

CARE, CLEANING AND HANDLING OF SURGICAL INSTRUMENTS

The following is a guide to the proper Care, Cleaning and Handling of Surgical Instruments to ensure that your instruments will perform properly.

Step in Pre-Cleaning, Cleaning, Rinsing and Lubrication prior to Sterilization



1. Decontamination
2. Manual Cleaning
3. Ultrasonic Cleaning
4. Rinsing
5. Lubrication
6. Sterilization
7. Trouble Shooting

1. Decontamination

- Begin Decontamination within 20 minutes following a procedure
- **Pre-Clean**...Spray or Soak instruments with a pH neutral enzymatic solution. This will help dissolve any blood/mucous/tissue from the instruments and make the cleaning process easier and more effective. Let the instruments soak from 10-20 minutes.
- **Never** allow blood to dry on the instruments.
- Rinse the instruments with Distilled/Filtered water. Never use Tap Water as it contains minerals that could leave a residue (stain) on the instrument surface.
- **The instruments are now ready for Cleaning**



2. Manual Cleaning

- Following Decontamination (Pre-Soak), if not using Ultrasonic, or if you process coated or insulated instruments, then Manual Cleaning is recommended.
- Keep washing to a minimum.
- Use pH neutral cleaning or enzymatic solutions.
- Nylon bristle brushes should be used to clean and scrub instrument surface, box/screw locks and serrations.
- For Orthopedic cases where bone residue is on the serrated areas of a file or rasp, then stainless Steel bristle brushes are recommended to clean those serrated areas only. It is not recommended to use Stainless Steel brushes to clean instrument surfaces as it will leave scratch marks on the instrument.
- Avoid using housekeeping, laundry, bleach and iodine based cleaning solutions as they will cause instrument staining and pitting.

4. Rinsing

- After Ultrasonic or Manual Cleaning, Always rinse instruments thoroughly with distilled/filtered water.
- Try to avoid rinsing with tap water because the high mineral content could lead to staining.
- Proper rinsing will ensure removal of any residue/cleaning solution left on the instruments.
- Never allow instruments to air dry, always hand dry with a towel.



3. Ultrasonic Cleaning

- Following Decontamination (Pre-Soak), Ultrasonic Cleaning is the preferred method to clean surgical instruments. This process is safe and effectively removes bio-burden.
- Use a pH neutral enzymatic cleaning solution.
- Instruments must be fully submerged with hinged instruments in an open position. Do not overload.
- Ensure that sharp/delicate instruments such as scissor blades do not touch other instruments so as to damage blades and scratch surfaces.
- Separate dissimilar metals such as stainless steel from silver plated. Combining dissimilar metals could cause electrolysis which can result in pitting in the steel.
- Change the ultrasonic solution daily.

5. Lubrication

- Following Rinsing, dry the instruments by hand with a towel.
- All hinged instruments require lubrication.
- Use a water soluble, steam permeable lubricant.
- Lubricant can be applied to the instruments by Spray or if processing many instruments at a time, the instruments can be submerged in a lubricant "milk" bath.
- It is Important that the Lubricant not be rinsed off the instrument before sterilization.
- Then proceed to prepare instruments for sterilization.

6. Sterilization

- Following lubrication, the instruments are prepared for Sterilization.
- While there are several sterilization methods, it is recommended that surgical instruments are sterilized using a steam autoclave.
- Instruments are placed in a perforated sterilization tray, then wrapped and labeled or placed in a closed sterilization container. Instruments can also be placed in a peel pouch. Ensure that hinged instruments are in an open position inside the pouch and the pouch is wide enough, labeled, then proceed to autoclave.
- Ensure dissimilar metals are separated.
- Follow the Autoclave manufacturers' instructions to sterilize.
- It is important that the autoclave be cleaned on a regular basis and that all cycles, especially the drying cycle is properly working.
- It is important to know that most cold sterilization solutions are damaging to surgical instruments, especially on tungsten carbide needle holder jaws and scissor blades.



pH Neutral Instrument Cleaning Detergent. Ultrasonic and manual cleaning detergent for surgical instruments.

Instrument Milk, Concentrate. An absolute necessity for lubricating and protecting expensive surgical instruments. Use after every cleaning to extend the life of all types of stainless steel surgical instruments. Contains a special additive which dissolves organic debris that may build up in the box lock.

Enzymatic Instrument Cleaning Detergent. This cleaner is excellent for removing stubborn organic debris that can stain your surgical instruments. It is a blend of four different enzymes to be the most effective cleaner available.



Medi-Sheen™ Polish Powder. Stain remover/polisher for manual applications. 8 oz.

Manual & Ultrasonic Instrument Detergent Powder. Specially formulated for surgical instruments. 1 Gallon.

FOAM-MAX Pump System. Conveniently guards against post-operative residual "bio-burden build up" on surgical instruments. 32 fl. oz.

Instrument Cleaning Intro Kit All of the essentials for instrument cleaning and care. Kit includes:

- **FOAM MAX Pump System**
- **pH Neutral Instrument Cleaning Detergent**
- **Instrument Milk, Concentrate**
- **Medi-Sheen Polish Power**
- **Nylon Instrument Cleaning Brush**



*****Receive a FREE 18 x 24 4 Step Guide to Cleaning Instruments to hang in your clinic with every kit*****

7. Troubleshooting

Corrosion or Stain?

To determine if an orange/brown discoloration is corrosion or stain, use a simple eraser test. Rub the eraser over the discoloration. If removed, then it was on the surface and it is a stain. If the eraser cannot remove the discoloration, then it is possible pitting, corrosion or rust.

Color of Stain	Cause
Orange	-High pH detergents -Not thoroughly rinsing and use of tap water
Dark Brown	-Low pH detergents, baked on blood or malfunctioning Autoclave
Multicolor	-Excessive heat, stain can be removed
Blue-BlackPitting	-Dissimilar metals are placed in Ultrasonic or Autoclave
Black	-Use of an ammonia solution
Light and Dark Spots	-Water droplets drying on instrument
Rust	-Baked on dried blood and/or soaking instrument in tap water

Enemies of Surgical Instruments

- **Never** allow blood to dry on instruments, this will lead to corrosion. The dried blood appears as an orange-brown stain. Therefore, it is important to begin decontamination (pre-soak and clean instruments within 20 minutes) following a procedure.
- **Never** soak instruments in water or saline. Tap water contains high amounts of minerals which can leave a deposit stain on the instrument surface. It is recommended to use distilled or filtered water in the cleaning process.
- **Never** autoclave (steam sterilize) with the box or screw locks in a closed position. When preparing for Sterilization, always set up hinged instruments in an open position
- **Never** use improper cleaning solutions and lubricants damaging to surgical instruments, especially on tungsten carbide needle holder jaws and scissor blades.