Detection and Confirmation of *Shigella* species in foods .

Shigellosis, although commonly regarded as waterborne, is also a food borne disease restricted primarily to higher primates, including humans. It is usually spread among humans by food handlers with poor personal hygiene. Foods most often incriminated in the transmission have been potato salad, shellfish, raw vegetables, and Mexican dishes.

Media:

- Gram Negative **(GN)** Broth
- MacConkey agar
- Xylose Lysine Deoxycholate **(XLD)** Agar
- Triple Sugar Iron **(TSI)** Agar slants

Procedure:

Enrichment:

Using aseptic techniques mix or blend if necessary 25 g sample with 225 ml of gram negative broth. Transfer to a sterile 500 ml bottle. Adjust pH (if necessary) to 6.0 - 7.0 with sterile 1N NaOH or 1N HCl.

Incubate at 35-37 C for 18 hours.

Selective streaking:

Transfer a 5mm loopful of the enrichment broth culture to the surface of **MacConkey agar** and **XLD agar** plates and streak to obtain isolated colonies.

Invert and incubate plates at 35-37 C for 24±2h. Typical Shigella colonies on XLD agar appear as red or pink colonies usually about 1mm in diameter and on Mac Conkey agar as opaque or transparent colonies. Inoculate each suspected colony into TSI agar slant by streaking the slant and stabbing the butt. After overnight incubation at 35-37 C, typical Shigella reaction is alkaline (red) slant and acid (yellow) butt with no H_2S or gas production .

Expression of Results :-*Shigella* = Present / Absent per 25g of sample .