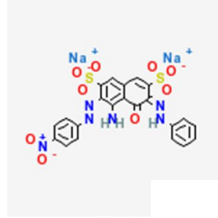


## Acidic Dyes

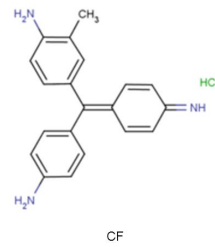
- Works best in acidic pH
- Ionizes (Na<sup>+</sup>, K<sup>+</sup>, Ca<sup>++</sup>)
- Creates Anionic (-) chromogen
- Attracted to (+) cell components [AA]
- Examples
  - Picric Acid
  - Nigrosin
  - India Ink
  - Eosin



Nigrosin

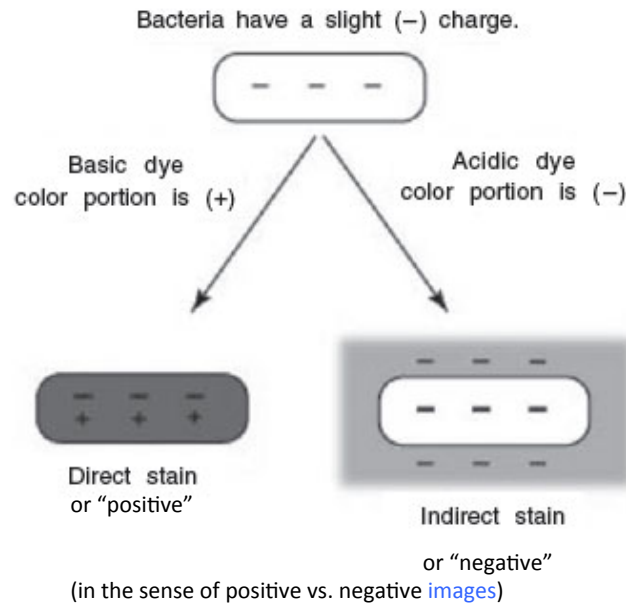
## Basic Dyes

- Work best in basic pH
- Ionizes (Cl<sup>-</sup>, SO<sub>4</sub><sup>-</sup>)
- Creates (+) Cationic chromogen
- Attracted to (-) acidic cell components [DNA, proteins]
- Examples
  - Methylene Blue
  - Crystal Violet
  - Carbol Fuchsin
  - Safranin
  - Malachite Green



CF

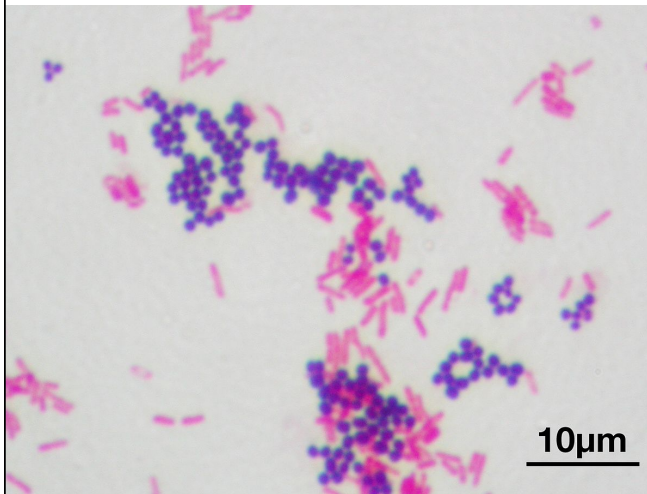
positive vs.  
negative  
charge



In a **differential stain**, positive vs. negative have a different meaning.

Positive means the cells are a specific color because a specific dye stuck to those cells.

Negative means they are a different color because that dye didn't stick but a second one did.



	G+	G-
Crystal violet	Yes	No
Safranin	(Yes)	Yes

Suggestion:  
Make the charts for:  
Acid Fast stain  
Endospore stain