

WATER QUALITY EXPERT BEYOND CLEAN Jeffrey VERDAV

Jeffrey Paquet | President & CEO VERDA Water Quality Systems & mmic™ Beyond Clean Water Quality Expert[™]:

WHAT NEEDS TO BE MONITORED?"

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The new <u>"ANSI/AAMI ST108 Water Standard"</u> introduces a third type of water to be monitored. We are familiar with the two that have carried over from TIR₃₄--Utility and Critical Water. Utility Water is used for washing and rinsing before disinfection. Critical Water is used in a final rinse during high-level disinfection and is produced using an RO and/or DI process.

The new type of water that is covered by the new standard is Steam Condensate. Steam is what is used in steam sterilizers to sterilize instruments, and the residual condensate composition can be measured for quality parameters. All three types of water must meet specific requirements that are outlined in Table 2 of ST108. This is an extensive list of characteristics that must be confirmed for validation purposes.

Once your water quality management plan and treatment system has been validated, your department can then switch to monitoring a smaller set of characteristics. If you change the plumbing, add or remove equipment or change the treatment system, you must validate again to Table 7 before returning to routine monitoring.

There are 7 characteristics that are primary indicators of SPD water quality that are listed in Table 4. They are pH, total alkalinity, bacteria, endotoxin, total hardness, turbidity, and conductivity. These characteristics must be monitored routinely, as often as once a month, and, in the case of conductivity, daily. Critical Water has specific requirements for all these parameters. Utility Water does not have requirements for endotoxin or total organic carbon. There is an exception if you are using Utility Water as a final rinse, then you must also measure endotoxin levels.

Steam condensate does not require measurements for these same two qualities and has no requirement for measuring bacteria. The levels that are acceptable differ with the type of water you are evaluating. Steam condensate has the same required levels as Critical Water for the corresponding qualities, whereas Utility Water has different levels that are acceptable. One of the notable changes, that is new in the standard, is the requirement for monitoring endotoxin levels in Critical Water monthly. Another change is the requirement for routine monitoring of Utility Water, something that is often ignored by departments.

Have more questions for this expert? Contact Jeffrey at jpaquet@mmicmedical.com

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Jeffrey Paquet is the CEO of MMIC Medical Systems and its VERDA Water Quality Systems. Mr. Paquet is expert in Product Realization and an Commercialization that stems from his career that spans nearly 30 yeears in various industries including Healthcare, Automotive, and Aerospace. Jeffrey has a Bachelors of Science in Aerospace Engineering from UCLA with his career focused on design, product development, and manufacturing. His experience in the Aerospace industry has driven his belief that the technology and operational systems employed to monitor processes and provide the ability for rapid response to dynamic situations have direct and valuable application in the healthcare environment.

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