Be safe with SQ.line® – Probability of reprocessing rework is reduced!

Comparison of protein residues after washing – SQ.line vs. traditional design

SQ.line

Traditional instrument design

Key Facts at a glance:

Comparing protein residues of double action instruments after Washer/Disinfector cycle, the **SQ.line design** offers advantages as follows:

- The **limit of protein residues** is reached at an **earlier stage** during cleaning and disinfection
- Therefore the **risk** of **reprocessing rework** is **reduced**

Executive Summary - Test performance:

Test purpose:

Prove that the new SQ.line double action instruments have a lower residual protein quantity compared to the traditional design for the corresponding cleaning time.

Test object:

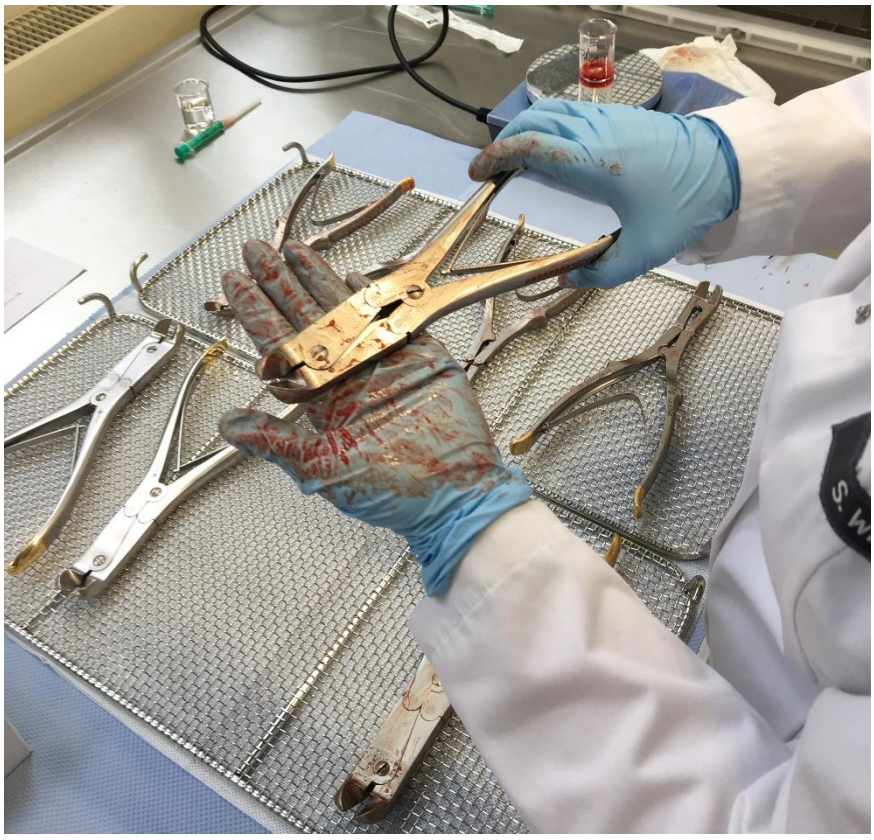
LX157NR vs. LX157R - defined as worst case design for this product group.

As competitors have equal constructions for double action instruments, the results are transferable to competitors products as well.

Overview test procedure:

1st step: Basic cleaning of all instruments
2nd step: Soiling using sheep blood
3rd step: Cleaning
4th step: BCA method (a biochemical assay is used for quantitation of total protein in a sample) was used to determine the residual protein per test sample

Soiling:



- After the complete soiling, the instrument was opened and closed 5 times.
- The instruments were dried for 1h at room temperature.

Machine Cleaning:

- Test runs according to standard parameters of "Aesculap Validated Reprocessing Procedures AVA-V6" with interruption of the alkaline cleaning process after 5 and 3 minutes.

- After cleaning, the instruments were dried for 24h at room temperature.

Cleaning Parameters:

Step	Temperature [°C]	Duration [min]	Concentration [ml/l]	Medium
Pre rinse	25	3	-	deionised water
Alkaline cleaning	55	1st 5 minutes 2nd 3 minutes	5	Helimatic Cleaner Alcaline deionised water
Final rinse	cold	2	-	deionised water

Note: Alkaline cleaning time in daily CSSD routines takes 10 minutes. Objective of the above mentioned procedure is to proof, that SQ.line instruments reach the protein limits at an even earlier stage.

Note: The limit of protein residues for double action instruments is <100 µg.

Test results:

	Average absolute amount of protein (minus blank value) µg / sample 5 minutes*	Average absolute amount of protein (minus blank value) µg / sample 3 minutes*
LX157NR - SQ.line	37,87*	41,49*
LX157R – traditional line	63,93*	105,72*

* Method-related error of ± 10µg / sample; two independent test runs

The SQ.line forceps show a 61% lower amount of protein residues after just 3 minutes of alkaline cleaning. Even after additional cleaning time of total 5 minutes the SQ.line forceps still show a 41% lower amount of protein residues than the traditional product line.

Conclusion:

A lower level of protein residues is reached at an earlier stage of the cleaning process compared to traditional instrument designs. Therefore the risk of reprocessing rework is reduced.