# Applicable Laboratory(s)):

[x]  North Carolina Baptist Hospital (NCBH)

[ ]  Lexington Medical Center (LMC)

[ ]  Davie Medical Center (DMC)

[ ]  Wilkes Medical Center (WMC)

[ ]  High Point Medical Center (HPMC)

[ ]  Westchester

[ ]  Clemmons

# Procedure Statement

Ultrapure water is generated by the Dracor water filtration system. The resultant water meets or exceeds ASTM TYPE 1B, CAP TYPE 1, and CLSI TYPE 1, and is suitable for preparation of reagents.

# Scope

i. Procedure Owner/Implementer: Blood Bank Management

ii. Procedure Prepared by: Emily H. Wilson

iii. Who Performs Procedure: Blood Bank Staff

# Definitions

1. Procedure: A process or method for accomplishing a specific task or objective.
2. WFBH Lab System: Wake Forest Baptist Lab System is a health system that includes Wake Forest Baptist Medical Center and all affiliated organizations including Wake Forest University Health Sciences (WFUHS), North Carolina Baptist Hospital (NCBH), Lexington Medical Center (LMC), Davie Medical Center (DMC), Wilkes Medical Center (WMC), High Point Medical Center (HPMC), Lab at Westchester and Lab at Clemmons.
3. ASTM: American Society for Testing and Materials
4. CLSI: Clinical and Laboratory Standards Institute
5. CAP: College of American Pathologists

# Sections

1. Operation
2. QC and Maintenance
3. Contingency Plan for Failure of System

# Policy Guidelines

Power to the Dracor unit should remain on at all times as the circulation of water through the ultraviolet light keeps it sterile.

# Procedure

Chemical Risk Assessment: Low

Biological Risk Assessment: Low

Protective Equipment: None

**Supplies**: Pathology Requisition Form, 13x100 sterile tube

**Reagents**: n/a

**Equipment**: Dracor Water Filtration System Model 21RC-1 with DRS-1 Unit

**Specimen Requirements**: n/a

# Section I. Operation

| **STEPS** | **INSTRUCTIONS** | **CHANGE/****APPROVAL** |
| --- | --- | --- |
| **1.0** | **Check the digital resistance display.** * 1. Reading should be 18 megaohms +/- 1. (Range: 17-19

megaohms). |  |
| **2.0** | **Check pilot light.** 2.1 Pilot light should be illuminated.   |  |
| **3.0** | **Open tap and collect desired amount of water.**  |  |
| **4.0** | **Close tap.**  |  |
|  | **EXPECTED OUTCOME RESULTS:** Water should flow on demand when tap is opened.  |  |
|  | **ACCEPTABLE RANGES:** Reading should be 18 megaohms +/- 1. (Range: 17-19 megaohms). Pilot light should be illuminated.  |  |

# Section II. QC and Maintenance

|  |  |
| --- | --- |
| **Frequency** | **Instructions** |
| **Daily** | * Check the digital display for resistance level. (Acceptable Range= 17-19 megaohms)
* Check that the circulatory pump and indicator light are on.
* Record checks on Daily Quality Control Checklist.
 |
| **If QC Failure:** |
| * Contact Dracor for service: 1-800-359-9421 or 1-919-383-9421 (Account # is 1039)
* Can also contact via email at accounting@dracorwatersystems.com
 |
| **Quarterly**  | * Open tap and allow the water to run for 3-5 minutes.
* Collect 50mL water in a 50mL sterile conical tube.
* Label tube BB, Water QC and send to Microbiology Lab with a Pathology Requisition, ***Attachment 1***.
* Microbiology Lab can use the BB Water Sample as the submitter.
* Save a copy of the requisition in the incomplete notebook.
* Check the culture in 3 days and print out a final copy.
	+ Wake One > Specimen Inquiry > Specimen Inquiry (by patient) > Submitter: WC BLOOD BANK WATER SAMPLES > Name: BB,WATER CULTURE
	+ Find current report
* Give final culture copy to management to review.
* Initial that water culture has been completed on the Quarterly QC form.
 |
|  | **If QC Failure:** |
|  | * Positive cultures should be immediately reported to the BB Lab by Microbiology.
* Repeat any contaminated Dracor water cultures.
* Notify manager of any positive Dracor water cultures.
* Consult management regarding use of water while any cultures are pending (refer also to Section III – Contingency Plan for Failure of System).
 |
| **Biannual** | * Dracor performs preventative maintenance on the water filtration system at least every six months.
 |
| **If QC Failure:** |
| * Follow Dracor service representative’s direction in case of QC failure.
 |
|  | **EXPECTED OUTCOME RESULTS:** Daily, Quarterly, and Biannual QC should be within acceptable ranges.  |
|  | **ACCEPTABLE RANGES:** Reading should be 18 megaohms +/- 1. (Range: 17-19 megaohms). Pilot light should be illuminated. Quarterly microbiology cultures should be negative (<10 cfu).  |

# Section III. Contingency Plan for Failure of System

| **STEPS** | **INSTRUCTIONS** | **CHANGE/****APPROVAL** |
| --- | --- | --- |
| **1.0** | **Contact Dracor Service at 1-800-359-9421 or 1-919-383-9421 (Account # is 1039)**1.1 Can also contact via email at accounting@dracorwatersystems.com |  |
| **2.0** | **Notify manager and medical director of failure of system.**  |  |
| **3.0** | **Deionized water is available in emergent situations in the SCTCT Lab 2nd Floor North Tower and Core Lab, Main Floor, North Tower.**  |  |
|  | **EXPECTED OUTCOME RESULTS:** Water should flow on demand when tap is opened.  |  |
|  | **ACCEPTABLE RANGES:** Reading should be 18 megaohms +/- 1. (Range: 17-19 megaohms). Pilot light should be illuminated |  |

# References

Dracor Water Filtration System Operator’s Manual – Date 1990.

# Related procedures/policies

None

# Attachments/Linked documents (title 21)

Attachment 1: Pathology Requisition

# Revision Dates: Review Change Summary as represented in Title 21.