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INSTRUMENT CLEANING & STERILIZING

In all reprocessing steps it is the responsibility of the user to triage the appropriate PPE for optimal safety of handling contaminated sharps.

AT POINT OF USE

Keep instruments clean at point of use to ensure gross debris does not adhere to the instrument(s). During use, handle instruments with care removing cement, bonding agent, blood, calculus, plaque, tissue, bodily fluids, etc. from the instrument(s).

PRE-CLEANING

If instruments cannot be reprocessed for a period of time, they must be moistened to ensure gross debris does not dry on the instrument(s). Pre-cleaning with an enzymatic solution in the form of liquid immersion, spray, gel, or foam is acceptable. Liquid detergent mixed with water will not have the same effect as an enzymatic pre-cleaning agent and is therefore not recommended. When the instruments are ready to be fully cleaned, a rinsing step must be performed to remove the pre-clean enzyme agent. Using filtered water to rinse and wash instruments provides the best care for the instruments. Be aware if unfiltered water/tap water is utilized, it can introduce minerals onto the instrument's surface which can then oxidize during sterilization. Rinse fully with copious amounts of water.

CLEANING

Manual

Manual cleaning must be performed as follows:

- Place warm water in a basin inside the cleaning sink of the reprocessing area (do not clean instruments in a designated hand hygiene sink).
- Using a designated cleaning brush, scrub the instruments in an action away from the user. Do not scrub back and forth and do not scrub towards the user.
- The cleaning brush can be of plastic or nylon bristles. Wool or wire brushes are not recommended. Stainless steel bristles can be utilized.
- Account for the cleaning brush within the offices reprocessing policies. The brush must be disposed after a period of short usage, or the brush must be sterilized if fabricated of heat tolerant materials.
- Do not scrub under running water.
- Rinse the instruments with copious amounts of water removing all cleaning agents/detergents, using filtered water to rinse and wash the instruments will provide

the best care for the instruments. Unfiltered water/tap water can introduce minerals onto the instrument's surface which can then oxidize during sterilization.
- 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 create black staining.
- High pH detergents will cause brown staining and surface deposits that will hinder the smooth operations of hinged instruments.
- For hinged instruments, after cleaning thoroughly rinse the instrument. Open and close the hinged instruments several times, ensuring all debris and cleaning solution are fully removed from the hinge.

Ultrasonic

- Confirm the ultrasonics' cavitation forces are in working order with a soil indicator quality assurance test.
- De-gas the unit.
- Disassemble any instrument with parts that can be removed, threaded, snapped, etc.
- Open all hinged instruments.
- Do not bundle instruments with elastics or such devices.
- All instruments must be fully submerged in the cleaning enzymatic solution 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).
- When using the ultrasonic clean for the full recommended cycle time as determined by the MIFU of the ultrasonic unit.
- Do not overload the unit.
- Change the ultrasonic solution frequently.
- 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.
- For hinged instruments, after cleaning thoroughly rinse the instrument. Open and close the hinged instruments several times, ensuring all debris and cleaning solution are fully removed from the hinge. Lubricate if necessary.
- Examine instruments for residual debris prior to fully drying and packaging for sterilization.

Automatic Washer/Disinfector

- Confirm the washer/disinfector is in proper working order with a soil indicator quality assurance test.
- Disassemble any instrument with parts that can be removed, threaded, snapped, etc. and secure any loose parts in a cassette, basket, etc.
- Open all hinged instruments.
- Post washer cycle open and close the hinged instruments several times, ensuring full function of the hinge, lubricate as necessary.
- Do not bundle instruments with elastics or such devices.
- When using the washer make sure to clean for the full recommended cycle time as determined by the MIFU of the unit.

- Examine instruments for residual debris prior to packaging for sterilization.
- Using filtered water to rinse and wash the instruments will provide the best care for the instruments. Unfiltered water/tap water can introduce minerals onto the instrument's surface which can then oxidize during sterilization.

INSTRUMENT INSPECTION

- After the instruments have been cleaned and fully dried inspect for signs of wear, for proper function and/or breakage.
- Check scissors to confirm they work smoothly and are not loose when in the closed position. Test scissors for sharpness by cutting a thin piece of gauze. A good scissor should be sharp from the tip of the instrument to three quarters of the length of the blade. The blade should cut smoothly and not hang up in the piece of gauze.
- Tissue and extraction forceps should have properly aligned jaws and operate smoothly.
- Needle holders and haemostats should have jaws that close securely.
- Sharp edged instruments should have smooth un-chipped blades and working surfaces and elevators and similar instruments should have unbent shafts.
- Remove from circulation any instrument/device that requires sharpening, repair or replacement.
- 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. Follow the MIFU of the handpieces for lubrication (or not if non-lubricating).
- Discard damaged and/or broken instruments in the sharp's container.

PACKAGING & STERILIZING

- After Cleaning and inspection select an appropriate size package for either cassettes and/or loose instruments.
- Keep the parts unassembled.
- Keep hinged instruments in open position.
- Follow the sterilizers MIFU for quality assurance testing, loading orientation and loading capacity.
- Sterilize in steam autoclave:

    Steam Flush Pressure Pulse
    - Pouches: 270°F (132°C) 27.1 psi (186 kPa) Sterilize: 5 min. Dry: 30 min.
    - Packs: 250°F (121°C) 15 psi (104 kPa) Sterilize: 30 min. Dry: 30 min.
    - Unwrapped (only recommended in case of emergency): 270°F (132°C) 27.1 psi (186 kPa) Sterilize: 3 min. Dry: 30 min.

    Pre-Vacuum:
    - Pouches/Wrapped: 270°F (132°C) 27.1 psi (186 kPa) Sterilize: 4 min. Dry: 30 min.
    - Unwrapped (only recommended in case of emergency): 270°F (132°C) 27.1 psi (186 kPa) Sterilize: 3 min. Dry: 30 min.

*Note sterilization may reach up to 272.3 – 274.0 °F (133.5-134.44 °C). Do not sterilize over 350 °F (177 °C).

*Note the drying time may vary by sterilizer type depending on 'smart' technology