

Lab : 1

Laboratory Safety Measures and the use of light Microscope

Learning outcomes

- Be familiar with general safety measures in a microbiology laboratory.
- Be familiar with different parts of a compound light microscope and its use.
- Be familiar with different morphological types and arrangements of bacteria

At the end of this lab you will be:

General safety measures in a microbiology laboratory.

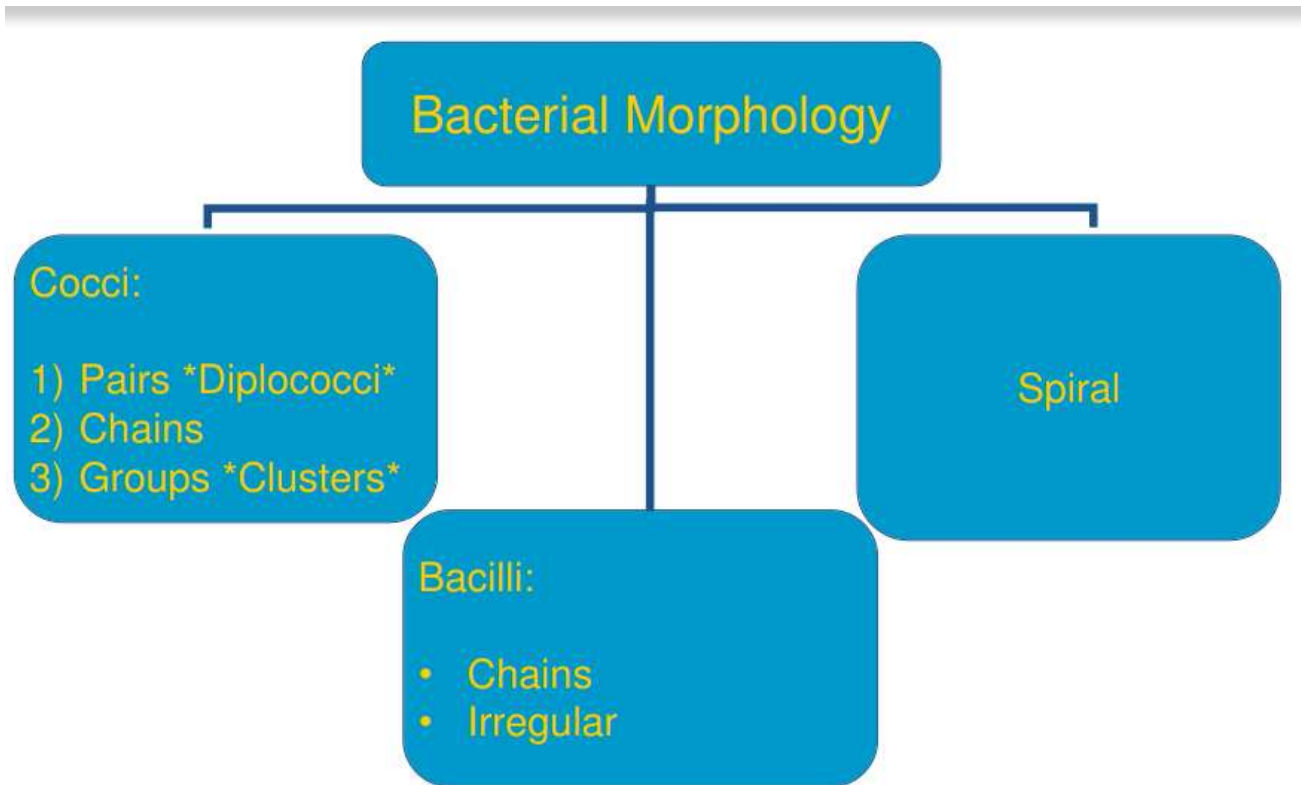
- Light microscopy.
- Morphology and arrangements of different bacteria.

Lab safety



Light Microscope





Other forms

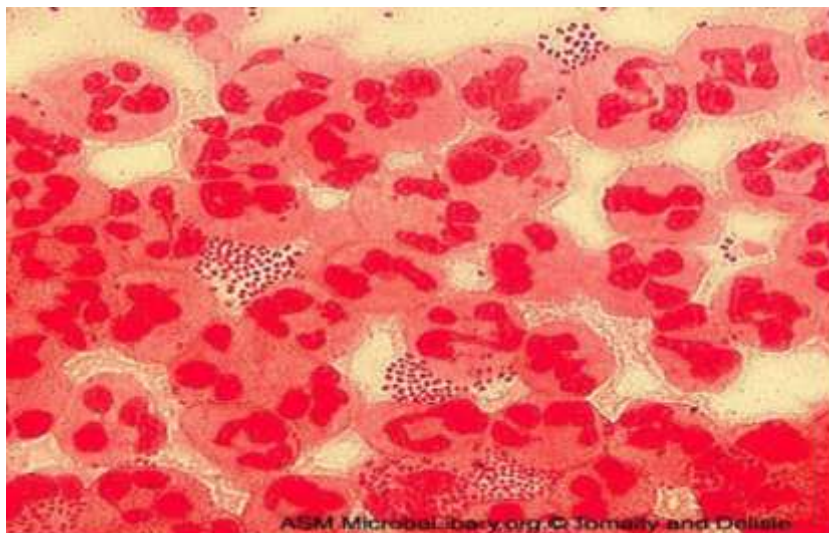
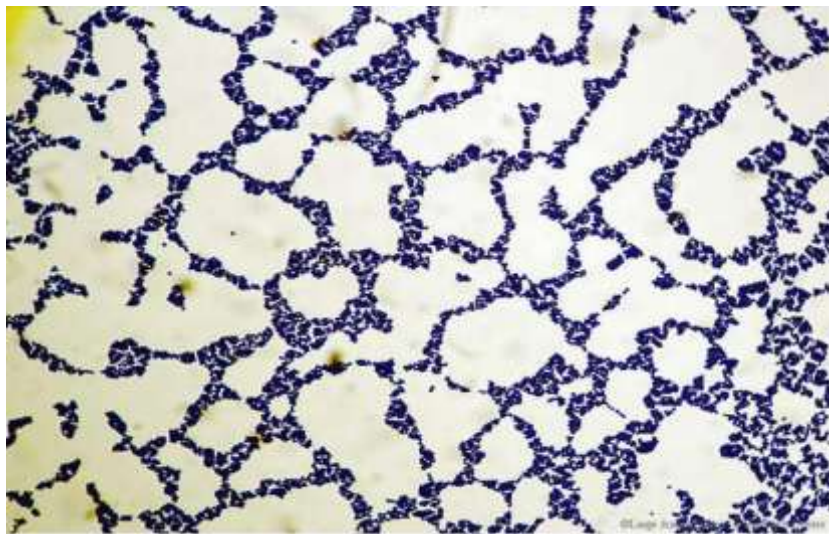
- Vibrio: Curved bacilli arranged irregularly or in pairs.
- Spirocheates: These are spiral bacteria with a series of flexous curves. The number and the dept of curves vary from one species to another.
- Filamentous bacteria: Long thin bacilli which may show branching.

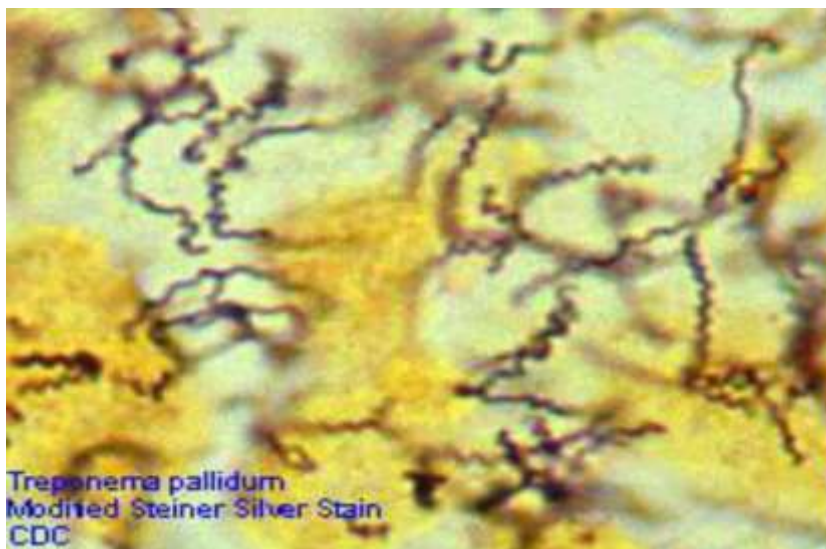
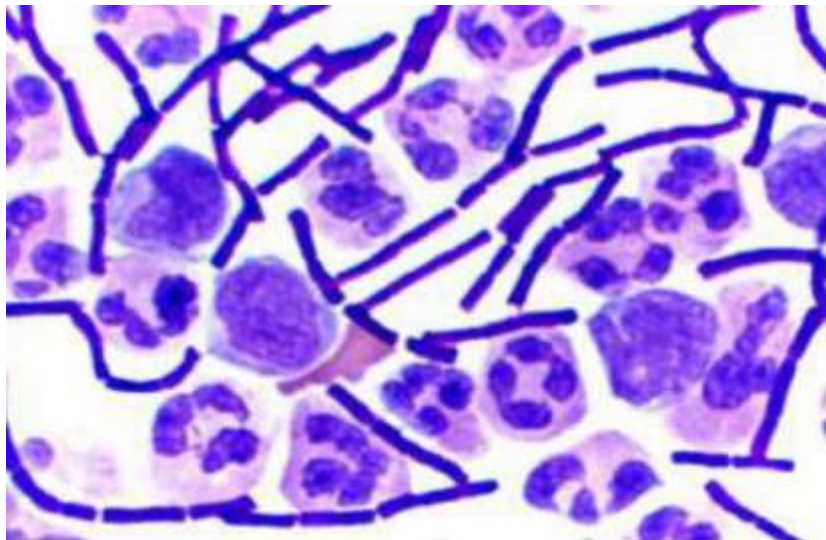
Bacterial Size

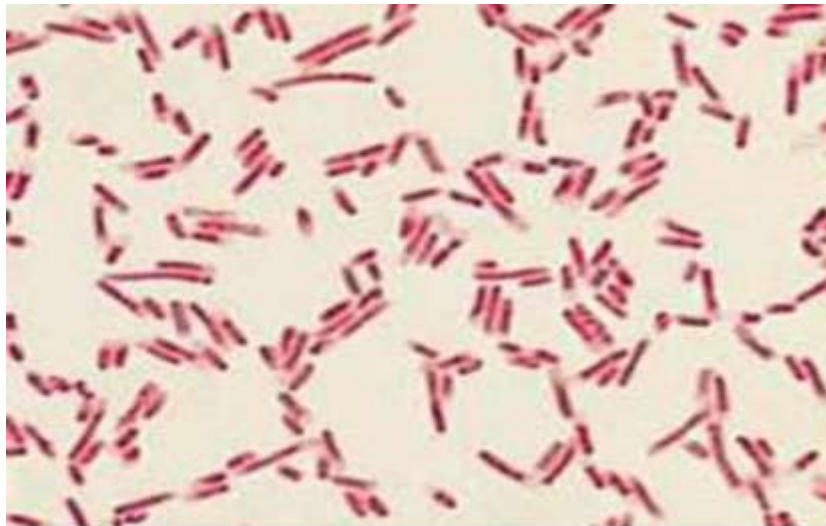
- Bacteria are very small and are measured in terms of microns (μ)
- $1 \mu = 1/1000$ of a millimeter
- Typical bacteria are 1μ in diameter
- Anthrax bacillus = 4 to 8 by 1 to 1.5μ m
- Whooping cough bacillus = 1.5 to 1.8 by $0.3 - 0.5 \mu$ m.

Examples

- Cocci in pairs = *Neisseria*
- Cocci in chains = *streptococci*
- Cocci in clusters = *staphylococci*
- Bacilli in pairs = *Proteus, Kleb*
- Bacilli in chains = *Bacillus species*
- Spirocheates = *Trepenoma Pallidum*







Forms of bacteria

