OXFORD LAB FINE CHEM LLP
ISO 9001-2008 Certified Company

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Range of
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TECHNICAL DATA SHEET

Tellurite Blood Agar Base

Principle

Tellurite blood agar base is a selective medium used for isolation and cultivation of *Corynebacterium species*. The tellurite blood agar base is composed of bipeptone, sodium chloride, phosphate buffer, corn starch and agar. The bipeptone is the source of nitrogen. The corn starch is source of carbon and energy source and also neutralizes toxic metabolites. Sodium chloride maintains the osmotic balance of the medium. Phosphate act as buffer. Agar is a solidifying agent. The media is fortified with dextrose, tellurite hemoglobin and vitamin supplements. Haemoglobin and Vitamin supplements stimulate good growth of Corynebacterium. The selectivity is enhanced by the presence of inhibitor and differential by means of ability of organism to reduce potassium tellurite. Potassium tellurite also acts as a selective agent, inhibits most gram-positive and gram-negative bacteria except Corynebacterium species. *C. diphtheriae* reduces potassium tellurite to tellurium and thereby produce gray-black coloured colonies.

Use: For the selective isolation and cultivation of Corynebacterium species.

Contents*

Ingredients	Gram/Litre
Bipeptone	10.000
Sodium chloride	5.000
Dipotassium phosphate	4.000
Corn starch	1.000
Monopotassium phosphate	1.000
Agar	10.000
pH at 25˚C	7.2 ±0.2

*** Formula adjusted for optimum performance and parameters**

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Directions: Dissolve 31.00 grams in 1000 ml distilled water to make double strength base. Boil to dissolve the medium completely and sterilize by autoclaving at 15 lbs. pressure (121°C) for 15 min, cool it to 42-45°C and add heat sensitive compounds.
Aseptically add sterile prepared Haemoglobin solution (10 grams in 490ml distilled water) and sterile 10 ml reconstituted contents of 1% Potassium Tellurite and 1 g dextrose, vitamin B12 (0.1mg), L-glutamine (100 mg) adenine sulphate (10mg), guaninine hydrochloride (0.3 mg), p-aminobenzoic acid (0.13 mg), NAD (2.5 mg), cocarboxylase (1mg), ferric nitrate (0.2mg), thiamine hydrochloride (0.03 mg) and cysteine hydrochloride (259 mg). Mix well and pour into sterile Petri plates.

Specimens types analyzed

Pharmaceutical samples, clinical and non-clinical samples etc.

Precautions to be taken

These microbial media are intended for the in-vitro use only. All the handling, experiments, storage, and discarding should be performed with the help of skilled and knowledgeable technicians and as per the established guidelines. The material should be disposed only after proper sterilization by autoclaving. Please go through the MSDS of the media to avoid any accidents or in emergency.

Performance and Evaluation

The expected performance of the medium is liable to use as per the direction on the label when stored at optimum conditions and within expiry date.

Quality Control

Appearance	**Beige colored free flowing, homogeneous powder**
Reaction of 3.1% solution	**7.2 ±0.2 at 25 ˚C**
pH	**7.00- 7.40**
Gelling	**Firm comparable with 1.0% agar gel**
Color and clarity of ready medium	**Basal medium: Light amber color clear to slightly opalescent gel. Haemoglobin solution added base: Reddish brown coloured, opaque gel**
Growth Promotion properties	**Best at ≤ 100 CFU at 32-37 ºC for 18-72 h**
Indicative properties	**Optimum at ≤ 100 CFU at 32-37 ºC for 18-48 h**
Negative control	**Performed using sterile distilled water**

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Different Microbial Response

Cultural characteristics observed along with added haemoglobin solution, 1% dextrose, vitamin Growth Supplement and 1% Potassium Tellurite after an incubation at 35-37°C for 48-72 hours.

Organism	ATCC	Inoculum (CFU)	Growth	Recovery (%)	Colony color
Corynebacterium diphtheriae	11913	50-100	Luxuriant	≥ 60%	Black to grey
Escherichia coli	8793	50-100	Inhibited	---	---

Storage and Shelf Life: The product is highly hygroscopic; keep the container tightly closed at all times and store it properly as per the conditions mentioned on the label. The declared expiry is valid only when stored as per the conditions mentioned on the label. Note: Sterilize media immediately after reconstitution.

Disposal: To avoid the contamination or propagation of any hazardous microbes the used, unusable or modified preparation of this product must be disposed after autoclaving after completion of task.

Reference

1. **Atlas, R. M. (2005). *Handbook of media for environmental microbiology*. CRC press.**
2. **MacFaddin J. F., (1985), Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.**

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