

## TM 707 – CYSTINE TELLURITE AGAR BASE

### INTENDED USE

For selective isolation and differentiation of *Corynebacterium diphtheriae* types.

### PRODUCT SUMMARY AND EXPLANATION

Cystine Tellurite Agar Base was originally formulated by Tinsdale which was later on modified by Moore and Parsons and then by Imre et al. Present formulation of Cystine Tellurite Agar Base with the addition of sterile sheep blood is used for selective isolation and differentiation of *Corynebacterium diphtheriae* types.

Potassium tellurite inhibits most upper respiratory tract normal flora other than *Corynebacterium* species and also inhibits the growth of majority of gram-negative bacteria. This medium is differential on the basis of the ability of *Corynebacterium* species to reduce tellurite whereas diphtheroids found in upper respiratory tract are not able to reduce tellurite. L-Cystine is the source of amino acid, which enhances H<sub>2</sub>S production. Further biochemical tests are necessary to distinguish between *C.diphtheriae* and *C.ulcerans* due to similar reactions on this medium.

### COMPOSITION

Ingredients	Gms / Ltr
Beef extract	10.000
Proteose peptone	10.000
Sodium chloride	5.000
L-Cystine	0.050
Agar	15.000

### PRINCIPLE

Beef heart infusion (solids) and proteose peptone are sources of carbon, nitrogen, vitamins and minerals. L-Cystine is the source of amino acid. Sodium chloride provides the essential ions.

### INSTRUCTION FOR USE

- Dissolve 40.05 grams in 900 ml purified / distilled water.
- Heat to boiling to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to 45-50°C and aseptically add 5% v/v sterile defibrinated sheep blood and 5% v/v of 1% Potassium Tellurite.
- Mix well and pour into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS

<b>Appearance of Powder</b>	: Cream to yellow homogeneous free flowing powder.
<b>Appearance of prepared medium</b>	: Basal medium: Amber coloured clear to slightly opalescent gel. After addition of blood & tellurite : Brownish red coloured opaque gel forms in Petri plates.
<b>pH (at 25°C)</b>	: 7.4±0.2

### INTERPRETATION

Cultural characteristics observed after incubation with added sterile defibrinated sheep blood and 1% Potassium tellurite solution.



Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Recovery	Colour of colony	Incubation Temperature	Incubation Period
<i>Corynebacterium diphtheriae</i> type <i>mitis</i>	9673	50-100	Good	40-50%	Black, with shining surface	35-37°C	24-48 Hours
<i>Bacillus subtilis</i> subsp. <i>spizizenii</i>	6633	$\geq 10^3$	Inhibited	0%	-	35-37°C	24-48 Hours
<i>Escherichia coli</i>	25922	$\geq 10^3$	Inhibited	0%	-	35-37°C	24-48 Hours
<i>Enterococcus faecalis</i>	29212	50-100	None-poor	0-10%	Minute, black colonies	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**

1. Tinsdale G. F. W., 1947, J. Pathol. Bacteriol., 59(3):461.

 GMP Good Manufacturing Practices Certified	 IVD For In Vitro Diagnostic Use	 QTY. Quantity	 LOT/ B. NO. Lot / Batch Number	 REF Catalogue Number	 Manufacturer
 Temperature Unit	 EC REP Authorized Representative <small>MedMer GmbH Buckhorn 16, 49142 Amande, Germany</small>	 European Conformity	 QR Code	 Consults Instructions for Use	 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