

Example of CartWashCheck™ Policy for Daily Monitoring of the Medical Cart Washer

NOTE: This document is an example of a policy that may be instituted in a healthcare facility for the daily monitoring of the medical cart washer. The actual policy in a facility must be based on variables, logistics, and risk-assessments that are specific to your facility.

Subject: Daily monitoring of the Medical Cart Washer

Department: Central Service

Approved By: [Name of Dept Supervisor/Manager]

Effective: [Enter date when this will take effect]

Revised: June 2021

Purpose: To ensure a properly functioning medical cart washer

Policy: Daily monitoring of Medical Cart Washer

Rationale: The CartWashCheck™ is the first test designed to challenge the mechanical efficiency of the medical cart washer.

Since there are various models (old and new) of cart washers, cycle selections may be different. Older models can be limited, and newer models may have the option to run surgical instruments. If your cart washer has an instrument cycle (used to process surgical instruments), you will need to test that specific cycle with a cleaning verification test—Test Object Surgical Instrument (TOSI®). Each department staff must be able to use and select the proper cycle/correct temperature, based on the various cart washer cycles, for items to be processed. The pass/fail [test]concerning temperature is also different and dependent among the various cycles. The range of temperatures is usually between 120 °F – 192 °F depending on the cycle selected.

Testing the temperature of any type of cart washer is easy using the CartWashCheck™. These convenient test strips can be quickly and easily adhered to any surface with the peel off adhesive. Place the test strip on surfaces farthest from the medical cart washer's jets or in area where you suspect coverage is most difficult. The special hydrochromic ink will change color only if moistened by water (black to white). This demonstrates water is reaching the area tested and indicates proper mechanical action by the medical cart washer. Furthermore, to ensure your washer is achieving your target temperature setting, the CartWashCheck™ also includes an irreversible thermometer. The thermochromatic (heat sensitive) indicator above the hydrophilic ink will register temperature levels of 120 °F, 150 °F, and 180 °F, showing the temperature reached during the cycle.

Standards and Professional Society Recommendations:

ANSI/AAM ST79:2017, Comprehensive guide to steam sterilization and sterility assurance in health care facilities ¹

According to ANSI/AAMI ST79, every medical facility that has a medical automatic cart washer (MACW) must put in place a cleaning verification process, which defines a cleaning process and its critical features. Each step of the process should be fully verifiable through personnel training and observation, ensuring it can be completely and accurately performed without variation by all individuals. The medical facility should also provide process controls along with verification methodologies that ensure adequate, consistent cleaning levels.

There are two principles are involved in verifying a cleaning process:

1. Establishing, clarifying, and documenting a standard cleaning process based on device manufacturer's written IFU(s) and published recommended practices or guidelines and articles
2. Measuring and evaluating the ability of the cart washer to perform to the original manufacture's specifications of cleaning; thus, verifying it meets their parameters of temperature and mechanical cleaning action ability to reach the area of the medical devices being cleaned.

Using verification tests is part of continuous quality improvement to demonstrate compliance with cleaning benchmarks. Once these benchmarks have been defined is supported by all standards and guidelines.

The standards support daily testing of mechanical cleaning equipment performance (if it is used) and all results should be recorded.

The Joint Commission standard E.C.6.20 states that all medical equipment is maintained, tested, and inspected.

The cart washer is considered a piece of medical equipment by the FDA. Medical cart washers need to be properly functioning to provide the best patient care possible and to help reduce the incidence of hospital-acquired infections.

Cleaning, not sterilization (or disinfection), is the first and foremost step in any instrument processing protocol. Without first subjecting the instrument to a thorough, validated, and standardized (ideally automated) cleaning process, the likelihood that any disinfection or sterilization process will be effective is significantly reduced. Thus, it must be verified.

Cart washers are important tools in the overall efforts to reduce cross contamination. Often, they are used to clean not just surgical case carts, but also basins, IV poles, instrument containers, wheelchairs and other supply and patient transport equipment. ²

The use of the CartWashCheck™ is an excellent tool to use for training of new employees as well as establishing a Quality Improvement Program (QIP). This tool can be used for checking whether the medical cart washer is working properly and if the staff is loading items into the washer correctly to be cleaned.

The TOSI® should be used when testing the instrument cycle and the CartWashCheck should be used for other cycles, like case carts (non-instrument cycle).⁴

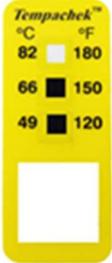
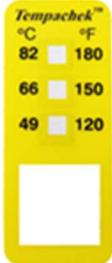
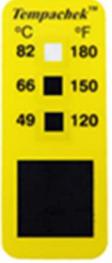
Procedure daily testing of the non-instrument cycle:

1. The CartWashCheck™ is a test designed to challenge the mechanical efficiency of the medical cart washer and verify the temperature for low/medium disinfection. These convenient test strips can be quickly and easily adhered to any surface with the peel off adhesive that leaves no residue
Note: an inactive strip is black/dark blue in color before being exposed to any mechanical cart washing process.
2. The suggested time frame frequency of testing is at least weekly and after any maintenance on the equipment
3. Peel the backing off the CartWashCheck™ strip, and remove the protective layer to expose the adhesive (sticky side) of the CartWashCheck™ strip
4. Place at least two CartWashCheck™ test strips on the surface being tested:
 - a. One farthest from the medical cart washer jets or in areas where you suspect coverage is most difficult
 - b. Other strip placed in a location that has maximum exposure, like the top of the case cart
5. Follow the manufacturer's instructions for proper loading of the item tested (cleaned) into the medical cart washer.
6. Operate the unit by selecting the proper cycle for the item being cleaned and the tests (example cart program). Follow manufacturer's instructions.
7. After the cycle, follow manufacturer's instructions for proper unloading of the item from the medical cart washer. (CAUTION: Surface may be hot).
8. Read the CartWashCheck™ test strip and document all results.
 - a. Look for color change from black/dark blue to white, then read the temperature on the irreversible temperature gauge
 - b. The thermochromatic (heat sensitive) indicator above the hydrophilic ink will register temperature levels of 120°F, 150°F, and 180°F, documenting the temperature reached during the cycle
9. The hydrochromic ink will change color only if moistened by water (from black/dark blue to white). This demonstrates that water is reaching the area tested and can indicate proper mechanical action by the water.
10. The CartWashCheck™ reports the temperature level reached during the cycle.
11. A properly exposed CartWashCheck™ will turn white and record a temperature of at least 120°F (black bar line).
12. A white only color test strip shows only exposure to water in that area tested and no exposure to temperatures above 120°F.

13. After reading and documenting the results you can peel off the CartWashCheck™ test strip and dispose of in your trash. There is no hazardous material on the CartWashCheck™ test strip
14. If proper temperature or proper water exposure are not achieved, please bring results to the attention of the proper person in the department for action

Examples of CartWashCheck™ Interpretation of results:

Procedure daily testing of the instrument cycle:

			
Before or complete fail	Pass (if target 150°F)	Water pass, temperature fail	Water fail, temperature pass

1. The testing of the cart washer instrument cycle is done on an empty cycle
2. Secure one (1) TOSI® per level in the center of an empty tray
3. Place this tray with TOSI® on each shelf
4. Process using your surgical instrument wash cycle
5. Examine the TOSI® for visual cleanliness. Compare the test to the interpretation chart, WT104, scale (0-5)⁵
6. Record results and report them to the proper management staff according to your facility's policy

Maintenance on Equipment:

- Staff should perform all maintenance outlined in the manufacture's manual, such as cleaning screens and checking water jets on the schedule provided by the manufacture to help ensure a properly performing medical cart washer
- Staff should record all observations (i.e.: conditions of the inside of the chamber [biofilm build up, other observations], etc.)
- After any maintenance is performed on the medical cart washer, run a CartWashCheck™ test to ensure equipment is at the minimum temperature of 120 °F and water is making it to difficult to reach areas. If the cart washer has an instrument cycle be sure to test with the TOSI® and passes
- Follow the daily test process
- Have the maintenance person wait until the test results are complete before leaving

Responsibility:

Central Service personnel handle proper use, result interpretation, and documentation of the CartWashCheck™ test strip and/or use of the TOSI® on the various cycles of the medical cart washer.

Note: Transportation and Storage Conditions: Keep below 100 °F and avoid exposure to moisture.

Medical Automatic Cart Washer (MACW) Quality Improvement Program

Manufacture: _____ Model/Make: _____

Daily Inspection should be done at least once a day; preferably each shift.

Note: When entering the MACW, make sure power is off and all safety features are activated.

1. Look at various debris screen (different models have different locations and may have more than one) are they clear of debris: Yes No
2. If the MACW has water jets are they clean of debris (clogged): Yes No
3. If MACW has moving spray arms are they present and turning: Yes No N/A
4. Is their staining / scaling on the inside chamber walls: Yes No
5. Is their sufficient level of cleaning solution in container: Yes No
6. Are all the door seal / gaskets intact: Yes No

Comments / Action taken:

Daily Testing using the CartWashCheck™ /TOSI® and Inspection: Should be done same time each day.

Cycle selection to test: _____

Minimum temperature checked by independent means and temperature is recorded.

A Mechanical function test of spray jets and arms has been performed: Pass Fail
If the Cart Washer has an instrument cycle, it must be tested with a TOSI® on each level and the results recorded.

Comments/Action taken:

Note: Work with the manufacture of the MACW in your department to make a detail list of activities that need to be monitored and performed on a: daily, weekly, monthly, quarterly and yearly time frame by the SPD staff. Keep this QIP log in a record book for review.

CartWashCheck™ Test Log

Date Tested	Testers Initials	Item Tested	Cycle Selection	Verification test	Temperature Result	Water Exposure Result	Other
1/1/11	SMK	Cart Cycle	Case Cart	Cart wash Check	120 °F	White	Call Repair Company to test temperature
1/3/11	SMK	Cart Cycle	Case Cart	Cart Wash Check	180°F	White	No action needed
6/3/18	SMK	Instrument Rack	Instrument Cycle	TOSI®	None taken	None taken	3 levels tested no action needed

Make/Model of: _____

The Medical Cart Washer # _____

Observations: _____

Record all results: The special hydrophilic ink will change color (from black/dark blue to white) only if moistened by water. This demonstrates that water is reaching the area tested and indicates proper mechanical action by the washer. White Means Water Reached the Test. The square needs to be completely white no black/dark blue color left on the square.

References:

1. AAMI. (2017). *ANSI/AAMI ST79:2017 Comprehensive guide to steam sterilization and sterility assurance in health care facilities*. Association for the Medical Advancement of Medical Instrumentation (AAMI).
2. CartWasherCheck™. (2009, March). Managing Infection Control; Kovach, Understanding Your Cart Washer.
<http://www.healthmark.info/CleaningVerification/CartWashCheck/CartWashCheckIFU.pdf>
3. CartWasherCheck™ Instructions for use.
<http://www.healthmark.info/CleaningVerification/CartWashCheck/CartWashCheckIFU.pdf>
4. TOSI Instructions for use.
<http://www.healthmark.info/CleaningVerification/TOSI/TOSI-IFU.pdf>
5. TOSI Troubleshooting Guide:
http://www.healthmark.info/CleaningVerification/TOSI/TOSI_Troubleshooting_2021-06.pdf