

## Tellurite Blood Agar Base

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

REF: BS.1/TE01.100.0100  
REF: BS.1/TE01.500.0500

100 Gram  
500 Gram

REF: BS.1/TE01.250.0250

250 Gram

### CLINICAL SIGNIFICANCE

*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 (1, 2). It is selective due to the presence of inhibitor and differential by means of ability of organism to reduce potassium tellurite.

### METHOD PRINCIPLE

Biopeptone provides nitrogenous compounds. Sodium chloride maintains the osmotic equilibrium of the medium while phosphates buffer the medium. Corn starch neutralizes the toxic metabolites. Hemoglobin 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.

### MEDIA COMPOSITION

| Item                             | Formula per liter of medium |
|----------------------------------|-----------------------------|
| - Biopeptone                     | 10.00 gm.                   |
| - Sodium chloride                | 5.000 gm.                   |
| - Dipotassium hydrogen phosphate | 4.000 gm.                   |
| - Corn starch                    | 1.000 gm.                   |
| - Monopotassium phosphate        | 1.000 gm.                   |
| - Agar                           | 10.00 gm.                   |

### PRECAUTIONS AND WARNINGS

Media to be handled by entitled and professionally educated person. Do not ingest or inhale.

Good Laboratories practices using appropriate precautions should be followed in:

- Wearing personnel protective equipment (overall, gloves, glasses,).
- Do not pipette by mouth.
- In case of contact with eyes or skin; rinse immediately with plenty of soap and water. In case of severe injuries; seek medical advice immediately.
- Respect country requirement for waste disposal.  
**S56:** dispose of this material and its container at hazardous or special waste collection point.  
**S57:** use appropriate container to avoid environmental contamination.

**S61:** avoid release in environment.

For further information, refer to the Tellurite Blood Agar Base material safety data sheet.

### STORAGE AND STABILITY

**BioScien** Tellurite Blood Agar Base dehydrated media are stable until expiration date stated on label when properly stored 10-30°C. The prepared medium should be stored at 2-8°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to avoid lump development due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in a 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.

**Final pH 7.2 ± 0.2 at 25°C**

### MEDIA PREPARATION

- Suspend 31 grams in 500 ml distilled water to make a double strength base.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.
- Cool to 45-50°C. Aseptically add sterile prepared Hemoglobin solution (10 grams in 490ml distilled water) and sterile reconstituted contents of one vial of Vitamino Growth Supplement and 1%Potassium Tellurite .
- Mix well and pour into sterile Petri plates

### Deterioration

The color of **BioScien** Tellurite Blood Agar Base is Cream to yellow homogeneous free flowing powder. If there are any physical changes, discard the medium.

The prepared Basal medium is Yellow coloured clear to slightly opalescent gel, With the addition of haemoglobin solution, Reddish brown coloured, opaque gel forms in Petri plates., media should not be used if there are any signs of deterioration (shrinking, cracking, or discoloration), and contaminations.

### Type of specimen

Clinical samples





### EQUIPMENT REQUIRED NOT PROVIDED

- Sterile cups
- Sterile petri plates
- Incubator

### PERFORMANCE CHARACTERISTICS

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

| Test Organisms                                   | Growth    | Indole test |
|--|-----------|-------------|
| <i>Corynebacterium diphtheriae</i><br>ATCC 11913 | Luxuriant | Grey- Black |
| <i>Escherichia coli</i><br>ATCC 25922            | inhibited | -           |

| SYMBOLS IN PRODUCT LABELLING  |                             |   |
|---|-----------------------------|---|
| <b>IVD</b>  | For in-vitro diagnostic use | Number of <n> test in the pack  |
| <b>LOT</b>  | Batch Code/Lot number       | Caution   |
| <b>REF</b>  | Catalogue Number            | Do not use if package is damaged  |
|  | Temperature Limitation      |  Consult Instruction for use |
|  | Expiration Date             |   |
|  | Manufactured by             |   |

## QUALITY CONTROL

To ensure adequate quality control, it is recommended that positive and negative control included in each run. If control values are found outside the defined range, check the system performance. If control still out of range please contact **BioScien** technical support.

## 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.