CM 20526 – CYSTINE TELLURITE AGAR BASE

INTENDED USE

For selective isolation and differentiation of Corynebacterium diphteriae types.

PRODUCT SUMMARY AND EXPLANATION

Cystine Tellurite Agar Base wasoriginally 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_2S 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

Beefheart 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 FORUSE

Dissolve 40.05 gramsin 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

Appearance of Powder	: Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium	: Basal medium: Amber coloured clear to slightly opalescent gel. After addition of blood & tellurite : Brownish red coloured opaque gel forms in Petri plates.
pH (at 25°C)	: 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
Corynebacterium diphtheriae type mitis	9673	50-100	Good	40-50%	Black, with shining surface	35-37°C	24-48 Hours
Bacillus subtilis subsp. spizizenii	6633	>=10^3	Inhibited	0%	-	35-37°C	24-48 Hours
Escherichia coli	25922	>=10^3	Inhibited	0%	-	35-37°C	24-48 Hours
Enterococcus faecalis	29212	50-100	None-poor	0-10%	Minute, black colonies	35-37°C	24-48 Hours

PACKAGING:

Inpacksizeof500 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.

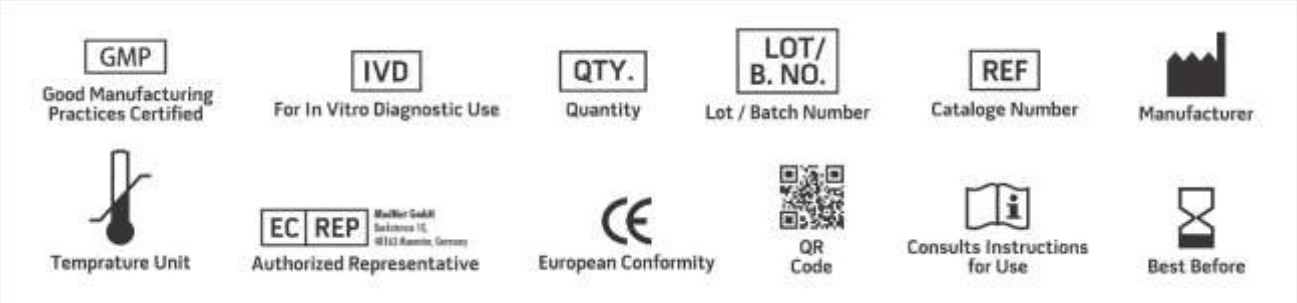
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

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

REFERENCES

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



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

*For LabUse Only