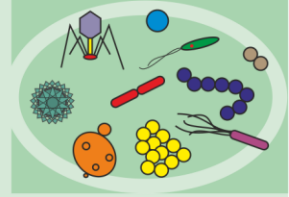


Cytology and morphology of bacteria

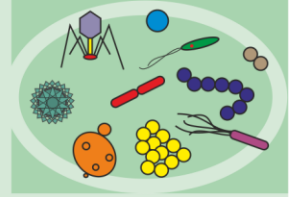


2. practice

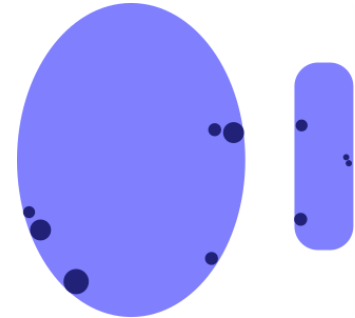
Structures of cell (inclusion and capsule staining)

Fidrich (2018)

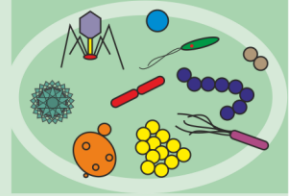
Volutin staining



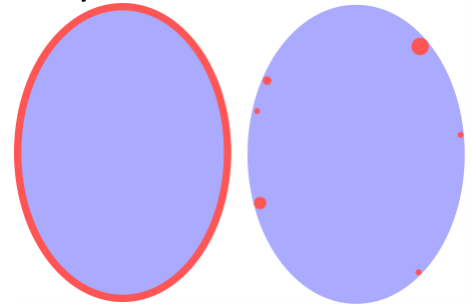
1. Drop of water on microscopic slide mix with small amount of culture
2. Spread the drop a little bit and allowed to air dry
3. Fix dry microscopic slide by the flame
4. Drop of Loefflers methylene blue and rinse with distilled water after 5 min
5. Drop of 1% H_2SO_4 (rinse with distilled water after few seconds)
6. Observe with immersion oil



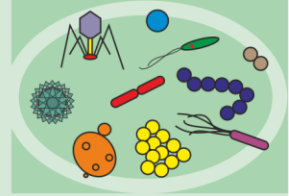
Lipids (fat) staining



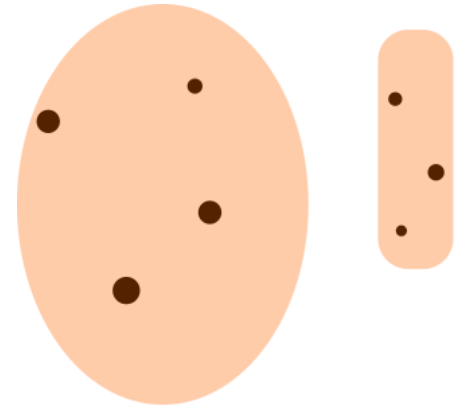
1. Drop of water on microscopic slide mix with small amount of culture
2. Spread the drop a little bit and allowed to air dry
3. Fix dry microscopic slide by the flame
4. Drop of formaldehyde for 5 min (rinse with distilled water)
5. Drop of methylene blue (1:40) for 10 min (rinse with distilled water)
6. Drop of Sudan III. (after 10-15 min rinse with distilled water)
7. Observe with immersion oil



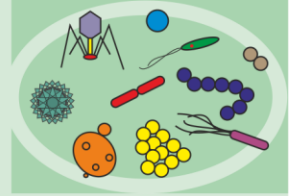
Glycogen staining



1. Drop of water on microscopic slide mix with small amount of culture
2. Mix it a little bit with drop of Lugol solution
3. Cover with cover glass and observe firstly 40x and after 100x magnification

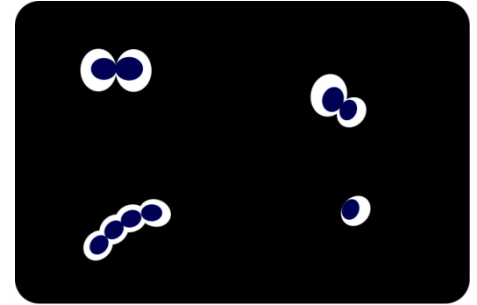


Negative staining of capsules



○ Nigrosin

1. Drop of nigrosin + small amount of culture
2. Spread over the slide with another slide and allowed to air dry
3. Cover the smear with methylene blue solution for 5 min at least
4. Rinse slide with distilled water and observe with immersion oil

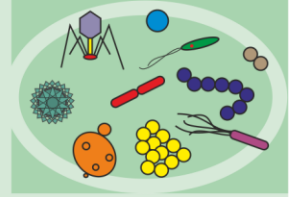


○ Kongo red

1. Drop of Kongo red + small amount of culture
2. Spread over the slide with another slide and allowed to air dry
3. Rinse the smear with HCl for several second (change to blue color) pour off the acid, do not wash it with distilled water
4. Cover the smear with methylene blue solution for 5 min at least
5. Rinse slide with distilled water and observe with immersion oil

- <https://youtu.be/7xoizj6iqCI?t=72>

What to observe ?



- Volution staining (1)
- Lipids (fat) staining (1)
- Glycogen staining
- Negative staining (1)
 - Nigrosin or Kongo red

Bacilli:

Bacillus cereus
Bacillus megaterium

Cocci:

„*Azotobacter vinelandii*“
Leuconostoc

Eukaryota:

Saccharomyces cerevisiae