

Document Code:	DPOTMH-E-67-P04	
Effective Date:	04-15-2022	
Document Type:	Policy	
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Department/Section:	Hemodialysis Unit	
Document Title:	REPROCESSING OF DIALYZER	

#### **PURPOSE:**

To make sure that the dialyzer is free from blood components, allergens, and pathogens for safe reuse.

#### LEVEL:

Hemodialysis Technicians, Renal Nurses, Dialysis Unit Head, and Hemodialysis Supervisors

#### **DEFINITION OF TERMS:**

Dialysis Reprocessing- is a process of cleaning, rinsing, and disinfecting of dialyzers for safe reuse.

**Dialyzer**- is a tube-like device with encased hollow fibers which acts as an artificial kidney and is used primarily to filter blood during hemodialysis.

Extra Corporeal Circuit (ECC) - is a synthetic tube with different segments and ports that is used as a conduit for blood and other solutions necessary in performing hemodialysis.

**Hemodialysis**- is an artificial process of removing waste products and excess fluid from the blood using a filter (dialyzer) outside the body.

**Peracetic Acid-** (also known as peroxyacetic acid, or PAA), is an organic compound with the formula CH<sub>3</sub>CO<sub>3</sub>H. It is the primary disinfectant used to remove surface contaminants (primarily protein) on dialyzers.

**TCV (total cell volume)** - measurement of volume of water being filled in a blood compartment of a dialyzer either with the conventional method or with automated reprocessing machines.



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#### POLICY:

- 1. The dialyzer must be rinsed using purified water before chemical disinfection.
- 2. The dialyzer must be disinfected with peracetic acid using an automated dialyzer reprocessing machine (Renatron).
- 3. The reprocessed dialyzer must pass the total cell volume (TCV) performance test before it can be stored for reuse.
- 4. The dialyzer reprocessing must be recorded appropriately indicating the name of the patient, date of first use, and the TCV.
- 5. The reprocessed dialyzer must be internally soaked with peracetic acid.
- 6. Prior to reuse, the dialyzer must be free from peracetic acid. Peracetic acid shall be rinsed out from the dialyzer using 500ml to 700ml sterile saline solution attached in the hemodialysis machine.
- 7. Residual peracetic acid from the dialyzer must be at zero ppm as determined using the residual peracetic acid test strip.

### **DOCUMENTATION:**

Revised Policy

#### **DISSEMINATION:**

Policies and Procedures Manual Hospital Communicator Memoranda Hemodialysis Unit Meetings



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## **REFERENCE:**

Clinical Practice Guidelines and Clinical Practice Recommendations. KDOQI Guidelines, 2006

ANSI/AAMI RD47:2020, Reprocessing of Dialyzers



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#### **PURPOSE:**

To ensure proper cleaning and disinfection of reused dialyzer.

### SCOPE:

Applies to all Hemodialysis Unit staff of Dr. Pablo O. Torre Memorial Hospital

### PERSON RESPONSIBLE:

Hemodialysis Technicians, Hemodialysis Supervisors

#### PROCEDURE:

- 1. Technician rinses the dialyzer using purified osmosis water until all blood fibrin clots are removed.
- 2. Then technician places the dialyzer onto the automated reprocessing machine, attaching the blood ports and the dialysate ports according to equipment specifications.
- 3. The dialyzer is rinsed and cleaned through the reprocessing machine.
- 4. The dialyzer performance is then checked. TCV should be more than or equal to 80% of the factory measured TCV.
- 5. Peracetic acid is used as a sterilant for dialyzer.
- 6. The blood ports and the dialysate ports are capped using port caps soaked in peracetic acid for at least 12 hours.
- 7. The dialyzer is kept in a storage rack where direct physical contact from one dialyzer to another is prevented.
- 8. Prior to reuse the Renal Nurse shall:
  - 8.1. verify that the identity of the patient and the owner of the dialyzer, as labeled on the dialyzer, are one and the same person
  - 8.2. couple the reprocessed dialyzer onto the hemodialysis machine and attach it to a sterile extra corporeal circuit (ECC)



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- 8.3. rinse the dialyzer using a sterile saline solution (500ml to 700ml) attached to the ECC
- 8.4. test the peracetic acid concentration of a fluid sample from the dialyzer using a residual peracetic acid test strip. The result must be zero (0) PPM before the dialyzer will be considered safe for reuse. If the test result is greater than zero (0) PPM, the Renal Nurse shall repeat the saline rinsing (procedure 3.2.) and retest the same until residual peracetic acid is equal to zero (0) PPM.

#### **REFERENCE:**

Clinical Practice Guidelines and Clinical Practice Recommendations. KDOQI Guidelines, 2006

ANSI/AAMI RD47:2020, Reprocessing of Dialyzers



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KEY TASKS		PERSON RESPONSIBLE	
1.	Rinses the dialyzer using purified osmosis water until all blood fibrin clots are removed.	Technician	
2.	Places the dialyzer onto the automated reprocessing machine, attaching the blood ports and the dialysate ports according to equipment specifications.		
3.	Rinses and cleans dialyzer through the reprocessing machine.		
4.	Caps blood ports and the dialysate ports using port caps soaked in peracetic acid for at least 12 hours.		
5.	Verifies that the identity of the patient and the owner of the dialyzer as labeled on the dialyzer, are one and the same person prior to reuse.		
6.	Rinses the dialyzer using a sterile saline solution (500ml to 700ml) attached to the ECC.		
7.	Tests the peracetic acid concentration of a fluid sample from the dialyzer using a residual peracetic acid test strip. The result must be zero (0) PPM before the dialyzer will be considered safe for reuse.	Renal Nurse	
8.	Repeats the saline rinsing and retest the same until residual peracetic acid is equal to zero (0) PPM if the test result is greater than zero (0) PPM		



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