Ready Prepared Media

Technical Information

Tellurite Blood Agar Base

Product Code: PM 2260

Application: Recommended for the selective isolation and cultivation of Corynebacterium species.

Composition**

Ingredients	Gms / Litre
Biopeptone	10.000
Sodium chloride	5.000
Dipotassium hydrogen phosphate	4.000
Corn starch	1.000
Potassium dihydrogen phosphate	1.000
Agar	10.000
Haemoglobin solution (MS2022)	1 vial
Vitamino Growth Supplement (MS2025)	1 vial
1%Potassium Tellurite (MS2052)	1 vial
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Corynebacterium is a genus of gram-positive, facultatively anaerobic, non-motile bacteria that exhibits a fermentative metabolism (carbohydrates to lactic acid) under certain conditions. Corynebacteria constitute a diverse group of bacteriathat includes saprophytic associations as well as plant and animal pathogens. Most species are normal flora of humans present virtually at all anatomic sites. Many species of Corynebacteria can be isolated from various places such as soil,water, blood, and human skin. Pathogenic strains of Corynebacteria can infect plants, animals, or humans. Tellurite Blood

Agar is a selective medium used for isolation and cultivation of *Corynebacterium* species (1,2).

It is selective due to the presence of inhibitor and differential by means of ability of organism to reduce potassium tellurite. Biopeptone provides nitrogenous compounds. Sodium chloride maintains the osmotic equilibrium of the medium while phosphates buffer the medium. Corn starch neutralizes the toxic metabolites. Haemoglobin and Vitamino Growth Supplement stimulate good growth of *Corynebacterium.* Potassium tellurite acts as a selective agent and has inhibitory activity against most gram-positive and gram-negative bacteria except *Corynebacterium* species. *C.diphtheriae* reduces potassium tellurite to tellurium and thereby produce gray-black coloured colonies. Throat or nasal swab is directly inoculated and streaked on this agar medium.

Type of specimen

Clinical samples - throat swab

Specimen Collection and Handling

For clinical samples follow appropriate techniques for handling specimens as per established guidelines (1,2).
After use, contaminated materials must be sterilized by autoclaving before discarding.

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Warning and Precautions

In Vitro diagnostic Use only. For professional use only. Read the label before opening the pack. 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. Specimens if enriched on Loeffler medium, can give better growth of *Corynebacterium* species.
2. Other organisms such as Staphylococci, Streptococci will grow as minute black colonies due to tellurite reduction, hence *Corynebacterium* should be confirmed by gram staining and other biochemical test.
3. Individual organisms differ in their growth requirement and may show variable growth patterns on the medium.
4. Each lot of the medium has been tested for the organisms specified on the COA. It is recommended to users to validatethe 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.

Methodology

Either streak, inoculate or surface spread the test inoculum (50-100 CFU) aseptically on the plate.

Quality Control

Appearance
Sterile Tellurite Blood Agar Base in 90 mm disposable plates with smooth surface and absence of black particles/cracks/bubbles

Colour of medium

Reddish brown coloured

Quantity of medium

25 ml of medium in 90 mm disposable plates.

Reaction
7.00-7.40

Sterility Check

Passes release criteria

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 48 hours (or more).

Organism	Inoculum(CFU)	Growth	Recovery	Colour of colony
Corynebacterium diphtheriae ATCC 11913	50-100	good-luxuriant	>=50%	grey-black
Escherichia coli ATCC 25922 (00013*)	>=10^4	inhibited	0%	

(*) - Corresponding WDCM numbers

Storage and Shelf Life

- On receipt store between 2-8°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 samplemust be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Further Reading

1. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williamsand Wilkins, Baltimore.
2. Scott T. J., 1981, Microbiological Media, A Manual of Products and Procedures, Fieskeville, TI : Scott Laboratories, Inc.Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. 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.

Disclaimer

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
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- Do not use the products if it fails to meet specificatons for identity and performens parameters.