Tryptone Soya Broth w/ SPS (Soyabean Casein Digest Broth w/ SPS) M2076

Intended Use

Recommended as a general purpose medium used for cultivation of a wide variety of microorganisms.

Composition**

Ingredients	Gms / Litre
Tryptone	17.000
Soya peptone	3.000
Sodium chloride	5.000
Dextrose(Glucose)	2.500
Dipotassium hydrogen phosphate	2.500
Sodium polyanethol sulphonate (SPS)	0.300
Final pH (at 25°C)	7.3±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 30.30 grams in 1000 ml purified/ distilled water. Heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well and dispense as desired.
Note: If any fibres are observed in the solution,it is recommended to filter the solution by using a 0.22 micron filter to eliminate the possibilty of presence of fibres.

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, 3). This medium is a highly nutritious medium used for cultivation of a wide variety of organisms (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. Such media often contain SPS as an anticoagulant and as an inhibitor of the bactericidal effects of blood cells and plasma factors (5, 6).
The combination of tryptone and soya peptone makes the medium nutritious by providing nitrogenous and carbonaceous compounds, amino acids and long chain peptides for the growth of microorganisms. Dextrose serve as the carbohydrate source and dibasic potassium phosphate buffers the medium. Sodium chloride maintains the osmotic balance of the medium. SPS has the added advantage of annulling the natural bactericidal action of blood and is not inhibitory.

Type of specimen

Clinical samples - Blood

Specimen Collection and Handling:

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (7,8).
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 :

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
Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium
Light yellow coloured clear solution without any precipitate.

pH of 3.0% w/v aqueous solution at 25°C .

pH
7.10-7.50

Cultural Response
Cultural characteristics observed after an incubation at 30-35°C for <= 3days for Bacterial and at 20-25°C for <= 5 days for Fungal.

Sterility test
Light yellow coloured clear solution without any precipitation or sedimentation at room temperature for 14 days.

Cultural Response

Organism	Inoculum (CFU)	Growth	Incubation temperature	Incubation period
Staphylococcus aureus subsp. *aureus ATCC 6538 (00032*)*	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Staphylococcus aureus subsp. *aureus ATCC 25923 (00034*)*	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Escherichia coli ATCC 8739 (00012)*	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Escherichia coli ATCC 25922 (00013)*	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Escherichia coli NCTC 9002	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Pseudomonas aeruginosa ATCC 9027 (00026)*	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Pseudomonas aeruginosa ATCC 27853 (00025)*	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Bacillus subtilis subsp. spizizenii ATCC 6633 (00003*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Micrococcus luteus ATCC 9341	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Salmonella Typhimurium ATCC 14028 (00031*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Salmonella Abony NCTC 6017 (00029*)	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Streptococcus pneumoniae ATCC 6305	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Streptococcus pyogenes ATCC 19615	50 -100	luxuriant	30 -35 °C	18 -24 hrs
Candida albicans ATCC 10231 (00054*)	50 -100	luxuriant	20 -25 °C	<=5 d

Key : * Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle inorder to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. 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 (7,8).

References

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