



Dental Unit Waterlines Handout

Key Standard

Maintain dental treatment water at ≤ 500 CFU/mL of heterotrophic bacteria, consistent with CDC drinking water recommendations. Biofilm forms inside dental unit waterlines and can contaminate treatment water, generate infectious aerosols, reduce disinfectant effectiveness, and rapidly recolonize lines.

Why It Matters

Contaminated waterlines have been linked to *Legionella*, *Pseudomonas*, and nontuberculous mycobacteria infections. Outbreaks in Georgia (2015) and California (2016) caused severe pediatric infections, hospitalizations, surgeries, and litigation. Approximately 30% of the dental offices are not in compliance.

Core Compliance Steps

- Use an approved water treatment system.
- Follow both dental unit and treatment-product IFUs.
- Test waterlines routinely.
- Shock/remediate lines as required (follow manufacturer's directions for the product in use).
- Maintain water monitoring test results and maintenance records.

Testing

Recommended: Follow manufacturer IFUs. If none exist, test monthly until two consecutive passing results, then quarterly. Test after plumbing repairs or significant changes. Both in-office and laboratory testing are acceptable when performed correctly using aseptic technique. Our office recommends an initial lab test to determine the exact CFU's per mL for the baseline test and then thereafter your office's preference, whether a lab test or self-test kit.

If a Test Fails

Immediately remove affected waterlines from service, perform remedial treatment according to manufacturer instructions, shock the system if indicated, and retest before returning the unit to patient care.

Documentation

Record dates, tester, testing method, pooled samples (if applicable), results, corrective actions, and retain documentation for at least five years where required.

Clinical Reminders

- Flush handpieces, ultrasonic scalers, and air/water syringes for 20–30 seconds between patients and at the beginning/end of the day.
- Use sterile water or sterile saline for surgical procedures.
- Include ultrasonic scaler lines in testing and maintenance.
- Do not warm treatment water because it may increase microbial growth.

Boil Water Advisory

Do not use public water for treatment during an advisory. Follow local utility guidance after the advisory ends, flush lines, then disinfect according to manufacturer instructions.

Office Checklist

- ☐ Written DUWL policy
- ☐ Staff training completed
- ☐ Water treatment product in use and protocols established
- ☐ Routine water monitoring/testing schedule is in place
- ☐ Shock protocol established
- ☐ Corrective action process
- ☐ Documentation maintained
- ☐ Annual review of procedures