Genus: SALMONELLA

MORPHOLOGY:

- Gram negative bacilli (pink).
- Short to medium size rode.
- (2-4 u length & 0.4u thickness).
- Non- sporulated & capsule may be formed in some spp.
- Most of strains are motile with long pertrichous flagella except
  S.pullorum & S.gallinurum which are non motile salmonella.
- Arrangement scattered singly or in pairs.

CULTURAL CH:

1- Facultative anaerobic or aerobic.
2- Optimum temp 37 °C but it can grow at wide range of temp.
   Between 15-41 °C.
3- Grow on ordinary nutrient agar.
4-Grow on MacConKey agar media = non lactose fermenter (yellow to white) colonies appear after 18-24 hr easily appears as smooth rounded, glistening, colorless or pale creamy in color.

5-Colonies are easily dissociating (smooth, rough) rounded, irregular, dry, rough colonies.

6-The fact that commonly exist on intestinal tract together with other MO there for it is isolated require used pre-enrichment fluid media such as selenite -F broth or tetrathionate broth which inhibit growth of coliforms and non-pathogenic M. O. and accelerate growth of salmonella.

7-Fecal sample is inoculated in pre-enriched fluid media at 37°C for 16-. 18hr then inoculated again in MacConkey agar at 37°C for 24-48 hours. Colonies appear pale creamy, colorless colonies.

8-On XLD – red colony with black center.

BIOCHEMICAL REACTION:

1- Oxidase test –ve.

2- Catalase test +ve for all spp.

3- IMVIC (-ve, +ve, -ve, +ve)

4- Nitrate reduction test +ve.

5- Gelatin slowly liquefied.

6- On triple sugar iron agar media (H2S is formed and gases are produced)

7- Salmonella not ferment lactose, sucrose, sulcin, dulcitol but ferment glucose, arahilose, xylose, mannitol with acid gases.
DISEASE PRODUCED BY SALMONELLA MO

In human :-

*S. typhi*
*S. paratyphi A.B.C*
*S. typhimuium*

Cause, Enteric paratyphoid in man & paratyphoid fever and food poising in man
- Incubation period is 24hr.
- Symptoms appear as vomiting, diarrhea, abdominal pain, rise temp.
Mortality rate is 10% due to ingestion of contaminated (food).-