**Intended Use**

Recommended for enrichment and isolation of *Salmonella* from foods and other pathological materials.

**Composition**

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Gms / Litre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peptone, special</td>
<td>18.000</td>
</tr>
<tr>
<td>Yeast extract</td>
<td>2.000</td>
</tr>
<tr>
<td>Sodium chloride</td>
<td>5.000</td>
</tr>
<tr>
<td>D-Mannitol</td>
<td>2.500</td>
</tr>
<tr>
<td>Dextrose (Glucose)</td>
<td>0.500</td>
</tr>
<tr>
<td>Sodium deoxycholate</td>
<td>0.500</td>
</tr>
<tr>
<td>Sodium thiosulphate</td>
<td>38.000</td>
</tr>
<tr>
<td>Calcium carbonate</td>
<td>25.000</td>
</tr>
<tr>
<td>Brilliant green</td>
<td>0.010</td>
</tr>
<tr>
<td>Final pH (at 25°C)</td>
<td>7.6±0.2</td>
</tr>
</tbody>
</table>

**Formula adjusted, standardized to suit performance parameters**

**Directions**

Label the ready to use LQ088 bottle. Inoculate the sample and Incubate at specified temperature and time.

**Principle And Interpretation**

Tetrathionate Broth Base was first formulated by Mueller (1) who showed that this medium favours the unrestricted growth of enteric pathogens by selectively inhibiting the coliforms. Muellers medium was subsequently modified by Kauffman (2) and Knox (3) in which they obtained more number of isolates. Tetrathionate Broth Base, Hajna is the modification formulated by Hajna and Damon (4). This medium is also recommended by APHA (5) for the selective enrichment of Salmonellae from foodstuffs. Peptone special and yeast extract are the sources of carbon, nitrogen, vitamins and minerals. The selectivity depends on the ability of thiosulphate and tetrathionate (formed by the addition of iodine-iodide) to suppress commensal coliform organisms (6, 7). Sodium deoxycholate and brilliant green inhibit gram-positive organisms. Dextrose and Mannitol are the carbohydrates sources. Calcium carbonate neutralizes the acidic tetrathionate decomposition products. Sodium chloride maintains the osmotic balance of the medium. After enrichment of the sample, streak on the plates of Brilliant Green Agar (M016), MacConkey Agar (M081), Bismuth Sulphite Agar (M027). Further biochemical and serological tests must be carried out for further identification.

**Type of specimen**

Clinical specimen: faeces, other material of sanitary importance. Food samples.

**Specimen Collection and Handling**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).

For food samples, follow appropriate techniques for sample collection and processing as per guidelines (9).

After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions**

In Vitro diagnostic use. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.
Limitations

1. For further confirmation, streak the enriched cultures after incubation, on plates of Brilliant Green Agar Plate (MP016), MacConkey Agar Plate (MP081).

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance
Sterile clear Tetrathionate Broth in bottles.

Colour
Bluish green coloured solution with white precipitate

Quantity of Medium
10ml of medium in bottles.

Reaction
7.40-7.80

Sterility test
Passes release criteria

Cultural Response
Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours (Recovery is done on MacConkey Agar Plate MP082).

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth on M081</th>
<th>Colour of colony</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Escherichia coli ATCC 25922</em></td>
<td>50-100</td>
<td>fair-good</td>
<td>pink-red with bile precipitate</td>
</tr>
<tr>
<td><em>Salmonella Arizonae ATCC 13314</em></td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>colourless</td>
</tr>
<tr>
<td><em>Salmonella Enteritidis ATCC 13076</em></td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>colourless</td>
</tr>
<tr>
<td><em>Salmonella Typhimurium ATCC 14028</em></td>
<td>50-100</td>
<td>good-luxuriant</td>
<td>colourless</td>
</tr>
<tr>
<td><em>Staphylococcus aureus subsp. aureus ATCC 25923</em></td>
<td>&gt;=10⁴</td>
<td>inhibited</td>
<td></td>
</tr>
</tbody>
</table>

Key : *Corresponding WDCM numbers.

Storage and Shelf Life

Store between 15-25°C. Use before expiry date on the label.

Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (2,3).

Reference


In vitro diagnostic medical device

CE Marking

Storage temperature

Do not use if package is damaged

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