

## Dental Unit Water Lines (DUWL) monitoring

The protocols and procedures involved in the prevention and control of infection in dentistry are directed to reduce the risk of cross-contamination occurring in the dental clinic, thereby producing a safe environment for both patients and staff.

Direct and direct contact and common vehicle spread, such as dental waterlines and plumbing are 2 of the 4 main routes by which infections can be transmitted.\*

Surface decontamination of the dental practice (environmental hygiene) is an essential tool in breaking the chain of infection.

Microfiber cloths have shown to be highly effective for environmental cleaning. However, few dental practices have an on-site 60-90°C washing machine to launder the cloth once it is potentially infectious after use.

Dental chair, dental handpiece unit, 3-in-1 syringe handle and hoses, lights, bracket table and cabinets will require surface decontamination

Difficult-to-clean components are switches, light handles, buttons on 3-in-one, ultrasonic handle, control buttons

### NOMAD SWABS KITS ARE IDEAL FOR PERIODIC CHECKING THAT

+ SURFACE TESTING PROCEDURES ARE EFFECTIVE

+ BACTERIA LEVELS IN DUWL ARE UNDER CONTROL AND ACCEPTABLE

Most Dental Units are not active 75% of the time during a week. Biofilms form rapidly and within a week can be shedding bacterial counts up to 10<sup>4</sup>-10<sup>6</sup> colony forming units (cfu) into the waterline. Bacteria in biofilms are more resistant to treatment with disinfectants, ultraviolet light and dehydration than corresponding non-attached cells.

There are multiple entry points for microbes into the Dental Unit Water Lines (DUWL). Microbial Colonization routes are through incoming water, suck-back of oral fluids via the dental handpieces and contamination of the independent water reservoir systems aseptic technique or cleaning failures.

No single control measure, such as flushing, fitting of anti-retraction valve, use of biocids, microbial filters, UV treatment is completely efficient and a combination is usually required.

Dental unit waterline management regulations and guidelines are designed to reduce and maintain environmental aerobic Gram-negative and oral bacteria at an acceptable < 200 cfu/ml level

Suggested Initial D.U. Monitoring Program, to be adjusted according to history		
Surfaces	Rationale	Test Regime
Unit control panel	These surfaces are frequently touched and can be difficult to clean. Test prior to sanitation for an indication of procedures asepsis Test after sanitation for an indication of the sanitation efficacy	<ul style="list-style-type: none"> <li><u>Standard</u>: One of the 3 surfaces, once a week</li> <li><u>Relaxed</u>: One of the 3 surfaces, once a month</li> <li><u>Tightened</u>: Each one daily, for a week</li> </ul>
Light handle		
Actuators on 3-in-one, ultrasonic handle		
Water Lines		
A - Unit inlet water (when possible) or purified water source used for reservoir bottle	<p>The program tracks the inlet end outlets water microbial load e.g. High Speed Drill, .. for verification of preventive measure efficacy (antiretraction valves, disinfectants, ..) as well as the aseptic technique for bottle filling.</p> <ul style="list-style-type: none"> <li>Test regularly, after flushing, under good conditions e.g. middle of the day, middle of the week, to obtain a reference microbial count.</li> <li>Use this reference value to compare with the results obtained after purging, in non-optimal conditions e.g. at the beginning of the week, after holidays, after maintenance, ..</li> </ul> <p>Counts should be same order of magnitude</p>	<ul style="list-style-type: none"> <li><u>Standard</u>: A : once per quarter B : once per month C : once per week</li> <li><u>Relaxed</u>: A : once per year B : once per quarter C : once per month</li> <li><u>Tightened</u>: A &amp; B: once per week C &amp; D &amp; D : 3 times per week</li> </ul>
B - Water from reservoir bottle		
C - 3-in-1 syringe water, High Speed Drill, Low Speed Drill		

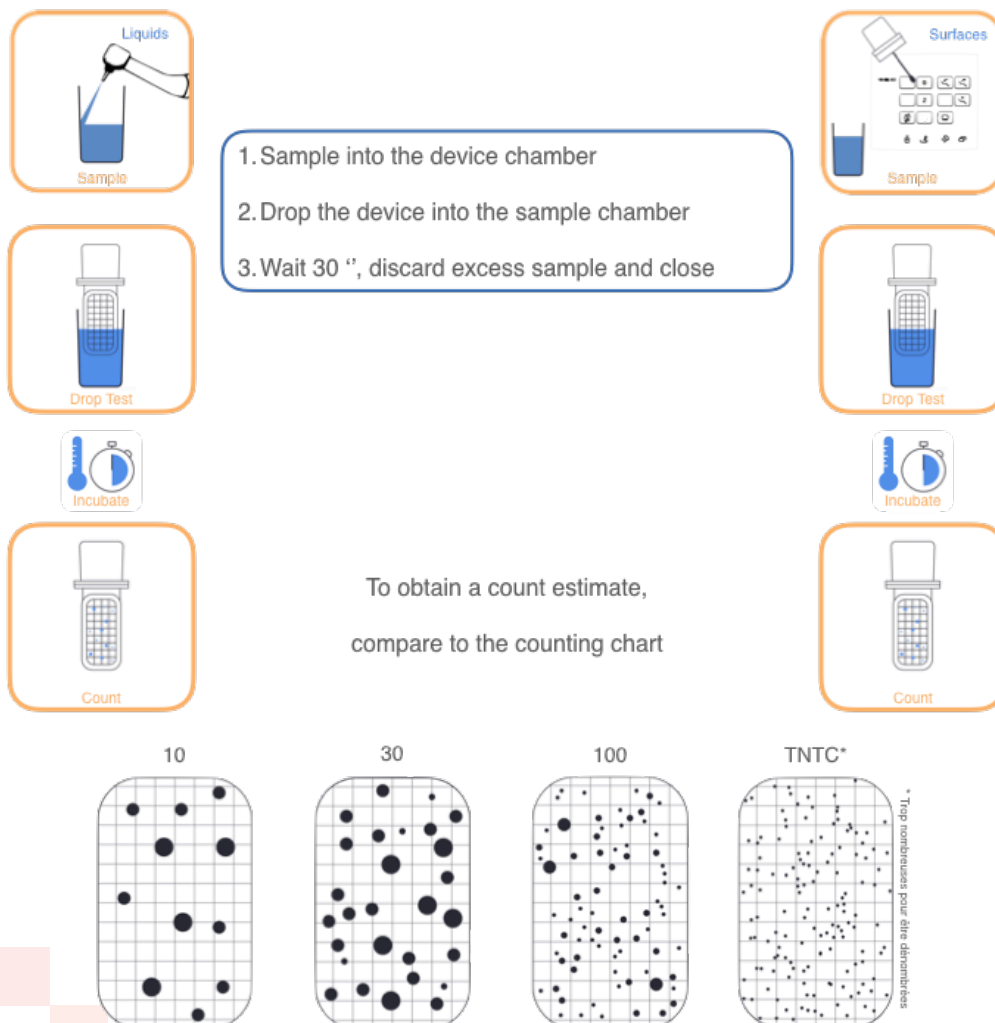
### SHOW YOUR STAFF AND YOURSELF THAT YOUR ENVIRONMENT IS SAFE

\* Title: Basic Guide to Infection Prevention and Control in Dentistry, 2nd Edition - Authors : Caroline L. Pankhurst, Wilson A. Coulter



SHOW AND TELL YOUR PATIENTS  
HOW MUCH YOU CARE ABOUT  
PROVIDING A SAFE  
ENVIRONMENT

THE NOMAD DEVICES ARE HANDY, SELF-CONTAINED, ARE STORED AT ROOM TEMPERATURE, HOLD IN A POCKET AND CAN BE SUCCESSFULLY DEPLOYED WITHOUT ANY SPECIFIC EQUIPMENT.



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