

Super-Oxidized Waterline Treatment Product (6/05)

Martin MV, Gallagher MA. An investigation of the efficacy of super-oxidised (Optident/Sterilox) water for the disinfection of dental unit water lines. Br Dent J 2005;198:353–354.

The authors conducted an investigation to determine the efficacy of super-oxidized water (Optident/Sterilox) in the decontamination of dental unit water lines (DUWL). Ten dental units were purged with concentrated super-oxidized water. After purging, 5% (v/v) super-oxidized water was added to the dental unit water bottles each working day. Samples for microbiological evaluation were taken after 0, 1, 2, 3, 4, 5, 6, 7 days, and each week for 13 weeks. After purging, the 5% (v/v) super-oxidized water was successful in reducing the microbial counts to zero, although in three of the units some bacteria were intermittently isolated in the first week of treatment. Super-oxidized water was successful in the removal of bacteria from dental unit water supplies. **Complete removal required the treatment with a purge phase of concentrated disinfectant and a maintenance phase of at least two weeks.**



DIS Comment: It is well documented that microorganisms colonize and multiply on the interior surfaces of DUWL resulting in the formation of biofilms. The levels of bacteria in water from untreated dental units often exceed 100,000 CFU/mL of water. Current dental-unit water systems cannot deliver water of optimal microbiologic quality without some form of intervention (e.g., use of a cleaner). The commercial product used in this study was Sterilox. In the United States, Sterilox is available from Ultradent Products. After adding the Sterilox Proprietary Electrolyte Solution to the Sterilox generator, a hypochlorous acid solution is produced in office, which is then added to the dental unit water bottle each time it is filled.