#whaims
aims.wh.com

Advanced Infection prevention Management Solutions

Drying – Reason why

At first glance, the importance of drying seems difficult to understand why it is mentioned in the **decontamination** cycle. This stage was initially identified in large sterilization departments, as it was found that it could lead to wet packs of surgical instrument trays. In todays modern dental surgery it is an important quality control measure as visible droplets of water remaining on/in instruments may lead to wet packs that no longer maintain their sterile barrier function (1). Water drops inside lumens may block penetration of steam. In addition, soaking wet instruments are more difficult to determine if they are clean. In some areas, if hard water is not rinsed off with purified water and then dried, limescale deposits may also appear. By drying instruments deposits and limescale deposits will be avoided, which in addition prolong the life span of the instruments.

Recommendations for correct drying

(please always follow the manufacturer's instructions)

The procedure used for drying should not only be quick and reliable, it should also prevent fresh contamination with chemical, microbial and particulate elements. **Ideally,** drying should be performed as part of the **automated cycle** in a **washer disinfector.** This is usually accomplished at the end of the thermal disinfect stage where the heat from the instruments can be used to 'flash off" any residual water. This is often assisted by a fan in the washer. Failing this, then drying shall be accomplished manually as quickly as possible after washing (see manual drying below).

Manual drying

Instruments should be dried by hand with a clean, lint-free cloth. Instrument cavities should be dried by means of compressed air, using the pressure specified by the device manufacturer. To avoid staining, metal instruments should be dried after they have been washed.

Literature:
(1) Debabrata Basu; Journal of Infection and Public Health Volume 10, Issue 2, March–April 2017, Pages 235-239

#whaims
aims.wh.com

W&H aims Advanced Infection prevention Management Solutions

Inspection of instruments in the reprocessing cycle

The cleanliness and function of instruments should be inspected and checked after the cleaning step. Any deposits like lime scale or organic materials like blood and protein can impair the sterilization or disinfection procedure. This means the successful reduction or removal of **microorganisms** for potential cross infection cannot be guaranteed (Parker 1995, Alfa 1998, Rutala 1998, Sehulster 2002, Favero 2001). This is because the disinfectant or steam (in case of a steam sterilizer) must come into direct contact with all surfaces of the instruments to be efficient. In the case of deposits, these can conceal bacteria and protein residues underneath, shielding them from the reprocessing procedure. If these bacteria and protein residues come into contact with the user or patient, the probability of adverse effects on patients health is there.

Corrosion of instruments is frequently underestimated

During the inspection of instruments, care must be taken that their surfaces are intact and not **corroded**. If instruments are corroded, this will result in surface changes that can affect both the patient and the user. These changes may make it impossible to reliably carry out controlled reprocessing. Pitting corrosion can also take root under the corroded surface; microbes multiply underneath the corroded area, but coatings also remain in place (1).

If the affected instrument is not repaired, the corrosion will continue to develop, possibly compromising the instrument's function or causing irreparable damage as a result.

If the affected instruments are sterilized in the steam sterilizer, the corrosion can be transferred by water and steam to other medical devices and equipment. The chamber in the autoclave can also be affected (1).

Bibliography:

(1) B. Amann, T. Appel, M. Bertram, P. Bröcheler, D. Diedrich, C. Faßbender, T. Fengler, A. Forster, K. Gehr-mann, M. Härtel, M. Kamer, G. Kirmse, P. Sauer, M. Schreiner, T. Schwibbe, U. Zimmermann, T. Gerasch, Recommendations by the Quality Task Group (109): Corrosion: an underestimated risk, Zentralsterilization,Volume 26, 5/2018

#whaims
aims.wh.com

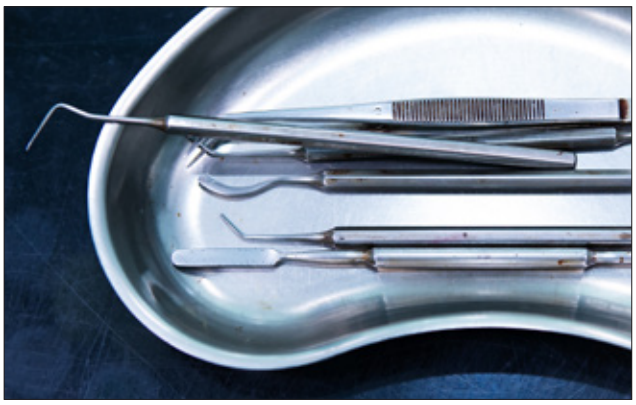
W&H aims Advanced Infection prevention Management Solutions

Corrosion of instruments is frequently underestimated

During the inspection of instruments care must be taken that their surfaces are intact and not corroded. If instruments are corroded this will result in surface changes that can affect both the patient and the user. These changes may make it impossible to reliably carry out controlled reprocessing. Pitting corrosion can also take root under the corroded surface; microbes multiply underneath the corroded area but coatings also remain in place (1).

If the affected instrument is not repaired, the corrosion will continue to develop, possibly compromising the instrument's function or causing irreparable damage as a result.

During the inspection of instruments care must be taken that their surfaces are intact. If the affected instruments are sterilized in the steam sterilizer the corrosion can be transferred by water and steam to other medical devices and equipment. The chamber in the autoclave can also be affected (1).



Bibliography:

(1) B. Amann, T. Appel, M. Bertram, P. Bröcheler, D. Diedrich, C. Faßbender, T. Fengler, A. Forster, K. Gehrmann, M. Härtel, M. Kamer, G. Kirmse, P. Sauer, M. Schreiner, T. Schwibbe, U. Zimmermann, T. Gerasch, Recommendations by the Quality Task Group (109): Corrosion: an underestimated risk, Zentralsterilization,Volume 26, 5/2018

#whaims
aims-wh.com

W&H aims Advanced Infection prevention Management Solutions

Checklist

Maintain the maintenance for the lifespan of your medical devices (instruments, handpieces et al.)

Besides of proper hygiene steps like cleaning, disinfection and sterilization – there are additional things you can do, to prolong the service life of your equipment.

In any case, always follow the recommendations in the IFU's of the manufacturer of your medical devices.

Important points to notice

Only use medical devices in its intended use:
Every medical device has its own intended use.

Misuse may damage the medical device and hence cause risks and hazards for patient, user and third parties.

Please use original spare parts:
Always use original spare parts for your tools!
This will give you and your patients the best safety, and you will keep the warranty for your products. Without original spare parts, the manufacturer's warranty isn't valid any more and problems which could occur with these parts cannot be solved by the manufacturer of the original parts.

Assemble the correct serial numbers:
Also keep in mind if you dismantle or assemble instruments and handpieces to assemble the correct serial numbers again.

React on damages immediately:
Please keep an eye on damages or wear and tear of certain parts. (e.g. burs, files, etc.) – always exchange worn out parts immediately. If the item has been dropped, please do precisely inspect it. If any kind of visual damage, malfunction, heating or noise occurs, please send it immediately to service.

Focus on drying:
Especially moisture in places where it should not be, can harm medical devices or certain parts immense, so please keep in mind, that drying after any kind of “cleaning” is very important!

Lubricate if necessary:
Always use high-quality oil to lubricate your high-quality instruments and handpieces! Keep an eye on using a sterilizable oil!

Stick to the recommendations in the IFU’s for the lubrication frequency of your instruments and handpieces. Lubrication in an incorrect frequency might lead either to over-oiled medical devices or damaged parts due to lack of oil.

Control O-rings and seals:
The correct placement and condition of O-rings and seals is mainly important for the proper function of your tools – so please always check their constitution.

Replace filters or lamps:
In some cases filters can be blocked due to water pollution, frequently check them and replace if necessary.