



Mongolian Emergency Service

Hospital Hygiene Project

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**Manual cleaning and disinfection of medical devices in a
Central Sterile Supply Department (CSSD)**

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Whenever possible, automatic cleaning and disinfection of medical devices in a washer disinfector (WD) should be preferred over a manual processing. In exceptional cases (e.g. instruments that are not thermo-stable) or if WDs are not available, manual cleaning and disinfection may be conducted if hygienic requirements are complied with (i.e. avoidance of cross-contamination). In the following, the essential steps for manual processing are described.

Employees must wear personal protective equipment (PPE) at any time during the processing. It consists of suitable disinfectable working shoes, working clothes, chemical-resistant gloves, cap, fluid-repellent gown, surgical face mask and eye protection.

Preparation of cleaning and disinfection solutions

In general, all solutions must be prepared with **cold** tap or demineralized water. Below the preparation of solutions is described **for Sekusept Cleaner and Sekusept Extra N by Ecolab only** (example for these products. Always look for producer's recommendation regarding concentration and contact time) (see Appendix A for a dosage table):

- **Cleaning solution (Sekusept Cleaner, 2%)**
 - Fill a suitable basin with 10 liters of tap or demineralized water
 - Remove 200ml of water
 - Add 200ml of **Sekusept Cleaner**
 - Stir thoroughly
- **Disinfection solution (Sekusept Extra N, 2%)**
 - Fill a suitable basin with 10 liters of tap or demineralized water
 - Remove 200ml of water
 - Add 200ml of **Sekusept Extra N**
 - Stir thoroughly

Cleaning solutions must be changed and prepared newly when visually contaminated. They must also be changed before every incoming instruments delivery. Disinfection solutions must be changed and prepared newly when visually contaminated. They must be changed at least every 24 hours, if used.

Basins must be cleaned and disinfected using a surface disinfectant at least once a day, if used.

Cleaning

Surgical instruments must be immersed in the cleaning solution and cleaned beneath the solution surface. Especially instruments with lumina must be thoroughly immersed to remove all remaining air, and to allow the cleaning solution to reach all inner surface areas. Suitable brushes (particularly for lumina) and/or disposable lint-free cloths must be used for cleaning (steel brushes and scrubbing agents are not permitted). Afterwards, instruments must be rinsed properly with tap or demineralized water (at least 5 minutes) to remove all cleaning solution residuals.

Disinfection

Surgical instruments must be immersed in the disinfection solution for 15 minutes (**applies to Sekusept Extra N by Ecolab and a concentration of 2%**) (example for these products. Always look for producer's recommendation regarding concentration and contact time). Instruments that are not appropriate for immersion disinfection have to be disinfected using wipes. For this, instruments must be moistened with sufficiently soaked disposable lint-free cloths for 15 minutes (**applies to Sekusept Extra N by Ecolab and a concentration of 2%**). Afterwards, instruments must be rinsed properly with tap or demineralized water (at least 5 minutes) to remove all disinfection solution residuals.

Cleaning and disinfection of cleaning accessories

Brushes must be cleaned under running tap water if contaminated, and cleaned and disinfected at the end of a working day. Brushes from which the bristles are falling out are to be disposed of. Also, rusty brushes promote corrosion on the instruments when used for cleaning and have to be littered.

APPENDIX A - DOSAGE TABLE

Liters of Solution	Detergent needed for solution	
	Sekusept Cleaner Cleaning 2% concentration	Sekusept Extra N Disinfection 2% concentration
1 Liters	20 ml	20 ml
2 Liters	40 ml	40 ml
3 Liters	60 ml	60 ml
4 Liters	80 ml	80 ml
5 Liters	100 ml	100 ml
6 Liters	120 ml	120 ml
7 Liters	140 ml	140 ml
8 Liters	160 ml	160 ml
9 Liters	180 ml	180 ml
10 Liters	200 ml	200 ml
15 Liters	300 ml	300 ml
20 Liters	400 ml	400 ml
25 Liters	500 ml	500 ml
30 Liters	600 ml	600 ml