How to avoid pitting corrosion on surgical instruments

**When does pitting corrosion occur?**

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

**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.

**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).

**What does pitting corrosion look like?**

**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.

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