SUBJECT: Using the Humipak™ to keep instruments/medical devices moist after they have been used

DEPARTMENT: Sterile Processing/Medical Device Reprocessing/Central Processing

APPROVED BY:

EFFECTIVE: 9/2017

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Purpose: To provide guidance in using the Humipak™ product in keeping surgical instruments/medical devices in a moist environment after their intended use until they can begin the cleaning process on them.

POLICY: To keep instruments moist until they are properly cleaned

RATIONALE: Dried blood represents a significant challenge to the cleaning of patient used instruments as well as being highly corrosive. Lumened instruments are particularly troublesome due to the potential of biofilm formation. Thus, it is recommended that patient used instruments be cleaned immediately following a procedure. However, this is not always possible. In these cases, the standards recommend they be kept moist until the cleaning process can begin.

Although it would be ideal practice for instruments to be reprocessed immediately after use to prevent the drying of contamination to their surfaces, this is not practical sometimes within a busy surgical environment. Studies have indicated that drying times longer than 15 minutes significantly reduce the efficacy of subsequent treatments to remove proteins, including prions. Keeping surgical instruments in a moist environment like humidity retention bags directly after use greatly reduces protein/amyloid attachment and improves decontamination efficacy. [1]

Any department that reprocesses surgical instruments must reduce the Decontamination Holding Time (DHT). This (DHT) is the time from when the instrument is last used to when it is received in decontamination and the cleaning process begins. This can vary in length of time from just a few minutes to hours or even days.

"…to prevent the formation of biofilm, definitive cleaning should occur as soon as possible. Prior to transport, instruments should be prepared in such a way as to prevent organic soils from drying. This can be accomplished by placing a towel moistened with water (not saline) over the instrument, placing it inside a package designed to maintain humid conditions …"[2]

AORN also states the following regarding endoscope transportation for reprocessing:

“IV.b. Endoscopes and accessories should be kept wet or damp but not submerged in liquid during transport: High Evidence] Keeping the endoscope and accessories wet helps dilute, soften, and ease removal of organic soils. Allowing organic material to dry on the surface and in the channels of the endoscope makes the cleaning process difficult.

Submerging the endoscope in liquid during transport may increase the risk of spillage and could lead to fluid invasion if the endoscope has an unknown leak.”[3]

Thus, instrument manufacturers, AAMI, AORN and others generally recommend that cleaning of instruments begin as soon as possible so that organic soils, particularly blood, do not dry. But often this is not possible. One solution is to extend the holding time of soiled instruments until they can be reprocessed is to place the instruments/medical devices into a Humipak™.

The Humipak™ has been specifically designed to keep instruments moist that cannot be cleaning quickly. The Humipak™ consists of a layer of highly absorbent material sandwiched between two layers of water proof film. To use, place individual instruments, or an entire instrument tray inside the Humipak™, add the specified amount of water to the absorbent layer, and seal with the peel away adhesive strip. This creates a water tight, moist atmosphere that helps prevent organics from drying over an extended period of time. Further, the transparent film allows observation of the contents and a list of contents and/instructions can be written directly onto the film.

Testing has demonstrated that items will remain moist for up to 5 days, depending upon the type of instruments, and the exact composition of the residue.[4],[3]. It is not recommended to keep instruments in the Humipak™, that long but they can be based on this research; the preferably choice is to begin the cleaning process as soon as possible.

The Humipak ™ is a useful product and has been shown to work in situations where clinics, medical facilities of all types that use instruments are miles or hours away from the centralized reprocessing department to keep them moist until processing can occur. [4]

Thus, placing surgical instruments and other medical devices (see IFU) into the Humipak™ after use will keep items moist longer delaying the drying of bio-contaminants before the cleaning process commences.[5]

PROCEDURE:

Items placed in the Humipak™ should be cleaned as soon as possible. When opening the Humipak™ use the correct PPE. To transport items placed in the Humipak™ they must be contained in a hospital approved container like the Heathmark SST™.

1. Pick the correct size (see IFU for the various sizes) of Humipak™ pouch for the items that are to be kept moist until reprocessing.
2. Add the specified amount of water per the directions found on the Humipak™ pouch.
3. Water will wick into and be absorbed throughout the Humipak™ pouch because of the special absorbent layer between the transparent films.
4. Place items in the pouch.
5. Peel off protective strip from adhesive band.
6. Fold over the adhesive strip and press down firmly from the center outwards to insure a watertight seal.
7. Place Humipak™ in a hospital approved container for transportation.
8. Send to the appropriate area for reprocessing as soon as possible.
9. The Humipak is NOT a sharps container and is NOT puncture proof. Be sure to follow your facility's policy for handling contaminated reusable sharps in compliance with OSHA Guidelines for transporting.

RESPONSIBILITY: The Sterile Processing manager (or their designee) is responsible for assuring training of staff, initiation, completion, documentation and analysis of the Humipak™ policy.

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[1]"Efficacy of humidity retention bags for the reduced adsorption and improved cleaning of tissue proteins including prion-associated amyloid to surgical stainless steel surfaces"; Biofouling, 2015;Vol. 36, No. 6, 535–541, http://dx.doi.org/10.1080/08927014.2015.1067686 . T.J. Secker*, H.E. Pinchin, R.C. Hervé and C.W. Keevil

[2] 2012 Association for the Advancement of Medical Instrumentation ■ ANSI/AAMI ST79:2010 & A1 & A2 & A3; page 48

[3] AORN GUIDELINE FOR PROCESSING FLEXIBLE ENDOSCOPES, Revised February 2016 for publication in Guidelines for Perioperative Practice, 2016 edition.

[3] [5]http://www.healthmark.info/InstrumentRetrieval/HumiPak/Humipak_Verification_Tests.pdf

[6] https://insidehospitals.co.uk/news3/132thebenefitsofusinghumipak

[7] http://www.healthmark.info/InstrumentRetrieval/HumiPak/Humipak_IFU_2017-07-19.pdf