Tryptone Agar Base

M319

Tryptone Agar Base is used for determination of motility and carbohydrate fermentation reactions of aerobes and anaerobes.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	20.000
Phenol red	0.020
Agar	3.500
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 23.52 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. If desired add required amount of carbohydrate (0.5%). Dispense in tubes and sterilize by autoclaving at *118°C for 15 minutes. Cool the tubed the tubed medium in an upright position. *- 12 lbs pressure

Principle And Interpretation

Tryptone Agar was developed by Vera (1) for the accurate differentiation and identification of aerobes and anaerobes by means of motility and fermentation reactions. It is recommended for Clostridia, *Bacillus* species, Micrococci , enteric bacilli and other nonfastidious organisms (2).

Casein enzymic hydrolysate provides essential nutrients necessary to support the growth of nonfastidious microorganisms. Phenol red is the pH indicator. Small amount of agar renders it suitable for study of motility. Acid produced do not readily get dispersed throughout the medium and hence positive reaction can be more quickly determined in this medium than in liquid medium. Tryptone Agar Base is also an excellent medium for the maintenance for both - aerobic and anaerobic cultures. Viability in this medium is greater than in any other broth medium or slant culture. Fermentation reactions of can be determined by the addition of desired carbohydrates. Acid production, during fermentation, is detected by the phenol red indicator by changing the colour of the medium from red to yellow.

Quality Control

Appearance
Light yellow to light pink homogeneous free flowing powder

Gelling
Semisolid, comparable with 0.35% Agar gel.

Colour and Clarity of prepared medium
Red coloured clear to slightly opalescent gel forms in tubes as butts.

Reaction
Reaction of 2.35% w/v aqueous solution at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
M319: Cultural characteristics observed after an incubation at 35-37°C for 24-48 hours with added 0.5% Dextrose.

Organism	Inoculum (CFU)	Growth	Acid	Motility
Clostridium perfringens ATCC 12924	50-100	luxuriant	positive reaction, yellow colour	negative, growth along the stabline, surrounding

				medium remains clear
Clostridium sporogenes ATCC 11437	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
Escherichia coli ATCC 25922	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
Enterobacter aerogenes ATCC 13048	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
Salmonella Typhi ATCC 6539	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
Salmonella Enteritidis ATCC 13076	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
Staphylococcus aureus ATCC 25923	50-100	good	positive reaction, yellow colour	negative, growth along the stabline, surrounding medium remains clear

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Vera, 1944, J. Bact., 47:455.
2. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

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