



Tryptone Agar Base

M319

Intended Use:

Recommended for determination of motility and carbohydrate fermentation reactions of aerobes and anaerobes.

Composition**

Ingredients	Gms / Litre
Tryptone	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 purified / 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 (4) 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 (3).

Tryptone 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.

Type of specimen

Isolated microorganisms

Specimen Collection and Handling:

For samples, follow appropriate techniques for sample collection and processing as per local guidelines (1,2). After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

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 specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Lack of sufficient inoculum may lead to false results.

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

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

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
<i>Clostridium perfringens</i> ATCC 12924	50-100	luxuriant	positive reaction, yellow colour	negative, growth along the stabline, surrounding medium remains clear
<i>Clostridium sporogenes</i> ATCC 11437	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
<i>Escherichia coli</i> ATCC 25922 (00013*)	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
# <i>Klebsiella aerogenes</i> ATCC 13048 (00175*)	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
<i>Salmonella</i> Typhi ATCC 6539	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
<i>Salmonella</i> Enteritidis ATCC 13076 (00030*)	50-100	luxuriant	positive reaction, yellow colour	positive, growth away from stabline causing turbidity
<i>Staphylococcus aureus</i> subsp. <i>aureus</i> ATCC 25923 (00034*)	50-100	good	positive reaction, yellow colour	negative, growth along the stabline, surrounding medium remains clear

Key : (*) Corresponding WDCM numbers.

(#) Formerly known as *Enterobacter aerogenes*

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 15-25°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order 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.

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 (1,2).

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
2. 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.
3. MacFaddin J., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
4. Vera, 1944, J. Bact., 47:455.

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Disclaimer :

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