

B. Graczyk, Inc.
Universal™ / Surgical Eye Care Products

Standards for Water Purity

To improve the overall performance in cleaning surgical instruments, reduce contaminates, mineral deposits, dissolved solids (both organic and inorganic), residues and the staining of surgical instruments; evaluate the following water supplies in the cleaning of instruments and equipment.

Note: All tap water has Pseudomonas in it. The pH, Calcium and Magnesium in tap water can stain instruments and also inactivate disinfectants. Therefore, distilled or deionized water is recommended for use-dilution with all concentrated instrument cleaners and approved disinfectants.

Definitions:

**United States Pharmacopeia (USP)
Standards for Water Purity Numerical Interpretations**

- Distilled Water:** Water, which has been cleansed by passing through one or more evaporation-condensation cycles until it contains a very low amount of, dissolved solids (usually less than 5.0 ppm TDS). Distilled water still contains ionized minerals and salts.
- Deionized Water:** Water that has undergone the removal of all ionized minerals, contaminates and salts (both organic and inorganic) from a solution through a combination of evaporation (or vaporization), cooling and condensation. This process is also known as demineralization.
- Sterile Water:** "Sterile" water has been treated to inactivate, destroy, and / or remove pathogenic (disease-producing) bacteria, viruses, cysts, and other microorganisms for the purpose of making the water microbiologically safe.
- Sterile Deionized Water:** Sterile water that has also undergone the removal of all ionized minerals, contaminates and salts (both organic and inorganic) from a solution through a combination of evaporation (or vaporization), cooling and condensation.

Note: "Carriers;" Water supports the growth of certain gram-negative bacilli, including Serratia, Pseudomonas, and Alcaligenes, Flavobacterium genus. "Continually change your water supply after every use."

The following chart will give you some idea as to how effectively the cleaning supplies will work when using the different water supplies used to dilute the cleaning solutions.

Distilled Water	Deionized Water	Sterile Deionized Water
Good Cleaning Results	Better Cleaning Results	Best Cleaning Results
Distilled water although filtered still contains chemicals, contaminants, salts and ionized minerals.	Deionized water contains no chemicals, contaminants, salts or ionized minerals.	Sterile Water has been treated to inactivate, disease-producing bacteria for the purpose of making the water microbiologically safe.
Distilled water may leave surface deposits and residues that can stain the instruments during sterilization.	This improves the overall performance of the equipment and reduces the risk of staining instruments during sterilization.	Deionized water contains no chemicals, contaminants, salts or ionized minerals.
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