TSB - Tryptone Soya Broth (Soyabean Casein Digest Medium)  LQ009A

A qualitative test for detection of microorganisms in blood. _Sterile, in glass bottles_.

**Composition**

**Ingredients**  |  **Gms / Litre**
---|---
Tryptone  |  17.000
Soya peptone  |  3.000
Sodium chloride  |  5.000
Dextrose (Glucose)  |  2.500
Dipotassium hydrogen phosphate  |  2.500
Final pH (at 25°C)  |  7.3±0.2

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

**Directions**

Label the ready to use blood culture bottle. Do not unscrew cap, remove the top of the screw cap. Disinfect the part of the rubber stopper which is now exposed. Draw patient's blood with the sterile or disposable needle and syringe as explained in specimen collection and disposable column. Transfer the blood sample immediately into the culture bottle by puncturing the rubber stopper with the needle and injecting the blood. Venting: Use sterile venting needle (LA038). Keep the bottle in an upright position preferably in a biological safety cabinet, place an alcohol swab over the rubber stopper and insert the venting needle with filter through it. Insertion and withdrawal of the needle should be done in a straight line. Discard the needle and mix the contents by gently inverting the bottle 2-3 times. Do Not vent the bottle for anaerobic cultures. Incubate at 35±2°C for 18-24 hours and further for seven days.

**Principle And Interpretation**

Soyabean Casein Digest Medium is recommended by various pharmacopeias as a sterility testing and as a microbial limit testing medium (2,6). This medium is a highly nutritious medium used for cultivation of a wide variety of organisms (1,5). Bacteremia is a serious and often life-threatening clinical condition. An important diagnostic tool for this condition is to analyze a blood specimen for the growth of bacteria on selected growth media.

The combination of tryptone and soya peptone makes the medium nutritious by providing amino acids and long chain peptides for the growth of microorganisms. Dextrose (Glucose) and dipotassium hydrogen phosphate serve as the carbohydrate source and the buffer, respectively in the medium. Sodium chloride maintains the osmotic balance of the medium.

**Type of specimen**

Clinical sample: Blood

**Specimen Collection and Handling**

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (3,4). After use, contaminated materials must be sterilized by autoclaving before discarding.

**Warning and Precautions**

In Vitro diagnostic use only. 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. This medium is general purpose medium and may not support the growth of fastidious organisms.

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 Tryptone Soya Broth in glass bottle.

Colour
Light yellow coloured clear solution

Quantity of Medium
70 ml of medium in glass bottle, (For Adult use )

pH
7.10-7.50

Sterility Check
Passes release criteria.

Cultural response
Cultural characteristics observed after an incubation at-

<table>
<thead>
<tr>
<th>Organism</th>
<th>Inoculum (CFU)</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth at 30-35°C for &lt;= 3 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td>6538 (00032*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Staphylococcus aureus</em> subsp. aureus ATCC</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td>25923 (00034*)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Escherichia coli ATCC</em> 8739 (00012*)</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Escherichia coli ATCC</em> 25922 (00013*)</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Escherichia coli NCTC 9002</em></td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa ATCC 9027</em> (00026*)</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Pseudomonas aeruginosa ATCC 27853</em> (00025*)</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Bacillus subtilis subsp.</em> spizizenii ATCC 6633 (0003*)</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Micrococcus luteus ATCC 9341</em></td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Salmonella Typhimurium ATCC 14028</em> (00031*)</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Salmonella Abony NCTC 6017</em> (00029*)</td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Streptococcus pneumoniae ATCC 6305</em></td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
<tr>
<td><em>Streptococcus pyogenes ATCC 19615</em></td>
<td>50 -100</td>
<td>luxuriant</td>
</tr>
</tbody>
</table>

Please refer disclaimer Overleaf.
**Growth at 20-25°C for <= 5 days**

<table>
<thead>
<tr>
<th>Organism</th>
<th>Growth Rate</th>
<th>Key Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Candida albicans</em> ATCC 2091 (00055*)</td>
<td>50 -100 luxuriant</td>
<td></td>
</tr>
<tr>
<td><em>Candida albicans</em> ATCC 10231 (00054*)</td>
<td>50 -100 luxuriant</td>
<td></td>
</tr>
<tr>
<td># <em>Aspergillus brasiliensis</em> ATCC 16404 (00053*)</td>
<td>50 -100 luxuriant</td>
<td></td>
</tr>
</tbody>
</table>

Key : (*) Corresponding WDCM numbers
(#) Formerly known as *Aspergillus niger*

**Storage and Shelf Life**

On receipt 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 sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

**References**

2. Indian Pharmacopeia, 2018, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
Disclaimer:

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