

Dental instrument reprocessing

#CleanlinessAndValueRetention

Process chemicals for hygiene and the preservation of the value of dental instruments

Like all medical instruments, those used in dentistry pose special needs in terms of reprocessing. Consequently, a washer-disinfector for medical use must perform to a higher level than domestic dishwashers. Washer-disinfectors ensure this by making use of special programmes, temperatures, process chemicals, etc. This alone is the key to excellent cleaning results as demanded by standards and legislation (e.g. EN ISO 15883 and EN ISO 17664) to safeguard the interests of patients and users alike. Alongside compliance with regulations and stipulations concerning hygienically clean instruments, the long-term preservation of the value of instruments also plays a central role: Medical instruments are associated with very high procurement costs and – depending on the materials used – can react sensitively to process chemicals and other reprocessing parameters.



GENTLE TREATMENT OF MATERIALS AND VALUE PRESERVATION THROUGH THE USE OF MIELE PROCESS CHEMICALS

Medical instruments must subscribe to the most stringent of hygiene standards in order to minimise the risk of users and patients contracting infections. Process chemicals used in cleaning must not only excel in terms of the results they produce, they must also be gentle on materials. If hygiene standards are not met, instruments must be sent through the cleaning process once again, wasting the valuable time and labour of staff members. Aggressive chemical products can, on the other hand, cause corrosion on instruments, making expensive repairs necessary and, in the worst case, requiring the replacement and premature repurchase of damaged instruments.

According to Sinner's Circle, the efficacy of cleaning is dependent on the key factors of mechanical action, chemistry, temperature and time. Process chemicals must therefore be balanced against the other three variables in machine-based reprocessing in a washer-disinfector in order to fully enhance the process. With its own-brand process chemicals, Miele is rounding off its comprehensive portfolio which focuses on the reprocessing of medical instruments – from machines purpose-built for medical reprocessing through to expert after-sales service.

HOW ARE PROCESS CHEMICALS USED?

In a washer-disinfector, loads to be reprocessed are cleaned in a wash liquor containing process chemicals. After that, any residual chemicals are neutralised by rinsing with neutralising agent. In addition to this, ProCare Dent process chemicals serve the purpose of curtailing drying times and rinsing loads. When reprocessing standard instruments (e.g. scalers, probes, mouth mirrors, suction extractors), the conventional combination of alkaline detergent and a neutralising agent based on phosphoric acid is used.

If, at the same time, transmission instruments require reprocessing, this is best done using a combination of mildly alkaline detergent and a neutralising agent based on citric acid. The reason for this gentler approach is that transmission instruments, alongside stainless steel, contain other materials such as aluminium and titanium which need to be treated with detergent with a higher pH value. In each individual case, however, instructions for use issued by the manufacturer of dental instruments according to EN 17664 must take precedence.

WHAT BENEFITS DO MIELE PROCARE DENT PROCESS CHEMICALS OFFER?

ProCare Dent is tailored to the needs of dental instruments and even intricate equipment such as hand-pieces, contra-angles and turbines. Similarly, each load contains items of varying shapes and sizes and made from a range of materials and therefore the process chemicals chosen must do justice to all items in the load. The avoidance of corrosive ingredients such as chlorine ensures the gentle treatment of instruments made from multiple materials. With good rinsing properties, excellent results are achieved in combination with the efficient use of water. ProCare Dent process chemicals are classified as medical products and are provided with a recommendation on concentrations in use, which are beneficial from both an economical and an ecological viewpoint. Machines and process chemicals from Miele are carefully coordinated with a view to achieving optimum results.

SUMMARY

In order to guarantee consistently high reprocessing standards, it is necessary to optimise the interaction between machines, processes and chemicals. When used in washer-disinfectors from Miele Professional, ProCare Dent process chemicals serve to support high-level hygiene whilst taking full account of material compatibility. Miele Service will gladly assist in the selection of the most suitable process chemicals to ensure good reprocessing results in combination with the gentlest possible treatment of instruments. This approach goes easy on both medical products and the environment.