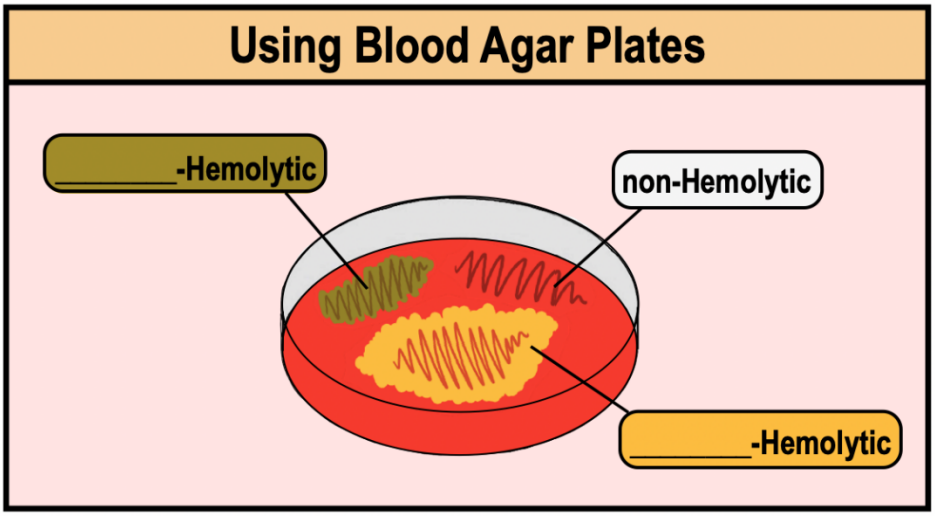
CONCEPT: DIFFERENTIAL MEDIA

- _____ **Media:** contain an indicator that allows microbes to be visually distinguished by chemical *differences*.
- Most common example are _____ *agar plates* which can identify different types of *hemolytic* microbes.
  - □ **Hemolytic:** ability of a microbe to cause *hemolysis* (_____ of a red blood cell).
- Hemolytic microbes cause a clear area around the colony forming the _____ *of clearance.*
  - □ The *zone of clearance* is important for identifying different types of microbes.
- For example: The *zone of clearance* has a different appearance for the different types of *hemolytic bacteria*:
  - □ **Alpha-hemolysis:** colonies are surrounded by a small _____-ish zone clearing from *partial* hemolysis.
  - □ **Beta-hemolysis:** colonies are surrounded by a very _____ zone of clearing from *complete* hemolysis.



PRACTICE: A blood agar plate is a common type of differential media. If there are different species of bacteria on a blood agar plate, what will the zones of clearance around the bacteria show you?

a) The zones of clearance can differentiate between the type different species of bacteria.
b) The zones of clearance will show you whether the bacterial species if an alpha or beta-hemolytic species.
c) If a zone of clearance is not present, it shows that the bacterial species is not hemolytic.
d) All of the above.

PRACTICE: *Streptococcus pneumoniae* is an alpha-hemolytic bacterial species. If *Streptococcus pneumoniae* is grown on a blood agar plate, what characteristics will the zone of clearance for this species have?

a) The zone of clearance will be large and bright yellow in color.
b) The zone of clearance will be small and a greenish color.
c) This bacterial species will show no zone of clearance on a blood agar plate.