Department of Microbiology
Dialysis Water & Dialysate Culture Procedure

Colony Count Dialysis Water (CCDW) and Colony Count Dialysate (CCDI)

A. Sample Collection and Transport

1. Water samples should be collected after allowing the water to run for at lease 60 sec before a sample is collected in a sterile, endotoxin-free container.
2. Dialysate samples should be collected from a dialysate port of the dialyzer, if possible.
3. Samples that can not be cultured within 1-2 h of collection can be refrigerated for up to 24 h.

B. Sample Processing

1. Water and dialysate are processed using a pipette to inoculate one BAP with 500 µl of specimen.
2. Using the sterile inoculation loop, not a swab, spread the sample over the surface of the agar plate. After spreading the sample, stab the agar near the edge of the plate so that it is obvious that the plate was inoculated.
3. Plates are incubated aerobically at 35°C (non-CO_2) for a total of 48 h.

C. Culture Work-up and Reporting

1. Sterile Culture
    a. At 24 h report: **No Growth to Date**. Re-incubate.
    b. At 48 h report: **Sterile or < 2 CFU/mL**. Discard the plate.
2. Positive Culture
    a. Report the appropriate colony count (total colony count per mL). The total colony count is determined by counting all of the organisms on the BAP and multiplying by 2 so that the total CFU/mL is obtained. If there are $\geq$ 100 colonies growing, report $\geq$ 200 CFU/mL. Do not list organisms individually.
    b. Bring up all positive cultures with $\geq$50 CFU/mL (at least 25 colonies on the plate) on Rounds.

D. Interpretation of Results

1. The action level for the total viable microbial count for either water used to prepare dialysate or for dialysate is 50 CFU/mL.
2. Ultrapure dialysate should contain a total viable microbial count less than 0.1 CFU/mL.

E. Reference

American National Standard. Dialysate for hemodialysis. ANDI/AAMI RD52:2004. Association for the Advancement of Medical Instrumentation. 2004.

Document Control
Effective 11/01/2008
Medical Director Review: 03/10/2010
Microbiology Director Approval: Dr. Ann Robinson 11/2008
Microbiology Supervisor Reviews: Jerry Claridge 11/2008, 09/2009, 03/2011, 03/2013, Jason Ammons 5/2015
Revisions & Updates: