HiCombi™ Dual Performance Salmonella Medium LQ073

For elective enrichment and isolation of *Salmonellae* from chicken legs, meat products or other food samples. Combination of solid (7 ml) and liquid (20 ml) media in single bottle.

**Directions**

1. Mark the dual performance bottle for sample detail.

2. Bring the frozen chicken leg specimen or any other food sample to 25 - 30°C and cut into small pieces under hygienic conditions.

3. Aseptically add 1 gm of finely chopped chicken leg pieces to 9 ml of sterile saline or other suitable diluents. Mix thoroughly using vortex meter. Use this suspension as inoculum. If larger quantity of sample is to be analyzed, proportionate amount of sterile saline should be used as diluents.

4. Add 3–5 ml of sample suspension to the broth medium by opening bottle under aseptic conditions and after addition, replace the cap. Incubate at 37°C for 4-5 hour.

5. After 4-5 hours of incubation remove the bottle from incubator. Tilt the bottle horizontally whereby solid medium is submerged with liquid phase. Keep it for 30–40 seconds and again bring bottle to standing position. Transfer bottle to incubator and incubate further at 37°C for 18 to 20 hours. After incubation read the results as indicated.

**Principle And Interpretation**

*Salmonella* species are the leading cause of food-borne bacterial diseases in humans. The problem of human salmonellosis from consumption of contaminated foods generally remains on the increase worldwide (1).

The ubiquity of Salmonellae in the natural environment, compelled with the intensive husbandry practices used in the meat, fish and shellfish industries and the recycling of offal and inedible raw materials into animal feeds has favored the continued preeminence of this human bacterial pathogen in the global food chain (2, 3) of the many sectors within the meat industry, poultry products remain the principal reservoirs of Salmonellae.

*Salmonella* species causes many types of infections from mild self-limiting gastroenteritis to life-threatening typhoid fever.

The most common form of *Salmonella* disease is self-limiting gastroenteritis with fever. Typhoid fever is characterized by fever, headache, diarrhea and abdominal pain. *Salmonella Typhi* and *Salmonella Paratyphi* A & B cause gastroenteritis, bacterimia and enteric fever. *Salmonella Choleraesuis* causes gastroenteritis and enteric fever.

Lab diagnosis depends on the isolation and identification of *Salmonella* from food samples.

Detection by Conventional methods – enrichment, isolation and confirmation requires 3-4 days. On the first day, the food sample is inoculated into enrichment media like Tetrathionate Broth or Selenite F Broth. On the second day the enrichment from broth is plated onto selective media like SS agar, XLD or DCA Agar. For confirmation colonies are then selected and inoculated into any confirmatory media such as Triple Sugar Iron Agar, Urea Broth and other biochemical media for biochemical tests.

The dual performance bottle allows faster confirmation of the causative organism, eliminating the waiting period of 3-4 days giving results in just 24 hours. The combination media ensure enrichment as well as isolation and colonies can be visualized in 24 hours and confirmed. Peptone special, lactose and sucrose provide necessary nitrogenous and carbonaceous compounds for growth of *Salmonella*. Bile salts along with indicator mixture inhibit other enteric bacteria present in food sample.

**Quality Control**

**Appearance**

In a sterile glass bottle, combination of broth and one agar coated surface.

Please refer disclaimer Overleaf.
Colour of agar medium
Green coloured medium

Colour of liquid medium
Green coloured medium

Quantity of medium
7ml of agar medium and 20ml of broth medium in a glass bottle

pH of agar medium
7.30-7.70

pH of liquid medium
7.30-7.70

Sterility test
Passes release criteria

Cultural response
Cultural characteristics was observed after incubation at 35-37°C for 18-24 hours.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth on agar medium</th>
<th>Growth in liquid medium</th>
<th>Colour of colony</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coli ATCC 25922</td>
<td>Fair</td>
<td>Luxuriant</td>
<td>Orange (may have bile ppt)</td>
</tr>
<tr>
<td>Enterococcus faecalis ATCC 29212</td>
<td>Inhibited</td>
<td>Inhibited</td>
<td></td>
</tr>
<tr>
<td>S. Typhimurium ATCC 14028</td>
<td>Luxuriant</td>
<td>Luxuriant</td>
<td>Greenish blue colonies, may have black center (H2S production)</td>
</tr>
<tr>
<td>S. Enteritidis ATCC 13076</td>
<td>Luxuriant</td>
<td>Luxuriant</td>
<td>Greenish blue colonies, may have black center (H2S production)</td>
</tr>
<tr>
<td>S. Typhi ATCC 6539</td>
<td>Luxuriant</td>
<td>Luxuriant</td>
<td>Greenish blue</td>
</tr>
</tbody>
</table>

Storage and Shelf Life
Store between 2-8°C. Use before expiry date on the label.

Reference

Revision : 1 / 2011

Disclaimer:
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