

## TM 1165 – DEXTROSE PROTEOSE PEPTONE AGAR BASE

### INTENDED USE

For isolation of *Corynebacterium diphtheriae*.

### PRODUCT SUMMARY AND EXPLANATION

*Corynebacterium diphtheriae* is the causative agent of diphtheria, an acute communicable disease manifested by both local infection of the upper respiratory tract and the systemic effects of a toxin, which are most notable in the heart and peripheral nerves. *C. diphtheriae* is most often isolated from the nasopharynx or skin lesions of patients with diphtheria. Dextrose Proteose Peptone Agar is used for the isolation of *C. diphtheriae*, in combination with blood and tellurite. A selective serum medium containing tellurite was described by Conradi and Troch for isolating *C. diphtheriae*. This medium later on underwent modification by different authors in which they used heated Blood Agar Tellurite or Blood Agar Tellurite Arsenate Medium. McGuigan and Frobisher had used a Cystine Tellurite Blood Agar for *C. diphtheriae*. Without the inclusion of blood and tellurite, this medium is recommended as a general laboratory medium. With added tellurite and blood, this medium permits the isolation of *C. diphtheriae*.

### COMPOSITION

| Ingredients        | Gms / Ltr |
|--------------------|-----------|
| Proteose peptone   | 20.000    |
| Dextrose (Glucose) | 2.000     |
| Sodium chloride    | 5.000     |
| Agar               | 15.000    |

### PRINCIPLE

The medium consists of Proteose Peptone which serves as source of carbon, nitrogen, vitamins and minerals. Dextrose serves as an energy source. Sodium chloride helps to maintain the osmotic equilibrium. Potassium tellurite serves as a selective agent.

### INSTRUCTION FOR USE

- Dissolve 42 grams in 1000 ml purified/distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15psi pressure (121°C) for 15 minutes. Cool to 45-50° C.
- Aseptically add sterile 5% v/v defibrinated blood and sterile 1% Tellurite Solution. Mix well before pouring into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS

**Appearance of Powder** : Cream to yellow homogeneous free flowing powder.  
**Appearance of prepared medium** : Reddish brown coloured, opaque gel forms in Petri plates.  
**pH (at 25°C)** : 7.4 ± 0.2

### INTERPRETATION

Cultural characteristics observed with added 5%v/v sterile defibrinated blood and 1% tellurite solution after incubation.

| Microorganism                      | ATCC  | Inoculum (CFU/ml) | Growth         | Recovery | Colour of colony | Incubation Temperature | Incubation Period |
|------------------------------------|-------|-------------------|----------------|----------|------------------|------------------------|-------------------|
| <i>Corynebacterium diphtheriae</i> | 11913 | 50-100            | Good-luxuriant | >=50%    | Black            | 35-37 °C               | 24-48 Hours       |

#### PACKAGING:

In pack size of 500 gm bottles.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

#### DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

#### REFERENCES

- Anderson J. S., Happold F. C., McLeod J. W. and Thompson J. G., 1931, J. Path. Bacteriol., 34:667.
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- Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
- 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.
- McGuigan and Frobisher, 1936, J. Infect. Dis., 59:22.
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|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>Good Manufacturing Practices Certified | <br>For In Vitro Diagnostic Use                                                          | <br>Quantity            | <br>Lot / Batch Number | <br>Catalogue Number              | <br>Manufacturer |
| <br>Temperature Unit                       | <br>Authorized Representative<br>MedNet GmbH<br>Bockstrasse 10<br>48143 Münster, Germany | <br>European Conformity | <br>QR Code            | <br>Consults Instructions for Use | <br>Best Before  |

**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

**\*For Lab Use Only**  
Revision: 08 Nov., 2019