

**Equipment and Supplies:**

- Fresenius (2008T) Machine
- Acetic Acid 5% (white distilled vinegar); or citric acid 2-5%  
PPE

**Running Acid Clean Program Procedural Steps:**

- Perform hand hygiene and don PPE
- Connect water supply
- 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
- Press CONFIRM to exit

**Chemical/Rinse Program**

**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. Chemical rinse should be performed at a minimum of 7 days or after a treatment of patients with unknown or positive Hepatitis B, or after a dialyzer blood leak is detected.

**Running Chemical/Rinse Program Procedural Steps:**

- Perform hand hygiene and don PPE
- Attach a sign to the front of the machine that identifies the chemical being used to disinfect 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 Chemical/Rinse.
- 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.
- Connect the red connector to a jug containing the chemical disinfectant and press CONFIRM when prompted.
- Water pre-rinse will start. Remaining Pre-rinse Time meter box will count down.
- When Remaining Pre-rinse Time meter box reads 0:00, chemical rinse will start after a delay. Remaining Time meter box will count down.
- 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. **Note:** Visually confirm that disinfectant has been pulled into the machine
- When prompted, press CONFIRM to exit.

**Note:** the machine will automatically perform a Diasafe test after the Chemical Rinse program completes.

**Heat Disinfection Program:**

**Purpose:**

The Heat Disinfect program disinfects the machine by running hot water (about 176°F/80°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 176°F/80°C. Heat disinfection should be performed at least daily when the machine is used for treatments. If machine not used in 48 hrs, it should be disinfected before the next use.

**Running the Heat Disinfect Program Procedural Steps:**

- Perform hand hygiene and don PPE
- Ensure that both dialysate lines are on the shunt and both concentrate connectors in their respective ports
- From the "Select Program" screen, select the Heat Disinfect button. The "Heat Disinfect" screen appears on the display. If the machine was not rinsed prior to this, it will automatically run a short rinse (10 minutes) or an extended rinse (20 minutes) on how the machine was configured in service mode
- 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

**Keynote:** See 2008T Machine Operator's Manual for Warnings when performing this procedure

**DOCUMENTATION**

- Documentation of cleaning for each machine will be done immediately following cleaning
- Documentation will be kept in a binder for each machine
- Dialysis Nurse Manager or designee will be responsible for oversight and will audit once a month for completeness

**Keynote:** For Other cleaning recommendation procedures, see 2008T Machine Operator's Manual P/N 490122 Rev Z

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Lippincott Procedure. *Hemodialysis Patient Assessment* Retrieved 5/26/23.

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Olive View Medical Center Department of Nephrology Policy and Procedure. Policy Number 11766, revised 07/03/23.

Rancho Los Amigos Infection Prevention and Control Policy number IC100

Rancho Los Amigos Policy C109- *Transfusion of Blood Products and Colloid Solution*

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