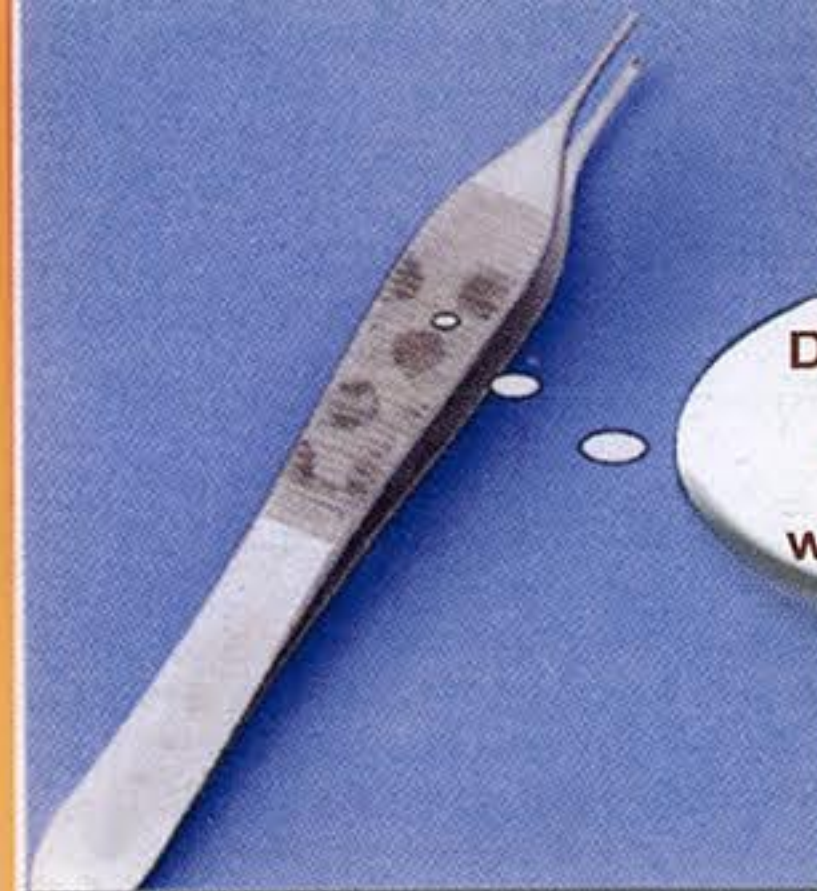
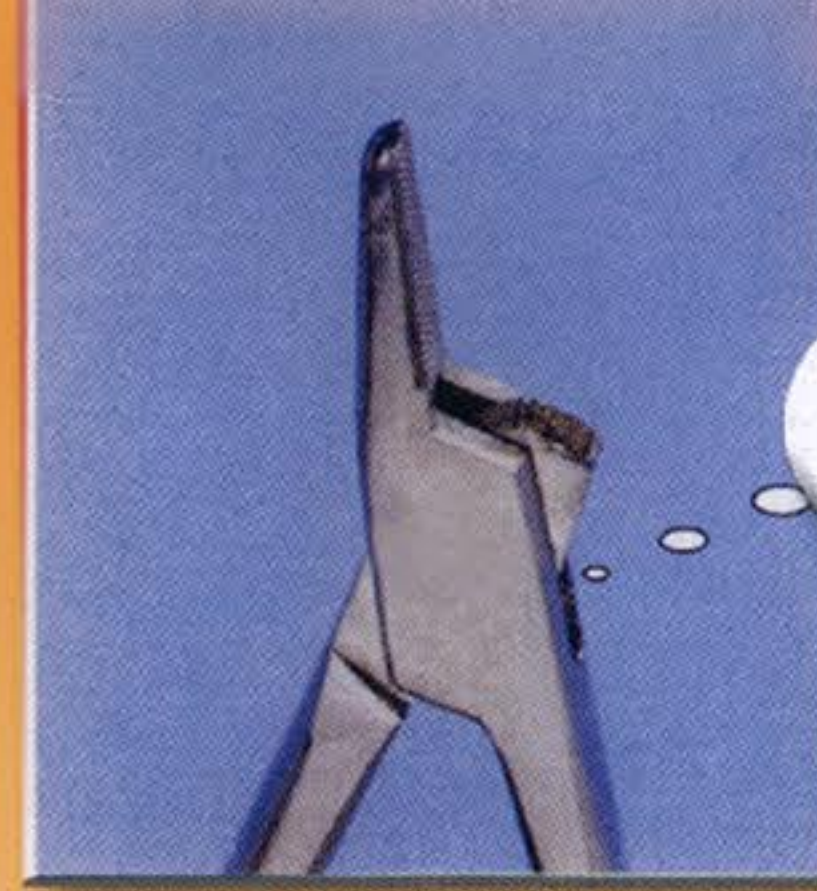




Contact Corrosion caused due to preparation on brass rack



Discolouration caused due to impurities in water vapour / steam

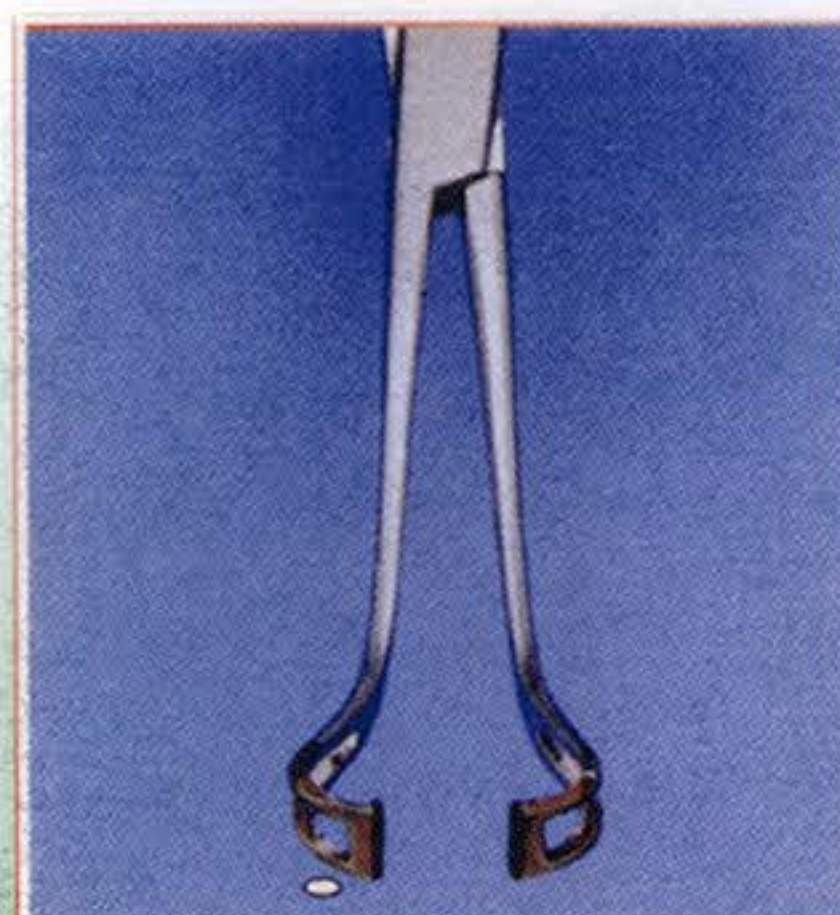


Breaking due to Stress Corrosion caused by chlorides



Spots resulting from Improper Pre - rinsing / washing

Fretting Corrosion caused due to insufficient treatment with LUBRICATING oil



Encrustations due to non removal of organic residues because of improper / insufficient cleaning

11 - Conditions for Sterilisation

- Do not overload instruments trays with more than 10 Kgs.
- Do not mix old instruments with new instruments.
- Micro and delicate instruments should be placed in secure containers.

10 - Maintenance of Instruments

- Periodically lubricate hinged / ratcheted instruments and instruments with joints, lubricating oil. Inspect edges of cutting instruments and sharpen if required. Inspect instruments with carbide tips for wear and tear. replace tips if required. Always maintain correct organisation of instruments in terms of size / old or new / large
- bulky instruments / micro delicate instruments.

9 - Care of Instruments

- Ensure all instruments are clean.
- Check functionality of individual instruments.
- Separate instruments which are not functioning correctly / show signs of corrosion / wear & tear.

8 - Drying

- Instruments should be dried immediately after rinsing / washing.
- Use of air pistol is recommended where ever possible.
- Use lint free paper / cloth to wipe.

12 - Sterilisation

- If all necessary steps prior to sterilisation have been followed - PROCEED.
- Use demineralised water if possible / Quality of water / steam is very important.
- Excessive silicates in water cause blackening of instruments.
- Excessive chlorides can set in corrosion in instruments (level of chlorides should be less than 120mg / l equiv to 200mg / l of nacl).
- Optimal loading of trays prevents formation of condensates.



M.F.ELAHI MEDICAL CO

SERVING WORLDWIDE SURGICAL INSTRUMENTS

Recommendations For Prevention Of Corrosion Of Surgery Instruments

1 - Specifications for Buying

- Choice of material ! / Does it fit the requirements ?
- Certificate of quality from the manufacturer.
- Choice of surface finish.

2 - Storing of Instruments

- Avoid any corrosive fumes / chemicals in storage area.
- Avoid area of high moisture to store instruments
- Brand new instruments should be cleaned / protective caps removed.
- Appropriate RACKS/CONTAINERS should be used to store instruments.

3 - Usage

- Clean the instruments after every use.
- Avoid prolonged exposure to saline.
- Sterilise USED and UNUSED instruments.

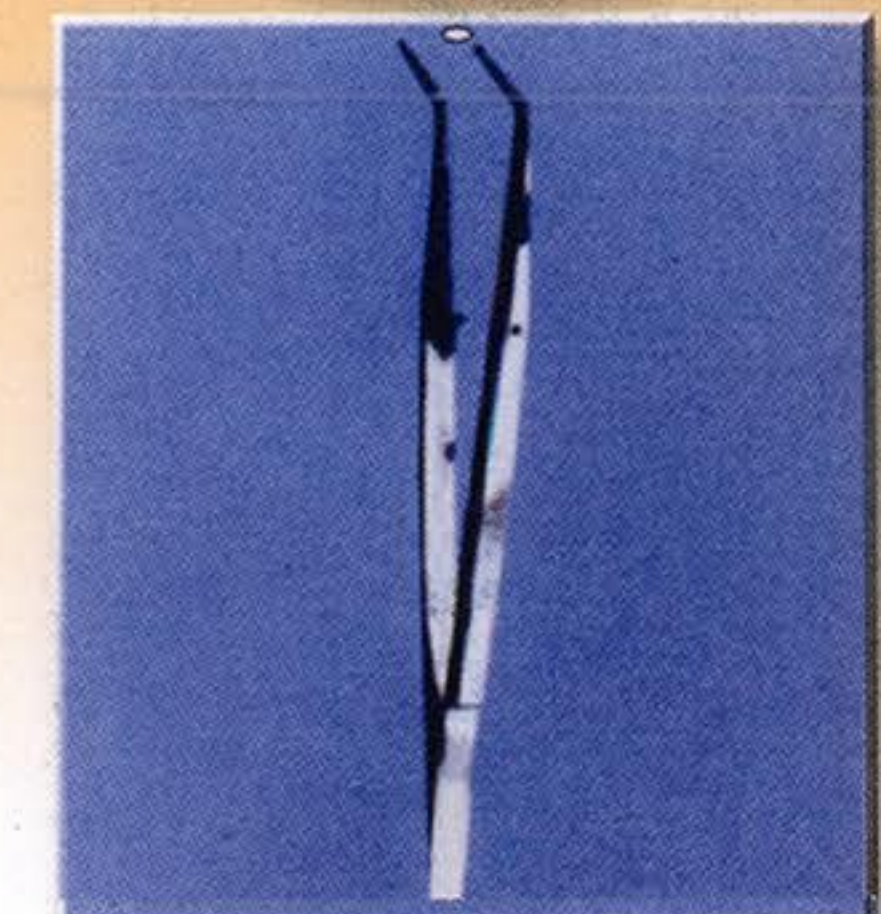
4 - Preparation for Disinfection & Cleaning

- Check the correctness of the delivery.
- Returning of instruments from OT:- Dry instruments should be returned in dry condition. Returning instruments in wet condition:- Instruments should be immersed in non corrosive combined disinfecting cum cleaning solutions.
- All hinges / ratches of instruments should be released. Breakpart instruments should be dismantled.

5 - Re Using Instruments

- Dismantle and immediately immerse USED and SOLID instruments, completely in a pre-disinfection bath.
- Use containers which are hermetically sealed during the process of thermal disinfection and cleaning. It is done at 93°C for approx 10 min. For heat sensitive material chemo thermal disinfection is done at 60°C for approx 10 min.
- Open the containers at 60°C or lower

Deposition due to caustic solution containing chlorides



Effect of prolonged immersion in physiological saline

7 - Washing

- Periodically test water for its chloride / silicate and mineral content.
- Use of enzyme based detergents is recommended and instructions for dilutions as recommended by the supplier should be followed. If powdered products are being used - particles should be dissolved.
- Final rinsing should be done in demineralised water.

6 - Pre - Disinfection

- Use cold water only. Water over 45°C leads to coagulation of proteins and causes cleaning problems.
- Epidemic Hygiene Aspect - disinfection first followed by cleaning.
- General Hygiene Aspect - first cleaning followed by disinfection.
- Follow exposure times / dilution parameters / concentration levels as recommended by the manufacturer for optimal cleaning / disinfection. pH value of 4.5 to 9.5 is recommended for cleaning and disinfection solutions.
- Ultrasonic cleaners may be used in case of stubborn stains / encrustations.



Water Spots due to high mineral content in water



Crevice Corrosion caused due to destruction of natural passive coating of steel due to mechanical / chemical destruction



Pitting due to Chlorides



Encrustation of blood due to improper washing / rinsing