TSB - Tryptone Soya Broth w/ 10% Sucrose

LQ005

a qualitative test for detection of microorganisms in blood. *Sterile,in glass bottles.*

Composition**

Ingredients	g/L
Tryptone	17.000
Soya peptone	3.000
Sodium chloride	5.000
Dextrose (Glucose)	2.500
Dipotassium hydrogen phosphate	2.500
Sucrose	100.000
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 (1,2). This medium is a highly nutritious medium used for cultivation of a wide variety of organisms (3,4). 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, Sucrose and dipotassium hydrogen phosphate serve as source of carbohydrate and 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 (5,6).

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

Warning and Precautions

In Vitro diagnostic use only. For professional 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.Biochemical characterization is necessary to be performed on colonies from pure cultures for further identification.

2.Individual organisms differ in their growth requirement and may show variable growth patterns on the medium

3.Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validate the medium for any specific microorganism other than mentioned in the COA based on the user's unique requirement.

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 w/ 10% Sucrose in glass bottle.

Colour

Light yellow coloured clear solution

Quantity of Medium

20 ml of medium in glass bottle. (Volume of blood for paediatrics use- 1 to 3ml)

pH

7.10-7.50

Sterility Check

Passes release criteria.

Cultural response

Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours

Organism	Inoculum (CFU)	Growth
Staphylococcus aureus subsp. *aureus* ATCC 25923 (00034*)	50 -100	luxuriant
Streptococcus pyogenes ATCC 19615	50 -100	good-luxuriant
****Bacillus spizizenii* ATCC 6633 (00003*)	50 -100	luxuriant
Neisseria meningitidis ATCC 13090	50 -100	luxuriant
Growth at 22-28°C		
Candida albicans ATCC 10231 (00054*)	50 -100	luxuriant
Growth under anaerobic condition		
# Phocaeicola vulgatus ATCC 8482	50 -100	luxuriant

Key : * Corresponding WDCM numbers
** Formerly known as *Bacillus subtilis* subsp. *spizizenii* (#) Formerly known as *Bacteroides vulgatus*

Storage and Shelf Life

On receipt store between 15-30°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 (5,6).

References

1.Indian Pharmacopoeia, 2022, Govt. of India, Ministry of Health and Family Welfare, New Delhi, India.
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3.Forbes B. A., Sahm D. F. and Weissfeld A. S., 1998, Bailey & Scotts Diagnostic Microbiology, 10th Ed., Mosby, Inc. St. Louis, Mo.
4.MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. 1, Williams & Wilkins, Baltimore, M.d.
5.Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
6.Jorgensen,J.H., Pfaller , M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock., D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.

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