

# The future of sterilization/disinfection

Wim Renders

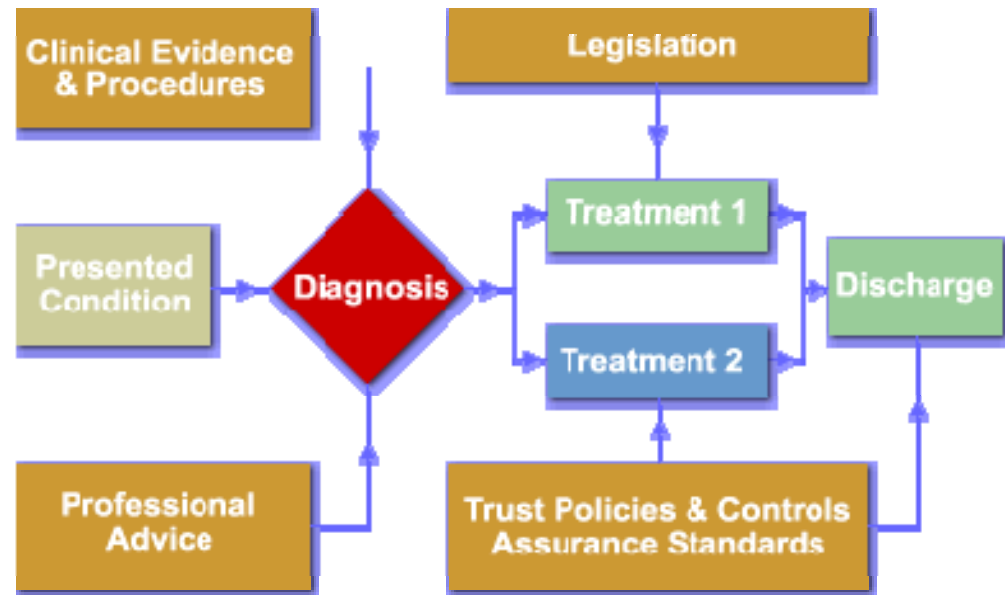


“Panta rei”

“Everything is in motion”

*Herakleitos*

## Clinical pathways



Not new technologies but new trends will have the biggest impact on how the CSSD will function in the future

*Rutala*

Not new technologies but new trends will have the biggest impact on how the CSSD will function in the future

*Rutala*

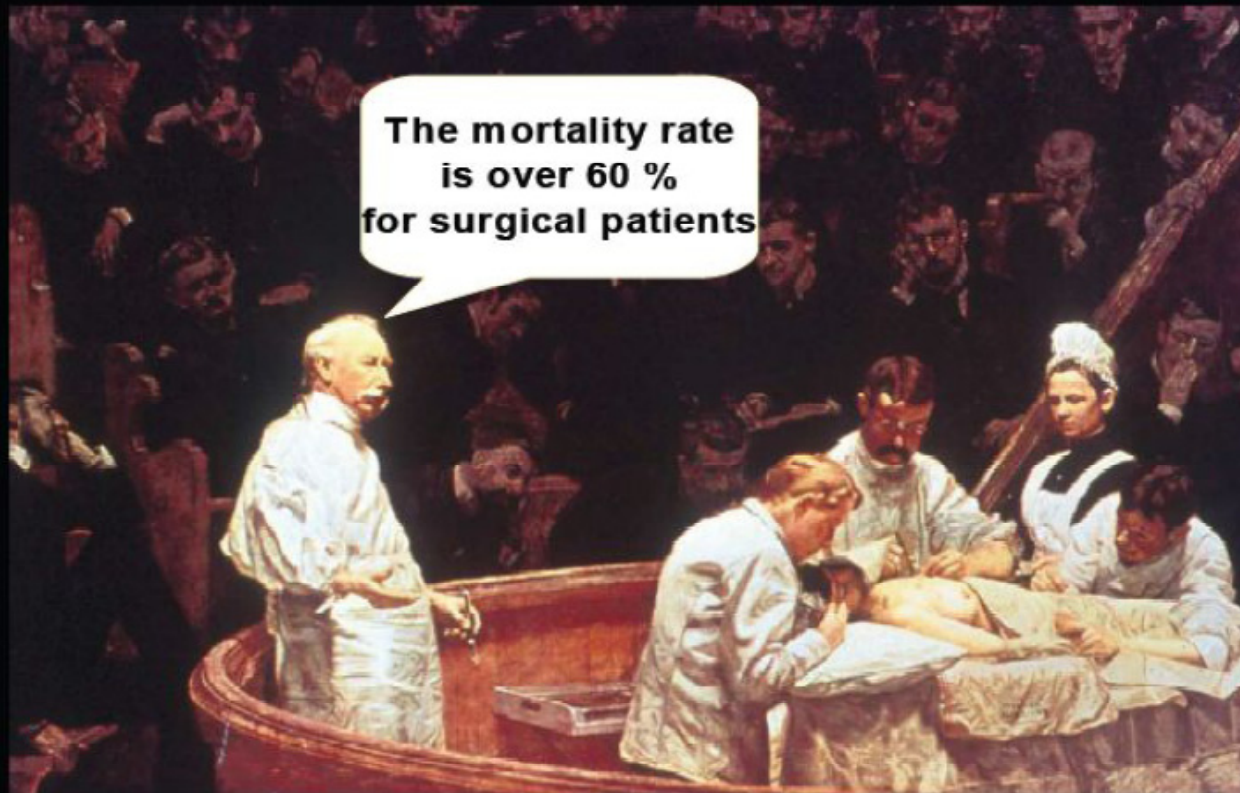
Attention to:

- Cleaning, disinfecting
- Outsourcing or centralization
- Introduction of QMS

Is sterilization necessary and useful?

Is sterilization necessary and useful?

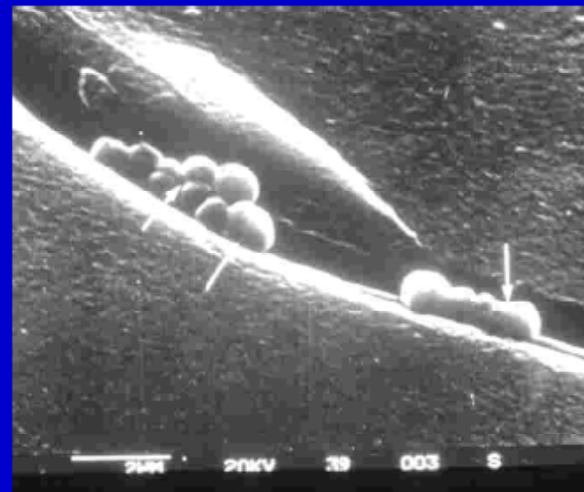
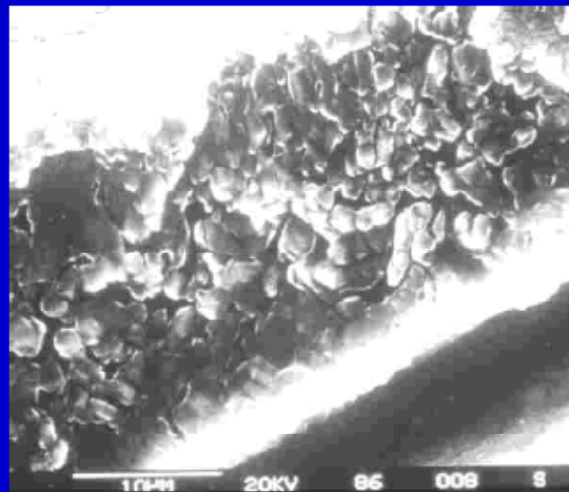
Yes !



The Agnew Clinic by Thomas Eakin (1885)

## Laws of Decontamination

- If cleaning was 100% effective sterilization would be unnecessary!



*David Hurrell*

In case of infectious incidents the authorities intervened and imposed measures to improve sterilization practice.

- The Netherlands
- Great-Britain

## Super centre

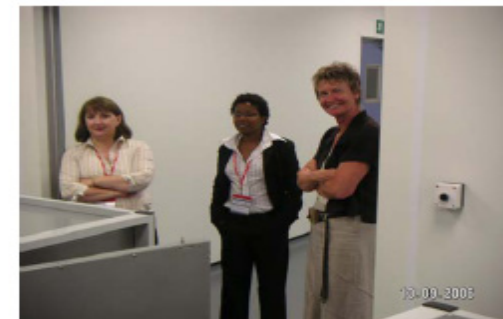
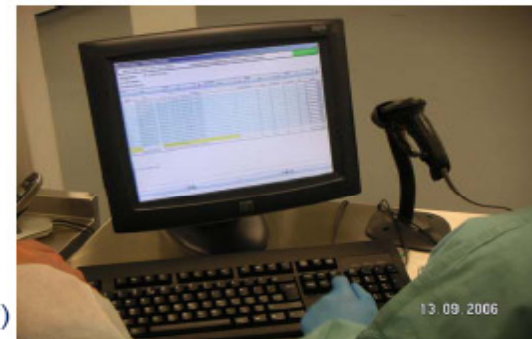


### Decontamination Centre Vernon Carus, Chorley UK

- first operating Super Centre in the UK
- capacity 1.5 mill. trays/year
- provide 3 hospitals, further will follow soon
- currently T+T on set level realized



- **IMS software SAVANT**
- **possible data carrier**
  - RFID (125 khz)
  - Dot Peen (matrix, 10 char)
  - Bar code / DataMatrix
- **subsequent marking**



**GS1 HUG**  
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In case of infectious incidents the authorities intervened and imposed measures to improve sterilization practice.

- The Netherlands
- Great-Britain
- France

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www.lexpress.fr

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**Classement 2008**

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**Le dernier défi  
des Clinton**

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W F H S S

FAITS DIVERS

11 - 1<sup>er</sup> Ouest Dimanche  
Dimanche 11 février 2008

**SANTÉ.** Sept médecins sont jugés à partir de mercredi au tribunal correctionnel de Paris pour avoir traité des jeunes morts par la suite de la maladie de Creutzfeldt-Jacob. Verdict dans quatre mois

# L'hormone de croissance en justice

**P**lus de cent jeunes ont succombé à ce jour en France à la maladie de Creutzfeldt-Jacob (MCJ) pour avoir été traités à l'hormone de croissance. Six ans après le premier cas, leurs familles demandent justice à partir de mercredi au tribunal correctionnel de Paris.

Pendant quatre mois, sept médecins - tous se disant innocents - s'expliquent sur les graves fautes d'imprudence et de négligence qu'on leur reproche d'avoir commises dans la collecte, le conditionnement et la distribution à 1 600 enfants de cette hormone fabriquée jusqu'en 1988 à partir de l'hypophyse, une glande crânienne prélevée sur les cadavres.



Jeanne Goerrian, la présidente de l'Association des victimes de l'hormone de croissance accusée

ments à risque (neurologie, gynécologie, primes en liquide aux garçons de laboratoire incitant aux « prélèvements sauvages », exécution rapide mais peu sûre par voie buccale, etc.

« C'est le procès de la transparence des gens qui croient détenir le savoir, qui sont insensibles d'eux-mêmes et ne se remettent jamais en question », lance Jeanne Goerrian, présidente de l'AVHC (Association des victimes de l'hormone de croissance). L'Etat, ébranlé par le scandale du sang contaminé, n'a pas attendu la justice et a déjà procédé, au nom de la solidarité nationale, à l'indemnisation des victimes : 225 000 euros par décès, plus des dommages et intérêts variables pour les proches. Même si elles demanderont des ajustements de ces sommes, les familles veulent d'abord « que justice soit faite », insiste M<sup>me</sup> Goerrian.

Une vingtaine d'experts sont attendus lors de ce procès, dont le professeur Luc Monagnan et le docteur Jeanne Prusiner, ainsi qu'une quarantaine de témoins. Pour les aider, le tribunal a prévu deux psychologues à l'audience. Une ligne téléphonique spéciale accueillera ceux

responsable de la fabrication à l'ins-  
truit Pasteur: deux observations  
des biologistes, un communiqué

traitement, avaient porté plainte.  
C'est une plus d'une centaine de

res. L'ampleur de ce drame typi-  
quement français, était alors

24/01/2008



**Extra**

- **Dokter Alsaid:** 'Ik heb het een tijdje wat laten hangen'

## Belgische arts besmette mogelijk 7.000 patiënten

*Frans inspectie gealarmeerd door gebrek aan hygiëne en amateuristische radiografie*

**De Franse overheid gaat 7.000 patiënten opsporen die door een Belgische radioloog zijn onderzocht. 'Door het gebrek aan hygiëne vrezen we besmettingen als aids en hepatitis. We twijfelen ook sterk aan de kwaliteit van de radiografieën.'**

Het opmerkelijke initiatief gisteren van de Franse overheid is een gevolg van de schorsing van de Belgische arts Farid Alsaid een paar weken geleden, voor minstens vijf maanden.

De arts van Syrische afkomst staat in het noorden van Frankrijk aan het hoofd van het Centre d'Imagerie Médicale, een privéonderneming met vijf filialen. De man stelt nog vijf andere Belgische artsen tewerk.

Enkele van zijn personeelsleden meldden de Franse gezondheidsinspectie dat de dokter en zijn staf het niet zo nauw namen met de hygiënevoorschriften. Inspecteurs van de Franse gezondheidsinspectie vielen daarop tegelijk in de vijf centra binnen.

De dokter van het centrum bleef niet ongeschonden. In een

In case of infectious incidents the authorities intervened and imposed measures to improve sterilization practice.

- The Netherlands
- Great-Britain
- France
- Turkey

What kind of sterilization department  
do we want?

What kind of sterilization practice  
do we want?

Sterilization has grown up!



Sterilization has grown up!

A. Centralization of the sterilization activities

- Better quality
- Cost reduction
- Efficient use of personnel and means

**Option 3: full centralization / best case**

- 8 FTE reduced at peripheral OR
- Lower transportation costs (2,5 FTE)
- FTE at peripheral hub perform other tasks

[illegible]



## Specific training courses



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### Basisopleiding in desinfectie en sterilisatietechnieken

i.s.m. v.z.w. Sterilisatie in het ziekenhuis

Sterilization has grown up!

- A. Centralization of the sterilization activities
- B. The European directive on medical disposables

# The Medical Device Directive

Avis juridique important

ES CS DA DE ET EL EN FR IT LV LT HU MT NL PL PT SK SL FI SV

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31993L0042

**Council Directive 93/42/EEC of 14 June 1993 concerning medical devices**

*Official Journal L 169 , 12/07/1993 P. 0001 - 0043*  
*Finnish special edition: Chapter 13 Volume 24 P. 0085*  
*Swedish special edition: Chapter 13 Volume 24 P. 0085*

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COUNCIL DIRECTIVE 93/42/EEC of 14 June 1993 concerning medical devices

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 100a thereof,

Having regard to the proposal from the Commission (1),

In cooperation with the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas measures should be adopted in the context of the internal market; whereas the internal market is an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured;

Whereas the content and scope of the laws, regulations and administrative provisions in force in the Member States with regard to the safety, health protection and performance characteristics of medical devices are different; whereas the certification and inspection procedures for such devices differ from one Member State to another: whereas such disparities constitute barriers to trade within the Community:



Industrial sterilization



CSSD

Sterilization has grown up!

- A. Centralization of sterilization activities
- B. The European directive on medical disposables
- C. National sterilization societies


World Forum for Hospital Sterile Supply

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Ireland IASSM »	Israel ISA »	Italy AIOS »
Japan JSMI »	Japan SCSTS »	Kuwait ICD
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**WFHSS Events**

**Annual WFHSS and AIOS Conference 2008**  
4/5/6/7 June 2008 in Milano, Italy  
» [Conference Website](#)  
» **NEW** [Conference Lectures](#)

**Annual WFHSS Conference 2009**  
» date and location to be confirmed



**WFHSS News**

**12 July 2008, 14:17 [GMT]**  
**WFHSS Questions and Answers**  
answer to question 1793: CSSD operational standard

**11 July 2008, 21:00 [GMT]**  
**WFHSS Members**  
**new WFHSS member organization:**  
**KACSDN - Korea Association of Central Supply Department Nurses (South Korea)**

**11 July 2008, 20:30 [GMT]**  
**WFHSS Related Sites & Links**  
link to new WFHSS Member organization KACSDN - Korea Association of Central Supply Department Nurses (South Korea) added

**11 July 2008, 16:29 [GMT]**  
**WFHSS Questions and Answers**  
answer to question 1862: Policy procedure for cssd

**11 July 2008, 03:15 [GMT]**

**Industrial Partners:**  
  
  
**7129177**

Knowledge is the best medical device

*Jan Hoborn*

Sterilization has grown up!

- A. Centralization of sterilization activities
- B. The European directive on medical disposables
- C. National sterilization societies
- D. The appointment of a responsible

## 'Shortcuts': Re-use



## 'Shortcuts'



## 'Shortcuts': Flash sterilization



## 'Shortcuts': High level disinfection



Sterilization finds itself on a roundabout.

## Centralization



Sterilization finds itself on a roundabout.

- The shortest route: sterilization within the hospital, in a department run by the hospital.

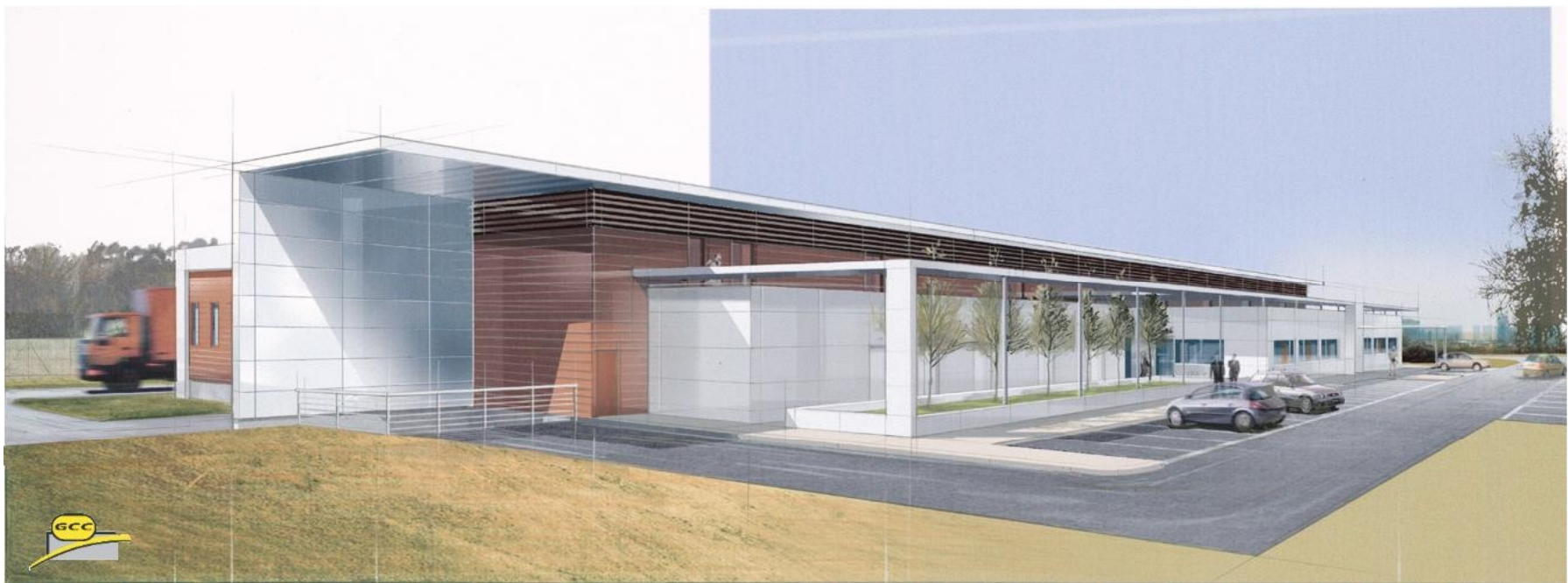


Sterilization finds itself on a roundabout.

- The shortest route: sterilization within the hospital, in a department run by the hospital.
- The fastest route: outsourcing or external centralization

# Centralization Lyon, France

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# Centralization Lyon, France

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What kind of sterilization practice  
do we want?

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What kind of sterilization practice do we want?

- Voice in the writing of norms




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Organization for  
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European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

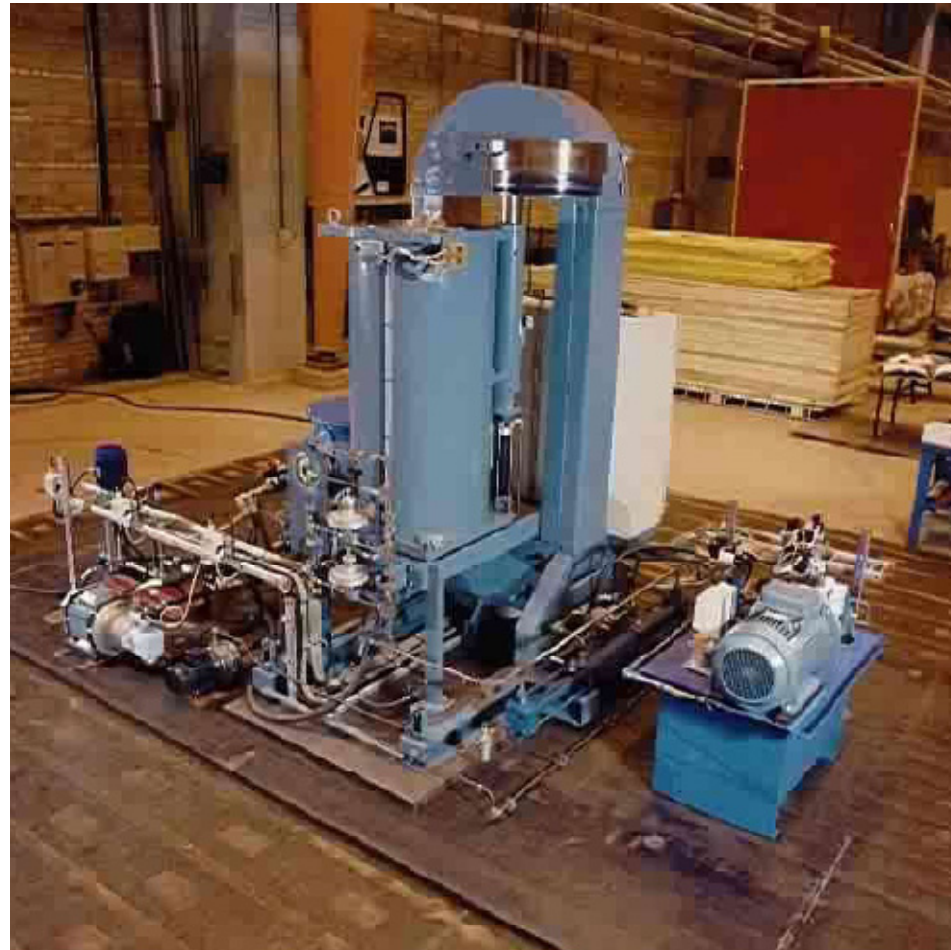
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What kind of sterilization practice do we want?

- Voice in the writing of norms
- Scientific underpinning of our discipline

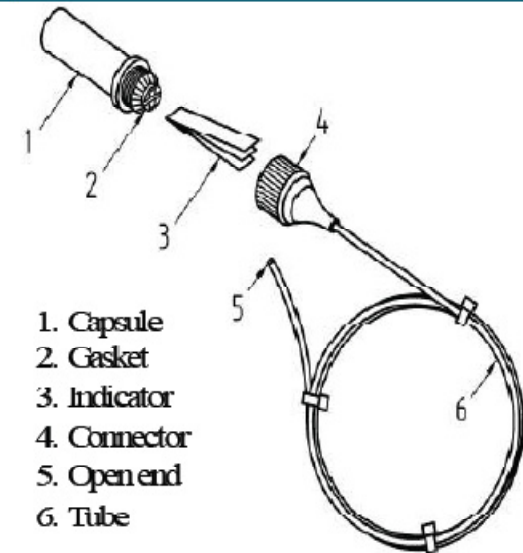
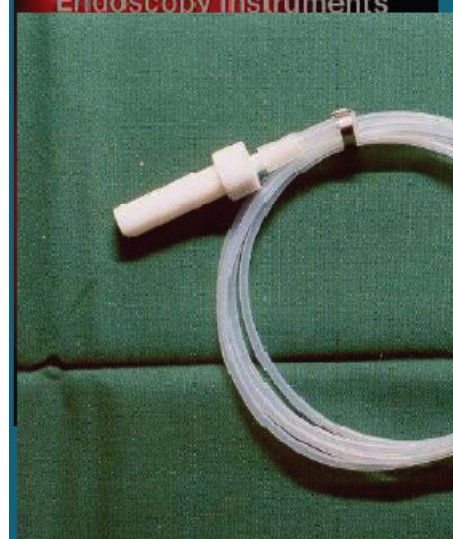
# Research on sterilization: High pressure processing





## How to test for steam penetration?

Endoscopy Instruments





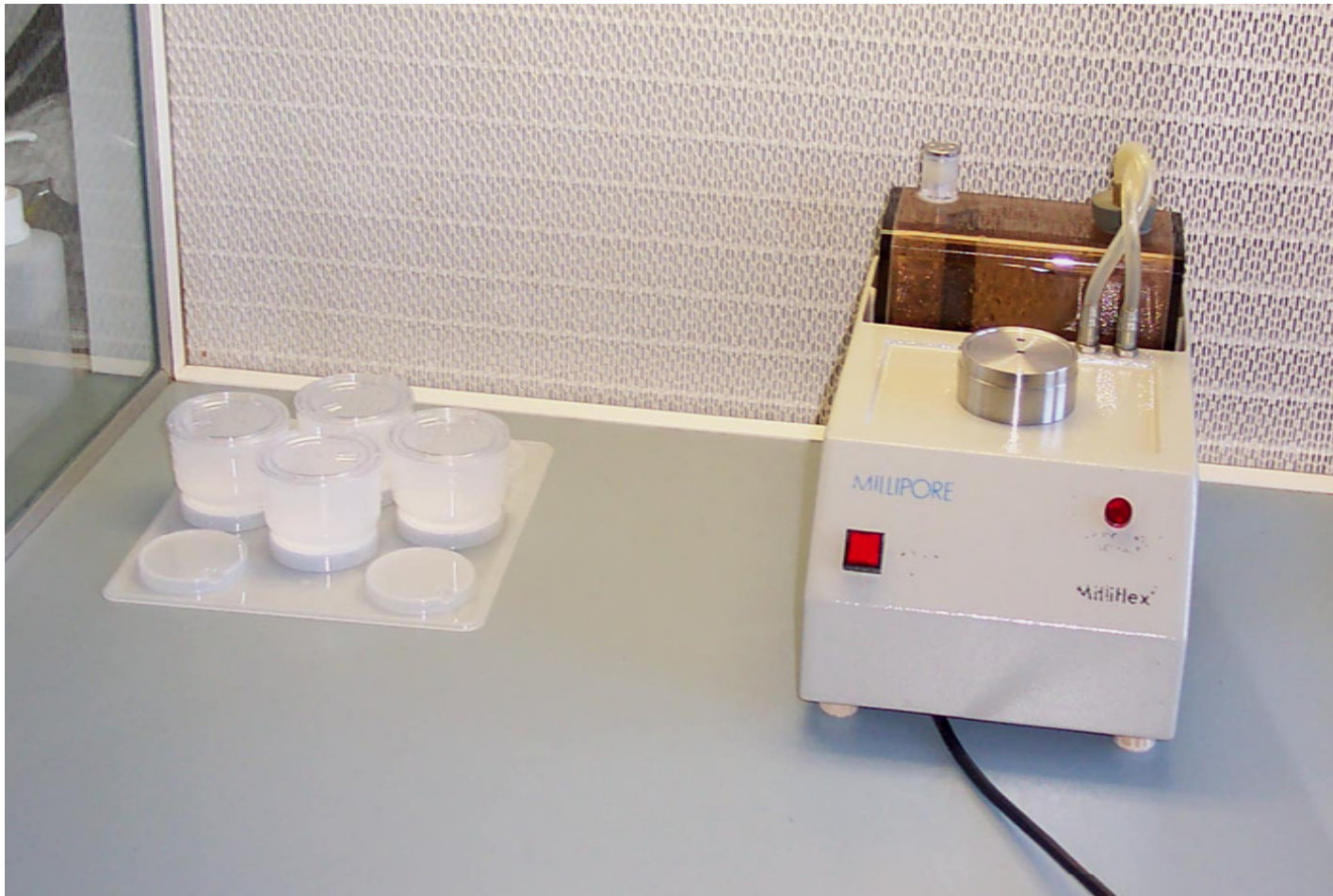


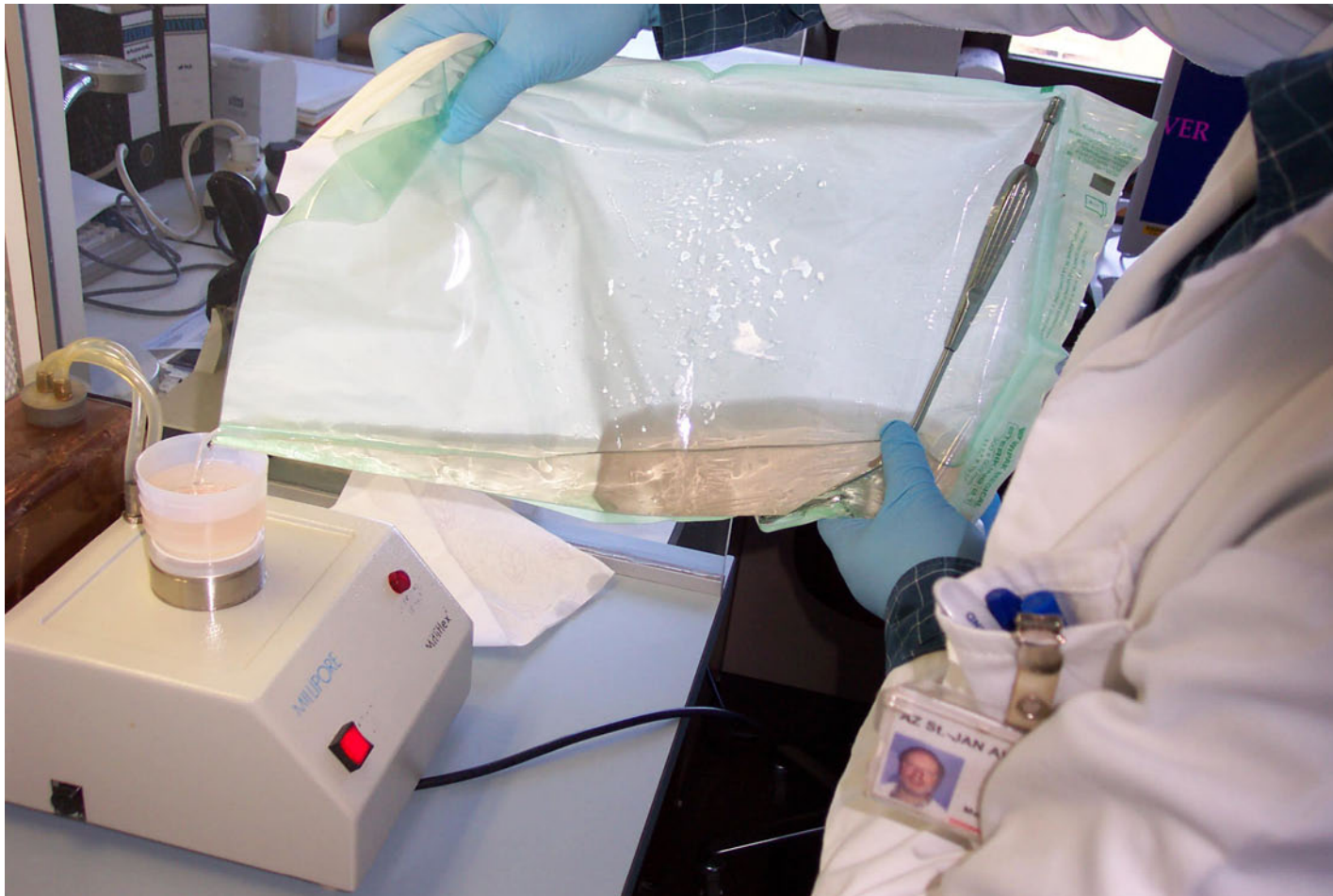


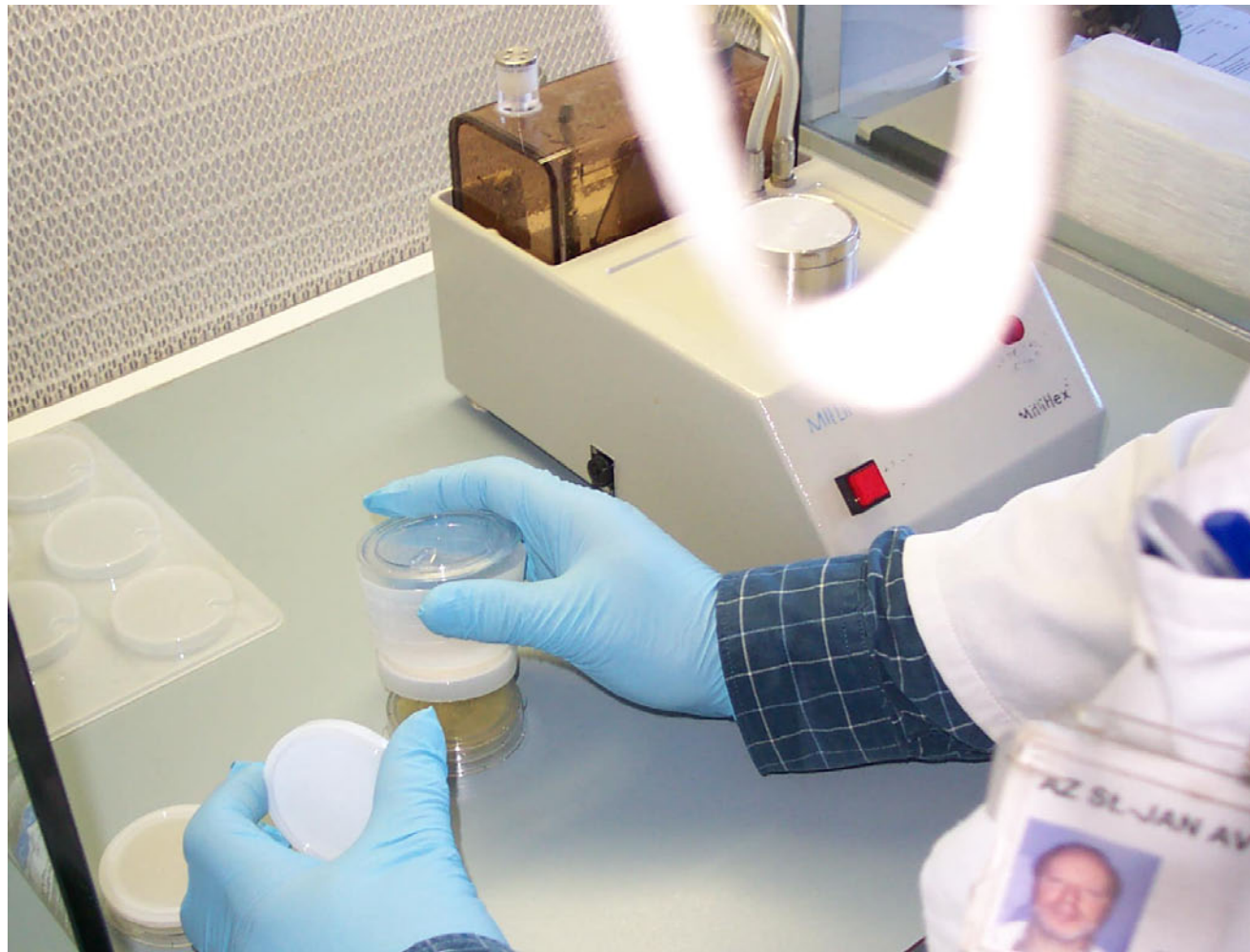


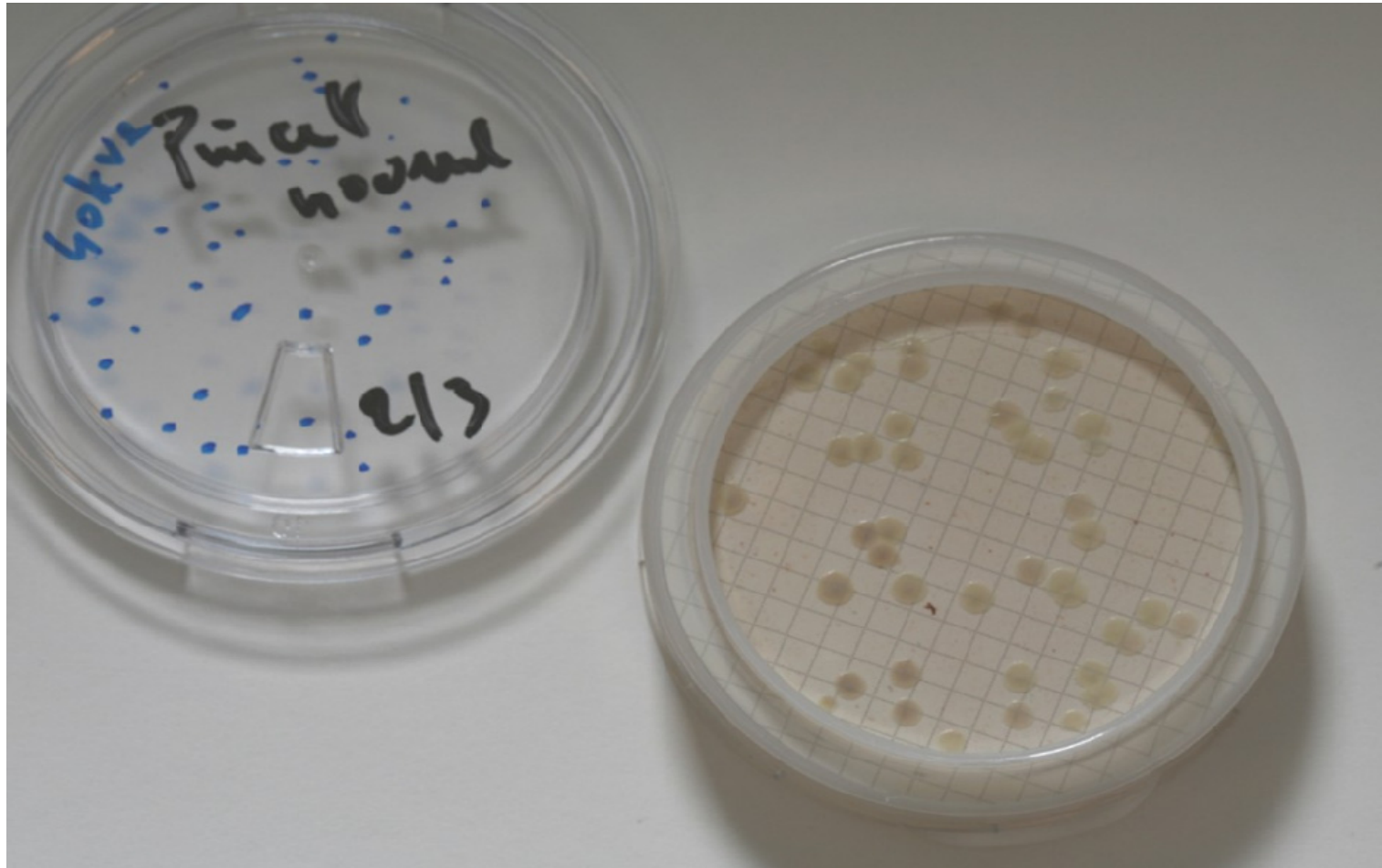


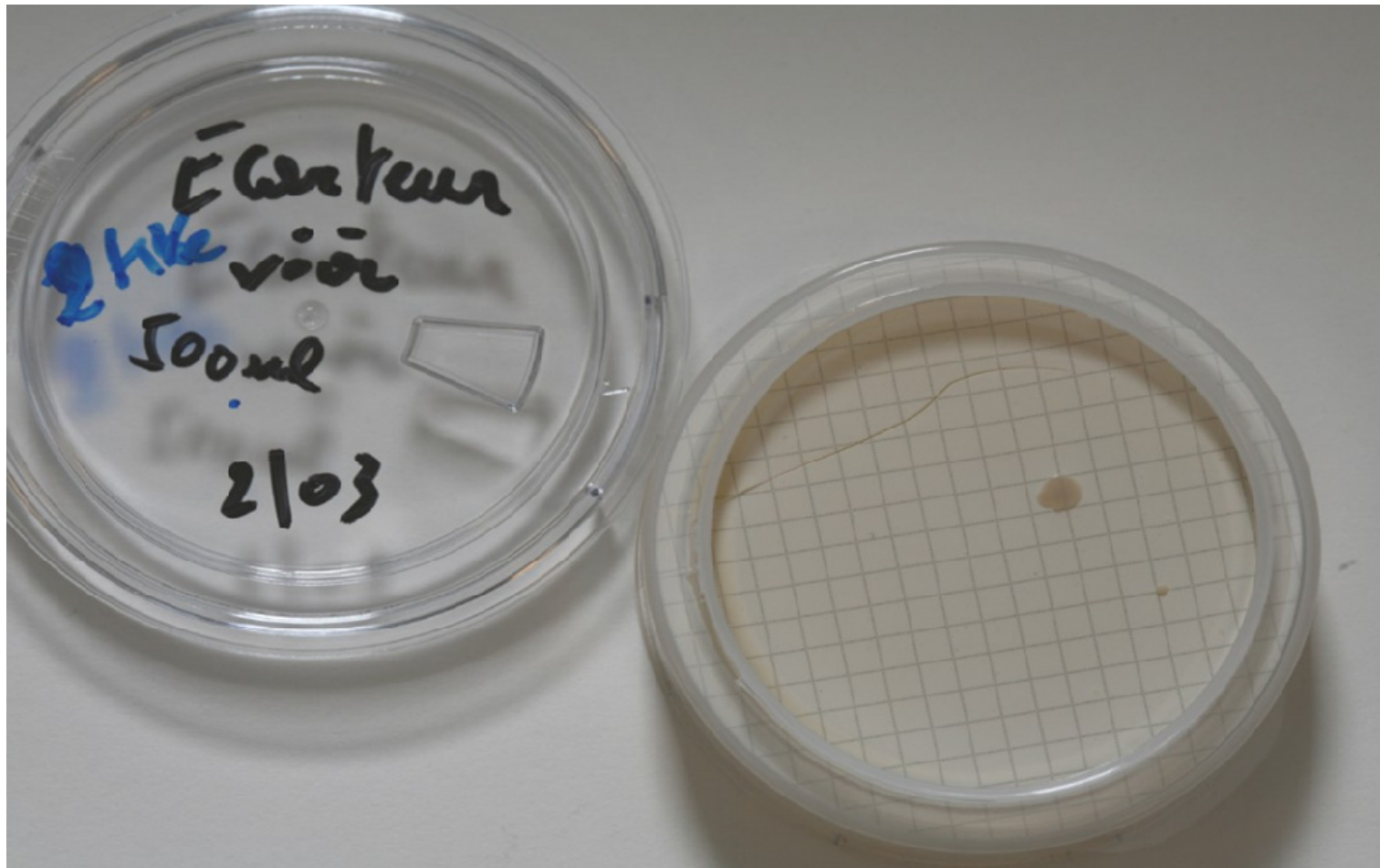










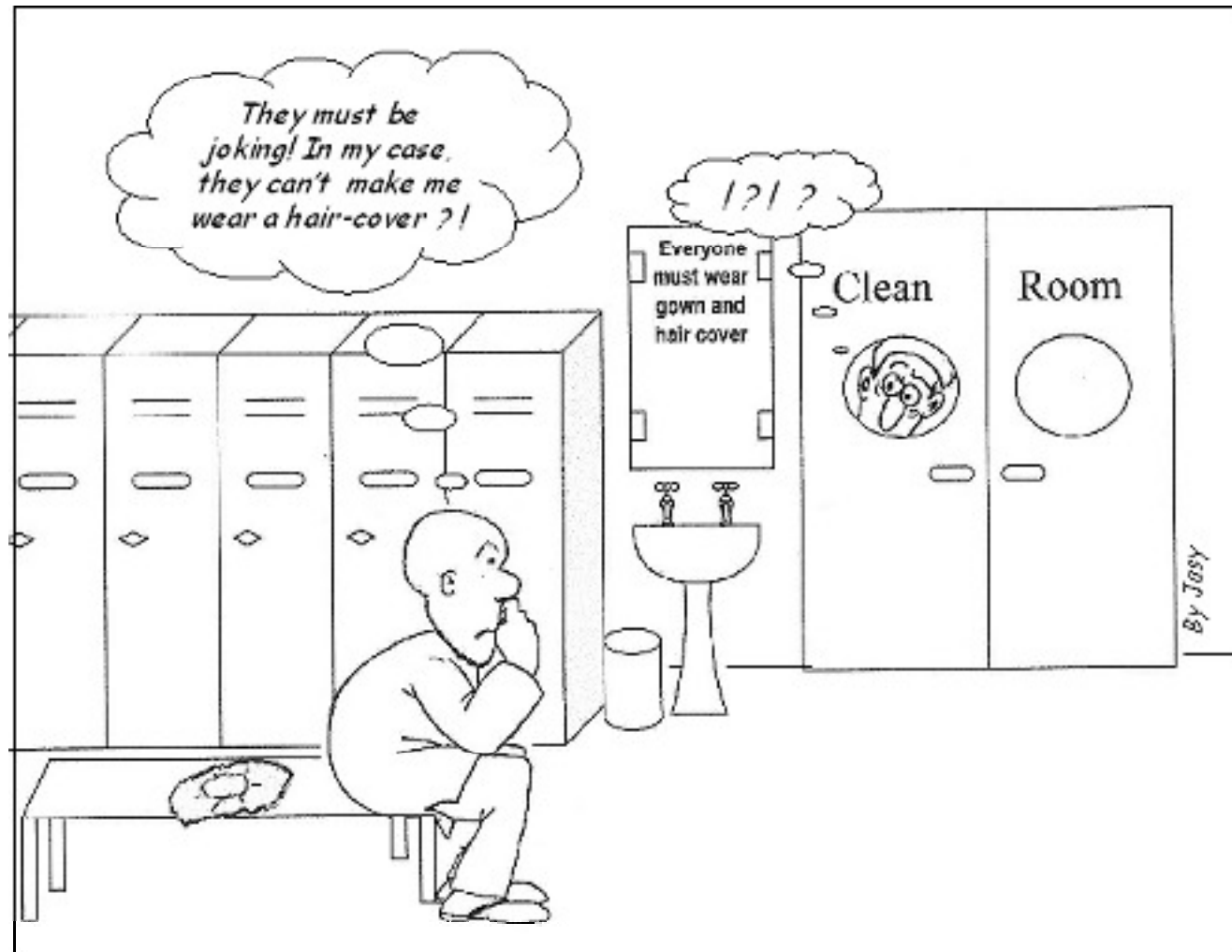


## Thyroideectomy:

- Farabeuf: 2 cfu
- Needle holder: 6 cfu

## Thrombectomy:

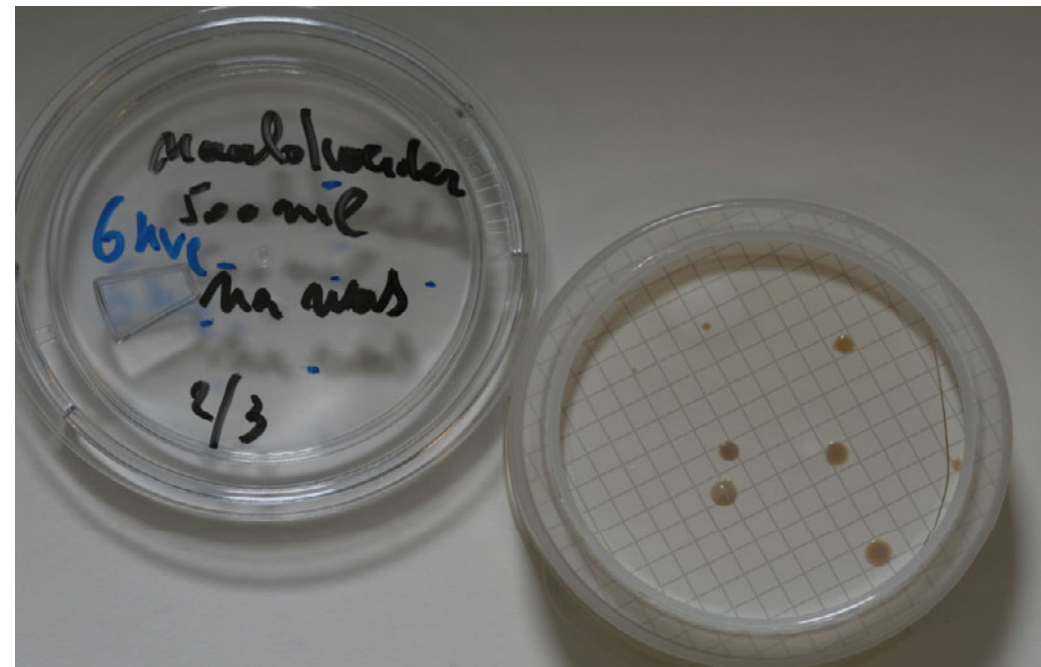
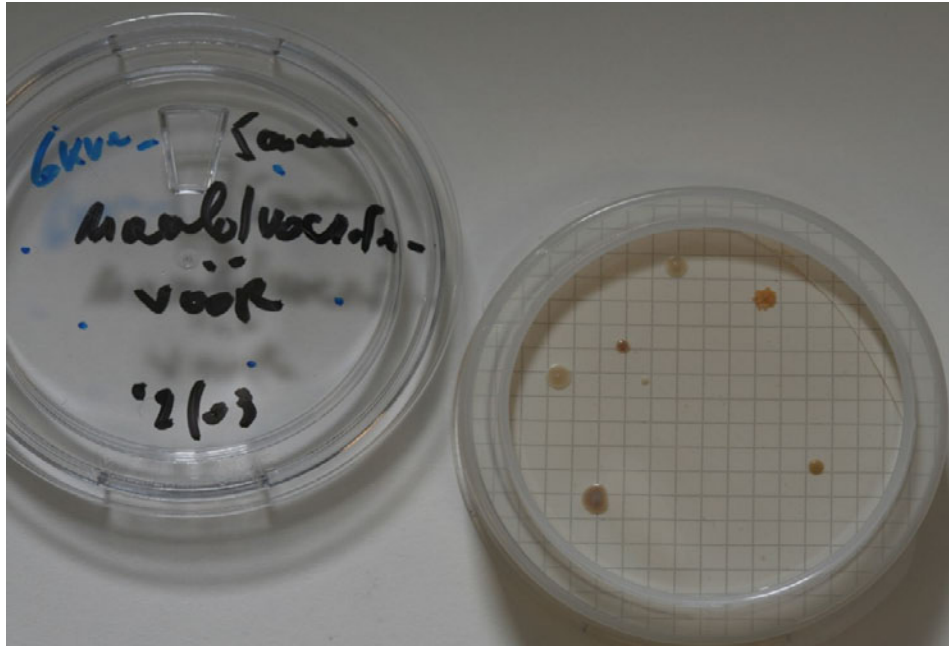
- Suction tube: 14 cfu
- Wound spreader: 3 cfu
- Pincet: 40 cfu





*Avoiding the hand to face reflex the hard way.*





Thyroideectomy:

	Before	After
• Farabeuf:	2 cfu	10 cfu
• Needle holder:	6 cfu	6 cfu

Thrombectomy:

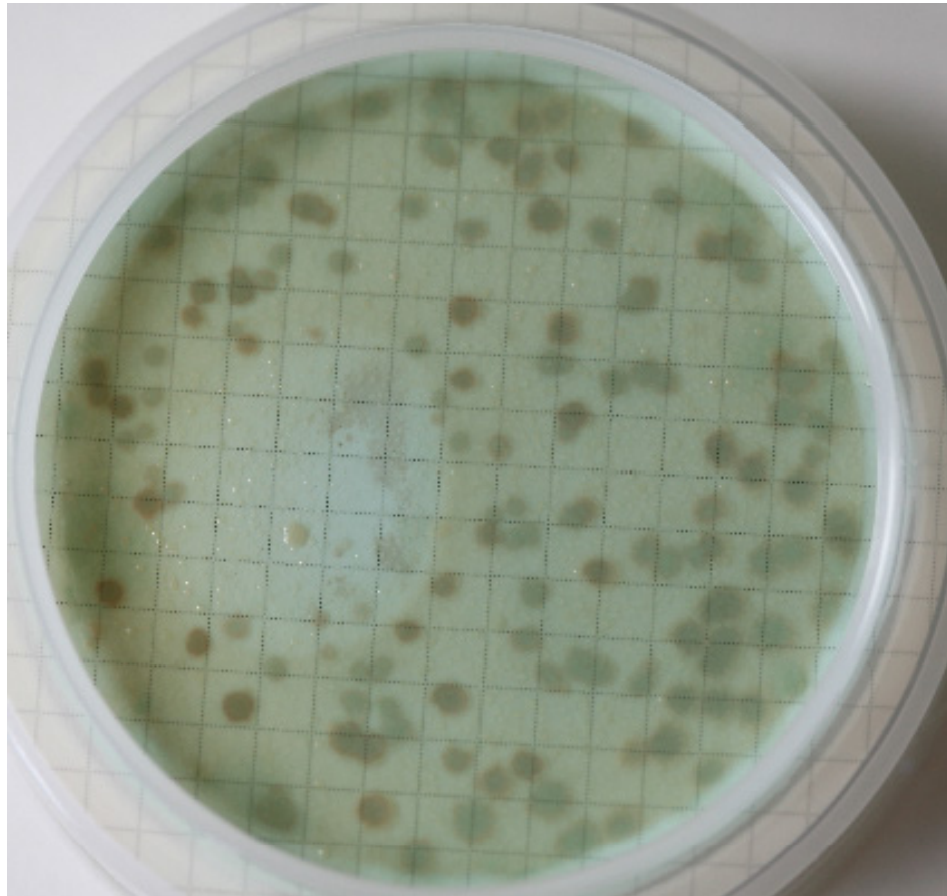
• Suction tube:	14 cfu	6 cfu
• Wound spreader:	3 cfu	6 cfu
• Pincet:	40 cfu	7 cfu

Ultrasonic unit

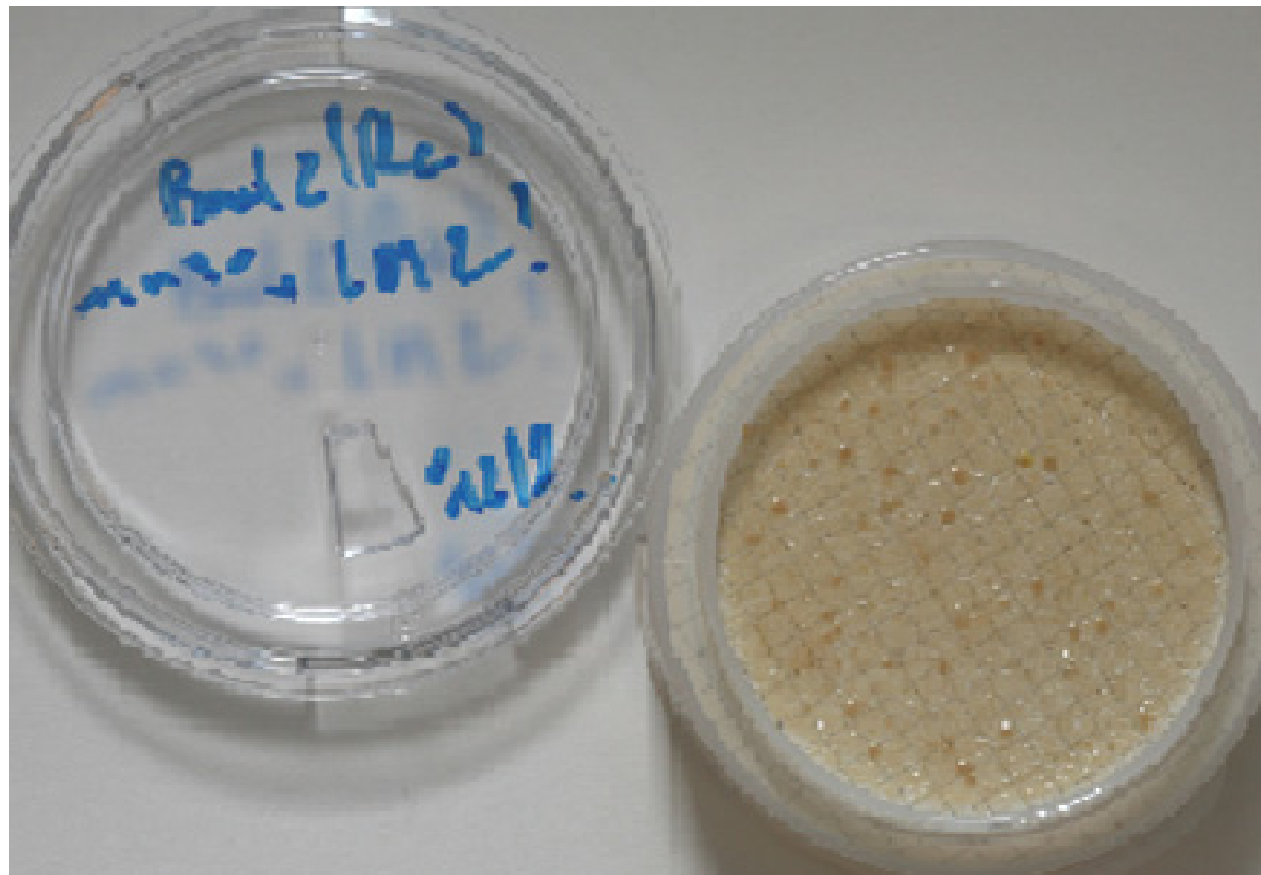
Rinsing



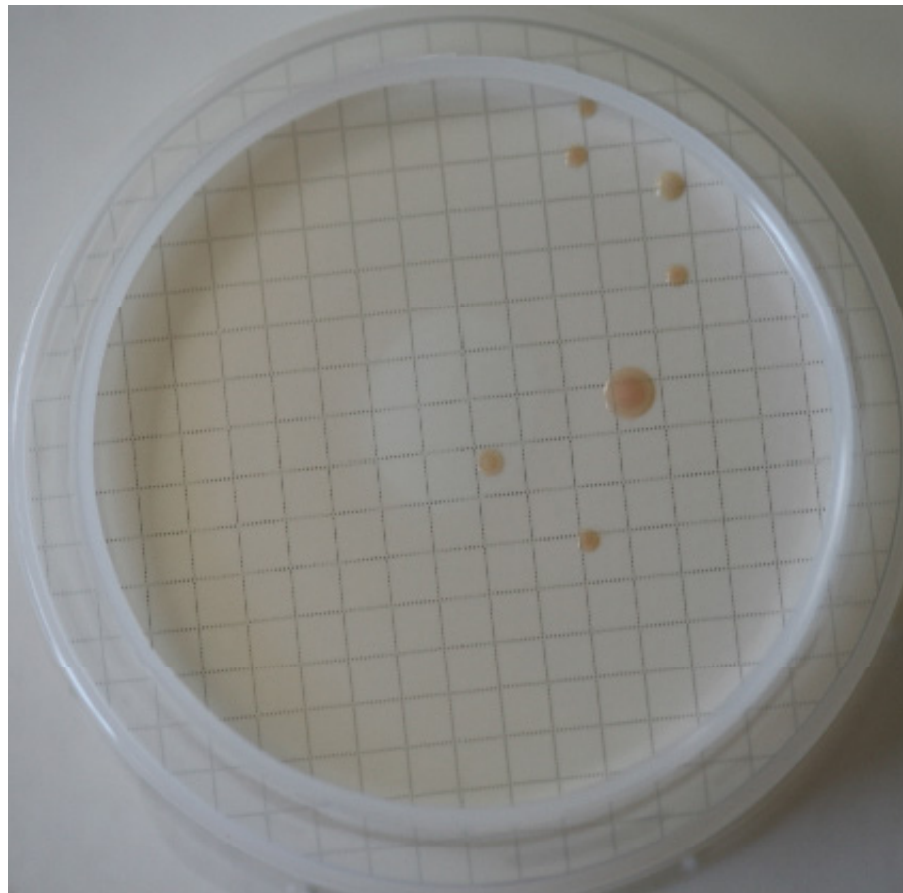
## STERILITEITSTESTEN OP ULTRASONE BADEN



## STERILITEITSTESTEN OP ULTRASONE BADEN



## STERILITEITSTESTEN OP ULTRASONE BADEN



Ultrason bath is:

- emptied in the evening and dried out.
- The sides and the lid are sprayed with alcohol 70°, and some alcohol is poured down in the drain.

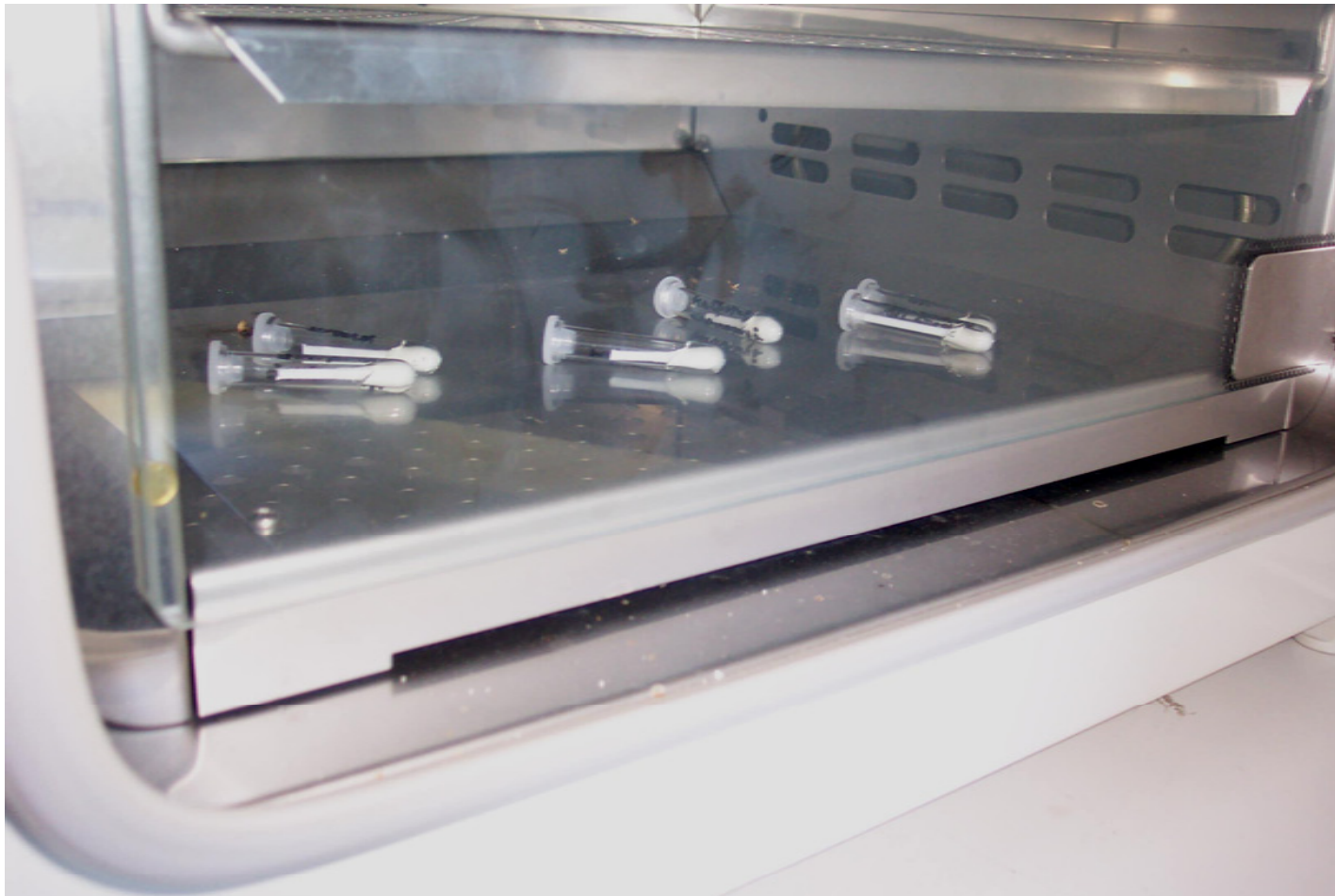


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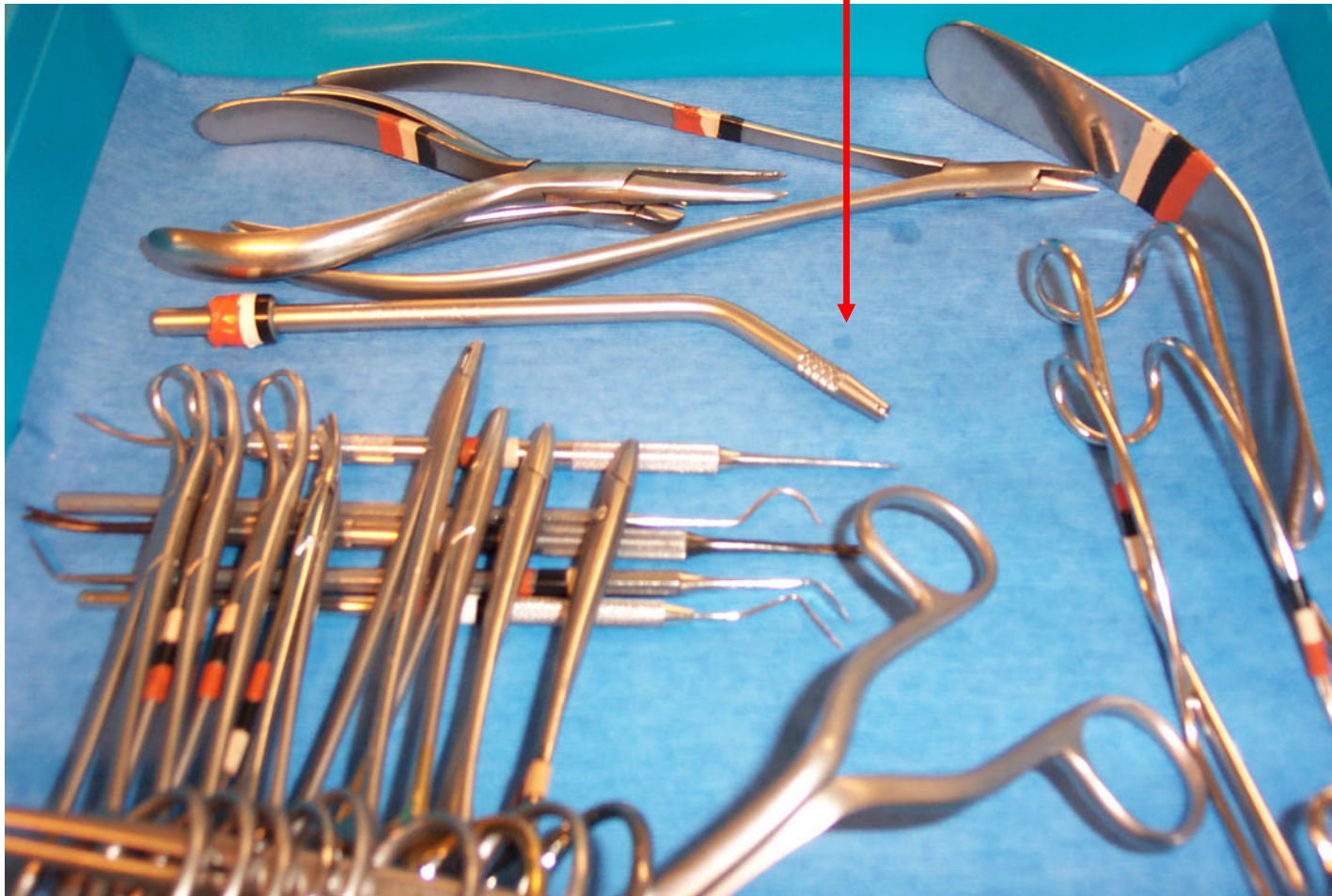
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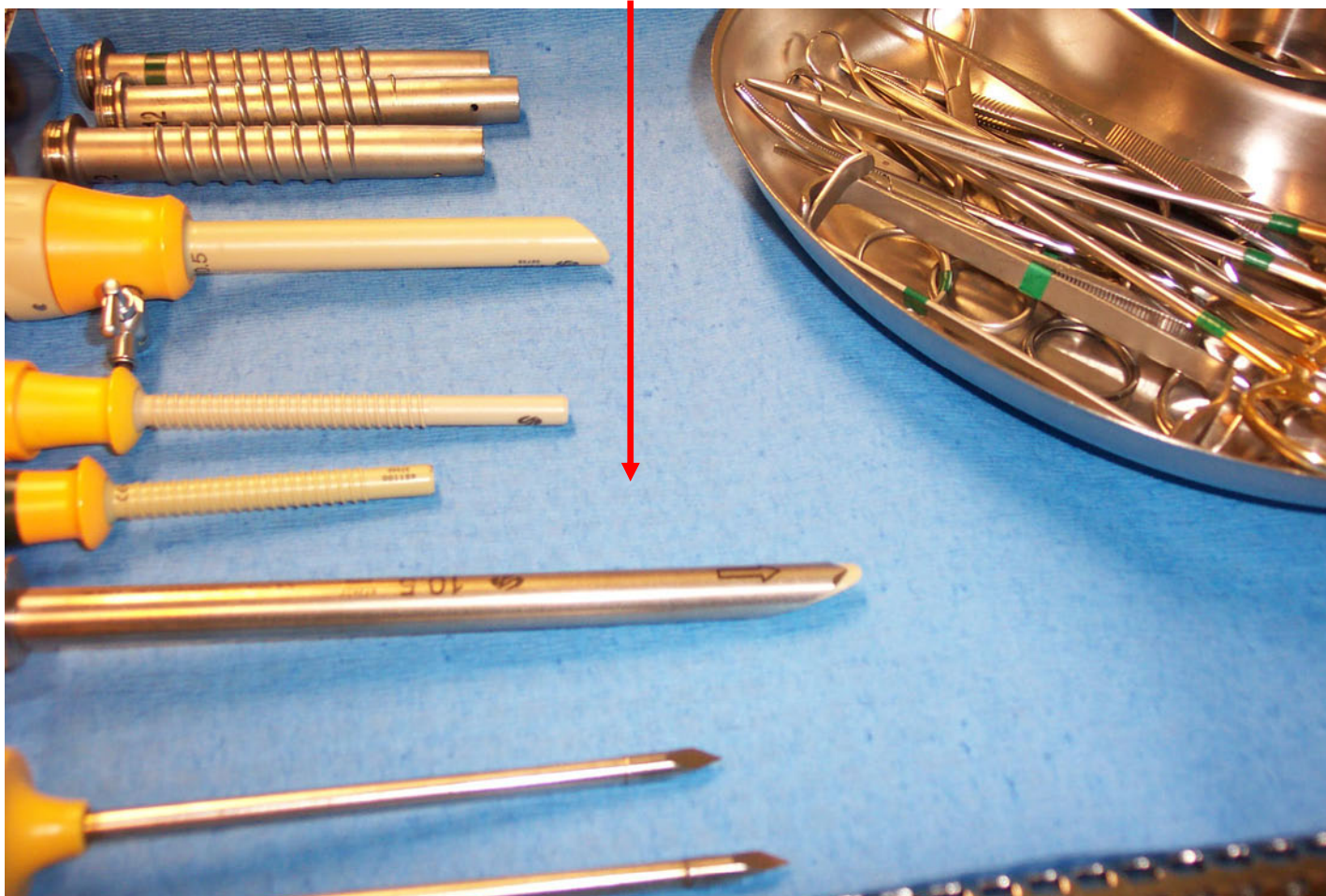


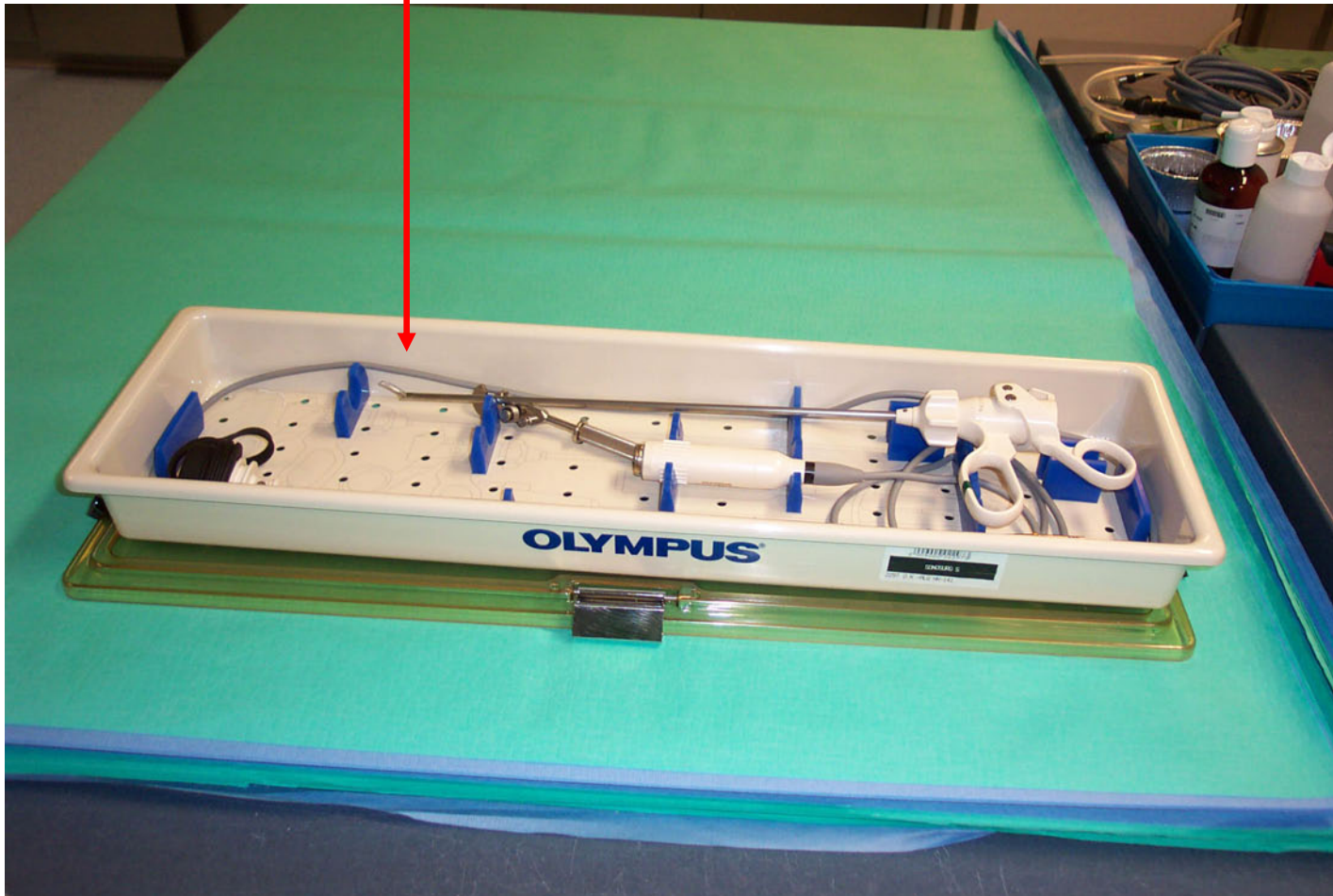
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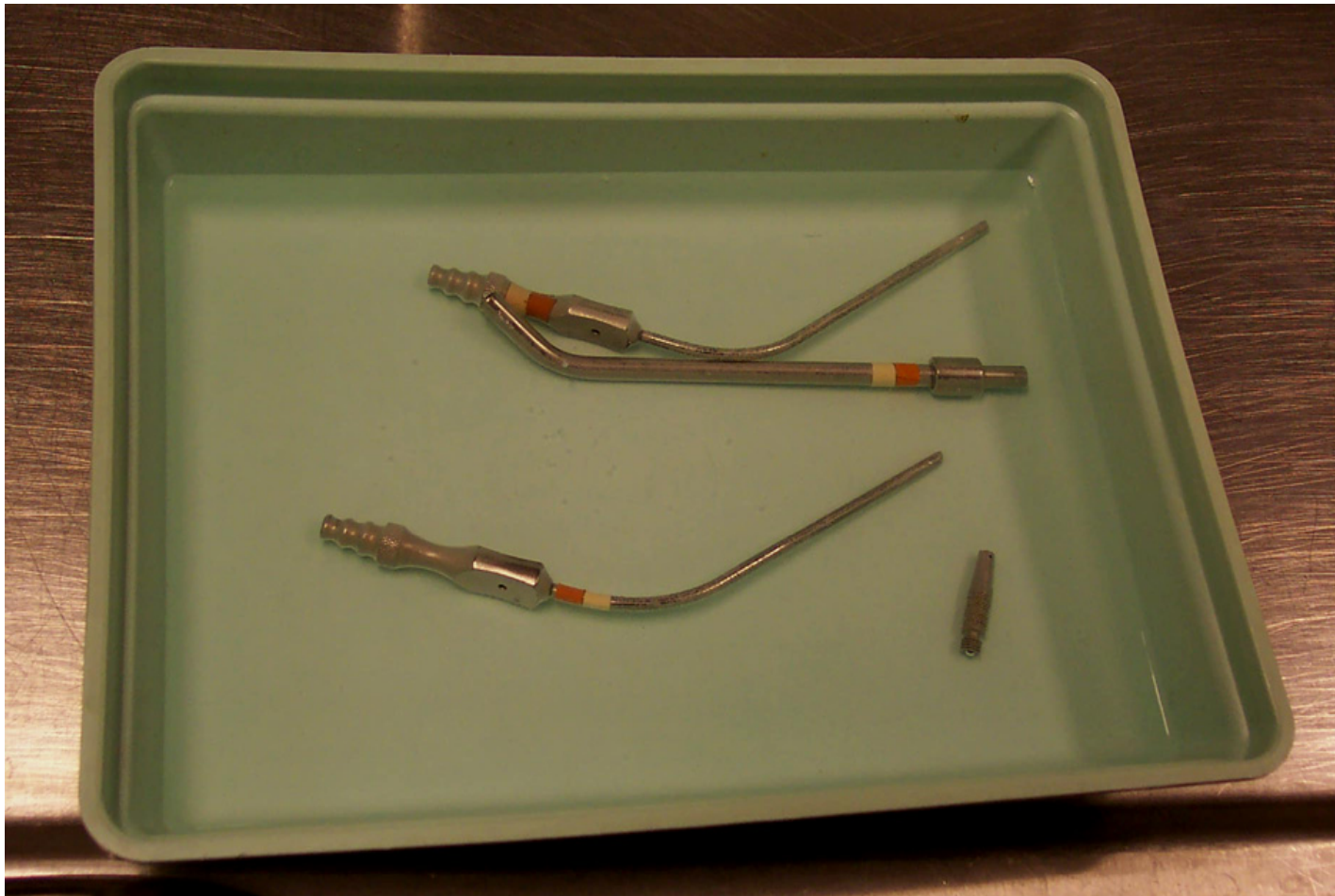




Suction tubes are:

- first rinsed with cold water and
- then treated with hydrogen peroxide 3 %,
- next: normal procedure.

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What kind of sterilization practice do we want?

- Voice in the writing of norms
- Scientific underpinning of our discipline
- Future developments

## Future developments

- Consolidation of quality
- Validation

**Gevalideerd**

**Amersfoort**

Tel: 033 450 88 00

Metingen

Inspecties

Validaties



**Door:**

M. El Kasah

**Datum:**

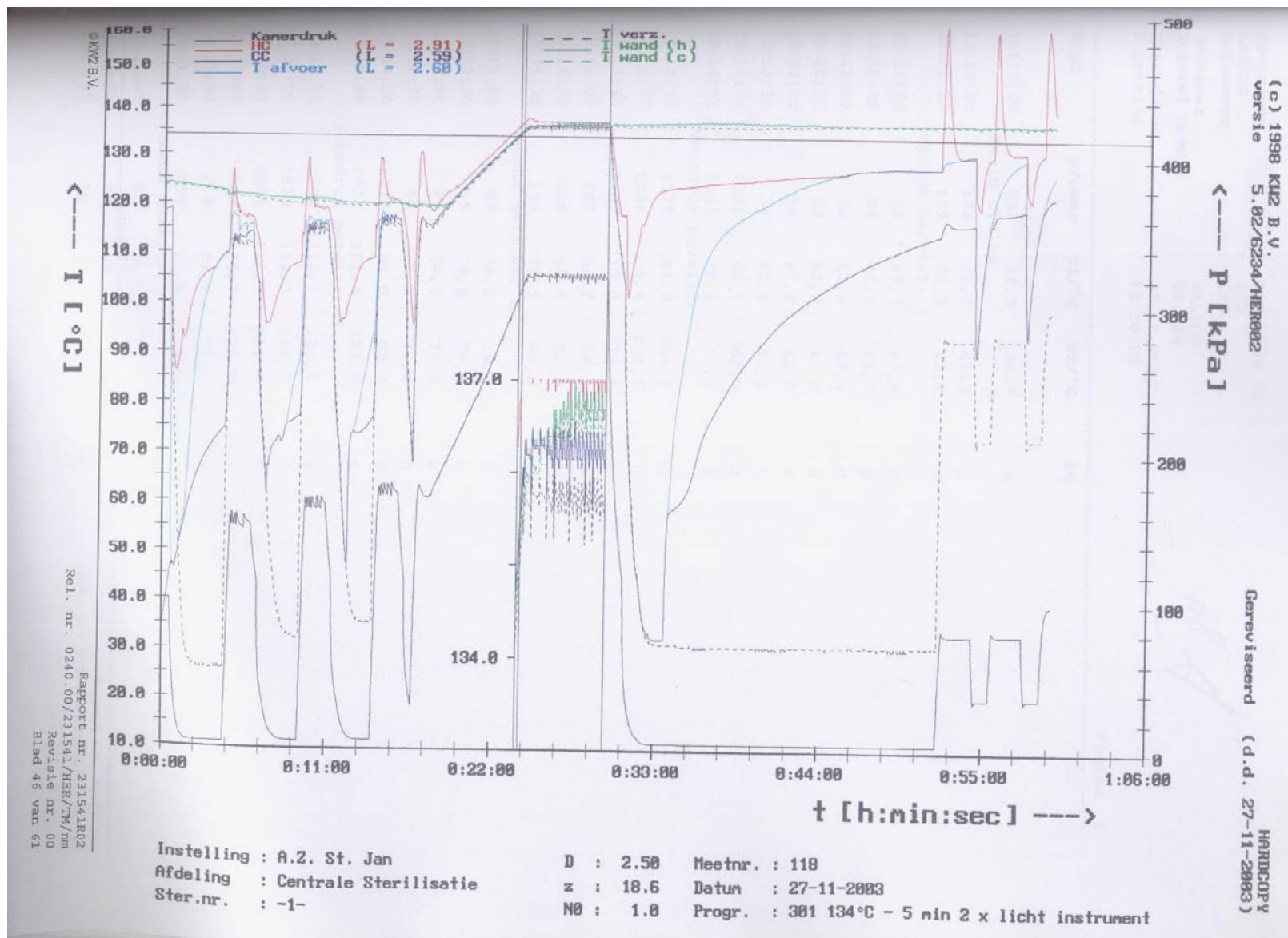
03-05-06

**Rapport  
nummer:**

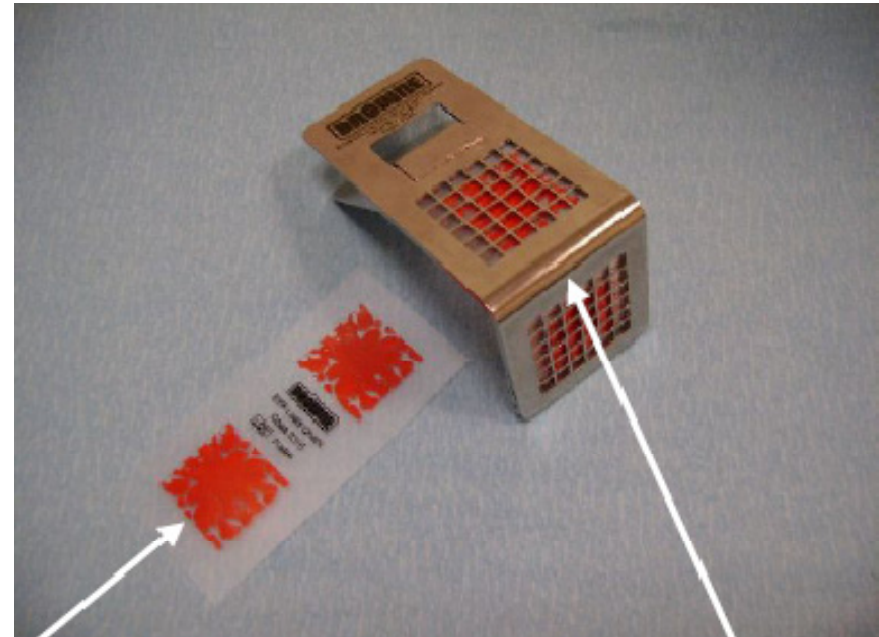
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## Future developments

- Consolidation of quality
- Validation
- Controls



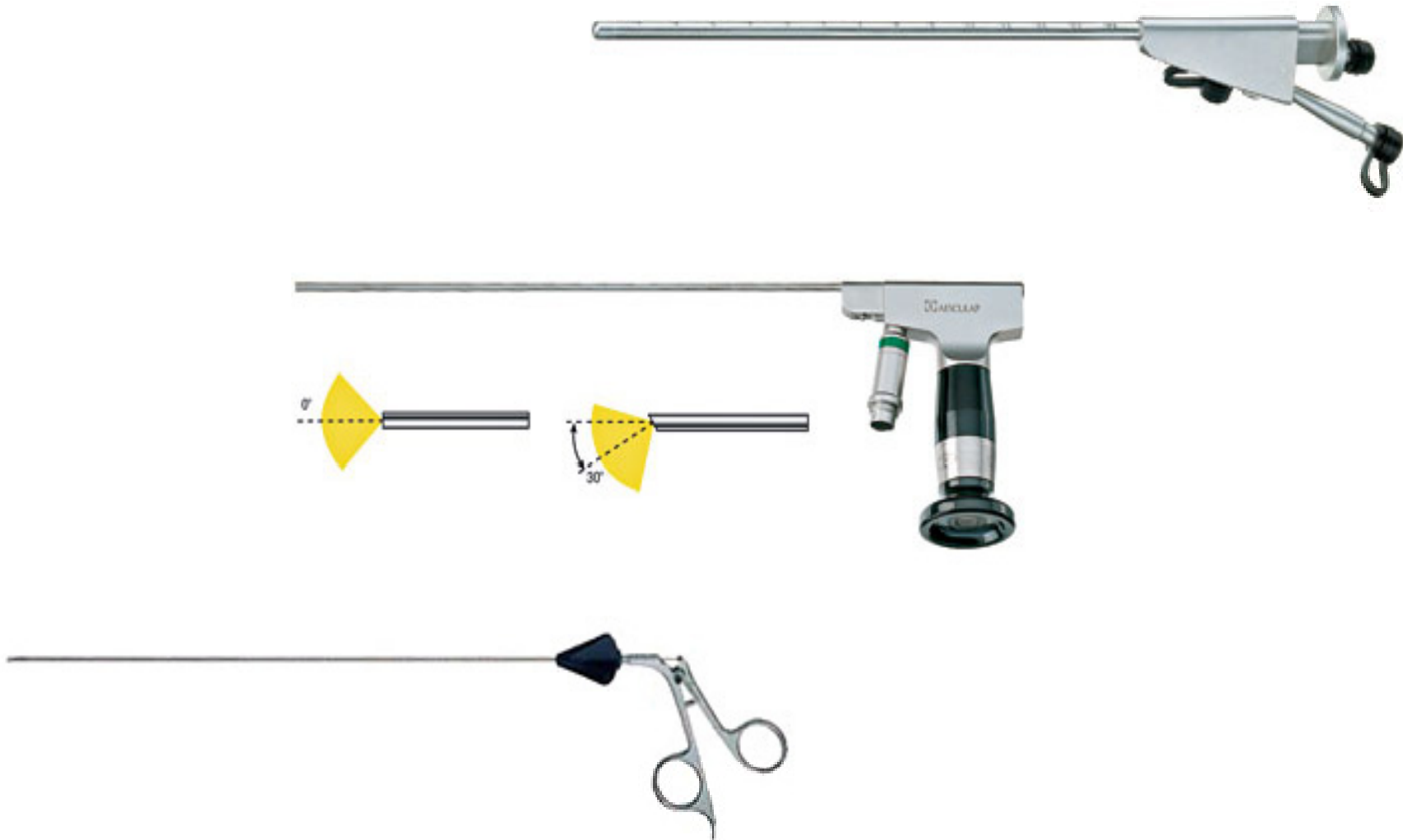
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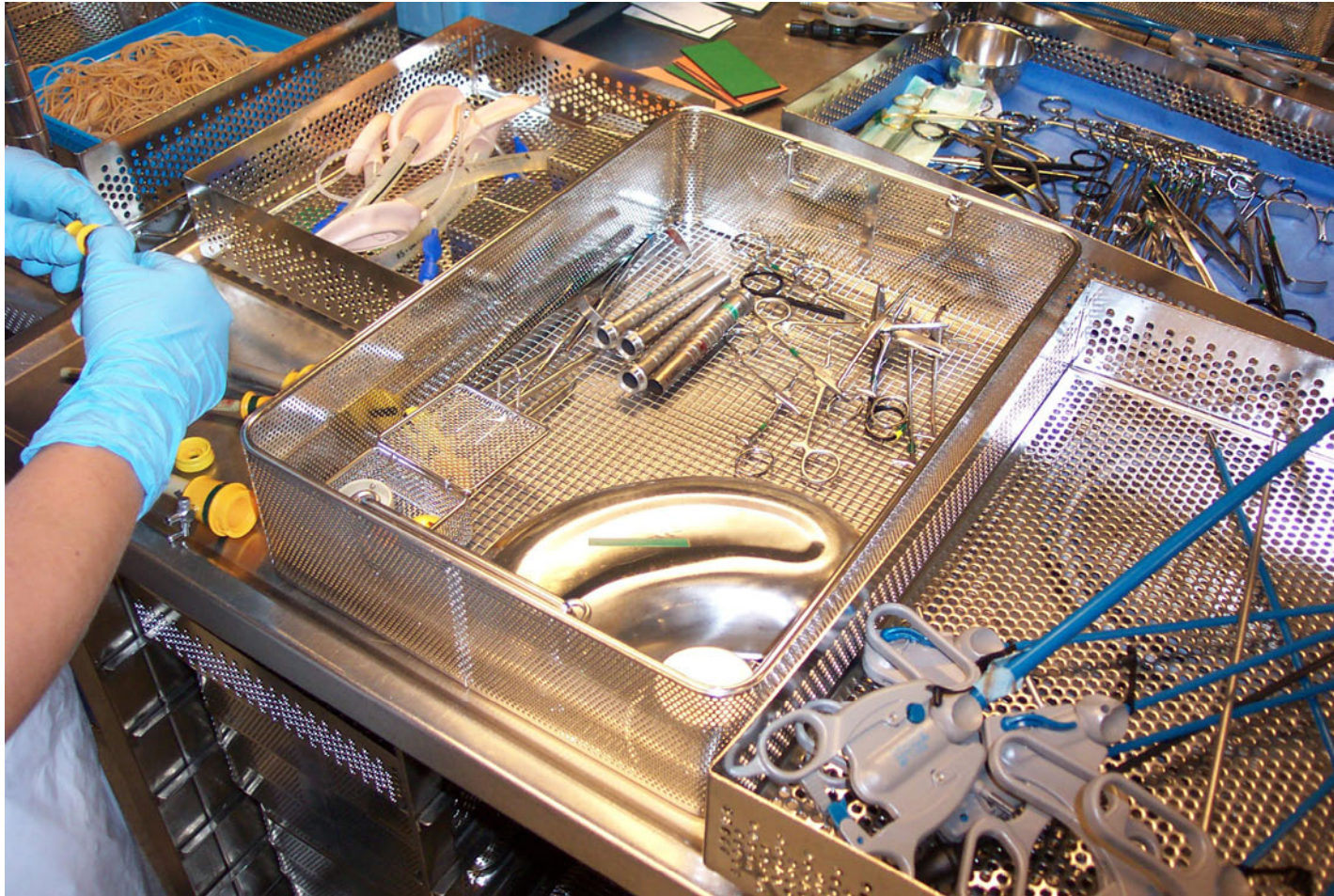
## Future developments

- Consolidation of quality
- Validation
- Controls
- Back to the future?

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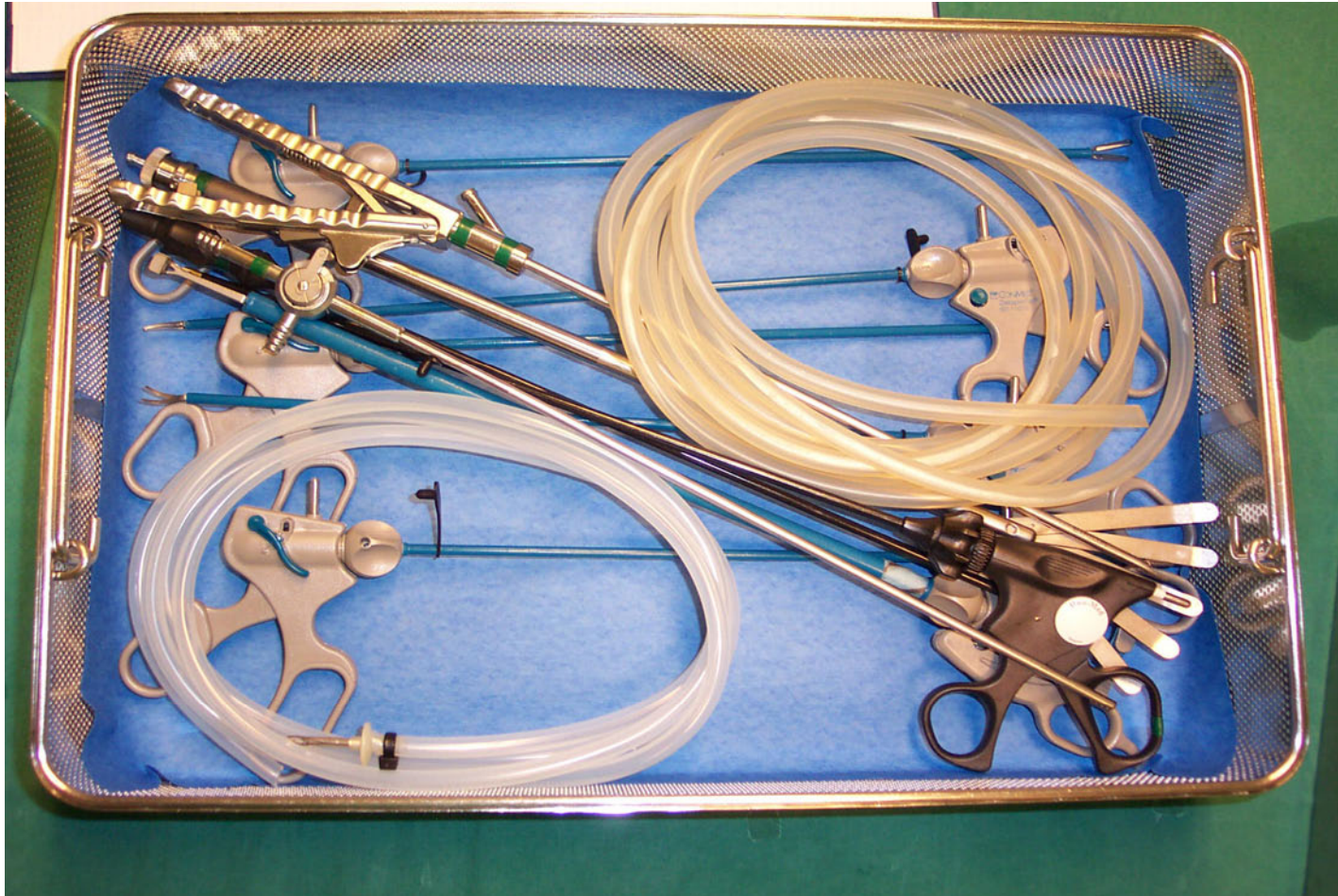












# Natural Orifices Transluminal Endoscopic surgery



## Conclusion

- Do we opt for sterilization within our own control or not, inside or outside the hospital?
- Do we opt for an independent department which has an “evidence based” practice?
- Are we prepared to do an effort to maintain our level of knowledge?
- Do we choose for co-operation in order to stimulate progress and innovation?

We can and have to be big in  
something small !

THANK YOU

WFHSS