



**NEPHROLOGY PROGRAM
DEPARTMENT POLICIES AND PROCEDURES**

**Biomed Neph - Section 03 - Water Quality Management - Neph Tech 3-14
Weekly Chemical Disinfection of RO1 and RO2 WHILE UNIT IS CLOSE
No.: 01465 (TOH Standardized Policy Number)**

ISSUED BY:

Technical Practice Committee

DATE OF APPROVAL:

2015/03

APPROVED BY:

Program Clinical Director & Division Chief

LAST REVIEW/REVISION DATE:

2017/06

CATEGORY:

Water Quality Management

IMPLEMENTATION DATE:

2015/03

POLICY STATEMENT:

- Provide the user with instructions to follow when performing the weekly chemical disinfection procedure for the reverse osmosis unit 1 (RO1) and the reverse osmosis unit 2 (RO2) while the unit is close

DEFINITION(S):

- Refer to the Definitions document in the water treatment room binder

ALERTS:

- The user shall wear gloves or appropriate PPE equipment when moving the dosing connectors
- Initiate chemical disinfection in the evening *after all machines are finished disinfection*

NOTE: *It is essential to follow the steps in this procedure in the sequence in which they appear*

PROCEDURE:

Section A: Equipment shut down

1. Position RO2 Osmosis Key to "0"
2. Position RO1 Osmosis Key to "0"

Section B: Initiate chemical disinfection on RO1

3. Enter code "813" on RO1 key pad and press "ENTER" key to confirm
4. Press "DISINF"
5. Press "DISINF" again
6. Open the front door and remove the dosing connector from "OPERATION" by depressing the clips on either side and pulling straight out
7. Move the dosing connector to "DISINFECTION" and push it in.

NOTE: *Ensure the connector is fully secured*

8. Ensure there is sufficient Dialox in container (approx. 4")
9. Press "DISINF"
10. Trace a line on the chemical container at the level of the liquid and write the date.
This will allow you to visualize how much chemical has been used
11. Close the front door

Section C: Initiate chemical disinfection on RO2

12. Position BIOSMOSIS key from "RO1 + RO2" to "RO2"
13. Enter code "813" on RO2 key pad and press "ENTER" key to confirm
14. Press "DISINF"
15. Press "DISINF" again
16. Open the front door and remove the dosing connector from "OPERATION" by depressing the clips on either side and pulling straight out
17. Move the dosing connector to "DISINFECTION" and push it in

NOTE: *Ensure the connector is fully secured*

18. Press "DISINF"
19. Trace a line on the chemical container at the level of the liquid and write the date—
this will allow you to visualize how much chemical has been used
20. Ensure there is sufficient Dialox in container (approx. 2 1/2")
21. Close the front door. The Disinfections will be complete in 132 minutes

NOTE: *Both the RO1 and RO2 will suction the correct volumes of disinfectant, perform the disinfection routines and will rinse out automatically*

Section D: Completing disinfection on RO's starting with RO2

22. Open the front door on **RO2** and remove the dosing connector from "DISINFECTION" by depressing the clips on either side and pulling straight out
23. Move the dosing connector to "OPERATION" and push it in, you should hear a click

NOTE: *Ensure the connector is fully secured*

24. Confirm that the level of liquid in the container has gone down about 2 inches below the mark and close the door
25. Press "START"

Section E: RO1 always follows RO2

26. Open the front door of RO1 and remove the dosing connector from “DISINFECTION” by depressing the clips on either side and pulling straight out
27. Move the dosing connector to “OPERATION” and push it in, you should hear a click

NOTE: *Ensure the connector is fully secured*

28. Confirm that the level of liquid in the container has gone down about 3 1/2 inches below the mark and close the door
29. Press “START”

Section F: Test for residual chemical RO2

NOTE: *You will need to use peroxide strips for the next steps. These are in a green bottle located inside the front panel of the RO. Ensure that the bottle used has a ‘date opened’ on it and that the date does not exceed three months*

30. After one minute, perform the residual check by putting a peroxide test strip into the RO2 “Funnel to Drain” located on the right of the RO unit. This is to verify that no peroxide is detected. If peroxide is detected, wait 5 minutes and perform the test again
31. Press “STOP”
32. Verify the cursor is after “dial code”, enter code “813” and press the “ENTER” key to confirm

Section G: Test for residual chemical RO1

NOTE: *You will need to use peroxide strips for the next steps. These are in a green bottle located inside the front panel of the RO. Ensure that the bottle used has a ‘date opened’ on it and that the date does not exceed three months*

33. After one minute, perform the residual check by putting a peroxide test strip into the RO1 “Funnel to Drain” located on the right of the RO unit. This is to verify that no peroxide is detected. If peroxide is detected, wait 5 minutes and perform the test again
34. Press “STOP”
35. Verify the cursor is after “dial code”, enter code “813” and press the “ENTER” key to confirm
36. Look for “Loop Test Required” message on the RO screens:
 - a) If present on either RO refer to policy [Neph Tech 3-15 \(#01466\)](#) before proceeding to Section F
 - b) If NOT present, proceed to Section F

Section H: Actions at the BIOSMOSIS BOX

37. Position RO1 key to “AUTO”
38. Position BIOSMOSIS key to “RO1 + RO2”

39. Position RO2 key to “MAN”

40. **DO NOT SKIP THIS STEP!** Wait one minute and position RO2 key to “AUTO”

NOTE: *The RO1 and RO2 systems will be in operation after 5 minutes. Check the two remote panels at the nursing station or technical lab-- the green lights should be on and not flashing*

Section I: Alarm/Troubleshooting

41. If an alarm occurs on one of the RO units during this procedure press the “alarm” key on the RO screen to display the list of alarms. Refer to the Troubleshooting sheet attached to front of RO and to policy [CCH Neph 14-23 \(#01367\)](#)

DOCUMENTATION:

42. If you encountered alarms, unusual messages, disinfectant container is low, please document the date, time, your initials and the details on the Daily Water Treatment Room Checklist

RELATED POLICIES / LEGISLATION:

1. Nephrology Policies and Procedures - [Biomed Neph - Section 03 - Water Quality Management - Neph Tech 3-15 \(#01466\) Message Loop Test Required](#)
2. Nephrology Policies and Procedures - [Hemodialysis - Section 14 - Unit Specific - CCH Neph 14-23 \(#01367\) Troubleshooting Gambro Water Treatment](#)

REFERENCES:

1. Gambro Osmosis Operator procedures (June 21, 2011)
2. CSA-ISO 13959:15 *Water for haemodialysis and related therapies*
3. CSA-ISO 26722-16 *Water treatment equipment for haemodialysis applications and related therapies*