Dental Waterline Testing FAQs

How often should I test my waterlines?

- Revert to manufacturer IFUs first. If both the dental unit and DUWL treatment manufacturer provide guidance, you must follow the test frequency recommendation with the most frequent testing intervals. For example, dental unit manuf. specifies testing twice a year, but the DUWL treatment manufacturer specifies quarterly, follow the quarterly guidance. If no guidance is provided, we recommend following OSAP's guidance provided below.
- Per the CDC, "Dentists should consult with the manufacturer of their dental unit or water delivery system to the recommended frequency of monitoring. Monitoring of dental water quality can be performed by using commercial self-contained test kits or commercial water-testing laboratories."
- OSAP recommends:
    1. Perform monitoring periodically regardless of the product or protocol used to manage dental procedural water quality, even when manufacturer directions for monitoring are absent or unclear.
    2. Periodic monitoring and inspection should be performed at least monthly on each dental unit or device following installation of treatment devices or initiation of new protocols.
        - If monitoring results indicate that water quality is acceptable for two consecutive monthly cycles, the frequency of testing may be reduced, but should be at least every three months.
    3. In addition to scheduled periodic monitoring, all dental devices that provide procedural water for patient treatment should be tested for bacterial contamination in the following circumstances:

        - Following installation of new equipment such as water reservoirs or procedural water treatment devices.
        - Following initiation of new procedural water treatment protocols using chemical germicides or cleaners.
        - After extended periods of disuse or lack of maintenance.
        - Following changes to manufacturer IFU or clinic protocols.
        - Following maintenance or repair of dental units or devices.

- Review the Aseptic Technique for Obtaining a Water Sample for Testing document

Source: DENTAL UNIT WATER QUALITY: ORGANIZATION FOR SAFETY, ASEPSIS AND PREVENTION WHITE PAPER AND RECOMMENDATIONS–2018, Journal of Dental Infection Control and Safety

What are the current water standards for dental unit waterlines?

- The current EPA standard for potable water is <500 CFU/mL

Is testing for specific organisms necessary?

- Per the CDC, "because methods used to treat dental water systems target the entire biofilm, no rationale exists for routine testing for such specific organisms as Legionella or Pseudomonas, except when investigating a suspected waterborne disease outbreak."

Which lines should be tested?

- As a best practice, all water-bearing lines should be tested. So, if your operatory has AWS, Handpiece and Scaler lines – ideally you should complete 3 tests and should also consider periodic source water testing (sink)
- Review the Aseptic Technique for Obtaining a Water Sample for Testing document

Is it ok to use a multi-source (pooled) test sample for water testing?

- Yes. If this method is chosen, waterlines for each single operatory or single dental unit would be pooled into one sample.
    1. A pooled sample must use equal amounts of water from each waterline.
    2. Should not include more than 10 lines.
    3. Pooling samples from units in different operatories into one sample is not acceptable.
    4. Ensure to document which lines are being pooled.
- Although use of this method is widely accepted it is important to understand that if the pooled sample does fail, each of the individual lines that were part of the pooled sample fail. At his point the office would have two options:
    1. Re-test every line separately to determine which line(s) are failing
    2. Shock every line connected to water on the dental unit (include ALL individual lines initially included as part of the pooled sample. In addition, to prevent contamination caused by areas of water stagnation not reached by shock or waterline treatments ensure to run shock through infrequently or unused lines (dead legs) on the dental unit
        - Ideally unused water lines should be disconnected from the dental unit
- Review the Aseptic Technique for Obtaining a Water Sample for Testing document

We use "Good Quality" potable water for patient treatment, isn't that good enough?

- **No!** Starting with good quality potable water for patient treatment is a must, but per the CDC, removal of inactivation of Dental Unit Waterline biofilms requires use of chemical germicides. *Using potable water alone does nothing to remove or reduce bacterial contamination in patient treatment water.* **This includes**:

Tap	**Distilled**	**Sterile**
Commercially Bottled	**Reverse Osmosis**	**Procedural water drawn from individual office filtration systems OR Commercial water filtrations systems in the building**

What about purging lines - isn't that effective?

- No. Purging lines does not completely dry them out.
- Bacteria needs just one drop of water to put out the welcome mat and start the process for biofilm development

Action levels: HuFriedyGroup recommendation

- *Results <500 CFU/mL*
    1. Keep doing what you are doing and continue to test per state requirements, manufacturer recommendations, or in the absence of manufacturer recommendations, follow the OSAP recommendation for quarterly testing following two consecutive months of passing results
- *Results between 500 – 2,000 CFU/mL*
    1. Review the IFU of your current waterline or shock treatment as well as your waterline test method to ensure that instructions have been followed
    2. If all protocols have been followed, shock lines and re-test immediately following treatment
        - Ensure that all water bearing lines are flushed for two minutes prior to sampling
        - Failure to reach all water-bearing lines with shocking liquid will result in dead legs (areas of stagnant water flow where pockets of bacteria can hide) that will continually re- contaminate the system
    3. If protocols have not been followed, re-educate office staff to ensure that proper protocols are now in place, shock and re-test immediately following treatment
        - Ensure that all water bearing lines are flushed for two minutes prior to sampling
        - Failure to reach all water-bearing lines with shocking liquid will result in dead legs (areas of stagnant water flow where pockets of bacteria can hide) that will continually re- contaminate the system
    4. When shocking lines:
        - Shock all lines connected to water on the unit - be sure to include infrequently or unused lines, scalers, side/assistant carts, cabinets.
        - Failure to reach all water-bearing lines with shocking liquid will result in dead legs (areas of stagnant water flow where pockets of bacteria can hide) that will continually re- contaminate the system
        - Look to cap off/remove unused lines
    5. Disconnection of unit water heaters is strongly recommended
    6. Revisit waterline treatment and testing product protocols and re-educate staff as needed
    7. Re-test immediately following treatment
        - Ensure that all water bearing lines are flushed for two minutes prior to sampling
- *Results >2,000 CFU/mL*
    1. Shock all lines connected to water on the unit.
    2. When shocking lines:
        - Shock all lines connected to water on the unit - be sure to include infrequently or unused lines, scalers, side/assistant carts, cabinets.
        - Failure to reach all water-bearing lines with shocking liquid will result in dead legs (areas of stagnant water flow where pockets of bacteria can hide) that will continually re- contaminate the system
        - Look to cap off/remove unused lines
    3. Disconnection of unit water heaters is strongly recommended
    4. Revisit waterline treatment and testing product protocols and re-educate staff as needed
    5. Re-test immediately following treatment
        - Ensure that all water bearing lines are flushed for two minutes prior to sampling
- If your office is consistently failing regardless of all remediation efforts, reach out to HuFriedyGroup water support, or your local service technician for a deeper look into potential causes
- Review the Aseptic Technique for Obtaining a Water Sample for Testing document

What is HPC (Heterotrophic Plate Count)?

- **H**eterotrophic **P**late **C**ount, formerly known as the standard plate count is a culture method for estimating the number of live heterotrophic bacteria in water. [Source: US Environmental Protection Agency. Fed. Regist. 54(124): 27486–27541.]

What does CFU/mL stand for?

- CFU/mL is a measurement reflecting the total **C**olony **F**orming **U**nits per Milliliter.

Why do some waterlines fail to meet the EPA potable water standard (<500 CFU/mL)?

- There are many variables when it comes to treating dental unit waterlines that could lead to a failure - including but not limited to:
    1. Staff compliance with protocols (such as incorrectly following manufacturer's instructions for use, lack of flushing waterlines)
    2. Characteristics of dental unit design (narrow, long, dark, moist tubing)
    3. Efficacy of dental waterline cleaning products
    4. Incoming water quality
    5. Areas of stagnant water flow/Dead legs (areas not reached by waterline or shock treatment where bacteria can hide)

What should an office do if their water test fails?

- When a dental unit exceeds 500 CFU/mL for an initial or periodic test, the unit should be treated according to manufacturer IFU, and re-tested immediately after treatment.
- Educational remediation is recommended: Review waterline treatment, testing, water sampling and shocking protocols method IFUs as well as water sampling techniques.
- Refer to Document: Top reasons why water tests fail and How to remediate

How long should a dental office keep their dental waterline testing records?

- The CDC Guidelines do not state a specific time period. Check with your state and local guidelines.

HuFriedyGroup Mail-in Dental Waterline Test Service Specific Questions

Why does it take 7 days to receive my lab testing results?

- According to the SM 9215C method, water samples must be incubated for 7 days. This incubation period allows for the best accuracy to represent the conditions within your dental waterline environment.

I purchased an 8-test kit and only used 7 tubes. Can I send that one tube in at another time?

- No. Each test kit contains return shipping and packaging for one shipment. It is best to purchase a kit that is in line with the number of chairs/locations tat will need to be tested.

I have 12 chairs that need to be tested and purchase a 4-test and an 8-test kit. Can I combine these test kits into one UPS Express Pak age to ship together?

- No. Multiple kits cannot be combined into the UPS Express Pak for return to the lab.

How do I get my report?

- You will receive an email notification when the lab receives your test. Please allow 7-10 days from the date of the email and then log into www.HuFriedyGroup.com/waterline-portal to retrieve your results

What if I have questions about my report?

- Call the Water Test Service Support Line: (888) 832-8324
- Email: watersupport@Hu-Friedy.com

Why should I use the Dental Waterline Test Service by Hu-Friedy vs an in-office test?

- Both are acceptable methods to test your dental waterlines.
    1. The in-office water test products on the market today:
        - Do not provide an exact count of colony forming units per milliliter. Instead, they provide a range that is left up to interpretation by the user - generally counting colonies on a paddle and/or comparing growth on a paddle to a chart provided by the test manufacturer
        - This method also relies on the user to log and track the water test results for their records on their own.
    2. The Dental Waterline Test Service by Hu-Friedy provides accurate, exact results from a third-party, ISO 17025 accredited laboratory backed by technical competency that meets the highest standards. Additionally, all water test results are stored in an exclusive online portal for easy record keeping.

What does it mean if I have test results that state Not Valid or Test Not Provided?

- These messages can appear because:
    1. There was not enough water in the sample
    2. A sample matching that vial was not included with your shipment
    3. The sample arrived out of acceptable temperature range (for example - the ice pack was not cold enough, the shipment was delayed in transit or shipped to the lab outside of the instructed shipping days of Monday – Thursday (for example, over a weekend or holiday)

Greenlight Compliance Center Questions

Where is my activation code located?

- The activation code is located on the side of the water test kit box

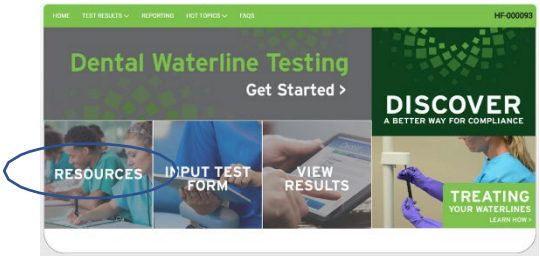
Where can I find help within the Greenlight portal while I am setting up/entering my test data?

- Click on Instructions For Use available on the main waterline testing page for detailed instructions
- If you cannot locate what you are looking for within the IFU, please reach out to Customer Care 1-800-Hu-Friedy, or email watersupport@hu-friedy.com

What waterline testing resources are available within the Greenlight Portal?

- The Water Test Service Landing page and the Water Test Service Main Menu provide options to select "Resources". The resource page provides:
    1. FAQs
    2. Failed waterline test remediation support
    3. Top reasons why waterlines fail
    4. Technique for obtaining a water sample for testing
    5. Waterline compliance brochure
    6. Water In. Water Out. Brochure
    7. Links to industry guidance documents

Dental Waterline Testing Home Page



Dental Waterline Testing Menu Page