## **Technical Information**

## Carry-over of soils in washer-disinfectors (WD)

730-1	30-EN	V05
Created	06.01.2015	JM
Changed	06.08.2021	KP
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In a cleaning process soils are removed from the surfaces of surgical instruments. To achieve cleaning a mechanical force is necessary, e.g. for manual cleaning by a brush or in a washerdisinfector (WD) by the spray jet. If the mechanical force alone is not sufficient, a cleaning detergent is used that dissolves or disperses the soils.

During mechanical cleaning in a WD the soils removed from an instrument should not be carried over from one water filling to another.

The removed soils are pumped out together with the water filling. If after the end of the program residues of solid particles remain in the WD, this carry-over may contaminate the next load.

Modern WDs have very low carry-over rates. The machines exchange the contaminated water volume several times against fresh, clean water as completely as possible so that almost no soils remain in the WD.

In the gap of the door hinges of the WD where soils are accumulated over time this water exchange is more difficult. These areas must be cleaned regularly by hand.



GKE produces cleaning process monitoring indicators, i. e. artificial test soils, which are added to the cleaning process. After the end of the program the indicators can be checked optically for cleaning success.

All test soils involved in a process, e.g. instruments or indicators contaminated with sheep blood, egg yolk or other materials, from GKE or other manufacturers, react the same way as real soils. Also the washed off indicator colour should preferably not remain in the WD but disperse and pumped down with the washing liquor. However, if there are inaccessible areas, like gaps, around doors not only real soils but also indicator colour accumulates there.

For better evaluation GKE cleaning process monitoring indicators are coloured. So the extent of washing off is better visible. Also the indicator substance can be clearly differentiated from real soils.

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If the hinge area around the door of the WD is wiped, the soils which have accumulated there over time are removed. These are partly real soils and partly test soils washed of e.g. from indicators.



Test soils often cannot be distinguished from real soils if they have no colour. Therefore, the proportion of real soils and test soils carried over cannot be evaluated.

If GKE coloured cleaning process monitoring indicators are used, they can be easily differentiated. The picture shows the result after wiping the hinge area. The grey residues on the wiping cloth are real soils carried over, the blue material is test soil from GKE indicators.

GKE cleaning process monitoring indicators are non-toxic and the washed-off indicator material does not adhere on surfaces. Therefore, it is continuously removed with the washing liquor under normal conditions and not carried over.

At areas where water exchange is not possible and soils accumulate over time, of course also part of the washed-off indicator pigment accumulates. It can be wiped off without any problems (it does not adhere) and can in addition – in contrast to other test soils – because of the colour easily be differentiated from real soils.

So real soil accumulations in WD gaps are visible much quicker and can be removed regularly.