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October 2015 edition | [www.aseptica.com](http://www.aseptica.com)



## Algae – the newcomers in human hygiene?

Algae as a group are proving to be of increasing significance for the health of humans and thus also for hygiene

## Content

Appliance trolleys re-invented – hygienic, modular and flexible	2	Algae – the newcomers in human hygiene?	13
The quality of fully-demineralised water used in Germany for automatic reprocessing in WDs	4	Evaluation of cleaning efficacy – the debate about internationally diverse acceptance criteria	20
Comparing electronic Bowie Dick test systems for checking steam penetration according to DIN EN ISO 11140-4	7	Imprint	23

# Appliance trolleys re-invented – hygienic, modular and flexible

*W. Michels*

The design of appliance trolley systems for the mobile provision of medical and electronic appliances is often unsatisfactory. There are sharp corners as well as inaccessible surfaces and/or partitions for cable management for the installation of electronic appliances. This means that the obligatory regular wipe disinfection is considerably hampered.

Improvements are required to efficiently provide daily cleaning and disinfection measures. This is because of rising hygiene requirements due to the increase in patients highly susceptible to infection and the increased spread of antibiotic resistant microorganisms, coinciding with reduced personnel numbers in hospitals.

Hence the improved "Prime Cart trolley system" has been developed, an appliance trolley family for the installation of medical and electronic appli-

ances. It is ready for use in functional units especially in the areas of diagnosis and therapy for hospitals, doctor's surgeries and out-patient clinics, for which the hygienic aspects are absolutely top priority.

Sharp 90° angles were more or less banished and curves were either round or had a radius allowing suitable ergonomics for easy and thorough wipe disinfection.

In the recommendation "Requirements for hygiene when cleaning and disinfecting surfaces" (Bundesgesundheitsblatt 2004; 47:51-61) the RKI Commission for Hospital Hygiene and Prevention of Infection remarks: "The efficiency of cleaning and disinfection depends on the nature of the surfaces", and "medical-technical appliances and fittings should, where possible, have smooth surfaces and be easy to clean and disinfect, especially those areas touched during use". To fulfil this requirement sustainably, it is essential that they are manufactured from smooth stainless steel and do not have extra coatings or use poor quality materials. Thus working loose of coatings or surface finishing components as well as the possible resultant danger of corrosion is

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**Figure 1:** Optimal cable management via integrated cable channels and generously designed support systems from Kögel ([www.mk-koegel.de](http://www.mk-koegel.de))

prevented. Lumina and capillary intersections, which are hard to monitor in practice, were avoided as far as possible or covered with flush, smooth covers or easily replaceable seals.

Cable management presents a particular challenge, and this was improved at the same time, so that handling was optimised and surface disinfection was simpler, noticeably faster and more comprehensive. As shown in Figure 1, in the lower shelf a stainless steel twin wall sheet forms a U-shaped channel rearwards, in which cables can easily be laid and which are then covered with a smooth strip of elastomer band cut to size. Thus any cables, data wires, or oxygen and pressurised air feeds are easily stowed reaching from the provision columns at the side of the appliance, safely managed and covered, but also easy to reach at any time. For the choice of materials it was taken into account how resistant they were to the substances listed in "Association for Applied Hygiene" (VAH) and the products on the Robert Koch Institute (RKI) inventory.

The trolley concept can be ideally adjusted to the most varied clinical application due to its high flexibility and modularity. Also good stability, safe standing and rolling, ergonomics and multifunctionality were prioritised. The appliance trolley system is simply and quickly modified or can even be completely disassembled, which greatly simplifies manual basic cleaning, medical-technical installation and also its transport. Figure 2 shows the complete appliance trolley, which is also available in versions which can be thermally and/or chemically-thermally completely reprocessed in large scale cleaning and disinfecting plants. |

**Figure 2:** Exemplary Prime Cart appliance trolley type C+ made entirely from stainless steel, safe to manoeuvre and hygienically flawless (Kögel)

