REPROCESSING INSTRUCTIONS FOR DENTAL ROTARY INSTRUMENTS

STERILIZATION USING DRY HEAT

SCOPE

These instructions are applicable to the processing of SS White Group tungsten carbide, diamond and steel dental rotary instruments (burs) before first use and each reuse. Dental rotary instruments are supplied mechanically clean but are not sterile. They should therefore be sterilized before first use. Steel burs are single use devices and the instructions therefore only apply to processing before first use.

WARNINGS

Used rotary instruments should be considered as contaminated and appropriate handling precautions should be taken during reprocessing. Gloves, eye protection and a mask should be worn. Other measures may be required if there are specific infection or cross-contamination risks from the patient.

LIMITATIONS OF PROCESSING

With the exception of steel rotary instruments, which are single use devices, reprocessing will have little effect on dental rotary instruments. The end of life is determined by wear and damage in use and the rotary instruments should be inspected for defects during the preliminary cleaning process.

CONTAINMENT AT THE POINT OF USE

Unless there are specific infection or cross-contamination risks, there are no special requirements for containment. The rotary instruments can be transported wet or dry and should be protected from damage to the cutting edges. If transported wet there is an increased chance of staining or corrosion. Prolonged storage in disinfectant solutions may result in corrosion and should be avoided.

Delay in reprocessing must be kept to a minimum to avoid contaminants drying thereby making cleaning more difficult.

PREPARATION FOR CLEANING

There are no special requirements unless infection controls require the use of a disinfectant, in which case a disinfectant agent validated for processing of dental rotary instruments must be used and the disinfectant manufacturers’ instructions must be followed.

CLEANING

Auto cleaning is the preferred method and should use only validated washer disinfectors and appropriate agents validated for use on dental rotary instruments with the selected machine. Follow the washer disinfector and the cleaning agent manufacturers’ instructions.

If hand cleaning is the only available option, the rotary instruments should be cleaned in a sink reserved for the purpose. Rinse the rotary instruments under running cold water and, keeping them immersed, brush thoroughly away from the body using a neutral cleaning or cleaning/disinfecting agent validated for use on dental rotary instruments. Follow the agent manufacturers’ instructions. Care should be taken to avoid spreading contaminants by spraying or splashing during the brushing process. Use wire brushes with caution as brass particles may result in galvanic corrosion and steel particles may cause discolouration of stainless steel.

After cleaning inspect the rotary instruments, with the aid of magnification if necessary, to ensure that all contamination has been removed. Repeat the cleaning process if necessary.
**DRYING**

Dry the rotary instruments using paper towelling or dry heat not exceeding 140°C.

**INSPECTION**

Inspect the rotary instruments, with the aid of magnification if necessary, and discard any damaged or corroded instruments.

**PACKAGING FOR STERILIZATION**

Pack the instruments in dedicated instrument trays, bur stands or pouches suitable for dry heat sterilization or wrap in aluminium foil.

**STERILIZATION**

Sterilize the instruments for a holding time not less than sixty minutes at a temperature between 180 and 185°C

The holding time is the minimum time for which the minimum temperature is sustained. The oven manufacturer’s instructions must be followed. In particular care must be taken not to exceed the maximum recommended load for the oven.

**STORAGE**

The rotary instruments should be stored in the sterilization container (bur stand or pouch) until required. Containers or pouches must be dry before opening to avoid recontamination of the contents with water. Storage should be in dry, clean conditions and at ambient temperature.

**VALIDATION**

These processes have been validated as being capable of preparing SS White Group tungsten carbide, diamond and steel dental burs for reuse. It remains the responsibility of the reprocessor to ensure that the reprocessing as actually performed using the equipment, materials and personnel in the reprocessing facility achieve the required results. This may require validation and monitoring of the process. Any deviation from these instructions should be properly evaluated for effectiveness and potential adverse results.

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