

Basic Water Treatment for Hemodialysis Course

Course Offered at:

Better Water, LLC
Corporate Offices and Training Facility
698 Swan Drive
Smyrna, TN 37167
Ph. (615) 355-6063
Fax (615) 355-6065



Instructional Length 8 ½ hrs

Contact hours awarded by NANT – 13.5

Course Length 2 days
(Day 1: 8:00am – 4:30pm)
(Day 2: 8:00am – 3:00pm)



Certified by BONENT

COST: \$350.00

Special: \$325.00 / person when
3 or more register at same time.

Training Coordinator

Craig Maddux
Director of Technical Services
Better Water, Inc.

Course Includes:

- 2 full days of classroom and Hands-on Training
- Work Book
- Lunch (both days)
- 13.5 contact hours, awarded by NANT
- Certificate of completion

Course Dates
February 21-22, 2012
May 22-23, 2012
August 21-22, 2012
Nov. 27-28, 2012

Register by:
Feb. 11, 2011
May 12, 2011
Aug. 11, 2011
Nov. 17, 2011

Basic Water Treatment for Hemodialysis Class Schedule

Day 1

8:00am – 8:30 INTRODUCTION

8:30 – 9:30 FUNDAMENTALS OF WATER

9:30 – 10:45 BASIC PRE-TREATMENT

10:45 – 11:00 BREAK

11:00 – 11:30 WATER TREATMENT ROOM

11:30 – 12:30pm BASIC PRE-TREATMENT (CON'T)

12:30 – 1:30 LUNCH

1:30 – 2:45 REVERSE OSMOSIS

2:45 – 3:00 BREAK

3:00 – 4:00 REVERSE OSMOSIS (CON'T)

4:00 – 4:30pm REVIEW AND BREAK FOR THE DAY

Day 2

8:00am – 8:30 REVIEW OF YESTERDAY

8:30 – 9:30 BASIC POST TREATMENT

9:30 – 9:45 BREAK

9:45 – 12:00pm BASIC POST TREATMENT (CON'T)

12:00 – 1:00 LUNCH

1:00 – 2:00 WATER TESTING AND MONITORING

2:00 – 3:00 QUESTIONS / ANSWERS & TEST

3:00 pm CERTIFICATE PRESENTATION AND DEPART

Basic Water Treatment for Hemodialysis

Course Outline

Fundamentals of water

- Sources
- Maximum allowable contaminant levels
- (AAMI Standards)
- Water Analysis

Basic Pre-Treatment of Hemodialysis Water Systems

- Placement of Pretreatment equipment (order of placement)
- Blending Valves
 - What do they do?
 - When are they necessary?
- Booster Pumps
 - What do they do?
 - How are they initiated?
- Sediment filters,
 - (Multi-Cartridge Housings, Hurricane Filters, Multi-Media Depth Filters)
- Carbon Filters,
 - What is Empty Bed Contact Time?
 - How many and how much is required?
 - How to properly size Carbon Filters?
 - How Carbon Works
 - How to know when Re-bedding is necessary
- Softeners / Brine Tanks
 - When are softeners needed?
 - How big do they need to be?
 - How to properly size softeners
 - Principals of Ion Exchange
 - Regenerating Softener Resin
 - How to know when re-bedding is necessary
- Reverse Osmosis Pre-Filtration

Reverse Osmosis for Hemodialysis Water Systems

- Basics of Osmosis and Reverse Osmosis
- Detailed look at Reverse Osmosis Membrane
- What features should the Reverse Osmosis Machine have?
- Start-up and shut-down
- Monitoring the RO and all of its functions
- Direct Feed and Tank Feed Systems

Basic Water Treatment for Hemodialysis

Course Outline (Con't)

Reservoirs

- **How big does the reservoir need to be?**
- **Reservoir requirements**
- **Monitoring the reservoir**
- **Disinfecting the reservoir**

Repressurization Pumps

- **What do they do?**
- **How are they initiated?**
- **How are they protected?**

Final Filtration for Hemodialysis Water Systems

- **Ultra Filters**
- **Hollow Fiber Absolute Filters**
- **Ultra Violet Irradiation Units**

Water Testing & Monitoring

- **What tests to perform?**
- **When tests are performed?**
- **What to record and why?**
- **Daily Log Sheets**