DR. WEIGERT
Systematic Hygiene

How to avoid pitting corrosion on surgical instruments

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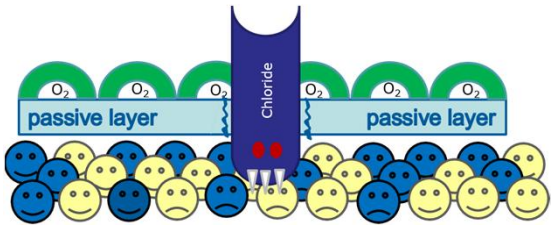
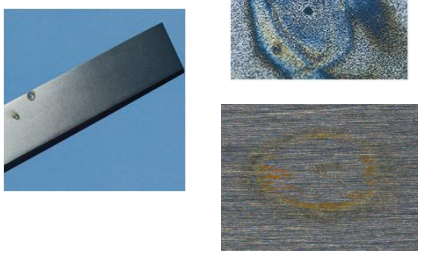
When does pitting corrosion occur?



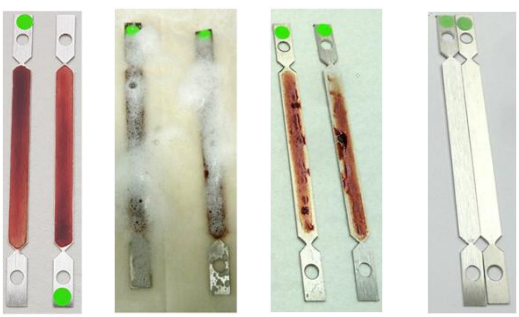
Chloride penetrates the passive layer and can cause pitting corrosion in short time

What does pitting corrosion look like?



Self-acting pre-cleaning

Test plates soiled with 100µl heparinised reactivated sheep blood[1)], 30 min drying, spraying with the product, 2 hours drying, after this cleaning with a mildly alkaline enzymatic detergent (5 ml/l, 55°C, 5 min, deionised water)



Test plates | spraying | drying | cleaning

1) ISO/TS 15883-5:2005 - Washer-disinfectors - Part 5: Test soils and methods for demonstrating cleaning efficacy, Annex A

Where do chlorides come from?

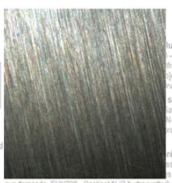
- Drinking water
- Insufficient water treatment (deionised feed water) for the final rinse or for steam sterilisation
- Carry-over of regeneration salt particles from ion changers when softening water.
- Isotonic solution (i.e. physiological saline solution or drugs).
- Dried organic residues such as blood, saliva, sweat, etc.

Corrosion inhibitor

Test:
Material: steel 1.4034 (X46/Cr13)
saline solution (0.9% NaCl)

Conditions:
1: saline solution 0.1 ml/l
2: combination with 0.2 ml/l spray and 0.2 ml/l saline solution
After 6, 24 and 72 hours checking of the material for pitting corrosion

Saline solution after 6 hrs



0.2 ml/l spray + 0.2 ml/l saline solution after 6 hrs

Instrument steel surface is protected from chloride induced corrosion by using an optimised enzymatic alkaline foam spray.