

## Technical Information

### Dextrose Proteose Peptone Agar Base

#### Product Code: DM 1734

**Application:** - Dextrose Proteose Peptone Agar is recommended in combination with blood and tellurite for the isolation of *Corynebacterium diphtheriae*.

#### Composition\*\*

Ingredients	Gms / Litre
Proteose peptone	20.000
Dextrose	2.000
Sodium chloride	5.000
Agar	15.000
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

#### Principle & Interpretation

*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 (1). 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* (2). This medium later on underwent modification by different authors in which they used heated Blood Agar Tellurite or Blood Agar Tellurite Arsenate Medium (3, 4, 5). McGuigan and Frobisher had used a Cystine Tellurite Blood Agar for *C. diphtheria* (6). 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*.

Proteose peptone 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.

#### Methodology

Suspend 42 grams of dehydrated media powder in 1000 ml distilled water. Mix thoroughly & heat to boil 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 5% v/v defibrinated blood and sterile 1% Tellurite Solution (MS 2052). Mix well before pouring into sterile Petri plates.

#### Quality Control

##### Appearance

Cream to yellow homogeneous free flowing powder.

##### Gelling

Firm, comparable with 1.5% Agar gel.

##### Colour and Clarity

Reddish brown coloured, opaque gel forms in Petri plates.

##### Reaction

Reaction of 4.2% w/v aqueous solution at 25°C. pH : 7.4±0.2

##### pH Range

7.20-7.60

