



Always Nearby to Answer Your Hygiene Questions – in Europe and Around the World:

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Dr. Weigert Management System – Certified according to DIN EN ISO 9001/13485/14001

www.drweigert.com



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Instrument Reprocessing



The Dr. Weigert Expert Check.

Ensuring Quality Assurance and Process Optimisation Together.

Every Process Has to Be Checked.

The Dr. Weigert Expert Check!

If surface changes occur, they must be rectified and prevented in a systematic sequence.



Situation

What change has occurred?



Expert Check

What may have caused this change?



Solution

Dr. Weigert recommends specific solutions.

Early detection of optimisation requirements is active quality assurance.

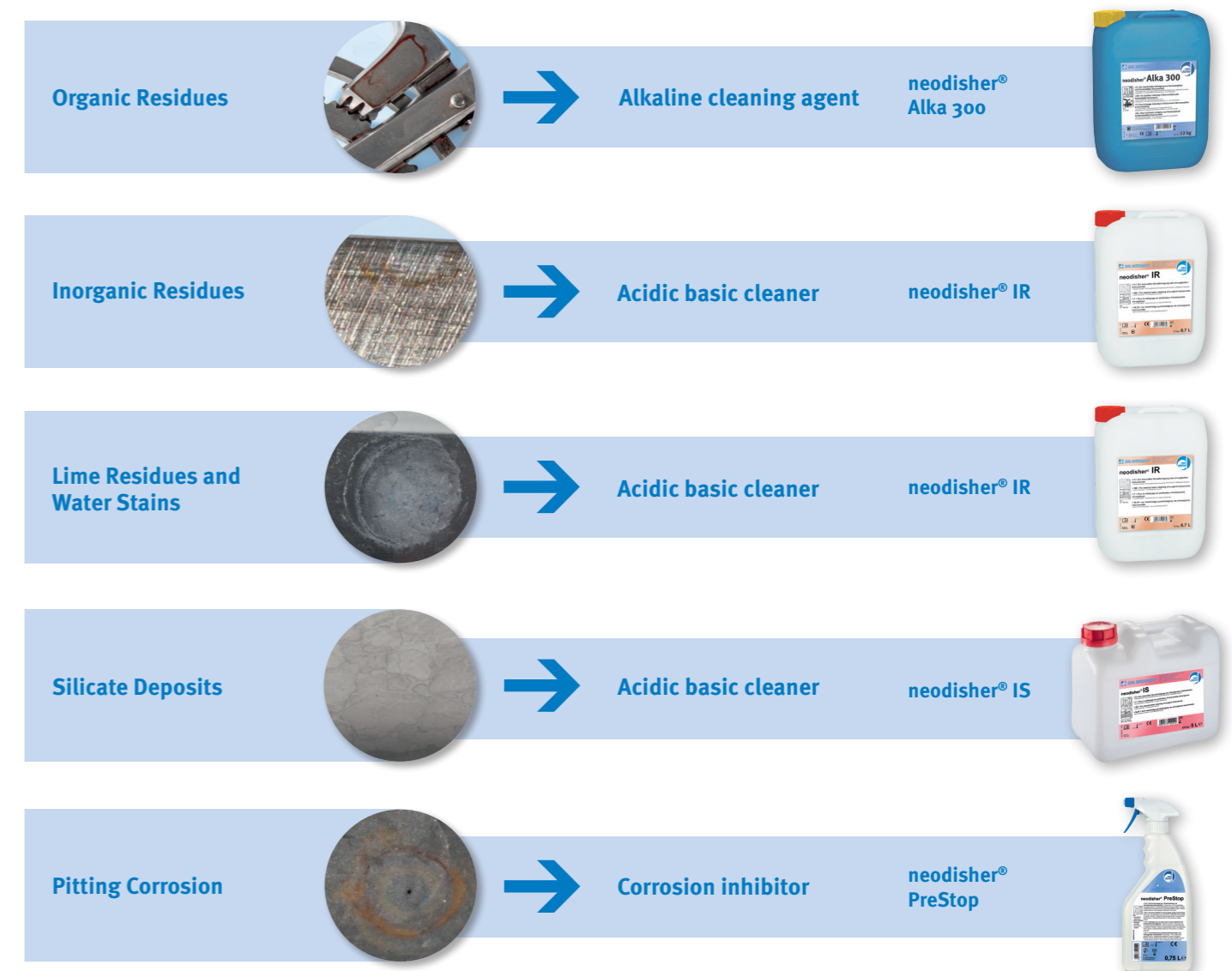
Reprocessing of medical devices often poses a major challenge. For instance, over time or even after just one reprocessing operation, all kinds of medical devices can be affected by discolouration and coatings on the surface as a result of chemical, thermal or physical influences. The cause of these surface changes is found during use in the operating theatre, during transportation to the CSSD or in the reprocessing process.¹

Possible causes are insufficient water quality, long sitting times until reprocessing, protein fixing, e.g. due to disinfectants containing aldehyde, or excessively high cleaning temperatures, incorrect loading and consequent lack of flow or circulation (unwashed areas), or an inappropriate program sequence. Incorrect reprocessing of this kind usually results in corrosion, discolouration and coatings on the instruments that can be of an organic as well as an inorganic nature.¹

In the highly sensitive process of the instrument cycle, it is necessary to have a hygiene partner who ensures safe, value-preserving instrument reprocessing with expertise and professionalism. Dr. Weigert is a founding member of the **Working Group Instrument Reprocessing** and sets out practical examples of the most common surface changes on medical devices on the next few pages. Here, the causes are explained and proven as well as particularly efficient and holistic solution concepts from Dr. Weigert are presented.

The Right Product for Every Challenge.

This overview shows typical surface changes and sets out examples of suitable process chemicals:



Further information on the listed products and the various container sizes can be found at www.drweigert.com.

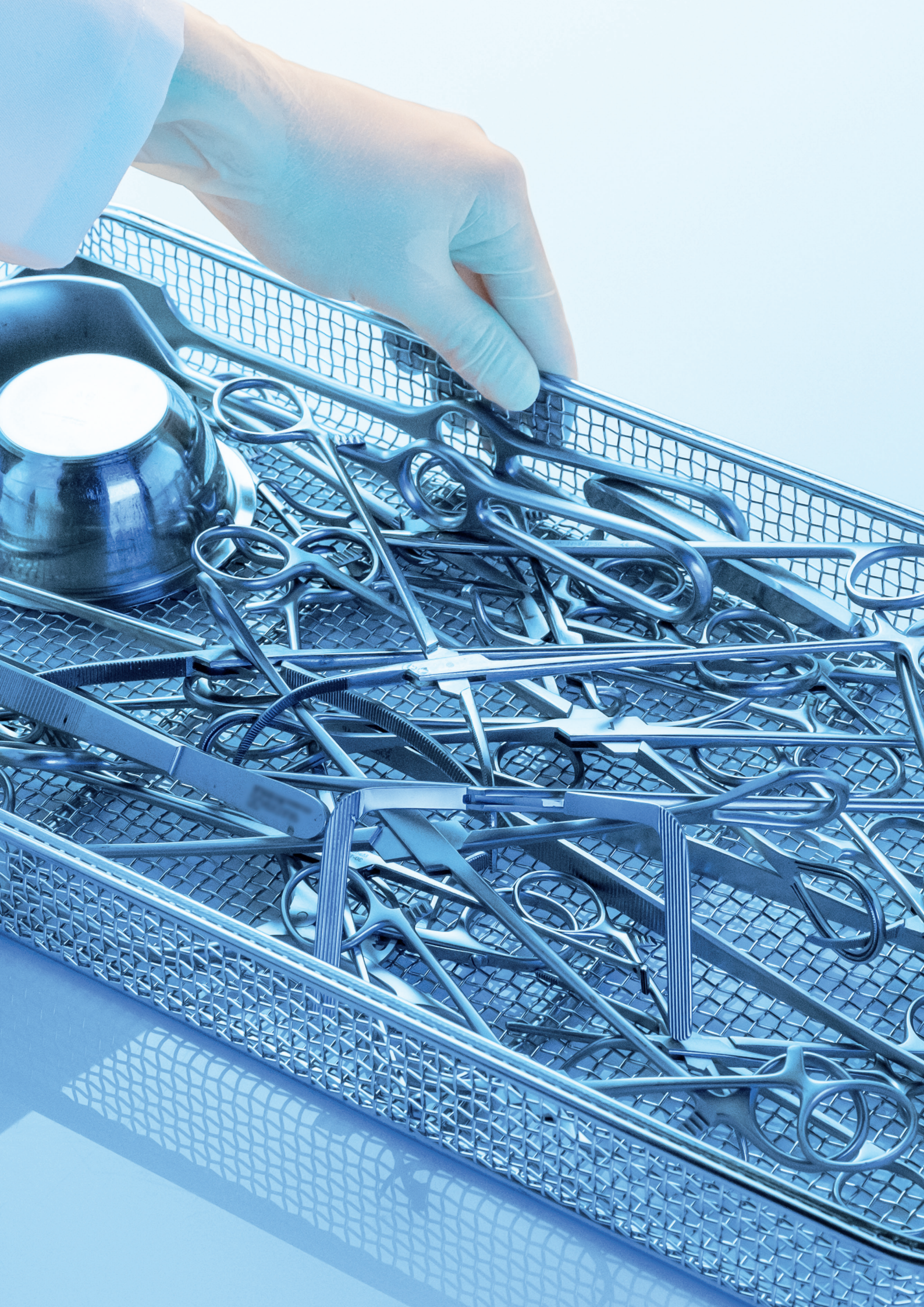
The Dr. Weigert team will provide you with professional advice on cleaning and disinfection and develop individual solutions geared towards your requirements.



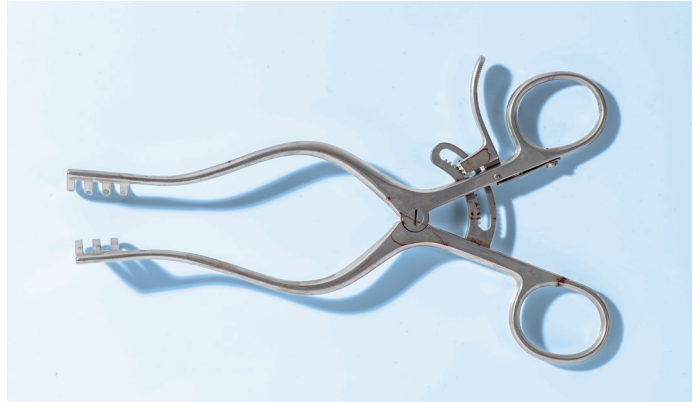
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Organic Residues

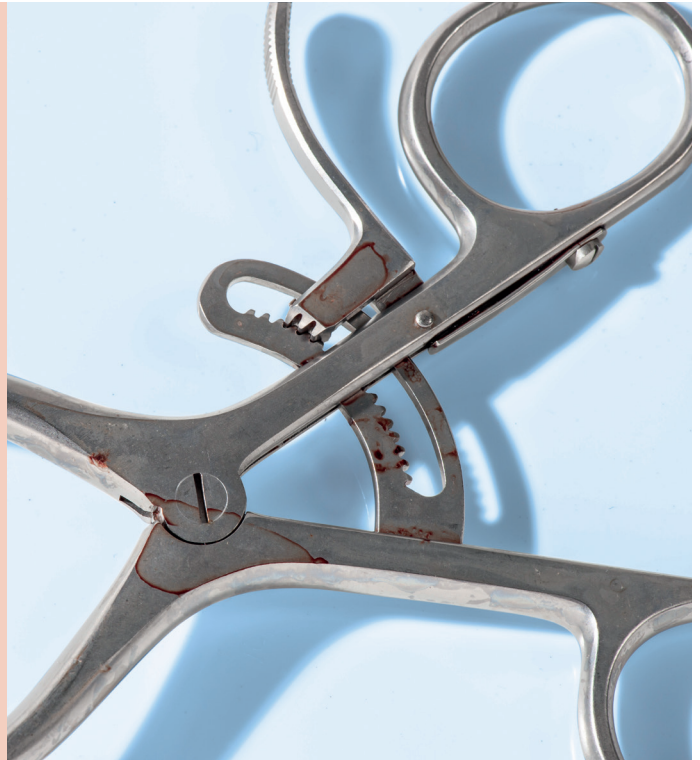


Situation: Organic Residues



Expert Check:

- Dried-on stains caused by an excessively long time between use and reprocessing
- Protein-fixing due to unsuitable (disinfecting) cleaners in pre-cleaning
- Incorrect manual or automated reprocessing in the washer disinfectator
- Insufficient preparation of the instruments (incorrect loading of the sieves, instruments incorrectly dismantled)
- Production residues on brand-new instruments or on instruments returned from repair, e.g. oil and grease



Dr. Weigert's Solution:

- Reduction of the storage period between the operating theatre and reprocessing
- Use of a spray foam – particularly in the event of longer sitting times
- Dismantling of instruments as specified by the manufacturer
- Wet disposal in suitable (disinfecting) cleaners
- Checking and optimisation of process parameters such as
 - Cleaning temperature
 - Cleaning time
 - Water quality
 - Application concentration of the process chemicals
- Performing thorough alkaline cleaning to remove organic residues



Inorganic Residues



Situation: Inorganic Residues



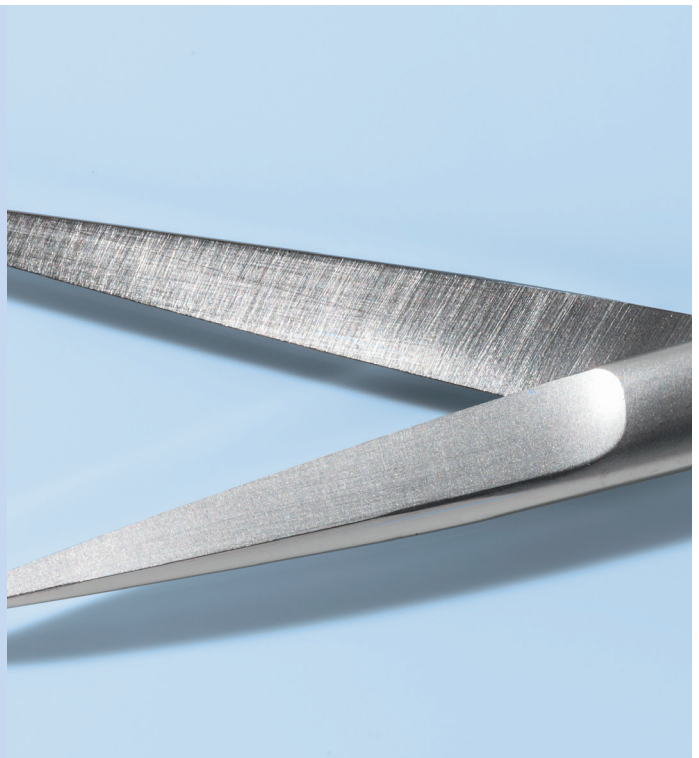
Expert Check:

- Insufficient water treatment
- Inadequate process parameters
- Transfer of rust film from corroded instruments
- Friction corrosion due to inadequate instrument maintenance
- Production residues on brand-new instruments or on instruments returned from repair



Dr. Weigert's Solution:

- Checking and optimisation of process parameters
- Checking of water quality as per DIN EN 285 and possible optimisation of the water treatment process
- Use of a spray foam with corrosion inhibitor
- Performing thorough acidic cleaning to remove residues
- Passivation of brand-new instruments before initial use
- Regular maintenance of hinged instruments with a suitable instrument maintenance agent
- Instruments affected by corrosion/rust must be sorted out and not returned to the instrument cycle until after the corrosion product/rust has been completely removed



Lime Residues and Water Stains



Situation: **Lime Residues and Water Stains**



Expert Check:

- Excessively high concentration of hard-water minerals in the process water and final rinse water
- Insufficient water quality in the sterilisation process

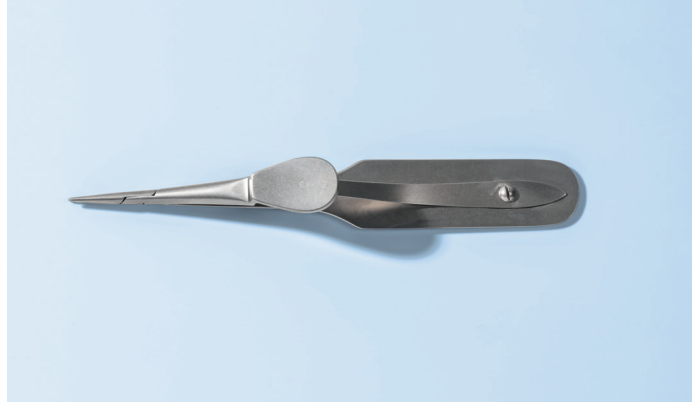


Dr. Weigert's Solution:

- Checking of water quality
- Optimisation of water quality, e.g. through fully deionised water in final rinsing
- Integration of an additional acidic neutralisation step in the reprocessing process
- Performing thorough acidic cleaning to remove lime residues



Silicate Deposits



Situation: Silicate Deposits



Expert Check:

- Insufficient water treatment (silica slippage)
- Production residues on brand-new instruments or on instruments returned from repair



Dr. Weigert's Solution:

- Checking of water quality as per DIN EN 285 and possible optimisation of the water treatment process
- Performing thorough acidic cleaning to remove silicate deposits



Pitting Corrosion

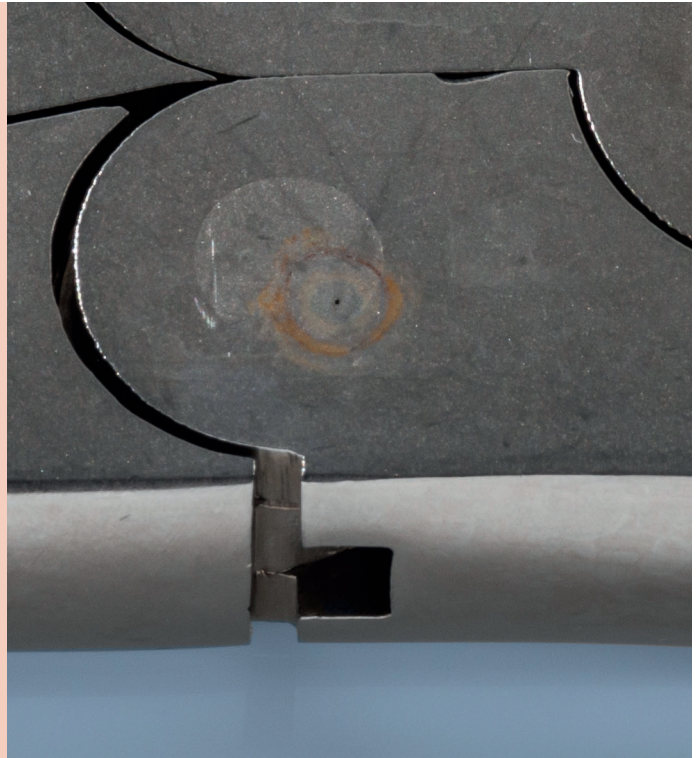


Situation: Pitting Corrosion



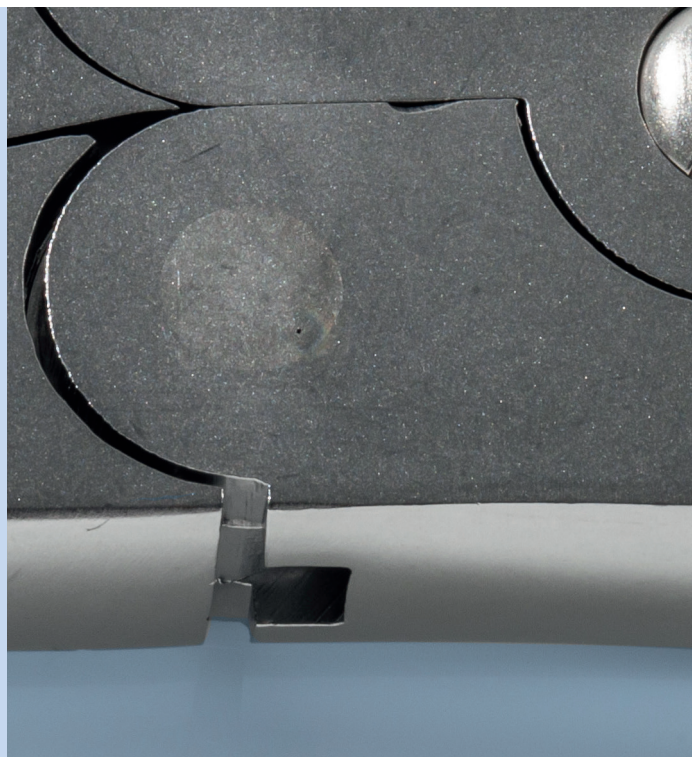
Expert Check:

- Damage and penetration of the passive layer
- Persistent operating-theatre residues, e.g. blood, pus or secretion
- Concentration of liquids containing chloride, e.g. physiological saline solution



Dr. Weigert's Solution:

- Use of low-chloride water qualities and testing thereof as per DIN EN 285
- Fast removal of operating-theatre residues and of liquids containing chloride
- Use of a spray foam with corrosion inhibitor immediately after use in the operating theatre
- Performing thorough acidic cleaning to remove the corrosion products; mechanical removal of corrosion holes if applicable
- Preventive measure: passivation of brand-new instruments before initial use
- Disposing of irreparably damaged instruments



Shaping the Future of Instrument Reprocessing Today.

We are constantly thinking ahead in order to provide solutions that are perfectly in tune with the times.

As a specialist in manual and automated instrument reprocessing, Dr. Weigert complements its cleaning agents and disinfectants with a wide range of services, for instance in the field of residue analysis.

If deviations arise in the instrument reprocessing process, e.g. material changes on the instruments, the entire instrument cycle must be checked. The neodisher® specialist adviser helps you on-site with their many years of experience, and can isolate the causes of reprocessing defects in most cases. As required, your neodisher® specialist adviser can also draw on qualitative and quantitative analyses performed at Dr. Weigert's laboratories equipped with state-of-the-art instrumental analysis equipment.

To determine the causes of material changes, we also perform microscopic surface analyses. In particular, analysis under a scanning electron microscope (SEM) and energy-dispersive X-ray analysis (EDX) help us to rapidly obtain reliable, detailed information on residues on the surfaces and the surface condition.

Further findings from analyses of the various types of process water, steam and chamber condensates, boiler feed water, boiler water and sterilised packaging round off the analysis result. Specific analyses of process chemical residues in the final rinse water are also offered in the context of cleaning validation.

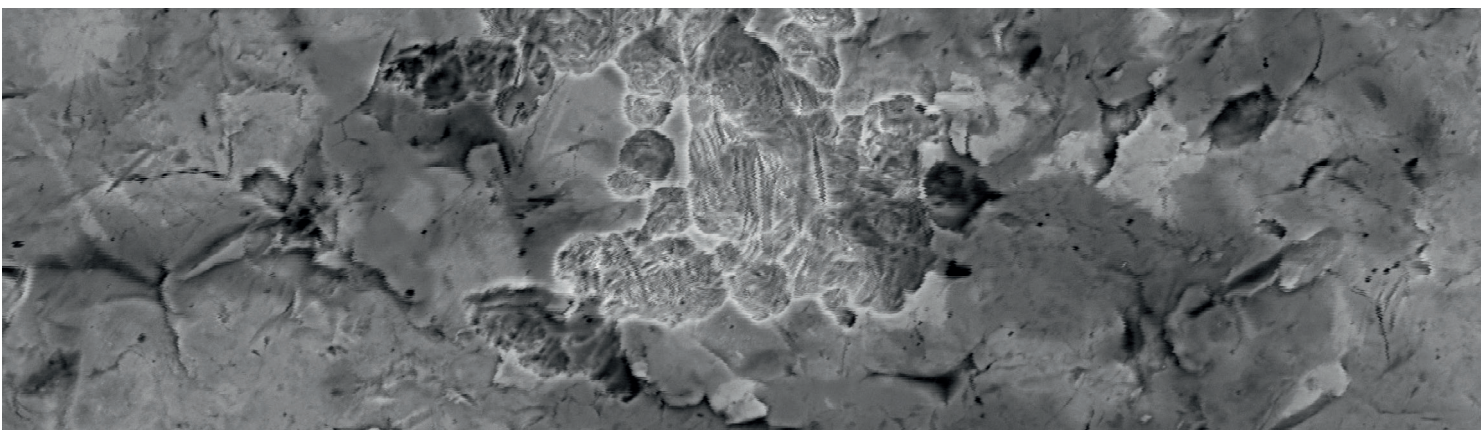
On the basis of all analysis data, we provide you with practical recommendations for process optimisation in order to prevent the recurrence of discolouration, residues, etc. – always with the aim of obtaining consistently outstanding results.

Your Partner for Now and the Future!

Those who think and plan long-term also need partners on hand who act in a similar way. Dr. Weigert has been a reliable supplier and partner for innovative hygiene solutions for over 100 years.

Year in, year out, the work of our Research & Development department and our Dosing Technology team shows our constant commitment to impressing our customers with our solutions, both now and in the future.

SEM micrograph of an instrument surface with chloride-induced pitting corrosion:



In Our
In-House Laboratory,
We Obtain the Findings that
Ensure Safety **for Our**
Customers.

Being present on-site to fully understand our customers' challenges.

Application Engineering is the interface between our customers' requirements and Dr. Weigert's expertise. In the event of particularly complex challenges, our customers and our specialist advisers receive the support they need. The experience gained here is exemplary in many respects, ensuring that other customers can also benefit from this knowledge in the future. This commitment makes our products and solutions consistently more sustainable.

We gain 100% clarity about our customers' water.

In the field of water analysis, Dr. Weigert has been a trusted partner for hospitals, medical practices, care institutions and machine manufacturers with regard to cleaning, disinfection and sterilisation processes in the reprocessing of surgical instruments for many years. To demonstrate this expertise, Dr. Weigert has received DIN EN ISO/IEC 17025:2018 accreditation for its water analysis laboratory. Water samples from our customers are analysed in this laboratory on a daily basis.



In the reprocessing of surgical instruments, monitoring water quality is a key factor in the results of the reprocessing process. For instance, specific water constituents can be responsible for discolourations on washware and corrosion on surgical instruments and machines.

In addition, Dr. Weigert has an analysis laboratory, a quality laboratory as well as a microbiology laboratory in which further analyses can be performed. Furthermore, the on-site analyses by our neodisher® specialist advisers ensure immediate clarity.

This work enables us to provide our customers with bespoke and sustainable solutions as well as 100% tested safety. Therefore, at Dr. Weigert, we are not willing to outsource this commitment to others.

