



**ESGE**

EUROPEAN SOCIETY OF GASTROINTESTINAL ENDOSCOPY



**ESGENA**

EUROPEAN SOCIETY OF GASTROINTESTINAL ENDOSCOPY NURSES AND ASSOCIATES

## **GUIDELINES**

# **Protocol for Reprocessing Endoscopy Accessories**

### **Table 1:**

#### **Standard for manual reprocessing of reusable endoscopy accessories**

##### **Protective Measures:**

transfer contaminated devices immediately after usage to the reprocessing procedure  
transport contaminated devices in a closed container from the endoscopy room to the reprocessing room, paying attention to protective measures concerning staff and environment

before starting the reprocessing, put on protective clothing as appropriate:

- chemically resistant gloves
- protective glasses / visor
- protective face masks
- special examination gown or coat (long-sleeved, moisture-resistant) or plastic aprons arms

##### **1. Cleaning:**

- disconnect and dismantle accessories as far as possible
- immerse accessories in enzymatic detergent solution immediately after usage
- clean the single components of the devices externally by using soft cloth, sponge and brushes
- perform brushing / cleaning under the water surface in order to avoid sprinkling of contaminated liquids
- inject detergent solution into all accessible channels and lumen to remove secretion and debris  
(at least 10-20ml solution in each channel)
- ensure that all lumen are flushed completely to avoid air blockage

- remove the instruments from the detergent solution

**Attention:**

- only special trained personnel should carry out the reprocessing of endoscopic equipment, this applies both to routine as well as emergency endoscopy
- enzymatic type detergent solutions are recommended for cleaning endoscopy accessories
- enzymatic detergents require a specific contact time, according to the manufacturer's instructions
- Aldehydes must not be used for cleaning steps because they denature and coagulate protein, fixing it and this may impair cleaning
- cleaning must take place before disinfection
- the water quality available in the endoscopy unit should be specified

**2. Ultrasonic Cleaning:**

- use a medical grade ultrasonic cleaner with a frequency range over 30 kHz (38 to 47 kHz) and a max. operation temperature of 45°C, following manufacturer's instructions
- use the same solution for the ultrasonic cleaner as for cleaning step
- ensure that the detergent used is a non-foaming solution, compatible for manual cleaning as well as for ultrasonic cleaning
- renew the cleaning solution at least daily or sooner if the solution is contaminated
- ensure that the tray is large and deep enough to allow for complete immersion of the devices
- load the basket / tray of the ultrasonic cleaner with the dismantled and pre-cleaned accessories (maximum 10 devices per cycle and tray)
- avoid any ultrasound "shadows" /dead spaces where ultrasound waves cannot act therefore do not overload the tray
- the instrument should be coiled with a diameter of not less than 15-20 cm, in accordance to manufacturer's instructions
- flush again all channels and lumen completely with at least 10 ml detergent solution, to avoid air blockage
- follow the instructions of both the ultrasonic cleaner manufacturer and the devices manufacturer
- cover the ultrasonic cleaner with a lid
- leave the accessories in the ultrasonic cleaner and complete the recommended contact time for ultrasonically cleaning, following the manufacturer's instructions for devices, ultrasonic cleaner and detergents (recommended ultrasonic cleaning: 30 min)
- remove the accessories from the ultrasonic cleaner
- flush all channels with air to displace excess fluid

**Attention:**

- during ultrasonic cleaning the temperature can arise from 40 to 60° C. Using enzymatic detergents ensure that the temperature should not be over 43°C compatible with detergent efficacy
- the temperature in the ultrasonic cleaner should be monitored.

**3. Rinsing:**

- transfer the cleaned accessories to a bowl or tray, containing drinking quality water without contamination and renew it after each rinsing cycle
- flush all channels completely and thoroughly in the water to remove detergent residuals, flush the channels with at least 20ml water

- rinse external surfaces thoroughly using drinking quality water to remove chemical residues
- remove the devices from the water
- drain or aspirate all channels with air to express residual rinse water

#### **4. Drying**

- dry the external surfaces with a non-shedding cloth and compressed medical air
- dry each channel completely with compressed air.
- dry all coiled accessories in a hanging position to support the drying procedure
- compose the accessories and check the correct functioning

#### **5. Sterilisation:**

- put the instruments into sterile packaging for special instruments
- select the adequate sterilisation procedure for the thermal stabile and thermal labile instruments in accordance with the manufacturer's instructions (pre-vacuum, 134°C, 5 minutes or equivalent cycles) and according to national laws
- after completion of the sterilisation cycle, ensure all cycle stages and parameters have been achieved
- check the sterile packaging for any damage and the sterilisation indicators

#### **6. Storage:**

- store sterilised instruments in the sterile packaging in a closed cupboard, protected from dust, humidity and temperature fluctuation
- follow instructions concerning the durability of the respective sterile packaging

### **Table 2:**

#### **Standard for automated reprocessing of endoscopic accessories:**

As an additional step, an automated washer-disinfectors may be used. Before this is done, pre-cleaning, ultrasonic cleaning and rinsing have to be completed. Follow articles 1 to 3 of the "Standard of manual reprocessing of endoscopic accessories" (see table 1).

#### **4. Loading of automated washer / disinfectant:**

- after thorough cleaning as described above, load the basket, immersion trays or tank of the machine, in accordance manufacturer's recommendations
- attach channel connectors to ensure complete and thorough irrigation of all lumens
- ensure that all channels are connected, the specific design of the machine must be taken into account
- handles, coils or wires must be fitted into a special basket
- remove the gloves and close the machine

#### **5. Automated reprocessing**

- select and start the cycle
- after completion of the automated cycle, ensure that all cycle stages and parameters have been achieved
- open the machine and remove the accessories
- dry the accessories if necessary, with non-shedding cloth
- dry each channel with compressed air
- to complete the cycle, follow article 5-6 of the "Standard of manual reprocessing of endoscopic accessories" (see table 1)