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[Date]

# Decontamination of Reusable Items Policy and Procedures

This template covers:

* overarching aspects of decontamination;
* instrument transport;
* cleaning & disinfection (including use of washer disinfectors and ultrasonic cleaners), sterilization (including use of sterilizers) & instrument storage;
* decontamination failure.

The text is for illustration. Amend information noted in square brackets and any other part of the text to suit your practice set-up and equipment manufacturers’ instructions. [SHTM 01-05 Management, equipment, and process of the decontamination of dental instruments in a Local Decontamination Unit (LDU) in NHSScotland](https://www.nss.nhs.scot/publications/management-equipment-and-process-of-the-decontamination-of-dental-instruments-in-a-local-decontamination-unit-ldu-in-nhsscotland-shtm-01-05/) provides further detail, if required.

Decontamination is a process by which re-usable dental instruments are rendered safe for further use and for staff to handle. It comprises several stages including, cleaning, disinfection, inspection and sterilization. All staff follow the Practice’s Decontamination of Reusable Items Policy and Procedures for the safety of patients and staff and to comply with national decontamination policy and guidance.

## Facilities

The practice has a dedicated Local Decontamination Unit (LDU) with separate dirty and clean work zones. There are separate clearly marked sinks for hand washing and cleaning and rinsing instruments, an ultrasonic cleaner, a washer disinfector, a handpiece lubricator, steam sterilizer(s) and an illuminated magnifier for inspection after cleaning. [Amend to provide details of how the LDU is set up in the practice]

A list of decontamination methods used for different types of reusable items is maintained for reference [refer to Decontamination Methods for Instruments Used in This Practice – Template]. Manufacturer’s instructions/manuals for decontamination

equipment and a written scheme of examination for each steam sterilizer are stored [enter location].

## Roles and Responsibilities

A list of the roles and responsibilities of all personnel involved in the use, installation, testing and maintenance of decontamination equipment is maintained for reference [refer to Staff Decontamination Training, LDU Roles & Responsibilities - Template].

## Training

Staff are trained in decontamination as appropriate to their role within the practice as part of their Infection Control induction and their continuing professional development. This includes the use of decontamination equipment. A record is kept of this training [(e.g. see Staff Decontamination CPD Checklist)].

## Testing and maintenance of decontamination equipment

Decontamination equipment is subject to a documented, planned maintenance programme and periodic testing schedule. Regular testing of decontamination equipment according to the equipment manufacturer’s instructions is documented and records are stored [location].

## Record keeping

For decontamination equipment, records of installation, validation, testing, maintenance, examination and repairs are retained [add location. Note if digital records are used, then specify an IT backup procedure to be followed to ensure data integrity, longevity, and security].

## Insurance

Being pressure vessels, steam sterilizers are subject to separate insurance. The practice has valid, current insurance and certification that includes third party liability. [Name and/or designation] is responsible for this.

## Transporting used items and instruments

Used reusable items and instruments are transported as safely and as soon as possible to the local decontamination unit using transport boxes that are rigid, durable, easy to clean and disinfect, have a tight-fitting lid and can be clearly identified as for dirty instruments by [labelling or colour coding – give details].

## Procedures Following Each Treatment Episode

#### In the surgery:

Any instruments that have been used for treatment or that have been exposed to the clinical environment are considered to be contaminated.

* Separate packaging prior to instrument use to avoid it being contaminated so that it can be put in non-healthcare waste/recycling.
* Avoid residual cements hardening on instruments by wiping immediately after use.
* Separate single use items, and clinical waste from re-usable items [at bracket table or after transfer to the surgery dirty area].
* Dispose of waste in the appropriate waste bins.
* Dispose of single use items according to their category (see Waste Management Policy).
* Dismantle matrix bands from holders and dispose of bands in sharps containers.
* Dispose of items of special waste or sharps in the containers provided (as soon as possible).
* Place all re-usable items in a transport box for contaminated items and transport to LDU as soon as possible.
* Clean [e.g. bracket table, motor, light handle, spittoon, curing light, dental chair] and all work surfaces using [detergent wipes followed by alcohol wipes].

#### In the LDU:

For most instruments, decontamination involves cleaning and disinfection in a washer disinfector followed by steam sterilization.

* Place the transport box containing contaminated items in the LDU dirty set down area.
* Carry out hand hygiene and don apron, face wear and gloves.
* Separate re-usable items for [e.g. ultrasonic cleaning/washer disinfector processing] from those that require manual cleaning (refer to list of decontamination methods used for different types of reusable items for the required cleaning methods).
* Open hinges or dismantle items if necessary, following manufacturer’s instructions.
* Check items for heavy soil or visible cement.
* Place heavily soiled items awaiting WD processing in [the ultrasonic cleaner, (see Ultrasonic Cleaner Procedure below)/cold water in the designated washing sink and agitate them gently to remove soil].
* Clean handpieces according to manufacturer’s instructions. If handpieces cannot be reprocessed in a WD, clean external surfaces according to manufacturer’s instructions.
* Load all trays and items which can be cleaned in the WD. Keep hinged items open. Do not overlap items or overload trays. When the WD is loaded, operate according to the manufacturer’s instructions (see Washer Disinfector Procedure below).
* Doff PPE (gloves, apron, face wear) and carry out hand hygiene.
* After processing in the washer disinfector, don fresh PPE and inspect all items for dryness, cleanliness and functionality using the illuminated magnifier. If there is evidence of soil remaining, return the item to the beginning of the decontamination process. Dispose of instruments that are blunt, bent, or damaged or show any signs of pitting or other corrosion.
* Load clean items in the steam sterilizer. When the sterilizer is loaded, operate according to manufacturer’s instructions (see Sterilizer Procedure below).
* After the sterilization cycle is complete, remove sterilized instruments to the post-sterilization area and reassemble as required.
* Store sterilized instruments in [covered sterilized trays/self-seal sterilization pouches].
* Place sterilized instruments into a 'Clean' transportation box to transport safely to surgeries.
* Use instruments that have been sterilized in a first in - first out stock rotation.
* Clean the transport box [e.g. in the washer disinfector or with fresh detergent solution, rinse and dry]. Do not use bleach or hypochlorite solutions because residues might damage the instruments.

##### Items unsuitable for immersion:

* Identify items unsuitable for immersion (e.g. electrical and electronic equipment) and decontaminate them according to manufacturer’s instructions.

#### End of day instrument processing procedure

* Fully decontaminate instruments as soon as possible after use because if soiled instruments are left to dry then they become more difficult to clean and more likely to corrode.
* If a patient is seen late or out of normal working hours, clean and dry instruments at the end of the treatment session.
* If instruments are not to be sterilized, clearly label them as unsafe for handling or use and reprocess them through the full decontamination cycle the next working day.

## Cleaning & Disinfection

[Amend to reflect the cleaning (and disinfection) methods used in the practice and instrument and cleaning equipment manufacturers’ instructions]

Gloves, apron and visor (household gloves, if necessary) is worn throughout the decontamination process. Reusable items are segregated according to the appropriate method of cleaning. These items are cleaned, [disinfected (if a washer–disinfector is used)] and inspected using the illuminated magnifier prior to sterilization. Cleaning is carried out using the most appropriate method for each item following the practice’s decontamination procedures.

Ultrasonic cleaning may be used to remove heavy soil prior to processing in a washer disinfector or, exceptionally, as a backup in the event of WD failure. Manual cleaning is only used when required by the instrument manufacturer’s instructions or in exceptional circumstances when other methods are not available (e.g. due to equipment failure).

#### **Washer Disinfector Operating Procedure** [amend details according to WD manufacturer’s instructions]

#### General Use

* Follow the washer disinfector manufacturer’s instructions.
* Ensure each item to be cleaned is compatible with this process.
* Don gloves, apron and visor.
* Load items into washer disinfector according to manufacturer’s instructions.
* Place trays in racks and individual items in baskets. Do not overlap items.
* Open any hinged items and disassemble instruments as required (e.g. amalgam carriers).
* Doff PPE and carry out hand hygiene.
* Choose the appropriate cycle and start the cycle.
* Ensure the cycle has completed successfully by checking the recorded disinfection mid-point temperature. Record whether each cycle was satisfactorily completed.
* Don fresh gloves, apron and visor.
* Unload and inspect instruments using the illuminated magnifier to check they are clean, dry and functional and ready for sterilization.
* Document and report any faults so that repairs or replacement can be arranged.

#### Installation, Maintenance and Testing

Installation, commissioning and validation will be carried out by the manufacturer.

* Carry out and document daily and weekly maintenance checks and tests to confirm that the machine is functioning correctly. [add details as per manufacturer’s instructions (e.g. housekeeping checks and test, automatic control test and cleaning efficacy test)].
* Ensure annual maintenance and other periodic tests as recommended by the manufacturer are carried out and documented by the contracted agent [e.g. name of agent].

**Automatic Control Test**

Carried out either daily or weekly as specified by the WD manufacturer.

* Place a normal load, typical of that used throughout the day, in the chamber of the WD.
* Select and start the operating cycle to be tested.
* Check that the recorded cycle parameters (temperature, pressure, hold time) are within the specified range for the cycle and comparable to the values obtained at validation.
* Check the printout or data logger to ensure that the following criteria are met:
* a visual display indicating ‘cycle complete’ occurs;
* during the whole cycle, the variables indicated on the WD or on the printout are within the limits established as satisfactory by the manufacturer or set during validation;
* during the disinfection hold period, the temperature and time are within the range specified by the manufacturer or established at validation. This is to ensure that the load is maintained at temperatures within the disinfection temperature band for the time specified in SHTM 01-05;
* the door cannot be opened until the cycle is complete;
* the person conducting the test does not observe any mechanical or other anomaly
* Refer to the logbook to identify what parameters should be recorded for daily and weekly tests
* Record the outcome of the test in the WD logbook. If any of these criteria are not met, record the test as a fail, and do not use the WD until the fault has been resolved. In this case, return any instruments that were loaded in the WD to the start of the decontamination process.

[Add details of the cleaning efficacy testing as per the manufacturer’s instructions and SHTM 01-05 part B]

#### **Ultrasonic Cleaner Operating Procedure** [amend details according to ultrasonic cleaner manufacturer’s instructions]

#### General Use

* Follow the ultrasonic cleaner manufacturer’s instructions.
* The cleaning agent used is [add name of cleaning agent used] which has the properties recommended by the machine and instrument manufacturer’s instructions. Ensure the cleaning agent is used at the concentration and temperature recommended by the manufacturer.
* At the start of a session, run the cleaner with cleaning solution only to degas the solution.
* Immerse particularly heavily soiled instruments briefly in cold water in the washing sink first.
* Load the instruments into a basket, ensuring hinges are open and instruments are not overlapping.
* Immerse in the cleaning solution.
* Close and lock the lid.
* Set the timer and start the cleaning cycle.
* After the cycle is complete, drain the basket of instruments.
* Rinse the instruments by immersing them in the rinse sink filled with fresh clean water.
* If instruments are not subsequently to be processed in a WD, dry them with disposable lint-free towels and inspect for dryness, cleanliness and functionality using the illuminated magnifier. If there is evidence of soil remaining, return the item to the beginning of the decontamination process.
* Change the cleaning solution every four hours or more often if visibly soiled.
* Document the change of cleaning solution.
* Document and report any faults so that repairs or replacement can be arranged.

#### Maintenance and Testing

* Carry out and document daily and weekly maintenance checks and tests to confirm that the machine is functioning correctly.

[Add details of maintenance checks and testing as per the manufacturer’s instructions (e.g. cleaning efficacy test, automatic control test)]

* Ensure other periodic tests as recommended by the manufacturer are carried out and documented by the contracted agent [name of agent].

### Manual Cleaning Procedure

* Wear appropriate PPE, i.e. household rubber gloves, visor, a plastic disposable apron.
* Fill the washing sink with [x litres] of clean water [as indicated by the painted line] and add [x ml] of detergent [state type].
* Immerse the thermometer and ensure that the temperature remains within [note the range specified by the detergent manufacturer] throughout.
* Fully submerge instruments in the detergent solution (unless manufacturer’s instructions indicate not to) and scrub under the surface of the detergent solution using a long- handled brush.
* Drain the instruments. If the solution is heavily soiled, repeat the above procedure with clean detergent solution.
* Rinse the instruments by immersing them in the rinse sink filled with fresh clean water.
* Dry the instruments with disposable lint-free towels.
* Inspect all instruments for cleanliness using the illuminated magnifier. If there is evidence of soil remaining, return the item to the beginning of the decontamination process.
* Doff PPE and carry out hand hygiene.

## Sterilization

[Consult both instrument and sterilizer manufacturers’ instructions to ensure that sterilizer (vacuum or non-vacuum) and instruments are compatible. Include appropriate wording to specify the type of sterilizer, packaging (e.g. whether instruments are packaged prior to sterilization in a vacuum sterilizer) and storage of reusable instruments.]

[All/specify\*] instruments are sterilized in a [non-vacuum/vacuum\*] sterilizer following the practice’s decontamination procedures. Instruments [are not/are] wrapped prior to sterilization. After sterilization, instruments are [wrapped or covered to protected them from dust and recontamination, and stored carefully or sterile and stored carefully to maintain the integrity of the wrapping].

\* [If certain instruments are processed in a different way or different types of sterilizers are used, include separate policy wording and a separate procedure and specify the types of instruments and/or sterilizer.]

### Steam Sterilizer Operating Procedure

#### General Use

* Follow the steam sterilizer manufacturer’s instructions and only use it for its intended type of load.
* Fill the reservoir using purified water [e.g. Sterile Water for Irrigation BP, freshly drawn RO water, freshly prepared distilled water] at the beginning of the day.
* Load instruments on trays. Do not overload or overlap and ensure hinged instruments are open. [When using a non-vacuum sterilizer, instruments must be sterilized unwrapped. When using a vacuum sterilizer, instruments may be wrapped – add details]
* Load the trays in the sterilizer.
* Check there is sufficient water in the reservoir. Select and start the sterilization cycle.
* After the cycle is complete, check that the required cycle parameters were attained. Record whether each cycle was satisfactorily completed.
* Carry out hand hygiene and don fresh gloves and apron.
* Remove the trays from the chamber.
* [For Type B sterilization cycles, check the wrapping material for dampness, tears, broken seals, or any other damage and that the label is intact, and the details are legible.]
* Store sterilized instruments [add details of where and how instruments are stored (e.g. covered trays, wrapping)].
* Change the water at least once per day or sooner if the reservoir water is visibly coloured or cloudy and always drain the reservoir at the end of the day. Record when each water change is done.
* Document and report any faults so that repairs or a replacement can be arranged.

#### Installation, Maintenance and Testing

Installation, commissioning and validation will be carried out by the manufacturer.

* Carry out and document daily and weekly safety checks and tests (see below) and at additional intervals according to the manufacturer’s instructions.
* Carry out and document weekly house-keeping tasks including cleaning door seals and safety features. Check the chamber and reservoir for debris.
* Ensure any maintenance is carried out and documented.
* Ensure annual maintenance and revalidation is carried and documented by the appointed Competent Person (Decontamination) [add details].
* Ensure the pressure system is inspected by a Competent Person (Decontamination) [add details] and that the inspection is documented.
* Report any deficiencies and arrange for repairs to be carried out, or for a replacement if not repairable.

#### Weekly Automatic Control Test

* Run a normal cycle and check that the recorded cycle parameters (temperature, pressure, hold time) are within the specified range for the cycle and comparable to the values obtained at validation.
* Record these values in the logbook and whether the test was a pass or a fail.
* If the required values are not attained, the test is a fail. Do not use the sterilizer until this has been investigated by a maintenance engineer. In this case, return any instruments that were loaded in the sterilizer to the start of the decontamination process.

[If using a vacuum sterilizer, add details of the weekly air leakage and automatic air detection system function tests as agreed with an Authorising Engineer (Decontamination)]

#### Other Periodic Testing

* Ensure that additional testing is performed by a Competent Person (Decontamination) according to the manufacturer’s instructions as part of the routine testing and maintenance programme.

## Failed Decontamination

Failures in the decontamination process (either instrument or equipment) are recorded in a Failure Log. Failures are monitored by reviewing the Failure Log every [e.g. frequency of review] by [e.g. designated User]. The Failure Log is used to investigate the reasons for the failure and to identify the changes required to ensure it does not reoccur. Failures in decontamination will be communicated to staff either immediately (in cases of serious decontamination failure) or at staff meetings and examined as part of Audit or Significant Event Analysis (SEA).

Decontamination equipment failure will be reported to [e.g. designated User] immediately. Engineering services [insert name and contact details] will be contacted regarding repair. Back up procedures will be followed if necessary (see Contingency Plan for Decontamination Failure).

Serious and significant decontamination failures (e.g. if unsterilized instruments were used on subsequent patients) will be reported to [e.g. practice owner]. A decision will be taken in conjunction with the [name of] Health Board and its infection control team regarding what further action might be required.

### Instrument Decontamination Failure Procedure

If instruments are still visibly soiled after cleaning:

* Return the instruments to the beginning of the decontamination process and ensure they are no longer soiled before progressing.
* Record in the failure log and advise the User so that the fault can be investigated.

If instruments are rejected at chairside:

* Quarantine the failed instrument and the rest of the instruments in that batch (i.e. other instruments on the tray are also deemed unsuitable) and return them to undergo the full decontamination process again as soon as practicable.
* Record in the failure log and advise the User so that the fault can be investigated.

### Decontamination Equipment Failure Procedure

If decontamination equipment fails, e.g. if the steam sterilizer fails to reach the required parameters (134-137ºC, 2.1-2.25 bar for at least 3 mins), or if it is suspected that there is equipment failure then:

* Withdraw the equipment from service.
* Report to [e.g. designated User]. He/she will contact [e.g. maintenance contacts for decontamination equipment] and instigate back up procedures for equipment failure (see below).
* Record in the failure log.
* Reprocess all items from the failed cycle according to back up procedures for equipment failure.

[Detail the backup procedures for equipment failure in your practice, e.g. use second steam sterilizer].

### Version history

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| **Date** | **Version No.** | **Summary of change(s)** | **Updated by** | **Next review date** |
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The following staff have read and understood this policy [include all team members].

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| **Dental Team Member**  | **Position** | **Signature** | **Date** |
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