

## TIPS ON PROPER INSTRUMENT CLEANING

### Rinsing

- Immediately after instrument use thoroughly rinse off all blood, tissue and other fluids.
- Using filtered water to rinse and wash your instruments will provide the best care for your instruments. Unfiltered water/tap water can introduce minerals onto your instrument's surface which can then oxidize during sterilization.

### Cleaning, Ultrasonic

- If cleaning is not to be done immediately after use keep your instruments in a solution of water and neutral PH (7) detergent.
- Ultrasonic cleaning is one of the most effective cleaning methods. When using the ultrasonic make sure to clean for the full recommended cycle time.
- Clean all hinged instruments in a fully open position. This will allow all parts of the instrument to be thoroughly cleaned.
- All instruments must be fully submerged in the cleaning solution for them to become thoroughly cleaned.
- Do not mix sharp instruments (like scissors or chisels) with other instruments (such as non-stick composite instruments) in the same cleaning batch. The movement caused during cleaning can scratch the surface of the less sharp instruments.
- Keep separate dissimilar metals during cleaning (don't mix stainless steel with chrome plated instruments for example).
- Change your ultrasonic solution frequently. Dirty solution does not make a clean instrument.
- Rinse instruments thoroughly with filtered/distilled water to remove cleaning solution. If tap water is used make sure to completely dry the instrument so no minerals are left behind.

### Cleaning, Manual

- If cleaning is not to be done immediately after use keep your instruments in a solution of water and neutral PH (7) detergent.
- Using filtered water to rinse and wash your instruments will provide the best care for your instruments. Unfiltered water/tap water can introduce minerals onto your instrument's surface which can then oxidize during sterilization.
- Ultrasonic cleaning is one of the most effective cleaning methods. If you are going to manually clean please follow these steps.
- Use stiff plastic or nylon cleaning brushes. Do not use steel wool or wire brushes except for stainless steel brushes. These stainless steel brushes are for cleaning items like bone files and getting stains out of the knurled areas on handles.
- Use only neutral detergent PH (7). If not rinsed properly low PH detergents will cause the breakdown of the protective coating on stainless steel and black staining. High PH detergents will cause a brown staining and surface deposits that will not allow smooth operations of hinged instruments.
- Manual cleaning is recommended for very delicate instruments like micro surgical and Castroviejo patterns for longer life.
- After thoroughly scrubbing, rinse the instrument completely. Opening and closing the hinged instruments to make sure that all debris and cleaning solution are out of the hinge.

### Cleaning, Automatic Washers/Sterilizers

- Using filtered water to rinse and wash your instruments will provide the best care for your instruments. Unfiltered water/tap water can introduce minerals onto your instrument's surface which can then oxidize during sterilization.
- Follow the manufacturer's recommendations for proper use of this type of equipment.
- Make sure to lubricate your instruments after the last rinse cycle and before the sterilization cycle.

### Instrument Inspection

- After the instruments have been cleaned and fully dried is a perfect time to inspect them for signs of wear, for proper function and/or breakage.
- Check scissors to see that they work smoothly and that they are not loose when in the closed position. Test scissors for sharpness by cutting some thin gauze. A good scissor should be sharp from the tip of the instrument to three quarters of the length of the blade. They should cut smoothly and not hang up in the gauze.
- Tissue and extraction forceps should have properly aligned jaws and operate smoothly.
- Needle holders and hemostats should have jaws that close securely. When they are closed look to see if light gets between the jaws, also checked for wear on the jaw surface.
- Sharp edged instruments should have smooth un-chipped blades and working surfaces. Elevators and similar instruments should have unbent shafts.
- If any of these conditions show themselves take them out of circulation for sharpening, repair or replacement.

## After Cleaning and Inspection

- If instruments are not to be reused, store them in a clean and dry place.
- If instruments are to be reused or autoclaved follow these steps.
- Lubricate all instruments that have any hinges (scissors, forceps etc.) Use a surgical lubricant like instrument milk. DO NOT use WD-40 type oil or other industrial lubricants.
- When you are ready to autoclave place your instruments in either disposable paper or plastic sterilization pouches or sterilization cassettes. Make sure that all hinged instruments are autoclaved in an open (not locked) position. Sterilizing in a locked position can cause two problems. One, steam may not reach into the hinged area to sterilize the instrument properly and two the hinge can develop cracks due to heat expansion.
- When autoclaving sets of instruments together place the heaviest instruments on the bottom of the pack to avoid damage to more delicate instruments.
- Do not overload your autoclave. Overloaded autoclaves can have places that the steam cannot penetrate and thus leaving areas unsterilized.
- Some practices like to place a towel in the bottom of the autoclave to absorb extra moisture during sterilization. If you use a towel make sure the detergent used to wash the towel is a neutral PH (7). This can be a bit of a problem since many laundries use high PH (9-13) detergents and they do not properly rinse out the detergent in the final wash/rinse cycle. Also many times the bleach is not neutralized.
- At the end of the autoclave cycle-before the drying cycle-unlock the autoclave door and just crack it open slightly (around 3/4 of an inch). Then run the drying cycle for the time span recommended by the autoclave manufacturer. If the autoclave door is fully open during the drying cycle the cool air hitting the hot chamber will cause condensation on the instruments. This will result in water stains and wet packs.