

Guidelines for Sterilization and Disinfecting of Stainless Steel Products

1. After using the instrument, rinse with running water.
2. Ultrasonic cleaning
 - a. Remove foreign substances (chemical, blood, tissues, etc.).
 - b. Adhesion of blood or protein can be effectively removed by using disinfectants.
 - c. Do not use tools such as cleanser, wire brush, steel wool and file to remove foreign substances.
 - d. Do not use home detergent as it promotes metal corrosion.
3. Rinse instruments with water and dry before sterilization
4. Sterilize
 - a. Avoid autoclaves that use chemical gas and solutions such as alcohol.
 - b. Do not use water with very high acidity
 - c. Use purified water; tap water may lead to corrosion.
5. Dry and Storage
 - a. Dry instruments before stocking
 - b. Products with joints (ie: scissors, pliers, haemostats) are recommended to be lubricated periodically with a silicone based lubricant. This will avoid rust (which can cross contaminate stainless steel instruments) and maintains smooth movement.
 - c. Do not stock instruments with visible corrosion
 - d. Do not stock instruments with any chemical as this can lead to corrosion.

While stainless steel has superior corrosion resistance, it will discolor and corrode when exposed to higher than recommended chemical concentrations or certain chemicals. Stainless steel should not be exposed to the following chemicals:

Sodium Hypochlorite (household bleach), Tartaric Acid (stain and tartar remover), Aluminum Chloride, Barium Chloride, Bichloride of Mercury, Calcium Chloride, Carbolic Acid, Chlorinated Lime, Citric Acid, Dakin's Solution, Ferrous Chloride, Lysol, Mercuric Chloride, Mercury Salts, Phenol, Potassium Permanganate, Potassium Thiocyanate or Stannous Chloride.

Stainless steel should NEVER be exposed to the following chemicals: Aqua Regia, Ferric Chloride, Sulfuric Acid or Iodine.

Do not mix Tungsten/Carbide instruments with stainless steel instruments during cleaning and sterilization. These instruments have higher carbon content than stainless steel instruments and can cause cross-contamination of the stainless steel instruments.

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Sterilization Method	Recommended Temperature	Expected Advantage
Steam Autoclave	121°C for 20 minutes	Time Efficient Good Penetration Sterilized water-based solution
Dry Heat	160°C for 60-120 minutes	No Corrosion Large Capacity/Cost Items dry after cycle
Chemical Vapour	132°C for 20 minutes	Time Efficient No Corrosion Items dry quickly after cycle

Problem Solving

Spotting: Insufficient rinsing after ultrasonic cleaning
 Insufficient drying after ultrasonic cleaning
 Not changing ultrasonic solution
 Sterilizer has not been cleaned

Rust: Corrosion from carbon cross-contamination

Pitting: Chemical reaction on instruments

- Confirm correct solution strength.

Tarnishing: Sterilizer temperature too high
 Chemical reaction on instruments

- Confirm correct solution strength