

Structural staining (Endospore)



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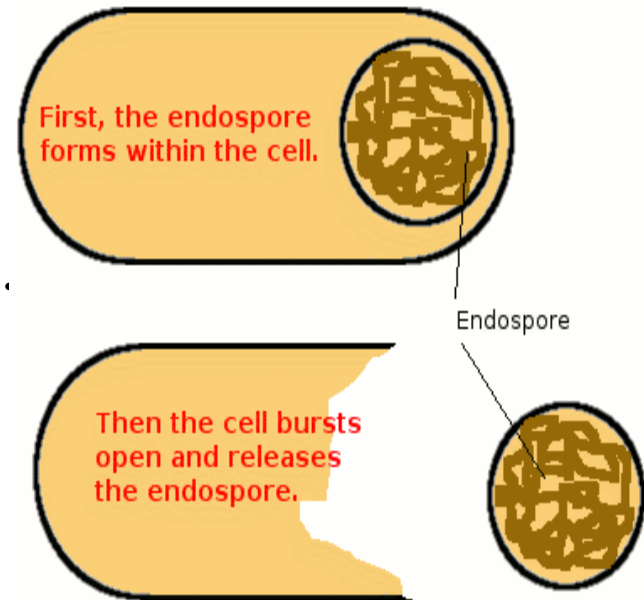


Endospore staining



Bacterial endospores

- Endospores called >>> **resting bodies** or **dormant stage** of bacteria.
- **No** metabolization.
- **Not** form of reproduction.
- Allow sporulating bacteria to survive (resist) conditions that normally kill them.
- **These conditions such as:**
 - ✓ Extreme heat.
 - ✓ Radiation.
 - ✓ Low nutrient condition.
 - ✓ Chemical disinfectants.
- Once conditions become normal >>> spores return to vegetative or growing state (regermination).





Endospore staining



Bacterial endospores

- According to its shape , size & Location can be used in identification of bacteria
(A: **central** , B: **terminal** , C: **sub-terminal**)



- Sporulating bacteria are **two** genera such as:
- ✓ **Bacillus.**
 - ✓ **Closteridium.**



Endospore Staining



**ENDOSPORE
STAINING**



Endospore staining



Schaeffer-Fulton Stain Procedure:

- ✓ Prepare heat fixed smear.
- ✓ Cover smear with small piece of paper towel.
- ✓ Flood smear with malachite green stain (1st stain).
- ✓ Steam slide for 10 min (every min add malachite green >>> don't let dye dry).
- ✓ Remove the paper towel & leave slide to cool.
- ✓ Wash off slide well with water .
- ✓ Add safranin (counter stain) for 3-4 min
>>> then wash with water.
- ✓ Dry slide & add oil dps to examine under oil examination lens.



Endospore Staining



Results



Endospore staining



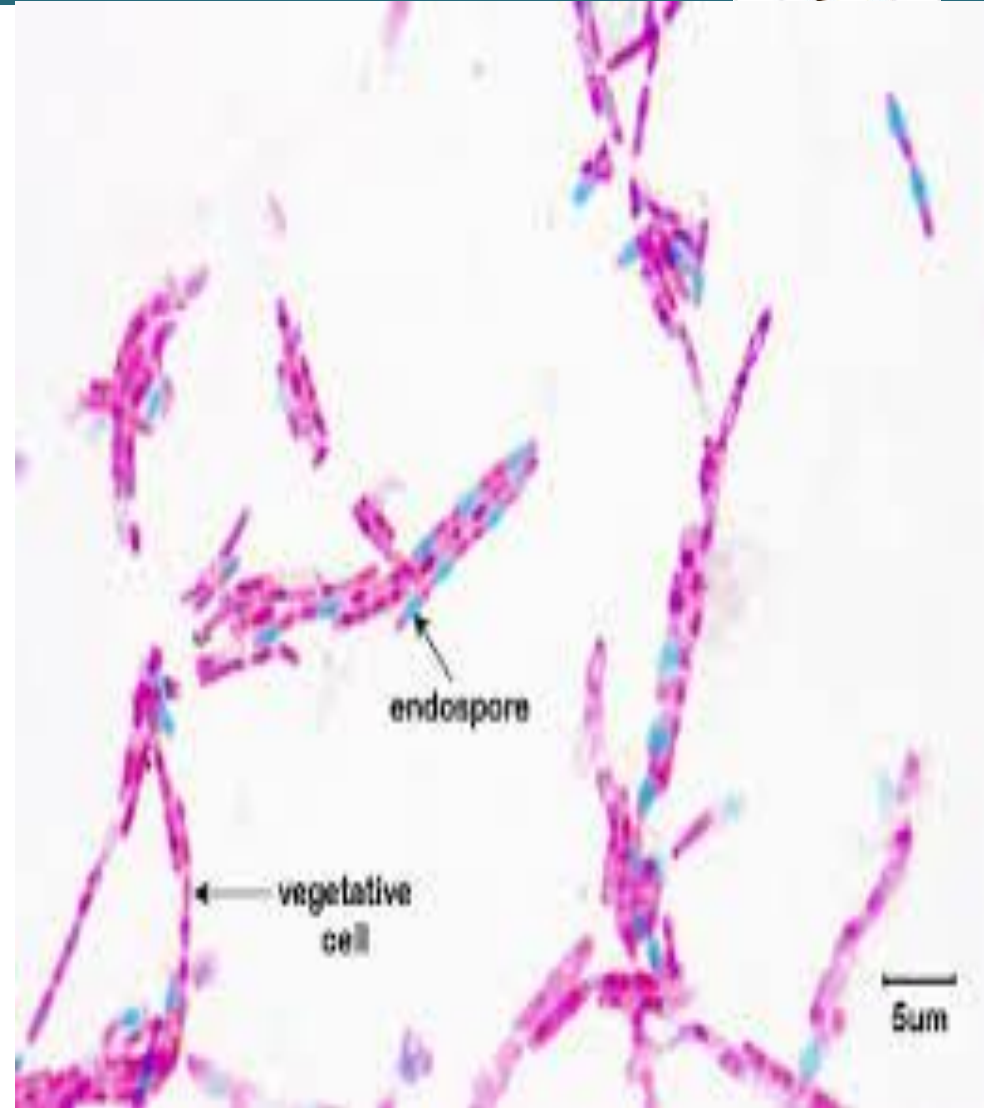
Name: Bacillus subtilis.

Shape: long rods.

Arrangement: chain.

Color: red cells with green endospores.

Endospore: central & oval.





**GOOD LUCK
&
SEE YOU NEXT LAB**