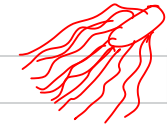
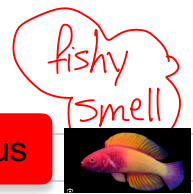


# Micro Lab ①



Proteus

Gram negative rods  
lactose fermenter, non  
o Swarming motility  
(flagellated)

Prevent swarming by  
culturing  
it on CLED or MacConkey  
media (prevent motility)

Stool collection and culture

Stool should be collected in  
clean wide mouth  
container not sterile

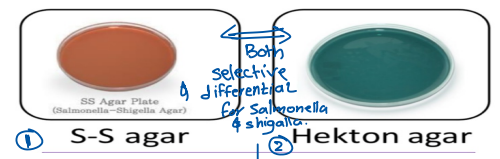
? Stool should be added to  
Selenite  
broth

Why??

- Inhibits the growth of coliforms
- Enhances the growth of Pathogen

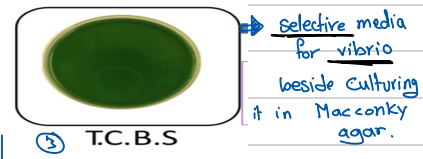
- Most common pathogens (Bacteria) :
- E.coli
  - Salmonella
  - Shigella
  - Vibrio
  - Proteus
  - Yersinia, Campylobacter, Clostridium, Bacillus...etc
  - > These bacteria are not normal inhabitants of the GIT

Stool sample should be cultured on  
the following media using streak plate  
method



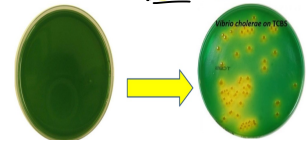
① S-S agar  
S-S ⇒ salmonella-shigella  
⇒ used to differentiate  
between Shigella &  
Salmonella by H<sub>2</sub>S  
Production.

② Hekton enteric agar  
H<sub>2</sub>S  
Salmonella  
Shigella



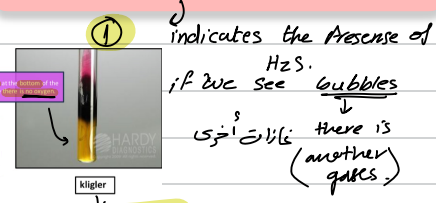
③ T.C.B.S.  
selective media  
for vibrio  
beside culturing  
it in MacConky  
agar.

Selective for  
Vibrio Spp.  
PH ⇒ 8.5-10  
vibrio ما يحب الـ PH  
• When Vibrio cholera ferment sucrose  
it turns the media from green to yellow



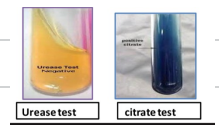
Salmonella

upper part  
remains Red means  
it doesn't ferment Lactose. / means it ferments glucose  
Kligler : red/Yellow + H<sub>2</sub>S  
(black/dark color)



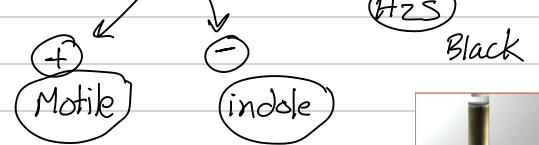
Results Kligler

- \* H<sub>2</sub>S Producer
- \* Glucose fermenter (yellow) bottom
- \* Non Lactose Fermenter (Red) up

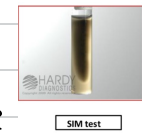


② Urease → ⊖ yellow  
③ Citrate → ⊕ green → blue

④ SIM → ⊕



Turbidity  
العكورة  
add Kovacs  
reagent →  
if turns  
topink



but Salmonella remains (colorless)