

CLEANING PROCESS

DECONTAMINATION

Most instrument damage occurs during processing and cleaning. The best way to avoid this is by handling them with great care.

It is best to remove soiling or other residues from your instruments as soon as possible, ideally immediately after use.

Instruments should be submerged in a solution of water and neutral pH (7) detergent until they can be cleaned. Please note that **temperatures below 40° C are needed** to avoid fixation of residual.

CLEANING

A. ULTRASONIC CLEANING

Place instruments into the ultrasonic cleaner.

Do not place dissimilar metals (stainless, copper, chrome plated, etc.) in the same cleaning cycle. Instruments should be processed in the cleaner for **5 to 10 minutes**.

After ultrasonic cleaning, rinse instruments with water to remove ultrasonic cleaning solution.

B. AUTOMATIC WASHER STERILIZERS

Follow manufacturer's recommendations. Be sure to lubricate instruments after last rinse cycle and before sterilization cycle.

C. MANUAL CLEANING

Ultrasonic cleaning is the most effective way to clean instruments, especially those with hinges, locks and moving parts. If ultrasonic cleaning is not available, follow these steps:

- I. Use stiff plastic cleaning brushes. Do not use steel wool or wire brushes.
- II. Use only neutral pH (7) detergents (low pH detergents, if not rinsed off properly, will cause breakdown of stainless protective surface and black staining; high pH detergents will cause surface deposit of brown stain, which will also interfere with smooth operation of the instrument).
- III. Brush delicate instruments carefully and, if possible, handle them separately from general instruments.
- IV. Make sure all instrument surfaces are visibly clean and free from stains.
- V. After scrubbing, rinse instruments thoroughly under running water.

IMPORTANT

To avoid damaging the delicate tips of micro instruments, process them in their own designated tray. Avoid overloading the tray, making sure that micro instruments do not come in contact with macro instruments.

New instruments should be processed and sterilized prior to their first use.

AUTOCCLAVING

Lubricate all instruments which have any metal-to-metal action. Surgical instrument lubricants should be used. Do not use WD-40 oil or other industrial lubricants.

Instruments may be autoclaved individually or in sets.

- A. INDIVIDUALLY Disposable paper or plastic pouches are ideal. Make sure you use a wide enough pouch (4" or wider).
- B. SETS Unlock all instruments and sterilize them in an open position. Place heavy instruments on bottom of set (when two layers are required).

Do not overload the autoclave chamber, as this may also hinder steam penetration. Place a towel on bottom of pan to absorb excess moisture during autoclaving.

HIGH PRECISION TWEEZERS

MANUFACTURED WITH SURGICAL STEEL FOR STERILIZATION

Make sure the towels contain no detergent residue and are neutral pH(7) when immersed in water. (Laundries frequently use inexpensive but high pH(9-13) detergents and do not properly rinse out or neutralize those detergents in the final wash/rinse cycle. Also, sometimes bleaches are added and are not neutralized).

IMPORTANT At the end of the autoclave cycle (before the drying cycle) unlock autoclave door and open it no more than a crack (about 3/4"). Then run dry cycle for the period recommended by the autoclave manufacturer. If the autoclave door is opened fully before the drying cycle, cold room air will rush into the chamber, causing condensation on the instruments. This will result in water stains on instruments and also cause wet packs.

STERILIZATION

The most common form of sterilization is steam autoclaving. We recommend autoclaving your instruments in saturated steam, **at a minimum of 132° - 134° C, for 3-18 minutes**. Stained instruments are an indication of problems having to do with cleaning/sterilization processes relating to one or more of the following:

- cleaning agents
- steam quality in sterilization
- water quality
- other agents

COLD STERILIZATION Most cold sterilization solutions require a 10-hour immersion to render instruments sterile, but this prolonged chemical action may be more detrimental to surgical instruments than the **20 minute** autoclave cycle. If the instruments need only to be disinfected (basically clean), cold sterilization is acceptable since disinfection will take place in only **10 minutes**. But to render the instruments sterile (with absolutely no living organism surviving), autoclaving is recommended. For instruments with tungsten carbide inserts (needle holders, scissors, tissue forceps), do not use solutions containing benzyl ammonium chloride which will destroy the tungsten carbide inserts.

DRYING

Manual drying can be performed using lint free towels and/or sterile compressed air.

STORAGE

Storage sites should be clean, dust-free and well ventilated. Environmental parameters such as temperature, humidity and radiation should be congruent with the standards for human habitation. Humidity must be below the dew point, at all times.

MAINTENANCE & CARE



TO PREVENT CORROSION AND RUST Do not soak in antibacterial liquid (i.e. Barbicide) as there is risk of the tweezers rusting, and always proceed to dry instruments after cleansing. We definitely advise against the use of barbicide for disinfection.

TO AVOID LOOSING TIPS PRECISION do not drop them, and when not in use always ensure that the tips are protected with the rubber protector provided when purchased. Also, during cleansing, make sure that fine instruments do not come in contact with macro instruments.

RECOMMENDED PRODUCTS

We suggest to use ISOPROPYL ALCOHOL as disinfecting agent and only NEUTRAL pH (7) DETERGENTS for cleaning.