Entering the lab
(A fresh beginning)

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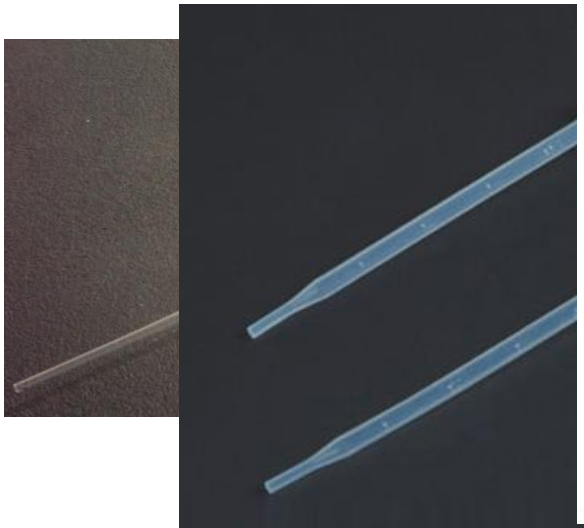
Types of pipettes

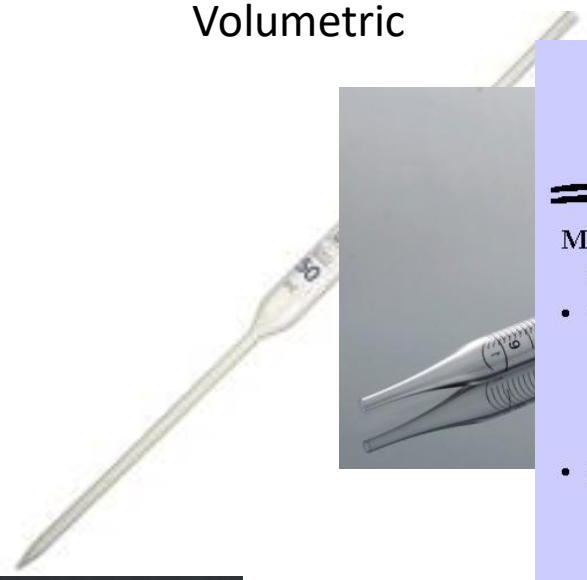
Table 1.1.4 Summary of Pipet Types

Type	Max. volume	Materials	Comments
Pasteur	1 to 2 ml	Borosilicate or soft glass	Disposable
Transfer (Beral)	0.3 to 23 ml	Polyethylene	Disposable
Volumetric	1 to 100 ml	Borosilicate	TD–drain; TC–blow out
Serological	0.1 to 50 ml	Borosilicate or polyethylene	TD–blow out
Mohr	1.0 to 50 ml	Borosilicate	TD–to mark
Micropipettors	1 to 1000 µl	Disposable polypropylene tips	
Pipettors	1 to 20 ml	Disposable polypropylene tips	

To contain (TC)
To deliver (TD)

Pasteur Transfer Volumetric Serological Mohr





MOHR AND SEROLOGICAL PIPETTES

Measuring pipettes are divided into:

- MOHR PIPETTES
  - the graduations on these always end before the tip

- SEROLOGICAL PIPETTES
  - the graduation marks continue to the tip

Types of pipettors

Micropipettors

Manual

Electronic

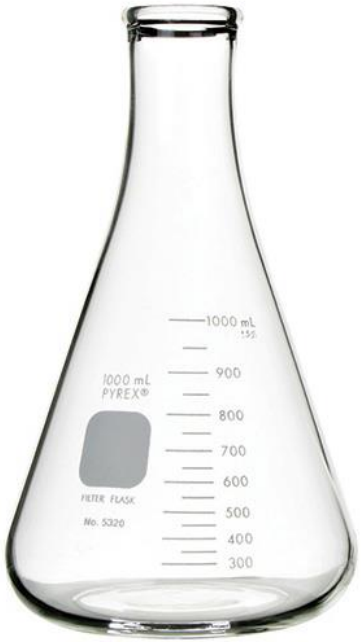
Electronic pipettor

Robotics

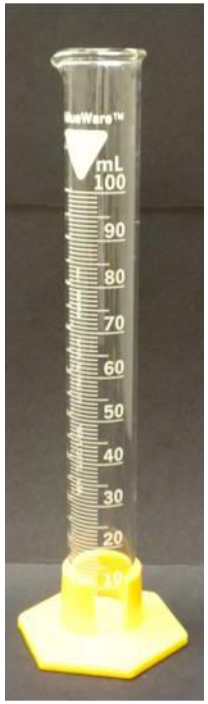
Flasks

Beaker

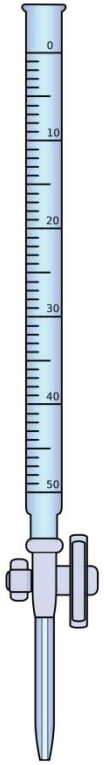
Erlenmeyer



Graduated cylinder



Buret



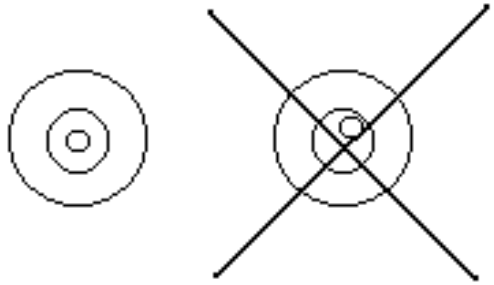
Volumetric

Electronic balances

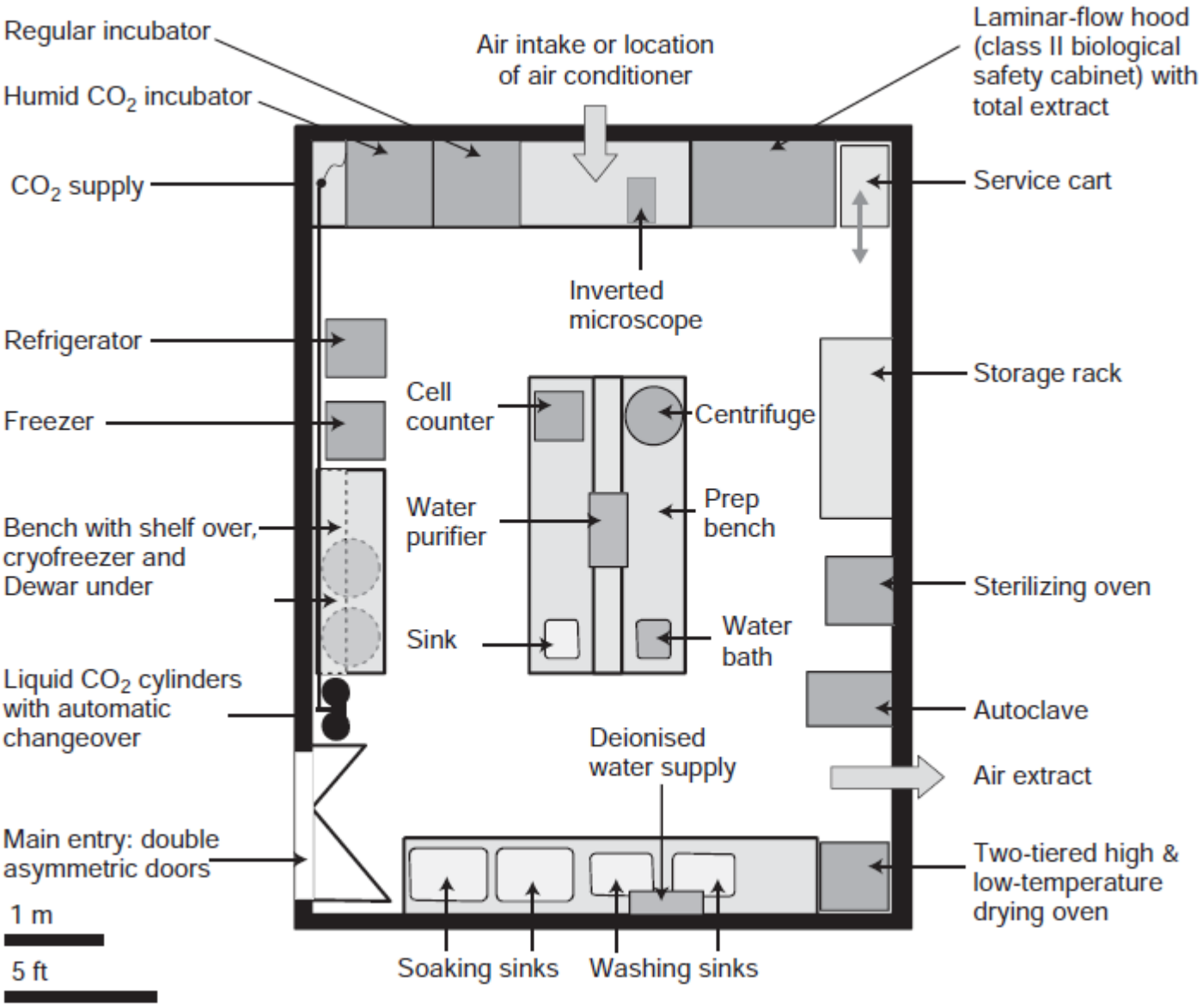
A

B

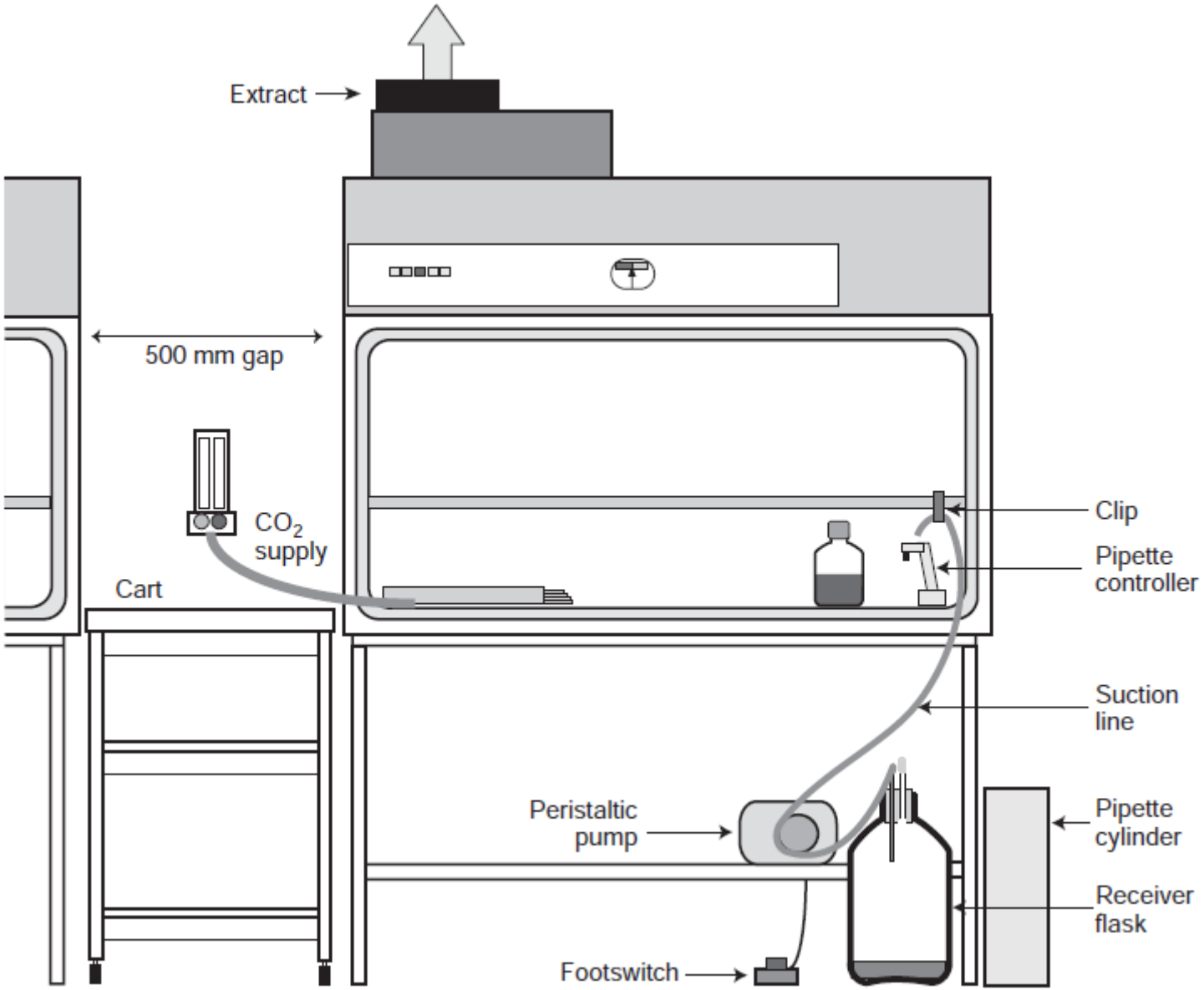
C



Small tissue culture laboratory

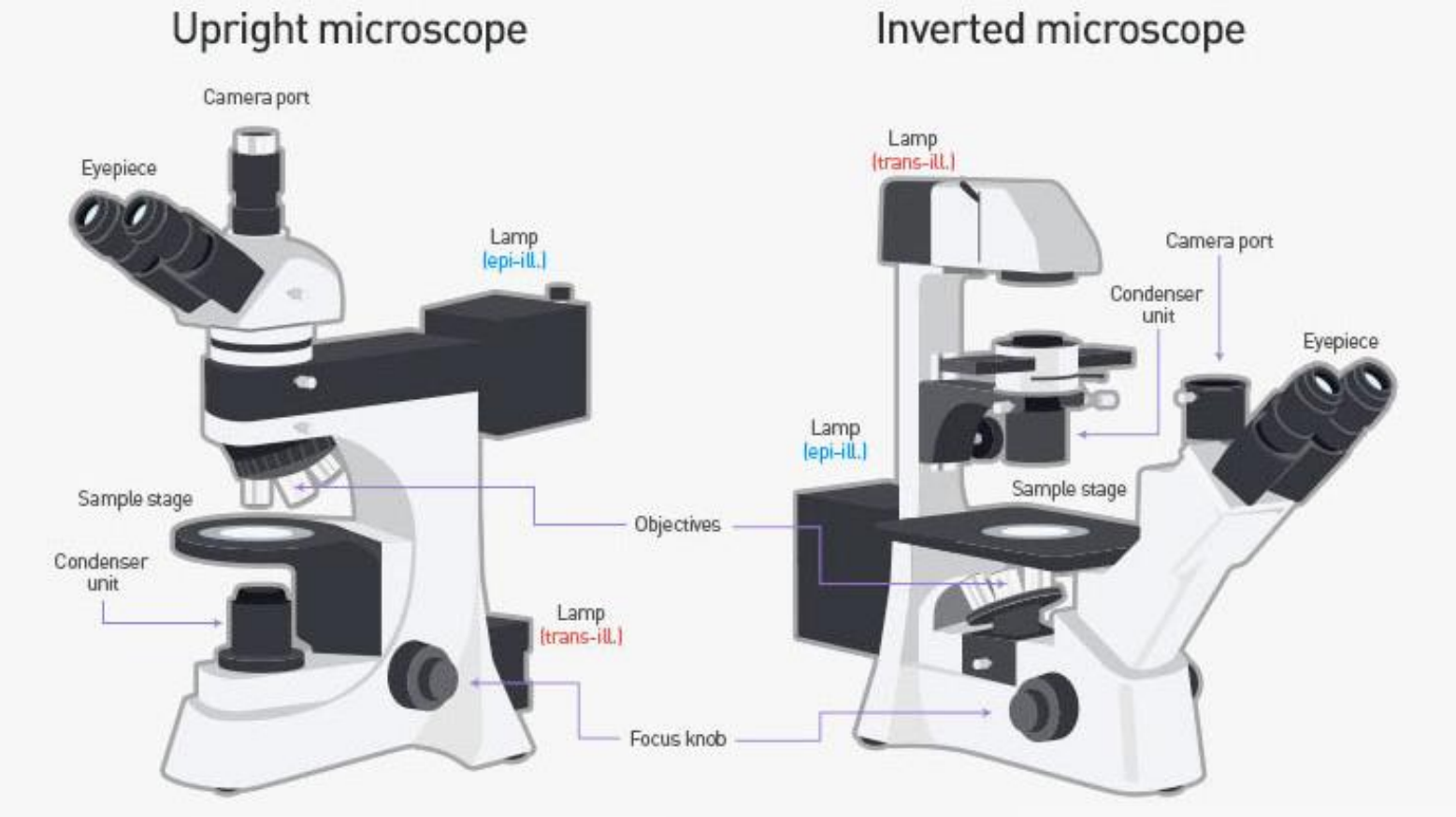


Laminar flow hood

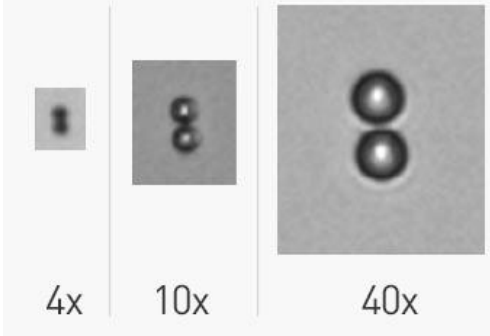


Liquid dispensers

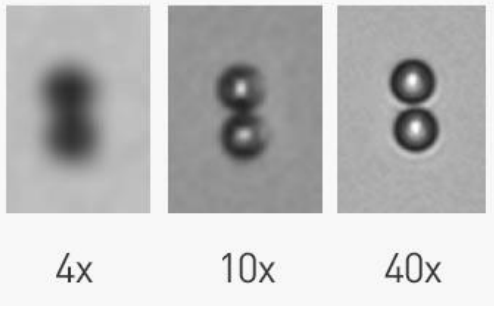
Common light microscopes



Magnification:



Resolution:



CO_2 incubator

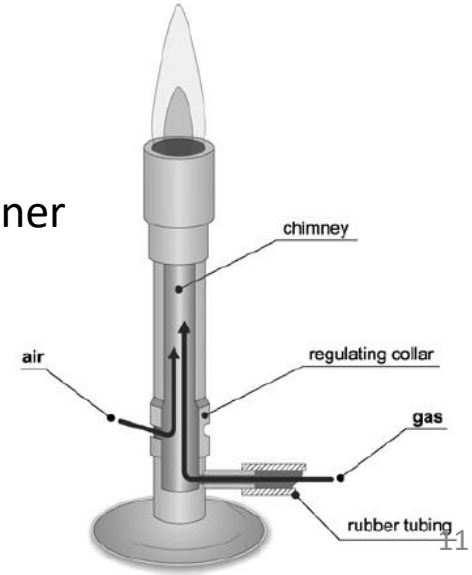
Sterilizing the material

Vertical autoclave

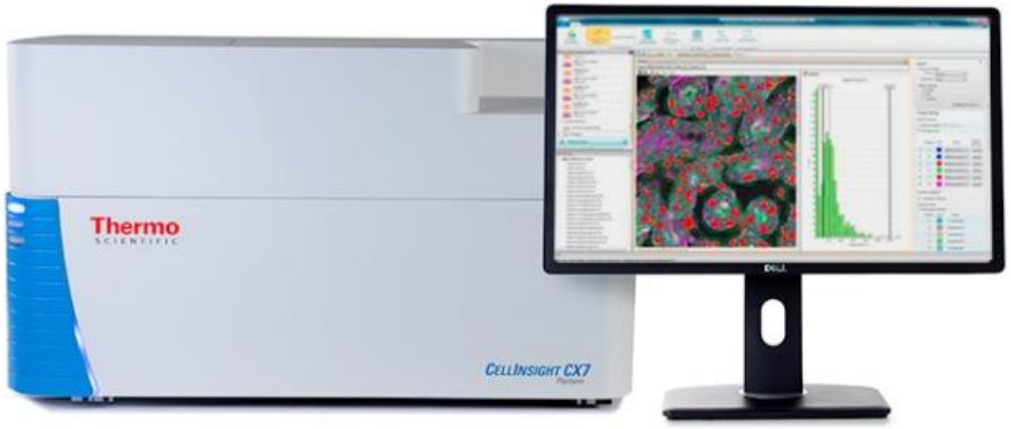
Horizontal autoclave

Sterilizing oven

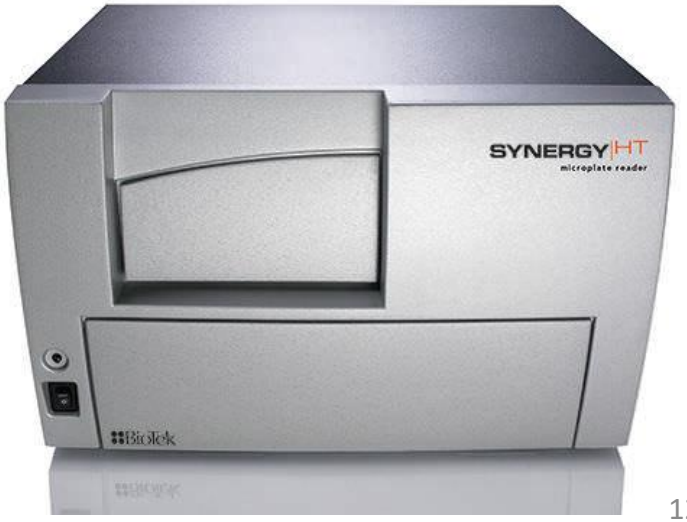
Bunsen burner



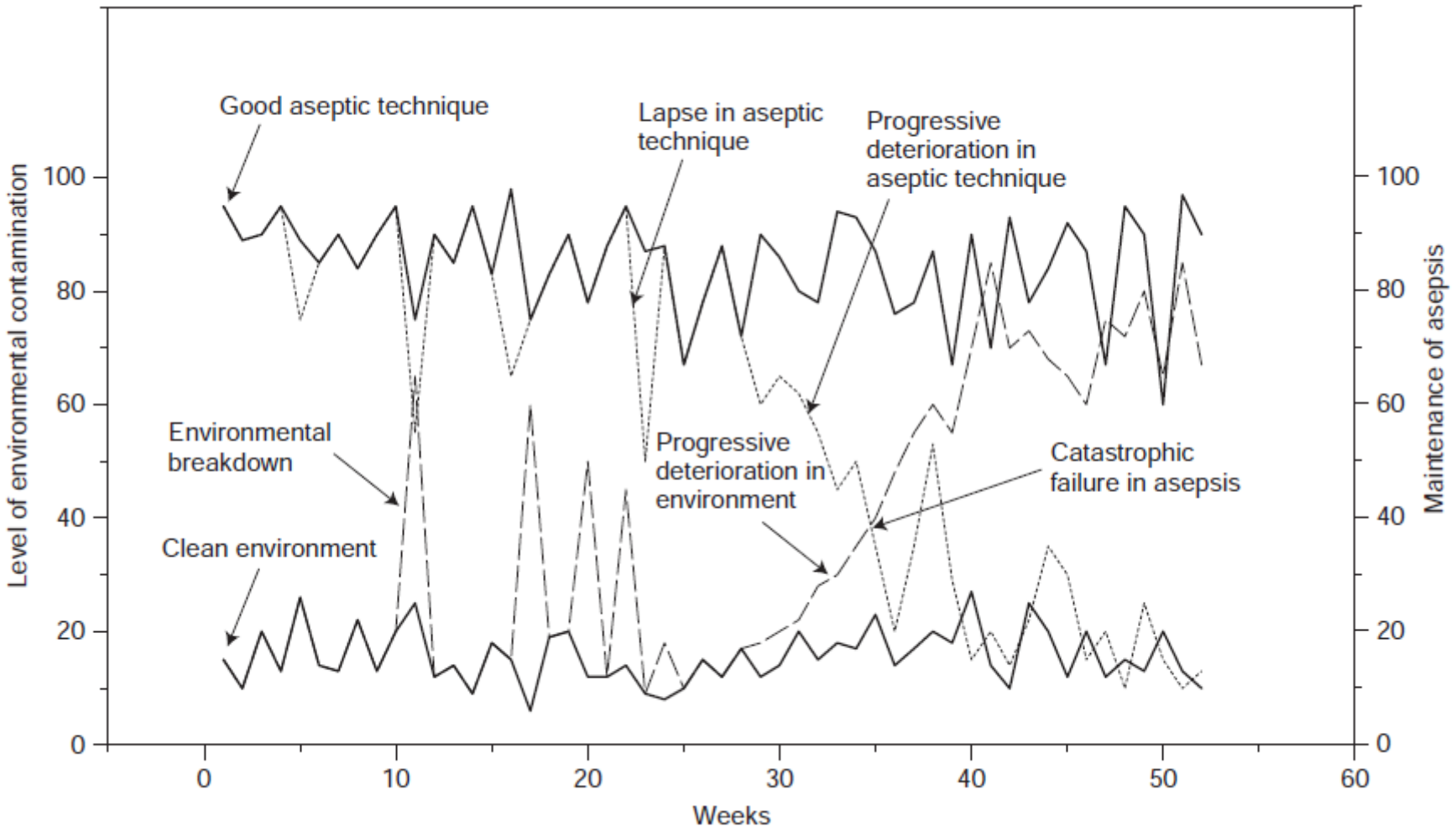
Microplate readers - spectrometers



Colorimetry
Fluorescence
Fluorescence polarization
Luminescence
Microscopy



Probability of contamination



Reading material

Gallagher, S.R.; Wiley, E.A. “Current Protocols in Essential Laboratory Techniques”
Volume/Weight Measurement
Reagent Preparation
Cell Culture Techniques

Freshney, Y. “Culture of animal cells”
Laboratory Design, Layout, and Equipment
Equipment and Materials
Aseptic Technique
Safety, Bioethics, and Validation

Planning the assay