Tellurite Blood Agar Base

Intended Use
Tellurite Blood Agar Base is used for the selective isolation and cultivation of *Corynebacterium* species.

Summary
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 bacteria that 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. It is selective due to the presence of inhibitor and differential by means of ability of organism to reduce potassium tellurite.

Principle
Biopeptone provides nitrogenous compounds. Sodium chloride maintains the osmotic equilibrium of the medium while phosphate buffers the medium. Corn starch neutralizes the toxic metabolites. Haemoglobin and Vitamin 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.

Formula*

Ingredients	**g/L**
Biopeptone	10.0
Sodium chloride	5.0
Dipotassium hydrogen phosphate	4.0
Corn starch	1.0
Monopotassium phosphate	1.0
Agar	10.0
Final pH (at 25°C)	7.2 ± 0.2

*Adjusted to suit performance parameters

Storage and Stability
Store dehydrated medium below 30°C in tightly closed container and the prepared medium at 2°C-8°C. Avoid freezing and overheating. Use before expiry date on the label. Once opened keep powdered medium closed to avoid hydration.

Type of Specimen
Clinical sample

Specimen Collection and Handling
Ensure that all samples are properly labelled.
Follow appropriate techniques for handling samples as per established guidelines.
Some samples may require special handling, such as immediate refrigeration or protection from light, follow the standard procedure.
The samples must be stored and tested within the permissible time duration.
After use, contaminated materials must be sterilized by autoclaving before discarding.

Directions

1. Suspend 31.00 g of the powder in 500 mL purified / distilled water to make a double strength base.
2. Heat to boiling to dissolve the powder completely.
3. Sterilize by autoclaving at 121°C (15 psi) for 15 minutes as per validated cycle.
4. Cool to 45°C-50°C.
5. Aseptically add sterile prepared Haemoglobin powder solution (204080100100) (10 g in 490 mL distilled water) and sterile reconstituted contents of one vial of Vitamin Growth Supplement and Potassium Tellurite 1 % (204160730010).
6. Mix well and pour into sterile petridishes.

Quality Control

Dehydrated Appearance: Cream to yellow coloured, homogenous, free flowing powder.
Prepared Appearance: Basal Medium: Yellow coloured, clear to slightly opalescent gel. With addition of haemoglobin solution: Brown coloured, opaque gel forms in petridishes.
Cultural Response: Cultural characteristics observed along with added Haemoglobin solution, Vitamino Growth Supplement and 1% Potassium Tellurite after an incubation at 35°C-37°C for 48 hours (or more).

Organism (ATCC)	Growth	Colour of colony
Corynebacterium diphtheriae (11913)	Good	Grey-black
Escherichia coli (25922)	Inhibited	-

Performance and Evaluation

Performance of the product is dependent on following parameters as per product label claim:

1. Directions
2. Storage
3. Expiry

Warranty

This product is designed to perform as described on the label and package insert. The manufacturer disclaims any implied warranty of use and sale for any other purpose.

References

1. Scott T. J., 1981, Microbiological Media, A Manual of Products and Procedures, Fieskeville, TI: Scott Laboratories, Inc.
2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.
3. Data on file: Microxpress®, A Division of Tulip Diagnostics (P) Ltd.

Product Presentation:

Cat No.	Product description	Pack Size
201200060500	Dehydrated Culture Media	500 g