Technical Bulletin

AMSCO Steam Sterilization Cleaning Procedure
Introduction

Due to their long useful life, it is not uncommon for facilities to own several different models of steam sterilizers. Over time, chamber materials and chemical cleaners have changed, and so have the recommendations for cleaning found in operator manuals. Therefore, cleaning instructions may differ from manual to manual. In the interest of providing a uniform, up-to-date cleaning methodology suitable for all steam sterilizers, the following procedure may be used in place of methods described in operator manuals.

General Guidelines:
1. Read this entire procedure before cleaning.
2. This bulletin contains procedures for daily drain strainer cleaning, drain cleaning and periodic chamber cleaning.
3. Perform all steps in each procedure in the order in which they are described.

Materials Required:
1. STERIS Liqui-Jet® 2 Instrument Detergent, part #1037-08, 1 gal. (4 per case); substitutions are not recommended except as noted in the drain cleaning procedure.
2. STERIS Pump-up Acid-Rated Sprayers, part #EQ1401, quantity 2, one for the Liqui-Jet 2 detergent and one for the rinse water (tap water).
3. Soft lint-free cloths and/or a soft brush suitable for attaching to a mop extension handle.
4. Mop extension handle with a clamping mechanism on the end [available through hospital suppliers or hardware stores].
5. Personal protective equipment, including heat resistance gloves, heavy rubber gloves, protective gown and face shield or safety goggles.

Safety Considerations
1. Before performing the steps in this guideline be sure to follow facility procedures to ensure steam, electricity, air and water are off and cannot be inadvertently turned on while the equipment is being cleaned.
2. Allow sterilizer to cool completely before cleaning. This takes approximately 4-5 hours.
3. Use appropriate personal protective equipment, including gloves, protective gown and safety goggles or face shield to prevent contact with the chemical solutions.
4. When spraying the diluted Liqui-Jet 2 detergent into the sterilizer, use a coarse sprayer that does not produce a fine mist.
5. Use only acid-rated pressure sprayers to avoid chemical damage to sprayer parts and to prevent sprayer malfunction.
6. Prior to using Liqui-Jet 2 detergent, review all warnings and cautions on the product label.

DRAIN STRAINER

Drain Strainer Cleaning Frequency
The chamber drain strainer should be cleaned at least once a day, preferably in the morning before running the first cycle and when the strainer is clogged.

Daily Drain Strainer Cleaning Procedure
1. Wear heat protective gloves prior to cleaning the chamber drain strainer, unless the sterilizer is cool.
2. Remove strainer following instructions provided in the operator manual.
3. Remove obvious debris from strainer and use a brush, wire, or similar tool to remove any remaining accumulation.
4. Once strainer has been cleared, position strainer upside down and under running water.
5. Replace strainer in chamber drain.

DRAIN

Drain Cleaning Frequency:
1. If liquids such as microbiology media are processed in the sterilizer on a regular basis, chamber drain should be cleaned once a week.
2. Drain should also be cleaned following chamber cleaning to remove any debris resulting from the cleaning process.
3. Drain should be cleaned whenever it becomes clogged.
Drain Cleaning Procedure

1. Turn OFF sterilizer power, water, and steam supply, following manufacturer instructions in the sterilizer operator manual. Completely open sterilizer door and allow sterilizer to cool (approximately 4-5 hours).
2. Remove chamber drain strainer and clean using the procedure above if necessary.
3. To clean chamber drain, measure 1-2 ounces (60 mL) of full-strength Liqui-Jet 2 into a metal medicine cup and pour solution slowly down sterilizer drain.

**NOTE:** If Liqui-Jet 2 detergent is unavailable, a hot solution of 1 tablespoon (10.8g) of trisodium phosphate to 1 pint (500 ml) of hot water may be used.
4. After five minutes, pour approximately 1 pint (500 mL) of hot tap water down the drain to rinse out Liqui-Jet 2 detergent.

**NOTE:** The tap water may puddle on the bottom of the chamber. This is normal and should drain completely after a few minutes. If the water does not drain completely, it may be necessary to initiate a cycle and immediately abort it. The cycle/abort action opens the sterilizer drain, draining the water from the chamber.
5. Rinse bottom of chamber with a small amount of water to prevent detergent residue from baking onto the surface.
6. Return drain strainer to the drain.

**CHAMBER**

**Chamber Cleaning Frequency**

Due to differences in water quality, steam quality, frequency of use and boiler additives, no specific frequency interval is recommended for chamber cleaning. Operators must determine the appropriate cleaning interval based on the local water conditions and chamber appearance.

In general, chamber cleaning should be performed under the following circumstances:
1. When spills or other soiling have occurred
2. Periodically to maintain sterilizer cleanliness and appearance
3. When processing materials that may be detrimental to the chamber

**Chamber Cleaning Procedure:**

1. Turn OFF sterilizer power, water, and steam supply, following manufacturer instructions in the sterilizer operator manual. Completely open sterilizer door and allow sterilizer to cool (approximately 4-5 hours).
2. If applicable, remove chamber rack and shelves according to instructions found in the operator manual.
3. Before cleaning, put on heavy rubber gloves, a protective gown and a face shield or safety goggles.
4. STERIS Liqui-Jet 2 detergent is an approved cleaning solution that is specifically formulated to remove many common chamber deposits. Prepare a solution of Liqui-Jet 2 detergent in one of the Pump-up Acid-Rated Sprayer containers by diluting per the label instructions on the Liqui-Jet 2 Instrument Detergent container. Clearly label Pump-up Acid-Rated Sprayer container with contents to prevent container mix-ups. Using a coarse spray pattern to avoid creating fine mist, evenly apply solution to inside surfaces of the sterilizer chamber, including inside surface of the door. Use a dampened lint-free cloth, or soft brush attached to an extension handle to clean the chamber surface.
5. Fill second pump-up spray bottle with tepid tap water and label bottle with contents to prevent container mix-ups. Thoroughly flush sterilizer chamber surfaces and inside of sterilizer door at least two times with tap water, taking care to eliminate all detergent residue. If not removed, detergent residue may become visible upon heating of the chamber and may cause damage to chamber surface. Refill Pump-up Acid-Rated Sprayer container with more tap water if necessary to ensure proper rinsing. If rinse water accumulates in bottom of sterilizer and does not drain after a few minutes, a cycle may be initiated and immediately aborted. This fully opens the sterilizer drain and allows water to go down the drain.
6. Diluted Liqui-Jet 2 detergent may also be used to clean the rack and shelves or loading car and transfer carriage, if applicable. Place rack and shelves in a large sink. Using the sprayer, apply Liqui-jet 2 detergent to the surface and with a dampened cloth remove any soil. Rinse thoroughly using tap water and dry with a soft, lint-free cloth.
7. Drain strainer should also be cleaned following chamber cleaning to remove any debris resulting from the cleaning process. Follow same procedure as described above for daily drain strainer cleaning.
8. Drain should also be cleaned following chamber cleaning to remove any debris resulting from the cleaning process. Follow same procedure as described above for drain cleaning.
9. Replace sterilizer rack and shelves, if applicable, using the reverse of the removal procedure.
10. Diluted Liqui-Jet 2 detergent should not be stored for any length of time. After cleaning, dispose of any unused Liqui-Jet 2 detergent by flushing down the drain with plenty of water. Thoroughly rinse spray container used for Liqui-Jet 2 detergent. Empty the water from spray container used for rinsing and store containers in a manner that promotes drying until needed for further use.

**Other Available Services:**

1. If chamber deposits remain after rinsing, water mineral scale may be the cause. To help resolve this problem, STERIS Diagnostic Solutions Service (DSS) is available. This is a laboratory based service in which STERIS analyzes instruments, water, wraps and scale deposits to help determine the causes for spotting, staining and corrosion of surgical instruments and processing equipment. STERIS provides recommendations on the products and procedures needed to improve cleaning results while protecting the integrity of the instrument and equipment materials.

2. Professional cleaning on an annual basis, or as required for local conditions is suggested. STERIS Service offers an automated chamber cleaning service that utilizes both mechanical and chemical means to remove stubborn deposits. Check the STERIS website at www.steris.com for details on these services or contact your STERIS Account Manager for more information.